



Full wwPDB X-ray Structure Validation Report ⓘ

Oct 9, 2023 – 11:20 AM EDT

PDB ID : 4V9S
Title : Crystal structure of antibiotic GE82832 bound to 70S ribosome
Authors : Bulkley, D.P.; Brandi, L.; Polikanov, Y.S.; Fabbretti, A.; O'Connor, M.;
Gualerzi, C.O.; Steitz, T.A.
Deposited on : 2013-12-05
Resolution : 3.10 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.35.1
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.35.1

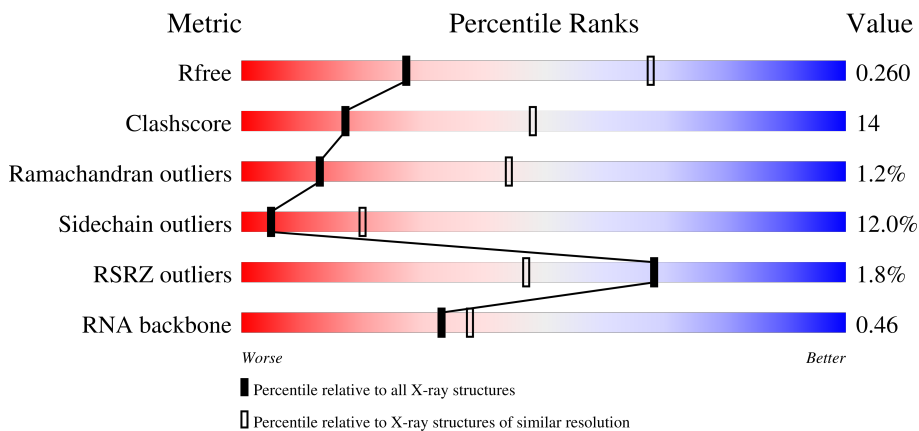
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.10 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1094 (3.10-3.10)
Clashscore	141614	1184 (3.10-3.10)
Ramachandran outliers	138981	1141 (3.10-3.10)
Sidechain outliers	138945	1141 (3.10-3.10)
RSRZ outliers	127900	1067 (3.10-3.10)
RNA backbone	3102	1116 (3.40-2.80)

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

Mol	Chain	Length	Quality of chain
1	AA	1522	 2% 36% 43% 17% ••
1	CA	1522	 2% 34% 43% 18% ••
2	AB	256	 3% 38% 39% 11% • 10%
2	CB	256	 5% 36% 44% 10% 10%

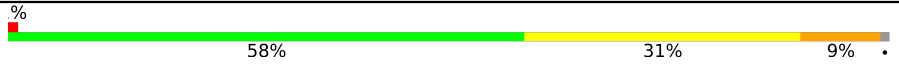

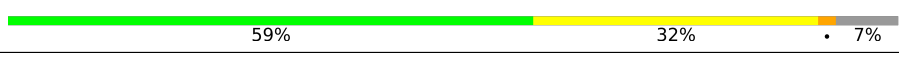



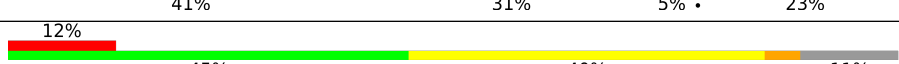
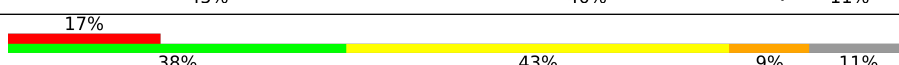
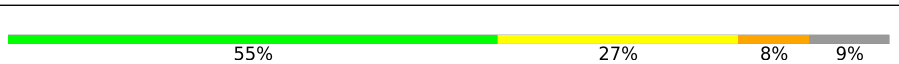





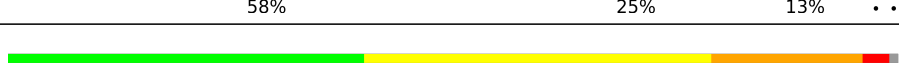



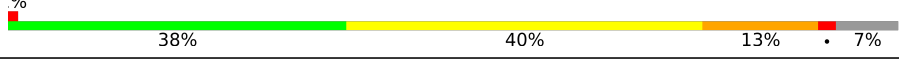
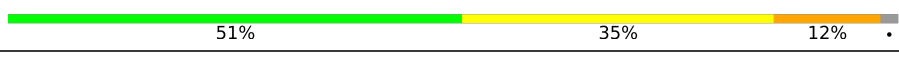





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Mol	Chain	Length	Quality of chain
3	AC	239	3% 51% 32% 14%
3	CC	239	5% 51% 29% 14%
4	AD	209	2% 52% 37% 10%
4	CD	209	55% 38% 7%
5	AE	162	50% 37% 9%
5	CE	162	56% 33% 9%
6	AF	101	56% 40% 2%
6	CF	101	62% 33% 2%
7	AG	156	7% 63% 31% 2%
7	CG	156	6% 54% 39% 6%
8	AH	138	55% 36% 8%
8	CH	138	56% 38% 5%
9	AI	128	6% 50% 41% 7%
9	CI	128	17% 45% 44% 10%
10	AJ	105	11% 55% 31% 6% 8%
10	CJ	105	11% 47% 40% 5% 9%
11	AK	129	65% 19% 5% 12%
11	CK	129	2% 55% 33% 12%
12	AL	132	61% 29% 8%
12	CL	132	57% 32% 8%
13	AM	126	7% 68% 24% 6%
13	CM	126	9% 51% 38% 8%
14	AN	61	3% 51% 43% 5%
14	CN	61	7% 49% 44% 5%
15	AO	89	70% 25% 2%






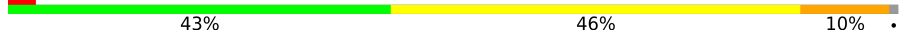



















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Mol	Chain	Length	Quality of chain
15	CO	89	
16	AP	88	
16	CP	88	
17	AQ	105	
17	CQ	105	
18	AR	88	
18	CR	88	
19	AS	93	
19	CS	93	
20	AT	106	
20	CT	106	
21	AU	27	
21	CU	27	
22	AV	24	
22	CV	24	
23	AX	77	
23	CX	77	
24	AW	10	
24	CW	10	
25	BA	2915	
25	DA	2915	
26	BB	122	
26	DB	122	
27	BD	276	
27	DD	276	

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Mol	Chain	Length	Quality of chain
28	BE	206	 71% 21% 7% .
28	DE	206	 62% 30% 6% ..
29	BF	210	 65% 28% . .
29	DF	210	 56% 36% . .
30	BG	182	 61% 32% 6% .
30	DG	182	 3% 43% 46% 10% .
31	BH	180	 64% 28% . .
31	DH	180	 9% 52% 39% 5% .
32	BI	148	 49% 39% 11% .
32	DI	148	 3% 58% 34% 6% .
33	BN	140	 78% 19% .
33	DN	140	 69% 27% .
34	BO	122	 72% 25% ..
34	DO	122	 61% 34% .
35	BP	150	 70% 25% . .
35	DP	150	 % 65% 28% 7% .
36	BQ	141	 62% 31% 6%
36	DQ	141	 55% 40% 5%
37	BR	118	 65% 25% 9%
37	DR	118	 60% 34% 6%
38	BS	112	 70% 22% 6% .
38	DS	112	 4% 46% 45% 8% .
39	BT	146	 62% 26% . 10%
39	DT	146	 60% 27% . 10%
40	BU	118	 69% 25% . .




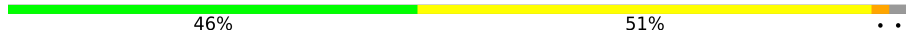


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Mol	Chain	Length	Quality of chain
40	DU	118	66% 27% 5% .
41	BV	101	81% 14% . .
41	DV	101	69% 27% . .
42	BW	113	79% 17% . .
42	DW	113	73% 23% . .
43	BX	96	73% 24% . .
43	DX	96	2% 61% 36% . .
44	BY	110	2% 65% 30% . .
44	DY	110	4% 67% 28% . .
45	BZ	206	48% 30% 5% 17%
45	DZ	206	50% 31% . 16%
46	B0	85	8% 65% 29% . .
46	D0	85	12% 68% 24% 6% .
47	B1	98	1% 71% 21% 6% .
47	D1	98	1% 63% 30% 6% .
48	B2	72	54% 39% . .
48	D2	72	60% 31% 7% .
49	B3	60	50% 43% 5% .
49	D3	60	2% 65% 25% 8% .
50	B4	71	1% 41% 41% 13% . .
50	D4	71	7% 48% 37% 11% . .
51	B5	60	72% 23% . .
51	D5	60	70% 23% 5% .
52	B6	54	67% 22% 9% .
52	D6	54	72% 22% . .

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Mol	Chain	Length	Quality of chain
53	B7	49	
53	D7	49	
54	B8	65	
54	D8	65	
55	B9	37	
55	D9	37	

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
24	2QY	CW	10	-	-	X	-
24	MVA	CW	9	-	-	X	-
56	MG	AA	3028	-	-	-	X
56	MG	AA	3035	-	-	-	X
56	MG	AA	3037	-	-	-	X
56	MG	AA	3043	-	-	-	X
56	MG	AA	3051	-	-	-	X
56	MG	AA	3079	-	-	-	X
56	MG	AA	3089	-	-	-	X
56	MG	AA	3093	-	-	-	X
56	MG	AA	3100	-	-	-	X
56	MG	AA	3114	-	-	-	X
56	MG	AA	3116	-	-	-	X
56	MG	AA	3120	-	-	-	X
56	MG	AA	3147	-	-	-	X
56	MG	B1	3001	-	-	-	X
56	MG	BA	3065	-	-	-	X
56	MG	BA	3069	-	-	-	X
56	MG	BA	3085	-	-	-	X
56	MG	BA	3087	-	-	-	X
56	MG	BA	3089	-	-	-	X
56	MG	BA	3094	-	-	-	X
56	MG	BA	3160	-	-	-	X
56	MG	BA	3231	-	-	-	X
56	MG	BA	3247	-	-	-	X
56	MG	BA	3295	-	-	-	X
56	MG	BA	3297	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
56	MG	BA	3622	-	-	-	X
56	MG	BA	3699	-	-	-	X
56	MG	CA	3016	-	-	-	X
56	MG	CA	3024	-	-	-	X
56	MG	CA	3030	-	-	-	X
56	MG	CA	3038	-	-	-	X
56	MG	CA	3041	-	-	-	X
56	MG	CA	3042	-	-	-	X
56	MG	CA	3053	-	-	-	X
56	MG	CA	3135	-	-	-	X
56	MG	DA	3064	-	-	-	X
56	MG	DA	3098	-	-	-	X
56	MG	DA	3103	-	-	-	X
56	MG	DA	3125	-	-	-	X
56	MG	DA	3186	-	-	-	X
56	MG	DA	3427	-	-	-	X
56	MG	DA	3438	-	-	-	X
56	MG	DA	3464	-	-	-	X
56	MG	DA	3545	-	-	-	X
56	MG	DA	3581	-	-	-	X
56	MG	DA	3615	-	-	-	X
56	MG	DW	202	-	-	-	X
59	FME	CX	101	-	-	-	X

2 Entry composition [i](#)

There are 61 unique types of molecules in this entry. The entry contains 286321 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
			Total	C	N	O	P			
1	AA	1498	Total	C	N	O	P	0	0	0
			32196	14328	5966	10404	1498			
1	CA	1503	Total	C	N	O	P	0	0	0
			32312	14381	5990	10438	1503			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	AB	231	Total	C	N	O	S	0	0	0
			1846	1179	331	331	5			
2	CB	231	Total	C	N	O	S	0	0	0
			1825	1167	326	327	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	AC	206	Total	C	N	O	S	0	0	0
			1552	976	302	273	1			
3	CC	206	Total	C	N	O	S	0	0	0
			1542	968	300	273	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	AD	208	Total	C	N	O	S	0	0	0
			1659	1040	326	286	7			
4	CD	208	Total	C	N	O	S	0	0	0
			1674	1050	333	284	7			

- 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
			1129	714	213	198	4			
5	CE	148	Total	C	N	O	S	0	0	0
			1133	716	214	199	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
			806	511	143	149	3			
6	CF	100	Total	C	N	O	S	0	0	0
			816	516	146	151	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
			1231	766	243	216	6			
7	CG	155	Total	C	N	O	S	0	0	0
			1235	769	244	216	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	137	Total	C	N	O	S	0	0	0
			1088	689	206	191	2			
8	CH	137	Total	C	N	O	S	0	0	0
			1088	689	206	191	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	AI	127	Total	C	N	O	0	0	0
			983	623	193	167			
9	CI	127	Total	C	N	O	0	0	0
			978	619	190	169			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
10	AJ	97	Total	C	N	O	0	0	0
			709	440	138	131			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
10	CJ	96	714	445	138	131	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
11	AK	114	829	516	155	155	3	0	0	0
11	CK	114	833	519	156	155	3	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
12	AL	122	930	585	185	159	1	0	0	0
12	CL	122	930	585	185	159	1	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
13	AM	123	958	592	198	166	2	0	0	0
13	CM	122	950	586	197	165	2	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
14	AN	60	492	312	104	72	4	0	0	0
14	CN	60	492	312	104	72	4	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
15	AO	88	728	456	144	126	2	0	0	0
15	CO	88	728	456	144	126	2	0	0	0

- 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
			681	433	134	113	1			
16	CP	82	Total	C	N	O	S	0	0	0
			677	430	133	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
			823	528	151	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
			555	355	108	92			
18	CR	68	Total	C	N	O	0	0	0
			555	355	108	92			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	83	Total	C	N	O	S	0	0	0
			652	417	120	113	2			
19	CS	83	Total	C	N	O	S	0	0	0
			646	412	119	113	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
			728	446	156	124	2			
20	CT	96	Total	C	N	O	S	0	0	0
			727	446	155	124	2			

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

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

- Molecule 22 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AV	7	Total	C	N	O	P	0	0	1
			114	49	22	37	6			
22	CV	6	Total	C	N	O	P	0	0	0
			113	49	22	36	6			

- Molecule 23 is a RNA chain called P-site tRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AX	76	Total	C	N	O	P	0	0	0
			1623	723	294	530	76			
23	CX	76	Total	C	N	O	P	0	0	0
			1623	723	294	530	76			

- Molecule 24 is a protein called GE82832.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
24	AW	10	Total	C	N	O	0	0	0
			93	67	10	16			
24	CW	10	Total	C	N	O	0	0	0
			93	67	10	16			

- Molecule 25 is a RNA chain called 23S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BA	2731	Total	C	N	O	P	0	0	0
			58834	26185	11020	18899	2730			
25	DA	2714	Total	C	N	O	P	0	0	0
			58458	26018	10942	18786	2712			

- Molecule 26 is a RNA chain called 5S Ribosomal RNA.

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

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

- Molecule 27 is a protein called 50S Ribosomal Protein L2.

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

- Molecule 28 is a protein called 50S Ribosomal Protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
28	BE	204	1559	985	298	270	6	0	0	0
28	DE	204	1559	985	298	270	6	0	0	0

- Molecule 29 is a protein called 50S Ribosomal Protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
29	BF	203	1584	1009	298	275	2	0	0	1
29	DF	203	1580	1007	297	274	2	0	0	1

- Molecule 30 is a protein called 50S Ribosomal Protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
30	BG	181	1425	914	256	251	4	0	0	0
30	DG	181	1424	911	258	251	4	0	0	0

- Molecule 31 is a protein called 50S Ribosomal Protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
31	BH	174	1330	845	248	236	1	0	0	0
31	DH	174	1330	845	248	236	1	0	0	0

- Molecule 32 is a protein called 50S Ribosomal Protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
32	BI	146	Total 1085	C 693	N 189	O 202	S 1	0	0	0
32	DI	146	Total 1061	C 680	N 186	O 194	S 1	0	0	0

- Molecule 33 is a protein called 50S Ribosomal Protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
33	BN	140	Total 1117	C 719	N 207	O 187	S 4	0	0	0
33	DN	140	Total 1117	C 719	N 207	O 187	S 4	0	0	0

- Molecule 34 is a protein called 50S Ribosomal Protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
34	BO	122	Total 933	C 588	N 171	O 170	S 4	0	0	0
34	DO	122	Total 933	C 588	N 171	O 170	S 4	0	0	0

- Molecule 35 is a protein called 50S Ribosomal Protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
35	BP	149	Total 1135	C 706	N 230	O 196	S 3	0	0	0
35	DP	149	Total 1135	C 706	N 230	O 196	S 3	0	0	0

- Molecule 36 is a protein called 50S Ribosomal Protein L16.

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

- Molecule 37 is a protein called 50S Ribosomal Protein L17.

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

- Molecule 38 is a protein called 50S Ribosomal Protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BS	110	Total	C	N	O	S	0	0	0
			877	553	175	149				
38	DS	110	Total	C	N	O	S	0	0	0
			870	549	173	148				

- Molecule 39 is a protein called 50S Ribosomal Protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BT	131	Total	C	N	O	S	0	0	0
			1091	680	225	185	1			
39	DT	131	Total	C	N	O	S	0	0	0
			1083	675	224	183	1			

- Molecule 40 is a protein called 50S Ribosomal Protein L20.

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

- Molecule 41 is a protein called 50S Ribosomal Protein L21.

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

- Molecule 42 is a protein called 50S Ribosomal Protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BW	112	Total	C	N	O	S	0	0	0
			886	557	174	153	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
42	DW	112	886	557	174	153	2	0	0	0

- Molecule 43 is a protein called 50S Ribosomal Protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
43	BX	95	750	488	135	126	1	0	0	0
43	DX	95	750	488	135	126	1	0	0	0

- Molecule 44 is a protein called 50S Ribosomal Protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
44	BY	107	806	517	152	131	6	0	0	0
44	DY	107	806	517	152	131	6	0	0	0

- Molecule 45 is a protein called 50S Ribosomal Protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
45	BZ	171	1349	862	243	242	2	0	0	0
45	DZ	174	1360	870	243	245	2	0	0	0

- Molecule 46 is a protein called 50S Ribosomal Protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
46	B0	83	653	404	139	109	1	0	0	0
46	D0	83	653	404	139	109	1	0	0	0

- Molecule 47 is a protein called 50S Ribosomal Protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
47	B1	97	755	475	148	131	1	0	0	0
47	D1	97	755	475	148	131	1	0	0	0

- Molecule 48 is a protein called 50S Ribosomal Protein L29.

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

- Molecule 49 is a protein called 50S Ribosomal Protein L30.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
49	B3	59	Total 469	C 298	N 90	O 81	0	0	0
49	D3	59	Total 464	C 296	N 90	O 78	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
50	B4	69	Total 551	C 348	N 99	O 99	S 5	0	0	0
50	D4	69	Total 531	C 338	N 97	O 91	S 5	0	0	0

- Molecule 51 is a protein called 50S Ribosomal Protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
51	B5	59	Total 455	C 285	N 89	O 76	S 5	0	0	0
51	D5	59	Total 455	C 285	N 89	O 76	S 5	0	0	0

- Molecule 52 is a protein called 50S Ribosomal Protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
52	B6	53	Total 453	C 281	N 91	O 77	S 4	0	0	0
52	D6	53	Total 449	C 279	N 91	O 75	S 4	0	0	0

- Molecule 53 is a protein called 50S Ribosomal Protein L34.

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

- Molecule 54 is a protein called 50S Ribosomal Protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	B8	64	Total	C	N	O	S	0	0	0
			511	328	99	82	2			
54	D8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			

- Molecule 55 is a protein called 50S Ribosomal Protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	B9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			
55	D9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	AA	221	Total	Mg	0	0
			221	221		
56	AD	1	Total	Mg	0	0
			1	1		
56	AF	1	Total	Mg	0	0
			1	1		
56	AK	1	Total	Mg	0	0
			1	1		
56	AM	1	Total	Mg	0	0
			1	1		
56	AN	2	Total	Mg	0	0
			2	2		
56	AV	1	Total	Mg	0	0
			1	1		
56	AX	9	Total	Mg	0	0
			9	9		
56	BA	738	Total	Mg	0	0
			738	738		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	BB	18	Total Mg 18 18	0	0
56	BD	12	Total Mg 12 12	0	0
56	BE	10	Total Mg 10 10	0	0
56	BF	8	Total Mg 8 8	0	0
56	BG	4	Total Mg 4 4	0	0
56	BN	6	Total Mg 6 6	0	0
56	BO	1	Total Mg 1 1	0	0
56	BP	4	Total Mg 4 4	0	0
56	BQ	5	Total Mg 5 5	0	0
56	BR	4	Total Mg 4 4	0	0
56	BU	8	Total Mg 8 8	0	0
56	BV	4	Total Mg 4 4	0	0
56	BW	5	Total Mg 5 5	0	0
56	BX	1	Total Mg 1 1	0	0
56	BY	1	Total Mg 1 1	0	0
56	BZ	1	Total Mg 1 1	0	0
56	B0	4	Total Mg 4 4	0	0
56	B1	1	Total Mg 1 1	0	0
56	B2	1	Total Mg 1 1	0	0
56	B3	3	Total Mg 3 3	0	0
56	B4	1	Total Mg 1 1	0	0

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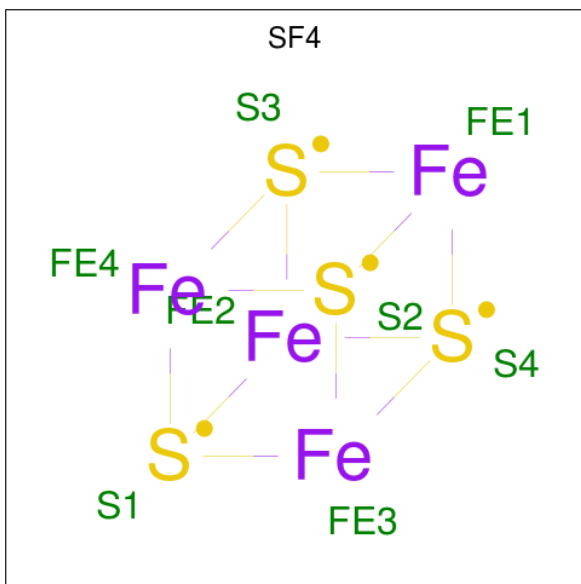
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	B5	1	Total Mg 1 1	0	0
56	B7	4	Total Mg 4 4	0	0
56	B8	3	Total Mg 3 3	0	0
56	B9	1	Total Mg 1 1	0	0
56	CA	172	Total Mg 172 172	0	0
56	CE	2	Total Mg 2 2	0	0
56	CF	1	Total Mg 1 1	0	0
56	CQ	1	Total Mg 1 1	0	0
56	CT	1	Total Mg 1 1	0	0
56	CX	3	Total Mg 3 3	0	0
56	DA	653	Total Mg 653 653	0	0
56	DB	12	Total Mg 12 12	0	0
56	DD	8	Total Mg 8 8	0	0
56	DE	6	Total Mg 6 6	0	0
56	DF	6	Total Mg 6 6	0	0
56	DG	1	Total Mg 1 1	0	0
56	DN	1	Total Mg 1 1	0	0
56	DO	1	Total Mg 1 1	0	0
56	DQ	5	Total Mg 5 5	0	0
56	DR	2	Total Mg 2 2	0	0
56	DV	4	Total Mg 4 4	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	DW	2	Total Mg 2 2	0	0
56	DY	1	Total Mg 1 1	0	0
56	D0	1	Total Mg 1 1	0	0
56	D3	1	Total Mg 1 1	0	0
56	D5	2	Total Mg 2 2	0	0
56	D8	1	Total Mg 1 1	0	0

- Molecule 57 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe₄S₄).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	AD	1	Total Fe S 8 4 4	0	0
57	CD	1	Total Fe S 8 4 4	0	0

- Molecule 58 is ZINC ION (three-letter code: ZN) (formula: Zn).

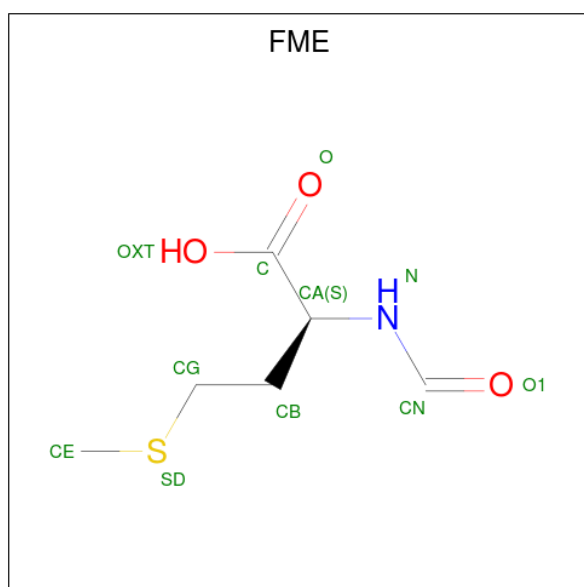
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	AN	1	Total Zn 1 1	0	0

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

- Molecule 59 is N-FORMYLMETHIONINE (three-letter code: FME) (formula: C₆H₁₁NO₃S).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
59	AX	1	Total	C	N	O	S	0	0
			10	6	1	2	1		
59	CX	1	Total	C	N	O	S	0	0
			10	6	1	2	1		

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
60	BA	1	Total	K	0	0
			1	1		
60	DA	1	Total	K	0	0
			1	1		

- Molecule 61 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
61	AA	148	Total	O	0	0
			148	148		
61	AD	1	Total	O	0	0
			1	1		
61	AE	3	Total	O	0	0
			3	3		
61	AJ	1	Total	O	0	0
			1	1		
61	AL	1	Total	O	0	0
			1	1		
61	AP	1	Total	O	0	0
			1	1		
61	AU	1	Total	O	0	0
			1	1		
61	AV	1	Total	O	0	0
			1	1		
61	AX	1	Total	O	0	0
			1	1		
61	BA	1092	Total	O	0	0
			1092	1092		
61	BB	26	Total	O	0	0
			26	26		
61	BD	8	Total	O	0	0
			8	8		
61	BE	9	Total	O	0	0
			9	9		
61	BF	4	Total	O	0	0
			4	4		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
61	BG	1	Total 1	O 1	0	0
61	BN	3	Total 3	O 3	0	0
61	BO	2	Total 2	O 2	0	0
61	BP	15	Total 15	O 15	0	0
61	BQ	3	Total 3	O 3	0	0
61	BR	1	Total 1	O 1	0	0
61	BT	1	Total 1	O 1	0	0
61	BU	4	Total 4	O 4	0	0
61	BV	2	Total 2	O 2	0	0
61	BW	2	Total 2	O 2	0	0
61	BX	4	Total 4	O 4	0	0
61	B0	4	Total 4	O 4	0	0
61	B1	2	Total 2	O 2	0	0
61	B5	3	Total 3	O 3	0	0
61	B7	1	Total 1	O 1	0	0
61	B8	8	Total 8	O 8	0	0
61	CA	187	Total 187	O 187	0	0
61	CE	2	Total 2	O 2	0	0
61	CN	1	Total 1	O 1	0	0
61	CT	1	Total 1	O 1	0	0
61	CX	2	Total 2	O 2	0	0

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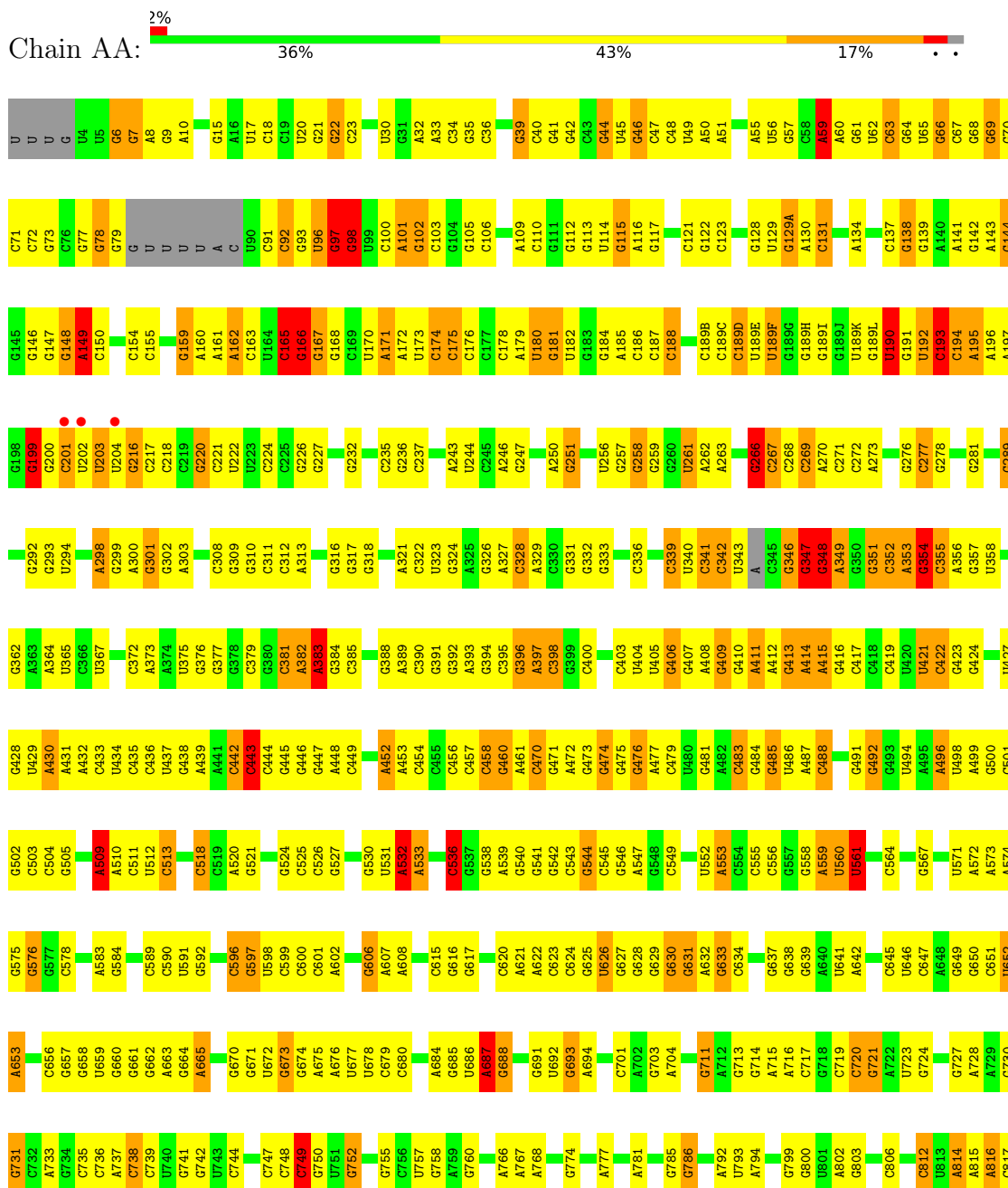
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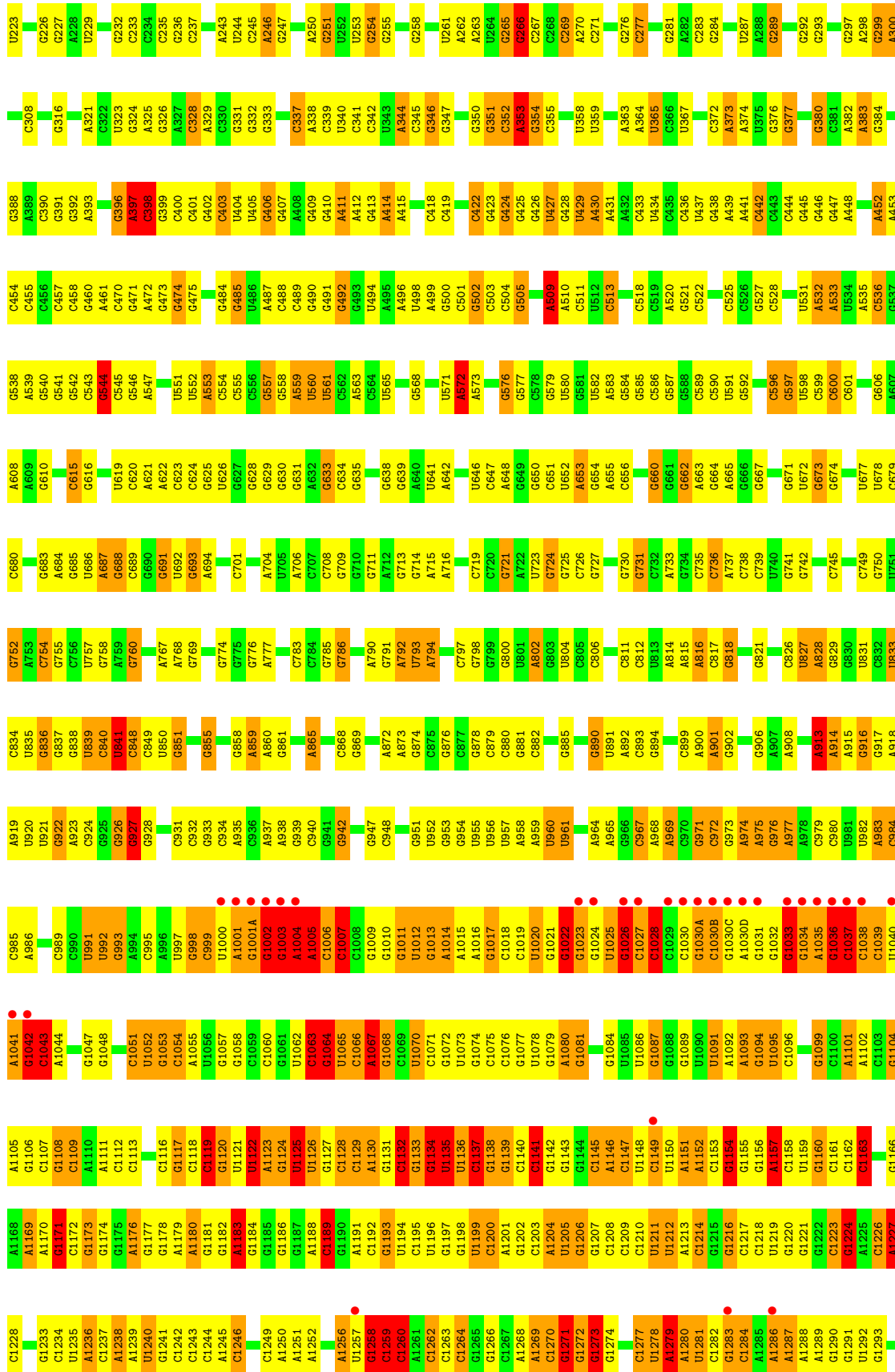
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
61	DA	902	Total 902	O 902	0	0
61	DB	7	Total 7	O 7	0	0
61	DD	8	Total 8	O 8	0	0
61	DE	13	Total 13	O 13	0	0
61	DF	5	Total 5	O 5	0	0
61	DO	1	Total 1	O 1	0	0
61	DP	14	Total 14	O 14	0	0
61	DQ	3	Total 3	O 3	0	0
61	DU	4	Total 4	O 4	0	0
61	DV	1	Total 1	O 1	0	0
61	DX	2	Total 2	O 2	0	0
61	DY	2	Total 2	O 2	0	0
61	D0	5	Total 5	O 5	0	0
61	D1	1	Total 1	O 1	0	0
61	D7	2	Total 2	O 2	0	0
61	D8	4	Total 4	O 4	0	0

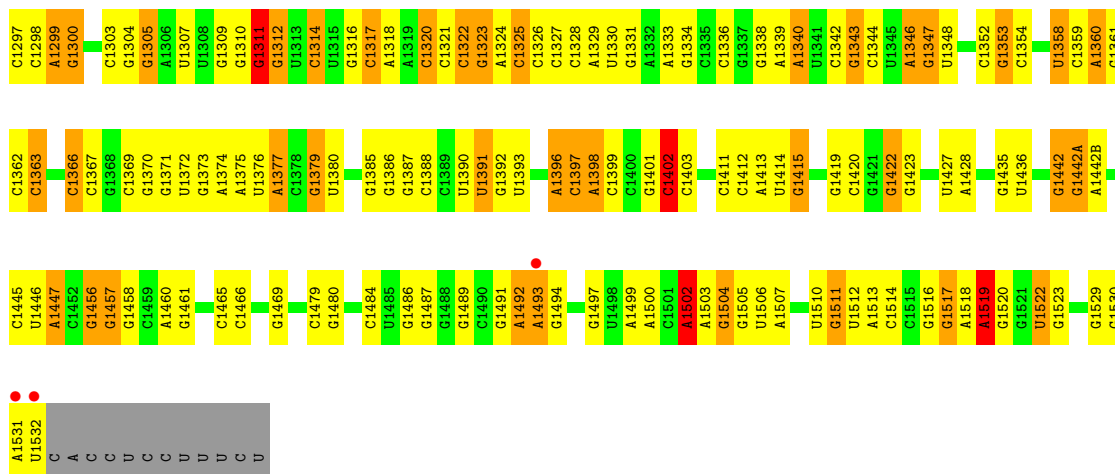
3 Residue-property plots

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.

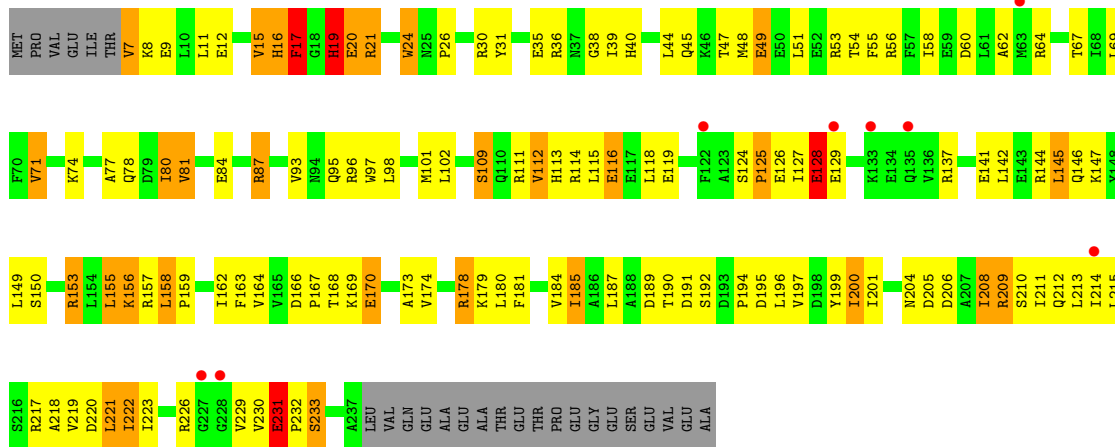
- Molecule 1: 16S Ribosomal RNA



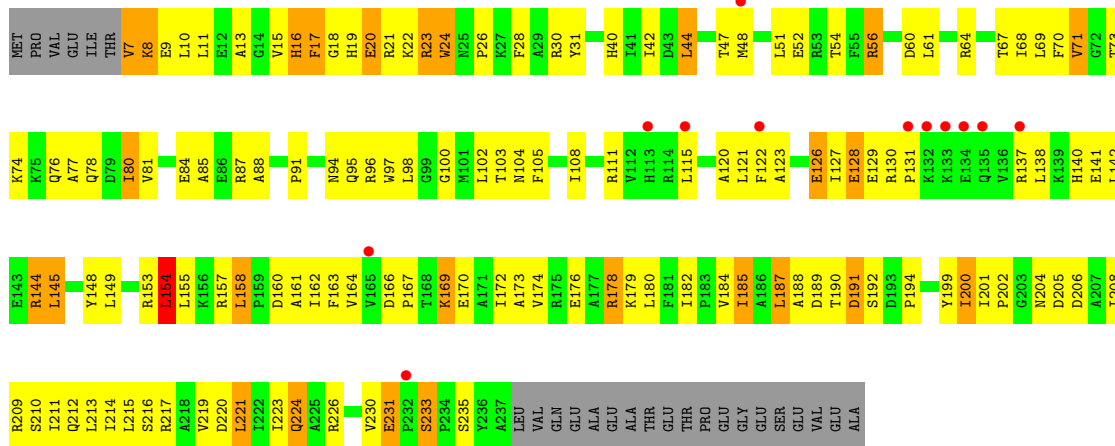




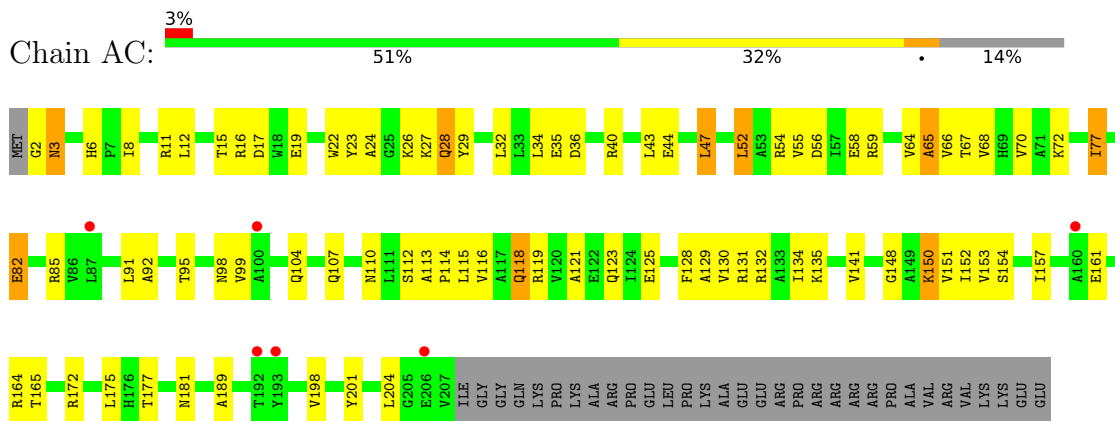
• Molecule 2: 30S Ribosomal Protein S2



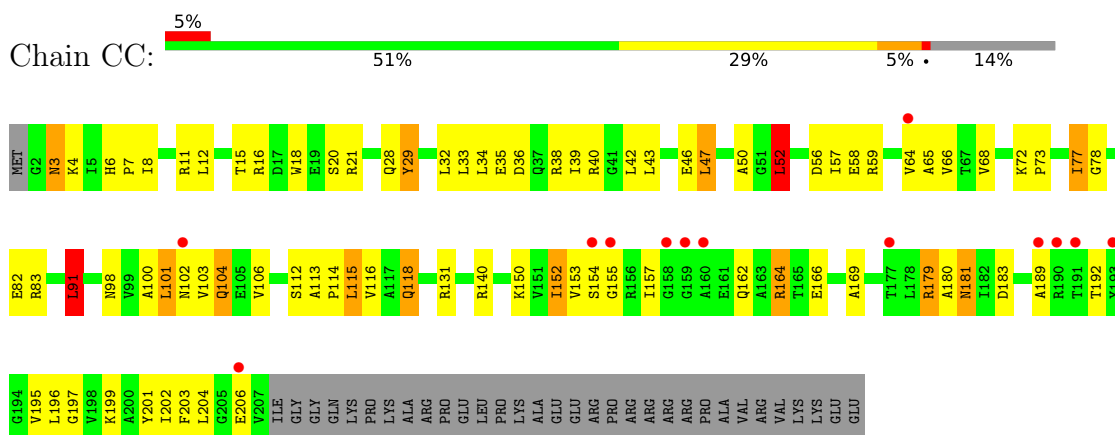
• Molecule 2: 30S Ribosomal Protein S2



- Molecule 3: 30S Ribosomal Protein S3



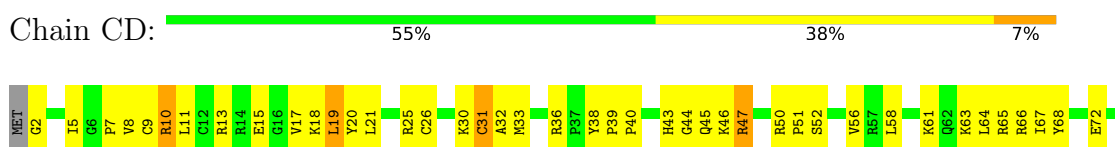
- Molecule 3: 30S Ribosomal Protein S3

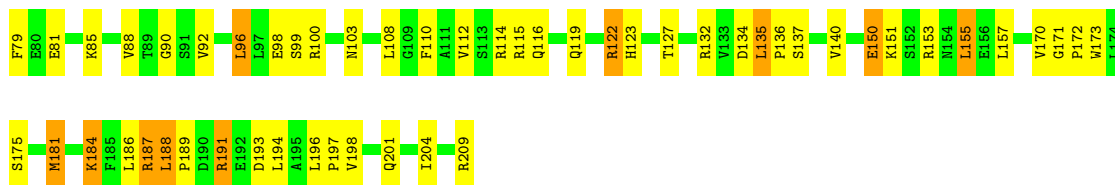


- Molecule 4: 30S Ribosomal Protein S4



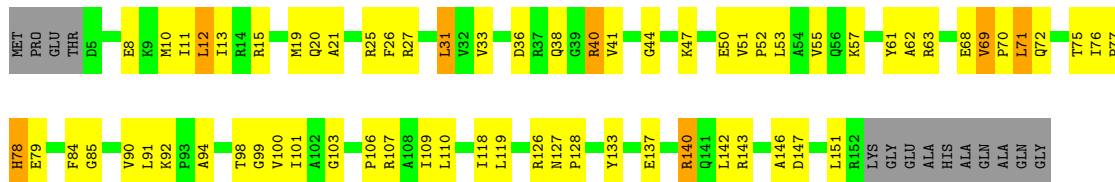
- Molecule 4: 30S Ribosomal Protein S4





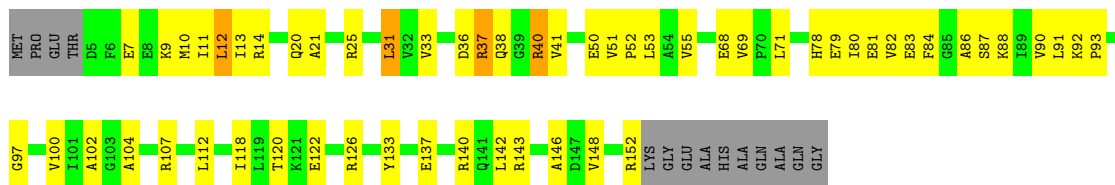
- Molecule 5: 30S Ribosomal Protein S5

Chain AE: 50% 37% 9%



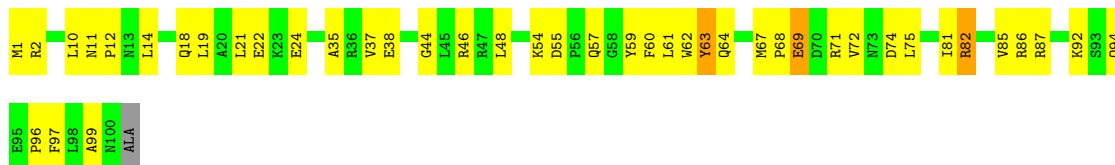
- Molecule 5: 30S Ribosomal Protein S5

Chain CE: 56% 33% 9%



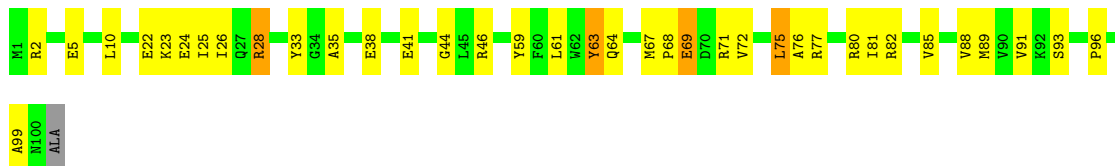
- Molecule 6: 30S Ribosomal Protein S6

Chain AF: 56% 40% 4%



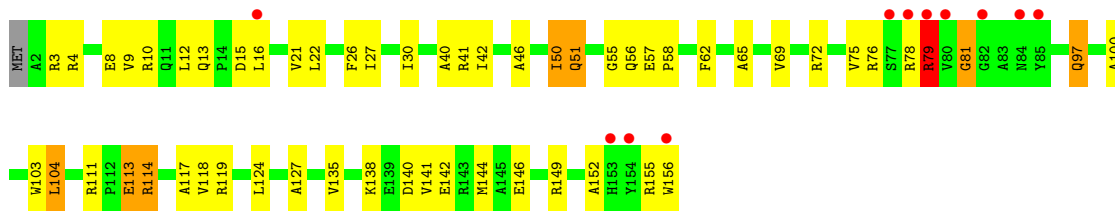
- Molecule 6: 30S Ribosomal Protein S6

Chain CF: 62% 33% 5%

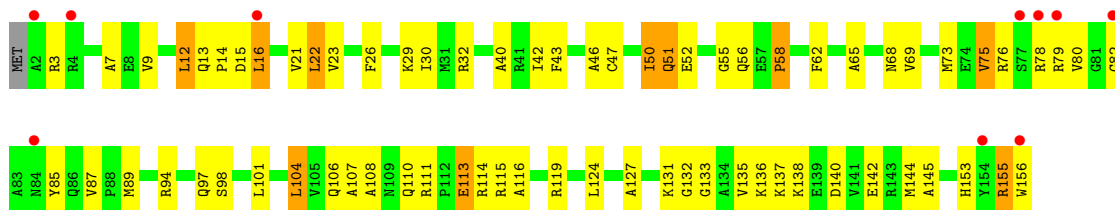


- Molecule 7: 30S Ribosomal Protein S7

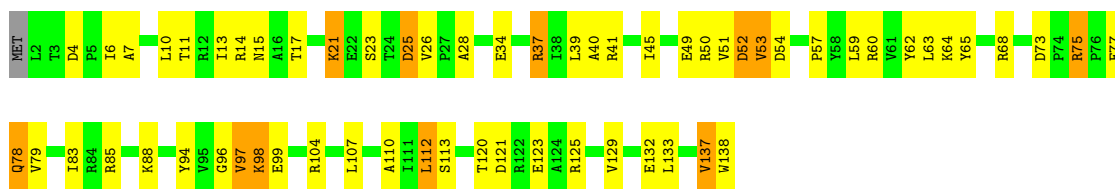
Chain AG: 63% 31% 7%



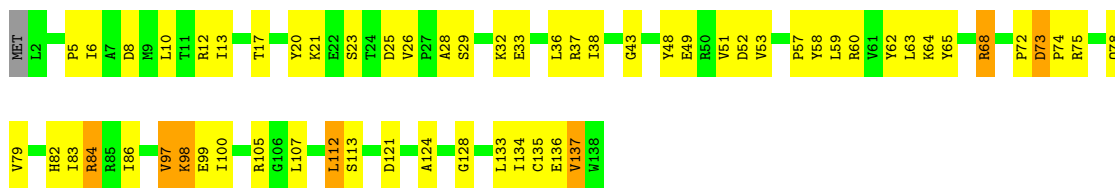
• Molecule 7: 30S Ribosomal Protein S7



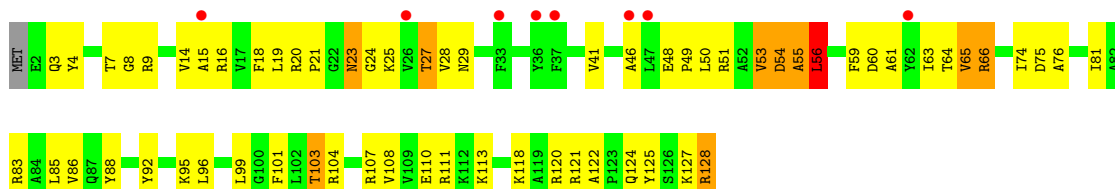
• Molecule 8: 30S Ribosomal Protein S8



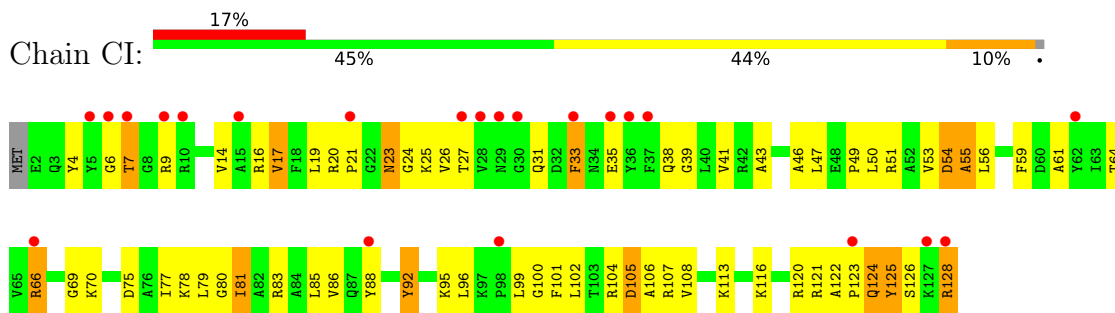
• Molecule 8: 30S Ribosomal Protein S8



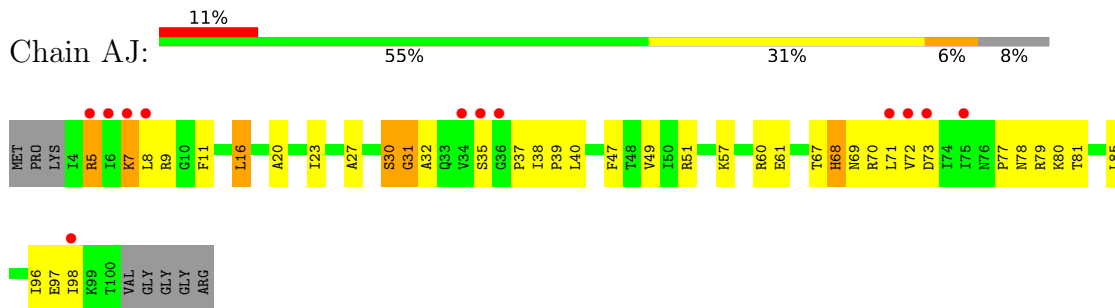
• Molecule 9: 30S Ribosomal Protein S9



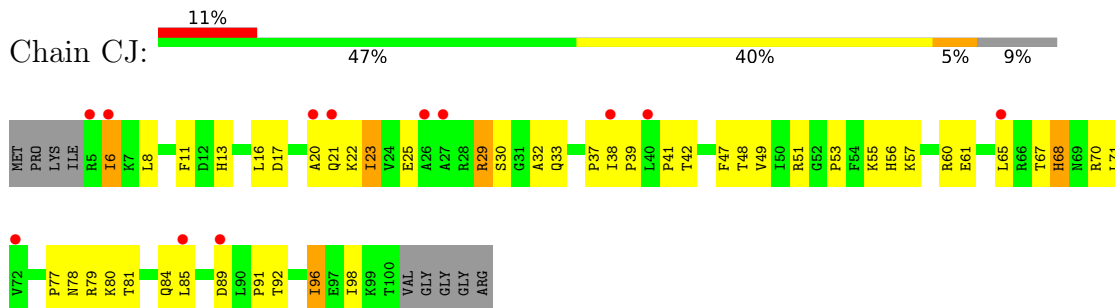
• Molecule 9: 30S Ribosomal Protein S9



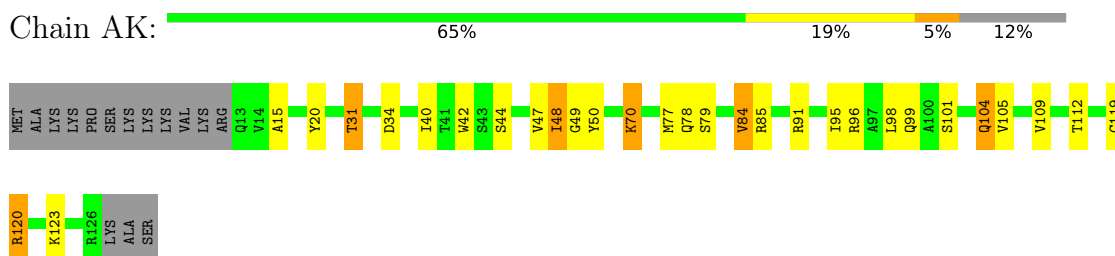
• Molecule 10: 30S Ribosomal Protein S10



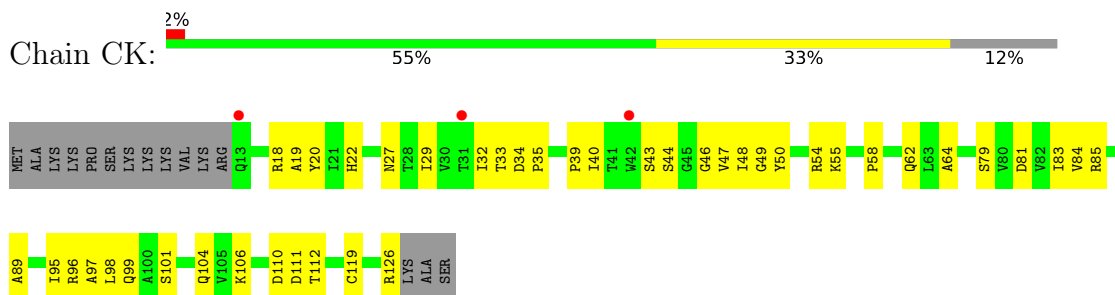
• Molecule 10: 30S Ribosomal Protein S10



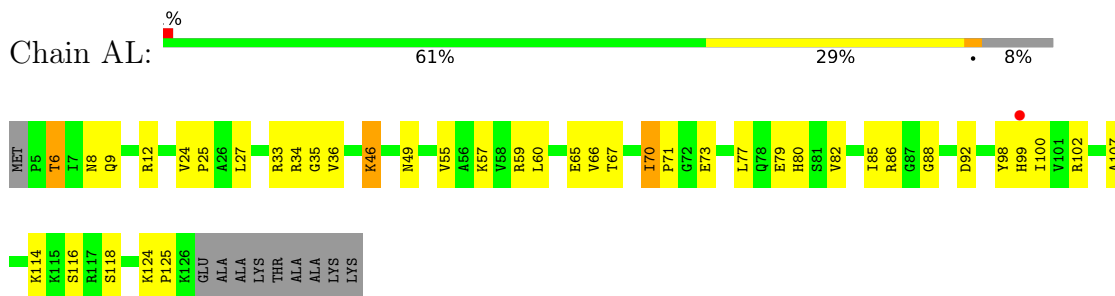
• Molecule 11: 30S Ribosomal Protein S11



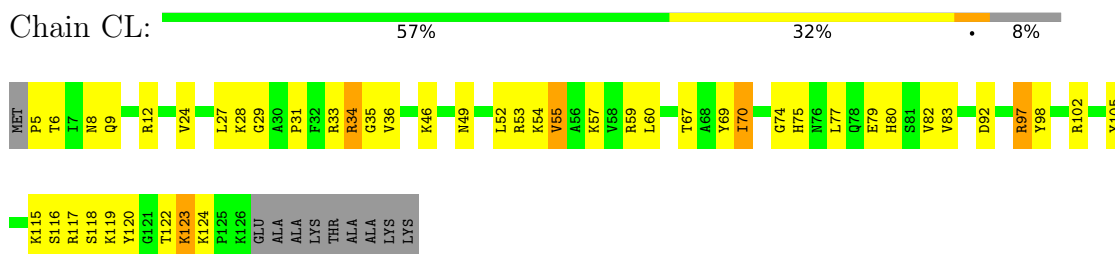
• Molecule 11: 30S Ribosomal Protein S11



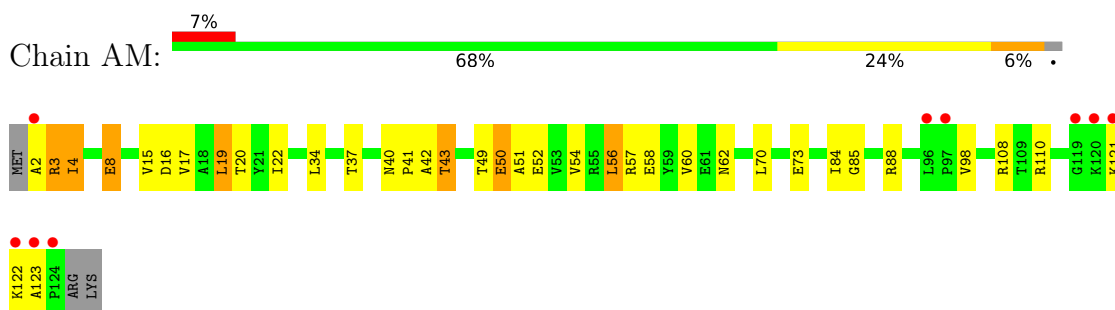
- Molecule 12: 30S Ribosomal Protein S12



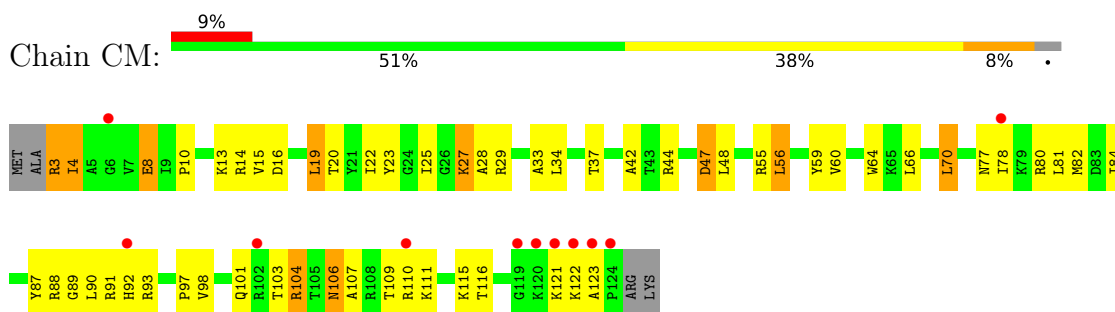
- Molecule 12: 30S Ribosomal Protein S12



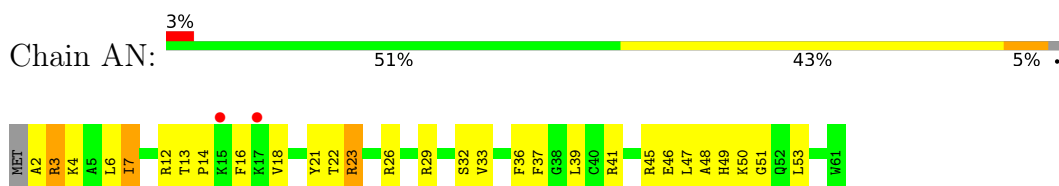
- Molecule 13: 30S Ribosomal Protein S13



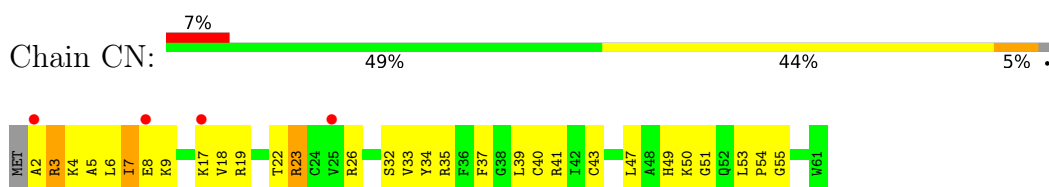
- Molecule 13: 30S Ribosomal Protein S13



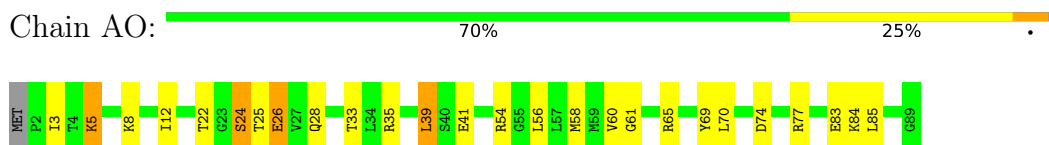
- Molecule 14: 30S Ribosomal Protein S14



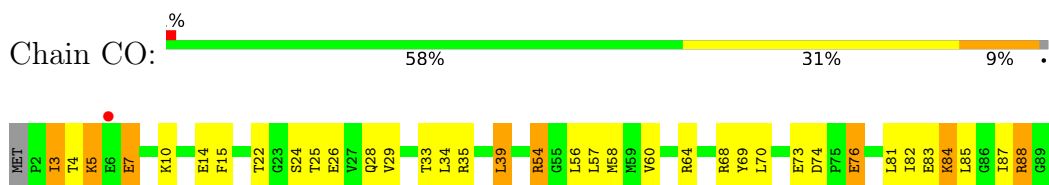
- Molecule 14: 30S Ribosomal Protein S14



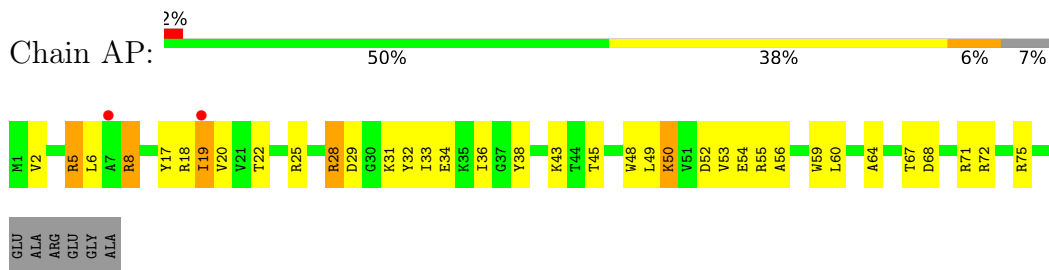
- Molecule 15: 30S Ribosomal Protein S15



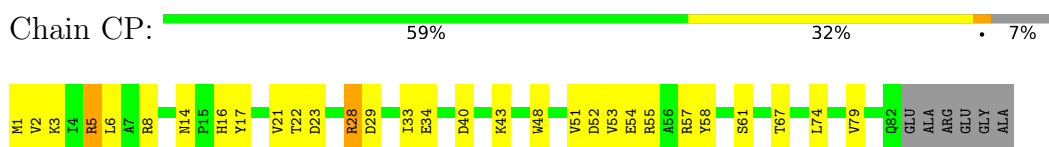
- Molecule 15: 30S Ribosomal Protein S15



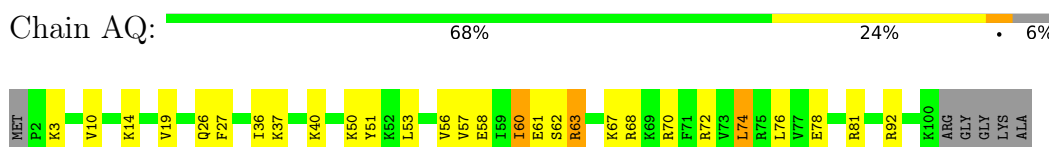
- Molecule 16: 30S Ribosomal Protein S16



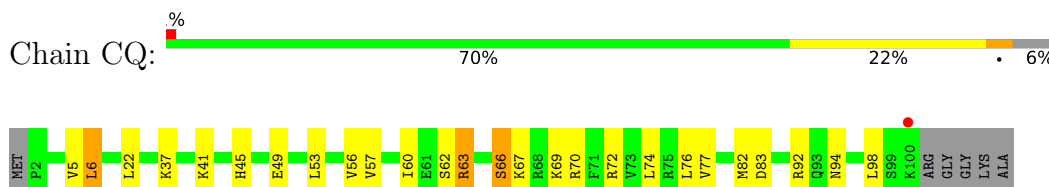
- Molecule 16: 30S Ribosomal Protein S16



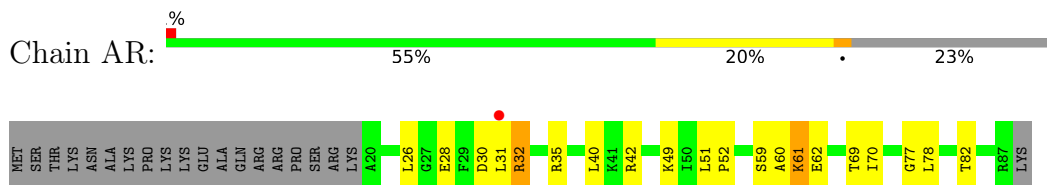
- Molecule 17: 30S Ribosomal Protein S17



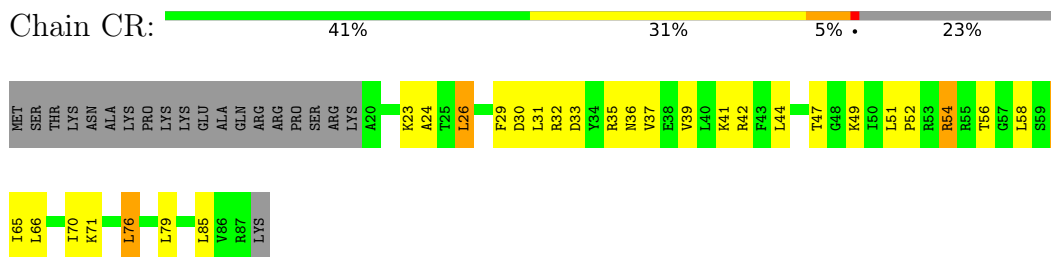
- Molecule 17: 30S Ribosomal Protein S17



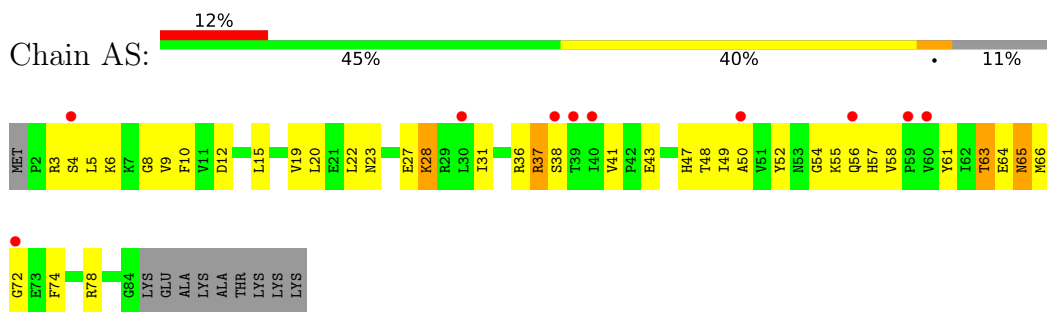
- Molecule 18: 30S Ribosomal Protein S18



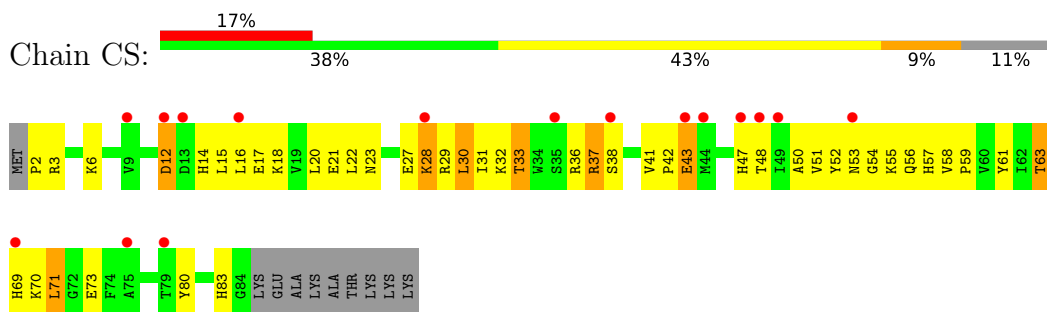
- Molecule 18: 30S Ribosomal Protein S18



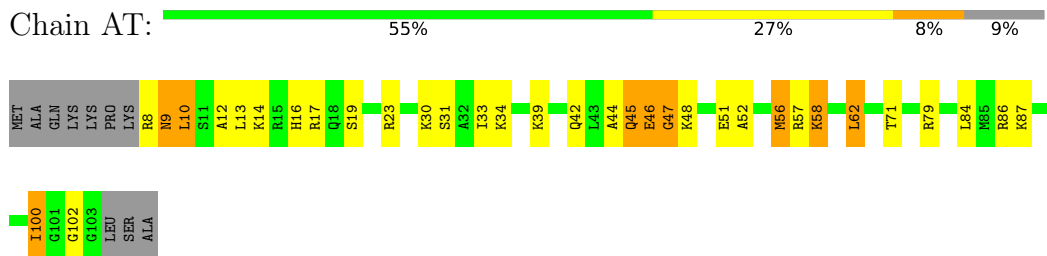
- Molecule 19: 30S Ribosomal Protein S19



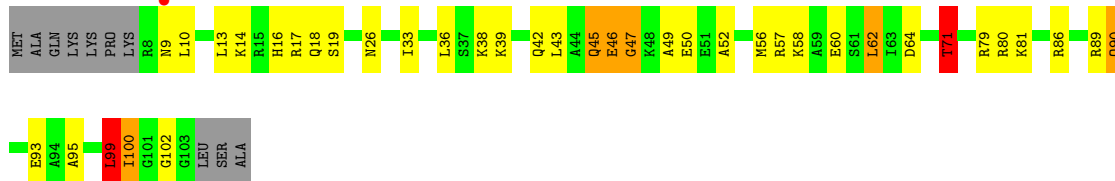
- Molecule 19: 30S Ribosomal Protein S19



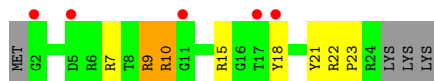
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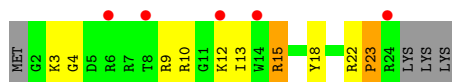
- Molecule 20: 30S Ribosomal Protein S20



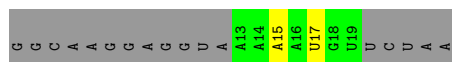
- Molecule 21: 30S Ribosomal Protein THX



- Molecule 21: 30S Ribosomal Protein THX



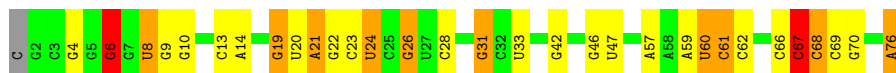
- Molecule 22: mRNA



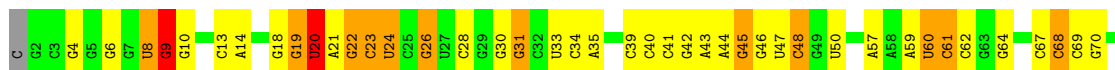
- Molecule 22: mRNA



- Molecule 23: P-site tRNA

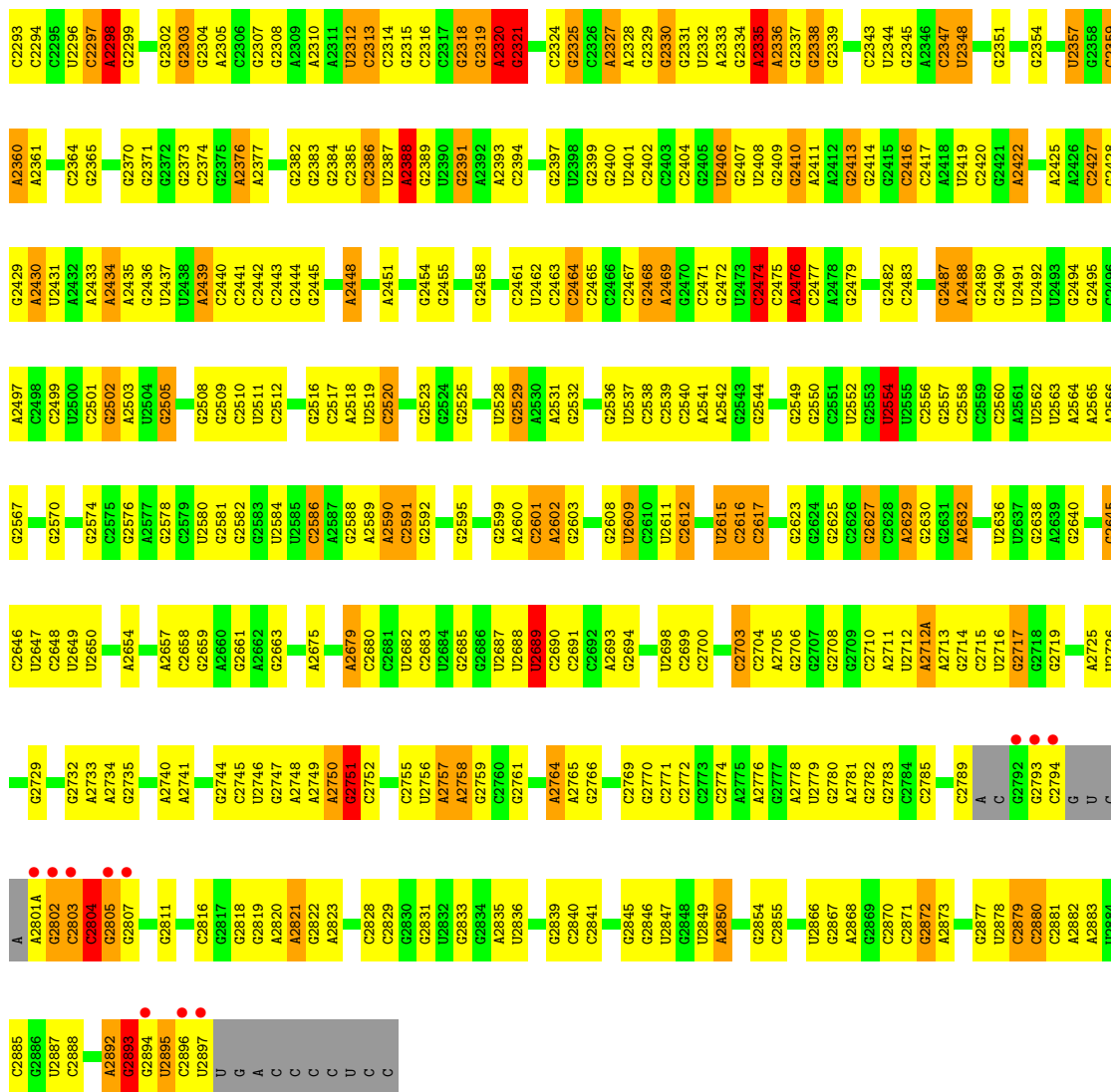


- Molecule 23: P-site tRNA

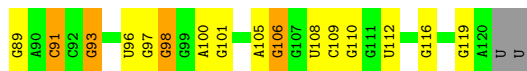
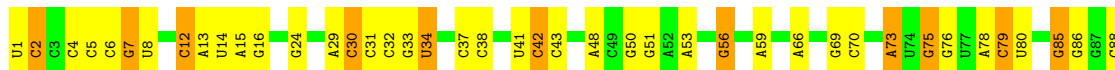


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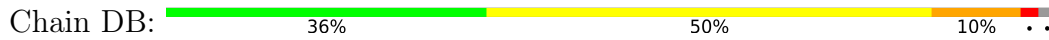
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G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773
G1753	C1794	A1773
C1794	U1739	A1773
U1739	G1741	A1773
G1741	G1746	A1773
G1746	G1753	A1773

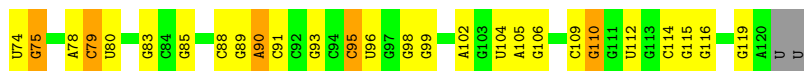


• Molecule 26: 5S Ribosomal RNA

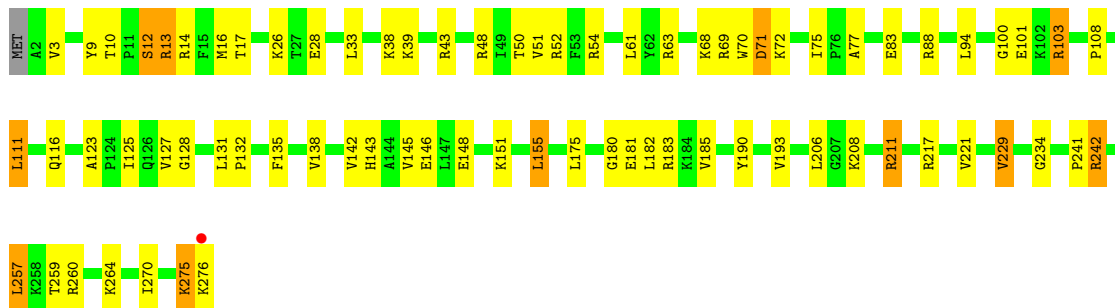


• Molecule 26: 5S Ribosomal RNA

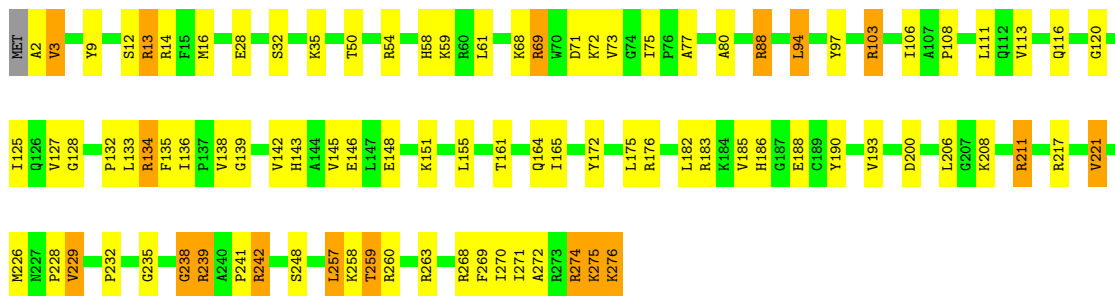




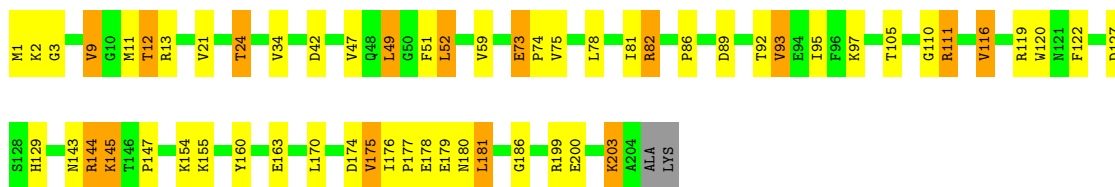
• Molecule 27: 50S Ribosomal Protein L2



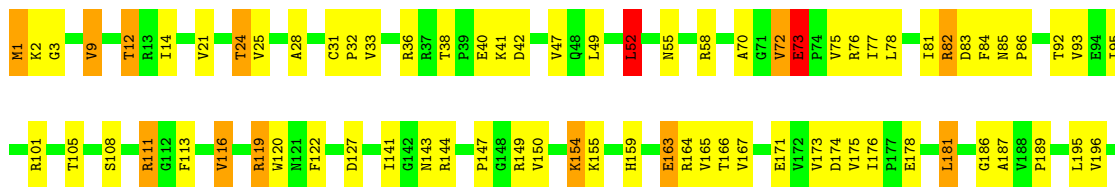
• Molecule 27: 50S Ribosomal Protein L2



• Molecule 28: 50S Ribosomal Protein L3

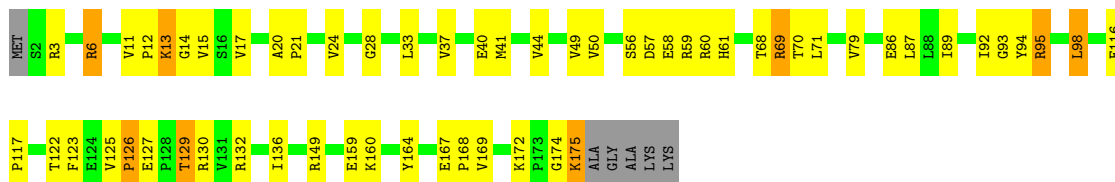


• Molecule 28: 50S Ribosomal Protein L3



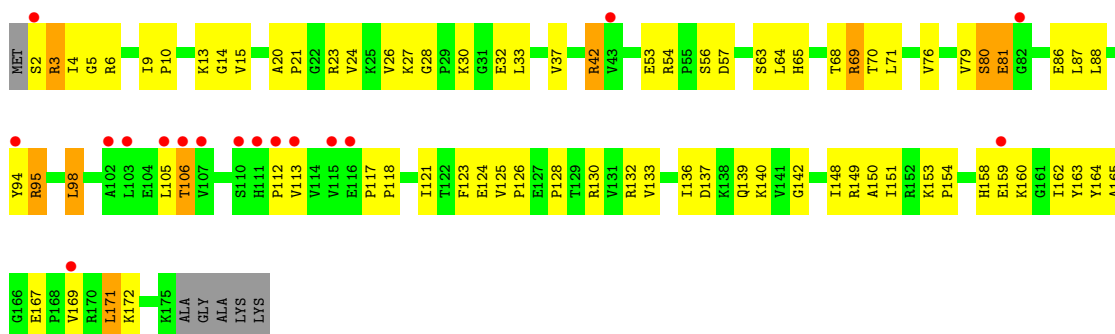
- Molecule 31: 50S Ribosomal Protein L6

Chain BH:  64% 28%



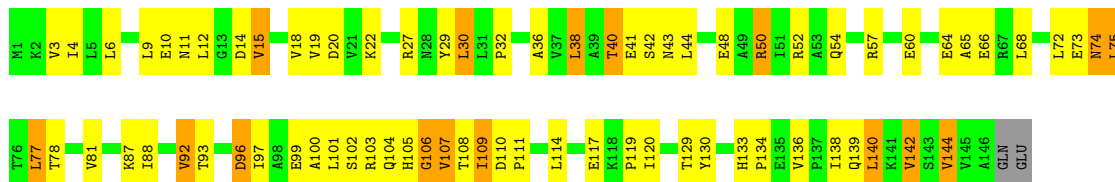
- Molecule 31: 50S Ribosomal Protein L6

Chain DH:  9% 52% 39% 5%



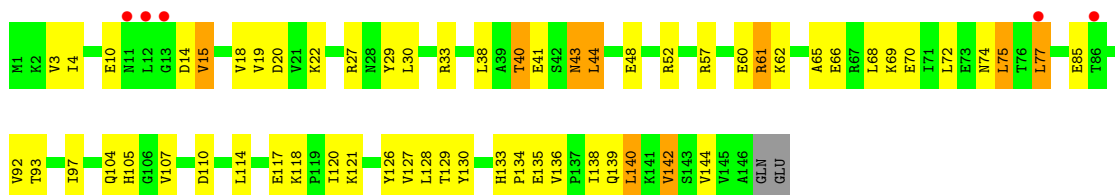
- Molecule 32: 50S Ribosomal Protein L9

Chain BI:  49% 39% 11%




- Molecule 32: 50S Ribosomal Protein L9

Chain DI:  3% 58% 34% 6%

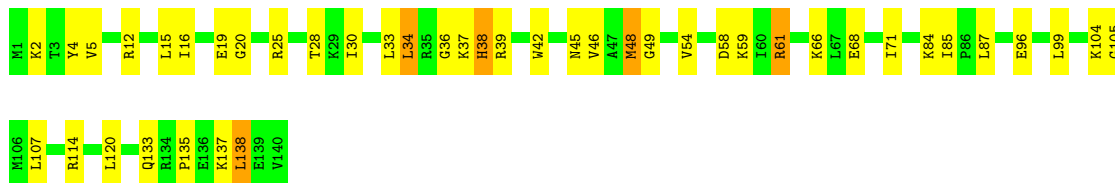


- Molecule 33: 50S Ribosomal Protein L13

Chain BN:  78% 19%



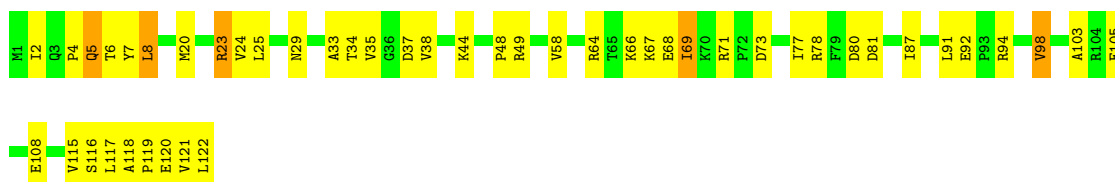
- Molecule 33: 50S Ribosomal Protein L13



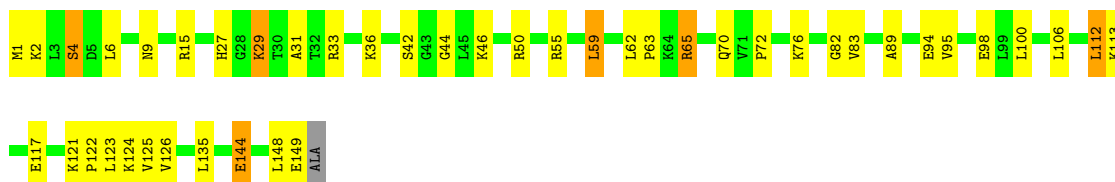
- Molecule 34: 50S Ribosomal Protein L14



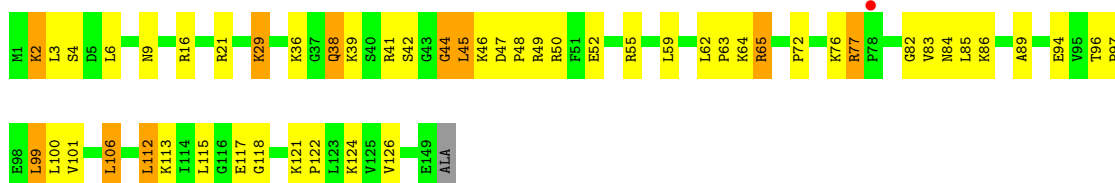
- Molecule 34: 50S Ribosomal Protein L14



- Molecule 35: 50S Ribosomal Protein L15

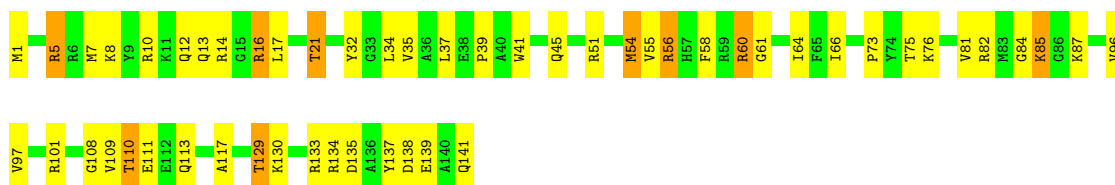


- Molecule 35: 50S Ribosomal Protein L15



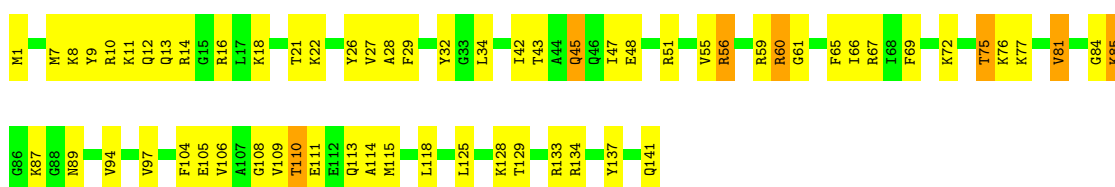
- Molecule 36: 50S Ribosomal Protein L16

Chain BQ: 62% 31% 6%



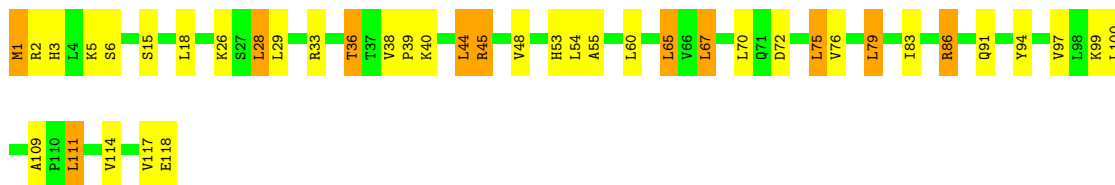
- Molecule 36: 50S Ribosomal Protein L16

Chain DQ: 55% 40% 5%



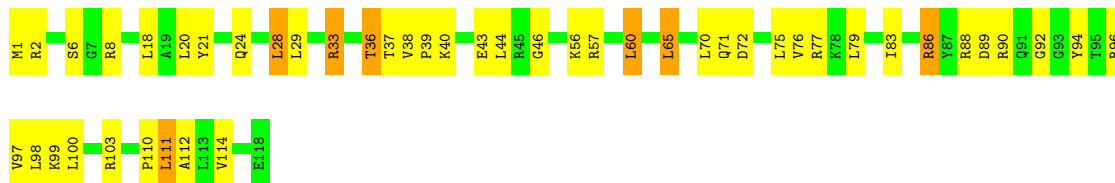
- Molecule 37: 50S Ribosomal Protein L17

Chain BR: 65% 25% 9%



- Molecule 37: 50S Ribosomal Protein L17

Chain DR: 60% 34% 6%



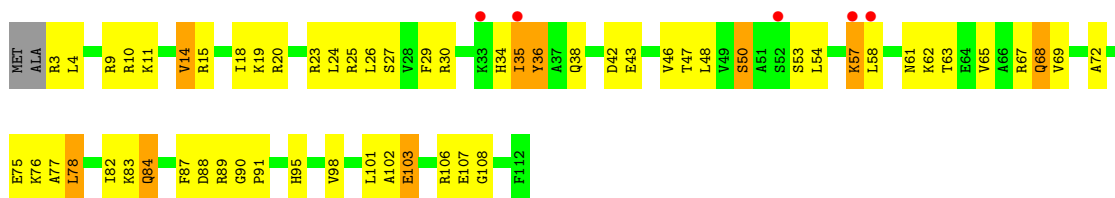
- Molecule 38: 50S Ribosomal Protein L18

Chain BS: 70% 22% 6%



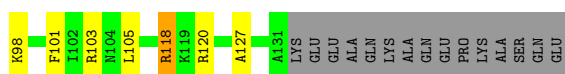
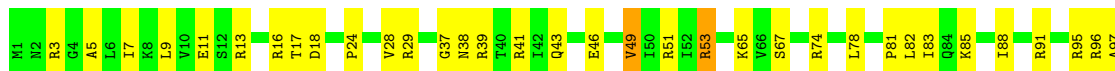
- Molecule 38: 50S Ribosomal Protein L18

Chain DS: 4% 46% 45% 8%



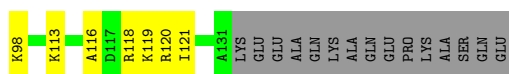
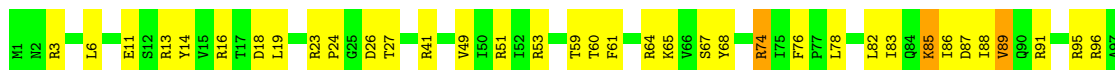
- Molecule 39: 50S Ribosomal Protein L19

Chain BT: 62% 26% 10%



- Molecule 39: 50S Ribosomal Protein L19

Chain DT: 60% 27% 10%



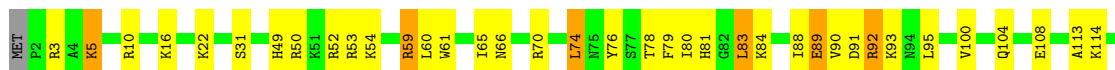
- Molecule 40: 50S Ribosomal Protein L20

Chain BU: 69% 25% 6%



- Molecule 40: 50S Ribosomal Protein L20

Chain DU: 66% 27% 5%

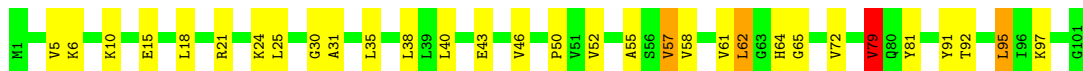


- Molecule 41: 50S Ribosomal Protein L21

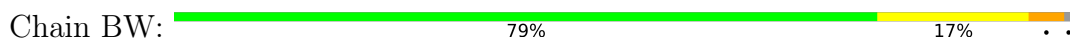
Chain BV: 81% 14% 5%



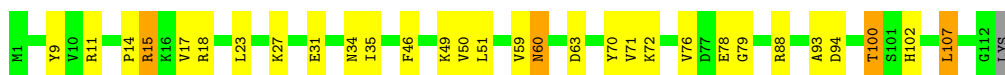
- Molecule 41: 50S Ribosomal Protein L21



- Molecule 42: 50S Ribosomal Protein L22



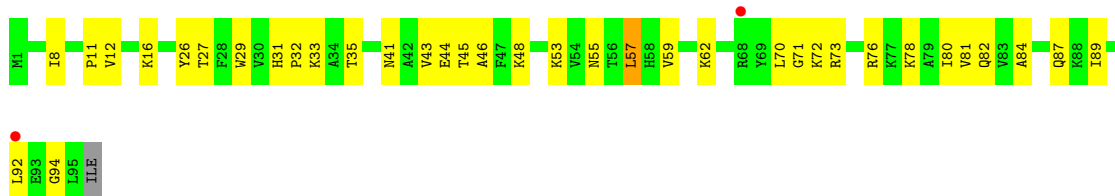
- Molecule 42: 50S Ribosomal Protein L22



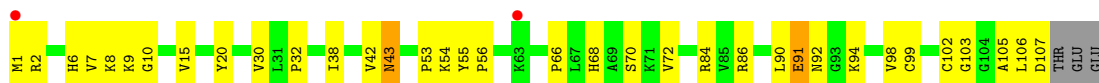
- Molecule 43: 50S Ribosomal Protein L23



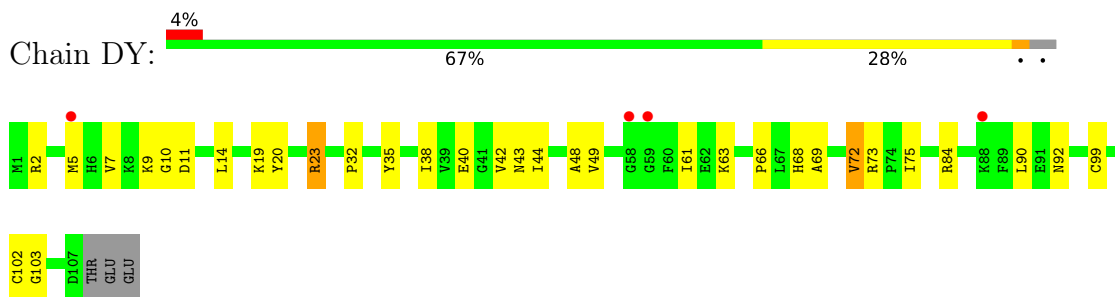
- Molecule 43: 50S Ribosomal Protein L23



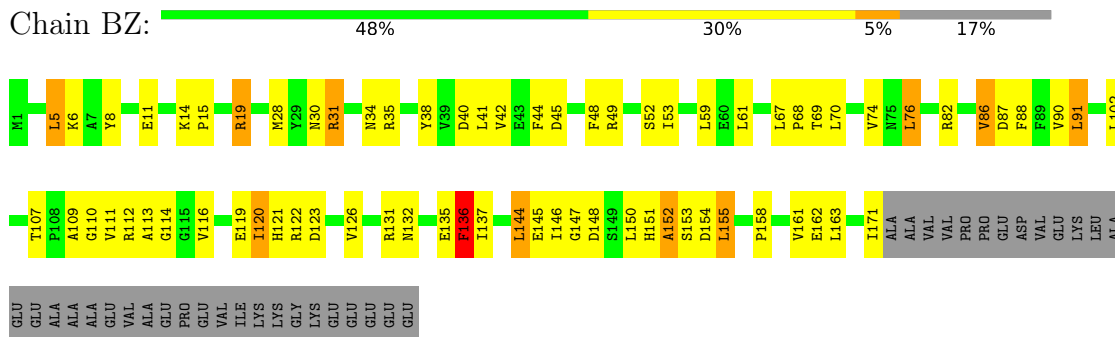
- Molecule 44: 50S Ribosomal Protein L24



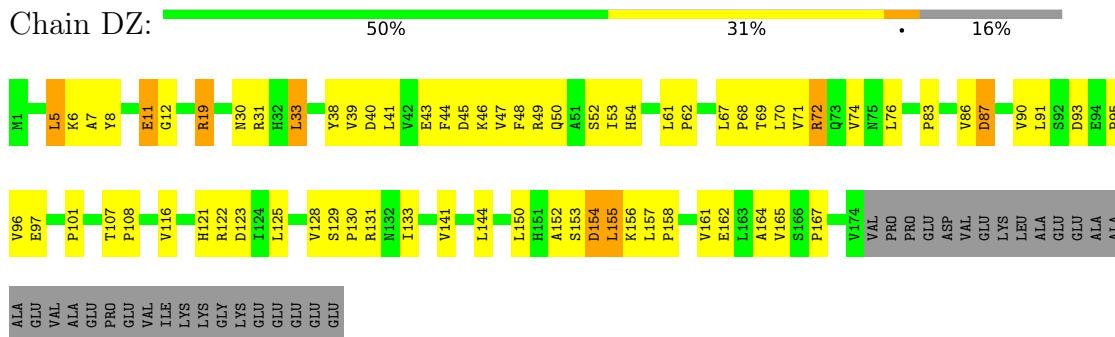
- Molecule 44: 50S Ribosomal Protein L24



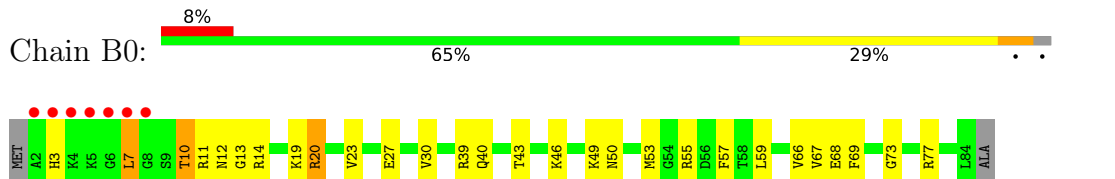
● Molecule 45: 50S Ribosomal Protein L25



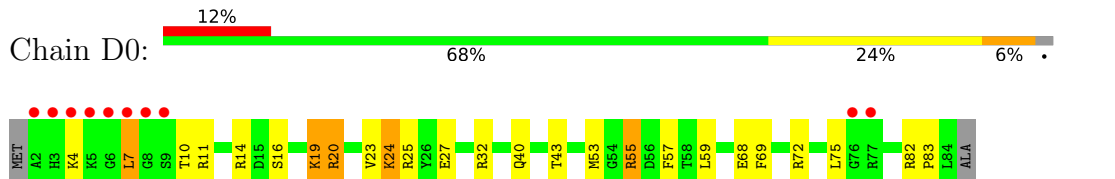
● Molecule 45: 50S Ribosomal Protein L25



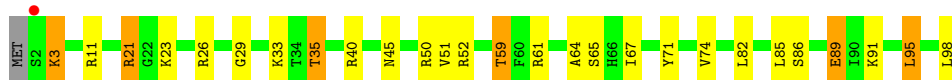
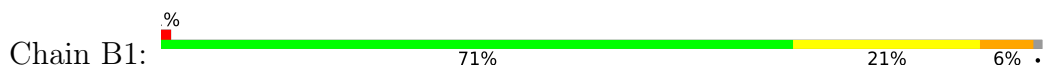
● Molecule 46: 50S Ribosomal Protein L27



● Molecule 46: 50S Ribosomal Protein L27



● Molecule 47: 50S Ribosomal Protein L28



- Molecule 47: 50S Ribosomal Protein L28



- Molecule 48: 50S Ribosomal Protein L29



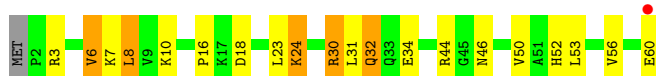
- Molecule 48: 50S Ribosomal Protein L29



- Molecule 49: 50S Ribosomal Protein L30



- Molecule 49: 50S Ribosomal Protein L30



- Molecule 50: 50S Ribosomal Protein L31



- Molecule 50: 50S Ribosomal Protein L31



• Molecule 51: 50S Ribosomal Protein L32



• Molecule 51: 50S Ribosomal Protein L32



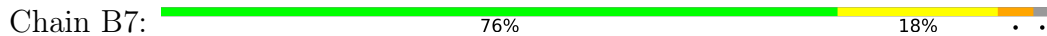
• Molecule 52: 50S Ribosomal Protein L33



• Molecule 52: 50S Ribosomal Protein L33



• Molecule 53: 50S Ribosomal Protein L34



• Molecule 53: 50S Ribosomal Protein L34

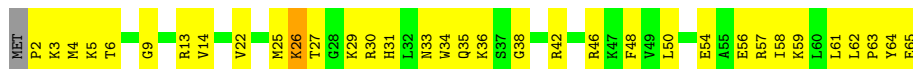


• Molecule 54: 50S Ribosomal Protein L35

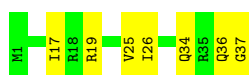
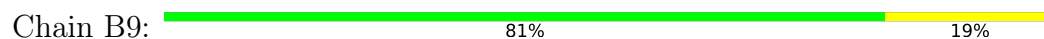




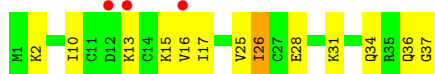
- Molecule 54: 50S Ribosomal Protein L35



- Molecule 55: 50S Ribosomal Protein L36



- Molecule 55: 50S Ribosomal Protein L36



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	209.68Å 450.64Å 622.54Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.68 – 3.10 49.68 – 3.10	Depositor EDS
% Data completeness (in resolution range)	98.2 (49.68-3.10) 98.2 (49.68-3.10)	Depositor EDS
R_{merge}	0.20	Depositor
R_{sym}	0.25	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.32 (at 3.12Å)	Xtrriage
Refinement program	PHENIX 1.8.2_1309	Depositor
R, R_{free}	0.203 , 0.260 0.203 , 0.260	Depositor DCC
R_{free} test set	51894 reflections (5.01%)	wwPDB-VP
Wilson B-factor (Å ²)	71.0	Xtrriage
Anisotropy	0.077	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.29 , 67.2	EDS
L-test for twinning ²	$\langle L \rangle = 0.46$, $\langle L^2 \rangle = 0.28$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	286321	wwPDB-VP
Average B, all atoms (Å ²)	62.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.83% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: 004, 2QY, 2QZ, K, MVA, MG, ZN, 2R3, FME, 2R1, SF4

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	0.75	2/36038 (0.0%)	1.31	240/56244 (0.4%)
1	CA	0.75	10/36170 (0.0%)	1.36	314/56452 (0.6%)
2	AB	0.49	0/1881	0.77	1/2542 (0.0%)
2	CB	0.54	0/1860	0.79	1/2518 (0.0%)
3	AC	0.47	0/1576	0.65	0/2130
3	CC	0.51	0/1566	0.71	2/2119 (0.1%)
4	AD	0.49	0/1689	0.73	0/2267
4	CD	0.49	0/1704	0.70	1/2284 (0.0%)
5	AE	0.47	0/1145	0.70	0/1543
5	CE	0.50	0/1149	0.71	0/1548
6	AF	0.47	0/819	0.69	0/1111
6	CF	0.52	0/829	0.74	1/1123 (0.1%)
7	AG	0.48	0/1250	0.67	1/1679 (0.1%)
7	CG	0.50	0/1254	0.71	1/1683 (0.1%)
8	AH	0.45	0/1108	0.66	0/1494
8	CH	0.48	0/1108	0.69	0/1494
9	AI	0.46	0/1002	0.72	0/1346
9	CI	0.56	0/997	0.75	1/1343 (0.1%)
10	AJ	0.47	0/722	0.68	0/982
10	CJ	0.51	0/727	0.68	0/988
11	AK	0.44	0/844	0.62	0/1145
11	CK	0.46	0/848	0.66	0/1149
12	AL	0.52	0/946	0.69	0/1274
12	CL	0.51	0/946	0.73	0/1274
13	AM	0.46	0/969	0.69	0/1302
13	CM	0.49	0/961	0.66	0/1291
14	AN	0.51	0/501	0.67	0/664
14	CN	0.54	0/501	0.68	0/664
15	AO	0.47	0/739	0.72	0/985
15	CO	0.46	0/739	0.73	0/985
16	AP	0.45	0/697	0.71	0/939
16	CP	0.47	0/693	0.65	0/935

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AQ	0.48	0/836	0.66	0/1117
17	CQ	0.49	0/836	0.68	0/1117
18	AR	0.49	0/560	0.72	0/746
18	CR	0.51	0/560	0.75	1/746 (0.1%)
19	AS	0.47	0/667	0.68	0/900
19	CS	0.54	0/661	0.82	2/893 (0.2%)
20	AT	0.51	0/730	0.76	0/965
20	CT	0.44	0/729	0.68	0/965
21	AU	0.45	0/203	0.65	0/266
21	CU	0.51	0/203	0.68	0/266
22	AV	0.94	0/127	1.36	2/198 (1.0%)
22	CV	0.86	0/126	1.29	0/195
23	AX	0.85	5/1813 (0.3%)	1.59	36/2825 (1.3%)
23	CX	0.88	4/1813 (0.2%)	1.81	40/2825 (1.4%)
24	AW	0.50	0/20	0.80	0/23
24	CW	0.43	0/20	0.70	0/23
25	BA	1.06	33/65892 (0.1%)	1.42	649/102850 (0.6%)
25	DA	0.79	9/65466 (0.0%)	1.39	590/102184 (0.6%)
26	BB	0.82	0/2878	1.26	11/4490 (0.2%)
26	DB	0.89	0/2878	1.39	18/4490 (0.4%)
27	BD	0.67	1/2186 (0.0%)	0.78	1/2944 (0.0%)
27	DD	0.61	2/2186 (0.1%)	0.77	1/2944 (0.0%)
28	BE	0.69	0/1592	0.75	0/2149
28	DE	0.55	0/1592	0.77	1/2149 (0.0%)
29	BF	0.69	0/1619	0.76	0/2193
29	DF	0.53	0/1615	0.77	1/2188 (0.0%)
30	BG	0.46	0/1450	0.70	0/1959
30	DG	0.55	0/1449	0.74	0/1958
31	BH	0.60	0/1356	0.70	0/1834
31	DH	0.56	0/1356	0.70	0/1834
32	BI	0.49	0/1100	0.74	1/1501 (0.1%)
32	DI	0.48	0/1076	0.77	0/1471
33	BN	0.65	0/1144	0.73	0/1543
33	DN	0.50	0/1144	0.72	0/1543
34	BO	0.65	0/943	0.73	1/1269 (0.1%)
34	DO	0.54	0/943	0.73	1/1269 (0.1%)
35	BP	0.62	0/1152	0.77	0/1533
35	DP	0.53	0/1152	0.80	1/1533 (0.1%)
36	BQ	0.64	0/1143	0.76	0/1527
36	DQ	0.60	0/1143	0.79	0/1527
37	BR	0.59	0/982	0.78	0/1312
37	DR	0.49	0/982	0.71	0/1312
38	BS	0.54	0/887	0.77	0/1180

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	DS	0.47	0/880	0.72	0/1172
39	BT	0.59	0/1105	0.79	1/1477 (0.1%)
39	DT	0.50	0/1097	0.72	0/1468
40	BU	0.71	1/977 (0.1%)	0.73	0/1301
40	DU	0.54	0/977	0.71	1/1301 (0.1%)
41	BV	0.68	0/782	0.74	1/1049 (0.1%)
41	DV	0.55	0/782	0.71	0/1049
42	BW	0.74	0/897	0.74	0/1205
42	DW	0.56	0/897	0.72	0/1205
43	BX	0.66	0/764	0.96	3/1025 (0.3%)
43	DX	0.55	0/764	0.75	1/1025 (0.1%)
44	BY	0.64	0/819	0.78	0/1095
44	DY	0.54	0/819	0.74	0/1095
45	BZ	0.56	0/1379	0.75	0/1873
45	DZ	0.53	0/1390	0.71	0/1890
46	B0	0.63	0/662	0.81	2/881 (0.2%)
46	D0	0.54	0/662	0.73	0/881
47	B1	0.61	0/762	0.74	0/1014
47	D1	0.51	0/762	0.75	1/1014 (0.1%)
48	B2	0.61	0/590	0.79	0/781
48	D2	0.48	0/590	0.66	0/781
49	B3	0.70	0/474	0.76	0/635
49	D3	0.45	0/469	0.67	0/630
50	B4	0.58	0/564	0.79	0/759
50	D4	0.59	0/544	0.86	1/735 (0.1%)
51	B5	0.66	0/469	0.78	0/635
51	D5	0.53	0/469	0.74	1/635 (0.2%)
52	B6	0.67	0/460	0.64	0/613
52	D6	0.53	0/456	0.70	0/608
53	B7	0.79	0/426	0.78	0/561
53	D7	0.62	0/426	0.76	1/561 (0.2%)
54	B8	0.70	0/519	0.71	0/684
54	D8	0.55	0/525	0.75	0/691
55	B9	0.69	0/310	0.76	0/407
55	D9	0.60	0/310	0.79	0/407
All	All	0.79	67/305966 (0.0%)	1.24	1933/457396 (0.4%)

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	3
4	CD	0	1
7	AG	0	1
23	CX	1	0
24	AW	0	1
24	CW	0	1
27	DD	0	1
38	BS	0	1
45	BZ	0	1
50	B4	0	1
All	All	1	11

All (67) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	AX	76	A	N7-C5	-11.16	1.32	1.39
1	CA	1154	G	C6-N1	-11.02	1.31	1.39
1	CA	1154	G	N1-C2	-10.69	1.29	1.37
25	BA	1188	A	N9-C4	-10.29	1.31	1.37
1	CA	1119	C	N3-C4	-10.20	1.26	1.33
25	BA	2299	A	N9-C4	-9.27	1.32	1.37
23	CX	76	A	N7-C5	-8.97	1.33	1.39
25	BA	1067	A	N9-C4	-8.63	1.32	1.37
23	CX	76	A	C5-C6	-8.11	1.33	1.41
25	DA	528	A	N9-C4	-7.89	1.33	1.37
1	CA	1492	A	N9-C4	7.83	1.42	1.37
25	BA	1222	A	N9-C4	7.65	1.42	1.37
23	AX	76	A	C5-C6	-7.63	1.34	1.41
1	CA	1154	G	N7-C5	-7.45	1.34	1.39
25	BA	1234	A	N9-C4	-6.96	1.33	1.37
23	CX	76	A	C5-C4	-6.68	1.34	1.38
25	BA	1188	A	N3-C4	-6.67	1.30	1.34
25	DA	2287	A	N9-C4	-6.63	1.33	1.37
40	BU	69	CYS	CB-SG	-6.61	1.71	1.82
25	BA	2601	A	N9-C4	-6.59	1.33	1.37
25	DA	2207	G	N7-C5	-6.42	1.35	1.39
23	AX	22	G	N7-C5	6.40	1.43	1.39
27	DD	28	GLU	CG-CD	6.36	1.61	1.51
25	BA	1605	A	N9-C4	-6.13	1.34	1.37
25	BA	2444	A	C5-C6	-6.13	1.35	1.41
1	CA	1154	G	C5-C4	6.05	1.42	1.38
25	DA	1142(A)	A	N9-C4	-6.03	1.34	1.37
25	DA	2320	A	N9-C4	6.01	1.41	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	DA	2725	A	N9-C4	-5.99	1.34	1.37
1	CA	1154	G	N9-C4	5.94	1.42	1.38
23	AX	46	G	C6-N1	5.78	1.43	1.39
25	BA	978	A	N9-C4	-5.77	1.34	1.37
25	BA	657	A	N9-C4	-5.77	1.34	1.37
25	BA	178	G	N7-C5	-5.64	1.35	1.39
1	CA	1119	C	N1-C2	5.58	1.45	1.40
25	BA	1425	A	N9-C4	-5.57	1.34	1.37
25	BA	354	A	N9-C4	-5.49	1.34	1.37
25	BA	2527	C	N1-C6	-5.48	1.33	1.37
25	BA	552	C	N3-C4	-5.46	1.30	1.33
25	BA	782	A	N3-C4	-5.42	1.31	1.34
25	DA	530	G	N9-C8	5.42	1.41	1.37
25	BA	506	A	N7-C5	-5.42	1.36	1.39
1	CA	1154	G	C8-N7	-5.40	1.27	1.30
25	BA	2803	A	N9-C4	5.38	1.41	1.37
25	BA	1153	G	N9-C4	5.35	1.42	1.38
25	BA	2509	A	N3-C4	-5.31	1.31	1.34
25	BA	2039	U	C2-N3	-5.30	1.34	1.37
1	AA	1124	G	N9-C4	5.29	1.42	1.38
23	CX	22	G	N7-C5	5.27	1.42	1.39
1	AA	1531	A	N9-C4	5.25	1.41	1.37
27	DD	28	GLU	CB-CG	5.21	1.62	1.52
25	BA	840	A	N7-C5	-5.21	1.36	1.39
25	BA	1234	A	N3-C4	-5.20	1.31	1.34
25	DA	2599	G	C6-N1	-5.20	1.35	1.39
25	BA	840	A	C5-C6	-5.18	1.36	1.41
25	BA	1076	G	C6-N1	-5.17	1.35	1.39
25	DA	784	A	N9-C4	-5.17	1.34	1.37
25	BA	186	A	N3-C4	-5.17	1.31	1.34
1	CA	998	G	N7-C5	5.16	1.42	1.39
25	BA	781	A	N9-C4	-5.16	1.34	1.37
25	BA	1818	A	C6-N1	-5.04	1.32	1.35
27	BD	28	GLU	CG-CD	5.04	1.59	1.51
25	BA	1030	A	N9-C4	-5.02	1.34	1.37
25	BA	990	A	N9-C4	-5.02	1.34	1.37
25	BA	2598	C	N1-C6	-5.02	1.34	1.37
23	AX	14	A	N7-C5	-5.01	1.36	1.39
25	BA	2080	A	N3-C4	-5.01	1.31	1.34

All (1933) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	CX	76	A	O4'-C1'-N9	38.71	139.17	108.20
1	CA	1119	C	N1-C2-O2	32.56	138.44	118.90
1	CA	1154	G	C5-C6-O6	28.63	145.78	128.60
1	CA	1154	G	N3-C2-N2	25.05	137.43	119.90
1	CA	1154	G	N1-C2-N2	-22.71	95.76	116.20
1	CA	1119	C	N3-C2-O2	-21.96	106.53	121.90
23	CX	76	A	C2-N3-C4	19.79	120.49	110.60
23	CX	76	A	N1-C2-N3	-19.05	119.78	129.30
23	AX	76	A	C2-N3-C4	18.48	119.84	110.60
23	AX	76	A	N1-C2-N3	-17.90	120.35	129.30
1	CA	1119	C	C2-N3-C4	17.09	128.45	119.90
1	CA	1154	G	C5-C6-N1	-17.07	102.97	111.50
1	CA	1119	C	C2-N1-C1'	16.03	136.44	118.80
43	BX	65	ARG	NE-CZ-NH2	15.41	128.00	120.30
23	AX	76	A	O4'-C1'-N9	15.35	120.48	108.20
1	CA	1154	G	C6-N1-C2	14.89	134.03	125.10
23	AX	8	U	C2-N3-C4	14.86	135.91	127.00
1	CA	1119	C	C5-C4-N4	14.60	130.42	120.20
1	CA	1154	G	N1-C6-O6	-14.49	111.20	119.90
25	BA	1067	A	C2-N3-C4	-14.43	103.38	110.60
1	CA	999	C	N1-C2-O2	13.32	126.89	118.90
1	CA	1154	G	C4-N9-C1'	12.75	143.07	126.50
25	DA	528	A	C2-N3-C4	-12.60	104.30	110.60
25	BA	2058	C	O5'-P-OP1	-12.50	94.45	105.70
23	CX	8	U	C2-N3-C4	12.28	134.37	127.00
1	CA	1119	C	N3-C4-N4	-12.22	109.45	118.00
1	CA	1119	C	C6-N1-C2	-12.18	115.43	120.30
25	BA	139	A	N7-C8-N9	12.11	119.86	113.80
25	DA	945	A	N1-C6-N6	11.58	125.55	118.60
25	BA	139	A	C5-N7-C8	-11.57	98.12	103.90
1	CA	1119	C	C6-N1-C1'	-11.45	107.07	120.80
43	BX	65	ARG	NE-CZ-NH1	-11.42	114.59	120.30
1	CA	1154	G	C8-N9-C1'	-11.28	112.34	127.00
25	BA	1188	A	C2-N3-C4	-11.10	105.05	110.60
1	AA	1125	U	N1-C2-O2	11.09	130.56	122.80
23	CX	76	A	N3-C4-C5	-10.90	119.17	126.80
23	CX	8	U	C5-C6-N1	10.69	128.04	122.70
26	BB	91	C	C6-N1-C2	10.59	124.53	120.30
23	AX	46	G	C6-N1-C2	-10.39	118.86	125.10
1	CA	1004	A	O4'-C1'-N9	10.33	116.47	108.20
25	BA	990	A	C5-N7-C8	-10.27	98.77	103.90
25	BA	1098	C	C6-N1-C2	-10.25	116.20	120.30
23	CX	76	A	C5-N7-C8	10.25	109.02	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	2835	C	O5'-P-OP1	-10.24	96.48	105.70
23	CX	76	A	N7-C8-N9	-10.24	108.68	113.80
23	AX	76	A	N7-C8-N9	-10.15	108.72	113.80
1	AA	1125	U	N1-C2-N3	-10.09	108.85	114.90
25	DA	856	C	C6-N1-C2	-10.03	116.29	120.30
25	BA	201	G	O5'-P-OP2	-9.99	96.71	105.70
23	CX	46	G	C6-N1-C2	-9.84	119.20	125.10
1	CA	1119	C	C5-C6-N1	9.74	125.87	121.00
25	DA	1698	A	N1-C6-N6	9.70	124.42	118.60
1	CA	927	G	C5-C6-O6	9.70	134.42	128.60
25	DA	205	G	C8-N9-C4	9.64	110.26	106.40
25	BA	990	A	C2-N3-C4	-9.64	105.78	110.60
25	BA	1067	A	C5-N7-C8	-9.61	99.10	103.90
1	CA	1154	G	C5-N7-C8	9.58	109.09	104.30
25	DA	2084	C	C6-N1-C2	9.51	124.10	120.30
23	AX	76	A	C5-N7-C8	9.49	108.64	103.90
25	DA	1823	G	O5'-P-OP2	-9.46	97.19	105.70
25	BA	724	A	O5'-P-OP2	-9.43	97.22	105.70
25	BA	1440	U	O5'-P-OP1	-9.40	97.24	105.70
25	BA	1020	C	C6-N1-C2	9.38	124.05	120.30
25	BA	607	C	C6-N1-C2	9.38	124.05	120.30
25	BA	537	G	O4'-C1'-N9	9.35	115.68	108.20
25	DA	1021	A	C2-N3-C4	-9.26	105.97	110.60
23	AX	8	U	C5-C4-O4	9.26	131.45	125.90
23	AX	14	A	C5-N7-C8	9.19	108.49	103.90
25	BA	2299	A	C2-N3-C4	-9.15	106.03	110.60
1	AA	1127	G	N3-C4-N9	9.14	131.48	126.00
23	AX	22	G	C5-N7-C8	-9.09	99.76	104.30
25	DA	2253	G	N1-C6-O6	9.03	125.32	119.90
23	CX	22	G	C5-N7-C8	-9.03	99.79	104.30
25	BA	1225	C	C6-N1-C2	8.99	123.89	120.30
25	DA	2503	A	C5-C6-N6	-8.97	116.52	123.70
25	BA	354	A	C2-N3-C4	-8.94	106.13	110.60
25	BA	139	A	C8-N9-C4	-8.93	102.23	105.80
26	DB	115	G	C8-N9-C4	8.93	109.97	106.40
25	DA	2207	G	C6-C5-N7	-8.92	125.05	130.40
25	BA	1216	G	C8-N9-C4	-8.90	102.84	106.40
25	DA	915	C	C6-N1-C2	-8.87	116.75	120.30
23	AX	14	A	C4-C5-C6	8.85	121.42	117.00
25	DA	1269	A	N1-C6-N6	8.84	123.91	118.60
23	AX	76	A	N3-C4-C5	-8.83	120.62	126.80
25	DA	1204	A	C2-N3-C4	-8.80	106.20	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	934	A	O4'-C1'-N9	8.80	115.24	108.20
25	DA	970	C	N1-C2-O2	-8.78	113.63	118.90
1	CA	1154	G	C4-C5-C6	8.76	124.06	118.80
25	DA	2804	C	C6-N1-C2	-8.75	116.80	120.30
25	DA	1698	A	C6-C5-N7	-8.74	126.18	132.30
25	BA	930	G	O4'-C1'-N9	8.72	115.18	108.20
25	DA	2188	C	C6-N1-C2	-8.68	116.83	120.30
25	DA	1698	A	C2-N3-C4	-8.66	106.27	110.60
1	AA	1030(B)	C	C2-N1-C1'	8.62	128.28	118.80
25	DA	530	G	C8-N9-C4	-8.62	102.95	106.40
25	BA	1686	U	O5'-P-OP2	-8.60	97.96	105.70
1	CA	1003	G	N3-C4-C5	-8.57	124.32	128.60
25	BA	1314	A	C8-N9-C4	8.55	109.22	105.80
25	BA	1067	A	N3-C4-C5	8.55	132.79	126.80
1	AA	1036	G	C4-N9-C1'	8.55	137.61	126.50
23	CX	46	G	N3-C2-N2	-8.53	113.93	119.90
25	BA	2105	G	C5-C6-O6	-8.49	123.51	128.60
1	CA	1260	C	C6-N1-C2	-8.48	116.91	120.30
25	BA	507	G	O4'-C1'-N9	8.45	114.96	108.20
1	AA	166	G	C8-N9-C4	-8.43	103.03	106.40
25	BA	1665	G	O5'-P-OP2	-8.41	98.13	105.70
7	CG	22	LEU	CA-CB-CG	8.39	134.60	115.30
25	DA	1791	A	O5'-P-OP1	-8.39	98.15	105.70
1	CA	998	G	C6-C5-N7	8.37	135.42	130.40
1	CA	1154	G	C2-N3-C4	-8.36	107.72	111.90
25	BA	2630	G	N3-C4-C5	-8.35	124.42	128.60
25	DA	249	C	C6-N1-C2	8.34	123.64	120.30
25	DA	1489	U	N3-C2-O2	-8.34	116.36	122.20
23	AX	46	G	C5-C6-N1	8.31	115.66	111.50
1	CA	999	C	N3-C2-O2	-8.30	116.09	121.90
25	BA	1188	A	O5'-P-OP1	-8.29	98.24	105.70
25	DA	945	A	C2-N3-C4	-8.29	106.46	110.60
25	DA	528	A	N1-C2-N3	8.27	133.44	129.30
25	BA	837	C	O5'-P-OP2	-8.27	98.26	105.70
25	BA	1067	A	C5-C6-N1	-8.27	113.57	117.70
1	CA	1122	U	C2-N1-C1'	8.26	127.61	117.70
25	DA	1937	A	N1-C6-N6	8.26	123.56	118.60
25	DA	1284	A	N1-C6-N6	8.25	123.55	118.60
1	CA	1154	G	N3-C4-C5	-8.24	124.48	128.60
25	BA	2701	U	P-O3'-C3'	8.23	129.58	119.70
25	BA	1072	U	N1-C2-O2	8.23	128.56	122.80
25	BA	2830	A	N1-C6-N6	8.23	123.54	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	945	A	C6-C5-N7	-8.23	126.54	132.30
25	BA	194	G	C8-N9-C4	8.22	109.69	106.40
1	CA	1154	G	C4-C5-N7	-8.21	107.52	110.80
25	DA	37	C	C6-N1-C2	8.19	123.58	120.30
25	DA	1489	U	C2-N1-C1'	8.19	127.53	117.70
1	CA	1311	G	N3-C4-N9	-8.19	121.09	126.00
25	BA	553	A	C2-N3-C4	-8.18	106.51	110.60
1	CA	841	U	C5-C6-N1	8.18	126.79	122.70
25	BA	2298	A	N1-C2-N3	8.18	133.39	129.30
25	BA	1985	U	C2-N1-C1'	8.17	127.50	117.70
1	CA	1012	U	N1-C2-O2	-8.17	117.08	122.80
25	DA	2039	C	C6-N1-C2	-8.16	117.04	120.30
1	AA	1036	G	C8-N9-C1'	-8.15	116.41	127.00
23	AX	8	U	N1-C2-N3	-8.15	110.01	114.90
25	BA	990	A	C4-C5-N7	8.10	114.75	110.70
1	CA	1396	A	O5'-P-OP1	-8.10	98.42	105.70
25	DA	933	A	C5-N7-C8	-8.09	99.86	103.90
25	DA	1380	G	O5'-P-OP2	-8.08	98.43	105.70
25	DA	1786	A	O4'-C1'-N9	8.07	114.66	108.20
25	DA	249	C	O5'-P-OP2	-8.07	98.44	105.70
1	AA	896	C	C6-N1-C2	8.01	123.50	120.30
25	DA	1284	A	O5'-P-OP2	-8.01	98.49	105.70
25	BA	2331	G	N3-C4-C5	8.00	132.60	128.60
25	BA	133	G	N3-C4-C5	8.00	132.60	128.60
25	DA	945	A	C4-C5-N7	8.00	114.70	110.70
25	BA	254	A	N7-C8-N9	7.99	117.80	113.80
25	BA	1700	G	P-O3'-C3'	7.98	129.28	119.70
25	BA	1216	G	N7-C8-N9	7.98	117.09	113.10
25	DA	2503	A	N1-C6-N6	7.97	123.39	118.60
1	CA	1037	C	C6-N1-C2	-7.97	117.11	120.30
25	DA	330	A	C2-N3-C4	-7.96	106.62	110.60
25	BA	552	C	N3-C2-O2	-7.96	116.33	121.90
25	BA	254	A	C8-N9-C4	-7.96	102.62	105.80
1	CA	1141	C	C2-N1-C1'	-7.96	110.05	118.80
25	BA	2331	G	C2-N3-C4	-7.94	107.93	111.90
25	BA	2835	C	N1-C2-O2	-7.88	114.17	118.90
23	CX	39	C	C6-N1-C2	-7.88	117.15	120.30
25	BA	288	U	O4'-C1'-N1	7.87	114.50	108.20
25	BA	12	U	N3-C2-O2	-7.86	116.70	122.20
25	DA	898	C	C5-C6-N1	7.86	124.93	121.00
25	BA	2725	A	O5'-P-OP1	-7.85	98.64	105.70
25	BA	2830	A	C4-C5-N7	7.85	114.62	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	1236	G	O5'-P-OP1	-7.85	98.64	105.70
1	CA	1149	C	C6-N1-C2	-7.84	117.16	120.30
25	DA	1934	C	C6-N1-C2	7.84	123.44	120.30
1	AA	193	C	C5-C6-N1	7.84	124.92	121.00
1	AA	1125	U	C2-N3-C4	7.84	131.70	127.00
23	AX	8	U	N1-C2-O2	7.83	128.28	122.80
23	CX	14	A	C5-N7-C8	7.79	107.79	103.90
25	DA	1640	C	N1-C2-O2	7.78	123.56	118.90
25	BA	2734	A	O5'-P-OP1	-7.77	98.71	105.70
25	BA	978	A	C5-N7-C8	-7.77	100.02	103.90
1	AA	1030(B)	C	N1-C2-O2	7.76	123.56	118.90
25	DA	2207	G	N1-C6-O6	7.76	124.56	119.90
25	BA	733	G	C5-C6-O6	-7.76	123.94	128.60
25	BA	2265	G	N1-C6-O6	7.76	124.55	119.90
1	AA	1530	G	N1-C6-O6	7.73	124.54	119.90
1	AA	1158	C	C4-C5-C6	7.71	121.25	117.40
1	CA	1017	G	C6-N1-C2	7.71	129.72	125.10
1	CA	1183	A	P-O3'-C3'	7.71	128.95	119.70
25	BA	2876	U	C5-C6-N1	-7.70	118.85	122.70
34	DO	8	LEU	CA-CB-CG	7.69	132.98	115.30
1	CA	1484	C	C6-N1-C2	7.67	123.37	120.30
25	BA	2830	A	N9-C4-C5	-7.67	102.73	105.80
1	AA	1131	G	C6-C5-N7	-7.65	125.81	130.40
25	DA	1372	U	C5-C4-O4	-7.64	121.32	125.90
25	DA	735	A	C8-N9-C4	7.64	108.85	105.80
25	DA	912	C	C6-N1-C2	-7.63	117.25	120.30
25	BA	961	C	N1-C2-O2	7.63	123.48	118.90
25	BA	484	G	N9-C4-C5	7.62	108.45	105.40
25	BA	1188	A	N3-C4-C5	7.62	132.14	126.80
25	BA	990	A	N7-C8-N9	7.62	117.61	113.80
25	DA	1118	C	C6-N1-C2	-7.62	117.25	120.30
1	CA	1133	G	C5-C6-O6	7.61	133.17	128.60
25	DA	2273	A	C8-N9-C4	7.61	108.84	105.80
25	DA	1703	G	N1-C6-O6	7.61	124.46	119.90
25	BA	2607	G	O5'-P-OP1	-7.61	98.86	105.70
1	CA	1033	G	N9-C4-C5	-7.59	102.36	105.40
25	DA	448	U	O5'-P-OP1	-7.59	98.87	105.70
25	BA	1067	A	N3-C4-N9	-7.58	121.33	127.40
25	DA	948	G	N3-C4-C5	7.58	132.39	128.60
25	BA	2250	G	O5'-P-OP1	-7.57	98.89	105.70
25	BA	139	A	C4-C5-N7	7.56	114.48	110.70
25	BA	990	A	C6-C5-N7	-7.56	127.01	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	CX	76	A	N9-C4-C5	7.55	108.82	105.80
25	BA	1327	G	N1-C6-O6	7.54	124.42	119.90
25	BA	2092	G	N9-C4-C5	-7.51	102.40	105.40
1	CA	299	G	N1-C6-O6	7.50	124.40	119.90
25	BA	1222	A	C8-N9-C4	-7.49	102.80	105.80
1	CA	998	G	N1-C6-O6	-7.49	115.41	119.90
25	BA	1719	C	N3-C4-C5	-7.48	118.91	121.90
25	BA	2608	U	C5-C6-N1	-7.48	118.96	122.70
25	BA	1067	A	N1-C6-N6	7.48	123.09	118.60
1	AA	1137	C	C6-N1-C2	-7.48	117.31	120.30
25	DA	573	G	N1-C6-O6	-7.48	115.41	119.90
1	AA	188	C	C6-N1-C2	-7.47	117.31	120.30
25	DA	1372	U	N3-C4-O4	7.47	124.63	119.40
1	CA	927	G	N1-C6-O6	-7.47	115.42	119.90
1	CA	1054	C	C2-N1-C1'	7.45	127.00	118.80
25	BA	1093	G	N3-C4-C5	-7.44	124.88	128.60
26	DB	6	C	C6-N1-C2	7.43	123.27	120.30
25	BA	1800	G	N1-C6-O6	7.43	124.36	119.90
25	BA	2015	U	O5'-P-OP1	-7.43	99.01	105.70
1	AA	476	G	O4'-C1'-N9	7.43	114.14	108.20
25	DA	1489	U	N1-C2-O2	7.43	128.00	122.80
23	CX	76	A	C4-C5-N7	-7.42	106.99	110.70
25	BA	1153	G	N3-C4-C5	-7.42	124.89	128.60
25	BA	2262	G	O5'-P-OP2	-7.41	99.03	105.70
25	DA	2253	G	C4-C5-N7	7.40	113.76	110.80
1	AA	1124	G	C8-N9-C4	-7.40	103.44	106.40
25	BA	1093	G	N3-C4-N9	7.40	130.44	126.00
23	AX	22	G	N3-C4-N9	-7.40	121.56	126.00
25	BA	215	G	O4'-C1'-N9	7.39	114.11	108.20
23	AX	76	A	C5-C6-N1	7.39	121.39	117.70
25	BA	2081	A	C8-N9-C4	7.39	108.75	105.80
25	DA	1404	C	O5'-P-OP2	-7.38	99.06	105.70
1	CA	998	G	C4-C5-N7	-7.38	107.85	110.80
25	BA	990	A	N1-C6-N6	7.38	123.03	118.60
25	BA	1766	G	C4-C5-N7	7.36	113.74	110.80
25	DA	2805	G	N1-C6-O6	-7.35	115.49	119.90
25	DA	1022	G	N3-C4-N9	-7.34	121.59	126.00
25	BA	2515	A	N1-C2-N3	-7.33	125.64	129.30
1	AA	1124	G	N3-C4-C5	-7.33	124.94	128.60
1	CA	1154	G	N3-C4-N9	7.31	130.38	126.00
25	BA	2299	A	N3-C4-C5	7.30	131.91	126.80
25	DA	1696	G	O5'-P-OP2	-7.30	99.13	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	827	U	N3-C2-O2	7.29	127.31	122.20
1	CA	1141	C	C6-N1-C1'	7.29	129.55	120.80
25	DA	2805	G	N9-C4-C5	7.28	108.31	105.40
1	AA	738	C	C6-N1-C2	-7.27	117.39	120.30
23	AX	22	G	C4-C5-C6	-7.27	114.44	118.80
25	DA	2805	G	C4-C5-N7	-7.27	107.89	110.80
25	BA	2627	U	O5'-P-OP1	-7.25	99.17	105.70
1	CA	998	G	C5-C6-O6	7.24	132.95	128.60
25	DA	1142(A)	A	C2-N3-C4	-7.24	106.98	110.60
51	D5	58	LEU	CA-CB-CG	7.24	131.95	115.30
1	AA	728	A	O5'-P-OP2	-7.23	99.19	105.70
1	CA	927	G	C4-C5-N7	-7.23	107.91	110.80
25	DA	2261	C	C6-N1-C2	7.23	123.19	120.30
25	BA	201	G	O5'-P-OP1	7.22	119.37	110.70
25	BA	2331	G	C5-N7-C8	-7.22	100.69	104.30
25	DA	687	C	N3-C4-C5	7.21	124.78	121.90
1	AA	1030(B)	C	C6-N1-C2	-7.21	117.42	120.30
25	DA	2207	G	C4-C5-C6	7.21	123.12	118.80
25	DA	476	G	O5'-P-OP2	-7.21	99.22	105.70
25	DA	2374	C	C6-N1-C2	7.21	123.18	120.30
25	BA	2298	A	C4-C5-C6	7.20	120.60	117.00
1	AA	1028	C	C6-N1-C2	-7.19	117.42	120.30
25	DA	205	G	N7-C8-N9	-7.18	109.51	113.10
25	BA	2092	G	C8-N9-C4	7.18	109.27	106.40
25	DA	1204	A	O4'-C1'-N9	7.17	113.94	108.20
25	DA	2574	G	N1-C6-O6	7.17	124.20	119.90
25	DA	2463	C	C6-N1-C2	7.17	123.17	120.30
1	CA	1038	C	C2-N3-C4	7.16	123.48	119.90
1	CA	1492	A	C8-N9-C4	-7.16	102.94	105.80
25	BA	1054	C	N1-C2-O2	7.16	123.20	118.90
25	BA	1745	A	C2-N3-C4	-7.15	107.02	110.60
25	BA	2701	U	N3-C2-O2	-7.15	117.19	122.20
25	BA	2058	C	O5'-P-OP2	7.15	119.28	110.70
1	CA	1113	C	C6-N1-C2	-7.15	117.44	120.30
25	BA	2028	C	O5'-P-OP1	-7.15	99.27	105.70
25	BA	733	G	C4-C5-N7	7.14	113.66	110.80
25	BA	834	U	O5'-P-OP1	-7.14	99.27	105.70
25	BA	553	A	C6-N1-C2	7.14	122.88	118.60
23	AX	4	G	C8-N9-C4	7.14	109.25	106.40
25	BA	1076	G	N1-C2-N2	-7.13	109.78	116.20
25	BA	706	C	C6-N1-C2	7.12	123.15	120.30
23	CX	76	A	C4-C5-C6	7.12	120.56	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	1605	A	C2-N3-C4	-7.11	107.04	110.60
25	BA	852	G	O5'-P-OP1	-7.11	99.31	105.70
25	BA	1077	G	N1-C6-O6	-7.10	115.64	119.90
25	DA	2588	G	O5'-P-OP1	-7.10	99.31	105.70
25	BA	2229	A	O4'-C1'-N9	7.10	113.88	108.20
25	BA	1249	A	O4'-C1'-N9	7.09	113.88	108.20
25	DA	528	A	N3-C4-C5	7.09	131.77	126.80
25	DA	2805	G	C8-N9-C4	-7.09	103.56	106.40
1	CA	1126	U	C5-C6-N1	7.08	126.24	122.70
1	AA	1026	G	C4-N9-C1'	7.07	135.69	126.50
25	DA	2321	G	N9-C4-C5	-7.07	102.57	105.40
25	BA	2556	G	N1-C6-O6	7.07	124.14	119.90
25	DA	129	C	C6-N1-C2	7.07	123.13	120.30
25	BA	1068	G	N3-C4-N9	-7.07	121.76	126.00
25	DA	1284	A	N9-C4-C5	-7.06	102.98	105.80
25	DA	2253	G	C6-C5-N7	-7.04	126.17	130.40
25	DA	2523	G	O5'-P-OP2	-7.04	99.37	105.70
25	BA	1067	A	N7-C8-N9	7.03	117.32	113.80
25	BA	103	C	O5'-P-OP2	-7.01	99.39	105.70
25	DA	2253	G	C5-C6-O6	-7.01	124.39	128.60
25	BA	473	A	O5'-P-OP1	-7.01	99.39	105.70
1	CA	927	G	N9-C4-C5	7.01	108.20	105.40
25	BA	1098	C	C5-C6-N1	7.01	124.50	121.00
1	CA	1033	G	C4-C5-N7	7.01	113.60	110.80
1	AA	1531	A	O4'-C1'-N9	-7.01	102.59	108.20
25	BA	733	G	N1-C6-O6	7.01	124.10	119.90
1	CA	1157	A	N1-C6-N6	-7.00	114.40	118.60
23	CX	14	A	C4-C5-C6	7.00	120.50	117.00
25	BA	602	G	N1-C6-O6	7.00	124.10	119.90
25	BA	2589	A	C8-N9-C4	-7.00	103.00	105.80
25	BA	122	G	O5'-P-OP2	-6.99	99.41	105.70
25	DA	2298	A	C6-N1-C2	6.99	122.79	118.60
25	DA	214	G	O4'-C1'-N9	6.98	113.78	108.20
25	BA	1871	G	N1-C6-O6	-6.98	115.71	119.90
25	BA	852	G	C5-C6-N1	6.97	114.99	111.50
25	BA	753	A	C2-N3-C4	-6.97	107.11	110.60
23	AX	46	G	C5-C6-O6	-6.97	124.42	128.60
25	BA	1006	C	O5'-P-OP2	-6.97	99.43	105.70
25	BA	2577	A	O5'-P-OP1	-6.97	99.43	105.70
25	BA	1719	C	C6-N1-C2	-6.96	117.52	120.30
25	BA	1844	G	C8-N9-C4	6.96	109.18	106.40
25	BA	819	C	C6-N1-C2	6.94	123.08	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	467	G	C8-N9-C4	6.94	109.17	106.40
1	AA	1131	G	N7-C8-N9	6.93	116.56	113.10
25	DA	2007	C	C6-N1-C2	6.93	123.07	120.30
25	DA	1204	A	N1-C6-N6	6.92	122.75	118.60
25	DA	2427	C	C6-N1-C2	6.92	123.07	120.30
25	BA	1188	A	N3-C4-N9	-6.92	121.86	127.40
25	DA	981	A	C5-C6-N6	6.91	129.23	123.70
25	BA	2081	A	N7-C8-N9	-6.91	110.34	113.80
1	CA	1259	C	C6-N1-C2	-6.91	117.53	120.30
25	BA	2804	C	C6-N1-C2	-6.90	117.54	120.30
25	DA	1339	G	O5'-P-OP1	-6.90	99.49	105.70
25	DA	1783	A	C8-N9-C4	6.90	108.56	105.80
25	DA	2298	A	N1-C2-N3	-6.90	125.85	129.30
25	BA	2331	G	C4-C5-N7	6.89	113.56	110.80
1	AA	199	G	C8-N9-C4	6.89	109.16	106.40
1	AA	383	A	C5-N7-C8	6.89	107.35	103.90
1	CA	1000	U	C5-C6-N1	6.89	126.14	122.70
25	DA	1251	C	N1-C2-O2	-6.89	114.77	118.90
25	BA	555	G	C4-C5-N7	6.88	113.55	110.80
1	CA	79	G	C5-C6-O6	6.88	132.73	128.60
1	AA	476	G	C4-N9-C1'	6.88	135.44	126.50
25	DA	1022	G	N3-C2-N2	-6.88	115.08	119.90
1	AA	1007	C	C5-C6-N1	6.88	124.44	121.00
1	CA	1119	C	N1-C2-N3	-6.88	114.39	119.20
25	DA	933	A	N7-C8-N9	6.88	117.24	113.80
25	DA	1653	G	C4-N9-C1'	6.88	135.44	126.50
1	CA	1017	G	C5-C6-O6	6.87	132.72	128.60
25	BA	2549	U	C5-C4-O4	6.87	130.02	125.90
1	CA	525	C	C5-C6-N1	6.87	124.43	121.00
1	AA	443	C	C2-N1-C1'	6.86	126.35	118.80
25	BA	1462	G	O4'-C1'-N9	6.86	113.69	108.20
1	AA	97	G	O4'-C1'-N9	6.86	113.69	108.20
1	AA	921	U	C2-N3-C4	6.85	131.11	127.00
25	DA	2689	U	P-O3'-C3'	6.85	127.92	119.70
1	AA	1397	C	O4'-C1'-N1	6.84	113.67	108.20
25	BA	1588	G	N3-C4-C5	-6.84	125.18	128.60
25	BA	2551	C	C6-N1-C2	6.84	123.03	120.30
25	DA	2829	C	C6-N1-C2	6.83	123.03	120.30
25	DA	1328	G	C5-C6-O6	-6.83	124.50	128.60
1	AA	720	C	C6-N1-C2	-6.83	117.57	120.30
25	DA	2206	G	C4-N9-C1'	-6.83	117.62	126.50
1	CA	1054	C	C6-N1-C2	-6.83	117.57	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	148	C	C6-N1-C2	6.83	123.03	120.30
1	AA	1396	A	C6-N1-C2	6.82	122.69	118.60
25	DA	2048	G	C5-C6-O6	6.82	132.69	128.60
1	CA	1163	C	C5-C6-N1	6.82	124.41	121.00
25	DA	294	A	N1-C6-N6	-6.82	114.51	118.60
25	BA	2105	G	N1-C6-O6	6.82	123.99	119.90
25	DA	1432	C	C6-N1-C2	6.82	123.03	120.30
25	DA	2345	G	C5-C6-O6	6.81	132.69	128.60
1	CA	117	G	N3-C4-N9	6.81	130.09	126.00
25	BA	555	G	N3-C4-C5	6.80	132.00	128.60
25	BA	2299	A	N3-C4-N9	-6.80	121.96	127.40
1	CA	1054	C	P-O3'-C3'	6.80	127.86	119.70
25	DA	2313	C	N1-C2-O2	6.79	122.97	118.90
1	AA	893	C	N1-C2-O2	6.79	122.97	118.90
25	DA	2751	G	N3-C4-C5	-6.79	125.21	128.60
1	AA	509	A	C8-N9-C4	-6.78	103.09	105.80
1	AA	63	C	N1-C2-O2	6.78	122.97	118.90
25	BA	824	A	N1-C2-N3	6.77	132.68	129.30
1	CA	1042	G	C6-N1-C2	6.76	129.16	125.10
25	BA	841	G	C5-C6-O6	6.76	132.65	128.60
25	BA	1314	A	N7-C8-N9	-6.75	110.42	113.80
25	BA	2444	A	N1-C6-N6	6.75	122.65	118.60
25	BA	553	A	N3-C4-C5	6.75	131.52	126.80
1	AA	1285	A	P-O3'-C3'	6.74	127.79	119.70
25	BA	2014	G	P-O3'-C3'	6.74	127.79	119.70
1	AA	1397	C	C2-N1-C1'	6.74	126.21	118.80
25	DA	524	U	O5'-P-OP2	-6.74	99.64	105.70
1	CA	1502	A	O5'-P-OP2	-6.73	99.64	105.70
25	DA	2010	G	O5'-P-OP2	6.73	118.78	110.70
25	BA	1843	A	O5'-P-OP1	-6.72	99.65	105.70
1	CA	848	C	C5-C6-N1	6.72	124.36	121.00
1	AA	1395	C	C2-N3-C4	6.72	123.26	119.90
25	DA	741	G	O5'-P-OP1	-6.72	99.65	105.70
1	CA	979	C	C6-N1-C2	-6.72	117.61	120.30
25	DA	110	G	C8-N9-C4	6.72	109.09	106.40
25	DA	1721	G	N3-C4-N9	6.71	130.03	126.00
1	CA	1258	G	O4'-C1'-N9	6.71	113.57	108.20
25	DA	2520	C	N3-C4-C5	6.71	124.58	121.90
1	CA	1003	G	N3-C4-N9	6.71	130.03	126.00
1	CA	1033	G	N1-C6-O6	6.71	123.93	119.90
25	DA	219	G	N3-C4-C5	-6.71	125.25	128.60
25	DA	1489	U	C4-C5-C6	6.70	123.72	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	CC	52	LEU	CA-CB-CG	6.70	130.72	115.30
25	DA	784	A	C8-N9-C4	6.70	108.48	105.80
1	CA	1126	U	C2-N1-C1'	6.69	125.73	117.70
1	CA	1135	U	O4'-C1'-N1	6.68	113.54	108.20
25	DA	738	G	N3-C4-C5	-6.67	125.26	128.60
1	AA	1502	A	O5'-P-OP2	-6.67	99.69	105.70
1	CA	1023	G	N3-C4-N9	6.67	130.00	126.00
26	DB	42	C	O5'-P-OP1	-6.67	99.70	105.70
1	CA	1456	G	C8-N9-C4	6.67	109.07	106.40
25	BA	1327	G	C5-C6-O6	-6.67	124.60	128.60
1	CA	1311	G	C6-C5-N7	6.67	134.40	130.40
25	BA	831	A	O4'-C1'-N9	6.66	113.53	108.20
25	DA	2360	A	C8-N9-C4	6.66	108.46	105.80
25	BA	555	G	C2-N3-C4	-6.66	108.57	111.90
25	DA	827	U	N1-C2-O2	-6.65	118.14	122.80
25	BA	1093	G	C4-N9-C1'	6.65	135.14	126.50
25	BA	2448	G	N3-C2-N2	-6.64	115.25	119.90
25	DA	1992	G	C8-N9-C4	-6.64	103.74	106.40
25	BA	43	A	C2-N3-C4	-6.64	107.28	110.60
25	DA	1281	G	O5'-P-OP2	6.64	118.67	110.70
25	DA	2286	A	N1-C6-N6	6.64	122.58	118.60
25	BA	2228	G	OP1-P-O3'	6.64	119.80	105.20
25	BA	2551	C	C5-C6-N1	-6.64	117.68	121.00
25	DA	776	G	C8-N9-C4	-6.64	103.75	106.40
25	DA	945	A	O4'-C1'-N9	6.64	113.51	108.20
25	DA	933	A	C4-C5-N7	6.63	114.02	110.70
25	DA	945	A	C5-N7-C8	-6.63	100.59	103.90
25	DA	2388	A	O4'-C1'-N9	6.63	113.50	108.20
26	DB	104	U	C6-N1-C2	6.63	124.98	121.00
25	BA	2260	C	O5'-P-OP2	-6.62	99.74	105.70
1	CA	726	C	O5'-P-OP1	-6.62	99.74	105.70
25	BA	2550	C	C6-N1-C2	6.62	122.95	120.30
25	DA	1395	A	O4'-C1'-N9	6.62	113.50	108.20
1	AA	1493	A	P-O3'-C3'	6.61	127.64	119.70
1	CA	1180	A	O4'-C1'-N9	6.61	113.48	108.20
25	BA	254	A	C5-N7-C8	-6.60	100.60	103.90
25	DA	63	U	N3-C4-O4	-6.60	114.78	119.40
25	DA	1489	U	C6-N1-C1'	-6.60	111.96	121.20
1	CA	1286	A	C8-N9-C4	-6.60	103.16	105.80
25	BA	805	C	C6-N1-C2	-6.59	117.66	120.30
1	CA	1123	A	O4'-C1'-N9	6.59	113.47	108.20
25	DA	2218	U	N3-C2-O2	-6.59	117.58	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	482	A	O5'-P-OP2	-6.59	99.77	105.70
25	DA	2050	C	C6-N1-C2	6.59	122.94	120.30
25	DA	2388	A	C2-N3-C4	6.59	113.89	110.60
25	DA	451	C	C6-N1-C2	6.59	122.94	120.30
1	AA	193	C	C6-N1-C2	-6.58	117.67	120.30
1	AA	458	C	C2-N1-C1'	6.58	126.04	118.80
25	BA	2298	A	C6-C5-N7	-6.58	127.69	132.30
25	DA	945	A	N9-C4-C5	-6.58	103.17	105.80
25	DA	2805	G	O4'-C1'-N9	6.58	113.46	108.20
25	BA	418	G	C5-C6-O6	-6.57	124.66	128.60
25	BA	148	C	C6-N1-C2	6.57	122.93	120.30
25	DA	826	U	C5-C6-N1	-6.57	119.41	122.70
25	DA	2253	G	N9-C4-C5	-6.57	102.77	105.40
1	CA	1003	G	C4-N9-C1'	6.57	135.04	126.50
1	CA	999	C	C6-N1-C1'	-6.57	112.92	120.80
25	BA	717	A	O4'-C1'-N9	-6.56	102.95	108.20
25	BA	2331	G	O4'-C1'-N9	6.55	113.44	108.20
1	CA	899	C	C6-N1-C2	6.55	122.92	120.30
1	AA	1137	C	C5-C6-N1	6.55	124.28	121.00
25	DA	2287	A	C2-N3-C4	-6.55	107.33	110.60
25	DA	2501	C	N3-C4-C5	6.55	124.52	121.90
25	BA	2054	G	N3-C4-C5	6.54	131.87	128.60
25	DA	2512	C	C6-N1-C2	6.54	122.92	120.30
1	AA	266	G	P-O3'-C3'	6.54	127.55	119.70
25	BA	1483	C	C6-N1-C2	-6.54	117.68	120.30
25	DA	2560	C	C6-N1-C2	6.54	122.92	120.30
25	BA	176	G	N1-C6-O6	6.54	123.82	119.90
25	DA	2061	G	C8-N9-C4	6.53	109.01	106.40
25	BA	666	C	C6-N1-C2	-6.51	117.69	120.30
1	AA	1127	G	C5-N7-C8	6.51	107.56	104.30
1	CA	1023	G	N3-C2-N2	6.51	124.46	119.90
25	BA	660	C	C6-N1-C2	-6.51	117.70	120.30
25	DA	1681	G	N3-C4-C5	6.50	131.85	128.60
25	BA	176	G	C4-C5-N7	6.49	113.40	110.80
1	CA	1502	A	N1-C2-N3	6.49	132.54	129.30
1	CA	1502	A	C5-N7-C8	-6.49	100.66	103.90
25	DA	1257	C	C6-N1-C2	-6.48	117.71	120.30
26	BB	98	G	O5'-P-OP2	-6.48	99.87	105.70
25	BA	781	A	N1-C6-N6	6.47	122.48	118.60
2	CB	154	LEU	CA-CB-CG	6.47	130.19	115.30
25	BA	2544	G	N1-C6-O6	6.47	123.78	119.90
25	DA	1022	G	C8-N9-C1'	6.47	135.41	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	987	G	C5-C6-O6	-6.47	124.72	128.60
23	AX	8	U	N3-C4-C5	-6.46	110.72	114.60
1	AA	382	A	N1-C6-N6	-6.46	114.72	118.60
1	AA	1125	U	C4-C5-C6	-6.46	115.83	119.70
1	CA	65	U	P-O3'-C3'	6.46	127.45	119.70
1	AA	470	C	N1-C2-O2	6.46	122.77	118.90
23	AX	22	G	N3-C4-C5	6.46	131.83	128.60
1	CA	1260	C	C5-C6-N1	6.46	124.23	121.00
25	DA	530	G	N3-C4-N9	-6.45	122.13	126.00
25	BA	1263	C	O5'-P-OP2	-6.45	99.90	105.70
25	BA	271	U	O4'-C1'-N1	6.44	113.35	108.20
25	DA	1635	G	N1-C6-O6	6.44	123.77	119.90
25	BA	2638	C	C6-N1-C2	6.44	122.88	120.30
25	DA	1142	U	N1-C2-O2	6.44	127.31	122.80
25	DA	933	A	N1-C6-N6	6.44	122.46	118.60
25	BA	2253	A	O5'-P-OP1	-6.43	99.91	105.70
1	CA	1163	C	C2-N3-C4	6.43	123.12	119.90
25	BA	139	A	O4'-C1'-N9	6.43	113.35	108.20
25	DA	2805	G	N3-C4-C5	-6.43	125.38	128.60
25	BA	1423	G	N1-C6-O6	-6.42	116.05	119.90
25	BA	1742	G	C6-C5-N7	-6.42	126.55	130.40
1	CA	1036	G	C5-C6-N1	-6.42	108.29	111.50
1	AA	1206	G	C5-C6-O6	-6.42	124.75	128.60
23	CX	46	G	C5-C6-N1	6.41	114.71	111.50
25	DA	216	A	C2-N3-C4	-6.41	107.40	110.60
1	AA	165	C	C6-N1-C2	-6.41	117.74	120.30
25	BA	2673	G	N3-C4-C5	-6.41	125.40	128.60
1	AA	532	A	OP1-P-O3'	6.40	119.29	105.20
25	DA	1021	A	N1-C2-N3	6.40	132.50	129.30
25	BA	2227	G	C4-N9-C1'	-6.40	118.18	126.50
25	BA	2891	C	C6-N1-C2	-6.40	117.74	120.30
25	DA	2544	G	N1-C6-O6	6.40	123.74	119.90
22	AV	17	U	C5-C4-O4	6.40	129.74	125.90
25	DA	2313	C	N3-C2-O2	-6.40	117.42	121.90
25	BA	2630	G	N3-C4-N9	6.40	129.84	126.00
25	BA	352	U	O5'-P-OP2	-6.40	99.94	105.70
1	AA	63	C	N3-C2-O2	-6.39	117.42	121.90
1	CA	1042	G	C8-N9-C4	6.39	108.96	106.40
43	DX	57	LEU	CA-CB-CG	6.39	130.00	115.30
1	CA	1132	C	C6-N1-C2	-6.39	117.74	120.30
25	DA	2512	C	N3-C2-O2	6.39	126.37	121.90
1	AA	458	C	N1-C2-O2	6.39	122.73	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	2830	A	C6-C5-N7	-6.39	127.83	132.30
1	AA	841	U	C6-N1-C2	-6.39	117.17	121.00
25	BA	1045	U	O5'-P-OP2	-6.38	99.95	105.70
25	BA	2026	G	C2-N3-C4	-6.38	108.71	111.90
25	DA	1698	A	C4-C5-N7	6.38	113.89	110.70
25	BA	2331	G	N3-C4-N9	-6.38	122.17	126.00
25	BA	1312	G	C8-N9-C4	6.38	108.95	106.40
25	BA	1919	G	N1-C6-O6	6.38	123.73	119.90
1	CA	1033	G	C6-N1-C2	6.38	128.93	125.10
1	CA	1169	A	C4-C5-C6	6.38	120.19	117.00
25	DA	2850	A	OP1-P-OP2	-6.37	110.04	119.60
1	AA	1058	G	C5-C6-O6	-6.37	124.78	128.60
25	BA	2280	A	O5'-P-OP1	-6.36	99.97	105.70
1	AA	1024	G	C4-N9-C1'	6.36	134.76	126.50
25	DA	2574	G	C5-C6-O6	-6.36	124.78	128.60
25	BA	978	A	N7-C8-N9	6.35	116.98	113.80
25	BA	1812	C	C6-N1-C2	6.35	122.84	120.30
25	DA	63	U	C5-C4-O4	6.35	129.71	125.90
25	DA	1022	G	C4-N9-C1'	-6.35	118.24	126.50
1	CA	1511	G	N1-C6-O6	6.35	123.71	119.90
1	AA	496	A	C8-N9-C4	-6.34	103.26	105.80
25	BA	568	C	C6-N1-C2	6.34	122.84	120.30
1	CA	1122	U	C6-N1-C1'	-6.34	112.32	121.20
25	DA	31	C	C6-N1-C2	-6.34	117.76	120.30
1	AA	443	C	C6-N1-C1'	-6.34	113.19	120.80
1	CA	1012	U	N1-C2-N3	6.33	118.70	114.90
26	DB	95	C	C6-N1-C2	6.33	122.83	120.30
25	BA	2442	A	N1-C6-N6	-6.33	114.80	118.60
1	AA	800	G	C8-N9-C4	-6.33	103.87	106.40
25	BA	2701	U	C6-N1-C2	-6.33	117.20	121.00
1	CA	754	C	C2-N1-C1'	6.32	125.75	118.80
23	CX	22	G	C4-C5-C6	-6.32	115.01	118.80
25	BA	342	C	C6-N1-C2	-6.32	117.77	120.30
1	CA	1402	C	C6-N1-C2	-6.32	117.77	120.30
1	CA	1311	G	N3-C4-C5	6.32	131.76	128.60
26	DB	8	U	C5-C6-N1	6.31	125.86	122.70
35	DP	44	GLY	N-CA-C	-6.31	97.31	113.10
25	BA	2094	G	C6-C5-N7	-6.31	126.61	130.40
25	DA	1681	G	C2-N3-C4	-6.31	108.74	111.90
25	DA	2279	G	C8-N9-C4	6.31	108.92	106.40
1	AA	1054	C	P-O3'-C3'	6.31	127.27	119.70
1	CA	1391	U	C5-C4-O4	6.30	129.68	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1029	C	C2-N1-C1'	-6.30	111.87	118.80
25	BA	733	G	C6-C5-N7	-6.30	126.62	130.40
25	BA	781	A	C2-N3-C4	-6.30	107.45	110.60
1	CA	967	C	C6-N1-C2	6.30	122.82	120.30
1	CA	1227	A	N7-C8-N9	6.30	116.95	113.80
25	DA	1284	A	C5-C6-N6	-6.30	118.66	123.70
25	BA	2631	C	C6-N1-C2	6.29	122.82	120.30
1	CA	908	A	O5'-P-OP2	-6.29	100.04	105.70
25	DA	528	A	N1-C6-N6	6.29	122.38	118.60
25	DA	1363	C	C5-C6-N1	-6.29	117.85	121.00
25	BA	484	G	C8-N9-C4	-6.29	103.88	106.40
25	DA	2070	G	N1-C6-O6	-6.28	116.13	119.90
25	BA	849	A	C8-N9-C4	-6.28	103.29	105.80
1	CA	999	C	C2-N1-C1'	6.28	125.70	118.80
25	DA	1600	C	O5'-P-OP2	-6.28	100.05	105.70
1	AA	227	G	C8-N9-C4	6.27	108.91	106.40
25	DA	2617	C	O5'-P-OP1	-6.27	100.05	105.70
25	BA	1779	G	C8-N9-C4	-6.27	103.89	106.40
25	DA	2048	G	N1-C6-O6	-6.27	116.14	119.90
25	DA	271(Y)	U	O4'-C1'-N1	6.26	113.21	108.20
1	AA	383	A	C4-C5-C6	6.26	120.13	117.00
1	CA	528	C	C6-N1-C2	-6.26	117.80	120.30
25	DA	2357	U	O5'-P-OP2	-6.26	100.06	105.70
1	CA	1272	G	C5-C6-O6	6.26	132.35	128.60
25	DA	2554	U	O5'-P-OP2	-6.25	100.07	105.70
25	BA	405	C	C6-N1-C2	6.25	122.80	120.30
25	BA	474	U	N3-C2-O2	-6.25	117.82	122.20
1	CA	117	G	C8-N9-C1'	-6.25	118.87	127.00
1	CA	1500	A	N1-C6-N6	6.25	122.35	118.60
25	BA	2638	C	N3-C4-C5	6.24	124.40	121.90
1	AA	1127	G	N3-C4-C5	-6.24	125.48	128.60
26	DB	115	G	N9-C4-C5	-6.24	102.90	105.40
25	BA	2283	G	N3-C4-N9	6.24	129.74	126.00
25	DA	2406	U	O4'-C1'-N1	-6.24	103.21	108.20
1	AA	167	G	C4-N9-C1'	6.23	134.60	126.50
25	DA	1698	A	N1-C2-N3	6.23	132.41	129.30
1	AA	1127	G	C8-N9-C4	6.22	108.89	106.40
25	BA	1779	G	N7-C8-N9	6.22	116.21	113.10
25	BA	1926	G	N1-C6-O6	-6.22	116.17	119.90
1	CA	509	A	C8-N9-C4	-6.22	103.31	105.80
1	AA	175	C	C6-N1-C2	-6.21	117.81	120.30
1	AA	1067	A	P-O3'-C3'	6.21	127.16	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	5	U	C6-N1-C2	-6.21	117.27	121.00
1	CA	967	C	N3-C2-O2	6.21	126.25	121.90
25	DA	614	U	C5-C4-O4	6.21	129.63	125.90
25	DA	2751	G	C4-N9-C1'	6.21	134.57	126.50
26	BB	93	G	C8-N9-C4	-6.21	103.92	106.40
25	BA	1832	G	N1-C6-O6	6.20	123.62	119.90
1	CA	354	G	C6-C5-N7	-6.20	126.68	130.40
25	BA	1629	C	C5-C6-N1	-6.20	117.90	121.00
1	AA	1515	C	N3-C4-C5	-6.19	119.42	121.90
25	BA	77	A	N1-C6-N6	6.19	122.32	118.60
1	AA	1150	U	C2-N3-C4	6.19	130.71	127.00
25	BA	2298	A	N7-C8-N9	6.19	116.90	113.80
25	DA	566	U	C5-C6-N1	-6.19	119.61	122.70
25	DA	2520	C	C6-N1-C2	6.19	122.78	120.30
25	DA	2053	G	C8-N9-C4	6.18	108.87	106.40
25	DA	1558	A	P-O3'-C3'	6.18	127.12	119.70
1	CA	1064	G	P-O3'-C3'	6.18	127.12	119.70
25	BA	1343	C	OP1-P-O3'	6.18	118.79	105.20
1	AA	1131	G	C4-C5-N7	6.17	113.27	110.80
25	BA	595	A	N1-C6-N6	-6.17	114.90	118.60
25	DA	154(A)	C	N1-C2-O2	6.17	122.60	118.90
25	DA	1363	C	C6-N1-C2	6.17	122.77	120.30
25	DA	2298	A	N9-C4-C5	-6.16	103.33	105.80
25	BA	39	C	O5'-P-OP2	-6.16	100.16	105.70
19	CS	16	LEU	CA-CB-CG	6.16	129.47	115.30
1	AA	488	C	C6-N1-C2	-6.16	117.84	120.30
25	BA	1255	A	C8-N9-C4	-6.15	103.34	105.80
25	BA	2403	G	O4'-C1'-N9	6.15	113.12	108.20
25	DA	2591	C	C6-N1-C2	-6.15	117.84	120.30
25	DA	130	C	N3-C4-C5	6.15	124.36	121.90
1	CA	818	G	C8-N9-C4	6.15	108.86	106.40
25	BA	1067	A	C4-C5-N7	6.14	113.77	110.70
25	DA	1790	C	P-O3'-C3'	6.14	127.07	119.70
25	DA	2042	A	C8-N9-C4	6.14	108.25	105.80
25	BA	859	C	C6-N1-C2	-6.14	117.84	120.30
25	BA	842	C	N1-C2-O2	6.13	122.58	118.90
25	BA	994	C	C6-N1-C2	6.13	122.75	120.30
25	DA	75	G	C8-N9-C4	-6.13	103.95	106.40
1	AA	347	G	C4-N9-C1'	6.13	134.47	126.50
25	BA	1725	G	C8-N9-C4	-6.13	103.95	106.40
25	BA	1067	A	N1-C2-N3	6.13	132.37	129.30
25	DA	414	C	O5'-P-OP2	-6.13	100.18	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1026	G	N3-C4-C5	-6.13	125.54	128.60
1	AA	1531	A	C8-N9-C4	-6.13	103.35	105.80
1	CA	1122	U	C5-C4-O4	-6.13	122.22	125.90
25	BA	2624	C	O5'-P-OP1	-6.12	100.19	105.70
1	AA	226	G	C8-N9-C4	6.12	108.85	106.40
1	AA	536	C	O5'-P-OP2	-6.12	100.19	105.70
25	DA	2207	G	C4-N9-C1'	6.12	134.45	126.50
25	BA	892	G	O4'-C1'-N9	6.11	113.09	108.20
23	CX	46	G	N9-C4-C5	6.11	107.84	105.40
25	DA	2623	G	N1-C6-O6	6.11	123.57	119.90
1	AA	1530	G	C5-C6-O6	-6.11	124.94	128.60
25	BA	840	A	N1-C6-N6	6.11	122.26	118.60
25	BA	2298	A	C8-N9-C4	-6.10	103.36	105.80
25	DA	1239	G	N1-C6-O6	6.10	123.56	119.90
25	BA	139	A	C6-C5-N7	-6.10	128.03	132.30
25	BA	2807	C	C5-C6-N1	6.10	124.05	121.00
1	CA	1002	G	N3-C2-N2	-6.10	115.63	119.90
25	BA	590	A	C2-N3-C4	-6.09	107.55	110.60
25	BA	873	U	OP2-P-O3'	6.09	118.61	105.20
25	DA	133	C	O5'-P-OP2	-6.09	100.22	105.70
25	DA	141	A	N7-C8-N9	6.09	116.85	113.80
1	CA	894	G	N3-C4-C5	6.09	131.65	128.60
25	BA	834	U	N1-C2-N3	6.09	118.55	114.90
1	CA	1149	C	C5-C6-N1	6.08	124.04	121.00
25	DA	2084	C	C5-C6-N1	-6.08	117.96	121.00
1	CA	736	C	C6-N1-C2	-6.08	117.87	120.30
25	DA	2321	G	C8-N9-C1'	-6.08	119.09	127.00
1	AA	1030(A)	G	O4'-C1'-N9	6.08	113.06	108.20
25	DA	2218	U	N1-C2-O2	6.08	127.06	122.80
26	BB	30	C	C6-N1-C2	-6.07	117.87	120.30
1	CA	915	A	C8-N9-C4	6.07	108.23	105.80
25	DA	991	C	O5'-P-OP1	6.07	117.98	110.70
1	CA	1137	C	P-O3'-C3'	6.07	126.98	119.70
1	CA	1484	C	C5-C6-N1	-6.06	117.97	121.00
25	BA	56	C	C2-N3-C4	6.06	122.93	119.90
25	DA	1721	G	N3-C2-N2	6.06	124.14	119.90
1	CA	1154	G	O4'-C1'-N9	6.06	113.05	108.20
25	DA	1531	C	C5-C6-N1	6.06	124.03	121.00
25	BA	332	G	C6-C5-N7	-6.06	126.77	130.40
25	DA	1122	G	O5'-P-OP2	-6.06	100.25	105.70
25	BA	2077	C	C2-N3-C4	6.05	122.93	119.90
1	AA	383	A	C8-N9-C1'	-6.05	116.81	127.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1002	G	C5-C6-O6	6.05	132.23	128.60
25	BA	1298	G	N3-C2-N2	-6.05	115.67	119.90
1	AA	1030(B)	C	N3-C2-O2	-6.05	117.67	121.90
25	BA	12	U	C6-N1-C2	-6.05	117.37	121.00
25	BA	2107	C	O5'-P-OP2	-6.05	100.26	105.70
25	BA	332	G	C4-C5-N7	6.04	113.22	110.80
25	BA	552	C	N3-C4-N4	-6.04	113.77	118.00
25	DA	801	G	O5'-P-OP2	-6.04	100.26	105.70
25	BA	535	C	C6-N1-C2	-6.04	117.88	120.30
1	AA	1127	G	N9-C4-C5	-6.04	102.98	105.40
25	DA	94(A)	G	C8-N9-C4	-6.04	103.98	106.40
25	BA	254	A	C6-C5-N7	-6.03	128.08	132.30
25	DA	1653	G	C8-N9-C1'	-6.03	119.16	127.00
23	CX	8	U	N1-C2-N3	-6.03	111.28	114.90
25	BA	1718	U	N1-C2-O2	-6.03	118.58	122.80
26	BB	91	C	N3-C4-C5	6.03	124.31	121.90
25	DA	2540	C	C6-N1-C2	6.03	122.71	120.30
1	CA	299	G	N9-C4-C5	-6.03	102.99	105.40
25	DA	2335	A	O4'-C1'-N9	6.03	113.02	108.20
25	BA	588	C	N1-C2-O2	6.02	122.51	118.90
25	BA	2830	A	C5-N7-C8	-6.02	100.89	103.90
25	BA	783	C	N1-C2-O2	-6.02	115.29	118.90
1	CA	1044	A	C6-N1-C2	6.02	122.21	118.60
25	DA	461	C	N3-C2-O2	6.02	126.11	121.90
25	BA	978	A	O4'-C1'-N9	6.01	113.01	108.20
25	BA	2236	G	C8-N9-C4	6.01	108.81	106.40
25	DA	1763	G	O5'-P-OP2	-6.01	100.29	105.70
1	CA	992	U	P-O3'-C3'	6.01	126.91	119.70
25	BA	876	A	O5'-P-OP2	-6.00	100.30	105.70
25	BA	1076	G	N3-C2-N2	6.00	124.10	119.90
25	BA	2650	G	C8-N9-C4	-6.00	104.00	106.40
1	CA	1042	G	N1-C2-N3	-6.00	120.30	123.90
25	DA	482	A	C8-N9-C4	6.00	108.20	105.80
25	DA	971	C	N1-C2-O2	-6.00	115.30	118.90
25	BA	2462	A	N1-C6-N6	6.00	122.20	118.60
25	DA	141	A	C5-N7-C8	-6.00	100.90	103.90
1	AA	218	C	C6-N1-C2	-6.00	117.90	120.30
1	AA	1493	A	O5'-P-OP1	6.00	117.89	110.70
25	BA	2228	G	P-O3'-C3'	5.99	126.89	119.70
25	DA	680	G	N1-C6-O6	5.99	123.50	119.90
25	DA	2751	G	N3-C4-N9	5.99	129.59	126.00
23	CX	34	C	C6-N1-C2	-5.98	117.91	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	807	U	O5'-P-OP2	5.98	117.87	110.70
1	CA	841	U	C6-N1-C2	-5.98	117.41	121.00
23	CX	22	G	N7-C8-N9	5.97	116.09	113.10
25	DA	2090	G	N1-C6-O6	-5.97	116.32	119.90
1	AA	890	G	O4'-C1'-N9	5.97	112.97	108.20
25	BA	2110	G	N3-C4-C5	5.97	131.59	128.60
1	AA	1286	A	C8-N9-C4	-5.97	103.41	105.80
25	BA	2515	A	C2-N3-C4	5.97	113.58	110.60
25	DA	627	A	C8-N9-C4	5.96	108.19	105.80
25	BA	348	A	O5'-P-OP1	-5.96	100.33	105.70
1	AA	1131	G	N1-C6-O6	5.96	123.47	119.90
1	AA	1201	A	P-O3'-C3'	5.96	126.85	119.70
25	BA	89	U	N3-C2-O2	-5.96	118.03	122.20
1	CA	1028	C	C5-C6-N1	5.96	123.98	121.00
25	DA	53	A	C8-N9-C4	5.96	108.18	105.80
1	AA	738	C	C5-C6-N1	5.96	123.98	121.00
1	AA	1127	G	N7-C8-N9	-5.96	110.12	113.10
1	AA	1150	U	N3-C4-C5	-5.96	111.03	114.60
26	DB	74	U	C5-C4-O4	5.96	129.47	125.90
25	BA	1800	G	O5'-P-OP2	-5.96	100.34	105.70
1	AA	1007	C	C2-N1-C1'	5.95	125.35	118.80
25	DA	141	A	C2-N3-C4	-5.95	107.62	110.60
1	CA	1169	A	N1-C6-N6	5.95	122.17	118.60
25	BA	1072	U	C2-N1-C1'	5.95	124.84	117.70
25	DA	1573	G	C8-N9-C4	5.95	108.78	106.40
25	DA	2617	C	C6-N1-C2	5.95	122.68	120.30
1	CA	308	C	C6-N1-C2	5.95	122.68	120.30
25	DA	1325	G	C6-C5-N7	-5.95	126.83	130.40
25	BA	70	A	P-O3'-C3'	5.95	126.83	119.70
1	AA	92	C	C5-C6-N1	5.94	123.97	121.00
25	BA	354	A	C5-N7-C8	-5.94	100.93	103.90
26	BB	80	U	C5-C4-O4	5.94	129.47	125.90
25	DA	2351	G	N3-C4-N9	5.94	129.57	126.00
25	DA	901	A	N7-C8-N9	5.94	116.77	113.80
25	BA	1555	C	C6-N1-C2	-5.94	117.92	120.30
25	BA	2080	A	OP2-P-O3'	5.94	118.27	105.20
1	AA	476	G	C8-N9-C1'	-5.94	119.28	127.00
1	AA	1026	G	C8-N9-C1'	-5.94	119.28	127.00
25	BA	2372	A	C2-N3-C4	-5.94	107.63	110.60
1	AA	122	G	C8-N9-C4	5.93	108.77	106.40
25	DA	1129	A	N1-C6-N6	-5.93	115.04	118.60
25	DA	210	C	C2-N1-C1'	-5.93	112.28	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	1673	U	C5-C4-O4	-5.93	122.34	125.90
25	BA	1072	U	N3-C2-O2	-5.92	118.05	122.20
1	CA	1312	G	N9-C4-C5	5.92	107.77	105.40
25	DA	1648	C	O5'-P-OP1	5.92	117.81	110.70
25	BA	1240	G	N9-C4-C5	5.92	107.77	105.40
25	BA	2735	G	N3-C4-N9	5.92	129.55	126.00
23	AX	8	U	C5-C6-N1	5.92	125.66	122.70
25	BA	2835	C	N3-C2-O2	5.92	126.04	121.90
25	BA	1423	G	C5-C6-O6	5.91	132.15	128.60
1	CA	916	G	C8-N9-C4	-5.91	104.03	106.40
25	DA	633	A	N1-C6-N6	5.91	122.15	118.60
25	DA	1640	C	C2-N1-C1'	5.91	125.30	118.80
25	BA	1757	C	C6-N1-C2	5.91	122.66	120.30
1	AA	383	A	C4-N9-C1'	5.91	136.93	126.30
25	DA	2351	G	N3-C4-C5	-5.91	125.65	128.60
25	BA	2026	G	OP2-P-O3'	5.90	118.19	105.20
25	DA	2805	G	C5-C6-O6	5.90	132.14	128.60
1	CA	204	U	C2-N1-C1'	5.90	124.78	117.70
7	AG	81	GLY	N-CA-C	5.90	127.85	113.10
25	BA	176	G	C6-C5-N7	-5.90	126.86	130.40
1	CA	337	C	C6-N1-C2	-5.90	117.94	120.30
25	DA	176	G	C8-N9-C4	5.90	108.76	106.40
23	CX	20	U	C2-N1-C1'	5.89	124.77	117.70
25	BA	1249	A	C2-N3-C4	-5.89	107.66	110.60
25	BA	2268	G	C4-C5-N7	5.88	113.15	110.80
1	CA	1125	U	C2-N1-C1'	5.88	124.76	117.70
25	DA	1368	G	O5'-P-OP2	-5.88	100.41	105.70
1	AA	1502	A	N7-C8-N9	5.88	116.74	113.80
25	BA	2354	C	C6-N1-C2	-5.88	117.95	120.30
25	BA	119	G	C5-C6-O6	-5.88	125.07	128.60
25	BA	670	C	C5-C6-N1	5.88	123.94	121.00
25	DA	1257	C	N3-C4-C5	-5.88	119.55	121.90
1	AA	1171	G	N3-C4-C5	-5.88	125.66	128.60
1	CA	998	G	N3-C4-N9	-5.88	122.47	126.00
25	DA	454	A	C8-N9-C4	5.88	108.15	105.80
25	BA	2601	A	C8-N9-C4	5.88	108.15	105.80
9	CI	105	ASP	CB-CG-OD1	5.88	123.59	118.30
1	AA	1181	G	C6-N1-C2	5.87	128.62	125.10
25	BA	2258	G	N9-C4-C5	-5.87	103.05	105.40
25	DA	2033	A	C2-N3-C4	5.87	113.53	110.60
25	BA	2506	G	C8-N9-C4	5.87	108.75	106.40
25	DA	2273	A	N7-C8-N9	-5.87	110.87	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	1959	A	C8-N9-C4	5.87	108.15	105.80
23	AX	76	A	C5-C6-N6	-5.86	119.01	123.70
1	CA	917	G	C8-N9-C4	-5.86	104.06	106.40
25	BA	1377	A	C2-N3-C4	-5.86	107.67	110.60
25	DA	945	A	C5-C6-N6	-5.86	119.02	123.70
25	DA	1698	A	C4-C5-C6	5.85	119.93	117.00
1	AA	97	G	N3-C4-C5	-5.85	125.67	128.60
1	CA	901	A	N1-C6-N6	-5.85	115.09	118.60
1	CA	1169	A	C6-C5-N7	-5.85	128.21	132.30
25	DA	735	A	N7-C8-N9	-5.85	110.88	113.80
1	AA	1127	G	C4-C5-C6	5.84	122.31	118.80
25	DA	459	U	N3-C2-O2	-5.84	118.11	122.20
1	AA	990	C	C6-N1-C2	-5.84	117.96	120.30
25	DA	2032	G	N1-C6-O6	-5.84	116.40	119.90
25	BA	621	G	O5'-P-OP2	-5.84	100.44	105.70
25	DA	2324	C	N3-C4-C5	5.84	124.24	121.90
25	BA	279	G	N7-C8-N9	5.84	116.02	113.10
1	AA	841	U	C5-C6-N1	5.83	125.62	122.70
25	DA	948	G	C8-N9-C4	5.83	108.73	106.40
47	D1	85	LEU	CA-CB-CG	5.83	128.72	115.30
25	BA	1093	G	C8-N9-C1'	-5.83	119.42	127.00
1	AA	1054	C	N3-C2-O2	-5.83	117.82	121.90
25	BA	2105	G	N9-C4-C5	-5.83	103.07	105.40
1	CA	1311	G	C4-N9-C1'	-5.83	118.92	126.50
25	DA	2330	G	N1-C6-O6	5.83	123.40	119.90
25	BA	903	C	C6-N1-C2	-5.83	117.97	120.30
1	CA	1271	G	C5-C6-O6	-5.83	125.11	128.60
25	BA	1461	U	C5-C4-O4	5.82	129.39	125.90
1	CA	117	G	C6-C5-N7	-5.82	126.91	130.40
1	AA	1125	U	P-O3'-C3'	5.82	126.69	119.70
25	BA	2876	U	C4-C5-C6	5.82	123.19	119.70
1	CA	1286	A	N7-C8-N9	5.82	116.71	113.80
25	DA	2024	G	C8-N9-C4	5.82	108.73	106.40
25	BA	1719	C	N3-C4-N4	5.82	122.07	118.00
23	CX	18	G	N3-C4-C5	5.82	131.51	128.60
25	DA	2679	A	O5'-P-OP2	-5.82	100.47	105.70
25	DA	2287	A	N3-C4-C5	5.82	130.87	126.80
1	CA	1000	U	C2-N3-C4	5.81	130.49	127.00
1	CA	1157	A	C6-C5-N7	5.81	136.37	132.30
1	AA	884	U	O5'-P-OP2	-5.81	100.47	105.70
1	AA	1131	G	C4-N9-C1'	5.81	134.06	126.50
25	BA	1154	U	N1-C2-O2	5.81	126.87	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	1663	C	C2-N3-C4	-5.81	116.99	119.90
25	BA	2729	U	N3-C2-O2	-5.81	118.13	122.20
25	DA	792	G	C5-C6-N1	5.81	114.41	111.50
1	AA	261	U	N1-C2-O2	-5.81	118.73	122.80
1	AA	1024	G	N3-C4-C5	-5.81	125.70	128.60
25	BA	555	G	C5-N7-C8	-5.81	101.40	104.30
1	CA	353	A	OP2-P-O3'	5.81	117.98	105.20
1	CA	1125	U	C5-C6-N1	5.81	125.60	122.70
25	DA	1192	G	C8-N9-C4	5.81	108.72	106.40
1	AA	904	C	C6-N1-C2	5.80	122.62	120.30
1	CA	117	G	C4-N9-C1'	5.80	134.05	126.50
1	AA	1269	A	N1-C6-N6	-5.80	115.12	118.60
25	BA	2026	G	N3-C4-C5	5.80	131.50	128.60
25	DA	901	A	C8-N9-C4	-5.80	103.48	105.80
25	BA	990	A	C5-C6-N1	-5.80	114.80	117.70
1	AA	336	C	N3-C2-O2	5.80	125.96	121.90
1	AA	421	U	N1-C2-O2	5.80	126.86	122.80
1	AA	1396	A	C5-C6-N6	5.80	128.34	123.70
25	BA	125	A	N1-C6-N6	5.80	122.08	118.60
1	CA	691	G	C8-N9-C4	5.79	108.72	106.40
23	AX	22	G	N7-C8-N9	5.79	116.00	113.10
25	DA	1682	G	C8-N9-C4	5.79	108.72	106.40
1	CA	1206	G	C5-C6-O6	-5.79	125.13	128.60
25	DA	1899	G	N9-C4-C5	-5.79	103.08	105.40
1	CA	79	G	C6-N1-C2	5.79	128.57	125.10
25	DA	205	G	N9-C4-C5	-5.79	103.09	105.40
25	BA	553	A	C4-C5-N7	5.78	113.59	110.70
25	BA	1255	A	P-O3'-C3'	5.78	126.64	119.70
25	DA	1405	U	O5'-P-OP2	-5.78	100.50	105.70
1	AA	991	U	P-O3'-C3'	5.78	126.63	119.70
1	CA	1149	C	N1-C2-O2	5.78	122.37	118.90
25	DA	1413	G	N1-C6-O6	5.78	123.37	119.90
1	AA	167	G	N7-C8-N9	5.78	115.99	113.10
25	BA	176	G	C5-N7-C8	-5.78	101.41	104.30
1	CA	1216	G	N3-C4-C5	5.78	131.49	128.60
25	DA	1325	G	N3-C4-N9	5.77	129.46	126.00
1	CA	1499	A	C8-N9-C4	5.77	108.11	105.80
25	DA	1239	G	C5-C6-O6	-5.77	125.14	128.60
25	BA	2320	G	N3-C4-C5	5.77	131.49	128.60
1	CA	1044	A	C5-C6-N6	5.77	128.32	123.70
1	AA	483	C	C6-N1-C2	5.77	122.61	120.30
25	DA	2010	G	C8-N9-C4	-5.77	104.09	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	1578	C	C5-C6-N1	5.77	123.88	121.00
25	BA	1153	G	N3-C4-N9	5.76	129.46	126.00
25	BA	2065	C	N1-C2-O2	-5.76	115.44	118.90
1	CA	794	A	C8-N9-C4	-5.76	103.49	105.80
1	CA	398	C	N3-C4-N4	-5.76	113.97	118.00
25	DA	1284	A	C4-C5-N7	5.76	113.58	110.70
1	AA	1026	G	N3-C4-N9	5.76	129.46	126.00
25	BA	553	A	C5-N7-C8	-5.76	101.02	103.90
23	AX	14	A	C5-C6-N1	-5.76	114.82	117.70
25	BA	2044	U	O5'-P-OP1	-5.76	100.52	105.70
26	BB	41	U	C5-C6-N1	-5.76	119.82	122.70
25	DA	962	G	C8-N9-C4	-5.76	104.10	106.40
1	AA	1181	G	N3-C4-C5	5.76	131.48	128.60
25	BA	841	G	C4-C5-N7	-5.75	108.50	110.80
25	DA	467	G	N7-C8-N9	-5.75	110.22	113.10
25	DA	2347	C	N1-C2-O2	5.75	122.35	118.90
25	BA	2014	G	C2'-C3'-O3'	5.75	122.90	113.70
1	CA	890	G	O4'-C1'-N9	5.75	112.80	108.20
25	BA	2245	U	C5-C6-N1	-5.75	119.83	122.70
1	AA	1036	G	N3-C4-N9	5.74	129.45	126.00
1	CA	377	G	N3-C4-N9	5.74	129.45	126.00
46	B0	77	ARG	NE-CZ-NH1	-5.74	117.43	120.30
25	BA	1605	A	N1-C6-N6	5.74	122.04	118.60
23	CX	76	A	N3-C4-N9	5.74	131.99	127.40
25	DA	2281	C	O5'-P-OP1	-5.74	100.54	105.70
25	BA	1252	C	O5'-P-OP1	-5.74	100.54	105.70
25	DA	2744	G	C5-C6-O6	-5.74	125.16	128.60
1	CA	915	A	N7-C8-N9	-5.73	110.93	113.80
1	CA	721	G	N1-C6-O6	5.73	123.34	119.90
25	DA	727	A	C8-N9-C4	-5.73	103.51	105.80
25	DA	1027	A	N9-C4-C5	-5.73	103.51	105.80
1	CA	1002	G	N3-C4-N9	-5.73	122.56	126.00
25	DA	557	U	C5-C6-N1	-5.73	119.84	122.70
25	DA	308	G	O5'-P-OP2	-5.72	100.55	105.70
25	DA	981	A	N1-C6-N6	-5.72	115.17	118.60
23	AX	6	G	N1-C6-O6	5.72	123.33	119.90
25	BA	989	G	C4-N9-C1'	5.72	133.94	126.50
43	BX	57	LEU	CA-CB-CG	5.72	128.46	115.30
1	CA	1028	C	N3-C2-O2	5.72	125.90	121.90
25	DA	119	A	N1-C6-N6	5.72	122.03	118.60
25	DA	912	C	N1-C2-O2	5.72	122.33	118.90
1	AA	166	G	N7-C8-N9	5.71	115.96	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	2509	G	C5-C6-N1	-5.71	108.64	111.50
1	CA	1157	A	C4-C5-N7	-5.71	107.84	110.70
25	DA	738	G	O5'-P-OP1	5.71	117.55	110.70
1	CA	997	U	C2-N3-C4	5.71	130.43	127.00
25	BA	2271	G	C8-N9-C4	-5.71	104.12	106.40
1	CA	1149	C	C2-N1-C1'	5.71	125.08	118.80
25	DA	242	G	N7-C8-N9	-5.71	110.25	113.10
25	DA	1647	G	O4'-C1'-N9	-5.71	103.63	108.20
1	AA	1531	A	N7-C8-N9	5.71	116.65	113.80
25	BA	2836	A	C8-N9-C4	5.71	108.08	105.80
19	CS	71	LEU	CA-CB-CG	5.71	128.42	115.30
25	DA	504	U	N1-C2-O2	5.71	126.79	122.80
25	BA	1694	G	O5'-P-OP1	-5.70	100.57	105.70
25	BA	1742	G	N3-C4-N9	5.70	129.42	126.00
25	DA	2271	G	N3-C4-N9	5.70	129.42	126.00
25	BA	990	A	O4'-C1'-N9	5.70	112.76	108.20
1	CA	1134	G	C8-N9-C4	-5.70	104.12	106.40
25	DA	1698	A	C5-N7-C8	-5.70	101.05	103.90
25	DA	560	C	C6-N1-C2	5.70	122.58	120.30
25	DA	991	C	O5'-P-OP2	-5.69	100.58	105.70
25	BA	295	C	O5'-P-OP2	-5.69	100.58	105.70
25	BA	1222	A	N7-C8-N9	5.69	116.65	113.80
46	B0	12	ASN	N-CA-C	5.69	126.37	111.00
1	CA	5	U	N3-C2-O2	-5.69	118.22	122.20
25	BA	2054	G	N3-C4-N9	-5.69	122.59	126.00
1	CA	754	C	N1-C2-O2	5.69	122.31	118.90
1	CA	1492	A	C2-N3-C4	5.69	113.44	110.60
25	DA	2057	A	C8-N9-C4	5.69	108.07	105.80
25	DA	2725	A	C2-N3-C4	-5.69	107.76	110.60
25	DA	1142(A)	A	N1-C2-N3	5.68	132.14	129.30
1	AA	162	A	C8-N9-C4	-5.68	103.53	105.80
1	AA	1124	G	C2-N3-C4	5.68	114.74	111.90
25	BA	2608	U	N1-C2-O2	-5.68	118.82	122.80
25	DA	193	U	N3-C4-O4	5.68	123.38	119.40
25	DA	885	C	C5-C6-N1	5.68	123.84	121.00
25	DA	2345	G	C8-N9-C4	-5.68	104.13	106.40
25	BA	1343	C	OP2-P-O3'	-5.68	92.71	105.20
25	DA	2794	C	C5-C6-N1	5.68	123.84	121.00
25	BA	2902	G	P-O3'-C3'	5.68	126.51	119.70
1	CA	266	G	N1-C6-O6	5.68	123.31	119.90
25	DA	795	C	O5'-P-OP2	-5.68	100.59	105.70
25	DA	1926	U	N3-C2-O2	-5.68	118.23	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	1328	G	C4-C5-N7	5.67	113.07	110.80
1	AA	1054	C	N1-C2-O2	5.67	122.30	118.90
25	BA	2495	C	N1-C2-O2	5.67	122.30	118.90
25	BA	716	G	C8-N9-C4	5.67	108.67	106.40
25	BA	1766	G	C5-C6-O6	-5.67	125.20	128.60
25	DA	2590	A	O5'-P-OP2	5.67	117.50	110.70
25	BA	357	G	C4-N9-C1'	5.67	133.87	126.50
1	CA	1277	C	N1-C2-O2	5.67	122.30	118.90
26	DB	52	A	C8-N9-C4	-5.67	103.53	105.80
25	BA	2861	A	OP2-P-O3'	5.67	117.66	105.20
1	CA	142	G	N3-C4-C5	-5.67	125.77	128.60
25	BA	36	G	O5'-P-OP2	-5.66	100.61	105.70
25	DA	1377	G	N3-C4-C5	-5.66	125.77	128.60
25	BA	553	A	C5-C6-N1	-5.66	114.87	117.70
25	DA	1363	C	O5'-P-OP2	-5.66	100.61	105.70
25	BA	1850	A	C8-N9-C4	5.66	108.06	105.80
25	DA	2043	C	C2-N1-C1'	5.65	125.02	118.80
25	DA	2053	G	N9-C4-C5	-5.65	103.14	105.40
1	AA	71	C	N1-C2-O2	5.65	122.29	118.90
25	BA	2804	C	C5-C6-N1	5.65	123.83	121.00
25	BA	185	A	N1-C6-N6	5.65	121.99	118.60
25	BA	2056	U	N3-C4-O4	5.65	123.35	119.40
25	BA	737	G	N1-C6-O6	5.65	123.29	119.90
25	BA	1700	G	N3-C4-C5	-5.64	125.78	128.60
1	CA	557	G	N9-C4-C5	-5.64	103.14	105.40
25	DA	532	A	O4'-C1'-N9	5.64	112.72	108.20
25	DA	783	A	O5'-P-OP2	-5.64	100.62	105.70
25	DA	1997	G	N3-C4-C5	-5.64	125.78	128.60
26	DB	45	A	P-O3'-C3'	5.64	126.47	119.70
25	DA	1115	G	N3-C4-C5	5.64	131.42	128.60
25	BA	615	G	N1-C6-O6	-5.64	116.52	119.90
25	BA	1807	G	N1-C6-O6	5.64	123.28	119.90
25	DA	2061	G	N9-C4-C5	-5.64	103.14	105.40
25	BA	2522	C	C6-N1-C2	5.64	122.55	120.30
1	CA	1484	C	C2-N1-C1'	-5.64	112.60	118.80
1	CA	1272	G	N1-C6-O6	-5.63	116.52	119.90
25	DA	1455	G	N1-C6-O6	5.63	123.28	119.90
25	DA	2440	C	C5-C4-N4	5.63	124.14	120.20
25	DA	956	G	C4-N9-C1'	5.63	133.82	126.50
25	DA	781	A	N1-C6-N6	-5.63	115.22	118.60
25	BA	103	C	N1-C2-O2	5.63	122.28	118.90
25	BA	1667	U	N3-C4-C5	-5.62	111.22	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	CX	8	U	N3-C4-C5	-5.62	111.23	114.60
1	AA	526	C	C6-N1-C2	5.62	122.55	120.30
25	DA	915	C	N3-C2-O2	-5.62	117.97	121.90
25	BA	1153	G	C8-N9-C4	-5.62	104.15	106.40
25	BA	2272	C	C5-C6-N1	-5.62	118.19	121.00
1	CA	1227	A	C8-N9-C4	-5.62	103.55	105.80
25	DA	768	G	N1-C6-O6	5.62	123.27	119.90
25	DA	1021	A	C5-C6-N1	-5.62	114.89	117.70
25	BA	1378	G	C4-C5-N7	5.62	113.05	110.80
1	CA	1189	C	C6-N1-C2	5.62	122.55	120.30
25	BA	2096	U	O5'-P-OP1	-5.62	100.65	105.70
25	DA	2206	G	C8-N9-C1'	5.61	134.30	127.00
25	BA	120	G	C5-C6-O6	-5.61	125.23	128.60
25	DA	971	C	N3-C4-N4	5.61	121.93	118.00
25	DA	1269	A	C5-C6-N1	-5.61	114.90	117.70
25	DA	2081	C	C6-N1-C2	5.61	122.54	120.30
29	DF	12	LEU	CA-CB-CG	5.61	128.20	115.30
1	AA	652	U	O5'-P-OP1	-5.61	100.66	105.70
25	BA	1378	G	C5-C6-O6	-5.60	125.24	128.60
25	BA	1681	A	C8-N9-C4	-5.60	103.56	105.80
25	DA	110	G	N7-C8-N9	-5.60	110.30	113.10
1	CA	399	G	C8-N9-C4	5.60	108.64	106.40
25	BA	1426	G	O5'-P-OP2	-5.60	100.66	105.70
1	CA	557	G	N3-C2-N2	5.60	123.82	119.90
25	BA	179	A	C5-N7-C8	-5.60	101.10	103.90
1	AA	340	U	C6-N1-C2	5.60	124.36	121.00
25	BA	1663	C	N3-C4-C5	5.60	124.14	121.90
40	DU	74	LEU	CA-CB-CG	5.59	128.17	115.30
25	BA	1188	A	C5-N7-C8	-5.59	101.10	103.90
1	CA	544	G	N1-C6-O6	-5.59	116.55	119.90
25	DA	956	G	N3-C4-C5	-5.59	125.80	128.60
25	BA	1068	G	N3-C2-N2	-5.59	115.99	119.90
25	BA	1390	G	N1-C6-O6	5.59	123.25	119.90
25	DA	806	C	N3-C4-C5	-5.59	119.66	121.90
25	DA	733	G	N9-C4-C5	-5.59	103.17	105.40
25	DA	912	C	C5-C6-N1	5.59	123.79	121.00
25	BA	2630	G	C6-N1-C2	-5.59	121.75	125.10
25	BA	2495	C	C5-C6-N1	5.58	123.79	121.00
25	BA	2239	A	N9-C4-C5	5.58	108.03	105.80
25	DA	2476	A	C8-N9-C4	-5.58	103.57	105.80
25	BA	1158	G	C8-N9-C4	-5.58	104.17	106.40
25	DA	242	G	C4-N9-C1'	-5.58	119.24	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	2333	A	C8-N9-C4	5.58	108.03	105.80
1	CA	1042	G	N3-C4-C5	5.58	131.39	128.60
25	DA	2804	C	N3-C2-O2	-5.58	117.99	121.90
1	CA	1279	A	C5-N7-C8	-5.58	101.11	103.90
1	CA	687	A	P-O3'-C3'	5.58	126.39	119.70
25	DA	376	C	C6-N1-C2	5.58	122.53	120.30
25	BA	113	C	O5'-P-OP1	-5.57	100.68	105.70
25	BA	403	C	N3-C4-N4	-5.57	114.10	118.00
25	BA	1221	G	OP1-P-O3'	5.57	117.46	105.20
25	BA	2513	C	O4'-C1'-N1	5.57	112.66	108.20
25	BA	1152	G	O4'-C1'-N9	-5.57	103.74	108.20
25	DA	981	A	C6-N1-C2	5.57	121.94	118.60
25	DA	1328	G	N9-C4-C5	-5.57	103.17	105.40
1	CA	1051	C	N1-C2-O2	-5.57	115.56	118.90
25	BA	94	G	O5'-P-OP2	-5.57	100.69	105.70
25	DA	210	C	C6-N1-C2	5.57	122.53	120.30
1	AA	1030(B)	C	C5-C6-N1	5.57	123.78	121.00
25	BA	2641	A	O4'-C1'-N9	5.56	112.65	108.20
1	CA	1067	A	P-O3'-C3'	5.56	126.38	119.70
25	BA	514	G	C4-C5-N7	-5.56	108.58	110.80
3	CC	91	LEU	CA-CB-CG	5.56	128.09	115.30
25	DA	2771	C	O5'-P-OP1	-5.56	100.69	105.70
25	DA	2896	C	C6-N1-C2	-5.56	118.08	120.30
25	BA	2419	G	C8-N9-C1'	-5.56	119.77	127.00
25	BA	1659	G	C5-C6-O6	5.56	131.94	128.60
25	BA	2740	G	O5'-P-OP2	-5.56	100.70	105.70
25	DA	552	G	N3-C4-C5	5.56	131.38	128.60
25	DA	2464	C	C5-C6-N1	-5.56	118.22	121.00
25	BA	873	U	OP1-P-O3'	-5.55	92.99	105.20
1	AA	383	A	O4'-C1'-N9	5.55	112.64	108.20
1	CA	299	G	C6-C5-N7	-5.55	127.07	130.40
1	CA	1124	G	N3-C4-C5	-5.55	125.83	128.60
25	BA	472	G	N1-C6-O6	5.55	123.23	119.90
25	BA	105	C	C6-N1-C2	5.55	122.52	120.30
25	BA	2666	A	N1-C6-N6	5.55	121.93	118.60
25	DA	1348	G	C5-C6-O6	-5.55	125.27	128.60
1	CA	117	G	N9-C4-C5	-5.54	103.18	105.40
1	CA	1017	G	C5-C6-N1	-5.54	108.73	111.50
1	AA	1127	G	C8-N9-C1'	-5.54	119.80	127.00
1	AA	1192	C	C6-N1-C2	-5.54	118.08	120.30
25	BA	553	A	O4'-C1'-N9	-5.54	103.77	108.20
25	BA	1991	A	O5'-P-OP2	5.54	117.35	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	2103	C	O5'-P-OP2	-5.54	100.71	105.70
25	DA	106	C	N1-C2-O2	5.54	122.22	118.90
1	CA	1492	A	N3-C4-C5	-5.54	122.92	126.80
25	DA	2416	C	N1-C2-O2	-5.54	115.58	118.90
25	BA	498	A	O5'-P-OP1	5.54	117.34	110.70
25	BA	1431	G	O4'-C1'-N9	5.54	112.63	108.20
25	BA	1832	G	C4-C5-N7	5.54	113.01	110.80
1	CA	365	U	C5-C6-N1	-5.54	119.93	122.70
25	DA	1213	A	C8-N9-C4	5.54	108.01	105.80
25	DA	2321	G	C6-N1-C2	5.54	128.42	125.10
1	AA	1298	C	N1-C2-O2	5.53	122.22	118.90
25	BA	1075	A	N1-C6-N6	5.53	121.92	118.60
25	BA	2061	C	C5-C6-N1	5.53	123.77	121.00
1	AA	1030(B)	C	C6-N1-C1'	-5.53	114.16	120.80
1	CA	1003	G	C8-N9-C1'	-5.53	119.81	127.00
25	BA	1746	G	C8-N9-C4	-5.53	104.19	106.40
25	DA	1769	G	C8-N9-C4	-5.53	104.19	106.40
25	DA	465	G	C5-C6-O6	-5.53	125.28	128.60
25	DA	1926	U	C5-C4-O4	5.53	129.22	125.90
25	BA	1929	G	N1-C6-O6	5.53	123.22	119.90
41	BV	82	ARG	NE-CZ-NH1	-5.53	117.54	120.30
1	CA	1279	A	N7-C8-N9	5.53	116.56	113.80
1	CA	1502	A	C4-C5-N7	5.53	113.46	110.70
25	BA	1325	G	O5'-P-OP2	-5.53	100.73	105.70
25	BA	1629	C	C6-N1-C2	5.53	122.51	120.30
1	CA	1011	G	C4-C5-N7	-5.53	108.59	110.80
1	AA	381	C	N1-C2-O2	5.52	122.21	118.90
23	CX	9	G	C4-N9-C1'	-5.52	119.32	126.50
1	AA	687	A	P-O3'-C3'	5.52	126.33	119.70
25	DA	2595	G	C8-N9-C4	5.52	108.61	106.40
1	AA	1154	G	N9-C4-C5	-5.52	103.19	105.40
25	BA	271	U	C2-N1-C1'	-5.52	111.08	117.70
25	BA	1284	G	N1-C6-O6	5.52	123.21	119.90
25	DA	277	C	C2-N1-C1'	5.52	124.87	118.80
23	AX	14	A	C4-C5-N7	-5.52	107.94	110.70
25	BA	1343	C	C6-N1-C2	5.52	122.51	120.30
25	DA	786	C	C6-N1-C2	5.52	122.51	120.30
26	DB	102	A	C8-N9-C4	5.52	108.01	105.80
25	BA	2094	G	C4-C5-N7	5.52	113.01	110.80
25	BA	990	A	C8-N9-C4	-5.51	103.59	105.80
26	BB	93	G	C6-C5-N7	-5.51	127.09	130.40
25	DA	1830	C	C6-N1-C2	5.51	122.50	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1007	C	N1-C2-O2	5.51	122.21	118.90
1	CA	1273	G	N3-C4-N9	5.51	129.31	126.00
25	BA	179	A	C5-C6-N6	-5.51	119.29	123.70
4	CD	188	LEU	CA-CB-CG	5.51	127.97	115.30
1	CA	265	G	O4'-C1'-N9	-5.50	103.80	108.20
25	DA	508	G	O5'-P-OP1	-5.50	100.75	105.70
26	DB	79	C	N3-C4-C5	-5.50	119.70	121.90
25	DA	389	G	C5-C6-O6	-5.50	125.30	128.60
25	DA	2744	G	N1-C6-O6	5.50	123.20	119.90
25	BA	179	A	C4-C5-N7	5.50	113.45	110.70
1	AA	913	A	P-O3'-C3'	5.49	126.29	119.70
23	AX	69	C	C2-N1-C1'	5.49	124.84	118.80
25	BA	68	C	OP2-P-O3'	5.49	117.29	105.20
25	DA	1665	A	C8-N9-C4	-5.49	103.60	105.80
25	BA	1078	A	C8-N9-C4	5.49	108.00	105.80
25	BA	1429	C	C5-C6-N1	5.49	123.75	121.00
1	CA	1183	A	OP1-P-O3'	5.49	117.28	105.20
1	CA	1271	G	N9-C4-C5	-5.49	103.20	105.40
25	BA	592	U	N1-C2-O2	-5.49	118.96	122.80
25	BA	2105	G	C4-C5-N7	5.49	113.00	110.80
25	BA	2622	C	O5'-P-OP1	-5.49	100.76	105.70
25	DA	1672	C	C5-C4-N4	-5.49	116.36	120.20
25	BA	902	G	N3-C4-N9	5.49	129.29	126.00
25	DA	1261	C	O5'-P-OP1	-5.49	100.76	105.70
25	BA	827	G	N3-C4-C5	-5.48	125.86	128.60
25	BA	1051	C	OP1-P-OP2	5.48	127.82	119.60
25	BA	2059	G	N3-C2-N2	5.48	123.74	119.90
28	DE	72	VAL	C-N-CA	5.48	135.41	121.70
1	CA	300	A	N1-C6-N6	-5.48	115.31	118.60
25	DA	250	G	C8-N9-C4	-5.48	104.21	106.40
1	AA	1058	G	N9-C4-C5	-5.48	103.21	105.40
25	BA	12	U	N1-C2-O2	5.48	126.64	122.80
1	CA	5	U	C2-N1-C1'	5.48	124.27	117.70
23	CX	18	G	C8-N9-C4	5.48	108.59	106.40
25	DA	917	A	OP1-P-O3'	5.48	117.25	105.20
25	BA	193	A	C8-N9-C4	5.48	107.99	105.80
1	AA	267	C	O5'-P-OP1	-5.47	100.77	105.70
25	DA	1531	C	C2-N1-C1'	5.47	124.82	118.80
25	DA	1982	C	N3-C4-C5	-5.47	119.71	121.90
1	AA	1145	C	N1-C2-O2	5.47	122.18	118.90
25	BA	2380	C	C6-N1-C2	5.47	122.49	120.30
1	CA	1022	G	N3-C4-N9	-5.47	122.72	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	2054	G	C8-N9-C1'	5.47	134.11	127.00
25	BA	2601	A	N3-C4-C5	5.47	130.63	126.80
25	BA	2460	A	N1-C6-N6	5.46	121.88	118.60
1	CA	1420	C	C6-N1-C2	-5.46	118.11	120.30
25	BA	978	A	C4-C5-N7	5.46	113.43	110.70
1	CA	354	G	C4-N9-C1'	5.46	133.60	126.50
25	DA	2351	G	C4-N9-C1'	5.46	133.60	126.50
25	BA	235	C	O5'-P-OP1	-5.46	100.79	105.70
25	DA	1336	A	N1-C6-N6	-5.46	115.32	118.60
25	DA	2230	G	O5'-P-OP1	-5.46	100.79	105.70
25	DA	2252	G	N3-C4-N9	-5.46	122.72	126.00
1	AA	922	G	C6-N1-C2	5.46	128.38	125.10
25	BA	1055	A	C8-N9-C4	-5.46	103.62	105.80
25	DA	1672	C	C6-N1-C1'	-5.46	114.25	120.80
25	DA	2532	G	C5-C6-O6	-5.46	125.32	128.60
25	BA	2298	A	C4-N9-C1'	5.46	136.12	126.30
25	BA	2601	A	C4-C5-C6	-5.46	114.27	117.00
1	CA	1420	C	C5-C6-N1	5.46	123.73	121.00
1	CA	1502	A	C6-C5-N7	-5.46	128.48	132.30
25	BA	1402	G	C5-C6-O6	-5.45	125.33	128.60
25	DA	1004	C	N1-C2-O2	-5.45	115.63	118.90
25	DA	1688	U	O5'-P-OP2	-5.45	100.79	105.70
25	BA	2495	C	C2-N1-C1'	5.45	124.80	118.80
26	DB	104	U	C5-C6-N1	-5.45	119.97	122.70
25	BA	2498	G	N1-C6-O6	-5.45	116.63	119.90
25	DA	1123	C	C6-N1-C2	5.45	122.48	120.30
25	DA	1348	G	N1-C6-O6	5.45	123.17	119.90
1	CA	998	G	C4-N9-C1'	-5.45	119.42	126.50
25	DA	193	U	C5-C4-O4	-5.45	122.63	125.90
25	DA	1256	G	C4-N9-C1'	5.45	133.58	126.50
26	DB	56	G	N3-C4-C5	-5.45	125.88	128.60
25	DA	1236	G	O5'-P-OP2	5.45	117.24	110.70
1	CA	1034	G	N3-C4-N9	-5.45	122.73	126.00
1	CA	1122	U	C5-C6-N1	5.44	125.42	122.70
23	CX	76	A	C5-C6-N1	5.44	120.42	117.70
1	CA	1124	G	O4'-C1'-N9	5.44	112.56	108.20
25	BA	397	G	N9-C4-C5	-5.44	103.22	105.40
25	BA	552	C	C5-C4-N4	5.44	124.01	120.20
26	BB	79	C	C6-N1-C2	-5.44	118.12	120.30
25	DA	2623	G	C5-C6-O6	-5.44	125.33	128.60
1	AA	1058	G	N1-C6-O6	5.44	123.16	119.90
25	BA	828	A	C2-N3-C4	5.44	113.32	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	1858	C	N3-C2-O2	-5.44	118.09	121.90
25	BA	1605	A	N3-C4-C5	5.44	130.61	126.80
25	BA	2830	A	C5-C6-N6	-5.44	119.35	123.70
1	CA	1290	G	C8-N9-C4	-5.44	104.22	106.40
25	BA	186	A	C5-N7-C8	-5.44	101.18	103.90
25	DA	668	G	C2-N3-C4	-5.44	109.18	111.90
1	AA	1007	C	C2-N3-C4	5.43	122.62	119.90
25	BA	1207	C	C6-N1-C2	-5.43	118.13	120.30
25	BA	1538	G	C8-N9-C4	5.43	108.57	106.40
25	DA	738	G	C4-N9-C1'	5.43	133.56	126.50
25	DA	2207	G	N3-C4-N9	5.43	129.26	126.00
25	BA	2248	C	C5-C4-N4	-5.43	116.40	120.20
25	DA	2458	G	N3-C4-N9	5.43	129.26	126.00
1	CA	1126	U	C6-N1-C2	-5.43	117.74	121.00
25	BA	993	G	N9-C4-C5	-5.43	103.23	105.40
1	AA	348	G	C5-C6-O6	-5.43	125.34	128.60
25	BA	839	G	N3-C2-N2	5.43	123.70	119.90
1	CA	525	C	N3-C4-N4	5.43	121.80	118.00
1	AA	458	C	C5-C6-N1	5.42	123.71	121.00
1	CA	1003	G	C4-C5-C6	5.42	122.06	118.80
1	CA	1227	A	C5-N7-C8	-5.42	101.19	103.90
1	CA	115	G	P-O3'-C3'	5.42	126.21	119.70
25	DA	242	G	C6-C5-N7	5.42	133.65	130.40
25	DA	1432	C	C5-C4-N4	-5.42	116.41	120.20
25	BA	125	A	C5-C6-N6	-5.42	119.36	123.70
25	DA	1769	G	N3-C4-C5	-5.42	125.89	128.60
1	AA	1530	G	C4-C5-N7	5.42	112.97	110.80
23	AX	76	A	N3-C4-N9	5.42	131.73	127.40
25	BA	1188	A	C5-C6-N1	-5.42	114.99	117.70
25	BA	2331	G	N1-C6-O6	5.42	123.15	119.90
1	CA	1028	C	N1-C2-O2	-5.42	115.65	118.90
25	DA	133	C	C6-N1-C2	5.42	122.47	120.30
25	DA	906	G	N9-C4-C5	5.42	107.57	105.40
1	AA	98	G	N7-C8-N9	5.42	115.81	113.10
25	BA	1608	G	C8-N9-C4	-5.42	104.23	106.40
26	BB	85	G	C6-C5-N7	-5.42	127.15	130.40
1	CA	794	A	N7-C8-N9	5.41	116.51	113.80
25	BA	279	G	C8-N9-C4	-5.41	104.24	106.40
25	BA	2460	A	C5-C6-N6	-5.41	119.37	123.70
1	AA	749	C	C5-C6-N1	5.41	123.70	121.00
25	BA	254	A	O4'-C1'-N9	5.41	112.53	108.20
25	BA	1985	U	C6-N1-C1'	-5.41	113.63	121.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	149	A	C8-N9-C4	-5.40	103.64	105.80
25	DA	242	G	C8-N9-C4	5.40	108.56	106.40
25	BA	2567	U	O5'-P-OP1	-5.40	100.84	105.70
25	BA	2896	G	C8-N9-C4	-5.40	104.24	106.40
1	CA	499	A	C8-N9-C4	5.40	107.96	105.80
1	CA	1199	U	C5-C4-O4	5.40	129.14	125.90
23	CX	22	G	N3-C4-N9	-5.40	122.76	126.00
25	BA	311	C	C6-N1-C2	5.40	122.46	120.30
25	BA	1577	C	P-O3'-C3'	5.40	126.18	119.70
25	DA	1937	A	C6-C5-N7	-5.40	128.52	132.30
25	BA	2094	G	N1-C6-O6	5.40	123.14	119.90
1	CA	993	G	N3-C4-N9	5.40	129.24	126.00
1	AA	1123	A	C6-N1-C2	5.40	121.84	118.60
1	AA	1149	C	C6-N1-C2	-5.39	118.14	120.30
25	DA	956	G	C4-C5-C6	5.39	122.04	118.80
25	DA	970	C	N3-C2-O2	5.39	125.68	121.90
25	BA	1177	G	O4'-C1'-N9	5.39	112.51	108.20
25	DA	2373	G	N1-C6-O6	5.39	123.14	119.90
34	BO	8	LEU	CA-CB-CG	5.39	127.70	115.30
25	DA	188	G	C4-C5-N7	5.39	112.96	110.80
25	DA	793	A	O5'-P-OP2	-5.39	100.85	105.70
1	CA	246	A	C8-N9-C4	5.39	107.95	105.80
1	CA	1125	U	C6-N1-C2	-5.39	117.77	121.00
1	CA	1311	G	C8-N9-C1'	5.39	134.00	127.00
23	CX	45	G	N3-C4-C5	5.39	131.29	128.60
25	DA	512	G	O4'-C1'-N9	5.39	112.51	108.20
50	D4	68	ARG	NE-CZ-NH2	5.39	122.99	120.30
1	CA	1415	G	O5'-P-OP2	-5.38	100.86	105.70
25	DA	2689	U	N3-C2-O2	-5.38	118.43	122.20
1	AA	1502	A	C6-C5-N7	-5.38	128.53	132.30
25	BA	2703	C	O5'-P-OP1	-5.38	100.86	105.70
1	CA	28	G	C8-N9-C4	-5.38	104.25	106.40
25	BA	187	C	OP2-P-O3'	5.38	117.03	105.20
25	BA	1302	G	C8-N9-C1'	-5.38	120.01	127.00
25	BA	2036	A	N1-C6-N6	5.38	121.83	118.60
25	DA	1430	C	N1-C2-O2	5.38	122.13	118.90
1	AA	115	G	P-O3'-C3'	5.38	126.15	119.70
25	BA	181	C	N3-C4-C5	5.38	124.05	121.90
1	CA	525	C	C5-C4-N4	-5.38	116.44	120.20
1	CA	913	A	P-O3'-C3'	5.37	126.15	119.70
25	BA	1304	C	C6-N1-C2	5.37	122.45	120.30
25	DA	1021	A	N1-C6-N6	5.37	121.82	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	166	G	N3-C4-C5	-5.37	125.92	128.60
1	AA	1139	G	C6-C5-N7	5.37	133.62	130.40
1	CA	502	G	OP1-P-O3'	5.37	117.01	105.20
1	CA	1366	C	C2-N3-C4	5.37	122.58	119.90
1	CA	1398	A	C8-N9-C4	5.37	107.95	105.80
25	DA	1365	A	C6-N1-C2	-5.37	115.38	118.60
25	DA	2616	C	N3-C2-O2	-5.37	118.14	121.90
25	BA	116	A	N1-C6-N6	-5.37	115.38	118.60
25	DA	530	G	N7-C8-N9	5.37	115.78	113.10
1	AA	63	C	C6-N1-C2	-5.37	118.15	120.30
25	BA	1412	A	N1-C6-N6	-5.37	115.38	118.60
25	BA	2059	G	N3-C4-N9	5.37	129.22	126.00
1	CA	354	G	N3-C4-N9	5.37	129.22	126.00
1	CA	397	A	OP2-P-O3'	5.37	117.00	105.20
25	DA	2332	U	C5-C6-N1	-5.37	120.02	122.70
25	BA	2476	C	C6-N1-C2	5.36	122.44	120.30
25	DA	179	G	C5-C6-O6	-5.36	125.38	128.60
25	DA	1607	C	N1-C2-O2	5.36	122.12	118.90
1	AA	1007	C	O4'-C1'-N1	-5.36	103.91	108.20
25	BA	716	G	N1-C6-O6	-5.36	116.68	119.90
1	CA	1312	G	N3-C4-N9	-5.36	122.78	126.00
1	AA	71	C	C5-C6-N1	5.36	123.68	121.00
1	CA	1325	C	C5-C4-N4	5.36	123.95	120.20
25	BA	2462	A	N1-C2-N3	-5.36	126.62	129.30
25	DA	2325	G	C8-N9-C4	-5.36	104.26	106.40
25	BA	1246	C	C6-N1-C2	5.36	122.44	120.30
25	BA	1543	U	N3-C4-O4	-5.36	115.65	119.40
25	BA	1298	G	C4-C5-N7	-5.35	108.66	110.80
25	BA	1919	G	C5-C6-O6	-5.35	125.39	128.60
32	BI	30	LEU	CA-CB-CG	-5.35	102.99	115.30
25	DA	907	U	C5-C6-N1	5.35	125.38	122.70
25	BA	678	A	C8-N9-C4	-5.35	103.66	105.80
25	DA	2275	C	O4'-C1'-N1	-5.35	103.92	108.20
1	AA	561	U	C6-N1-C2	5.35	124.21	121.00
25	BA	140	A	N1-C6-N6	-5.35	115.39	118.60
25	BA	1370	G	C8-N9-C4	5.35	108.54	106.40
25	BA	2265	G	C8-N9-C4	5.35	108.54	106.40
25	BA	2735	G	N3-C4-C5	-5.35	125.93	128.60
25	DA	179	G	N1-C6-O6	5.35	123.11	119.90
25	DA	1365	A	N1-C2-N3	5.35	131.97	129.30
25	DA	2503	A	N3-C4-N9	5.35	131.68	127.40
25	DA	530	G	N9-C4-C5	5.34	107.54	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1029	C	C6-N1-C1'	5.34	127.21	120.80
25	BA	145	G	O5'-P-OP2	-5.34	100.89	105.70
1	CA	1099	G	C4-C5-N7	-5.34	108.66	110.80
25	DA	116	C	C6-N1-C2	-5.34	118.16	120.30
1	AA	576	G	N1-C6-O6	5.34	123.10	119.90
25	BA	1783	C	C6-N1-C2	5.34	122.44	120.30
25	BA	1977	U	N1-C2-O2	-5.34	119.06	122.80
1	CA	1030(B)	C	C6-N1-C2	-5.34	118.16	120.30
25	DA	2540	C	C2-N1-C1'	-5.34	112.93	118.80
1	AA	561	U	N1-C2-N3	-5.34	111.70	114.90
25	DA	204	A	OP1-P-O3'	5.34	116.94	105.20
25	DA	1210	A	P-O3'-C3'	5.34	126.11	119.70
25	DA	2586	C	C5-C6-N1	5.34	123.67	121.00
26	DB	30	C	C6-N1-C2	-5.34	118.17	120.30
25	BA	2513	C	C2-N1-C1'	-5.33	112.93	118.80
25	DA	1781	C	N1-C2-O2	-5.33	115.70	118.90
1	CA	266	G	C5-N7-C8	-5.33	101.63	104.30
25	DA	1471	A	C8-N9-C4	-5.33	103.67	105.80
25	BA	1302	G	N9-C4-C5	-5.33	103.27	105.40
25	BA	2634	C	N3-C2-O2	5.33	125.63	121.90
25	BA	2734	A	C8-N9-C4	5.33	107.93	105.80
1	CA	1043	C	N3-C4-C5	-5.33	119.77	121.90
1	CA	1119	C	C4-C5-C6	-5.33	114.73	117.40
25	DA	1897	G	N1-C6-O6	5.33	123.10	119.90
25	DA	2488	A	C8-N9-C4	5.33	107.93	105.80
25	DA	2532	G	N1-C6-O6	5.33	123.10	119.90
25	BA	405	C	C5-C4-N4	-5.33	116.47	120.20
1	CA	572	A	C8-N9-C4	5.33	107.93	105.80
25	DA	811	U	C5-C6-N1	-5.33	120.04	122.70
25	BA	397	G	N3-C4-N9	5.32	129.19	126.00
25	BA	1723	A	N1-C6-N6	-5.32	115.41	118.60
25	BA	1389	G	C4-N9-C1'	5.32	133.42	126.50
1	CA	1005	A	OP1-P-O3'	5.32	116.91	105.20
1	CA	1063	C	C6-N1-C2	-5.32	118.17	120.30
1	AA	1388	C	N1-C2-O2	-5.32	115.71	118.90
25	BA	354	A	N3-C4-C5	5.32	130.52	126.80
25	BA	1298	G	N3-C4-N9	-5.32	122.81	126.00
1	CA	615	C	C6-N1-C2	-5.32	118.17	120.30
25	DA	1703	G	C6-C5-N7	-5.32	127.21	130.40
1	CA	1065	U	P-O3'-C3'	5.32	126.08	119.70
25	BA	2239	A	C8-N9-C4	-5.32	103.67	105.80
25	DA	1181	C	N1-C2-O2	5.32	122.09	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	1930	G	C4-N9-C1'	-5.32	119.59	126.50
1	AA	1122	U	N3-C2-O2	-5.32	118.48	122.20
1	CA	701	C	N3-C2-O2	-5.32	118.18	121.90
25	BA	1746	G	N9-C4-C5	5.31	107.53	105.40
25	DA	1313	U	C2-N1-C1'	5.31	124.08	117.70
25	BA	2011	G	C8-N9-C4	5.31	108.52	106.40
25	DA	1204	A	C4-C5-N7	5.31	113.36	110.70
25	DA	2772	C	C6-N1-C2	5.31	122.42	120.30
1	AA	1067	A	O4'-C1'-N9	-5.31	103.95	108.20
25	BA	139	A	N1-C6-N6	5.31	121.79	118.60
25	BA	1154	U	N3-C2-O2	-5.31	118.48	122.20
1	CA	984	C	C2-N3-C4	5.31	122.55	119.90
25	DA	729	G	N1-C6-O6	5.31	123.09	119.90
25	DA	2755	C	C5-C6-N1	5.31	123.66	121.00
1	AA	1396	A	C5-C6-N1	-5.31	115.05	117.70
25	BA	2054	G	C5-N7-C8	-5.31	101.65	104.30
25	DA	1254	A	C8-N9-C4	-5.31	103.68	105.80
1	CA	1180	A	N7-C8-N9	5.31	116.45	113.80
25	BA	2036	A	N9-C4-C5	-5.30	103.68	105.80
25	BA	2370	G	N1-C6-O6	-5.30	116.72	119.90
25	BA	2518	U	O4'-C1'-N1	5.30	112.44	108.20
1	CA	783	C	N3-C4-C5	5.30	124.02	121.90
25	BA	478	G	N3-C4-C5	-5.30	125.95	128.60
25	DA	2207	G	C8-N9-C1'	-5.30	120.11	127.00
25	BA	410	U	C2-N1-C1'	-5.30	111.34	117.70
25	BA	839	G	O4'-C1'-N9	-5.30	103.96	108.20
25	DA	1142	U	N3-C2-O2	-5.30	118.49	122.20
25	BA	670	C	C2-N1-C1'	5.29	124.62	118.80
1	CA	1205	U	C6-N1-C2	-5.29	117.82	121.00
1	AA	97	G	N3-C4-N9	5.29	129.18	126.00
1	CA	400	C	C6-N1-C2	5.29	122.42	120.30
25	DA	1698	A	N9-C4-C5	-5.29	103.68	105.80
25	BA	139	A	C2-N3-C4	-5.29	107.96	110.60
25	DA	2338	G	C4-N9-C1'	-5.29	119.62	126.50
25	BA	342	C	N3-C4-C5	-5.29	119.78	121.90
25	BA	1425	A	OP2-P-O3'	5.29	116.83	105.20
1	AA	1131	G	C5-N7-C8	-5.29	101.66	104.30
25	BA	1068	G	N9-C4-C5	5.29	107.51	105.40
25	BA	1298	G	N9-C4-C5	5.29	107.51	105.40
25	BA	2495	C	C6-N1-C2	-5.29	118.19	120.30
1	CA	733	A	O5'-P-OP2	-5.29	100.94	105.70
25	DA	1831	G	C8-N9-C4	-5.29	104.29	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	557	G	C8-N9-C4	5.28	108.51	106.40
1	CA	1502	A	N7-C8-N9	5.28	116.44	113.80
1	AA	944	G	C4-N9-C1'	5.28	133.37	126.50
25	DA	1684	C	N3-C4-C5	-5.28	119.79	121.90
23	AX	46	G	N3-C2-N2	-5.28	116.20	119.90
25	DA	2479	G	N1-C6-O6	-5.28	116.73	119.90
25	BA	2262	G	C8-N9-C4	-5.28	104.29	106.40
1	CA	1163	C	N1-C2-O2	5.28	122.07	118.90
25	DA	2252	G	N3-C2-N2	-5.28	116.20	119.90
1	AA	1235	U	C6-N1-C2	-5.28	117.83	121.00
1	CA	660	G	C8-N9-C4	5.28	108.51	106.40
23	CX	24	U	C6-N1-C2	-5.28	117.83	121.00
25	DA	1653	G	C6-C5-N7	-5.28	127.23	130.40
25	BA	1954	A	O5'-P-OP1	-5.28	100.95	105.70
25	DA	1021	A	C5-N7-C8	-5.28	101.26	103.90
25	DA	1281	G	N3-C4-C5	5.27	131.24	128.60
25	BA	496	A	OP1-P-O3'	5.27	116.80	105.20
25	BA	1066	A	C8-N9-C4	-5.27	103.69	105.80
25	DA	2612	C	C6-N1-C2	5.27	122.41	120.30
1	AA	998	G	N3-C4-N9	-5.27	122.84	126.00
1	AA	1278	U	C5-C6-N1	5.27	125.33	122.70
25	BA	2858	G	O4'-C1'-N9	5.27	112.42	108.20
1	AA	422	C	O4'-C1'-N1	5.27	112.42	108.20
25	BA	1009	C	N3-C4-N4	5.27	121.69	118.00
25	DA	1212	G	C8-N9-C4	5.27	108.51	106.40
1	AA	159	G	C4-N9-C1'	-5.27	119.65	126.50
25	DA	669	G	OP1-P-OP2	-5.27	111.70	119.60
25	DA	2645	G	N3-C2-N2	5.27	123.59	119.90
25	DA	1880	C	C6-N1-C2	5.26	122.41	120.30
27	DD	275	LYS	N-CA-C	-5.26	96.79	111.00
25	BA	1421	C	OP1-P-O3'	5.26	116.78	105.20
1	CA	667	G	N3-C4-C5	5.26	131.23	128.60
1	CA	1004	A	N1-C6-N6	-5.26	115.44	118.60
25	DA	511	U	N3-C2-O2	-5.26	118.52	122.20
25	BA	2291	G	C8-N9-C4	5.26	108.50	106.40
25	BA	498	A	O5'-P-OP2	-5.26	100.97	105.70
25	BA	1444	C	OP2-P-O3'	5.26	116.77	105.20
25	DA	729	G	C4-N9-C1'	5.26	133.34	126.50
25	BA	1718	U	N3-C2-O2	5.25	125.88	122.20
1	CA	65	U	OP2-P-O3'	5.25	116.76	105.20
25	DA	1963	U	C2-N1-C1'	5.25	124.00	117.70
25	BA	1314	A	C2-N3-C4	-5.25	107.97	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	1270	C	OP2-P-O3'	5.25	116.75	105.20
25	BA	2042	A	O5'-P-OP1	-5.25	100.97	105.70
1	CA	1026	G	N7-C8-N9	5.25	115.72	113.10
1	CA	1149	C	N3-C2-O2	-5.25	118.23	121.90
25	DA	2491	U	N1-C2-O2	5.25	126.47	122.80
1	CA	1312	G	C8-N9-C4	-5.25	104.30	106.40
25	DA	2057	A	N7-C8-N9	-5.25	111.18	113.80
25	DA	1899	G	OP1-P-O3'	5.24	116.73	105.20
25	BA	1308	A	N1-C6-N6	5.24	121.74	118.60
25	DA	740	U	O5'-P-OP1	5.24	116.99	110.70
1	AA	1113	C	C6-N1-C2	-5.24	118.20	120.30
25	BA	88	G	C8-N9-C4	-5.24	104.31	106.40
25	BA	193	A	N7-C8-N9	-5.24	111.18	113.80
25	BA	702	A	C8-N9-C4	-5.24	103.70	105.80
25	BA	912	C	C6-N1-C2	5.24	122.39	120.30
25	BA	12	U	C2-N1-C1'	5.24	123.98	117.70
25	DA	1997	G	N3-C4-N9	5.24	129.14	126.00
22	AV	17	U	C2-N3-C4	5.24	130.14	127.00
25	DA	71	A	N1-C6-N6	5.24	121.74	118.60
25	DA	2531	A	C8-N9-C4	5.24	107.89	105.80
25	BA	600	G	C8-N9-C4	5.23	108.49	106.40
25	DA	21	A	C8-N9-C4	5.23	107.89	105.80
1	AA	934	C	O5'-P-OP1	-5.23	100.99	105.70
1	AA	1150	U	C6-N1-C2	-5.23	117.86	121.00
25	BA	180	A	OP2-P-O3'	5.23	116.70	105.20
1	CA	354	G	C4-C5-N7	5.23	112.89	110.80
25	BA	719	C	OP2-P-O3'	5.23	116.70	105.20
25	DA	1571	A	N1-C6-N6	-5.23	115.46	118.60
25	BA	2684	G	C8-N9-C4	5.23	108.49	106.40
25	DA	116	C	C4-C5-C6	5.23	120.01	117.40
1	AA	98	G	N3-C4-N9	5.22	129.13	126.00
25	BA	827	G	C4-C5-C6	5.22	121.94	118.80
25	BA	2062	C	C6-N1-C2	5.22	122.39	120.30
25	BA	2283	G	C8-N9-C1'	-5.22	120.21	127.00
1	CA	44	G	C4-N9-C1'	5.22	133.29	126.50
25	DA	154(A)	C	C2-N1-C1'	5.22	124.55	118.80
1	AA	1531	A	C4-N9-C1'	5.22	135.70	126.30
25	DA	1372	U	C2-N1-C1'	5.22	123.97	117.70
1	CA	1080	A	N1-C6-N6	-5.22	115.47	118.60
25	DA	1880	C	C5-C6-N1	-5.22	118.39	121.00
25	DA	1992	G	C2-N3-C4	5.22	114.51	111.90
25	DA	2374	C	C5-C6-N1	-5.22	118.39	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	175	C	C5-C6-N1	5.22	123.61	121.00
1	AA	340	U	C5-C6-N1	-5.22	120.09	122.70
25	BA	194	G	O5'-P-OP2	-5.22	101.00	105.70
25	DA	2601	C	N3-C4-C5	5.22	123.99	121.90
25	BA	331	G	O5'-P-OP1	-5.21	101.01	105.70
23	CX	35	A	C5-C6-N6	5.21	127.87	123.70
1	AA	6	G	N3-C4-N9	5.21	129.13	126.00
25	DA	933	A	C6-C5-N7	-5.21	128.65	132.30
25	DA	1555	G	N1-C6-O6	5.21	123.03	119.90
25	DA	1970	A	O4'-C1'-N9	-5.21	104.03	108.20
25	BA	733	G	C5-N7-C8	-5.21	101.69	104.30
1	AA	167	G	C8-N9-C1'	-5.21	120.23	127.00
25	DA	1797	C	C5-C6-N1	-5.21	118.40	121.00
1	AA	354	G	O5'-P-OP2	-5.21	101.02	105.70
25	BA	231	G	N3-C4-C5	5.21	131.20	128.60
25	BA	2011	G	N7-C8-N9	-5.21	110.50	113.10
25	BA	2421	G	N1-C2-N2	-5.21	111.51	116.20
25	BA	989	G	C8-N9-C4	-5.20	104.32	106.40
25	BA	1725	G	N9-C4-C5	5.20	107.48	105.40
25	BA	2285	A	C8-N9-C4	-5.20	103.72	105.80
25	DA	1897	G	O5'-P-OP1	-5.20	101.02	105.70
25	BA	1187	U	C5-C6-N1	5.20	125.30	122.70
25	DA	885	C	C6-N1-C2	-5.20	118.22	120.30
25	DA	1475	G	N1-C6-O6	5.20	123.02	119.90
25	DA	2519	U	C6-N1-C2	5.20	124.12	121.00
1	AA	645	C	N1-C2-O2	5.20	122.02	118.90
25	DA	807	U	C6-N1-C2	-5.20	117.88	121.00
1	AA	1276	G	N3-C4-C5	-5.20	126.00	128.60
25	BA	1454	C	C6-N1-C2	-5.20	118.22	120.30
25	BA	1367	A	O5'-P-OP1	-5.19	101.03	105.70
25	DA	2249	U	C5-C4-O4	5.19	129.02	125.90
25	BA	665	C	N1-C2-O2	-5.19	115.79	118.90
25	BA	2227	G	C8-N9-C1'	5.19	133.75	127.00
1	CA	1141	C	C5-C4-N4	5.19	123.83	120.20
25	DA	2877	G	N3-C4-C5	5.19	131.19	128.60
53	D7	35	ARG	NE-CZ-NH1	-5.19	117.70	120.30
1	AA	339	C	C5-C6-N1	-5.19	118.41	121.00
1	CA	1226	C	C6-N1-C2	-5.19	118.22	120.30
23	CX	46	G	C8-N9-C1'	5.19	133.74	127.00
25	DA	1961	C	C2-N1-C1'	-5.19	113.09	118.80
25	DA	2010	G	O5'-P-OP1	-5.19	101.03	105.70
25	DA	2878	U	C6-N1-C2	-5.19	117.89	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	1220	U	P-O3'-C3'	5.19	125.92	119.70
23	CX	23	C	O5'-P-OP1	-5.19	101.03	105.70
25	DA	1602	U	O5'-P-OP2	5.19	116.92	110.70
1	AA	496	A	N9-C4-C5	5.18	107.87	105.80
1	AA	1127	G	C6-C5-N7	-5.18	127.29	130.40
1	CA	1397	C	C2-N1-C1'	5.18	124.50	118.80
25	DA	1679	U	C5-C4-O4	5.18	129.01	125.90
1	AA	348	G	O5'-P-OP1	5.18	116.92	110.70
25	BA	2077	C	N3-C4-C5	-5.18	119.83	121.90
25	DA	792	G	N3-C4-C5	-5.18	126.01	128.60
25	BA	1386	U	N1-C2-O2	-5.18	119.17	122.80
25	BA	2389	A	C2-N3-C4	-5.18	108.01	110.60
25	DA	188	G	C5-N7-C8	-5.18	101.71	104.30
27	BD	111	LEU	CA-CB-CG	5.18	127.21	115.30
25	DA	2227	A	N1-C6-N6	-5.18	115.49	118.60
25	DA	2540	C	O5'-P-OP2	-5.18	101.04	105.70
25	BA	1382	A	O5'-P-OP2	-5.17	101.04	105.70
25	BA	2059	G	N1-C2-N2	-5.17	111.54	116.20
1	CA	1240	U	O4'-C1'-N1	5.17	112.34	108.20
25	DA	13	A	N1-C6-N6	-5.17	115.50	118.60
25	DA	1432	C	N3-C4-N4	5.17	121.62	118.00
25	BA	242	C	C6-N1-C2	5.17	122.37	120.30
1	CA	46	G	C5-C6-O6	-5.17	125.50	128.60
1	CA	64	G	C5-C6-N1	-5.17	108.91	111.50
25	BA	1035	G	N3-C4-N9	5.17	129.10	126.00
25	DA	954	G	N1-C6-O6	-5.17	116.80	119.90
25	DA	2804	C	N1-C2-O2	5.17	122.00	118.90
23	CX	9	G	N3-C4-C5	5.17	131.19	128.60
25	DA	1215	G	OP1-P-O3'	5.17	116.57	105.20
25	BA	1154	U	C2-N1-C1'	5.17	123.90	117.70
25	BA	1852	A	C8-N9-C4	-5.17	103.73	105.80
1	CA	254	G	OP2-P-O3'	5.17	116.57	105.20
1	CA	380	G	N3-C4-N9	-5.17	122.90	126.00
1	CA	1171	G	N7-C8-N9	5.17	115.68	113.10
25	DA	34	C	C6-N1-C2	-5.17	118.23	120.30
25	BA	2594	G	C8-N9-C4	-5.17	104.33	106.40
25	BA	962	G	N3-C4-C5	-5.16	126.02	128.60
25	BA	1175	A	N1-C6-N6	-5.16	115.50	118.60
25	BA	2299	A	C5-N7-C8	-5.16	101.32	103.90
1	CA	1036	G	C4-N9-C1'	5.16	133.21	126.50
25	BA	202	A	C8-N9-C4	5.16	107.86	105.80
1	CA	1246	C	N3-C2-O2	-5.16	118.29	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	CX	26	G	C6-N1-C2	5.16	128.20	125.10
25	DA	448	U	C5-C6-N1	-5.16	120.12	122.70
25	DA	2320	A	C2-N3-C4	5.16	113.18	110.60
25	BA	1985	U	C5-C6-N1	5.16	125.28	122.70
25	BA	2299	A	O4'-C1'-N9	-5.16	104.07	108.20
25	DA	512	G	C8-N9-C1'	5.16	133.71	127.00
1	AA	46	G	N1-C6-O6	5.16	122.99	119.90
25	BA	2065	C	N3-C2-O2	5.16	125.51	121.90
18	CR	64	ARG	NE-CZ-NH2	-5.16	117.72	120.30
25	DA	1204	A	C5-N7-C8	-5.16	101.32	103.90
25	BA	639	G	O4'-C1'-N9	5.15	112.32	108.20
25	DA	2512	C	N1-C2-O2	-5.15	115.81	118.90
25	BA	1076	G	N9-C4-C5	-5.15	103.34	105.40
25	BA	1222	A	C4-C5-C6	5.15	119.58	117.00
25	DA	2386	C	N3-C4-C5	5.15	123.96	121.90
25	BA	1019	G	OP1-P-OP2	5.15	127.33	119.60
25	DA	446	G	C8-N9-C4	5.15	108.46	106.40
25	DA	645	C	C6-N1-C2	-5.15	118.24	120.30
26	DB	70	C	C6-N1-C2	-5.15	118.24	120.30
25	BA	2428	C	C5-C6-N1	5.15	123.57	121.00
1	CA	800	G	OP2-P-O3'	5.15	116.53	105.20
25	DA	2483	C	C5-C6-N1	5.15	123.58	121.00
25	BA	354	A	N1-C2-N3	5.15	131.87	129.30
25	DA	737	C	C6-N1-C2	5.15	122.36	120.30
25	BA	2537	G	O5'-P-OP1	5.14	116.87	110.70
25	DA	1937	A	N9-C4-C5	-5.14	103.74	105.80
25	BA	2061	C	C6-N1-C2	-5.14	118.24	120.30
25	BA	2544	G	C5-C6-O6	-5.14	125.52	128.60
25	BA	2574	U	C5-C6-N1	-5.14	120.13	122.70
25	DA	1313	U	C5-C6-N1	5.14	125.27	122.70
25	DA	2321	G	C6-C5-N7	-5.14	127.32	130.40
1	AA	159	G	N9-C1'-C2'	-5.14	106.35	112.00
25	BA	1321	A	C5-C6-N1	-5.14	115.13	117.70
25	BA	1745	A	N1-C6-N6	5.14	121.68	118.60
25	BA	2608	U	C6-N1-C2	5.14	124.08	121.00
25	DA	1487	G	C8-N9-C4	-5.14	104.34	106.40
25	BA	332	G	C8-N9-C1'	-5.14	120.32	127.00
1	CA	299	G	C5-C6-O6	-5.14	125.52	128.60
1	AA	1506	U	N3-C4-O4	5.13	122.99	119.40
25	BA	2256	U	N3-C4-O4	-5.13	115.81	119.40
25	BA	2419	G	C4-N9-C1'	5.13	133.18	126.50
25	BA	2566	U	N1-C2-O2	-5.13	119.21	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	271(M)	G	N3-C4-C5	-5.13	126.03	128.60
25	DA	792	G	N3-C4-N9	5.13	129.08	126.00
25	BA	30	G	OP1-P-O3'	5.13	116.49	105.20
1	AA	341	C	C6-N1-C2	5.13	122.35	120.30
25	DA	90	U	C2-N1-C1'	5.13	123.86	117.70
25	DA	1124	C	N3-C4-C5	5.13	123.95	121.90
25	BA	1153	G	C2-N3-C4	5.13	114.47	111.90
1	CA	1028	C	C6-N1-C2	-5.13	118.25	120.30
1	CA	1269	A	N1-C6-N6	-5.13	115.52	118.60
25	DA	762	U	C2-N1-C1'	5.13	123.86	117.70
25	DA	1375	C	O5'-P-OP1	-5.13	101.08	105.70
25	DA	1596	A	C8-N9-C4	5.13	107.85	105.80
25	DA	2039	C	C2-N1-C1'	5.13	124.44	118.80
1	AA	578	C	C6-N1-C2	-5.13	118.25	120.30
1	AA	1150	U	C5-C6-N1	5.13	125.26	122.70
25	BA	1707	C	C6-N1-C2	-5.13	118.25	120.30
25	DA	602	G	N3-C4-N9	5.13	129.08	126.00
1	CA	893	C	C6-N1-C2	5.13	122.35	120.30
1	CA	1307	U	C5-C6-N1	5.13	125.26	122.70
25	DA	914	C	N1-C2-O2	5.13	121.97	118.90
25	DA	1718	G	C4-N9-C1'	5.13	133.16	126.50
25	DA	1966	A	N1-C6-N6	-5.13	115.53	118.60
25	DA	2591	C	N3-C4-C5	-5.13	119.85	121.90
1	CA	1519	A	C8-N9-C4	-5.12	103.75	105.80
25	DA	889	C	C6-N1-C2	-5.12	118.25	120.30
1	AA	190	U	C5-C6-N1	5.12	125.26	122.70
25	DA	1017	G	C4-N9-C1'	5.12	133.16	126.50
25	DA	2413	G	N1-C6-O6	5.12	122.97	119.90
1	AA	781	A	N9-C4-C5	-5.12	103.75	105.80
1	AA	814	A	OP1-P-O3'	5.12	116.47	105.20
1	AA	1435	G	C5-C6-N1	-5.12	108.94	111.50
25	BA	332	G	C4-N9-C1'	5.12	133.16	126.50
25	BA	725	C	C6-N1-C2	5.12	122.35	120.30
25	DA	199	A	C5-C6-N6	-5.12	119.60	123.70
25	DA	2474	C	N1-C2-O2	5.12	121.97	118.90
25	BA	2258	G	C5-C6-O6	-5.12	125.53	128.60
1	CA	1502	A	C2-N3-C4	-5.12	108.04	110.60
25	BA	861	C	C4-C5-C6	-5.12	114.84	117.40
25	DA	1115	G	C4-N9-C1'	-5.12	119.85	126.50
1	CA	1522	U	OP2-P-O3'	5.11	116.45	105.20
25	BA	2040	G	O5'-P-OP1	5.11	116.83	110.70
1	AA	1004	A	P-O3'-C3'	5.11	125.83	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1145	C	N3-C2-O2	-5.11	118.32	121.90
25	BA	2230	U	N1-C2-O2	5.11	126.38	122.80
25	DA	783	A	C4-C5-C6	5.11	119.56	117.00
25	DA	1897	G	C5-C6-O6	-5.11	125.53	128.60
25	BA	1483	C	C2-N1-C1'	5.11	124.42	118.80
25	BA	1725	G	N3-C2-N2	-5.11	116.32	119.90
1	CA	865	A	C8-N9-C4	-5.11	103.76	105.80
25	DA	912	C	N3-C2-O2	-5.11	118.33	121.90
25	DA	2893	G	N9-C4-C5	-5.11	103.36	105.40
1	AA	421	U	N3-C2-O2	-5.11	118.63	122.20
25	BA	2621	U	C6-N1-C2	5.11	124.06	121.00
1	CA	998	G	N9-C4-C5	5.11	107.44	105.40
25	DA	584	C	N1-C2-O2	-5.11	115.84	118.90
25	BA	418	G	N1-C6-O6	5.10	122.96	119.90
25	DA	188	G	C5-C6-O6	-5.10	125.54	128.60
25	BA	515	G	N1-C6-O6	5.10	122.96	119.90
25	BA	553	A	O5'-P-OP2	-5.10	101.11	105.70
25	BA	1418	U	C5-C6-N1	5.10	125.25	122.70
25	BA	1429	C	C5-C4-N4	-5.10	116.63	120.20
25	DA	389	G	N1-C6-O6	5.10	122.96	119.90
25	DA	1363	C	N3-C4-N4	-5.10	114.43	118.00
25	DA	2297	C	C5-C6-N1	5.10	123.55	121.00
1	CA	833	U	O5'-P-OP2	-5.10	101.11	105.70
25	BA	1718	U	C5-C6-N1	5.10	125.25	122.70
25	BA	2054	G	C4-N9-C1'	-5.10	119.87	126.50
25	DA	560	C	C5-C6-N1	-5.10	118.45	121.00
25	DA	1204	A	N9-C1'-C2'	5.10	120.63	114.00
1	AA	192	U	C6-N1-C2	-5.10	117.94	121.00
1	AA	348	G	N1-C6-O6	5.10	122.96	119.90
25	BA	772	G	N3-C4-C5	-5.10	126.05	128.60
25	DA	1802	A	C6-N1-C2	-5.10	115.54	118.60
1	AA	840	C	O4'-C1'-N1	-5.10	104.12	108.20
1	AA	1125	U	C6-N1-C2	5.09	124.06	121.00
25	BA	2735	G	C8-N9-C1'	-5.09	120.38	127.00
25	DA	394	A	O5'-P-OP1	-5.09	101.12	105.70
26	DB	79	C	C6-N1-C2	-5.09	118.26	120.30
1	AA	977	A	N1-C6-N6	-5.09	115.54	118.60
26	DB	60	C	C5-C6-N1	5.09	123.55	121.00
25	BA	930	G	C4-N9-C1'	-5.09	119.88	126.50
25	DA	461	C	N3-C4-N4	5.09	121.56	118.00
25	DA	1439	A	C8-N9-C4	5.09	107.84	105.80
1	CA	1017	G	N3-C4-C5	5.09	131.15	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1296	C	N3-C2-O2	5.09	125.46	121.90
25	BA	816	G	N9-C4-C5	-5.09	103.36	105.40
1	CA	1044	A	N1-C6-N6	-5.09	115.55	118.60
1	AA	167	G	C6-C5-N7	-5.09	127.35	130.40
1	AA	532	A	P-O3'-C3'	5.09	125.80	119.70
23	AX	22	G	C8-N9-C1'	5.09	133.61	127.00
25	DA	783	A	N3-C4-C5	-5.09	123.24	126.80
25	DA	2591	C	N1-C2-O2	-5.09	115.85	118.90
1	AA	220	G	C4-N9-C1'	5.08	133.11	126.50
1	AA	162	A	N7-C8-N9	5.08	116.34	113.80
25	BA	332	G	N9-C4-C5	-5.08	103.37	105.40
25	BA	2383	G	N1-C2-N3	-5.08	120.85	123.90
25	DA	1614	A	N1-C6-N6	-5.08	115.55	118.60
25	DA	2523	G	O5'-P-OP1	5.08	116.80	110.70
25	BA	1459	G	C5-C6-O6	-5.08	125.55	128.60
25	DA	729	G	C8-N9-C1'	-5.08	120.39	127.00
25	DA	1588	C	N3-C4-C5	5.08	123.93	121.90
25	BA	103	C	N3-C4-C5	5.08	123.93	121.90
25	DA	1421	G	N1-C6-O6	5.08	122.95	119.90
1	AA	1183	A	P-O3'-C3'	5.08	125.79	119.70
25	BA	893	C	C6-N1-C2	5.08	122.33	120.30
25	DA	116	C	N3-C2-O2	-5.08	118.34	121.90
25	DA	2828	C	C6-N1-C2	5.08	122.33	120.30
25	DA	1653	G	N3-C4-N9	5.08	129.05	126.00
1	AA	1397	C	C6-N1-C1'	-5.08	114.71	120.80
23	AX	24	U	N3-C2-O2	-5.08	118.65	122.20
25	BA	1153	G	O5'-P-OP2	-5.08	101.13	105.70
25	DA	1253	A	C8-N9-C4	5.08	107.83	105.80
25	DA	1340	U	C5-C4-O4	-5.08	122.86	125.90
25	BA	1417	G	C5-C6-O6	-5.07	125.56	128.60
1	CA	1034	G	N9-C4-C5	5.07	107.43	105.40
1	CA	1036	G	C8-N9-C1'	-5.07	120.41	127.00
25	DA	148	C	C5-C6-N1	-5.07	118.46	121.00
25	BA	1578	C	C2-N1-C1'	5.07	124.38	118.80
23	AX	14	A	C4-N9-C1'	5.07	135.42	126.30
25	BA	639	G	C4-C5-N7	-5.07	108.77	110.80
25	BA	1076	G	C2-N3-C4	-5.07	109.37	111.90
25	BA	1412	A	C4-C5-N7	-5.07	108.17	110.70
25	BA	1920	U	C5-C4-O4	5.07	128.94	125.90
23	CX	22	G	C8-N9-C1'	5.07	133.59	127.00
25	DA	2286	A	C6-C5-N7	-5.07	128.75	132.30
1	CA	287	U	O5'-P-OP2	-5.06	101.14	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	2347	C	N3-C2-O2	-5.06	118.36	121.90
25	DA	2519	U	C5-C6-N1	-5.06	120.17	122.70
1	CA	1020	U	N1-C2-O2	5.06	126.34	122.80
1	AA	460	G	N7-C8-N9	5.06	115.63	113.10
25	BA	2067	C	N3-C4-C5	5.06	123.92	121.90
25	BA	179	A	N1-C6-N6	5.06	121.64	118.60
25	BA	2549	U	N3-C4-O4	-5.06	115.86	119.40
25	BA	2627	U	C4-C5-C6	-5.06	116.66	119.70
25	DA	685	A	OP1-P-OP2	5.06	127.19	119.60
25	DA	2063	C	N1-C2-O2	-5.06	115.86	118.90
25	DA	2627	G	N1-C6-O6	-5.06	116.86	119.90
25	DA	2042	A	C2-N3-C4	-5.06	108.07	110.60
25	BA	829	A	C8-N9-C4	5.06	107.82	105.80
25	DA	1123	C	N3-C2-O2	5.06	125.44	121.90
25	BA	1745	A	C5-C6-N1	-5.05	115.17	117.70
25	BA	2227	G	N3-C4-C5	5.05	131.13	128.60
25	BA	2697	G	N1-C6-O6	-5.05	116.87	119.90
25	DA	985	C	C5-C6-N1	-5.05	118.47	121.00
25	DA	1620	G	O5'-P-OP2	5.05	116.77	110.70
25	DA	2338	G	C8-N9-C1'	5.05	133.57	127.00
25	BA	137	G	C8-N9-C4	5.05	108.42	106.40
25	BA	51	A	C8-N9-C4	-5.05	103.78	105.80
25	BA	107	G	C6-C5-N7	5.05	133.43	130.40
25	BA	2397	C	N3-C4-C5	5.05	123.92	121.90
1	CA	1028	C	C2-N3-C4	5.05	122.43	119.90
1	CA	1224	G	C8-N9-C4	-5.05	104.38	106.40
23	AX	67	C	N1-C2-O2	5.05	121.93	118.90
25	BA	1091	A	C8-N9-C4	5.05	107.82	105.80
25	BA	1821	C	P-O3'-C3'	5.05	125.76	119.70
1	CA	265	G	N1-C6-O6	5.05	122.93	119.90
25	DA	330	A	N3-C4-C5	5.05	130.33	126.80
26	BB	93	G	N7-C8-N9	5.05	115.62	113.10
25	DA	729	G	C6-C5-N7	-5.05	127.37	130.40
25	BA	194	G	N7-C8-N9	-5.05	110.58	113.10
25	BA	2265	G	N9-C4-C5	-5.05	103.38	105.40
1	CA	662	G	N3-C4-N9	5.05	129.03	126.00
25	DA	90	U	N3-C2-O2	-5.05	118.67	122.20
25	DA	315	G	O5'-P-OP1	5.05	116.76	110.70
25	DA	1189	A	O5'-P-OP1	5.05	116.75	110.70
25	BA	990	A	N1-C2-N3	5.04	131.82	129.30
25	DA	1022	G	N9-C4-C5	5.04	107.42	105.40
25	DA	975	C	C6-N1-C2	-5.04	118.28	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	1899	G	N3-C4-N9	5.04	129.03	126.00
25	DA	2298	A	C4-C5-N7	5.04	113.22	110.70
25	DA	2440	C	C2-N1-C1'	-5.04	113.25	118.80
1	AA	1131	G	C5-C6-O6	-5.04	125.58	128.60
23	AX	14	A	C8-N9-C1'	-5.04	118.63	127.70
25	BA	622	G	C8-N9-C4	5.04	108.42	106.40
25	BA	1823	G	N3-C4-C5	5.04	131.12	128.60
1	CA	1264	C	C6-N1-C2	5.04	122.32	120.30
25	DA	879	G	N3-C4-C5	-5.04	126.08	128.60
1	AA	340	U	C2-N1-C1'	-5.04	111.65	117.70
6	CF	75	LEU	CA-CB-CG	5.04	126.89	115.30
25	DA	1251	C	N3-C2-O2	5.04	125.43	121.90
25	DA	1828	G	C5-C6-O6	5.04	131.62	128.60
1	AA	1286	A	O5'-P-OP1	-5.04	101.17	105.70
25	BA	1219	A	P-O3'-C3'	5.04	125.75	119.70
25	BA	2465	A	N1-C6-N6	-5.04	115.58	118.60
25	DA	2024	G	C5-C6-O6	-5.04	125.58	128.60
1	AA	1024	G	C8-N9-C1'	-5.04	120.45	127.00
25	DA	1488	G	N3-C4-C5	-5.04	126.08	128.60
25	DA	2321	G	C4-C5-N7	5.04	112.81	110.80
25	BA	2001	C	C6-N1-C2	-5.04	118.29	120.30
25	DA	374	A	N1-C6-N6	5.04	121.62	118.60
25	DA	1320	C	N1-C2-O2	-5.04	115.88	118.90
25	BA	418	G	N9-C4-C5	-5.03	103.39	105.40
25	DA	1441	G	C8-N9-C4	5.03	108.41	106.40
25	BA	666	C	N3-C4-C5	-5.03	119.89	121.90
25	DA	768	G	C5-C6-O6	-5.03	125.58	128.60
1	AA	827	U	N3-C2-O2	-5.03	118.68	122.20
25	BA	512	C	C6-N1-C2	5.03	122.31	120.30
25	BA	2610	A	C8-N9-C4	5.03	107.81	105.80
39	BT	103	ARG	NE-CZ-NH1	-5.03	117.78	120.30
1	CA	266	G	P-O3'-C3'	5.03	125.74	119.70
1	AA	30	U	OP2-P-O3'	5.03	116.26	105.20
25	BA	1366	C	C6-N1-C2	5.03	122.31	120.30
25	DA	1204	A	C5-C6-N1	-5.03	115.19	117.70
25	DA	1339	G	O5'-P-OP2	5.03	116.73	110.70
25	DA	2292	C	O5'-P-OP2	-5.03	101.18	105.70
1	AA	1395	C	N1-C2-O2	5.03	121.92	118.90
2	AB	128	GLU	N-CA-C	-5.03	97.43	111.00
25	BA	1687	C	N1-C2-O2	5.03	121.92	118.90
25	BA	2899	C	O5'-P-OP2	-5.03	101.18	105.70
1	CA	99	U	C2-N1-C1'	-5.03	111.67	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1169	A	C8-N9-C4	-5.03	103.79	105.80
1	AA	59	A	C2-N3-C4	5.02	113.11	110.60
1	AA	66	G	C5-C6-N1	-5.02	108.99	111.50
25	BA	1277	G	N3-C4-C5	5.02	131.11	128.60
25	BA	2527	C	C5-C4-N4	-5.02	116.69	120.20
25	BA	2550	C	N3-C4-C5	5.02	123.91	121.90
25	DA	1266	G	C8-N9-C4	5.02	108.41	106.40
25	BA	1177	G	N3-C2-N2	5.02	123.42	119.90
1	CA	1206	G	N1-C6-O6	5.02	122.91	119.90
1	AA	1007	C	C6-N1-C1'	-5.02	114.78	120.80
1	AA	1206	G	N1-C6-O6	5.02	122.91	119.90
25	BA	2300	A	N1-C6-N6	5.02	121.61	118.60
1	AA	975	A	O4'-C1'-N9	-5.02	104.19	108.20
25	DA	1259	G	OP2-P-O3'	5.02	116.24	105.20
1	AA	1502	A	C5-N7-C8	-5.02	101.39	103.90
25	BA	2579	G	C5-N7-C8	5.02	106.81	104.30
25	DA	1004	C	N3-C2-O2	5.02	125.41	121.90
25	BA	2843	G	N3-C4-N9	5.01	129.01	126.00
1	AA	328	C	O5'-P-OP1	-5.01	101.19	105.70
25	BA	1823	G	N3-C4-N9	-5.01	122.99	126.00
1	AA	1335	C	C6-N1-C2	5.01	122.30	120.30
25	BA	2451	A	O4'-C1'-N9	-5.01	104.19	108.20
25	BA	2906	U	C2-N1-C1'	5.01	123.72	117.70
23	CX	76	A	C5-C6-N6	-5.01	119.69	123.70
25	DA	389	G	C8-N9-C4	5.01	108.41	106.40
25	DA	2689	U	OP2-P-O3'	5.01	116.23	105.20
25	BA	1417	G	N1-C6-O6	5.01	122.91	119.90
25	BA	441	C	N3-C4-C5	5.01	123.90	121.90
25	DA	2896	C	N1-C2-O2	5.01	121.91	118.90
1	AA	1127	G	N1-C2-N2	-5.01	111.69	116.20
25	BA	120	G	N1-C6-O6	5.01	122.90	119.90
25	BA	2105	G	C8-N9-C4	5.01	108.40	106.40
1	CA	46	G	N1-C6-O6	5.00	122.90	119.90
25	DA	1703	G	C5-C6-O6	-5.00	125.60	128.60
25	BA	26	G	C6-C5-N7	-5.00	127.40	130.40
25	DA	863	A	OP2-P-O3'	5.00	116.21	105.20
1	AA	347	G	C8-N9-C1'	-5.00	120.50	127.00
25	BA	2283	G	C4-N9-C1'	5.00	133.00	126.50
1	CA	1132	C	C5-C6-N1	5.00	123.50	121.00
25	DA	461	C	N1-C2-O2	-5.00	115.90	118.90
25	DA	1432	C	N3-C2-O2	5.00	125.40	121.90
25	DA	1721	G	N3-C4-C5	-5.00	126.10	128.60

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
23	CX	76	A	C1'

All (11) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	AB	231	GLU	Peptide
2	AB	8	LYS	Peptide
2	AB	9	GLU	Peptide
7	AG	79	ARG	Peptide
24	AW	4	PRO	Peptide
50	B4	59	PHE	Peptide
38	BS	58	LEU	Peptide
45	BZ	136	PHE	Peptide
4	CD	45	GLN	Peptide
24	CW	9	MVA	Peptide
27	DD	274	ARG	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	32196	0	16251	809	0
1	CA	32312	0	16307	915	0
2	AB	1846	0	1867	109	0
2	CB	1825	0	1828	119	0
3	AC	1552	0	1546	59	0
3	CC	1542	0	1517	66	0
4	AD	1659	0	1676	99	0
4	CD	1674	0	1714	78	0
5	AE	1129	0	1185	50	0
5	CE	1133	0	1191	45	0
6	AF	806	0	793	33	0
6	CF	816	0	808	27	0
7	AG	1231	0	1238	35	0
7	CG	1235	0	1249	56	0
8	AH	1088	0	1126	48	0
8	CH	1088	0	1126	46	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
9	AI	983	0	986	54	0
9	CI	978	0	966	57	0
10	AJ	709	0	650	35	0
10	CJ	714	0	672	47	0
11	AK	829	0	825	19	0
11	CK	833	0	836	29	0
12	AL	930	0	980	28	0
12	CL	930	0	980	34	0
13	AM	958	0	1002	25	0
13	CM	950	0	988	56	0
14	AN	492	0	529	26	0
14	CN	492	0	529	29	0
15	AO	728	0	760	16	0
15	CO	728	0	760	27	0
16	AP	681	0	697	29	0
16	CP	677	0	686	28	0
17	AQ	823	0	891	21	0
17	CQ	823	0	891	19	0
18	AR	555	0	618	17	0
18	CR	555	0	618	27	0
19	AS	652	0	662	36	0
19	CS	646	0	644	56	0
20	AT	728	0	798	30	0
20	CT	727	0	796	28	0
21	AU	199	0	208	5	0
21	CU	199	0	208	7	0
22	AV	114	0	54	0	0
22	CV	113	0	54	0	0
23	AX	1623	0	823	18	0
23	CX	1623	0	824	24	0
24	AW	93	0	84	9	0
24	CW	93	0	84	14	0
25	BA	58834	0	29667	785	0
25	DA	58458	0	29482	1100	0
26	BB	2573	0	1306	38	0
26	DB	2573	0	1306	54	0
27	BD	2136	0	2218	64	0
27	DD	2136	0	2218	74	0
28	BE	1559	0	1618	38	0
28	DE	1559	0	1618	60	0
29	BF	1584	0	1625	46	0
29	DF	1580	0	1619	69	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
30	BG	1425	0	1443	45	0
30	DG	1424	0	1434	82	0
31	BH	1330	0	1407	33	0
31	DH	1330	0	1407	52	0
32	BI	1085	0	1114	42	0
32	DI	1061	0	1080	31	0
33	BN	1117	0	1183	17	0
33	DN	1117	0	1184	26	0
34	BO	933	0	996	24	0
34	DO	933	0	996	36	0
35	BP	1135	0	1212	37	0
35	DP	1135	0	1211	46	0
36	BQ	1122	0	1179	38	0
36	DQ	1122	0	1179	47	0
37	BR	968	0	1033	24	0
37	DR	968	0	1032	30	0
38	BS	877	0	938	25	0
38	DS	870	0	923	47	0
39	BT	1091	0	1151	28	0
39	DT	1083	0	1136	36	0
40	BU	959	0	1019	26	0
40	DU	959	0	1019	37	0
41	BV	771	0	830	11	0
41	DV	771	0	830	23	0
42	BW	886	0	940	9	0
42	DW	886	0	940	17	0
43	BX	750	0	814	20	0
43	DX	750	0	814	25	0
44	BY	806	0	881	25	0
44	DY	806	0	881	21	0
45	BZ	1349	0	1355	47	0
45	DZ	1360	0	1363	48	0
46	B0	653	0	674	25	0
46	D0	653	0	674	23	0
47	B1	755	0	826	19	0
47	D1	755	0	826	26	0
48	B2	588	0	643	18	0
48	D2	588	0	643	20	0
49	B3	469	0	518	17	0
49	D3	464	0	514	12	0
50	B4	551	0	532	38	0
50	D4	531	0	502	32	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
51	B5	455	0	465	13	0
51	D5	455	0	465	11	0
52	B6	453	0	473	10	0
52	D6	449	0	469	10	0
53	B7	418	0	466	9	0
53	D7	418	0	467	9	0
54	B8	511	0	571	27	0
54	D8	517	0	582	27	0
55	B9	307	0	335	5	0
55	D9	307	0	335	10	0
56	AA	221	0	0	0	0
56	AD	1	0	0	0	0
56	AF	1	0	0	0	0
56	AK	1	0	0	0	0
56	AM	1	0	0	0	0
56	AN	2	0	0	0	0
56	AV	1	0	0	0	0
56	AX	9	0	0	0	0
56	B0	4	0	0	0	0
56	B1	1	0	0	0	0
56	B2	1	0	0	0	0
56	B3	3	0	0	0	0
56	B4	1	0	0	0	0
56	B5	1	0	0	0	0
56	B7	4	0	0	0	0
56	B8	3	0	0	0	0
56	B9	1	0	0	0	0
56	BA	738	0	0	0	0
56	BB	18	0	0	0	0
56	BD	12	0	0	0	0
56	BE	10	0	0	0	0
56	BF	8	0	0	0	0
56	BG	4	0	0	0	0
56	BN	6	0	0	0	0
56	BO	1	0	0	0	0
56	BP	4	0	0	0	0
56	BQ	5	0	0	0	0
56	BR	4	0	0	0	0
56	BU	8	0	0	0	0
56	BV	4	0	0	0	0
56	BW	5	0	0	0	0
56	BX	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	BY	1	0	0	0	0
56	BZ	1	0	0	0	0
56	CA	172	0	0	0	0
56	CE	2	0	0	0	0
56	CF	1	0	0	0	0
56	CQ	1	0	0	0	0
56	CT	1	0	0	0	0
56	CX	3	0	0	0	0
56	D0	1	0	0	0	0
56	D3	1	0	0	0	0
56	D5	2	0	0	0	0
56	D8	1	0	0	0	0
56	DA	653	0	0	0	0
56	DB	12	0	0	0	0
56	DD	8	0	0	0	0
56	DE	6	0	0	0	0
56	DF	6	0	0	0	0
56	DG	1	0	0	0	0
56	DN	1	0	0	0	0
56	DO	1	0	0	0	0
56	DQ	5	0	0	0	0
56	DR	2	0	0	0	0
56	DV	4	0	0	0	0
56	DW	2	0	0	0	0
56	DY	1	0	0	0	0
57	AD	8	0	0	1	0
57	CD	8	0	0	1	0
58	AN	1	0	0	0	0
58	B4	1	0	0	0	0
58	B5	1	0	0	0	0
58	B6	1	0	0	0	0
58	B9	1	0	0	0	0
58	BY	1	0	0	0	0
58	CN	1	0	0	0	0
58	D4	1	0	0	0	0
58	D5	1	0	0	0	0
58	D6	1	0	0	0	0
58	D9	1	0	0	0	0
58	DY	1	0	0	0	0
59	AX	10	0	10	0	0
59	CX	10	0	10	2	0
60	BA	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
60	DA	1	0	0	0	0
61	AA	148	0	0	27	0
61	AD	1	0	0	0	0
61	AE	3	0	0	0	0
61	AJ	1	0	0	0	0
61	AL	1	0	0	0	0
61	AP	1	0	0	0	0
61	AU	1	0	0	0	0
61	AV	1	0	0	0	0
61	AX	1	0	0	0	0
61	B0	4	0	0	0	0
61	B1	2	0	0	0	0
61	B5	3	0	0	1	0
61	B7	1	0	0	1	0
61	B8	8	0	0	1	0
61	BA	1092	0	0	113	0
61	BB	26	0	0	0	0
61	BD	8	0	0	1	0
61	BE	9	0	0	4	0
61	BF	4	0	0	0	0
61	BG	1	0	0	0	0
61	BN	3	0	0	0	0
61	BO	2	0	0	0	0
61	BP	15	0	0	3	0
61	BQ	3	0	0	1	0
61	BR	1	0	0	0	0
61	BT	1	0	0	0	0
61	BU	4	0	0	0	0
61	BV	2	0	0	0	0
61	BW	2	0	0	0	0
61	BX	4	0	0	1	0
61	CA	187	0	0	24	0
61	CE	2	0	0	0	0
61	CN	1	0	0	0	0
61	CT	1	0	0	0	0
61	CX	2	0	0	0	0
61	D0	5	0	0	1	0
61	D1	1	0	0	0	0
61	D7	2	0	0	0	0
61	D8	4	0	0	0	0
61	DA	902	0	0	120	0
61	DB	7	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
61	DD	8	0	0	0	0
61	DE	13	0	0	1	0
61	DF	5	0	0	0	0
61	DO	1	0	0	0	0
61	DP	14	0	0	0	0
61	DQ	3	0	0	1	0
61	DU	4	0	0	0	0
61	DV	1	0	0	0	0
61	DX	2	0	0	0	0
61	DY	2	0	0	0	0
All	All	286321	0	191126	6372	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 14.

All (6372) 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)
1:CA:1002:G:H1	1:CA:1038:C:N4	1.42	1.16
1:AA:348:G:H2'	1:AA:349:A:H5'	1.36	1.04
1:AA:1125:U:N3	1:AA:1127:G:N7	2.06	1.03
39:BT:16:ARG:NH2	39:BT:83:ILE:O	1.92	1.02
2:CB:185:ILE:HG22	2:CB:199:TYR:HB2	1.40	1.02
2:CB:16:HIS:HB2	2:CB:204:ASN:HB3	1.41	1.01
1:CA:1162:C:H42	1:CA:1174:G:H1	1.02	1.00
25:DA:1019:U:HO2'	25:DA:1021:A:H2	1.01	1.00
1:AA:1129:C:N4	1:AA:1143:G:H1	1.59	0.99
2:AB:16:HIS:HB2	2:AB:204:ASN:HB3	1.43	0.98
25:DA:2206:G:H3'	25:DA:2207:G:C8	1.98	0.98
1:CA:1007:C:N3	1:CA:1022:G:N2	2.12	0.97
30:BG:41:GLN:HG3	30:BG:60:LEU:HD11	1.48	0.96
38:DS:35:ILE:HD11	38:DS:101:LEU:HD12	1.47	0.96
1:CA:998:G:H1	1:CA:1043:C:H42	1.14	0.95
25:BA:9:U:H3	25:BA:2641:A:H2	1.15	0.95
30:BG:66:GLN:HG2	50:B4:1:MET:HE3	1.44	0.95
10:CJ:8:LEU:HB2	10:CJ:70:ARG:HB2	1.49	0.95
1:CA:1163:C:H42	1:CA:1173:G:H1	1.07	0.94
25:DA:1689:A:H62	25:DA:1698:A:H2	1.15	0.93
25:BA:1065:U:HO2'	25:BA:1067:A:H2	1.05	0.93
25:DA:1798:U:H5'	27:DD:259:THR:HG22	1.50	0.92
35:BP:126:VAL:HG12	35:BP:148:LEU:HD22	1.49	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1002:G:N2	1:CA:1038:C:N3	2.16	0.92
1:AA:1129:C:H42	1:AA:1143:G:H1	0.95	0.91
25:DA:1693:U:O2'	27:DD:14:ARG:NH2	2.02	0.91
25:DA:1648:C:OP1	61:DA:4111:HOH:O	1.88	0.91
1:CA:999:C:N4	1:CA:1042:G:N1	2.17	0.91
26:DB:22:U:H3	26:DB:61:G:H1	1.18	0.91
1:CA:1007:C:N4	1:CA:1022:G:N1	2.19	0.91
1:AA:201:C:H42	1:AA:216:G:H1	1.11	0.90
25:DA:1204:A:H2	25:DA:1241:A:H62	1.19	0.90
39:DT:16:ARG:NH2	39:DT:83:ILE:O	2.02	0.90
25:BA:1829:U:H5'	27:BD:259:THR:HG22	1.52	0.90
28:BE:110:GLY:O	61:BE:406:HOH:O	1.89	0.90
50:D4:53:GLU:HG2	50:D4:55:ARG:H	1.34	0.90
1:CA:1153:C:H42	1:CA:1154:G:H21	1.17	0.90
25:DA:526:A:OP1	61:DA:4572:HOH:O	1.89	0.90
25:DA:195:A:N7	61:DA:4175:HOH:O	2.04	0.89
10:AJ:35:SER:HB3	10:AJ:73:ASP:HB2	1.54	0.89
44:BY:54:LYS:HA	44:BY:56:PRO:HD3	1.52	0.89
25:DA:566:U:H5''	35:DP:29:LYS:HE3	1.55	0.88
25:DA:2615:U:OP1	61:DA:3943:HOH:O	1.91	0.88
2:AB:69:LEU:HB3	2:AB:162:ILE:HG22	1.53	0.88
25:DA:740:U:OP2	61:DA:4117:HOH:O	1.92	0.88
11:AK:79:SER:HA	11:AK:104:GLN:HB2	1.55	0.88
1:CA:1163:C:N4	1:CA:1173:G:H1	1.72	0.88
1:CA:542:G:OP1	4:CD:10:ARG:NH2	2.06	0.88
1:CA:999:C:N4	1:CA:1042:G:C6	2.42	0.88
46:D0:11:ARG:O	46:D0:14:ARG:NH2	2.05	0.87
1:CA:563:A:N6	61:CA:4065:HOH:O	2.06	0.87
9:CI:9:ARG:HG2	9:CI:14:VAL:HG12	1.56	0.87
1:CA:1318:A:H5''	19:CS:3:ARG:HH22	1.37	0.86
25:DA:981:A:OP1	61:DA:4033:HOH:O	1.92	0.86
16:AP:53:VAL:HG13	16:AP:79:VAL:HG13	1.57	0.86
25:BA:1395:A:OP1	61:BA:4761:HOH:O	1.93	0.86
25:BA:1686:U:OP1	61:BA:4272:HOH:O	1.93	0.86
25:BA:537:G:N7	61:BA:4621:HOH:O	2.07	0.86
25:DA:2592:G:OP1	61:DA:4137:HOH:O	1.93	0.86
25:DA:323:G:HO2'	25:DA:1205:U:H3	1.23	0.86
25:DA:1153:C:OP1	40:DU:92:ARG:NH1	2.09	0.86
25:DA:1268:A:OP1	61:DA:3940:HOH:O	1.93	0.86
25:DA:2807:G:N1	25:DA:2893:G:O6	2.09	0.86
46:B0:11:ARG:O	46:B0:14:ARG:NH2	2.08	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:185:ASP:HA	29:BF:188:ARG:HD3	1.54	0.85
49:B3:8:LEU:HD13	49:B3:31:LEU:HD23	1.58	0.85
12:AL:36:VAL:HG23	24:AW:10:2QY:H89	1.57	0.85
13:AM:2:ALA:N	13:AM:8:GLU:OE1	2.09	0.85
1:CA:1493:A:H1'	25:DA:1913:A:H62	1.39	0.85
25:DA:770:G:OP2	61:DA:4148:HOH:O	1.94	0.85
45:DZ:69:THR:HG22	45:DZ:90:VAL:HA	1.57	0.85
25:BA:656:A:OP1	35:BP:65:ARG:NH1	2.09	0.85
25:BA:303:C:H42	25:BA:385:G:H1	1.24	0.85
1:CA:1502:A:H2	1:CA:1505:G:H1	1.24	0.85
4:CD:122:ARG:NH1	4:CD:134:ASP:O	2.09	0.85
25:DA:2879:C:OP2	61:DA:4045:HOH:O	1.95	0.85
25:BA:2720:G:O6	61:BA:4017:HOH:O	1.93	0.85
25:BA:1500:A:OP2	61:BA:3907:HOH:O	1.95	0.85
2:AB:21:ARG:HB3	2:AB:39:ILE:HA	1.57	0.84
13:CM:122:LYS:HD3	13:CM:123:ALA:H	1.41	0.84
25:BA:894:U:O4	25:BA:978:A:N6	2.10	0.84
1:CA:656:C:O2'	15:CO:28:GLN:NE2	2.09	0.84
1:CA:1162:C:N4	1:CA:1174:G:H1	1.74	0.84
4:AD:155:LEU:HB3	4:AD:158:ILE:HD11	1.59	0.84
25:BA:1577:C:O2'	25:BA:1578:C:O5'	1.96	0.84
25:DA:1271:G:OP2	61:DA:4112:HOH:O	1.96	0.84
25:DA:1021:A:H62	25:DA:1141:U:H3	1.22	0.84
8:CH:51:VAL:HG11	8:CH:60:ARG:HH12	1.40	0.84
25:DA:301:G:OP2	44:DY:84:ARG:NH2	2.11	0.84
25:DA:2632:A:HO2'	25:DA:2811:G:HO2'	1.17	0.84
1:AA:559:A:OP1	5:AE:126:ARG:NH2	2.11	0.83
25:BA:1736:A:H62	25:BA:1745:A:H2	1.24	0.83
1:CA:1122:U:O4	1:CA:1151:A:N1	2.11	0.83
1:AA:1314:C:OP2	19:AS:4:SER:OG	1.94	0.83
4:AD:149:ALA:HB3	4:AD:152:SER:HB2	1.60	0.83
25:BA:2587:C:OP2	61:BA:4081:HOH:O	1.96	0.83
30:DG:113:ARG:NH1	30:DG:139:LEU:O	2.12	0.83
32:BI:129:THR:HG22	32:BI:139:GLN:HE22	1.42	0.83
1:CA:999:C:C4	1:CA:1042:G:N1	2.47	0.83
1:CA:599:C:H2'	1:CA:600:C:H5''	1.61	0.83
15:CO:54:ARG:NH1	15:CO:58:MET:SD	2.51	0.83
1:AA:166:G:H2'	1:AA:167:G:C8	2.14	0.83
30:DG:11:TYR:CZ	30:DG:16:ARG:HD3	2.14	0.83
25:BA:2585:C:OP1	61:BA:4081:HOH:O	1.97	0.82
1:CA:1348:U:H4'	9:CI:120:ARG:HD2	1.61	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1030:G:OP2	36:DQ:128:LYS:NZ	2.11	0.82
35:DP:96:THR:H	35:DP:99:LEU:HD21	1.44	0.82
36:DQ:81:VAL:HB	46:D0:7:LEU:HD21	1.59	0.82
1:CA:64:G:H4'	1:CA:65:U:H3'	1.61	0.82
1:CA:972:C:OP1	61:CA:4184:HOH:O	1.95	0.82
25:DA:2748:A:H5'	31:DH:4:ILE:HD12	1.59	0.82
46:D0:53:MET:HG3	46:D0:59:LEU:HD23	1.61	0.82
1:CA:1492:A:N3	25:DA:1913:A:N6	2.28	0.82
16:CP:1:MET:SD	16:CP:3:LYS:NZ	2.51	0.82
31:DH:98:LEU:HD22	31:DH:125:VAL:HG23	1.62	0.82
2:CB:178:ARG:HH22	8:CH:68:ARG:HH12	1.25	0.82
1:AA:1158:C:H5	1:AA:1181:G:H1	1.26	0.82
1:CA:1125:U:O2'	1:CA:1126:U:H2'	1.79	0.82
32:DI:72:LEU:HD21	32:DI:107:VAL:HG11	1.60	0.82
3:AC:134:ILE:HD11	3:AC:153:VAL:HG23	1.62	0.82
1:CA:1003:G:N2	1:CA:1025:U:O4	2.13	0.82
25:BA:237:G:OP1	61:BA:4880:HOH:O	1.96	0.81
1:CA:406:G:H5'	4:CD:5:ILE:HD11	1.59	0.81
1:AA:189(B):C:N4	1:AA:189(I):G:O6	2.11	0.81
1:CA:664:G:OP1	18:CR:64:ARG:NH2	2.13	0.81
23:CX:50:U:H3	23:CX:64:G:H1	1.28	0.81
27:DD:71:ASP:HB2	27:DD:103:ARG:HH22	1.45	0.81
51:D5:16:ARG:NH1	51:D5:17:ASP:OD1	2.12	0.81
25:DA:2243:U:OP1	61:DA:4350:HOH:O	1.98	0.81
25:BA:1503:G:OP2	61:BA:3908:HOH:O	1.99	0.81
38:BS:59:LYS:HE3	38:BS:60:GLY:H	1.44	0.81
1:CA:376:G:H5''	16:CP:5:ARG:HD3	1.63	0.81
1:CA:922:G:H4'	5:CE:20:GLN:HA	1.61	0.81
1:CA:1007:C:N4	1:CA:1022:G:H1	1.77	0.81
2:CB:15:VAL:HG21	2:CB:213:LEU:HD12	1.62	0.81
25:DA:20:C:OP1	40:DU:22:LYS:NZ	2.12	0.81
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.63	0.81
25:BA:1683:C:OP2	61:BA:4524:HOH:O	1.99	0.81
25:DA:1782:C:OP1	61:DA:4383:HOH:O	1.99	0.81
25:BA:1462:G:N2	25:BA:1629:C:O2	2.11	0.81
26:BB:42:C:OP1	30:BG:67:LYS:NZ	2.13	0.81
25:BA:1036:A:OP2	61:BA:4503:HOH:O	1.99	0.80
2:CB:16:HIS:HB3	2:CB:210:SER:HB3	1.62	0.80
1:AA:1124:G:O2'	1:AA:1145:C:N4	2.14	0.80
1:AA:1414:U:H3	1:AA:1486:G:H1	1.28	0.80
23:CX:4:G:H1	23:CX:69:C:H42	1.28	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:570:G:O6	61:DA:4475:HOH:O	1.99	0.80
1:CA:608:A:OP2	61:CA:4182:HOH:O	1.99	0.80
1:CA:768:A:OP2	61:CA:4023:HOH:O	1.98	0.80
1:CA:953:G:H5'	1:CA:965:A:H61	1.47	0.80
1:CA:975:A:H4'	1:CA:976:G:H5''	1.63	0.80
25:DA:2022:U:OP1	61:DA:4084:HOH:O	1.99	0.80
1:AA:1304:G:OP2	61:AA:4087:HOH:O	1.97	0.80
1:CA:1318:A:OP1	19:CS:3:ARG:NH1	2.15	0.80
25:DA:198:C:OP2	61:DA:4175:HOH:O	1.99	0.80
1:AA:1183:A:O2'	1:AA:1184:G:OP1	2.00	0.80
2:CB:80:ILE:HD11	2:CB:212:GLN:HA	1.62	0.80
1:AA:421:U:O2'	1:AA:423:G:N7	2.14	0.80
25:BA:238:C:O2	54:B8:12:LYS:NZ	2.14	0.80
25:DA:1352:U:OP1	61:DA:3785:HOH:O	1.98	0.80
25:DA:2052:G:O2'	61:DA:3729:HOH:O	1.99	0.80
9:AI:64:THR:HG23	9:AI:66:ARG:HH21	1.47	0.80
25:BA:1694:G:OP1	61:BA:4516:HOH:O	1.99	0.80
1:CA:444:C:H2'	1:CA:445:G:H8	1.48	0.80
1:CA:1030(A):G:N1	1:CA:1030(D):A:OP2	2.13	0.80
25:DA:2037:G:O6	61:DA:4103:HOH:O	2.00	0.80
1:AA:166:G:H2'	1:AA:167:G:H8	1.47	0.79
1:AA:1502:A:H2	1:AA:1505:G:H1	1.25	0.79
25:BA:2297:C:OP2	52:B6:6:ARG:NH1	2.16	0.79
29:BF:18:ARG:NH2	29:BF:127:GLU:OE1	2.14	0.79
2:AB:16:HIS:HB3	2:AB:210:SER:HB2	1.64	0.79
1:AA:509:A:OP2	61:AA:4088:HOH:O	2.01	0.79
35:BP:50:ARG:HH21	54:B8:7:HIS:HD2	1.28	0.79
1:CA:673:G:H2'	1:CA:674:G:C8	2.16	0.79
28:DE:47:VAL:HG11	28:DE:86:PRO:HD2	1.65	0.79
29:BF:53:THR:HG23	29:BF:55:GLY:H	1.48	0.79
20:CT:57:ARG:HH22	20:CT:100:ILE:HD12	1.46	0.79
1:AA:1145:C:H4'	1:AA:1146:A:H5'	1.65	0.79
25:BA:831:A:OP2	61:BA:4454:HOH:O	1.99	0.79
35:BP:36:LYS:O	61:BP:304:HOH:O	1.99	0.79
30:DG:161:THR:HG22	30:DG:163:ALA:H	1.45	0.79
1:AA:656:C:O2'	15:AO:28:GLN:NE2	2.15	0.79
1:AA:1492:A:N3	25:BA:1935:A:N6	2.31	0.79
2:AB:16:HIS:CG	2:AB:17:PHE:H	2.01	0.79
25:BA:2299:A:H62	25:BA:2356:U:H3	1.28	0.79
25:BA:2804:C:H2'	25:BA:2805:G:H8	1.47	0.79
1:AA:165:C:H2'	1:AA:166:G:C8	2.18	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:241:G:OP1	35:BP:50:ARG:NH1	2.16	0.79
30:BG:161:THR:HG22	30:BG:163:ALA:H	1.48	0.79
1:CA:939:G:H1	1:CA:1344:C:H42	1.27	0.79
2:CB:15:VAL:HG13	2:CB:209:ARG:HB3	1.65	0.79
3:AC:15:THR:HG21	3:AC:181:ASN:HA	1.64	0.79
25:BA:1001:G:O6	61:BA:3865:HOH:O	2.00	0.78
28:BE:105:THR:OG1	28:BE:199:ARG:NH2	2.16	0.78
1:AA:97:G:O2'	1:AA:98:G:O4'	2.00	0.78
25:BA:2614:A:OP1	61:BA:4815:HOH:O	2.01	0.78
25:DA:1250:G:OP1	61:DA:4455:HOH:O	2.00	0.78
25:DA:1159:U:H2'	25:DA:1160:G:H8	1.48	0.78
25:BA:988:U:OP2	61:BA:4601:HOH:O	2.01	0.78
39:BT:95:ARG:HG2	39:BT:95:ARG:HH11	1.47	0.78
1:CA:289:G:OP2	61:CA:4053:HOH:O	2.01	0.78
1:CA:1005:A:H1'	1:CA:1036:G:H1	1.49	0.78
25:DA:2005:A:OP1	61:DA:4386:HOH:O	2.01	0.78
25:BA:455:A:OP1	61:BA:3961:HOH:O	2.00	0.78
1:CA:1142:G:H3'	1:CA:1143:G:H8	1.47	0.78
25:DA:1019:U:H3	25:DA:1142(A):A:H62	1.28	0.78
1:AA:1124:G:HO2'	1:AA:1145:C:N4	1.82	0.78
25:DA:1997:G:OP2	61:DA:4560:HOH:O	2.01	0.78
25:BA:611:U:OP2	61:BA:4160:HOH:O	2.01	0.78
25:BA:1018:A:OP2	61:BA:4046:HOH:O	2.01	0.78
25:BA:535:C:OP1	61:BA:4621:HOH:O	2.00	0.77
25:BA:1404:G:OP2	61:BA:4219:HOH:O	2.02	0.77
25:DA:271(A):A:N7	25:DA:271(W):G:N2	2.32	0.77
29:DF:53:THR:HG23	29:DF:55:GLY:H	1.50	0.77
1:AA:289:G:OP2	61:AA:4071:HOH:O	2.02	0.77
4:CD:13:ARG:HB2	4:CD:40:PRO:HD3	1.66	0.77
12:AL:49:ASN:ND2	12:AL:92:ASP:OD2	2.16	0.77
28:BE:93:VAL:HG21	28:BE:180:ASN:HA	1.67	0.77
39:BT:65:LYS:HE2	39:BT:67:SER:HB2	1.66	0.77
13:CM:3:ARG:HA	50:D4:34:GLU:HG2	1.66	0.77
34:BO:35:VAL:HG11	34:BO:103:ALA:HB3	1.66	0.77
25:DA:1604:C:OP1	61:DA:3956:HOH:O	2.03	0.77
25:DA:1800:C:OP2	27:DD:183:ARG:NH2	2.18	0.77
30:DG:5:VAL:HG22	30:DG:8:LYS:H	1.50	0.77
25:BA:808:A:OP1	61:BA:4592:HOH:O	2.01	0.77
10:CJ:49:VAL:HG23	14:CN:41:ARG:HB2	1.67	0.77
25:DA:2032:G:N7	61:DA:3886:HOH:O	2.16	0.77
32:DI:110:ASP:N	32:DI:130:TYR:OH	2.16	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1133:G:H1	1:CA:1141:C:H42	1.33	0.77
25:BA:1717:C:OP1	61:BA:3893:HOH:O	2.02	0.77
25:BA:2227:G:H3'	25:BA:2228:G:C8	2.19	0.77
1:CA:1048:G:OP1	14:CN:3:ARG:NH2	2.18	0.77
1:AA:1128:C:O2	1:AA:1147:C:N4	2.17	0.77
1:AA:1075:C:OP1	2:AB:179:LYS:NZ	2.18	0.77
25:BA:11:G:H2'	25:BA:12:U:H5'	1.65	0.77
25:DA:2296:U:OP2	38:DS:9:ARG:NH2	2.18	0.77
1:AA:1126:U:H5	10:AJ:71:LEU:HD22	1.49	0.76
8:AH:10:LEU:HD22	8:AH:83:ILE:HD11	1.67	0.76
25:BA:1016:C:OP2	61:BA:4637:HOH:O	2.04	0.76
1:CA:677:U:H3	1:CA:713:G:H22	1.33	0.76
25:DA:1488:G:C6	25:DA:1489:U:H5	2.03	0.76
1:AA:642:A:N3	8:AH:113:SER:OG	2.17	0.76
1:AA:1492:A:O2'	25:BA:1935:A:N1	2.18	0.76
1:CA:352:C:OP2	61:CA:4051:HOH:O	2.02	0.76
4:AD:13:ARG:NH1	4:AD:38:TYR:O	2.18	0.76
25:DA:120:U:OP2	61:DA:3744:HOH:O	2.03	0.76
4:AD:108:LEU:HD13	4:AD:174:LEU:HD13	1.65	0.76
4:CD:100:ARG:NH1	4:CD:137:SER:OG	2.19	0.76
26:DB:44:G:OP1	30:DG:98:ARG:NH2	2.19	0.76
1:AA:167:G:H2'	1:AA:168:G:H8	1.49	0.76
25:BA:2604:G:O2'	61:BA:4655:HOH:O	1.99	0.76
25:DA:2805:G:H2'	25:DA:2807:G:H8	1.51	0.76
25:BA:667:G:H21	25:BA:671:A:H2	1.34	0.76
1:CA:1132:C:H2'	1:CA:1133:G:H8	1.49	0.76
19:CS:30:LEU:HD11	19:CS:32:LYS:HG3	1.67	0.76
25:DA:1253:A:N7	61:DA:3854:HOH:O	2.18	0.76
1:CA:610:G:O6	61:CA:4180:HOH:O	2.04	0.76
1:CA:1015:A:N3	1:CA:1218:C:O2'	2.18	0.76
25:DA:801:G:OP2	61:DA:3762:HOH:O	2.02	0.76
1:AA:803:G:OP1	61:AA:4050:HOH:O	2.03	0.76
25:BA:934:A:H4'	25:BA:935:C:H5	1.51	0.76
25:BA:1431:G:O2'	25:BA:1442:U:O2	2.03	0.76
25:DA:1022:G:H22	25:DA:1142(A):A:H2	1.32	0.76
27:BD:17:THR:O	27:BD:211:ARG:NH2	2.19	0.76
43:BX:31:HIS:HD2	43:BX:33:LYS:H	1.29	0.76
43:DX:11:PRO:HB3	43:DX:92:LEU:HD11	1.66	0.76
1:AA:975:A:H4'	1:AA:976:G:H5''	1.67	0.76
7:AG:50:ILE:HD11	7:AG:58:PRO:HA	1.66	0.76
26:BB:31:C:O2	26:BB:53:A:N6	2.19	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1494:G:HO2'	25:BA:1934:A:HO2'	1.32	0.75
25:BA:2331:G:H22	38:BS:3:ARG:HE	1.34	0.75
1:CA:323:U:OP1	20:CT:26:ASN:ND2	2.18	0.75
4:CD:25:ARG:NH1	4:CD:30:LYS:O	2.20	0.75
1:CA:999:C:N3	1:CA:1042:G:N2	2.34	0.75
10:CJ:38:ILE:HD11	10:CJ:71:LEU:HD23	1.68	0.75
2:AB:87:ARG:HH21	2:AB:219:VAL:HG12	1.51	0.75
20:AT:9:ASN:HB3	20:AT:10:LEU:HD12	1.69	0.75
25:DA:2371:G:O6	61:DA:3975:HOH:O	2.03	0.75
1:AA:348:G:H2'	1:AA:349:A:C5'	2.16	0.75
13:AM:58:GLU:O	13:AM:62:ASN:ND2	2.19	0.75
25:BA:2331:G:H22	38:BS:3:ARG:NE	1.85	0.75
29:BF:13:SER:HA	29:BF:127:GLU:HG3	1.66	0.75
15:CO:14:GLU:OE2	15:CO:84:LYS:NZ	2.20	0.75
25:BA:2732:G:OP2	61:BA:4645:HOH:O	2.03	0.75
25:DA:1412:A:H2'	25:DA:1413:G:C8	2.21	0.75
25:DA:1762:A:N1	61:DA:4178:HOH:O	2.18	0.75
1:AA:954:G:H21	1:AA:1227:A:H62	1.30	0.75
1:AA:165:C:H2'	1:AA:166:G:H8	1.52	0.75
1:AA:180:U:O2	1:AA:196:A:N6	2.19	0.75
1:AA:474:G:H2'	1:AA:475:G:H8	1.51	0.75
25:BA:880:U:O2	35:BP:55:ARG:NH2	2.20	0.75
25:BA:2510:C:OP2	61:BA:4510:HOH:O	2.05	0.75
44:BY:92:ASN:HB3	44:BY:94:LYS:H	1.52	0.75
25:DA:1376:C:OP2	61:DA:3757:HOH:O	2.05	0.75
25:DA:2683:C:OP1	39:DT:53:ARG:NH2	2.20	0.75
1:AA:406:G:H5'	4:AD:5:ILE:HD11	1.67	0.74
25:BA:945:A:O2'	25:BA:946:A:O5'	2.05	0.74
3:CC:58:GLU:HB3	10:CJ:92:THR:HG21	1.67	0.74
25:BA:1065:U:H3	25:BA:1188:A:H62	1.36	0.74
25:BA:2059:G:N7	61:BA:4504:HOH:O	2.20	0.74
32:BI:77:LEU:HB3	32:BI:142:VAL:HG12	1.68	0.74
25:DA:452:G:OP2	61:DA:4105:HOH:O	2.04	0.74
25:DA:631:A:OP1	35:DP:65:ARG:NH1	2.19	0.74
25:DA:2049:G:OP2	61:DA:3941:HOH:O	2.05	0.74
7:AG:62:PHE:HA	7:AG:124:LEU:HD22	1.70	0.74
25:BA:139:A:H8	25:BA:1454:C:HO2'	1.35	0.74
1:CA:522:C:H41	12:CL:53:ARG:HH22	1.32	0.74
25:DA:1315:C:OP2	61:DA:4076:HOH:O	2.05	0.74
25:BA:1356:G:OP2	53:B7:9:ARG:NH1	2.20	0.74
25:BA:2695:C:O2	34:BO:70:LYS:NZ	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:47:VAL:HG21	28:BE:86:PRO:HD2	1.69	0.74
39:DT:26:ASP:OD1	39:DT:120:ARG:NH2	2.21	0.74
25:BA:2365:G:N7	61:BA:4327:HOH:O	2.19	0.74
1:CA:1223:C:H5''	1:CA:1224:G:H5'	1.68	0.74
15:CO:39:LEU:HD13	15:CO:56:LEU:HB2	1.68	0.74
26:DB:105:A:OP1	45:DZ:72:ARG:NH1	2.20	0.74
1:AA:574:A:OP2	61:AA:4004:HOH:O	2.04	0.74
25:BA:591:U:O4	61:BA:4046:HOH:O	2.05	0.74
3:CC:32:LEU:HD12	3:CC:59:ARG:HH12	1.53	0.74
7:CG:111:ARG:NH1	7:CG:113:GLU:OE2	2.21	0.74
25:DA:2287:A:H62	25:DA:2344:U:H3	1.31	0.74
25:BA:130:G:O6	61:BA:4550:HOH:O	2.04	0.74
8:AH:49:GLU:HG2	8:AH:62:TYR:HE2	1.53	0.74
1:CA:1153:C:H42	1:CA:1154:G:N2	1.86	0.74
25:DA:832:G:OP1	61:DA:4165:HOH:O	2.06	0.74
25:DA:848:G:H2'	25:DA:849:A:C8	2.22	0.74
1:AA:1054:C:OP1	61:AA:4053:HOH:O	2.04	0.73
1:AA:1162:C:H42	1:AA:1174:G:H1	1.35	0.73
25:BA:874:U:OP1	61:BA:4633:HOH:O	2.05	0.73
1:CA:504:C:OP1	61:CA:4009:HOH:O	2.05	0.73
1:CA:804:U:OP1	61:CA:4020:HOH:O	2.06	0.73
1:CA:998:G:H1	1:CA:1043:C:N4	1.83	0.73
4:CD:187:ARG:NH2	4:CD:193:ASP:OD2	2.21	0.73
25:BA:1809:U:O2	61:BA:4722:HOH:O	2.05	0.73
1:CA:1251:A:H2'	1:CA:1252:A:C8	2.24	0.73
25:DA:2248:C:OP2	61:DA:3945:HOH:O	2.06	0.73
2:CB:163:PHE:HD1	2:CB:185:ILE:HG13	1.53	0.73
25:DA:919:G:N2	25:DA:2269:A:OP2	2.21	0.73
1:AA:184:G:H2'	1:AA:185:A:H8	1.54	0.73
1:CA:316:G:OP2	1:CA:351:G:O2'	2.06	0.73
8:CH:51:VAL:HG12	8:CH:52:ASP:H	1.53	0.73
25:DA:963:U:OP2	61:DA:4173:HOH:O	2.04	0.73
1:AA:812:C:N3	61:AA:4028:HOH:O	2.22	0.73
1:AA:976:G:H5'	1:AA:1358:U:O2'	1.89	0.73
25:BA:2227:G:H5'	25:BA:2228:G:N7	2.03	0.73
37:BR:67:LEU:HD13	37:BR:76:VAL:HG21	1.71	0.73
43:BX:31:HIS:CD2	43:BX:33:LYS:H	2.07	0.73
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.02	0.73
3:AC:35:GLU:OE2	3:AC:59:ARG:NH2	2.21	0.73
25:BA:985:G:OP1	61:BA:4728:HOH:O	2.07	0.73
25:BA:1513:G:HO2'	25:BA:1593:C:HO2'	1.34	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:959:A:HO2'	1:CA:984:C:HO2'	1.37	0.73
2:CB:91:PRO:HG2	2:CB:155:LEU:HD23	1.71	0.73
1:AA:262:A:H2'	1:AA:263:A:C8	2.24	0.73
1:CA:664:G:P	18:CR:64:ARG:HH22	2.10	0.73
1:CA:976:G:H5'	1:CA:1358:U:O2'	1.87	0.73
13:CM:27:LYS:HE2	13:CM:27:LYS:HA	1.69	0.73
25:DA:900:A:H2'	25:DA:901:A:C8	2.24	0.73
25:DA:1817:G:OP1	27:DD:88:ARG:NH2	2.21	0.73
50:D4:38:LYS:O	50:D4:40:HIS:N	2.21	0.73
1:AA:742:G:OP2	15:AO:35:ARG:NH2	2.20	0.73
27:BD:69:ARG:NH2	27:BD:128:GLY:O	2.20	0.73
25:BA:1398:U:OP2	61:BA:3932:HOH:O	2.05	0.73
1:CA:989:C:N4	1:CA:1216:G:O6	2.17	0.73
25:DA:2445:G:OP1	29:DF:74:ARG:NH2	2.22	0.73
1:AA:266:G:H5''	1:AA:268:C:H41	1.53	0.73
1:AA:558:G:OP1	61:AA:4042:HOH:O	2.07	0.73
13:AM:34:LEU:HD13	13:AM:41:PRO:HA	1.70	0.73
30:DG:80:PHE:O	30:DG:82:LEU:N	2.20	0.73
30:BG:48:GLU:HA	30:BG:51:ARG:HE	1.53	0.72
40:DU:83:LEU:HD12	40:DU:88:ILE:HD12	1.70	0.72
1:AA:601:C:H2'	1:AA:602:A:C8	2.24	0.72
1:CA:1251:A:HO2'	1:CA:1369:C:HO2'	1.32	0.72
25:DA:2749:A:H1'	31:DH:63:SER:HB3	1.71	0.72
25:BA:2745:G:OP1	28:BE:203:LYS:NZ	2.17	0.72
2:CB:52:GLU:HG2	2:CB:56:ARG:HH22	1.54	0.72
46:D0:27:GLU:HG3	46:D0:68:GLU:HA	1.71	0.72
1:AA:1028:C:H42	1:AA:1033:G:H1	1.36	0.72
11:AK:15:ALA:HB1	11:AK:78:GLN:HB2	1.69	0.72
1:AA:864:A:OP1	61:AA:4127:HOH:O	2.08	0.72
10:AJ:38:ILE:HD11	10:AJ:71:LEU:HD23	1.71	0.72
15:AO:56:LEU:O	15:AO:60:VAL:HG23	1.88	0.72
1:CA:1003:G:H1	1:CA:1035:A:H61	1.37	0.72
1:CA:1277:C:HO2'	1:CA:1279:A:H8	1.35	0.72
25:DA:963:U:OP1	61:DA:3740:HOH:O	2.08	0.72
1:AA:881:G:P	12:AL:12:ARG:HH22	2.12	0.72
1:AA:972:C:OP1	61:AA:4123:HOH:O	2.08	0.72
25:BA:2019:G:OP2	61:BA:4565:HOH:O	2.07	0.72
38:BS:15:ARG:O	38:BS:19:LYS:HG2	1.89	0.72
17:CQ:57:VAL:HG12	17:CQ:76:LEU:HA	1.72	0.72
25:DA:574:C:OP1	61:DA:3788:HOH:O	2.08	0.72
25:DA:1876:A:H2'	25:DA:1877:A:C8	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1695:C:OP1	61:BA:4516:HOH:O	2.07	0.72
4:CD:18:LYS:NZ	4:CD:31:CYS:SG	2.63	0.72
34:DO:115:VAL:HG13	34:DO:121:VAL:HG21	1.72	0.72
25:DA:400:G:O6	61:DA:4274:HOH:O	2.06	0.72
25:DA:1670:C:OP1	61:DA:3750:HOH:O	2.07	0.72
1:AA:346:G:O6	1:AA:348:G:N2	2.23	0.72
50:B4:57:GLU:HB3	50:B4:58:ARG:HA	1.71	0.72
1:CA:1135:U:O2'	1:CA:1137:C:O2	2.05	0.72
13:CM:16:ASP:HB3	13:CM:34:LEU:HD11	1.72	0.72
27:DD:71:ASP:CB	27:DD:103:ARG:HH22	2.03	0.72
1:CA:559:A:OP1	5:CE:126:ARG:NH2	2.22	0.72
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.72	0.72
7:CG:68:ASN:ND2	7:CG:127:ALA:O	2.19	0.72
30:DG:136:ARG:HH11	30:DG:137:GLU:H	1.37	0.72
32:BI:48:GLU:HG2	32:BI:52:ARG:HH22	1.55	0.71
51:B5:17:ASP:OD2	61:B5:602:HOH:O	2.07	0.71
25:DA:731:C:OP1	61:DA:4224:HOH:O	2.08	0.71
5:AE:100:VAL:O	5:AE:107:ARG:NH2	2.22	0.71
30:BG:16:ARG:NE	30:BG:31:VAL:HG11	2.05	0.71
35:BP:100:LEU:HD12	35:BP:112:LEU:HD11	1.70	0.71
1:CA:693:G:H2'	1:CA:694:A:C8	2.25	0.71
1:AA:1027:C:O2'	1:AA:1034:G:N2	2.23	0.71
25:BA:1679:A:OP2	61:BA:4622:HOH:O	2.07	0.71
26:BB:48:A:H4'	38:BS:95:HIS:HD2	1.53	0.71
35:BP:50:ARG:HH21	54:B8:7:HIS:CD2	2.09	0.71
1:CA:1376:U:OP1	7:CG:98:SER:OG	2.08	0.71
25:DA:89:G:H3'	25:DA:90:U:H5''	1.71	0.71
1:AA:974:A:OP2	14:AN:41:ARG:NH1	2.24	0.71
10:AJ:7:LYS:HE2	10:AJ:9:ARG:HH12	1.55	0.71
25:BA:1379:C:OP2	61:BA:4121:HOH:O	2.07	0.71
25:BA:2804:C:H2'	25:BA:2805:G:C8	2.24	0.71
1:CA:1457:G:OP1	20:CT:39:LYS:NZ	2.22	0.71
2:CB:96:ARG:HD2	2:CB:98:LEU:HD22	1.72	0.71
25:DA:11:G:H2'	25:DA:12:U:H5'	1.71	0.71
25:DA:600:G:N3	61:DA:3733:HOH:O	2.23	0.71
1:AA:1036:G:H5'	1:AA:1037:C:H5	1.55	0.71
46:B0:40:GLN:HE21	46:B0:57:PHE:HB3	1.55	0.71
25:DA:819:A:OP2	25:DA:1187:G:N2	2.19	0.71
25:DA:1140:C:O3'	33:DN:25:ARG:NH1	2.23	0.71
25:DA:2267:A:H5''	25:DA:2268:A:H5'	1.71	0.71
1:CA:21:G:OP1	61:CA:4062:HOH:O	2.07	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2228:G:O2'	25:BA:2229:A:OP1	2.07	0.71
1:CA:148:G:H2'	1:CA:149:A:H8	1.54	0.71
25:DA:1665:A:OP2	61:DA:4385:HOH:O	2.08	0.71
49:D3:8:LEU:HD13	49:D3:31:LEU:HD23	1.73	0.71
25:BA:1094:A:OP2	25:BA:1155:C:N4	2.23	0.71
49:B3:3:ARG:NH1	49:B3:60:GLU:OE2	2.19	0.71
1:AA:1223:C:H5''	1:AA:1224:G:H5'	1.72	0.71
4:AD:15:GLU:HG3	4:AD:63:LYS:HE2	1.72	0.71
25:BA:597:C:OP1	61:BA:3998:HOH:O	2.09	0.71
1:CA:1189:C:O2	61:CA:4087:HOH:O	2.08	0.71
31:DH:159:GLU:HG3	31:DH:169:VAL:HG11	1.72	0.71
36:DQ:34:LEU:HD11	36:DQ:129:THR:HB	1.73	0.71
1:CA:954:G:H21	1:CA:1227:A:H62	1.39	0.70
3:CC:73:PRO:HB3	3:CC:103:VAL:HG11	1.70	0.70
4:CD:13:ARG:NH1	4:CD:38:TYR:O	2.23	0.70
25:DA:1593:G:H2'	25:DA:1594:G:C8	2.26	0.70
46:D0:14:ARG:NH1	61:D0:202:HOH:O	2.23	0.70
1:AA:17:U:H2'	1:AA:18:C:C6	2.26	0.70
1:AA:411:A:OP1	4:AD:30:LYS:NZ	2.19	0.70
25:BA:1039:G:OP1	40:BU:50:ARG:NH2	2.25	0.70
30:BG:102:PHE:HE1	30:BG:141:PHE:HE2	1.37	0.70
25:DA:287:C:H2'	25:DA:288:C:H6	1.56	0.70
25:DA:1488:G:C6	25:DA:1489:U:C5	2.78	0.70
25:DA:2819:G:N7	61:DA:4006:HOH:O	2.24	0.70
1:AA:167:G:H2'	1:AA:168:G:C8	2.26	0.70
9:AI:53:VAL:O	9:AI:55:ALA:N	2.21	0.70
25:BA:322:G:N7	61:BA:3883:HOH:O	2.23	0.70
25:BA:932:C:H3'	25:BA:933:C:H5''	1.73	0.70
25:BA:1189:A:OP1	33:BN:25:ARG:NH2	2.24	0.70
1:CA:1142:G:H3'	1:CA:1143:G:C8	2.26	0.70
2:CB:54:THR:HG23	2:CB:199:TYR:HB3	1.72	0.70
25:DA:1310:G:OP2	53:D7:9:ARG:NH1	2.21	0.70
2:AB:16:HIS:CD2	2:AB:17:PHE:H	2.09	0.70
8:AH:51:VAL:HG12	8:AH:52:ASP:H	1.56	0.70
10:AJ:78:ASN:O	10:AJ:80:LYS:N	2.25	0.70
25:BA:2862:G:OP1	61:BA:4875:HOH:O	2.10	0.70
35:BP:33:ARG:O	61:BP:301:HOH:O	2.07	0.70
1:CA:572:A:OP1	61:CA:4046:HOH:O	2.10	0.70
25:DA:2805:G:H2'	25:DA:2807:G:C8	2.25	0.70
1:AA:221:C:H2'	1:AA:222:U:H6	1.54	0.70
25:BA:1055:A:OP2	33:BN:37:LYS:NZ	2.19	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:17:ASP:OD1	10:CJ:70:ARG:NH1	2.24	0.70
25:DA:827:U:OP1	61:DA:4180:HOH:O	2.08	0.70
25:DA:1235:G:OP1	61:DA:4361:HOH:O	2.08	0.70
25:DA:2849:U:OP2	39:DT:95:ARG:NH1	2.24	0.70
27:DD:148:GLU:HB2	27:DD:151:LYS:HD2	1.73	0.70
1:AA:1129:C:N3	1:AA:1143:G:N2	2.37	0.70
4:AD:173:TRP:CZ3	4:AD:174:LEU:HG	2.27	0.70
1:CA:811:C:N4	61:CA:4026:HOH:O	2.25	0.70
25:BA:147:U:O4	61:BA:4550:HOH:O	2.06	0.70
25:BA:2101:U:O4	61:BA:4300:HOH:O	2.09	0.70
42:DW:14:PRO:HG2	42:DW:78:GLU:HG2	1.73	0.70
50:D4:68:ARG:HG3	50:D4:68:ARG:HH21	1.54	0.70
45:DZ:93:ASP:O	45:DZ:131:ARG:NH1	2.23	0.70
25:DA:2705:A:OP2	61:DA:4123:HOH:O	2.08	0.70
36:DQ:85:LYS:HG2	46:D0:7:LEU:HB3	1.74	0.70
1:AA:148:G:HO2'	1:AA:149:A:H8	1.40	0.70
36:BQ:10:ARG:NH1	61:BQ:302:HOH:O	2.25	0.70
2:CB:178:ARG:NH2	8:CH:68:ARG:HH12	1.90	0.70
24:CW:9:MVA:O	24:CW:10:2QY:H86	1.91	0.70
25:DA:2206:G:H3'	25:DA:2207:G:H8	1.56	0.70
36:DQ:48:GLU:OE1	36:DQ:51:ARG:NH2	2.24	0.70
25:BA:70:A:N7	43:BX:31:HIS:HE1	1.90	0.69
1:CA:1269:A:N1	1:CA:1312:G:O2'	2.24	0.69
25:BA:284:G:O6	61:BA:4714:HOH:O	2.09	0.69
25:BA:1249:A:H2	25:BA:1287:A:H62	1.40	0.69
2:CB:18:GLY:HA2	2:CB:42:ILE:HG13	1.73	0.69
12:CL:24:VAL:HG11	12:CL:27:LEU:HD22	1.74	0.69
1:AA:1292:U:OP2	7:AG:41:ARG:NH2	2.24	0.69
25:BA:9:U:N3	25:BA:2641:A:H2	1.89	0.69
2:CB:77:ALA:HB2	2:CB:211:ILE:HD13	1.73	0.69
4:CD:119:GLN:HG2	4:CD:123:HIS:CD2	2.27	0.69
20:CT:49:ALA:HB3	20:CT:99:LEU:HD22	1.74	0.69
25:BA:388:A:H2'	25:BA:389:G:C8	2.27	0.69
25:BA:2339:A:H2'	25:BA:2340:A:C8	2.27	0.69
1:CA:1002:G:H2'	1:CA:1003:G:C8	2.27	0.69
25:DA:993:G:OP1	40:DU:50:ARG:NH2	2.25	0.69
25:DA:1671:U:HO2'	25:DA:1673:U:H5	1.40	0.69
5:AE:100:VAL:HG22	5:AE:118:ILE:HG22	1.74	0.69
25:DA:1803:A:O2'	27:DD:259:THR:HG21	1.92	0.69
52:D6:13:CYS:SG	52:D6:47:THR:HG21	2.33	0.69
13:AM:122:LYS:HD3	13:AM:123:ALA:H	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BH:56:SER:OG	31:BH:57:ASP:N	2.26	0.69
2:CB:178:ARG:HH22	8:CH:68:ARG:NH1	1.91	0.69
25:DA:1017:G:N7	61:DA:4208:HOH:O	2.25	0.69
25:BA:1480:A:H61	25:BA:1605:A:H62	1.40	0.69
25:BA:1831:C:OP1	27:BD:264:LYS:NZ	2.24	0.69
25:BA:2457:G:OP1	29:BF:74:ARG:NH2	2.26	0.69
1:CA:503:C:OP2	12:CL:116:SER:HB3	1.93	0.69
25:DA:1637:A:OP2	61:DA:4412:HOH:O	2.10	0.69
1:AA:1025:U:O2	1:AA:1036:G:O6	2.11	0.69
12:AL:24:VAL:HG11	12:AL:27:LEU:HD22	1.74	0.69
19:AS:3:ARG:NH1	19:AS:8:GLY:O	2.25	0.69
25:BA:956:A:H62	36:BQ:12:GLN:HA	1.58	0.69
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.26	0.69
1:CA:652:U:O4	1:CA:752:G:O2'	2.10	0.69
4:CD:15:GLU:HG2	4:CD:63:LYS:HB3	1.75	0.69
25:DA:1430:C:H2'	25:DA:1431:U:H6	1.57	0.69
25:DA:1509(B):A:H2'	25:DA:1510:G:C8	2.28	0.69
25:DA:2682:U:OP2	61:DA:3802:HOH:O	2.09	0.69
19:AS:9:VAL:HG21	50:B4:61:ARG:HH22	1.57	0.69
25:BA:1648:U:O4	61:BA:4117:HOH:O	2.08	0.69
25:BA:2101:U:O3'	47:B1:35:THR:OG1	2.11	0.69
44:BY:102:CYS:SG	44:BY:103:GLY:N	2.66	0.69
1:CA:532:A:O2'	1:CA:533:A:OP1	2.11	0.69
25:DA:649:G:H4'	54:D8:46:ARG:HH22	1.57	0.69
25:DA:1143:A:OP1	33:DN:25:ARG:NH2	2.26	0.69
29:DF:185:ASP:HA	29:DF:188:ARG:HD3	1.75	0.69
1:AA:596:C:OP2	61:AA:4043:HOH:O	2.11	0.69
4:AD:120:LEU:HB3	4:AD:126:ILE:HD11	1.73	0.69
25:BA:551:A:OP1	61:BA:4499:HOH:O	2.11	0.69
25:BA:1613:A:OP1	27:BD:211:ARG:NH1	2.26	0.69
25:BA:2619:G:O3'	61:BA:4188:HOH:O	2.11	0.69
1:CA:837:G:H1	1:CA:849:C:H42	1.41	0.69
18:CR:54:ARG:HB2	18:CR:54:ARG:HH11	1.58	0.69
20:CT:60:GLU:HG3	20:CT:81:LYS:HD2	1.75	0.69
28:DE:72:VAL:HG22	28:DE:73:GLU:HG2	1.75	0.69
1:AA:1003:G:N2	1:AA:1038:C:N3	2.41	0.68
6:AF:69:GLU:O	6:AF:72:VAL:HG12	1.93	0.68
27:BD:71:ASP:HB3	27:BD:103:ARG:HH22	1.58	0.68
1:CA:891:U:OP2	61:CA:4083:HOH:O	2.11	0.68
5:CE:12:LEU:HB3	5:CE:31:LEU:HB2	1.74	0.68
9:CI:24:GLY:HA2	9:CI:59:PHE:O	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1963:U:O2'	61:DA:4441:HOH:O	2.11	0.68
25:DA:2016:U:H2'	25:DA:2017:U:C6	2.29	0.68
28:DE:72:VAL:HG13	28:DE:73:GLU:O	1.93	0.68
29:DF:195:ASP:OD1	29:DF:196:LEU:N	2.26	0.68
1:AA:21:G:OP1	61:AA:4080:HOH:O	2.10	0.68
1:AA:35:G:O2'	12:AL:118:SER:O	2.12	0.68
1:AA:839:U:O2'	1:AA:840:C:OP1	2.11	0.68
25:BA:272:U:H4'	32:BI:50:ARG:HH12	1.58	0.68
25:BA:1315:A:N7	61:BA:4265:HOH:O	2.25	0.68
32:BI:92:VAL:HG13	32:BI:120:ILE:HB	1.75	0.68
7:CG:108:ALA:HA	7:CG:111:ARG:HD2	1.73	0.68
25:DA:1593:G:H2'	25:DA:1594:G:H8	1.56	0.68
1:AA:1025:U:O2'	1:AA:1026:G:O4'	2.12	0.68
1:AA:1125:U:O2'	1:AA:1126:U:OP2	2.10	0.68
10:AJ:5:ARG:NE	10:AJ:73:ASP:OD1	2.25	0.68
25:BA:2460:A:OP2	61:BA:4510:HOH:O	2.11	0.68
42:BW:14:PRO:HG2	42:BW:78:GLU:HG2	1.76	0.68
25:DA:2552:U:H2'	25:DA:2554:U:OP2	1.93	0.68
61:DA:4599:HOH:O	46:D0:4:LYS:NZ	2.24	0.68
6:AF:18:GLN:HA	6:AF:21:LEU:HD12	1.76	0.68
25:BA:1576:G:C6	25:BA:1577:C:N4	2.61	0.68
25:BA:1815:A:OP2	61:BA:4519:HOH:O	2.10	0.68
1:CA:1003:G:H1	1:CA:1035:A:N6	1.91	0.68
44:DY:102:CYS:SG	44:DY:103:GLY:N	2.67	0.68
25:BA:1463:C:O2'	25:BA:1633:A:N3	2.27	0.68
39:BT:24:PRO:HA	39:BT:49:VAL:HG22	1.74	0.68
2:CB:144:ARG:NH1	2:CB:148:TYR:OH	2.26	0.68
19:CS:42:PRO:HG3	50:D4:61:ARG:HG2	1.75	0.68
27:DD:132:PRO:HD3	27:DD:190:TYR:CZ	2.28	0.68
47:D1:50:ARG:HG2	47:D1:59:THR:HB	1.76	0.68
50:D4:44:THR:O	50:D4:46:GLN:N	2.27	0.68
2:AB:17:PHE:HB2	2:AB:44:LEU:HD21	1.74	0.68
25:BA:927:G:N2	25:BA:944:C:N3	2.41	0.68
1:CA:1193:G:O2'	5:CE:25:ARG:NH2	2.27	0.68
12:CL:57:LYS:HG2	12:CL:67:THR:HG22	1.73	0.68
13:CM:3:ARG:HE	13:CM:4:ILE:HG22	1.58	0.68
25:DA:639:U:H2'	25:DA:640:C:C6	2.29	0.68
50:D4:24:THR:OG1	50:D4:25:TYR:N	2.27	0.68
1:AA:836:G:OP2	18:AR:61:LYS:NZ	2.27	0.68
31:BH:149:ARG:NH1	31:BH:167:GLU:OE2	2.27	0.68
1:CA:419:C:OP1	1:CA:513:C:O2'	2.10	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:735:C:H2'	1:CA:736:C:H6	1.58	0.68
3:CC:152:ILE:HG23	3:CC:199:LYS:HB2	1.76	0.68
25:DA:1200:C:H5'	61:DA:3770:HOH:O	1.94	0.68
27:DD:132:PRO:HG2	27:DD:135:PHE:HD2	1.57	0.68
1:AA:661:G:H1	1:AA:744:C:H42	1.39	0.68
2:AB:185:ILE:HG22	2:AB:199:TYR:HB2	1.74	0.68
25:BA:1047:A:OP2	61:BA:3917:HOH:O	2.11	0.68
29:BF:8:GLN:NE2	29:BF:21:ALA:HB2	2.09	0.68
1:CA:646:U:H2'	1:CA:647:C:C6	2.29	0.68
25:DA:2393:A:H5''	35:DP:63:PRO:HB3	1.76	0.68
25:DA:2394:C:OP2	54:D8:30:ARG:NH1	2.27	0.68
1:AA:278:G:OP2	17:AQ:92:ARG:NH2	2.27	0.68
1:AA:664:G:H22	1:AA:741:G:H1	1.39	0.68
1:AA:1086:U:H3	1:AA:1099:G:H22	1.42	0.68
3:AC:3:ASN:N	3:AC:3:ASN:OD1	2.26	0.68
25:BA:2734:A:N7	61:BA:4015:HOH:O	2.27	0.68
1:CA:460:G:O6	1:CA:470:C:H5''	1.93	0.68
2:CB:210:SER:O	2:CB:214:ILE:HG12	1.94	0.68
25:BA:2212:G:H2'	25:BA:2213:G:O4'	1.93	0.68
40:BU:76:TYR:OH	40:BU:92:ARG:NH1	2.26	0.68
1:CA:474:G:H2'	1:CA:475:G:H8	1.58	0.68
25:DA:2287:A:N6	25:DA:2344:U:H3	1.92	0.68
25:DA:2427:C:OP1	61:DA:4257:HOH:O	2.11	0.68
1:AA:342:C:N3	1:AA:343:U:H5	1.92	0.67
25:BA:335:A:OP2	61:BA:4497:HOH:O	2.11	0.67
61:BE:406:HOH:O	37:BR:3:HIS:NE2	2.27	0.67
5:CE:9:LYS:HB2	5:CE:112:LEU:HD11	1.76	0.67
25:DA:652(D):C:H42	25:DA:652(U):G:H1	1.42	0.67
1:AA:59:A:H3'	1:AA:331:G:H22	1.59	0.67
25:BA:1361:C:OP2	61:BA:4471:HOH:O	2.12	0.67
25:DA:1607:C:N4	25:DA:1622:G:OP2	2.27	0.67
46:D0:24:LYS:HE2	46:D0:24:LYS:HA	1.76	0.67
47:D1:65:SER:HG	47:D1:66:HIS:HD1	1.39	0.67
1:AA:946:A:H2'	1:AA:947:G:C8	2.28	0.67
1:CA:382:A:H2'	1:CA:383:A:C8	2.28	0.67
1:CA:1042:G:O2'	1:CA:1043:C:O4'	2.12	0.67
9:AI:4:TYR:HB2	9:AI:19:LEU:HB2	1.77	0.67
25:BA:2081:A:OP2	61:BA:4212:HOH:O	2.12	0.67
25:BA:2361:G:OP1	61:BA:3947:HOH:O	2.12	0.67
1:CA:565:U:OP2	61:CA:4054:HOH:O	2.13	0.67
2:CB:84:GLU:HB3	2:CB:219:VAL:HG21	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:588:U:OP2	61:DA:3873:HOH:O	2.11	0.67
25:DA:962:G:OP1	61:DA:4173:HOH:O	2.12	0.67
25:DA:2006:C:OP2	61:DA:4388:HOH:O	2.12	0.67
34:DO:68:GLU:HB3	34:DO:78:ARG:HB2	1.74	0.67
47:D1:77:ALA:HA	47:D1:80:LEU:HD13	1.77	0.67
31:BH:56:SER:HB3	31:BH:61:HIS:ND1	2.10	0.67
1:CA:1251:A:O2'	1:CA:1369:C:O2'	2.08	0.67
25:DA:272:G:H4'	25:DA:272(A):U:H5''	1.74	0.67
25:DA:994:C:OP2	40:DU:54:LYS:NZ	2.28	0.67
25:DA:2431:U:OP2	61:DA:3860:HOH:O	2.12	0.67
50:D4:62:ARG:O	50:D4:64:GLY:N	2.28	0.67
1:AA:1030(D):A:H62	1:AA:1031:G:H21	1.43	0.67
25:BA:1391:C:OP2	61:BA:3931:HOH:O	2.10	0.67
51:B5:16:ARG:NH1	51:B5:17:ASP:OD1	2.28	0.67
23:CX:73:A:H5''	23:CX:74:C:H5'	1.77	0.67
1:AA:933:G:O6	7:AG:3:ARG:NH2	2.28	0.67
1:AA:1063:C:OP2	1:AA:1064:G:O2'	2.10	0.67
1:AA:1108:G:O6	61:AA:4120:HOH:O	2.10	0.67
25:BA:324:A:OP2	44:BY:86:ARG:NH2	2.28	0.67
25:BA:2460:A:OP1	61:BA:4034:HOH:O	2.11	0.67
25:DA:754:C:H2'	25:DA:755:C:H6	1.60	0.67
25:DA:1971:A:OP1	61:DA:3909:HOH:O	2.13	0.67
25:DA:2291:U:H2'	25:DA:2292:C:C6	2.29	0.67
25:BA:2420:U:OP2	61:BA:4137:HOH:O	2.13	0.67
1:CA:117:G:OP2	61:CA:4053:HOH:O	2.13	0.67
1:CA:1075:C:OP1	2:CB:179:LYS:NZ	2.28	0.67
1:CA:1226:C:N4	13:CM:104:ARG:HG3	2.10	0.67
9:CI:33:PHE:HE1	9:CI:43:ALA:HB1	1.59	0.67
25:DA:2430:A:OP2	61:DA:4180:HOH:O	2.12	0.67
6:AF:68:PRO:HB2	6:AF:71:ARG:HG3	1.77	0.67
38:BS:25:ARG:NH1	38:BS:42:ASP:OD1	2.27	0.67
25:DA:1359:A:H2'	25:DA:1360:A:H5'	1.77	0.67
30:DG:16:ARG:O	30:DG:20:ILE:HG13	1.95	0.67
32:DI:104:GLN:O	32:DI:105:HIS:ND1	2.28	0.67
14:AN:37:PHE:HB3	14:AN:39:LEU:HD12	1.76	0.67
1:CA:619:U:N3	4:CD:134:ASP:OD1	2.20	0.67
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.30	0.67
25:BA:2897:U:H2'	25:BA:2898:C:C6	2.30	0.66
27:BD:132:PRO:HG2	27:BD:135:PHE:HD2	1.60	0.66
45:BZ:69:THR:HG22	45:BZ:90:VAL:HA	1.77	0.66
1:CA:1004:A:C6	1:CA:1037:C:C2	2.82	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1133:G:H2'	1:CA:1134:G:C8	2.31	0.66
1:CA:1170:A:O2'	1:CA:1171:G:O4'	2.12	0.66
23:CX:64:G:H4'	36:DQ:10:ARG:HH21	1.59	0.66
25:DA:602:G:O2'	25:DA:655:A:N6	2.28	0.66
1:AA:1286:A:C8	1:AA:1287:A:H4'	2.30	0.66
1:AA:1422:G:H5''	34:BO:48:PRO:HB3	1.77	0.66
9:AI:3:GLN:OE1	9:AI:20:ARG:NH2	2.27	0.66
25:BA:449:A:OP2	61:BA:3954:HOH:O	2.13	0.66
25:BA:1007:G:OP1	61:BA:4616:HOH:O	2.12	0.66
1:CA:947:G:O3'	13:CM:109:THR:OG1	2.14	0.66
1:AA:1321:C:H5''	1:AA:1322:C:H2'	1.77	0.66
25:DA:1652:A:OP1	37:DR:8:ARG:NH1	2.28	0.66
45:DZ:108:PRO:HG3	45:DZ:141:VAL:HB	1.77	0.66
25:BA:2600:G:OP2	61:BA:4789:HOH:O	2.14	0.66
48:B2:16:LEU:O	48:B2:67:LYS:NZ	2.27	0.66
25:DA:773:U:OP1	61:DA:4405:HOH:O	2.12	0.66
25:DA:1606:G:OP1	61:DA:4577:HOH:O	2.13	0.66
25:DA:2685:G:O6	61:DA:3896:HOH:O	2.09	0.66
33:DN:20:GLY:HA2	33:DN:61:ARG:HE	1.58	0.66
33:DN:42:TRP:HA	33:DN:48:MET:HE1	1.78	0.66
1:AA:1189:C:OP1	10:AJ:51:ARG:NH2	2.28	0.66
23:CX:23:C:H2'	23:CX:24:U:C6	2.30	0.66
27:DD:206:LEU:HD22	27:DD:211:ARG:HG2	1.76	0.66
1:AA:243:A:H4'	1:AA:244:U:H5''	1.77	0.66
1:CA:1256:A:N6	1:CA:1278:U:H1'	2.10	0.66
25:DA:1301:A:OP1	61:DA:4411:HOH:O	2.13	0.66
25:DA:271(E):U:H2'	25:DA:271(F):C:C6	2.30	0.66
29:DF:18:ARG:NH2	29:DF:127:GLU:OE1	2.28	0.66
45:DZ:72:ARG:NH2	45:DZ:97:GLU:O	2.29	0.66
25:BA:2817:G:N1	25:BA:2902:G:O6	2.19	0.66
7:CG:113:GLU:HG2	7:CG:119:ARG:HG2	1.78	0.66
25:DA:1774:C:OP1	61:DA:3936:HOH:O	2.13	0.66
29:DF:13:SER:HA	29:DF:127:GLU:HG3	1.77	0.66
1:AA:407:G:H5''	4:AD:115:ARG:HB3	1.78	0.66
1:AA:452:A:H4'	16:AP:72:ARG:NH1	2.11	0.66
2:AB:166:ASP:HB3	2:AB:169:LYS:HB2	1.78	0.66
25:BA:1218:G:O2'	25:BA:1219:A:O4'	2.13	0.66
25:BA:2324:U:H5'	30:BG:88:ILE:HD11	1.78	0.66
42:BW:12:ILE:HD13	42:BW:17:VAL:HG13	1.77	0.66
3:CC:78:GLY:HA3	3:CC:83:ARG:H	1.60	0.66
5:CE:137:GLU:HG2	5:CE:140:ARG:HH11	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:117:G:OP2	61:AA:4071:HOH:O	2.14	0.66
27:BD:108:PRO:HD2	27:BD:111:LEU:HG	1.78	0.66
1:CA:1120:G:O6	1:CA:1154:G:N2	2.29	0.66
4:CD:43:HIS:HA	4:CD:46:LYS:HG3	1.77	0.66
25:DA:818:G:OP2	61:DA:3837:HOH:O	2.13	0.66
25:DA:2070:G:OP2	61:DA:4339:HOH:O	2.13	0.66
50:D4:61:ARG:NH1	50:D4:61:ARG:O	2.28	0.66
25:BA:1091:A:OP1	25:BA:1091:A:H4'	1.94	0.65
1:CA:539:A:H2'	1:CA:540:G:C8	2.31	0.65
1:CA:1236:A:O2'	1:CA:1304:G:H4'	1.96	0.65
5:CE:122:GLU:O	5:CE:126:ARG:NH1	2.30	0.65
10:CJ:29:ARG:HB2	10:CJ:84:GLN:HE22	1.60	0.65
25:DA:900:A:H2'	25:DA:901:A:H8	1.61	0.65
25:DA:1313:U:OP1	61:DA:3981:HOH:O	2.15	0.65
25:DA:2867:G:OP2	39:DT:119:LYS:NZ	2.28	0.65
26:DB:75:G:N2	45:DZ:87:ASP:OD1	2.28	0.65
9:AI:46:ALA:HB2	9:AI:74:ILE:HG23	1.78	0.65
25:BA:839:G:OP2	61:BA:4064:HOH:O	2.13	0.65
35:BP:59:LEU:HD11	54:B8:10:ALA:HB2	1.78	0.65
1:CA:56:U:H2'	1:CA:57:G:C8	2.31	0.65
2:CB:47:THR:O	2:CB:51:LEU:N	2.27	0.65
9:CI:85:LEU:HB3	9:CI:92:TYR:CD2	2.31	0.65
10:CJ:42:THR:HG21	10:CJ:68:HIS:HD2	1.61	0.65
19:CS:15:LEU:HD12	19:CS:18:LYS:HD2	1.79	0.65
1:AA:1182:G:H4'	1:AA:1183:A:H5'	1.78	0.65
2:AB:15:VAL:HB	2:AB:209:ARG:HG2	1.79	0.65
25:BA:601:A:OP2	61:BA:4002:HOH:O	2.14	0.65
1:CA:333:G:H4'	20:CT:16:HIS:CE1	2.30	0.65
25:DA:411:G:OP1	61:DA:3857:HOH:O	2.14	0.65
28:DE:14:ILE:HD11	28:DE:173:VAL:HG11	1.76	0.65
26:DB:55:U:O3'	30:DG:27:ASN:ND2	2.30	0.65
30:DG:25:TYR:HB3	30:DG:30:GLU:HB2	1.79	0.65
33:DN:15:LEU:HB2	33:DN:135:PRO:HB2	1.77	0.65
1:AA:1198:G:OP2	61:AA:4053:HOH:O	2.14	0.65
4:AD:31:CYS:SG	4:AD:32:ALA:N	2.69	0.65
25:BA:2832:G:OP2	61:BE:406:HOH:O	2.13	0.65
44:BY:98:VAL:HG12	44:BY:105:ALA:HA	1.78	0.65
8:CH:12:ARG:HD2	8:CH:26:VAL:HG12	1.79	0.65
1:AA:159:G:H2'	1:AA:161:A:OP2	1.97	0.65
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.32	0.65
25:BA:950:C:H2'	25:BA:951:U:C6	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:31:C:OP1	61:DA:4153:HOH:O	2.14	0.65
1:AA:1095:U:OP1	1:AA:1108:G:N2	2.30	0.65
1:AA:1320:C:H5'	19:AS:70:LYS:HG3	1.78	0.65
2:AB:87:ARG:NH1	2:AB:233:SER:OG	2.30	0.65
9:AI:16:ARG:HB2	9:AI:64:THR:HB	1.77	0.65
25:BA:849:A:OP1	61:BA:4293:HOH:O	2.13	0.65
25:BA:2349:G:OP1	61:BA:4028:HOH:O	2.13	0.65
35:BP:44:GLY:O	61:BP:302:HOH:O	2.14	0.65
1:CA:1305:G:N2	1:CA:1331:G:H1'	2.12	0.65
8:CH:49:GLU:HG2	8:CH:62:TYR:HE2	1.62	0.65
23:CX:40:C:H2'	23:CX:41:C:H6	1.62	0.65
53:B7:33:ARG:NH2	61:B7:4001:HOH:O	2.30	0.65
1:CA:558:G:OP1	61:CA:4171:HOH:O	2.14	0.65
1:CA:1133:G:H2'	1:CA:1134:G:H8	1.62	0.65
25:DA:1557:C:OP2	25:DA:1558:A:O2'	2.14	0.65
32:DI:77:LEU:HB3	32:DI:142:VAL:HG12	1.79	0.65
1:AA:659:U:H2'	1:AA:660:G:H8	1.62	0.65
1:AA:673:G:H2'	1:AA:674:G:C8	2.32	0.65
24:AW:1:2QZ:H11	24:AW:9:MVA:HG23	1.77	0.65
25:BA:2442:A:OP2	61:BA:4633:HOH:O	2.14	0.65
2:CB:19:HIS:CE1	2:CB:206:ASP:HB2	2.32	0.65
25:DA:370:G:OP1	25:DA:403:U:N3	2.24	0.65
2:AB:16:HIS:HB3	2:AB:210:SER:CB	2.26	0.64
4:AD:173:TRP:NE1	4:AD:193:ASP:OD1	2.29	0.64
25:BA:1398:U:OP1	61:BA:3990:HOH:O	2.15	0.64
43:BX:92:LEU:C	43:BX:94:GLY:H	2.00	0.64
1:CA:353:A:H5'	1:CA:353:A:H8	1.62	0.64
2:CB:201:ILE:HG21	2:CB:214:ILE:HG21	1.77	0.64
17:CQ:22:LEU:HD13	17:CQ:41:LYS:HG3	1.79	0.64
25:DA:1430:C:H2'	25:DA:1431:U:C6	2.32	0.64
25:DA:2680:C:H1'	28:DE:187:ALA:HB1	1.78	0.64
39:DT:65:LYS:HE2	39:DT:67:SER:HB2	1.79	0.64
5:AE:137:GLU:HG2	5:AE:140:ARG:HH11	1.63	0.64
25:BA:589:U:H5''	35:BP:29:LYS:HE3	1.79	0.64
54:B8:6:THR:HG22	54:B8:63:PRO:HD2	1.79	0.64
1:CA:662:G:O2'	1:CA:836:G:OP1	2.14	0.64
25:DA:2708:G:H1'	37:DR:71:GLN:HE22	1.62	0.64
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.32	0.64
2:AB:210:SER:O	2:AB:214:ILE:HG12	1.97	0.64
5:AE:12:LEU:HB3	5:AE:31:LEU:HB2	1.78	0.64
25:BA:1848:G:OP1	27:BD:88:ARG:NH2	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BR:28:LEU:HD12	37:BR:48:VAL:HG21	1.79	0.64
1:CA:69:G:H2'	1:CA:70:G:H8	1.62	0.64
25:DA:143:G:H2'	25:DA:143(A):C:C6	2.32	0.64
25:DA:455:C:N3	25:DA:472:A:H2'	2.12	0.64
30:DG:129:GLY:O	30:DG:161:THR:HB	1.97	0.64
25:BA:1093:G:H2'	25:BA:1156:G:H22	1.61	0.64
1:CA:1154:G:N7	1:CA:1155:G:C4	2.66	0.64
1:CA:1273:G:H3'	1:CA:1274:G:H8	1.62	0.64
1:CA:1305:G:H5'	21:CU:4:GLY:HA3	1.79	0.64
45:DZ:153:SER:OG	45:DZ:154:ASP:OD1	2.14	0.64
2:AB:231:GLU:HB3	2:AB:232:PRO:CD	2.28	0.64
19:AS:27:GLU:HB3	19:AS:28:LYS:HB3	1.77	0.64
25:DA:524:U:H2'	25:DA:525:U:C6	2.33	0.64
25:DA:2062:A:OP1	61:DA:3798:HOH:O	2.14	0.64
33:DN:38:HIS:CE1	33:DN:39:ARG:HG3	2.32	0.64
1:AA:56:U:H2'	1:AA:57:G:C8	2.33	0.64
1:AA:123:C:OP1	1:AA:311:C:O2'	2.13	0.64
1:AA:457:C:H2'	1:AA:458:C:C6	2.33	0.64
1:AA:476:G:H2'	1:AA:477:A:O4'	1.98	0.64
1:AA:1346:A:N1	1:AA:1374:A:H5''	2.12	0.64
23:AX:6:G:H1	23:AX:67:C:H42	1.45	0.64
19:CS:37:ARG:O	19:CS:70:LYS:NZ	2.28	0.64
20:CT:86:ARG:O	20:CT:90:GLN:HB2	1.98	0.64
25:BA:2405:A:H5'	35:BP:63:PRO:HB3	1.79	0.64
1:CA:254:G:OP1	17:CQ:66:SER:OG	2.16	0.64
4:CD:92:VAL:O	4:CD:96:LEU:HD22	1.97	0.64
10:CJ:16:LEU:HD13	10:CJ:70:ARG:HG2	1.78	0.64
59:CX:101:FME:HCN	25:DA:2451:A:H2	1.62	0.64
25:DA:1776:G:OP2	61:DA:3756:HOH:O	2.14	0.64
28:DE:150:VAL:HG13	28:DE:154:LYS:HG3	1.79	0.64
50:D4:64:GLY:C	50:D4:66:SER:H	2.01	0.64
1:AA:161:A:H2'	1:AA:162:A:C8	2.32	0.64
1:AA:193:C:H2'	1:AA:194:C:H6	1.61	0.64
1:AA:1042:G:O2'	1:AA:1043:C:O4'	2.14	0.64
1:AA:1530:G:H2'	1:AA:1531:A:O4'	1.97	0.64
3:AC:12:LEU:HD23	3:AC:16:ARG:HB3	1.78	0.64
25:BA:325:G:OP2	44:BY:84:ARG:NH2	2.31	0.64
25:BA:1997:G:OP2	61:BA:4529:HOH:O	2.15	0.64
1:CA:814:A:H2'	1:CA:816:A:H5''	1.78	0.64
1:CA:1015:A:H2'	1:CA:1016:A:C8	2.33	0.64
1:CA:1133:G:H1	1:CA:1141:C:N4	1.95	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1312:G:N7	19:CS:2:PRO:HG2	2.12	0.64
13:CM:37:THR:O	13:CM:55:ARG:NH1	2.31	0.64
25:DA:586:A:N1	25:DA:809:G:O2'	2.25	0.64
25:DA:594:U:H3	25:DA:663:G:H1	1.44	0.64
25:DA:1973:G:OP1	61:DA:4138:HOH:O	2.15	0.64
36:DQ:26:TYR:O	36:DQ:67:ARG:NH1	2.28	0.64
37:DR:97:VAL:HG22	37:DR:114:VAL:HG22	1.79	0.64
1:AA:630:G:H2'	1:AA:631:G:H8	1.62	0.64
12:AL:70:ILE:HG12	12:AL:100:ILE:HD12	1.80	0.64
16:AP:19:ILE:HD13	16:AP:36:ILE:HG13	1.78	0.64
37:BR:53:HIS:ND1	37:BR:94:TYR:OH	2.30	0.64
25:DA:1604:C:OP2	61:DA:4392:HOH:O	2.15	0.64
25:DA:2781:A:H5''	25:DA:2782:G:H5'	1.79	0.64
26:DB:11:C:OP2	26:DB:12:C:N4	2.27	0.64
3:AC:36:ASP:O	3:AC:40:ARG:HG3	1.98	0.64
25:BA:778:C:OP2	61:BA:4592:HOH:O	2.15	0.64
2:CB:16:HIS:CB	2:CB:204:ASN:HB3	2.24	0.64
19:CS:64:GLU:HB2	50:D4:59:PHE:HE1	1.62	0.64
25:DA:1266:G:O5'	42:DW:15:ARG:NH2	2.30	0.64
25:DA:2298:A:C6	25:DA:2321:G:N1	2.66	0.64
28:DE:73:GLU:O	28:DE:73:GLU:HG3	1.96	0.64
42:DW:71:VAL:HA	42:DW:107:LEU:HD12	1.79	0.64
1:AA:518:C:O2'	1:AA:530:G:N2	2.31	0.63
1:AA:598:U:H4'	8:AH:94:TYR:CD2	2.33	0.63
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.31	0.63
25:BA:641:G:OP1	29:BF:40:GLN:NE2	2.24	0.63
25:BA:1091:A:H1'	25:BA:1093:G:N3	2.13	0.63
13:CM:22:ILE:HB	13:CM:25:ILE:HD13	1.79	0.63
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.80	0.63
20:CT:64:ASP:OD2	20:CT:81:LYS:NZ	2.28	0.63
25:DA:365:C:OP2	61:DA:4447:HOH:O	2.15	0.63
36:DQ:59:ARG:O	36:DQ:61:GLY:N	2.23	0.63
1:AA:945:G:OP2	61:AA:4057:HOH:O	2.15	0.63
25:BA:2331:G:N2	38:BS:3:ARG:HA	2.14	0.63
25:BA:2369:U:OP1	46:B0:20:ARG:NH1	2.31	0.63
1:CA:59:A:H3'	1:CA:331:G:H22	1.62	0.63
1:CA:404:U:H5'	4:CD:122:ARG:HD3	1.80	0.63
1:CA:953:G:H5'	1:CA:965:A:N6	2.13	0.63
5:CE:78:HIS:HE1	5:CE:143:ARG:H	1.45	0.63
6:AF:97:PHE:N	18:AR:30:ASP:OD1	2.29	0.63
25:BA:53:G:O2'	53:B7:35:ARG:HD3	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1466:U:O2'	25:BA:1467:G:OP1	2.13	0.63
25:BA:2701:U:H4'	25:BA:2702:C:O5'	1.97	0.63
1:CA:405:U:O4	4:CD:2:GLY:N	2.32	0.63
1:CA:1129:C:H2'	1:CA:1139:G:N7	2.13	0.63
1:CA:1362:C:H2'	1:CA:1363:C:H5''	1.81	0.63
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.34	0.63
2:CB:187:LEU:HA	2:CB:201:ILE:HB	1.80	0.63
25:DA:910:A:H62	36:DQ:12:GLN:HA	1.63	0.63
50:B4:24:THR:OG1	50:B4:25:TYR:N	2.31	0.63
25:DA:1667:G:O2'	25:DA:1991:U:O4	2.13	0.63
25:DA:1766:U:H2'	25:DA:1767:C:H6	1.63	0.63
25:DA:2816:C:O3'	37:DR:99:LYS:NZ	2.32	0.63
1:AA:333:G:H4'	20:AT:16:HIS:CE1	2.33	0.63
25:BA:560:C:O3'	40:BU:53:ARG:NH1	2.31	0.63
25:BA:1639:G:H2'	25:BA:1640:G:C8	2.33	0.63
1:CA:1320:C:H5'	19:CS:70:LYS:HG3	1.80	0.63
2:CB:56:ARG:HB3	2:CB:56:ARG:HH11	1.63	0.63
2:CB:87:ARG:HE	2:CB:233:SER:HB3	1.63	0.63
25:DA:298:G:H5''	25:DA:299:A:OP1	1.98	0.63
26:DB:14:U:OP2	26:DB:70:C:O2'	2.14	0.63
31:DH:28:GLY:HA3	31:DH:79:VAL:HB	1.80	0.63
12:AL:79:GLU:HB3	12:AL:80:HIS:HD2	1.64	0.63
25:BA:1701:A:OP2	61:BA:4089:HOH:O	2.15	0.63
1:CA:1145:C:H4'	1:CA:1146:A:H5'	1.81	0.63
4:CD:31:CYS:SG	4:CD:33:MET:N	2.71	0.63
25:DA:568:U:H5'	25:DA:945:A:N1	2.14	0.63
1:AA:922:G:H4'	5:AE:20:GLN:HA	1.80	0.63
2:AB:62:ALA:HB2	2:AB:222:ILE:HG22	1.80	0.63
2:AB:195:ASP:O	8:AH:68:ARG:NH2	2.31	0.63
4:AD:177:ASP:HB3	4:AD:182:LYS:HD3	1.81	0.63
25:BA:1020:C:OP1	61:BA:4060:HOH:O	2.16	0.63
25:BA:1044:C:OP1	61:BA:4480:HOH:O	2.15	0.63
11:CK:98:LEU:O	11:CK:101:SER:OG	2.13	0.63
23:CX:48:C:C2	23:CX:59:A:H1'	2.34	0.63
25:DA:144:C:H2'	25:DA:145:G:H8	1.62	0.63
40:DU:92:ARG:HA	40:DU:95:LEU:HB2	1.81	0.63
1:AA:427:U:OP1	4:AD:13:ARG:NH2	2.32	0.63
1:AA:503:C:OP2	12:AL:116:SER:HB3	1.99	0.63
1:AA:1346:A:OP1	9:AI:120:ARG:NH1	2.28	0.63
15:AO:5:LYS:H	15:AO:5:LYS:HD2	1.63	0.63
25:BA:599:U:OP1	61:BA:4467:HOH:O	2.15	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DF:21:ALA:CB	29:DF:22:ALA:HA	2.28	0.63
2:AB:78:GLN:O	2:AB:81:VAL:HG23	1.98	0.63
5:AE:78:HIS:CD2	5:AE:142:LEU:HD23	2.34	0.63
38:BS:27:SER:HA	38:BS:88:ASP:HB3	1.80	0.63
25:DA:1653:G:H3'	37:DR:2:ARG:HD3	1.81	0.63
25:DA:1688:U:O2	25:DA:1700:A:H5'	1.99	0.63
25:DA:1721:G:H8	25:DA:1741:A:H62	1.46	0.63
25:DA:1889:A:H2'	25:DA:1890:A:C8	2.33	0.63
25:DA:2803:C:H2'	25:DA:2804:C:H6	1.63	0.63
27:DD:183:ARG:HG3	27:DD:270:ILE:HG12	1.81	0.63
1:AA:200:G:H5'	1:AA:201:C:OP2	1.99	0.62
1:AA:400:C:H5''	4:AD:73:ARG:HH22	1.63	0.62
1:AA:445:G:H2'	1:AA:446:G:C8	2.33	0.62
4:AD:173:TRP:CE3	4:AD:174:LEU:HG	2.34	0.62
1:CA:45:U:H2'	1:CA:46:G:C8	2.34	0.62
1:CA:585:G:OP1	17:CQ:37:LYS:NZ	2.24	0.62
25:DA:1159:U:H2'	25:DA:1160:G:C8	2.32	0.62
25:DA:2016:U:H2'	25:DA:2017:U:H6	1.64	0.62
25:DA:2098:U:H2'	25:DA:2099:U:O4'	1.99	0.62
25:DA:2469:A:H4'	36:DQ:56:ARG:HD2	1.79	0.62
29:DF:165:ARG:HG2	29:DF:168:ARG:NH2	2.14	0.62
50:D4:59:PHE:HA	50:D4:61:ARG:N	2.14	0.62
1:AA:404:U:H5'	4:AD:122:ARG:HD2	1.81	0.62
10:AJ:37:PRO:HA	10:AJ:72:VAL:HG12	1.81	0.62
10:AJ:49:VAL:HG23	14:AN:41:ARG:HB2	1.81	0.62
25:BA:2367:C:H1'	46:B0:39:ARG:HH21	1.63	0.62
44:BY:6:HIS:H	44:BY:6:HIS:CD2	2.15	0.62
1:CA:1163:C:N3	1:CA:1173:G:N2	2.47	0.62
13:CM:13:LYS:HA	13:CM:44:ARG:HH11	1.63	0.62
28:DE:72:VAL:HA	28:DE:73:GLU:HB3	1.81	0.62
1:AA:187:C:H2'	1:AA:188:C:H6	1.65	0.62
45:BZ:151:HIS:O	45:BZ:153:SER:N	2.31	0.62
25:DA:854:G:H2'	25:DA:855:G:H8	1.64	0.62
25:DA:2079:U:OP1	47:D1:21:ARG:NH2	2.32	0.62
25:DA:2206:G:H3'	25:DA:2207:G:N7	2.14	0.62
1:AA:486:U:H2'	1:AA:487:A:C8	2.35	0.62
1:AA:552:U:C2'	1:AA:553:A:H5'	2.29	0.62
1:AA:937:A:OP2	61:AA:4095:HOH:O	2.16	0.62
8:AH:14:ARG:NH2	8:AH:83:ILE:O	2.33	0.62
16:AP:43:LYS:HG2	16:AP:48:TRP:CD2	2.34	0.62
32:BI:40:THR:O	32:BI:44:LEU:HB2	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:62:C:H42	25:DA:93:G:H1	1.46	0.62
25:DA:994:C:OP1	40:DU:53:ARG:NH2	2.32	0.62
1:AA:560:U:O2'	1:AA:561:U:OP2	2.16	0.62
1:AA:1305:G:N2	1:AA:1331:G:H1'	2.15	0.62
3:AC:114:PRO:O	3:AC:118:GLN:NE2	2.32	0.62
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.81	0.62
25:DA:2079:U:O3'	47:D1:35:THR:OG1	2.17	0.62
43:DX:53:LYS:HB3	43:DX:82:GLN:HB3	1.80	0.62
2:AB:74:LYS:NZ	2:AB:205:ASP:OD2	2.32	0.62
52:B6:13:CYS:SG	52:B6:47:THR:HG21	2.39	0.62
2:CB:163:PHE:CD1	2:CB:185:ILE:HG13	2.34	0.62
12:CL:49:ASN:ND2	12:CL:92:ASP:OD2	2.31	0.62
25:DA:333:G:H5''	25:DA:334:C:OP2	1.99	0.62
25:DA:1036:G:H1	25:DA:1119:C:H42	1.45	0.62
28:DE:3:GLY:HA3	28:DE:81:ILE:HD12	1.80	0.62
30:DG:179:PRO:HB2	50:D4:42:PHE:HE1	1.64	0.62
1:AA:96:U:H2'	1:AA:97:G:C8	2.35	0.62
1:AA:406:G:N3	4:AD:119:GLN:NE2	2.46	0.62
16:AP:53:VAL:HG22	16:AP:79:VAL:HG22	1.80	0.62
19:AS:36:ARG:HB3	19:AS:72:GLY:HA3	1.79	0.62
1:CA:1108:G:O6	61:CA:4092:HOH:O	2.14	0.62
3:CC:6:HIS:HB3	14:CN:49:HIS:ND1	2.14	0.62
1:AA:983:A:H1'	1:AA:1049:U:O2	2.00	0.62
16:AP:43:LYS:HG2	16:AP:48:TRP:CE2	2.35	0.62
25:BA:2348:A:H61	46:B0:43:THR:CG2	2.12	0.62
1:CA:586:C:O2'	1:CA:878:G:H4'	1.98	0.62
1:CA:1036:G:H5'	1:CA:1037:C:C6	2.35	0.62
2:CB:69:LEU:HB3	2:CB:162:ILE:HG22	1.81	0.62
3:CC:179:ARG:NH1	3:CC:206:GLU:OE1	2.33	0.62
23:CX:9:G:O2'	23:CX:10:G:N7	2.23	0.62
25:DA:1495:A:H2'	25:DA:1496:A:C8	2.35	0.62
25:DA:2584:U:O4	61:DA:3959:HOH:O	2.13	0.62
34:DO:35:VAL:HG11	34:DO:103:ALA:HB3	1.80	0.62
1:AA:863:U:OP1	61:AA:4128:HOH:O	2.16	0.62
25:DA:658:C:H2'	25:DA:659:C:C6	2.35	0.62
25:DA:1005:C:H2'	25:DA:1006:C:C6	2.35	0.62
1:AA:1125:U:C2	1:AA:1127:G:N7	2.68	0.62
9:AI:29:ASN:ND2	9:AI:65:VAL:O	2.33	0.62
32:BI:72:LEU:O	32:BI:74:ASN:N	2.31	0.62
45:BZ:102:LEU:HD13	45:BZ:123:ASP:HA	1.81	0.62
50:B4:15:ILE:HD12	50:B4:21:VAL:HG22	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:85:LEU:HB3	9:CI:92:TYR:HD2	1.64	0.62
11:CK:110:ASP:HB3	18:CR:85:LEU:HB3	1.81	0.62
30:DG:11:TYR:CE2	30:DG:16:ARG:HD3	2.35	0.62
45:DZ:45:ASP:OD1	45:DZ:49:ARG:NH1	2.32	0.62
1:AA:175:C:H2'	1:AA:176:C:H6	1.64	0.61
1:AA:460:G:O6	1:AA:470:C:H5''	2.00	0.61
20:AT:14:LYS:HG3	20:AT:17:ARG:NH2	2.15	0.61
1:CA:447:G:O6	61:CA:4157:HOH:O	2.16	0.61
1:CA:1502:A:H2	1:CA:1505:G:N1	1.95	0.61
19:CS:41:VAL:HG12	19:CS:43:GLU:H	1.63	0.61
25:DA:579:G:H2'	25:DA:580:C:C6	2.35	0.61
25:DA:2285:C:OP2	52:D6:6:ARG:NH1	2.33	0.61
29:DF:183:VAL:O	29:DF:187:VAL:HG23	2.00	0.61
1:AA:993:G:H1	1:AA:1045:C:H42	1.48	0.61
1:AA:1305:G:H22	1:AA:1331:G:H1'	1.64	0.61
1:AA:1442(A):G:C8	39:BT:118:ARG:HG2	2.35	0.61
8:AH:51:VAL:HG11	8:AH:60:ARG:HH12	1.65	0.61
11:AK:99:GLN:HG2	11:AK:105:VAL:HG21	1.82	0.61
1:CA:1239:A:H62	1:CA:1299:A:H62	1.47	0.61
25:DA:2218:U:O2	47:D1:52:ARG:NH2	2.33	0.61
30:DG:18:GLU:OE2	30:DG:21:ARG:NH1	2.32	0.61
1:AA:1241:G:H1	1:AA:1296:C:H42	1.49	0.61
19:AS:64:GLU:HB2	50:B4:59:PHE:HE1	1.65	0.61
25:BA:2713:C:H2'	25:BA:2714:U:H2'	1.81	0.61
1:CA:202:U:H3'	1:CA:203:U:H6	1.63	0.61
3:CC:47:LEU:HD12	3:CC:68:VAL:HG11	1.81	0.61
34:DO:119:PRO:HB2	39:DT:68:TYR:CE2	2.35	0.61
35:DP:50:ARG:HH21	35:DP:50:ARG:HG3	1.66	0.61
39:DT:85:LYS:NZ	39:DT:87:ASP:OD2	2.33	0.61
25:BA:2412:G:O6	61:BA:4067:HOH:O	2.14	0.61
1:CA:1041:A:N6	1:CA:1042:G:O6	2.33	0.61
25:DA:867:C:H2'	25:DA:868:U:C6	2.35	0.61
25:DA:1496:A:N3	25:DA:1577:C:O2'	2.32	0.61
25:DA:2640:G:N7	61:DA:3808:HOH:O	2.31	0.61
1:AA:1158:C:H5	1:AA:1181:G:N1	1.98	0.61
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.35	0.61
6:AF:38:GLU:HB2	6:AF:64:GLN:HG2	1.83	0.61
27:BD:71:ASP:CB	27:BD:103:ARG:HH22	2.13	0.61
1:CA:1004:A:H8	1:CA:1005:A:H4'	1.66	0.61
2:CB:48:MET:HA	2:CB:51:LEU:HB2	1.83	0.61
11:CK:58:PRO:HG3	11:CK:89:ALA:O	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:37:PHE:HB3	14:CN:39:LEU:HD12	1.81	0.61
25:DA:1773:A:H5''	61:DA:4248:HOH:O	1.99	0.61
25:DA:2303:G:O2'	30:DG:132:ASN:HB2	2.01	0.61
25:DA:2748:A:O2'	31:DH:63:SER:O	2.19	0.61
39:DT:24:PRO:HA	39:DT:49:VAL:HG22	1.82	0.61
9:AI:50:LEU:HD13	9:AI:56:LEU:HA	1.82	0.61
28:BE:175:VAL:HG22	28:BE:177:PRO:HD3	1.82	0.61
1:CA:1422:G:O3'	34:DO:49:ARG:NH1	2.34	0.61
15:CO:88:ARG:HB3	15:CO:88:ARG:HH21	1.63	0.61
25:DA:2404:C:O3'	35:DP:77:ARG:NH2	2.33	0.61
25:DA:2557:G:H2'	25:DA:2558:C:H6	1.66	0.61
1:AA:154:C:N4	1:AA:168:G:O6	2.34	0.61
1:AA:601:C:H2'	1:AA:602:A:H8	1.63	0.61
1:AA:1260:C:O5'	1:AA:1284:C:H4'	2.01	0.61
28:BE:24:THR:HG22	28:BE:186:GLY:O	2.01	0.61
1:CA:192:U:O2'	1:CA:193:C:H5'	2.00	0.61
6:CF:24:GLU:HG3	6:CF:28:ARG:HH11	1.65	0.61
15:CO:5:LYS:H	15:CO:5:LYS:HD2	1.64	0.61
23:CX:4:G:H1	23:CX:69:C:N4	1.97	0.61
25:DA:307:G:N1	25:DA:310:A:OP2	2.33	0.61
25:DA:958:U:OP2	36:DQ:14:ARG:NH1	2.34	0.61
25:DA:2273:A:H2'	25:DA:2274:A:C8	2.36	0.61
4:AD:184:LYS:NZ	4:AD:184:LYS:HB3	2.16	0.61
4:CD:17:VAL:HG11	4:CD:197:PRO:HG3	1.82	0.61
6:CF:25:ILE:HD13	6:CF:82:ARG:HE	1.65	0.61
25:DA:2589:A:OP1	61:DA:4063:HOH:O	2.15	0.61
41:DV:5:VAL:HG11	41:DV:57:VAL:HG21	1.83	0.61
1:AA:923:A:O2'	1:AA:1399:C:OP2	2.18	0.61
1:CA:9:G:H2'	1:CA:10:A:H8	1.65	0.61
1:CA:1150:U:O4	1:CA:1151:A:N6	2.34	0.61
20:CT:57:ARG:HH12	20:CT:100:ILE:HG13	1.65	0.61
25:DA:867:C:H2'	25:DA:868:U:H6	1.66	0.61
25:DA:887:A:O2'	25:DA:889:C:OP2	2.18	0.61
25:DA:948:G:OP1	61:DA:4173:HOH:O	2.16	0.61
29:DF:103:LYS:HA	29:DF:106:ARG:HG3	1.82	0.61
37:DR:36:THR:HG22	37:DR:37:THR:H	1.66	0.61
39:DT:95:ARG:HG2	39:DT:95:ARG:HH11	1.64	0.61
1:AA:1104:G:H4'	2:AB:111:ARG:NH1	2.16	0.61
5:AE:92:LYS:HB3	5:AE:119:LEU:HB2	1.83	0.61
25:BA:787:U:OP2	61:BA:4519:HOH:O	2.16	0.61
25:BA:1199:C:OP1	40:BU:92:ARG:NH1	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1405:A:H61	25:BA:1418:U:H3	1.49	0.61
25:BA:1577:C:HO2'	25:BA:1578:C:P	2.23	0.61
25:BA:2460:A:N1	61:BA:4605:HOH:O	2.31	0.61
29:BF:65:TRP:CZ2	29:BF:75:HIS:HD2	2.19	0.61
10:CJ:32:ALA:HB1	10:CJ:33:GLN:HA	1.82	0.61
25:DA:1900:A:OP2	61:DA:3902:HOH:O	2.16	0.61
25:DA:2845:G:H2'	25:DA:2846:G:C8	2.36	0.61
29:DF:11:VAL:HG22	29:DF:125:LEU:HB2	1.83	0.61
1:AA:552:U:H2'	1:AA:553:A:H5'	1.83	0.60
25:BA:1219:A:H4'	25:BA:1220:U:OP1	2.01	0.60
25:BA:1231:G:H2'	25:BA:1232:G:O4'	2.01	0.60
25:BA:1701:A:OP1	37:BR:1:MET:HA	2.00	0.60
1:CA:346:G:OP1	39:DT:41:ARG:NH2	2.32	0.60
1:CA:1053:G:N7	1:CA:1200:C:H5''	2.16	0.60
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.36	0.60
3:CC:150:LYS:HG3	3:CC:169:ALA:HB2	1.83	0.60
6:CF:61:LEU:HB3	6:CF:63:TYR:HE1	1.65	0.60
25:DA:289:A:N6	25:DA:351:G:O2'	2.34	0.60
25:DA:973:A:OP2	61:DA:3814:HOH:O	2.17	0.60
26:DB:41:U:H5	30:DG:70:VAL:H	1.48	0.60
39:DT:16:ARG:NH1	39:DT:18:ASP:OD2	2.35	0.60
1:AA:1026:G:H5'	1:AA:1027:C:H5''	1.83	0.60
3:AC:40:ARG:NH2	3:AC:55:VAL:O	2.35	0.60
1:CA:1256:A:H61	1:CA:1278:U:H1'	1.65	0.60
11:CK:62:GLN:HG3	11:CK:97:ALA:HB2	1.82	0.60
16:CP:52:ASP:O	16:CP:54:GLU:N	2.32	0.60
25:DA:585:G:O2'	25:DA:1254:A:N6	2.31	0.60
25:DA:667:U:O2	54:D8:2:PRO:HD2	2.01	0.60
25:DA:1531:C:H42	25:DA:1538:G:H1	1.49	0.60
1:AA:201:C:N4	1:AA:216:G:H1	1.91	0.60
1:AA:827:U:H5''	1:AA:828:A:OP2	2.02	0.60
1:AA:881:G:OP2	12:AL:12:ARG:NH2	2.34	0.60
1:AA:1271:G:H5''	1:AA:1314:C:OP1	2.02	0.60
25:BA:272:U:H4'	32:BI:50:ARG:NH1	2.16	0.60
25:BA:649:C:O2'	25:BA:704:U:OP1	2.19	0.60
25:BA:2340:A:H2'	25:BA:2341:G:C8	2.36	0.60
45:BZ:109:ALA:HB3	45:BZ:145:GLU:HG3	1.83	0.60
1:CA:826:C:H2'	1:CA:827:U:C6	2.35	0.60
3:CC:18:TRP:CD1	14:CN:54:PRO:HA	2.36	0.60
25:DA:390:A:N6	61:DA:4490:HOH:O	2.33	0.60
1:AA:677:U:H3	1:AA:713:G:H22	1.47	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1829:U:H5'	27:BD:259:THR:CG2	2.28	0.60
1:CA:67:C:H2'	1:CA:68:G:C8	2.35	0.60
25:DA:1125:G:H5'	55:D9:37:GLY:HA2	1.81	0.60
25:DA:2570:G:O6	61:DA:4417:HOH:O	2.12	0.60
25:DA:2870:C:H2'	25:DA:2871:C:O4'	2.00	0.60
1:AA:953:G:H5'	1:AA:965:A:H61	1.66	0.60
5:AE:11:ILE:HB	5:AE:31:LEU:HB3	1.83	0.60
10:AJ:11:PHE:HE1	10:AJ:67:THR:HG22	1.66	0.60
25:BA:594:A:O2'	41:BV:78:LYS:NZ	2.32	0.60
25:DA:2785:C:OP1	28:DE:41:LYS:NZ	2.17	0.60
1:AA:486:U:H2'	1:AA:487:A:H8	1.65	0.60
1:AA:691:G:H2'	1:AA:692:U:C6	2.36	0.60
1:AA:1007:C:N3	1:AA:1022:G:O6	2.35	0.60
9:AI:86:VAL:HG13	9:AI:96:LEU:HD12	1.83	0.60
1:CA:235:C:H5'	17:CQ:70:ARG:HG2	1.82	0.60
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.34	0.60
6:CF:82:ARG:HB2	6:CF:85:VAL:HG23	1.82	0.60
25:DA:898:C:H2'	25:DA:899:A:O4'	2.02	0.60
28:DE:52:LEU:O	28:DE:76:ARG:N	2.24	0.60
33:DN:34:LEU:O	33:DN:49:GLY:HA3	2.01	0.60
43:DX:59:VAL:HG21	43:DX:78:LYS:HE3	1.84	0.60
44:DY:38:ILE:HD13	44:DY:66:PRO:HA	1.83	0.60
1:AA:383:A:C2	1:AA:384:G:H1'	2.36	0.60
12:AL:59:ARG:HD3	24:AW:1:2QZ:OG1	2.02	0.60
25:BA:1739:U:H2'	25:BA:1741:C:C5	2.37	0.60
25:BA:2227:G:H3'	25:BA:2228:G:N7	2.15	0.60
31:BH:3:ARG:HG2	31:BH:6:ARG:HG2	1.84	0.60
1:CA:491:G:O6	61:CA:4132:HOH:O	2.11	0.60
1:CA:749:C:OP2	61:CA:4142:HOH:O	2.16	0.60
25:DA:2397:G:N2	25:DA:2420:C:H1'	2.16	0.60
30:DG:39:ILE:HG23	30:DG:157:ILE:HG12	1.83	0.60
35:DP:89:ALA:O	35:DP:121:LYS:NZ	2.29	0.60
1:AA:232:G:H1'	1:AA:262:A:N1	2.17	0.60
1:AA:322:C:O2'	20:AT:23:ARG:HD2	2.02	0.60
25:BA:1668:G:OP2	61:BA:4215:HOH:O	2.17	0.60
28:BE:120:TRP:CE3	28:BE:155:LYS:HD3	2.37	0.60
30:BG:170:ARG:NH2	30:BG:182:LYS:O	2.35	0.60
31:BH:40:GLU:OE1	31:BH:61:HIS:NE2	2.31	0.60
31:BH:92:ILE:H	31:BH:92:ILE:HD12	1.67	0.60
1:CA:69:G:H2'	1:CA:70:G:C8	2.37	0.60
1:CA:1286:A:H2	21:CU:18:TYR:HH	1.50	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1266:G:O2'	25:DA:2012:G:O6	2.13	0.60
30:DG:16:ARG:HE	30:DG:31:VAL:HG11	1.65	0.60
50:D4:15:ILE:HB	50:D4:32:TYR:HD1	1.66	0.60
1:AA:961:U:OP2	1:AA:1223:C:O2'	2.16	0.60
29:BF:183:VAL:O	29:BF:187:VAL:HG23	2.01	0.60
1:CA:735:C:H2'	1:CA:736:C:C6	2.35	0.60
1:CA:939:G:H1	1:CA:1344:C:N4	1.98	0.60
1:CA:1442:G:O2'	1:CA:1442(A):G:OP1	2.18	0.60
36:DQ:66:ILE:HG12	36:DQ:104:PHE:CE2	2.37	0.60
38:DS:14:VAL:O	38:DS:18:ILE:HG12	2.02	0.60
1:AA:454:C:P	16:AP:75:ARG:HH22	2.24	0.60
6:AF:61:LEU:HB3	6:AF:63:TYR:HE1	1.65	0.60
25:BA:278:G:H2'	25:BA:279:G:H5''	1.82	0.60
25:BA:1889:G:N2	25:BA:1905:G:H2'	2.17	0.60
50:B4:62:ARG:HB2	50:B4:63:TYR:HD1	1.67	0.60
1:CA:426:G:OP1	4:CD:36:ARG:NH1	2.33	0.60
16:CP:14:ASN:OD1	16:CP:16:HIS:HE1	1.85	0.60
20:CT:58:LYS:HE3	20:CT:62:LEU:HD12	1.84	0.60
25:DA:981:A:N1	25:DA:2027:G:O2'	2.28	0.60
35:DP:47:ASP:OD2	35:DP:50:ARG:NH2	2.34	0.60
36:DQ:34:LEU:HB2	36:DQ:118:LEU:HD22	1.83	0.60
2:AB:163:PHE:HD1	2:AB:185:ILE:HD12	1.67	0.59
20:AT:44:ALA:HB2	20:AT:52:ALA:HB1	1.83	0.59
25:BA:98:U:OP1	25:BA:99:G:O2'	2.14	0.59
25:BA:599:U:H2'	25:BA:600:G:C8	2.36	0.59
25:BA:830:A:OP2	61:BA:4454:HOH:O	2.17	0.59
25:BA:922:G:H1	25:BA:948:C:H42	1.49	0.59
34:BO:98:VAL:HG11	34:BO:114:ILE:HG23	1.84	0.59
1:CA:1151:A:C5'	10:CJ:41:PRO:HA	2.32	0.59
2:CB:100:GLY:O	2:CB:104:ASN:N	2.34	0.59
3:CC:157:ILE:HD12	3:CC:164:ARG:HB3	1.84	0.59
3:CC:189:ALA:HB3	3:CC:196:LEU:HB2	1.84	0.59
11:CK:48:ILE:O	11:CK:50:TYR:N	2.33	0.59
25:DA:82:G:N1	25:DA:103:A:OP2	2.28	0.59
25:DA:443:A:H5''	25:DA:444:C:OP1	2.02	0.59
25:DA:704:G:H1'	25:DA:726:G:N2	2.17	0.59
34:DO:98:VAL:HG13	34:DO:117:LEU:HB3	1.84	0.59
1:AA:128:G:O2'	17:AQ:3:LYS:NZ	2.34	0.59
25:BA:542:C:OP1	51:B5:16:ARG:NH2	2.35	0.59
25:BA:2406:C:OP2	54:B8:30:ARG:NH1	2.35	0.59
19:CS:48:THR:HG22	19:CS:61:TYR:HA	1.82	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DD:108:PRO:HG2	27:DD:111:LEU:HB2	1.84	0.59
50:D4:15:ILE:HB	50:D4:32:TYR:CD1	2.36	0.59
54:D8:33:ASN:HA	54:D8:36:LYS:HD2	1.84	0.59
1:AA:1277:C:O2'	1:AA:1279:A:H1'	2.02	0.59
46:B0:53:MET:HG3	46:B0:59:LEU:HD23	1.83	0.59
1:CA:1016:A:H2'	1:CA:1017:G:O4'	2.02	0.59
6:CF:33:TYR:HB2	6:CF:75:LEU:HD23	1.83	0.59
29:DF:21:ALA:HB3	29:DF:22:ALA:HA	1.84	0.59
48:D2:29:LYS:HG2	48:D2:57:ILE:HD13	1.84	0.59
1:AA:501:C:H1'	1:AA:549:C:H1'	1.84	0.59
2:AB:51:LEU:HD23	2:AB:201:ILE:HD12	1.85	0.59
10:AJ:7:LYS:HB3	10:AJ:97:GLU:HB2	1.83	0.59
18:AR:42:ARG:HH21	18:AR:42:ARG:HA	1.67	0.59
25:BA:139:A:H8	25:BA:1454:C:O2'	1.86	0.59
25:BA:2092:G:N3	61:BA:3834:HOH:O	2.31	0.59
25:BA:2274:U:OP2	46:B0:19:LYS:NZ	2.34	0.59
35:BP:89:ALA:O	35:BP:121:LYS:NZ	2.29	0.59
39:BT:53:ARG:HB3	39:BT:53:ARG:HH11	1.67	0.59
12:CL:36:VAL:HG23	24:CW:10:2QY:H89	1.85	0.59
15:CO:3:ILE:HG21	15:CO:34:LEU:HD21	1.83	0.59
19:CS:51:VAL:O	19:CS:58:VAL:N	2.30	0.59
25:DA:226:G:H21	25:DA:228:A:H62	1.50	0.59
25:DA:885:C:H2'	25:DA:886:C:H4'	1.84	0.59
25:DA:1405:U:H2'	25:DA:1406:U:C6	2.37	0.59
25:DA:1903:G:OP1	27:DD:241:PRO:HB2	2.02	0.59
29:DF:184:TYR:CE2	29:DF:188:ARG:HD2	2.37	0.59
1:AA:1009:G:O6	1:AA:1020:U:O2	2.20	0.59
1:AA:1342:C:H4'	9:AI:125:TYR:HB3	1.84	0.59
9:AI:24:GLY:HA2	9:AI:59:PHE:O	2.02	0.59
25:BA:1229:G:H5'	49:B3:29:ARG:NH1	2.17	0.59
25:BA:1501:U:O2'	25:BA:1502:G:N7	2.33	0.59
25:BA:2213:G:H5'	25:BA:2214:G:OP2	2.03	0.59
1:CA:827:U:H5''	1:CA:828:A:OP2	2.02	0.59
2:CB:68:ILE:HG12	2:CB:161:ALA:HB3	1.84	0.59
5:CE:50:GLU:HB2	5:CE:53:LEU:HD13	1.84	0.59
25:DA:212:G:H2'	25:DA:213:A:O4'	2.02	0.59
25:DA:799:G:O6	61:DA:4430:HOH:O	2.15	0.59
25:DA:1632:A:OP2	61:DA:4177:HOH:O	2.17	0.59
26:DB:48:A:H4'	38:DS:95:HIS:HD2	1.68	0.59
47:D1:3:LYS:HB2	47:D1:61:ARG:NH1	2.18	0.59
1:AA:78:G:H1	1:AA:92:C:N4	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:623:C:H2'	1:AA:624:C:H6	1.68	0.59
2:AB:95:GLN:HG3	2:AB:147:LYS:HD3	1.84	0.59
4:AD:182:LYS:HG2	4:AD:183:GLY:N	2.16	0.59
25:BA:479:C:OP1	61:BA:4179:HOH:O	2.17	0.59
25:BA:1385:G:H5''	43:BX:16:LYS:HD3	1.83	0.59
25:BA:1897:C:H2'	25:BA:1898:A:O4'	2.02	0.59
1:CA:1104:G:H4'	2:CB:111:ARG:NH1	2.17	0.59
2:CB:7:VAL:HB	2:CB:9:GLU:HG3	1.85	0.59
4:CD:8:VAL:HB	4:CD:115:ARG:HH12	1.67	0.59
10:CJ:8:LEU:HD12	10:CJ:20:ALA:HB2	1.85	0.59
3:AC:70:VAL:HG12	3:AC:72:LYS:H	1.66	0.59
1:CA:776:G:N2	1:CA:802:A:OP2	2.29	0.59
47:D1:3:LYS:HB2	47:D1:61:ARG:HH11	1.66	0.59
1:AA:1442:G:O2'	1:AA:1442(A):G:OP1	2.18	0.59
16:AP:50:LYS:HE2	16:AP:50:LYS:HA	1.85	0.59
25:BA:1410:G:P	47:B1:3:LYS:HG3	2.43	0.59
27:BD:183:ARG:HG3	27:BD:270:ILE:HG12	1.85	0.59
30:BG:12:TYR:HA	30:BG:16:ARG:HG2	1.84	0.59
1:CA:427:U:H3'	1:CA:428:G:H2'	1.85	0.59
1:CA:457:C:H2'	1:CA:458:C:H6	1.68	0.59
3:CC:114:PRO:O	3:CC:118:GLN:HG2	2.03	0.59
25:DA:2074:U:OP1	61:DA:3911:HOH:O	2.17	0.59
25:DA:2802:G:H2'	25:DA:2803:C:O4'	2.01	0.59
30:DG:50:ALA:O	30:DG:52:ILE:N	2.35	0.59
34:DO:77:ILE:HG13	39:DT:74:ARG:HG2	1.83	0.59
55:D9:25:VAL:HB	55:D9:34:GLN:HB2	1.83	0.59
1:AA:433:C:H2'	1:AA:434:U:H6	1.67	0.59
1:AA:1126:U:C5	10:AJ:71:LEU:HD22	2.36	0.59
1:AA:1221:G:OP1	1:AA:1320:C:N4	2.34	0.59
25:BA:1077:G:H21	55:B9:36:GLN:HE22	1.50	0.59
1:CA:693:G:H2'	1:CA:694:A:H8	1.68	0.59
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.02	0.59
1:CA:1172:C:H2'	1:CA:1173:G:C8	2.38	0.59
1:CA:1493:A:H1'	25:DA:1913:A:N6	2.13	0.59
3:CC:6:HIS:HD2	3:CC:8:ILE:H	1.51	0.59
3:CC:36:ASP:HA	3:CC:39:ILE:HD12	1.85	0.59
5:CE:36:ASP:O	5:CE:38:GLN:N	2.36	0.59
25:DA:1314:C:OP1	61:DA:4076:HOH:O	2.17	0.59
25:DA:1359:A:N1	25:DA:1372:U:O4	2.35	0.59
31:DH:30:LYS:HG3	31:DH:80:SER:O	2.02	0.59
1:AA:174:C:H2'	1:AA:175:C:C6	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:323:U:H2'	1:AA:324:G:O4'	2.02	0.59
1:AA:382:A:C2	1:AA:383:A:N7	2.70	0.59
1:AA:501:C:O2'	1:AA:549:C:O2	2.21	0.59
1:AA:659:U:H2'	1:AA:660:G:C8	2.38	0.59
1:AA:711:G:OP1	6:AF:54:LYS:NZ	2.35	0.59
1:AA:715:A:H2'	1:AA:716:A:C8	2.38	0.59
1:AA:913:A:OP1	12:AL:46:LYS:NZ	2.36	0.59
25:BA:129:G:OP1	61:BA:3963:HOH:O	2.17	0.59
45:BZ:111:VAL:C	45:BZ:113:ALA:H	2.06	0.59
52:B6:14:THR:HB	52:B6:48:VAL:O	2.03	0.59
1:CA:826:C:H2'	1:CA:827:U:H6	1.68	0.59
1:CA:1287:A:N3	1:CA:1353:G:O2'	2.32	0.59
11:CK:22:HIS:HB3	11:CK:29:ILE:HB	1.84	0.59
16:CP:51:VAL:HG12	16:CP:53:VAL:H	1.68	0.59
25:DA:1359:A:H61	25:DA:1372:U:H3	1.50	0.59
25:DA:1840:G:OP2	61:DA:4306:HOH:O	2.16	0.59
25:DA:2298:A:N1	25:DA:2321:G:C6	2.71	0.59
1:AA:692:U:O2'	1:AA:694:A:N7	2.28	0.58
1:AA:833:U:H2'	1:AA:834:C:C6	2.38	0.58
25:BA:2579:G:H2'	25:BA:2580:C:C6	2.38	0.58
43:BX:31:HIS:CD2	43:BX:33:LYS:HB2	2.37	0.58
1:CA:1005:A:H1'	1:CA:1036:G:N1	2.16	0.58
7:CG:76:ARG:O	7:CG:87:VAL:N	2.36	0.58
25:DA:143:G:H2'	25:DA:143(A):C:H6	1.66	0.58
25:DA:2299:G:N1	25:DA:2318:G:C8	2.71	0.58
25:DA:2472:G:N1	25:DA:2477:C:OP1	2.25	0.58
4:AD:31:CYS:SG	4:AD:33:MET:N	2.74	0.58
5:AE:143:ARG:NH1	8:AH:77:GLU:OE1	2.36	0.58
25:BA:2745:G:P	28:BE:203:LYS:HZ1	2.26	0.58
39:BT:51:ARG:HG3	39:BT:98:LYS:HD2	1.86	0.58
1:CA:552:U:C2'	1:CA:553:A:H5'	2.33	0.58
1:CA:999:C:N4	1:CA:1043:C:N3	2.51	0.58
1:CA:1005:A:O2'	1:CA:1006:C:OP1	2.20	0.58
1:CA:1286:A:C8	1:CA:1287:A:H4'	2.38	0.58
5:CE:9:LYS:HD2	5:CE:112:LEU:HD21	1.86	0.58
7:CG:75:VAL:HG13	7:CG:145:ALA:HA	1.85	0.58
7:CG:113:GLU:CG	7:CG:119:ARG:HG2	2.32	0.58
28:DE:28:ALA:HB3	28:DE:93:VAL:HG12	1.84	0.58
42:DW:60:ASN:HD22	42:DW:60:ASN:N	2.02	0.58
43:DX:31:HIS:CD2	43:DX:33:LYS:H	2.21	0.58
48:D2:22:GLU:OE2	48:D2:68:ARG:NH2	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:600:C:H2'	1:AA:601:C:C6	2.38	0.58
1:AA:713:G:H2'	1:AA:714:G:C8	2.38	0.58
1:AA:737:A:H2'	1:AA:738:C:C6	2.37	0.58
3:AC:157:ILE:HD12	3:AC:164:ARG:HB3	1.84	0.58
5:AE:110:LEU:HD13	5:AE:118:ILE:HG21	1.86	0.58
25:BA:1233:U:H4'	41:BV:79:VAL:HG22	1.84	0.58
32:BI:4:ILE:HG12	32:BI:18:VAL:HG22	1.84	0.58
45:BZ:151:HIS:C	45:BZ:153:SER:H	2.06	0.58
1:CA:9:G:H2'	1:CA:10:A:C8	2.38	0.58
1:CA:202:U:H3'	1:CA:203:U:C6	2.38	0.58
1:CA:1047:G:H1	1:CA:1210:C:H42	1.51	0.58
1:CA:1121:U:H2'	1:CA:1122:U:O4'	2.03	0.58
1:CA:1271:G:H5''	1:CA:1314:C:OP1	2.04	0.58
2:CB:40:HIS:HB3	2:CB:190:THR:HG21	1.85	0.58
25:DA:2314:C:H2'	25:DA:2315:G:C8	2.38	0.58
25:DA:2502:G:N7	61:DA:4548:HOH:O	2.31	0.58
29:DF:137:LYS:HA	29:DF:140:LEU:HD23	1.85	0.58
53:D7:5:TRP:CD1	53:D7:7:PRO:HD3	2.38	0.58
1:AA:1030(C):G:H2'	1:AA:1030(D):A:C8	2.39	0.58
20:AT:45:GLN:HA	20:AT:91:LEU:HB3	1.84	0.58
1:CA:1086:U:H3	1:CA:1099:G:H22	1.51	0.58
3:CC:180:ALA:HB1	3:CC:203:PHE:HE1	1.69	0.58
1:AA:269:C:H2'	1:AA:270:A:C8	2.37	0.58
1:AA:1392:G:N2	1:AA:1502:A:H8	2.02	0.58
11:AK:15:ALA:HA	11:AK:77:MET:HA	1.84	0.58
25:BA:1185:C:O3'	33:BN:25:ARG:NH1	2.36	0.58
25:BA:2853:G:O6	61:BA:4561:HOH:O	2.17	0.58
31:BH:33:LEU:HD21	31:BH:136:ILE:HG13	1.85	0.58
31:BH:40:GLU:OE2	31:BH:60:ARG:NH1	2.37	0.58
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.85	0.58
1:CA:1138:G:C6	1:CA:1140:C:H1'	2.38	0.58
6:CF:81:ILE:HD11	27:DD:125:ILE:HB	1.86	0.58
25:DA:1188:U:H4'	41:DV:79:VAL:HG22	1.84	0.58
34:DO:80:ASP:OD1	39:DT:64:ARG:NH2	2.36	0.58
45:DZ:130:PRO:O	45:DZ:133:ILE:HG13	2.03	0.58
7:AG:46:ALA:O	7:AG:50:ILE:HG23	2.04	0.58
19:AS:41:VAL:HG12	19:AS:43:GLU:H	1.68	0.58
25:BA:2080:A:N7	61:BA:4112:HOH:O	2.32	0.58
1:CA:222:U:H2'	1:CA:223:U:C6	2.38	0.58
1:CA:1123:A:H4'	10:CJ:37:PRO:HD2	1.86	0.58
25:DA:83:G:O2'	25:DA:102:G:N2	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DE:9:VAL:HB	39:DT:3:ARG:HG2	1.85	0.58
40:DU:65:ILE:HD11	40:DU:95:LEU:HB3	1.86	0.58
44:DY:23:ARG:HG2	44:DY:42:VAL:HG22	1.84	0.58
1:AA:924:C:O2'	1:AA:1502:A:N6	2.35	0.58
5:AE:94:ALA:HB2	5:AE:119:LEU:HG	1.85	0.58
12:AL:36:VAL:HG22	12:AL:82:VAL:HG22	1.86	0.58
25:BA:1779:G:H8	25:BA:1779:G:H5''	1.68	0.58
26:BB:6:C:H2'	26:BB:7:G:H5''	1.85	0.58
34:BO:35:VAL:HG21	34:BO:69:ILE:HD13	1.85	0.58
43:BX:41:ASN:O	43:BX:45:THR:HG23	2.04	0.58
53:B7:47:ARG:HH11	53:B7:47:ARG:HB3	1.67	0.58
1:CA:130:A:O2'	1:CA:131:C:O5'	2.19	0.58
1:CA:975:A:N1	10:CJ:48:THR:HB	2.19	0.58
31:DH:124:GLU:HB2	31:DH:132:ARG:HB3	1.86	0.58
7:AG:42:ILE:HG23	7:AG:117:ALA:HA	1.84	0.58
9:AI:16:ARG:HD3	9:AI:64:THR:HG21	1.85	0.58
25:BA:2022:G:OP1	37:BR:5:LYS:NZ	2.37	0.58
25:BA:2251:G:OP2	61:BA:4210:HOH:O	2.17	0.58
39:BT:53:ARG:HB3	39:BT:53:ARG:NH1	2.18	0.58
1:CA:426:G:H2'	1:CA:427:U:C6	2.39	0.58
1:CA:913:A:OP1	12:CL:46:LYS:NZ	2.36	0.58
1:CA:1026:G:H5'	1:CA:1027:C:H5''	1.85	0.58
5:CE:78:HIS:CE1	5:CE:143:ARG:H	2.22	0.58
25:DA:7:G:H2'	25:DA:8:A:C8	2.38	0.58
25:DA:171:G:H2'	25:DA:172:C:C6	2.39	0.58
30:DG:38:VAL:HG22	30:DG:93:THR:HG23	1.84	0.58
32:BI:104:GLN:HG3	32:BI:105:HIS:CD2	2.38	0.58
36:BQ:110:THR:HG23	36:BQ:113:GLN:OE1	2.04	0.58
1:CA:437:U:H5'	4:CD:155:LEU:HD21	1.85	0.58
1:CA:642:A:N3	8:CH:113:SER:OG	2.35	0.58
1:CA:1316:G:H2'	1:CA:1318:A:OP2	2.04	0.58
2:CB:30:ARG:HH21	2:CB:194:PRO:HB2	1.68	0.58
25:DA:2680:C:OP2	28:DE:111:ARG:NH2	2.37	0.58
6:AF:10:LEU:HD23	6:AF:61:LEU:HD13	1.86	0.58
8:AH:83:ILE:HB	8:AH:137:VAL:HG13	1.86	0.58
25:BA:945:A:O2'	25:BA:946:A:H8	1.87	0.58
1:CA:582:U:OP1	15:CO:68:ARG:NH2	2.25	0.58
3:CC:39:ILE:O	3:CC:43:LEU:HG	2.04	0.58
25:DA:1618:A:H5'	61:DA:3986:HOH:O	2.04	0.58
1:AA:997:U:H3	1:AA:1044:A:H61	1.52	0.57
1:AA:1521:G:N3	61:AA:4036:HOH:O	2.32	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:147:ASP:O	5:AE:151:LEU:HG	2.03	0.57
2:CB:87:ARG:NE	2:CB:233:SER:HB3	2.18	0.57
4:CD:150:GLU:OE2	4:CD:151:LYS:N	2.37	0.57
7:CG:14:PRO:HG3	7:CG:21:VAL:HG13	1.86	0.57
25:DA:1169:G:H1	25:DA:1180:C:H42	1.52	0.57
25:DA:1327:C:OP2	61:DA:3851:HOH:O	2.17	0.57
1:AA:1189:C:O2	61:AA:4114:HOH:O	2.16	0.57
3:AC:56:ASP:HB2	3:AC:67:THR:HB	1.86	0.57
19:AS:31:ILE:HB	19:AS:49:ILE:HG12	1.85	0.57
25:BA:1425:A:H4'	25:BA:1426:G:OP2	2.04	0.57
29:BF:53:THR:HG22	29:BF:56:GLU:HG3	1.85	0.57
31:BH:98:LEU:HD22	31:BH:125:VAL:HG23	1.85	0.57
1:CA:17:U:H2'	1:CA:18:C:C6	2.39	0.57
1:CA:392:G:H2'	1:CA:393:A:C8	2.39	0.57
1:CA:689:C:OP2	11:CK:55:LYS:NZ	2.35	0.57
1:CA:1422:G:H5''	34:DO:48:PRO:HB3	1.86	0.57
2:CB:162:ILE:HD11	2:CB:184:VAL:HG22	1.84	0.57
7:CG:26:PHE:O	7:CG:30:ILE:HG13	2.04	0.57
23:CX:23:C:H2'	23:CX:24:U:H6	1.69	0.57
25:DA:2591:C:OP1	27:DD:239:ARG:HD2	2.03	0.57
28:DE:116:VAL:HG13	28:DE:122:PHE:HB2	1.85	0.57
43:DX:31:HIS:HD2	43:DX:33:LYS:H	1.51	0.57
44:BY:54:LYS:HA	44:BY:56:PRO:CD	2.31	0.57
1:CA:839:U:O2'	1:CA:840:C:OP1	2.20	0.57
1:CA:1269:A:C8	1:CA:1270:C:H1'	2.38	0.57
1:CA:1309:G:O2'	13:CM:77:ASN:ND2	2.38	0.57
9:CI:51:ARG:HG2	9:CI:56:LEU:HD21	1.85	0.57
15:CO:54:ARG:O	15:CO:58:MET:HG3	2.04	0.57
25:DA:286:C:H2'	25:DA:287:C:C6	2.38	0.57
1:AA:444:C:H2'	1:AA:445:G:H8	1.69	0.57
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.39	0.57
2:AB:60:ASP:OD1	2:AB:64:ARG:NE	2.35	0.57
7:AG:27:ILE:HD12	7:AG:40:ALA:HA	1.85	0.57
24:AW:4:PRO:O	24:AW:6:2R1:N	2.37	0.57
25:BA:1890:A:N6	25:BA:1905:G:O2'	2.38	0.57
25:BA:2045:G:H5'	25:BA:2629:C:H4'	1.86	0.57
28:BE:12:THR:HG22	28:BE:13:ARG:H	1.68	0.57
29:BF:197:ASP:N	29:BF:197:ASP:OD1	2.37	0.57
1:CA:148:G:H2'	1:CA:149:A:C8	2.37	0.57
7:CG:76:ARG:CZ	7:CG:89:MET:HB2	2.34	0.57
19:CS:64:GLU:HB2	50:D4:59:PHE:CE1	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DR:83:ILE:O	37:DR:86:ARG:HG2	2.04	0.57
1:AA:1270:C:C2'	1:AA:1271:G:H5'	2.34	0.57
25:BA:303:C:N4	25:BA:385:G:H1	1.98	0.57
1:CA:785:G:C2'	1:CA:786:G:H5'	2.34	0.57
1:CA:1160:G:H22	1:CA:1176:A:H2	1.52	0.57
11:CK:20:TYR:CZ	11:CK:83:ILE:HD12	2.38	0.57
18:CR:47:THR:HG23	18:CR:49:LYS:HG3	1.87	0.57
25:DA:674:G:H1'	29:DF:74:ARG:HD3	1.87	0.57
25:DA:956:G:H5'	25:DA:957:A:OP2	2.04	0.57
25:DA:1031:G:H21	55:D9:36:GLN:HE22	1.52	0.57
25:DA:2023:G:H5'	25:DA:2617:C:H4'	1.87	0.57
25:DA:2839:G:H5'	37:DR:46:GLY:HA2	1.87	0.57
34:DO:87:ILE:HD12	34:DO:91:LEU:HA	1.86	0.57
45:DZ:39:VAL:HG21	45:DZ:44:PHE:HB2	1.85	0.57
1:AA:96:U:O2'	1:AA:97:G:H5'	2.04	0.57
1:AA:347:G:H21	1:AA:348:G:H3'	1.69	0.57
3:AC:15:THR:CG2	3:AC:181:ASN:HA	2.34	0.57
5:AE:50:GLU:HB2	5:AE:53:LEU:HD13	1.85	0.57
6:AF:44:GLY:HA2	6:AF:59:TYR:CZ	2.40	0.57
1:CA:243:A:H4'	1:CA:244:U:H5''	1.85	0.57
1:CA:974:A:OP2	14:CN:41:ARG:NH1	2.38	0.57
1:CA:1318:A:H5''	19:CS:3:ARG:NH2	2.15	0.57
2:CB:102:LEU:HD23	2:CB:182:ILE:HD12	1.86	0.57
2:CB:166:ASP:HB3	2:CB:169:LYS:HB2	1.86	0.57
3:CC:58:GLU:HB2	3:CC:65:ALA:HB3	1.86	0.57
10:CJ:8:LEU:HB3	10:CJ:16:LEU:HD22	1.86	0.57
11:CK:48:ILE:HD11	11:CK:64:ALA:HA	1.87	0.57
25:DA:195:A:H5''	25:DA:196:A:O5'	2.03	0.57
33:DN:58:ASP:OD1	33:DN:58:ASP:N	2.34	0.57
25:BA:625:G:O2'	25:BA:702:A:N6	2.38	0.57
25:BA:1068:G:H22	25:BA:1188:A:H2	1.47	0.57
1:CA:706:A:H5''	11:CK:22:HIS:CE1	2.39	0.57
2:CB:179:LYS:HA	8:CH:72:PRO:HG3	1.85	0.57
35:DP:86:LYS:HB3	35:DP:118:GLY:HA3	1.86	0.57
40:DU:76:TYR:HH	40:DU:92:ARG:HH11	1.52	0.57
1:AA:828:A:H2'	1:AA:829:G:O4'	2.05	0.57
1:AA:1162:C:N4	1:AA:1174:G:H1	2.01	0.57
1:AA:1392:G:H21	1:AA:1502:A:H8	1.53	0.57
25:BA:181:C:OP1	61:BA:3915:H0H:O	2.17	0.57
25:BA:572:A:O2'	25:BA:573:G:OP1	2.21	0.57
25:BA:2786:C:H2'	25:BA:2787:C:H6	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1125:U:HO2'	1:CA:1126:U:H2'	1.69	0.57
14:CN:4:LYS:HA	14:CN:7:ILE:HD13	1.87	0.57
15:CO:4:THR:HB	15:CO:5:LYS:HD2	1.87	0.57
25:DA:10:G:H2'	25:DA:11:G:H8	1.70	0.57
25:DA:1778:U:H2'	25:DA:1784:A:N6	2.19	0.57
1:AA:216:G:H2'	1:AA:217:C:C6	2.40	0.57
14:AN:48:ALA:HB2	14:AN:53:LEU:HD12	1.87	0.57
25:BA:676:G:OP1	54:B8:19:SER:OG	2.21	0.57
25:BA:2299:A:N6	25:BA:2356:U:H3	2.01	0.57
25:BA:2308:U:OP2	38:BS:9:ARG:NH2	2.37	0.57
28:BE:174:ASP:OD1	28:BE:175:VAL:N	2.38	0.57
30:BG:47:LYS:HG3	30:BG:48:GLU:H	1.69	0.57
48:B2:1:MET:HE2	48:B2:6:VAL:HG22	1.86	0.57
10:CJ:55:LYS:HG3	10:CJ:56:HIS:CD2	2.40	0.57
25:DA:30:G:H2'	25:DA:31:C:C6	2.40	0.57
25:DA:38:A:H2'	25:DA:39:C:C6	2.40	0.57
25:DA:660:G:H5'	29:DF:99:TYR:CE2	2.40	0.57
25:DA:2189:U:H2'	25:DA:2190:G:C8	2.40	0.57
25:DA:2312:U:C5	25:DA:2313:C:H5	2.23	0.57
25:DA:2562:U:H1'	34:DO:23:ARG:HH11	1.70	0.57
25:DA:2689:U:OP2	25:DA:2719:G:N2	2.36	0.57
27:DD:182:LEU:HB2	27:DD:272:ALA:HB3	1.86	0.57
28:DE:101:ARG:NH2	28:DE:171:GLU:HB2	2.19	0.57
30:DG:103:LEU:HD23	30:DG:106:LEU:HD23	1.86	0.57
30:DG:114:ILE:HB	30:DG:117:PHE:HB2	1.87	0.57
1:AA:1028:C:N4	1:AA:1033:G:H1	2.00	0.57
25:BA:311:C:H2'	25:BA:312:C:H6	1.69	0.57
25:BA:1836:U:O2	27:BD:50:THR:HB	2.04	0.57
35:BP:2:LYS:NZ	35:BP:4:SER:HB3	2.20	0.57
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.40	0.57
2:CB:44:LEU:HD22	2:CB:44:LEU:H	1.70	0.57
25:DA:82:G:O6	61:DA:4494:HOH:O	2.17	0.57
25:DA:2074:U:H2'	25:DA:2075:U:C6	2.39	0.57
28:DE:174:ASP:OD1	28:DE:175:VAL:N	2.37	0.57
45:DZ:48:PHE:CE1	45:DZ:52:SER:HA	2.40	0.57
1:AA:175:C:H2'	1:AA:176:C:C6	2.39	0.56
1:AA:994:A:N1	1:AA:1047:G:H4'	2.20	0.56
1:AA:1002:G:H3'	1:AA:1003:G:H8	1.70	0.56
13:AM:56:LEU:O	13:AM:60:VAL:HG23	2.04	0.56
25:BA:118:U:OP2	61:BA:3886:HOH:O	2.17	0.56
25:BA:1338:U:H2'	25:BA:1339:C:C6	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2348:A:H61	46:B0:43:THR:HG22	1.70	0.56
45:BZ:158:PRO:O	45:BZ:161:VAL:HG12	2.04	0.56
1:CA:738:C:H2'	1:CA:739:C:H6	1.70	0.56
1:CA:1138:G:C5	1:CA:1140:C:H1'	2.40	0.56
1:CA:1157:A:N6	1:CA:1180:A:C4	2.72	0.56
10:CJ:8:LEU:HD23	10:CJ:96:ILE:HG23	1.87	0.56
10:CJ:65:LEU:HD12	14:CN:55:GLY:O	2.05	0.56
25:DA:71:A:H5''	25:DA:73:A:C8	2.40	0.56
25:DA:1636:C:H2'	25:DA:1637:A:C8	2.40	0.56
25:BA:692:C:H2'	25:BA:693:G:O4'	2.05	0.56
25:BA:1211:U:H2'	25:BA:1212:C:C6	2.40	0.56
43:BX:88:LYS:NZ	43:BX:90:GLU:OE1	2.33	0.56
1:CA:149:A:H2'	1:CA:150:C:C6	2.40	0.56
1:CA:1414:U:H3	1:CA:1486:G:H1	1.53	0.56
4:CD:173:TRP:CZ3	4:CD:193:ASP:HB3	2.40	0.56
7:CG:106:GLN:O	7:CG:110:GLN:HG3	2.05	0.56
15:CO:25:THR:HG21	15:CO:70:LEU:HB2	1.87	0.56
32:DI:40:THR:O	32:DI:44:LEU:HB2	2.05	0.56
1:AA:78:G:H1	1:AA:92:C:H42	1.54	0.56
1:AA:149:A:H2'	1:AA:150:C:C6	2.40	0.56
1:AA:192:U:HO2'	1:AA:193:C:H6	1.52	0.56
1:AA:409:G:N2	1:AA:433:C:O2	2.38	0.56
1:AA:532:A:O2'	1:AA:533:A:OP1	2.20	0.56
1:AA:1025:U:C2	1:AA:1036:G:O6	2.58	0.56
2:AB:16:HIS:CG	2:AB:17:PHE:N	2.70	0.56
5:AE:103:GLY:O	5:AE:106:PRO:HD2	2.04	0.56
25:BA:2431:U:O4	61:BA:4236:HOH:O	2.14	0.56
25:BA:2860:A:OP2	25:BA:2876:U:H5	1.89	0.56
31:BH:86:GLU:OE2	31:BH:130:ARG:HD3	2.06	0.56
37:BR:44:LEU:HD22	37:BR:48:VAL:HG23	1.87	0.56
50:B4:56:VAL:HB	50:B4:60:GLN:HG3	1.88	0.56
1:CA:1318:A:O2'	19:CS:37:ARG:HB2	2.06	0.56
2:CB:120:ALA:O	2:CB:122:PHE:N	2.34	0.56
3:CC:56:ASP:O	3:CC:57:ILE:HD12	2.05	0.56
4:CD:31:CYS:SG	4:CD:32:ALA:N	2.79	0.56
8:CH:10:LEU:HD22	8:CH:83:ILE:HD11	1.85	0.56
8:CH:68:ARG:NH1	8:CH:74:PRO:HB3	2.20	0.56
13:CM:81:LEU:HD22	13:CM:88:ARG:HB3	1.86	0.56
15:CO:5:LYS:H	15:CO:5:LYS:CD	2.17	0.56
16:CP:21:VAL:HG13	16:CP:33:ILE:HB	1.86	0.56
25:DA:1278:A:OP1	37:DR:36:THR:HG23	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1470:G:H5''	25:DA:1471:A:OP1	2.05	0.56
25:DA:1798:U:H5'	27:DD:259:THR:CG2	2.31	0.56
25:DA:2299:G:N2	25:DA:2318:G:H8	2.02	0.56
1:AA:193:C:H2'	1:AA:194:C:C6	2.39	0.56
1:AA:538:G:H5''	12:AL:114:LYS:HB2	1.86	0.56
1:AA:1125:U:H1'	1:AA:1126:U:O5'	2.06	0.56
15:AO:25:THR:HG21	15:AO:70:LEU:HB2	1.88	0.56
17:AQ:3:LYS:HD2	17:AQ:60:ILE:HD11	1.87	0.56
18:AR:51:LEU:HD23	18:AR:52:PRO:HD2	1.87	0.56
25:BA:624:C:O2'	25:BA:628:C:OP1	2.16	0.56
25:BA:1000:C:OP1	36:BQ:87:LYS:HE3	2.05	0.56
25:BA:1066:A:N1	25:BA:1186:U:O2'	2.27	0.56
25:BA:2013:U:H2'	25:BA:2014:G:H5''	1.86	0.56
1:CA:834:C:H2'	1:CA:835:U:C6	2.40	0.56
1:CA:1104:G:H5'	2:CB:111:ARG:HD2	1.86	0.56
1:CA:1207:G:H2'	1:CA:1208:C:C6	2.39	0.56
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.40	0.56
1:CA:1279:A:H5''	1:CA:1280:A:OP1	2.06	0.56
2:CB:170:GLU:O	2:CB:174:VAL:HG23	2.04	0.56
25:DA:375:C:H2'	25:DA:376:C:C6	2.40	0.56
25:DA:479:A:N3	25:DA:481:G:H5''	2.20	0.56
25:DA:500:G:N1	25:DA:503:A:OP2	2.38	0.56
25:DA:1292:U:H2'	25:DA:1293:C:C6	2.40	0.56
28:DE:143:ASN:HD22	28:DE:147:PRO:HD3	1.70	0.56
53:D7:26:GLY:O	53:D7:30:VAL:HG23	2.05	0.56
1:AA:1125:U:H3'	10:AJ:5:ARG:HH22	1.70	0.56
1:AA:1202:G:N2	14:AN:46:GLU:OE1	2.32	0.56
16:AP:18:ARG:NH1	16:AP:32:TYR:OH	2.38	0.56
25:BA:83:A:H5'	44:BY:8:LYS:HG2	1.86	0.56
25:BA:1615:G:P	27:BD:63:ARG:HH22	2.29	0.56
25:BA:2694:U:OP2	61:BA:4014:HOH:O	2.17	0.56
26:BB:50:G:H5''	38:BS:61:ASN:HD22	1.69	0.56
1:CA:38:G:H22	1:CA:397:A:H5''	1.71	0.56
1:CA:1002:G:N2	1:CA:1039:C:N3	2.54	0.56
9:CI:6:GLY:H	9:CI:17:VAL:HG12	1.70	0.56
9:CI:125:TYR:HD1	9:CI:126:SER:N	2.03	0.56
12:CL:74:GLY:O	12:CL:102:ARG:NH1	2.27	0.56
23:CX:8:U:O5'	23:CX:8:U:H6	1.89	0.56
25:DA:1239:G:H2'	25:DA:1240:U:O4'	2.06	0.56
25:DA:1359:A:N6	25:DA:1372:U:H3	2.03	0.56
25:DA:2687:U:H2'	25:DA:2688:U:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DB:95:C:H2'	26:DB:96:U:C6	2.40	0.56
29:DF:157:VAL:HB	29:DF:194:MET:HG2	1.87	0.56
1:AA:1030(D):A:H2'	1:AA:1031:G:O4'	2.06	0.56
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.30	0.56
25:BA:1553:A:O2'	25:BA:1554:A:O4'	2.24	0.56
25:BA:2481:A:O2'	36:BQ:56:ARG:HD2	2.06	0.56
28:BE:127:ASP:OD2	61:BE:408:HOH:O	2.18	0.56
1:CA:200:G:H2'	1:CA:201:C:C6	2.41	0.56
25:DA:271(H):G:H2'	25:DA:271(I):G:H8	1.69	0.56
25:DA:857:C:H4'	46:D0:23:VAL:HG21	1.88	0.56
25:DA:988:A:N7	61:DA:3839:HOH:O	2.32	0.56
1:AA:1318:A:H4'	19:AS:10:PHE:CZ	2.40	0.56
2:AB:231:GLU:HB3	2:AB:232:PRO:HD3	1.87	0.56
17:AQ:57:VAL:HG12	17:AQ:76:LEU:HA	1.88	0.56
27:BD:206:LEU:HD22	27:BD:211:ARG:HG2	1.87	0.56
34:BO:2:ILE:HB	34:BO:33:ALA:HB3	1.87	0.56
48:B2:32:LEU:HD12	48:B2:36:ARG:HH11	1.69	0.56
4:CD:103:ASN:OD1	4:CD:114:ARG:NE	2.37	0.56
59:CX:101:FME:HCN	25:DA:2451:A:C2	2.40	0.56
43:DX:8:ILE:O	48:D2:36:ARG:NH2	2.39	0.56
9:AI:4:TYR:CE1	9:AI:88:TYR:HA	2.41	0.56
14:AN:14:PRO:HG2	14:AN:16:PHE:O	2.06	0.56
14:AN:21:TYR:OH	14:AN:23:ARG:NH2	2.38	0.56
25:BA:930:G:H2'	25:BA:931:C:C6	2.41	0.56
25:BA:1067:A:H8	25:BA:1068:G:H5''	1.69	0.56
25:BA:1566:U:H2'	25:BA:1567:G:O4'	2.06	0.56
30:BG:72:ARG:NH1	30:BG:87:PRO:HG3	2.21	0.56
30:BG:179:PRO:HB2	50:B4:42:PHE:HE2	1.70	0.56
31:BH:11:VAL:HG21	31:BH:50:VAL:HG23	1.88	0.56
31:BH:125:VAL:HG12	31:BH:127:GLU:O	2.05	0.56
1:CA:187:C:H2'	1:CA:188:C:H6	1.71	0.56
1:CA:861:G:OP1	8:CH:75:ARG:NH2	2.38	0.56
1:CA:1125:U:C2	10:CJ:38:ILE:HD13	2.41	0.56
25:DA:172:C:H2'	25:DA:173:G:H8	1.70	0.56
25:DA:1338:G:N3	25:DA:1393:A:H2	2.04	0.56
26:DB:48:A:H2'	26:DB:49:C:C6	2.40	0.56
31:DH:69:ARG:HG3	31:DH:70:THR:N	2.20	0.56
37:DR:88:ARG:NH2	37:DR:89:ASP:OD2	2.38	0.56
1:AA:272:C:H2'	1:AA:273:A:H8	1.71	0.56
1:AA:1138:G:C6	1:AA:1140:C:H1'	2.41	0.56
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1091:A:O2'	25:BA:1093:G:C4	2.57	0.56
29:BF:185:ASP:OD1	29:BF:188:ARG:NH1	2.35	0.56
41:BV:21:ARG:HG2	41:BV:91:TYR:CD1	2.41	0.56
1:CA:890:G:O2'	1:CA:906:G:O6	2.19	0.56
1:CA:1263:C:H2'	1:CA:1264:C:C6	2.41	0.56
11:CK:18:ARG:NH2	11:CK:35:PRO:O	2.32	0.56
11:CK:34:ASP:HB3	11:CK:40:ILE:HD11	1.88	0.56
19:CS:28:LYS:HB2	19:CS:29:ARG:CA	2.35	0.56
25:DA:247:G:H4'	25:DA:386:G:C5	2.40	0.56
25:DA:1815:A:OP2	27:DD:54:ARG:NH2	2.37	0.56
34:DO:68:GLU:CB	34:DO:78:ARG:HB2	2.36	0.56
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.06	0.56
4:AD:155:LEU:HD22	4:AD:156:GLU:H	1.70	0.56
33:BN:67:LEU:HD12	33:BN:87:LEU:HD13	1.87	0.56
8:CH:84:ARG:HD2	8:CH:136:GLU:HG2	1.87	0.56
9:CI:53:VAL:O	9:CI:55:ALA:N	2.39	0.56
12:CL:24:VAL:HG12	12:CL:27:LEU:HB2	1.86	0.56
30:DG:43:LEU:HD12	30:DG:45:GLU:HG3	1.88	0.56
1:AA:1030(C):G:H2'	1:AA:1030(D):A:H8	1.70	0.55
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.41	0.55
4:AD:154:ASN:HA	4:AD:159:ARG:HH21	1.71	0.55
25:BA:918:U:OP1	36:BQ:5:ARG:HD3	2.06	0.55
1:CA:814:A:N7	1:CA:816:A:C4	2.73	0.55
25:DA:275:G:H2'	25:DA:276:A:C8	2.41	0.55
25:DA:287:C:H2'	25:DA:288:C:C6	2.38	0.55
25:DA:1309:G:HO2'	25:DA:1611:C:HO2'	1.53	0.55
25:DA:2359:C:H2'	25:DA:2360:A:O4'	2.05	0.55
30:DG:12:TYR:HA	30:DG:16:ARG:HG2	1.88	0.55
1:AA:221:C:H2'	1:AA:222:U:C6	2.38	0.55
1:AA:520:A:N1	1:AA:536:C:H1'	2.21	0.55
8:AH:98:LYS:H	8:AH:98:LYS:HD3	1.71	0.55
15:AO:26:GLU:OE2	15:AO:77:ARG:NE	2.39	0.55
25:BA:606:G:OP2	40:BU:10:ARG:NH1	2.36	0.55
29:BF:101:LEU:O	29:BF:106:ARG:HD3	2.06	0.55
32:BI:72:LEU:C	32:BI:74:ASN:H	2.09	0.55
39:BT:95:ARG:HG2	39:BT:95:ARG:NH1	2.21	0.55
48:B2:1:MET:N	48:B2:52:ASP:OD2	2.38	0.55
1:CA:8:A:N6	4:CD:209:ARG:HB2	2.21	0.55
1:CA:138:G:H8	1:CA:138:G:H5'	1.71	0.55
1:CA:444:C:H2'	1:CA:445:G:C8	2.34	0.55
2:CB:189:ASP:HB3	2:CB:204:ASN:HA	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CX:59:A:H2'	23:CX:60:U:H5'	1.89	0.55
25:DA:1379:A:H4'	25:DA:1380:G:OP2	2.05	0.55
30:DG:101:ILE:HG22	30:DG:105:LYS:HE2	1.87	0.55
50:D4:46:GLN:C	50:D4:48:ARG:H	2.09	0.55
1:AA:437:U:H5'	4:AD:155:LEU:HD11	1.88	0.55
25:BA:7:G:H2'	25:BA:8:A:O4'	2.06	0.55
25:BA:231:G:O2'	25:BA:243:G:O6	2.20	0.55
25:BA:645:G:N3	25:BA:645:G:H5'	2.22	0.55
25:BA:2661:U:H2'	25:BA:2662:U:C6	2.41	0.55
61:BA:4299:HOH:O	37:BR:15:SER:HB3	2.06	0.55
3:CC:113:ALA:HB2	3:CC:202:ILE:HG13	1.87	0.55
27:DD:108:PRO:HB3	27:DD:143:HIS:CE1	2.40	0.55
55:D9:15:LYS:HE2	55:D9:17:ILE:HD13	1.89	0.55
1:AA:738:C:OP1	6:AF:2:ARG:NH1	2.39	0.55
2:AB:229:VAL:HG12	2:AB:230:VAL:H	1.70	0.55
20:AT:45:GLN:HB2	20:AT:91:LEU:HD13	1.88	0.55
25:BA:742:G:OP1	25:BA:1426:G:O2'	2.22	0.55
25:BA:934:A:H4'	25:BA:935:C:C5	2.39	0.55
25:BA:1553:A:O2'	25:BA:1554:A:H8	1.88	0.55
35:BP:62:LEU:O	54:B8:13:ARG:HD3	2.05	0.55
1:CA:324:G:N7	61:CA:4084:HOH:O	2.33	0.55
3:CC:43:LEU:HD21	3:CC:91:LEU:HD13	1.89	0.55
5:CE:100:VAL:O	5:CE:107:ARG:NH2	2.40	0.55
25:DA:286:C:H2'	25:DA:287:C:H6	1.71	0.55
25:DA:906:G:O2'	36:DQ:67:ARG:NH2	2.37	0.55
25:DA:957:A:H5'	36:DQ:76:LYS:HG3	1.88	0.55
25:DA:2357:U:OP1	46:D0:20:ARG:HD3	2.06	0.55
25:DA:2364:C:H2'	25:DA:2365:G:O4'	2.06	0.55
1:AA:487:A:H2'	1:AA:488:C:O4'	2.06	0.55
12:AL:71:PRO:HG2	12:AL:102:ARG:HG3	1.88	0.55
25:BA:721:G:H1'	29:BF:74:ARG:HD3	1.88	0.55
25:BA:2053:A:C6	25:BA:2510:C:H1'	2.41	0.55
25:BA:2332:A:N3	25:BA:2332:A:H2'	2.20	0.55
25:BA:2373:A:OP1	54:B8:27:THR:OG1	2.24	0.55
35:BP:50:ARG:HD3	54:B8:7:HIS:CD2	2.40	0.55
1:CA:433:C:H2'	1:CA:434:U:H6	1.72	0.55
7:CG:78:ARG:HG2	7:CG:79:ARG:HB2	1.87	0.55
15:CO:69:TYR:O	15:CO:73:GLU:HG2	2.07	0.55
15:CO:88:ARG:HB3	15:CO:88:ARG:NH2	2.21	0.55
31:DH:20:ALA:HB1	31:DH:21:PRO:HD2	1.88	0.55
33:DN:96:GLU:H	33:DN:96:GLU:CD	2.10	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DQ:29:PHE:HB2	36:DQ:105:GLU:OE2	2.06	0.55
1:AA:630:G:H2'	1:AA:631:G:C8	2.41	0.55
2:AB:219:VAL:HA	2:AB:222:ILE:HD11	1.88	0.55
3:AC:130:VAL:HG21	3:AC:157:ILE:HG23	1.88	0.55
25:BA:1001:G:OP2	36:BQ:14:ARG:NH2	2.39	0.55
25:BA:1766:G:H3'	25:BA:1767:A:H5''	1.87	0.55
32:BI:133:HIS:ND1	32:BI:134:PRO:O	2.38	0.55
1:CA:130:A:H5'	17:CQ:63:ARG:HE	1.71	0.55
1:CA:441:A:H3'	1:CA:442:C:C6	2.40	0.55
1:CA:1320:C:O4'	19:CS:73:GLU:HG3	2.07	0.55
2:CB:211:ILE:O	2:CB:215:LEU:HB2	2.07	0.55
6:CF:99:ALA:HB1	18:CR:23:LYS:HE3	1.88	0.55
25:DA:614(C):A:C4	29:DF:180:GLY:HA2	2.42	0.55
25:DA:2640:G:H1	25:DA:2774:C:H42	1.55	0.55
31:DH:149:ARG:NH1	31:DH:167:GLU:OE2	2.38	0.55
1:AA:768:A:OP2	61:AA:4024:HOH:O	2.18	0.55
1:AA:833:U:H2'	1:AA:834:C:H6	1.71	0.55
2:AB:163:PHE:HA	2:AB:185:ILE:HG13	1.89	0.55
16:AP:28:ARG:HG2	16:AP:29:ASP:OD1	2.05	0.55
25:BA:1466:U:HO2'	25:BA:1467:G:P	2.29	0.55
54:B8:39:LYS:O	54:B8:43:GLN:HG3	2.06	0.55
1:CA:445:G:H2'	1:CA:446:G:C8	2.42	0.55
8:CH:112:LEU:HA	8:CH:134:ILE:HG12	1.89	0.55
11:CK:85:ARG:HE	11:CK:111:ASP:HB3	1.71	0.55
25:DA:1025:G:O2'	61:DA:4219:HOH:O	2.06	0.55
25:DA:2314:C:H2'	25:DA:2315:G:H8	1.72	0.55
25:DA:2541:A:N7	61:DA:3938:HOH:O	2.33	0.55
26:DB:95:C:H2'	26:DB:96:U:H6	1.71	0.55
1:AA:91:C:H2'	1:AA:92:C:C6	2.42	0.55
1:AA:727:G:N2	1:AA:730:G:OP2	2.39	0.55
1:AA:880:C:OP1	12:AL:8:ASN:ND2	2.37	0.55
1:AA:1239:A:H62	1:AA:1299:A:N6	2.05	0.55
1:AA:1260:C:OP1	1:AA:1284:C:O2'	2.25	0.55
4:AD:3:ARG:HE	4:AD:118:ARG:HD3	1.71	0.55
10:AJ:35:SER:CB	10:AJ:73:ASP:HB2	2.29	0.55
23:AX:59:A:H2'	23:AX:60:U:H5'	1.88	0.55
25:BA:1232:G:H5''	41:BV:81:TYR:CE1	2.41	0.55
25:BA:1698:G:OP1	37:BR:40:LYS:HE3	2.06	0.55
45:BZ:48:PHE:CE1	45:BZ:52:SER:HA	2.41	0.55
1:CA:927:G:H2'	1:CA:928:G:H8	1.72	0.55
9:CI:121:ARG:NH1	9:CI:122:ALA:O	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:60:VAL:HG23	13:CM:64:TRP:CE3	2.42	0.55
25:DA:668:G:H5'	25:DA:669:G:OP2	2.06	0.55
25:DA:800:A:H8	25:DA:800:A:OP1	1.90	0.55
25:DA:1805:U:O2	27:DD:50:THR:HB	2.07	0.55
27:DD:73:VAL:HG13	27:DD:120:GLY:HA3	1.88	0.55
47:D1:85:LEU:HB3	47:D1:89:GLU:HB3	1.88	0.55
1:AA:1008:C:H42	1:AA:1021:G:H1	1.54	0.55
2:AB:30:ARG:HH21	2:AB:194:PRO:HB2	1.72	0.55
2:AB:87:ARG:NH2	2:AB:220:ASP:OD1	2.24	0.55
4:AD:107:ARG:NH2	4:AD:194:LEU:HD22	2.21	0.55
27:BD:132:PRO:HG2	27:BD:135:PHE:CD2	2.39	0.55
1:CA:840:C:H4'	1:CA:841:U:OP1	2.06	0.55
1:CA:1025:U:H1'	1:CA:1026:G:C8	2.42	0.55
1:CA:1272:G:H2'	1:CA:1273:G:O4'	2.06	0.55
1:CA:1346:A:N1	1:CA:1374:A:H5''	2.22	0.55
7:CG:69:VAL:HG21	7:CG:104:LEU:HD11	1.88	0.55
25:DA:1448:G:H4'	25:DA:1542:A:OP1	2.06	0.55
25:DA:1889:A:N1	25:DA:2234:G:H1'	2.22	0.55
42:DW:9:TYR:H	42:DW:102:HIS:CE1	2.25	0.55
45:DZ:52:SER:OG	45:DZ:53:ILE:N	2.40	0.55
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.42	0.55
1:AA:1127:G:H1'	1:AA:1280:A:C6	2.42	0.55
2:AB:7:VAL:HG11	2:AB:221:LEU:HD23	1.89	0.55
25:BA:933:C:OP1	25:BA:933:C:H4'	2.05	0.55
25:BA:1639:G:H2'	25:BA:1640:G:H8	1.72	0.55
29:BF:116:ASP:OD2	35:BP:1:MET:HB2	2.07	0.55
46:B0:30:VAL:HG22	46:B0:66:VAL:HG22	1.89	0.55
1:CA:543:C:C2'	1:CA:544:G:H5'	2.36	0.55
1:CA:880:C:OP1	12:CL:8:ASN:ND2	2.40	0.55
25:DA:71:A:N7	43:DX:31:HIS:HE1	2.04	0.55
25:DA:139(A):G:N7	61:DA:4443:HOH:O	2.33	0.55
25:DA:848:G:N3	25:DA:933:A:H1'	2.21	0.55
25:DA:1014:U:H2'	25:DA:1015:G:H8	1.72	0.55
35:DP:101:VAL:HA	35:DP:106:LEU:O	2.07	0.55
49:D3:10:LYS:HB3	49:D3:53:LEU:HA	1.89	0.55
1:AA:1216:G:OP1	14:AN:2:ALA:HA	2.06	0.54
2:AB:178:ARG:NH2	8:AH:68:ARG:HH22	2.05	0.54
5:AE:15:ARG:HD2	5:AE:26:PHE:CD2	2.41	0.54
10:AJ:47:PHE:CZ	14:AN:37:PHE:HE1	2.25	0.54
20:AT:47:GLY:HA2	20:AT:48:LYS:HB2	1.89	0.54
1:CA:1216:G:H5''	14:CN:5:ALA:CB	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:78:HIS:CE1	5:CE:142:LEU:HA	2.42	0.54
8:CH:68:ARG:HH11	8:CH:68:ARG:HG3	1.71	0.54
21:CU:12:LYS:HB3	21:CU:22:ARG:HD2	1.89	0.54
25:DA:19:C:H2'	25:DA:20:C:H6	1.71	0.54
25:DA:253:C:OP2	54:D8:5:LYS:NZ	2.30	0.54
25:DA:1009:A:OP2	61:DA:4091:HOH:O	2.18	0.54
25:DA:1427:A:H4'	25:DA:1428:C:O5'	2.07	0.54
25:DA:1651:G:OP1	37:DR:40:LYS:HE3	2.07	0.54
1:AA:339:C:OP2	34:BO:97:ARG:HD3	2.07	0.54
1:AA:877:C:H5''	8:AH:88:LYS:HD3	1.89	0.54
25:BA:1405:A:N1	25:BA:1418:U:O4	2.40	0.54
33:BN:58:ASP:OD1	33:BN:58:ASP:N	2.37	0.54
37:BR:97:VAL:HG22	37:BR:114:VAL:HG22	1.89	0.54
50:B4:63:TYR:HD1	50:B4:63:TYR:N	2.06	0.54
1:CA:8:A:C6	4:CD:209:ARG:HB2	2.42	0.54
1:CA:192:U:H2'	1:CA:193:C:H6	1.71	0.54
1:CA:671:G:H2'	1:CA:672:U:O4'	2.07	0.54
1:CA:1051:C:H2'	1:CA:1052:U:H6	1.71	0.54
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.42	0.54
3:CC:116:VAL:HG21	3:CC:202:ILE:HD11	1.89	0.54
25:DA:1579:A:H2'	25:DA:1580:A:C8	2.43	0.54
1:AA:96:U:H2'	1:AA:97:G:H8	1.71	0.54
4:AD:103:ASN:O	4:AD:107:ARG:HG2	2.07	0.54
4:AD:172:PRO:HB2	4:AD:187:ARG:NH2	2.22	0.54
25:BA:1553:A:O2'	25:BA:1554:A:O5'	2.25	0.54
38:BS:11:LYS:HD2	38:BS:15:ARG:HH12	1.73	0.54
40:BU:76:TYR:HH	40:BU:92:ARG:HH11	1.50	0.54
49:B3:55:ARG:NH1	49:B3:57:GLU:OE1	2.36	0.54
1:CA:1025:U:N3	1:CA:1036:G:C6	2.75	0.54
5:CE:53:LEU:H	5:CE:53:LEU:HD12	1.73	0.54
9:CI:23:ASN:OD1	9:CI:25:LYS:HE3	2.08	0.54
25:DA:2887:U:H2'	25:DA:2888:C:C6	2.42	0.54
52:D6:35:GLU:HG2	52:D6:50:ARG:HD3	1.88	0.54
1:AA:105:G:H2'	1:AA:106:C:C6	2.43	0.54
1:AA:986:A:H1'	19:AS:54:GLY:O	2.07	0.54
1:AA:1010:G:N2	1:AA:1020:U:O2'	2.40	0.54
10:AJ:8:LEU:HB2	10:AJ:70:ARG:HB2	1.90	0.54
25:BA:1003:U:OP2	36:BQ:14:ARG:NH1	2.41	0.54
25:BA:2044:U:O2'	25:BA:2629:C:H5'	2.08	0.54
27:BD:242:ARG:HD3	27:BD:242:ARG:N	2.22	0.54
30:BG:16:ARG:CZ	30:BG:31:VAL:HG11	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:552:U:H2'	1:CA:553:A:H5'	1.89	0.54
1:CA:560:U:O2'	1:CA:561:U:OP2	2.22	0.54
1:CA:923:A:OP1	5:CE:21:ALA:HB2	2.08	0.54
1:CA:1120:G:C6	1:CA:1154:G:C2	2.95	0.54
4:CD:98:GLU:OE1	4:CD:103:ASN:ND2	2.39	0.54
25:DA:918:A:H5''	26:DB:98:G:O2'	2.08	0.54
25:DA:2335:A:O2'	25:DA:2336:A:H5''	2.07	0.54
32:DI:117:GLU:HG3	32:DI:118:LYS:H	1.71	0.54
39:DT:116:ALA:HB1	39:DT:121:ILE:HD11	1.88	0.54
50:D4:2:LYS:HB2	50:D4:5:ILE:HD13	1.89	0.54
4:AD:18:LYS:HD2	4:AD:31:CYS:SG	2.48	0.54
4:AD:122:ARG:HA	4:AD:122:ARG:HE	1.72	0.54
5:AE:36:ASP:OD2	5:AE:40:ARG:HB2	2.06	0.54
25:BA:144:C:H5'	43:BX:2:LYS:HE2	1.89	0.54
25:BA:762:G:H2'	25:BA:763:A:O4'	2.08	0.54
26:BB:43:C:H5''	50:B4:1:MET:HG2	1.90	0.54
36:BQ:56:ARG:HH11	36:BQ:56:ARG:HG3	1.71	0.54
45:BZ:145:GLU:O	45:BZ:148:ASP:N	2.39	0.54
1:CA:250:A:H4'	1:CA:251:G:O5'	2.08	0.54
1:CA:1015:A:H2'	1:CA:1016:A:H8	1.72	0.54
21:CU:15:ARG:HH11	21:CU:15:ARG:HB2	1.72	0.54
27:DD:172:TYR:CD1	27:DD:186:HIS:HA	2.43	0.54
34:DO:116:SER:OG	34:DO:117:LEU:N	2.40	0.54
1:AA:159:G:N2	1:AA:161:A:H3'	2.22	0.54
1:AA:190:U:H2'	1:AA:191:G:H8	1.70	0.54
1:AA:1095:U:H5''	1:AA:1109:C:O2	2.07	0.54
5:AE:77:PRO:HD2	5:AE:142:LEU:HD22	1.89	0.54
25:BA:1475:G:H2'	25:BA:1476:C:C6	2.43	0.54
32:BI:92:VAL:HG11	32:BI:144:VAL:HG11	1.89	0.54
1:CA:1129:C:H1'	1:CA:1130:A:N7	2.21	0.54
1:CA:1154:G:N7	1:CA:1155:G:C8	2.76	0.54
9:CI:4:TYR:CZ	9:CI:88:TYR:HA	2.43	0.54
25:DA:195:A:OP1	35:DP:46:LYS:NZ	2.37	0.54
25:DA:348:G:H2'	25:DA:349:G:H8	1.72	0.54
44:DY:7:VAL:HG21	44:DY:72:VAL:HG12	1.90	0.54
49:D3:46:ASN:O	49:D3:50:VAL:HG22	2.07	0.54
10:AJ:49:VAL:HG23	14:AN:41:ARG:HD2	1.90	0.54
28:BE:59:VAL:HG21	28:BE:74:PRO:HB3	1.90	0.54
39:BT:5:ALA:O	39:BT:9:LEU:N	2.41	0.54
1:CA:1279:A:O2'	1:CA:1281:U:OP2	2.12	0.54
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:4:TYR:CE2	9:CI:88:TYR:HD1	2.25	0.54
19:CS:17:GLU:O	19:CS:21:GLU:N	2.34	0.54
25:DA:607:U:OP1	29:DF:102:PRO:HA	2.08	0.54
25:DA:1341:U:OP2	25:DA:1394:U:O2'	2.23	0.54
26:DB:50:G:OP1	38:DS:63:THR:OG1	2.19	0.54
29:DF:129:PHE:CD2	29:DF:163:VAL:HG21	2.43	0.54
1:AA:72:C:H2'	1:AA:73:G:O4'	2.08	0.54
1:AA:78:G:C6	1:AA:91:C:N4	2.75	0.54
1:AA:186:C:H2'	1:AA:187:C:C6	2.42	0.54
1:AA:434:U:H2'	1:AA:435:C:C6	2.42	0.54
1:AA:1316:G:H2'	1:AA:1318:A:OP2	2.07	0.54
5:AE:51:VAL:O	5:AE:55:VAL:HG23	2.08	0.54
25:BA:236:G:H4'	25:BA:413:G:C5	2.43	0.54
25:BA:1471:G:H2'	25:BA:1472:G:C8	2.43	0.54
34:BO:35:VAL:HG11	34:BO:103:ALA:CB	2.36	0.54
1:CA:942:G:C2	1:CA:1342:C:C2	2.96	0.54
1:CA:991:U:O4	1:CA:1212:U:H1'	2.08	0.54
1:CA:1169:A:N7	1:CA:1170:A:C5	2.76	0.54
25:DA:340:A:N6	25:DA:341:G:C2	2.75	0.54
25:DA:1270:C:H5''	25:DA:1271:G:H5'	1.90	0.54
28:DE:24:THR:HG22	28:DE:186:GLY:O	2.07	0.54
38:DS:34:HIS:ND1	38:DS:53:SER:OG	2.33	0.54
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.07	0.54
5:AE:76:ILE:HB	5:AE:77:PRO:HD2	1.90	0.54
23:AX:61:C:H2'	23:AX:62:C:H6	1.72	0.54
25:BA:287:G:N7	25:BA:448:U:H2'	2.22	0.54
25:BA:312:C:H2'	25:BA:313:A:H8	1.72	0.54
30:BG:11:TYR:CZ	30:BG:16:ARG:HD3	2.41	0.54
30:BG:143:GLU:OE2	50:B4:26:SER:OG	2.20	0.54
1:CA:1154:G:N7	1:CA:1155:G:N9	2.55	0.54
1:CA:1479:C:H2'	1:CA:1480:G:H8	1.72	0.54
3:CC:50:ALA:HB1	3:CC:72:LYS:O	2.08	0.54
9:CI:4:TYR:CE1	9:CI:88:TYR:HA	2.42	0.54
25:DA:708:C:H42	25:DA:723:G:H1	1.55	0.54
25:DA:887:A:H5'	25:DA:888:C:OP1	2.07	0.54
25:DA:2268:A:OP1	61:DA:4048:HOH:O	2.18	0.54
25:DA:2331:G:O2'	46:D0:43:THR:HG22	2.08	0.54
25:DA:2706:G:N7	61:DA:4124:HOH:O	2.34	0.54
1:AA:69:G:H2'	1:AA:70:G:C8	2.43	0.54
1:AA:1064:G:H4'	1:AA:1065:U:OP1	2.07	0.54
3:AC:129:ALA:HB3	3:AC:132:ARG:HB2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:61:TYR:CE2	19:AS:63:THR:HG23	2.44	0.54
25:BA:1067:A:H3'	25:BA:1067:A:C8	2.43	0.54
33:BN:4:TYR:CD2	40:BU:100:VAL:HG11	2.43	0.54
36:BQ:84:GLY:O	36:BQ:85:LYS:HB2	2.08	0.54
1:CA:841:U:OP1	1:CA:841:U:H6	1.91	0.54
1:CA:985:C:H2'	1:CA:986:A:C8	2.43	0.54
9:CI:9:ARG:H	9:CI:79:LEU:HD23	1.73	0.54
13:CM:25:ILE:HD11	13:CM:66:LEU:HD13	1.90	0.54
25:DA:529:A:H62	25:DA:2041:U:H3	1.56	0.54
25:DA:1025:G:C4	25:DA:1135:C:H1'	2.42	0.54
25:DA:2657:A:O3'	31:DH:160:LYS:NZ	2.41	0.54
1:AA:316:G:OP2	1:AA:351:G:O2'	2.24	0.53
2:AB:109:SER:HA	2:AB:112:VAL:HG13	1.90	0.53
6:AF:69:GLU:OE1	6:AF:69:GLU:N	2.39	0.53
25:BA:479:C:O2	25:BA:483:A:O2'	2.24	0.53
25:BA:2474:U:H1'	25:BA:2503:U:O4	2.08	0.53
25:BA:2822:G:N2	25:BA:2899:C:O2	2.41	0.53
1:CA:276:G:H2'	1:CA:277:C:H5'	1.90	0.53
1:CA:737:A:H2'	1:CA:738:C:C6	2.43	0.53
1:CA:1128:C:H1'	1:CA:1147:C:H42	1.73	0.53
10:CJ:77:PRO:O	10:CJ:81:THR:OG1	2.25	0.53
12:CL:36:VAL:HG22	12:CL:82:VAL:HG22	1.89	0.53
19:CS:20:LEU:HD23	19:CS:23:ASN:HD22	1.73	0.53
25:DA:997:G:OP1	40:DU:92:ARG:HG2	2.08	0.53
25:DA:2689:U:P	25:DA:2719:G:H22	2.31	0.53
28:DE:55:ASN:O	28:DE:58:ARG:HG2	2.07	0.53
40:DU:89:GLU:HB2	41:DV:50:PRO:HB2	1.89	0.53
1:AA:21:G:H2'	1:AA:22:G:C8	2.43	0.53
1:AA:1118:C:H2'	1:AA:1119:C:C6	2.42	0.53
1:AA:1243:C:H2'	1:AA:1244:C:C6	2.43	0.53
2:AB:24:TRP:CZ3	2:AB:26:PRO:HA	2.43	0.53
4:AD:116:GLN:NE2	4:AD:157:LEU:HD21	2.23	0.53
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.90	0.53
25:BA:272:U:OP1	32:BI:50:ARG:NH2	2.42	0.53
25:BA:469:A:H1'	25:BA:1246:C:O4'	2.08	0.53
25:BA:1346:U:H4'	25:BA:1347:A:H5'	1.91	0.53
25:BA:1834:A:O2'	27:BD:259:THR:HG21	2.09	0.53
25:BA:1985:U:H4'	25:BA:1986:G:OP1	2.08	0.53
50:B4:63:TYR:N	50:B4:63:TYR:CD1	2.76	0.53
53:B7:1:MET:H3	53:B7:1:MET:HE3	1.73	0.53
1:CA:192:U:H2'	1:CA:193:C:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1118:C:H1'	1:CA:1179:A:C5	2.43	0.53
5:CE:52:PRO:HG2	5:CE:53:LEU:HD12	1.91	0.53
15:CO:56:LEU:O	15:CO:60:VAL:HG23	2.08	0.53
23:CX:19:G:H4'	23:CX:20:U:OP2	2.09	0.53
25:DA:1469:A:H2'	25:DA:1470:G:O4'	2.08	0.53
25:DA:1826:G:H4'	27:DD:242:ARG:NH1	2.23	0.53
28:DE:119:ARG:HD2	28:DE:120:TRP:CE2	2.43	0.53
31:DH:64:LEU:O	31:DH:68:THR:OG1	2.20	0.53
7:AG:111:ARG:NH1	7:AG:113:GLU:OE2	2.38	0.53
8:AH:34:GLU:OE2	8:AH:37:ARG:NH1	2.34	0.53
11:AK:98:LEU:O	11:AK:101:SER:OG	2.17	0.53
35:BP:121:LYS:HG2	35:BP:122:PRO:HD2	1.91	0.53
43:BX:11:PRO:HB3	43:BX:92:LEU:HD11	1.90	0.53
1:CA:557:G:C6	1:CA:558:G:C6	2.96	0.53
1:CA:598:U:H2'	1:CA:599:C:C6	2.43	0.53
2:CB:16:HIS:HB2	2:CB:204:ASN:CB	2.26	0.53
10:CJ:48:THR:O	14:CN:34:TYR:OH	2.27	0.53
18:CR:29:PHE:HE1	18:CR:31:LEU:HD13	1.72	0.53
31:DH:33:LEU:HD21	31:DH:136:ILE:HG13	1.90	0.53
31:DH:80:SER:OG	31:DH:81:GLU:N	2.40	0.53
1:AA:262:A:C6	1:AA:263:A:C6	2.96	0.53
1:AA:545:C:H5'	4:AD:72:GLU:HG2	1.90	0.53
25:BA:2642:G:H2'	25:BA:2643:G:C8	2.43	0.53
26:BB:33:G:C2	26:BB:50:G:C2	2.97	0.53
1:CA:999:C:N3	1:CA:1042:G:C2	2.77	0.53
1:CA:1170:A:O2'	1:CA:1171:G:C8	2.61	0.53
1:CA:1305:G:H22	1:CA:1331:G:H1'	1.73	0.53
10:CJ:6:ILE:O	10:CJ:71:LEU:HD12	2.08	0.53
13:CM:92:HIS:CE1	13:CM:98:VAL:HG11	2.44	0.53
23:CX:10:G:N2	23:CX:26:G:H1'	2.24	0.53
25:DA:300:A:H1'	25:DA:319:C:H1'	1.88	0.53
25:DA:2557:G:H2'	25:DA:2558:C:C6	2.43	0.53
25:DA:2831:G:OP1	28:DE:58:ARG:NH2	2.28	0.53
28:DE:163:GLU:HG2	28:DE:164:ARG:N	2.23	0.53
30:DG:41:GLN:HB3	30:DG:43:LEU:HD22	1.91	0.53
1:AA:352:C:OP2	61:AA:4067:HOH:O	2.19	0.53
1:AA:664:G:N2	1:AA:741:G:H1	2.06	0.53
1:AA:991:U:N3	1:AA:1212:U:H1'	2.24	0.53
3:AC:121:ALA:HB1	3:AC:189:ALA:HB2	1.91	0.53
11:AK:48:ILE:O	11:AK:50:TYR:N	2.40	0.53
26:BB:78:A:C2	26:BB:100:A:C4	2.95	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:837:G:H1	1:CA:849:C:N4	2.06	0.53
1:CA:1126:U:H4'	1:CA:1281:U:H1'	1.91	0.53
1:CA:1128:C:H1'	1:CA:1147:C:N3	2.22	0.53
25:DA:1816:G:O6	27:DD:35:LYS:NZ	2.23	0.53
25:DA:2849:U:O4	39:DT:23:ARG:NH2	2.32	0.53
45:DZ:154:ASP:OD1	45:DZ:154:ASP:N	2.42	0.53
47:D1:23:LYS:HB3	47:D1:29:GLY:HA3	1.91	0.53
1:AA:33:A:H2'	1:AA:34:C:C6	2.44	0.53
1:AA:102:G:H2'	1:AA:103:C:C6	2.43	0.53
2:AB:35:GLU:HB2	2:AB:40:HIS:CD2	2.44	0.53
4:AD:196:LEU:H	4:AD:196:LEU:HD12	1.73	0.53
18:AR:40:LEU:HD22	18:AR:70:ILE:HG12	1.90	0.53
25:BA:346:A:H5'	25:BA:364:A:H1'	1.89	0.53
25:BA:776:G:H2'	25:BA:1806:U:H1'	1.90	0.53
25:BA:1293:A:OP1	29:BF:95:ARG:NH2	2.39	0.53
25:BA:1405:A:N3	25:BA:1405:A:H5'	2.24	0.53
25:BA:1775:C:H5'	25:BA:1776:G:OP2	2.08	0.53
25:BA:2255:U:H2'	25:BA:2256:U:C6	2.44	0.53
27:BD:148:GLU:HB2	27:BD:151:LYS:HD2	1.90	0.53
32:BI:108:THR:O	32:BI:109:ILE:HD12	2.09	0.53
35:BP:124:LYS:HG3	35:BP:144:GLU:HG2	1.91	0.53
44:BY:38:ILE:HD11	44:BY:66:PRO:HG3	1.90	0.53
1:CA:1104:G:H4'	2:CB:111:ARG:HH11	1.73	0.53
1:CA:1326:C:H5''	21:CU:18:TYR:O	2.09	0.53
16:CP:5:ARG:NH1	16:CP:28:ARG:HA	2.24	0.53
17:CQ:66:SER:OG	17:CQ:67:LYS:N	2.42	0.53
17:CQ:66:SER:O	17:CQ:70:ARG:NH1	2.41	0.53
25:DA:997:G:O2'	25:DA:998:C:H5'	2.08	0.53
25:DA:1914:C:H2'	25:DA:1915:U:O4'	2.08	0.53
25:DA:1946:U:H2'	25:DA:1947:C:C6	2.43	0.53
25:DA:2299:G:H22	25:DA:2318:G:H8	1.56	0.53
25:DA:2510:C:H4'	61:DA:4416:HOH:O	2.07	0.53
25:DA:2600:A:C6	25:DA:2601:C:N4	2.77	0.53
25:DA:2887:U:H2'	25:DA:2888:C:H6	1.73	0.53
45:DZ:53:ILE:HG22	45:DZ:71:VAL:O	2.09	0.53
1:AA:258:G:H2'	1:AA:259:G:H8	1.73	0.53
1:AA:376:G:O3'	16:AP:5:ARG:NH2	2.41	0.53
1:AA:473:G:C2	1:AA:474:G:C5	2.97	0.53
1:AA:652:U:O4	1:AA:752:G:O2'	2.22	0.53
1:AA:1031:G:H2'	1:AA:1032:G:H8	1.73	0.53
1:AA:1118:C:H1'	1:AA:1179:A:C5	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:219:VAL:O	2:AB:222:ILE:HG13	2.09	0.53
8:AH:39:LEU:HB3	8:AH:45:ILE:HD11	1.90	0.53
11:AK:15:ALA:O	11:AK:79:SER:N	2.33	0.53
19:AS:22:LEU:HD13	19:AS:47:HIS:CD2	2.44	0.53
23:AX:23:C:H2'	23:AX:24:U:C6	2.44	0.53
25:BA:1660:A:OP1	25:BA:1663:C:N4	2.39	0.53
35:BP:65:ARG:HG3	54:B8:25:MET:HG3	1.91	0.53
37:BR:55:ALA:HB2	37:BR:79:LEU:HD13	1.90	0.53
1:CA:587:G:N2	1:CA:754:C:OP2	2.34	0.53
1:CA:1182:G:H4'	1:CA:1183:A:H3'	1.90	0.53
1:CA:1220:G:O3'	19:CS:36:ARG:HD3	2.09	0.53
10:CJ:78:ASN:O	10:CJ:80:LYS:N	2.41	0.53
12:CL:117:ARG:HB3	12:CL:122:THR:HB	1.89	0.53
25:DA:67:U:H2'	25:DA:68:G:O4'	2.09	0.53
25:DA:2286:A:H4'	25:DA:2287:A:O4'	2.08	0.53
28:DE:108:SER:HB3	28:DE:165:VAL:HG21	1.91	0.53
30:DG:96:ARG:O	30:DG:99:MET:HB3	2.09	0.53
48:D2:28:LYS:HD3	48:D2:60:LEU:HD11	1.91	0.53
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.44	0.53
1:AA:243:A:C2	1:AA:246:A:C8	2.97	0.53
4:AD:119:GLN:HG2	4:AD:123:HIS:CD2	2.43	0.53
9:AI:8:GLY:HA3	9:AI:76:ALA:O	2.09	0.53
25:BA:139:A:C8	25:BA:1454:C:O2'	2.60	0.53
25:BA:326:C:H2'	25:BA:327:U:H6	1.74	0.53
25:BA:407:U:H2'	25:BA:408:G:H8	1.73	0.53
25:BA:1067:A:H2'	25:BA:1069:U:H5'	1.89	0.53
7:CG:51:GLN:O	7:CG:55:GLY:HA2	2.08	0.53
13:CM:89:GLY:O	13:CM:93:ARG:HG3	2.09	0.53
18:CR:61:LYS:O	18:CR:65:ILE:HG12	2.08	0.53
25:DA:96:G:H4'	48:D2:48:HIS:CD2	2.43	0.53
25:DA:796:C:H2'	25:DA:797:C:C6	2.44	0.53
25:DA:1319:G:C6	25:DA:1320:C:N4	2.77	0.53
25:DA:2189:U:H2'	25:DA:2190:G:H8	1.74	0.53
25:DA:2469:A:C2	25:DA:2482:G:C8	2.97	0.53
25:DA:2698:U:H2'	25:DA:2699:C:C6	2.44	0.53
1:AA:381:C:N4	1:AA:382:A:C2	2.77	0.53
1:AA:987:G:H1	1:AA:1218:C:H42	1.57	0.53
23:AX:23:C:H2'	23:AX:24:U:H6	1.74	0.53
23:AX:59:A:C2'	23:AX:60:U:H5'	2.39	0.53
25:BA:1597:C:OP1	25:BA:1765:U:O2'	2.19	0.53
25:BA:2255:U:OP1	61:BA:3915:HOH:O	2.19	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BI:3:VAL:HG12	32:BI:38:LEU:HA	1.91	0.53
36:BQ:85:LYS:HG2	46:B0:7:LEU:HB3	1.91	0.53
41:BV:95:LEU:HD13	41:BV:97:LYS:HD3	1.90	0.53
1:CA:73:G:C6	1:CA:97:G:C6	2.97	0.53
1:CA:1007:C:C4	1:CA:1022:G:N1	2.73	0.53
1:CA:1122:U:C4	1:CA:1151:A:N1	2.77	0.53
25:DA:2712:U:H1'	25:DA:2712(A):A:C8	2.44	0.53
30:DG:63:ILE:HA	30:DG:143:GLU:HG3	1.89	0.53
35:DP:38:GLN:O	35:DP:39:LYS:HB3	2.09	0.53
38:DS:11:LYS:O	38:DS:15:ARG:HG3	2.09	0.53
1:AA:1027:C:C2	1:AA:1034:G:N1	2.69	0.53
12:AL:60:LEU:HD21	12:AL:66:VAL:HG22	1.91	0.53
13:AM:37:THR:HG21	13:AM:56:LEU:HA	1.90	0.53
25:BA:851:A:OP1	61:BA:4484:HOH:O	2.19	0.53
32:BI:27:ARG:HD2	47:B1:71:TYR:CE1	2.44	0.53
32:BI:29:TYR:O	32:BI:32:PRO:HD2	2.09	0.53
1:CA:954:G:H2'	1:CA:955:U:C6	2.44	0.53
1:CA:1095:U:H2'	1:CA:1096:C:O4'	2.09	0.53
1:CA:1360:A:OP2	14:CN:35:ARG:NH2	2.41	0.53
7:CG:62:PHE:HA	7:CG:124:LEU:HD22	1.90	0.53
15:CO:33:THR:HG21	15:CO:85:LEU:HD22	1.91	0.53
25:DA:687:C:H42	25:DA:787:U:H4'	1.73	0.53
1:AA:975:A:H5'	1:AA:975:A:H8	1.74	0.52
1:AA:1070:U:OP1	5:AE:25:ARG:NH1	2.38	0.52
25:BA:1653:C:H4'	25:BA:1654:A:O5'	2.09	0.52
25:BA:1993:A:C4	27:BD:241:PRO:HD3	2.45	0.52
27:BD:108:PRO:HG3	27:BD:143:HIS:CE1	2.43	0.52
52:B6:6:ARG:NH1	52:B6:26:ASN:HB2	2.24	0.52
1:CA:473:G:H2'	1:CA:474:G:C8	2.45	0.52
1:CA:850:U:H2'	1:CA:851:G:H5''	1.90	0.52
1:CA:983:A:H2	1:CA:984:C:C6	2.26	0.52
5:CE:90:VAL:O	5:CE:91:LEU:HD13	2.08	0.52
25:DA:475:U:C4	25:DA:481:G:O6	2.62	0.52
25:DA:1344:G:O2'	25:DA:1385:G:H2'	2.09	0.52
25:DA:1858:G:O6	61:DA:4292:HOH:O	2.16	0.52
25:DA:2750:A:H8	25:DA:2750:A:OP1	1.92	0.52
50:D4:46:GLN:HB3	50:D4:48:ARG:HG2	1.90	0.52
1:AA:56:U:H2'	1:AA:57:G:H8	1.72	0.52
1:AA:154:C:N3	1:AA:168:G:N1	2.58	0.52
1:AA:923:A:H2'	1:AA:924:C:C6	2.44	0.52
1:AA:1272:G:H2'	1:AA:1273:G:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1952:G:O2'	25:BA:1990:G:O6	2.20	0.52
25:BA:1954:A:H2'	25:BA:1955:G:O4'	2.09	0.52
35:BP:82:GLY:HA2	35:BP:113:LYS:O	2.09	0.52
54:B8:33:ASN:HA	54:B8:36:LYS:HD2	1.90	0.52
1:CA:1116:C:H2'	1:CA:1117:G:H5''	1.90	0.52
2:CB:16:HIS:CG	2:CB:17:PHE:H	2.28	0.52
2:CB:178:ARG:CZ	8:CH:74:PRO:HG3	2.40	0.52
25:DA:10:G:H2'	25:DA:11:G:C8	2.44	0.52
25:DA:531:C:H5'	61:DA:4094:HOH:O	2.09	0.52
25:DA:1434:A:H61	25:DA:1558:A:N6	2.07	0.52
25:DA:2313:C:O2	25:DA:2313:C:H2'	2.09	0.52
25:DA:2646:C:H2'	25:DA:2647:U:O4'	2.09	0.52
31:DH:105:LEU:HD11	31:DH:148:ILE:HG23	1.91	0.52
32:DI:43:ASN:HD22	32:DI:43:ASN:C	2.12	0.52
43:DX:84:ALA:HB3	43:DX:87:GLN:NE2	2.24	0.52
1:AA:719:C:O2'	18:AR:49:LYS:HB3	2.10	0.52
1:AA:1005:A:H1'	1:AA:1036:G:H22	1.75	0.52
1:AA:1187:G:H4'	9:AI:111:ARG:HH11	1.73	0.52
1:AA:1256:A:H5''	1:AA:1258:G:H1'	1.92	0.52
8:AH:120:THR:H	8:AH:123:GLU:HB2	1.72	0.52
24:AW:8:2R3:H65	24:AW:10:2QY:CE1	2.38	0.52
25:BA:1913:G:H2'	25:BA:1914:C:C6	2.45	0.52
30:BG:16:ARG:HE	30:BG:31:VAL:HG11	1.73	0.52
49:B3:59:VAL:O	49:B3:60:GLU:HG2	2.09	0.52
1:CA:583:A:H2'	1:CA:584:G:O4'	2.09	0.52
1:CA:1179:A:N1	1:CA:1180:A:C8	2.78	0.52
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.44	0.52
16:CP:53:VAL:HG13	16:CP:79:VAL:HG22	1.91	0.52
25:DA:1219:G:H1	25:DA:1230:C:H42	1.55	0.52
25:DA:2454:G:H1'	61:DA:3886:HOH:O	2.08	0.52
32:DI:126:TYR:HB2	32:DI:142:VAL:HG23	1.92	0.52
36:DQ:56:ARG:CG	36:DQ:56:ARG:HH11	2.22	0.52
40:DU:78:THR:O	40:DU:117:GLN:NE2	2.42	0.52
1:AA:364:A:H2'	1:AA:365:U:C6	2.44	0.52
1:AA:558:G:H5''	1:AA:559:A:OP2	2.10	0.52
1:AA:1142:G:H3'	1:AA:1143:G:H8	1.74	0.52
2:AB:201:ILE:HG21	2:AB:214:ILE:HG21	1.91	0.52
25:BA:662:A:H8	35:BP:117:GLU:HG3	1.74	0.52
25:BA:1221:G:N2	25:BA:1223:C:OP2	2.43	0.52
26:BB:86:G:H1	26:BB:91:C:N4	2.08	0.52
34:BO:8:LEU:HB2	34:BO:19:ILE:HG13	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:838:G:H1	1:CA:848:C:H42	1.56	0.52
1:CA:1131:G:OP1	9:CI:20:ARG:NH2	2.42	0.52
1:CA:1237:C:HO2'	1:CA:1300:G:H1	1.55	0.52
4:CD:175:SER:HB3	4:CD:186:LEU:HD11	1.91	0.52
25:DA:184:C:H2'	25:DA:185:U:H6	1.75	0.52
25:DA:446:G:OP1	40:DU:3:ARG:NH1	2.39	0.52
25:DA:991:C:OP1	61:DA:4100:HOH:O	2.19	0.52
25:DA:2099:U:H5'	25:DA:2100:G:OP2	2.09	0.52
25:DA:2562:U:H1'	34:DO:23:ARG:HD3	1.92	0.52
25:DA:2704:C:H2'	25:DA:2705:A:O4'	2.09	0.52
27:DD:133:LEU:HA	27:DD:136:ILE:HD12	1.90	0.52
34:DO:71:ARG:NE	34:DO:105:GLU:OE2	2.42	0.52
38:DS:26:LEU:HD22	38:DS:87:PHE:CE1	2.44	0.52
40:DU:79:PHE:CZ	40:DU:83:LEU:HD21	2.44	0.52
47:D1:73:LEU:HB3	47:D1:94:LEU:HD22	1.91	0.52
1:AA:100:C:H2'	1:AA:101:A:C8	2.44	0.52
1:AA:503:C:H2'	1:AA:504:C:H6	1.74	0.52
1:AA:985:C:H2'	1:AA:986:A:C8	2.44	0.52
1:AA:1210:C:H2'	1:AA:1211:U:H5'	1.92	0.52
17:AQ:56:VAL:HB	17:AQ:78:GLU:HB3	1.91	0.52
25:BA:2819:A:C6	25:BA:2820:A:C6	2.98	0.52
1:CA:1004:A:N7	1:CA:1037:C:H2'	2.25	0.52
1:CA:1216:G:H5''	14:CN:5:ALA:HB2	1.91	0.52
1:CA:1310:G:H5'	13:CM:77:ASN:ND2	2.25	0.52
4:CD:99:SER:O	4:CD:140:VAL:HG23	2.09	0.52
18:CR:33:ASP:OD2	18:CR:36:ASN:HB2	2.08	0.52
25:DA:1589:C:H2'	25:DA:1590:U:C6	2.44	0.52
25:DA:2751:G:C8	31:DH:2:SER:N	2.77	0.52
30:DG:122:PRO:HG3	30:DG:180:PHE:HB3	1.92	0.52
32:DI:93:THR:O	32:DI:97:ILE:HG13	2.09	0.52
1:AA:134:A:H61	16:AP:25:ARG:NH1	2.07	0.52
1:AA:148:G:O2'	1:AA:149:A:H8	1.91	0.52
1:AA:195:A:N3	1:AA:222:U:O2'	2.30	0.52
1:AA:520:A:O2'	12:AL:73:GLU:OE1	2.14	0.52
1:AA:1241:G:H2'	1:AA:1242:C:C6	2.44	0.52
5:AE:78:HIS:HD1	8:AH:104:ARG:HD2	1.74	0.52
7:AG:113:GLU:HG2	7:AG:119:ARG:HG2	1.90	0.52
28:BE:47:VAL:HG21	28:BE:86:PRO:CD	2.38	0.52
1:CA:358:U:H2'	1:CA:359:U:H6	1.75	0.52
1:CA:1399:C:C2	1:CA:1502:A:N6	2.78	0.52
25:DA:271(H):G:H2'	25:DA:271(I):G:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:468:G:H5''	29:DF:60:SER:HB2	1.90	0.52
25:DA:524:U:H2'	25:DA:525:U:H6	1.73	0.52
25:DA:539:G:H2'	25:DA:540:C:H6	1.73	0.52
25:DA:947:G:N2	25:DA:971:C:C2	2.78	0.52
25:DA:1300:U:H4'	25:DA:1301:A:H5''	1.91	0.52
25:DA:1309:G:O2'	25:DA:1611:C:O2'	2.27	0.52
25:DA:1857:G:O2'	25:DA:1885:A:N6	2.42	0.52
31:DH:56:SER:OG	31:DH:57:ASP:N	2.40	0.52
37:DR:38:VAL:HG22	37:DR:112:ALA:HB2	1.92	0.52
38:DS:3:ARG:O	38:DS:4:LEU:HD23	2.10	0.52
41:DV:62:LEU:HD11	41:DV:95:LEU:HB2	1.91	0.52
41:DV:65:GLY:HA3	41:DV:91:TYR:CZ	2.44	0.52
25:BA:173:C:H2'	25:BA:174:U:C6	2.44	0.52
25:BA:354:A:H2	25:BA:1255:A:HO2'	1.57	0.52
25:BA:1941:A:H5''	25:BA:1942:C:OP2	2.10	0.52
25:BA:2897:U:H2'	25:BA:2898:C:H6	1.72	0.52
26:BB:76:G:N2	26:BB:101:G:O6	2.40	0.52
1:CA:1041:A:C6	1:CA:1042:G:C6	2.98	0.52
6:CF:96:PRO:HB3	18:CR:30:ASP:CG	2.30	0.52
25:DA:592:G:O2'	54:D8:4:MET:HG3	2.09	0.52
25:DA:2262:U:H4'	25:DA:2328:A:C2	2.45	0.52
30:DG:82:LEU:HA	30:DG:86:MET:SD	2.49	0.52
33:DN:38:HIS:ND1	33:DN:39:ARG:HG3	2.25	0.52
45:DZ:6:LYS:HE2	45:DZ:43:GLU:OE1	2.09	0.52
45:DZ:152:ALA:O	45:DZ:155:LEU:HD22	2.10	0.52
45:DZ:157:LEU:HB3	45:DZ:161:VAL:HG13	1.92	0.52
1:AA:826:C:H2'	1:AA:827:U:C6	2.44	0.52
4:AD:85:LYS:HG3	4:AD:86:LYS:N	2.24	0.52
6:AF:67:MET:SD	6:AF:75:LEU:HD13	2.50	0.52
15:AO:33:THR:HG21	15:AO:85:LEU:HD22	1.91	0.52
15:AO:74:ASP:OD2	15:AO:77:ARG:HG3	2.09	0.52
25:BA:1717:C:O2	28:BE:129:HIS:NE2	2.34	0.52
25:BA:1814:A:OP1	61:BA:4519:HOH:O	2.18	0.52
25:BA:1993:A:OP2	27:BD:242:ARG:NH2	2.42	0.52
34:BO:16:ALA:HB2	34:BO:52:VAL:HG21	1.92	0.52
54:B8:62:LEU:HB3	54:B8:65:GLU:HG2	1.91	0.52
1:CA:192:U:C2'	1:CA:193:C:H5'	2.40	0.52
1:CA:792:A:H4'	1:CA:793:U:O5'	2.10	0.52
1:CA:1207:G:H2'	1:CA:1208:C:H6	1.75	0.52
2:CB:76:GLN:HB2	2:CB:208:ILE:HG12	1.91	0.52
25:DA:348:G:H2'	25:DA:349:G:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DB:19:G:H2'	26:DB:20:C:O4'	2.09	0.52
26:DB:46:A:H2'	26:DB:47:C:C6	2.44	0.52
30:DG:16:ARG:NE	30:DG:31:VAL:HG11	2.25	0.52
45:DZ:8:TYR:HB2	45:DZ:38:TYR:CE2	2.45	0.52
1:AA:407:G:H2'	1:AA:408:A:H8	1.74	0.52
1:AA:447:G:H2'	1:AA:485:G:N2	2.25	0.52
9:AI:7:THR:O	9:AI:83:ARG:NH1	2.41	0.52
10:AJ:61:GLU:OE2	14:AN:45:ARG:NE	2.35	0.52
23:AX:10:G:N2	23:AX:26:G:H1'	2.25	0.52
25:BA:344:A:OP1	29:BF:135:LYS:NZ	2.41	0.52
29:BF:157:VAL:HB	29:BF:194:MET:HG2	1.91	0.52
32:BI:93:THR:HG22	32:BI:119:PRO:HB3	1.92	0.52
36:BQ:35:VAL:HG13	36:BQ:130:LYS:HB3	1.92	0.52
50:B4:63:TYR:N	50:B4:64:GLY:HA2	2.25	0.52
1:CA:1063:C:H5''	1:CA:1064:G:H2'	1.92	0.52
1:CA:1269:A:H2	1:CA:1312:G:N3	2.08	0.52
1:CA:1323:G:H4'	1:CA:1363:C:C2	2.45	0.52
1:CA:1492:A:H2'	1:CA:1493:A:H1'	1.92	0.52
2:CB:56:ARG:HB3	2:CB:56:ARG:NH1	2.25	0.52
9:CI:78:LYS:HD3	9:CI:101:PHE:HD2	1.75	0.52
19:CS:28:LYS:HB2	19:CS:29:ARG:CB	2.40	0.52
25:DA:72:U:OP2	48:D2:29:LYS:NZ	2.33	0.52
25:DA:323:G:O2'	25:DA:1205:U:N3	2.32	0.52
25:DA:1268:A:H2'	25:DA:1269:A:O4'	2.10	0.52
25:DA:2086:U:H2'	25:DA:2087:G:C8	2.45	0.52
27:DD:69:ARG:NH2	27:DD:128:GLY:O	2.39	0.52
37:DR:56:LYS:NZ	37:DR:90:ARG:O	2.43	0.52
43:DX:12:VAL:HG22	43:DX:29:TRP:CE2	2.45	0.52
1:AA:1328:C:OP1	21:AU:21:TYR:OH	2.25	0.52
2:AB:55:PHE:HA	2:AB:58:ILE:HD12	1.92	0.52
2:AB:60:ASP:O	2:AB:64:ARG:HB2	2.10	0.52
25:BA:864:C:O2'	25:BA:886:U:H5''	2.10	0.52
25:BA:2108:U:H2'	25:BA:2109:G:C8	2.45	0.52
25:BA:2784:C:H2'	25:BA:2785:C:C6	2.44	0.52
31:BH:24:VAL:HG13	31:BH:37:VAL:HG21	1.91	0.52
1:CA:1309:G:H5'	13:CM:78:ILE:HD11	1.92	0.52
9:CI:21:PRO:HA	9:CI:59:PHE:HA	1.92	0.52
20:CT:13:LEU:O	20:CT:17:ARG:HG3	2.10	0.52
25:DA:84:A:N1	25:DA:98:G:O2'	2.41	0.52
25:DA:154:G:O6	25:DA:172:C:N4	2.43	0.52
25:DA:601:C:O2	25:DA:605:C:H4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:774:A:N3	25:DA:774:A:H2'	2.25	0.52
25:DA:864:G:C6	25:DA:865:C:N4	2.78	0.52
26:DB:66:A:H61	26:DB:109:C:H5'	1.75	0.52
28:DE:120:TRP:CE3	28:DE:155:LYS:HD3	2.45	0.52
29:DF:65:TRP:CZ2	29:DF:75:HIS:HD2	2.28	0.52
31:DH:106:THR:HG23	31:DH:112:PRO:HB3	1.92	0.52
40:DU:76:TYR:OH	40:DU:92:ARG:NH1	2.42	0.52
40:DU:78:THR:HG22	40:DU:117:GLN:NE2	2.24	0.52
1:AA:184:G:H2'	1:AA:185:A:C8	2.42	0.51
1:AA:396:G:O2'	1:AA:398:C:OP1	2.15	0.51
1:AA:503:C:H2'	1:AA:504:C:C6	2.46	0.51
1:AA:657:G:C2	1:AA:658:G:C8	2.98	0.51
1:AA:1223:C:H5''	1:AA:1224:G:C5'	2.40	0.51
25:BA:239:G:OP2	54:B8:13:ARG:NH2	2.43	0.51
26:BB:91:C:OP2	36:BQ:16:ARG:NH1	2.42	0.51
27:BD:234:GLY:O	61:BD:402:HOH:O	2.19	0.51
28:BE:11:MET:HG2	28:BE:24:THR:HB	1.92	0.51
1:CA:15:G:H2'	1:CA:16:A:H8	1.74	0.51
1:CA:652:U:O2'	1:CA:653:A:OP2	2.24	0.51
1:CA:660:G:H1	1:CA:745:C:H42	1.58	0.51
1:CA:742:G:OP2	15:CO:35:ARG:NH2	2.40	0.51
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.44	0.51
1:CA:1517:G:H1'	25:DA:1919:A:O3'	2.10	0.51
12:CL:97:ARG:HB2	12:CL:98:TYR:CE2	2.45	0.51
25:DA:528:A:C2	25:DA:2042:A:H2'	2.45	0.51
25:DA:1529:G:H2'	25:DA:1530:C:H6	1.75	0.51
26:DB:43:C:H5''	50:D4:1:MET:HG2	1.91	0.51
32:DI:62:LYS:HG2	32:DI:133:HIS:NE2	2.25	0.51
39:DT:19:LEU:HD22	39:DT:86:ILE:HG13	1.92	0.51
39:DT:23:ARG:HG3	39:DT:120:ARG:NH1	2.24	0.51
1:AA:192:U:O2'	1:AA:193:C:H6	1.92	0.51
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.92	0.51
1:AA:454:C:OP1	16:AP:75:ARG:NH2	2.42	0.51
1:AA:502:G:C6	1:AA:503:C:C4	2.98	0.51
1:AA:785:G:C2'	1:AA:786:G:H5'	2.41	0.51
25:BA:611:U:H2'	25:BA:612:C:C6	2.46	0.51
25:BA:1378:G:OP1	61:BA:4471:HOH:O	2.19	0.51
25:BA:2779:G:N3	25:BA:2779:G:H2'	2.24	0.51
32:BI:72:LEU:HA	32:BI:75:LEU:HD11	1.91	0.51
43:BX:1:MET:HE1	48:B2:26:ARG:HH21	1.75	0.51
1:CA:1206:G:H4'	3:CC:192:THR:O	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1227:A:H8	1:CA:1227:A:H3'	1.75	0.51
1:CA:1311:G:H1	1:CA:1326:C:H42	1.57	0.51
18:CR:52:PRO:O	18:CR:56:THR:HG23	2.10	0.51
20:CT:16:HIS:O	20:CT:19:SER:OG	2.17	0.51
25:DA:652(B):A:C2	25:DA:655:A:H1'	2.44	0.51
26:DB:6:C:H2'	26:DB:7:G:H5''	1.92	0.51
28:DE:141:ILE:O	28:DE:154:LYS:HE2	2.10	0.51
1:AA:45:U:H2'	1:AA:46:G:C8	2.45	0.51
1:AA:202:U:H3'	1:AA:203:U:H6	1.75	0.51
1:AA:626:U:C2	1:AA:627:G:C8	2.98	0.51
1:AA:1399:C:C2	1:AA:1502:A:N6	2.78	0.51
2:AB:220:ASP:O	2:AB:223:ILE:HG12	2.10	0.51
9:AI:64:THR:HG23	9:AI:66:ARG:HD2	1.92	0.51
25:BA:895:G:H2'	25:BA:896:A:C8	2.46	0.51
25:BA:1218:G:O2'	25:BA:1219:A:O5'	2.28	0.51
25:BA:2372:A:H8	25:BA:2372:A:O5'	1.92	0.51
25:BA:2889:C:OP2	61:BA:4427:HOH:O	2.19	0.51
36:BQ:51:ARG:HD3	36:BQ:66:ILE:HD11	1.93	0.51
45:BZ:110:GLY:O	45:BZ:113:ALA:HB3	2.10	0.51
47:B1:3:LYS:HB2	47:B1:61:ARG:NH1	2.25	0.51
47:B1:91:LYS:O	47:B1:95:LEU:HD22	2.11	0.51
1:CA:344:A:H4'	1:CA:345:C:OP2	2.10	0.51
1:CA:1121:U:C4	1:CA:1122:U:C5	2.98	0.51
2:CB:167:PRO:HG3	2:CB:188:ALA:HB2	1.92	0.51
3:CC:180:ALA:HB1	3:CC:203:PHE:CE1	2.46	0.51
10:CJ:22:LYS:HA	10:CJ:25:GLU:HB2	1.93	0.51
25:DA:852:G:N2	25:DA:926:A:H1'	2.26	0.51
25:DA:1563:G:H2'	25:DA:1564:C:C6	2.45	0.51
25:DA:2327:A:H2'	25:DA:2328:A:C8	2.45	0.51
25:DA:2474:C:H5''	25:DA:2475:C:OP2	2.10	0.51
38:DS:88:ASP:OD1	38:DS:90:GLY:N	2.43	0.51
47:D1:51:VAL:HG11	47:D1:74:VAL:HG21	1.92	0.51
1:AA:413:G:N2	1:AA:428:G:H1'	2.24	0.51
1:AA:543:C:C2'	1:AA:544:G:H5'	2.41	0.51
1:AA:674:G:H2'	1:AA:675:A:H8	1.74	0.51
8:AH:25:ASP:N	8:AH:25:ASP:OD1	2.43	0.51
8:AH:41:ARG:NH2	8:AH:123:GLU:OE2	2.35	0.51
25:BA:1405:A:N6	25:BA:1418:U:H3	2.09	0.51
28:BE:2:LYS:HG3	28:BE:200:GLU:HB2	1.93	0.51
44:BY:99:CYS:HB2	44:BY:106:LEU:HD21	1.92	0.51
48:B2:2:LYS:O	48:B2:6:VAL:HG23	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:266:G:H5'	1:CA:266:G:C8	2.46	0.51
1:CA:1004:A:H2'	1:CA:1005:A:H5'	1.92	0.51
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.44	0.51
8:CH:29:SER:HB3	8:CH:32:LYS:HG3	1.91	0.51
8:CH:86:ILE:HG13	8:CH:133:LEU:HD22	1.92	0.51
25:DA:184:C:H2'	25:DA:185:U:C6	2.45	0.51
1:AA:102:G:H2'	1:AA:103:C:H6	1.76	0.51
1:AA:671:G:H2'	1:AA:672:U:O4'	2.11	0.51
1:AA:865:A:C2	1:AA:918:A:H4'	2.46	0.51
1:AA:1051:C:H2'	1:AA:1052:U:C6	2.45	0.51
2:AB:208:ILE:HA	2:AB:211:ILE:HD12	1.91	0.51
4:AD:158:ILE:O	4:AD:162:LEU:N	2.42	0.51
7:AG:146:GLU:O	7:AG:149:ARG:HB2	2.11	0.51
19:AS:65:ASN:HA	50:B4:58:ARG:HG3	1.93	0.51
25:BA:549:U:H2'	25:BA:550:U:C6	2.46	0.51
25:BA:559:U:H2'	25:BA:560:C:C6	2.45	0.51
48:B2:44:LEU:HD23	48:B2:47:ASN:HA	1.93	0.51
50:B4:61:ARG:HG3	50:B4:62:ARG:N	2.26	0.51
1:CA:392:G:H2'	1:CA:393:A:H8	1.73	0.51
1:CA:424:G:H2'	1:CA:425:G:H8	1.75	0.51
1:CA:1001(A):G:H2'	1:CA:1002:G:O4'	2.11	0.51
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.45	0.51
5:CE:40:ARG:NH2	5:CE:68:GLU:HA	2.25	0.51
19:CS:64:GLU:O	19:CS:67:VAL:HG23	2.10	0.51
25:DA:588:U:H2'	25:DA:589:C:C6	2.45	0.51
25:DA:637:A:H8	35:DP:117:GLU:HG3	1.74	0.51
25:DA:1297:C:H2'	25:DA:1298:C:H6	1.76	0.51
25:DA:1766:U:H2'	25:DA:1767:C:C6	2.44	0.51
49:D3:16:PRO:HB2	49:D3:18:ASP:OD1	2.11	0.51
1:AA:714:G:H2'	1:AA:715:A:C8	2.46	0.51
1:AA:747:C:OP2	1:AA:748:C:N4	2.44	0.51
1:AA:1144:G:N2	1:AA:1146:A:H62	2.09	0.51
1:AA:1187:G:H2'	1:AA:1188:A:C8	2.45	0.51
2:AB:19:HIS:CD2	2:AB:206:ASP:HB2	2.46	0.51
25:BA:155:C:OP2	25:BA:155:C:H6	1.94	0.51
25:BA:296:U:H2'	25:BA:297:C:H6	1.76	0.51
25:BA:581:G:OP1	33:BN:111:PRO:HD2	2.11	0.51
25:BA:1647:G:N7	61:BA:4116:HOH:O	2.35	0.51
30:BG:131:TYR:HB3	30:BG:159:VAL:HG13	1.91	0.51
1:CA:144:G:H1	1:CA:178:C:H42	1.59	0.51
1:CA:229:U:O2'	16:CP:23:ASP:OD2	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:920:U:H2'	1:CA:921:U:C6	2.45	0.51
2:CB:138:LEU:HA	2:CB:141:GLU:HB3	1.92	0.51
13:CM:14:ARG:CZ	13:CM:42:ALA:HA	2.40	0.51
25:DA:848:G:N9	25:DA:933:A:H8	2.08	0.51
25:DA:1709:U:H2'	25:DA:1710:C:C6	2.45	0.51
25:DA:1810:A:H2'	25:DA:1811:G:O4'	2.11	0.51
25:DA:2602:A:OP2	25:DA:2603:G:H5''	2.11	0.51
36:DQ:75:THR:HA	36:DQ:89:ASN:O	2.11	0.51
44:DY:44:ILE:HA	44:DY:63:LYS:O	2.11	0.51
1:AA:346:G:C6	1:AA:348:G:N2	2.78	0.51
7:AG:111:ARG:HB3	7:AG:113:GLU:OE2	2.11	0.51
8:AH:11:THR:HG22	8:AH:15:ASN:ND2	2.25	0.51
25:BA:2050:U:H2'	25:BA:2051:G:O4'	2.11	0.51
34:BO:2:ILE:HD12	34:BO:6:THR:HG21	1.92	0.51
35:BP:121:LYS:O	35:BP:123:LEU:N	2.44	0.51
37:BR:26:LYS:HE2	37:BR:70:LEU:O	2.10	0.51
38:BS:11:LYS:HD2	38:BS:15:ARG:NH1	2.25	0.51
50:B4:62:ARG:HB2	50:B4:63:TYR:CD1	2.44	0.51
1:CA:596:C:H2'	1:CA:597:G:H8	1.74	0.51
1:CA:620:C:C2	4:CD:135:LEU:HG	2.46	0.51
1:CA:1316:G:O2'	1:CA:1318:A:N7	2.38	0.51
2:CB:24:TRP:CZ3	2:CB:26:PRO:HA	2.46	0.51
2:CB:87:ARG:NH2	2:CB:220:ASP:OD1	2.35	0.51
3:CC:42:LEU:O	3:CC:46:GLU:HG2	2.11	0.51
3:CC:100:ALA:O	3:CC:102:ASN:ND2	2.44	0.51
25:DA:411:G:C5	35:DP:72:PRO:HB3	2.46	0.51
25:DA:2408:U:O5'	25:DA:2408:U:H6	1.94	0.51
25:DA:2849:U:H4'	25:DA:2868:A:C2	2.46	0.51
1:AA:738:C:H2'	1:AA:739:C:C6	2.46	0.51
1:AA:991:U:C4	1:AA:1212:U:H1'	2.46	0.51
1:AA:1442:G:H2'	1:AA:1442(A):G:H5'	1.93	0.51
4:AD:3:ARG:HE	4:AD:118:ARG:CD	2.24	0.51
4:AD:18:LYS:HG2	57:AD:501:SF4:S1	2.51	0.51
12:AL:59:ARG:HD3	24:AW:10:2QY:C	2.41	0.51
14:AN:3:ARG:HB3	14:AN:3:ARG:HH21	1.75	0.51
25:BA:8:A:H2'	25:BA:9:U:H6	1.76	0.51
25:BA:1284:G:OP2	61:BA:4767:HOH:O	2.18	0.51
25:BA:1373:C:O2'	61:BA:3810:HOH:O	2.17	0.51
27:BD:132:PRO:HD3	27:BD:190:TYR:CZ	2.46	0.51
45:BZ:150:LEU:HB3	45:BZ:171:ILE:HD11	1.92	0.51
1:CA:568:G:N7	12:CL:5:PRO:HD3	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:980:C:H1'	14:CN:19:ARG:HA	1.92	0.51
1:CA:1002:G:N2	1:CA:1039:C:C4	2.79	0.51
1:CA:1009:G:H2'	1:CA:1010:G:O4'	2.10	0.51
1:CA:1162:C:N3	1:CA:1174:G:N2	2.45	0.51
1:CA:1260:C:HO2'	1:CA:1283:G:HO2'	1.59	0.51
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.46	0.51
2:CB:84:GLU:OE1	2:CB:216:SER:HA	2.11	0.51
3:CC:164:ARG:NH2	3:CC:166:GLU:OE1	2.44	0.51
7:CG:107:ALA:O	7:CG:111:ARG:HG3	2.10	0.51
25:DA:903:C:H2'	25:DA:904:C:C6	2.46	0.51
25:DA:924:C:H2'	25:DA:925:C:C6	2.46	0.51
25:DA:1164:G:H2'	25:DA:1165:U:C6	2.46	0.51
25:DA:1529:G:H2'	25:DA:1530:C:C6	2.45	0.51
25:DA:2293:C:H5'	38:DS:89:ARG:NH2	2.25	0.51
25:DA:2320:A:H2'	25:DA:2320:A:N3	2.24	0.51
1:AA:542:G:P	4:AD:10:ARG:HH22	2.34	0.51
2:AB:185:ILE:CG2	2:AB:199:TYR:HB2	2.41	0.51
12:AL:34:ARG:HG2	12:AL:35:GLY:N	2.26	0.51
13:AM:49:THR:HB	13:AM:52:GLU:H	1.75	0.51
20:AT:87:LYS:O	20:AT:91:LEU:HG	2.10	0.51
26:BB:86:G:H1	26:BB:91:C:H42	1.59	0.51
44:BY:92:ASN:HB3	44:BY:94:LYS:N	2.22	0.51
47:B1:50:ARG:HG2	47:B1:59:THR:HB	1.93	0.51
1:CA:599:C:C2'	1:CA:600:C:H5''	2.37	0.51
1:CA:623:C:H2'	1:CA:624:C:H6	1.75	0.51
1:CA:1119:C:H2'	1:CA:1120:G:C8	2.46	0.51
2:CB:91:PRO:HG3	2:CB:154:LEU:HD12	1.92	0.51
13:CM:82:MET:HE2	13:CM:92:HIS:HB3	1.93	0.51
17:CQ:45:HIS:HA	17:CQ:69:LYS:HE3	1.92	0.51
25:DA:30:G:OP2	40:DU:5:LYS:HE2	2.10	0.51
25:DA:817:C:H2'	25:DA:818:G:O4'	2.11	0.51
25:DA:873:G:N2	25:DA:905:U:C2	2.78	0.51
25:DA:909:A:H2'	25:DA:912:C:H5	1.76	0.51
25:DA:1161:C:H2'	25:DA:1162:G:H8	1.76	0.51
25:DA:1639:U:H2'	25:DA:1640:C:H5''	1.92	0.51
25:DA:2850:A:OP2	25:DA:2866:U:H5	1.94	0.51
1:AA:394:G:H2'	1:AA:395:C:H6	1.76	0.51
1:AA:474:G:H2'	1:AA:475:G:C8	2.40	0.51
1:AA:693:G:H2'	1:AA:694:A:C8	2.46	0.51
3:AC:11:ARG:NH2	3:AC:177:THR:O	2.39	0.51
25:BA:1008:U:OP2	61:BA:4616:HOH:O	2.19	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1549:U:H2'	25:BA:1550:C:C6	2.46	0.51
25:BA:1921:G:H2'	25:BA:1921:G:N3	2.26	0.51
27:BD:123:ALA:HB3	27:BD:131:LEU:HG	1.93	0.51
30:BG:137:GLU:OE1	30:BG:139:LEU:HD11	2.11	0.51
49:B3:44:ARG:O	49:B3:48:GLU:HG3	2.11	0.51
1:CA:396:G:O2'	1:CA:398:C:OP1	2.22	0.51
1:CA:1005:A:C2	1:CA:1026:G:C8	2.99	0.51
1:CA:1120:G:C6	1:CA:1121:U:C4	2.98	0.51
1:CA:1122:U:H3	1:CA:1151:A:H2	1.59	0.51
2:CB:60:ASP:O	2:CB:64:ARG:HG2	2.10	0.51
2:CB:162:ILE:O	2:CB:185:ILE:HG12	2.11	0.51
3:CC:35:GLU:OE2	3:CC:59:ARG:NH2	2.35	0.51
7:CG:76:ARG:HD3	7:CG:89:MET:HG3	1.93	0.51
16:CP:51:VAL:HG12	16:CP:53:VAL:N	2.26	0.51
25:DA:784:A:C5	27:DD:229:VAL:HG21	2.46	0.51
25:DA:1022:G:N7	33:DN:66:LYS:HE2	2.26	0.51
25:DA:1833:U:H2'	25:DA:1834:U:H6	1.75	0.51
26:DB:21:G:H2'	26:DB:22:U:O4'	2.10	0.51
28:DE:92:THR:O	28:DE:95:ILE:HG23	2.11	0.51
33:DN:4:TYR:CD2	40:DU:100:VAL:HG11	2.46	0.51
1:AA:1002:G:H3'	1:AA:1003:G:C8	2.45	0.50
1:AA:1025:U:H3	1:AA:1036:G:H1	1.60	0.50
1:AA:1348:U:H4'	9:AI:120:ARG:HD2	1.93	0.50
7:AG:26:PHE:O	7:AG:30:ILE:HG13	2.11	0.50
9:AI:23:ASN:ND2	9:AI:25:LYS:HG2	2.26	0.50
18:AR:59:SER:H	18:AR:62:GLU:HG3	1.76	0.50
23:AX:6:G:H1	23:AX:67:C:N4	2.09	0.50
25:BA:208:G:H2'	25:BA:209:G:O4'	2.11	0.50
25:BA:930:G:O6	25:BA:939:C:C2	2.64	0.50
25:BA:1846:A:OP2	27:BD:54:ARG:NH2	2.45	0.50
25:BA:2847:G:H21	37:BR:45:ARG:HH12	1.59	0.50
28:BE:116:VAL:HG13	28:BE:122:PHE:HB2	1.93	0.50
31:BH:94:TYR:CE2	31:BH:160:LYS:HG2	2.46	0.50
50:B4:63:TYR:HD1	50:B4:63:TYR:H	1.57	0.50
1:CA:127:G:OP1	1:CA:635:G:H1'	2.11	0.50
1:CA:545:C:OP1	4:CD:61:LYS:NZ	2.42	0.50
1:CA:758:G:N7	61:CA:4152:HOH:O	2.34	0.50
1:CA:922:G:H2'	1:CA:923:A:C8	2.45	0.50
1:CA:1060:C:H4'	10:CJ:51:ARG:HB3	1.93	0.50
2:CB:80:ILE:HD13	2:CB:80:ILE:O	2.11	0.50
3:CC:155:GLY:HA3	3:CC:196:LEU:HD13	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:69:GLU:O	6:CF:72:VAL:HG12	2.11	0.50
12:CL:34:ARG:HG3	12:CL:105:TYR:CE2	2.45	0.50
25:DA:118:A:N3	25:DA:178:G:H1'	2.26	0.50
25:DA:1007:C:P	33:DN:37:LYS:HZ2	2.34	0.50
25:DA:1819:A:H5''	27:DD:161:THR:HG21	1.93	0.50
25:DA:2847:U:OP1	39:DT:98:LYS:NZ	2.42	0.50
29:DF:154:VAL:HG22	29:DF:191:ARG:HB2	1.94	0.50
31:DH:117:PRO:HG3	31:DH:123:PHE:CD2	2.46	0.50
25:BA:310:C:H2'	25:BA:311:C:C6	2.46	0.50
25:BA:346:A:OP1	29:BF:168:ARG:HD2	2.11	0.50
25:BA:831:A:C5	27:BD:229:VAL:HG21	2.46	0.50
26:BB:42:C:C6	30:BG:69:ALA:HB2	2.46	0.50
28:BE:34:VAL:HG21	28:BE:78:LEU:HD11	1.93	0.50
29:BF:164:ARG:O	29:BF:168:ARG:HB2	2.11	0.50
35:BP:63:PRO:HD3	54:B8:27:THR:HG22	1.93	0.50
55:B9:25:VAL:HB	55:B9:34:GLN:HB2	1.93	0.50
1:CA:91:C:H2'	1:CA:92:C:C6	2.46	0.50
1:CA:509:A:C8	1:CA:509:A:H3'	2.45	0.50
1:CA:1014:A:C2	1:CA:1219:U:H1'	2.46	0.50
1:CA:1028:C:O2	1:CA:1034:G:H1'	2.11	0.50
1:CA:1241:G:H2'	1:CA:1242:C:C6	2.45	0.50
1:CA:1273:G:H3'	1:CA:1274:G:C8	2.43	0.50
3:CC:181:ASN:ND2	3:CC:204:LEU:HD12	2.26	0.50
8:CH:73:ASP:OD1	8:CH:75:ARG:HD3	2.10	0.50
13:CM:80:ARG:HH22	19:CS:69:HIS:CE1	2.29	0.50
19:CS:28:LYS:HB2	19:CS:29:ARG:HA	1.92	0.50
23:CX:44:A:C6	23:CX:45:G:C6	3.00	0.50
25:DA:581:C:H2'	25:DA:582:G:C8	2.47	0.50
25:DA:1665:A:H4'	34:DO:67:LYS:HB2	1.93	0.50
25:DA:2316:C:O2'	30:DG:128:ARG:NH1	2.44	0.50
25:DA:2615:U:H2'	25:DA:2616:C:H6	1.77	0.50
30:DG:14:GLU:O	30:DG:17:PRO:HD2	2.11	0.50
30:DG:36:LYS:HE3	30:DG:95:ARG:NH1	2.27	0.50
30:DG:97:ASP:O	30:DG:101:ILE:HG13	2.11	0.50
32:DI:134:PRO:C	32:DI:136:VAL:H	2.15	0.50
34:DO:25:LEU:HD12	34:DO:38:VAL:HG12	1.93	0.50
35:DP:2:LYS:NZ	35:DP:4:SER:OG	2.42	0.50
35:DP:94:GLU:HG3	35:DP:124:LYS:HD3	1.94	0.50
1:AA:261:U:OP2	20:AT:79:ARG:NH2	2.44	0.50
1:AA:308:C:H2'	1:AA:309:G:C8	2.46	0.50
1:AA:946:A:O2'	1:AA:1333:A:N3	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:985:C:H2'	1:AA:986:A:H8	1.76	0.50
1:AA:1003:G:C2'	1:AA:1004:A:H4'	2.41	0.50
1:AA:1036:G:H5'	1:AA:1037:C:C5	2.41	0.50
11:AK:34:ASP:HB3	11:AK:40:ILE:HD11	1.93	0.50
18:AR:59:SER:H	18:AR:62:GLU:CG	2.24	0.50
25:BA:239:G:H2'	25:BA:240:A:C8	2.47	0.50
27:BD:26:LYS:HB3	27:BD:83:GLU:HG2	1.93	0.50
30:BG:109:VAL:C	30:BG:112:PRO:HD2	2.31	0.50
46:B0:27:GLU:HG3	46:B0:68:GLU:HA	1.92	0.50
1:CA:487:A:H2'	1:CA:488:C:O4'	2.11	0.50
1:CA:689:C:OP1	11:CK:27:ASN:ND2	2.45	0.50
1:CA:1249:C:O4'	9:CI:70:LYS:HE2	2.11	0.50
5:CE:100:VAL:HG22	5:CE:118:ILE:HG22	1.92	0.50
25:DA:454:A:H4'	25:DA:455:C:OP2	2.11	0.50
25:DA:1187:G:H5''	41:DV:81:TYR:CE1	2.46	0.50
30:DG:13:GLU:O	30:DG:15:VAL:N	2.44	0.50
1:AA:684:A:H2'	1:AA:685:G:C8	2.46	0.50
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.46	0.50
9:AI:3:GLN:HG2	9:AI:20:ARG:HE	1.77	0.50
19:AS:52:TYR:HA	19:AS:56:GLN:O	2.11	0.50
25:BA:275:C:H2'	25:BA:276:C:C6	2.47	0.50
25:BA:2062:C:H2'	25:BA:2063:U:O4'	2.12	0.50
25:BA:2377:G:O6	54:B8:39:LYS:HE3	2.11	0.50
27:BD:12:SER:HB3	27:BD:208:LYS:HB3	1.93	0.50
1:CA:300:A:H1'	1:CA:565:U:O2	2.11	0.50
1:CA:411:A:OP1	4:CD:30:LYS:NZ	2.25	0.50
1:CA:1256:A:H61	1:CA:1278:U:C1'	2.23	0.50
1:CA:1270:C:C2'	1:CA:1271:G:H5'	2.42	0.50
2:CB:76:GLN:HG3	2:CB:206:ASP:O	2.11	0.50
25:DA:250:G:H2'	25:DA:251:A:C8	2.47	0.50
25:DA:465:G:C6	25:DA:466:A:N6	2.79	0.50
33:DN:20:GLY:HA2	33:DN:61:ARG:NE	2.27	0.50
7:AG:16:LEU:HD23	9:AI:41:VAL:HG12	1.92	0.50
8:AH:4:ASP:OD2	8:AH:85:ARG:NH1	2.36	0.50
9:AI:48:GLU:OE2	9:AI:51:ARG:HD2	2.12	0.50
25:BA:1093:G:H2'	25:BA:1156:G:H1	1.77	0.50
25:BA:1834:A:H4'	27:BD:259:THR:HG23	1.93	0.50
43:BX:31:HIS:HD2	43:BX:33:LYS:N	2.05	0.50
52:B6:11:LEU:HB2	52:B6:21:TYR:HB2	1.92	0.50
1:CA:170:U:O2'	1:CA:171:A:H5'	2.12	0.50
1:CA:757:U:H2'	1:CA:758:G:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:977:A:H2'	1:CA:977:A:N3	2.26	0.50
1:CA:998:G:N2	1:CA:1043:C:N3	2.48	0.50
1:CA:1072:G:C6	1:CA:1073:U:C4	3.00	0.50
20:CT:42:GLN:O	20:CT:45:GLN:HB3	2.11	0.50
25:DA:937:U:H2'	25:DA:938:G:O4'	2.12	0.50
25:DA:1412:A:H2'	25:DA:1413:G:H8	1.72	0.50
25:DA:2336:A:H61	46:D0:43:THR:HG21	1.76	0.50
27:DD:221:VAL:HG22	27:DD:226:MET:CE	2.42	0.50
29:DF:167:ALA:O	29:DF:170:LEU:HB2	2.11	0.50
43:DX:92:LEU:C	43:DX:94:GLY:H	2.15	0.50
48:D2:1:MET:SD	48:D2:56:GLN:NE2	2.85	0.50
1:AA:36:C:O2'	1:AA:501:C:OP1	2.26	0.50
1:AA:67:C:H2'	1:AA:68:G:C8	2.46	0.50
1:AA:166:G:C4	1:AA:167:G:N7	2.79	0.50
1:AA:382:A:N3	1:AA:383:A:N7	2.59	0.50
1:AA:407:G:OP1	4:AD:115:ARG:HD3	2.12	0.50
1:AA:738:C:H2'	1:AA:739:C:H6	1.75	0.50
1:AA:826:C:H2'	1:AA:827:U:H6	1.77	0.50
5:AE:98:THR:HG22	5:AE:99:GLY:O	2.12	0.50
7:AG:69:VAL:HG22	7:AG:135:VAL:HG22	1.94	0.50
9:AI:53:VAL:HG11	9:AI:92:TYR:CE1	2.46	0.50
25:BA:1153:G:N3	25:BA:1153:G:H2'	2.27	0.50
25:BA:2211:U:H2'	25:BA:2212:G:H5'	1.92	0.50
61:BA:3804:HOH:O	51:B5:15:ARG:HG2	2.11	0.50
32:BI:29:TYR:C	32:BI:32:PRO:HD2	2.31	0.50
33:BN:15:LEU:HD12	33:BN:137:LYS:HG2	1.94	0.50
41:BV:14:VAL:HA	41:BV:18:LEU:HD12	1.93	0.50
1:CA:276:G:C2'	1:CA:277:C:H5'	2.41	0.50
1:CA:1004:A:C8	1:CA:1005:A:H4'	2.47	0.50
1:CA:1093:A:H5''	1:CA:1094:G:OP2	2.12	0.50
7:CG:16:LEU:HD22	7:CG:16:LEU:H	1.77	0.50
9:CI:9:ARG:O	9:CI:104:ARG:HG3	2.11	0.50
10:CJ:13:HIS:O	10:CJ:17:ASP:HB2	2.12	0.50
11:CK:81:ASP:OD1	11:CK:106:LYS:HE2	2.12	0.50
20:CT:9:ASN:O	20:CT:10:LEU:HB2	2.11	0.50
25:DA:1328:G:H2'	25:DA:1330:C:C5	2.47	0.50
25:DA:1359:A:N1	25:DA:1372:U:C4	2.80	0.50
25:DA:1563:G:H2'	25:DA:1564:C:H6	1.77	0.50
25:DA:1697:G:OP2	25:DA:1698:A:O2'	2.24	0.50
25:DA:2262:U:OP2	46:D0:19:LYS:HD3	2.12	0.50
25:DA:2293:C:H5'	25:DA:2294:C:OP2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DE:9:VAL:HG22	28:DE:25:VAL:HB	1.94	0.50
28:DE:101:ARG:CZ	28:DE:171:GLU:HB2	2.41	0.50
40:DU:66:ASN:O	40:DU:70:ARG:HG3	2.12	0.50
41:DV:95:LEU:HD13	41:DV:97:LYS:HD3	1.93	0.50
1:AA:397:A:H3'	1:AA:397:A:N3	2.26	0.50
1:AA:491:G:H2'	1:AA:492:G:O4'	2.12	0.50
1:AA:872:A:C8	1:AA:874:G:C8	3.00	0.50
1:AA:1066:C:O2'	1:AA:1067:A:H5'	2.11	0.50
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.47	0.50
2:AB:45:GLN:O	2:AB:49:GLU:HB2	2.11	0.50
2:AB:71:VAL:HB	2:AB:164:VAL:HG13	1.93	0.50
3:AC:58:GLU:HB2	3:AC:65:ALA:HB2	1.92	0.50
7:AG:78:ARG:HG2	7:AG:79:ARG:HB2	1.94	0.50
13:AM:84:ILE:HG13	19:AS:74:PHE:HE1	1.75	0.50
25:BA:179:A:N3	25:BA:726:C:O2'	2.37	0.50
27:BD:38:LYS:HE3	27:BD:39:LYS:O	2.12	0.50
46:B0:27:GLU:HA	46:B0:67:VAL:HG12	1.94	0.50
1:CA:1095:U:P	1:CA:1108:G:H1	2.35	0.50
9:CI:105:ASP:HB2	9:CI:107:ARG:HG3	1.93	0.50
25:DA:1153:C:H2'	25:DA:1154:G:O4'	2.12	0.50
25:DA:1346:G:OP2	61:DA:4263:HOH:O	2.20	0.50
25:DA:2293:C:H42	25:DA:2339:G:H1	1.58	0.50
25:DA:2336:A:H61	46:D0:43:THR:CG2	2.25	0.50
38:DS:25:ARG:NH1	38:DS:42:ASP:OD1	2.41	0.50
42:DW:35:ILE:HG23	51:D5:28:PRO:HD2	1.93	0.50
45:DZ:5:LEU:HD13	45:DZ:6:LYS:O	2.12	0.50
1:AA:414:A:H2'	1:AA:415:A:O4'	2.12	0.50
1:AA:701:C:O2	1:AA:703:G:N1	2.45	0.50
1:AA:1269:A:H2	1:AA:1312:G:N3	2.10	0.50
5:AE:90:VAL:O	5:AE:91:LEU:HD13	2.10	0.50
9:AI:19:LEU:HB3	9:AI:59:PHE:HD2	1.76	0.50
25:BA:225:C:H2'	25:BA:226:C:C6	2.46	0.50
25:BA:1221:G:H1'	25:BA:1222:A:O5'	2.11	0.50
25:BA:1712:A:H4'	34:BO:67:LYS:HB2	1.92	0.50
25:BA:1855:G:OP1	27:BD:52:ARG:NH1	2.40	0.50
1:CA:153:C:H2'	1:CA:154:C:C6	2.47	0.50
1:CA:715:A:H2'	1:CA:716:A:C8	2.47	0.50
1:CA:1036:G:N7	1:CA:1037:C:C2	2.80	0.50
5:CE:80:ILE:HG22	5:CE:91:LEU:HB2	1.94	0.50
13:CM:93:ARG:HD3	25:DA:888:C:OP2	2.12	0.50
20:CT:43:LEU:O	20:CT:47:GLY:N	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:330:A:H2	25:DA:1210:A:H2'	1.76	0.50
25:DA:954:G:C5	25:DA:955:C:C5	2.99	0.50
25:DA:1406:U:H2'	25:DA:1407:C:C6	2.46	0.50
25:DA:2386:C:H2'	25:DA:2387:U:C6	2.46	0.50
25:DA:2711:A:H5''	25:DA:2712:U:H5''	1.94	0.50
25:DA:2882:A:OP1	37:DR:96:ARG:NE	2.44	0.50
29:DF:150:GLY:HA2	29:DF:172:TRP:CE3	2.47	0.50
1:AA:137:C:H2'	1:AA:138:G:H5'	1.94	0.50
1:AA:174:C:H2'	1:AA:175:C:H6	1.76	0.50
1:AA:203:U:H2'	1:AA:203:U:OP2	2.12	0.50
1:AA:457:C:H2'	1:AA:458:C:H6	1.74	0.50
1:AA:1129:C:O2'	1:AA:1139:G:N7	2.33	0.50
1:AA:1224:G:O2'	1:AA:1322:C:OP1	2.29	0.50
4:AD:25:ARG:HG2	4:AD:25:ARG:O	2.11	0.50
13:AM:3:ARG:HG3	13:AM:4:ILE:H	1.77	0.50
19:AS:65:ASN:HD22	19:AS:65:ASN:N	2.08	0.50
25:BA:831:A:H5'	25:BA:832:G:OP1	2.12	0.50
25:BA:910:A:H2'	25:BA:911:G:H8	1.77	0.50
25:BA:1201:A:OP1	40:BU:55:ARG:HD3	2.11	0.50
25:BA:1312:G:O5'	42:BW:15:ARG:NH2	2.45	0.50
27:BD:10:THR:OG1	27:BD:13:ARG:HB2	2.12	0.50
32:BI:93:THR:OG1	32:BI:96:ASP:OD1	2.19	0.50
1:CA:501:C:H2'	1:CA:502:G:C8	2.47	0.50
25:DA:754:C:H2'	25:DA:755:C:C6	2.43	0.50
25:DA:873:G:H2'	25:DA:874:G:H5''	1.94	0.50
25:DA:878:A:N6	25:DA:900:A:N7	2.60	0.50
25:DA:1453:U:OP1	37:DR:77:ARG:NH1	2.36	0.50
25:DA:2302:G:C6	25:DA:2303:G:N7	2.80	0.50
26:DB:3:C:H2'	26:DB:4:C:C6	2.47	0.50
27:DD:16:MET:HG3	27:DD:206:LEU:O	2.12	0.50
35:DP:65:ARG:HG3	54:D8:25:MET:HG3	1.93	0.50
1:AA:524:G:H2'	1:AA:525:C:C6	2.46	0.49
1:AA:1145:C:H4'	1:AA:1146:A:C5'	2.41	0.49
1:AA:1241:G:H1	1:AA:1296:C:N4	2.10	0.49
25:BA:2486:C:H5''	25:BA:2487:C:OP2	2.12	0.49
25:BA:2899:C:H2'	25:BA:2900:G:O4'	2.12	0.49
30:BG:16:ARG:HB2	30:BG:17:PRO:HD3	1.94	0.49
1:CA:1227:A:H3'	1:CA:1227:A:C8	2.47	0.49
4:CD:26:CYS:HA	57:CD:501:SF4:S2	2.52	0.49
8:CH:64:LYS:HG2	8:CH:79:VAL:HG21	1.93	0.49
11:CK:20:TYR:CE1	11:CK:83:ILE:HD12	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:29:VAL:HG11	15:CO:81:LEU:HD21	1.94	0.49
18:CR:60:ALA:O	18:CR:64:ARG:HG3	2.12	0.49
38:DS:10:ARG:HH21	38:DS:91:PRO:HB2	1.77	0.49
48:D2:32:LEU:HD23	48:D2:53:LEU:HB3	1.94	0.49
1:AA:64:G:H4'	1:AA:65:U:H3'	1.93	0.49
1:AA:160:A:N1	1:AA:343:U:C2	2.80	0.49
1:AA:1210:C:C2'	1:AA:1211:U:H5'	2.42	0.49
7:AG:78:ARG:HH21	7:AG:156:TRP:HB3	1.77	0.49
23:AX:20:U:H5''	23:AX:21:A:OP2	2.12	0.49
25:BA:1827:U:H2'	25:BA:1828:C:C6	2.47	0.49
46:B0:27:GLU:HB2	46:B0:69:PHE:HD1	1.77	0.49
1:CA:59:A:H5''	1:CA:60:A:H5''	1.94	0.49
1:CA:999:C:C4	1:CA:1042:G:C2	2.99	0.49
1:CA:1047:G:H5''	14:CN:4:LYS:HD3	1.93	0.49
1:CA:1176:A:H2'	1:CA:1177:G:C8	2.47	0.49
1:CA:1516:G:N2	1:CA:1519:A:OP2	2.45	0.49
2:CB:230:VAL:HG22	2:CB:231:GLU:H	1.77	0.49
7:CG:47:CYS:O	7:CG:50:ILE:HG12	2.11	0.49
8:CH:124:ALA:O	8:CH:128:GLY:N	2.44	0.49
19:CS:27:GLU:HG2	19:CS:47:HIS:NE2	2.28	0.49
25:DA:608:A:H2'	25:DA:609:A:C8	2.47	0.49
25:DA:1161:C:H2'	25:DA:1162:G:C8	2.46	0.49
25:DA:1651:G:H5'	37:DR:39:PRO:HG2	1.94	0.49
25:DA:1996:C:H4'	25:DA:1997:G:OP1	2.11	0.49
27:DD:71:ASP:HB2	27:DD:103:ARG:NH2	2.22	0.49
32:DI:140:LEU:HD13	32:DI:142:VAL:HG13	1.94	0.49
1:AA:41:G:H2'	1:AA:42:G:C8	2.47	0.49
1:AA:615:C:H2'	1:AA:616:G:O4'	2.12	0.49
1:AA:1298:C:H4'	1:AA:1299:A:C4	2.46	0.49
1:AA:1492:A:H1'	25:BA:1935:A:H61	1.78	0.49
20:AT:57:ARG:HH22	20:AT:100:ILE:HD12	1.77	0.49
21:AU:9:ARG:HA	21:AU:22:ARG:HB2	1.94	0.49
25:BA:296:U:H2'	25:BA:297:C:C6	2.46	0.49
25:BA:354:A:HO2'	25:BA:355:A:H8	1.58	0.49
25:BA:1001:G:OP2	36:BQ:87:LYS:HE2	2.12	0.49
25:BA:1222:A:H3'	25:BA:1223:C:C6	2.48	0.49
25:BA:2314:G:C2	25:BA:2327:G:C2	3.00	0.49
31:BH:20:ALA:HB1	31:BH:21:PRO:HD2	1.93	0.49
32:BI:38:LEU:HB2	32:BI:40:THR:HG22	1.94	0.49
41:BV:98:GLU:OE1	41:BV:100:ARG:HD3	2.12	0.49
42:BW:18:ARG:NH1	42:BW:76:VAL:O	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:297:G:N2	1:CA:300:A:OP2	2.45	0.49
1:CA:358:U:H2'	1:CA:359:U:C6	2.47	0.49
1:CA:691:G:H2'	1:CA:692:U:C6	2.46	0.49
1:CA:1057:G:C5	1:CA:1204:A:C2	3.00	0.49
7:CG:132:GLY:O	7:CG:136:LYS:HG2	2.12	0.49
10:CJ:11:PHE:CE1	10:CJ:67:THR:HG22	2.47	0.49
12:CL:54:LYS:O	12:CL:70:ILE:HG13	2.11	0.49
25:DA:812:C:H2'	25:DA:813:U:H6	1.77	0.49
26:DB:78:A:H2'	26:DB:79:C:O4'	2.12	0.49
29:DF:20:LEU:HD22	29:DF:21:ALA:H	1.77	0.49
34:DO:2:ILE:HD12	34:DO:6:THR:HG21	1.94	0.49
35:DP:84:ASN:OD1	35:DP:117:GLU:HB2	2.12	0.49
47:D1:7:ILE:HG23	47:D1:98:LEU:HD11	1.93	0.49
54:D8:3:LYS:HB2	54:D8:64:TYR:OH	2.11	0.49
1:AA:391:G:O3'	16:AP:8:ARG:NH2	2.46	0.49
1:AA:757:U:H2'	1:AA:758:G:O4'	2.11	0.49
12:AL:25:PRO:HD2	12:AL:98:TYR:OH	2.12	0.49
25:BA:1248:G:O6	61:BA:4634:HOH:O	2.19	0.49
25:BA:1904:C:H2'	25:BA:1905:G:O4'	2.13	0.49
25:BA:2827:G:OP1	37:BR:99:LYS:HE2	2.12	0.49
26:BB:15:A:OP1	26:BB:108:U:O2'	2.24	0.49
29:BF:31:HIS:HB2	35:BP:9:ASN:OD1	2.12	0.49
29:BF:103:LYS:HA	29:BF:106:ARG:HG3	1.94	0.49
33:BN:96:GLU:CD	33:BN:96:GLU:H	2.16	0.49
51:B5:16:ARG:HH11	51:B5:16:ARG:HG2	1.78	0.49
1:CA:189(L):G:H2'	1:CA:190:U:H6	1.76	0.49
1:CA:1025:U:O2'	1:CA:1026:G:H5''	2.12	0.49
1:CA:1079:G:O3'	5:CE:14:ARG:NH2	2.44	0.49
1:CA:1240:U:OP2	7:CG:115:ARG:HA	2.12	0.49
12:CL:24:VAL:HG13	12:CL:98:TYR:CE1	2.47	0.49
13:CM:60:VAL:HG23	13:CM:64:TRP:HE3	1.77	0.49
16:CP:74:LEU:O	16:CP:79:VAL:HG23	2.13	0.49
24:CW:9:MVA:HG13	24:CW:10:2QY:H82	1.94	0.49
25:DA:637:A:H2'	35:DP:117:GLU:OE2	2.11	0.49
25:DA:816:C:O2'	25:DA:932:G:O6	2.31	0.49
25:DA:2592:G:N7	61:DA:3923:HOH:O	2.34	0.49
31:DH:3:ARG:HH22	31:DH:5:GLY:H	1.61	0.49
31:DH:27:LYS:HZ3	31:DH:32:GLU:HB2	1.77	0.49
35:DP:97:PRO:HD3	35:DP:126:VAL:O	2.11	0.49
39:DT:51:ARG:HG3	39:DT:98:LYS:HD2	1.94	0.49
50:D4:46:GLN:HG3	50:D4:48:ARG:HH21	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:130:A:O2'	1:AA:131:C:O5'	2.28	0.49
1:AA:394:G:H2'	1:AA:395:C:C6	2.46	0.49
1:AA:665:A:H1'	1:AA:733:A:O4'	2.12	0.49
1:AA:1189:C:H5''	1:AA:1190:G:OP2	2.13	0.49
1:AA:1243:C:H2'	1:AA:1244:C:H6	1.78	0.49
4:AD:30:LYS:HA	4:AD:35:ARG:HH11	1.78	0.49
25:BA:407:U:H2'	25:BA:408:G:C8	2.47	0.49
25:BA:809:U:H4'	25:BA:810:G:O5'	2.12	0.49
25:BA:1298:G:C2	25:BA:1299:A:C2	3.01	0.49
25:BA:1940:A:O2'	25:BA:1942:C:N4	2.46	0.49
25:BA:2398:C:O2'	61:BA:3871:HOH:O	2.20	0.49
40:BU:58:ARG:HA	40:BU:61:TRP:CE3	2.47	0.49
1:CA:1228:C:OP1	13:CM:115:LYS:N	2.33	0.49
4:CD:150:GLU:HA	4:CD:153:ARG:HE	1.77	0.49
8:CH:20:TYR:CE2	8:CH:75:ARG:HG2	2.47	0.49
8:CH:51:VAL:HG11	8:CH:60:ARG:NH1	2.20	0.49
25:DA:315:G:H2'	25:DA:316:C:C6	2.48	0.49
25:DA:483:A:O2'	44:DY:49:VAL:O	2.19	0.49
25:DA:684:G:OP1	53:D7:16:HIS:ND1	2.45	0.49
25:DA:1614:A:C2	42:DW:93:ALA:HB2	2.47	0.49
25:DA:2552:U:C2	25:DA:2554:U:H5''	2.48	0.49
25:DA:2845:G:H2'	25:DA:2846:G:H8	1.75	0.49
34:DO:20:MET:HE3	34:DO:44:LYS:HE3	1.95	0.49
43:DX:44:GLU:O	43:DX:48:LYS:N	2.45	0.49
1:AA:542:G:H2'	1:AA:543:C:C6	2.47	0.49
1:AA:678:U:H2'	1:AA:679:C:C6	2.47	0.49
1:AA:999:C:H2'	1:AA:1000:U:O4'	2.13	0.49
2:AB:20:GLU:HG2	2:AB:191:ASP:HB3	1.94	0.49
5:AE:84:PHE:CE2	5:AE:133:TYR:HD2	2.31	0.49
13:AM:50:GLU:O	13:AM:54:VAL:HG22	2.13	0.49
25:BA:207:A:C2	25:BA:224:U:H4'	2.47	0.49
25:BA:672:G:H8	25:BA:672:G:O5'	1.96	0.49
25:BA:1825:U:H2'	25:BA:1826:C:C6	2.47	0.49
25:BA:1919:G:H2'	25:BA:1920:U:O4'	2.13	0.49
25:BA:2879:G:H2'	25:BA:2880:C:O4'	2.13	0.49
1:CA:628:G:H2'	1:CA:629:G:C8	2.48	0.49
1:CA:1423:G:P	34:DO:49:ARG:HH12	2.34	0.49
2:CB:221:LEU:HD13	2:CB:224:GLN:HE22	1.76	0.49
9:CI:38:GLN:HG2	9:CI:39:GLY:N	2.27	0.49
12:CL:24:VAL:HG13	12:CL:98:TYR:HE1	1.77	0.49
25:DA:176:G:O2'	25:DA:177:G:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:807:U:OP1	35:DP:36:LYS:NZ	2.40	0.49
25:DA:1472:A:H2'	25:DA:1473:G:O4'	2.13	0.49
25:DA:2471:C:N4	25:DA:2476:A:O2'	2.46	0.49
32:DI:70:GLU:O	32:DI:74:ASN:HB2	2.13	0.49
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.12	0.49
1:AA:540:G:H2'	1:AA:541:G:O4'	2.12	0.49
1:AA:1015:A:H2'	1:AA:1016:A:H8	1.78	0.49
2:AB:98:LEU:HB2	2:AB:101:MET:SD	2.52	0.49
9:AI:21:PRO:HA	9:AI:59:PHE:HA	1.94	0.49
13:AM:40:ASN:O	13:AM:43:THR:OG1	2.29	0.49
25:BA:1098:C:O5'	25:BA:1098:C:H6	1.96	0.49
25:BA:1552:C:O2'	25:BA:1553:A:H5'	2.13	0.49
25:BA:1700:G:H3'	37:BR:2:ARG:HD3	1.93	0.49
25:BA:2507:G:H5''	36:BQ:82:ARG:HG2	1.93	0.49
27:BD:175:LEU:HD12	27:BD:185:VAL:HG21	1.95	0.49
1:CA:253:U:H2'	1:CA:254:G:H8	1.77	0.49
1:CA:377:G:OP1	16:CP:3:LYS:HD2	2.13	0.49
1:CA:427:U:H2'	1:CA:428:G:C8	2.48	0.49
1:CA:975:A:H4'	1:CA:976:G:C5'	2.40	0.49
1:CA:1012:U:H2'	1:CA:1013:G:C8	2.47	0.49
1:CA:1151:A:H5''	10:CJ:41:PRO:HA	1.95	0.49
2:CB:23:ARG:HB2	2:CB:23:ARG:NH1	2.28	0.49
25:DA:491:G:H2'	25:DA:492:A:C8	2.48	0.49
25:DA:539:G:H2'	25:DA:540:C:C6	2.47	0.49
25:DA:601:C:O2'	29:DF:104:LYS:NZ	2.46	0.49
25:DA:895:U:O2'	25:DA:896:A:H2'	2.13	0.49
25:DA:1313:U:H2'	25:DA:1610:A:N1	2.27	0.49
25:DA:1899:G:N3	25:DA:1899:G:H2'	2.28	0.49
25:DA:2880:C:O3'	37:DR:90:ARG:NH1	2.45	0.49
1:AA:191:G:C6	1:AA:192:U:C4	3.01	0.49
1:AA:250:A:H4'	1:AA:251:G:O5'	2.13	0.49
1:AA:302:G:N3	1:AA:556:C:H4'	2.28	0.49
1:AA:445:G:H2'	1:AA:446:G:H8	1.78	0.49
1:AA:472:A:N6	1:AA:473:G:C2	2.80	0.49
25:BA:231:G:C8	54:B8:5:LYS:HG2	2.48	0.49
25:BA:330:U:H2'	25:BA:331:G:O4'	2.13	0.49
25:BA:821:A:N3	25:BA:821:A:H2'	2.27	0.49
25:BA:1317:G:OP2	61:BA:4516:HOH:O	2.20	0.49
25:BA:1521:C:H2'	25:BA:1522:G:C8	2.48	0.49
25:BA:1810:U:H2'	61:BA:4800:HOH:O	2.11	0.49
25:BA:2316:G:H22	25:BA:2324:U:H3	1.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B3:11:SER:OG	49:B3:13:ILE:HG13	2.12	0.49
1:CA:600:C:H2'	1:CA:601:C:C6	2.48	0.49
2:CB:208:ILE:HA	2:CB:211:ILE:HD12	1.95	0.49
14:CN:47:LEU:O	14:CN:51:GLY:N	2.44	0.49
25:DA:989:G:H4'	25:DA:990:A:OP1	2.12	0.49
25:DA:999:U:O2'	25:DA:1000:A:H5'	2.13	0.49
25:DA:1434:A:H61	25:DA:1558:A:H62	1.59	0.49
25:DA:1531:C:N4	25:DA:1538:G:H1	2.10	0.49
25:DA:2100:G:H2'	25:DA:2101:G:H5'	1.94	0.49
25:DA:2649:U:H2'	25:DA:2650:U:C6	2.47	0.49
27:DD:228:PRO:HD3	27:DD:235:GLY:CA	2.42	0.49
29:DF:88:VAL:HG21	29:DF:91:GLY:HA3	1.95	0.49
41:DV:24:LYS:HA	41:DV:92:THR:OG1	2.12	0.49
1:AA:308:C:H2'	1:AA:309:G:H8	1.77	0.49
1:AA:438:G:O2'	1:AA:494:U:O4	2.23	0.49
1:AA:542:G:H2'	1:AA:543:C:H6	1.78	0.49
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.13	0.49
2:AB:20:GLU:O	2:AB:40:HIS:HB2	2.12	0.49
23:AX:8:U:H6	23:AX:8:U:O5'	1.95	0.49
25:BA:1588:G:H5''	25:BA:1589:A:OP2	2.12	0.49
36:BQ:133:ARG:HG2	36:BQ:134:ARG:N	2.28	0.49
40:BU:24:TYR:HB2	40:BU:29:SER:HB3	1.95	0.49
1:CA:164:U:H2'	1:CA:165:C:C6	2.47	0.49
1:CA:1129:C:H4'	9:CI:16:ARG:HH22	1.78	0.49
9:CI:49:PRO:HG2	9:CI:81:ILE:HG23	1.95	0.49
30:DG:7:LEU:HD22	30:DG:100:TRP:HE3	1.78	0.49
33:DN:104:LYS:HA	33:DN:107:LEU:HD12	1.93	0.49
37:DR:72:ASP:O	37:DR:76:VAL:HG23	2.13	0.49
44:DY:14:LEU:HB2	44:DY:75:ILE:HD11	1.95	0.49
44:DY:35:TYR:CE2	44:DY:69:ALA:HB3	2.47	0.49
1:AA:276:G:H2'	1:AA:277:C:H5'	1.95	0.49
1:AA:392:G:H2'	1:AA:393:A:H8	1.78	0.49
1:AA:864:A:H2'	1:AA:865:A:C8	2.47	0.49
1:AA:1183:A:H3'	1:AA:1184:G:H5''	1.95	0.49
1:AA:1237:C:O2'	1:AA:1300:G:N2	2.45	0.49
9:AI:15:ALA:HB2	9:AI:65:VAL:HG23	1.94	0.49
25:BA:602:G:H2'	25:BA:603:C:C6	2.48	0.49
45:BZ:146:ILE:HA	45:BZ:147:GLY:HA2	1.62	0.49
50:B4:20:ASN:ND2	50:B4:36:CYS:SG	2.82	0.49
1:CA:532:A:H2	1:CA:1207:G:H4'	1.77	0.49
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:29:TYR:OH	14:CN:54:PRO:O	2.23	0.49
3:CC:36:ASP:O	3:CC:40:ARG:HG3	2.12	0.49
16:CP:28:ARG:HG3	16:CP:29:ASP:N	2.28	0.49
25:DA:321:G:OP2	29:DF:135:LYS:HG3	2.12	0.49
25:DA:1815:A:P	27:DD:54:ARG:HH22	2.36	0.49
25:DA:2740:A:C6	25:DA:2741:A:C6	3.01	0.49
35:DP:38:GLN:HG2	35:DP:45:LEU:H	1.78	0.49
38:DS:15:ARG:O	38:DS:19:LYS:HG2	2.12	0.49
1:AA:435:C:H2'	1:AA:436:C:H6	1.77	0.48
1:AA:438:G:OP1	4:AD:125:HIS:NE2	2.33	0.48
1:AA:1015:A:H8	1:AA:1015:A:O5'	1.96	0.48
1:AA:1145:C:H5''	1:AA:1146:A:OP1	2.13	0.48
1:AA:1438:G:H2'	1:AA:1439:C:H6	1.77	0.48
20:AT:9:ASN:ND2	20:AT:10:LEU:H	2.11	0.48
25:BA:1525:G:O2'	25:BA:1605:A:N1	2.43	0.48
25:BA:1615:G:OP2	27:BD:63:ARG:NH2	2.45	0.48
34:BO:7:TYR:CE1	34:BO:20:MET:HB2	2.48	0.48
1:CA:199:G:O2'	1:CA:200:G:H5'	2.12	0.48
1:CA:831:U:H3	1:CA:855:G:H1	1.60	0.48
1:CA:1006:C:C4	1:CA:1007:C:C5	3.01	0.48
1:CA:1051:C:H2'	1:CA:1052:U:C6	2.48	0.48
7:CG:22:LEU:HD13	7:CG:97:GLN:OE1	2.13	0.48
7:CG:133:GLY:O	7:CG:137:LYS:N	2.45	0.48
8:CH:83:ILE:HB	8:CH:137:VAL:HG13	1.95	0.48
12:CL:123:LYS:H	12:CL:123:LYS:HG2	1.37	0.48
25:DA:409:C:O2'	25:DA:410:G:H5'	2.12	0.48
25:DA:792:G:OP2	61:DA:3818:HOH:O	2.20	0.48
25:DA:2031:A:N3	25:DA:2455:G:O2'	2.41	0.48
25:DA:2505:G:O6	25:DA:2576:G:H2'	2.13	0.48
28:DE:178:GLU:OE2	28:DE:178:GLU:N	2.36	0.48
31:DH:86:GLU:OE1	31:DH:130:ARG:HD3	2.13	0.48
36:DQ:65:PHE:HB2	36:DQ:105:GLU:HB2	1.93	0.48
44:DY:49:VAL:HG21	44:DY:61:ILE:HG23	1.94	0.48
54:D8:6:THR:HG22	54:D8:63:PRO:HD2	1.94	0.48
54:D8:62:LEU:HB3	54:D8:65:GLU:HG2	1.94	0.48
1:AA:62:U:O2'	1:AA:379:C:H1'	2.14	0.48
1:AA:236:G:H2'	1:AA:237:C:C6	2.47	0.48
1:AA:293:G:C6	1:AA:294:U:C4	3.01	0.48
1:AA:1353:G:OP1	21:AU:10:ARG:NH1	2.45	0.48
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.48	0.48
8:AH:13:ILE:O	8:AH:17:THR:HG23	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:5:ARG:HH21	10:AJ:73:ASP:CG	2.17	0.48
25:BA:839:G:H5''	25:BA:840:A:H5'	1.95	0.48
25:BA:870:G:C6	25:BA:882:A:N1	2.80	0.48
25:BA:1285:G:H2'	25:BA:1286:U:O4'	2.13	0.48
25:BA:1314:A:H2'	25:BA:1315:A:O4'	2.13	0.48
25:BA:1817:A:H1'	25:BA:1960:A:N6	2.28	0.48
25:BA:2444:A:C8	47:B1:33:LYS:HD2	2.48	0.48
1:CA:730:G:C5	1:CA:731:G:H1'	2.47	0.48
1:CA:736:C:H2'	1:CA:737:A:C8	2.47	0.48
1:CA:1036:G:H3'	1:CA:1037:C:O4'	2.14	0.48
2:CB:105:PHE:CD2	2:CB:158:LEU:HG	2.48	0.48
4:CD:63:LYS:HG3	4:CD:198:VAL:HG22	1.95	0.48
7:CG:111:ARG:HB3	7:CG:113:GLU:OE2	2.12	0.48
25:DA:116:C:H2'	25:DA:117:G:O4'	2.12	0.48
25:DA:322:A:OP2	29:DF:169:ASN:HB2	2.13	0.48
25:DA:2261:C:O2'	25:DA:2262:U:H5'	2.13	0.48
25:DA:2360:A:H2'	25:DA:2361:A:O4'	2.13	0.48
25:DA:2391:G:O2'	25:DA:2422:A:N7	2.46	0.48
25:DA:2711:A:OP2	61:DA:3973:HOH:O	2.20	0.48
29:DF:167:ALA:HB1	29:DF:173:VAL:HG11	1.95	0.48
31:DH:94:TYR:CE2	31:DH:160:LYS:HG2	2.48	0.48
32:DI:75:LEU:HD11	32:DI:105:HIS:CD2	2.47	0.48
37:DR:103:ARG:NH1	37:DR:110:PRO:HD3	2.28	0.48
1:AA:430:A:OP2	4:AD:8:VAL:HG12	2.13	0.48
1:AA:437:U:O3'	4:AD:125:HIS:HE1	1.96	0.48
1:AA:1051:C:H2'	1:AA:1052:U:H6	1.79	0.48
1:AA:1052:U:H5''	1:AA:1053:G:OP2	2.13	0.48
1:AA:1340:A:O2'	23:AX:31:G:O3'	2.31	0.48
3:AC:52:LEU:HA	3:AC:70:VAL:HG22	1.95	0.48
20:AT:9:ASN:HD22	20:AT:10:LEU:H	1.61	0.48
20:AT:56:MET:HG3	20:AT:84:LEU:HD22	1.95	0.48
25:BA:70:A:H3'	25:BA:70:A:OP2	2.13	0.48
25:BA:347:G:C8	29:BF:171:PRO:HG3	2.48	0.48
25:BA:794:U:O2	25:BA:2036:A:H1'	2.13	0.48
27:BD:72:LYS:HE3	27:BD:75:ILE:HD12	1.95	0.48
36:BQ:55:VAL:HG12	36:BQ:64:ILE:HD12	1.96	0.48
44:BY:53:PRO:HA	44:BY:56:PRO:HD3	1.94	0.48
48:B2:32:LEU:HD23	48:B2:53:LEU:HB3	1.95	0.48
50:B4:46:GLN:HG2	50:B4:48:ARG:HG2	1.95	0.48
1:CA:5:U:H5'	1:CA:6:G:C5	2.48	0.48
1:CA:48:C:OP2	61:CA:4095:HOH:O	2.20	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:129(A):G:C6	1:CA:189(E):U:H4'	2.48	0.48
1:CA:460:G:H1'	1:CA:472:A:H61	1.77	0.48
1:CA:1014:A:H2'	1:CA:1015:A:C8	2.49	0.48
1:CA:1038:C:O2'	1:CA:1039:C:H5'	2.13	0.48
1:CA:1095:U:OP1	1:CA:1108:G:N2	2.36	0.48
1:CA:1288:A:H2'	1:CA:1289:A:C8	2.49	0.48
13:CM:37:THR:HG21	13:CM:56:LEU:HA	1.94	0.48
25:DA:328:U:H4'	44:DY:68:HIS:CD2	2.49	0.48
25:DA:1916:A:H2'	25:DA:1917:U:O4'	2.12	0.48
25:DA:2025:C:H2'	25:DA:2026:C:C6	2.49	0.48
36:DQ:27:VAL:HG11	36:DQ:134:ARG:HG3	1.95	0.48
38:DS:87:PHE:CZ	38:DS:102:ALA:HB2	2.48	0.48
40:DU:113:ALA:O	40:DU:117:GLN:HG2	2.13	0.48
1:AA:384:G:C2	1:AA:385:C:C4	3.02	0.48
1:AA:1530:G:OP1	1:AA:1530:G:H4'	2.13	0.48
2:AB:12:GLU:O	2:AB:15:VAL:HG13	2.14	0.48
2:AB:15:VAL:HG11	2:AB:213:LEU:HD12	1.95	0.48
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.95	0.48
2:AB:77:ALA:O	2:AB:81:VAL:HG22	2.13	0.48
4:AD:175:SER:OG	4:AD:184:LYS:HB2	2.13	0.48
7:AG:72:ARG:HG3	7:AG:142:GLU:OE2	2.12	0.48
25:BA:596:G:O2'	25:BA:597:C:H3'	2.13	0.48
25:BA:1845:G:H4'	27:BD:51:VAL:HG21	1.96	0.48
25:BA:2601:A:N3	61:BA:3847:HOH:O	2.35	0.48
25:BA:2623:U:H5'	25:BA:2623:U:H6	1.79	0.48
28:BE:179:GLU:HB3	28:BE:181:LEU:HD22	1.95	0.48
33:BN:28:THR:HG22	33:BN:29:LYS:N	2.29	0.48
36:BQ:54:MET:HG3	36:BQ:117:ALA:HB1	1.95	0.48
1:CA:216:G:H2'	1:CA:217:C:C6	2.49	0.48
1:CA:255:G:OP1	17:CQ:69:LYS:NZ	2.35	0.48
1:CA:986:A:O2'	19:CS:55:LYS:O	2.31	0.48
1:CA:1005:A:H8	1:CA:1005:A:O5'	1.96	0.48
1:CA:1007:C:N4	1:CA:1022:G:C6	2.81	0.48
1:CA:1040:U:C4	1:CA:1041:A:C8	3.01	0.48
1:CA:1226:C:H4'	19:CS:80:TYR:CZ	2.49	0.48
1:CA:1446:U:O2'	1:CA:1447:A:O5'	2.31	0.48
2:CB:71:VAL:HG23	2:CB:164:VAL:HA	1.95	0.48
2:CB:97:TRP:CH2	2:CB:173:ALA:HA	2.49	0.48
2:CB:127:ILE:HG12	2:CB:128:GLU:H	1.78	0.48
6:CF:24:GLU:HG3	6:CF:28:ARG:HD3	1.95	0.48
16:CP:43:LYS:HA	16:CP:48:TRP:HB3	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:330:A:HO2'	25:DA:331:A:H8	1.61	0.48
25:DA:614(C):A:N3	29:DF:180:GLY:HA2	2.29	0.48
25:DA:784:A:OP2	61:DA:4063:HOH:O	2.20	0.48
25:DA:1449:A:H5'	25:DA:1450:G:OP2	2.14	0.48
25:DA:1520:G:H3'	25:DA:1523:U:H6	1.78	0.48
25:DA:2001:A:H2'	25:DA:2002:G:C8	2.49	0.48
25:DA:2293:C:OP1	25:DA:2377:A:N6	2.46	0.48
25:DA:2872:G:C2	25:DA:2873:A:N6	2.82	0.48
27:DD:58:HIS:HD1	27:DD:59:LYS:N	2.11	0.48
27:DD:242:ARG:N	27:DD:242:ARG:HD3	2.28	0.48
30:DG:136:ARG:HD2	30:DG:137:GLU:N	2.28	0.48
31:DH:113:VAL:HG11	31:DH:151:ILE:HD13	1.94	0.48
32:DI:29:TYR:O	32:DI:33:ARG:HD2	2.14	0.48
1:AA:620:C:H2'	1:AA:621:A:O4'	2.14	0.48
1:AA:926:G:C6	1:AA:1505:G:C6	3.02	0.48
1:AA:1131:G:H8	1:AA:1131:G:O5'	1.96	0.48
1:AA:1182:G:C4'	1:AA:1183:A:H5'	2.43	0.48
1:AA:1327:C:H2'	1:AA:1328:C:C6	2.48	0.48
23:AX:19:G:H4'	23:AX:20:U:OP2	2.12	0.48
25:BA:956:A:C5	36:BQ:13:GLN:HG3	2.49	0.48
25:BA:2303:U:O2'	25:BA:2386:C:O2	2.24	0.48
27:BD:68:LYS:HD2	27:BD:70:TRP:CH2	2.48	0.48
30:BG:56:ALA:HA	30:BG:153:ARG:NH2	2.29	0.48
31:BH:56:SER:OG	31:BH:58:GLU:HG2	2.13	0.48
34:BO:101:PRO:HG3	39:BT:67:SER:OG	2.13	0.48
52:B6:21:TYR:CE2	52:B6:38:LYS:HG2	2.48	0.48
1:CA:520:A:N1	1:CA:536:C:H1'	2.29	0.48
1:CA:554:C:H2'	1:CA:555:C:H6	1.77	0.48
1:CA:839:U:H5''	1:CA:840:C:C5	2.48	0.48
1:CA:1003:G:C6	1:CA:1004:A:C2	3.02	0.48
2:CB:16:HIS:CG	2:CB:17:PHE:N	2.81	0.48
3:CC:34:LEU:HG	3:CC:38:ARG:HH12	1.78	0.48
6:CF:68:PRO:HB2	6:CF:71:ARG:HG3	1.95	0.48
11:CK:19:ALA:HA	11:CK:32:ILE:HD13	1.96	0.48
11:CK:33:THR:HA	11:CK:39:PRO:HA	1.95	0.48
25:DA:428:A:H3'	25:DA:429:A:C8	2.48	0.48
25:DA:507:A:H5''	25:DA:508:G:H3'	1.95	0.48
25:DA:934:G:H2'	25:DA:935:C:H6	1.79	0.48
25:DA:2680:C:H5'	28:DE:189:PRO:HA	1.96	0.48
30:DG:41:GLN:NE2	30:DG:154:GLY:O	2.46	0.48
31:DH:26:VAL:HG12	31:DH:79:VAL:HG11	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DO:98:VAL:HG22	34:DO:118:ALA:HA	1.95	0.48
41:DV:30:GLY:H	41:DV:61:VAL:HG13	1.79	0.48
1:AA:1298:C:H2'	7:AG:114:ARG:NH1	2.28	0.48
2:AB:19:HIS:NE2	2:AB:206:ASP:OD2	2.46	0.48
2:AB:168:THR:OG1	2:AB:192:SER:HB3	2.13	0.48
7:AG:152:ALA:HB1	7:AG:155:ARG:NH2	2.28	0.48
10:AJ:5:ARG:HD3	10:AJ:71:LEU:HD11	1.95	0.48
10:AJ:57:LYS:HD2	10:AJ:60:ARG:HH21	1.79	0.48
13:AM:15:VAL:O	13:AM:19:LEU:HD22	2.13	0.48
19:AS:3:ARG:NH1	19:AS:10:PHE:HB2	2.27	0.48
25:BA:1537:G:O2'	27:BD:101:GLU:HB2	2.14	0.48
25:BA:2343:G:O2'	25:BA:2348:A:N1	2.35	0.48
30:BG:102:PHE:HE1	30:BG:141:PHE:CE2	2.26	0.48
48:B2:32:LEU:HD12	48:B2:36:ARG:NH1	2.29	0.48
1:CA:270:A:H2'	1:CA:271:C:C6	2.48	0.48
1:CA:585:G:N3	1:CA:879:C:H4'	2.29	0.48
1:CA:1002:G:H1	1:CA:1038:C:H42	0.67	0.48
1:CA:1015:A:H1'	1:CA:1219:U:H5'	1.95	0.48
1:CA:1169:A:H8	1:CA:1169:A:H3'	1.79	0.48
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.29	0.48
2:CB:73:THR:HB	2:CB:95:GLN:O	2.14	0.48
7:CG:78:ARG:HH21	7:CG:156:TRP:HB3	1.78	0.48
8:CH:49:GLU:HG2	8:CH:62:TYR:CE2	2.45	0.48
9:CI:31:GLN:HB2	9:CI:35:GLU:OE2	2.13	0.48
10:CJ:42:THR:CG2	10:CJ:68:HIS:HD2	2.25	0.48
10:CJ:47:PHE:CZ	14:CN:37:PHE:HE1	2.32	0.48
12:CL:34:ARG:HG2	12:CL:35:GLY:N	2.29	0.48
25:DA:180:G:H5''	25:DA:181:A:OP2	2.13	0.48
25:DA:784:A:C8	25:DA:792:G:C5	3.01	0.48
25:DA:1163:G:C2	25:DA:1164:G:C8	3.01	0.48
25:DA:1666:G:OP1	34:DO:66:LYS:HE3	2.14	0.48
30:DG:101:ILE:HD13	50:D4:25:TYR:HB2	1.94	0.48
31:DH:24:VAL:HG13	31:DH:37:VAL:HG21	1.96	0.48
34:DO:120:GLU:HG2	34:DO:122:LEU:HG	1.95	0.48
38:DS:27:SER:HA	38:DS:88:ASP:HB3	1.95	0.48
42:DW:70:TYR:OH	42:DW:72:LYS:HG3	2.14	0.48
1:AA:154:C:H5	1:AA:155:C:C5	2.31	0.48
1:AA:364:A:H2'	1:AA:365:U:H6	1.79	0.48
3:AC:135:LYS:HE2	5:AE:53:LEU:HD11	1.95	0.48
10:AJ:68:HIS:H	10:AJ:68:HIS:CD2	2.31	0.48
25:BA:217:A:H2'	25:BA:219:U:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:438:G:C5	35:BP:72:PRO:HB3	2.49	0.48
25:BA:1093:G:H2'	25:BA:1156:G:N2	2.26	0.48
25:BA:1604:C:H5''	25:BA:1605:A:OP2	2.14	0.48
25:BA:1815:A:H5''	61:BA:4186:HOH:O	2.13	0.48
32:BI:100:ALA:HA	32:BI:103:ARG:HG2	1.94	0.48
46:B0:53:MET:HG3	46:B0:59:LEU:CD2	2.43	0.48
1:CA:422:C:H4'	1:CA:423:G:C4	2.48	0.48
1:CA:758:G:H8	1:CA:758:G:H5''	1.78	0.48
1:CA:999:C:N4	1:CA:1042:G:C2	2.81	0.48
1:CA:999:C:N4	1:CA:1043:C:C4	2.81	0.48
1:CA:1137:C:H1'	1:CA:1138:G:C2	2.48	0.48
1:CA:1277:C:O2'	1:CA:1279:A:H8	1.94	0.48
1:CA:1320:C:C1'	19:CS:73:GLU:HG3	2.44	0.48
1:CA:1342:C:H1'	9:CI:124:GLN:NE2	2.28	0.48
25:DA:78:A:H2'	25:DA:79:G:H8	1.78	0.48
25:DA:1041:C:OP1	45:DZ:46:LYS:NZ	2.43	0.48
25:DA:2094:G:OP1	32:DI:22:LYS:HD2	2.14	0.48
25:DA:2489:G:C6	25:DA:2490:G:C6	3.02	0.48
26:DB:50:G:OP2	38:DS:62:LYS:HD3	2.13	0.48
41:DV:6:LYS:HB2	41:DV:38:LEU:HD21	1.94	0.48
1:AA:1206:G:C6	1:AA:1207:G:C5	3.01	0.48
3:AC:32:LEU:HD22	3:AC:59:ARG:HH12	1.79	0.48
13:AM:84:ILE:HD12	19:AS:74:PHE:HZ	1.78	0.48
16:AP:52:ASP:OD1	16:AP:54:GLU:HG3	2.14	0.48
20:AT:10:LEU:HB3	20:AT:12:ALA:H	1.79	0.48
25:BA:137:G:O2'	25:BA:138:G:H5'	2.14	0.48
25:BA:388:A:H2'	25:BA:389:G:H8	1.77	0.48
25:BA:860:U:H2'	25:BA:861:C:C6	2.48	0.48
25:BA:1576:G:O2'	25:BA:1577:C:H5'	2.14	0.48
25:BA:2814:C:H2'	25:BA:2815:C:O4'	2.14	0.48
27:BD:9:TYR:CZ	27:BD:13:ARG:HG2	2.49	0.48
1:CA:364:A:H2'	1:CA:365:U:H6	1.79	0.48
1:CA:418:C:H2'	1:CA:419:C:C6	2.48	0.48
1:CA:797:C:O2'	1:CA:798:G:H5'	2.13	0.48
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.13	0.48
1:CA:1492:A:H2'	1:CA:1493:A:C1'	2.43	0.48
4:CD:15:GLU:OE2	4:CD:66:ARG:NH1	2.46	0.48
10:CJ:8:LEU:CD2	10:CJ:96:ILE:HG23	2.43	0.48
14:CN:7:ILE:HG12	14:CN:8:GLU:N	2.27	0.48
16:CP:51:VAL:O	16:CP:53:VAL:HG23	2.14	0.48
25:DA:1256:G:H5'	25:DA:1257:C:OP2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1287:A:H5''	25:DA:1288:U:OP2	2.13	0.48
27:DD:132:PRO:HG2	27:DD:135:PHE:CD2	2.44	0.48
31:DH:20:ALA:HB3	31:DH:23:ARG:HG3	1.95	0.48
48:D2:10:LEU:HD22	48:D2:14:ARG:NH1	2.29	0.48
1:AA:300:A:H2'	1:AA:301:G:O4'	2.13	0.48
1:AA:300:A:O2'	1:AA:564:C:N3	2.36	0.48
1:AA:430:A:OP1	4:AD:9:CYS:HB2	2.13	0.48
1:AA:658:G:H2'	1:AA:659:U:C6	2.48	0.48
1:AA:662:G:H2'	1:AA:663:A:C8	2.48	0.48
1:AA:1286:A:H2	21:AU:18:TYR:HH	1.60	0.48
25:BA:905:U:O2	25:BA:2280:A:H2'	2.14	0.48
25:BA:1093:G:HO2'	25:BA:1094:A:H8	1.61	0.48
25:BA:1362:U:H2'	25:BA:1363:A:C8	2.49	0.48
26:BB:8:U:O3'	38:BS:25:ARG:NH2	2.47	0.48
30:BG:50:ALA:O	30:BG:52:ILE:N	2.47	0.48
40:BU:16:LYS:HB3	40:BU:16:LYS:HE2	1.55	0.48
45:BZ:30:ASN:ND2	45:BZ:90:VAL:HB	2.28	0.48
45:BZ:152:ALA:HA	45:BZ:155:LEU:HD22	1.94	0.48
1:CA:192:U:O2'	20:CT:60:GLU:OE2	2.25	0.48
1:CA:790:A:H2'	1:CA:791:G:C8	2.49	0.48
1:CA:1151:A:O4'	10:CJ:39:PRO:HB2	2.14	0.48
1:CA:1321:C:H5''	1:CA:1322:C:H2'	1.95	0.48
1:CA:1333:A:H2'	1:CA:1334:G:O4'	2.13	0.48
6:CF:61:LEU:HD23	6:CF:63:TYR:OH	2.13	0.48
25:DA:892:G:H2'	25:DA:893:C:O4'	2.14	0.48
25:DA:1022:G:C6	25:DA:1140:C:C4	3.01	0.48
25:DA:1794:U:H2'	25:DA:1795:C:C6	2.49	0.48
25:DA:2261:C:H1'	25:DA:2388:A:N3	2.29	0.48
25:DA:2823:A:OP1	28:DE:159:HIS:NE2	2.42	0.48
34:DO:64:ARG:NH1	34:DO:81:ASP:OD1	2.47	0.48
34:DO:73:ASP:HB2	39:DT:82:LEU:HD13	1.96	0.48
45:DZ:19:ARG:HE	45:DZ:19:ARG:HB2	1.44	0.48
46:D0:27:GLU:HB2	46:D0:69:PHE:HD1	1.78	0.48
1:AA:376:G:H2'	1:AA:377:G:H8	1.79	0.48
1:AA:1028:C:H2'	1:AA:1029:C:O4'	2.14	0.48
1:AA:1234:C:C2'	1:AA:1235:U:H5'	2.44	0.48
1:AA:1237:C:HO2'	1:AA:1300:G:H1	1.62	0.48
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.96	0.48
25:BA:484:G:C8	53:B7:37:LYS:HG2	2.49	0.48
25:BA:1067:A:H8	25:BA:1067:A:H3'	1.79	0.48
26:BB:37:C:C5	26:BB:38:C:C5	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BW:86:LEU:HD12	42:BW:87:PRO:HD2	1.96	0.48
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.49	0.48
2:CB:8:LYS:HD2	2:CB:51:LEU:HD13	1.96	0.48
6:CF:10:LEU:HD12	6:CF:85:VAL:HA	1.94	0.48
17:CQ:62:SER:OG	17:CQ:72:ARG:HD3	2.13	0.48
25:DA:271(F):C:H2'	25:DA:271(G):C:H6	1.78	0.48
25:DA:729:G:OP2	27:DD:13:ARG:NH1	2.45	0.48
25:DA:1463:C:H2'	25:DA:1464:C:H6	1.78	0.48
28:DE:127:ASP:OD2	61:DE:408:HOH:O	2.19	0.48
29:DF:164:ARG:O	29:DF:168:ARG:HB2	2.14	0.48
30:DG:11:TYR:O	30:DG:16:ARG:HG2	2.13	0.48
32:DI:110:ASP:H	32:DI:130:TYR:HH	1.55	0.48
38:DS:53:SER:OG	38:DS:54:LEU:N	2.47	0.48
47:D1:64:ALA:HA	47:D1:67:ILE:HG13	1.96	0.48
1:AA:606:G:H1'	1:AA:632:A:H61	1.79	0.47
1:AA:1030(A):G:H2'	1:AA:1030(C):G:OP2	2.13	0.47
4:AD:12:CYS:SG	4:AD:19:LEU:N	2.77	0.47
4:AD:155:LEU:HD22	4:AD:156:GLU:N	2.29	0.47
9:AI:99:LEU:HB3	9:AI:101:PHE:HE1	1.79	0.47
25:BA:671:A:H2'	25:BA:672:G:O4'	2.14	0.47
25:BA:777:C:OP2	61:BA:4592:HOH:O	2.20	0.47
25:BA:1220:U:OP1	25:BA:1222:A:N6	2.47	0.47
25:BA:1925:G:OP1	27:BD:241:PRO:HB2	2.14	0.47
25:BA:2087:C:H2'	25:BA:2088:C:C6	2.49	0.47
25:BA:2303:U:H2'	25:BA:2304:C:C6	2.49	0.47
48:B2:32:LEU:CD1	48:B2:36:ARG:HH11	2.26	0.47
1:CA:671:G:H5'	6:CF:77:ARG:HH22	1.79	0.47
1:CA:785:G:H2'	1:CA:786:G:H5'	1.96	0.47
1:CA:1206:G:C6	1:CA:1207:G:C5	3.03	0.47
1:CA:1262:C:H42	1:CA:1273:G:H1	1.61	0.47
1:CA:1358:U:OP2	1:CA:1359:C:H5	1.97	0.47
2:CB:48:MET:HA	2:CB:51:LEU:HD12	1.96	0.47
6:CF:44:GLY:HA2	6:CF:59:TYR:CZ	2.48	0.47
19:CS:27:GLU:HB2	19:CS:28:LYS:HE2	1.95	0.47
25:DA:253:C:O2'	61:DA:4187:HOH:O	2.16	0.47
25:DA:688:U:H5'	25:DA:1780:A:C2	2.49	0.47
25:DA:867:C:O2	25:DA:913:U:H5'	2.14	0.47
25:DA:910:A:C5	36:DQ:13:GLN:HG3	2.49	0.47
25:DA:1593:G:C2	25:DA:1594:G:C4	3.02	0.47
27:DD:72:LYS:HB3	27:DD:75:ILE:HD12	1.96	0.47
29:DF:53:THR:HG22	29:DF:56:GLU:HG3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DF:126:VAL:HG21	29:DF:129:PHE:CZ	2.49	0.47
1:AA:49:U:H3	1:AA:362:G:H1'	1.80	0.47
5:AE:72:GLN:O	5:AE:75:THR:HG22	2.14	0.47
6:AF:44:GLY:HA2	6:AF:59:TYR:CE2	2.49	0.47
8:AH:96:GLY:H	8:AH:99:GLU:CD	2.18	0.47
25:BA:904:C:H4'	46:B0:23:VAL:HG21	1.96	0.47
25:BA:1086:C:H2'	25:BA:1087:C:O4'	2.14	0.47
25:BA:1091:A:OP1	25:BA:1092:A:H3'	2.13	0.47
25:BA:1686:U:O2'	25:BA:1687:C:H5'	2.14	0.47
28:BE:92:THR:O	28:BE:95:ILE:HG23	2.14	0.47
1:CA:109:A:H2'	1:CA:326:G:N2	2.28	0.47
1:CA:543:C:O2'	1:CA:544:G:H5'	2.14	0.47
4:CD:36:ARG:HG3	4:CD:38:TYR:CE2	2.49	0.47
20:CT:50:GLU:HB2	20:CT:99:LEU:HD23	1.96	0.47
25:DA:1149:G:H2'	25:DA:1150:C:C6	2.49	0.47
25:DA:1463:C:H2'	25:DA:1464:C:C6	2.49	0.47
27:DD:275:LYS:HB3	27:DD:276:LYS:HA	1.96	0.47
29:DF:7:TYR:O	29:DF:22:ALA:N	2.46	0.47
30:DG:103:LEU:HD22	30:DG:178:PHE:HZ	1.80	0.47
31:DH:87:LEU:HD23	31:DH:164:TYR:HA	1.96	0.47
47:D1:83:GLU:HA	47:D1:84:GLY:HA2	1.62	0.47
1:AA:129(A):G:C6	1:AA:189(E):U:H4'	2.50	0.47
1:AA:146:G:H8	1:AA:146:G:H5''	1.80	0.47
1:AA:1127:G:H21	1:AA:1148:U:H3	1.61	0.47
2:AB:24:TRP:H	2:AB:24:TRP:HD1	1.62	0.47
14:AN:37:PHE:CE2	14:AN:53:LEU:HD13	2.50	0.47
19:AS:65:ASN:ND2	19:AS:66:MET:HG3	2.29	0.47
25:BA:1740:U:O2'	27:BD:14:ARG:NH2	2.46	0.47
25:BA:1913:G:H2'	25:BA:1914:C:H6	1.78	0.47
25:BA:2698:G:H5'	61:BA:4643:HOH:O	2.15	0.47
34:BO:64:ARG:NH1	34:BO:81:ASP:OD1	2.46	0.47
1:CA:457:C:H2'	1:CA:458:C:C6	2.49	0.47
1:CA:577:G:C8	1:CA:816:A:C6	3.02	0.47
1:CA:932:C:H2'	1:CA:933:G:C8	2.49	0.47
1:CA:1009:G:N2	1:CA:1010:G:H1'	2.30	0.47
1:CA:1157:A:N7	1:CA:1180:A:C6	2.82	0.47
6:CF:2:ARG:NE	6:CF:69:GLU:HG2	2.29	0.47
12:CL:79:GLU:HB3	12:CL:80:HIS:HD2	1.78	0.47
20:CT:46:GLU:O	20:CT:46:GLU:HG2	2.13	0.47
25:DA:1027:A:C6	25:DA:1126:A:C4	3.02	0.47
25:DA:1637:A:H4'	25:DA:2711:A:O2'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1786:A:H1'	25:DA:1938:A:N6	2.29	0.47
25:DA:1935:G:H1'	25:DA:1964:G:N2	2.29	0.47
30:DG:114:ILE:HD12	30:DG:117:PHE:HD2	1.79	0.47
44:DY:9:LYS:HA	44:DY:10:GLY:HA2	1.67	0.47
1:AA:277:C:H5''	17:AQ:68:ARG:NH2	2.30	0.47
1:AA:430:A:H2'	1:AA:431:A:O4'	2.15	0.47
1:AA:1125:U:O4	1:AA:1128:C:C5	2.68	0.47
3:AC:123:GLN:HG2	3:AC:128:PHE:CD2	2.50	0.47
6:AF:99:ALA:O	18:AR:28:GLU:HG3	2.14	0.47
8:AH:6:ILE:HB	8:AH:85:ARG:NH1	2.29	0.47
10:AJ:5:ARG:O	10:AJ:98:ILE:HA	2.14	0.47
14:AN:4:LYS:HD3	14:AN:7:ILE:CG2	2.44	0.47
25:BA:911:G:O2'	25:BA:912:C:H5'	2.14	0.47
25:BA:956:A:OP2	61:BA:4430:HOH:O	2.20	0.47
25:BA:2116:G:OP1	32:BI:22:LYS:HD2	2.14	0.47
25:BA:2538:G:H5'	25:BA:2755:C:O2'	2.13	0.47
25:BA:2643:G:N2	25:BA:2800:C:O2	2.40	0.47
27:BD:132:PRO:HA	27:BD:190:TYR:HA	1.96	0.47
28:BE:176:ILE:HB	28:BE:181:LEU:HB2	1.96	0.47
29:BF:7:TYR:CD2	29:BF:24:LEU:HB2	2.49	0.47
32:BI:110:ASP:HA	32:BI:111:PRO:HD2	1.72	0.47
1:CA:341:C:H6	1:CA:341:C:O5'	1.98	0.47
1:CA:554:C:H2'	1:CA:555:C:C6	2.49	0.47
1:CA:1074:G:O2'	1:CA:1101:A:N1	2.37	0.47
2:CB:163:PHE:HA	2:CB:185:ILE:HG12	1.96	0.47
19:CS:30:LEU:CD1	19:CS:32:LYS:HG3	2.41	0.47
25:DA:118:A:H1'	25:DA:178:G:O4'	2.14	0.47
25:DA:1523:U:C2	25:DA:1524:G:C8	3.01	0.47
25:DA:1528(A):A:C8	25:DA:1529:G:C8	3.03	0.47
25:DA:1932:A:H2'	25:DA:1933:G:O4'	2.14	0.47
25:DA:2303:G:H2'	25:DA:2304:G:O4'	2.14	0.47
25:DA:2319:G:C2	38:DS:3:ARG:HA	2.49	0.47
28:DE:72:VAL:HA	28:DE:73:GLU:CB	2.43	0.47
29:DF:165:ARG:HG2	29:DF:168:ARG:HH21	1.79	0.47
31:DH:13:LYS:HA	31:DH:14:GLY:HA2	1.61	0.47
45:DZ:153:SER:HB3	45:DZ:167:PRO:HB3	1.96	0.47
49:D3:3:ARG:HH11	49:D3:60:GLU:CB	2.27	0.47
50:D4:15:ILE:HG23	50:D4:21:VAL:HG22	1.96	0.47
52:D6:38:LYS:HB2	52:D6:38:LYS:NZ	2.29	0.47
1:AA:481:G:H1'	1:AA:483:C:N4	2.30	0.47
1:AA:685:G:C2	1:AA:686:U:C4	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.96	0.47
1:AA:1256:A:H5''	1:AA:1258:G:C1'	2.44	0.47
5:AE:69:VAL:HG22	5:AE:71:LEU:HD23	1.96	0.47
9:AI:28:VAL:HA	9:AI:63:ILE:HB	1.97	0.47
9:AI:49:PRO:HG3	9:AI:101:PHE:HD2	1.79	0.47
25:BA:83:A:H5''	44:BY:8:LYS:HE3	1.97	0.47
25:BA:934:A:O2'	25:BA:935:C:OP2	2.27	0.47
25:BA:1828:C:H4'	27:BD:257:LEU:O	2.15	0.47
25:BA:2702:C:N4	25:BA:2726:A:H1'	2.29	0.47
25:BA:2795:G:OP2	61:BA:4647:HOH:O	2.20	0.47
29:BF:7:TYR:HD2	29:BF:24:LEU:HB2	1.78	0.47
29:BF:110:LEU:HD12	29:BF:205:ARG:HG2	1.96	0.47
29:BF:195:ASP:HB3	29:BF:198:ALA:H	1.78	0.47
1:CA:719:C:O2'	18:CR:49:LYS:HB3	2.13	0.47
1:CA:834:C:H2'	1:CA:835:U:H6	1.77	0.47
1:CA:954:G:H21	1:CA:1227:A:N6	2.08	0.47
1:CA:1133:G:N2	1:CA:1141:C:N3	2.59	0.47
5:CE:83:GLU:HG2	5:CE:88:LYS:HG3	1.95	0.47
9:CI:6:GLY:HA3	9:CI:80:GLY:O	2.14	0.47
25:DA:78:A:H2'	25:DA:79:G:C8	2.49	0.47
25:DA:86:C:H4'	25:DA:104:U:H1'	1.96	0.47
25:DA:565:C:H2'	25:DA:566:U:O4'	2.15	0.47
25:DA:639:U:H2'	25:DA:640:C:H6	1.79	0.47
25:DA:1012:U:H5	33:DN:28:THR:HG21	1.79	0.47
25:DA:1291:C:H2'	25:DA:1292:U:C6	2.49	0.47
25:DA:1513:C:H2'	25:DA:1514:U:C6	2.49	0.47
28:DE:195:LEU:HG	28:DE:196:VAL:N	2.30	0.47
29:DF:160:ASN:HB3	29:DF:163:VAL:HB	1.96	0.47
30:DG:106:LEU:HA	30:DG:110:ALA:HB3	1.95	0.47
35:DP:99:LEU:HD23	35:DP:99:LEU:H	1.79	0.47
36:DQ:59:ARG:C	36:DQ:61:GLY:H	2.13	0.47
47:D1:3:LYS:H	47:D1:61:ARG:HH12	1.62	0.47
1:AA:567:G:H1'	61:AA:4081:HOH:O	2.13	0.47
1:AA:674:G:H2'	1:AA:675:A:C8	2.49	0.47
1:AA:1137:C:H5''	1:AA:1138:G:OP1	2.15	0.47
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.49	0.47
2:AB:16:HIS:CB	2:AB:204:ASN:HB3	2.29	0.47
2:AB:166:ASP:HA	2:AB:167:PRO:HD3	1.73	0.47
5:AE:8:GLU:OE1	5:AE:63:ARG:NH2	2.48	0.47
5:AE:33:VAL:HG21	5:AE:109:ILE:HA	1.96	0.47
6:AF:97:PHE:HD2	18:AR:31:LEU:HD23	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:38:TYR:O	16:AP:49:LEU:HD12	2.15	0.47
20:AT:58:LYS:O	20:AT:62:LEU:HB2	2.14	0.47
25:BA:12:U:H2'	25:BA:12:U:O2	2.14	0.47
25:BA:1517:G:C6	25:BA:1567:G:N7	2.83	0.47
25:BA:1547:C:O4'	27:BD:100:GLY:HA2	2.15	0.47
25:BA:1549:U:H2'	25:BA:1550:C:H6	1.79	0.47
25:BA:2087:C:H2'	25:BA:2088:C:H6	1.79	0.47
25:BA:2285:A:H2'	25:BA:2286:A:C8	2.49	0.47
25:BA:2325:C:C2'	25:BA:2326:C:H5'	2.45	0.47
25:BA:2846:U:C4	25:BA:2893:A:N6	2.83	0.47
30:BG:67:LYS:H	50:B4:6:HIS:CE1	2.33	0.47
39:BT:37:GLY:HA2	39:BT:38:ASN:HA	1.66	0.47
39:BT:91:ARG:HH11	39:BT:120:ARG:NH1	2.12	0.47
1:CA:1023:G:H3'	1:CA:1024:G:H8	1.79	0.47
1:CA:1080:A:H5''	1:CA:1081:G:OP2	2.15	0.47
1:CA:1217:C:H2'	1:CA:1218:C:O4'	2.14	0.47
1:CA:1292:U:C2	1:CA:1293:G:C8	3.03	0.47
12:CL:119:LYS:O	12:CL:120:TYR:HB2	2.15	0.47
13:CM:82:MET:CE	13:CM:92:HIS:HB3	2.45	0.47
25:DA:735:A:C6	25:DA:736:C:C2	3.03	0.47
25:DA:900:A:H2'	25:DA:901:A:O4'	2.15	0.47
25:DA:1845:G:OP1	27:DD:258:LYS:NZ	2.43	0.47
25:DA:2408:U:H2'	25:DA:2409:G:C8	2.49	0.47
26:DB:43:C:C5	26:DB:45:A:N6	2.82	0.47
27:DD:71:ASP:OD2	27:DD:103:ARG:NH2	2.47	0.47
30:DG:64:THR:HB	30:DG:94:LEU:HD11	1.96	0.47
30:DG:103:LEU:HA	30:DG:106:LEU:HB3	1.96	0.47
36:DQ:32:TYR:CE1	36:DQ:133:ARG:HG3	2.49	0.47
41:DV:5:VAL:CG1	41:DV:57:VAL:HG21	2.44	0.47
1:AA:110:C:O2'	16:AP:25:ARG:O	2.32	0.47
1:AA:676:A:H2'	1:AA:677:U:C6	2.50	0.47
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.80	0.47
1:AA:1346:A:C8	7:AG:10:ARG:NH2	2.83	0.47
4:AD:11:LEU:HD23	4:AD:66:ARG:HB3	1.96	0.47
5:AE:12:LEU:HD22	5:AE:13:ILE:N	2.30	0.47
5:AE:53:LEU:HD12	5:AE:53:LEU:H	1.79	0.47
9:AI:9:ARG:HG2	9:AI:14:VAL:HG13	1.97	0.47
11:AK:44:SER:OG	11:AK:47:VAL:HG23	2.14	0.47
17:AQ:10:VAL:HG13	17:AQ:19:VAL:HB	1.97	0.47
25:BA:399:G:H8	47:B1:65:SER:O	1.97	0.47
25:BA:572:A:H61	41:BV:18:LEU:HD23	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:908:A:H2'	25:BA:909:G:O4'	2.14	0.47
25:BA:1223:C:H2'	25:BA:1224:C:C6	2.49	0.47
25:BA:1577:C:H1'	25:BA:1578:C:OP1	2.15	0.47
25:BA:2642:G:H2'	25:BA:2643:G:H8	1.79	0.47
26:BB:29:A:C2	26:BB:30:C:C2	3.03	0.47
30:BG:11:TYR:CE2	30:BG:16:ARG:HD3	2.50	0.47
31:BH:86:GLU:OE1	31:BH:132:ARG:NH1	2.45	0.47
35:BP:63:PRO:HB2	54:B8:30:ARG:NH2	2.30	0.47
45:BZ:70:LEU:HD23	45:BZ:70:LEU:HA	1.58	0.47
45:BZ:144:LEU:HD11	45:BZ:150:LEU:HD22	1.95	0.47
50:B4:14:ILE:HD12	50:B4:24:THR:HG21	1.96	0.47
1:CA:337:C:H2'	1:CA:338:A:C8	2.50	0.47
1:CA:410:G:H5''	1:CA:411:A:OP1	2.14	0.47
1:CA:622:A:H3'	1:CA:623:C:C6	2.49	0.47
1:CA:865:A:C2	1:CA:918:A:H4'	2.50	0.47
1:CA:985:C:H2'	1:CA:986:A:H8	1.80	0.47
1:CA:1119:C:N3	1:CA:1154:G:O6	2.48	0.47
1:CA:1137:C:H5''	1:CA:1138:G:OP1	2.15	0.47
2:CB:127:ILE:C	2:CB:129:GLU:H	2.16	0.47
3:CC:140:ARG:NH1	3:CC:140:ARG:HB2	2.29	0.47
6:CF:35:ALA:HA	6:CF:67:MET:HB3	1.96	0.47
8:CH:6:ILE:O	8:CH:10:LEU:HG	2.15	0.47
9:CI:7:THR:OG1	9:CI:83:ARG:NH1	2.48	0.47
10:CJ:25:GLU:O	10:CJ:29:ARG:HD3	2.15	0.47
25:DA:153:C:OP2	47:D1:92:LYS:NZ	2.46	0.47
25:DA:1197:G:H5'	25:DA:1227:G:O2'	2.14	0.47
25:DA:1359:A:C2	25:DA:1372:U:O4	2.68	0.47
25:DA:2319:G:N2	38:DS:3:ARG:HA	2.29	0.47
25:DA:2508:G:C2	25:DA:2582:G:C6	3.02	0.47
25:DA:2659:G:N2	25:DA:2661:G:H3'	2.30	0.47
28:DE:143:ASN:HD22	28:DE:147:PRO:CD	2.28	0.47
32:DI:3:VAL:HG12	32:DI:38:LEU:HA	1.96	0.47
47:D1:25:LYS:HG3	47:D1:31:GLY:HA2	1.97	0.47
49:D3:6:VAL:HG13	49:D3:56:VAL:HG13	1.96	0.47
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.49	0.47
1:AA:1392:G:C2'	1:AA:1393:U:H5'	2.45	0.47
2:AB:162:ILE:HD11	2:AB:184:VAL:HG22	1.95	0.47
3:AC:112:SER:O	3:AC:116:VAL:HG23	2.14	0.47
25:BA:623:G:N2	25:BA:628:C:O3'	2.47	0.47
25:BA:1496:A:H5'	25:BA:1497:G:OP2	2.14	0.47
25:BA:1759:C:H2'	25:BA:1760:U:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1833:A:N1	25:BA:1853:G:H1'	2.30	0.47
25:BA:2299:A:H2	25:BA:2358:A:H62	1.60	0.47
25:BA:2584:A:N7	28:BE:144:ARG:HD2	2.30	0.47
27:BD:16:MET:HG3	27:BD:206:LEU:O	2.15	0.47
38:BS:24:LEU:HA	38:BS:24:LEU:HD23	1.70	0.47
47:B1:64:ALA:HA	47:B1:67:ILE:HG13	1.97	0.47
1:CA:429:U:H1'	1:CA:430:A:H5''	1.97	0.47
1:CA:441:A:H3'	1:CA:442:C:H6	1.79	0.47
1:CA:452:A:O2'	1:CA:453:A:OP2	2.29	0.47
1:CA:1209:C:O2'	1:CA:1214:C:N4	2.30	0.47
1:CA:1226:C:H4'	19:CS:80:TYR:OH	2.14	0.47
25:DA:1188:U:C4'	41:DV:79:VAL:HG22	2.45	0.47
25:DA:2078:C:C4	25:DA:2079:U:C4	3.02	0.47
25:DA:2315:G:H2'	25:DA:2316:C:C6	2.49	0.47
25:DA:2364:C:OP1	46:D0:55:ARG:NH1	2.48	0.47
25:DA:2538:C:H2'	25:DA:2539:C:H6	1.79	0.47
26:DB:79:C:H2'	26:DB:80:U:O4'	2.15	0.47
1:AA:172:A:N7	1:AA:174:C:C4	2.83	0.47
1:AA:276:G:C2'	1:AA:277:C:H5'	2.45	0.47
1:AA:435:C:H2'	1:AA:436:C:C6	2.50	0.47
1:AA:652:U:O2'	1:AA:653:A:OP2	2.26	0.47
1:AA:1125:U:N3	1:AA:1127:G:C5	2.68	0.47
3:AC:44:GLU:HG2	3:AC:52:LEU:HD22	1.97	0.47
3:AC:181:ASN:ND2	3:AC:204:LEU:HD12	2.30	0.47
4:AD:65:ARG:HG2	4:AD:75:PHE:CD1	2.50	0.47
5:AE:68:GLU:HG2	5:AE:70:PRO:HG3	1.97	0.47
6:AF:62:TRP:CH2	6:AF:64:GLN:HB2	2.50	0.47
8:AH:112:LEU:HB3	8:AH:133:LEU:HA	1.97	0.47
11:AK:20:TYR:HB2	11:AK:31:THR:HG23	1.97	0.47
24:AW:9:MVA:O	24:AW:10:2QY:CD2	2.62	0.47
25:BA:553:A:C2	25:BA:2065:C:H4'	2.50	0.47
25:BA:932:C:H3'	25:BA:933:C:C5'	2.43	0.47
25:BA:1809:U:H2'	25:BA:1815:A:N6	2.30	0.47
25:BA:2335:G:H2'	25:BA:2336:C:O4'	2.15	0.47
29:BF:101:LEU:HD12	29:BF:102:PRO:HD2	1.97	0.47
29:BF:150:GLY:HA2	29:BF:172:TRP:CE3	2.50	0.47
40:BU:78:THR:HG22	40:BU:117:GLN:HE22	1.80	0.47
1:CA:78:G:H2'	1:CA:79:G:H5'	1.97	0.47
1:CA:838:G:H1	1:CA:848:C:N4	2.13	0.47
1:CA:859:A:H2'	1:CA:860:A:O4'	2.15	0.47
1:CA:885:G:O2'	1:CA:914:A:N1	2.38	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:957:U:H2'	1:CA:959:A:OP2	2.14	0.47
1:CA:1154:G:C8	1:CA:1155:G:C8	3.02	0.47
5:CE:84:PHE:N	5:CE:87:SER:O	2.48	0.47
5:CE:104:ALA:HA	5:CE:107:ARG:HB3	1.96	0.47
7:CG:138:LYS:HE2	7:CG:142:GLU:OE1	2.15	0.47
13:CM:16:ASP:OD1	13:CM:16:ASP:N	2.48	0.47
20:CT:50:GLU:HG3	20:CT:100:ILE:HD13	1.97	0.47
25:DA:585:G:H2'	25:DA:1251:C:H42	1.79	0.47
25:DA:678:C:H2'	25:DA:679:C:C6	2.50	0.47
35:DP:45:LEU:HA	35:DP:45:LEU:HD23	1.51	0.47
39:DT:78:LEU:O	39:DT:78:LEU:HD13	2.14	0.47
40:DU:89:GLU:HB2	41:DV:50:PRO:CB	2.45	0.47
42:DW:59:VAL:HG12	42:DW:60:ASN:HD22	1.80	0.47
1:AA:159:G:O2'	1:AA:161:A:N7	2.35	0.47
1:AA:458:C:H2'	1:AA:460:G:C8	2.50	0.47
1:AA:499:A:N3	1:AA:546:G:N2	2.54	0.47
1:AA:735:C:H2'	1:AA:736:C:H6	1.80	0.47
1:AA:1140:C:H2'	1:AA:1141:C:C6	2.49	0.47
1:AA:1176:A:H2'	1:AA:1177:G:C8	2.50	0.47
1:AA:1273:G:H3'	1:AA:1274:G:H8	1.78	0.47
2:AB:178:ARG:HH22	8:AH:68:ARG:HH22	1.62	0.47
4:AD:173:TRP:HB2	4:AD:187:ARG:O	2.15	0.47
15:AO:24:SER:OG	15:AO:25:THR:N	2.48	0.47
25:BA:908:A:N3	26:BB:79:C:O2'	2.41	0.47
25:BA:2745:G:H3'	25:BA:2746:A:O4'	2.14	0.47
1:CA:160:A:H61	1:CA:347:G:H1'	1.80	0.47
1:CA:1492:A:H5''	1:CA:1493:A:OP2	2.15	0.47
4:CD:184:LYS:HE3	4:CD:186:LEU:HD23	1.96	0.47
7:CG:79:ARG:HB3	7:CG:80:VAL:H	1.39	0.47
7:CG:155:ARG:HB3	7:CG:155:ARG:CZ	2.43	0.47
16:CP:21:VAL:HG22	16:CP:33:ILE:HD12	1.97	0.47
18:CR:76:LEU:HD12	18:CR:76:LEU:HA	1.74	0.47
25:DA:10:G:H1'	25:DA:2801(A):A:C6	2.50	0.47
25:DA:19:C:H2'	25:DA:20:C:C6	2.50	0.47
25:DA:489:G:N7	42:DW:49:LYS:NZ	2.61	0.47
25:DA:701:G:N2	25:DA:732:C:C2	2.82	0.47
25:DA:922:U:H2'	25:DA:923:C:C6	2.50	0.47
25:DA:1509(B):A:H2'	25:DA:1510:G:H8	1.77	0.47
25:DA:2227:A:OP1	27:DD:263:ARG:HD2	2.15	0.47
27:DD:80:ALA:HB3	27:DD:94:LEU:HD13	1.96	0.47
32:DI:65:ALA:O	32:DI:69:LYS:N	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DQ:125:LEU:O	61:DQ:302:HOH:O	2.20	0.47
43:DX:59:VAL:N	43:DX:76:ARG:O	2.33	0.47
1:AA:93:G:O2'	1:AA:96:U:H5'	2.15	0.46
1:AA:103:C:OP2	20:AT:14:LYS:NZ	2.30	0.46
1:AA:103:C:P	20:AT:17:ARG:HH21	2.38	0.46
1:AA:189(D):C:O2	1:AA:189(H):G:C6	2.68	0.46
1:AA:189(F):U:O2'	17:AQ:63:ARG:NH2	2.48	0.46
1:AA:342:C:N3	1:AA:348:G:O6	2.48	0.46
1:AA:1129:C:H5''	9:AI:16:ARG:HH12	1.79	0.46
1:AA:1392:G:N2	1:AA:1502:A:C8	2.83	0.46
1:AA:1442:G:HO2'	1:AA:1442(A):G:P	2.34	0.46
2:AB:97:TRP:CH2	2:AB:173:ALA:HA	2.49	0.46
6:AF:12:PRO:HG3	6:AF:57:GLN:O	2.15	0.46
7:AG:113:GLU:HG3	7:AG:118:VAL:HG12	1.97	0.46
8:AH:64:LYS:HG2	8:AH:79:VAL:HG21	1.98	0.46
10:AJ:27:ALA:HA	10:AJ:81:THR:CG2	2.45	0.46
10:AJ:57:LYS:HD2	10:AJ:60:ARG:NH2	2.30	0.46
13:AM:16:ASP:N	13:AM:16:ASP:OD1	2.47	0.46
25:BA:714:U:O2	54:B8:2:PRO:HD2	2.14	0.46
25:BA:1229:G:H5'	49:B3:29:ARG:HH12	1.80	0.46
46:B0:43:THR:HG23	46:B0:43:THR:O	2.14	0.46
1:CA:922:G:N3	1:CA:1398:A:H2	2.13	0.46
1:CA:1068:G:N2	1:CA:1191:A:N3	2.55	0.46
1:CA:1309:G:N2	1:CA:1329:A:H1'	2.30	0.46
1:CA:1310:G:H5'	13:CM:77:ASN:HD21	1.80	0.46
15:CO:39:LEU:HB3	15:CO:56:LEU:HD13	1.96	0.46
16:CP:55:ARG:O	16:CP:58:TYR:HB3	2.15	0.46
25:DA:75:G:H4'	48:D2:55:ARG:NH1	2.30	0.46
25:DA:807:U:OP2	35:DP:41:ARG:NH2	2.48	0.46
25:DA:1151:G:H5''	40:DU:81:HIS:CD2	2.50	0.46
25:DA:1199:U:H2'	25:DA:1200:C:C6	2.50	0.46
25:DA:1317:A:H2'	25:DA:1318:C:C6	2.50	0.46
25:DA:2051:A:H5'	25:DA:2578:G:O4'	2.14	0.46
25:DA:2302:G:C2	25:DA:2303:G:C8	3.03	0.46
25:DA:2312:U:C4	25:DA:2313:C:H5	2.32	0.46
29:DF:29:ASN:HB3	29:DF:112:MET:HE1	1.97	0.46
30:DG:78:SER:OG	30:DG:79:ASN:N	2.48	0.46
35:DP:44:GLY:CA	35:DP:45:LEU:HB2	2.45	0.46
35:DP:49:ARG:NH1	54:D8:61:LEU:HD23	2.30	0.46
35:DP:82:GLY:HA2	35:DP:113:LYS:O	2.15	0.46
53:D7:24:THR:O	53:D7:28:ARG:HG3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:646:U:H2'	1:AA:647:C:C6	2.50	0.46
1:AA:918:A:H2'	1:AA:919:A:C8	2.50	0.46
1:AA:1223:C:OP2	19:AS:78:ARG:NH2	2.45	0.46
1:AA:1457:G:P	20:AT:39:LYS:HZ1	2.38	0.46
2:AB:174:VAL:O	2:AB:178:ARG:HB2	2.14	0.46
6:AF:35:ALA:HA	6:AF:67:MET:HB3	1.96	0.46
25:BA:329:U:H2'	25:BA:330:U:C6	2.50	0.46
25:BA:768:C:H2'	25:BA:769:A:C8	2.49	0.46
25:BA:1688:A:H2'	25:BA:1689:G:O4'	2.14	0.46
25:BA:1900:G:H2'	25:BA:1901:C:C6	2.49	0.46
29:BF:106:ARG:H	29:BF:106:ARG:HG2	1.37	0.46
48:B2:37:PHE:O	48:B2:40:SER:HB3	2.14	0.46
1:CA:376:G:H2'	1:CA:377:G:H8	1.80	0.46
1:CA:840:C:H5''	1:CA:841:U:H5	1.80	0.46
1:CA:1347:G:H22	1:CA:1373:G:H2'	1.77	0.46
1:CA:1516:G:H2'	1:CA:1518:A:OP2	2.15	0.46
6:CF:5:GLU:HG3	6:CF:93:SER:OG	2.16	0.46
10:CJ:57:LYS:HD2	10:CJ:60:ARG:HH21	1.81	0.46
25:DA:330:A:H2	25:DA:1210:A:HO2'	1.63	0.46
25:DA:333:G:H2'	25:DA:333:G:N3	2.30	0.46
25:DA:924:C:H2'	25:DA:925:C:H6	1.79	0.46
25:DA:1221(A):C:C2	25:DA:1229:G:C2	3.03	0.46
25:DA:1669:A:H5''	25:DA:2550:G:OP1	2.15	0.46
25:DA:1866:C:H2'	25:DA:1876:A:O4'	2.15	0.46
25:DA:2348:U:O4	25:DA:2382:G:N1	2.48	0.46
29:DF:36:VAL:HG11	29:DF:183:VAL:HG11	1.97	0.46
1:AA:532:A:O2'	1:AA:533:A:P	2.74	0.46
1:AA:616:G:C2	1:AA:617:G:C8	3.04	0.46
1:AA:1005:A:H5'	1:AA:1038:C:H1'	1.96	0.46
1:AA:1131:G:H2'	1:AA:1132:C:C6	2.50	0.46
1:AA:1232:U:OP1	9:AI:124:GLN:HG2	2.15	0.46
2:AB:55:PHE:HE1	2:AB:218:ALA:HA	1.80	0.46
10:AJ:20:ALA:HA	10:AJ:23:ILE:HG22	1.95	0.46
19:AS:20:LEU:HD23	19:AS:23:ASN:HD22	1.80	0.46
24:AW:9:MVA:HA	24:AW:10:2QY:H82	1.39	0.46
25:BA:324:A:P	44:BY:86:ARG:HH22	2.38	0.46
25:BA:335:A:C6	25:BA:352:U:C4	3.04	0.46
25:BA:364:A:H2'	25:BA:365:G:O4'	2.15	0.46
25:BA:436:C:O2'	25:BA:437:G:H5'	2.16	0.46
25:BA:636:G:N2	25:BA:640:A:O2'	2.48	0.46
25:BA:664:U:H2'	25:BA:665:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:982:U:H2'	25:BA:983:G:O4'	2.15	0.46
25:BA:2314:G:N2	25:BA:2327:G:C4	2.84	0.46
25:BA:2389:A:H2'	25:BA:2390:A:C8	2.50	0.46
28:BE:51:PHE:H	28:BE:75:VAL:CG1	2.27	0.46
30:BG:16:ARG:O	30:BG:20:ILE:HG13	2.15	0.46
32:BI:81:VAL:HG21	32:BI:88:ILE:HD13	1.96	0.46
45:BZ:120:ILE:HB	45:BZ:171:ILE:HA	1.97	0.46
51:B5:42:PRO:HB2	51:B5:43:HIS:ND1	2.30	0.46
1:CA:1003:G:C6	1:CA:1004:A:H2	2.34	0.46
1:CA:1327:C:H2'	1:CA:1328:C:C6	2.51	0.46
2:CB:15:VAL:CG1	2:CB:209:ARG:HB3	2.41	0.46
2:CB:77:ALA:HA	2:CB:80:ILE:HG22	1.96	0.46
2:CB:163:PHE:HA	2:CB:185:ILE:O	2.15	0.46
5:CE:36:ASP:C	5:CE:38:GLN:H	2.18	0.46
13:CM:60:VAL:HG22	13:CM:66:LEU:HD11	1.96	0.46
25:DA:263:C:H2'	25:DA:264:C:O4'	2.15	0.46
25:DA:491:G:H2'	25:DA:492:A:H8	1.80	0.46
25:DA:861:A:C2	25:DA:917:A:C4	3.03	0.46
25:DA:874:G:H2'	25:DA:875:G:O4'	2.15	0.46
25:DA:1593:G:C4	25:DA:1594:G:C8	3.03	0.46
25:DA:1668:A:H4'	25:DA:1669:A:O5'	2.14	0.46
25:DA:1740:G:H2'	25:DA:1741:A:C8	2.51	0.46
26:DB:33:G:C2	26:DB:50:G:C2	3.04	0.46
26:DB:90:A:N7	26:DB:91:C:H1'	2.30	0.46
29:DF:129:PHE:O	29:DF:132:VAL:HG13	2.15	0.46
30:DG:16:ARG:HB2	30:DG:17:PRO:HD3	1.98	0.46
40:DU:59:ARG:HB3	40:DU:59:ARG:HH11	1.80	0.46
40:DU:76:TYR:CZ	40:DU:80:ILE:HG13	2.51	0.46
1:AA:391:G:C6	1:AA:392:G:C5	3.03	0.46
1:AA:814:A:H2'	1:AA:816:A:H5''	1.97	0.46
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.15	0.46
4:AD:155:LEU:O	4:AD:158:ILE:HG12	2.15	0.46
8:AH:39:LEU:HD12	8:AH:39:LEU:HA	1.79	0.46
9:AI:121:ARG:NH1	9:AI:122:ALA:O	2.49	0.46
15:AO:8:LYS:O	15:AO:12:ILE:HG13	2.16	0.46
25:BA:85:C:H4'	25:BA:102:U:H1'	1.97	0.46
25:BA:736:A:N3	25:BA:826:U:O2'	2.43	0.46
25:BA:926:G:H2'	25:BA:927:G:C1'	2.46	0.46
25:BA:1217:G:H3'	25:BA:1218:G:H5'	1.98	0.46
25:BA:1592:A:H2'	25:BA:1593:C:O4'	2.16	0.46
25:BA:2225:U:O4'	27:BD:151:LYS:HE2	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2658:C:OP2	25:BA:2745:G:O2'	2.19	0.46
44:BY:30:VAL:O	44:BY:32:PRO:HD3	2.16	0.46
1:CA:1203:C:H2'	1:CA:1204:A:O4'	2.16	0.46
1:CA:1238:A:C2	1:CA:1303:C:H4'	2.50	0.46
1:CA:1240:U:O2'	7:CG:32:ARG:HD3	2.16	0.46
2:CB:167:PRO:HD3	2:CB:187:LEU:O	2.15	0.46
3:CC:6:HIS:CD2	3:CC:8:ILE:H	2.32	0.46
14:CN:3:ARG:O	14:CN:7:ILE:HG23	2.15	0.46
25:DA:568:U:H5'	25:DA:945:A:C2	2.50	0.46
25:DA:647:G:H8	25:DA:647:G:O5'	1.99	0.46
25:DA:656:G:H2'	25:DA:657:U:O4'	2.14	0.46
25:DA:792:G:H5''	25:DA:793:A:H5'	1.98	0.46
25:DA:857:C:H2'	25:DA:858:U:C6	2.50	0.46
25:DA:888:C:H2'	25:DA:889:C:N3	2.30	0.46
25:DA:889:C:O2'	25:DA:890:A:H8	1.99	0.46
25:DA:956:G:OP1	36:DQ:87:LYS:HG3	2.16	0.46
25:DA:1142:U:O2	25:DA:1142:U:H2'	2.15	0.46
25:DA:1259:G:H2'	25:DA:1260:G:C8	2.50	0.46
25:DA:1358:G:O2'	25:DA:1359:A:H5''	2.15	0.46
25:DA:1529:G:O2'	25:DA:1530:C:H5'	2.16	0.46
25:DA:1794:U:H2'	25:DA:1795:C:H6	1.80	0.46
54:D8:30:ARG:HD3	54:D8:30:ARG:HA	1.69	0.46
1:AA:59:A:H5''	1:AA:60:A:H5''	1.97	0.46
1:AA:186:C:H2'	1:AA:187:C:H6	1.80	0.46
1:AA:437:U:O3'	4:AD:125:HIS:CE1	2.69	0.46
1:AA:863:U:H2'	1:AA:865:A:OP2	2.15	0.46
1:AA:1149:C:H2'	1:AA:1150:U:H6	1.81	0.46
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.50	0.46
2:AB:16:HIS:CD2	2:AB:17:PHE:N	2.81	0.46
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.96	0.46
8:AH:97:VAL:HG23	8:AH:129:VAL:O	2.16	0.46
10:AJ:67:THR:O	10:AJ:67:THR:OG1	2.31	0.46
25:BA:696:C:P	25:BA:696:C:H6	2.38	0.46
25:BA:910:A:H2'	25:BA:911:G:C8	2.50	0.46
1:CA:693:G:H1'	7:CG:82:GLY:HA3	1.97	0.46
1:CA:1120:G:N1	1:CA:1154:G:N3	2.64	0.46
1:CA:1240:U:C2	7:CG:32:ARG:HD2	2.50	0.46
1:CA:1286:A:H2'	1:CA:1287:A:H4'	1.96	0.46
2:CB:47:THR:HA	2:CB:202:PRO:HG2	1.98	0.46
3:CC:104:GLN:HE21	3:CC:104:GLN:HB3	1.58	0.46
5:CE:137:GLU:HG2	5:CE:140:ARG:NH1	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:38:GLU:HB2	6:CF:64:GLN:HG2	1.96	0.46
13:CM:15:VAL:HG11	13:CM:48:LEU:HD21	1.96	0.46
13:CM:33:ALA:HA	13:CM:59:TYR:CE2	2.49	0.46
25:DA:34:C:H6	25:DA:34:C:OP1	1.99	0.46
25:DA:302:C:H2'	25:DA:303:U:C6	2.50	0.46
25:DA:1506:C:H2'	25:DA:1507:A:H5'	1.98	0.46
25:DA:2287:A:O2'	25:DA:2288:A:H3'	2.15	0.46
25:DA:2747:G:H21	25:DA:2757:A:H62	1.64	0.46
29:DF:184:TYR:CE1	35:DP:3:LEU:HD21	2.50	0.46
31:DH:137:ASP:HB3	31:DH:140:LYS:HB3	1.95	0.46
33:DN:71:ILE:HG21	33:DN:84:LYS:HB3	1.98	0.46
40:DU:78:THR:HG22	40:DU:117:GLN:HE21	1.81	0.46
1:AA:292:G:N7	1:AA:293:G:H1'	2.31	0.46
2:AB:127:ILE:HB	2:AB:129:GLU:H	1.79	0.46
25:BA:68:C:O2'	25:BA:69:G:H5'	2.16	0.46
25:BA:553:A:N1	25:BA:2064:A:H2'	2.30	0.46
25:BA:922:G:H1	25:BA:948:C:N4	2.13	0.46
25:BA:2901:A:N6	25:BA:2902:G:N1	2.64	0.46
1:CA:25:C:H2'	1:CA:26:A:C8	2.51	0.46
1:CA:32:A:C2	1:CA:33:A:C4	3.04	0.46
1:CA:323:U:H2'	1:CA:324:G:O4'	2.16	0.46
1:CA:1145:C:H5''	1:CA:1146:A:OP1	2.16	0.46
1:CA:1154:G:N7	1:CA:1155:G:C5	2.83	0.46
1:CA:1154:G:O6	1:CA:1155:G:N1	2.48	0.46
1:CA:1401:G:C2	1:CA:1402:C:H1'	2.51	0.46
2:CB:17:PHE:HB2	2:CB:44:LEU:CD1	2.46	0.46
4:CD:191:ARG:HD2	4:CD:191:ARG:O	2.16	0.46
7:CG:12:LEU:H	7:CG:12:LEU:HD12	1.80	0.46
9:CI:26:VAL:HG22	9:CI:61:ALA:HB3	1.97	0.46
13:CM:3:ARG:CA	50:D4:34:GLU:HG2	2.43	0.46
16:CP:6:LEU:HD23	16:CP:17:TYR:CG	2.51	0.46
19:CS:22:LEU:HB3	19:CS:27:GLU:HG3	1.97	0.46
20:CT:33:ILE:HG13	20:CT:62:LEU:HD22	1.96	0.46
25:DA:1341:U:OP1	25:DA:1397:U:N3	2.40	0.46
25:DA:1364:G:P	47:D1:3:LYS:HG3	2.55	0.46
25:DA:1589:C:H2'	25:DA:1590:U:H6	1.80	0.46
29:DF:53:THR:HG23	29:DF:55:GLY:N	2.26	0.46
38:DS:38:GLN:HB2	38:DS:47:THR:HG23	1.96	0.46
45:DZ:54:HIS:CG	45:DZ:101:PRO:HG3	2.51	0.46
1:AA:346:G:OP1	39:BT:41:ARG:NH2	2.48	0.46
1:AA:865:A:H2	1:AA:918:A:H4'	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:877:C:OP1	8:AH:88:LYS:NZ	2.34	0.46
1:AA:1270:C:H2'	1:AA:1271:G:H5'	1.98	0.46
3:AC:58:GLU:O	3:AC:59:ARG:HG3	2.15	0.46
24:AW:3:004:C	24:AW:4:PRO:O	2.63	0.46
25:BA:1071:G:C4	25:BA:1180:C:H1'	2.50	0.46
30:BG:102:PHE:CE1	30:BG:141:PHE:HE2	2.25	0.46
36:BQ:21:THR:HG21	36:BQ:101:ARG:HB2	1.98	0.46
1:CA:232:G:H1'	1:CA:262:A:N1	2.30	0.46
1:CA:918:A:H2'	1:CA:919:A:C8	2.50	0.46
1:CA:1126:U:H6	1:CA:1281:U:O2	1.98	0.46
3:CC:106:VAL:HG11	3:CC:115:LEU:HD21	1.98	0.46
5:CE:7:GLU:OE1	5:CE:37:ARG:NH2	2.47	0.46
9:CI:14:VAL:HG22	9:CI:66:ARG:O	2.16	0.46
9:CI:99:LEU:HB3	9:CI:101:PHE:HE1	1.81	0.46
25:DA:1324:G:C2	25:DA:1331:A:C2	3.04	0.46
25:DA:1371:G:H2'	25:DA:1372:U:H5	1.80	0.46
25:DA:1420:U:HO2'	25:DA:1421:G:P	2.39	0.46
25:DA:2443:C:H2'	25:DA:2444:G:H8	1.80	0.46
25:DA:2885:C:O2'	51:D5:34:PRO:HG3	2.14	0.46
28:DE:36:ARG:HD3	28:DE:85:ASN:HD21	1.80	0.46
34:DO:120:GLU:HB2	39:DT:68:TYR:HE2	1.81	0.46
36:DQ:32:TYR:OH	36:DQ:111:GLU:OE1	2.29	0.46
43:DX:41:ASN:O	43:DX:45:THR:HG23	2.15	0.46
46:D0:82:ARG:HA	46:D0:83:PRO:HD3	1.73	0.46
51:D5:40:LYS:HD3	51:D5:41:PRO:O	2.16	0.46
1:AA:658:G:C2	1:AA:749:C:N3	2.83	0.46
1:AA:676:A:H2'	1:AA:677:U:H6	1.79	0.46
2:AB:54:THR:HG22	2:AB:58:ILE:HD11	1.97	0.46
3:AC:115:LEU:O	3:AC:118:GLN:HG2	2.15	0.46
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.16	0.46
5:AE:77:PRO:HG2	5:AE:78:HIS:CD2	2.51	0.46
25:BA:279:G:H5''	25:BA:279:G:H8	1.81	0.46
25:BA:1233:U:C2'	25:BA:1234:A:H5'	2.45	0.46
25:BA:1465:A:O2'	25:BA:1467:G:N7	2.44	0.46
25:BA:1662:A:H4'	25:BA:1663:C:OP2	2.15	0.46
31:BH:71:LEU:HD12	31:BH:71:LEU:HA	1.70	0.46
1:CA:96:U:O2'	1:CA:97:G:H5'	2.15	0.46
1:CA:174:C:H2'	1:CA:175:C:H6	1.81	0.46
1:CA:283:C:H2'	1:CA:284:G:O4'	2.15	0.46
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.98	0.46
1:CA:1491:G:H3'	1:CA:1492:A:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:22:GLU:O	6:CF:26:ILE:HG13	2.16	0.46
19:CS:20:LEU:HA	19:CS:23:ASN:HD22	1.81	0.46
25:DA:32:C:O2'	25:DA:33:U:H5'	2.16	0.46
25:DA:492:A:H2'	25:DA:493:G:O4'	2.16	0.46
25:DA:1198:U:H2'	25:DA:1199:U:C6	2.50	0.46
25:DA:1773:A:C5	25:DA:1829:A:H1'	2.51	0.46
26:DB:31:C:C2'	26:DB:32:C:H5'	2.45	0.46
30:DG:170:ARG:HH21	30:DG:180:PHE:CB	2.28	0.46
41:DV:64:HIS:CD2	41:DV:92:THR:HG1	2.33	0.46
50:D4:46:GLN:HG2	50:D4:48:ARG:HE	1.81	0.46
1:AA:597:G:H5''	1:AA:598:U:OP2	2.16	0.46
1:AA:736:C:H2'	1:AA:737:A:C8	2.51	0.46
1:AA:920:U:H2'	1:AA:921:U:C6	2.51	0.46
1:AA:1068:G:N7	1:AA:1094:G:H2'	2.31	0.46
7:AG:69:VAL:HG12	7:AG:100:ALA:HA	1.96	0.46
9:AI:27:THR:O	9:AI:63:ILE:N	2.49	0.46
25:BA:160:G:O2'	25:BA:161:C:H5'	2.16	0.46
25:BA:593:G:H2'	25:BA:2052:A:C5	2.50	0.46
25:BA:1008:U:H2'	25:BA:1009:C:C6	2.51	0.46
25:BA:1096:A:H2'	25:BA:1096:A:N3	2.30	0.46
25:BA:1199:C:H2'	25:BA:1200:G:O4'	2.16	0.46
25:BA:2786:C:H2'	25:BA:2787:C:C6	2.51	0.46
40:BU:66:ASN:O	40:BU:70:ARG:HG3	2.15	0.46
40:BU:95:LEU:HD12	40:BU:95:LEU:HA	1.78	0.46
1:CA:89:C:H2'	1:CA:90:U:O4'	2.16	0.46
1:CA:1118:C:H1'	1:CA:1179:A:C4	2.51	0.46
2:CB:19:HIS:HB2	2:CB:204:ASN:HB2	1.98	0.46
2:CB:145:LEU:O	2:CB:149:LEU:HB2	2.15	0.46
7:CG:50:ILE:HD11	7:CG:58:PRO:HA	1.98	0.46
17:CQ:41:LYS:NZ	17:CQ:92:ARG:HH21	2.14	0.46
25:DA:189:G:H2'	25:DA:205:G:N2	2.30	0.46
25:DA:704:G:H1'	25:DA:726:G:H22	1.81	0.46
25:DA:1163:G:O2'	25:DA:1164:G:H5'	2.16	0.46
25:DA:1417:C:H2'	25:DA:1418:G:O4'	2.16	0.46
25:DA:2228:G:C6	25:DA:2229:C:C4	3.04	0.46
25:DA:2831:G:P	28:DE:58:ARG:HH22	2.38	0.46
36:DQ:111:GLU:O	36:DQ:115:MET:HG2	2.16	0.46
52:D6:19:ARG:N	52:D6:19:ARG:HD2	2.30	0.46
55:D9:17:ILE:HD12	55:D9:17:ILE:HA	1.76	0.46
1:AA:78:G:C2	1:AA:91:C:N3	2.84	0.46
1:AA:658:G:H2'	1:AA:659:U:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:30:SER:O	10:AJ:81:THR:HG23	2.16	0.46
25:BA:508:A:H5''	25:BA:509:A:OP1	2.16	0.46
25:BA:751:G:O2'	25:BA:773:G:N2	2.35	0.46
25:BA:1171:G:H5'	55:B9:37:GLY:HA2	1.98	0.46
25:BA:1264:G:OP2	40:BU:19:LYS:HE3	2.15	0.46
25:BA:1629:C:H2'	25:BA:1630:A:H8	1.81	0.46
25:BA:1854:G:OP1	27:BD:54:ARG:NH1	2.48	0.46
25:BA:2812:A:N3	25:BA:2904:U:H1'	2.31	0.46
27:BD:182:LEU:HD23	27:BD:182:LEU:HA	1.65	0.46
28:BE:143:ASN:HD22	28:BE:147:PRO:HD3	1.81	0.46
32:BI:104:GLN:HG3	32:BI:105:HIS:HD2	1.80	0.46
44:BY:15:VAL:HG21	44:BY:42:VAL:HG11	1.99	0.46
1:CA:923:A:H2'	1:CA:924:C:C6	2.51	0.46
1:CA:983:A:H3'	1:CA:983:A:N3	2.31	0.46
1:CA:1077:G:C2	1:CA:1081:G:C6	3.04	0.46
1:CA:1305:G:O2'	1:CA:1331:G:N2	2.49	0.46
16:CP:40:ASP:O	16:CP:48:TRP:HB2	2.16	0.46
25:DA:1885:A:H2'	25:DA:1886:C:O4'	2.17	0.46
25:DA:2207:G:H3'	25:DA:2208:A:H5''	1.98	0.46
25:DA:2354:G:OP1	46:D0:32:ARG:NH2	2.49	0.46
25:DA:2461:C:H2'	25:DA:2462:U:C6	2.51	0.46
33:DN:19:GLU:HA	33:DN:59:LYS:HB2	1.97	0.46
36:DQ:108:GLY:HA3	45:DZ:116:VAL:HG13	1.96	0.46
45:DZ:70:LEU:HD23	45:DZ:70:LEU:HA	1.79	0.46
1:AA:752:G:H4'	15:AO:69:TYR:OH	2.16	0.45
1:AA:1424:C:H2'	1:AA:1425:U:O4'	2.15	0.45
4:AD:30:LYS:HA	4:AD:35:ARG:NH1	2.31	0.45
4:AD:190:ASP:OD1	4:AD:190:ASP:N	2.49	0.45
11:AK:31:THR:HA	11:AK:42:TRP:HA	1.98	0.45
11:AK:99:GLN:HG3	11:AK:105:VAL:HG11	1.97	0.45
26:BB:48:A:H4'	38:BS:95:HIS:CD2	2.42	0.45
26:BB:75:G:H5''	26:BB:75:G:H8	1.80	0.45
27:BD:72:LYS:HB3	27:BD:75:ILE:HD12	1.99	0.45
36:BQ:85:LYS:HD3	46:B0:7:LEU:HG	1.98	0.45
42:BW:71:VAL:HA	42:BW:107:LEU:HD12	1.98	0.45
1:CA:433:C:H2'	1:CA:434:U:C6	2.49	0.45
1:CA:931:C:H42	1:CA:1386:G:H1	1.64	0.45
1:CA:1058:G:N2	10:CJ:53:PRO:HG3	2.31	0.45
1:CA:1243:C:H2'	1:CA:1244:C:H6	1.81	0.45
3:CC:183:ASP:N	3:CC:202:ILE:O	2.46	0.45
4:CD:20:TYR:CD1	4:CD:26:CYS:HB3	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:77:C:O2'	48:D2:14:ARG:NH2	2.49	0.45
25:DA:556:G:C6	25:DA:557:U:C4	3.04	0.45
25:DA:1405:U:H2'	25:DA:1406:U:H6	1.77	0.45
25:DA:1707:G:H2'	25:DA:1708:C:C6	2.51	0.45
25:DA:1783:A:H5'	25:DA:2608:G:H4'	1.98	0.45
25:DA:2065:C:H2'	25:DA:2066:C:H6	1.80	0.45
33:DN:30:ILE:O	33:DN:34:LEU:HD22	2.16	0.45
36:DQ:42:ILE:HG22	36:DQ:47:ILE:HG13	1.98	0.45
38:DS:77:ALA:HB1	38:DS:82:ILE:HB	1.97	0.45
39:DT:61:PHE:CE1	39:DT:76:PHE:HB2	2.51	0.45
44:DY:19:LYS:HE2	44:DY:20:TYR:CE1	2.51	0.45
1:AA:923:A:OP1	5:AE:21:ALA:HB2	2.15	0.45
1:AA:958:A:C6	1:AA:959:A:N1	2.84	0.45
11:AK:84:VAL:HG11	11:AK:91:ARG:HD2	1.97	0.45
19:AS:38:SER:O	19:AS:70:LYS:HD3	2.17	0.45
25:BA:1702:A:H3'	25:BA:1703:C:H6	1.81	0.45
27:BD:43:ARG:HA	27:BD:48:ARG:O	2.16	0.45
28:BE:144:ARG:HB3	28:BE:145:LYS:H	1.36	0.45
29:BF:8:GLN:OE1	29:BF:19:GLU:HG2	2.17	0.45
30:BG:97:ASP:O	30:BG:101:ILE:HG13	2.16	0.45
31:BH:174:GLY:O	31:BH:175:LYS:HB3	2.16	0.45
39:BT:29:ARG:HB2	39:BT:46:GLU:HG3	1.97	0.45
45:BZ:136:PHE:O	45:BZ:137:ILE:HG13	2.17	0.45
1:CA:689:C:O4'	1:CA:704:A:H2	1.99	0.45
1:CA:1004:A:H3'	1:CA:1005:A:O4'	2.16	0.45
1:CA:1329:A:P	13:CM:28:ALA:HB3	2.57	0.45
2:CB:51:LEU:HD23	2:CB:201:ILE:HD12	1.97	0.45
5:CE:33:VAL:HG13	5:CE:112:LEU:HD12	1.98	0.45
25:DA:57:C:H2'	25:DA:58:G:O4'	2.16	0.45
25:DA:94(A):G:N2	48:D2:47:ASN:OD1	2.40	0.45
25:DA:428:A:H3'	25:DA:429:A:H8	1.81	0.45
25:DA:776:G:C8	25:DA:793:A:C2	3.04	0.45
25:DA:858:U:O2	25:DA:2268:A:H2'	2.16	0.45
25:DA:881:G:C2	25:DA:882:G:C4	3.03	0.45
25:DA:1266:G:O4'	42:DW:15:ARG:NH2	2.48	0.45
25:DA:1321:A:H2'	25:DA:1322:A:O4'	2.16	0.45
25:DA:2443:C:H2'	25:DA:2444:G:C8	2.51	0.45
29:DF:31:HIS:NE2	29:DF:35:GLU:OE2	2.49	0.45
30:DG:61:ALA:HA	30:DG:66:GLN:O	2.15	0.45
34:DO:4:PRO:O	34:DO:5:GLN:HB2	2.17	0.45
38:DS:30:ARG:HD3	38:DS:98:VAL:HG22	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DV:62:LEU:CD1	41:DV:95:LEU:HB2	2.46	0.45
45:DZ:6:LYS:HE3	45:DZ:8:TYR:OH	2.16	0.45
1:AA:181:G:N1	1:AA:195:A:C8	2.84	0.45
1:AA:323:U:OP1	20:AT:23:ARG:HA	2.16	0.45
1:AA:355:C:C4	1:AA:356:A:N7	2.84	0.45
1:AA:660:G:H2'	1:AA:661:G:H8	1.82	0.45
1:AA:1030:C:H5'	1:AA:1030(A):G:O5'	2.16	0.45
1:AA:1082:G:H2'	1:AA:1083:U:O4'	2.16	0.45
4:AD:107:ARG:HA	4:AD:107:ARG:HD2	1.72	0.45
5:AE:44:GLY:HA3	5:AE:62:ALA:HB2	1.99	0.45
19:AS:12:ASP:OD1	19:AS:37:ARG:HD2	2.16	0.45
25:BA:471:C:H2'	25:BA:472:G:O4'	2.16	0.45
29:BF:184:TYR:O	29:BF:188:ARG:HG3	2.16	0.45
45:BZ:28:MET:HA	45:BZ:88:PHE:O	2.16	0.45
1:CA:243:A:C2	1:CA:246:A:C8	3.05	0.45
1:CA:299:G:H2'	1:CA:300:A:C8	2.50	0.45
1:CA:790:A:C6	1:CA:791:G:C6	3.05	0.45
1:CA:1007:C:N3	1:CA:1022:G:C2	2.83	0.45
1:CA:1194:U:H2'	1:CA:1195:C:C6	2.51	0.45
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.52	0.45
1:CA:1342:C:H4'	9:CI:125:TYR:HB3	1.97	0.45
1:CA:1479:C:H2'	1:CA:1480:G:C8	2.51	0.45
3:CC:28:GLN:HB3	3:CC:32:LEU:HD23	1.96	0.45
12:CL:117:ARG:NH2	12:CL:124:LYS:HB2	2.31	0.45
19:CS:22:LEU:HD23	19:CS:28:LYS:HA	1.98	0.45
20:CT:89:ARG:O	20:CT:93:GLU:HB2	2.15	0.45
25:DA:858:U:H1'	25:DA:2268:A:H2'	1.97	0.45
25:DA:903:C:H2'	25:DA:904:C:H6	1.80	0.45
25:DA:987:G:O2'	25:DA:1000:A:N3	2.44	0.45
25:DA:2335:A:C8	25:DA:2337:G:N7	2.84	0.45
25:DA:2439:A:H5'	25:DA:2439:A:C8	2.50	0.45
25:DA:2693:A:H2'	25:DA:2694:G:H8	1.81	0.45
36:DQ:56:ARG:HH11	36:DQ:56:ARG:HG3	1.81	0.45
1:AA:299:G:C6	1:AA:300:A:C6	3.04	0.45
1:AA:1035:A:H2	1:AA:1036:G:N7	2.15	0.45
1:AA:1523:G:OP1	11:AK:123:LYS:HD2	2.16	0.45
4:AD:15:GLU:HG2	4:AD:63:LYS:HB3	1.99	0.45
15:AO:74:ASP:CG	15:AO:77:ARG:HG3	2.37	0.45
25:BA:270:C:H6	25:BA:270:C:O5'	1.99	0.45
25:BA:1183:G:H2'	33:BN:106:MET:HE2	1.98	0.45
25:BA:1825:U:H2'	25:BA:1826:C:H6	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1882:U:H3	25:BA:1913:G:H1	1.64	0.45
25:BA:2117:C:H2'	25:BA:2118:U:O4'	2.16	0.45
26:BB:32:C:C2	26:BB:51:G:N2	2.85	0.45
31:BH:159:GLU:HG3	31:BH:169:VAL:HG11	1.99	0.45
43:BX:26:TYR:CE2	43:BX:89:ILE:HG13	2.51	0.45
50:B4:59:PHE:C	50:B4:61:ARG:H	2.18	0.45
54:B8:30:ARG:HA	54:B8:30:ARG:HD3	1.58	0.45
1:CA:35:G:C6	1:CA:36:C:N4	2.85	0.45
1:CA:35:G:C5	1:CA:36:C:C4	3.04	0.45
1:CA:186:C:H2'	1:CA:187:C:C6	2.51	0.45
1:CA:474:G:H2'	1:CA:475:G:C8	2.47	0.45
1:CA:685:G:C2	1:CA:686:U:C4	3.04	0.45
1:CA:757:U:O2'	1:CA:879:C:O2	2.32	0.45
1:CA:872:A:C4	1:CA:874:G:N7	2.85	0.45
1:CA:927:G:H2'	1:CA:928:G:C8	2.52	0.45
1:CA:1186:G:O3'	9:CI:113:LYS:NZ	2.49	0.45
3:CC:179:ARG:O	3:CC:206:GLU:HA	2.16	0.45
7:CG:153:HIS:CE1	11:CK:58:PRO:HD2	2.50	0.45
16:CP:22:THR:HA	16:CP:33:ILE:HG13	1.99	0.45
25:DA:140:G:N2	25:DA:1596:A:H4'	2.31	0.45
25:DA:747:U:O2	25:DA:2014:A:H1'	2.17	0.45
31:DH:163:TYR:CE2	31:DH:169:VAL:HG22	2.52	0.45
32:DI:129:THR:HG22	32:DI:139:GLN:HE22	1.80	0.45
35:DP:52:GLU:OE2	54:D8:57:ARG:NH1	2.46	0.45
45:DZ:45:ASP:OD2	45:DZ:49:ARG:HD2	2.16	0.45
46:D0:72:ARG:O	46:D0:75:LEU:HB2	2.16	0.45
1:AA:202:U:H3'	1:AA:203:U:C6	2.51	0.45
1:AA:303:A:HO2'	1:AA:555:C:HO2'	1.57	0.45
1:AA:433:C:H2'	1:AA:434:U:C6	2.49	0.45
1:AA:1030(C):G:N7	1:AA:1031:G:N2	2.65	0.45
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.51	0.45
1:AA:1239:A:H62	1:AA:1299:A:H62	1.64	0.45
5:AE:78:HIS:NE2	5:AE:142:LEU:HA	2.32	0.45
7:AG:103:TRP:CH2	7:AG:141:VAL:HG21	2.52	0.45
8:AH:28:ALA:HA	8:AH:59:LEU:HG	1.98	0.45
8:AH:53:VAL:HG12	8:AH:54:ASP:OD1	2.16	0.45
9:AI:99:LEU:HB3	9:AI:101:PHE:CE1	2.52	0.45
34:BO:104:ARG:NH2	39:BT:43:GLN:OE1	2.50	0.45
36:BQ:34:LEU:HD11	36:BQ:129:THR:HB	1.99	0.45
38:BS:10:ARG:O	38:BS:14:VAL:HG13	2.16	0.45
45:BZ:8:TYR:HB2	45:BZ:38:TYR:CE2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B6:11:LEU:HB3	52:B6:49:HIS:HB3	1.99	0.45
1:CA:489:C:H2'	1:CA:490:G:H8	1.81	0.45
2:CB:180:LEU:HA	2:CB:180:LEU:HD23	1.69	0.45
3:CC:73:PRO:O	3:CC:77:ILE:HG12	2.16	0.45
4:CD:43:HIS:CA	4:CD:46:LYS:HG3	2.45	0.45
13:CM:8:GLU:HG2	30:DG:146:TYR:HD2	1.81	0.45
14:CN:32:SER:O	14:CN:40:CYS:HA	2.17	0.45
25:DA:139(A):G:O2'	25:DA:140:G:H5'	2.17	0.45
25:DA:506:G:O3'	25:DA:507:A:H8	2.00	0.45
25:DA:714:U:O2	25:DA:716:A:C8	2.70	0.45
25:DA:1803:A:H4'	27:DD:259:THR:HG23	1.98	0.45
25:DA:1927:A:H2'	25:DA:1928:A:C8	2.52	0.45
25:DA:2564:A:OP1	25:DA:2648:C:H4'	2.16	0.45
26:DB:33:G:C2'	26:DB:34:U:H5'	2.47	0.45
31:DH:20:ALA:HB3	31:DH:23:ARG:CG	2.46	0.45
38:DS:36:TYR:N	38:DS:36:TYR:CD1	2.85	0.45
43:DX:26:TYR:CE2	43:DX:89:ILE:HG13	2.51	0.45
45:DZ:131:ARG:H	45:DZ:131:ARG:HD2	1.81	0.45
1:AA:130:A:H5'	17:AQ:63:ARG:HE	1.81	0.45
1:AA:473:G:H2'	1:AA:474:G:C8	2.52	0.45
1:AA:1179:A:O3'	9:AI:103:THR:HB	2.16	0.45
1:AA:1309:G:OP1	13:AM:88:ARG:NH1	2.49	0.45
3:AC:58:GLU:HB2	3:AC:65:ALA:CB	2.46	0.45
5:AE:137:GLU:HG2	5:AE:140:ARG:NH1	2.30	0.45
6:AF:81:ILE:HD11	27:BD:125:ILE:HB	1.99	0.45
7:AG:50:ILE:CD1	7:AG:58:PRO:HA	2.41	0.45
8:AH:121:ASP:N	8:AH:121:ASP:OD1	2.49	0.45
25:BA:1003:U:HO2'	25:BA:1004:A:P	2.40	0.45
25:BA:1314:A:C2	25:BA:2035:A:C4	3.05	0.45
25:BA:1938:A:H2'	25:BA:1939:U:O4'	2.17	0.45
29:BF:7:TYR:O	29:BF:21:ALA:HA	2.16	0.45
45:BZ:74:VAL:HG22	45:BZ:86:VAL:HG12	1.99	0.45
47:B1:86:SER:N	47:B1:89:GLU:HG3	2.31	0.45
1:CA:840:C:H5''	1:CA:848:C:O2	2.17	0.45
1:CA:881:G:P	12:CL:12:ARG:HH22	2.40	0.45
1:CA:959:A:O2'	1:CA:984:C:O2'	2.14	0.45
1:CA:1504:G:OP1	1:CA:1507:A:H4'	2.17	0.45
4:CD:108:LEU:HD12	4:CD:108:LEU:HA	1.68	0.45
8:CH:63:LEU:HA	8:CH:63:LEU:HD13	1.85	0.45
9:CI:16:ARG:HB2	9:CI:64:THR:HB	1.99	0.45
9:CI:47:LEU:HD22	9:CI:50:LEU:HD21	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:47:ASP:N	13:CM:47:ASP:OD1	2.50	0.45
17:CQ:94:ASN:O	17:CQ:98:LEU:HD13	2.16	0.45
18:CR:56:THR:HB	18:CR:58:LEU:HD23	1.98	0.45
25:DA:198:C:H5'	25:DA:2244:U:OP1	2.17	0.45
25:DA:222:A:C2	25:DA:233:A:H5''	2.52	0.45
25:DA:646:A:H2'	25:DA:647:G:O4'	2.16	0.45
25:DA:955:C:OP1	36:DQ:87:LYS:HE3	2.16	0.45
25:DA:1539:G:H2'	25:DA:1540:U:C6	2.52	0.45
25:DA:2658:C:O3'	31:DH:158:HIS:HE1	1.98	0.45
27:DD:2:ALA:O	27:DD:3:VAL:HB	2.16	0.45
28:DE:77:ILE:HD13	28:DE:195:LEU:HD13	1.98	0.45
29:DF:33:LEU:HB3	35:DP:6:LEU:HD21	1.99	0.45
37:DR:60:LEU:HD23	37:DR:60:LEU:HA	1.77	0.45
38:DS:26:LEU:HD22	38:DS:87:PHE:CD1	2.51	0.45
40:DU:49:HIS:HA	40:DU:52:ARG:HB3	1.97	0.45
1:AA:109:A:H2'	1:AA:326:G:N2	2.32	0.45
1:AA:419:C:OP1	1:AA:513:C:O2'	2.27	0.45
1:AA:974:A:OP2	14:AN:29:ARG:NH2	2.50	0.45
1:AA:1123:A:H61	1:AA:1149:C:N4	2.15	0.45
1:AA:1125:U:HO2'	1:AA:1126:U:P	2.39	0.45
5:AE:36:ASP:OD1	5:AE:38:GLN:N	2.37	0.45
11:AK:70:LYS:NZ	11:AK:70:LYS:HB2	2.31	0.45
25:BA:561:A:H2'	25:BA:562:C:C6	2.52	0.45
25:BA:943:C:O5'	25:BA:943:C:H6	2.00	0.45
25:BA:1002:A:N1	25:BA:2470:G:H4'	2.32	0.45
25:BA:1410:G:OP2	47:B1:3:LYS:HG3	2.16	0.45
26:BB:14:U:OP2	26:BB:70:C:O2'	2.29	0.45
28:BE:51:PHE:O	28:BE:75:VAL:HG13	2.16	0.45
29:BF:181:LEU:HD12	29:BF:181:LEU:HA	1.71	0.45
31:BH:13:LYS:HA	31:BH:14:GLY:HA2	1.78	0.45
36:BQ:54:MET:HB3	36:BQ:64:ILE:HD11	1.99	0.45
44:BY:55:TYR:N	44:BY:55:TYR:CD2	2.84	0.45
45:BZ:45:ASP:OD1	45:BZ:49:ARG:HD2	2.16	0.45
1:CA:376:G:H5''	16:CP:5:ARG:HB2	1.99	0.45
1:CA:584:G:H2'	1:CA:585:G:C8	2.51	0.45
1:CA:624:C:H2'	1:CA:625:G:H8	1.82	0.45
1:CA:1427:U:H2'	1:CA:1428:A:C8	2.52	0.45
2:CB:17:PHE:HB2	2:CB:44:LEU:HD12	1.97	0.45
3:CC:52:LEU:HD23	3:CC:68:VAL:HG13	1.98	0.45
4:CD:10:ARG:HB2	4:CD:40:PRO:HG3	1.99	0.45
10:CJ:55:LYS:HE3	10:CJ:56:HIS:HE2	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:2:ALA:HB1	14:CN:6:LEU:HD13	1.97	0.45
14:CN:6:LEU:HB3	14:CN:23:ARG:NH2	2.32	0.45
20:CT:43:LEU:HB3	20:CT:52:ALA:HB2	1.99	0.45
25:DA:11:G:C2'	25:DA:12:U:H5'	2.43	0.45
25:DA:362:U:O2'	25:DA:363:G:H5'	2.17	0.45
25:DA:729:G:C5	27:DD:208:LYS:HB2	2.51	0.45
25:DA:919:G:C6	25:DA:920:G:C5	3.05	0.45
25:DA:1003:G:N2	25:DA:1153:C:C2	2.84	0.45
25:DA:1138:G:H2'	25:DA:1139:G:O4'	2.16	0.45
25:DA:1291:C:H2'	25:DA:1292:U:H6	1.82	0.45
25:DA:1786:A:C4	25:DA:1938:A:C6	3.04	0.45
25:DA:1876:A:H2'	25:DA:1877:A:H8	1.77	0.45
25:DA:2019:A:OP2	51:D5:9:LYS:NZ	2.30	0.45
25:DA:2370:G:H2'	25:DA:2371:G:C8	2.51	0.45
27:DD:268:ARG:HD3	27:DD:269:PHE:CE2	2.51	0.45
43:DX:53:LYS:NZ	43:DX:55:ASN:OD1	2.32	0.45
51:D5:41:PRO:HG2	51:D5:44:THR:OG1	2.16	0.45
1:AA:44:G:C2	1:AA:45:U:H1'	2.50	0.45
1:AA:721:G:C6	1:AA:733:A:C2	3.04	0.45
1:AA:991:U:H1'	1:AA:993:G:C8	2.52	0.45
1:AA:1002:G:H5''	1:AA:1003:G:OP2	2.17	0.45
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.17	0.45
1:AA:1285:A:O5'	1:AA:1285:A:H8	1.99	0.45
1:AA:1351:U:O4	9:AI:118:LYS:NZ	2.49	0.45
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.17	0.45
2:AB:95:GLN:HB3	2:AB:147:LYS:HZ2	1.82	0.45
4:AD:5:ILE:HD13	4:AD:5:ILE:O	2.17	0.45
4:AD:189:PRO:HB3	4:AD:193:ASP:HB3	1.99	0.45
6:AF:60:PHE:CE2	18:AR:78:LEU:HD21	2.52	0.45
7:AG:26:PHE:CE2	7:AG:30:ILE:HD11	2.51	0.45
8:AH:7:ALA:HB2	8:AH:85:ARG:HD2	1.98	0.45
16:AP:56:ALA:O	16:AP:60:LEU:HD23	2.17	0.45
25:BA:211:A:H5''	25:BA:448:U:OP1	2.16	0.45
25:BA:1715:A:H4'	25:BA:1716:A:O5'	2.16	0.45
25:BA:1735:U:O2	25:BA:1747:A:H5'	2.17	0.45
25:BA:2092:G:H2'	25:BA:2093:A:O4'	2.16	0.45
25:BA:2289:G:OP2	46:B0:10:THR:HG21	2.16	0.45
26:BB:106:G:OP1	45:BZ:31:ARG:HG2	2.17	0.45
35:BP:46:LYS:HE3	35:BP:46:LYS:HB3	1.77	0.45
1:CA:21:G:H2'	1:CA:22:G:C8	2.52	0.45
1:CA:130:A:H5'	17:CQ:63:ARG:NE	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:130:A:OP2	17:CQ:63:ARG:NE	2.44	0.45
1:CA:615:C:H2'	1:CA:616:G:O4'	2.16	0.45
1:CA:1106:G:H2'	1:CA:1107:C:H6	1.82	0.45
1:CA:1118:C:C2	1:CA:1119:C:H5	2.35	0.45
1:CA:1403:C:O5'	1:CA:1403:C:H6	1.99	0.45
4:CD:132:ARG:NH2	4:CD:134:ASP:OD2	2.49	0.45
6:CF:61:LEU:HB3	6:CF:63:TYR:CE1	2.49	0.45
9:CI:4:TYR:HB2	9:CI:19:LEU:HB2	1.99	0.45
23:CX:67:C:C2'	23:CX:68:C:H5'	2.46	0.45
25:DA:64:A:O3'	43:DX:71:GLY:HA3	2.17	0.45
25:DA:1006:C:C2	25:DA:1138:G:N2	2.85	0.45
25:DA:1336:A:H2'	25:DA:1337:G:C8	2.52	0.45
25:DA:1477:A:H2'	25:DA:1478:G:O4'	2.16	0.45
25:DA:1710:C:H2'	25:DA:1711:C:C6	2.51	0.45
25:DA:1857:G:C6	25:DA:1858:G:N1	2.85	0.45
25:DA:2261:C:C5	46:D0:16:SER:HB3	2.52	0.45
25:DA:2528:U:O2'	25:DA:2529:G:H3'	2.16	0.45
26:DB:17:C:H2'	26:DB:18:G:O4'	2.16	0.45
27:DD:58:HIS:ND1	27:DD:59:LYS:N	2.65	0.45
27:DD:148:GLU:CB	27:DD:151:LYS:HD2	2.45	0.45
29:DF:120:GLU:HB3	29:DF:122:LYS:HG2	1.99	0.45
37:DR:28:LEU:HD23	37:DR:28:LEU:HA	1.85	0.45
39:DT:95:ARG:NH1	39:DT:95:ARG:HG2	2.31	0.45
1:AA:303:A:O2'	1:AA:555:C:O2'	2.34	0.45
1:AA:921:U:O2	5:AE:19:MET:HB2	2.17	0.45
4:AD:13:ARG:HB3	4:AD:38:TYR:O	2.17	0.45
6:AF:11:ASN:HB3	6:AF:14:LEU:HG	1.99	0.45
25:BA:163:C:H2'	25:BA:164:G:O4'	2.17	0.45
25:BA:211:A:H3'	25:BA:448:U:H5'	1.99	0.45
25:BA:1834:A:C8	25:BA:1835:C:C5	3.04	0.45
25:BA:2299:A:C4	25:BA:2301:G:C8	3.05	0.45
25:BA:2624:C:H2'	25:BA:2625:U:H5'	1.99	0.45
26:BB:50:G:O5'	26:BB:50:G:H8	2.00	0.45
52:B6:19:ARG:NH2	52:B6:52:VAL:HG11	2.32	0.45
1:CA:35:G:O2'	12:CL:118:SER:O	2.34	0.45
1:CA:1106:G:H2'	1:CA:1107:C:C6	2.51	0.45
2:CB:81:VAL:O	2:CB:85:ALA:N	2.49	0.45
4:CD:17:VAL:HG11	4:CD:197:PRO:CG	2.47	0.45
4:CD:79:PHE:HE1	4:CD:204:ILE:HD13	1.81	0.45
9:CI:53:VAL:HG21	9:CI:92:TYR:OH	2.17	0.45
25:DA:193:U:O3'	25:DA:803:U:H4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:587:C:OP2	35:DP:21:ARG:NH2	2.50	0.45
25:DA:652(B):A:H2	25:DA:655:A:H1'	1.82	0.45
25:DA:804:A:H5''	25:DA:805:G:OP1	2.17	0.45
25:DA:1525:G:H2'	25:DA:1526:G:H8	1.82	0.45
25:DA:2699:C:H2'	25:DA:2700:C:O4'	2.17	0.45
28:DE:1:MET:HB3	28:DE:83:ASP:O	2.16	0.45
28:DE:119:ARG:HB3	28:DE:120:TRP:CD1	2.52	0.45
49:D3:6:VAL:HG12	49:D3:56:VAL:HG22	1.98	0.45
49:D3:8:LEU:O	49:D3:32:GLN:N	2.38	0.45
1:AA:192:U:O2'	1:AA:193:C:C6	2.68	0.45
1:AA:452:A:O2'	1:AA:453:A:OP2	2.29	0.45
1:AA:1347:G:H5''	9:AI:107:ARG:HB3	1.99	0.45
2:AB:71:VAL:HA	2:AB:93:VAL:HG23	1.99	0.45
5:AE:127:ASN:HA	5:AE:128:PRO:HD3	1.85	0.45
9:AI:18:PHE:O	9:AI:61:ALA:HA	2.17	0.45
13:AM:84:ILE:N	13:AM:85:GLY:HA2	2.32	0.45
17:AQ:26:GLN:HE21	17:AQ:37:LYS:HG2	1.81	0.45
25:BA:217:A:OP1	35:BP:76:LYS:NZ	2.42	0.45
25:BA:254:A:H1'	25:BA:255:G:O4'	2.17	0.45
25:BA:1321:A:N1	25:BA:1341:C:O2'	2.48	0.45
25:BA:2211:U:C2'	25:BA:2212:G:H5'	2.47	0.45
25:BA:2274:U:P	46:B0:19:LYS:HZ3	2.40	0.45
25:BA:2473:C:H2'	25:BA:2474:U:C6	2.51	0.45
25:BA:2660:C:H2'	25:BA:2661:U:C6	2.53	0.45
25:BA:2784:C:H2'	25:BA:2785:C:H6	1.82	0.45
27:BD:180:GLY:HA3	27:BD:275:LYS:HD2	1.98	0.45
30:BG:115:ARG:HB3	30:BG:136:ARG:HH22	1.81	0.45
40:BU:85:LYS:HE2	40:BU:85:LYS:HB3	1.78	0.45
46:B0:43:THR:OG1	46:B0:46:LYS:HG2	2.16	0.45
54:B8:54:GLU:O	54:B8:58:ILE:HG13	2.17	0.45
1:CA:590:C:H2'	1:CA:591:U:C6	2.52	0.45
1:CA:1038:C:H2'	1:CA:1039:C:C6	2.52	0.45
1:CA:1066:C:O2'	1:CA:1067:A:H5'	2.17	0.45
1:CA:1136:U:O5'	1:CA:1137:C:C4	2.69	0.45
1:CA:1227:A:N3	19:CS:83:HIS:HB3	2.32	0.45
1:CA:1237:C:H3'	1:CA:1336:C:H41	1.82	0.45
1:CA:1289:A:H2	1:CA:1372:U:O4'	2.00	0.45
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.51	0.45
9:CI:77:ILE:O	9:CI:81:ILE:HG22	2.17	0.45
13:CM:87:TYR:O	13:CM:91:ARG:HG2	2.17	0.45
25:DA:453:C:O2	25:DA:457:A:O2'	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:652(D):C:N4	25:DA:652(U):G:H1	2.10	0.45
25:DA:1575:C:H2'	25:DA:1576:U:H6	1.81	0.45
25:DA:1652:A:C2'	25:DA:1653:G:H5'	2.47	0.45
25:DA:1817:G:H2'	25:DA:1818:U:H5'	1.98	0.45
25:DA:2002:G:OP2	61:DA:3782:HOH:O	2.21	0.45
25:DA:2242:G:H2'	25:DA:2243:U:O4'	2.17	0.45
28:DE:176:ILE:HB	28:DE:181:LEU:HB2	1.98	0.45
38:DS:23:ARG:NH2	38:DS:84:GLN:HG2	2.32	0.45
38:DS:57:LYS:HE2	38:DS:57:LYS:HB2	1.79	0.45
44:DY:49:VAL:CG2	44:DY:61:ILE:HG23	2.47	0.45
54:D8:54:GLU:O	54:D8:58:ILE:HG13	2.17	0.45
1:AA:590:C:H2'	1:AA:591:U:H6	1.81	0.44
1:AA:1187:G:H4'	9:AI:111:ARG:NH1	2.31	0.44
4:AD:61:LYS:NZ	4:AD:72:GLU:OE2	2.48	0.44
25:BA:659:C:H2'	25:BA:660:C:C6	2.52	0.44
25:BA:722:A:C8	25:BA:851:A:C6	3.05	0.44
25:BA:1032:C:C2'	25:BA:1033:G:H5'	2.47	0.44
36:BQ:135:ASP:OD2	45:BZ:49:ARG:NH2	2.50	0.44
42:BW:84:ARG:HG3	42:BW:98:LYS:HD2	1.99	0.44
49:B3:43:ILE:O	49:B3:47:VAL:HG23	2.18	0.44
54:B8:42:ARG:HD2	61:B8:203:HOH:O	2.17	0.44
1:CA:791:G:C5	1:CA:792:A:N7	2.85	0.44
1:CA:953:G:N7	13:CM:104:ARG:NH1	2.65	0.44
1:CA:1009:G:N2	1:CA:1021:G:H1'	2.32	0.44
1:CA:1030(A):G:HO2'	1:CA:1030(B):C:H5	1.61	0.44
1:CA:1118:C:H2'	1:CA:1119:C:H6	1.82	0.44
1:CA:1166:G:H1'	1:CA:1171:G:H22	1.81	0.44
1:CA:1192:C:OP2	3:CC:4:LYS:NZ	2.45	0.44
1:CA:1291:G:C6	1:CA:1292:U:C4	3.05	0.44
3:CC:12:LEU:HD23	3:CC:16:ARG:HB3	1.98	0.44
3:CC:66:VAL:HB	3:CC:101:LEU:HA	1.99	0.44
7:CG:56:GLN:O	7:CG:58:PRO:HD3	2.17	0.44
11:CK:44:SER:OG	11:CK:47:VAL:HG23	2.17	0.44
21:CU:22:ARG:HA	21:CU:23:PRO:HD3	1.74	0.44
23:CX:40:C:H2'	23:CX:41:C:C6	2.46	0.44
24:CW:4:PRO:O	24:CW:5:MVA:HG23	2.17	0.44
25:DA:39:C:H2'	25:DA:40:C:C6	2.52	0.44
25:DA:614:U:H4'	25:DA:614(C):A:N6	2.32	0.44
25:DA:911:A:H2'	36:DQ:9:TYR:CZ	2.53	0.44
25:DA:931:G:O2'	49:D3:24:LYS:HD3	2.16	0.44
25:DA:1022:G:C5	25:DA:1140:C:C4	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1489:U:O3'	25:DA:1490:A:H8	2.00	0.44
25:DA:1540:U:O2'	25:DA:1541:G:H5'	2.17	0.44
25:DA:1857:G:C6	25:DA:1858:G:C6	3.05	0.44
31:DH:86:GLU:CD	31:DH:130:ARG:HD3	2.38	0.44
32:DI:27:ARG:HD2	47:D1:71:TYR:CE1	2.52	0.44
40:DU:65:ILE:CD1	40:DU:95:LEU:HB3	2.47	0.44
40:DU:76:TYR:HH	40:DU:92:ARG:NH1	2.15	0.44
42:DW:18:ARG:NH1	42:DW:76:VAL:O	2.50	0.44
54:D8:34:TRP:CG	54:D8:35:GLN:N	2.85	0.44
1:AA:384:G:H2'	1:AA:385:C:C6	2.51	0.44
1:AA:922:G:C6	1:AA:923:A:C6	3.04	0.44
1:AA:1068:G:OP2	1:AA:1068:G:H8	2.00	0.44
2:AB:115:LEU:HD13	2:AB:145:LEU:HB3	1.98	0.44
4:AD:122:ARG:O	4:AD:134:ASP:HB2	2.18	0.44
4:AD:177:ASP:OD2	4:AD:180:GLY:HA3	2.16	0.44
6:AF:21:LEU:O	6:AF:24:GLU:HB3	2.16	0.44
9:AI:85:LEU:HB3	9:AI:92:TYR:HD2	1.82	0.44
20:AT:92:LEU:HD23	20:AT:92:LEU:HA	1.80	0.44
25:BA:597:C:H1'	25:BA:2077:C:C6	2.53	0.44
30:BG:34:LEU:HD23	30:BG:34:LEU:HA	1.76	0.44
31:BH:93:GLY:O	31:BH:95:ARG:NH2	2.50	0.44
36:BQ:32:TYR:OH	36:BQ:111:GLU:OE1	2.15	0.44
36:BQ:137:TYR:O	36:BQ:141:GLN:HG2	2.16	0.44
43:BX:24:GLY:O	43:BX:83:VAL:HG22	2.17	0.44
49:B3:46:ASN:O	49:B3:50:VAL:HG22	2.17	0.44
51:B5:33:CYS:HB2	51:B5:40:LYS:HD2	1.98	0.44
51:B5:48:GLU:OE1	51:B5:48:GLU:HA	2.16	0.44
1:CA:269:C:H2'	1:CA:270:A:C8	2.51	0.44
1:CA:719:C:N4	18:CR:71:LYS:HE2	2.32	0.44
1:CA:738:C:H2'	1:CA:739:C:C6	2.50	0.44
1:CA:1005:A:H3'	1:CA:1006:C:O4'	2.17	0.44
1:CA:1118:C:C2	1:CA:1119:C:C5	3.06	0.44
1:CA:1119:C:C4	1:CA:1154:G:O6	2.71	0.44
1:CA:1209:C:HO2'	1:CA:1214:C:H42	1.61	0.44
2:CB:74:LYS:HZ2	2:CB:166:ASP:HB2	1.82	0.44
3:CC:58:GLU:O	3:CC:59:ARG:HG3	2.16	0.44
4:CD:43:HIS:ND1	4:CD:46:LYS:HE3	2.32	0.44
8:CH:17:THR:HA	8:CH:65:TYR:HE2	1.82	0.44
9:CI:51:ARG:HG2	9:CI:56:LEU:CD2	2.46	0.44
10:CJ:23:ILE:HD12	10:CJ:85:LEU:HD22	2.00	0.44
13:CM:78:ILE:HD12	13:CM:92:HIS:NE2	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:949:C:H2'	25:DA:950:G:C8	2.51	0.44
25:DA:1420:U:O2'	25:DA:1421:G:OP1	2.31	0.44
25:DA:1527:G:H2'	25:DA:1542:A:N1	2.32	0.44
25:DA:2714:G:P	61:DA:3973:HOH:O	2.75	0.44
28:DE:150:VAL:CG1	28:DE:154:LYS:HG3	2.45	0.44
38:DS:36:TYR:OH	38:DS:54:LEU:HD22	2.17	0.44
1:AA:109:A:C6	1:AA:326:G:C6	3.06	0.44
1:AA:272:C:H2'	1:AA:273:A:C8	2.52	0.44
1:AA:977:A:H1'	1:AA:982:U:O4	2.17	0.44
1:AA:1456:G:O3'	20:AT:39:LYS:NZ	2.51	0.44
3:AC:26:LYS:HA	14:AN:36:PHE:HE1	1.81	0.44
3:AC:26:LYS:HA	14:AN:36:PHE:CE1	2.52	0.44
6:AF:1:MET:HA	6:AF:67:MET:O	2.18	0.44
8:AH:121:ASP:HB2	8:AH:125:ARG:NH1	2.31	0.44
14:AN:13:THR:HA	14:AN:14:PRO:HD3	1.85	0.44
19:AS:48:THR:HG22	19:AS:61:TYR:HA	1.99	0.44
25:BA:11:G:C2'	25:BA:12:U:H5'	2.42	0.44
25:BA:288:U:H6	25:BA:288:U:H2'	1.56	0.44
25:BA:701:A:H2	25:BA:702:A:C2	2.36	0.44
25:BA:1709:C:H1'	25:BA:2699:U:H5''	1.99	0.44
25:BA:1778:G:H2'	25:BA:1779:G:H5''	1.99	0.44
31:BH:69:ARG:HG3	31:BH:70:THR:N	2.32	0.44
32:BI:93:THR:H	32:BI:96:ASP:CG	2.21	0.44
33:BN:138:LEU:HD23	33:BN:138:LEU:HA	1.53	0.44
36:BQ:135:ASP:O	36:BQ:139:GLU:HG3	2.17	0.44
1:CA:7:G:O2'	5:CE:120:THR:O	2.35	0.44
1:CA:186:C:H2'	1:CA:187:C:H6	1.83	0.44
1:CA:671:G:N2	1:CA:735:C:O2	2.49	0.44
1:CA:811:C:O2'	1:CA:901:A:N1	2.48	0.44
1:CA:1004:A:H62	1:CA:1037:C:H2'	1.81	0.44
1:CA:1339:A:H2'	1:CA:1340:A:O4'	2.18	0.44
2:CB:7:VAL:HG12	2:CB:8:LYS:HG2	1.99	0.44
3:CC:150:LYS:HD2	3:CC:201:TYR:HD2	1.82	0.44
6:CF:72:VAL:O	6:CF:75:LEU:HB3	2.18	0.44
7:CG:78:ARG:NH2	7:CG:79:ARG:HH22	2.16	0.44
10:CJ:16:LEU:HD23	10:CJ:16:LEU:HA	1.88	0.44
18:CR:36:ASN:OD1	18:CR:39:VAL:HG23	2.17	0.44
25:DA:341:G:H2'	25:DA:342:G:O4'	2.17	0.44
25:DA:583:G:OP2	40:DU:10:ARG:NH1	2.50	0.44
25:DA:953:A:O2'	25:DA:954:G:H5'	2.18	0.44
25:DA:1223:G:N2	25:DA:1226:A:OP2	2.44	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1448:G:H1'	25:DA:1528:A:N1	2.33	0.44
25:DA:2044:C:C2	25:DA:2625:G:C2	3.05	0.44
30:DG:110:ALA:HA	30:DG:140:ILE:O	2.17	0.44
30:DG:114:ILE:HD12	30:DG:117:PHE:CD2	2.52	0.44
31:DH:149:ARG:NH1	31:DH:154:PRO:HG2	2.32	0.44
33:DN:16:ILE:HB	33:DN:54:VAL:HG22	1.99	0.44
35:DP:62:LEU:O	54:D8:13:ARG:HD3	2.17	0.44
36:DQ:77:LYS:HE3	36:DQ:84:GLY:O	2.17	0.44
45:DZ:11:GLU:HB3	45:DZ:12:GLY:H	1.53	0.44
48:D2:3:LEU:HA	48:D2:3:LEU:HD23	1.72	0.44
52:D6:11:LEU:HD23	52:D6:11:LEU:HA	1.80	0.44
1:AA:144:G:H1	1:AA:178:C:H42	1.64	0.44
1:AA:149:A:H2'	1:AA:150:C:H6	1.81	0.44
1:AA:410:G:H5''	1:AA:411:A:OP1	2.17	0.44
2:AB:47:THR:O	2:AB:51:LEU:N	2.40	0.44
3:AC:43:LEU:HD21	3:AC:91:LEU:HD13	1.99	0.44
7:AG:56:GLN:O	7:AG:58:PRO:HD3	2.17	0.44
25:BA:41:C:H2'	25:BA:42:G:O4'	2.17	0.44
25:BA:768:C:H2'	25:BA:769:A:H8	1.82	0.44
25:BA:927:G:C2	25:BA:928:G:C8	3.05	0.44
25:BA:2042:A:O2'	25:BA:2043:C:H5'	2.17	0.44
25:BA:2101:U:OP1	47:B1:21:ARG:NH2	2.51	0.44
25:BA:2348:A:H61	46:B0:43:THR:HG21	1.81	0.44
25:BA:2425:G:H2'	25:BA:2426:G:O4'	2.18	0.44
28:BE:51:PHE:CD2	28:BE:52:LEU:HG	2.51	0.44
29:BF:28:ILE:O	29:BF:30:PRO:HD3	2.17	0.44
31:BH:87:LEU:HD23	31:BH:164:TYR:HA	1.99	0.44
37:BR:65:LEU:HD13	37:BR:65:LEU:HA	1.59	0.44
45:BZ:120:ILE:HD13	45:BZ:120:ILE:N	2.33	0.44
50:B4:40:HIS:HA	50:B4:41:PRO:HD2	1.84	0.44
1:CA:189(L):G:H2'	1:CA:190:U:C6	2.52	0.44
1:CA:633:G:H2'	1:CA:634:C:C6	2.53	0.44
1:CA:1001(A):G:N3	1:CA:1002:G:H1'	2.32	0.44
1:CA:1091:U:H2'	1:CA:1093:A:OP2	2.18	0.44
1:CA:1223:C:H5''	1:CA:1224:G:C5'	2.43	0.44
1:CA:1243:C:H2'	1:CA:1244:C:C6	2.53	0.44
2:CB:9:GLU:HA	2:CB:48:MET:SD	2.58	0.44
3:CC:6:HIS:HA	3:CC:7:PRO:HD3	1.83	0.44
8:CH:98:LYS:HB2	8:CH:98:LYS:HE3	1.66	0.44
25:DA:192:C:O2'	25:DA:802:A:N3	2.44	0.44
25:DA:675:A:C6	25:DA:676:A:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1005:C:H4'	25:DA:1012:U:C6	2.52	0.44
25:DA:1041:C:H42	25:DA:1114:G:H1	1.64	0.44
25:DA:2708:G:H1'	37:DR:71:GLN:NE2	2.32	0.44
25:DA:2734:A:H2'	25:DA:2735:G:O4'	2.17	0.44
25:DA:2745:C:C4	25:DA:2746:U:C4	3.04	0.44
25:DA:2881:C:H2'	25:DA:2882:A:O4'	2.18	0.44
30:DG:11:TYR:HA	30:DG:15:VAL:HB	2.00	0.44
30:DG:70:VAL:HA	30:DG:90:LEU:HD23	2.00	0.44
50:D4:16:CYS:SG	50:D4:17:GLY:N	2.90	0.44
50:D4:46:GLN:HG3	50:D4:48:ARG:NH2	2.32	0.44
55:D9:2:LYS:HE2	55:D9:31:LYS:O	2.17	0.44
1:AA:392:G:H2'	1:AA:393:A:C8	2.53	0.44
1:AA:500:G:N2	1:AA:546:G:H1'	2.32	0.44
1:AA:1030(B):C:H2'	1:AA:1030(C):G:H5'	2.00	0.44
1:AA:1289:A:N1	1:AA:1371:G:O2'	2.42	0.44
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.51	0.44
2:AB:145:LEU:O	2:AB:149:LEU:HB2	2.18	0.44
3:AC:6:HIS:HD2	3:AC:8:ILE:H	1.65	0.44
7:AG:50:ILE:HD11	7:AG:58:PRO:CA	2.40	0.44
15:AO:54:ARG:O	15:AO:58:MET:HG3	2.17	0.44
20:AT:16:HIS:O	20:AT:19:SER:OG	2.24	0.44
25:BA:640:A:C4	29:BF:180:GLY:HA2	2.53	0.44
25:BA:851:A:H5''	25:BA:852:G:OP1	2.17	0.44
25:BA:964:A:H5''	26:BB:98:G:O2'	2.18	0.44
25:BA:1002:A:H5'	36:BQ:76:LYS:HG3	1.98	0.44
25:BA:1044:C:OP2	40:BU:92:ARG:NH2	2.51	0.44
25:BA:1096:A:H3'	25:BA:1097:G:H8	1.82	0.44
25:BA:2116:G:P	32:BI:22:LYS:HD2	2.57	0.44
25:BA:2340:A:H2'	25:BA:2341:G:H8	1.83	0.44
25:BA:2410:U:H2'	25:BA:2411:G:C8	2.53	0.44
25:BA:2418:U:OP1	61:BA:4136:HOH:O	2.21	0.44
25:BA:2545:A:H2'	25:BA:2546:A:O4'	2.17	0.44
30:BG:43:LEU:HB3	30:BG:44:GLY:H	1.52	0.44
32:BI:99:GLU:O	32:BI:103:ARG:NH1	2.50	0.44
44:BY:20:TYR:CE1	44:BY:43:ASN:HA	2.52	0.44
45:BZ:161:VAL:HG13	45:BZ:161:VAL:O	2.18	0.44
1:CA:66:G:C2	1:CA:67:C:C6	3.05	0.44
1:CA:397:A:H3'	1:CA:397:A:N3	2.32	0.44
1:CA:620:C:H2'	1:CA:621:A:O4'	2.17	0.44
1:CA:1004:A:C6	1:CA:1038:C:C6	3.06	0.44
1:CA:1024:G:N3	1:CA:1024:G:H2'	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1259:C:C4	1:CA:1260:C:H1'	2.53	0.44
1:CA:1346:A:H5''	9:CI:120:ARG:HH12	1.83	0.44
7:CG:26:PHE:CE2	7:CG:30:ILE:HD11	2.52	0.44
7:CG:69:VAL:HG21	7:CG:104:LEU:CD1	2.48	0.44
10:CJ:30:SER:O	10:CJ:81:THR:HG23	2.17	0.44
13:CM:16:ASP:HB3	13:CM:34:LEU:CD1	2.46	0.44
25:DA:652(D):C:H2'	25:DA:652(E):G:O4'	2.17	0.44
25:DA:817:C:O2'	25:DA:839:U:H5''	2.18	0.44
25:DA:2318:G:N2	38:DS:3:ARG:NH1	2.66	0.44
26:DB:70:C:H2'	26:DB:71:C:H6	1.83	0.44
29:DF:64:ILE:HG21	29:DF:78:ILE:HG23	1.98	0.44
29:DF:102:PRO:HB2	29:DF:105:VAL:HG23	2.00	0.44
36:DQ:137:TYR:CE1	45:DZ:83:PRO:HG3	2.52	0.44
41:DV:35:LEU:HB2	41:DV:57:VAL:HG23	1.99	0.44
1:AA:62:U:OP1	1:AA:385:C:O2'	2.35	0.44
1:AA:444:C:H2'	1:AA:445:G:C8	2.50	0.44
1:AA:457:C:H2'	1:AA:458:C:C5	2.53	0.44
1:AA:1346:A:C8	1:AA:1348:U:O2	2.71	0.44
2:AB:113:HIS:HA	2:AB:116:GLU:HB2	2.00	0.44
2:AB:155:LEU:HD21	2:AB:159:PRO:HG3	1.98	0.44
4:AD:188:LEU:HD23	4:AD:188:LEU:H	1.82	0.44
12:AL:57:LYS:HG2	12:AL:65:GLU:OE2	2.18	0.44
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.82	0.44
14:AN:26:ARG:NH2	14:AN:47:LEU:HD21	2.33	0.44
16:AP:6:LEU:HD23	16:AP:17:TYR:CD2	2.52	0.44
16:AP:75:ARG:HA	16:AP:80:PHE:HD2	1.82	0.44
25:BA:927:G:C2'	25:BA:928:G:H5'	2.48	0.44
25:BA:939:C:O2'	25:BA:940:C:H5'	2.16	0.44
28:BE:111:ARG:HG3	28:BE:160:TYR:CD2	2.53	0.44
31:BH:28:GLY:HA3	31:BH:79:VAL:HB	2.00	0.44
40:BU:50:ARG:HG2	40:BU:53:ARG:NH2	2.33	0.44
1:CA:292:G:C5	1:CA:293:G:H1'	2.53	0.44
1:CA:407:G:N2	1:CA:436:C:C2	2.86	0.44
1:CA:472:A:C2	1:CA:473:G:H1'	2.53	0.44
1:CA:692:U:O2'	1:CA:694:A:N7	2.37	0.44
1:CA:1036:G:N7	1:CA:1037:C:O2	2.51	0.44
1:CA:1380:U:C4	7:CG:3:ARG:HG2	2.52	0.44
2:CB:16:HIS:CB	2:CB:210:SER:HB3	2.42	0.44
2:CB:96:ARG:NH1	2:CB:98:LEU:HD13	2.33	0.44
2:CB:172:ILE:O	2:CB:176:GLU:HG3	2.18	0.44
7:CG:40:ALA:HB1	9:CI:41:VAL:HG21	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:42:ILE:HD13	7:CG:116:ALA:HB3	1.99	0.44
25:DA:108:U:H2'	25:DA:109:G:C8	2.52	0.44
25:DA:311:A:C8	25:DA:332:A:N7	2.85	0.44
25:DA:815:C:C2	25:DA:1193:G:C2	3.05	0.44
25:DA:1027:A:N6	25:DA:1126:A:C4	2.86	0.44
25:DA:1721:G:H8	25:DA:1741:A:N6	2.12	0.44
25:DA:2318:G:H21	38:DS:3:ARG:HD3	1.83	0.44
25:DA:2461:C:H2'	25:DA:2462:U:H6	1.83	0.44
26:DB:31:C:H4'	30:DG:29:TRP:CZ2	2.52	0.44
29:DF:33:LEU:HD22	29:DF:112:MET:HE3	2.00	0.44
30:DG:170:ARG:C	30:DG:170:ARG:HD3	2.38	0.44
44:DY:90:LEU:HD23	44:DY:92:ASN:HB2	1.99	0.44
1:AA:376:G:H2'	1:AA:377:G:C8	2.52	0.44
1:AA:720:C:O5'	1:AA:720:C:H6	2.01	0.44
1:AA:799:G:H5''	1:AA:799:G:H8	1.82	0.44
1:AA:1060:C:N4	3:AC:2:GLY:HA3	2.32	0.44
1:AA:1291:G:H2'	1:AA:1292:U:C6	2.53	0.44
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.17	0.44
3:AC:47:LEU:HD12	3:AC:68:VAL:HG11	1.98	0.44
3:AC:77:ILE:H	3:AC:77:ILE:HG12	1.70	0.44
4:AD:20:TYR:HD1	4:AD:26:CYS:HB3	1.82	0.44
13:AM:4:ILE:HB	13:AM:57:ARG:HG3	1.99	0.44
20:AT:34:LYS:HB2	20:AT:34:LYS:HE2	1.69	0.44
25:BA:254:A:C8	25:BA:255:G:H1'	2.53	0.44
25:BA:276:C:O3'	32:BI:42:SER:OG	2.36	0.44
25:BA:442:A:H2'	25:BA:443:C:C6	2.53	0.44
25:BA:648:G:H2'	25:BA:649:C:C6	2.52	0.44
26:BB:12:C:H2'	46:B0:73:GLY:HA3	1.99	0.44
26:BB:31:C:H4'	30:BG:29:TRP:CH2	2.51	0.44
28:BE:181:LEU:HD12	28:BE:181:LEU:HA	1.79	0.44
35:BP:59:LEU:HD21	54:B8:10:ALA:HA	1.99	0.44
1:CA:60:A:N6	1:CA:110:C:N3	2.64	0.44
1:CA:430:A:H2'	1:CA:431:A:O4'	2.18	0.44
1:CA:767:A:H2'	1:CA:768:A:O4'	2.16	0.44
1:CA:1191:A:OP2	3:CC:3:ASN:ND2	2.50	0.44
4:CD:64:LEU:HD22	4:CD:198:VAL:HG11	1.99	0.44
5:CE:51:VAL:O	5:CE:55:VAL:HG23	2.17	0.44
7:CG:131:LYS:HG2	7:CG:132:GLY:H	1.83	0.44
8:CH:13:ILE:O	8:CH:17:THR:HG23	2.18	0.44
8:CH:36:LEU:HD23	8:CH:36:LEU:HA	1.89	0.44
11:CK:85:ARG:HA	11:CK:112:THR:OG1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:14:HIS:O	19:CS:18:LYS:HG3	2.18	0.44
25:DA:460:A:P	53:D7:41:ARG:HH22	2.41	0.44
25:DA:984:A:H5''	25:DA:985:C:H5	1.81	0.44
25:DA:2294:C:OP2	38:DS:89:ARG:NH2	2.41	0.44
25:DA:2410:G:H2'	25:DA:2411:A:O4'	2.17	0.44
25:DA:2556:C:H2'	25:DA:2557:G:O4'	2.18	0.44
35:DP:64:LYS:HA	54:D8:13:ARG:HB3	2.00	0.44
45:DZ:5:LEU:HD22	45:DZ:6:LYS:H	1.83	0.44
45:DZ:141:VAL:O	45:DZ:144:LEU:HB2	2.18	0.44
46:D0:40:GLN:HE21	46:D0:57:PHE:HB3	1.83	0.44
1:AA:456:C:H2'	1:AA:457:C:C6	2.53	0.44
1:AA:532:A:H5'	3:AC:161:GLU:OE2	2.18	0.44
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.53	0.44
1:AA:1084:G:C5	1:AA:1085:U:C4	3.06	0.44
1:AA:1125:U:O2'	1:AA:1126:U:P	2.75	0.44
1:AA:1134:G:H2'	1:AA:1134:G:N3	2.33	0.44
1:AA:1198:G:C6	1:AA:1199:U:C4	3.06	0.44
1:AA:1258:G:H2'	1:AA:1259:C:C6	2.52	0.44
1:AA:1456:G:N1	20:AT:51:GLU:OE1	2.51	0.44
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.83	0.44
3:AC:175:LEU:HD21	3:AC:201:TYR:CE2	2.52	0.44
10:AJ:40:LEU:HB2	10:AJ:69:ASN:HB3	2.00	0.44
11:AK:85:ARG:HA	11:AK:112:THR:OG1	2.18	0.44
25:BA:926:G:H2'	25:BA:927:G:O4'	2.17	0.44
25:BA:2336:C:H5''	25:BA:2337:G:H5'	2.00	0.44
25:BA:2850:C:H4'	37:BR:53:HIS:CE1	2.53	0.44
27:BD:145:VAL:HG12	27:BD:146:GLU:O	2.18	0.44
33:BN:30:ILE:HG22	33:BN:34:LEU:HD22	2.00	0.44
47:B1:51:VAL:HG11	47:B1:74:VAL:HG21	1.99	0.44
52:B6:9:LEU:HD21	52:B6:25:LYS:HB3	1.98	0.44
1:CA:922:G:C6	1:CA:923:A:C6	3.05	0.44
1:CA:933:G:C6	1:CA:1385:G:C6	3.05	0.44
1:CA:1005:A:H2	1:CA:1026:G:C8	2.36	0.44
1:CA:1068:G:H8	1:CA:1068:G:OP2	2.00	0.44
1:CA:1142:G:C2	1:CA:1143:G:H1'	2.52	0.44
1:CA:1277:C:HO2'	1:CA:1279:A:H1'	1.83	0.44
2:CB:230:VAL:HG13	2:CB:231:GLU:O	2.18	0.44
3:CC:33:LEU:HD21	14:CN:53:LEU:CD2	2.48	0.44
4:CD:39:PRO:O	4:CD:44:GLY:HA3	2.18	0.44
9:CI:53:VAL:C	9:CI:55:ALA:H	2.20	0.44
13:CM:82:MET:O	13:CM:93:ARG:NH2	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:14:LYS:O	20:CT:18:GLN:HG3	2.18	0.44
25:DA:55:G:H2'	25:DA:56:A:H8	1.83	0.44
25:DA:863:A:O2'	25:DA:864:G:H5'	2.18	0.44
25:DA:875:G:C2	25:DA:903:C:C2	3.06	0.44
25:DA:1115:G:H8	25:DA:1115:G:OP2	2.01	0.44
25:DA:2251:G:OP1	61:DA:4599:HOH:O	2.21	0.44
26:DB:42:C:O2'	30:DG:66:GLN:HG2	2.18	0.44
27:DD:77:ALA:HB2	27:DD:97:TYR:CD2	2.52	0.44
31:DH:150:ALA:HA	31:DH:153:LYS:HG3	2.00	0.44
36:DQ:27:VAL:O	36:DQ:29:PHE:N	2.51	0.44
1:AA:8:A:H5'	5:AE:101:ILE:HG22	2.00	0.44
1:AA:78:G:N1	1:AA:91:C:N4	2.66	0.44
1:AA:539:A:H2'	1:AA:540:G:C8	2.52	0.44
1:AA:600:C:H2'	1:AA:601:C:H6	1.83	0.44
1:AA:1164:G:H2'	1:AA:1165:C:H6	1.82	0.44
4:AD:88:VAL:O	4:AD:92:VAL:HG23	2.18	0.44
4:AD:106:TYR:HE2	4:AD:112:VAL:O	2.01	0.44
6:AF:48:LEU:HD22	18:AR:77:GLY:HA3	1.99	0.44
10:AJ:31:GLY:HA2	10:AJ:32:ALA:HA	1.46	0.44
20:AT:42:GLN:NE2	20:AT:46:GLU:OE2	2.51	0.44
25:BA:63:A:O3'	43:BX:71:GLY:HA3	2.18	0.44
25:BA:1091:A:H2'	25:BA:1091:A:N3	2.31	0.44
25:BA:1157:A:N3	25:BA:1158:G:H1'	2.33	0.44
25:BA:1749:G:H2'	25:BA:1750:G:O4'	2.17	0.44
25:BA:1805:C:O5'	25:BA:1805:C:H6	2.01	0.44
25:BA:2214:G:H5'	25:BA:2215:G:OP2	2.18	0.44
25:BA:2614:A:N7	46:B0:3:HIS:CE1	2.86	0.44
25:BA:2830:A:OP1	37:BR:2:ARG:NH2	2.51	0.44
31:BH:126:PRO:HB2	31:BH:127:GLU:H	1.51	0.44
37:BR:72:ASP:OD2	37:BR:75:LEU:HB2	2.18	0.44
38:BS:103:GLU:O	38:BS:107:GLU:HG3	2.18	0.44
1:CA:142:G:H2'	1:CA:143:A:C8	2.53	0.44
1:CA:165:C:O5'	1:CA:165:C:H6	2.01	0.44
1:CA:713:G:H2'	1:CA:714:G:C8	2.53	0.44
1:CA:1324:A:H5'	1:CA:1362:C:O2'	2.18	0.44
3:CC:153:VAL:HA	3:CC:197:GLY:O	2.17	0.44
7:CG:51:GLN:HE21	7:CG:51:GLN:HB3	1.63	0.44
12:CL:36:VAL:HG23	24:CW:10:2QY:CE1	2.47	0.44
14:CN:26:ARG:HB3	14:CN:43:CYS:SG	2.57	0.44
19:CS:28:LYS:HD2	19:CS:47:HIS:HA	2.00	0.44
25:DA:271(F):C:H2'	25:DA:271(G):C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2854:G:H2'	25:DA:2855:C:C6	2.52	0.44
33:DN:138:LEU:HD23	33:DN:138:LEU:HA	1.75	0.44
39:DT:88:ILE:HG21	39:DT:91:ARG:NE	2.33	0.44
1:AA:10:A:OP2	5:AE:126:ARG:HD2	2.17	0.43
1:AA:106:C:O2'	1:AA:379:C:H5''	2.17	0.43
1:AA:266:G:O3'	17:AQ:67:LYS:HB2	2.18	0.43
1:AA:346:G:H3'	1:AA:346:G:N3	2.33	0.43
1:AA:404:U:H2'	1:AA:405:U:C6	2.53	0.43
1:AA:1427:U:H2'	1:AA:1428:A:C8	2.53	0.43
4:AD:110:PHE:N	4:AD:110:PHE:CD1	2.86	0.43
8:AH:25:ASP:HA	8:AH:60:ARG:HA	1.99	0.43
8:AH:94:TYR:HD1	8:AH:132:GLU:HA	1.83	0.43
14:AN:45:ARG:HG2	14:AN:49:HIS:HD2	1.83	0.43
19:AS:50:ALA:HA	19:AS:58:VAL:O	2.18	0.43
25:BA:31:C:C4	25:BA:32:C:C5	3.05	0.43
25:BA:171:A:H2'	25:BA:172:C:O4'	2.18	0.43
25:BA:174:U:H4'	25:BA:207:A:H4'	2.00	0.43
25:BA:588:C:H2'	25:BA:589:U:O4'	2.18	0.43
25:BA:1188:A:C4	25:BA:1190:G:C8	3.05	0.43
25:BA:1319:U:H4'	25:BA:1321:A:OP2	2.18	0.43
25:BA:1617:A:H2'	25:BA:1618:A:C8	2.53	0.43
25:BA:1874:C:O5'	25:BA:1874:C:H6	2.01	0.43
25:BA:2804:C:OP2	25:BA:2804:C:H6	2.01	0.43
26:BB:33:G:C2'	26:BB:34:U:H5'	2.47	0.43
1:CA:89:C:C4	1:CA:90:U:C5	3.05	0.43
1:CA:93:G:O2'	1:CA:96:U:H5'	2.18	0.43
1:CA:380:G:C2	1:CA:384:G:C6	3.06	0.43
1:CA:579:G:C6	1:CA:580:U:C4	3.06	0.43
1:CA:926:G:C6	1:CA:1505:G:C6	3.06	0.43
1:CA:1017:G:H2'	1:CA:1018:C:O4'	2.17	0.43
1:CA:1066:C:H2'	1:CA:1067:A:C8	2.53	0.43
4:CD:112:VAL:HG22	4:CD:116:GLN:OE1	2.18	0.43
5:CE:84:PHE:CE2	5:CE:133:TYR:HD2	2.36	0.43
5:CE:102:ALA:HB2	5:CE:120:THR:HG21	2.00	0.43
15:CO:54:ARG:O	15:CO:57:LEU:HB2	2.18	0.43
17:CQ:41:LYS:HZ2	17:CQ:92:ARG:HH21	1.65	0.43
23:CX:59:A:C2'	23:CX:60:U:H5'	2.47	0.43
25:DA:271(S):G:C2'	25:DA:271(T):C:H5'	2.47	0.43
25:DA:479:A:O2'	25:DA:481:G:H5'	2.18	0.43
25:DA:644:A:H4'	25:DA:645:C:N4	2.33	0.43
25:DA:777:A:H2'	25:DA:778:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1384:A:N3	25:DA:1405:U:H1'	2.32	0.43
25:DA:1942:C:OP2	25:DA:1943:U:O2'	2.20	0.43
25:DA:1991:U:H2'	25:DA:1992:G:H5''	1.99	0.43
25:DA:2197:U:H1'	25:DA:2198:A:C8	2.53	0.43
27:DD:206:LEU:HD23	27:DD:206:LEU:HA	1.68	0.43
27:DD:206:LEU:CD2	27:DD:211:ARG:HG2	2.46	0.43
29:DF:196:LEU:HD23	29:DF:196:LEU:HA	1.66	0.43
30:DG:54:GLU:O	30:DG:57:ALA:HB3	2.17	0.43
39:DT:16:ARG:HD2	39:DT:18:ASP:OD1	2.18	0.43
40:DU:16:LYS:HB3	40:DU:16:LYS:HE2	1.78	0.43
45:DZ:67:LEU:HA	45:DZ:68:PRO:HD3	1.64	0.43
1:AA:428:G:O4'	1:AA:430:A:C8	2.72	0.43
1:AA:432:A:OP2	1:AA:433:C:N4	2.43	0.43
2:AB:230:VAL:HG22	2:AB:231:GLU:H	1.83	0.43
17:AQ:50:LYS:HD2	17:AQ:51:TYR:CZ	2.53	0.43
25:BA:400:U:H1'	25:BA:450:A:N3	2.34	0.43
25:BA:733:G:OP2	25:BA:733:G:H4'	2.18	0.43
25:BA:1042:A:H4'	40:BU:91:ASP:OD2	2.17	0.43
25:BA:1072:U:H4'	25:BA:1073:A:OP1	2.18	0.43
25:BA:1899:A:H5'	25:BA:1900:G:OP2	2.18	0.43
32:BI:10:GLU:O	32:BI:12:LEU:N	2.51	0.43
36:BQ:12:GLN:HG2	36:BQ:73:PRO:HD2	2.00	0.43
38:BS:35:ILE:HG12	38:BS:101:LEU:HD12	2.00	0.43
43:BX:40:LYS:HE2	61:BX:3103:HOH:O	2.17	0.43
1:CA:245:C:O2	1:CA:283:C:N3	2.51	0.43
1:CA:848:C:H2'	1:CA:849:C:O4'	2.18	0.43
1:CA:960:U:H2'	1:CA:960:U:O2	2.17	0.43
1:CA:1133:G:C2'	1:CA:1134:G:H8	2.30	0.43
1:CA:1224:G:O2'	1:CA:1322:C:OP1	2.26	0.43
1:CA:1237:C:O2'	1:CA:1300:G:N1	2.43	0.43
3:CC:12:LEU:HA	3:CC:16:ARG:HB3	2.00	0.43
3:CC:155:GLY:O	3:CC:157:ILE:HG13	2.19	0.43
18:CR:66:LEU:O	18:CR:70:ILE:HG13	2.18	0.43
19:CS:20:LEU:HA	19:CS:23:ASN:ND2	2.34	0.43
24:CW:1:2QZ:CG2	24:CW:10:2QY:H83	2.48	0.43
25:DA:307:G:H21	25:DA:330:A:H62	1.66	0.43
25:DA:657:U:H2'	25:DA:658:C:C6	2.52	0.43
25:DA:880:G:N2	25:DA:898:C:H1'	2.33	0.43
25:DA:910:A:H2'	25:DA:2264:C:O2'	2.18	0.43
25:DA:1268:A:C2	25:DA:2013:A:C4	3.06	0.43
25:DA:2274:A:C5	25:DA:2276:G:C8	3.05	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DE:70:ALA:O	28:DE:72:VAL:N	2.42	0.43
29:DF:123:LEU:HD12	29:DF:124:LEU:N	2.32	0.43
35:DP:47:ASP:HA	35:DP:48:PRO:HD3	1.80	0.43
36:DQ:66:ILE:HG12	36:DQ:104:PHE:HE2	1.82	0.43
1:AA:180:U:O2'	1:AA:181:G:H5'	2.18	0.43
1:AA:375:U:C2	1:AA:376:G:C8	3.06	0.43
1:AA:400:C:H5''	4:AD:73:ARG:NH2	2.32	0.43
1:AA:414:A:C5	1:AA:431:A:C2	3.06	0.43
1:AA:584:G:H1	1:AA:757:U:H3	1.65	0.43
1:AA:1034:G:H5''	1:AA:1035:A:OP2	2.18	0.43
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.19	0.43
3:AC:24:ALA:HB1	3:AC:28:GLN:O	2.19	0.43
4:AD:129:ASN:OD1	4:AD:145:GLU:N	2.45	0.43
5:AE:52:PRO:HG2	5:AE:53:LEU:HD12	1.99	0.43
6:AF:22:GLU:OE2	6:AF:82:ARG:HG2	2.18	0.43
7:AG:22:LEU:HD13	7:AG:97:GLN:OE1	2.18	0.43
9:AI:53:VAL:C	9:AI:55:ALA:H	2.17	0.43
25:BA:609:A:H5'	29:BF:89:VAL:HG21	1.99	0.43
25:BA:843:C:H2'	25:BA:844:C:C6	2.54	0.43
25:BA:1541:A:C6	25:BA:1542:A:C6	3.06	0.43
25:BA:2307:C:C2'	25:BA:2308:U:H5'	2.48	0.43
25:BA:2671:G:O2'	31:BH:175:LYS:NZ	2.50	0.43
25:BA:2858:G:C8	39:BT:97:ALA:HB2	2.53	0.43
27:BD:77:ALA:O	27:BD:116:GLN:HG3	2.18	0.43
29:BF:81:PRO:HA	29:BF:87:GLY:O	2.17	0.43
37:BR:38:VAL:HB	37:BR:39:PRO:HD3	2.00	0.43
45:BZ:126:VAL:HG13	45:BZ:161:VAL:HG23	1.99	0.43
50:B4:62:ARG:C	50:B4:64:GLY:HA2	2.38	0.43
1:CA:791:G:C6	1:CA:792:A:N7	2.86	0.43
1:CA:1119:C:H2'	1:CA:1120:G:H8	1.82	0.43
1:CA:1134:G:H2'	1:CA:1135:U:H5'	2.00	0.43
2:CB:95:GLN:HB2	2:CB:148:TYR:HD1	1.83	0.43
2:CB:100:GLY:HA2	2:CB:103:THR:OG1	2.18	0.43
2:CB:187:LEU:HD13	2:CB:205:ASP:HA	2.01	0.43
5:CE:93:PRO:HG2	8:CH:105:ARG:NE	2.33	0.43
5:CE:148:VAL:HG21	8:CH:107:LEU:HD12	2.00	0.43
9:CI:128:ARG:NH2	23:CX:33:U:OP2	2.50	0.43
10:CJ:89:ASP:O	10:CJ:91:PRO:HD3	2.18	0.43
16:CP:74:LEU:HD23	16:CP:79:VAL:HG11	2.00	0.43
19:CS:28:LYS:CB	19:CS:29:ARG:HA	2.48	0.43
25:DA:1907:G:C2	25:DA:1908:C:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2494:G:C4	25:DA:2495:G:C8	3.06	0.43
25:DA:2776:A:C6	25:DA:2782:G:H1'	2.54	0.43
29:DF:11:VAL:HG21	29:DF:20:LEU:HB2	1.99	0.43
31:DH:54:ARG:HD3	31:DH:65:HIS:ND1	2.34	0.43
32:DI:48:GLU:OE2	32:DI:52:ARG:HD3	2.18	0.43
32:DI:61:ARG:HD3	32:DI:61:ARG:HA	1.81	0.43
32:DI:92:VAL:CG2	32:DI:120:ILE:HB	2.48	0.43
39:DT:53:ARG:HD3	39:DT:60:THR:OG1	2.18	0.43
40:DU:61:TRP:CH2	40:DU:93:LYS:HB2	2.53	0.43
49:D3:7:LYS:HG3	49:D3:34:GLU:HG3	2.00	0.43
54:D8:50:LEU:HA	54:D8:50:LEU:HD23	1.75	0.43
55:D9:13:LYS:HD3	55:D9:28:GLU:OE2	2.17	0.43
1:AA:170:U:O2'	1:AA:171:A:H5'	2.17	0.43
1:AA:298:A:C6	1:AA:299:G:C2	3.06	0.43
1:AA:442:C:H5'	1:AA:443:C:OP2	2.18	0.43
1:AA:630:G:O2'	1:AA:631:G:H5'	2.18	0.43
1:AA:1125:U:C3'	10:AJ:5:ARG:HH22	2.30	0.43
1:AA:1162:C:H2'	1:AA:1163:C:C6	2.53	0.43
1:AA:1502:A:H2	1:AA:1505:G:N1	2.04	0.43
2:AB:118:LEU:HD11	2:AB:141:GLU:HG2	2.01	0.43
3:AC:110:ASN:O	3:AC:141:VAL:HG22	2.19	0.43
4:AD:184:LYS:HB3	4:AD:184:LYS:HZ2	1.83	0.43
6:AF:92:LYS:HE2	6:AF:92:LYS:HB2	1.83	0.43
12:AL:77:LEU:HD21	12:AL:107:ALA:HA	1.99	0.43
16:AP:68:ASP:O	16:AP:71:ARG:HG2	2.17	0.43
25:BA:715:G:H5'	25:BA:716:G:OP2	2.18	0.43
25:BA:1721:G:H1'	25:BA:1723:A:N6	2.33	0.43
33:BN:38:HIS:H	33:BN:38:HIS:HD1	1.66	0.43
45:BZ:150:LEU:HB3	45:BZ:171:ILE:CD1	2.48	0.43
47:B1:3:LYS:HB2	47:B1:61:ARG:HH11	1.83	0.43
47:B1:23:LYS:HB3	47:B1:29:GLY:HA3	1.99	0.43
48:B2:63:VAL:O	48:B2:66:GLU:HB2	2.18	0.43
51:B5:40:LYS:HE2	51:B5:40:LYS:HB2	1.88	0.43
1:CA:1105:A:C2	1:CA:1106:G:N7	2.86	0.43
1:CA:1122:U:C4	1:CA:1123:A:N7	2.87	0.43
6:CF:25:ILE:CD1	6:CF:82:ARG:HH21	2.31	0.43
7:CG:94:ARG:O	7:CG:97:GLN:HB3	2.19	0.43
8:CH:33:GLU:HG2	8:CH:48:TYR:CE2	2.53	0.43
9:CI:46:ALA:HA	9:CI:78:LYS:HB2	2.01	0.43
11:CK:99:GLN:C	11:CK:101:SER:H	2.21	0.43
12:CL:75:HIS:ND1	12:CL:77:LEU:HB2	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:12:ASP:OD2	19:CS:38:SER:OG	2.36	0.43
25:DA:644:A:H4'	25:DA:645:C:C4	2.53	0.43
25:DA:729:G:C6	27:DD:208:LYS:HB2	2.53	0.43
25:DA:999:U:H3'	25:DA:1154:G:O6	2.19	0.43
25:DA:2249:U:O4	61:DA:3947:HOH:O	2.21	0.43
26:DB:46:A:C5	26:DB:47:C:C4	3.06	0.43
27:DD:221:VAL:HG22	27:DD:226:MET:HE3	2.00	0.43
29:DF:36:VAL:HG11	29:DF:183:VAL:CG1	2.48	0.43
45:DZ:30:ASN:ND2	45:DZ:90:VAL:HB	2.33	0.43
46:D0:24:LYS:O	46:D0:25:ARG:HD3	2.18	0.43
53:D7:22:MET:HA	53:D7:28:ARG:HG2	2.00	0.43
1:AA:147:G:C6	1:AA:148:G:C5	3.07	0.43
1:AA:353:A:H8	1:AA:353:A:H5'	1.84	0.43
1:AA:416:G:C6	1:AA:417:C:C4	3.06	0.43
1:AA:631:G:H2'	1:AA:632:A:H8	1.82	0.43
2:AB:146:GLN:O	2:AB:150:SER:HB3	2.19	0.43
8:AH:110:ALA:HB3	8:AH:121:ASP:HB3	2.00	0.43
25:BA:1183:G:H2'	25:BA:1184:G:O4'	2.18	0.43
25:BA:1324:A:OP1	37:BR:36:THR:HG22	2.18	0.43
25:BA:2768:C:C4	55:B9:19:ARG:NH1	2.86	0.43
26:BB:66:A:H61	26:BB:109:C:H5'	1.82	0.43
26:BB:73:A:C4	26:BB:105:A:C2	3.06	0.43
47:B1:82:LEU:HA	47:B1:85:LEU:HD12	2.01	0.43
53:B7:24:THR:HG22	53:B7:26:GLY:N	2.32	0.43
1:CA:35:G:C5	1:CA:36:C:N4	2.86	0.43
1:CA:401:C:H1'	1:CA:622:A:H1'	2.01	0.43
1:CA:545:C:H5'	4:CD:72:GLU:CB	2.49	0.43
1:CA:683:G:C6	1:CA:684:A:C5	3.07	0.43
1:CA:688:G:H5'	11:CK:46:GLY:C	2.39	0.43
1:CA:1038:C:C2'	1:CA:1039:C:H5'	2.49	0.43
1:CA:1118:C:H2'	1:CA:1119:C:C6	2.53	0.43
19:CS:31:ILE:HG22	19:CS:33:THR:HG22	2.00	0.43
25:DA:443:A:H1'	25:DA:1201:C:O4'	2.18	0.43
25:DA:483:A:O4'	44:DY:48:ALA:HB1	2.18	0.43
25:DA:1784:A:H4'	25:DA:1785:A:O5'	2.19	0.43
25:DA:1859:A:N6	25:DA:1883:G:O2'	2.52	0.43
25:DA:1970:A:OP2	61:DA:3905:HOH:O	2.20	0.43
26:DB:46:A:H2'	26:DB:47:C:H6	1.84	0.43
30:DG:25:TYR:HB3	30:DG:30:GLU:CB	2.47	0.43
35:DP:100:LEU:HD12	35:DP:112:LEU:HD11	1.99	0.43
37:DR:92:GLY:HA2	37:DR:94:TYR:CZ	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:6:G:O2'	1:AA:7:G:H5'	2.18	0.43
1:AA:93:G:H2'	1:AA:96:U:O4'	2.19	0.43
1:AA:246:A:N1	1:AA:278:G:O2'	2.39	0.43
1:AA:598:U:H2'	1:AA:599:C:H6	1.84	0.43
1:AA:1030:C:H3'	1:AA:1030(A):G:H4'	2.01	0.43
1:AA:1142:G:H3'	1:AA:1143:G:C8	2.53	0.43
3:AC:123:GLN:HG2	3:AC:128:PHE:HD2	1.84	0.43
6:AF:86:ARG:O	6:AF:87:ARG:HG2	2.19	0.43
7:AG:27:ILE:CD1	7:AG:40:ALA:HA	2.47	0.43
7:AG:50:ILE:O	7:AG:50:ILE:HD12	2.19	0.43
23:AX:6:G:N2	23:AX:68:C:C2	2.86	0.43
23:AX:66:C:H2'	23:AX:67:C:O4'	2.17	0.43
25:BA:403:C:H42	25:BA:425:G:H1	1.65	0.43
25:BA:2306:C:OP2	38:BS:89:ARG:NH2	2.46	0.43
25:BA:2661:U:H2'	25:BA:2662:U:H6	1.84	0.43
26:BB:24:G:N7	26:BB:56:G:H2'	2.34	0.43
32:BI:87:LYS:HE3	32:BI:87:LYS:HB2	1.85	0.43
34:BO:2:ILE:HG23	34:BO:6:THR:HG21	2.01	0.43
49:B3:4:LEU:O	49:B3:36:VAL:HA	2.18	0.43
49:B3:18:ASP:OD1	49:B3:18:ASP:N	2.51	0.43
50:B4:59:PHE:HA	50:B4:61:ARG:HG2	2.00	0.43
1:CA:500:G:C6	1:CA:546:G:C2	3.07	0.43
1:CA:724:G:C2	1:CA:725:G:C8	3.06	0.43
1:CA:1032:G:H2'	1:CA:1033:G:C8	2.54	0.43
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.84	0.43
1:CA:1093:A:N3	1:CA:1109:C:O2'	2.47	0.43
1:CA:1134:G:H2'	1:CA:1134:G:N3	2.32	0.43
1:CA:1151:A:C4	1:CA:1152:A:N7	2.87	0.43
1:CA:1312:G:O6	19:CS:2:PRO:HD2	2.18	0.43
3:CC:12:LEU:HD23	3:CC:12:LEU:HA	1.86	0.43
4:CD:52:SER:O	4:CD:56:VAL:HG23	2.19	0.43
7:CG:23:VAL:HG13	7:CG:43:PHE:CE2	2.53	0.43
10:CJ:11:PHE:CD1	10:CJ:67:THR:HG22	2.54	0.43
13:CM:15:VAL:O	13:CM:19:LEU:HD22	2.19	0.43
13:CM:88:ARG:HG3	13:CM:98:VAL:HG12	2.00	0.43
23:CX:61:C:H2'	23:CX:62:C:H6	1.82	0.43
25:DA:271(X):G:C2	25:DA:271(Y):U:O4	2.71	0.43
25:DA:517:C:OP1	51:D5:16:ARG:NH2	2.51	0.43
25:DA:1955:U:O4	25:DA:2554:U:H5	2.01	0.43
25:DA:2330:G:H2'	25:DA:2331:G:O4'	2.18	0.43
25:DA:2636:U:H1'	25:DA:2783:G:N2	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DB:5:C:OP1	26:DB:61:G:O2'	2.34	0.43
28:DE:147:PRO:HB2	28:DE:149:ARG:HG2	2.01	0.43
30:DG:179:PRO:HG3	50:D4:43:TYR:OH	2.18	0.43
31:DH:169:VAL:HG12	31:DH:171:LEU:HD22	2.00	0.43
42:DW:88:ARG:NH1	42:DW:94:ASP:OD2	2.52	0.43
47:D1:95:LEU:O	47:D1:98:LEU:HB2	2.18	0.43
50:D4:62:ARG:H	50:D4:62:ARG:HD3	1.83	0.43
55:D9:17:ILE:HG21	55:D9:26:ILE:HD11	2.01	0.43
1:AA:389:A:C6	1:AA:390:C:H1'	2.53	0.43
1:AA:436:C:H5''	4:AD:156:GLU:OE2	2.19	0.43
1:AA:625:G:O2'	1:AA:626:U:H5'	2.17	0.43
1:AA:1343:G:O2'	9:AI:121:ARG:HD2	2.19	0.43
2:AB:124:SER:HB3	2:AB:125:PRO:HA	2.01	0.43
6:AF:82:ARG:HB3	6:AF:85:VAL:HG23	2.00	0.43
10:AJ:81:THR:O	10:AJ:85:LEU:HG	2.18	0.43
21:AU:22:ARG:HA	21:AU:23:PRO:HD3	1.65	0.43
25:BA:199:C:H2'	25:BA:200:A:C8	2.54	0.43
25:BA:316:C:C2	25:BA:373:G:C2	3.07	0.43
25:BA:1034:A:O5'	25:BA:1034:A:H8	2.02	0.43
25:BA:1095:C:H2'	25:BA:1096:A:H8	1.84	0.43
25:BA:1558:G:H2'	25:BA:1559:C:C6	2.54	0.43
25:BA:2843:G:H4'	25:BA:2844:G:OP2	2.19	0.43
26:BB:96:U:H2'	26:BB:97:G:C8	2.54	0.43
27:BD:206:LEU:HA	27:BD:206:LEU:HD23	1.78	0.43
1:CA:445:G:H2'	1:CA:446:G:H8	1.83	0.43
1:CA:937:A:H1'	1:CA:1379:G:N2	2.34	0.43
1:CA:1015:A:C6	1:CA:1016:A:C6	3.07	0.43
1:CA:1052:U:H5''	1:CA:1053:G:OP2	2.17	0.43
1:CA:1125:U:H2'	1:CA:1127:G:N7	2.34	0.43
1:CA:1323:G:H4'	1:CA:1363:C:N3	2.32	0.43
3:CC:112:SER:O	3:CC:115:LEU:HB2	2.19	0.43
4:CD:67:ILE:HG22	4:CD:68:TYR:CD1	2.54	0.43
8:CH:121:ASP:N	8:CH:121:ASP:OD1	2.50	0.43
9:CI:96:LEU:HD22	9:CI:101:PHE:HB2	2.00	0.43
10:CJ:16:LEU:HD13	10:CJ:70:ARG:CG	2.47	0.43
12:CL:34:ARG:HE	12:CL:34:ARG:HB3	1.37	0.43
17:CQ:56:VAL:O	17:CQ:77:VAL:HB	2.19	0.43
25:DA:31:C:H5'	25:DA:1239:G:OP1	2.19	0.43
25:DA:108:U:H2'	25:DA:109:G:H8	1.84	0.43
25:DA:154:G:C6	25:DA:173:G:C6	3.07	0.43
25:DA:242:G:H5''	54:D8:64:TYR:CE2	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:702:G:C2	25:DA:731:C:C2	3.06	0.43
25:DA:763:G:H1'	25:DA:765:G:O4'	2.18	0.43
25:DA:844:C:C5	25:DA:845:G:C6	3.06	0.43
25:DA:863:A:H2'	25:DA:864:G:C8	2.53	0.43
25:DA:863:A:OP1	36:DQ:22:LYS:HG3	2.18	0.43
25:DA:952:G:C6	25:DA:953:A:N7	2.87	0.43
25:DA:1462:C:H4'	25:DA:2703:C:H5'	2.00	0.43
25:DA:1475:G:C2	25:DA:1517:G:C2	3.06	0.43
25:DA:2027:G:H2'	25:DA:2028:U:O4'	2.19	0.43
25:DA:2464:C:C2	25:DA:2487:G:C2	3.07	0.43
25:DA:2537:U:H2'	25:DA:2538:C:C6	2.54	0.43
25:DA:2645:G:H4'	25:DA:2732:G:O3'	2.19	0.43
26:DB:28:C:H2'	26:DB:29:A:O4'	2.19	0.43
28:DE:181:LEU:HA	28:DE:181:LEU:HD12	1.58	0.43
31:DH:3:ARG:NH1	31:DH:3:ARG:HB3	2.34	0.43
35:DP:96:THR:N	35:DP:99:LEU:HD21	2.24	0.43
42:DW:14:PRO:HG2	42:DW:78:GLU:CG	2.46	0.43
45:DZ:121:HIS:HB3	45:DZ:123:ASP:O	2.18	0.43
48:D2:65:ASN:OD1	48:D2:69:ARG:NH1	2.49	0.43
1:AA:113:G:H2'	1:AA:114:U:C6	2.54	0.43
1:AA:312:C:H2'	1:AA:313:A:H8	1.83	0.43
1:AA:637:G:C6	1:AA:638:G:C5	3.06	0.43
1:AA:975:A:H4'	1:AA:976:G:C5'	2.44	0.43
1:AA:1187:G:H2'	1:AA:1188:A:H8	1.84	0.43
2:AB:180:LEU:O	2:AB:181:PHE:HB2	2.18	0.43
3:AC:12:LEU:HD11	14:AN:51:GLY:CA	2.48	0.43
4:AD:163:GLU:O	4:AD:166:LYS:HG2	2.19	0.43
9:AI:19:LEU:HB3	9:AI:59:PHE:CD2	2.52	0.43
25:BA:866:A:C4	25:BA:1234:A:C2	3.06	0.43
25:BA:1854:G:N2	61:BA:3835:HOH:O	2.41	0.43
25:BA:2418:U:H2'	25:BA:2418:U:OP2	2.19	0.43
32:BI:93:THR:O	32:BI:97:ILE:HG13	2.18	0.43
33:BN:48:MET:H	33:BN:48:MET:HG3	1.70	0.43
36:BQ:58:PHE:HB3	36:BQ:61:GLY:O	2.18	0.43
38:BS:14:VAL:O	38:BS:18:ILE:HG12	2.17	0.43
40:BU:104:GLN:CD	40:BU:104:GLN:H	2.22	0.43
1:CA:452:A:C2	1:CA:453:A:C4	3.06	0.43
1:CA:473:G:O2'	1:CA:474:G:H5'	2.19	0.43
1:CA:961:U:OP2	1:CA:1223:C:O2'	2.31	0.43
1:CA:1005:A:N6	1:CA:1024:G:O2'	2.51	0.43
1:CA:1178:G:H2'	1:CA:1180:A:OP2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1385:G:C6	1:CA:1386:G:C5	3.07	0.43
7:CG:65:ALA:HB3	7:CG:124:LEU:HD23	2.01	0.43
7:CG:111:ARG:HB2	7:CG:119:ARG:HD2	2.00	0.43
8:CH:37:ARG:NH2	8:CH:38:ILE:HG12	2.34	0.43
19:CS:23:ASN:OD1	19:CS:47:HIS:NE2	2.51	0.43
25:DA:537:C:H2'	25:DA:538:G:O4'	2.19	0.43
25:DA:616:G:C2	25:DA:618:C:C2	3.06	0.43
25:DA:706:A:H2'	25:DA:707:G:O4'	2.19	0.43
25:DA:898:C:H3'	25:DA:898:C:H6	1.84	0.43
25:DA:1005:C:C2	25:DA:1143:A:C5	3.06	0.43
25:DA:1578:U:O2	25:DA:1578:U:H2'	2.18	0.43
25:DA:1759:A:H4'	25:DA:2715:C:O4'	2.19	0.43
25:DA:2094:G:P	32:DI:22:LYS:HD2	2.59	0.43
25:DA:2318:G:H21	38:DS:3:ARG:CD	2.31	0.43
25:DA:2409:G:H2'	25:DA:2410:G:O4'	2.18	0.43
25:DA:2494:G:C5	25:DA:2495:G:N7	2.87	0.43
25:DA:2563:U:O2	25:DA:2565:A:H8	2.01	0.43
25:DA:2679:A:C2	25:DA:2729:G:C2	3.07	0.43
26:DB:11:C:H3'	26:DB:12:C:C6	2.54	0.43
28:DE:1:MET:O	28:DE:84:PHE:HB2	2.19	0.43
45:DZ:161:VAL:HG13	45:DZ:161:VAL:O	2.19	0.43
50:D4:59:PHE:HA	50:D4:60:GLN:C	2.39	0.43
1:AA:114:U:H1'	1:AA:353:A:H1'	2.00	0.43
1:AA:161:A:H2'	1:AA:162:A:H8	1.82	0.43
1:AA:298:A:H5''	1:AA:299:G:OP2	2.18	0.43
1:AA:309:G:H1'	1:AA:608:A:C2	2.54	0.43
1:AA:327:A:C4	1:AA:329:A:C8	3.07	0.43
1:AA:357:G:O2'	1:AA:358:U:H5'	2.19	0.43
1:AA:433:C:H6	1:AA:433:C:O5'	2.02	0.43
1:AA:601:C:O2	1:AA:637:G:N2	2.27	0.43
1:AA:625:G:C2'	1:AA:626:U:H5'	2.48	0.43
1:AA:901:A:C5	1:AA:902:G:H1'	2.54	0.43
1:AA:958:A:C2	19:AS:55:LYS:HB2	2.54	0.43
1:AA:1443:G:C2	1:AA:1460:A:N3	2.87	0.43
2:AB:155:LEU:HD11	2:AB:159:PRO:HD3	2.01	0.43
3:AC:34:LEU:HD12	3:AC:34:LEU:O	2.19	0.43
4:AD:23:GLY:HA3	4:AD:112:VAL:HB	2.01	0.43
8:AH:40:ALA:HA	8:AH:45:ILE:HG13	2.00	0.43
12:AL:85:ILE:HD12	12:AL:98:TYR:HB3	2.00	0.43
25:BA:302:A:P	25:BA:302:A:H8	2.42	0.43
25:BA:1073:A:C2	25:BA:2500:A:H5'	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1176:U:O2	25:BA:2047:C:H5''	2.19	0.43
25:BA:1766:G:H3'	25:BA:1767:A:C5'	2.47	0.43
25:BA:2576:A:C2	25:BA:2659:U:H4'	2.54	0.43
28:BE:73:GLU:H	28:BE:73:GLU:HG3	1.54	0.43
29:BF:11:VAL:HG22	29:BF:125:LEU:HB2	2.00	0.43
29:BF:149:ASP:OD1	29:BF:149:ASP:N	2.45	0.43
30:BG:150:ASP:OD2	30:BG:151:ALA:N	2.52	0.43
36:BQ:37:LEU:HD21	36:BQ:130:LYS:HE2	2.00	0.43
39:BT:81:PRO:HG2	39:BT:82:LEU:HD12	2.01	0.43
42:BW:20:VAL:O	42:BW:23:LEU:HB2	2.19	0.43
44:BY:91:GLU:N	44:BY:91:GLU:CD	2.72	0.43
45:BZ:19:ARG:HE	45:BZ:19:ARG:HB2	1.65	0.43
45:BZ:44:PHE:CZ	45:BZ:86:VAL:HG11	2.53	0.43
1:CA:402:G:C2'	1:CA:403:C:H5'	2.49	0.43
1:CA:1157:A:N6	1:CA:1180:A:N3	2.67	0.43
3:CC:16:ARG:HD2	3:CC:16:ARG:HA	1.80	0.43
5:CE:12:LEU:HD22	5:CE:13:ILE:N	2.33	0.43
25:DA:322:A:P	29:DF:169:ASN:HB2	2.59	0.43
25:DA:536:A:H2'	25:DA:537:C:C6	2.54	0.43
25:DA:881:G:H1	25:DA:895:U:H3	1.67	0.43
25:DA:1332:G:OP1	61:DA:4077:HOH:O	2.21	0.43
25:DA:1665:A:C4'	34:DO:67:LYS:HB2	2.48	0.43
25:DA:1711:C:H2'	25:DA:1712:C:C6	2.53	0.43
25:DA:2000:G:N7	61:DA:4008:HOH:O	2.36	0.43
25:DA:2648:C:H2'	25:DA:2649:U:C6	2.54	0.43
28:DE:163:GLU:HG2	28:DE:164:ARG:H	1.83	0.43
30:DG:23:PHE:HB2	30:DG:25:TYR:CZ	2.53	0.43
31:DH:95:ARG:HB2	31:DH:128:PRO:HB2	2.01	0.43
36:DQ:42:ILE:HD13	36:DQ:97:VAL:CG2	2.49	0.43
37:DR:96:ARG:HD3	37:DR:98:LEU:HD11	2.00	0.43
39:DT:88:ILE:HG13	39:DT:91:ARG:NH2	2.34	0.43
1:AA:309:G:O2'	1:AA:607:A:N1	2.48	0.43
1:AA:687:A:N3	1:AA:688:G:H1'	2.33	0.43
1:AA:1362:C:H2'	1:AA:1363:C:H5''	2.00	0.43
2:AB:192:SER:O	2:AB:194:PRO:HD3	2.18	0.43
4:AD:45:GLN:HE21	4:AD:45:GLN:HB3	1.59	0.43
13:AM:40:ASN:OD1	13:AM:42:ALA:HB3	2.19	0.43
16:AP:22:THR:HA	16:AP:33:ILE:HG12	2.00	0.43
20:AT:90:GLN:O	20:AT:93:GLU:HB3	2.19	0.43
25:BA:64:C:H2'	25:BA:65:C:H6	1.83	0.43
25:BA:1752:G:C6	25:BA:1753:U:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2070:G:C5	25:BA:2071:G:C8	3.07	0.43
25:BA:2490:A:H2'	25:BA:2491:G:O4'	2.19	0.43
25:BA:2830:A:O2'	25:BA:2831:A:OP1	2.37	0.43
26:BB:1:U:H2'	26:BB:2:C:C6	2.53	0.43
31:BH:89:ILE:O	31:BH:129:THR:HG22	2.19	0.43
32:BI:65:ALA:HB1	32:BI:136:VAL:HG11	1.99	0.43
36:BQ:39:PRO:HA	36:BQ:97:VAL:O	2.19	0.43
45:BZ:5:LEU:O	45:BZ:59:LEU:HA	2.19	0.43
50:B4:59:PHE:HA	50:B4:61:ARG:H	1.83	0.43
1:CA:80:G:N2	1:CA:90:U:H1'	2.34	0.43
1:CA:261:U:C5	20:CT:79:ARG:CZ	3.02	0.43
1:CA:1198:G:H2'	1:CA:1199:U:C6	2.54	0.43
1:CA:1375:A:O2'	7:CG:29:LYS:NZ	2.50	0.43
4:CD:19:LEU:O	4:CD:21:LEU:N	2.51	0.43
5:CE:11:ILE:HB	5:CE:31:LEU:HB3	2.00	0.43
5:CE:92:LYS:HA	5:CE:93:PRO:HD2	1.84	0.43
7:CG:101:LEU:O	7:CG:104:LEU:HB2	2.18	0.43
11:CK:48:ILE:C	11:CK:50:TYR:H	2.21	0.43
12:CL:55:VAL:HG12	12:CL:69:TYR:HA	2.01	0.43
13:CM:97:PRO:HB3	13:CM:101:GLN:OE1	2.19	0.43
15:CO:4:THR:OG1	15:CO:7:GLU:OE1	2.27	0.43
15:CO:82:ILE:HB	15:CO:87:ILE:HB	2.01	0.43
25:DA:55:G:H2'	25:DA:56:A:C8	2.54	0.43
25:DA:196:A:H2'	25:DA:196:A:N3	2.34	0.43
25:DA:538:G:H2'	25:DA:539:G:H8	1.83	0.43
25:DA:601:C:O2'	25:DA:605:C:H5''	2.19	0.43
25:DA:854:G:H2'	25:DA:855:G:C8	2.48	0.43
25:DA:927:G:H2'	25:DA:928:G:C8	2.53	0.43
25:DA:1169:G:H8	25:DA:1169:G:O5'	2.01	0.43
25:DA:1638:C:H5''	25:DA:2710:C:O2'	2.19	0.43
25:DA:2257:U:H2'	25:DA:2258:C:C6	2.54	0.43
25:DA:2302:G:C6	25:DA:2315:G:C6	3.06	0.43
25:DA:2310:A:H61	30:DG:79:ASN:ND2	2.17	0.43
25:DA:2675:A:H4'	34:DO:29:ASN:ND2	2.34	0.43
27:DD:139:GLY:H	27:DD:165:ILE:HB	1.84	0.43
30:DG:16:ARG:HD2	30:DG:16:ARG:HA	1.69	0.43
30:DG:76:SER:CB	30:DG:84:LYS:H	2.32	0.43
34:DO:34:THR:O	34:DO:37:ASP:HB2	2.19	0.43
48:D2:35:LEU:HD23	48:D2:35:LEU:HA	1.80	0.43
54:D8:22:VAL:CG2	54:D8:59:LYS:HG3	2.48	0.43
1:AA:453:A:C5	1:AA:454:C:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1129:C:H1'	1:AA:1130:A:N7	2.34	0.42
1:AA:1445:C:C4	1:AA:1446:U:C4	3.07	0.42
3:AC:44:GLU:HG2	3:AC:52:LEU:CD2	2.49	0.42
8:AH:73:ASP:OD2	8:AH:75:ARG:NH1	2.52	0.42
9:AI:64:THR:CG2	9:AI:66:ARG:HD2	2.49	0.42
25:BA:771:U:H2'	25:BA:772:G:O4'	2.18	0.42
25:BA:1702:A:H3'	25:BA:1703:C:C6	2.53	0.42
25:BA:1712:A:C4'	34:BO:67:LYS:HB2	2.49	0.42
25:BA:2331:G:C8	25:BA:2332:A:C2	3.07	0.42
25:BA:2658:C:H2'	25:BA:2659:U:O4'	2.19	0.42
26:BB:4:C:H2'	26:BB:5:C:O4'	2.19	0.42
30:BG:96:ARG:O	30:BG:99:MET:HB3	2.19	0.42
1:CA:414:A:C5	1:CA:431:A:C2	3.07	0.42
1:CA:491:G:C2	1:CA:492:G:C4	3.07	0.42
1:CA:664:G:H5''	18:CR:64:ARG:NH2	2.33	0.42
1:CA:939:G:H2'	1:CA:940:C:C6	2.54	0.42
1:CA:1317:C:OP1	14:CN:17:LYS:HG2	2.19	0.42
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.82	0.42
1:CA:1445:C:C2	1:CA:1458:G:C2	3.07	0.42
7:CG:69:VAL:HG22	7:CG:135:VAL:HG22	2.01	0.42
25:DA:272(B):G:H2'	25:DA:272(C):G:C8	2.54	0.42
25:DA:879:G:C8	25:DA:880:G:C8	3.07	0.42
25:DA:2076:U:O5'	25:DA:2076:U:H6	2.02	0.42
26:DB:28:C:OP1	38:DS:36:TYR:OH	2.34	0.42
29:DF:31:HIS:HB2	35:DP:9:ASN:OD1	2.19	0.42
29:DF:138:GLU:O	29:DF:141:ALA:HB3	2.19	0.42
30:DG:33:ARG:O	30:DG:161:THR:HG23	2.18	0.42
30:DG:109:VAL:O	30:DG:113:ARG:HB2	2.19	0.42
33:DN:96:GLU:OE2	33:DN:96:GLU:N	2.46	0.42
1:AA:39:G:C6	1:AA:40:C:C4	3.07	0.42
1:AA:317:G:C6	1:AA:318:G:C5	3.07	0.42
1:AA:410:G:N1	1:AA:431:A:OP2	2.48	0.42
1:AA:1100:C:O2'	1:AA:1102:A:OP1	2.34	0.42
1:AA:1446:U:O2'	1:AA:1447:A:O5'	2.38	0.42
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	2.00	0.42
2:AB:54:THR:HG23	2:AB:199:TYR:HB3	2.00	0.42
4:AD:13:ARG:HB2	4:AD:40:PRO:HD3	2.00	0.42
4:AD:15:GLU:OE2	4:AD:66:ARG:NH1	2.52	0.42
4:AD:110:PHE:N	4:AD:110:PHE:HD1	2.16	0.42
8:AH:51:VAL:HG21	8:AH:60:ARG:HB2	2.00	0.42
10:AJ:16:LEU:HD21	10:AJ:70:ARG:CG	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:6:THR:HG23	12:AL:9:GLN:OE1	2.19	0.42
20:AT:30:LYS:HA	20:AT:33:ILE:HD12	2.00	0.42
25:BA:21:A:H2'	25:BA:22:C:O4'	2.19	0.42
25:BA:311:C:H2'	25:BA:312:C:C6	2.51	0.42
25:BA:873:U:H2'	25:BA:875:U:O4'	2.19	0.42
25:BA:2442:A:N3	25:BA:2442:A:H2'	2.33	0.42
26:BB:37:C:C5	26:BB:38:C:C4	3.06	0.42
34:BO:115:VAL:HG13	34:BO:121:VAL:HG21	2.00	0.42
38:BS:6:ALA:O	38:BS:10:ARG:HB2	2.18	0.42
45:BZ:15:PRO:O	45:BZ:19:ARG:HB2	2.19	0.42
51:B5:16:ARG:O	51:B5:20:ARG:HG3	2.19	0.42
54:B8:39:LYS:HA	54:B8:42:ARG:NH1	2.34	0.42
1:CA:339:C:H2'	1:CA:340:U:C6	2.54	0.42
1:CA:382:A:H2'	1:CA:383:A:H8	1.78	0.42
1:CA:1205:U:O2'	3:CC:195:VAL:HG23	2.19	0.42
1:CA:1390:U:H2'	1:CA:1391:U:C6	2.54	0.42
2:CB:23:ARG:HB2	2:CB:23:ARG:HH11	1.82	0.42
5:CE:10:MET:HG2	5:CE:13:ILE:HD11	2.00	0.42
13:CM:23:TYR:CD2	13:CM:70:LEU:HD13	2.54	0.42
17:CQ:5:VAL:O	17:CQ:6:LEU:HD13	2.19	0.42
23:CX:22:G:H2'	23:CX:23:C:C6	2.54	0.42
25:DA:77:C:H5''	48:D2:10:LEU:HD21	2.01	0.42
25:DA:532:A:N7	25:DA:2021:C:O2'	2.42	0.42
25:DA:754:C:H4'	25:DA:1272:A:N6	2.34	0.42
25:DA:768:G:C6	25:DA:769:G:C5	3.07	0.42
25:DA:945:A:C4	25:DA:2448:A:C2	3.07	0.42
25:DA:1338:G:N7	43:DX:62:LYS:NZ	2.64	0.42
25:DA:1412:A:C2	25:DA:1591:G:C2	3.07	0.42
25:DA:1514:U:H2'	25:DA:1515:G:C8	2.55	0.42
25:DA:1515:G:H2'	25:DA:1516:C:C6	2.55	0.42
25:DA:2193:G:H2'	25:DA:2194:G:C8	2.54	0.42
25:DA:2408:U:H2'	25:DA:2409:G:H8	1.84	0.42
28:DE:14:ILE:HB	39:DT:14:TYR:CE2	2.54	0.42
29:DF:37:VAL:HA	29:DF:40:GLN:HB2	2.00	0.42
30:DG:121:ASN:HB3	30:DG:124:SER:HB2	2.00	0.42
34:DO:7:TYR:CZ	34:DO:44:LYS:HG3	2.54	0.42
42:DW:46:PHE:O	42:DW:50:VAL:HG23	2.19	0.42
45:DZ:7:ALA:O	45:DZ:62:PRO:HD3	2.19	0.42
1:AA:310:G:H5''	16:AP:31:LYS:HB2	2.02	0.42
1:AA:1006:C:H2'	1:AA:1007:C:O4'	2.19	0.42
1:AA:1091:U:H2'	1:AA:1093:A:OP2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1114:C:H42	1:AA:1186:G:H1	1.67	0.42
3:AC:64:VAL:HG13	3:AC:99:VAL:HA	2.01	0.42
4:AD:119:GLN:HG2	4:AD:123:HIS:NE2	2.35	0.42
7:AG:51:GLN:O	7:AG:55:GLY:HA2	2.19	0.42
9:AI:3:GLN:CG	9:AI:20:ARG:HE	2.32	0.42
12:AL:24:VAL:CG1	12:AL:27:LEU:HD22	2.44	0.42
19:AS:64:GLU:O	19:AS:67:VAL:HG23	2.19	0.42
25:BA:287:G:O2'	25:BA:448:U:OP2	2.26	0.42
25:BA:1766:G:H8	25:BA:1770:A:H62	1.66	0.42
25:BA:2695:C:OP1	39:BT:53:ARG:NH2	2.52	0.42
33:BN:42:TRP:CE3	40:BU:63:VAL:HG11	2.54	0.42
36:BQ:14:ARG:HG2	36:BQ:41:TRP:HH2	1.83	0.42
43:BX:12:VAL:HG22	43:BX:29:TRP:CE2	2.54	0.42
45:BZ:111:VAL:HG12	45:BZ:112:ARG:N	2.34	0.42
50:B4:8:LYS:HB3	50:B4:8:LYS:HE2	1.70	0.42
1:CA:9:G:O6	1:CA:558:G:H2'	2.20	0.42
1:CA:19:C:H5''	5:CE:86:ALA:HB3	2.02	0.42
1:CA:448:A:P	1:CA:485:G:H22	2.42	0.42
1:CA:833:U:H2'	1:CA:834:C:C6	2.54	0.42
1:CA:1014:A:H4'	19:CS:14:HIS:CE1	2.54	0.42
1:CA:1122:U:C5	1:CA:1123:A:N7	2.88	0.42
2:CB:187:LEU:HD23	2:CB:201:ILE:HG22	2.00	0.42
8:CH:28:ALA:HB3	8:CH:57:PRO:HB2	2.02	0.42
25:DA:180:G:H5''	25:DA:181:A:P	2.59	0.42
25:DA:289:A:H2'	25:DA:290:G:C8	2.54	0.42
25:DA:652(D):C:C2'	25:DA:652(E):G:H5'	2.49	0.42
25:DA:660:G:H5'	29:DF:99:TYR:CD2	2.55	0.42
25:DA:760:G:H2'	25:DA:761:A:O4'	2.19	0.42
25:DA:837:C:N3	25:DA:941:A:N6	2.67	0.42
25:DA:934:G:H2'	25:DA:935:C:C6	2.55	0.42
25:DA:1167:U:O2	25:DA:1183:G:N2	2.52	0.42
25:DA:2275:C:H6	25:DA:2275:C:H5'	1.84	0.42
29:DF:184:TYR:O	29:DF:188:ARG:HG3	2.20	0.42
38:DS:69:VAL:O	38:DS:72:ALA:HB3	2.18	0.42
47:D1:52:ARG:NH2	47:D1:57:GLU:HB2	2.34	0.42
50:D4:64:GLY:C	50:D4:66:SER:N	2.71	0.42
1:AA:922:G:H2'	1:AA:923:A:C8	2.54	0.42
1:AA:998:G:H2'	1:AA:999:C:C6	2.55	0.42
1:AA:1086:U:C2'	1:AA:1087:G:H5'	2.49	0.42
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.34	0.42
1:AA:1405:G:O4'	1:AA:1519:A:H4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1524:C:OP1	11:AK:120:ARG:NH1	2.50	0.42
8:AH:104:ARG:HG3	8:AH:138:TRP:CD2	2.54	0.42
16:AP:6:LEU:HB3	16:AP:17:TYR:CD2	2.54	0.42
16:AP:34:GLU:OE2	16:AP:55:ARG:NH2	2.39	0.42
25:BA:776:G:OP2	27:BD:13:ARG:NH1	2.45	0.42
25:BA:895:G:O6	25:BA:974:G:H2'	2.20	0.42
25:BA:2760:G:C2	25:BA:2769:U:C5	3.07	0.42
30:BG:86:MET:HA	30:BG:87:PRO:HD3	1.90	0.42
31:BH:17:VAL:HG21	31:BH:50:VAL:HG21	2.01	0.42
39:BT:7:ILE:O	39:BT:11:GLU:HG3	2.19	0.42
45:BZ:111:VAL:HG12	45:BZ:112:ARG:H	1.84	0.42
1:CA:35:G:H2'	1:CA:36:C:C6	2.55	0.42
1:CA:97:G:O2'	1:CA:98:G:O4'	2.35	0.42
1:CA:383:A:H5''	1:CA:384:G:OP2	2.20	0.42
1:CA:473:G:H2'	1:CA:474:G:H8	1.81	0.42
1:CA:540:G:H2'	1:CA:541:G:O4'	2.19	0.42
1:CA:590:C:H2'	1:CA:591:U:H6	1.84	0.42
1:CA:1005:A:H1'	1:CA:1036:G:C6	2.55	0.42
1:CA:1023:G:C4	1:CA:1024:G:C8	3.07	0.42
1:CA:1120:G:C6	1:CA:1154:G:N2	2.87	0.42
1:CA:1210:C:H2'	1:CA:1211:U:H5''	2.01	0.42
2:CB:130:ARG:HA	2:CB:131:PRO:HD3	1.80	0.42
4:CD:90:GLY:HA2	4:CD:204:ILE:HD11	2.01	0.42
6:CF:76:ALA:O	6:CF:80:ARG:HG3	2.20	0.42
9:CI:33:PHE:CE1	9:CI:43:ALA:HB1	2.46	0.42
9:CI:99:LEU:HB3	9:CI:101:PHE:CE1	2.54	0.42
16:CP:53:VAL:O	16:CP:57:ARG:HB2	2.19	0.42
25:DA:836:G:H2'	25:DA:837:C:C6	2.53	0.42
25:DA:871:U:H5''	36:DQ:69:PHE:CE2	2.54	0.42
25:DA:1418:G:H8	25:DA:1418:G:O5'	2.03	0.42
25:DA:1517:G:C6	25:DA:1518:U:C4	3.07	0.42
25:DA:2298:A:C8	25:DA:2299:G:C8	3.07	0.42
25:DA:2419:U:H2'	25:DA:2420:C:C6	2.54	0.42
25:DA:2477:C:N4	55:D9:10:ILE:HG23	2.34	0.42
27:DD:134:ARG:NH1	27:DD:188:GLU:OE2	2.51	0.42
29:DF:110:LEU:HD21	29:DF:181:LEU:HG	2.00	0.42
31:DH:88:LEU:HD23	31:DH:165:ALA:HA	2.01	0.42
34:DO:2:ILE:HB	34:DO:33:ALA:HB3	2.01	0.42
38:DS:24:LEU:HD23	38:DS:24:LEU:HA	1.88	0.42
38:DS:78:LEU:HD11	38:DS:108:GLY:O	2.18	0.42
51:D5:48:GLU:O	51:D5:60:VAL:HG11	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:D6:11:LEU:HB2	52:D6:21:TYR:HB2	2.00	0.42
1:AA:406:G:N2	4:AD:119:GLN:HE22	2.18	0.42
1:AA:448:A:H2'	1:AA:449:C:C6	2.54	0.42
1:AA:575:G:O2'	1:AA:821:G:H5'	2.19	0.42
1:AA:1129:C:N4	1:AA:1143:G:N1	2.40	0.42
1:AA:1486:G:H2'	1:AA:1487:G:C1'	2.50	0.42
2:AB:170:GLU:O	2:AB:174:VAL:HG23	2.20	0.42
19:AS:19:VAL:O	19:AS:22:LEU:HB2	2.19	0.42
25:BA:904:C:N4	25:BA:905:U:O4	2.52	0.42
25:BA:2245:U:H2'	25:BA:2246:G:C8	2.54	0.42
26:BB:16:G:C6	26:BB:69:G:C2	3.08	0.42
28:BE:49:LEU:HD12	28:BE:49:LEU:HA	1.89	0.42
34:BO:10:VAL:HG21	34:BO:16:ALA:HB3	2.01	0.42
37:BR:83:ILE:O	37:BR:86:ARG:HG2	2.20	0.42
47:B1:98:LEU:HD23	47:B1:98:LEU:HA	1.88	0.42
50:B4:53:GLU:O	50:B4:56:VAL:HG13	2.20	0.42
1:CA:373:A:H2'	1:CA:374:A:H8	1.84	0.42
1:CA:391:G:C6	1:CA:392:G:C5	3.07	0.42
1:CA:460:G:C6	1:CA:470:C:H5''	2.53	0.42
1:CA:622:A:H3'	1:CA:623:C:H6	1.84	0.42
1:CA:973:G:H3'	1:CA:974:A:H5''	2.01	0.42
1:CA:1023:G:H3'	1:CA:1024:G:C8	2.54	0.42
1:CA:1179:A:C6	1:CA:1180:A:C8	3.07	0.42
4:CD:110:PHE:N	4:CD:110:PHE:CD1	2.87	0.42
5:CE:40:ARG:HH21	5:CE:68:GLU:HA	1.82	0.42
16:CP:5:ARG:HH12	16:CP:28:ARG:HA	1.84	0.42
24:CW:9:MVA:O	24:CW:10:2QY:CD2	2.63	0.42
24:CW:9:MVA:CB	24:CW:10:2QY:H82	2.49	0.42
25:DA:319:C:N4	25:DA:320:A:C6	2.87	0.42
25:DA:442:G:O4'	29:DF:46:ARG:HG3	2.19	0.42
25:DA:576:U:H2'	25:DA:577:G:C8	2.55	0.42
25:DA:608:A:C6	25:DA:609:A:C6	3.07	0.42
25:DA:829:A:N7	25:DA:2248:C:H5'	2.35	0.42
25:DA:900:A:C2'	25:DA:901:A:H8	2.32	0.42
25:DA:1636:C:H2'	25:DA:1637:A:H8	1.80	0.42
25:DA:1790:C:H5''	25:DA:1791:A:OP1	2.19	0.42
25:DA:1815:A:P	27:DD:54:ARG:NH2	2.92	0.42
25:DA:2005:A:H5''	25:DA:2006:C:OP2	2.20	0.42
25:DA:2055:C:H5'	25:DA:2056:G:O5'	2.19	0.42
25:DA:2298:A:N6	25:DA:2321:G:H1	2.18	0.42
25:DA:2740:A:C6	25:DA:2764:A:C8	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DP:6:LEU:HD23	35:DP:6:LEU:HA	1.76	0.42
35:DP:83:VAL:O	35:DP:115:LEU:N	2.44	0.42
36:DQ:18:LYS:HB2	36:DQ:18:LYS:HE3	1.91	0.42
38:DS:103:GLU:O	38:DS:107:GLU:HG3	2.20	0.42
45:DZ:95:PRO:HA	45:DZ:129:SER:HA	2.00	0.42
45:DZ:122:ARG:HH11	45:DZ:122:ARG:HG2	1.84	0.42
45:DZ:150:LEU:HD12	45:DZ:150:LEU:HA	1.58	0.42
1:AA:271:C:H2'	1:AA:272:C:C6	2.54	0.42
1:AA:1041:A:C2'	1:AA:1042:G:H5'	2.49	0.42
1:AA:1346:A:H5''	9:AI:120:ARG:NH1	2.34	0.42
4:AD:158:ILE:HB	4:AD:162:LEU:HD12	2.01	0.42
13:AM:20:THR:C	13:AM:22:ILE:H	2.21	0.42
14:AN:45:ARG:HG2	14:AN:49:HIS:CD2	2.53	0.42
15:AO:5:LYS:H	15:AO:5:LYS:CD	2.31	0.42
23:AX:19:G:C5	23:AX:57:A:C2	3.07	0.42
25:BA:196:A:H2'	25:BA:197:C:O4'	2.18	0.42
25:BA:354:A:H2	25:BA:1255:A:O2'	2.02	0.42
25:BA:1308:A:OP1	42:BW:99:ARG:NH1	2.49	0.42
25:BA:2703:C:O3'	25:BA:2881:C:H4'	2.20	0.42
27:BD:33:LEU:HD23	27:BD:33:LEU:HA	1.81	0.42
30:BG:125:PHE:HB3	30:BG:166:ASP:OD1	2.20	0.42
30:BG:145:THR:OG1	30:BG:148:MET:SD	2.73	0.42
48:B2:3:LEU:HD23	48:B2:3:LEU:HA	1.76	0.42
1:CA:735:C:H5'	18:CR:71:LYS:HD3	2.00	0.42
1:CA:837:G:H2'	1:CA:838:G:C8	2.55	0.42
1:CA:881:G:H2'	1:CA:882:C:O4'	2.19	0.42
1:CA:999:C:C2	1:CA:1042:G:N2	2.87	0.42
1:CA:1002:G:N3	1:CA:1003:G:N7	2.67	0.42
1:CA:1057:G:C4	1:CA:1204:A:C2	3.07	0.42
1:CA:1145:C:H4'	1:CA:1146:A:C5'	2.48	0.42
2:CB:61:LEU:HD23	2:CB:68:ILE:HD11	2.01	0.42
4:CD:81:GLU:O	4:CD:85:LYS:HB2	2.20	0.42
4:CD:173:TRP:CE2	4:CD:189:PRO:HG3	2.54	0.42
25:DA:14:A:C6	25:DA:526:A:C2	3.08	0.42
25:DA:172:C:H2'	25:DA:173:G:C8	2.52	0.42
25:DA:994:C:O2'	25:DA:996:A:OP1	2.30	0.42
25:DA:1479:G:C6	25:DA:1480:G:C5	3.08	0.42
25:DA:1510:G:H8	25:DA:1510:G:O5'	2.03	0.42
25:DA:1844:C:OP1	27:DD:257:LEU:HD23	2.19	0.42
25:DA:2046:G:H2'	25:DA:2047:U:C6	2.53	0.42
25:DA:2399:G:C6	25:DA:2400:G:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DB:15:A:O4'	26:DB:110:G:C8	2.73	0.42
26:DB:24:G:H4'	26:DB:25:A:N7	2.35	0.42
29:DF:32:LEU:HD11	29:DF:105:VAL:HG13	2.00	0.42
29:DF:51:THR:HG23	29:DF:92:PRO:HG2	2.01	0.42
1:AA:68:G:H22	1:AA:101:A:H2	1.67	0.42
1:AA:341:C:O2'	1:AA:342:C:H5'	2.20	0.42
1:AA:840:C:H4'	1:AA:841:U:OP1	2.20	0.42
1:AA:1001:A:N6	1:AA:1001(A):G:O6	2.53	0.42
1:AA:1047:G:O3'	14:AN:4:LYS:HB2	2.20	0.42
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.55	0.42
1:AA:1438:G:H2'	1:AA:1439:C:C6	2.54	0.42
2:AB:102:LEU:HB3	2:AB:180:LEU:CD1	2.50	0.42
2:AB:156:LYS:HB3	2:AB:156:LYS:HE2	1.81	0.42
3:AC:19:GLU:HB3	3:AC:40:ARG:NH2	2.35	0.42
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.87	0.42
4:AD:121:VAL:HA	4:AD:126:ILE:HG13	2.01	0.42
9:AI:4:TYR:CZ	9:AI:88:TYR:HD1	2.38	0.42
25:BA:416:G:N1	35:BP:70:GLN:HG3	2.34	0.42
25:BA:2887:G:O2'	25:BA:2888:U:H5'	2.18	0.42
39:BT:16:ARG:HD2	39:BT:18:ASP:OD1	2.20	0.42
43:BX:92:LEU:C	43:BX:94:GLY:N	2.71	0.42
49:B3:3:ARG:HD3	49:B3:60:GLU:OE2	2.20	0.42
1:CA:149:A:H2'	1:CA:150:C:H6	1.83	0.42
1:CA:189:G:C5	1:CA:189(A):C:C4	3.07	0.42
1:CA:811:C:H4'	1:CA:900:A:N6	2.34	0.42
1:CA:865:A:H2	1:CA:918:A:H4'	1.83	0.42
1:CA:1002:G:N2	1:CA:1038:C:C2	2.82	0.42
1:CA:1002:G:H5''	1:CA:1003:G:OP2	2.19	0.42
1:CA:1002:G:C2	1:CA:1038:C:N3	2.83	0.42
1:CA:1158:C:H2'	1:CA:1160:G:H5'	2.02	0.42
1:CA:1239:A:H62	1:CA:1299:A:N6	2.16	0.42
2:CB:28:PHE:CD1	2:CB:31:TYR:HB2	2.55	0.42
2:CB:69:LEU:HD12	2:CB:70:PHE:H	1.84	0.42
2:CB:78:GLN:O	2:CB:94:ASN:ND2	2.52	0.42
18:CR:24:ALA:C	18:CR:26:LEU:H	2.23	0.42
25:DA:824:A:H2'	25:DA:825:C:O4'	2.19	0.42
25:DA:864:G:OP2	36:DQ:22:LYS:HE2	2.20	0.42
25:DA:1425:G:H2'	25:DA:1426:G:O4'	2.19	0.42
25:DA:1654:A:O2'	28:DE:113:PHE:O	2.30	0.42
25:DA:2009:G:O2'	25:DA:2010:G:H5'	2.20	0.42
25:DA:2307:G:H8	25:DA:2307:G:OP1	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2319:G:H22	38:DS:3:ARG:HE	1.68	0.42
25:DA:2348:U:OP2	54:D8:42:ARG:NH2	2.52	0.42
25:DA:2510:C:C4	25:DA:2511:U:C4	3.08	0.42
26:DB:45:A:H2'	26:DB:46:A:H8	1.84	0.42
27:DD:145:VAL:HG12	27:DD:146:GLU:O	2.18	0.42
30:DG:170:ARG:HD3	30:DG:170:ARG:O	2.19	0.42
31:DH:42:ARG:NH1	31:DH:53:GLU:OE2	2.52	0.42
31:DH:118:PRO:HD2	31:DH:121:ILE:HB	2.00	0.42
38:DS:68:GLN:HA	38:DS:68:GLN:HE21	1.85	0.42
1:AA:1057:G:OP2	61:AA:4014:HOH:O	2.22	0.42
1:AA:1503:A:H8	1:AA:1503:A:OP1	2.03	0.42
2:AB:119:GLU:OE2	2:AB:153:ARG:NH2	2.53	0.42
2:AB:141:GLU:O	2:AB:145:LEU:HB2	2.20	0.42
3:AC:32:LEU:HD22	3:AC:59:ARG:NH1	2.34	0.42
3:AC:121:ALA:O	3:AC:125:GLU:HG3	2.19	0.42
6:AF:63:TYR:N	6:AF:63:TYR:CD1	2.88	0.42
25:BA:83:A:C5'	44:BY:8:LYS:HG2	2.49	0.42
25:BA:589:U:OP1	35:BP:29:LYS:HD2	2.19	0.42
25:BA:753:A:H2'	25:BA:754:G:O4'	2.20	0.42
25:BA:950:C:H2'	25:BA:951:U:H6	1.83	0.42
25:BA:1273:G:OP1	40:BU:13:LYS:HG2	2.19	0.42
25:BA:2326:C:H2'	25:BA:2327:G:C8	2.55	0.42
26:BB:6:C:C2	26:BB:116:G:N2	2.88	0.42
28:BE:3:GLY:HA3	28:BE:81:ILE:HD12	2.01	0.42
31:BH:167:GLU:HA	31:BH:168:PRO:HD3	1.86	0.42
32:BI:130:TYR:HB3	32:BI:138:ILE:HB	2.02	0.42
35:BP:135:LEU:HA	35:BP:135:LEU:HD23	1.86	0.42
38:BS:58:LEU:HD23	38:BS:58:LEU:HA	1.83	0.42
48:B2:18:PRO:HA	48:B2:21:LEU:HB2	2.02	0.42
1:CA:15:G:H2'	1:CA:16:A:C8	2.53	0.42
1:CA:176:C:H2'	1:CA:177:C:C6	2.54	0.42
1:CA:683:G:H2'	1:CA:684:A:C8	2.55	0.42
1:CA:741:G:H2'	1:CA:742:G:O4'	2.20	0.42
1:CA:938:A:N6	1:CA:939:G:C6	2.88	0.42
1:CA:947:G:H2'	1:CA:948:C:O4'	2.20	0.42
1:CA:991:U:C4	1:CA:1212:U:H1'	2.54	0.42
1:CA:1095:U:H5''	1:CA:1109:C:O2	2.20	0.42
1:CA:1292:U:O2'	1:CA:1293:G:H5'	2.20	0.42
1:CA:1522:U:H2'	1:CA:1523:G:H8	1.84	0.42
2:CB:20:GLU:HG3	2:CB:191:ASP:HB3	2.02	0.42
8:CH:5:PRO:O	8:CH:8:ASP:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:95:LYS:HA	9:CI:99:LEU:HD13	2.00	0.42
16:CP:21:VAL:CG1	16:CP:34:GLU:HB3	2.50	0.42
19:CS:50:ALA:HA	19:CS:58:VAL:O	2.20	0.42
20:CT:39:LYS:HE3	20:CT:39:LYS:HB2	1.90	0.42
24:CW:8:2R3:H62	24:CW:9:MVA:HN1	1.62	0.42
25:DA:9:U:O4	25:DA:2629:A:H2	2.02	0.42
25:DA:13:A:N1	25:DA:525:U:H2'	2.34	0.42
25:DA:530:G:N3	25:DA:530:G:O4'	2.53	0.42
25:DA:571:A:N6	25:DA:2499:C:O3'	2.53	0.42
25:DA:959:A:C6	25:DA:960:A:C6	3.08	0.42
25:DA:1015:G:O2'	25:DA:1016:G:H5'	2.20	0.42
25:DA:1184:G:OP1	49:D3:30:ARG:HD2	2.19	0.42
25:DA:1364:G:OP2	47:D1:3:LYS:HG3	2.20	0.42
25:DA:1375:C:H2'	25:DA:1376:C:H6	1.84	0.42
25:DA:2590:A:O2'	25:DA:2591:C:H5'	2.20	0.42
27:DD:13:ARG:HD2	27:DD:13:ARG:HA	1.43	0.42
27:DD:127:VAL:HA	27:DD:193:VAL:HG22	2.01	0.42
29:DF:154:VAL:HG22	29:DF:191:ARG:CB	2.49	0.42
30:DG:45:GLU:C	30:DG:47:LYS:H	2.23	0.42
50:D4:60:GLN:HA	50:D4:62:ARG:HG2	2.02	0.42
54:D8:26:LYS:HG2	54:D8:48:PHE:CD1	2.55	0.42
1:AA:66:G:O3'	1:AA:199:G:H4'	2.20	0.42
1:AA:352:C:O2'	1:AA:354:G:OP1	2.28	0.42
1:AA:357:G:C2	1:AA:358:U:C5	3.08	0.42
1:AA:589:C:O2'	1:AA:590:C:H5'	2.20	0.42
1:AA:657:G:C2	1:AA:750:G:C5	3.08	0.42
1:AA:977:A:H2'	1:AA:978:A:H5''	2.01	0.42
1:AA:1060:C:H41	3:AC:2:GLY:HA3	1.85	0.42
1:AA:1256:A:C2	1:AA:1277:C:N4	2.88	0.42
1:AA:1277:C:H1'	1:AA:1282:C:C2	2.55	0.42
6:AF:96:PRO:HB3	18:AR:30:ASP:CG	2.39	0.42
9:AI:110:GLU:OE2	9:AI:113:LYS:NZ	2.49	0.42
17:AQ:27:PHE:CZ	17:AQ:36:ILE:HD11	2.55	0.42
23:AX:19:G:C4	23:AX:57:A:C2	3.07	0.42
25:BA:439:A:H8	25:BA:439:A:O5'	2.03	0.42
25:BA:1370:G:C4	25:BA:1374:G:O6	2.72	0.42
25:BA:1387:U:OP1	25:BA:1443:U:N3	2.47	0.42
25:BA:1522:G:N2	25:BA:1565:G:C4	2.87	0.42
25:BA:1629:C:C2	25:BA:1630:A:C8	3.08	0.42
25:BA:1790:A:H1'	25:BA:2723:A:C2	2.55	0.42
25:BA:1898:A:H2'	25:BA:1899:A:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2623:U:H2'	51:B5:2:ALA:O	2.20	0.42
25:BA:2860:A:C2	25:BA:2861:A:C4	3.08	0.42
32:BI:6:LEU:HG	32:BI:36:ALA:HA	2.01	0.42
34:BO:7:TYR:CZ	34:BO:44:LYS:HG3	2.55	0.42
45:BZ:67:LEU:HA	45:BZ:68:PRO:HD3	1.72	0.42
1:CA:160:A:H2'	1:CA:161:A:C8	2.55	0.42
1:CA:472:A:H2'	1:CA:473:G:O4'	2.20	0.42
1:CA:576:G:N2	1:CA:760:G:OP2	2.53	0.42
1:CA:677:U:H1'	11:CK:119:CYS:SG	2.60	0.42
1:CA:714:G:H2'	1:CA:715:A:C8	2.55	0.42
1:CA:951:G:C6	1:CA:952:U:C4	3.08	0.42
6:CF:80:ARG:NH1	6:CF:88:VAL:O	2.53	0.42
19:CS:27:GLU:HG2	19:CS:47:HIS:HE2	1.83	0.42
25:DA:144:C:H2'	25:DA:145:G:C8	2.50	0.42
25:DA:244:A:C2	25:DA:255:A:C4	3.08	0.42
25:DA:459:U:H4'	53:D7:40:TRP:CZ3	2.55	0.42
25:DA:537:C:H1'	33:DN:45:ASN:HD21	1.85	0.42
25:DA:595:C:H2'	25:DA:596:G:O4'	2.19	0.42
25:DA:1912:A:C8	25:DA:1918:A:C2	3.08	0.42
25:DA:2298:A:N7	25:DA:2299:G:C4	2.88	0.42
25:DA:2821:A:C2	25:DA:2822:G:C4	3.08	0.42
30:DG:128:ARG:HE	30:DG:128:ARG:HB2	1.55	0.42
40:DU:79:PHE:O	40:DU:83:LEU:HD22	2.20	0.42
1:AA:22:G:H2'	1:AA:23:C:C6	2.55	0.42
1:AA:55:A:C5	1:AA:56:U:C5	3.08	0.42
1:AA:192:U:C2	1:AA:193:C:C5	3.08	0.42
1:AA:673:G:N2	1:AA:674:G:C2	2.88	0.42
1:AA:684:A:H2'	1:AA:685:G:H8	1.84	0.42
1:AA:890:G:O2'	1:AA:906:G:O6	2.31	0.42
1:AA:1162:C:H2'	1:AA:1163:C:H6	1.85	0.42
1:AA:1277:C:H2'	1:AA:1279:A:C8	2.53	0.42
1:AA:1308:U:H5''	13:AM:98:VAL:CG2	2.49	0.42
2:AB:158:LEU:HA	2:AB:159:PRO:HD3	1.88	0.42
3:AC:22:TRP:CD1	3:AC:59:ARG:HD2	2.54	0.42
3:AC:175:LEU:HD21	3:AC:201:TYR:HE2	1.85	0.42
5:AE:20:GLN:NE2	5:AE:21:ALA:O	2.53	0.42
15:AO:61:GLY:O	15:AO:65:ARG:HG3	2.19	0.42
16:AP:71:ARG:O	16:AP:75:ARG:N	2.30	0.42
25:BA:374:U:H2'	25:BA:375:G:O4'	2.20	0.42
25:BA:738:C:O2'	25:BA:739:C:H5'	2.20	0.42
25:BA:801:C:H2'	25:BA:802:C:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:831:A:C8	25:BA:839:G:C5	3.08	0.42
25:BA:1224:C:O2'	25:BA:1225:C:H5'	2.20	0.42
25:BA:2376:C:H2'	25:BA:2377:G:O4'	2.20	0.42
25:BA:2450:U:O2'	25:BA:2452:C:OP1	2.30	0.42
25:BA:2517:G:O6	25:BA:2588:G:H2'	2.19	0.42
25:BA:2673:G:H2'	25:BA:2674:A:C8	2.55	0.42
25:BA:2677:A:C2	25:BA:2678:C:C2	3.08	0.42
25:BA:2797:C:O2'	28:BE:42:ASP:OD1	2.22	0.42
27:BD:145:VAL:HB	27:BD:155:LEU:HB2	2.02	0.42
28:BE:178:GLU:OE2	28:BE:178:GLU:N	2.47	0.42
37:BR:117:VAL:HG12	37:BR:118:GLU:N	2.34	0.42
39:BT:101:PHE:HD2	39:BT:105:LEU:HD11	1.84	0.42
40:BU:112:ARG:H	40:BU:112:ARG:HG2	1.53	0.42
49:B3:26:LEU:O	49:B3:35:ARG:NE	2.51	0.42
1:CA:59:A:H5''	1:CA:60:A:C5'	2.49	0.42
1:CA:226:G:C2	1:CA:227:G:C8	3.08	0.42
1:CA:952:U:O2'	1:CA:965:A:N6	2.52	0.42
1:CA:1188:A:H2'	1:CA:1189:C:O4'	2.19	0.42
1:CA:1228:C:H4'	13:CM:116:THR:HA	2.01	0.42
1:CA:1270:C:H2'	1:CA:1271:G:H5'	2.02	0.42
1:CA:1291:G:H4'	9:CI:39:GLY:HA3	2.02	0.42
1:CA:1298:C:H4'	1:CA:1299:A:C4	2.54	0.42
4:CD:135:LEU:O	4:CD:137:SER:N	2.53	0.42
9:CI:96:LEU:HD23	9:CI:96:LEU:HA	1.92	0.42
19:CS:29:ARG:O	19:CS:31:ILE:HG13	2.19	0.42
24:CW:9:MVA:HN3	24:CW:10:2QY:CE2	2.49	0.42
25:DA:190:A:OP2	47:D1:39:LYS:HE3	2.19	0.42
25:DA:597:U:H2'	25:DA:598:G:C8	2.55	0.42
25:DA:776:G:C8	25:DA:793:A:N3	2.88	0.42
25:DA:1024:G:H8	25:DA:1024:G:O5'	2.02	0.42
25:DA:1275:A:N1	25:DA:1295:C:O2'	2.39	0.42
25:DA:1575:C:H2'	25:DA:1576:U:C6	2.55	0.42
27:DD:228:PRO:HD3	27:DD:235:GLY:HA3	2.02	0.42
31:DH:130:ARG:HH11	31:DH:132:ARG:NH2	2.18	0.42
32:DI:4:ILE:HG12	32:DI:18:VAL:HG22	2.01	0.42
32:DI:14:ASP:OD1	32:DI:15:VAL:N	2.53	0.42
34:DO:69:ILE:H	34:DO:69:ILE:HD13	1.85	0.42
36:DQ:133:ARG:HG2	36:DQ:134:ARG:N	2.34	0.42
41:DV:58:VAL:O	41:DV:97:LYS:N	2.38	0.42
51:D5:49:CYS:SG	51:D5:51:TYR:HB2	2.59	0.42
1:AA:503:C:O2'	1:AA:504:C:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:622:A:H3'	1:AA:623:C:C6	2.55	0.41
1:AA:767:A:H2'	1:AA:768:A:O4'	2.20	0.41
2:AB:219:VAL:HA	2:AB:222:ILE:CD1	2.49	0.41
4:AD:81:GLU:OE2	4:AD:139:ARG:NH2	2.53	0.41
12:AL:124:LYS:HA	12:AL:125:PRO:HD3	1.77	0.41
25:BA:202:A:H2'	25:BA:203:G:O4'	2.19	0.41
25:BA:310:C:H2'	25:BA:311:C:H6	1.85	0.41
25:BA:312:C:H2'	25:BA:313:A:C8	2.53	0.41
25:BA:518:G:H2'	25:BA:519:G:O4'	2.20	0.41
25:BA:2798:C:H2'	25:BA:2799:U:C6	2.55	0.41
31:BH:37:VAL:HG13	31:BH:68:THR:CG2	2.50	0.41
34:BO:120:GLU:OE1	39:BT:67:SER:OG	2.27	0.41
35:BP:6:LEU:HA	35:BP:6:LEU:HD23	1.71	0.41
43:BX:31:HIS:HD2	43:BX:33:LYS:HB2	1.84	0.41
44:BY:1:MET:HE2	44:BY:1:MET:HB2	1.89	0.41
45:BZ:111:VAL:C	45:BZ:113:ALA:N	2.71	0.41
1:CA:61:G:C5	1:CA:107:G:C2	3.08	0.41
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.55	0.41
1:CA:447:G:H2'	1:CA:485:G:N2	2.35	0.41
1:CA:538:G:OP2	12:CL:115:LYS:HB2	2.18	0.41
1:CA:922:G:H2'	1:CA:923:A:H8	1.85	0.41
1:CA:1105:A:C2	1:CA:1106:G:C8	3.08	0.41
1:CA:1245:A:H61	1:CA:1292:U:H3	1.68	0.41
4:CD:88:VAL:O	4:CD:92:VAL:HG23	2.20	0.41
4:CD:110:PHE:N	4:CD:110:PHE:HD1	2.18	0.41
10:CJ:23:ILE:HD13	10:CJ:23:ILE:HA	1.74	0.41
10:CJ:49:VAL:HG23	14:CN:41:ARG:HD2	2.00	0.41
11:CK:43:SER:HA	11:CK:47:VAL:HG21	2.02	0.41
13:CM:80:ARG:O	13:CM:84:ILE:HG23	2.20	0.41
15:CO:76:GLU:OE1	15:CO:76:GLU:HA	2.20	0.41
21:CU:9:ARG:O	21:CU:13:ILE:HG13	2.20	0.41
25:DA:30:G:H2'	25:DA:31:C:H6	1.84	0.41
25:DA:275:G:H2'	25:DA:276:A:H8	1.83	0.41
25:DA:489:G:H2'	25:DA:491:G:O4'	2.20	0.41
25:DA:590:A:H2'	25:DA:591:C:C6	2.54	0.41
25:DA:623:G:C2	25:DA:624:C:C2	3.08	0.41
25:DA:721:C:H2'	25:DA:722:A:C8	2.55	0.41
25:DA:848:G:C4	25:DA:933:A:H8	2.38	0.41
25:DA:884:C:H5'	25:DA:885:C:OP2	2.20	0.41
25:DA:1032:A:O3'	55:D9:16:VAL:HG11	2.19	0.41
25:DA:1138:G:O2'	33:DN:105:GLY:HA3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1339:G:H5'	43:DX:16:LYS:HD3	2.01	0.41
25:DA:1366:A:H2'	25:DA:1367:A:O4'	2.20	0.41
25:DA:1833:U:O2'	25:DA:1969:A:N1	2.37	0.41
25:DA:1954:G:N2	25:DA:1956:U:C2	2.89	0.41
25:DA:2376:A:N3	38:DS:106:ARG:NH2	2.60	0.41
25:DA:2758:A:C2	25:DA:2759:G:H1'	2.55	0.41
32:DI:127:VAL:O	32:DI:128:LEU:HD23	2.19	0.41
35:DP:85:LEU:HG	35:DP:115:LEU:O	2.20	0.41
36:DQ:43:THR:OG1	36:DQ:45:GLN:HG2	2.20	0.41
42:DW:31:GLU:O	42:DW:34:ASN:HB2	2.20	0.41
43:DX:46:ALA:O	48:D2:30:ARG:NH2	2.50	0.41
1:AA:20:U:H1'	1:AA:916:G:N2	2.34	0.41
1:AA:342:C:N3	1:AA:348:G:C6	2.87	0.41
1:AA:545:C:H5'	4:AD:72:GLU:CB	2.51	0.41
1:AA:1004:A:C8	1:AA:1037:C:C2	3.09	0.41
1:AA:1020:U:H2'	1:AA:1021:G:C8	2.55	0.41
1:AA:1118:C:OP1	9:AI:104:ARG:NH1	2.48	0.41
1:AA:1325:C:O2'	1:AA:1326:C:H5'	2.19	0.41
4:AD:138:TYR:HE1	4:AD:140:VAL:HA	1.85	0.41
8:AH:21:LYS:O	8:AH:65:TYR:OH	2.24	0.41
8:AH:34:GLU:CD	8:AH:37:ARG:HH22	2.23	0.41
25:BA:233:A:C2	25:BA:244:A:C4	3.08	0.41
25:BA:1889:G:H21	25:BA:1905:G:H2'	1.84	0.41
25:BA:2285:A:O2'	25:BA:2286:A:H5'	2.20	0.41
38:BS:61:ASN:O	38:BS:65:VAL:HG23	2.19	0.41
45:BZ:121:HIS:HB3	45:BZ:123:ASP:O	2.20	0.41
49:B3:31:LEU:HD23	49:B3:31:LEU:HA	1.88	0.41
1:CA:44:G:H2'	1:CA:45:U:O4'	2.20	0.41
1:CA:137:C:H2'	1:CA:138:G:H5'	2.00	0.41
1:CA:189(C):C:H2'	1:CA:189(D):C:O4'	2.20	0.41
1:CA:407:G:O2'	4:CD:116:GLN:HG3	2.20	0.41
1:CA:557:G:N1	1:CA:558:G:C2	2.88	0.41
1:CA:833:U:H2'	1:CA:834:C:H6	1.85	0.41
1:CA:991:U:H3'	1:CA:1212:U:N3	2.35	0.41
1:CA:1245:A:H2'	1:CA:1246:C:O4'	2.20	0.41
3:CC:11:ARG:HB3	3:CC:15:THR:HB	2.00	0.41
4:CD:8:VAL:HA	4:CD:11:LEU:HD13	2.02	0.41
6:CF:89:MET:HG2	6:CF:91:VAL:HG23	2.02	0.41
15:CO:15:PHE:CZ	15:CO:84:LYS:HG2	2.55	0.41
23:CX:19:G:C4	23:CX:57:A:C2	3.08	0.41
25:DA:442:G:H21	29:DF:48:THR:HB	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:826:U:H5''	25:DA:2428:G:O3'	2.20	0.41
25:DA:843:G:C2	25:DA:936:C:C2	3.08	0.41
25:DA:1026:U:H4'	25:DA:1027:A:OP1	2.20	0.41
25:DA:1399:C:O2'	25:DA:1400:G:H5'	2.20	0.41
25:DA:1782:C:O4'	25:DA:2609:U:C2	2.73	0.41
25:DA:2022:U:O2'	25:DA:2617:C:H5'	2.19	0.41
25:DA:2058:A:N7	61:DA:3842:HOH:O	2.37	0.41
25:DA:2070:G:C2	25:DA:2442:C:C2	3.08	0.41
25:DA:2416:C:H2'	25:DA:2417:C:H6	1.85	0.41
26:DB:33:G:C6	26:DB:34:U:C4	3.08	0.41
27:DD:68:LYS:O	27:DD:69:ARG:HB2	2.20	0.41
27:DD:232:PRO:HG2	27:DD:248:SER:O	2.20	0.41
30:DG:117:PHE:CE1	30:DG:119:GLY:HA2	2.55	0.41
30:DG:178:PHE:HA	30:DG:179:PRO:HD2	1.87	0.41
31:DH:123:PHE:CD1	31:DH:133:VAL:HG22	2.56	0.41
36:DQ:141:GLN:NE2	45:DZ:74:VAL:O	2.42	0.41
41:DV:40:LEU:HD11	41:DV:55:ALA:HB2	2.01	0.41
43:DX:72:LYS:HG2	43:DX:73:ARG:O	2.20	0.41
53:D7:12:ARG:NH2	53:D7:44:PRO:HB3	2.35	0.41
1:AA:258:G:N3	1:AA:259:G:C8	2.89	0.41
1:AA:575:G:HO2'	1:AA:821:G:H5'	1.85	0.41
1:AA:1001(A):G:C5	1:AA:1002:G:C8	3.08	0.41
1:AA:1039:C:N4	1:AA:1040:U:O4	2.53	0.41
1:AA:1085:U:OP2	61:AA:4121:HOH:O	2.22	0.41
1:AA:1162:C:C2	1:AA:1175:G:C2	3.09	0.41
3:AC:19:GLU:HB3	3:AC:40:ARG:HH21	1.85	0.41
4:AD:71:SER:OG	4:AD:74:GLN:HB2	2.21	0.41
10:AJ:38:ILE:HA	10:AJ:39:PRO:HD3	1.85	0.41
16:AP:55:ARG:HD2	16:AP:55:ARG:HA	1.89	0.41
19:AS:31:ILE:O	19:AS:49:ILE:HG23	2.20	0.41
23:AX:8:U:O2	23:AX:21:A:H2	2.03	0.41
25:BA:324:A:H2'	25:BA:358:C:H1'	2.02	0.41
25:BA:442:A:H2'	25:BA:443:C:H6	1.85	0.41
25:BA:694:G:N1	25:BA:696:C:O2	2.53	0.41
25:BA:895:G:N9	25:BA:978:A:H8	2.18	0.41
25:BA:1722:C:H2'	25:BA:1723:A:O4'	2.20	0.41
25:BA:1775:C:H6	25:BA:1775:C:H5''	1.85	0.41
25:BA:2038:U:H1'	51:B5:6:VAL:HG13	2.02	0.41
25:BA:2455:C:OP1	29:BF:68:LYS:HD3	2.20	0.41
32:BI:102:SER:HA	32:BI:106:GLY:HA3	2.01	0.41
39:BT:16:ARG:NH1	39:BT:18:ASP:OD2	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BT:88:ILE:HG21	39:BT:91:ARG:NE	2.35	0.41
48:B2:10:LEU:HD23	48:B2:10:LEU:HA	1.90	0.41
50:B4:56:VAL:HB	50:B4:57:GLU:H	1.65	0.41
55:B9:17:ILE:HD12	55:B9:17:ILE:HA	1.81	0.41
1:CA:445:G:C6	1:CA:490:G:C6	3.09	0.41
1:CA:663:A:C2'	1:CA:664:G:H5'	2.49	0.41
1:CA:964:A:N3	1:CA:969:A:O2'	2.34	0.41
1:CA:1151:A:C2	1:CA:1152:A:C5	3.08	0.41
1:CA:1155:G:N7	1:CA:1156:G:C5	2.88	0.41
1:CA:1260:C:O5'	1:CA:1284:C:H4'	2.20	0.41
1:CA:1309:G:H2'	1:CA:1310:G:O4'	2.20	0.41
13:CM:29:ARG:NH1	13:CM:64:TRP:HB3	2.35	0.41
17:CQ:53:LEU:HD23	17:CQ:82:MET:HE1	2.01	0.41
18:CR:35:ARG:O	18:CR:37:VAL:N	2.51	0.41
24:CW:1:2QZ:CB	24:CW:10:2QY:H83	2.49	0.41
24:CW:8:2R3:H69	24:CW:8:2R3:H67	1.72	0.41
25:DA:79:G:C4	25:DA:80:G:C8	3.08	0.41
25:DA:254:G:N7	54:D8:5:LYS:HE2	2.35	0.41
25:DA:340:A:H2'	25:DA:341:G:O4'	2.19	0.41
25:DA:674:G:C1'	29:DF:74:ARG:HD3	2.50	0.41
25:DA:729:G:O5'	27:DD:208:LYS:NZ	2.54	0.41
25:DA:1639:U:C2'	25:DA:1640:C:H5''	2.51	0.41
25:DA:2030:A:H4'	25:DA:2031:A:C8	2.55	0.41
25:DA:2319:G:H4'	25:DA:2320:A:OP1	2.19	0.41
25:DA:2517:C:C6	25:DA:2542:A:N7	2.88	0.41
25:DA:2892:A:H2'	25:DA:2893:G:H5'	2.02	0.41
31:DH:71:LEU:HD12	31:DH:71:LEU:HA	1.78	0.41
35:DP:16:ARG:HH11	35:DP:16:ARG:HD2	1.73	0.41
36:DQ:72:LYS:HB3	36:DQ:94:VAL:HG23	2.01	0.41
36:DQ:106:VAL:HG21	36:DQ:114:ALA:HB1	2.02	0.41
37:DR:21:TYR:OH	37:DR:43:GLU:HG2	2.21	0.41
37:DR:65:LEU:HD12	37:DR:65:LEU:HA	1.65	0.41
41:DV:25:LEU:H	41:DV:92:THR:HG1	1.65	0.41
43:DX:43:VAL:HG21	43:DX:81:VAL:HG11	2.03	0.41
45:DZ:5:LEU:HD22	45:DZ:6:LYS:N	2.35	0.41
47:D1:23:LYS:HB2	47:D1:23:LYS:HE3	1.70	0.41
48:D2:21:LEU:HD23	48:D2:21:LEU:HA	1.86	0.41
1:AA:258:G:H2'	1:AA:259:G:C8	2.55	0.41
1:AA:1349:A:OP2	9:AI:118:LYS:HE3	2.20	0.41
4:AD:190:ASP:H	4:AD:193:ASP:HB2	1.86	0.41
8:AH:28:ALA:HB3	8:AH:57:PRO:HB2	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:22:LEU:HD13	19:AS:47:HIS:HD2	1.85	0.41
25:BA:223:C:H2'	25:BA:224:U:C6	2.56	0.41
25:BA:469:A:H5''	25:BA:470:C:OP1	2.19	0.41
25:BA:1506:G:H5''	25:BA:1507:A:OP2	2.20	0.41
25:BA:2303:U:OP1	25:BA:2392:C:O2'	2.25	0.41
29:BF:129:PHE:CD2	29:BF:163:VAL:HG21	2.56	0.41
30:BG:6:ALA:HB3	30:BG:104:GLU:OE2	2.20	0.41
34:BO:4:PRO:O	34:BO:5:GLN:HB2	2.20	0.41
35:BP:27:HIS:O	35:BP:31:ALA:HA	2.19	0.41
39:BT:101:PHE:CD2	39:BT:105:LEU:HD11	2.56	0.41
50:B4:68:ARG:HB3	50:B4:69:LYS:H	1.43	0.41
1:CA:328:C:H4'	1:CA:329:A:H5'	2.02	0.41
1:CA:438:G:O2'	1:CA:494:U:O4	2.32	0.41
1:CA:558:G:H5''	1:CA:559:A:OP2	2.20	0.41
1:CA:727:G:N2	1:CA:730:G:OP2	2.51	0.41
1:CA:865:A:H5'	1:CA:1078:U:O4	2.20	0.41
1:CA:971:G:OP1	1:CA:971:G:H3'	2.19	0.41
1:CA:1001:A:N6	1:CA:1001(A):G:O6	2.53	0.41
1:CA:1077:G:N1	1:CA:1081:G:C6	2.89	0.41
1:CA:1120:G:H8	1:CA:1120:G:O5'	2.02	0.41
1:CA:1266:G:N2	1:CA:1268:A:H3'	2.35	0.41
2:CB:192:SER:O	2:CB:194:PRO:HD3	2.20	0.41
2:CB:213:LEU:HD22	2:CB:214:ILE:HD13	2.02	0.41
4:CD:100:ARG:HG2	4:CD:137:SER:HA	2.01	0.41
5:CE:81:GLU:OE1	5:CE:88:LYS:HE2	2.20	0.41
5:CE:137:GLU:HA	5:CE:140:ARG:HB3	2.02	0.41
8:CH:58:TYR:O	8:CH:59:LEU:HD23	2.21	0.41
18:CR:26:LEU:HD13	18:CR:26:LEU:HA	1.93	0.41
25:DA:45:C:H2'	25:DA:47:C:C6	2.56	0.41
25:DA:996:A:H4'	40:DU:91:ASP:OD2	2.20	0.41
25:DA:1313:U:H2'	25:DA:1610:A:C2	2.55	0.41
25:DA:1364:G:C8	47:D1:3:LYS:HD2	2.55	0.41
25:DA:2023:G:H4'	25:DA:2617:C:O3'	2.20	0.41
26:DB:33:G:N3	26:DB:50:G:C2	2.88	0.41
26:DB:90:A:C5	26:DB:91:C:H1'	2.56	0.41
28:DE:166:THR:HG21	28:DE:199:ARG:HH22	1.85	0.41
30:DG:17:PRO:HA	30:DG:20:ILE:HD12	2.01	0.41
35:DP:38:GLN:O	35:DP:39:LYS:CB	2.69	0.41
42:DW:79:GLY:CA	42:DW:100:THR:HG22	2.51	0.41
54:D8:56:GLU:HA	54:D8:59:LYS:HE3	2.02	0.41
1:AA:404:U:H2'	1:AA:405:U:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:512:U:H2'	1:AA:513:C:C6	2.56	0.41
1:AA:1376:U:H2'	1:AA:1377:A:H8	1.86	0.41
2:AB:36:ARG:C	2:AB:38:GLY:H	2.23	0.41
2:AB:80:ILE:HD11	2:AB:212:GLN:HA	2.01	0.41
3:AC:152:ILE:O	3:AC:198:VAL:HA	2.20	0.41
5:AE:31:LEU:HD23	5:AE:31:LEU:HA	1.80	0.41
5:AE:78:HIS:CE1	8:AH:104:ARG:NH1	2.89	0.41
6:AF:62:TRP:CD1	18:AR:35:ARG:HD2	2.56	0.41
9:AI:128:ARG:NH2	23:AX:33:U:OP2	2.53	0.41
19:AS:20:LEU:HD13	50:B4:69:LYS:HE2	2.03	0.41
25:BA:1047:A:H2'	25:BA:1048:G:O4'	2.20	0.41
25:BA:1074:A:N6	25:BA:1171:G:H2'	2.35	0.41
25:BA:1155:C:C5	25:BA:1156:G:C6	3.09	0.41
25:BA:1520:G:C6	25:BA:1521:C:N3	2.89	0.41
25:BA:1530:G:N2	25:BA:1552:C:C2	2.88	0.41
30:BG:77:ILE:HG21	30:BG:80:PHE:CD2	2.56	0.41
33:BN:10:GLU:OE1	33:BN:11:PRO:HD2	2.21	0.41
36:BQ:137:TYR:HB3	45:BZ:76:LEU:HD21	2.01	0.41
38:BS:110:LEU:HD12	38:BS:110:LEU:HA	1.70	0.41
40:BU:18:LEU:HD23	40:BU:18:LEU:HA	1.89	0.41
44:BY:9:LYS:HA	44:BY:10:GLY:HA2	1.80	0.41
44:BY:106:LEU:O	44:BY:107:ASP:HB2	2.20	0.41
1:CA:53:A:N6	1:CA:54:C:C4	2.88	0.41
1:CA:325:A:H2'	1:CA:326:G:O4'	2.20	0.41
1:CA:868:C:H2'	1:CA:869:G:O4'	2.21	0.41
1:CA:919:A:O2'	1:CA:1080:A:N1	2.50	0.41
1:CA:1127:G:H2'	1:CA:1128:C:C6	2.55	0.41
1:CA:1179:A:C6	1:CA:1180:A:N7	2.89	0.41
1:CA:1227:A:C8	1:CA:1227:A:C3'	3.03	0.41
1:CA:1264:C:C2	1:CA:1272:G:N2	2.88	0.41
1:CA:1460:A:H2'	1:CA:1461:G:O4'	2.21	0.41
2:CB:7:VAL:HB	2:CB:8:LYS:H	1.72	0.41
4:CD:153:ARG:HB2	4:CD:181:MET:SD	2.61	0.41
4:CD:171:GLY:HA2	4:CD:172:PRO:HD3	1.93	0.41
13:CM:91:ARG:HA	13:CM:91:ARG:HD2	1.93	0.41
16:CP:55:ARG:O	16:CP:58:TYR:N	2.51	0.41
20:CT:26:ASN:OD1	20:CT:71:THR:HG23	2.21	0.41
25:DA:343:C:H2'	25:DA:344:G:H8	1.85	0.41
25:DA:372:G:O2'	25:DA:373:U:OP2	2.37	0.41
25:DA:632:A:H2'	25:DA:633:A:C8	2.55	0.41
25:DA:705:A:H2'	25:DA:706:A:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:966:G:C6	25:DA:967:C:N4	2.88	0.41
25:DA:1790:C:O3'	25:DA:1791:A:C8	2.73	0.41
25:DA:2297:C:H3'	25:DA:2297:C:C6	2.55	0.41
25:DA:2472:G:H2'	25:DA:2475:C:H42	1.85	0.41
26:DB:3:C:H2'	26:DB:4:C:H6	1.84	0.41
28:DE:167:VAL:HG11	28:DE:189:PRO:HD3	2.02	0.41
30:DG:18:GLU:HG2	30:DG:175:LEU:HD21	2.01	0.41
43:DX:26:TYR:HB3	43:DX:92:LEU:CD2	2.51	0.41
46:D0:19:LYS:NZ	46:D0:19:LYS:H	2.18	0.41
1:AA:376:G:OP1	16:AP:5:ARG:HB2	2.20	0.41
1:AA:538:G:O2'	1:AA:539:A:H5'	2.21	0.41
1:AA:628:G:H2'	1:AA:629:G:C8	2.55	0.41
1:AA:1005:A:H1'	1:AA:1036:G:N2	2.35	0.41
2:AB:30:ARG:HG3	2:AB:31:TYR:CD1	2.55	0.41
2:AB:48:MET:HA	2:AB:51:LEU:HD12	2.03	0.41
2:AB:137:ARG:NH1	2:AB:137:ARG:HB3	2.36	0.41
4:AD:59:ARG:NH2	4:AD:66:ARG:NH1	2.68	0.41
17:AQ:62:SER:CB	17:AQ:72:ARG:HD3	2.49	0.41
19:AS:15:LEU:HD12	19:AS:15:LEU:HA	1.96	0.41
25:BA:999:G:N3	25:BA:2286:A:C2	2.88	0.41
25:BA:1421:C:H2'	25:BA:1422:C:H6	1.85	0.41
25:BA:2555:G:H2'	25:BA:2556:G:C8	2.55	0.41
36:BQ:41:TRP:CD1	36:BQ:96:VAL:HG22	2.55	0.41
45:BZ:151:HIS:C	45:BZ:153:SER:N	2.73	0.41
47:B1:11:ARG:HH11	47:B1:11:ARG:HD2	1.70	0.41
53:B7:24:THR:HG22	53:B7:26:GLY:H	1.86	0.41
1:CA:429:U:H3'	4:CD:9:CYS:SG	2.61	0.41
1:CA:749:C:O2'	1:CA:750:G:H5'	2.20	0.41
1:CA:1111:A:H2'	1:CA:1112:C:C6	2.56	0.41
2:CB:200:ILE:O	2:CB:200:ILE:HG12	2.21	0.41
4:CD:15:GLU:CG	4:CD:63:LYS:HB3	2.46	0.41
8:CH:82:HIS:NE2	8:CH:84:ARG:HG2	2.36	0.41
11:CK:33:THR:OG1	11:CK:34:ASP:O	2.31	0.41
19:CS:41:VAL:HG12	19:CS:43:GLU:N	2.30	0.41
23:CX:43:A:C2	23:CX:44:A:C4	3.09	0.41
24:CW:4:PRO:HA	24:CW:5:MVA:HN1	1.33	0.41
25:DA:301:G:C4	25:DA:302:C:C5	3.08	0.41
25:DA:705:A:H1'	27:DD:9:TYR:CE1	2.55	0.41
25:DA:1525:G:H2'	25:DA:1526:G:C8	2.56	0.41
25:DA:1580:A:OP2	25:DA:1580:A:H8	2.04	0.41
25:DA:1788:C:H2'	25:DA:1789:A:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1854:A:H2'	25:DA:1855:G:O4'	2.20	0.41
25:DA:2640:G:H1	25:DA:2774:C:N4	2.17	0.41
29:DF:110:LEU:HD23	29:DF:110:LEU:HA	1.79	0.41
38:DS:29:PHE:CD1	38:DS:30:ARG:N	2.89	0.41
43:DX:84:ALA:O	43:DX:87:GLN:HG3	2.21	0.41
1:AA:1258:G:H1	1:AA:1277:C:H42	1.68	0.41
1:AA:1339:A:H2'	1:AA:1340:A:O4'	2.21	0.41
1:AA:1508:G:H2'	1:AA:1509:C:O4'	2.21	0.41
7:AG:104:LEU:HD13	7:AG:104:LEU:HA	1.88	0.41
9:AI:23:ASN:ND2	9:AI:25:LYS:HE3	2.36	0.41
13:AM:49:THR:OG1	13:AM:52:GLU:OE1	2.28	0.41
25:BA:642:G:H5'	29:BF:205:ARG:HD2	2.02	0.41
25:BA:816:G:H5'	25:BA:1425:A:N6	2.36	0.41
25:BA:1362:U:H2'	25:BA:1363:A:H8	1.85	0.41
25:BA:1505:C:H4'	25:BA:1506:G:O5'	2.19	0.41
30:BG:139:LEU:H	30:BG:139:LEU:HG	1.53	0.41
32:BI:30:LEU:HD23	32:BI:30:LEU:HA	1.70	0.41
49:B3:15:TYR:HA	49:B3:16:PRO:HD3	1.88	0.41
51:B5:35:GLU:HG3	51:B5:51:TYR:CD2	2.56	0.41
1:CA:10:A:O2'	1:CA:11:G:H5'	2.20	0.41
1:CA:647:C:C2'	1:CA:648:A:H5'	2.50	0.41
1:CA:664:G:P	18:CR:64:ARG:HH12	2.44	0.41
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.21	0.41
1:CA:955:U:O2'	19:CS:83:HIS:HD2	2.03	0.41
1:CA:991:U:N3	1:CA:1212:U:O2	2.53	0.41
1:CA:1039:C:N4	1:CA:1040:U:O4	2.54	0.41
1:CA:1191:A:OP1	3:CC:4:LYS:HG3	2.20	0.41
1:CA:1245:A:H2'	1:CA:1246:C:C6	2.56	0.41
1:CA:1258:G:O2'	1:CA:1259:C:H5'	2.21	0.41
2:CB:185:ILE:HA	2:CB:199:TYR:O	2.21	0.41
3:CC:18:TRP:NE1	14:CN:53:LEU:O	2.53	0.41
7:CG:69:VAL:HG12	7:CG:69:VAL:O	2.21	0.41
13:CM:20:THR:C	13:CM:22:ILE:H	2.23	0.41
15:CO:64:ARG:HH11	15:CO:68:ARG:NH2	2.17	0.41
23:CX:30:G:C4	23:CX:31:G:C8	3.09	0.41
24:CW:3:004:O	24:CW:6:2R1:N	2.53	0.41
25:DA:375:C:H2'	25:DA:376:C:H6	1.84	0.41
25:DA:784:A:H5'	25:DA:785:G:OP1	2.20	0.41
25:DA:811:U:H2'	35:DP:21:ARG:HA	2.02	0.41
25:DA:910:A:C6	25:DA:911:A:C6	3.08	0.41
25:DA:1341:U:H3'	25:DA:1397:U:O2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1487:G:H2'	25:DA:1488:G:H8	1.85	0.41
25:DA:1850:G:C6	25:DA:1851:U:C4	3.09	0.41
25:DA:2320:A:H4'	25:DA:2321:G:N7	2.36	0.41
25:DA:2328:A:H2'	25:DA:2329:G:C8	2.56	0.41
25:DA:2337:G:C2	25:DA:2338:G:C8	3.08	0.41
25:DA:2467:C:C5	25:DA:2468:G:C6	3.08	0.41
25:DA:2488:A:O2'	25:DA:2489:G:H5'	2.21	0.41
25:DA:2836:U:C4	25:DA:2883:A:N6	2.88	0.41
26:DB:5:C:OP1	26:DB:62:C:H5'	2.21	0.41
26:DB:83:G:H5''	49:D3:52:HIS:CE1	2.55	0.41
31:DH:3:ARG:NH2	31:DH:5:GLY:H	2.19	0.41
37:DR:33:ARG:NH2	51:D5:57:VAL:O	2.49	0.41
40:DU:81:HIS:O	40:DU:84:LYS:HB3	2.21	0.41
41:DV:43:GLU:N	41:DV:43:GLU:OE2	2.54	0.41
43:DX:31:HIS:HA	43:DX:32:PRO:HD3	1.87	0.41
45:DZ:144:LEU:HD23	45:DZ:144:LEU:HA	1.89	0.41
48:D2:8:LYS:HD2	48:D2:8:LYS:HA	1.92	0.41
1:AA:178:C:H2'	1:AA:179:A:O4'	2.21	0.41
1:AA:872:A:C4	1:AA:874:G:N7	2.88	0.41
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.56	0.41
2:AB:71:VAL:HG13	2:AB:93:VAL:HG21	2.02	0.41
2:AB:109:SER:O	2:AB:112:VAL:HG22	2.20	0.41
3:AC:12:LEU:HD23	3:AC:12:LEU:HA	1.96	0.41
4:AD:79:PHE:HE1	4:AD:204:ILE:HD13	1.86	0.41
13:AM:3:ARG:CG	13:AM:8:GLU:HA	2.51	0.41
13:AM:17:VAL:O	13:AM:20:THR:OG1	2.19	0.41
14:AN:12:ARG:HG2	14:AN:13:THR:N	2.35	0.41
25:BA:771:U:C4	25:BA:772:G:C5	3.09	0.41
25:BA:776:G:C6	27:BD:208:LYS:HB2	2.56	0.41
25:BA:785:G:C6	25:BA:786:G:C2	3.07	0.41
25:BA:1051:C:O2	25:BA:1189:A:C6	2.74	0.41
25:BA:1652:G:H5''	25:BA:1653:C:OP1	2.21	0.41
25:BA:1821:C:H5''	25:BA:1822:A:OP1	2.20	0.41
25:BA:2120:U:C4	25:BA:2121:U:C5	3.09	0.41
25:BA:2219:U:H1'	25:BA:2220:A:C8	2.55	0.41
30:BG:7:LEU:HA	30:BG:7:LEU:HD23	1.85	0.41
30:BG:137:GLU:HG2	30:BG:152:LEU:HD22	2.03	0.41
44:BY:68:HIS:CE1	44:BY:70:SER:HB3	2.56	0.41
48:B2:41:ILE:H	48:B2:41:ILE:HG12	1.67	0.41
50:B4:15:ILE:HB	50:B4:32:TYR:CD1	2.55	0.41
50:B4:18:CYS:SG	50:B4:20:ASN:HB2	2.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:202:U:O2'	1:CA:203:U:O5'	2.19	0.41
1:CA:292:G:N7	1:CA:293:G:H1'	2.35	0.41
1:CA:437:U:C5'	4:CD:155:LEU:HD11	2.50	0.41
1:CA:541:G:H2'	1:CA:542:G:H8	1.85	0.41
1:CA:678:U:H2'	1:CA:679:C:C6	2.56	0.41
1:CA:1218:C:OP2	14:CN:9:LYS:NZ	2.31	0.41
1:CA:1387:G:H2'	1:CA:1388:C:H6	1.84	0.41
1:CA:1442:G:H2'	1:CA:1442(A):G:H5'	2.02	0.41
3:CC:180:ALA:HA	3:CC:206:GLU:HB3	2.02	0.41
4:CD:38:TYR:HA	4:CD:39:PRO:HD3	1.92	0.41
7:CG:26:PHE:CD2	7:CG:30:ILE:HD11	2.56	0.41
8:CH:97:VAL:O	8:CH:100:ILE:HG13	2.21	0.41
9:CI:54:ASP:O	9:CI:56:LEU:N	2.44	0.41
10:CJ:6:ILE:HD13	10:CJ:98:ILE:HD11	2.02	0.41
10:CJ:8:LEU:HB3	10:CJ:16:LEU:CD2	2.51	0.41
10:CJ:21:GLN:O	10:CJ:25:GLU:HG2	2.20	0.41
11:CK:81:ASP:OD1	11:CK:106:LYS:HB2	2.21	0.41
25:DA:527:C:H5'	25:DA:527:C:O2	2.21	0.41
25:DA:932:G:H4'	25:DA:933:A:O5'	2.21	0.41
25:DA:990:A:N1	25:DA:1186:G:O2'	2.52	0.41
25:DA:1274:A:N3	25:DA:1297:C:H1'	2.35	0.41
25:DA:1486:A:O2'	25:DA:1487:G:H5'	2.21	0.41
25:DA:1649:G:C2'	25:DA:1650:G:H5'	2.51	0.41
25:DA:1664:A:OP1	61:DA:4384:HOH:O	2.21	0.41
25:DA:2590:A:OP2	27:DD:238:GLY:HA2	2.20	0.41
25:DA:2638:G:P	28:DE:82:ARG:NH2	2.94	0.41
27:DD:182:LEU:HD23	27:DD:182:LEU:HA	1.90	0.41
28:DE:31:CYS:HA	28:DE:32:PRO:HD2	1.83	0.41
30:DG:43:LEU:HB3	30:DG:44:GLY:H	1.48	0.41
31:DH:3:ARG:CD	31:DH:54:ARG:HH12	2.34	0.41
34:DO:29:ASN:N	34:DO:29:ASN:OD1	2.54	0.41
38:DS:19:LYS:HG2	38:DS:19:LYS:H	1.59	0.41
39:DT:27:THR:O	39:DT:89:VAL:HG22	2.20	0.41
41:DV:31:ALA:O	41:DV:61:VAL:HG12	2.20	0.41
44:DY:5:MET:HE1	44:DY:32:PRO:HA	2.03	0.41
51:D5:19:ARG:HH11	51:D5:19:ARG:HD2	1.74	0.41
52:D6:21:TYR:CE1	52:D6:38:LYS:HG2	2.55	0.41
1:AA:129:U:H5'	17:AQ:3:LYS:HZ3	1.86	0.41
1:AA:138:G:H2'	1:AA:139:G:O4'	2.21	0.41
1:AA:146:G:C4	1:AA:147:G:C8	3.08	0.41
1:AA:509:A:O4'	4:AD:58:LEU:HD12	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:717:C:H5''	1:AA:717:C:H6	1.86	0.41
1:AA:741:G:H2'	1:AA:742:G:O4'	2.21	0.41
1:AA:857:C:H2'	1:AA:858:G:O4'	2.21	0.41
1:AA:872:A:C5	1:AA:874:G:C8	3.09	0.41
1:AA:1058:G:H2'	1:AA:1059:C:O4'	2.20	0.41
1:AA:1084:G:H2'	1:AA:1085:U:C5	2.56	0.41
1:AA:1136:U:H5''	1:AA:1137:C:C4	2.56	0.41
1:AA:1168:A:C6	1:AA:1169:A:C6	3.09	0.41
1:AA:1304:G:C6	1:AA:1305:G:N1	2.89	0.41
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.20	0.41
2:AB:71:VAL:HG12	2:AB:170:GLU:HG2	2.03	0.41
2:AB:211:ILE:H	2:AB:211:ILE:HG13	1.69	0.41
3:AC:82:GLU:O	3:AC:85:ARG:HB2	2.21	0.41
4:AD:85:LYS:HG3	4:AD:86:LYS:H	1.85	0.41
7:AG:65:ALA:HB1	7:AG:127:ALA:HB3	2.02	0.41
10:AJ:38:ILE:HG13	10:AJ:71:LEU:HB3	2.03	0.41
11:AK:44:SER:O	11:AK:48:ILE:HD13	2.21	0.41
13:AM:108:ARG:HA	13:AM:108:ARG:HD3	1.83	0.41
14:AN:46:GLU:O	14:AN:50:LYS:HG3	2.21	0.41
17:AQ:81:ARG:HD2	17:AQ:81:ARG:HA	1.86	0.41
19:AS:22:LEU:O	19:AS:27:GLU:HG3	2.21	0.41
20:AT:86:ARG:O	20:AT:90:GLN:NE2	2.54	0.41
25:BA:26:G:C6	25:BA:27:G:N1	2.88	0.41
25:BA:146:G:C6	25:BA:147:U:C4	3.09	0.41
25:BA:215:G:H21	25:BA:217:A:H62	1.67	0.41
25:BA:415:G:O2'	25:BA:416:G:N7	2.43	0.41
25:BA:441:C:O2'	25:BA:442:A:H5'	2.21	0.41
25:BA:496:A:C8	25:BA:496:A:H5''	2.56	0.41
25:BA:870:G:C6	25:BA:882:A:C6	3.09	0.41
25:BA:1830:G:O2'	27:BD:181:GLU:OE2	2.29	0.41
25:BA:2119:C:H2'	25:BA:2120:U:O4'	2.21	0.41
25:BA:2240:G:C5	25:BA:2241:C:C4	3.09	0.41
30:BG:109:VAL:HG13	50:B4:33:VAL:HG11	2.03	0.41
32:BI:14:ASP:OD1	32:BI:15:VAL:N	2.54	0.41
34:BO:108:GLU:H	34:BO:108:GLU:HG3	1.63	0.41
40:BU:19:LYS:O	40:BU:22:LYS:HG3	2.21	0.41
41:BV:98:GLU:CD	41:BV:100:ARG:HH11	2.24	0.41
43:BX:92:LEU:O	43:BX:94:GLY:N	2.51	0.41
45:BZ:119:GLU:OE2	45:BZ:122:ARG:NH1	2.54	0.41
48:B2:65:ASN:OD1	48:B2:69:ARG:NH1	2.39	0.41
50:B4:40:HIS:O	50:B4:43:TYR:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:22:G:H4'	1:CA:885:G:C8	2.56	0.41
1:CA:353:A:H5'	1:CA:353:A:C8	2.49	0.41
1:CA:410:G:OP1	4:CD:30:LYS:NZ	2.22	0.41
1:CA:454:C:OP2	1:CA:455:C:N4	2.52	0.41
1:CA:500:G:N2	1:CA:546:G:H1'	2.36	0.41
1:CA:505:G:C6	1:CA:535:A:C2	3.09	0.41
1:CA:589:C:O2'	1:CA:590:C:H5'	2.21	0.41
1:CA:601:C:C2	1:CA:638:G:N2	2.88	0.41
1:CA:919:A:O5'	1:CA:919:A:H8	2.03	0.41
1:CA:939:G:N2	1:CA:1344:C:N3	2.59	0.41
1:CA:952:U:C5	13:CM:104:ARG:NH1	2.89	0.41
1:CA:1047:G:H1	1:CA:1210:C:N4	2.16	0.41
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.85	0.41
1:CA:1154:G:H8	1:CA:1154:G:H2'	1.35	0.41
1:CA:1233:G:H2'	1:CA:1234:C:C6	2.55	0.41
1:CA:1256:A:H2	1:CA:1277:C:H42	1.67	0.41
1:CA:1330:U:O3'	13:CM:23:TYR:HE1	2.04	0.41
1:CA:1493:A:O2'	1:CA:1494:G:O5'	2.34	0.41
1:CA:1511:G:H2'	1:CA:1512:U:O4'	2.20	0.41
2:CB:52:GLU:HG2	2:CB:56:ARG:NH2	2.30	0.41
2:CB:56:ARG:HH11	2:CB:56:ARG:CB	2.31	0.41
2:CB:219:VAL:O	2:CB:223:ILE:HG23	2.21	0.41
3:CC:11:ARG:HD3	3:CC:15:THR:HB	2.02	0.41
3:CC:59:ARG:HG3	3:CC:64:VAL:HA	2.03	0.41
4:CD:88:VAL:HG13	5:CE:97:GLY:HA2	2.02	0.41
4:CD:196:LEU:O	4:CD:198:VAL:N	2.46	0.41
8:CH:20:TYR:HE2	8:CH:75:ARG:HG2	1.85	0.41
9:CI:23:ASN:H	9:CI:23:ASN:HD22	1.68	0.41
9:CI:106:ALA:O	9:CI:108:VAL:HG23	2.21	0.41
13:CM:3:ARG:C	13:CM:3:ARG:HD2	2.41	0.41
16:CP:58:TYR:O	16:CP:61:SER:N	2.52	0.41
19:CS:58:VAL:HA	19:CS:59:PRO:HD2	1.80	0.41
25:DA:335:C:H4'	44:DY:73:ARG:CD	2.51	0.41
25:DA:863:A:H2'	25:DA:864:G:H8	1.86	0.41
25:DA:878:A:C6	25:DA:900:A:N7	2.89	0.41
25:DA:1348:G:O6	25:DA:1349:A:N6	2.54	0.41
25:DA:1533:G:C2	25:DA:1537:G:C6	3.08	0.41
25:DA:1607:C:H5''	25:DA:1608:A:H5'	2.03	0.41
25:DA:1739:U:O2'	25:DA:1740:G:H8	2.04	0.41
25:DA:1804:C:O5'	25:DA:1804:C:H6	2.02	0.41
25:DA:2274:A:C6	25:DA:2276:G:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2416:C:H6	25:DA:2416:C:O5'	2.04	0.41
25:DA:2505:G:H2'	25:DA:2576:G:O6	2.20	0.41
25:DA:2516:G:C6	25:DA:2517:C:C4	3.09	0.41
25:DA:2627:G:N3	25:DA:2781:A:H2	2.19	0.41
25:DA:2840:C:H2'	25:DA:2841:C:C6	2.56	0.41
26:DB:24:G:N7	26:DB:56:G:H2'	2.35	0.41
26:DB:43:C:C4	26:DB:45:A:C6	3.08	0.41
26:DB:48:A:H4'	38:DS:95:HIS:CD2	2.53	0.41
27:DD:12:SER:HB3	27:DD:208:LYS:HB3	2.03	0.41
27:DD:175:LEU:HD12	27:DD:185:VAL:HG21	2.03	0.41
27:DD:182:LEU:O	27:DD:271:ILE:N	2.47	0.41
29:DF:110:LEU:HD11	29:DF:181:LEU:HD23	2.03	0.41
30:DG:11:TYR:O	30:DG:16:ARG:N	2.49	0.41
30:DG:53:LEU:HD23	30:DG:53:LEU:HA	1.84	0.41
30:DG:91:ARG:HE	30:DG:91:ARG:HB3	1.53	0.41
33:DN:36:GLY:HA3	33:DN:49:GLY:HA2	2.03	0.41
33:DN:114:ARG:HH11	33:DN:114:ARG:HD2	1.75	0.41
37:DR:20:LEU:O	37:DR:24:GLN:HG3	2.21	0.41
40:DU:88:ILE:HG22	40:DU:90:VAL:HG23	2.03	0.41
43:DX:27:THR:OG1	43:DX:80:ILE:HG12	2.21	0.41
45:DZ:5:LEU:HG	45:DZ:47:VAL:HG21	2.03	0.41
45:DZ:125:LEU:HG	45:DZ:164:ALA:HB3	2.01	0.41
45:DZ:156:LYS:NZ	45:DZ:158:PRO:HD3	2.35	0.41
52:D6:5:VAL:O	52:D6:27:LYS:HG2	2.21	0.41
1:AA:475:G:O2'	1:AA:476:G:H5'	2.19	0.41
1:AA:827:U:H2'	1:AA:859:A:H61	1.85	0.41
1:AA:991:U:H1'	1:AA:993:G:H8	1.86	0.41
1:AA:1125:U:H2'	1:AA:1125:U:OP2	2.21	0.41
1:AA:1216:G:N2	1:AA:1217:C:C2	2.89	0.41
1:AA:1371:G:C6	1:AA:1372:U:C4	3.08	0.41
2:AB:197:VAL:HB	2:AB:200:ILE:CG2	2.51	0.41
3:AC:150:LYS:HG2	3:AC:151:VAL:N	2.36	0.41
6:AF:19:LEU:HD11	6:AF:59:TYR:CE2	2.56	0.41
25:BA:1024:G:C2	25:BA:1032:C:C2	3.09	0.41
25:BA:1210:G:H2'	25:BA:1211:U:C6	2.56	0.41
25:BA:1908:C:H6	25:BA:1908:C:O5'	2.04	0.41
25:BA:2710:U:H2'	25:BA:2711:C:C6	2.56	0.41
26:BB:78:A:H2'	26:BB:79:C:O4'	2.21	0.41
31:BH:117:PRO:HG3	31:BH:123:PHE:CD2	2.56	0.41
36:BQ:16:ARG:HG3	36:BQ:17:LEU:H	1.86	0.41
45:BZ:14:LYS:HA	45:BZ:15:PRO:HD3	1.95	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BZ:52:SER:OG	45:BZ:53:ILE:N	2.54	0.41
54:B8:50:LEU:HD23	54:B8:50:LEU:HA	1.94	0.41
1:CA:20:U:H2'	1:CA:21:G:O4'	2.21	0.41
1:CA:263:A:OP1	20:CT:79:ARG:NH1	2.54	0.41
1:CA:426:G:OP1	4:CD:38:TYR:OH	2.33	0.41
1:CA:955:U:H2'	1:CA:956:U:O4'	2.21	0.41
1:CA:991:U:H3'	1:CA:1212:U:C4	2.56	0.41
1:CA:1492:A:H2'	25:DA:1913:A:H62	1.84	0.41
2:CB:127:ILE:O	2:CB:128:GLU:HB2	2.20	0.41
2:CB:137:ARG:HB3	2:CB:137:ARG:NH1	2.36	0.41
4:CD:50:ARG:HA	4:CD:51:PRO:HD3	1.92	0.41
7:CG:46:ALA:O	7:CG:50:ILE:HG23	2.21	0.41
13:CM:107:ALA:HB3	13:CM:111:LYS:HE3	2.03	0.41
15:CO:81:LEU:HD11	15:CO:85:LEU:HD12	2.02	0.41
25:DA:623:G:C6	25:DA:624:C:C4	3.09	0.41
25:DA:658:C:H2'	25:DA:659:C:H6	1.85	0.41
25:DA:855:G:H2'	25:DA:856:C:C6	2.56	0.41
25:DA:994:C:H1'	41:DV:10:LYS:HE3	2.03	0.41
25:DA:1334:G:H2'	25:DA:1335:U:C6	2.56	0.41
25:DA:2193:G:H2'	25:DA:2194:G:H8	1.87	0.41
25:DA:2287:A:C4	25:DA:2289:G:C8	3.09	0.41
25:DA:2416:C:O2'	25:DA:2417:C:H5'	2.21	0.41
25:DA:2746:U:H2'	25:DA:2747:G:H5'	2.01	0.41
25:DA:2801(A):A:N3	25:DA:2895:U:H1'	2.36	0.41
26:DB:114:C:H4'	38:DS:46:VAL:HG22	2.02	0.41
32:DI:104:GLN:O	32:DI:105:HIS:CG	2.73	0.41
38:DS:61:ASN:O	38:DS:65:VAL:HG23	2.21	0.41
44:DY:5:MET:HE2	44:DY:5:MET:HB2	1.91	0.41
1:AA:44:G:H2'	1:AA:45:U:O4'	2.20	0.40
1:AA:266:G:H5'	1:AA:266:G:C8	2.56	0.40
1:AA:407:G:O2'	4:AD:116:GLN:HG3	2.21	0.40
1:AA:584:G:O6	61:AA:4012:HOH:O	2.20	0.40
1:AA:684:A:C6	1:AA:685:G:C6	3.09	0.40
1:AA:933:G:C6	1:AA:1385:G:C6	3.09	0.40
1:AA:1127:G:C2'	1:AA:1128:C:H5'	2.50	0.40
1:AA:1223:C:P	19:AS:78:ARG:HH21	2.44	0.40
1:AA:1314:C:N4	1:AA:1315:U:O4	2.54	0.40
2:AB:78:GLN:NE2	2:AB:95:GLN:OE1	2.54	0.40
2:AB:102:LEU:HB3	2:AB:180:LEU:HD12	2.02	0.40
2:AB:189:ASP:OD1	2:AB:189:ASP:N	2.35	0.40
5:AE:69:VAL:HA	5:AE:70:PRO:HD3	1.72	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:37:VAL:HG12	6:AF:38:GLU:N	2.36	0.40
7:AG:79:ARG:HB2	7:AG:79:ARG:HH21	1.85	0.40
18:AR:59:SER:OG	18:AR:62:GLU:HG2	2.21	0.40
25:BA:496:A:OP1	25:BA:496:A:H4'	2.20	0.40
25:BA:639:G:N2	29:BF:44:ARG:O	2.53	0.40
25:BA:815:G:C6	25:BA:816:G:C5	3.08	0.40
25:BA:857:U:O5'	25:BA:857:U:H6	2.04	0.40
25:BA:922:G:O2'	45:BZ:151:HIS:CE1	2.74	0.40
25:BA:1067:A:C8	25:BA:1067:A:C3'	3.04	0.40
25:BA:1223:C:H2'	25:BA:1224:C:H6	1.85	0.40
25:BA:1431:G:H4'	25:BA:1432:C:OP1	2.21	0.40
25:BA:1541:A:H2'	25:BA:1542:A:C8	2.55	0.40
25:BA:2564:U:C2	25:BA:2566:U:H5'	2.56	0.40
25:BA:2718:G:C2	25:BA:2719:G:H1'	2.56	0.40
28:BE:9:VAL:HB	39:BT:3:ARG:HG2	2.02	0.40
29:BF:56:GLU:OE2	29:BF:93:LYS:NZ	2.47	0.40
41:BV:14:VAL:HB	41:BV:96:ILE:HG13	2.03	0.40
45:BZ:91:LEU:HD13	45:BZ:91:LEU:HA	1.88	0.40
47:B1:86:SER:H	47:B1:89:GLU:HG3	1.85	0.40
48:B2:48:HIS:CE1	48:B2:49:LYS:HG3	2.56	0.40
54:B8:16:ILE:HD11	54:B8:62:LEU:HD12	2.02	0.40
1:CA:233:C:O5'	1:CA:233:C:H6	2.04	0.40
1:CA:236:G:C6	1:CA:237:C:C4	3.09	0.40
1:CA:401:C:O2'	1:CA:621:A:N3	2.47	0.40
1:CA:446:G:H1	1:CA:488:C:H42	1.70	0.40
1:CA:1074:G:C2	1:CA:1075:C:C2	3.09	0.40
1:CA:1220:G:H2'	1:CA:1221:G:O4'	2.20	0.40
1:CA:1325:C:O2'	1:CA:1326:C:H5'	2.22	0.40
2:CB:13:ALA:C	2:CB:15:VAL:H	2.25	0.40
4:CD:11:LEU:HD23	4:CD:66:ARG:HB3	2.03	0.40
5:CE:152:ARG:HG3	8:CH:43:GLY:O	2.21	0.40
7:CG:155:ARG:HB3	7:CG:155:ARG:NH1	2.36	0.40
9:CI:96:LEU:O	9:CI:100:GLY:N	2.54	0.40
9:CI:116:LYS:HA	9:CI:123:PRO:HD3	2.02	0.40
12:CL:6:THR:HG23	12:CL:9:GLN:OE1	2.21	0.40
12:CL:28:LYS:N	12:CL:29:GLY:HA2	2.36	0.40
13:CM:92:HIS:CE1	13:CM:98:VAL:HG21	2.55	0.40
18:CR:51:LEU:HA	18:CR:52:PRO:HD3	1.94	0.40
19:CS:41:VAL:CG1	19:CS:43:GLU:H	2.29	0.40
19:CS:52:TYR:HB2	19:CS:57:HIS:CE1	2.56	0.40
19:CS:63:THR:OG1	19:CS:64:GLU:N	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:89:G:C3'	25:DA:90:U:H5''	2.44	0.40
25:DA:227:A:C2	25:DA:2407:G:H1'	2.56	0.40
25:DA:1131:G:C2	25:DA:1132:A:C4	3.10	0.40
25:DA:1195:G:O2'	25:DA:1226:A:N1	2.46	0.40
25:DA:1590:U:H2'	25:DA:1591:G:C8	2.57	0.40
25:DA:1682:G:H1'	25:DA:1762:A:C6	2.57	0.40
25:DA:1801:G:H3'	25:DA:1802:A:H5'	2.03	0.40
25:DA:1957:C:O2'	25:DA:1985:G:H1'	2.22	0.40
25:DA:2228:G:C5	25:DA:2229:C:C4	3.09	0.40
25:DA:2361:A:P	54:D8:27:THR:HG1	2.44	0.40
25:DA:2436:G:C6	25:DA:2437:U:C4	3.10	0.40
25:DA:2716:U:O2'	25:DA:2717:G:H5'	2.20	0.40
27:DD:164:GLN:NE2	27:DD:176:ARG:HH22	2.19	0.40
28:DE:2:LYS:HB2	28:DE:95:ILE:HD12	2.03	0.40
29:DF:101:LEU:HD12	29:DF:102:PRO:HD2	2.03	0.40
31:DH:9:ILE:HA	31:DH:10:PRO:HD2	1.94	0.40
31:DH:149:ARG:HA	31:DH:162:ILE:HG21	2.03	0.40
32:DI:60:GLU:CB	32:DI:61:ARG:HH21	2.34	0.40
32:DI:72:LEU:HB2	32:DI:138:ILE:HG21	2.03	0.40
35:DP:121:LYS:HG2	35:DP:122:PRO:HD2	2.03	0.40
40:DU:80:ILE:HD13	40:DU:80:ILE:HA	1.91	0.40
44:DY:40:GLU:O	44:DY:42:VAL:HG23	2.21	0.40
45:DZ:33:LEU:HD21	45:DZ:90:VAL:HG21	2.03	0.40
1:AA:92:C:H2'	1:AA:93:G:C8	2.56	0.40
1:AA:237:C:OP2	17:AQ:40:LYS:NZ	2.48	0.40
1:AA:491:G:C4	1:AA:492:G:C8	3.09	0.40
1:AA:670:G:C4	1:AA:671:G:C8	3.09	0.40
1:AA:1110:A:OP2	61:AA:4115:HOH:O	2.22	0.40
1:AA:1139:G:N2	1:AA:1143:G:C6	2.89	0.40
1:AA:1164:G:H2'	1:AA:1165:C:C6	2.56	0.40
1:AA:1164:G:O2'	1:AA:1165:C:H5'	2.21	0.40
2:AB:55:PHE:CE1	2:AB:218:ALA:HA	2.56	0.40
7:AG:152:ALA:HB1	7:AG:155:ARG:HH21	1.86	0.40
12:AL:60:LEU:HD13	12:AL:60:LEU:HA	1.93	0.40
12:AL:88:GLY:O	12:AL:99:HIS:HD2	2.04	0.40
17:AQ:26:GLN:HG2	17:AQ:37:LYS:HG2	2.03	0.40
20:AT:45:GLN:HE21	20:AT:45:GLN:HB3	1.60	0.40
25:BA:505:A:N3	25:BA:507:G:H5''	2.37	0.40
25:BA:1316:C:H5''	25:BA:1317:G:O5'	2.21	0.40
25:BA:2075:G:OP1	28:BE:144:ARG:HG2	2.20	0.40
25:BA:2354:C:O2'	25:BA:2386:C:H5''	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BQ:108:GLY:HA3	45:BZ:116:VAL:HG13	2.03	0.40
52:B6:40:CYS:HA	52:B6:41:PRO:HD3	1.85	0.40
1:CA:458:C:C2	1:CA:460:G:C8	3.10	0.40
1:CA:489:C:H2'	1:CA:490:G:C8	2.57	0.40
1:CA:522:C:H5''	12:CL:120:TYR:OH	2.21	0.40
1:CA:598:U:H2'	1:CA:599:C:H6	1.86	0.40
1:CA:986:A:H1'	19:CS:54:GLY:O	2.21	0.40
1:CA:1014:A:N3	1:CA:1219:U:H1'	2.36	0.40
1:CA:1063:C:H3'	1:CA:1064:G:H2'	2.04	0.40
1:CA:1178:G:N3	1:CA:1180:A:H2	2.19	0.40
1:CA:1226:C:H6	13:CM:103:THR:OG1	2.04	0.40
1:CA:1244:C:H42	1:CA:1293:G:H1	1.68	0.40
1:CA:1465:C:H2'	1:CA:1466:C:O4'	2.21	0.40
3:CC:113:ALA:CB	3:CC:202:ILE:HG13	2.50	0.40
7:CG:65:ALA:HB1	7:CG:127:ALA:HB3	2.03	0.40
20:CT:10:LEU:HD12	20:CT:10:LEU:HA	1.88	0.40
25:DA:112:U:H2'	25:DA:113:G:O4'	2.21	0.40
25:DA:282:A:N6	25:DA:284:U:C2	2.89	0.40
25:DA:300:A:H1'	25:DA:319:C:C1'	2.51	0.40
25:DA:324:A:N6	25:DA:338:G:O2'	2.50	0.40
25:DA:530:G:C5	25:DA:2022:U:H5''	2.56	0.40
25:DA:699:A:H4'	25:DA:1554:A:N6	2.36	0.40
25:DA:996:A:N6	25:DA:1160:G:C6	2.90	0.40
25:DA:1022:G:C6	25:DA:1140:C:N3	2.90	0.40
25:DA:1032:A:H2	25:DA:1122:G:H22	1.70	0.40
25:DA:1971:A:C4	27:DD:241:PRO:HD3	2.57	0.40
25:DA:2282:G:H4'	25:DA:2389:G:O2'	2.21	0.40
25:DA:2298:A:N1	25:DA:2321:G:C2	2.88	0.40
26:DB:32:C:C4	26:DB:33:G:N7	2.89	0.40
28:DE:93:VAL:O	28:DE:95:ILE:N	2.54	0.40
30:DG:25:TYR:CD2	30:DG:30:GLU:HB3	2.57	0.40
34:DO:35:VAL:HG11	34:DO:103:ALA:CB	2.50	0.40
35:DP:46:LYS:HE3	35:DP:46:LYS:HB3	1.90	0.40
41:DV:40:LEU:HB2	41:DV:46:VAL:HG22	2.02	0.40
44:DY:19:LYS:HE2	44:DY:19:LYS:HB3	1.91	0.40
48:D2:48:HIS:O	48:D2:52:ASP:HB2	2.20	0.40
54:D8:9:GLY:O	54:D8:13:ARG:HG2	2.20	0.40
54:D8:38:GLY:O	54:D8:42:ARG:HB2	2.20	0.40
1:AA:78:G:N2	1:AA:91:C:N3	2.69	0.40
1:AA:184:G:O4'	1:AA:224:C:H4'	2.21	0.40
1:AA:341:C:C2'	1:AA:342:C:H5'	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:477:A:O2'	1:AA:479:C:H5'	2.22	0.40
1:AA:633:G:H2'	1:AA:634:C:C6	2.57	0.40
1:AA:731:G:OP1	1:AA:766:A:H1'	2.20	0.40
1:AA:864:A:O5'	1:AA:864:A:H8	2.05	0.40
1:AA:1127:G:H22	1:AA:1147:C:N4	2.20	0.40
1:AA:1277:C:H2'	1:AA:1279:A:H8	1.85	0.40
1:AA:1321:C:H3'	1:AA:1322:C:H6	1.86	0.40
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.56	0.40
3:AC:92:ALA:HA	3:AC:95:THR:CB	2.51	0.40
4:AD:171:GLY:HA2	4:AD:172:PRO:HD3	1.95	0.40
4:AD:173:TRP:HA	4:AD:186:LEU:HB2	2.02	0.40
17:AQ:60:ILE:HG12	17:AQ:61:GLU:N	2.36	0.40
25:BA:26:G:C6	25:BA:27:G:C6	3.09	0.40
25:BA:1736:A:N6	25:BA:1745:A:H2	2.04	0.40
25:BA:1900:G:H2'	25:BA:1901:C:H6	1.86	0.40
25:BA:2428:C:O5'	25:BA:2428:C:H6	2.04	0.40
25:BA:2430:A:H2'	25:BA:2431:U:O4'	2.21	0.40
25:BA:2701:U:OP2	25:BA:2882:G:N2	2.47	0.40
25:BA:2832:G:O2'	25:BA:2834:C:OP2	2.31	0.40
27:BD:127:VAL:HA	27:BD:193:VAL:HG22	2.04	0.40
27:BD:275:LYS:HB3	27:BD:276:LYS:H	1.36	0.40
35:BP:94:GLU:HG3	35:BP:124:LYS:HB3	2.03	0.40
39:BT:91:ARG:HH11	39:BT:120:ARG:HH11	1.68	0.40
1:CA:41:G:H2'	1:CA:42:G:C8	2.56	0.40
1:CA:340:U:C2	1:CA:350:G:N2	2.89	0.40
1:CA:654:G:H2'	1:CA:655:A:O4'	2.21	0.40
1:CA:1122:U:C4	1:CA:1123:A:C5	3.09	0.40
11:CK:104:GLN:HG2	11:CK:106:LYS:HG2	2.02	0.40
18:CR:44:LEU:HD11	18:CR:79:LEU:HB3	2.02	0.40
25:DA:45:C:H2'	25:DA:47:C:H6	1.86	0.40
25:DA:94(A):G:H2'	25:DA:95:G:O4'	2.21	0.40
25:DA:248:G:H5'	25:DA:250:G:N7	2.35	0.40
25:DA:310:A:HO2'	25:DA:311:A:P	2.44	0.40
25:DA:392:C:H5''	25:DA:409:C:H5''	2.03	0.40
25:DA:724:U:H2'	25:DA:725:G:O4'	2.21	0.40
25:DA:870:A:C2	25:DA:908:C:C2	3.09	0.40
25:DA:1753:G:H2'	25:DA:1755:A:OP2	2.22	0.40
25:DA:2267:A:H5''	25:DA:2268:A:C5'	2.47	0.40
25:DA:2329:G:H2'	25:DA:2330:G:O4'	2.22	0.40
25:DA:2536:G:C5	25:DA:2537:U:C5	3.09	0.40
30:DG:121:ASN:HA	30:DG:122:PRO:HD3	1.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DG:165:THR:HG23	30:DG:168:GLU:OE2	2.21	0.40
34:DO:7:TYR:CE1	34:DO:20:MET:HB2	2.57	0.40
36:DQ:110:THR:HG23	36:DQ:113:GLN:OE1	2.21	0.40
38:DS:10:ARG:O	38:DS:14:VAL:HG13	2.22	0.40
38:DS:50:SER:O	38:DS:76:LYS:NZ	2.49	0.40
40:DU:76:TYR:CE1	40:DU:80:ILE:HG13	2.57	0.40
1:AA:235:C:H2'	1:AA:236:G:H8	1.87	0.40
1:AA:256:U:H2'	1:AA:257:G:C8	2.57	0.40
1:AA:583:A:N6	1:AA:758:G:O2'	2.54	0.40
1:AA:1030:C:N4	1:AA:1031:G:C6	2.90	0.40
1:AA:1122:U:C4	1:AA:1123:A:N7	2.89	0.40
1:AA:1247:U:H2'	1:AA:1248:A:O4'	2.22	0.40
1:AA:1443:G:C2	1:AA:1460:A:C2	3.09	0.40
2:AB:215:LEU:HD23	2:AB:215:LEU:HA	1.86	0.40
4:AD:65:ARG:HG2	4:AD:75:PHE:CG	2.57	0.40
5:AE:27:ARG:HE	5:AE:27:ARG:HB2	1.45	0.40
8:AH:6:ILE:O	8:AH:10:LEU:HG	2.21	0.40
8:AH:78:GLN:HE21	8:AH:78:GLN:HB2	1.65	0.40
25:BA:105:C:H2'	25:BA:106:U:H6	1.85	0.40
25:BA:346:A:OP2	29:BF:169:ASN:HB2	2.21	0.40
25:BA:511:C:H2'	25:BA:512:C:C6	2.56	0.40
25:BA:1686:U:H4'	25:BA:2711:C:H4'	2.02	0.40
25:BA:1857:G:H4'	27:BD:242:ARG:CZ	2.51	0.40
25:BA:2528:G:C6	25:BA:2529:C:N4	2.89	0.40
25:BA:2650:G:P	28:BE:82:ARG:HH22	2.45	0.40
31:BH:11:VAL:HA	31:BH:12:PRO:HD3	1.94	0.40
37:BR:109:ALA:O	37:BR:111:LEU:HD22	2.22	0.40
38:BS:36:TYR:CD1	38:BS:36:TYR:N	2.90	0.40
40:BU:98:LEU:HA	40:BU:98:LEU:HD23	1.80	0.40
45:BZ:34:ASN:O	45:BZ:35:ARG:HD2	2.21	0.40
46:B0:49:LYS:O	46:B0:50:ASN:HB2	2.22	0.40
50:B4:59:PHE:CA	50:B4:61:ARG:H	2.34	0.40
53:B7:24:THR:O	53:B7:28:ARG:HG3	2.22	0.40
1:CA:79:G:H1	1:CA:90:U:H3	1.70	0.40
1:CA:194:C:H5''	1:CA:195:A:OP2	2.22	0.40
1:CA:363:A:C5	12:CL:31:PRO:HD2	2.57	0.40
1:CA:551:U:H2'	1:CA:552:U:C6	2.56	0.40
1:CA:596:C:H2'	1:CA:597:G:C8	2.54	0.40
1:CA:688:G:H2'	1:CA:689:C:H6	1.85	0.40
1:CA:708:C:H2'	1:CA:709:G:H8	1.86	0.40
1:CA:1003:G:H2'	1:CA:1004:A:C4'	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1150:U:C4	1:CA:1151:A:N6	2.89	0.40
1:CA:1166:G:H2'	1:CA:1169:A:OP2	2.22	0.40
1:CA:1317:C:H42	14:CN:19:ARG:HH21	1.69	0.40
1:CA:1371:G:O3'	9:CI:69:GLY:HA3	2.21	0.40
6:CF:82:ARG:HB3	6:CF:82:ARG:NH1	2.36	0.40
8:CH:20:TYR:HA	8:CH:65:TYR:CZ	2.56	0.40
8:CH:51:VAL:HG21	8:CH:60:ARG:HB2	2.04	0.40
15:CO:74:ASP:OD1	15:CO:76:GLU:HB2	2.21	0.40
18:CR:52:PRO:HB2	18:CR:54:ARG:HG2	2.03	0.40
25:DA:30:G:H2'	25:DA:31:C:O4'	2.21	0.40
25:DA:143:G:C6	25:DA:143(A):C:C4	3.10	0.40
25:DA:373:U:H2'	25:DA:374:A:H8	1.86	0.40
25:DA:1131:G:C8	25:DA:2025:C:H4'	2.56	0.40
25:DA:1288:U:O2'	25:DA:1647:G:N2	2.55	0.40
25:DA:2580:U:C5	25:DA:2581:G:C6	3.09	0.40
25:DA:2745:C:H4'	31:DH:142:GLY:O	2.20	0.40
25:DA:2769:C:H2'	25:DA:2770:G:O4'	2.21	0.40
26:DB:98:G:C5	26:DB:99:G:C8	3.09	0.40
28:DE:12:THR:HG21	39:DT:11:GLU:OE2	2.21	0.40
28:DE:14:ILE:HB	39:DT:14:TYR:CZ	2.56	0.40
28:DE:38:THR:O	28:DE:42:ASP:N	2.40	0.40
28:DE:105:THR:HG21	28:DE:164:ARG:CZ	2.51	0.40
37:DR:70:LEU:O	37:DR:72:ASP:N	2.55	0.40
39:DT:59:THR:HG23	39:DT:78:LEU:HB2	2.03	0.40
45:DZ:96:VAL:N	45:DZ:128:VAL:O	2.45	0.40
52:D6:25:LYS:HE3	52:D6:27:LYS:HA	2.04	0.40
1:AA:41:G:H2'	1:AA:42:G:H8	1.87	0.40
1:AA:69:G:H2'	1:AA:70:G:H8	1.82	0.40
1:AA:676:A:H2	11:AK:119:CYS:SG	2.44	0.40
1:AA:828:A:N6	1:AA:829:G:C2	2.90	0.40
1:AA:1005:A:H5''	1:AA:1006:C:OP2	2.20	0.40
1:AA:1079:G:C6	1:AA:1080:A:N6	2.90	0.40
1:AA:1095:U:P	1:AA:1108:G:H1	2.43	0.40
1:AA:1367:C:N3	1:AA:1368:G:C8	2.90	0.40
2:AB:19:HIS:HE1	2:AB:189:ASP:CB	2.35	0.40
2:AB:95:GLN:HB3	2:AB:147:LYS:NZ	2.36	0.40
4:AD:61:LYS:HD2	4:AD:207:TYR:OH	2.21	0.40
4:AD:107:ARG:HH22	4:AD:194:LEU:HD22	1.86	0.40
5:AE:57:LYS:HD3	5:AE:61:TYR:HE2	1.87	0.40
14:AN:3:ARG:HH21	14:AN:3:ARG:CB	2.34	0.40
16:AP:59:TRP:HB3	16:AP:64:ALA:HB2	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:58:GLU:O	17:AQ:74:LEU:N	2.43	0.40
18:AR:40:LEU:HA	18:AR:40:LEU:HD23	1.72	0.40
25:BA:218:A:C8	25:BA:218:A:H3'	2.57	0.40
25:BA:504:A:C6	25:BA:506:A:C6	3.09	0.40
25:BA:938:G:C2	25:BA:939:C:C2	3.10	0.40
25:BA:1394:G:O6	25:BA:1395:A:N6	2.55	0.40
25:BA:1698:G:N2	25:BA:2029:C:C2	2.90	0.40
25:BA:1781:G:O2'	25:BA:2870:A:N1	2.48	0.40
25:BA:2274:U:O2'	25:BA:2275:C:H5'	2.21	0.40
25:BA:2310:A:H2'	25:BA:2311:G:O4'	2.21	0.40
25:BA:2372:A:C2	25:BA:2373:A:H1'	2.56	0.40
32:BI:140:LEU:HD23	32:BI:140:LEU:HA	1.71	0.40
41:BV:18:LEU:O	41:BV:95:LEU:HD23	2.22	0.40
45:BZ:163:LEU:HD12	45:BZ:163:LEU:HA	1.87	0.40
46:B0:27:GLU:HB2	46:B0:69:PHE:CD1	2.56	0.40
49:B3:7:LYS:HG3	49:B3:34:GLU:HG3	2.04	0.40
50:B4:9:LEU:HD23	50:B4:9:LEU:HA	1.96	0.40
1:CA:1003:G:C2'	1:CA:1004:A:H4'	2.52	0.40
1:CA:1086:U:H2'	1:CA:1087:G:O4'	2.21	0.40
1:CA:1183:A:H8	1:CA:1183:A:H5'	1.85	0.40
1:CA:1272:G:C5	1:CA:1273:G:C8	3.10	0.40
3:CC:18:TRP:O	3:CC:21:ARG:NH1	2.54	0.40
8:CH:86:ILE:HG12	8:CH:135:CYS:HA	2.04	0.40
10:CJ:49:VAL:HG12	10:CJ:61:GLU:O	2.22	0.40
13:CM:90:LEU:HD23	13:CM:93:ARG:NE	2.37	0.40
19:CS:36:ARG:NH1	19:CS:53:ASN:HA	2.37	0.40
25:DA:478:A:C6	25:DA:480:A:C6	3.09	0.40
25:DA:1171:G:H1	25:DA:1178:C:H42	1.69	0.40
25:DA:1301:A:C8	25:DA:1303:G:C8	3.09	0.40
25:DA:1416:G:HO2'	25:DA:1417:C:H5	1.65	0.40
25:DA:1842:G:H2'	25:DA:1843:C:O4'	2.22	0.40
25:DA:2433:A:H5''	25:DA:2434:A:OP1	2.21	0.40
25:DA:2748:A:C6	25:DA:2749:A:C5	3.10	0.40
37:DR:37:THR:HA	37:DR:111:LEU:HD12	2.02	0.40
39:DT:61:PHE:CZ	39:DT:76:PHE:HB2	2.57	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AB	229/256 (90%)	200 (87%)	23 (10%)	6 (3%)	5	26
2	CB	229/256 (90%)	201 (88%)	18 (8%)	10 (4%)	2	15
3	AC	204/239 (85%)	179 (88%)	22 (11%)	3 (2%)	10	39
3	CC	204/239 (85%)	178 (87%)	24 (12%)	2 (1%)	15	49
4	AD	206/209 (99%)	182 (88%)	22 (11%)	2 (1%)	15	49
4	CD	206/209 (99%)	185 (90%)	18 (9%)	3 (2%)	10	39
5	AE	146/162 (90%)	127 (87%)	15 (10%)	4 (3%)	5	25
5	CE	146/162 (90%)	133 (91%)	10 (7%)	3 (2%)	7	30
6	AF	98/101 (97%)	92 (94%)	6 (6%)	0	100	100
6	CF	98/101 (97%)	93 (95%)	5 (5%)	0	100	100
7	AG	153/156 (98%)	137 (90%)	14 (9%)	2 (1%)	12	42
7	CG	153/156 (98%)	137 (90%)	15 (10%)	1 (1%)	22	57
8	AH	135/138 (98%)	129 (96%)	6 (4%)	0	100	100
8	CH	135/138 (98%)	129 (96%)	5 (4%)	1 (1%)	22	57
9	AI	125/128 (98%)	111 (89%)	10 (8%)	4 (3%)	4	22
9	CI	125/128 (98%)	112 (90%)	11 (9%)	2 (2%)	9	37
10	AJ	95/105 (90%)	85 (90%)	7 (7%)	3 (3%)	4	22
10	CJ	94/105 (90%)	86 (92%)	7 (7%)	1 (1%)	14	46
11	AK	112/129 (87%)	98 (88%)	13 (12%)	1 (1%)	17	52
11	CK	112/129 (87%)	99 (88%)	12 (11%)	1 (1%)	17	52
12	AL	120/132 (91%)	116 (97%)	4 (3%)	0	100	100
12	CL	120/132 (91%)	112 (93%)	8 (7%)	0	100	100
13	AM	121/126 (96%)	106 (88%)	15 (12%)	0	100	100
13	CM	120/126 (95%)	104 (87%)	14 (12%)	2 (2%)	9	36
14	AN	58/61 (95%)	54 (93%)	4 (7%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	CN	58/61 (95%)	55 (95%)	3 (5%)	0	100	100
15	AO	86/89 (97%)	82 (95%)	4 (5%)	0	100	100
15	CO	86/89 (97%)	80 (93%)	5 (6%)	1 (1%)	13	44
16	AP	80/88 (91%)	69 (86%)	11 (14%)	0	100	100
16	CP	80/88 (91%)	70 (88%)	10 (12%)	0	100	100
17	AQ	97/105 (92%)	91 (94%)	6 (6%)	0	100	100
17	CQ	97/105 (92%)	93 (96%)	4 (4%)	0	100	100
18	AR	66/88 (75%)	60 (91%)	5 (8%)	1 (2%)	10	39
18	CR	66/88 (75%)	60 (91%)	5 (8%)	1 (2%)	10	39
19	AS	81/93 (87%)	74 (91%)	7 (9%)	0	100	100
19	CS	81/93 (87%)	69 (85%)	12 (15%)	0	100	100
20	AT	94/106 (89%)	84 (89%)	5 (5%)	5 (5%)	2	12
20	CT	94/106 (89%)	85 (90%)	3 (3%)	6 (6%)	1	8
21	AU	21/27 (78%)	17 (81%)	4 (19%)	0	100	100
21	CU	21/27 (78%)	18 (86%)	1 (5%)	2 (10%)	0	3
24	AW	3/10 (30%)	1 (33%)	0	2 (67%)	0	0
24	CW	3/10 (30%)	1 (33%)	1 (33%)	1 (33%)	0	0
27	BD	273/276 (99%)	259 (95%)	13 (5%)	1 (0%)	34	69
27	DD	273/276 (99%)	257 (94%)	13 (5%)	3 (1%)	14	46
28	BE	202/206 (98%)	195 (96%)	6 (3%)	1 (0%)	29	64
28	DE	202/206 (98%)	194 (96%)	6 (3%)	2 (1%)	15	49
29	BF	201/210 (96%)	193 (96%)	7 (4%)	1 (0%)	29	64
29	DF	201/210 (96%)	189 (94%)	10 (5%)	2 (1%)	15	49
30	BG	179/182 (98%)	163 (91%)	13 (7%)	3 (2%)	9	36
30	DG	179/182 (98%)	160 (89%)	13 (7%)	6 (3%)	3	21
31	BH	172/180 (96%)	161 (94%)	10 (6%)	1 (1%)	25	59
31	DH	172/180 (96%)	159 (92%)	11 (6%)	2 (1%)	13	44
32	BI	144/148 (97%)	122 (85%)	17 (12%)	5 (4%)	3	20
32	DI	144/148 (97%)	123 (85%)	17 (12%)	4 (3%)	5	25
33	BN	138/140 (99%)	134 (97%)	4 (3%)	0	100	100
33	DN	138/140 (99%)	131 (95%)	6 (4%)	1 (1%)	22	57

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
34	BO	120/122 (98%)	115 (96%)	4 (3%)	1 (1%)	19	54
34	DO	120/122 (98%)	117 (98%)	2 (2%)	1 (1%)	19	54
35	BP	147/150 (98%)	132 (90%)	14 (10%)	1 (1%)	22	57
35	DP	147/150 (98%)	133 (90%)	12 (8%)	2 (1%)	11	40
36	BQ	139/141 (99%)	130 (94%)	8 (6%)	1 (1%)	22	57
36	DQ	139/141 (99%)	129 (93%)	8 (6%)	2 (1%)	11	40
37	BR	116/118 (98%)	110 (95%)	5 (4%)	1 (1%)	17	52
37	DR	116/118 (98%)	109 (94%)	7 (6%)	0	100	100
38	BS	108/112 (96%)	100 (93%)	7 (6%)	1 (1%)	17	52
38	DS	108/112 (96%)	102 (94%)	5 (5%)	1 (1%)	17	52
39	BT	129/146 (88%)	124 (96%)	4 (3%)	1 (1%)	19	54
39	DT	129/146 (88%)	125 (97%)	4 (3%)	0	100	100
40	BU	114/118 (97%)	114 (100%)	0	0	100	100
40	DU	114/118 (97%)	113 (99%)	1 (1%)	0	100	100
41	BV	99/101 (98%)	91 (92%)	7 (7%)	1 (1%)	15	49
41	DV	99/101 (98%)	92 (93%)	6 (6%)	1 (1%)	15	49
42	BW	110/113 (97%)	109 (99%)	1 (1%)	0	100	100
42	DW	110/113 (97%)	108 (98%)	2 (2%)	0	100	100
43	BX	93/96 (97%)	89 (96%)	3 (3%)	1 (1%)	14	46
43	DX	93/96 (97%)	87 (94%)	6 (6%)	0	100	100
44	BY	105/110 (96%)	95 (90%)	10 (10%)	0	100	100
44	DY	105/110 (96%)	97 (92%)	8 (8%)	0	100	100
45	BZ	169/206 (82%)	150 (89%)	17 (10%)	2 (1%)	13	44
45	DZ	172/206 (84%)	157 (91%)	15 (9%)	0	100	100
46	B0	81/85 (95%)	77 (95%)	3 (4%)	1 (1%)	13	44
46	D0	81/85 (95%)	76 (94%)	5 (6%)	0	100	100
47	B1	95/98 (97%)	93 (98%)	0	2 (2%)	7	30
47	D1	95/98 (97%)	92 (97%)	2 (2%)	1 (1%)	14	46
48	B2	68/72 (94%)	66 (97%)	2 (3%)	0	100	100
48	D2	68/72 (94%)	65 (96%)	3 (4%)	0	100	100
49	B3	57/60 (95%)	54 (95%)	3 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
49	D3	57/60 (95%)	54 (95%)	3 (5%)	0	100	100
50	B4	67/71 (94%)	50 (75%)	9 (13%)	8 (12%)	0	1
50	D4	67/71 (94%)	50 (75%)	8 (12%)	9 (13%)	0	1
51	B5	57/60 (95%)	56 (98%)	1 (2%)	0	100	100
51	D5	57/60 (95%)	56 (98%)	1 (2%)	0	100	100
52	B6	51/54 (94%)	48 (94%)	3 (6%)	0	100	100
52	D6	51/54 (94%)	48 (94%)	3 (6%)	0	100	100
53	B7	46/49 (94%)	45 (98%)	1 (2%)	0	100	100
53	D7	46/49 (94%)	44 (96%)	1 (2%)	1 (2%)	6	29
54	B8	62/65 (95%)	60 (97%)	2 (3%)	0	100	100
54	D8	62/65 (95%)	59 (95%)	3 (5%)	0	100	100
55	B9	35/37 (95%)	35 (100%)	0	0	100	100
55	D9	35/37 (95%)	35 (100%)	0	0	100	100
All	All	11415/12148 (94%)	10525 (92%)	749 (7%)	141 (1%)	13	44

All (141) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	17	PHE
2	AB	125	PRO
3	AC	65	ALA
3	AC	107	GLN
4	AD	166	LYS
7	AG	4	ARG
9	AI	54	ASP
9	AI	56	LEU
10	AJ	31	GLY
10	AJ	79	ARG
18	AR	60	ALA
20	AT	10	LEU
27	BD	275	LYS
29	BF	130	ALA
30	BG	51	ARG
30	BG	126	ASP
31	BH	126	PRO
32	BI	73	GLU
36	BQ	60	ARG

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Mol	Chain	Res	Type
38	BS	60	GLY
47	B1	3	LYS
50	B4	49	PHE
50	B4	55	ARG
50	B4	68	ARG
2	CB	16	HIS
2	CB	126	GLU
2	CB	231	GLU
3	CC	91	LEU
3	CC	181	ASN
7	CG	7	ALA
13	CM	106	ASN
20	CT	95	ALA
20	CT	99	LEU
27	DD	239	ARG
29	DF	21	ALA
29	DF	130	ALA
30	DG	14	GLU
30	DG	47	LYS
30	DG	51	ARG
30	DG	81	LYS
30	DG	126	ASP
31	DH	126	PRO
32	DI	10	GLU
35	DP	38	GLN
36	DQ	28	ALA
36	DQ	60	ARG
47	D1	3	LYS
50	D4	39	CYS
50	D4	45	GLY
50	D4	55	ARG
50	D4	63	TYR
53	D7	46	VAL
2	AB	16	HIS
2	AB	19	HIS
4	AD	171	GLY
5	AE	85	GLY
5	AE	140	ARG
9	AI	95	LYS
11	AK	49	GLY
20	AT	47	GLY
32	BI	11	ASN

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Mol	Chain	Res	Type
32	BI	106	GLY
34	BO	5	GLN
41	BV	79	VAL
46	B0	13	GLY
50	B4	47	GLN
50	B4	56	VAL
50	B4	66	SER
2	CB	8	LYS
2	CB	10	LEU
2	CB	17	PHE
2	CB	20	GLU
2	CB	121	LEU
2	CB	123	ALA
9	CI	54	ASP
9	CI	55	ALA
10	CJ	79	ARG
11	CK	49	GLY
31	DH	80	SER
33	DN	2	LYS
34	DO	5	GLN
41	DV	79	VAL
50	D4	38	LYS
50	D4	60	GLN
50	D4	62	ARG
2	AB	128	GLU
9	AI	55	ALA
20	AT	102	GLY
35	BP	29	LYS
37	BR	45	ARG
43	BX	93	GLU
45	BZ	152	ALA
50	B4	57	GLU
50	B4	62	ARG
2	CB	21	ARG
5	CE	146	ALA
13	CM	10	PRO
20	CT	47	GLY
21	CU	3	LYS
28	DE	52	LEU
32	DI	30	LEU
32	DI	135	GLU
38	DS	84	GLN

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Mol	Chain	Res	Type
50	D4	49	PHE
3	AC	66	VAL
20	AT	71	THR
24	AW	7	PRO
28	BE	52	LEU
32	BI	107	VAL
39	BT	127	ALA
4	CD	47	ARG
5	CE	37	ARG
21	CU	23	PRO
24	CW	4	PRO
27	DD	3	VAL
28	DE	73	GLU
7	AG	81	GLY
30	BG	47	LYS
32	BI	117	GLU
4	CD	136	PRO
15	CO	88	ARG
18	CR	60	ALA
20	CT	71	THR
20	CT	102	GLY
35	DP	45	LEU
5	AE	146	ALA
10	AJ	77	PRO
47	B1	45	ASN
8	CH	73	ASP
30	DG	117	PHE
32	DI	85	GLU
50	D4	29	PRO
2	AB	231	GLU
24	AW	4	PRO
20	AT	100	ILE
20	CT	100	ILE
27	DD	238	GLY
5	AE	69	VAL
45	BZ	114	GLY
5	CE	69	VAL
4	CD	7	PRO

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AB	192/220 (87%)	147 (77%)	45 (23%)	1	3
2	CB	187/220 (85%)	152 (81%)	35 (19%)	1	7
3	AC	143/188 (76%)	125 (87%)	18 (13%)	4	18
3	CC	140/188 (74%)	122 (87%)	18 (13%)	4	18
4	AD	170/181 (94%)	145 (85%)	25 (15%)	3	13
4	CD	173/181 (96%)	152 (88%)	21 (12%)	5	20
5	AE	113/123 (92%)	104 (92%)	9 (8%)	12	40
5	CE	114/123 (93%)	107 (94%)	7 (6%)	18	49
6	AF	83/90 (92%)	76 (92%)	7 (8%)	11	38
6	CF	85/90 (94%)	79 (93%)	6 (7%)	14	44
7	AG	119/127 (94%)	100 (84%)	19 (16%)	2	11
7	CG	120/127 (94%)	102 (85%)	18 (15%)	3	12
8	AH	114/119 (96%)	98 (86%)	16 (14%)	3	15
8	CH	114/119 (96%)	102 (90%)	12 (10%)	7	26
9	AI	90/99 (91%)	76 (84%)	14 (16%)	2	11
9	CI	89/99 (90%)	75 (84%)	14 (16%)	2	11
10	AJ	66/92 (72%)	60 (91%)	6 (9%)	9	33
10	CJ	69/92 (75%)	64 (93%)	5 (7%)	14	44
11	AK	82/99 (83%)	73 (89%)	9 (11%)	6	25
11	CK	83/99 (84%)	77 (93%)	6 (7%)	14	44
12	AL	97/109 (89%)	90 (93%)	7 (7%)	14	44
12	CL	97/109 (89%)	87 (90%)	10 (10%)	7	27
13	AM	93/101 (92%)	82 (88%)	11 (12%)	5	21
13	CM	92/101 (91%)	80 (87%)	12 (13%)	4	18
14	AN	49/50 (98%)	41 (84%)	8 (16%)	2	10
14	CN	49/50 (98%)	42 (86%)	7 (14%)	3	14

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
15	AO	78/80 (98%)	69 (88%)	9 (12%)	5	22
15	CO	78/80 (98%)	66 (85%)	12 (15%)	2	11
16	AP	69/74 (93%)	60 (87%)	9 (13%)	4	18
16	CP	68/74 (92%)	63 (93%)	5 (7%)	13	42
17	AQ	94/97 (97%)	89 (95%)	5 (5%)	22	54
17	CQ	94/97 (97%)	87 (93%)	7 (7%)	13	42
18	AR	59/77 (77%)	55 (93%)	4 (7%)	16	45
18	CR	59/77 (77%)	52 (88%)	7 (12%)	5	20
19	AS	69/80 (86%)	63 (91%)	6 (9%)	10	36
19	CS	67/80 (84%)	57 (85%)	10 (15%)	3	13
20	AT	70/82 (85%)	61 (87%)	9 (13%)	4	18
20	CT	70/82 (85%)	60 (86%)	10 (14%)	3	14
21	AU	18/22 (82%)	14 (78%)	4 (22%)	1	4
21	CU	18/22 (82%)	16 (89%)	2 (11%)	6	24
24	AW	3/3 (100%)	2 (67%)	1 (33%)	0	0
24	CW	3/3 (100%)	2 (67%)	1 (33%)	0	0
27	BD	215/218 (99%)	198 (92%)	17 (8%)	12	40
27	DD	215/218 (99%)	190 (88%)	25 (12%)	5	22
28	BE	164/166 (99%)	142 (87%)	22 (13%)	4	16
28	DE	164/166 (99%)	144 (88%)	20 (12%)	5	19
29	BF	160/166 (96%)	143 (89%)	17 (11%)	6	26
29	DF	159/166 (96%)	145 (91%)	14 (9%)	10	36
30	BG	143/156 (92%)	123 (86%)	20 (14%)	3	15
30	DG	142/156 (91%)	116 (82%)	26 (18%)	1	7
31	BH	144/148 (97%)	129 (90%)	15 (10%)	7	27
31	DH	144/148 (97%)	131 (91%)	13 (9%)	9	34
32	BI	110/124 (89%)	82 (74%)	28 (26%)	0	1
32	DI	104/124 (84%)	86 (83%)	18 (17%)	2	9
33	BN	118/119 (99%)	103 (87%)	15 (13%)	4	18
33	DN	118/119 (99%)	102 (86%)	16 (14%)	3	16
34	BO	100/100 (100%)	94 (94%)	6 (6%)	19	49

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
34	DO	100/100 (100%)	91 (91%)	9 (9%)	9	34
35	BP	115/116 (99%)	102 (89%)	13 (11%)	6	23
35	DP	115/116 (99%)	104 (90%)	11 (10%)	8	31
36	BQ	111/111 (100%)	94 (85%)	17 (15%)	2	12
36	DQ	111/111 (100%)	96 (86%)	15 (14%)	4	16
37	BR	101/101 (100%)	83 (82%)	18 (18%)	2	8
37	DR	101/101 (100%)	85 (84%)	16 (16%)	2	11
38	BS	87/88 (99%)	77 (88%)	10 (12%)	5	22
38	DS	85/88 (97%)	70 (82%)	15 (18%)	2	8
39	BT	115/127 (91%)	104 (90%)	11 (10%)	8	31
39	DT	113/127 (89%)	105 (93%)	8 (7%)	14	44
40	BU	93/94 (99%)	83 (89%)	10 (11%)	6	25
40	DU	93/94 (99%)	82 (88%)	11 (12%)	5	21
41	BV	80/82 (98%)	69 (86%)	11 (14%)	3	16
41	DV	80/82 (98%)	71 (89%)	9 (11%)	6	23
42	BW	90/92 (98%)	79 (88%)	11 (12%)	5	19
42	DW	90/92 (98%)	80 (89%)	10 (11%)	6	24
43	BX	77/78 (99%)	73 (95%)	4 (5%)	23	55
43	DX	77/78 (99%)	74 (96%)	3 (4%)	32	65
44	BY	85/91 (93%)	79 (93%)	6 (7%)	14	44
44	DY	85/91 (93%)	79 (93%)	6 (7%)	14	44
45	BZ	145/179 (81%)	121 (83%)	24 (17%)	2	9
45	DZ	145/179 (81%)	126 (87%)	19 (13%)	4	17
46	B0	65/67 (97%)	61 (94%)	4 (6%)	18	49
46	D0	65/67 (97%)	59 (91%)	6 (9%)	9	33
47	B1	80/83 (96%)	72 (90%)	8 (10%)	7	28
47	D1	80/83 (96%)	73 (91%)	7 (9%)	10	36
48	B2	65/67 (97%)	56 (86%)	9 (14%)	3	16
48	D2	65/67 (97%)	57 (88%)	8 (12%)	4	19
49	B3	51/52 (98%)	44 (86%)	7 (14%)	3	16
49	D3	50/52 (96%)	43 (86%)	7 (14%)	3	15

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
50	B4	59/63 (94%)	48 (81%)	11 (19%)	1	7
50	D4	53/63 (84%)	45 (85%)	8 (15%)	3	12
51	B5	50/52 (96%)	45 (90%)	5 (10%)	7	28
51	D5	50/52 (96%)	45 (90%)	5 (10%)	7	28
52	B6	51/52 (98%)	45 (88%)	6 (12%)	5	21
52	D6	50/52 (96%)	46 (92%)	4 (8%)	12	40
53	B7	41/42 (98%)	37 (90%)	4 (10%)	8	29
53	D7	41/42 (98%)	39 (95%)	2 (5%)	25	57
54	B8	53/55 (96%)	49 (92%)	4 (8%)	13	42
54	D8	54/55 (98%)	50 (93%)	4 (7%)	13	42
55	B9	34/34 (100%)	33 (97%)	1 (3%)	42	72
55	D9	34/34 (100%)	33 (97%)	1 (3%)	42	72
All	All	9325/10072 (93%)	8209 (88%)	1116 (12%)	5	20

All (1116) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	7	VAL
2	AB	11	LEU
2	AB	15	VAL
2	AB	17	PHE
2	AB	19	HIS
2	AB	20	GLU
2	AB	21	ARG
2	AB	24	TRP
2	AB	49	GLU
2	AB	53	ARG
2	AB	56	ARG
2	AB	67	THR
2	AB	71	VAL
2	AB	80	ILE
2	AB	81	VAL
2	AB	87	ARG
2	AB	96	ARG
2	AB	109	SER
2	AB	112	VAL
2	AB	114	ARG
2	AB	116	GLU

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Mol	Chain	Res	Type
2	AB	126	GLU
2	AB	128	GLU
2	AB	142	LEU
2	AB	144	ARG
2	AB	145	LEU
2	AB	153	ARG
2	AB	155	LEU
2	AB	156	LYS
2	AB	157	ARG
2	AB	158	LEU
2	AB	170	GLU
2	AB	178	ARG
2	AB	185	ILE
2	AB	187	LEU
2	AB	190	THR
2	AB	196	LEU
2	AB	200	ILE
2	AB	208	ILE
2	AB	209	ARG
2	AB	217	ARG
2	AB	221	LEU
2	AB	222	ILE
2	AB	226	ARG
2	AB	233	SER
3	AC	3	ASN
3	AC	17	ASP
3	AC	27	LYS
3	AC	28	GLN
3	AC	29	TYR
3	AC	47	LEU
3	AC	52	LEU
3	AC	54	ARG
3	AC	77	ILE
3	AC	82	GLU
3	AC	98	ASN
3	AC	104	GLN
3	AC	118	GLN
3	AC	119	ARG
3	AC	131	ARG
3	AC	150	LYS
3	AC	154	SER
3	AC	165	THR

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Mol	Chain	Res	Type
4	AD	5	ILE
4	AD	19	LEU
4	AD	31	CYS
4	AD	58	LEU
4	AD	85	LYS
4	AD	86	LYS
4	AD	110	PHE
4	AD	112	VAL
4	AD	122	ARG
4	AD	126	ILE
4	AD	127	THR
4	AD	135	LEU
4	AD	150	GLU
4	AD	155	LEU
4	AD	158	ILE
4	AD	168	ARG
4	AD	181	MET
4	AD	182	LYS
4	AD	184	LYS
4	AD	187	ARG
4	AD	188	LEU
4	AD	190	ASP
4	AD	193	ASP
4	AD	196	LEU
4	AD	201	GLN
5	AE	10	MET
5	AE	12	LEU
5	AE	31	LEU
5	AE	40	ARG
5	AE	41	VAL
5	AE	47	LYS
5	AE	71	LEU
5	AE	78	HIS
5	AE	79	GLU
6	AF	46	ARG
6	AF	55	ASP
6	AF	63	TYR
6	AF	69	GLU
6	AF	74	ASP
6	AF	82	ARG
6	AF	94	GLN
7	AG	8	GLU

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Mol	Chain	Res	Type
7	AG	9	VAL
7	AG	12	LEU
7	AG	13	GLN
7	AG	15	ASP
7	AG	21	VAL
7	AG	50	ILE
7	AG	51	GLN
7	AG	57	GLU
7	AG	75	VAL
7	AG	76	ARG
7	AG	79	ARG
7	AG	97	GLN
7	AG	104	LEU
7	AG	113	GLU
7	AG	114	ARG
7	AG	138	LYS
7	AG	140	ASP
7	AG	144	MET
8	AH	21	LYS
8	AH	23	SER
8	AH	25	ASP
8	AH	26	VAL
8	AH	37	ARG
8	AH	50	ARG
8	AH	52	ASP
8	AH	53	VAL
8	AH	63	LEU
8	AH	75	ARG
8	AH	78	GLN
8	AH	97	VAL
8	AH	98	LYS
8	AH	107	LEU
8	AH	112	LEU
8	AH	137	VAL
9	AI	23	ASN
9	AI	27	THR
9	AI	53	VAL
9	AI	54	ASP
9	AI	56	LEU
9	AI	60	ASP
9	AI	65	VAL
9	AI	66	ARG

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Mol	Chain	Res	Type
9	AI	75	ASP
9	AI	81	ILE
9	AI	103	THR
9	AI	108	VAL
9	AI	127	LYS
9	AI	128	ARG
10	AJ	5	ARG
10	AJ	7	LYS
10	AJ	16	LEU
10	AJ	30	SER
10	AJ	68	HIS
10	AJ	96	ILE
11	AK	31	THR
11	AK	48	ILE
11	AK	70	LYS
11	AK	84	VAL
11	AK	95	ILE
11	AK	96	ARG
11	AK	104	GLN
11	AK	109	VAL
11	AK	120	ARG
12	AL	6	THR
12	AL	33	ARG
12	AL	46	LYS
12	AL	55	VAL
12	AL	67	THR
12	AL	70	ILE
12	AL	86	ARG
13	AM	3	ARG
13	AM	4	ILE
13	AM	8	GLU
13	AM	19	LEU
13	AM	43	THR
13	AM	50	GLU
13	AM	56	LEU
13	AM	70	LEU
13	AM	73	GLU
13	AM	110	ARG
13	AM	121	LYS
14	AN	3	ARG
14	AN	6	LEU
14	AN	7	ILE

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Mol	Chain	Res	Type
14	AN	18	VAL
14	AN	22	THR
14	AN	23	ARG
14	AN	32	SER
14	AN	33	VAL
15	AO	3	ILE
15	AO	5	LYS
15	AO	22	THR
15	AO	24	SER
15	AO	26	GLU
15	AO	39	LEU
15	AO	41	GLU
15	AO	83	GLU
15	AO	84	LYS
16	AP	2	VAL
16	AP	5	ARG
16	AP	8	ARG
16	AP	19	ILE
16	AP	20	VAL
16	AP	28	ARG
16	AP	45	THR
16	AP	50	LYS
16	AP	67	THR
17	AQ	14	LYS
17	AQ	53	LEU
17	AQ	60	ILE
17	AQ	63	ARG
17	AQ	74	LEU
18	AR	26	LEU
18	AR	32	ARG
18	AR	61	LYS
18	AR	82	THR
19	AS	5	LEU
19	AS	6	LYS
19	AS	28	LYS
19	AS	37	ARG
19	AS	63	THR
19	AS	65	ASN
20	AT	8	ARG
20	AT	9	ASN
20	AT	13	LEU
20	AT	31	SER

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Mol	Chain	Res	Type
20	AT	45	GLN
20	AT	46	GLU
20	AT	56	MET
20	AT	58	LYS
20	AT	62	LEU
21	AU	7	ARG
21	AU	9	ARG
21	AU	10	ARG
21	AU	15	ARG
24	AW	2	VAL
27	BD	3	VAL
27	BD	12	SER
27	BD	13	ARG
27	BD	61	LEU
27	BD	71	ASP
27	BD	94	LEU
27	BD	103	ARG
27	BD	138	VAL
27	BD	142	VAL
27	BD	155	LEU
27	BD	211	ARG
27	BD	217	ARG
27	BD	221	VAL
27	BD	229	VAL
27	BD	242	ARG
27	BD	257	LEU
27	BD	260	ARG
28	BE	1	MET
28	BE	9	VAL
28	BE	12	THR
28	BE	21	VAL
28	BE	24	THR
28	BE	49	LEU
28	BE	73	GLU
28	BE	82	ARG
28	BE	89	ASP
28	BE	93	VAL
28	BE	97	LYS
28	BE	111	ARG
28	BE	116	VAL
28	BE	119	ARG
28	BE	144	ARG

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Mol	Chain	Res	Type
28	BE	145	LYS
28	BE	154	LYS
28	BE	163	GLU
28	BE	170	LEU
28	BE	175	VAL
28	BE	181	LEU
28	BE	203	LYS
29	BF	19	GLU
29	BF	24	LEU
29	BF	33	LEU
29	BF	53	THR
29	BF	57	VAL
29	BF	64	ILE
29	BF	74	ARG
29	BF	78	ILE
29	BF	88	VAL
29	BF	106	ARG
29	BF	108	LYS
29	BF	110	LEU
29	BF	125	LEU
29	BF	170	LEU
29	BF	192	LEU
29	BF	197	ASP
29	BF	200	GLU
30	BG	5	VAL
30	BG	7	LEU
30	BG	28	VAL
30	BG	31	VAL
30	BG	43	LEU
30	BG	45	GLU
30	BG	78	SER
30	BG	81	LYS
30	BG	82	LEU
30	BG	86	MET
30	BG	91	ARG
30	BG	133	LEU
30	BG	135	LEU
30	BG	136	ARG
30	BG	140	ILE
30	BG	143	GLU
30	BG	148	MET
30	BG	159	VAL

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Mol	Chain	Res	Type
30	BG	170	ARG
30	BG	181	ARG
31	BH	6	ARG
31	BH	13	LYS
31	BH	15	VAL
31	BH	41	MET
31	BH	44	VAL
31	BH	49	VAL
31	BH	59	ARG
31	BH	69	ARG
31	BH	95	ARG
31	BH	98	LEU
31	BH	116	GLU
31	BH	122	THR
31	BH	129	THR
31	BH	172	LYS
31	BH	175	LYS
32	BI	9	LEU
32	BI	15	VAL
32	BI	19	VAL
32	BI	20	ASP
32	BI	38	LEU
32	BI	40	THR
32	BI	41	GLU
32	BI	43	ASN
32	BI	50	ARG
32	BI	54	GLN
32	BI	57	ARG
32	BI	60	GLU
32	BI	64	GLU
32	BI	66	GLU
32	BI	68	LEU
32	BI	74	ASN
32	BI	75	LEU
32	BI	77	LEU
32	BI	78	THR
32	BI	92	VAL
32	BI	96	ASP
32	BI	101	LEU
32	BI	107	VAL
32	BI	109	ILE
32	BI	114	LEU

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Mol	Chain	Res	Type
32	BI	140	LEU
32	BI	142	VAL
32	BI	144	VAL
33	BN	28	THR
33	BN	33	LEU
33	BN	34	LEU
33	BN	46	VAL
33	BN	48	MET
33	BN	61	ARG
33	BN	68	GLU
33	BN	83	LYS
33	BN	87	LEU
33	BN	97	ARG
33	BN	99	LEU
33	BN	120	LEU
33	BN	121	LYS
33	BN	133	GLN
33	BN	137	LYS
34	BO	8	LEU
34	BO	23	ARG
34	BO	24	VAL
34	BO	58	VAL
34	BO	94	ARG
34	BO	98	VAL
35	BP	4	SER
35	BP	15	ARG
35	BP	42	SER
35	BP	59	LEU
35	BP	65	ARG
35	BP	83	VAL
35	BP	95	VAL
35	BP	98	GLU
35	BP	106	LEU
35	BP	112	LEU
35	BP	125	VAL
35	BP	144	GLU
35	BP	149	GLU
36	BQ	1	MET
36	BQ	5	ARG
36	BQ	7	MET
36	BQ	8	LYS
36	BQ	16	ARG

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Mol	Chain	Res	Type
36	BQ	21	THR
36	BQ	45	GLN
36	BQ	54	MET
36	BQ	56	ARG
36	BQ	60	ARG
36	BQ	75	THR
36	BQ	81	VAL
36	BQ	85	LYS
36	BQ	109	VAL
36	BQ	110	THR
36	BQ	129	THR
36	BQ	138	ASP
37	BR	1	MET
37	BR	6	SER
37	BR	18	LEU
37	BR	28	LEU
37	BR	29	LEU
37	BR	33	ARG
37	BR	36	THR
37	BR	44	LEU
37	BR	54	LEU
37	BR	60	LEU
37	BR	65	LEU
37	BR	67	LEU
37	BR	75	LEU
37	BR	79	LEU
37	BR	86	ARG
37	BR	91	GLN
37	BR	100	LEU
37	BR	111	LEU
38	BS	14	VAL
38	BS	20	ARG
38	BS	36	TYR
38	BS	43	GLU
38	BS	48	LEU
38	BS	50	SER
38	BS	59	LYS
38	BS	61	ASN
38	BS	78	LEU
38	BS	103	GLU
39	BT	13	ARG
39	BT	17	THR

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Mol	Chain	Res	Type
39	BT	28	VAL
39	BT	39	ARG
39	BT	49	VAL
39	BT	53	ARG
39	BT	74	ARG
39	BT	78	LEU
39	BT	85	LYS
39	BT	96	ARG
39	BT	118	ARG
40	BU	8	VAL
40	BU	31	SER
40	BU	36	ARG
40	BU	60	LEU
40	BU	74	LEU
40	BU	83	LEU
40	BU	92	ARG
40	BU	95	LEU
40	BU	104	GLN
40	BU	117	GLN
41	BV	10	LYS
41	BV	18	LEU
41	BV	21	ARG
41	BV	51	VAL
41	BV	52	VAL
41	BV	61	VAL
41	BV	62	LEU
41	BV	72	VAL
41	BV	79	VAL
41	BV	95	LEU
41	BV	100	ARG
42	BW	11	ARG
42	BW	15	ARG
42	BW	17	VAL
42	BW	23	LEU
42	BW	27	LYS
42	BW	51	LEU
42	BW	60	ASN
42	BW	63	ASP
42	BW	67	ASP
42	BW	100	THR
42	BW	107	LEU
43	BX	2	LYS

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Mol	Chain	Res	Type
43	BX	57	LEU
43	BX	66	LEU
43	BX	70	LEU
44	BY	2	ARG
44	BY	7	VAL
44	BY	43	ASN
44	BY	72	VAL
44	BY	90	LEU
44	BY	91	GLU
45	BZ	5	LEU
45	BZ	6	LYS
45	BZ	11	GLU
45	BZ	19	ARG
45	BZ	31	ARG
45	BZ	40	ASP
45	BZ	41	LEU
45	BZ	42	VAL
45	BZ	61	LEU
45	BZ	76	LEU
45	BZ	82	ARG
45	BZ	86	VAL
45	BZ	87	ASP
45	BZ	91	LEU
45	BZ	107	THR
45	BZ	120	ILE
45	BZ	131	ARG
45	BZ	132	ASN
45	BZ	135	GLU
45	BZ	136	PHE
45	BZ	144	LEU
45	BZ	154	ASP
45	BZ	155	LEU
45	BZ	162	GLU
46	B0	7	LEU
46	B0	10	THR
46	B0	20	ARG
46	B0	55	ARG
47	B1	21	ARG
47	B1	26	ARG
47	B1	35	THR
47	B1	40	ARG
47	B1	52	ARG

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Mol	Chain	Res	Type
47	B1	59	THR
47	B1	89	GLU
47	B1	95	LEU
48	B2	28	LYS
48	B2	30	ARG
48	B2	41	ILE
48	B2	45	SER
48	B2	52	ASP
48	B2	53	LEU
48	B2	55	ARG
48	B2	64	LEU
48	B2	70	GLN
49	B3	6	VAL
49	B3	8	LEU
49	B3	23	LEU
49	B3	29	ARG
49	B3	32	GLN
49	B3	55	ARG
49	B3	58	VAL
50	B4	5	ILE
50	B4	28	LYS
50	B4	34	GLU
50	B4	46	GLN
50	B4	49	PHE
50	B4	56	VAL
50	B4	58	ARG
50	B4	61	ARG
50	B4	63	TYR
50	B4	68	ARG
50	B4	69	LYS
51	B5	6	VAL
51	B5	29	THR
51	B5	40	LYS
51	B5	58	LEU
51	B5	60	VAL
52	B6	4	GLU
52	B6	6	ARG
52	B6	14	THR
52	B6	38	LYS
52	B6	48	VAL
52	B6	49	HIS
53	B7	1	MET

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Mol	Chain	Res	Type
53	B7	23	ARG
53	B7	43	THR
53	B7	47	ARG
54	B8	14	VAL
54	B8	29	LYS
54	B8	31	HIS
54	B8	32	LEU
55	B9	26	ILE
2	CB	7	VAL
2	CB	11	LEU
2	CB	22	LYS
2	CB	23	ARG
2	CB	24	TRP
2	CB	44	LEU
2	CB	56	ARG
2	CB	67	THR
2	CB	71	VAL
2	CB	80	ILE
2	CB	108	ILE
2	CB	115	LEU
2	CB	126	GLU
2	CB	128	GLU
2	CB	140	HIS
2	CB	142	LEU
2	CB	144	ARG
2	CB	145	LEU
2	CB	153	ARG
2	CB	154	LEU
2	CB	157	ARG
2	CB	158	LEU
2	CB	160	ASP
2	CB	169	LYS
2	CB	178	ARG
2	CB	185	ILE
2	CB	187	LEU
2	CB	191	ASP
2	CB	200	ILE
2	CB	217	ARG
2	CB	221	LEU
2	CB	224	GLN
2	CB	226	ARG
2	CB	233	SER

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Mol	Chain	Res	Type
2	CB	235	SER
3	CC	3	ASN
3	CC	20	SER
3	CC	29	TYR
3	CC	47	LEU
3	CC	52	LEU
3	CC	77	ILE
3	CC	82	GLU
3	CC	98	ASN
3	CC	101	LEU
3	CC	104	GLN
3	CC	115	LEU
3	CC	118	GLN
3	CC	131	ARG
3	CC	152	ILE
3	CC	154	SER
3	CC	162	GLN
3	CC	164	ARG
3	CC	179	ARG
4	CD	10	ARG
4	CD	19	LEU
4	CD	31	CYS
4	CD	47	ARG
4	CD	58	LEU
4	CD	65	ARG
4	CD	96	LEU
4	CD	122	ARG
4	CD	127	THR
4	CD	135	LEU
4	CD	150	GLU
4	CD	155	LEU
4	CD	157	LEU
4	CD	170	VAL
4	CD	181	MET
4	CD	184	LYS
4	CD	187	ARG
4	CD	188	LEU
4	CD	191	ARG
4	CD	194	LEU
4	CD	201	GLN
5	CE	12	LEU
5	CE	31	LEU

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Mol	Chain	Res	Type
5	CE	40	ARG
5	CE	41	VAL
5	CE	71	LEU
5	CE	79	GLU
5	CE	82	VAL
6	CF	23	LYS
6	CF	28	ARG
6	CF	41	GLU
6	CF	46	ARG
6	CF	63	TYR
6	CF	69	GLU
7	CG	9	VAL
7	CG	12	LEU
7	CG	13	GLN
7	CG	15	ASP
7	CG	16	LEU
7	CG	50	ILE
7	CG	51	GLN
7	CG	52	GLU
7	CG	58	PRO
7	CG	73	MET
7	CG	75	VAL
7	CG	85	TYR
7	CG	104	LEU
7	CG	113	GLU
7	CG	114	ARG
7	CG	140	ASP
7	CG	144	MET
7	CG	155	ARG
8	CH	21	LYS
8	CH	23	SER
8	CH	25	ASP
8	CH	53	VAL
8	CH	68	ARG
8	CH	78	GLN
8	CH	84	ARG
8	CH	97	VAL
8	CH	98	LYS
8	CH	99	GLU
8	CH	112	LEU
8	CH	137	VAL
9	CI	7	THR

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Mol	Chain	Res	Type
9	CI	17	VAL
9	CI	23	ASN
9	CI	27	THR
9	CI	33	PHE
9	CI	66	ARG
9	CI	75	ASP
9	CI	81	ILE
9	CI	86	VAL
9	CI	92	TYR
9	CI	102	LEU
9	CI	124	GLN
9	CI	125	TYR
9	CI	128	ARG
10	CJ	6	ILE
10	CJ	23	ILE
10	CJ	29	ARG
10	CJ	68	HIS
10	CJ	96	ILE
11	CK	54	ARG
11	CK	79	SER
11	CK	84	VAL
11	CK	95	ILE
11	CK	96	ARG
11	CK	126	ARG
12	CL	33	ARG
12	CL	34	ARG
12	CL	52	LEU
12	CL	55	VAL
12	CL	59	ARG
12	CL	60	LEU
12	CL	70	ILE
12	CL	83	VAL
12	CL	97	ARG
12	CL	123	LYS
13	CM	3	ARG
13	CM	4	ILE
13	CM	8	GLU
13	CM	19	LEU
13	CM	27	LYS
13	CM	47	ASP
13	CM	56	LEU
13	CM	70	LEU

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Mol	Chain	Res	Type
13	CM	104	ARG
13	CM	106	ASN
13	CM	110	ARG
13	CM	121	LYS
14	CN	3	ARG
14	CN	7	ILE
14	CN	18	VAL
14	CN	22	THR
14	CN	23	ARG
14	CN	33	VAL
14	CN	50	LYS
15	CO	3	ILE
15	CO	5	LYS
15	CO	7	GLU
15	CO	10	LYS
15	CO	22	THR
15	CO	24	SER
15	CO	26	GLU
15	CO	39	LEU
15	CO	54	ARG
15	CO	76	GLU
15	CO	83	GLU
15	CO	84	LYS
16	CP	2	VAL
16	CP	5	ARG
16	CP	8	ARG
16	CP	28	ARG
16	CP	67	THR
17	CQ	6	LEU
17	CQ	49	GLU
17	CQ	60	ILE
17	CQ	63	ARG
17	CQ	66	SER
17	CQ	74	LEU
17	CQ	83	ASP
18	CR	26	LEU
18	CR	32	ARG
18	CR	41	LYS
18	CR	42	ARG
18	CR	54	ARG
18	CR	64	ARG
18	CR	76	LEU

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Mol	Chain	Res	Type
19	CS	6	LYS
19	CS	12	ASP
19	CS	28	LYS
19	CS	30	LEU
19	CS	33	THR
19	CS	37	ARG
19	CS	43	GLU
19	CS	56	GLN
19	CS	63	THR
19	CS	71	LEU
20	CT	36	LEU
20	CT	38	LYS
20	CT	45	GLN
20	CT	46	GLU
20	CT	56	MET
20	CT	62	LEU
20	CT	71	THR
20	CT	80	ARG
20	CT	90	GLN
20	CT	99	LEU
21	CU	10	ARG
21	CU	15	ARG
24	CW	2	VAL
27	DD	13	ARG
27	DD	32	SER
27	DD	61	LEU
27	DD	69	ARG
27	DD	88	ARG
27	DD	94	LEU
27	DD	103	ARG
27	DD	106	ILE
27	DD	113	VAL
27	DD	116	GLN
27	DD	134	ARG
27	DD	138	VAL
27	DD	142	VAL
27	DD	155	LEU
27	DD	200	ASP
27	DD	211	ARG
27	DD	217	ARG
27	DD	221	VAL
27	DD	229	VAL

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Mol	Chain	Res	Type
27	DD	242	ARG
27	DD	257	LEU
27	DD	259	THR
27	DD	260	ARG
27	DD	274	ARG
27	DD	276	LYS
28	DE	1	MET
28	DE	9	VAL
28	DE	12	THR
28	DE	21	VAL
28	DE	24	THR
28	DE	33	VAL
28	DE	40	GLU
28	DE	49	LEU
28	DE	52	LEU
28	DE	73	GLU
28	DE	75	VAL
28	DE	78	LEU
28	DE	82	ARG
28	DE	111	ARG
28	DE	116	VAL
28	DE	119	ARG
28	DE	144	ARG
28	DE	154	LYS
28	DE	163	GLU
28	DE	181	LEU
29	DF	12	LEU
29	DF	19	GLU
29	DF	20	LEU
29	DF	24	LEU
29	DF	33	LEU
29	DF	74	ARG
29	DF	106	ARG
29	DF	107	LYS
29	DF	108	LYS
29	DF	110	LEU
29	DF	135	LYS
29	DF	137	LYS
29	DF	192	LEU
29	DF	200	GLU
30	DG	5	VAL
30	DG	21	ARG

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Mol	Chain	Res	Type
30	DG	28	VAL
30	DG	31	VAL
30	DG	35	GLU
30	DG	36	LYS
30	DG	43	LEU
30	DG	45	GLU
30	DG	49	ASP
30	DG	60	LEU
30	DG	84	LYS
30	DG	91	ARG
30	DG	98	ARG
30	DG	113	ARG
30	DG	115	ARG
30	DG	128	ARG
30	DG	133	LEU
30	DG	136	ARG
30	DG	140	ILE
30	DG	143	GLU
30	DG	145	THR
30	DG	148	MET
30	DG	153	ARG
30	DG	159	VAL
30	DG	164	GLU
30	DG	170	ARG
31	DH	3	ARG
31	DH	6	ARG
31	DH	15	VAL
31	DH	42	ARG
31	DH	69	ARG
31	DH	76	VAL
31	DH	81	GLU
31	DH	95	ARG
31	DH	98	LEU
31	DH	106	THR
31	DH	139	GLN
31	DH	171	LEU
31	DH	172	LYS
32	DI	15	VAL
32	DI	19	VAL
32	DI	20	ASP
32	DI	40	THR
32	DI	41	GLU

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Mol	Chain	Res	Type
32	DI	43	ASN
32	DI	44	LEU
32	DI	57	ARG
32	DI	61	ARG
32	DI	66	GLU
32	DI	68	LEU
32	DI	75	LEU
32	DI	77	LEU
32	DI	114	LEU
32	DI	121	LYS
32	DI	140	LEU
32	DI	142	VAL
32	DI	144	VAL
33	DN	5	VAL
33	DN	12	ARG
33	DN	33	LEU
33	DN	34	LEU
33	DN	38	HIS
33	DN	46	VAL
33	DN	48	MET
33	DN	61	ARG
33	DN	68	GLU
33	DN	85	ILE
33	DN	87	LEU
33	DN	99	LEU
33	DN	120	LEU
33	DN	133	GLN
33	DN	137	LYS
33	DN	138	LEU
34	DO	8	LEU
34	DO	23	ARG
34	DO	24	VAL
34	DO	58	VAL
34	DO	69	ILE
34	DO	92	GLU
34	DO	94	ARG
34	DO	98	VAL
34	DO	108	GLU
35	DP	2	LYS
35	DP	29	LYS
35	DP	42	SER
35	DP	55	ARG

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Mol	Chain	Res	Type
35	DP	59	LEU
35	DP	65	ARG
35	DP	76	LYS
35	DP	77	ARG
35	DP	99	LEU
35	DP	106	LEU
35	DP	112	LEU
36	DQ	1	MET
36	DQ	7	MET
36	DQ	8	LYS
36	DQ	11	LYS
36	DQ	16	ARG
36	DQ	21	THR
36	DQ	45	GLN
36	DQ	55	VAL
36	DQ	56	ARG
36	DQ	60	ARG
36	DQ	75	THR
36	DQ	81	VAL
36	DQ	85	LYS
36	DQ	109	VAL
36	DQ	110	THR
37	DR	1	MET
37	DR	6	SER
37	DR	18	LEU
37	DR	28	LEU
37	DR	29	LEU
37	DR	33	ARG
37	DR	36	THR
37	DR	44	LEU
37	DR	57	ARG
37	DR	60	LEU
37	DR	65	LEU
37	DR	75	LEU
37	DR	79	LEU
37	DR	86	ARG
37	DR	100	LEU
37	DR	111	LEU
38	DS	14	VAL
38	DS	20	ARG
38	DS	35	ILE
38	DS	36	TYR

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Mol	Chain	Res	Type
38	DS	43	GLU
38	DS	48	LEU
38	DS	50	SER
38	DS	57	LYS
38	DS	58	LEU
38	DS	67	ARG
38	DS	68	GLN
38	DS	75	GLU
38	DS	78	LEU
38	DS	83	LYS
38	DS	103	GLU
39	DT	6	LEU
39	DT	13	ARG
39	DT	74	ARG
39	DT	85	LYS
39	DT	89	VAL
39	DT	96	ARG
39	DT	113	LYS
39	DT	118	ARG
40	DU	5	LYS
40	DU	31	SER
40	DU	59	ARG
40	DU	60	LEU
40	DU	74	LEU
40	DU	83	LEU
40	DU	89	GLU
40	DU	92	ARG
40	DU	104	GLN
40	DU	108	GLU
40	DU	114	LYS
41	DV	15	GLU
41	DV	18	LEU
41	DV	21	ARG
41	DV	52	VAL
41	DV	57	VAL
41	DV	62	LEU
41	DV	72	VAL
41	DV	79	VAL
41	DV	95	LEU
42	DW	11	ARG
42	DW	15	ARG
42	DW	17	VAL

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Mol	Chain	Res	Type
42	DW	23	LEU
42	DW	27	LYS
42	DW	51	LEU
42	DW	60	ASN
42	DW	63	ASP
42	DW	100	THR
42	DW	107	LEU
43	DX	35	THR
43	DX	57	LEU
43	DX	70	LEU
44	DY	2	ARG
44	DY	11	ASP
44	DY	23	ARG
44	DY	43	ASN
44	DY	72	VAL
44	DY	99	CYS
45	DZ	5	LEU
45	DZ	11	GLU
45	DZ	19	ARG
45	DZ	31	ARG
45	DZ	33	LEU
45	DZ	40	ASP
45	DZ	41	LEU
45	DZ	50	GLN
45	DZ	61	LEU
45	DZ	72	ARG
45	DZ	76	LEU
45	DZ	86	VAL
45	DZ	87	ASP
45	DZ	91	LEU
45	DZ	107	THR
45	DZ	154	ASP
45	DZ	155	LEU
45	DZ	162	GLU
45	DZ	165	VAL
46	D0	7	LEU
46	D0	10	THR
46	D0	19	LYS
46	D0	20	ARG
46	D0	24	LYS
46	D0	55	ARG
47	D1	21	ARG

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Mol	Chain	Res	Type
47	D1	26	ARG
47	D1	35	THR
47	D1	40	ARG
47	D1	52	ARG
47	D1	59	THR
47	D1	78	LYS
48	D2	28	LYS
48	D2	30	ARG
48	D2	40	SER
48	D2	45	SER
48	D2	52	ASP
48	D2	53	LEU
48	D2	55	ARG
48	D2	70	GLN
49	D3	6	VAL
49	D3	8	LEU
49	D3	23	LEU
49	D3	24	LYS
49	D3	30	ARG
49	D3	32	GLN
49	D3	44	ARG
50	D4	5	ILE
50	D4	44	THR
50	D4	56	VAL
50	D4	58	ARG
50	D4	61	ARG
50	D4	63	TYR
50	D4	68	ARG
50	D4	69	LYS
51	D5	29	THR
51	D5	33	CYS
51	D5	40	LYS
51	D5	48	GLU
51	D5	58	LEU
52	D6	6	ARG
52	D6	9	LEU
52	D6	38	LYS
52	D6	48	VAL
53	D7	1	MET
53	D7	48	LYS
54	D8	14	VAL
54	D8	26	LYS

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Mol	Chain	Res	Type
54	D8	29	LYS
54	D8	31	HIS
55	D9	26	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (113) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	40	HIS
3	AC	6	HIS
3	AC	28	GLN
3	AC	104	GLN
3	AC	118	GLN
3	AC	136	GLN
3	AC	181	ASN
4	AD	45	GLN
5	AE	20	GLN
5	AE	56	GLN
5	AE	141	GLN
6	AF	94	GLN
6	AF	100	ASN
7	AG	28	ASN
7	AG	148	ASN
9	AI	23	ASN
9	AI	31	GLN
9	AI	34	ASN
9	AI	89	ASN
10	AJ	13	HIS
10	AJ	56	HIS
11	AK	93	GLN
12	AL	78	GLN
12	AL	99	HIS
13	AM	92	HIS
15	AO	28	GLN
15	AO	62	GLN
16	AP	13	HIS
17	AQ	16	GLN
17	AQ	26	GLN
19	AS	23	ASN
19	AS	47	HIS
19	AS	65	ASN
19	AS	69	HIS
20	AT	9	ASN

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Mol	Chain	Res	Type
20	AT	45	GLN
20	AT	90	GLN
27	BD	253	GLN
29	BF	69	HIS
29	BF	169	ASN
29	BF	203	GLN
31	BH	158	HIS
32	BI	43	ASN
32	BI	139	GLN
35	BP	38	GLN
36	BQ	45	GLN
39	BT	123	GLN
40	BU	117	GLN
41	BV	80	GLN
43	BX	31	HIS
44	BY	6	HIS
44	BY	43	ASN
45	BZ	32	HIS
45	BZ	151	HIS
46	B0	3	HIS
48	B2	38	GLN
48	B2	70	GLN
49	B3	32	GLN
55	B9	36	GLN
2	CB	19	HIS
2	CB	40	HIS
2	CB	224	GLN
3	CC	6	HIS
3	CC	28	GLN
3	CC	37	GLN
3	CC	104	GLN
3	CC	118	GLN
3	CC	123	GLN
3	CC	136	GLN
4	CD	45	GLN
4	CD	74	GLN
4	CD	125	HIS
5	CE	20	GLN
5	CE	78	HIS
5	CE	141	GLN
7	CG	51	GLN
8	CH	78	GLN

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Mol	Chain	Res	Type
9	CI	31	GLN
9	CI	58	HIS
10	CJ	68	HIS
11	CK	22	HIS
11	CK	93	GLN
12	CL	78	GLN
13	CM	77	ASN
15	CO	28	GLN
16	CP	16	HIS
19	CS	65	ASN
19	CS	69	HIS
20	CT	16	HIS
27	DD	87	ASN
27	DD	164	GLN
27	DD	253	GLN
28	DE	85	ASN
29	DF	69	HIS
29	DF	169	ASN
29	DF	203	GLN
30	DG	40	ASN
30	DG	79	ASN
31	DH	139	GLN
31	DH	158	HIS
32	DI	43	ASN
35	DP	38	GLN
36	DQ	45	GLN
37	DR	13	HIS
37	DR	71	GLN
38	DS	68	GLN
39	DT	123	GLN
41	DV	64	HIS
43	DX	31	HIS
44	DY	43	ASN
46	D0	3	HIS
48	D2	38	GLN
55	D9	36	GLN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1495/1522 (98%)	393 (26%)	25 (1%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	CA	1502/1522 (98%)	388 (25%)	31 (2%)
22	AV	4/24 (16%)	1 (25%)	0
22	CV	4/24 (16%)	1 (25%)	0
23	AX	75/77 (97%)	16 (21%)	0
23	CX	75/77 (97%)	16 (21%)	0
25	BA	2722/2915 (93%)	508 (18%)	40 (1%)
25	DA	2704/2915 (92%)	535 (19%)	37 (1%)
26	BB	119/122 (97%)	18 (15%)	0
26	DB	119/122 (97%)	24 (20%)	1 (0%)
All	All	8819/9320 (94%)	1900 (21%)	134 (1%)

All (1900) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	7	G
1	AA	9	G
1	AA	15	G
1	AA	22	G
1	AA	32	A
1	AA	39	G
1	AA	44	G
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	59	A
1	AA	61	G
1	AA	63	C
1	AA	69	G
1	AA	77	G
1	AA	78	G
1	AA	79	G
1	AA	96	U
1	AA	97	G
1	AA	98	G
1	AA	101	A
1	AA	102	G
1	AA	112	G
1	AA	115	G
1	AA	116	A
1	AA	121	C
1	AA	129(A)	G

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Mol	Chain	Res	Type
1	AA	131	C
1	AA	138	G
1	AA	141	A
1	AA	142	G
1	AA	143	A
1	AA	144	G
1	AA	149	A
1	AA	163	C
1	AA	165	C
1	AA	166	G
1	AA	171	A
1	AA	173	U
1	AA	174	C
1	AA	180	U
1	AA	181	G
1	AA	182	U
1	AA	189(D)	C
1	AA	189(F)	U
1	AA	190	U
1	AA	193	C
1	AA	194	C
1	AA	195	A
1	AA	197	A
1	AA	199	G
1	AA	201	C
1	AA	203	U
1	AA	204	U
1	AA	216	G
1	AA	220	G
1	AA	247	G
1	AA	251	G
1	AA	258	G
1	AA	266	G
1	AA	267	C
1	AA	269	C
1	AA	277	C
1	AA	281	G
1	AA	289	G
1	AA	298	A
1	AA	301	G
1	AA	321	A
1	AA	328	C

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Mol	Chain	Res	Type
1	AA	332	G
1	AA	342	C
1	AA	346	G
1	AA	347	G
1	AA	348	G
1	AA	349	A
1	AA	351	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	355	C
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	383	A
1	AA	388	G
1	AA	396	G
1	AA	397	A
1	AA	398	C
1	AA	403	C
1	AA	406	G
1	AA	409	G
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	415	A
1	AA	422	C
1	AA	424	G
1	AA	429	U
1	AA	430	A
1	AA	439	A
1	AA	442	C
1	AA	443	C
1	AA	452	A
1	AA	461	A
1	AA	471	G
1	AA	474	G
1	AA	484	G
1	AA	485	G
1	AA	492	G
1	AA	496	A

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Mol	Chain	Res	Type
1	AA	498	U
1	AA	505	G
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	513	C
1	AA	518	C
1	AA	521	G
1	AA	527	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	536	C
1	AA	544	G
1	AA	547	A
1	AA	553	A
1	AA	559	A
1	AA	561	U
1	AA	571	U
1	AA	572	A
1	AA	573	A
1	AA	576	G
1	AA	592	G
1	AA	596	C
1	AA	597	G
1	AA	606	G
1	AA	626	U
1	AA	630	G
1	AA	631	G
1	AA	633	G
1	AA	639	G
1	AA	641	U
1	AA	649	G
1	AA	650	G
1	AA	651	C
1	AA	653	A
1	AA	665	A
1	AA	673	G
1	AA	680	C
1	AA	687	A
1	AA	688	G
1	AA	693	G

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Mol	Chain	Res	Type
1	AA	704	A
1	AA	711	G
1	AA	721	G
1	AA	723	U
1	AA	724	G
1	AA	731	G
1	AA	749	C
1	AA	752	G
1	AA	755	G
1	AA	760	G
1	AA	774	G
1	AA	777	A
1	AA	786	G
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	802	A
1	AA	806	C
1	AA	812	C
1	AA	815	A
1	AA	816	A
1	AA	817	C
1	AA	818	G
1	AA	821	G
1	AA	827	U
1	AA	828	A
1	AA	829	G
1	AA	836	G
1	AA	839	U
1	AA	840	C
1	AA	841	U
1	AA	851	G
1	AA	855	G
1	AA	858	G
1	AA	859	A
1	AA	870	U
1	AA	873	A
1	AA	876	G
1	AA	902	G
1	AA	914	A
1	AA	916	G
1	AA	922	G

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Mol	Chain	Res	Type
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	942	G
1	AA	958	A
1	AA	960	U
1	AA	961	U
1	AA	967	C
1	AA	968	A
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	982	U
1	AA	983	A
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	999	C
1	AA	1000	U
1	AA	1001	A
1	AA	1001(A)	G
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	1011	G
1	AA	1013	G
1	AA	1014	A
1	AA	1019	C
1	AA	1020	U
1	AA	1022	G
1	AA	1024	G
1	AA	1025	U
1	AA	1026	G

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Mol	Chain	Res	Type
1	AA	1027	C
1	AA	1028	C
1	AA	1029	C
1	AA	1030	C
1	AA	1030(A)	G
1	AA	1030(C)	G
1	AA	1031	G
1	AA	1033	G
1	AA	1035	A
1	AA	1036	G
1	AA	1037	C
1	AA	1039	C
1	AA	1042	G
1	AA	1043	C
1	AA	1052	U
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	1070	U
1	AA	1076	C
1	AA	1081	G
1	AA	1087	G
1	AA	1091	U
1	AA	1092	A
1	AA	1093	A
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1104	G
1	AA	1108	G
1	AA	1109	C
1	AA	1119	C
1	AA	1124	G
1	AA	1125	U
1	AA	1126	U
1	AA	1128	C
1	AA	1130	A
1	AA	1132	C
1	AA	1134	G

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Mol	Chain	Res	Type
1	AA	1135	U
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1141	C
1	AA	1145	C
1	AA	1146	A
1	AA	1151	A
1	AA	1152	A
1	AA	1154	G
1	AA	1157	A
1	AA	1159	U
1	AA	1160	G
1	AA	1161	C
1	AA	1166	G
1	AA	1173	G
1	AA	1176	A
1	AA	1181	G
1	AA	1183	A
1	AA	1184	G
1	AA	1189	C
1	AA	1193	G
1	AA	1196	U
1	AA	1197	G
1	AA	1200	C
1	AA	1202	G
1	AA	1204	A
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1223	C
1	AA	1224	G
1	AA	1227	A
1	AA	1235	U
1	AA	1236	A
1	AA	1238	A
1	AA	1250	A
1	AA	1256	A
1	AA	1257	U
1	AA	1258	G
1	AA	1259	C

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Mol	Chain	Res	Type
1	AA	1260	C
1	AA	1262	C
1	AA	1270	C
1	AA	1271	G
1	AA	1273	G
1	AA	1278	U
1	AA	1279	A
1	AA	1280	A
1	AA	1281	U
1	AA	1282	C
1	AA	1283	G
1	AA	1284	C
1	AA	1286	A
1	AA	1287	A
1	AA	1294	G
1	AA	1296	C
1	AA	1297	C
1	AA	1299	A
1	AA	1300	G
1	AA	1302	U
1	AA	1305	G
1	AA	1311	G
1	AA	1314	C
1	AA	1317	C
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1338	G
1	AA	1340	A
1	AA	1343	G
1	AA	1346	A
1	AA	1347	G
1	AA	1353	G
1	AA	1354	C
1	AA	1358	U
1	AA	1360	A
1	AA	1361	G
1	AA	1363	C
1	AA	1370	G
1	AA	1377	A
1	AA	1379	G
1	AA	1393	U

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Mol	Chain	Res	Type
1	AA	1396	A
1	AA	1397	C
1	AA	1402	C
1	AA	1419	G
1	AA	1422	G
1	AA	1442	G
1	AA	1442(A)	G
1	AA	1442(B)	A
1	AA	1446	U
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1457	G
1	AA	1469	G
1	AA	1487	G
1	AA	1489	G
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	1506	U
1	AA	1517	G
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
1	AA	1531	A
1	AA	1532	U
22	AV	15	A
23	AX	6	G
23	AX	9	G
23	AX	13	C
23	AX	19	G
23	AX	21	A
23	AX	26	G
23	AX	28	C
23	AX	31	G
23	AX	42	G
23	AX	47	U
23	AX	60	U
23	AX	61	C

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Mol	Chain	Res	Type
23	AX	67	C
23	AX	68	C
23	AX	70	G
23	AX	76	A
25	BA	9	U
25	BA	11	G
25	BA	12	U
25	BA	14	A
25	BA	34	C
25	BA	36	G
25	BA	45	C
25	BA	54	G
25	BA	62	U
25	BA	63	A
25	BA	70	A
25	BA	71	U
25	BA	73	A
25	BA	74	G
25	BA	83	A
25	BA	90	A
25	BA	99	G
25	BA	116	A
25	BA	118	U
25	BA	120	G
25	BA	125	A
25	BA	155	C
25	BA	161	C
25	BA	185	A
25	BA	187	C
25	BA	188	A
25	BA	194	G
25	BA	203	G
25	BA	204	G
25	BA	205	A
25	BA	206	G
25	BA	210	A
25	BA	211	A
25	BA	217	A
25	BA	218	A
25	BA	222	A
25	BA	237	G
25	BA	250	G

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Mol	Chain	Res	Type
25	BA	263	C
25	BA	265	U
25	BA	269	G
25	BA	271	U
25	BA	272	U
25	BA	273	G
25	BA	274	U
25	BA	275	C
25	BA	276	C
25	BA	279	G
25	BA	288	U
25	BA	289	G
25	BA	294	C
25	BA	296	U
25	BA	303	C
25	BA	306	A
25	BA	307	A
25	BA	332	G
25	BA	335	A
25	BA	353	G
25	BA	354	A
25	BA	360	C
25	BA	376	G
25	BA	381	A
25	BA	387	G
25	BA	391	G
25	BA	399	G
25	BA	407	U
25	BA	413	G
25	BA	432	U
25	BA	434	G
25	BA	438	G
25	BA	439	A
25	BA	448	U
25	BA	455	A
25	BA	469	A
25	BA	470	C
25	BA	474	U
25	BA	478	G
25	BA	482	C
25	BA	483	A
25	BA	496	A

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Mol	Chain	Res	Type
25	BA	505	A
25	BA	506	A
25	BA	507	G
25	BA	508	A
25	BA	515	G
25	BA	519	G
25	BA	522	A
25	BA	526	A
25	BA	529	U
25	BA	530	A
25	BA	534	C
25	BA	543	G
25	BA	549	U
25	BA	554	A
25	BA	555	G
25	BA	556	C
25	BA	557	A
25	BA	558	G
25	BA	569	G
25	BA	573	G
25	BA	586	G
25	BA	596	G
25	BA	598	A
25	BA	609	A
25	BA	610	C
25	BA	616	G
25	BA	625	G
25	BA	626	A
25	BA	627	G
25	BA	630	U
25	BA	633	G
25	BA	638	U
25	BA	639	G
25	BA	641	G
25	BA	659	C
25	BA	662	A
25	BA	670	C
25	BA	671	A
25	BA	692	C
25	BA	693	G
25	BA	697	C
25	BA	698	G

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Mol	Chain	Res	Type
25	BA	701	A
25	BA	712	C
25	BA	716	G
25	BA	724	A
25	BA	733	G
25	BA	745	C
25	BA	749	G
25	BA	764	G
25	BA	777	C
25	BA	811	A
25	BA	822	G
25	BA	823	G
25	BA	826	U
25	BA	829	A
25	BA	831	A
25	BA	832	G
25	BA	839	G
25	BA	852	G
25	BA	858	U
25	BA	859	C
25	BA	866	A
25	BA	874	U
25	BA	875	U
25	BA	877	G
25	BA	902	G
25	BA	906	G
25	BA	926	G
25	BA	927	G
25	BA	928	G
25	BA	929	G
25	BA	930	G
25	BA	931	C
25	BA	932	C
25	BA	933	C
25	BA	934	A
25	BA	935	C
25	BA	937	A
25	BA	938	G
25	BA	940	C
25	BA	942	A
25	BA	944	C
25	BA	945	A

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Mol	Chain	Res	Type
25	BA	946	A
25	BA	956	A
25	BA	965	G
25	BA	977	G
25	BA	983	G
25	BA	986	A
25	BA	989	G
25	BA	990	A
25	BA	991	G
25	BA	998	A
25	BA	1003	U
25	BA	1004	A
25	BA	1006	C
25	BA	1015	C
25	BA	1019	G
25	BA	1020	C
25	BA	1029	A
25	BA	1036	A
25	BA	1042	A
25	BA	1051	C
25	BA	1058	U
25	BA	1059	C
25	BA	1066	A
25	BA	1067	A
25	BA	1068	G
25	BA	1069	U
25	BA	1072	U
25	BA	1076	G
25	BA	1079	U
25	BA	1080	G
25	BA	1085	G
25	BA	1087	C
25	BA	1088	G
25	BA	1089	C
25	BA	1091	A
25	BA	1092	A
25	BA	1093	G
25	BA	1153	G
25	BA	1154	U
25	BA	1156	G
25	BA	1158	G
25	BA	1168	G

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Mol	Chain	Res	Type
25	BA	1174	A
25	BA	1175	A
25	BA	1176	U
25	BA	1180	C
25	BA	1181	G
25	BA	1184	G
25	BA	1186	U
25	BA	1187	U
25	BA	1188	A
25	BA	1189	A
25	BA	1195	G
25	BA	1202	A
25	BA	1210	G
25	BA	1216	G
25	BA	1217	G
25	BA	1218	G
25	BA	1219	A
25	BA	1220	U
25	BA	1221	G
25	BA	1222	A
25	BA	1223	C
25	BA	1225	C
25	BA	1229	G
25	BA	1255	A
25	BA	1256	U
25	BA	1263	C
25	BA	1266	C
25	BA	1296	G
25	BA	1298	G
25	BA	1299	A
25	BA	1302	G
25	BA	1311	A
25	BA	1317	G
25	BA	1318	A
25	BA	1319	U
25	BA	1321	A
25	BA	1346	U
25	BA	1347	A
25	BA	1359	U
25	BA	1360	C
25	BA	1367	A
25	BA	1384	G

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Mol	Chain	Res	Type
25	BA	1398	U
25	BA	1405	A
25	BA	1406	A
25	BA	1411	A
25	BA	1416	C
25	BA	1417	G
25	BA	1418	U
25	BA	1426	G
25	BA	1430	A
25	BA	1431	G
25	BA	1432	C
25	BA	1462	G
25	BA	1463	C
25	BA	1466	U
25	BA	1467	G
25	BA	1468	G
25	BA	1474	C
25	BA	1487	G
25	BA	1491	A
25	BA	1496	A
25	BA	1507	A
25	BA	1514	C
25	BA	1518	A
25	BA	1519	A
25	BA	1525	G
25	BA	1529	G
25	BA	1536	A
25	BA	1539	C
25	BA	1554	A
25	BA	1555	C
25	BA	1556	A
25	BA	1569	U
25	BA	1574	A
25	BA	1578	C
25	BA	1579	C
25	BA	1589	A
25	BA	1590	C
25	BA	1592	A
25	BA	1605	A
25	BA	1613	A
25	BA	1616	A
25	BA	1625	U

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Mol	Chain	Res	Type
25	BA	1628	G
25	BA	1631	C
25	BA	1632	A
25	BA	1654	A
25	BA	1655	A
25	BA	1656	A
25	BA	1660	A
25	BA	1686	U
25	BA	1694	G
25	BA	1695	C
25	BA	1696	G
25	BA	1701	A
25	BA	1711	A
25	BA	1721	G
25	BA	1722	C
25	BA	1735	U
25	BA	1742	G
25	BA	1743	G
25	BA	1747	A
25	BA	1748	A
25	BA	1766	G
25	BA	1767	A
25	BA	1768	U
25	BA	1769	G
25	BA	1776	G
25	BA	1777	G
25	BA	1779	G
25	BA	1787	G
25	BA	1791	A
25	BA	1794	G
25	BA	1795	G
25	BA	1804	A
25	BA	1811	A
25	BA	1813	C
25	BA	1822	A
25	BA	1831	C
25	BA	1832	G
25	BA	1843	A
25	BA	1847	G
25	BA	1860	A
25	BA	1870	G
25	BA	1878	A

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Mol	Chain	Res	Type
25	BA	1879	A
25	BA	1899	A
25	BA	1900	G
25	BA	1911	A
25	BA	1922	A
25	BA	1928	G
25	BA	1935	A
25	BA	1936	C
25	BA	1941	A
25	BA	1951	G
25	BA	1952	G
25	BA	1953	U
25	BA	1954	A
25	BA	1958	A
25	BA	1960	A
25	BA	1963	C
25	BA	1977	U
25	BA	1985	U
25	BA	1987	C
25	BA	1989	C
25	BA	1992	A
25	BA	1993	A
25	BA	1994	A
25	BA	2014	G
25	BA	2015	U
25	BA	2019	G
25	BA	2042	A
25	BA	2045	G
25	BA	2053	A
25	BA	2054	G
25	BA	2055	A
25	BA	2065	C
25	BA	2071	G
25	BA	2074	G
25	BA	2077	C
25	BA	2078	G
25	BA	2082	A
25	BA	2083	G
25	BA	2084	A
25	BA	2091	G
25	BA	2115	G
25	BA	2121	U

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Mol	Chain	Res	Type
25	BA	2122	G
25	BA	2212	G
25	BA	2214	G
25	BA	2217	C
25	BA	2220	A
25	BA	2227	G
25	BA	2228	G
25	BA	2229	A
25	BA	2230	U
25	BA	2237	A
25	BA	2246	G
25	BA	2250	G
25	BA	2251	G
25	BA	2260	C
25	BA	2264	G
25	BA	2280	A
25	BA	2281	A
25	BA	2285	A
25	BA	2287	C
25	BA	2295	C
25	BA	2299	A
25	BA	2301	G
25	BA	2306	C
25	BA	2308	U
25	BA	2317	A
25	BA	2320	G
25	BA	2326	C
25	BA	2332	A
25	BA	2337	G
25	BA	2339	A
25	BA	2346	G
25	BA	2347	A
25	BA	2348	A
25	BA	2353	G
25	BA	2355	C
25	BA	2359	C
25	BA	2362	C
25	BA	2366	G
25	BA	2373	A
25	BA	2384	G
25	BA	2388	A
25	BA	2391	G

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Mol	Chain	Res	Type
25	BA	2395	G
25	BA	2397	C
25	BA	2401	G
25	BA	2412	G
25	BA	2418	U
25	BA	2422	G
25	BA	2430	A
25	BA	2434	A
25	BA	2435	U
25	BA	2436	C
25	BA	2437	A
25	BA	2441	G
25	BA	2442	A
25	BA	2443	U
25	BA	2447	A
25	BA	2451	A
25	BA	2453	C
25	BA	2459	G
25	BA	2460	A
25	BA	2480	G
25	BA	2481	A
25	BA	2486	C
25	BA	2488	A
25	BA	2490	A
25	BA	2510	C
25	BA	2514	G
25	BA	2517	G
25	BA	2518	U
25	BA	2530	A
25	BA	2532	C
25	BA	2537	G
25	BA	2541	G
25	BA	2547	G
25	BA	2566	U
25	BA	2578	A
25	BA	2579	G
25	BA	2594	G
25	BA	2614	A
25	BA	2615	G
25	BA	2621	U
25	BA	2622	C
25	BA	2623	U

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Mol	Chain	Res	Type
25	BA	2624	C
25	BA	2632	C
25	BA	2641	A
25	BA	2642	G
25	BA	2653	G
25	BA	2666	A
25	BA	2674	A
25	BA	2690	C
25	BA	2691	A
25	BA	2701	U
25	BA	2702	C
25	BA	2703	C
25	BA	2714	U
25	BA	2715	C
25	BA	2719	G
25	BA	2725	A
25	BA	2726	A
25	BA	2727	G
25	BA	2739	U
25	BA	2746	A
25	BA	2764	G
25	BA	2770	A
25	BA	2771	A
25	BA	2777	A
25	BA	2778	A
25	BA	2779	G
25	BA	2782	C
25	BA	2788	A
25	BA	2791	A
25	BA	2803	A
25	BA	2804	C
25	BA	2807	C
25	BA	2813	G
25	BA	2816	G
25	BA	2828	G
25	BA	2830	A
25	BA	2831	A
25	BA	2843	G
25	BA	2845	A
25	BA	2849	G
25	BA	2876	U
25	BA	2882	G

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Mol	Chain	Res	Type
25	BA	2883	A
25	BA	2884	C
25	BA	2890	C
25	BA	2893	A
25	BA	2899	C
25	BA	2901	A
25	BA	2903	G
25	BA	2906	U
26	BB	2	C
26	BB	7	G
26	BB	12	C
26	BB	13	A
26	BB	34	U
26	BB	42	C
26	BB	56	G
26	BB	59	A
26	BB	73	A
26	BB	75	G
26	BB	85	G
26	BB	88	C
26	BB	89	G
26	BB	93	G
26	BB	106	G
26	BB	110	G
26	BB	112	U
26	BB	119	G
1	CA	7	G
1	CA	9	G
1	CA	15	G
1	CA	22	G
1	CA	32	A
1	CA	39	G
1	CA	44	G
1	CA	47	C
1	CA	48	C
1	CA	50	A
1	CA	51	A
1	CA	59	A
1	CA	63	C
1	CA	65	U
1	CA	66	G
1	CA	69	G

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Mol	Chain	Res	Type
1	CA	77	G
1	CA	78	G
1	CA	79	G
1	CA	80	G
1	CA	88	A
1	CA	89	C
1	CA	96	U
1	CA	97	G
1	CA	98	G
1	CA	101	A
1	CA	102	G
1	CA	112	G
1	CA	115	G
1	CA	116	A
1	CA	121	C
1	CA	129(A)	G
1	CA	131	C
1	CA	138	G
1	CA	142	G
1	CA	144	G
1	CA	163	C
1	CA	165	C
1	CA	166	G
1	CA	171	A
1	CA	173	U
1	CA	174	C
1	CA	180	U
1	CA	181	G
1	CA	182	U
1	CA	189(D)	C
1	CA	189(F)	U
1	CA	190	U
1	CA	193	C
1	CA	194	C
1	CA	195	A
1	CA	197	A
1	CA	199	G
1	CA	201	C
1	CA	203	U
1	CA	204	U
1	CA	216	G
1	CA	220	G

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Mol	Chain	Res	Type
1	CA	247	G
1	CA	251	G
1	CA	258	G
1	CA	265	G
1	CA	266	G
1	CA	267	C
1	CA	269	C
1	CA	277	C
1	CA	281	G
1	CA	289	G
1	CA	298	A
1	CA	321	A
1	CA	328	C
1	CA	332	G
1	CA	342	C
1	CA	344	A
1	CA	346	G
1	CA	351	G
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	355	C
1	CA	367	U
1	CA	372	C
1	CA	373	A
1	CA	383	A
1	CA	388	G
1	CA	396	G
1	CA	397	A
1	CA	398	C
1	CA	403	C
1	CA	406	G
1	CA	409	G
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	415	A
1	CA	422	C
1	CA	424	G
1	CA	427	U
1	CA	429	U

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Mol	Chain	Res	Type
1	CA	430	A
1	CA	439	A
1	CA	442	C
1	CA	452	A
1	CA	461	A
1	CA	471	G
1	CA	474	G
1	CA	484	G
1	CA	485	G
1	CA	492	G
1	CA	496	A
1	CA	498	U
1	CA	505	G
1	CA	509	A
1	CA	510	A
1	CA	511	C
1	CA	513	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	544	G
1	CA	547	A
1	CA	553	A
1	CA	559	A
1	CA	561	U
1	CA	571	U
1	CA	572	A
1	CA	573	A
1	CA	576	G
1	CA	592	G
1	CA	596	C
1	CA	597	G
1	CA	600	C
1	CA	606	G
1	CA	626	U
1	CA	630	G
1	CA	631	G
1	CA	633	G

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Mol	Chain	Res	Type
1	CA	639	G
1	CA	641	U
1	CA	650	G
1	CA	651	C
1	CA	653	A
1	CA	665	A
1	CA	673	G
1	CA	680	C
1	CA	687	A
1	CA	688	G
1	CA	693	G
1	CA	711	G
1	CA	721	G
1	CA	723	U
1	CA	724	G
1	CA	731	G
1	CA	752	G
1	CA	755	G
1	CA	760	G
1	CA	774	G
1	CA	777	A
1	CA	786	G
1	CA	792	A
1	CA	793	U
1	CA	794	A
1	CA	802	A
1	CA	806	C
1	CA	812	C
1	CA	815	A
1	CA	816	A
1	CA	817	C
1	CA	818	G
1	CA	821	G
1	CA	827	U
1	CA	828	A
1	CA	829	G
1	CA	836	G
1	CA	839	U
1	CA	840	C
1	CA	841	U
1	CA	851	G
1	CA	855	G

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Mol	Chain	Res	Type
1	CA	858	G
1	CA	859	A
1	CA	873	A
1	CA	876	G
1	CA	902	G
1	CA	914	A
1	CA	916	G
1	CA	922	G
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	942	G
1	CA	958	A
1	CA	960	U
1	CA	961	U
1	CA	967	C
1	CA	968	A
1	CA	969	A
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	982	U
1	CA	983	A
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	995	C
1	CA	1001	A
1	CA	1001(A)	G
1	CA	1002	G
1	CA	1003	G
1	CA	1004	A
1	CA	1005	A
1	CA	1006	C
1	CA	1007	C
1	CA	1011	G
1	CA	1013	G
1	CA	1014	A

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Mol	Chain	Res	Type
1	CA	1019	C
1	CA	1020	U
1	CA	1022	G
1	CA	1025	U
1	CA	1026	G
1	CA	1027	C
1	CA	1028	C
1	CA	1030	C
1	CA	1030(A)	G
1	CA	1030(C)	G
1	CA	1031	G
1	CA	1033	G
1	CA	1035	A
1	CA	1036	G
1	CA	1037	C
1	CA	1039	C
1	CA	1041	A
1	CA	1042	G
1	CA	1043	C
1	CA	1052	U
1	CA	1053	G
1	CA	1054	C
1	CA	1055	A
1	CA	1063	C
1	CA	1065	U
1	CA	1066	C
1	CA	1068	G
1	CA	1070	U
1	CA	1076	C
1	CA	1081	G
1	CA	1087	G
1	CA	1089	G
1	CA	1091	U
1	CA	1092	A
1	CA	1093	A
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1104	G
1	CA	1108	G
1	CA	1109	C
1	CA	1117	G

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Mol	Chain	Res	Type
1	CA	1119	C
1	CA	1120	G
1	CA	1122	U
1	CA	1124	G
1	CA	1125	U
1	CA	1128	C
1	CA	1129	C
1	CA	1130	A
1	CA	1132	C
1	CA	1134	G
1	CA	1135	U
1	CA	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1141	C
1	CA	1145	C
1	CA	1146	A
1	CA	1147	C
1	CA	1151	A
1	CA	1152	A
1	CA	1154	G
1	CA	1157	A
1	CA	1159	U
1	CA	1160	G
1	CA	1161	C
1	CA	1163	C
1	CA	1171	G
1	CA	1173	G
1	CA	1176	A
1	CA	1181	G
1	CA	1183	A
1	CA	1184	G
1	CA	1189	C
1	CA	1193	G
1	CA	1196	U
1	CA	1197	G
1	CA	1200	C
1	CA	1202	G
1	CA	1204	A
1	CA	1211	U
1	CA	1212	U

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Mol	Chain	Res	Type
1	CA	1213	A
1	CA	1214	C
1	CA	1223	C
1	CA	1224	G
1	CA	1227	A
1	CA	1235	U
1	CA	1236	A
1	CA	1238	A
1	CA	1250	A
1	CA	1256	A
1	CA	1257	U
1	CA	1258	G
1	CA	1259	C
1	CA	1260	C
1	CA	1262	C
1	CA	1270	C
1	CA	1271	G
1	CA	1273	G
1	CA	1278	U
1	CA	1279	A
1	CA	1280	A
1	CA	1281	U
1	CA	1282	C
1	CA	1283	G
1	CA	1284	C
1	CA	1287	A
1	CA	1297	C
1	CA	1299	A
1	CA	1300	G
1	CA	1305	G
1	CA	1311	G
1	CA	1314	C
1	CA	1317	C
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1338	G
1	CA	1340	A
1	CA	1343	G
1	CA	1346	A
1	CA	1347	G
1	CA	1353	G

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Mol	Chain	Res	Type
1	CA	1354	C
1	CA	1358	U
1	CA	1360	A
1	CA	1361	G
1	CA	1363	C
1	CA	1370	G
1	CA	1377	A
1	CA	1379	G
1	CA	1393	U
1	CA	1396	A
1	CA	1397	C
1	CA	1402	C
1	CA	1419	G
1	CA	1422	G
1	CA	1442	G
1	CA	1442(A)	G
1	CA	1442(B)	A
1	CA	1447	A
1	CA	1456	G
1	CA	1457	G
1	CA	1469	G
1	CA	1487	G
1	CA	1489	G
1	CA	1493	A
1	CA	1497	G
1	CA	1502	A
1	CA	1503	A
1	CA	1504	G
1	CA	1506	U
1	CA	1517	G
1	CA	1519	A
1	CA	1520	G
1	CA	1529	G
1	CA	1530	G
1	CA	1531	A
1	CA	1532	U
22	CV	15	A
23	CX	6	G
23	CX	9	G
23	CX	13	C
23	CX	19	G
23	CX	20	U

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Mol	Chain	Res	Type
23	CX	21	A
23	CX	28	C
23	CX	31	G
23	CX	42	G
23	CX	47	U
23	CX	48	C
23	CX	60	U
23	CX	61	C
23	CX	68	C
23	CX	70	G
23	CX	76	A
25	DA	8	A
25	DA	10	G
25	DA	12	U
25	DA	15	G
25	DA	32	C
25	DA	34	C
25	DA	35	G
25	DA	36	G
25	DA	41	C
25	DA	45	C
25	DA	55	G
25	DA	61	G
25	DA	71	A
25	DA	74	A
25	DA	75	G
25	DA	83	G
25	DA	84	A
25	DA	90	U
25	DA	95	G
25	DA	100	G
25	DA	102	G
25	DA	118	A
25	DA	119	A
25	DA	120	U
25	DA	125	G
25	DA	133	C
25	DA	141	A
25	DA	149	A
25	DA	154(A)	C
25	DA	157	U
25	DA	173	G

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Mol	Chain	Res	Type
25	DA	180	G
25	DA	181	A
25	DA	182	A
25	DA	188	G
25	DA	196	A
25	DA	199	A
25	DA	205	G
25	DA	214	G
25	DA	215	G
25	DA	216	A
25	DA	221	A
25	DA	222	A
25	DA	225	A
25	DA	229	A
25	DA	233	A
25	DA	248	G
25	DA	250	G
25	DA	266	G
25	DA	267	C
25	DA	271(E)	U
25	DA	271(H)	G
25	DA	271(J)	C
25	DA	271(K)	U
25	DA	271(L)	U
25	DA	271(M)	G
25	DA	271(N)	U
25	DA	271(T)	C
25	DA	272(A)	U
25	DA	272(B)	G
25	DA	277	C
25	DA	278	A
25	DA	292	C
25	DA	304	G
25	DA	311	A
25	DA	312	G
25	DA	324	A
25	DA	327	G
25	DA	329	G
25	DA	330	A
25	DA	333	G
25	DA	338	G
25	DA	339	U

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Mol	Chain	Res	Type
25	DA	342	G
25	DA	348	G
25	DA	351	G
25	DA	352	G
25	DA	363	G
25	DA	363(C)	G
25	DA	386	G
25	DA	396	G
25	DA	399	G
25	DA	405	U
25	DA	407	G
25	DA	411	G
25	DA	412	A
25	DA	415	A
25	DA	428	A
25	DA	437	G
25	DA	438	G
25	DA	443	A
25	DA	444	C
25	DA	454	A
25	DA	455	C
25	DA	456	C
25	DA	457	A
25	DA	470	A
25	DA	480	A
25	DA	481	G
25	DA	504	U
25	DA	505	A
25	DA	509	C
25	DA	524	U
25	DA	527	C
25	DA	528	A
25	DA	529	A
25	DA	530	G
25	DA	531	C
25	DA	532	A
25	DA	533	G
25	DA	545	G
25	DA	563	G
25	DA	568	U
25	DA	573	G
25	DA	575	A

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Mol	Chain	Res	Type
25	DA	586	A
25	DA	587	C
25	DA	592	G
25	DA	603	A
25	DA	604	G
25	DA	606	U
25	DA	607	U
25	DA	610	G
25	DA	614(B)	G
25	DA	614(C)	A
25	DA	615	G
25	DA	631	A
25	DA	634	C
25	DA	637	A
25	DA	645	C
25	DA	646	A
25	DA	652(B)	A
25	DA	652(C)	G
25	DA	652(E)	G
25	DA	652(U)	G
25	DA	669	G
25	DA	670	A
25	DA	686	G
25	DA	717	G
25	DA	726	G
25	DA	730	C
25	DA	747	U
25	DA	749	C
25	DA	752	A
25	DA	753	C
25	DA	765	G
25	DA	771	G
25	DA	775	G
25	DA	776	G
25	DA	782	A
25	DA	784	A
25	DA	785	G
25	DA	790	C
25	DA	792	G
25	DA	805	G
25	DA	812	C
25	DA	819	A

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Mol	Chain	Res	Type
25	DA	827	U
25	DA	854	G
25	DA	857	C
25	DA	859	G
25	DA	866	A
25	DA	867	C
25	DA	869	G
25	DA	871	U
25	DA	874	G
25	DA	878	A
25	DA	879	G
25	DA	880	G
25	DA	884	C
25	DA	886	C
25	DA	887	A
25	DA	888	C
25	DA	889	C
25	DA	890	A
25	DA	895	U
25	DA	896	A
25	DA	897	C
25	DA	898	C
25	DA	899	A
25	DA	900	A
25	DA	901	A
25	DA	910	A
25	DA	911	A
25	DA	913	U
25	DA	914	C
25	DA	917	A
25	DA	923	C
25	DA	926	A
25	DA	932	G
25	DA	938	G
25	DA	941	A
25	DA	945	A
25	DA	946	G
25	DA	953	A
25	DA	957	A
25	DA	958	U
25	DA	959	A
25	DA	961	C

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Mol	Chain	Res	Type
25	DA	974	G
25	DA	975	C
25	DA	983	A
25	DA	996	A
25	DA	1010	A
25	DA	1012	U
25	DA	1013	C
25	DA	1020	A
25	DA	1022	G
25	DA	1023	U
25	DA	1025	G
25	DA	1027	A
25	DA	1033	U
25	DA	1034	G
25	DA	1038	C
25	DA	1039	G
25	DA	1040	C
25	DA	1041	C
25	DA	1043	C
25	DA	1114	G
25	DA	1115	G
25	DA	1118	C
25	DA	1119	C
25	DA	1130	U
25	DA	1135	C
25	DA	1136	G
25	DA	1139	G
25	DA	1142(A)	A
25	DA	1155	A
25	DA	1170	G
25	DA	1171	G
25	DA	1186	G
25	DA	1204	A
25	DA	1205	U
25	DA	1210	A
25	DA	1211	U
25	DA	1219	G
25	DA	1220	A
25	DA	1230	C
25	DA	1249	U
25	DA	1253	A
25	DA	1256	G

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Mol	Chain	Res	Type
25	DA	1271	G
25	DA	1272	A
25	DA	1273	U
25	DA	1284	A
25	DA	1287	A
25	DA	1300	U
25	DA	1301	A
25	DA	1313	U
25	DA	1314	C
25	DA	1315	C
25	DA	1321	A
25	DA	1332	G
25	DA	1345	C
25	DA	1359	A
25	DA	1360	A
25	DA	1365	A
25	DA	1366	A
25	DA	1368	G
25	DA	1370	C
25	DA	1380	G
25	DA	1384	A
25	DA	1385	G
25	DA	1386	C
25	DA	1395	A
25	DA	1403	C
25	DA	1410	G
25	DA	1411	C
25	DA	1416	G
25	DA	1417	C
25	DA	1419	A
25	DA	1420	U
25	DA	1421	G
25	DA	1427	A
25	DA	1428	C
25	DA	1437	C
25	DA	1445	A
25	DA	1445(A)	C
25	DA	1449	A
25	DA	1450	G
25	DA	1455	G
25	DA	1459	G
25	DA	1466	G

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Mol	Chain	Res	Type
25	DA	1467	C
25	DA	1471	A
25	DA	1482	G
25	DA	1490	A
25	DA	1492	G
25	DA	1493	C
25	DA	1495	A
25	DA	1496	A
25	DA	1497	U
25	DA	1504	C
25	DA	1508	A
25	DA	1509	C
25	DA	1509(A)	A
25	DA	1531	C
25	DA	1541	G
25	DA	1542	A
25	DA	1543	C
25	DA	1547	C
25	DA	1554	A
25	DA	1558	A
25	DA	1559	G
25	DA	1566	A
25	DA	1569	A
25	DA	1578	U
25	DA	1580	A
25	DA	1586	A
25	DA	1588	C
25	DA	1595	G
25	DA	1598	C
25	DA	1603	A
25	DA	1608	A
25	DA	1609	A
25	DA	1610	A
25	DA	1613	G
25	DA	1618	A
25	DA	1625	C
25	DA	1631(A)	A
25	DA	1632	A
25	DA	1640	C
25	DA	1648	C
25	DA	1654	A
25	DA	1674	G

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Mol	Chain	Res	Type
25	DA	1676	A
25	DA	1682	G
25	DA	1696	G
25	DA	1700	A
25	DA	1701	A
25	DA	1703	G
25	DA	1718	G
25	DA	1721	G
25	DA	1722	A
25	DA	1740	G
25	DA	1746	G
25	DA	1756	G
25	DA	1762	A
25	DA	1763	G
25	DA	1764	G
25	DA	1773	A
25	DA	1780	A
25	DA	1782	C
25	DA	1786	A
25	DA	1791	A
25	DA	1800	C
25	DA	1801	G
25	DA	1812	A
25	DA	1816	G
25	DA	1823	G
25	DA	1829	A
25	DA	1835	G
25	DA	1836	C
25	DA	1847	A
25	DA	1848	A
25	DA	1860	G
25	DA	1877	A
25	DA	1878	G
25	DA	1881	C
25	DA	1900	A
25	DA	1906	G
25	DA	1913	A
25	DA	1914	C
25	DA	1926	U
25	DA	1929	G
25	DA	1930	G
25	DA	1931	U

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Mol	Chain	Res	Type
25	DA	1936	A
25	DA	1938	A
25	DA	1955	U
25	DA	1960	A
25	DA	1963	U
25	DA	1966	A
25	DA	1967	C
25	DA	1970	A
25	DA	1971	A
25	DA	1972	A
25	DA	1984	G
25	DA	1993	U
25	DA	1997	G
25	DA	2005	A
25	DA	2020	A
25	DA	2021	C
25	DA	2023	G
25	DA	2031	A
25	DA	2032	G
25	DA	2033	A
25	DA	2034	U
25	DA	2039	C
25	DA	2043	C
25	DA	2049	G
25	DA	2055	C
25	DA	2056	G
25	DA	2060	A
25	DA	2061	G
25	DA	2062	A
25	DA	2069	G
25	DA	2076	U
25	DA	2082	A
25	DA	2093	G
25	DA	2097	C
25	DA	2099	U
25	DA	2101	G
25	DA	2189	U
25	DA	2192	G
25	DA	2193	G
25	DA	2198	A
25	DA	2206	G
25	DA	2207	G

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Mol	Chain	Res	Type
25	DA	2208	A
25	DA	2218	U
25	DA	2219	G
25	DA	2225	A
25	DA	2235	G
25	DA	2238	G
25	DA	2239	G
25	DA	2243	U
25	DA	2251	G
25	DA	2267	A
25	DA	2268	A
25	DA	2269	A
25	DA	2275	C
25	DA	2278	A
25	DA	2279	G
25	DA	2283	C
25	DA	2286	A
25	DA	2287	A
25	DA	2289	G
25	DA	2291	U
25	DA	2298	A
25	DA	2303	G
25	DA	2305	A
25	DA	2308	G
25	DA	2312	U
25	DA	2318	G
25	DA	2319	G
25	DA	2320	A
25	DA	2321	G
25	DA	2325	G
25	DA	2327	A
25	DA	2334	G
25	DA	2335	A
25	DA	2336	A
25	DA	2343	C
25	DA	2347	C
25	DA	2348	U
25	DA	2359	C
25	DA	2376	A
25	DA	2383	G
25	DA	2384	G
25	DA	2385	C

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Mol	Chain	Res	Type
25	DA	2388	A
25	DA	2391	G
25	DA	2401	U
25	DA	2402	C
25	DA	2406	U
25	DA	2410	G
25	DA	2413	G
25	DA	2414	G
25	DA	2422	A
25	DA	2425	A
25	DA	2429	G
25	DA	2430	A
25	DA	2434	A
25	DA	2435	A
25	DA	2439	A
25	DA	2441	C
25	DA	2448	A
25	DA	2465	C
25	DA	2468	G
25	DA	2469	A
25	DA	2474	C
25	DA	2476	A
25	DA	2487	G
25	DA	2492	U
25	DA	2497	A
25	DA	2502	G
25	DA	2505	G
25	DA	2518	A
25	DA	2520	C
25	DA	2525	G
25	DA	2529	G
25	DA	2549	G
25	DA	2554	U
25	DA	2566	A
25	DA	2567	G
25	DA	2586	C
25	DA	2602	A
25	DA	2609	U
25	DA	2611	U
25	DA	2612	C
25	DA	2615	U
25	DA	2629	A

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Mol	Chain	Res	Type
25	DA	2630	G
25	DA	2632	A
25	DA	2654	A
25	DA	2663	G
25	DA	2689	U
25	DA	2690	C
25	DA	2691	C
25	DA	2703	C
25	DA	2712(A)	A
25	DA	2713	A
25	DA	2717	G
25	DA	2726	U
25	DA	2733	A
25	DA	2751	G
25	DA	2752	C
25	DA	2757	A
25	DA	2758	A
25	DA	2761	G
25	DA	2764	A
25	DA	2765	A
25	DA	2766	G
25	DA	2778	A
25	DA	2779	U
25	DA	2780	G
25	DA	2789	C
25	DA	2793	G
25	DA	2802	G
25	DA	2803	C
25	DA	2804	C
25	DA	2818	G
25	DA	2820	A
25	DA	2821	A
25	DA	2833	G
25	DA	2835	A
25	DA	2872	G
25	DA	2879	C
25	DA	2880	C
25	DA	2892	A
25	DA	2893	G
25	DA	2894	G
25	DA	2895	U
25	DA	2897	U

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Mol	Chain	Res	Type
26	DB	2	C
26	DB	7	G
26	DB	8	U
26	DB	12	C
26	DB	13	A
26	DB	34	U
26	DB	42	C
26	DB	45	A
26	DB	46	A
26	DB	56	G
26	DB	59	A
26	DB	72	G
26	DB	73	A
26	DB	75	G
26	DB	85	G
26	DB	88	C
26	DB	89	G
26	DB	90	A
26	DB	93	G
26	DB	106	G
26	DB	110	G
26	DB	112	U
26	DB	116	G
26	DB	119	G

All (134) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	97	G
1	AA	115	G
1	AA	148	G
1	AA	266	G
1	AA	429	U
1	AA	509	A
1	AA	532	A
1	AA	560	U
1	AA	687	A
1	AA	793	U
1	AA	913	A
1	AA	991	U
1	AA	1027	C
1	AA	1042	G

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Mol	Chain	Res	Type
1	AA	1054	C
1	AA	1064	G
1	AA	1065	U
1	AA	1067	A
1	AA	1125	U
1	AA	1165	C
1	AA	1201	A
1	AA	1256	A
1	AA	1285	A
1	AA	1299	A
1	AA	1442	G
25	BA	70	A
25	BA	99	G
25	BA	184	A
25	BA	185	A
25	BA	273	G
25	BA	302	A
25	BA	553	A
25	BA	716	G
25	BA	732	A
25	BA	793	A
25	BA	811	A
25	BA	821	A
25	BA	874	U
25	BA	945	A
25	BA	990	A
25	BA	1003	U
25	BA	1019	G
25	BA	1219	A
25	BA	1220	U
25	BA	1221	G
25	BA	1255	A
25	BA	1425	A
25	BA	1466	U
25	BA	1507	A
25	BA	1577	C
25	BA	1654	A
25	BA	1655	A
25	BA	1700	G
25	BA	1793	A
25	BA	2014	G
25	BA	2228	G

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Mol	Chain	Res	Type
25	BA	2347	A
25	BA	2418	U
25	BA	2434	A
25	BA	2442	A
25	BA	2623	U
25	BA	2701	U
25	BA	2763	A
25	BA	2769	U
25	BA	2902	G
1	CA	4	U
1	CA	5	U
1	CA	65	U
1	CA	97	G
1	CA	115	G
1	CA	204	U
1	CA	266	G
1	CA	429	U
1	CA	509	A
1	CA	532	A
1	CA	560	U
1	CA	687	A
1	CA	793	U
1	CA	913	A
1	CA	991	U
1	CA	992	U
1	CA	1005	A
1	CA	1027	C
1	CA	1054	C
1	CA	1064	G
1	CA	1065	U
1	CA	1067	A
1	CA	1128	C
1	CA	1137	C
1	CA	1183	A
1	CA	1201	A
1	CA	1212	U
1	CA	1256	A
1	CA	1299	A
1	CA	1442	G
1	CA	1531	A
25	DA	195	A
25	DA	249	C

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Mol	Chain	Res	Type
25	DA	271(M)	G
25	DA	277	C
25	DA	310	A
25	DA	503	A
25	DA	528	A
25	DA	620	G
25	DA	669	G
25	DA	685	A
25	DA	752	A
25	DA	827	U
25	DA	856	C
25	DA	900	A
25	DA	1026	U
25	DA	1210	A
25	DA	1378	A
25	DA	1379	A
25	DA	1395	A
25	DA	1420	U
25	DA	1427	A
25	DA	1530	C
25	DA	1543	C
25	DA	1558	A
25	DA	1559	G
25	DA	1608	A
25	DA	1653	G
25	DA	1790	C
25	DA	1992	G
25	DA	2318	G
25	DA	2335	A
25	DA	2406	U
25	DA	2439	A
25	DA	2611	U
25	DA	2689	U
25	DA	2750	A
25	DA	2756	U
26	DB	45	A

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

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

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	004	AW	3	24	9,10,11	0.97	1 (11%)	9,12,14	1.20	2 (22%)
24	004	CW	3	24	9,10,11	1.22	1 (11%)	9,12,14	0.97	0
24	2R1	AW	6	24	10,10,11	1.78	3 (30%)	6,13,15	5.49	2 (33%)
24	MVA	AW	9	24	6,7,8	0.46	0	7,8,10	0.95	1 (14%)
24	2R3	AW	8	24	12,14,15	0.80	0	16,18,20	1.73	5 (31%)
24	2QZ	CW	1	24	7,8,9	0.61	0	8,10,12	3.72	2 (25%)
24	MVA	CW	9	24	6,7,8	0.97	1 (16%)	7,8,10	1.53	1 (14%)
24	2R1	CW	6	24	10,10,11	1.86	2 (20%)	6,13,15	4.48	2 (33%)
24	2QY	AW	10	24	12,13,14	2.00	1 (8%)	13,16,18	3.53	4 (30%)
24	2QY	CW	10	24	12,13,14	2.25	2 (16%)	13,16,18	2.99	2 (15%)
24	2QZ	AW	1	24	7,8,9	0.38	0	8,10,12	4.18	1 (12%)
24	MVA	CW	5	24	6,7,8	0.70	0	7,8,10	1.42	1 (14%)
24	MVA	AW	5	24	6,7,8	0.37	0	7,8,10	1.11	0
24	2R3	CW	8	24	12,14,15	0.66	0	16,18,20	1.63	5 (31%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	004	AW	3	24	-	0/4/6/8	0/1/1/1
24	004	CW	3	24	-	0/4/6/8	0/1/1/1
24	2R1	AW	6	24	-	1/2/14/16	0/1/1/1
24	MVA	AW	9	24	-	5/6/8/10	-
24	2R3	AW	8	24	-	4/11/12/14	0/1/1/1
24	2QZ	CW	1	24	-	2/6/10/12	-
24	MVA	CW	9	24	-	5/6/8/10	-
24	2R1	CW	6	24	-	0/2/14/16	0/1/1/1
24	2QY	AW	10	24	-	3/4/8/10	0/1/1/1
24	2QY	CW	10	24	-	2/4/8/10	0/1/1/1
24	2QZ	AW	1	24	-	3/6/10/12	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	MVA	CW	5	24	-	6/6/8/10	-
24	MVA	AW	5	24	-	3/6/8/10	-
24	2R3	CW	8	24	-	7/11/12/14	0/1/1/1

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	CW	10	2QY	C-CA	6.88	1.53	1.43
24	AW	10	2QY	C-CA	6.24	1.52	1.43
24	CW	6	2R1	CA-N	3.90	1.46	1.36
24	AW	6	2R1	CA-N	3.57	1.45	1.36
24	CW	6	2R1	C-CA	3.43	1.50	1.45
24	CW	10	2QY	CG-CB	3.19	1.53	1.46
24	CW	3	004	CB-CA	-3.04	1.49	1.52
24	AW	6	2R1	OD1-CG1	2.31	1.55	1.43
24	CW	9	MVA	CB-CA	2.26	1.58	1.54
24	AW	6	2R1	C-CA	2.19	1.48	1.45
24	AW	3	004	CA-C	2.12	1.55	1.51

All (28) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	AW	6	2R1	OD2-CG2-CB	-12.79	88.98	112.24
24	AW	1	2QZ	OG1-CB-CG2	11.22	142.97	109.74
24	CW	6	2R1	OD2-CG2-CB	-10.33	93.46	112.24
24	AW	10	2QY	CN-N-CA	-10.27	107.83	123.45
24	CW	1	2QZ	OG1-CB-CG2	9.77	138.68	109.74
24	CW	10	2QY	CN-N-CA	-9.36	109.22	123.45
24	AW	10	2QY	O-C-CA	-5.65	118.21	125.39
24	CW	10	2QY	O-C-CA	-4.86	119.21	125.39
24	AW	6	2R1	O-C-CA	-3.42	119.16	125.54
24	AW	8	2R3	OB-CB-CA	3.41	114.47	107.28
24	AW	10	2QY	CG-CB-CA	-3.40	123.86	130.62
24	CW	6	2R1	O-C-CA	-3.17	119.62	125.54
24	CW	8	2R3	CO-OH-CZ	-3.10	110.78	117.51
24	AW	8	2R3	CE2-CD2-CG	3.01	124.22	121.20
24	CW	5	MVA	CB-CA-N	2.95	115.01	111.17
24	CW	8	2R3	CD2-CE2-CZ	-2.70	116.43	119.73
24	CW	8	2R3	CE2-CD2-CG	2.50	123.71	121.20
24	CW	1	2QZ	CB-CA-C	-2.35	108.03	111.77
24	CW	8	2R3	O-C-CA	-2.28	118.81	124.78

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	AW	8	2R3	CD2-CE2-CZ	-2.27	116.95	119.73
24	AW	8	2R3	CO-OH-CZ	-2.26	112.62	117.51
24	AW	10	2QY	CD1-CG-CD2	2.24	120.96	117.64
24	AW	8	2R3	CD1-CE1-CZ	2.21	122.43	119.73
24	AW	9	MVA	O-C-CA	-2.13	118.89	124.83
24	CW	9	MVA	CB-CA-N	2.10	113.91	111.17
24	CW	8	2R3	OB-CB-CA	2.07	111.64	107.28
24	AW	3	004	CG1-CB-CA	-2.05	117.35	120.65
24	AW	3	004	CG2-CB-CA	2.03	123.92	120.65

There are no chirality outliers.

All (41) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
24	AW	1	2QZ	N-CA-CB-OG1
24	AW	1	2QZ	N-CA-CB-CG2
24	AW	1	2QZ	C-CA-CB-OG1
24	AW	5	MVA	CB-CA-N-CN
24	AW	5	MVA	C-CA-CB-CG1
24	AW	5	MVA	C-CA-CB-CG2
24	AW	8	2R3	N-CA-CB-OB
24	AW	8	2R3	N-CA-CB-CG
24	AW	8	2R3	C-CA-CB-OB
24	AW	8	2R3	C-CA-CB-CG
24	AW	9	MVA	N-CA-CB-CG1
24	AW	9	MVA	N-CA-CB-CG2
24	AW	9	MVA	C-CA-CB-CG1
24	AW	9	MVA	C-CA-CB-CG2
24	CW	1	2QZ	N-CA-CB-OG1
24	CW	5	MVA	N-CA-CB-CG1
24	CW	5	MVA	N-CA-CB-CG2
24	CW	5	MVA	C-CA-CB-CG1
24	CW	5	MVA	C-CA-CB-CG2
24	CW	8	2R3	N-CA-CB-OB
24	CW	8	2R3	N-CA-CB-CG
24	CW	8	2R3	C-CA-CB-OB
24	CW	8	2R3	C-CA-CB-CG
24	CW	9	MVA	N-CA-CB-CG1
24	CW	9	MVA	N-CA-CB-CG2
24	CW	9	MVA	C-CA-CB-CG1
24	CW	9	MVA	C-CA-CB-CG2
24	AW	10	2QY	O-C-CA-CB

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Mol	Chain	Res	Type	Atoms
24	CW	10	2QY	O-C-CA-CB
24	AW	10	2QY	CA-CB-CG-CD2
24	AW	10	2QY	CA-CB-CG-CD1
24	CW	8	2R3	CE2-CZ-OH-CO
24	CW	8	2R3	CE1-CZ-OH-CO
24	AW	6	2R1	CG1-CB-CG2-OD2
24	AW	9	MVA	CB-CA-N-CN
24	CW	5	MVA	CB-CA-N-CN
24	CW	9	MVA	CB-CA-N-CN
24	CW	5	MVA	O-C-CA-CB
24	CW	10	2QY	CA-CB-CG-CD1
24	CW	1	2QZ	C-CA-CB-OG1
24	CW	8	2R3	O-C-CA-CB

There are no ring outliers.

13 monomers are involved in 23 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	AW	3	004	1	0
24	CW	3	004	1	0
24	AW	6	2R1	1	0
24	AW	9	MVA	3	0
24	AW	8	2R3	1	0
24	CW	1	2QZ	2	0
24	CW	9	MVA	6	0
24	CW	6	2R1	1	0
24	AW	10	2QY	5	0
24	CW	10	2QY	9	0
24	AW	1	2QZ	2	0
24	CW	5	MVA	2	0
24	CW	8	2R3	2	0

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 1991 ligands modelled in this entry, 1987 are monoatomic - leaving 4 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
59	FME	AX	101	23	8,9,10	0.93	0	7,9,11	1.49	1 (14%)
57	SF4	CD	501	4	0,12,12	-	-	-	-	-
57	SF4	AD	501	4	0,12,12	-	-	-	-	-
59	FME	CX	101	23	8,9,10	1.05	1 (12%)	7,9,11	1.32	2 (28%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
59	FME	AX	101	23	-	3/7/9/11	-
57	SF4	CD	501	4	-	-	0/6/5/5
57	SF4	AD	501	4	-	-	0/6/5/5
59	FME	CX	101	23	-	3/7/9/11	-

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	CX	101	FME	CA-N	2.14	1.49	1.46

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	AX	101	FME	CA-N-CN	-2.85	118.44	122.82
59	CX	101	FME	CA-N-CN	-2.17	119.49	122.82
59	CX	101	FME	C-CA-N	2.10	113.52	109.73

There are no chirality outliers.

All (6) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
59	AX	101	FME	O1-CN-N-CA
59	AX	101	FME	O-C-CA-CB

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Mol	Chain	Res	Type	Atoms
59	CX	101	FME	O1-CN-N-CA
59	CX	101	FME	O-C-CA-CB
59	CX	101	FME	CA-CB-CG-SD
59	AX	101	FME	CB-CA-N-CN

There are no ring outliers.

3 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
57	CD	501	SF4	1	0
57	AD	501	SF4	1	0
59	CX	101	FME	2	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data i

6.1 Protein, DNA and RNA chains i

In the following table, the column labelled '#RSRZ > 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th 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	1498/1522 (98%)	-0.17	32 (2%) 63 43	36, 80, 103, 123	0
1	CA	1503/1522 (98%)	-0.18	34 (2%) 60 39	38, 80, 103, 122	0
2	AB	231/256 (90%)	-0.07	8 (3%) 44 23	71, 88, 98, 107	0
2	CB	231/256 (90%)	0.20	12 (5%) 27 12	71, 89, 99, 108	0
3	AC	206/239 (86%)	0.18	6 (2%) 51 28	74, 87, 96, 108	0
3	CC	206/239 (86%)	0.33	13 (6%) 20 8	75, 89, 98, 106	0
4	AD	208/209 (99%)	0.06	4 (1%) 66 46	62, 80, 92, 99	0
4	CD	208/209 (99%)	-0.15	0 100 100	61, 79, 92, 99	0
5	AE	148/162 (91%)	-0.25	0 100 100	53, 73, 83, 96	0
5	CE	148/162 (91%)	-0.22	0 100 100	54, 74, 85, 98	0
6	AF	100/101 (99%)	-0.22	0 100 100	60, 78, 89, 92	0
6	CF	100/101 (99%)	-0.32	0 100 100	62, 79, 89, 94	0
7	AG	155/156 (99%)	0.29	11 (7%) 16 6	74, 85, 97, 104	0
7	CG	155/156 (99%)	0.36	10 (6%) 18 8	76, 86, 99, 105	0
8	AH	137/138 (99%)	-0.08	0 100 100	60, 75, 83, 90	0
8	CH	137/138 (99%)	-0.15	0 100 100	61, 76, 83, 90	0
9	AI	127/128 (99%)	0.44	8 (6%) 20 8	70, 92, 99, 103	0
9	CI	127/128 (99%)	0.98	22 (17%) 1 0	69, 93, 100, 105	0
10	AJ	97/105 (92%)	0.66	12 (12%) 4 1	71, 93, 101, 106	0
10	CJ	96/105 (91%)	0.68	12 (12%) 3 1	75, 95, 102, 107	0
11	AK	114/129 (88%)	-0.24	0 100 100	53, 74, 88, 93	0
11	CK	114/129 (88%)	-0.02	3 (2%) 56 33	54, 76, 88, 93	0
12	AL	122/132 (92%)	-0.18	1 (0%) 86 72	56, 68, 80, 86	0
12	CL	122/132 (92%)	-0.19	0 100 100	55, 68, 79, 87	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AM	123/126 (97%)	0.29	9 (7%) 15 6	67, 83, 95, 104	0
13	CM	122/126 (96%)	0.58	11 (9%) 9 3	77, 91, 101, 105	0
14	AN	60/61 (98%)	0.17	2 (3%) 46 24	74, 85, 95, 97	0
14	CN	60/61 (98%)	0.56	4 (6%) 17 7	77, 88, 95, 100	0
15	AO	88/89 (98%)	-0.23	0 100 100	59, 73, 87, 94	0
15	CO	88/89 (98%)	0.04	1 (1%) 80 64	58, 73, 87, 95	0
16	AP	82/88 (93%)	0.41	2 (2%) 59 37	66, 77, 88, 95	0
16	CP	82/88 (93%)	-0.01	0 100 100	66, 76, 88, 93	0
17	AQ	99/105 (94%)	0.02	0 100 100	59, 73, 84, 87	0
17	CQ	99/105 (94%)	-0.07	1 (1%) 82 67	60, 73, 84, 85	0
18	AR	68/88 (77%)	0.16	1 (1%) 73 54	66, 76, 86, 90	0
18	CR	68/88 (77%)	0.39	0 100 100	67, 77, 87, 89	0
19	AS	83/93 (89%)	0.79	11 (13%) 3 1	79, 91, 100, 105	0
19	CS	83/93 (89%)	1.23	16 (19%) 1 0	82, 92, 102, 106	0
20	AT	96/106 (90%)	0.07	0 100 100	62, 75, 88, 91	0
20	CT	96/106 (90%)	0.09	1 (1%) 82 67	62, 75, 86, 94	0
21	AU	23/27 (85%)	1.22	5 (21%) 0 0	76, 87, 90, 91	0
21	CU	23/27 (85%)	1.16	5 (21%) 0 0	77, 87, 91, 92	0
22	AV	7/24 (29%)	0.02	0 100 100	61, 73, 97, 100	0
22	CV	6/24 (25%)	0.36	0 100 100	64, 75, 94, 103	0
23	AX	76/77 (98%)	0.02	0 100 100	48, 79, 96, 101	0
23	CX	76/77 (98%)	0.02	0 100 100	47, 81, 98, 101	0
24	AW	3/10 (30%)	-0.00	0 100 100	78, 78, 93, 96	0
24	CW	3/10 (30%)	0.56	1 (33%) 0 0	67, 67, 87, 96	0
25	BA	2731/2915 (93%)	-0.28	11 (0%) 92 84	24, 44, 86, 114	0
25	DA	2714/2915 (93%)	-0.49	18 (0%) 87 75	27, 48, 87, 118	0
26	BB	120/122 (98%)	-0.40	0 100 100	41, 68, 81, 96	0
26	DB	120/122 (98%)	-0.33	0 100 100	47, 73, 86, 98	0
27	BD	275/276 (99%)	-0.47	1 (0%) 92 84	24, 41, 62, 85	0
27	DD	275/276 (99%)	-0.47	0 100 100	25, 44, 63, 86	0
28	BE	204/206 (99%)	-0.35	0 100 100	22, 45, 68, 90	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	DE	204/206 (99%)	-0.45	0 100 100	24, 47, 70, 90	0
29	BF	203/210 (96%)	-0.33	0 100 100	24, 52, 77, 97	0
29	DF	203/210 (96%)	-0.45	0 100 100	25, 56, 79, 96	0
30	BG	181/182 (99%)	-0.30	2 (1%) 80 64	61, 76, 89, 100	0
30	DG	181/182 (99%)	0.09	5 (2%) 53 30	65, 79, 91, 100	0
31	BH	174/180 (96%)	-0.32	0 100 100	49, 67, 81, 85	0
31	DH	174/180 (96%)	0.52	17 (9%) 7 2	54, 72, 85, 89	0
32	BI	146/148 (98%)	-0.16	0 100 100	49, 77, 88, 94	0
32	DI	146/148 (98%)	0.14	5 (3%) 45 24	49, 78, 88, 94	0
33	BN	140/140 (100%)	-0.37	0 100 100	33, 48, 71, 78	0
33	DN	140/140 (100%)	-0.42	0 100 100	35, 52, 73, 81	0
34	BO	122/122 (100%)	-0.50	0 100 100	23, 40, 61, 76	0
34	DO	122/122 (100%)	-0.47	0 100 100	37, 53, 71, 80	0
35	BP	149/150 (99%)	-0.32	0 100 100	25, 54, 77, 83	0
35	DP	149/150 (99%)	-0.07	1 (0%) 87 75	27, 57, 81, 87	0
36	BQ	141/141 (100%)	-0.33	0 100 100	36, 52, 68, 79	0
36	DQ	141/141 (100%)	-0.45	0 100 100	38, 55, 71, 81	0
37	BR	118/118 (100%)	-0.50	0 100 100	20, 35, 52, 64	0
37	DR	118/118 (100%)	-0.40	0 100 100	36, 52, 68, 84	0
38	BS	110/112 (98%)	-0.43	0 100 100	35, 54, 71, 85	0
38	DS	110/112 (98%)	0.27	5 (4%) 33 16	65, 81, 92, 95	0
39	BT	131/146 (89%)	-0.48	0 100 100	31, 45, 75, 92	0
39	DT	131/146 (89%)	-0.45	0 100 100	45, 59, 80, 90	0
40	BU	116/118 (98%)	-0.64	0 100 100	21, 31, 52, 63	0
40	DU	116/118 (98%)	-0.34	1 (0%) 84 69	36, 61, 78, 92	0
41	BV	101/101 (100%)	-0.42	0 100 100	27, 53, 73, 80	0
41	DV	101/101 (100%)	-0.19	0 100 100	29, 58, 78, 80	0
42	BW	112/113 (99%)	-0.43	0 100 100	27, 38, 62, 92	0
42	DW	112/113 (99%)	-0.25	0 100 100	30, 42, 64, 94	0
43	BX	95/96 (98%)	-0.37	0 100 100	29, 47, 72, 81	0
43	DX	95/96 (98%)	-0.29	2 (2%) 63 43	33, 51, 73, 82	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	BY	107/110 (97%)	-0.19	2 (1%) 66 46	39, 61, 80, 89	0
44	DY	107/110 (97%)	0.29	4 (3%) 41 21	43, 65, 82, 92	0
45	BZ	171/206 (83%)	-0.39	0 100 100	53, 71, 85, 96	0
45	DZ	174/206 (84%)	-0.07	0 100 100	58, 74, 87, 95	0
46	B0	83/85 (97%)	-0.08	7 (8%) 11 4	25, 39, 80, 108	0
46	D0	83/85 (97%)	0.42	10 (12%) 4 2	42, 66, 86, 104	0
47	B1	97/98 (98%)	-0.27	1 (1%) 82 67	27, 44, 74, 83	0
47	D1	97/98 (98%)	-0.23	1 (1%) 82 67	35, 58, 79, 86	0
48	B2	70/72 (97%)	-0.54	0 100 100	35, 48, 64, 90	0
48	D2	70/72 (97%)	-0.26	0 100 100	59, 74, 83, 92	0
49	B3	59/60 (98%)	-0.36	0 100 100	24, 38, 63, 85	0
49	D3	59/60 (98%)	0.19	1 (1%) 70 49	45, 62, 80, 90	0
50	B4	69/71 (97%)	-0.18	1 (1%) 75 56	60, 85, 103, 105	0
50	D4	69/71 (97%)	0.38	5 (7%) 15 6	82, 96, 106, 112	0
51	B5	59/60 (98%)	-0.61	0 100 100	14, 36, 59, 74	0
51	D5	59/60 (98%)	-0.54	0 100 100	31, 50, 72, 82	0
52	B6	53/54 (98%)	-0.27	0 100 100	43, 53, 68, 75	0
52	D6	53/54 (98%)	-0.25	0 100 100	45, 56, 69, 73	0
53	B7	48/49 (97%)	-0.30	0 100 100	24, 32, 62, 84	0
53	D7	48/49 (97%)	-0.15	1 (2%) 63 43	26, 35, 63, 86	0
54	B8	64/65 (98%)	-0.30	0 100 100	31, 42, 51, 64	0
54	D8	64/65 (98%)	-0.30	0 100 100	34, 46, 56, 66	0
55	B9	37/37 (100%)	0.06	0 100 100	43, 53, 71, 77	0
55	D9	37/37 (100%)	0.62	3 (8%) 12 5	46, 58, 73, 78	0
All	All	20462/21468 (95%)	-0.18	362 (1%) 68 47	14, 65, 95, 123	0

All (362) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
13	CM	124	PRO	15.2
13	CM	123	ALA	12.7
13	AM	124	PRO	9.7
13	AM	123	ALA	9.5
46	B0	3	HIS	8.1

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Mol	Chain	Res	Type	RSRZ
13	CM	122	LYS	7.7
7	CG	78	ARG	6.6
1	CA	1030(B)	C	6.5
46	D0	3	HIS	5.9
3	CC	159	GLY	5.9
19	CS	49	ILE	5.8
9	CI	30	GLY	5.4
9	CI	36	TYR	5.4
13	CM	121	LYS	5.3
1	AA	1000	U	5.3
13	AM	122	LYS	5.2
3	CC	155	GLY	5.2
46	B0	7	LEU	5.1
7	AG	78	ARG	4.9
1	AA	1030(B)	C	4.8
7	CG	79	ARG	4.8
7	AG	79	ARG	4.7
1	CA	1001(A)	G	4.7
25	DA	229	A	4.7
46	B0	6	GLY	4.6
1	CA	1532	U	4.6
7	AG	156	TRP	4.6
1	AA	1036	G	4.5
40	DU	117	GLN	4.5
7	CG	156	TRP	4.5
13	CM	120	LYS	4.5
1	AA	1001	A	4.5
10	CJ	6	ILE	4.3
1	CA	1026	G	4.3
46	D0	8	GLY	4.2
7	AG	153	HIS	4.1
1	AA	202	U	4.1
2	CB	232	PRO	4.1
1	AA	1001(A)	G	4.1
9	CI	7	THR	4.0
19	CS	38	SER	4.0
46	B0	5	LYS	4.0
25	DA	2802	G	4.0
3	CC	160	ALA	4.0
50	D4	68	ARG	4.0
1	AA	1030(C)	G	3.9
13	AM	121	LYS	3.9

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Mol	Chain	Res	Type	RSRZ
46	D0	2	ALA	3.9
9	CI	62	TYR	3.8
46	D0	6	GLY	3.8
31	DH	112	PRO	3.8
1	AA	1028	C	3.8
3	AC	206	GLU	3.8
7	CG	2	ALA	3.8
1	CA	1002	G	3.8
1	CA	1030(C)	G	3.8
31	DH	2	SER	3.8
10	AJ	35	SER	3.8
19	AS	39	THR	3.7
9	CI	9	ARG	3.7
13	CM	119	GLY	3.7
25	BA	1555	C	3.7
46	D0	76	GLY	3.6
1	AA	1002	G	3.6
46	B0	8	GLY	3.6
1	CA	1001	A	3.6
19	CS	48	THR	3.6
1	CA	1034	G	3.6
7	AG	85	TYR	3.6
25	DA	2793	G	3.6
7	CG	84	ASN	3.5
1	CA	1036	G	3.5
10	CJ	20	ALA	3.5
7	AG	77	SER	3.5
31	DH	103	LEU	3.5
1	CA	1035	A	3.5
46	D0	5	LYS	3.5
55	D9	12	ASP	3.5
10	AJ	6	ILE	3.4
47	D1	2	SER	3.4
31	DH	111	HIS	3.4
1	CA	1030(A)	G	3.4
1	AA	1026	G	3.4
2	AB	228	GLY	3.4
2	CB	135	GLN	3.4
7	CG	82	GLY	3.4
19	AS	38	SER	3.3
1	AA	1037	C	3.3
10	AJ	5	ARG	3.3

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Mol	Chain	Res	Type	RSRZ
1	AA	1044	A	3.3
21	AU	18	TYR	3.3
25	DA	652(B)	A	3.2
7	CG	4	ARG	3.2
43	DX	68	ARG	3.2
10	CJ	85	LEU	3.2
7	CG	77	SER	3.2
31	DH	102	ALA	3.2
2	AB	133	LYS	3.2
31	DH	115	VAL	3.2
25	BA	2815	C	3.2
4	AD	179	GLU	3.1
3	AC	87	LEU	3.1
10	CJ	89	ASP	3.1
9	CI	66	ARG	3.1
1	CA	1531	A	3.1
46	D0	7	LEU	3.1
1	AA	1030	C	3.1
10	AJ	98	ILE	3.1
3	AC	193	TYR	3.1
30	DG	2	PRO	3.1
9	AI	33	PHE	3.1
53	D7	48	LYS	3.1
11	CK	13	GLN	3.0
55	D9	13	LYS	3.0
31	DH	82	GLY	3.0
31	DH	43	VAL	3.0
19	AS	72	GLY	3.0
25	DA	2803	C	3.0
9	AI	15	ALA	3.0
1	AA	204	U	3.0
38	DS	35	ILE	3.0
1	AA	1029	C	3.0
25	BA	935	C	3.0
10	AJ	7	LYS	3.0
14	AN	17	LYS	2.9
1	AA	999	C	2.9
25	BA	2814	C	2.9
25	DA	1509	C	2.9
19	AS	50	ALA	2.9
1	AA	201	C	2.9
3	AC	160	ALA	2.9

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Mol	Chain	Res	Type	RSRZ
20	CT	9	ASN	2.9
44	BY	1	MET	2.9
25	BA	2816	G	2.9
19	CS	47	HIS	2.9
7	AG	80	VAL	2.8
21	CU	24	ARG	2.8
3	CC	154	SER	2.8
25	BA	2807	C	2.8
4	AD	180	GLY	2.8
25	BA	1221	G	2.8
46	B0	4	LYS	2.8
31	DH	113	VAL	2.8
7	AG	84	ASN	2.8
19	CS	12	ASP	2.8
21	CU	14	TRP	2.7
9	CI	37	PHE	2.7
31	DH	105	LEU	2.7
1	CA	1037	C	2.7
3	CC	193	TYR	2.7
13	CM	102	ARG	2.7
9	CI	15	ALA	2.7
1	CA	1040	U	2.7
19	CS	69	HIS	2.7
1	CA	1286	A	2.7
1	AA	1030(A)	G	2.7
7	CG	154	TYR	2.7
19	AS	59	PRO	2.7
21	AU	11	GLY	2.7
44	DY	58	GLY	2.7
2	CB	132	LYS	2.6
46	B0	2	ALA	2.7
10	AJ	73	ASP	2.6
3	AC	192	THR	2.6
30	BG	75	LYS	2.6
19	AS	71	LEU	2.6
1	CA	1023	G	2.6
50	D4	52	THR	2.6
9	CI	21	PRO	2.6
14	CN	17	LYS	2.6
43	DX	92	LEU	2.6
14	CN	8	GLU	2.6
1	AA	1007	C	2.6

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Mol	Chain	Res	Type	RSRZ
1	CA	1041	A	2.6
25	BA	2806	G	2.6
10	CJ	21	GLN	2.6
25	DA	2801(A)	A	2.6
1	CA	1027	C	2.6
1	CA	1042	G	2.5
9	CI	128	ARG	2.5
30	DG	75	LYS	2.5
7	AG	16	LEU	2.5
2	CB	133	LYS	2.5
3	CC	190	ARG	2.5
32	DI	12	LEU	2.5
19	CS	75	ALA	2.5
13	AM	97	PRO	2.5
49	D3	60	GLU	2.5
10	CJ	26	ALA	2.5
25	DA	2792	G	2.5
50	B4	66	SER	2.5
50	D4	69	LYS	2.5
9	AI	62	TYR	2.5
44	DY	59	GLY	2.5
1	CA	1257	U	2.5
9	AI	47	LEU	2.5
25	DA	888	C	2.5
1	CA	1003	G	2.5
14	CN	2	ALA	2.5
31	DH	107	VAL	2.5
9	CI	29	ASN	2.5
13	CM	110	ARG	2.5
1	AA	1027	C	2.5
10	AJ	71	LEU	2.5
44	DY	88	LYS	2.5
1	CA	1024	G	2.5
10	AJ	34	VAL	2.4
31	DH	169	VAL	2.4
9	CI	35	GLU	2.4
1	AA	1023	G	2.4
10	AJ	36	GLY	2.4
25	DA	2805	G	2.4
32	DI	13	GLY	2.4
25	DA	2188	C	2.4
1	CA	1030(D)	A	2.4

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Mol	Chain	Res	Type	RSRZ
9	AI	37	PHE	2.4
10	AJ	72	VAL	2.4
10	CJ	40	LEU	2.4
1	CA	80	G	2.4
1	AA	1041	A	2.4
9	CI	10	ARG	2.4
55	D9	16	VAL	2.4
19	AS	40	ILE	2.4
25	BA	696	C	2.4
7	AG	154	TYR	2.4
1	AA	1024	G	2.4
31	DH	116	GLU	2.4
2	CB	115	LEU	2.4
10	AJ	8	LEU	2.4
13	AM	119	GLY	2.4
31	DH	94	TYR	2.4
19	CS	9	VAL	2.4
2	AB	122	PHE	2.4
10	CJ	65	LEU	2.4
44	DY	5	MET	2.4
3	CC	191	THR	2.4
32	DI	11	ASN	2.4
1	AA	1031	G	2.4
3	CC	177	THR	2.4
2	CB	134	GLU	2.3
17	CQ	100	LYS	2.3
10	CJ	5	ARG	2.3
2	CB	137	ARG	2.3
25	DA	2807	G	2.3
10	CJ	27	ALA	2.3
1	CA	1029	C	2.3
19	AS	60	VAL	2.3
4	AD	152	SER	2.3
19	CS	35	SER	2.3
25	DA	2794	C	2.3
19	CS	13	ASP	2.3
30	BG	49	ASP	2.3
15	CO	6	GLU	2.3
21	CU	6	ARG	2.3
25	DA	2896	C	2.3
9	CI	28	VAL	2.3
9	CI	33	PHE	2.3

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Mol	Chain	Res	Type	RSRZ
3	CC	206	GLU	2.3
19	CS	43	GLU	2.3
2	CB	48	MET	2.3
38	DS	33	LYS	2.3
1	CA	1030	C	2.3
2	CB	122	PHE	2.3
3	CC	189	ALA	2.3
9	AI	36	TYR	2.3
25	DA	2897	U	2.3
21	AU	17	THR	2.3
30	DG	76	SER	2.3
12	AL	99	HIS	2.3
19	AS	56	GLN	2.3
3	CC	64	VAL	2.3
1	CA	1031	G	2.3
10	CJ	38	ILE	2.3
13	AM	120	LYS	2.3
2	AB	227	GLY	2.3
9	CI	27	THR	2.3
30	DG	136	ARG	2.3
1	AA	1531	A	2.3
9	CI	5	TYR	2.3
11	CK	31	THR	2.2
1	AA	1137	C	2.2
25	DA	2894	G	2.2
16	AP	7	ALA	2.2
16	AP	19	ILE	2.2
32	DI	86	THR	2.2
1	AA	1034	G	2.2
1	CA	1033	G	2.2
38	DS	52	SER	2.2
19	CS	44	MET	2.2
3	AC	100	ALA	2.2
31	DH	106	THR	2.2
38	DS	58	LEU	2.2
14	CN	25	VAL	2.2
9	CI	127	LYS	2.2
1	AA	1257	U	2.2
10	CJ	72	VAL	2.2
1	AA	1039	C	2.2
3	CC	158	GLY	2.2
19	AS	30	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
19	CS	53	ASN	2.2
32	DI	77	LEU	2.2
11	CK	42	TRP	2.2
50	D4	49	PHE	2.2
10	AJ	75	ILE	2.2
31	DH	110	SER	2.2
21	AU	5	ASP	2.2
21	CU	8	THR	2.2
1	CA	1000	U	2.2
9	CI	88	TYR	2.2
13	AM	2	ALA	2.2
50	D4	67	TYR	2.2
2	AB	135	GLN	2.2
2	CB	131	PRO	2.2
19	CS	28	LYS	2.2
1	AA	1003	G	2.2
25	DA	879	G	2.2
7	AG	82	GLY	2.2
14	AN	15	LYS	2.1
3	CC	102	ASN	2.1
27	BD	276	LYS	2.1
44	BY	63	LYS	2.1
19	CS	16	LEU	2.1
2	AB	129	GLU	2.1
13	AM	96	LEU	2.1
9	AI	46	ALA	2.1
9	AI	26	VAL	2.1
9	CI	6	GLY	2.1
21	CU	12	LYS	2.1
9	CI	98	PRO	2.1
4	AD	175	SER	2.1
31	DH	159	GLU	2.1
2	CB	113	HIS	2.1
13	CM	78	ILE	2.1
1	CA	1283	G	2.1
46	D0	9	SER	2.1
1	AA	1286	A	2.1
2	AB	63	MET	2.1
1	CA	1149	C	2.1
38	DS	57	LYS	2.1
46	D0	4	LYS	2.1
13	CM	6	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
1	CA	1493	A	2.1
47	B1	2	SER	2.1
2	CB	165	VAL	2.1
24	CW	2	VAL	2.1
1	CA	1004	A	2.1
18	AR	31	LEU	2.1
13	CM	92	HIS	2.1
46	D0	77	ARG	2.0
1	CA	1038	C	2.0
9	CI	123	PRO	2.0
19	CS	79	THR	2.0
30	DG	122	PRO	2.0
35	DP	78	PRO	2.0
19	AS	4	SER	2.0
1	AA	1038	C	2.0
25	BA	2813	G	2.0
2	AB	214	ILE	2.0
21	AU	2	GLY	2.0
25	BA	2805	G	2.0
25	DA	652(U)	G	2.0
7	CG	16	LEU	2.0

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

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
24	004	AW	3	10/11	0.83	0.13	71,89,99,106	0
24	2R1	AW	6	10/11	0.90	0.12	68,82,98,104	0
24	2QY	CW	10	13/14	0.91	0.14	55,69,84,94	0
24	MVA	CW	9	8/9	0.92	0.21	61,72,80,84	0
24	MVA	AW	5	8/9	0.93	0.19	66,87,90,90	0
24	MVA	AW	9	8/9	0.93	0.24	65,78,87,91	0
24	MVA	CW	5	8/9	0.94	0.20	51,78,86,88	0
24	2R1	CW	6	10/11	0.94	0.11	79,86,90,94	0
24	004	CW	3	10/11	0.94	0.15	60,76,84,86	0
24	2QZ	AW	1	9/10	0.95	0.22	58,64,81,82	0
24	2QZ	CW	1	9/10	0.95	0.24	57,72,81,93	0
24	2R3	AW	8	14/15	0.95	0.15	54,79,87,90	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
24	2R3	CW	8	14/15	0.96	0.11	47,70,74,79	0
24	2QY	AW	10	13/14	0.97	0.14	55,67,75,79	0

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	AA	3093	1/1	0.37	0.58	88,88,88,88	0
56	MG	BA	3094	1/1	0.40	0.86	61,61,61,61	0
56	MG	BA	3295	1/1	0.40	0.57	75,75,75,75	0
56	MG	AA	3043	1/1	0.50	0.50	74,74,74,74	0
56	MG	CA	3041	1/1	0.50	0.69	75,75,75,75	0
56	MG	BA	3247	1/1	0.51	0.96	68,68,68,68	0
56	MG	CA	3042	1/1	0.58	0.56	85,85,85,85	0
56	MG	DA	3427	1/1	0.58	0.54	60,60,60,60	0
56	MG	AA	3079	1/1	0.60	1.07	74,74,74,74	0
56	MG	AA	3114	1/1	0.60	0.51	66,66,66,66	0
56	MG	DA	3464	1/1	0.60	0.56	50,50,50,50	0
56	MG	AA	3116	1/1	0.61	0.53	52,52,52,52	0
56	MG	B4	3001	1/1	0.61	0.27	100,100,100,100	0
56	MG	CA	3053	1/1	0.62	1.19	73,73,73,73	0
56	MG	AA	3147	1/1	0.63	0.49	61,61,61,61	0
56	MG	BA	3613	1/1	0.64	0.29	76,76,76,76	0
56	MG	AA	3087	1/1	0.64	0.36	72,72,72,72	0
56	MG	CA	3016	1/1	0.64	0.48	76,76,76,76	0
56	MG	AA	3045	1/1	0.64	0.31	61,61,61,61	0
56	MG	AA	3028	1/1	0.65	0.46	60,60,60,60	0
56	MG	DA	3135	1/1	0.65	0.23	50,50,50,50	0
56	MG	BA	3622	1/1	0.65	0.52	77,77,77,77	0
56	MG	AA	3129	1/1	0.65	0.30	77,77,77,77	0
56	MG	DA	3162	1/1	0.66	0.13	71,71,71,71	0
56	MG	BA	3691	1/1	0.67	0.38	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3068	1/1	0.67	0.33	55,55,55,55	0
56	MG	DA	3545	1/1	0.67	0.62	75,75,75,75	0
56	MG	DA	3186	1/1	0.68	0.51	53,53,53,53	0
56	MG	DA	3131	1/1	0.68	0.23	54,54,54,54	0
56	MG	CA	3025	1/1	0.69	0.18	94,94,94,94	0
56	MG	CA	3038	1/1	0.69	0.46	70,70,70,70	0
56	MG	DA	3211	1/1	0.69	0.10	51,51,51,51	0
56	MG	DA	3125	1/1	0.69	0.55	48,48,48,48	0
56	MG	AA	3023	1/1	0.69	0.17	65,65,65,65	0
56	MG	AX	102	1/1	0.69	0.25	74,74,74,74	0
56	MG	DB	3003	1/1	0.69	0.12	63,63,63,63	0
56	MG	AA	3084	1/1	0.70	0.36	78,78,78,78	0
56	MG	DA	3103	1/1	0.70	0.78	48,48,48,48	0
56	MG	BA	3579	1/1	0.70	0.24	63,63,63,63	0
56	MG	CA	3135	1/1	0.70	0.56	76,76,76,76	0
59	FME	CX	101	10/11	0.70	0.57	71,82,97,105	0
56	MG	CA	3030	1/1	0.71	0.45	73,73,73,73	0
56	MG	AA	3048	1/1	0.71	0.25	57,57,57,57	0
56	MG	DA	3223	1/1	0.71	0.26	66,66,66,66	0
56	MG	DA	3117	1/1	0.71	0.17	53,53,53,53	0
56	MG	BA	3270	1/1	0.71	0.31	50,50,50,50	0
56	MG	AA	3128	1/1	0.71	0.20	68,68,68,68	0
56	MG	DA	3581	1/1	0.71	0.86	73,73,73,73	0
56	MG	AA	3044	1/1	0.71	0.22	66,66,66,66	0
56	MG	BA	3235	1/1	0.71	0.28	47,47,47,47	0
56	MG	CA	3024	1/1	0.72	0.44	65,65,65,65	0
56	MG	BA	3703	1/1	0.72	0.22	31,31,31,31	0
56	MG	AA	3037	1/1	0.72	0.41	61,61,61,61	0
58	ZN	B4	3002	1/1	0.72	0.07	165,165,165,165	0
56	MG	BA	3263	1/1	0.72	0.23	79,79,79,79	0
56	MG	CA	3055	1/1	0.73	0.28	62,62,62,62	0
56	MG	CA	3067	1/1	0.73	0.30	80,80,80,80	0
56	MG	BA	3065	1/1	0.73	0.44	50,50,50,50	0
56	MG	BA	3085	1/1	0.73	0.46	48,48,48,48	0
56	MG	AA	3020	1/1	0.73	0.10	77,77,77,77	0
56	MG	BA	3632	1/1	0.73	0.30	57,57,57,57	0
56	MG	BA	3289	1/1	0.73	0.34	60,60,60,60	0
56	MG	AA	3065	1/1	0.73	0.27	60,60,60,60	0
56	MG	DW	202	1/1	0.73	0.42	58,58,58,58	0
56	MG	BF	307	1/1	0.73	0.40	47,47,47,47	0
56	MG	BA	3297	1/1	0.73	1.46	53,53,53,53	0
56	MG	B1	3001	1/1	0.74	0.86	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	AA	3086	1/1	0.74	0.30	51,51,51,51	0
56	MG	BA	3287	1/1	0.74	0.17	53,53,53,53	0
56	MG	BA	3699	1/1	0.74	0.52	56,56,56,56	0
56	MG	BA	3089	1/1	0.74	0.57	61,61,61,61	0
56	MG	AA	3006	1/1	0.74	0.08	78,78,78,78	0
56	MG	DA	3438	1/1	0.74	0.51	70,70,70,70	0
56	MG	DA	3011	1/1	0.75	0.38	45,45,45,45	0
56	MG	DA	3049	1/1	0.75	0.30	58,58,58,58	0
56	MG	AA	3117	1/1	0.75	0.26	71,71,71,71	0
56	MG	AA	3035	1/1	0.76	0.42	71,71,71,71	0
56	MG	BA	3206	1/1	0.76	0.35	57,57,57,57	0
56	MG	DA	3056	1/1	0.76	0.37	43,43,43,43	0
56	MG	DA	3228	1/1	0.76	0.25	45,45,45,45	0
56	MG	DA	3410	1/1	0.76	0.22	69,69,69,69	0
56	MG	DA	3064	1/1	0.76	0.41	50,50,50,50	0
56	MG	CA	3018	1/1	0.76	0.31	54,54,54,54	0
56	MG	BA	3231	1/1	0.76	0.55	38,38,38,38	0
56	MG	BU	206	1/1	0.76	0.38	60,60,60,60	0
56	MG	DA	3123	1/1	0.76	0.23	59,59,59,59	0
56	MG	BA	3075	1/1	0.76	0.26	45,45,45,45	0
56	MG	CA	3127	1/1	0.76	0.25	79,79,79,79	0
56	MG	CA	3033	1/1	0.76	0.19	68,68,68,68	0
56	MG	CX	103	1/1	0.76	0.25	60,60,60,60	0
56	MG	DA	3587	1/1	0.77	0.14	64,64,64,64	0
56	MG	AX	108	1/1	0.77	0.21	61,61,61,61	0
56	MG	AA	3090	1/1	0.77	0.17	68,68,68,68	0
56	MG	AA	3120	1/1	0.77	0.63	71,71,71,71	0
56	MG	AA	3051	1/1	0.77	0.50	73,73,73,73	0
56	MG	AA	3100	1/1	0.78	0.67	40,40,40,40	0
56	MG	AA	3127	1/1	0.78	0.18	62,62,62,62	0
56	MG	BA	3275	1/1	0.78	0.20	46,46,46,46	0
56	MG	BA	3160	1/1	0.78	0.65	53,53,53,53	0
56	MG	AA	3063	1/1	0.78	0.30	61,61,61,61	0
56	MG	BA	3718	1/1	0.78	0.37	57,57,57,57	0
56	MG	AA	3088	1/1	0.78	0.33	63,63,63,63	0
56	MG	DA	3615	1/1	0.78	0.40	60,60,60,60	0
56	MG	AA	3096	1/1	0.78	0.28	44,44,44,44	0
56	MG	BA	3241	1/1	0.78	0.38	63,63,63,63	0
56	MG	BA	3087	1/1	0.78	0.45	61,61,61,61	0
56	MG	DA	3098	1/1	0.78	1.25	43,43,43,43	0
56	MG	DA	3089	1/1	0.79	0.39	57,57,57,57	0
56	MG	BA	3022	1/1	0.79	0.34	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BB	3005	1/1	0.79	0.28	61,61,61,61	0
56	MG	CA	3021	1/1	0.79	0.22	53,53,53,53	0
56	MG	BA	3209	1/1	0.79	0.38	40,40,40,40	0
56	MG	DA	3352	1/1	0.79	0.38	47,47,47,47	0
56	MG	DG	3001	1/1	0.79	0.14	63,63,63,63	0
56	MG	AA	3071	1/1	0.79	0.29	60,60,60,60	0
56	MG	AA	3113	1/1	0.79	0.28	68,68,68,68	0
56	MG	AA	3076	1/1	0.79	0.29	66,66,66,66	0
56	MG	DA	3293	1/1	0.80	0.27	53,53,53,53	0
56	MG	DA	3314	1/1	0.80	0.19	64,64,64,64	0
56	MG	BA	3158	1/1	0.80	0.54	64,64,64,64	0
56	MG	DA	3402	1/1	0.80	0.08	61,61,61,61	0
56	MG	CA	3062	1/1	0.80	0.26	57,57,57,57	0
56	MG	BA	3069	1/1	0.80	0.44	41,41,41,41	0
56	MG	DA	3113	1/1	0.80	0.57	43,43,43,43	0
56	MG	DA	3454	1/1	0.80	0.31	55,55,55,55	0
56	MG	BA	3731	1/1	0.80	0.36	55,55,55,55	0
56	MG	DA	3499	1/1	0.80	0.13	46,46,46,46	0
56	MG	DA	3525	1/1	0.80	0.70	70,70,70,70	0
56	MG	AA	3110	1/1	0.80	0.24	48,48,48,48	0
56	MG	CA	3138	1/1	0.80	0.24	72,72,72,72	0
56	MG	CA	3147	1/1	0.80	0.26	66,66,66,66	0
56	MG	AA	3061	1/1	0.80	0.19	82,82,82,82	0
56	MG	AA	3118	1/1	0.80	0.32	52,52,52,52	0
56	MG	DB	3007	1/1	0.80	0.27	45,45,45,45	0
56	MG	B0	103	1/1	0.80	0.84	59,59,59,59	0
56	MG	BA	3658	1/1	0.80	0.27	79,79,79,79	0
56	MG	BA	3029	1/1	0.80	0.38	53,53,53,53	0
56	MG	AA	3089	1/1	0.80	0.43	78,78,78,78	0
56	MG	BA	3370	1/1	0.81	0.19	54,54,54,54	0
56	MG	BA	3180	1/1	0.81	0.99	43,43,43,43	0
56	MG	CA	3057	1/1	0.81	0.26	49,49,49,49	0
56	MG	CA	3060	1/1	0.81	0.37	43,43,43,43	0
56	MG	AA	3085	1/1	0.81	0.32	69,69,69,69	0
56	MG	BB	3003	1/1	0.81	0.25	43,43,43,43	0
56	MG	CA	3073	1/1	0.81	0.39	55,55,55,55	0
56	MG	DA	3492	1/1	0.81	0.37	68,68,68,68	0
56	MG	CA	3123	1/1	0.81	0.14	77,77,77,77	0
56	MG	BB	3004	1/1	0.81	0.26	54,54,54,54	0
56	MG	AA	3012	1/1	0.81	0.14	56,56,56,56	0
56	MG	BA	3146	1/1	0.81	0.29	52,52,52,52	0
56	MG	CA	3144	1/1	0.81	0.59	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3155	1/1	0.81	0.38	57,57,57,57	0
56	MG	DA	3647	1/1	0.81	0.37	66,66,66,66	0
56	MG	DB	3001	1/1	0.81	0.25	68,68,68,68	0
56	MG	CA	3172	1/1	0.81	0.15	51,51,51,51	0
56	MG	CE	3001	1/1	0.81	0.32	68,68,68,68	0
56	MG	DE	302	1/1	0.81	0.38	44,44,44,44	0
56	MG	BW	201	1/1	0.81	0.88	53,53,53,53	0
56	MG	DA	3003	1/1	0.81	0.35	56,56,56,56	0
56	MG	AA	3030	1/1	0.81	0.32	69,69,69,69	0
56	MG	AX	103	1/1	0.81	0.08	66,66,66,66	0
56	MG	CA	3015	1/1	0.82	0.34	51,51,51,51	0
56	MG	BA	3244	1/1	0.82	0.47	65,65,65,65	0
56	MG	DA	3279	1/1	0.82	0.31	63,63,63,63	0
56	MG	CA	3161	1/1	0.82	0.12	54,54,54,54	0
56	MG	BA	3083	1/1	0.82	0.23	63,63,63,63	0
56	MG	BA	3157	1/1	0.82	0.39	63,63,63,63	0
56	MG	DA	3388	1/1	0.82	0.16	54,54,54,54	0
56	MG	BA	3706	1/1	0.82	0.46	63,63,63,63	0
56	MG	BA	3402	1/1	0.82	0.25	71,71,71,71	0
56	MG	BA	3719	1/1	0.82	0.25	25,25,25,25	0
56	MG	DA	3024	1/1	0.82	0.36	65,65,65,65	0
56	MG	BA	3444	1/1	0.82	0.15	74,74,74,74	0
56	MG	BA	3736	1/1	0.82	0.24	48,48,48,48	0
56	MG	BA	3739	1/1	0.82	0.76	50,50,50,50	0
56	MG	DA	3497	1/1	0.82	0.23	60,60,60,60	0
56	MG	BA	3452	1/1	0.82	0.26	47,47,47,47	0
56	MG	BA	3562	1/1	0.82	0.10	73,73,73,73	0
56	MG	BA	3123	1/1	0.82	0.33	69,69,69,69	0
56	MG	BD	311	1/1	0.82	0.54	45,45,45,45	0
56	MG	BA	3611	1/1	0.82	0.28	52,52,52,52	0
56	MG	BA	3134	1/1	0.82	0.31	47,47,47,47	0
56	MG	AA	3038	1/1	0.82	0.35	66,66,66,66	0
56	MG	BA	3242	1/1	0.82	0.36	48,48,48,48	0
56	MG	CA	3114	1/1	0.82	0.27	82,82,82,82	0
56	MG	BA	3290	1/1	0.82	0.24	49,49,49,49	0
56	MG	B2	101	1/1	0.82	0.36	40,40,40,40	0
56	MG	BA	3677	1/1	0.82	0.27	67,67,67,67	0
56	MG	DQ	205	1/1	0.82	0.40	55,55,55,55	0
56	MG	DA	3187	1/1	0.82	0.44	59,59,59,59	0
56	MG	DA	3189	1/1	0.82	0.11	55,55,55,55	0
56	MG	CA	3007	1/1	0.82	0.56	68,68,68,68	0
56	MG	BZ	3001	1/1	0.83	0.28	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	CA	3032	1/1	0.83	0.20	42,42,42,42	0
56	MG	B0	102	1/1	0.83	0.61	40,40,40,40	0
56	MG	CA	3139	1/1	0.83	0.27	75,75,75,75	0
56	MG	CA	3035	1/1	0.83	0.23	52,52,52,52	0
56	MG	AA	3014	1/1	0.83	0.19	28,28,28,28	0
56	MG	BA	3334	1/1	0.83	0.30	73,73,73,73	0
56	MG	BA	3071	1/1	0.83	0.30	55,55,55,55	0
56	MG	DA	3140	1/1	0.83	0.34	54,54,54,54	0
56	MG	DA	3515	1/1	0.83	0.21	48,48,48,48	0
56	MG	CA	3048	1/1	0.83	0.20	62,62,62,62	0
56	MG	DA	3163	1/1	0.83	0.18	39,39,39,39	0
56	MG	AA	3022	1/1	0.83	0.27	48,48,48,48	0
56	MG	CA	3003	1/1	0.83	0.11	66,66,66,66	0
56	MG	DA	3598	1/1	0.83	0.30	66,66,66,66	0
56	MG	BA	3673	1/1	0.83	0.20	53,53,53,53	0
56	MG	DA	3631	1/1	0.83	0.17	56,56,56,56	0
56	MG	BA	3279	1/1	0.83	0.22	48,48,48,48	0
56	MG	BA	3164	1/1	0.83	0.72	56,56,56,56	0
56	MG	BA	3496	1/1	0.83	0.40	57,57,57,57	0
56	MG	BA	3166	1/1	0.83	0.53	59,59,59,59	0
56	MG	BA	3152	1/1	0.83	0.33	46,46,46,46	0
56	MG	DA	3071	1/1	0.83	0.52	46,46,46,46	0
56	MG	DA	3318	1/1	0.83	0.11	45,45,45,45	0
56	MG	DA	3087	1/1	0.83	0.16	49,49,49,49	0
56	MG	DA	3367	1/1	0.83	0.26	42,42,42,42	0
56	MG	BA	3068	1/1	0.83	0.45	54,54,54,54	0
56	MG	DA	3198	1/1	0.84	0.29	48,48,48,48	0
56	MG	BA	3240	1/1	0.84	0.17	28,28,28,28	0
56	MG	BA	3102	1/1	0.84	0.32	52,52,52,52	0
56	MG	CA	3031	1/1	0.84	0.39	53,53,53,53	0
56	MG	DA	3256	1/1	0.84	0.18	63,63,63,63	0
56	MG	DA	3104	1/1	0.84	0.28	62,62,62,62	0
56	MG	AA	3059	1/1	0.84	1.19	54,54,54,54	0
56	MG	CA	3070	1/1	0.84	0.34	55,55,55,55	0
56	MG	BA	3288	1/1	0.84	0.22	61,61,61,61	0
56	MG	DA	3609	1/1	0.84	0.35	64,64,64,64	0
56	MG	CA	3081	1/1	0.84	0.10	72,72,72,72	0
56	MG	CA	3008	1/1	0.84	0.78	53,53,53,53	0
56	MG	AA	3029	1/1	0.84	0.69	52,52,52,52	0
56	MG	AA	3077	1/1	0.84	0.41	65,65,65,65	0
56	MG	AA	3140	1/1	0.84	0.12	70,70,70,70	0
56	MG	DA	3423	1/1	0.84	0.15	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3165	1/1	0.84	0.31	53,53,53,53	0
56	MG	CA	3023	1/1	0.84	0.14	37,37,37,37	0
56	MG	DA	3084	1/1	0.84	0.32	70,70,70,70	0
56	MG	DA	3458	1/1	0.84	0.15	71,71,71,71	0
56	MG	BA	3598	1/1	0.84	0.12	56,56,56,56	0
56	MG	DA	3483	1/1	0.84	0.19	49,49,49,49	0
56	MG	BA	3136	1/1	0.85	0.23	58,58,58,58	0
56	MG	DA	3357	1/1	0.85	0.20	56,56,56,56	0
56	MG	BA	3140	1/1	0.85	0.19	64,64,64,64	0
56	MG	BA	3040	1/1	0.85	0.35	51,51,51,51	0
56	MG	AA	3015	1/1	0.85	0.16	73,73,73,73	0
56	MG	BA	3624	1/1	0.85	0.25	52,52,52,52	0
56	MG	CA	3103	1/1	0.85	0.19	83,83,83,83	0
56	MG	DA	3099	1/1	0.85	0.27	44,44,44,44	0
56	MG	CA	3109	1/1	0.85	0.11	83,83,83,83	0
56	MG	BA	3626	1/1	0.85	0.11	43,43,43,43	0
56	MG	DA	3456	1/1	0.85	0.13	47,47,47,47	0
56	MG	BB	3017	1/1	0.85	0.20	64,64,64,64	0
56	MG	BD	301	1/1	0.85	0.27	28,28,28,28	0
56	MG	BA	3088	1/1	0.85	0.36	56,56,56,56	0
56	MG	DA	3484	1/1	0.85	0.25	51,51,51,51	0
56	MG	DA	3124	1/1	0.85	0.13	67,67,67,67	0
56	MG	AA	3094	1/1	0.85	0.21	68,68,68,68	0
56	MG	BU	205	1/1	0.85	0.33	42,42,42,42	0
56	MG	BA	3669	1/1	0.85	0.24	75,75,75,75	0
56	MG	AA	3164	1/1	0.85	0.38	69,69,69,69	0
56	MG	DA	3531	1/1	0.85	0.09	57,57,57,57	0
56	MG	DA	3157	1/1	0.85	0.99	62,62,62,62	0
56	MG	CA	3158	1/1	0.85	0.22	76,76,76,76	0
56	MG	BA	3009	1/1	0.85	0.17	25,25,25,25	0
56	MG	CA	3163	1/1	0.85	0.24	65,65,65,65	0
56	MG	BA	3111	1/1	0.85	0.40	53,53,53,53	0
56	MG	DA	3613	1/1	0.85	0.16	54,54,54,54	0
56	MG	CA	3039	1/1	0.85	0.36	72,72,72,72	0
56	MG	AA	3212	1/1	0.85	0.15	79,79,79,79	0
56	MG	AA	3218	1/1	0.85	0.54	65,65,65,65	0
56	MG	DA	3222	1/1	0.85	0.13	71,71,71,71	0
56	MG	BA	3175	1/1	0.85	0.25	48,48,48,48	0
56	MG	BA	3135	1/1	0.85	0.17	42,42,42,42	0
56	MG	DD	307	1/1	0.85	0.61	38,38,38,38	0
56	MG	DA	3238	1/1	0.85	0.10	61,61,61,61	0
56	MG	DF	302	1/1	0.85	0.27	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	B7	104	1/1	0.85	0.13	51,51,51,51	0
56	MG	BA	3285	1/1	0.85	0.14	32,32,32,32	0
56	MG	DR	201	1/1	0.85	0.62	65,65,65,65	0
56	MG	DV	202	1/1	0.85	0.84	63,63,63,63	0
56	MG	DA	3061	1/1	0.85	0.45	52,52,52,52	0
56	MG	CA	3005	1/1	0.85	0.32	54,54,54,54	0
58	ZN	D4	501	1/1	0.85	0.09	153,153,153,153	0
56	MG	DA	3065	1/1	0.85	0.19	38,38,38,38	0
56	MG	BA	3110	1/1	0.86	0.34	55,55,55,55	0
56	MG	BE	303	1/1	0.86	0.17	29,29,29,29	0
56	MG	DA	3482	1/1	0.86	0.13	55,55,55,55	0
56	MG	CQ	201	1/1	0.86	0.19	56,56,56,56	0
56	MG	BA	3027	1/1	0.86	0.23	45,45,45,45	0
56	MG	CA	3063	1/1	0.86	0.09	61,61,61,61	0
56	MG	BF	308	1/1	0.86	0.25	28,28,28,28	0
56	MG	DA	3022	1/1	0.86	0.25	45,45,45,45	0
56	MG	DA	3168	1/1	0.86	0.39	48,48,48,48	0
56	MG	CA	3068	1/1	0.86	0.11	41,41,41,41	0
56	MG	DA	3036	1/1	0.86	0.29	35,35,35,35	0
56	MG	BA	3249	1/1	0.86	0.24	40,40,40,40	0
56	MG	DA	3553	1/1	0.86	0.36	70,70,70,70	0
56	MG	BA	3590	1/1	0.86	0.13	64,64,64,64	0
56	MG	BA	3253	1/1	0.86	0.16	51,51,51,51	0
56	MG	DA	3592	1/1	0.86	0.15	65,65,65,65	0
56	MG	DA	3062	1/1	0.86	0.34	55,55,55,55	0
56	MG	BA	3712	1/1	0.86	0.09	58,58,58,58	0
56	MG	AX	106	1/1	0.86	0.17	73,73,73,73	0
56	MG	CA	3110	1/1	0.86	0.21	97,97,97,97	0
56	MG	DA	3070	1/1	0.86	0.27	44,44,44,44	0
56	MG	DA	3632	1/1	0.86	0.19	71,71,71,71	0
56	MG	AA	3004	1/1	0.86	0.15	55,55,55,55	0
56	MG	AA	3013	1/1	0.86	0.23	78,78,78,78	0
56	MG	BA	3277	1/1	0.86	0.37	45,45,45,45	0
56	MG	CA	3131	1/1	0.86	0.10	55,55,55,55	0
56	MG	DA	3093	1/1	0.86	0.20	53,53,53,53	0
56	MG	DA	3095	1/1	0.86	0.23	61,61,61,61	0
56	MG	AA	3001	1/1	0.86	0.18	68,68,68,68	0
56	MG	BA	3282	1/1	0.86	0.37	49,49,49,49	0
56	MG	B9	502	1/1	0.86	0.27	49,49,49,49	0
56	MG	BA	3641	1/1	0.86	0.12	45,45,45,45	0
56	MG	DA	3112	1/1	0.86	0.43	54,54,54,54	0
56	MG	DV	203	1/1	0.86	0.74	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3198	1/1	0.86	0.14	52,52,52,52	0
56	MG	D5	101	1/1	0.86	0.48	53,53,53,53	0
56	MG	BA	3462	1/1	0.86	0.12	52,52,52,52	0
56	MG	CA	3054	1/1	0.86	0.39	48,48,48,48	0
59	FME	AX	101	10/11	0.86	0.44	48,75,97,113	0
56	MG	BA	3474	1/1	0.86	0.21	42,42,42,42	0
56	MG	DA	3481	1/1	0.87	0.27	47,47,47,47	0
56	MG	DA	3032	1/1	0.87	0.13	46,46,46,46	0
56	MG	BA	3643	1/1	0.87	0.28	43,43,43,43	0
56	MG	BA	3156	1/1	0.87	0.40	56,56,56,56	0
56	MG	DA	3053	1/1	0.87	0.15	42,42,42,42	0
56	MG	DA	3161	1/1	0.87	0.30	60,60,60,60	0
56	MG	CA	3125	1/1	0.87	0.13	72,72,72,72	0
56	MG	DA	3500	1/1	0.87	0.17	50,50,50,50	0
56	MG	DA	3058	1/1	0.87	0.34	47,47,47,47	0
56	MG	DA	3060	1/1	0.87	0.25	55,55,55,55	0
56	MG	DA	3171	1/1	0.87	0.25	39,39,39,39	0
56	MG	BB	3008	1/1	0.87	0.21	35,35,35,35	0
56	MG	BA	3495	1/1	0.87	0.34	84,84,84,84	0
56	MG	BA	3006	1/1	0.87	0.27	42,42,42,42	0
56	MG	BA	3501	1/1	0.87	0.25	59,59,59,59	0
56	MG	DA	3591	1/1	0.87	0.26	58,58,58,58	0
56	MG	AA	3075	1/1	0.87	0.11	52,52,52,52	0
56	MG	CA	3142	1/1	0.87	0.18	59,59,59,59	0
56	MG	AA	3137	1/1	0.87	0.21	42,42,42,42	0
56	MG	DA	3079	1/1	0.87	0.27	37,37,37,37	0
56	MG	DA	3080	1/1	0.87	0.14	44,44,44,44	0
56	MG	DA	3081	1/1	0.87	0.20	48,48,48,48	0
56	MG	DA	3260	1/1	0.87	0.10	40,40,40,40	0
56	MG	CA	3146	1/1	0.87	0.20	69,69,69,69	0
56	MG	DA	3292	1/1	0.87	0.22	37,37,37,37	0
56	MG	BA	3252	1/1	0.87	0.17	55,55,55,55	0
56	MG	CA	3155	1/1	0.87	0.16	71,71,71,71	0
56	MG	DD	302	1/1	0.87	0.23	46,46,46,46	0
56	MG	BA	3214	1/1	0.87	0.09	53,53,53,53	0
56	MG	BA	3221	1/1	0.87	0.27	44,44,44,44	0
56	MG	BA	3268	1/1	0.87	0.17	46,46,46,46	0
56	MG	BW	203	1/1	0.87	0.32	45,45,45,45	0
56	MG	AA	3067	1/1	0.87	0.37	87,87,87,87	0
56	MG	BA	3727	1/1	0.87	0.66	68,68,68,68	0
56	MG	DA	3108	1/1	0.87	0.46	37,37,37,37	0
56	MG	AA	3042	1/1	0.87	0.33	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
56	MG	CA	3091	1/1	0.87	0.17	72,72,72,72	0
56	MG	DA	3115	1/1	0.87	0.09	63,63,63,63	0
56	MG	DA	3009	1/1	0.87	0.12	31,31,31,31	0
56	MG	BA	3236	1/1	0.87	0.17	36,36,36,36	0
56	MG	AA	3074	1/1	0.87	0.44	47,47,47,47	0
56	MG	AA	3166	1/1	0.87	0.18	48,48,48,48	0
60	K	BA	3300	1/1	0.87	0.28	100,100,100,100	0
56	MG	BA	3092	1/1	0.88	0.27	51,51,51,51	0
56	MG	DA	3067	1/1	0.88	0.54	43,43,43,43	0
56	MG	BA	3163	1/1	0.88	0.17	50,50,50,50	0
56	MG	AA	3032	1/1	0.88	0.28	57,57,57,57	0
56	MG	DA	3310	1/1	0.88	0.21	53,53,53,53	0
56	MG	BA	3100	1/1	0.88	0.25	48,48,48,48	0
56	MG	DA	3078	1/1	0.88	0.17	44,44,44,44	0
56	MG	DA	3343	1/1	0.88	0.21	41,41,41,41	0
56	MG	AA	3131	1/1	0.88	0.50	56,56,56,56	0
56	MG	CA	3126	1/1	0.88	0.24	61,61,61,61	0
56	MG	BA	3168	1/1	0.88	0.28	42,42,42,42	0
56	MG	BA	3045	1/1	0.88	0.29	34,34,34,34	0
56	MG	DA	3398	1/1	0.88	0.15	35,35,35,35	0
56	MG	DA	3086	1/1	0.88	0.30	43,43,43,43	0
56	MG	BA	3514	1/1	0.88	0.14	37,37,37,37	0
56	MG	BA	3058	1/1	0.88	0.45	38,38,38,38	0
56	MG	DA	3092	1/1	0.88	0.60	39,39,39,39	0
56	MG	CA	3027	1/1	0.88	0.17	57,57,57,57	0
56	MG	BA	3192	1/1	0.88	0.48	58,58,58,58	0
56	MG	CA	3143	1/1	0.88	0.07	87,87,87,87	0
56	MG	BA	3062	1/1	0.88	0.34	42,42,42,42	0
56	MG	DA	3102	1/1	0.88	0.25	41,41,41,41	0
56	MG	BA	3205	1/1	0.88	0.19	40,40,40,40	0
56	MG	BA	3280	1/1	0.88	0.69	69,69,69,69	0
56	MG	CA	3034	1/1	0.88	0.26	65,65,65,65	0
56	MG	DA	3110	1/1	0.88	0.14	49,49,49,49	0
56	MG	CA	3157	1/1	0.88	0.11	54,54,54,54	0
56	MG	AN	103	1/1	0.88	0.38	60,60,60,60	0
56	MG	CA	3159	1/1	0.88	0.61	91,91,91,91	0
56	MG	AA	3132	1/1	0.88	0.36	76,76,76,76	0
56	MG	DA	3119	1/1	0.88	0.15	44,44,44,44	0
56	MG	DA	3524	1/1	0.88	0.12	28,28,28,28	0
56	MG	DA	3122	1/1	0.88	0.15	62,62,62,62	0
56	MG	AA	3133	1/1	0.88	0.35	63,63,63,63	0
56	MG	CA	3164	1/1	0.88	0.39	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	CA	3040	1/1	0.88	0.35	42,42,42,42	0
56	MG	BG	3002	1/1	0.88	0.11	42,42,42,42	0
56	MG	DA	3134	1/1	0.88	0.23	46,46,46,46	0
56	MG	BN	3002	1/1	0.88	0.30	56,56,56,56	0
56	MG	BA	3216	1/1	0.88	0.22	41,41,41,41	0
56	MG	DA	3147	1/1	0.88	0.11	53,53,53,53	0
56	MG	DA	3599	1/1	0.88	0.23	72,72,72,72	0
56	MG	DA	3604	1/1	0.88	0.20	54,54,54,54	0
56	MG	DA	3150	1/1	0.88	0.21	64,64,64,64	0
56	MG	AA	3046	1/1	0.88	0.12	73,73,73,73	0
56	MG	DA	3005	1/1	0.88	0.21	42,42,42,42	0
56	MG	AA	3138	1/1	0.88	0.54	37,37,37,37	0
56	MG	AA	3033	1/1	0.88	0.38	64,64,64,64	0
56	MG	AA	3050	1/1	0.88	0.50	63,63,63,63	0
56	MG	BA	3298	1/1	0.88	0.33	49,49,49,49	0
56	MG	DA	3185	1/1	0.88	0.58	52,52,52,52	0
56	MG	BA	3320	1/1	0.88	0.29	57,57,57,57	0
56	MG	DB	3011	1/1	0.88	0.34	55,55,55,55	0
56	MG	AA	3009	1/1	0.88	0.23	79,79,79,79	0
56	MG	BA	3346	1/1	0.88	0.23	37,37,37,37	0
56	MG	BA	3693	1/1	0.88	0.14	64,64,64,64	0
56	MG	DA	3208	1/1	0.88	0.94	43,43,43,43	0
56	MG	DA	3210	1/1	0.88	0.14	40,40,40,40	0
56	MG	DQ	201	1/1	0.88	0.43	48,48,48,48	0
56	MG	BA	3354	1/1	0.88	0.15	74,74,74,74	0
56	MG	DA	3214	1/1	0.88	0.27	64,64,64,64	0
56	MG	DA	3217	1/1	0.88	0.57	54,54,54,54	0
56	MG	CA	3071	1/1	0.88	0.08	63,63,63,63	0
56	MG	BA	3023	1/1	0.88	0.13	66,66,66,66	0
56	MG	DA	3224	1/1	0.88	0.15	47,47,47,47	0
56	MG	CA	3002	1/1	0.88	0.07	62,62,62,62	0
56	MG	BA	3373	1/1	0.88	0.28	36,36,36,36	0
56	MG	DA	3240	1/1	0.88	0.26	51,51,51,51	0
56	MG	DA	3252	1/1	0.88	0.12	45,45,45,45	0
56	MG	AA	3019	1/1	0.88	0.39	74,74,74,74	0
56	MG	BA	3103	1/1	0.89	0.12	53,53,53,53	0
56	MG	DA	3405	1/1	0.89	0.10	47,47,47,47	0
56	MG	DA	3132	1/1	0.89	0.71	54,54,54,54	0
56	MG	CA	3079	1/1	0.89	0.14	48,48,48,48	0
56	MG	DA	3048	1/1	0.89	0.37	37,37,37,37	0
56	MG	BA	3104	1/1	0.89	0.28	45,45,45,45	0
56	MG	DA	3441	1/1	0.89	0.30	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3145	1/1	0.89	0.46	65,65,65,65	0
56	MG	CA	3086	1/1	0.89	0.20	80,80,80,80	0
56	MG	BA	3215	1/1	0.89	0.14	69,69,69,69	0
56	MG	DA	3460	1/1	0.89	0.36	50,50,50,50	0
56	MG	AA	3002	1/1	0.89	0.20	57,57,57,57	0
56	MG	DA	3159	1/1	0.89	0.24	51,51,51,51	0
56	MG	BA	3218	1/1	0.89	0.20	62,62,62,62	0
56	MG	AA	3181	1/1	0.89	0.28	57,57,57,57	0
56	MG	BA	3509	1/1	0.89	0.16	27,27,27,27	0
56	MG	DA	3487	1/1	0.89	0.19	57,57,57,57	0
56	MG	DA	3167	1/1	0.89	0.23	48,48,48,48	0
56	MG	BA	3230	1/1	0.89	0.47	46,46,46,46	0
56	MG	DA	3169	1/1	0.89	0.38	57,57,57,57	0
56	MG	BA	3523	1/1	0.89	0.12	48,48,48,48	0
56	MG	BA	3558	1/1	0.89	0.22	35,35,35,35	0
56	MG	BA	3005	1/1	0.89	0.18	36,36,36,36	0
56	MG	CA	3029	1/1	0.89	0.15	59,59,59,59	0
56	MG	BA	3127	1/1	0.89	0.38	50,50,50,50	0
56	MG	DA	3191	1/1	0.89	0.44	47,47,47,47	0
56	MG	DA	3194	1/1	0.89	0.13	48,48,48,48	0
56	MG	DA	3560	1/1	0.89	0.11	34,34,34,34	0
56	MG	DA	3195	1/1	0.89	0.10	50,50,50,50	0
56	MG	BA	3585	1/1	0.89	0.17	51,51,51,51	0
56	MG	DA	3590	1/1	0.89	0.17	80,80,80,80	0
56	MG	DA	3200	1/1	0.89	0.21	42,42,42,42	0
56	MG	AA	3047	1/1	0.89	0.31	61,61,61,61	0
56	MG	BA	3237	1/1	0.89	0.55	51,51,51,51	0
56	MG	BA	3292	1/1	0.89	0.21	63,63,63,63	0
56	MG	BA	3061	1/1	0.89	0.49	51,51,51,51	0
56	MG	CA	3036	1/1	0.89	0.52	68,68,68,68	0
56	MG	CA	3037	1/1	0.89	0.31	67,67,67,67	0
56	MG	AA	3139	1/1	0.89	0.34	56,56,56,56	0
56	MG	DA	3623	1/1	0.89	0.17	53,53,53,53	0
56	MG	BA	3017	1/1	0.89	0.54	44,44,44,44	0
56	MG	BN	3003	1/1	0.89	0.39	59,59,59,59	0
56	MG	DA	3638	1/1	0.89	0.30	62,62,62,62	0
56	MG	BA	3309	1/1	0.89	0.13	46,46,46,46	0
56	MG	CA	3160	1/1	0.89	0.13	59,59,59,59	0
56	MG	DA	3243	1/1	0.89	0.21	67,67,67,67	0
56	MG	BA	3177	1/1	0.89	0.21	62,62,62,62	0
56	MG	DA	3253	1/1	0.89	0.14	42,42,42,42	0
56	MG	AA	3039	1/1	0.89	0.24	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3336	1/1	0.89	0.21	54,54,54,54	0
56	MG	CA	3170	1/1	0.89	0.48	50,50,50,50	0
56	MG	DA	3286	1/1	0.89	0.17	62,62,62,62	0
56	MG	BA	3147	1/1	0.89	0.24	46,46,46,46	0
56	MG	BA	3664	1/1	0.89	0.26	68,68,68,68	0
56	MG	BA	3251	1/1	0.89	0.21	61,61,61,61	0
56	MG	BA	3355	1/1	0.89	0.23	64,64,64,64	0
56	MG	BA	3356	1/1	0.89	0.27	56,56,56,56	0
56	MG	BA	3365	1/1	0.89	0.14	20,20,20,20	0
56	MG	DV	204	1/1	0.89	0.21	41,41,41,41	0
56	MG	BA	3197	1/1	0.89	0.30	39,39,39,39	0
56	MG	BA	3149	1/1	0.89	0.55	40,40,40,40	0
56	MG	DA	3361	1/1	0.89	0.11	61,61,61,61	0
56	MG	DA	3018	1/1	0.89	0.47	48,48,48,48	0
56	MG	DA	3387	1/1	0.89	0.14	56,56,56,56	0
56	MG	AA	3031	1/1	0.89	0.22	41,41,41,41	0
56	MG	AA	3134	1/1	0.89	0.43	70,70,70,70	0
56	MG	DA	3359	1/1	0.90	0.23	46,46,46,46	0
56	MG	BA	3181	1/1	0.90	0.34	38,38,38,38	0
56	MG	DA	3363	1/1	0.90	0.09	57,57,57,57	0
56	MG	BA	3730	1/1	0.90	0.64	45,45,45,45	0
56	MG	DA	3369	1/1	0.90	0.13	47,47,47,47	0
56	MG	BA	3183	1/1	0.90	0.24	48,48,48,48	0
56	MG	AA	3003	1/1	0.90	0.24	63,63,63,63	0
56	MG	DA	3391	1/1	0.90	0.14	41,41,41,41	0
56	MG	BA	3738	1/1	0.90	0.35	59,59,59,59	0
56	MG	BA	3194	1/1	0.90	0.18	55,55,55,55	0
56	MG	AA	3092	1/1	0.90	0.51	50,50,50,50	0
56	MG	AA	3180	1/1	0.90	0.38	66,66,66,66	0
56	MG	BA	3007	1/1	0.90	0.23	35,35,35,35	0
56	MG	DA	3126	1/1	0.90	0.34	43,43,43,43	0
56	MG	DA	3128	1/1	0.90	0.19	52,52,52,52	0
56	MG	DA	3440	1/1	0.90	0.32	33,33,33,33	0
56	MG	DA	3129	1/1	0.90	0.14	43,43,43,43	0
56	MG	BA	3139	1/1	0.90	0.25	51,51,51,51	0
56	MG	CT	3001	1/1	0.90	0.43	57,57,57,57	0
56	MG	BA	3560	1/1	0.90	0.20	61,61,61,61	0
56	MG	AA	3119	1/1	0.90	0.37	63,63,63,63	0
56	MG	DA	3461	1/1	0.90	0.21	41,41,41,41	0
56	MG	DA	3462	1/1	0.90	0.11	55,55,55,55	0
56	MG	BA	3577	1/1	0.90	0.10	52,52,52,52	0
56	MG	DA	3465	1/1	0.90	0.16	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	CA	3046	1/1	0.90	0.38	53,53,53,53	0
56	MG	BA	3578	1/1	0.90	0.32	54,54,54,54	0
56	MG	BE	305	1/1	0.90	0.70	42,42,42,42	0
56	MG	BA	3144	1/1	0.90	0.27	74,74,74,74	0
56	MG	BA	3011	1/1	0.90	0.09	37,37,37,37	0
56	MG	AA	3184	1/1	0.90	0.10	72,72,72,72	0
56	MG	BA	3596	1/1	0.90	0.12	51,51,51,51	0
56	MG	DA	3042	1/1	0.90	0.25	36,36,36,36	0
56	MG	DA	3044	1/1	0.90	0.13	46,46,46,46	0
56	MG	DA	3503	1/1	0.90	0.17	71,71,71,71	0
56	MG	DA	3046	1/1	0.90	0.18	56,56,56,56	0
56	MG	DA	3517	1/1	0.90	0.19	50,50,50,50	0
56	MG	BA	3019	1/1	0.90	0.18	39,39,39,39	0
56	MG	BQ	203	1/1	0.90	0.22	58,58,58,58	0
56	MG	BA	3609	1/1	0.90	0.12	46,46,46,46	0
56	MG	DA	3538	1/1	0.90	0.18	44,44,44,44	0
56	MG	AA	3080	1/1	0.90	0.17	53,53,53,53	0
56	MG	DA	3548	1/1	0.90	0.13	37,37,37,37	0
56	MG	AA	3215	1/1	0.90	0.10	53,53,53,53	0
56	MG	AA	3217	1/1	0.90	0.65	67,67,67,67	0
56	MG	AA	3123	1/1	0.90	0.43	39,39,39,39	0
56	MG	DA	3582	1/1	0.90	0.11	52,52,52,52	0
56	MG	DA	3193	1/1	0.90	0.22	65,65,65,65	0
56	MG	AK	3001	1/1	0.90	0.18	45,45,45,45	0
56	MG	BA	3159	1/1	0.90	0.30	48,48,48,48	0
56	MG	AA	3124	1/1	0.90	0.10	57,57,57,57	0
56	MG	DA	3593	1/1	0.90	0.23	73,73,73,73	0
56	MG	DA	3066	1/1	0.90	0.37	53,53,53,53	0
56	MG	BA	3047	1/1	0.90	0.42	47,47,47,47	0
56	MG	DA	3602	1/1	0.90	0.19	52,52,52,52	0
56	MG	BA	3350	1/1	0.90	0.24	47,47,47,47	0
56	MG	B7	101	1/1	0.90	0.20	43,43,43,43	0
56	MG	DA	3610	1/1	0.90	0.28	54,54,54,54	0
56	MG	DA	3213	1/1	0.90	0.21	44,44,44,44	0
56	MG	B7	103	1/1	0.90	0.85	48,48,48,48	0
56	MG	DA	3620	1/1	0.90	0.19	71,71,71,71	0
56	MG	DA	3075	1/1	0.90	0.33	44,44,44,44	0
56	MG	DA	3624	1/1	0.90	0.40	51,51,51,51	0
56	MG	DA	3218	1/1	0.90	0.25	62,62,62,62	0
56	MG	DA	3219	1/1	0.90	0.17	60,60,60,60	0
56	MG	DA	3077	1/1	0.90	0.28	50,50,50,50	0
56	MG	DA	3640	1/1	0.90	0.68	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
56	MG	BA	3048	1/1	0.90	0.23	31,31,31,31	0
56	MG	BA	3243	1/1	0.90	0.15	48,48,48,48	0
56	MG	BA	3671	1/1	0.90	0.33	57,57,57,57	0
56	MG	DB	3005	1/1	0.90	0.26	43,43,43,43	0
56	MG	BA	3105	1/1	0.90	0.44	34,34,34,34	0
56	MG	AA	3052	1/1	0.90	0.25	60,60,60,60	0
56	MG	BA	3683	1/1	0.90	0.22	60,60,60,60	0
56	MG	AA	3115	1/1	0.90	0.10	48,48,48,48	0
56	MG	BA	3174	1/1	0.90	0.09	48,48,48,48	0
56	MG	DA	3254	1/1	0.90	0.22	30,30,30,30	0
56	MG	DF	303	1/1	0.90	0.33	43,43,43,43	0
56	MG	BA	3114	1/1	0.90	0.36	51,51,51,51	0
56	MG	AA	3005	1/1	0.90	0.20	66,66,66,66	0
56	MG	DA	3264	1/1	0.90	0.32	49,49,49,49	0
56	MG	BA	3255	1/1	0.90	0.18	41,41,41,41	0
56	MG	DA	3284	1/1	0.90	0.14	68,68,68,68	0
56	MG	DA	3096	1/1	0.90	0.17	60,60,60,60	0
56	MG	BA	3708	1/1	0.90	0.23	40,40,40,40	0
56	MG	BA	3457	1/1	0.90	0.12	57,57,57,57	0
56	MG	BA	3714	1/1	0.90	0.21	58,58,58,58	0
56	MG	CA	3150	1/1	0.90	0.12	59,59,59,59	0
56	MG	CA	3153	1/1	0.90	0.10	83,83,83,83	0
56	MG	DA	3105	1/1	0.90	0.38	48,48,48,48	0
56	MG	BA	3125	1/1	0.90	0.20	39,39,39,39	0
56	MG	BA	3463	1/1	0.90	0.20	55,55,55,55	0
56	MG	BA	3049	1/1	0.91	0.38	35,35,35,35	0
56	MG	BA	3055	1/1	0.91	0.23	44,44,44,44	0
56	MG	BA	3262	1/1	0.91	0.20	56,56,56,56	0
56	MG	BA	3056	1/1	0.91	0.42	44,44,44,44	0
56	MG	BA	3638	1/1	0.91	0.21	37,37,37,37	0
56	MG	DA	3051	1/1	0.91	0.12	46,46,46,46	0
56	MG	BA	3372	1/1	0.91	0.17	38,38,38,38	0
56	MG	AA	3169	1/1	0.91	0.16	76,76,76,76	0
56	MG	BA	3653	1/1	0.91	0.15	69,69,69,69	0
56	MG	DA	3172	1/1	0.91	0.43	51,51,51,51	0
56	MG	DA	3466	1/1	0.91	0.14	56,56,56,56	0
56	MG	DA	3183	1/1	0.91	0.11	54,54,54,54	0
56	MG	BA	3391	1/1	0.91	0.14	48,48,48,48	0
56	MG	BA	3269	1/1	0.91	0.65	34,34,34,34	0
56	MG	BA	3666	1/1	0.91	0.32	61,61,61,61	0
56	MG	BA	3443	1/1	0.91	0.17	26,26,26,26	0
56	MG	AN	101	1/1	0.91	0.19	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3496	1/1	0.91	0.15	53,53,53,53	0
56	MG	CA	3106	1/1	0.91	0.34	64,64,64,64	0
56	MG	BA	3106	1/1	0.91	0.12	48,48,48,48	0
56	MG	BA	3676	1/1	0.91	0.22	51,51,51,51	0
56	MG	DA	3069	1/1	0.91	0.12	51,51,51,51	0
56	MG	DA	3512	1/1	0.91	0.25	61,61,61,61	0
56	MG	AA	3081	1/1	0.91	0.23	41,41,41,41	0
56	MG	CA	3119	1/1	0.91	0.24	64,64,64,64	0
56	MG	DA	3073	1/1	0.91	0.18	44,44,44,44	0
56	MG	AA	3125	1/1	0.91	0.16	47,47,47,47	0
56	MG	DA	3526	1/1	0.91	0.19	54,54,54,54	0
56	MG	BA	3689	1/1	0.91	0.23	39,39,39,39	0
56	MG	BA	3020	1/1	0.91	0.11	45,45,45,45	0
56	MG	BA	3464	1/1	0.91	0.10	43,43,43,43	0
56	MG	CA	3006	1/1	0.91	0.17	77,77,77,77	0
56	MG	BA	3466	1/1	0.91	0.14	61,61,61,61	0
56	MG	AA	3101	1/1	0.91	0.15	56,56,56,56	0
56	MG	DA	3567	1/1	0.91	0.15	62,62,62,62	0
56	MG	CA	3010	1/1	0.91	0.11	32,32,32,32	0
56	MG	BA	3481	1/1	0.91	0.23	38,38,38,38	0
56	MG	DA	3226	1/1	0.91	0.21	50,50,50,50	0
56	MG	BA	3226	1/1	0.91	0.30	32,32,32,32	0
56	MG	AX	105	1/1	0.91	0.69	56,56,56,56	0
56	MG	BA	3024	1/1	0.91	0.40	35,35,35,35	0
56	MG	BA	3505	1/1	0.91	0.19	59,59,59,59	0
56	MG	DA	3594	1/1	0.91	0.30	47,47,47,47	0
56	MG	BA	3507	1/1	0.91	0.10	68,68,68,68	0
56	MG	CA	3151	1/1	0.91	0.25	80,80,80,80	0
56	MG	BA	3132	1/1	0.91	0.25	35,35,35,35	0
56	MG	AA	3142	1/1	0.91	0.26	38,38,38,38	0
56	MG	BA	3172	1/1	0.91	0.98	48,48,48,48	0
56	MG	AX	107	1/1	0.91	0.25	66,66,66,66	0
56	MG	BA	3038	1/1	0.91	0.60	51,51,51,51	0
56	MG	BA	3137	1/1	0.91	0.29	42,42,42,42	0
56	MG	BA	3568	1/1	0.91	0.23	47,47,47,47	0
56	MG	DA	3621	1/1	0.91	0.14	54,54,54,54	0
56	MG	CA	3162	1/1	0.91	0.21	46,46,46,46	0
56	MG	BA	3303	1/1	0.91	0.16	35,35,35,35	0
56	MG	AA	3121	1/1	0.91	0.53	51,51,51,51	0
56	MG	AA	3136	1/1	0.91	0.08	62,62,62,62	0
56	MG	DA	3635	1/1	0.91	0.32	58,58,58,58	0
56	MG	DA	3315	1/1	0.91	0.09	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BB	3009	1/1	0.91	0.16	48,48,48,48	0
56	MG	DA	3339	1/1	0.91	0.10	37,37,37,37	0
56	MG	DA	3653	1/1	0.91	0.35	60,60,60,60	0
56	MG	DA	3342	1/1	0.91	0.12	52,52,52,52	0
56	MG	BA	3331	1/1	0.91	0.19	47,47,47,47	0
56	MG	BA	3143	1/1	0.91	0.31	40,40,40,40	0
56	MG	BA	3335	1/1	0.91	0.17	35,35,35,35	0
56	MG	BD	312	1/1	0.91	0.85	80,80,80,80	0
56	MG	DA	3360	1/1	0.91	0.25	41,41,41,41	0
56	MG	BA	3248	1/1	0.91	0.24	43,43,43,43	0
56	MG	BA	3187	1/1	0.91	0.64	50,50,50,50	0
56	MG	DF	301	1/1	0.91	0.51	32,32,32,32	0
56	MG	CA	3047	1/1	0.91	0.16	63,63,63,63	0
56	MG	BF	302	1/1	0.91	0.31	46,46,46,46	0
56	MG	DF	304	1/1	0.91	0.28	44,44,44,44	0
56	MG	DA	3376	1/1	0.91	0.08	31,31,31,31	0
56	MG	AA	3011	1/1	0.91	1.19	55,55,55,55	0
56	MG	AA	3219	1/1	0.91	0.20	57,57,57,57	0
56	MG	BA	3619	1/1	0.91	0.27	40,40,40,40	0
56	MG	CA	3056	1/1	0.91	0.11	64,64,64,64	0
56	MG	DA	3401	1/1	0.91	0.29	58,58,58,58	0
56	MG	DA	3143	1/1	0.91	0.22	46,46,46,46	0
56	MG	DA	3033	1/1	0.91	0.25	39,39,39,39	0
56	MG	BN	3001	1/1	0.91	0.76	54,54,54,54	0
56	MG	D8	5001	1/1	0.91	0.41	47,47,47,47	0
56	MG	DA	3419	1/1	0.91	0.17	31,31,31,31	0
56	MG	DA	3148	1/1	0.91	0.23	47,47,47,47	0
56	MG	DA	3149	1/1	0.91	0.06	47,47,47,47	0
56	MG	DA	3430	1/1	0.91	0.28	55,55,55,55	0
56	MG	DA	3041	1/1	0.91	0.45	57,57,57,57	0
56	MG	AA	3200	1/1	0.92	0.24	68,68,68,68	0
56	MG	BA	3108	1/1	0.92	0.14	55,55,55,55	0
56	MG	BA	3225	1/1	0.92	0.33	62,62,62,62	0
56	MG	DA	3459	1/1	0.92	0.11	33,33,33,33	0
56	MG	DA	3050	1/1	0.92	0.57	31,31,31,31	0
56	MG	AA	3211	1/1	0.92	0.20	36,36,36,36	0
56	MG	DA	3170	1/1	0.92	0.80	57,57,57,57	0
56	MG	BA	3468	1/1	0.92	0.17	30,30,30,30	0
56	MG	AA	3025	1/1	0.92	0.14	69,69,69,69	0
56	MG	DA	3179	1/1	0.92	0.22	46,46,46,46	0
56	MG	DA	3478	1/1	0.92	0.25	46,46,46,46	0
56	MG	CA	3104	1/1	0.92	0.19	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
56	MG	CA	3105	1/1	0.92	0.09	79,79,79,79	0
56	MG	BA	3016	1/1	0.92	0.24	33,33,33,33	0
56	MG	BA	3122	1/1	0.92	0.27	52,52,52,52	0
56	MG	DA	3188	1/1	0.92	0.33	47,47,47,47	0
56	MG	DA	3489	1/1	0.92	0.16	36,36,36,36	0
56	MG	AA	3034	1/1	0.92	0.18	48,48,48,48	0
56	MG	CA	3111	1/1	0.92	0.12	64,64,64,64	0
56	MG	BA	3698	1/1	0.92	0.20	41,41,41,41	0
56	MG	CA	3117	1/1	0.92	0.15	68,68,68,68	0
56	MG	AA	3024	1/1	0.92	0.18	53,53,53,53	0
56	MG	DA	3502	1/1	0.92	0.12	65,65,65,65	0
56	MG	BA	3502	1/1	0.92	0.20	43,43,43,43	0
56	MG	DA	3505	1/1	0.92	0.06	65,65,65,65	0
56	MG	DA	3509	1/1	0.92	0.13	55,55,55,55	0
56	MG	AA	3098	1/1	0.92	0.35	72,72,72,72	0
56	MG	DA	3202	1/1	0.92	0.33	42,42,42,42	0
56	MG	AA	3154	1/1	0.92	0.08	63,63,63,63	0
56	MG	AA	3162	1/1	0.92	0.23	74,74,74,74	0
56	MG	DA	3074	1/1	0.92	0.21	54,54,54,54	0
56	MG	AA	3041	1/1	0.92	0.15	49,49,49,49	0
56	MG	AA	3069	1/1	0.92	0.14	84,84,84,84	0
56	MG	DA	3532	1/1	0.92	0.10	57,57,57,57	0
56	MG	DA	3536	1/1	0.92	0.16	80,80,80,80	0
56	MG	CA	3136	1/1	0.92	0.18	45,45,45,45	0
56	MG	DA	3543	1/1	0.92	0.15	42,42,42,42	0
56	MG	BA	3325	1/1	0.92	0.19	58,58,58,58	0
56	MG	BA	3328	1/1	0.92	0.21	42,42,42,42	0
56	MG	DA	3221	1/1	0.92	0.18	49,49,49,49	0
56	MG	DA	3554	1/1	0.92	0.18	70,70,70,70	0
56	MG	CA	3140	1/1	0.92	0.16	73,73,73,73	0
56	MG	DA	3562	1/1	0.92	0.10	61,61,61,61	0
56	MG	BA	3245	1/1	0.92	0.30	47,47,47,47	0
56	MG	AA	3105	1/1	0.92	0.22	46,46,46,46	0
56	MG	DA	3225	1/1	0.92	0.16	45,45,45,45	0
56	MG	BA	3735	1/1	0.92	0.20	45,45,45,45	0
56	MG	AA	3036	1/1	0.92	0.23	71,71,71,71	0
56	MG	BA	3039	1/1	0.92	0.14	42,42,42,42	0
56	MG	BA	3188	1/1	0.92	0.15	37,37,37,37	0
56	MG	BA	3141	1/1	0.92	0.30	43,43,43,43	0
56	MG	DA	3246	1/1	0.92	0.17	24,24,24,24	0
56	MG	DA	3597	1/1	0.92	0.23	47,47,47,47	0
56	MG	CA	3152	1/1	0.92	0.38	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3097	1/1	0.92	0.22	61,61,61,61	0
56	MG	BA	3090	1/1	0.92	0.20	46,46,46,46	0
56	MG	BA	3254	1/1	0.92	0.19	59,59,59,59	0
56	MG	BA	3196	1/1	0.92	0.76	56,56,56,56	0
56	MG	BA	3601	1/1	0.92	0.28	64,64,64,64	0
56	MG	DA	3611	1/1	0.92	0.09	42,42,42,42	0
56	MG	BB	3014	1/1	0.92	0.13	69,69,69,69	0
56	MG	BA	3256	1/1	0.92	0.17	58,58,58,58	0
56	MG	DA	3107	1/1	0.92	0.30	55,55,55,55	0
56	MG	BA	3258	1/1	0.92	0.23	40,40,40,40	0
56	MG	DA	3109	1/1	0.92	0.55	66,66,66,66	0
56	MG	DA	3295	1/1	0.92	0.24	39,39,39,39	0
56	MG	DA	3296	1/1	0.92	0.09	31,31,31,31	0
56	MG	BD	304	1/1	0.92	0.51	58,58,58,58	0
56	MG	DA	3111	1/1	0.92	0.23	53,53,53,53	0
56	MG	DA	3636	1/1	0.92	0.14	61,61,61,61	0
56	MG	AA	3072	1/1	0.92	0.26	79,79,79,79	0
56	MG	BA	3617	1/1	0.92	0.24	62,62,62,62	0
56	MG	AA	3082	1/1	0.92	0.24	39,39,39,39	0
56	MG	DA	3651	1/1	0.92	0.60	52,52,52,52	0
56	MG	DA	3340	1/1	0.92	0.14	47,47,47,47	0
56	MG	DA	3116	1/1	0.92	0.31	39,39,39,39	0
56	MG	BA	3374	1/1	0.92	0.19	44,44,44,44	0
56	MG	BA	3099	1/1	0.92	0.17	44,44,44,44	0
56	MG	BF	304	1/1	0.92	0.09	35,35,35,35	0
56	MG	BA	3401	1/1	0.92	0.12	42,42,42,42	0
56	MG	AA	3190	1/1	0.92	0.32	67,67,67,67	0
56	MG	BG	3001	1/1	0.92	0.13	64,64,64,64	0
56	MG	BA	3633	1/1	0.92	0.13	58,58,58,58	0
56	MG	DA	3006	1/1	0.92	0.16	42,42,42,42	0
56	MG	BA	3406	1/1	0.92	0.14	28,28,28,28	0
56	MG	BA	3430	1/1	0.92	0.32	49,49,49,49	0
56	MG	DA	3013	1/1	0.92	0.09	47,47,47,47	0
56	MG	DA	3014	1/1	0.92	0.21	34,34,34,34	0
56	MG	BA	3432	1/1	0.92	0.17	60,60,60,60	0
56	MG	DA	3139	1/1	0.92	0.18	40,40,40,40	0
56	MG	BA	3652	1/1	0.92	0.20	64,64,64,64	0
56	MG	BR	204	1/1	0.92	0.61	43,43,43,43	0
56	MG	DA	3029	1/1	0.92	0.10	61,61,61,61	0
56	MG	BU	201	1/1	0.92	0.75	39,39,39,39	0
56	MG	CA	3065	1/1	0.92	0.23	75,75,75,75	0
56	MG	AA	3191	1/1	0.92	0.13	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
56	MG	DA	3040	1/1	0.92	0.10	42,42,42,42	0
56	MG	DA	3151	1/1	0.92	0.29	60,60,60,60	0
56	MG	AA	3194	1/1	0.92	0.19	54,54,54,54	0
56	MG	BA	3052	1/1	0.92	0.25	29,29,29,29	0
56	MG	AA	3198	1/1	0.92	0.11	87,87,87,87	0
56	MG	DA	3453	1/1	0.92	0.36	61,61,61,61	0
56	MG	AA	3152	1/1	0.93	0.09	19,19,19,19	0
56	MG	BA	3357	1/1	0.93	0.13	49,49,49,49	0
56	MG	DA	3424	1/1	0.93	0.20	30,30,30,30	0
56	MG	DA	3144	1/1	0.93	0.39	36,36,36,36	0
56	MG	DA	3008	1/1	0.93	0.23	51,51,51,51	0
56	MG	DA	3437	1/1	0.93	0.14	49,49,49,49	0
56	MG	BA	3589	1/1	0.93	0.15	51,51,51,51	0
56	MG	AA	3135	1/1	0.93	0.23	41,41,41,41	0
56	MG	DA	3012	1/1	0.93	0.18	57,57,57,57	0
56	MG	DA	3443	1/1	0.93	0.17	53,53,53,53	0
56	MG	DA	3447	1/1	0.93	0.05	56,56,56,56	0
56	MG	DA	3450	1/1	0.93	0.16	43,43,43,43	0
56	MG	BA	3592	1/1	0.93	0.17	28,28,28,28	0
56	MG	BB	3006	1/1	0.93	0.24	39,39,39,39	0
56	MG	DA	3155	1/1	0.93	0.17	50,50,50,50	0
56	MG	DA	3015	1/1	0.93	0.26	49,49,49,49	0
56	MG	BA	3257	1/1	0.93	0.30	38,38,38,38	0
56	MG	DA	3020	1/1	0.93	0.30	52,52,52,52	0
56	MG	BA	3597	1/1	0.93	0.35	60,60,60,60	0
56	MG	AA	3066	1/1	0.93	0.31	38,38,38,38	0
56	MG	BA	3599	1/1	0.93	0.31	46,46,46,46	0
56	MG	AA	3199	1/1	0.93	0.17	88,88,88,88	0
56	MG	BA	3608	1/1	0.93	0.13	68,68,68,68	0
56	MG	DA	3470	1/1	0.93	0.28	52,52,52,52	0
56	MG	DA	3472	1/1	0.93	0.17	36,36,36,36	0
56	MG	DA	3474	1/1	0.93	0.08	61,61,61,61	0
56	MG	BD	306	1/1	0.93	0.45	46,46,46,46	0
56	MG	BA	3098	1/1	0.93	0.15	35,35,35,35	0
56	MG	BA	3387	1/1	0.93	0.07	48,48,48,48	0
56	MG	AA	3008	1/1	0.93	0.41	54,54,54,54	0
56	MG	BA	3394	1/1	0.93	0.12	49,49,49,49	0
56	MG	DA	3045	1/1	0.93	0.37	41,41,41,41	0
56	MG	BE	306	1/1	0.93	0.44	46,46,46,46	0
56	MG	AA	3201	1/1	0.93	0.12	67,67,67,67	0
56	MG	BA	3153	1/1	0.93	0.32	35,35,35,35	0
56	MG	BA	3403	1/1	0.93	0.21	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3273	1/1	0.93	0.39	42,42,42,42	0
56	MG	BA	3408	1/1	0.93	0.15	24,24,24,24	0
56	MG	DA	3054	1/1	0.93	0.11	51,51,51,51	0
56	MG	AA	3202	1/1	0.93	0.23	76,76,76,76	0
56	MG	CA	3074	1/1	0.93	0.18	54,54,54,54	0
56	MG	DA	3199	1/1	0.93	0.13	42,42,42,42	0
56	MG	BA	3050	1/1	0.93	0.15	21,21,21,21	0
56	MG	BA	3640	1/1	0.93	0.25	60,60,60,60	0
56	MG	AA	3206	1/1	0.93	0.07	70,70,70,70	0
56	MG	DA	3519	1/1	0.93	0.14	44,44,44,44	0
56	MG	DA	3521	1/1	0.93	0.12	62,62,62,62	0
56	MG	CA	3087	1/1	0.93	0.19	41,41,41,41	0
56	MG	CA	3089	1/1	0.93	0.15	52,52,52,52	0
56	MG	DA	3212	1/1	0.93	0.09	48,48,48,48	0
56	MG	DA	3527	1/1	0.93	0.10	46,46,46,46	0
56	MG	AA	3068	1/1	0.93	0.08	66,66,66,66	0
56	MG	CA	3097	1/1	0.93	0.15	48,48,48,48	0
56	MG	CA	3099	1/1	0.93	0.33	65,65,65,65	0
56	MG	DA	3537	1/1	0.93	0.22	65,65,65,65	0
56	MG	BA	3647	1/1	0.93	0.10	34,34,34,34	0
56	MG	BA	3446	1/1	0.93	0.13	49,49,49,49	0
56	MG	BU	204	1/1	0.93	0.39	44,44,44,44	0
56	MG	DA	3072	1/1	0.93	0.14	41,41,41,41	0
56	MG	AA	3167	1/1	0.93	0.19	67,67,67,67	0
56	MG	CA	3107	1/1	0.93	0.12	60,60,60,60	0
56	MG	DA	3556	1/1	0.93	0.08	56,56,56,56	0
56	MG	DA	3559	1/1	0.93	0.19	46,46,46,46	0
56	MG	BA	3012	1/1	0.93	0.16	40,40,40,40	0
56	MG	DA	3076	1/1	0.93	0.56	44,44,44,44	0
56	MG	BA	3060	1/1	0.93	0.40	40,40,40,40	0
56	MG	DA	3579	1/1	0.93	0.17	23,23,23,23	0
56	MG	DA	3580	1/1	0.93	0.14	46,46,46,46	0
56	MG	DA	3233	1/1	0.93	0.19	42,42,42,42	0
56	MG	AA	3060	1/1	0.93	0.53	60,60,60,60	0
56	MG	BW	205	1/1	0.93	0.46	41,41,41,41	0
56	MG	BX	3001	1/1	0.93	0.29	55,55,55,55	0
56	MG	AA	3173	1/1	0.93	0.24	32,32,32,32	0
56	MG	B0	101	1/1	0.93	0.20	36,36,36,36	0
56	MG	AA	3177	1/1	0.93	0.14	80,80,80,80	0
56	MG	BA	3067	1/1	0.93	0.33	53,53,53,53	0
56	MG	DA	3255	1/1	0.93	0.20	40,40,40,40	0
56	MG	BA	3238	1/1	0.93	0.16	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	AA	3026	1/1	0.93	0.17	41,41,41,41	0
56	MG	CA	3134	1/1	0.93	0.17	82,82,82,82	0
56	MG	DA	3603	1/1	0.93	0.16	55,55,55,55	0
56	MG	DA	3273	1/1	0.93	0.13	30,30,30,30	0
56	MG	DA	3278	1/1	0.93	0.17	47,47,47,47	0
56	MG	B3	103	1/1	0.93	0.62	41,41,41,41	0
56	MG	DA	3280	1/1	0.93	0.20	57,57,57,57	0
56	MG	DA	3281	1/1	0.93	0.21	42,42,42,42	0
56	MG	AA	3049	1/1	0.93	0.50	51,51,51,51	0
56	MG	BA	3684	1/1	0.93	0.17	58,58,58,58	0
56	MG	BA	3687	1/1	0.93	0.22	38,38,38,38	0
56	MG	BA	3299	1/1	0.93	0.23	9,9,9,9	0
56	MG	CA	3141	1/1	0.93	0.25	70,70,70,70	0
56	MG	DA	3627	1/1	0.93	0.21	43,43,43,43	0
56	MG	B8	101	1/1	0.93	0.47	49,49,49,49	0
56	MG	DA	3303	1/1	0.93	0.17	47,47,47,47	0
56	MG	DA	3305	1/1	0.93	0.09	33,33,33,33	0
56	MG	BA	3690	1/1	0.93	0.17	53,53,53,53	0
56	MG	AA	3146	1/1	0.93	0.20	48,48,48,48	0
56	MG	BA	3133	1/1	0.93	0.27	32,32,32,32	0
56	MG	DA	3643	1/1	0.93	0.72	53,53,53,53	0
56	MG	BA	3072	1/1	0.93	0.28	45,45,45,45	0
56	MG	DA	3326	1/1	0.93	0.20	33,33,33,33	0
56	MG	DA	3334	1/1	0.93	0.16	49,49,49,49	0
56	MG	DA	3336	1/1	0.93	0.12	27,27,27,27	0
56	MG	AA	3189	1/1	0.93	0.10	77,77,77,77	0
56	MG	BA	3246	1/1	0.93	0.24	46,46,46,46	0
56	MG	BA	3704	1/1	0.93	0.19	85,85,85,85	0
56	MG	BA	3182	1/1	0.93	0.31	51,51,51,51	0
56	MG	DB	3012	1/1	0.93	0.27	59,59,59,59	0
56	MG	BA	3515	1/1	0.93	0.05	56,56,56,56	0
56	MG	BA	3711	1/1	0.93	0.17	86,86,86,86	0
56	MG	DD	308	1/1	0.93	0.15	55,55,55,55	0
56	MG	AV	101	1/1	0.93	0.17	36,36,36,36	0
56	MG	CA	3019	1/1	0.93	0.07	49,49,49,49	0
56	MG	BA	3549	1/1	0.93	0.22	27,27,27,27	0
56	MG	BA	3716	1/1	0.93	0.11	27,27,27,27	0
56	MG	DA	3366	1/1	0.93	0.35	36,36,36,36	0
56	MG	BA	3555	1/1	0.93	0.18	53,53,53,53	0
56	MG	BA	3028	1/1	0.93	0.21	48,48,48,48	0
56	MG	DA	3373	1/1	0.93	0.23	29,29,29,29	0
56	MG	BA	3722	1/1	0.93	0.17	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3724	1/1	0.93	0.19	58,58,58,58	0
56	MG	BA	3250	1/1	0.93	0.21	45,45,45,45	0
56	MG	BA	3728	1/1	0.93	0.52	32,32,32,32	0
56	MG	DW	201	1/1	0.93	0.31	46,46,46,46	0
56	MG	AA	3058	1/1	0.93	0.16	50,50,50,50	0
56	MG	DA	3400	1/1	0.93	0.19	42,42,42,42	0
56	MG	BA	3190	1/1	0.93	0.20	42,42,42,42	0
58	ZN	AN	102	1/1	0.93	0.12	90,90,90,90	0
56	MG	BA	3030	1/1	0.93	0.43	51,51,51,51	0
58	ZN	CN	501	1/1	0.93	0.12	108,108,108,108	0
56	MG	DA	3002	1/1	0.93	0.19	55,55,55,55	0
56	MG	BA	3193	1/1	0.93	0.57	52,52,52,52	0
56	MG	DA	3414	1/1	0.93	0.17	49,49,49,49	0
56	MG	DA	3415	1/1	0.93	0.25	56,56,56,56	0
60	K	DA	3231	1/1	0.93	0.22	96,96,96,96	0
56	MG	DA	3442	1/1	0.94	0.19	40,40,40,40	0
56	MG	AA	3018	1/1	0.94	0.27	38,38,38,38	0
56	MG	BD	307	1/1	0.94	0.20	43,43,43,43	0
56	MG	DA	3164	1/1	0.94	0.26	48,48,48,48	0
56	MG	DA	3452	1/1	0.94	0.17	56,56,56,56	0
56	MG	DA	3027	1/1	0.94	0.43	39,39,39,39	0
56	MG	BA	3431	1/1	0.94	0.23	17,17,17,17	0
56	MG	CA	3058	1/1	0.94	0.10	40,40,40,40	0
56	MG	AA	3010	1/1	0.94	0.37	70,70,70,70	0
56	MG	CA	3061	1/1	0.94	0.30	46,46,46,46	0
56	MG	DA	3038	1/1	0.94	0.15	39,39,39,39	0
56	MG	DA	3175	1/1	0.94	0.17	40,40,40,40	0
56	MG	BA	3439	1/1	0.94	0.16	34,34,34,34	0
56	MG	BA	3178	1/1	0.94	0.28	48,48,48,48	0
56	MG	BA	3631	1/1	0.94	0.14	78,78,78,78	0
56	MG	AA	3209	1/1	0.94	0.40	70,70,70,70	0
56	MG	DA	3469	1/1	0.94	0.21	47,47,47,47	0
56	MG	BA	3293	1/1	0.94	0.18	45,45,45,45	0
56	MG	BA	3635	1/1	0.94	0.10	78,78,78,78	0
56	MG	BA	3449	1/1	0.94	0.12	21,21,21,21	0
56	MG	AA	3210	1/1	0.94	0.06	40,40,40,40	0
56	MG	BA	3453	1/1	0.94	0.19	18,18,18,18	0
56	MG	CA	3076	1/1	0.94	0.33	40,40,40,40	0
56	MG	DA	3052	1/1	0.94	0.20	23,23,23,23	0
56	MG	DA	3196	1/1	0.94	0.34	44,44,44,44	0
56	MG	BA	3091	1/1	0.94	0.60	45,45,45,45	0
56	MG	BA	3057	1/1	0.94	0.27	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
56	MG	CA	3084	1/1	0.94	0.11	64,64,64,64	0
56	MG	DA	3057	1/1	0.94	0.16	52,52,52,52	0
56	MG	DA	3204	1/1	0.94	0.41	34,34,34,34	0
56	MG	DA	3207	1/1	0.94	0.13	58,58,58,58	0
56	MG	BA	3650	1/1	0.94	0.15	45,45,45,45	0
56	MG	DA	3501	1/1	0.94	0.20	23,23,23,23	0
56	MG	DA	3209	1/1	0.94	0.17	41,41,41,41	0
56	MG	BQ	202	1/1	0.94	0.30	28,28,28,28	0
56	MG	BA	3185	1/1	0.94	0.20	47,47,47,47	0
56	MG	BQ	205	1/1	0.94	0.42	49,49,49,49	0
56	MG	DA	3510	1/1	0.94	0.23	63,63,63,63	0
56	MG	DA	3063	1/1	0.94	0.12	52,52,52,52	0
56	MG	BR	202	1/1	0.94	0.29	27,27,27,27	0
56	MG	BA	3301	1/1	0.94	0.13	56,56,56,56	0
56	MG	BA	3465	1/1	0.94	0.12	40,40,40,40	0
56	MG	BA	3659	1/1	0.94	0.21	46,46,46,46	0
56	MG	BA	3660	1/1	0.94	0.27	71,71,71,71	0
56	MG	BA	3661	1/1	0.94	0.15	68,68,68,68	0
56	MG	AA	3016	1/1	0.94	0.07	63,63,63,63	0
56	MG	BA	3304	1/1	0.94	0.19	49,49,49,49	0
56	MG	DA	3528	1/1	0.94	0.09	56,56,56,56	0
56	MG	BA	3306	1/1	0.94	0.14	48,48,48,48	0
56	MG	BA	3476	1/1	0.94	0.13	40,40,40,40	0
56	MG	BY	201	1/1	0.94	0.43	58,58,58,58	0
56	MG	DA	3229	1/1	0.94	0.11	40,40,40,40	0
56	MG	CA	3116	1/1	0.94	0.17	76,76,76,76	0
56	MG	DA	3539	1/1	0.94	0.17	53,53,53,53	0
56	MG	DA	3237	1/1	0.94	0.15	45,45,45,45	0
56	MG	BA	3142	1/1	0.94	0.71	46,46,46,46	0
56	MG	BA	3482	1/1	0.94	0.17	72,72,72,72	0
56	MG	DA	3552	1/1	0.94	0.12	34,34,34,34	0
56	MG	AA	3017	1/1	0.94	0.27	55,55,55,55	0
56	MG	CA	3124	1/1	0.94	0.17	61,61,61,61	0
56	MG	AA	3053	1/1	0.94	0.33	49,49,49,49	0
56	MG	B0	104	1/1	0.94	0.10	43,43,43,43	0
56	MG	BA	3499	1/1	0.94	0.17	55,55,55,55	0
56	MG	BA	3686	1/1	0.94	0.14	25,25,25,25	0
56	MG	DA	3564	1/1	0.94	0.77	61,61,61,61	0
56	MG	AA	3109	1/1	0.94	0.33	65,65,65,65	0
56	MG	DA	3572	1/1	0.94	0.11	53,53,53,53	0
56	MG	DA	3574	1/1	0.94	0.17	56,56,56,56	0
56	MG	DA	3578	1/1	0.94	0.38	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3688	1/1	0.94	0.11	54,54,54,54	0
56	MG	DA	3090	1/1	0.94	0.34	47,47,47,47	0
56	MG	AA	3197	1/1	0.94	0.30	69,69,69,69	0
56	MG	CA	3137	1/1	0.94	0.13	48,48,48,48	0
56	MG	BA	3148	1/1	0.94	0.35	52,52,52,52	0
56	MG	BA	3066	1/1	0.94	0.26	44,44,44,44	0
56	MG	BA	3692	1/1	0.94	0.40	36,36,36,36	0
56	MG	AA	3054	1/1	0.94	0.20	45,45,45,45	0
56	MG	DA	3285	1/1	0.94	0.26	55,55,55,55	0
56	MG	BA	3511	1/1	0.94	0.16	39,39,39,39	0
56	MG	DA	3288	1/1	0.94	0.17	47,47,47,47	0
56	MG	DA	3100	1/1	0.94	0.50	56,56,56,56	0
56	MG	DA	3101	1/1	0.94	0.33	48,48,48,48	0
56	MG	BA	3344	1/1	0.94	0.09	30,30,30,30	0
56	MG	AF	3001	1/1	0.94	0.17	61,61,61,61	0
56	MG	AA	3145	1/1	0.94	0.25	63,63,63,63	0
56	MG	BA	3535	1/1	0.94	0.19	37,37,37,37	0
56	MG	DA	3106	1/1	0.94	0.21	41,41,41,41	0
56	MG	CA	3149	1/1	0.94	0.18	74,74,74,74	0
56	MG	BA	3546	1/1	0.94	0.31	48,48,48,48	0
56	MG	BA	3107	1/1	0.94	0.23	40,40,40,40	0
56	MG	DA	3617	1/1	0.94	0.19	58,58,58,58	0
56	MG	CA	3014	1/1	0.94	0.17	50,50,50,50	0
56	MG	BA	3259	1/1	0.94	0.49	27,27,27,27	0
56	MG	BA	3261	1/1	0.94	0.26	34,34,34,34	0
56	MG	BA	3211	1/1	0.94	0.29	38,38,38,38	0
56	MG	DA	3114	1/1	0.94	0.19	37,37,37,37	0
56	MG	BA	3717	1/1	0.94	0.22	57,57,57,57	0
56	MG	BA	3044	1/1	0.94	0.30	42,42,42,42	0
56	MG	DA	3634	1/1	0.94	0.14	51,51,51,51	0
56	MG	DA	3347	1/1	0.94	0.19	62,62,62,62	0
56	MG	BA	3565	1/1	0.94	0.11	55,55,55,55	0
56	MG	AM	3001	1/1	0.94	0.06	65,65,65,65	0
56	MG	DA	3358	1/1	0.94	0.18	46,46,46,46	0
56	MG	BA	3570	1/1	0.94	0.12	61,61,61,61	0
56	MG	DA	3646	1/1	0.94	0.07	38,38,38,38	0
56	MG	BA	3573	1/1	0.94	0.16	56,56,56,56	0
56	MG	BA	3074	1/1	0.94	0.08	42,42,42,42	0
56	MG	DA	3362	1/1	0.94	0.13	41,41,41,41	0
56	MG	CA	3167	1/1	0.94	0.09	78,78,78,78	0
56	MG	DA	3364	1/1	0.94	0.19	32,32,32,32	0
56	MG	AA	3112	1/1	0.94	0.12	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3127	1/1	0.94	0.09	48,48,48,48	0
56	MG	DB	3008	1/1	0.94	0.09	45,45,45,45	0
56	MG	DB	3009	1/1	0.94	0.37	40,40,40,40	0
56	MG	BA	3161	1/1	0.94	0.65	49,49,49,49	0
56	MG	BA	3377	1/1	0.94	0.14	32,32,32,32	0
56	MG	CF	3001	1/1	0.94	0.22	55,55,55,55	0
56	MG	DD	305	1/1	0.94	0.64	49,49,49,49	0
56	MG	DA	3378	1/1	0.94	0.15	45,45,45,45	0
56	MG	DA	3383	1/1	0.94	0.09	56,56,56,56	0
56	MG	BA	3386	1/1	0.94	0.14	58,58,58,58	0
56	MG	DE	305	1/1	0.94	0.64	65,65,65,65	0
56	MG	BA	3079	1/1	0.94	0.28	42,42,42,42	0
56	MG	BA	3082	1/1	0.94	0.29	41,41,41,41	0
56	MG	DA	3392	1/1	0.94	0.17	35,35,35,35	0
56	MG	DA	3393	1/1	0.94	0.19	41,41,41,41	0
56	MG	DF	305	1/1	0.94	0.73	39,39,39,39	0
56	MG	DA	3137	1/1	0.94	0.27	56,56,56,56	0
56	MG	BA	3278	1/1	0.94	0.17	34,34,34,34	0
56	MG	DQ	202	1/1	0.94	0.22	34,34,34,34	0
56	MG	BA	3124	1/1	0.94	0.23	39,39,39,39	0
56	MG	AA	3095	1/1	0.94	0.24	58,58,58,58	0
56	MG	DR	202	1/1	0.94	0.18	37,37,37,37	0
56	MG	BA	3084	1/1	0.94	0.14	33,33,33,33	0
56	MG	BA	3018	1/1	0.94	0.34	40,40,40,40	0
56	MG	DA	3146	1/1	0.94	0.18	34,34,34,34	0
56	MG	BA	3086	1/1	0.94	0.33	49,49,49,49	0
56	MG	BA	3412	1/1	0.94	0.18	26,26,26,26	0
56	MG	DY	502	1/1	0.94	0.10	60,60,60,60	0
56	MG	CA	3044	1/1	0.94	0.20	63,63,63,63	0
56	MG	BA	3610	1/1	0.94	0.21	40,40,40,40	0
56	MG	BB	3018	1/1	0.94	0.19	60,60,60,60	0
56	MG	BA	3417	1/1	0.94	0.18	18,18,18,18	0
56	MG	DA	3433	1/1	0.94	0.17	48,48,48,48	0
56	MG	DA	3435	1/1	0.94	0.21	46,46,46,46	0
56	MG	DA	3156	1/1	0.94	0.56	29,29,29,29	0
56	MG	DA	3016	1/1	0.94	0.27	37,37,37,37	0
56	MG	BA	3419	1/1	0.94	0.14	24,24,24,24	0
56	MG	BD	305	1/1	0.94	0.23	48,48,48,48	0
56	MG	CA	3013	1/1	0.95	0.12	51,51,51,51	0
56	MG	BA	3510	1/1	0.95	0.24	40,40,40,40	0
56	MG	AA	3213	1/1	0.95	0.16	29,29,29,29	0
56	MG	DA	3434	1/1	0.95	0.26	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3348	1/1	0.95	0.20	64,64,64,64	0
56	MG	AA	3187	1/1	0.95	0.04	62,62,62,62	0
56	MG	DA	3001	1/1	0.95	0.30	78,78,78,78	0
56	MG	BA	3697	1/1	0.95	0.14	78,78,78,78	0
56	MG	DA	3154	1/1	0.95	0.61	45,45,45,45	0
56	MG	CA	3020	1/1	0.95	0.18	47,47,47,47	0
56	MG	DA	3004	1/1	0.95	0.19	29,29,29,29	0
56	MG	DA	3444	1/1	0.95	0.13	43,43,43,43	0
56	MG	BA	3353	1/1	0.95	0.24	57,57,57,57	0
56	MG	AA	3216	1/1	0.95	0.14	58,58,58,58	0
56	MG	DA	3451	1/1	0.95	0.07	49,49,49,49	0
56	MG	BA	3700	1/1	0.95	0.12	67,67,67,67	0
56	MG	BA	3540	1/1	0.95	0.27	34,34,34,34	0
56	MG	DA	3010	1/1	0.95	0.14	39,39,39,39	0
56	MG	BA	3541	1/1	0.95	0.23	30,30,30,30	0
56	MG	BA	3545	1/1	0.95	0.24	47,47,47,47	0
56	MG	AA	3083	1/1	0.95	0.09	65,65,65,65	0
56	MG	BA	3547	1/1	0.95	0.18	31,31,31,31	0
56	MG	BA	3548	1/1	0.95	0.22	50,50,50,50	0
56	MG	BA	3053	1/1	0.95	0.35	39,39,39,39	0
56	MG	DA	3017	1/1	0.95	0.16	46,46,46,46	0
56	MG	BA	3145	1/1	0.95	0.40	38,38,38,38	0
56	MG	BA	3358	1/1	0.95	0.09	33,33,33,33	0
56	MG	DA	3021	1/1	0.95	0.15	35,35,35,35	0
56	MG	BA	3260	1/1	0.95	0.17	22,22,22,22	0
56	MG	BA	3014	1/1	0.95	0.77	34,34,34,34	0
56	MG	BA	3563	1/1	0.95	0.21	37,37,37,37	0
56	MG	BA	3201	1/1	0.95	0.29	36,36,36,36	0
56	MG	DA	3479	1/1	0.95	0.19	57,57,57,57	0
56	MG	DA	3030	1/1	0.95	0.28	51,51,51,51	0
56	MG	DA	3031	1/1	0.95	0.29	55,55,55,55	0
56	MG	BA	3202	1/1	0.95	0.24	41,41,41,41	0
56	MG	BA	3097	1/1	0.95	0.19	33,33,33,33	0
56	MG	DA	3034	1/1	0.95	0.15	40,40,40,40	0
56	MG	AA	3007	1/1	0.95	0.19	82,82,82,82	0
56	MG	DA	3490	1/1	0.95	0.10	39,39,39,39	0
56	MG	DA	3197	1/1	0.95	0.45	36,36,36,36	0
56	MG	DA	3494	1/1	0.95	0.09	78,78,78,78	0
56	MG	BA	3576	1/1	0.95	0.26	23,23,23,23	0
56	MG	AA	3155	1/1	0.95	0.16	70,70,70,70	0
56	MG	BA	3271	1/1	0.95	0.12	36,36,36,36	0
56	MG	AA	3078	1/1	0.95	0.27	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3580	1/1	0.95	0.12	58,58,58,58	0
56	MG	BA	3101	1/1	0.95	0.17	35,35,35,35	0
56	MG	BA	3588	1/1	0.95	0.21	48,48,48,48	0
56	MG	DA	3047	1/1	0.95	0.08	34,34,34,34	0
56	MG	DA	3506	1/1	0.95	0.07	59,59,59,59	0
56	MG	DA	3507	1/1	0.95	0.15	54,54,54,54	0
56	MG	BA	3397	1/1	0.95	0.19	28,28,28,28	0
56	MG	BA	3276	1/1	0.95	0.32	40,40,40,40	0
56	MG	DA	3511	1/1	0.95	0.08	65,65,65,65	0
56	MG	BA	3059	1/1	0.95	0.60	45,45,45,45	0
56	MG	BA	3594	1/1	0.95	0.31	42,42,42,42	0
56	MG	DA	3516	1/1	0.95	0.17	40,40,40,40	0
56	MG	BA	3595	1/1	0.95	0.16	41,41,41,41	0
56	MG	DA	3216	1/1	0.95	0.17	31,31,31,31	0
56	MG	DA	3520	1/1	0.95	0.20	51,51,51,51	0
56	MG	AA	3195	1/1	0.95	0.16	71,71,71,71	0
56	MG	DA	3522	1/1	0.95	0.17	61,61,61,61	0
56	MG	AA	3196	1/1	0.95	0.31	65,65,65,65	0
56	MG	DA	3055	1/1	0.95	0.21	48,48,48,48	0
56	MG	DA	3220	1/1	0.95	0.12	37,37,37,37	0
56	MG	AA	3126	1/1	0.95	0.16	54,54,54,54	0
56	MG	CA	3066	1/1	0.95	0.10	55,55,55,55	0
56	MG	BA	3224	1/1	0.95	0.73	64,64,64,64	0
56	MG	BA	3284	1/1	0.95	0.10	54,54,54,54	0
56	MG	DA	3534	1/1	0.95	0.19	45,45,45,45	0
56	MG	DA	3535	1/1	0.95	0.19	33,33,33,33	0
56	MG	BA	3603	1/1	0.95	0.08	39,39,39,39	0
56	MG	BA	3605	1/1	0.95	0.30	59,59,59,59	0
56	MG	AA	3040	1/1	0.95	0.12	55,55,55,55	0
56	MG	BA	3421	1/1	0.95	0.12	36,36,36,36	0
56	MG	DA	3232	1/1	0.95	0.25	50,50,50,50	0
56	MG	CA	3075	1/1	0.95	0.17	76,76,76,76	0
56	MG	BA	3422	1/1	0.95	0.23	42,42,42,42	0
56	MG	DA	3550	1/1	0.95	0.17	53,53,53,53	0
56	MG	BA	3286	1/1	0.95	0.26	32,32,32,32	0
56	MG	AA	3064	1/1	0.95	0.30	79,79,79,79	0
56	MG	CA	3082	1/1	0.95	0.08	47,47,47,47	0
56	MG	DA	3555	1/1	0.95	0.12	41,41,41,41	0
56	MG	DA	3245	1/1	0.95	0.15	37,37,37,37	0
56	MG	DA	3558	1/1	0.95	0.18	37,37,37,37	0
56	MG	BE	307	1/1	0.95	0.24	39,39,39,39	0
56	MG	BA	3616	1/1	0.95	0.10	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3229	1/1	0.95	0.15	22,22,22,22	0
56	MG	BA	3618	1/1	0.95	0.27	46,46,46,46	0
56	MG	DA	3565	1/1	0.95	0.07	57,57,57,57	0
56	MG	DA	3566	1/1	0.95	0.14	71,71,71,71	0
56	MG	CA	3090	1/1	0.95	0.18	73,73,73,73	0
56	MG	DA	3570	1/1	0.95	0.22	28,28,28,28	0
56	MG	AA	3168	1/1	0.95	0.31	68,68,68,68	0
56	MG	CA	3094	1/1	0.95	0.18	43,43,43,43	0
56	MG	DA	3576	1/1	0.95	0.15	38,38,38,38	0
56	MG	DA	3261	1/1	0.95	0.22	35,35,35,35	0
56	MG	DA	3263	1/1	0.95	0.19	31,31,31,31	0
56	MG	BA	3620	1/1	0.95	0.12	47,47,47,47	0
56	MG	DA	3267	1/1	0.95	0.17	61,61,61,61	0
56	MG	BA	3441	1/1	0.95	0.25	25,25,25,25	0
56	MG	DA	3585	1/1	0.95	0.15	62,62,62,62	0
56	MG	CA	3102	1/1	0.95	0.09	41,41,41,41	0
56	MG	DA	3589	1/1	0.95	0.18	59,59,59,59	0
56	MG	BG	3004	1/1	0.95	0.04	62,62,62,62	0
56	MG	AA	3111	1/1	0.95	0.17	95,95,95,95	0
56	MG	DA	3083	1/1	0.95	0.25	41,41,41,41	0
56	MG	DA	3283	1/1	0.95	0.21	33,33,33,33	0
56	MG	BA	3233	1/1	0.95	0.18	47,47,47,47	0
56	MG	DA	3595	1/1	0.95	0.18	72,72,72,72	0
56	MG	BA	3627	1/1	0.95	0.20	50,50,50,50	0
56	MG	BN	3005	1/1	0.95	0.85	52,52,52,52	0
56	MG	CA	3108	1/1	0.95	0.21	52,52,52,52	0
56	MG	DA	3601	1/1	0.95	0.12	77,77,77,77	0
56	MG	BP	201	1/1	0.95	0.66	40,40,40,40	0
56	MG	BA	3628	1/1	0.95	0.21	41,41,41,41	0
56	MG	AX	104	1/1	0.95	0.14	76,76,76,76	0
56	MG	AA	3170	1/1	0.95	0.16	101,101,101,101	0
56	MG	DA	3297	1/1	0.95	0.14	57,57,57,57	0
56	MG	DA	3298	1/1	0.95	0.32	37,37,37,37	0
56	MG	DA	3299	1/1	0.95	0.22	40,40,40,40	0
56	MG	DA	3614	1/1	0.95	0.20	48,48,48,48	0
56	MG	BA	3037	1/1	0.95	0.20	31,31,31,31	0
56	MG	BA	3073	1/1	0.95	0.85	41,41,41,41	0
56	MG	DA	3619	1/1	0.95	0.22	48,48,48,48	0
56	MG	DA	3306	1/1	0.95	0.21	33,33,33,33	0
56	MG	DA	3307	1/1	0.95	0.30	37,37,37,37	0
56	MG	BA	3169	1/1	0.95	0.70	46,46,46,46	0
56	MG	BU	202	1/1	0.95	0.36	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3626	1/1	0.95	0.07	68,68,68,68	0
56	MG	BA	3639	1/1	0.95	0.16	50,50,50,50	0
56	MG	BA	3461	1/1	0.95	0.24	36,36,36,36	0
56	MG	DA	3319	1/1	0.95	0.18	53,53,53,53	0
56	MG	DA	3322	1/1	0.95	0.13	55,55,55,55	0
56	MG	DA	3325	1/1	0.95	0.17	36,36,36,36	0
56	MG	AA	3130	1/1	0.95	0.23	46,46,46,46	0
56	MG	DA	3329	1/1	0.95	0.16	53,53,53,53	0
56	MG	BU	208	1/1	0.95	0.88	56,56,56,56	0
56	MG	BV	202	1/1	0.95	0.44	56,56,56,56	0
56	MG	BV	203	1/1	0.95	1.03	46,46,46,46	0
56	MG	AA	3056	1/1	0.95	0.19	39,39,39,39	0
56	MG	DA	3648	1/1	0.95	0.17	52,52,52,52	0
56	MG	BA	3645	1/1	0.95	0.09	56,56,56,56	0
56	MG	BA	3078	1/1	0.95	0.26	17,17,17,17	0
56	MG	DA	3654	1/1	0.95	0.17	52,52,52,52	0
56	MG	BA	3129	1/1	0.95	0.25	36,36,36,36	0
56	MG	DB	3002	1/1	0.95	0.25	56,56,56,56	0
56	MG	DA	3350	1/1	0.95	0.04	32,32,32,32	0
56	MG	AA	3070	1/1	0.95	0.10	75,75,75,75	0
56	MG	DB	3006	1/1	0.95	0.13	42,42,42,42	0
56	MG	DA	3353	1/1	0.95	0.10	62,62,62,62	0
56	MG	BA	3312	1/1	0.95	0.10	58,58,58,58	0
56	MG	BA	3654	1/1	0.95	0.16	25,25,25,25	0
56	MG	DB	3010	1/1	0.95	0.18	73,73,73,73	0
56	MG	BA	3470	1/1	0.95	0.24	54,54,54,54	0
56	MG	BA	3041	1/1	0.95	0.38	32,32,32,32	0
56	MG	DD	301	1/1	0.95	0.32	46,46,46,46	0
56	MG	BA	3042	1/1	0.95	0.76	47,47,47,47	0
56	MG	BA	3326	1/1	0.95	0.08	41,41,41,41	0
56	MG	DD	306	1/1	0.95	1.14	44,44,44,44	0
56	MG	BA	3043	1/1	0.95	0.17	52,52,52,52	0
56	MG	DA	3118	1/1	0.95	0.10	39,39,39,39	0
56	MG	BA	3484	1/1	0.95	0.17	54,54,54,54	0
56	MG	DA	3120	1/1	0.95	0.76	51,51,51,51	0
56	MG	DE	306	1/1	0.95	0.14	32,32,32,32	0
56	MG	DA	3121	1/1	0.95	0.19	48,48,48,48	0
56	MG	BA	3330	1/1	0.95	0.16	39,39,39,39	0
56	MG	B5	502	1/1	0.95	0.10	54,54,54,54	0
56	MG	BA	3004	1/1	0.95	0.12	24,24,24,24	0
56	MG	DA	3382	1/1	0.95	0.14	25,25,25,25	0
56	MG	BA	3672	1/1	0.95	0.30	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3384	1/1	0.95	0.11	23,23,23,23	0
56	MG	BA	3498	1/1	0.95	0.15	39,39,39,39	0
56	MG	CA	3156	1/1	0.95	0.15	70,70,70,70	0
56	MG	BA	3674	1/1	0.95	0.18	55,55,55,55	0
56	MG	BA	3332	1/1	0.95	0.19	39,39,39,39	0
56	MG	DA	3130	1/1	0.95	0.12	32,32,32,32	0
56	MG	DA	3396	1/1	0.95	0.19	35,35,35,35	0
56	MG	BA	3500	1/1	0.95	0.15	37,37,37,37	0
56	MG	AA	3122	1/1	0.95	0.54	44,44,44,44	0
56	MG	BA	3138	1/1	0.95	0.17	46,46,46,46	0
56	MG	AA	3148	1/1	0.95	0.21	66,66,66,66	0
56	MG	BA	3506	1/1	0.95	0.14	30,30,30,30	0
56	MG	D5	102	1/1	0.95	0.58	55,55,55,55	0
56	MG	DA	3406	1/1	0.95	0.12	40,40,40,40	0
56	MG	DA	3407	1/1	0.95	0.24	21,21,21,21	0
56	MG	DA	3138	1/1	0.95	0.22	42,42,42,42	0
56	MG	DA	3411	1/1	0.95	0.17	21,21,21,21	0
56	MG	BA	3339	1/1	0.95	0.22	43,43,43,43	0
56	MG	CA	3009	1/1	0.95	0.14	47,47,47,47	0
56	MG	DA	3141	1/1	0.95	0.13	62,62,62,62	0
56	MG	BA	3189	1/1	0.95	0.16	54,54,54,54	0
56	MG	CA	3011	1/1	0.95	0.28	42,42,42,42	0
56	MG	BA	3076	1/1	0.96	0.23	41,41,41,41	0
56	MG	BA	3291	1/1	0.96	0.17	41,41,41,41	0
56	MG	BA	3395	1/1	0.96	0.20	25,25,25,25	0
56	MG	DA	3178	1/1	0.96	0.37	43,43,43,43	0
56	MG	AA	3149	1/1	0.96	0.09	50,50,50,50	0
56	MG	DA	3182	1/1	0.96	0.16	32,32,32,32	0
56	MG	BA	3551	1/1	0.96	0.22	25,25,25,25	0
56	MG	BA	3021	1/1	0.96	0.27	42,42,42,42	0
56	MG	BA	3191	1/1	0.96	0.19	52,52,52,52	0
56	MG	CA	3026	1/1	0.96	0.07	52,52,52,52	0
56	MG	BA	3109	1/1	0.96	0.09	36,36,36,36	0
56	MG	DA	3457	1/1	0.96	0.12	37,37,37,37	0
56	MG	CA	3028	1/1	0.96	0.44	43,43,43,43	0
56	MG	BA	3561	1/1	0.96	0.19	24,24,24,24	0
56	MG	BA	3707	1/1	0.96	0.20	36,36,36,36	0
56	MG	BA	3405	1/1	0.96	0.14	34,34,34,34	0
56	MG	BA	3709	1/1	0.96	0.12	86,86,86,86	0
56	MG	DA	3463	1/1	0.96	0.37	43,43,43,43	0
56	MG	AA	3104	1/1	0.96	0.16	37,37,37,37	0
56	MG	BA	3151	1/1	0.96	0.06	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3566	1/1	0.96	0.09	53,53,53,53	0
56	MG	DA	3468	1/1	0.96	0.14	48,48,48,48	0
56	MG	BA	3715	1/1	0.96	0.13	47,47,47,47	0
56	MG	AA	3153	1/1	0.96	0.13	45,45,45,45	0
56	MG	DA	3201	1/1	0.96	0.12	48,48,48,48	0
56	MG	BA	3413	1/1	0.96	0.14	20,20,20,20	0
56	MG	DA	3203	1/1	0.96	0.13	41,41,41,41	0
56	MG	DA	3039	1/1	0.96	0.40	59,59,59,59	0
56	MG	DA	3206	1/1	0.96	0.26	42,42,42,42	0
56	MG	BA	3571	1/1	0.96	0.08	65,65,65,65	0
56	MG	BA	3112	1/1	0.96	0.09	38,38,38,38	0
56	MG	BA	3575	1/1	0.96	0.19	51,51,51,51	0
56	MG	DA	3485	1/1	0.96	0.09	38,38,38,38	0
56	MG	DA	3486	1/1	0.96	0.12	38,38,38,38	0
56	MG	BA	3054	1/1	0.96	0.29	46,46,46,46	0
56	MG	BA	3726	1/1	0.96	0.55	47,47,47,47	0
56	MG	BA	3199	1/1	0.96	0.46	36,36,36,36	0
56	MG	DA	3491	1/1	0.96	0.15	56,56,56,56	0
56	MG	BA	3117	1/1	0.96	0.24	25,25,25,25	0
56	MG	BA	3425	1/1	0.96	0.36	36,36,36,36	0
56	MG	BA	3426	1/1	0.96	0.27	51,51,51,51	0
56	MG	BA	3584	1/1	0.96	0.18	22,22,22,22	0
56	MG	DA	3498	1/1	0.96	0.18	56,56,56,56	0
56	MG	BA	3427	1/1	0.96	0.12	48,48,48,48	0
56	MG	BA	3737	1/1	0.96	0.25	60,60,60,60	0
56	MG	BA	3118	1/1	0.96	0.19	39,39,39,39	0
56	MG	BA	3319	1/1	0.96	0.17	25,25,25,25	0
56	MG	BB	3002	1/1	0.96	0.19	59,59,59,59	0
56	MG	BA	3121	1/1	0.96	0.27	57,57,57,57	0
56	MG	BA	3434	1/1	0.96	0.12	32,32,32,32	0
56	MG	BA	3324	1/1	0.96	0.18	36,36,36,36	0
56	MG	BA	3440	1/1	0.96	0.40	38,38,38,38	0
56	MG	BB	3007	1/1	0.96	0.09	47,47,47,47	0
56	MG	AA	3099	1/1	0.96	0.42	60,60,60,60	0
56	MG	BA	3025	1/1	0.96	0.25	28,28,28,28	0
56	MG	DA	3513	1/1	0.96	0.22	49,49,49,49	0
56	MG	BA	3001	1/1	0.96	0.15	69,69,69,69	0
56	MG	DA	3235	1/1	0.96	0.19	50,50,50,50	0
56	MG	BA	3213	1/1	0.96	0.05	41,41,41,41	0
56	MG	DA	3518	1/1	0.96	0.20	40,40,40,40	0
56	MG	CA	3072	1/1	0.96	0.22	38,38,38,38	0
56	MG	AA	3174	1/1	0.96	0.22	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	AA	3175	1/1	0.96	0.14	76,76,76,76	0
56	MG	BD	302	1/1	0.96	0.36	58,58,58,58	0
56	MG	BD	303	1/1	0.96	0.19	42,42,42,42	0
56	MG	DA	3247	1/1	0.96	0.08	31,31,31,31	0
56	MG	DA	3248	1/1	0.96	0.29	51,51,51,51	0
56	MG	DA	3249	1/1	0.96	0.21	28,28,28,28	0
56	MG	CA	3078	1/1	0.96	0.29	46,46,46,46	0
56	MG	DA	3530	1/1	0.96	0.15	49,49,49,49	0
56	MG	BA	3604	1/1	0.96	0.11	72,72,72,72	0
56	MG	AD	502	1/1	0.96	0.46	43,43,43,43	0
56	MG	BA	3606	1/1	0.96	0.23	25,25,25,25	0
56	MG	BA	3607	1/1	0.96	0.43	53,53,53,53	0
56	MG	DA	3257	1/1	0.96	0.10	48,48,48,48	0
56	MG	DA	3259	1/1	0.96	0.15	47,47,47,47	0
56	MG	BD	309	1/1	0.96	0.14	42,42,42,42	0
56	MG	BA	3217	1/1	0.96	0.09	28,28,28,28	0
56	MG	BA	3458	1/1	0.96	0.12	29,29,29,29	0
56	MG	DA	3544	1/1	0.96	0.11	51,51,51,51	0
56	MG	BE	301	1/1	0.96	0.56	43,43,43,43	0
56	MG	DA	3265	1/1	0.96	0.27	51,51,51,51	0
56	MG	DA	3266	1/1	0.96	0.23	43,43,43,43	0
56	MG	BA	3265	1/1	0.96	0.11	20,20,20,20	0
56	MG	DA	3270	1/1	0.96	0.20	36,36,36,36	0
56	MG	BA	3266	1/1	0.96	0.33	46,46,46,46	0
56	MG	DA	3276	1/1	0.96	0.22	36,36,36,36	0
56	MG	DA	3082	1/1	0.96	0.10	19,19,19,19	0
56	MG	DA	3557	1/1	0.96	0.12	45,45,45,45	0
56	MG	CA	3095	1/1	0.96	0.11	39,39,39,39	0
56	MG	CA	3096	1/1	0.96	0.10	60,60,60,60	0
56	MG	BA	3340	1/1	0.96	0.13	57,57,57,57	0
56	MG	BA	3615	1/1	0.96	0.17	36,36,36,36	0
56	MG	BA	3343	1/1	0.96	0.19	40,40,40,40	0
56	MG	BA	3130	1/1	0.96	0.58	43,43,43,43	0
56	MG	DA	3091	1/1	0.96	0.38	44,44,44,44	0
56	MG	DA	3287	1/1	0.96	0.27	53,53,53,53	0
56	MG	DA	3568	1/1	0.96	0.10	42,42,42,42	0
56	MG	BA	3345	1/1	0.96	0.21	33,33,33,33	0
56	MG	DA	3289	1/1	0.96	0.13	26,26,26,26	0
56	MG	BA	3219	1/1	0.96	0.22	65,65,65,65	0
56	MG	DA	3575	1/1	0.96	0.19	43,43,43,43	0
56	MG	DA	3094	1/1	0.96	0.18	26,26,26,26	0
56	MG	DA	3577	1/1	0.96	0.25	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3294	1/1	0.96	0.10	47,47,47,47	0
56	MG	BA	3035	1/1	0.96	0.09	37,37,37,37	0
56	MG	BA	3472	1/1	0.96	0.08	30,30,30,30	0
56	MG	BG	3003	1/1	0.96	0.15	42,42,42,42	0
56	MG	BA	3223	1/1	0.96	0.68	47,47,47,47	0
56	MG	BA	3625	1/1	0.96	0.13	51,51,51,51	0
56	MG	AA	3106	1/1	0.96	0.25	56,56,56,56	0
56	MG	CA	3113	1/1	0.96	0.23	77,77,77,77	0
56	MG	BA	3477	1/1	0.96	0.11	25,25,25,25	0
56	MG	CA	3115	1/1	0.96	0.09	55,55,55,55	0
56	MG	BA	3093	1/1	0.96	0.22	25,25,25,25	0
56	MG	DA	3311	1/1	0.96	0.09	32,32,32,32	0
56	MG	BA	3630	1/1	0.96	0.25	52,52,52,52	0
56	MG	BP	204	1/1	0.96	0.17	55,55,55,55	0
56	MG	AA	3178	1/1	0.96	0.18	65,65,65,65	0
56	MG	BA	3483	1/1	0.96	0.26	53,53,53,53	0
56	MG	DA	3321	1/1	0.96	0.23	41,41,41,41	0
56	MG	AA	3157	1/1	0.96	0.08	35,35,35,35	0
56	MG	BA	3485	1/1	0.96	0.29	44,44,44,44	0
56	MG	BA	3637	1/1	0.96	0.35	33,33,33,33	0
56	MG	DA	3328	1/1	0.96	0.15	28,28,28,28	0
56	MG	DA	3605	1/1	0.96	0.15	44,44,44,44	0
56	MG	DA	3606	1/1	0.96	0.10	58,58,58,58	0
56	MG	DA	3607	1/1	0.96	0.10	45,45,45,45	0
56	MG	BA	3488	1/1	0.96	0.35	35,35,35,35	0
56	MG	DA	3333	1/1	0.96	0.24	58,58,58,58	0
56	MG	CA	3132	1/1	0.96	0.11	70,70,70,70	0
56	MG	BA	3176	1/1	0.96	0.19	38,38,38,38	0
56	MG	AA	3161	1/1	0.96	0.12	72,72,72,72	0
56	MG	BA	3497	1/1	0.96	0.14	62,62,62,62	0
56	MG	DA	3341	1/1	0.96	0.19	23,23,23,23	0
56	MG	BA	3642	1/1	0.96	0.24	51,51,51,51	0
56	MG	BA	3359	1/1	0.96	0.20	23,23,23,23	0
56	MG	DA	3345	1/1	0.96	0.09	31,31,31,31	0
56	MG	DA	3622	1/1	0.96	0.08	55,55,55,55	0
56	MG	BV	201	1/1	0.96	0.40	53,53,53,53	0
56	MG	DA	3348	1/1	0.96	0.32	37,37,37,37	0
56	MG	BA	3361	1/1	0.96	0.26	34,34,34,34	0
56	MG	BA	3362	1/1	0.96	0.09	43,43,43,43	0
56	MG	DA	3628	1/1	0.96	0.22	63,63,63,63	0
56	MG	DA	3629	1/1	0.96	0.17	19,19,19,19	0
56	MG	BV	204	1/1	0.96	0.20	20,20,20,20	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3648	1/1	0.96	0.30	49,49,49,49	0
56	MG	DA	3633	1/1	0.96	0.20	54,54,54,54	0
56	MG	BW	202	1/1	0.96	0.18	34,34,34,34	0
56	MG	CA	3145	1/1	0.96	0.08	43,43,43,43	0
56	MG	BA	3649	1/1	0.96	0.17	66,66,66,66	0
56	MG	DA	3637	1/1	0.96	0.28	48,48,48,48	0
56	MG	BW	204	1/1	0.96	0.35	35,35,35,35	0
56	MG	DA	3639	1/1	0.96	0.30	15,15,15,15	0
56	MG	BA	3013	1/1	0.96	0.14	40,40,40,40	0
56	MG	DA	3641	1/1	0.96	0.43	61,61,61,61	0
56	MG	DA	3642	1/1	0.96	0.13	35,35,35,35	0
56	MG	BA	3651	1/1	0.96	0.13	45,45,45,45	0
56	MG	BA	3366	1/1	0.96	0.09	63,63,63,63	0
56	MG	BA	3503	1/1	0.96	0.28	31,31,31,31	0
56	MG	BA	3504	1/1	0.96	0.29	41,41,41,41	0
56	MG	DA	3133	1/1	0.96	0.15	33,33,33,33	0
56	MG	BA	3657	1/1	0.96	0.16	56,56,56,56	0
56	MG	BA	3367	1/1	0.96	0.15	50,50,50,50	0
56	MG	BA	3368	1/1	0.96	0.20	35,35,35,35	0
56	MG	DA	3381	1/1	0.96	0.27	47,47,47,47	0
56	MG	BA	3234	1/1	0.96	0.30	55,55,55,55	0
56	MG	DB	3004	1/1	0.96	0.14	68,68,68,68	0
56	MG	AA	3183	1/1	0.96	0.10	42,42,42,42	0
56	MG	BA	3663	1/1	0.96	0.23	56,56,56,56	0
56	MG	DA	3386	1/1	0.96	0.18	56,56,56,56	0
56	MG	BA	3015	1/1	0.96	0.34	44,44,44,44	0
56	MG	DA	3142	1/1	0.96	0.24	33,33,33,33	0
56	MG	DA	3389	1/1	0.96	0.28	27,27,27,27	0
56	MG	BA	3665	1/1	0.96	0.21	39,39,39,39	0
56	MG	AA	3107	1/1	0.96	0.31	44,44,44,44	0
56	MG	BA	3667	1/1	0.96	0.09	63,63,63,63	0
56	MG	BA	3512	1/1	0.96	0.23	40,40,40,40	0
56	MG	DA	3397	1/1	0.96	0.18	41,41,41,41	0
56	MG	BA	3513	1/1	0.96	0.11	45,45,45,45	0
56	MG	DA	3399	1/1	0.96	0.19	41,41,41,41	0
56	MG	BA	3376	1/1	0.96	0.10	48,48,48,48	0
56	MG	DE	301	1/1	0.96	0.61	51,51,51,51	0
56	MG	AA	3108	1/1	0.96	0.47	67,67,67,67	0
56	MG	DE	304	1/1	0.96	0.20	41,41,41,41	0
56	MG	BA	3380	1/1	0.96	0.13	53,53,53,53	0
56	MG	DA	3403	1/1	0.96	0.14	28,28,28,28	0
56	MG	CA	3004	1/1	0.96	0.21	96,96,96,96	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3152	1/1	0.96	0.23	50,50,50,50	0
56	MG	DA	3153	1/1	0.96	0.20	38,38,38,38	0
56	MG	DA	3409	1/1	0.96	0.15	32,32,32,32	0
56	MG	BA	3524	1/1	0.96	0.25	55,55,55,55	0
56	MG	DF	306	1/1	0.96	0.23	50,50,50,50	0
56	MG	BA	3384	1/1	0.96	0.39	60,60,60,60	0
56	MG	DN	5001	1/1	0.96	0.12	75,75,75,75	0
56	MG	BA	3536	1/1	0.96	0.14	27,27,27,27	0
56	MG	BA	3537	1/1	0.96	0.38	31,31,31,31	0
56	MG	DA	3416	1/1	0.96	0.07	44,44,44,44	0
56	MG	DA	3417	1/1	0.96	0.15	34,34,34,34	0
56	MG	DA	3158	1/1	0.96	0.34	57,57,57,57	0
56	MG	DV	201	1/1	0.96	0.38	55,55,55,55	0
56	MG	DA	3420	1/1	0.96	0.13	51,51,51,51	0
56	MG	DA	3422	1/1	0.96	0.11	38,38,38,38	0
56	MG	BA	3685	1/1	0.96	0.09	67,67,67,67	0
56	MG	BA	3538	1/1	0.96	0.15	36,36,36,36	0
56	MG	DA	3425	1/1	0.96	0.11	27,27,27,27	0
56	MG	DA	3426	1/1	0.96	0.15	74,74,74,74	0
56	MG	D3	101	1/1	0.96	0.45	63,63,63,63	0
56	MG	BA	3385	1/1	0.96	0.24	26,26,26,26	0
56	MG	DA	3429	1/1	0.96	0.18	44,44,44,44	0
56	MG	CA	3012	1/1	0.96	0.12	49,49,49,49	0
56	MG	DA	3432	1/1	0.96	0.27	66,66,66,66	0
56	MG	DA	3007	1/1	0.96	0.23	30,30,30,30	0
56	MG	DA	3166	1/1	0.96	0.08	32,32,32,32	0
56	MG	AA	3021	1/1	0.96	0.20	76,76,76,76	0
58	ZN	D9	501	1/1	0.96	0.05	66,66,66,66	0
56	MG	BA	3542	1/1	0.96	0.23	19,19,19,19	0
56	MG	BA	3543	1/1	0.96	0.29	52,52,52,52	0
56	MG	DA	3439	1/1	0.96	0.19	28,28,28,28	0
56	MG	AA	3055	1/1	0.96	0.20	50,50,50,50	0
56	MG	BA	3695	1/1	0.97	0.17	15,15,15,15	0
56	MG	BA	3696	1/1	0.97	0.26	39,39,39,39	0
56	MG	BA	3554	1/1	0.97	0.20	31,31,31,31	0
56	MG	DA	3023	1/1	0.97	0.28	52,52,52,52	0
56	MG	AA	3160	1/1	0.97	0.30	52,52,52,52	0
56	MG	BA	3322	1/1	0.97	0.23	22,22,22,22	0
56	MG	BA	3559	1/1	0.97	0.14	48,48,48,48	0
56	MG	BA	3701	1/1	0.97	0.13	32,32,32,32	0
56	MG	BA	3323	1/1	0.97	0.15	23,23,23,23	0
56	MG	BA	3203	1/1	0.97	0.26	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
56	MG	DA	3471	1/1	0.97	0.14	37,37,37,37	0
56	MG	BA	3705	1/1	0.97	0.05	39,39,39,39	0
56	MG	BA	3204	1/1	0.97	0.40	25,25,25,25	0
56	MG	AA	3207	1/1	0.97	0.28	45,45,45,45	0
56	MG	DA	3037	1/1	0.97	0.30	35,35,35,35	0
56	MG	BA	3564	1/1	0.97	0.07	52,52,52,52	0
56	MG	BA	3428	1/1	0.97	0.11	45,45,45,45	0
56	MG	BA	3710	1/1	0.97	0.21	48,48,48,48	0
56	MG	BA	3327	1/1	0.97	0.15	38,38,38,38	0
56	MG	BA	3031	1/1	0.97	0.79	41,41,41,41	0
56	MG	DA	3043	1/1	0.97	0.45	54,54,54,54	0
56	MG	BA	3713	1/1	0.97	0.10	66,66,66,66	0
56	MG	DA	3488	1/1	0.97	0.04	46,46,46,46	0
56	MG	BA	3329	1/1	0.97	0.13	29,29,29,29	0
56	MG	BA	3162	1/1	0.97	0.19	23,23,23,23	0
56	MG	BA	3572	1/1	0.97	0.20	36,36,36,36	0
56	MG	BA	3435	1/1	0.97	0.23	24,24,24,24	0
56	MG	DA	3493	1/1	0.97	0.15	29,29,29,29	0
56	MG	BA	3437	1/1	0.97	0.15	42,42,42,42	0
56	MG	DA	3495	1/1	0.97	0.22	39,39,39,39	0
56	MG	BA	3438	1/1	0.97	0.18	30,30,30,30	0
56	MG	DA	3239	1/1	0.97	0.21	39,39,39,39	0
56	MG	BA	3720	1/1	0.97	0.20	33,33,33,33	0
56	MG	DA	3241	1/1	0.97	0.21	15,15,15,15	0
56	MG	DA	3242	1/1	0.97	0.23	35,35,35,35	0
56	MG	BA	3721	1/1	0.97	0.08	25,25,25,25	0
56	MG	CA	3043	1/1	0.97	0.34	49,49,49,49	0
56	MG	BA	3210	1/1	0.97	0.11	34,34,34,34	0
56	MG	DA	3504	1/1	0.97	0.08	44,44,44,44	0
56	MG	CA	3045	1/1	0.97	0.09	54,54,54,54	0
56	MG	BA	3032	1/1	0.97	0.19	49,49,49,49	0
56	MG	BA	3333	1/1	0.97	0.12	49,49,49,49	0
56	MG	DA	3508	1/1	0.97	0.19	38,38,38,38	0
56	MG	DA	3251	1/1	0.97	0.15	54,54,54,54	0
56	MG	BA	3212	1/1	0.97	0.28	43,43,43,43	0
56	MG	CA	3049	1/1	0.97	0.24	53,53,53,53	0
56	MG	CA	3050	1/1	0.97	0.13	43,43,43,43	0
56	MG	CA	3052	1/1	0.97	0.12	39,39,39,39	0
56	MG	DA	3514	1/1	0.97	0.12	39,39,39,39	0
56	MG	BA	3582	1/1	0.97	0.22	25,25,25,25	0
56	MG	BA	3729	1/1	0.97	0.40	46,46,46,46	0
56	MG	DA	3258	1/1	0.97	0.18	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3033	1/1	0.97	0.37	35,35,35,35	0
56	MG	BA	3034	1/1	0.97	0.41	52,52,52,52	0
56	MG	BA	3734	1/1	0.97	0.26	45,45,45,45	0
56	MG	DA	3262	1/1	0.97	0.22	44,44,44,44	0
56	MG	BA	3587	1/1	0.97	0.18	23,23,23,23	0
56	MG	CA	3059	1/1	0.97	0.27	51,51,51,51	0
56	MG	BA	3447	1/1	0.97	0.13	37,37,37,37	0
56	MG	BA	3338	1/1	0.97	0.21	50,50,50,50	0
56	MG	BA	3450	1/1	0.97	0.27	46,46,46,46	0
56	MG	DA	3269	1/1	0.97	0.12	48,48,48,48	0
56	MG	BA	3451	1/1	0.97	0.30	28,28,28,28	0
56	MG	BB	3001	1/1	0.97	0.17	54,54,54,54	0
56	MG	DA	3274	1/1	0.97	0.09	52,52,52,52	0
56	MG	DA	3275	1/1	0.97	0.07	38,38,38,38	0
56	MG	BA	3593	1/1	0.97	0.14	74,74,74,74	0
56	MG	AA	3208	1/1	0.97	0.34	46,46,46,46	0
56	MG	BA	3167	1/1	0.97	0.39	39,39,39,39	0
56	MG	BA	3455	1/1	0.97	0.14	47,47,47,47	0
56	MG	BA	3456	1/1	0.97	0.10	52,52,52,52	0
56	MG	DA	3282	1/1	0.97	0.14	36,36,36,36	0
56	MG	BA	3267	1/1	0.97	0.16	41,41,41,41	0
56	MG	BA	3063	1/1	0.97	0.28	43,43,43,43	0
56	MG	DA	3546	1/1	0.97	0.12	44,44,44,44	0
56	MG	DA	3547	1/1	0.97	0.10	41,41,41,41	0
56	MG	BA	3600	1/1	0.97	0.15	47,47,47,47	0
56	MG	BA	3064	1/1	0.97	0.19	39,39,39,39	0
56	MG	BB	3015	1/1	0.97	0.10	37,37,37,37	0
56	MG	DA	3085	1/1	0.97	0.12	36,36,36,36	0
56	MG	BA	3170	1/1	0.97	0.66	48,48,48,48	0
56	MG	DA	3291	1/1	0.97	0.24	35,35,35,35	0
56	MG	BA	3220	1/1	0.97	0.10	57,57,57,57	0
56	MG	DA	3088	1/1	0.97	0.15	46,46,46,46	0
56	MG	BA	3349	1/1	0.97	0.26	43,43,43,43	0
56	MG	BA	3272	1/1	0.97	0.34	7,7,7,7	0
56	MG	CA	3083	1/1	0.97	0.08	39,39,39,39	0
56	MG	BA	3351	1/1	0.97	0.07	30,30,30,30	0
56	MG	DA	3563	1/1	0.97	0.15	64,64,64,64	0
56	MG	BA	3352	1/1	0.97	0.12	34,34,34,34	0
56	MG	BA	3469	1/1	0.97	0.09	38,38,38,38	0
56	MG	DA	3300	1/1	0.97	0.15	37,37,37,37	0
56	MG	DA	3302	1/1	0.97	0.18	22,22,22,22	0
56	MG	CA	3088	1/1	0.97	0.26	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3171	1/1	0.97	0.41	40,40,40,40	0
56	MG	DA	3571	1/1	0.97	0.14	46,46,46,46	0
56	MG	BA	3274	1/1	0.97	0.16	52,52,52,52	0
56	MG	DA	3573	1/1	0.97	0.19	40,40,40,40	0
56	MG	BD	308	1/1	0.97	0.33	23,23,23,23	0
56	MG	DA	3309	1/1	0.97	0.17	33,33,33,33	0
56	MG	BA	3473	1/1	0.97	0.11	51,51,51,51	0
56	MG	BA	3096	1/1	0.97	0.35	62,62,62,62	0
56	MG	BA	3475	1/1	0.97	0.21	36,36,36,36	0
56	MG	BA	3173	1/1	0.97	0.58	37,37,37,37	0
56	MG	AA	3150	1/1	0.97	0.27	46,46,46,46	0
56	MG	CA	3101	1/1	0.97	0.18	70,70,70,70	0
56	MG	BE	304	1/1	0.97	0.09	49,49,49,49	0
56	MG	DA	3583	1/1	0.97	0.28	48,48,48,48	0
56	MG	DA	3584	1/1	0.97	0.16	61,61,61,61	0
56	MG	BA	3479	1/1	0.97	0.10	56,56,56,56	0
56	MG	DA	3586	1/1	0.97	0.09	29,29,29,29	0
56	MG	AA	3102	1/1	0.97	0.06	64,64,64,64	0
56	MG	BA	3621	1/1	0.97	0.36	74,74,74,74	0
56	MG	BE	310	1/1	0.97	0.24	50,50,50,50	0
56	MG	BF	301	1/1	0.97	0.52	45,45,45,45	0
56	MG	AA	3171	1/1	0.97	0.25	72,72,72,72	0
56	MG	BA	3623	1/1	0.97	0.21	47,47,47,47	0
56	MG	DA	3335	1/1	0.97	0.26	38,38,38,38	0
56	MG	BF	305	1/1	0.97	0.32	35,35,35,35	0
56	MG	DA	3596	1/1	0.97	0.10	67,67,67,67	0
56	MG	BF	306	1/1	0.97	0.18	37,37,37,37	0
56	MG	CA	3112	1/1	0.97	0.23	59,59,59,59	0
56	MG	BA	3360	1/1	0.97	0.19	38,38,38,38	0
56	MG	AA	3182	1/1	0.97	0.12	49,49,49,49	0
56	MG	AA	3156	1/1	0.97	0.17	62,62,62,62	0
56	MG	DA	3344	1/1	0.97	0.11	26,26,26,26	0
56	MG	BA	3486	1/1	0.97	0.06	38,38,38,38	0
56	MG	BA	3363	1/1	0.97	0.15	39,39,39,39	0
56	MG	CA	3118	1/1	0.97	0.08	37,37,37,37	0
56	MG	DA	3349	1/1	0.97	0.17	54,54,54,54	0
56	MG	BA	3629	1/1	0.97	0.13	47,47,47,47	0
56	MG	CA	3120	1/1	0.97	0.19	58,58,58,58	0
56	MG	CA	3121	1/1	0.97	0.27	53,53,53,53	0
56	MG	DA	3356	1/1	0.97	0.11	27,27,27,27	0
56	MG	BA	3489	1/1	0.97	0.14	43,43,43,43	0
56	MG	BA	3490	1/1	0.97	0.26	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3616	1/1	0.97	0.23	62,62,62,62	0
56	MG	BA	3493	1/1	0.97	0.37	15,15,15,15	0
56	MG	BA	3364	1/1	0.97	0.24	29,29,29,29	0
56	MG	BO	201	1/1	0.97	0.14	70,70,70,70	0
56	MG	CA	3130	1/1	0.97	0.08	65,65,65,65	0
56	MG	BA	3232	1/1	0.97	0.15	29,29,29,29	0
56	MG	BP	202	1/1	0.97	0.11	40,40,40,40	0
56	MG	BP	203	1/1	0.97	0.69	29,29,29,29	0
56	MG	BA	3636	1/1	0.97	0.11	36,36,36,36	0
56	MG	DA	3368	1/1	0.97	0.12	39,39,39,39	0
56	MG	AA	3057	1/1	0.97	0.09	37,37,37,37	0
56	MG	DA	3371	1/1	0.97	0.07	44,44,44,44	0
56	MG	DA	3630	1/1	0.97	0.20	40,40,40,40	0
56	MG	DA	3136	1/1	0.97	0.11	49,49,49,49	0
56	MG	DA	3374	1/1	0.97	0.05	37,37,37,37	0
56	MG	DA	3375	1/1	0.97	0.14	60,60,60,60	0
56	MG	AA	3185	1/1	0.97	0.28	46,46,46,46	0
56	MG	BQ	204	1/1	0.97	0.18	12,12,12,12	0
56	MG	AA	3186	1/1	0.97	0.07	49,49,49,49	0
56	MG	BA	3369	1/1	0.97	0.22	45,45,45,45	0
56	MG	BR	203	1/1	0.97	0.18	15,15,15,15	0
56	MG	AA	3158	1/1	0.97	0.20	44,44,44,44	0
56	MG	BA	3184	1/1	0.97	0.38	49,49,49,49	0
56	MG	AX	110	1/1	0.97	0.20	42,42,42,42	0
56	MG	BA	3644	1/1	0.97	0.16	43,43,43,43	0
56	MG	BA	3239	1/1	0.97	0.10	33,33,33,33	0
56	MG	BA	3646	1/1	0.97	0.23	52,52,52,52	0
56	MG	AA	3176	1/1	0.97	0.09	63,63,63,63	0
56	MG	BA	3077	1/1	0.97	0.20	39,39,39,39	0
56	MG	DA	3650	1/1	0.97	0.58	48,48,48,48	0
56	MG	BA	3379	1/1	0.97	0.22	22,22,22,22	0
56	MG	BA	3294	1/1	0.97	0.28	37,37,37,37	0
56	MG	BA	3002	1/1	0.97	0.20	54,54,54,54	0
56	MG	BA	3296	1/1	0.97	0.25	46,46,46,46	0
56	MG	BA	3003	1/1	0.97	0.16	43,43,43,43	0
56	MG	BA	3080	1/1	0.97	0.52	45,45,45,45	0
56	MG	BA	3390	1/1	0.97	0.25	30,30,30,30	0
56	MG	AA	3221	1/1	0.97	0.10	64,64,64,64	0
56	MG	BA	3517	1/1	0.97	0.08	49,49,49,49	0
56	MG	BA	3518	1/1	0.97	0.10	41,41,41,41	0
56	MG	DA	3160	1/1	0.97	0.15	44,44,44,44	0
56	MG	BA	3521	1/1	0.97	0.12	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3392	1/1	0.97	0.26	56,56,56,56	0
56	MG	BA	3026	1/1	0.97	0.47	36,36,36,36	0
56	MG	DA	3412	1/1	0.97	0.28	30,30,30,30	0
56	MG	CA	3166	1/1	0.97	0.23	59,59,59,59	0
56	MG	BA	3527	1/1	0.97	0.18	64,64,64,64	0
56	MG	DD	303	1/1	0.97	0.20	19,19,19,19	0
56	MG	DD	304	1/1	0.97	0.23	35,35,35,35	0
56	MG	CA	3169	1/1	0.97	0.16	57,57,57,57	0
56	MG	BA	3530	1/1	0.97	0.28	31,31,31,31	0
56	MG	CA	3171	1/1	0.97	0.32	67,67,67,67	0
56	MG	BA	3532	1/1	0.97	0.18	34,34,34,34	0
56	MG	DA	3421	1/1	0.97	0.19	34,34,34,34	0
56	MG	BA	3668	1/1	0.97	0.13	38,38,38,38	0
56	MG	BA	3534	1/1	0.97	0.12	41,41,41,41	0
56	MG	DA	3173	1/1	0.97	0.41	39,39,39,39	0
56	MG	BA	3302	1/1	0.97	0.13	27,27,27,27	0
56	MG	DA	3176	1/1	0.97	0.27	39,39,39,39	0
56	MG	BA	3396	1/1	0.97	0.18	22,22,22,22	0
56	MG	DA	3428	1/1	0.97	0.27	51,51,51,51	0
56	MG	CX	102	1/1	0.97	0.06	61,61,61,61	0
56	MG	DA	3180	1/1	0.97	0.21	46,46,46,46	0
56	MG	DA	3431	1/1	0.97	0.12	41,41,41,41	0
56	MG	BA	3115	1/1	0.97	0.26	36,36,36,36	0
56	MG	CX	104	1/1	0.97	0.14	40,40,40,40	0
56	MG	DO	5001	1/1	0.97	0.12	35,35,35,35	0
56	MG	DA	3184	1/1	0.97	0.32	45,45,45,45	0
56	MG	BA	3400	1/1	0.97	0.19	24,24,24,24	0
56	MG	DQ	203	1/1	0.97	0.32	57,57,57,57	0
56	MG	DQ	204	1/1	0.97	0.13	43,43,43,43	0
56	MG	DA	3436	1/1	0.97	0.07	62,62,62,62	0
56	MG	BA	3539	1/1	0.97	0.16	35,35,35,35	0
56	MG	BA	3116	1/1	0.97	0.20	31,31,31,31	0
56	MG	B8	103	1/1	0.97	0.19	24,24,24,24	0
56	MG	BA	3680	1/1	0.97	0.35	37,37,37,37	0
56	MG	BA	3682	1/1	0.97	0.22	38,38,38,38	0
56	MG	DA	3192	1/1	0.97	0.12	47,47,47,47	0
56	MG	AA	3203	1/1	0.97	0.12	63,63,63,63	0
56	MG	AA	3204	1/1	0.97	0.14	54,54,54,54	0
56	MG	DA	3445	1/1	0.97	0.23	39,39,39,39	0
56	MG	D0	101	1/1	0.97	0.12	63,63,63,63	0
56	MG	DA	3446	1/1	0.97	0.11	52,52,52,52	0
56	MG	BA	3404	1/1	0.97	0.15	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3449	1/1	0.97	0.09	43,43,43,43	0
56	MG	BA	3311	1/1	0.97	0.23	42,42,42,42	0
56	MG	BA	3119	1/1	0.97	0.25	58,58,58,58	0
56	MG	BA	3314	1/1	0.97	0.17	24,24,24,24	0
56	MG	BA	3315	1/1	0.97	0.11	37,37,37,37	0
58	ZN	DY	501	1/1	0.97	0.05	83,83,83,83	0
56	MG	BA	3317	1/1	0.97	0.15	40,40,40,40	0
58	ZN	D6	501	1/1	0.97	0.12	61,61,61,61	0
56	MG	DA	3455	1/1	0.97	0.17	60,60,60,60	0
56	MG	BA	3550	1/1	0.97	0.24	45,45,45,45	0
56	MG	BA	3120	1/1	0.97	0.09	51,51,51,51	0
56	MG	BA	3552	1/1	0.97	0.23	29,29,29,29	0
56	MG	BA	3694	1/1	0.97	0.37	56,56,56,56	0
56	MG	AA	3103	1/1	0.98	0.19	38,38,38,38	0
56	MG	DA	3523	1/1	0.98	0.06	55,55,55,55	0
56	MG	BA	3179	1/1	0.98	0.20	43,43,43,43	0
56	MG	DA	3174	1/1	0.98	0.26	41,41,41,41	0
56	MG	BA	3602	1/1	0.98	0.09	35,35,35,35	0
56	MG	BA	3081	1/1	0.98	0.08	14,14,14,14	0
56	MG	DA	3177	1/1	0.98	0.08	33,33,33,33	0
56	MG	DA	3529	1/1	0.98	0.10	63,63,63,63	0
56	MG	CA	3085	1/1	0.98	0.30	43,43,43,43	0
56	MG	AA	3172	1/1	0.98	0.05	53,53,53,53	0
56	MG	BU	203	1/1	0.98	0.35	33,33,33,33	0
56	MG	DA	3533	1/1	0.98	0.08	68,68,68,68	0
56	MG	DA	3351	1/1	0.98	0.38	35,35,35,35	0
56	MG	AA	3163	1/1	0.98	0.17	28,28,28,28	0
56	MG	BA	3702	1/1	0.98	0.12	56,56,56,56	0
56	MG	DA	3354	1/1	0.98	0.15	27,27,27,27	0
56	MG	BA	3281	1/1	0.98	0.18	52,52,52,52	0
56	MG	BU	207	1/1	0.98	0.21	40,40,40,40	0
56	MG	DA	3541	1/1	0.98	0.28	35,35,35,35	0
56	MG	CA	3092	1/1	0.98	0.12	47,47,47,47	0
56	MG	CA	3093	1/1	0.98	0.06	53,53,53,53	0
56	MG	BA	3131	1/1	0.98	0.72	54,54,54,54	0
56	MG	BA	3519	1/1	0.98	0.12	39,39,39,39	0
56	MG	BA	3445	1/1	0.98	0.20	25,25,25,25	0
56	MG	BA	3522	1/1	0.98	0.14	49,49,49,49	0
56	MG	CA	3098	1/1	0.98	0.23	46,46,46,46	0
56	MG	DA	3551	1/1	0.98	0.08	52,52,52,52	0
56	MG	DA	3365	1/1	0.98	0.06	40,40,40,40	0
56	MG	BA	3375	1/1	0.98	0.24	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	CA	3100	1/1	0.98	0.11	60,60,60,60	0
56	MG	BA	3612	1/1	0.98	0.15	37,37,37,37	0
56	MG	BA	3283	1/1	0.98	0.15	17,17,17,17	0
56	MG	DA	3370	1/1	0.98	0.15	38,38,38,38	0
56	MG	DA	3059	1/1	0.98	0.08	46,46,46,46	0
56	MG	DA	3372	1/1	0.98	0.12	45,45,45,45	0
56	MG	BA	3525	1/1	0.98	0.23	43,43,43,43	0
56	MG	DA	3561	1/1	0.98	0.19	45,45,45,45	0
56	MG	BA	3526	1/1	0.98	0.19	19,19,19,19	0
56	MG	BA	3448	1/1	0.98	0.09	29,29,29,29	0
56	MG	BA	3529	1/1	0.98	0.21	35,35,35,35	0
56	MG	DA	3377	1/1	0.98	0.24	59,59,59,59	0
56	MG	BA	3008	1/1	0.98	0.13	50,50,50,50	0
56	MG	DA	3380	1/1	0.98	0.16	26,26,26,26	0
56	MG	AA	3062	1/1	0.98	0.08	32,32,32,32	0
56	MG	DA	3569	1/1	0.98	0.19	37,37,37,37	0
56	MG	DA	3205	1/1	0.98	0.09	38,38,38,38	0
56	MG	BA	3533	1/1	0.98	0.18	32,32,32,32	0
56	MG	BA	3186	1/1	0.98	0.14	53,53,53,53	0
56	MG	DA	3385	1/1	0.98	0.15	35,35,35,35	0
56	MG	BA	3381	1/1	0.98	0.10	37,37,37,37	0
56	MG	BA	3382	1/1	0.98	0.13	51,51,51,51	0
56	MG	BA	3454	1/1	0.98	0.09	22,22,22,22	0
56	MG	BA	3010	1/1	0.98	0.17	32,32,32,32	0
56	MG	DA	3390	1/1	0.98	0.09	42,42,42,42	0
56	MG	B3	101	1/1	0.98	0.15	28,28,28,28	0
56	MG	B3	102	1/1	0.98	0.13	59,59,59,59	0
56	MG	BA	3723	1/1	0.98	0.14	49,49,49,49	0
56	MG	DA	3394	1/1	0.98	0.14	47,47,47,47	0
56	MG	DA	3395	1/1	0.98	0.21	34,34,34,34	0
56	MG	DA	3215	1/1	0.98	0.30	29,29,29,29	0
56	MG	BA	3046	1/1	0.98	0.14	29,29,29,29	0
56	MG	BA	3725	1/1	0.98	0.12	49,49,49,49	0
56	MG	AA	3165	1/1	0.98	0.15	23,23,23,23	0
56	MG	DA	3588	1/1	0.98	0.18	40,40,40,40	0
56	MG	AA	3027	1/1	0.98	0.06	55,55,55,55	0
56	MG	BA	3459	1/1	0.98	0.22	31,31,31,31	0
56	MG	BA	3388	1/1	0.98	0.15	34,34,34,34	0
56	MG	B8	102	1/1	0.98	0.10	60,60,60,60	0
56	MG	DA	3404	1/1	0.98	0.16	47,47,47,47	0
56	MG	BA	3544	1/1	0.98	0.23	27,27,27,27	0
56	MG	BA	3389	1/1	0.98	0.12	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	CA	3128	1/1	0.98	0.26	41,41,41,41	0
56	MG	DA	3408	1/1	0.98	0.22	37,37,37,37	0
56	MG	CA	3129	1/1	0.98	0.14	45,45,45,45	0
56	MG	DA	3227	1/1	0.98	0.14	53,53,53,53	0
56	MG	DA	3600	1/1	0.98	0.07	45,45,45,45	0
56	MG	BA	3733	1/1	0.98	0.11	27,27,27,27	0
56	MG	BA	3634	1/1	0.98	0.70	63,63,63,63	0
56	MG	BA	3222	1/1	0.98	0.29	25,25,25,25	0
56	MG	CA	3133	1/1	0.98	0.05	49,49,49,49	0
56	MG	DA	3234	1/1	0.98	0.23	33,33,33,33	0
56	MG	BA	3337	1/1	0.98	0.17	23,23,23,23	0
56	MG	DA	3418	1/1	0.98	0.17	29,29,29,29	0
56	MG	DA	3608	1/1	0.98	0.27	57,57,57,57	0
56	MG	DA	3236	1/1	0.98	0.17	46,46,46,46	0
56	MG	AA	3141	1/1	0.98	0.21	48,48,48,48	0
56	MG	BA	3393	1/1	0.98	0.18	38,38,38,38	0
56	MG	BA	3467	1/1	0.98	0.06	40,40,40,40	0
56	MG	BA	3113	1/1	0.98	0.09	32,32,32,32	0
56	MG	BA	3070	1/1	0.98	0.13	35,35,35,35	0
56	MG	BA	3341	1/1	0.98	0.09	33,33,33,33	0
56	MG	AA	3097	1/1	0.98	0.25	43,43,43,43	0
56	MG	DA	3244	1/1	0.98	0.31	29,29,29,29	0
56	MG	BA	3556	1/1	0.98	0.31	27,27,27,27	0
56	MG	BA	3557	1/1	0.98	0.23	31,31,31,31	0
56	MG	BA	3398	1/1	0.98	0.11	41,41,41,41	0
56	MG	BA	3227	1/1	0.98	0.30	32,32,32,32	0
56	MG	CA	3017	1/1	0.98	0.24	42,42,42,42	0
56	MG	DA	3250	1/1	0.98	0.14	31,31,31,31	0
56	MG	BA	3228	1/1	0.98	0.27	63,63,63,63	0
56	MG	CA	3148	1/1	0.98	0.19	68,68,68,68	0
56	MG	BB	3012	1/1	0.98	0.15	56,56,56,56	0
56	MG	BB	3013	1/1	0.98	0.10	39,39,39,39	0
56	MG	BA	3195	1/1	0.98	0.33	47,47,47,47	0
56	MG	CA	3022	1/1	0.98	0.04	70,70,70,70	0
56	MG	BA	3347	1/1	0.98	0.27	25,25,25,25	0
56	MG	BB	3016	1/1	0.98	0.12	21,21,21,21	0
56	MG	BA	3478	1/1	0.98	0.15	29,29,29,29	0
56	MG	AA	3179	1/1	0.98	0.26	34,34,34,34	0
56	MG	BA	3480	1/1	0.98	0.20	17,17,17,17	0
56	MG	BA	3264	1/1	0.98	0.17	30,30,30,30	0
56	MG	BA	3655	1/1	0.98	0.21	52,52,52,52	0
56	MG	BA	3656	1/1	0.98	0.11	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3448	1/1	0.98	0.08	57,57,57,57	0
56	MG	BA	3567	1/1	0.98	0.22	37,37,37,37	0
56	MG	AA	3220	1/1	0.98	0.12	40,40,40,40	0
56	MG	DA	3644	1/1	0.98	0.08	42,42,42,42	0
56	MG	DA	3645	1/1	0.98	0.09	30,30,30,30	0
56	MG	BA	3569	1/1	0.98	0.18	19,19,19,19	0
56	MG	DA	3268	1/1	0.98	0.17	40,40,40,40	0
56	MG	CA	3165	1/1	0.98	0.08	40,40,40,40	0
56	MG	DA	3649	1/1	0.98	0.24	24,24,24,24	0
56	MG	BA	3095	1/1	0.98	0.47	55,55,55,55	0
56	MG	BA	3411	1/1	0.98	0.15	38,38,38,38	0
56	MG	DA	3652	1/1	0.98	0.60	60,60,60,60	0
56	MG	CA	3168	1/1	0.98	0.39	77,77,77,77	0
56	MG	BD	310	1/1	0.98	0.31	48,48,48,48	0
56	MG	AA	3205	1/1	0.98	0.19	61,61,61,61	0
56	MG	DA	3277	1/1	0.98	0.25	49,49,49,49	0
56	MG	BA	3305	1/1	0.98	0.13	44,44,44,44	0
56	MG	BA	3574	1/1	0.98	0.08	54,54,54,54	0
56	MG	BE	302	1/1	0.98	0.22	33,33,33,33	0
56	MG	CE	3002	1/1	0.98	0.07	55,55,55,55	0
56	MG	BA	3487	1/1	0.98	0.12	31,31,31,31	0
56	MG	AA	3192	1/1	0.98	0.08	57,57,57,57	0
56	MG	BA	3418	1/1	0.98	0.15	27,27,27,27	0
56	MG	DA	3467	1/1	0.98	0.09	35,35,35,35	0
56	MG	BA	3307	1/1	0.98	0.20	33,33,33,33	0
56	MG	BA	3670	1/1	0.98	0.08	59,59,59,59	0
56	MG	BE	308	1/1	0.98	0.18	52,52,52,52	0
56	MG	BE	309	1/1	0.98	0.27	25,25,25,25	0
56	MG	BA	3491	1/1	0.98	0.19	23,23,23,23	0
56	MG	DA	3473	1/1	0.98	0.31	32,32,32,32	0
56	MG	DA	3290	1/1	0.98	0.07	42,42,42,42	0
56	MG	DA	3475	1/1	0.98	0.11	36,36,36,36	0
56	MG	DA	3476	1/1	0.98	0.20	45,45,45,45	0
56	MG	DA	3477	1/1	0.98	0.09	49,49,49,49	0
56	MG	BA	3420	1/1	0.98	0.30	33,33,33,33	0
56	MG	BA	3581	1/1	0.98	0.10	51,51,51,51	0
56	MG	DE	303	1/1	0.98	0.11	41,41,41,41	0
56	MG	DA	3480	1/1	0.98	0.09	52,52,52,52	0
56	MG	CA	3051	1/1	0.98	0.10	63,63,63,63	0
56	MG	BA	3308	1/1	0.98	0.08	44,44,44,44	0
56	MG	BA	3675	1/1	0.98	0.12	49,49,49,49	0
56	MG	BA	3583	1/1	0.98	0.20	27,27,27,27	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
56	MG	BA	3036	1/1	0.98	0.18	38,38,38,38	0
56	MG	BA	3678	1/1	0.98	0.16	53,53,53,53	0
56	MG	BA	3679	1/1	0.98	0.40	27,27,27,27	0
56	MG	BA	3424	1/1	0.98	0.17	15,15,15,15	0
56	MG	BA	3681	1/1	0.98	0.14	40,40,40,40	0
56	MG	BA	3586	1/1	0.98	0.19	29,29,29,29	0
56	MG	BA	3310	1/1	0.98	0.17	13,13,13,13	0
56	MG	AA	3193	1/1	0.98	0.10	60,60,60,60	0
56	MG	AA	3143	1/1	0.98	0.15	45,45,45,45	0
56	MG	DA	3308	1/1	0.98	0.32	30,30,30,30	0
56	MG	CA	3064	1/1	0.98	0.12	58,58,58,58	0
56	MG	DA	3019	1/1	0.98	0.13	30,30,30,30	0
56	MG	BN	3004	1/1	0.98	0.40	66,66,66,66	0
56	MG	DA	3313	1/1	0.98	0.17	52,52,52,52	0
56	MG	BA	3313	1/1	0.98	0.27	36,36,36,36	0
56	MG	BA	3591	1/1	0.98	0.32	48,48,48,48	0
56	MG	DA	3316	1/1	0.98	0.17	58,58,58,58	0
56	MG	DA	3317	1/1	0.98	0.12	32,32,32,32	0
56	MG	BA	3429	1/1	0.98	0.14	20,20,20,20	0
56	MG	BA	3150	1/1	0.98	0.45	34,34,34,34	0
56	MG	DA	3320	1/1	0.98	0.17	30,30,30,30	0
56	MG	DA	3025	1/1	0.98	0.38	44,44,44,44	0
56	MG	DA	3026	1/1	0.98	0.21	37,37,37,37	0
56	MG	DA	3323	1/1	0.98	0.18	30,30,30,30	0
56	MG	AA	3091	1/1	0.98	0.15	75,75,75,75	0
56	MG	BA	3316	1/1	0.98	0.16	28,28,28,28	0
56	MG	DA	3327	1/1	0.98	0.18	29,29,29,29	0
58	ZN	BY	202	1/1	0.98	0.09	71,71,71,71	0
56	MG	BQ	201	1/1	0.98	0.43	61,61,61,61	0
56	MG	DA	3165	1/1	0.98	0.24	44,44,44,44	0
56	MG	DA	3330	1/1	0.98	0.14	37,37,37,37	0
56	MG	BA	3433	1/1	0.98	0.24	39,39,39,39	0
56	MG	BA	3207	1/1	0.98	0.23	35,35,35,35	0
56	MG	BA	3208	1/1	0.98	0.28	41,41,41,41	0
56	MG	BA	3436	1/1	0.98	0.09	37,37,37,37	0
56	MG	DA	3337	1/1	0.98	0.09	27,27,27,27	0
56	MG	DA	3035	1/1	0.98	0.23	56,56,56,56	0
56	MG	BR	201	1/1	0.98	0.60	51,51,51,51	0
56	MG	AX	109	1/1	0.99	0.09	43,43,43,43	0
56	MG	AA	3159	1/1	0.99	0.32	57,57,57,57	0
56	MG	AA	3188	1/1	0.99	0.24	53,53,53,53	0
56	MG	BA	3508	1/1	0.99	0.14	34,34,34,34	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
56	MG	BA	3378	1/1	0.99	0.12	20,20,20,20	0
56	MG	BA	3318	1/1	0.99	0.13	33,33,33,33	0
56	MG	DA	3312	1/1	0.99	0.27	43,43,43,43	0
56	MG	BA	3423	1/1	0.99	0.07	26,26,26,26	0
56	MG	DA	3379	1/1	0.99	0.22	28,28,28,28	0
56	MG	BF	303	1/1	0.99	0.27	36,36,36,36	0
56	MG	CA	3069	1/1	0.99	0.11	69,69,69,69	0
56	MG	BA	3051	1/1	0.99	0.15	20,20,20,20	0
56	MG	BA	3662	1/1	0.99	0.12	39,39,39,39	0
56	MG	BA	3399	1/1	0.99	0.19	18,18,18,18	0
56	MG	CA	3122	1/1	0.99	0.07	47,47,47,47	0
56	MG	BA	3154	1/1	0.99	0.17	61,61,61,61	0
56	MG	BA	3321	1/1	0.99	0.16	29,29,29,29	0
56	MG	BA	3516	1/1	0.99	0.09	47,47,47,47	0
56	MG	BA	3553	1/1	0.99	0.13	31,31,31,31	0
56	MG	DA	3324	1/1	0.99	0.23	40,40,40,40	0
56	MG	CA	3077	1/1	0.99	0.22	53,53,53,53	0
56	MG	BA	3383	1/1	0.99	0.18	38,38,38,38	0
56	MG	AA	3214	1/1	0.99	0.27	75,75,75,75	0
56	MG	CA	3080	1/1	0.99	0.14	55,55,55,55	0
56	MG	BB	3010	1/1	0.99	0.26	40,40,40,40	0
56	MG	BB	3011	1/1	0.99	0.15	37,37,37,37	0
56	MG	DA	3331	1/1	0.99	0.09	34,34,34,34	0
56	MG	DA	3332	1/1	0.99	0.13	33,33,33,33	0
56	MG	BA	3200	1/1	0.99	0.27	25,25,25,25	0
56	MG	DA	3271	1/1	0.99	0.20	37,37,37,37	0
56	MG	DA	3272	1/1	0.99	0.28	27,27,27,27	0
56	MG	BA	3520	1/1	0.99	0.14	34,34,34,34	0
56	MG	AA	3144	1/1	0.99	0.08	48,48,48,48	0
56	MG	DA	3338	1/1	0.99	0.14	29,29,29,29	0
56	MG	BN	3006	1/1	0.99	0.12	24,24,24,24	0
56	MG	DA	3540	1/1	0.99	0.23	54,54,54,54	0
56	MG	BA	3126	1/1	0.99	0.22	24,24,24,24	0
56	MG	DA	3612	1/1	0.99	0.15	39,39,39,39	0
56	MG	DA	3542	1/1	0.99	0.18	32,32,32,32	0
56	MG	BA	3460	1/1	0.99	0.13	33,33,33,33	0
56	MG	B7	102	1/1	0.99	0.25	40,40,40,40	0
56	MG	BA	3407	1/1	0.99	0.19	15,15,15,15	0
56	MG	AA	3151	1/1	0.99	0.08	41,41,41,41	0
56	MG	DA	3618	1/1	0.99	0.12	39,39,39,39	0
56	MG	BA	3492	1/1	0.99	0.25	23,23,23,23	0
56	MG	DA	3346	1/1	0.99	0.23	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3549	1/1	0.99	0.24	52,52,52,52	0
56	MG	DA	3413	1/1	0.99	0.20	53,53,53,53	0
56	MG	BA	3409	1/1	0.99	0.23	27,27,27,27	0
56	MG	BA	3528	1/1	0.99	0.22	33,33,33,33	0
56	MG	DA	3625	1/1	0.99	0.10	35,35,35,35	0
56	MG	BA	3494	1/1	0.99	0.34	18,18,18,18	0
56	MG	CA	3001	1/1	0.99	0.21	55,55,55,55	0
56	MG	BA	3410	1/1	0.99	0.15	27,27,27,27	0
56	MG	BA	3531	1/1	0.99	0.29	38,38,38,38	0
56	MG	DA	3230	1/1	0.99	0.16	62,62,62,62	0
56	MG	BA	3371	1/1	0.99	0.18	15,15,15,15	0
56	MG	DA	3355	1/1	0.99	0.26	18,18,18,18	0
56	MG	BA	3128	1/1	0.99	0.27	40,40,40,40	0
56	MG	BA	3342	1/1	0.99	0.19	31,31,31,31	0
56	MG	BA	3414	1/1	0.99	0.21	19,19,19,19	0
57	SF4	AD	501	8/8	0.99	0.14	59,72,92,96	0
57	SF4	CD	501	8/8	0.99	0.14	64,75,91,95	0
56	MG	BA	3415	1/1	0.99	0.24	27,27,27,27	0
56	MG	DA	3181	1/1	0.99	0.30	36,36,36,36	0
56	MG	CA	3154	1/1	0.99	0.13	49,49,49,49	0
58	ZN	B5	501	1/1	0.99	0.11	54,54,54,54	0
56	MG	BA	3442	1/1	0.99	0.15	12,12,12,12	0
56	MG	BA	3471	1/1	0.99	0.17	51,51,51,51	0
56	MG	DA	3028	1/1	0.99	0.06	35,35,35,35	0
58	ZN	D5	103	1/1	0.99	0.07	70,70,70,70	0
56	MG	BA	3416	1/1	0.99	0.25	42,42,42,42	0
56	MG	BA	3614	1/1	0.99	0.42	30,30,30,30	0
56	MG	DA	3301	1/1	0.99	0.14	45,45,45,45	0
56	MG	AA	3073	1/1	0.99	0.07	46,46,46,46	0
56	MG	BA	3732	1/1	0.99	0.52	61,61,61,61	0
56	MG	DA	3190	1/1	0.99	0.13	37,37,37,37	0
58	ZN	B6	501	1/1	1.00	0.13	49,49,49,49	0
58	ZN	B9	501	1/1	1.00	0.12	48,48,48,48	0
56	MG	DA	3304	1/1	1.00	0.11	35,35,35,35	0

6.5 Other polymers [\(i\)](#)

There are no such residues in this entry.