



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 20, 2025 – 12:11 PM EDT

PDB ID : 4V9R
Title : Crystal structure of antibiotic DITYROMYCIN 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 : 3.00 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	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	1.21
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.004 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.41.4

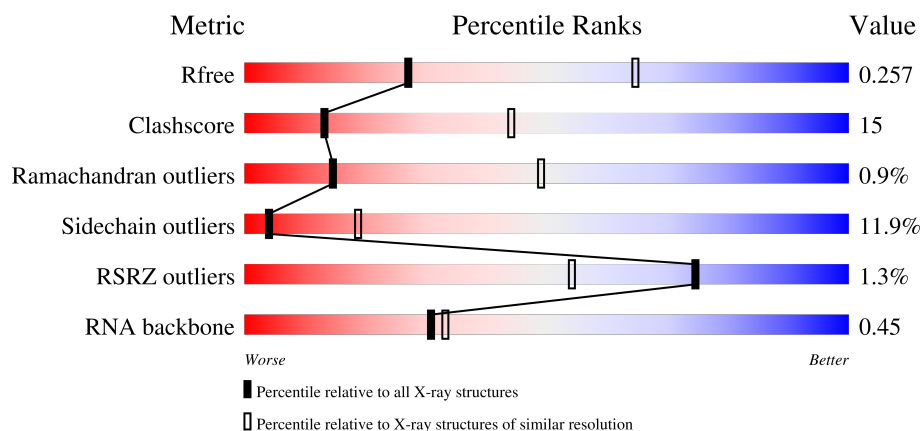
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.00 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}	164625	2511 (3.00-3.00)
Clashscore	180529	2866 (3.00-3.00)
Ramachandran outliers	177936	2778 (3.00-3.00)
Sidechain outliers	177891	2781 (3.00-3.00)
RSRZ outliers	164620	2523 (3.00-3.00)
RNA backbone	3690	1019 (3.20-2.80)

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	<div> <div>2%</div> <div>29% 44% 20% 5%</div> </div>
1	CA	1522	<div> <div>%</div> <div>32% 43% 20%</div> </div>
2	AB	256	<div> <div>2%</div> <div>38% 41% 11% 10%</div> </div>
2	CB	256	<div> <div>3%</div> <div>36% 44% 10% 10%</div> </div>

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Mol	Chain	Length	Quality of chain
3	AC	239	
3	CC	239	
4	AD	209	
4	CD	209	
5	AE	162	
5	CE	162	
6	AF	101	
6	CF	101	
7	AG	156	
7	CG	156	
8	AH	138	
8	CH	138	
9	AI	128	
9	CI	128	
10	AJ	105	
10	CJ	105	
11	AK	129	
11	CK	129	
12	AL	132	
12	CL	132	
13	AM	126	
13	CM	126	
14	AN	61	
14	CN	61	
15	AO	89	

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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	












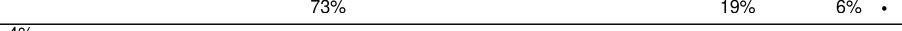







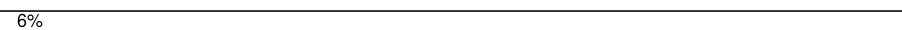

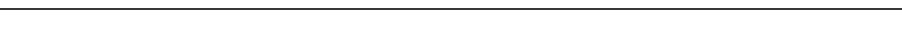
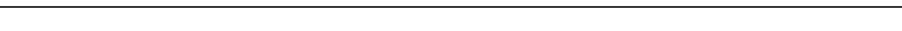


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Mol	Chain	Length	Quality of chain
28	BE	206	
28	DE	206	
29	BF	210	
29	DF	210	
30	BG	182	
30	DG	182	
31	BH	180	
31	DH	180	
32	BI	148	
32	DI	148	
33	BN	140	
33	DN	140	
34	BO	122	
34	DO	122	
35	BP	150	
35	DP	150	
36	BQ	141	
36	DQ	141	
37	BR	118	
37	DR	118	
38	BS	112	
38	DS	112	
39	BT	146	
39	DT	146	
40	BU	118	

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Mol	Chain	Length	Quality of chain
40	DU	118	
41	BV	101	
41	DV	101	
42	BW	113	
42	DW	113	
43	BX	96	
43	DX	96	
44	BY	110	
44	DY	110	
45	BZ	206	
45	DZ	206	
46	B0	85	
46	D0	85	
47	B1	98	
47	D1	98	
48	B2	72	
48	D2	72	
49	B3	60	
49	D3	60	
50	B4	71	
50	D4	71	
51	B5	60	
51	D5	60	
52	B6	54	
52	D6	54	

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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
56	MG	AA	3030	-	-	-	X
56	MG	AA	3133	-	-	-	X
56	MG	CA	3030	-	-	-	X
56	MG	CA	3053	-	-	-	X
56	MG	DA	3113	-	-	-	X

2 Entry composition

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
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
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
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
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
10	CJ	96	Total	C	N	O			
			714	445	138	131	0	0	0

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

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

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

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

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

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

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

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

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

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

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
26	DB	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- 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		0	0	0
			877	553	175	149				
38	DS	110	Total	C	N	O		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
42	DW	112	Total	C	N	O	S	0	0	0
			886	557	174	153	2			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- 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	222	Total	Mg	0	0
			222	222		
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	AL	1	Total	Mg	0	0
			1	1		
56	AM	2	Total	Mg	0	0
			2	2		
56	AN	1	Total	Mg	0	0
			1	1		
56	AS	1	Total	Mg	0	0
			1	1		
56	AV	1	Total	Mg	0	0
			1	1		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	AX	9	Total 9	Mg 9	0	0
56	BA	739	Total 739	Mg 739	0	0
56	BB	18	Total 18	Mg 18	0	0
56	BD	12	Total 12	Mg 12	0	0
56	BE	9	Total 9	Mg 9	0	0
56	BF	6	Total 6	Mg 6	0	0
56	BG	4	Total 4	Mg 4	0	0
56	BN	6	Total 6	Mg 6	0	0
56	BO	1	Total 1	Mg 1	0	0
56	BP	4	Total 4	Mg 4	0	0
56	BQ	4	Total 4	Mg 4	0	0
56	BR	3	Total 3	Mg 3	0	0
56	BU	9	Total 9	Mg 9	0	0
56	BV	3	Total 3	Mg 3	0	0
56	BW	5	Total 5	Mg 5	0	0
56	BX	2	Total 2	Mg 2	0	0
56	BZ	1	Total 1	Mg 1	0	0
56	B0	6	Total 6	Mg 6	0	0
56	B1	2	Total 2	Mg 2	0	0
56	B2	1	Total 1	Mg 1	0	0
56	B3	3	Total 3	Mg 3	0	0

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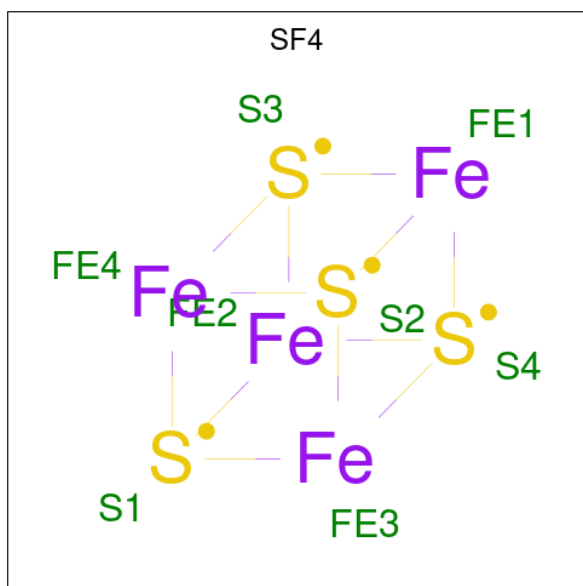
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	B5	1	Total 1	Mg 1	0	0
56	B7	4	Total 4	Mg 4	0	0
56	B8	2	Total 2	Mg 2	0	0
56	B9	1	Total 1	Mg 1	0	0
56	CA	172	Total 172	Mg 172	0	0
56	CE	2	Total 2	Mg 2	0	0
56	CF	1	Total 1	Mg 1	0	0
56	CN	1	Total 1	Mg 1	0	0
56	CT	1	Total 1	Mg 1	0	0
56	CX	3	Total 3	Mg 3	0	0
56	DA	657	Total 657	Mg 657	0	0
56	DB	12	Total 12	Mg 12	0	0
56	DD	5	Total 5	Mg 5	0	0
56	DE	6	Total 6	Mg 6	0	0
56	DF	5	Total 5	Mg 5	0	0
56	DG	1	Total 1	Mg 1	0	0
56	DN	1	Total 1	Mg 1	0	0
56	DO	1	Total 1	Mg 1	0	0
56	DP	2	Total 2	Mg 2	0	0
56	DQ	4	Total 4	Mg 4	0	0
56	DR	1	Total 1	Mg 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	DU	2	Total	Mg	0	0
			2	2		
56	DV	3	Total	Mg	0	0
			3	3		
56	DW	2	Total	Mg	0	0
			2	2		
56	DY	1	Total	Mg	0	0
			1	1		
56	D3	1	Total	Mg	0	0
			1	1		
56	D5	2	Total	Mg	0	0
			2	2		
56	D8	1	Total	Mg	0	0
			1	1		

- Molecule 57 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe_4S_4).

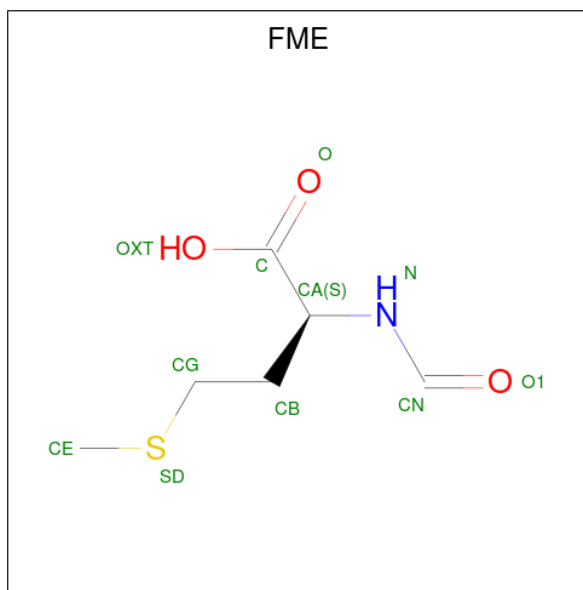


Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
57	AD	1	Total	Fe	S	0	0
			8	4	4		
57	CD	1	Total	Fe	S	0	0
			8	4	4		

- 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
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: $C_6H_{11}NO_3S$).



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	147	Total	O	0	0
			147	147		
61	AD	1	Total	O	0	0
			1	1		
61	AE	2	Total	O	0	0
			2	2		
61	AJ	1	Total	O	0	0
			1	1		
61	AL	2	Total	O	0	0
			2	2		
61	AO	2	Total	O	0	0
			2	2		
61	AU	1	Total	O	0	0
			1	1		
61	AV	2	Total	O	0	0
			2	2		
61	AX	1	Total	O	0	0
			1	1		
61	BA	1086	Total	O	0	0
			1086	1086		
61	BB	26	Total	O	0	0
			26	26		
61	BD	6	Total	O	0	0
			6	6		
61	BE	13	Total	O	0	0
			13	13		
61	BF	5	Total	O	0	0
			5	5		

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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	2	Total 2	O 2	0	0
61	BU	5	Total 5	O 5	0	0
61	BV	2	Total 2	O 2	0	0
61	BW	4	Total 4	O 4	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	2	Total 2	O 2	0	0
61	B7	1	Total 1	O 1	0	0
61	B8	7	Total 7	O 7	0	0
61	CA	186	Total 186	O 186	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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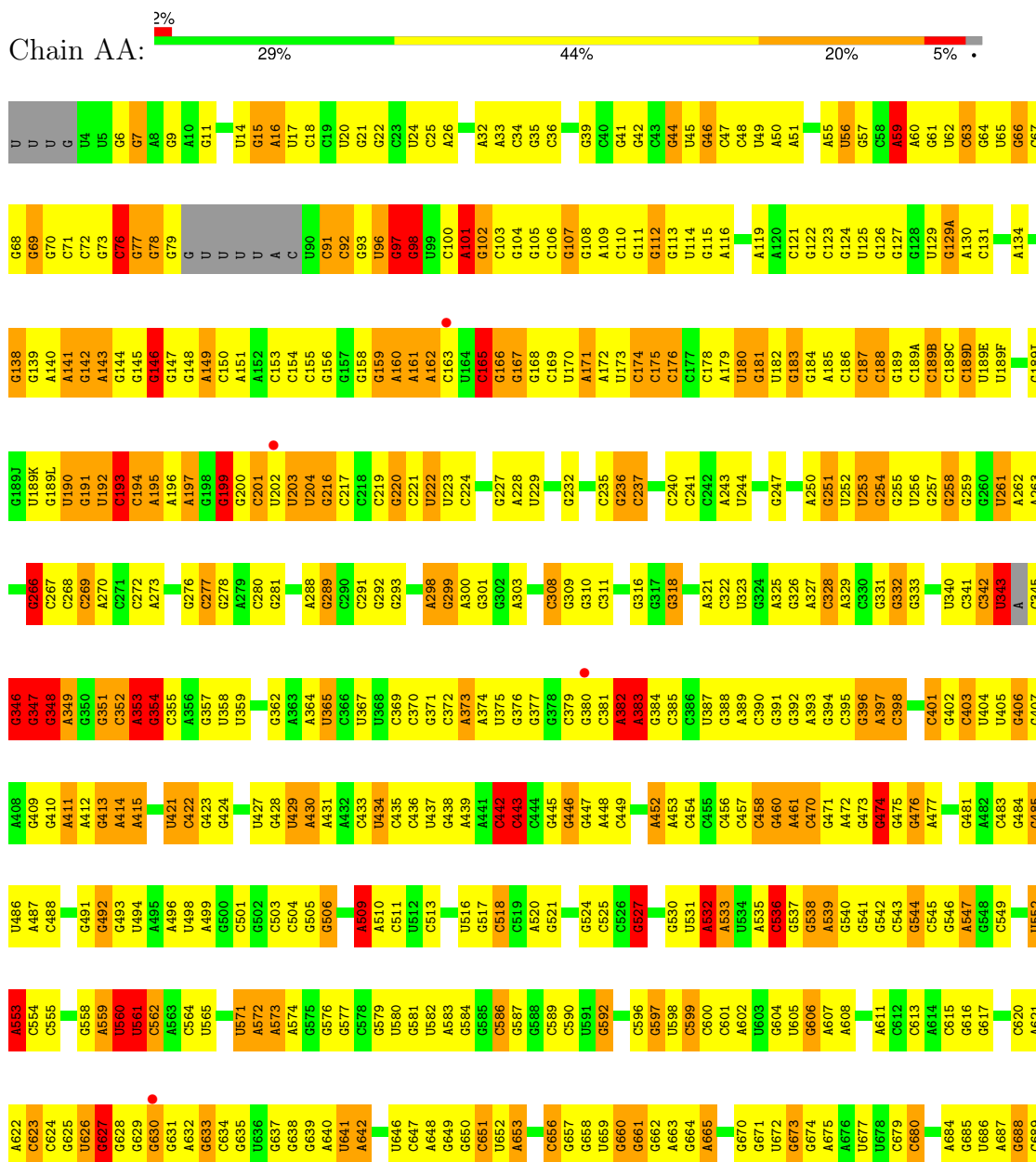
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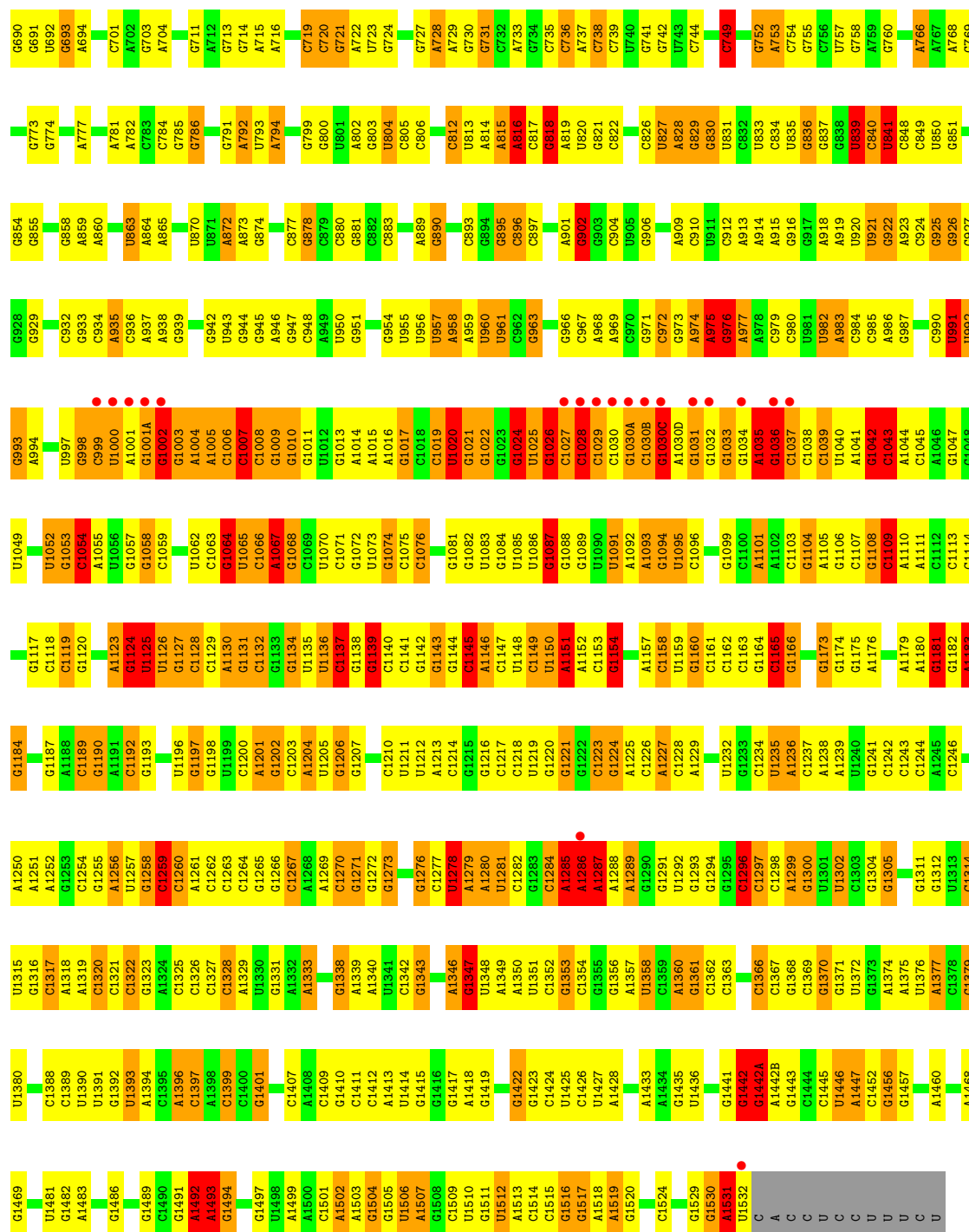
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
61	DA	906	Total 906	O 906	0	0
61	DB	7	Total 7	O 7	0	0
61	DD	10	Total 10	O 10	0	0
61	DE	11	Total 11	O 11	0	0
61	DF	4	Total 4	O 4	0	0
61	DO	1	Total 1	O 1	0	0
61	DP	14	Total 14	O 14	0	0
61	DQ	3	Total 3	O 3	0	0
61	DR	1	Total 1	O 1	0	0
61	DU	4	Total 4	O 4	0	0
61	DV	1	Total 1	O 1	0	0
61	DX	2	Total 2	O 2	0	0
61	DY	1	Total 1	O 1	0	0
61	D0	3	Total 3	O 3	0	0
61	D1	1	Total 1	O 1	0	0
61	D3	1	Total 1	O 1	0	0
61	D7	1	Total 1	O 1	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

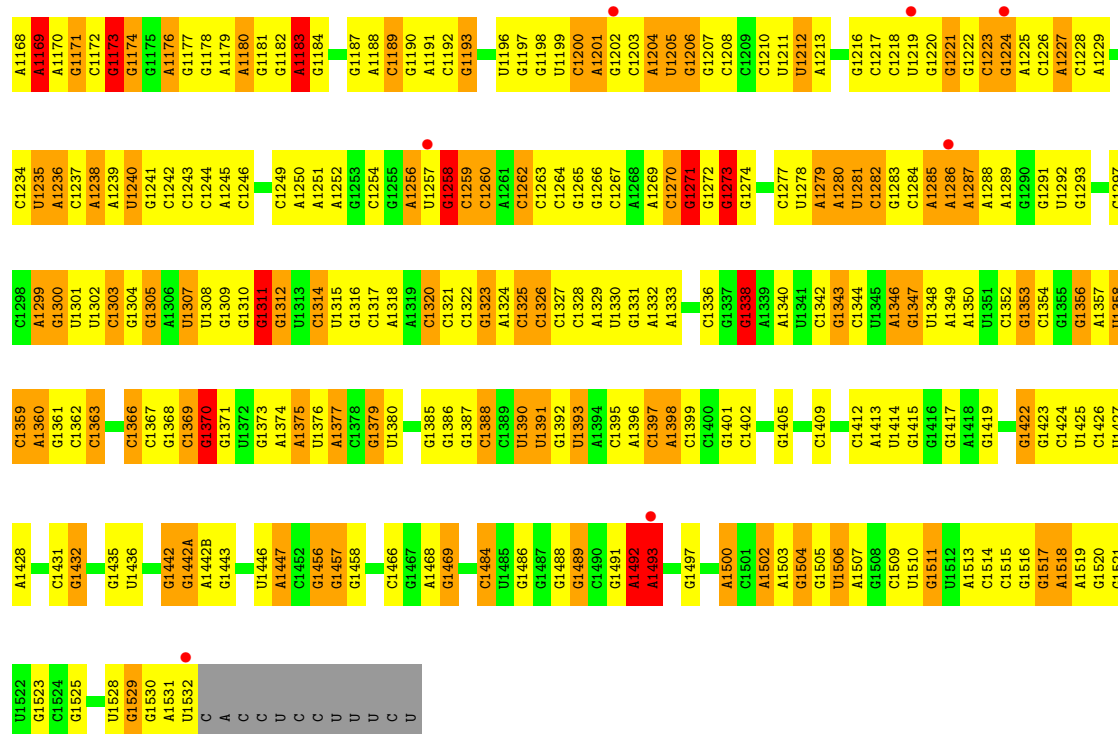




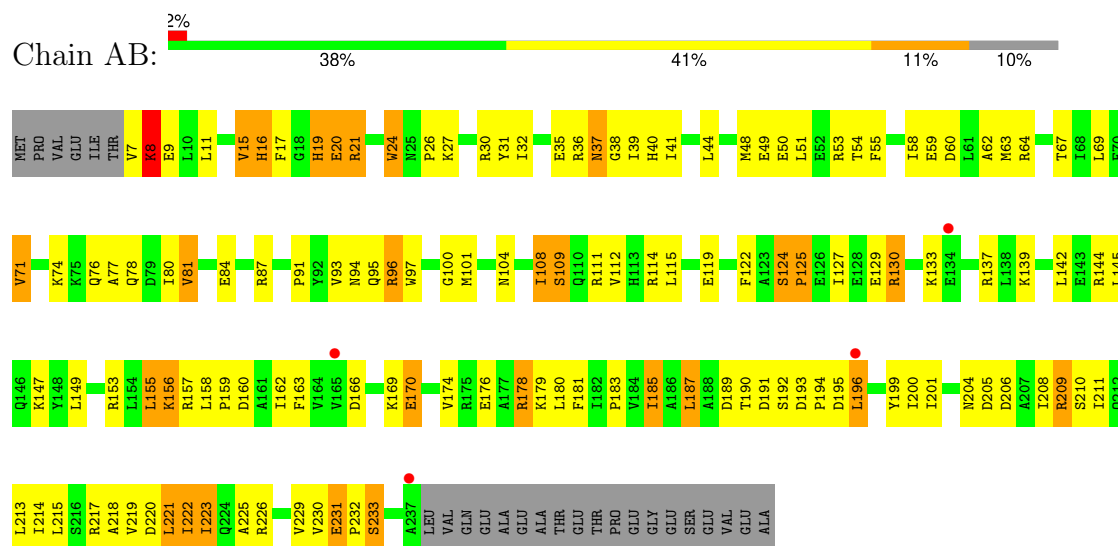
• Molecule 1: 16S Ribosomal RNA



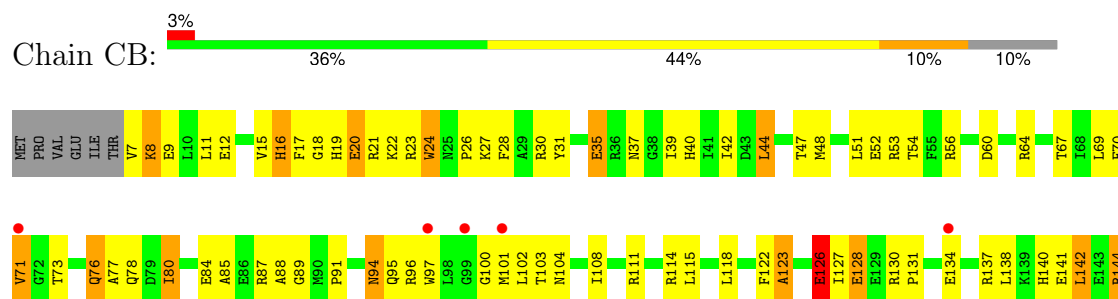
G1107	G1108	G1109	A1110	A1111	A1112	A1113	G1114	A1115	A1116	A1117	A1118	A1119	G1120	A1121	A1122	A1123	A1124	A1125	A1126	C1127	C1128	C1129	A1130	A1131	C1132	G1133	G1134	G1135	G1136	G1137	G1138	G1139	C1140	C1141	G1142	G1143	G1144	C1145	A1146	C1147	C1148	C1149	A1150	A1151	A1152	C1153	G1154	G1155	G1156	A1157	A1158	C1159	G1160	C1161	C1162	C1163	C1164	C1165	G1166																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
G1043	A1044	G1047	G1048	G1049	G1050	G1051	G1052	G1053	G1054	G1055	G1056	G1057	G1058	G1059	G1060	G1061	G1062	G1063	G1064	G1065	G1066	G1067	G1068	G1069	G1070	G1071	G1072	G1073	G1074	G1075	G1076	G1077	G1081	G1082	G1083	G1084	G1085	G1086	G1087	G1088	G1089	G1090	G1091	A1092	C1093	G1094	G1095	G1096	G1097	G1098	G1099	G1100	A1101	A1102	G1103	G1104	A1105	G1106																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
A986	C990	U991	U992	U993	U994	U995	U996	U997	U998	U999	U1000	A1001	G1001A	G1002	G1003	G1004	G1005	G1006	G1007	G1008	G1009	G1010	G1011	G1012	G1013	A1014	G1015	G1016	G1017	G1018	G1019	G1020	G1021	G1022	U960	U961	A964	A965	G966	G967	A968	A969	C970	G971	C972	G973	A974	A975	G976	A977	A978	C979	C980	U981	U982	A983	A984	C985																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
U920	U921	G922	A923	G924	G925	G926	G927	C931	C932	C933	C934	A935	C936	A937	A938	A939	A940	A941	A942	A943	A944	A945	A946	A947	A948	A949	A950	A951	A952	A953	A954	A955	A956	A957	A958	A959	A960	A961	A964	A965	G966	G967	A968	A969	C970	G971	C972	G973	A974	A975	G976	A977	A978	C979	C980	U981	U982	A983	A984	C985																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
C840	U841	C848	C849	C850	C851	C852	C853	C854	C855	C856	C857	C858	C859	C860	C861	C862	C863	C864	C865	C866	C867	C868	C869	C870	C871	C872	C873	C874	C875	C876	C877	C878	C879	C880	C881	C882	C883	C884	C885	C886	C887	C888	C889	C890	C891	C892	C893	C894	C895	C896	C897	C898	C899	C900	C901	C902	C903	C904	C905	C906	C907	C908	C909	C910	C911	C912	C913	C914	C915	C916	C917	C918	C919	C920	C921	C922	C923	C924	C925	C926	C927	C928	C929	C930	C931	C932	C933	C934	C935	C936	C937	C938	C939	C940	C941	C942	C943	C944	C945	C946	C947	C948	C949	C950	C951	C952	C953	C954	C955	C956	C957	C958	C959	C960	C961	C962	C963	C964	C965	C966	C967	C968	C969	C970	C971	C972	C973	C974	C975	C976	C977	C978	C979	C980	C981	C982	C983	C984	C985	C986	C987	C988	C989	C990	C991	C992	C993	C994	C995	C996	C997	C998	C999	C1000	C1001	C1002	C1003	C1004	C1005	C1006	C1007	C1008	C1009	C1010	C1011	C1012	C1013	C1014	C1015	C1016	C1017	C1018	C1019	C1020	C1021	C1022	C1023	C1024	C1025	C1026	C1027	C1028	C1029	C1030	C1031	C1032	C1033	C1034	C1035	C1036	C1037	C1038	C1039	C1040	C1041	C1042	C1043	C1044	C1045	C1046	C1047	C1048	C1049	C1050	C1051	C1052	C1053	C1054	C1055	C1056	C1057	C1058	C1059	C1060	C1061	C1062	C1063	C1064	C1065	C1066	C1067	C1068	C1069	C1070	C1071	C1072	C1073	C1074	C1075	C1076	C1077	C1078	C1079	C1080	C1081	C1082	C1083	C1084	C1085	C1086	C1087	C1088	C1089	C1090	C1091	C1092	C1093	C1094	C1095	C1096	C1097	C1098	C1099	C1100	C1101	C1102	C1103	C1104	C1105	C1106	C1107	C1108	C1109	C1110	C1111	C1112	C1113	C1114	C1115	C1116	C1117	C1118	C1119	C1120	C1121	C1122	C1123	C1124	C1125	C1126	C1127	C1128	C1129	C1130	C1131	C1132	C1133	C1134	C1135	C1136	C1137	C1138	C1139	C1140	C1141	C1142	C1143	C1144	C1145	C1146	C1147	C1148	C1149	C1150	C1151	C1152	C1153	C1154	C1155	C1156	C1157	C1158	C1159	C1160	C1161	C1162	C1163	C1164	C1165	C1166																																																																																																																																																																																																																																																																																																											
G78	G79	G80	U	U	U	U	U84	U88	C89	C90	C91	C92	C93	U96	G97	G98	A101	G102	A109	C110	G111	G112	G113	U114	G115	A116	G117	G118	G119	G120	G121	G122	G123	G127	G128	G129	G130	G131	G132	G133	G134	G135	G136	G137	G138	G139	G140	G141	G142	A143	G144	G145	G146	G147	G148	G149	C150	A151	A152	C153	C154	A155	A156	A157	A158	A159	A160	A161	A162	C163																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
U164	C165	G166	C167	C168	C169	U170	A171	A172	U173	C174	C175	C176	C177	C178	A179	U180	G181	U182	C183	C184	C185	C186	C187	C188	C189	C190	C191	C192	C193	C194	C195	C196	C197	C198	C199	C200	C201	C202	C203	C204	C205	C206	C207	C208	C209	C210	C211	C212	C213	C214	C215	C216	C217	C218	C219	C220	C221	C222	C223	C224	C225	C226	C227	C228	C229	C230	C231	C232	C233	C234	C235	C236	C237	C238	C239	C240																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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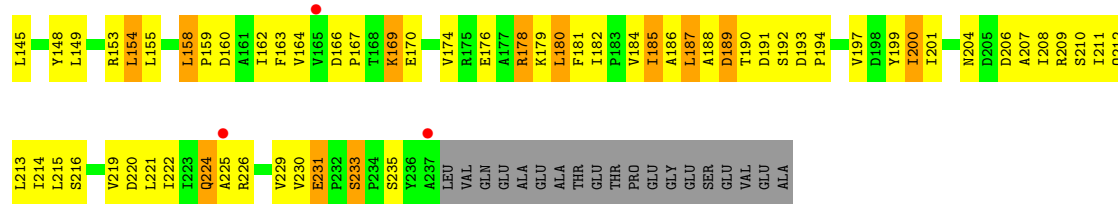


• Molecule 2: 30S Ribosomal Protein S2

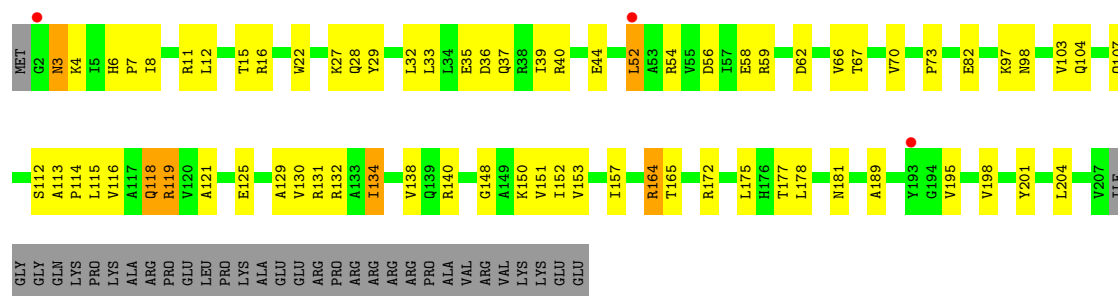


• Molecule 2: 30S Ribosomal Protein S2





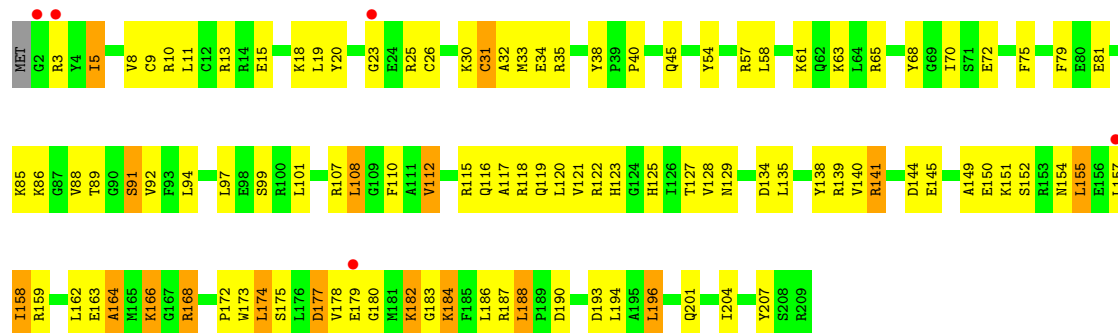
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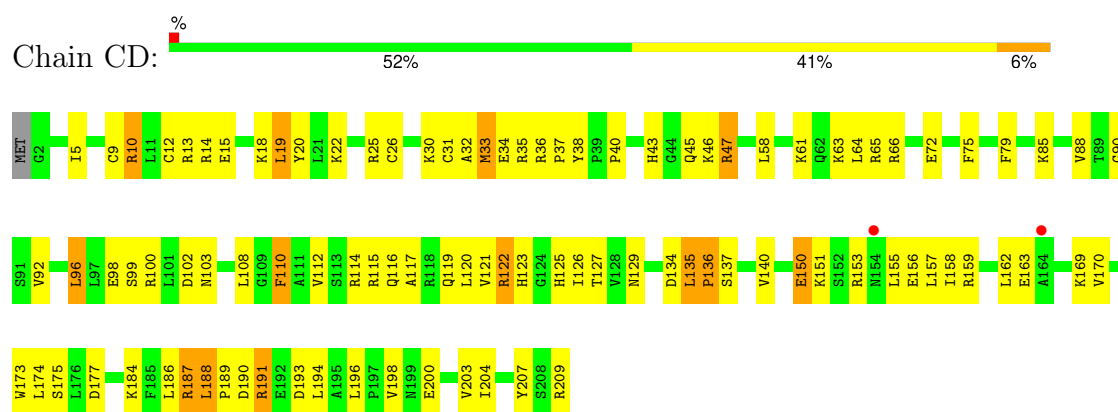
• Molecule 3: 30S Ribosomal Protein S3



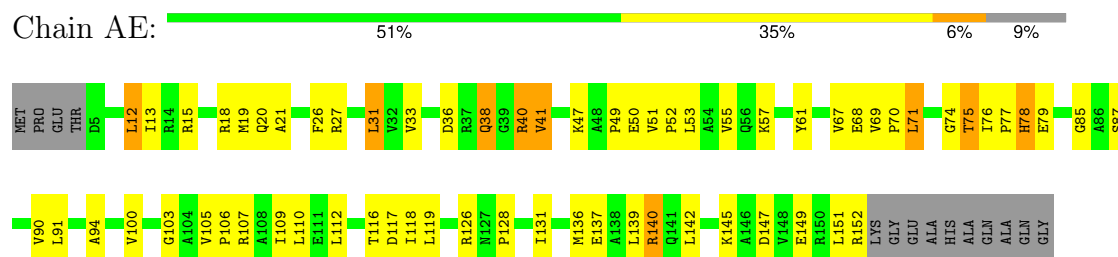
• Molecule 4: 30S Ribosomal Protein S4



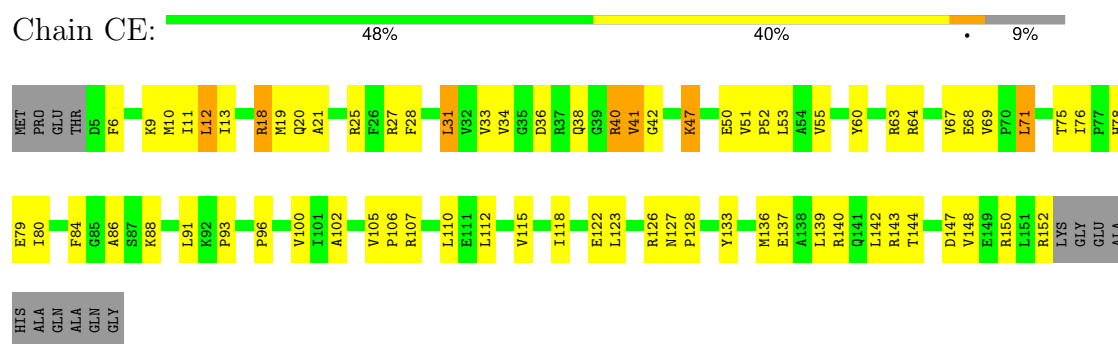
• Molecule 4: 30S Ribosomal Protein S4



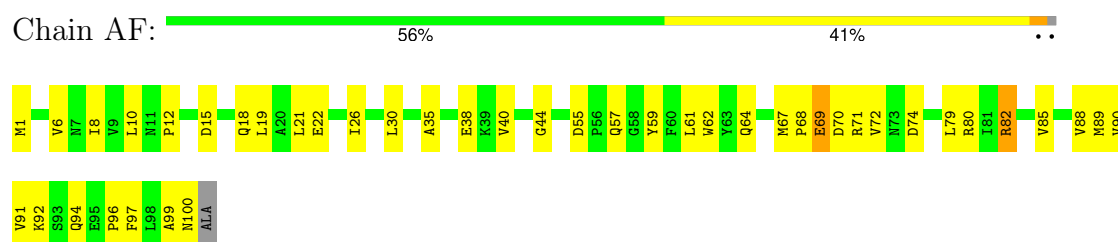
• Molecule 5: 30S Ribosomal Protein S5



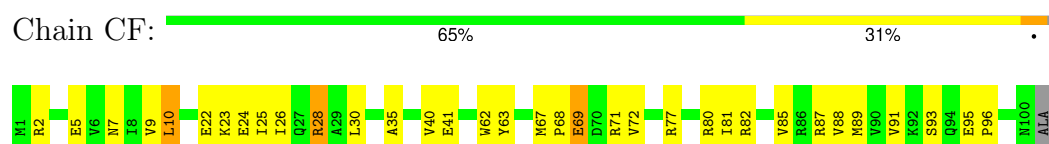
• Molecule 5: 30S Ribosomal Protein S5



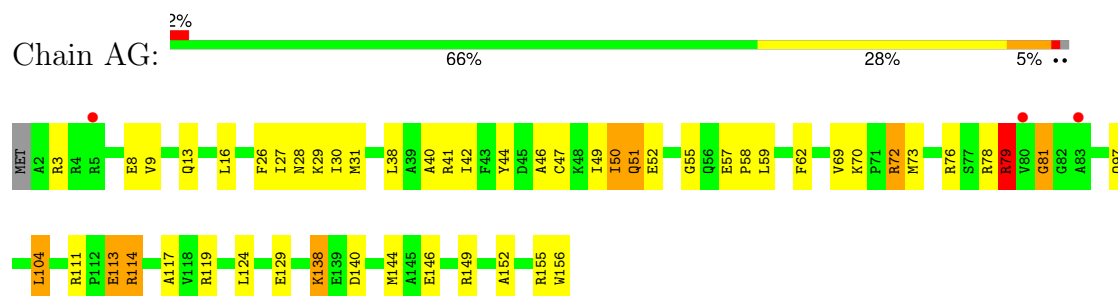
• Molecule 6: 30S Ribosomal Protein S6



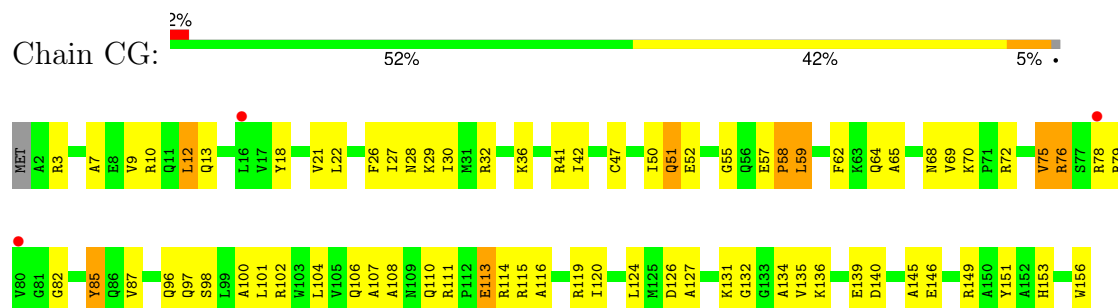
• Molecule 6: 30S Ribosomal Protein S6



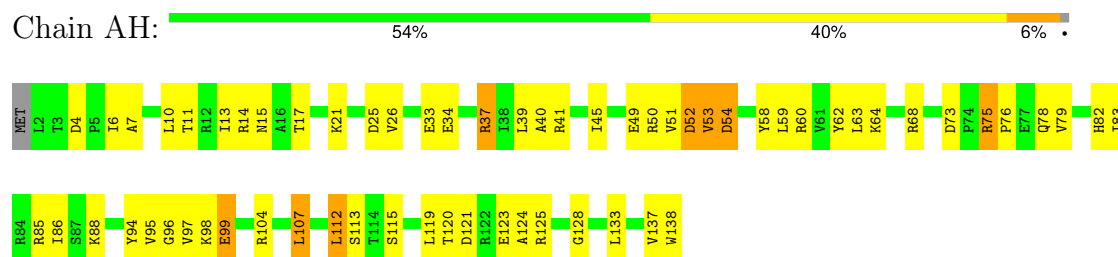
- Molecule 7: 30S Ribosomal Protein S7



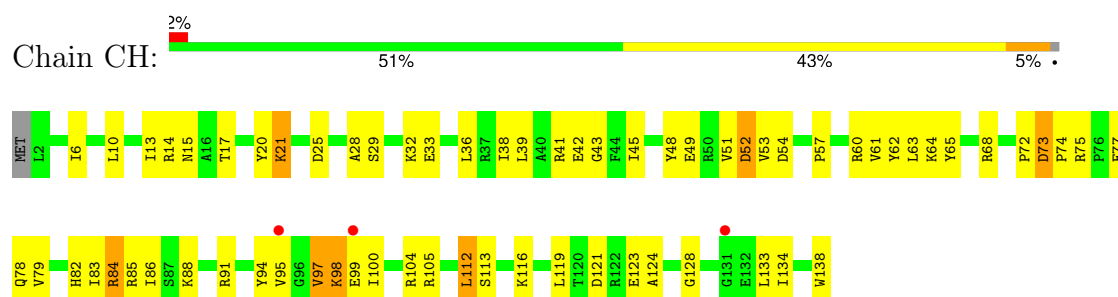
- Molecule 7: 30S Ribosomal Protein S7



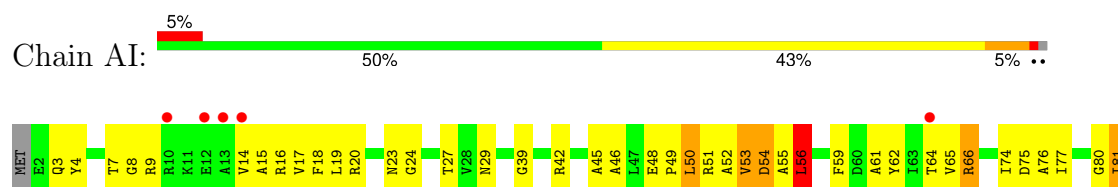
- Molecule 8: 30S Ribosomal Protein S8



- Molecule 8: 30S Ribosomal Protein S8

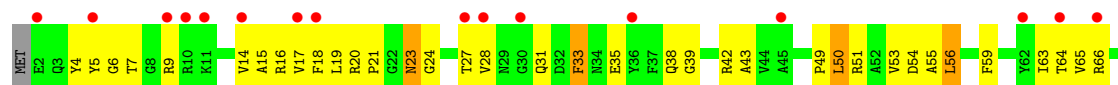


- Molecule 9: 30S Ribosomal Protein S9

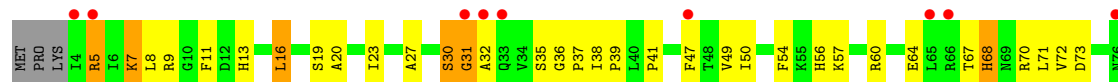




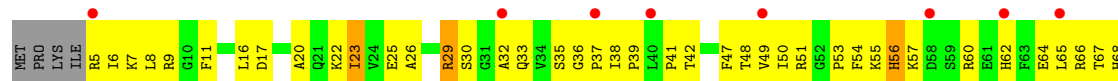
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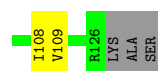
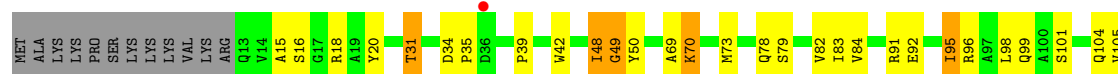
• Molecule 10: 30S Ribosomal Protein S10



• Molecule 10: 30S Ribosomal Protein S10

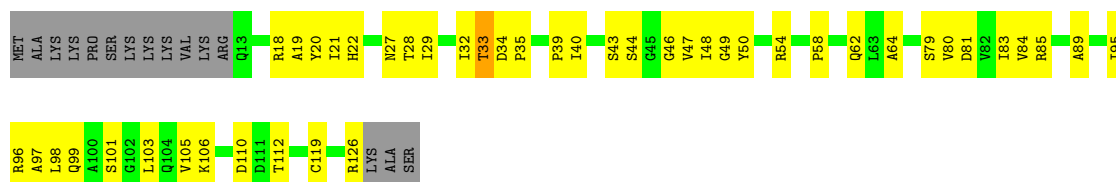


• Molecule 11: 30S Ribosomal Protein S11

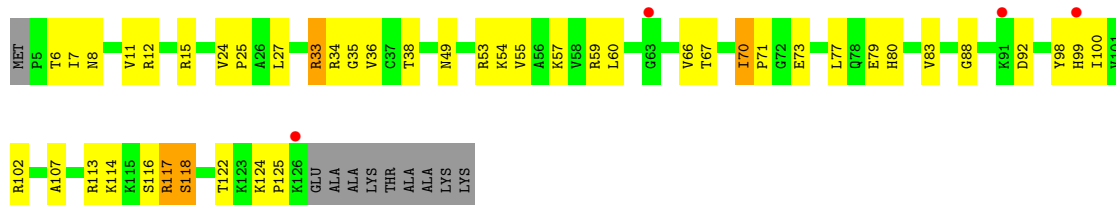


• Molecule 11: 30S Ribosomal Protein S11

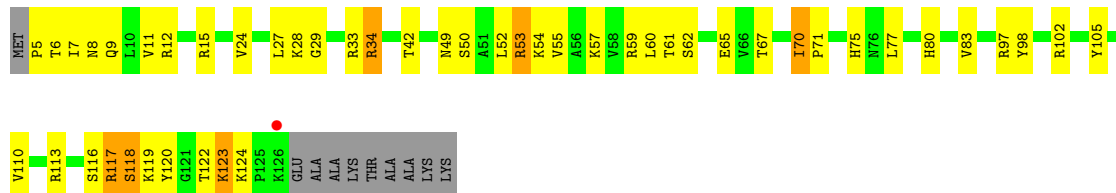




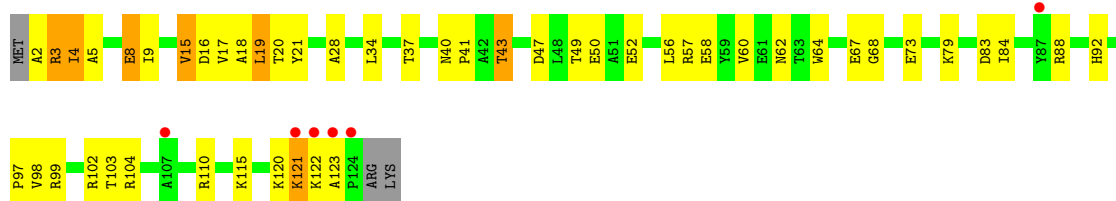
• Molecule 12: 30S Ribosomal Protein S12



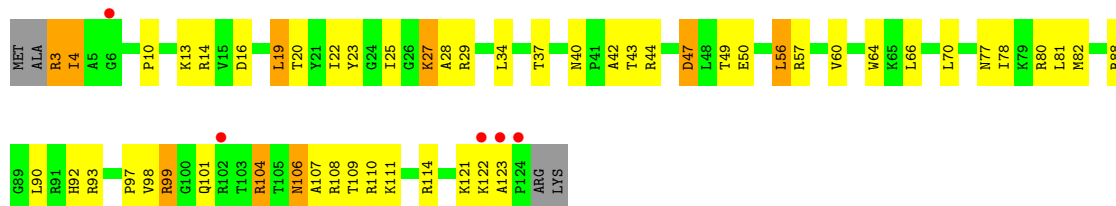
• Molecule 12: 30S Ribosomal Protein S12



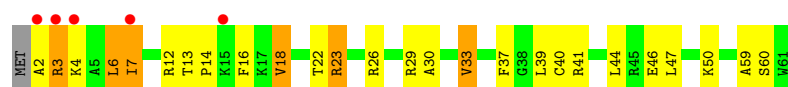
• Molecule 13: 30S Ribosomal Protein S13



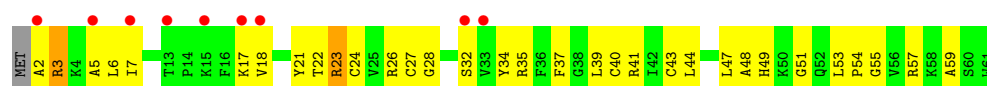
• Molecule 13: 30S Ribosomal Protein S13



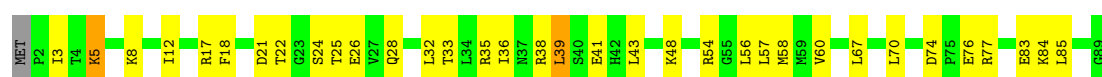
• Molecule 14: 30S Ribosomal Protein S14



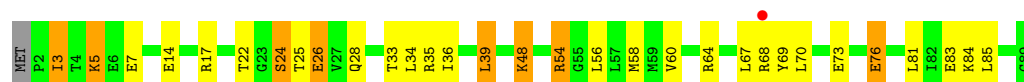
• Molecule 14: 30S Ribosomal Protein S14



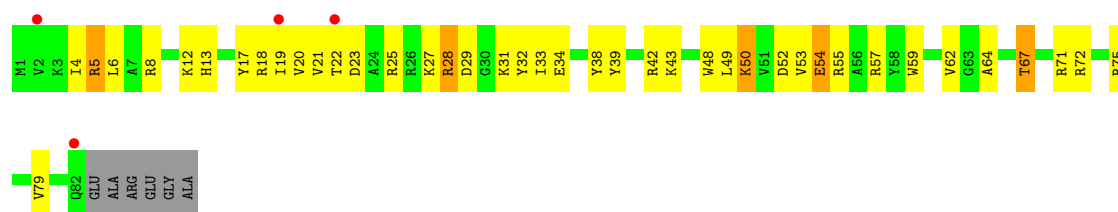
• Molecule 15: 30S Ribosomal Protein S15



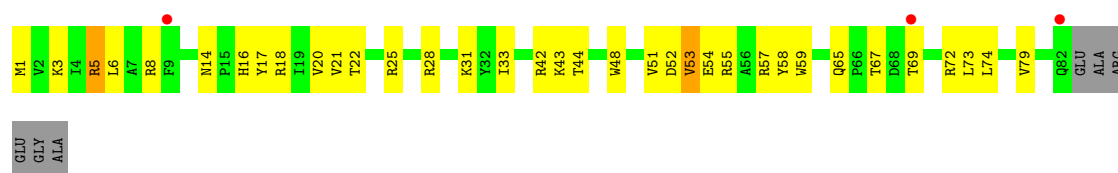
• Molecule 15: 30S Ribosomal Protein S15



• Molecule 16: 30S Ribosomal Protein S16



• Molecule 16: 30S Ribosomal Protein S16

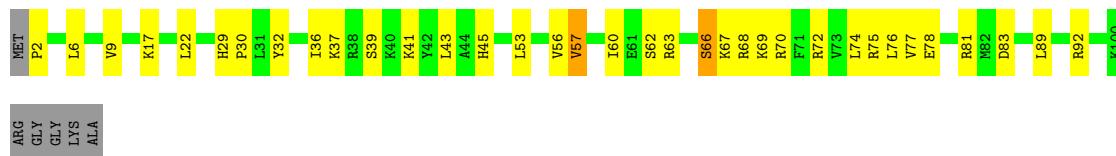


• Molecule 17: 30S Ribosomal Protein S17

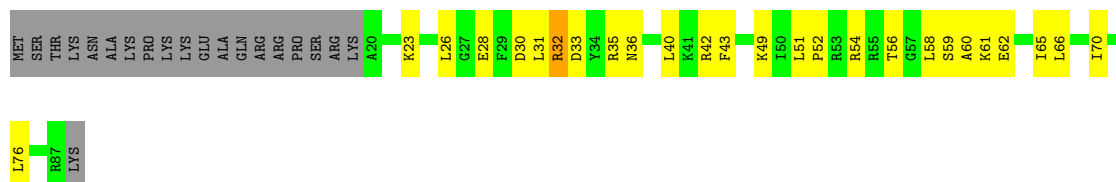




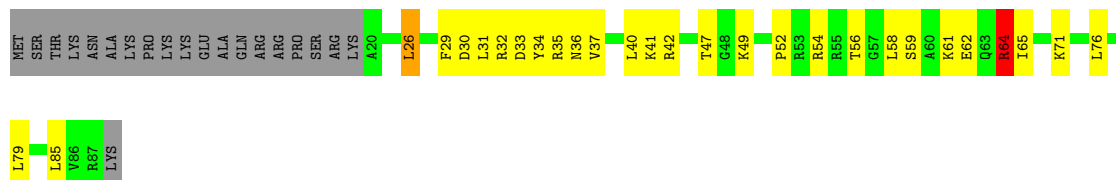
• Molecule 17: 30S Ribosomal Protein S17



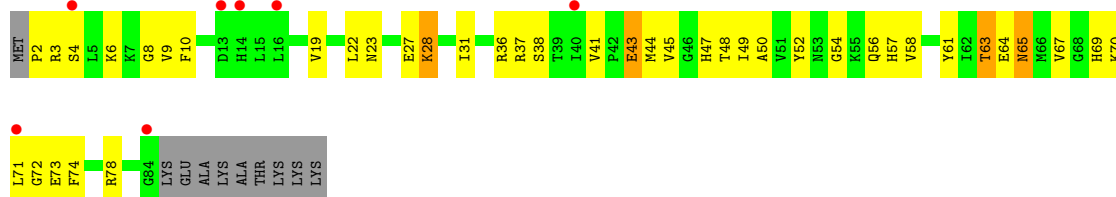
• Molecule 18: 30S Ribosomal Protein S18



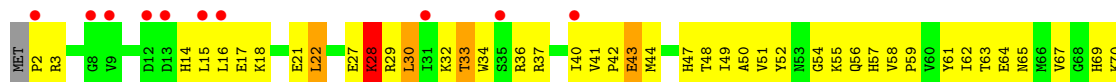
• Molecule 18: 30S Ribosomal Protein S18

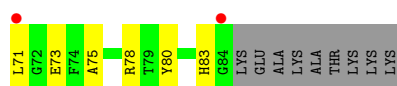


• Molecule 19: 30S Ribosomal Protein S19

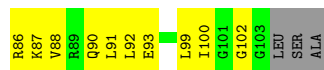


• Molecule 19: 30S Ribosomal Protein S19





• Molecule 20: 30S Ribosomal Protein S20



• Molecule 20: 30S Ribosomal Protein S20



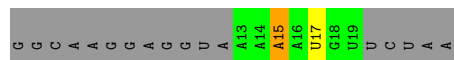
• Molecule 21: 30S Ribosomal Protein THX



• Molecule 21: 30S Ribosomal Protein THX

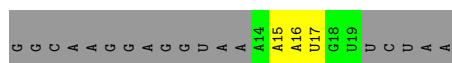


• Molecule 22: mRNA



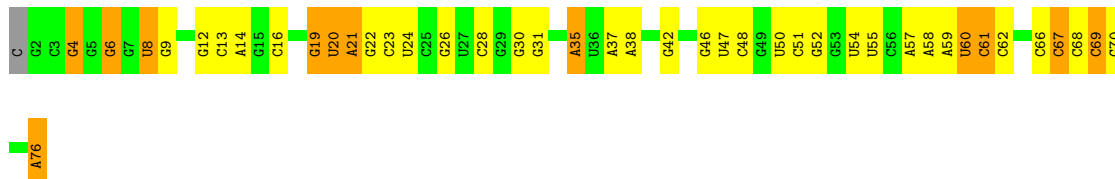
• Molecule 22: mRNA





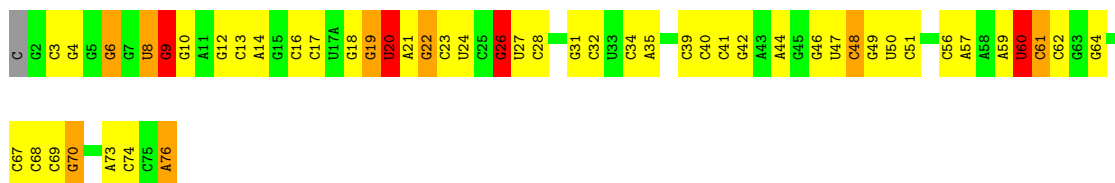
• Molecule 23: P-site tRNA

Chain AX: 44% 39% 16%



• Molecule 23: P-site tRNA

Chain CX: 34% 49% 10% 5%



• Molecule 24: Dityromycin

Chain AW: 40% 60%



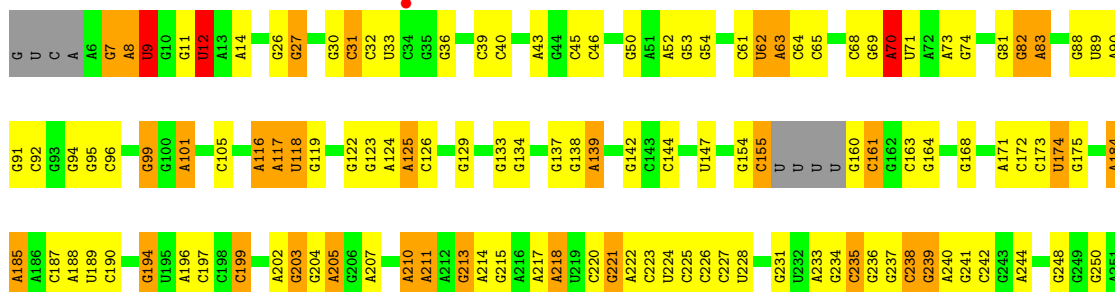
• Molecule 24: Dityromycin

Chain CW: 20% 80%



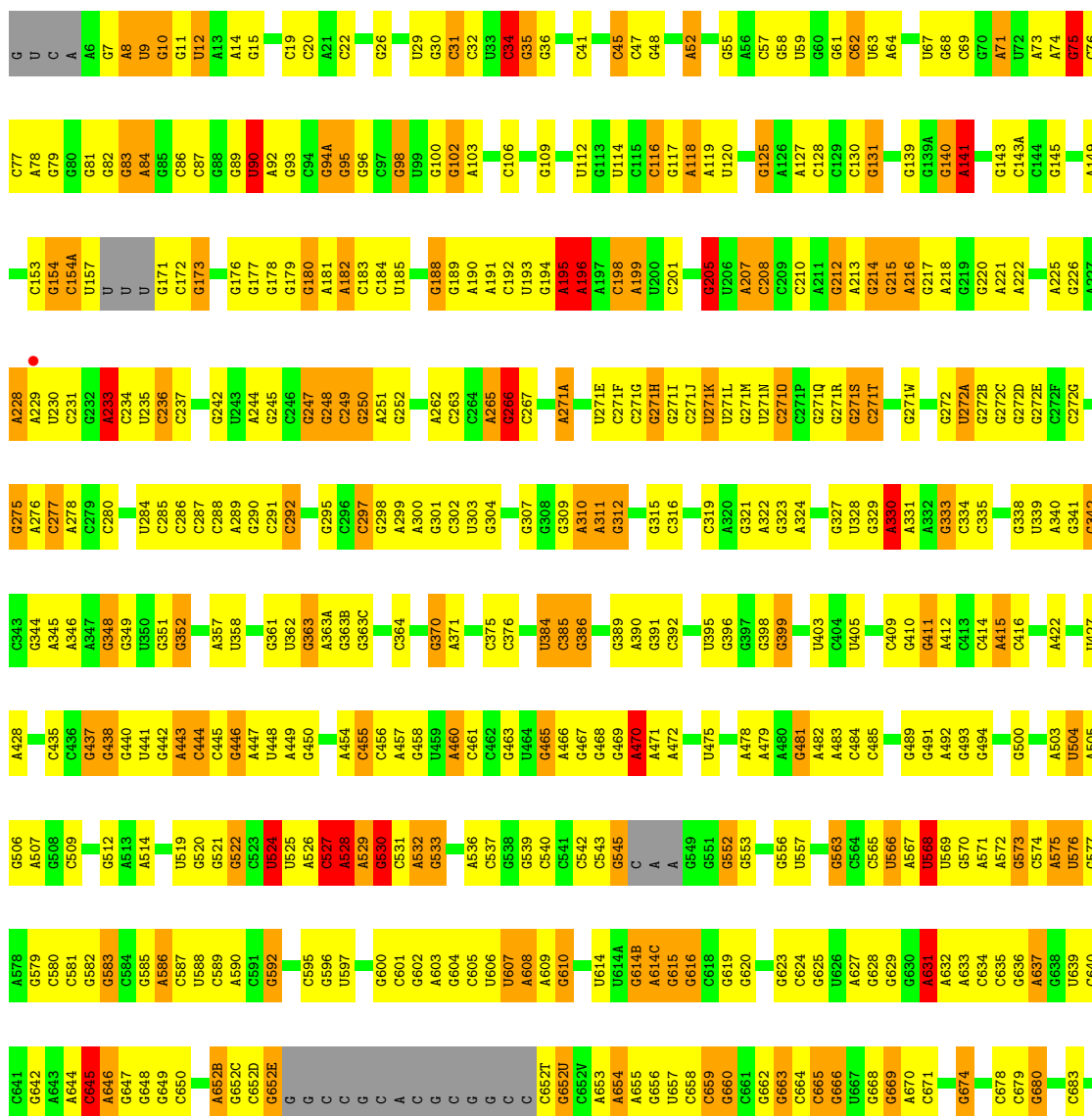
• Molecule 25: 23S Ribosomal RNA

Chain BA: 44% 34% 13% 6%



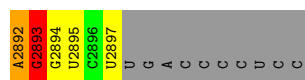
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A1045	A	C884	G810		C510	C510	G426	G665	C255
A1046	G962	G885		G739	G666	C511	G427	C342	
A1047	G965	U886	U814	C740	G667	C512	A428		U265
G1048		C887	G815	U741		C513		A346	C266
	G973	G892	G816		C670	G514	C431		C267
C1051	G974	C893	G818	G747	A671	G515	U432	G351	G268
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A1056	G977	G895	A821	U750		G518	G434	G353	C270
G1057	A978	C896	G822	G751	G676	U592	G435	A354	U271
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	G983	G902	A829	G758	A	U524	G438	C358	U274
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A1066	G985	C904	A831	G758	C	A526		G360	C276
A1067	A986	U905	G832		C	A527	U448	G361	G277
G1068	G987	G906	G833	G762	G	A528	A449	G362	G278
U1069	G988	U907	C834	A763	G	U529	G450	U363	G279
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A1071	G989	A908	A835		C	G531		G365	C281
A990	A990	A936	A836	G767	C	A532	A455	G366	
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		G911	C838	A769	C	C534			U288
G999	G999	A917	G839		A	C535	A459	G373	G289
A1073	C1000	U918	A840	U771	C	U536	C460	U374	G290
A1074	G1001	U918	G841	G772	G691	G537		G375	
A1075	A1002		C842	G773	C692	A538	G468	G376	C294
G1076	U1003	G922	G843		G693	A539	A469		C295
A1077	A1004	C923	C844	G776	C	A540	C470	U382	U296
G1080	A1095			C777	G616	C541	C471	A381	C297
	G926	G927	G848	C778	C696	C542		U382	G298
G1085	G1007	G928	A851	G779	G623	G543	U474	G384	C299
C1086	U1008	G928		G780	G624		A475	G385	A
C1087	C1009	G929	G852	A781	G625	A551	G476	U386	C
G1088	C1010	G930			A626	C552	C477	G387	A302
A1089	G1011	C931	U854	G784	A702	A553	G478	A388	C303
C1090	C1012	C932	G855	G785	G703	A554	C479	G389	
A1091	G1013	C933	G856	G786	U704	G555	A480	G390	A306
A1092	U1014	A934	U857	G787	C705	C556	C481	G391	A307
G1093	C1015	C935	U858	G788	C706	A557	C482		
A1094	G1016	G936	C859	G789		C558	A483	A398	C310
C1095	C1017	A937	U860	G790	G709	U559	G484	G399	C311
A1096	U1018	G938	C861	G791	G710	C560	U485	C312	C312
G1097	G1019	C939		G792	C711	A561	U400	A401	A313
C1098	C1020	C940	G864	A793	C712	C562	C488	C402	
		U941	G865	U794	G713	G563		C403	C316
A1102	G1024	A942	A866	G795	U714	G564	G491	C404	
G1103	G1025	C943	A867	G796	G715	C565	A492	C405	G319
A1104	A1026	C944	A868	A797	G716		G493	G406	
		A945	A945	A798	A717	C568		U407	A323
A1109	A1029	A946	A946	A799	G718	G569	A496	A324	A324
		A947	A947	C872	C719	C			G325
U1243	G1035	C948	U873	C800	G720	A	U501	C412	C326
C1244	A1036	C949	U874	C302	G721		G502	G413	
A1249	G1171	C950	U875	C903	G721		A572	G415	U330
	G1039	U951	A876	U804			G573	G416	
	C	G952	A877	C805	A724		A504	G331	
U1255	C1040	U953	G877	C908	G725	G575	A505	A417	A324
	A1175	U	C878		G728	G576	A506		





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U1692	G1539	C1468	G1539	A1393	G1319	A1248	U	G	C982	G916	G855	G776	C887
U1693	U1540	G1469	U1540	A1394	C1320	U1249	G	A	A983	A917	C856	A777	U688
	A1614	A1395	A1395	A1395	A1321	G1250	C	C	A984	A918	C857		
	A1616	A1471	A1471	A1396	A1322	G1251	G	A	U858	G919	A782	A763	C692
	C1543	U1397	U1397	A1397	A1323	G1252	A	G	C985	G920	A783	C693	C692
	A1544	G1473	G1473	C1398	U1323	A1253	C	C	C986	G921	U860	A764	C693
	A1545	G1474	G1474	C1399	G1324	A1254	C	C	C987	G922	A861	G765	C698
	C1546	G1475	G1475			A1255	A	A		C923	G862		
	A1554	C1476	C1476	C1403	C1327	G1256	A	G	A990	C924	A863	G704	G704
	A1477	G1477	G1477	A1404	G1328	G1257	G	G	C991	A926	A788	A705	A705
	G1478	U1405	U1405	U1329	U1329	C1258	A	A	C994	G927	A789	C790	C790
	G1479	U1406	U1406	C1330	A1331	G1259	G	G	A995	G928	C791	C708	C708
		C1407	C1407	A1332	G1332	G1260	G	G	A996		G792	U709	U709
		C1408	C1408	G1333	C1333	G1261	U	U	C997	G932	A793	G710	G710
		G1482	G1482	G1334	U1334	A1262	U	U	C998		G794	G717	G717
		A1486	A1486	U1335	G1335	G1191	G	G	U999		C796	A718	A718
		G1487	G1487	A1336	G1336	G1192	C	C		C936	U871	C797	C797
		U1488	U1488	A1337	G1337	G1193	U	U		U937	A872	C798	C798
		A1490	A1490	G1338	G1338	G1197	U	U	C1005	G938	G873	G799	G799
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		C1493	C1493	U1340	A1204	U1199	G	G	C1007	G940	C876	G801	U724
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		A1495	A1495	G1342	A1206	C1201	A	A	A1009	G942	A802		
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		U1497	U1497	G1344	G1271	A1132	G	G	G1011	G944	G805		
		C1498	C1498	C1345	A1272	U1133	C	C	U1012	A945	C806		
				C1346	A1273	G1136	C	C	U1013	G946	U807	C731	C731
		G1425	G1425	G1347	U1274	G1137	C	C	U1014	G947	G808	C732	C732
		G1426	G1426	U1348	A1278	G1138	C	C	G1015	G948	G882	G733	G733
		A1427	A1427	C1350	A1278	G1139	A	A	C1016	G949	C894	A734	A734
		C1428	C1428	C1351	A1280	G1139	U	U	C1017	G950	C885	A735	A735
		G1429	G1429	U1352	U1211	U1141	U	U	C886	C951	U813	C736	C736
		A1430	A1430	A1353	U1282	U1212	C	C	A887	G952	C814	C737	C737
		U1431	U1431	A1354	A1213	U1142	C	C	C888	G953	C815	G738	G738
		C1432	C1432		A1214	A1142A	U	U	C889	G954	C816	G739	G739
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		A1434	A1434	A1359	A1285	G1144	U	U	G1022	G956	G818	G741	G741
		G1435	G1435	A1360	A1286		A	A	U1023		A819	G742	G742
		C1436	C1436	C1363	U1287	A1148	A	A	G1024	A957	C893	G743	G743
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		A1445	A1445	A1366	U1291	G1153	A	A	A1027	G960	C896	U826	U826
		C1445A	C1445A	G1368	U1292	G1154	U	U	A1028	C961	C897	U827	U827
		C1446	C1446	G1369	C1293	G1154	U	U	A1029	G962	C898	U828	U828
		G1447	G1447	C1370	C1297	U1159	G	G	G1030	U963	A899	A829	A829
		A1448	A1448	G1371	C1298	G1160	C	C	A1031	C964	A900	C753	C753
		A1449	A1449	U1372	G1299	C1161	U	U	U1032	G965	C901	C754	C754
		G1450	G1450		U1300	G1162	U	U	U1033	G966	G831	C755	C755
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		A1459	A1459	A1379	C1305	G1164	U	U	G1037	C970	G906	U762	U762
		A1460	A1460	G1380	C1305	U1165	A	A	U1038	G971	U907	G763	G763
		G1461	G1461		G1309	G1166	G	G	G1039	G972	C908	A764	A764
		C1462	C1462	A1384	G1309	U1167	C	C	U1040	A973	A909	G765	G765
		C1463	C1463	G1385	G1310	G1168	U	U	C1041	G974	A910	G848	G848
		A1464	A1464	G1386	G1311	G1169	C	C	G1042	C975	A911	A849	A849
		G1465	G1465	C1387	U1312	G1170	A	A	G1043	G975A	C912	U773	U773
		C1536	C1536	C1387	C1314	G1171	C	C	G	C976	U913	G852	G852
		G1537	G1537			G	U	U	A		C914	A774	A774

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A2823	G2751	A2541	C2462	G2384	C2316	G2250	U	U2034	U1963	A1783	A1783
C2824	G2752	A2542	C2463	C2385	C2317	G2251	A	G2037	G1964	G1857	A1784
C2825	C2690	G2543	C2464	C2386	G2318	G2252	A	G2038	C1965	G1858	A1785
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C2828	G2694	G2549	A2468	G2390	G2322	G2256	C	U2042	C1969	A1876	A1789
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C2856	A2721	C2574	U2500	C2420	A2352	C2285	C	C2073	G2004	A1918	G1817
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G2885	C2742	U2525	C2525	G2445	G2374	A2305	C	G2101	U1946		
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G2889	C2746	C2601	U2536	U2451	C2380	U2244	C	C	G2029		
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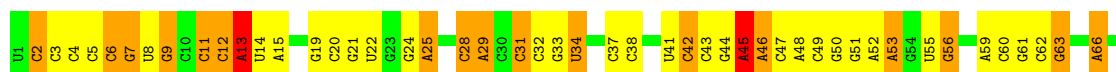
• Molecule 26: 5S Ribosomal RNA

Chain BB: 50% 38% 10% ..



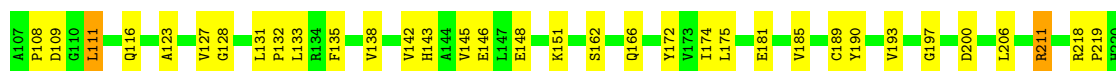
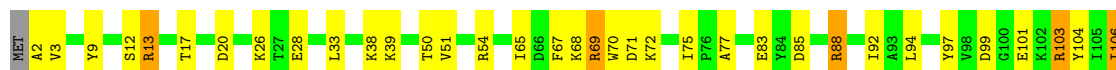
• Molecule 26: 5S Ribosomal RNA

Chain DB: 30% 47% 19% ..



• Molecule 27: 50S Ribosomal Protein L2

Chain BD: 69% 27% .

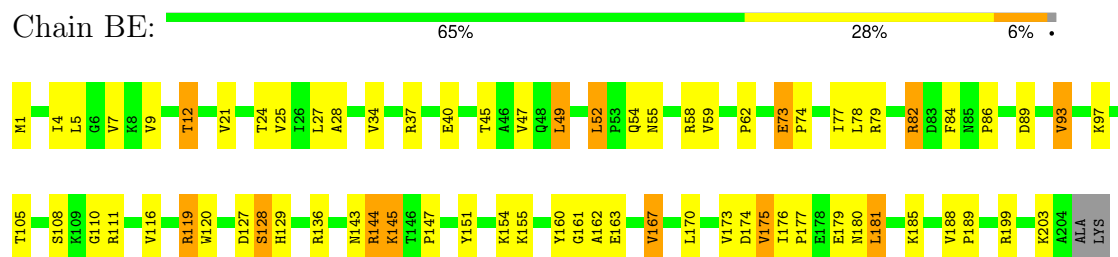


• Molecule 27: 50S Ribosomal Protein L2

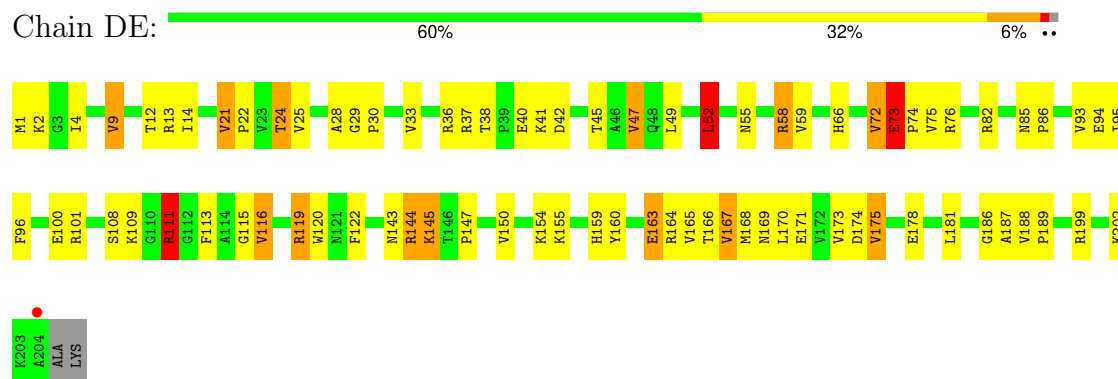
Chain DD: 67% 28% 5%



• Molecule 28: 50S Ribosomal Protein L3



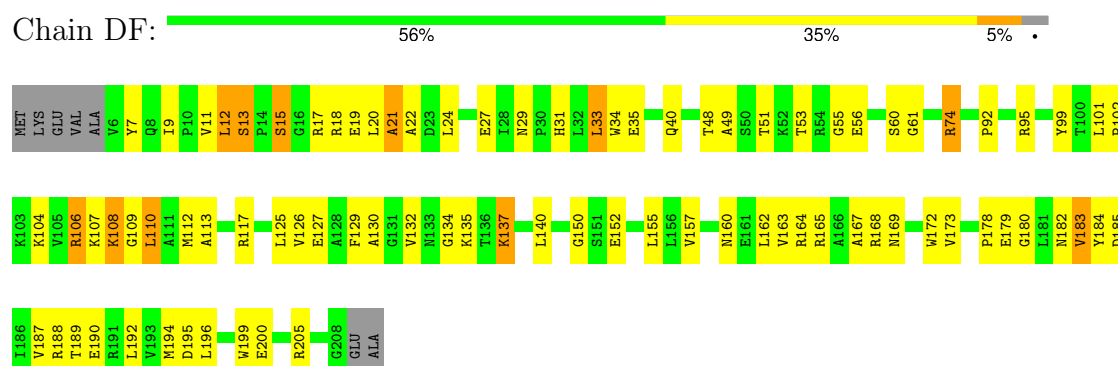
• Molecule 28: 50S Ribosomal Protein L3



• Molecule 29: 50S Ribosomal Protein L4

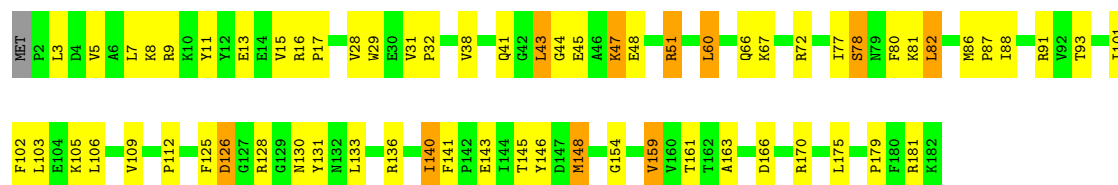


• Molecule 29: 50S Ribosomal Protein L4

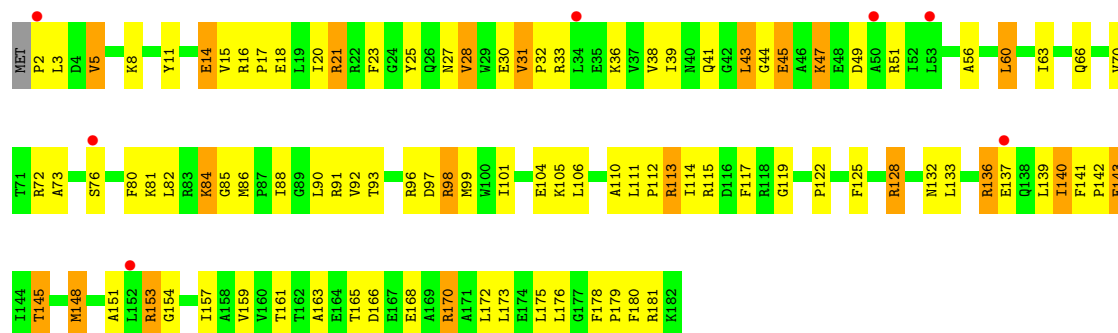


• Molecule 30: 50S Ribosomal Protein L5

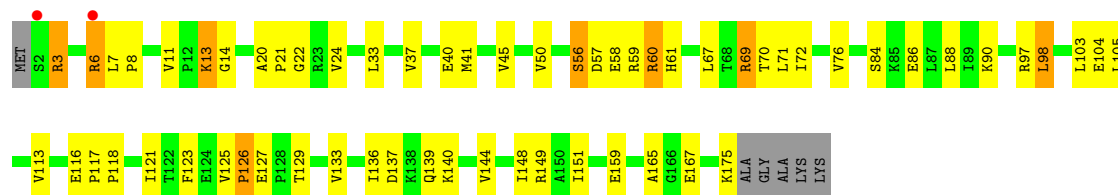




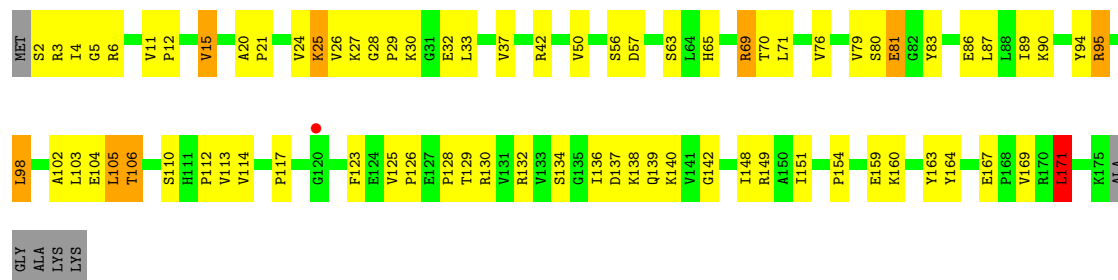
• Molecule 30: 50S Ribosomal Protein L5



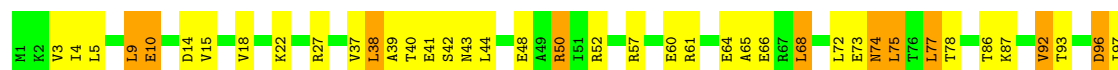
• Molecule 31: 50S Ribosomal Protein L6



• Molecule 31: 50S Ribosomal Protein L6



• Molecule 32: 50S Ribosomal Protein L9





• Molecule 32: 50S Ribosomal Protein L9

Chain DI: 66% 28% 5% •



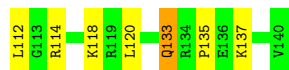
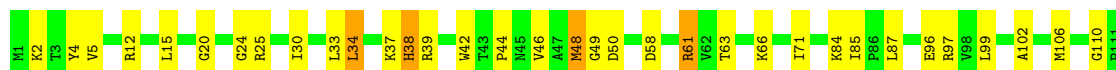
• Molecule 33: 50S Ribosomal Protein L13

Chain BN: 75% 22% •



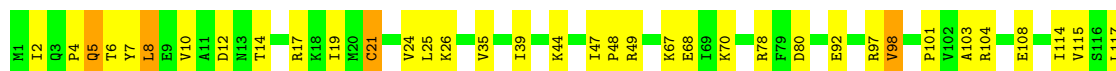
• Molecule 33: 50S Ribosomal Protein L13

Chain DN: 71% 26% •



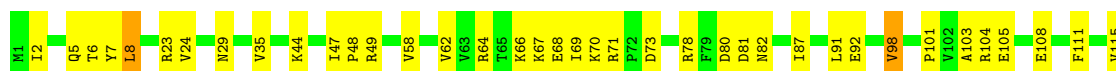
• Molecule 34: 50S Ribosomal Protein L14

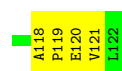
Chain BO: 69% 28% •



• Molecule 34: 50S Ribosomal Protein L14

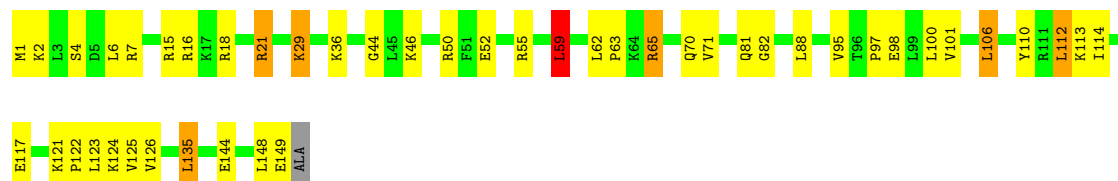
Chain DO: 66% 33% •





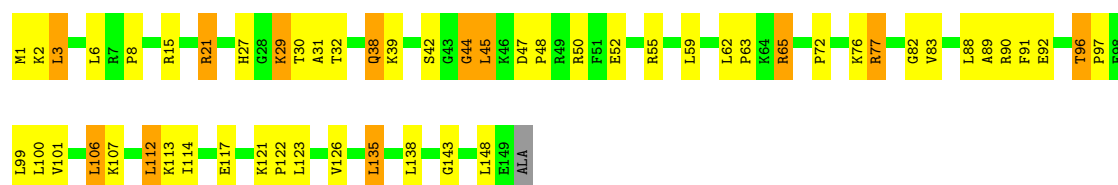
• Molecule 35: 50S Ribosomal Protein L15

Chain BP: 69% 26%



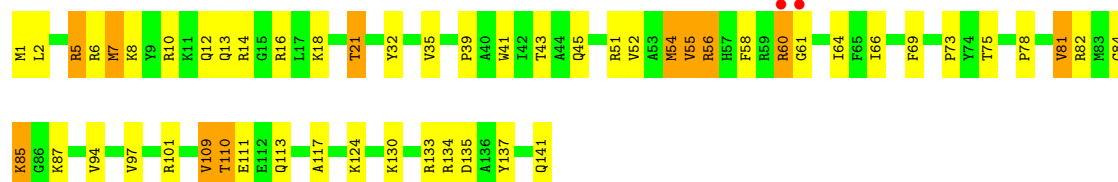
• Molecule 35: 50S Ribosomal Protein L15

Chain DP: 63% 29% 8%



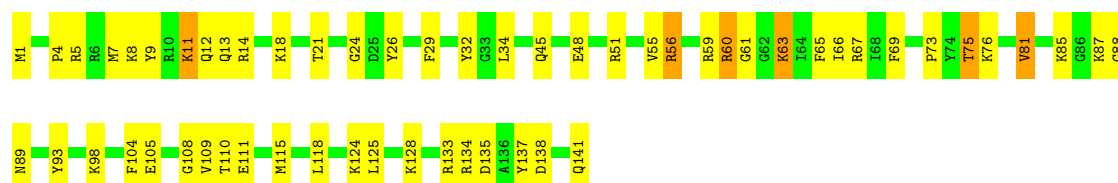
• Molecule 36: 50S Ribosomal Protein L16

Chain BQ: 62% 30% 8%



• Molecule 36: 50S Ribosomal Protein L16

Chain DQ: 60% 36%



• Molecule 37: 50S Ribosomal Protein L17

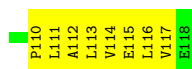
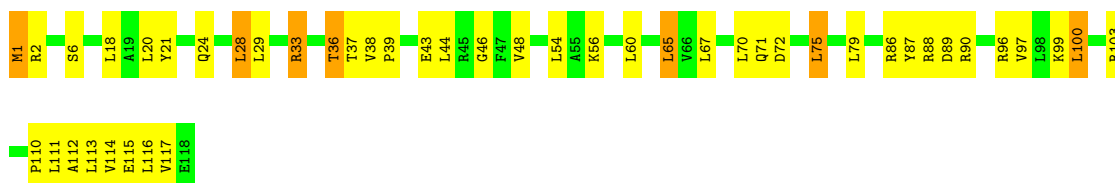
Chain BR: 68% 21% 11%





• Molecule 37: 50S Ribosomal Protein L17

Chain DR: 61% 33% 6%



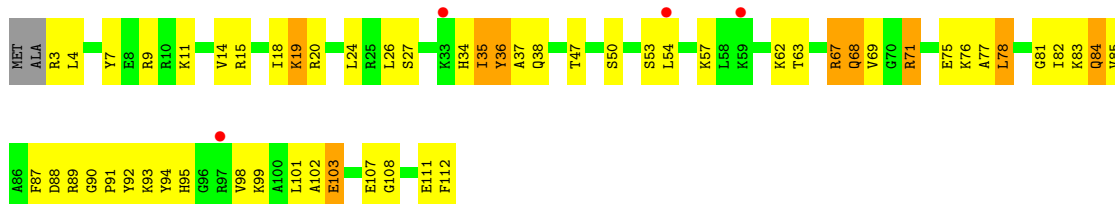
• Molecule 38: 50S Ribosomal Protein L18

Chain BS: 64% 30% ...



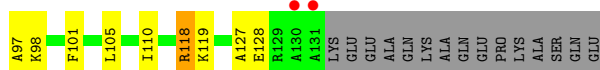
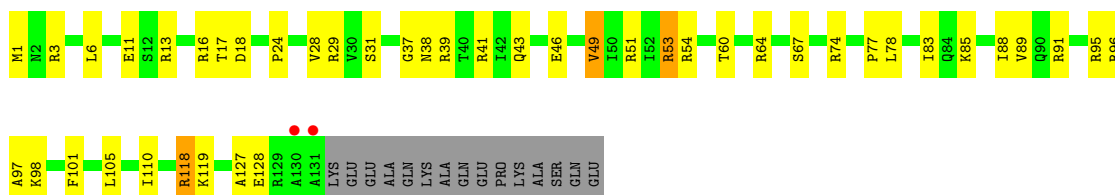
• Molecule 38: 50S Ribosomal Protein L18

Chain DS: 4% 48% 42% 8%



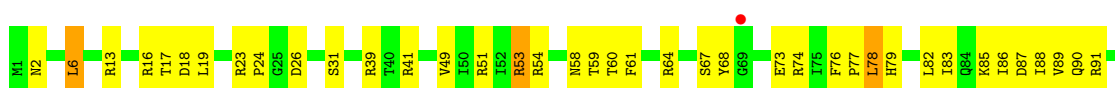
• Molecule 39: 50S Ribosomal Protein L19

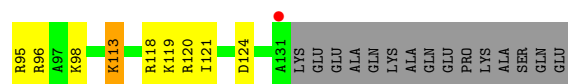
Chain BT: 60% 28% 10%



• Molecule 39: 50S Ribosomal Protein L19

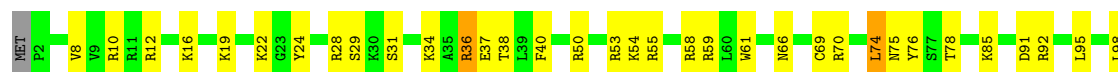
Chain DT: 57% 30% 10%





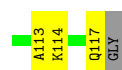
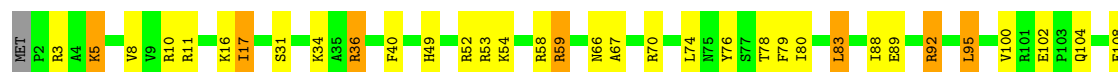
• Molecule 40: 50S Ribosomal Protein L20

Chain BU: 65% 31%



• Molecule 40: 50S Ribosomal Protein L20

Chain DU: 67% 25% 6%



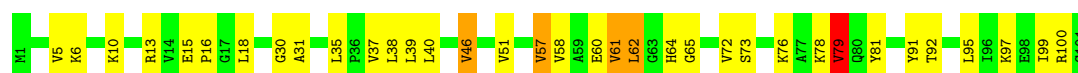
• Molecule 41: 50S Ribosomal Protein L21

Chain BV: 74% 20% 5%



• Molecule 41: 50S Ribosomal Protein L21

Chain DV: 65% 30%



• Molecule 42: 50S Ribosomal Protein L22

Chain BW: 77% 19%



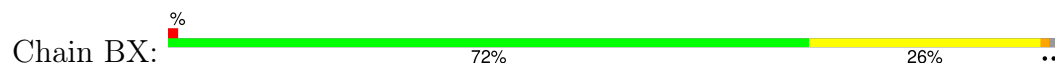
• Molecule 42: 50S Ribosomal Protein L22

Chain DW: 65% 32%

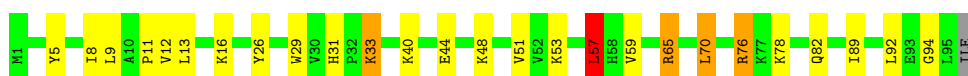




- Molecule 43: 50S Ribosomal Protein L23



- Molecule 43: 50S Ribosomal Protein L23



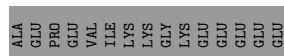
- Molecule 44: 50S Ribosomal Protein L24



- Molecule 44: 50S Ribosomal Protein L24

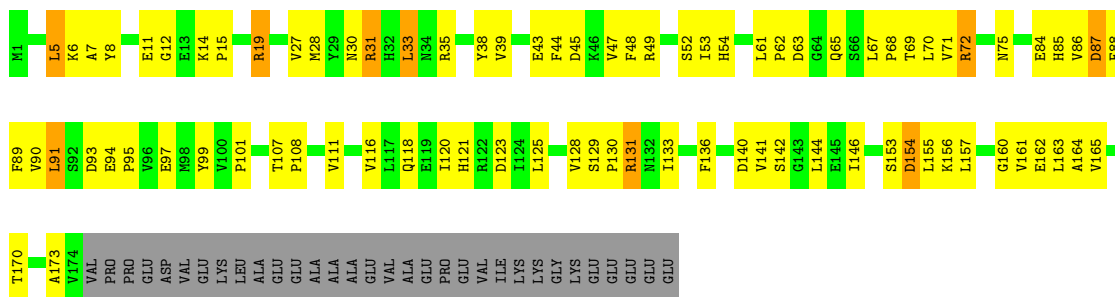


- Molecule 45: 50S Ribosomal Protein L25



- Molecule 45: 50S Ribosomal Protein L25

Chain DZ: 



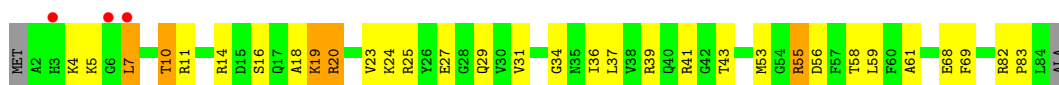
- Molecule 46: 50S Ribosomal Protein L27

Chain B0:



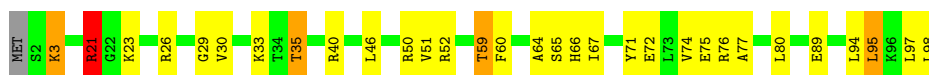
- Molecule 46: 50S Ribosomal Protein L27

Chain D0:  4% 60% 32% 6%



- Molecule 47: 50S Ribosomal Protein L28

Chain B1:  67% 27% . .



- Molecule 47: 50S Ribosomal Protein L28

Chain D1:  %



- Molecule 48: 50S Ribosomal Protein L29

Chain B2:  65% 26% 6% .



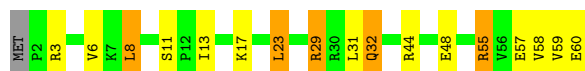
- Molecule 48: 50S Ribosomal Protein L29

Chain D2: 61% 29% 7% .



- Molecule 49: 50S Ribosomal Protein L30

Chain B3: 70% 20% 8% .



- Molecule 49: 50S Ribosomal Protein L30

Chain D3: 70% 20% 8% .



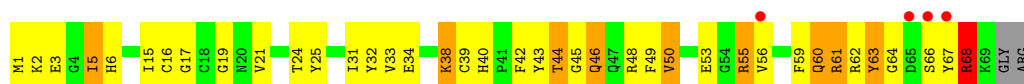
- Molecule 50: 50S Ribosomal Protein L31

Chain B4: 44% 35% 17% . .



- Molecule 50: 50S Ribosomal Protein L31

Chain D4: 6% 42% 41% 13% . .



- Molecule 51: 50S Ribosomal Protein L32

Chain B5: 72% 22% 5% .



- Molecule 51: 50S Ribosomal Protein L32

Chain D5: 72% 23% . .



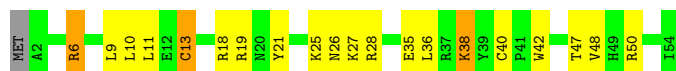
- Molecule 52: 50S Ribosomal Protein L33

Chain B6: 67% 26% 6% .



- Molecule 52: 50S Ribosomal Protein L33

Chain D6: 61% 31% 6% .



- Molecule 53: 50S Ribosomal Protein L34

Chain B7: 76% 20% ..



- Molecule 53: 50S Ribosomal Protein L34

Chain D7: 2% 67% 31% .



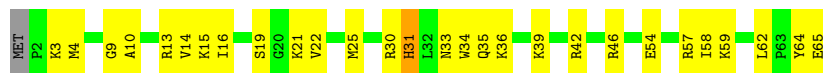
- Molecule 54: 50S Ribosomal Protein L35

Chain B8: 55% 42% ..



- Molecule 54: 50S Ribosomal Protein L35

Chain D8: 55% 42% ..



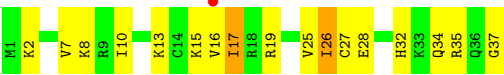
- Molecule 55: 50S Ribosomal Protein L36

Chain B9: 3% 76% 22% .



- Molecule 55: 50S Ribosomal Protein L36

Chain D9: 3% 54% 41% 5%



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	210.08Å 449.83Å 619.65Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.74 – 3.00 49.74 – 3.00	Depositor EDS
% Data completeness (in resolution range)	98.8 (49.74-3.00) 98.8 (49.74-3.00)	Depositor EDS
R_{merge}	0.20	Depositor
R_{sym}	0.24	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.26 (at 3.01Å)	Xtriage
Refinement program	PHENIX 1.8.2_1309	Depositor
R, R_{free}	0.203 , 0.259 0.203 , 0.257	Depositor DCC
R_{free} test set	57319 reflections (5.01%)	wwPDB-VP
Wilson B-factor (Å ²)	66.8	Xtriage
Anisotropy	0.228	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.28 , 55.4	EDS
L-test for twinning ²	$\langle L \rangle = 0.46$, $\langle L^2 \rangle = 0.28$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
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

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.70% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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	0.77	7/36038 (0.0%)	1.39	355/56244 (0.6%)
1	CA	0.76	13/36170 (0.0%)	1.43	365/56452 (0.6%)
2	AB	0.49	0/1881	0.77	0/2542
2	CB	0.56	0/1860	0.81	2/2518 (0.1%)
3	AC	0.48	0/1576	0.64	0/2130
3	CC	0.50	0/1566	0.72	2/2119 (0.1%)
4	AD	0.49	0/1689	0.76	1/2267 (0.0%)
4	CD	0.50	0/1704	0.71	0/2284
5	AE	0.47	0/1145	0.71	0/1543
5	CE	0.50	0/1149	0.76	0/1548
6	AF	0.48	0/819	0.69	0/1111
6	CF	0.53	0/829	0.76	0/1123
7	AG	0.48	0/1250	0.66	1/1679 (0.1%)
7	CG	0.50	0/1254	0.72	1/1683 (0.1%)
8	AH	0.46	0/1108	0.69	0/1494
8	CH	0.47	0/1108	0.71	0/1494
9	AI	0.47	0/1002	0.73	1/1346 (0.1%)
9	CI	0.56	0/997	0.75	2/1343 (0.1%)
10	AJ	0.47	0/722	0.67	0/982
10	CJ	0.53	0/727	0.69	0/988
11	AK	0.44	0/844	0.65	1/1145 (0.1%)
11	CK	0.46	0/848	0.67	0/1149
12	AL	0.50	0/946	0.73	0/1274
12	CL	0.52	0/946	0.74	0/1274
13	AM	0.48	0/969	0.68	0/1302
13	CM	0.48	0/961	0.66	0/1291
14	AN	0.48	0/501	0.71	0/664
14	CN	0.55	0/501	0.71	0/664
15	AO	0.49	0/739	0.76	0/985
15	CO	0.47	0/739	0.70	0/985
16	AP	0.47	0/697	0.73	0/939
16	CP	0.49	0/693	0.70	0/935

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AQ	0.51	0/836	0.68	0/1117
17	CQ	0.51	0/836	0.70	0/1117
18	AR	0.48	0/560	0.73	0/746
18	CR	0.50	0/560	0.75	1/746 (0.1%)
19	AS	0.47	0/667	0.66	0/900
19	CS	0.50	0/661	0.80	1/893 (0.1%)
20	AT	0.48	0/730	0.77	0/965
20	CT	0.43	0/729	0.68	0/965
21	AU	0.47	0/203	0.62	0/266
21	CU	0.51	0/203	0.64	0/266
22	AV	0.99	0/127	1.42	2/198 (1.0%)
22	CV	0.82	0/126	1.39	1/195 (0.5%)
23	AX	0.88	8/1813 (0.4%)	1.62	47/2825 (1.7%)
23	CX	0.94	6/1813 (0.3%)	1.87	57/2825 (2.0%)
24	AW	0.46	0/20	0.84	0/23
24	CW	0.34	0/20	0.64	0/23
25	BA	1.07	33/65892 (0.1%)	1.49	877/102850 (0.9%)
25	DA	0.82	13/65466 (0.0%)	1.46	741/102184 (0.7%)
26	BB	0.83	0/2878	1.31	13/4490 (0.3%)
26	DB	0.93	2/2878 (0.1%)	1.50	45/4490 (1.0%)
27	BD	0.71	2/2186 (0.1%)	0.82	0/2944
27	DD	0.63	2/2186 (0.1%)	0.77	0/2944
28	BE	0.72	0/1592	0.77	0/2149
28	DE	0.57	0/1592	0.79	2/2149 (0.1%)
29	BF	0.73	0/1619	0.75	0/2193
29	DF	0.53	0/1615	0.80	2/2188 (0.1%)
30	BG	0.46	0/1450	0.71	0/1959
30	DG	0.54	0/1449	0.76	0/1958
31	BH	0.61	0/1356	0.72	0/1834
31	DH	0.54	0/1356	0.71	1/1834 (0.1%)
32	BI	0.51	0/1100	0.70	0/1501
32	DI	0.51	0/1076	0.74	0/1471
33	BN	0.67	0/1144	0.75	0/1543
33	DN	0.54	0/1144	0.74	0/1543
34	BO	0.66	0/943	0.78	1/1269 (0.1%)
34	DO	0.56	0/943	0.78	1/1269 (0.1%)
35	BP	0.64	0/1152	0.82	1/1533 (0.1%)
35	DP	0.55	0/1152	0.83	2/1533 (0.1%)
36	BQ	0.69	0/1143	0.81	0/1527
36	DQ	0.59	0/1143	0.77	0/1527
37	BR	0.62	0/982	0.86	0/1312
37	DR	0.51	0/982	0.70	0/1312
38	BS	0.55	0/887	0.78	1/1180 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	DS	0.51	0/880	0.74	0/1172
39	BT	0.59	0/1105	0.79	0/1477
39	DT	0.53	0/1097	0.74	0/1468
40	BU	0.70	0/977	0.76	0/1301
40	DU	0.52	0/977	0.71	0/1301
41	BV	0.67	0/782	0.72	0/1049
41	DV	0.57	0/782	0.75	0/1049
42	BW	0.73	0/897	0.76	0/1205
42	DW	0.59	0/897	0.74	0/1205
43	BX	0.71	0/764	0.75	1/1025 (0.1%)
43	DX	0.56	0/764	0.80	2/1025 (0.2%)
44	BY	0.70	0/819	0.78	0/1095
44	DY	0.57	0/819	0.75	0/1095
45	BZ	0.55	0/1379	0.74	0/1873
45	DZ	0.54	0/1390	0.70	0/1890
46	B0	0.63	0/662	0.81	2/881 (0.2%)
46	D0	0.55	0/662	0.78	0/881
47	B1	0.66	0/762	0.81	3/1014 (0.3%)
47	D1	0.55	0/762	0.74	0/1014
48	B2	0.61	0/590	0.81	0/781
48	D2	0.47	0/590	0.67	0/781
49	B3	0.67	0/474	0.78	0/635
49	D3	0.50	0/469	0.70	0/630
50	B4	0.57	0/564	0.81	0/759
50	D4	0.59	0/544	0.89	1/735 (0.1%)
51	B5	0.72	0/469	0.84	1/635 (0.2%)
51	D5	0.59	0/469	0.73	1/635 (0.2%)
52	B6	0.66	0/460	0.66	0/613
52	D6	0.58	0/456	0.72	0/608
53	B7	0.74	0/426	0.82	0/561
53	D7	0.60	0/426	0.78	1/561 (0.2%)
54	B8	0.68	0/519	0.72	0/684
54	D8	0.58	0/525	0.73	0/691
55	B9	0.74	0/310	0.73	0/407
55	D9	0.61	0/310	0.80	0/407
All	All	0.81	86/305966 (0.0%)	1.30	2539/457396 (0.6%)

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
9	AI	0	1
19	CS	0	1
23	CX	1	0
24	AW	0	1
24	CW	0	1
27	DD	0	1
38	BS	0	1
44	BY	0	1
45	BZ	0	1
50	B4	0	1
50	D4	0	1
All	All	1	15

All (86) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	CA	1154	G	C6-N1	-13.21	1.30	1.39
1	CA	1119	C	N3-C4	-13.12	1.24	1.33
1	AA	343	U	C4-O4	12.79	1.33	1.23
1	CA	1154	G	N1-C2	-12.44	1.27	1.37
23	CX	76	A	N7-C5	-12.26	1.31	1.39
25	BA	1188	A	N9-C4	-11.91	1.30	1.37
23	AX	76	A	N7-C5	-11.21	1.32	1.39
25	BA	2299	A	N9-C4	-9.64	1.32	1.37
1	CA	1492	A	N9-C4	9.17	1.43	1.37
23	AX	76	A	C5-C4	-8.50	1.32	1.38
25	BA	1067	A	N9-C4	-8.41	1.32	1.37
25	DA	528	A	N9-C4	-8.20	1.32	1.37
23	AX	76	A	C5-C6	-8.08	1.33	1.41
1	CA	1154	G	C5-C4	7.97	1.44	1.38
1	CA	1154	G	N7-C5	-7.92	1.34	1.39
25	DA	2207	G	N7-C5	-7.74	1.34	1.39
25	BA	1605	A	N9-C4	-7.58	1.33	1.37
1	CA	1119	C	C2-N3	-7.45	1.29	1.35
25	BA	139	A	N9-C4	-7.24	1.33	1.37
23	CX	76	A	C5-C6	-7.03	1.34	1.41
25	DA	1021	A	N9-C4	-6.95	1.33	1.37
23	CX	76	A	C5-C4	-6.87	1.33	1.38
23	CX	14	A	N7-C5	-6.81	1.35	1.39
25	BA	1222	A	N9-C4	6.78	1.42	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	BA	354	A	N9-C4	-6.73	1.33	1.37
25	BA	2389	A	N9-C4	-6.55	1.33	1.37
25	BA	990	A	C5-C6	-6.42	1.35	1.41
26	DB	66	A	N9-C4	6.41	1.41	1.37
25	BA	990	A	N9-C4	-6.26	1.34	1.37
25	DA	2320	A	N9-C4	6.25	1.41	1.37
27	DD	28	GLU	CG-CD	6.25	1.61	1.51
25	BA	1697	G	N7-C5	-6.24	1.35	1.39
25	DA	1142(A)	A	N9-C4	-6.07	1.34	1.37
27	BD	28	GLU	CG-CD	6.00	1.60	1.51
25	DA	330	A	N9-C4	-5.99	1.34	1.37
27	DD	28	GLU	CB-CG	5.98	1.63	1.52
1	AA	1124	G	N9-C4	5.94	1.42	1.38
25	BA	2771	A	N9-C4	-5.91	1.34	1.37
25	DA	1489	U	C5-C6	-5.91	1.28	1.34
25	BA	978	A	N9-C4	-5.89	1.34	1.37
25	BA	2228	G	N7-C5	-5.83	1.35	1.39
25	BA	552	C	N3-C4	-5.76	1.29	1.33
23	AX	46	G	C6-N1	5.73	1.43	1.39
25	DA	530	G	N9-C8	5.71	1.41	1.37
23	AX	22	G	N7-C5	5.71	1.42	1.39
1	AA	161	A	N9-C4	5.70	1.41	1.37
1	CA	1169	A	N7-C5	-5.67	1.35	1.39
25	DA	1890	A	N9-C4	-5.65	1.34	1.37
25	BA	1153	G	N9-C4	5.61	1.42	1.38
25	BA	2825	C	N3-C4	-5.54	1.30	1.33
25	BA	1287	A	N9-C4	-5.53	1.34	1.37
25	BA	254	A	N7-C5	-5.53	1.35	1.39
23	AX	14	A	N7-C5	-5.51	1.35	1.39
1	CA	1119	C	N1-C2	5.47	1.45	1.40
25	BA	2082	A	N9-C4	-5.46	1.34	1.37
25	BA	43	A	N9-C4	-5.46	1.34	1.37
1	CA	1003	G	N9-C4	5.41	1.42	1.38
25	BA	528	A	N3-C4	-5.40	1.31	1.34
27	BD	28	GLU	CB-CG	5.39	1.62	1.52
25	DA	945	A	N9-C4	-5.39	1.34	1.37
1	CA	1154	G	N9-C4	5.36	1.42	1.38
25	BA	798	A	N3-C4	-5.30	1.31	1.34
25	BA	2598	C	N1-C6	-5.30	1.33	1.37
25	BA	555	G	N9-C8	5.29	1.41	1.37
1	AA	1492	A	N9-C4	5.28	1.41	1.37
25	BA	590	A	N7-C5	-5.26	1.36	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	DA	945	A	N3-C4	-5.25	1.31	1.34
1	CA	1493	A	N3-C4	5.24	1.38	1.34
25	DA	2207	G	N9-C8	-5.20	1.34	1.37
25	BA	2584	A	N3-C4	-5.20	1.31	1.34
1	AA	1531	A	N9-C4	5.18	1.41	1.37
25	BA	1188	A	C5-C6	-5.13	1.36	1.41
25	BA	2740	G	N7-C5	-5.12	1.36	1.39
23	CX	22	G	C8-N7	5.12	1.34	1.30
25	BA	2803	A	N9-C4	5.12	1.41	1.37
23	AX	14	A	C8-N7	-5.09	1.27	1.31
25	BA	1605	A	N3-C4	-5.08	1.31	1.34
1	AA	1036	G	N9-C4	5.08	1.42	1.38
1	AA	1127	G	C8-N7	-5.07	1.27	1.30
23	AX	22	G	C8-N7	5.07	1.33	1.30
23	CX	46	G	C6-N1	5.04	1.43	1.39
25	BA	1067	A	N3-C4	-5.03	1.31	1.34
25	DA	1698	A	C5-C6	-5.03	1.36	1.41
25	BA	2331	G	C5-C6	-5.01	1.37	1.42
26	DB	56	G	N9-C4	5.01	1.42	1.38
1	CA	1023	G	N9-C4	5.00	1.42	1.38

All (2539) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1119	C	N1-C2-O2	40.38	143.13	118.90
1	CA	1154	G	C5-C6-O6	34.47	149.28	128.60
23	CX	76	A	O4'-C1'-N9	33.86	135.29	108.20
1	CA	1154	G	N3-C2-N2	29.11	140.27	119.90
1	CA	1154	G	N1-C2-N2	-27.03	91.87	116.20
1	CA	1119	C	N3-C2-O2	-26.84	103.11	121.90
1	CA	1154	G	C5-C6-N1	-21.02	100.99	111.50
1	CA	1119	C	C2-N3-C4	20.75	130.28	119.90
1	CA	1119	C	C5-C4-N4	19.74	134.02	120.20
1	CA	1154	G	C6-N1-C2	19.14	136.58	125.10
23	CX	76	A	C2-N3-C4	18.83	120.01	110.60
23	CX	76	A	N1-C2-N3	-18.56	120.02	129.30
1	CA	1119	C	N3-C4-N4	-18.49	105.05	118.00
23	AX	76	A	N1-C2-N3	-18.09	120.25	129.30
23	AX	76	A	O4'-C1'-N9	18.05	122.64	108.20
23	AX	76	A	C2-N3-C4	17.76	119.48	110.60
1	CA	1154	G	N1-C6-O6	-17.13	109.62	119.90
23	CX	8	U	C2-N3-C4	16.84	137.10	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1119	C	C2-N1-C1'	15.00	135.30	118.80
23	AX	8	U	C2-N3-C4	14.78	135.87	127.00
25	BA	990	A	N1-C6-N6	14.63	127.38	118.60
25	BA	1188	A	C2-N3-C4	-14.62	103.29	110.60
25	BA	1067	A	C2-N3-C4	-13.98	103.61	110.60
1	CA	1154	G	C4-N9-C1'	13.40	143.92	126.50
1	CA	1154	G	C2-N3-C4	-13.31	105.24	111.90
25	DA	528	A	C2-N3-C4	-13.08	104.06	110.60
25	BA	990	A	C2-N3-C4	-12.63	104.28	110.60
25	DA	1698	A	C2-N3-C4	-12.59	104.31	110.60
25	BA	1686	U	O5'-P-OP2	-12.55	94.40	105.70
25	DA	945	A	N1-C6-N6	12.39	126.04	118.60
25	DA	1021	A	C2-N3-C4	-12.13	104.54	110.60
1	AA	1125	U	N1-C2-O2	12.04	131.22	122.80
25	BA	139	A	C5-N7-C8	-11.81	98.00	103.90
25	BA	990	A	C5-N7-C8	-11.77	98.01	103.90
25	BA	990	A	C6-C5-N7	-11.42	124.30	132.30
1	CA	1119	C	C6-N1-C2	-11.41	115.74	120.30
25	BA	990	A	C4-C5-N7	11.33	116.36	110.70
1	CA	999	C	N1-C2-O2	11.29	125.67	118.90
1	CA	1154	G	C8-N9-C1'	-11.20	112.44	127.00
1	AA	1125	U	N1-C2-N3	-11.16	108.20	114.90
23	CX	14	A	C4-C5-C6	11.16	122.58	117.00
25	DA	1489	U	C4-C5-C6	11.12	126.37	119.70
1	AA	343	U	C5-C4-O4	-11.06	119.26	125.90
1	CA	1119	C	C6-N1-C1'	-10.92	107.70	120.80
23	CX	14	A	C5-N7-C8	10.74	109.27	103.90
25	DA	2207	G	N1-C6-O6	10.73	126.34	119.90
23	CX	46	G	N3-C2-N2	-10.65	112.44	119.90
23	AX	8	U	C5-C4-O4	10.58	132.25	125.90
25	BA	1188	A	N3-C4-C5	10.54	134.18	126.80
1	AA	1036	G	C4-N9-C1'	10.48	140.13	126.50
25	BA	139	A	N7-C8-N9	10.45	119.03	113.80
25	DA	1791	A	O5'-P-OP1	-10.22	96.50	105.70
1	CA	1004	A	O4'-C1'-N9	10.19	116.35	108.20
25	DA	2207	G	C6-C5-N7	-10.17	124.30	130.40
25	BA	2452	C	C6-N1-C2	10.12	124.35	120.30
1	CA	1492	A	C8-N9-C4	-10.00	101.80	105.80
25	DA	856	C	C6-N1-C2	-9.98	116.31	120.30
25	DA	1489	U	C2-N1-C1'	9.98	129.68	117.70
25	DA	807	U	O5'-P-OP2	9.92	122.60	110.70
1	CA	1119	C	C5-C6-N1	9.91	125.96	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	1698	A	N1-C6-N6	9.91	124.55	118.60
25	BA	354	A	C2-N3-C4	-9.82	105.69	110.60
1	AA	343	U	N3-C4-C5	9.82	120.49	114.60
23	AX	46	G	C6-N1-C2	-9.81	119.22	125.10
25	BA	978	A	C5-N7-C8	-9.78	99.01	103.90
1	AA	354	G	O5'-P-OP2	-9.77	96.91	105.70
25	BA	139	A	C2-N3-C4	-9.74	105.73	110.60
25	BA	1067	A	C5-N7-C8	-9.68	99.06	103.90
25	BA	834	U	O5'-P-OP1	-9.67	96.99	105.70
25	BA	2299	A	C2-N3-C4	-9.66	105.77	110.60
1	CA	1122	U	C2-N1-C1'	9.65	129.28	117.70
23	CX	76	A	N7-C8-N9	-9.64	108.98	113.80
23	CX	76	A	N3-C4-C5	-9.63	120.06	126.80
25	BA	1605	A	C2-N3-C4	-9.62	105.79	110.60
26	BB	91	C	C6-N1-C2	9.61	124.14	120.30
25	DA	945	A	C6-C5-N7	-9.60	125.58	132.30
23	CX	8	U	C5-C4-O4	9.59	131.65	125.90
25	BA	2624	C	O5'-P-OP1	-9.53	97.12	105.70
1	AA	1036	G	C8-N9-C1'	-9.51	114.64	127.00
23	CX	8	U	C5-C6-N1	9.49	127.44	122.70
25	DA	330	A	C2-N3-C4	-9.48	105.86	110.60
25	DA	205	G	C8-N9-C4	9.47	110.19	106.40
25	DA	446	G	C8-N9-C4	9.47	110.19	106.40
1	CA	1273	G	N3-C4-N9	9.46	131.68	126.00
25	BA	930	G	O4'-C1'-N9	9.43	115.74	108.20
25	BA	2250	G	O5'-P-OP1	-9.40	97.24	105.70
26	DB	115	G	C8-N9-C4	9.35	110.14	106.40
25	BA	1694	G	O5'-P-OP1	-9.33	97.30	105.70
25	BA	1745	A	N1-C6-N6	9.31	124.19	118.60
25	BA	1440	U	O5'-P-OP1	-9.28	97.34	105.70
25	DA	1698	A	C6-C5-N7	-9.27	125.81	132.30
23	AX	76	A	N3-C4-C5	-9.25	120.33	126.80
1	AA	343	U	C2-N3-C4	-9.23	121.46	127.00
25	DA	981	A	N1-C6-N6	-9.18	113.09	118.60
1	CA	1528	U	O5'-P-OP2	-9.17	97.45	105.70
25	DA	2804	C	C6-N1-C2	-9.16	116.64	120.30
1	CA	1003	G	N3-C4-C5	-9.15	124.03	128.60
1	AA	1030(B)	C	N1-C2-O2	9.14	124.39	118.90
23	AX	76	A	N7-C8-N9	-9.14	109.23	113.80
25	DA	1489	U	C6-N1-C1'	-9.13	108.41	121.20
25	BA	2551	C	C6-N1-C2	9.13	123.95	120.30
25	DA	2617	C	C6-N1-C2	9.10	123.94	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	2446	G	C8-N9-C4	9.07	110.03	106.40
23	AX	14	A	C5-N7-C8	9.06	108.43	103.90
25	DA	2501	C	C6-N1-C2	9.04	123.92	120.30
23	CX	8	U	N3-C4-C5	-9.03	109.18	114.60
25	BA	2331	G	C4-C5-N7	9.02	114.41	110.80
25	BA	1067	A	N7-C8-N9	8.98	118.29	113.80
1	AA	1493	A	O5'-P-OP1	8.98	121.47	110.70
25	DA	2566	A	O5'-P-OP2	-8.97	97.62	105.70
1	AA	460	G	N7-C8-N9	8.95	117.58	113.10
25	BA	2601	A	C8-N9-C4	8.95	109.38	105.80
1	CA	1012	U	N1-C2-O2	-8.94	116.55	122.80
1	CA	1260	C	C6-N1-C2	-8.91	116.73	120.30
1	CA	1119	C	C4-C5-C6	-8.91	112.94	117.40
1	AA	1030(B)	C	C2-N1-C1'	8.91	128.60	118.80
26	DB	6	C	C6-N1-C2	8.88	123.85	120.30
23	AX	22	G	N3-C4-N9	-8.87	120.68	126.00
26	DB	53	A	C8-N9-C4	-8.85	102.26	105.80
25	BA	254	A	N7-C8-N9	8.84	118.22	113.80
1	CA	1119	C	N1-C2-N3	-8.81	113.03	119.20
25	DA	63	U	C5-C4-O4	8.81	131.18	125.90
23	AX	14	A	C4-C5-C6	8.80	121.40	117.00
25	BA	2694	U	N1-C2-O2	8.79	128.96	122.80
23	CX	76	A	C5-N7-C8	8.79	108.29	103.90
23	CX	46	G	C6-N1-C2	-8.78	119.83	125.10
23	AX	22	G	C5-N7-C8	-8.76	99.92	104.30
25	BA	139	A	N1-C6-N6	8.76	123.85	118.60
23	AX	76	A	C5-N7-C8	8.75	108.27	103.90
25	BA	2298	A	N1-C2-N3	8.74	133.67	129.30
25	BA	607	C	C6-N1-C2	8.73	123.79	120.30
23	CX	22	G	C5-N7-C8	-8.73	99.94	104.30
1	CA	1017	G	C6-N1-C2	8.72	130.34	125.10
25	DA	733	G	N9-C4-C5	-8.71	101.92	105.40
25	BA	552	C	N3-C2-O2	-8.69	115.82	121.90
25	BA	733	G	O5'-P-OP1	-8.68	97.89	105.70
25	BA	2535	G	O5'-P-OP2	-8.68	97.89	105.70
25	DA	1372	U	N3-C4-O4	8.67	125.47	119.40
25	BA	537	G	O4'-C1'-N9	8.64	115.11	108.20
25	DA	933	A	C5-N7-C8	-8.64	99.58	103.90
1	CA	1484	C	C6-N1-C2	8.62	123.75	120.30
25	DA	945	A	C2-N3-C4	-8.58	106.31	110.60
25	BA	934	A	O4'-C1'-N9	8.57	115.06	108.20
25	BA	1382	A	O5'-P-OP2	-8.57	97.98	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	12	U	N3-C2-O2	-8.56	116.21	122.20
23	AX	46	G	C5-C6-N1	8.55	115.77	111.50
1	CA	1000	U	C5-C6-N1	8.54	126.97	122.70
25	BA	2876	U	C5-C6-N1	-8.54	118.43	122.70
25	BA	119	G	C5-C6-O6	-8.53	123.48	128.60
25	BA	670	C	C5-C6-N1	8.52	125.26	121.00
1	AA	76	C	C5-C6-N1	8.52	125.26	121.00
25	BA	254	A	C8-N9-C4	-8.51	102.39	105.80
1	CA	1307	U	C5-C6-N1	8.48	126.94	122.70
25	DA	528	A	N3-C4-C5	8.47	132.73	126.80
25	DA	1204	A	O4'-C1'-N9	8.46	114.97	108.20
25	BA	1067	A	C5-C6-N1	-8.45	113.47	117.70
25	BA	784	C	C6-N1-C2	8.44	123.67	120.30
1	CA	1054	C	P-O3'-C3'	8.44	129.82	119.70
1	CA	1492	A	C2-N3-C4	8.43	114.81	110.60
25	DA	446	G	N9-C4-C5	-8.43	102.03	105.40
25	DA	1677	A	N1-C6-N6	8.42	123.65	118.60
26	DB	56	G	N3-C4-C5	-8.41	124.40	128.60
25	DA	1142(A)	A	C2-N3-C4	-8.40	106.40	110.60
1	AA	1030(B)	C	C6-N1-C2	-8.39	116.94	120.30
25	BA	1188	A	N1-C6-N6	8.39	123.64	118.60
25	BA	2331	G	N1-C6-O6	8.39	124.94	119.90
1	CA	1311	G	N3-C4-N9	-8.38	120.97	126.00
25	BA	553	A	C2-N3-C4	-8.36	106.42	110.60
1	AA	167	G	N7-C8-N9	8.35	117.27	113.10
1	AA	1125	U	C2-N3-C4	8.34	132.00	127.00
25	DA	1204	A	N1-C6-N6	8.30	123.58	118.60
25	BA	2298	A	C8-N9-C4	-8.29	102.48	105.80
25	BA	837	C	O5'-P-OP2	-8.29	98.24	105.70
23	AX	76	A	N9-C4-C5	8.29	109.11	105.80
1	CA	1004	A	N1-C6-N6	-8.29	113.63	118.60
25	DA	2870	C	C6-N1-C2	-8.28	116.99	120.30
1	CA	999	C	N3-C2-O2	-8.28	116.11	121.90
1	CA	1154	G	C4-C5-C6	8.24	123.75	118.80
25	BA	2083	G	O5'-P-OP2	-8.24	98.28	105.70
25	BA	1263	C	O5'-P-OP2	-8.23	98.29	105.70
25	BA	139	A	C4-C5-N7	8.23	114.81	110.70
25	DA	514	A	C8-N9-C4	8.23	109.09	105.80
25	BA	2298	A	N7-C8-N9	8.22	117.91	113.80
25	BA	2227	G	C4-N9-C1'	-8.19	115.86	126.50
1	AA	1124	G	C8-N9-C4	-8.18	103.13	106.40
25	DA	1654	A	O5'-P-OP1	-8.18	98.34	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	43	A	C2-N3-C4	-8.14	106.53	110.60
25	DA	1204	A	C2-N3-C4	-8.13	106.53	110.60
1	AA	348	G	O5'-P-OP1	8.13	120.45	110.70
25	BA	1745	A	C2-N3-C4	-8.13	106.54	110.60
1	CA	1123	A	O4'-C1'-N9	8.13	114.70	108.20
25	DA	2567	G	N1-C6-O6	8.13	124.78	119.90
1	AA	1124	G	N3-C4-C5	-8.12	124.54	128.60
25	BA	254	A	C5-N7-C8	-8.12	99.84	103.90
25	BA	2477	C	O5'-P-OP2	-8.12	98.39	105.70
1	AA	800	G	C8-N9-C4	-8.12	103.15	106.40
1	AA	1127	G	N3-C4-N9	8.12	130.87	126.00
1	CA	848	C	C5-C6-N1	8.11	125.05	121.00
25	BA	978	A	N7-C8-N9	8.09	117.84	113.80
25	BA	139	A	C6-C5-N7	-8.08	126.65	132.30
25	BA	2510	C	C2-N3-C4	-8.05	115.88	119.90
1	AA	1125	U	C4-C5-C6	-8.04	114.87	119.70
25	BA	119	G	N1-C6-O6	8.04	124.73	119.90
25	BA	415	G	O5'-P-OP2	-8.04	98.46	105.70
25	BA	2058	C	O5'-P-OP1	-8.03	98.47	105.70
1	CA	1017	G	C5-C6-O6	8.03	133.42	128.60
25	BA	1067	A	N1-C2-N3	8.03	133.31	129.30
25	DA	2224	G	N1-C6-O6	8.02	124.71	119.90
1	CA	998	G	C6-C5-N7	8.02	135.21	130.40
25	BA	1188	A	N3-C4-N9	-8.01	120.99	127.40
25	BA	295	C	O5'-P-OP2	-8.00	98.50	105.70
25	BA	1860	A	O5'-P-OP2	-7.99	98.51	105.70
25	DA	1904	G	O5'-P-OP2	-7.99	98.50	105.70
26	DB	74	U	C5-C4-O4	7.98	130.69	125.90
25	DA	837	C	N1-C2-O2	7.97	123.68	118.90
25	DA	460	A	N1-C6-N6	7.97	123.38	118.60
25	BA	1188	A	C5-C6-N1	-7.96	113.72	117.70
1	AA	1137	C	C5-C6-N1	7.96	124.98	121.00
25	DA	2298	A	N1-C2-N3	-7.96	125.32	129.30
25	DA	529	A	N1-C6-N6	7.95	123.37	118.60
1	CA	1502	A	C5-N7-C8	-7.91	99.95	103.90
25	BA	1056	A	OP1-P-OP2	-7.91	107.74	119.60
25	BA	848	G	O5'-P-OP2	-7.90	98.59	105.70
1	CA	1122	U	C6-N1-C1'	-7.90	110.14	121.20
25	BA	2298	A	C6-C5-N7	-7.88	126.78	132.30
25	DA	530	G	C8-N9-C4	-7.88	103.25	106.40
1	CA	299	G	N1-C6-O6	7.88	124.62	119.90
25	BA	134	G	C8-N9-C4	7.87	109.55	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	855	G	O5'-P-OP2	-7.86	98.63	105.70
25	DA	945	A	C5-N7-C8	-7.86	99.97	103.90
1	AA	1007	C	C2-N1-C1'	7.86	127.44	118.80
25	BA	1067	A	N1-C6-N6	7.85	123.31	118.60
25	BA	1188	A	C5-N7-C8	-7.85	99.98	103.90
25	BA	1249	A	C5-N7-C8	-7.84	99.98	103.90
25	DA	1254	A	C8-N9-C4	-7.84	102.67	105.80
25	DA	1021	A	C5-N7-C8	-7.83	99.99	103.90
25	DA	981	A	C5-C6-N6	7.83	129.96	123.70
25	BA	2299	A	N3-C4-C5	7.82	132.28	126.80
1	AA	896	C	C6-N1-C2	7.82	123.43	120.30
1	CA	1286	A	C8-N9-C4	-7.81	102.67	105.80
25	BA	1694	G	O5'-P-OP2	7.81	120.07	110.70
1	CA	1149	C	C6-N1-C2	-7.81	117.18	120.30
23	CX	14	A	C5-C6-N1	-7.81	113.80	117.70
25	BA	1249	A	O4'-C1'-N9	7.80	114.44	108.20
25	DA	141	A	C2-N3-C4	-7.80	106.70	110.60
25	DA	1797	C	C6-N1-C2	7.80	123.42	120.30
25	DA	2679	A	O5'-P-OP2	-7.78	98.69	105.70
25	DA	2721	A	O5'-P-OP1	-7.78	98.70	105.70
25	BA	1426	G	O5'-P-OP2	-7.78	98.70	105.70
25	DA	2033	A	C2-N3-C4	7.78	114.49	110.60
25	BA	82	G	N1-C6-O6	7.77	124.56	119.90
25	BA	1985	U	C2-N1-C1'	7.77	127.02	117.70
25	BA	1093	G	N3-C4-N9	7.76	130.66	126.00
25	BA	2074	G	C8-N9-C4	-7.76	103.30	106.40
25	BA	1397	C	N3-C4-C5	7.75	125.00	121.90
25	DA	1266	G	C8-N9-C4	7.75	109.50	106.40
25	DA	1660	C	C2-N3-C4	-7.74	116.03	119.90
1	CA	1180	A	O4'-C1'-N9	7.74	114.39	108.20
25	BA	2298	A	C4-C5-C6	7.73	120.87	117.00
25	BA	2331	G	C5-N7-C8	-7.73	100.43	104.30
25	BA	2331	G	C2-N3-C4	-7.73	108.04	111.90
25	DA	2805	G	C4-C5-N7	-7.71	107.72	110.80
25	BA	1216	G	C8-N9-C4	-7.71	103.32	106.40
1	CA	1135	U	O4'-C1'-N1	7.71	114.36	108.20
25	DA	784	A	C8-N9-C4	7.71	108.88	105.80
25	BA	1093	G	N3-C4-C5	-7.71	124.75	128.60
25	DA	249	C	O5'-P-OP2	-7.70	98.77	105.70
25	DA	214	G	O4'-C1'-N9	7.68	114.34	108.20
34	DO	8	LEU	CA-CB-CG	7.68	132.96	115.30
25	DA	2463	C	C6-N1-C2	7.67	123.37	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1087	G	C8-N9-C4	-7.67	103.33	106.40
25	DA	2253	G	C6-C5-N7	-7.67	125.80	130.40
26	DB	53	A	N7-C8-N9	7.67	117.63	113.80
25	BA	1700	G	C8-N9-C4	-7.67	103.33	106.40
25	DA	210	C	C6-N1-C2	7.66	123.36	120.30
25	BA	2265	G	C8-N9-C4	7.65	109.46	106.40
25	BA	1743	G	O5'-P-OP2	-7.65	98.82	105.70
25	BA	990	A	C5-C6-N6	-7.64	117.59	123.70
25	BA	2331	G	C6-C5-N7	-7.63	125.82	130.40
1	CA	1169	A	C4-C5-C6	7.63	120.81	117.00
25	DA	188	G	C4-C5-N7	7.63	113.85	110.80
25	BA	215	G	O4'-C1'-N9	7.62	114.30	108.20
25	BA	82	G	C4-C5-N7	7.61	113.84	110.80
23	CX	8	U	N1-C2-N3	-7.61	110.34	114.90
25	DA	460	A	C5-C6-N6	-7.60	117.62	123.70
1	AA	97	G	O4'-C1'-N9	7.59	114.27	108.20
25	BA	2631	C	C6-N1-C2	7.58	123.33	120.30
25	BA	1972	G	N1-C6-O6	7.58	124.45	119.90
25	DA	1372	U	C5-C4-O4	-7.57	121.36	125.90
1	AA	1397	C	O4'-C1'-N1	7.57	114.25	108.20
25	BA	505	A	N1-C6-N6	-7.57	114.06	118.60
1	CA	1134	G	C8-N9-C4	-7.56	103.38	106.40
25	BA	2236	G	C8-N9-C4	7.55	109.42	106.40
25	BA	2093	A	C8-N9-C4	7.54	108.82	105.80
1	AA	893	C	C6-N1-C2	7.54	123.32	120.30
1	AA	897	C	O5'-P-OP2	-7.54	98.91	105.70
25	DA	2207	G	C4-C5-C6	7.54	123.33	118.80
25	DA	2206	G	C4-N9-C1'	-7.54	116.70	126.50
25	DA	1315	C	C6-N1-C2	-7.54	117.28	120.30
25	BA	2694	U	N3-C2-O2	-7.53	116.93	122.20
23	AX	22	G	C4-C5-C6	-7.53	114.28	118.80
25	DA	212	G	C8-N9-C4	-7.53	103.39	106.40
1	CA	354	G	O5'-P-OP2	-7.53	98.93	105.70
25	BA	1162	C	C6-N1-C2	7.52	123.31	120.30
25	BA	2281	A	O5'-P-OP1	-7.51	98.94	105.70
25	DA	566	U	C5-C6-N1	-7.51	118.94	122.70
25	DA	2503	A	N1-C6-N6	7.49	123.09	118.60
22	AV	17	U	C5-C4-O4	7.48	130.39	125.90
25	BA	917	A	C8-N9-C4	7.47	108.79	105.80
25	DA	2262	U	O5'-P-OP1	-7.47	98.98	105.70
25	DA	1698	A	N1-C2-N3	7.47	133.03	129.30
25	BA	1072	U	N1-C2-O2	7.46	128.03	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	1973	G	N1-C6-O6	-7.45	115.43	119.90
25	DA	1698	A	C5-C6-N1	-7.45	113.98	117.70
1	CA	1037	C	C6-N1-C2	-7.44	117.33	120.30
25	DA	461	C	N3-C2-O2	7.43	127.10	121.90
25	DA	1261	C	C6-N1-C2	7.43	123.27	120.30
1	CA	841	U	C5-C6-N1	7.42	126.41	122.70
25	BA	1249	A	C2-N3-C4	-7.41	106.90	110.60
25	DA	130	C	N1-C2-O2	7.40	123.34	118.90
25	DA	2357	U	O5'-P-OP2	-7.40	99.04	105.70
1	AA	1127	G	C8-N9-C4	7.40	109.36	106.40
25	BA	139	A	O4'-C1'-N9	7.40	114.12	108.20
25	DA	945	A	C4-C5-C6	7.40	120.70	117.00
25	DA	1791	A	C8-N9-C4	-7.38	102.85	105.80
1	AA	77	G	N9-C4-C5	-7.38	102.45	105.40
23	AX	35	A	C5-C6-N6	7.37	129.59	123.70
25	BA	2036	A	C8-N9-C4	7.36	108.74	105.80
1	AA	167	G	C4-N9-C1'	7.35	136.06	126.50
1	AA	382	A	N1-C2-N3	7.35	132.98	129.30
25	BA	2511	C	C5-C6-N1	7.35	124.67	121.00
25	DA	1644	C	N1-C2-O2	7.34	123.31	118.90
25	DA	1763	G	O5'-P-OP2	-7.34	99.09	105.70
25	DA	2503	A	C5-C6-N6	-7.33	117.83	123.70
25	DA	2218	U	N3-C2-O2	-7.32	117.08	122.20
25	DA	837	C	N3-C2-O2	-7.32	116.78	121.90
25	DA	614	U	C5-C4-O4	7.32	130.29	125.90
25	BA	1094	A	C8-N9-C4	-7.31	102.88	105.80
25	DA	2218	U	N1-C2-O2	7.31	127.92	122.80
25	BA	978	A	C4-C5-N7	7.30	114.35	110.70
1	CA	998	G	C4-C5-N7	-7.30	107.88	110.80
25	BA	2335	G	C5-C6-O6	-7.30	124.22	128.60
25	DA	1022	G	C4-C5-N7	-7.30	107.88	110.80
25	DA	504	U	N1-C2-O2	7.29	127.91	122.80
1	AA	162	A	C8-N9-C4	-7.29	102.88	105.80
25	BA	753	A	C2-N3-C4	-7.29	106.95	110.60
1	CA	1002	G	C5-C6-O6	7.29	132.97	128.60
1	AA	348	G	N3-C4-N9	-7.29	121.63	126.00
1	CA	398	C	N3-C4-N4	-7.28	112.90	118.00
25	BA	1068	G	N3-C4-N9	-7.27	121.64	126.00
25	BA	552	C	N3-C4-N4	-7.27	112.91	118.00
25	BA	122	G	O5'-P-OP2	-7.27	99.16	105.70
25	DA	945	A	N1-C2-N3	7.26	132.93	129.30
1	CA	1492	A	N3-C4-C5	-7.25	121.72	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1067	A	P-O3'-C3'	7.24	128.39	119.70
25	DA	2554	U	O5'-P-OP2	-7.24	99.18	105.70
25	BA	989	G	C5-C6-N1	-7.24	107.88	111.50
25	BA	1153	G	N3-C4-C5	-7.24	124.98	128.60
25	BA	1098	C	C6-N1-C2	-7.23	117.41	120.30
25	BA	1007	G	C8-N9-C4	-7.23	103.51	106.40
1	CA	1260	C	C5-C6-N1	7.23	124.61	121.00
1	AA	1502	A	C6-C5-N7	-7.22	127.25	132.30
1	AA	991	U	P-O3'-C3'	7.22	128.36	119.70
1	AA	1030(B)	C	C5-C6-N1	7.22	124.61	121.00
1	CA	1154	G	C4-C5-N7	-7.22	107.91	110.80
25	DA	116	C	C6-N1-C2	-7.22	117.41	120.30
25	BA	1605	A	N3-C4-C5	7.21	131.85	126.80
25	DA	528	A	N1-C6-N6	7.21	122.93	118.60
1	CA	927	G	C5-C6-O6	7.21	132.93	128.60
1	CA	1273	G	C8-N9-C1'	-7.21	117.63	127.00
25	DA	1021	A	N3-C4-N9	-7.21	121.63	127.40
25	DA	1142	U	N3-C2-O2	-7.21	117.16	122.20
1	CA	1286	A	N7-C8-N9	7.20	117.40	113.80
1	CA	1492	A	N7-C8-N9	7.19	117.40	113.80
1	AA	736	C	C6-N1-C2	-7.19	117.42	120.30
25	BA	990	A	N1-C2-N3	7.18	132.89	129.30
1	CA	1154	G	C8-N9-C4	-7.18	103.53	106.40
1	AA	1007	C	C5-C6-N1	7.17	124.58	121.00
25	DA	1828	G	C5-C6-N1	-7.17	107.92	111.50
1	AA	895	G	O5'-P-OP2	-7.16	99.26	105.70
25	DA	528	A	N1-C2-N3	7.16	132.88	129.30
25	BA	1222	A	C8-N9-C4	-7.15	102.94	105.80
1	CA	848	C	C6-N1-C2	-7.15	117.44	120.30
25	DA	2723	C	N1-C2-O2	-7.15	114.61	118.90
1	CA	998	G	N9-C4-C5	7.15	108.26	105.40
25	DA	552	G	N3-C4-C5	7.14	132.17	128.60
25	DA	1776	G	N3-C4-N9	7.14	130.29	126.00
1	AA	1137	C	C6-N1-C2	-7.14	117.44	120.30
23	CX	22	G	C4-C5-C6	-7.14	114.52	118.80
25	BA	789	G	O5'-P-OP1	-7.14	99.27	105.70
23	AX	8	U	N1-C2-N3	-7.14	110.62	114.90
25	DA	1531	C	C5-C6-N1	7.13	124.57	121.00
1	AA	161	A	C8-N9-C4	-7.13	102.95	105.80
1	AA	71	C	N1-C2-O2	7.12	123.17	118.90
1	CA	1023	G	N3-C4-N9	7.12	130.27	126.00
1	AA	162	A	N7-C8-N9	7.11	117.36	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	2608	U	C5-C6-N1	-7.11	119.14	122.70
1	CA	320	C	C6-N1-C2	7.11	123.14	120.30
1	AA	236	G	C5-C6-N1	-7.10	107.95	111.50
1	AA	254	G	O5'-P-OP1	-7.10	99.31	105.70
25	BA	133	G	N3-C4-C5	7.10	132.15	128.60
25	BA	1067	A	C8-N9-C4	-7.10	102.96	105.80
1	CA	998	G	N3-C4-N9	-7.09	121.74	126.00
25	DA	933	A	C4-C5-N7	7.09	114.25	110.70
25	BA	552	C	C5-C4-N4	7.08	125.16	120.20
25	DA	2253	G	N1-C6-O6	7.07	124.14	119.90
1	CA	913	A	N1-C6-N6	-7.07	114.36	118.60
25	BA	2692	C	N1-C2-O2	-7.06	114.66	118.90
25	DA	1372	U	C2-N1-C1'	7.06	126.18	117.70
1	CA	1003	G	C4-N9-C1'	7.06	135.68	126.50
43	BX	57	LEU	CA-CB-CG	7.06	131.53	115.30
1	AA	1154	G	N9-C4-C5	-7.06	102.58	105.40
1	CA	998	G	N1-C6-O6	-7.06	115.67	119.90
25	DA	1229	G	C8-N9-C4	7.06	109.22	106.40
25	BA	2724	U	C5-C4-O4	-7.05	121.67	125.90
25	DA	528	A	C8-N9-C4	7.05	108.62	105.80
1	AA	470	C	N1-C2-O2	7.05	123.13	118.90
1	AA	193	C	C5-C6-N1	7.04	124.52	121.00
25	DA	2828	C	C6-N1-C2	7.04	123.12	120.30
1	CA	1038	C	C2-N3-C4	7.04	123.42	119.90
25	BA	1318	A	O5'-P-OP2	-7.03	99.38	105.70
25	DA	914	C	N1-C2-O2	7.03	123.11	118.90
1	AA	1397	C	C2-N1-C1'	7.02	126.52	118.80
25	DA	680	G	C6-C5-N7	-7.02	126.19	130.40
1	AA	1036	G	N3-C4-N9	7.01	130.21	126.00
25	BA	553	A	N1-C6-N6	7.01	122.81	118.60
25	DA	1118	C	C6-N1-C2	-7.01	117.50	120.30
25	BA	990	A	N7-C8-N9	7.01	117.31	113.80
23	CX	26	G	C6-N1-C2	7.01	129.31	125.10
1	AA	460	G	C8-N9-C4	-7.00	103.60	106.40
1	AA	1150	U	C2-N3-C4	6.98	131.19	127.00
25	DA	915	C	N3-C2-O2	-6.98	117.01	121.90
25	DA	933	A	N7-C8-N9	6.98	117.29	113.80
25	DA	1701	A	O5'-P-OP1	-6.98	99.42	105.70
25	BA	785	G	N1-C6-O6	6.97	124.08	119.90
25	DA	2286	A	N1-C6-N6	6.97	122.78	118.60
1	AA	76	C	C2-N3-C4	6.97	123.39	119.90
25	BA	639	G	O4'-C1'-N9	6.97	113.77	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	2001	C	C6-N1-C2	-6.97	117.51	120.30
25	DA	2003	G	O5'-P-OP1	-6.97	99.43	105.70
1	AA	1531	A	O4'-C1'-N9	-6.96	102.63	108.20
25	BA	1386	U	N1-C2-O2	-6.96	117.93	122.80
25	DA	180	G	C6-C5-N7	-6.96	126.22	130.40
1	AA	122	G	C8-N9-C4	6.96	109.18	106.40
25	BA	82	G	N9-C4-C5	-6.96	102.62	105.40
25	DA	90	U	N3-C2-O2	-6.95	117.33	122.20
25	DA	2023	G	N3-C4-N9	6.95	130.17	126.00
23	CX	22	G	N7-C8-N9	6.95	116.58	113.10
25	DA	1975	G	O5'-P-OP2	-6.94	99.45	105.70
1	AA	63	C	C6-N1-C2	-6.94	117.52	120.30
25	BA	1822	A	N1-C6-N6	6.94	122.77	118.60
25	BA	2638	C	C6-N1-C2	6.94	123.08	120.30
25	DA	2699	C	C6-N1-C2	6.94	123.08	120.30
25	BA	1631	C	C5-C6-N1	6.93	124.47	121.00
23	AX	22	G	N3-C4-C5	6.93	132.06	128.60
25	DA	2607	G	N1-C2-N2	-6.93	109.96	116.20
25	BA	2692	C	N3-C4-N4	6.93	122.85	118.00
25	DA	1776	G	C5-C6-O6	-6.93	124.44	128.60
1	AA	460	G	C6-C5-N7	-6.92	126.25	130.40
23	AX	8	U	N3-C4-C5	-6.91	110.45	114.60
25	BA	749	G	O5'-P-OP2	-6.91	99.48	105.70
1	AA	912	C	N3-C2-O2	6.91	126.74	121.90
25	BA	254	A	C2-N3-C4	-6.91	107.14	110.60
25	DA	141	A	N7-C8-N9	6.91	117.25	113.80
26	DB	99	G	N3-C2-N2	-6.90	115.07	119.90
1	CA	979	C	C6-N1-C2	-6.90	117.54	120.30
1	CA	1273	G	C4-N9-C1'	6.90	135.47	126.50
25	BA	2630	G	N3-C4-C5	-6.90	125.15	128.60
25	BA	555	G	C5-N7-C8	-6.89	100.85	104.30
25	DA	1022	G	N3-C4-N9	-6.89	121.86	126.00
25	DA	2893	G	N9-C4-C5	-6.89	102.64	105.40
25	BA	894	U	C5-C6-N1	-6.89	119.25	122.70
25	DA	1826	G	N1-C6-O6	-6.89	115.77	119.90
25	BA	1631	C	C6-N1-C2	-6.88	117.55	120.30
1	CA	1106	G	N9-C4-C5	6.88	108.15	105.40
25	BA	1216	G	N7-C8-N9	6.88	116.54	113.10
25	BA	1414	G	N1-C6-O6	-6.88	115.77	119.90
25	BA	667	G	O5'-P-OP2	-6.88	99.51	105.70
25	BA	990	A	O4'-C1'-N9	6.88	113.70	108.20
1	CA	1391	U	C5-C4-O4	6.88	130.03	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1030(B)	C	N3-C2-O2	-6.88	117.09	121.90
1	CA	1502	A	C2-N3-C4	-6.88	107.16	110.60
1	AA	476	G	O4'-C1'-N9	6.87	113.70	108.20
1	CA	1044	A	C5-C6-N6	6.87	129.19	123.70
25	DA	945	A	N7-C8-N9	6.87	117.23	113.80
1	AA	1127	G	N7-C8-N9	-6.87	109.67	113.10
25	DA	1251	C	N1-C2-O2	-6.87	114.78	118.90
1	AA	841	U	C5-C6-N1	6.86	126.13	122.70
1	CA	1003	G	N3-C4-N9	6.86	130.12	126.00
25	DA	738	G	N1-C6-O6	-6.86	115.78	119.90
25	DA	112	U	O5'-P-OP1	-6.86	99.53	105.70
25	DA	2061	G	C5-C6-O6	-6.86	124.48	128.60
1	CA	1273	G	C5-C6-O6	-6.85	124.49	128.60
25	BA	1372	U	C5-C6-N1	-6.85	119.28	122.70
25	DA	2084	C	C6-N1-C2	6.84	123.04	120.30
25	DA	2297	C	C5-C6-N1	6.84	124.42	121.00
25	BA	1755	C	N3-C2-O2	6.84	126.69	121.90
25	DA	2827	C	C6-N1-C2	6.83	123.03	120.30
1	CA	1141	C	C2-N1-C1'	-6.83	111.28	118.80
25	BA	2339	A	N1-C6-N6	-6.83	114.50	118.60
25	BA	2454	C	C5-C6-N1	-6.83	117.59	121.00
25	DA	2313	C	C6-N1-C2	-6.83	117.57	120.30
25	BA	587	C	N1-C2-O2	-6.83	114.80	118.90
25	DA	1983	C	N1-C2-O2	-6.82	114.81	118.90
25	DA	2569	G	N3-C2-N2	-6.82	115.13	119.90
1	AA	187	C	C5-C6-N1	6.81	124.41	121.00
25	DA	2519	U	O5'-P-OP1	-6.81	99.57	105.70
25	BA	949	C	C6-N1-C2	6.80	123.02	120.30
25	DA	1607	C	N1-C2-O2	6.80	122.98	118.90
25	BA	1745	A	C6-C5-N7	-6.80	127.54	132.30
25	BA	174	U	C5-C6-N1	-6.79	119.30	122.70
25	DA	180	G	C4-C5-N7	6.79	113.52	110.80
1	CA	1043	C	N3-C4-C5	-6.79	119.18	121.90
25	DA	2330	G	N1-C6-O6	6.79	123.97	119.90
25	BA	1745	A	C4-C5-N7	6.79	114.09	110.70
1	AA	1502	A	N1-C6-N6	6.78	122.67	118.60
25	DA	945	A	O4'-C1'-N9	6.78	113.63	108.20
26	DB	70	C	N1-C2-O2	6.78	122.97	118.90
25	DA	2501	C	N3-C4-C5	6.78	124.61	121.90
25	BA	2660	C	C6-N1-C2	6.78	123.01	120.30
25	BA	1775	C	C5-C6-N1	6.78	124.39	121.00
25	BA	1744	G	C5-C6-O6	-6.77	124.53	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	CB	154	LEU	CA-CB-CG	6.77	130.88	115.30
25	BA	2229	A	O4'-C1'-N9	6.77	113.62	108.20
25	BA	978	A	N1-C6-N6	6.77	122.66	118.60
25	BA	2074	G	N9-C4-C5	6.77	108.11	105.40
25	DA	1826	G	C4-C5-N7	-6.77	108.09	110.80
1	AA	383	A	O4'-C1'-N9	6.76	113.61	108.20
1	CA	1002	G	N3-C4-N9	-6.76	121.94	126.00
25	BA	2265	G	N9-C4-C5	-6.76	102.70	105.40
25	DA	2033	A	C5-C6-N1	6.76	121.08	117.70
25	DA	1284	A	N1-C6-N6	6.76	122.65	118.60
25	BA	2299	A	N3-C4-N9	-6.75	122.00	127.40
25	BA	2558	U	C5-C6-N1	-6.75	119.33	122.70
25	BA	2298	A	C2-N3-C4	-6.75	107.23	110.60
25	DA	22	C	C6-N1-C2	6.75	123.00	120.30
1	CA	1042	G	C6-N1-C2	6.75	129.15	125.10
25	BA	840	A	N1-C6-N6	6.74	122.65	118.60
25	BA	2627	U	N3-C4-O4	-6.74	114.68	119.40
25	BA	1858	C	N3-C4-N4	-6.74	113.28	118.00
25	BA	339	G	C5-C6-N1	-6.73	108.13	111.50
1	CA	1502	A	C4-C5-N7	6.73	114.07	110.70
1	AA	1028	C	C6-N1-C2	-6.73	117.61	120.30
1	CA	1183	A	P-O3'-C3'	6.72	127.77	119.70
1	CA	1307	U	N3-C4-O4	6.72	124.11	119.40
25	DA	901	A	N7-C8-N9	6.72	117.16	113.80
25	DA	2188	C	C6-N1-C2	-6.72	117.61	120.30
25	BA	719	C	C6-N1-C2	6.72	122.99	120.30
1	AA	446	G	N1-C6-O6	6.72	123.93	119.90
25	BA	2238	C	C6-N1-C2	6.72	122.99	120.30
25	BA	105	C	C6-N1-C2	6.71	122.99	120.30
25	BA	1606	G	C4-N9-C1'	-6.71	117.77	126.50
7	CG	22	LEU	CA-CB-CG	6.71	130.74	115.30
25	BA	2807	C	C5-C6-N1	6.71	124.35	121.00
25	DA	552	G	N3-C4-N9	-6.71	121.98	126.00
25	BA	2527	C	OP1-P-OP2	-6.71	109.54	119.60
25	BA	555	G	N3-C4-N9	-6.70	121.98	126.00
1	AA	912	C	N1-C2-O2	-6.70	114.88	118.90
1	AA	1278	U	C5-C6-N1	6.70	126.05	122.70
25	DA	1021	A	N3-C4-C5	6.70	131.49	126.80
25	BA	559	U	O5'-P-OP1	-6.70	99.67	105.70
51	D5	58	LEU	CA-CB-CG	6.69	130.69	115.30
1	AA	460	G	C4-N9-C1'	6.69	135.20	126.50
25	BA	767	C	C6-N1-C2	6.69	122.98	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	2544	G	N1-C6-O6	6.69	123.91	119.90
1	CA	1154	G	C5-N7-C8	6.69	107.64	104.30
19	CS	16	LEU	CA-CB-CG	6.69	130.68	115.30
25	DA	458	G	C8-N9-C4	-6.69	103.72	106.40
1	CA	768	A	C2-N3-C4	-6.68	107.26	110.60
25	BA	833	C	N3-C4-C5	6.68	124.57	121.90
25	BA	2055	A	O5'-P-OP1	-6.68	99.69	105.70
1	CA	754	C	C2-N1-C1'	6.68	126.15	118.80
25	DA	94(A)	G	C8-N9-C4	-6.68	103.73	106.40
25	BA	512	C	C6-N1-C2	6.68	122.97	120.30
25	BA	1745	A	C5-N7-C8	-6.68	100.56	103.90
1	CA	1034	G	N3-C4-N9	-6.68	121.99	126.00
25	BA	50	G	N9-C4-C5	6.68	108.07	105.40
25	DA	2519	U	C6-N1-C2	6.67	125.00	121.00
1	AA	836	G	N1-C6-O6	6.67	123.90	119.90
25	BA	2549	U	C5-C4-O4	6.67	129.90	125.90
23	CX	76	A	N9-C4-C5	6.66	108.47	105.80
22	AV	17	U	C2-N3-C4	6.66	131.00	127.00
1	CA	65	U	P-O3'-C3'	6.66	127.69	119.70
1	AA	1026	G	C4-N9-C1'	6.66	135.16	126.50
25	BA	1093	G	C4-N9-C1'	6.66	135.16	126.50
1	CA	841	U	C6-N1-C2	-6.66	117.00	121.00
25	DA	205	G	C4-N9-C1'	-6.66	117.84	126.50
25	DA	2224	G	C6-C5-N7	-6.66	126.41	130.40
25	BA	488	C	N3-C4-C5	6.65	124.56	121.90
25	BA	655	G	C8-N9-C4	6.65	109.06	106.40
25	DA	1021	A	N1-C2-N3	6.65	132.63	129.30
25	DA	2567	G	C5-C6-O6	-6.65	124.61	128.60
25	DA	114	U	N3-C4-O4	6.65	124.05	119.40
25	DA	330	A	N3-C4-C5	6.65	131.45	126.80
1	AA	728	A	O5'-P-OP2	-6.64	99.72	105.70
25	BA	477	C	N1-C2-O2	-6.64	114.91	118.90
25	DA	1489	U	C5-C6-N1	-6.64	119.38	122.70
1	AA	167	G	C6-C5-N7	-6.64	126.42	130.40
25	DA	1471	A	C8-N9-C4	-6.64	103.14	105.80
43	DX	57	LEU	CA-CB-CG	6.64	130.57	115.30
25	BA	1097	G	N1-C6-O6	6.63	123.88	119.90
1	CA	1154	G	O4'-C1'-N9	6.63	113.50	108.20
1	CA	1106	G	C8-N9-C4	-6.63	103.75	106.40
25	DA	1344	G	N1-C6-O6	6.62	123.88	119.90
1	AA	66	G	N1-C6-O6	6.62	123.87	119.90
25	DA	898	C	C5-C6-N1	6.62	124.31	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	271(A)	A	C8-N9-C4	6.61	108.45	105.80
1	CA	1126	U	C5-C6-N1	6.61	126.00	122.70
1	CA	984	C	C2-N3-C4	6.61	123.20	119.90
1	AA	1276	G	N3-C4-C5	-6.61	125.30	128.60
26	DB	9	G	N1-C6-O6	6.61	123.86	119.90
25	BA	1958	A	N1-C6-N6	6.60	122.56	118.60
25	DA	2320	A	C2-N3-C4	6.60	113.90	110.60
25	DA	2630	G	N3-C4-C5	6.60	131.90	128.60
1	AA	532	A	OP1-P-O3'	6.60	119.72	105.20
25	BA	553	A	N3-C4-C5	6.60	131.42	126.80
25	BA	2794	A	N1-C6-N6	-6.60	114.64	118.60
25	DA	530	G	N3-C4-N9	-6.59	122.04	126.00
1	CA	5	U	C2-N1-C1'	6.59	125.61	117.70
25	BA	50	G	C5-C6-O6	6.59	132.55	128.60
25	DA	2512	C	C6-N1-C2	6.59	122.94	120.30
25	BA	485	U	O5'-P-OP2	-6.58	99.78	105.70
25	DA	898	C	C6-N1-C2	-6.58	117.67	120.30
25	DA	2572	A	C8-N9-C4	6.58	108.43	105.80
25	BA	1926	G	N1-C6-O6	-6.58	115.95	119.90
1	AA	1007	C	C6-N1-C1'	-6.58	112.90	120.80
25	BA	892	G	O4'-C1'-N9	6.58	113.46	108.20
1	CA	1273	G	N3-C4-C5	-6.58	125.31	128.60
25	DA	2072	G	N1-C6-O6	6.57	123.84	119.90
23	AX	22	G	C8-N9-C1'	6.56	135.53	127.00
1	CA	1395	C	C2-N3-C4	6.56	123.18	119.90
25	DA	2333	A	C8-N9-C4	6.56	108.42	105.80
25	DA	1269	A	C2-N3-C4	-6.56	107.32	110.60
25	DA	1573	G	C8-N9-C4	6.55	109.02	106.40
1	CA	915	A	N7-C8-N9	-6.55	110.53	113.80
25	DA	576	U	O5'-P-OP1	-6.55	99.81	105.70
25	DA	2512	C	N3-C4-C5	6.55	124.52	121.90
25	DA	790	C	O5'-P-OP2	-6.55	99.81	105.70
25	DA	272(C)	G	N3-C4-C5	6.54	131.87	128.60
25	BA	2700	U	N3-C4-C5	-6.54	110.67	114.60
1	CA	992	U	P-O3'-C3'	6.54	127.55	119.70
1	CA	998	G	C5-C6-O6	6.54	132.53	128.60
25	DA	1477	A	C2-N3-C4	-6.54	107.33	110.60
25	BA	1068	G	N9-C4-C5	6.54	108.02	105.40
25	BA	1072	U	C2-N1-C1'	6.54	125.54	117.70
25	BA	254	A	O4'-C1'-N9	6.53	113.42	108.20
1	AA	611	A	C8-N9-C4	6.53	108.41	105.80
25	BA	1249	A	C4-C5-N7	6.53	113.96	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	205	G	N7-C8-N9	-6.53	109.84	113.10
25	DA	956	G	C8-N9-C4	-6.52	103.79	106.40
1	AA	1127	G	N9-C4-C5	-6.52	102.79	105.40
43	DX	65	ARG	NE-CZ-NH2	-6.52	117.04	120.30
25	BA	1723	A	N1-C6-N6	-6.52	114.69	118.60
25	BA	2651	A	N1-C6-N6	6.52	122.51	118.60
25	DA	1698	A	C5-N7-C8	-6.52	100.64	103.90
25	DA	912	C	C6-N1-C2	-6.52	117.69	120.30
1	AA	1123	A	C5-C6-N6	6.52	128.91	123.70
1	AA	1123	A	C6-N1-C2	6.51	122.51	118.60
25	DA	1142	U	N1-C2-O2	6.51	127.36	122.80
1	CA	527	G	N1-C6-O6	-6.51	115.99	119.90
25	DA	663	G	C4-C5-N7	-6.51	108.20	110.80
25	DA	1698	A	C4-C5-N7	6.51	113.96	110.70
25	DA	1698	A	O4'-C1'-N9	6.51	113.41	108.20
25	DA	514	A	N7-C8-N9	-6.51	110.55	113.80
1	CA	1101	A	C8-N9-C4	6.51	108.40	105.80
25	DA	2489	G	C8-N9-C4	6.51	109.00	106.40
25	BA	1098	C	C5-C6-N1	6.50	124.25	121.00
25	BA	398	A	N1-C6-N6	6.50	122.50	118.60
1	AA	348	G	N3-C4-C5	6.50	131.85	128.60
25	BA	2454	C	C6-N1-C2	6.50	122.90	120.30
23	CX	22	G	C8-N9-C4	-6.50	103.80	106.40
25	DA	754	C	N1-C2-O2	-6.50	115.00	118.90
25	BA	2430	A	N1-C6-N6	6.49	122.50	118.60
25	DA	1269	A	N1-C6-N6	6.49	122.50	118.60
25	BA	1700	G	P-O3'-C3'	6.49	127.48	119.70
25	DA	195	A	OP2-P-O3'	6.49	119.47	105.20
25	DA	1313	U	C2-N1-C1'	6.49	125.48	117.70
25	DA	196	A	O5'-P-OP2	-6.48	99.86	105.70
25	BA	354	A	C5-N7-C8	-6.48	100.66	103.90
1	AA	1127	G	C5-N7-C8	6.47	107.54	104.30
1	AA	1502	A	N1-C2-N3	6.47	132.54	129.30
26	DB	72	G	C6-C5-N7	-6.47	126.52	130.40
1	AA	890	G	O4'-C1'-N9	6.47	113.38	108.20
25	DA	1807	G	N1-C6-O6	6.46	123.78	119.90
25	DA	63	U	N3-C4-O4	-6.46	114.88	119.40
25	BA	254	A	C6-C5-N7	-6.46	127.78	132.30
25	DA	1698	A	C4-C5-C6	6.46	120.23	117.00
25	BA	2521	G	C8-N9-C4	6.46	108.98	106.40
25	BA	1930	C	C6-N1-C2	-6.45	117.72	120.30
25	BA	2868	C	O5'-P-OP2	-6.45	99.90	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	2446	G	N9-C4-C5	-6.45	102.82	105.40
1	AA	1519	A	C5-C6-N1	-6.45	114.48	117.70
1	CA	1518	A	N1-C2-N3	6.45	132.52	129.30
1	CA	161	A	C8-N9-C4	-6.44	103.22	105.80
1	AA	1124	G	C2-N3-C4	6.44	115.12	111.90
25	DA	1692	U	O5'-P-OP2	-6.44	99.91	105.70
25	BA	184	A	C5-N7-C8	6.44	107.12	103.90
25	DA	31	C	O5'-P-OP2	-6.43	99.91	105.70
25	BA	696	C	C5-C6-N1	6.43	124.22	121.00
25	DA	2244	U	C5-C6-N1	-6.43	119.49	122.70
25	BA	1783	C	C6-N1-C2	6.43	122.87	120.30
25	DA	2546	U	N1-C2-O2	-6.42	118.30	122.80
25	BA	1067	A	C6-C5-N7	-6.42	127.81	132.30
1	AA	738	C	C6-N1-C2	-6.42	117.73	120.30
25	DA	1210	A	P-O3'-C3'	6.42	127.40	119.70
23	CX	46	G	N9-C4-C5	6.42	107.97	105.40
25	BA	999	G	OP2-P-O3'	6.41	119.30	105.20
25	DA	907	U	C5-C6-N1	6.41	125.91	122.70
25	DA	2207	G	C5-C6-O6	-6.41	124.75	128.60
25	DA	2805	G	O4'-C1'-N9	6.41	113.33	108.20
25	BA	12	U	N1-C2-O2	6.40	127.28	122.80
1	CA	915	A	C8-N9-C4	6.40	108.36	105.80
25	DA	671	C	N1-C2-O2	-6.40	115.06	118.90
1	CA	1064	G	P-O3'-C3'	6.40	127.38	119.70
25	DA	529	A	C4-C5-N7	6.40	113.90	110.70
25	BA	538	A	N1-C6-N6	6.40	122.44	118.60
25	DA	1660	C	C5-C6-N1	-6.40	117.80	121.00
25	DA	1021	A	N7-C8-N9	6.40	117.00	113.80
25	DA	1142(A)	A	N1-C2-N3	6.40	132.50	129.30
1	AA	878	G	C8-N9-C4	6.39	108.96	106.40
25	DA	1489	U	N3-C4-O4	6.39	123.87	119.40
25	DA	522	G	C5-C6-O6	-6.38	124.77	128.60
25	DA	915	C	C6-N1-C2	-6.38	117.75	120.30
25	DA	945	A	C5-C6-N1	-6.38	114.51	117.70
25	BA	2228	G	C6-C5-N7	-6.38	126.58	130.40
1	AA	1502	A	C2-N3-C4	-6.38	107.41	110.60
25	BA	856	G	C5-C6-O6	6.37	132.42	128.60
25	BA	2331	G	C5-C6-O6	-6.37	124.78	128.60
25	DA	1677	A	C5-C6-N6	-6.37	118.61	123.70
25	BA	2427	G	C8-N9-C4	-6.37	103.85	106.40
25	DA	1653	G	C6-C5-N7	-6.36	126.58	130.40
25	BA	1631	C	C2-N1-C1'	6.36	125.79	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	906	G	N3-C4-N9	6.36	129.81	126.00
25	DA	470	A	O5'-P-OP1	-6.36	99.98	105.70
25	DA	529	A	C5-N7-C8	-6.36	100.72	103.90
25	DA	2347	C	N1-C2-O2	6.36	122.71	118.90
1	AA	1531	A	C8-N9-C4	-6.35	103.26	105.80
25	BA	2103	C	O5'-P-OP2	-6.35	99.98	105.70
25	BA	2228	G	C8-N9-C1'	-6.35	118.74	127.00
25	DA	2550	G	C6-C5-N7	-6.35	126.59	130.40
25	BA	610	C	N1-C2-O2	-6.35	115.09	118.90
1	CA	1221	G	C6-N1-C2	6.35	128.91	125.10
25	DA	2338	G	N3-C4-C5	6.35	131.78	128.60
1	AA	1276	G	C8-N9-C4	-6.35	103.86	106.40
25	BA	1659	G	C2-N3-C4	-6.34	108.73	111.90
25	BA	1850	A	C2-N3-C4	-6.34	107.43	110.60
25	BA	1710	C	C5-C4-N4	-6.34	115.76	120.20
25	DA	2826	A	N1-C6-N6	-6.34	114.80	118.60
25	BA	1170	C	C6-N1-C2	6.33	122.83	120.30
1	AA	1506	U	N3-C2-O2	6.33	126.63	122.20
25	BA	1994	A	C8-N9-C4	-6.33	103.27	105.80
25	DA	2595	G	C8-N9-C4	6.33	108.93	106.40
1	AA	146	G	C8-N9-C4	-6.33	103.87	106.40
1	CA	1262	C	C2-N1-C1'	6.33	125.76	118.80
25	DA	527	C	C6-N1-C2	-6.33	117.77	120.30
1	AA	458	C	C5-C6-N1	6.32	124.16	121.00
25	DA	2313	C	N3-C4-C5	-6.32	119.37	121.90
1	CA	1158	C	N3-C2-O2	-6.32	117.48	121.90
26	DB	56	G	N3-C4-N9	6.31	129.79	126.00
25	BA	2431	U	OP1-P-O3'	6.31	119.09	105.20
1	CA	1026	G	C2-N3-C4	6.31	115.06	111.90
25	DA	114	U	C2-N1-C1'	6.31	125.27	117.70
25	BA	1093	G	N3-C2-N2	6.31	124.31	119.90
25	DA	912	C	N3-C2-O2	-6.31	117.48	121.90
25	BA	719	C	N1-C2-O2	-6.30	115.12	118.90
1	CA	299	G	C5-C6-O6	-6.30	124.82	128.60
25	DA	461	C	N1-C2-O2	-6.30	115.12	118.90
25	DA	659	C	C6-N1-C2	6.30	122.82	120.30
25	DA	1774	C	C5-C6-N1	6.30	124.15	121.00
25	DA	2332	U	C5-C6-N1	-6.30	119.55	122.70
25	BA	2641	A	O4'-C1'-N9	6.30	113.24	108.20
25	DA	2520	C	C6-N1-C2	6.30	122.82	120.30
25	BA	507	G	O5'-P-OP2	-6.30	100.03	105.70
25	BA	1067	A	N3-C4-C5	6.30	131.21	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	342	C	C6-N1-C2	-6.29	117.78	120.30
1	CA	115	G	P-O3'-C3'	6.29	127.25	119.70
25	DA	465	G	C5-C6-O6	-6.29	124.82	128.60
25	DA	1647	G	O4'-C1'-N9	-6.29	103.16	108.20
1	CA	1502	A	N7-C8-N9	6.29	116.95	113.80
1	CA	1122	U	O4'-C1'-N1	-6.29	103.17	108.20
1	AA	299	G	N3-C4-C5	6.29	131.74	128.60
25	BA	46	C	N3-C4-C5	6.29	124.42	121.90
25	BA	1373	C	C6-N1-C2	-6.29	117.78	120.30
1	CA	1397	C	C2-N1-C1'	6.29	125.72	118.80
1	CA	1004	A	C5-C6-N6	6.29	128.73	123.70
1	CA	1154	G	N1-C2-N3	6.29	127.67	123.90
1	CA	365	U	C5-C6-N1	-6.29	119.56	122.70
25	DA	2346	A	N1-C6-N6	-6.29	114.83	118.60
25	BA	1322	A	C8-N9-C4	6.28	108.31	105.80
1	AA	1460	A	C8-N9-C4	6.28	108.31	105.80
25	DA	827	U	N3-C2-O2	6.28	126.60	122.20
25	DA	597	U	N3-C2-O2	6.28	126.60	122.20
25	BA	2227	G	C8-N9-C1'	6.28	135.16	127.00
1	CA	1325	C	C5-C4-N4	6.28	124.59	120.20
25	BA	1699	A	OP1-P-O3'	6.28	119.01	105.20
29	DF	12	LEU	CA-CB-CG	6.27	129.72	115.30
1	CA	1163	C	N1-C2-O2	6.27	122.66	118.90
1	CA	1271	G	C5-C6-O6	-6.27	124.84	128.60
1	AA	421	U	N3-C2-O2	-6.26	117.81	122.20
1	AA	1036	G	N3-C4-C5	-6.26	125.47	128.60
25	BA	1665	G	O5'-P-OP2	-6.26	100.06	105.70
25	DA	1963	U	C5-C6-N1	6.26	125.83	122.70
25	BA	2511	C	N3-C4-N4	6.26	122.38	118.00
25	BA	1315	A	O5'-P-OP2	-6.26	100.06	105.70
25	BA	2622	C	O5'-P-OP1	-6.26	100.07	105.70
1	CA	5	U	C6-N1-C2	-6.26	117.25	121.00
1	CA	1022	G	N3-C4-N9	-6.26	122.25	126.00
23	CX	34	C	C2-N1-C1'	6.25	125.68	118.80
25	DA	1281	G	N1-C6-O6	6.25	123.65	119.90
25	BA	354	A	N3-C4-C5	6.25	131.18	126.80
25	BA	1055	A	C8-N9-C4	-6.25	103.30	105.80
1	CA	916	G	C8-N9-C4	-6.25	103.90	106.40
25	DA	2825	C	O5'-P-OP1	-6.25	100.07	105.70
25	BA	2694	U	C2-N1-C1'	6.25	125.20	117.70
25	DA	2599	G	C8-N9-C4	6.25	108.90	106.40
25	BA	1522	G	N3-C2-N2	-6.25	115.53	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1531	A	N7-C8-N9	6.25	116.92	113.80
25	BA	555	G	C8-N9-C4	-6.25	103.90	106.40
25	DA	680	G	C5-C6-O6	-6.25	124.85	128.60
25	BA	82	G	C6-C5-N7	-6.24	126.65	130.40
25	DA	1322	A	O5'-P-OP2	-6.24	100.08	105.70
25	BA	1249	A	C6-C5-N7	-6.24	127.93	132.30
25	DA	826	U	C5-C6-N1	-6.24	119.58	122.70
1	AA	401	C	C6-N1-C2	-6.24	117.81	120.30
1	AA	1113	C	C6-N1-C2	-6.24	117.81	120.30
23	CX	26	G	N3-C2-N2	6.24	124.27	119.90
25	BA	2641	A	N1-C2-N3	6.24	132.42	129.30
25	DA	208	C	C6-N1-C2	6.24	122.80	120.30
23	CX	22	G	C8-N9-C1'	6.24	135.11	127.00
25	DA	1769	G	C5-C6-O6	-6.24	124.86	128.60
1	CA	1158	C	C6-N1-C2	-6.23	117.81	120.30
25	BA	978	A	C6-C5-N7	-6.23	127.94	132.30
25	BA	930	G	C4-N9-C1'	-6.23	118.40	126.50
25	DA	680	G	N1-C6-O6	6.22	123.64	119.90
25	DA	1746	G	C8-N9-C4	-6.22	103.91	106.40
1	AA	1285	A	P-O3'-C3'	6.22	127.17	119.70
25	BA	2265	G	N1-C6-O6	6.22	123.63	119.90
25	BA	1489	G	N1-C6-O6	6.22	123.63	119.90
25	BA	2550	C	N3-C4-C5	6.22	124.39	121.90
25	BA	1522	G	N1-C6-O6	6.22	123.63	119.90
2	CB	180	LEU	CA-CB-CG	-6.22	101.00	115.30
25	BA	1494	G	C8-N9-C4	-6.21	103.91	106.40
25	DA	1271	G	C5-C6-N1	-6.21	108.39	111.50
25	DA	680	G	C4-C5-N7	6.21	113.28	110.80
25	DA	1363	C	N3-C4-N4	-6.21	113.66	118.00
25	DA	52	A	C8-N9-C4	-6.20	103.32	105.80
25	DA	885	C	C5-C6-N1	6.20	124.10	121.00
1	CA	1033	G	N9-C4-C5	-6.20	102.92	105.40
25	BA	1696	G	O5'-P-OP2	-6.20	100.12	105.70
1	AA	998	G	N3-C4-N9	-6.20	122.28	126.00
1	CA	1169	A	N1-C6-N6	6.19	122.32	118.60
25	DA	1600	C	N1-C2-O2	-6.19	115.19	118.90
1	AA	1415	G	N1-C6-O6	6.19	123.61	119.90
25	BA	46	C	C2-N3-C4	-6.19	116.81	119.90
25	BA	139	A	C8-N9-C4	-6.19	103.33	105.80
25	BA	288	U	O4'-C1'-N1	6.19	113.15	108.20
25	BA	1606	G	N3-C4-N9	-6.19	122.29	126.00
25	DA	1653	G	C8-N9-C1'	-6.18	118.96	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	1937	A	C8-N9-C4	6.18	108.27	105.80
22	CV	17	U	C2-N3-C4	6.18	130.71	127.00
25	DA	1651	G	C8-N9-C4	6.18	108.87	106.40
25	DA	733	G	C4-C5-N7	6.18	113.27	110.80
1	CA	175	C	C6-N1-C2	-6.17	117.83	120.30
1	CA	897	C	O5'-P-OP2	-6.17	100.14	105.70
25	BA	792	G	C5-C6-O6	-6.17	124.90	128.60
1	CA	1169	A	C8-N9-C4	-6.17	103.33	105.80
25	DA	1204	A	C6-C5-N7	-6.17	127.98	132.30
1	AA	92	C	C5-C6-N1	6.17	124.08	121.00
1	AA	720	C	C6-N1-C2	-6.17	117.83	120.30
1	AA	1007	C	O4'-C1'-N1	-6.17	103.27	108.20
1	CA	1000	U	C2-N3-C4	6.17	130.70	127.00
34	BO	8	LEU	CA-CB-CG	6.17	129.48	115.30
25	BA	2734	A	C8-N9-C4	6.16	108.27	105.80
1	AA	1007	C	C2-N3-C4	6.16	122.98	119.90
1	CA	1113	C	C6-N1-C2	-6.16	117.84	120.30
25	DA	827	U	N1-C2-O2	-6.16	118.49	122.80
25	DA	1826	G	C5-N7-C8	6.16	107.38	104.30
25	DA	2804	C	C5-C6-N1	6.16	124.08	121.00
25	DA	116	C	N3-C4-C5	-6.16	119.44	121.90
25	BA	1922	A	O5'-P-OP1	-6.16	100.16	105.70
1	CA	997	U	C2-N3-C4	6.15	130.69	127.00
25	DA	1204	A	N1-C2-N3	6.15	132.38	129.30
25	DA	1660	C	C4-C5-C6	6.15	120.47	117.40
25	DA	2505	G	C5-C6-O6	-6.15	124.91	128.60
26	DB	56	G	C8-N9-C4	-6.15	103.94	106.40
25	DA	207	A	C8-N9-C4	6.14	108.26	105.80
25	BA	353	G	O5'-P-OP2	-6.14	100.17	105.70
25	BA	2519	C	O5'-P-OP2	-6.14	100.17	105.70
23	AX	4	G	C8-N9-C4	6.14	108.86	106.40
1	AA	1506	U	N1-C2-O2	-6.14	118.50	122.80
25	BA	2239	A	N9-C4-C5	6.14	108.25	105.80
25	BA	1067	A	N3-C4-N9	-6.13	122.49	127.40
25	DA	2246	G	C2-N3-C4	-6.13	108.83	111.90
25	DA	2644	G	N3-C4-N9	-6.13	122.32	126.00
25	BA	2506	G	C8-N9-C4	6.13	108.85	106.40
25	BA	903	C	C6-N1-C2	-6.13	117.85	120.30
25	BA	2627	U	C4-C5-C6	-6.13	116.02	119.70
1	CA	316	G	N1-C6-O6	6.13	123.58	119.90
25	DA	2286	A	C2-N3-C4	-6.13	107.54	110.60
25	BA	1386	U	C2-N3-C4	-6.12	123.33	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	227	G	C8-N9-C4	6.12	108.85	106.40
23	AX	76	A	C4-C5-C6	6.12	120.06	117.00
25	BA	842	C	N3-C4-N4	-6.12	113.72	118.00
1	CA	1044	A	N1-C6-N6	-6.12	114.93	118.60
1	CA	1054	C	C2-N1-C1'	6.12	125.53	118.80
25	BA	2331	G	O4'-C1'-N9	6.11	113.09	108.20
25	DA	62	C	C6-N1-C2	6.11	122.75	120.30
25	DA	2373	G	N1-C6-O6	6.11	123.57	119.90
23	CX	22	G	N1-C6-O6	-6.11	116.23	119.90
25	DA	141	A	C5-N7-C8	-6.11	100.85	103.90
25	BA	2015	U	O5'-P-OP1	-6.10	100.21	105.70
25	DA	1678	G	C8-N9-C4	-6.10	103.96	106.40
25	DA	2294	C	N1-C2-O2	6.10	122.56	118.90
25	DA	2321	G	N9-C4-C5	-6.10	102.96	105.40
1	AA	343	U	N1-C2-O2	-6.10	118.53	122.80
25	DA	748	G	C5-C6-N1	6.10	114.55	111.50
26	BB	80	U	C5-C4-O4	6.10	129.56	125.90
25	DA	2039	C	C6-N1-C2	-6.10	117.86	120.30
25	BA	989	G	C4-N9-C1'	6.10	134.43	126.50
25	BA	2287	C	O5'-P-OP1	-6.09	100.21	105.70
1	AA	1131	G	N1-C6-O6	6.09	123.56	119.90
25	BA	1829	U	N3-C4-O4	-6.09	115.14	119.40
25	DA	180	G	C5-C6-O6	-6.09	124.94	128.60
25	DA	2446	G	N7-C8-N9	-6.09	110.05	113.10
25	BA	933	C	N1-C2-O2	6.09	122.55	118.90
25	BA	2228	G	N1-C6-O6	6.09	123.55	119.90
23	CX	46	G	C8-N9-C1'	6.09	134.91	127.00
25	DA	2489	G	N9-C4-C5	-6.09	102.96	105.40
25	BA	894	U	N3-C4-O4	-6.09	115.14	119.40
25	DA	1558	A	P-O3'-C3'	6.09	127.00	119.70
1	AA	101	A	O5'-P-OP2	-6.08	100.22	105.70
25	BA	2712	C	C6-N1-C2	6.08	122.73	120.30
25	DA	2735	G	C5-C6-O6	-6.08	124.95	128.60
25	BA	1336	C	C6-N1-C2	-6.08	117.87	120.30
25	BA	2227	G	C8-N9-C4	6.08	108.83	106.40
25	DA	1797	C	C5-C6-N1	-6.08	117.96	121.00
26	DB	13	A	C8-N9-C4	6.08	108.23	105.80
25	DA	885	C	C6-N1-C2	-6.08	117.87	120.30
25	BA	477	C	C6-N1-C2	6.08	122.73	120.30
25	BA	1024	G	C5-C6-O6	6.08	132.25	128.60
25	BA	2565	G	N3-C2-N2	6.08	124.15	119.90
25	DA	522	G	N1-C6-O6	6.08	123.55	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	981	A	C6-C5-N7	6.08	136.55	132.30
25	DA	1826	G	C5-C6-O6	6.08	132.25	128.60
1	CA	1126	U	C2-N1-C1'	6.07	124.99	117.70
1	AA	841	U	C6-N1-C2	-6.07	117.36	121.00
25	BA	1919	G	N1-C6-O6	6.07	123.54	119.90
1	CA	1003	G	C4-C5-C6	6.07	122.44	118.80
1	AA	421	U	N1-C2-O2	6.07	127.05	122.80
25	DA	467	G	C8-N9-C4	6.07	108.83	106.40
25	DA	2277	G	O5'-P-OP2	-6.07	100.24	105.70
25	BA	70	A	P-O3'-C3'	6.07	126.98	119.70
1	CA	1502	A	N1-C6-N6	6.07	122.24	118.60
25	DA	504	U	N3-C2-O2	-6.07	117.95	122.20
1	CA	1511	G	N1-C6-O6	6.06	123.54	119.90
25	BA	533	G	N3-C4-N9	-6.06	122.36	126.00
1	CA	1101	A	N9-C4-C5	-6.06	103.38	105.80
23	CX	39	C	C6-N1-C2	-6.06	117.88	120.30
25	DA	1022	G	N9-C4-C5	6.06	107.82	105.40
25	DA	2388	A	O4'-C1'-N9	6.06	113.05	108.20
25	DA	2805	G	N9-C4-C5	6.06	107.82	105.40
23	AX	20	U	O4'-C1'-N1	6.06	113.05	108.20
1	CA	299	G	N9-C4-C5	-6.06	102.98	105.40
23	CX	34	C	C6-N1-C2	-6.06	117.88	120.30
1	CA	995	C	N1-C2-O2	6.05	122.53	118.90
1	AA	1131	G	C6-C5-N7	-6.05	126.77	130.40
25	DA	2206	G	C8-N9-C1'	6.05	134.87	127.00
1	AA	76	C	C4-C5-C6	-6.05	114.38	117.40
25	BA	1867	C	C6-N1-C2	-6.05	117.88	120.30
25	DA	2607	G	N3-C2-N2	6.05	124.14	119.90
25	BA	199	C	C6-N1-C2	6.05	122.72	120.30
1	CA	1369	C	C6-N1-C2	6.05	122.72	120.30
25	BA	82	G	C5-C6-O6	-6.04	124.97	128.60
25	DA	94(A)	G	N9-C4-C5	6.04	107.82	105.40
25	DA	933	A	N1-C6-N6	6.04	122.23	118.60
50	D4	68	ARG	NE-CZ-NH2	6.04	123.32	120.30
25	DA	90	U	N1-C2-O2	6.04	127.03	122.80
1	AA	848	C	C5-C6-N1	6.04	124.02	121.00
1	AA	1024	G	C8-N9-C4	-6.04	103.98	106.40
25	BA	1605	A	C5-C6-N1	-6.04	114.68	117.70
25	DA	1760	A	N1-C6-N6	-6.04	114.98	118.60
25	DA	1537	G	C5-C6-O6	-6.04	124.98	128.60
25	DA	1956	U	N1-C2-N3	6.04	118.52	114.90
25	BA	798	A	OP1-P-O3'	6.03	118.47	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	799	A	O5'-P-OP2	6.03	117.94	110.70
25	BA	2515	A	N1-C2-N3	-6.03	126.28	129.30
25	DA	461	C	N3-C4-N4	6.03	122.22	118.00
25	BA	1450	C	OP1-P-OP2	6.03	128.65	119.60
1	AA	325	A	C8-N9-C4	6.03	108.21	105.80
25	DA	893	C	C5-C6-N1	6.03	124.02	121.00
25	DA	945	A	C4-C5-N7	6.03	113.72	110.70
25	BA	2622	C	C5-C6-N1	-6.03	117.99	121.00
25	DA	1115	G	C4-N9-C1'	-6.03	118.67	126.50
35	DP	44	GLY	N-CA-C	-6.02	98.05	113.10
25	DA	614	U	N3-C2-O2	-6.02	117.99	122.20
1	AA	139	G	C8-N9-C4	-6.02	103.99	106.40
25	BA	1318	A	O4'-C1'-N9	6.01	113.01	108.20
25	BA	2513	C	C2-N1-C1'	-6.01	112.18	118.80
1	CA	509	A	C8-N9-C4	-6.01	103.39	105.80
1	AA	236	G	C4-C5-N7	-6.01	108.39	110.80
25	BA	1076	G	C8-N9-C4	6.01	108.81	106.40
25	DA	2298	A	C6-N1-C2	6.01	122.21	118.60
25	BA	990	A	N9-C4-C5	-6.01	103.40	105.80
25	BA	1018	A	O5'-P-OP2	6.01	117.91	110.70
25	BA	342	C	N1-C2-O2	-6.00	115.30	118.90
1	CA	1180	A	N7-C8-N9	6.00	116.80	113.80
25	BA	507	G	O4'-C1'-N9	6.00	113.00	108.20
25	DA	1708	C	O5'-P-OP2	6.00	117.90	110.70
25	DA	1775	U	O5'-P-OP2	6.00	117.90	110.70
25	BA	989	G	C5-C6-O6	6.00	132.20	128.60
1	CA	1262	C	N3-C4-C5	5.99	124.30	121.90
25	DA	1021	A	C5-C6-N1	-5.99	114.70	117.70
25	DA	2474	C	N1-C2-O2	5.99	122.49	118.90
1	CA	1154	G	N3-C4-C5	-5.99	125.61	128.60
25	DA	1721	G	N3-C4-N9	5.99	129.59	126.00
25	BA	719	C	C5-C6-N1	-5.98	118.01	121.00
1	AA	348	G	N3-C2-N2	-5.98	115.71	119.90
25	BA	2814	C	C6-N1-C2	-5.98	117.91	120.30
25	BA	1249	A	N7-C8-N9	5.98	116.79	113.80
25	BA	1870	G	C8-N9-C1'	-5.98	119.23	127.00
1	AA	1286	A	O5'-P-OP1	-5.98	100.32	105.70
1	CA	1397	C	N1-C2-O2	5.98	122.49	118.90
1	CA	265	G	O4'-C1'-N9	-5.98	103.42	108.20
1	AA	167	G	C8-N9-C4	-5.97	104.01	106.40
1	AA	107	G	C8-N9-C4	5.97	108.79	106.40
1	CA	1043	C	C6-N1-C2	-5.97	117.91	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	266	G	P-O3'-C3'	5.97	126.86	119.70
25	BA	474	U	C5-C4-O4	5.97	129.48	125.90
1	CA	1273	G	N9-C4-C5	-5.97	103.01	105.40
26	DB	56	G	C2-N3-C4	5.97	114.88	111.90
25	BA	1870	G	C4-N9-C1'	5.96	134.25	126.50
25	BA	2725	A	O5'-P-OP1	-5.96	100.33	105.70
1	CA	266	G	C2-N3-C4	-5.96	108.92	111.90
25	DA	2206	G	N3-C4-C5	5.96	131.58	128.60
1	CA	1022	G	N3-C4-C5	5.96	131.58	128.60
25	BA	883	G	N1-C6-O6	-5.96	116.33	119.90
25	BA	1072	U	N3-C2-O2	-5.96	118.03	122.20
25	DA	530	G	C5-N7-C8	-5.96	101.32	104.30
25	DA	808	G	N3-C4-C5	-5.96	125.62	128.60
25	BA	739	C	C6-N1-C2	-5.95	117.92	120.30
25	DA	2569	G	N1-C6-O6	5.95	123.47	119.90
25	BA	837	C	C2-N1-C1'	5.95	125.35	118.80
25	BA	987	G	C8-N9-C4	5.95	108.78	106.40
25	BA	2298	A	C5-N7-C8	-5.95	100.93	103.90
25	DA	2897	U	C5-C6-N1	5.95	125.67	122.70
25	BA	1152	G	O4'-C1'-N9	-5.95	103.44	108.20
1	CA	65	U	OP2-P-O3'	5.95	118.28	105.20
25	BA	1225	C	C6-N1-C2	5.94	122.68	120.30
25	BA	2574	U	C5-C6-N1	-5.94	119.73	122.70
25	DA	199	A	N1-C6-N6	5.94	122.17	118.60
25	DA	1816	G	O5'-P-OP1	-5.94	100.35	105.70
25	BA	835	A	N1-C6-N6	5.94	122.16	118.60
1	CA	1036	G	C5-C6-N1	-5.94	108.53	111.50
23	CX	22	G	N3-C4-N9	-5.94	122.44	126.00
1	AA	146	G	N7-C8-N9	5.93	116.07	113.10
25	DA	1614	A	N1-C6-N6	-5.93	115.04	118.60
25	DA	2255	G	OP2-P-O3'	5.93	118.25	105.20
26	DB	60	C	C5-C6-N1	5.93	123.97	121.00
25	BA	2094	G	C5-C6-O6	-5.93	125.04	128.60
25	BA	930	G	C8-N9-C1'	5.93	134.71	127.00
25	BA	2273	C	OP2-P-O3'	5.93	118.24	105.20
25	DA	2257	U	N3-C2-O2	5.93	126.35	122.20
25	DA	889	C	C6-N1-C2	-5.93	117.93	120.30
25	DA	2084	C	C5-C6-N1	-5.93	118.04	121.00
25	DA	1745	C	N1-C2-O2	-5.92	115.34	118.90
25	BA	2527	C	C5-C4-N4	-5.92	116.05	120.20
25	DA	2024	G	N1-C6-O6	5.92	123.45	119.90
25	BA	2674	A	C8-N9-C4	-5.92	103.43	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	1606	G	C6-C5-N7	5.92	133.95	130.40
25	DA	1350	C	N1-C2-O2	-5.92	115.35	118.90
1	CA	1017	G	C5-C6-N1	-5.91	108.55	111.50
23	CX	6	G	C8-N9-C4	5.91	108.76	106.40
25	BA	793	A	O4'-C1'-N9	5.91	112.93	108.20
25	DA	2805	G	C5-C6-O6	5.91	132.14	128.60
1	CA	1311	G	N9-C4-C5	5.91	107.76	105.40
25	DA	808	G	N3-C4-N9	5.91	129.54	126.00
1	CA	768	A	C5-C6-N1	-5.90	114.75	117.70
25	DA	923	C	C5-C6-N1	5.90	123.95	121.00
25	BA	474	U	N3-C2-O2	-5.90	118.07	122.20
25	BA	1440	U	O5'-P-OP2	5.90	117.78	110.70
25	DA	530	G	N7-C8-N9	5.90	116.05	113.10
25	BA	1188	A	C4-C5-N7	5.90	113.65	110.70
25	BA	555	G	N3-C4-C5	5.90	131.55	128.60
25	DA	817	C	C6-N1-C2	5.90	122.66	120.30
25	DA	1776	G	N9-C4-C5	-5.90	103.04	105.40
25	BA	399	G	O4'-C1'-N9	5.89	112.92	108.20
1	CA	354	G	C6-C5-N7	-5.89	126.86	130.40
25	DA	1956	U	N3-C2-O2	-5.89	118.07	122.20
25	BA	1807	G	O5'-P-OP2	-5.89	100.40	105.70
1	CA	1137	C	P-O3'-C3'	5.89	126.77	119.70
1	CA	1311	G	C6-C5-N7	5.89	133.94	130.40
25	DA	1807	G	C5-C6-O6	-5.89	125.06	128.60
25	BA	727	G	N3-C4-C5	-5.89	125.65	128.60
25	BA	2298	A	N1-C6-N6	5.89	122.14	118.60
23	AX	69	C	C2-N1-C1'	5.89	125.28	118.80
25	DA	1130	U	O5'-P-OP1	-5.89	100.40	105.70
25	DA	114	U	C5-C4-O4	-5.89	122.37	125.90
25	BA	2389	A	C2-N3-C4	-5.89	107.66	110.60
25	BA	2876	U	C5-C4-O4	5.89	129.43	125.90
1	CA	1125	U	C2-N1-C1'	5.88	124.76	117.70
25	BA	303	C	C5-C6-N1	5.88	123.94	121.00
25	DA	529	A	C5-C6-N6	-5.88	119.00	123.70
25	DA	1972	A	N1-C6-N6	5.88	122.13	118.60
25	DA	565	C	C4-C5-C6	5.88	120.34	117.40
1	AA	902	G	O5'-P-OP2	-5.88	100.41	105.70
25	BA	1871	G	N1-C6-O6	-5.88	116.37	119.90
25	BA	917	A	N7-C8-N9	-5.88	110.86	113.80
25	DA	955	C	OP1-P-O3'	5.88	118.12	105.20
25	BA	671	A	C2-N3-C4	-5.87	107.66	110.60
1	CA	1312	G	N9-C4-C5	5.87	107.75	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	2059	A	N1-C6-N6	5.87	122.12	118.60
1	AA	720	C	N3-C2-O2	-5.87	117.79	121.90
25	BA	670	C	C2-N1-C1'	5.87	125.26	118.80
25	BA	1359	U	C6-N1-C2	-5.87	117.48	121.00
25	BA	1757	C	C6-N1-C2	5.87	122.65	120.30
1	AA	1150	U	N3-C4-C5	-5.87	111.08	114.60
25	BA	1249	A	N1-C6-N6	5.87	122.12	118.60
25	BA	525	G	C4-C5-N7	-5.87	108.45	110.80
1	CA	1002	G	N3-C2-N2	-5.87	115.79	119.90
25	BA	1617	A	C8-N9-C4	5.86	108.14	105.80
25	BA	1850	A	C5-C6-N1	-5.86	114.77	117.70
25	BA	2734	A	O5'-P-OP1	-5.86	100.43	105.70
25	DA	949	C	N1-C2-O2	-5.86	115.38	118.90
1	AA	1054	C	N3-C2-O2	-5.86	117.80	121.90
25	DA	1313	U	C5-C6-N1	5.86	125.63	122.70
1	AA	1054	C	P-O3'-C3'	5.86	126.73	119.70
1	CA	483	C	C6-N1-C2	5.86	122.64	120.30
1	CA	1033	G	C4-C5-N7	5.86	113.14	110.80
25	BA	1952	G	O5'-P-OP2	-5.85	100.43	105.70
25	BA	1700	G	O5'-P-OP1	-5.85	100.43	105.70
25	BA	2072	C	N1-C2-O2	-5.85	115.39	118.90
25	DA	512	G	O4'-C1'-N9	5.85	112.88	108.20
26	DB	76	G	N1-C6-O6	5.85	123.41	119.90
1	CA	999	C	C6-N1-C1'	-5.85	113.78	120.80
25	DA	856	C	O5'-P-OP1	-5.85	100.44	105.70
25	DA	2299	G	C6-N1-C2	5.85	128.61	125.10
25	BA	724	A	O5'-P-OP2	-5.85	100.44	105.70
25	DA	2501	C	C2-N1-C1'	-5.85	112.37	118.80
1	AA	1287	A	N1-C6-N6	5.85	122.11	118.60
25	BA	1298	G	N3-C4-N9	-5.84	122.49	126.00
25	DA	524	U	O5'-P-OP2	-5.84	100.44	105.70
1	AA	1407	C	C4-C5-C6	-5.84	114.48	117.40
25	BA	89	U	N3-C2-O2	-5.84	118.11	122.20
25	DA	2487	G	C8-N9-C4	5.84	108.74	106.40
25	BA	2036	A	C5-C6-N6	-5.84	119.03	123.70
1	AA	781	A	OP2-P-O3'	5.84	118.04	105.20
25	BA	2055	A	C2-N3-C4	5.84	113.52	110.60
25	DA	1030	G	N1-C6-O6	5.84	123.40	119.90
1	CA	1042	G	N1-C2-N3	-5.83	120.40	123.90
25	BA	2037	A	C8-N9-C4	5.83	108.13	105.80
25	BA	2071	G	C8-N9-C4	5.83	108.73	106.40
25	DA	194	G	N1-C6-O6	5.83	123.40	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	1189	A	O5'-P-OP1	5.83	117.70	110.70
1	CA	1002	G	N1-C6-O6	-5.83	116.40	119.90
1	CA	1359	C	N1-C2-O2	5.83	122.40	118.90
23	CX	14	A	C4-C5-N7	-5.83	107.78	110.70
25	DA	1930	G	C4-N9-C1'	-5.83	118.92	126.50
1	AA	97	G	N3-C4-N9	5.83	129.50	126.00
25	BA	52	A	N1-C6-N6	5.83	122.10	118.60
25	BA	1862	G	OP2-P-O3'	5.83	118.02	105.20
25	DA	915	C	N1-C2-O2	5.83	122.40	118.90
25	DA	1120	G	N3-C4-N9	-5.83	122.50	126.00
25	DA	2249	U	N3-C4-O4	-5.83	115.32	119.40
25	DA	747	U	N1-C2-O2	-5.83	118.72	122.80
1	AA	228	A	O5'-P-OP2	5.83	117.69	110.70
1	AA	1506	U	N3-C4-O4	5.83	123.48	119.40
25	DA	704	G	OP1-P-OP2	5.83	128.34	119.60
25	BA	1344	C	O5'-P-OP1	5.82	117.69	110.70
25	BA	2228	G	OP1-P-O3'	5.82	118.01	105.20
25	BA	1985	U	C5-C6-N1	5.82	125.61	122.70
25	DA	1471	A	N7-C8-N9	5.82	116.71	113.80
25	DA	1653	G	C4-N9-C1'	5.82	134.07	126.50
25	BA	2407	C	N3-C4-N4	5.82	122.07	118.00
25	BA	623	G	C2-N3-C4	-5.82	108.99	111.90
25	DA	1900	A	O5'-P-OP1	-5.82	100.46	105.70
25	DA	2604	U	N3-C2-O2	-5.82	118.13	122.20
1	CA	1163	C	C5-C6-N1	5.82	123.91	121.00
1	AA	365	U	N1-C2-N3	5.81	118.39	114.90
25	BA	576	G	N1-C6-O6	5.81	123.39	119.90
25	BA	1507	A	O4'-C1'-N9	5.81	112.85	108.20
25	BA	366	G	C5-C6-O6	-5.81	125.11	128.60
25	BA	2251	G	N1-C6-O6	-5.81	116.42	119.90
25	DA	944	G	N9-C4-C5	-5.81	103.08	105.40
1	AA	1029	C	C2-N1-C1'	-5.80	112.41	118.80
25	BA	1461	U	C5-C4-O4	5.80	129.38	125.90
25	DA	633	A	N1-C6-N6	5.80	122.08	118.60
25	BA	1714	G	C8-N9-C4	5.80	108.72	106.40
1	CA	353	A	OP2-P-O3'	5.80	117.97	105.20
25	DA	2517	C	O4'-C1'-N1	5.80	112.84	108.20
26	DB	104	U	C6-N1-C2	5.80	124.48	121.00
25	BA	2804	C	C6-N1-C2	-5.80	117.98	120.30
1	CA	1169	A	C6-C5-N7	-5.80	128.24	132.30
25	BA	807	G	C5-C6-N1	-5.80	108.60	111.50
25	DA	1021	A	C8-N9-C4	-5.80	103.48	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	2239	A	C8-N9-C4	-5.80	103.48	105.80
1	AA	1035	A	C4-N9-C1'	5.80	136.74	126.30
25	BA	568	C	C6-N1-C2	5.80	122.62	120.30
25	BA	2836	A	C8-N9-C4	5.80	108.12	105.80
1	CA	79	G	C6-N1-C2	5.80	128.58	125.10
25	DA	1251	C	N3-C4-N4	5.80	122.06	118.00
1	AA	1201	A	P-O3'-C3'	5.79	126.65	119.70
25	BA	551	A	N1-C6-N6	-5.79	115.12	118.60
25	BA	2227	G	N3-C4-C5	5.79	131.50	128.60
25	DA	193	U	N3-C4-O4	5.79	123.45	119.40
1	AA	63	C	N3-C2-O2	-5.79	117.85	121.90
25	BA	2223	C	N3-C2-O2	-5.79	117.85	121.90
1	AA	1206	G	C5-C6-O6	-5.79	125.13	128.60
25	BA	753	A	C5-C6-N1	-5.79	114.81	117.70
25	BA	1488	G	N1-C6-O6	5.79	123.37	119.90
18	CR	64	ARG	NE-CZ-NH2	-5.79	117.41	120.30
25	DA	2560	C	C6-N1-C2	5.79	122.61	120.30
25	BA	2081	A	O4'-C1'-N9	5.79	112.83	108.20
1	CA	561	U	C5-C4-O4	-5.79	122.43	125.90
1	CA	1366	C	C2-N3-C4	5.79	122.79	119.90
25	BA	2383	G	C5-C6-O6	-5.78	125.13	128.60
1	AA	553	A	O5'-P-OP2	-5.78	100.50	105.70
1	AA	1296	C	N3-C2-O2	5.78	125.95	121.90
25	BA	1745	A	N9-C4-C5	-5.78	103.49	105.80
1	CA	300	A	N1-C6-N6	-5.78	115.13	118.60
25	DA	2207	G	C4-N9-C1'	5.78	134.02	126.50
25	DA	2893	G	C5-C6-O6	-5.78	125.13	128.60
25	BA	1821	C	N3-C4-C5	5.78	124.21	121.90
25	BA	2228	G	P-O3'-C3'	5.78	126.64	119.70
25	DA	1937	A	N7-C8-N9	-5.78	110.91	113.80
25	DA	2321	G	C5-C6-N1	-5.78	108.61	111.50
1	AA	579	G	OP2-P-O3'	5.78	117.91	105.20
25	BA	803	C	OP2-P-O3'	5.78	117.91	105.20
25	DA	198	C	O5'-P-OP1	-5.78	100.50	105.70
25	DA	528	A	N3-C4-N9	-5.78	122.78	127.40
25	BA	2407	C	C5-C4-N4	-5.78	116.16	120.20
1	CA	1044	A	C6-N1-C2	5.78	122.06	118.60
25	BA	1725	G	C8-N9-C4	-5.77	104.09	106.40
1	CA	687	A	P-O3'-C3'	5.77	126.63	119.70
25	DA	2805	G	N1-C6-O6	-5.77	116.44	119.90
1	AA	1154	G	O4'-C1'-N9	-5.77	103.58	108.20
25	BA	741	U	N3-C2-O2	-5.77	118.16	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1067	A	P-O3'-C3'	5.77	126.62	119.70
25	BA	856	G	N1-C6-O6	-5.77	116.44	119.90
25	BA	2268	G	C2-N3-C4	-5.77	109.02	111.90
25	BA	2343	G	C2-N3-C4	-5.77	109.02	111.90
25	DA	1123	C	C6-N1-C2	5.77	122.61	120.30
1	AA	1512	U	N3-C2-O2	-5.77	118.16	122.20
25	BA	2565	G	N3-C4-N9	5.77	129.46	126.00
1	AA	280	C	C6-N1-C2	5.76	122.61	120.30
1	AA	1447	A	O4'-C1'-N9	5.76	112.81	108.20
23	CX	34	C	C5-C6-N1	5.76	123.88	121.00
1	AA	191	G	C6-C5-N7	-5.76	126.94	130.40
23	CX	60	U	O5'-P-OP2	-5.76	100.51	105.70
1	AA	921	U	C2-N3-C4	5.76	130.46	127.00
25	BA	1567	G	C8-N9-C4	-5.76	104.10	106.40
1	CA	204	U	C2-N1-C1'	5.76	124.61	117.70
25	BA	866	A	N1-C6-N6	-5.76	115.14	118.60
25	BA	1858	C	C5-C4-N4	5.75	124.23	120.20
1	AA	720	C	N1-C2-O2	5.75	122.35	118.90
1	AA	719	C	C6-N1-C2	-5.75	118.00	120.30
25	BA	12	U	C2-N1-C1'	5.75	124.60	117.70
25	BA	1551	C	C6-N1-C2	-5.75	118.00	120.30
1	AA	527	G	N3-C4-C5	5.75	131.47	128.60
1	CA	266	G	N1-C6-O6	5.75	123.35	119.90
25	DA	62	C	C5-C6-N1	-5.75	118.13	121.00
25	DA	827	U	O5'-P-OP2	-5.75	100.53	105.70
1	AA	1125	U	C6-N1-C2	5.74	124.45	121.00
25	BA	693	G	N1-C6-O6	5.74	123.34	119.90
25	DA	693	C	C6-N1-C2	5.74	122.60	120.30
25	DA	2261	C	C5-C4-N4	-5.74	116.18	120.20
25	DA	2645	G	N3-C2-N2	5.74	123.92	119.90
1	AA	1246	C	C6-N1-C2	-5.74	118.00	120.30
1	CA	117	G	N3-C4-N9	5.74	129.44	126.00
25	DA	856	C	C5-C6-N1	5.74	123.87	121.00
25	DA	1432	C	C6-N1-C2	5.74	122.59	120.30
1	AA	1516	G	C4-N9-C1'	-5.74	119.04	126.50
25	DA	1328	G	N9-C4-C5	-5.73	103.11	105.40
25	BA	592	U	C5-C6-N1	-5.73	119.83	122.70
25	DA	2595	G	N1-C6-O6	5.73	123.34	119.90
25	BA	555	G	N7-C8-N9	5.73	115.97	113.10
25	BA	2521	G	N7-C8-N9	-5.73	110.23	113.10
25	DA	2630	G	N3-C4-N9	-5.73	122.56	126.00
26	DB	51	G	C4-N9-C1'	5.73	133.95	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	894	U	C2-N1-C1'	-5.73	110.83	117.70
47	B1	21	ARG	NE-CZ-NH2	-5.73	117.44	120.30
1	CA	980	C	O4'-C1'-N1	5.72	112.78	108.20
1	CA	1311	G	C4-C5-N7	-5.72	108.51	110.80
23	CX	17	C	C2-N1-C1'	5.72	125.10	118.80
23	AX	4	G	N9-C4-C5	-5.72	103.11	105.40
25	DA	1746	G	O5'-P-OP1	5.72	117.57	110.70
26	DB	72	G	C5-C6-O6	-5.72	125.17	128.60
1	CA	1158	C	N1-C2-O2	5.72	122.33	118.90
25	DA	1681	G	N3-C4-C5	5.72	131.46	128.60
1	AA	199	G	C8-N9-C4	5.72	108.69	106.40
25	BA	1011	G	N1-C6-O6	-5.72	116.47	119.90
25	BA	1859	G	OP2-P-O3'	5.72	117.78	105.20
25	DA	2554	U	N3-C4-O4	5.72	123.40	119.40
25	BA	2802	C	N1-C2-O2	-5.71	115.47	118.90
25	DA	188	G	C5-C6-O6	-5.71	125.17	128.60
25	DA	389	G	C5-C6-O6	-5.71	125.17	128.60
25	BA	2567	U	N3-C2-O2	5.71	126.20	122.20
25	BA	2692	C	N3-C4-C5	-5.71	119.62	121.90
25	DA	2464	C	C6-N1-C2	5.71	122.58	120.30
25	DA	830	G	C5-C6-N1	5.71	114.35	111.50
25	DA	1721	G	N3-C2-N2	5.70	123.89	119.90
25	DA	2586	C	N3-C4-N4	5.70	121.99	118.00
25	BA	2711	C	N3-C2-O2	-5.70	117.91	121.90
25	DA	1964	G	O5'-P-OP1	-5.70	100.57	105.70
1	CA	906	G	C5-C6-O6	-5.70	125.18	128.60
1	CA	1518	A	N9-C4-C5	5.70	108.08	105.80
1	AA	990	C	C6-N1-C2	-5.70	118.02	120.30
1	AA	1026	G	C8-N9-C1'	-5.70	119.60	127.00
25	BA	1068	G	N3-C2-N2	-5.70	115.91	119.90
25	BA	1287	A	C8-N9-C4	5.70	108.08	105.80
25	BA	451	G	C5-C6-O6	-5.69	125.18	128.60
25	DA	645	C	C6-N1-C2	-5.69	118.02	120.30
25	DA	2635	C	C4-C5-C6	5.69	120.25	117.40
1	CA	893	C	N1-C2-O2	5.69	122.32	118.90
25	BA	1153	G	C2-N3-C4	5.69	114.75	111.90
25	BA	1405	A	C2-N3-C4	5.69	113.44	110.60
35	BP	59	LEU	CA-CB-CG	5.69	128.39	115.30
1	CA	1033	G	N1-C6-O6	5.69	123.31	119.90
1	CA	1258	G	O4'-C1'-N9	5.69	112.75	108.20
23	CX	46	G	C4-C5-N7	-5.69	108.52	110.80
25	BA	1605	A	N3-C4-N9	-5.69	122.85	127.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	165	C	C6-N1-C2	-5.69	118.03	120.30
1	CA	1163	C	C2-N1-C1'	5.68	125.05	118.80
26	BB	108	U	C5-C6-N1	-5.68	119.86	122.70
25	DA	807	U	OP1-P-OP2	-5.68	111.08	119.60
25	BA	670	C	C6-N1-C2	-5.68	118.03	120.30
25	BA	1859	G	C5-C6-O6	5.68	132.01	128.60
25	BA	2375	C	C6-N1-C2	5.68	122.57	120.30
25	DA	179	G	N7-C8-N9	-5.68	110.26	113.10
1	AA	1002	G	C8-N9-C4	-5.68	104.13	106.40
1	AA	1149	C	C6-N1-C2	-5.68	118.03	120.30
26	DB	29	A	C8-N9-C4	-5.68	103.53	105.80
25	BA	553	A	C6-N1-C2	5.68	122.01	118.60
25	BA	712	C	C6-N1-C2	5.68	122.57	120.30
1	AA	509	A	C8-N9-C4	-5.67	103.53	105.80
1	AA	1030(B)	C	O4'-C1'-N1	5.67	112.74	108.20
25	BA	1423	G	C5-C6-O6	5.67	132.00	128.60
25	DA	973	A	N1-C2-N3	-5.67	126.46	129.30
1	AA	536	C	O5'-P-OP2	-5.67	100.59	105.70
25	BA	600	G	C8-N9-C4	5.67	108.67	106.40
25	BA	2662	U	N3-C4-O4	-5.67	115.43	119.40
25	BA	719	C	OP2-P-O3'	5.67	117.68	105.20
25	BA	2700	U	N3-C4-O4	5.67	123.37	119.40
1	CA	1002	G	N9-C4-C5	5.67	107.67	105.40
23	CX	46	G	N1-C2-N2	5.67	121.30	116.20
1	CA	1273	G	C6-C5-N7	-5.67	127.00	130.40
25	DA	799	G	C8-N9-C4	-5.67	104.13	106.40
25	BA	94	G	O5'-P-OP2	-5.67	100.60	105.70
1	CA	1311	G	N3-C2-N2	-5.67	115.93	119.90
28	DE	72	VAL	C-N-CA	5.67	135.86	121.70
25	BA	725	C	N3-C4-C5	5.67	124.17	121.90
23	CX	8	U	N1-C2-O2	5.67	126.77	122.80
1	AA	1276	G	C4-N9-C1'	5.66	133.86	126.50
25	BA	1578	C	C5-C6-N1	5.66	123.83	121.00
1	AA	1006	C	C5-C6-N1	5.66	123.83	121.00
1	CA	527	G	C5-C6-O6	5.66	132.00	128.60
1	CA	1165	C	C5-C6-N1	5.66	123.83	121.00
25	DA	981	A	N9-C4-C5	5.66	108.06	105.80
25	DA	920	G	C8-N9-C4	-5.66	104.14	106.40
25	DA	1681	G	N1-C6-O6	5.66	123.30	119.90
1	AA	818	G	C4-C5-N7	-5.66	108.54	110.80
25	DA	1135	C	C6-N1-C2	5.66	122.56	120.30
25	DA	2769	C	C5-C4-N4	5.66	124.16	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	1926	G	C5-C6-O6	5.66	131.99	128.60
25	BA	2601	A	N9-C4-C5	-5.66	103.54	105.80
1	CA	1180	A	N1-C2-N3	5.66	132.13	129.30
1	AA	422	C	O4'-C1'-N1	5.65	112.72	108.20
1	AA	749	C	C5-C6-N1	5.65	123.83	121.00
23	CX	76	A	C4-C5-C6	5.65	119.83	117.00
25	BA	2094	G	C4-C5-N7	5.65	113.06	110.80
26	BB	76	G	C8-N9-C4	5.65	108.66	106.40
1	CA	1307	U	C5-C4-O4	-5.65	122.51	125.90
25	BA	2211	U	C5-C6-N1	5.65	125.52	122.70
25	BA	459	A	N1-C6-N6	5.65	121.99	118.60
25	BA	1871	G	C5-C6-O6	5.65	131.99	128.60
25	DA	1840	G	C5-C6-N1	-5.65	108.68	111.50
25	DA	2003	G	OP1-P-OP2	5.65	128.07	119.60
25	DA	2755	C	C5-C6-N1	5.65	123.82	121.00
25	BA	2627	U	N1-C2-O2	5.64	126.75	122.80
25	DA	906	G	N3-C4-N9	-5.64	122.61	126.00
25	BA	273	G	N3-C4-N9	5.64	129.38	126.00
25	BA	2756	C	C6-N1-C2	-5.64	118.04	120.30
25	DA	797	C	C5-C4-N4	-5.64	116.25	120.20
1	AA	1131	G	N7-C8-N9	5.64	115.92	113.10
9	CI	105	ASP	CB-CG-OD1	5.64	123.38	118.30
1	AA	561	U	N1-C2-N3	-5.64	111.52	114.90
1	AA	998	G	N3-C2-N2	-5.64	115.95	119.90
25	BA	587	C	N3-C2-O2	5.64	125.85	121.90
38	BS	60	GLY	N-CA-C	5.64	127.19	113.10
1	CA	1326	C	N1-C2-O2	-5.64	115.52	118.90
25	BA	1476	C	N1-C2-O2	5.63	122.28	118.90
1	CA	1388	C	C6-N1-C2	5.63	122.55	120.30
25	BA	2238	C	C5-C6-N1	-5.63	118.18	121.00
25	BA	2466	G	N1-C6-O6	-5.63	116.52	119.90
25	DA	139	G	C8-N9-C4	-5.63	104.15	106.40
25	BA	101	A	C8-N9-C4	5.63	108.05	105.80
25	BA	822	G	C5-C6-O6	-5.63	125.22	128.60
25	BA	1220	U	P-O3'-C3'	5.63	126.45	119.70
25	DA	981	A	C4-C5-N7	-5.63	107.89	110.70
1	CA	5	U	C5-C6-N1	5.62	125.51	122.70
23	CX	46	G	C4-N9-C1'	-5.62	119.19	126.50
1	AA	187	C	C2-N1-C1'	5.62	124.98	118.80
25	BA	2518	U	O4'-C1'-N1	5.62	112.70	108.20
25	DA	9	U	C5-C6-N1	5.62	125.51	122.70
25	DA	894	C	N1-C2-O2	5.62	122.27	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1026	G	N3-C4-C5	-5.62	125.79	128.60
25	DA	1437	C	C6-N1-C2	-5.62	118.05	120.30
25	DA	63	U	C6-N1-C1'	5.62	129.06	121.20
25	DA	141	A	C8-N9-C4	-5.62	103.55	105.80
1	AA	192	U	O4'-C1'-N1	5.62	112.69	108.20
23	AX	52	G	O4'-C1'-N9	5.62	112.69	108.20
1	CA	1521	G	N3-C4-C5	-5.62	125.79	128.60
23	AX	22	G	N7-C8-N9	5.61	115.91	113.10
25	BA	2028	C	O5'-P-OP1	-5.61	100.65	105.70
25	BA	2777	A	N1-C6-N6	-5.61	115.23	118.60
25	BA	2603	C	O5'-P-OP2	5.61	117.43	110.70
25	DA	1983	C	C2-N3-C4	-5.61	117.10	119.90
1	AA	63	C	N1-C2-O2	5.61	122.27	118.90
25	BA	2093	A	N7-C8-N9	-5.61	111.00	113.80
25	BA	2513	C	C6-N1-C2	5.61	122.54	120.30
25	BA	362	G	N3-C4-C5	-5.61	125.80	128.60
25	BA	2044	U	C5-C4-O4	-5.61	122.54	125.90
1	CA	999	C	C2-N1-C1'	5.61	124.97	118.80
25	DA	1204	A	C5-N7-C8	-5.61	101.10	103.90
25	DA	1997	G	N1-C6-O6	-5.61	116.54	119.90
25	BA	423	G	N1-C6-O6	5.60	123.26	119.90
25	DA	467	G	N7-C8-N9	-5.60	110.30	113.10
25	BA	1719	C	N3-C4-N4	5.60	121.92	118.00
1	CA	1125	U	C6-N1-C2	-5.60	117.64	121.00
25	DA	2286	A	C6-C5-N7	-5.60	128.38	132.30
25	DA	2689	U	P-O3'-C3'	5.60	126.42	119.70
25	DA	1445(A)	C	C6-N1-C2	-5.60	118.06	120.30
25	BA	2376	C	C6-N1-C2	5.60	122.54	120.30
1	CA	1432	G	C5-C6-O6	5.60	131.96	128.60
25	DA	180	G	N3-C4-N9	5.60	129.36	126.00
1	CA	1415	G	O5'-P-OP2	-5.60	100.66	105.70
25	DA	2687	U	N3-C2-O2	5.60	126.12	122.20
25	BA	553	A	C4-C5-N7	5.60	113.50	110.70
25	BA	1823	G	N3-C4-N9	-5.59	122.64	126.00
25	BA	2229	A	N1-C6-N6	5.59	121.96	118.60
1	CA	79	G	N3-C4-N9	-5.59	122.64	126.00
1	CA	398	C	C5-C4-N4	5.59	124.12	120.20
1	AA	560	U	C6-N1-C2	-5.59	117.64	121.00
1	CA	1466	C	C6-N1-C2	-5.59	118.06	120.30
1	CA	1502	A	C6-C5-N7	-5.59	128.39	132.30
25	DA	956	G	N7-C8-N9	5.59	115.90	113.10
1	CA	1034	G	C5-C6-O6	5.59	131.95	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	2299	G	N3-C4-C5	5.59	131.40	128.60
1	AA	175	C	N1-C2-O2	5.59	122.25	118.90
25	BA	989	G	C8-N9-C4	-5.59	104.17	106.40
25	BA	2651	A	N9-C4-C5	-5.59	103.56	105.80
25	BA	1093	G	C6-C5-N7	-5.59	127.05	130.40
25	BA	1176	U	N3-C2-O2	-5.59	118.29	122.20
25	BA	2065	C	N1-C2-O2	-5.59	115.55	118.90
25	BA	2687	A	C8-N9-C4	5.59	108.03	105.80
25	BA	94	G	OP1-P-OP2	5.58	127.98	119.60
23	AX	46	G	C5-C6-O6	-5.58	125.25	128.60
25	BA	1476	C	C6-N1-C2	-5.58	118.07	120.30
25	BA	523	G	O5'-P-OP2	5.58	117.39	110.70
1	CA	427	U	C2-N1-C1'	5.58	124.39	117.70
1	AA	353	A	OP2-P-O3'	5.58	117.47	105.20
25	BA	1565	G	OP2-P-O3'	5.58	117.47	105.20
25	BA	1606	G	C8-N9-C1'	5.58	134.25	127.00
1	CA	1023	G	N3-C2-N2	5.58	123.80	119.90
25	DA	2827	C	C5-C6-N1	-5.58	118.21	121.00
1	CA	1502	A	N1-C2-N3	5.57	132.09	129.30
25	DA	2056	G	N3-C4-N9	5.57	129.34	126.00
1	AA	346	G	N9-C4-C5	5.57	107.63	105.40
25	BA	96	C	C6-N1-C2	-5.57	118.07	120.30
25	BA	1051	C	N1-C2-O2	5.57	122.24	118.90
1	CA	1036	G	C4-N9-C1'	5.57	133.74	126.50
23	CX	20	U	C2-N1-C1'	5.57	124.38	117.70
23	AX	14	A	C8-N9-C1'	-5.57	117.68	127.70
25	BA	538	A	C6-C5-N7	-5.57	128.40	132.30
25	BA	2250	G	OP1-P-OP2	5.57	127.95	119.60
1	AA	175	C	C6-N1-C2	-5.56	118.07	120.30
1	AA	1074	G	N1-C6-O6	5.56	123.24	119.90
25	BA	2902	G	P-O3'-C3'	5.56	126.38	119.70
1	CA	1002	G	N1-C2-N2	5.56	121.20	116.20
1	CA	1311	G	C8-N9-C1'	5.56	134.23	127.00
25	BA	1578	C	C2-N1-C1'	5.56	124.92	118.80
9	CI	50	LEU	CA-CB-CG	5.56	128.09	115.30
25	DA	1819	A	C8-N9-C4	5.56	108.02	105.80
25	DA	141	A	N1-C2-N3	5.56	132.08	129.30
25	DA	195	A	N1-C6-N6	-5.56	115.27	118.60
25	BA	552	C	O4'-C1'-N1	5.56	112.64	108.20
1	CA	354	G	C4-N9-C1'	5.56	133.72	126.50
25	DA	205	G	N3-C4-C5	5.56	131.38	128.60
25	DA	1662	C	C5-C6-N1	-5.56	118.22	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	194	G	C8-N9-C4	5.55	108.62	106.40
25	BA	1045	U	O5'-P-OP2	-5.55	100.70	105.70
25	BA	1218	G	O4'-C1'-N9	5.55	112.64	108.20
25	BA	1237	G	C8-N9-C4	5.55	108.62	106.40
1	CA	528	C	C6-N1-C2	-5.55	118.08	120.30
25	BA	2601	A	N7-C8-N9	-5.55	111.03	113.80
1	CA	754	C	N1-C2-O2	5.55	122.23	118.90
25	DA	2321	G	C8-N9-C1'	-5.55	119.78	127.00
1	AA	347	G	C4-N9-C1'	5.55	133.71	126.50
25	BA	2549	U	N3-C4-O4	-5.55	115.52	119.40
1	AA	660	G	C4-C5-N7	5.55	113.02	110.80
25	DA	1696	G	O5'-P-OP2	-5.55	100.71	105.70
25	BA	2441	G	O5'-P-OP1	5.54	117.35	110.70
1	CA	740	U	C5-C6-N1	-5.54	119.93	122.70
1	CA	1002	G	C6-C5-N7	5.54	133.73	130.40
1	AA	1502	A	C5-N7-C8	-5.54	101.13	103.90
25	DA	583	G	N1-C6-O6	5.54	123.23	119.90
25	DA	2521	C	N1-C2-O2	-5.54	115.57	118.90
1	CA	1141	C	C6-N1-C1'	5.54	127.45	120.80
25	DA	1573	G	N7-C8-N9	-5.54	110.33	113.10
26	DB	115	G	N7-C8-N9	-5.54	110.33	113.10
1	AA	188	C	C2-N1-C1'	5.54	124.89	118.80
1	AA	369	C	C6-N1-C2	-5.54	118.08	120.30
25	BA	2393	C	O5'-P-OP2	-5.54	100.71	105.70
1	CA	60	A	OP1-P-O3'	5.54	117.39	105.20
1	AA	161	A	N7-C8-N9	5.54	116.57	113.80
1	AA	460	G	C5-N7-C8	-5.54	101.53	104.30
25	BA	50	G	C4-C5-N7	-5.54	108.58	110.80
25	BA	1001	G	C5-C6-O6	5.54	131.92	128.60
25	BA	2109	G	O5'-P-OP1	5.54	117.34	110.70
25	DA	783	A	C4-C5-C6	5.54	119.77	117.00
1	AA	167	G	C5-N7-C8	-5.54	101.53	104.30
25	DA	1204	A	C5-C6-N1	-5.54	114.93	117.70
25	BA	375	G	N1-C6-O6	5.53	123.22	119.90
25	BA	818	G	C8-N9-C4	5.53	108.61	106.40
25	BA	1255	A	P-O3'-C3'	5.53	126.34	119.70
25	BA	1991	A	O5'-P-OP2	5.53	117.34	110.70
25	BA	2229	A	C5-N7-C8	-5.53	101.13	103.90
25	BA	2890	C	O5'-P-OP1	-5.53	100.72	105.70
25	DA	435	C	OP1-P-OP2	5.53	127.90	119.60
25	DA	2061	G	C4-C5-N7	5.53	113.01	110.80
1	AA	766	A	C8-N9-C4	5.53	108.01	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	AD	174	LEU	CA-CB-CG	5.53	128.02	115.30
25	DA	179	G	C8-N9-C4	5.53	108.61	106.40
25	BA	223	C	C6-N1-C2	-5.53	118.09	120.30
29	DF	17	ARG	NE-CZ-NH1	-5.53	117.54	120.30
1	AA	872	A	N1-C6-N6	5.53	121.92	118.60
25	BA	948	C	C6-N1-C2	5.53	122.51	120.30
25	BA	1314	A	OP2-P-O3'	5.53	117.36	105.20
1	AA	1087	G	N7-C8-N9	5.52	115.86	113.10
25	BA	2804	C	C5-C6-N1	5.52	123.76	121.00
1	CA	1311	G	C4-N9-C1'	-5.52	119.32	126.50
25	DA	2713	A	C8-N9-C4	-5.52	103.59	105.80
25	BA	1668	G	O5'-P-OP1	-5.52	100.73	105.70
25	BA	2876	U	C4-C5-C6	5.52	123.01	119.70
1	CA	60	A	P-O3'-C3'	5.52	126.33	119.70
1	CA	1012	U	N1-C2-N3	5.52	118.21	114.90
1	CA	1262	C	N1-C2-O2	5.52	122.21	118.90
25	BA	2323	A	N1-C6-N6	-5.52	115.29	118.60
25	DA	608	A	C8-N9-C4	-5.52	103.59	105.80
25	DA	2063	C	N1-C2-O2	-5.52	115.59	118.90
26	DB	72	G	N1-C6-O6	5.52	123.21	119.90
25	BA	616	G	C5-C6-O6	5.52	131.91	128.60
25	BA	2375	C	C5-C6-N1	-5.52	118.24	121.00
1	AA	1165	C	P-O3'-C3'	5.52	126.32	119.70
1	CA	1007	C	N1-C2-O2	5.52	122.21	118.90
25	DA	631	A	OP1-P-O3'	5.52	117.33	105.20
1	AA	266	G	C4-C5-N7	5.51	113.00	110.80
1	AA	460	G	N1-C6-O6	5.51	123.21	119.90
1	AA	627	G	N1-C6-O6	5.51	123.21	119.90
25	BA	670	C	C2-N3-C4	5.51	122.66	119.90
1	CA	1043	C	C5-C4-N4	5.51	124.06	120.20
1	CA	1500	A	N1-C6-N6	5.51	121.91	118.60
1	AA	1510	U	N1-C2-N3	-5.51	111.59	114.90
1	CA	1003	G	C8-N9-C1'	-5.51	119.84	127.00
25	DA	733	G	C6-C5-N7	-5.51	127.09	130.40
25	DA	901	A	C8-N9-C4	-5.51	103.60	105.80
25	DA	2422	A	C5-C6-N6	5.51	128.11	123.70
25	DA	553	G	C4-C5-N7	-5.51	108.60	110.80
1	AA	915	A	C8-N9-C4	5.51	108.00	105.80
25	BA	1652	G	C8-N9-C4	5.51	108.60	106.40
25	BA	2421	G	N3-C4-C5	-5.51	125.85	128.60
25	BA	2515	A	C2-N3-C4	5.51	113.35	110.60
25	BA	2713	C	N3-C2-O2	-5.50	118.05	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	248	G	C5-C6-O6	-5.50	125.30	128.60
23	AX	46	G	C2-N3-C4	5.50	114.65	111.90
1	CA	820	U	N1-C2-N3	5.50	118.20	114.90
25	DA	1330	C	N3-C2-O2	5.50	125.75	121.90
25	DA	2241	A	N1-C6-N6	-5.50	115.30	118.60
25	BA	1425	A	C8-N9-C4	5.50	108.00	105.80
25	BA	2389	A	N3-C4-C5	5.50	130.65	126.80
25	DA	1977	A	N1-C6-N6	-5.50	115.30	118.60
25	DA	2595	G	N9-C4-C5	-5.50	103.20	105.40
25	BA	1404	G	N3-C4-C5	-5.50	125.85	128.60
25	BA	2495	C	C5-C6-N1	5.50	123.75	121.00
25	BA	1824	C	N3-C4-N4	-5.49	114.16	118.00
1	AA	1154	G	C4-C5-N7	5.49	113.00	110.80
1	AA	547	A	N1-C6-N6	-5.49	115.31	118.60
1	CA	1054	C	C6-N1-C2	-5.49	118.10	120.30
1	CA	1205	U	C6-N1-C2	-5.49	117.71	121.00
25	DA	2252	G	N3-C4-N9	-5.49	122.71	126.00
25	BA	2540	U	C6-N1-C2	-5.49	117.71	121.00
25	DA	1937	A	N1-C6-N6	5.49	121.89	118.60
25	DA	215	G	N1-C6-O6	-5.49	116.61	119.90
1	AA	818	G	N1-C6-O6	-5.49	116.61	119.90
25	DA	1960	A	C8-N9-C4	5.49	107.99	105.80
1	AA	660	G	N9-C4-C5	-5.48	103.21	105.40
25	BA	50	G	N1-C6-O6	-5.48	116.61	119.90
1	AA	754	C	N3-C2-O2	-5.48	118.06	121.90
46	B0	12	ASN	N-CA-C	5.48	125.81	111.00
25	DA	236	C	C2-N3-C4	-5.48	117.16	119.90
25	DA	2352	A	O5'-P-OP1	-5.48	100.77	105.70
25	BA	2004	C	OP1-P-OP2	5.48	127.82	119.60
1	CA	894	G	C2-N3-C4	-5.48	109.16	111.90
26	DB	2	C	C6-N1-C2	-5.48	118.11	120.30
1	AA	1524	C	C5-C6-N1	-5.48	118.26	121.00
25	BA	553	A	C5-C6-N1	-5.48	114.96	117.70
1	AA	97	G	N3-C4-C5	-5.48	125.86	128.60
25	BA	1986	G	N3-C4-N9	5.48	129.29	126.00
25	BA	1269	G	N1-C6-O6	-5.47	116.62	119.90
25	BA	2421	G	N3-C4-N9	5.47	129.28	126.00
25	BA	2531	U	C5-C4-O4	-5.47	122.61	125.90
1	CA	915	A	N1-C6-N6	-5.47	115.31	118.60
25	DA	1022	G	C6-C5-N7	5.47	133.68	130.40
25	DA	2321	G	C6-N1-C2	5.47	128.38	125.10
1	AA	1143	G	C8-N9-C4	-5.47	104.21	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	1769	G	N1-C6-O6	-5.47	116.62	119.90
1	CA	161	A	N9-C4-C5	5.47	107.99	105.80
1	CA	552	U	C5-C4-O4	5.47	129.18	125.90
25	DA	648	G	N1-C6-O6	5.47	123.18	119.90
25	DA	2260	C	C2-N3-C4	-5.47	117.17	119.90
1	AA	804	U	C5-C6-N1	-5.47	119.97	122.70
23	AX	46	G	N3-C2-N2	-5.47	116.07	119.90
25	BA	1588	G	N3-C4-C5	-5.47	125.87	128.60
25	BA	2445	A	O5'-P-OP2	5.47	117.26	110.70
25	BA	1573	G	C5-C6-N1	-5.47	108.77	111.50
25	BA	1665	G	N1-C6-O6	5.47	123.18	119.90
25	BA	2268	G	N3-C4-C5	5.47	131.33	128.60
25	DA	1544	A	C2-N3-C4	5.47	113.33	110.60
25	DA	1653	G	N3-C4-N9	5.47	129.28	126.00
1	AA	343	U	N1-C2-N3	5.46	118.18	114.90
1	AA	1114	C	C6-N1-C2	-5.46	118.11	120.30
25	BA	493	G	O5'-P-OP2	-5.46	100.78	105.70
25	BA	1986	G	N3-C2-N2	5.46	123.72	119.90
25	BA	2609	G	C8-N9-C4	-5.46	104.21	106.40
25	DA	1913	A	C5-C6-N1	5.46	120.43	117.70
1	AA	736	C	C2-N1-C1'	5.46	124.81	118.80
1	AA	446	G	C5-C6-O6	-5.46	125.32	128.60
1	AA	266	G	C5-N7-C8	-5.46	101.57	104.30
25	BA	613	A	N1-C6-N6	5.46	121.88	118.60
25	BA	2036	A	N7-C8-N9	-5.46	111.07	113.80
25	DA	154(A)	C	N1-C2-O2	5.46	122.18	118.90
25	DA	738	G	C5-C6-N1	5.46	114.23	111.50
25	DA	1256	G	N3-C4-N9	5.46	129.28	126.00
1	AA	146	G	C4-N9-C1'	5.46	133.60	126.50
1	AA	167	G	C8-N9-C1'	-5.46	119.90	127.00
25	BA	1404	G	C8-N9-C4	-5.46	104.22	106.40
1	CA	400	C	C6-N1-C2	5.46	122.48	120.30
25	DA	145	G	N1-C6-O6	5.46	123.17	119.90
25	BA	1390	G	N1-C6-O6	5.46	123.17	119.90
25	BA	1653	C	C5-C4-N4	-5.46	116.38	120.20
25	BA	2036	A	N9-C4-C5	-5.46	103.62	105.80
1	CA	1338	G	N3-C4-C5	-5.46	125.87	128.60
25	BA	1744	G	N1-C6-O6	5.45	123.17	119.90
1	CA	1312	G	N3-C4-N9	-5.45	122.73	126.00
1	AA	1030(B)	C	C6-N1-C1'	-5.45	114.26	120.80
25	BA	1653	C	N3-C4-N4	5.45	121.81	118.00
25	DA	2735	G	N1-C6-O6	5.45	123.17	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	2101	U	N1-C2-N3	5.45	118.17	114.90
25	BA	2331	G	N3-C4-C5	5.45	131.32	128.60
25	BA	2370	G	C8-N9-C4	5.45	108.58	106.40
25	DA	2347	C	N3-C2-O2	-5.45	118.09	121.90
25	DA	2825	C	O5'-P-OP2	5.45	117.24	110.70
25	BA	1068	G	C8-N9-C1'	5.45	134.08	127.00
23	CX	46	G	C5-C6-O6	-5.45	125.33	128.60
25	DA	482	A	O5'-P-OP2	-5.45	100.80	105.70
25	DA	2406	U	O4'-C1'-N1	-5.45	103.84	108.20
25	BA	2556	G	N1-C6-O6	5.45	123.17	119.90
25	DA	1526	G	N1-C6-O6	5.45	123.17	119.90
25	DA	1261	C	N3-C4-C5	5.44	124.08	121.90
25	BA	2245	U	C5-C6-N1	-5.44	119.98	122.70
1	AA	1137	C	C2-N3-C4	5.44	122.62	119.90
25	DA	312	G	C5-C6-O6	-5.44	125.34	128.60
1	CA	32	A	C8-N9-C4	-5.44	103.62	105.80
25	DA	796	C	N3-C4-C5	5.44	124.08	121.90
25	DA	1984	G	O5'-P-OP2	-5.44	100.81	105.70
25	BA	2690	C	N3-C4-C5	-5.44	119.73	121.90
1	CA	266	G	P-O3'-C3'	5.44	126.22	119.70
1	CA	1077	G	C8-N9-C4	5.44	108.57	106.40
25	DA	2325	G	N1-C6-O6	5.44	123.16	119.90
1	AA	1502	A	O5'-P-OP2	-5.43	100.81	105.70
47	B1	21	ARG	NE-CZ-NH1	5.43	123.02	120.30
1	CA	1017	G	N3-C4-C5	5.43	131.32	128.60
25	DA	216	A	C2-N3-C4	-5.43	107.88	110.60
25	DA	2636	U	C2-N1-C1'	5.43	124.22	117.70
25	BA	2591	C	N3-C4-C5	5.43	124.07	121.90
25	BA	507	G	C8-N9-C4	-5.43	104.23	106.40
1	AA	893	C	N1-C2-O2	5.43	122.16	118.90
25	BA	1606	G	N3-C4-C5	5.43	131.31	128.60
25	DA	552	G	C8-N9-C1'	5.43	134.06	127.00
25	DA	1510	G	C6-C5-N7	-5.43	127.14	130.40
25	DA	2628	C	C6-N1-C2	5.43	122.47	120.30
25	DA	2828	C	C5-C6-N1	-5.43	118.29	121.00
1	AA	1502	A	C4-C5-N7	5.43	113.41	110.70
25	DA	2724	C	N1-C2-O2	-5.43	115.64	118.90
26	DB	119	G	O4'-C1'-N9	5.43	112.54	108.20
1	AA	1054	C	N1-C2-O2	5.42	122.16	118.90
25	BA	1243	U	N3-C2-O2	-5.42	118.40	122.20
1	CA	1028	C	C5-C6-N1	5.42	123.71	121.00
25	DA	743	G	C8-N9-C4	-5.42	104.23	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	873	U	OP2-P-O3'	5.42	117.12	105.20
25	BA	1215	G	N1-C6-O6	5.42	123.15	119.90
25	DA	2261	C	N3-C4-N4	5.42	121.80	118.00
1	AA	1389	C	N3-C2-O2	5.42	125.69	121.90
25	BA	1255	A	C8-N9-C4	-5.42	103.63	105.80
25	DA	947	G	N9-C4-C5	5.42	107.57	105.40
25	DA	2667	C	C6-N1-C2	-5.42	118.13	120.30
26	DB	82	G	C6-C5-N7	5.42	133.65	130.40
25	DA	31	C	C6-N1-C2	-5.42	118.13	120.30
25	BA	2616	U	C5-C4-O4	5.42	129.15	125.90
25	DA	312	G	N1-C6-O6	5.42	123.15	119.90
25	BA	2228	G	C4-N9-C1'	5.41	133.54	126.50
25	DA	2893	G	C4-C5-N7	5.41	112.97	110.80
1	AA	1442	G	P-O3'-C3'	5.41	126.19	119.70
23	AX	35	A	N1-C6-N6	-5.41	115.35	118.60
25	DA	215	G	C5-C6-O6	5.41	131.85	128.60
25	DA	1115	G	N3-C4-C5	5.41	131.31	128.60
25	BA	799	A	OP1-P-OP2	-5.41	111.48	119.60
25	BA	2453	C	N3-C2-O2	-5.41	118.11	121.90
1	CA	397	A	N1-C6-N6	-5.41	115.36	118.60
23	CX	22	G	C5-C6-N1	5.41	114.20	111.50
25	BA	2428	C	C4-C5-C6	-5.41	114.70	117.40
25	BA	2729	U	N3-C2-O2	-5.41	118.42	122.20
25	DA	2635	C	C5-C6-N1	-5.41	118.30	121.00
1	AA	831	U	C5-C6-N1	5.40	125.40	122.70
25	BA	12	U	C6-N1-C2	-5.40	117.76	121.00
25	BA	1153	G	N3-C4-N9	5.40	129.24	126.00
25	BA	1431	G	O4'-C1'-N9	5.40	112.52	108.20
25	BA	2851	C	N1-C2-O2	5.40	122.14	118.90
25	DA	22	C	N3-C4-C5	5.40	124.06	121.90
25	BA	81	G	C5-C6-O6	5.40	131.84	128.60
25	BA	852	G	O5'-P-OP1	-5.40	100.84	105.70
25	BA	2229	A	N7-C8-N9	5.40	116.50	113.80
1	CA	1259	C	C6-N1-C2	-5.40	118.14	120.30
25	DA	130	C	N3-C2-O2	-5.40	118.12	121.90
25	DA	1284	A	C4-C5-N7	5.40	113.40	110.70
1	AA	1442(A)	G	C5-C6-O6	-5.40	125.36	128.60
25	DA	1973	G	C5-C6-O6	5.40	131.84	128.60
25	BA	816	G	N1-C6-O6	5.40	123.14	119.90
25	DA	1644	C	N3-C2-O2	-5.40	118.12	121.90
25	BA	2777	A	C5-C6-N6	5.40	128.02	123.70
1	AA	1154	G	C8-N9-C4	5.39	108.56	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	460	A	N9-C4-C5	-5.39	103.64	105.80
25	DA	1899	G	N3-C4-N9	5.39	129.24	126.00
26	DB	25	A	O4'-C1'-N9	-5.39	103.88	108.20
1	AA	56	U	C2-N1-C1'	5.39	124.17	117.70
25	BA	1821	C	OP1-P-O3'	5.39	117.06	105.20
1	CA	1134	G	N7-C8-N9	5.39	115.80	113.10
25	BA	1755	C	N1-C2-O2	-5.39	115.67	118.90
25	BA	2699	U	N1-C2-O2	-5.39	119.03	122.80
25	BA	2405	A	C2-N3-C4	-5.39	107.91	110.60
1	AA	627	G	C4-C5-N7	5.39	112.95	110.80
25	BA	254	A	C4-C5-N7	5.39	113.39	110.70
25	BA	2826	C	C6-N1-C2	5.39	122.45	120.30
1	CA	1370	G	C8-N9-C4	-5.39	104.25	106.40
25	DA	956	G	C4-C5-C6	5.39	122.03	118.80
1	AA	346	G	N1-C6-O6	-5.38	116.67	119.90
1	AA	458	C	C2-N1-C1'	5.38	124.72	118.80
25	BA	1299	A	N1-C6-N6	-5.38	115.37	118.60
25	BA	2122	G	C2-N3-C4	5.38	114.59	111.90
25	DA	2376	A	O5'-P-OP2	-5.38	100.85	105.70
25	BA	582	G	N1-C6-O6	5.38	123.13	119.90
25	DA	90	U	C2-N1-C1'	5.38	124.16	117.70
25	DA	2253	G	N9-C4-C5	-5.38	103.25	105.40
25	BA	1163	G	N1-C6-O6	5.38	123.13	119.90
51	B5	58	LEU	CA-CB-CG	5.38	127.67	115.30
1	CA	1262	C	C6-N1-C1'	-5.38	114.35	120.80
1	CA	1285	A	C8-N9-C4	5.38	107.95	105.80
1	AA	1030(C)	G	C4-N9-C1'	5.38	133.49	126.50
25	BA	553	A	C5-N7-C8	-5.38	101.21	103.90
25	BA	974	G	N1-C6-O6	5.38	123.13	119.90
25	BA	989	G	N7-C8-N9	5.38	115.79	113.10
25	BA	2723	A	C2-N3-C4	-5.38	107.91	110.60
1	CA	893	C	C6-N1-C2	5.38	122.45	120.30
25	BA	2611	G	OP2-P-O3'	5.38	117.02	105.20
25	DA	660	G	C5-C6-N1	-5.38	108.81	111.50
1	AA	571	U	O5'-P-OP1	-5.37	100.86	105.70
25	BA	805	C	O5'-P-OP2	-5.37	100.86	105.70
26	DB	74	U	C6-N1-C1'	5.37	128.72	121.20
1	AA	976	G	N1-C6-O6	5.37	123.12	119.90
1	AA	1030(C)	G	N3-C4-N9	5.37	129.22	126.00
25	BA	2651	A	C8-N9-C4	5.37	107.95	105.80
1	AA	14	U	O5'-P-OP1	-5.37	100.87	105.70
25	BA	1055	A	OP1-P-O3'	5.37	117.01	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	2701	U	P-O3'-C3'	5.37	126.14	119.70
1	CA	345	C	N3-C2-O2	-5.37	118.14	121.90
25	DA	1956	U	OP1-P-O3'	5.37	117.01	105.20
25	DA	2525	G	N1-C6-O6	5.37	123.12	119.90
25	BA	142	G	N3-C4-C5	5.37	131.28	128.60
25	BA	1067	A	C4-C5-N7	5.37	113.38	110.70
1	AA	1181	G	N3-C4-C5	5.37	131.28	128.60
25	BA	1934	A	N1-C6-N6	-5.37	115.38	118.60
25	BA	2078	G	C8-N9-C1'	-5.37	120.02	127.00
25	DA	2206	G	N3-C4-N9	-5.37	122.78	126.00
1	CA	1356	G	C6-N1-C2	5.36	128.32	125.10
25	DA	2023	G	N3-C4-C5	-5.36	125.92	128.60
25	DA	1031	G	N1-C6-O6	5.36	123.12	119.90
25	DA	2519	U	C5-C6-N1	-5.36	120.02	122.70
26	DB	72	G	C4-C5-N7	5.36	112.94	110.80
1	CA	1375	A	C8-N9-C4	-5.36	103.66	105.80
25	DA	52	A	N7-C8-N9	5.36	116.48	113.80
25	DA	370	G	N3-C4-C5	5.36	131.28	128.60
1	AA	1024	G	C4-N9-C1'	5.36	133.47	126.50
25	BA	69	G	N1-C6-O6	-5.36	116.69	119.90
25	BA	886	U	C5-C4-O4	5.36	129.11	125.90
25	BA	2535	G	C2-N3-C4	-5.36	109.22	111.90
25	DA	1662	C	C6-N1-C2	5.36	122.44	120.30
1	AA	800	G	N7-C8-N9	5.36	115.78	113.10
1	AA	1125	U	P-O3'-C3'	5.36	126.12	119.70
1	AA	1158	C	C4-C5-C6	5.36	120.08	117.40
25	BA	2044	U	N3-C4-O4	5.36	123.15	119.40
25	DA	1648	C	O5'-P-OP1	5.36	117.13	110.70
25	DA	2050	C	C6-N1-C2	5.36	122.44	120.30
25	BA	725	C	C5-C6-N1	-5.35	118.32	121.00
1	AA	1531	A	C4-N9-C1'	5.35	135.94	126.30
1	CA	981	U	C5-C6-N1	5.35	125.38	122.70
1	AA	1519	A	C2-N3-C4	-5.35	107.92	110.60
25	DA	2023	G	C5-C6-O6	-5.35	125.39	128.60
25	DA	2287	A	C2-N3-C4	-5.35	107.92	110.60
1	CA	429	U	C2-N1-C1'	-5.35	111.28	117.70
1	CA	1099	G	C4-C5-N7	-5.35	108.66	110.80
25	DA	976	C	N1-C2-O2	5.35	122.11	118.90
25	BA	1483	C	C6-N1-C2	-5.35	118.16	120.30
26	BB	73	A	O4'-C1'-N9	-5.35	103.92	108.20
1	CA	1173	G	N1-C6-O6	5.35	123.11	119.90
25	DA	2330	G	C5-C6-O6	-5.35	125.39	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	657	A	O5'-P-OP2	5.34	117.11	110.70
1	CA	500	G	N3-C4-C5	-5.34	125.93	128.60
25	BA	853	C	N3-C4-C5	5.34	124.04	121.90
1	AA	237	C	C6-N1-C2	5.34	122.44	120.30
25	BA	425	G	C5-C6-N1	-5.34	108.83	111.50
25	BA	933	C	C5-C6-N1	5.34	123.67	121.00
1	CA	228	A	C8-N9-C4	5.34	107.94	105.80
1	CA	503	C	C6-N1-C2	-5.34	118.16	120.30
1	CA	1028	C	N3-C2-O2	5.34	125.64	121.90
25	DA	2870	C	N3-C2-O2	-5.34	118.16	121.90
1	AA	1035	A	C8-N9-C1'	-5.34	118.09	127.70
25	BA	678	A	C8-N9-C4	-5.34	103.67	105.80
25	BA	2372	A	O5'-P-OP1	5.34	117.11	110.70
1	CA	1125	U	C5-C6-N1	5.34	125.37	122.70
25	DA	1238	G	N9-C4-C5	-5.34	103.27	105.40
25	DA	2489	G	N1-C6-O6	5.34	123.10	119.90
25	BA	331	G	O5'-P-OP1	-5.33	100.90	105.70
25	BA	519	G	C5-C6-O6	-5.33	125.40	128.60
25	BA	990	A	C5-C6-N1	-5.33	115.03	117.70
25	BA	2283	G	O5'-P-OP2	-5.33	100.90	105.70
25	BA	2372	A	O5'-P-OP2	-5.33	100.90	105.70
1	CA	194	C	C6-N1-C2	-5.33	118.17	120.30
23	AX	22	G	C6-C5-N7	5.33	133.60	130.40
25	BA	572	A	OP1-P-O3'	5.33	116.93	105.20
1	CA	691	G	C8-N9-C4	5.33	108.53	106.40
1	CA	1311	G	N3-C4-C5	5.33	131.27	128.60
25	DA	446	G	C8-N9-C1'	-5.33	120.07	127.00
1	AA	1139	G	C4-N9-C1'	-5.33	119.57	126.50
23	AX	22	G	C4-N9-C1'	-5.33	119.57	126.50
25	BA	9	U	C2-N3-C4	5.33	130.20	127.00
25	BA	2550	C	C6-N1-C2	5.33	122.43	120.30
1	AA	1030(B)	C	C2-N3-C4	5.33	122.56	119.90
25	DA	363(B)	G	N3-C4-N9	5.33	129.20	126.00
1	AA	261	U	N1-C2-O2	-5.33	119.07	122.80
25	BA	2339	A	C5-C6-N6	5.33	127.96	123.70
1	AA	1499	A	C8-N9-C4	5.32	107.93	105.80
25	BA	2753	A	O5'-P-OP2	-5.32	100.91	105.70
25	BA	2755	C	C6-N1-C2	5.32	122.43	120.30
1	CA	1034	G	C6-C5-N7	5.32	133.59	130.40
1	AA	98	G	N7-C8-N9	5.32	115.76	113.10
23	CX	70	G	C8-N9-C1'	-5.32	120.08	127.00
25	DA	1963	U	C2-N1-C1'	5.32	124.08	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	395	C	C6-N1-C2	-5.32	118.17	120.30
25	DA	614(B)	G	O4'-C1'-N9	5.32	112.45	108.20
25	DA	2827	C	C2-N3-C4	-5.32	117.24	119.90
1	AA	1024	G	N3-C4-C5	-5.31	125.94	128.60
25	BA	27	G	O5'-P-OP2	-5.31	100.92	105.70
23	CX	14	A	N1-C2-N3	5.31	131.96	129.30
25	DA	1313	U	N3-C4-O4	5.31	123.12	119.40
25	BA	932	C	C2-N3-C4	5.31	122.56	119.90
1	AA	77	G	C8-N9-C4	5.31	108.52	106.40
25	DA	1403	C	N3-C2-O2	-5.31	118.18	121.90
25	DA	1812	A	O5'-P-OP1	-5.31	100.92	105.70
25	BA	2630	G	N3-C4-N9	5.31	129.18	126.00
25	BA	2802	C	C5-C6-N1	-5.31	118.35	121.00
1	CA	661	G	N1-C6-O6	5.31	123.08	119.90
25	DA	945	A	C5-C6-N6	-5.31	119.45	123.70
25	BA	1093	G	P-O3'-C3'	5.31	126.07	119.70
25	DA	2541	A	N1-C6-N6	5.31	121.78	118.60
1	CA	851	G	N1-C6-O6	5.30	123.08	119.90
1	CA	1369	C	C5-C6-N1	-5.30	118.35	121.00
1	CA	787	A	C2-N3-C4	-5.30	107.95	110.60
25	DA	1615	C	N1-C2-O2	-5.30	115.72	118.90
1	AA	59	A	C2-N3-C4	5.30	113.25	110.60
1	CA	316	G	C6-C5-N7	-5.30	127.22	130.40
25	DA	392	C	O5'-P-OP2	5.30	117.06	110.70
25	DA	532	A	O4'-C1'-N9	5.30	112.44	108.20
1	AA	476	G	C4-N9-C1'	5.30	133.39	126.50
1	AA	1289	A	N9-C4-C5	5.30	107.92	105.80
25	BA	199	C	OP2-P-O3'	5.30	116.86	105.20
25	BA	1954	A	O5'-P-OP2	5.30	117.06	110.70
25	BA	2807	C	C6-N1-C2	-5.30	118.18	120.30
25	BA	2904	U	C5-C6-N1	5.30	125.35	122.70
25	DA	271(K)	U	C2-N1-C1'	5.30	124.06	117.70
25	DA	2643	G	O5'-P-OP1	-5.30	100.93	105.70
1	CA	266	G	C5-N7-C8	-5.30	101.65	104.30
25	DA	2744	G	OP2-P-O3'	5.30	116.86	105.20
1	AA	122	G	N3-C4-C5	5.30	131.25	128.60
25	BA	2641	A	C2-N3-C4	-5.30	107.95	110.60
26	DB	56	G	C4-N9-C1'	5.30	133.38	126.50
25	BA	30	G	N3-C4-C5	-5.29	125.95	128.60
25	BA	1992	A	O4'-C1'-N9	-5.29	103.96	108.20
1	CA	1149	C	N3-C2-O2	-5.29	118.19	121.90
23	AX	4	G	N1-C6-O6	5.29	123.08	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	2559	U	N1-C2-O2	-5.29	119.09	122.80
26	BB	91	C	N3-C4-C5	5.29	124.02	121.90
26	DB	115	G	N9-C4-C5	-5.29	103.28	105.40
1	AA	236	G	C5-C6-O6	5.29	131.78	128.60
25	BA	932	C	C5-C6-N1	5.29	123.65	121.00
25	BA	1650	C	N1-C2-O2	-5.29	115.72	118.90
23	AX	35	A	C5-C6-N1	-5.29	115.06	117.70
25	DA	216	A	C8-N9-C4	5.29	107.92	105.80
25	DA	2507	C	N3-C4-C5	-5.29	119.78	121.90
25	DA	2856	C	C5-C6-N1	5.29	123.64	121.00
25	BA	1631	C	C2-N3-C4	5.29	122.54	119.90
1	AA	1481	U	OP2-P-O3'	5.29	116.83	105.20
11	AK	49	GLY	N-CA-C	5.29	126.31	113.10
25	BA	1093	G	C8-N9-C1'	-5.29	120.13	127.00
25	DA	295	G	C6-C5-N7	-5.29	127.23	130.40
25	DA	830	G	N1-C6-O6	-5.29	116.73	119.90
1	AA	1006	C	C6-N1-C2	-5.28	118.19	120.30
1	AA	1531	A	N9-C1'-C2'	5.28	120.87	114.00
25	BA	415	G	C4-N9-C1'	-5.28	119.63	126.50
25	BA	417	A	C2-N3-C4	-5.28	107.96	110.60
25	BA	758	G	N1-C6-O6	5.28	123.07	119.90
25	BA	876	A	O5'-P-OP2	-5.28	100.94	105.70
1	CA	44	G	O5'-P-OP2	-5.28	100.94	105.70
25	DA	63	U	C2-N1-C1'	-5.28	111.36	117.70
25	BA	471	C	C2-N3-C4	-5.28	117.26	119.90
1	AA	46	G	N1-C6-O6	5.28	123.07	119.90
25	BA	1972	G	C6-C5-N7	-5.28	127.23	130.40
25	BA	2663	C	C5-C4-N4	-5.28	116.50	120.20
23	CX	32	C	N1-C2-O2	5.28	122.07	118.90
1	AA	848	C	C6-N1-C2	-5.28	118.19	120.30
25	BA	739	C	OP2-P-O3'	5.28	116.81	105.20
25	BA	1221	G	OP1-P-OP2	-5.28	111.68	119.60
25	BA	1638	C	C6-N1-C2	5.28	122.41	120.30
25	BA	799	A	C2-N3-C4	-5.28	107.96	110.60
1	CA	1039	C	C5-C6-N1	5.28	123.64	121.00
25	DA	2512	C	C5-C4-N4	-5.28	116.51	120.20
25	BA	733	G	C4-C5-N7	5.27	112.91	110.80
25	BA	1348	A	O5'-P-OP2	-5.27	100.95	105.70
25	DA	2455	G	C8-N9-C1'	-5.27	120.14	127.00
1	AA	1181	G	N1-C6-O6	5.27	123.06	119.90
1	AA	1519	A	C8-N9-C4	-5.27	103.69	105.80
23	AX	8	U	C5-C6-N1	5.27	125.34	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	1476	C	N3-C2-O2	-5.27	118.21	121.90
1	CA	138	G	C8-N9-C4	-5.27	104.29	106.40
25	DA	1314	C	N1-C2-O2	5.27	122.06	118.90
23	AX	35	A	C6-N1-C2	5.27	121.76	118.60
25	BA	1298	G	C4-N9-C1'	-5.27	119.65	126.50
1	AA	219	C	C6-N1-C2	-5.27	118.19	120.30
25	BA	1994	A	C5-C6-N6	-5.27	119.48	123.70
25	DA	2892	A	N1-C6-N6	-5.27	115.44	118.60
25	BA	2228	G	C4-C5-C6	5.27	121.96	118.80
25	DA	2023	G	C6-C5-N7	-5.27	127.24	130.40
26	BB	6	C	N1-C2-O2	5.27	122.06	118.90
25	BA	1850	A	OP1-P-OP2	5.26	127.50	119.60
25	DA	63	U	O4'-C1'-N1	5.26	112.41	108.20
1	AA	1058	G	N9-C4-C5	-5.26	103.30	105.40
25	BA	978	A	C8-N9-C4	-5.26	103.69	105.80
1	AA	904	C	C6-N1-C2	5.26	122.41	120.30
25	BA	816	G	C5-C6-O6	-5.26	125.44	128.60
25	BA	1794	G	N7-C8-N9	-5.26	110.47	113.10
47	B1	46	LEU	CA-CB-CG	5.26	127.40	115.30
1	CA	939	G	N3-C4-C5	-5.26	125.97	128.60
25	DA	893	C	C2-N3-C4	5.26	122.53	119.90
25	DA	1148	A	C8-N9-C4	-5.26	103.69	105.80
25	BA	351	G	O4'-C1'-N9	-5.26	103.99	108.20
25	DA	1784	A	O5'-P-OP2	5.26	117.01	110.70
25	BA	1867	C	N1-C2-O2	5.26	122.05	118.90
25	BA	2829	G	N1-C6-O6	5.26	123.05	119.90
1	CA	1012	U	C6-N1-C1'	5.26	128.56	121.20
25	BA	2527	C	C6-N1-C2	5.25	122.40	120.30
1	AA	1043	C	O4'-C1'-N1	5.25	112.40	108.20
25	BA	693	G	C5-C6-O6	-5.25	125.45	128.60
1	CA	1180	A	C8-N9-C4	-5.25	103.70	105.80
23	CX	9	G	C4-N9-C1'	-5.25	119.67	126.50
25	DA	188	G	C6-C5-N7	-5.25	127.25	130.40
25	DA	2313	C	N3-C2-O2	-5.25	118.22	121.90
1	AA	167	G	C5-C6-O6	-5.25	125.45	128.60
25	BA	353	G	C5-C6-O6	-5.25	125.45	128.60
25	DA	1377	G	N3-C4-C5	-5.25	125.97	128.60
26	DB	81	G	N7-C8-N9	5.25	115.73	113.10
25	BA	926	G	N3-C4-C5	-5.25	125.97	128.60
25	BA	1365	G	C8-N9-C4	-5.25	104.30	106.40
25	BA	1766	G	C4-C5-N7	5.25	112.90	110.80
25	BA	2241	C	N3-C2-O2	-5.25	118.22	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	1710	C	N3-C4-N4	5.25	121.67	118.00
25	BA	1859	G	N1-C6-O6	-5.25	116.75	119.90
1	CA	1029	C	C5-C6-N1	5.25	123.62	121.00
1	CA	1518	A	C5-C6-N6	5.25	127.90	123.70
25	DA	1120	G	N3-C4-C5	5.25	131.22	128.60
25	DA	2435	A	C8-N9-C4	-5.25	103.70	105.80
25	BA	2857	U	C5-C6-N1	-5.25	120.08	122.70
25	DA	912	C	N1-C2-O2	5.25	122.05	118.90
26	DB	119	G	C8-N9-C1'	5.25	133.82	127.00
1	AA	587	G	O5'-P-OP1	5.24	116.99	110.70
25	BA	965	G	O5'-P-OP2	-5.24	100.98	105.70
25	BA	1222	A	N7-C8-N9	5.24	116.42	113.80
23	AX	8	U	N1-C2-O2	5.24	126.47	122.80
25	BA	139	A	C5-C6-N1	-5.24	115.08	117.70
1	CA	422	C	C6-N1-C2	-5.24	118.20	120.30
25	BA	1857	G	OP1-P-O3'	5.24	116.73	105.20
25	BA	1985	U	C6-N1-C2	-5.24	117.86	121.00
1	AA	1190	G	C8-N9-C4	-5.24	104.31	106.40
25	BA	2452	C	C5-C6-N1	-5.24	118.38	121.00
25	DA	75	G	N3-C2-N2	-5.24	116.23	119.90
25	DA	1885	A	C8-N9-C4	5.24	107.89	105.80
25	DA	2336	A	N1-C6-N6	5.24	121.74	118.60
26	DB	29	A	N7-C8-N9	5.24	116.42	113.80
25	BA	168	G	O5'-P-OP2	-5.23	100.99	105.70
25	BA	978	A	O4'-C1'-N9	5.23	112.39	108.20
25	DA	76	C	N1-C2-O2	5.23	122.04	118.90
25	DA	895	U	C2-N1-C1'	5.23	123.98	117.70
25	DA	2345	G	C5-C6-O6	5.23	131.74	128.60
25	DA	2861	G	N3-C2-N2	-5.23	116.24	119.90
25	DA	893	C	C6-N1-C2	-5.23	118.21	120.30
1	AA	140	A	C8-N9-C4	-5.23	103.71	105.80
1	AA	975	A	O4'-C1'-N9	-5.23	104.02	108.20
25	BA	89	U	C5-C4-O4	5.23	129.04	125.90
25	BA	438	G	O5'-P-OP2	-5.23	100.99	105.70
25	BA	2122	G	N1-C6-O6	-5.23	116.76	119.90
25	DA	2375	G	O5'-P-OP2	-5.23	100.99	105.70
1	AA	204	U	N1-C2-O2	5.23	126.46	122.80
25	BA	1176	U	C5-C4-O4	5.23	129.04	125.90
25	BA	2510	C	C5-C6-N1	-5.23	118.39	121.00
25	DA	1955	U	N3-C4-O4	-5.23	115.74	119.40
25	DA	2604	U	N1-C2-O2	5.23	126.46	122.80
1	AA	1510	U	C6-N1-C2	5.23	124.14	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	840	A	C5-C6-N6	-5.23	119.52	123.70
25	BA	2414	C	C6-N1-C2	5.23	122.39	120.30
25	BA	2701	U	N3-C2-O2	-5.23	118.54	122.20
25	DA	1243	G	C4-C5-N7	-5.23	108.71	110.80
25	DA	1395	A	O4'-C1'-N9	5.23	112.38	108.20
25	DA	1955	U	C5-C6-N1	-5.23	120.09	122.70
26	DB	11	C	C6-N1-C2	-5.23	118.21	120.30
1	CA	561	U	N3-C4-O4	5.23	123.06	119.40
1	AA	167	G	N1-C6-O6	5.22	123.03	119.90
25	BA	134	G	N7-C8-N9	-5.22	110.49	113.10
25	DA	228	A	N1-C6-N6	5.22	121.73	118.60
25	DA	552	G	C4-N9-C1'	-5.22	119.71	126.50
25	DA	1488	G	N3-C4-C5	-5.22	125.99	128.60
25	DA	2334	G	OP2-P-O3'	5.22	116.69	105.20
25	DA	2587	A	N1-C6-N6	5.22	121.73	118.60
1	AA	1064	G	OP1-P-O3'	5.22	116.69	105.20
25	BA	362	G	N3-C4-N9	5.22	129.13	126.00
1	CA	800	G	OP2-P-O3'	5.22	116.69	105.20
1	AA	458	C	C6-N1-C2	-5.22	118.21	120.30
23	AX	14	A	C4-N9-C1'	5.22	135.70	126.30
25	BA	512	C	N3-C2-O2	5.22	125.56	121.90
25	BA	2503	U	N3-C4-O4	-5.22	115.75	119.40
25	DA	923	C	C6-N1-C2	-5.22	118.21	120.30
25	DA	1986	A	N1-C2-N3	5.22	131.91	129.30
25	BA	1450	C	O5'-P-OP2	-5.22	101.00	105.70
25	DA	796	C	C2-N3-C4	-5.22	117.29	119.90
25	DA	1368	G	O5'-P-OP2	-5.22	101.00	105.70
25	DA	1488	G	C4-N9-C1'	5.22	133.28	126.50
1	AA	1259	C	C6-N1-C2	-5.22	118.21	120.30
25	BA	1810	U	O4'-C1'-N1	5.22	112.37	108.20
25	BA	288	U	C5-C6-N1	5.21	125.31	122.70
1	CA	605	U	O4'-C1'-N1	5.21	112.37	108.20
1	CA	997	U	C5-C4-O4	5.21	129.03	125.90
26	DB	74	U	N1-C2-N3	5.21	118.03	114.90
25	BA	1539	C	C2-N1-C1'	5.21	124.53	118.80
1	AA	1507	A	C2-N3-C4	-5.21	108.00	110.60
25	BA	1221	G	OP1-P-O3'	5.21	116.66	105.20
1	CA	1004	A	C4-C5-N7	-5.21	108.10	110.70
25	DA	908	C	N1-C2-O2	-5.21	115.78	118.90
1	AA	365	U	C5-C6-N1	-5.21	120.10	122.70
1	AA	552	U	C5-C6-N1	-5.21	120.10	122.70
25	DA	970	C	N1-C2-O2	-5.21	115.78	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	2049	G	O5'-P-OP2	-5.21	101.02	105.70
1	CA	372	C	N1-C2-O2	5.21	122.02	118.90
25	DA	1488	G	C8-N9-C4	-5.21	104.32	106.40
25	DA	2591	C	C6-N1-C2	-5.21	118.22	120.30
25	BA	1172	A	N1-C6-N6	5.20	121.72	118.60
1	CA	354	G	N1-C6-O6	5.20	123.02	119.90
25	DA	665	C	N1-C2-O2	5.20	122.02	118.90
25	DA	1992	G	P-O3'-C3'	5.20	125.94	119.70
25	DA	666	G	C2-N3-C4	-5.20	109.30	111.90
25	DA	2070	G	N3-C4-C5	-5.20	126.00	128.60
25	BA	2386	C	C6-N1-C2	5.20	122.38	120.30
25	DA	2253	G	C5-C6-O6	-5.20	125.48	128.60
1	AA	220	G	C4-N9-C1'	5.20	133.26	126.50
1	AA	1042	G	O4'-C1'-N9	5.20	112.36	108.20
1	AA	1397	C	C6-N1-C2	-5.20	118.22	120.30
25	BA	2740	G	N3-C2-N2	-5.20	116.26	119.90
1	CA	528	C	C5-C6-N1	5.20	123.60	121.00
1	CA	1042	G	O4'-C1'-N9	5.20	112.36	108.20
26	DB	82	G	C4-N9-C1'	-5.20	119.74	126.50
1	AA	963	G	C5-C6-N1	5.20	114.10	111.50
1	AA	1407	C	C5-C6-N1	5.20	123.60	121.00
25	DA	233	A	OP1-P-OP2	5.20	127.39	119.60
25	BA	1093	G	N1-C2-N2	-5.19	111.53	116.20
1	AA	1150	U	C5-C4-O4	5.19	129.01	125.90
25	BA	483	A	C5-C6-N6	5.19	127.85	123.70
25	BA	1972	G	C5-C6-N1	-5.19	108.90	111.50
1	AA	1401	G	O4'-C1'-N9	-5.19	104.05	108.20
1	CA	894	G	N3-C4-C5	5.19	131.19	128.60
25	DA	645	C	C2-N1-C1'	5.19	124.51	118.80
25	BA	1472	G	N3-C2-N2	5.19	123.53	119.90
25	DA	2018	G	C5-C6-O6	-5.19	125.49	128.60
25	BA	235	C	N3-C2-O2	5.19	125.53	121.90
1	CA	299	G	C6-C5-N7	-5.19	127.29	130.40
26	DB	45	A	P-O3'-C3'	5.19	125.92	119.70
25	BA	31	C	O5'-P-OP1	-5.19	101.03	105.70
25	BA	2425	G	OP2-P-O3'	5.19	116.61	105.20
1	CA	5	U	N3-C2-O2	-5.19	118.57	122.20
25	DA	894	C	N3-C2-O2	-5.19	118.27	121.90
25	DA	1380	G	O5'-P-OP2	-5.19	101.03	105.70
23	AX	69	C	N1-C2-O2	5.18	122.01	118.90
23	AX	76	A	C4-C5-N7	-5.18	108.11	110.70
25	BA	2255	U	OP1-P-OP2	5.18	127.38	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	2838	C	N3-C4-C5	5.18	123.97	121.90
1	CA	925	G	C5-C6-O6	-5.18	125.49	128.60
25	DA	936	C	N3-C4-N4	-5.18	114.37	118.00
25	DA	2207	G	C5-C6-N1	-5.18	108.91	111.50
1	AA	839	U	P-O3'-C3'	5.18	125.92	119.70
25	BA	1094	A	N7-C8-N9	5.18	116.39	113.80
25	BA	1824	C	N3-C2-O2	-5.18	118.27	121.90
1	CA	662	G	C6-C5-N7	-5.18	127.29	130.40
25	DA	1761	C	N1-C2-O2	-5.18	115.79	118.90
25	DA	1955	U	C5-C4-O4	5.18	129.01	125.90
25	BA	1700	G	N9-C4-C5	5.18	107.47	105.40
25	BA	2110	G	N3-C2-N2	-5.18	116.27	119.90
7	AG	81	GLY	N-CA-C	5.18	126.05	113.10
25	BA	2646	G	O5'-P-OP2	-5.18	101.04	105.70
25	BA	2906	U	C2-N1-C1'	5.18	123.92	117.70
1	CA	1456	G	C8-N9-C4	5.18	108.47	106.40
25	DA	692	C	C6-N1-C2	5.18	122.37	120.30
25	BA	1372	U	C6-N1-C2	5.18	124.11	121.00
1	CA	1303	C	N1-C2-O2	5.18	122.01	118.90
3	CC	91	LEU	CA-CB-CG	5.18	127.21	115.30
25	DA	1022	G	N3-C2-N2	-5.18	116.28	119.90
1	AA	158	G	N3-C4-N9	-5.18	122.89	126.00
25	BA	718	C	C5-C4-N4	5.18	123.82	120.20
1	CA	1065	U	P-O3'-C3'	5.17	125.91	119.70
25	DA	1142(A)	A	N1-C6-N6	5.17	121.70	118.60
25	DA	2207	G	N7-C8-N9	5.17	115.69	113.10
25	DA	2286	A	C4-C5-N7	5.17	113.29	110.70
25	BA	1755	C	C6-N1-C2	5.17	122.37	120.30
1	CA	1142	G	N3-C4-C5	-5.17	126.01	128.60
25	DA	1124	C	N3-C4-C5	5.17	123.97	121.90
1	AA	1145	C	N1-C2-O2	5.17	122.00	118.90
1	AA	749	C	C2-N3-C4	5.17	122.48	119.90
1	AA	1029	C	C6-N1-C1'	5.17	127.00	120.80
25	BA	2223	C	N1-C2-O2	5.17	122.00	118.90
26	BB	118	G	N1-C6-O6	5.17	123.00	119.90
23	CX	35	A	C6-N1-C2	5.17	121.70	118.60
25	DA	2843	G	N3-C2-N2	-5.17	116.28	119.90
1	CA	1030(B)	C	C6-N1-C2	-5.17	118.23	120.30
1	CA	1271	G	N9-C4-C5	-5.17	103.33	105.40
1	AA	1019	C	C2-N3-C4	5.17	122.48	119.90
25	DA	266	G	C5-C6-O6	-5.17	125.50	128.60
25	DA	272(C)	G	C4-N9-C1'	-5.17	119.78	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	1418	G	C6-C5-N7	-5.17	127.30	130.40
25	BA	118	U	O5'-P-OP1	-5.16	101.05	105.70
25	BA	1814	A	O5'-P-OP2	-5.16	101.05	105.70
1	CA	557	G	N3-C2-N2	5.16	123.51	119.90
1	CA	960	U	N1-C2-O2	5.16	126.41	122.80
1	CA	1135	U	C2-N1-C1'	-5.16	111.50	117.70
25	DA	567	A	N3-C4-C5	5.16	130.41	126.80
25	DA	1838	C	O4'-C1'-N1	5.16	112.33	108.20
1	AA	1399	C	N3-C2-O2	5.16	125.51	121.90
25	BA	2344	U	O5'-P-OP2	-5.16	101.05	105.70
1	CA	1206	G	N3-C4-N9	5.16	129.10	126.00
25	BA	50	G	O5'-P-OP2	-5.16	101.06	105.70
25	BA	1240	G	C8-N9-C4	-5.16	104.34	106.40
25	BA	1807	G	N1-C6-O6	5.16	123.00	119.90
25	BA	2697	G	O5'-P-OP2	-5.16	101.06	105.70
1	CA	242	C	N3-C4-N4	5.16	121.61	118.00
25	DA	98	G	C8-N9-C4	5.16	108.46	106.40
25	DA	1126	A	O5'-P-OP1	-5.16	101.06	105.70
25	BA	671	A	O4'-C1'-N9	5.16	112.33	108.20
1	CA	906	G	N9-C4-C5	-5.16	103.34	105.40
1	AA	24	U	O5'-P-OP1	-5.16	101.06	105.70
23	CX	35	A	C5-C6-N1	-5.16	115.12	117.70
25	DA	1229	G	N9-C4-C5	-5.16	103.34	105.40
25	DA	2018	G	C4-C5-N7	5.16	112.86	110.80
25	BA	2634	C	C6-N1-C2	5.16	122.36	120.30
25	DA	1607	C	C6-N1-C2	5.16	122.36	120.30
25	DA	1767	C	C5-C6-N1	-5.16	118.42	121.00
1	CA	1165	C	N1-C2-O2	5.15	121.99	118.90
25	DA	743	G	N9-C4-C5	5.15	107.46	105.40
28	DE	111	ARG	NE-CZ-NH2	-5.15	117.72	120.30
25	DA	1643	G	OP1-P-O3'	5.15	116.54	105.20
25	DA	2422	A	N1-C6-N6	-5.15	115.51	118.60
25	DA	2487	G	C2-N3-C4	-5.15	109.32	111.90
25	DA	2581	G	OP1-P-O3'	5.15	116.54	105.20
25	BA	852	G	C4-C5-N7	5.15	112.86	110.80
25	BA	2662	U	C5-C6-N1	-5.15	120.12	122.70
25	BA	2801	C	C2-N3-C4	-5.15	117.33	119.90
31	DH	171	LEU	CA-CB-CG	5.15	127.14	115.30
25	BA	2251	G	C8-N9-C4	5.15	108.46	106.40
25	BA	2785	C	N1-C2-O2	5.15	121.99	118.90
1	CA	897	C	C6-N1-C2	5.15	122.36	120.30
1	AA	1150	U	C6-N1-C2	-5.15	117.91	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	2228	G	N9-C4-C5	-5.15	103.34	105.40
25	BA	2464	C	C5-C6-N1	5.15	123.57	121.00
26	BB	108	U	C2-N1-C1'	-5.15	111.52	117.70
1	CA	18	C	O5'-P-OP2	5.15	116.88	110.70
25	DA	1786	A	O4'-C1'-N9	5.15	112.32	108.20
1	CA	1405	G	O5'-P-OP2	-5.15	101.07	105.70
25	DA	205	G	O5'-P-OP2	-5.15	101.07	105.70
25	DA	265	A	N1-C6-N6	5.15	121.69	118.60
23	AX	76	A	C5-C6-N1	5.14	120.27	117.70
25	BA	572	A	P-O3'-C3'	5.14	125.87	119.70
25	BA	1007	G	N7-C8-N9	5.14	115.67	113.10
25	BA	2510	C	N1-C2-N3	5.14	122.80	119.20
1	CA	380	G	N3-C4-N9	-5.14	122.91	126.00
25	BA	68	C	N1-C2-O2	-5.14	115.81	118.90
25	BA	405	C	C6-N1-C2	5.14	122.36	120.30
25	BA	696	C	C2-N3-C4	5.14	122.47	119.90
1	CA	1122	U	C5-C4-O4	-5.14	122.81	125.90
25	DA	1226	A	C8-N9-C4	5.14	107.86	105.80
1	AA	156	G	C8-N9-C4	-5.14	104.34	106.40
25	BA	781	A	N1-C6-N6	5.14	121.68	118.60
1	CA	1039	C	N1-C2-O2	5.14	121.98	118.90
25	DA	2520	C	N3-C4-C5	5.14	123.96	121.90
1	AA	442	C	C5-C6-N1	5.14	123.57	121.00
25	BA	280	C	C5-C6-N1	-5.14	118.43	121.00
1	AA	781	A	N9-C4-C5	-5.14	103.75	105.80
1	AA	1143	G	N9-C4-C5	5.14	107.45	105.40
25	DA	2346	A	C4-C5-N7	-5.14	108.13	110.70
1	CA	1466	C	O5'-P-OP1	-5.13	101.08	105.70
25	DA	34	C	N1-C2-O2	5.13	121.98	118.90
25	DA	748	G	C2-N3-C4	5.13	114.47	111.90
1	AA	1058	G	C5-C6-O6	-5.13	125.52	128.60
25	BA	2266	C	C6-N1-C2	5.13	122.35	120.30
1	CA	1034	G	C8-N9-C1'	5.13	133.67	127.00
1	AA	1265	G	C6-C5-N7	-5.13	127.32	130.40
25	BA	1473	A	C6-N1-C2	-5.13	115.52	118.60
1	CA	138	G	N7-C8-N9	5.13	115.67	113.10
25	DA	422	A	O5'-P-OP2	-5.13	101.08	105.70
25	BA	660	C	C6-N1-C2	-5.13	118.25	120.30
26	BB	30	C	C6-N1-C2	-5.13	118.25	120.30
1	CA	1012	U	C2-N1-C1'	-5.13	111.54	117.70
1	CA	990	C	N1-C2-O2	5.13	121.98	118.90
25	DA	829	A	O4'-C1'-N9	5.13	112.30	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	443	C	C2-N1-C1'	5.13	124.44	118.80
23	AX	69	C	C6-N1-C1'	-5.13	114.65	120.80
25	BA	835	A	N9-C4-C5	-5.13	103.75	105.80
25	BA	1244	U	OP2-P-O3'	5.13	116.48	105.20
25	BA	2110	G	N1-C6-O6	5.13	122.98	119.90
25	BA	2236	G	N7-C8-N9	-5.13	110.54	113.10
25	DA	2540	C	N1-C2-O2	-5.13	115.82	118.90
25	BA	2110	G	N3-C4-C5	5.12	131.16	128.60
25	BA	2235	G	C5-C6-O6	-5.12	125.53	128.60
25	BA	2662	U	C6-N1-C2	5.12	124.08	121.00
1	AA	889	A	OP1-P-OP2	5.12	127.29	119.60
25	BA	2524	C	N3-C2-O2	5.12	125.49	121.90
25	BA	119	G	C6-C5-N7	-5.12	127.33	130.40
25	DA	1122	G	O5'-P-OP2	-5.12	101.09	105.70
25	DA	1399	C	OP2-P-O3'	5.12	116.47	105.20
26	DB	51	G	C8-N9-C1'	-5.12	120.34	127.00
1	CA	1506	U	N3-C2-O2	5.12	125.78	122.20
1	AA	1183	A	P-O3'-C3'	5.12	125.84	119.70
25	BA	1153	G	C8-N9-C4	-5.12	104.35	106.40
25	BA	1255	A	N9-C4-C5	5.12	107.85	105.80
25	BA	1325	G	N3-C4-C5	-5.12	126.04	128.60
25	DA	2804	C	N3-C4-C5	-5.12	119.85	121.90
1	AA	382	A	C6-N1-C2	-5.12	115.53	118.60
25	DA	2384	G	N1-C6-O6	5.12	122.97	119.90
25	BA	1935	A	C5-C6-N6	-5.12	119.61	123.70
1	CA	1034	G	N9-C4-C5	5.12	107.45	105.40
23	CX	18	G	N3-C4-C5	5.12	131.16	128.60
25	DA	2059	A	C5-C6-N6	-5.12	119.61	123.70
25	DA	2325	G	C8-N9-C4	-5.12	104.35	106.40
25	BA	1470	G	C8-N9-C4	5.11	108.44	106.40
25	BA	2094	G	N1-C6-O6	5.11	122.97	119.90
1	CA	266	G	C6-C5-N7	-5.11	127.33	130.40
1	CA	1525	G	N3-C4-N9	-5.11	122.93	126.00
25	DA	512	G	C4-N9-C1'	-5.11	119.85	126.50
25	DA	1261	C	C2-N1-C1'	-5.11	113.18	118.80
1	AA	1221	G	C6-N1-C2	5.11	128.17	125.10
1	CA	1036	G	C8-N9-C1'	-5.11	120.35	127.00
25	DA	2509	G	C5-C6-N1	-5.11	108.94	111.50
25	BA	552	C	N1-C2-N3	5.11	122.78	119.20
25	BA	2345	A	OP1-P-O3'	5.11	116.44	105.20
1	CA	1183	A	O4'-C1'-N9	-5.11	104.11	108.20
25	BA	2564	U	N1-C2-O2	-5.11	119.22	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	340	U	C6-N1-C2	5.11	124.06	121.00
25	BA	133	G	N3-C4-N9	-5.11	122.94	126.00
25	BA	1680	G	C4-C5-N7	5.11	112.84	110.80
1	CA	1023	G	N3-C4-C5	-5.11	126.05	128.60
1	CA	1206	G	C5-C6-O6	-5.11	125.53	128.60
25	DA	709	U	C5-C4-O4	5.11	128.96	125.90
25	DA	2560	C	N3-C4-C5	5.11	123.94	121.90
25	DA	2802	G	N3-C4-C5	-5.11	126.05	128.60
1	AA	1516	G	C8-N9-C1'	5.11	133.64	127.00
25	BA	1688	A	N1-C2-N3	5.11	131.85	129.30
25	BA	2070	G	N1-C6-O6	5.11	122.96	119.90
1	CA	1158	C	C2-N1-C1'	5.11	124.42	118.80
25	DA	1142	U	C2-N1-C1'	5.11	123.83	117.70
25	DA	1617	C	C4-C5-C6	5.10	119.95	117.40
26	DB	28	C	O4'-C1'-N1	5.10	112.28	108.20
1	CA	1142	G	N3-C4-N9	5.10	129.06	126.00
25	DA	533	G	O5'-P-OP1	-5.10	101.11	105.70
25	DA	2010	G	C8-N9-C4	-5.10	104.36	106.40
1	AA	1517	G	N3-C4-C5	5.10	131.15	128.60
25	BA	496	A	N1-C6-N6	-5.10	115.54	118.60
25	BA	1398	U	N3-C2-O2	-5.10	118.63	122.20
25	BA	1488	G	OP1-P-OP2	-5.10	111.95	119.60
25	BA	2506	G	C6-N1-C2	5.10	128.16	125.10
25	DA	180	G	N7-C8-N9	5.10	115.65	113.10
25	DA	2463	C	N3-C2-O2	5.10	125.47	121.90
26	DB	52	A	C8-N9-C4	-5.10	103.76	105.80
25	BA	238	C	OP1-P-O3'	5.10	116.41	105.20
25	DA	2689	U	N3-C2-O2	-5.10	118.63	122.20
23	AX	14	A	C5-C6-N1	-5.09	115.15	117.70
25	BA	816	G	C4-C5-N7	5.09	112.84	110.80
25	DA	563	G	C8-N9-C4	-5.09	104.36	106.40
25	BA	2265	G	N3-C4-C5	5.09	131.15	128.60
25	DA	1661	G	C8-N9-C4	5.09	108.44	106.40
1	AA	183	G	C8-N9-C4	-5.09	104.36	106.40
25	BA	874	U	N3-C2-O2	5.09	125.76	122.20
25	DA	568	U	C5-C4-O4	-5.09	122.84	125.90
25	DA	824	A	N7-C8-N9	-5.09	111.25	113.80
25	DA	1266	G	N7-C8-N9	-5.09	110.55	113.10
1	AA	348	G	C4-N9-C1'	-5.09	119.88	126.50
1	AA	1150	U	C5-C6-N1	5.09	125.25	122.70
25	BA	205	A	C5-C6-N6	5.09	127.77	123.70
25	BA	405	C	C5-C4-N4	-5.09	116.64	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	2524	C	C6-N1-C2	5.09	122.34	120.30
3	CC	52	LEU	CA-CB-CG	5.09	127.01	115.30
25	DA	2889	C	N1-C2-O2	5.09	121.95	118.90
25	BA	1807	G	C6-C5-N7	-5.09	127.35	130.40
25	BA	1999	A	C2-N3-C4	-5.09	108.06	110.60
25	DA	799	G	N9-C4-C5	5.09	107.44	105.40
25	DA	1890	A	C4-C5-C6	-5.09	114.46	117.00
25	DA	2285	C	N3-C2-O2	-5.09	118.34	121.90
53	D7	35	ARG	NE-CZ-NH1	-5.09	117.76	120.30
1	CA	1064	G	OP2-P-O3'	5.08	116.39	105.20
25	BA	354	A	N1-C2-N3	5.08	131.84	129.30
25	DA	674	G	N1-C6-O6	-5.08	116.85	119.90
25	DA	949	C	N3-C2-O2	5.08	125.46	121.90
26	DB	63	G	C8-N9-C4	5.08	108.43	106.40
1	AA	925	G	C5-C6-O6	-5.08	125.55	128.60
25	BA	2335	G	N1-C6-O6	5.08	122.95	119.90
25	BA	2512	U	N3-C2-O2	-5.08	118.64	122.20
25	DA	1976	U	C5-C6-N1	-5.08	120.16	122.70
25	DA	2588	G	C4-C5-N7	-5.08	108.77	110.80
1	AA	753	A	OP1-P-O3'	5.08	116.38	105.20
1	CA	1136	U	C5-C6-N1	5.08	125.24	122.70
1	CA	1169	A	N9-C1'-C2'	-5.08	106.41	112.00
25	DA	1662	C	C2-N3-C4	-5.08	117.36	119.90
25	DA	2062	A	OP2-P-O3'	5.08	116.37	105.20
25	BA	807	G	C2-N3-C4	-5.08	109.36	111.90
25	BA	1870	G	N3-C4-N9	5.08	129.05	126.00
26	DB	56	G	C5-C6-N1	5.08	114.04	111.50
1	AA	474	G	C4-N9-C1'	-5.08	119.90	126.50
1	AA	627	G	C6-C5-N7	-5.08	127.36	130.40
25	BA	1658	C	C6-N1-C2	5.08	122.33	120.30
25	BA	2014	G	P-O3'-C3'	5.08	125.79	119.70
26	BB	75	G	N7-C8-N9	5.08	115.64	113.10
26	BB	98	G	O5'-P-OP2	-5.08	101.13	105.70
26	DB	66	A	C2-N3-C4	5.08	113.14	110.60
26	DB	99	G	N3-C4-N9	-5.08	122.95	126.00
25	BA	95	G	OP1-P-OP2	5.07	127.21	119.60
25	BA	1658	C	N3-C2-O2	5.07	125.45	121.90
23	CX	17	C	N1-C2-O2	5.07	121.94	118.90
25	DA	249	C	C6-N1-C2	5.07	122.33	120.30
25	DA	1826	G	N7-C8-N9	-5.07	110.56	113.10
1	AA	1415	G	C5-C6-O6	-5.07	125.56	128.60
25	DA	1776	G	C4-C5-N7	5.07	112.83	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1183	A	OP1-P-O3'	5.07	116.36	105.20
1	CA	1165	C	C2-N1-C1'	5.07	124.38	118.80
1	AA	155	C	C6-N1-C2	-5.07	118.27	120.30
25	BA	2511	C	C5-C4-N4	-5.07	116.65	120.20
1	CA	79	G	N3-C4-C5	5.07	131.13	128.60
25	DA	188	G	C5-N7-C8	-5.07	101.77	104.30
25	DA	795	C	O5'-P-OP2	-5.07	101.14	105.70
25	DA	2024	G	C8-N9-C4	5.07	108.43	106.40
1	AA	91	C	N1-C2-O2	5.07	121.94	118.90
1	AA	222	U	C2-N1-C1'	5.07	123.78	117.70
1	AA	1366	C	C2-N3-C4	5.07	122.43	119.90
25	BA	1154	U	N1-C2-O2	5.07	126.35	122.80
25	DA	674	G	C5-C6-O6	5.07	131.64	128.60
25	DA	738	G	N3-C4-C5	-5.07	126.07	128.60
25	DA	754	C	N3-C2-O2	5.07	125.45	121.90
25	DA	2520	C	C5-C6-N1	-5.07	118.47	121.00
25	DA	1790	C	P-O3'-C3'	5.06	125.78	119.70
1	CA	1082	G	C6-N1-C2	5.06	128.14	125.10
1	AA	308	C	N1-C2-O2	5.06	121.94	118.90
1	AA	1347	G	O4'-C1'-N9	5.06	112.25	108.20
25	BA	1024	G	C8-N9-C4	5.06	108.42	106.40
1	CA	998	G	C8-N9-C1'	5.06	133.58	127.00
1	AA	1109	C	N1-C2-O2	-5.06	115.86	118.90
25	BA	2762	A	C8-N9-C4	5.06	107.82	105.80
25	DA	2716	U	N1-C2-N3	5.06	117.94	114.90
1	AA	318	G	O5'-P-OP2	-5.06	101.15	105.70
25	BA	1386	U	C5-C6-N1	-5.06	120.17	122.70
25	BA	2071	G	N9-C4-C5	-5.06	103.38	105.40
1	CA	865	A	C2-N3-C4	-5.06	108.07	110.60
25	DA	1181	C	N1-C2-O2	5.06	121.93	118.90
25	DA	1758	G	N1-C6-O6	5.06	122.93	119.90
1	CA	1028	C	C2-N3-C4	5.06	122.43	119.90
25	DA	573	G	OP1-P-O3'	5.06	116.32	105.20
25	DA	795	C	C5-C6-N1	-5.06	118.47	121.00
1	AA	863	U	C5-C4-O4	5.05	128.93	125.90
25	BA	1573	G	C4-C5-N7	-5.05	108.78	110.80
25	BA	1994	A	N7-C8-N9	5.05	116.33	113.80
25	BA	2239	A	N1-C6-N6	-5.05	115.57	118.60
25	DA	297	C	C6-N1-C2	-5.05	118.28	120.30
1	AA	627	G	C5-C6-O6	-5.05	125.57	128.60
1	AA	346	G	C8-N9-C4	-5.05	104.38	106.40
25	BA	484	G	O4'-C1'-N9	5.05	112.24	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	1017	G	O5'-P-OP2	-5.05	101.15	105.70
26	BB	107	G	C2-N3-C4	-5.05	109.37	111.90
1	AA	816	A	C8-N9-C4	-5.05	103.78	105.80
1	CA	1312	G	C8-N9-C4	-5.05	104.38	106.40
1	CA	142	G	N3-C4-C5	-5.05	126.08	128.60
1	CA	977	A	C8-N9-C4	-5.05	103.78	105.80
25	DA	1600	C	N3-C2-O2	5.05	125.43	121.90
1	AA	1166	G	C4-N9-C1'	5.05	133.06	126.50
25	BA	238	C	O5'-P-OP2	-5.05	101.16	105.70
25	BA	784	C	N3-C4-C5	5.05	123.92	121.90
25	BA	2736	C	N1-C2-O2	5.05	121.93	118.90
25	BA	2771	A	C8-N9-C4	5.05	107.82	105.80
25	BA	1360	C	C2-N1-C1'	5.04	124.35	118.80
25	BA	1680	G	C5-C6-O6	-5.04	125.57	128.60
25	BA	2052	A	N1-C6-N6	5.04	121.63	118.60
25	DA	2695	C	C6-N1-C2	5.04	122.32	120.30
25	BA	990	A	N3-C4-C5	5.04	130.33	126.80
25	BA	1035	G	N9-C4-C5	-5.04	103.38	105.40
25	BA	1302	G	C8-N9-C1'	-5.04	120.44	127.00
25	BA	1310	G	P-O3'-C3'	5.04	125.75	119.70
25	BA	1359	U	C2-N1-C1'	5.04	123.75	117.70
25	BA	2535	G	OP1-P-OP2	5.04	127.17	119.60
23	CX	35	A	C5-C6-N6	5.04	127.73	123.70
25	DA	1142(A)	A	C5-C6-N1	-5.04	115.18	117.70
25	DA	1955	U	C2-N1-C1'	-5.04	111.65	117.70
35	DP	44	GLY	C-N-CA	5.04	134.31	121.70
1	AA	1502	A	N7-C8-N9	5.04	116.32	113.80
25	BA	1373	C	O5'-P-OP1	5.04	116.75	110.70
25	BA	2354	C	C6-N1-C2	-5.04	118.28	120.30
1	CA	721	G	C6-C5-N7	-5.04	127.38	130.40
25	DA	991	C	O5'-P-OP2	-5.04	101.16	105.70
25	BA	990	A	C1'-O4'-C4'	-5.04	105.87	109.90
25	BA	1170	C	N3-C4-C5	5.04	123.92	121.90
1	CA	1005	A	OP1-P-O3'	5.04	116.29	105.20
23	CX	51	C	C2-N1-C1'	5.04	124.34	118.80
1	AA	1151	A	N1-C6-N6	-5.04	115.58	118.60
23	AX	69	C	C5-C4-N4	-5.04	116.67	120.20
25	BA	449	A	OP1-P-OP2	-5.04	112.04	119.60
25	BA	615	G	N1-C6-O6	-5.04	116.88	119.90
25	BA	2268	G	C4-C5-N7	5.04	112.82	110.80
25	DA	114	U	C6-N1-C1'	-5.04	114.14	121.20
25	DA	1537	G	N1-C6-O6	5.04	122.92	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	716	G	N1-C6-O6	-5.04	116.88	119.90
25	BA	1796	C	O5'-P-OP2	-5.04	101.17	105.70
1	CA	1154	G	N3-C4-N9	5.04	129.02	126.00
25	DA	265	A	O4'-C1'-N9	5.04	112.23	108.20
25	DA	698	C	N3-C2-O2	-5.04	118.37	121.90
9	AI	50	LEU	CA-CB-CG	5.04	126.88	115.30
25	BA	334	A	N1-C6-N6	-5.04	115.58	118.60
1	CA	1282	C	C6-N1-C2	-5.04	118.29	120.30
25	DA	1615	C	N3-C2-O2	5.04	125.42	121.90
25	BA	2032	G	C5-N7-C8	-5.03	101.78	104.30
46	B0	13	GLY	N-CA-C	5.03	125.68	113.10
25	DA	659	C	C5-C6-N1	-5.03	118.48	121.00
25	DA	2045	C	N1-C2-O2	5.03	121.92	118.90
25	BA	725	C	C2-N3-C4	-5.03	117.38	119.90
25	DA	2540	C	O5'-P-OP2	-5.03	101.17	105.70
25	BA	482	C	C2-N1-C1'	5.03	124.33	118.80
25	BA	555	G	C8-N9-C1'	5.03	133.54	127.00
25	BA	1006	C	N3-C4-N4	-5.03	114.48	118.00
25	BA	2757	G	O5'-P-OP2	-5.03	101.17	105.70
1	CA	1077	G	C4-N9-C1'	-5.03	119.96	126.50
25	DA	1148	A	N9-C4-C5	5.03	107.81	105.80
25	DA	2189	U	N1-C2-O2	5.03	126.32	122.80
25	BA	2229	A	C6-C5-N7	-5.03	128.78	132.30
1	CA	972	C	C5-C6-N1	5.03	123.52	121.00
1	CA	1151	A	C5-C6-N6	-5.03	119.68	123.70
1	AA	159	G	N1-C2-N3	-5.03	120.88	123.90
1	CA	1525	G	N9-C4-C5	5.03	107.41	105.40
23	CX	49	G	C8-N9-C4	-5.03	104.39	106.40
25	DA	247	G	C8-N9-C4	5.03	108.41	106.40
1	AA	1020	U	N3-C2-O2	-5.02	118.68	122.20
1	AA	255	G	C5-C6-O6	-5.02	125.59	128.60
1	AA	382	A	N1-C6-N6	-5.02	115.59	118.60
25	BA	1738	C	N3-C4-N4	-5.02	114.48	118.00
25	DA	987	G	N9-C1'-C2'	-5.02	106.47	112.00
25	DA	1123	C	N3-C4-C5	5.02	123.91	121.90
25	DA	1313	U	C6-N1-C2	-5.02	117.99	121.00
25	BA	2638	C	N3-C4-C5	5.02	123.91	121.90
1	AA	854	G	N1-C6-O6	5.02	122.91	119.90
25	BA	762	G	C6-C5-N7	-5.02	127.39	130.40
25	DA	330	A	N3-C4-N9	-5.02	123.38	127.40
25	BA	1176	U	N1-C2-O2	5.02	126.31	122.80
25	BA	1838	G	C5-C6-O6	-5.02	125.59	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BA	2414	C	C5-C4-N4	-5.02	116.69	120.20
25	BA	2646	G	C5-C6-O6	-5.02	125.59	128.60
25	BA	2662	U	N3-C4-C5	5.02	117.61	114.60
25	BA	2697	G	N3-C4-N9	-5.02	122.99	126.00
25	DA	1309	G	C8-N9-C4	5.02	108.41	106.40
25	DA	1531	C	C2-N1-C1'	5.02	124.32	118.80
25	DA	2255	G	OP1-P-OP2	5.02	127.13	119.60
25	BA	2528	G	OP2-P-O3'	5.02	116.24	105.20
25	DA	94(A)	G	C5-C6-O6	5.02	131.61	128.60
25	DA	2545	G	N3-C4-C5	-5.02	126.09	128.60
1	AA	1088	G	N1-C6-O6	5.01	122.91	119.90
25	BA	268	G	O4'-C1'-N9	5.01	112.21	108.20
23	CX	76	A	N3-C4-N9	5.01	131.41	127.40
25	DA	193	U	C5-C4-O4	-5.01	122.89	125.90
26	DB	60	C	C2-N3-C4	5.01	122.41	119.90
25	BA	31	C	N3-C2-O2	5.01	125.41	121.90
25	BA	1425	A	OP2-P-O3'	5.01	116.23	105.20
23	CX	46	G	N3-C4-N9	-5.01	122.99	126.00
1	AA	957	U	C5-C6-N1	5.01	125.21	122.70
25	BA	933	C	C6-N1-C2	-5.01	118.30	120.30
25	BA	2608	U	C6-N1-C2	5.01	124.01	121.00
25	DA	271(S)	G	C4-C5-N7	5.01	112.81	110.80
25	DA	945	A	N9-C1'-C2'	5.01	120.52	114.00
25	BA	485	U	O5'-P-OP1	5.01	116.71	110.70
25	BA	1170	C	C5-C6-N1	-5.01	118.50	121.00
25	BA	2387	G	O5'-P-OP1	5.01	116.71	110.70
25	BA	2524	C	N1-C2-O2	-5.01	115.89	118.90
25	DA	2396	G	N1-C6-O6	5.01	122.91	119.90
1	AA	188	C	C6-N1-C2	-5.01	118.30	120.30
25	BA	476	G	N3-C4-N9	5.01	129.00	126.00
25	BA	600	G	N9-C4-C5	-5.01	103.40	105.40
25	DA	180	G	C4-N9-C1'	5.01	133.01	126.50
1	CA	972	C	C6-N1-C2	-5.00	118.30	120.30
25	DA	733	G	N3-C4-N9	5.00	129.00	126.00
25	BA	88	G	C8-N9-C4	-5.00	104.40	106.40
25	BA	423	G	C4-C5-N7	5.00	112.80	110.80
1	AA	176	C	C5-C6-N1	5.00	123.50	121.00
25	BA	585	U	OP1-P-OP2	5.00	127.10	119.60
25	BA	719	C	C2-N3-C4	-5.00	117.40	119.90
25	BA	1314	A	C2-N3-C4	-5.00	108.10	110.60
25	BA	1787	G	O5'-P-OP1	-5.00	101.20	105.70
25	DA	567	A	C4-C5-C6	-5.00	114.50	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	2320	A	C5-C6-N1	5.00	120.20	117.70

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
23	CX	76	A	C1'

All (15) 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
9	AI	52	ALA	Peptide
24	AW	4	PRO	Peptide
50	B4	59	PHE	Peptide
38	BS	58	LEU	Peptide
44	BY	53	PRO	Peptide
45	BZ	136	PHE	Peptide
4	CD	45	GLN	Peptide
19	CS	28	LYS	Peptide
24	CW	9	MVA	Peptide
50	D4	67	TYR	Peptide
27	DD	274	ARG	Peptide

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32196	0	16250	907	0
1	CA	32312	0	16307	1000	0
2	AB	1846	0	1867	106	0
2	CB	1825	0	1828	118	0
3	AC	1552	0	1546	51	0
3	CC	1542	0	1517	81	0
4	AD	1659	0	1676	86	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	CD	1674	0	1714	83	0
5	AE	1129	0	1185	44	0
5	CE	1133	0	1191	57	0
6	AF	806	0	793	34	0
6	CF	816	0	808	24	0
7	AG	1231	0	1238	33	0
7	CG	1235	0	1249	53	0
8	AH	1088	0	1126	43	0
8	CH	1088	0	1126	56	0
9	AI	983	0	986	47	0
9	CI	978	0	966	55	0
10	AJ	709	0	650	41	0
10	CJ	714	0	672	58	0
11	AK	829	0	825	17	0
11	CK	833	0	836	27	0
12	AL	930	0	980	35	0
12	CL	930	0	980	40	0
13	AM	958	0	1002	35	0
13	CM	950	0	988	50	0
14	AN	492	0	529	27	0
14	CN	492	0	529	31	0
15	AO	728	0	760	23	0
15	CO	728	0	760	26	0
16	AP	681	0	697	35	0
16	CP	677	0	686	30	0
17	AQ	823	0	891	21	0
17	CQ	823	0	891	27	0
18	AR	555	0	618	24	0
18	CR	555	0	618	19	0
19	AS	652	0	662	42	0
19	CS	646	0	644	49	0
20	AT	728	0	798	36	0
20	CT	727	0	796	26	0
21	AU	199	0	208	6	0
21	CU	199	0	208	8	0
22	AV	114	0	54	1	0
22	CV	113	0	54	1	0
23	AX	1623	0	823	23	0
23	CX	1623	0	823	22	0
24	AW	93	0	84	10	0
24	CW	93	0	84	10	0
25	BA	58834	0	29666	828	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
25	DA	58458	0	29481	1163	0
26	BB	2573	0	1306	33	0
26	DB	2573	0	1306	65	0
27	BD	2136	0	2218	62	0
27	DD	2136	0	2218	74	0
28	BE	1559	0	1618	55	0
28	DE	1559	0	1618	65	0
29	BF	1584	0	1625	38	0
29	DF	1580	0	1619	65	0
30	BG	1425	0	1443	41	0
30	DG	1424	0	1434	89	0
31	BH	1330	0	1407	37	0
31	DH	1330	0	1407	50	0
32	BI	1085	0	1114	42	0
32	DI	1061	0	1080	27	0
33	BN	1117	0	1183	18	0
33	DN	1117	0	1184	25	0
34	BO	933	0	996	26	0
34	DO	933	0	996	30	0
35	BP	1135	0	1212	42	0
35	DP	1135	0	1212	52	0
36	BQ	1122	0	1179	38	0
36	DQ	1122	0	1179	38	0
37	BR	968	0	1033	24	0
37	DR	968	0	1032	28	0
38	BS	877	0	938	30	0
38	DS	870	0	923	45	0
39	BT	1091	0	1151	36	0
39	DT	1083	0	1136	38	0
40	BU	959	0	1019	28	0
40	DU	959	0	1019	26	0
41	BV	771	0	830	15	0
41	DV	771	0	830	23	0
42	BW	886	0	940	15	0
42	DW	886	0	940	25	0
43	BX	750	0	814	19	0
43	DX	750	0	814	22	0
44	BY	806	0	881	22	0
44	DY	806	0	881	27	0
45	BZ	1349	0	1355	44	0
45	DZ	1360	0	1363	55	0
46	B0	653	0	674	19	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
46	D0	653	0	674	31	0
47	B1	755	0	826	19	0
47	D1	755	0	826	20	0
48	B2	588	0	643	13	0
48	D2	588	0	643	18	0
49	B3	469	0	518	12	0
49	D3	464	0	514	10	0
50	B4	551	0	532	38	0
50	D4	531	0	502	38	0
51	B5	455	0	465	14	0
51	D5	455	0	465	8	0
52	B6	453	0	473	10	0
52	D6	449	0	469	13	0
53	B7	418	0	467	11	0
53	D7	418	0	467	8	0
54	B8	511	0	571	31	0
54	D8	517	0	582	24	0
55	B9	307	0	335	7	0
55	D9	307	0	335	14	0
56	AA	222	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	AL	1	0	0	0	0
56	AM	2	0	0	0	0
56	AN	1	0	0	0	0
56	AS	1	0	0	0	0
56	AV	1	0	0	0	0
56	AX	9	0	0	0	0
56	B0	6	0	0	0	0
56	B1	2	0	0	0	0
56	B2	1	0	0	0	0
56	B3	3	0	0	0	0
56	B5	1	0	0	0	0
56	B7	4	0	0	0	0
56	B8	2	0	0	0	0
56	B9	1	0	0	0	0
56	BA	739	0	0	0	0
56	BB	18	0	0	0	0
56	BD	12	0	0	0	0
56	BE	9	0	0	0	0
56	BF	6	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
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	4	0	0	0	0
56	BR	3	0	0	0	0
56	BU	9	0	0	0	0
56	BV	3	0	0	0	0
56	BW	5	0	0	0	0
56	BX	2	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	CN	1	0	0	0	0
56	CT	1	0	0	0	0
56	CX	3	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	657	0	0	0	0
56	DB	12	0	0	0	0
56	DD	5	0	0	0	0
56	DE	6	0	0	0	0
56	DF	5	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	DP	2	0	0	0	0
56	DQ	4	0	0	0	0
56	DR	1	0	0	0	0
56	DU	2	0	0	0	0
56	DV	3	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

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
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	1	0
59	CX	10	0	10	2	0
60	BA	1	0	0	0	0
60	DA	1	0	0	0	0
61	AA	147	0	0	23	0
61	AD	1	0	0	0	0
61	AE	2	0	0	0	0
61	AJ	1	0	0	0	0
61	AL	2	0	0	0	0
61	AO	2	0	0	0	0
61	AU	1	0	0	1	0
61	AV	2	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	2	0	0	0	0
61	B7	1	0	0	1	0
61	B8	7	0	0	1	0
61	BA	1086	0	0	94	0
61	BB	26	0	0	2	0
61	BD	6	0	0	0	0
61	BE	13	0	0	3	0
61	BF	5	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	2	0
61	BQ	3	0	0	1	0
61	BR	1	0	0	0	0
61	BT	2	0	0	0	0
61	BU	5	0	0	0	0
61	BV	2	0	0	0	0
61	BW	4	0	0	0	0
61	BX	4	0	0	1	0
61	CA	186	0	0	24	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
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	3	0	0	1	0
61	D1	1	0	0	0	0
61	D3	1	0	0	0	0
61	D7	1	0	0	0	0
61	D8	4	0	0	0	0
61	DA	906	0	0	116	0
61	DB	7	0	0	0	0
61	DD	10	0	0	0	0
61	DE	11	0	0	1	0
61	DF	4	0	0	0	0
61	DO	1	0	0	0	0
61	DP	14	0	0	2	0
61	DQ	3	0	0	1	0
61	DR	1	0	0	0	0
61	DU	4	0	0	0	0
61	DV	1	0	0	0	0
61	DX	2	0	0	1	0
61	DY	1	0	0	0	0
All	All	286321	0	191124	6684	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 15.

All (6684) 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:AA:1129:C:N4	1:AA:1143:G:H1	1.46	1.12
1:CA:1002:G:H1	1:CA:1038:C:N4	1.48	1.09
1:AA:348:G:H2'	1:AA:349:A:H5'	1.30	1.06
2:AB:185:ILE:HG22	2:AB:199:TYR:HB2	1.39	1.04
2:CB:16:HIS:HB2	2:CB:204:ASN:HB3	1.36	1.03
25:DA:2206:G:H3'	25:DA:2207:G:C8	1.95	1.00
39:BT:16:ARG:NH2	39:BT:83:ILE:O	1.93	1.00
1:CA:1163:C:N4	1:CA:1173:G:H1	1.60	1.00
25:DA:1019:U:HO2'	25:DA:1021:A:H2	1.03	1.00
1:AA:1125:U:N3	1:AA:1127:G:N7	2.10	0.99
1:CA:1153:C:H42	1:CA:1154:G:H21	1.06	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1318:A:H5''	19:CS:3:ARG:HH22	1.26	0.98
2:CB:185:ILE:HG22	2:CB:199:TYR:HB2	1.44	0.98
1:AA:201:C:H42	1:AA:216:G:H1	0.99	0.96
1:CA:1492:A:N3	25:DA:1913:A:N6	2.14	0.96
13:CM:122:LYS:HD3	13:CM:123:ALA:H	1.29	0.96
1:CA:1163:C:H42	1:CA:1173:G:H1	1.06	0.95
1:CA:998:G:H1	1:CA:1043:C:N4	1.64	0.94
25:DA:1488:G:C6	25:DA:1489:U:H5	1.85	0.94
25:BA:9:U:H3	25:BA:2641:A:H2	1.02	0.93
1:CA:998:G:H1	1:CA:1043:C:H42	0.95	0.93
1:AA:167:G:H2'	1:AA:168:G:H8	1.32	0.93
25:BA:1036:A:OP2	61:BA:4501:HOH:O	1.87	0.93
1:CA:999:C:N4	1:CA:1042:G:C6	2.36	0.92
1:CA:837:G:H1	1:CA:849:C:H42	1.18	0.92
25:DA:1664:A:OP1	61:DA:4386:HOH:O	1.87	0.92
25:DA:740:U:OP2	61:DA:4119:HOH:O	1.87	0.92
4:CD:122:ARG:NH1	4:CD:134:ASP:O	2.03	0.92
25:BA:139:A:H8	25:BA:1454:C:HO2'	0.94	0.92
1:CA:999:C:C4	1:CA:1042:G:N1	2.38	0.91
44:BY:92:ASN:HB3	44:BY:94:LYS:H	1.35	0.91
26:DB:22:U:H3	26:DB:61:G:H1	1.18	0.91
25:DA:1798:U:H5'	27:DD:259:THR:HG22	1.52	0.91
25:BA:1065:U:HO2'	25:BA:1067:A:H2	1.13	0.91
1:CA:677:U:H3	1:CA:713:G:H22	1.19	0.91
2:AB:16:HIS:HB2	2:AB:204:ASN:HB3	1.50	0.91
2:AB:16:HIS:CD2	2:AB:17:PHE:H	1.89	0.90
1:CA:999:C:N4	1:CA:1042:G:N1	2.18	0.90
10:CJ:8:LEU:HB2	10:CJ:70:ARG:HB2	1.53	0.90
44:BY:54:LYS:HA	44:BY:56:PRO:HD3	1.52	0.90
1:AA:1075:C:OP1	2:AB:179:LYS:NZ	2.04	0.90
25:BA:2695:C:O2	34:BO:70:LYS:NZ	2.04	0.89
1:CA:1162:C:H42	1:CA:1174:G:H1	1.21	0.89
25:BA:2227:G:H5'	25:BA:2228:G:N7	1.88	0.89
34:BO:35:VAL:HG11	34:BO:103:ALA:HB3	1.54	0.89
30:DG:11:TYR:CZ	30:DG:16:ARG:HD3	2.08	0.88
1:AA:1028:C:H42	1:AA:1033:G:H1	1.21	0.88
50:D4:53:GLU:HG2	50:D4:55:ARG:H	1.38	0.88
1:CA:1007:C:N3	1:CA:1022:G:N2	2.20	0.88
11:AK:79:SER:HA	11:AK:104:GLN:HB2	1.56	0.87
1:CA:1002:G:N2	1:CA:1038:C:N3	2.23	0.87
25:DA:1689:A:H62	25:DA:1698:A:H2	1.20	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:16:HIS:HB3	2:CB:210:SER:HB3	1.57	0.87
1:AA:1414:U:H3	1:AA:1486:G:H1	1.22	0.87
1:AA:406:G:H5'	4:AD:5:ILE:HD11	1.55	0.87
1:AA:836:G:OP2	18:AR:61:LYS:NZ	2.06	0.87
25:DA:1019:U:H3	25:DA:1142(A):A:H62	1.23	0.87
25:BA:1007:G:OP1	61:BA:4615:HOH:O	1.93	0.87
35:BP:126:VAL:HG12	35:BP:148:LEU:HD22	1.54	0.87
1:CA:1133:G:H2'	1:CA:1134:G:H8	1.39	0.87
25:DA:827:U:OP1	61:DA:4182:HOH:O	1.92	0.87
1:AA:1129:C:N3	1:AA:1143:G:N2	2.22	0.86
23:AX:6:G:H1	23:AX:67:C:H42	1.23	0.86
46:B0:11:ARG:O	46:B0:14:ARG:NH2	2.08	0.86
1:CA:1007:C:N4	1:CA:1022:G:N1	2.23	0.86
9:CI:9:ARG:HG2	9:CI:14:VAL:HG12	1.56	0.86
25:BA:1404:G:OP2	61:BA:4220:HOH:O	1.92	0.86
27:BD:71:ASP:HB3	27:BD:103:ARG:HH22	1.39	0.86
29:DF:53:THR:HG23	29:DF:55:GLY:H	1.40	0.86
25:BA:1361:C:OP2	61:BA:4469:HOH:O	1.94	0.86
1:CA:1262:C:H42	1:CA:1273:G:H1	1.21	0.86
1:AA:1025:U:O2	1:AA:1036:G:O6	1.93	0.86
25:DA:1648:C:OP1	61:DA:4113:HOH:O	1.93	0.86
1:CA:1502:A:H2	1:CA:1505:G:H1	1.23	0.86
8:AH:51:VAL:HG12	8:AH:52:ASP:H	1.41	0.85
25:BA:831:A:OP2	61:BA:4453:HOH:O	1.94	0.85
1:AA:574:A:OP2	61:AA:4004:HOH:O	1.93	0.85
1:AA:1036:G:H5'	1:AA:1037:C:H5	1.39	0.85
1:AA:166:G:H2'	1:AA:167:G:C8	2.10	0.85
30:BG:66:GLN:HG2	50:B4:1:MET:HE3	1.59	0.85
1:AA:427:U:OP1	4:AD:13:ARG:NH2	2.09	0.85
45:DZ:69:THR:HG22	45:DZ:90:VAL:HA	1.57	0.85
1:AA:1108:G:O6	61:AA:4120:HOH:O	1.94	0.84
29:BF:185:ASP:HA	29:BF:188:ARG:HD3	1.58	0.84
25:BA:1577:C:O2'	25:BA:1578:C:O5'	1.95	0.84
25:BA:656:A:OP1	35:BP:65:ARG:NH1	2.10	0.84
1:CA:1075:C:OP1	2:CB:179:LYS:NZ	2.09	0.84
25:BA:1717:C:OP1	61:BA:3894:HOH:O	1.95	0.84
25:DA:1602:U:O4	61:DA:4523:HOH:O	1.93	0.84
25:DA:2592:G:OP1	61:DA:4138:HOH:O	1.96	0.84
2:AB:21:ARG:HB3	2:AB:39:ILE:HA	1.60	0.84
1:CA:542:G:OP1	4:CD:10:ARG:NH2	2.11	0.84
25:DA:2738:A:OP2	61:DA:4117:HOH:O	1.96	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1683:C:OP2	61:BA:4522:HOH:O	1.95	0.84
1:CA:565:U:OP2	61:CA:4054:HOH:O	1.96	0.84
1:CA:1125:U:O2'	1:CA:1126:U:H2'	1.76	0.84
25:BA:2459:G:OP2	61:BA:4395:HOH:O	1.96	0.84
25:DA:2452:C:OP1	61:DA:4409:HOH:O	1.95	0.83
1:AA:474:G:H2'	1:AA:475:G:H8	1.41	0.83
1:CA:582:U:OP1	15:CO:68:ARG:NH2	2.08	0.83
1:AA:1008:C:H42	1:AA:1021:G:H1	1.25	0.83
25:BA:551:A:OP1	61:BA:4497:HOH:O	1.97	0.83
25:BA:2604:G:O2'	61:BA:4655:HOH:O	1.96	0.83
5:CE:40:ARG:HH21	5:CE:68:GLU:HA	1.43	0.83
36:DQ:81:VAL:HB	46:D0:7:LEU:HD21	1.58	0.83
1:AA:443:C:N4	1:AA:491:G:O6	2.12	0.83
1:AA:1492:A:N3	25:BA:1935:A:N6	2.26	0.83
1:AA:1005:A:N7	1:AA:1024:G:N2	2.26	0.83
3:CC:73:PRO:HB3	3:CC:103:VAL:HG11	1.60	0.83
2:AB:69:LEU:HB3	2:AB:162:ILE:HG22	1.61	0.82
35:DP:100:LEU:HD12	35:DP:112:LEU:HD11	1.59	0.82
25:DA:1204:A:H2	25:DA:1241:A:H62	1.26	0.82
38:DS:93:LYS:HD3	38:DS:95:HIS:HB2	1.62	0.82
25:BA:1391:C:OP2	61:BA:3932:HOH:O	1.97	0.82
46:D0:11:ARG:O	46:D0:14:ARG:NH2	2.12	0.82
1:AA:1492:A:O2'	25:BA:1935:A:N1	2.12	0.82
25:BA:1480:A:H61	25:BA:1605:A:H62	1.25	0.82
16:AP:53:VAL:HG13	16:AP:79:VAL:HG13	1.59	0.82
25:DA:1310:G:OP2	53:D7:9:ARG:NH1	2.13	0.82
2:AB:16:HIS:CG	2:AB:17:PHE:H	1.96	0.82
4:AD:108:LEU:HD13	4:AD:174:LEU:HD13	1.60	0.82
1:CA:838:G:H1	1:CA:848:C:H42	1.27	0.82
1:CA:21:G:OP1	61:CA:4062:HOH:O	1.97	0.82
25:DA:62:C:H42	25:DA:93:G:H1	1.28	0.81
28:BE:110:GLY:O	61:BE:408:HOH:O	1.98	0.81
10:AJ:35:SER:HB3	10:AJ:73:ASP:HB2	1.61	0.81
30:BG:161:THR:HG22	30:BG:163:ALA:H	1.44	0.81
1:AA:656:C:O2'	15:AO:28:GLN:NE2	2.13	0.81
1:AA:1124:G:O2'	1:AA:1145:C:N4	2.13	0.81
1:CA:1132:C:H2'	1:CA:1133:G:H8	1.45	0.81
25:DA:1840:G:OP2	61:DA:4308:HOH:O	1.97	0.81
1:AA:97:G:O2'	1:AA:98:G:O4'	1.99	0.81
25:BA:1736:A:H62	25:BA:1745:A:H2	1.27	0.81
2:CB:201:ILE:HG21	2:CB:214:ILE:HG21	1.62	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:826:U:OP1	61:DA:4259:HOH:O	1.98	0.81
25:DA:1021:A:H62	25:DA:1141:U:H3	1.26	0.81
43:DX:53:LYS:HB3	43:DX:82:GLN:HB3	1.61	0.81
1:AA:21:G:OP1	61:AA:4080:HOH:O	1.98	0.81
32:BI:92:VAL:HG13	32:BI:120:ILE:HB	1.62	0.81
45:DZ:72:ARG:NH2	45:DZ:97:GLU:O	2.14	0.81
1:AA:167:G:H2'	1:AA:168:G:C8	2.16	0.81
1:AA:1026:G:H5'	1:AA:1027:C:H5''	1.61	0.81
1:CA:922:G:H4'	5:CE:20:GLN:HA	1.62	0.81
1:CA:975:A:H4'	1:CA:976:G:H5''	1.63	0.81
35:BP:36:LYS:O	61:BP:304:HOH:O	1.98	0.81
1:CA:1245:A:H61	1:CA:1292:U:H3	1.28	0.80
25:DA:2287:A:H62	25:DA:2344:U:H3	1.26	0.80
1:CA:1005:A:H1'	1:CA:1036:G:H1	1.43	0.80
39:DT:16:ARG:NH2	39:DT:83:ILE:O	2.13	0.80
1:AA:189(B):C:N4	1:AA:189(I):G:O6	2.11	0.80
1:AA:421:U:O2'	1:AA:423:G:N7	2.14	0.80
27:BD:69:ARG:NH2	27:BD:128:GLY:O	2.14	0.80
1:CA:148:G:H2'	1:CA:149:A:H8	1.44	0.80
1:CA:768:A:OP2	61:CA:4023:HOH:O	2.00	0.80
25:BA:1093:G:H2'	25:BA:1156:G:H22	1.44	0.80
25:DA:878:A:N6	25:DA:900:A:N7	2.30	0.80
33:DN:20:GLY:HA2	33:DN:61:ARG:HE	1.45	0.80
55:D9:25:VAL:HB	55:D9:34:GLN:HB2	1.62	0.80
1:AA:289:G:OP2	61:AA:4071:HOH:O	1.99	0.80
25:DA:271(A):A:N7	25:DA:271(W):G:N2	2.28	0.80
26:DB:11:C:OP2	26:DB:12:C:N4	2.15	0.80
1:AA:559:A:OP1	5:AE:126:ARG:NH2	2.14	0.80
25:DA:2683:C:OP1	39:DT:53:ARG:NH2	2.14	0.80
51:D5:16:ARG:NH1	51:D5:17:ASP:OD1	2.14	0.80
10:CJ:49:VAL:HG23	14:CN:41:ARG:HB2	1.62	0.80
25:DA:1816:G:O6	27:DD:35:LYS:NZ	2.11	0.80
25:BA:272:U:H4'	32:BI:50:ARG:HH12	1.45	0.80
25:DA:301:G:OP2	44:DY:84:ARG:NH2	2.14	0.80
1:AA:1030(C):G:N7	1:AA:1031:G:N2	2.30	0.80
1:AA:1126:U:H5	10:AJ:71:LEU:HD22	1.45	0.79
25:DA:2371:G:O6	61:DA:3977:HOH:O	2.00	0.79
25:DA:323:G:O2'	25:DA:1205:U:N3	2.15	0.79
25:DA:981:A:OP1	61:DA:4035:HOH:O	2.01	0.79
4:AD:155:LEU:HB3	4:AD:158:ILE:HD11	1.64	0.79
4:CD:103:ASN:OD1	4:CD:114:ARG:NH2	2.15	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1070:G:OP2	61:BA:4705:HOH:O	2.00	0.79
25:BA:2734:A:N7	61:BA:4015:HOH:O	2.16	0.79
1:CA:664:G:OP1	18:CR:64:ARG:NH2	2.15	0.79
1:CA:1142:G:H3'	1:CA:1143:G:H8	1.47	0.79
47:B1:50:ARG:HG2	47:B1:59:THR:HB	1.64	0.79
1:CA:117:G:OP2	61:CA:4053:HOH:O	2.01	0.79
2:CB:15:VAL:HG21	2:CB:213:LEU:HD12	1.63	0.79
25:DA:1250:G:OP1	61:DA:4457:HOH:O	1.99	0.79
25:DA:1971:A:OP1	61:DA:3912:HOH:O	2.01	0.79
1:AA:1314:C:OP2	19:AS:4:SER:OG	2.00	0.79
2:AB:16:HIS:HB3	2:AB:210:SER:HB2	1.65	0.79
25:BA:2795:G:OP2	61:BA:4646:HOH:O	2.01	0.79
2:CB:54:THR:HG23	2:CB:199:TYR:HB3	1.65	0.79
25:DA:172:C:H2'	25:DA:173:G:H8	1.49	0.79
26:DB:75:G:N2	45:DZ:87:ASP:OD1	2.16	0.79
25:BA:1815:A:OP2	61:BA:4517:HOH:O	1.99	0.78
1:CA:563:A:N6	61:CA:4065:HOH:O	2.16	0.78
8:CH:51:VAL:HG12	8:CH:52:ASP:H	1.47	0.78
25:BA:787:U:OP2	61:BA:4517:HOH:O	2.00	0.78
19:CS:30:LEU:HD11	19:CS:32:LYS:HG3	1.64	0.78
25:BA:354:A:H2	25:BA:1255:A:HO2'	1.30	0.78
1:CA:656:C:O2'	15:CO:28:GLN:NE2	2.17	0.78
4:CD:100:ARG:NH1	4:CD:137:SER:OG	2.16	0.78
25:DA:1040:C:N3	25:DA:1115:G:N1	2.27	0.78
19:AS:41:VAL:HG12	19:AS:43:GLU:H	1.47	0.78
25:DA:125:G:H5''	53:D7:19:ARG:HD3	1.64	0.78
25:BA:1695:C:OP1	61:BA:4514:HOH:O	2.02	0.78
25:BA:1712:A:OP2	61:BA:4248:HOH:O	2.01	0.78
1:AA:642:A:N3	8:AH:113:SER:OG	2.16	0.78
25:BA:1431:G:O2'	25:BA:1442:U:O2	2.02	0.78
50:B4:57:GLU:HB3	50:B4:58:ARG:HA	1.66	0.78
1:CA:1047:G:H1	1:CA:1210:C:H42	1.30	0.78
23:CX:50:U:H3	23:CX:64:G:H1	1.32	0.78
25:DA:1315:C:OP2	61:DA:4078:HOH:O	2.02	0.78
9:AI:50:LEU:HD13	9:AI:56:LEU:HA	1.64	0.78
25:BA:599:U:OP1	61:BA:4465:HOH:O	2.00	0.78
25:BA:2299:A:H62	25:BA:2356:U:H3	1.26	0.78
3:AC:15:THR:HG21	3:AC:181:ASN:HA	1.65	0.78
25:BA:1531:G:N2	25:BA:1550:C:O2	2.15	0.78
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.16	0.78
1:CA:619:U:N3	4:CD:134:ASP:OD1	2.14	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:47:VAL:HG21	28:BE:86:PRO:HD2	1.64	0.78
49:B3:3:ARG:NH1	49:B3:60:GLU:OE2	2.17	0.78
1:CA:1348:U:H4'	9:CI:120:ARG:HD2	1.66	0.78
1:CA:1166:G:H1'	1:CA:1171:G:H22	1.49	0.78
25:BA:2227:G:H3'	25:BA:2228:G:C8	2.19	0.77
25:BA:2601:A:N3	61:BA:3847:HOH:O	2.17	0.77
1:AA:266:G:H5''	1:AA:268:C:H41	1.48	0.77
1:CA:1133:G:H2'	1:CA:1134:G:C8	2.18	0.77
1:AA:1304:G:OP2	61:AA:4087:HOH:O	2.02	0.77
25:DA:1022:G:H22	25:DA:1142(A):A:H2	1.30	0.77
25:DA:323:G:HO2'	25:DA:1205:U:H3	1.28	0.77
30:DG:80:PHE:O	30:DG:82:LEU:N	2.18	0.77
1:AA:195:A:N3	1:AA:222:U:O2'	2.15	0.77
1:CA:999:C:N3	1:CA:1042:G:N2	2.33	0.77
1:CA:1193:G:O2'	5:CE:25:ARG:NH2	2.18	0.77
2:CB:80:ILE:HD11	2:CB:212:GLN:HA	1.67	0.77
7:CG:75:VAL:HG13	7:CG:145:ALA:HA	1.66	0.77
25:DA:602:G:O2'	25:DA:655:A:N6	2.17	0.77
1:AA:1054:C:OP1	61:AA:4053:HOH:O	2.01	0.77
1:AA:1124:G:HO2'	1:AA:1145:C:N4	1.81	0.77
1:AA:1129:C:H42	1:AA:1143:G:H1	0.80	0.77
35:BP:50:ARG:HH21	54:B8:7:HIS:HD2	1.33	0.77
1:CA:427:U:H3'	1:CA:428:G:H2'	1.66	0.77
1:CA:998:G:N2	1:CA:1043:C:N3	2.32	0.77
49:B3:8:LEU:HD13	49:B3:31:LEU:HD23	1.67	0.77
1:CA:559:A:OP1	5:CE:126:ARG:NH2	2.17	0.77
1:AA:972:C:OP1	61:AA:4123:HOH:O	2.02	0.77
35:BP:59:LEU:HD21	54:B8:10:ALA:HA	1.67	0.77
10:CJ:29:ARG:HB2	10:CJ:84:GLN:HE22	1.49	0.77
25:DA:195:A:N7	61:DA:4177:HOH:O	2.18	0.77
41:DV:6:LYS:HB2	41:DV:38:LEU:HD21	1.67	0.77
1:AA:742:G:OP2	15:AO:35:ARG:NH2	2.17	0.76
25:DA:2494:G:OP2	61:DA:4410:HOH:O	2.02	0.76
2:CB:178:ARG:HH22	8:CH:68:ARG:HH12	1.30	0.76
35:DP:126:VAL:HG12	35:DP:148:LEU:HD22	1.66	0.76
25:BA:2614:A:OP1	61:BA:4813:HOH:O	2.03	0.76
25:DA:2296:U:OP2	38:DS:9:ARG:NH2	2.18	0.76
1:CA:1223:C:H5''	1:CA:1224:G:H5'	1.67	0.76
2:AB:166:ASP:HB3	2:AB:169:LYS:HB2	1.66	0.76
10:AJ:27:ALA:HA	10:AJ:81:THR:HG21	1.66	0.76
13:AM:17:VAL:O	13:AM:20:THR:OG1	2.04	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2228:G:O2'	25:BA:2229:A:OP1	2.01	0.76
38:BS:25:ARG:NH1	38:BS:42:ASP:OD1	2.17	0.76
25:DA:1268:A:OP1	61:DA:3942:HOH:O	2.03	0.76
25:DA:1323:U:O4	61:DA:4525:HOH:O	2.03	0.76
2:AB:17:PHE:HB2	2:AB:44:LEU:HD21	1.66	0.76
10:AJ:7:LYS:HE2	10:AJ:9:ARG:HH12	1.50	0.76
25:BA:808:A:OP1	61:BA:4590:HOH:O	2.02	0.76
1:CA:1376:U:OP1	7:CG:98:SER:OG	2.03	0.76
1:AA:1162:C:H42	1:AA:1174:G:H1	1.32	0.76
20:AT:47:GLY:HA2	20:AT:48:LYS:HB2	1.67	0.76
25:BA:927:G:N2	25:BA:944:C:N3	2.34	0.76
1:AA:175:C:H2'	1:AA:176:C:H6	1.51	0.76
1:AA:881:G:P	12:AL:12:ARG:HH22	2.08	0.76
10:AJ:5:ARG:HD3	10:AJ:71:LEU:HD11	1.68	0.76
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.65	0.76
25:BA:894:U:O4	25:BA:978:A:N6	2.19	0.76
1:CA:138:G:H8	1:CA:138:G:H5'	1.48	0.76
25:DA:2227:A:OP2	61:DA:4568:HOH:O	2.02	0.76
25:BA:1248:G:O6	61:BA:4633:HOH:O	2.04	0.76
7:AG:50:ILE:HD11	7:AG:58:PRO:HA	1.68	0.76
37:BR:67:LEU:HD13	37:BR:76:VAL:HG21	1.66	0.76
1:CA:1003:G:N2	1:CA:1025:U:O4	2.19	0.76
1:AA:659:U:H2'	1:AA:660:G:C8	2.21	0.75
3:CC:35:GLU:OE2	3:CC:59:ARG:NH2	2.17	0.75
25:DA:1010:A:OP2	61:DA:4093:HOH:O	2.04	0.75
4:AD:13:ARG:NH1	4:AD:38:TYR:O	2.20	0.75
25:BA:2587:C:OP2	61:BA:4081:HOH:O	2.03	0.75
25:DA:2504:U:OP2	61:DA:4073:HOH:O	2.04	0.75
1:AA:661:G:H1	1:AA:744:C:H42	1.32	0.75
1:AA:1007:C:N3	1:AA:1022:G:O6	2.19	0.75
1:CA:1004:A:H8	1:CA:1005:A:H4'	1.51	0.75
10:CJ:38:ILE:HD11	10:CJ:71:LEU:HD23	1.68	0.75
25:DA:2705:A:OP2	61:DA:4125:HOH:O	2.04	0.75
26:DB:48:A:H4'	38:DS:95:HIS:HD2	1.50	0.75
1:AA:1183:A:O2'	1:AA:1184:G:OP1	2.04	0.75
1:CA:64:G:H4'	1:CA:65:U:H3'	1.67	0.75
7:CG:113:GLU:HG2	7:CG:119:ARG:HG2	1.66	0.75
25:DA:89:G:H3'	25:DA:90:U:H5''	1.68	0.75
25:DA:1604:C:OP2	61:DA:4394:HOH:O	2.04	0.75
1:CA:1163:C:N3	1:CA:1173:G:N2	2.35	0.75
20:CT:57:ARG:HH22	20:CT:100:ILE:HD12	1.50	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BX:31:HIS:HD2	43:BX:33:LYS:H	1.32	0.75
1:CA:608:A:OP2	61:CA:4181:HOH:O	2.03	0.75
36:DQ:48:GLU:OE1	36:DQ:51:ARG:NH2	2.19	0.75
1:AA:407:G:H5''	4:AD:115:ARG:HB3	1.68	0.75
61:BE:408:HOH:O	37:BR:3:HIS:NE2	2.19	0.75
1:CA:1273:G:H3'	1:CA:1274:G:H8	1.51	0.75
26:DB:50:G:OP1	38:DS:63:THR:OG1	2.04	0.75
1:AA:1182:G:H4'	1:AA:1183:A:H5'	1.67	0.75
1:CA:1123:A:H4'	10:CJ:37:PRO:HD2	1.69	0.75
25:DA:773:U:OP1	61:DA:4407:HOH:O	2.05	0.75
49:B3:55:ARG:NH1	49:B3:57:GLU:OE1	2.20	0.75
25:DA:649:G:H4'	54:D8:46:ARG:HH22	1.51	0.75
25:DA:1324:G:N7	61:DA:3853:HOH:O	2.20	0.75
25:DA:2074:U:OP1	61:DA:3914:HOH:O	2.05	0.75
30:DG:18:GLU:OE2	30:DG:21:ARG:NH1	2.17	0.75
1:AA:175:C:H2'	1:AA:176:C:C6	2.22	0.74
6:AF:18:GLN:HA	6:AF:21:LEU:HD12	1.68	0.74
25:DA:1671:U:OP2	61:DA:3754:HOH:O	2.04	0.74
1:AA:803:G:OP1	61:AA:4050:HOH:O	2.04	0.74
31:BH:98:LEU:HD22	31:BH:125:VAL:HG23	1.67	0.74
25:DA:948:G:OP1	61:DA:4175:HOH:O	2.04	0.74
1:AA:1028:C:N4	1:AA:1033:G:H1	1.84	0.74
25:BA:1284:G:OP2	61:BA:4765:HOH:O	2.05	0.74
1:CA:1251:A:O2'	1:CA:1369:C:O2'	2.04	0.74
25:DA:1670:C:OP1	61:DA:3754:HOH:O	2.05	0.74
7:AG:111:ARG:NH1	7:AG:113:GLU:OE2	2.20	0.74
47:B1:65:SER:HG	47:B1:66:HIS:HD1	1.34	0.74
25:DA:1876:A:H2'	25:DA:1877:A:C8	2.22	0.74
25:DA:2006:C:OP2	61:DA:4390:HOH:O	2.06	0.74
1:AA:348:G:H2'	1:AA:349:A:C5'	2.13	0.74
25:BA:175:G:N2	25:BA:199:C:O2	2.19	0.74
25:BA:535:C:OP1	61:BA:4620:HOH:O	2.05	0.74
25:DA:31:C:OP1	61:DA:4155:HOH:O	2.05	0.74
25:DA:286:C:H2'	25:DA:287:C:H6	1.53	0.74
25:DA:1153:C:OP2	61:DA:4082:HOH:O	2.05	0.74
25:DA:2552:U:H2'	25:DA:2554:U:OP2	1.86	0.74
44:DY:49:VAL:HG21	44:DY:61:ILE:HG23	1.69	0.74
39:BT:95:ARG:HG2	39:BT:95:ARG:HH11	1.53	0.74
1:CA:693:G:H1'	7:CG:82:GLY:HA3	1.68	0.74
25:DA:465:G:O6	61:DA:4428:HOH:O	2.04	0.74
25:DA:1332:G:OP1	61:DA:4079:HOH:O	2.05	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1693:U:O2'	27:DD:14:ARG:NH2	2.20	0.74
30:DG:113:ARG:NH1	30:DG:139:LEU:O	2.20	0.74
1:CA:289:G:OP2	61:CA:4053:HOH:O	2.06	0.74
4:CD:25:ARG:NH1	4:CD:30:LYS:O	2.21	0.74
25:DA:2206:G:H3'	25:DA:2207:G:H8	1.47	0.74
46:D0:53:MET:HG3	46:D0:59:LEU:HD23	1.69	0.74
28:BE:143:ASN:HD22	28:BE:147:PRO:HD3	1.51	0.74
39:DT:85:LYS:NZ	39:DT:87:ASP:OD2	2.21	0.74
1:AA:659:U:H2'	1:AA:660:G:H8	1.52	0.73
15:AO:56:LEU:O	15:AO:60:VAL:HG23	1.88	0.73
1:CA:1015:A:N3	1:CA:1218:C:O2'	2.20	0.73
25:DA:1803:A:O2'	27:DD:259:THR:HG21	1.86	0.73
30:DG:161:THR:HG22	30:DG:163:ALA:H	1.53	0.73
50:D4:24:THR:OG1	50:D4:25:TYR:N	2.21	0.73
1:AA:159:G:HO2'	1:AA:161:A:H62	1.36	0.73
1:AA:346:G:O6	1:AA:348:G:N2	2.17	0.73
8:AH:41:ARG:NH2	8:AH:123:GLU:OE2	2.21	0.73
25:DA:1593:G:H2'	25:DA:1594:G:H8	1.52	0.73
13:AM:34:LEU:HD13	13:AM:41:PRO:HA	1.70	0.73
7:CG:111:ARG:NH2	7:CG:126:ASP:OD2	2.21	0.73
25:DA:11:G:H2'	25:DA:12:U:H5'	1.68	0.73
25:BA:1359:U:OP1	61:BA:4316:HOH:O	2.05	0.73
1:CA:1189:C:O2	61:CA:4087:HOH:O	2.07	0.73
3:CC:40:ARG:NH2	3:CC:55:VAL:O	2.21	0.73
25:DA:1040:C:O2	25:DA:1115:G:N2	2.18	0.73
25:BA:2460:A:OP2	61:BA:4508:HOH:O	2.07	0.73
32:BI:129:THR:HG22	32:BI:139:GLN:HE22	1.54	0.73
25:BA:830:A:OP2	61:BA:4453:HOH:O	2.07	0.73
25:BA:1694:G:OP1	61:BA:4514:HOH:O	2.06	0.73
1:CA:673:G:H2'	1:CA:674:G:C8	2.23	0.73
2:CB:84:GLU:HB3	2:CB:219:VAL:HG21	1.70	0.73
13:CM:3:ARG:HA	50:D4:34:GLU:HG2	1.69	0.73
1:AA:445:G:H2'	1:AA:446:G:C8	2.23	0.73
25:DA:731:C:OP1	61:DA:4226:HOH:O	2.06	0.73
25:DA:1038:C:H42	25:DA:1117:G:H1	1.34	0.73
25:DA:1593:G:H2'	25:DA:1594:G:C8	2.23	0.73
25:BA:874:U:OP1	61:BA:4632:HOH:O	2.07	0.73
25:DA:2867:G:OP2	39:DT:119:LYS:NZ	2.20	0.73
1:AA:154:C:N4	1:AA:168:G:O6	2.22	0.73
25:DA:526:A:OP1	61:DA:4574:HOH:O	2.07	0.73
25:DA:963:U:OP2	61:DA:4175:HOH:O	2.05	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2805:G:H2'	25:DA:2807:G:H8	1.53	0.73
31:DH:98:LEU:HD22	31:DH:125:VAL:HG23	1.70	0.73
1:CA:1457:G:OP1	20:CT:39:LYS:NZ	2.20	0.73
2:CB:87:ARG:NH2	2:CB:220:ASP:OD1	2.20	0.73
25:DA:1776:G:OP2	61:DA:3760:HOH:O	2.06	0.73
25:DA:2748:A:O2'	31:DH:63:SER:O	2.06	0.73
54:D8:33:ASN:HA	54:D8:36:LYS:HD2	1.70	0.73
1:AA:768:A:OP2	61:AA:4023:HOH:O	2.06	0.72
25:BA:537:G:N7	61:BA:4620:HOH:O	2.21	0.72
1:CA:316:G:OP2	1:CA:351:G:O2'	2.06	0.72
1:CA:671:G:H5'	6:CF:77:ARG:HH22	1.54	0.72
1:CA:1492:A:H2'	25:DA:1913:A:H62	1.54	0.72
25:DA:2052:G:O2'	61:DA:3731:HOH:O	2.07	0.72
25:BA:1405:A:H61	25:BA:1418:U:H3	1.37	0.72
4:CD:119:GLN:HG2	4:CD:123:HIS:CD2	2.24	0.72
25:DA:450:G:O6	61:DA:4448:HOH:O	2.07	0.72
2:AB:195:ASP:O	8:AH:68:ARG:NH2	2.21	0.72
25:BA:2331:G:N2	38:BS:3:ARG:HA	2.04	0.72
1:CA:749:C:OP2	61:CA:4141:HOH:O	2.07	0.72
24:CW:9:MVA:O	24:CW:10:2QY:H86	1.89	0.72
1:AA:383:A:H2	1:AA:384:G:H1'	1.54	0.72
1:AA:976:G:H5'	1:AA:1358:U:O2'	1.90	0.72
1:CA:299:G:O6	61:CA:4170:HOH:O	2.06	0.72
25:DA:390:A:H4'	25:DA:391:G:H5'	1.71	0.72
25:DA:2037:G:O6	61:DA:4105:HOH:O	2.06	0.72
1:AA:1158:C:H5	1:AA:1181:G:H1	1.36	0.72
25:BA:1055:A:OP2	33:BN:37:LYS:NZ	2.18	0.72
25:BA:1701:A:OP1	37:BR:1:MET:HA	1.90	0.72
1:CA:939:G:H1	1:CA:1344:C:H42	1.34	0.72
1:CA:1030(A):G:N1	1:CA:1030(D):A:OP2	2.22	0.72
3:CC:36:ASP:HA	3:CC:39:ILE:HD12	1.69	0.72
1:CA:21:G:OP1	61:CA:4064:HOH:O	2.08	0.72
25:DA:2430:A:OP2	61:DA:4182:HOH:O	2.08	0.72
25:DA:2849:U:OP2	39:DT:95:ARG:NH1	2.22	0.72
31:DH:27:LYS:NZ	31:DH:32:GLU:OE2	2.22	0.72
50:D4:44:THR:O	50:D4:46:GLN:N	2.23	0.72
1:AA:1030(C):G:H2'	1:AA:1030(D):A:H8	1.55	0.72
1:AA:1145:C:H4'	1:AA:1146:A:H5'	1.72	0.72
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.25	0.72
43:BX:31:HIS:CD2	43:BX:33:LYS:H	2.08	0.72
1:CA:954:G:H21	1:CA:1227:A:H62	1.38	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:972:C:OP1	61:CA:4183:HOH:O	2.06	0.72
25:DA:887:A:O2'	25:DA:889:C:OP2	2.08	0.72
1:AA:1198:G:OP2	61:AA:4053:HOH:O	2.06	0.72
12:AL:49:ASN:ND2	12:AL:92:ASP:OD2	2.22	0.72
1:CA:1279:A:OP2	10:CJ:9:ARG:NH1	2.22	0.72
2:CB:179:LYS:HA	8:CH:72:PRO:HG3	1.71	0.72
10:CJ:16:LEU:HD13	10:CJ:70:ARG:HG2	1.71	0.72
19:CS:37:ARG:O	19:CS:70:LYS:NZ	2.22	0.72
25:BA:865:G:OP2	61:BA:4105:HOH:O	2.07	0.72
40:BU:76:TYR:OH	40:BU:92:ARG:NH1	2.23	0.72
25:DA:2483:C:N3	36:DQ:124:LYS:NZ	2.37	0.72
25:DA:2248:C:OP2	61:DA:3947:HOH:O	2.08	0.71
40:DU:83:LEU:HD12	40:DU:88:ILE:HD12	1.70	0.71
10:AJ:49:VAL:HG23	14:AN:41:ARG:HB2	1.72	0.71
25:BA:1494:G:N2	25:BA:1511:C:O2	2.20	0.71
1:CA:558:G:OP1	61:CA:4170:HOH:O	2.06	0.71
1:CA:1153:C:N4	1:CA:1154:G:H21	1.85	0.71
38:DS:50:SER:O	38:DS:76:LYS:NZ	2.22	0.71
43:DX:11:PRO:HB3	43:DX:92:LEU:HD11	1.72	0.71
4:AD:15:GLU:HG3	4:AD:63:LYS:HE2	1.70	0.71
13:AM:58:GLU:O	13:AM:62:ASN:ND2	2.16	0.71
25:BA:2014:G:OP2	61:BA:4282:HOH:O	2.08	0.71
35:DP:89:ALA:O	35:DP:121:LYS:NZ	2.21	0.71
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.26	0.71
9:AI:53:VAL:O	9:AI:55:ALA:N	2.18	0.71
25:BA:1289:G:O2'	35:BP:7:ARG:NH2	2.24	0.71
29:BF:13:SER:HA	29:BF:127:GLU:HG3	1.72	0.71
33:DN:34:LEU:O	33:DN:49:GLY:HA3	1.89	0.71
1:AA:922:G:H4'	5:AE:20:GLN:HA	1.71	0.71
29:BF:18:ARG:NH2	29:BF:127:GLU:OE1	2.23	0.71
38:BS:27:SER:HA	38:BS:88:ASP:HB3	1.72	0.71
18:CR:26:LEU:HD21	18:CR:42:ARG:HD3	1.72	0.71
25:DA:1036:G:H1	25:DA:1119:C:H42	1.35	0.71
25:DA:2427:C:OP1	61:DA:4259:HOH:O	2.08	0.71
25:DA:2785:C:OP1	28:DE:41:LYS:NZ	2.18	0.71
1:AA:975:A:H4'	1:AA:976:G:H5''	1.71	0.71
26:DB:105:A:OP1	45:DZ:72:ARG:NH1	2.23	0.71
32:DI:72:LEU:HD21	32:DI:107:VAL:HG11	1.71	0.71
1:AA:56:U:H2'	1:AA:57:G:C8	2.26	0.71
1:CA:1108:G:O6	61:CA:4092:HOH:O	2.08	0.71
25:DA:1782:C:OP1	61:DA:4385:HOH:O	2.09	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DV:35:LEU:HB2	41:DV:57:VAL:HG23	1.72	0.71
1:CA:599:C:H2'	1:CA:600:C:H5''	1.73	0.71
25:DA:566:U:H5''	35:DP:29:LYS:HE3	1.71	0.71
25:DA:1143:A:OP1	33:DN:25:ARG:NH2	2.23	0.71
25:DA:1488:G:C6	25:DA:1489:U:C5	2.75	0.71
25:DA:2805:G:H2'	25:DA:2807:G:C8	2.26	0.71
25:BA:991:G:OP1	61:BA:4609:HOH:O	2.09	0.71
28:BE:105:THR:OG1	28:BE:199:ARG:NH2	2.24	0.71
2:CB:91:PRO:HG2	2:CB:155:LEU:HD23	1.72	0.71
32:DI:91:SER:HB3	32:DI:121:LYS:HE3	1.72	0.71
1:AA:186:C:H2'	1:AA:187:C:C6	2.26	0.71
17:AQ:18:THR:OG1	17:AQ:69:LYS:NZ	2.15	0.71
10:CJ:77:PRO:O	10:CJ:81:THR:OG1	2.09	0.71
25:DA:885:C:H2'	25:DA:886:C:H4'	1.72	0.71
27:DD:108:PRO:HG2	27:DD:111:LEU:HB2	1.73	0.71
1:AA:881:G:OP2	12:AL:12:ARG:NH2	2.23	0.70
5:AE:77:PRO:HD2	5:AE:142:LEU:HD22	1.70	0.70
43:BX:11:PRO:HB3	43:BX:92:LEU:HD11	1.73	0.70
1:CA:1204:A:OP1	14:CN:3:ARG:NH1	2.23	0.70
25:DA:10:G:H2'	25:DA:11:G:H8	1.56	0.70
36:DQ:26:TYR:O	36:DQ:67:ARG:NH1	2.24	0.70
1:AA:262:A:H2'	1:AA:263:A:C8	2.25	0.70
25:BA:2361:G:OP1	61:BA:3948:HOH:O	2.09	0.70
5:CE:137:GLU:HG2	5:CE:140:ARG:HH11	1.54	0.70
1:AA:221:C:H2'	1:AA:222:U:H6	1.55	0.70
25:BA:303:C:H42	25:BA:385:G:H1	1.39	0.70
25:BA:932:C:H3'	25:BA:933:C:H5''	1.73	0.70
25:BA:2331:G:H22	38:BS:3:ARG:NE	1.90	0.70
1:CA:1007:C:C4	1:CA:1022:G:N1	2.59	0.70
27:DD:71:ASP:HB2	27:DD:103:ARG:HH22	1.55	0.70
47:D1:77:ALA:HA	47:D1:80:LEU:HD13	1.73	0.70
7:AG:62:PHE:HA	7:AG:124:LEU:HD22	1.72	0.70
12:AL:36:VAL:HG23	24:AW:10:2QY:H89	1.73	0.70
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.71	0.70
25:DA:1140:C:O3'	33:DN:25:ARG:NH1	2.24	0.70
25:DA:1189:A:OP2	61:DA:4088:HOH:O	2.08	0.70
9:AI:46:ALA:HB2	9:AI:74:ILE:HG23	1.73	0.70
25:BA:241:G:OP1	35:BP:50:ARG:NH1	2.23	0.70
25:DA:631:A:OP1	35:DP:65:ARG:NH1	2.24	0.70
32:DI:102:SER:HB2	32:DI:108:THR:HG22	1.73	0.70
1:AA:437:U:H5'	4:AD:155:LEU:HD11	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1003:U:OP2	36:BQ:14:ARG:NH1	2.23	0.70
35:BP:63:PRO:HD3	54:B8:27:THR:HG22	1.73	0.70
1:CA:147:G:HO2'	1:CA:148:G:H8	1.38	0.70
27:DD:148:GLU:HB2	27:DD:151:LYS:HD2	1.72	0.70
29:DF:185:ASP:HA	29:DF:188:ARG:HD3	1.74	0.70
45:DZ:53:ILE:HG22	45:DZ:71:VAL:O	1.91	0.70
1:AA:946:A:O2'	1:AA:1333:A:N3	2.24	0.70
1:AA:1346:A:OP1	9:AI:120:ARG:NH1	2.25	0.70
25:BA:1039:G:OP1	40:BU:50:ARG:NH2	2.24	0.70
25:BA:2339:A:H2'	25:BA:2340:A:C8	2.25	0.70
48:B2:29:LYS:HG2	48:B2:57:ILE:HD13	1.73	0.70
1:CA:1162:C:N4	1:CA:1174:G:H1	1.88	0.70
30:DG:5:VAL:HG22	30:DG:8:LYS:H	1.55	0.70
36:BQ:10:ARG:NH1	61:BQ:3102:HOH:O	2.23	0.70
1:CA:1318:A:OP1	19:CS:3:ARG:NH1	2.24	0.70
8:AH:51:VAL:HG11	8:AH:60:ARG:HH12	1.57	0.70
25:BA:542:C:OP1	51:B5:16:ARG:NH2	2.24	0.70
35:BP:100:LEU:HD12	35:BP:112:LEU:HD11	1.72	0.70
1:AA:509:A:OP2	61:AA:4088:HOH:O	2.09	0.70
1:AA:1027:C:O2'	1:AA:1034:G:N2	2.23	0.70
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.22	0.70
1:AA:1530:G:H2'	1:AA:1531:A:O4'	1.91	0.70
25:BA:667:G:H21	25:BA:671:A:H2	1.40	0.70
25:BA:1001:G:O6	61:BA:3865:HOH:O	2.07	0.70
27:BD:17:THR:O	27:BD:211:ARG:NH2	2.24	0.70
1:AA:476:G:H2'	1:AA:477:A:O4'	1.92	0.69
1:AA:1125:U:O2'	1:AA:1126:U:OP2	2.10	0.69
8:AH:14:ARG:NH2	8:AH:83:ILE:O	2.25	0.69
36:BQ:54:MET:HB3	36:BQ:64:ILE:HD11	1.73	0.69
2:CB:18:GLY:HA2	2:CB:42:ILE:HG13	1.73	0.69
25:DA:587:C:OP2	35:DP:21:ARG:NH2	2.25	0.69
25:DA:2005:A:OP1	61:DA:4388:HOH:O	2.10	0.69
36:BQ:32:TYR:OH	36:BQ:111:GLU:OE1	2.10	0.69
42:BW:12:ILE:HD13	42:BW:17:VAL:HG13	1.74	0.69
25:DA:2327:A:H2'	25:DA:2328:A:C8	2.27	0.69
1:AA:673:G:H2'	1:AA:674:G:C8	2.27	0.69
30:BG:48:GLU:HA	30:BG:51:ARG:HE	1.57	0.69
44:BY:102:CYS:SG	44:BY:103:GLY:N	2.65	0.69
1:CA:961:U:OP2	1:CA:1223:C:O2'	2.06	0.69
11:CK:98:LEU:O	11:CK:101:SER:OG	2.06	0.69
25:DA:82:G:N1	25:DA:103:A:OP2	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1845:G:OP1	27:DD:258:LYS:NZ	2.24	0.69
25:DA:2595:G:N7	61:DA:4196:HOH:O	2.24	0.69
2:AB:15:VAL:HB	2:AB:209:ARG:HG2	1.73	0.69
3:AC:35:GLU:OE2	3:AC:59:ARG:NH2	2.24	0.69
5:AE:137:GLU:HG2	5:AE:140:ARG:HH11	1.57	0.69
25:BA:2732:G:OP2	61:BA:4644:HOH:O	2.10	0.69
1:CA:890:G:O2'	1:CA:906:G:O6	2.05	0.69
25:DA:1153:C:OP1	40:DU:92:ARG:NH1	2.25	0.69
25:DA:2682:U:OP2	61:DA:3806:HOH:O	2.09	0.69
1:AA:166:G:H2'	1:AA:167:G:H8	1.53	0.69
1:CA:610:G:O6	61:CA:4179:HOH:O	2.10	0.69
19:CS:42:PRO:HG3	50:D4:61:ARG:HG2	1.73	0.69
43:DX:65:ARG:HB2	43:DX:70:LEU:HG	1.75	0.69
6:AF:69:GLU:O	6:AF:72:VAL:HG12	1.93	0.69
13:AM:49:THR:HB	13:AM:52:GLU:H	1.57	0.69
1:CA:412:A:H8	4:CD:35:ARG:HH21	1.37	0.69
1:CA:1189:C:OP1	10:CJ:51:ARG:NH2	2.24	0.69
1:AA:59:A:H3'	1:AA:331:G:H22	1.57	0.69
30:BG:145:THR:OG1	30:BG:148:MET:SD	2.51	0.69
1:CA:1153:C:H42	1:CA:1154:G:N2	1.87	0.69
2:CB:8:LYS:HD2	2:CB:48:MET:HG2	1.75	0.69
1:AA:812:C:N3	61:AA:4027:HOH:O	2.24	0.69
19:AS:27:GLU:HB3	19:AS:28:LYS:HB3	1.73	0.69
25:BA:777:C:OP2	61:BA:4590:HOH:O	2.10	0.69
25:BA:989:G:O3'	61:BA:4610:HOH:O	2.09	0.69
25:BA:1683:C:OP2	61:BA:4523:HOH:O	2.09	0.69
1:CA:46:G:O6	61:CA:4103:HOH:O	2.11	0.69
1:CA:1226:C:N4	13:CM:104:ARG:HG2	2.08	0.69
1:CA:1287:A:N3	1:CA:1353:G:O2'	2.23	0.69
12:CL:24:VAL:HG13	12:CL:98:TYR:HE1	1.58	0.69
18:CR:47:THR:HG23	18:CR:49:LYS:HG3	1.74	0.69
25:DA:818:G:OP2	61:DA:3841:HOH:O	2.10	0.69
43:DX:8:ILE:O	48:D2:36:ARG:NH2	2.25	0.69
4:AD:173:TRP:CZ3	4:AD:174:LEU:HG	2.27	0.69
6:AF:38:GLU:HB2	6:AF:64:GLN:HG2	1.75	0.69
15:AO:5:LYS:H	15:AO:5:LYS:HD2	1.56	0.69
42:DW:14:PRO:HG2	42:DW:78:GLU:HG2	1.73	0.69
3:AC:11:ARG:NH2	3:AC:177:THR:O	2.25	0.69
25:BA:1047:A:OP2	61:BA:3918:HOH:O	2.09	0.69
32:BI:40:THR:O	32:BI:44:LEU:HB2	1.93	0.69
1:CA:353:A:H5'	1:CA:353:A:H8	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:108:ALA:HA	7:CG:111:ARG:HD2	1.74	0.69
25:DA:77:C:O2'	48:D2:14:ARG:NH2	2.26	0.69
25:DA:1607:C:N4	25:DA:1622:G:OP2	2.26	0.69
25:DA:2291:U:H2'	25:DA:2292:C:C6	2.27	0.69
25:DA:2748:A:H5'	31:DH:4:ILE:HD12	1.75	0.69
25:DA:2831:G:OP1	28:DE:58:ARG:NH2	2.23	0.69
35:DP:88:LEU:HD11	35:DP:114:ILE:HD12	1.74	0.69
36:DQ:81:VAL:HG12	46:D0:5:LYS:HD3	1.73	0.69
16:AP:43:LYS:HG2	16:AP:48:TRP:CD2	2.27	0.68
23:AX:6:G:H1	23:AX:67:C:N4	1.91	0.68
24:AW:1:2QZ:H11	24:AW:9:MVA:HG23	1.73	0.68
25:BA:611:U:H2'	25:BA:612:C:C6	2.28	0.68
1:CA:1493:A:H1'	25:DA:1913:A:H62	1.57	0.68
32:DI:4:ILE:HG12	32:DI:18:VAL:HG22	1.75	0.68
29:BF:8:GLN:NE2	29:BF:21:ALA:HB2	2.08	0.68
1:CA:346:G:OP1	39:DT:41:ARG:NH2	2.22	0.68
1:CA:437:U:H5'	4:CD:155:LEU:HD21	1.75	0.68
10:CJ:17:ASP:OD1	10:CJ:70:ARG:NH1	2.27	0.68
30:DG:16:ARG:O	30:DG:20:ILE:HG13	1.93	0.68
1:AA:1241:G:H1	1:AA:1296:C:H42	1.38	0.68
25:BA:1215:G:H2'	25:BA:1216:G:H5''	1.75	0.68
9:CI:53:VAL:O	9:CI:55:ALA:N	2.25	0.68
25:DA:2570:G:O6	61:DA:4419:HOH:O	2.08	0.68
1:AA:974:A:OP2	14:AN:29:ARG:NH2	2.25	0.68
1:AA:1370:G:O6	61:AA:4060:HOH:O	2.10	0.68
1:CA:693:G:H2'	1:CA:694:A:C8	2.28	0.68
46:D0:27:GLU:HG3	46:D0:68:GLU:HA	1.75	0.68
25:BA:388:A:H2'	25:BA:389:G:C8	2.29	0.68
25:BA:1218:G:O2'	25:BA:1219:A:O4'	2.11	0.68
1:CA:382:A:H2'	1:CA:383:A:C8	2.29	0.68
1:CA:664:G:P	18:CR:64:ARG:HH22	2.16	0.68
32:DI:104:GLN:O	32:DI:105:HIS:ND1	2.26	0.68
1:AA:56:U:H2'	1:AA:57:G:H8	1.57	0.68
25:DA:994:C:O2'	25:DA:996:A:OP1	2.10	0.68
25:DA:1352:U:OP2	61:DA:3761:HOH:O	2.11	0.68
25:DA:2589:A:OP1	61:DA:4066:HOH:O	2.11	0.68
15:AO:33:THR:HG21	15:AO:85:LEU:HD22	1.76	0.68
25:BA:808:A:N7	61:BA:3904:HOH:O	2.26	0.68
16:CP:1:MET:SD	16:CP:3:LYS:NZ	2.65	0.68
16:CP:52:ASP:O	16:CP:54:GLU:N	2.26	0.68
20:CT:49:ALA:HB3	20:CT:99:LEU:HD22	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:577:G:OP1	61:AA:4090:HOH:O	2.12	0.68
1:CA:877:C:H5''	8:CH:88:LYS:HD3	1.74	0.68
1:CA:1025:U:N3	1:CA:1036:G:C6	2.62	0.68
4:CD:187:ARG:NH2	4:CD:193:ASP:OD2	2.26	0.68
25:BA:2101:U:O3'	47:B1:35:THR:OG1	2.11	0.68
5:CE:136:MET:HA	5:CE:139:LEU:HD12	1.75	0.68
25:DA:2445:G:OP1	29:DF:74:ARG:NH2	2.27	0.68
25:DA:2749:A:H1'	31:DH:63:SER:HB3	1.76	0.68
1:AA:1237:C:HO2'	1:AA:1300:G:H1	1.42	0.68
25:BA:1249:A:H2	25:BA:1287:A:H62	1.42	0.68
25:BA:2720:G:O6	61:BA:4017:HOH:O	2.12	0.68
46:B0:27:GLU:HG3	46:B0:68:GLU:HA	1.76	0.68
25:DA:131:G:OP1	61:DA:3772:HOH:O	2.12	0.68
25:DA:271(I):G:O6	25:DA:271(O):C:N4	2.17	0.68
25:DA:2592:G:N7	61:DA:3925:HOH:O	2.27	0.68
1:AA:452:A:H4'	16:AP:72:ARG:NH1	2.08	0.67
13:AM:2:ALA:N	13:AM:8:GLU:OE1	2.27	0.67
25:BA:809:U:H4'	25:BA:810:G:O5'	1.93	0.67
25:BA:880:U:O2	35:BP:55:ARG:NH2	2.27	0.67
25:BA:1356:G:OP2	53:B7:9:ARG:NH1	2.27	0.67
42:BW:14:PRO:HG2	42:BW:78:GLU:HG2	1.77	0.67
52:B6:13:CYS:SG	52:B6:47:THR:HG21	2.35	0.67
25:DA:1637:A:OP2	61:DA:4414:HOH:O	2.11	0.67
1:AA:503:C:OP2	12:AL:116:SER:HB3	1.93	0.67
25:BA:2008:A:OP1	61:BA:4270:HOH:O	2.11	0.67
25:BA:2324:U:H5'	30:BG:88:ILE:HD11	1.76	0.67
1:CA:646:U:H2'	1:CA:647:C:C6	2.29	0.67
10:CJ:78:ASN:O	10:CJ:80:LYS:N	2.28	0.67
19:CS:28:LYS:HB2	19:CS:29:ARG:HA	1.75	0.67
25:DA:2562:U:H1'	34:DO:23:ARG:HH11	1.59	0.67
25:DA:2819:G:N7	61:DA:4008:HOH:O	2.26	0.67
37:DR:88:ARG:NH2	37:DR:89:ASP:OD2	2.27	0.67
1:AA:165:C:H2'	1:AA:166:G:C8	2.30	0.67
25:BA:1476:C:H2'	25:BA:1477:U:H6	1.60	0.67
25:BA:2316:G:H22	25:BA:2324:U:H3	1.42	0.67
25:DA:1278:A:OP1	37:DR:36:THR:HG23	1.94	0.67
50:D4:62:ARG:O	50:D4:64:GLY:N	2.28	0.67
20:AT:16:HIS:O	20:AT:19:SER:OG	2.12	0.67
25:BA:1476:C:H2'	25:BA:1477:U:C6	2.29	0.67
26:DB:44:G:OP1	30:DG:98:ARG:NH2	2.26	0.67
6:AF:97:PHE:N	18:AR:30:ASP:OD1	2.24	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:99:GLN:HG2	11:AK:105:VAL:HG21	1.76	0.67
29:BF:53:THR:HG22	29:BF:55:GLY:H	1.60	0.67
30:BG:38:VAL:HG22	30:BG:93:THR:HG23	1.76	0.67
1:CA:1502:A:H2	1:CA:1505:G:N1	1.93	0.67
25:BA:1310:G:OP1	51:B5:19:ARG:NH2	2.20	0.67
1:CA:766:A:OP2	61:CA:4024:HOH:O	2.13	0.67
1:CA:1262:C:N4	1:CA:1273:G:H1	1.92	0.67
20:CT:16:HIS:O	20:CT:19:SER:OG	2.09	0.67
25:DA:192:C:OP1	61:DA:4352:HOH:O	2.11	0.67
25:DA:226:G:H21	25:DA:228:A:H62	1.41	0.67
25:BA:1199:C:OP2	61:BA:4476:HOH:O	2.12	0.67
31:BH:56:SER:OG	31:BH:57:ASP:N	2.26	0.67
25:DA:411:G:OP1	61:DA:3860:HOH:O	2.12	0.67
1:AA:383:A:C2	1:AA:384:G:H1'	2.29	0.67
1:AA:518:C:HO2'	1:AA:530:G:N2	1.93	0.67
32:BI:100:ALA:HA	32:BI:103:ARG:HG2	1.75	0.67
1:CA:376:G:H5''	16:CP:5:ARG:HD3	1.75	0.67
1:CA:585:G:OP1	17:CQ:37:LYS:NZ	2.25	0.67
28:DE:72:VAL:HG13	28:DE:73:GLU:O	1.95	0.67
1:AA:454:C:P	16:AP:75:ARG:HH22	2.18	0.67
2:AB:24:TRP:CZ3	2:AB:26:PRO:HA	2.30	0.67
25:BA:426:G:OP2	61:BA:4762:HOH:O	2.12	0.67
25:BA:611:U:OP2	61:BA:4159:HOH:O	2.13	0.67
25:BA:791:G:OP1	61:BA:4513:HOH:O	2.13	0.67
25:BA:2658:C:OP2	25:BA:2745:G:O2'	2.10	0.67
1:CA:8:A:C6	4:CD:209:ARG:HB2	2.29	0.67
1:CA:144:G:H1	1:CA:178:C:H42	1.42	0.67
26:DB:66:A:H61	26:DB:109:C:H5'	1.60	0.67
1:AA:538:G:H5''	12:AL:114:LYS:HB2	1.76	0.66
1:AA:839:U:O2'	1:AA:840:C:OP1	2.13	0.66
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.30	0.66
2:AB:229:VAL:HG12	2:AB:230:VAL:H	1.60	0.66
6:AF:15:ASP:OD1	6:AF:18:GLN:N	2.19	0.66
10:AJ:78:ASN:O	10:AJ:80:LYS:N	2.28	0.66
25:BA:1889:G:N2	25:BA:1905:G:H2'	2.10	0.66
30:BG:41:GLN:NE2	30:BG:154:GLY:O	2.28	0.66
1:CA:586:C:O2'	1:CA:878:G:H4'	1.95	0.66
4:CD:31:CYS:SG	4:CD:33:MET:N	2.69	0.66
1:AA:1042:G:O2'	1:AA:1043:C:O4'	2.12	0.66
1:AA:1320:C:H5'	19:AS:70:LYS:HG3	1.75	0.66
25:BA:1044:C:OP1	61:BA:4478:HOH:O	2.12	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:179:GLU:HB3	28:BE:181:LEU:HD22	1.76	0.66
2:CB:77:ALA:HB2	2:CB:211:ILE:HD13	1.76	0.66
12:CL:24:VAL:HG12	12:CL:27:LEU:HB2	1.76	0.66
19:CS:52:TYR:HB2	19:CS:57:HIS:CE1	2.29	0.66
9:AI:64:THR:HG23	9:AI:66:ARG:HH21	1.59	0.66
25:DA:601:C:OP1	29:DF:108:LYS:NZ	2.28	0.66
25:BA:778:C:OP2	61:BA:4590:HOH:O	2.13	0.66
25:BA:1067:A:H3'	25:BA:1067:A:C8	2.31	0.66
1:CA:1005:A:H1'	1:CA:1036:G:N1	2.08	0.66
1:CA:1237:C:H3'	1:CA:1336:C:H41	1.60	0.66
4:CD:92:VAL:O	4:CD:96:LEU:HD22	1.95	0.66
25:DA:2049:G:OP2	61:DA:3943:HOH:O	2.13	0.66
1:AA:243:A:H4'	1:AA:244:U:H5''	1.76	0.66
1:AA:573:A:OP2	61:AA:4004:HOH:O	2.13	0.66
2:AB:155:LEU:HD11	2:AB:159:PRO:HD3	1.76	0.66
25:BA:479:C:OP1	61:BA:4178:HOH:O	2.12	0.66
25:BA:2297:C:OP2	52:B6:6:ARG:NH1	2.28	0.66
7:CG:68:ASN:ND2	7:CG:127:ALA:O	2.22	0.66
25:DA:1017:G:N7	61:DA:4210:HOH:O	2.29	0.66
10:AJ:7:LYS:HB3	10:AJ:97:GLU:HB2	1.77	0.66
34:DO:35:VAL:HG11	34:DO:103:ALA:HB3	1.76	0.66
1:CA:256:U:OP1	17:CQ:17:LYS:NZ	2.29	0.66
1:CA:503:C:OP2	12:CL:116:SER:HB3	1.96	0.66
1:CA:837:G:H1	1:CA:849:C:N4	1.90	0.66
16:AP:43:LYS:HG2	16:AP:48:TRP:CE2	2.31	0.66
6:CF:24:GLU:HG3	6:CF:28:ARG:HH11	1.60	0.66
25:DA:2062:A:OP1	61:DA:3802:HOH:O	2.13	0.66
25:DA:2576:G:OP1	61:DA:4108:HOH:O	2.13	0.66
1:AA:392:G:H2'	1:AA:393:A:H8	1.61	0.66
14:AN:3:ARG:HB3	14:AN:3:ARG:HH21	1.61	0.66
25:BA:839:G:H5''	25:BA:840:A:H5'	1.77	0.66
25:BA:946:A:H2'	25:BA:947:A:C8	2.31	0.66
25:BA:946:A:H2'	25:BA:947:A:H8	1.60	0.66
25:BA:1405:A:N6	25:BA:1418:U:H3	1.93	0.66
25:BA:2601:A:OP2	61:BA:4455:HOH:O	2.13	0.66
31:DH:28:GLY:HA3	31:DH:79:VAL:HB	1.78	0.66
25:DA:1341:U:OP2	25:DA:1394:U:O2'	2.13	0.66
30:DG:18:GLU:HG2	30:DG:175:LEU:HD21	1.78	0.66
36:DQ:11:LYS:NZ	36:DQ:88:GLY:O	2.17	0.66
39:DT:19:LEU:HD22	39:DT:86:ILE:HG13	1.78	0.66
50:D4:38:LYS:O	50:D4:40:HIS:N	2.27	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1125:U:C2	1:AA:1127:G:N7	2.64	0.65
1:AA:1502:A:H2	1:AA:1505:G:H1	1.43	0.65
25:BA:1077:G:H21	55:B9:36:GLN:HE22	1.43	0.65
35:BP:52:GLU:OE1	35:BP:55:ARG:NH1	2.27	0.65
25:DA:922:U:H2'	25:DA:923:C:C6	2.30	0.65
25:DA:2299:G:H22	25:DA:2318:G:H8	1.42	0.65
34:DO:2:ILE:HD12	34:DO:6:THR:HG21	1.77	0.65
1:AA:558:G:OP1	61:AA:4042:HOH:O	2.14	0.65
1:AA:1221:G:OP1	1:AA:1320:C:N4	2.30	0.65
25:BA:2308:U:OP2	38:BS:9:ARG:NH2	2.29	0.65
47:B1:21:ARG:HG2	47:B1:21:ARG:HH11	1.61	0.65
2:CB:163:PHE:HD1	2:CB:185:ILE:HG13	1.61	0.65
7:CG:111:ARG:NH1	7:CG:113:GLU:OE2	2.30	0.65
25:DA:900:A:H2'	25:DA:901:A:C8	2.31	0.65
25:DA:1299:G:O6	61:DA:3930:HOH:O	2.11	0.65
25:DA:1301:A:OP1	61:DA:4413:HOH:O	2.13	0.65
25:DA:2588:G:OP2	61:DA:3902:HOH:O	2.14	0.65
12:AL:60:LEU:HD21	12:AL:66:VAL:HG22	1.78	0.65
1:CA:1166:G:H1'	1:CA:1171:G:N2	2.10	0.65
1:CA:1273:G:H3'	1:CA:1274:G:C8	2.31	0.65
25:DA:994:C:OP1	40:DU:53:ARG:NH2	2.29	0.65
25:DA:2287:A:N6	25:DA:2344:U:H3	1.94	0.65
1:AA:827:U:H5''	1:AA:828:A:OP2	1.97	0.65
2:AB:201:ILE:HG21	2:AB:214:ILE:HG21	1.76	0.65
38:DS:35:ILE:HD11	38:DS:101:LEU:HD12	1.77	0.65
46:D0:10:THR:O	61:D0:103:HOH:O	2.14	0.65
25:BA:1067:A:H62	25:BA:1186:U:H3	1.44	0.65
27:BD:132:PRO:HG2	27:BD:135:PHE:HD2	1.62	0.65
44:BY:92:ASN:HB3	44:BY:94:LYS:N	2.09	0.65
1:CA:444:C:H2'	1:CA:445:G:H8	1.61	0.65
25:DA:69:C:O2	25:DA:73:A:O2'	2.14	0.65
25:DA:1300:U:H4'	25:DA:1301:A:H5''	1.78	0.65
40:DU:78:THR:O	40:DU:117:GLN:NE2	2.29	0.65
1:AA:201:C:N4	1:AA:216:G:H1	1.84	0.65
1:AA:623:C:H2'	1:AA:624:C:H6	1.59	0.65
4:AD:149:ALA:HB3	4:AD:152:SER:HB2	1.79	0.65
8:AH:4:ASP:OD2	8:AH:85:ARG:NH1	2.25	0.65
38:BS:15:ARG:O	38:BS:19:LYS:HG2	1.96	0.65
48:B2:1:MET:N	48:B2:52:ASP:OD2	2.30	0.65
6:CF:25:ILE:HD13	6:CF:82:ARG:HE	1.61	0.65
30:DG:136:ARG:HH11	30:DG:137:GLU:H	1.45	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:937:A:OP2	61:AA:4095:HOH:O	2.14	0.65
1:AA:1125:U:N3	1:AA:1127:G:C5	2.65	0.65
7:AG:152:ALA:HB1	7:AG:155:ARG:HH21	1.61	0.65
30:BG:16:ARG:NE	30:BG:31:VAL:HG11	2.12	0.65
34:BO:8:LEU:HB2	34:BO:19:ILE:HG13	1.78	0.65
1:CA:56:U:H2'	1:CA:57:G:C8	2.32	0.65
2:CB:162:ILE:HD11	2:CB:184:VAL:HG22	1.78	0.65
25:DA:10:G:H2'	25:DA:11:G:C8	2.31	0.65
25:DA:2394:C:OP2	54:D8:30:ARG:NH1	2.30	0.65
26:DB:76:G:N2	26:DB:101:G:O6	2.27	0.65
50:D4:64:GLY:C	50:D4:66:SER:H	1.99	0.65
1:AA:1025:U:O2'	1:AA:1026:G:O4'	2.15	0.65
1:AA:1027:C:C2	1:AA:1034:G:N1	2.62	0.65
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.78	0.65
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.78	0.65
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.29	0.65
4:AD:182:LYS:HG2	4:AD:183:GLY:N	2.11	0.65
36:BQ:135:ASP:OD2	45:BZ:49:ARG:NH2	2.30	0.65
45:BZ:69:THR:HG22	45:BZ:90:VAL:HA	1.77	0.65
1:CA:976:G:H5'	1:CA:1358:U:O2'	1.97	0.65
3:CC:78:GLY:HA3	3:CC:83:ARG:H	1.62	0.65
25:DA:75:G:H4'	48:D2:55:ARG:NH1	2.11	0.65
26:BB:48:A:H4'	38:BS:95:HIS:HD2	1.60	0.65
25:DA:1815:A:OP2	27:DD:54:ARG:NH2	2.28	0.65
34:DO:115:VAL:HG13	34:DO:121:VAL:HG21	1.78	0.65
1:AA:864:A:OP1	61:AA:4127:HOH:O	2.15	0.64
1:AA:1003:G:N2	1:AA:1038:C:N3	2.45	0.64
2:AB:219:VAL:HA	2:AB:222:ILE:HG13	1.78	0.64
3:AC:181:ASN:ND2	3:AC:204:LEU:HD12	2.12	0.64
25:BA:2579:G:H2'	25:BA:2580:C:C6	2.31	0.64
28:BE:4:ILE:HD13	28:BE:28:ALA:HB1	1.78	0.64
1:CA:148:G:H2'	1:CA:149:A:C8	2.30	0.64
1:CA:1176:A:H2'	1:CA:1177:G:C8	2.33	0.64
2:CB:47:THR:O	2:CB:51:LEU:N	2.17	0.64
25:DA:963:U:OP1	61:DA:3744:HOH:O	2.14	0.64
37:DR:36:THR:HG22	37:DR:37:THR:H	1.62	0.64
1:AA:983:A:H1'	1:AA:1049:U:O2	1.98	0.64
1:AA:1127:G:H1'	1:AA:1280:A:C6	2.32	0.64
4:AD:166:LYS:NZ	4:AD:179:GLU:OE2	2.30	0.64
9:AI:3:GLN:HG2	9:AI:20:ARG:HE	1.63	0.64
25:BA:878:G:OP1	61:BA:4601:HOH:O	2.14	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:B8:42:ARG:NH1	61:B8:5103:HOH:O	2.04	0.64
1:CA:38:G:H22	1:CA:397:A:H5''	1.62	0.64
1:CA:60:A:H4'	1:CA:61:G:O5'	1.97	0.64
1:CA:345:C:OP2	39:DT:39:ARG:NH2	2.29	0.64
1:CA:1004:A:C6	1:CA:1037:C:C2	2.85	0.64
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.79	0.64
25:DA:171:G:H2'	25:DA:172:C:C6	2.31	0.64
25:DA:607:U:OP1	29:DF:102:PRO:HA	1.97	0.64
25:DA:2472:G:N1	25:DA:2477:C:OP1	2.24	0.64
1:AA:1009:G:O6	1:AA:1020:U:O2	2.15	0.64
2:CB:16:HIS:CB	2:CB:204:ASN:HB3	2.21	0.64
4:CD:10:ARG:HB2	4:CD:40:PRO:HG3	1.78	0.64
25:DA:2630:G:H2'	25:DA:2631:G:H8	1.62	0.64
28:DE:47:VAL:HG11	28:DE:86:PRO:HD2	1.79	0.64
32:DI:110:ASP:N	32:DI:130:TYR:OH	2.24	0.64
35:DP:50:ARG:HH21	35:DP:50:ARG:HG3	1.62	0.64
50:D4:15:ILE:HB	50:D4:32:TYR:CD1	2.32	0.64
25:BA:1091:A:OP1	25:BA:1091:A:H4'	1.96	0.64
25:BA:1890:A:N6	25:BA:1905:G:O2'	2.30	0.64
1:CA:1002:G:H2'	1:CA:1003:G:C8	2.33	0.64
5:CE:78:HIS:HE1	5:CE:143:ARG:H	1.45	0.64
1:AA:833:U:H2'	1:AA:834:C:C6	2.32	0.64
1:AA:1224:G:O2'	1:AA:1322:C:OP1	2.16	0.64
23:AX:4:G:H1	23:AX:69:C:H42	1.44	0.64
25:BA:1475:G:H2'	25:BA:1476:C:C6	2.33	0.64
25:BA:1647:G:N7	61:BA:4116:HOH:O	2.30	0.64
1:CA:1122:U:O4	1:CA:1151:A:N1	2.30	0.64
2:CB:16:HIS:CG	2:CB:17:PHE:H	2.16	0.64
3:CC:12:LEU:HD23	3:CC:16:ARG:HB3	1.78	0.64
9:CI:23:ASN:H	9:CI:23:ASN:HD22	1.45	0.64
35:DP:121:LYS:HG2	35:DP:122:PRO:HD2	1.77	0.64
43:DX:44:GLU:OE2	61:DX:102:HOH:O	2.15	0.64
1:CA:404:U:H5'	4:CD:122:ARG:HD3	1.78	0.64
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.33	0.64
5:CE:50:GLU:HB2	5:CE:53:LEU:HD13	1.79	0.64
25:DA:286:C:H2'	25:DA:287:C:C6	2.32	0.64
25:DA:910:A:H62	36:DQ:12:GLN:HA	1.63	0.64
25:DA:1784:A:OP2	61:DA:4119:HOH:O	2.15	0.64
25:DA:2839:G:H5'	37:DR:46:GLY:HA2	1.79	0.64
42:DW:60:ASN:HD22	42:DW:60:ASN:N	1.95	0.64
10:AJ:11:PHE:HE1	10:AJ:67:THR:HG22	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:128:SER:OG	28:BE:129:HIS:N	2.25	0.64
38:BS:59:LYS:HE3	38:BS:60:GLY:H	1.63	0.64
48:B2:16:LEU:O	48:B2:67:LYS:NZ	2.30	0.64
1:CA:406:G:H5'	4:CD:5:ILE:HD11	1.80	0.64
1:CA:1036:G:H5'	1:CA:1037:C:C6	2.32	0.64
15:CO:14:GLU:OE2	15:CO:84:LYS:NZ	2.31	0.64
1:AA:409:G:N2	1:AA:433:C:O2	2.31	0.64
1:AA:1129:C:H5''	9:AI:16:ARG:HH12	1.63	0.64
20:AT:10:LEU:HB3	20:AT:12:ALA:H	1.63	0.64
25:BA:2584:A:N7	28:BE:144:ARG:HD2	2.13	0.64
25:BA:2766:A:O2'	55:B9:15:LYS:NZ	2.30	0.64
1:CA:831:U:H3	1:CA:855:G:H1	1.45	0.64
9:CI:53:VAL:C	9:CI:55:ALA:H	2.01	0.64
15:CO:54:ARG:NH1	15:CO:58:MET:SD	2.71	0.64
25:DA:2316:C:O2'	30:DG:128:ARG:NH1	2.30	0.64
1:AA:1223:C:H5''	1:AA:1224:G:H5'	1.80	0.64
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.33	0.64
2:AB:7:VAL:HG11	2:AB:221:LEU:HD23	1.80	0.64
2:AB:78:GLN:NE2	2:AB:94:ASN:O	2.30	0.64
25:BA:1185:C:O3'	33:BN:25:ARG:NH1	2.30	0.64
25:BA:2507:G:H5''	36:BQ:82:ARG:HG2	1.79	0.64
35:BP:50:ARG:HD3	54:B8:7:HIS:CD2	2.33	0.64
14:CN:48:ALA:HB2	14:CN:53:LEU:HD12	1.79	0.64
1:AA:1162:C:N4	1:AA:1174:G:H1	1.95	0.63
16:AP:53:VAL:HG22	16:AP:79:VAL:HG22	1.79	0.63
25:BA:1067:A:H3'	25:BA:1067:A:H8	1.63	0.63
1:CA:735:C:H2'	1:CA:736:C:C6	2.32	0.63
1:CA:1142:G:H3'	1:CA:1143:G:C8	2.31	0.63
1:CA:1145:C:H4'	1:CA:1146:A:H5'	1.80	0.63
25:DA:1041:C:H42	25:DA:1114:G:H1	1.46	0.63
25:BA:1410:G:P	47:B1:3:LYS:HG3	2.39	0.63
27:BD:85:ASP:OD2	27:BD:88:ARG:NH1	2.31	0.63
1:CA:59:A:H3'	1:CA:331:G:H22	1.62	0.63
1:CA:1245:A:N6	1:CA:1292:U:H3	1.96	0.63
3:CC:52:LEU:HD23	3:CC:68:VAL:HG13	1.79	0.63
25:DA:323:G:H5'	29:DF:169:ASN:HD21	1.62	0.63
25:DA:903:C:H2'	25:DA:904:C:H6	1.62	0.63
25:DA:1688:U:O2	25:DA:1700:A:H5'	1.98	0.63
27:DD:132:PRO:HD3	27:DD:190:TYR:CZ	2.34	0.63
1:AA:154:C:N3	1:AA:168:G:N1	2.46	0.63
1:CA:1023:G:H3'	1:CA:1024:G:H8	1.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:76:ARG:O	7:CG:87:VAL:N	2.28	0.63
1:AA:189:G:H1	1:AA:189(K):U:H3	1.45	0.63
25:BA:2804:C:H2'	25:BA:2805:G:C8	2.34	0.63
43:BX:53:LYS:HB3	43:BX:82:GLN:HB3	1.79	0.63
50:B4:28:LYS:HD3	50:B4:31:ILE:HD11	1.80	0.63
1:CA:460:G:O6	1:CA:470:C:H5''	1.98	0.63
1:CA:735:C:H2'	1:CA:736:C:H6	1.62	0.63
1:CA:1312:G:N7	19:CS:2:PRO:HG2	2.14	0.63
4:CD:13:ARG:NH1	4:CD:38:TYR:O	2.31	0.63
28:DE:72:VAL:HA	28:DE:73:GLU:HB3	1.80	0.63
50:D4:46:GLN:HG3	50:D4:48:ARG:HH21	1.62	0.63
25:BA:1219:A:H4'	25:BA:1220:U:OP1	1.97	0.63
25:BA:1000:C:OP1	36:BQ:87:LYS:HE3	1.98	0.63
25:BA:1091:A:H1'	25:BA:1093:G:N3	2.13	0.63
25:BA:1829:U:H5'	27:BD:259:THR:HG22	1.79	0.63
27:BD:38:LYS:HE3	27:BD:39:LYS:O	1.98	0.63
1:CA:1119:C:H2'	1:CA:1120:G:C8	2.33	0.63
25:DA:601:C:O2'	29:DF:104:LYS:NZ	2.32	0.63
25:DA:1427:A:H4'	25:DA:1428:C:O5'	1.99	0.63
29:DF:13:SER:HA	29:DF:127:GLU:HG3	1.80	0.63
30:DG:43:LEU:HD12	30:DG:45:GLU:HG3	1.81	0.63
30:DG:101:ILE:HG22	30:DG:105:LYS:HE2	1.81	0.63
33:DN:38:HIS:CE1	33:DN:39:ARG:HG3	2.34	0.63
50:D4:46:GLN:C	50:D4:48:ARG:H	2.02	0.63
1:AA:997:U:H3	1:AA:1044:A:H61	1.47	0.63
1:AA:1008:C:N4	1:AA:1021:G:H1	1.96	0.63
1:CA:1129:C:H2'	1:CA:1139:G:N7	2.13	0.63
29:DF:150:GLY:HA2	29:DF:172:TRP:CE3	2.34	0.63
1:AA:552:U:C2'	1:AA:553:A:H5'	2.29	0.63
2:AB:60:ASP:OD1	2:AB:64:ARG:NE	2.32	0.63
25:BA:1897:C:H2'	25:BA:1898:A:O4'	1.98	0.63
25:BA:2405:A:H5'	35:BP:63:PRO:HB3	1.80	0.63
50:B4:46:GLN:HG2	50:B4:48:ARG:HG2	1.79	0.63
1:CA:222:U:H2'	1:CA:223:U:C6	2.34	0.63
1:CA:452:A:O2'	1:CA:453:A:OP2	2.15	0.63
1:CA:1042:G:O2'	1:CA:1043:C:O4'	2.17	0.63
3:CC:6:HIS:HB3	14:CN:49:HIS:ND1	2.14	0.63
5:CE:78:HIS:CE1	5:CE:142:LEU:HA	2.33	0.63
13:CM:60:VAL:HG22	13:CM:66:LEU:HD11	1.80	0.63
31:DH:113:VAL:HG11	31:DH:151:ILE:HD13	1.81	0.63
36:DQ:85:LYS:HD3	46:D0:7:LEU:HG	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:929:G:H1	1:AA:1388:C:H42	1.47	0.63
1:CA:192:U:H2'	1:CA:193:C:H6	1.63	0.63
1:CA:1151:A:C5'	10:CJ:41:PRO:HA	2.29	0.63
1:CA:1236:A:O2'	1:CA:1304:G:H4'	1.99	0.63
25:DA:7:G:H2'	25:DA:8:A:C8	2.33	0.63
25:DA:2023:G:H5'	25:DA:2617:C:H4'	1.81	0.63
25:BA:2212:G:H2'	25:BA:2213:G:O4'	1.99	0.62
38:DS:77:ALA:HB1	38:DS:82:ILE:HB	1.81	0.62
45:DZ:19:ARG:NH1	45:DZ:84:GLU:O	2.32	0.62
1:AA:165:C:H2'	1:AA:166:G:H8	1.63	0.62
5:AE:74:GLY:HA3	5:AE:116:THR:HG22	1.82	0.62
7:AG:70:LYS:O	7:AG:138:LYS:NZ	2.30	0.62
2:CB:166:ASP:HB3	2:CB:169:LYS:HB2	1.81	0.62
2:CB:210:SER:O	2:CB:214:ILE:HG12	1.99	0.62
13:CM:60:VAL:HG23	13:CM:64:TRP:CE3	2.34	0.62
25:DA:1810:A:H2'	25:DA:1811:G:O4'	1.99	0.62
25:DA:2070:G:OP2	61:DA:4341:HOH:O	2.16	0.62
25:DA:2478:A:OP2	55:D9:2:LYS:NZ	2.24	0.62
40:DU:92:ARG:HA	40:DU:95:LEU:HB2	1.80	0.62
1:AA:986:A:H1'	19:AS:54:GLY:O	1.99	0.62
2:AB:210:SER:O	2:AB:214:ILE:HG12	1.99	0.62
25:BA:9:U:N3	25:BA:2641:A:H2	1.86	0.62
25:BA:1576:G:C6	25:BA:1577:C:N4	2.67	0.62
2:CB:9:GLU:HA	2:CB:48:MET:SD	2.40	0.62
25:DA:2206:G:H3'	25:DA:2207:G:N7	2.15	0.62
1:AA:457:C:H2'	1:AA:458:C:C6	2.34	0.62
1:AA:1036:G:H5'	1:AA:1037:C:C5	2.29	0.62
19:AS:52:TYR:HA	19:AS:56:GLN:O	2.00	0.62
40:BU:28:ARG:NH1	40:BU:38:THR:OG1	2.33	0.62
59:CX:101:FME:HCN	25:DA:2451:A:H2	1.63	0.62
25:DA:2273:A:H2'	25:DA:2274:A:C8	2.34	0.62
25:DA:2685:G:O6	61:DA:3899:HOH:O	2.14	0.62
23:AX:59:A:H2'	23:AX:60:U:H5'	1.80	0.62
25:BA:1466:U:O2'	25:BA:1467:G:OP1	2.16	0.62
32:BI:72:LEU:HD21	32:BI:107:VAL:HG11	1.80	0.62
44:BY:15:VAL:HG21	44:BY:42:VAL:HG11	1.82	0.62
1:CA:137:C:H42	1:CA:226:G:H1	1.47	0.62
6:CF:80:ARG:NH1	6:CF:88:VAL:O	2.32	0.62
25:DA:1005:C:H2'	25:DA:1006:C:C6	2.34	0.62
25:DA:2712(A):A:OP2	61:DA:3974:HOH:O	2.16	0.62
29:DF:21:ALA:CB	29:DF:22:ALA:HA	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:51:LEU:HD23	2:AB:201:ILE:HD12	1.82	0.62
4:AD:18:LYS:HD2	4:AD:31:CYS:SG	2.40	0.62
25:BA:239:G:OP2	54:B8:13:ARG:NH2	2.33	0.62
1:CA:147:G:O2'	1:CA:148:G:O5'	2.17	0.62
25:DA:1358:G:O2'	25:DA:1359:A:H5''	1.99	0.62
25:DA:2364:C:OP1	46:D0:55:ARG:NH1	2.32	0.62
2:AB:78:GLN:O	2:AB:81:VAL:HG23	2.00	0.62
1:CA:17:U:H2'	1:CA:18:C:C6	2.34	0.62
1:CA:235:C:H5'	17:CQ:70:ARG:HG2	1.80	0.62
1:CA:999:C:C4	1:CA:1042:G:C2	2.87	0.62
1:CA:1016:A:H2'	1:CA:1017:G:O4'	2.00	0.62
3:CC:47:LEU:HD12	3:CC:68:VAL:HG11	1.82	0.62
25:DA:96:G:H4'	48:D2:48:HIS:CD2	2.35	0.62
31:DH:30:LYS:HG3	31:DH:80:SER:O	2.00	0.62
25:BA:1566:U:H2'	25:BA:1567:G:O4'	2.00	0.62
27:BD:148:GLU:HB2	27:BD:151:LYS:HD2	1.82	0.62
1:CA:424:G:H2'	1:CA:425:G:H8	1.64	0.62
1:CA:1305:G:N2	1:CA:1331:G:H1'	2.15	0.62
29:DF:18:ARG:NH2	29:DF:127:GLU:OE1	2.33	0.62
1:AA:828:A:H2'	1:AA:829:G:O4'	2.00	0.62
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.35	0.62
12:AL:24:VAL:HG11	12:AL:27:LEU:HD22	1.81	0.62
20:AT:87:LYS:O	20:AT:91:LEU:HG	2.00	0.62
25:BA:2101:U:OP1	47:B1:21:ARG:NH2	2.33	0.62
1:CA:1047:G:H1	1:CA:1210:C:N4	1.98	0.62
25:DA:754:C:H2'	25:DA:755:C:H6	1.64	0.62
25:DA:1766:U:H2'	25:DA:1767:C:H6	1.65	0.62
25:DA:2298:A:C6	25:DA:2321:G:N1	2.68	0.62
25:DA:2649:U:H2'	25:DA:2650:U:C6	2.35	0.62
1:CA:446:G:H1	1:CA:488:C:H42	1.48	0.62
1:CA:758:G:N7	61:CA:4151:HOH:O	2.31	0.62
25:DA:298:G:H5''	25:DA:299:A:OP1	2.00	0.62
25:DA:2079:U:O3'	47:D1:35:THR:OG1	2.17	0.62
1:AA:96:U:O2'	1:AA:97:G:H5'	2.00	0.61
1:AA:200:G:H5'	1:AA:201:C:OP2	2.00	0.61
1:AA:346:G:C6	1:AA:348:G:N2	2.66	0.61
1:AA:993:G:H1	1:AA:1045:C:H42	1.47	0.61
35:BP:121:LYS:HG2	35:BP:122:PRO:HD2	1.82	0.61
1:CA:152:A:N6	1:CA:169:C:N3	2.46	0.61
1:CA:504:C:OP1	61:CA:4009:HOH:O	2.16	0.61
1:CA:827:U:H5''	1:CA:828:A:OP2	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:99:LEU:HB3	9:CI:101:PHE:HE1	1.65	0.61
10:CJ:42:THR:HG21	10:CJ:68:HIS:HD2	1.63	0.61
25:DA:302:C:H42	25:DA:315:G:H1	1.46	0.61
25:DA:483:A:O2'	44:DY:49:VAL:O	2.14	0.61
25:DA:586:A:N1	25:DA:809:G:O2'	2.30	0.61
25:DA:1223:G:N2	25:DA:1226:A:OP2	2.31	0.61
35:DP:65:ARG:HG3	54:D8:25:MET:HG3	1.81	0.61
25:BA:1466:U:HO2'	25:BA:1467:G:P	2.22	0.61
31:BH:33:LEU:HD21	31:BH:136:ILE:HG13	1.82	0.61
32:BI:93:THR:H	32:BI:96:ASP:CG	2.04	0.61
48:B2:65:ASN:OD1	48:B2:69:ARG:NH1	2.31	0.61
1:CA:567:G:O2'	61:CA:4063:HOH:O	2.16	0.61
25:DA:880:G:N1	25:DA:898:C:O2	2.33	0.61
28:DE:73:GLU:O	28:DE:73:GLU:HG3	1.99	0.61
5:AE:76:ILE:HD12	5:AE:142:LEU:HD21	1.81	0.61
18:AR:42:ARG:HH21	18:AR:42:ARG:HA	1.65	0.61
3:CC:39:ILE:O	3:CC:43:LEU:HG	2.00	0.61
3:CC:114:PRO:O	3:CC:118:GLN:HG2	2.00	0.61
7:CG:113:GLU:CG	7:CG:119:ARG:HG2	2.30	0.61
13:CM:16:ASP:HB3	13:CM:34:LEU:HD11	1.81	0.61
26:DB:48:A:H2'	26:DB:49:C:C6	2.35	0.61
1:AA:159:G:HO2'	1:AA:161:A:N6	1.98	0.61
1:AA:487:A:H2'	1:AA:488:C:O4'	1.99	0.61
1:AA:961:U:OP2	1:AA:1223:C:O2'	2.09	0.61
6:AF:97:PHE:HD2	18:AR:31:LEU:HD23	1.66	0.61
8:AH:121:ASP:HB2	8:AH:125:ARG:NH1	2.15	0.61
1:CA:1172:C:H2'	1:CA:1173:G:C8	2.34	0.61
2:CB:15:VAL:HG13	2:CB:209:ARG:HB3	1.82	0.61
25:DA:2312:U:C5	25:DA:2313:C:H5	2.19	0.61
28:DE:4:ILE:HD13	28:DE:28:ALA:HB1	1.81	0.61
1:AA:45:U:H2'	1:AA:46:G:C8	2.36	0.61
1:AA:183:G:O2'	1:AA:224:C:O2'	2.10	0.61
1:AA:520:A:N1	1:AA:536:C:H1'	2.16	0.61
1:AA:1342:C:H4'	9:AI:125:TYR:HB3	1.81	0.61
20:AT:14:LYS:HG3	20:AT:17:ARG:NH2	2.16	0.61
25:BA:1378:G:OP1	61:BA:4469:HOH:O	2.16	0.61
1:CA:337:C:H2'	1:CA:338:A:C8	2.36	0.61
1:CA:1154:G:N7	1:CA:1155:G:C4	2.68	0.61
7:CG:50:ILE:HD11	7:CG:58:PRO:HA	1.81	0.61
25:DA:2537:U:H2'	25:DA:2538:C:C6	2.35	0.61
31:DH:159:GLU:HG3	31:DH:169:VAL:HG11	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:49:GLU:HG2	8:AH:62:TYR:HE2	1.64	0.61
25:BA:554:A:H62	25:BA:2063:U:H3	1.48	0.61
25:BA:2348:A:H61	46:B0:43:THR:CG2	2.13	0.61
25:BA:2889:C:OP2	61:BA:4426:HOH:O	2.16	0.61
1:CA:683:G:H2'	1:CA:684:A:C8	2.35	0.61
1:CA:1154:G:N7	1:CA:1155:G:N9	2.49	0.61
5:CE:143:ARG:NH1	8:CH:77:GLU:OE1	2.33	0.61
19:CS:48:THR:HG22	19:CS:61:TYR:HA	1.83	0.61
25:DA:2299:G:N2	25:DA:2318:G:H8	1.99	0.61
36:DQ:34:LEU:HB2	36:DQ:118:LEU:HD22	1.82	0.61
1:AA:628:G:H2'	1:AA:629:G:H8	1.65	0.61
1:AA:833:U:H2'	1:AA:834:C:H6	1.65	0.61
25:BA:798:A:H5'	42:BW:90:ARG:HA	1.82	0.61
33:BN:67:LEU:HD12	33:BN:87:LEU:HD13	1.83	0.61
52:B6:14:THR:HB	52:B6:48:VAL:O	2.01	0.61
1:CA:192:U:H2'	1:CA:193:C:C6	2.35	0.61
1:CA:539:A:H2'	1:CA:540:G:C8	2.35	0.61
25:DA:1379:A:H4'	25:DA:1380:G:OP2	1.99	0.61
25:DA:1557:C:OP2	25:DA:1558:A:O2'	2.18	0.61
25:DA:2584:U:O4	61:DA:3961:HOH:O	2.13	0.61
30:DG:16:ARG:HE	30:DG:31:VAL:HG11	1.66	0.61
1:AA:601:C:O2	1:AA:637:G:N2	2.28	0.61
1:AA:924:C:O2'	1:AA:1502:A:N6	2.32	0.61
25:BA:572:A:N6	41:BV:19:LYS:H	1.99	0.61
25:BA:2830:A:OP1	37:BR:2:ARG:NH2	2.33	0.61
29:BF:51:THR:O	29:BF:93:LYS:NZ	2.29	0.61
1:CA:683:G:H2'	1:CA:684:A:H8	1.66	0.61
1:CA:1223:C:H5''	1:CA:1224:G:C5'	2.30	0.61
11:CK:22:HIS:HB3	11:CK:29:ILE:HB	1.82	0.61
25:DA:83:G:O2'	25:DA:102:G:N2	2.34	0.61
25:DA:903:C:H2'	25:DA:904:C:C6	2.35	0.61
25:DA:1359:A:N1	25:DA:1372:U:C4	2.69	0.61
27:DD:73:VAL:HG13	27:DD:120:GLY:HA3	1.83	0.61
25:BA:2062:C:H2'	25:BA:2063:U:O4'	2.01	0.61
28:BE:93:VAL:HG21	28:BE:180:ASN:HA	1.83	0.61
4:CD:79:PHE:HE1	4:CD:204:ILE:HD13	1.65	0.61
13:CM:107:ALA:HB3	13:CM:111:LYS:HE3	1.83	0.61
19:CS:28:LYS:HB2	19:CS:29:ARG:CA	2.31	0.61
25:DA:1509(B):A:H2'	25:DA:1510:G:C8	2.36	0.61
28:DE:93:VAL:O	28:DE:95:ILE:N	2.33	0.61
29:DF:53:THR:HG22	29:DF:56:GLU:HG3	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DF:183:VAL:O	29:DF:187:VAL:HG23	2.01	0.61
30:DG:41:GLN:NE2	30:DG:154:GLY:O	2.34	0.61
45:DZ:39:VAL:HG21	45:DZ:44:PHE:HB2	1.83	0.61
47:D1:23:LYS:HB3	47:D1:29:GLY:HA3	1.83	0.61
1:AA:333:G:H4'	20:AT:16:HIS:CE1	2.36	0.61
1:AA:946:A:H2'	1:AA:947:G:C8	2.34	0.61
17:AQ:56:VAL:HB	17:AQ:78:GLU:HB3	1.83	0.61
25:BA:7:G:H2'	25:BA:8:A:O4'	2.01	0.61
46:B0:53:MET:HG3	46:B0:59:LEU:HD23	1.82	0.61
1:CA:195:A:N3	1:CA:222:U:O2'	2.32	0.61
1:CA:1002:G:N2	1:CA:1039:C:N3	2.49	0.61
1:CA:1132:C:H2'	1:CA:1133:G:C8	2.33	0.61
1:CA:1286:A:C8	1:CA:1287:A:H4'	2.36	0.61
8:CH:51:VAL:HG11	8:CH:60:ARG:HH12	1.64	0.61
25:DA:2723:C:OP2	28:DE:109:LYS:NZ	2.32	0.61
47:D1:5:CYS:SG	47:D1:8:SER:HB3	2.41	0.61
1:AA:664:G:H22	1:AA:741:G:H1	1.47	0.60
9:AI:4:TYR:CE1	9:AI:88:TYR:HA	2.36	0.60
48:B2:32:LEU:HD12	48:B2:36:ARG:HH11	1.66	0.60
50:B4:20:ASN:ND2	50:B4:36:CYS:SG	2.74	0.60
1:CA:143:A:H5''	1:CA:144:G:H5'	1.82	0.60
1:CA:1442:G:O2'	1:CA:1442(A):G:OP1	2.15	0.60
3:CC:18:TRP:CD1	14:CN:54:PRO:HA	2.36	0.60
25:DA:370:G:OP1	25:DA:403:U:N3	2.32	0.60
49:D3:8:LEU:HD13	49:D3:31:LEU:HD23	1.83	0.60
1:AA:499:A:N3	1:AA:546:G:N2	2.46	0.60
1:AA:1228:C:OP1	13:AM:115:LYS:N	2.22	0.60
3:AC:6:HIS:HD2	3:AC:8:ILE:H	1.50	0.60
25:BA:801:C:H2'	25:BA:802:C:C6	2.37	0.60
25:BA:1093:G:H2'	25:BA:1156:G:N2	2.16	0.60
45:BZ:111:VAL:C	45:BZ:113:ALA:H	2.03	0.60
1:CA:1263:C:H2'	1:CA:1264:C:C6	2.36	0.60
1:AA:1144:G:N2	1:AA:1146:A:H62	1.99	0.60
3:AC:58:GLU:HB3	10:AJ:92:THR:HG21	1.81	0.60
25:BA:1016:C:OP2	61:BA:4636:HOH:O	2.16	0.60
25:BA:1480:A:N6	25:BA:1605:A:H62	1.98	0.60
1:CA:826:C:H2'	1:CA:827:U:C6	2.35	0.60
1:CA:1095:U:H2'	1:CA:1096:C:O4'	2.01	0.60
9:CI:21:PRO:HA	9:CI:59:PHE:HA	1.83	0.60
10:CJ:32:ALA:HB1	10:CJ:33:GLN:HA	1.82	0.60
17:CQ:22:LEU:HD13	17:CQ:41:LYS:HG3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:11:G:C2'	25:DA:12:U:H5'	2.31	0.60
45:DZ:45:ASP:OD1	45:DZ:49:ARG:NH1	2.34	0.60
1:AA:991:U:H1'	1:AA:993:G:C8	2.37	0.60
7:AG:27:ILE:HD12	7:AG:40:ALA:HA	1.82	0.60
30:BG:41:GLN:HG3	30:BG:60:LEU:HD11	1.81	0.60
33:BN:15:LEU:HD12	33:BN:137:LYS:HG2	1.83	0.60
1:CA:532:A:N6	3:CC:156:ARG:HH12	1.99	0.60
10:CJ:47:PHE:CZ	14:CN:37:PHE:HE1	2.20	0.60
20:CT:86:ARG:O	20:CT:90:GLN:HB2	2.01	0.60
25:DA:479:A:N3	25:DA:481:G:H5''	2.16	0.60
25:DA:1709:U:H2'	25:DA:1710:C:C6	2.37	0.60
25:DA:2886:G:O2'	25:DA:2887:U:H5'	2.02	0.60
35:DP:96:THR:H	35:DP:99:LEU:HD21	1.66	0.60
1:AA:123:C:OP1	1:AA:311:C:O2'	2.16	0.60
12:AL:24:VAL:HG12	12:AL:27:LEU:HB2	1.82	0.60
25:BA:1542:A:N3	25:BA:1624:C:O2'	2.29	0.60
1:CA:250:A:H4'	1:CA:251:G:O5'	2.02	0.60
1:CA:1240:U:O2'	7:CG:32:ARG:HD3	2.02	0.60
25:DA:1488:G:C5	25:DA:1489:U:C5	2.89	0.60
25:DA:1531:C:H42	25:DA:1538:G:H1	1.49	0.60
25:DA:1914:C:H2'	25:DA:1915:U:O4'	2.01	0.60
34:DO:68:GLU:HB3	34:DO:78:ARG:HB2	1.84	0.60
39:DT:95:ARG:HG2	39:DT:95:ARG:HH11	1.65	0.60
1:AA:443:C:N3	1:AA:491:G:N1	2.39	0.60
1:AA:890:G:O2'	1:AA:906:G:O6	2.14	0.60
1:AA:1025:U:H3	1:AA:1036:G:H1	1.49	0.60
25:BA:11:G:H2'	25:BA:12:U:H5'	1.82	0.60
25:BA:927:G:H1	25:BA:944:C:H42	1.50	0.60
25:BA:2340:A:H2'	25:BA:2341:G:C8	2.36	0.60
1:CA:192:U:O2'	1:CA:193:C:H5'	2.02	0.60
1:CA:1288:A:H2'	1:CA:1289:A:C8	2.36	0.60
38:DS:14:VAL:O	38:DS:18:ILE:HG12	2.01	0.60
38:DS:35:ILE:CD1	38:DS:101:LEU:HD12	2.32	0.60
1:AA:258:G:H2'	1:AA:259:G:H8	1.66	0.60
1:AA:474:G:H2'	1:AA:475:G:C8	2.31	0.60
1:AA:701:C:O2	1:AA:703:G:N1	2.35	0.60
16:AP:50:LYS:HE2	16:AP:50:LYS:HA	1.84	0.60
17:AQ:3:LYS:HD2	17:AQ:60:ILE:HD11	1.83	0.60
25:BA:1846:A:OP2	27:BD:54:ARG:NH2	2.33	0.60
34:BO:21:CYS:HB2	34:BO:39:ILE:HD12	1.83	0.60
44:BY:38:ILE:HD11	44:BY:66:PRO:HG3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:43:LYS:HA	16:CP:48:TRP:HB3	1.82	0.60
1:AA:67:C:H2'	1:AA:68:G:C8	2.36	0.60
1:AA:364:A:H2'	1:AA:365:U:H6	1.66	0.60
3:AC:56:ASP:HB2	3:AC:67:THR:HB	1.82	0.60
1:CA:1104:G:H5'	2:CB:111:ARG:HD2	1.82	0.60
1:CA:1138:G:C6	1:CA:1140:C:H1'	2.37	0.60
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.17	0.60
3:CC:150:LYS:HD2	3:CC:201:TYR:HD2	1.67	0.60
3:CC:155:GLY:HA3	3:CC:196:LEU:HD13	1.84	0.60
1:AA:1126:U:C5	10:AJ:71:LEU:HD22	2.34	0.60
7:AG:78:ARG:HG2	7:AG:79:ARG:HB2	1.83	0.60
15:AO:54:ARG:O	15:AO:58:MET:HG3	2.02	0.60
25:BA:1825:U:H2'	25:BA:1826:C:C6	2.36	0.60
40:BU:58:ARG:HA	40:BU:61:TRP:CE3	2.37	0.60
44:BY:86:ARG:HH11	44:BY:100:ALA:HB1	1.67	0.60
1:CA:1237:C:HO2'	1:CA:1300:G:H1	1.47	0.60
1:CA:1251:A:H2'	1:CA:1252:A:C8	2.37	0.60
12:CL:24:VAL:HG11	12:CL:27:LEU:HD22	1.83	0.60
25:DA:1721:G:H8	25:DA:1741:A:H62	1.50	0.60
25:DA:1740:G:H2'	25:DA:1741:A:H8	1.66	0.60
26:DB:43:C:H5''	50:D4:1:MET:HG2	1.83	0.60
30:DG:44:GLY:O	30:DG:47:LYS:HB2	2.00	0.60
30:DG:63:ILE:HA	30:DG:143:GLU:HG3	1.83	0.60
1:AA:735:C:H2'	1:AA:736:C:H6	1.67	0.60
1:AA:1286:A:C8	1:AA:1287:A:H4'	2.37	0.60
1:AA:1422:G:H5''	34:BO:48:PRO:HB3	1.84	0.60
4:AD:158:ILE:O	4:AD:162:LEU:N	2.35	0.60
25:BA:692:C:H2'	25:BA:693:G:O4'	2.02	0.60
29:BF:183:VAL:O	29:BF:187:VAL:HG23	2.01	0.60
32:BI:3:VAL:HG12	32:BI:38:LEU:HA	1.83	0.60
1:CA:333:G:H4'	20:CT:16:HIS:CE1	2.37	0.60
1:CA:959:A:HO2'	1:CA:984:C:HO2'	1.47	0.60
30:DG:122:PRO:HG3	30:DG:180:PHE:HB3	1.84	0.60
31:DH:80:SER:OG	31:DH:81:GLU:N	2.32	0.60
1:AA:193:C:H2'	1:AA:194:C:H6	1.66	0.59
1:AA:994:A:N1	1:AA:1047:G:H4'	2.17	0.59
1:AA:1351:U:O4	9:AI:118:LYS:NZ	2.34	0.59
5:AE:78:HIS:CD2	5:AE:142:LEU:HD23	2.37	0.59
13:AM:15:VAL:O	13:AM:19:LEU:HD22	2.01	0.59
20:AT:42:GLN:NE2	20:AT:46:GLU:OE2	2.35	0.59
1:CA:1266:G:N2	1:CA:1269:A:OP2	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.36	0.59
5:CE:78:HIS:HE1	5:CE:142:LEU:HA	1.67	0.59
25:DA:957:A:H5'	36:DQ:76:LYS:HG3	1.84	0.59
25:DA:1889:A:H2'	25:DA:1890:A:C8	2.36	0.59
43:DX:12:VAL:HG22	43:DX:29:TRP:CE2	2.37	0.59
1:AA:518:C:O2'	1:AA:530:G:N2	2.35	0.59
1:AA:1192:C:OP2	3:AC:4:LYS:NZ	2.31	0.59
5:AE:94:ALA:HB2	5:AE:119:LEU:HG	1.82	0.59
25:BA:1631:C:O2'	25:BA:1632:A:H5'	2.02	0.59
1:CA:1119:C:N3	1:CA:1154:G:O6	2.35	0.59
25:DA:184:C:H2'	25:DA:185:U:H6	1.67	0.59
28:DE:24:THR:HG22	28:DE:186:GLY:O	2.02	0.59
50:D4:68:ARG:HG3	50:D4:68:ARG:HH21	1.67	0.59
1:AA:110:C:O2'	16:AP:25:ARG:O	2.20	0.59
1:AA:192:U:HO2'	1:AA:193:C:H6	1.50	0.59
3:AC:3:ASN:N	3:AC:3:ASN:OD1	2.35	0.59
25:BA:589:U:H5''	35:BP:29:LYS:HE3	1.84	0.59
25:BA:1232:G:H5''	41:BV:81:TYR:CE1	2.37	0.59
25:BA:1463:C:O2'	25:BA:1633:A:N3	2.30	0.59
29:BF:30:PRO:HB3	35:BP:1:MET:HE1	1.84	0.59
41:BV:40:LEU:HB2	41:BV:46:VAL:HG13	1.83	0.59
43:BX:31:HIS:CD2	43:BX:33:LYS:HB2	2.36	0.59
3:CC:58:GLU:HB3	10:CJ:92:THR:HG21	1.84	0.59
18:CR:33:ASP:OD2	18:CR:36:ASN:HB2	2.01	0.59
25:DA:1470:G:H5''	25:DA:1471:A:OP1	2.02	0.59
25:DA:2821:A:H2'	25:DA:2822:G:C8	2.37	0.59
45:DZ:140:ASP:OD1	45:DZ:142:SER:OG	2.17	0.59
1:AA:1442:G:O2'	1:AA:1442(A):G:OP1	2.17	0.59
8:AH:7:ALA:HB2	8:AH:85:ARG:HD2	1.85	0.59
25:BA:310:C:H2'	25:BA:311:C:C6	2.37	0.59
25:BA:2343:G:O2'	25:BA:2348:A:N1	2.28	0.59
7:CG:78:ARG:HH21	7:CG:156:TRP:HB3	1.65	0.59
23:CX:10:G:N2	23:CX:26:G:H1'	2.18	0.59
25:DA:1031:G:H5''	55:D9:8:LYS:HE3	1.84	0.59
1:AA:17:U:H2'	1:AA:18:C:C6	2.37	0.59
1:AA:1025:U:C2	1:AA:1036:G:O6	2.55	0.59
1:AA:1271:G:H5''	1:AA:1314:C:OP1	2.03	0.59
1:AA:1442(A):G:C8	39:BT:118:ARG:HG2	2.38	0.59
25:BA:1827:U:H2'	25:BA:1828:C:C6	2.38	0.59
29:BF:8:GLN:HE21	29:BF:21:ALA:HB2	1.68	0.59
19:CS:49:ILE:HD12	19:CS:62:ILE:HD13	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2298:A:N1	25:DA:2321:G:C6	2.70	0.59
1:AA:78:G:H1	1:AA:92:C:H42	1.50	0.59
1:AA:159:G:O2'	1:AA:161:A:N6	2.26	0.59
1:AA:1216:G:OP1	14:AN:2:ALA:HA	2.03	0.59
19:AS:38:SER:HB2	19:AS:71:LEU:HD12	1.84	0.59
25:BA:1496:A:H5'	25:BA:1497:G:OP2	2.03	0.59
36:BQ:43:THR:HG22	36:BQ:94:VAL:HG12	1.85	0.59
1:CA:738:C:OP1	6:CF:2:ARG:NH1	2.36	0.59
1:CA:742:G:OP2	15:CO:35:ARG:NH2	2.36	0.59
1:CA:1138:G:C5	1:CA:1140:C:H1'	2.38	0.59
25:DA:1200:C:H5'	61:DA:3774:HOH:O	2.01	0.59
1:AA:626:U:H2'	1:AA:627:G:H8	1.67	0.59
4:AD:154:ASN:HA	4:AD:159:ARG:HH21	1.68	0.59
25:BA:709:G:H5''	35:BP:16:ARG:HG2	1.85	0.59
25:BA:945:A:O2'	25:BA:946:A:H8	1.85	0.59
25:BA:2450:U:O2'	25:BA:2452:C:OP1	2.21	0.59
35:BP:59:LEU:HD11	54:B8:10:ALA:HB2	1.83	0.59
45:BZ:151:HIS:O	45:BZ:153:SER:N	2.35	0.59
1:CA:1004:A:N7	1:CA:1037:C:H2'	2.18	0.59
1:CA:1409:C:O2	1:CA:1491:G:N2	2.27	0.59
7:CG:26:PHE:O	7:CG:30:ILE:HG13	2.02	0.59
26:DB:9:G:H1	26:DB:112:U:H3	1.51	0.59
27:DD:132:PRO:HG2	27:DD:135:PHE:HD2	1.67	0.59
29:DF:126:VAL:HG21	29:DF:129:PHE:CZ	2.36	0.59
1:AA:1030(D):A:H2'	1:AA:1031:G:O4'	2.03	0.59
25:BA:1201:A:OP1	40:BU:55:ARG:HD3	2.03	0.59
27:BD:26:LYS:HB3	27:BD:83:GLU:HG2	1.84	0.59
1:CA:1048:G:OP1	14:CN:3:ARG:NH2	2.35	0.59
1:CA:1279:A:H5''	1:CA:1280:A:OP1	2.02	0.59
1:CA:1288:A:H2'	1:CA:1289:A:H8	1.68	0.59
1:CA:1368:G:OP1	9:CI:111:ARG:NH2	2.36	0.59
2:CB:76:GLN:HB2	2:CB:208:ILE:HG12	1.84	0.59
23:CX:4:G:H1	23:CX:69:C:H42	1.51	0.59
25:DA:184:C:H1'	25:DA:217:G:H1'	1.85	0.59
25:DA:1256:G:H5'	25:DA:1257:C:OP2	2.01	0.59
25:DA:2404:C:O3'	35:DP:77:ARG:NH2	2.36	0.59
38:DS:71:ARG:NH2	38:DS:107:GLU:OE1	2.36	0.59
29:BF:53:THR:CG2	29:BF:55:GLY:H	2.15	0.59
39:BT:29:ARG:HG3	39:BT:46:GLU:HB2	1.84	0.59
1:CA:664:G:H22	1:CA:741:G:H1	1.51	0.59
1:AA:583:A:N6	1:AA:758:G:O2'	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1259:C:H42	1:AA:1276:G:H1	1.50	0.59
1:AA:1272:G:H2'	1:AA:1273:G:O4'	2.03	0.59
10:AJ:38:ILE:HD11	10:AJ:71:LEU:HD23	1.84	0.59
59:AX:101:FME:HCN	25:BA:2463:A:H2	1.68	0.59
25:BA:639:G:O2'	61:BA:3869:HOH:O	2.17	0.59
29:BF:185:ASP:OD1	29:BF:188:ARG:NH1	2.34	0.59
54:B8:6:THR:HG22	54:B8:63:PRO:HD2	1.83	0.59
3:CC:43:LEU:HD21	3:CC:91:LEU:HD13	1.84	0.59
6:CF:69:GLU:O	6:CF:72:VAL:HG12	2.03	0.59
25:DA:1405:U:H2'	25:DA:1406:U:C6	2.38	0.59
25:DA:2189:U:H2'	25:DA:2190:G:C8	2.38	0.59
30:DG:16:ARG:HB2	30:DG:17:PRO:HD3	1.85	0.59
39:DT:59:THR:HG23	39:DT:78:LEU:HB2	1.85	0.59
41:DV:62:LEU:HD11	41:DV:95:LEU:HB2	1.85	0.59
45:DZ:6:LYS:HE2	45:DZ:43:GLU:OE1	2.03	0.59
50:D4:59:PHE:HA	50:D4:61:ARG:N	2.17	0.59
1:AA:552:U:H2'	1:AA:553:A:H5'	1.84	0.58
2:AB:145:LEU:HD12	2:AB:149:LEU:HD12	1.84	0.58
3:AC:112:SER:O	3:AC:116:VAL:HG23	2.03	0.58
25:BA:1094:A:OP2	25:BA:1155:C:N4	2.29	0.58
2:CB:102:LEU:HD23	2:CB:182:ILE:HD12	1.85	0.58
4:CD:31:CYS:SG	4:CD:32:ALA:N	2.76	0.58
17:CQ:66:SER:O	17:CQ:70:ARG:NH1	2.36	0.58
25:DA:300:A:H1'	25:DA:319:C:H1'	1.83	0.58
25:DA:311:A:OP2	61:DA:4575:HOH:O	2.17	0.58
25:DA:2363:C:O2	46:D0:39:ARG:NH2	2.31	0.58
28:DE:143:ASN:HD22	28:DE:147:PRO:HD3	1.67	0.58
32:DI:77:LEU:HB3	32:DI:142:VAL:HG12	1.84	0.58
38:DS:11:LYS:O	38:DS:15:ARG:HG3	2.02	0.58
1:AA:713:G:H2'	1:AA:714:G:C8	2.38	0.58
27:BD:242:ARG:HG2	27:BD:246:PRO:HG3	1.84	0.58
1:CA:392:G:H2'	1:CA:393:A:H8	1.68	0.58
1:CA:474:G:H2'	1:CA:475:G:H8	1.68	0.58
25:DA:1614:A:OP1	61:DA:3881:HOH:O	2.17	0.58
26:DB:5:C:H42	26:DB:116:G:H1	1.50	0.58
30:DG:39:ILE:HG23	30:DG:157:ILE:HG12	1.85	0.58
1:AA:501:C:H1'	1:AA:549:C:H1'	1.85	0.58
13:AM:122:LYS:HD3	13:AM:123:ALA:H	1.67	0.58
14:AN:23:ARG:NH1	14:AN:30:ALA:HB2	2.19	0.58
20:AT:30:LYS:HA	20:AT:33:ILE:HD12	1.86	0.58
25:BA:294:C:H42	25:BA:390:G:H1	1.50	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1221:G:H1'	25:BA:1222:A:O5'	2.03	0.58
26:BB:64:C:O2'	61:BB:4001:HOH:O	2.17	0.58
54:B8:62:LEU:HB3	54:B8:65:GLU:HG2	1.85	0.58
1:CA:79:G:H1	1:CA:90:U:H3	1.50	0.58
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.04	0.58
1:CA:1128:C:H1'	1:CA:1147:C:H42	1.67	0.58
1:CA:1376:U:H2'	1:CA:1377:A:H8	1.68	0.58
9:CI:6:GLY:HA3	9:CI:80:GLY:O	2.03	0.58
25:DA:236:C:H2'	25:DA:237:C:H6	1.66	0.58
25:DA:1014:U:H2'	25:DA:1015:G:H8	1.69	0.58
31:DH:169:VAL:HG12	31:DH:171:LEU:HD22	1.86	0.58
33:DN:102:ALA:O	33:DN:106:MET:HG3	2.03	0.58
1:AA:520:A:O2'	12:AL:73:GLU:OE1	2.15	0.58
2:AB:231:GLU:HB3	2:AB:232:PRO:CD	2.33	0.58
3:AC:130:VAL:HG21	3:AC:157:ILE:HG23	1.85	0.58
20:AT:86:ARG:O	20:AT:90:GLN:NE2	2.36	0.58
25:BA:1577:C:HO2'	25:BA:1578:C:P	2.27	0.58
25:BA:2331:G:H22	38:BS:3:ARG:HE	1.50	0.58
27:BD:132:PRO:HG2	27:BD:135:PHE:CD2	2.39	0.58
1:CA:444:C:O2	1:CA:490:G:N2	2.17	0.58
1:CA:1491:G:H3'	1:CA:1492:A:C8	2.38	0.58
2:CB:48:MET:HA	2:CB:51:LEU:HB2	1.86	0.58
4:CD:15:GLU:OE2	4:CD:66:ARG:NH1	2.35	0.58
25:DA:662:G:OP1	61:DA:4092:HOH:O	2.16	0.58
26:DB:95:C:H2'	26:DB:96:U:C6	2.38	0.58
39:DT:26:ASP:OD1	39:DT:120:ARG:NH2	2.30	0.58
1:AA:396:G:O2'	1:AA:398:C:OP1	2.13	0.58
1:AA:737:A:H2'	1:AA:738:C:C6	2.38	0.58
1:AA:738:C:H2'	1:AA:739:C:H6	1.69	0.58
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.04	0.58
1:AA:1239:A:H62	1:AA:1299:A:N6	2.02	0.58
5:AE:12:LEU:HB3	5:AE:31:LEU:HB2	1.86	0.58
5:AE:110:LEU:HD13	5:AE:118:ILE:HG21	1.84	0.58
25:BA:536:U:OP2	61:BA:4619:HOH:O	2.17	0.58
25:BA:776:G:H4'	25:BA:810:G:H5'	1.85	0.58
48:B2:32:LEU:HD23	48:B2:53:LEU:HB3	1.85	0.58
1:CA:999:C:N4	1:CA:1043:C:N3	2.51	0.58
1:CA:999:C:N3	1:CA:1042:G:C2	2.72	0.58
1:CA:1002:G:H1	1:CA:1038:C:H42	0.72	0.58
1:CA:1223:C:P	19:CS:78:ARG:HH21	2.26	0.58
2:CB:16:HIS:HB2	2:CB:204:ASN:CB	2.24	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:99:GLN:HG2	11:CK:105:VAL:HG21	1.85	0.58
25:DA:500:G:N1	25:DA:503:A:OP2	2.36	0.58
25:DA:571:A:N6	25:DA:2499:C:O3'	2.36	0.58
25:DA:2393:A:H5''	35:DP:63:PRO:HB3	1.85	0.58
35:DP:97:PRO:HD3	35:DP:126:VAL:O	2.04	0.58
25:BA:1199:C:OP1	40:BU:92:ARG:NH1	2.37	0.58
25:BA:2299:A:N6	25:BA:2356:U:H3	2.00	0.58
25:BA:2514:G:OP2	61:BA:4400:HOH:O	2.17	0.58
1:CA:664:G:H5''	18:CR:64:ARG:NH2	2.19	0.58
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.39	0.58
14:CN:6:LEU:HB3	14:CN:23:ARG:NH2	2.19	0.58
25:DA:784:A:C5	27:DD:229:VAL:HG21	2.38	0.58
25:DA:1359:A:N6	25:DA:1372:U:H3	2.01	0.58
25:DA:2772:C:H2'	25:DA:2773:C:H6	1.68	0.58
28:DE:167:VAL:HG11	28:DE:189:PRO:HD3	1.86	0.58
45:DZ:108:PRO:HG3	45:DZ:141:VAL:HB	1.85	0.58
5:AE:145:LYS:O	5:AE:149:GLU:HG2	2.04	0.58
18:AR:40:LEU:HD22	18:AR:70:ILE:HG12	1.86	0.58
25:BA:325:G:OP2	44:BY:84:ARG:NH2	2.36	0.58
25:BA:346:A:OP1	29:BF:168:ARG:HD2	2.04	0.58
25:BA:1003:U:O2	26:BB:90:A:O2'	2.21	0.58
25:BA:1360:C:OP1	61:BA:4469:HOH:O	2.16	0.58
25:BA:1779:G:H8	25:BA:1779:G:H5''	1.68	0.58
1:CA:543:C:C2'	1:CA:544:G:H5'	2.33	0.58
20:CT:64:ASP:OD2	20:CT:81:LYS:NZ	2.35	0.58
25:DA:2343:C:HO2'	25:DA:2373:G:HO2'	1.47	0.58
25:DA:2693:A:H2'	25:DA:2694:G:H8	1.68	0.58
32:DI:77:LEU:HD21	32:DI:101:LEU:HA	1.86	0.58
12:AL:59:ARG:HD3	24:AW:1:2QZ:OG1	2.04	0.58
25:BA:326:C:OP2	44:BY:73:ARG:NH2	2.36	0.58
1:CA:1516:G:H2'	1:CA:1518:A:OP2	2.03	0.58
2:CB:189:ASP:HB3	2:CB:204:ASN:HA	1.85	0.58
3:CC:152:ILE:HG23	3:CC:199:LYS:HB2	1.86	0.58
8:CH:49:GLU:HG2	8:CH:62:TYR:HE2	1.68	0.58
27:DD:71:ASP:CB	27:DD:103:ARG:HH22	2.17	0.58
41:DV:5:VAL:HG11	41:DV:57:VAL:HG21	1.86	0.58
1:AA:598:U:H4'	8:AH:94:TYR:CD2	2.38	0.58
25:BA:231:G:C8	54:B8:5:LYS:HG2	2.39	0.58
25:BA:1261:G:P	40:BU:12:ARG:HH21	2.27	0.58
38:BS:10:ARG:O	38:BS:14:VAL:HG13	2.04	0.58
25:DA:847:U:OP2	61:DA:3962:HOH:O	2.16	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:900:A:H2'	25:DA:901:A:H8	1.68	0.58
25:DA:2630:G:H2'	25:DA:2631:G:C8	2.38	0.58
2:AB:16:HIS:CB	2:AB:204:ASN:HB3	2.31	0.58
25:BA:1086:C:H2'	25:BA:1087:C:O4'	2.04	0.58
25:BA:1985:U:H4'	25:BA:1986:G:OP1	2.03	0.58
31:BH:40:GLU:OE2	31:BH:60:ARG:NH1	2.37	0.58
1:CA:147:G:O2'	1:CA:148:G:H8	1.87	0.58
1:CA:192:U:C2'	1:CA:193:C:H5'	2.34	0.58
1:CA:433:C:H2'	1:CA:434:U:H6	1.68	0.58
25:DA:839:U:H2'	25:DA:840:C:C6	2.39	0.58
25:DA:2802:G:H2'	25:DA:2803:C:O4'	2.04	0.58
33:DN:15:LEU:HB2	33:DN:135:PRO:HB2	1.85	0.58
40:DU:66:ASN:O	40:DU:70:ARG:HG3	2.04	0.58
1:AA:33:A:H2'	1:AA:34:C:C6	2.39	0.57
1:AA:991:U:O2'	1:AA:992:U:OP2	2.21	0.57
1:AA:999:C:H2'	1:AA:1000:U:O4'	2.04	0.57
10:AJ:8:LEU:HB2	10:AJ:70:ARG:HB2	1.86	0.57
25:BA:988:U:OP2	61:BA:4599:HOH:O	2.17	0.57
26:BB:76:G:N2	26:BB:101:G:O6	2.30	0.57
32:BI:4:ILE:HG12	32:BI:18:VAL:HG22	1.85	0.57
1:CA:662:G:O2'	1:CA:836:G:OP1	2.21	0.57
1:CA:953:G:H5'	1:CA:965:A:H61	1.69	0.57
2:CB:71:VAL:HG23	2:CB:164:VAL:HA	1.85	0.57
5:CE:137:GLU:HA	5:CE:140:ARG:HB3	1.85	0.57
23:CX:73:A:H5''	23:CX:74:C:H5'	1.86	0.57
25:DA:579:G:H2'	25:DA:580:C:C6	2.38	0.57
25:DA:854:G:H2'	25:DA:855:G:H8	1.69	0.57
25:DA:1796:U:H2'	25:DA:1797:C:C6	2.38	0.57
1:AA:44:G:C2	1:AA:45:U:H1'	2.39	0.57
1:AA:272:C:H2'	1:AA:273:A:H8	1.69	0.57
1:AA:1142:G:H3'	1:AA:1143:G:H8	1.68	0.57
8:AH:40:ALA:HA	8:AH:45:ILE:HG13	1.87	0.57
25:BA:1525:G:O2'	25:BA:1605:A:N1	2.35	0.57
25:BA:1825:U:H2'	25:BA:1826:C:H6	1.69	0.57
25:BA:1925:G:OP1	27:BD:241:PRO:HB2	2.04	0.57
25:BA:2457:G:OP1	29:BF:74:ARG:NH2	2.37	0.57
47:B1:21:ARG:HG2	47:B1:21:ARG:NH1	2.18	0.57
1:CA:45:U:H2'	1:CA:46:G:C8	2.39	0.57
1:CA:715:A:H2'	1:CA:716:A:C8	2.39	0.57
1:CA:1182:G:H4'	1:CA:1183:A:H3'	1.86	0.57
3:CC:36:ASP:O	3:CC:40:ARG:HG3	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:98:ASN:N	3:CC:98:ASN:OD1	2.37	0.57
8:CH:21:LYS:O	8:CH:65:TYR:OH	2.20	0.57
9:CI:121:ARG:NH1	9:CI:122:ALA:O	2.36	0.57
11:CK:34:ASP:HB3	11:CK:40:ILE:HD11	1.85	0.57
19:CS:64:GLU:HB2	50:D4:59:PHE:CE1	2.39	0.57
28:DE:119:ARG:HB3	28:DE:120:TRP:CD1	2.39	0.57
33:DN:4:TYR:CD2	40:DU:100:VAL:HG11	2.39	0.57
38:DS:99:LYS:HE2	38:DS:103:GLU:OE2	2.03	0.57
48:D2:10:LEU:HD22	48:D2:14:ARG:NH1	2.19	0.57
28:BE:111:ARG:HG3	28:BE:160:TYR:CD2	2.39	0.57
44:BY:6:HIS:H	44:BY:6:HIS:CD2	2.21	0.57
1:CA:900:A:H2'	1:CA:901:A:C8	2.39	0.57
1:CA:1427:U:H2'	1:CA:1428:A:C8	2.39	0.57
7:CG:153:HIS:CE1	11:CK:58:PRO:HD2	2.39	0.57
23:CX:9:G:O2'	23:CX:10:G:N7	2.33	0.57
25:DA:333:G:H5''	25:DA:334:C:OP2	2.04	0.57
25:DA:1032:A:H2	25:DA:1122:G:H22	1.51	0.57
25:DA:2336:A:H61	46:D0:43:THR:CG2	2.17	0.57
46:D0:24:LYS:HE2	46:D0:24:LYS:HA	1.87	0.57
1:AA:392:G:H2'	1:AA:393:A:C8	2.38	0.57
1:AA:954:G:H21	1:AA:1227:A:H62	1.53	0.57
25:BA:1211:U:H2'	25:BA:1212:C:C6	2.39	0.57
30:BG:102:PHE:HE1	30:BG:141:PHE:HE2	1.52	0.57
19:CS:41:VAL:HB	19:CS:44:MET:HG3	1.87	0.57
25:DA:2639:A:OP2	61:DA:3812:HOH:O	2.16	0.57
1:AA:959:A:O2'	1:AA:984:C:O2'	2.22	0.57
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.39	0.57
5:AE:50:GLU:HB2	5:AE:53:LEU:HD13	1.86	0.57
17:AQ:53:LEU:HD23	17:AQ:82:MET:HE1	1.86	0.57
25:BA:606:G:OP2	40:BU:10:ARG:NH1	2.37	0.57
25:BA:1091:A:OP1	25:BA:1092:A:H3'	2.04	0.57
30:BG:131:TYR:HB3	30:BG:159:VAL:HG13	1.86	0.57
40:BU:105:VAL:HG11	41:BV:39:LEU:HD21	1.85	0.57
1:CA:59:A:H5''	1:CA:60:A:H5''	1.85	0.57
1:CA:487:A:H2'	1:CA:488:C:O4'	2.05	0.57
1:CA:623:C:H2'	1:CA:624:C:H6	1.69	0.57
1:CA:1305:G:H5'	21:CU:4:GLY:HA3	1.87	0.57
3:CC:140:ARG:NH1	3:CC:140:ARG:HB2	2.19	0.57
5:CE:10:MET:HG2	5:CE:13:ILE:HD11	1.86	0.57
8:CH:29:SER:HB3	8:CH:32:LYS:HG3	1.86	0.57
9:CI:116:LYS:HA	9:CI:123:PRO:HD3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:898:C:H2'	25:DA:899:A:O4'	2.05	0.57
35:DP:38:GLN:O	35:DP:39:LYS:HB3	2.05	0.57
50:D4:68:ARG:HH21	50:D4:68:ARG:CG	2.16	0.57
1:AA:342:C:N3	1:AA:343:U:H5	2.03	0.57
10:AJ:20:ALA:HA	10:AJ:23:ILE:HG22	1.87	0.57
25:BA:296:U:H2'	25:BA:297:C:C6	2.39	0.57
25:BA:586:G:OP2	61:BA:4474:HOH:O	2.16	0.57
27:BD:108:PRO:HG3	27:BD:143:HIS:CE1	2.39	0.57
36:BQ:51:ARG:HD3	36:BQ:66:ILE:HD11	1.87	0.57
1:CA:1007:C:N4	1:CA:1022:G:C6	2.72	0.57
1:CA:1154:G:N7	1:CA:1155:G:C8	2.73	0.57
17:CQ:66:SER:OG	17:CQ:67:LYS:N	2.37	0.57
25:DA:867:C:O2	25:DA:913:U:H5'	2.05	0.57
25:DA:1038:C:N4	25:DA:1117:G:H1	2.01	0.57
25:DA:1292:U:H2'	25:DA:1293:C:C6	2.40	0.57
25:DA:1430:C:H2'	25:DA:1431:U:C6	2.40	0.57
1:AA:877:C:H5''	8:AH:88:LYS:HD3	1.87	0.57
1:AA:1007:C:O2	1:AA:1022:G:N1	2.32	0.57
25:BA:1261:G:OP2	40:BU:12:ARG:NH2	2.37	0.57
25:BA:1660:A:OP1	25:BA:1663:C:N4	2.32	0.57
50:B4:63:TYR:N	50:B4:64:GLY:HA2	2.19	0.57
1:CA:947:G:O3'	13:CM:109:THR:OG1	2.22	0.57
1:CA:1217:C:H2'	1:CA:1218:C:O4'	2.05	0.57
1:CA:1269:A:N1	1:CA:1312:G:O2'	2.30	0.57
25:DA:601:C:O2	25:DA:605:C:H4'	2.04	0.57
25:DA:855:G:H2'	25:DA:856:C:C6	2.40	0.57
25:DA:2000:G:N7	61:DA:4010:HOH:O	2.33	0.57
25:DA:2680:C:H1'	28:DE:187:ALA:HB1	1.86	0.57
29:DF:129:PHE:CD2	29:DF:163:VAL:HG21	2.40	0.57
32:DI:40:THR:O	32:DI:44:LEU:HB2	2.04	0.57
1:AA:1241:G:H1	1:AA:1296:C:N4	2.00	0.57
1:AA:1270:C:C2'	1:AA:1271:G:H5'	2.35	0.57
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.86	0.57
7:AG:42:ILE:HG23	7:AG:117:ALA:HA	1.87	0.57
12:AL:117:ARG:HB3	12:AL:122:THR:HB	1.87	0.57
25:BA:8:A:H2'	25:BA:9:U:H6	1.70	0.57
25:BA:1778:G:H2'	25:BA:1779:G:H5''	1.86	0.57
36:BQ:16:ARG:HG2	36:BQ:18:LYS:HE2	1.87	0.57
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.19	0.57
25:DA:116:C:H2'	25:DA:117:G:O4'	2.04	0.57
25:DA:1291:C:H2'	25:DA:1292:U:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1314:C:OP1	61:DA:4078:HOH:O	2.18	0.57
36:DQ:135:ASP:OD2	45:DZ:49:ARG:NH2	2.38	0.57
43:DX:44:GLU:O	43:DX:48:LYS:N	2.38	0.57
1:AA:102:G:H2'	1:AA:103:C:C6	2.40	0.57
1:AA:545:C:H5'	4:AD:72:GLU:HG2	1.87	0.57
1:AA:1369:C:H2'	1:AA:1370:G:H8	1.69	0.57
4:AD:172:PRO:HB2	4:AD:187:ARG:NH2	2.20	0.57
25:BA:721:G:H1'	29:BF:74:ARG:HD3	1.87	0.57
25:BA:1405:A:N1	25:BA:1418:U:O4	2.38	0.57
32:BI:48:GLU:HG2	32:BI:52:ARG:HH22	1.69	0.57
38:BS:3:ARG:HE	38:BS:4:LEU:H	1.52	0.57
1:CA:426:G:OP1	4:CD:36:ARG:NH1	2.36	0.57
3:CC:6:HIS:HD2	3:CC:8:ILE:H	1.51	0.57
29:DF:101:LEU:HD12	29:DF:102:PRO:HD2	1.86	0.57
19:AS:9:VAL:HG21	50:B4:61:ARG:HH22	1.70	0.57
25:BA:278:G:H2'	25:BA:279:G:H5''	1.87	0.57
27:BD:71:ASP:CB	27:BD:103:ARG:HH22	2.15	0.57
1:CA:1327:C:H2'	1:CA:1328:C:H6	1.70	0.57
2:CB:137:ARG:O	2:CB:141:GLU:N	2.33	0.57
12:CL:75:HIS:HA	12:CL:102:ARG:HH22	1.69	0.57
13:CM:108:ARG:CZ	13:CM:114:ARG:HG2	2.34	0.57
25:DA:491:G:H2'	25:DA:492:A:C8	2.40	0.57
25:DA:754:C:H2'	25:DA:755:C:C6	2.40	0.57
36:DQ:24:GLY:HA2	36:DQ:67:ARG:NH2	2.20	0.57
1:AA:458:C:H2'	1:AA:460:G:C8	2.40	0.56
1:AA:1138:G:C6	1:AA:1140:C:H1'	2.39	0.56
10:AJ:35:SER:CB	10:AJ:73:ASP:HB2	2.31	0.56
25:BA:801:C:H2'	25:BA:802:C:H6	1.69	0.56
25:BA:1940:A:O2'	25:BA:1942:C:N4	2.38	0.56
32:BI:65:ALA:HB1	32:BI:136:VAL:HG11	1.87	0.56
32:BI:72:LEU:O	32:BI:74:ASN:N	2.37	0.56
1:CA:5:U:H5'	1:CA:6:G:C5	2.40	0.56
1:CA:1003:G:C6	1:CA:1004:A:C2	2.93	0.56
1:CA:1023:G:H3'	1:CA:1024:G:C8	2.38	0.56
25:DA:600:G:N3	61:DA:3736:HOH:O	2.32	0.56
25:DA:1364:G:OP2	47:D1:3:LYS:HG3	2.05	0.56
30:DG:25:TYR:HB3	30:DG:30:GLU:HB2	1.87	0.56
4:AD:119:GLN:HG2	4:AD:123:HIS:CD2	2.39	0.56
4:AD:173:TRP:CE3	4:AD:174:LEU:HG	2.39	0.56
24:AW:8:2R3:H65	24:AW:10:2QY:CE1	2.35	0.56
25:BA:2092:G:N3	61:BA:3833:HOH:O	2.32	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2510:C:OP2	61:BA:4508:HOH:O	2.18	0.56
46:B0:24:LYS:O	46:B0:25:ARG:NH1	2.33	0.56
50:B4:61:ARG:HG3	50:B4:62:ARG:N	2.21	0.56
1:CA:727:G:N2	1:CA:730:G:OP2	2.36	0.56
45:DZ:130:PRO:O	45:DZ:133:ILE:HG13	2.05	0.56
1:AA:146:G:N2	1:AA:176:C:O2	2.31	0.56
1:AA:161:A:H2'	1:AA:162:A:C8	2.40	0.56
1:AA:605:U:H2'	1:AA:606:G:C8	2.40	0.56
1:AA:1064:G:H4'	1:AA:1065:U:OP1	2.03	0.56
1:AA:1494:G:HO2'	25:BA:1934:A:HO2'	1.53	0.56
25:BA:407:U:OP1	61:BA:4096:HOH:O	2.17	0.56
25:BA:1830:G:O2'	27:BD:181:GLU:OE2	2.15	0.56
25:BA:2847:G:H21	37:BR:45:ARG:HH12	1.53	0.56
25:BA:2897:U:H2'	25:BA:2898:C:C6	2.40	0.56
31:BH:56:SER:HB3	31:BH:61:HIS:ND1	2.20	0.56
53:B7:33:ARG:NH2	61:B7:4001:HOH:O	2.38	0.56
1:CA:975:A:N1	10:CJ:48:THR:HB	2.20	0.56
9:CI:9:ARG:O	9:CI:104:ARG:HG3	2.06	0.56
10:CJ:6:ILE:O	10:CJ:71:LEU:HD12	2.04	0.56
25:DA:271(E):U:H2'	25:DA:271(F):C:C6	2.40	0.56
25:DA:1271:G:OP2	61:DA:4114:HOH:O	2.18	0.56
25:DA:1514:U:H2'	25:DA:1515:G:H8	1.70	0.56
25:DA:1636:C:H2'	25:DA:1637:A:C8	2.40	0.56
25:DA:2293:C:H42	25:DA:2339:G:H1	1.53	0.56
25:DA:2397:G:N2	25:DA:2420:C:H1'	2.20	0.56
25:DA:2887:U:H2'	25:DA:2888:C:C6	2.41	0.56
28:DE:52:LEU:O	28:DE:76:ARG:N	2.25	0.56
34:DO:71:ARG:NE	34:DO:105:GLU:OE2	2.36	0.56
51:D5:41:PRO:O	51:D5:44:THR:OG1	2.23	0.56
3:AC:181:ASN:HD21	3:AC:204:LEU:HD12	1.69	0.56
4:AD:88:VAL:O	4:AD:92:VAL:HG23	2.05	0.56
25:BA:2899:C:H2'	25:BA:2900:G:O4'	2.05	0.56
25:BA:2902:G:O2'	25:BA:2903:G:OP2	2.22	0.56
33:BN:58:ASP:OD1	33:BN:58:ASP:N	2.34	0.56
1:CA:78:G:H2'	1:CA:79:G:H5'	1.87	0.56
1:CA:410:G:H5''	1:CA:411:A:OP1	2.05	0.56
1:CA:920:U:H2'	1:CA:921:U:C6	2.41	0.56
1:CA:1179:A:H4'	9:CI:103:THR:HA	1.87	0.56
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.39	0.56
10:CJ:55:LYS:HG3	10:CJ:56:HIS:CD2	2.40	0.56
19:CS:41:VAL:HG12	19:CS:43:GLU:H	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:184:C:H2'	25:DA:185:U:C6	2.40	0.56
25:DA:819:A:OP2	25:DA:1187:G:N2	2.30	0.56
25:DA:1656:C:H2'	25:DA:1657:C:H6	1.71	0.56
28:DE:13:ARG:HG2	39:DT:58:ASN:HD21	1.70	0.56
44:DY:5:MET:HE1	44:DY:32:PRO:HA	1.88	0.56
1:AA:1030:C:H3'	1:AA:1030(A):G:H4'	1.87	0.56
25:BA:469:A:H1'	25:BA:1246:C:O4'	2.04	0.56
51:B5:16:ARG:O	51:B5:20:ARG:HG3	2.04	0.56
1:CA:509:A:C8	1:CA:509:A:H3'	2.40	0.56
1:CA:1179:A:C6	1:CA:1180:A:C8	2.94	0.56
1:CA:1179:A:N1	1:CA:1180:A:C8	2.74	0.56
1:CA:1327:C:H2'	1:CA:1328:C:C6	2.41	0.56
1:CA:1493:A:H1'	25:DA:1913:A:N6	2.21	0.56
2:CB:51:LEU:HD23	2:CB:201:ILE:HD12	1.87	0.56
7:CG:107:ALA:O	7:CG:111:ARG:HG3	2.05	0.56
25:DA:1028:A:H2'	25:DA:1029:A:C8	2.40	0.56
42:DW:78:GLU:OE1	42:DW:99:ARG:NH1	2.36	0.56
45:DZ:8:TYR:HB2	45:DZ:38:TYR:CE2	2.41	0.56
1:AA:600:C:H2'	1:AA:601:C:C6	2.41	0.56
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.70	0.56
4:AD:65:ARG:HG2	4:AD:75:PHE:CD1	2.40	0.56
25:BA:147:U:O4	61:BA:4548:HOH:O	2.16	0.56
25:BA:2332:A:N3	25:BA:2332:A:H2'	2.20	0.56
1:CA:859:A:OP2	1:CA:869:G:N2	2.39	0.56
1:CA:1226:C:H4'	19:CS:80:TYR:OH	2.06	0.56
4:CD:18:LYS:NZ	4:CD:31:CYS:SG	2.77	0.56
8:CH:51:VAL:HG12	8:CH:52:ASP:N	2.19	0.56
8:CH:51:VAL:HG21	8:CH:60:ARG:HB2	1.88	0.56
25:DA:539:G:H2'	25:DA:540:C:C6	2.41	0.56
25:DA:2336:A:H61	46:D0:43:THR:HG21	1.69	0.56
25:DA:2590:A:OP2	27:DD:238:GLY:HA2	2.05	0.56
28:DE:163:GLU:HG2	28:DE:164:ARG:N	2.20	0.56
38:DS:37:ALA:HB2	38:DS:101:LEU:HD11	1.88	0.56
43:DX:59:VAL:N	43:DX:76:ARG:O	2.34	0.56
1:AA:187:C:H2'	1:AA:188:C:H6	1.70	0.56
1:AA:974:A:OP2	14:AN:41:ARG:NH1	2.39	0.56
1:AA:1010:G:N2	1:AA:1020:U:O2'	2.39	0.56
1:AA:1197:G:OP1	61:AA:4053:HOH:O	2.17	0.56
25:BA:144:C:H5'	43:BX:2:LYS:HE2	1.86	0.56
25:BA:1296:G:N7	35:BP:18:ARG:NH2	2.54	0.56
1:CA:826:C:H2'	1:CA:827:U:H6	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1036:G:N7	1:CA:1037:C:C2	2.74	0.56
1:CA:1154:G:C8	1:CA:1155:G:C8	2.93	0.56
3:CC:179:ARG:NH1	3:CC:206:GLU:OE1	2.39	0.56
23:CX:23:C:H2'	23:CX:24:U:C6	2.40	0.56
25:DA:443:A:H5''	25:DA:444:C:OP1	2.06	0.56
25:DA:455:C:N3	25:DA:472:A:H2'	2.20	0.56
25:DA:894:C:H2'	25:DA:895:U:C6	2.41	0.56
25:DA:1025:G:C4	25:DA:1135:C:H1'	2.41	0.56
25:DA:1755:A:OP2	39:DT:113:LYS:NZ	2.38	0.56
25:DA:1774:C:OP1	61:DA:3938:HOH:O	2.18	0.56
25:DA:2816:C:O3'	37:DR:99:LYS:NZ	2.37	0.56
1:AA:1002:G:H3'	1:AA:1003:G:H8	1.71	0.56
1:AA:1223:C:H5''	1:AA:1224:G:C5'	2.35	0.56
25:BA:843:C:H2'	25:BA:844:C:C6	2.41	0.56
25:BA:985:G:OP1	61:BA:4727:HOH:O	2.18	0.56
25:BA:2860:A:OP2	25:BA:2876:U:H5	1.88	0.56
1:CA:1004:A:H2'	1:CA:1005:A:H5'	1.88	0.56
1:CA:1422:G:H5''	34:DO:48:PRO:HB3	1.86	0.56
16:CP:6:LEU:HD23	16:CP:17:TYR:CG	2.40	0.56
25:DA:330:A:HO2'	25:DA:331:A:H8	1.53	0.56
30:DG:179:PRO:HB2	50:D4:42:PHE:HE1	1.70	0.56
50:D4:15:ILE:N	50:D4:31:ILE:O	2.28	0.56
52:D6:13:CYS:SG	52:D6:47:THR:HG21	2.45	0.56
1:AA:78:G:N2	1:AA:92:C:N3	2.54	0.56
1:AA:134:A:H61	16:AP:25:ARG:NH1	2.04	0.56
26:BB:50:G:H5''	38:BS:61:ASN:HD22	1.71	0.56
1:CA:560:U:O2'	1:CA:561:U:OP2	2.20	0.56
1:CA:1269:A:C8	1:CA:1270:C:H1'	2.41	0.56
1:CA:1504:G:OP1	1:CA:1507:A:H4'	2.06	0.56
9:CI:85:LEU:HB3	9:CI:92:TYR:CD2	2.41	0.56
10:CJ:57:LYS:HD2	10:CJ:60:ARG:HH21	1.69	0.56
25:DA:437:G:H2'	25:DA:438:G:H8	1.70	0.56
25:DA:887:A:H5'	25:DA:888:C:OP1	2.05	0.56
25:DA:2203:U:O4'	27:DD:151:LYS:HE2	2.06	0.56
28:DE:119:ARG:HD2	28:DE:120:TRP:CE2	2.41	0.56
1:AA:269:C:H2'	1:AA:270:A:C8	2.41	0.56
1:AA:447:G:H2'	1:AA:485:G:N2	2.21	0.56
1:AA:920:U:H2'	1:AA:921:U:C6	2.41	0.56
12:AL:70:ILE:HD13	12:AL:77:LEU:HD12	1.86	0.56
25:BA:436:C:OP1	61:BA:3960:HOH:O	2.18	0.56
25:BA:2877:G:OP2	39:BT:119:LYS:NZ	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:101:LEU:HD12	29:BF:102:PRO:HD2	1.86	0.56
45:BZ:152:ALA:HA	45:BZ:155:LEU:HD22	1.87	0.56
52:B6:12:GLU:OE2	52:B6:52:VAL:HG21	2.06	0.56
1:CA:838:G:H1	1:CA:848:C:N4	2.01	0.56
1:CA:1119:C:H2'	1:CA:1120:G:H8	1.71	0.56
1:CA:1190:G:OP1	3:CC:5:ILE:N	2.37	0.56
25:DA:271(H):G:H2'	25:DA:271(I):G:H8	1.71	0.56
25:DA:443:A:H1'	25:DA:1201:C:O4'	2.06	0.56
25:DA:1778:U:H2'	25:DA:1784:A:N6	2.21	0.56
25:DA:2708:G:H1'	37:DR:71:GLN:HE22	1.70	0.56
27:DD:3:VAL:HG13	27:DD:17:THR:HB	1.86	0.56
35:DP:59:LEU:O	54:D8:13:ARG:HD2	2.06	0.56
48:D2:32:LEU:HD23	48:D2:53:LEU:HB3	1.87	0.56
1:AA:376:G:O3'	16:AP:5:ARG:NH2	2.39	0.55
1:AA:691:G:H2'	1:AA:692:U:C6	2.41	0.55
4:AD:57:ARG:NH2	5:AE:107:ARG:HD3	2.21	0.55
19:AS:36:ARG:HB3	19:AS:72:GLY:HA3	1.86	0.55
1:CA:552:U:C2'	1:CA:553:A:H5'	2.37	0.55
1:CA:1492:A:H2'	1:CA:1493:A:H1'	1.87	0.55
2:CB:188:ALA:HB1	2:CB:192:SER:OG	2.05	0.55
3:CC:189:ALA:HB3	3:CC:196:LEU:HB2	1.88	0.55
7:CG:146:GLU:OE2	7:CG:149:ARG:NE	2.39	0.55
9:CI:33:PHE:HE1	9:CI:43:ALA:HB1	1.70	0.55
20:CT:10:LEU:HD23	20:CT:12:ALA:HB2	1.87	0.55
25:DA:247:G:H4'	25:DA:386:G:C5	2.41	0.55
25:DA:2079:U:OP1	47:D1:21:ARG:NH2	2.38	0.55
55:D9:13:LYS:HD3	55:D9:28:GLU:OE2	2.06	0.55
1:AA:342:C:C4	1:AA:343:U:H5	2.24	0.55
3:AC:36:ASP:HA	3:AC:39:ILE:HD12	1.89	0.55
20:AT:45:GLN:HA	20:AT:91:LEU:HB3	1.88	0.55
23:AX:59:A:C2'	23:AX:60:U:H5'	2.36	0.55
25:BA:2879:G:H2'	25:BA:2880:C:O4'	2.07	0.55
28:BE:59:VAL:HG21	28:BE:74:PRO:HB3	1.88	0.55
3:CC:140:ARG:HB2	3:CC:140:ARG:CZ	2.37	0.55
23:CX:40:C:H2'	23:CX:41:C:H6	1.71	0.55
25:DA:839:U:H2'	25:DA:840:C:H6	1.70	0.55
25:DA:1709:U:H2'	25:DA:1710:C:H6	1.71	0.55
25:DA:1833:U:O2'	25:DA:1969:A:N1	2.31	0.55
37:DR:97:VAL:HG22	37:DR:114:VAL:HG22	1.87	0.55
1:AA:232:G:H1'	1:AA:262:A:N1	2.22	0.55
2:AB:16:HIS:HB3	2:AB:210:SER:CB	2.35	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:36:ASP:OD1	5:AE:38:GLN:N	2.29	0.55
7:AG:78:ARG:HH21	7:AG:156:TRP:HB3	1.70	0.55
9:AI:4:TYR:HB2	9:AI:19:LEU:HB2	1.88	0.55
9:AI:19:LEU:HB3	9:AI:59:PHE:HD2	1.70	0.55
13:AM:3:ARG:HG3	13:AM:4:ILE:H	1.71	0.55
25:BA:310:C:H2'	25:BA:311:C:H6	1.71	0.55
25:BA:1248:G:OP2	25:BA:1249:A:O2'	2.19	0.55
47:B1:65:SER:OG	47:B1:66:HIS:ND1	2.27	0.55
1:CA:937:A:H1'	1:CA:1379:G:N2	2.21	0.55
5:CE:78:HIS:CE1	5:CE:143:ARG:H	2.23	0.55
15:CO:39:LEU:HD13	15:CO:56:LEU:HB2	1.89	0.55
25:DA:190:A:OP2	47:D1:39:LYS:HE3	2.06	0.55
25:DA:271(Q):G:H2'	25:DA:271(R):G:H8	1.71	0.55
25:DA:1025:G:O2'	61:DA:4221:HOH:O	1.99	0.55
1:AA:491:G:H2'	1:AA:492:G:O4'	2.06	0.55
1:AA:1346:A:N1	1:AA:1374:A:H5''	2.22	0.55
6:AF:69:GLU:OE1	6:AF:69:GLU:N	2.38	0.55
7:AG:113:GLU:HG2	7:AG:119:ARG:HG2	1.87	0.55
25:BA:2108:U:H2'	25:BA:2109:G:C8	2.42	0.55
25:BA:2116:G:OP1	32:BI:22:LYS:HD2	2.06	0.55
33:BN:67:LEU:O	33:BN:88:GLU:HG3	2.06	0.55
47:B1:51:VAL:HG11	47:B1:74:VAL:HG21	1.87	0.55
10:CJ:8:LEU:HD12	10:CJ:20:ALA:HB2	1.88	0.55
11:CK:18:ARG:NH2	11:CK:35:PRO:O	2.39	0.55
1:AA:102:G:O2'	1:AA:151:A:N3	2.38	0.55
1:AA:628:G:H2'	1:AA:629:G:C8	2.41	0.55
1:AA:757:U:OP1	1:AA:822:C:O2'	2.22	0.55
19:AS:9:VAL:HG21	50:B4:61:ARG:HH12	1.71	0.55
25:BA:868:A:O2'	25:BA:991:G:OP2	2.20	0.55
25:BA:2211:U:H2'	25:BA:2212:G:H5'	1.88	0.55
25:BA:2623:U:H5'	25:BA:2623:U:H6	1.71	0.55
1:CA:457:C:H2'	1:CA:458:C:H6	1.71	0.55
1:CA:1401:G:C2	1:CA:1402:C:H1'	2.41	0.55
7:CG:106:GLN:O	7:CG:110:GLN:HG3	2.05	0.55
10:CJ:30:SER:O	10:CJ:81:THR:HG23	2.07	0.55
14:CN:26:ARG:HB3	14:CN:43:CYS:SG	2.46	0.55
19:CS:27:GLU:HG2	19:CS:47:HIS:NE2	2.21	0.55
25:DA:956:G:H5''	25:DA:956:G:H8	1.72	0.55
25:DA:984:A:H5''	25:DA:985:C:H5	1.70	0.55
31:DH:26:VAL:HG12	31:DH:79:VAL:HG11	1.89	0.55
25:BA:1513:G:HO2'	25:BA:1593:C:HO2'	1.55	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1541:A:H2'	25:BA:1542:A:C8	2.42	0.55
25:BA:1712:A:H4'	34:BO:67:LYS:HB2	1.87	0.55
38:BS:59:LYS:CE	38:BS:60:GLY:H	2.19	0.55
1:CA:537:G:H5''	12:CL:113:ARG:NH1	2.22	0.55
1:CA:1004:A:C8	1:CA:1005:A:H4'	2.38	0.55
1:CA:1005:A:O2'	1:CA:1006:C:OP1	2.19	0.55
25:DA:1653:G:H3'	37:DR:2:ARG:HD3	1.89	0.55
39:DT:24:PRO:HA	39:DT:49:VAL:HG22	1.89	0.55
1:AA:382:A:C2	1:AA:383:A:N7	2.75	0.55
1:AA:1110:A:OP2	61:AA:4115:HOH:O	2.18	0.55
1:AA:1182:G:C4'	1:AA:1183:A:H5'	2.37	0.55
10:AJ:5:ARG:NE	10:AJ:73:ASP:OD1	2.39	0.55
11:AK:20:TYR:CZ	11:AK:83:ILE:HD12	2.42	0.55
16:AP:28:ARG:HG2	16:AP:29:ASP:OD1	2.07	0.55
25:BA:139:A:C8	25:BA:1454:C:O2'	2.57	0.55
25:BA:599:U:H2'	25:BA:600:G:C8	2.42	0.55
25:BA:1220:U:OP1	25:BA:1222:A:N6	2.40	0.55
25:BA:1223:C:H2'	25:BA:1224:C:H6	1.72	0.55
25:BA:2299:A:H2	25:BA:2358:A:H62	1.53	0.55
25:BA:2348:A:H61	46:B0:43:THR:HG21	1.71	0.55
35:BP:82:GLY:HA2	35:BP:113:LYS:O	2.07	0.55
1:CA:418:C:H2'	1:CA:419:C:C6	2.41	0.55
1:CA:1133:G:H1	1:CA:1141:C:N4	2.05	0.55
1:CA:1245:A:H2'	1:CA:1246:C:O4'	2.06	0.55
1:CA:1316:G:O2'	1:CA:1318:A:N7	2.35	0.55
16:CP:3:LYS:HZ2	16:CP:65:GLN:HB2	1.72	0.55
17:CQ:45:HIS:HA	17:CQ:69:LYS:HE3	1.87	0.55
41:DV:16:PRO:HD3	41:DV:99:ILE:HD11	1.89	0.55
1:AA:78:G:H1	1:AA:92:C:N4	2.05	0.55
1:AA:192:U:O2'	1:AA:193:C:H6	1.90	0.55
1:AA:1030(B):C:H2'	1:AA:1030(C):G:H5'	1.88	0.55
6:AF:22:GLU:OE2	6:AF:82:ARG:HG2	2.07	0.55
19:AS:38:SER:O	19:AS:70:LYS:HD3	2.06	0.55
25:BA:272:U:OP1	32:BI:50:ARG:NH2	2.38	0.55
25:BA:676:G:OP1	54:B8:19:SER:OG	2.23	0.55
25:BA:945:A:O2'	25:BA:946:A:O5'	2.17	0.55
25:BA:2820:A:N6	25:BA:2900:G:O2'	2.38	0.55
1:CA:392:G:H2'	1:CA:393:A:C8	2.41	0.55
1:CA:1160:G:H22	1:CA:1176:A:H2	1.55	0.55
5:CE:100:VAL:O	5:CE:107:ARG:NH2	2.40	0.55
18:CR:40:LEU:HB3	18:CR:79:LEU:HD11	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1469:A:H2'	25:DA:1470:G:O4'	2.07	0.55
25:DA:2286:A:H4'	25:DA:2287:A:O4'	2.06	0.55
42:DW:65:LEU:HD12	42:DW:68:ARG:HE	1.71	0.55
1:AA:129:U:H5'	17:AQ:3:LYS:HZ1	1.72	0.55
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.41	0.55
1:AA:1492:A:H5''	1:AA:1493:A:OP2	2.06	0.55
12:AL:70:ILE:HG12	12:AL:100:ILE:HD12	1.89	0.55
25:BA:1775:C:H6	25:BA:1775:C:H5''	1.72	0.55
25:BA:2396:G:OP2	46:B0:55:ARG:NH1	2.40	0.55
39:BT:16:ARG:NH1	39:BT:18:ASP:OD2	2.40	0.55
41:BV:98:GLU:OE2	41:BV:100:ARG:NH1	2.40	0.55
1:CA:839:U:O2'	1:CA:840:C:OP1	2.16	0.55
1:CA:986:A:O2'	19:CS:55:LYS:O	2.24	0.55
1:CA:1120:G:C6	1:CA:1121:U:C4	2.95	0.55
1:CA:1135:U:O2'	1:CA:1137:C:O2	2.18	0.55
1:CA:1157:A:N6	1:CA:1180:A:C4	2.74	0.55
2:CB:52:GLU:HG2	2:CB:56:ARG:NH2	2.22	0.55
25:DA:637:A:H2'	35:DP:117:GLU:OE2	2.06	0.55
25:DA:2409:G:H2'	25:DA:2410:G:O4'	2.06	0.55
26:DB:90:A:N7	26:DB:91:C:H1'	2.21	0.55
30:DG:11:TYR:O	30:DG:16:ARG:HG2	2.07	0.55
45:DZ:131:ARG:H	45:DZ:131:ARG:HD2	1.72	0.55
46:D0:53:MET:HG3	46:D0:59:LEU:CD2	2.37	0.55
1:AA:66:G:O3'	1:AA:199:G:H4'	2.07	0.55
1:AA:125:U:H3	1:AA:236:G:H1	1.55	0.55
1:AA:316:G:OP2	1:AA:351:G:O2'	2.18	0.55
1:AA:932:C:H2'	1:AA:933:G:H8	1.72	0.55
4:AD:79:PHE:HE1	4:AD:204:ILE:HD13	1.71	0.55
5:AE:103:GLY:O	5:AE:106:PRO:HD2	2.06	0.55
6:AF:22:GLU:O	6:AF:26:ILE:HG13	2.06	0.55
19:AS:64:GLU:HB2	50:B4:59:PHE:HE1	1.72	0.55
25:BA:1233:U:H4'	41:BV:79:VAL:HG22	1.88	0.55
25:BA:1553:A:O2'	25:BA:1554:A:O4'	2.26	0.55
32:BI:37:VAL:HG12	32:BI:38:LEU:HD12	1.89	0.55
45:BZ:145:GLU:O	45:BZ:148:ASP:N	2.39	0.55
25:DA:265:A:C8	25:DA:266:G:H1'	2.42	0.55
25:DA:2600:A:C6	25:DA:2601:C:N4	2.75	0.55
30:DG:136:ARG:HD2	30:DG:137:GLU:HG3	1.87	0.55
32:DI:117:GLU:HG3	32:DI:118:LYS:H	1.71	0.55
1:AA:190:U:H2'	1:AA:191:G:H8	1.71	0.54
1:AA:558:G:H5''	1:AA:559:A:OP2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:794:A:OP2	61:AA:4035:HOH:O	2.18	0.54
1:AA:1158:C:H5	1:AA:1181:G:N1	2.04	0.54
4:AD:65:ARG:NH1	4:AD:70:ILE:O	2.40	0.54
6:AF:68:PRO:HB2	6:AF:71:ARG:HG3	1.89	0.54
25:BA:560:C:O3'	40:BU:53:ARG:NH1	2.38	0.54
25:BA:1451:U:H2'	25:BA:1452:U:C6	2.42	0.54
25:BA:1848:G:OP1	27:BD:88:ARG:NH2	2.40	0.54
31:BH:3:ARG:CG	31:BH:6:ARG:HG2	2.38	0.54
35:BP:62:LEU:O	54:B8:13:ARG:HD3	2.07	0.54
1:CA:1320:C:O4'	19:CS:73:GLU:HG3	2.07	0.54
25:DA:1141:U:OP2	33:DN:63:THR:OG1	2.21	0.54
25:DA:1803:A:H4'	27:DD:259:THR:HG23	1.90	0.54
25:DA:2061:G:H5''	25:DA:2503:A:C2	2.42	0.54
29:DF:53:THR:HG23	29:DF:55:GLY:N	2.17	0.54
1:AA:1129:C:N4	1:AA:1143:G:N1	2.30	0.54
1:AA:1234:C:C2'	1:AA:1235:U:H5'	2.38	0.54
9:AI:3:GLN:OE1	9:AI:20:ARG:NH2	2.33	0.54
20:AT:45:GLN:HB2	20:AT:91:LEU:HD13	1.89	0.54
25:BA:11:G:H2'	25:BA:12:U:C5'	2.38	0.54
25:BA:287:G:N7	25:BA:448:U:H2'	2.21	0.54
25:BA:934:A:H4'	25:BA:935:C:C5	2.42	0.54
45:BZ:151:HIS:C	45:BZ:153:SER:H	2.09	0.54
1:CA:202:U:H3'	1:CA:203:U:C6	2.42	0.54
1:CA:885:G:O2'	1:CA:914:A:N1	2.39	0.54
1:CA:1164:G:H1	1:CA:1172:C:H42	1.53	0.54
4:CD:43:HIS:HA	4:CD:46:LYS:HG3	1.88	0.54
25:DA:143:G:H2'	25:DA:143(A):C:C6	2.42	0.54
25:DA:272:G:H4'	25:DA:272(A):U:C5'	2.37	0.54
25:DA:615:G:OP1	29:DF:40:GLN:NE2	2.33	0.54
25:DA:1359:A:N1	25:DA:1372:U:O4	2.40	0.54
29:DF:11:VAL:HG22	29:DF:125:LEU:HB2	1.89	0.54
29:DF:167:ALA:HB1	29:DF:173:VAL:HG11	1.88	0.54
32:DI:3:VAL:HG12	32:DI:38:LEU:HA	1.88	0.54
35:DP:59:LEU:HD21	54:D8:10:ALA:HA	1.88	0.54
44:DY:7:VAL:HG21	44:DY:72:VAL:HG12	1.89	0.54
45:DZ:5:LEU:HG	45:DZ:47:VAL:HG21	1.89	0.54
1:AA:1111:A:N1	3:AC:177:THR:OG1	2.34	0.54
1:AA:1256:A:N6	1:AA:1278:U:O4'	2.37	0.54
3:AC:150:LYS:HD3	3:AC:152:ILE:HD11	1.89	0.54
6:AF:19:LEU:HD11	6:AF:59:TYR:CE2	2.42	0.54
6:AF:35:ALA:HA	6:AF:67:MET:HB3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:34:GLU:OE2	16:AP:55:ARG:NH2	2.30	0.54
25:BA:2314:G:N2	25:BA:2327:G:C4	2.75	0.54
25:BA:2507:G:O6	61:BA:4440:HOH:O	2.19	0.54
1:CA:41:G:H2'	1:CA:42:G:C8	2.42	0.54
25:DA:30:G:H2'	25:DA:31:C:C6	2.43	0.54
25:DA:1766:U:H2'	25:DA:1767:C:C6	2.42	0.54
27:DD:182:LEU:HB2	27:DD:272:ALA:HB3	1.89	0.54
36:DQ:125:LEU:O	61:DQ:3102:HOH:O	2.18	0.54
41:DV:40:LEU:HB2	41:DV:46:VAL:HG13	1.89	0.54
1:AA:601:C:H2'	1:AA:602:A:C8	2.43	0.54
1:AA:1239:A:H62	1:AA:1299:A:H62	1.53	0.54
3:AC:58:GLU:O	3:AC:59:ARG:HG3	2.07	0.54
29:BF:164:ARG:O	29:BF:168:ARG:HB2	2.07	0.54
45:BZ:19:ARG:NH1	45:BZ:84:GLU:O	2.40	0.54
1:CA:376:G:H5''	16:CP:5:ARG:HB2	1.88	0.54
1:CA:616:G:N2	1:CA:624:C:O2	2.38	0.54
1:CA:1111:A:H2'	1:CA:1112:C:C6	2.42	0.54
4:CD:112:VAL:HG22	4:CD:116:GLN:OE1	2.08	0.54
11:CK:20:TYR:CZ	11:CK:83:ILE:HD12	2.42	0.54
25:DA:848:G:H2'	25:DA:849:A:C8	2.42	0.54
25:DA:1270:C:H5''	25:DA:1271:G:O5'	2.07	0.54
25:DA:2803:C:H2'	25:DA:2804:C:H6	1.73	0.54
26:DB:78:A:N6	26:DB:99:G:O2'	2.40	0.54
50:D4:15:ILE:HB	50:D4:32:TYR:HD1	1.69	0.54
1:AA:527:G:O2'	1:AA:535:A:N1	2.31	0.54
1:AA:1095:U:H5''	1:AA:1109:C:O2	2.07	0.54
2:AB:127:ILE:HD11	2:AB:130:ARG:HD3	1.90	0.54
9:AI:7:THR:O	9:AI:83:ARG:NH1	2.41	0.54
16:AP:52:ASP:OD1	16:AP:54:GLU:HG3	2.06	0.54
25:BA:1312:G:O5'	42:BW:15:ARG:NH2	2.41	0.54
27:BD:145:VAL:HG12	27:BD:146:GLU:O	2.08	0.54
41:BV:21:ARG:HG2	41:BV:91:TYR:CD1	2.43	0.54
1:CA:344:A:H4'	1:CA:345:C:OP2	2.07	0.54
1:CA:1373:G:H5''	7:CG:36:LYS:HB2	1.88	0.54
16:CP:74:LEU:O	16:CP:79:VAL:HG23	2.07	0.54
17:CQ:41:LYS:HZ2	17:CQ:92:ARG:HH21	1.55	0.54
25:DA:857:C:H4'	46:D0:23:VAL:HG21	1.90	0.54
25:DA:2074:U:H2'	25:DA:2075:U:C6	2.42	0.54
41:DV:31:ALA:O	41:DV:61:VAL:HG12	2.07	0.54
1:AA:358:U:H2'	1:AA:359:U:H6	1.72	0.54
1:AA:1183:A:HO2'	1:AA:1184:G:P	2.29	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.42	0.54
6:AF:6:VAL:HG22	6:AF:90:VAL:HG22	1.90	0.54
9:AI:8:GLY:HA3	9:AI:76:ALA:O	2.07	0.54
25:BA:574:G:O2'	25:BA:1265:A:N3	2.34	0.54
25:BA:1157:A:N3	25:BA:1158:G:H1'	2.23	0.54
25:BA:2225:U:O2'	25:BA:2226:C:H5'	2.08	0.54
32:BI:93:THR:OG1	32:BI:96:ASP:OD1	2.18	0.54
39:BT:53:ARG:NH1	39:BT:60:THR:OG1	2.41	0.54
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.43	0.54
1:CA:848:C:H2'	1:CA:849:C:O4'	2.08	0.54
2:CB:144:ARG:NH1	2:CB:148:TYR:OH	2.40	0.54
7:CG:69:VAL:HG22	7:CG:135:VAL:HG22	1.90	0.54
9:CI:79:LEU:HD22	9:CI:104:ARG:HB2	1.90	0.54
15:CO:24:SER:OG	15:CO:25:THR:N	2.41	0.54
25:DA:250:G:H2'	25:DA:251:A:C8	2.43	0.54
25:DA:660:G:H5'	29:DF:99:TYR:CE2	2.42	0.54
25:DA:1395:A:OP1	61:DA:4394:HOH:O	2.18	0.54
25:DA:1740:G:H2'	25:DA:1741:A:C8	2.42	0.54
1:AA:96:U:H2'	1:AA:97:G:C8	2.42	0.54
1:AA:1086:U:H3	1:AA:1099:G:H22	1.56	0.54
2:AB:20:GLU:O	2:AB:40:HIS:HB2	2.08	0.54
9:AI:48:GLU:OE2	9:AI:51:ARG:HD2	2.08	0.54
20:AT:90:GLN:O	20:AT:93:GLU:HB3	2.08	0.54
32:BI:72:LEU:HA	32:BI:75:LEU:HD11	1.90	0.54
1:CA:1025:U:H1'	1:CA:1026:G:C8	2.43	0.54
1:CA:1362:C:H2'	1:CA:1363:C:H5''	1.88	0.54
2:CB:178:ARG:HH22	8:CH:68:ARG:NH1	2.04	0.54
3:CC:29:TYR:HE1	3:CC:33:LEU:HD22	1.71	0.54
4:CD:33:MET:HB2	57:CD:501:SF4:S3	2.48	0.54
17:CQ:56:VAL:O	17:CQ:77:VAL:HB	2.08	0.54
25:DA:645:C:H3'	25:DA:645:C:OP2	2.08	0.54
25:DA:816:C:O2'	25:DA:932:G:O6	2.25	0.54
25:DA:1268:A:C2	25:DA:2013:A:C4	2.95	0.54
25:DA:2037:G:O2'	25:DA:2038:G:H5'	2.07	0.54
25:DA:2293:C:OP1	25:DA:2377:A:N6	2.41	0.54
1:AA:473:G:C2	1:AA:474:G:C5	2.96	0.54
25:BA:508:A:H5''	25:BA:509:A:OP1	2.08	0.54
25:BA:2080:A:OP1	61:BA:4000:HOH:O	2.18	0.54
29:BF:103:LYS:HA	29:BF:106:ARG:HG3	1.90	0.54
1:CA:276:G:H2'	1:CA:277:C:H5'	1.89	0.54
1:CA:564:C:O2'	8:CH:91:ARG:NH2	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:758:G:H8	1:CA:758:G:H5''	1.72	0.54
1:CA:1220:G:O3'	19:CS:36:ARG:HD3	2.08	0.54
11:CK:48:ILE:HD11	11:CK:64:ALA:HA	1.89	0.54
25:DA:411:G:C5	35:DP:72:PRO:HB3	2.43	0.54
25:DA:585:G:H2'	25:DA:1251:C:H42	1.73	0.54
25:DA:656:G:H2'	25:DA:657:U:O4'	2.07	0.54
25:DA:873:G:N2	25:DA:905:U:C2	2.76	0.54
25:DA:1359:A:C2	25:DA:1372:U:O4	2.61	0.54
25:DA:2099:U:H5'	25:DA:2100:G:OP2	2.08	0.54
26:DB:33:G:C2'	26:DB:34:U:H5'	2.37	0.54
37:DR:103:ARG:NH1	37:DR:110:PRO:HD3	2.23	0.54
3:AC:157:ILE:HD12	3:AC:164:ARG:HB3	1.90	0.54
43:BX:12:VAL:HG22	43:BX:29:TRP:CE2	2.43	0.54
54:B8:33:ASN:HA	54:B8:36:LYS:HD2	1.90	0.54
1:CA:199:G:O2'	1:CA:200:G:H5'	2.07	0.54
1:CA:791:G:C6	1:CA:792:A:N7	2.76	0.54
2:CB:163:PHE:HA	2:CB:185:ILE:HG12	1.89	0.54
25:DA:1514:U:H2'	25:DA:1515:G:C8	2.43	0.54
25:DA:2218:U:N3	47:D1:55:GLY:O	2.41	0.54
28:DE:101:ARG:NH2	28:DE:171:GLU:HB2	2.23	0.54
1:AA:76:C:H5''	1:AA:76:C:H6	1.73	0.54
10:AJ:5:ARG:O	10:AJ:98:ILE:HA	2.08	0.54
23:AX:23:C:H2'	23:AX:24:U:C6	2.43	0.54
25:BA:493:G:OP1	53:B7:33:ARG:NH1	2.41	0.54
25:BA:555:G:O4'	25:BA:555:G:N3	2.39	0.54
25:BA:715:G:H5'	25:BA:716:G:OP2	2.07	0.54
25:BA:821:A:N3	25:BA:821:A:H2'	2.22	0.54
37:BR:29:LEU:HD12	37:BR:116:LEU:HD11	1.89	0.54
38:BS:34:HIS:ND1	38:BS:53:SER:OG	2.37	0.54
39:BT:95:ARG:HG2	39:BT:95:ARG:NH1	2.22	0.54
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.90	0.54
1:CA:939:G:H1	1:CA:1344:C:N4	2.04	0.54
1:CA:1133:G:H1	1:CA:1141:C:H42	1.56	0.54
2:CB:7:VAL:HG12	2:CB:8:LYS:HG2	1.90	0.54
6:CF:81:ILE:HD11	27:DD:125:ILE:HB	1.90	0.54
10:CJ:11:PHE:CE1	10:CJ:67:THR:HG22	2.42	0.54
13:CM:80:ARG:HH22	19:CS:69:HIS:CE1	2.26	0.54
25:DA:1351:C:OP2	61:DA:4267:HOH:O	2.18	0.54
1:AA:345:C:H4'	1:AA:346:G:C4	2.43	0.53
1:AA:598:U:H2'	1:AA:599:C:H6	1.73	0.53
1:AA:630:G:H2'	1:AA:631:G:H8	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:89:THR:HG22	4:AD:204:ILE:HD12	1.90	0.53
8:AH:13:ILE:O	8:AH:17:THR:HG23	2.08	0.53
8:AH:120:THR:H	8:AH:123:GLU:HB2	1.72	0.53
11:AK:99:GLN:HG3	11:AK:105:VAL:HG11	1.90	0.53
25:BA:2075:G:OP1	28:BE:144:ARG:HG2	2.08	0.53
32:BI:77:LEU:HB3	32:BI:142:VAL:HG12	1.90	0.53
38:BS:6:ALA:O	38:BS:10:ARG:HB2	2.08	0.53
1:CA:101:A:C2'	1:CA:102:G:H5'	2.37	0.53
1:CA:254:G:OP1	17:CQ:66:SER:OG	2.26	0.53
1:CA:1014:A:H4'	19:CS:14:HIS:CE1	2.43	0.53
1:CA:1170:A:O2'	1:CA:1171:G:O4'	2.25	0.53
15:CO:26:GLU:HB3	15:CO:81:LEU:HD13	1.90	0.53
25:DA:1283:G:N2	25:DA:1285:G:H3'	2.24	0.53
25:DA:2299:G:N1	25:DA:2318:G:C8	2.76	0.53
29:DF:21:ALA:HB3	29:DF:22:ALA:HA	1.89	0.53
31:DH:56:SER:OG	31:DH:57:ASP:N	2.41	0.53
1:AA:189:G:H2'	1:AA:189(A):C:O4'	2.09	0.53
1:AA:346:G:OP1	39:BT:41:ARG:NH1	2.41	0.53
25:BA:1218:G:O2'	25:BA:1219:A:O5'	2.25	0.53
25:BA:1698:G:OP1	37:BR:40:LYS:HE3	2.07	0.53
25:BA:1864:U:O2'	25:BA:1991:A:N1	2.32	0.53
25:BA:2759:U:OP2	61:BA:4008:HOH:O	2.18	0.53
27:BD:206:LEU:HD22	27:BD:211:ARG:HG2	1.89	0.53
31:BH:113:VAL:HG11	31:BH:151:ILE:HD13	1.90	0.53
36:BQ:84:GLY:O	36:BQ:85:LYS:HB2	2.07	0.53
38:BS:3:ARG:HE	38:BS:4:LEU:N	2.07	0.53
39:BT:60:THR:HG22	39:BT:77:PRO:HA	1.90	0.53
52:B6:10:LEU:HD23	52:B6:22:ALA:HB2	1.90	0.53
1:CA:500:G:N2	1:CA:546:G:H1'	2.23	0.53
1:CA:605:U:O2'	1:CA:606:G:H5'	2.07	0.53
1:CA:922:G:N3	1:CA:1398:A:H2	2.06	0.53
1:CA:944:G:N1	1:CA:1338:G:OP2	2.39	0.53
1:CA:999:C:N4	1:CA:1042:G:C2	2.76	0.53
3:CC:15:THR:HG21	3:CC:181:ASN:HA	1.90	0.53
5:CE:9:LYS:HB2	5:CE:112:LEU:HD11	1.89	0.53
5:CE:122:GLU:O	5:CE:126:ARG:NH1	2.42	0.53
12:CL:80:HIS:HD1	24:CW:6:2R1:CG2	2.20	0.53
25:DA:345:A:H1'	25:DA:346:A:N7	2.23	0.53
25:DA:856:C:H5''	61:DA:3739:HOH:O	2.08	0.53
25:DA:867:C:H2'	25:DA:868:U:C6	2.43	0.53
25:DA:2293:C:H5'	38:DS:89:ARG:NH2	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DG:17:PRO:HA	30:DG:20:ILE:HD12	1.89	0.53
45:DZ:108:PRO:HB2	45:DZ:111:VAL:HG23	1.89	0.53
1:AA:147:G:C6	1:AA:148:G:N7	2.76	0.53
1:AA:509:A:H5'	4:AD:54:TYR:HD2	1.72	0.53
3:AC:121:ALA:O	3:AC:125:GLU:HG3	2.08	0.53
3:AC:153:VAL:HG22	3:AC:198:VAL:HG22	1.91	0.53
6:AF:8:ILE:HD11	6:AF:79:LEU:HD13	1.89	0.53
25:BA:61:C:H5''	25:BA:62:U:OP2	2.08	0.53
25:BA:346:A:OP2	29:BF:169:ASN:HB2	2.08	0.53
25:BA:1577:C:H1'	25:BA:1578:C:OP1	2.08	0.53
61:BA:3851:HOH:O	33:BN:73:THR:HG21	2.09	0.53
1:CA:520:A:N1	1:CA:536:C:H1'	2.23	0.53
1:CA:1120:G:O6	1:CA:1154:G:N2	2.41	0.53
1:CA:1375:A:O2'	7:CG:29:LYS:NZ	2.39	0.53
3:CC:106:VAL:HG11	3:CC:115:LEU:HD21	1.90	0.53
13:CM:14:ARG:CZ	13:CM:42:ALA:HA	2.38	0.53
25:DA:191:A:N1	61:DA:4123:HOH:O	2.34	0.53
25:DA:747:U:O2	25:DA:2014:A:H1'	2.08	0.53
25:DA:1371:G:H2'	25:DA:1372:U:H5	1.73	0.53
25:DA:1495:A:H2'	25:DA:1496:A:C8	2.43	0.53
26:DB:90:A:C5	26:DB:91:C:H1'	2.44	0.53
36:DQ:56:ARG:HG3	36:DQ:56:ARG:HH11	1.73	0.53
1:AA:6:G:O2'	1:AA:7:G:H5'	2.08	0.53
1:AA:1005:A:O2'	1:AA:1037:C:O2'	2.11	0.53
7:AG:146:GLU:O	7:AG:149:ARG:HB2	2.08	0.53
25:BA:174:U:H4'	25:BA:207:A:H4'	1.91	0.53
25:BA:1067:A:H2'	25:BA:1069:U:H5'	1.90	0.53
27:BD:72:LYS:HB3	27:BD:75:ILE:HD12	1.90	0.53
31:BH:3:ARG:HG2	31:BH:6:ARG:HG2	1.89	0.53
50:B4:15:ILE:HD12	50:B4:21:VAL:HG22	1.91	0.53
50:B4:56:VAL:HB	50:B4:60:GLN:HG3	1.90	0.53
1:CA:429:U:H1'	1:CA:430:A:H5''	1.91	0.53
1:CA:430:A:H2'	1:CA:431:A:O4'	2.08	0.53
1:CA:444:C:H2'	1:CA:445:G:C8	2.41	0.53
1:CA:445:G:H2'	1:CA:446:G:C8	2.43	0.53
1:CA:1346:A:H5''	9:CI:120:ARG:HH12	1.73	0.53
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.43	0.53
2:CB:24:TRP:CZ3	2:CB:26:PRO:HA	2.44	0.53
2:CB:28:PHE:CD1	2:CB:31:TYR:HB2	2.44	0.53
25:DA:1313:U:OP1	61:DA:3983:HOH:O	2.18	0.53
25:DA:1805:U:O2	27:DD:50:THR:HB	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:174:C:H2'	1:AA:175:C:C6	2.44	0.53
1:AA:448:A:H2'	1:AA:449:C:C6	2.43	0.53
1:AA:973:G:OP1	10:AJ:57:LYS:NZ	2.34	0.53
3:AC:8:ILE:HG23	3:AC:16:ARG:HG2	1.91	0.53
8:AH:119:LEU:HB3	8:AH:123:GLU:HB3	1.90	0.53
25:BA:2255:U:H2'	25:BA:2256:U:C6	2.44	0.53
26:BB:43:C:H5''	50:B4:1:MET:HG2	1.91	0.53
1:CA:419:C:OP1	1:CA:513:C:O2'	2.25	0.53
1:CA:441:A:H3'	1:CA:442:C:C6	2.44	0.53
1:CA:542:G:P	4:CD:10:ARG:HH22	2.32	0.53
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.43	0.53
26:DB:41:U:H5	30:DG:70:VAL:H	1.57	0.53
38:DS:84:GLN:H	38:DS:111:GLU:HB2	1.73	0.53
47:D1:65:SER:OG	47:D1:66:HIS:ND1	2.30	0.53
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.90	0.53
1:AA:352:C:H4'	1:AA:354:G:OP1	2.08	0.53
1:AA:1243:C:H2'	1:AA:1244:C:C6	2.43	0.53
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.08	0.53
5:AE:20:GLN:NE2	5:AE:21:ALA:O	2.42	0.53
25:BA:236:G:H4'	25:BA:413:G:C5	2.43	0.53
25:BA:595:A:OP2	41:BV:78:LYS:NZ	2.40	0.53
25:BA:851:A:H5''	25:BA:852:G:OP1	2.09	0.53
32:BI:130:TYR:HB3	32:BI:138:ILE:HB	1.91	0.53
34:BO:120:GLU:OE1	39:BT:67:SER:OG	2.24	0.53
1:CA:129(A):G:C6	1:CA:189(E):U:H4'	2.44	0.53
1:CA:543:C:O2'	1:CA:544:G:H5'	2.08	0.53
1:CA:1162:C:H2'	1:CA:1163:C:H5''	1.91	0.53
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.44	0.53
3:CC:157:ILE:HD12	3:CC:164:ARG:HB3	1.91	0.53
6:CF:9:VAL:HB	6:CF:87:ARG:HB2	1.91	0.53
25:DA:639:U:H2'	25:DA:640:C:C6	2.43	0.53
25:DA:997:G:O2'	25:DA:998:C:H5'	2.09	0.53
25:DA:1247:A:OP1	29:DF:95:ARG:NH2	2.39	0.53
25:DA:2772:C:H2'	25:DA:2773:C:C6	2.44	0.53
28:DE:116:VAL:HG13	28:DE:122:PHE:HB2	1.91	0.53
31:DH:69:ARG:HG3	31:DH:70:THR:N	2.24	0.53
38:DS:15:ARG:O	38:DS:19:LYS:HG2	2.08	0.53
1:AA:1243:C:H2'	1:AA:1244:C:H6	1.74	0.53
1:AA:1292:U:OP2	7:AG:41:ARG:NH2	2.34	0.53
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.43	0.53
4:AD:116:GLN:NE2	4:AD:157:LEU:HD21	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:41:VAL:O	5:AE:67:VAL:HG12	2.08	0.53
10:AJ:47:PHE:CZ	14:AN:37:PHE:HE1	2.26	0.53
17:AQ:52:LYS:HG3	17:AQ:53:LEU:N	2.22	0.53
25:BA:63:A:O3'	43:BX:71:GLY:HA3	2.09	0.53
25:BA:1223:C:H2'	25:BA:1224:C:C6	2.44	0.53
25:BA:1451:U:H2'	25:BA:1452:U:H6	1.73	0.53
25:BA:2053:A:C6	25:BA:2510:C:H1'	2.44	0.53
30:BG:47:LYS:HG3	30:BG:48:GLU:H	1.74	0.53
1:CA:138:G:H5'	1:CA:138:G:C8	2.36	0.53
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.44	0.53
1:CA:1320:C:H5'	19:CS:70:LYS:HG3	1.90	0.53
11:CK:58:PRO:HG3	11:CK:89:ALA:O	2.08	0.53
24:CW:1:2QZ:H5	24:CW:2:VAL:N	2.24	0.53
25:DA:154:G:O6	25:DA:172:C:N4	2.42	0.53
25:DA:220:G:O2'	25:DA:233:A:N3	2.37	0.53
25:DA:266:G:N2	25:DA:427:U:H1'	2.24	0.53
25:DA:867:C:H2'	25:DA:868:U:H6	1.74	0.53
25:DA:1237:A:OP1	61:DA:4360:HOH:O	2.19	0.53
29:DF:195:ASP:OD1	29:DF:196:LEU:N	2.42	0.53
3:AC:62:ASP:HA	3:AC:97:LYS:HD3	1.91	0.53
25:BA:211:A:H5''	25:BA:448:U:OP1	2.09	0.53
25:BA:644:G:O6	29:BF:103:LYS:HE3	2.08	0.53
25:BA:1628:G:H5''	25:BA:1628:G:H8	1.73	0.53
25:BA:2442:A:OP2	61:BA:4632:HOH:O	2.19	0.53
27:BD:132:PRO:HD3	27:BD:190:TYR:CZ	2.44	0.53
30:BG:16:ARG:CZ	30:BG:31:VAL:HG11	2.39	0.53
1:CA:977:A:H2'	1:CA:977:A:N3	2.22	0.53
1:CA:1151:A:H5''	10:CJ:41:PRO:HA	1.90	0.53
14:CN:24:CYS:SG	14:CN:40:CYS:N	2.76	0.53
25:DA:236:C:H2'	25:DA:237:C:C6	2.43	0.53
25:DA:272(D):G:O6	61:DA:4045:HOH:O	2.17	0.53
25:DA:646:A:H2'	25:DA:647:G:O4'	2.08	0.53
25:DA:773:U:O2'	27:DD:48:ARG:HD3	2.09	0.53
25:DA:1798:U:H5'	27:DD:259:THR:CG2	2.33	0.53
25:DA:2228:G:C6	25:DA:2229:C:C4	2.97	0.53
25:DA:2823:A:OP1	28:DE:159:HIS:NE2	2.36	0.53
27:DD:72:LYS:HB3	27:DD:75:ILE:HD12	1.90	0.53
1:AA:266:G:O3'	17:AQ:67:LYS:HB2	2.09	0.53
1:AA:837:G:H1	1:AA:849:C:H42	1.57	0.53
1:AA:959:A:HO2'	1:AA:984:C:HO2'	1.55	0.53
3:AC:121:ALA:HB1	3:AC:189:ALA:HB2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:64:THR:HG23	9:AI:66:ARG:HD2	1.90	0.53
25:BA:1087:C:H42	25:BA:1160:G:H1	1.55	0.53
45:BZ:111:VAL:HG12	45:BZ:112:ARG:H	1.74	0.53
50:B4:24:THR:OG1	50:B4:25:TYR:N	2.42	0.53
1:CA:278:G:OP2	17:CQ:41:LYS:NZ	2.37	0.53
1:CA:619:U:C4	4:CD:135:LEU:HD11	2.44	0.53
1:CA:1205:U:O2'	3:CC:195:VAL:HG23	2.09	0.53
3:CC:11:ARG:HB3	3:CC:15:THR:HB	1.90	0.53
11:CK:19:ALA:HA	11:CK:32:ILE:HD13	1.91	0.53
25:DA:62:C:N3	25:DA:93:G:N2	2.45	0.53
25:DA:962:G:OP1	61:DA:4175:HOH:O	2.19	0.53
26:DB:19:G:H2'	26:DB:20:C:O4'	2.09	0.53
31:DH:24:VAL:HG13	31:DH:37:VAL:HG21	1.90	0.53
39:DT:16:ARG:HD2	39:DT:18:ASP:OD1	2.09	0.53
55:D9:10:ILE:HD12	55:D9:32:HIS:HA	1.91	0.53
1:AA:138:G:H5'	1:AA:138:G:H8	1.74	0.53
1:AA:159:G:N2	1:AA:161:A:H3'	2.22	0.53
1:AA:364:A:H2'	1:AA:365:U:C6	2.44	0.53
1:AA:446:G:H1	1:AA:488:C:H42	1.56	0.53
1:AA:627:G:H2'	1:AA:628:G:C8	2.44	0.53
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.09	0.53
5:AE:33:VAL:HG21	5:AE:109:ILE:HA	1.90	0.53
12:AL:38:THR:HG22	24:AW:3:004:HD1	1.90	0.53
25:BA:533:G:N2	42:BW:80:PRO:HG2	2.24	0.53
25:BA:771:U:H2'	25:BA:772:G:O4'	2.09	0.53
25:BA:1815:A:OP1	61:BA:4185:HOH:O	2.19	0.53
25:BA:1833:A:N1	25:BA:1853:G:H1'	2.24	0.53
43:BX:92:LEU:C	43:BX:94:GLY:H	2.13	0.53
45:BZ:30:ASN:ND2	45:BZ:90:VAL:HB	2.24	0.53
45:BZ:150:LEU:HG	45:BZ:154:ASP:OD1	2.08	0.53
1:CA:964:A:N3	1:CA:969:A:O2'	2.30	0.53
4:CD:150:GLU:OE2	4:CD:151:LYS:N	2.42	0.53
25:DA:297:C:H2'	25:DA:298:G:O4'	2.09	0.53
25:DA:463:G:O6	61:DA:3740:HOH:O	2.14	0.53
25:DA:588:U:H2'	25:DA:589:C:C6	2.44	0.53
25:DA:2303:G:O2'	30:DG:132:ASN:HB2	2.09	0.53
35:DP:47:ASP:OD2	35:DP:50:ARG:NH2	2.41	0.53
35:DP:101:VAL:HA	35:DP:106:LEU:O	2.09	0.53
1:AA:414:A:H2'	1:AA:415:A:O4'	2.09	0.52
1:AA:1297:C:O2'	7:AG:114:ARG:NH2	2.43	0.52
20:AT:44:ALA:HB2	20:AT:52:ALA:HB1	1.89	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1506:G:H5''	25:BA:1507:A:OP2	2.08	0.52
45:BZ:109:ALA:HB3	45:BZ:145:GLU:HG3	1.92	0.52
1:CA:73:G:C6	1:CA:97:G:C6	2.97	0.52
1:CA:598:U:H2'	1:CA:599:C:C6	2.44	0.52
1:CA:1392:G:C2'	1:CA:1393:U:H5'	2.39	0.52
9:CI:116:LYS:HD2	9:CI:122:ALA:HA	1.91	0.52
12:CL:57:LYS:NZ	12:CL:65:GLU:OE2	2.21	0.52
25:DA:770:G:OP2	61:DA:4150:HOH:O	2.19	0.52
30:DG:117:PHE:CE1	30:DG:119:GLY:HA2	2.44	0.52
35:DP:39:LYS:HB2	35:DP:45:LEU:HG	1.91	0.52
41:DV:30:GLY:H	41:DV:61:VAL:HG13	1.74	0.52
43:DX:11:PRO:HG2	43:DX:13:LEU:HD21	1.90	0.52
1:AA:404:U:H2'	1:AA:405:U:C6	2.45	0.52
1:AA:560:U:O2'	1:AA:561:U:OP2	2.20	0.52
1:AA:985:C:H2'	1:AA:986:A:H8	1.74	0.52
1:AA:1376:U:H2'	1:AA:1377:A:H8	1.74	0.52
2:AB:19:HIS:HE1	2:AB:189:ASP:CB	2.22	0.52
3:AC:33:LEU:O	3:AC:37:GLN:HG2	2.09	0.52
25:BA:2044:U:O2'	25:BA:2629:C:H5'	2.09	0.52
1:CA:97:G:O2'	1:CA:98:G:H8	1.92	0.52
1:CA:433:C:H2'	1:CA:434:U:C6	2.44	0.52
1:CA:1014:A:H2'	1:CA:1015:A:C8	2.45	0.52
1:CA:1254:C:O4'	1:CA:1356:G:H5''	2.09	0.52
1:CA:1256:A:N6	1:CA:1278:U:H1'	2.24	0.52
1:CA:1272:G:H2'	1:CA:1273:G:O4'	2.09	0.52
2:CB:100:GLY:O	2:CB:104:ASN:N	2.39	0.52
8:CH:112:LEU:HA	8:CH:134:ILE:HG12	1.91	0.52
25:DA:362:U:O2'	25:DA:363:G:H5'	2.09	0.52
25:DA:958:U:OP2	36:DQ:14:ARG:NH1	2.41	0.52
25:DA:1328:G:H2'	25:DA:1330:C:C5	2.43	0.52
28:DE:55:ASN:O	28:DE:58:ARG:HG2	2.09	0.52
29:DF:20:LEU:HD22	29:DF:21:ALA:H	1.74	0.52
29:DF:157:VAL:HB	29:DF:194:MET:HG2	1.91	0.52
30:DG:97:ASP:O	30:DG:101:ILE:HG13	2.09	0.52
34:DO:7:TYR:CZ	34:DO:44:LYS:HG3	2.45	0.52
36:DQ:108:GLY:HA3	45:DZ:116:VAL:HG13	1.91	0.52
1:AA:650:G:C2'	1:AA:651:C:H5'	2.40	0.52
1:AA:1530:G:OP1	1:AA:1530:G:H4'	2.09	0.52
4:AD:128:VAL:HG12	4:AD:129:ASN:HD22	1.72	0.52
12:AL:38:THR:O	12:AL:79:GLU:HG3	2.09	0.52
25:BA:240:A:C5	25:BA:241:G:H1'	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:265:U:H2'	25:BA:266:C:C6	2.44	0.52
25:BA:910:A:H2'	25:BA:911:G:H8	1.73	0.52
25:BA:2673:G:H2'	25:BA:2674:A:C8	2.43	0.52
28:BE:47:VAL:HG12	28:BE:49:LEU:HD13	1.91	0.52
30:BG:67:LYS:H	50:B4:6:HIS:CE1	2.27	0.52
31:BH:72:ILE:O	31:BH:76:VAL:HG23	2.09	0.52
37:BR:44:LEU:HD22	37:BR:48:VAL:HG23	1.90	0.52
1:CA:8:A:N6	4:CD:209:ARG:HB2	2.23	0.52
4:CD:64:LEU:HD22	4:CD:198:VAL:HG11	1.91	0.52
8:CH:68:ARG:NH1	8:CH:74:PRO:HB3	2.24	0.52
25:DA:234:C:H2'	25:DA:235:U:C6	2.44	0.52
25:DA:918:A:H5''	26:DB:98:G:O2'	2.09	0.52
25:DA:1190:G:O2'	25:DA:1191:G:H5'	2.10	0.52
25:DA:2821:A:H2'	25:DA:2822:G:H8	1.75	0.52
31:DH:86:GLU:CD	31:DH:130:ARG:HD3	2.29	0.52
33:DN:30:ILE:HG22	33:DN:34:LEU:HD22	1.91	0.52
1:AA:129(A):G:C6	1:AA:189(E):U:H4'	2.44	0.52
1:AA:560:U:HO2'	1:AA:561:U:P	2.29	0.52
1:AA:586:C:O2'	1:AA:878:G:H4'	2.10	0.52
1:AA:1270:C:H2'	1:AA:1271:G:H5'	1.91	0.52
2:AB:231:GLU:HB3	2:AB:232:PRO:HD3	1.91	0.52
8:AH:112:LEU:HB3	8:AH:133:LEU:HA	1.91	0.52
10:AJ:27:ALA:HA	10:AJ:81:THR:CG2	2.39	0.52
25:BA:572:A:O2'	25:BA:573:G:OP1	2.20	0.52
25:BA:2474:U:H1'	25:BA:2503:U:O4	2.10	0.52
31:BH:11:VAL:HG21	31:BH:50:VAL:HG23	1.90	0.52
50:B4:62:ARG:C	50:B4:64:GLY:HA2	2.30	0.52
1:CA:130:A:H5'	17:CQ:63:ARG:HE	1.74	0.52
1:CA:174:C:H2'	1:CA:175:C:H6	1.75	0.52
2:CB:73:THR:HB	2:CB:95:GLN:O	2.10	0.52
2:CB:84:GLU:OE1	2:CB:216:SER:HA	2.10	0.52
2:CB:127:ILE:O	2:CB:128:GLU:HB2	2.09	0.52
10:CJ:64:GLU:OE2	10:CJ:66:ARG:NH1	2.42	0.52
12:CL:7:ILE:O	12:CL:11:VAL:HG23	2.09	0.52
28:DE:101:ARG:CZ	28:DE:171:GLU:HB2	2.39	0.52
32:DI:93:THR:O	32:DI:97:ILE:HG13	2.09	0.52
35:DP:27:HIS:O	35:DP:31:ALA:HA	2.10	0.52
42:DW:86:LEU:HD22	42:DW:96:ILE:HD11	1.91	0.52
49:D3:8:LEU:O	49:D3:32:GLN:N	2.34	0.52
1:AA:179:A:H2'	1:AA:180:U:C6	2.44	0.52
1:AA:310:G:OP2	16:AP:27:LYS:NZ	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:613:C:H42	1:AA:627:G:H1	1.58	0.52
1:AA:688:G:H2'	1:AA:689:C:H6	1.74	0.52
1:AA:1164:G:H2'	1:AA:1165:C:C6	2.44	0.52
1:CA:160:A:H2'	1:CA:161:A:C8	2.44	0.52
1:CA:164:U:H2'	1:CA:165:C:C6	2.45	0.52
1:CA:918:A:H2'	1:CA:919:A:C8	2.44	0.52
1:CA:1492:A:H3'	1:CA:1493:A:H8	1.75	0.52
8:CH:10:LEU:HD22	8:CH:83:ILE:HD11	1.91	0.52
13:CM:92:HIS:CE1	13:CM:98:VAL:HG11	2.44	0.52
19:CS:22:LEU:HB3	19:CS:27:GLU:HG3	1.90	0.52
26:DB:11:C:H3'	26:DB:12:C:C6	2.45	0.52
1:AA:261:U:OP2	20:AT:79:ARG:NH2	2.42	0.52
8:AH:34:GLU:OE2	8:AH:37:ARG:NH1	2.40	0.52
8:AH:51:VAL:HG12	8:AH:52:ASP:N	2.17	0.52
17:AQ:66:SER:O	17:AQ:70:ARG:NH1	2.42	0.52
25:BA:1715:A:H4'	25:BA:1716:A:O5'	2.10	0.52
25:BA:2117:C:H2'	25:BA:2118:U:O4'	2.10	0.52
32:BI:72:LEU:C	32:BI:74:ASN:H	2.13	0.52
32:BI:93:THR:O	32:BI:97:ILE:HG13	2.09	0.52
41:BV:76:LYS:HB2	41:BV:81:TYR:HB3	1.92	0.52
1:CA:67:C:H2'	1:CA:68:G:C8	2.45	0.52
1:CA:1014:A:C2	1:CA:1219:U:H1'	2.45	0.52
1:CA:1015:A:H1'	1:CA:1219:U:H5'	1.92	0.52
1:CA:1116:C:H2'	1:CA:1117:G:H5''	1.90	0.52
2:CB:197:VAL:HB	2:CB:200:ILE:HG22	1.91	0.52
9:CI:125:TYR:HD1	9:CI:126:SER:N	2.06	0.52
12:CL:57:LYS:HG2	12:CL:67:THR:HG22	1.90	0.52
25:DA:873:G:H1	25:DA:904:C:H42	1.56	0.52
25:DA:1505:C:H2'	25:DA:1506:C:H6	1.75	0.52
25:DA:1574:C:H2'	25:DA:1575:C:C6	2.43	0.52
25:DA:2261:C:O2'	25:DA:2262:U:H5'	2.09	0.52
30:DG:28:VAL:O	30:DG:31:VAL:HG12	2.10	0.52
33:DN:38:HIS:ND1	33:DN:39:ARG:HG3	2.24	0.52
35:DP:42:SER:O	61:DP:303:HOH:O	2.18	0.52
38:DS:34:HIS:HD1	38:DS:53:SER:HG	1.57	0.52
1:AA:921:U:O2	5:AE:19:MET:HB2	2.09	0.52
1:AA:1007:C:N3	1:AA:1022:G:C6	2.78	0.52
1:AA:1103:C:OP1	2:AB:96:ARG:NH2	2.41	0.52
2:AB:109:SER:O	2:AB:112:VAL:HG22	2.10	0.52
3:AC:134:ILE:HD11	3:AC:153:VAL:HG23	1.91	0.52
11:AK:20:TYR:HB2	11:AK:31:THR:HG23	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:56:MET:HE3	20:AT:88:VAL:HG11	1.91	0.52
25:BA:930:G:O6	25:BA:939:C:C2	2.62	0.52
11:CK:21:ILE:HB	11:CK:84:VAL:HG22	1.92	0.52
25:DA:674:G:H1'	29:DF:74:ARG:HD3	1.91	0.52
25:DA:1219:G:H1	25:DA:1230:C:H42	1.56	0.52
25:DA:2680:C:H5'	28:DE:189:PRO:HA	1.92	0.52
30:DG:11:TYR:CE2	30:DG:16:ARG:HD3	2.44	0.52
1:AA:229:U:O2'	16:AP:23:ASP:OD2	2.27	0.52
1:AA:433:C:H2'	1:AA:434:U:H6	1.74	0.52
1:AA:532:A:O2'	1:AA:533:A:OP1	2.25	0.52
1:AA:840:C:H5''	1:AA:841:U:C5	2.44	0.52
19:AS:50:ALA:HA	19:AS:58:VAL:O	2.09	0.52
25:BA:1222:A:H3'	25:BA:1223:C:C6	2.44	0.52
25:BA:1425:A:H4'	25:BA:1426:G:OP2	2.09	0.52
25:BA:1500:A:OP2	61:BA:3908:HOH:O	2.19	0.52
30:BG:103:LEU:HD23	30:BG:106:LEU:HD23	1.90	0.52
1:CA:1121:U:C4	1:CA:1122:U:H5	2.28	0.52
1:CA:1169:A:N7	1:CA:1170:A:C5	2.78	0.52
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.44	0.52
2:CB:17:PHE:HB2	2:CB:44:LEU:HD12	1.92	0.52
6:CF:96:PRO:HB3	18:CR:30:ASP:CG	2.30	0.52
8:CH:17:THR:HG22	8:CH:63:LEU:HD12	1.92	0.52
17:CQ:41:LYS:NZ	17:CQ:92:ARG:HH21	2.08	0.52
25:DA:784:A:C8	25:DA:792:G:C5	2.98	0.52
25:DA:2345:G:OP2	52:D6:38:LYS:HG3	2.10	0.52
27:DD:132:PRO:HG2	27:DD:135:PHE:CD2	2.44	0.52
42:DW:9:TYR:H	42:DW:102:HIS:CE1	2.27	0.52
45:DZ:93:ASP:O	45:DZ:131:ARG:NH1	2.43	0.52
1:AA:20:U:H4'	1:AA:572:A:C6	2.44	0.52
1:AA:160:A:N1	1:AA:343:U:C2	2.78	0.52
1:AA:193:C:H2'	1:AA:194:C:C6	2.44	0.52
1:AA:303:A:O2'	1:AA:555:C:O2'	2.25	0.52
1:AA:987:G:H1	1:AA:1218:C:H42	1.58	0.52
1:AA:1392:G:C2'	1:AA:1393:U:H5'	2.40	0.52
6:AF:97:PHE:CD2	18:AR:31:LEU:HD23	2.44	0.52
24:AW:6:2R1:C	24:AW:8:2R3:N	2.73	0.52
52:B6:6:ARG:NH1	52:B6:26:ASN:HB2	2.25	0.52
1:CA:202:U:H3'	1:CA:203:U:H6	1.75	0.52
1:CA:352:C:H4'	1:CA:354:G:OP1	2.10	0.52
1:CA:708:C:H2'	1:CA:709:G:H8	1.75	0.52
1:CA:793:U:O2	1:CA:1516:G:H4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:33:GLU:HG2	8:CH:48:TYR:CE2	2.45	0.52
11:CK:62:GLN:HG3	11:CK:97:ALA:HB2	1.92	0.52
25:DA:303:U:H2'	25:DA:304:G:H8	1.75	0.52
25:DA:492:A:H2'	25:DA:493:G:O4'	2.10	0.52
25:DA:2887:U:H2'	25:DA:2888:C:H6	1.75	0.52
43:DX:9:LEU:HA	48:D2:36:ARG:HH21	1.75	0.52
2:AB:170:GLU:O	2:AB:174:VAL:HG23	2.09	0.52
5:AE:51:VAL:O	5:AE:55:VAL:HG23	2.09	0.52
25:BA:641:G:OP1	29:BF:40:GLN:NE2	2.33	0.52
25:BA:768:C:H2'	25:BA:769:A:H8	1.75	0.52
1:CA:174:C:H2'	1:CA:175:C:C6	2.45	0.52
1:CA:565:U:OP2	1:CA:566:G:O2'	2.18	0.52
1:CA:833:U:H2'	1:CA:834:C:H6	1.74	0.52
1:CA:1036:G:H3'	1:CA:1037:C:O4'	2.09	0.52
1:CA:1183:A:H5'	1:CA:1183:A:H8	1.75	0.52
1:CA:1446:U:O2'	1:CA:1447:A:O5'	2.28	0.52
3:CC:125:GLU:HG3	3:CC:190:ARG:O	2.10	0.52
4:CD:188:LEU:HD23	4:CD:188:LEU:H	1.75	0.52
23:CX:48:C:C2	23:CX:59:A:H1'	2.45	0.52
25:DA:2228:G:C5	25:DA:2229:C:C4	2.98	0.52
25:DA:2615:U:H2'	25:DA:2616:C:H6	1.74	0.52
31:DH:33:LEU:HD21	31:DH:136:ILE:HG13	1.91	0.52
37:DR:21:TYR:OH	37:DR:43:GLU:HG2	2.10	0.52
1:AA:562:C:H1'	12:AL:15:ARG:HB3	1.92	0.51
1:AA:1075:C:C2'	1:AA:1076:C:H5'	2.40	0.51
25:BA:276:C:O3'	32:BI:42:SER:OG	2.27	0.51
25:BA:762:G:H2'	25:BA:763:A:O4'	2.10	0.51
25:BA:1653:C:H4'	25:BA:1654:A:O5'	2.10	0.51
25:BA:2603:C:P	27:BD:239:ARG:HG3	2.50	0.51
25:BA:2799:U:O2'	28:BE:62:PRO:O	2.12	0.51
27:BD:9:TYR:CZ	27:BD:13:ARG:HG2	2.45	0.51
36:BQ:110:THR:HG23	36:BQ:113:GLN:OE1	2.10	0.51
40:BU:69:CYS:HB3	40:BU:74:LEU:HD13	1.91	0.51
9:CI:4:TYR:CE1	9:CI:88:TYR:HA	2.44	0.51
25:DA:341:G:H2'	25:DA:342:G:O4'	2.10	0.51
25:DA:774:A:N3	25:DA:774:A:H2'	2.25	0.51
25:DA:1040:C:N4	25:DA:1115:G:O6	2.41	0.51
25:DA:1529:G:O2'	25:DA:1530:C:H5'	2.11	0.51
27:DD:206:LEU:HD22	27:DD:211:ARG:HG2	1.92	0.51
29:DF:165:ARG:HG2	29:DF:168:ARG:NH2	2.25	0.51
1:AA:1131:G:O2'	1:AA:1132:C:H5'	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1183:A:H3'	1:AA:1184:G:H5''	1.92	0.51
9:AI:110:GLU:OE2	9:AI:113:LYS:NZ	2.43	0.51
25:BA:225:C:H2'	25:BA:226:C:C6	2.45	0.51
25:BA:1555:C:OP2	25:BA:1555:C:H4'	2.09	0.51
25:BA:2013:U:H2'	25:BA:2014:G:H5''	1.93	0.51
25:BA:2555:G:H2'	25:BA:2556:G:C8	2.44	0.51
25:BA:2855:G:H5''	39:BT:54:ARG:O	2.09	0.51
25:BA:2880:C:H2'	25:BA:2881:C:O4'	2.10	0.51
38:BS:48:LEU:HD23	38:BS:82:ILE:HD11	1.91	0.51
1:CA:768:A:H4'	1:CA:1523:G:N2	2.25	0.51
1:CA:931:C:H42	1:CA:1386:G:H1	1.58	0.51
1:CA:1311:G:H1	1:CA:1326:C:H42	1.58	0.51
2:CB:78:GLN:O	2:CB:94:ASN:ND2	2.44	0.51
3:CC:119:ARG:HG2	3:CC:123:GLN:HE21	1.76	0.51
9:CI:51:ARG:HG2	9:CI:56:LEU:HD21	1.92	0.51
25:DA:528:A:H2	25:DA:2043:C:H5'	1.75	0.51
25:DA:1448:G:H1'	25:DA:1528:A:N1	2.26	0.51
26:DB:6:C:H2'	26:DB:7:G:H5''	1.91	0.51
1:AA:384:G:H2'	1:AA:385:C:C6	2.46	0.51
1:AA:679:C:C2'	1:AA:680:C:H5'	2.41	0.51
1:AA:1129:C:O2'	1:AA:1139:G:N7	2.26	0.51
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.90	0.51
7:AG:50:ILE:HD11	7:AG:58:PRO:CA	2.39	0.51
19:AS:19:VAL:O	19:AS:22:LEU:HB2	2.10	0.51
20:AT:10:LEU:HD22	20:AT:12:ALA:HB2	1.91	0.51
25:BA:926:G:H2'	25:BA:927:G:C1'	2.41	0.51
25:BA:1067:A:C8	25:BA:1067:A:C3'	2.94	0.51
25:BA:1071:G:C4	25:BA:1180:C:H1'	2.46	0.51
29:BF:157:VAL:HB	29:BF:194:MET:HG2	1.91	0.51
1:CA:532:A:H2	1:CA:1207:G:H4'	1.76	0.51
1:CA:814:A:H2'	1:CA:816:A:H5''	1.90	0.51
1:CA:1040:U:C4	1:CA:1041:A:C8	2.98	0.51
1:CA:1104:G:H4'	2:CB:111:ARG:NH1	2.26	0.51
1:CA:1220:G:H5'	19:CS:34:TRP:O	2.11	0.51
16:CP:51:VAL:HG12	16:CP:53:VAL:H	1.74	0.51
25:DA:1153:C:H2'	25:DA:1154:G:O4'	2.11	0.51
30:DG:56:ALA:O	30:DG:60:LEU:HB2	2.10	0.51
41:DV:37:VAL:O	41:DV:51:VAL:HG23	2.10	0.51
52:D6:18:ARG:HD2	52:D6:42:TRP:CE2	2.46	0.51
52:D6:35:GLU:HG2	52:D6:50:ARG:HD3	1.92	0.51
1:AA:671:G:H2'	1:AA:672:U:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:731:G:OP1	1:AA:766:A:H1'	2.08	0.51
1:AA:929:G:H1	1:AA:1388:C:N4	2.06	0.51
1:AA:985:C:H2'	1:AA:986:A:C8	2.45	0.51
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.44	0.51
2:AB:204:ASN:OD1	2:AB:206:ASP:N	2.37	0.51
5:AE:68:GLU:HG2	5:AE:70:PRO:HG3	1.93	0.51
19:AS:23:ASN:HA	19:AS:27:GLU:CD	2.31	0.51
25:BA:930:G:H2'	25:BA:931:C:C6	2.44	0.51
30:BG:5:VAL:HG22	30:BG:8:LYS:H	1.75	0.51
1:CA:428:G:OP2	4:CD:10:ARG:NH1	2.43	0.51
1:CA:975:A:H4'	1:CA:976:G:C5'	2.38	0.51
1:CA:1007:C:N4	1:CA:1022:G:H1	1.98	0.51
1:CA:1307:U:O5'	1:CA:1307:U:H6	1.93	0.51
23:CX:23:C:H2'	23:CX:24:U:H6	1.75	0.51
23:CX:27:U:O2	23:CX:44:A:H2	1.93	0.51
25:DA:1539:G:H2'	25:DA:1540:U:C6	2.45	0.51
25:DA:2285:C:OP2	52:D6:6:ARG:NH1	2.44	0.51
25:DA:2364:C:H2'	25:DA:2365:G:O4'	2.10	0.51
26:DB:31:C:C2'	26:DB:32:C:H5'	2.40	0.51
28:DE:174:ASP:OD1	28:DE:175:VAL:N	2.43	0.51
50:D4:16:CYS:SG	50:D4:17:GLY:N	2.83	0.51
1:AA:537:G:H5''	12:AL:113:ARG:NH1	2.24	0.51
1:AA:661:G:H1	1:AA:744:C:N4	2.05	0.51
1:AA:799:G:H5''	1:AA:799:G:H8	1.76	0.51
1:AA:918:A:H2'	1:AA:919:A:C8	2.45	0.51
1:AA:1125:U:H3'	10:AJ:5:ARG:HH22	1.75	0.51
3:AC:73:PRO:HB3	3:AC:103:VAL:HG11	1.93	0.51
4:AD:31:CYS:SG	4:AD:32:ALA:N	2.83	0.51
4:AD:196:LEU:H	4:AD:196:LEU:HD12	1.76	0.51
8:AH:121:ASP:HB2	8:AH:125:ARG:HH12	1.75	0.51
25:BA:2661:U:H2'	25:BA:2662:U:C6	2.45	0.51
34:BO:35:VAL:HG11	34:BO:103:ALA:CB	2.35	0.51
49:B3:11:SER:OG	49:B3:13:ILE:HG13	2.10	0.51
1:CA:1301:U:O2'	1:CA:1302:U:H5'	2.10	0.51
25:DA:829:A:N7	25:DA:2248:C:H5'	2.25	0.51
25:DA:1563:G:H2'	25:DA:1564:C:C6	2.45	0.51
25:DA:2785:C:O2'	28:DE:66:HIS:ND1	2.38	0.51
26:DB:46:A:H2'	26:DB:47:C:C6	2.45	0.51
38:DS:87:PHE:CZ	38:DS:102:ALA:HB2	2.45	0.51
25:BA:1405:A:N3	25:BA:1405:A:H5'	2.26	0.51
28:BE:119:ARG:HG2	28:BE:160:TYR:CG	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:16:ARG:HB2	30:BG:17:PRO:HD3	1.92	0.51
1:CA:552:U:H2'	1:CA:553:A:H5'	1.93	0.51
1:CA:1118:C:H1'	1:CA:1179:A:C5	2.46	0.51
1:CA:1279:A:O2'	1:CA:1281:U:OP2	2.14	0.51
1:CA:1492:A:H3'	1:CA:1493:A:C8	2.45	0.51
4:CD:191:ARG:HD2	4:CD:191:ARG:O	2.11	0.51
12:CL:6:THR:OG1	12:CL:9:GLN:HG3	2.10	0.51
15:CO:33:THR:HG21	15:CO:85:LEU:HD22	1.93	0.51
25:DA:92:A:H2'	25:DA:93:G:H8	1.76	0.51
25:DA:704:G:H1'	25:DA:726:G:N2	2.26	0.51
25:DA:879:G:H3'	25:DA:880:G:H5''	1.93	0.51
25:DA:2823:A:OP1	28:DE:113:PHE:HB2	2.10	0.51
1:AA:221:C:H2'	1:AA:222:U:C6	2.42	0.51
1:AA:649:G:H2'	1:AA:650:G:H8	1.75	0.51
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.11	0.51
35:BP:121:LYS:O	35:BP:123:LEU:N	2.43	0.51
47:B1:23:LYS:HB3	47:B1:29:GLY:HA3	1.93	0.51
1:CA:44:G:H2'	1:CA:45:U:O4'	2.10	0.51
1:CA:999:C:N4	1:CA:1043:C:C4	2.79	0.51
1:CA:1004:A:H5''	1:CA:1025:U:C5	2.46	0.51
1:CA:1150:U:O4	1:CA:1151:A:N6	2.44	0.51
3:CC:18:TRP:O	3:CC:21:ARG:NH1	2.43	0.51
8:CH:6:ILE:O	8:CH:10:LEU:HG	2.10	0.51
14:CN:47:LEU:O	14:CN:51:GLY:N	2.43	0.51
25:DA:45:C:H2'	25:DA:47:C:C6	2.45	0.51
25:DA:375:C:H2'	25:DA:376:C:C6	2.46	0.51
25:DA:858:U:O2	25:DA:2268:A:H2'	2.11	0.51
25:DA:1341:U:OP1	25:DA:1397:U:N3	2.33	0.51
25:DA:2745:C:C4	25:DA:2746:U:C4	2.98	0.51
25:DA:2853:C:O2'	25:DA:2854:G:H5'	2.11	0.51
1:AA:7:G:H5''	1:AA:298:A:O4'	2.11	0.51
1:AA:276:G:H2'	1:AA:277:C:H5'	1.92	0.51
1:AA:358:U:H2'	1:AA:359:U:C6	2.46	0.51
1:AA:625:G:O2'	1:AA:626:U:H5'	2.11	0.51
2:AB:50:GLU:OE1	2:AB:53:ARG:NH1	2.44	0.51
25:BA:906:G:O2'	25:BA:962:G:O6	2.22	0.51
25:BA:1576:G:O2'	25:BA:1577:C:H5'	2.11	0.51
25:BA:1775:C:H5'	25:BA:1776:G:OP2	2.11	0.51
35:BP:65:ARG:HG3	54:B8:25:MET:HG3	1.92	0.51
1:CA:256:U:P	17:CQ:17:LYS:HZ2	2.34	0.51
1:CA:429:U:H3'	4:CD:9:CYS:SG	2.50	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:881:G:OP1	12:CL:12:ARG:NH2	2.42	0.51
1:CA:1120:G:C6	1:CA:1154:G:C2	2.99	0.51
1:CA:1323:G:H4'	1:CA:1363:C:C2	2.46	0.51
2:CB:192:SER:O	2:CB:194:PRO:HD3	2.11	0.51
25:DA:71:A:N7	43:DX:31:HIS:HE1	2.08	0.51
25:DA:668:G:H5'	25:DA:669:G:OP2	2.11	0.51
25:DA:814:C:O2'	25:DA:815:C:H5'	2.11	0.51
25:DA:1291:C:H2'	25:DA:1292:U:H6	1.75	0.51
25:DA:1472:A:H2'	25:DA:1473:G:O4'	2.11	0.51
25:DA:2526:G:H2'	25:DA:2527:C:H6	1.75	0.51
25:DA:2773:C:OP1	28:DE:166:THR:OG1	2.26	0.51
30:DG:114:ILE:HD12	30:DG:117:PHE:CD2	2.46	0.51
30:DG:179:PRO:HG3	50:D4:43:TYR:OH	2.11	0.51
34:DO:111:PHE:O	34:DO:115:VAL:HG23	2.10	0.51
1:AA:96:U:H2'	1:AA:97:G:H8	1.75	0.51
1:AA:159:G:H2'	1:AA:161:A:OP2	2.10	0.51
1:AA:933:G:O6	7:AG:3:ARG:NH2	2.44	0.51
1:AA:1328:C:H5'	13:AM:28:ALA:CB	2.41	0.51
2:AB:15:VAL:HG11	2:AB:213:LEU:HD12	1.91	0.51
4:AD:190:ASP:H	4:AD:193:ASP:HB2	1.75	0.51
25:BA:238:C:O2	54:B8:12:LYS:NZ	2.37	0.51
25:BA:289:G:H2'	25:BA:290:G:C8	2.46	0.51
25:BA:592:U:C4	25:BA:593:G:C6	2.99	0.51
25:BA:910:A:H2'	25:BA:911:G:C8	2.45	0.51
35:BP:88:LEU:HD11	35:BP:114:ILE:HD12	1.93	0.51
36:BQ:12:GLN:HG2	36:BQ:73:PRO:HD2	1.93	0.51
43:BX:95:LEU:H	43:BX:95:LEU:HD12	1.76	0.51
1:CA:426:G:H2'	1:CA:427:U:C6	2.46	0.51
1:CA:790:A:H2'	1:CA:791:G:C8	2.46	0.51
1:CA:818:G:O2'	1:CA:819:A:H5'	2.11	0.51
2:CB:163:PHE:HA	2:CB:185:ILE:O	2.11	0.51
6:CF:24:GLU:HG3	6:CF:28:ARG:NH1	2.26	0.51
25:DA:571:A:H5'	25:DA:2030:A:N7	2.26	0.51
25:DA:1963:U:O2'	61:DA:4443:HOH:O	2.16	0.51
27:DD:127:VAL:HA	27:DD:193:VAL:HG22	1.92	0.51
27:DD:148:GLU:CB	27:DD:151:LYS:HD2	2.41	0.51
30:DG:145:THR:HG23	30:DG:148:MET:HE3	1.92	0.51
37:DR:28:LEU:HD12	37:DR:48:VAL:HG21	1.91	0.51
1:AA:42:G:O2'	1:AA:622:A:N1	2.32	0.51
1:AA:78:G:C6	1:AA:91:C:N4	2.79	0.51
1:AA:1125:U:HO2'	1:AA:1126:U:P	2.34	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:79:PHE:CE1	4:AD:204:ILE:HD13	2.46	0.51
10:AJ:49:VAL:HG23	14:AN:41:ARG:HD2	1.92	0.51
11:AK:31:THR:HA	11:AK:42:TRP:HA	1.93	0.51
25:BA:2504:U:H2'	25:BA:2505:U:H6	1.76	0.51
29:BF:197:ASP:N	29:BF:197:ASP:OD1	2.44	0.51
39:BT:127:ALA:O	39:BT:128:GLU:HB3	2.09	0.51
1:CA:438:G:N1	1:CA:495:A:OP2	2.33	0.51
1:CA:1191:A:OP2	3:CC:3:ASN:ND2	2.44	0.51
2:CB:52:GLU:HG2	2:CB:56:ARG:HH22	1.76	0.51
5:CE:51:VAL:O	5:CE:55:VAL:HG23	2.10	0.51
15:CO:54:ARG:HD3	15:CO:58:MET:HE2	1.93	0.51
19:CS:36:ARG:HD2	19:CS:52:TYR:O	2.11	0.51
25:DA:271(Q):G:H2'	25:DA:271(R):G:C8	2.46	0.51
25:DA:1337:G:H2'	25:DA:1338:G:H8	1.76	0.51
25:DA:1710:C:H2'	25:DA:1711:C:C6	2.46	0.51
29:DF:110:LEU:HD12	29:DF:205:ARG:HG2	1.92	0.51
37:DR:75:LEU:O	37:DR:75:LEU:HD22	2.11	0.51
1:AA:216:G:H2'	1:AA:217:C:C6	2.46	0.50
1:AA:404:U:H2'	1:AA:405:U:H6	1.77	0.50
1:AA:606:G:H1'	1:AA:632:A:H61	1.76	0.50
1:AA:975:A:N6	1:AA:1367:C:O4'	2.43	0.50
1:AA:1164:G:H2'	1:AA:1165:C:H6	1.75	0.50
3:AC:175:LEU:HD21	3:AC:201:TYR:CE2	2.46	0.50
4:AD:3:ARG:HE	4:AD:118:ARG:CD	2.23	0.50
6:AF:80:ARG:NH1	6:AF:88:VAL:O	2.44	0.50
8:AH:86:ILE:HG13	8:AH:133:LEU:HD22	1.93	0.50
16:AP:39:TYR:HA	16:AP:48:TRP:O	2.10	0.50
25:BA:780:G:N7	61:BA:3904:HOH:O	2.35	0.50
25:BA:2762:A:H3'	25:BA:2763:A:H2'	1.93	0.50
26:BB:77:U:OP1	45:BZ:19:ARG:NH2	2.43	0.50
30:BG:11:TYR:CZ	30:BG:16:ARG:HD3	2.46	0.50
36:BQ:54:MET:HG3	36:BQ:117:ALA:HB1	1.92	0.50
42:BW:71:VAL:HA	42:BW:107:LEU:HD12	1.94	0.50
1:CA:1007:C:N3	1:CA:1022:G:C2	2.79	0.50
1:CA:1133:G:C2'	1:CA:1134:G:H8	2.19	0.50
1:CA:1256:A:H2	1:CA:1277:C:N4	2.08	0.50
1:CA:1360:A:OP2	14:CN:35:ARG:NH2	2.43	0.50
2:CB:16:HIS:CG	2:CB:17:PHE:N	2.79	0.50
9:CI:78:LYS:HD3	9:CI:101:PHE:HD2	1.76	0.50
25:DA:852:G:H2'	25:DA:853:G:C8	2.46	0.50
25:DA:2342:C:O2	25:DA:2374:C:H4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DO:64:ARG:NH1	34:DO:81:ASP:OD1	2.44	0.50
45:DZ:7:ALA:O	45:DZ:62:PRO:HD3	2.12	0.50
1:AA:72:C:H2'	1:AA:73:G:O4'	2.11	0.50
1:AA:112:G:H4'	1:AA:389:A:H4'	1.92	0.50
1:AA:202:U:O2'	1:AA:203:U:O5'	2.17	0.50
25:BA:623:G:N2	25:BA:628:C:O3'	2.44	0.50
28:BE:47:VAL:HG21	28:BE:86:PRO:CD	2.36	0.50
36:BQ:137:TYR:O	36:BQ:141:GLN:HG2	2.10	0.50
40:BU:36:ARG:HD2	40:BU:40:PHE:CZ	2.46	0.50
48:B2:32:LEU:CD1	48:B2:36:ARG:HH11	2.23	0.50
1:CA:677:U:H3	1:CA:713:G:N2	1.99	0.50
1:CA:1061:G:H2'	1:CA:1062:U:H5'	1.93	0.50
1:CA:1262:C:N3	1:CA:1273:G:N2	2.56	0.50
1:CA:1346:A:N1	1:CA:1374:A:H5''	2.26	0.50
4:CD:22:LYS:HB2	4:CD:26:CYS:SG	2.52	0.50
4:CD:36:ARG:HG3	4:CD:38:TYR:CE2	2.46	0.50
4:CD:159:ARG:O	4:CD:163:GLU:N	2.42	0.50
10:CJ:48:THR:O	14:CN:34:TYR:OH	2.30	0.50
25:DA:275:G:H2'	25:DA:276:A:C8	2.46	0.50
25:DA:302:C:N4	25:DA:315:G:H1	2.09	0.50
25:DA:1022:G:C6	25:DA:1140:C:C4	3.00	0.50
25:DA:1239:G:H2'	25:DA:1240:U:O4'	2.11	0.50
31:DH:3:ARG:HD3	31:DH:6:ARG:HH12	1.77	0.50
48:D2:29:LYS:HG2	48:D2:57:ILE:HD13	1.92	0.50
1:AA:370:C:H2'	1:AA:371:G:C8	2.46	0.50
1:AA:540:G:H2'	1:AA:541:G:O4'	2.11	0.50
1:AA:662:G:H2'	1:AA:663:A:C8	2.45	0.50
1:AA:1279:A:H5''	1:AA:1280:A:OP1	2.12	0.50
9:AI:24:GLY:HA2	9:AI:59:PHE:O	2.12	0.50
16:AP:21:VAL:HG11	16:AP:59:TRP:NE1	2.27	0.50
25:BA:296:U:H2'	25:BA:297:C:H6	1.75	0.50
25:BA:1002:A:N1	25:BA:2470:G:H4'	2.27	0.50
25:BA:2442:A:N3	25:BA:2442:A:H2'	2.25	0.50
30:BG:140:ILE:HG22	30:BG:141:PHE:CD1	2.46	0.50
55:B9:17:ILE:HG22	55:B9:24:TYR:HB2	1.93	0.50
1:CA:522:C:H41	12:CL:53:ARG:HH22	1.58	0.50
1:CA:957:U:H2'	1:CA:959:A:OP2	2.11	0.50
1:CA:1002:G:N2	1:CA:1039:C:C4	2.80	0.50
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.94	0.50
1:CA:1028:C:O2	1:CA:1034:G:H1'	2.11	0.50
1:CA:1122:U:C4	1:CA:1123:A:N7	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.46	0.50
2:CB:230:VAL:HG22	2:CB:231:GLU:H	1.76	0.50
7:CG:69:VAL:HG11	7:CG:134:ALA:HB1	1.93	0.50
7:CG:101:LEU:O	7:CG:104:LEU:HB2	2.11	0.50
9:CI:99:LEU:HB3	9:CI:101:PHE:CE1	2.46	0.50
25:DA:322:A:OP2	29:DF:169:ASN:HB2	2.09	0.50
25:DA:471:A:H2'	25:DA:472:A:O4'	2.11	0.50
25:DA:614(C):A:C4	29:DF:180:GLY:HA2	2.46	0.50
25:DA:839:U:H1'	25:DA:1191:G:H1'	1.93	0.50
25:DA:1149:G:H2'	25:DA:1150:C:C6	2.46	0.50
25:DA:1489:U:O2	25:DA:1489:U:H2'	2.11	0.50
25:DA:1858:G:O6	61:DA:4294:HOH:O	2.16	0.50
28:DE:36:ARG:HD3	28:DE:85:ASN:HD21	1.76	0.50
48:D2:16:LEU:O	48:D2:67:LYS:NZ	2.43	0.50
1:AA:106:C:O2'	1:AA:379:C:H5''	2.10	0.50
1:AA:262:A:C6	1:AA:263:A:C6	2.99	0.50
1:AA:757:U:H2'	1:AA:758:G:O4'	2.10	0.50
1:AA:785:G:C2'	1:AA:786:G:H5'	2.42	0.50
1:AA:1038:C:C2'	1:AA:1039:C:H5'	2.42	0.50
6:AF:44:GLY:HA2	6:AF:59:TYR:CZ	2.46	0.50
7:AG:28:ASN:HA	7:AG:31:MET:HE2	1.94	0.50
14:AN:29:ARG:HD3	14:AN:40:CYS:SG	2.52	0.50
25:BA:768:C:H2'	25:BA:769:A:C8	2.46	0.50
25:BA:1219:A:H1'	25:BA:1220:U:H5''	1.93	0.50
1:CA:6:G:O2'	1:CA:7:G:H5'	2.12	0.50
1:CA:153:C:H2'	1:CA:154:C:C6	2.47	0.50
1:CA:790:A:C6	1:CA:791:G:C6	3.00	0.50
1:CA:1164:G:H1	1:CA:1172:C:N4	2.08	0.50
1:CA:1318:A:O2'	19:CS:37:ARG:HB2	2.11	0.50
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.47	0.50
2:CB:87:ARG:NE	2:CB:233:SER:HB3	2.27	0.50
3:CC:134:ILE:HD11	3:CC:153:VAL:CG2	2.42	0.50
25:DA:1036:G:H1	25:DA:1119:C:N4	2.06	0.50
25:DA:1041:C:N4	25:DA:1114:G:H1	2.10	0.50
25:DA:1666:G:P	34:DO:66:LYS:HE3	2.52	0.50
27:DD:177:LEU:HD11	27:DD:183:ARG:HD2	1.92	0.50
27:DD:242:ARG:N	27:DD:242:ARG:HD3	2.25	0.50
48:D2:17:SER:N	48:D2:20:GLU:OE2	2.41	0.50
1:AA:69:G:H2'	1:AA:70:G:C8	2.46	0.50
1:AA:103:C:P	20:AT:17:ARG:HH21	2.35	0.50
1:AA:407:G:OP1	4:AD:115:ARG:HD3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1005:A:H5'	1:AA:1038:C:H1'	1.93	0.50
1:AA:1142:G:H3'	1:AA:1143:G:C8	2.46	0.50
1:AA:1318:A:H4'	19:AS:10:PHE:CZ	2.46	0.50
2:AB:21:ARG:H	2:AB:21:ARG:HH21	1.58	0.50
2:AB:208:ILE:HA	2:AB:211:ILE:HD12	1.94	0.50
3:AC:22:TRP:CD1	3:AC:59:ARG:HD2	2.47	0.50
3:AC:36:ASP:O	3:AC:40:ARG:HG3	2.12	0.50
25:BA:70:A:H3'	25:BA:70:A:OP2	2.11	0.50
25:BA:354:A:H2	25:BA:1255:A:O2'	1.90	0.50
25:BA:895:G:H2'	25:BA:896:A:C8	2.47	0.50
25:BA:1809:U:H2'	25:BA:1815:A:N6	2.27	0.50
25:BA:2784:C:H2'	25:BA:2785:C:C6	2.46	0.50
39:BT:53:ARG:HB3	39:BT:53:ARG:HH11	1.76	0.50
40:BU:102:GLU:HG3	41:BV:2:PHE:CE2	2.47	0.50
44:BY:98:VAL:HG12	44:BY:105:ALA:HA	1.93	0.50
45:BZ:44:PHE:CZ	45:BZ:86:VAL:HG11	2.46	0.50
45:BZ:136:PHE:O	45:BZ:137:ILE:HG13	2.12	0.50
1:CA:200:G:H2'	1:CA:201:C:C6	2.46	0.50
1:CA:473:G:O2'	1:CA:474:G:H5'	2.11	0.50
1:CA:641:U:O3'	1:CA:642:A:H8	1.94	0.50
1:CA:1226:C:C4	13:CM:104:ARG:HG2	2.46	0.50
2:CB:187:LEU:HA	2:CB:201:ILE:HB	1.92	0.50
5:CE:33:VAL:HG13	5:CE:112:LEU:HD12	1.92	0.50
25:DA:57:C:H2'	25:DA:58:G:O4'	2.12	0.50
25:DA:2447:G:OP2	61:DA:4551:HOH:O	2.20	0.50
25:DA:2657:A:O3'	31:DH:160:LYS:NZ	2.43	0.50
29:DF:31:HIS:NE2	29:DF:35:GLU:OE2	2.44	0.50
30:DG:15:VAL:HG13	30:DG:175:LEU:HB3	1.93	0.50
44:DY:43:ASN:CG	44:DY:65:ALA:HB3	2.31	0.50
54:D8:34:TRP:CG	54:D8:35:GLN:N	2.79	0.50
1:AA:646:U:H2'	1:AA:647:C:C6	2.45	0.50
1:AA:819:A:H4'	1:AA:820:U:OP2	2.12	0.50
1:AA:1241:G:H2'	1:AA:1242:C:C6	2.47	0.50
25:BA:160:G:C2'	25:BA:161:C:H5'	2.42	0.50
25:BA:626:A:H4'	25:BA:627:G:H5'	1.94	0.50
25:BA:1385:G:H5''	43:BX:16:LYS:HD3	1.94	0.50
25:BA:1846:A:H8	25:BA:1846:A:OP1	1.95	0.50
50:B4:62:ARG:HB2	50:B4:63:TYR:CD1	2.46	0.50
1:CA:93:G:O2'	1:CA:96:U:H5'	2.11	0.50
2:CB:19:HIS:CE1	2:CB:206:ASP:HB2	2.46	0.50
7:CG:102:ARG:O	7:CG:106:GLN:HG3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:13:LEU:O	20:CT:17:ARG:HG3	2.11	0.50
25:DA:2272:U:H5''	25:DA:2273:A:OP1	2.11	0.50
25:DA:2320:A:H2'	25:DA:2320:A:N3	2.25	0.50
25:DA:2406:U:C4	35:DP:72:PRO:HD2	2.46	0.50
29:DF:60:SER:OG	29:DF:61:GLY:N	2.45	0.50
31:DH:106:THR:HG23	31:DH:112:PRO:HB3	1.94	0.50
34:DO:68:GLU:CB	34:DO:78:ARG:HB2	2.41	0.50
39:DT:51:ARG:HG3	39:DT:98:LYS:HD2	1.93	0.50
50:D4:2:LYS:HB2	50:D4:5:ILE:HD13	1.93	0.50
1:AA:445:G:H2'	1:AA:446:G:H8	1.74	0.50
1:AA:947:G:H2'	1:AA:948:C:C6	2.46	0.50
1:AA:1232:U:OP1	9:AI:124:GLN:HG2	2.12	0.50
4:AD:3:ARG:HE	4:AD:118:ARG:HD3	1.76	0.50
14:AN:14:PRO:HG2	14:AN:16:PHE:O	2.12	0.50
15:AO:18:PHE:O	15:AO:21:ASP:HB3	2.12	0.50
19:AS:3:ARG:NH1	19:AS:8:GLY:O	2.44	0.50
25:BA:294:C:N3	25:BA:390:G:N2	2.40	0.50
25:BA:1093:G:HO2'	25:BA:1094:A:H8	1.59	0.50
25:BA:1578:C:H5''	25:BA:1579:C:OP2	2.11	0.50
25:BA:1629:C:H2'	25:BA:1630:A:H8	1.77	0.50
25:BA:2227:G:H3'	25:BA:2228:G:N7	2.26	0.50
29:BF:65:TRP:CZ2	29:BF:75:HIS:HD2	2.29	0.50
31:BH:20:ALA:HB1	31:BH:21:PRO:HD2	1.94	0.50
1:CA:540:G:H2'	1:CA:541:G:O4'	2.12	0.50
1:CA:833:U:H2'	1:CA:834:C:C6	2.47	0.50
1:CA:999:C:C2	1:CA:1042:G:N2	2.80	0.50
1:CA:1509:C:H2'	1:CA:1510:U:O4'	2.12	0.50
9:CI:49:PRO:HG2	9:CI:81:ILE:HG23	1.93	0.50
25:DA:118:A:N3	25:DA:178:G:H1'	2.27	0.50
25:DA:307:G:N1	25:DA:310:A:OP2	2.39	0.50
25:DA:889:C:HO2'	25:DA:890:A:H8	1.58	0.50
25:DA:1007:C:P	33:DN:37:LYS:HZ1	2.34	0.50
25:DA:1188:U:H4'	41:DV:79:VAL:HG22	1.94	0.50
25:DA:1313:U:H2'	25:DA:1610:A:C2	2.46	0.50
39:DT:2:ASN:O	39:DT:6:LEU:HD22	2.11	0.50
39:DT:60:THR:HG22	39:DT:77:PRO:HA	1.94	0.50
1:AA:626:U:H2'	1:AA:627:G:C8	2.47	0.50
1:AA:1059:C:H42	1:AA:1198:G:H1	1.60	0.50
1:AA:1267:C:O2	21:AU:20:LYS:HD2	2.12	0.50
1:AA:1318:A:H4'	19:AS:10:PHE:CE2	2.47	0.50
3:AC:119:ARG:HH11	3:AC:140:ARG:NH2	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:81:GLU:OE2	4:AD:139:ARG:NH2	2.44	0.50
15:AO:43:LEU:HD12	15:AO:56:LEU:HD22	1.94	0.50
25:BA:672:G:H8	25:BA:672:G:O5'	1.95	0.50
25:BA:718:C:N4	61:BA:4670:HOH:O	2.44	0.50
25:BA:2122:G:C6	25:BA:2211:U:N3	2.80	0.50
25:BA:2211:U:C2'	25:BA:2212:G:H5'	2.42	0.50
25:BA:2418:U:OP1	61:BA:4136:HOH:O	2.20	0.50
27:BD:166:GLN:HB2	27:BD:174:ILE:HG22	1.94	0.50
45:BZ:110:GLY:O	45:BZ:113:ALA:HB3	2.12	0.50
1:CA:377:G:OP1	16:CP:3:LYS:HD2	2.12	0.50
1:CA:677:U:H1'	11:CK:119:CYS:SG	2.51	0.50
1:CA:866:C:C4	1:CA:867:G:H1'	2.46	0.50
1:CA:1315:U:H2'	1:CA:1316:G:O4'	2.11	0.50
3:CC:18:TRP:HB3	3:CC:20:SER:O	2.12	0.50
3:CC:56:ASP:O	3:CC:57:ILE:HD12	2.12	0.50
7:CG:65:ALA:HB3	7:CG:124:LEU:HD23	1.94	0.50
13:CM:37:THR:HG21	13:CM:56:LEU:HA	1.94	0.50
19:CS:22:LEU:HB3	19:CS:27:GLU:CG	2.41	0.50
19:CS:41:VAL:HG13	19:CS:42:PRO:HD2	1.92	0.50
25:DA:491:G:H2'	25:DA:492:A:H8	1.76	0.50
25:DA:2267:A:H5''	25:DA:2268:A:H5'	1.93	0.50
29:DF:7:TYR:O	29:DF:22:ALA:N	2.45	0.50
1:AA:406:G:N3	4:AD:119:GLN:NE2	2.58	0.50
1:AA:620:C:H2'	1:AA:621:A:O4'	2.11	0.50
1:AA:657:G:C2	1:AA:658:G:C8	3.00	0.50
1:AA:836:G:P	18:AR:61:LYS:HZ1	2.33	0.50
25:BA:1359:U:H2'	25:BA:1656:A:C2	2.46	0.50
25:BA:1709:C:O2'	25:BA:2699:U:OP1	2.24	0.50
25:BA:2745:G:P	28:BE:203:LYS:HZ1	2.34	0.50
25:BA:2873:C:O2'	25:BA:2874:G:H5'	2.12	0.50
30:BG:179:PRO:HB2	50:B4:42:PHE:HE2	1.77	0.50
34:BO:68:GLU:OE2	34:BO:78:ARG:NH1	2.44	0.50
36:BQ:21:THR:HG21	36:BQ:101:ARG:HB2	1.93	0.50
37:BR:72:ASP:OD2	37:BR:75:LEU:HB2	2.11	0.50
1:CA:171:A:H2'	1:CA:172:A:C8	2.47	0.50
1:CA:192:U:O2'	20:CT:60:GLU:OE2	2.24	0.50
1:CA:364:A:H2'	1:CA:365:U:H6	1.77	0.50
1:CA:1038:C:O2'	1:CA:1039:C:H5'	2.12	0.50
3:CC:87:LEU:O	3:CC:91:LEU:N	2.34	0.50
3:CC:111:LEU:HD22	3:CC:146:ALA:HB2	1.93	0.50
4:CD:99:SER:O	4:CD:140:VAL:HG23	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:85:LEU:HB3	9:CI:92:TYR:HD2	1.76	0.50
13:CM:19:LEU:HD11	13:CM:56:LEU:HD11	1.93	0.50
25:DA:709:U:H2'	25:DA:710:G:C8	2.47	0.50
25:DA:910:A:C5	36:DQ:13:GLN:HG3	2.47	0.50
25:DA:2319:G:C2	38:DS:3:ARG:HA	2.46	0.50
25:DA:2540:C:H2'	25:DA:2541:A:O4'	2.11	0.50
28:DE:143:ASN:HD22	28:DE:147:PRO:CD	2.25	0.50
30:DG:5:VAL:HG13	30:DG:8:LYS:HD3	1.94	0.50
44:DY:49:VAL:CG2	44:DY:61:ILE:HG23	2.40	0.50
54:D8:9:GLY:O	54:D8:13:ARG:HG2	2.11	0.50
1:AA:67:C:O2'	1:AA:171:A:N3	2.34	0.49
1:AA:250:A:H4'	1:AA:251:G:O5'	2.12	0.49
1:AA:452:A:O2'	1:AA:453:A:OP2	2.23	0.49
1:AA:623:C:H2'	1:AA:624:C:C6	2.44	0.49
1:AA:1348:U:H4'	9:AI:120:ARG:HD2	1.94	0.49
2:AB:62:ALA:HB3	2:AB:225:ALA:HB3	1.93	0.49
2:AB:100:GLY:N	2:AB:176:GLU:OE2	2.37	0.49
2:AB:174:VAL:O	2:AB:178:ARG:HB2	2.12	0.49
16:AP:18:ARG:NH1	16:AP:32:TYR:OH	2.45	0.49
20:AT:59:ALA:O	20:AT:63:ILE:HG13	2.12	0.49
25:BA:933:C:OP1	25:BA:933:C:H4'	2.11	0.49
25:BA:2402:U:P	54:B8:35:GLN:HE22	2.34	0.49
1:CA:59:A:H5''	1:CA:60:A:C5'	2.42	0.49
1:CA:337:C:H2'	1:CA:338:A:H8	1.74	0.49
1:CA:457:C:H2'	1:CA:458:C:C6	2.47	0.49
1:CA:827:U:H2'	1:CA:859:A:H61	1.77	0.49
1:CA:875:C:H1'	8:CH:15:ASN:HD21	1.77	0.49
1:CA:921:U:O2	5:CE:19:MET:HB2	2.12	0.49
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.12	0.49
1:CA:1492:A:H5''	1:CA:1493:A:OP2	2.11	0.49
1:CA:1515:C:H2'	1:CA:1516:G:C8	2.47	0.49
2:CB:44:LEU:HD22	2:CB:44:LEU:H	1.77	0.49
25:DA:892:G:H2'	25:DA:893:C:O4'	2.12	0.49
25:DA:1507:A:O2'	25:DA:1508:A:O5'	2.29	0.49
25:DA:2647:U:H2'	25:DA:2648:C:C6	2.47	0.49
29:DF:152:GLU:HA	29:DF:190:GLU:OE2	2.12	0.49
30:DG:23:PHE:HB2	30:DG:25:TYR:CZ	2.47	0.49
31:DH:20:ALA:HB1	31:DH:21:PRO:HD2	1.94	0.49
36:DQ:18:LYS:O	36:DQ:98:LYS:NZ	2.24	0.49
54:D8:54:GLU:O	54:D8:58:ILE:HG13	2.12	0.49
1:AA:460:G:O6	1:AA:470:C:H5''	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1326:C:OP1	21:AU:17:THR:OG1	2.29	0.49
8:AH:96:GLY:H	8:AH:99:GLU:CD	2.15	0.49
17:AQ:26:GLN:HG2	17:AQ:37:LYS:HG2	1.93	0.49
19:AS:65:ASN:HD22	19:AS:65:ASN:N	2.08	0.49
20:AT:99:LEU:HA	20:AT:100:ILE:O	2.12	0.49
23:AX:54:U:H2'	23:AX:55:U:O4'	2.12	0.49
23:AX:61:C:H2'	23:AX:62:C:H6	1.75	0.49
25:BA:2041:A:OP2	51:B5:9:LYS:NZ	2.35	0.49
30:BG:15:VAL:HG13	30:BG:175:LEU:HB3	1.94	0.49
48:B2:44:LEU:HD23	48:B2:47:ASN:HA	1.94	0.49
1:CA:1417:G:O6	61:CA:4047:HOH:O	2.14	0.49
4:CD:98:GLU:HG2	4:CD:189:PRO:HG2	1.93	0.49
12:CL:11:VAL:HG11	17:CQ:36:ILE:HG21	1.94	0.49
16:CP:18:ARG:O	16:CP:20:VAL:HG23	2.12	0.49
25:DA:442:G:N2	29:DF:48:THR:HB	2.27	0.49
25:DA:2369:A:H2'	25:DA:2370:G:H8	1.76	0.49
31:DH:89:ILE:O	31:DH:129:THR:HG23	2.12	0.49
1:AA:20:U:H2'	1:AA:21:G:O4'	2.13	0.49
1:AA:692:U:O2'	1:AA:694:A:N7	2.31	0.49
1:AA:950:U:OP2	13:AM:102:ARG:HD3	2.13	0.49
1:AA:1260:C:O5'	1:AA:1284:C:H4'	2.13	0.49
2:AB:163:PHE:HA	2:AB:185:ILE:HG13	1.93	0.49
2:AB:213:LEU:HD22	2:AB:214:ILE:HD13	1.94	0.49
25:BA:32:C:O2'	25:BA:33:U:H5'	2.12	0.49
25:BA:1153:G:N3	25:BA:1153:G:H2'	2.27	0.49
1:CA:605:U:H2'	1:CA:606:G:C8	2.47	0.49
1:CA:628:G:H2'	1:CA:629:G:C8	2.48	0.49
1:CA:1129:C:H1'	1:CA:1130:A:N7	2.27	0.49
1:CA:1320:C:H2'	1:CA:1321:C:O4'	2.12	0.49
1:CA:1414:U:H3	1:CA:1486:G:H1	1.60	0.49
25:DA:440:G:H2'	25:DA:441:U:C6	2.47	0.49
25:DA:872:A:H2'	25:DA:873:G:O4'	2.11	0.49
25:DA:1221(A):C:C2	25:DA:1229:G:C2	3.00	0.49
25:DA:1857:G:O2'	25:DA:1885:A:N6	2.45	0.49
25:DA:1937:A:C8	25:DA:1939:U:H2'	2.46	0.49
1:AA:509:A:C8	1:AA:509:A:H3'	2.48	0.49
1:AA:991:U:H1'	1:AA:993:G:H8	1.78	0.49
1:AA:1127:G:H22	1:AA:1147:C:N4	2.10	0.49
25:BA:564:G:H2'	25:BA:565:C:H6	1.76	0.49
25:BA:610:C:OP2	35:BP:21:ARG:NH2	2.45	0.49
25:BA:831:A:H5'	25:BA:832:G:OP1	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:867:A:N3	25:BA:988:U:O2'	2.42	0.49
25:BA:1688:A:H2'	25:BA:1689:G:O4'	2.12	0.49
43:BX:88:LYS:NZ	43:BX:90:GLU:OE1	2.31	0.49
1:CA:441:A:H3'	1:CA:442:C:H6	1.76	0.49
1:CA:460:G:H1'	1:CA:472:A:H61	1.76	0.49
1:CA:650:G:C2'	1:CA:651:C:H5'	2.43	0.49
1:CA:1068:G:H8	1:CA:1068:G:OP2	1.94	0.49
1:CA:1157:A:N7	1:CA:1180:A:C6	2.80	0.49
3:CC:56:ASP:HB2	3:CC:67:THR:HB	1.94	0.49
5:CE:76:ILE:HG12	5:CE:118:ILE:HD11	1.93	0.49
9:CI:77:ILE:O	9:CI:81:ILE:HG22	2.12	0.49
25:DA:450:G:OP1	25:DA:1248:G:N2	2.45	0.49
25:DA:705:A:H1'	27:DD:9:TYR:CE1	2.48	0.49
25:DA:861:A:C2	25:DA:917:A:C4	3.00	0.49
26:DB:53:A:H8	26:DB:53:A:O5'	1.96	0.49
37:DR:56:LYS:NZ	37:DR:90:ARG:O	2.45	0.49
39:DT:16:ARG:HG3	39:DT:79:HIS:HA	1.95	0.49
39:DT:61:PHE:CE1	39:DT:76:PHE:HB2	2.48	0.49
41:DV:62:LEU:CD1	41:DV:95:LEU:HB2	2.42	0.49
54:D8:3:LYS:HB2	54:D8:64:TYR:OH	2.13	0.49
1:AA:517:G:N1	1:AA:533:A:OP2	2.41	0.49
1:AA:818:G:O2'	1:AA:819:A:H5'	2.12	0.49
1:AA:839:U:H3'	1:AA:840:C:H6	1.77	0.49
10:AJ:11:PHE:CE1	10:AJ:67:THR:HG22	2.44	0.49
18:AR:51:LEU:HD23	18:AR:52:PRO:HD2	1.94	0.49
20:AT:18:GLN:O	20:AT:22:ARG:HG3	2.12	0.49
25:BA:507:G:H1'	25:BA:532:A:N1	2.28	0.49
25:BA:581:G:OP1	33:BN:111:PRO:HD2	2.13	0.49
25:BA:1040:C:P	40:BU:54:LYS:HZ1	2.35	0.49
25:BA:1155:C:C5	25:BA:1156:G:C6	3.01	0.49
25:BA:1505:C:H4'	25:BA:1506:G:O5'	2.12	0.49
25:BA:2519:C:OP2	61:BA:4083:HOH:O	2.20	0.49
39:BT:105:LEU:HB2	39:BT:110:ILE:HG13	1.95	0.49
1:CA:41:G:H2'	1:CA:42:G:H8	1.76	0.49
1:CA:123:C:O2'	1:CA:290:C:O2	2.30	0.49
1:CA:187:C:H2'	1:CA:188:C:H6	1.76	0.49
1:CA:458:C:C2	1:CA:460:G:C8	3.01	0.49
1:CA:667:G:OP1	1:CA:732:C:O2'	2.26	0.49
1:CA:952:U:C4	13:CM:104:ARG:NH1	2.81	0.49
1:CA:1117:G:N2	1:CA:1180:A:O2'	2.43	0.49
2:CB:200:ILE:O	2:CB:200:ILE:HG12	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:179:ARG:O	3:CC:206:GLU:HA	2.13	0.49
4:CD:65:ARG:HG2	4:CD:75:PHE:CD1	2.47	0.49
5:CE:12:LEU:HB3	5:CE:31:LEU:HB2	1.95	0.49
7:CG:135:VAL:O	7:CG:139:GLU:N	2.31	0.49
9:CI:28:VAL:HA	9:CI:63:ILE:HB	1.93	0.49
25:DA:1339:G:N2	25:DA:1603:A:H1'	2.28	0.49
25:DA:1545:A:H2'	25:DA:1546:C:O4'	2.12	0.49
29:DF:9:ILE:O	29:DF:11:VAL:HG23	2.12	0.49
1:AA:153:C:H42	1:AA:169:C:N4	2.09	0.49
1:AA:1002:G:H3'	1:AA:1003:G:C8	2.48	0.49
1:AA:1052:U:H5''	1:AA:1053:G:OP2	2.11	0.49
1:AA:1392:G:H2'	1:AA:1393:U:H5'	1.95	0.49
2:AB:160:ASP:O	2:AB:183:PRO:HD2	2.13	0.49
25:BA:895:G:N9	25:BA:978:A:H8	2.11	0.49
25:BA:934:A:O2'	25:BA:935:C:OP2	2.29	0.49
25:BA:2303:U:H2'	25:BA:2304:C:C6	2.48	0.49
25:BA:2326:C:H2'	25:BA:2327:G:C8	2.48	0.49
28:BE:120:TRP:CE3	28:BE:155:LYS:HD3	2.46	0.49
36:BQ:56:ARG:HH11	36:BQ:56:ARG:HG3	1.78	0.49
39:BT:88:ILE:HG21	39:BT:91:ARG:NE	2.27	0.49
1:CA:689:C:OP1	11:CK:27:ASN:ND2	2.42	0.49
1:CA:953:G:C6	1:CA:1229:A:C6	3.01	0.49
1:CA:1001(A):G:N3	1:CA:1002:G:H1'	2.28	0.49
1:CA:1057:G:C4	1:CA:1204:A:C2	3.01	0.49
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.47	0.49
6:CF:68:PRO:HB2	6:CF:71:ARG:HG3	1.95	0.49
8:CH:20:TYR:HA	8:CH:65:TYR:CZ	2.48	0.49
12:CL:54:LYS:O	12:CL:70:ILE:HG13	2.13	0.49
15:CO:17:ARG:HH11	15:CO:17:ARG:HG3	1.78	0.49
16:CP:14:ASN:OD1	16:CP:16:HIS:HE1	1.94	0.49
23:CX:19:G:H4'	23:CX:20:U:OP2	2.13	0.49
25:DA:1488:G:N1	25:DA:1489:U:H5	2.09	0.49
25:DA:2227:A:OP1	27:DD:263:ARG:HD2	2.13	0.49
25:DA:2348:U:OP2	54:D8:42:ARG:NH2	2.45	0.49
27:DD:164:GLN:NE2	27:DD:176:ARG:HH22	2.10	0.49
30:DG:110:ALA:HA	30:DG:140:ILE:O	2.12	0.49
44:DY:51:VAL:HG13	44:DY:56:PRO:HA	1.94	0.49
1:AA:102:G:H2'	1:AA:103:C:H6	1.77	0.49
1:AA:649:G:H2'	1:AA:650:G:C8	2.48	0.49
1:AA:977:A:O2'	1:AA:979:C:OP2	2.26	0.49
8:AH:33:GLU:O	8:AH:37:ARG:N	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:510:C:H2'	25:BA:511:C:C6	2.48	0.49
25:BA:794:U:O2	25:BA:2036:A:H1'	2.13	0.49
25:BA:927:G:C2	25:BA:928:G:C8	3.01	0.49
25:BA:1001:G:OP2	36:BQ:87:LYS:HE2	2.13	0.49
25:BA:1699:A:O2'	25:BA:1700:G:H5'	2.13	0.49
25:BA:1829:U:H5'	27:BD:259:THR:CG2	2.41	0.49
30:BG:3:LEU:HD22	50:B4:25:TYR:CE1	2.48	0.49
1:CA:598:U:H4'	8:CH:94:TYR:CD2	2.47	0.49
1:CA:692:U:O2'	1:CA:694:A:N7	2.33	0.49
1:CA:999:C:H4'	1:CA:999:C:OP1	2.11	0.49
1:CA:1038:C:C2'	1:CA:1039:C:H5'	2.42	0.49
1:CA:1243:C:H2'	1:CA:1244:C:H6	1.77	0.49
1:CA:1277:C:HO2'	1:CA:1279:A:H8	1.57	0.49
7:CG:111:ARG:HB3	7:CG:113:GLU:OE2	2.12	0.49
10:CJ:42:THR:CG2	10:CJ:68:HIS:HD2	2.26	0.49
14:CN:34:TYR:N	14:CN:39:LEU:O	2.40	0.49
21:CU:10:ARG:HG3	21:CU:10:ARG:HH11	1.77	0.49
25:DA:468:G:N7	53:D7:39:ARG:NH2	2.47	0.49
25:DA:568:U:H5'	25:DA:945:A:N1	2.27	0.49
25:DA:585:G:O2'	25:DA:1254:A:N6	2.40	0.49
25:DA:740:U:H2'	25:DA:741:G:C8	2.47	0.49
25:DA:1418:G:H8	25:DA:1418:G:O5'	1.96	0.49
25:DA:1579:A:H2'	25:DA:1580:A:C8	2.47	0.49
25:DA:1927:A:H2'	25:DA:1928:A:C8	2.48	0.49
25:DA:2646:C:H2'	25:DA:2647:U:O4'	2.13	0.49
30:DG:66:GLN:HG3	50:D4:1:MET:HE3	1.95	0.49
35:DP:83:VAL:HG12	35:DP:112:LEU:HD21	1.94	0.49
36:DQ:66:ILE:HG12	36:DQ:104:PHE:CE2	2.48	0.49
36:DQ:111:GLU:O	36:DQ:115:MET:HG2	2.12	0.49
48:D2:48:HIS:O	48:D2:52:ASP:HB2	2.12	0.49
1:AA:191:G:C6	1:AA:192:U:C4	3.00	0.49
1:AA:384:G:H2'	1:AA:385:C:H6	1.76	0.49
2:AB:74:LYS:NZ	2:AB:205:ASP:OD2	2.46	0.49
3:AC:44:GLU:HG2	3:AC:52:LEU:HD22	1.94	0.49
7:AG:51:GLN:O	7:AG:55:GLY:HA2	2.12	0.49
19:AS:64:GLU:O	19:AS:67:VAL:HG23	2.12	0.49
25:BA:64:C:H2'	25:BA:65:C:H6	1.77	0.49
25:BA:831:A:C5	27:BD:229:VAL:HG21	2.48	0.49
25:BA:926:G:H2'	25:BA:927:G:O4'	2.12	0.49
25:BA:1224:C:O2'	25:BA:1225:C:H5'	2.11	0.49
25:BA:2486:C:H5''	25:BA:2487:C:OP2	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2584:A:N7	28:BE:145:LYS:HB2	2.28	0.49
25:BA:2623:U:H2'	51:B5:2:ALA:O	2.12	0.49
38:BS:29:PHE:HD1	38:BS:92:TYR:HH	1.61	0.49
45:BZ:161:VAL:HG13	45:BZ:161:VAL:O	2.12	0.49
53:B7:34:ARG:NH1	53:B7:41:ARG:O	2.46	0.49
1:CA:736:C:H2'	1:CA:737:A:C8	2.48	0.49
1:CA:804:U:H5''	1:CA:805:C:OP2	2.13	0.49
1:CA:1012:U:H2'	1:CA:1013:G:C8	2.47	0.49
1:CA:1329:A:P	13:CM:28:ALA:HB3	2.52	0.49
1:CA:1399:C:C2	1:CA:1502:A:N6	2.80	0.49
3:CC:58:GLU:O	3:CC:59:ARG:HG3	2.12	0.49
4:CD:100:ARG:NH2	4:CD:102:ASP:OD2	2.46	0.49
25:DA:84:A:N1	25:DA:98:G:O2'	2.43	0.49
25:DA:708:C:H42	25:DA:723:G:H1	1.61	0.49
25:DA:753:C:O5'	25:DA:753:C:H6	1.95	0.49
25:DA:784:A:O4'	27:DD:227:ASN:ND2	2.45	0.49
25:DA:1682:G:H1'	25:DA:1762:A:C6	2.47	0.49
28:DE:52:LEU:HB2	28:DE:76:ARG:HB2	1.93	0.49
1:AA:141:A:H2	1:AA:222:U:O2	1.96	0.49
1:AA:433:C:H2'	1:AA:434:U:C6	2.47	0.49
1:AA:863:U:H2'	1:AA:865:A:OP2	2.12	0.49
1:AA:1030(C):G:H2'	1:AA:1030(D):A:C8	2.41	0.49
1:AA:1031:G:H2'	1:AA:1032:G:H8	1.78	0.49
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.95	0.49
9:AI:4:TYR:CZ	9:AI:88:TYR:HD1	2.31	0.49
11:AK:82:VAL:HB	11:AK:108:ILE:HG12	1.94	0.49
25:BA:155:C:OP2	25:BA:155:C:H6	1.96	0.49
25:BA:1821:C:H5''	25:BA:1822:A:OP1	2.13	0.49
25:BA:1900:G:H2'	25:BA:1901:C:C6	2.47	0.49
25:BA:2564:U:C2	25:BA:2566:U:H5'	2.48	0.49
47:B1:72:GLU:O	47:B1:76:ARG:HG3	2.13	0.49
1:CA:671:G:H2'	1:CA:672:U:O4'	2.13	0.49
1:CA:785:G:C2'	1:CA:786:G:H5'	2.42	0.49
1:CA:1121:U:C4	1:CA:1122:U:C5	3.01	0.49
1:CA:1170:A:O2'	1:CA:1171:G:C8	2.66	0.49
2:CB:53:ARG:O	2:CB:56:ARG:HG2	2.13	0.49
4:CD:121:VAL:O	4:CD:134:ASP:HA	2.13	0.49
18:CR:52:PRO:O	18:CR:56:THR:HG23	2.13	0.49
19:CS:28:LYS:CB	19:CS:29:ARG:HA	2.43	0.49
19:CS:64:GLU:O	19:CS:67:VAL:HG23	2.12	0.49
25:DA:947:G:N2	25:DA:971:C:C2	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:953:A:C2	25:DA:954:G:C8	3.00	0.49
25:DA:2356:C:H2'	25:DA:2357:U:O4'	2.12	0.49
25:DA:2716:U:O2'	25:DA:2717:G:H5'	2.13	0.49
25:DA:2812:G:H2'	25:DA:2813:A:C8	2.48	0.49
27:DD:108:PRO:HB3	27:DD:143:HIS:CE1	2.47	0.49
31:DH:83:TYR:CE2	31:DH:138:LYS:HB2	2.48	0.49
33:DN:42:TRP:CH2	33:DN:44:PRO:HB3	2.48	0.49
37:DR:87:TYR:OH	37:DR:116:LEU:HB3	2.13	0.49
25:BA:359:C:O5'	25:BA:359:C:H6	1.96	0.49
25:BA:1003:U:HO2'	25:BA:1004:A:P	2.36	0.49
25:BA:2713:C:H2'	25:BA:2714:U:H2'	1.95	0.49
25:BA:2843:G:H4'	25:BA:2844:G:OP2	2.13	0.49
25:BA:2904:U:O5'	25:BA:2904:U:H6	1.96	0.49
28:BE:27:LEU:HD22	39:BT:1:MET:HE3	1.94	0.49
31:BH:149:ARG:NH1	31:BH:167:GLU:OE2	2.46	0.49
32:BI:92:VAL:HG11	32:BI:144:VAL:HG11	1.94	0.49
50:B4:59:PHE:HA	50:B4:61:ARG:H	1.78	0.49
1:CA:97:G:HO2'	1:CA:98:G:H8	1.61	0.49
1:CA:625:G:H2'	1:CA:626:U:H6	1.77	0.49
1:CA:1142:G:C2	1:CA:1143:G:H1'	2.47	0.49
1:CA:1256:A:H2	1:CA:1277:C:H42	1.60	0.49
1:CA:1291:G:H4'	9:CI:39:GLY:HA3	1.94	0.49
1:CA:1318:A:H5''	19:CS:3:ARG:NH2	2.10	0.49
3:CC:29:TYR:OH	14:CN:54:PRO:O	2.22	0.49
13:CM:93:ARG:NH1	25:DA:888:C:OP1	2.46	0.49
15:CO:5:LYS:H	15:CO:5:LYS:CD	2.26	0.49
59:CX:101:FME:HCN	25:DA:2451:A:C2	2.45	0.49
25:DA:176:G:O2'	25:DA:177:G:H5'	2.12	0.49
25:DA:1041:C:N3	25:DA:1114:G:N2	2.57	0.49
25:DA:2659:G:N2	25:DA:2661:G:H3'	2.28	0.49
26:DB:24:G:H4'	26:DB:25:A:N7	2.28	0.49
26:DB:45:A:OP2	30:DG:96:ARG:NH2	2.46	0.49
30:DG:114:ILE:HD12	30:DG:117:PHE:HD2	1.78	0.49
45:DZ:28:MET:HB3	45:DZ:88:PHE:HB2	1.95	0.49
1:AA:145:G:H2'	1:AA:146:G:H5''	1.95	0.48
1:AA:410:G:H5''	1:AA:411:A:OP1	2.13	0.48
1:AA:737:A:H5''	6:AF:92:LYS:HD3	1.95	0.48
1:AA:1104:G:H4'	2:AB:111:ARG:NH1	2.28	0.48
1:AA:1118:C:OP1	9:AI:104:ARG:NH1	2.46	0.48
1:AA:1123:A:H4'	10:AJ:37:PRO:HD2	1.95	0.48
1:AA:1422:G:O3'	34:BO:49:ARG:NH1	2.37	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:36:ASP:OD2	5:AE:40:ARG:HB2	2.13	0.48
9:AI:17:VAL:HG21	9:AI:81:ILE:HB	1.95	0.48
14:AN:23:ARG:HH11	14:AN:30:ALA:HB2	1.77	0.48
23:AX:4:G:H1	23:AX:69:C:N4	2.10	0.48
25:BA:672:G:H2'	25:BA:673:G:O4'	2.13	0.48
25:BA:1506:G:C3'	25:BA:1507:A:H5''	2.43	0.48
25:BA:1952:G:O2'	25:BA:1990:G:O6	2.18	0.48
1:CA:540:G:H2'	1:CA:541:G:H8	1.78	0.48
1:CA:586:C:HO2'	1:CA:878:G:H4'	1.78	0.48
3:CC:113:ALA:HB2	3:CC:202:ILE:HG13	1.95	0.48
6:CF:10:LEU:HD12	6:CF:85:VAL:HA	1.94	0.48
24:CW:9:MVA:HG13	24:CW:10:2QY:H82	1.95	0.48
25:DA:1022:G:C5	25:DA:1140:C:C4	3.01	0.48
34:DO:29:ASN:N	34:DO:29:ASN:OD1	2.46	0.48
42:DW:50:VAL:HG12	42:DW:105:VAL:HB	1.96	0.48
44:DY:44:ILE:HA	44:DY:63:LYS:O	2.13	0.48
1:AA:202:U:H3'	1:AA:203:U:H6	1.78	0.48
1:AA:457:C:H2'	1:AA:458:C:C5	2.48	0.48
8:AH:73:ASP:OD2	8:AH:75:ARG:NH1	2.46	0.48
11:AK:48:ILE:O	11:AK:50:TYR:N	2.45	0.48
25:BA:374:U:H2'	25:BA:375:G:O4'	2.12	0.48
25:BA:1790:A:H5''	25:BA:2728:C:H1'	1.95	0.48
25:BA:1834:A:O2'	27:BD:259:THR:HG21	2.13	0.48
25:BA:1941:A:H5''	25:BA:1942:C:OP2	2.13	0.48
25:BA:2481:A:C2	25:BA:2494:G:C8	3.01	0.48
1:CA:96:U:O2'	1:CA:97:G:H5'	2.13	0.48
1:CA:202:U:O2'	1:CA:203:U:O5'	2.17	0.48
1:CA:424:G:H2'	1:CA:425:G:C8	2.47	0.48
1:CA:625:G:H2'	1:CA:626:U:C6	2.48	0.48
1:CA:745:C:OP1	1:CA:851:G:O2'	2.20	0.48
1:CA:1058:G:N2	10:CJ:53:PRO:HG3	2.28	0.48
11:CK:110:ASP:HB3	18:CR:85:LEU:HB3	1.93	0.48
17:CQ:62:SER:OG	17:CQ:72:ARG:HD3	2.13	0.48
20:CT:50:GLU:HG3	20:CT:100:ILE:HD13	1.93	0.48
25:DA:952:G:C6	25:DA:966:G:C6	3.01	0.48
25:DA:997:G:OP2	40:DU:58:ARG:NH1	2.40	0.48
25:DA:1786:A:H1'	25:DA:1938:A:N6	2.28	0.48
25:DA:1819:A:H5''	27:DD:161:THR:HG21	1.93	0.48
25:DA:2257:U:O2'	25:DA:2258:C:H5'	2.12	0.48
28:DE:108:SER:HB3	28:DE:165:VAL:HG21	1.94	0.48
28:DE:120:TRP:CE3	28:DE:155:LYS:HD3	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DG:16:ARG:NE	30:DG:31:VAL:HG11	2.26	0.48
31:DH:95:ARG:HB2	31:DH:128:PRO:CB	2.44	0.48
33:DN:38:HIS:NE2	33:DN:50:ASP:OD2	2.25	0.48
43:DX:31:HIS:CD2	43:DX:33:LYS:H	2.32	0.48
49:D3:10:LYS:NZ	49:D3:15:TYR:OH	2.41	0.48
2:AB:27:LYS:NZ	2:AB:193:ASP:OD2	2.45	0.48
2:AB:220:ASP:O	2:AB:223:ILE:HG12	2.13	0.48
3:AC:15:THR:CG2	3:AC:181:ASN:HA	2.40	0.48
4:AD:20:TYR:HA	4:AD:26:CYS:SG	2.53	0.48
14:AN:26:ARG:NH2	14:AN:47:LEU:HD21	2.28	0.48
19:AS:61:TYR:CE2	19:AS:63:THR:HG23	2.48	0.48
25:BA:53:G:O2'	53:B7:35:ARG:HD3	2.13	0.48
25:BA:1533:G:H1	25:BA:1548:C:H42	1.61	0.48
25:BA:1899:A:H5'	25:BA:1900:G:OP2	2.13	0.48
25:BA:2343:G:O2'	46:B0:43:THR:HG22	2.13	0.48
35:BP:148:LEU:H	35:BP:148:LEU:HD23	1.79	0.48
36:BQ:7:MET:HE3	36:BQ:7:MET:HB2	1.82	0.48
39:BT:31:SER:OG	39:BT:85:LYS:HE3	2.13	0.48
49:B3:3:ARG:HD3	49:B3:60:GLU:CD	2.34	0.48
1:CA:557:G:C6	1:CA:558:G:C6	3.01	0.48
1:CA:991:U:H3'	1:CA:1212:U:H3	1.78	0.48
1:CA:1104:G:H4'	2:CB:111:ARG:HH11	1.77	0.48
1:CA:1118:C:H2'	1:CA:1119:C:H6	1.77	0.48
1:CA:1264:C:H2'	1:CA:1265:G:H8	1.78	0.48
4:CD:200:GLU:O	4:CD:204:ILE:HG12	2.13	0.48
5:CE:80:ILE:HG22	5:CE:91:LEU:HB2	1.94	0.48
6:CF:82:ARG:HB2	6:CF:85:VAL:HG23	1.95	0.48
13:CM:16:ASP:OD1	13:CM:16:ASP:N	2.46	0.48
14:CN:6:LEU:HB3	14:CN:23:ARG:HH21	1.77	0.48
25:DA:83:G:OP2	44:DY:95:LYS:NZ	2.31	0.48
25:DA:291:C:H2'	25:DA:292:C:H5'	1.95	0.48
25:DA:815:C:H2'	25:DA:816:C:C6	2.48	0.48
25:DA:1027:A:C6	25:DA:1126:A:C4	3.01	0.48
26:DB:78:A:H2'	26:DB:79:C:O4'	2.13	0.48
31:DH:102:ALA:HA	31:DH:117:PRO:HD3	1.95	0.48
1:AA:113:G:H2'	1:AA:114:U:C6	2.48	0.48
1:AA:1030(A):G:H2'	1:AA:1030(C):G:OP2	2.13	0.48
1:AA:1106:G:C6	1:AA:1107:C:C4	3.00	0.48
4:AD:25:ARG:HG2	4:AD:25:ARG:O	2.12	0.48
13:AM:37:THR:HG21	13:AM:56:LEU:HA	1.95	0.48
23:AX:19:G:C5	23:AX:57:A:C2	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:173:C:H2'	25:BA:174:U:C6	2.48	0.48
25:BA:279:G:H5''	25:BA:279:G:H8	1.78	0.48
25:BA:922:G:H1	25:BA:948:C:H42	1.62	0.48
25:BA:1346:U:H4'	25:BA:1347:A:H5'	1.94	0.48
31:BH:67:LEU:O	31:BH:71:LEU:HB2	2.14	0.48
34:BO:80:ASP:OD1	39:BT:64:ARG:NH2	2.46	0.48
1:CA:460:G:C6	1:CA:470:C:H5''	2.47	0.48
1:CA:1093:A:H5''	1:CA:1094:G:OP2	2.13	0.48
5:CE:88:LYS:HB3	5:CE:123:LEU:HB2	1.96	0.48
14:CN:32:SER:O	14:CN:40:CYS:HA	2.13	0.48
25:DA:272:G:H4'	25:DA:272(A):U:H5''	1.94	0.48
25:DA:1197:G:H2'	25:DA:1198:U:C6	2.48	0.48
25:DA:2740:A:C6	25:DA:2741:A:C6	3.01	0.48
26:DB:42:C:O2'	30:DG:66:GLN:HG2	2.13	0.48
26:DB:55:U:O3'	30:DG:27:ASN:ND2	2.46	0.48
27:DD:134:ARG:NH1	27:DD:188:GLU:OE2	2.45	0.48
32:DI:72:LEU:HA	32:DI:75:LEU:HD22	1.96	0.48
40:DU:79:PHE:CZ	40:DU:83:LEU:HD21	2.48	0.48
41:DV:60:GLU:OE2	41:DV:97:LYS:NZ	2.30	0.48
47:D1:3:LYS:HB2	47:D1:61:ARG:HH11	1.77	0.48
1:AA:1134:G:H2'	1:AA:1134:G:N3	2.29	0.48
11:AK:92:GLU:O	11:AK:95:ILE:HG13	2.13	0.48
23:AX:19:G:H4'	23:AX:20:U:OP2	2.12	0.48
25:BA:1702:A:H3'	25:BA:1703:C:C6	2.48	0.48
25:BA:1913:G:H2'	25:BA:1914:C:C6	2.49	0.48
25:BA:2104:A:H2'	25:BA:2105:G:O4'	2.13	0.48
61:BA:3803:HOH:O	51:B5:15:ARG:HG2	2.13	0.48
27:BD:133:LEU:HG	27:BD:189:CYS:O	2.13	0.48
28:BE:47:VAL:HG23	28:BE:84:PHE:O	2.12	0.48
45:BZ:107:THR:HG21	45:BZ:112:ARG:HH21	1.78	0.48
1:CA:189:G:C5	1:CA:189(A):C:C4	3.00	0.48
1:CA:397:A:H3'	1:CA:397:A:N3	2.27	0.48
1:CA:617:G:H4'	16:CP:44:THR:O	2.12	0.48
1:CA:960:U:H2'	1:CA:960:U:O2	2.12	0.48
1:CA:1004:A:H62	1:CA:1037:C:H2'	1.79	0.48
1:CA:1041:A:N6	1:CA:1042:G:C6	2.81	0.48
1:CA:1075:C:C2'	1:CA:1076:C:H5'	2.43	0.48
1:CA:1169:A:H8	1:CA:1169:A:H3'	1.78	0.48
12:CL:110:VAL:CG2	12:CL:120:TYR:HB3	2.43	0.48
25:DA:94(A):G:N2	48:D2:47:ASN:OD1	2.45	0.48
25:DA:172:C:H2'	25:DA:173:G:C8	2.38	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:244:A:H2'	25:DA:245:G:O4'	2.13	0.48
25:DA:489:G:H2'	25:DA:491:G:O4'	2.14	0.48
25:DA:2271:G:H2'	25:DA:2272:U:C6	2.48	0.48
25:DA:2632:A:O2'	25:DA:2811:G:O2'	2.20	0.48
25:DA:2722:G:H2'	25:DA:2723:C:C6	2.49	0.48
25:DA:2742:C:OP1	55:D9:35:ARG:HD3	2.14	0.48
26:DB:42:C:C4	26:DB:43:C:C4	3.01	0.48
39:DT:23:ARG:HG3	39:DT:120:ARG:NH1	2.29	0.48
1:AA:300:A:O2'	1:AA:564:C:N3	2.38	0.48
1:AA:391:G:C6	1:AA:392:G:C5	3.01	0.48
2:AB:32:ILE:HD13	2:AB:40:HIS:CD2	2.48	0.48
2:AB:95:GLN:HG3	2:AB:147:LYS:HD3	1.94	0.48
2:AB:180:LEU:O	2:AB:181:PHE:HB2	2.14	0.48
2:AB:192:SER:O	2:AB:194:PRO:HD3	2.14	0.48
5:AE:105:VAL:HG21	5:AE:128:PRO:HB3	1.96	0.48
16:AP:13:HIS:O	16:AP:42:ARG:NH2	2.47	0.48
25:BA:403:C:H2'	25:BA:404:C:C6	2.47	0.48
25:BA:2605:U:H2'	25:BA:2606:C:C6	2.49	0.48
28:BE:173:VAL:CG2	28:BE:185:LYS:HB2	2.44	0.48
28:BE:174:ASP:OD1	28:BE:175:VAL:N	2.46	0.48
31:BH:69:ARG:HG3	31:BH:70:THR:N	2.28	0.48
32:BI:104:GLN:O	32:BI:106:GLY:N	2.35	0.48
1:CA:504:C:H1'	1:CA:510:A:C4	2.49	0.48
1:CA:977:A:O2'	1:CA:979:C:OP2	2.20	0.48
1:CA:1458:G:H5'	20:CT:32:ALA:HB2	1.96	0.48
25:DA:67:U:H2'	25:DA:68:G:O4'	2.13	0.48
25:DA:370:G:OP2	61:DA:3768:HOH:O	2.20	0.48
25:DA:384:U:H2'	25:DA:385:C:H6	1.78	0.48
25:DA:528:A:C2	25:DA:2042:A:H2'	2.48	0.48
25:DA:1023:U:H4'	25:DA:1123:C:OP1	2.13	0.48
25:DA:1125:G:H5'	55:D9:37:GLY:HA2	1.96	0.48
30:DG:38:VAL:HG22	30:DG:93:THR:HG23	1.95	0.48
39:DT:88:ILE:HG13	39:DT:91:ARG:NH2	2.28	0.48
1:AA:35:G:O2'	12:AL:118:SER:O	2.23	0.48
1:AA:308:C:H2'	1:AA:309:G:H8	1.78	0.48
1:AA:438:G:O2'	1:AA:494:U:O4	2.19	0.48
1:AA:728:A:H2'	1:AA:729:A:C8	2.49	0.48
1:AA:738:C:H2'	1:AA:739:C:C6	2.47	0.48
1:AA:901:A:C5	1:AA:902:G:H1'	2.48	0.48
1:AA:1086:U:C2'	1:AA:1087:G:H5'	2.43	0.48
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:37:PRO:HA	10:AJ:72:VAL:HG12	1.96	0.48
13:AM:56:LEU:O	13:AM:60:VAL:HG23	2.13	0.48
25:BA:8:A:H2'	25:BA:9:U:C6	2.48	0.48
32:BI:117:GLU:HG3	32:BI:118:LYS:H	1.77	0.48
35:BP:81:GLN:HB2	35:BP:110:TYR:CD2	2.49	0.48
45:BZ:150:LEU:HB3	45:BZ:171:ILE:HD11	1.96	0.48
49:B3:59:VAL:O	49:B3:60:GLU:HG2	2.13	0.48
55:B9:13:LYS:HD2	55:B9:28:GLU:OE2	2.14	0.48
1:CA:1239:A:H62	1:CA:1299:A:H62	1.60	0.48
7:CG:62:PHE:HA	7:CG:124:LEU:HD22	1.96	0.48
9:CI:96:LEU:O	9:CI:100:GLY:N	2.47	0.48
12:CL:24:VAL:HG12	12:CL:24:VAL:O	2.14	0.48
15:CO:5:LYS:H	15:CO:5:LYS:HD2	1.78	0.48
25:DA:361:G:O2'	25:DA:362:U:H5'	2.13	0.48
25:DA:454:A:H4'	25:DA:455:C:OP2	2.12	0.48
25:DA:1142(A):A:C8	25:DA:1144:G:N7	2.81	0.48
25:DA:1289:C:H2'	25:DA:1290:C:C6	2.47	0.48
25:DA:1839:G:C8	25:DA:1927:A:H1'	2.48	0.48
25:DA:2299:G:H2'	25:DA:2300:G:H8	1.79	0.48
26:DB:12:C:O5'	26:DB:12:C:H6	1.96	0.48
28:DE:28:ALA:HB3	28:DE:93:VAL:HG12	1.95	0.48
36:DQ:133:ARG:HG2	36:DQ:134:ARG:N	2.27	0.48
41:DV:65:GLY:HA3	41:DV:91:TYR:CZ	2.48	0.48
49:D3:46:ASN:O	49:D3:50:VAL:HG22	2.14	0.48
1:AA:346:G:N1	1:AA:347:G:H1'	2.28	0.48
1:AA:1020:U:H2'	1:AA:1021:G:C8	2.49	0.48
1:AA:1030(C):G:N7	1:AA:1031:G:C2	2.82	0.48
2:AB:20:GLU:HG2	2:AB:191:ASP:HB3	1.94	0.48
8:AH:104:ARG:HG3	8:AH:138:TRP:CD2	2.48	0.48
8:AH:124:ALA:O	8:AH:128:GLY:N	2.47	0.48
19:AS:65:ASN:HD22	19:AS:65:ASN:H	1.61	0.48
25:BA:125:A:H5'	25:BA:126:C:O4'	2.14	0.48
25:BA:160:G:O2'	25:BA:161:C:H5'	2.14	0.48
25:BA:553:A:N1	25:BA:2064:A:H2'	2.28	0.48
25:BA:927:G:C2'	25:BA:928:G:H5'	2.44	0.48
25:BA:2038:U:H1'	51:B5:6:VAL:HG13	1.96	0.48
25:BA:2352:G:H2'	25:BA:2353:G:H8	1.78	0.48
25:BA:2857:U:OP1	39:BT:98:LYS:NZ	2.41	0.48
32:BI:77:LEU:CB	32:BI:142:VAL:HG12	2.44	0.48
51:B5:11:THR:HG23	51:B5:15:ARG:HB3	1.95	0.48
51:B5:48:GLU:OE1	51:B5:48:GLU:HA	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:364:A:H2'	1:CA:365:U:C6	2.49	0.48
1:CA:839:U:H5''	1:CA:840:C:C5	2.48	0.48
1:CA:840:C:H4'	1:CA:841:U:OP1	2.13	0.48
1:CA:1028:C:C2	1:CA:1033:G:N1	2.80	0.48
1:CA:1121:U:H2'	1:CA:1122:U:O4'	2.13	0.48
2:CB:170:GLU:O	2:CB:174:VAL:HG23	2.13	0.48
3:CC:134:ILE:HD11	3:CC:153:VAL:HG23	1.94	0.48
8:CH:61:VAL:HG12	8:CH:63:LEU:HD22	1.95	0.48
25:DA:574:C:OP1	61:DA:3792:HOH:O	2.20	0.48
25:DA:1452:A:OP2	61:DA:4348:HOH:O	2.20	0.48
25:DA:1932:A:H2'	25:DA:1933:G:O4'	2.13	0.48
25:DA:2735:G:H2'	25:DA:2736:G:H8	1.79	0.48
28:DE:38:THR:O	28:DE:42:ASP:N	2.39	0.48
37:DR:38:VAL:HB	37:DR:39:PRO:HD3	1.96	0.48
44:DY:102:CYS:SG	44:DY:103:GLY:N	2.87	0.48
45:DZ:153:SER:OG	45:DZ:154:ASP:OD1	2.23	0.48
48:D2:29:LYS:HE2	48:D2:57:ILE:HG21	1.96	0.48
49:D3:23:LEU:HD13	49:D3:50:VAL:HG11	1.96	0.48
1:AA:836:G:H1	1:AA:850:U:H3	1.60	0.48
1:AA:991:U:O2'	1:AA:992:U:P	2.72	0.48
1:AA:1004:A:N7	1:AA:1036:G:N2	2.62	0.48
5:AE:152:ARG:HA	8:AH:64:LYS:NZ	2.29	0.48
12:AL:79:GLU:HB3	12:AL:80:HIS:HD2	1.78	0.48
13:AM:97:PRO:HG2	13:AM:103:THR:HG22	1.96	0.48
15:AO:48:LYS:HA	15:AO:48:LYS:HD2	1.75	0.48
16:AP:22:THR:HA	16:AP:33:ILE:HG12	1.94	0.48
25:BA:747:G:H2'	25:BA:748:G:O4'	2.14	0.48
25:BA:1537:G:O2'	27:BD:101:GLU:HB2	2.13	0.48
25:BA:2650:G:P	28:BE:82:ARG:HH22	2.37	0.48
25:BA:2798:C:H2'	25:BA:2799:U:O4'	2.14	0.48
26:BB:66:A:H61	26:BB:109:C:H5'	1.79	0.48
26:BB:75:G:H5''	26:BB:75:G:H8	1.79	0.48
54:B8:39:LYS:O	54:B8:43:GLN:HG3	2.14	0.48
1:CA:297:G:N2	1:CA:300:A:OP2	2.45	0.48
1:CA:625:G:O2'	1:CA:626:U:H5'	2.14	0.48
1:CA:1026:G:H3'	1:CA:1026:G:N3	2.29	0.48
1:CA:1027:C:C2	1:CA:1034:G:N2	2.68	0.48
1:CA:1119:C:C2	1:CA:1154:G:O6	2.66	0.48
10:CJ:65:LEU:HD12	14:CN:55:GLY:O	2.14	0.48
13:CM:3:ARG:HE	13:CM:4:ILE:HG22	1.79	0.48
13:CM:10:PRO:HB2	13:CM:13:LYS:HB2	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:22:ARG:HA	21:CU:23:PRO:HD3	1.69	0.48
25:DA:1614:A:C2	42:DW:93:ALA:HB2	2.49	0.48
29:DF:51:THR:HG23	29:DF:92:PRO:HG2	1.96	0.48
31:DH:86:GLU:OE1	31:DH:130:ARG:HD3	2.13	0.48
38:DS:88:ASP:OD1	38:DS:90:GLY:N	2.42	0.48
1:AA:15:G:H5'	1:AA:1396:A:O2'	2.13	0.48
1:AA:598:U:H2'	1:AA:599:C:C6	2.48	0.48
2:AB:24:TRP:CE3	2:AB:26:PRO:HA	2.48	0.48
2:AB:71:VAL:HG13	2:AB:93:VAL:HG21	1.95	0.48
4:AD:188:LEU:HD23	4:AD:188:LEU:H	1.79	0.48
10:AJ:30:SER:O	10:AJ:81:THR:HG23	2.14	0.48
11:AK:70:LYS:NZ	11:AK:70:LYS:HB2	2.28	0.48
12:AL:34:ARG:HG2	12:AL:35:GLY:N	2.29	0.48
25:BA:202:A:H2'	25:BA:203:G:O4'	2.14	0.48
25:BA:1462:G:O2'	25:BA:1463:C:OP2	2.32	0.48
29:BF:60:SER:OG	29:BF:61:GLY:N	2.47	0.48
45:BZ:8:TYR:HB2	45:BZ:38:TYR:CE2	2.49	0.48
1:CA:714:G:H2'	1:CA:715:A:C8	2.49	0.48
1:CA:1067:A:N3	1:CA:1068:G:H1'	2.29	0.48
1:CA:1125:U:C2	10:CJ:38:ILE:HD13	2.49	0.48
1:CA:1304:G:C6	1:CA:1305:G:N1	2.81	0.48
4:CD:15:GLU:HG2	4:CD:63:LYS:HB3	1.96	0.48
4:CD:117:ALA:O	4:CD:121:VAL:HG23	2.13	0.48
7:CG:100:ALA:O	7:CG:104:LEU:HD13	2.13	0.48
25:DA:644:A:H4'	25:DA:645:C:N4	2.29	0.48
25:DA:937:U:H2'	25:DA:938:G:O4'	2.14	0.48
25:DA:1348:G:O6	25:DA:1349:A:N6	2.47	0.48
25:DA:1412:A:H2'	25:DA:1413:G:C8	2.49	0.48
25:DA:1488:G:C5	25:DA:1489:U:H5	2.22	0.48
25:DA:2461:C:H2'	25:DA:2462:U:C6	2.49	0.48
25:DA:2647:U:H2'	25:DA:2648:C:H6	1.79	0.48
26:DB:73:A:C4	26:DB:105:A:C2	3.01	0.48
33:DN:71:ILE:HG21	33:DN:84:LYS:HB3	1.95	0.48
35:DP:92:GLU:HA	35:DP:123:LEU:HD21	1.96	0.48
45:DZ:54:HIS:NE2	45:DZ:123:ASP:HB3	2.28	0.48
1:AA:472:A:N6	1:AA:473:G:C2	2.82	0.47
1:AA:880:C:OP1	12:AL:8:ASN:ND2	2.45	0.47
1:AA:1292:U:C2'	1:AA:1293:G:H5'	2.44	0.47
5:AE:12:LEU:HD22	5:AE:13:ILE:N	2.29	0.47
12:AL:25:PRO:HD2	12:AL:98:TYR:OH	2.14	0.47
25:BA:615:G:O2'	54:B8:4:MET:HG3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2363:G:O6	54:B8:39:LYS:HG3	2.14	0.47
1:CA:1106:G:H2'	1:CA:1107:C:C6	2.49	0.47
1:CA:1223:C:OP2	19:CS:78:ARG:NH2	2.41	0.47
1:CA:1256:A:H61	1:CA:1278:U:C1'	2.27	0.47
1:CA:1326:C:H5''	21:CU:18:TYR:O	2.14	0.47
2:CB:19:HIS:CG	2:CB:20:GLU:H	2.31	0.47
25:DA:272(G):C:H42	25:DA:363(C):G:H1	1.62	0.47
25:DA:784:A:OP2	61:DA:4065:HOH:O	2.20	0.47
25:DA:1658:C:H2'	25:DA:1659:U:C6	2.49	0.47
25:DA:2331:G:O2'	46:D0:43:THR:HG22	2.14	0.47
25:DA:2359:C:H2'	25:DA:2360:A:O4'	2.13	0.47
25:DA:2556:C:H2'	25:DA:2557:G:O4'	2.14	0.47
26:DB:45:A:H2'	26:DB:46:A:H8	1.78	0.47
27:DD:17:THR:O	27:DD:211:ARG:NH2	2.47	0.47
28:DE:9:VAL:HG22	28:DE:25:VAL:HB	1.96	0.47
31:DH:94:TYR:CE2	31:DH:160:LYS:HG2	2.49	0.47
35:DP:62:LEU:O	54:D8:13:ARG:HD3	2.14	0.47
36:DQ:51:ARG:HD3	36:DQ:66:ILE:HD11	1.95	0.47
1:AA:36:C:O2'	1:AA:501:C:OP1	2.32	0.47
1:AA:430:A:OP1	4:AD:9:CYS:HB2	2.14	0.47
1:AA:1125:U:O2'	1:AA:1126:U:P	2.72	0.47
1:AA:1226:C:C5	13:AM:104:ARG:HA	2.49	0.47
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.50	0.47
2:AB:60:ASP:O	2:AB:64:ARG:HB2	2.14	0.47
11:AK:15:ALA:HB1	11:AK:78:GLN:HB2	1.95	0.47
14:AN:26:ARG:CZ	14:AN:47:LEU:HD21	2.43	0.47
19:AS:3:ARG:NH1	19:AS:10:PHE:HB2	2.29	0.47
25:BA:70:A:N7	43:BX:31:HIS:HE1	2.12	0.47
25:BA:1249:A:H61	25:BA:1286:U:H2'	1.78	0.47
25:BA:1957:G:H1'	25:BA:1986:G:N2	2.29	0.47
25:BA:2490:A:H5'	55:B9:31:LYS:HE2	1.96	0.47
26:BB:40:U:H2'	50:B4:2:LYS:HE3	1.95	0.47
31:BH:7:LEU:HD12	31:BH:8:PRO:HD2	1.96	0.47
34:BO:7:TYR:CZ	34:BO:44:LYS:HG3	2.49	0.47
45:BZ:70:LEU:HD23	45:BZ:70:LEU:HA	1.67	0.47
1:CA:589:C:O2'	1:CA:590:C:H5'	2.14	0.47
1:CA:663:A:C2'	1:CA:664:G:H5'	2.44	0.47
1:CA:719:C:O2'	18:CR:49:LYS:HB3	2.13	0.47
1:CA:1118:C:OP1	9:CI:104:ARG:NH1	2.46	0.47
1:CA:1207:G:H2'	1:CA:1208:C:H6	1.79	0.47
1:CA:1216:G:H5''	14:CN:5:ALA:CB	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.49	0.47
18:CR:61:LYS:O	18:CR:65:ILE:HG12	2.14	0.47
25:DA:30:G:H2'	25:DA:31:C:H6	1.78	0.47
25:DA:994:C:OP2	40:DU:54:LYS:NZ	2.38	0.47
25:DA:1710:C:H2'	25:DA:1711:C:H6	1.78	0.47
30:DG:125:PHE:HB3	30:DG:166:ASP:OD1	2.14	0.47
41:DV:76:LYS:HD2	41:DV:81:TYR:CD2	2.49	0.47
50:D4:59:PHE:HA	50:D4:60:GLN:C	2.35	0.47
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.14	0.47
1:AA:782:A:O3'	1:AA:1515:C:H4'	2.14	0.47
1:AA:1315:U:O2'	1:AA:1360:A:N3	2.39	0.47
15:AO:8:LYS:O	15:AO:12:ILE:HG13	2.14	0.47
23:AX:66:C:H2'	23:AX:67:C:O4'	2.14	0.47
25:BA:1047:A:H2'	25:BA:1048:G:O4'	2.15	0.47
25:BA:1171:G:H5'	55:B9:37:GLY:HA2	1.97	0.47
25:BA:2481:A:O2'	36:BQ:56:ARG:HD2	2.14	0.47
26:BB:48:A:H2'	26:BB:49:C:C6	2.49	0.47
45:BZ:132:ASN:O	45:BZ:134:PRO:HD3	2.14	0.47
52:B6:18:ARG:HD2	52:B6:42:TRP:CG	2.49	0.47
53:B7:1:MET:H3	53:B7:1:MET:HE3	1.80	0.47
1:CA:300:A:O2'	1:CA:564:C:N3	2.36	0.47
1:CA:650:G:H2'	1:CA:651:C:H5'	1.96	0.47
1:CA:1169:A:N7	1:CA:1170:A:N7	2.62	0.47
1:CA:1270:C:H2'	1:CA:1271:G:H5'	1.96	0.47
1:CA:1286:A:H2	21:CU:18:TYR:HH	1.61	0.47
1:CA:1442:G:H2'	1:CA:1442(A):G:H5'	1.95	0.47
9:CI:110:GLU:OE2	9:CI:113:LYS:HE2	2.14	0.47
18:CR:35:ARG:O	18:CR:37:VAL:N	2.46	0.47
25:DA:568:U:H5'	25:DA:945:A:C2	2.50	0.47
25:DA:592:G:O2'	54:D8:4:MET:HG3	2.14	0.47
25:DA:652(D):C:H42	25:DA:652(U):G:H1	1.62	0.47
25:DA:1639:U:H2'	25:DA:1640:C:H5''	1.95	0.47
45:DZ:53:ILE:CD1	45:DZ:99:TYR:HB2	2.44	0.47
46:D0:27:GLU:HB2	46:D0:69:PHE:HD1	1.78	0.47
1:AA:860:A:OP2	61:AA:4055:HOH:O	2.20	0.47
1:AA:865:A:C2	1:AA:918:A:H4'	2.49	0.47
1:AA:1162:C:C2	1:AA:1175:G:C2	3.02	0.47
1:AA:1187:G:N3	14:AN:60:SER:OG	2.48	0.47
1:AA:1316:G:H4'	14:AN:18:VAL:HG13	1.97	0.47
2:AB:16:HIS:CG	2:AB:17:PHE:N	2.71	0.47
4:AD:30:LYS:HA	4:AD:35:ARG:HH11	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:69:ALA:O	11:AK:73:MET:HG3	2.14	0.47
13:AM:15:VAL:HG13	13:AM:43:THR:O	2.14	0.47
13:AM:120:LYS:HA	13:AM:121:LYS:HE3	1.95	0.47
19:AS:41:VAL:HG12	19:AS:43:GLU:N	2.23	0.47
25:BA:1074:A:N6	25:BA:1171:G:H2'	2.29	0.47
25:BA:1495:G:O2'	25:BA:1575:A:N1	2.38	0.47
33:BN:138:LEU:HA	33:BN:138:LEU:HD23	1.52	0.47
44:BY:19:LYS:HE2	44:BY:20:TYR:CE1	2.49	0.47
48:B2:32:LEU:HD21	48:B2:54:LYS:HG3	1.97	0.47
1:CA:20:U:H2'	1:CA:21:G:O4'	2.14	0.47
1:CA:540:G:H2'	1:CA:541:G:C8	2.48	0.47
1:CA:1002:G:C2	1:CA:1003:G:N7	2.83	0.47
1:CA:1009:G:N2	1:CA:1021:G:H1'	2.29	0.47
1:CA:1025:U:O2'	1:CA:1026:G:H5''	2.15	0.47
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.96	0.47
1:CA:1237:C:O2'	1:CA:1300:G:N1	2.37	0.47
25:DA:242:G:H5''	54:D8:64:TYR:CE2	2.50	0.47
25:DA:530:G:C5	25:DA:2022:U:H5''	2.50	0.47
25:DA:954:G:C2	25:DA:964:C:O2	2.67	0.47
25:DA:1525:G:H2'	25:DA:1526:G:C8	2.50	0.47
25:DA:2439:A:H5'	25:DA:2439:A:C8	2.50	0.47
27:DD:58:HIS:ND1	27:DD:59:LYS:N	2.62	0.47
42:DW:82:LEU:HD22	42:DW:84:ARG:NH2	2.29	0.47
43:DX:92:LEU:C	43:DX:94:GLY:H	2.17	0.47
1:AA:1125:U:H1'	1:AA:1126:U:O5'	2.14	0.47
19:AS:69:HIS:HD2	19:AS:73:GLU:OE1	1.97	0.47
25:BA:705:C:H2'	25:BA:706:C:C6	2.49	0.47
25:BA:839:G:O2'	61:BA:4651:HOH:O	2.20	0.47
25:BA:1001:G:OP2	36:BQ:14:ARG:NH2	2.47	0.47
25:BA:2504:U:H2'	25:BA:2505:U:C6	2.49	0.47
27:BD:108:PRO:HD2	27:BD:111:LEU:HG	1.96	0.47
37:BR:57:ARG:HB3	37:BR:59:ASP:OD1	2.13	0.47
1:CA:160:A:H61	1:CA:347:G:H1'	1.80	0.47
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.50	0.47
1:CA:1077:G:N1	1:CA:1081:G:C6	2.83	0.47
1:CA:1134:G:H1	1:CA:1140:C:H42	1.62	0.47
1:CA:1492:A:H2'	1:CA:1493:A:C1'	2.43	0.47
2:CB:163:PHE:CD1	2:CB:185:ILE:HG13	2.47	0.47
3:CC:117:ALA:HB2	3:CC:200:ALA:HB2	1.97	0.47
15:CO:54:ARG:HD3	15:CO:58:MET:CE	2.43	0.47
25:DA:287:C:H2'	25:DA:288:C:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:307:G:H2'	25:DA:309:G:OP2	2.14	0.47
25:DA:1494:A:C6	25:DA:1495:A:C6	3.03	0.47
25:DA:1803:A:HO2'	27:DD:259:THR:HG21	1.79	0.47
25:DA:2297:C:H3'	25:DA:2297:C:C6	2.49	0.47
25:DA:2741:A:H2'	25:DA:2742:C:O4'	2.13	0.47
29:DF:178:PRO:HG2	29:DF:179:GLU:OE1	2.15	0.47
29:DF:184:TYR:CE2	29:DF:188:ARG:HD2	2.50	0.47
45:DZ:31:ARG:HD2	45:DZ:94:GLU:OE2	2.15	0.47
25:BA:207:A:C2	25:BA:224:U:H4'	2.50	0.47
25:BA:248:G:O2'	25:BA:646:A:O2'	2.25	0.47
31:BH:22:GLY:HA2	31:BH:37:VAL:O	2.14	0.47
31:BH:40:GLU:OE1	31:BH:61:HIS:NE2	2.44	0.47
1:CA:954:G:H2'	1:CA:955:U:C6	2.49	0.47
1:CA:979:C:H2'	1:CA:980:C:H5'	1.96	0.47
2:CB:69:LEU:HD12	2:CB:70:PHE:H	1.80	0.47
10:CJ:42:THR:HG23	10:CJ:68:HIS:HA	1.97	0.47
20:CT:47:GLY:HA2	20:CT:48:LYS:CB	2.44	0.47
25:DA:574:C:H1'	25:DA:2055:C:C6	2.50	0.47
25:DA:1429:G:H2'	25:DA:1430:C:C6	2.49	0.47
25:DA:1463:C:H2'	25:DA:1464:C:H6	1.79	0.47
25:DA:1668:A:O2'	25:DA:1674:G:N7	2.34	0.47
25:DA:1773:A:H5''	61:DA:4250:HOH:O	2.13	0.47
25:DA:1826:G:H4'	27:DD:242:ARG:CZ	2.45	0.47
25:DA:2332:U:H5'	25:DA:2336:A:N6	2.30	0.47
25:DA:2356:C:O3'	46:D0:20:ARG:HD2	2.14	0.47
25:DA:2771:C:H5''	28:DE:202:LYS:HD3	1.95	0.47
27:DD:139:GLY:N	27:DD:165:ILE:O	2.47	0.47
38:DS:53:SER:OG	38:DS:54:LEU:N	2.47	0.47
44:DY:13:VAL:HG12	44:DY:74:PRO:HA	1.96	0.47
45:DZ:33:LEU:HD21	45:DZ:90:VAL:HG21	1.96	0.47
1:AA:49:U:H3	1:AA:362:G:H1'	1.78	0.47
1:AA:68:G:H22	1:AA:101:A:H2	1.63	0.47
1:AA:196:A:H8	1:AA:196:A:O5'	1.98	0.47
1:AA:323:U:H5'	20:AT:23:ARG:HB2	1.96	0.47
1:AA:407:G:O2'	4:AD:116:GLN:HG3	2.15	0.47
1:AA:532:A:O2'	1:AA:533:A:P	2.73	0.47
1:AA:631:G:H2'	1:AA:632:A:C8	2.50	0.47
1:AA:1068:G:N7	1:AA:1094:G:H2'	2.30	0.47
1:AA:1125:U:H1'	1:AA:1126:U:H2'	1.97	0.47
3:AC:138:VAL:HG23	3:AC:151:VAL:HG23	1.96	0.47
4:AD:31:CYS:SG	4:AD:33:MET:N	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:166:LYS:HB2	4:AD:168:ARG:NH2	2.30	0.47
5:AE:57:LYS:HD3	5:AE:61:TYR:HE2	1.80	0.47
7:AG:46:ALA:HA	7:AG:49:ILE:HD12	1.97	0.47
9:AI:86:VAL:HG13	9:AI:96:LEU:HD12	1.97	0.47
11:AK:84:VAL:HG11	11:AK:91:ARG:HD2	1.95	0.47
15:AO:17:ARG:HH11	15:AO:17:ARG:HG3	1.79	0.47
24:AW:9:MVA:O	24:AW:10:2QY:CD2	2.63	0.47
25:BA:82:G:N2	25:BA:101:A:OP2	2.47	0.47
25:BA:956:A:N1	25:BA:2289:G:H1'	2.30	0.47
25:BA:2724:U:O2'	25:BA:2726:A:H5'	2.15	0.47
25:BA:2828:G:OP2	37:BR:42:LYS:NZ	2.42	0.47
25:BA:2891:C:H2'	25:BA:2892:A:O4'	2.14	0.47
26:BB:31:C:H4'	30:BG:29:TRP:CH2	2.50	0.47
27:BD:106:ILE:O	27:BD:108:PRO:HD3	2.15	0.47
29:BF:14:PRO:HD2	29:BF:127:GLU:OE2	2.15	0.47
35:BP:63:PRO:HB2	54:B8:30:ARG:NH2	2.29	0.47
42:BW:28:SER:O	42:BW:31:GLU:N	2.47	0.47
1:CA:149:A:H2'	1:CA:150:C:C6	2.50	0.47
1:CA:502:G:C6	1:CA:503:C:N3	2.83	0.47
1:CA:576:G:N2	1:CA:760:G:OP2	2.48	0.47
1:CA:658:G:C6	1:CA:659:U:C4	3.02	0.47
1:CA:773:G:H1	1:CA:806:C:H42	1.61	0.47
1:CA:875:C:O2'	8:CH:14:ARG:HD2	2.15	0.47
1:CA:1051:C:H2'	1:CA:1052:U:H6	1.78	0.47
1:CA:1111:A:N1	3:CC:177:THR:OG1	2.37	0.47
1:CA:1122:U:H5'	1:CA:1123:A:OP2	2.14	0.47
1:CA:1130:A:H5'	9:CI:18:PHE:CE2	2.50	0.47
1:CA:1134:G:H2'	1:CA:1135:U:H5'	1.97	0.47
1:CA:1238:A:C2	1:CA:1303:C:H4'	2.50	0.47
1:CA:1277:C:O2'	1:CA:1279:A:H8	1.98	0.47
1:CA:1291:G:H2'	1:CA:1292:U:C6	2.50	0.47
2:CB:189:ASP:OD1	2:CB:189:ASP:N	2.46	0.47
4:CD:150:GLU:HA	4:CD:153:ARG:HE	1.79	0.47
8:CH:28:ALA:HB3	8:CH:57:PRO:HB2	1.96	0.47
10:CJ:8:LEU:HB3	10:CJ:16:LEU:HD22	1.96	0.47
12:CL:71:PRO:O	12:CL:102:ARG:HD2	2.15	0.47
19:CS:14:HIS:O	19:CS:18:LYS:HG3	2.14	0.47
25:DA:30:G:OP2	40:DU:5:LYS:HE2	2.15	0.47
25:DA:34:C:O2'	25:DA:35:G:OP1	2.26	0.47
25:DA:303:U:H2'	25:DA:304:G:C8	2.50	0.47
25:DA:652(B):A:N1	25:DA:655:A:H1'	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:854:G:H2'	25:DA:855:G:C8	2.49	0.47
25:DA:1030:G:OP2	36:DQ:128:LYS:NZ	2.44	0.47
25:DA:1167:U:O2	25:DA:1183:G:N2	2.48	0.47
25:DA:1707:G:H2'	25:DA:1708:C:C6	2.49	0.47
25:DA:2291:U:H2'	25:DA:2292:C:H6	1.76	0.47
25:DA:2687:U:H2'	25:DA:2688:U:O4'	2.15	0.47
27:DD:63:ARG:HD3	27:DD:92:ILE:HD11	1.96	0.47
28:DE:37:ARG:O	28:DE:45:THR:HA	2.14	0.47
31:DH:11:VAL:HG21	31:DH:50:VAL:HG23	1.97	0.47
31:DH:104:GLU:HG3	31:DH:114:VAL:HG22	1.97	0.47
32:DI:77:LEU:HD13	32:DI:79:ILE:HD11	1.96	0.47
34:DO:91:LEU:N	34:DO:91:LEU:HD23	2.30	0.47
34:DO:120:GLU:HB2	39:DT:68:TYR:HE2	1.79	0.47
36:DQ:63:LYS:HE2	36:DQ:65:PHE:CE2	2.49	0.47
38:DS:7:TYR:CZ	38:DS:91:PRO:HG3	2.49	0.47
49:D3:18:ASP:OD1	49:D3:18:ASP:N	2.48	0.47
1:AA:145:G:H2'	1:AA:146:G:C5'	2.45	0.47
1:AA:170:U:O2'	1:AA:171:A:H5'	2.15	0.47
1:AA:397:A:H3'	1:AA:397:A:N3	2.30	0.47
1:AA:543:C:C2'	1:AA:544:G:H5'	2.45	0.47
1:AA:652:U:O2'	1:AA:653:A:OP2	2.29	0.47
1:AA:1005:A:H1'	1:AA:1036:G:H22	1.79	0.47
1:AA:1118:C:H1'	1:AA:1179:A:C5	2.50	0.47
24:AW:5:MVA:O	24:AW:6:2R1:H51	2.15	0.47
25:BA:354:A:HO2'	25:BA:355:A:H8	1.57	0.47
25:BA:895:G:O6	25:BA:974:G:H2'	2.15	0.47
25:BA:2649:U:O3'	28:BE:82:ARG:NH2	2.48	0.47
26:BB:1:U:H2'	26:BB:2:C:C6	2.50	0.47
28:BE:73:GLU:H	28:BE:73:GLU:HG3	1.54	0.47
33:BN:4:TYR:CD2	40:BU:100:VAL:HG11	2.50	0.47
39:BT:24:PRO:HA	39:BT:49:VAL:HG22	1.96	0.47
54:B8:61:LEU:O	54:B8:63:PRO:HD3	2.14	0.47
1:CA:58:C:O2'	1:CA:388:G:N7	2.45	0.47
1:CA:590:C:H2'	1:CA:591:U:C6	2.49	0.47
1:CA:839:U:HO2'	1:CA:840:C:P	2.35	0.47
1:CA:923:A:OP1	5:CE:21:ALA:HB2	2.15	0.47
1:CA:1179:A:N6	1:CA:1180:A:N7	2.62	0.47
6:CF:10:LEU:HD11	6:CF:85:VAL:HG22	1.95	0.47
9:CI:38:GLN:HG2	9:CI:39:GLY:N	2.29	0.47
25:DA:185:U:H4'	25:DA:218:A:H4'	1.97	0.47
28:DE:72:VAL:HA	28:DE:73:GLU:CB	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DR:38:VAL:HG22	37:DR:112:ALA:HB2	1.97	0.47
1:AA:149:A:H2'	1:AA:150:C:C6	2.50	0.47
1:AA:180:U:O2'	1:AA:181:G:H5'	2.15	0.47
1:AA:403:C:H2'	1:AA:404:U:H6	1.80	0.47
1:AA:909:A:H2'	1:AA:910:C:O4'	2.14	0.47
1:AA:1189:C:H5''	1:AA:1190:G:OP2	2.15	0.47
1:AA:1236:A:O2'	1:AA:1304:G:H4'	2.15	0.47
1:AA:1314:C:H5	19:AS:4:SER:HB2	1.80	0.47
1:AA:1346:A:H5''	9:AI:120:ARG:NH1	2.29	0.47
2:AB:54:THR:O	2:AB:58:ILE:HG13	2.15	0.47
25:BA:312:C:H2'	25:BA:313:A:H8	1.79	0.47
25:BA:1650:C:H5''	61:BA:4275:HOH:O	2.15	0.47
25:BA:1699:A:OP1	37:BR:8:ARG:NH1	2.48	0.47
25:BA:1810:U:H2'	61:BA:4798:HOH:O	2.15	0.47
25:BA:2692:C:H5'	28:BE:189:PRO:HA	1.96	0.47
35:BP:2:LYS:NZ	35:BP:4:SER:HB3	2.29	0.47
50:B4:6:HIS:HA	50:B4:7:PRO:HD3	1.77	0.47
1:CA:304:U:H2'	1:CA:305:G:C8	2.49	0.47
1:CA:771:G:N7	61:CA:4038:HOH:O	2.36	0.47
3:CC:92:ALA:HB2	3:CC:99:VAL:CB	2.45	0.47
7:CG:18:TYR:HB3	7:CG:59:LEU:HD13	1.97	0.47
11:CK:48:ILE:O	11:CK:50:TYR:N	2.47	0.47
23:CX:61:C:H2'	23:CX:62:C:H6	1.79	0.47
25:DA:923:C:H1'	46:D0:29:GLN:HG2	1.97	0.47
25:DA:2369:A:H2'	25:DA:2370:G:C8	2.50	0.47
50:D4:59:PHE:O	50:D4:62:ARG:NH2	2.48	0.47
1:AA:308:C:H2'	1:AA:309:G:C8	2.50	0.47
1:AA:486:U:H2'	1:AA:487:A:H8	1.80	0.47
1:AA:664:G:N2	1:AA:741:G:H1	2.12	0.47
1:AA:1030(B):C:C2'	1:AA:1030(C):G:H5'	2.45	0.47
1:AA:1149:C:H2'	1:AA:1150:U:H6	1.79	0.47
6:AF:99:ALA:O	18:AR:28:GLU:HG3	2.14	0.47
11:AK:34:ASP:HB2	11:AK:35:PRO:HD2	1.97	0.47
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.50	0.47
20:AT:31:SER:HA	20:AT:34:LYS:HE2	1.97	0.47
25:BA:934:A:H4'	25:BA:935:C:H5	1.80	0.47
25:BA:1517:G:C6	25:BA:1567:G:N7	2.83	0.47
25:BA:1790:A:H1'	25:BA:2723:A:C2	2.50	0.47
25:BA:1921:G:H2'	25:BA:1921:G:N3	2.29	0.47
25:BA:2858:G:C8	39:BT:97:ALA:HB2	2.50	0.47
29:BF:116:ASP:OD2	35:BP:1:MET:HB2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BN:75:TYR:CE2	33:BN:77:GLY:HA2	2.50	0.47
45:BZ:24:LEU:HB2	45:BZ:41:LEU:HD23	1.96	0.47
50:B4:63:TYR:N	50:B4:63:TYR:CD1	2.83	0.47
1:CA:425:G:C2	1:CA:426:G:C8	3.02	0.47
1:CA:532:A:H62	3:CC:156:ARG:HH12	1.61	0.47
1:CA:583:A:H2'	1:CA:584:G:O4'	2.15	0.47
1:CA:947:G:H2'	1:CA:948:C:O4'	2.15	0.47
1:CA:953:G:N7	13:CM:104:ARG:NH1	2.63	0.47
1:CA:1003:G:H1	1:CA:1035:A:N6	2.12	0.47
1:CA:1005:A:H1'	1:CA:1036:G:C6	2.49	0.47
1:CA:1032:G:H2'	1:CA:1033:G:C8	2.50	0.47
1:CA:1191:A:OP1	3:CC:4:LYS:HG3	2.15	0.47
1:CA:1376:U:C2	1:CA:1377:A:N7	2.83	0.47
3:CC:73:PRO:HB3	3:CC:103:VAL:CG1	2.40	0.47
7:CG:113:GLU:O	7:CG:119:ARG:HD3	2.15	0.47
9:CI:6:GLY:O	9:CI:17:VAL:HG12	2.15	0.47
25:DA:26:G:OP1	42:DW:80:PRO:HB3	2.14	0.47
25:DA:71:A:H5''	25:DA:73:A:C8	2.50	0.47
25:DA:143:G:H2'	25:DA:143(A):C:H6	1.76	0.47
25:DA:195:A:H5''	25:DA:196:A:O5'	2.15	0.47
25:DA:536:A:H2'	25:DA:537:C:C6	2.50	0.47
25:DA:848:G:N3	25:DA:933:A:H1'	2.30	0.47
25:DA:1142:U:O2	25:DA:1142:U:H2'	2.14	0.47
25:DA:1364:G:P	47:D1:3:LYS:HG3	2.54	0.47
29:DF:137:LYS:HA	29:DF:140:LEU:HD23	1.97	0.47
30:DG:32:PRO:HB2	30:DG:172:LEU:HD22	1.97	0.47
36:DQ:135:ASP:HB2	36:DQ:138:ASP:OD2	2.15	0.47
43:DX:59:VAL:HG21	43:DX:78:LYS:HE3	1.96	0.47
49:D3:3:ARG:HH11	49:D3:60:GLU:CB	2.28	0.47
50:D4:5:ILE:HG12	50:D4:6:HIS:CD2	2.50	0.47
54:D8:3:LYS:HB2	54:D8:64:TYR:HH	1.80	0.47
54:D8:62:LEU:HB3	54:D8:65:GLU:HG2	1.97	0.47
1:AA:834:C:H2'	1:AA:835:U:C6	2.50	0.46
1:AA:997:U:H3	1:AA:1044:A:N6	2.13	0.46
1:AA:1217:C:H2'	1:AA:1218:C:O4'	2.15	0.46
6:AF:1:MET:HA	6:AF:67:MET:O	2.14	0.46
13:AM:16:ASP:N	13:AM:16:ASP:OD1	2.48	0.46
19:AS:52:TYR:HB2	19:AS:57:HIS:CE1	2.50	0.46
25:BA:1372:U:H2'	25:BA:1373:C:C6	2.50	0.46
28:BE:34:VAL:HG21	28:BE:78:LEU:HD11	1.97	0.46
32:BI:9:LEU:HD13	32:BI:10:GLU:HG2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BY:54:LYS:HA	44:BY:56:PRO:CD	2.36	0.46
1:CA:1220:G:N2	1:CA:1221:G:H1'	2.30	0.46
1:CA:1292:U:OP2	7:CG:41:ARG:NH2	2.49	0.46
3:CC:12:LEU:HA	3:CC:16:ARG:HB3	1.98	0.46
15:CO:3:ILE:HG21	15:CO:34:LEU:HD21	1.97	0.46
16:CP:57:ARG:HH21	16:CP:79:VAL:HA	1.80	0.46
25:DA:984:A:H5''	25:DA:985:C:C5	2.49	0.46
25:DA:1028:A:N6	25:DA:1125:G:H2'	2.30	0.46
25:DA:1352:U:OP1	61:DA:3789:HOH:O	2.20	0.46
25:DA:1899:G:N3	25:DA:1899:G:H2'	2.30	0.46
26:DB:95:C:H2'	26:DB:96:U:H6	1.78	0.46
31:DH:137:ASP:HB3	31:DH:140:LYS:HB3	1.97	0.46
35:DP:99:LEU:HD23	35:DP:99:LEU:H	1.80	0.46
39:DT:121:ILE:O	39:DT:124:ASP:HB2	2.14	0.46
52:D6:25:LYS:HE3	52:D6:27:LYS:HA	1.96	0.46
1:AA:272:C:H2'	1:AA:273:A:C8	2.49	0.46
1:AA:300:A:H1'	1:AA:565:U:O2	2.15	0.46
1:AA:380:G:N1	1:AA:384:G:C6	2.83	0.46
1:AA:437:U:O3'	4:AD:125:HIS:HE1	1.98	0.46
1:AA:616:G:C2	1:AA:617:G:C8	3.03	0.46
1:AA:627:G:H2'	1:AA:628:G:H8	1.79	0.46
1:AA:791:G:C2'	1:AA:792:A:H5'	2.46	0.46
1:AA:839:U:H5''	1:AA:840:C:H5	1.81	0.46
1:AA:1057:G:H2'	1:AA:1058:G:O4'	2.16	0.46
1:AA:1305:G:N2	1:AA:1331:G:H1'	2.30	0.46
2:AB:115:LEU:O	2:AB:119:GLU:HG2	2.15	0.46
3:AC:12:LEU:HA	3:AC:16:ARG:HB3	1.97	0.46
25:BA:662:A:H8	35:BP:117:GLU:HG3	1.81	0.46
25:BA:1592:A:H2'	25:BA:1593:C:O4'	2.16	0.46
25:BA:1629:C:C2	25:BA:1630:A:C8	3.03	0.46
25:BA:2735:G:H2'	25:BA:2736:C:C6	2.50	0.46
38:BS:34:HIS:HD1	38:BS:53:SER:HG	1.62	0.46
42:BW:33:ARG:NE	42:BW:52:GLU:OE1	2.48	0.46
50:B4:68:ARG:O	50:B4:69:LYS:HB3	2.15	0.46
53:B7:11:LYS:HE3	53:B7:15:THR:OG1	2.15	0.46
1:CA:78:G:C2'	1:CA:79:G:H5'	2.45	0.46
1:CA:380:G:C2	1:CA:384:G:C6	3.04	0.46
1:CA:427:U:H2'	1:CA:428:G:C8	2.50	0.46
1:CA:629:G:H2'	1:CA:630:G:O4'	2.14	0.46
1:CA:1015:A:H2'	1:CA:1016:A:C8	2.50	0.46
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1207:G:H2'	1:CA:1208:C:C6	2.49	0.46
4:CD:64:LEU:HB2	4:CD:198:VAL:HG21	1.97	0.46
8:CH:86:ILE:HG13	8:CH:133:LEU:HD22	1.97	0.46
13:CM:60:VAL:HG23	13:CM:64:TRP:HE3	1.78	0.46
13:CM:92:HIS:CE1	13:CM:98:VAL:HG21	2.50	0.46
25:DA:475:U:C4	25:DA:481:G:O6	2.69	0.46
25:DA:994:C:H1'	41:DV:10:LYS:HE3	1.98	0.46
25:DA:1397:U:OP2	25:DA:1398:C:N4	2.42	0.46
25:DA:1945:G:H2'	25:DA:1946:U:C6	2.50	0.46
25:DA:2291:U:O2'	25:DA:2374:C:O2	2.30	0.46
25:DA:2591:C:OP1	27:DD:239:ARG:HD2	2.15	0.46
25:DA:2807:G:N2	25:DA:2893:G:O6	2.48	0.46
26:DB:33:G:C6	26:DB:34:U:C4	3.03	0.46
27:DD:206:LEU:HA	27:DD:206:LEU:HD23	1.49	0.46
33:DN:58:ASP:OD1	33:DN:58:ASP:N	2.39	0.46
46:D0:56:ASP:OD1	46:D0:58:THR:OG1	2.31	0.46
52:D6:36:LEU:HB3	52:D6:38:LYS:HZ1	1.79	0.46
1:AA:1025:U:O2	1:AA:1036:G:C6	2.67	0.46
1:AA:1305:G:H22	1:AA:1331:G:H1'	1.80	0.46
2:AB:178:ARG:HH22	8:AH:68:ARG:HH12	1.63	0.46
3:AC:11:ARG:HD3	3:AC:15:THR:HB	1.97	0.46
20:AT:14:LYS:O	20:AT:18:GLN:HG3	2.15	0.46
25:BA:1041:C:OP2	40:BU:54:LYS:NZ	2.45	0.46
25:BA:1521:C:H2'	25:BA:1522:G:C8	2.49	0.46
31:BH:126:PRO:HB2	31:BH:127:GLU:H	1.41	0.46
45:BZ:69:THR:HG22	45:BZ:90:VAL:HG22	1.98	0.46
53:B7:24:THR:HG22	53:B7:26:GLY:N	2.29	0.46
53:B7:24:THR:HG22	53:B7:26:GLY:H	1.80	0.46
1:CA:662:G:H2'	1:CA:663:A:C8	2.51	0.46
1:CA:942:G:C2	1:CA:1342:C:C2	3.03	0.46
1:CA:1041:A:C6	1:CA:1042:G:C6	3.04	0.46
1:CA:1151:A:O4'	10:CJ:39:PRO:HB2	2.15	0.46
7:CG:132:GLY:O	7:CG:136:LYS:HG2	2.15	0.46
20:CT:58:LYS:HE3	20:CT:62:LEU:HD12	1.97	0.46
25:DA:300:A:H3'	44:DY:84:ARG:NH2	2.31	0.46
25:DA:581:C:H2'	25:DA:582:G:C8	2.50	0.46
25:DA:583:G:OP2	40:DU:10:ARG:NH1	2.47	0.46
25:DA:627:A:H4'	25:DA:628:G:H5'	1.97	0.46
25:DA:1311:G:N7	53:D7:47:ARG:HD2	2.31	0.46
25:DA:1531:C:N4	25:DA:1538:G:H1	2.12	0.46
25:DA:2262:U:H4'	25:DA:2328:A:C2	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2563:U:O2	25:DA:2565:A:H8	1.98	0.46
25:DA:2880:C:O3'	37:DR:90:ARG:NH1	2.48	0.46
30:DG:106:LEU:HA	30:DG:110:ALA:HB3	1.96	0.46
35:DP:138:LEU:HD11	35:DP:143:GLY:HA3	1.97	0.46
36:DQ:18:LYS:HB2	36:DQ:18:LYS:HE3	1.71	0.46
42:DW:59:VAL:HA	42:DW:64:MET:O	2.16	0.46
1:AA:16:A:N1	1:AA:919:A:H2	2.13	0.46
1:AA:146:G:C4	1:AA:147:G:C8	3.03	0.46
1:AA:622:A:C8	1:AA:623:C:C5	3.03	0.46
1:AA:741:G:H2'	1:AA:742:G:O4'	2.15	0.46
1:AA:804:U:H5''	1:AA:805:C:OP2	2.15	0.46
1:AA:958:A:C6	1:AA:959:A:N1	2.83	0.46
1:AA:1291:G:H4'	9:AI:39:GLY:HA3	1.97	0.46
1:AA:1302:U:OP2	13:AM:21:TYR:OH	2.26	0.46
1:AA:1433:A:C6	1:AA:1468:A:C4	3.03	0.46
4:AD:173:TRP:HZ3	4:AD:174:LEU:HG	1.74	0.46
25:BA:196:A:H2'	25:BA:197:C:O4'	2.14	0.46
25:BA:319:G:H1	25:BA:367:C:H42	1.63	0.46
25:BA:664:U:H2'	25:BA:665:C:C6	2.51	0.46
25:BA:1421:C:H2'	25:BA:1422:C:H6	1.79	0.46
25:BA:2262:G:C8	25:BA:2508:C:H5''	2.50	0.46
32:BI:27:ARG:HD2	47:B1:71:TYR:CE1	2.51	0.46
1:CA:67:C:H2'	1:CA:68:G:H8	1.80	0.46
1:CA:955:U:H2'	1:CA:956:U:O4'	2.15	0.46
1:CA:971:G:OP1	1:CA:971:G:H3'	2.16	0.46
1:CA:1003:G:C6	1:CA:1004:A:H2	2.32	0.46
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.51	0.46
2:CB:180:LEU:O	2:CB:181:PHE:HB2	2.15	0.46
5:CE:71:LEU:HD11	5:CE:115:VAL:HG22	1.96	0.46
8:CH:20:TYR:CE2	8:CH:75:ARG:HG2	2.51	0.46
8:CH:98:LYS:HE3	8:CH:98:LYS:HB2	1.73	0.46
12:CL:34:ARG:HG3	12:CL:105:TYR:CE2	2.50	0.46
24:CW:8:2R3:H62	24:CW:9:MVA:HN1	1.51	0.46
25:DA:370:G:H4'	25:DA:371:A:OP2	2.16	0.46
25:DA:649:G:C5	25:DA:650:C:C4	3.03	0.46
25:DA:687:C:H2'	25:DA:688:U:O4'	2.15	0.46
25:DA:1651:G:H5'	37:DR:39:PRO:HG2	1.97	0.46
25:DA:1800:C:OP2	27:DD:183:ARG:NH2	2.47	0.46
25:DA:2704:C:H2'	25:DA:2705:A:O4'	2.15	0.46
28:DE:72:VAL:HG22	28:DE:73:GLU:HG2	1.98	0.46
35:DP:52:GLU:OE2	54:D8:57:ARG:NH1	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DS:38:GLN:HB2	38:DS:47:THR:HG23	1.98	0.46
40:DU:79:PHE:O	40:DU:83:LEU:HD22	2.15	0.46
45:DZ:30:ASN:ND2	45:DZ:90:VAL:HB	2.31	0.46
52:D6:19:ARG:N	52:D6:19:ARG:HD2	2.31	0.46
1:AA:55:A:C5	1:AA:56:U:C5	3.04	0.46
1:AA:376:G:P	16:AP:67:THR:HG21	2.56	0.46
1:AA:583:A:H2'	1:AA:584:G:O4'	2.16	0.46
1:AA:1136:U:H5''	1:AA:1137:C:N3	2.31	0.46
1:AA:1418:A:C2	1:AA:1483:A:C2	3.03	0.46
4:AD:138:TYR:HE1	4:AD:140:VAL:HA	1.80	0.46
7:AG:26:PHE:O	7:AG:30:ILE:HG13	2.15	0.46
25:BA:211:A:H3'	25:BA:448:U:H5'	1.97	0.46
25:BA:2517:G:O6	25:BA:2588:G:H2'	2.15	0.46
38:BS:14:VAL:O	38:BS:18:ILE:HG12	2.15	0.46
1:CA:688:G:H5'	11:CK:46:GLY:C	2.36	0.46
1:CA:757:U:O2'	1:CA:879:C:O2	2.21	0.46
1:CA:799:G:H5''	1:CA:799:G:H8	1.80	0.46
1:CA:1061:G:C2'	1:CA:1062:U:H5'	2.46	0.46
1:CA:1124:G:C5'	10:CJ:36:GLY:H	2.29	0.46
1:CA:1127:G:H5'	1:CA:1280:A:O2'	2.15	0.46
2:CB:20:GLU:HG3	2:CB:191:ASP:HB3	1.97	0.46
2:CB:22:LYS:HB3	2:CB:22:LYS:HE2	1.60	0.46
8:CH:49:GLU:HG2	8:CH:62:TYR:CE2	2.48	0.46
10:CJ:9:ARG:HG2	10:CJ:69:ASN:OD1	2.14	0.46
20:CT:14:LYS:O	20:CT:18:GLN:HG3	2.15	0.46
25:DA:530:G:O4'	25:DA:530:G:N3	2.49	0.46
25:DA:625:G:N7	35:DP:107:LYS:NZ	2.59	0.46
25:DA:848:G:C4	25:DA:933:A:H8	2.34	0.46
25:DA:1274:A:N1	25:DA:1644:C:O2'	2.40	0.46
25:DA:1319:G:C6	25:DA:1320:C:N4	2.84	0.46
28:DE:163:GLU:HG2	28:DE:164:ARG:H	1.80	0.46
30:DG:82:LEU:HA	30:DG:86:MET:SD	2.55	0.46
38:DS:78:LEU:HD11	38:DS:108:GLY:O	2.15	0.46
45:DZ:52:SER:OG	45:DZ:53:ILE:N	2.48	0.46
1:AA:826:C:H2'	1:AA:827:U:C6	2.51	0.46
1:AA:932:C:H2'	1:AA:933:G:C8	2.51	0.46
5:AE:100:VAL:O	5:AE:107:ARG:NH2	2.49	0.46
10:AJ:38:ILE:HD11	10:AJ:71:LEU:HB3	1.97	0.46
25:BA:403:C:H2'	25:BA:404:C:H6	1.79	0.46
25:BA:1042:A:H4'	40:BU:91:ASP:OD2	2.16	0.46
25:BA:1471:G:H2'	25:BA:1472:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1836:U:H5''	27:BD:250:TRP:CE2	2.50	0.46
32:BI:93:THR:HG22	32:BI:119:PRO:HB3	1.98	0.46
45:BZ:53:ILE:HG22	45:BZ:71:VAL:O	2.16	0.46
45:BZ:67:LEU:HA	45:BZ:68:PRO:HD3	1.86	0.46
1:CA:1036:G:N7	1:CA:1037:C:O2	2.48	0.46
1:CA:1131:G:OP1	9:CI:20:ARG:NH2	2.48	0.46
1:CA:1305:G:H22	1:CA:1331:G:H1'	1.80	0.46
1:CA:1308:U:OP2	13:CM:99:ARG:HD3	2.15	0.46
2:CB:207:ALA:O	2:CB:210:SER:OG	2.20	0.46
10:CJ:62:HIS:HB3	14:CN:59:ALA:HB3	1.96	0.46
18:CR:59:SER:H	18:CR:62:GLU:CG	2.29	0.46
20:CT:54:LYS:HA	20:CT:57:ARG:CZ	2.46	0.46
25:DA:300:A:H1'	25:DA:319:C:C1'	2.45	0.46
25:DA:315:G:H2'	25:DA:316:C:C6	2.51	0.46
25:DA:1264:G:H2'	25:DA:2014:A:N6	2.30	0.46
25:DA:1824:G:N3	27:DD:254:THR:OG1	2.48	0.46
26:DB:118:G:H2'	26:DB:119:G:O4'	2.16	0.46
27:DD:10:THR:OG1	27:DD:13:ARG:HG2	2.15	0.46
29:DF:164:ARG:O	29:DF:168:ARG:HB2	2.15	0.46
30:DG:173:LEU:HD22	30:DG:178:PHE:CE1	2.50	0.46
32:DI:27:ARG:HD2	47:D1:71:TYR:CE1	2.51	0.46
32:DI:134:PRO:C	32:DI:136:VAL:H	2.19	0.46
43:DX:44:GLU:HG3	43:DX:51:VAL:HG23	1.97	0.46
2:AB:115:LEU:O	2:AB:119:GLU:N	2.47	0.46
2:AB:124:SER:HB3	2:AB:125:PRO:HA	1.98	0.46
2:AB:229:VAL:HG12	2:AB:230:VAL:N	2.30	0.46
4:AD:163:GLU:O	4:AD:166:LYS:HG2	2.16	0.46
25:BA:330:U:H2'	25:BA:331:G:O4'	2.15	0.46
25:BA:640:A:C4	29:BF:180:GLY:HA2	2.51	0.46
25:BA:1709:C:H1'	25:BA:2699:U:H5''	1.97	0.46
30:BG:102:PHE:CE1	30:BG:141:PHE:HE2	2.32	0.46
32:BI:77:LEU:HD23	32:BI:77:LEU:HA	1.75	0.46
35:BP:135:LEU:HD23	35:BP:135:LEU:HA	1.81	0.46
1:CA:109:A:H2'	1:CA:326:G:N2	2.29	0.46
1:CA:458:C:H2'	1:CA:460:G:H8	1.81	0.46
1:CA:814:A:N7	1:CA:816:A:C4	2.84	0.46
1:CA:1484:C:O2'	25:DA:1960:A:O2'	2.30	0.46
4:CD:175:SER:HB3	4:CD:186:LEU:HD11	1.98	0.46
7:CG:69:VAL:HG21	7:CG:104:LEU:HD11	1.97	0.46
16:CP:55:ARG:O	16:CP:58:TYR:HB3	2.15	0.46
20:CT:18:GLN:O	20:CT:22:ARG:HG3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:212:G:H2'	25:DA:213:A:O4'	2.16	0.46
25:DA:2545:G:N3	25:DA:2565:A:H2	2.13	0.46
25:DA:2747:G:N2	25:DA:2757:A:H62	2.13	0.46
27:DD:221:VAL:HG22	27:DD:226:MET:CE	2.46	0.46
1:AA:62:U:OP1	1:AA:385:C:O2'	2.29	0.46
1:AA:184:G:N2	1:AA:194:C:C2	2.84	0.46
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.51	0.46
1:AA:276:G:C2'	1:AA:277:C:H5'	2.45	0.46
1:AA:376:G:H2'	1:AA:377:G:H8	1.81	0.46
1:AA:452:A:OP1	16:AP:43:LYS:NZ	2.39	0.46
1:AA:630:G:H2'	1:AA:631:G:C8	2.50	0.46
1:AA:688:G:H2'	1:AA:689:C:C6	2.51	0.46
1:AA:735:C:H2'	1:AA:736:C:C6	2.48	0.46
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.50	0.46
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.16	0.46
8:AH:39:LEU:HB3	8:AH:45:ILE:HD11	1.97	0.46
14:AN:46:GLU:O	14:AN:50:LYS:HG3	2.16	0.46
25:BA:904:C:N4	25:BA:905:U:O4	2.49	0.46
25:BA:1739:U:H2'	25:BA:1741:C:C5	2.50	0.46
25:BA:2326:C:H2'	25:BA:2327:G:H8	1.80	0.46
25:BA:2825:C:H5'	51:B5:29:THR:HG21	1.98	0.46
37:BR:65:LEU:HD13	37:BR:65:LEU:HA	1.72	0.46
52:B6:18:ARG:HD2	52:B6:42:TRP:CD1	2.51	0.46
1:CA:411:A:H1'	1:CA:413:G:O4'	2.16	0.46
1:CA:458:C:H2'	1:CA:460:G:C8	2.51	0.46
1:CA:568:G:N7	12:CL:5:PRO:HD3	2.31	0.46
1:CA:664:G:N2	1:CA:741:G:H1	2.12	0.46
1:CA:1120:G:N1	1:CA:1154:G:N3	2.64	0.46
1:CA:1515:C:H2'	1:CA:1516:G:H8	1.80	0.46
2:CB:17:PHE:HB2	2:CB:44:LEU:CD1	2.46	0.46
2:CB:40:HIS:HB3	2:CB:190:THR:HG21	1.97	0.46
2:CB:145:LEU:O	2:CB:149:LEU:HB2	2.15	0.46
2:CB:180:LEU:HD23	2:CB:180:LEU:HA	1.67	0.46
4:CD:98:GLU:OE1	4:CD:103:ASN:ND2	2.44	0.46
6:CF:10:LEU:HD12	6:CF:10:LEU:HA	1.78	0.46
9:CI:4:TYR:HB2	9:CI:19:LEU:HB2	1.98	0.46
10:CJ:23:ILE:HD13	10:CJ:26:ALA:HB3	1.96	0.46
12:CL:117:ARG:HB3	12:CL:122:THR:HB	1.98	0.46
15:CO:56:LEU:O	15:CO:60:VAL:HG23	2.15	0.46
25:DA:251:A:C5	25:DA:252:G:H1'	2.51	0.46
25:DA:409:C:O2'	25:DA:410:G:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:437:G:H2'	25:DA:438:G:C8	2.49	0.46
25:DA:1197:G:H2'	25:DA:1198:U:H6	1.81	0.46
25:DA:1748:G:O2'	25:DA:1749:A:H5'	2.16	0.46
25:DA:2040:C:H2'	25:DA:2041:U:O4'	2.16	0.46
25:DA:2266:A:H4'	25:DA:2267:A:N3	2.31	0.46
25:DA:2318:G:N2	38:DS:3:ARG:HH11	2.13	0.46
25:DA:2693:A:H2'	25:DA:2694:G:C8	2.49	0.46
30:DG:25:TYR:CD2	30:DG:30:GLU:HB3	2.51	0.46
30:DG:141:PHE:HD1	30:DG:142:PRO:HD2	1.80	0.46
31:DH:149:ARG:NH1	31:DH:167:GLU:OE2	2.49	0.46
45:DZ:157:LEU:HB3	45:DZ:161:VAL:HG13	1.98	0.46
55:D9:15:LYS:HE2	55:D9:17:ILE:HD13	1.98	0.46
1:AA:604:G:C6	1:AA:605:U:C4	3.04	0.46
1:AA:1027:C:C4	1:AA:1034:G:O6	2.67	0.46
1:AA:1035:A:H2	1:AA:1036:G:N7	2.14	0.46
2:AB:101:MET:HA	2:AB:108:ILE:HD12	1.97	0.46
25:BA:696:C:P	25:BA:696:C:H6	2.39	0.46
25:BA:1859:G:OP1	61:BA:4531:HOH:O	2.20	0.46
25:BA:2299:A:C4	25:BA:2301:G:C8	3.04	0.46
25:BA:2630:G:C6	25:BA:2631:C:C4	3.03	0.46
28:BE:54:GLN:OE1	28:BE:55:ASN:N	2.46	0.46
28:BE:167:VAL:HG11	28:BE:189:PRO:HD3	1.96	0.46
38:BS:15:ARG:NE	38:BS:88:ASP:OD2	2.41	0.46
39:BT:16:ARG:HD2	39:BT:18:ASP:OD1	2.16	0.46
1:CA:671:G:N2	1:CA:735:C:O2	2.49	0.46
1:CA:685:G:C2	1:CA:686:U:C4	3.04	0.46
1:CA:991:U:H3'	1:CA:1212:U:N3	2.31	0.46
1:CA:1030:C:N4	1:CA:1032:G:O6	2.49	0.46
3:CC:43:LEU:N	3:CC:43:LEU:HD23	2.31	0.46
4:CD:25:ARG:O	4:CD:25:ARG:HG2	2.16	0.46
7:CG:51:GLN:O	7:CG:55:GLY:HA2	2.16	0.46
14:CN:24:CYS:O	14:CN:28:GLY:N	2.43	0.46
25:DA:415:A:H2'	25:DA:416:C:O4'	2.16	0.46
25:DA:1019:U:OP1	25:DA:1035:U:O2'	2.23	0.46
25:DA:1427:A:H8	25:DA:1427:A:O5'	1.99	0.46
25:DA:1782:C:O2'	25:DA:2609:U:H5''	2.15	0.46
25:DA:1851:U:H2'	25:DA:1852:C:O4'	2.16	0.46
30:DG:14:GLU:O	30:DG:17:PRO:HD2	2.15	0.46
42:DW:54:ALA:HB1	42:DW:107:LEU:HD22	1.97	0.46
45:DZ:27:VAL:HG12	45:DZ:85:HIS:HE1	1.81	0.46
54:D8:19:SER:OG	54:D8:21:LYS:HE3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:473:G:O2'	1:AA:474:G:H5'	2.16	0.46
1:AA:637:G:C2	1:AA:638:G:C4	3.04	0.46
1:AA:693:G:H2'	1:AA:694:A:C8	2.51	0.46
1:AA:1068:G:OP2	1:AA:1068:G:H8	1.99	0.46
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.50	0.46
23:AX:48:C:C2	23:AX:59:A:H1'	2.51	0.46
25:BA:886:U:H2'	25:BA:887:C:C6	2.51	0.46
25:BA:1369:U:H2'	25:BA:1370:G:H5'	1.97	0.46
25:BA:1496:A:H5''	25:BA:1496:A:H8	1.80	0.46
25:BA:1854:G:OP1	27:BD:54:ARG:NH1	2.49	0.46
42:BW:18:ARG:NH1	42:BW:76:VAL:O	2.48	0.46
42:BW:19:LEU:HB3	51:B5:25:LEU:HD11	1.97	0.46
1:CA:1097:C:H4'	1:CA:1170:A:H5'	1.97	0.46
1:CA:1163:C:N4	1:CA:1173:G:N1	2.35	0.46
1:CA:1277:C:O2'	1:CA:1279:A:C8	2.66	0.46
3:CC:23:TYR:HA	10:CJ:11:PHE:CE2	2.50	0.46
3:CC:70:VAL:HG22	3:CC:72:LYS:H	1.80	0.46
16:CP:21:VAL:HG22	16:CP:33:ILE:HD12	1.97	0.46
25:DA:62:C:N4	25:DA:93:G:H1	2.04	0.46
25:DA:812:C:H1'	25:DA:1250:G:C2	2.51	0.46
25:DA:996:A:C2	25:DA:997:G:C8	3.03	0.46
25:DA:1259:G:H2'	25:DA:1260:G:C8	2.51	0.46
25:DA:1528(A):A:C8	25:DA:1529:G:C8	3.03	0.46
25:DA:1999:C:OP1	25:DA:2723:C:O2'	2.28	0.46
26:DB:5:C:OP1	26:DB:61:G:O2'	2.29	0.46
26:DB:42:C:O2	30:DG:93:THR:N	2.37	0.46
35:DP:21:ARG:HD3	35:DP:21:ARG:HA	1.78	0.46
36:DQ:137:TYR:O	36:DQ:141:GLN:HG2	2.16	0.46
41:DV:64:HIS:CD2	41:DV:92:THR:HG1	2.33	0.46
45:DZ:128:VAL:HG23	45:DZ:160:GLY:O	2.15	0.46
52:D6:11:LEU:HA	52:D6:11:LEU:HD23	1.64	0.46
1:AA:166:G:H2'	1:AA:167:G:N7	2.30	0.45
1:AA:975:A:H5'	1:AA:975:A:H8	1.82	0.45
1:AA:1091:U:H2'	1:AA:1093:A:OP2	2.16	0.45
1:AA:1237:C:O2'	1:AA:1300:G:N1	2.38	0.45
1:AA:1325:C:O2'	1:AA:1326:C:H5'	2.16	0.45
1:AA:1361:G:H2'	1:AA:1362:C:O4'	2.15	0.45
3:AC:129:ALA:HB3	3:AC:132:ARG:HB2	1.97	0.45
4:AD:30:LYS:HA	4:AD:35:ARG:NH1	2.30	0.45
9:AI:85:LEU:HB3	9:AI:92:TYR:HD2	1.80	0.45
18:AR:32:ARG:HH11	18:AR:65:ILE:HD12	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1188:A:C4	25:BA:1190:G:C8	3.04	0.45
25:BA:1919:G:H2'	25:BA:1920:U:O4'	2.16	0.45
26:BB:13:A:N1	26:BB:69:G:O2'	2.41	0.45
27:BD:127:VAL:HA	27:BD:193:VAL:HG22	1.98	0.45
28:BE:143:ASN:HD22	28:BE:147:PRO:CD	2.24	0.45
30:BG:72:ARG:NH1	30:BG:87:PRO:HG3	2.30	0.45
45:BZ:111:VAL:C	45:BZ:113:ALA:N	2.69	0.45
1:CA:540:G:C4	1:CA:541:G:C8	3.04	0.45
1:CA:600:C:C2	1:CA:639:G:C2	3.04	0.45
1:CA:1002:G:H5''	1:CA:1003:G:OP2	2.16	0.45
1:CA:1013:G:N2	1:CA:1016:A:OP2	2.35	0.45
1:CA:1041:A:N6	1:CA:1042:G:O6	2.48	0.45
4:CD:15:GLU:CG	4:CD:63:LYS:HB3	2.46	0.45
4:CD:33:MET:SD	4:CD:37:PRO:HA	2.56	0.45
5:CE:36:ASP:O	5:CE:38:GLN:N	2.47	0.45
5:CE:152:ARG:HG2	8:CH:42:GLU:O	2.16	0.45
12:CL:34:ARG:HE	12:CL:34:ARG:HB3	1.40	0.45
25:DA:230:U:H2'	25:DA:231:C:H6	1.81	0.45
25:DA:446:G:H8	61:DA:3775:HOH:O	1.98	0.45
25:DA:1014:U:H2'	25:DA:1015:G:C8	2.49	0.45
25:DA:1614:A:P	25:DA:1614:A:H8	2.39	0.45
25:DA:1739:U:O2'	25:DA:1740:G:H8	1.98	0.45
25:DA:2342:C:O2'	25:DA:2374:C:OP1	2.31	0.45
42:DW:18:ARG:NH1	42:DW:76:VAL:O	2.50	0.45
1:AA:222:U:H2'	1:AA:223:U:C6	2.51	0.45
1:AA:375:U:C4	1:AA:376:G:N7	2.84	0.45
1:AA:501:C:O2'	1:AA:549:C:O2	2.34	0.45
1:AA:1005:A:H1'	1:AA:1036:G:N2	2.31	0.45
1:AA:1039:C:N4	1:AA:1040:U:O4	2.49	0.45
3:AC:35:GLU:CD	3:AC:59:ARG:HH22	2.19	0.45
5:AE:27:ARG:HE	5:AE:27:ARG:HB2	1.46	0.45
12:AL:77:LEU:HD21	12:AL:107:ALA:HA	1.98	0.45
18:AR:43:PHE:O	18:AR:51:LEU:HD12	2.17	0.45
25:BA:2760:G:O6	25:BA:2768:C:H5''	2.17	0.45
26:BB:6:C:H2'	26:BB:7:G:H5''	1.98	0.45
31:BH:71:LEU:HD12	31:BH:71:LEU:HA	1.79	0.45
35:BP:97:PRO:HD3	35:BP:126:VAL:O	2.17	0.45
45:BZ:98:MET:O	45:BZ:125:LEU:HD12	2.16	0.45
1:CA:113:G:H2'	1:CA:114:U:H6	1.82	0.45
1:CA:817:C:H42	1:CA:1529:G:H1	1.63	0.45
1:CA:991:U:N3	1:CA:1212:U:O2	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1189:C:H5''	1:CA:1190:G:OP2	2.16	0.45
1:CA:1256:A:H61	1:CA:1278:U:H1'	1.81	0.45
2:CB:85:ALA:O	2:CB:89:GLY:N	2.49	0.45
2:CB:122:PHE:HD1	2:CB:123:ALA:H	1.63	0.45
2:CB:178:ARG:CZ	8:CH:74:PRO:HG3	2.47	0.45
8:CH:51:VAL:CG1	8:CH:52:ASP:H	2.24	0.45
9:CI:31:GLN:HB2	9:CI:35:GLU:OE2	2.16	0.45
17:CQ:43:LEU:HG	17:CQ:68:ARG:HG2	1.97	0.45
18:CR:29:PHE:HE1	18:CR:31:LEU:HD13	1.81	0.45
24:CW:4:PRO:HA	24:CW:5:MVA:HN1	1.30	0.45
25:DA:265:A:H1'	25:DA:266:G:O4'	2.16	0.45
25:DA:468:G:H2'	25:DA:469:G:O4'	2.15	0.45
25:DA:817:C:O2'	25:DA:839:U:H5''	2.16	0.45
25:DA:1339:G:H21	25:DA:1603:A:H1'	1.80	0.45
25:DA:1386:C:H2'	25:DA:1387:C:C6	2.51	0.45
25:DA:1593:G:C2	25:DA:1594:G:C4	3.04	0.45
25:DA:2070:G:C2	25:DA:2442:C:C2	3.04	0.45
25:DA:2578:G:H1'	61:DE:404:HOH:O	2.15	0.45
25:DA:2689:U:P	25:DA:2719:G:H22	2.39	0.45
29:DF:34:TRP:CZ3	35:DP:8:PRO:HB3	2.51	0.45
30:DG:76:SER:CB	30:DG:84:LYS:H	2.29	0.45
34:DO:87:ILE:HD12	34:DO:91:LEU:HA	1.98	0.45
35:DP:27:HIS:HB2	61:DP:313:HOH:O	2.16	0.45
51:D5:16:ARG:O	51:D5:20:ARG:HG3	2.16	0.45
1:AA:160:A:H2'	1:AA:161:A:C8	2.52	0.45
1:AA:193:C:C2	1:AA:194:C:C5	3.04	0.45
1:AA:690:G:C6	1:AA:691:G:C6	3.04	0.45
1:AA:938:A:C6	1:AA:939:G:C5	3.05	0.45
1:AA:994:A:N7	1:AA:1216:G:H4'	2.32	0.45
1:AA:1298:C:H2'	7:AG:114:ARG:NH1	2.32	0.45
2:AB:8:LYS:H	2:AB:8:LYS:HG2	1.59	0.45
2:AB:77:ALA:O	2:AB:81:VAL:HG22	2.16	0.45
5:AE:15:ARG:HD2	5:AE:26:PHE:CD2	2.51	0.45
5:AE:52:PRO:HG2	5:AE:53:LEU:HD12	1.98	0.45
8:AH:11:THR:HG22	8:AH:15:ASN:ND2	2.31	0.45
16:AP:71:ARG:O	16:AP:75:ARG:N	2.45	0.45
25:BA:581:G:P	33:BN:111:PRO:HD2	2.56	0.45
25:BA:596:G:O2'	25:BA:597:C:H3'	2.17	0.45
25:BA:1613:A:OP1	27:BD:211:ARG:NH1	2.50	0.45
25:BA:2304:C:H2'	25:BA:2305:C:C6	2.51	0.45
40:BU:16:LYS:HB3	40:BU:16:LYS:HE2	1.71	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BX:92:LEU:HD12	43:BX:92:LEU:HA	1.79	0.45
1:CA:243:A:H4'	1:CA:244:U:H5''	1.97	0.45
1:CA:251:G:H4'	1:CA:252:U:O5'	2.16	0.45
1:CA:292:G:N2	1:CA:309:G:C4	2.85	0.45
1:CA:353:A:H5'	1:CA:353:A:C8	2.45	0.45
1:CA:461:A:C5	1:CA:471:G:C6	3.04	0.45
1:CA:555:C:H2'	1:CA:556:C:C6	2.51	0.45
1:CA:1145:C:H4'	1:CA:1146:A:C5'	2.44	0.45
1:CA:1309:G:H5'	13:CM:78:ILE:HD11	1.98	0.45
1:CA:1422:G:O3'	34:DO:49:ARG:NH1	2.48	0.45
2:CB:118:LEU:HB3	2:CB:142:LEU:HD12	1.97	0.45
5:CE:53:LEU:H	5:CE:53:LEU:HD12	1.80	0.45
14:CN:21:TYR:HE1	14:CN:23:ARG:NE	2.14	0.45
14:CN:37:PHE:HB3	14:CN:39:LEU:HD12	1.99	0.45
25:DA:623:G:C6	25:DA:624:C:C4	3.05	0.45
25:DA:1252:G:C2	25:DA:1253:A:C2	3.03	0.45
26:DB:31:C:O2'	26:DB:32:C:H5'	2.16	0.45
27:DD:33:LEU:HD23	27:DD:33:LEU:HA	1.74	0.45
35:DP:29:LYS:HG3	35:DP:30:THR:HG23	1.98	0.45
1:AA:251:G:N2	1:AA:253:U:C5	2.84	0.45
1:AA:278:G:OP2	17:AQ:92:ARG:NH2	2.50	0.45
1:AA:299:G:H2'	1:AA:300:A:C8	2.51	0.45
1:AA:658:G:H2'	1:AA:659:U:H6	1.81	0.45
1:AA:1118:C:H2'	1:AA:1119:C:C6	2.51	0.45
1:AA:1125:U:O4	1:AA:1128:C:C5	2.70	0.45
1:AA:1206:G:C6	1:AA:1207:G:C5	3.04	0.45
1:AA:1254:C:H2'	1:AA:1255:G:C8	2.52	0.45
4:AD:23:GLY:HA3	4:AD:112:VAL:HB	1.98	0.45
6:AF:100:ASN:H	18:AR:23:LYS:HZ1	1.63	0.45
17:AQ:26:GLN:HE21	17:AQ:37:LYS:HG2	1.81	0.45
18:AR:52:PRO:O	18:AR:56:THR:HG23	2.16	0.45
25:BA:306:A:H2'	25:BA:306:A:N3	2.31	0.45
25:BA:860:U:H2'	25:BA:861:C:C6	2.52	0.45
25:BA:1285:G:H2'	25:BA:1286:U:O4'	2.16	0.45
25:BA:2354:C:O2'	25:BA:2386:C:H5''	2.17	0.45
1:CA:605:U:C2'	1:CA:606:G:H5'	2.46	0.45
1:CA:731:G:H5'	1:CA:766:A:H4'	1.97	0.45
2:CB:47:THR:HG22	2:CB:51:LEU:HG	1.99	0.45
2:CB:127:ILE:HG12	2:CB:128:GLU:H	1.81	0.45
2:CB:211:ILE:O	2:CB:215:LEU:HB2	2.16	0.45
7:CG:65:ALA:HB1	7:CG:127:ALA:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:17:THR:HA	8:CH:65:TYR:HE2	1.81	0.45
12:CL:24:VAL:CG1	12:CL:27:LEU:HD22	2.46	0.45
20:CT:46:GLU:O	20:CT:46:GLU:HG2	2.14	0.45
25:DA:528:A:H2	25:DA:2043:C:C5'	2.30	0.45
25:DA:888:C:H2'	25:DA:889:C:N3	2.31	0.45
25:DA:966:G:H2'	25:DA:967:C:C6	2.52	0.45
25:DA:1527:G:H2'	25:DA:1542:A:N1	2.31	0.45
25:DA:2219:G:H2'	25:DA:2220:G:H8	1.81	0.45
25:DA:2400:G:H2'	25:DA:2401:U:H6	1.81	0.45
27:DD:61:LEU:O	27:DD:63:ARG:NH1	2.50	0.45
35:DP:47:ASP:HA	35:DP:48:PRO:HD3	1.82	0.45
45:DZ:30:ASN:HA	45:DZ:89:PHE:HE1	1.80	0.45
1:AA:627:G:O2'	1:AA:628:G:H5'	2.17	0.45
1:AA:658:G:H2'	1:AA:659:U:C6	2.51	0.45
1:AA:977:A:H1'	1:AA:982:U:O4	2.16	0.45
1:AA:1202:G:N2	14:AN:46:GLU:OE1	2.48	0.45
1:AA:1316:G:N1	1:AA:1319:A:OP2	2.48	0.45
1:AA:1410:G:H2'	1:AA:1411:C:C6	2.51	0.45
2:AB:55:PHE:HE1	2:AB:218:ALA:HA	1.82	0.45
4:AD:8:VAL:O	4:AD:11:LEU:HB2	2.17	0.45
9:AI:99:LEU:HB3	9:AI:101:PHE:HE1	1.81	0.45
25:BA:1056:A:N3	25:BA:1199:C:H1'	2.32	0.45
25:BA:1230:C:H5''	25:BA:1231:G:OP1	2.17	0.45
25:BA:1839:U:O5'	25:BA:1839:U:H6	1.99	0.45
25:BA:2289:G:OP2	46:B0:10:THR:HG21	2.16	0.45
25:BA:2614:A:C8	46:B0:3:HIS:HE1	2.34	0.45
35:BP:46:LYS:HB3	35:BP:46:LYS:HE3	1.74	0.45
41:BV:62:LEU:HD12	41:BV:62:LEU:HA	1.83	0.45
43:BX:38:GLU:HA	61:BX:201:HOH:O	2.16	0.45
44:BY:20:TYR:CE1	44:BY:43:ASN:HA	2.51	0.45
45:BZ:48:PHE:CE1	45:BZ:52:SER:HA	2.51	0.45
45:BZ:107:THR:HG21	45:BZ:112:ARG:NH2	2.30	0.45
1:CA:380:G:N2	1:CA:384:G:C5	2.85	0.45
1:CA:413:G:N2	1:CA:428:G:H1'	2.32	0.45
1:CA:737:A:H2'	1:CA:738:C:C6	2.52	0.45
1:CA:780:A:H1'	1:CA:803:G:N2	2.32	0.45
1:CA:1328:C:H2'	1:CA:1329:A:O4'	2.16	0.45
4:CD:122:ARG:HA	4:CD:122:ARG:HH11	1.82	0.45
9:CI:53:VAL:HG23	9:CI:55:ALA:HB3	1.98	0.45
10:CJ:22:LYS:HA	10:CJ:25:GLU:HB2	1.98	0.45
15:CO:69:TYR:O	15:CO:73:GLU:HG2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:276:A:H5''	25:DA:277:C:H5'	1.99	0.45
25:DA:644:A:H4'	25:DA:645:C:C4	2.50	0.45
25:DA:761:A:N7	61:DA:3757:HOH:O	2.36	0.45
25:DA:1138:G:H2'	25:DA:1139:G:O4'	2.16	0.45
25:DA:1223:G:N1	25:DA:1227:G:C6	2.85	0.45
25:DA:2097:C:H2'	25:DA:2098:U:H6	1.81	0.45
25:DA:2497:A:H5''	61:DA:3744:HOH:O	2.16	0.45
25:DA:2728:U:H2'	25:DA:2729:G:C8	2.52	0.45
25:DA:2751:G:H3'	25:DA:2752:C:C6	2.51	0.45
25:DA:2879:C:OP2	61:DA:4047:HOH:O	2.21	0.45
29:DF:137:LYS:HB3	29:DF:137:LYS:HE3	1.57	0.45
32:DI:126:TYR:HB2	32:DI:142:VAL:HG23	1.98	0.45
35:DP:82:GLY:HA2	35:DP:113:LYS:O	2.17	0.45
40:DU:49:HIS:HA	40:DU:52:ARG:HB3	1.98	0.45
42:DW:20:VAL:HG21	42:DW:43:GLY:HA3	1.99	0.45
44:DY:74:PRO:O	44:DY:82:PRO:HA	2.17	0.45
45:DZ:125:LEU:HG	45:DZ:164:ALA:HB3	1.99	0.45
1:AA:236:G:H2'	1:AA:237:C:C6	2.51	0.45
1:AA:589:C:O2'	1:AA:590:C:H5'	2.17	0.45
1:AA:719:C:O2'	18:AR:49:LYS:HB3	2.15	0.45
1:AA:1127:G:H21	1:AA:1128:C:H1'	1.80	0.45
1:AA:1327:C:OP2	21:AU:12:LYS:NZ	2.37	0.45
1:AA:1353:G:OP1	21:AU:10:ARG:NH1	2.46	0.45
4:AD:129:ASN:N	4:AD:145:GLU:O	2.43	0.45
5:AE:87:SER:HB3	5:AE:131:ILE:HD13	1.97	0.45
9:AI:19:LEU:HB3	9:AI:59:PHE:CD2	2.50	0.45
9:AI:77:ILE:O	9:AI:81:ILE:HG22	2.17	0.45
16:AP:4:ILE:HG13	16:AP:64:ALA:HB1	1.99	0.45
19:AS:45:VAL:HG13	19:AS:63:THR:HA	1.98	0.45
25:BA:629:U:H4'	25:BA:705:C:H4'	1.99	0.45
25:BA:1204:C:H4'	49:B3:32:GLN:HB2	1.97	0.45
25:BA:2323:A:OP1	25:BA:2323:A:H3'	2.17	0.45
30:BG:101:ILE:HG22	30:BG:105:LYS:HE2	1.98	0.45
34:BO:115:VAL:HG13	34:BO:121:VAL:HG21	1.98	0.45
44:BY:106:LEU:O	44:BY:107:ASP:HB2	2.17	0.45
1:CA:109:A:C6	1:CA:326:G:C6	3.05	0.45
1:CA:557:G:N1	1:CA:558:G:C2	2.84	0.45
1:CA:1074:G:C2	1:CA:1075:C:C2	3.05	0.45
1:CA:1149:C:O2'	1:CA:1280:A:N1	2.44	0.45
1:CA:1346:A:H5''	9:CI:120:ARG:NH1	2.31	0.45
1:CA:1423:G:H2'	1:CA:1424:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:23:ILE:HD13	10:CJ:23:ILE:HA	1.72	0.45
12:CL:34:ARG:O	12:CL:61:THR:HG23	2.17	0.45
19:CS:22:LEU:HD23	19:CS:27:GLU:HA	1.99	0.45
25:DA:196:A:H2'	25:DA:196:A:N3	2.32	0.45
25:DA:610:G:N2	25:DA:619:G:H1'	2.32	0.45
25:DA:870:A:C2'	25:DA:871:U:H5'	2.46	0.45
25:DA:1227:G:H2'	25:DA:1228:G:O4'	2.16	0.45
25:DA:1248:G:O2'	40:DU:3:ARG:HA	2.17	0.45
25:DA:1647:G:H3'	61:DA:4113:HOH:O	2.17	0.45
25:DA:1664:A:N7	61:DA:3965:HOH:O	2.36	0.45
25:DA:1789:A:H2'	25:DA:1790:C:C6	2.52	0.45
25:DA:2290:G:C6	25:DA:2291:U:C4	3.05	0.45
25:DA:2872:G:C2	25:DA:2873:A:N6	2.85	0.45
29:DF:29:ASN:H	29:DF:112:MET:CE	2.30	0.45
29:DF:132:VAL:HG21	29:DF:163:VAL:HG22	1.99	0.45
42:DW:4:LYS:HD3	42:DW:6:ILE:HD11	1.98	0.45
1:AA:124:G:H4'	1:AA:291:C:O2'	2.16	0.45
1:AA:389:A:C6	1:AA:390:C:H1'	2.51	0.45
1:AA:430:A:H2'	1:AA:431:A:O4'	2.17	0.45
1:AA:524:G:H2'	1:AA:525:C:C6	2.52	0.45
1:AA:580:U:H2'	1:AA:581:G:C8	2.51	0.45
1:AA:684:A:H2'	1:AA:685:G:C8	2.52	0.45
1:AA:721:G:H4'	1:AA:722:A:O4'	2.16	0.45
1:AA:736:C:H2'	1:AA:737:A:C8	2.51	0.45
1:AA:1073:U:O2'	2:AB:104:ASN:OD1	2.30	0.45
1:AA:1504:G:H4'	1:AA:1505:G:C4	2.52	0.45
18:AR:33:ASP:OD2	18:AR:36:ASN:HB2	2.16	0.45
25:BA:605:G:H2'	25:BA:606:G:C8	2.52	0.45
25:BA:2612:A:H2'	25:BA:2613:C:C6	2.52	0.45
25:BA:2661:U:H2'	25:BA:2662:U:H6	1.82	0.45
31:BH:13:LYS:HA	31:BH:14:GLY:HA2	1.77	0.45
1:CA:690:G:H2'	1:CA:691:G:O4'	2.16	0.45
1:CA:1005:A:H5''	1:CA:1006:C:C5	2.52	0.45
1:CA:1249:C:O4'	9:CI:70:LYS:HE2	2.17	0.45
4:CD:110:PHE:N	4:CD:110:PHE:CD1	2.84	0.45
7:CG:42:ILE:HD13	7:CG:116:ALA:HB3	1.98	0.45
9:CI:15:ALA:HB2	9:CI:65:VAL:HG23	1.98	0.45
19:CS:40:ILE:HD12	19:CS:71:LEU:HD12	1.99	0.45
25:DA:479:A:HO2'	25:DA:481:G:H8	1.62	0.45
25:DA:493:G:H2'	25:DA:494:G:O4'	2.16	0.45
25:DA:528:A:OP2	33:DN:114:ARG:NH1	2.44	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1032:A:O3'	55:D9:16:VAL:HG11	2.16	0.45
25:DA:1159:U:O2'	25:DA:1160:G:H5'	2.17	0.45
25:DA:1165:U:H2'	25:DA:1166:C:C6	2.52	0.45
25:DA:1212:G:H1'	25:DA:1236:G:N2	2.31	0.45
25:DA:1525:G:H2'	25:DA:1526:G:H8	1.80	0.45
25:DA:2019:A:OP2	51:D5:9:LYS:NZ	2.27	0.45
25:DA:2046:G:H2'	25:DA:2047:U:C6	2.52	0.45
30:DG:70:VAL:HA	30:DG:90:LEU:HD23	1.98	0.45
30:DG:143:GLU:H	30:DG:143:GLU:HG2	1.35	0.45
36:DQ:29:PHE:HB2	36:DQ:105:GLU:OE2	2.17	0.45
42:DW:60:ASN:N	42:DW:60:ASN:ND2	2.65	0.45
1:AA:127:G:OP1	1:AA:635:G:H1'	2.17	0.45
1:AA:148:G:O2'	1:AA:149:A:H8	2.00	0.45
1:AA:665:A:H1'	1:AA:733:A:O4'	2.17	0.45
1:AA:865:A:H2	1:AA:918:A:H4'	1.81	0.45
1:AA:1027:C:N3	1:AA:1034:G:O6	2.50	0.45
1:AA:1095:U:OP1	1:AA:1108:G:N2	2.45	0.45
1:AA:1223:C:P	19:AS:78:ARG:HH21	2.39	0.45
1:AA:1299:A:H5''	1:AA:1299:A:N3	2.32	0.45
1:AA:1417:G:N2	1:AA:1482:G:H2'	2.32	0.45
2:AB:19:HIS:HE1	2:AB:189:ASP:HB3	1.80	0.45
25:BA:83:A:H5'	44:BY:8:LYS:HG2	1.98	0.45
25:BA:476:G:O6	61:BA:4177:HOH:O	2.21	0.45
25:BA:1541:A:O2'	25:BA:1542:A:H5'	2.17	0.45
25:BA:2451:A:H5'	25:BA:2451:A:C8	2.52	0.45
25:BA:2619:G:O3'	61:BA:4187:HOH:O	2.21	0.45
25:BA:2658:C:H2'	25:BA:2659:U:O4'	2.17	0.45
37:BR:104:ARG:HG3	37:BR:111:LEU:HD21	1.99	0.45
39:BT:51:ARG:HG3	39:BT:98:LYS:HD2	1.99	0.45
39:BT:53:ARG:NH1	39:BT:53:ARG:HB3	2.32	0.45
40:BU:24:TYR:HB2	40:BU:29:SER:HB3	1.99	0.45
45:BZ:15:PRO:O	45:BZ:19:ARG:HB2	2.17	0.45
1:CA:443:C:C2	1:CA:444:C:C5	3.05	0.45
1:CA:580:U:H5''	15:CO:58:MET:HG2	1.99	0.45
1:CA:728:A:H2'	1:CA:729:A:C8	2.52	0.45
1:CA:1009:G:H2'	1:CA:1010:G:O4'	2.16	0.45
1:CA:1027:C:O2'	1:CA:1034:G:N2	2.49	0.45
1:CA:1342:C:H4'	9:CI:125:TYR:HB3	1.98	0.45
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.51	0.45
2:CB:12:GLU:HA	2:CB:15:VAL:HG23	1.98	0.45
2:CB:130:ARG:HA	2:CB:131:PRO:HD3	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:196:LEU:O	4:CD:198:VAL:N	2.41	0.45
12:CL:27:LEU:HD13	12:CL:98:TYR:CE1	2.52	0.45
13:CM:81:LEU:HD22	13:CM:88:ARG:HB3	1.98	0.45
25:DA:7:G:O4'	33:DN:133:GLN:NE2	2.49	0.45
25:DA:81:G:C2	25:DA:106:C:N3	2.85	0.45
25:DA:271(S):G:C2'	25:DA:271(T):C:H5'	2.46	0.45
25:DA:848:G:O6	25:DA:928:G:H2'	2.16	0.45
25:DA:940:G:H21	25:DA:1191:G:C4'	2.30	0.45
25:DA:1486:A:O2'	25:DA:1487:G:H5'	2.17	0.45
25:DA:2297:C:H3'	25:DA:2297:C:H6	1.81	0.45
25:DA:2882:A:OP1	37:DR:96:ARG:NE	2.49	0.45
28:DE:111:ARG:HG3	28:DE:160:TYR:CD2	2.52	0.45
45:DZ:121:HIS:HB3	45:DZ:123:ASP:O	2.17	0.45
46:D0:53:MET:HA	46:D0:58:THR:O	2.16	0.45
50:D4:61:ARG:NH1	50:D4:61:ARG:O	2.49	0.45
1:AA:1015:A:H8	1:AA:1015:A:O5'	2.00	0.45
1:AA:1041:A:C2'	1:AA:1042:G:H5'	2.46	0.45
1:AA:1205:U:O2'	3:AC:195:VAL:HG23	2.17	0.45
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.52	0.45
1:AA:1424:C:H2'	1:AA:1425:U:O4'	2.16	0.45
2:AB:63:MET:HB3	2:AB:225:ALA:O	2.16	0.45
24:AW:6:2R1:O	24:AW:8:2R3:N	2.50	0.45
25:BA:613:A:H2'	25:BA:614:C:O4'	2.17	0.45
25:BA:2399:U:OP1	46:B0:55:ARG:NH2	2.50	0.45
34:BO:97:ARG:HA	34:BO:117:LEU:HD22	1.99	0.45
35:BP:124:LYS:HG3	35:BP:144:GLU:HG2	1.99	0.45
36:BQ:133:ARG:HG2	36:BQ:134:ARG:N	2.31	0.45
44:BY:43:ASN:HA	44:BY:43:ASN:HD22	1.50	0.45
47:B1:94:LEU:O	47:B1:97:LEU:HB2	2.17	0.45
1:CA:420:U:H1'	1:CA:424:G:N2	2.32	0.45
1:CA:437:U:O2'	4:CD:125:HIS:HE1	2.00	0.45
4:CD:88:VAL:O	4:CD:92:VAL:HG23	2.16	0.45
5:CE:6:PHE:HD2	5:CE:63:ARG:HD3	1.82	0.45
11:CK:44:SER:OG	11:CK:47:VAL:HG23	2.17	0.45
11:CK:99:GLN:C	11:CK:101:SER:H	2.20	0.45
13:CM:22:ILE:HB	13:CM:25:ILE:HD13	1.99	0.45
25:DA:445:C:O2'	25:DA:446:G:H5'	2.17	0.45
25:DA:524:U:H2'	25:DA:525:U:C6	2.52	0.45
25:DA:921:G:C6	25:DA:922:U:C4	3.05	0.45
25:DA:1266:G:O5'	42:DW:15:ARG:NH2	2.50	0.45
25:DA:1637:A:H4'	25:DA:2711:A:O2'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1790:C:H2'	25:DA:1791:A:C5	2.52	0.45
25:DA:1796:U:H2'	25:DA:1797:C:H6	1.81	0.45
25:DA:1903:G:OP1	27:DD:241:PRO:HB2	2.17	0.45
25:DA:2335:A:C8	25:DA:2337:G:C5	3.05	0.45
25:DA:2408:U:H2'	25:DA:2409:G:C8	2.52	0.45
25:DA:2698:U:H2'	25:DA:2699:C:C6	2.52	0.45
30:DG:151:ALA:O	30:DG:153:ARG:HD3	2.16	0.45
43:DX:40:LYS:HG3	43:DX:51:VAL:HB	1.99	0.45
1:AA:66:G:N2	1:AA:172:A:N3	2.65	0.45
1:AA:309:G:H1'	1:AA:608:A:C2	2.51	0.45
1:AA:384:G:C2	1:AA:385:C:C4	3.05	0.45
1:AA:486:U:H2'	1:AA:487:A:C8	2.52	0.45
1:AA:674:G:O2'	1:AA:675:A:H5'	2.17	0.45
1:AA:1127:G:H21	1:AA:1148:U:H3	1.64	0.45
1:AA:1203:C:H2'	1:AA:1204:A:C8	2.52	0.45
2:AB:196:LEU:HD12	2:AB:196:LEU:HA	1.78	0.45
7:AG:46:ALA:O	7:AG:50:ILE:HG23	2.17	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:154:G:C6	25:BA:155:C:N4	2.85	0.45
25:BA:335:A:C6	25:BA:352:U:C4	3.05	0.45
25:BA:804:U:H2'	25:BA:805:C:O4'	2.17	0.45
25:BA:927:G:OP2	25:BA:927:G:H8	2.01	0.45
25:BA:1828:C:H4'	27:BD:257:LEU:O	2.17	0.45
25:BA:1971:G:C6	25:BA:1972:G:C6	3.05	0.45
25:BA:2328:C:H1'	30:BG:128:ARG:HH21	1.81	0.45
25:BA:2444:A:C8	47:B1:33:LYS:HD2	2.52	0.45
25:BA:2695:C:OP1	39:BT:53:ARG:NH2	2.50	0.45
27:BD:146:GLU:HB2	27:BD:189:CYS:HB3	1.98	0.45
28:BE:55:ASN:HB3	28:BE:58:ARG:HG3	1.97	0.45
40:BU:76:TYR:HH	40:BU:92:ARG:HH11	1.59	0.45
50:B4:57:GLU:HB3	50:B4:58:ARG:CA	2.44	0.45
1:CA:649:G:H2'	1:CA:650:G:O4'	2.16	0.45
1:CA:1007:C:H2'	1:CA:1007:C:O2	2.16	0.45
1:CA:1216:G:OP1	14:CN:2:ALA:HA	2.17	0.45
2:CB:37:ASN:O	2:CB:39:ILE:HG12	2.17	0.45
3:CC:179:ARG:HD2	3:CC:206:GLU:HB2	1.98	0.45
10:CJ:11:PHE:CD1	10:CJ:67:THR:HG22	2.52	0.45
10:CJ:55:LYS:HE3	10:CJ:56:HIS:NE2	2.32	0.45
13:CM:57:ARG:NH1	50:D4:17:GLY:HA3	2.32	0.45
17:CQ:76:LEU:HD11	17:CQ:78:GLU:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:271(S):G:C6	25:DA:271(T):C:C4	3.05	0.45
25:DA:335:C:H4'	44:DY:73:ARG:CD	2.47	0.45
25:DA:2315:G:H2'	25:DA:2316:C:C6	2.52	0.45
25:DA:2461:C:H2'	25:DA:2462:U:H6	1.82	0.45
27:DD:99:ASP:HB3	27:DD:101:GLU:H	1.82	0.45
28:DE:119:ARG:HD2	28:DE:120:TRP:NE1	2.32	0.45
28:DE:144:ARG:HB3	28:DE:145:LYS:H	1.52	0.45
29:DF:160:ASN:HB3	29:DF:163:VAL:HB	1.98	0.45
38:DS:85:VAL:O	38:DS:112:PHE:HB3	2.16	0.45
1:AA:146:G:C6	1:AA:147:G:N7	2.84	0.44
1:AA:542:G:OP1	4:AD:10:ARG:NH1	2.49	0.44
6:AF:44:GLY:HA2	6:AF:59:TYR:CE2	2.52	0.44
9:AI:3:GLN:CG	9:AI:20:ARG:HE	2.28	0.44
13:AM:121:LYS:HE3	13:AM:121:LYS:H	1.82	0.44
23:AX:12:G:H4'	25:BA:1930:C:O2	2.17	0.44
25:BA:834:U:H5''	25:BA:835:A:H5'	1.98	0.44
25:BA:1217:G:C5	25:BA:1218:G:C8	3.05	0.44
25:BA:1314:A:H2'	25:BA:1315:A:O4'	2.17	0.44
25:BA:1557:A:H2'	25:BA:1558:G:C8	2.52	0.44
25:BA:2087:C:H2'	25:BA:2088:C:C6	2.52	0.44
37:BR:98:LEU:HB2	37:BR:113:LEU:HD11	1.98	0.44
38:BS:67:ARG:HG2	38:BS:71:ARG:NH1	2.32	0.44
38:BS:67:ARG:HG2	38:BS:71:ARG:CZ	2.47	0.44
40:BU:34:LYS:NZ	40:BU:37:GLU:OE2	2.41	0.44
40:BU:98:LEU:HD23	40:BU:98:LEU:HA	1.75	0.44
1:CA:401:C:H1'	1:CA:622:A:H1'	1.98	0.44
1:CA:599:C:H5''	8:CH:95:VAL:O	2.17	0.44
1:CA:977:A:H2'	1:CA:978:A:H5''	1.98	0.44
1:CA:1026:G:N7	1:CA:1036:G:N2	2.66	0.44
1:CA:1106:G:H2'	1:CA:1107:C:H6	1.82	0.44
3:CC:68:VAL:HG12	3:CC:70:VAL:HG12	1.99	0.44
4:CD:90:GLY:HA2	4:CD:204:ILE:HD11	1.97	0.44
10:CJ:81:THR:HA	10:CJ:84:GLN:HB2	1.99	0.44
16:CP:6:LEU:HD23	16:CP:17:TYR:CD1	2.50	0.44
16:CP:42:ARG:CB	16:CP:44:THR:HG23	2.48	0.44
25:DA:484:C:H2'	25:DA:485:C:H6	1.82	0.44
25:DA:668:G:H5''	25:DA:668:G:H8	1.82	0.44
25:DA:852:G:N2	25:DA:926:A:H1'	2.32	0.44
25:DA:1187:G:H5''	41:DV:81:TYR:CE1	2.51	0.44
25:DA:1710:C:H5'	25:DA:2859:G:H1'	1.99	0.44
25:DA:1847:A:H4'	25:DA:1848:A:OP2	2.15	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2293:C:H6	25:DA:2293:C:H5'	1.82	0.44
25:DA:2508:G:C2	25:DA:2582:G:C6	3.05	0.44
25:DA:2740:A:C6	25:DA:2764:A:C8	3.06	0.44
26:DB:66:A:N6	26:DB:109:C:H5'	2.28	0.44
26:DB:119:G:C6	26:DB:120:A:C6	3.05	0.44
28:DE:96:PHE:HA	28:DE:100:GLU:OE1	2.17	0.44
30:DG:96:ARG:O	30:DG:99:MET:HB3	2.17	0.44
34:DO:119:PRO:HB2	39:DT:68:TYR:CE2	2.52	0.44
37:DR:65:LEU:HD12	37:DR:65:LEU:HA	1.81	0.44
38:DS:27:SER:HA	38:DS:88:ASP:HB3	1.99	0.44
44:DY:35:TYR:CE2	44:DY:69:ALA:HB3	2.52	0.44
55:D9:17:ILE:HG21	55:D9:26:ILE:HD11	1.99	0.44
1:AA:1066:C:O2'	1:AA:1067:A:H5'	2.16	0.44
1:AA:1216:G:P	14:AN:2:ALA:HA	2.57	0.44
2:AB:30:ARG:HH21	2:AB:194:PRO:HB2	1.82	0.44
8:AH:51:VAL:HG11	8:AH:60:ARG:NH1	2.28	0.44
13:AM:40:ASN:O	13:AM:43:THR:OG1	2.30	0.44
19:AS:31:ILE:HB	19:AS:49:ILE:HG12	1.99	0.44
25:BA:401:A:C2	25:BA:428:A:C4	3.06	0.44
25:BA:1073:A:C6	25:BA:1172:A:C4	3.06	0.44
25:BA:1095:C:C4	25:BA:1096:A:N7	2.85	0.44
25:BA:1334:U:C4	25:BA:1373:C:H1'	2.52	0.44
26:BB:4:C:H42	26:BB:117:G:H1	1.65	0.44
28:BE:175:VAL:HG22	28:BE:177:PRO:HD3	1.99	0.44
32:BI:14:ASP:OD1	32:BI:15:VAL:N	2.51	0.44
35:BP:50:ARG:HG2	54:B8:61:LEU:HD11	1.99	0.44
1:CA:321:A:C2	1:CA:333:G:C2	3.06	0.44
1:CA:422:C:H4'	1:CA:423:G:C4	2.51	0.44
1:CA:1126:U:H4'	1:CA:1281:U:H1'	1.98	0.44
1:CA:1206:G:C6	1:CA:1207:G:C5	3.05	0.44
1:CA:1225:A:H2'	1:CA:1226:C:C5	2.52	0.44
2:CB:208:ILE:HA	2:CB:211:ILE:HD12	2.00	0.44
4:CD:134:ASP:O	4:CD:136:PRO:HD3	2.18	0.44
5:CE:27:ARG:HE	5:CE:27:ARG:HB2	1.62	0.44
7:CG:70:LYS:HG2	7:CG:96:GLN:O	2.18	0.44
8:CH:41:ARG:HH22	8:CH:123:GLU:CD	2.20	0.44
13:CM:25:ILE:HD11	13:CM:66:LEU:HD13	1.98	0.44
14:CN:24:CYS:SG	14:CN:39:LEU:HA	2.58	0.44
18:CR:58:LEU:HD12	18:CR:62:GLU:HG3	1.99	0.44
25:DA:52:A:C5	25:DA:118:A:C2	3.05	0.44
25:DA:94(A):G:H2'	25:DA:95:G:O4'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:797:C:H2'	25:DA:798:G:C8	2.53	0.44
25:DA:1506:C:H2'	25:DA:1507:A:H5'	1.99	0.44
25:DA:1681:G:H8	25:DA:1681:G:O5'	2.01	0.44
25:DA:1802:A:N1	25:DA:1822:G:H1'	2.33	0.44
26:DB:33:G:O2'	26:DB:34:U:H5'	2.17	0.44
45:DZ:125:LEU:HB3	45:DZ:165:VAL:CG1	2.47	0.44
1:AA:373:A:C2	1:AA:374:A:C8	3.06	0.44
1:AA:435:C:H2'	1:AA:436:C:H6	1.83	0.44
1:AA:1124:G:P	10:AJ:36:GLY:H	2.40	0.44
1:AA:1291:G:H2'	1:AA:1292:U:C6	2.52	0.44
2:AB:71:VAL:HG12	2:AB:170:GLU:HG2	2.00	0.44
4:AD:101:LEU:HD23	4:AD:121:VAL:HG11	1.98	0.44
9:AI:49:PRO:HG2	9:AI:81:ILE:HG23	1.99	0.44
15:AO:25:THR:HG21	15:AO:70:LEU:HB2	2.00	0.44
23:AX:57:A:O4'	30:BG:78:SER:OG	2.31	0.44
25:BA:254:A:C8	25:BA:255:G:H1'	2.51	0.44
25:BA:323:A:N1	25:BA:346:A:O2'	2.44	0.44
25:BA:917:A:C2	25:BA:954:C:C2	3.05	0.44
25:BA:1014:U:OP1	49:B3:17:LYS:N	2.50	0.44
25:BA:1904:C:H2'	25:BA:1905:G:O4'	2.18	0.44
25:BA:2856:G:H2'	25:BA:2857:U:O4'	2.17	0.44
29:BF:195:ASP:HB3	29:BF:198:ALA:H	1.82	0.44
36:BQ:109:VAL:HG22	36:BQ:113:GLN:OE1	2.17	0.44
41:BV:20:LEU:HD12	41:BV:20:LEU:HA	1.75	0.44
46:B0:27:GLU:HB2	46:B0:69:PHE:HD1	1.82	0.44
1:CA:35:G:H2'	1:CA:36:C:C6	2.53	0.44
1:CA:932:C:H2'	1:CA:933:G:C8	2.52	0.44
1:CA:1144:G:N2	1:CA:1146:A:H62	2.16	0.44
2:CB:77:ALA:HA	2:CB:80:ILE:HG22	1.99	0.44
2:CB:178:ARG:NH2	8:CH:68:ARG:HH12	2.06	0.44
3:CC:79:ARG:O	3:CC:82:GLU:HB2	2.17	0.44
4:CD:88:VAL:HG22	5:CE:96:PRO:HB2	1.99	0.44
15:CO:48:LYS:N	15:CO:48:LYS:HD2	2.32	0.44
24:CW:1:2QZ:CG2	24:CW:10:2QY:H83	2.48	0.44
25:DA:828:U:H4'	25:DA:831:G:N1	2.31	0.44
25:DA:900:A:C2'	25:DA:901:A:H8	2.30	0.44
25:DA:910:A:C6	25:DA:911:A:C6	3.05	0.44
25:DA:997:G:H2'	25:DA:998:C:H6	1.83	0.44
25:DA:1266:G:O2'	25:DA:2012:G:O6	2.21	0.44
25:DA:1475:G:C2	25:DA:1517:G:C2	3.05	0.44
25:DA:1654:A:OP1	37:DR:1:MET:HA	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2022:U:O2'	25:DA:2617:C:H5'	2.17	0.44
26:DB:46:A:H2'	26:DB:47:C:H6	1.83	0.44
30:DG:15:VAL:HG13	30:DG:175:LEU:HD23	1.99	0.44
45:DZ:63:ASP:OD1	45:DZ:65:GLN:HG3	2.17	0.44
1:AA:64:G:H4'	1:AA:65:U:H3'	1.98	0.44
1:AA:257:G:N2	1:AA:269:C:O2	2.20	0.44
1:AA:457:C:H2'	1:AA:458:C:H6	1.82	0.44
1:AA:784:C:H4'	25:BA:1868:C:OP1	2.18	0.44
1:AA:1129:C:H1'	1:AA:1130:A:N7	2.33	0.44
2:AB:36:ARG:C	2:AB:38:GLY:H	2.20	0.44
4:AD:138:TYR:CE1	4:AD:140:VAL:HA	2.52	0.44
6:AF:62:TRP:CD1	18:AR:35:ARG:HD2	2.53	0.44
9:AI:53:VAL:HG11	9:AI:92:TYR:CE1	2.53	0.44
25:BA:412:C:O2	35:BP:71:VAL:HG21	2.17	0.44
25:BA:1993:A:OP2	27:BD:242:ARG:NH2	2.51	0.44
27:BD:33:LEU:HD23	27:BD:33:LEU:HA	1.75	0.44
28:BE:127:ASP:OD2	61:BE:410:HOH:O	2.21	0.44
32:BI:68:LEU:HD11	32:BI:109:ILE:HD11	2.00	0.44
37:BR:8:ARG:NH1	37:BR:39:PRO:HB3	2.32	0.44
43:BX:72:LYS:HG2	43:BX:73:ARG:O	2.18	0.44
45:BZ:150:LEU:HD12	45:BZ:150:LEU:HA	1.59	0.44
53:B7:1:MET:HE3	53:B7:1:MET:N	2.32	0.44
1:CA:38:G:N2	1:CA:397:A:H5''	2.31	0.44
1:CA:110:C:O2'	16:CP:25:ARG:O	2.33	0.44
1:CA:671:G:H5'	6:CF:77:ARG:NH2	2.27	0.44
1:CA:805:C:C2'	1:CA:806:C:H5'	2.48	0.44
1:CA:974:A:OP2	14:CN:41:ARG:NH1	2.50	0.44
1:CA:1028:C:N3	1:CA:1033:G:O6	2.50	0.44
1:CA:1030(C):G:H2'	1:CA:1030(D):A:C8	2.53	0.44
1:CA:1179:A:C6	1:CA:1180:A:N7	2.85	0.44
2:CB:126:GLU:H	2:CB:126:GLU:HG3	1.63	0.44
3:CC:19:GLU:HB3	3:CC:40:ARG:NH2	2.33	0.44
6:CF:7:ASN:ND2	18:CR:34:TYR:OH	2.46	0.44
8:CH:116:LYS:O	8:CH:119:LEU:HD21	2.17	0.44
13:CM:20:THR:HG21	13:CM:27:LYS:HE2	1.99	0.44
19:CS:15:LEU:HD11	19:CS:33:THR:HB	1.99	0.44
25:DA:854:G:C2	25:DA:855:G:C5	3.06	0.44
25:DA:1493:C:N4	25:DA:2206:G:O2'	2.47	0.44
25:DA:2653:U:O2'	31:DH:110:SER:HB3	2.17	0.44
25:DA:2780:G:OP2	33:DN:118:LYS:HD3	2.18	0.44
25:DA:2819:G:H2'	25:DA:2821:A:N7	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DD:61:LEU:HD12	27:DD:61:LEU:HA	1.57	0.44
29:DF:40:GLN:NE2	29:DF:182:ASN:HB2	2.32	0.44
29:DF:49:ALA:O	29:DF:92:PRO:HB2	2.17	0.44
31:DH:90:LYS:HD2	31:DH:163:TYR:CD1	2.52	0.44
31:DH:95:ARG:HB2	31:DH:128:PRO:HB2	1.99	0.44
31:DH:117:PRO:HG3	31:DH:123:PHE:CD2	2.52	0.44
32:DI:79:ILE:HA	32:DI:80:PRO:HD2	1.73	0.44
46:D0:82:ARG:HA	46:D0:83:PRO:HD3	1.73	0.44
1:AA:159:G:O2'	1:AA:161:A:N7	2.47	0.44
1:AA:184:G:H2'	1:AA:185:A:H8	1.82	0.44
1:AA:1034:G:H5''	1:AA:1035:A:OP2	2.17	0.44
1:AA:1082:G:H2'	1:AA:1083:U:O4'	2.18	0.44
1:AA:1084:G:C5	1:AA:1085:U:C4	3.06	0.44
2:AB:59:GLU:O	2:AB:63:MET:HG2	2.18	0.44
2:AB:95:GLN:HG3	2:AB:147:LYS:O	2.17	0.44
4:AD:187:ARG:HG2	4:AD:188:LEU:H	1.82	0.44
5:AE:75:THR:HG23	5:AE:76:ILE:O	2.18	0.44
7:AG:16:LEU:HD11	9:AI:45:ALA:HB2	1.99	0.44
22:AV:15:A:O5'	22:AV:15:A:H8	2.00	0.44
25:BA:982:U:H2'	25:BA:983:G:O4'	2.18	0.44
25:BA:2635:G:H4'	25:BA:2835:C:O2	2.16	0.44
25:BA:2827:G:OP1	37:BR:99:LYS:HE2	2.17	0.44
26:BB:24:G:N3	26:BB:27:C:N4	2.58	0.44
50:B4:16:CYS:SG	50:B4:17:GLY:N	2.90	0.44
50:B4:61:ARG:HG3	50:B4:62:ARG:H	1.82	0.44
52:B6:11:LEU:HB3	52:B6:49:HIS:HB3	1.99	0.44
1:CA:35:G:O2'	12:CL:118:SER:O	2.36	0.44
1:CA:276:G:C2'	1:CA:277:C:H5'	2.48	0.44
1:CA:679:C:O2'	1:CA:680:C:H5'	2.18	0.44
1:CA:937:A:H1'	1:CA:1379:G:H22	1.83	0.44
1:CA:1007:C:C2	1:CA:1022:G:N2	2.75	0.44
1:CA:1118:C:H2'	1:CA:1119:C:C6	2.52	0.44
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	2.00	0.44
9:CI:53:VAL:HG21	9:CI:92:TYR:OH	2.18	0.44
13:CM:13:LYS:HA	13:CM:44:ARG:HH11	1.81	0.44
13:CM:97:PRO:HB3	13:CM:101:GLN:OE1	2.17	0.44
19:CS:50:ALA:HA	19:CS:58:VAL:O	2.17	0.44
25:DA:719:C:H2'	25:DA:720:C:H6	1.82	0.44
25:DA:764:A:N1	25:DA:1789:A:O2'	2.49	0.44
25:DA:1359:A:N6	25:DA:1372:U:N3	2.61	0.44
25:DA:1574:C:H2'	25:DA:1575:C:H6	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2197:U:O3'	25:DA:2198:A:H8	2.01	0.44
25:DA:2261:C:C5	46:D0:16:SER:HB3	2.53	0.44
27:DD:221:VAL:HG22	27:DD:226:MET:HE3	1.98	0.44
30:DG:111:LEU:HB2	30:DG:112:PRO:HD3	1.99	0.44
32:DI:80:PRO:HA	32:DI:145:VAL:HG23	1.99	0.44
41:DV:35:LEU:HB2	41:DV:57:VAL:CG2	2.46	0.44
42:DW:8:ARG:HA	42:DW:102:HIS:ND1	2.31	0.44
1:AA:184:G:O4'	1:AA:224:C:H4'	2.18	0.44
1:AA:581:G:N2	1:AA:582:U:C4	2.85	0.44
1:AA:688:G:O2'	1:AA:704:A:N1	2.47	0.44
1:AA:715:A:H2'	1:AA:716:A:C8	2.52	0.44
1:AA:1399:C:C2	1:AA:1401:G:C5	3.06	0.44
2:AB:69:LEU:HD13	2:AB:91:PRO:HB2	2.00	0.44
4:AD:174:LEU:HA	4:AD:184:LYS:O	2.18	0.44
10:AJ:57:LYS:HD2	10:AJ:60:ARG:HH21	1.81	0.44
27:BD:2:ALA:N	27:BD:20:ASP:OD2	2.50	0.44
31:BH:117:PRO:HG3	31:BH:123:PHE:CD2	2.52	0.44
35:BP:59:LEU:HG	54:B8:58:ILE:HD13	2.00	0.44
52:B6:40:CYS:HA	52:B6:41:PRO:HD3	1.80	0.44
1:CA:292:G:N7	1:CA:293:G:H1'	2.32	0.44
1:CA:564:C:H5'	17:CQ:32:TYR:CE1	2.52	0.44
1:CA:939:G:H2'	1:CA:940:C:C6	2.53	0.44
1:CA:1431:C:H2'	1:CA:1432:G:O4'	2.18	0.44
8:CH:82:HIS:NE2	8:CH:84:ARG:HG2	2.32	0.44
9:CI:24:GLY:HA2	9:CI:59:PHE:O	2.18	0.44
15:CO:54:ARG:O	15:CO:58:MET:HG3	2.17	0.44
25:DA:78:A:H2'	25:DA:79:G:C8	2.53	0.44
25:DA:154:G:C6	25:DA:173:G:C6	3.05	0.44
25:DA:542:C:C2	25:DA:552:G:N2	2.86	0.44
25:DA:572:A:OP2	41:DV:78:LYS:NZ	2.50	0.44
25:DA:652(D):C:H2'	25:DA:652(E):G:O4'	2.17	0.44
25:DA:652(E):G:OP2	25:DA:652(E):G:H8	2.00	0.44
25:DA:1169:G:H1	25:DA:1180:C:H42	1.65	0.44
25:DA:1365:A:O4'	47:D1:41:ARG:NH2	2.51	0.44
25:DA:1392:A:C6	25:DA:1393:A:C6	3.06	0.44
25:DA:2262:U:OP2	46:D0:19:LYS:HD3	2.16	0.44
25:DA:2319:G:H4'	25:DA:2320:A:OP1	2.17	0.44
26:DB:62:C:H2'	26:DB:63:G:C8	2.53	0.44
27:DD:85:ASP:OD2	27:DD:88:ARG:HD2	2.18	0.44
34:DO:7:TYR:CE1	34:DO:44:LYS:HG3	2.53	0.44
38:DS:26:LEU:HD22	38:DS:87:PHE:CE1	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DS:36:TYR:OH	38:DS:54:LEU:HD22	2.17	0.44
38:DS:67:ARG:O	38:DS:71:ARG:HG2	2.17	0.44
46:D0:34:GLY:N	46:D0:61:ALA:O	2.46	0.44
1:AA:1173:G:H2'	1:AA:1174:G:H8	1.83	0.44
1:AA:1285:A:O5'	1:AA:1285:A:H8	2.01	0.44
2:AB:51:LEU:O	2:AB:55:PHE:HD2	2.01	0.44
3:AC:175:LEU:HD21	3:AC:201:TYR:HE2	1.82	0.44
6:AF:10:LEU:HD23	6:AF:61:LEU:HD13	2.00	0.44
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.82	0.44
25:BA:171:A:H2'	25:BA:172:C:O4'	2.18	0.44
25:BA:555:G:C5	25:BA:2044:U:H5''	2.52	0.44
25:BA:1359:U:H2'	25:BA:1656:A:N1	2.33	0.44
25:BA:1588:G:H5''	25:BA:1589:A:OP2	2.17	0.44
25:BA:1702:A:H3'	25:BA:1703:C:H6	1.82	0.44
25:BA:2623:U:C4	51:B5:3:LYS:HG2	2.53	0.44
28:BE:78:LEU:O	28:BE:79:ARG:HG2	2.18	0.44
28:BE:188:VAL:HA	28:BE:189:PRO:HD3	1.80	0.44
29:BF:9:ILE:HA	29:BF:10:PRO:HD2	1.76	0.44
33:BN:67:LEU:HD12	33:BN:67:LEU:HA	1.71	0.44
43:BX:24:GLY:O	43:BX:83:VAL:HG22	2.18	0.44
50:B4:14:ILE:HG12	50:B4:31:ILE:HB	2.00	0.44
1:CA:399:G:H2'	1:CA:400:C:C6	2.53	0.44
1:CA:453:A:H4'	16:CP:72:ARG:HG3	2.00	0.44
1:CA:502:G:OP2	12:CL:116:SER:HA	2.17	0.44
1:CA:1349:A:H2'	1:CA:1350:A:H8	1.82	0.44
2:CB:76:GLN:NE2	2:CB:206:ASP:O	2.50	0.44
3:CC:33:LEU:HD21	14:CN:53:LEU:CD2	2.47	0.44
5:CE:36:ASP:C	5:CE:38:GLN:H	2.20	0.44
5:CE:152:ARG:HG3	8:CH:43:GLY:O	2.17	0.44
6:CF:89:MET:HG2	6:CF:91:VAL:HG23	2.00	0.44
8:CH:36:LEU:HD23	8:CH:36:LEU:HA	1.80	0.44
20:CT:60:GLU:HG3	20:CT:81:LYS:HD2	2.00	0.44
25:DA:71:A:N7	43:DX:31:HIS:CE1	2.86	0.44
25:DA:344:G:N2	25:DA:345:A:H62	2.15	0.44
25:DA:395:U:H1'	25:DA:396:G:N7	2.32	0.44
25:DA:447:A:H4'	25:DA:449:A:C8	2.51	0.44
25:DA:595:C:H2'	25:DA:596:G:O4'	2.17	0.44
25:DA:954:G:C5	25:DA:955:C:C5	3.05	0.44
25:DA:1514:U:O2'	25:DA:1515:G:H5'	2.18	0.44
25:DA:1788:C:C2	25:DA:1789:A:C8	3.05	0.44
25:DA:2080:G:O2'	25:DA:2081:C:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2536:G:C5	25:DA:2537:U:C5	3.05	0.44
25:DA:2817:G:C5	25:DA:2830:G:C2	3.05	0.44
28:DE:101:ARG:HD2	28:DE:169:ASN:OD1	2.18	0.44
38:DS:15:ARG:HB3	38:DS:19:LYS:NZ	2.32	0.44
38:DS:34:HIS:ND1	38:DS:53:SER:OG	2.36	0.44
40:DU:76:TYR:CZ	40:DU:80:ILE:HG13	2.53	0.44
1:AA:59:A:H5''	1:AA:60:A:H5''	2.00	0.44
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.52	0.44
1:AA:1220:G:O3'	19:AS:36:ARG:HD3	2.18	0.44
1:AA:1375:A:H4'	7:AG:29:LYS:HD3	2.00	0.44
10:AJ:84:GLN:O	10:AJ:84:GLN:HG2	2.18	0.44
12:AL:88:GLY:O	12:AL:99:HIS:HD2	2.01	0.44
15:AO:67:LEU:HD23	15:AO:67:LEU:HA	1.74	0.44
19:AS:65:ASN:C	50:B4:58:ARG:HG3	2.38	0.44
25:BA:248:G:HO2'	25:BA:646:A:HO2'	1.54	0.44
25:BA:1722:C:H2'	25:BA:1723:A:O4'	2.18	0.44
25:BA:1766:G:H8	25:BA:1770:A:H62	1.66	0.44
25:BA:2369:U:OP1	46:B0:20:ARG:NH1	2.51	0.44
29:BF:53:THR:HB	29:BF:56:GLU:OE2	2.18	0.44
30:BG:16:ARG:HE	30:BG:31:VAL:HG21	1.82	0.44
31:BH:84:SER:HA	31:BH:133:VAL:O	2.18	0.44
44:BY:55:TYR:N	44:BY:55:TYR:CD2	2.85	0.44
45:BZ:146:ILE:HA	45:BZ:147:GLY:HA2	1.67	0.44
47:B1:77:ALA:HA	47:B1:80:LEU:HD13	1.99	0.44
54:B8:30:ARG:HA	54:B8:30:ARG:HD3	1.45	0.44
1:CA:189:G:H2'	1:CA:189(A):C:C6	2.53	0.44
1:CA:472:A:H2'	1:CA:473:G:O4'	2.18	0.44
1:CA:738:C:H2'	1:CA:739:C:H6	1.83	0.44
1:CA:1151:A:H5'	10:CJ:41:PRO:HA	1.97	0.44
1:CA:1154:G:H8	1:CA:1154:G:H2'	1.36	0.44
2:CB:69:LEU:HB3	2:CB:162:ILE:HG22	2.00	0.44
2:CB:100:GLY:HA2	2:CB:103:THR:OG1	2.18	0.44
4:CD:110:PHE:N	4:CD:110:PHE:HD1	2.16	0.44
12:CL:24:VAL:HG13	12:CL:98:TYR:CE1	2.46	0.44
19:CS:15:LEU:HD12	19:CS:18:LYS:HD2	1.99	0.44
24:CW:1:2QZ:CB	24:CW:10:2QY:H83	2.47	0.44
25:DA:519:U:H2'	25:DA:520:G:H8	1.83	0.44
25:DA:616:G:H5'	29:DF:205:ARG:HD2	2.00	0.44
25:DA:623:G:C2	25:DA:624:C:C2	3.06	0.44
25:DA:1656:C:H2'	25:DA:1657:C:C6	2.53	0.44
25:DA:2078:C:H2'	25:DA:2079:U:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2261:C:H1'	25:DA:2388:A:N3	2.33	0.44
25:DA:2298:A:N6	25:DA:2321:G:H1	2.15	0.44
37:DR:33:ARG:NH1	37:DR:115:GLU:OE2	2.49	0.44
40:DU:113:ALA:O	40:DU:117:GLN:HG2	2.18	0.44
1:AA:437:U:O3'	4:AD:125:HIS:CE1	2.71	0.44
1:AA:592:G:C2	1:AA:648:A:C2	3.06	0.44
1:AA:658:G:C2	1:AA:749:C:N3	2.86	0.44
1:AA:660:G:H2'	1:AA:661:G:H8	1.81	0.44
2:AB:35:GLU:HB2	2:AB:40:HIS:HA	2.00	0.44
2:AB:133:LYS:O	2:AB:137:ARG:HG3	2.18	0.44
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.17	0.44
4:AD:164:ALA:O	4:AD:168:ARG:NH1	2.48	0.44
8:AH:53:VAL:HG12	8:AH:54:ASP:OD1	2.17	0.44
20:AT:57:ARG:HH22	20:AT:100:ILE:HD12	1.83	0.44
25:BA:956:A:C5	36:BQ:13:GLN:HG3	2.53	0.44
25:BA:2303:U:O2'	25:BA:2386:C:O2	2.30	0.44
25:BA:2734:A:O2'	25:BA:2884:C:H5'	2.17	0.44
27:BD:77:ALA:HB2	27:BD:97:TYR:CG	2.52	0.44
30:BG:43:LEU:HB3	30:BG:44:GLY:H	1.53	0.44
45:BZ:126:VAL:CG1	45:BZ:161:VAL:HG23	2.47	0.44
1:CA:1049:U:C5	1:CA:1201:A:H5'	2.52	0.44
1:CA:1168:A:H3'	1:CA:1168:A:N3	2.33	0.44
1:CA:1227:A:H8	1:CA:1227:A:H3'	1.83	0.44
1:CA:1342:C:H1'	9:CI:124:GLN:NE2	2.32	0.44
1:CA:1380:U:C4	7:CG:3:ARG:HG2	2.52	0.44
11:CK:20:TYR:CE1	11:CK:83:ILE:HD12	2.52	0.44
13:CM:20:THR:C	13:CM:22:ILE:H	2.21	0.44
19:CS:30:LEU:CD1	19:CS:32:LYS:HG3	2.40	0.44
23:CX:8:U:O5'	23:CX:8:U:H6	2.01	0.44
25:DA:330:A:H2	25:DA:1210:A:H2'	1.82	0.44
25:DA:478:A:N1	25:DA:500:G:H4'	2.33	0.44
25:DA:1131:G:O6	25:DA:2040:C:H1'	2.18	0.44
25:DA:1857:G:C6	25:DA:1858:G:N1	2.86	0.44
25:DA:2387:U:H1'	46:D0:41:ARG:NE	2.32	0.44
25:DA:2750:A:H4'	25:DA:2751:G:OP2	2.13	0.44
31:DH:5:GLY:HA3	31:DH:65:HIS:CG	2.52	0.44
34:DO:80:ASP:OD1	39:DT:64:ARG:NH2	2.49	0.44
38:DS:57:LYS:HB2	38:DS:57:LYS:HE2	1.61	0.44
47:D1:7:ILE:HG23	47:D1:98:LEU:HD11	1.99	0.44
48:D2:22:GLU:OE2	48:D2:68:ARG:NH2	2.51	0.44
1:AA:181:G:N1	1:AA:195:A:C8	2.85	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:630:G:O2'	1:AA:631:G:H5'	2.19	0.43
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.17	0.43
9:AI:15:ALA:HB2	9:AI:65:VAL:HG23	2.00	0.43
13:AM:3:ARG:HG2	13:AM:8:GLU:HA	2.00	0.43
13:AM:49:THR:OG1	13:AM:52:GLU:OE1	2.24	0.43
17:AQ:60:ILE:HG12	17:AQ:61:GLU:N	2.33	0.43
17:AQ:92:ARG:O	17:AQ:95:TYR:HB2	2.18	0.43
18:AR:59:SER:H	18:AR:62:GLU:CG	2.31	0.43
25:BA:26:G:C6	25:BA:27:G:C6	3.06	0.43
25:BA:31:C:C4	25:BA:32:C:C5	3.06	0.43
25:BA:233:A:C2	25:BA:244:A:C4	3.06	0.43
25:BA:671:A:H2'	25:BA:672:G:O4'	2.18	0.43
25:BA:927:G:H2'	25:BA:928:G:H5'	2.00	0.43
25:BA:2023:A:H2'	25:BA:2024:G:C8	2.52	0.43
25:BA:2092:G:H2'	25:BA:2093:A:O4'	2.17	0.43
25:BA:2710:U:H2'	25:BA:2711:C:C6	2.53	0.43
27:BD:175:LEU:HD12	27:BD:185:VAL:HG21	2.00	0.43
28:BE:110:GLY:HA2	28:BE:161:GLY:HA3	2.00	0.43
29:BF:125:LEU:HD12	29:BF:194:MET:HB2	2.00	0.43
40:BU:75:ASN:OD1	40:BU:78:THR:OG1	2.19	0.43
44:BY:86:ARG:NH1	44:BY:100:ALA:HB1	2.31	0.43
1:CA:67:C:O2'	1:CA:171:A:H1'	2.18	0.43
1:CA:69:G:H2'	1:CA:70:G:H8	1.82	0.43
1:CA:1003:G:H22	1:CA:1035:A:H61	1.66	0.43
1:CA:1178:G:H2'	1:CA:1180:A:OP2	2.17	0.43
1:CA:1203:C:H2'	1:CA:1204:A:C8	2.53	0.43
1:CA:1425:U:H2'	1:CA:1426:C:C6	2.53	0.43
2:CB:162:ILE:O	2:CB:162:ILE:HG13	2.17	0.43
2:CB:213:LEU:HD22	2:CB:214:ILE:HD13	1.99	0.43
3:CC:112:SER:HB3	3:CC:115:LEU:HD23	2.00	0.43
13:CM:29:ARG:HH11	13:CM:64:TRP:HB3	1.83	0.43
16:CP:72:ARG:NH2	16:CP:73:LEU:HD21	2.33	0.43
25:DA:321:G:H4'	29:DF:165:ARG:O	2.18	0.43
25:DA:333:G:H2'	25:DA:333:G:N3	2.33	0.43
25:DA:775:G:C4	25:DA:794:G:C8	3.06	0.43
25:DA:876:C:H2'	25:DA:877:U:O4'	2.17	0.43
25:DA:1160:G:C6	25:DA:1161:C:C4	3.06	0.43
25:DA:1297:C:OP1	25:DA:2710:C:H4'	2.18	0.43
25:DA:1957:C:O2'	25:DA:1985:G:H1'	2.18	0.43
31:DH:86:GLU:OE2	31:DH:132:ARG:NH2	2.38	0.43
33:DN:42:TRP:HA	33:DN:48:MET:HE1	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:454:C:OP1	16:AP:75:ARG:NH2	2.49	0.43
1:AA:472:A:H2'	1:AA:473:G:O4'	2.17	0.43
1:AA:1030:C:N4	1:AA:1030(A):G:N3	2.66	0.43
1:AA:1047:G:O3'	14:AN:4:LYS:HB2	2.17	0.43
1:AA:1277:C:H1'	1:AA:1282:C:C2	2.53	0.43
1:AA:1304:G:C6	1:AA:1305:G:N1	2.86	0.43
4:AD:177:ASP:OD2	4:AD:180:GLY:HA3	2.18	0.43
6:AF:30:LEU:O	6:AF:35:ALA:N	2.51	0.43
6:AF:38:GLU:OE1	6:AF:64:GLN:NE2	2.35	0.43
7:AG:78:ARG:NH2	7:AG:156:TRP:HB3	2.33	0.43
9:AI:18:PHE:HD2	9:AI:62:TYR:HD2	1.66	0.43
9:AI:29:ASN:ND2	9:AI:65:VAL:O	2.51	0.43
12:AL:71:PRO:O	12:AL:102:ARG:HD2	2.18	0.43
16:AP:6:LEU:HB3	16:AP:17:TYR:CD2	2.53	0.43
19:AS:41:VAL:HB	19:AS:44:MET:HG3	1.99	0.43
20:AT:92:LEU:HA	20:AT:92:LEU:HD23	1.72	0.43
23:AX:20:U:H5''	23:AX:21:A:OP2	2.17	0.43
25:BA:220:C:H2'	25:BA:221:G:O4'	2.18	0.43
25:BA:518:G:H2'	25:BA:519:G:O4'	2.18	0.43
26:BB:12:C:H2'	46:B0:73:GLY:HA3	1.99	0.43
27:BD:275:LYS:HB3	27:BD:276:LYS:H	1.40	0.43
28:BE:119:ARG:CG	28:BE:160:TYR:HB2	2.48	0.43
37:BR:36:THR:O	37:BR:111:LEU:HD12	2.18	0.43
38:BS:32:LEU:HD23	38:BS:32:LEU:HA	1.81	0.43
40:BU:66:ASN:O	40:BU:70:ARG:HG3	2.17	0.43
41:BV:55:ALA:HB2	41:BV:101:GLY:HA2	1.99	0.43
45:BZ:39:VAL:HG21	45:BZ:44:PHE:HB2	1.99	0.43
1:CA:123:C:OP1	1:CA:312:C:H5'	2.18	0.43
1:CA:640:A:C2'	1:CA:641:U:H5'	2.48	0.43
1:CA:926:G:H22	22:CV:16:A:P	2.41	0.43
1:CA:1002:G:H2'	1:CA:1003:G:H8	1.83	0.43
1:CA:1072:G:C6	1:CA:1073:U:C4	3.07	0.43
1:CA:1157:A:N6	1:CA:1178:G:H21	2.15	0.43
1:CA:1243:C:H2'	1:CA:1244:C:C6	2.53	0.43
1:CA:1323:G:H4'	1:CA:1363:C:N3	2.32	0.43
1:CA:1427:U:H2'	1:CA:1428:A:H8	1.80	0.43
2:CB:24:TRP:CH2	2:CB:26:PRO:HA	2.53	0.43
5:CE:105:VAL:HG21	5:CE:128:PRO:HB3	2.00	0.43
9:CI:14:VAL:HG22	9:CI:66:ARG:O	2.18	0.43
25:DA:89:G:C3'	25:DA:90:U:H5''	2.44	0.43
25:DA:262:A:H2'	25:DA:263:C:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:590:A:OP1	29:DF:95:ARG:NH1	2.51	0.43
25:DA:936:C:H2'	25:DA:937:U:C6	2.52	0.43
25:DA:1489:U:O2'	25:DA:1490:A:H5''	2.18	0.43
25:DA:2298:A:C8	25:DA:2299:G:C8	3.07	0.43
25:DA:2820:A:OP1	37:DR:2:ARG:NH2	2.51	0.43
25:DA:2849:U:H4'	25:DA:2868:A:C2	2.52	0.43
27:DD:77:ALA:HA	27:DD:97:TYR:HA	2.00	0.43
28:DE:166:THR:HG21	28:DE:199:ARG:HH22	1.83	0.43
30:DG:3:LEU:HD22	50:D4:25:TYR:CE2	2.53	0.43
30:DG:170:ARG:C	30:DG:170:ARG:HD3	2.39	0.43
43:DX:26:TYR:CE2	43:DX:89:ILE:HG13	2.53	0.43
44:DY:76:CYS:SG	44:DY:78:ALA:HB3	2.59	0.43
47:D1:76:ARG:HH11	47:D1:97:LEU:HD22	1.83	0.43
53:D7:22:MET:HA	53:D7:28:ARG:HG2	2.00	0.43
1:AA:195:A:H3'	1:AA:196:A:C8	2.52	0.43
1:AA:327:A:C4	1:AA:329:A:C8	3.06	0.43
1:AA:328:C:H4'	1:AA:329:A:H5'	2.00	0.43
1:AA:966:G:H21	9:AI:127:LYS:NZ	2.17	0.43
1:AA:1262:C:H2'	1:AA:1263:C:C6	2.53	0.43
2:AB:127:ILE:CD1	2:AB:130:ARG:HD3	2.49	0.43
4:AD:107:ARG:NH2	4:AD:194:LEU:HD22	2.33	0.43
14:AN:13:THR:HA	14:AN:14:PRO:HD3	1.85	0.43
15:AO:74:ASP:CG	15:AO:77:ARG:HG3	2.38	0.43
16:AP:57:ARG:NH2	16:AP:79:VAL:O	2.42	0.43
25:BA:905:U:O2	25:BA:2280:A:H2'	2.18	0.43
25:BA:1535:U:O2'	25:BA:1536:A:H8	2.01	0.43
25:BA:1894:G:H2'	25:BA:1895:U:C6	2.53	0.43
25:BA:2352:G:H2'	25:BA:2353:G:C8	2.53	0.43
25:BA:2453:C:OP2	25:BA:2598:C:O2'	2.35	0.43
30:BG:11:TYR:CE2	30:BG:16:ARG:HD3	2.53	0.43
30:BG:125:PHE:HB3	30:BG:166:ASP:OD1	2.19	0.43
35:BP:6:LEU:HA	35:BP:6:LEU:HD23	1.74	0.43
48:B2:32:LEU:HD12	48:B2:36:ARG:NH1	2.33	0.43
1:CA:160:A:H2'	1:CA:161:A:H8	1.83	0.43
1:CA:509:A:C8	1:CA:509:A:C3'	3.01	0.43
1:CA:1137:C:H5''	1:CA:1138:G:OP1	2.18	0.43
1:CA:1169:A:H3'	1:CA:1169:A:C8	2.53	0.43
1:CA:1240:U:C2	7:CG:32:ARG:HD2	2.53	0.43
10:CJ:38:ILE:HG13	10:CJ:38:ILE:O	2.18	0.43
10:CJ:57:LYS:HD2	10:CJ:60:ARG:NH2	2.33	0.43
16:CP:72:ARG:HH21	16:CP:73:LEU:HD21	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:81:ARG:HA	17:CQ:81:ARG:HD2	1.76	0.43
23:CX:59:A:H2'	23:CX:60:U:H5'	2.00	0.43
25:DA:289:A:H2'	25:DA:290:G:O4'	2.19	0.43
25:DA:917:A:H5'	25:DA:918:A:OP2	2.17	0.43
25:DA:1916:A:H2'	25:DA:1917:U:O4'	2.18	0.43
25:DA:1996:C:H4'	25:DA:1997:G:OP1	2.18	0.43
25:DA:2031:A:C6	25:DA:2498:C:H1'	2.53	0.43
25:DA:2236:C:H2'	25:DA:2237:G:O4'	2.19	0.43
25:DA:2312:U:H5'	30:DG:88:ILE:HD11	2.01	0.43
25:DA:2852:G:H2'	25:DA:2853:C:C6	2.53	0.43
26:DB:3:C:H2'	26:DB:4:C:C6	2.53	0.43
30:DG:16:ARG:HA	30:DG:16:ARG:HD2	1.65	0.43
30:DG:73:ALA:HB3	30:DG:85:GLY:H	1.83	0.43
38:DS:19:LYS:HG2	38:DS:19:LYS:H	1.56	0.43
38:DS:94:TYR:CE1	38:DS:99:LYS:HG3	2.53	0.43
1:AA:33:A:H2'	1:AA:34:C:H6	1.82	0.43
1:AA:413:G:N2	1:AA:428:G:H1'	2.34	0.43
1:AA:673:G:N2	1:AA:674:G:C2	2.86	0.43
1:AA:784:C:H2'	1:AA:785:G:O4'	2.18	0.43
1:AA:1095:U:H2'	1:AA:1096:C:O4'	2.17	0.43
1:AA:1394:A:C6	1:AA:1501:C:H4'	2.53	0.43
2:AB:71:VAL:HA	2:AB:93:VAL:HG23	2.01	0.43
4:AD:117:ALA:O	4:AD:121:VAL:HG23	2.18	0.43
7:AG:26:PHE:CE2	7:AG:30:ILE:HD11	2.53	0.43
20:AT:13:LEU:HD12	20:AT:14:LYS:N	2.33	0.43
25:BA:564:G:H2'	25:BA:565:C:C6	2.52	0.43
25:BA:711:C:H4'	25:BA:986:A:OP1	2.18	0.43
25:BA:814:U:O2'	25:BA:815:G:H5'	2.17	0.43
25:BA:977:G:OP2	49:B3:29:ARG:NH2	2.50	0.43
25:BA:1008:U:H2'	25:BA:1009:C:C6	2.54	0.43
25:BA:2336:C:H5''	25:BA:2337:G:H5'	2.00	0.43
25:BA:2367:C:H1'	46:B0:39:ARG:HH21	1.82	0.43
36:BQ:2:LEU:HD23	36:BQ:69:PHE:CD2	2.53	0.43
36:BQ:35:VAL:HG13	36:BQ:130:LYS:HB3	1.99	0.43
40:BU:78:THR:HG22	40:BU:117:GLN:HE22	1.84	0.43
54:B8:39:LYS:HA	54:B8:42:ARG:NH1	2.33	0.43
1:CA:642:A:C6	1:CA:643:C:C4	3.06	0.43
1:CA:646:U:H2'	1:CA:647:C:H6	1.77	0.43
1:CA:708:C:H2'	1:CA:709:G:C8	2.54	0.43
1:CA:832:C:N4	1:CA:833:U:C4	2.87	0.43
1:CA:1035:A:C2	1:CA:1036:G:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1263:C:H2'	1:CA:1264:C:C5	2.54	0.43
1:CA:1270:C:C2'	1:CA:1271:G:H5'	2.47	0.43
1:CA:1517:G:H1'	25:DA:1919:A:O3'	2.18	0.43
4:CD:72:GLU:OE1	4:CD:207:TYR:OH	2.37	0.43
5:CE:110:LEU:HD21	5:CE:139:LEU:HD21	2.00	0.43
8:CH:39:LEU:HB3	8:CH:45:ILE:HG12	2.00	0.43
9:CI:116:LYS:NZ	9:CI:122:ALA:HB2	2.33	0.43
13:CM:29:ARG:HD3	13:CM:64:TRP:CD2	2.53	0.43
13:CM:29:ARG:NH1	13:CM:64:TRP:HB3	2.34	0.43
15:CO:33:THR:O	15:CO:36:ILE:HB	2.19	0.43
25:DA:140:G:N2	25:DA:1596:A:H4'	2.33	0.43
25:DA:608:A:H2'	25:DA:609:A:C8	2.53	0.43
25:DA:966:G:C6	25:DA:967:C:N4	2.86	0.43
25:DA:1939:U:OP1	25:DA:2604:U:O2'	2.36	0.43
25:DA:2243:U:OP1	61:DA:4352:HOH:O	2.21	0.43
25:DA:2751:G:OP2	31:DH:2:SER:HB3	2.18	0.43
25:DA:2831:G:P	28:DE:58:ARG:NH2	2.91	0.43
26:DB:45:A:H2'	26:DB:46:A:C8	2.53	0.43
27:DD:139:GLY:H	27:DD:165:ILE:HB	1.83	0.43
31:DH:25:LYS:HZ3	31:DH:25:LYS:HG2	1.75	0.43
34:DO:73:ASP:HB2	39:DT:82:LEU:HD13	2.00	0.43
37:DR:87:TYR:OH	37:DR:117:VAL:O	2.24	0.43
1:AA:276:G:O3'	17:AQ:68:ARG:NH1	2.52	0.43
1:AA:727:G:N2	1:AA:730:G:OP2	2.45	0.43
1:AA:1266:G:N2	1:AA:1270:C:C2	2.86	0.43
1:AA:1288:A:C6	1:AA:1289:A:C5	3.06	0.43
1:AA:1379:G:C5	1:AA:1380:U:C5	3.06	0.43
2:AB:156:LYS:HB3	2:AB:156:LYS:HE2	1.64	0.43
8:AH:10:LEU:HD22	8:AH:83:ILE:HD11	2.00	0.43
9:AI:128:ARG:NH1	23:AX:35:A:OP2	2.51	0.43
13:AM:84:ILE:HD12	19:AS:74:PHE:HZ	1.83	0.43
21:AU:18:TYR:CE2	21:AU:24:ARG:HD3	2.53	0.43
25:BA:302:A:H2'	25:BA:303:C:C6	2.54	0.43
25:BA:1003:U:H5''	36:BQ:14:ARG:HD3	2.01	0.43
25:BA:1618:A:H2'	25:BA:1619:A:C8	2.53	0.43
25:BA:1987:C:H3'	25:BA:1988:A:H2'	1.99	0.43
25:BA:2042:A:O2'	25:BA:2043:C:H5'	2.19	0.43
25:BA:2108:U:H2'	25:BA:2109:G:H8	1.83	0.43
25:BA:2122:G:H2'	25:BA:2122:G:N3	2.33	0.43
31:BH:88:LEU:HD23	31:BH:165:ALA:HA	2.01	0.43
31:BH:117:PRO:HA	31:BH:118:PRO:HD2	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BZ:102:LEU:HD13	45:BZ:123:ASP:HA	2.00	0.43
45:BZ:111:VAL:HG12	45:BZ:112:ARG:N	2.33	0.43
54:B8:34:TRP:CE2	54:B8:35:GLN:HB3	2.54	0.43
1:CA:554:C:H2'	1:CA:555:C:C6	2.53	0.43
1:CA:1017:G:H2'	1:CA:1018:C:O4'	2.18	0.43
1:CA:1271:G:H5''	1:CA:1314:C:OP1	2.18	0.43
2:CB:101:MET:HA	2:CB:108:ILE:HD13	2.01	0.43
3:CC:12:LEU:HD23	3:CC:12:LEU:HA	1.88	0.43
5:CE:52:PRO:HG2	5:CE:53:LEU:HD12	2.00	0.43
16:CP:21:VAL:HG11	16:CP:59:TRP:NE1	2.33	0.43
25:DA:275:G:C6	25:DA:276:A:C6	3.07	0.43
25:DA:450:G:P	25:DA:1248:G:H22	2.41	0.43
25:DA:1032:A:O2'	25:DA:1034:G:OP2	2.21	0.43
25:DA:1341:U:H3'	25:DA:1397:U:O2	2.18	0.43
25:DA:2259:G:H1'	25:DA:2427:C:C2	2.53	0.43
25:DA:2380:C:H6	25:DA:2380:C:O5'	2.01	0.43
25:DA:2573:C:H3'	61:DA:4461:HOH:O	2.18	0.43
25:DA:2845:G:H5''	39:DT:54:ARG:O	2.18	0.43
25:DA:2870:C:H2'	25:DA:2871:C:O4'	2.17	0.43
26:DB:6:C:C2	26:DB:116:G:N2	2.87	0.43
26:DB:42:C:O2	30:DG:92:VAL:HA	2.18	0.43
31:DH:98:LEU:CD2	31:DH:125:VAL:HG23	2.46	0.43
37:DR:20:LEU:O	37:DR:24:GLN:HG3	2.19	0.43
39:DT:16:ARG:NH1	39:DT:18:ASP:OD2	2.51	0.43
43:DX:31:HIS:HD2	43:DX:33:LYS:H	1.67	0.43
45:DZ:11:GLU:HB3	45:DZ:12:GLY:H	1.70	0.43
45:DZ:14:LYS:HA	45:DZ:15:PRO:HD3	1.87	0.43
1:AA:353:A:H8	1:AA:353:A:H5'	1.84	0.43
1:AA:626:U:C2	1:AA:627:G:C8	3.06	0.43
1:AA:684:A:O2'	11:AK:39:PRO:O	2.37	0.43
1:AA:1030(A):G:N2	1:AA:1032:G:O6	2.51	0.43
1:AA:1075:C:H2'	1:AA:1076:C:H5'	2.01	0.43
1:AA:1145:C:H4'	1:AA:1146:A:C5'	2.47	0.43
4:AD:18:LYS:HG2	57:AD:501:SF4:S1	2.57	0.43
18:AR:59:SER:H	18:AR:62:GLU:HG3	1.84	0.43
20:AT:34:LYS:HE2	20:AT:34:LYS:HB2	1.85	0.43
25:BA:154:G:O6	25:BA:155:C:N4	2.52	0.43
25:BA:864:C:H4'	25:BA:977:G:C5	2.54	0.43
25:BA:1836:U:H5''	27:BD:250:TRP:CD2	2.54	0.43
27:BD:38:LYS:HD2	27:BD:38:LYS:HA	1.59	0.43
30:BG:11:TYR:OH	30:BG:32:PRO:O	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BO:101:PRO:HG3	39:BT:67:SER:OG	2.18	0.43
1:CA:577:G:C8	1:CA:816:A:C6	3.07	0.43
1:CA:933:G:C6	1:CA:1385:G:C6	3.07	0.43
1:CA:1120:G:N2	1:CA:1154:G:H1'	2.34	0.43
1:CA:1178:G:N3	1:CA:1180:A:H2	2.16	0.43
1:CA:1269:A:H2	1:CA:1312:G:N3	2.16	0.43
1:CA:1374:A:O2'	7:CG:28:ASN:HB3	2.19	0.43
5:CE:110:LEU:HD23	5:CE:110:LEU:HA	1.68	0.43
8:CH:51:VAL:HG11	8:CH:60:ARG:NH1	2.30	0.43
10:CJ:5:ARG:O	10:CJ:98:ILE:HA	2.18	0.43
16:CP:22:THR:HA	16:CP:33:ILE:HG13	2.01	0.43
20:CT:10:LEU:HD12	20:CT:10:LEU:HA	1.61	0.43
25:DA:1761:C:H3'	25:DA:1762:A:H5''	1.99	0.43
25:DA:1827:C:OP2	27:DD:222:ARG:NH1	2.52	0.43
25:DA:2607:G:H2'	25:DA:2608:G:O4'	2.19	0.43
25:DA:2845:G:H2'	25:DA:2846:G:C8	2.54	0.43
26:DB:43:C:C5	26:DB:45:A:N6	2.87	0.43
29:DF:106:ARG:H	29:DF:106:ARG:HG2	1.48	0.43
30:DG:145:THR:H	30:DG:148:MET:HE3	1.84	0.43
35:DP:45:LEU:HD23	35:DP:45:LEU:HA	1.43	0.43
44:DY:86:ARG:HH11	44:DY:100:ALA:HA	1.84	0.43
1:AA:178:C:H2'	1:AA:179:A:O4'	2.19	0.43
1:AA:194:C:H5''	1:AA:195:A:OP2	2.18	0.43
1:AA:381:C:C5	1:AA:382:A:C5	3.06	0.43
1:AA:442:C:H5'	1:AA:443:C:OP2	2.19	0.43
1:AA:646:U:H2'	1:AA:647:C:H6	1.84	0.43
1:AA:957:U:H2'	1:AA:959:A:OP2	2.19	0.43
1:AA:1003:G:C2'	1:AA:1004:A:H4'	2.49	0.43
1:AA:1203:C:H2'	1:AA:1204:A:H8	1.84	0.43
1:AA:1263:C:H2'	1:AA:1264:C:C6	2.54	0.43
1:AA:1367:C:N3	1:AA:1368:G:C8	2.87	0.43
2:AB:122:PHE:CD2	2:AB:139:LYS:HE2	2.53	0.43
4:AD:57:ARG:HH22	5:AE:107:ARG:HD3	1.82	0.43
5:AE:69:VAL:HG22	5:AE:71:LEU:HD23	2.00	0.43
6:AF:62:TRP:CH2	6:AF:64:GLN:HB2	2.53	0.43
25:BA:99:G:O3'	48:B2:7:ARG:NH2	2.52	0.43
25:BA:1473:A:H4'	25:BA:1474:C:O4'	2.19	0.43
25:BA:2348:A:H61	46:B0:43:THR:HG22	1.81	0.43
25:BA:2679:C:O5'	25:BA:2679:C:H6	2.02	0.43
27:BD:123:ALA:HB3	27:BD:131:LEU:HG	1.99	0.43
30:BG:77:ILE:HD12	30:BG:82:LEU:HD12	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BH:7:LEU:O	31:BH:69:ARG:HD3	2.19	0.43
36:BQ:78:PRO:O	36:BQ:81:VAL:HG13	2.18	0.43
43:BX:31:HIS:HA	43:BX:32:PRO:HD3	1.86	0.43
1:CA:38:G:C2	1:CA:397:A:C2	3.07	0.43
1:CA:93:G:H2'	1:CA:96:U:O4'	2.19	0.43
1:CA:391:G:C6	1:CA:392:G:C5	3.06	0.43
1:CA:811:C:O2'	1:CA:901:A:N1	2.46	0.43
1:CA:909:A:H2'	1:CA:910:C:O4'	2.19	0.43
4:CD:158:ILE:HG22	4:CD:162:LEU:HD12	2.01	0.43
15:CO:76:GLU:OE1	15:CO:76:GLU:HA	2.19	0.43
17:CQ:57:VAL:HG12	17:CQ:75:ARG:O	2.18	0.43
25:DA:348:G:H2'	25:DA:349:G:H8	1.82	0.43
25:DA:362:U:H6	25:DA:362:U:H2'	1.68	0.43
25:DA:635:C:H2'	25:DA:636:G:O4'	2.19	0.43
25:DA:649:G:C4'	54:D8:46:ARG:HH22	2.28	0.43
25:DA:1503:U:O2'	25:DA:1504:C:H5'	2.18	0.43
25:DA:1654:A:O2'	28:DE:113:PHE:O	2.34	0.43
25:DA:2646:C:OP2	25:DA:2732:G:O2'	2.27	0.43
25:DA:2712:U:H1'	25:DA:2712(A):A:C8	2.53	0.43
25:DA:2776:A:H4'	25:DA:2777:G:H5''	2.00	0.43
26:DB:28:C:H2'	26:DB:29:A:O4'	2.19	0.43
27:DD:13:ARG:HA	27:DD:13:ARG:HD2	1.67	0.43
27:DD:183:ARG:HG3	27:DD:270:ILE:HG12	2.01	0.43
35:DP:38:GLN:O	35:DP:39:LYS:CB	2.66	0.43
45:DZ:45:ASP:OD2	45:DZ:49:ARG:HD2	2.19	0.43
1:AA:97:G:O2'	1:AA:98:G:H8	2.02	0.43
1:AA:728:A:C6	15:AO:54:ARG:HD2	2.54	0.43
1:AA:773:G:H5''	1:AA:773:G:H8	1.84	0.43
1:AA:1067:A:N3	1:AA:1068:G:H1'	2.34	0.43
1:AA:1127:G:N2	1:AA:1147:C:N4	2.67	0.43
1:AA:1442:G:H2'	1:AA:1442(A):G:H5'	1.99	0.43
3:AC:12:LEU:HD23	3:AC:16:ARG:HB3	2.01	0.43
4:AD:61:LYS:HD2	4:AD:207:TYR:CZ	2.54	0.43
5:AE:136:MET:O	5:AE:139:LEU:N	2.52	0.43
5:AE:152:ARG:NH2	8:AH:107:LEU:O	2.52	0.43
10:AJ:78:ASN:C	10:AJ:80:LYS:H	2.22	0.43
16:AP:27:LYS:HE3	16:AP:27:LYS:HB2	1.73	0.43
19:AS:48:THR:HG22	19:AS:61:TYR:HA	2.01	0.43
25:BA:64:C:H2'	25:BA:65:C:C6	2.54	0.43
25:BA:242:C:OP2	54:B8:5:LYS:NZ	2.43	0.43
25:BA:311:C:H2'	25:BA:312:C:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1345:G:O5'	25:BA:1345:G:H8	2.01	0.43
36:BQ:54:MET:HB3	36:BQ:64:ILE:CD1	2.46	0.43
50:B4:59:PHE:CA	50:B4:61:ARG:H	2.31	0.43
1:CA:382:A:H2'	1:CA:383:A:H8	1.77	0.43
1:CA:414:A:H2'	1:CA:415:A:O4'	2.18	0.43
1:CA:642:A:N3	8:CH:113:SER:OG	2.40	0.43
1:CA:738:C:H2'	1:CA:739:C:C6	2.53	0.43
1:CA:1226:C:H4'	19:CS:80:TYR:CZ	2.53	0.43
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.54	0.43
2:CB:138:LEU:HA	2:CB:141:GLU:HB3	2.01	0.43
25:DA:35:G:H1'	25:DA:454:A:C4	2.53	0.43
25:DA:301:G:C4	25:DA:302:C:C5	3.07	0.43
25:DA:1164:G:H2'	25:DA:1165:U:C6	2.54	0.43
25:DA:1338:G:O2'	25:DA:1339:G:H5'	2.19	0.43
25:DA:2048:G:C6	25:DA:2049:G:C5	3.07	0.43
25:DA:2469:A:H5''	25:DA:2470:G:OP2	2.19	0.43
25:DA:2526:G:H2'	25:DA:2527:C:C6	2.53	0.43
25:DA:2821:A:C2	25:DA:2822:G:C4	3.06	0.43
28:DE:59:VAL:HG21	28:DE:74:PRO:HB3	2.00	0.43
30:DG:165:THR:OG1	30:DG:168:GLU:HG3	2.19	0.43
32:DI:62:LYS:HG2	32:DI:133:HIS:NE2	2.34	0.43
50:D4:60:GLN:N	50:D4:62:ARG:HE	2.17	0.43
1:AA:41:G:O2'	1:AA:42:G:H5'	2.19	0.43
1:AA:203:U:H2'	1:AA:203:U:OP2	2.19	0.43
1:AA:256:U:H2'	1:AA:257:G:C8	2.54	0.43
1:AA:429:U:H4'	1:AA:430:A:O5'	2.19	0.43
1:AA:516:U:C4	1:AA:517:G:C6	3.06	0.43
1:AA:600:C:H2'	1:AA:601:C:H6	1.83	0.43
1:AA:625:G:C2'	1:AA:626:U:H5'	2.49	0.43
1:AA:742:G:P	15:AO:35:ARG:HH22	2.40	0.43
1:AA:1220:G:N2	19:AS:54:GLY:O	2.45	0.43
1:AA:1259:C:N4	1:AA:1276:G:H1	2.16	0.43
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.19	0.43
8:AH:39:LEU:HD12	8:AH:39:LEU:HA	1.80	0.43
10:AJ:68:HIS:H	10:AJ:68:HIS:CD2	2.35	0.43
11:AK:98:LEU:O	11:AK:101:SER:OG	2.21	0.43
16:AP:59:TRP:HA	16:AP:62:VAL:HG12	2.01	0.43
18:AR:56:THR:HB	18:AR:58:LEU:HD23	1.99	0.43
19:AS:22:LEU:HD13	19:AS:47:HIS:CD2	2.54	0.43
24:AW:8:2R3:H62	24:AW:9:MVA:HN1	1.67	0.43
25:BA:83:A:C5'	44:BY:8:LYS:HG2	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:252:C:H2'	25:BA:253:C:O4'	2.19	0.43
25:BA:383:A:H2'	25:BA:384:G:O4'	2.19	0.43
25:BA:939:C:O2'	25:BA:940:C:H5'	2.19	0.43
25:BA:1805:C:O5'	25:BA:1805:C:H6	2.02	0.43
25:BA:2624:C:H2'	25:BA:2625:U:H5'	2.00	0.43
26:BB:75:G:H8	26:BB:75:G:C5'	2.32	0.43
29:BF:7:TYR:O	29:BF:21:ALA:HA	2.18	0.43
31:BH:103:LEU:HD23	31:BH:148:ILE:HD13	1.99	0.43
47:B1:64:ALA:HA	47:B1:67:ILE:HG13	2.00	0.43
1:CA:32:A:C2	1:CA:33:A:C4	3.07	0.43
1:CA:620:C:C2	4:CD:135:LEU:HG	2.52	0.43
1:CA:817:C:N4	1:CA:1529:G:H1	2.16	0.43
1:CA:860:A:H2'	1:CA:861:G:O4'	2.19	0.43
1:CA:1052:U:H5''	1:CA:1053:G:OP2	2.19	0.43
5:CE:11:ILE:HB	5:CE:31:LEU:HB3	2.01	0.43
5:CE:148:VAL:HG13	5:CE:152:ARG:CZ	2.49	0.43
9:CI:9:ARG:H	9:CI:79:LEU:HD23	1.84	0.43
10:CJ:50:ILE:HD11	10:CJ:57:LYS:HD3	2.01	0.43
11:CK:43:SER:HA	11:CK:47:VAL:HG21	1.99	0.43
25:DA:218:A:N1	25:DA:235:U:O2'	2.48	0.43
25:DA:868:U:C4	25:DA:869:G:N7	2.87	0.43
25:DA:1009:A:O5'	25:DA:1009:A:H8	2.02	0.43
25:DA:1380:G:N2	25:DA:1570:A:N1	2.59	0.43
25:DA:1494:A:H2'	25:DA:1495:A:C8	2.53	0.43
25:DA:2298:A:N1	25:DA:2321:G:C2	2.86	0.43
25:DA:2489:G:C6	25:DA:2490:G:C6	3.07	0.43
25:DA:2617:C:H2'	25:DA:2618:G:O4'	2.19	0.43
26:DB:37:C:C5	26:DB:38:C:C5	3.07	0.43
30:DG:14:GLU:C	30:DG:17:PRO:HD2	2.39	0.43
34:DO:35:VAL:HA	34:DO:62:VAL:HG12	2.01	0.43
35:DP:50:ARG:O	35:DP:52:GLU:HG3	2.19	0.43
40:DU:36:ARG:HD2	40:DU:40:PHE:CZ	2.54	0.43
1:AA:148:G:N3	1:AA:149:A:C8	2.87	0.43
1:AA:292:G:N7	1:AA:293:G:H1'	2.34	0.43
1:AA:322:C:O2'	20:AT:23:ARG:HD2	2.19	0.43
1:AA:374:A:C6	1:AA:375:U:C4	3.07	0.43
1:AA:1003:G:H2'	1:AA:1004:A:H4'	2.01	0.43
1:AA:1150:U:O4	1:AA:1151:A:N6	2.52	0.43
1:AA:1151:A:C5'	10:AJ:41:PRO:HA	2.49	0.43
1:AA:1409:C:H2'	1:AA:1410:G:H8	1.84	0.43
1:AA:1423:G:OP1	34:BO:49:ARG:NH2	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1456:G:O6	20:AT:54:LYS:NZ	2.34	0.43
12:AL:102:ARG:HE	12:AL:102:ARG:HB3	1.58	0.43
13:AM:3:ARG:CG	13:AM:4:ILE:H	2.32	0.43
25:BA:273:G:H8	25:BA:273:G:H2'	1.64	0.43
25:BA:302:A:P	25:BA:302:A:H8	2.42	0.43
25:BA:956:A:H62	36:BQ:12:GLN:HA	1.83	0.43
25:BA:1337:C:H2'	25:BA:1338:U:C6	2.54	0.43
25:BA:1586:G:H2'	25:BA:1587:U:O4'	2.19	0.43
25:BA:1889:G:H22	25:BA:1905:G:H2'	1.83	0.43
28:BE:176:ILE:HB	28:BE:181:LEU:HB2	2.00	0.43
31:BH:103:LEU:CD2	31:BH:148:ILE:HD13	2.48	0.43
33:BN:42:TRP:HA	33:BN:48:MET:SD	2.58	0.43
38:BS:38:GLN:OE1	38:BS:47:THR:HG21	2.19	0.43
45:BZ:155:LEU:HD12	45:BZ:155:LEU:HA	1.73	0.43
49:B3:23:LEU:HD12	49:B3:23:LEU:HA	1.85	0.43
54:B8:6:THR:HG23	54:B8:64:TYR:HD2	1.84	0.43
1:CA:113:G:H2'	1:CA:114:U:C6	2.53	0.43
1:CA:226:G:C2	1:CA:227:G:C8	3.07	0.43
1:CA:600:C:OP1	8:CH:97:VAL:N	2.38	0.43
1:CA:654:G:H2'	1:CA:655:A:O4'	2.19	0.43
1:CA:1063:C:H5''	1:CA:1064:G:H2'	2.01	0.43
1:CA:1065:U:H6	1:CA:1190:G:H21	1.65	0.43
1:CA:1220:G:H2'	1:CA:1221:G:O4'	2.18	0.43
1:CA:1305:G:O2'	1:CA:1331:G:N2	2.52	0.43
2:CB:219:VAL:HA	2:CB:222:ILE:CD1	2.48	0.43
19:CS:42:PRO:CG	50:D4:61:ARG:HG2	2.44	0.43
25:DA:754:C:H4'	25:DA:1272:A:N6	2.34	0.43
25:DA:945:A:C4	25:DA:2448:A:C2	3.07	0.43
25:DA:1448:G:H4'	25:DA:1542:A:OP1	2.19	0.43
27:DD:164:GLN:HE22	27:DD:176:ARG:HH22	1.65	0.43
45:DZ:91:LEU:HD12	45:DZ:91:LEU:HA	1.77	0.43
45:DZ:161:VAL:HG13	45:DZ:161:VAL:O	2.19	0.43
48:D2:28:LYS:HD3	48:D2:60:LEU:HD11	2.00	0.43
1:AA:341:C:C2'	1:AA:342:C:H5'	2.49	0.42
1:AA:589:C:C2'	1:AA:590:C:H5'	2.48	0.42
1:AA:615:C:H2'	1:AA:616:G:O4'	2.19	0.42
1:AA:684:A:C6	1:AA:685:G:C6	3.07	0.42
1:AA:1312:G:N7	19:AS:2:PRO:HG3	2.33	0.42
6:AF:92:LYS:HE2	6:AF:92:LYS:HB2	1.85	0.42
13:AM:9:ILE:HB	13:AM:18:ALA:HB1	2.01	0.42
13:AM:88:ARG:HG3	13:AM:98:VAL:HG12	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:6:LEU:HD12	14:AN:6:LEU:HA	1.87	0.42
25:BA:185:A:N3	25:BA:185:A:H2'	2.33	0.42
25:BA:1478:C:H2'	25:BA:1479:U:O4'	2.19	0.42
25:BA:1552:C:O2'	25:BA:1553:A:H5'	2.19	0.42
25:BA:2274:U:OP2	46:B0:19:LYS:NZ	2.50	0.42
25:BA:2331:G:N2	38:BS:3:ARG:NE	2.64	0.42
25:BA:2377:G:O6	54:B8:39:LYS:HE3	2.19	0.42
25:BA:2792:U:OP1	61:BA:4641:HOH:O	2.22	0.42
27:BD:65:ILE:HB	27:BD:67:PHE:CE2	2.54	0.42
35:BP:44:GLY:N	61:BP:302:HOH:O	2.52	0.42
50:B4:53:GLU:HG2	50:B4:55:ARG:H	1.84	0.42
1:CA:89:C:C4	1:CA:90:U:C5	3.07	0.42
1:CA:624:C:H2'	1:CA:625:G:H8	1.84	0.42
1:CA:936:C:H2'	1:CA:937:A:O4'	2.18	0.42
1:CA:1003:G:C2'	1:CA:1004:A:H4'	2.49	0.42
1:CA:1119:C:C4	1:CA:1154:G:O6	2.71	0.42
1:CA:1159:U:C6	1:CA:1182:G:C4	3.07	0.42
1:CA:1206:G:H4'	3:CC:192:THR:O	2.19	0.42
7:CG:26:PHE:CE2	7:CG:30:ILE:HD11	2.54	0.42
10:CJ:7:LYS:HB2	10:CJ:97:GLU:HB2	2.00	0.42
12:CL:117:ARG:NH2	12:CL:124:LYS:HB2	2.34	0.42
15:CO:25:THR:HG21	15:CO:70:LEU:HB2	2.01	0.42
25:DA:357:A:H2'	25:DA:358:U:C6	2.54	0.42
25:DA:653:A:H2'	25:DA:654:A:O4'	2.19	0.42
25:DA:880:G:N2	25:DA:898:C:H1'	2.33	0.42
25:DA:881:G:H2'	25:DA:882:G:C8	2.54	0.42
25:DA:999:U:O2'	25:DA:1000:A:H5'	2.19	0.42
25:DA:1297:C:H2'	25:DA:1298:C:H6	1.84	0.42
25:DA:1657:C:H2'	25:DA:1658:C:C6	2.54	0.42
25:DA:2695:C:H2'	25:DA:2696:U:C6	2.54	0.42
28:DE:9:VAL:HG22	28:DE:25:VAL:O	2.19	0.42
35:DP:6:LEU:HA	35:DP:6:LEU:HD23	1.79	0.42
36:DQ:32:TYR:OH	36:DQ:111:GLU:OE1	2.28	0.42
45:DZ:35:ARG:HD2	45:DZ:35:ARG:HA	1.82	0.42
51:D5:11:THR:HG22	51:D5:12:SER:O	2.19	0.42
52:D6:36:LEU:HB3	52:D6:38:LYS:NZ	2.34	0.42
1:AA:147:G:C6	1:AA:148:G:C5	3.07	0.42
1:AA:392:G:C4	1:AA:393:A:C8	3.06	0.42
1:AA:604:G:C2	1:AA:635:G:C5	3.08	0.42
1:AA:1210:C:C2'	1:AA:1211:U:H5'	2.49	0.42
1:AA:1314:C:N4	1:AA:1315:U:O4	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:122:PHE:HD2	2:AB:139:LYS:HE2	1.84	0.42
2:AB:219:VAL:HA	2:AB:222:ILE:CG1	2.47	0.42
9:AI:80:GLY:O	9:AI:84:ALA:N	2.50	0.42
25:BA:124:A:H5''	25:BA:124:A:H8	1.83	0.42
25:BA:137:G:O2'	25:BA:138:G:H5'	2.19	0.42
25:BA:829:A:O2'	25:BA:1819:C:H4'	2.20	0.42
25:BA:1485:A:H2'	25:BA:1486:G:O4'	2.19	0.42
25:BA:1605:A:N3	25:BA:1605:A:O4'	2.51	0.42
25:BA:2284:U:H5''	25:BA:2285:A:OP1	2.19	0.42
25:BA:2584:A:C8	28:BE:144:ARG:HD2	2.55	0.42
35:BP:101:VAL:HG22	35:BP:106:LEU:O	2.18	0.42
39:BT:118:ARG:HH11	39:BT:118:ARG:HG3	1.84	0.42
1:CA:300:A:H1'	1:CA:565:U:O2	2.20	0.42
1:CA:491:G:H2'	1:CA:492:G:O4'	2.18	0.42
1:CA:1001(A):G:C4	1:CA:1002:G:H1'	2.53	0.42
1:CA:1030(A):G:HO2'	1:CA:1030(B):C:H5	1.62	0.42
1:CA:1115:C:H2'	1:CA:1116:C:C6	2.54	0.42
1:CA:1134:G:N1	1:CA:1135:U:H1'	2.34	0.42
1:CA:1292:U:C2	1:CA:1293:G:C8	3.07	0.42
1:CA:1347:G:O2'	1:CA:1373:G:O6	2.24	0.42
2:CB:60:ASP:O	2:CB:64:ARG:HG2	2.19	0.42
3:CC:119:ARG:HG2	3:CC:123:GLN:NE2	2.34	0.42
4:CD:190:ASP:O	4:CD:193:ASP:HB2	2.19	0.42
8:CH:84:ARG:NH1	8:CH:85:ARG:O	2.52	0.42
12:CL:28:LYS:NZ	12:CL:62:SER:HB2	2.34	0.42
17:CQ:22:LEU:HD11	17:CQ:39:SER:HB2	2.01	0.42
17:CQ:89:LEU:HD23	17:CQ:89:LEU:HA	1.63	0.42
19:CS:64:GLU:HB2	50:D4:59:PHE:HE1	1.82	0.42
23:CX:19:G:H1	23:CX:56:C:H42	1.67	0.42
25:DA:143:G:H5''	25:DA:1598:C:O2'	2.19	0.42
25:DA:763:G:H1'	25:DA:765:G:O4'	2.19	0.42
25:DA:815:C:C2	25:DA:1193:G:C2	3.06	0.42
25:DA:1289:C:H2'	25:DA:1290:C:H6	1.84	0.42
25:DA:1510:G:H2'	25:DA:1511:C:O4'	2.18	0.42
25:DA:1590:U:H2'	25:DA:1591:G:C8	2.54	0.42
25:DA:2287:A:O2'	25:DA:2288:A:H3'	2.19	0.42
25:DA:2313:C:O2	25:DA:2313:C:H2'	2.19	0.42
26:DB:50:G:OP2	38:DS:62:LYS:HD3	2.18	0.42
28:DE:178:GLU:OE2	28:DE:178:GLU:N	2.44	0.42
28:DE:199:ARG:NH1	28:DE:202:LYS:HZ1	2.17	0.42
33:DN:110:GLY:O	33:DN:114:ARG:HG3	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:44:G:H2'	1:AA:45:U:O4'	2.18	0.42
1:AA:126:G:OP1	1:AA:605:U:O2'	2.28	0.42
1:AA:652:U:C4	1:AA:752:G:N3	2.87	0.42
1:AA:872:A:C8	1:AA:874:G:C8	3.07	0.42
1:AA:1053:G:N2	61:AA:4013:HOH:O	2.46	0.42
1:AA:1220:G:N3	19:AS:54:GLY:HA2	2.34	0.42
1:AA:1343:G:O2'	9:AI:121:ARG:HD2	2.19	0.42
2:AB:127:ILE:HG13	2:AB:130:ARG:HG2	2.02	0.42
2:AB:145:LEU:O	2:AB:149:LEU:HB2	2.20	0.42
2:AB:214:ILE:O	2:AB:218:ALA:HB2	2.19	0.42
4:AD:173:TRP:HA	4:AD:186:LEU:HB2	2.00	0.42
9:AI:16:ARG:HD3	9:AI:64:THR:HG21	2.01	0.42
12:AL:79:GLU:C	12:AL:80:HIS:CD2	2.93	0.42
21:AU:5:ASP:OD2	61:AU:101:HOH:O	2.20	0.42
25:BA:174:U:H2'	25:BA:175:G:H8	1.85	0.42
25:BA:503:A:C6	25:BA:504:A:C6	3.07	0.42
25:BA:1091:A:C8	25:BA:1093:G:N2	2.88	0.42
25:BA:1093:G:H2'	25:BA:1156:G:H1	1.84	0.42
25:BA:1376:C:O2'	25:BA:1377:A:H5'	2.19	0.42
25:BA:1639:G:H2'	25:BA:1640:G:C8	2.53	0.42
25:BA:2779:G:N3	25:BA:2779:G:H2'	2.34	0.42
31:BH:144:VAL:O	31:BH:148:ILE:HG13	2.19	0.42
39:BT:118:ARG:HG3	39:BT:118:ARG:NH1	2.35	0.42
1:CA:130:A:O2'	1:CA:131:C:O5'	2.36	0.42
1:CA:328:C:H4'	1:CA:329:A:H5'	2.01	0.42
1:CA:419:C:N3	1:CA:425:G:C2	2.87	0.42
1:CA:999:C:H3'	1:CA:1000:U:H5	1.84	0.42
2:CB:71:VAL:CG2	2:CB:164:VAL:HG22	2.49	0.42
3:CC:32:LEU:HD12	3:CC:59:ARG:HH12	1.84	0.42
4:CD:120:LEU:HB3	4:CD:126:ILE:HD11	2.00	0.42
9:CI:50:LEU:CD1	9:CI:56:LEU:HD23	2.50	0.42
11:CK:81:ASP:OD1	11:CK:106:LYS:HB2	2.20	0.42
11:CK:85:ARG:HA	11:CK:112:THR:OG1	2.20	0.42
13:CM:88:ARG:HG3	13:CM:98:VAL:HG12	2.00	0.42
25:DA:195:A:H2'	25:DA:198:C:N4	2.34	0.42
25:DA:911:A:H2'	36:DQ:9:TYR:CZ	2.54	0.42
25:DA:949:C:H2'	25:DA:950:G:C8	2.55	0.42
25:DA:1005:C:C2	25:DA:1143:A:C5	3.08	0.42
25:DA:1221(A):C:C2	25:DA:1229:G:N2	2.87	0.42
25:DA:1227:G:C2	25:DA:1228:G:C4	3.08	0.42
25:DA:1580:A:OP2	25:DA:1580:A:H8	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2009:G:OP1	42:DW:41:LYS:HE2	2.19	0.42
25:DA:2019:A:H4'	40:DU:34:LYS:HD2	2.01	0.42
25:DA:2298:A:N7	25:DA:2299:G:C4	2.88	0.42
25:DA:2755:C:HO2'	25:DA:2756:U:H6	1.65	0.42
25:DA:2876:G:H4'	39:DT:2:ASN:ND2	2.34	0.42
27:DD:26:LYS:HB3	27:DD:83:GLU:HG2	2.01	0.42
35:DP:29:LYS:HG3	35:DP:30:THR:N	2.35	0.42
38:DS:3:ARG:O	38:DS:4:LEU:HD23	2.20	0.42
1:AA:11:G:O2'	1:AA:506:G:N2	2.52	0.42
1:AA:445:G:C2	1:AA:446:G:C4	3.07	0.42
1:AA:839:U:H3'	1:AA:840:C:C6	2.53	0.42
1:AA:923:A:O2'	1:AA:1399:C:OP2	2.30	0.42
10:AJ:13:HIS:HA	10:AJ:16:LEU:HB3	2.02	0.42
15:AO:32:LEU:O	15:AO:36:ILE:HG13	2.20	0.42
25:BA:163:C:H2'	25:BA:164:G:O4'	2.19	0.42
25:BA:476:G:OP2	61:BA:4507:HOH:O	2.22	0.42
25:BA:917:A:OP1	36:BQ:6:ARG:NE	2.50	0.42
25:BA:950:C:H2'	25:BA:951:U:C6	2.54	0.42
25:BA:1051:C:O2'	33:BN:28:THR:HG21	2.20	0.42
25:BA:2627:U:OP1	61:BA:4253:HOH:O	2.21	0.42
25:BA:2753:A:C6	25:BA:2777:A:C8	3.07	0.42
26:BB:113:G:H2'	26:BB:114:C:C6	2.54	0.42
37:BR:28:LEU:HD12	37:BR:48:VAL:HG21	2.01	0.42
47:B1:95:LEU:O	47:B1:98:LEU:HB2	2.20	0.42
48:B2:22:GLU:OE2	48:B2:68:ARG:NH2	2.51	0.42
48:B2:28:LYS:HG3	48:B2:53:LEU:HD21	2.01	0.42
1:CA:130:A:H5'	17:CQ:63:ARG:NE	2.34	0.42
1:CA:332:G:C2	1:CA:333:G:C8	3.07	0.42
1:CA:505:G:H2'	1:CA:506:G:H8	1.84	0.42
1:CA:542:G:C2	1:CA:543:C:C4	3.07	0.42
1:CA:1003:G:H2'	1:CA:1004:A:C4'	2.48	0.42
1:CA:1126:U:H6	1:CA:1281:U:O2	2.02	0.42
1:CA:1129:C:H4'	9:CI:16:ARG:HH22	1.84	0.42
1:CA:1310:G:H5'	13:CM:77:ASN:ND2	2.34	0.42
3:CC:181:ASN:ND2	3:CC:204:LEU:HD12	2.34	0.42
5:CE:78:HIS:CE1	5:CE:142:LEU:HD23	2.54	0.42
23:CX:22:G:H2'	23:CX:23:C:C6	2.54	0.42
25:DA:19:C:H2'	25:DA:20:C:H6	1.84	0.42
25:DA:543:C:H2'	25:DA:545:G:O4'	2.19	0.42
25:DA:797:C:H2'	25:DA:798:G:H8	1.83	0.42
25:DA:878:A:C6	25:DA:900:A:N7	2.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1208:C:C4	25:DA:1209:G:N7	2.87	0.42
25:DA:1288:U:C2	25:DA:1327:C:O2	2.72	0.42
25:DA:1403:C:O5'	25:DA:1471:A:H1'	2.19	0.42
25:DA:1425:G:N2	25:DA:1573:G:N7	2.67	0.42
25:DA:1665:A:H4'	34:DO:67:LYS:HB2	2.01	0.42
25:DA:2051:A:H5'	25:DA:2578:G:O4'	2.20	0.42
25:DA:2365:G:O6	54:D8:39:LYS:HE3	2.19	0.42
27:DD:79:VAL:HG21	27:DD:111:LEU:HD11	2.02	0.42
30:DG:105:LYS:HB3	30:DG:142:PRO:HG3	2.01	0.42
31:DH:105:LEU:HD11	31:DH:148:ILE:HG23	2.01	0.42
40:DU:102:GLU:CG	41:DV:13:ARG:HH12	2.33	0.42
1:AA:342:C:C2'	1:AA:343:U:H5'	2.49	0.42
1:AA:926:G:C6	1:AA:1505:G:C6	3.08	0.42
1:AA:1007:C:C4	1:AA:1022:G:O6	2.72	0.42
1:AA:1016:A:H2'	1:AA:1017:G:O4'	2.20	0.42
1:AA:1399:C:C2	1:AA:1502:A:N6	2.87	0.42
1:AA:1442:G:HO2'	1:AA:1442(A):G:P	2.37	0.42
18:AR:66:LEU:O	18:AR:70:ILE:HG13	2.20	0.42
25:BA:694:G:N1	25:BA:696:C:O2	2.52	0.42
25:BA:1717:C:O2	28:BE:129:HIS:NE2	2.43	0.42
25:BA:1954:A:H2'	25:BA:1955:G:O4'	2.20	0.42
25:BA:2304:C:H2'	25:BA:2305:C:H6	1.83	0.42
25:BA:2372:A:H8	25:BA:2372:A:O5'	2.02	0.42
25:BA:2804:C:H2'	25:BA:2805:G:H8	1.81	0.42
26:BB:33:G:C2	26:BB:50:G:C2	3.07	0.42
34:BO:10:VAL:HG13	34:BO:17:ARG:C	2.40	0.42
36:BQ:39:PRO:HA	36:BQ:97:VAL:O	2.19	0.42
38:BS:4:LEU:HD23	38:BS:4:LEU:HA	1.64	0.42
39:BT:101:PHE:HD2	39:BT:105:LEU:HD11	1.83	0.42
1:CA:414:A:C5	1:CA:431:A:C2	3.07	0.42
1:CA:445:G:C6	1:CA:490:G:C6	3.08	0.42
1:CA:691:G:H2'	1:CA:692:U:C6	2.54	0.42
1:CA:922:G:C6	1:CA:923:A:C6	3.08	0.42
3:CC:3:ASN:OD1	3:CC:3:ASN:N	2.53	0.42
3:CC:19:GLU:O	3:CC:56:ASP:HA	2.19	0.42
3:CC:66:VAL:O	3:CC:101:LEU:HA	2.19	0.42
3:CC:118:GLN:HE21	3:CC:118:GLN:HB3	1.68	0.42
6:CF:35:ALA:HA	6:CF:67:MET:HB3	2.00	0.42
9:CI:17:VAL:HG11	9:CI:80:GLY:C	2.39	0.42
12:CL:77:LEU:HD23	12:CL:77:LEU:HA	1.84	0.42
15:CO:26:GLU:H	15:CO:26:GLU:HG2	1.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:48:G:N2	25:DA:177:G:H21	2.18	0.42
25:DA:86:C:O2'	25:DA:87:C:H5'	2.20	0.42
25:DA:363:G:H2'	25:DA:363(A):A:H8	1.83	0.42
25:DA:577:G:O2'	25:DA:1254:A:OP1	2.35	0.42
25:DA:861:A:H2'	25:DA:862:G:O4'	2.19	0.42
25:DA:1022:G:N7	33:DN:66:LYS:HE2	2.33	0.42
25:DA:1132:A:H2'	25:DA:1133:U:C6	2.55	0.42
25:DA:1287:A:H5''	25:DA:1288:U:OP2	2.20	0.42
25:DA:1540:U:C2'	25:DA:1541:G:H5'	2.49	0.42
25:DA:1794:U:H2'	25:DA:1795:C:C6	2.54	0.42
25:DA:1876:A:H2'	25:DA:1877:A:H8	1.81	0.42
25:DA:1991:U:H2'	25:DA:1992:G:H5''	2.01	0.42
25:DA:2262:U:H4'	25:DA:2328:A:H2	1.85	0.42
25:DA:2319:G:N2	38:DS:3:ARG:HA	2.34	0.42
25:DA:2355:C:H4'	46:D0:24:LYS:HG3	2.01	0.42
25:DA:2747:G:H21	25:DA:2757:A:H62	1.67	0.42
26:DB:83:G:H4'	49:D3:52:HIS:CG	2.55	0.42
27:DD:238:GLY:O	27:DD:239:ARG:O	2.37	0.42
33:DN:96:GLU:H	33:DN:96:GLU:CD	2.22	0.42
36:DQ:56:ARG:HH11	36:DQ:56:ARG:CG	2.31	0.42
39:DT:16:ARG:HB2	39:DT:79:HIS:ND1	2.35	0.42
50:D4:19:GLY:O	50:D4:21:VAL:HG23	2.19	0.42
50:D4:61:ARG:HA	50:D4:61:ARG:HH11	1.84	0.42
1:AA:67:C:H4'	1:AA:172:A:O4'	2.20	0.42
1:AA:300:A:H2'	1:AA:301:G:O4'	2.19	0.42
1:AA:434:U:H2'	1:AA:435:C:C6	2.54	0.42
1:AA:445:G:C6	1:AA:446:G:C6	3.08	0.42
1:AA:538:G:O2'	1:AA:539:A:H5'	2.20	0.42
1:AA:541:G:O2'	1:AA:542:G:H5'	2.20	0.42
1:AA:769:G:H4'	1:AA:1513:A:H4'	2.01	0.42
1:AA:975:A:H4'	1:AA:976:G:C5'	2.44	0.42
1:AA:1137:C:H3'	1:AA:1137:C:H6	1.84	0.42
1:AA:1229:A:O2'	23:AX:30:G:OP1	2.35	0.42
7:AG:72:ARG:O	7:AG:73:MET:HE2	2.20	0.42
15:AO:24:SER:OG	15:AO:25:THR:N	2.53	0.42
19:AS:65:ASN:HA	50:B4:58:ARG:HG3	2.00	0.42
20:AT:56:MET:HG3	20:AT:84:LEU:HD22	2.01	0.42
25:BA:1337:C:H2'	25:BA:1338:U:H6	1.85	0.42
25:BA:2802:C:O2	25:BA:2903:G:N1	2.49	0.42
30:BG:109:VAL:C	30:BG:112:PRO:HD2	2.40	0.42
31:BH:90:LYS:HD3	31:BH:159:GLU:HG2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BH:98:LEU:HD12	31:BH:98:LEU:HA	1.80	0.42
32:BI:38:LEU:HD12	32:BI:38:LEU:H	1.84	0.42
37:BR:33:ARG:HA	37:BR:114:VAL:O	2.19	0.42
39:BT:37:GLY:HA2	39:BT:38:ASN:HA	1.50	0.42
44:BY:86:ARG:HD2	44:BY:100:ALA:HA	2.02	0.42
1:CA:191:G:N2	20:CT:102:GLY:O	2.40	0.42
1:CA:532:A:H62	3:CC:156:ARG:NH1	2.17	0.42
1:CA:688:G:C6	1:CA:700:G:C2	3.07	0.42
1:CA:841:U:OP1	1:CA:841:U:H6	2.01	0.42
1:CA:880:C:OP1	12:CL:8:ASN:ND2	2.49	0.42
1:CA:1006:C:C4	1:CA:1007:C:C5	3.08	0.42
1:CA:1227:A:H3'	1:CA:1227:A:C8	2.55	0.42
1:CA:1234:C:C2'	1:CA:1235:U:H5'	2.50	0.42
1:CA:1241:G:H2'	1:CA:1242:C:C6	2.54	0.42
1:CA:1358:U:H2'	1:CA:1359:C:O4'	2.20	0.42
1:CA:1402:C:O2	1:CA:1500:A:N1	2.53	0.42
4:CD:12:CYS:SG	4:CD:19:LEU:HB2	2.59	0.42
7:CG:64:GLN:OE1	7:CG:64:GLN:HA	2.19	0.42
11:CK:80:VAL:HG22	11:CK:103:LEU:HB3	2.02	0.42
13:CM:40:ASN:HB3	13:CM:43:THR:HG23	2.01	0.42
13:CM:57:ARG:NH1	50:D4:34:GLU:HA	2.35	0.42
14:CN:27:CYS:HB3	14:CN:43:CYS:SG	2.59	0.42
19:CS:17:GLU:O	19:CS:21:GLU:N	2.43	0.42
25:DA:189:G:H2'	25:DA:205:G:N2	2.35	0.42
25:DA:484:C:H2'	25:DA:485:C:C6	2.54	0.42
25:DA:848:G:N9	25:DA:933:A:H8	2.18	0.42
25:DA:1378:A:OP1	53:D7:10:ARG:NH2	2.52	0.42
25:DA:1462:C:H4'	25:DA:2703:C:H5'	2.01	0.42
25:DA:2081:C:H2'	25:DA:2082:A:H8	1.85	0.42
25:DA:2360:A:H2'	25:DA:2361:A:O4'	2.20	0.42
28:DE:93:VAL:C	28:DE:95:ILE:H	2.23	0.42
30:DG:122:PRO:HB3	30:DG:170:ARG:NH2	2.34	0.42
32:DI:38:LEU:C	32:DI:40:THR:H	2.22	0.42
32:DI:140:LEU:HD13	32:DI:142:VAL:HG13	2.01	0.42
38:DS:24:LEU:O	38:DS:85:VAL:HG23	2.19	0.42
44:DY:19:LYS:HB3	44:DY:19:LYS:HE2	1.91	0.42
50:D4:46:GLN:HB3	50:D4:48:ARG:HG2	2.01	0.42
1:AA:597:G:H5''	1:AA:598:U:OP2	2.19	0.42
1:AA:829:G:O2'	1:AA:830:G:H5'	2.19	0.42
1:AA:924:C:H2'	1:AA:925:G:H8	1.85	0.42
1:AA:993:G:N3	1:AA:993:G:H2'	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1104:G:C4	1:AA:1105:A:C8	3.08	0.42
1:AA:1261:A:H3'	1:AA:1262:C:C6	2.55	0.42
3:AC:32:LEU:HD13	3:AC:59:ARG:HD3	2.01	0.42
5:AE:33:VAL:HG13	5:AE:112:LEU:HD12	2.02	0.42
12:AL:33:ARG:HG2	12:AL:60:LEU:HD12	2.02	0.42
13:AM:4:ILE:HB	13:AM:57:ARG:HG3	2.02	0.42
16:AP:71:ARG:O	16:AP:75:ARG:HB2	2.19	0.42
25:BA:415:G:O2'	25:BA:416:G:N7	2.48	0.42
25:BA:540:A:H2	25:BA:1306:G:N3	2.18	0.42
25:BA:1183:G:H2'	25:BA:1184:G:O4'	2.20	0.42
25:BA:1212:C:H2'	25:BA:1213:U:H6	1.84	0.42
25:BA:1338:U:H2'	25:BA:1339:C:C6	2.55	0.42
25:BA:1740:U:H4'	25:BA:1741:C:OP2	2.19	0.42
25:BA:2081:A:O2'	29:BF:69:HIS:HD2	2.03	0.42
25:BA:2275:C:H2'	25:BA:2276:C:O4'	2.20	0.42
25:BA:2831:A:H2'	25:BA:2832:G:C8	2.55	0.42
26:BB:16:G:C6	26:BB:69:G:C2	3.07	0.42
28:BE:9:VAL:HB	39:BT:3:ARG:HG2	2.02	0.42
1:CA:407:G:H5''	4:CD:115:ARG:HB3	2.02	0.42
1:CA:1086:U:C2'	1:CA:1087:G:H5'	2.49	0.42
1:CA:1325:C:O2'	1:CA:1326:C:H5'	2.20	0.42
2:CB:16:HIS:ND1	2:CB:17:PHE:N	2.66	0.42
4:CD:61:LYS:HA	4:CD:203:VAL:HG22	2.02	0.42
4:CD:156:GLU:O	4:CD:159:ARG:HB2	2.19	0.42
6:CF:30:LEU:H	6:CF:30:LEU:HG	1.57	0.42
8:CH:13:ILE:O	8:CH:17:THR:HG23	2.20	0.42
10:CJ:48:THR:HG1	10:CJ:62:HIS:CE1	2.37	0.42
13:CM:82:MET:O	13:CM:93:ARG:NH2	2.52	0.42
23:CX:27:U:O2	23:CX:44:A:C2	2.72	0.42
25:DA:284:U:H2'	25:DA:285:C:H6	1.83	0.42
25:DA:442:G:N2	29:DF:48:THR:O	2.52	0.42
25:DA:448:U:O4	25:DA:583:G:H1'	2.19	0.42
25:DA:539:G:H2'	25:DA:540:C:H6	1.81	0.42
25:DA:652(B):A:C2	25:DA:655:A:H1'	2.55	0.42
25:DA:784:A:P	61:DA:4065:HOH:O	2.78	0.42
25:DA:1140:C:H5'	33:DN:24:GLY:HA3	2.01	0.42
25:DA:1214:A:H61	25:DA:1235:G:H1'	1.85	0.42
25:DA:1299:G:C5	25:DA:1639:U:C5	3.07	0.42
25:DA:2203:U:O2'	25:DA:2205:C:H5'	2.20	0.42
25:DA:2265:U:C4	25:DA:2266:A:C5	3.08	0.42
25:DA:2291:U:H5''	25:DA:2380:C:H1'	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2519:U:C6	25:DA:2542:A:N6	2.88	0.42
25:DA:2788:C:H2'	25:DA:2789:C:C6	2.55	0.42
27:DD:264:LYS:HD3	27:DD:266:SER:OG	2.20	0.42
28:DE:2:LYS:NZ	28:DE:95:ILE:O	2.44	0.42
29:DF:29:ASN:O	29:DF:33:LEU:HD22	2.19	0.42
30:DG:128:ARG:HE	30:DG:128:ARG:HB2	1.51	0.42
42:DW:14:PRO:HG2	42:DW:78:GLU:CG	2.45	0.42
46:D0:31:VAL:HG11	46:D0:37:LEU:HD21	2.01	0.42
1:AA:1034:G:H3'	1:AA:1035:A:H8	1.85	0.42
1:AA:1356:G:O2'	1:AA:1357:A:H5'	2.20	0.42
1:AA:1426:C:H2'	1:AA:1427:U:C6	2.55	0.42
2:AB:93:VAL:HG21	2:AB:97:TRP:CD1	2.54	0.42
4:AD:155:LEU:HB3	4:AD:158:ILE:CD1	2.42	0.42
8:AH:40:ALA:CA	8:AH:45:ILE:HG13	2.49	0.42
10:AJ:50:ILE:HD11	10:AJ:57:LYS:HE3	2.02	0.42
15:AO:57:LEU:HD23	15:AO:57:LEU:HA	1.92	0.42
23:AX:8:U:H6	23:AX:8:U:O5'	2.03	0.42
25:BA:324:A:H2'	25:BA:358:C:H1'	2.01	0.42
25:BA:943:C:O5'	25:BA:943:C:H6	2.03	0.42
25:BA:1098:C:O5'	25:BA:1098:C:H6	2.03	0.42
25:BA:1506:G:H3'	25:BA:1507:A:H5''	2.02	0.42
25:BA:1541:A:C6	25:BA:1542:A:C6	3.08	0.42
25:BA:1737:A:H3'	25:BA:1738:C:H6	1.84	0.42
25:BA:2904:U:H2'	25:BA:2905:C:O4'	2.20	0.42
26:BB:33:G:N2	26:BB:50:G:C4	2.88	0.42
26:BB:82:G:C2'	26:BB:83:G:H5'	2.49	0.42
27:BD:223:GLY:HA3	27:BD:231:HIS:CE1	2.55	0.42
31:BH:56:SER:OG	31:BH:58:GLU:HG2	2.20	0.42
31:BH:125:VAL:HG12	31:BH:127:GLU:O	2.20	0.42
32:BI:87:LYS:HB2	32:BI:87:LYS:HE3	1.77	0.42
36:BQ:58:PHE:HB3	36:BQ:61:GLY:O	2.20	0.42
38:BS:10:ARG:HH21	38:BS:91:PRO:HB2	1.84	0.42
45:BZ:45:ASP:OD2	45:BZ:49:ARG:NH1	2.52	0.42
1:CA:147:G:N2	1:CA:148:G:C4	2.88	0.42
1:CA:407:G:O2'	4:CD:116:GLN:HG3	2.20	0.42
1:CA:453:A:C5	1:CA:454:C:C4	3.08	0.42
1:CA:622:A:H3'	1:CA:623:C:C6	2.54	0.42
1:CA:991:U:O4	1:CA:1212:U:H1'	2.20	0.42
1:CA:1053:G:N7	1:CA:1200:C:H5''	2.34	0.42
1:CA:1244:C:H42	1:CA:1293:G:H1	1.67	0.42
3:CC:23:TYR:HA	10:CJ:11:PHE:CD2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:124:ALA:O	8:CH:128:GLY:N	2.52	0.42
20:CT:63:ILE:HD13	20:CT:80:ARG:HB3	2.01	0.42
25:DA:29:U:H4'	40:DU:11:ARG:HH22	1.84	0.42
25:DA:307:G:H21	25:DA:330:A:H62	1.68	0.42
25:DA:344:G:N2	25:DA:345:A:N6	2.68	0.42
25:DA:506:G:O3'	25:DA:507:A:H8	2.03	0.42
25:DA:852:G:H2'	25:DA:853:G:H8	1.83	0.42
25:DA:1020:A:N1	25:DA:1141:U:O2'	2.35	0.42
25:DA:1394:U:C4	25:DA:1395:A:C5	3.07	0.42
25:DA:1593:G:C4	25:DA:1594:G:C8	3.07	0.42
25:DA:1857:G:C6	25:DA:1858:G:C6	3.08	0.42
25:DA:1885:A:H2'	25:DA:1886:C:O4'	2.20	0.42
25:DA:2097:C:H2'	25:DA:2098:U:C6	2.55	0.42
25:DA:2259:G:C2	25:DA:2282:G:C6	3.08	0.42
25:DA:2526:G:H5'	25:DA:2742:C:O2'	2.18	0.42
25:DA:2768:C:H2'	25:DA:2769:C:O4'	2.19	0.42
25:DA:2847:U:OP1	39:DT:98:LYS:NZ	2.40	0.42
26:DB:46:A:C5	26:DB:47:C:C4	3.08	0.42
30:DG:114:ILE:HG23	30:DG:136:ARG:NH2	2.35	0.42
31:DH:12:PRO:O	31:DH:15:VAL:HG13	2.20	0.42
31:DH:123:PHE:CZ	31:DH:148:ILE:HD11	2.54	0.42
32:DI:83:ALA:HB1	32:DI:87:LYS:O	2.19	0.42
39:DT:90:GLN:HG3	39:DT:91:ARG:N	2.35	0.42
40:DU:59:ARG:HH11	40:DU:59:ARG:HB3	1.85	0.42
42:DW:50:VAL:HG21	42:DW:103:ILE:HB	2.01	0.42
43:DX:57:LEU:HD13	43:DX:78:LYS:HG3	2.02	0.42
45:DZ:67:LEU:HA	45:DZ:68:PRO:HD3	1.66	0.42
1:AA:105:G:H2'	1:AA:106:C:C6	2.55	0.42
1:AA:438:G:O2'	1:AA:493:G:C2	2.73	0.42
1:AA:1002:G:C6	1:AA:1003:G:C2	3.08	0.42
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.19	0.42
4:AD:91:SER:O	4:AD:94:LEU:HB2	2.20	0.42
10:AJ:19:SER:OG	10:AJ:91:PRO:HD2	2.19	0.42
12:AL:124:LYS:HA	12:AL:125:PRO:HD3	1.82	0.42
25:BA:918:U:OP1	36:BQ:5:ARG:HD3	2.20	0.42
25:BA:927:G:H1	25:BA:944:C:N4	2.16	0.42
25:BA:932:C:H3'	25:BA:933:C:C5'	2.46	0.42
26:BB:103:G:O2'	45:BZ:73:GLN:NE2	2.52	0.42
31:BH:121:ILE:HD13	31:BH:121:ILE:HA	1.93	0.42
47:B1:60:PHE:HE2	47:B1:95:LEU:HD11	1.85	0.42
50:B4:63:TYR:HD1	50:B4:63:TYR:H	1.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:834:C:H2'	1:CA:835:U:C6	2.55	0.42
1:CA:874:G:O2'	1:CA:875:C:H5'	2.20	0.42
1:CA:979:C:C2'	1:CA:980:C:H5'	2.50	0.42
1:CA:1066:C:H2'	1:CA:1067:A:C8	2.55	0.42
1:CA:1128:C:H1'	1:CA:1147:C:N4	2.34	0.42
2:CB:114:ARG:NH1	2:CB:118:LEU:HD21	2.35	0.42
7:CG:85:TYR:HB3	7:CG:151:TYR:CE2	2.54	0.42
19:CS:58:VAL:HA	19:CS:59:PRO:HD2	1.82	0.42
23:CX:19:G:C4	23:CX:57:A:C2	3.08	0.42
25:DA:153:C:H2'	25:DA:154:G:O4'	2.19	0.42
25:DA:226:G:H21	25:DA:228:A:N6	2.13	0.42
25:DA:521:G:O2'	25:DA:522:G:H5'	2.20	0.42
25:DA:600:G:N2	25:DA:605:C:O3'	2.52	0.42
25:DA:628:G:H2'	25:DA:629:G:C8	2.55	0.42
25:DA:776:G:H4'	25:DA:777:A:O5'	2.20	0.42
25:DA:1638:C:H4'	25:DA:2710:C:O2	2.19	0.42
25:DA:1698:A:C8	25:DA:1700:A:H5''	2.55	0.42
25:DA:2280:G:O2'	25:DA:2388:A:N1	2.46	0.42
25:DA:2391:G:O6	25:DA:2425:A:H8	2.02	0.42
25:DA:2500:U:H2'	25:DA:2504:U:C5	2.55	0.42
25:DA:2836:U:C4	25:DA:2883:A:N6	2.88	0.42
26:DB:15:A:OP2	26:DB:69:G:N2	2.52	0.42
28:DE:14:ILE:HG13	28:DE:21:VAL:HG13	2.01	0.42
36:DQ:75:THR:HA	36:DQ:89:ASN:O	2.19	0.42
39:DT:61:PHE:CZ	39:DT:76:PHE:HB2	2.55	0.42
47:D1:4:VAL:HG11	47:D1:11:ARG:NH1	2.34	0.42
1:AA:110:C:H2'	1:AA:111:G:O4'	2.20	0.42
1:AA:670:G:C2	1:AA:671:G:C4	3.07	0.42
1:AA:677:U:H3	1:AA:713:G:H22	1.68	0.42
1:AA:1117:G:H5''	9:AI:104:ARG:NH2	2.35	0.42
1:AA:1292:U:O2'	1:AA:1293:G:H5'	2.20	0.42
3:AC:112:SER:HB3	3:AC:115:LEU:HD22	2.01	0.42
4:AD:178:VAL:C	4:AD:180:GLY:H	2.24	0.42
7:AG:38:LEU:O	7:AG:42:ILE:HG13	2.19	0.42
25:BA:26:G:C6	25:BA:27:G:N1	2.88	0.42
25:BA:552:C:C5	25:BA:2792:U:H2'	2.55	0.42
25:BA:815:G:C6	25:BA:816:G:C5	3.08	0.42
25:BA:1306:G:C6	25:BA:1307:C:C4	3.08	0.42
25:BA:2647:C:H2'	25:BA:2648:U:O4'	2.20	0.42
25:BA:2804:C:O2	25:BA:2816:G:N1	2.46	0.42
28:BE:167:VAL:CG1	28:BE:189:PRO:HD3	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:43:LEU:HD12	30:BG:43:LEU:HA	1.89	0.42
32:BI:133:HIS:ND1	32:BI:134:PRO:O	2.52	0.42
45:BZ:126:VAL:HG13	45:BZ:161:VAL:HG23	2.02	0.42
1:CA:283:C:H2'	1:CA:284:G:O4'	2.20	0.42
1:CA:402:G:C2'	1:CA:403:C:H5'	2.49	0.42
1:CA:434:U:H2'	1:CA:435:C:C6	2.55	0.42
1:CA:502:G:P	12:CL:116:SER:HA	2.60	0.42
1:CA:562:C:H1'	12:CL:15:ARG:HB3	2.02	0.42
1:CA:948:C:OP2	13:CM:108:ARG:HB2	2.20	0.42
1:CA:976:G:P	14:CN:32:SER:H	2.42	0.42
1:CA:1423:G:P	34:DO:49:ARG:HH12	2.43	0.42
2:CB:35:GLU:HA	2:CB:39:ILE:O	2.20	0.42
3:CC:6:HIS:HA	3:CC:7:PRO:HD3	1.86	0.42
4:CD:169:LYS:NZ	4:CD:169:LYS:HB3	2.35	0.42
6:CF:5:GLU:HG3	6:CF:93:SER:OG	2.20	0.42
15:CO:67:LEU:HD23	15:CO:67:LEU:HA	1.75	0.42
16:CP:5:ARG:CZ	16:CP:22:THR:HG21	2.50	0.42
25:DA:642:G:N2	25:DA:645:C:OP1	2.52	0.42
25:DA:735:A:C6	25:DA:736:C:C2	3.08	0.42
25:DA:1190:G:H5''	35:DP:32:THR:HA	2.01	0.42
25:DA:1447:G:N2	25:DA:1464:C:O2	2.30	0.42
25:DA:1639:U:C2'	25:DA:1640:C:H5''	2.50	0.42
25:DA:2283:C:C2	25:DA:2389:G:C2	3.08	0.42
25:DA:2615:U:OP1	61:DA:3945:HOH:O	2.20	0.42
25:DA:2761:G:H2'	25:DA:2761:G:N3	2.34	0.42
26:DB:75:G:N3	45:DZ:85:HIS:CE1	2.88	0.42
30:DG:114:ILE:HB	30:DG:117:PHE:HB2	2.01	0.42
31:DH:29:PRO:HG2	31:DH:80:SER:HA	2.02	0.42
1:AA:25:C:H2'	1:AA:26:A:C8	2.56	0.41
1:AA:41:G:C6	1:AA:402:G:C6	3.08	0.41
1:AA:393:A:OP2	16:AP:12:LYS:HD2	2.20	0.41
1:AA:428:G:O4'	1:AA:430:A:C8	2.74	0.41
1:AA:640:A:C2'	1:AA:641:U:H5'	2.49	0.41
1:AA:814:A:H2'	1:AA:816:A:H5''	2.02	0.41
1:AA:895:G:H2'	1:AA:896:C:C6	2.55	0.41
1:AA:935:A:C2	1:AA:936:C:C2	3.08	0.41
1:AA:1277:C:O2'	1:AA:1279:A:H1'	2.19	0.41
3:AC:114:PRO:O	3:AC:118:GLN:NE2	2.53	0.41
14:AN:37:PHE:HB3	14:AN:39:LEU:HD12	2.02	0.41
15:AO:74:ASP:OD2	15:AO:77:ARG:HG3	2.20	0.41
20:AT:53:LEU:HD13	20:AT:100:ILE:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:234:G:H2'	25:BA:235:C:H6	1.84	0.41
25:BA:316:C:C2	25:BA:373:G:C2	3.07	0.41
25:BA:491:G:H2'	25:BA:492:A:C8	2.55	0.41
25:BA:504:A:C6	25:BA:506:A:C6	3.08	0.41
25:BA:714:U:O2	54:B8:2:PRO:HD2	2.20	0.41
25:BA:1066:A:H4'	25:BA:1067:A:O5'	2.20	0.41
25:BA:1513:G:O2'	25:BA:1593:C:O2'	2.27	0.41
25:BA:2235:G:OP1	27:BD:172:TYR:OH	2.36	0.41
25:BA:2860:A:C2	25:BA:2861:A:C4	3.08	0.41
27:BD:218:ARG:HB3	27:BD:219:PRO:HD2	2.02	0.41
49:B3:44:ARG:O	49:B3:48:GLU:HG3	2.20	0.41
55:B9:28:GLU:O	55:B9:30:PRO:HD3	2.18	0.41
1:CA:66:G:C2	1:CA:67:C:C6	3.08	0.41
1:CA:310:G:C5'	16:CP:31:LYS:HB2	2.50	0.41
1:CA:872:A:C2	1:CA:874:G:C6	3.08	0.41
1:CA:1286:A:H2'	1:CA:1287:A:H4'	2.01	0.41
1:CA:1330:U:O3'	13:CM:23:TYR:HE1	2.03	0.41
2:CB:134:GLU:O	2:CB:138:LEU:HG	2.20	0.41
3:CC:8:ILE:HG22	14:CN:49:HIS:O	2.20	0.41
5:CE:31:LEU:HD23	5:CE:31:LEU:HA	1.73	0.41
5:CE:93:PRO:HG2	8:CH:105:ARG:NE	2.34	0.41
6:CF:62:TRP:C	6:CF:63:TYR:HD1	2.23	0.41
11:CK:33:THR:HA	11:CK:39:PRO:HA	2.02	0.41
12:CL:123:LYS:H	12:CL:123:LYS:HG2	1.52	0.41
25:DA:118:A:H1'	25:DA:178:G:O4'	2.19	0.41
25:DA:271(H):G:H2'	25:DA:271(I):G:C8	2.53	0.41
25:DA:328:U:H4'	44:DY:68:HIS:CD2	2.55	0.41
25:DA:665:C:H2'	25:DA:666:G:H8	1.84	0.41
25:DA:704:G:N3	25:DA:726:G:C2	2.87	0.41
25:DA:724:U:H2'	25:DA:725:G:O4'	2.20	0.41
25:DA:875:G:N2	25:DA:903:C:C2	2.88	0.41
25:DA:942:G:OP2	35:DP:39:LYS:NZ	2.49	0.41
25:DA:966:G:H2'	25:DA:967:C:H6	1.85	0.41
25:DA:1188:U:C4'	41:DV:79:VAL:HG22	2.50	0.41
25:DA:1266:G:C8	42:DW:15:ARG:NH2	2.87	0.41
25:DA:1298:C:H5''	25:DA:1299:G:OP2	2.20	0.41
25:DA:1434:A:H2'	25:DA:1435:G:O4'	2.20	0.41
25:DA:1708:C:O2'	25:DA:1709:U:H5'	2.20	0.41
25:DA:2292:C:H4'	25:DA:2375:G:H4'	2.01	0.41
25:DA:2335:A:C8	25:DA:2337:G:N7	2.88	0.41
25:DA:2671:A:H2'	25:DA:2672:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2685:G:H5'	34:DO:68:GLU:OE1	2.19	0.41
25:DA:2850:A:H5'	25:DA:2868:A:C2	2.55	0.41
26:DB:33:G:N3	26:DB:50:G:C2	2.88	0.41
31:DH:169:VAL:HG12	31:DH:171:LEU:CD2	2.50	0.41
32:DI:45:LYS:O	32:DI:49:ALA:N	2.50	0.41
33:DN:38:HIS:O	40:DU:67:ALA:HB1	2.20	0.41
36:DQ:59:ARG:O	36:DQ:61:GLY:N	2.39	0.41
42:DW:82:LEU:HD22	42:DW:84:ARG:HH22	1.84	0.41
43:DX:5:TYR:CE1	48:D2:30:ARG:HB2	2.55	0.41
46:D0:24:LYS:O	46:D0:25:ARG:HD3	2.20	0.41
1:AA:677:U:H6	1:AA:677:U:O5'	2.03	0.41
1:AA:1125:U:N3	1:AA:1127:G:C6	2.89	0.41
1:AA:1131:G:H8	1:AA:1131:G:O5'	2.03	0.41
2:AB:187:LEU:HD23	2:AB:201:ILE:HB	2.02	0.41
4:AD:99:SER:O	4:AD:140:VAL:HG23	2.20	0.41
4:AD:110:PHE:N	4:AD:110:PHE:CD1	2.88	0.41
6:AF:12:PRO:HG3	6:AF:57:GLN:O	2.20	0.41
20:AT:43:LEU:HD12	20:AT:55:ILE:HG13	2.01	0.41
25:BA:875:U:C5	25:BA:2259:A:H4'	2.55	0.41
25:BA:1159:U:H2'	25:BA:1160:G:C8	2.55	0.41
25:BA:1577:C:O2'	25:BA:1578:C:P	2.76	0.41
27:BD:72:LYS:HD3	27:BD:97:TYR:CE2	2.55	0.41
28:BE:52:LEU:HD12	28:BE:77:ILE:HD13	2.01	0.41
29:BF:11:VAL:HB	29:BF:18:ARG:HB3	2.01	0.41
32:BI:104:GLN:HG3	32:BI:105:HIS:CD2	2.55	0.41
36:BQ:52:VAL:HA	36:BQ:55:VAL:HG13	2.02	0.41
45:BZ:125:LEU:HG	45:BZ:164:ALA:HB3	2.01	0.41
49:B3:3:ARG:HD3	49:B3:60:GLU:OE2	2.20	0.41
54:B8:54:GLU:O	54:B8:58:ILE:HG13	2.20	0.41
1:CA:194:C:H5''	1:CA:195:A:OP2	2.20	0.41
1:CA:348:G:C2	1:CA:349:A:C5	3.08	0.41
1:CA:454:C:N4	1:CA:479:C:N3	2.68	0.41
1:CA:857:C:H2'	1:CA:858:G:O4'	2.20	0.41
1:CA:872:A:C4	1:CA:874:G:N7	2.88	0.41
1:CA:983:A:H3'	1:CA:983:A:N3	2.36	0.41
1:CA:991:U:H3'	1:CA:1212:U:C4	2.55	0.41
1:CA:999:C:H3'	1:CA:1000:U:C5	2.55	0.41
1:CA:1005:A:H8	1:CA:1005:A:O5'	2.03	0.41
1:CA:1051:C:H2'	1:CA:1052:U:C6	2.54	0.41
1:CA:1054:C:H6	1:CA:1054:C:H2'	1.49	0.41
1:CA:1063:C:H3'	1:CA:1064:G:H2'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1118:C:C2	1:CA:1119:C:C5	3.09	0.41
1:CA:1228:C:OP2	13:CM:111:LYS:HD3	2.20	0.41
1:CA:1252:A:H61	1:CA:1285:A:H61	1.67	0.41
2:CB:229:VAL:HG12	2:CB:230:VAL:N	2.35	0.41
5:CE:28:PHE:O	5:CE:47:LYS:HA	2.20	0.41
8:CH:82:HIS:HB3	8:CH:138:TRP:NE1	2.35	0.41
15:CO:54:ARG:HH11	15:CO:58:MET:CE	2.33	0.41
25:DA:322:A:P	29:DF:169:ASN:HB2	2.60	0.41
25:DA:328:U:H4'	44:DY:68:HIS:CG	2.55	0.41
25:DA:556:G:C6	25:DA:557:U:C4	3.08	0.41
25:DA:576:U:H2'	25:DA:577:G:C8	2.54	0.41
25:DA:864:G:C6	25:DA:865:C:N4	2.88	0.41
25:DA:1163:G:C2	25:DA:1164:G:C8	3.08	0.41
25:DA:1774:C:H5''	25:DA:1775:U:OP2	2.20	0.41
25:DA:1815:A:C6	25:DA:1817:G:C6	3.08	0.41
25:DA:2271:G:OP1	46:D0:18:ALA:HB1	2.20	0.41
25:DA:2801(A):A:N3	25:DA:2895:U:H1'	2.35	0.41
30:DG:181:ARG:CZ	30:DG:181:ARG:HB3	2.49	0.41
32:DI:62:LYS:HG2	32:DI:133:HIS:CE1	2.54	0.41
41:DV:58:VAL:HG21	41:DV:100:ARG:NH1	2.35	0.41
47:D1:95:LEU:O	47:D1:98:LEU:HB2	2.20	0.41
1:AA:142:G:H2'	1:AA:143:A:H8	1.85	0.41
1:AA:481:G:H1'	1:AA:483:C:N4	2.36	0.41
1:AA:840:C:H4'	1:AA:841:U:OP1	2.20	0.41
1:AA:1071:C:H5''	5:AE:49:PRO:HG2	2.02	0.41
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.21	0.41
1:AA:1279:A:O2'	1:AA:1281:U:OP2	2.35	0.41
2:AB:24:TRP:H	2:AB:24:TRP:HD1	1.68	0.41
2:AB:211:ILE:H	2:AB:211:ILE:HG13	1.68	0.41
3:AC:11:ARG:HD3	3:AC:15:THR:CB	2.51	0.41
3:AC:32:LEU:HD13	3:AC:59:ARG:NH1	2.35	0.41
3:AC:52:LEU:HA	3:AC:70:VAL:HG22	2.01	0.41
4:AD:13:ARG:NH2	4:AD:40:PRO:HA	2.35	0.41
4:AD:13:ARG:HB2	4:AD:40:PRO:HD3	2.02	0.41
8:AH:58:TYR:O	8:AH:59:LEU:HD23	2.20	0.41
25:BA:266:C:H2'	25:BA:267:C:O4'	2.21	0.41
25:BA:922:G:H1	25:BA:948:C:N4	2.18	0.41
25:BA:1096:A:H2'	25:BA:1096:A:N3	2.35	0.41
25:BA:1470:G:H2'	25:BA:1471:G:O4'	2.20	0.41
25:BA:1836:U:O2	27:BD:50:THR:HB	2.20	0.41
25:BA:2045:G:H5'	25:BA:2629:C:H4'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2589:A:O4'	51:B5:3:LYS:HB2	2.20	0.41
25:BA:2711:C:H2'	25:BA:2712:C:O4'	2.20	0.41
25:BA:2901:A:N6	25:BA:2902:G:N1	2.67	0.41
25:BA:2902:G:H4'	25:BA:2903:G:O5'	2.21	0.41
27:BD:68:LYS:HD2	27:BD:70:TRP:CH2	2.55	0.41
30:BG:9:ARG:O	30:BG:13:GLU:HG2	2.20	0.41
31:BH:6:ARG:HE	31:BH:6:ARG:HB3	1.57	0.41
42:BW:38:TYR:CE1	51:B5:41:PRO:HD3	2.56	0.41
46:B0:12:ASN:O	46:B0:14:ARG:N	2.52	0.41
50:B4:59:PHE:C	50:B4:61:ARG:H	2.16	0.41
50:B4:62:ARG:HB2	50:B4:63:TYR:HD1	1.82	0.41
1:CA:340:U:H2'	1:CA:341:C:C6	2.55	0.41
1:CA:489:C:H2'	1:CA:490:G:H8	1.85	0.41
1:CA:503:C:H2'	1:CA:504:C:H6	1.85	0.41
1:CA:1188:A:H2'	1:CA:1189:C:O4'	2.21	0.41
1:CA:1311:G:H1	1:CA:1326:C:N4	2.18	0.41
2:CB:215:LEU:HD23	2:CB:215:LEU:HA	1.67	0.41
4:CD:63:LYS:HG3	4:CD:198:VAL:CG2	2.50	0.41
7:CG:47:CYS:O	7:CG:50:ILE:HG12	2.20	0.41
7:CG:78:ARG:HG2	7:CG:79:ARG:HB2	2.03	0.41
8:CH:104:ARG:HG3	8:CH:138:TRP:CD2	2.55	0.41
10:CJ:8:LEU:HD23	10:CJ:96:ILE:HG23	2.03	0.41
10:CJ:49:VAL:HG23	14:CN:41:ARG:HD2	2.01	0.41
12:CL:119:LYS:O	12:CL:120:TYR:HB2	2.20	0.41
25:DA:662:G:H2'	25:DA:663:G:H8	1.85	0.41
25:DA:686:G:N2	25:DA:788:A:H61	2.18	0.41
25:DA:799:G:H3'	25:DA:800:A:H2'	2.03	0.41
25:DA:950:G:C6	25:DA:951:C:C4	3.08	0.41
25:DA:2055:C:H5'	25:DA:2056:G:O5'	2.20	0.41
25:DA:2274:A:C5	25:DA:2276:G:C8	3.08	0.41
25:DA:2285:C:C2	25:DA:2384:G:N2	2.88	0.41
25:DA:2744:G:C2	25:DA:2761:G:C4	3.08	0.41
26:DB:21:G:H2'	26:DB:22:U:O4'	2.20	0.41
26:DB:33:G:H1'	26:DB:50:G:H22	1.85	0.41
30:DG:31:VAL:HA	30:DG:32:PRO:HD2	1.87	0.41
37:DR:100:LEU:HD12	37:DR:100:LEU:HA	1.90	0.41
45:DZ:146:ILE:H	45:DZ:146:ILE:HG13	1.58	0.41
47:D1:83:GLU:HA	47:D1:84:GLY:HA2	1.58	0.41
1:AA:109:A:H2'	1:AA:326:G:H21	1.86	0.41
1:AA:113:G:H2'	1:AA:114:U:H6	1.84	0.41
1:AA:119:A:C5	1:AA:240:C:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:347:G:H21	1:AA:348:G:H3'	1.85	0.41
1:AA:376:G:H2'	1:AA:377:G:C8	2.56	0.41
1:AA:401:C:H2'	1:AA:402:G:H8	1.86	0.41
1:AA:1491:G:H5''	1:AA:1492:A:OP2	2.20	0.41
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.55	0.41
5:AE:57:LYS:HD3	5:AE:61:TYR:CE2	2.55	0.41
7:AG:69:VAL:O	7:AG:69:VAL:HG12	2.19	0.41
7:AG:104:LEU:HD13	7:AG:104:LEU:HA	1.84	0.41
8:AH:75:ARG:HA	8:AH:76:PRO:HD2	1.84	0.41
23:AX:50:U:H2'	23:AX:51:C:C6	2.55	0.41
23:AX:61:C:H2'	23:AX:62:C:C6	2.54	0.41
25:BA:210:A:N1	25:BA:254:A:O2'	2.48	0.41
25:BA:213:G:H2'	25:BA:214:A:O4'	2.20	0.41
25:BA:289:G:H2'	25:BA:290:G:H8	1.83	0.41
25:BA:553:A:C2	25:BA:2065:C:H4'	2.55	0.41
25:BA:873:U:H2'	25:BA:875:U:O4'	2.20	0.41
25:BA:1314:A:C2	25:BA:2035:A:C4	3.08	0.41
25:BA:1343:C:OP1	25:BA:2722:C:H4'	2.20	0.41
25:BA:1882:U:C4	25:BA:1883:C:C4	3.09	0.41
26:BB:85:G:H5''	26:BB:85:G:H8	1.85	0.41
27:BD:71:ASP:HB3	27:BD:103:ARG:NH2	2.21	0.41
27:BD:253:GLN:HE21	27:BD:253:GLN:HB3	1.56	0.41
28:BE:4:ILE:HG12	28:BE:5:LEU:N	2.35	0.41
30:BG:126:ASP:HB3	30:BG:130:ASN:H	1.85	0.41
37:BR:55:ALA:HB2	37:BR:79:LEU:HD13	2.02	0.41
37:BR:100:LEU:HD12	37:BR:100:LEU:HA	1.93	0.41
50:B4:49:PHE:HB3	50:B4:50:VAL:H	1.37	0.41
50:B4:61:ARG:O	50:B4:62:ARG:C	2.58	0.41
1:CA:147:G:O2'	1:CA:148:G:P	2.79	0.41
1:CA:780:A:N3	1:CA:803:G:N1	2.67	0.41
1:CA:983:A:H2	1:CA:984:C:C6	2.38	0.41
1:CA:1157:A:N6	1:CA:1180:A:N3	2.67	0.41
2:CB:80:ILE:HD13	2:CB:80:ILE:O	2.20	0.41
5:CE:67:VAL:HG13	5:CE:69:VAL:HG12	2.03	0.41
8:CH:73:ASP:OD1	8:CH:75:ARG:HD3	2.20	0.41
9:CI:89:ASN:O	9:CI:92:TYR:HB2	2.19	0.41
9:CI:95:LYS:HA	9:CI:99:LEU:HD13	2.02	0.41
24:CW:3:004:HA	24:CW:4:PRO:HD3	1.73	0.41
24:CW:8:2R3:H67	24:CW:8:2R3:H69	1.81	0.41
25:DA:207:A:H2'	25:DA:208:C:O4'	2.21	0.41
25:DA:460:A:C2	25:DA:470:A:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:569:U:C4	25:DA:570:G:C6	3.08	0.41
25:DA:1371:G:HO2'	25:DA:1372:U:H5	1.63	0.41
25:DA:1478:G:C2	25:DA:1479:G:C8	3.09	0.41
25:DA:1587:A:H2'	25:DA:1588:C:C6	2.55	0.41
25:DA:1664:A:OP1	61:DA:4387:HOH:O	2.21	0.41
25:DA:1721:G:H5'	25:DA:1722:A:OP2	2.20	0.41
25:DA:1959:G:C6	25:DA:1960:A:C5	3.08	0.41
25:DA:2850:A:H5'	25:DA:2868:A:H2	1.85	0.41
29:DF:117:ARG:NH2	29:DF:187:VAL:HA	2.35	0.41
31:DH:87:LEU:HD23	31:DH:164:TYR:HA	2.02	0.41
34:DO:104:ARG:NH2	34:DO:121:VAL:O	2.54	0.41
39:DT:64:ARG:HB2	39:DT:73:GLU:HG2	2.02	0.41
40:DU:17:ILE:HD12	40:DU:17:ILE:HG23	1.73	0.41
45:DZ:75:ASN:O	45:DZ:84:GLU:N	2.35	0.41
46:D0:19:LYS:HE2	46:D0:19:LYS:HB2	1.46	0.41
48:D2:44:LEU:HD23	48:D2:47:ASN:HA	2.02	0.41
1:AA:112:G:H21	1:AA:354:G:C4'	2.34	0.41
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.38	0.41
1:AA:310:G:H5''	16:AP:31:LYS:HB2	2.03	0.41
1:AA:946:A:C6	1:AA:947:G:C6	3.09	0.41
1:AA:955:U:H2'	1:AA:956:U:O4'	2.20	0.41
1:AA:1153:C:H2'	1:AA:1154:G:H5''	2.03	0.41
2:AB:30:ARG:HG3	2:AB:31:TYR:CD1	2.55	0.41
4:AD:141:ARG:HG3	4:AD:144:ASP:OD2	2.20	0.41
6:AF:91:VAL:HG12	6:AF:92:LYS:O	2.20	0.41
10:AJ:57:LYS:HD2	10:AJ:60:ARG:NH2	2.36	0.41
23:AX:8:U:O2	23:AX:21:A:H2	2.03	0.41
25:BA:501:U:C4	25:BA:507:G:O6	2.74	0.41
25:BA:672:G:O2'	25:BA:2363:G:H4'	2.21	0.41
25:BA:865:G:H4'	25:BA:885:C:O3'	2.20	0.41
25:BA:922:G:H2'	25:BA:923:C:O4'	2.20	0.41
25:BA:1298:G:C2	25:BA:1299:A:C2	3.08	0.41
25:BA:1933:U:H2'	25:BA:1940:A:N1	2.35	0.41
25:BA:2814:C:H2'	25:BA:2815:C:O4'	2.20	0.41
25:BA:2906:U:O2	25:BA:2906:U:H2'	2.21	0.41
27:BD:72:LYS:HB3	27:BD:72:LYS:HE3	1.85	0.41
28:BE:111:ARG:HA	37:BR:1:MET:SD	2.61	0.41
34:BO:98:VAL:HG11	34:BO:114:ILE:HG23	2.03	0.41
36:BQ:18:LYS:HB2	36:BQ:18:LYS:HE3	1.67	0.41
38:BS:19:LYS:HG2	38:BS:19:LYS:H	1.76	0.41
1:CA:402:G:H2'	1:CA:403:C:H5'	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:406:G:N2	4:CD:119:GLN:HE22	2.18	0.41
1:CA:544:G:C2	1:CA:545:C:C2	3.08	0.41
1:CA:1133:G:N2	1:CA:1141:C:N3	2.69	0.41
1:CA:1155:G:C6	1:CA:1156:G:C2	3.09	0.41
1:CA:1240:U:OP2	7:CG:115:ARG:HA	2.20	0.41
1:CA:1392:G:N2	1:CA:1502:A:H8	2.19	0.41
2:CB:30:ARG:HG3	2:CB:31:TYR:CD1	2.55	0.41
4:CD:173:TRP:CE2	4:CD:189:PRO:HG3	2.56	0.41
7:CG:12:LEU:O	7:CG:21:VAL:HG12	2.21	0.41
8:CH:97:VAL:HA	8:CH:100:ILE:HD11	2.01	0.41
12:CL:28:LYS:N	12:CL:29:GLY:HA2	2.35	0.41
12:CL:42:THR:HA	12:CL:53:ARG:O	2.21	0.41
20:CT:89:ARG:O	20:CT:93:GLU:HB2	2.19	0.41
25:DA:398:G:H2'	25:DA:399:G:O4'	2.20	0.41
25:DA:527:C:H4'	25:DA:528:A:O5'	2.20	0.41
25:DA:575:A:OP2	25:DA:2055:C:N4	2.36	0.41
25:DA:678:C:H2'	25:DA:679:C:C6	2.55	0.41
25:DA:1009:A:O4'	40:DU:59:ARG:HG2	2.20	0.41
25:DA:1344:G:O2'	25:DA:1385:G:H2'	2.20	0.41
25:DA:1380:G:N3	25:DA:1380:G:H2'	2.36	0.41
25:DA:1814:G:H4'	27:DD:51:VAL:HG21	2.02	0.41
25:DA:2558:C:H2'	25:DA:2559:C:O4'	2.20	0.41
25:DA:2756:U:H5''	55:D9:19:ARG:HB3	2.02	0.41
25:DA:2807:G:C2	25:DA:2893:G:O6	2.73	0.41
27:DD:68:LYS:O	27:DD:69:ARG:HB2	2.20	0.41
30:DG:176:LEU:HD23	30:DG:176:LEU:HA	1.77	0.41
34:DO:98:VAL:HG22	34:DO:118:ALA:HA	2.02	0.41
44:DY:5:MET:HG2	44:DY:30:VAL:HG11	2.03	0.41
45:DZ:163:LEU:HA	45:DZ:163:LEU:HD12	1.77	0.41
1:AA:92:C:H2'	1:AA:93:G:O4'	2.21	0.41
1:AA:145:G:C6	1:AA:146:G:N7	2.88	0.41
1:AA:401:C:H2'	1:AA:402:G:C8	2.56	0.41
1:AA:553:A:H2'	1:AA:554:C:C6	2.55	0.41
4:AD:108:LEU:HD12	4:AD:108:LEU:HA	1.90	0.41
4:AD:175:SER:OG	4:AD:184:LYS:HB2	2.20	0.41
6:AF:100:ASN:H	18:AR:23:LYS:NZ	2.17	0.41
8:AH:6:ILE:O	8:AH:10:LEU:HG	2.21	0.41
9:AI:18:PHE:O	9:AI:61:ALA:HA	2.20	0.41
12:AL:7:ILE:O	12:AL:11:VAL:HG23	2.20	0.41
13:AM:3:ARG:CG	13:AM:8:GLU:HA	2.51	0.41
15:AO:18:PHE:CZ	15:AO:21:ASP:HB2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:45:HIS:NE2	17:AQ:47:PRO:HG3	2.35	0.41
25:BA:402:C:H2'	25:BA:403:C:C6	2.56	0.41
25:BA:1074:A:H61	25:BA:1171:G:H2'	1.84	0.41
25:BA:1988:A:H1'	61:BA:4655:HOH:O	2.21	0.41
25:BA:2050:U:H2'	25:BA:2051:G:O4'	2.21	0.41
25:BA:2226:C:O2	25:BA:2232:G:C2	2.74	0.41
25:BA:2240:G:C5	25:BA:2241:C:C4	3.08	0.41
25:BA:2321:A:H2'	25:BA:2322:A:C8	2.56	0.41
25:BA:2544:G:O2'	25:BA:2669:A:N1	2.48	0.41
29:BF:29:ASN:H	29:BF:112:MET:CE	2.34	0.41
32:BI:37:VAL:CG1	32:BI:38:LEU:HD12	2.51	0.41
34:BO:4:PRO:O	34:BO:5:GLN:HB2	2.20	0.41
1:CA:97:G:O2'	1:CA:98:G:O4'	2.37	0.41
1:CA:245:C:O2	1:CA:283:C:N3	2.53	0.41
1:CA:300:A:H2'	1:CA:301:G:O4'	2.20	0.41
1:CA:471:G:H2'	1:CA:471:G:N3	2.36	0.41
1:CA:539:A:C6	1:CA:540:G:C6	3.08	0.41
1:CA:784:C:H2'	1:CA:785:G:O4'	2.21	0.41
1:CA:1084:G:C5	1:CA:1085:U:C4	3.09	0.41
1:CA:1168:A:N1	1:CA:1169:A:C6	2.89	0.41
1:CA:1385:G:C4	1:CA:1386:G:C8	3.09	0.41
4:CD:13:ARG:HB2	4:CD:40:PRO:HD3	2.02	0.41
5:CE:40:ARG:NH2	5:CE:68:GLU:HA	2.23	0.41
5:CE:41:VAL:O	5:CE:67:VAL:HG12	2.20	0.41
8:CH:64:LYS:HD2	8:CH:79:VAL:HG21	2.02	0.41
9:CI:5:TYR:OH	9:CI:16:ARG:HG2	2.20	0.41
13:CM:77:ASN:O	13:CM:81:LEU:HD12	2.21	0.41
23:CX:3:C:H5'	25:DA:2255:G:O2'	2.20	0.41
25:DA:322:A:C5	25:DA:340:A:C2	3.09	0.41
25:DA:471:A:H8	25:DA:471:A:O5'	2.02	0.41
25:DA:574:C:N3	28:DE:145:LYS:HE3	2.36	0.41
25:DA:872:A:P	36:DQ:5:ARG:HH12	2.44	0.41
25:DA:942:G:O2'	25:DA:943:U:H5'	2.21	0.41
25:DA:1337:G:H2'	25:DA:1338:G:C8	2.53	0.41
25:DA:1430:C:H2'	25:DA:1431:U:H6	1.81	0.41
25:DA:1785:A:C8	25:DA:1787:A:C5	3.08	0.41
25:DA:2298:A:H8	25:DA:2299:G:C8	2.37	0.41
27:DD:228:PRO:HD3	27:DD:235:GLY:CA	2.51	0.41
28:DE:29:GLY:HA2	28:DE:30:PRO:HA	1.84	0.41
29:DF:155:LEU:HB2	29:DF:189:THR:HG21	2.03	0.41
35:DP:44:GLY:CA	35:DP:45:LEU:HB2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DS:68:GLN:O	38:DS:71:ARG:HG3	2.20	0.41
44:DY:9:LYS:HA	44:DY:10:GLY:HA2	1.51	0.41
55:D9:27:CYS:SG	55:D9:28:GLU:N	2.94	0.41
1:AA:197:A:N6	1:AA:221:C:H5'	2.35	0.41
1:AA:332:G:OP2	20:AT:10:LEU:HD13	2.20	0.41
1:AA:631:G:H2'	1:AA:632:A:H8	1.85	0.41
1:AA:633:G:H2'	1:AA:634:C:C6	2.56	0.41
1:AA:951:G:N7	13:AM:102:ARG:NH2	2.68	0.41
1:AA:1106:G:C5	1:AA:1107:C:C5	3.09	0.41
1:AA:1289:A:H2	1:AA:1372:U:O4'	2.04	0.41
1:AA:1380:U:C4	7:AG:3:ARG:HG2	2.56	0.41
4:AD:3:ARG:HH12	4:AD:5:ILE:HG13	1.85	0.41
10:AJ:64:GLU:HG2	14:AN:59:ALA:HB2	2.02	0.41
11:AK:18:ARG:NH2	11:AK:35:PRO:O	2.41	0.41
12:AL:24:VAL:HG12	12:AL:24:VAL:O	2.20	0.41
12:AL:79:GLU:HB3	12:AL:80:HIS:CD2	2.56	0.41
13:AM:67:GLU:HB3	13:AM:68:GLY:H	1.65	0.41
25:BA:116:A:H3'	25:BA:117:A:C5'	2.49	0.41
25:BA:364:A:H2'	25:BA:365:G:O4'	2.21	0.41
25:BA:702:A:H8	25:BA:703:G:O4'	2.04	0.41
25:BA:1018:A:H5'	25:BA:1233:U:H1'	2.03	0.41
25:BA:1093:G:O2'	25:BA:1094:A:H8	2.03	0.41
25:BA:1733:C:H2'	25:BA:1734:G:O4'	2.21	0.41
25:BA:2631:C:H4'	28:BE:151:TYR:O	2.21	0.41
25:BA:2701:U:OP2	25:BA:2732:G:N2	2.43	0.41
30:BG:48:GLU:HA	30:BG:51:ARG:NE	2.31	0.41
31:BH:86:GLU:HB3	31:BH:165:ALA:HB2	2.02	0.41
34:BO:12:ASP:CG	34:BO:14:THR:HG23	2.41	0.41
34:BO:104:ARG:NH2	39:BT:43:GLN:OE1	2.54	0.41
42:BW:9:TYR:H	42:BW:102:HIS:CE1	2.38	0.41
42:BW:20:VAL:O	42:BW:23:LEU:HB2	2.20	0.41
45:BZ:13:GLU:HB3	45:BZ:18:LEU:HD21	2.02	0.41
1:CA:19:C:H5''	5:CE:86:ALA:HB3	2.02	0.41
1:CA:540:G:H8	1:CA:540:G:O5'	2.04	0.41
1:CA:652:U:O2'	1:CA:653:A:OP2	2.27	0.41
1:CA:853:G:C4	1:CA:854:G:C8	3.09	0.41
1:CA:1009:G:N2	1:CA:1010:G:H1'	2.36	0.41
1:CA:1039:C:N4	1:CA:1040:U:O4	2.54	0.41
4:CD:14:ARG:HB2	4:CD:40:PRO:HD2	2.02	0.41
13:CM:16:ASP:HB3	13:CM:34:LEU:CD1	2.50	0.41
25:DA:127:A:H5''	25:DA:128:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:411:G:C4	35:DP:72:PRO:HB3	2.56	0.41
25:DA:647:G:H8	25:DA:647:G:O5'	2.04	0.41
25:DA:2398:U:H2'	25:DA:2399:G:C8	2.56	0.41
25:DA:2730:C:H4'	28:DE:168:MET:O	2.20	0.41
25:DA:2850:A:OP2	25:DA:2866:U:H5	2.03	0.41
27:DD:227:ASN:C	27:DD:234:GLY:HA3	2.41	0.41
29:DF:13:SER:HB2	29:DF:15:SER:H	1.84	0.41
30:DG:11:TYR:OH	30:DG:16:ARG:HD3	2.21	0.41
36:DQ:4:PRO:HG3	36:DQ:69:PHE:HE2	1.86	0.41
37:DR:113:LEU:HD12	37:DR:113:LEU:O	2.20	0.41
39:DT:26:ASP:OD1	39:DT:91:ARG:HA	2.21	0.41
45:DZ:95:PRO:HA	45:DZ:129:SER:HA	2.02	0.41
45:DZ:118:GLN:N	45:DZ:173:ALA:O	2.54	0.41
45:DZ:120:ILE:N	45:DZ:120:ILE:HD12	2.36	0.41
47:D1:22:GLY:O	47:D1:32:LYS:HE3	2.21	0.41
52:D6:11:LEU:HB2	52:D6:21:TYR:HB2	2.03	0.41
55:D9:17:ILE:HA	55:D9:17:ILE:HD12	1.70	0.41
1:AA:456:C:H2'	1:AA:457:C:C6	2.55	0.41
1:AA:605:U:O2'	1:AA:606:G:H5'	2.21	0.41
1:AA:1162:C:H2'	1:AA:1163:C:C6	2.56	0.41
1:AA:1349:A:C2	1:AA:1374:A:C4	3.09	0.41
2:AB:162:ILE:O	2:AB:162:ILE:HG13	2.20	0.41
20:AT:33:ILE:HG23	20:AT:63:ILE:HG12	2.03	0.41
25:BA:346:A:C5	25:BA:364:A:C2	3.09	0.41
25:BA:908:A:N3	26:BB:79:C:O2'	2.44	0.41
25:BA:1212:C:H2'	25:BA:1213:U:C6	2.55	0.41
25:BA:1553:A:O2'	25:BA:1554:A:O5'	2.31	0.41
25:BA:1560:U:H2'	25:BA:1561:C:C6	2.56	0.41
25:BA:1771:G:H8	25:BA:1771:G:O5'	2.04	0.41
25:BA:2119:C:H2'	25:BA:2120:U:O4'	2.21	0.41
26:BB:29:A:C2	26:BB:30:C:C2	3.08	0.41
27:BD:111:LEU:HD23	27:BD:127:VAL:HG12	2.03	0.41
28:BE:108:SER:O	28:BE:162:ALA:HA	2.21	0.41
29:BF:181:LEU:HA	29:BF:181:LEU:HD12	1.83	0.41
31:BH:137:ASP:HB3	31:BH:140:LYS:HB3	2.02	0.41
33:BN:28:THR:HG22	33:BN:29:LYS:N	2.33	0.41
34:BO:25:LEU:O	34:BO:26:LYS:HG3	2.21	0.41
40:BU:19:LYS:O	40:BU:22:LYS:HG3	2.21	0.41
1:CA:954:G:C5	1:CA:955:U:C4	3.09	0.41
1:CA:1198:G:H2'	1:CA:1199:U:C6	2.54	0.41
1:CA:1258:G:H21	1:CA:1279:A:H62	1.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1468:A:H2'	1:CA:1469:G:O4'	2.20	0.41
2:CB:27:LYS:HE3	2:CB:193:ASP:OD1	2.20	0.41
5:CE:139:LEU:HA	5:CE:142:LEU:HD12	2.02	0.41
8:CH:39:LEU:HD13	8:CH:39:LEU:HA	1.93	0.41
8:CH:68:ARG:HH11	8:CH:68:ARG:HG3	1.86	0.41
10:CJ:54:PHE:CD2	10:CJ:55:LYS:HG2	2.55	0.41
11:CK:27:ASN:OD1	11:CK:28:THR:N	2.49	0.41
21:CU:2:GLY:O	21:CU:4:GLY:N	2.54	0.41
25:DA:83:G:N2	25:DA:103:A:OP2	2.53	0.41
25:DA:141:A:C8	25:DA:1408:C:O2'	2.72	0.41
25:DA:280:C:C2	25:DA:361:G:C2	3.08	0.41
25:DA:465:G:C6	25:DA:466:A:N6	2.89	0.41
25:DA:1339:G:H5''	43:DX:16:LYS:HD3	2.03	0.41
25:DA:1425:G:H2'	25:DA:1426:G:O4'	2.21	0.41
26:DB:13:A:O2'	26:DB:14:U:H3'	2.20	0.41
27:DD:125:ILE:HG13	27:DD:137:PRO:HD3	2.01	0.41
29:DF:134:GLY:HA2	29:DF:162:LEU:O	2.21	0.41
29:DF:184:TYR:CE1	35:DP:3:LEU:HD21	2.56	0.41
38:DS:92:TYR:HB3	38:DS:98:VAL:HG21	2.02	0.41
44:DY:38:ILE:HD13	44:DY:66:PRO:HA	2.03	0.41
49:D3:6:VAL:HG12	49:D3:54:VAL:HG13	2.02	0.41
1:AA:6:G:C4	5:AE:119:LEU:HD11	2.56	0.41
1:AA:100:C:H2'	1:AA:101:A:C8	2.56	0.41
1:AA:357:G:C2	1:AA:358:U:C5	3.08	0.41
1:AA:375:U:C2	1:AA:376:G:C8	3.09	0.41
1:AA:382:A:H2	1:AA:383:A:N7	2.19	0.41
1:AA:394:G:H2'	1:AA:395:C:H6	1.86	0.41
1:AA:461:A:H8	1:AA:461:A:O5'	2.04	0.41
1:AA:599:C:H5''	8:AH:95:VAL:O	2.20	0.41
1:AA:815:A:N7	1:AA:1509:C:O2'	2.43	0.41
1:AA:998:G:H2'	1:AA:999:C:C6	2.56	0.41
1:AA:1220:G:H2'	1:AA:1221:G:O4'	2.20	0.41
1:AA:1235:U:H2'	1:AA:1236:A:O4'	2.20	0.41
1:AA:1304:G:C5	1:AA:1305:G:C6	3.09	0.41
1:AA:1329:A:OP1	13:AM:28:ALA:HB3	2.21	0.41
1:AA:1445:C:C4	1:AA:1446:U:C4	3.09	0.41
2:AB:87:ARG:NH1	2:AB:233:SER:HB3	2.36	0.41
2:AB:127:ILE:HB	2:AB:129:GLU:H	1.85	0.41
2:AB:211:ILE:O	2:AB:215:LEU:HB2	2.21	0.41
3:AC:6:HIS:HA	3:AC:7:PRO:HD3	1.96	0.41
3:AC:35:GLU:HG2	3:AC:39:ILE:HD11	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:178:LEU:HD13	3:AC:178:LEU:HA	1.80	0.41
5:AE:90:VAL:O	5:AE:91:LEU:HD13	2.21	0.41
12:AL:54:LYS:N	12:AL:54:LYS:HD3	2.36	0.41
13:AM:60:VAL:HG13	13:AM:64:TRP:CE3	2.55	0.41
13:AM:79:LYS:NZ	13:AM:83:ASP:OD2	2.45	0.41
20:AT:36:LEU:HA	20:AT:36:LEU:HD23	1.82	0.41
20:AT:56:MET:O	20:AT:56:MET:HG2	2.21	0.41
23:AX:37:A:H2'	23:AX:38:A:O4'	2.20	0.41
25:BA:273:G:O2'	25:BA:274:U:H5''	2.20	0.41
25:BA:866:A:C4	25:BA:1234:A:C2	3.08	0.41
25:BA:922:G:H4'	45:BZ:151:HIS:HE1	1.86	0.41
25:BA:989:G:H5'	25:BA:990:A:H5'	2.02	0.41
25:BA:1013:G:H2'	25:BA:1014:U:C6	2.56	0.41
25:BA:1355:G:P	53:B7:9:ARG:HD3	2.61	0.41
25:BA:1403:U:H2'	25:BA:1404:G:O4'	2.21	0.41
25:BA:1679:A:OP2	61:BA:4621:HOH:O	2.22	0.41
25:BA:1712:A:C4'	34:BO:67:LYS:HB2	2.51	0.41
25:BA:1845:G:H4'	27:BD:51:VAL:HG21	2.03	0.41
25:BA:2495:C:N3	36:BQ:124:LYS:NZ	2.67	0.41
25:BA:2797:C:H1'	28:BE:37:ARG:NH1	2.36	0.41
25:BA:2856:G:OP2	39:BT:54:ARG:HB2	2.21	0.41
26:BB:78:A:H2'	26:BB:79:C:O4'	2.20	0.41
31:BH:97:ARG:NE	31:BH:104:GLU:OE1	2.53	0.41
32:BI:102:SER:HA	32:BI:106:GLY:HA3	2.03	0.41
33:BN:82:LEU:HA	33:BN:82:LEU:HD12	1.76	0.41
34:BO:47:ILE:HB	34:BO:48:PRO:HD2	2.03	0.41
40:BU:85:LYS:HE2	40:BU:85:LYS:HB3	1.88	0.41
42:BW:14:PRO:HG2	42:BW:78:GLU:CG	2.45	0.41
42:BW:88:ARG:HA	42:BW:88:ARG:HD2	1.94	0.41
1:CA:112:G:H21	1:CA:354:G:C4'	2.33	0.41
1:CA:114:U:H2'	1:CA:115:G:C8	2.56	0.41
1:CA:308:C:H2'	1:CA:309:G:H8	1.86	0.41
1:CA:341:C:C2'	1:CA:342:C:H5'	2.50	0.41
1:CA:358:U:H2'	1:CA:359:U:H6	1.86	0.41
1:CA:447:G:H2'	1:CA:485:G:N2	2.36	0.41
1:CA:451:A:N1	1:CA:480:U:H2'	2.36	0.41
1:CA:649:G:C5	1:CA:650:G:C8	3.09	0.41
1:CA:734:G:H2'	1:CA:735:C:C6	2.55	0.41
1:CA:735:C:H5'	18:CR:71:LYS:HD3	2.02	0.41
1:CA:757:U:H2'	1:CA:758:G:O4'	2.21	0.41
1:CA:780:A:C2	1:CA:803:G:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:853:G:C2	1:CA:854:G:C8	3.08	0.41
1:CA:868:C:H2'	1:CA:869:G:O4'	2.20	0.41
1:CA:932:C:H2'	1:CA:933:G:H8	1.86	0.41
1:CA:1075:C:H2'	1:CA:1076:C:H5'	2.02	0.41
1:CA:1093:A:N3	1:CA:1109:C:O2'	2.46	0.41
1:CA:1121:U:N3	1:CA:1122:U:C5	2.88	0.41
1:CA:1139:G:N2	1:CA:1143:G:C6	2.88	0.41
1:CA:1305:G:H5'	21:CU:4:GLY:CA	2.51	0.41
1:CA:1316:G:H2'	1:CA:1318:A:OP2	2.21	0.41
1:CA:1353:G:C2	1:CA:1370:G:C2	3.09	0.41
1:CA:1390:U:H2'	1:CA:1391:U:C6	2.56	0.41
2:CB:158:LEU:HA	2:CB:159:PRO:HD3	1.74	0.41
3:CC:6:HIS:NE2	3:CC:8:ILE:HB	2.36	0.41
4:CD:20:TYR:CD1	4:CD:26:CYS:HB3	2.56	0.41
5:CE:18:ARG:HE	5:CE:25:ARG:HB2	1.86	0.41
5:CE:60:TYR:CZ	5:CE:64:ARG:HD3	2.56	0.41
7:CG:26:PHE:CD2	7:CG:30:ILE:HD11	2.56	0.41
7:CG:75:VAL:O	7:CG:76:ARG:HG3	2.21	0.41
9:CI:20:ARG:HA	9:CI:21:PRO:HD3	1.90	0.41
10:CJ:25:GLU:O	10:CJ:29:ARG:HD3	2.21	0.41
13:CM:47:ASP:OD1	13:CM:47:ASP:N	2.54	0.41
17:CQ:29:HIS:HA	17:CQ:30:PRO:HD2	1.88	0.41
17:CQ:57:VAL:HG12	17:CQ:76:LEU:HA	2.03	0.41
23:CX:59:A:C2'	23:CX:60:U:H5'	2.51	0.41
25:DA:77:C:H42	25:DA:109:G:H1	1.68	0.41
25:DA:90:U:O3'	25:DA:92:A:H8	2.04	0.41
25:DA:272(E):G:C2	25:DA:364:C:C2	3.09	0.41
25:DA:335:C:H4'	44:DY:73:ARG:NE	2.36	0.41
25:DA:352:G:OP1	25:DA:352:G:H8	2.04	0.41
25:DA:631:A:H2'	25:DA:632:A:O4'	2.19	0.41
25:DA:760:G:H2'	25:DA:761:A:O4'	2.19	0.41
25:DA:802:A:OP1	61:DA:4454:HOH:O	2.21	0.41
25:DA:1263:U:H1'	51:D5:10:LYS:HG3	2.03	0.41
25:DA:1353:A:H2'	25:DA:1354:A:C8	2.55	0.41
25:DA:1461:G:H2'	25:DA:1462:C:H6	1.85	0.41
25:DA:1539:G:H2'	25:DA:1540:U:H6	1.84	0.41
25:DA:1581:G:H2'	25:DA:1582:C:O4'	2.21	0.41
25:DA:1655:A:H4'	28:DE:115:GLY:N	2.36	0.41
25:DA:1717:G:C2	25:DA:1745(A):C:O2	2.74	0.41
25:DA:1782:C:O4'	25:DA:2609:U:C2	2.74	0.41
25:DA:2028:U:H2'	25:DA:2029:G:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2250:G:N3	25:DA:2250:G:H5''	2.36	0.41
25:DA:2302:G:C6	25:DA:2303:G:N7	2.89	0.41
25:DA:2683:C:O2	34:DO:70:LYS:HE3	2.20	0.41
25:DA:2758:A:H2'	25:DA:2759:G:O4'	2.20	0.41
28:DE:14:ILE:HD11	28:DE:173:VAL:HG11	2.03	0.41
29:DF:34:TRP:CH2	35:DP:8:PRO:HB3	2.56	0.41
30:DG:72:ARG:HA	30:DG:86:MET:O	2.21	0.41
31:DH:71:LEU:HD12	31:DH:71:LEU:HA	1.86	0.41
31:DH:154:PRO:HB3	31:DH:163:TYR:CZ	2.56	0.41
34:DO:2:ILE:HD11	34:DO:82:ASN:HB3	2.03	0.41
38:DS:24:LEU:HD23	38:DS:24:LEU:HA	1.89	0.41
41:DV:40:LEU:CB	41:DV:46:VAL:HG13	2.51	0.41
46:D0:36:ILE:HD12	46:D0:58:THR:CG2	2.51	0.41
47:D1:94:LEU:O	47:D1:97:LEU:HB2	2.20	0.41
53:D7:24:THR:O	53:D7:28:ARG:HG3	2.21	0.41
54:D8:31:HIS:O	54:D8:36:LYS:NZ	2.53	0.41
1:AA:91:C:H2'	1:AA:92:C:C6	2.56	0.41
1:AA:108:G:H5''	1:AA:109:A:H5''	2.03	0.41
1:AA:125:U:O2	1:AA:236:G:N2	2.46	0.41
1:AA:146:G:N1	1:AA:147:G:C5	2.89	0.41
1:AA:147:G:O2'	1:AA:148:G:H5'	2.20	0.41
1:AA:172:A:N7	1:AA:174:C:C4	2.89	0.41
1:AA:460:G:C6	1:AA:470:C:H5''	2.56	0.41
1:AA:685:G:C2	1:AA:686:U:C4	3.08	0.41
1:AA:1206:G:O6	1:AA:1207:G:C6	2.74	0.41
2:AB:71:VAL:HG13	2:AB:93:VAL:CG2	2.50	0.41
4:AD:150:GLU:HG3	4:AD:151:LYS:N	2.36	0.41
4:AD:178:VAL:HG12	4:AD:179:GLU:N	2.36	0.41
6:AF:82:ARG:HB3	6:AF:85:VAL:HG23	2.03	0.41
9:AI:9:ARG:HG2	9:AI:14:VAL:HG13	2.02	0.41
18:AR:58:LEU:HD13	18:AR:58:LEU:HA	1.79	0.41
25:BA:26:G:O3'	25:BA:1306:G:H4'	2.20	0.41
25:BA:275:C:H2'	25:BA:276:C:C6	2.56	0.41
25:BA:474:U:C4	25:BA:606:G:H1'	2.56	0.41
25:BA:751:G:O2'	25:BA:773:G:N2	2.40	0.41
25:BA:1629:C:H2'	25:BA:1630:A:C8	2.56	0.41
25:BA:2074:G:H4'	28:BE:143:ASN:O	2.21	0.41
25:BA:2214:G:H5'	25:BA:2215:G:OP2	2.21	0.41
25:BA:2430:A:H2'	25:BA:2431:U:C6	2.56	0.41
25:BA:2745:G:H3'	25:BA:2746:A:O4'	2.21	0.41
26:BB:4:C:H2'	26:BB:5:C:O4'	2.22	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:77:ILE:HG22	30:BG:80:PHE:H	1.86	0.41
32:BI:99:GLU:O	32:BI:103:ARG:NH1	2.54	0.41
35:BP:81:GLN:HB2	35:BP:110:TYR:HD2	1.86	0.41
44:BY:38:ILE:HD13	44:BY:66:PRO:HA	2.03	0.41
47:B1:21:ARG:HH11	47:B1:21:ARG:CG	2.29	0.41
1:CA:78:G:N2	1:CA:92:C:C2	2.88	0.41
1:CA:216:G:H2'	1:CA:217:C:C6	2.56	0.41
1:CA:358:U:H2'	1:CA:359:U:C6	2.56	0.41
1:CA:456:C:N3	1:CA:476:G:C2	2.89	0.41
1:CA:484:G:C8	1:CA:486:U:C2	3.09	0.41
1:CA:783:C:N4	1:CA:784:C:H41	2.19	0.41
1:CA:1049:U:C6	1:CA:1201:A:H5'	2.56	0.41
1:CA:1153:C:H2'	1:CA:1154:G:H5''	2.02	0.41
1:CA:1227:A:C2	19:CS:83:HIS:HB3	2.56	0.41
1:CA:1272:G:C2	1:CA:1273:G:H1'	2.56	0.41
3:CC:6:HIS:CD2	3:CC:8:ILE:H	2.36	0.41
5:CE:41:VAL:HG23	5:CE:67:VAL:CG1	2.51	0.41
5:CE:127:ASN:HA	5:CE:128:PRO:HD3	1.83	0.41
6:CF:22:GLU:O	6:CF:26:ILE:HG13	2.21	0.41
8:CH:121:ASP:N	8:CH:121:ASP:OD1	2.53	0.41
13:CM:90:LEU:HD23	13:CM:93:ARG:NE	2.36	0.41
20:CT:42:GLN:O	20:CT:45:GLN:HB3	2.20	0.41
23:CX:12:G:H1'	25:DA:1923:U:O2'	2.21	0.41
25:DA:106:C:O4'	44:DY:1:MET:HG3	2.21	0.41
25:DA:271(G):C:H2'	25:DA:271(H):G:H8	1.86	0.41
25:DA:652(T):C:H2'	25:DA:652(U):G:C8	2.56	0.41
25:DA:658:C:H2'	25:DA:659:C:C6	2.55	0.41
25:DA:2318:G:H21	38:DS:3:ARG:CD	2.34	0.41
25:DA:2348:U:O4	25:DA:2382:G:N1	2.54	0.41
25:DA:2371:G:C2	25:DA:2372:G:C8	3.09	0.41
25:DA:2494:G:C4	25:DA:2495:G:C8	3.08	0.41
25:DA:2745:C:H4'	31:DH:142:GLY:O	2.21	0.41
25:DA:2755:C:C4	55:D9:19:ARG:NH1	2.89	0.41
26:DB:14:U:O3'	26:DB:108:U:O2'	2.38	0.41
30:DG:8:LYS:O	30:DG:11:TYR:HB3	2.21	0.41
30:DG:11:TYR:HA	30:DG:176:LEU:HD21	2.03	0.41
30:DG:43:LEU:HB3	30:DG:44:GLY:H	1.51	0.41
30:DG:142:PRO:HG2	30:DG:143:GLU:OE1	2.21	0.41
32:DI:9:LEU:HD11	32:DI:35:LEU:HD13	2.03	0.41
35:DP:135:LEU:HD23	35:DP:135:LEU:HA	1.93	0.41
40:DU:16:LYS:HE2	40:DU:16:LYS:HB3	1.80	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DZ:48:PHE:CE1	45:DZ:52:SER:HA	2.56	0.41
45:DZ:70:LEU:HD23	45:DZ:70:LEU:HA	1.79	0.41
54:D8:22:VAL:CG2	54:D8:59:LYS:HG3	2.51	0.41
1:AA:251:G:H4'	1:AA:252:U:O5'	2.21	0.40
1:AA:720:C:H6	1:AA:720:C:O5'	2.04	0.40
1:AA:1210:C:H2'	1:AA:1211:U:H5'	2.03	0.40
1:AA:1269:A:H2	1:AA:1312:G:N3	2.19	0.40
4:AD:45:GLN:HE21	4:AD:45:GLN:HB3	1.66	0.40
4:AD:68:TYR:CE2	4:AD:97:LEU:HB3	2.56	0.40
4:AD:107:ARG:HA	4:AD:107:ARG:HD2	1.71	0.40
5:AE:116:THR:HG23	5:AE:117:ASP:OD2	2.21	0.40
7:AG:111:ARG:HB3	7:AG:113:GLU:OE2	2.21	0.40
8:AH:64:LYS:HG2	8:AH:79:VAL:HG21	2.02	0.40
14:AN:12:ARG:HG2	14:AN:13:THR:N	2.36	0.40
16:AP:38:TYR:O	16:AP:49:LEU:HD12	2.21	0.40
25:BA:390:G:H2'	25:BA:391:G:O4'	2.21	0.40
25:BA:895:G:C4	25:BA:978:A:H8	2.39	0.40
25:BA:1347:A:C8	25:BA:1349:G:C8	3.09	0.40
25:BA:1735:U:O2	25:BA:1747:A:H5'	2.21	0.40
25:BA:2701:U:H5'	25:BA:2701:U:O2	2.21	0.40
28:BE:9:VAL:HG22	28:BE:25:VAL:HB	2.03	0.40
28:BE:144:ARG:HB3	28:BE:145:LYS:H	1.45	0.40
29:BF:74:ARG:H	29:BF:74:ARG:HG3	1.63	0.40
41:BV:65:GLY:HA3	41:BV:91:TYR:CZ	2.55	0.40
1:CA:127:G:O2'	17:CQ:2:PRO:O	2.40	0.40
1:CA:341:C:H6	1:CA:341:C:O5'	2.04	0.40
1:CA:559:A:H4'	1:CA:560:U:H5''	2.03	0.40
1:CA:674:G:H2'	1:CA:675:A:H8	1.84	0.40
1:CA:881:G:P	12:CL:12:ARG:NH2	2.94	0.40
1:CA:1005:A:H3'	1:CA:1006:C:O4'	2.20	0.40
1:CA:1073:U:C4	1:CA:1074:G:N7	2.90	0.40
1:CA:1128:C:H1'	1:CA:1147:C:N3	2.35	0.40
1:CA:1134:G:C2'	1:CA:1135:U:H5'	2.50	0.40
2:CB:164:VAL:HB	2:CB:186:ALA:HB2	2.03	0.40
3:CC:112:SER:O	3:CC:115:LEU:HB2	2.22	0.40
4:CD:64:LEU:O	4:CD:64:LEU:HD12	2.21	0.40
4:CD:108:LEU:HD12	4:CD:108:LEU:HA	1.67	0.40
4:CD:173:TRP:CD1	4:CD:174:LEU:HG	2.56	0.40
5:CE:84:PHE:CE2	5:CE:133:TYR:HD2	2.39	0.40
6:CF:95:GLU:HA	6:CF:96:PRO:HD3	1.90	0.40
7:CG:27:ILE:HA	7:CG:30:ILE:HD12	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:29:ARG:HB3	13:CM:64:TRP:CZ3	2.55	0.40
16:CP:43:LYS:HG2	16:CP:48:TRP:CD2	2.56	0.40
21:CU:15:ARG:HH11	21:CU:15:ARG:HB2	1.86	0.40
25:DA:848:G:C2	25:DA:933:A:H1'	2.57	0.40
25:DA:1114:G:H2'	25:DA:1115:G:C8	2.55	0.40
25:DA:1309:G:O2'	25:DA:1611:C:O2'	2.26	0.40
25:DA:1334:G:H2'	25:DA:1335:U:C6	2.57	0.40
25:DA:1583:A:H5'	25:DA:1584:C:O5'	2.20	0.40
25:DA:2044:C:C2	25:DA:2625:G:C2	3.08	0.40
25:DA:2298:A:C6	25:DA:2321:G:C2	3.09	0.40
26:DB:83:G:H5''	49:D3:52:HIS:CE1	2.55	0.40
29:DF:125:LEU:HD21	29:DF:199:TRP:CD2	2.56	0.40
30:DG:136:ARG:NH1	30:DG:137:GLU:H	2.16	0.40
30:DG:179:PRO:HG3	50:D4:43:TYR:CZ	2.56	0.40
35:DP:88:LEU:O	35:DP:91:PHE:HD1	2.02	0.40
36:DQ:73:PRO:HA	36:DQ:93:TYR:CD1	2.55	0.40
37:DR:70:LEU:O	37:DR:72:ASP:N	2.54	0.40
38:DS:78:LEU:H	38:DS:78:LEU:HG	1.29	0.40
42:DW:24:ILE:HA	42:DW:27:LYS:HG3	2.02	0.40
45:DZ:144:LEU:HD23	45:DZ:144:LEU:HA	1.85	0.40
1:AA:129:U:H5'	17:AQ:3:LYS:NZ	2.35	0.40
1:AA:130:A:N7	17:AQ:63:ARG:HB2	2.35	0.40
1:AA:391:G:OP1	16:AP:28:ARG:NH1	2.41	0.40
1:AA:963:G:N3	10:AJ:54:PHE:HZ	2.19	0.40
1:AA:1347:G:H5''	9:AI:107:ARG:HB3	2.02	0.40
7:AG:44:TYR:O	7:AG:47:CYS:HB2	2.21	0.40
10:AJ:31:GLY:HA2	10:AJ:32:ALA:HA	1.49	0.40
10:AJ:38:ILE:HA	10:AJ:39:PRO:HD3	1.90	0.40
14:AN:33:VAL:HA	14:AN:40:CYS:HA	2.03	0.40
15:AO:39:LEU:HB3	15:AO:56:LEU:HD13	2.03	0.40
25:BA:218:A:H3'	25:BA:218:A:C8	2.57	0.40
25:BA:630:U:OP1	29:BF:102:PRO:HA	2.21	0.40
25:BA:1091:A:O2'	25:BA:1093:G:C4	2.68	0.40
25:BA:1220:U:H1'	25:BA:1221:G:OP1	2.21	0.40
25:BA:1629:C:O2'	25:BA:1632:A:N3	2.53	0.40
25:BA:1703:C:H5''	28:BE:136:ARG:HB2	2.02	0.40
25:BA:2410:U:H2'	25:BA:2411:G:C8	2.56	0.40
26:BB:33:G:C2'	26:BB:34:U:H5'	2.50	0.40
27:BD:109:ASP:HB2	27:BD:197:GLY:HA2	2.01	0.40
27:BD:206:LEU:HA	27:BD:206:LEU:HD23	1.79	0.40
34:BO:104:ARG:HH22	39:BT:43:GLN:NE2	2.19	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BX:26:TYR:CE2	43:BX:89:ILE:HG13	2.55	0.40
50:B4:5:ILE:HG12	50:B4:6:HIS:CD2	2.56	0.40
1:CA:687:A:C2	1:CA:704:A:C5	3.09	0.40
1:CA:973:G:H3'	1:CA:974:A:H5''	2.03	0.40
1:CA:986:A:H1'	19:CS:54:GLY:O	2.21	0.40
1:CA:1021:G:N3	1:CA:1021:G:H2'	2.35	0.40
1:CA:1222:G:C6	1:CA:1223:C:C4	3.10	0.40
1:CA:1385:G:C6	1:CA:1386:G:C5	3.09	0.40
5:CE:34:VAL:N	5:CE:42:GLY:O	2.51	0.40
5:CE:144:THR:H	5:CE:147:ASP:HB2	1.86	0.40
10:CJ:35:SER:N	10:CJ:73:ASP:O	2.34	0.40
11:CK:33:THR:OG1	11:CK:34:ASP:O	2.29	0.40
25:DA:14:A:C6	25:DA:526:A:C2	3.09	0.40
25:DA:30:G:C5	25:DA:31:C:C4	3.10	0.40
25:DA:182:A:C6	25:DA:183:C:C4	3.09	0.40
25:DA:521:G:H2'	25:DA:522:G:H8	1.86	0.40
25:DA:919:G:C6	25:DA:920:G:C5	3.09	0.40
25:DA:1338:G:C4	25:DA:1339:G:C8	3.10	0.40
25:DA:1667:G:H1'	25:DA:1991:U:O4	2.21	0.40
25:DA:2016:U:H2'	25:DA:2017:U:C6	2.56	0.40
25:DA:2360:A:C2	25:DA:2361:A:H1'	2.57	0.40
25:DA:2756:U:H4'	25:DA:2757:A:OP1	2.21	0.40
27:DD:253:GLN:HE21	27:DD:253:GLN:HB3	1.53	0.40
28:DE:21:VAL:HA	28:DE:22:PRO:HD3	1.74	0.40
30:DG:101:ILE:O	30:DG:104:GLU:HB3	2.21	0.40
42:DW:26:GLY:HA2	42:DW:71:VAL:O	2.20	0.40
48:D2:62:THR:O	48:D2:65:ASN:HB3	2.21	0.40
1:AA:342:C:N3	1:AA:348:G:O6	2.55	0.40
1:AA:347:G:O2'	1:AA:348:G:N2	2.54	0.40
1:AA:437:U:C5'	4:AD:155:LEU:HD11	2.47	0.40
1:AA:960:U:C2	1:AA:1225:A:N7	2.89	0.40
1:AA:1001(A):G:C5	1:AA:1002:G:C8	3.08	0.40
1:AA:1144:G:H21	1:AA:1146:A:H62	1.67	0.40
1:AA:1145:C:H5''	1:AA:1146:A:OP1	2.21	0.40
1:AA:1220:G:H21	19:AS:54:GLY:C	2.23	0.40
1:AA:1370:G:C2	1:AA:1371:G:C8	3.09	0.40
1:AA:1427:U:H2'	1:AA:1428:A:C8	2.56	0.40
16:AP:59:TRP:HB3	16:AP:64:ALA:HB2	2.03	0.40
17:AQ:29:HIS:HA	17:AQ:30:PRO:HD2	1.88	0.40
25:BA:39:C:H2'	25:BA:40:C:C6	2.56	0.40
25:BA:227:C:H2'	25:BA:228:U:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:403:C:H42	25:BA:425:G:H1	1.68	0.40
25:BA:561:A:H2'	25:BA:562:C:C6	2.56	0.40
25:BA:1026:A:C4	25:BA:1181:G:O4'	2.74	0.40
25:BA:1423:G:H2'	61:BA:3831:HOH:O	2.20	0.40
25:BA:2087:C:H2'	25:BA:2088:C:H6	1.86	0.40
25:BA:2642:G:H2'	25:BA:2643:G:O4'	2.21	0.40
26:BB:100:A:O5'	61:BB:4021:HOH:O	2.22	0.40
32:BI:50:ARG:H	32:BI:50:ARG:HG2	1.59	0.40
36:BQ:14:ARG:HG2	36:BQ:41:TRP:HH2	1.87	0.40
38:BS:69:VAL:HG23	38:BS:101:LEU:HG	2.04	0.40
1:CA:601:C:H2'	1:CA:602:A:C8	2.55	0.40
1:CA:828:A:N6	1:CA:858:G:O2'	2.50	0.40
1:CA:840:C:H5''	1:CA:841:U:H5	1.86	0.40
1:CA:943:U:H2'	1:CA:944:G:H5'	2.02	0.40
1:CA:1118:C:H1'	1:CA:1179:A:C4	2.56	0.40
1:CA:1169:A:C8	1:CA:1169:A:C3'	3.04	0.40
4:CD:43:HIS:CA	4:CD:46:LYS:HG3	2.51	0.40
7:CG:120:ILE:CG2	7:CG:124:LEU:HD12	2.52	0.40
20:CT:43:LEU:O	20:CT:47:GLY:N	2.54	0.40
25:DA:414:C:C2'	25:DA:415:A:H5'	2.51	0.40
25:DA:442:G:H21	29:DF:48:THR:HB	1.84	0.40
25:DA:466:A:H1'	25:DA:683:C:O4'	2.21	0.40
25:DA:628:G:H2'	25:DA:629:G:H8	1.85	0.40
25:DA:921:G:C5	25:DA:922:U:C4	3.09	0.40
25:DA:952:G:C6	25:DA:953:A:N7	2.90	0.40
25:DA:1336:A:H2'	25:DA:1337:G:C8	2.56	0.40
25:DA:1406:U:H2'	25:DA:1407:C:C6	2.56	0.40
25:DA:1813:G:H1'	27:DD:50:THR:OG1	2.22	0.40
25:DA:2287:A:C5	25:DA:2289:G:C5	3.10	0.40
25:DA:2564:A:OP1	25:DA:2648:C:H4'	2.20	0.40
27:DD:182:LEU:O	27:DD:271:ILE:N	2.45	0.40
38:DS:77:ALA:O	38:DS:81:GLY:N	2.54	0.40
39:DT:31:SER:OG	39:DT:85:LYS:HE3	2.21	0.40
45:DZ:30:ASN:OD1	45:DZ:33:LEU:HD23	2.22	0.40
52:D6:6:ARG:NH1	52:D6:26:ASN:HB2	2.36	0.40
1:AA:103:C:C4	1:AA:104:G:N7	2.89	0.40
1:AA:240:C:H2'	1:AA:241:C:C6	2.56	0.40
1:AA:573:A:N3	1:AA:883:C:O2'	2.43	0.40
1:AA:943:U:H2'	1:AA:944:G:H5'	2.04	0.40
1:AA:945:G:C2	1:AA:946:A:C8	3.10	0.40
1:AA:974:A:OP1	1:AA:974:A:H8	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1317:C:OP1	14:AN:18:VAL:HG22	2.22	0.40
1:AA:1321:C:H5''	1:AA:1322:C:H2'	2.03	0.40
1:AA:1492:A:H1'	25:BA:1935:A:H61	1.86	0.40
2:AB:48:MET:HA	2:AB:51:LEU:HD12	2.03	0.40
3:AC:115:LEU:HD12	3:AC:118:GLN:OE1	2.21	0.40
5:AE:147:ASP:O	5:AE:151:LEU:HG	2.21	0.40
6:AF:89:MET:SD	18:AR:76:LEU:HD21	2.61	0.40
13:AM:92:HIS:CE1	13:AM:98:VAL:HG11	2.56	0.40
14:AN:4:LYS:HD3	14:AN:7:ILE:CG2	2.51	0.40
25:BA:12:U:O2	25:BA:12:U:H2'	2.21	0.40
25:BA:254:A:H1'	25:BA:255:G:O4'	2.21	0.40
25:BA:807:G:H2'	25:BA:808:A:O4'	2.22	0.40
25:BA:868:A:H2'	25:BA:991:G:H5''	2.04	0.40
25:BA:1040:C:O2'	25:BA:1042:A:OP1	2.34	0.40
25:BA:1929:G:C2	25:BA:1946:C:C2	3.10	0.40
25:BA:2576:A:C2	25:BA:2659:U:H4'	2.56	0.40
26:BB:11:C:OP2	26:BB:12:C:H5	2.05	0.40
32:BI:65:ALA:CB	32:BI:136:VAL:HG11	2.50	0.40
32:BI:140:LEU:HD23	32:BI:140:LEU:HA	1.87	0.40
37:BR:87:TYR:OH	37:BR:116:LEU:HB3	2.21	0.40
1:CA:391:G:P	16:CP:28:ARG:HH22	2.44	0.40
1:CA:491:G:C2	1:CA:492:G:C4	3.10	0.40
1:CA:528:C:H41	12:CL:49:ASN:ND2	2.19	0.40
1:CA:811:C:N4	61:CA:4026:HOH:O	2.52	0.40
1:CA:1106:G:N2	1:CA:1107:C:C2	2.89	0.40
1:CA:1155:G:H2'	1:CA:1156:G:O4'	2.22	0.40
1:CA:1488:G:C2'	1:CA:1489:G:H5'	2.52	0.40
2:CB:219:VAL:HA	2:CB:222:ILE:HD11	2.02	0.40
2:CB:224:GLN:HG2	2:CB:225:ALA:N	2.36	0.40
2:CB:230:VAL:HG13	2:CB:231:GLU:O	2.22	0.40
7:CG:65:ALA:CB	7:CG:124:LEU:HD23	2.50	0.40
19:CS:51:VAL:HB	19:CS:75:ALA:HB2	2.03	0.40
20:CT:82:SER:O	20:CT:86:ARG:HG3	2.22	0.40
23:CX:4:G:H1	23:CX:69:C:N4	2.17	0.40
25:DA:663:G:C6	25:DA:664:C:C4	3.10	0.40
25:DA:875:G:C2	25:DA:903:C:C2	3.10	0.40
25:DA:895:U:O2'	25:DA:896:A:H2'	2.22	0.40
25:DA:912:C:C2	25:DA:913:U:C5	3.10	0.40
25:DA:955:C:OP1	36:DQ:87:LYS:HE3	2.22	0.40
25:DA:990:A:C6	25:DA:1186:G:H1'	2.57	0.40
25:DA:1292:U:H2'	25:DA:1293:C:H6	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2352:A:C4	25:DA:2366:A:C2	3.10	0.40
25:DA:2805:G:C6	25:DA:2807:G:C6	3.09	0.40
25:DA:2831:G:P	28:DE:58:ARG:HH22	2.38	0.40
26:DB:33:G:H5'	30:DG:2:PRO:HD3	2.03	0.40
28:DE:188:VAL:HA	28:DE:189:PRO:HD3	1.98	0.40
31:DH:103:LEU:HB3	31:DH:123:PHE:CD2	2.57	0.40
34:DO:101:PRO:HG3	39:DT:67:SER:OG	2.21	0.40
35:DP:90:ARG:HG2	35:DP:91:PHE:CD1	2.56	0.40
45:DZ:54:HIS:CG	45:DZ:101:PRO:HG3	2.56	0.40
50:D4:49:PHE:HB3	50:D4:50:VAL:HG12	2.04	0.40
51:D5:48:GLU:O	51:D5:60:VAL:HG11	2.22	0.40
52:D6:10:LEU:O	52:D6:11:LEU:HD23	2.21	0.40
53:D7:5:TRP:CD1	53:D7:7:PRO:HD3	2.56	0.40
1:AA:107:G:H2'	1:AA:108:G:O4'	2.22	0.40
1:AA:288:A:H2'	1:AA:289:G:H4'	2.04	0.40
1:AA:341:C:O2'	1:AA:342:C:H5'	2.21	0.40
1:AA:701:C:H1'	1:AA:703:G:C6	2.56	0.40
1:AA:920:U:H2'	1:AA:921:U:H6	1.84	0.40
1:AA:1072:G:C5	1:AA:1073:U:C4	3.10	0.40
1:AA:1160:G:H8	1:AA:1160:G:H5'	1.87	0.40
1:AA:1261:A:H3'	1:AA:1262:C:H6	1.86	0.40
2:AB:37:ASN:HB2	2:AB:41:ILE:HD11	2.03	0.40
4:AD:65:ARG:HG2	4:AD:75:PHE:CG	2.56	0.40
5:AE:76:ILE:HB	5:AE:77:PRO:HD2	2.04	0.40
6:AF:96:PRO:HB3	18:AR:30:ASP:CG	2.41	0.40
8:AH:82:HIS:O	8:AH:137:VAL:HA	2.21	0.40
25:BA:207:A:N1	25:BA:224:U:H4'	2.36	0.40
25:BA:390:G:H8	25:BA:390:G:O5'	2.04	0.40
25:BA:796:C:C5	25:BA:1664:A:C6	3.10	0.40
25:BA:1471:G:H2'	25:BA:1472:G:O4'	2.21	0.40
25:BA:1521:C:H2'	25:BA:1522:G:H8	1.87	0.40
25:BA:2225:U:O4'	27:BD:151:LYS:HE2	2.21	0.40
25:BA:2328:C:H1'	30:BG:128:ARG:NH2	2.36	0.40
25:BA:2427:G:C5	25:BA:2428:C:C4	3.10	0.40
25:BA:2862:G:H2'	25:BA:2863:C:O4'	2.22	0.40
27:BD:92:ILE:HD12	27:BD:104:TYR:CE1	2.57	0.40
28:BE:12:THR:HG21	39:BT:11:GLU:HG2	2.03	0.40
28:BE:49:LEU:HD12	28:BE:49:LEU:HA	1.85	0.40
33:BN:39:ARG:HA	33:BN:40:PRO:HD3	1.96	0.40
34:BO:2:ILE:HD12	34:BO:6:THR:HG21	2.02	0.40
41:BV:8:GLY:O	41:BV:10:LYS:HE2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:B0:82:ARG:HA	46:B0:83:PRO:HD3	1.94	0.40
1:CA:101:A:H2'	1:CA:102:G:H5'	2.03	0.40
1:CA:310:G:H5''	16:CP:31:LYS:HB2	2.03	0.40
1:CA:567:G:N2	61:CA:4065:HOH:O	2.48	0.40
1:CA:922:G:H2'	1:CA:923:A:C8	2.56	0.40
1:CA:954:G:C6	1:CA:955:U:C4	3.10	0.40
1:CA:1122:U:C4	1:CA:1151:A:N1	2.89	0.40
1:CA:1126:U:C4	10:CJ:71:LEU:HD22	2.56	0.40
2:CB:97:TRP:HZ3	2:CB:176:GLU:OE2	2.04	0.40
2:CB:167:PRO:HD3	2:CB:187:LEU:O	2.21	0.40
2:CB:211:ILE:H	2:CB:211:ILE:HG13	1.71	0.40
3:CC:178:LEU:HD13	3:CC:178:LEU:HA	1.82	0.40
3:CC:187:ALA:HB3	3:CC:198:VAL:HB	2.04	0.40
10:CJ:16:LEU:HD23	10:CJ:94:VAL:HG22	2.04	0.40
18:CR:59:SER:H	18:CR:62:GLU:HG3	1.86	0.40
25:DA:657:U:H2'	25:DA:658:C:C6	2.56	0.40
25:DA:679:C:H2'	25:DA:680:G:H8	1.86	0.40
25:DA:858:U:H1'	25:DA:2268:A:H2'	2.04	0.40
25:DA:871:U:H5''	36:DQ:69:PHE:CE2	2.56	0.40
25:DA:949:C:H2'	25:DA:950:G:H8	1.86	0.40
25:DA:1268:A:H2'	25:DA:1269:A:O4'	2.22	0.40
25:DA:1472:A:C2	25:DA:1473:G:H1'	2.56	0.40
25:DA:1498:C:O4'	25:DA:1577:C:H4'	2.22	0.40
25:DA:1630:G:H2'	25:DA:1631:C:C6	2.56	0.40
25:DA:2611:U:C4	51:D5:3:LYS:HG2	2.57	0.40
28:DE:150:VAL:HG13	28:DE:154:LYS:HG3	2.03	0.40
29:DF:109:GLY:O	29:DF:113:ALA:N	2.43	0.40
32:DI:133:HIS:CD2	32:DI:134:PRO:O	2.75	0.40
44:DY:86:ARG:HD2	44:DY:100:ALA:HA	2.04	0.40
54:D8:15:LYS:HG2	54:D8:16:ILE:N	2.35	0.40
54:D8:30:ARG:HD3	54:D8:30:ARG:HA	1.57	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%)	201 (88%)	23 (10%)	5 (2%)	5	27
2	CB	229/256 (90%)	201 (88%)	21 (9%)	7 (3%)	3	19
3	AC	204/239 (85%)	182 (89%)	20 (10%)	2 (1%)	13	46
3	CC	204/239 (85%)	181 (89%)	21 (10%)	2 (1%)	13	46
4	AD	206/209 (99%)	184 (89%)	20 (10%)	2 (1%)	13	46
4	CD	206/209 (99%)	185 (90%)	18 (9%)	3 (2%)	8	36
5	AE	146/162 (90%)	136 (93%)	8 (6%)	2 (1%)	9	37
5	CE	146/162 (90%)	134 (92%)	12 (8%)	0	100	100
6	AF	98/101 (97%)	94 (96%)	4 (4%)	0	100	100
6	CF	98/101 (97%)	94 (96%)	4 (4%)	0	100	100
7	AG	153/156 (98%)	137 (90%)	15 (10%)	1 (1%)	19	54
7	CG	153/156 (98%)	139 (91%)	13 (8%)	1 (1%)	19	54
8	AH	135/138 (98%)	131 (97%)	4 (3%)	0	100	100
8	CH	135/138 (98%)	131 (97%)	3 (2%)	1 (1%)	19	54
9	AI	125/128 (98%)	112 (90%)	10 (8%)	3 (2%)	5	25
9	CI	125/128 (98%)	115 (92%)	8 (6%)	2 (2%)	8	34
10	AJ	95/105 (90%)	84 (88%)	8 (8%)	3 (3%)	3	19
10	CJ	94/105 (90%)	84 (89%)	8 (8%)	2 (2%)	5	28
11	AK	112/129 (87%)	101 (90%)	10 (9%)	1 (1%)	14	49
11	CK	112/129 (87%)	101 (90%)	10 (9%)	1 (1%)	14	49
12	AL	120/132 (91%)	117 (98%)	3 (2%)	0	100	100
12	CL	120/132 (91%)	113 (94%)	7 (6%)	0	100	100
13	AM	121/126 (96%)	113 (93%)	7 (6%)	1 (1%)	16	51
13	CM	120/126 (95%)	113 (94%)	6 (5%)	1 (1%)	16	51
14	AN	58/61 (95%)	55 (95%)	3 (5%)	0	100	100
14	CN	58/61 (95%)	55 (95%)	3 (5%)	0	100	100
15	AO	86/89 (97%)	80 (93%)	6 (7%)	0	100	100
15	CO	86/89 (97%)	81 (94%)	5 (6%)	0	100	100
16	AP	80/88 (91%)	74 (92%)	6 (8%)	0	100	100
16	CP	80/88 (91%)	73 (91%)	6 (8%)	1 (1%)	10	39

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
17	AQ	97/105 (92%)	92 (95%)	5 (5%)	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%)	8	36
18	CR	66/88 (75%)	61 (92%)	5 (8%)	0	100	100
19	AS	81/93 (87%)	76 (94%)	5 (6%)	0	100	100
19	CS	81/93 (87%)	74 (91%)	7 (9%)	0	100	100
20	AT	94/106 (89%)	84 (89%)	9 (10%)	1 (1%)	12	44
20	CT	94/106 (89%)	86 (92%)	5 (5%)	3 (3%)	3	19
21	AU	21/27 (78%)	17 (81%)	4 (19%)	0	100	100
21	CU	21/27 (78%)	18 (86%)	3 (14%)	0	100	100
24	AW	3/10 (30%)	0	2 (67%)	1 (33%)	0	0
24	CW	3/10 (30%)	1 (33%)	1 (33%)	1 (33%)	0	0
27	BD	273/276 (99%)	260 (95%)	12 (4%)	1 (0%)	30	66
27	DD	273/276 (99%)	258 (94%)	13 (5%)	2 (1%)	19	54
28	BE	202/206 (98%)	194 (96%)	7 (4%)	1 (0%)	25	61
28	DE	202/206 (98%)	195 (96%)	4 (2%)	3 (2%)	8	36
29	BF	201/210 (96%)	195 (97%)	5 (2%)	1 (0%)	25	61
29	DF	201/210 (96%)	195 (97%)	4 (2%)	2 (1%)	13	46
30	BG	179/182 (98%)	167 (93%)	9 (5%)	3 (2%)	7	33
30	DG	179/182 (98%)	161 (90%)	14 (8%)	4 (2%)	5	27
31	BH	172/180 (96%)	165 (96%)	6 (4%)	1 (1%)	22	57
31	DH	172/180 (96%)	164 (95%)	7 (4%)	1 (1%)	22	57
32	BI	144/148 (97%)	124 (86%)	14 (10%)	6 (4%)	2	13
32	DI	144/148 (97%)	124 (86%)	17 (12%)	3 (2%)	5	28
33	BN	138/140 (99%)	133 (96%)	5 (4%)	0	100	100
33	DN	138/140 (99%)	132 (96%)	5 (4%)	1 (1%)	19	54
34	BO	120/122 (98%)	116 (97%)	3 (2%)	1 (1%)	16	51
34	DO	120/122 (98%)	117 (98%)	2 (2%)	1 (1%)	16	51
35	BP	147/150 (98%)	138 (94%)	8 (5%)	1 (1%)	19	54
35	DP	147/150 (98%)	135 (92%)	9 (6%)	3 (2%)	6	29
36	BQ	139/141 (99%)	131 (94%)	7 (5%)	1 (1%)	19	54

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
36	DQ	139/141 (99%)	129 (93%)	9 (6%)	1 (1%)	19	54
37	BR	116/118 (98%)	110 (95%)	5 (4%)	1 (1%)	14	49
37	DR	116/118 (98%)	111 (96%)	5 (4%)	0	100	100
38	BS	108/112 (96%)	103 (95%)	4 (4%)	1 (1%)	14	49
38	DS	108/112 (96%)	102 (94%)	5 (5%)	1 (1%)	14	49
39	BT	129/146 (88%)	123 (95%)	6 (5%)	0	100	100
39	DT	129/146 (88%)	127 (98%)	2 (2%)	0	100	100
40	BU	114/118 (97%)	113 (99%)	1 (1%)	0	100	100
40	DU	114/118 (97%)	113 (99%)	1 (1%)	0	100	100
41	BV	99/101 (98%)	93 (94%)	5 (5%)	1 (1%)	13	46
41	DV	99/101 (98%)	94 (95%)	4 (4%)	1 (1%)	13	46
42	BW	110/113 (97%)	108 (98%)	2 (2%)	0	100	100
42	DW	110/113 (97%)	108 (98%)	2 (2%)	0	100	100
43	BX	93/96 (97%)	91 (98%)	2 (2%)	0	100	100
43	DX	93/96 (97%)	89 (96%)	4 (4%)	0	100	100
44	BY	105/110 (96%)	98 (93%)	7 (7%)	0	100	100
44	DY	105/110 (96%)	97 (92%)	8 (8%)	0	100	100
45	BZ	169/206 (82%)	150 (89%)	18 (11%)	1 (1%)	22	57
45	DZ	172/206 (84%)	162 (94%)	10 (6%)	0	100	100
46	B0	81/85 (95%)	76 (94%)	4 (5%)	1 (1%)	11	41
46	D0	81/85 (95%)	76 (94%)	4 (5%)	1 (1%)	11	41
47	B1	95/98 (97%)	93 (98%)	1 (1%)	1 (1%)	12	44
47	D1	95/98 (97%)	92 (97%)	2 (2%)	1 (1%)	12	44
48	B2	68/72 (94%)	68 (100%)	0	0	100	100
48	D2	68/72 (94%)	67 (98%)	1 (2%)	0	100	100
49	B3	57/60 (95%)	56 (98%)	1 (2%)	0	100	100
49	D3	57/60 (95%)	57 (100%)	0	0	100	100
50	B4	67/71 (94%)	53 (79%)	9 (13%)	5 (8%)	1	4
50	D4	67/71 (94%)	52 (78%)	8 (12%)	7 (10%)	0	2
51	B5	57/60 (95%)	53 (93%)	4 (7%)	0	100	100
51	D5	57/60 (95%)	54 (95%)	3 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
52	B6	51/54 (94%)	48 (94%)	3 (6%)	0	100	100
52	D6	51/54 (94%)	47 (92%)	4 (8%)	0	100	100
53	B7	46/49 (94%)	46 (100%)	0	0	100	100
53	D7	46/49 (94%)	44 (96%)	1 (2%)	1 (2%)	5	27
54	B8	62/65 (95%)	60 (97%)	2 (3%)	0	100	100
54	D8	62/65 (95%)	61 (98%)	1 (2%)	0	100	100
55	B9	35/37 (95%)	34 (97%)	1 (3%)	0	100	100
55	D9	35/37 (95%)	34 (97%)	1 (3%)	0	100	100
All	All	11415/12148 (94%)	10659 (93%)	648 (6%)	108 (1%)	14	49

All (108) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	125	PRO
3	AC	107	GLN
4	AD	166	LYS
9	AI	54	ASP
10	AJ	31	GLY
10	AJ	79	ARG
11	AK	49	GLY
18	AR	60	ALA
27	BD	275	LYS
29	BF	130	ALA
31	BH	126	PRO
36	BQ	60	ARG
50	B4	55	ARG
50	B4	68	ARG
2	CB	16	HIS
2	CB	20	GLU
2	CB	21	ARG
2	CB	126	GLU
7	CG	7	ALA
9	CI	54	ASP
10	CJ	79	ARG
20	CT	95	ALA
20	CT	99	LEU
29	DF	21	ALA
29	DF	130	ALA
30	DG	14	GLU

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Mol	Chain	Res	Type
30	DG	47	LYS
30	DG	81	LYS
31	DH	126	PRO
32	DI	10	GLU
36	DQ	60	ARG
47	D1	3	LYS
50	D4	38	LYS
50	D4	39	CYS
50	D4	45	GLY
50	D4	55	ARG
50	D4	60	GLN
50	D4	63	TYR
53	D7	46	VAL
2	AB	16	HIS
2	AB	19	HIS
5	AE	85	GLY
5	AE	140	ARG
7	AG	81	GLY
9	AI	56	LEU
9	AI	95	LYS
10	AJ	56	HIS
24	AW	7	PRO
32	BI	73	GLU
34	BO	5	GLN
35	BP	29	LYS
38	BS	60	GLY
45	BZ	152	ALA
46	B0	13	GLY
47	B1	3	LYS
50	B4	47	GLN
50	B4	56	VAL
50	B4	57	GLU
2	CB	8	LYS
13	CM	106	ASN
27	DD	239	ARG
28	DE	73	GLU
28	DE	94	GLU
32	DI	117	GLU
33	DN	2	LYS
34	DO	5	GLN
30	BG	47	LYS
30	BG	51	ARG

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Mol	Chain	Res	Type
2	CB	231	GLU
3	CC	181	ASN
11	CK	49	GLY
20	CT	102	GLY
28	DE	52	LEU
30	DG	51	ARG
38	DS	84	GLN
41	DV	79	VAL
4	AD	164	ALA
13	AM	5	ALA
28	BE	52	LEU
32	BI	39	ALA
2	CB	123	ALA
4	CD	47	ARG
4	CD	129	ASN
10	CJ	56	HIS
32	DI	119	PRO
35	DP	38	GLN
50	D4	46	GLN
2	AB	37	ASN
30	BG	126	ASP
32	BI	105	HIS
32	BI	107	VAL
41	BV	79	VAL
3	CC	91	LEU
9	CI	56	LEU
27	DD	3	VAL
35	DP	29	LYS
35	DP	45	LEU
46	D0	4	LYS
3	AC	66	VAL
20	AT	102	GLY
32	BI	10	GLU
37	BR	83	ILE
8	CH	73	ASP
32	BI	106	GLY
16	CP	53	VAL
24	CW	7	PRO
2	AB	124	SER
4	CD	136	PRO

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AB	192/220 (87%)	154 (80%)	38 (20%)	1	6
2	CB	187/220 (85%)	155 (83%)	32 (17%)	1	8
3	AC	143/188 (76%)	128 (90%)	15 (10%)	5	23
3	CC	140/188 (74%)	123 (88%)	17 (12%)	4	18
4	AD	170/181 (94%)	146 (86%)	24 (14%)	3	13
4	CD	173/181 (96%)	152 (88%)	21 (12%)	4	18
5	AE	113/123 (92%)	102 (90%)	11 (10%)	6	27
5	CE	114/123 (93%)	104 (91%)	10 (9%)	8	31
6	AF	83/90 (92%)	76 (92%)	7 (8%)	9	33
6	CF	85/90 (94%)	79 (93%)	6 (7%)	12	40
7	AG	119/127 (94%)	100 (84%)	19 (16%)	2	10
7	CG	120/127 (94%)	102 (85%)	18 (15%)	2	12
8	AH	114/119 (96%)	97 (85%)	17 (15%)	2	12
8	CH	114/119 (96%)	102 (90%)	12 (10%)	5	23
9	AI	90/99 (91%)	78 (87%)	12 (13%)	3	15
9	CI	89/99 (90%)	75 (84%)	14 (16%)	2	10
10	AJ	66/92 (72%)	59 (89%)	7 (11%)	5	23
10	CJ	69/92 (75%)	65 (94%)	4 (6%)	17	48
11	AK	82/99 (83%)	75 (92%)	7 (8%)	8	33
11	CK	83/99 (84%)	77 (93%)	6 (7%)	12	39
12	AL	97/109 (89%)	87 (90%)	10 (10%)	6	24
12	CL	97/109 (89%)	83 (86%)	14 (14%)	2	13
13	AM	93/101 (92%)	81 (87%)	12 (13%)	3	16
13	CM	92/101 (91%)	78 (85%)	14 (15%)	2	11
14	AN	49/50 (98%)	41 (84%)	8 (16%)	2	9
14	CN	49/50 (98%)	41 (84%)	8 (16%)	2	9

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
15	AO	78/80 (98%)	68 (87%)	10 (13%)	3	16
15	CO	78/80 (98%)	66 (85%)	12 (15%)	2	11
16	AP	69/74 (93%)	61 (88%)	8 (12%)	4	20
16	CP	68/74 (92%)	64 (94%)	4 (6%)	16	47
17	AQ	94/97 (97%)	88 (94%)	6 (6%)	14	44
17	CQ	94/97 (97%)	86 (92%)	8 (8%)	8	33
18	AR	59/77 (77%)	56 (95%)	3 (5%)	20	53
18	CR	59/77 (77%)	53 (90%)	6 (10%)	6	24
19	AS	69/80 (86%)	63 (91%)	6 (9%)	8	32
19	CS	67/80 (84%)	59 (88%)	8 (12%)	4	19
20	AT	70/82 (85%)	60 (86%)	10 (14%)	2	13
20	CT	70/82 (85%)	61 (87%)	9 (13%)	3	16
21	AU	18/22 (82%)	15 (83%)	3 (17%)	2	9
21	CU	18/22 (82%)	16 (89%)	2 (11%)	5	21
24	AW	3/3 (100%)	2 (67%)	1 (33%)	0	1
24	CW	3/3 (100%)	2 (67%)	1 (33%)	0	1
27	BD	215/218 (99%)	193 (90%)	22 (10%)	6	24
27	DD	215/218 (99%)	195 (91%)	20 (9%)	7	29
28	BE	164/166 (99%)	140 (85%)	24 (15%)	2	12
28	DE	164/166 (99%)	140 (85%)	24 (15%)	2	12
29	BF	160/166 (96%)	145 (91%)	15 (9%)	7	28
29	DF	159/166 (96%)	142 (89%)	17 (11%)	5	22
30	BG	143/156 (92%)	124 (87%)	19 (13%)	3	15
30	DG	142/156 (91%)	117 (82%)	25 (18%)	1	8
31	BH	144/148 (97%)	128 (89%)	16 (11%)	5	21
31	DH	144/148 (97%)	131 (91%)	13 (9%)	8	30
32	BI	110/124 (89%)	85 (77%)	25 (23%)	0	3
32	DI	104/124 (84%)	90 (86%)	14 (14%)	3	14
33	BN	118/119 (99%)	100 (85%)	18 (15%)	2	11
33	DN	118/119 (99%)	102 (86%)	16 (14%)	3	14
34	BO	100/100 (100%)	95 (95%)	5 (5%)	20	53

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
34	DO	100/100 (100%)	92 (92%)	8 (8%)	10	35
35	BP	115/116 (99%)	103 (90%)	12 (10%)	5	23
35	DP	115/116 (99%)	102 (89%)	13 (11%)	4	21
36	BQ	111/111 (100%)	96 (86%)	15 (14%)	3	14
36	DQ	111/111 (100%)	97 (87%)	14 (13%)	3	17
37	BR	101/101 (100%)	83 (82%)	18 (18%)	1	8
37	DR	101/101 (100%)	84 (83%)	17 (17%)	1	9
38	BS	87/88 (99%)	78 (90%)	9 (10%)	6	24
38	DS	85/88 (97%)	73 (86%)	12 (14%)	3	13
39	BT	115/127 (91%)	103 (90%)	12 (10%)	5	23
39	DT	113/127 (89%)	103 (91%)	10 (9%)	8	31
40	BU	93/94 (99%)	85 (91%)	8 (9%)	8	32
40	DU	93/94 (99%)	79 (85%)	14 (15%)	2	12
41	BV	80/82 (98%)	68 (85%)	12 (15%)	2	12
41	DV	80/82 (98%)	70 (88%)	10 (12%)	3	17
42	BW	90/92 (98%)	83 (92%)	7 (8%)	10	36
42	DW	90/92 (98%)	82 (91%)	8 (9%)	8	31
43	BX	77/78 (99%)	74 (96%)	3 (4%)	27	61
43	DX	77/78 (99%)	73 (95%)	4 (5%)	19	52
44	BY	85/91 (93%)	76 (89%)	9 (11%)	5	23
44	DY	85/91 (93%)	77 (91%)	8 (9%)	7	28
45	BZ	145/179 (81%)	127 (88%)	18 (12%)	4	17
45	DZ	145/179 (81%)	128 (88%)	17 (12%)	4	19
46	B0	65/67 (97%)	62 (95%)	3 (5%)	23	56
46	D0	65/67 (97%)	60 (92%)	5 (8%)	10	37
47	B1	80/83 (96%)	70 (88%)	10 (12%)	3	17
47	D1	80/83 (96%)	69 (86%)	11 (14%)	3	14
48	B2	65/67 (97%)	56 (86%)	9 (14%)	3	14
48	D2	65/67 (97%)	57 (88%)	8 (12%)	4	18
49	B3	51/52 (98%)	44 (86%)	7 (14%)	3	14
49	D3	50/52 (96%)	42 (84%)	8 (16%)	2	10

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
50	B4	59/63 (94%)	47 (80%)	12 (20%)	1	5
50	D4	53/63 (84%)	44 (83%)	9 (17%)	1	9
51	B5	50/52 (96%)	45 (90%)	5 (10%)	6	25
51	D5	50/52 (96%)	45 (90%)	5 (10%)	6	25
52	B6	51/52 (98%)	47 (92%)	4 (8%)	10	36
52	D6	50/52 (96%)	43 (86%)	7 (14%)	3	13
53	B7	41/42 (98%)	39 (95%)	2 (5%)	21	54
53	D7	41/42 (98%)	38 (93%)	3 (7%)	11	39
54	B8	53/55 (96%)	50 (94%)	3 (6%)	17	49
54	D8	54/55 (98%)	52 (96%)	2 (4%)	29	63
55	B9	34/34 (100%)	33 (97%)	1 (3%)	37	70
55	D9	34/34 (100%)	31 (91%)	3 (9%)	8	31
All	All	9325/10072 (93%)	8217 (88%)	1108 (12%)	4	19

All (1108) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	8	LYS
2	AB	11	LEU
2	AB	15	VAL
2	AB	20	GLU
2	AB	21	ARG
2	AB	24	TRP
2	AB	49	GLU
2	AB	67	THR
2	AB	71	VAL
2	AB	76	GLN
2	AB	80	ILE
2	AB	81	VAL
2	AB	96	ARG
2	AB	108	ILE
2	AB	109	SER
2	AB	114	ARG
2	AB	130	ARG
2	AB	142	LEU
2	AB	144	ARG
2	AB	153	ARG
2	AB	155	LEU

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Mol	Chain	Res	Type
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	209	ARG
2	AB	217	ARG
2	AB	221	LEU
2	AB	222	ILE
2	AB	223	ILE
2	AB	226	ARG
2	AB	233	SER
3	AC	3	ASN
3	AC	27	LYS
3	AC	28	GLN
3	AC	29	TYR
3	AC	52	LEU
3	AC	54	ARG
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	134	ILE
3	AC	164	ARG
3	AC	165	THR
4	AD	5	ILE
4	AD	19	LEU
4	AD	31	CYS
4	AD	34	GLU
4	AD	58	LEU
4	AD	85	LYS
4	AD	86	LYS
4	AD	91	SER
4	AD	108	LEU
4	AD	112	VAL

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Mol	Chain	Res	Type
4	AD	120	LEU
4	AD	122	ARG
4	AD	127	THR
4	AD	135	LEU
4	AD	141	ARG
4	AD	155	LEU
4	AD	158	ILE
4	AD	168	ARG
4	AD	177	ASP
4	AD	182	LYS
4	AD	184	LYS
4	AD	188	LEU
4	AD	196	LEU
4	AD	201	GLN
5	AE	12	LEU
5	AE	18	ARG
5	AE	31	LEU
5	AE	38	GLN
5	AE	40	ARG
5	AE	41	VAL
5	AE	47	LYS
5	AE	71	LEU
5	AE	75	THR
5	AE	78	HIS
5	AE	79	GLU
6	AF	40	VAL
6	AF	55	ASP
6	AF	69	GLU
6	AF	70	ASP
6	AF	74	ASP
6	AF	82	ARG
6	AF	94	GLN
7	AG	8	GLU
7	AG	9	VAL
7	AG	13	GLN
7	AG	50	ILE
7	AG	51	GLN
7	AG	52	GLU
7	AG	57	GLU
7	AG	59	LEU
7	AG	72	ARG
7	AG	76	ARG

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Mol	Chain	Res	Type
7	AG	79	ARG
7	AG	97	GLN
7	AG	104	LEU
7	AG	113	GLU
7	AG	114	ARG
7	AG	129	GLU
7	AG	138	LYS
7	AG	140	ASP
7	AG	144	MET
8	AH	21	LYS
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	54	ASP
8	AH	63	LEU
8	AH	75	ARG
8	AH	78	GLN
8	AH	97	VAL
8	AH	98	LYS
8	AH	99	GLU
8	AH	107	LEU
8	AH	112	LEU
8	AH	115	SER
9	AI	23	ASN
9	AI	27	THR
9	AI	42	ARG
9	AI	53	VAL
9	AI	54	ASP
9	AI	56	LEU
9	AI	66	ARG
9	AI	75	ASP
9	AI	81	ILE
9	AI	103	THR
9	AI	127	LYS
9	AI	128	ARG
10	AJ	5	ARG
10	AJ	7	LYS
10	AJ	16	LEU
10	AJ	30	SER

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Mol	Chain	Res	Type
10	AJ	68	HIS
10	AJ	84	GLN
10	AJ	92	THR
11	AK	16	SER
11	AK	31	THR
11	AK	48	ILE
11	AK	70	LYS
11	AK	95	ILE
11	AK	96	ARG
11	AK	109	VAL
12	AL	6	THR
12	AL	33	ARG
12	AL	53	ARG
12	AL	55	VAL
12	AL	57	LYS
12	AL	67	THR
12	AL	70	ILE
12	AL	83	VAL
12	AL	117	ARG
12	AL	118	SER
13	AM	3	ARG
13	AM	4	ILE
13	AM	8	GLU
13	AM	15	VAL
13	AM	19	LEU
13	AM	43	THR
13	AM	47	ASP
13	AM	50	GLU
13	AM	73	GLU
13	AM	99	ARG
13	AM	110	ARG
13	AM	121	LYS
14	AN	3	ARG
14	AN	6	LEU
14	AN	7	ILE
14	AN	18	VAL
14	AN	22	THR
14	AN	23	ARG
14	AN	33	VAL
14	AN	44	LEU
15	AO	3	ILE
15	AO	5	LYS

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Mol	Chain	Res	Type
15	AO	22	THR
15	AO	26	GLU
15	AO	38	ARG
15	AO	39	LEU
15	AO	41	GLU
15	AO	76	GLU
15	AO	83	GLU
15	AO	84	LYS
16	AP	5	ARG
16	AP	8	ARG
16	AP	19	ILE
16	AP	20	VAL
16	AP	28	ARG
16	AP	50	LYS
16	AP	54	GLU
16	AP	67	THR
17	AQ	14	LYS
17	AQ	53	LEU
17	AQ	57	VAL
17	AQ	60	ILE
17	AQ	74	LEU
17	AQ	100	LYS
18	AR	26	LEU
18	AR	32	ARG
18	AR	54	ARG
19	AS	6	LYS
19	AS	28	LYS
19	AS	37	ARG
19	AS	43	GLU
19	AS	63	THR
19	AS	65	ASN
20	AT	8	ARG
20	AT	9	ASN
20	AT	10	LEU
20	AT	13	LEU
20	AT	24	LEU
20	AT	45	GLN
20	AT	46	GLU
20	AT	56	MET
20	AT	58	LYS
20	AT	62	LEU
21	AU	7	ARG

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Mol	Chain	Res	Type
21	AU	9	ARG
21	AU	10	ARG
24	AW	2	VAL
27	BD	3	VAL
27	BD	12	SER
27	BD	13	ARG
27	BD	69	ARG
27	BD	88	ARG
27	BD	94	LEU
27	BD	99	ASP
27	BD	103	ARG
27	BD	106	ILE
27	BD	111	LEU
27	BD	116	GLN
27	BD	138	VAL
27	BD	142	VAL
27	BD	162	SER
27	BD	200	ASP
27	BD	211	ARG
27	BD	221	VAL
27	BD	229	VAL
27	BD	242	ARG
27	BD	257	LEU
27	BD	260	ARG
27	BD	274	ARG
28	BE	1	MET
28	BE	7	VAL
28	BE	12	THR
28	BE	21	VAL
28	BE	24	THR
28	BE	40	GLU
28	BE	45	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	116	VAL
28	BE	119	ARG
28	BE	128	SER
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	167	VAL
28	BE	170	LEU
28	BE	175	VAL
28	BE	181	LEU
29	BF	19	GLU
29	BF	24	LEU
29	BF	33	LEU
29	BF	53	THR
29	BF	57	VAL
29	BF	74	ARG
29	BF	106	ARG
29	BF	108	LYS
29	BF	110	LEU
29	BF	125	LEU
29	BF	140	LEU
29	BF	170	LEU
29	BF	192	LEU
29	BF	197	ASP
29	BF	200	GLU
30	BG	7	LEU
30	BG	28	VAL
30	BG	43	LEU
30	BG	45	GLU
30	BG	60	LEU
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	136	ARG
30	BG	140	ILE
30	BG	143	GLU
30	BG	146	TYR
30	BG	148	MET
30	BG	159	VAL
30	BG	170	ARG
30	BG	181	ARG
31	BH	3	ARG

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Mol	Chain	Res	Type
31	BH	6	ARG
31	BH	13	LYS
31	BH	24	VAL
31	BH	41	MET
31	BH	45	VAL
31	BH	56	SER
31	BH	59	ARG
31	BH	60	ARG
31	BH	69	ARG
31	BH	98	LEU
31	BH	105	LEU
31	BH	116	GLU
31	BH	129	THR
31	BH	139	GLN
31	BH	175	LYS
32	BI	5	LEU
32	BI	9	LEU
32	BI	38	LEU
32	BI	41	GLU
32	BI	43	ASN
32	BI	50	ARG
32	BI	57	ARG
32	BI	60	GLU
32	BI	61	ARG
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	86	THR
32	BI	92	VAL
32	BI	96	ASP
32	BI	101	LEU
32	BI	102	SER
32	BI	103	ARG
32	BI	109	ILE
32	BI	140	LEU
32	BI	144	VAL
33	BN	5	VAL
33	BN	12	ARG

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Mol	Chain	Res	Type
33	BN	33	LEU
33	BN	34	LEU
33	BN	46	VAL
33	BN	48	MET
33	BN	61	ARG
33	BN	67	LEU
33	BN	68	GLU
33	BN	83	LYS
33	BN	87	LEU
33	BN	97	ARG
33	BN	99	LEU
33	BN	112	LEU
33	BN	120	LEU
33	BN	121	LYS
33	BN	133	GLN
33	BN	137	LYS
34	BO	21	CYS
34	BO	24	VAL
34	BO	92	GLU
34	BO	98	VAL
34	BO	108	GLU
35	BP	15	ARG
35	BP	21	ARG
35	BP	59	LEU
35	BP	65	ARG
35	BP	70	GLN
35	BP	95	VAL
35	BP	98	GLU
35	BP	106	LEU
35	BP	112	LEU
35	BP	125	VAL
35	BP	135	LEU
35	BP	149	GLU
36	BQ	1	MET
36	BQ	5	ARG
36	BQ	7	MET
36	BQ	8	LYS
36	BQ	21	THR
36	BQ	45	GLN
36	BQ	54	MET
36	BQ	55	VAL
36	BQ	56	ARG

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Mol	Chain	Res	Type
36	BQ	60	ARG
36	BQ	75	THR
36	BQ	81	VAL
36	BQ	85	LYS
36	BQ	109	VAL
36	BQ	110	THR
37	BR	1	MET
37	BR	6	SER
37	BR	8	ARG
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	100	LEU
37	BR	111	LEU
38	BS	19	LYS
38	BS	20	ARG
38	BS	36	TYR
38	BS	57	LYS
38	BS	59	LYS
38	BS	61	ASN
38	BS	78	LEU
38	BS	83	LYS
38	BS	103	GLU
39	BT	6	LEU
39	BT	13	ARG
39	BT	17	THR
39	BT	28	VAL
39	BT	39	ARG
39	BT	49	VAL
39	BT	53	ARG
39	BT	74	ARG
39	BT	78	LEU

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Mol	Chain	Res	Type
39	BT	89	VAL
39	BT	96	ARG
39	BT	118	ARG
40	BU	8	VAL
40	BU	31	SER
40	BU	36	ARG
40	BU	59	ARG
40	BU	74	LEU
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	39	LEU
41	BV	43	GLU
41	BV	46	VAL
41	BV	51	VAL
41	BV	61	VAL
41	BV	62	LEU
41	BV	72	VAL
41	BV	73	SER
41	BV	79	VAL
42	BW	11	ARG
42	BW	15	ARG
42	BW	17	VAL
42	BW	23	LEU
42	BW	51	LEU
42	BW	67	ASP
42	BW	107	LEU
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	73	ARG
44	BY	90	LEU
44	BY	91	GLU
44	BY	102	CYS
44	BY	107	ASP

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Mol	Chain	Res	Type
45	BZ	5	LEU
45	BZ	6	LYS
45	BZ	11	GLU
45	BZ	19	ARG
45	BZ	42	VAL
45	BZ	61	LEU
45	BZ	86	VAL
45	BZ	87	ASP
45	BZ	91	LEU
45	BZ	107	THR
45	BZ	126	VAL
45	BZ	132	ASN
45	BZ	135	GLU
45	BZ	136	PHE
45	BZ	144	LEU
45	BZ	155	LEU
45	BZ	162	GLU
45	BZ	170	THR
46	B0	10	THR
46	B0	20	ARG
46	B0	55	ARG
47	B1	21	ARG
47	B1	26	ARG
47	B1	30	VAL
47	B1	35	THR
47	B1	40	ARG
47	B1	52	ARG
47	B1	59	THR
47	B1	75	GLU
47	B1	89	GLU
47	B1	95	LEU
48	B2	28	LYS
48	B2	30	ARG
48	B2	41	ILE
48	B2	52	ASP
48	B2	53	LEU
48	B2	55	ARG
48	B2	64	LEU
48	B2	68	ARG
48	B2	70	GLN
49	B3	6	VAL
49	B3	8	LEU

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Mol	Chain	Res	Type
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	33	VAL
50	B4	34	GLU
50	B4	44	THR
50	B4	46	GLN
50	B4	48	ARG
50	B4	49	PHE
50	B4	56	VAL
50	B4	58	ARG
50	B4	61	ARG
50	B4	63	TYR
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	13	CYS
52	B6	14	THR
52	B6	48	VAL
53	B7	1	MET
53	B7	47	ARG
54	B8	13	ARG
54	B8	14	VAL
54	B8	31	HIS
55	B9	17	ILE
2	CB	11	LEU
2	CB	23	ARG
2	CB	24	TRP
2	CB	35	GLU
2	CB	44	LEU
2	CB	67	THR
2	CB	71	VAL
2	CB	76	GLN
2	CB	80	ILE
2	CB	94	ASN

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Mol	Chain	Res	Type
2	CB	96	ARG
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	153	ARG
2	CB	154	LEU
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	189	ASP
2	CB	200	ILE
2	CB	221	LEU
2	CB	224	GLN
2	CB	226	ARG
2	CB	233	SER
2	CB	235	SER
3	CC	3	ASN
3	CC	20	SER
3	CC	29	TYR
3	CC	44	GLU
3	CC	52	LEU
3	CC	70	VAL
3	CC	82	GLU
3	CC	98	ASN
3	CC	101	LEU
3	CC	104	GLN
3	CC	105	GLU
3	CC	115	LEU
3	CC	131	ARG
3	CC	152	ILE
3	CC	164	ARG
3	CC	165	THR
3	CC	179	ARG
4	CD	10	ARG
4	CD	19	LEU
4	CD	33	MET

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Mol	Chain	Res	Type
4	CD	34	GLU
4	CD	47	ARG
4	CD	58	LEU
4	CD	85	LYS
4	CD	96	LEU
4	CD	110	PHE
4	CD	122	ARG
4	CD	127	THR
4	CD	135	LEU
4	CD	150	GLU
4	CD	157	LEU
4	CD	170	VAL
4	CD	177	ASP
4	CD	184	LYS
4	CD	187	ARG
4	CD	188	LEU
4	CD	191	ARG
4	CD	194	LEU
5	CE	12	LEU
5	CE	18	ARG
5	CE	31	LEU
5	CE	40	ARG
5	CE	41	VAL
5	CE	47	LYS
5	CE	71	LEU
5	CE	75	THR
5	CE	79	GLU
5	CE	150	ARG
6	CF	10	LEU
6	CF	23	LYS
6	CF	28	ARG
6	CF	40	VAL
6	CF	41	GLU
6	CF	69	GLU
7	CG	9	VAL
7	CG	10	ARG
7	CG	12	LEU
7	CG	13	GLN
7	CG	51	GLN
7	CG	52	GLU
7	CG	57	GLU
7	CG	58	PRO

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Mol	Chain	Res	Type
7	CG	59	LEU
7	CG	72	ARG
7	CG	75	VAL
7	CG	76	ARG
7	CG	85	TYR
7	CG	97	GLN
7	CG	113	GLU
7	CG	114	ARG
7	CG	131	LYS
7	CG	140	ASP
8	CH	21	LYS
8	CH	25	ASP
8	CH	38	ILE
8	CH	52	ASP
8	CH	53	VAL
8	CH	54	ASP
8	CH	78	GLN
8	CH	84	ARG
8	CH	97	VAL
8	CH	98	LYS
8	CH	99	GLU
8	CH	112	LEU
9	CI	7	THR
9	CI	23	ASN
9	CI	27	THR
9	CI	33	PHE
9	CI	42	ARG
9	CI	64	THR
9	CI	75	ASP
9	CI	81	ILE
9	CI	86	VAL
9	CI	102	LEU
9	CI	108	VAL
9	CI	124	GLN
9	CI	125	TYR
9	CI	128	ARG
10	CJ	23	ILE
10	CJ	29	ARG
10	CJ	74	ILE
10	CJ	92	THR
11	CK	33	THR
11	CK	54	ARG

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Mol	Chain	Res	Type
11	CK	79	SER
11	CK	95	ILE
11	CK	96	ARG
11	CK	126	ARG
12	CL	33	ARG
12	CL	34	ARG
12	CL	50	SER
12	CL	52	LEU
12	CL	53	ARG
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	117	ARG
12	CL	118	SER
12	CL	123	LYS
13	CM	3	ARG
13	CM	4	ILE
13	CM	19	LEU
13	CM	27	LYS
13	CM	47	ASP
13	CM	49	THR
13	CM	50	GLU
13	CM	56	LEU
13	CM	70	LEU
13	CM	99	ARG
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	17	LYS
14	CN	18	VAL
14	CN	22	THR
14	CN	23	ARG
14	CN	44	LEU
14	CN	57	ARG
15	CO	3	ILE
15	CO	5	LYS

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Mol	Chain	Res	Type
15	CO	7	GLU
15	CO	22	THR
15	CO	24	SER
15	CO	26	GLU
15	CO	39	LEU
15	CO	48	LYS
15	CO	54	ARG
15	CO	64	ARG
15	CO	76	GLU
15	CO	83	GLU
16	CP	5	ARG
16	CP	8	ARG
16	CP	67	THR
16	CP	69	THR
17	CQ	6	LEU
17	CQ	9	VAL
17	CQ	53	LEU
17	CQ	57	VAL
17	CQ	60	ILE
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	54	ARG
18	CR	64	ARG
18	CR	76	LEU
19	CS	22	LEU
19	CS	28	LYS
19	CS	30	LEU
19	CS	33	THR
19	CS	43	GLU
19	CS	56	GLN
19	CS	63	THR
19	CS	65	ASN
20	CT	24	LEU
20	CT	38	LYS
20	CT	46	GLU
20	CT	56	MET
20	CT	62	LEU
20	CT	71	THR

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Mol	Chain	Res	Type
20	CT	80	ARG
20	CT	90	GLN
20	CT	99	LEU
21	CU	10	ARG
21	CU	12	LYS
24	CW	2	VAL
27	DD	13	ARG
27	DD	61	LEU
27	DD	69	ARG
27	DD	88	ARG
27	DD	94	LEU
27	DD	106	ILE
27	DD	111	LEU
27	DD	116	GLN
27	DD	134	ARG
27	DD	211	ARG
27	DD	217	ARG
27	DD	221	VAL
27	DD	229	VAL
27	DD	242	ARG
27	DD	257	LEU
27	DD	259	THR
27	DD	260	ARG
27	DD	274	ARG
27	DD	275	LYS
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	47	VAL
28	DE	49	LEU
28	DE	52	LEU
28	DE	58	ARG
28	DE	73	GLU
28	DE	75	VAL
28	DE	82	ARG
28	DE	111	ARG
28	DE	116	VAL

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Mol	Chain	Res	Type
28	DE	119	ARG
28	DE	144	ARG
28	DE	145	LYS
28	DE	163	GLU
28	DE	167	VAL
28	DE	170	LEU
28	DE	175	VAL
28	DE	181	LEU
29	DF	12	LEU
29	DF	13	SER
29	DF	15	SER
29	DF	19	GLU
29	DF	24	LEU
29	DF	27	GLU
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	183	VAL
29	DF	192	LEU
29	DF	200	GLU
30	DG	5	VAL
30	DG	21	ARG
30	DG	28	VAL
30	DG	31	VAL
30	DG	33	ARG
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

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Mol	Chain	Res	Type
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	170	ARG
31	DH	15	VAL
31	DH	25	LYS
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	105	LEU
31	DH	106	THR
31	DH	134	SER
31	DH	139	GLN
31	DH	171	LEU
32	DI	5	LEU
32	DI	19	VAL
32	DI	40	THR
32	DI	43	ASN
32	DI	44	LEU
32	DI	57	ARG
32	DI	61	ARG
32	DI	68	LEU
32	DI	73	GLU
32	DI	75	LEU
32	DI	77	LEU
32	DI	121	LYS
32	DI	140	LEU
32	DI	142	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

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Mol	Chain	Res	Type
33	DN	61	ARG
33	DN	85	ILE
33	DN	87	LEU
33	DN	97	ARG
33	DN	99	LEU
33	DN	112	LEU
33	DN	120	LEU
33	DN	133	GLN
33	DN	137	LYS
34	DO	8	LEU
34	DO	24	VAL
34	DO	47	ILE
34	DO	58	VAL
34	DO	69	ILE
34	DO	92	GLU
34	DO	98	VAL
34	DO	108	GLU
35	DP	1	MET
35	DP	2	LYS
35	DP	3	LEU
35	DP	15	ARG
35	DP	21	ARG
35	DP	55	ARG
35	DP	65	ARG
35	DP	76	LYS
35	DP	77	ARG
35	DP	96	THR
35	DP	106	LEU
35	DP	112	LEU
35	DP	135	LEU
36	DQ	1	MET
36	DQ	7	MET
36	DQ	8	LYS
36	DQ	11	LYS
36	DQ	21	THR
36	DQ	45	GLN
36	DQ	55	VAL
36	DQ	56	ARG
36	DQ	60	ARG
36	DQ	63	LYS
36	DQ	75	THR
36	DQ	81	VAL

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Mol	Chain	Res	Type
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	54	LEU
37	DR	60	LEU
37	DR	65	LEU
37	DR	67	LEU
37	DR	75	LEU
37	DR	79	LEU
37	DR	86	ARG
37	DR	100	LEU
37	DR	111	LEU
38	DS	19	LYS
38	DS	20	ARG
38	DS	35	ILE
38	DS	36	TYR
38	DS	67	ARG
38	DS	68	GLN
38	DS	69	VAL
38	DS	71	ARG
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	17	THR
39	DT	53	ARG
39	DT	74	ARG
39	DT	78	LEU
39	DT	89	VAL
39	DT	96	ARG
39	DT	113	LYS
39	DT	118	ARG
40	DU	5	LYS

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Mol	Chain	Res	Type
40	DU	8	VAL
40	DU	17	ILE
40	DU	31	SER
40	DU	36	ARG
40	DU	59	ARG
40	DU	74	LEU
40	DU	83	LEU
40	DU	89	GLU
40	DU	92	ARG
40	DU	95	LEU
40	DU	104	GLN
40	DU	108	GLU
40	DU	114	LYS
41	DV	15	GLU
41	DV	18	LEU
41	DV	39	LEU
41	DV	46	VAL
41	DV	57	VAL
41	DV	61	VAL
41	DV	62	LEU
41	DV	72	VAL
41	DV	73	SER
41	DV	79	VAL
42	DW	11	ARG
42	DW	17	VAL
42	DW	23	LEU
42	DW	27	LYS
42	DW	51	LEU
42	DW	60	ASN
42	DW	100	THR
42	DW	107	LEU
43	DX	33	LYS
43	DX	57	LEU
43	DX	70	LEU
43	DX	76	ARG
44	DY	2	ARG
44	DY	11	ASP
44	DY	43	ASN
44	DY	49	VAL
44	DY	72	VAL
44	DY	90	LEU
44	DY	91	GLU

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Mol	Chain	Res	Type
44	DY	99	CYS
45	DZ	5	LEU
45	DZ	19	ARG
45	DZ	31	ARG
45	DZ	33	LEU
45	DZ	61	LEU
45	DZ	72	ARG
45	DZ	86	VAL
45	DZ	87	ASP
45	DZ	91	LEU
45	DZ	107	THR
45	DZ	131	ARG
45	DZ	136	PHE
45	DZ	154	ASP
45	DZ	155	LEU
45	DZ	156	LYS
45	DZ	162	GLU
45	DZ	170	THR
46	D0	7	LEU
46	D0	10	THR
46	D0	19	LYS
46	D0	20	ARG
46	D0	55	ARG
47	D1	4	VAL
47	D1	8	SER
47	D1	21	ARG
47	D1	26	ARG
47	D1	35	THR
47	D1	40	ARG
47	D1	51	VAL
47	D1	52	ARG
47	D1	59	THR
47	D1	89	GLU
47	D1	95	LEU
48	D2	28	LYS
48	D2	30	ARG
48	D2	40	SER
48	D2	41	ILE
48	D2	52	ASP
48	D2	53	LEU
48	D2	55	ARG
48	D2	70	GLN

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Mol	Chain	Res	Type
49	D3	6	VAL
49	D3	8	LEU
49	D3	23	LEU
49	D3	24	LYS
49	D3	30	ARG
49	D3	31	LEU
49	D3	32	GLN
49	D3	44	ARG
50	D4	3	GLU
50	D4	5	ILE
50	D4	33	VAL
50	D4	44	THR
50	D4	50	VAL
50	D4	56	VAL
50	D4	61	ARG
50	D4	63	TYR
50	D4	68	ARG
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	13	CYS
52	D6	28	ARG
52	D6	38	LYS
52	D6	40	CYS
52	D6	48	VAL
53	D7	1	MET
53	D7	41	ARG
53	D7	48	LYS
54	D8	14	VAL
54	D8	31	HIS
55	D9	7	VAL
55	D9	17	ILE
55	D9	26	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (115) such sidechains are listed below:

Mol	Chain	Res	Type
3	AC	6	HIS

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Mol	Chain	Res	Type
3	AC	28	GLN
3	AC	37	GLN
3	AC	181	ASN
4	AD	45	GLN
4	AD	123	HIS
5	AE	20	GLN
5	AE	141	GLN
6	AF	94	GLN
6	AF	100	ASN
7	AG	28	ASN
9	AI	23	ASN
9	AI	31	GLN
9	AI	34	ASN
9	AI	58	HIS
9	AI	73	GLN
9	AI	89	ASN
10	AJ	56	HIS
10	AJ	84	GLN
11	AK	93	GLN
11	AK	104	GLN
12	AL	78	GLN
12	AL	99	HIS
15	AO	28	GLN
15	AO	62	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
20	AT	16	HIS
20	AT	45	GLN
27	BD	87	ASN
27	BD	164	GLN
27	BD	253	GLN
28	BE	85	ASN
29	BF	8	GLN
29	BF	69	HIS
29	BF	169	ASN
29	BF	203	GLN
30	BG	26	GLN
30	BG	40	ASN

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Mol	Chain	Res	Type
32	BI	43	ASN
32	BI	139	GLN
35	BP	38	GLN
39	BT	123	GLN
40	BU	117	GLN
43	BX	31	HIS
43	BX	55	ASN
44	BY	6	HIS
44	BY	43	ASN
45	BZ	32	HIS
45	BZ	151	HIS
46	B0	3	HIS
48	B2	70	GLN
54	B8	35	GLN
55	B9	36	GLN
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
3	CC	181	ASN
4	CD	77	ASN
4	CD	125	HIS
5	CE	20	GLN
5	CE	78	HIS
5	CE	141	GLN
7	CG	51	GLN
7	CG	148	ASN
8	CH	15	ASN
8	CH	78	GLN
9	CI	23	ASN
9	CI	58	HIS
9	CI	89	ASN
9	CI	124	GLN
10	CJ	68	HIS
11	CK	22	HIS
11	CK	93	GLN
12	CL	78	GLN
13	CM	77	ASN

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Mol	Chain	Res	Type
15	CO	28	GLN
15	CO	62	GLN
19	CS	56	GLN
19	CS	65	ASN
19	CS	69	HIS
20	CT	16	HIS
27	DD	164	GLN
27	DD	253	GLN
28	DE	85	ASN
28	DE	143	ASN
29	DF	69	HIS
29	DF	169	ASN
29	DF	203	GLN
32	DI	43	ASN
32	DI	133	HIS
34	DO	3	GLN
35	DP	38	GLN
36	DQ	45	GLN
37	DR	13	HIS
37	DR	71	GLN
38	DS	68	GLN
39	DT	58	ASN
39	DT	123	GLN
42	DW	60	ASN
43	DX	31	HIS
44	DY	43	ASN
45	DZ	55	HIS
46	D0	3	HIS
48	D2	38	GLN
55	D9	36	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1495/1522 (98%)	421 (28%)	24 (1%)
1	CA	1501/1522 (98%)	421 (28%)	30 (1%)
22	AV	4/24 (16%)	1 (25%)	0
22	CV	4/24 (16%)	1 (25%)	0
23	AX	75/77 (97%)	18 (24%)	0
23	CX	75/77 (97%)	19 (25%)	0
25	BA	2722/2915 (93%)	527 (19%)	41 (1%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
25	DA	2704/2915 (92%)	526 (19%)	35 (1%)
26	BB	119/122 (97%)	21 (17%)	0
26	DB	119/122 (97%)	23 (19%)	1 (0%)
All	All	8818/9320 (94%)	1978 (22%)	131 (1%)

All (1978) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	7	G
1	AA	9	G
1	AA	15	G
1	AA	16	A
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	76	C
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
1	AA	131	C
1	AA	138	G
1	AA	141	A
1	AA	142	G

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Mol	Chain	Res	Type
1	AA	143	A
1	AA	144	G
1	AA	146	G
1	AA	149	A
1	AA	160	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(B)	C
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	253	U
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	318	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	343	U
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	382	A
1	AA	383	A
1	AA	387	U
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	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	434	U
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

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Mol	Chain	Res	Type
1	AA	485	G
1	AA	492	G
1	AA	496	A
1	AA	498	U
1	AA	504	C
1	AA	505	G
1	AA	506	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	538	G
1	AA	539	A
1	AA	544	G
1	AA	547	A
1	AA	553	A
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	562	C
1	AA	571	U
1	AA	572	A
1	AA	573	A
1	AA	576	G
1	AA	586	C
1	AA	592	G
1	AA	596	C
1	AA	597	G
1	AA	599	C
1	AA	606	G
1	AA	607	A
1	AA	623	C
1	AA	626	U
1	AA	627	G
1	AA	630	G

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Mol	Chain	Res	Type
1	AA	633	G
1	AA	639	G
1	AA	641	U
1	AA	642	A
1	AA	651	C
1	AA	653	A
1	AA	656	C
1	AA	661	G
1	AA	665	A
1	AA	673	G
1	AA	680	C
1	AA	687	A
1	AA	688	G
1	AA	693	G
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	753	A
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	813	U
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

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Mol	Chain	Res	Type
1	AA	830	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	902	G
1	AA	914	A
1	AA	916	G
1	AA	922	G
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	980	C
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

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Mol	Chain	Res	Type
1	AA	1003	G
1	AA	1004	A
1	AA	1005	A
1	AA	1006	C
1	AA	1007	C
1	AA	1008	C
1	AA	1009	G
1	AA	1010	G
1	AA	1011	G
1	AA	1013	G
1	AA	1014	A
1	AA	1017	G
1	AA	1019	C
1	AA	1020	U
1	AA	1021	G
1	AA	1022	G
1	AA	1024	G
1	AA	1025	U
1	AA	1026	G
1	AA	1027	C
1	AA	1028	C
1	AA	1029	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	1076	C
1	AA	1081	G
1	AA	1087	G

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Mol	Chain	Res	Type
1	AA	1089	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	1120	G
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
1	AA	1135	U
1	AA	1136	U
1	AA	1137	C
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	1192	C
1	AA	1193	G

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Mol	Chain	Res	Type
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
1	AA	1260	C
1	AA	1267	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	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

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Mol	Chain	Res	Type
1	AA	1322	C
1	AA	1323	G
1	AA	1328	C
1	AA	1333	A
1	AA	1338	G
1	AA	1340	A
1	AA	1343	G
1	AA	1346	A
1	AA	1347	G
1	AA	1350	A
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	1390	U
1	AA	1393	U
1	AA	1396	A
1	AA	1397	C
1	AA	1419	G
1	AA	1422	G
1	AA	1441	G
1	AA	1442	G
1	AA	1442(A)	G
1	AA	1442(B)	A
1	AA	1443	G
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	1489	G
1	AA	1492	A
1	AA	1493	A
1	AA	1494	G
1	AA	1497	G
1	AA	1503	A

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Mol	Chain	Res	Type
1	AA	1504	G
1	AA	1506	U
1	AA	1517	G
1	AA	1519	A
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	16	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	58	A
23	AX	60	U
23	AX	61	C
23	AX	67	C
23	AX	68	C
23	AX	70	G
23	AX	76	A
25	BA	7	G
25	BA	8	A
25	BA	9	U
25	BA	12	U
25	BA	14	A
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

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Mol	Chain	Res	Type
25	BA	83	A
25	BA	90	A
25	BA	91	G
25	BA	92	C
25	BA	99	G
25	BA	116	A
25	BA	117	A
25	BA	118	U
25	BA	123	G
25	BA	125	A
25	BA	129	G
25	BA	155	C
25	BA	161	C
25	BA	185	A
25	BA	187	C
25	BA	189	U
25	BA	190	C
25	BA	194	G
25	BA	203	G
25	BA	204	G
25	BA	205	A
25	BA	210	A
25	BA	211	A
25	BA	213	G
25	BA	217	A
25	BA	218	A
25	BA	221	G
25	BA	222	A
25	BA	237	G
25	BA	239	G
25	BA	250	G
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	281	G
25	BA	287	G

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Mol	Chain	Res	Type
25	BA	288	U
25	BA	289	G
25	BA	294	C
25	BA	299	G
25	BA	303	C
25	BA	306	A
25	BA	307	A
25	BA	335	A
25	BA	351	G
25	BA	353	G
25	BA	354	A
25	BA	358	C
25	BA	359	C
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	423	G
25	BA	431	C
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	456	A
25	BA	460	C
25	BA	469	A
25	BA	470	C
25	BA	474	U
25	BA	481	C
25	BA	482	C
25	BA	483	A
25	BA	496	A
25	BA	505	A
25	BA	507	G
25	BA	508	A
25	BA	514	G

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Mol	Chain	Res	Type
25	BA	515	G
25	BA	526	A
25	BA	529	U
25	BA	530	A
25	BA	534	C
25	BA	535	C
25	BA	538	A
25	BA	543	G
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	574	G
25	BA	586	G
25	BA	596	G
25	BA	598	A
25	BA	615	G
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	644	G
25	BA	657	A
25	BA	659	C
25	BA	662	A
25	BA	670	C
25	BA	671	A
25	BA	692	C
25	BA	694	G
25	BA	697	C
25	BA	698	G
25	BA	701	A
25	BA	716	G
25	BA	724	A

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Mol	Chain	Res	Type
25	BA	733	G
25	BA	749	G
25	BA	763	A
25	BA	764	G
25	BA	777	C
25	BA	810	G
25	BA	822	G
25	BA	823	G
25	BA	829	A
25	BA	831	A
25	BA	832	G
25	BA	835	A
25	BA	839	G
25	BA	852	G
25	BA	853	C
25	BA	857	U
25	BA	858	U
25	BA	859	C
25	BA	866	A
25	BA	871	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	940	C
25	BA	942	A
25	BA	944	C
25	BA	945	A
25	BA	946	A
25	BA	953	U

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Mol	Chain	Res	Type
25	BA	956	A
25	BA	965	G
25	BA	973	G
25	BA	977	G
25	BA	986	A
25	BA	989	G
25	BA	990	A
25	BA	991	G
25	BA	1003	U
25	BA	1004	A
25	BA	1006	C
25	BA	1019	G
25	BA	1020	C
25	BA	1026	A
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	1068	G
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	1094	A
25	BA	1096	A
25	BA	1153	G
25	BA	1154	U
25	BA	1156	G
25	BA	1158	G
25	BA	1168	G
25	BA	1175	A
25	BA	1176	U

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Mol	Chain	Res	Type
25	BA	1180	C
25	BA	1181	G
25	BA	1184	G
25	BA	1186	U
25	BA	1187	U
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	1255	A
25	BA	1256	U
25	BA	1270	C
25	BA	1290	G
25	BA	1296	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	1322	A
25	BA	1338	U
25	BA	1346	U
25	BA	1347	A
25	BA	1360	C
25	BA	1367	A
25	BA	1398	U
25	BA	1401	G
25	BA	1405	A
25	BA	1406	A
25	BA	1411	A
25	BA	1416	C
25	BA	1419	A

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Mol	Chain	Res	Type
25	BA	1430	A
25	BA	1431	G
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	1491	A
25	BA	1496	A
25	BA	1497	G
25	BA	1507	A
25	BA	1514	C
25	BA	1516	A
25	BA	1518	A
25	BA	1525	G
25	BA	1529	G
25	BA	1536	A
25	BA	1539	C
25	BA	1541	A
25	BA	1554	A
25	BA	1555	C
25	BA	1556	A
25	BA	1569	U
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
25	BA	1628	G
25	BA	1631	C
25	BA	1632	A
25	BA	1633	A
25	BA	1654	A
25	BA	1655	A
25	BA	1656	A
25	BA	1660	A
25	BA	1694	G

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Mol	Chain	Res	Type
25	BA	1695	C
25	BA	1696	G
25	BA	1699	A
25	BA	1701	A
25	BA	1707	C
25	BA	1711	A
25	BA	1721	G
25	BA	1743	G
25	BA	1747	A
25	BA	1748	A
25	BA	1750	G
25	BA	1766	G
25	BA	1767	A
25	BA	1768	U
25	BA	1769	G
25	BA	1772	C
25	BA	1776	G
25	BA	1777	G
25	BA	1779	G
25	BA	1787	G
25	BA	1790	A
25	BA	1791	A
25	BA	1793	A
25	BA	1794	G
25	BA	1795	G
25	BA	1804	A
25	BA	1805	C
25	BA	1811	A
25	BA	1813	C
25	BA	1817	A
25	BA	1822	A
25	BA	1829	U
25	BA	1831	C
25	BA	1832	G
25	BA	1843	A
25	BA	1847	G
25	BA	1860	A
25	BA	1867	C
25	BA	1870	G
25	BA	1878	A
25	BA	1879	A
25	BA	1881	G

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Mol	Chain	Res	Type
25	BA	1889	G
25	BA	1899	A
25	BA	1900	G
25	BA	1901	C
25	BA	1911	A
25	BA	1916	C
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	1959	A
25	BA	1960	A
25	BA	1963	C
25	BA	1964	C
25	BA	1977	U
25	BA	1985	U
25	BA	1986	G
25	BA	1987	C
25	BA	1989	C
25	BA	1992	A
25	BA	1993	A
25	BA	1994	A
25	BA	1999	A
25	BA	2014	G
25	BA	2015	U
25	BA	2018	C
25	BA	2019	G
25	BA	2042	A
25	BA	2045	G
25	BA	2052	A
25	BA	2053	A
25	BA	2054	G
25	BA	2055	A
25	BA	2065	C
25	BA	2074	G
25	BA	2077	C
25	BA	2078	G

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Mol	Chain	Res	Type
25	BA	2082	A
25	BA	2083	G
25	BA	2084	A
25	BA	2091	G
25	BA	2102	G
25	BA	2121	U
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	2236	G
25	BA	2237	A
25	BA	2247	G
25	BA	2250	G
25	BA	2251	G
25	BA	2260	C
25	BA	2278	A
25	BA	2280	A
25	BA	2281	A
25	BA	2287	C
25	BA	2290	A
25	BA	2295	C
25	BA	2299	A
25	BA	2306	C
25	BA	2308	U
25	BA	2317	A
25	BA	2319	G
25	BA	2320	G
25	BA	2326	C
25	BA	2332	A
25	BA	2337	G
25	BA	2339	A
25	BA	2347	A
25	BA	2348	A
25	BA	2353	G
25	BA	2355	C
25	BA	2359	C
25	BA	2362	C

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Mol	Chain	Res	Type
25	BA	2366	G
25	BA	2373	A
25	BA	2384	G
25	BA	2391	G
25	BA	2395	G
25	BA	2397	C
25	BA	2404	A
25	BA	2418	U
25	BA	2422	G
25	BA	2426	G
25	BA	2434	A
25	BA	2435	U
25	BA	2437	A
25	BA	2440	G
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	2503	U
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	2567	U
25	BA	2578	A
25	BA	2579	G
25	BA	2594	G

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Mol	Chain	Res	Type
25	BA	2614	A
25	BA	2621	U
25	BA	2622	C
25	BA	2623	U
25	BA	2624	C
25	BA	2641	A
25	BA	2642	G
25	BA	2644	A
25	BA	2650	G
25	BA	2653	G
25	BA	2666	A
25	BA	2674	A
25	BA	2690	C
25	BA	2701	U
25	BA	2702	C
25	BA	2711	C
25	BA	2715	C
25	BA	2721	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	2791	A
25	BA	2799	U
25	BA	2803	A
25	BA	2804	C
25	BA	2807	C
25	BA	2813	G
25	BA	2816	G
25	BA	2817	G
25	BA	2825	C
25	BA	2828	G
25	BA	2830	A
25	BA	2831	A

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Mol	Chain	Res	Type
25	BA	2843	G
25	BA	2845	A
25	BA	2868	C
25	BA	2882	G
25	BA	2883	A
25	BA	2890	C
25	BA	2893	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	31	C
26	BB	34	U
26	BB	42	C
26	BB	56	G
26	BB	59	A
26	BB	72	G
26	BB	73	A
26	BB	75	G
26	BB	85	G
26	BB	88	C
26	BB	89	G
26	BB	90	A
26	BB	93	G
26	BB	95	C
26	BB	106	G
26	BB	110	G
26	BB	119	G
1	CA	6	G
1	CA	7	G
1	CA	9	G
1	CA	15	G
1	CA	16	A
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

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Mol	Chain	Res	Type
1	CA	51	A
1	CA	59	A
1	CA	61	G
1	CA	63	C
1	CA	65	U
1	CA	66	G
1	CA	69	G
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	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	148	G
1	CA	160	A
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	189(J)	G
1	CA	190	U
1	CA	193	C

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Mol	Chain	Res	Type
1	CA	194	C
1	CA	195	A
1	CA	197	A
1	CA	199	G
1	CA	203	U
1	CA	204	U
1	CA	216	G
1	CA	220	G
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	301	G
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	382	A
1	CA	383	A
1	CA	387	U
1	CA	388	G
1	CA	396	G
1	CA	397	A
1	CA	398	C
1	CA	403	C

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Mol	Chain	Res	Type
1	CA	406	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
1	CA	430	A
1	CA	434	U
1	CA	439	A
1	CA	442	C
1	CA	449	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	504	C
1	CA	505	G
1	CA	506	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	538	G
1	CA	544	G
1	CA	547	A
1	CA	553	A

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Mol	Chain	Res	Type
1	CA	559	A
1	CA	560	U
1	CA	561	U
1	CA	562	C
1	CA	571	U
1	CA	572	A
1	CA	573	A
1	CA	576	G
1	CA	586	C
1	CA	592	G
1	CA	596	C
1	CA	597	G
1	CA	600	C
1	CA	606	G
1	CA	607	A
1	CA	623	C
1	CA	626	U
1	CA	627	G
1	CA	630	G
1	CA	633	G
1	CA	639	G
1	CA	641	U
1	CA	642	A
1	CA	650	G
1	CA	651	C
1	CA	653	A
1	CA	656	C
1	CA	661	G
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	753	A
1	CA	755	G

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Mol	Chain	Res	Type
1	CA	758	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	813	U
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	830	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
1	CA	858	G
1	CA	859	A
1	CA	870	U
1	CA	873	A
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

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Mol	Chain	Res	Type
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	980	C
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	999	C
1	CA	1001	A
1	CA	1001(A)	G
1	CA	1002	G
1	CA	1004	A
1	CA	1005	A
1	CA	1006	C
1	CA	1007	C
1	CA	1010	G
1	CA	1011	G
1	CA	1013	G
1	CA	1014	A
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	1034	G

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	1165	C
1	CA	1169	A
1	CA	1171	G
1	CA	1173	G
1	CA	1174	G
1	CA	1176	A
1	CA	1181	G
1	CA	1183	A
1	CA	1184	G
1	CA	1187	G
1	CA	1189	C
1	CA	1192	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
1	CA	1213	A
1	CA	1223	C
1	CA	1224	G
1	CA	1227	A
1	CA	1235	U
1	CA	1236	A
1	CA	1238	A

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Mol	Chain	Res	Type
1	CA	1240	U
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	1267	C
1	CA	1270	C
1	CA	1271	G
1	CA	1273	G
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	1332	A
1	CA	1333	A
1	CA	1338	G
1	CA	1340	A
1	CA	1343	G
1	CA	1346	A
1	CA	1347	G
1	CA	1353	G
1	CA	1354	C
1	CA	1358	U
1	CA	1360	A
1	CA	1361	G
1	CA	1363	C
1	CA	1370	G

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Mol	Chain	Res	Type
1	CA	1377	A
1	CA	1379	G
1	CA	1390	U
1	CA	1393	U
1	CA	1396	A
1	CA	1397	C
1	CA	1398	A
1	CA	1419	G
1	CA	1422	G
1	CA	1442	G
1	CA	1442(A)	G
1	CA	1442(B)	A
1	CA	1443	G
1	CA	1447	A
1	CA	1456	G
1	CA	1457	G
1	CA	1469	G
1	CA	1489	G
1	CA	1492	A
1	CA	1493	A
1	CA	1497	G
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	16	C
23	CX	19	G
23	CX	20	U
23	CX	21	A
23	CX	26	G
23	CX	28	C
23	CX	31	G

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Mol	Chain	Res	Type
23	CX	42	G
23	CX	47	U
23	CX	48	C
23	CX	60	U
23	CX	61	C
23	CX	67	C
23	CX	68	C
23	CX	70	G
23	CX	76	A
25	DA	8	A
25	DA	9	U
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	59	U
25	DA	61	G
25	DA	64	A
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	131	G
25	DA	140	G
25	DA	141	A
25	DA	149	A
25	DA	154	G

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Mol	Chain	Res	Type
25	DA	154(A)	C
25	DA	157	U
25	DA	173	G
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	201	C
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(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(O)	C
25	DA	271(T)	C
25	DA	272(A)	U
25	DA	272(B)	G
25	DA	275	G
25	DA	277	C
25	DA	278	A
25	DA	292	C
25	DA	311	A
25	DA	312	G
25	DA	324	A
25	DA	327	G
25	DA	329	G

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Mol	Chain	Res	Type
25	DA	330	A
25	DA	333	G
25	DA	338	G
25	DA	339	U
25	DA	342	G
25	DA	348	G
25	DA	351	G
25	DA	352	G
25	DA	363	G
25	DA	384	U
25	DA	385	C
25	DA	386	G
25	DA	399	G
25	DA	405	U
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	455	C
25	DA	456	C
25	DA	457	A
25	DA	470	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

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Mol	Chain	Res	Type
25	DA	575	A
25	DA	586	A
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	616	G
25	DA	620	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	654	A
25	DA	669	G
25	DA	670	A
25	DA	686	G
25	DA	710	G
25	DA	717	G
25	DA	726	G
25	DA	730	C
25	DA	747	U
25	DA	752	A
25	DA	753	C
25	DA	765	G
25	DA	775	G
25	DA	776	G
25	DA	782	A
25	DA	784	A
25	DA	785	G
25	DA	792	G
25	DA	805	G
25	DA	812	C

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Mol	Chain	Res	Type
25	DA	819	A
25	DA	827	U
25	DA	829	A
25	DA	857	C
25	DA	859	G
25	DA	866	A
25	DA	867	C
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	903	C
25	DA	910	A
25	DA	911	A
25	DA	913	U
25	DA	917	A
25	DA	923	C
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	956	G
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	968	G
25	DA	974	G
25	DA	975	C
25	DA	983	A
25	DA	996	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	1116	C
25	DA	1118	C
25	DA	1119	C
25	DA	1129	A
25	DA	1130	U
25	DA	1135	C
25	DA	1136	G
25	DA	1139	G
25	DA	1142(A)	A
25	DA	1170	G
25	DA	1171	G
25	DA	1198	U
25	DA	1204	A
25	DA	1205	U
25	DA	1210	A
25	DA	1211	U
25	DA	1213	A
25	DA	1220	A
25	DA	1230	C
25	DA	1244	G
25	DA	1249	U

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Mol	Chain	Res	Type
25	DA	1253	A
25	DA	1256	G
25	DA	1271	G
25	DA	1272	A
25	DA	1273	U
25	DA	1284	A
25	DA	1287	A
25	DA	1298	C
25	DA	1300	U
25	DA	1301	A
25	DA	1305	C
25	DA	1314	C
25	DA	1315	C
25	DA	1345	C
25	DA	1359	A
25	DA	1360	A
25	DA	1365	A
25	DA	1368	G
25	DA	1370	C
25	DA	1379	A
25	DA	1380	G
25	DA	1384	A
25	DA	1385	G
25	DA	1386	C
25	DA	1403	C
25	DA	1410	G
25	DA	1411	C
25	DA	1412	A
25	DA	1416	G
25	DA	1417	C
25	DA	1419	A
25	DA	1420	U
25	DA	1421	G
25	DA	1428	C
25	DA	1435	G
25	DA	1437	C
25	DA	1445	A
25	DA	1445(A)	C
25	DA	1449	A
25	DA	1450	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	1493	C
25	DA	1494	A
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	1525	G
25	DA	1531	C
25	DA	1539	G
25	DA	1541	G
25	DA	1542	A
25	DA	1543	C
25	DA	1545	A
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	1595	G
25	DA	1608	A
25	DA	1609	A
25	DA	1631(A)	A
25	DA	1632	A
25	DA	1634	A
25	DA	1639	U
25	DA	1640	C
25	DA	1645	G
25	DA	1648	C
25	DA	1654	A
25	DA	1674	G
25	DA	1682	G
25	DA	1696	G

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Mol	Chain	Res	Type
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	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	1791	A
25	DA	1800	C
25	DA	1801	G
25	DA	1812	A
25	DA	1816	G
25	DA	1823	G
25	DA	1828	G
25	DA	1829	A
25	DA	1835	G
25	DA	1839	G
25	DA	1847	A
25	DA	1848	A
25	DA	1857	G
25	DA	1859	A
25	DA	1861	G
25	DA	1877	A
25	DA	1878	G
25	DA	1895	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
25	DA	1936	A
25	DA	1937	A

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Mol	Chain	Res	Type
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	2055	C
25	DA	2056	G
25	DA	2060	A
25	DA	2061	G
25	DA	2062	A
25	DA	2063	C
25	DA	2069	G
25	DA	2076	U
25	DA	2082	A
25	DA	2086	U
25	DA	2096	U
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	2267	A
25	DA	2275	C
25	DA	2283	C
25	DA	2287	A
25	DA	2289	G
25	DA	2291	U
25	DA	2297	C
25	DA	2302	G
25	DA	2303	G
25	DA	2305	A
25	DA	2308	G
25	DA	2312	U
25	DA	2313	C
25	DA	2315	G
25	DA	2318	G
25	DA	2319	G
25	DA	2320	A
25	DA	2321	G
25	DA	2325	G
25	DA	2334	G
25	DA	2335	A
25	DA	2336	A
25	DA	2337	G
25	DA	2343	C
25	DA	2347	C
25	DA	2366	A
25	DA	2375	G
25	DA	2376	A
25	DA	2383	G
25	DA	2385	C
25	DA	2401	U
25	DA	2402	C
25	DA	2406	U
25	DA	2410	G
25	DA	2413	G

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Mol	Chain	Res	Type
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	2468	G
25	DA	2469	A
25	DA	2474	C
25	DA	2476	A
25	DA	2487	G
25	DA	2502	G
25	DA	2505	G
25	DA	2517	C
25	DA	2518	A
25	DA	2520	C
25	DA	2529	G
25	DA	2549	G
25	DA	2554	U
25	DA	2566	A
25	DA	2567	G
25	DA	2573	C
25	DA	2574	G
25	DA	2578	G
25	DA	2586	C
25	DA	2602	A
25	DA	2611	U
25	DA	2612	C
25	DA	2615	U
25	DA	2630	G
25	DA	2632	A
25	DA	2654	A
25	DA	2662	A
25	DA	2663	G
25	DA	2666	C
25	DA	2689	U
25	DA	2690	C
25	DA	2691	C

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Mol	Chain	Res	Type
25	DA	2712(A)	A
25	DA	2713	A
25	DA	2714	G
25	DA	2726	U
25	DA	2733	A
25	DA	2751	G
25	DA	2752	C
25	DA	2757	A
25	DA	2763	G
25	DA	2764	A
25	DA	2765	A
25	DA	2766	G
25	DA	2778	A
25	DA	2789	C
25	DA	2793	G
25	DA	2794	C
25	DA	2802	G
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	2849	U
25	DA	2872	G
25	DA	2879	C
25	DA	2880	C
25	DA	2887	U
25	DA	2892	A
25	DA	2893	G
25	DA	2894	G
26	DB	2	C
26	DB	7	G
26	DB	8	U
26	DB	12	C
26	DB	13	A
26	DB	31	C
26	DB	34	U
26	DB	42	C
26	DB	45	A
26	DB	46	A
26	DB	56	G

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Mol	Chain	Res	Type
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	119	G

All (131) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	97	G
1	AA	115	G
1	AA	173	U
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
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	1442	G
25	BA	70	A
25	BA	99	G

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Mol	Chain	Res	Type
25	BA	184	A
25	BA	185	A
25	BA	188	A
25	BA	271	U
25	BA	273	G
25	BA	302	A
25	BA	468	G
25	BA	553	A
25	BA	716	G
25	BA	793	A
25	BA	823	G
25	BA	874	U
25	BA	945	A
25	BA	990	A
25	BA	1003	U
25	BA	1019	G
25	BA	1093	G
25	BA	1219	A
25	BA	1220	U
25	BA	1221	G
25	BA	1255	A
25	BA	1321	A
25	BA	1466	U
25	BA	1577	C
25	BA	1654	A
25	BA	1700	G
25	BA	1793	A
25	BA	2014	G
25	BA	2228	G
25	BA	2347	A
25	BA	2418	U
25	BA	2434	A
25	BA	2442	A
25	BA	2459	G
25	BA	2623	U
25	BA	2701	U
25	BA	2769	U
25	BA	2883	A
25	BA	2902	G
1	CA	5	U
1	CA	60	A
1	CA	65	U

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Mol	Chain	Res	Type
1	CA	97	G
1	CA	115	G
1	CA	147	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	1054	C
1	CA	1064	G
1	CA	1065	U
1	CA	1067	A
1	CA	1128	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	196	A
25	DA	249	C
25	DA	271(M)	G
25	DA	277	C
25	DA	310	A
25	DA	528	A
25	DA	620	G
25	DA	669	G
25	DA	752	A
25	DA	774	A
25	DA	827	U
25	DA	856	C
25	DA	859	G
25	DA	900	A

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Mol	Chain	Res	Type
25	DA	1026	U
25	DA	1210	A
25	DA	1378	A
25	DA	1379	A
25	DA	1420	U
25	DA	1427	A
25	DA	1543	C
25	DA	1558	A
25	DA	1559	G
25	DA	1608	A
25	DA	1653	G
25	DA	1992	G
25	DA	2288	A
25	DA	2318	G
25	DA	2335	A
25	DA	2406	U
25	DA	2439	A
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 ⓘ

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	2QZ	CW	1	24	7,8,9	0.83	0	7,10,12	3.69	2 (28%)
24	004	AW	3	24	9,10,11	1.20	1 (11%)	9,12,14	1.16	0
24	2QY	CW	10	24	12,13,14	2.04	2 (16%)	14,16,18	3.56	3 (21%)
24	2R1	CW	6	24	10,10,11	1.82	3 (30%)	8,13,15	3.68	3 (37%)
24	2R3	CW	8	24	12,14,15	0.71	0	16,18,20	2.15	6 (37%)
24	2QZ	AW	1	24	7,8,9	0.41	0	7,10,12	2.50	1 (14%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	2R3	AW	8	24	12,14,15	0.81	0	16,18,20	2.05	7 (43%)
24	MVA	CW	5	24	6,7,8	0.81	0	6,8,10	1.51	2 (33%)
24	MVA	CW	9	24	6,7,8	0.89	0	6,8,10	1.10	0
24	2QY	AW	10	24	12,13,14	1.94	2 (16%)	14,16,18	3.62	6 (42%)
24	MVA	AW	9	24	6,7,8	0.38	0	6,8,10	0.94	1 (16%)
24	004	CW	3	24	9,10,11	1.35	1 (11%)	9,12,14	0.68	0
24	2R1	AW	6	24	10,10,11	2.43	4 (40%)	8,13,15	4.19	3 (37%)
24	MVA	AW	5	24	6,7,8	0.57	0	6,8,10	1.28	0

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

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

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	CW	10	2QY	C-CA	6.08	1.53	1.43
24	AW	10	2QY	C-CA	5.76	1.53	1.43
24	AW	6	2R1	OD1-CG1	4.61	1.56	1.42
24	AW	6	2R1	CA-N	4.13	1.46	1.36
24	CW	6	2R1	CA-N	3.84	1.45	1.36
24	CW	3	004	CB-CA	-3.38	1.49	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	CW	10	2QY	CG-CB	2.90	1.52	1.46
24	CW	6	2R1	C-CA	2.77	1.49	1.45
24	AW	3	004	CB-CA	-2.67	1.49	1.52
24	AW	10	2QY	CG-CB	2.50	1.51	1.46
24	AW	6	2R1	C-CA	2.42	1.49	1.45
24	CW	6	2R1	CG2-CB	-2.30	1.48	1.51
24	AW	6	2R1	CB-CA	2.27	1.36	1.34

All (34) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	AW	6	2R1	OD2-CG2-CB	-10.70	92.15	111.99
24	CW	10	2QY	CN-N-CA	-9.76	109.17	123.98
24	AW	10	2QY	CN-N-CA	-9.66	109.33	123.98
24	CW	1	2QZ	OG1-CB-CG2	9.20	137.20	109.68
24	CW	6	2R1	OD2-CG2-CB	-8.95	95.40	111.99
24	AW	10	2QY	CB-CA-N	6.71	132.58	121.98
24	AW	1	2QZ	OG1-CB-CG2	6.00	127.64	109.68
24	CW	10	2QY	O-C-CA	-5.95	117.93	125.39
24	CW	10	2QY	CB-CA-N	5.83	131.19	121.98
24	CW	8	2R3	OB-CB-CA	5.04	118.56	107.49
24	AW	10	2QY	O-C-CA	-4.73	119.46	125.39
24	AW	8	2R3	OB-CB-CA	4.00	116.28	107.49
24	CW	6	2R1	C-CA-N	3.73	124.69	116.15
24	CW	6	2R1	O-C-CA	-3.50	118.97	125.53
24	CW	8	2R3	CO-OH-CZ	-3.31	110.40	117.50
24	AW	6	2R1	O-C-CA	-3.16	119.61	125.53
24	AW	8	2R3	CO-OH-CZ	-3.11	110.83	117.50
24	AW	8	2R3	CE2-CD2-CG	3.11	124.29	121.18
24	AW	6	2R1	CG1-CB-CA	2.81	126.77	119.74
24	CW	8	2R3	CE1-CD1-CG	-2.74	118.45	121.18
24	AW	10	2QY	CG-CB-CA	-2.72	126.71	130.72
24	CW	1	2QZ	CN2-N-CN1	-2.58	102.89	110.49
24	AW	8	2R3	CE1-CD1-CG	-2.43	118.75	121.18
24	CW	8	2R3	CD2-CG-CB	-2.41	117.08	120.71
24	AW	8	2R3	CD1-CE1-CZ	2.36	122.42	119.73
24	CW	5	MVA	CB-CA-C	2.35	115.98	112.96
24	CW	5	MVA	CB-CA-N	2.25	114.10	111.17
24	AW	8	2R3	CD1-CG-CB	2.21	124.04	120.71
24	AW	10	2QY	CD1-CG-CD2	2.21	120.93	117.65
24	CW	8	2R3	CE2-CD2-CG	2.20	123.38	121.18
24	AW	9	MVA	O-C-CA	-2.15	119.19	124.86

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	CW	8	2R3	CD2-CE2-CZ	-2.13	117.30	119.73
24	AW	8	2R3	CD2-CE2-CZ	-2.09	117.34	119.73
24	AW	10	2QY	CE1-CD1-CG	-2.02	118.61	121.22

There are no chirality outliers.

All (39) torsion outliers are listed below:

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

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Mol	Chain	Res	Type	Atoms
24	AW	1	2QZ	C-CA-CB-OG1
24	AW	3	004	C-CA-CB-CG2
24	AW	8	2R3	CE1-CZ-OH-CO
24	AW	8	2R3	CE2-CZ-OH-CO
24	AW	6	2R1	CG1-CB-CG2-OD2

There are no ring outliers.

14 monomers are involved in 20 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	CW	1	2QZ	3	0
24	AW	3	004	1	0
24	CW	10	2QY	4	0
24	CW	6	2R1	1	0
24	CW	8	2R3	2	0
24	AW	1	2QZ	2	0
24	AW	8	2R3	4	0
24	CW	5	MVA	1	0
24	CW	9	MVA	3	0
24	AW	10	2QY	3	0
24	AW	9	MVA	3	0
24	CW	3	004	1	0
24	AW	6	2R1	3	0
24	AW	5	MVA	1	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides 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	0.94	0	8,9,11	1.49	2 (25%)
57	SF4	AD	501	4	0,12,12	-	-	-		
57	SF4	CD	501	4	0,12,12	-	-	-		
59	FME	CX	101	23	8,9,10	0.82	0	8,9,11	1.37	1 (12%)

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	-	2/7/9/11	-
57	SF4	AD	501	4	-	-	0/6/5/5
57	SF4	CD	501	4	-	-	0/6/5/5
59	FME	CX	101	23	-	1/7/9/11	-

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	AX	101	FME	CA-N-CN	-2.47	119.03	122.82
59	CX	101	FME	CA-N-CN	-2.33	119.25	122.82
59	AX	101	FME	CB-CA-N	2.31	114.72	110.52

There are no chirality outliers.

All (3) torsion outliers are listed below:

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

There are no ring outliers.

4 monomers are involved in 5 short contacts:

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

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 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%)	-0.05	23 (1%) 71 50	39, 80, 103, 118	0
1	CA	1503/1522 (98%)	-0.05	19 (1%) 74 54	41, 80, 103, 119	0
2	AB	231/256 (90%)	0.32	4 (1%) 69 47	69, 86, 97, 105	0
2	CB	231/256 (90%)	0.40	8 (3%) 47 28	70, 88, 98, 107	0
3	AC	206/239 (86%)	0.30	3 (1%) 71 50	73, 87, 95, 104	0
3	CC	206/239 (86%)	0.47	6 (2%) 54 32	72, 89, 97, 104	0
4	AD	208/209 (99%)	0.41	5 (2%) 59 37	61, 80, 90, 97	0
4	CD	208/209 (99%)	0.28	2 (0%) 79 60	61, 79, 89, 97	0
5	AE	148/162 (91%)	-0.24	0 100 100	51, 73, 82, 93	0
5	CE	148/162 (91%)	0.04	0 100 100	53, 75, 84, 96	0
6	AF	100/101 (99%)	-0.04	0 100 100	63, 77, 87, 94	0
6	CF	100/101 (99%)	-0.00	0 100 100	62, 78, 87, 95	0
7	AG	155/156 (99%)	0.15	3 (1%) 66 44	74, 86, 99, 106	0
7	CG	155/156 (99%)	0.28	3 (1%) 66 44	75, 86, 99, 105	0
8	AH	137/138 (99%)	0.02	0 100 100	60, 74, 82, 89	0
8	CH	137/138 (99%)	0.17	3 (2%) 62 40	62, 75, 83, 89	0
9	AI	127/128 (99%)	0.66	6 (4%) 37 21	73, 91, 99, 101	0
9	CI	127/128 (99%)	1.18	24 (18%) 4 3	72, 93, 100, 102	0
10	AJ	97/105 (92%)	0.90	9 (9%) 16 9	73, 91, 100, 105	0
10	CJ	96/105 (91%)	1.05	11 (11%) 11 6	77, 93, 100, 104	0
11	AK	114/129 (88%)	-0.14	1 (0%) 81 63	53, 74, 87, 91	0
11	CK	114/129 (88%)	-0.12	0 100 100	55, 76, 87, 92	0
12	AL	122/132 (92%)	0.10	4 (3%) 49 29	53, 68, 80, 87	0
12	CL	122/132 (92%)	0.00	1 (0%) 82 66	53, 69, 80, 87	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å ²)	Q<0.9
13	AM	123/126 (97%)	0.26	6 (4%)	36	20	67, 85, 95, 105	0
13	CM	122/126 (96%)	0.61	5 (4%)	42	24	77, 92, 100, 109	0
14	AN	60/61 (98%)	0.71	5 (8%)	19	10	75, 87, 94, 103	0
14	CN	60/61 (98%)	1.17	9 (15%)	6	4	77, 89, 94, 100	0
15	AO	88/89 (98%)	0.03	0	100	100	55, 72, 85, 90	0
15	CO	88/89 (98%)	-0.06	1 (1%)	77	58	55, 72, 85, 91	0
16	AP	82/88 (93%)	0.52	4 (4%)	36	20	67, 78, 89, 94	0
16	CP	82/88 (93%)	0.44	3 (3%)	45	27	66, 76, 88, 94	0
17	AQ	99/105 (94%)	0.07	1 (1%)	79	60	59, 72, 83, 90	0
17	CQ	99/105 (94%)	0.04	0	100	100	58, 72, 83, 89	0
18	AR	68/88 (77%)	0.04	0	100	100	65, 73, 87, 91	0
18	CR	68/88 (77%)	-0.06	0	100	100	64, 75, 87, 91	0
19	AS	83/93 (89%)	0.64	7 (8%)	18	10	77, 92, 99, 106	0
19	CS	83/93 (89%)	1.00	12 (14%)	7	4	79, 92, 101, 106	0
20	AT	96/106 (90%)	0.49	5 (5%)	34	19	62, 76, 86, 90	0
20	CT	96/106 (90%)	0.18	3 (3%)	51	30	62, 74, 86, 92	0
21	AU	23/27 (85%)	1.19	2 (8%)	17	10	73, 88, 93, 94	0
21	CU	23/27 (85%)	1.66	8 (34%)	1	1	73, 89, 92, 94	0
22	AV	7/24 (29%)	0.27	0	100	100	65, 77, 102, 104	0
22	CV	6/24 (25%)	0.38	0	100	100	67, 78, 103, 103	0
23	AX	76/77 (98%)	-0.42	0	100	100	52, 80, 97, 105	0
23	CX	76/77 (98%)	-0.19	0	100	100	52, 82, 100, 106	0
24	AW	3/10 (30%)	0.35	0	100	100	67, 67, 82, 98	0
24	CW	3/10 (30%)	-0.46	0	100	100	67, 67, 78, 82	0
25	BA	2731/2915 (93%)	-0.73	12 (0%)	89	77	23, 44, 85, 111	0
25	DA	2714/2915 (93%)	-0.73	4 (0%)	92	88	26, 47, 85, 118	0
26	BB	120/122 (98%)	-0.32	0	100	100	42, 68, 80, 95	0
26	DB	120/122 (98%)	0.03	0	100	100	48, 74, 84, 97	0
27	BD	275/276 (99%)	-0.58	0	100	100	22, 42, 58, 77	0
27	DD	275/276 (99%)	-0.59	0	100	100	23, 44, 60, 79	0
28	BE	204/206 (99%)	-0.56	0	100	100	23, 45, 67, 88	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	DE	204/206 (99%)	-0.54	1 (0%) 87 75	24, 47, 70, 88	0
29	BF	203/210 (96%)	-0.37	0 100 100	20, 51, 77, 94	0
29	DF	203/210 (96%)	-0.40	0 100 100	22, 54, 78, 93	0
30	BG	181/182 (99%)	0.04	0 100 100	59, 77, 90, 103	0
30	DG	181/182 (99%)	0.45	7 (3%) 44 26	63, 80, 92, 102	0
31	BH	174/180 (96%)	-0.02	2 (1%) 77 58	50, 66, 78, 84	0
31	DH	174/180 (96%)	0.16	1 (0%) 85 71	54, 71, 82, 87	0
32	BI	146/148 (98%)	-0.22	0 100 100	45, 75, 87, 92	0
32	DI	146/148 (98%)	0.03	0 100 100	48, 76, 86, 91	0
33	BN	140/140 (100%)	-0.30	1 (0%) 84 68	32, 49, 68, 80	0
33	DN	140/140 (100%)	-0.37	0 100 100	34, 53, 72, 81	0
34	BO	122/122 (100%)	-0.71	0 100 100	25, 39, 60, 78	0
34	DO	122/122 (100%)	-0.53	0 100 100	34, 52, 68, 79	0
35	BP	149/150 (99%)	-0.33	0 100 100	26, 54, 76, 84	0
35	DP	149/150 (99%)	-0.22	0 100 100	30, 57, 79, 86	0
36	BQ	141/141 (100%)	-0.19	2 (1%) 73 52	33, 51, 65, 79	0
36	DQ	141/141 (100%)	-0.30	0 100 100	35, 54, 70, 80	0
37	BR	118/118 (100%)	-0.67	0 100 100	22, 35, 51, 64	0
37	DR	118/118 (100%)	-0.40	0 100 100	36, 50, 64, 81	0
38	BS	110/112 (98%)	-0.45	0 100 100	38, 55, 69, 81	0
38	DS	110/112 (98%)	0.43	4 (3%) 46 27	66, 78, 90, 100	0
39	BT	131/146 (89%)	-0.44	2 (1%) 71 50	33, 45, 75, 91	0
39	DT	131/146 (89%)	-0.36	2 (1%) 71 50	44, 56, 80, 86	0
40	BU	116/118 (98%)	-0.85	0 100 100	19, 30, 50, 63	0
40	DU	116/118 (98%)	-0.24	0 100 100	39, 61, 79, 88	0
41	BV	101/101 (100%)	-0.44	0 100 100	29, 52, 70, 77	0
41	DV	101/101 (100%)	-0.45	0 100 100	32, 58, 74, 79	0
42	BW	112/113 (99%)	-0.61	0 100 100	27, 37, 61, 94	0
42	DW	112/113 (99%)	-0.57	0 100 100	31, 40, 63, 94	0
43	BX	95/96 (98%)	-0.30	1 (1%) 77 58	32, 46, 69, 82	0
43	DX	95/96 (98%)	-0.18	0 100 100	38, 50, 72, 83	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	BY	107/110 (97%)	-0.03	2 (1%) 66 44	44, 59, 77, 82	0
44	DY	107/110 (97%)	0.16	3 (2%) 55 33	46, 63, 80, 85	0
45	BZ	171/206 (83%)	-0.03	2 (1%) 76 56	52, 71, 85, 93	0
45	DZ	174/206 (84%)	0.18	0 100 100	56, 74, 87, 95	0
46	B0	83/85 (97%)	-0.28	6 (7%) 23 13	22, 40, 75, 104	0
46	D0	83/85 (97%)	0.14	3 (3%) 46 27	45, 66, 87, 98	0
47	B1	97/98 (98%)	-0.55	0 100 100	25, 42, 71, 77	0
47	D1	97/98 (98%)	-0.31	1 (1%) 79 60	35, 56, 79, 85	0
48	B2	70/72 (97%)	-0.37	0 100 100	31, 48, 64, 77	0
48	D2	70/72 (97%)	-0.05	0 100 100	56, 73, 84, 86	0
49	B3	59/60 (98%)	-0.58	0 100 100	26, 38, 63, 86	0
49	D3	59/60 (98%)	-0.28	0 100 100	49, 62, 80, 93	0
50	B4	69/71 (97%)	0.13	0 100 100	64, 87, 101, 104	0
50	D4	69/71 (97%)	0.57	4 (5%) 30 17	85, 95, 104, 107	0
51	B5	59/60 (98%)	-0.89	0 100 100	14, 35, 55, 71	0
51	D5	59/60 (98%)	-0.49	0 100 100	29, 51, 70, 77	0
52	B6	53/54 (98%)	-0.53	0 100 100	40, 54, 68, 74	0
52	D6	53/54 (98%)	-0.44	0 100 100	42, 58, 68, 74	0
53	B7	48/49 (97%)	-0.53	0 100 100	26, 32, 67, 78	0
53	D7	48/49 (97%)	-0.41	1 (2%) 63 41	27, 34, 66, 79	0
54	B8	64/65 (98%)	-0.48	0 100 100	33, 43, 51, 56	0
54	D8	64/65 (98%)	-0.29	0 100 100	34, 46, 56, 60	0
55	B9	37/37 (100%)	0.00	1 (2%) 56 34	43, 52, 68, 77	0
55	D9	37/37 (100%)	0.12	1 (2%) 56 34	48, 57, 72, 78	0
All	All	20462/21468 (95%)	-0.23	269 (1%) 74 54	14, 65, 95, 119	0

All (269) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
13	CM	124	PRO	6.4
13	AM	123	ALA	5.9
13	CM	123	ALA	5.7
9	CI	11	LYS	5.1
44	BY	1	MET	4.8

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Mol	Chain	Res	Type	RSRZ
14	AN	2	ALA	4.7
20	CT	9	ASN	4.6
19	CS	9	VAL	4.6
14	CN	2	ALA	4.4
19	AS	13	ASP	4.3
20	AT	69	GLY	4.2
9	AI	13	ALA	4.1
1	AA	1036	G	4.1
25	BA	935	C	3.9
25	BA	2814	C	3.9
1	CA	1030(B)	C	3.8
46	B0	7	LEU	3.8
7	AG	80	VAL	3.8
1	AA	1030	C	3.7
9	CI	126	SER	3.7
21	CU	6	ARG	3.6
3	CC	160	ALA	3.6
1	AA	1000	U	3.6
9	CI	105	ASP	3.5
1	CA	1001(A)	G	3.4
25	BA	2815	C	3.4
1	CA	1002	G	3.4
21	CU	14	TRP	3.4
46	D0	7	LEU	3.3
44	DY	1	MET	3.3
1	CA	80	G	3.3
1	CA	1036	G	3.3
2	CB	237	ALA	3.2
20	AT	18	GLN	3.2
31	BH	2	SER	3.2
13	AM	122	LYS	3.2
2	AB	165	VAL	3.2
19	CS	15	LEU	3.2
7	CG	16	LEU	3.2
30	DG	53	LEU	3.1
3	CC	155	GLY	3.1
10	AJ	5	ARG	3.1
9	CI	118	LYS	3.1
13	CM	102	ARG	3.1
1	CA	1030(A)	G	3.1
50	D4	56	VAL	3.0
46	B0	4	LYS	3.0

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Mol	Chain	Res	Type	RSRZ
25	BA	34	C	3.0
9	CI	2	GLU	3.0
25	BA	2806	G	3.0
16	CP	82	GLN	3.0
12	AL	91	LYS	3.0
9	CI	102	LEU	3.0
1	AA	1028	C	3.0
19	AS	71	LEU	3.0
25	BA	2816	G	2.9
9	AI	14	VAL	2.9
16	AP	82	GLN	2.9
7	CG	78	ARG	2.9
9	CI	36	TYR	2.9
20	AT	10	LEU	2.9
13	CM	122	LYS	2.9
1	AA	1030(C)	G	2.9
19	CS	35	SER	2.9
47	D1	2	SER	2.9
2	CB	99	GLY	2.9
44	BY	3	VAL	2.9
9	AI	64	THR	2.9
1	AA	1037	C	2.9
25	DA	229	A	2.9
3	CC	177	THR	2.8
16	CP	9	PHE	2.8
2	AB	237	ALA	2.8
12	AL	63	GLY	2.8
2	CB	134	GLU	2.8
12	AL	126	LYS	2.8
1	AA	1030(B)	C	2.8
1	CA	1286	A	2.8
1	CA	1493	A	2.8
46	B0	3	HIS	2.8
2	AB	196	LEU	2.8
10	CJ	40	LEU	2.8
14	CN	33	VAL	2.8
21	CU	17	THR	2.8
20	CT	103	GLY	2.8
21	AU	6	ARG	2.7
28	DE	204	ALA	2.7
1	AA	1286	A	2.7
1	CA	1001	A	2.7

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Mol	Chain	Res	Type	RSRZ
1	AA	1029	C	2.7
13	AM	87	TYR	2.7
10	CJ	5	ARG	2.7
36	BQ	61	GLY	2.7
46	D0	6	GLY	2.7
19	AS	84	GLY	2.7
25	BA	1555	C	2.7
25	BA	2807	C	2.7
2	CB	97	TRP	2.7
50	D4	66	SER	2.7
9	AI	12	GLU	2.6
16	AP	19	ILE	2.6
21	CU	11	GLY	2.6
10	CJ	65	LEU	2.6
4	AD	23	GLY	2.6
10	AJ	76	ASN	2.6
14	AN	15	LYS	2.6
14	CN	17	LYS	2.6
19	CS	16	LEU	2.6
19	CS	13	ASP	2.6
45	BZ	118	GLN	2.6
9	CI	10	ARG	2.6
1	CA	1202	G	2.6
21	CU	13	ILE	2.6
25	DA	1536	C	2.6
9	CI	30	GLY	2.6
4	CD	164	ALA	2.6
9	CI	62	TYR	2.5
10	AJ	65	LEU	2.5
9	CI	66	ARG	2.5
1	AA	1002	G	2.5
25	BA	2813	G	2.5
2	CB	71	VAL	2.5
9	CI	81	ILE	2.5
50	D4	65	ASP	2.5
19	CS	84	GLY	2.5
2	AB	134	GLU	2.5
9	CI	117	HIS	2.5
19	CS	71	LEU	2.5
11	AK	36	ASP	2.5
4	CD	154	ASN	2.5
46	D0	3	HIS	2.5

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Mol	Chain	Res	Type	RSRZ
19	AS	4	SER	2.5
20	AT	74	LYS	2.5
39	BT	130	ALA	2.5
9	CI	14	VAL	2.5
1	AA	1001(A)	G	2.4
44	DY	5	MET	2.4
3	CC	207	VAL	2.4
1	CA	1149	C	2.4
14	AN	7	ILE	2.4
36	BQ	60	ARG	2.4
1	AA	1532	U	2.4
10	CJ	32	ALA	2.4
13	AM	124	PRO	2.4
19	AS	40	ILE	2.4
20	CT	25	ARG	2.4
44	DY	107	ASP	2.4
10	AJ	47	PHE	2.4
9	AI	10	ARG	2.4
19	CS	31	ILE	2.4
43	BX	95	LEU	2.4
14	CN	15	LYS	2.4
4	AD	2	GLY	2.4
10	AJ	31	GLY	2.4
19	CS	8	GLY	2.4
21	AU	11	GLY	2.4
9	CI	119	ALA	2.4
21	CU	15	ARG	2.4
1	CA	979	C	2.3
7	CG	80	VAL	2.3
9	CI	28	VAL	2.3
20	AT	12	ALA	2.3
9	CI	64	THR	2.3
1	AA	1001	A	2.3
1	AA	380	G	2.3
30	DG	76	SER	2.3
14	AN	3	ARG	2.3
19	AS	14	HIS	2.3
9	CI	18	PHE	2.3
14	CN	18	VAL	2.3
21	CU	4	GLY	2.3
46	B0	6	GLY	2.3
1	AA	1030(A)	G	2.3

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Mol	Chain	Res	Type	RSRZ
1	AA	1031	G	2.3
1	AA	1034	G	2.3
38	DS	54	LEU	2.3
9	CI	17	VAL	2.3
10	AJ	32	ALA	2.3
10	CJ	76	ASN	2.3
1	CA	1532	U	2.3
19	CS	12	ASP	2.3
50	D4	67	TYR	2.3
1	AA	999	C	2.3
8	CH	95	VAL	2.3
17	AQ	35	VAL	2.3
14	CN	32	SER	2.2
14	CN	13	THR	2.2
38	DS	33	LYS	2.2
38	DS	59	LYS	2.2
46	B0	5	LYS	2.2
39	DT	131	ALA	2.2
14	CN	7	ILE	2.2
19	CS	40	ILE	2.2
1	AA	163	C	2.2
55	B9	29	ASN	2.2
1	CA	1224	G	2.2
10	AJ	33	GLN	2.2
3	AC	52	LEU	2.2
8	CH	131	GLY	2.2
10	AJ	4	ILE	2.2
16	CP	69	THR	2.2
9	CI	5	TYR	2.2
30	DG	152	LEU	2.2
55	D9	16	VAL	2.2
9	AI	119	ALA	2.2
46	B0	8	GLY	2.2
25	DA	1171	G	2.2
16	AP	22	THR	2.2
10	CJ	74	ILE	2.1
15	CO	68	ARG	2.1
1	CA	1257	U	2.1
1	CA	1030(C)	G	2.1
25	BA	2805	G	2.1
2	CB	225	ALA	2.1
9	CI	45	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
31	DH	120	GLY	2.1
12	CL	126	LYS	2.1
14	AN	4	LYS	2.1
1	AA	1027	C	2.1
19	CS	2	PRO	2.1
1	CA	1126	U	2.1
1	CA	1219	U	2.1
3	CC	159	GLY	2.1
53	D7	48	LYS	2.1
8	CH	99	GLU	2.1
2	CB	165	VAL	2.1
33	BN	53	VAL	2.1
9	CI	27	THR	2.1
3	AC	193	TYR	2.1
31	BH	6	ARG	2.1
30	DG	2	PRO	2.1
13	AM	107	ALA	2.1
9	CI	9	ARG	2.1
9	CI	113	LYS	2.1
21	CU	8	THR	2.1
1	AA	202	U	2.1
25	BA	1072	U	2.1
10	CJ	85	LEU	2.1
10	CJ	37	PRO	2.1
10	CJ	62	HIS	2.1
16	AP	2	VAL	2.1
4	AD	3	ARG	2.0
7	AG	5	ARG	2.0
7	AG	83	ALA	2.0
10	AJ	66	ARG	2.0
13	AM	121	LYS	2.0
14	CN	5	ALA	2.0
39	BT	131	ALA	2.0
3	AC	2	GLY	2.0
25	DA	1533	G	2.0
39	DT	69	GLY	2.0
10	CJ	58	ASP	2.0
2	CB	101	MET	2.0
10	CJ	49	VAL	2.0
12	AL	99	HIS	2.0
25	BA	696	C	2.0
3	CC	79	ARG	2.0

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Mol	Chain	Res	Type	RSRZ
30	DG	137	GLU	2.0
38	DS	97	ARG	2.0
45	BZ	119	GLU	2.0
30	DG	50	ALA	2.0
13	CM	6	GLY	2.0
1	CA	1035	A	2.0
4	AD	157	LEU	2.0
19	AS	16	LEU	2.0
30	DG	34	LEU	2.0
1	AA	630	G	2.0
1	AA	1032	G	2.0
4	AD	179	GLU	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(\AA^2)	Q<0.9
24	2R1	AW	6	10/11	0.76	0.14	66,72,84,91	0
24	MVA	AW	5	8/9	0.77	0.15	69,82,86,91	0
24	004	AW	3	10/11	0.81	0.12	67,87,95,97	0
24	2QY	CW	10	13/14	0.85	0.11	60,72,80,86	0
24	2R1	CW	6	10/11	0.86	0.12	68,82,90,91	0
24	2R3	AW	8	14/15	0.86	0.13	70,78,86,87	0
24	MVA	CW	5	8/9	0.87	0.12	76,88,91,99	0
24	MVA	CW	9	8/9	0.88	0.11	70,73,84,91	0
24	2QY	AW	10	13/14	0.90	0.10	49,70,87,100	0
24	MVA	AW	9	8/9	0.92	0.11	63,74,87,88	0
24	2QZ	AW	1	9/10	0.92	0.10	50,71,82,83	0
24	2R3	CW	8	14/15	0.93	0.08	62,69,77,78	0
24	2QZ	CW	1	9/10	0.94	0.10	63,71,80,101	0
24	004	CW	3	10/11	0.94	0.08	69,78,82,83	0

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands ⓘ

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
56	MG	CA	3147	1/1	0.22	0.30	77,77,77,77	0
56	MG	CA	3139	1/1	0.53	0.22	76,76,76,76	0
56	MG	AA	3180	1/1	0.57	0.30	75,75,75,75	0
56	MG	BA	3661	1/1	0.60	0.22	69,69,69,69	0
56	MG	CA	3114	1/1	0.61	0.18	67,67,67,67	0
56	MG	CA	3053	1/1	0.62	0.52	87,87,87,87	0
56	MG	AA	3093	1/1	0.63	0.25	90,90,90,90	0
56	MG	AA	3129	1/1	0.63	0.26	77,77,77,77	0
56	MG	CA	3030	1/1	0.67	0.43	74,74,74,74	0
56	MG	CA	3142	1/1	0.68	0.21	80,80,80,80	0
56	MG	CA	3161	1/1	0.68	0.15	71,71,71,71	0
56	MG	DA	3356	1/1	0.68	0.15	57,57,57,57	0
56	MG	DG	3001	1/1	0.68	0.16	68,68,68,68	0
56	MG	BA	3625	1/1	0.69	0.17	80,80,80,80	0
56	MG	AA	3164	1/1	0.69	0.29	61,61,61,61	0
56	MG	CA	3156	1/1	0.69	0.22	80,80,80,80	0
56	MG	BA	3203	1/1	0.70	0.17	45,45,45,45	0
56	MG	BB	3005	1/1	0.70	0.26	62,62,62,62	0
56	MG	AA	3076	1/1	0.70	0.38	74,74,74,74	0
56	MG	AA	3200	1/1	0.71	0.24	79,79,79,79	0
56	MG	AS	3001	1/1	0.71	0.17	79,79,79,79	0
56	MG	AA	3094	1/1	0.71	0.13	78,78,78,78	0
56	MG	AA	3072	1/1	0.71	0.20	69,69,69,69	0
56	MG	AX	108	1/1	0.72	0.27	66,66,66,66	0
56	MG	BA	3103	1/1	0.72	0.27	58,58,58,58	0
56	MG	DA	3619	1/1	0.73	0.17	67,67,67,67	0
56	MG	CA	3025	1/1	0.73	0.17	102,102,102,102	0
56	MG	CA	3070	1/1	0.74	0.21	59,59,59,59	0
56	MG	BA	3133	1/1	0.74	0.36	53,53,53,53	0
56	MG	AA	3022	1/1	0.74	0.20	56,56,56,56	0
56	MG	DA	3540	1/1	0.74	0.16	76,76,76,76	0
56	MG	DA	3602	1/1	0.74	0.20	63,63,63,63	0
56	MG	AA	3021	1/1	0.74	0.18	76,76,76,76	0
56	MG	AA	3133	1/1	0.74	0.43	71,71,71,71	0
56	MG	AA	3209	1/1	0.75	0.18	66,66,66,66	0
56	MG	DA	3464	1/1	0.75	0.11	51,51,51,51	0
56	MG	DA	3346	1/1	0.75	0.13	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	CA	3164	1/1	0.76	0.17	43,43,43,43	0
56	MG	DA	3001	1/1	0.76	0.37	76,76,76,76	0
56	MG	DA	3296	1/1	0.76	0.21	65,65,65,65	0
56	MG	AA	3087	1/1	0.76	0.21	87,87,87,87	0
56	MG	CA	3119	1/1	0.76	0.29	73,73,73,73	0
56	MG	DA	3436	1/1	0.76	0.13	61,61,61,61	0
56	MG	BA	3582	1/1	0.76	0.16	52,52,52,52	0
56	MG	AA	3002	1/1	0.76	0.14	74,74,74,74	0
56	MG	DA	3568	1/1	0.76	0.19	58,58,58,58	0
56	MG	AA	3131	1/1	0.76	0.27	65,65,65,65	0
56	MG	DA	3603	1/1	0.76	0.17	66,66,66,66	0
56	MG	CA	3061	1/1	0.76	0.37	68,68,68,68	0
56	MG	DA	3630	1/1	0.76	0.12	67,67,67,67	0
56	MG	DA	3639	1/1	0.76	0.24	55,55,55,55	0
56	MG	BA	3708	1/1	0.76	0.16	38,38,38,38	0
56	MG	CA	3056	1/1	0.77	0.20	63,63,63,63	0
56	MG	BD	304	1/1	0.77	0.23	41,41,41,41	0
56	MG	BA	3704	1/1	0.77	0.20	58,58,58,58	0
56	MG	CA	3027	1/1	0.77	0.14	64,64,64,64	0
56	MG	DA	3456	1/1	0.77	0.19	58,58,58,58	0
56	MG	AA	3114	1/1	0.77	0.19	73,73,73,73	0
56	MG	AA	3030	1/1	0.77	0.43	66,66,66,66	0
56	MG	AA	3063	1/1	0.78	0.18	57,57,57,57	0
56	MG	DA	3066	1/1	0.78	0.26	59,59,59,59	0
56	MG	DA	3567	1/1	0.78	0.15	68,68,68,68	0
56	MG	DA	3141	1/1	0.78	0.23	63,63,63,63	0
56	MG	CA	3144	1/1	0.78	0.27	84,84,84,84	0
56	MG	BA	3620	1/1	0.78	0.22	57,57,57,57	0
56	MG	CA	3117	1/1	0.78	0.12	58,58,58,58	0
56	MG	BA	3292	1/1	0.78	0.27	59,59,59,59	0
56	MG	BA	3740	1/1	0.78	0.26	57,57,57,57	0
56	MG	DB	3001	1/1	0.78	0.18	80,80,80,80	0
56	MG	DA	3462	1/1	0.78	0.19	71,71,71,71	0
56	MG	BA	3711	1/1	0.79	0.29	64,64,64,64	0
56	MG	AA	3067	1/1	0.79	0.29	76,76,76,76	0
56	MG	BA	3358	1/1	0.79	0.12	78,78,78,78	0
56	MG	DA	3441	1/1	0.79	0.12	46,46,46,46	0
56	MG	DA	3115	1/1	0.79	0.11	64,64,64,64	0
56	MG	AA	3184	1/1	0.79	0.16	81,81,81,81	0
56	MG	DA	3220	1/1	0.79	0.07	61,61,61,61	0
56	MG	DA	3500	1/1	0.79	0.33	66,66,66,66	0
56	MG	DB	3003	1/1	0.79	0.22	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	AA	3115	1/1	0.79	0.27	67,67,67,67	0
56	MG	CA	3028	1/1	0.80	0.43	62,62,62,62	0
56	MG	DA	3123	1/1	0.80	0.14	61,61,61,61	0
56	MG	DA	3506	1/1	0.80	0.10	61,61,61,61	0
56	MG	DA	3131	1/1	0.80	0.09	60,60,60,60	0
56	MG	AA	3032	1/1	0.80	0.29	65,65,65,65	0
56	MG	DA	3169	1/1	0.80	0.24	58,58,58,58	0
56	MG	CA	3159	1/1	0.80	0.26	76,76,76,76	0
56	MG	AA	3136	1/1	0.80	0.14	68,68,68,68	0
56	MG	CA	3162	1/1	0.80	0.18	60,60,60,60	0
56	MG	DA	3627	1/1	0.80	0.14	52,52,52,52	0
56	MG	CA	3009	1/1	0.80	0.15	55,55,55,55	0
56	MG	AA	3189	1/1	0.80	0.13	74,74,74,74	0
56	MG	DA	3642	1/1	0.80	0.22	67,67,67,67	0
56	MG	DA	3008	1/1	0.80	0.15	56,56,56,56	0
56	MG	AA	3117	1/1	0.80	0.18	64,64,64,64	0
56	MG	DA	3113	1/1	0.80	0.45	61,61,61,61	0
56	MG	CA	3152	1/1	0.81	0.22	45,45,45,45	0
56	MG	AX	104	1/1	0.81	0.12	62,62,62,62	0
56	MG	CA	3073	1/1	0.81	0.23	74,74,74,74	0
56	MG	CA	3110	1/1	0.81	0.15	93,93,93,93	0
56	MG	AA	3148	1/1	0.81	0.15	72,72,72,72	0
56	MG	BA	3705	1/1	0.81	0.15	64,64,64,64	0
56	MG	CA	3172	1/1	0.81	0.19	65,65,65,65	0
56	MG	BA	3510	1/1	0.81	0.24	66,66,66,66	0
56	MG	AA	3039	1/1	0.81	0.12	62,62,62,62	0
56	MG	AA	3112	1/1	0.81	0.14	53,53,53,53	0
56	MG	DA	3073	1/1	0.81	0.23	50,50,50,50	0
56	MG	DA	3096	1/1	0.81	0.15	68,68,68,68	0
56	MG	AA	3045	1/1	0.81	0.27	71,71,71,71	0
56	MG	BA	3636	1/1	0.81	0.12	54,54,54,54	0
56	MG	DA	3496	1/1	0.82	0.21	76,76,76,76	0
56	MG	BF	306	1/1	0.82	0.13	52,52,52,52	0
56	MG	CA	3067	1/1	0.82	0.17	66,66,66,66	0
56	MG	CA	3007	1/1	0.82	0.13	63,63,63,63	0
56	MG	DA	3549	1/1	0.82	0.20	73,73,73,73	0
56	MG	AA	3217	1/1	0.82	0.30	64,64,64,64	0
56	MG	CA	3091	1/1	0.82	0.12	95,95,95,95	0
56	MG	BA	3710	1/1	0.82	0.16	57,57,57,57	0
56	MG	DA	3241	1/1	0.82	0.07	74,74,74,74	0
56	MG	BA	3028	1/1	0.82	0.26	59,59,59,59	0
56	MG	BA	3716	1/1	0.82	0.20	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	AD	502	1/1	0.82	0.31	56,56,56,56	0
56	MG	CA	3129	1/1	0.82	0.21	54,54,54,54	0
56	MG	CA	3136	1/1	0.82	0.25	70,70,70,70	0
56	MG	CA	3039	1/1	0.82	0.32	82,82,82,82	0
56	MG	AA	3171	1/1	0.82	0.15	77,77,77,77	0
56	MG	AA	3016	1/1	0.82	0.10	70,70,70,70	0
56	MG	CA	3065	1/1	0.83	0.17	81,81,81,81	0
56	MG	DA	3314	1/1	0.83	0.14	56,56,56,56	0
56	MG	BA	3247	1/1	0.83	0.26	58,58,58,58	0
56	MG	BB	3014	1/1	0.83	0.17	68,68,68,68	0
56	MG	DA	3414	1/1	0.83	0.20	59,59,59,59	0
56	MG	BB	3017	1/1	0.83	0.29	80,80,80,80	0
56	MG	BA	3638	1/1	0.83	0.14	73,73,73,73	0
56	MG	CX	103	1/1	0.83	0.08	57,57,57,57	0
56	MG	AA	3106	1/1	0.83	0.29	68,68,68,68	0
56	MG	BA	3686	1/1	0.83	0.26	65,65,65,65	0
56	MG	DA	3022	1/1	0.83	0.14	41,41,41,41	0
56	MG	BA	3693	1/1	0.83	0.22	57,57,57,57	0
56	MG	BA	3701	1/1	0.83	0.12	69,69,69,69	0
56	MG	BA	3294	1/1	0.83	0.21	59,59,59,59	0
56	MG	DA	3108	1/1	0.83	0.11	50,50,50,50	0
56	MG	DA	3554	1/1	0.83	0.07	62,62,62,62	0
56	MG	BA	3338	1/1	0.83	0.18	62,62,62,62	0
56	MG	BA	3068	1/1	0.83	0.30	43,43,43,43	0
56	MG	DA	3122	1/1	0.83	0.11	60,60,60,60	0
56	MG	CA	3141	1/1	0.83	0.40	85,85,85,85	0
56	MG	DA	3617	1/1	0.83	0.12	51,51,51,51	0
56	MG	AA	3079	1/1	0.83	0.27	65,65,65,65	0
56	MG	DA	3620	1/1	0.83	0.16	66,66,66,66	0
56	MG	AA	3127	1/1	0.83	0.20	50,50,50,50	0
56	MG	BA	3177	1/1	0.83	0.48	35,35,35,35	0
56	MG	DA	3171	1/1	0.83	0.26	58,58,58,58	0
56	MG	DA	3189	1/1	0.83	0.21	55,55,55,55	0
56	MG	CA	3060	1/1	0.83	0.29	59,59,59,59	0
56	MG	AA	3089	1/1	0.83	0.24	80,80,80,80	0
56	MG	DA	3246	1/1	0.83	0.10	55,55,55,55	0
56	MG	DQ	3004	1/1	0.83	0.13	52,52,52,52	0
59	FME	CX	101	10/11	0.83	0.25	59,80,100,106	0
56	MG	AA	3068	1/1	0.84	0.21	67,67,67,67	0
56	MG	DA	3418	1/1	0.84	0.14	57,57,57,57	0
56	MG	BA	3071	1/1	0.84	0.20	55,55,55,55	0
56	MG	AA	3196	1/1	0.84	0.32	78,78,78,78	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	AA	3029	1/1	0.84	0.33	60,60,60,60	0
56	MG	BA	3651	1/1	0.84	0.23	52,52,52,52	0
56	MG	DA	3098	1/1	0.84	0.34	45,45,45,45	0
56	MG	AA	3098	1/1	0.84	0.37	76,76,76,76	0
56	MG	AA	3023	1/1	0.84	0.14	56,56,56,56	0
56	MG	AA	3028	1/1	0.84	0.23	72,72,72,72	0
56	MG	DA	3537	1/1	0.84	0.15	74,74,74,74	0
56	MG	BA	3272	1/1	0.84	0.21	49,49,49,49	0
56	MG	CA	3032	1/1	0.84	0.21	44,44,44,44	0
56	MG	DA	3124	1/1	0.84	0.17	66,66,66,66	0
56	MG	CA	3033	1/1	0.84	0.14	64,64,64,64	0
56	MG	AA	3064	1/1	0.84	0.07	65,65,65,65	0
56	MG	DA	3586	1/1	0.84	0.12	57,57,57,57	0
56	MG	DA	3162	1/1	0.84	0.20	69,69,69,69	0
56	MG	CA	3041	1/1	0.84	0.32	71,71,71,71	0
56	MG	DA	3608	1/1	0.84	0.23	63,63,63,63	0
56	MG	DA	3613	1/1	0.84	0.21	64,64,64,64	0
56	MG	CA	3153	1/1	0.84	0.15	85,85,85,85	0
56	MG	AA	3033	1/1	0.84	0.23	68,68,68,68	0
56	MG	AA	3090	1/1	0.84	0.24	64,64,64,64	0
56	MG	BA	3022	1/1	0.84	0.24	66,66,66,66	0
56	MG	DA	3243	1/1	0.84	0.21	49,49,49,49	0
56	MG	BA	3465	1/1	0.84	0.12	51,51,51,51	0
56	MG	DA	3263	1/1	0.84	0.14	48,48,48,48	0
56	MG	BA	3467	1/1	0.84	0.09	44,44,44,44	0
56	MG	BA	3027	1/1	0.84	0.14	53,53,53,53	0
56	MG	AA	3092	1/1	0.84	0.27	59,59,59,59	0
56	MG	BA	3616	1/1	0.84	0.18	73,73,73,73	0
56	MG	DA	3405	1/1	0.84	0.26	53,53,53,53	0
56	MG	DA	3060	1/1	0.85	0.07	51,51,51,51	0
56	MG	DA	3062	1/1	0.85	0.24	58,58,58,58	0
56	MG	AA	3037	1/1	0.85	0.17	53,53,53,53	0
56	MG	AA	3061	1/1	0.85	0.11	57,57,57,57	0
56	MG	DA	3086	1/1	0.85	0.20	43,43,43,43	0
56	MG	CA	3029	1/1	0.85	0.17	54,54,54,54	0
56	MG	CA	3127	1/1	0.85	0.12	72,72,72,72	0
56	MG	AA	3162	1/1	0.85	0.17	79,79,79,79	0
56	MG	DA	3109	1/1	0.85	0.15	55,55,55,55	0
56	MG	DA	3112	1/1	0.85	0.23	49,49,49,49	0
56	MG	BA	3596	1/1	0.85	0.12	79,79,79,79	0
56	MG	BA	3601	1/1	0.85	0.18	61,61,61,61	0
56	MG	BA	3248	1/1	0.85	0.34	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3257	1/1	0.85	0.22	56,56,56,56	0
56	MG	BA	3739	1/1	0.85	0.10	50,50,50,50	0
56	MG	DA	3566	1/1	0.85	0.18	55,55,55,55	0
56	MG	AA	3017	1/1	0.85	0.25	57,57,57,57	0
56	MG	BA	3060	1/1	0.85	0.32	64,64,64,64	0
56	MG	DA	3155	1/1	0.85	0.15	50,50,50,50	0
56	MG	DA	3596	1/1	0.85	0.21	68,68,68,68	0
56	MG	AA	3070	1/1	0.85	0.15	68,68,68,68	0
56	MG	BA	3648	1/1	0.85	0.14	54,54,54,54	0
56	MG	DA	3606	1/1	0.85	0.14	58,58,58,58	0
56	MG	BA	3301	1/1	0.85	0.18	44,44,44,44	0
56	MG	AA	3178	1/1	0.85	0.17	63,63,63,63	0
56	MG	CA	3071	1/1	0.85	0.26	64,64,64,64	0
56	MG	BA	3667	1/1	0.85	0.18	72,72,72,72	0
56	MG	CA	3074	1/1	0.85	0.19	56,56,56,56	0
56	MG	CE	3001	1/1	0.85	0.19	66,66,66,66	0
56	MG	DA	3251	1/1	0.85	0.21	50,50,50,50	0
56	MG	CA	3081	1/1	0.85	0.14	72,72,72,72	0
56	MG	AA	3132	1/1	0.85	0.17	59,59,59,59	0
56	MG	DA	3306	1/1	0.85	0.11	51,51,51,51	0
56	MG	DA	3005	1/1	0.85	0.09	50,50,50,50	0
56	MG	DB	3010	1/1	0.85	0.17	66,66,66,66	0
56	MG	DF	304	1/1	0.85	0.25	39,39,39,39	0
56	MG	CA	3103	1/1	0.85	0.14	101,101,101,101	0
56	MG	AA	3088	1/1	0.85	0.25	53,53,53,53	0
59	FME	AX	101	10/11	0.85	0.22	55,74,92,107	0
56	MG	DA	3361	1/1	0.85	0.17	58,58,58,58	0
56	MG	BA	3088	1/1	0.86	0.10	55,55,55,55	0
56	MG	DA	3514	1/1	0.86	0.18	60,60,60,60	0
56	MG	DA	3524	1/1	0.86	0.10	51,51,51,51	0
56	MG	DA	3529	1/1	0.86	0.23	72,72,72,72	0
56	MG	DA	3532	1/1	0.86	0.14	60,60,60,60	0
56	MG	CA	3125	1/1	0.86	0.17	64,64,64,64	0
56	MG	BA	3641	1/1	0.86	0.10	33,33,33,33	0
56	MG	CA	3048	1/1	0.86	0.32	70,70,70,70	0
56	MG	DA	3212	1/1	0.86	0.18	48,48,48,48	0
56	MG	DA	3035	1/1	0.86	0.16	58,58,58,58	0
56	MG	DA	3057	1/1	0.86	0.19	57,57,57,57	0
56	MG	CA	3135	1/1	0.86	0.20	61,61,61,61	0
56	MG	AA	3025	1/1	0.86	0.11	78,78,78,78	0
56	MG	DA	3587	1/1	0.86	0.17	57,57,57,57	0
56	MG	DA	3589	1/1	0.86	0.14	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3014	1/1	0.86	0.30	48,48,48,48	0
56	MG	BA	3021	1/1	0.86	0.17	62,62,62,62	0
56	MG	DA	3289	1/1	0.86	0.21	64,64,64,64	0
56	MG	DA	3084	1/1	0.86	0.10	55,55,55,55	0
56	MG	AA	3082	1/1	0.86	0.26	52,52,52,52	0
56	MG	BA	3223	1/1	0.86	0.23	49,49,49,49	0
56	MG	DA	3333	1/1	0.86	0.09	61,61,61,61	0
56	MG	BW	3001	1/1	0.86	0.13	55,55,55,55	0
56	MG	B7	101	1/1	0.86	0.16	45,45,45,45	0
56	MG	BA	3567	1/1	0.86	0.07	54,54,54,54	0
56	MG	AA	3053	1/1	0.86	0.20	56,56,56,56	0
56	MG	BA	3702	1/1	0.86	0.11	56,56,56,56	0
56	MG	AF	3001	1/1	0.86	0.16	62,62,62,62	0
56	MG	AA	3134	1/1	0.86	0.31	70,70,70,70	0
56	MG	BA	3066	1/1	0.86	0.20	49,49,49,49	0
56	MG	CA	3168	1/1	0.86	0.30	79,79,79,79	0
56	MG	DB	3011	1/1	0.86	0.18	49,49,49,49	0
56	MG	AA	3097	1/1	0.86	0.32	53,53,53,53	0
56	MG	BA	3293	1/1	0.86	0.31	69,69,69,69	0
56	MG	DA	3491	1/1	0.86	0.25	55,55,55,55	0
56	MG	D3	101	1/1	0.86	0.12	54,54,54,54	0
56	MG	DA	3153	1/1	0.86	0.21	51,51,51,51	0
56	MG	AX	105	1/1	0.86	0.20	72,72,72,72	0
60	K	BA	3304	1/1	0.86	0.19	93,93,93,93	0
56	MG	DA	3367	1/1	0.87	0.19	55,55,55,55	0
56	MG	DA	3391	1/1	0.87	0.10	54,54,54,54	0
56	MG	CA	3042	1/1	0.87	0.28	69,69,69,69	0
56	MG	BA	3262	1/1	0.87	0.33	44,44,44,44	0
56	MG	BA	3267	1/1	0.87	0.18	56,56,56,56	0
56	MG	AA	3078	1/1	0.87	0.31	55,55,55,55	0
56	MG	AA	3203	1/1	0.87	0.12	76,76,76,76	0
56	MG	DA	3448	1/1	0.87	0.22	67,67,67,67	0
56	MG	BA	3694	1/1	0.87	0.16	48,48,48,48	0
56	MG	AA	3143	1/1	0.87	0.15	67,67,67,67	0
56	MG	BA	3107	1/1	0.87	0.23	60,60,60,60	0
56	MG	BA	3119	1/1	0.87	0.12	56,56,56,56	0
56	MG	BA	3122	1/1	0.87	0.12	68,68,68,68	0
56	MG	DA	3074	1/1	0.87	0.26	60,60,60,60	0
56	MG	BA	3123	1/1	0.87	0.12	47,47,47,47	0
56	MG	BA	3709	1/1	0.87	0.15	77,77,77,77	0
56	MG	BA	3433	1/1	0.87	0.25	46,46,46,46	0
56	MG	DA	3525	1/1	0.87	0.12	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	AA	3215	1/1	0.87	0.32	77,77,77,77	0
56	MG	DA	3531	1/1	0.87	0.08	44,44,44,44	0
56	MG	BA	3137	1/1	0.87	0.16	59,59,59,59	0
56	MG	CA	3109	1/1	0.87	0.17	79,79,79,79	0
56	MG	BA	3722	1/1	0.87	0.10	49,49,49,49	0
56	MG	CA	3111	1/1	0.87	0.16	69,69,69,69	0
56	MG	BA	3732	1/1	0.87	0.21	56,56,56,56	0
56	MG	BA	3156	1/1	0.87	0.25	61,61,61,61	0
56	MG	BA	3514	1/1	0.87	0.13	49,49,49,49	0
56	MG	CA	3122	1/1	0.87	0.18	70,70,70,70	0
56	MG	DA	3585	1/1	0.87	0.26	62,62,62,62	0
56	MG	CA	3124	1/1	0.87	0.12	64,64,64,64	0
56	MG	BA	3530	1/1	0.87	0.14	72,72,72,72	0
56	MG	BA	3538	1/1	0.87	0.13	29,29,29,29	0
56	MG	BA	3563	1/1	0.87	0.40	66,66,66,66	0
56	MG	BA	3565	1/1	0.87	0.13	75,75,75,75	0
56	MG	AA	3147	1/1	0.87	0.14	51,51,51,51	0
56	MG	DA	3170	1/1	0.87	0.10	45,45,45,45	0
56	MG	DA	3607	1/1	0.87	0.21	68,68,68,68	0
56	MG	BA	3180	1/1	0.87	0.28	48,48,48,48	0
56	MG	BX	102	1/1	0.87	0.22	60,60,60,60	0
56	MG	BA	3183	1/1	0.87	0.13	40,40,40,40	0
56	MG	CA	3004	1/1	0.87	0.14	88,88,88,88	0
56	MG	DA	3224	1/1	0.87	0.23	53,53,53,53	0
56	MG	DA	3621	1/1	0.87	0.15	46,46,46,46	0
56	MG	CA	3146	1/1	0.87	0.16	61,61,61,61	0
56	MG	BA	3597	1/1	0.87	0.14	46,46,46,46	0
56	MG	CA	3008	1/1	0.87	0.37	59,59,59,59	0
56	MG	BA	3184	1/1	0.87	0.24	51,51,51,51	0
56	MG	DA	3645	1/1	0.87	0.22	57,57,57,57	0
56	MG	BA	3186	1/1	0.87	0.19	50,50,50,50	0
56	MG	AA	3074	1/1	0.87	0.22	40,40,40,40	0
56	MG	DB	3006	1/1	0.87	0.11	54,54,54,54	0
56	MG	BA	3212	1/1	0.87	0.22	47,47,47,47	0
56	MG	AA	3081	1/1	0.87	0.27	46,46,46,46	0
56	MG	BA	3637	1/1	0.87	0.59	52,52,52,52	0
56	MG	DA	3323	1/1	0.87	0.10	60,60,60,60	0
56	MG	DA	3326	1/1	0.87	0.17	61,61,61,61	0
56	MG	BA	3240	1/1	0.87	0.26	54,54,54,54	0
56	MG	AA	3194	1/1	0.87	0.17	50,50,50,50	0
56	MG	AX	103	1/1	0.87	0.06	57,57,57,57	0
56	MG	AA	3020	1/1	0.87	0.10	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3344	1/1	0.88	0.08	48,48,48,48	0
56	MG	CA	3160	1/1	0.88	0.13	49,49,49,49	0
56	MG	DA	3351	1/1	0.88	0.13	58,58,58,58	0
56	MG	BA	3681	1/1	0.88	0.26	54,54,54,54	0
56	MG	BA	3172	1/1	0.88	0.13	54,54,54,54	0
56	MG	CA	3034	1/1	0.88	0.27	66,66,66,66	0
56	MG	DA	3373	1/1	0.88	0.15	52,52,52,52	0
56	MG	CA	3038	1/1	0.88	0.10	54,54,54,54	0
56	MG	DA	3392	1/1	0.88	0.11	60,60,60,60	0
56	MG	CA	3171	1/1	0.88	0.16	61,61,61,61	0
56	MG	AA	3122	1/1	0.88	0.35	40,40,40,40	0
56	MG	BA	3369	1/1	0.88	0.14	49,49,49,49	0
56	MG	BA	3178	1/1	0.88	0.17	51,51,51,51	0
56	MG	CA	3043	1/1	0.88	0.15	62,62,62,62	0
56	MG	AA	3207	1/1	0.88	0.15	51,51,51,51	0
56	MG	CA	3050	1/1	0.88	0.23	54,54,54,54	0
56	MG	DA	3457	1/1	0.88	0.09	44,44,44,44	0
56	MG	DA	3460	1/1	0.88	0.14	47,47,47,47	0
56	MG	AA	3080	1/1	0.88	0.22	58,58,58,58	0
56	MG	BA	3469	1/1	0.88	0.12	60,60,60,60	0
56	MG	DA	3468	1/1	0.88	0.14	47,47,47,47	0
56	MG	DA	3039	1/1	0.88	0.25	46,46,46,46	0
56	MG	DA	3040	1/1	0.88	0.15	45,45,45,45	0
56	MG	DA	3043	1/1	0.88	0.27	56,56,56,56	0
56	MG	DA	3504	1/1	0.88	0.11	46,46,46,46	0
56	MG	BA	3485	1/1	0.88	0.13	67,67,67,67	0
56	MG	AA	3046	1/1	0.88	0.20	60,60,60,60	0
56	MG	CA	3064	1/1	0.88	0.12	74,74,74,74	0
56	MG	BA	3064	1/1	0.88	0.10	49,49,49,49	0
56	MG	AA	3003	1/1	0.88	0.13	70,70,70,70	0
56	MG	BA	3204	1/1	0.88	0.12	48,48,48,48	0
56	MG	BA	3717	1/1	0.88	0.13	51,51,51,51	0
56	MG	DA	3534	1/1	0.88	0.13	62,62,62,62	0
56	MG	AA	3218	1/1	0.88	0.14	73,73,73,73	0
56	MG	DA	3089	1/1	0.88	0.08	51,51,51,51	0
56	MG	DA	3095	1/1	0.88	0.22	53,53,53,53	0
56	MG	BA	3213	1/1	0.88	0.15	63,63,63,63	0
56	MG	DA	3557	1/1	0.88	0.14	74,74,74,74	0
56	MG	DA	3563	1/1	0.88	0.16	49,49,49,49	0
56	MG	AA	3219	1/1	0.88	0.16	54,54,54,54	0
56	MG	DA	3102	1/1	0.88	0.11	49,49,49,49	0
56	MG	CA	3084	1/1	0.88	0.22	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	CA	3086	1/1	0.88	0.20	70,70,70,70	0
56	MG	BA	3224	1/1	0.88	0.18	48,48,48,48	0
56	MG	BB	3001	1/1	0.88	0.17	56,56,56,56	0
56	MG	CA	3107	1/1	0.88	0.23	71,71,71,71	0
56	MG	AA	3174	1/1	0.88	0.19	49,49,49,49	0
56	MG	AA	3176	1/1	0.88	0.16	60,60,60,60	0
56	MG	AA	3086	1/1	0.88	0.13	65,65,65,65	0
56	MG	BB	3018	1/1	0.88	0.16	54,54,54,54	0
56	MG	CA	3116	1/1	0.88	0.16	76,76,76,76	0
56	MG	AA	3027	1/1	0.88	0.11	67,67,67,67	0
56	MG	BD	309	1/1	0.88	0.18	43,43,43,43	0
56	MG	AA	3005	1/1	0.88	0.35	66,66,66,66	0
56	MG	BG	3003	1/1	0.88	0.13	53,53,53,53	0
56	MG	BQ	3002	1/1	0.88	0.10	51,51,51,51	0
56	MG	AA	3018	1/1	0.88	0.20	51,51,51,51	0
56	MG	AA	3141	1/1	0.88	0.18	51,51,51,51	0
56	MG	DA	3628	1/1	0.88	0.11	38,38,38,38	0
56	MG	BA	3289	1/1	0.88	0.19	53,53,53,53	0
56	MG	DA	3637	1/1	0.88	0.20	59,59,59,59	0
56	MG	CA	3003	1/1	0.88	0.13	69,69,69,69	0
56	MG	BA	3291	1/1	0.88	0.17	44,44,44,44	0
56	MG	DA	3230	1/1	0.88	0.19	61,61,61,61	0
56	MG	AA	3065	1/1	0.88	0.25	50,50,50,50	0
56	MG	BA	3644	1/1	0.88	0.13	38,38,38,38	0
56	MG	BA	3155	1/1	0.88	0.08	56,56,56,56	0
56	MG	CA	3022	1/1	0.88	0.09	67,67,67,67	0
56	MG	AA	3019	1/1	0.88	0.16	64,64,64,64	0
56	MG	CA	3150	1/1	0.88	0.12	63,63,63,63	0
56	MG	BA	3158	1/1	0.88	0.29	43,43,43,43	0
56	MG	DQ	3003	1/1	0.88	0.18	58,58,58,58	0
56	MG	BA	3335	1/1	0.88	0.19	51,51,51,51	0
56	MG	DY	502	1/1	0.88	0.13	66,66,66,66	0
56	MG	BA	3671	1/1	0.88	0.13	44,44,44,44	0
56	MG	CA	3157	1/1	0.88	0.11	56,56,56,56	0
56	MG	CA	3158	1/1	0.88	0.12	64,64,64,64	0
56	MG	BA	3674	1/1	0.88	0.17	67,67,67,67	0
56	MG	DA	3425	1/1	0.89	0.17	51,51,51,51	0
56	MG	BA	3238	1/1	0.89	0.15	48,48,48,48	0
56	MG	BA	3473	1/1	0.89	0.14	55,55,55,55	0
56	MG	BA	3149	1/1	0.89	0.13	58,58,58,58	0
56	MG	AA	3077	1/1	0.89	0.31	67,67,67,67	0
56	MG	DA	3099	1/1	0.89	0.20	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	AM	3002	1/1	0.89	0.25	60,60,60,60	0
56	MG	BA	3520	1/1	0.89	0.12	69,69,69,69	0
56	MG	AA	3071	1/1	0.89	0.24	60,60,60,60	0
56	MG	DA	3465	1/1	0.89	0.08	41,41,41,41	0
56	MG	DA	3110	1/1	0.89	0.15	46,46,46,46	0
56	MG	DA	3475	1/1	0.89	0.11	35,35,35,35	0
56	MG	AA	3015	1/1	0.89	0.13	74,74,74,74	0
56	MG	BA	3173	1/1	0.89	0.18	41,41,41,41	0
56	MG	CA	3145	1/1	0.89	0.08	67,67,67,67	0
56	MG	DA	3119	1/1	0.89	0.11	44,44,44,44	0
56	MG	DA	3121	1/1	0.89	0.10	46,46,46,46	0
56	MG	AA	3121	1/1	0.89	0.23	52,52,52,52	0
56	MG	AA	3073	1/1	0.89	0.12	63,63,63,63	0
56	MG	BA	3094	1/1	0.89	0.19	62,62,62,62	0
56	MG	DA	3528	1/1	0.89	0.10	33,33,33,33	0
56	MG	DA	3128	1/1	0.89	0.16	54,54,54,54	0
56	MG	BA	3583	1/1	0.89	0.20	57,57,57,57	0
56	MG	AA	3139	1/1	0.89	0.18	58,58,58,58	0
56	MG	CA	3054	1/1	0.89	0.23	74,74,74,74	0
56	MG	DA	3536	1/1	0.89	0.10	57,57,57,57	0
56	MG	AA	3216	1/1	0.89	0.20	60,60,60,60	0
56	MG	DA	3157	1/1	0.89	0.29	56,56,56,56	0
56	MG	BA	3111	1/1	0.89	0.17	43,43,43,43	0
56	MG	DA	3166	1/1	0.89	0.07	37,37,37,37	0
56	MG	BA	3604	1/1	0.89	0.19	64,64,64,64	0
56	MG	BA	3296	1/1	0.89	0.24	69,69,69,69	0
56	MG	BA	3202	1/1	0.89	0.25	29,29,29,29	0
56	MG	BA	3317	1/1	0.89	0.16	40,40,40,40	0
56	MG	DA	3190	1/1	0.89	0.09	54,54,54,54	0
56	MG	DA	3196	1/1	0.89	0.17	54,54,54,54	0
56	MG	BA	3631	1/1	0.89	0.13	41,41,41,41	0
56	MG	BA	3634	1/1	0.89	0.15	77,77,77,77	0
56	MG	BA	3328	1/1	0.89	0.15	41,41,41,41	0
56	MG	DA	3591	1/1	0.89	0.14	67,67,67,67	0
56	MG	BD	305	1/1	0.89	0.18	41,41,41,41	0
56	MG	DA	3598	1/1	0.89	0.09	45,45,45,45	0
56	MG	DA	3240	1/1	0.89	0.24	58,58,58,58	0
56	MG	AA	3126	1/1	0.89	0.22	54,54,54,54	0
56	MG	CN	502	1/1	0.89	0.17	70,70,70,70	0
56	MG	AA	3056	1/1	0.89	0.27	61,61,61,61	0
56	MG	BA	3640	1/1	0.89	0.15	31,31,31,31	0
56	MG	DA	3255	1/1	0.89	0.17	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3208	1/1	0.89	0.18	50,50,50,50	0
56	MG	DA	3618	1/1	0.89	0.18	61,61,61,61	0
56	MG	DA	3281	1/1	0.89	0.09	33,33,33,33	0
56	MG	DA	3282	1/1	0.89	0.14	58,58,58,58	0
56	MG	DA	3287	1/1	0.89	0.09	53,53,53,53	0
56	MG	AA	3128	1/1	0.89	0.23	64,64,64,64	0
56	MG	DA	3020	1/1	0.89	0.18	45,45,45,45	0
56	MG	CA	3106	1/1	0.89	0.23	72,72,72,72	0
56	MG	DA	3029	1/1	0.89	0.17	62,62,62,62	0
56	MG	BA	3373	1/1	0.89	0.07	48,48,48,48	0
56	MG	BA	3429	1/1	0.89	0.21	55,55,55,55	0
56	MG	AA	3004	1/1	0.89	0.17	50,50,50,50	0
56	MG	DA	3336	1/1	0.89	0.12	36,36,36,36	0
56	MG	BA	3663	1/1	0.89	0.25	73,73,73,73	0
56	MG	CA	3112	1/1	0.89	0.20	69,69,69,69	0
56	MG	BA	3447	1/1	0.89	0.10	76,76,76,76	0
56	MG	BA	3669	1/1	0.89	0.12	61,61,61,61	0
56	MG	BA	3460	1/1	0.89	0.17	66,66,66,66	0
56	MG	DA	3069	1/1	0.89	0.17	49,49,49,49	0
56	MG	BA	3039	1/1	0.89	0.16	44,44,44,44	0
56	MG	CA	3121	1/1	0.89	0.29	59,59,59,59	0
56	MG	DV	202	1/1	0.89	0.21	45,45,45,45	0
56	MG	DW	202	1/1	0.89	0.11	53,53,53,53	0
56	MG	DA	3078	1/1	0.89	0.14	49,49,49,49	0
56	MG	BA	3675	1/1	0.89	0.29	68,68,68,68	0
56	MG	BA	3143	1/1	0.89	0.38	41,41,41,41	0
56	MG	DA	3087	1/1	0.89	0.15	43,43,43,43	0
56	MG	DA	3424	1/1	0.89	0.14	58,58,58,58	0
60	K	DA	3234	1/1	0.89	0.21	102,102,102,102	0
56	MG	BA	3549	1/1	0.90	0.25	49,49,49,49	0
56	MG	BA	3714	1/1	0.90	0.12	72,72,72,72	0
56	MG	CA	3069	1/1	0.90	0.21	63,63,63,63	0
56	MG	DA	3393	1/1	0.90	0.20	35,35,35,35	0
56	MG	AX	106	1/1	0.90	0.10	64,64,64,64	0
56	MG	DA	3068	1/1	0.90	0.12	52,52,52,52	0
56	MG	AA	3099	1/1	0.90	0.20	49,49,49,49	0
56	MG	CA	3072	1/1	0.90	0.20	57,57,57,57	0
56	MG	BA	3283	1/1	0.90	0.23	61,61,61,61	0
56	MG	BA	3571	1/1	0.90	0.12	48,48,48,48	0
56	MG	DA	3079	1/1	0.90	0.09	44,44,44,44	0
56	MG	DA	3444	1/1	0.90	0.18	43,43,43,43	0
56	MG	DA	3445	1/1	0.90	0.34	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	DA	3447	1/1	0.90	0.13	56,56,56,56	0
56	MG	BA	3006	1/1	0.90	0.10	46,46,46,46	0
56	MG	DA	3452	1/1	0.90	0.22	64,64,64,64	0
56	MG	BA	3105	1/1	0.90	0.28	54,54,54,54	0
56	MG	BA	3591	1/1	0.90	0.13	38,38,38,38	0
56	MG	BB	3003	1/1	0.90	0.14	40,40,40,40	0
56	MG	DA	3093	1/1	0.90	0.14	51,51,51,51	0
56	MG	AA	3100	1/1	0.90	0.19	43,43,43,43	0
56	MG	BB	3006	1/1	0.90	0.21	34,34,34,34	0
56	MG	AA	3102	1/1	0.90	0.20	68,68,68,68	0
56	MG	CA	3108	1/1	0.90	0.11	45,45,45,45	0
56	MG	BA	3114	1/1	0.90	0.25	46,46,46,46	0
56	MG	DA	3495	1/1	0.90	0.09	53,53,53,53	0
56	MG	DA	3106	1/1	0.90	0.28	45,45,45,45	0
56	MG	BA	3118	1/1	0.90	0.22	53,53,53,53	0
56	MG	BA	3299	1/1	0.90	0.25	56,56,56,56	0
56	MG	BA	3300	1/1	0.90	0.18	48,48,48,48	0
56	MG	DA	3513	1/1	0.90	0.12	58,58,58,58	0
56	MG	AA	3013	1/1	0.90	0.07	75,75,75,75	0
56	MG	DA	3523	1/1	0.90	0.08	47,47,47,47	0
56	MG	BD	311	1/1	0.90	0.29	53,53,53,53	0
56	MG	BF	303	1/1	0.90	0.18	42,42,42,42	0
56	MG	AA	3107	1/1	0.90	0.21	44,44,44,44	0
56	MG	BA	3632	1/1	0.90	0.13	55,55,55,55	0
56	MG	BG	3004	1/1	0.90	0.14	53,53,53,53	0
56	MG	AA	3001	1/1	0.90	0.19	74,74,74,74	0
56	MG	BU	202	1/1	0.90	0.48	41,41,41,41	0
56	MG	CA	3126	1/1	0.90	0.11	56,56,56,56	0
56	MG	BA	3331	1/1	0.90	0.12	61,61,61,61	0
56	MG	DA	3134	1/1	0.90	0.14	37,37,37,37	0
56	MG	DA	3135	1/1	0.90	0.15	58,58,58,58	0
56	MG	BW	3005	1/1	0.90	0.16	38,38,38,38	0
56	MG	AA	3113	1/1	0.90	0.16	56,56,56,56	0
56	MG	B1	3001	1/1	0.90	0.46	63,63,63,63	0
56	MG	B2	101	1/1	0.90	0.09	34,34,34,34	0
56	MG	BA	3209	1/1	0.90	0.23	39,39,39,39	0
56	MG	BA	3357	1/1	0.90	0.16	45,45,45,45	0
56	MG	DA	3571	1/1	0.90	0.17	57,57,57,57	0
56	MG	BA	3135	1/1	0.90	0.23	57,57,57,57	0
56	MG	BA	3643	1/1	0.90	0.11	59,59,59,59	0
56	MG	AA	3009	1/1	0.90	0.29	71,71,71,71	0
56	MG	DA	3172	1/1	0.90	0.21	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3175	1/1	0.90	0.20	52,52,52,52	0
56	MG	DA	3595	1/1	0.90	0.14	53,53,53,53	0
56	MG	DA	3180	1/1	0.90	0.25	47,47,47,47	0
56	MG	BA	3214	1/1	0.90	0.17	37,37,37,37	0
56	MG	DA	3600	1/1	0.90	0.13	73,73,73,73	0
56	MG	CA	3015	1/1	0.90	0.15	53,53,53,53	0
56	MG	BA	3376	1/1	0.90	0.20	35,35,35,35	0
56	MG	DA	3205	1/1	0.90	0.15	41,41,41,41	0
56	MG	AX	102	1/1	0.90	0.14	66,66,66,66	0
56	MG	CA	3155	1/1	0.90	0.08	71,71,71,71	0
56	MG	BA	3144	1/1	0.90	0.11	52,52,52,52	0
56	MG	BA	3230	1/1	0.90	0.30	70,70,70,70	0
56	MG	DA	3236	1/1	0.90	0.08	38,38,38,38	0
56	MG	AA	3047	1/1	0.90	0.23	59,59,59,59	0
56	MG	AA	3085	1/1	0.90	0.24	57,57,57,57	0
56	MG	CA	3031	1/1	0.90	0.34	55,55,55,55	0
56	MG	BA	3070	1/1	0.90	0.10	46,46,46,46	0
56	MG	AA	3135	1/1	0.90	0.17	49,49,49,49	0
56	MG	BA	3676	1/1	0.90	0.09	63,63,63,63	0
56	MG	DA	3256	1/1	0.90	0.14	41,41,41,41	0
56	MG	CA	3036	1/1	0.90	0.12	56,56,56,56	0
56	MG	DA	3278	1/1	0.90	0.08	39,39,39,39	0
56	MG	CA	3037	1/1	0.90	0.13	45,45,45,45	0
56	MG	DA	3646	1/1	0.90	0.09	42,42,42,42	0
56	MG	BA	3251	1/1	0.90	0.07	45,45,45,45	0
56	MG	DB	3002	1/1	0.90	0.23	72,72,72,72	0
56	MG	BA	3477	1/1	0.90	0.18	52,52,52,52	0
56	MG	DB	3004	1/1	0.90	0.14	56,56,56,56	0
56	MG	BA	3252	1/1	0.90	0.28	65,65,65,65	0
56	MG	BA	3499	1/1	0.90	0.23	50,50,50,50	0
56	MG	BA	3696	1/1	0.90	0.13	36,36,36,36	0
56	MG	DB	3012	1/1	0.90	0.23	50,50,50,50	0
56	MG	DE	303	1/1	0.90	0.14	36,36,36,36	0
56	MG	CA	3047	1/1	0.90	0.14	56,56,56,56	0
56	MG	BA	3697	1/1	0.90	0.14	63,63,63,63	0
56	MG	BA	3253	1/1	0.90	0.31	63,63,63,63	0
56	MG	BA	3512	1/1	0.90	0.13	42,42,42,42	0
56	MG	BA	3255	1/1	0.90	0.18	53,53,53,53	0
56	MG	BA	3164	1/1	0.90	0.18	57,57,57,57	0
56	MG	DA	3036	1/1	0.90	0.11	35,35,35,35	0
56	MG	BA	3261	1/1	0.90	0.25	45,45,45,45	0
56	MG	D8	5001	1/1	0.90	0.21	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	3353	1/1	0.90	0.16	54,54,54,54	0
56	MG	BA	3535	1/1	0.90	0.16	42,42,42,42	0
56	MG	BA	3167	1/1	0.90	0.42	50,50,50,50	0
56	MG	DA	3055	1/1	0.90	0.21	55,55,55,55	0
56	MG	AA	3048	1/1	0.91	0.11	52,52,52,52	0
56	MG	BA	3672	1/1	0.91	0.15	63,63,63,63	0
56	MG	DA	3012	1/1	0.91	0.18	52,52,52,52	0
56	MG	AA	3130	1/1	0.91	0.20	55,55,55,55	0
56	MG	BA	3231	1/1	0.91	0.18	50,50,50,50	0
56	MG	DA	3354	1/1	0.91	0.06	39,39,39,39	0
56	MG	DA	3023	1/1	0.91	0.36	64,64,64,64	0
56	MG	DA	3024	1/1	0.91	0.30	59,59,59,59	0
56	MG	DA	3363	1/1	0.91	0.16	56,56,56,56	0
56	MG	BA	3139	1/1	0.91	0.22	50,50,50,50	0
56	MG	AA	3191	1/1	0.91	0.10	56,56,56,56	0
56	MG	BA	3466	1/1	0.91	0.09	53,53,53,53	0
56	MG	BA	3242	1/1	0.91	0.23	45,45,45,45	0
56	MG	AA	3118	1/1	0.91	0.27	39,39,39,39	0
56	MG	AA	3150	1/1	0.91	0.27	67,67,67,67	0
56	MG	DA	3054	1/1	0.91	0.13	34,34,34,34	0
56	MG	DA	3416	1/1	0.91	0.19	34,34,34,34	0
56	MG	BA	3150	1/1	0.91	0.20	42,42,42,42	0
56	MG	DA	3419	1/1	0.91	0.09	53,53,53,53	0
56	MG	BA	3478	1/1	0.91	0.20	36,36,36,36	0
56	MG	BA	3154	1/1	0.91	0.17	55,55,55,55	0
56	MG	DA	3432	1/1	0.91	0.17	37,37,37,37	0
56	MG	DA	3435	1/1	0.91	0.12	56,56,56,56	0
56	MG	DA	3061	1/1	0.91	0.21	47,47,47,47	0
56	MG	DA	3437	1/1	0.91	0.20	46,46,46,46	0
56	MG	AA	3197	1/1	0.91	0.17	64,64,64,64	0
56	MG	CA	3058	1/1	0.91	0.08	36,36,36,36	0
56	MG	BA	3072	1/1	0.91	0.27	45,45,45,45	0
56	MG	BA	3082	1/1	0.91	0.21	54,54,54,54	0
56	MG	DA	3071	1/1	0.91	0.30	46,46,46,46	0
56	MG	CA	3062	1/1	0.91	0.33	67,67,67,67	0
56	MG	CA	3063	1/1	0.91	0.08	57,57,57,57	0
56	MG	DA	3077	1/1	0.91	0.13	48,48,48,48	0
56	MG	DA	3458	1/1	0.91	0.12	47,47,47,47	0
56	MG	BA	3163	1/1	0.91	0.14	50,50,50,50	0
56	MG	AA	3120	1/1	0.91	0.23	53,53,53,53	0
56	MG	BA	3263	1/1	0.91	0.33	35,35,35,35	0
56	MG	AA	3042	1/1	0.91	0.18	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3099	1/1	0.91	0.33	55,55,55,55	0
56	MG	BA	3279	1/1	0.91	0.23	60,60,60,60	0
56	MG	DA	3477	1/1	0.91	0.28	35,35,35,35	0
56	MG	DA	3483	1/1	0.91	0.13	55,55,55,55	0
56	MG	DA	3485	1/1	0.91	0.09	44,44,44,44	0
56	MG	DA	3487	1/1	0.91	0.07	44,44,44,44	0
56	MG	BA	3718	1/1	0.91	0.12	52,52,52,52	0
56	MG	BA	3552	1/1	0.91	0.18	30,30,30,30	0
56	MG	BA	3725	1/1	0.91	0.07	29,29,29,29	0
56	MG	DA	3498	1/1	0.91	0.15	75,75,75,75	0
56	MG	DA	3097	1/1	0.91	0.15	58,58,58,58	0
56	MG	CA	3075	1/1	0.91	0.26	76,76,76,76	0
56	MG	BA	3561	1/1	0.91	0.16	39,39,39,39	0
56	MG	DA	3507	1/1	0.91	0.17	53,53,53,53	0
56	MG	BA	3280	1/1	0.91	0.26	44,44,44,44	0
56	MG	AA	3168	1/1	0.91	0.16	80,80,80,80	0
56	MG	DA	3515	1/1	0.91	0.14	57,57,57,57	0
56	MG	DA	3521	1/1	0.91	0.11	46,46,46,46	0
56	MG	CA	3088	1/1	0.91	0.10	49,49,49,49	0
56	MG	BA	3174	1/1	0.91	0.07	52,52,52,52	0
56	MG	CA	3099	1/1	0.91	0.21	64,64,64,64	0
56	MG	DA	3111	1/1	0.91	0.21	67,67,67,67	0
56	MG	AA	3083	1/1	0.91	0.16	56,56,56,56	0
56	MG	BB	3004	1/1	0.91	0.22	57,57,57,57	0
56	MG	BA	3007	1/1	0.91	0.13	55,55,55,55	0
56	MG	BA	3109	1/1	0.91	0.38	62,62,62,62	0
56	MG	BA	3181	1/1	0.91	0.11	37,37,37,37	0
56	MG	BA	3182	1/1	0.91	0.19	43,43,43,43	0
56	MG	AA	3125	1/1	0.91	0.14	56,56,56,56	0
56	MG	DA	3542	1/1	0.91	0.10	44,44,44,44	0
56	MG	DA	3543	1/1	0.91	0.11	52,52,52,52	0
56	MG	DA	3547	1/1	0.91	0.11	47,47,47,47	0
56	MG	BA	3112	1/1	0.91	0.21	46,46,46,46	0
56	MG	CA	3113	1/1	0.91	0.23	84,84,84,84	0
56	MG	BA	3185	1/1	0.91	0.16	40,40,40,40	0
56	MG	DA	3558	1/1	0.91	0.16	77,77,77,77	0
56	MG	DA	3559	1/1	0.91	0.12	47,47,47,47	0
56	MG	BA	3612	1/1	0.91	0.14	41,41,41,41	0
56	MG	BA	3614	1/1	0.91	0.10	48,48,48,48	0
56	MG	BA	3311	1/1	0.91	0.26	52,52,52,52	0
56	MG	DA	3146	1/1	0.91	0.22	34,34,34,34	0
56	MG	DA	3152	1/1	0.91	0.15	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	AA	3084	1/1	0.91	0.20	71,71,71,71	0
56	MG	BA	3621	1/1	0.91	0.11	57,57,57,57	0
56	MG	BA	3318	1/1	0.91	0.13	30,30,30,30	0
56	MG	BN	3001	1/1	0.91	0.13	65,65,65,65	0
56	MG	BA	3627	1/1	0.91	0.21	50,50,50,50	0
56	MG	DA	3594	1/1	0.91	0.14	63,63,63,63	0
56	MG	BA	3629	1/1	0.91	0.08	51,51,51,51	0
56	MG	BU	208	1/1	0.91	0.14	42,42,42,42	0
56	MG	BA	3324	1/1	0.91	0.19	54,54,54,54	0
56	MG	BA	3116	1/1	0.91	0.23	30,30,30,30	0
56	MG	BA	3633	1/1	0.91	0.21	54,54,54,54	0
56	MG	BZ	3001	1/1	0.91	0.12	47,47,47,47	0
56	MG	BA	3117	1/1	0.91	0.14	37,37,37,37	0
56	MG	AA	3075	1/1	0.91	0.11	50,50,50,50	0
56	MG	AA	3026	1/1	0.91	0.17	52,52,52,52	0
56	MG	DA	3197	1/1	0.91	0.23	43,43,43,43	0
56	MG	DA	3198	1/1	0.91	0.18	34,34,34,34	0
56	MG	DA	3201	1/1	0.91	0.09	43,43,43,43	0
56	MG	DA	3203	1/1	0.91	0.06	48,48,48,48	0
56	MG	B7	104	1/1	0.91	0.17	55,55,55,55	0
56	MG	DA	3209	1/1	0.91	0.11	44,44,44,44	0
56	MG	DA	3622	1/1	0.91	0.10	40,40,40,40	0
56	MG	B8	5001	1/1	0.91	0.09	62,62,62,62	0
56	MG	CA	3149	1/1	0.91	0.10	81,81,81,81	0
56	MG	DA	3222	1/1	0.91	0.09	45,45,45,45	0
56	MG	DA	3636	1/1	0.91	0.18	64,64,64,64	0
56	MG	BA	3342	1/1	0.91	0.19	46,46,46,46	0
56	MG	BA	3343	1/1	0.91	0.09	37,37,37,37	0
56	MG	AA	3181	1/1	0.91	0.18	46,46,46,46	0
56	MG	AA	3182	1/1	0.91	0.09	48,48,48,48	0
56	MG	BA	3368	1/1	0.91	0.12	22,22,22,22	0
56	MG	DA	3655	1/1	0.91	0.20	62,62,62,62	0
56	MG	BA	3126	1/1	0.91	0.18	47,47,47,47	0
56	MG	CA	3018	1/1	0.91	0.07	55,55,55,55	0
56	MG	CA	3019	1/1	0.91	0.09	62,62,62,62	0
56	MG	CA	3021	1/1	0.91	0.18	54,54,54,54	0
56	MG	BA	3649	1/1	0.91	0.22	43,43,43,43	0
56	MG	CA	3024	1/1	0.91	0.27	57,57,57,57	0
56	MG	DA	3273	1/1	0.91	0.14	32,32,32,32	0
56	MG	CA	3163	1/1	0.91	0.08	60,60,60,60	0
56	MG	BA	3131	1/1	0.91	0.09	31,31,31,31	0
56	MG	DE	305	1/1	0.91	0.18	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3654	1/1	0.91	0.17	49,49,49,49	0
56	MG	DA	3285	1/1	0.91	0.11	41,41,41,41	0
56	MG	DP	202	1/1	0.91	0.18	54,54,54,54	0
56	MG	DQ	3002	1/1	0.91	0.17	51,51,51,51	0
56	MG	CA	3169	1/1	0.91	0.16	52,52,52,52	0
56	MG	BA	3656	1/1	0.91	0.12	70,70,70,70	0
56	MG	BA	3047	1/1	0.91	0.22	30,30,30,30	0
56	MG	DA	3299	1/1	0.91	0.08	35,35,35,35	0
56	MG	BA	3390	1/1	0.91	0.12	40,40,40,40	0
56	MG	BA	3666	1/1	0.91	0.33	54,54,54,54	0
56	MG	DA	3318	1/1	0.91	0.13	47,47,47,47	0
56	MG	BA	3394	1/1	0.91	0.20	45,45,45,45	0
56	MG	BA	3395	1/1	0.91	0.22	56,56,56,56	0
56	MG	DA	3331	1/1	0.91	0.11	27,27,27,27	0
56	MG	DA	3003	1/1	0.91	0.08	43,43,43,43	0
56	MG	BA	3309	1/1	0.92	0.18	43,43,43,43	0
56	MG	BA	3310	1/1	0.92	0.14	59,59,59,59	0
56	MG	CA	3079	1/1	0.92	0.07	37,37,37,37	0
56	MG	DA	3431	1/1	0.92	0.16	56,56,56,56	0
56	MG	BA	3074	1/1	0.92	0.06	38,38,38,38	0
56	MG	BA	3313	1/1	0.92	0.14	56,56,56,56	0
56	MG	DA	3090	1/1	0.92	0.19	59,59,59,59	0
56	MG	DA	3092	1/1	0.92	0.19	48,48,48,48	0
56	MG	BA	3315	1/1	0.92	0.21	43,43,43,43	0
56	MG	BA	3001	1/1	0.92	0.23	52,52,52,52	0
56	MG	BA	3145	1/1	0.92	0.14	40,40,40,40	0
56	MG	BB	3016	1/1	0.92	0.14	24,24,24,24	0
56	MG	BA	3599	1/1	0.92	0.09	56,56,56,56	0
56	MG	DA	3449	1/1	0.92	0.25	46,46,46,46	0
56	MG	CA	3104	1/1	0.92	0.16	60,60,60,60	0
56	MG	DA	3454	1/1	0.92	0.08	52,52,52,52	0
56	MG	DA	3455	1/1	0.92	0.14	53,53,53,53	0
56	MG	BA	3600	1/1	0.92	0.12	54,54,54,54	0
56	MG	BA	3084	1/1	0.92	0.35	47,47,47,47	0
56	MG	BA	3004	1/1	0.92	0.18	45,45,45,45	0
56	MG	BA	3610	1/1	0.92	0.61	49,49,49,49	0
56	MG	DA	3461	1/1	0.92	0.09	40,40,40,40	0
56	MG	AA	3038	1/1	0.92	0.37	64,64,64,64	0
56	MG	AA	3187	1/1	0.92	0.08	72,72,72,72	0
56	MG	AA	3108	1/1	0.92	0.15	72,72,72,72	0
56	MG	BA	3340	1/1	0.92	0.17	57,57,57,57	0
56	MG	AA	3111	1/1	0.92	0.08	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3235	1/1	0.92	0.26	44,44,44,44	0
56	MG	BN	3002	1/1	0.92	0.10	52,52,52,52	0
56	MG	DA	3484	1/1	0.92	0.09	47,47,47,47	0
56	MG	BN	3005	1/1	0.92	0.31	63,63,63,63	0
56	MG	BP	203	1/1	0.92	0.58	39,39,39,39	0
56	MG	BA	3161	1/1	0.92	0.13	50,50,50,50	0
56	MG	DA	3126	1/1	0.92	0.14	61,61,61,61	0
56	MG	BR	201	1/1	0.92	0.14	44,44,44,44	0
56	MG	BR	203	1/1	0.92	0.15	48,48,48,48	0
56	MG	AA	3222	1/1	0.92	0.20	64,64,64,64	0
56	MG	DA	3502	1/1	0.92	0.16	48,48,48,48	0
56	MG	BA	3026	1/1	0.92	0.07	36,36,36,36	0
56	MG	BV	3002	1/1	0.92	0.28	42,42,42,42	0
56	MG	BA	3246	1/1	0.92	0.22	38,38,38,38	0
56	MG	BW	3002	1/1	0.92	0.16	34,34,34,34	0
56	MG	BA	3371	1/1	0.92	0.13	38,38,38,38	0
56	MG	BA	3166	1/1	0.92	0.11	41,41,41,41	0
56	MG	DA	3517	1/1	0.92	0.10	47,47,47,47	0
56	MG	AA	3140	1/1	0.92	0.10	65,65,65,65	0
56	MG	AA	3173	1/1	0.92	0.07	37,37,37,37	0
56	MG	AA	3069	1/1	0.92	0.11	77,77,77,77	0
56	MG	BA	3043	1/1	0.92	0.20	33,33,33,33	0
56	MG	BA	3405	1/1	0.92	0.11	57,57,57,57	0
56	MG	BA	3425	1/1	0.92	0.15	42,42,42,42	0
56	MG	DA	3530	1/1	0.92	0.12	57,57,57,57	0
56	MG	BA	3254	1/1	0.92	0.11	40,40,40,40	0
56	MG	CA	3151	1/1	0.92	0.10	80,80,80,80	0
56	MG	DA	3179	1/1	0.92	0.24	36,36,36,36	0
56	MG	BA	3044	1/1	0.92	0.20	32,32,32,32	0
56	MG	BA	3046	1/1	0.92	0.13	52,52,52,52	0
56	MG	BA	3453	1/1	0.92	0.21	54,54,54,54	0
56	MG	DA	3194	1/1	0.92	0.37	65,65,65,65	0
56	MG	DA	3195	1/1	0.92	0.13	51,51,51,51	0
56	MG	DA	3544	1/1	0.92	0.32	42,42,42,42	0
56	MG	BA	3455	1/1	0.92	0.17	47,47,47,47	0
56	MG	CA	3014	1/1	0.92	0.23	56,56,56,56	0
56	MG	BA	3179	1/1	0.92	0.31	53,53,53,53	0
56	MG	DA	3200	1/1	0.92	0.22	48,48,48,48	0
56	MG	BA	3658	1/1	0.92	0.17	62,62,62,62	0
56	MG	BA	3660	1/1	0.92	0.16	58,58,58,58	0
56	MG	AA	3198	1/1	0.92	0.09	73,73,73,73	0
56	MG	AA	3095	1/1	0.92	0.23	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	3664	1/1	0.92	0.19	63,63,63,63	0
56	MG	BA	3665	1/1	0.92	0.22	39,39,39,39	0
56	MG	DA	3570	1/1	0.92	0.17	67,67,67,67	0
56	MG	BA	3061	1/1	0.92	0.22	44,44,44,44	0
56	MG	AA	3123	1/1	0.92	0.26	38,38,38,38	0
56	MG	DA	3225	1/1	0.92	0.17	64,64,64,64	0
56	MG	BA	3470	1/1	0.92	0.11	44,44,44,44	0
56	MG	DA	3231	1/1	0.92	0.09	45,45,45,45	0
56	MG	DA	3235	1/1	0.92	0.18	46,46,46,46	0
56	MG	BA	3273	1/1	0.92	0.30	35,35,35,35	0
56	MG	BA	3476	1/1	0.92	0.08	47,47,47,47	0
56	MG	AA	3204	1/1	0.92	0.13	70,70,70,70	0
56	MG	CT	3001	1/1	0.92	0.19	57,57,57,57	0
56	MG	AA	3096	1/1	0.92	0.21	52,52,52,52	0
56	MG	DA	3250	1/1	0.92	0.11	42,42,42,42	0
56	MG	BA	3481	1/1	0.92	0.15	41,41,41,41	0
56	MG	DA	3604	1/1	0.92	0.07	50,50,50,50	0
56	MG	DA	3252	1/1	0.92	0.21	36,36,36,36	0
56	MG	DA	3254	1/1	0.92	0.12	52,52,52,52	0
56	MG	BA	3677	1/1	0.92	0.14	47,47,47,47	0
56	MG	DA	3609	1/1	0.92	0.14	49,49,49,49	0
56	MG	DA	3611	1/1	0.92	0.16	51,51,51,51	0
56	MG	DA	3612	1/1	0.92	0.17	46,46,46,46	0
56	MG	AA	3012	1/1	0.92	0.13	58,58,58,58	0
56	MG	DA	3615	1/1	0.92	0.08	57,57,57,57	0
56	MG	BA	3682	1/1	0.92	0.28	50,50,50,50	0
56	MG	DA	3268	1/1	0.92	0.13	42,42,42,42	0
56	MG	DA	3270	1/1	0.92	0.14	55,55,55,55	0
56	MG	BA	3487	1/1	0.92	0.18	47,47,47,47	0
56	MG	DA	3015	1/1	0.92	0.18	54,54,54,54	0
56	MG	DA	3018	1/1	0.92	0.17	41,41,41,41	0
56	MG	BA	3284	1/1	0.92	0.43	76,76,76,76	0
56	MG	BA	3502	1/1	0.92	0.17	59,59,59,59	0
56	MG	BA	3503	1/1	0.92	0.14	56,56,56,56	0
56	MG	DA	3631	1/1	0.92	0.18	49,49,49,49	0
56	MG	DA	3634	1/1	0.92	0.13	33,33,33,33	0
56	MG	CA	3045	1/1	0.92	0.23	60,60,60,60	0
56	MG	BA	3505	1/1	0.92	0.12	45,45,45,45	0
56	MG	DA	3030	1/1	0.92	0.16	49,49,49,49	0
56	MG	DA	3033	1/1	0.92	0.15	41,41,41,41	0
56	MG	DA	3310	1/1	0.92	0.17	30,30,30,30	0
56	MG	BA	3288	1/1	0.92	0.11	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3648	1/1	0.92	0.12	43,43,43,43	0
56	MG	CA	3049	1/1	0.92	0.18	51,51,51,51	0
56	MG	BA	3187	1/1	0.92	0.11	53,53,53,53	0
56	MG	DA	3325	1/1	0.92	0.16	31,31,31,31	0
56	MG	BA	3190	1/1	0.92	0.08	42,42,42,42	0
56	MG	BA	3518	1/1	0.92	0.09	52,52,52,52	0
56	MG	DA	3048	1/1	0.92	0.21	29,29,29,29	0
56	MG	DA	3049	1/1	0.92	0.13	56,56,56,56	0
56	MG	BA	3191	1/1	0.92	0.09	56,56,56,56	0
56	MG	BA	3524	1/1	0.92	0.09	50,50,50,50	0
56	MG	BA	3195	1/1	0.92	0.17	37,37,37,37	0
56	MG	DE	304	1/1	0.92	0.10	30,30,30,30	0
56	MG	BA	3196	1/1	0.92	0.17	45,45,45,45	0
56	MG	BA	3295	1/1	0.92	0.08	30,30,30,30	0
56	MG	BA	3540	1/1	0.92	0.18	29,29,29,29	0
56	MG	DN	5001	1/1	0.92	0.07	71,71,71,71	0
56	MG	DA	3064	1/1	0.92	0.10	55,55,55,55	0
56	MG	BA	3546	1/1	0.92	0.17	46,46,46,46	0
56	MG	AX	107	1/1	0.92	0.08	82,82,82,82	0
56	MG	BA	3721	1/1	0.92	0.22	56,56,56,56	0
56	MG	DU	3001	1/1	0.92	0.19	61,61,61,61	0
56	MG	DA	3378	1/1	0.92	0.08	38,38,38,38	0
56	MG	DA	3380	1/1	0.92	0.07	40,40,40,40	0
56	MG	DA	3070	1/1	0.92	0.24	51,51,51,51	0
56	MG	BA	3297	1/1	0.92	0.13	43,43,43,43	0
56	MG	BA	3138	1/1	0.92	0.23	54,54,54,54	0
56	MG	AA	3154	1/1	0.92	0.12	60,60,60,60	0
56	MG	DA	3075	1/1	0.92	0.17	45,45,45,45	0
56	MG	BA	3737	1/1	0.92	0.11	39,39,39,39	0
56	MG	BA	3207	1/1	0.92	0.22	44,44,44,44	0
56	MG	BA	3680	1/1	0.93	0.15	62,62,62,62	0
56	MG	CA	3010	1/1	0.93	0.12	34,34,34,34	0
56	MG	DA	3129	1/1	0.93	0.10	45,45,45,45	0
56	MG	AA	3159	1/1	0.93	0.17	57,57,57,57	0
56	MG	DA	3132	1/1	0.93	0.21	47,47,47,47	0
56	MG	BA	3550	1/1	0.93	0.11	32,32,32,32	0
56	MG	CA	3016	1/1	0.93	0.14	72,72,72,72	0
56	MG	BA	3359	1/1	0.93	0.12	63,63,63,63	0
56	MG	BA	3687	1/1	0.93	0.14	59,59,59,59	0
56	MG	DA	3149	1/1	0.93	0.08	47,47,47,47	0
56	MG	AA	3007	1/1	0.93	0.09	68,68,68,68	0
56	MG	AA	3188	1/1	0.93	0.18	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	DA	3154	1/1	0.93	0.31	45,45,45,45	0
56	MG	AA	3055	1/1	0.93	0.23	56,56,56,56	0
56	MG	DA	3472	1/1	0.93	0.09	38,38,38,38	0
56	MG	DA	3473	1/1	0.93	0.17	50,50,50,50	0
56	MG	DA	3156	1/1	0.93	0.32	38,38,38,38	0
56	MG	BA	3134	1/1	0.93	0.13	34,34,34,34	0
56	MG	DA	3478	1/1	0.93	0.06	58,58,58,58	0
56	MG	DA	3161	1/1	0.93	0.18	51,51,51,51	0
56	MG	BA	3375	1/1	0.93	0.08	44,44,44,44	0
56	MG	DA	3163	1/1	0.93	0.15	52,52,52,52	0
56	MG	BA	3008	1/1	0.93	0.14	30,30,30,30	0
56	MG	BA	3012	1/1	0.93	0.07	34,34,34,34	0
56	MG	DA	3493	1/1	0.93	0.12	38,38,38,38	0
56	MG	BA	3590	1/1	0.93	0.12	23,23,23,23	0
56	MG	BA	3392	1/1	0.93	0.13	53,53,53,53	0
56	MG	BA	3593	1/1	0.93	0.08	51,51,51,51	0
56	MG	DA	3499	1/1	0.93	0.19	44,44,44,44	0
56	MG	BA	3277	1/1	0.93	0.27	45,45,45,45	0
56	MG	AA	3166	1/1	0.93	0.14	55,55,55,55	0
56	MG	BA	3075	1/1	0.93	0.20	36,36,36,36	0
56	MG	DA	3184	1/1	0.93	0.15	54,54,54,54	0
56	MG	BA	3199	1/1	0.93	0.15	31,31,31,31	0
56	MG	DA	3509	1/1	0.93	0.07	57,57,57,57	0
56	MG	BA	3201	1/1	0.93	0.21	36,36,36,36	0
56	MG	CE	3002	1/1	0.93	0.08	69,69,69,69	0
56	MG	BA	3286	1/1	0.93	0.18	42,42,42,42	0
56	MG	DA	3516	1/1	0.93	0.23	54,54,54,54	0
56	MG	BA	3607	1/1	0.93	0.15	74,74,74,74	0
56	MG	DA	3519	1/1	0.93	0.07	39,39,39,39	0
56	MG	DA	3520	1/1	0.93	0.08	38,38,38,38	0
56	MG	BA	3435	1/1	0.93	0.11	59,59,59,59	0
56	MG	BA	3444	1/1	0.93	0.15	29,29,29,29	0
56	MG	DA	3002	1/1	0.93	0.20	47,47,47,47	0
56	MG	CA	3044	1/1	0.93	0.14	52,52,52,52	0
56	MG	DA	3527	1/1	0.93	0.15	58,58,58,58	0
56	MG	BA	3141	1/1	0.93	0.26	43,43,43,43	0
56	MG	BA	3734	1/1	0.93	0.14	42,42,42,42	0
56	MG	BA	3735	1/1	0.93	0.08	47,47,47,47	0
56	MG	BA	3142	1/1	0.93	0.15	57,57,57,57	0
56	MG	DA	3214	1/1	0.93	0.13	48,48,48,48	0
56	MG	DA	3215	1/1	0.93	0.25	43,43,43,43	0
56	MG	DA	3216	1/1	0.93	0.11	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3017	1/1	0.93	0.09	51,51,51,51	0
56	MG	BA	3618	1/1	0.93	0.18	37,37,37,37	0
56	MG	DA	3541	1/1	0.93	0.09	55,55,55,55	0
56	MG	DA	3223	1/1	0.93	0.09	41,41,41,41	0
56	MG	BA	3619	1/1	0.93	0.18	42,42,42,42	0
56	MG	BA	3081	1/1	0.93	0.21	44,44,44,44	0
56	MG	DA	3227	1/1	0.93	0.10	40,40,40,40	0
56	MG	BB	3002	1/1	0.93	0.16	49,49,49,49	0
56	MG	DA	3551	1/1	0.93	0.07	43,43,43,43	0
56	MG	CA	3057	1/1	0.93	0.14	40,40,40,40	0
56	MG	DA	3555	1/1	0.93	0.13	43,43,43,43	0
56	MG	BA	3458	1/1	0.93	0.14	46,46,46,46	0
56	MG	BA	3622	1/1	0.93	0.18	32,32,32,32	0
56	MG	DA	3031	1/1	0.93	0.15	60,60,60,60	0
56	MG	DA	3032	1/1	0.93	0.06	36,36,36,36	0
56	MG	BA	3624	1/1	0.93	0.11	73,73,73,73	0
56	MG	BA	3017	1/1	0.93	0.21	38,38,38,38	0
56	MG	DA	3249	1/1	0.93	0.10	25,25,25,25	0
56	MG	DA	3569	1/1	0.93	0.07	54,54,54,54	0
56	MG	BB	3009	1/1	0.93	0.12	49,49,49,49	0
56	MG	BB	3011	1/1	0.93	0.13	45,45,45,45	0
56	MG	DA	3575	1/1	0.93	0.16	51,51,51,51	0
56	MG	DA	3578	1/1	0.93	0.21	68,68,68,68	0
56	MG	BA	3083	1/1	0.93	0.14	33,33,33,33	0
56	MG	DA	3041	1/1	0.93	0.20	54,54,54,54	0
56	MG	BA	3018	1/1	0.93	0.10	54,54,54,54	0
56	MG	AA	3036	1/1	0.93	0.14	69,69,69,69	0
56	MG	DA	3259	1/1	0.93	0.09	45,45,45,45	0
56	MG	BA	3468	1/1	0.93	0.19	45,45,45,45	0
56	MG	BA	3093	1/1	0.93	0.35	52,52,52,52	0
56	MG	AA	3169	1/1	0.93	0.08	62,62,62,62	0
56	MG	BA	3217	1/1	0.93	0.10	59,59,59,59	0
56	MG	DA	3276	1/1	0.93	0.07	26,26,26,26	0
56	MG	DA	3601	1/1	0.93	0.11	50,50,50,50	0
56	MG	DA	3058	1/1	0.93	0.15	56,56,56,56	0
56	MG	BA	3098	1/1	0.93	0.25	42,42,42,42	0
56	MG	BD	312	1/1	0.93	0.31	72,72,72,72	0
56	MG	DA	3284	1/1	0.93	0.12	45,45,45,45	0
56	MG	BE	307	1/1	0.93	0.20	51,51,51,51	0
56	MG	AA	3006	1/1	0.93	0.10	84,84,84,84	0
56	MG	DA	3288	1/1	0.93	0.10	68,68,68,68	0
56	MG	DA	3065	1/1	0.93	0.14	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3305	1/1	0.93	0.10	48,48,48,48	0
56	MG	BA	3229	1/1	0.93	0.11	50,50,50,50	0
56	MG	DA	3302	1/1	0.93	0.12	42,42,42,42	0
56	MG	BA	3482	1/1	0.93	0.11	59,59,59,59	0
56	MG	BA	3100	1/1	0.93	0.15	42,42,42,42	0
56	MG	BA	3647	1/1	0.93	0.08	40,40,40,40	0
56	MG	BN	3003	1/1	0.93	0.14	67,67,67,67	0
56	MG	BA	3101	1/1	0.93	0.31	47,47,47,47	0
56	MG	CA	3105	1/1	0.93	0.10	59,59,59,59	0
56	MG	DA	3624	1/1	0.93	0.09	54,54,54,54	0
56	MG	DA	3625	1/1	0.93	0.07	48,48,48,48	0
56	MG	AN	101	1/1	0.93	0.08	64,64,64,64	0
56	MG	AA	3101	1/1	0.93	0.20	61,61,61,61	0
56	MG	BQ	3004	1/1	0.93	0.11	41,41,41,41	0
56	MG	DA	3081	1/1	0.93	0.20	56,56,56,56	0
56	MG	BA	3316	1/1	0.93	0.14	51,51,51,51	0
56	MG	BA	3504	1/1	0.93	0.18	54,54,54,54	0
56	MG	BA	3657	1/1	0.93	0.11	29,29,29,29	0
56	MG	BA	3037	1/1	0.93	0.24	39,39,39,39	0
56	MG	BA	3038	1/1	0.93	0.20	51,51,51,51	0
56	MG	DA	3091	1/1	0.93	0.41	50,50,50,50	0
56	MG	AA	3146	1/1	0.93	0.08	55,55,55,55	0
56	MG	BA	3042	1/1	0.93	0.20	50,50,50,50	0
56	MG	DA	3651	1/1	0.93	0.09	48,48,48,48	0
56	MG	DA	3364	1/1	0.93	0.11	40,40,40,40	0
56	MG	BW	3004	1/1	0.93	0.27	46,46,46,46	0
56	MG	DA	3370	1/1	0.93	0.20	40,40,40,40	0
56	MG	AA	3043	1/1	0.93	0.28	63,63,63,63	0
56	MG	BA	3250	1/1	0.93	0.30	61,61,61,61	0
56	MG	BA	3336	1/1	0.93	0.14	46,46,46,46	0
56	MG	DB	3009	1/1	0.93	0.29	41,41,41,41	0
56	MG	DA	3381	1/1	0.93	0.14	68,68,68,68	0
56	MG	CA	3123	1/1	0.93	0.14	75,75,75,75	0
56	MG	DA	3100	1/1	0.93	0.13	55,55,55,55	0
56	MG	DD	303	1/1	0.93	0.54	48,48,48,48	0
56	MG	DE	302	1/1	0.93	0.15	46,46,46,46	0
56	MG	B0	106	1/1	0.93	0.06	43,43,43,43	0
56	MG	DA	3395	1/1	0.93	0.07	40,40,40,40	0
56	MG	DA	3103	1/1	0.93	0.12	52,52,52,52	0
56	MG	DA	3409	1/1	0.93	0.07	54,54,54,54	0
56	MG	AA	3124	1/1	0.93	0.17	61,61,61,61	0
56	MG	BA	3533	1/1	0.93	0.15	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DP	201	1/1	0.93	0.09	52,52,52,52	0
56	MG	B3	3403	1/1	0.93	0.12	37,37,37,37	0
56	MG	AA	3052	1/1	0.93	0.20	58,58,58,58	0
56	MG	CA	3130	1/1	0.93	0.12	59,59,59,59	0
56	MG	CA	3132	1/1	0.93	0.12	66,66,66,66	0
56	MG	B7	103	1/1	0.93	0.16	46,46,46,46	0
56	MG	AA	3116	1/1	0.93	0.33	62,62,62,62	0
56	MG	DV	203	1/1	0.93	0.18	41,41,41,41	0
56	MG	DA	3116	1/1	0.93	0.13	43,43,43,43	0
56	MG	DA	3117	1/1	0.93	0.08	46,46,46,46	0
56	MG	BA	3673	1/1	0.93	0.18	60,60,60,60	0
56	MG	BA	3539	1/1	0.93	0.11	23,23,23,23	0
58	ZN	B4	501	1/1	0.93	0.10	152,152,152,152	0
56	MG	DA	3442	1/1	0.93	0.18	58,58,58,58	0
56	MG	AA	3211	1/1	0.93	0.10	58,58,58,58	0
56	MG	BA	3544	1/1	0.93	0.12	35,35,35,35	0
56	MG	AA	3155	1/1	0.93	0.15	54,54,54,54	0
56	MG	AA	3193	1/1	0.94	0.16	65,65,65,65	0
56	MG	DA	3164	1/1	0.94	0.06	40,40,40,40	0
56	MG	BA	3211	1/1	0.94	0.08	43,43,43,43	0
56	MG	DA	3167	1/1	0.94	0.19	46,46,46,46	0
56	MG	DA	3463	1/1	0.94	0.08	32,32,32,32	0
56	MG	DA	3168	1/1	0.94	0.34	46,46,46,46	0
56	MG	AA	3153	1/1	0.94	0.14	46,46,46,46	0
56	MG	CF	3001	1/1	0.94	0.10	56,56,56,56	0
56	MG	BA	3152	1/1	0.94	0.11	52,52,52,52	0
56	MG	AA	3195	1/1	0.94	0.20	58,58,58,58	0
56	MG	DA	3173	1/1	0.94	0.12	50,50,50,50	0
56	MG	CA	3046	1/1	0.94	0.23	52,52,52,52	0
56	MG	AM	3001	1/1	0.94	0.05	76,76,76,76	0
56	MG	DA	3481	1/1	0.94	0.09	59,59,59,59	0
56	MG	DA	3482	1/1	0.94	0.06	45,45,45,45	0
56	MG	BA	3219	1/1	0.94	0.24	36,36,36,36	0
56	MG	BA	3221	1/1	0.94	0.26	55,55,55,55	0
56	MG	DA	3187	1/1	0.94	0.18	52,52,52,52	0
56	MG	DA	3486	1/1	0.94	0.07	52,52,52,52	0
56	MG	DA	3188	1/1	0.94	0.26	52,52,52,52	0
56	MG	BB	3015	1/1	0.94	0.08	35,35,35,35	0
56	MG	CA	3051	1/1	0.94	0.11	77,77,77,77	0
56	MG	DA	3192	1/1	0.94	0.16	48,48,48,48	0
56	MG	CA	3052	1/1	0.94	0.13	47,47,47,47	0
56	MG	DA	3014	1/1	0.94	0.09	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	BA	3030	1/1	0.94	0.32	26,26,26,26	0
56	MG	BA	3157	1/1	0.94	0.08	52,52,52,52	0
56	MG	BA	3635	1/1	0.94	0.07	52,52,52,52	0
56	MG	DA	3503	1/1	0.94	0.08	41,41,41,41	0
56	MG	DA	3019	1/1	0.94	0.12	32,32,32,32	0
56	MG	BD	303	1/1	0.94	0.09	35,35,35,35	0
56	MG	BA	3479	1/1	0.94	0.14	44,44,44,44	0
56	MG	AA	3109	1/1	0.94	0.13	59,59,59,59	0
56	MG	DA	3511	1/1	0.94	0.09	47,47,47,47	0
56	MG	DA	3206	1/1	0.94	0.24	36,36,36,36	0
56	MG	BA	3102	1/1	0.94	0.17	45,45,45,45	0
56	MG	AA	3175	1/1	0.94	0.13	70,70,70,70	0
56	MG	BA	3234	1/1	0.94	0.20	48,48,48,48	0
56	MG	BE	306	1/1	0.94	0.24	38,38,38,38	0
56	MG	DA	3518	1/1	0.94	0.07	40,40,40,40	0
56	MG	BA	3104	1/1	0.94	0.25	34,34,34,34	0
56	MG	DA	3218	1/1	0.94	0.12	31,31,31,31	0
56	MG	AA	3110	1/1	0.94	0.12	41,41,41,41	0
56	MG	DA	3221	1/1	0.94	0.19	56,56,56,56	0
56	MG	DA	3034	1/1	0.94	0.18	40,40,40,40	0
56	MG	CA	3068	1/1	0.94	0.16	47,47,47,47	0
56	MG	AA	3142	1/1	0.94	0.17	60,60,60,60	0
56	MG	DA	3037	1/1	0.94	0.20	37,37,37,37	0
56	MG	BG	3002	1/1	0.94	0.17	51,51,51,51	0
56	MG	DA	3229	1/1	0.94	0.13	44,44,44,44	0
56	MG	BA	3326	1/1	0.94	0.17	15,15,15,15	0
56	MG	BA	3171	1/1	0.94	0.25	42,42,42,42	0
56	MG	BA	3507	1/1	0.94	0.09	37,37,37,37	0
56	MG	DA	3535	1/1	0.94	0.09	58,58,58,58	0
56	MG	BA	3509	1/1	0.94	0.14	29,29,29,29	0
56	MG	DA	3238	1/1	0.94	0.07	37,37,37,37	0
56	MG	AA	3201	1/1	0.94	0.12	76,76,76,76	0
56	MG	DA	3053	1/1	0.94	0.14	47,47,47,47	0
56	MG	CA	3078	1/1	0.94	0.11	51,51,51,51	0
56	MG	DA	3244	1/1	0.94	0.15	23,23,23,23	0
56	MG	BN	3004	1/1	0.94	0.19	69,69,69,69	0
56	MG	DA	3248	1/1	0.94	0.15	30,30,30,30	0
56	MG	DA	3056	1/1	0.94	0.16	37,37,37,37	0
56	MG	AA	3202	1/1	0.94	0.14	72,72,72,72	0
56	MG	AA	3011	1/1	0.94	0.34	44,44,44,44	0
56	MG	BQ	3001	1/1	0.94	0.21	38,38,38,38	0
56	MG	CA	3087	1/1	0.94	0.09	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3113	1/1	0.94	0.20	48,48,48,48	0
56	MG	CA	3090	1/1	0.94	0.11	63,63,63,63	0
56	MG	BA	3339	1/1	0.94	0.15	47,47,47,47	0
56	MG	DA	3565	1/1	0.94	0.13	48,48,48,48	0
56	MG	CA	3092	1/1	0.94	0.12	56,56,56,56	0
56	MG	DA	3067	1/1	0.94	0.20	35,35,35,35	0
56	MG	AA	3059	1/1	0.94	0.17	49,49,49,49	0
56	MG	CA	3100	1/1	0.94	0.14	72,72,72,72	0
56	MG	BA	3051	1/1	0.94	0.18	34,34,34,34	0
56	MG	AA	3206	1/1	0.94	0.17	79,79,79,79	0
56	MG	BA	3352	1/1	0.94	0.08	58,58,58,58	0
56	MG	BV	3001	1/1	0.94	0.11	42,42,42,42	0
56	MG	DA	3582	1/1	0.94	0.17	44,44,44,44	0
56	MG	BA	3356	1/1	0.94	0.09	33,33,33,33	0
56	MG	AA	3044	1/1	0.94	0.15	60,60,60,60	0
56	MG	AA	3208	1/1	0.94	0.14	38,38,38,38	0
56	MG	DA	3588	1/1	0.94	0.11	47,47,47,47	0
56	MG	BA	3256	1/1	0.94	0.22	60,60,60,60	0
56	MG	BA	3545	1/1	0.94	0.11	20,20,20,20	0
56	MG	DA	3593	1/1	0.94	0.13	62,62,62,62	0
56	MG	DA	3290	1/1	0.94	0.13	59,59,59,59	0
56	MG	DA	3295	1/1	0.94	0.11	31,31,31,31	0
56	MG	BA	3361	1/1	0.94	0.06	39,39,39,39	0
56	MG	DA	3597	1/1	0.94	0.12	66,66,66,66	0
56	MG	BA	3548	1/1	0.94	0.20	40,40,40,40	0
56	MG	B0	101	1/1	0.94	0.14	57,57,57,57	0
56	MG	B0	104	1/1	0.94	0.12	55,55,55,55	0
56	MG	BA	3002	1/1	0.94	0.15	38,38,38,38	0
56	MG	AA	3167	1/1	0.94	0.17	78,78,78,78	0
56	MG	DA	3316	1/1	0.94	0.22	47,47,47,47	0
56	MG	B1	3002	1/1	0.94	0.06	29,29,29,29	0
56	MG	DA	3320	1/1	0.94	0.18	50,50,50,50	0
56	MG	AA	3210	1/1	0.94	0.09	48,48,48,48	0
56	MG	DA	3094	1/1	0.94	0.16	26,26,26,26	0
56	MG	BA	3557	1/1	0.94	0.18	35,35,35,35	0
56	MG	DA	3328	1/1	0.94	0.20	33,33,33,33	0
56	MG	AA	3185	1/1	0.94	0.19	47,47,47,47	0
56	MG	AA	3213	1/1	0.94	0.09	74,74,74,74	0
56	MG	BA	3268	1/1	0.94	0.19	29,29,29,29	0
56	MG	DA	3338	1/1	0.94	0.14	58,58,58,58	0
56	MG	BA	3383	1/1	0.94	0.16	51,51,51,51	0
56	MG	BA	3384	1/1	0.94	0.18	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3577	1/1	0.94	0.14	63,63,63,63	0
56	MG	CA	3131	1/1	0.94	0.08	48,48,48,48	0
56	MG	DA	3623	1/1	0.94	0.08	63,63,63,63	0
56	MG	DA	3104	1/1	0.94	0.12	46,46,46,46	0
56	MG	DA	3105	1/1	0.94	0.13	56,56,56,56	0
56	MG	CA	3006	1/1	0.94	0.08	72,72,72,72	0
56	MG	CA	3134	1/1	0.94	0.11	92,92,92,92	0
56	MG	BA	3011	1/1	0.94	0.12	39,39,39,39	0
56	MG	BA	3698	1/1	0.94	0.26	58,58,58,58	0
56	MG	DA	3369	1/1	0.94	0.10	53,53,53,53	0
56	MG	BA	3391	1/1	0.94	0.12	39,39,39,39	0
56	MG	AA	3062	1/1	0.94	0.09	30,30,30,30	0
56	MG	DA	3638	1/1	0.94	0.08	53,53,53,53	0
56	MG	BA	3274	1/1	0.94	0.21	54,54,54,54	0
56	MG	DA	3640	1/1	0.94	0.12	53,53,53,53	0
56	MG	DA	3379	1/1	0.94	0.09	63,63,63,63	0
56	MG	DA	3114	1/1	0.94	0.09	47,47,47,47	0
56	MG	CA	3143	1/1	0.94	0.12	91,91,91,91	0
56	MG	DA	3647	1/1	0.94	0.14	45,45,45,45	0
56	MG	DA	3390	1/1	0.94	0.12	58,58,58,58	0
56	MG	BA	3193	1/1	0.94	0.16	53,53,53,53	0
56	MG	BA	3595	1/1	0.94	0.10	37,37,37,37	0
56	MG	BA	3404	1/1	0.94	0.05	42,42,42,42	0
56	MG	AA	3014	1/1	0.94	0.06	24,24,24,24	0
56	MG	DA	3399	1/1	0.94	0.23	39,39,39,39	0
56	MG	DA	3400	1/1	0.94	0.16	42,42,42,42	0
56	MG	CA	3148	1/1	0.94	0.12	65,65,65,65	0
56	MG	DB	3007	1/1	0.94	0.27	45,45,45,45	0
56	MG	DA	3406	1/1	0.94	0.09	48,48,48,48	0
56	MG	DA	3407	1/1	0.94	0.09	35,35,35,35	0
56	MG	AA	3170	1/1	0.94	0.16	83,83,83,83	0
56	MG	DA	3413	1/1	0.94	0.12	44,44,44,44	0
56	MG	BA	3281	1/1	0.94	0.08	45,45,45,45	0
56	MG	BA	3198	1/1	0.94	0.20	29,29,29,29	0
56	MG	DA	3127	1/1	0.94	0.07	44,44,44,44	0
56	MG	BA	3434	1/1	0.94	0.16	22,22,22,22	0
56	MG	BA	3605	1/1	0.94	0.09	35,35,35,35	0
56	MG	BA	3719	1/1	0.94	0.08	63,63,63,63	0
56	MG	AA	3190	1/1	0.94	0.26	61,61,61,61	0
56	MG	BA	3019	1/1	0.94	0.17	42,42,42,42	0
56	MG	DA	3434	1/1	0.94	0.10	51,51,51,51	0
56	MG	BA	3087	1/1	0.94	0.23	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	3140	1/1	0.94	0.27	55,55,55,55	0
56	MG	BA	3613	1/1	0.94	0.17	47,47,47,47	0
56	MG	DA	3145	1/1	0.94	0.11	52,52,52,52	0
56	MG	AA	3151	1/1	0.94	0.07	49,49,49,49	0
56	MG	DA	3148	1/1	0.94	0.10	41,41,41,41	0
56	MG	BA	3615	1/1	0.94	0.17	55,55,55,55	0
56	MG	DA	3446	1/1	0.94	0.14	46,46,46,46	0
56	MG	CA	3035	1/1	0.94	0.18	49,49,49,49	0
56	MG	BA	3089	1/1	0.94	0.14	50,50,50,50	0
56	MG	BA	3092	1/1	0.94	0.09	28,28,28,28	0
56	MG	CA	3165	1/1	0.94	0.15	47,47,47,47	0
58	ZN	D4	501	1/1	0.94	0.10	155,155,155,155	0
56	MG	CA	3167	1/1	0.94	0.06	68,68,68,68	0
56	MG	BA	3147	1/1	0.94	0.12	42,42,42,42	0
56	MG	BA	3464	1/1	0.94	0.10	40,40,40,40	0
56	MG	CA	3040	1/1	0.94	0.21	47,47,47,47	0
56	MG	DA	3417	1/1	0.95	0.12	54,54,54,54	0
56	MG	BA	3225	1/1	0.95	0.23	42,42,42,42	0
56	MG	BA	3227	1/1	0.95	0.15	67,67,67,67	0
56	MG	DA	3422	1/1	0.95	0.19	45,45,45,45	0
56	MG	AA	3035	1/1	0.95	0.08	59,59,59,59	0
56	MG	CA	3128	1/1	0.95	0.14	55,55,55,55	0
56	MG	DA	3428	1/1	0.95	0.10	30,30,30,30	0
56	MG	BA	3307	1/1	0.95	0.08	35,35,35,35	0
56	MG	BA	3125	1/1	0.95	0.16	26,26,26,26	0
56	MG	DA	3433	1/1	0.95	0.20	39,39,39,39	0
56	MG	BA	3010	1/1	0.95	0.05	35,35,35,35	0
56	MG	DA	3130	1/1	0.95	0.07	34,34,34,34	0
56	MG	BU	207	1/1	0.95	0.14	38,38,38,38	0
56	MG	BA	3128	1/1	0.95	0.11	28,28,28,28	0
56	MG	DA	3438	1/1	0.95	0.20	50,50,50,50	0
56	MG	BU	209	1/1	0.95	0.40	36,36,36,36	0
56	MG	BA	3129	1/1	0.95	0.27	44,44,44,44	0
56	MG	DA	3137	1/1	0.95	0.28	62,62,62,62	0
56	MG	DA	3138	1/1	0.95	0.30	53,53,53,53	0
56	MG	DA	3139	1/1	0.95	0.12	47,47,47,47	0
56	MG	CA	3137	1/1	0.95	0.13	59,59,59,59	0
56	MG	BA	3237	1/1	0.95	0.16	43,43,43,43	0
56	MG	DA	3143	1/1	0.95	0.10	53,53,53,53	0
56	MG	DA	3144	1/1	0.95	0.21	37,37,37,37	0
56	MG	BA	3645	1/1	0.95	0.23	63,63,63,63	0
56	MG	BA	3646	1/1	0.95	0.12	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3147	1/1	0.95	0.15	46,46,46,46	0
56	MG	BW	3003	1/1	0.95	0.14	39,39,39,39	0
56	MG	AA	3160	1/1	0.95	0.19	52,52,52,52	0
56	MG	DA	3459	1/1	0.95	0.09	43,43,43,43	0
56	MG	BA	3132	1/1	0.95	0.11	28,28,28,28	0
56	MG	BA	3484	1/1	0.95	0.08	40,40,40,40	0
56	MG	BA	3650	1/1	0.95	0.09	44,44,44,44	0
56	MG	AA	3060	1/1	0.95	0.29	52,52,52,52	0
56	MG	BA	3245	1/1	0.95	0.15	45,45,45,45	0
56	MG	B0	105	1/1	0.95	0.23	44,44,44,44	0
56	MG	DA	3466	1/1	0.95	0.07	43,43,43,43	0
56	MG	DA	3160	1/1	0.95	0.10	47,47,47,47	0
56	MG	DA	3469	1/1	0.95	0.14	52,52,52,52	0
56	MG	BA	3498	1/1	0.95	0.07	81,81,81,81	0
56	MG	AA	3041	1/1	0.95	0.08	41,41,41,41	0
56	MG	BA	3501	1/1	0.95	0.10	35,35,35,35	0
56	MG	CA	3154	1/1	0.95	0.16	54,54,54,54	0
56	MG	BA	3016	1/1	0.95	0.13	50,50,50,50	0
56	MG	BA	3097	1/1	0.95	0.17	30,30,30,30	0
56	MG	BA	3249	1/1	0.95	0.13	46,46,46,46	0
56	MG	BA	3056	1/1	0.95	0.23	39,39,39,39	0
56	MG	BA	3506	1/1	0.95	0.11	33,33,33,33	0
56	MG	BA	3059	1/1	0.95	0.23	35,35,35,35	0
56	MG	B9	502	1/1	0.95	0.15	49,49,49,49	0
56	MG	CA	3002	1/1	0.95	0.06	74,74,74,74	0
56	MG	AA	3054	1/1	0.95	0.13	46,46,46,46	0
56	MG	DA	3176	1/1	0.95	0.11	52,52,52,52	0
56	MG	BA	3668	1/1	0.95	0.11	42,42,42,42	0
56	MG	CA	3005	1/1	0.95	0.24	37,37,37,37	0
56	MG	DA	3497	1/1	0.95	0.07	37,37,37,37	0
56	MG	CA	3166	1/1	0.95	0.09	71,71,71,71	0
56	MG	DA	3186	1/1	0.95	0.10	38,38,38,38	0
56	MG	AA	3205	1/1	0.95	0.13	66,66,66,66	0
56	MG	BA	3341	1/1	0.95	0.11	31,31,31,31	0
56	MG	BA	3513	1/1	0.95	0.21	51,51,51,51	0
56	MG	BA	3189	1/1	0.95	0.07	39,39,39,39	0
56	MG	BA	3516	1/1	0.95	0.09	64,64,64,64	0
56	MG	DA	3193	1/1	0.95	0.15	42,42,42,42	0
56	MG	CA	3012	1/1	0.95	0.05	50,50,50,50	0
56	MG	BA	3517	1/1	0.95	0.11	52,52,52,52	0
56	MG	AA	3221	1/1	0.95	0.22	52,52,52,52	0
56	MG	BA	3346	1/1	0.95	0.07	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	3678	1/1	0.95	0.13	47,47,47,47	0
56	MG	CX	102	1/1	0.95	0.07	60,60,60,60	0
56	MG	BA	3349	1/1	0.95	0.07	31,31,31,31	0
56	MG	DA	3202	1/1	0.95	0.09	39,39,39,39	0
56	MG	CX	104	1/1	0.95	0.08	52,52,52,52	0
56	MG	BA	3527	1/1	0.95	0.17	45,45,45,45	0
56	MG	BA	3529	1/1	0.95	0.10	22,22,22,22	0
56	MG	BA	3685	1/1	0.95	0.21	58,58,58,58	0
56	MG	DA	3210	1/1	0.95	0.14	46,46,46,46	0
56	MG	BA	3350	1/1	0.95	0.10	36,36,36,36	0
56	MG	DA	3006	1/1	0.95	0.11	41,41,41,41	0
56	MG	DA	3007	1/1	0.95	0.14	43,43,43,43	0
56	MG	BA	3532	1/1	0.95	0.15	42,42,42,42	0
56	MG	DA	3011	1/1	0.95	0.07	42,42,42,42	0
56	MG	BA	3689	1/1	0.95	0.09	25,25,25,25	0
56	MG	DA	3013	1/1	0.95	0.17	38,38,38,38	0
56	MG	BA	3692	1/1	0.95	0.17	36,36,36,36	0
56	MG	AA	3179	1/1	0.95	0.15	34,34,34,34	0
56	MG	BA	3355	1/1	0.95	0.07	39,39,39,39	0
56	MG	BA	3067	1/1	0.95	0.29	55,55,55,55	0
56	MG	BA	3258	1/1	0.95	0.05	35,35,35,35	0
56	MG	DA	3228	1/1	0.95	0.20	49,49,49,49	0
56	MG	BA	3259	1/1	0.95	0.14	59,59,59,59	0
56	MG	DA	3021	1/1	0.95	0.19	43,43,43,43	0
56	MG	BA	3700	1/1	0.95	0.13	26,26,26,26	0
56	MG	DA	3233	1/1	0.95	0.10	58,58,58,58	0
56	MG	DA	3548	1/1	0.95	0.13	60,60,60,60	0
56	MG	BA	3543	1/1	0.95	0.11	24,24,24,24	0
56	MG	BA	3260	1/1	0.95	0.11	47,47,47,47	0
56	MG	DA	3027	1/1	0.95	0.20	49,49,49,49	0
56	MG	BA	3360	1/1	0.95	0.09	39,39,39,39	0
56	MG	BA	3194	1/1	0.95	0.25	43,43,43,43	0
56	MG	DA	3242	1/1	0.95	0.11	31,31,31,31	0
56	MG	BA	3367	1/1	0.95	0.11	29,29,29,29	0
56	MG	DA	3562	1/1	0.95	0.09	41,41,41,41	0
56	MG	BA	3146	1/1	0.95	0.24	56,56,56,56	0
56	MG	AX	109	1/1	0.95	0.13	56,56,56,56	0
56	MG	BA	3264	1/1	0.95	0.10	29,29,29,29	0
56	MG	BA	3713	1/1	0.95	0.07	49,49,49,49	0
56	MG	BA	3553	1/1	0.95	0.17	46,46,46,46	0
56	MG	BA	3715	1/1	0.95	0.14	44,44,44,44	0
56	MG	DA	3038	1/1	0.95	0.06	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3554	1/1	0.95	0.16	25,25,25,25	0
56	MG	BA	3265	1/1	0.95	0.22	39,39,39,39	0
56	MG	BA	3558	1/1	0.95	0.13	47,47,47,47	0
56	MG	BA	3148	1/1	0.95	0.35	49,49,49,49	0
56	MG	DA	3262	1/1	0.95	0.19	60,60,60,60	0
56	MG	DA	3044	1/1	0.95	0.25	45,45,45,45	0
56	MG	DA	3267	1/1	0.95	0.11	40,40,40,40	0
56	MG	AX	110	1/1	0.95	0.11	45,45,45,45	0
56	MG	DA	3269	1/1	0.95	0.12	47,47,47,47	0
56	MG	DA	3590	1/1	0.95	0.08	39,39,39,39	0
56	MG	AA	3031	1/1	0.95	0.20	41,41,41,41	0
56	MG	DA	3592	1/1	0.95	0.10	49,49,49,49	0
56	MG	DA	3271	1/1	0.95	0.08	45,45,45,45	0
56	MG	DA	3050	1/1	0.95	0.09	30,30,30,30	0
56	MG	BA	3723	1/1	0.95	0.09	25,25,25,25	0
56	MG	BA	3151	1/1	0.95	0.17	40,40,40,40	0
56	MG	DA	3279	1/1	0.95	0.13	32,32,32,32	0
56	MG	DA	3280	1/1	0.95	0.12	46,46,46,46	0
56	MG	DA	3599	1/1	0.95	0.17	69,69,69,69	0
56	MG	BA	3726	1/1	0.95	0.11	29,29,29,29	0
56	MG	BA	3729	1/1	0.95	0.08	54,54,54,54	0
56	MG	BA	3385	1/1	0.95	0.07	56,56,56,56	0
56	MG	BA	3733	1/1	0.95	0.16	40,40,40,40	0
56	MG	DA	3059	1/1	0.95	0.07	42,42,42,42	0
56	MG	BA	3387	1/1	0.95	0.10	49,49,49,49	0
56	MG	AA	3119	1/1	0.95	0.20	42,42,42,42	0
56	MG	BA	3073	1/1	0.95	0.05	43,43,43,43	0
56	MG	DA	3294	1/1	0.95	0.15	30,30,30,30	0
56	MG	BA	3205	1/1	0.95	0.19	38,38,38,38	0
56	MG	AA	3051	1/1	0.95	0.08	56,56,56,56	0
56	MG	DA	3298	1/1	0.95	0.21	45,45,45,45	0
56	MG	DA	3614	1/1	0.95	0.12	46,46,46,46	0
56	MG	BA	3031	1/1	0.95	0.15	44,44,44,44	0
56	MG	BA	3594	1/1	0.95	0.17	55,55,55,55	0
56	MG	DA	3305	1/1	0.95	0.11	33,33,33,33	0
56	MG	BA	3400	1/1	0.95	0.06	29,29,29,29	0
56	MG	BA	3282	1/1	0.95	0.11	34,34,34,34	0
56	MG	DA	3312	1/1	0.95	0.11	24,24,24,24	0
56	MG	DA	3313	1/1	0.95	0.11	30,30,30,30	0
56	MG	BA	3033	1/1	0.95	0.25	54,54,54,54	0
56	MG	BA	3406	1/1	0.95	0.19	54,54,54,54	0
56	MG	DA	3317	1/1	0.95	0.13	34,34,34,34	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	0.10	63,63,63,63	0
56	MG	BA	3408	1/1	0.95	0.08	28,28,28,28	0
56	MG	BA	3423	1/1	0.95	0.15	45,45,45,45	0
56	MG	BA	3602	1/1	0.95	0.08	44,44,44,44	0
56	MG	BA	3210	1/1	0.95	0.20	39,39,39,39	0
56	MG	BA	3428	1/1	0.95	0.18	36,36,36,36	0
56	MG	DA	3635	1/1	0.95	0.07	39,39,39,39	0
56	MG	CA	3080	1/1	0.95	0.13	51,51,51,51	0
56	MG	DA	3329	1/1	0.95	0.08	40,40,40,40	0
56	MG	DA	3080	1/1	0.95	0.16	43,43,43,43	0
56	MG	BA	3606	1/1	0.95	0.06	44,44,44,44	0
56	MG	BA	3285	1/1	0.95	0.14	44,44,44,44	0
56	MG	CA	3085	1/1	0.95	0.18	58,58,58,58	0
56	MG	DA	3644	1/1	0.95	0.19	50,50,50,50	0
56	MG	DA	3339	1/1	0.95	0.15	35,35,35,35	0
56	MG	BD	301	1/1	0.95	0.15	35,35,35,35	0
56	MG	BD	302	1/1	0.95	0.38	44,44,44,44	0
56	MG	DA	3347	1/1	0.95	0.09	39,39,39,39	0
56	MG	BA	3609	1/1	0.95	0.16	29,29,29,29	0
56	MG	DA	3652	1/1	0.95	0.16	26,26,26,26	0
56	MG	DA	3654	1/1	0.95	0.08	50,50,50,50	0
56	MG	CA	3089	1/1	0.95	0.12	54,54,54,54	0
56	MG	BA	3430	1/1	0.95	0.11	47,47,47,47	0
56	MG	DA	3355	1/1	0.95	0.19	39,39,39,39	0
56	MG	BA	3005	1/1	0.95	0.11	43,43,43,43	0
56	MG	DA	3358	1/1	0.95	0.08	38,38,38,38	0
56	MG	BD	306	1/1	0.95	0.07	47,47,47,47	0
56	MG	CA	3093	1/1	0.95	0.11	65,65,65,65	0
56	MG	CA	3095	1/1	0.95	0.12	35,35,35,35	0
56	MG	DA	3365	1/1	0.95	0.07	52,52,52,52	0
56	MG	AA	3058	1/1	0.95	0.25	59,59,59,59	0
56	MG	BD	310	1/1	0.95	0.12	48,48,48,48	0
56	MG	DD	302	1/1	0.95	0.28	48,48,48,48	0
56	MG	AA	3105	1/1	0.95	0.25	54,54,54,54	0
56	MG	DD	304	1/1	0.95	0.22	40,40,40,40	0
56	MG	DD	305	1/1	0.95	0.13	73,73,73,73	0
56	MG	DE	301	1/1	0.95	0.20	51,51,51,51	0
56	MG	BA	3436	1/1	0.95	0.12	35,35,35,35	0
56	MG	DA	3377	1/1	0.95	0.14	32,32,32,32	0
56	MG	BA	3438	1/1	0.95	0.13	30,30,30,30	0
56	MG	BA	3443	1/1	0.95	0.16	34,34,34,34	0
56	MG	DF	301	1/1	0.95	0.17	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BF	302	1/1	0.95	0.18	49,49,49,49	0
56	MG	BA	3120	1/1	0.95	0.20	56,56,56,56	0
56	MG	DA	3385	1/1	0.95	0.22	58,58,58,58	0
56	MG	DA	3387	1/1	0.95	0.10	50,50,50,50	0
56	MG	BF	304	1/1	0.95	0.21	30,30,30,30	0
56	MG	DQ	3001	1/1	0.95	0.16	40,40,40,40	0
56	MG	DA	3107	1/1	0.95	0.12	50,50,50,50	0
56	MG	BA	3215	1/1	0.95	0.08	32,32,32,32	0
56	MG	BA	3451	1/1	0.95	0.09	31,31,31,31	0
56	MG	DR	5001	1/1	0.95	0.13	39,39,39,39	0
56	MG	DA	3394	1/1	0.95	0.07	46,46,46,46	0
56	MG	DU	3002	1/1	0.95	0.23	52,52,52,52	0
56	MG	BA	3165	1/1	0.95	0.28	44,44,44,44	0
56	MG	BA	3121	1/1	0.95	0.14	50,50,50,50	0
56	MG	BA	3086	1/1	0.95	0.06	50,50,50,50	0
56	MG	DA	3402	1/1	0.95	0.14	33,33,33,33	0
56	MG	BA	3459	1/1	0.95	0.08	51,51,51,51	0
56	MG	D5	102	1/1	0.95	0.25	44,44,44,44	0
56	MG	BA	3222	1/1	0.95	0.25	56,56,56,56	0
56	MG	BA	3169	1/1	0.95	0.11	39,39,39,39	0
56	MG	DA	3408	1/1	0.95	0.09	35,35,35,35	0
56	MG	BA	3298	1/1	0.95	0.26	45,45,45,45	0
56	MG	BP	202	1/1	0.95	0.24	47,47,47,47	0
56	MG	BA	3170	1/1	0.95	0.23	34,34,34,34	0
56	MG	BP	204	1/1	0.95	0.08	53,53,53,53	0
56	MG	AK	3001	1/1	0.96	0.10	48,48,48,48	0
56	MG	DA	3046	1/1	0.96	0.11	48,48,48,48	0
56	MG	DA	3047	1/1	0.96	0.10	36,36,36,36	0
56	MG	BD	308	1/1	0.96	0.17	21,21,21,21	0
56	MG	DA	3479	1/1	0.96	0.11	35,35,35,35	0
56	MG	DA	3480	1/1	0.96	0.09	42,42,42,42	0
56	MG	BA	3490	1/1	0.96	0.07	40,40,40,40	0
56	MG	DA	3226	1/1	0.96	0.22	47,47,47,47	0
56	MG	BA	3493	1/1	0.96	0.08	51,51,51,51	0
56	MG	DA	3051	1/1	0.96	0.08	39,39,39,39	0
56	MG	CA	3076	1/1	0.96	0.14	48,48,48,48	0
56	MG	CA	3077	1/1	0.96	0.24	51,51,51,51	0
56	MG	BA	3496	1/1	0.96	0.20	21,21,21,21	0
56	MG	DA	3488	1/1	0.96	0.08	48,48,48,48	0
56	MG	DA	3232	1/1	0.96	0.05	39,39,39,39	0
56	MG	AL	3001	1/1	0.96	0.11	50,50,50,50	0
56	MG	DA	3494	1/1	0.96	0.07	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BE	302	1/1	0.96	0.12	29,29,29,29	0
56	MG	BE	305	1/1	0.96	0.23	44,44,44,44	0
56	MG	AA	3008	1/1	0.96	0.12	61,61,61,61	0
56	MG	DA	3239	1/1	0.96	0.13	54,54,54,54	0
56	MG	BA	3278	1/1	0.96	0.19	53,53,53,53	0
56	MG	BE	308	1/1	0.96	0.16	27,27,27,27	0
56	MG	DA	3501	1/1	0.96	0.15	67,67,67,67	0
56	MG	BF	301	1/1	0.96	0.10	46,46,46,46	0
56	MG	BA	3034	1/1	0.96	0.06	37,37,37,37	0
56	MG	BA	3218	1/1	0.96	0.09	58,58,58,58	0
56	MG	DA	3245	1/1	0.96	0.19	43,43,43,43	0
56	MG	BA	3076	1/1	0.96	0.13	40,40,40,40	0
56	MG	BA	3642	1/1	0.96	0.09	52,52,52,52	0
56	MG	BA	3036	1/1	0.96	0.13	25,25,25,25	0
56	MG	AA	3138	1/1	0.96	0.21	38,38,38,38	0
56	MG	BA	3372	1/1	0.96	0.08	42,42,42,42	0
56	MG	BA	3508	1/1	0.96	0.09	46,46,46,46	0
56	MG	BA	3124	1/1	0.96	0.11	46,46,46,46	0
56	MG	AA	3024	1/1	0.96	0.12	49,49,49,49	0
56	MG	BA	3511	1/1	0.96	0.17	40,40,40,40	0
56	MG	DA	3076	1/1	0.96	0.24	38,38,38,38	0
56	MG	DA	3261	1/1	0.96	0.13	44,44,44,44	0
56	MG	BA	3009	1/1	0.96	0.12	36,36,36,36	0
56	MG	DA	3522	1/1	0.96	0.08	46,46,46,46	0
56	MG	BO	201	1/1	0.96	0.07	63,63,63,63	0
56	MG	DA	3264	1/1	0.96	0.07	38,38,38,38	0
56	MG	BA	3226	1/1	0.96	0.25	31,31,31,31	0
56	MG	BA	3652	1/1	0.96	0.18	54,54,54,54	0
56	MG	BA	3653	1/1	0.96	0.20	46,46,46,46	0
56	MG	DA	3083	1/1	0.96	0.05	44,44,44,44	0
56	MG	BA	3085	1/1	0.96	0.20	35,35,35,35	0
56	MG	DA	3272	1/1	0.96	0.13	36,36,36,36	0
56	MG	BA	3290	1/1	0.96	0.08	35,35,35,35	0
56	MG	DA	3533	1/1	0.96	0.12	59,59,59,59	0
56	MG	BA	3386	1/1	0.96	0.07	29,29,29,29	0
56	MG	DA	3277	1/1	0.96	0.05	46,46,46,46	0
56	MG	BA	3175	1/1	0.96	0.18	40,40,40,40	0
56	MG	BA	3659	1/1	0.96	0.06	42,42,42,42	0
56	MG	DA	3538	1/1	0.96	0.13	37,37,37,37	0
56	MG	CA	3115	1/1	0.96	0.06	81,81,81,81	0
56	MG	BU	201	1/1	0.96	0.34	33,33,33,33	0
56	MG	BA	3388	1/1	0.96	0.07	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3283	1/1	0.96	0.06	47,47,47,47	0
56	MG	CA	3118	1/1	0.96	0.09	39,39,39,39	0
56	MG	DA	3546	1/1	0.96	0.14	38,38,38,38	0
56	MG	BU	204	1/1	0.96	0.13	49,49,49,49	0
56	MG	BA	3521	1/1	0.96	0.10	38,38,38,38	0
56	MG	BA	3040	1/1	0.96	0.10	40,40,40,40	0
56	MG	BA	3526	1/1	0.96	0.12	49,49,49,49	0
56	MG	BA	3130	1/1	0.96	0.37	51,51,51,51	0
56	MG	DA	3291	1/1	0.96	0.12	42,42,42,42	0
56	MG	BA	3232	1/1	0.96	0.15	32,32,32,32	0
56	MG	AA	3183	1/1	0.96	0.12	56,56,56,56	0
56	MG	AA	3212	1/1	0.96	0.10	36,36,36,36	0
56	MG	DA	3561	1/1	0.96	0.12	40,40,40,40	0
56	MG	BA	3396	1/1	0.96	0.13	41,41,41,41	0
56	MG	AA	3034	1/1	0.96	0.14	46,46,46,46	0
56	MG	BA	3401	1/1	0.96	0.11	49,49,49,49	0
56	MG	BA	3402	1/1	0.96	0.13	23,23,23,23	0
56	MG	BA	3090	1/1	0.96	0.08	42,42,42,42	0
56	MG	DA	3309	1/1	0.96	0.09	25,25,25,25	0
56	MG	AA	3199	1/1	0.96	0.08	62,62,62,62	0
56	MG	B0	103	1/1	0.96	0.07	46,46,46,46	0
56	MG	BA	3241	1/1	0.96	0.23	41,41,41,41	0
56	MG	BA	3136	1/1	0.96	0.10	47,47,47,47	0
56	MG	DA	3576	1/1	0.96	0.09	57,57,57,57	0
56	MG	CA	3138	1/1	0.96	0.15	59,59,59,59	0
56	MG	DA	3581	1/1	0.96	0.10	41,41,41,41	0
56	MG	BA	3412	1/1	0.96	0.16	29,29,29,29	0
56	MG	DA	3583	1/1	0.96	0.12	35,35,35,35	0
56	MG	CA	3140	1/1	0.96	0.14	75,75,75,75	0
56	MG	BA	3419	1/1	0.96	0.31	36,36,36,36	0
56	MG	BA	3302	1/1	0.96	0.08	48,48,48,48	0
56	MG	DA	3118	1/1	0.96	0.07	44,44,44,44	0
56	MG	BA	3424	1/1	0.96	0.10	44,44,44,44	0
56	MG	DA	3120	1/1	0.96	0.41	50,50,50,50	0
56	MG	BA	3683	1/1	0.96	0.20	37,37,37,37	0
56	MG	DA	3330	1/1	0.96	0.07	30,30,30,30	0
56	MG	BA	3551	1/1	0.96	0.13	31,31,31,31	0
56	MG	BA	3243	1/1	0.96	0.10	43,43,43,43	0
56	MG	DA	3334	1/1	0.96	0.11	37,37,37,37	0
56	MG	BA	3426	1/1	0.96	0.09	34,34,34,34	0
56	MG	DA	3125	1/1	0.96	0.09	55,55,55,55	0
56	MG	BA	3688	1/1	0.96	0.08	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3244	1/1	0.96	0.22	46,46,46,46	0
56	MG	BA	3690	1/1	0.96	0.16	55,55,55,55	0
56	MG	BA	3556	1/1	0.96	0.07	25,25,25,25	0
56	MG	BA	3308	1/1	0.96	0.13	33,33,33,33	0
56	MG	AA	3103	1/1	0.96	0.14	43,43,43,43	0
56	MG	BA	3695	1/1	0.96	0.23	34,34,34,34	0
56	MG	BA	3559	1/1	0.96	0.17	29,29,29,29	0
56	MG	BA	3048	1/1	0.96	0.21	33,33,33,33	0
56	MG	BA	3095	1/1	0.96	0.21	55,55,55,55	0
56	MG	BA	3140	1/1	0.96	0.18	50,50,50,50	0
56	MG	DA	3610	1/1	0.96	0.06	49,49,49,49	0
56	MG	CA	3011	1/1	0.96	0.19	27,27,27,27	0
56	MG	BA	3096	1/1	0.96	0.23	35,35,35,35	0
56	MG	CA	3013	1/1	0.96	0.05	46,46,46,46	0
56	MG	DA	3366	1/1	0.96	0.06	43,43,43,43	0
56	MG	DA	3142	1/1	0.96	0.20	33,33,33,33	0
56	MG	AA	3186	1/1	0.96	0.11	51,51,51,51	0
56	MG	BA	3703	1/1	0.96	0.10	44,44,44,44	0
56	MG	DA	3371	1/1	0.96	0.07	37,37,37,37	0
56	MG	BA	3576	1/1	0.96	0.06	45,45,45,45	0
56	MG	DA	3374	1/1	0.96	0.11	40,40,40,40	0
56	MG	CA	3017	1/1	0.96	0.18	54,54,54,54	0
56	MG	BA	3052	1/1	0.96	0.15	29,29,29,29	0
56	MG	BA	3581	1/1	0.96	0.18	54,54,54,54	0
56	MG	BA	3053	1/1	0.96	0.12	52,52,52,52	0
56	MG	DA	3150	1/1	0.96	0.05	57,57,57,57	0
56	MG	DA	3151	1/1	0.96	0.31	48,48,48,48	0
56	MG	BA	3446	1/1	0.96	0.11	25,25,25,25	0
56	MG	CA	3170	1/1	0.96	0.14	44,44,44,44	0
56	MG	BA	3587	1/1	0.96	0.13	23,23,23,23	0
56	MG	DA	3632	1/1	0.96	0.16	60,60,60,60	0
56	MG	BA	3712	1/1	0.96	0.11	47,47,47,47	0
56	MG	BA	3055	1/1	0.96	0.23	44,44,44,44	0
56	MG	BA	3449	1/1	0.96	0.11	59,59,59,59	0
56	MG	DA	3158	1/1	0.96	0.28	47,47,47,47	0
56	MG	DA	3398	1/1	0.96	0.07	50,50,50,50	0
56	MG	BA	3450	1/1	0.96	0.08	40,40,40,40	0
56	MG	BA	3325	1/1	0.96	0.11	39,39,39,39	0
56	MG	BA	3452	1/1	0.96	0.07	16,16,16,16	0
56	MG	DA	3404	1/1	0.96	0.09	57,57,57,57	0
56	MG	AA	3104	1/1	0.96	0.10	35,35,35,35	0
56	MG	BA	3197	1/1	0.96	0.21	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3165	1/1	0.96	0.30	48,48,48,48	0
56	MG	BA	3720	1/1	0.96	0.07	51,51,51,51	0
56	MG	DA	3649	1/1	0.96	0.06	39,39,39,39	0
56	MG	BA	3598	1/1	0.96	0.09	32,32,32,32	0
56	MG	BA	3058	1/1	0.96	0.20	41,41,41,41	0
56	MG	BA	3332	1/1	0.96	0.13	52,52,52,52	0
56	MG	DA	3004	1/1	0.96	0.06	24,24,24,24	0
56	MG	DA	3657	1/1	0.96	0.08	55,55,55,55	0
56	MG	DA	3658	1/1	0.96	0.27	50,50,50,50	0
56	MG	BA	3334	1/1	0.96	0.08	41,41,41,41	0
56	MG	BA	3461	1/1	0.96	0.07	33,33,33,33	0
56	MG	BA	3462	1/1	0.96	0.13	30,30,30,30	0
56	MG	DA	3174	1/1	0.96	0.22	26,26,26,26	0
56	MG	DA	3423	1/1	0.96	0.07	29,29,29,29	0
56	MG	BA	3731	1/1	0.96	0.11	52,52,52,52	0
56	MG	DA	3009	1/1	0.96	0.04	33,33,33,33	0
56	MG	DA	3010	1/1	0.96	0.08	42,42,42,42	0
56	MG	AA	3010	1/1	0.96	0.05	71,71,71,71	0
56	MG	DA	3181	1/1	0.96	0.31	55,55,55,55	0
56	MG	DA	3182	1/1	0.96	0.15	29,29,29,29	0
56	MG	DA	3183	1/1	0.96	0.11	42,42,42,42	0
56	MG	BA	3020	1/1	0.96	0.31	43,43,43,43	0
56	MG	BA	3337	1/1	0.96	0.13	48,48,48,48	0
56	MG	BA	3608	1/1	0.96	0.13	51,51,51,51	0
56	MG	AA	3161	1/1	0.96	0.07	61,61,61,61	0
56	MG	DA	3439	1/1	0.96	0.13	45,45,45,45	0
56	MG	DA	3440	1/1	0.96	0.05	48,48,48,48	0
56	MG	BA	3738	1/1	0.96	0.17	58,58,58,58	0
56	MG	BA	3106	1/1	0.96	0.23	52,52,52,52	0
56	MG	DF	302	1/1	0.96	0.09	47,47,47,47	0
56	MG	DF	303	1/1	0.96	0.11	42,42,42,42	0
56	MG	DA	3443	1/1	0.96	0.13	30,30,30,30	0
56	MG	DF	305	1/1	0.96	0.22	55,55,55,55	0
56	MG	BA	3611	1/1	0.96	0.07	61,61,61,61	0
56	MG	AA	3066	1/1	0.96	0.19	41,41,41,41	0
56	MG	BA	3025	1/1	0.96	0.09	48,48,48,48	0
56	MG	BA	3472	1/1	0.96	0.07	53,53,53,53	0
56	MG	AA	3091	1/1	0.96	0.12	75,75,75,75	0
56	MG	BA	3474	1/1	0.96	0.11	43,43,43,43	0
56	MG	CA	3055	1/1	0.96	0.27	61,61,61,61	0
56	MG	DA	3453	1/1	0.96	0.09	44,44,44,44	0
56	MG	AA	3050	1/1	0.96	0.08	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BB	3008	1/1	0.96	0.15	49,49,49,49	0
56	MG	BA	3069	1/1	0.96	0.12	33,33,33,33	0
56	MG	DV	201	1/1	0.96	0.07	56,56,56,56	0
56	MG	BA	3003	1/1	0.96	0.08	24,24,24,24	0
56	MG	BA	3029	1/1	0.96	0.29	53,53,53,53	0
56	MG	DW	201	1/1	0.96	0.08	45,45,45,45	0
56	MG	BA	3269	1/1	0.96	0.15	32,32,32,32	0
56	MG	BA	3623	1/1	0.96	0.12	43,43,43,43	0
56	MG	BA	3354	1/1	0.96	0.06	45,45,45,45	0
56	MG	D5	101	1/1	0.96	0.15	44,44,44,44	0
56	MG	DA	3211	1/1	0.96	0.22	46,46,46,46	0
56	MG	BA	3270	1/1	0.96	0.13	29,29,29,29	0
56	MG	BA	3626	1/1	0.96	0.06	50,50,50,50	0
56	MG	BA	3162	1/1	0.96	0.09	43,43,43,43	0
56	MG	BA	3628	1/1	0.96	0.09	39,39,39,39	0
56	MG	DA	3217	1/1	0.96	0.18	33,33,33,33	0
56	MG	BA	3486	1/1	0.96	0.12	55,55,55,55	0
56	MG	BA	3630	1/1	0.96	0.11	48,48,48,48	0
56	MG	BA	3445	1/1	0.97	0.10	16,16,16,16	0
56	MG	BA	3603	1/1	0.97	0.12	40,40,40,40	0
56	MG	DA	3342	1/1	0.97	0.09	31,31,31,31	0
56	MG	DA	3185	1/1	0.97	0.16	42,42,42,42	0
56	MG	DA	3345	1/1	0.97	0.06	16,16,16,16	0
56	MG	BA	3054	1/1	0.97	0.07	39,39,39,39	0
56	MG	BA	3321	1/1	0.97	0.14	47,47,47,47	0
56	MG	DA	3348	1/1	0.97	0.05	39,39,39,39	0
56	MG	DA	3350	1/1	0.97	0.12	21,21,21,21	0
56	MG	BA	3013	1/1	0.97	0.16	36,36,36,36	0
56	MG	BE	304	1/1	0.97	0.15	45,45,45,45	0
56	MG	DA	3539	1/1	0.97	0.10	35,35,35,35	0
56	MG	AA	3214	1/1	0.97	0.17	42,42,42,42	0
56	MG	DA	3191	1/1	0.97	0.07	31,31,31,31	0
56	MG	DA	3072	1/1	0.97	0.14	40,40,40,40	0
56	MG	DA	3357	1/1	0.97	0.06	50,50,50,50	0
56	MG	BA	3377	1/1	0.97	0.04	27,27,27,27	0
56	MG	DA	3545	1/1	0.97	0.14	35,35,35,35	0
56	MG	BA	3380	1/1	0.97	0.11	32,32,32,32	0
56	MG	BA	3382	1/1	0.97	0.13	21,21,21,21	0
56	MG	BA	3220	1/1	0.97	0.19	27,27,27,27	0
56	MG	BA	3522	1/1	0.97	0.13	42,42,42,42	0
56	MG	DA	3550	1/1	0.97	0.09	54,54,54,54	0
56	MG	BA	3456	1/1	0.97	0.08	24,24,24,24	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	DA	3553	1/1	0.97	0.12	58,58,58,58	0
56	MG	DA	3199	1/1	0.97	0.16	46,46,46,46	0
56	MG	BA	3525	1/1	0.97	0.09	31,31,31,31	0
56	MG	DA	3556	1/1	0.97	0.07	35,35,35,35	0
56	MG	BF	305	1/1	0.97	0.15	38,38,38,38	0
56	MG	BA	3457	1/1	0.97	0.06	25,25,25,25	0
56	MG	BA	3078	1/1	0.97	0.11	44,44,44,44	0
56	MG	DA	3204	1/1	0.97	0.24	44,44,44,44	0
56	MG	DA	3375	1/1	0.97	0.07	40,40,40,40	0
56	MG	DA	3376	1/1	0.97	0.09	42,42,42,42	0
56	MG	BA	3617	1/1	0.97	0.15	30,30,30,30	0
56	MG	DA	3085	1/1	0.97	0.07	35,35,35,35	0
56	MG	DA	3207	1/1	0.97	0.13	41,41,41,41	0
56	MG	BA	3329	1/1	0.97	0.07	49,49,49,49	0
56	MG	BA	3330	1/1	0.97	0.07	35,35,35,35	0
56	MG	DA	3383	1/1	0.97	0.08	27,27,27,27	0
56	MG	DA	3088	1/1	0.97	0.06	47,47,47,47	0
56	MG	DA	3386	1/1	0.97	0.06	18,18,18,18	0
56	MG	BA	3531	1/1	0.97	0.11	28,28,28,28	0
56	MG	DA	3577	1/1	0.97	0.10	44,44,44,44	0
56	MG	DA	3213	1/1	0.97	0.15	48,48,48,48	0
56	MG	DA	3579	1/1	0.97	0.11	38,38,38,38	0
56	MG	DA	3580	1/1	0.97	0.08	35,35,35,35	0
56	MG	BA	3699	1/1	0.97	0.08	23,23,23,23	0
56	MG	AA	3177	1/1	0.97	0.05	58,58,58,58	0
56	MG	BA	3168	1/1	0.97	0.29	52,52,52,52	0
56	MG	DA	3584	1/1	0.97	0.09	47,47,47,47	0
56	MG	BN	3006	1/1	0.97	0.04	33,33,33,33	0
56	MG	BA	3389	1/1	0.97	0.15	52,52,52,52	0
56	MG	DA	3397	1/1	0.97	0.11	40,40,40,40	0
56	MG	BP	201	1/1	0.97	0.24	37,37,37,37	0
56	MG	BA	3041	1/1	0.97	0.26	45,45,45,45	0
56	MG	AV	101	1/1	0.97	0.16	51,51,51,51	0
56	MG	AA	3049	1/1	0.97	0.18	46,46,46,46	0
56	MG	DA	3403	1/1	0.97	0.06	42,42,42,42	0
56	MG	BA	3706	1/1	0.97	0.12	38,38,38,38	0
56	MG	BA	3707	1/1	0.97	0.06	57,57,57,57	0
56	MG	DA	3101	1/1	0.97	0.13	59,59,59,59	0
56	MG	CA	3059	1/1	0.97	0.19	51,51,51,51	0
56	MG	BQ	3003	1/1	0.97	0.07	15,15,15,15	0
56	MG	BA	3542	1/1	0.97	0.11	37,37,37,37	0
56	MG	DA	3410	1/1	0.97	0.06	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	AA	3057	1/1	0.97	0.05	45,45,45,45	0
56	MG	BA	3200	1/1	0.97	0.09	32,32,32,32	0
56	MG	BA	3065	1/1	0.97	0.15	31,31,31,31	0
56	MG	BA	3471	1/1	0.97	0.05	28,28,28,28	0
56	MG	CA	3066	1/1	0.97	0.06	47,47,47,47	0
56	MG	BA	3045	1/1	0.97	0.08	27,27,27,27	0
56	MG	DA	3421	1/1	0.97	0.12	43,43,43,43	0
56	MG	DA	3237	1/1	0.97	0.15	37,37,37,37	0
56	MG	BU	206	1/1	0.97	0.15	41,41,41,41	0
56	MG	AA	3158	1/1	0.97	0.13	47,47,47,47	0
56	MG	BA	3233	1/1	0.97	0.12	49,49,49,49	0
56	MG	DA	3426	1/1	0.97	0.10	41,41,41,41	0
56	MG	BA	3403	1/1	0.97	0.07	28,28,28,28	0
56	MG	BA	3108	1/1	0.97	0.08	32,32,32,32	0
56	MG	BA	3344	1/1	0.97	0.07	65,65,65,65	0
56	MG	BV	3003	1/1	0.97	0.14	27,27,27,27	0
56	MG	AA	3149	1/1	0.97	0.05	49,49,49,49	0
56	MG	BA	3407	1/1	0.97	0.18	35,35,35,35	0
56	MG	DA	3247	1/1	0.97	0.17	34,34,34,34	0
56	MG	BA	3347	1/1	0.97	0.10	44,44,44,44	0
56	MG	BA	3266	1/1	0.97	0.21	47,47,47,47	0
56	MG	BA	3413	1/1	0.97	0.05	19,19,19,19	0
56	MG	BA	3560	1/1	0.97	0.15	24,24,24,24	0
56	MG	BA	3153	1/1	0.97	0.09	47,47,47,47	0
56	MG	BA	3727	1/1	0.97	0.10	27,27,27,27	0
56	MG	B0	102	1/1	0.97	0.07	50,50,50,50	0
56	MG	BA	3728	1/1	0.97	0.11	56,56,56,56	0
56	MG	DA	3629	1/1	0.97	0.09	30,30,30,30	0
56	MG	DA	3258	1/1	0.97	0.14	39,39,39,39	0
56	MG	BA	3562	1/1	0.97	0.11	42,42,42,42	0
56	MG	BA	3730	1/1	0.97	0.06	43,43,43,43	0
56	MG	BA	3110	1/1	0.97	0.11	43,43,43,43	0
56	MG	DA	3016	1/1	0.97	0.11	33,33,33,33	0
56	MG	DA	3451	1/1	0.97	0.04	68,68,68,68	0
56	MG	BA	3489	1/1	0.97	0.06	50,50,50,50	0
56	MG	DA	3265	1/1	0.97	0.12	44,44,44,44	0
56	MG	DA	3133	1/1	0.97	0.11	31,31,31,31	0
56	MG	BA	3566	1/1	0.97	0.12	43,43,43,43	0
56	MG	DA	3641	1/1	0.97	0.12	47,47,47,47	0
56	MG	BA	3303	1/1	0.97	0.11	11,11,11,11	0
56	MG	B3	3401	1/1	0.97	0.10	24,24,24,24	0
56	MG	B3	3402	1/1	0.97	0.07	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	3097	1/1	0.97	0.09	60,60,60,60	0
56	MG	BA	3568	1/1	0.97	0.07	68,68,68,68	0
56	MG	DA	3274	1/1	0.97	0.23	49,49,49,49	0
56	MG	DA	3275	1/1	0.97	0.12	34,34,34,34	0
56	MG	BA	3736	1/1	0.97	0.09	40,40,40,40	0
56	MG	DA	3025	1/1	0.97	0.20	38,38,38,38	0
56	MG	DA	3653	1/1	0.97	0.07	52,52,52,52	0
56	MG	CA	3101	1/1	0.97	0.08	58,58,58,58	0
56	MG	DA	3028	1/1	0.97	0.06	34,34,34,34	0
56	MG	DA	3656	1/1	0.97	0.08	62,62,62,62	0
56	MG	DA	3467	1/1	0.97	0.13	48,48,48,48	0
56	MG	BA	3569	1/1	0.97	0.09	55,55,55,55	0
56	MG	BA	3492	1/1	0.97	0.12	48,48,48,48	0
56	MG	DA	3470	1/1	0.97	0.16	45,45,45,45	0
56	MG	DA	3471	1/1	0.97	0.09	32,32,32,32	0
56	MG	BA	3572	1/1	0.97	0.10	23,23,23,23	0
56	MG	DB	3005	1/1	0.97	0.15	41,41,41,41	0
56	MG	B8	5002	1/1	0.97	0.10	48,48,48,48	0
56	MG	BA	3655	1/1	0.97	0.11	44,44,44,44	0
56	MG	DB	3008	1/1	0.97	0.10	36,36,36,36	0
56	MG	BA	3239	1/1	0.97	0.06	33,33,33,33	0
56	MG	DA	3286	1/1	0.97	0.05	26,26,26,26	0
56	MG	BA	3494	1/1	0.97	0.09	28,28,28,28	0
56	MG	BA	3580	1/1	0.97	0.11	58,58,58,58	0
56	MG	DD	301	1/1	0.97	0.09	23,23,23,23	0
56	MG	BA	3495	1/1	0.97	0.15	27,27,27,27	0
56	MG	AA	3165	1/1	0.97	0.09	24,24,24,24	0
56	MG	BA	3427	1/1	0.97	0.07	20,20,20,20	0
56	MG	DA	3292	1/1	0.97	0.06	34,34,34,34	0
56	MG	BB	3007	1/1	0.97	0.04	49,49,49,49	0
56	MG	BA	3662	1/1	0.97	0.08	46,46,46,46	0
56	MG	DA	3042	1/1	0.97	0.15	38,38,38,38	0
56	MG	DA	3297	1/1	0.97	0.09	36,36,36,36	0
56	MG	DA	3489	1/1	0.97	0.05	36,36,36,36	0
56	MG	DA	3159	1/1	0.97	0.06	50,50,50,50	0
56	MG	DA	3492	1/1	0.97	0.05	44,44,44,44	0
56	MG	BA	3050	1/1	0.97	0.12	33,33,33,33	0
56	MG	DA	3300	1/1	0.97	0.07	47,47,47,47	0
56	MG	DA	3301	1/1	0.97	0.12	30,30,30,30	0
56	MG	BA	3588	1/1	0.97	0.07	41,41,41,41	0
56	MG	BA	3500	1/1	0.97	0.07	43,43,43,43	0
56	MG	BA	3035	1/1	0.97	0.06	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	CA	3120	1/1	0.97	0.12	59,59,59,59	0
56	MG	BA	3023	1/1	0.97	0.18	34,34,34,34	0
56	MG	DA	3311	1/1	0.97	0.07	33,33,33,33	0
56	MG	BA	3275	1/1	0.97	0.21	28,28,28,28	0
56	MG	BA	3312	1/1	0.97	0.06	43,43,43,43	0
56	MG	DA	3052	1/1	0.97	0.05	20,20,20,20	0
56	MG	DA	3315	1/1	0.97	0.10	39,39,39,39	0
56	MG	BA	3670	1/1	0.97	0.09	55,55,55,55	0
56	MG	BA	3364	1/1	0.97	0.09	30,30,30,30	0
56	MG	BA	3160	1/1	0.97	0.15	24,24,24,24	0
56	MG	CA	3020	1/1	0.97	0.13	45,45,45,45	0
56	MG	DA	3322	1/1	0.97	0.10	41,41,41,41	0
56	MG	BA	3115	1/1	0.97	0.14	28,28,28,28	0
56	MG	BA	3439	1/1	0.97	0.05	35,35,35,35	0
56	MG	CA	3023	1/1	0.97	0.15	37,37,37,37	0
56	MG	DA	3327	1/1	0.97	0.06	45,45,45,45	0
56	MG	BA	3024	1/1	0.97	0.06	31,31,31,31	0
56	MG	DA	3177	1/1	0.97	0.13	30,30,30,30	0
56	MG	DA	3178	1/1	0.97	0.08	43,43,43,43	0
56	MG	BA	3216	1/1	0.97	0.09	46,46,46,46	0
56	MG	CA	3133	1/1	0.97	0.05	45,45,45,45	0
56	MG	DA	3063	1/1	0.97	0.08	55,55,55,55	0
56	MG	DA	3335	1/1	0.97	0.10	36,36,36,36	0
56	MG	CA	3026	1/1	0.97	0.04	52,52,52,52	0
56	MG	BA	3437	1/1	0.98	0.06	37,37,37,37	0
56	MG	BE	309	1/1	0.98	0.07	37,37,37,37	0
56	MG	BA	3271	1/1	0.98	0.18	40,40,40,40	0
56	MG	DA	3208	1/1	0.98	0.17	46,46,46,46	0
56	MG	BA	3320	1/1	0.98	0.07	41,41,41,41	0
56	MG	BA	3497	1/1	0.98	0.21	28,28,28,28	0
56	MG	BA	3440	1/1	0.98	0.05	40,40,40,40	0
56	MG	BA	3442	1/1	0.98	0.12	33,33,33,33	0
56	MG	DA	3319	1/1	0.98	0.05	31,31,31,31	0
56	MG	DA	3450	1/1	0.98	0.06	47,47,47,47	0
56	MG	AA	3144	1/1	0.98	0.08	56,56,56,56	0
56	MG	DA	3026	1/1	0.98	0.08	36,36,36,36	0
56	MG	BG	3001	1/1	0.98	0.07	65,65,65,65	0
56	MG	DA	3324	1/1	0.98	0.09	24,24,24,24	0
56	MG	BA	3351	1/1	0.98	0.10	21,21,21,21	0
56	MG	BA	3564	1/1	0.98	0.10	26,26,26,26	0
56	MG	BA	3322	1/1	0.98	0.06	46,46,46,46	0
56	MG	DA	3219	1/1	0.98	0.21	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	3353	1/1	0.98	0.11	31,31,31,31	0
56	MG	BA	3323	1/1	0.98	0.06	25,25,25,25	0
56	MG	BA	3639	1/1	0.98	0.06	35,35,35,35	0
56	MG	DA	3332	1/1	0.98	0.06	29,29,29,29	0
56	MG	BA	3062	1/1	0.98	0.28	46,46,46,46	0
56	MG	BA	3063	1/1	0.98	0.08	34,34,34,34	0
56	MG	BA	3236	1/1	0.98	0.13	37,37,37,37	0
56	MG	BA	3276	1/1	0.98	0.14	9,9,9,9	0
56	MG	DA	3337	1/1	0.98	0.09	50,50,50,50	0
56	MG	DA	3605	1/1	0.98	0.04	58,58,58,58	0
56	MG	BA	3573	1/1	0.98	0.07	53,53,53,53	0
56	MG	BA	3574	1/1	0.98	0.05	52,52,52,52	0
56	MG	DA	3340	1/1	0.98	0.05	29,29,29,29	0
56	MG	DA	3341	1/1	0.98	0.04	40,40,40,40	0
56	MG	BA	3575	1/1	0.98	0.06	26,26,26,26	0
56	MG	DA	3343	1/1	0.98	0.07	37,37,37,37	0
56	MG	BA	3397	1/1	0.98	0.04	44,44,44,44	0
56	MG	DA	3476	1/1	0.98	0.05	35,35,35,35	0
56	MG	BA	3398	1/1	0.98	0.07	36,36,36,36	0
56	MG	DA	3136	1/1	0.98	0.05	39,39,39,39	0
56	MG	BA	3578	1/1	0.98	0.09	47,47,47,47	0
56	MG	BA	3579	1/1	0.98	0.12	21,21,21,21	0
56	MG	DA	3045	1/1	0.98	0.14	49,49,49,49	0
56	MG	BA	3399	1/1	0.98	0.10	22,22,22,22	0
56	MG	DA	3352	1/1	0.98	0.08	24,24,24,24	0
56	MG	BA	3724	1/1	0.98	0.11	22,22,22,22	0
56	MG	BR	202	1/1	0.98	0.09	25,25,25,25	0
56	MG	AA	3157	1/1	0.98	0.04	26,26,26,26	0
56	MG	BA	3127	1/1	0.98	0.12	42,42,42,42	0
56	MG	BA	3032	1/1	0.98	0.15	36,36,36,36	0
56	MG	BU	203	1/1	0.98	0.10	26,26,26,26	0
56	MG	DA	3490	1/1	0.98	0.04	46,46,46,46	0
56	MG	BA	3584	1/1	0.98	0.07	43,43,43,43	0
56	MG	DA	3362	1/1	0.98	0.20	42,42,42,42	0
56	MG	BU	205	1/1	0.98	0.10	39,39,39,39	0
56	MG	BA	3585	1/1	0.98	0.10	25,25,25,25	0
56	MG	BA	3515	1/1	0.98	0.12	46,46,46,46	0
56	MG	BA	3363	1/1	0.98	0.06	29,29,29,29	0
56	MG	BA	3589	1/1	0.98	0.12	34,34,34,34	0
56	MG	DA	3368	1/1	0.98	0.06	34,34,34,34	0
56	MG	AA	3040	1/1	0.98	0.06	46,46,46,46	0
56	MG	BA	3365	1/1	0.98	0.05	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	3519	1/1	0.98	0.04	57,57,57,57	0
56	MG	DA	3253	1/1	0.98	0.05	35,35,35,35	0
56	MG	BA	3188	1/1	0.98	0.06	49,49,49,49	0
56	MG	BA	3206	1/1	0.98	0.10	32,32,32,32	0
56	MG	BA	3077	1/1	0.98	0.04	20,20,20,20	0
56	MG	BA	3409	1/1	0.98	0.07	40,40,40,40	0
56	MG	BA	3370	1/1	0.98	0.03	39,39,39,39	0
56	MG	DA	3510	1/1	0.98	0.05	67,67,67,67	0
56	MG	DA	3260	1/1	0.98	0.03	32,32,32,32	0
56	MG	DA	3512	1/1	0.98	0.09	37,37,37,37	0
56	MG	BA	3091	1/1	0.98	0.16	55,55,55,55	0
56	MG	BA	3416	1/1	0.98	0.08	25,25,25,25	0
56	MG	DA	3382	1/1	0.98	0.07	44,44,44,44	0
56	MG	BA	3528	1/1	0.98	0.09	44,44,44,44	0
56	MG	DA	3384	1/1	0.98	0.05	24,24,24,24	0
56	MG	BA	3418	1/1	0.98	0.14	20,20,20,20	0
56	MG	AA	3172	1/1	0.98	0.04	36,36,36,36	0
56	MG	DA	3266	1/1	0.98	0.08	32,32,32,32	0
56	MG	DA	3388	1/1	0.98	0.07	25,25,25,25	0
56	MG	DA	3389	1/1	0.98	0.09	32,32,32,32	0
56	MG	BA	3421	1/1	0.98	0.07	28,28,28,28	0
56	MG	BA	3422	1/1	0.98	0.08	23,23,23,23	0
56	MG	BA	3475	1/1	0.98	0.05	42,42,42,42	0
56	MG	DA	3526	1/1	0.98	0.05	49,49,49,49	0
56	MG	BA	3534	1/1	0.98	0.11	36,36,36,36	0
56	MG	BB	3010	1/1	0.98	0.10	44,44,44,44	0
56	MG	BA	3176	1/1	0.98	0.10	50,50,50,50	0
56	MG	BB	3012	1/1	0.98	0.09	42,42,42,42	0
56	MG	BA	3536	1/1	0.98	0.07	37,37,37,37	0
56	MG	BA	3679	1/1	0.98	0.06	39,39,39,39	0
56	MG	B5	502	1/1	0.98	0.05	56,56,56,56	0
56	MG	DA	3082	1/1	0.98	0.04	7,7,7,7	0
56	MG	BA	3374	1/1	0.98	0.12	26,26,26,26	0
56	MG	B7	102	1/1	0.98	0.06	29,29,29,29	0
56	MG	BA	3287	1/1	0.98	0.07	11,11,11,11	0
56	MG	CA	3082	1/1	0.98	0.05	46,46,46,46	0
56	MG	BA	3228	1/1	0.98	0.06	23,23,23,23	0
56	MG	BA	3541	1/1	0.98	0.07	37,37,37,37	0
56	MG	BA	3684	1/1	0.98	0.13	44,44,44,44	0
56	MG	DE	306	1/1	0.98	0.07	44,44,44,44	0
56	MG	BA	3079	1/1	0.98	0.09	50,50,50,50	0
56	MG	DA	3411	1/1	0.98	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	DA	3412	1/1	0.98	0.13	34,34,34,34	0
56	MG	CA	3001	1/1	0.98	0.06	48,48,48,48	0
56	MG	BA	3378	1/1	0.98	0.09	24,24,24,24	0
56	MG	DA	3415	1/1	0.98	0.04	22,22,22,22	0
56	MG	BA	3483	1/1	0.98	0.09	18,18,18,18	0
56	MG	DO	5001	1/1	0.98	0.05	33,33,33,33	0
56	MG	BA	3379	1/1	0.98	0.07	43,43,43,43	0
56	MG	BD	307	1/1	0.98	0.06	36,36,36,36	0
56	MG	BA	3049	1/1	0.98	0.15	17,17,17,17	0
56	MG	DA	3420	1/1	0.98	0.04	43,43,43,43	0
56	MG	CA	3094	1/1	0.98	0.19	37,37,37,37	0
56	MG	BA	3431	1/1	0.98	0.18	54,54,54,54	0
56	MG	CA	3096	1/1	0.98	0.06	54,54,54,54	0
56	MG	BA	3691	1/1	0.98	0.10	40,40,40,40	0
56	MG	CA	3098	1/1	0.98	0.12	37,37,37,37	0
56	MG	BA	3432	1/1	0.98	0.05	27,27,27,27	0
56	MG	DA	3560	1/1	0.98	0.05	57,57,57,57	0
56	MG	DA	3427	1/1	0.98	0.04	29,29,29,29	0
56	MG	BA	3381	1/1	0.98	0.04	25,25,25,25	0
56	MG	DA	3429	1/1	0.98	0.05	30,30,30,30	0
56	MG	BE	301	1/1	0.98	0.14	28,28,28,28	0
56	MG	CA	3102	1/1	0.98	0.04	55,55,55,55	0
56	MG	AA	3137	1/1	0.98	0.14	40,40,40,40	0
56	MG	DA	3303	1/1	0.98	0.06	37,37,37,37	0
56	MG	BA	3491	1/1	0.98	0.08	38,38,38,38	0
57	SF4	CD	501	8/8	0.98	0.03	63,76,87,96	0
56	MG	BA	3345	1/1	0.98	0.03	37,37,37,37	0
58	ZN	CN	501	1/1	0.98	0.04	104,104,104,104	0
58	ZN	DY	501	1/1	0.98	0.04	90,90,90,90	0
56	MG	DA	3307	1/1	0.98	0.08	40,40,40,40	0
56	MG	DA	3574	1/1	0.98	0.11	22,22,22,22	0
56	MG	DA	3308	1/1	0.98	0.05	32,32,32,32	0
56	MG	AA	3220	1/1	0.98	0.06	42,42,42,42	0
56	MG	BA	3555	1/1	0.98	0.18	31,31,31,31	0
56	MG	AA	3192	1/1	0.99	0.08	73,73,73,73	0
56	MG	DA	3304	1/1	0.99	0.04	44,44,44,44	0
56	MG	BA	3314	1/1	0.99	0.06	22,22,22,22	0
56	MG	BA	3410	1/1	0.99	0.05	21,21,21,21	0
56	MG	DA	3349	1/1	0.99	0.04	27,27,27,27	0
56	MG	DA	3396	1/1	0.99	0.06	37,37,37,37	0
56	MG	BA	3586	1/1	0.99	0.08	26,26,26,26	0
56	MG	BA	3411	1/1	0.99	0.08	21,21,21,21	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3463	1/1	0.99	0.06	32,32,32,32	0
56	MG	BA	3523	1/1	0.99	0.09	32,32,32,32	0
56	MG	DA	3552	1/1	0.99	0.05	42,42,42,42	0
56	MG	DA	3401	1/1	0.99	0.11	41,41,41,41	0
56	MG	BA	3192	1/1	0.99	0.04	48,48,48,48	0
56	MG	BA	3393	1/1	0.99	0.07	27,27,27,27	0
56	MG	BA	3592	1/1	0.99	0.08	43,43,43,43	0
56	MG	BA	3414	1/1	0.99	0.12	51,51,51,51	0
56	MG	DA	3505	1/1	0.99	0.07	24,24,24,24	0
56	MG	BA	3415	1/1	0.99	0.06	28,28,28,28	0
56	MG	DA	3616	1/1	0.99	0.04	41,41,41,41	0
56	MG	DA	3359	1/1	0.99	0.07	21,21,21,21	0
56	MG	DA	3508	1/1	0.99	0.05	30,30,30,30	0
56	MG	DA	3360	1/1	0.99	0.02	36,36,36,36	0
56	MG	AA	3152	1/1	0.99	0.07	29,29,29,29	0
56	MG	DA	3564	1/1	0.99	0.03	29,29,29,29	0
56	MG	BA	3441	1/1	0.99	0.10	29,29,29,29	0
56	MG	BE	303	1/1	0.99	0.04	39,39,39,39	0
56	MG	BA	3417	1/1	0.99	0.07	21,21,21,21	0
56	MG	AA	3145	1/1	0.99	0.10	63,63,63,63	0
56	MG	DA	3321	1/1	0.99	0.04	31,31,31,31	0
56	MG	BA	3306	1/1	0.99	0.06	19,19,19,19	0
56	MG	BA	3420	1/1	0.99	0.10	13,13,13,13	0
56	MG	DA	3572	1/1	0.99	0.05	39,39,39,39	0
56	MG	DA	3573	1/1	0.99	0.10	32,32,32,32	0
56	MG	BA	3362	1/1	0.99	0.06	23,23,23,23	0
56	MG	BA	3333	1/1	0.99	0.09	27,27,27,27	0
56	MG	DA	3633	1/1	0.99	0.09	25,25,25,25	0
56	MG	BA	3448	1/1	0.99	0.10	23,23,23,23	0
56	MG	DA	3372	1/1	0.99	0.03	37,37,37,37	0
56	MG	CA	3083	1/1	0.99	0.05	30,30,30,30	0
56	MG	BA	3537	1/1	0.99	0.06	45,45,45,45	0
56	MG	BA	3570	1/1	0.99	0.10	33,33,33,33	0
56	MG	BA	3348	1/1	0.99	0.06	29,29,29,29	0
56	MG	DA	3474	1/1	0.99	0.05	49,49,49,49	0
56	MG	BA	3319	1/1	0.99	0.10	34,34,34,34	0
56	MG	BA	3366	1/1	0.99	0.06	30,30,30,30	0
56	MG	DA	3643	1/1	0.99	0.13	18,18,18,18	0
56	MG	BA	3057	1/1	0.99	0.17	36,36,36,36	0
56	MG	BA	3159	1/1	0.99	0.10	47,47,47,47	0
56	MG	DA	3293	1/1	0.99	0.04	34,34,34,34	0
56	MG	DA	3430	1/1	0.99	0.11	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	BA	3454	1/1	0.99	0.08	20,20,20,20	0
57	SF4	AD	501	8/8	0.99	0.04	62,75,82,88	0
56	MG	BA	3015	1/1	0.99	0.13	30,30,30,30	0
58	ZN	AN	102	1/1	0.99	0.02	88,88,88,88	0
58	ZN	BY	501	1/1	0.99	0.03	67,67,67,67	0
56	MG	DA	3650	1/1	0.99	0.04	35,35,35,35	0
58	ZN	B5	501	1/1	0.99	0.02	49,49,49,49	0
56	MG	BB	3013	1/1	0.99	0.07	31,31,31,31	0
56	MG	DA	3257	1/1	0.99	0.09	25,25,25,25	0
56	MG	BA	3080	1/1	0.99	0.03	12,12,12,12	0
58	ZN	D5	103	1/1	0.99	0.02	61,61,61,61	0
58	ZN	D6	501	1/1	0.99	0.03	65,65,65,65	0
58	ZN	D9	501	1/1	0.99	0.04	63,63,63,63	0
56	MG	AA	3156	1/1	0.99	0.07	31,31,31,31	0
56	MG	BA	3547	1/1	0.99	0.10	30,30,30,30	0
56	MG	AA	3163	1/1	0.99	0.10	23,23,23,23	0
56	MG	BA	3488	1/1	0.99	0.14	43,43,43,43	0
56	MG	BA	3327	1/1	1.00	0.05	21,21,21,21	0
56	MG	BA	3480	1/1	1.00	0.03	22,22,22,22	0
56	MG	BX	101	1/1	1.00	0.04	38,38,38,38	0
58	ZN	B6	501	1/1	1.00	0.03	51,51,51,51	0
58	ZN	B9	501	1/1	1.00	0.02	49,49,49,49	0

6.5 Other polymers ⓘ

There are no such residues in this entry.