



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 10:25 PM GMT

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
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.7 (RC4), CSD as536be (2015)
Xtriage (Phenix) : 1.9-1692
EDS : rb-20026688
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac : 5.8.0135
CCP4 : 6.5.0
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : trunk26865

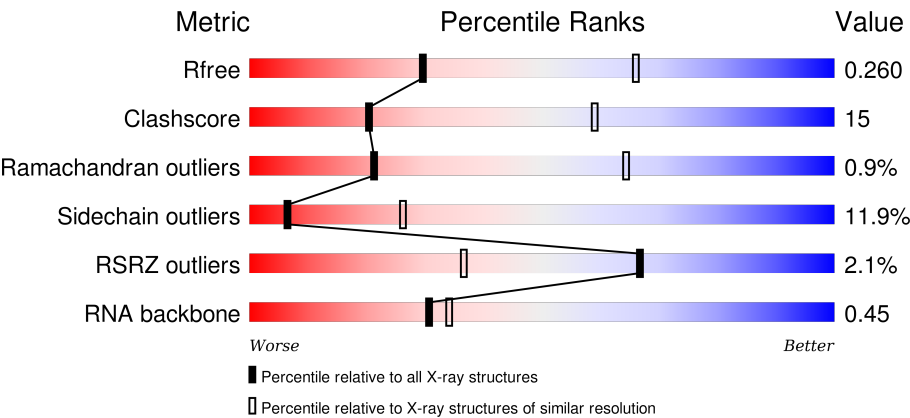
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.00 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}	91344	1578 (3.00-3.00)
Clashscore	102246	1912 (3.00-3.00)
Ramachandran outliers	100387	1853 (3.00-3.00)
Sidechain outliers	100360	1856 (3.00-3.00)
RSRZ outliers	91569	1592 (3.00-3.00)
RNA backbone	2183	1036 (3.40-2.60)

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 on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. 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>3%</div><div><div></div><div>29%</div><div>44%</div><div>20%</div><div>5%</div></div><div></div></div>
1	CA	1522	<div><div>3%</div><div><div></div><div>32%</div><div>43%</div><div>20%</div><div></div></div><div></div></div>
2	AB	256	<div><div>2%</div><div><div></div><div>38%</div><div>41%</div><div>11%</div><div>10%</div></div><div></div></div>
2	CB	256	<div><div>4%</div><div><div></div><div>36%</div><div>44%</div><div>10%</div><div>10%</div></div><div></div></div>




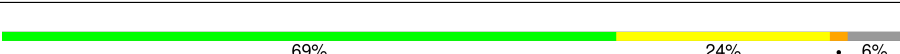
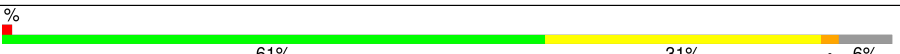
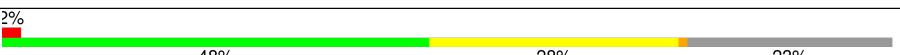
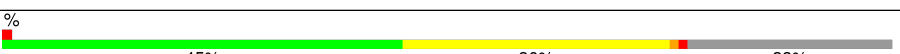
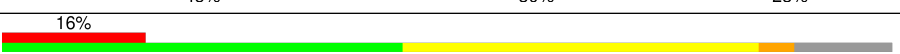
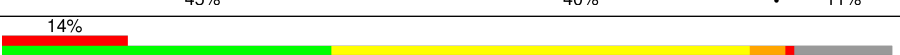
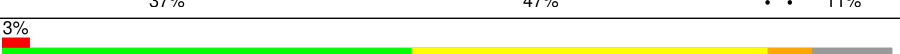



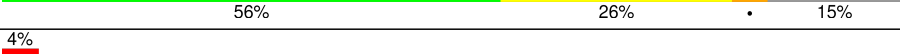


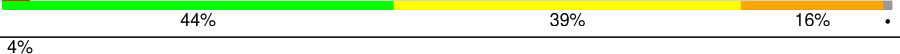
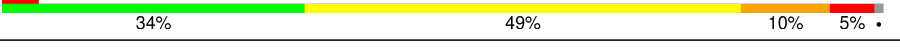
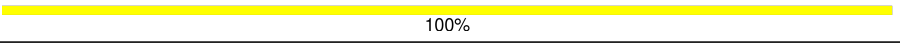

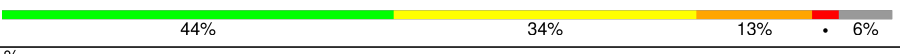
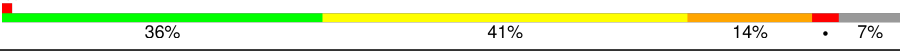

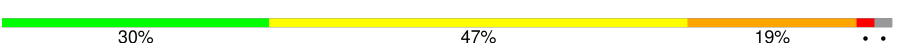

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Mol	Chain	Length	Quality of chain
3	AC	239	
3	CC	239	
4	AD	209	
4	CD	209	
5	AE	162	
5	CE	162	
6	AF	101	
6	CF	101	
7	AG	156	
7	CG	156	
8	AH	138	
8	CH	138	
9	AI	128	
9	CI	128	
10	AJ	105	
10	CJ	105	
11	AK	129	
11	CK	129	
12	AL	132	
12	CL	132	
13	AM	126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

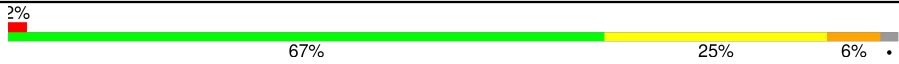
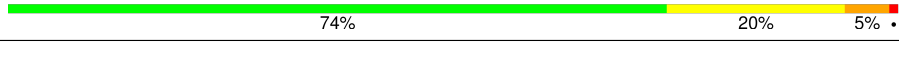
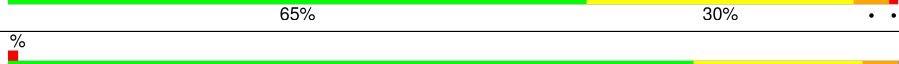
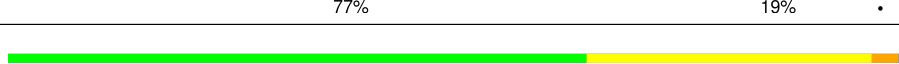
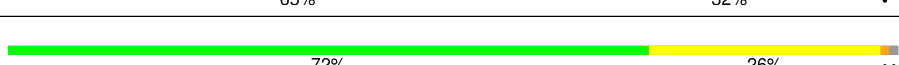


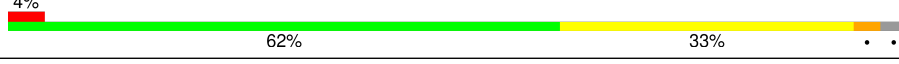
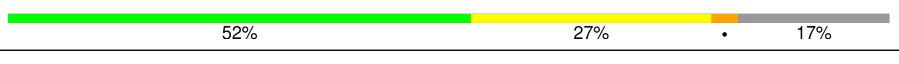


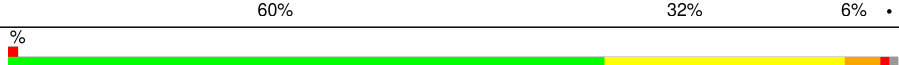
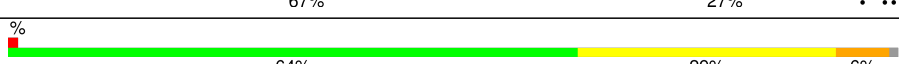
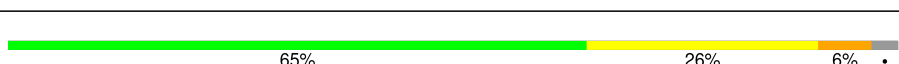
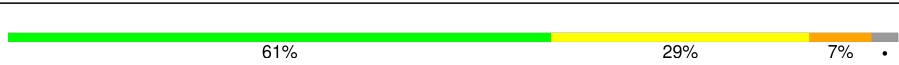

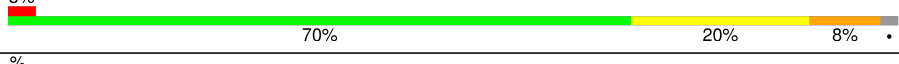
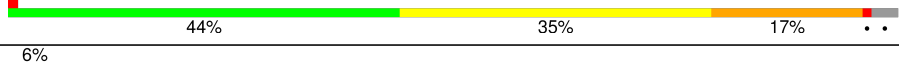



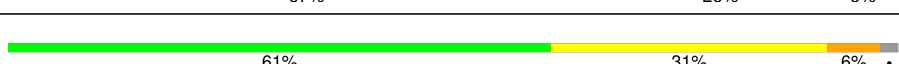



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Mol	Chain	Length	Quality of chain
28	BE	206	
28	DE	206	
29	BF	210	
29	DF	210	
30	BG	182	
30	DG	182	
31	BH	180	
31	DH	180	
32	BI	148	
32	DI	148	
33	BN	140	
33	DN	140	
34	BO	122	
34	DO	122	
35	BP	150	
35	DP	150	
36	BQ	141	
36	DQ	141	
37	BR	118	
37	DR	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	3008	-	-	-	X
56	MG	AA	3011	-	-	-	X
56	MG	AA	3015	-	-	-	X
56	MG	AA	3027	-	-	-	X
56	MG	AA	3031	-	-	-	X
56	MG	AA	3033	-	-	-	X
56	MG	AA	3035	-	-	-	X
56	MG	AA	3038	-	-	-	X
56	MG	AA	3039	-	-	-	X
56	MG	AA	3050	-	-	-	X
56	MG	AA	3060	-	-	-	X
56	MG	AA	3064	-	-	-	X
56	MG	AA	3071	-	-	-	X
56	MG	AA	3084	-	-	-	X
56	MG	AA	3088	-	-	-	X
56	MG	AA	3091	-	-	-	X
56	MG	AA	3107	-	-	-	X
56	MG	AA	3109	-	-	-	X
56	MG	AA	3120	-	-	-	X
56	MG	AA	3124	-	-	-	X
56	MG	AA	3145	-	-	-	X
56	MG	AA	3146	-	-	-	X
56	MG	AA	3159	-	-	-	X
56	MG	AA	3160	-	-	-	X
56	MG	AA	3168	-	-	-	X
56	MG	AA	3171	-	-	-	X
56	MG	AA	3179	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
56	MG	AA	3180	-	-	-	X
56	MG	AA	3208	-	-	-	X
56	MG	AA	3209	-	-	-	X
56	MG	AA	3215	-	-	-	X
56	MG	AX	105	-	-	-	X
56	MG	B0	101	-	-	-	X
56	MG	B0	104	-	-	-	X
56	MG	B3	3403	-	-	-	X
56	MG	B7	102	-	-	-	X
56	MG	B7	103	-	-	-	X
56	MG	BA	3009	-	-	-	X
56	MG	BA	3013	-	-	-	X
56	MG	BA	3023	-	-	-	X
56	MG	BA	3025	-	-	-	X
56	MG	BA	3032	-	-	-	X
56	MG	BA	3033	-	-	-	X
56	MG	BA	3037	-	-	-	X
56	MG	BA	3040	-	-	-	X
56	MG	BA	3041	-	-	-	X
56	MG	BA	3044	-	-	-	X
56	MG	BA	3046	-	-	-	X
56	MG	BA	3047	-	-	-	X
56	MG	BA	3051	-	-	-	X
56	MG	BA	3056	-	-	-	X
56	MG	BA	3059	-	-	-	X
56	MG	BA	3073	-	-	-	X
56	MG	BA	3076	-	-	-	X
56	MG	BA	3078	-	-	-	X
56	MG	BA	3085	-	-	-	X
56	MG	BA	3095	-	-	-	X
56	MG	BA	3099	-	-	-	X
56	MG	BA	3109	-	-	-	X
56	MG	BA	3116	-	-	-	X
56	MG	BA	3123	-	-	-	X
56	MG	BA	3124	-	-	-	X
56	MG	BA	3127	-	-	-	X
56	MG	BA	3132	-	-	-	X
56	MG	BA	3135	-	-	-	X
56	MG	BA	3136	-	-	-	X
56	MG	BA	3137	-	-	-	X
56	MG	BA	3143	-	-	-	X
56	MG	BA	3145	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
56	MG	BA	3148	-	-	-	X
56	MG	BA	3151	-	-	-	X
56	MG	BA	3153	-	-	-	X
56	MG	BA	3182	-	-	-	X
56	MG	BA	3185	-	-	-	X
56	MG	BA	3193	-	-	-	X
56	MG	BA	3194	-	-	-	X
56	MG	BA	3197	-	-	-	X
56	MG	BA	3198	-	-	-	X
56	MG	BA	3201	-	-	-	X
56	MG	BA	3209	-	-	-	X
56	MG	BA	3220	-	-	-	X
56	MG	BA	3221	-	-	-	X
56	MG	BA	3224	-	-	-	X
56	MG	BA	3226	-	-	-	X
56	MG	BA	3229	-	-	-	X
56	MG	BA	3230	-	-	-	X
56	MG	BA	3234	-	-	-	X
56	MG	BA	3253	-	-	-	X
56	MG	BA	3264	-	-	-	X
56	MG	BA	3268	-	-	-	X
56	MG	BA	3276	-	-	-	X
56	MG	BA	3301	-	-	-	X
56	MG	BA	3303	-	-	-	X
56	MG	BA	3308	-	-	-	X
56	MG	BA	3315	-	-	-	X
56	MG	BA	3320	-	-	-	X
56	MG	BA	3321	-	-	-	X
56	MG	BA	3354	-	-	-	X
56	MG	BA	3382	-	-	-	X
56	MG	BA	3396	-	-	-	X
56	MG	BA	3399	-	-	-	X
56	MG	BA	3405	-	-	-	X
56	MG	BA	3406	-	-	-	X
56	MG	BA	3407	-	-	-	X
56	MG	BA	3419	-	-	-	X
56	MG	BA	3428	-	-	-	X
56	MG	BA	3434	-	-	-	X
56	MG	BA	3438	-	-	-	X
56	MG	BA	3441	-	-	-	X
56	MG	BA	3444	-	-	-	X
56	MG	BA	3454	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
56	MG	BA	3458	-	-	-	X
56	MG	BA	3462	-	-	-	X
56	MG	BA	3477	-	-	-	X
56	MG	BA	3483	-	-	-	X
56	MG	BA	3496	-	-	-	X
56	MG	BA	3506	-	-	-	X
56	MG	BA	3509	-	-	-	X
56	MG	BA	3514	-	-	-	X
56	MG	BA	3515	-	-	-	X
56	MG	BA	3527	-	-	-	X
56	MG	BA	3528	-	-	-	X
56	MG	BA	3529	-	-	-	X
56	MG	BA	3533	-	-	-	X
56	MG	BA	3546	-	-	-	X
56	MG	BA	3547	-	-	-	X
56	MG	BA	3548	-	-	-	X
56	MG	BA	3549	-	-	-	X
56	MG	BA	3555	-	-	-	X
56	MG	BA	3560	-	-	-	X
56	MG	BA	3563	-	-	-	X
56	MG	BA	3579	-	-	-	X
56	MG	BA	3586	-	-	-	X
56	MG	BA	3596	-	-	-	X
56	MG	BA	3597	-	-	-	X
56	MG	BA	3603	-	-	-	X
56	MG	BA	3604	-	-	-	X
56	MG	BA	3610	-	-	-	X
56	MG	BA	3617	-	-	-	X
56	MG	BA	3618	-	-	-	X
56	MG	BA	3627	-	-	-	X
56	MG	BA	3637	-	-	-	X
56	MG	BA	3640	-	-	-	X
56	MG	BA	3657	-	-	-	X
56	MG	BA	3674	-	-	-	X
56	MG	BA	3685	-	-	-	X
56	MG	BA	3695	-	-	-	X
56	MG	BA	3700	-	-	-	X
56	MG	BA	3702	-	-	-	X
56	MG	BA	3724	-	-	-	X
56	MG	BA	3728	-	-	-	X
56	MG	BA	3731	-	-	-	X
56	MG	BA	3732	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
56	MG	BA	3733	-	-	-	X
56	MG	BA	3734	-	-	-	X
56	MG	BA	3735	-	-	-	X
56	MG	BA	3739	-	-	-	X
56	MG	BA	3740	-	-	-	X
56	MG	BB	3003	-	-	-	X
56	MG	BD	302	-	-	-	X
56	MG	BD	303	-	-	-	X
56	MG	BD	305	-	-	-	X
56	MG	BD	306	-	-	-	X
56	MG	BD	307	-	-	-	X
56	MG	BD	308	-	-	-	X
56	MG	BD	310	-	-	-	X
56	MG	BD	312	-	-	-	X
56	MG	BE	304	-	-	-	X
56	MG	BE	306	-	-	-	X
56	MG	BE	307	-	-	-	X
56	MG	BF	301	-	-	-	X
56	MG	BF	304	-	-	-	X
56	MG	BF	305	-	-	-	X
56	MG	BN	3001	-	-	-	X
56	MG	BN	3004	-	-	-	X
56	MG	BN	3005	-	-	-	X
56	MG	BP	201	-	-	-	X
56	MG	BP	203	-	-	-	X
56	MG	BQ	3001	-	-	-	X
56	MG	BQ	3004	-	-	-	X
56	MG	BR	201	-	-	-	X
56	MG	BR	203	-	-	-	X
56	MG	BU	201	-	-	-	X
56	MG	BU	202	-	-	-	X
56	MG	BU	203	-	-	-	X
56	MG	BU	204	-	-	-	X
56	MG	BU	205	-	-	-	X
56	MG	BU	207	-	-	-	X
56	MG	BU	209	-	-	-	X
56	MG	BV	3001	-	-	-	X
56	MG	BV	3002	-	-	-	X
56	MG	BW	3004	-	-	-	X
56	MG	CA	3004	-	-	-	X
56	MG	CA	3007	-	-	-	X
56	MG	CA	3020	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
56	MG	CA	3026	-	-	-	X
56	MG	CA	3027	-	-	-	X
56	MG	CA	3042	-	-	-	X
56	MG	CA	3043	-	-	-	X
56	MG	CA	3048	-	-	-	X
56	MG	CA	3053	-	-	-	X
56	MG	CA	3061	-	-	-	X
56	MG	CA	3072	-	-	-	X
56	MG	CA	3075	-	-	-	X
56	MG	CA	3078	-	-	-	X
56	MG	CA	3094	-	-	-	X
56	MG	CA	3100	-	-	-	X
56	MG	CA	3119	-	-	-	X
56	MG	CA	3135	-	-	-	X
56	MG	CA	3152	-	-	-	X
56	MG	CA	3162	-	-	-	X
56	MG	CA	3170	-	-	-	X
56	MG	D3	101	-	-	-	X
56	MG	D5	101	-	-	-	X
56	MG	DA	3002	-	-	-	X
56	MG	DA	3007	-	-	-	X
56	MG	DA	3010	-	-	-	X
56	MG	DA	3012	-	-	-	X
56	MG	DA	3016	-	-	-	X
56	MG	DA	3017	-	-	-	X
56	MG	DA	3018	-	-	-	X
56	MG	DA	3019	-	-	-	X
56	MG	DA	3025	-	-	-	X
56	MG	DA	3026	-	-	-	X
56	MG	DA	3027	-	-	-	X
56	MG	DA	3033	-	-	-	X
56	MG	DA	3035	-	-	-	X
56	MG	DA	3036	-	-	-	X
56	MG	DA	3038	-	-	-	X
56	MG	DA	3040	-	-	-	X
56	MG	DA	3056	-	-	-	X
56	MG	DA	3065	-	-	-	X
56	MG	DA	3094	-	-	-	X
56	MG	DA	3099	-	-	-	X
56	MG	DA	3100	-	-	-	X
56	MG	DA	3112	-	-	-	X
56	MG	DA	3114	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
56	MG	DA	3116	-	-	-	X
56	MG	DA	3117	-	-	-	X
56	MG	DA	3121	-	-	-	X
56	MG	DA	3129	-	-	-	X
56	MG	DA	3142	-	-	-	X
56	MG	DA	3171	-	-	-	X
56	MG	DA	3172	-	-	-	X
56	MG	DA	3174	-	-	-	X
56	MG	DA	3177	-	-	-	X
56	MG	DA	3179	-	-	-	X
56	MG	DA	3192	-	-	-	X
56	MG	DA	3197	-	-	-	X
56	MG	DA	3198	-	-	-	X
56	MG	DA	3217	-	-	-	X
56	MG	DA	3249	-	-	-	X
56	MG	DA	3252	-	-	-	X
56	MG	DA	3265	-	-	-	X
56	MG	DA	3267	-	-	-	X
56	MG	DA	3268	-	-	-	X
56	MG	DA	3270	-	-	-	X
56	MG	DA	3275	-	-	-	X
56	MG	DA	3282	-	-	-	X
56	MG	DA	3292	-	-	-	X
56	MG	DA	3295	-	-	-	X
56	MG	DA	3298	-	-	-	X
56	MG	DA	3300	-	-	-	X
56	MG	DA	3301	-	-	-	X
56	MG	DA	3304	-	-	-	X
56	MG	DA	3305	-	-	-	X
56	MG	DA	3316	-	-	-	X
56	MG	DA	3328	-	-	-	X
56	MG	DA	3339	-	-	-	X
56	MG	DA	3350	-	-	-	X
56	MG	DA	3351	-	-	-	X
56	MG	DA	3386	-	-	-	X
56	MG	DA	3389	-	-	-	X
56	MG	DA	3399	-	-	-	X
56	MG	DA	3405	-	-	-	X
56	MG	DA	3411	-	-	-	X
56	MG	DA	3418	-	-	-	X
56	MG	DA	3422	-	-	-	X
56	MG	DA	3428	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
56	MG	DA	3433	-	-	-	X
56	MG	DA	3436	-	-	-	X
56	MG	DA	3444	-	-	-	X
56	MG	DA	3462	-	-	-	X
56	MG	DA	3464	-	-	-	X
56	MG	DA	3465	-	-	-	X
56	MG	DA	3477	-	-	-	X
56	MG	DA	3493	-	-	-	X
56	MG	DA	3522	-	-	-	X
56	MG	DA	3539	-	-	-	X
56	MG	DA	3548	-	-	-	X
56	MG	DA	3557	-	-	-	X
56	MG	DA	3565	-	-	-	X
56	MG	DA	3579	-	-	-	X
56	MG	DA	3580	-	-	-	X
56	MG	DA	3583	-	-	-	X
56	MG	DA	3585	-	-	-	X
56	MG	DA	3599	-	-	-	X
56	MG	DA	3601	-	-	-	X
56	MG	DA	3612	-	-	-	X
56	MG	DA	3613	-	-	-	X
56	MG	DA	3620	-	-	-	X
56	MG	DA	3631	-	-	-	X
56	MG	DA	3632	-	-	-	X
56	MG	DA	3637	-	-	-	X
56	MG	DA	3641	-	-	-	X
56	MG	DA	3643	-	-	-	X
56	MG	DA	3645	-	-	-	X
56	MG	DA	3647	-	-	-	X
56	MG	DA	3648	-	-	-	X
56	MG	DA	3652	-	-	-	X
56	MG	DA	3654	-	-	-	X
56	MG	DA	3657	-	-	-	X
56	MG	DB	3007	-	-	-	X
56	MG	DD	301	-	-	-	X
56	MG	DD	302	-	-	-	X
56	MG	DD	303	-	-	-	X
56	MG	DD	304	-	-	-	X
56	MG	DE	301	-	-	-	X
56	MG	DF	301	-	-	-	X
56	MG	DF	303	-	-	-	X
56	MG	DF	304	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
56	MG	DP	201	-	-	-	X
56	MG	DU	3001	-	-	-	X
56	MG	DV	201	-	-	-	X
56	MG	DV	202	-	-	-	X
59	FME	AX	101	-	-	-	X
59	FME	CX	101	-	-	-	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	S	0	0	0
			877	553	175	149				
38	DS	110	Total	C	N	O	S	0	0	0
			870	549	173	148				

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

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

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

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

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

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

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

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

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
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	BA	739	Total	Mg	0	0
			739	739		
56	AK	1	Total	Mg	0	0
			1	1		
56	DQ	4	Total	Mg	0	0
			4	4		
56	D3	1	Total	Mg	0	0
			1	1		
56	DF	5	Total	Mg	0	0
			5	5		
56	B8	2	Total	Mg	0	0
			2	2		
56	BE	9	Total	Mg	0	0
			9	9		
56	DU	2	Total	Mg	0	0
			2	2		
56	B1	2	Total	Mg	0	0
			2	2		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	AN	1	Total 1	Mg 1	0	0
56	BP	4	Total 4	Mg 4	0	0
56	AX	9	Total 9	Mg 9	0	0
56	CN	1	Total 1	Mg 1	0	0
56	DN	1	Total 1	Mg 1	0	0
56	AS	1	Total 1	Mg 1	0	0
56	CA	172	Total 172	Mg 172	0	0
56	B5	1	Total 1	Mg 1	0	0
56	BB	18	Total 18	Mg 18	0	0
56	D8	1	Total 1	Mg 1	0	0
56	DG	1	Total 1	Mg 1	0	0
56	CF	1	Total 1	Mg 1	0	0
56	B9	1	Total 1	Mg 1	0	0
56	BF	6	Total 6	Mg 6	0	0
56	AV	1	Total 1	Mg 1	0	0
56	BX	2	Total 2	Mg 2	0	0
56	B2	1	Total 1	Mg 1	0	0
56	AA	222	Total 222	Mg 222	0	0
56	BQ	4	Total 4	Mg 4	0	0
56	CX	3	Total 3	Mg 3	0	0
56	DV	3	Total 3	Mg 3	0	0

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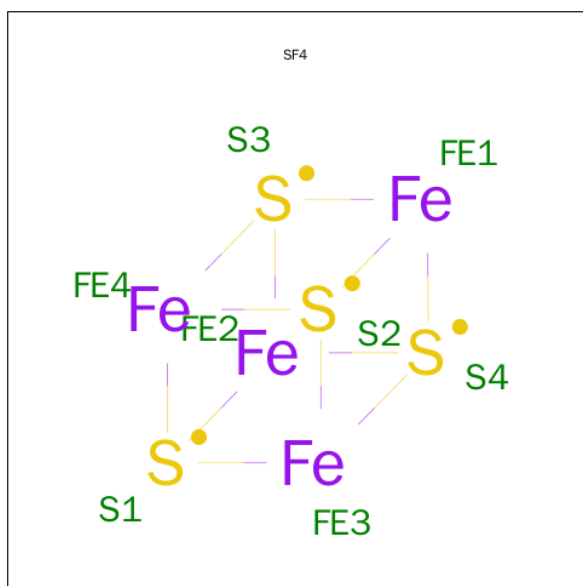
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	AM	2	Total 2	Mg 2	0	0
56	BU	9	Total 9	Mg 9	0	0
56	DR	1	Total 1	Mg 1	0	0
56	AD	1	Total 1	Mg 1	0	0
56	BN	6	Total 6	Mg 6	0	0
56	CT	1	Total 1	Mg 1	0	0
56	BG	4	Total 4	Mg 4	0	0
56	DE	6	Total 6	Mg 6	0	0
56	B3	3	Total 3	Mg 3	0	0
56	BR	3	Total 3	Mg 3	0	0
56	DA	657	Total 657	Mg 657	0	0
56	DP	2	Total 2	Mg 2	0	0
56	DW	2	Total 2	Mg 2	0	0
56	B7	4	Total 4	Mg 4	0	0
56	AL	1	Total 1	Mg 1	0	0
56	BV	3	Total 3	Mg 3	0	0
56	DO	1	Total 1	Mg 1	0	0
56	BO	1	Total 1	Mg 1	0	0
56	BZ	1	Total 1	Mg 1	0	0
56	DY	1	Total 1	Mg 1	0	0
56	D5	2	Total 2	Mg 2	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	BD	12	Total	Mg	0	0
			12	12		
56	B0	6	Total	Mg	0	0
			6	6		
56	CE	2	Total	Mg	0	0
			2	2		
56	BW	5	Total	Mg	0	0
			5	5		
56	DD	5	Total	Mg	0	0
			5	5		
56	AF	1	Total	Mg	0	0
			1	1		
56	DB	12	Total	Mg	0	0
			12	12		

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

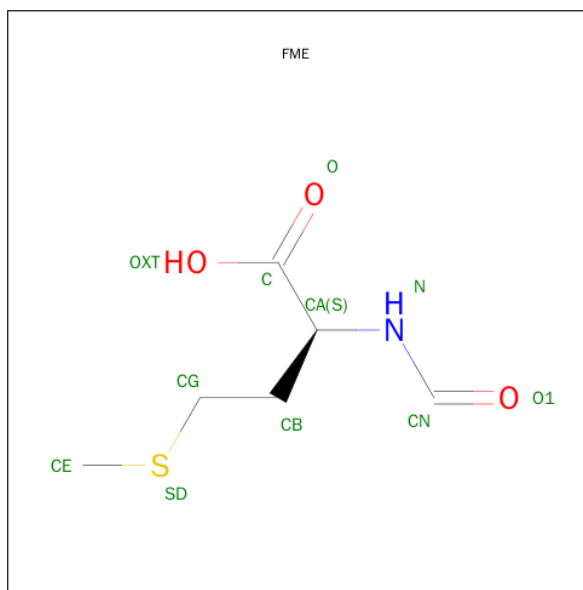


Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
57	AD	1	Total	Fe	S	0	0
			8	4	4		
57	CD	1	Total	Fe	S	0	0
			8	4	4		

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	B5	1	Total Zn 1 1	0	0
58	B4	1	Total Zn 1 1	0	0
58	CN	1	Total Zn 1 1	0	0
58	BY	1	Total Zn 1 1	0	0
58	B9	1	Total Zn 1 1	0	0
58	DY	1	Total Zn 1 1	0	0
58	D5	1	Total Zn 1 1	0	0
58	D4	1	Total Zn 1 1	0	0
58	AN	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
58	B6	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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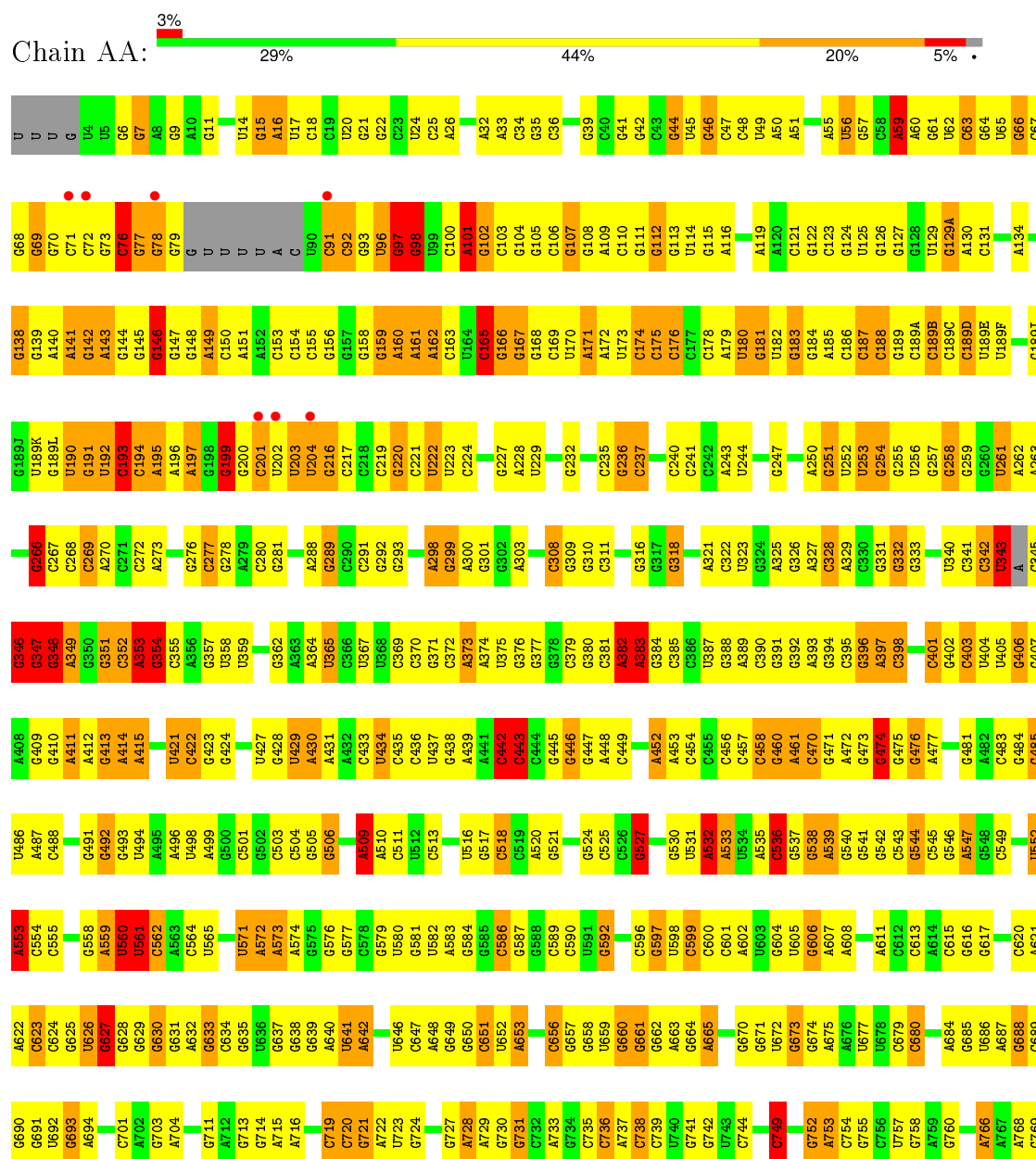
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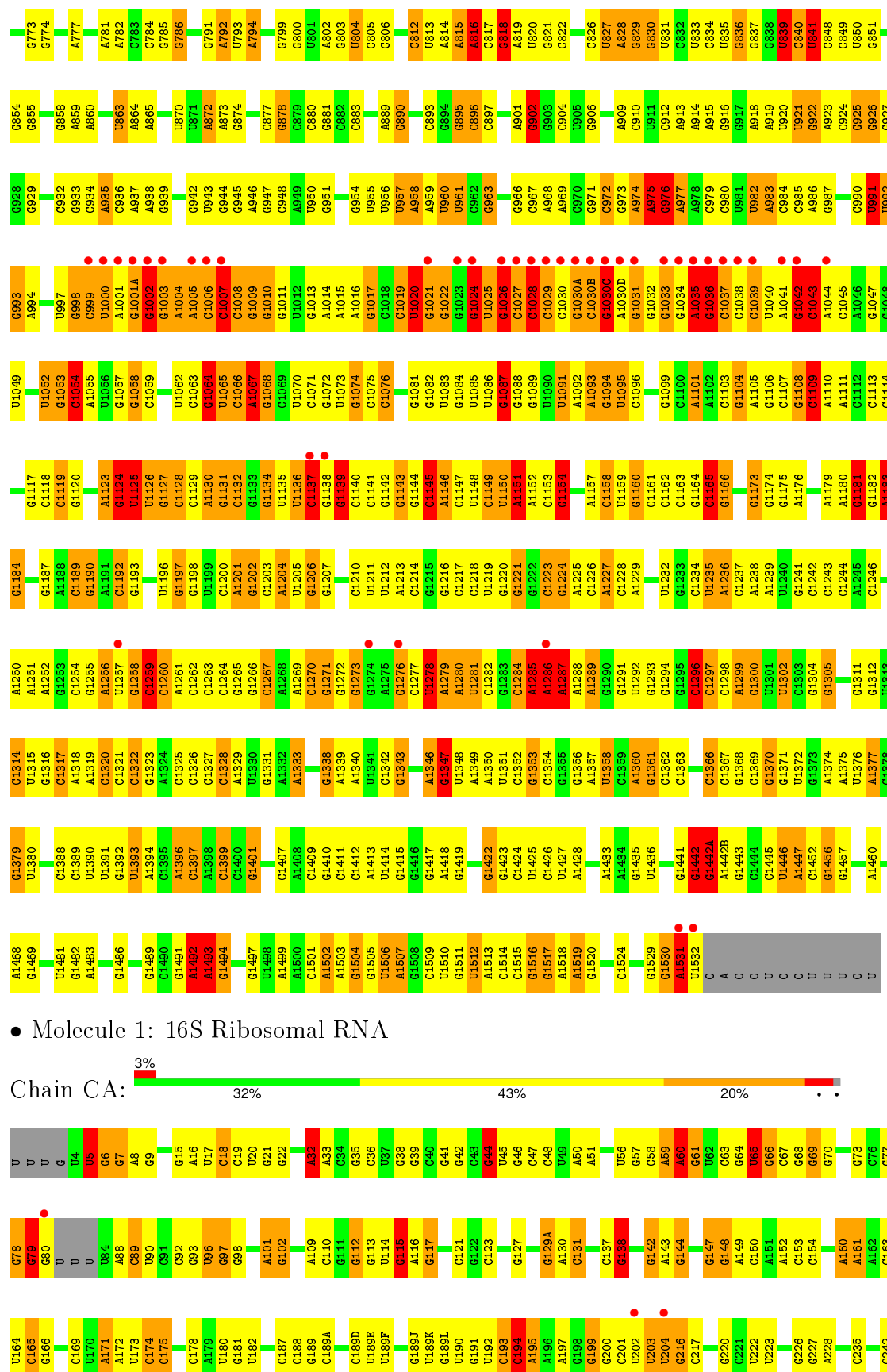
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
61	DA	906	Total 906	O 906	0	0
61	DB	7	Total 7	O 7	0	0
61	DD	10	Total 10	O 10	0	0
61	DE	11	Total 11	O 11	0	0
61	DF	4	Total 4	O 4	0	0
61	DO	1	Total 1	O 1	0	0
61	DP	14	Total 14	O 14	0	0
61	DQ	3	Total 3	O 3	0	0
61	DR	1	Total 1	O 1	0	0
61	DU	4	Total 4	O 4	0	0
61	DV	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

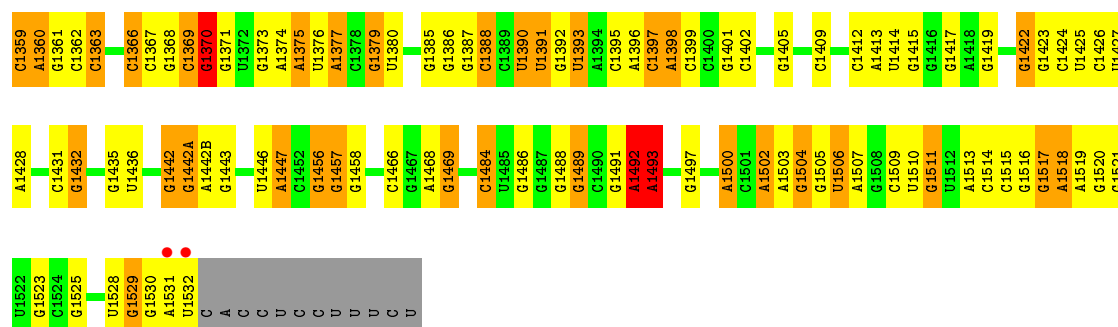
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according 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

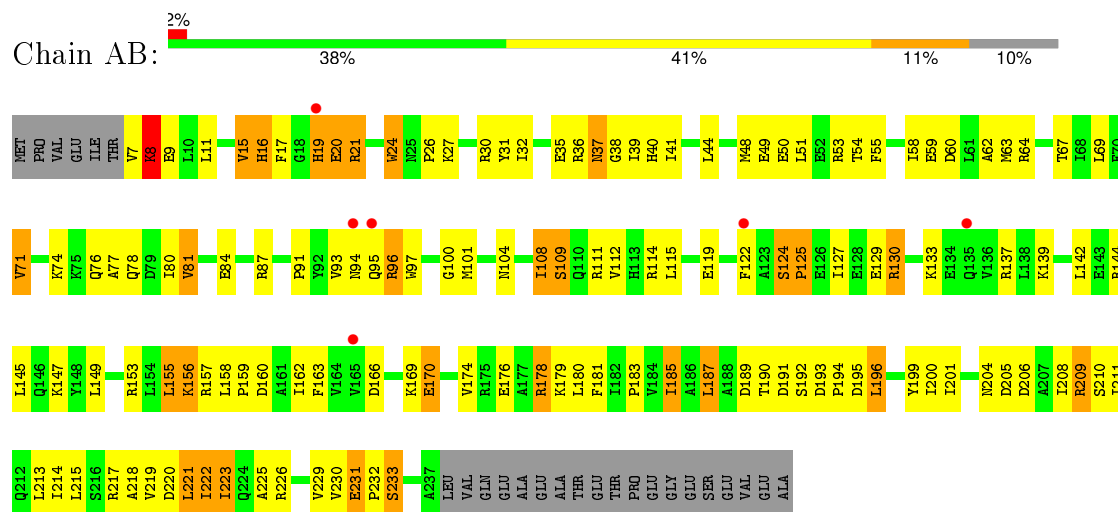




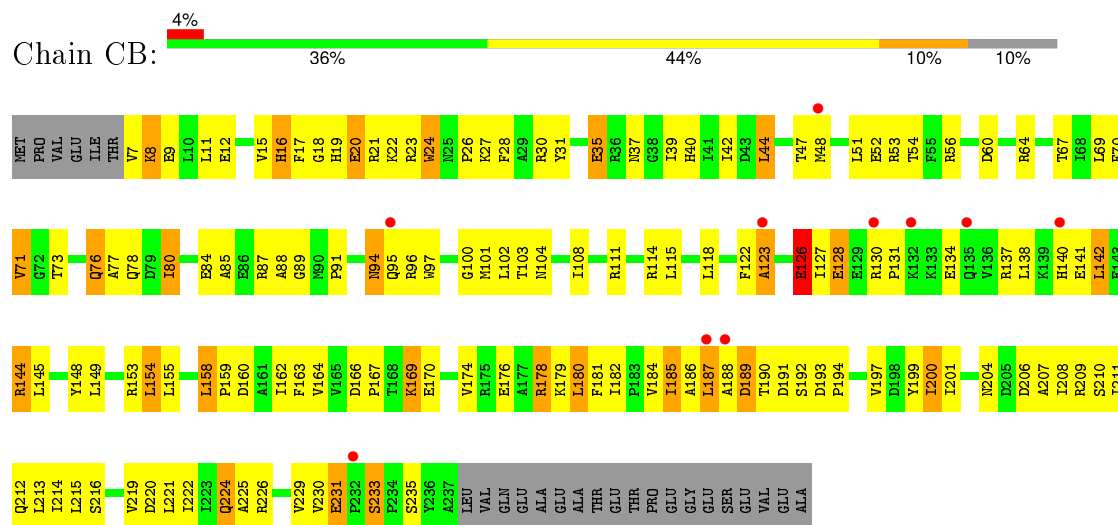
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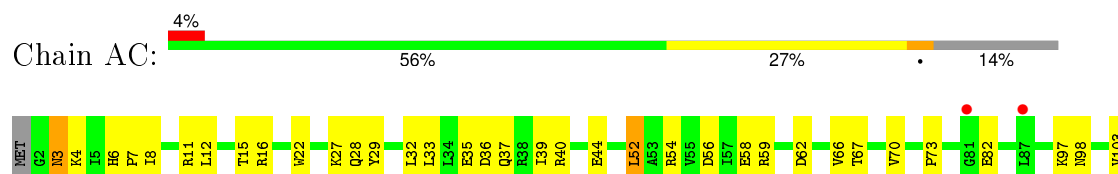
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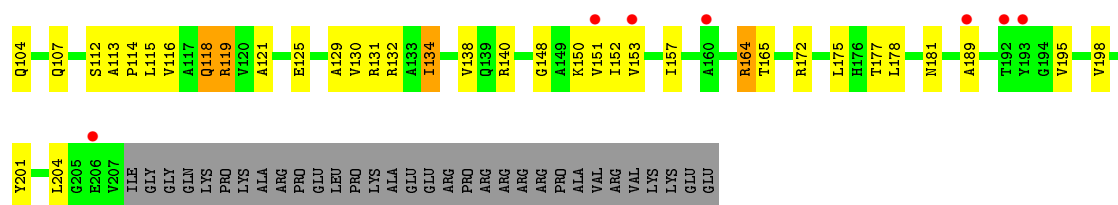


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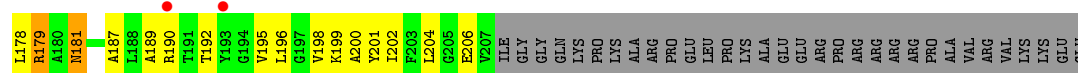
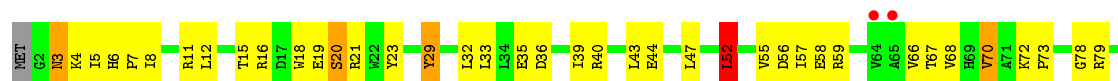


• Molecule 3: 30S Ribosomal Protein S3

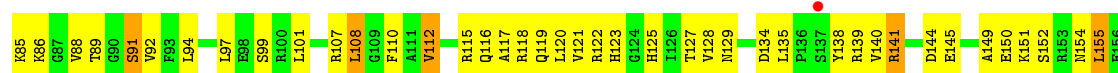
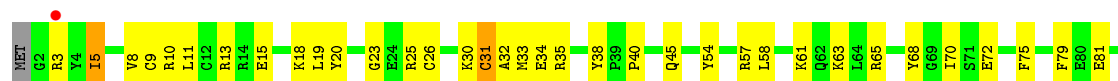




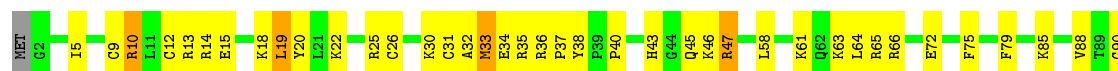
• Molecule 3: 30S Ribosomal Protein S3



• Molecule 4: 30S Ribosomal Protein S4

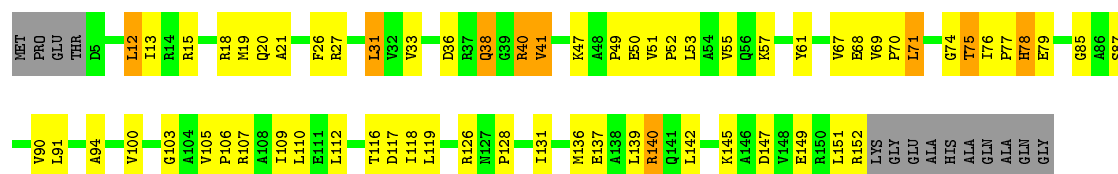


• Molecule 4: 30S Ribosomal Protein S4



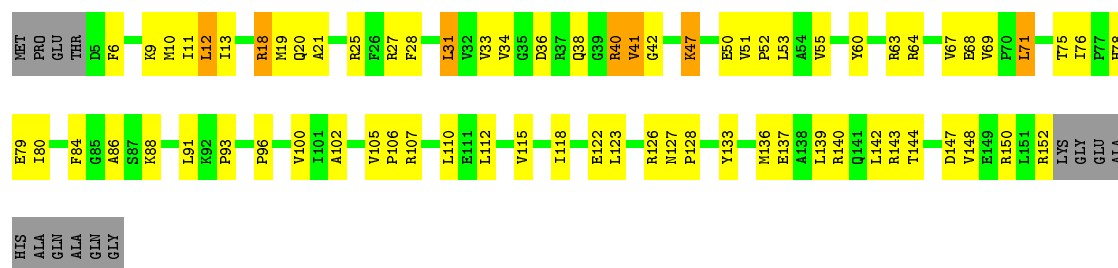
• Molecule 5: 30S Ribosomal Protein S5





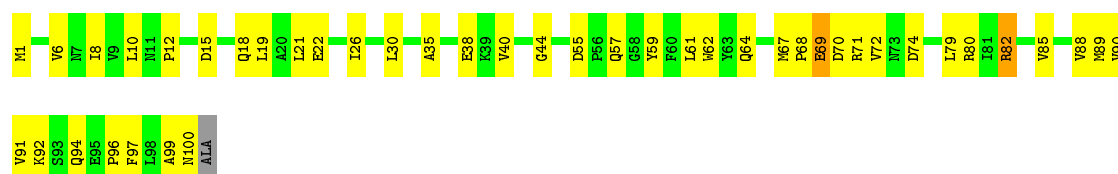
• Molecule 5: 30S Ribosomal Protein S5

Chain CE: 48% 40% 9%



• Molecule 6: 30S Ribosomal Protein S6

Chain AF: 56% 41% ..



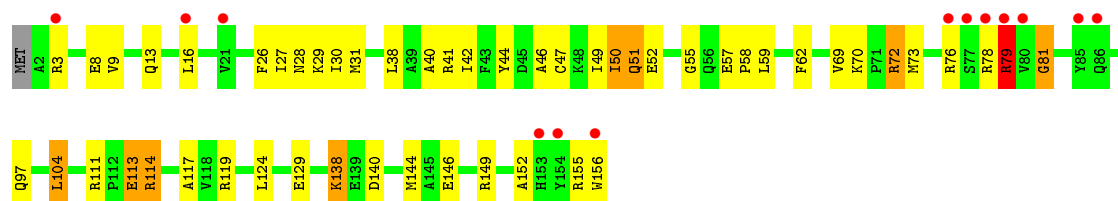
• Molecule 6: 30S Ribosomal Protein S6

Chain CF: 65% 31% ..



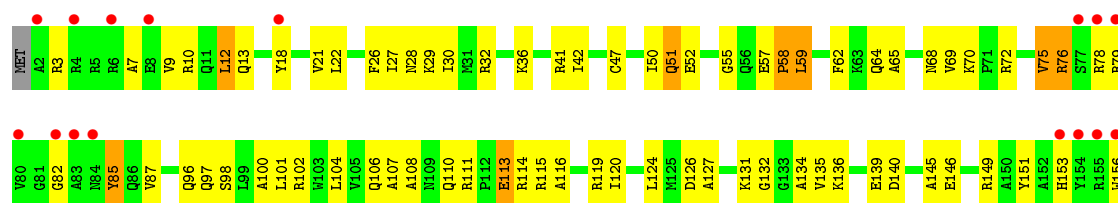
• Molecule 7: 30S Ribosomal Protein S7

Chain AG: 8% 66% 28% 5% ..



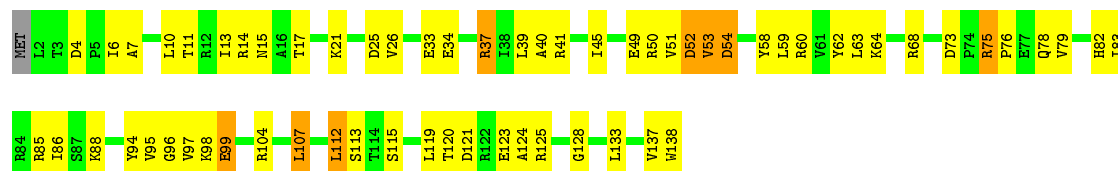
• Molecule 7: 30S Ribosomal Protein S7

Chain CG: 10% 52% 42% 5%



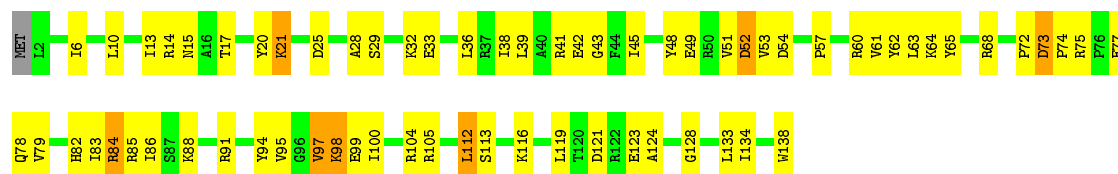
• Molecule 8: 30S Ribosomal Protein S8

Chain AH: 54% 40% 6% •



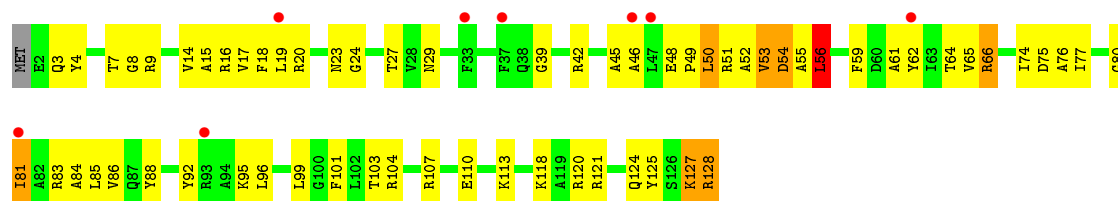
• Molecule 8: 30S Ribosomal Protein S8

Chain CH: 51% 43% 5% •



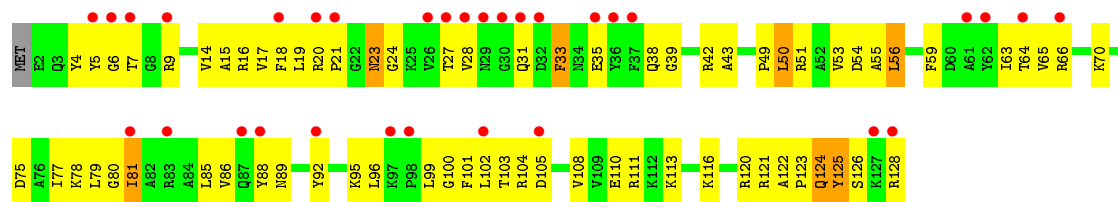
• Molecule 9: 30S Ribosomal Protein S9

Chain AI: 50% 43% 5% •



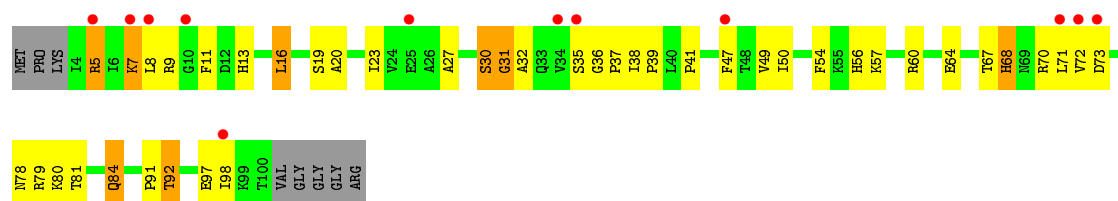
• Molecule 9: 30S Ribosomal Protein S9

Chain CI: 45% 49% 5% •

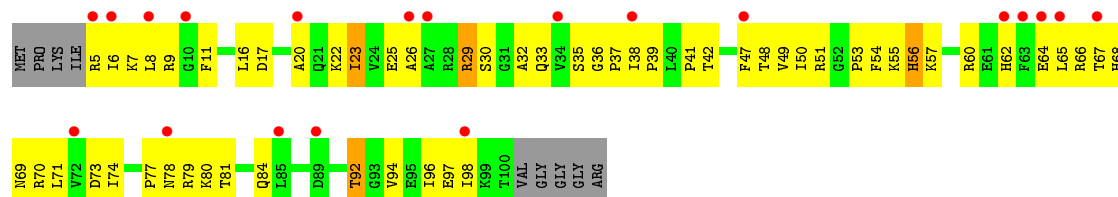


• Molecule 10: 30S Ribosomal Protein S10

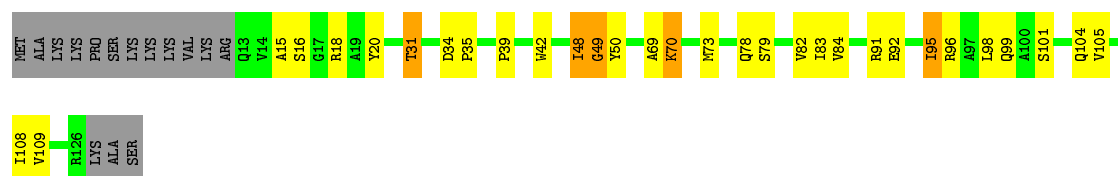
Chain AJ: 51% 33% 8% 8%



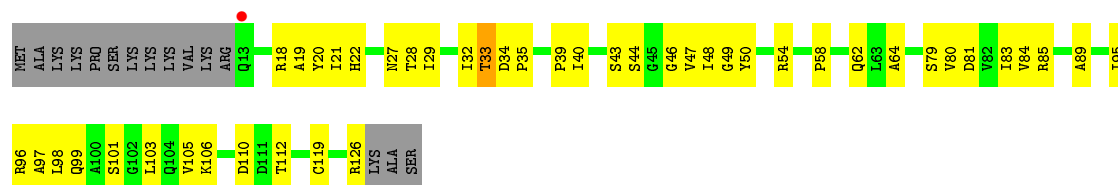
• Molecule 10: 30S Ribosomal Protein S10



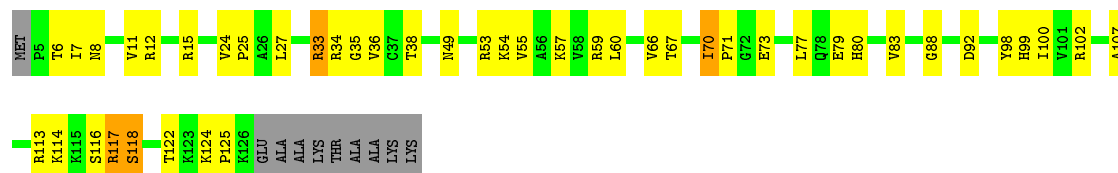
• Molecule 11: 30S Ribosomal Protein S11



• Molecule 11: 30S Ribosomal Protein S11

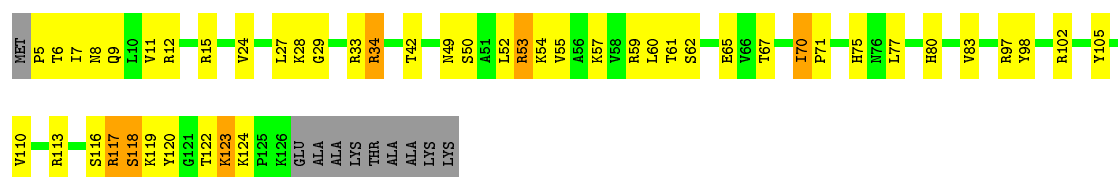


• Molecule 12: 30S Ribosomal Protein S12

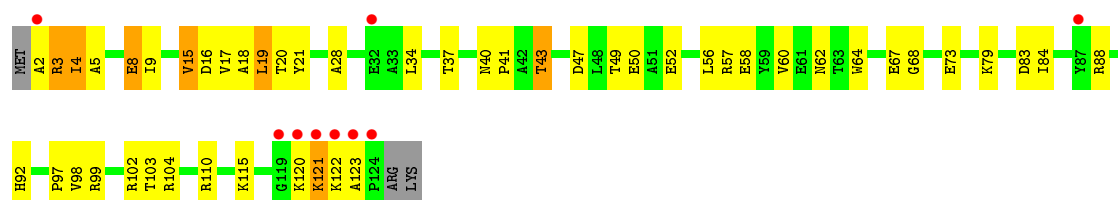


• Molecule 12: 30S Ribosomal Protein S12

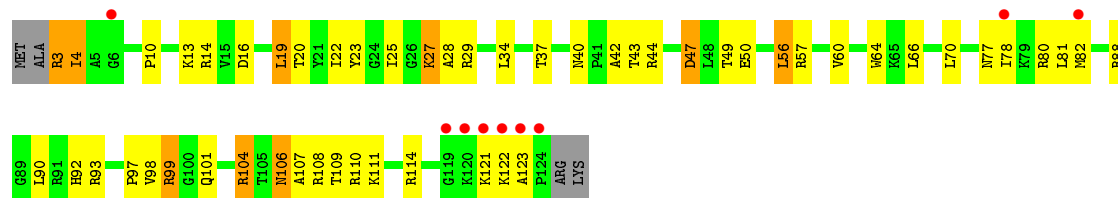




• Molecule 13: 30S Ribosomal Protein S13



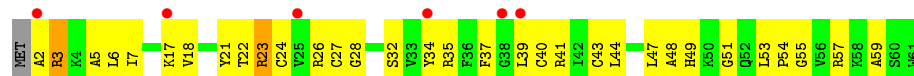
• Molecule 13: 30S Ribosomal Protein S13



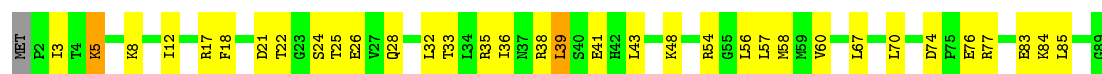
• Molecule 14: 30S Ribosomal Protein S14



• Molecule 14: 30S Ribosomal Protein S14

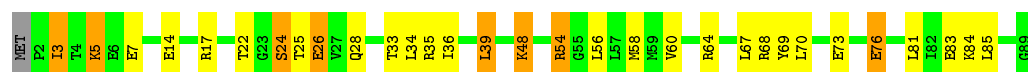


• Molecule 15: 30S Ribosomal Protein S15

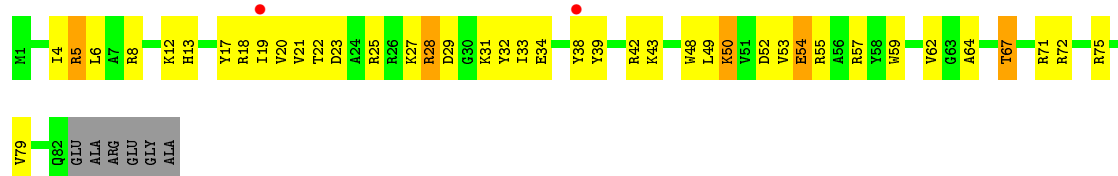


• Molecule 15: 30S Ribosomal Protein S15

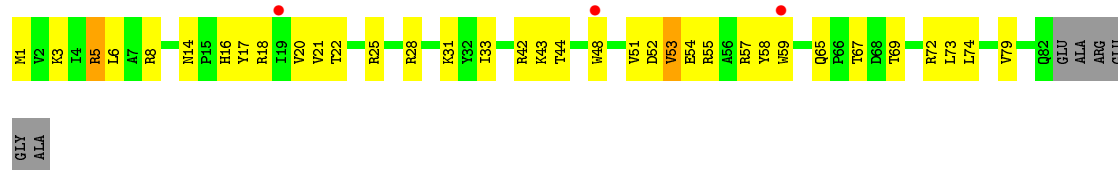




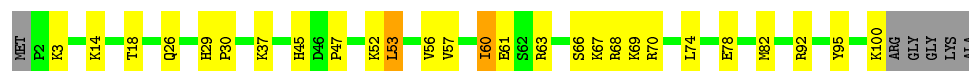
• Molecule 16: 30S Ribosomal Protein S16



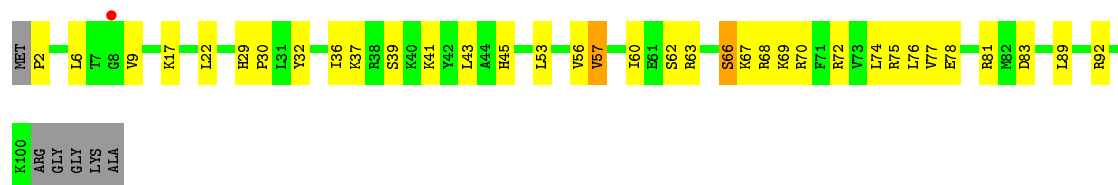
• Molecule 16: 30S Ribosomal Protein S16



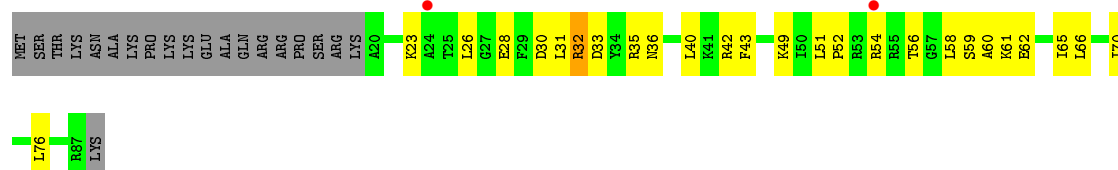
• Molecule 17: 30S Ribosomal Protein S17



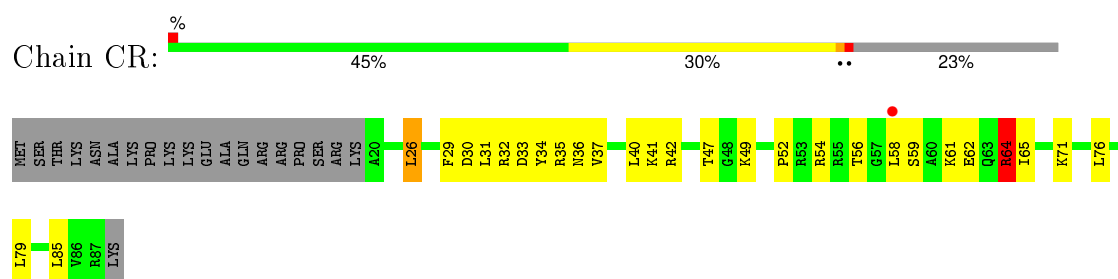
• Molecule 17: 30S Ribosomal Protein S17



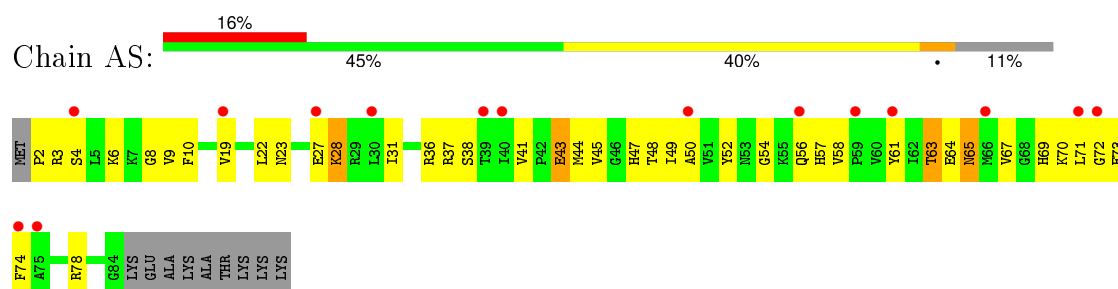
• Molecule 18: 30S Ribosomal Protein S18



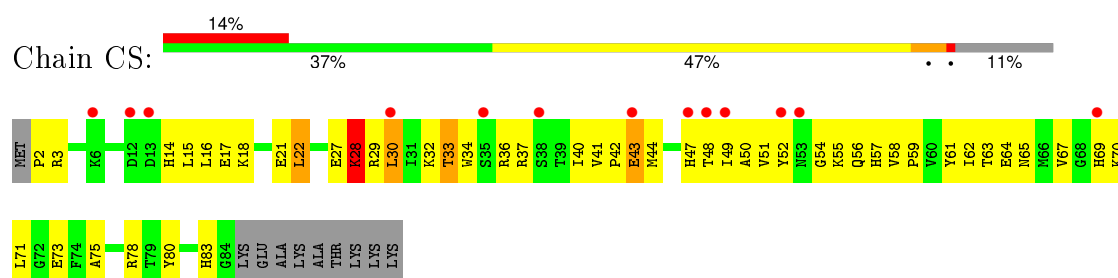
• Molecule 18: 30S Ribosomal Protein S18



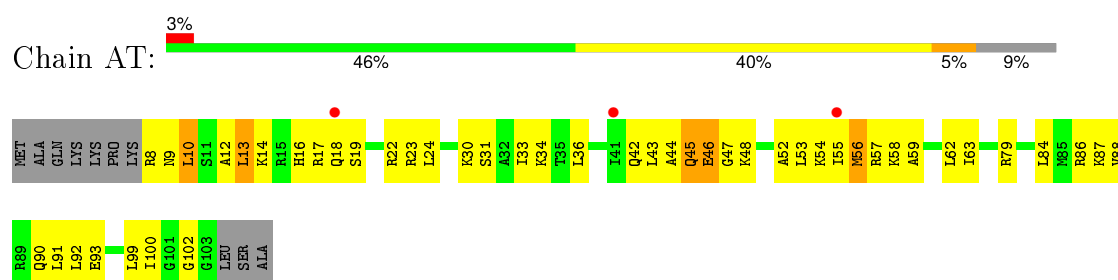
• Molecule 19: 30S Ribosomal Protein S19



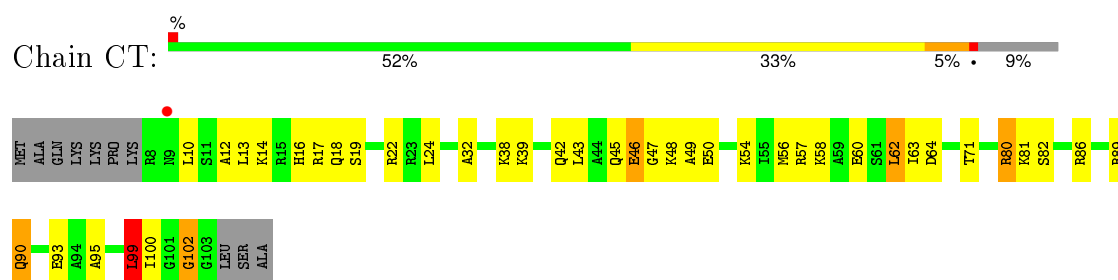
• Molecule 19: 30S Ribosomal Protein S19



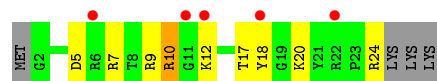
• Molecule 20: 30S Ribosomal Protein S20



• Molecule 20: 30S Ribosomal Protein S20



• Molecule 21: 30S Ribosomal Protein THX



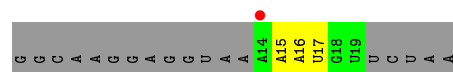
• Molecule 21: 30S Ribosomal Protein THX



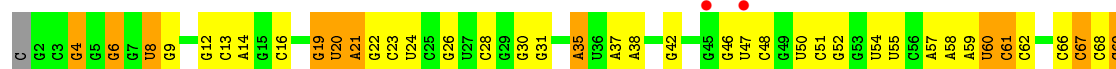
• Molecule 22: mRNA



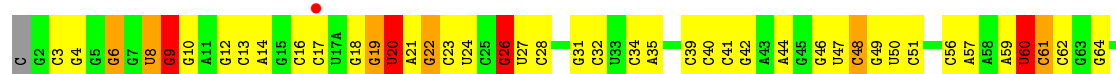
• Molecule 22: mRNA



• Molecule 23: P-site tRNA



• Molecule 23: P-site tRNA

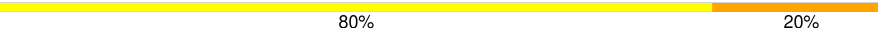


• Molecule 24: Dityromycin



T1
V2
P3
P4
V5
V6
P7
V8
V9
P10

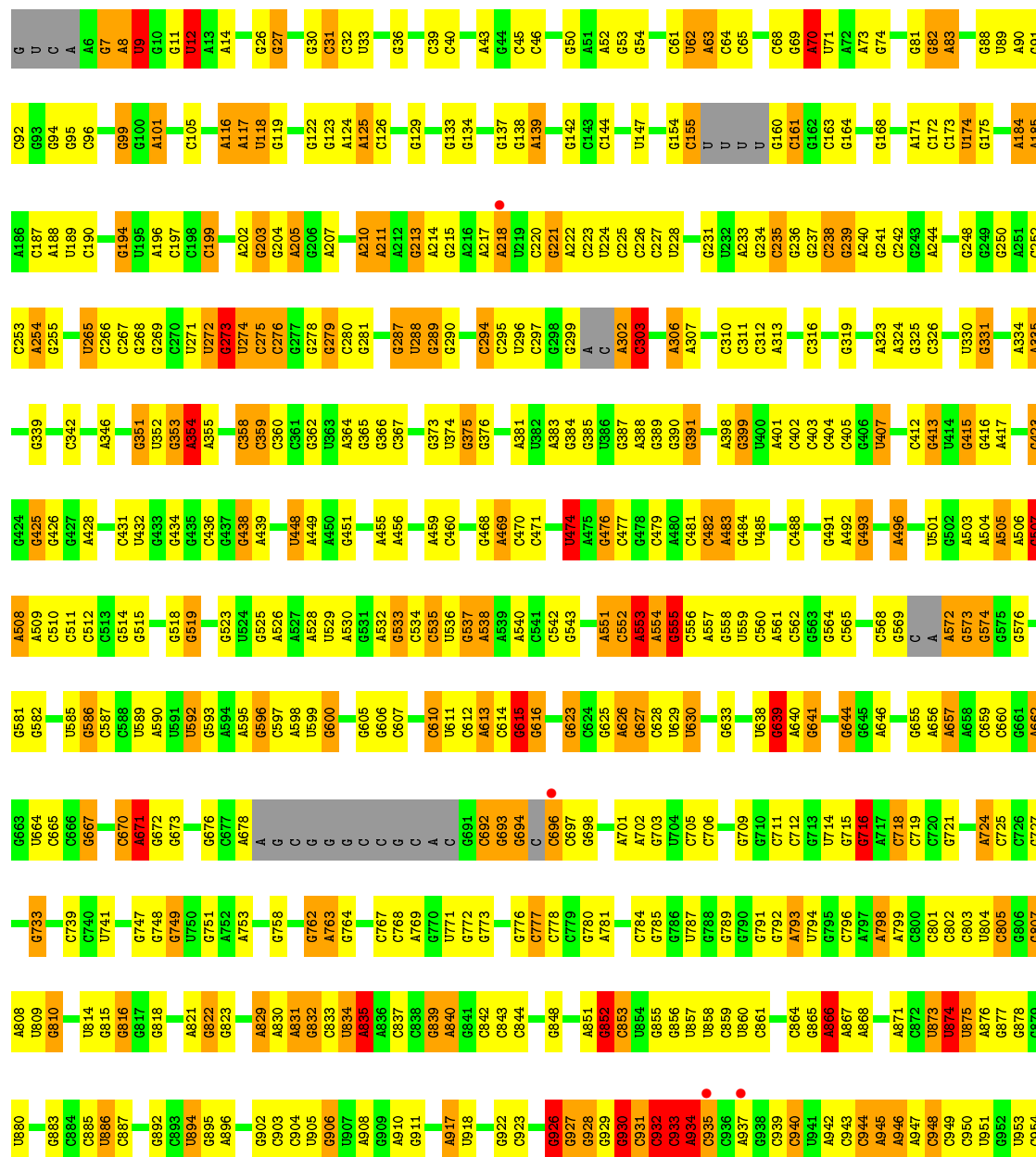
• Molecule 24: Dityromycin

Chain CW:  80% 20%

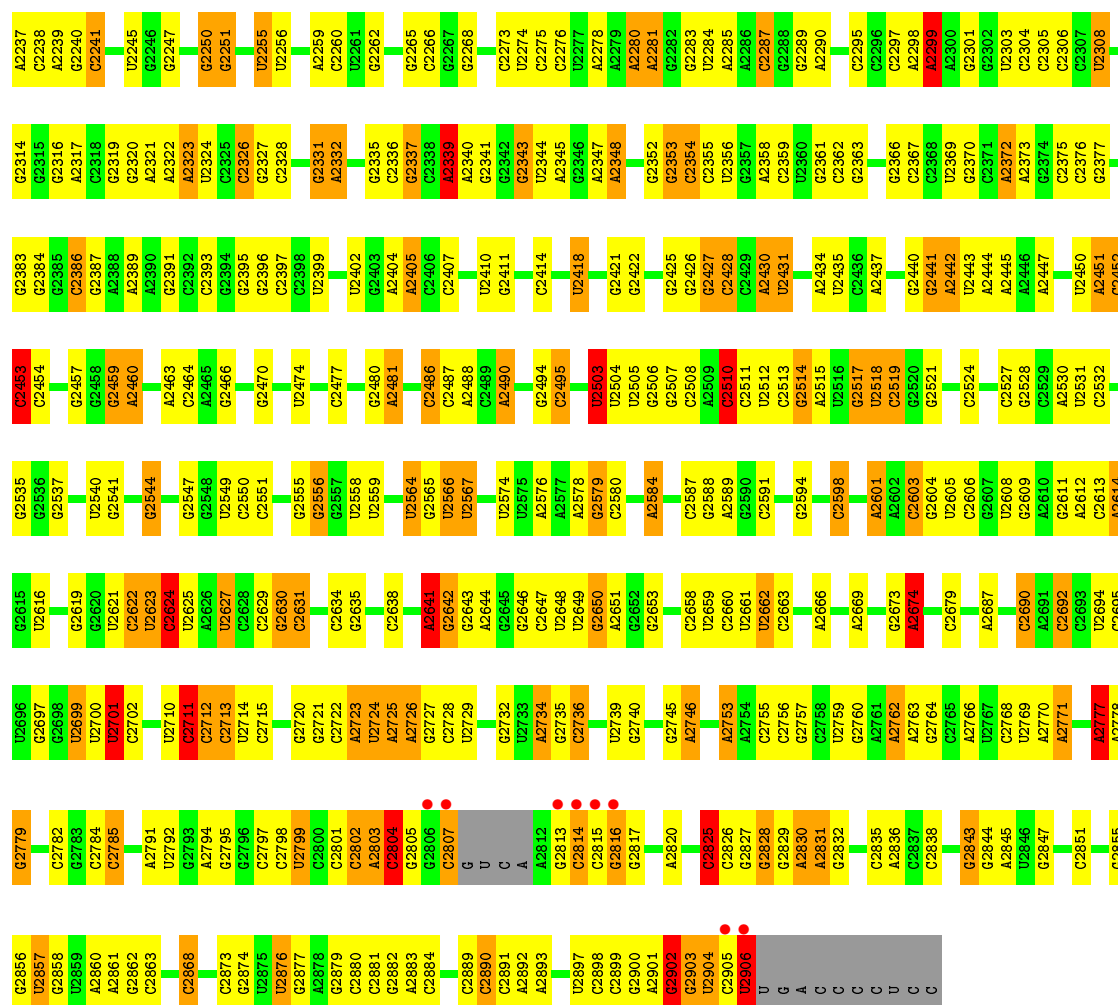
T1
V2
P3
P4
V5
V6
P7
V8
V9
P10

• Molecule 25: 23S Ribosomal RNA

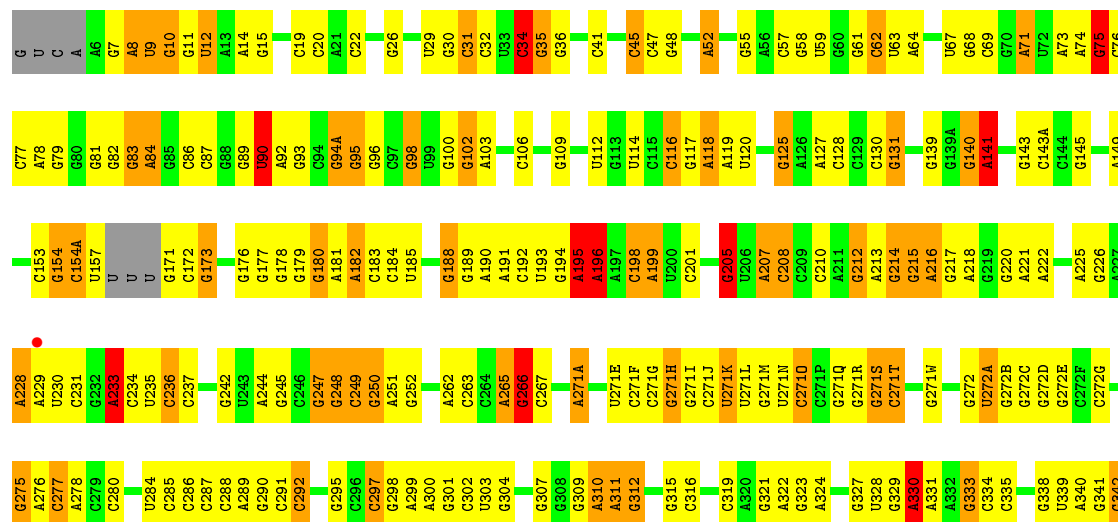
Chain BA:  44% 34% 13% 6%





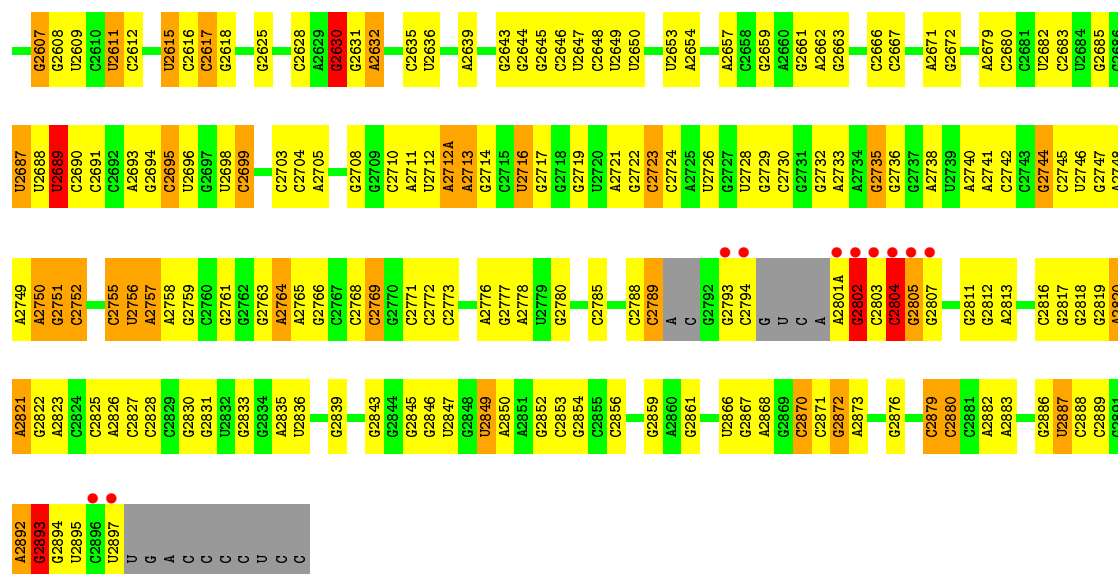


Chain DA:



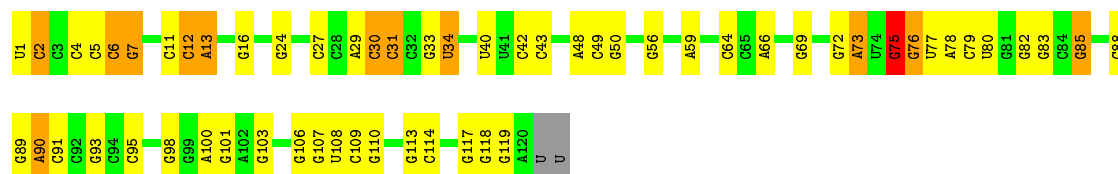


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G2455	C2461	U2462	C2463	C2464	G2468	A2469	C2470	C2471	C2472	U2473	C2474	C2475	A2476	C2477	A2478	C2483	G2487	A2488	G2489	G2490	G2494	G2495	C2496	A2497	C2498	C2499	C2500	C2501	C2502	A2503	U2504	C2505	U2506	C2507	C2508	C2509	C2512	C2517	A2518	U2519	C2520	C2521	G2525	G2526	C2527	U2528	G2529	A2600	C2601	A2602	U2604							
G2382	G2383	G2384	C2385	C2386	U2387	A2388	C2389	U2390	C2391	A2392	A2393	C2394	C2395	G2396	U2397	U2398	C2399	A2400	U2401	C2402	C2403	C2404	A2405	C2407	U2408	C2409	C2410	G2413	G2414	C2420	C2421	A2422	A2425	A2426	C2427	C2428	C2429	A2430	A2434	A2435	A2439	C2440	C2441	C2442	G2445	C2446	C2447	A2448	A2451	C2452	C2381							
C2314	G2315	C2316	C2317	G2318	G2319	A2320	C2321	C2325	C2326	A2327	A2328	C2329	G2330	C2331	U2332	A2333	G2334	A2335	A2336	C2337	G2338	G2339	C2342	C2343	U2344	C2345	A2346	C2347	U2348	A2352	C2355	U2356	U2357	C2358	C2359	A2360	A2361	C2362	C2363	C2364	C2365	A2366	A2369	G2370	C2371	C2372	C2373	C2374	C2375	A2376	A2377	C2380	C2381					
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C	C	U	U	C	C	U	C	A	C	A	A	C	G	C	U	U	U	U	C	C	C	C	C	C	C	C	U1991	C1992	U1993	C1996	G1997	C1998	C1999	G2000	G2003	C2004	A2005	C2006	G2009	G2010	U2011	G2012	A2013	A2014	A2015	U2016	U2017	G2018	A2019	A2020	C2021	U2022	G2023	G2024	U2028	U2029	A2030	A2031
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C	C	U	U	C	C	U	C	A	C	A	A	C	G	C	U	U	U	U	C	C	C	C	C	C	C	C	U1991	C1992	U1993	C1996	G1997	C1998	C1999	G2000	G2003	C2004	A2005	C2006	G2009	G2010	U2011	G2012	A2013	A2014	A2015	U2016	U2017	G2018	A2019	A2020	C2021	U2022	G2023	G2024	U2028	U2029	A2030	A2031
C	C	U	U	C	C	U	C	A	C	A	A	C	G	C	U	U	U	U	C	C	C	C	C	C	C	C	U1991	C1992	U1993	C1996	G1997	C1998	C1999	G2000	G2003	C2004	A2005	C2006	G2009	G2010	U2011	G2012	A2013	A2014	A2015	U2016	U2017	G2018	A2019	A2020	C2021	U2022	G2023	G2024	U2028	U2029	A2030	A2031
C	C	U	U	C	C	U	C	A	C	A	A	C	G	C	U	U	U	U	C	C	C	C	C	C	C	C	U1991	C1992	U1993	C1996	G1997	C1998	C1999	G2000	G2003	C2004	A2005	C2006	G2009	G2010	U2011	G2012	A2013	A2014	A2015	U2016	U2017	G2018	A2019	A2020	C2021	U2022	G2023	G2024	U2028	U2029	A2030	A2031
C	C	U	U	C	C	U	C	A	C	A	A	C	G	C	U	U	U	U	C	C	C	C	C	C	C	C	U1991	C1992	U1993	C1996	G1997	C1998	C1999	G2000	G2003	C2004	A2005	C2006	G2009	G2010	U2011	G2012	A2013	A2014	A2015	U2016	U2017	G2018	A2019	A2020	C2021	U2022	G2023	G2024	U2028	U2029	A2030	A2031
C	C	U	U	C	C	U	C	A	C	A	A	C	G	C	U	U	U	U	C	C	C	C	C	C	C	C	U1991	C1992	U1993	C1996	G1997	C1998	C1999	G2000	G2003	C2004	A2005	C2006	G2009	G2010	U2011	G2012	A2013	A2014	A2015	U2016	U2017	G2018	A2019	A2020	C2021	U2022	G2023	G2024	U2028	U2029	A2030	



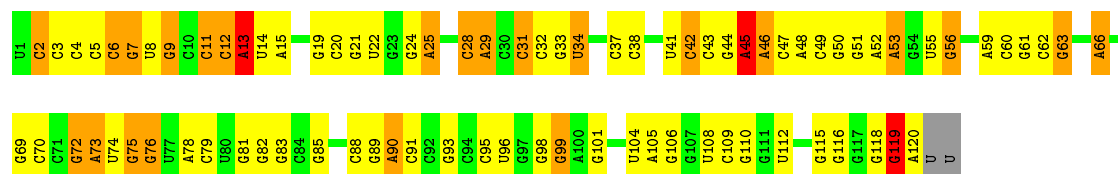
- Molecule 26: 5S Ribosomal RNA

Chain BB:  50% 38% 10% 2%



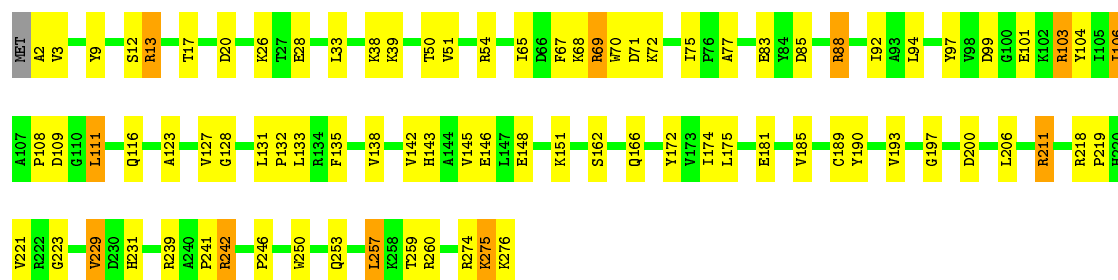
- Molecule 26: 5S Ribosomal RNA

Chain DB:  30% 47% 19% ..



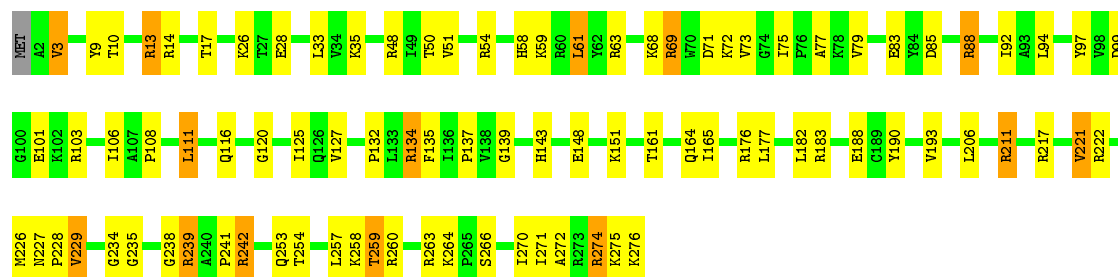
- Molecule 27: 50S Ribosomal Protein L2

Chain BD: 69% 27% .



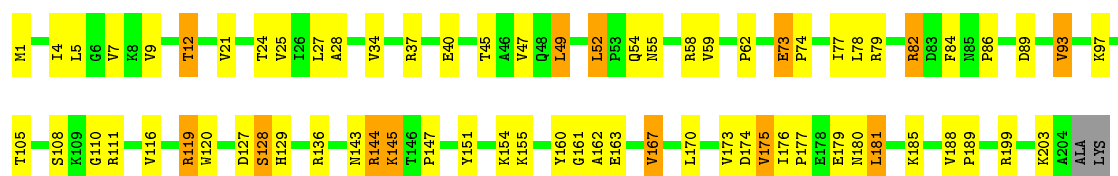
- Molecule 27: 50S Ribosomal Protein L2

Chain DD: 



• Molecule 28: 50S Ribosomal Protein L3

Chain BE: 



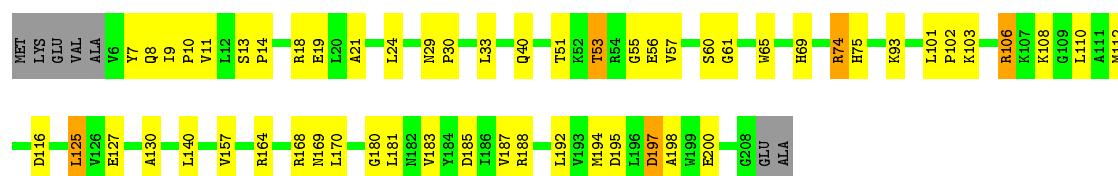
• Molecule 28: 50S Ribosomal Protein L3

Chain DE: 



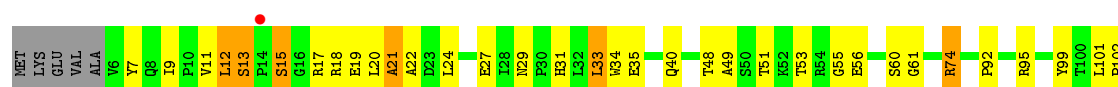
• Molecule 29: 50S Ribosomal Protein L4

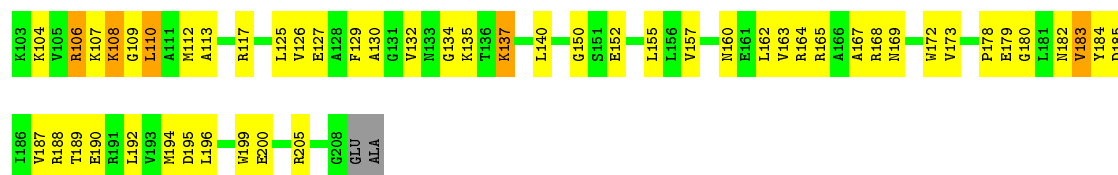
Chain BF: 



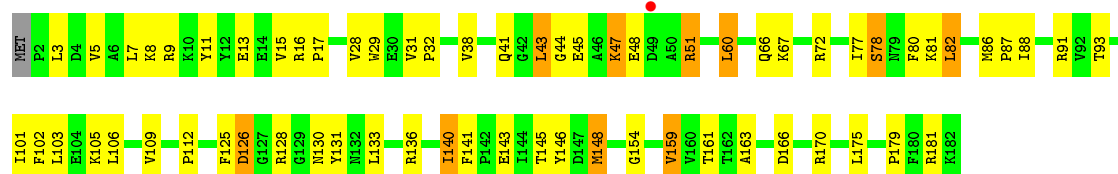
• Molecule 29: 50S Ribosomal Protein L4

Chain DF: 

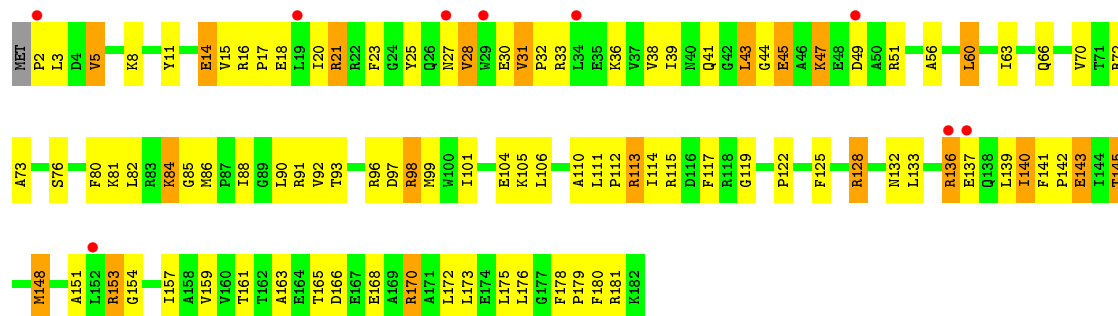




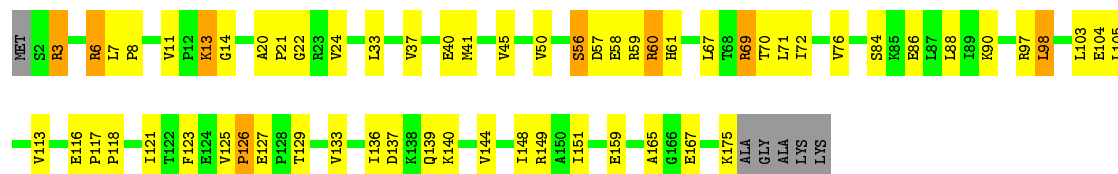
• Molecule 30: 50S Ribosomal Protein L5



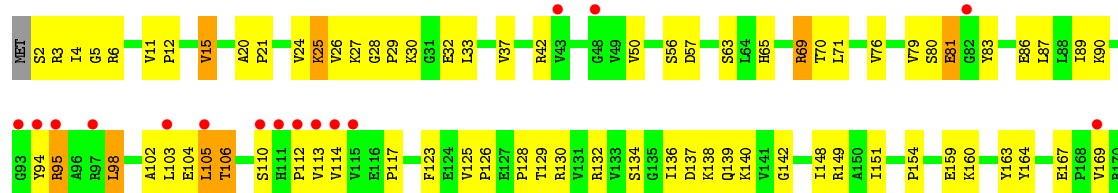
• Molecule 30: 50S Ribosomal Protein L5



• Molecule 31: 50S Ribosomal Protein L6

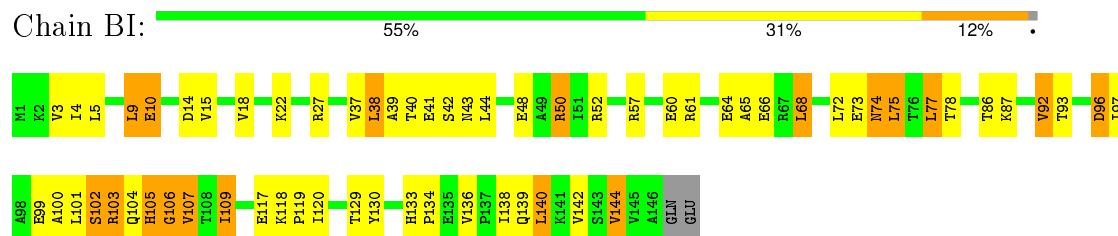


• Molecule 31: 50S Ribosomal Protein L6

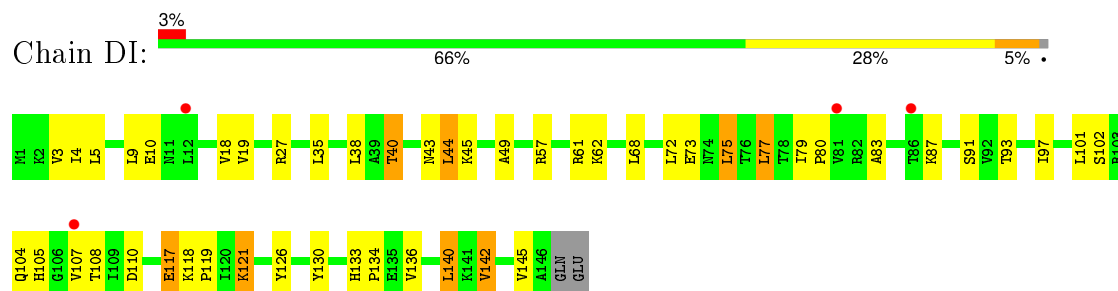




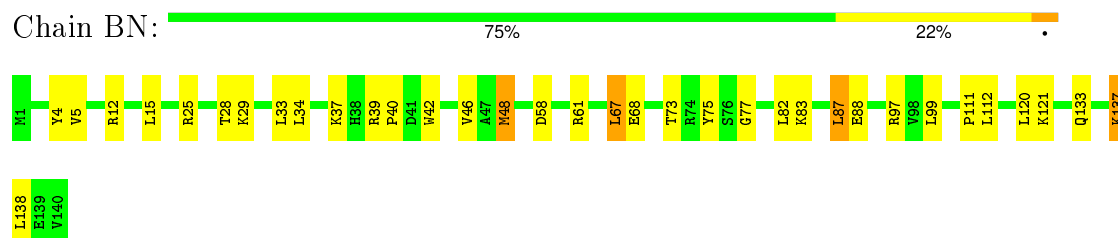
• Molecule 32: 50S Ribosomal Protein L9



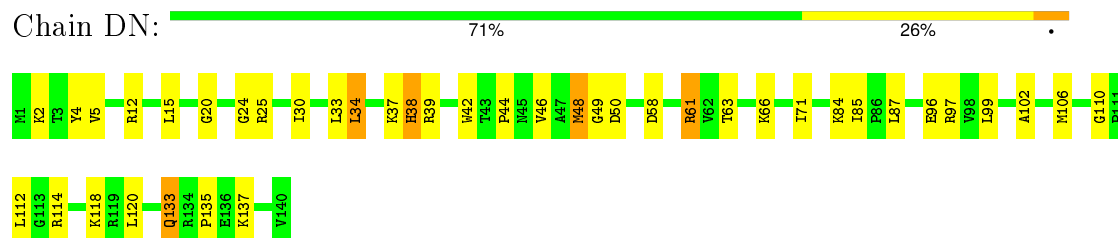
• Molecule 32: 50S Ribosomal Protein L9



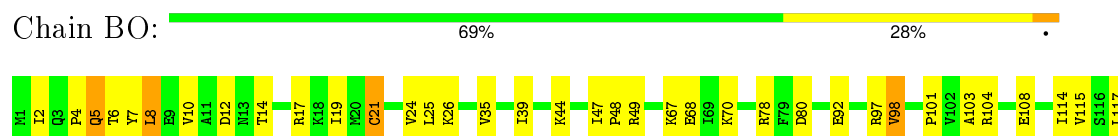
• Molecule 33: 50S Ribosomal Protein L13



• Molecule 33: 50S Ribosomal Protein L13



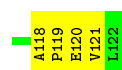
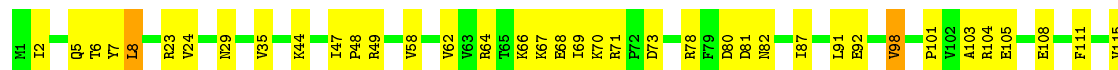
• Molecule 34: 50S Ribosomal Protein L14





• Molecule 34: 50S Ribosomal Protein L14

Chain DO: 66% 33%



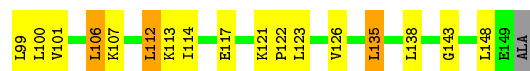
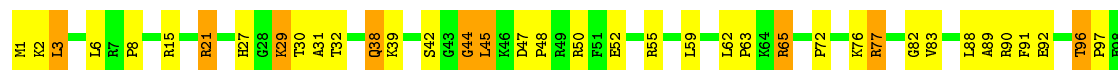
• Molecule 35: 50S Ribosomal Protein L15

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%

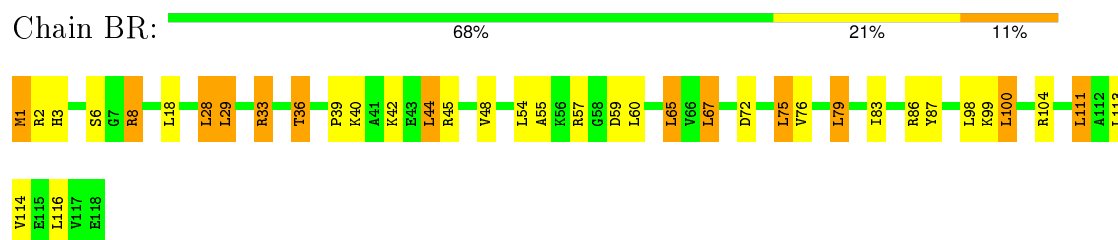


• Molecule 36: 50S Ribosomal Protein L16

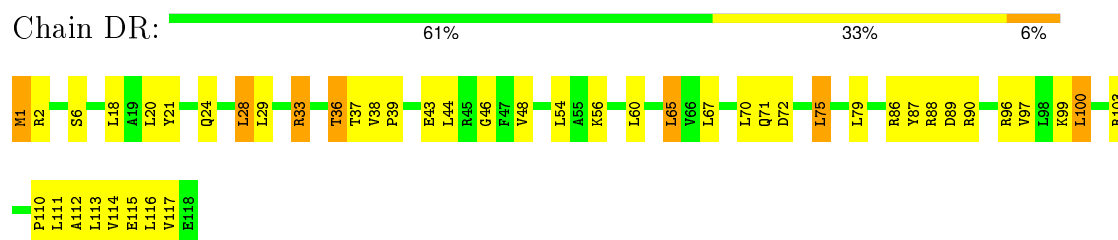
Chain DQ: 60% 36%



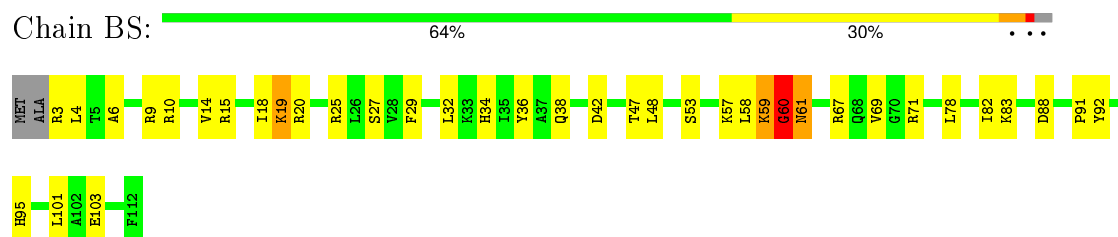
- Molecule 37: 50S Ribosomal Protein L17



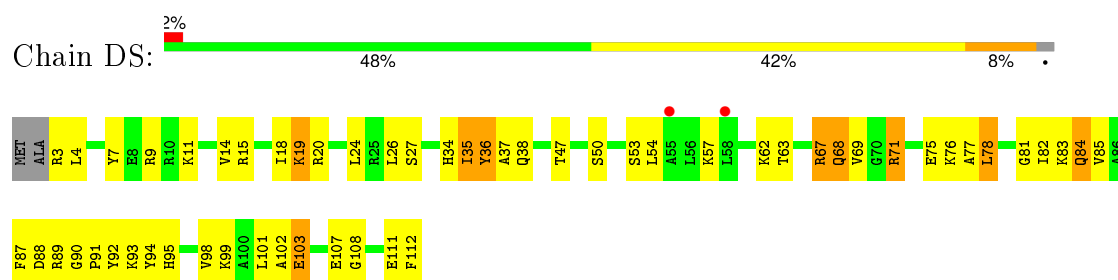
- Molecule 37: 50S Ribosomal Protein L17



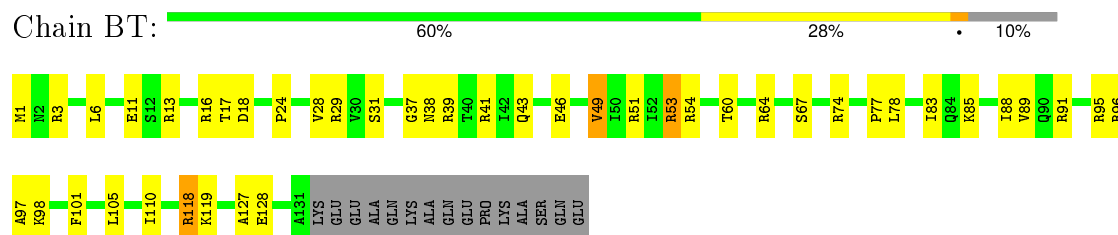
- Molecule 38: 50S Ribosomal Protein L18



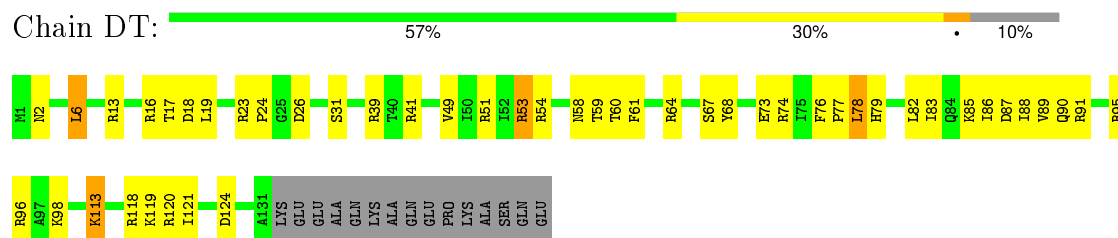
- Molecule 38: 50S Ribosomal Protein L18



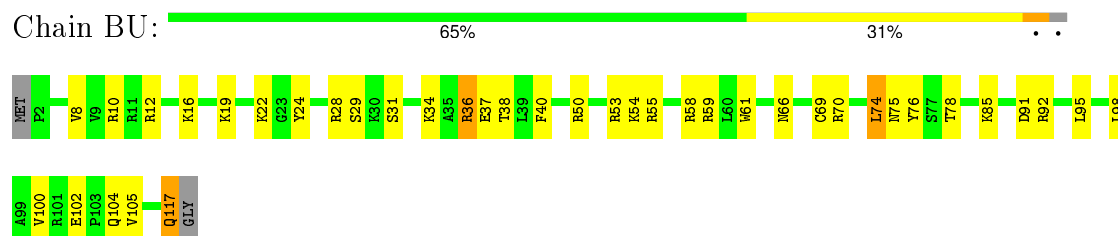
- Molecule 39: 50S Ribosomal Protein L19



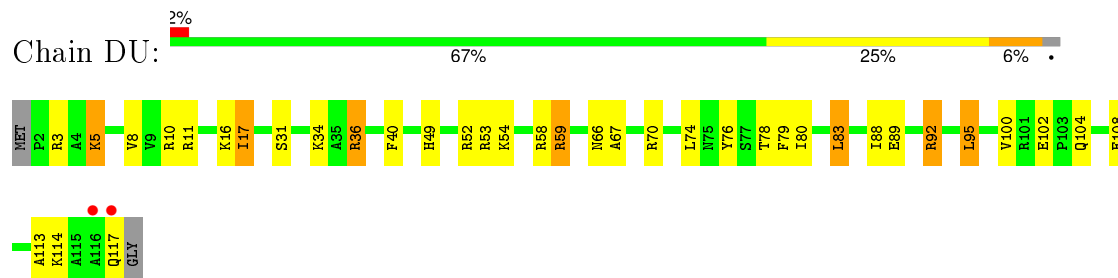
- Molecule 39: 50S Ribosomal Protein L19



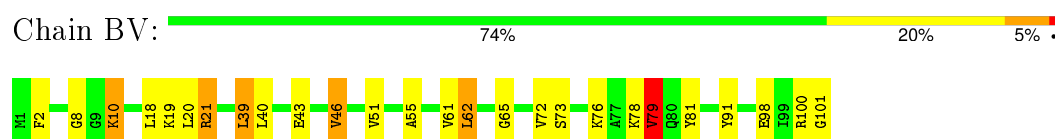
- Molecule 40: 50S Ribosomal Protein L20



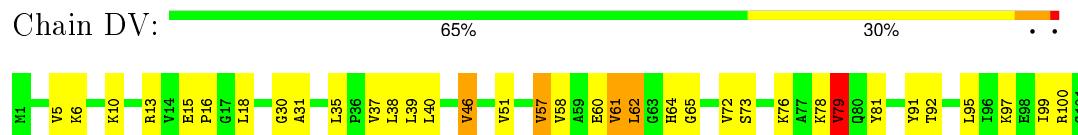
- Molecule 40: 50S Ribosomal Protein L20



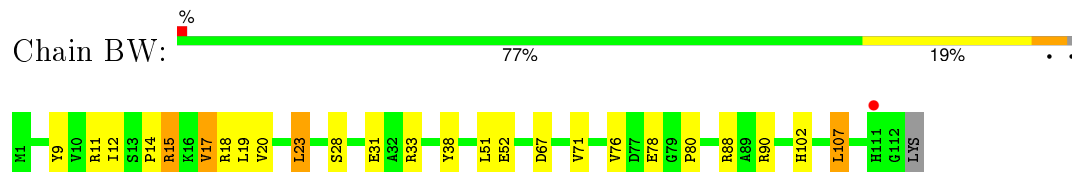
- Molecule 41: 50S Ribosomal Protein L21



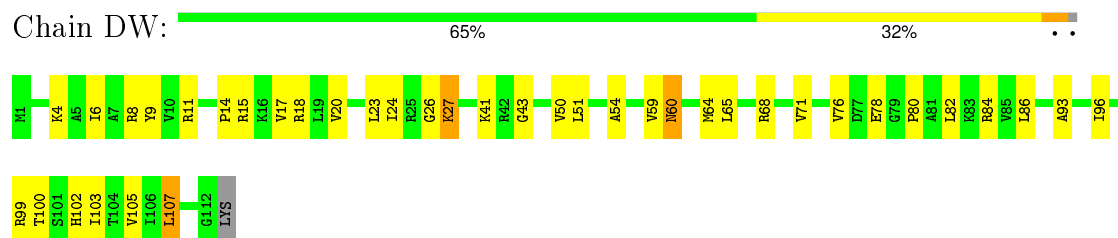
- Molecule 41: 50S Ribosomal Protein L21



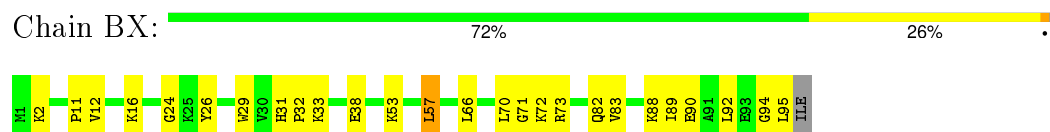
- Molecule 42: 50S Ribosomal Protein L22



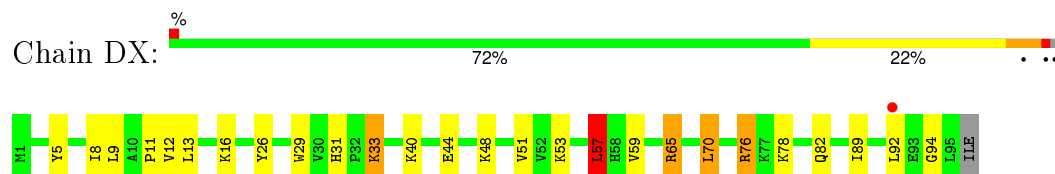
- Molecule 42: 50S Ribosomal Protein L22



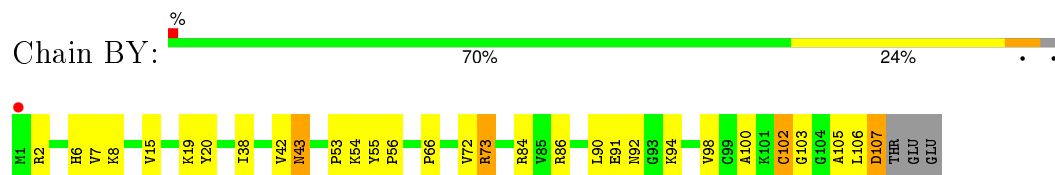
• Molecule 43: 50S Ribosomal Protein L23



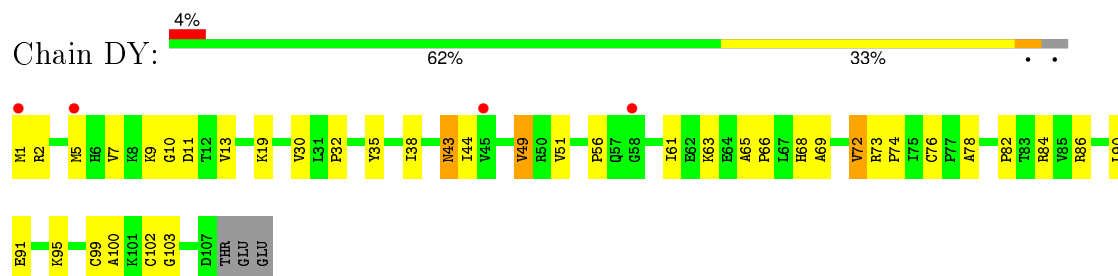
• Molecule 43: 50S Ribosomal Protein L23



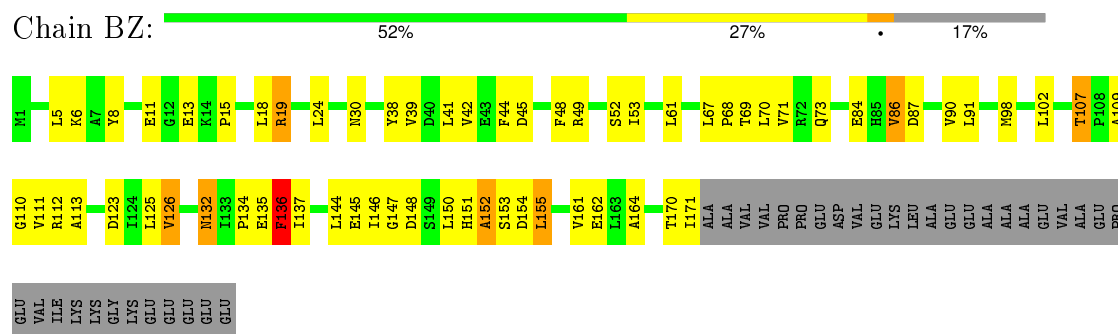
• Molecule 44: 50S Ribosomal Protein L24



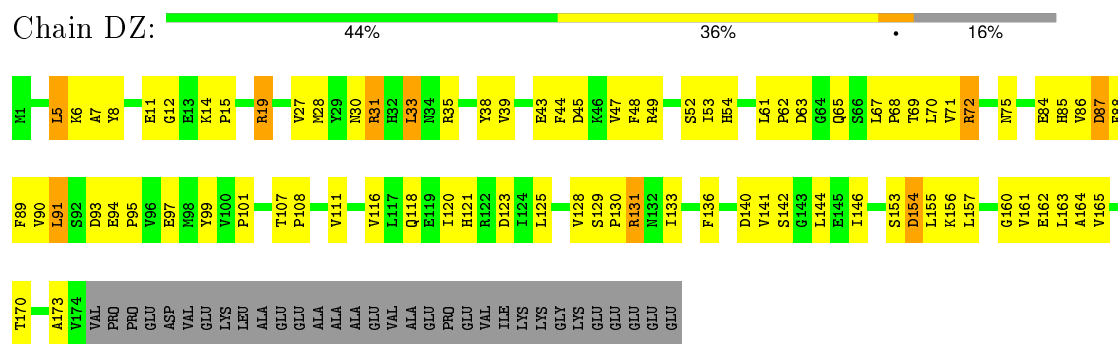
• Molecule 44: 50S Ribosomal Protein L24



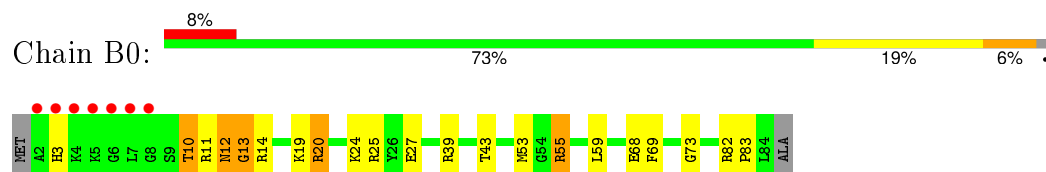
• Molecule 45: 50S Ribosomal Protein L25



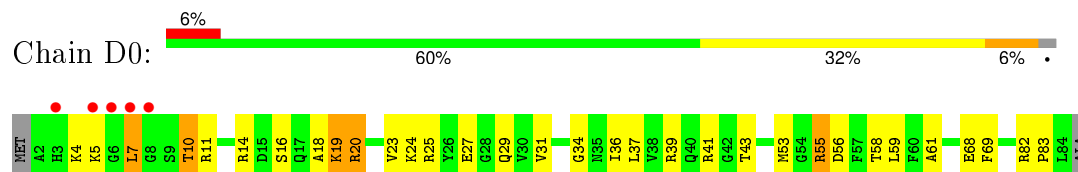
- Molecule 45: 50S Ribosomal Protein L25



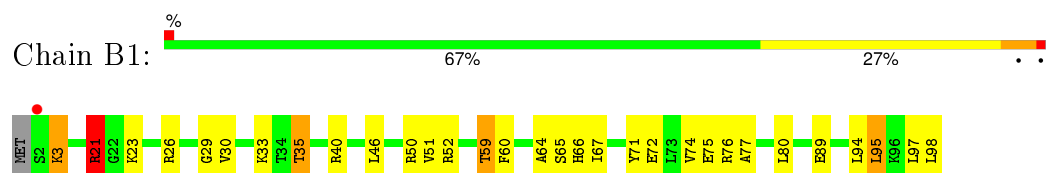
- Molecule 46: 50S Ribosomal Protein L27



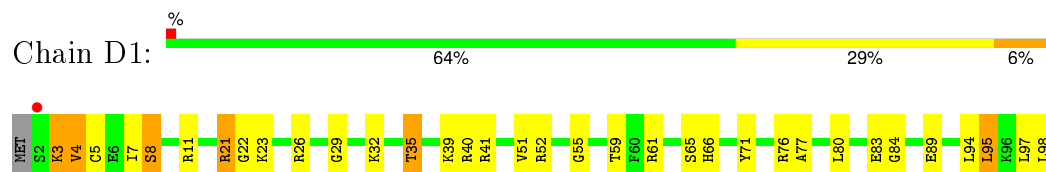
- Molecule 46: 50S Ribosomal Protein L27



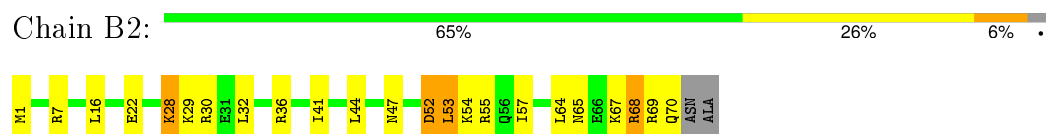
- Molecule 47: 50S Ribosomal Protein L28



- Molecule 47: 50S Ribosomal Protein L28



- Molecule 48: 50S Ribosomal Protein L29



- Molecule 48: 50S Ribosomal Protein L29

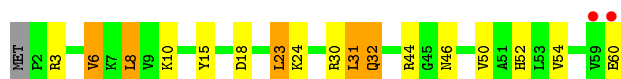




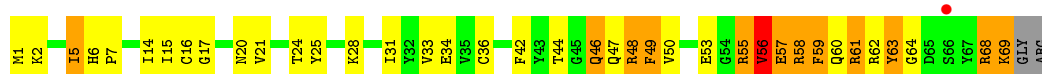
• Molecule 49: 50S Ribosomal Protein L30



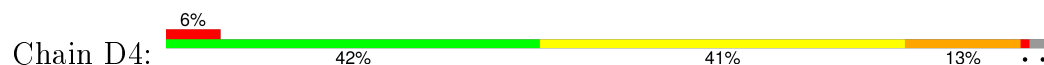
• Molecule 49: 50S Ribosomal Protein L30



• Molecule 50: 50S Ribosomal Protein L31



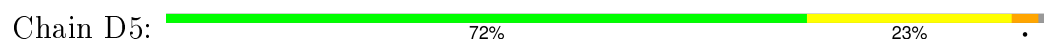
• Molecule 50: 50S Ribosomal Protein L31



• Molecule 51: 50S Ribosomal Protein L32



• Molecule 51: 50S Ribosomal Protein L32

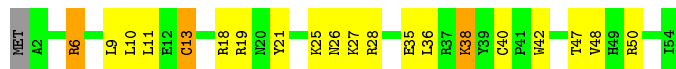


• Molecule 52: 50S Ribosomal Protein L33




- Molecule 52: 50S Ribosomal Protein L33

Chain D6:  61% 31% 6% .



- Molecule 53: 50S Ribosomal Protein L34

Chain B7:  76% 20% ..



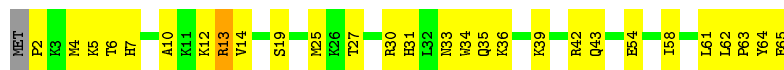
- Molecule 53: 50S Ribosomal Protein L34

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% ..



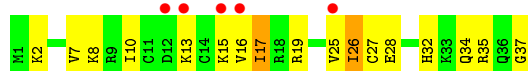
- Molecule 55: 50S Ribosomal Protein L36

Chain B9:  3% 76% 22% .



- Molecule 55: 50S Ribosomal Protein L36

Chain D9:  14% 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 49.75 – 3.00	Depositor EDS
% Data completeness (in resolution range)	98.8 (49.74-3.00) 98.8 (49.75-3.00)	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 (phenix.refine: 1.8.2_1309)	Depositor
R, R_{free}	0.203 , 0.259 0.207 , 0.260	Depositor DCC
R_{free} test set	57319 reflections (5.28%)	DCC
Wilson B-factor (Å ²)	66.8	Xtriage
Anisotropy	0.228	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.30 , 66.2	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.46$, $\langle L^2 \rangle = 0.28$	Xtriage
Outliers	0 of 1143007 reflections	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, 0.375 respectively for untwinned datasets, and 0.333, 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: MG, K, 2QZ, ZN, 2QY, MVA, 004, FME, 2R3, SF4, 2R1

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
25:BA:1036:A:OP2	61:BA:4501:HOH:O	1.87	0.93
1:AA:167:G:H2'	1:AA:168:G:H8	1.32	0.93
1:CA:999:C:N4	1:CA:1042:G:C6	2.36	0.92
25:DA:1664:A:OP1	61:DA:4386:HOH:O	1.87	0.92
1:CA:837:G:H1	1:CA:849:C:H42	1.18	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
1:CA:677:U:H3	1:CA:713:G:H22	1.19	0.91
25:BA:1065:U:HO2'	25:BA:1067:A:H2	1.13	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
50:D4:53:GLU:HG2	50:D4:55:ARG:H	1.38	0.88
1:AA:1028:C:H42	1:AA:1033:G:H1	1.21	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
25:DA:1019:U:H3	25:DA:1142(A):A:H62	1.23	0.87
1:AA:836:G:OP2	18:AR:61:LYS:NZ	2.06	0.87
1:AA:406:G:H5'	4:AD:5:ILE:HD11	1.55	0.87
35:BP:126:VAL:HG12	35:BP:148:LEU:HD22	1.54	0.87
25:BA:1007:G:OP1	61:BA:4615:HOH:O	1.93	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
1:CA:1007:C:N4	1:CA:1022:G:N1	2.23	0.86
46:B0:11:ARG:O	46:B0:14:ARG:NH2	2.08	0.86
23:AX:6:G:H1	23:AX:67:C:H42	1.23	0.86
9:CI:9:ARG:HG2	9:CI:14:VAL:HG12	1.56	0.86
27:BD:71:ASP:HB3	27:BD:103:ARG:HH22	1.39	0.86
25:BA:1404:G:OP2	61:BA:4220:HOH:O	1.92	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
25:BA:831:A:OP2	61:BA:4453:HOH:O	1.94	0.85
8:AH:51:VAL:HG12	8:AH:52:ASP:H	1.41	0.85
1:AA:1036:G:H5'	1:AA:1037:C:H5	1.39	0.85
1:AA:574:A:OP2	61:AA:4004:HOH:O	1.93	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
29:BF:185:ASP:HA	29:BF:188:ARG:HD3	1.58	0.84
1:AA:1108:G:O6	61:AA:4120:HOH:O	1.94	0.84
25:BA:1577:C:O2'	25:BA:1578:C:O5'	1.95	0.84
1:CA:1075:C:OP1	2:CB:179:LYS:NZ	2.09	0.84
25:BA:656:A:OP1	35:BP:65:ARG:NH1	2.10	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
25:DA:2738:A:OP2	61:DA:4117:HOH:O	1.96	0.84
1:CA:542:G:OP1	4:CD:10:ARG:NH2	2.11	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1125:U:O2'	1:CA:1126:U:H2'	1.76	0.84
1:CA:565:U:OP2	61:CA:4054:HOH:O	1.96	0.84
25:BA:1683:C:OP2	61:BA:4522:HOH:O	1.95	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
5:CE:40:ARG:HH21	5:CE:68:GLU:HA	1.43	0.83
25:BA:551:A:OP1	61:BA:4497:HOH:O	1.97	0.83
1:AA:1008:C:H42	1:AA:1021:G:H1	1.25	0.83
25:BA:2604:G:O2'	61:BA:4655:HOH:O	1.96	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
35:DP:100:LEU:HD12	35:DP:112:LEU:HD11	1.59	0.82
2:AB:69:LEU:HB3	2:AB:162:ILE:HG22	1.61	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
46:D0:11:ARG:O	46:D0:14:ARG:NH2	2.12	0.82
25:BA:1391:C:OP2	61:BA:3932:HOH:O	1.97	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
25:DA:1310:G:OP2	53:D7:9:ARG:NH1	2.13	0.82
16:AP:53:VAL:HG13	16:AP:79:VAL:HG13	1.59	0.82
1:CA:838:G:H1	1:CA:848:C:H42	1.27	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: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: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:656:C:O2'	15:AO:28:GLN:NE2	2.13	0.81
2:CB:201:ILE:HG21	2:CB:214:ILE:HG21	1.62	0.81
25:DA:1021:A:H62	25:DA:1141:U:H3	1.26	0.81
25:BA:1736:A:H62	25:BA:1745:A:H2	1.27	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DX:53:LYS:HB3	43:DX:82:GLN:HB3	1.61	0.81
1:AA:97:G:O2'	1:AA:98:G:O4'	1.99	0.81
25:DA:826:U:OP1	61:DA:4259:HOH:O	1.98	0.81
32:BI:92:VAL:HG13	32:BI:120:ILE:HB	1.62	0.81
1:AA:21:G:OP1	61:AA:4080:HOH:O	1.98	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:975:A:H4'	1:CA:976:G:H5''	1.63	0.81
1:CA:922:G:H4'	5:CE:20:GLN:HA	1.62	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:CA:768:A:OP2	61:CA:4023:HOH:O	2.00	0.80
27:BD:69:ARG:NH2	27:BD:128:GLY:O	2.14	0.80
1:AA:421:U:O2'	1:AA:423:G:N7	2.14	0.80
1:CA:148:G:H2'	1:CA:149:A:H8	1.44	0.80
1:AA:189(B):C:N4	1:AA:189(I):G:O6	2.11	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
26:DB:11:C:OP2	26:DB:12:C:N4	2.15	0.80
25:DA:271(A):A:N7	25:DA:271(W):G:N2	2.28	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
25:DA:1816:G:O6	27:DD:35:LYS:NZ	2.11	0.80
10:CJ:49:VAL:HG23	14:CN:41:ARG:HB2	1.62	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)
1:CA:664:G:OP1	18:CR:64:ARG:NH2	2.15	0.79
25:BA:2734:A:N7	61:BA:4015:HOH:O	2.16	0.79
25:BA:1070:G:OP2	61:BA:4705:HOH:O	2.00	0.79
1:CA:1142:G:H3'	1:CA:1143:G:H8	1.47	0.79
1:CA:117:G:OP2	61:CA:4053:HOH:O	2.01	0.79
47:B1:50:ARG:HG2	47:B1:59:THR:HB	1.64	0.79
2:CB:15:VAL:HG21	2:CB:213:LEU:HD12	1.63	0.79
25:DA:1971:A:OP1	61:DA:3912:HOH:O	2.01	0.79
25:DA:1250:G:OP1	61:DA:4457:HOH:O	1.99	0.79
2:CB:54:THR:HG23	2:CB:199:TYR:HB3	1.65	0.79
2:AB:16:HIS:HB3	2:AB:210:SER:HB2	1.65	0.79
25:DA:172:C:H2'	25:DA:173:G:H8	1.49	0.79
25:BA:2795:G:OP2	61:BA:4646:HOH:O	2.01	0.79
1:AA:1314:C:OP2	19:AS:4:SER:OG	2.00	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
8:CH:51:VAL:HG12	8:CH:52:ASP:H	1.47	0.78
1:CA:563:A:N6	61:CA:4065:HOH:O	2.16	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:1712:A:OP2	61:BA:4248:HOH:O	2.01	0.78
25:BA:1695:C:OP1	61:BA:4514:HOH:O	2.02	0.78
1:AA:642:A:N3	8:AH:113:SER:OG	2.16	0.78
25:DA:1315:C:OP2	61:DA:4078:HOH:O	2.02	0.78
23:CX:50:U:H3	23:CX:64:G:H1	1.32	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
25:BA:1431:G:O2'	25:BA:1442:U:O2	2.02	0.78
9:AI:50:LEU:HD13	9:AI:56:LEU:HA	1.64	0.78
25:BA:2299:A:H62	25:BA:2356:U:H3	1.26	0.78
25:BA:599:U:OP1	61:BA:4465:HOH:O	2.00	0.78
1:CA:619:U:N3	4:CD:134:ASP:OD1	2.14	0.78
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.16	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

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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
1:CA:1348:U:H4'	9:CI:120:ARG:HD2	1.66	0.78
49:B3:3:ARG:NH1	49:B3:60:GLU:OE2	2.17	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:CA:1133:G:H2'	1:CA:1134:G:C8	2.18	0.77
1:AA:266:G:H5''	1:AA:268:C:H41	1.48	0.77
25:DA:1022:G:H22	25:DA:1142(A):A:H2	1.30	0.77
1:AA:1304:G:OP2	61:AA:4087:HOH:O	2.02	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:CA:999:C:N3	1:CA:1042:G:N2	2.33	0.77
7:CG:75:VAL:HG13	7:CG:145:ALA:HA	1.66	0.77
1:CA:1193:G:O2'	5:CE:25:ARG:NH2	2.18	0.77
25:DA:602:G:O2'	25:DA:655:A:N6	2.17	0.77
2:CB:80:ILE:HD11	2:CB:212:GLN:HA	1.67	0.77
1:AA:195:A:N3	1:AA:222:U:O2'	2.15	0.77
1:AA:1124:G:HO2'	1:AA:1145:C:N4	1.81	0.77
1:AA:1054:C:OP1	61:AA:4053:HOH:O	2.01	0.77
1:AA:1129:C:H42	1:AA:1143:G:H1	0.80	0.77
1:CA:998:G:N2	1:CA:1043:C:N3	2.32	0.77
1:CA:427:U:H3'	1:CA:428:G:H2'	1.66	0.77
35:BP:50:ARG:HH21	54:B8:7:HIS:HD2	1.33	0.77
1:CA:559:A:OP1	5:CE:126:ARG:NH2	2.17	0.77
49:B3:8:LEU:HD13	49:B3:31:LEU:HD23	1.67	0.77
35:BP:59:LEU:HD21	54:B8:10:ALA:HA	1.67	0.77
1:AA:972:C:OP1	61:AA:4123:HOH:O	2.02	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
35:DP:126:VAL:HG12	35:DP:148:LEU:HD22	1.66	0.76
2:CB:178:ARG:HH22	8:CH:68:ARG:HH12	1.30	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
25:BA:2228:G:O2'	25:BA:2229:A:OP1	2.01	0.76
25:DA:1323:U:O4	61:DA:4525:HOH:O	2.03	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)
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
10:AJ:27:ALA:HA	10:AJ:81:THR:HG21	1.66	0.76
2:AB:166:ASP:HB3	2:AB:169:LYS:HB2	1.66	0.76
2:AB:17:PHE:HB2	2:AB:44:LEU:HD21	1.66	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
10:AJ:7:LYS:HE2	10:AJ:9:ARG:HH12	1.50	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:1162:C:H42	1:AA:1174:G:H1	1.32	0.76
10:AJ:5:ARG:HD3	10:AJ:71:LEU:HD11	1.68	0.76
25:DA:2227:A:OP2	61:DA:4568:HOH:O	2.02	0.76
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.65	0.76
1:AA:881:G:P	12:AL:12:ARG:HH22	2.08	0.76
1:CA:138:G:H8	1:CA:138:G:H5'	1.48	0.76
25:BA:894:U:O4	25:BA:978:A:N6	2.19	0.76
1:AA:175:C:H2'	1:AA:176:C:H6	1.51	0.76
25:BA:1248:G:O6	61:BA:4633:HOH:O	2.04	0.76
1:CA:1003:G:N2	1:CA:1025:U:O4	2.19	0.76
37:BR:67:LEU:HD13	37:BR:76:VAL:HG21	1.66	0.76
7:AG:50:ILE:HD11	7:AG:58:PRO:HA	1.68	0.76
25:DA:1010:A:OP2	61:DA:4093:HOH:O	2.04	0.75
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
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: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
26:DB:48:A:H4'	38:DS:95:HIS:HD2	1.50	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
25:DA:2705:A:OP2	61:DA:4125:HOH:O	2.04	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
7:CG:113:GLU:HG2	7:CG:119:ARG:HG2	1.66	0.75
1:CA:64:G:H4'	1:CA:65:U:H3'	1.67	0.75
1:AA:1183:A:O2'	1:AA:1184:G:OP1	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)
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
43:BX:31:HIS:HD2	43:BX:33:LYS:H	1.32	0.75
1:CA:1273:G:H3'	1:CA:1274:G:H8	1.51	0.75
61:BE:408:HOH:O	37:BR:3:HIS:NE2	2.19	0.75
26:DB:50:G:OP1	38:DS:63:THR:OG1	2.04	0.75
1:AA:407:G:H5''	4:AD:115:ARG:HB3	1.68	0.75
1:CA:1123:A:H4'	10:CJ:37:PRO:HD2	1.69	0.75
1:AA:1182:G:H4'	1:AA:1183:A:H5'	1.67	0.75
25:DA:773:U:OP1	61:DA:4407:HOH:O	2.05	0.75
25:DA:1324:G:N7	61:DA:3853:HOH:O	2.20	0.75
25:DA:649:G:H4'	54:D8:46:ARG:HH22	1.51	0.75
49:B3:55:ARG:NH1	49:B3:57:GLU:OE1	2.20	0.75
30:DG:18:GLU:OE2	30:DG:21:ARG:NH1	2.17	0.75
25:DA:2074:U:OP1	61:DA:3914:HOH:O	2.05	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
31:BH:98:LEU:HD22	31:BH:125:VAL:HG23	1.67	0.74
1:AA:803:G:OP1	61:AA:4050:HOH:O	2.04	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:DA:1670:C:OP1	61:DA:3754:HOH:O	2.05	0.74
1:CA:1251:A:O2'	1:CA:1369:C:O2'	2.04	0.74
25:BA:1284:G:OP2	61:BA:4765:HOH:O	2.05	0.74
47:B1:65:SER:HG	47:B1:66:HIS:HD1	1.34	0.74
7:AG:111:ARG:NH1	7:AG:113:GLU:OE2	2.20	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: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:BA:175:G:N2	25:BA:199:C:O2	2.19	0.74
25:DA:2552:U:H2'	25:DA:2554:U:OP2	1.86	0.74
25:DA:1153:C:OP2	61:DA:4082:HOH:O	2.05	0.74
44:DY:49:VAL:HG21	44:DY:61:ILE:HG23	1.69	0.74
25:DA:286:C:H2'	25:DA:287:C:H6	1.53	0.74
25:DA:1693:U:O2'	27:DD:14:ARG:NH2	2.20	0.74
25:DA:1332:G:OP1	61:DA:4079:HOH:O	2.05	0.74
30:DG:113:ARG:NH1	30:DG:139:LEU:O	2.20	0.74
25:DA:465:G:O6	61:DA:4428:HOH:O	2.04	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:2206:G:H3'	25:DA:2207:G:H8	1.47	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
46:D0:53:MET:HG3	46:D0:59:LEU:HD23	1.69	0.74
39:DT:85:LYS:NZ	39:DT:87:ASP:OD2	2.21	0.74
28:BE:143:ASN:HD22	28:BE:147:PRO:HD3	1.51	0.74
25:DA:1803:A:O2'	27:DD:259:THR:HG21	1.86	0.73
1:AA:659:U:H2'	1:AA:660:G:H8	1.52	0.73
1:CA:1015:A:N3	1:CA:1218:C:O2'	2.20	0.73
15:AO:56:LEU:O	15:AO:60:VAL:HG23	1.88	0.73
50:D4:24:THR:OG1	50:D4:25:TYR:N	2.21	0.73
30:DG:161:THR:HG22	30:DG:163:ALA:H	1.53	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
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
13:AM:34:LEU:HD13	13:AM:41:PRO:HA	1.70	0.73
25:DA:1040:C:O2	25:DA:1115:G:N2	2.18	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: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
13:CM:3:ARG:HA	50:D4:34:GLU:HG2	1.69	0.73
2:CB:84:GLU:HB3	2:CB:219:VAL:HG21	1.70	0.73
25:DA:1593:G:H2'	25:DA:1594:G:C8	2.23	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: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:963:U:OP2	61:DA:4175:HOH:O	2.05	0.73
25:DA:2805:G:H2'	25:DA:2807:G:H8	1.53	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:526:A:OP1	61:DA:4574:HOH:O	2.07	0.73
31:DH:98:LEU:HD22	31:DH:125:VAL:HG23	1.70	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
1:CA:1457:G:OP1	20:CT:39:LYS:NZ	2.20	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:CA:1492:A:H2'	25:DA:1913:A:H62	1.54	0.72
25:BA:537:G:N7	61:BA:4620:HOH:O	2.21	0.72
1:AA:768:A:OP2	61:AA:4023:HOH:O	2.06	0.72
1:CA:671:G:H5'	6:CF:77:ARG:HH22	1.54	0.72
25:DA:2052:G:O2'	61:DA:3731:HOH:O	2.07	0.72
1:CA:316:G:OP2	1:CA:351:G:O2'	2.06	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
1:CA:749:C:OP2	61:CA:4141:HOH:O	2.07	0.72
25:BA:2331:G:N2	38:BS:3:ARG:HA	2.04	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: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:976:G:H5'	1:AA:1358:U:O2'	1.90	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:AA:1158:C:H5	1:AA:1181:G:H1	1.36	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
25:BA:1055:A:OP2	33:BN:37:LYS:NZ	2.18	0.72
25:DA:2430:A:OP2	61:DA:4182:HOH:O	2.08	0.72
1:CA:21:G:OP1	61:CA:4064:HOH:O	2.08	0.72
50:D4:44:THR:O	50:D4:46:GLN:N	2.23	0.72
31:DH:27:LYS:NZ	31:DH:32:GLU:OE2	2.22	0.72
25:DA:2849:U:OP2	39:DT:95:ARG:NH1	2.22	0.72
1:AA:1145:C:H4'	1:AA:1146:A:H5'	1.72	0.72
1:AA:1030(C):G:H2'	1:AA:1030(D):A:H8	1.55	0.72
43:BX:31:HIS:CD2	43:BX:33:LYS:H	2.08	0.72
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.25	0.72
25:DA:887:A:O2'	25:DA:889:C:OP2	2.08	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:954:G:H21	1:CA:1227:A:H62	1.38	0.72
1:CA:972:C:OP1	61:CA:4183:HOH:O	2.06	0.72
19:CS:37:ARG:O	19:CS:70:LYS:NZ	2.22	0.72
10:CJ:16:LEU:HD13	10:CJ:70:ARG:HG2	1.71	0.72
2:CB:179:LYS:HA	8:CH:72:PRO:HG3	1.71	0.72
1:CA:1279:A:OP2	10:CJ:9:ARG:NH1	2.22	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
25:BA:865:G:OP2	61:BA:4105:HOH:O	2.07	0.72
25:DA:2483:C:N3	36:DQ:124:LYS:NZ	2.37	0.72
40:BU:76:TYR:OH	40:BU:92:ARG:NH1	2.23	0.72
40:DU:83:LEU:HD12	40:DU:88:ILE:HD12	1.70	0.71
25:DA:2248:C:OP2	61:DA:3947:HOH:O	2.08	0.71
1:CA:1153:C:N4	1:CA:1154:G:H21	1.85	0.71
1:CA:558:G:OP1	61:CA:4170:HOH:O	2.06	0.71
10:AJ:49:VAL:HG23	14:AN:41:ARG:HB2	1.72	0.71
43:DX:11:PRO:HB3	43:DX:92:LEU:HD11	1.72	0.71
25:BA:1494:G:N2	25:BA:1511:C:O2	2.20	0.71
38:DS:50:SER:O	38:DS:76:LYS:NZ	2.22	0.71
25:BA:2014:G:OP2	61:BA:4282:HOH:O	2.08	0.71
13:AM:58:GLU:O	13:AM:62:ASN:ND2	2.16	0.71
4:AD:15:GLU:HG3	4:AD:63:LYS:HE2	1.70	0.71
35:DP:89:ALA:O	35:DP:121:LYS:NZ	2.21	0.71
25:BA:1289:G:O2'	35:BP:7:ARG:NH2	2.24	0.71
33:DN:34:LEU:O	33:DN:49:GLY:HA3	1.89	0.71
9:AI:53:VAL:O	9:AI:55:ALA:N	2.18	0.71
29:BF:13:SER:HA	29:BF:127:GLU:HG3	1.72	0.71
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.26	0.71
25:DA:2427:C:OP1	61:DA:4259:HOH:O	2.08	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
25:DA:2785:C:OP1	28:DE:41:LYS:NZ	2.18	0.71
18:CR:26:LEU:HD21	18:CR:42:ARG:HD3	1.72	0.71
1:AA:922:G:H4'	5:AE:20:GLN:HA	1.71	0.71
25:DA:1036:G:H1	25:DA:1119:C:H42	1.35	0.71
26:DB:105:A:OP1	45:DZ:72:ARG:NH1	2.23	0.71
1:AA:975:A:H4'	1:AA:976:G:H5''	1.71	0.71
32:DI:72:LEU:HD21	32:DI:107:VAL:HG11	1.71	0.71
25:DA:1782:C:OP1	61:DA:4385:HOH:O	2.09	0.71
41:DV:35:LEU:HB2	41:DV:57:VAL:HG23	1.72	0.71
1:AA:56:U:H2'	1:AA:57:G:C8	2.26	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1108:G:O6	61:CA:4092:HOH:O	2.08	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:DA:566:U:H5''	35:DP:29:LYS:HE3	1.71	0.71
1:CA:599:C:H2'	1:CA:600:C:H5''	1.73	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
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
10:CJ:77:PRO:O	10:CJ:81:THR:OG1	2.09	0.71
27:DD:108:PRO:HG2	27:DD:111:LEU:HB2	1.73	0.71
25:DA:885:C:H2'	25:DA:886:C:H4'	1.72	0.71
17:AQ:18:THR:OG1	17:AQ:69:LYS:NZ	2.15	0.71
1:AA:186:C:H2'	1:AA:187:C:C6	2.26	0.71
1:AA:881:G:OP2	12:AL:12:ARG:NH2	2.23	0.70
25:DA:10:G:H2'	25:DA:11:G:H8	1.56	0.70
5:AE:77:PRO:HD2	5:AE:142:LEU:HD22	1.70	0.70
36:DQ:26:TYR:O	36:DQ:67:ARG:NH1	2.24	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
5:CE:137:GLU:HG2	5:CE:140:ARG:HH11	1.54	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
1:CA:1007:C:C4	1:CA:1022:G:N1	2.59	0.70
1:AA:221:C:H2'	1:AA:222:U:H6	1.55	0.70
25:BA:2331:G:H22	38:BS:3:ARG:NE	1.90	0.70
47:D1:77:ALA:HA	47:D1:80:LEU:HD13	1.73	0.70
27:DD:71:ASP:HB2	27:DD:103:ARG:HH22	1.55	0.70
25:BA:932:C:H3'	25:BA:933:C:H5''	1.73	0.70
25:BA:303:C:H42	25:BA:385:G:H1	1.39	0.70
25:DA:1140:C:O3'	33:DN:25:ARG:NH1	2.24	0.70
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.71	0.70
25:DA:1189:A:OP2	61:DA:4088:HOH:O	2.08	0.70
12:AL:36:VAL:HG23	24:AW:10:2QY:H89	1.73	0.70
7:AG:62:PHE:HA	7:AG:124:LEU:HD22	1.72	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
9:AI:46:ALA:HB2	9:AI:74:ILE:HG23	1.73	0.70
1:CA:147:G:HO2'	1:CA:148:G:H8	1.38	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:437:U:H5'	4:AD:155:LEU:HD11	1.74	0.70
29:DF:185:ASP:HA	29:DF:188:ARG:HD3	1.74	0.70
35:BP:63:PRO:HD3	54:B8:27:THR:HG22	1.73	0.70
25:BA:1003:U:OP2	36:BQ:14:ARG:NH1	2.23	0.70
45:DZ:53:ILE:HG22	45:DZ:71:VAL:O	1.91	0.70
27:DD:148:GLU:HB2	27:DD:151:LYS:HD2	1.72	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
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:2339:A:H2'	25:BA:2340:A:C8	2.25	0.70
25:BA:1039:G:OP1	40:BU:50:ARG:NH2	2.24	0.70
48:B2:29:LYS:HG2	48:B2:57:ILE:HD13	1.73	0.70
1:CA:1318:A:OP1	19:CS:3:ARG:NH1	2.24	0.70
36:BQ:10:ARG:NH1	61:BQ:3102:HOH:O	2.23	0.70
8:AH:51:VAL:HG11	8:AH:60:ARG:HH12	1.57	0.70
35:BP:100:LEU:HD12	35:BP:112:LEU:HD11	1.72	0.70
25:BA:542:C:OP1	51:B5:16:ARG:NH2	2.24	0.70
1:AA:1027:C:O2'	1:AA:1034:G:N2	2.23	0.70
25:BA:1001:G:O6	61:BA:3865:HOH:O	2.07	0.70
25:BA:667:G:H21	25:BA:671:A:H2	1.40	0.70
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.22	0.70
27:BD:17:THR:O	27:BD:211:ARG:NH2	2.24	0.70
1:AA:509:A:OP2	61:AA:4088:HOH:O	2.09	0.70
1:AA:1530:G:H2'	1:AA:1531:A:O4'	1.91	0.70
1:AA:1125:U:O2'	1:AA:1126:U:OP2	2.10	0.69
36:BQ:54:MET:HB3	36:BQ:64:ILE:HD11	1.73	0.69
1:AA:476:G:H2'	1:AA:477:A:O4'	1.92	0.69
2:CB:18:GLY:HA2	2:CB:42:ILE:HG13	1.73	0.69
8:AH:14:ARG:NH2	8:AH:83:ILE:O	2.25	0.69
25:DA:2005:A:OP1	61:DA:4388:HOH:O	2.10	0.69
25:DA:587:C:OP2	35:DP:21:ARG:NH2	2.25	0.69
25:DA:2327:A:H2'	25:DA:2328:A:C8	2.27	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
1:CA:961:U:OP2	1:CA:1223:C:O2'	2.06	0.69
44:BY:102:CYS:SG	44:BY:103:GLY:N	2.65	0.69
25:DA:82:G:N1	25:DA:103:A:OP2	2.22	0.69
25:DA:1845:G:OP1	27:DD:258:LYS:NZ	2.24	0.69
1:AA:673:G:H2'	1:AA:674:G:C8	2.27	0.69
11:CK:98:LEU:O	11:CK:101:SER:OG	2.06	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2595:G:N7	61:DA:4196:HOH:O	2.24	0.69
30:BG:48:GLU:HA	30:BG:51:ARG:HE	1.57	0.69
2:AB:15:VAL:HB	2:AB:209:ARG:HG2	1.73	0.69
25:DA:1153:C:OP1	40:DU:92:ARG:NH1	2.25	0.69
5:AE:137:GLU:HG2	5:AE:140:ARG:HH11	1.57	0.69
3:AC:35:GLU:OE2	3:AC:59:ARG:NH2	2.24	0.69
1:CA:890:G:O2'	1:CA:906:G:O6	2.05	0.69
25:DA:2682:U:OP2	61:DA:3806:HOH:O	2.09	0.69
25:BA:2732:G:OP2	61:BA:4644:HOH:O	2.10	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
1:CA:1189:C:OP1	10:CJ:51:ARG:NH2	2.24	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
6:AF:69:GLU:O	6:AF:72:VAL:HG12	1.93	0.69
2:CB:8:LYS:HD2	2:CB:48:MET:HG2	1.75	0.69
1:CA:1153:C:H42	1:CA:1154:G:N2	1.87	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
25:BA:1683:C:OP2	61:BA:4523:HOH:O	2.09	0.69
25:BA:777:C:OP2	61:BA:4590:HOH:O	2.10	0.69
43:DX:8:ILE:O	48:D2:36:ARG:NH2	2.25	0.69
18:CR:47:THR:HG23	18:CR:49:LYS:HG3	1.74	0.69
1:CA:1287:A:N3	1:CA:1353:G:O2'	2.23	0.69
1:CA:46:G:O6	61:CA:4103:HOH:O	2.11	0.69
12:CL:24:VAL:HG13	12:CL:98:TYR:HE1	1.58	0.69
25:BA:989:G:O3'	61:BA:4610:HOH:O	2.09	0.69
19:AS:27:GLU:HB3	19:AS:28:LYS:HB3	1.73	0.69
1:AA:812:C:N3	61:AA:4027:HOH:O	2.24	0.69
25:DA:818:G:OP2	61:DA:3841:HOH:O	2.10	0.69
1:CA:1226:C:N4	13:CM:104:ARG:HG2	2.08	0.69
4:AD:173:TRP:CZ3	4:AD:174:LEU:HG	2.27	0.69
42:DW:14:PRO:HG2	42:DW:78:GLU:HG2	1.73	0.69
15:AO:5:LYS:HD2	15:AO:5:LYS:H	1.56	0.69
6:AF:38:GLU:HB2	6:AF:64:GLN:HG2	1.75	0.69
36:DQ:81:VAL:HG12	46:D0:5:LYS:HD3	1.73	0.69
3:AC:11:ARG:NH2	3:AC:177:THR:O	2.25	0.69
7:CG:108:ALA:HA	7:CG:111:ARG:HD2	1.74	0.69
25:DA:2748:A:H5'	31:DH:4:ILE:HD12	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2831:G:OP1	28:DE:58:ARG:NH2	2.23	0.69
32:BI:40:THR:O	32:BI:44:LEU:HB2	1.93	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:77:C:O2'	48:D2:14:ARG:NH2	2.26	0.69
35:DP:88:LEU:HD11	35:DP:114:ILE:HD12	1.74	0.69
1:CA:353:A:H8	1:CA:353:A:H5'	1.58	0.69
25:BA:1047:A:OP2	61:BA:3918:HOH:O	2.09	0.69
1:CA:1493:A:H1'	25:DA:1913:A:H62	1.57	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
32:DI:4:ILE:HG12	32:DI:18:VAL:HG22	1.75	0.68
25:BA:611:U:H2'	25:BA:612:C:C6	2.28	0.68
16:AP:43:LYS:HG2	16:AP:48:TRP:CD2	2.27	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:CA:437:U:H5'	4:CD:155:LEU:HD21	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:AA:1241:G:H1	1:AA:1296:C:H42	1.38	0.68
25:DA:2570:G:O6	61:DA:4419:HOH:O	2.08	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
1:CA:693:G:H2'	1:CA:694:A:C8	2.28	0.68
1:AA:1370:G:O6	61:AA:4060:HOH:O	2.10	0.68
1:AA:974:A:OP2	14:AN:29:ARG:NH2	2.25	0.68
46:D0:27:GLU:HG3	46:D0:68:GLU:HA	1.75	0.68
1:CA:664:G:P	18:CR:64:ARG:HH22	2.16	0.68
25:BA:388:A:H2'	25:BA:389:G:C8	2.29	0.68
1:CA:382:A:H2'	1:CA:383:A:C8	2.29	0.68
25:BA:1218:G:O2'	25:BA:1219:A:O4'	2.11	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
25:BA:808:A:N7	61:BA:3904:HOH:O	2.26	0.68
20:CT:49:ALA:HB3	20:CT:99:LEU:HD22	1.76	0.68
16:CP:52:ASP:O	16:CP:54:GLU:N	2.26	0.68
16:CP:1:MET:SD	16:CP:3:LYS:NZ	2.65	0.68
15:AO:33:THR:HG21	15:AO:85:LEU:HD22	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1025:U:N3	1:CA:1036:G:C6	2.62	0.68
1:AA:577:G:OP1	61:AA:4090:HOH:O	2.12	0.68
4:CD:187:ARG:NH2	4:CD:193:ASP:OD2	2.26	0.68
1:CA:877:C:H5''	8:CH:88:LYS:HD3	1.74	0.68
25:DA:2749:A:H1'	31:DH:63:SER:HB3	1.76	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:2592:G:N7	61:DA:3925:HOH:O	2.27	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
46:B0:27:GLU:HG3	46:B0:68:GLU:HA	1.76	0.68
25:DA:271(I):G:O6	25:DA:271(O):C:N4	2.17	0.68
25:BA:2720:G:O6	61:BA:4017:HOH:O	2.12	0.68
25:DA:131:G:OP1	61:DA:3772:HOH:O	2.12	0.68
1:AA:452:A:H4'	16:AP:72:ARG:NH1	2.08	0.67
25:BA:880:U:O2	35:BP:55:ARG:NH2	2.27	0.67
25:DA:1637:A:OP2	61:DA:4414:HOH:O	2.11	0.67
25:BA:809:U:H4'	25:BA:810:G:O5'	1.93	0.67
25:BA:1356:G:OP2	53:B7:9:ARG:NH1	2.27	0.67
52:B6:13:CYS:SG	52:B6:47:THR:HG21	2.35	0.67
42:BW:14:PRO:HG2	42:BW:78:GLU:HG2	1.77	0.67
13:AM:2:ALA:N	13:AM:8:GLU:OE1	2.27	0.67
25:BA:2008:A:OP1	61:BA:4270:HOH:O	2.11	0.67
10:CJ:78:ASN:O	10:CJ:80:LYS:N	2.28	0.67
25:DA:2819:G:N7	61:DA:4008:HOH:O	2.26	0.67
19:CS:28:LYS:HB2	19:CS:29:ARG:HA	1.75	0.67
1:CA:646:U:H2'	1:CA:647:C:C6	2.29	0.67
25:BA:2324:U:H5'	30:BG:88:ILE:HD11	1.76	0.67
1:AA:503:C:OP2	12:AL:116:SER:HB3	1.93	0.67
37:DR:88:ARG:NH2	37:DR:89:ASP:OD2	2.27	0.67
25:DA:2562:U:H1'	34:DO:23:ARG:HH11	1.59	0.67
1:AA:165:C:H2'	1:AA:166:G:C8	2.30	0.67
50:D4:62:ARG:O	50:D4:64:GLY:N	2.28	0.67
25:BA:2316:G:H22	25:BA:2324:U:H3	1.42	0.67
25:BA:1476:C:H2'	25:BA:1477:U:H6	1.60	0.67
25:DA:1278:A:OP1	37:DR:36:THR:HG23	1.94	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
20:AT:16:HIS:O	20:AT:19:SER:OG	2.12	0.67
1:CA:1502:A:H2	1:CA:1505:G:N1	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:38:VAL:HG22	30:BG:93:THR:HG23	1.76	0.67
6:AF:97:PHE:N	18:AR:30:ASP:OD1	2.24	0.67
29:BF:53:THR:HG22	29:BF:55:GLY:H	1.60	0.67
11:AK:99:GLN:HG2	11:AK:105:VAL:HG21	1.76	0.67
1:CA:1262:C:N4	1:CA:1273:G:H1	1.92	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
25:DA:226:G:H21	25:DA:228:A:H62	1.41	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:BA:1199:C:OP2	61:BA:4476:HOH:O	2.12	0.67
25:DA:411:G:OP1	61:DA:3860:HOH:O	2.12	0.67
31:BH:56:SER:OG	31:BH:57:ASP:N	2.26	0.67
1:AA:383:A:C2	1:AA:384:G:H1'	2.29	0.67
1:CA:585:G:OP1	17:CQ:37:LYS:NZ	2.25	0.67
32:BI:100:ALA:HA	32:BI:103:ARG:HG2	1.75	0.67
28:DE:72:VAL:HG13	28:DE:73:GLU:O	1.95	0.67
1:AA:518:C:HO2'	1:AA:530:G:N2	1.93	0.67
1:CA:376:G:H5''	16:CP:5:ARG:HD3	1.75	0.67
25:BA:611:U:OP2	61:BA:4159:HOH:O	2.13	0.67
25:BA:2658:C:OP2	25:BA:2745:G:O2'	2.10	0.67
2:AB:24:TRP:CZ3	2:AB:26:PRO:HA	2.30	0.67
1:AA:454:C:P	16:AP:75:ARG:HH22	2.18	0.67
1:CA:8:A:C6	4:CD:209:ARG:HB2	2.29	0.67
25:BA:791:G:OP1	61:BA:4513:HOH:O	2.13	0.67
25:BA:426:G:OP2	61:BA:4762:HOH:O	2.12	0.67
26:DB:66:A:H61	26:DB:109:C:H5'	1.60	0.67
1:CA:144:G:H1	1:CA:178:C:H42	1.42	0.67
6:AF:15:ASP:OD1	6:AF:18:GLN:N	2.19	0.66
25:BA:1889:G:N2	25:BA:1905:G:H2'	2.10	0.66
1:AA:839:U:O2'	1:AA:840:C:OP1	2.13	0.66
10:AJ:78:ASN:O	10:AJ:80:LYS:N	2.28	0.66
2:AB:229:VAL:HG12	2:AB:230:VAL:H	1.60	0.66
4:CD:31:CYS:SG	4:CD:33:MET:N	2.69	0.66
1:CA:586:C:O2'	1:CA:878:G:H4'	1.95	0.66
1:AA:538:G:H5''	12:AL:114:LYS:HB2	1.76	0.66
30:BG:41:GLN:NE2	30:BG:154:GLY:O	2.28	0.66
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.30	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
1:AA:1320:C:H5'	19:AS:70:LYS:HG3	1.75	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
1:AA:1042:G:O2'	1:AA:1043:C:O4'	2.12	0.66
25:BA:1044:C:OP1	61:BA:4478:HOH:O	2.12	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
1:CA:1005:A:H1'	1:CA:1036:G:N1	2.08	0.66
25:BA:1067:A:H3'	25:BA:1067:A:C8	2.31	0.66
25:BA:778:C:OP2	61:BA:4590:HOH:O	2.13	0.66
1:CA:1237:C:H3'	1:CA:1336:C:H41	1.60	0.66
25:DA:2049:G:OP2	61:DA:3943:HOH:O	2.13	0.66
4:CD:92:VAL:O	4:CD:96:LEU:HD22	1.95	0.66
1:AA:573:A:OP2	61:AA:4004:HOH:O	2.13	0.66
25:DA:1017:G:N7	61:DA:4210:HOH:O	2.29	0.66
7:CG:68:ASN:ND2	7:CG:127:ALA:O	2.22	0.66
25:BA:479:C:OP1	61:BA:4178:HOH:O	2.12	0.66
2:AB:155:LEU:HD11	2:AB:159:PRO:HD3	1.76	0.66
25:BA:2297:C:OP2	52:B6:6:ARG:NH1	2.28	0.66
1:AA:243:A:H4'	1:AA:244:U:H5''	1.76	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:837:G:H1	1:CA:849:C:N4	1.90	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
16:AP:43:LYS:HG2	16:AP:48:TRP:CE2	2.31	0.66
25:DA:2576:G:OP1	61:DA:4108:HOH:O	2.13	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:BA:2601:A:OP2	61:BA:4455:HOH:O	2.13	0.66
25:BA:1405:A:N6	25:BA:1418:U:H3	1.93	0.66
1:AA:392:G:H2'	1:AA:393:A:H8	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:H8	1.60	0.66
25:BA:946:A:H2'	25:BA:947:A:C8	2.31	0.66
31:DH:28:GLY:HA3	31:DH:79:VAL:HB	1.78	0.66
14:AN:3:ARG:HH21	14:AN:3:ARG:HB3	1.61	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
50:D4:38:LYS:O	50:D4:40:HIS:N	2.27	0.66
39:DT:19:LEU:HD22	39:DT:86:ILE:HG13	1.78	0.66
36:DQ:11:LYS:NZ	36:DQ:88:GLY:O	2.17	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
25:DA:2299:G:H22	25:DA:2318:G:H8	1.42	0.65
35:BP:52:GLU:OE1	35:BP:55:ARG:NH1	2.27	0.65
34:DO:2:ILE:HD12	34:DO:6:THR:HG21	1.77	0.65
1:AA:1502:A:H2	1:AA:1505:G:H1	1.43	0.65
25:DA:922:U:H2'	25:DA:923:C:C6	2.30	0.65
25:BA:1077:G:H21	55:B9:36:GLN:HE22	1.43	0.65
2:CB:163:PHE:HD1	2:CB:185:ILE:HG13	1.61	0.65
25:DA:900:A:H2'	25:DA:901:A:C8	2.31	0.65
1:AA:558:G:OP1	61:AA:4042:HOH:O	2.14	0.65
7:CG:111:ARG:NH1	7:CG:113:GLU:OE2	2.30	0.65
47:B1:21:ARG:HH11	47:B1:21:ARG:HG2	1.61	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
25:DA:1299:G:O6	61:DA:3930:HOH:O	2.11	0.65
25:DA:2588:G:OP2	61:DA:3902:HOH:O	2.14	0.65
25:DA:1301:A:OP1	61:DA:4413:HOH:O	2.13	0.65
1:CA:1273:G:H3'	1:CA:1274:G:C8	2.31	0.65
25:DA:2287:A:N6	25:DA:2344:U:H3	1.94	0.65
1:CA:1166:G:H1'	1:CA:1171:G:N2	2.10	0.65
25:DA:994:C:OP1	40:DU:53:ARG:NH2	2.29	0.65
12:AL:60:LEU:HD21	12:AL:66:VAL:HG22	1.78	0.65
2:AB:201:ILE:HG21	2:AB:214:ILE:HG21	1.76	0.65
1:AA:827:U:H5''	1:AA:828:A:OP2	1.97	0.65
46:D0:10:THR:O	61:D0:103:HOH:O	2.14	0.65
38:DS:35:ILE:HD11	38:DS:101:LEU:HD12	1.77	0.65
44:BY:92:ASN:HB3	44:BY:94:LYS:N	2.09	0.65
25:BA:1067:A:H62	25:BA:1186:U:H3	1.44	0.65
25:DA:1300:U:H4'	25:DA:1301:A:H5''	1.78	0.65
27:BD:132:PRO:HG2	27:BD:135:PHE:HD2	1.62	0.65
40:DU:78:THR:O	40:DU:117:GLN:NE2	2.29	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
1:AA:201:C:N4	1:AA:216:G:H1	1.84	0.65
38:BS:15:ARG:O	38:BS:19:LYS:HG2	1.96	0.65
8:AH:4:ASP:OD2	8:AH:85:ARG:NH1	2.25	0.65
30:DG:136:ARG:HH11	30:DG:137:GLU:H	1.45	0.65
6:CF:25:ILE:HD13	6:CF:82:ARG:HE	1.61	0.65
1:AA:623:C:H2'	1:AA:624:C:H6	1.59	0.65
48:B2:1:MET:N	48:B2:52:ASP:OD2	2.30	0.65
4:AD:149:ALA:HB3	4:AD:152:SER:HB2	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1125:U:N3	1:AA:1127:G:C5	2.65	0.65
25:DA:10:G:H2'	25:DA:11:G:C8	2.31	0.65
50:D4:64:GLY:C	50:D4:66:SER:H	1.99	0.65
1:AA:937:A:OP2	61:AA:4095:HOH:O	2.14	0.65
2:CB:162:ILE:HD11	2:CB:184:VAL:HG22	1.78	0.65
7:AG:152:ALA:HB1	7:AG:155:ARG:HH21	1.61	0.65
25:DA:2394:C:OP2	54:D8:30:ARG:NH1	2.30	0.65
1:CA:56:U:H2'	1:CA:57:G:C8	2.32	0.65
34:BO:8:LEU:HB2	34:BO:19:ILE:HG13	1.78	0.65
30:BG:16:ARG:NE	30:BG:31:VAL:HG11	2.12	0.65
26:DB:76:G:N2	26:DB:101:G:O6	2.27	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
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
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.78	0.65
1:CA:976:G:H5'	1:CA:1358:U:O2'	1.97	0.65
36:BQ:135:ASP:OD2	45:BZ:49:ARG:NH2	2.30	0.65
4:AD:182:LYS:HG2	4:AD:183:GLY:N	2.11	0.65
45:BZ:69:THR:HG22	45:BZ:90:VAL:HA	1.77	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
34:DO:115:VAL:HG13	34:DO:121:VAL:HG21	1.78	0.65
25:DA:1815:A:OP2	27:DD:54:ARG:NH2	2.28	0.65
2:CB:47:THR:O	2:CB:51:LEU:N	2.17	0.64
1:AA:1003:G:N2	1:AA:1038:C:N3	2.45	0.64
1:CA:148:G:H2'	1:CA:149:A:C8	2.30	0.64
3:AC:181:ASN:ND2	3:AC:204:LEU:HD12	2.12	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
2:AB:219:VAL:HA	2:AB:222:ILE:HG13	1.78	0.64
25:BA:2579:G:H2'	25:BA:2580:C:C6	2.31	0.64
1:CA:1176:A:H2'	1:CA:1177:G:C8	2.33	0.64
1:AA:864:A:OP1	61:AA:4127:HOH:O	2.15	0.64
28:BE:4:ILE:HD13	28:BE:28:ALA:HB1	1.78	0.64
1:CA:1004:A:C6	1:CA:1037:C:C2	2.85	0.64
1:AA:1127:G:H1'	1:AA:1280:A:C6	2.32	0.64
25:DA:171:G:H2'	25:DA:172:C:C6	2.31	0.64
54:B8:42:ARG:NH1	61:B8:5103:HOH:O	2.04	0.64
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:345:C:OP2	39:DT:39:ARG:NH2	2.29	0.64
4:AD:166:LYS:NZ	4:AD:179:GLU:OE2	2.30	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: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
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
1:AA:983:A:H1'	1:AA:1049:U:O2	1.98	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
1:AA:1009:G:O6	1:AA:1020:U:O2	2.15	0.64
50:D4:15:ILE:HB	50:D4:32:TYR:CD1	2.32	0.64
25:DA:2630:G:H2'	25:DA:2631:G:H8	1.62	0.64
35:DP:50:ARG:HH21	35:DP:50:ARG:HG3	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
1:CA:1002:G:H2'	1:CA:1003:G:C8	2.33	0.64
25:BA:1091:A:OP1	25:BA:1091:A:H4'	1.96	0.64
5:CE:78:HIS:HE1	5:CE:143:ARG:H	1.45	0.64
25:BA:1890:A:N6	25:BA:1905:G:O2'	2.30	0.64
2:CB:16:HIS:CG	2:CB:17:PHE:H	2.16	0.64
1:CA:1122:U:O4	1:CA:1151:A:N1	2.30	0.64
35:DP:121:LYS:HG2	35:DP:122:PRO:HD2	1.77	0.64
25:BA:1475:G:H2'	25:BA:1476:C:C6	2.33	0.64
1:AA:833:U:H2'	1:AA:834:C:C6	2.32	0.64
43:DX:44:GLU:OE2	61:DX:102:HOH:O	2.15	0.64
25:BA:1647:G:N7	61:BA:4116:HOH:O	2.30	0.64
3:CC:12:LEU:HD23	3:CC:16:ARG:HB3	1.78	0.64
1:AA:1224:G:O2'	1:AA:1322:C:OP1	2.16	0.64
9:CI:23:ASN:HD22	9:CI:23:ASN:H	1.45	0.64
23:AX:4:G:H1	23:AX:69:C:H42	1.44	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
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
5:CE:50:GLU:HB2	5:CE:53:LEU:HD13	1.79	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
1:CA:1036:G:H5'	1:CA:1037:C:C6	2.32	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
1:CA:406:G:H5'	4:CD:5:ILE:HD11	1.80	0.64
10:AJ:11:PHE:HE1	10:AJ:67:THR:HG22	1.63	0.64
15:CO:14:GLU:OE2	15:CO:84:LYS:NZ	2.31	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:AA:1129:C:H5''	9:AI:16:ARG:HH12	1.63	0.64
9:CI:53:VAL:C	9:CI:55:ALA:H	2.01	0.64
25:BA:2766:A:O2'	55:B9:15:LYS:NZ	2.30	0.64
15:CO:54:ARG:NH1	15:CO:58:MET:SD	2.71	0.64
25:BA:2584:A:N7	28:BE:144:ARG:HD2	2.13	0.64
1:CA:831:U:H3	1:CA:855:G:H1	1.45	0.64
1:AA:409:G:N2	1:AA:433:C:O2	2.31	0.64
25:DA:2316:C:O2'	30:DG:128:ARG:NH1	2.30	0.64
20:AT:10:LEU:HB3	20:AT:12:ALA:H	1.63	0.64
35:BP:50:ARG:HD3	54:B8:7:HIS:CD2	2.33	0.64
1:AA:1223:C:H5''	1:AA:1224:G:H5'	1.80	0.64
25:BA:2507:G:H5''	36:BQ:82:ARG:HG2	1.79	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
2:AB:7:VAL:HG11	2:AB:221:LEU:HD23	1.80	0.64
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.33	0.64
14:CN:48:ALA:HB2	14:CN:53:LEU:HD12	1.79	0.64
25:BA:1067:A:H3'	25:BA:1067:A:H8	1.63	0.63
16:AP:53:VAL:HG22	16:AP:79:VAL:HG22	1.79	0.63
1:CA:1142:G:H3'	1:CA:1143:G:C8	2.31	0.63
25:DA:1041:C:H42	25:DA:1114:G:H1	1.46	0.63
1:AA:1162:C:N4	1:AA:1174:G:H1	1.95	0.63
1:CA:735:C:H2'	1:CA:736:C:C6	2.32	0.63
1:CA:1145:C:H4'	1:CA:1146:A:H5'	1.80	0.63
25:DA:1688:U:O2	25:DA:1700:A:H5'	1.98	0.63
1:CA:1245:A:N6	1:CA:1292:U:H3	1.96	0.63
25:DA:323:G:H5'	29:DF:169:ASN:HD21	1.62	0.63
1:CA:59:A:H3'	1:CA:331:G:H22	1.62	0.63
27:DD:132:PRO:HD3	27:DD:190:TYR:CZ	2.34	0.63
25:DA:903:C:H2'	25:DA:904:C:H6	1.62	0.63
25:BA:1410:G:P	47:B1:3:LYS:HG3	2.39	0.63
3:CC:52:LEU:HD23	3:CC:68:VAL:HG13	1.79	0.63
27:BD:85:ASP:OD2	27:BD:88:ARG:NH1	2.31	0.63
1:AA:154:C:N3	1:AA:168:G:N1	2.46	0.63
7:CG:76:ARG:O	7:CG:87:VAL:N	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1023:G:H3'	1:CA:1024:G:H8	1.62	0.63
4:CD:13:ARG:NH1	4:CD:38:TYR:O	2.31	0.63
1:CA:735:C:H2'	1:CA:736:C:H6	1.62	0.63
50:D4:46:GLN:HG3	50:D4:48:ARG:HH21	1.62	0.63
28:DE:72:VAL:HA	28:DE:73:GLU:HB3	1.80	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
1:CA:1312:G:N7	19:CS:2:PRO:HG2	2.14	0.63
1:CA:460:G:O6	1:CA:470:C:H5''	1.98	0.63
50:B4:28:LYS:HD3	50:B4:31:ILE:HD11	1.80	0.63
1:AA:189:G:H1	1:AA:189(K):U:H3	1.45	0.63
25:BA:1219:A:H4'	25:BA:1220:U:OP1	1.97	0.63
1:CA:1119:C:H2'	1:CA:1120:G:C8	2.33	0.63
25:BA:1091:A:H1'	25:BA:1093:G:N3	2.13	0.63
25:DA:1427:A:H4'	25:DA:1428:C:O5'	1.99	0.63
50:D4:46:GLN:C	50:D4:48:ARG:H	2.02	0.63
25:BA:1000:C:OP1	36:BQ:87:LYS:HE3	1.98	0.63
25:DA:601:C:O2'	29:DF:104:LYS:NZ	2.32	0.63
30:DG:43:LEU:HD12	30:DG:45:GLU:HG3	1.81	0.63
25:BA:1829:U:H5'	27:BD:259:THR:HG22	1.79	0.63
30:DG:101:ILE:HG22	30:DG:105:LYS:HE2	1.81	0.63
27:BD:38:LYS:HE3	27:BD:39:LYS:O	1.98	0.63
29:DF:13:SER:HA	29:DF:127:GLU:HG3	1.80	0.63
33:DN:38:HIS:CE1	33:DN:39:ARG:HG3	2.34	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:997:U:H3	1:AA:1044:A:H61	1.47	0.63
1:CA:1042:G:O2'	1:CA:1043:C:O4'	2.17	0.63
36:DQ:85:LYS:HD3	46:D0:7:LEU:HG	1.79	0.63
25:BA:2405:A:H5'	35:BP:63:PRO:HB3	1.80	0.63
5:CE:78:HIS:CE1	5:CE:142:LEU:HA	2.33	0.63
1:AA:552:U:C2'	1:AA:553:A:H5'	2.29	0.63
1:CA:452:A:O2'	1:CA:453:A:OP2	2.15	0.63
2:AB:60:ASP:OD1	2:AB:64:ARG:NE	2.32	0.63
1:CA:222:U:H2'	1:CA:223:U:C6	2.34	0.63
3:CC:6:HIS:HB3	14:CN:49:HIS:ND1	2.14	0.63
13:CM:60:VAL:HG22	13:CM:66:LEU:HD11	1.80	0.63
50:B4:46:GLN:HG2	50:B4:48:ARG:HG2	1.79	0.63
25:BA:1897:C:H2'	25:BA:1898:A:O4'	1.98	0.63
31:DH:113:VAL:HG11	31:DH:151:ILE:HD13	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1151:A:C5'	10:CJ:41:PRO:HA	2.29	0.63
25:DA:2023:G:H5'	25:DA:2617:C:H4'	1.81	0.63
1:AA:929:G:H1	1:AA:1388:C:H42	1.47	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
1:CA:192:U:H2'	1:CA:193:C:H6	1.63	0.63
25:BA:2212:G:H2'	25:BA:2213:G:O4'	1.99	0.62
45:DZ:19:ARG:NH1	45:DZ:84:GLU:O	2.32	0.62
38:DS:77:ALA:HB1	38:DS:82:ILE:HB	1.81	0.62
2:CB:210:SER:O	2:CB:214:ILE:HG12	1.99	0.62
1:AA:165:C:H2'	1:AA:166:G:H8	1.63	0.62
40:DU:92:ARG:HA	40:DU:95:LEU:HB2	1.80	0.62
13:CM:60:VAL:HG23	13:CM:64:TRP:CE3	2.34	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
25:DA:2478:A:OP2	55:D9:2:LYS:NZ	2.24	0.62
25:DA:1810:A:H2'	25:DA:1811:G:O4'	1.99	0.62
5:AE:74:GLY:HA3	5:AE:116:THR:HG22	1.82	0.62
25:DA:2070:G:OP2	61:DA:4341:HOH:O	2.16	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
25:BA:9:U:N3	25:BA:2641:A:H2	1.86	0.62
2:AB:210:SER:O	2:AB:214:ILE:HG12	1.99	0.62
25:BA:1576:G:C6	25:BA:1577:C:N4	2.67	0.62
1:AA:986:A:H1'	19:AS:54:GLY:O	1.99	0.62
1:AA:1036:G:H5'	1:AA:1037:C:C5	2.29	0.62
1:AA:457:C:H2'	1:AA:458:C:C6	2.34	0.62
19:AS:52:TYR:HA	19:AS:56:GLN:O	2.00	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
40:BU:28:ARG:NH1	40:BU:38:THR:OG1	2.33	0.62
25:DA:2685:G:O6	61:DA:3899:HOH:O	2.14	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
25:BA:1466:U:O2'	25:BA:1467:G:OP1	2.16	0.62
29:DF:21:ALA:CB	29:DF:22:ALA:HA	2.29	0.62
6:CF:80:ARG:NH1	6:CF:88:VAL:O	2.32	0.62
32:BI:72:LEU:HD21	32:BI:107:VAL:HG11	1.80	0.62
1:CA:137:C:H42	1:CA:226:G:H1	1.47	0.62
23:AX:59:A:H2'	23:AX:60:U:H5'	1.80	0.62
44:BY:15:VAL:HG21	44:BY:42:VAL:HG11	1.82	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
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
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: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
2:AB:78:GLN:O	2:AB:81:VAL:HG23	2.00	0.62
3:CC:47:LEU:HD12	3:CC:68:VAL:HG11	1.82	0.62
1:CA:17:U:H2'	1:CA:18:C:C6	2.34	0.62
31:DH:30:LYS:HG3	31:DH:80:SER:O	2.00	0.62
25:DA:96:G:H4'	48:D2:48:HIS:CD2	2.35	0.62
1:CA:235:C:H5'	17:CQ:70:ARG:HG2	1.80	0.62
1:CA:424:G:H2'	1:CA:425:G:H8	1.64	0.62
29:DF:18:ARG:NH2	29:DF:127:GLU:OE1	2.33	0.62
1:CA:1305:G:N2	1:CA:1331:G:H1'	2.15	0.62
27:BD:148:GLU:HB2	27:BD:151:LYS:HD2	1.82	0.62
25:BA:1566:U:H2'	25:BA:1567:G:O4'	2.00	0.62
25:DA:2298:A:C6	25:DA:2321:G:N1	2.68	0.62
1:CA:1047:G:H1	1:CA:1210:C:N4	1.98	0.62
25:BA:2101:U:OP1	47:B1:21:ARG:NH2	2.33	0.62
1:AA:828:A:H2'	1:AA:829:G:O4'	2.00	0.62
12:AL:24:VAL:HG11	12:AL:27:LEU:HD22	1.81	0.62
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.35	0.62
25:DA:754:C:H2'	25:DA:755:C:H6	1.64	0.62
25:DA:2649:U:H2'	25:DA:2650:U:C6	2.35	0.62
25:DA:1766:U:H2'	25:DA:1767:C:H6	1.65	0.62
20:AT:87:LYS:O	20:AT:91:LEU:HG	2.00	0.62
25:DA:298:G:H5''	25:DA:299:A:OP1	2.00	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:2079:U:O3'	47:D1:35:THR:OG1	2.17	0.62
1:AA:346:G:C6	1:AA:348:G:N2	2.66	0.61
1:AA:200:G:H5'	1:AA:201:C:OP2	2.00	0.61
1:AA:96:U:O2'	1:AA:97:G:H5'	2.00	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
35:DP:65:ARG:HG3	54:D8:25:MET:HG3	1.81	0.61
1:CA:504:C:OP1	61:CA:4009:HOH:O	2.16	0.61
1:CA:152:A:N6	1:CA:169:C:N3	2.46	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BP:121:LYS:HG2	35:BP:122:PRO:HD2	1.82	0.61
10:CJ:42:THR:HG21	10:CJ:68:HIS:HD2	1.63	0.61
1:AA:993:G:H1	1:AA:1045:C:H42	1.47	0.61
9:CI:99:LEU:HB3	9:CI:101:PHE:HE1	1.65	0.61
25:DA:586:A:N1	25:DA:809:G:O2'	2.30	0.61
1:CA:827:U:H5''	1:CA:828:A:OP2	1.99	0.61
25:DA:1223:G:N2	25:DA:1226:A:OP2	2.31	0.61
1:CA:567:G:O2'	61:CA:4063:HOH:O	2.16	0.61
28:DE:73:GLU:HG3	28:DE:73:GLU:O	1.99	0.61
25:BA:1466:U:HO2'	25:BA:1467:G:P	2.22	0.61
25:DA:880:G:N1	25:DA:898:C:O2	2.33	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
26:DB:48:A:H2'	26:DB:49:C:C6	2.35	0.61
7:CG:113:GLU:CG	7:CG:119:ARG:HG2	2.30	0.61
3:CC:39:ILE:O	3:CC:43:LEU:HG	2.00	0.61
5:AE:76:ILE:HD12	5:AE:142:LEU:HD21	1.81	0.61
13:CM:16:ASP:HB3	13:CM:34:LEU:HD11	1.81	0.61
18:AR:42:ARG:HH21	18:AR:42:ARG:HA	1.65	0.61
3:CC:114:PRO:O	3:CC:118:GLN:HG2	2.00	0.61
1:AA:159:G:HO2'	1:AA:161:A:N6	1.98	0.61
2:CB:15:VAL:HG13	2:CB:209:ARG:HB3	1.82	0.61
1:CA:1172:C:H2'	1:CA:1173:G:C8	2.34	0.61
1:AA:487:A:H2'	1:AA:488:C:O4'	1.99	0.61
6:AF:97:PHE:HD2	18:AR:31:LEU:HD23	1.66	0.61
1:AA:961:U:OP2	1:AA:1223:C:O2'	2.09	0.61
8:AH:121:ASP:HB2	8:AH:125:ARG:NH1	2.15	0.61
28:DE:4:ILE:HD13	28:DE:28:ALA:HB1	1.81	0.61
25:DA:2312:U:C5	25:DA:2313:C:H5	2.19	0.61
1:CA:1154:G:N7	1:CA:1155:G:C4	2.68	0.61
25:BA:1378:G:OP1	61:BA:4469:HOH:O	2.16	0.61
1:AA:183:G:O2'	1:AA:224:C:O2'	2.10	0.61
20:AT:14:LYS:HG3	20:AT:17:ARG:NH2	2.16	0.61
1:CA:337:C:H2'	1:CA:338:A:C8	2.36	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
7:CG:50:ILE:HD11	7:CG:58:PRO:HA	1.81	0.61
1:AA:45:U:H2'	1:AA:46:G:C8	2.36	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1154:G:N7	1:CA:1155:G:N9	2.49	0.61
25:DA:2299:G:N2	25:DA:2318:G:H8	1.99	0.61
5:CE:143:ARG:NH1	8:CH:77:GLU:OE1	2.33	0.61
8:AH:49:GLU:HG2	8:AH:62:TYR:HE2	1.64	0.61
36:DQ:34:LEU:HB2	36:DQ:118:LEU:HD22	1.82	0.61
25:BA:2889:C:OP2	61:BA:4426:HOH:O	2.16	0.61
25:BA:554:A:H62	25:BA:2063:U:H3	1.48	0.61
19:CS:48:THR:HG22	19:CS:61:TYR:HA	1.83	0.61
1:CA:683:G:H2'	1:CA:684:A:C8	2.35	0.61
25:BA:2348:A:H61	46:B0:43:THR:CG2	2.13	0.61
30:DG:16:ARG:HE	30:DG:31:VAL:HG11	1.66	0.61
1:AA:833:U:H2'	1:AA:834:C:H6	1.65	0.61
1:CA:192:U:H2'	1:CA:193:C:C6	2.35	0.61
33:BN:67:LEU:HD12	33:BN:87:LEU:HD13	1.83	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
52:B6:14:THR:HB	52:B6:48:VAL:O	2.01	0.61
25:DA:2584:U:O4	61:DA:3961:HOH:O	2.13	0.61
25:DA:1557:C:OP2	25:DA:1558:A:O2'	2.18	0.61
25:BA:798:A:H5'	42:BW:90:ARG:HA	1.82	0.61
1:AA:628:G:H2'	1:AA:629:G:H8	1.65	0.61
1:CA:1223:C:H5''	1:CA:1224:G:C5'	2.30	0.61
25:DA:83:G:O2'	25:DA:102:G:N2	2.34	0.61
1:AA:924:C:O2'	1:AA:1502:A:N6	2.32	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
1:CA:683:G:H2'	1:CA:684:A:H8	1.66	0.61
1:AA:601:C:O2	1:AA:637:G:N2	2.28	0.61
27:DD:73:VAL:HG13	27:DD:120:GLY:HA3	1.83	0.61
11:CK:22:HIS:HB3	11:CK:29:ILE:HB	1.82	0.61
25:BA:572:A:N6	41:BV:19:LYS:H	1.99	0.61
29:BF:51:THR:O	29:BF:93:LYS:NZ	2.29	0.61
25:BA:2830:A:OP1	37:BR:2:ARG:NH2	2.33	0.61
29:DF:53:THR:HG22	29:DF:56:GLU:HG3	1.83	0.61
19:CS:28:LYS:HB2	19:CS:29:ARG:CA	2.31	0.61
28:DE:93:VAL:O	28:DE:95:ILE:N	2.33	0.61
25:BA:2062:C:H2'	25:BA:2063:U:O4'	2.01	0.61
29:DF:183:VAL:O	29:DF:187:VAL:HG23	2.01	0.61
25:DA:1509(B):A:H2'	25:DA:1510:G:C8	2.36	0.61
45:DZ:39:VAL:HG21	45:DZ:44:PHE:HB2	1.83	0.61
28:BE:93:VAL:HG21	28:BE:180:ASN:HA	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:D1:23:LYS:HB3	47:D1:29:GLY:HA3	1.83	0.61
30:DG:41:GLN:NE2	30:DG:154:GLY:O	2.34	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
1:CA:1002:G:N2	1:CA:1039:C:N3	2.49	0.61
25:BA:7:G:H2'	25:BA:8:A:O4'	2.01	0.61
1:CA:1132:C:H2'	1:CA:1133:G:C8	2.33	0.61
8:CH:51:VAL:HG11	8:CH:60:ARG:HH12	1.64	0.61
1:AA:946:A:H2'	1:AA:947:G:C8	2.34	0.61
1:CA:1286:A:C8	1:CA:1287:A:H4'	2.36	0.61
1:AA:333:G:H4'	20:AT:16:HIS:CE1	2.36	0.61
1:CA:195:A:N3	1:CA:222:U:O2'	2.32	0.61
25:DA:2723:C:OP2	28:DE:109:LYS:NZ	2.32	0.61
17:AQ:56:VAL:HB	17:AQ:78:GLU:HB3	1.83	0.61
46:B0:53:MET:HG3	46:B0:59:LEU:HD23	1.82	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
1:CA:143:A:H5''	1:CA:144:G:H5'	1.82	0.60
3:CC:18:TRP:CD1	14:CN:54:PRO:HA	2.36	0.60
50:B4:20:ASN:ND2	50:B4:36:CYS:SG	2.74	0.60
49:D3:8:LEU:HD13	49:D3:31:LEU:HD23	1.83	0.60
1:CA:1442:G:O2'	1:CA:1442(A):G:OP1	2.15	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
25:DA:370:G:OP1	25:DA:403:U:N3	2.32	0.60
25:BA:1093:G:H2'	25:BA:1156:G:N2	2.16	0.60
25:BA:801:C:H2'	25:BA:802:C:C6	2.37	0.60
3:AC:6:HIS:HD2	3:AC:8:ILE:H	1.50	0.60
1:CA:1263:C:H2'	1:CA:1264:C:C6	2.36	0.60
45:BZ:111:VAL:C	45:BZ:113:ALA:H	2.03	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
1:AA:1144:G:N2	1:AA:1146:A:H62	1.99	0.60
25:BA:1480:A:N6	25:BA:1605:A:H62	1.98	0.60
9:CI:21:PRO:HA	9:CI:59:PHE:HA	1.83	0.60
25:DA:11:G:C2'	25:DA:12:U:H5'	2.31	0.60
3:AC:58:GLU:HB3	10:AJ:92:THR:HG21	1.81	0.60
1:CA:826:C:H2'	1:CA:827:U:C6	2.35	0.60
17:CQ:22:LEU:HD13	17:CQ:41:LYS:HG3	1.83	0.60
1:CA:1095:U:H2'	1:CA:1096:C:O4'	2.01	0.60
10:CJ:32:ALA:HB1	10:CJ:33:GLN:HA	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1016:C:OP2	61:BA:4636:HOH:O	2.16	0.60
45:DZ:45:ASP:OD1	45:DZ:49:ARG:NH1	2.34	0.60
10:CJ:47:PHE:CZ	14:CN:37:PHE:HE1	2.20	0.60
30:BG:41:GLN:HG3	30:BG:60:LEU:HD11	1.81	0.60
1:AA:991:U:H1'	1:AA:993:G:C8	2.37	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
25:DA:1709:U:H2'	25:DA:1710:C:C6	2.37	0.60
35:DP:96:THR:H	35:DP:99:LEU:HD21	1.66	0.60
25:DA:479:A:N3	25:DA:481:G:H5''	2.16	0.60
7:AG:27:ILE:HD12	7:AG:40:ALA:HA	1.82	0.60
25:DA:2886:G:O2'	25:DA:2887:U:H5'	2.02	0.60
20:CT:86:ARG:O	20:CT:90:GLN:HB2	2.01	0.60
25:DA:1488:G:C5	25:DA:1489:U:C5	2.89	0.60
39:DT:95:ARG:HG2	39:DT:95:ARG:HH11	1.65	0.60
34:DO:68:GLU:HB3	34:DO:78:ARG:HB2	1.84	0.60
12:AL:24:VAL:HG12	12:AL:27:LEU:HB2	1.82	0.60
1:CA:250:A:H4'	1:CA:251:G:O5'	2.02	0.60
25:BA:1542:A:N3	25:BA:1624:C:O2'	2.29	0.60
25:DA:1531:C:H42	25:DA:1538:G:H1	1.49	0.60
1:AA:123:C:OP1	1:AA:311:C:O2'	2.16	0.60
25:DA:1914:C:H2'	25:DA:1915:U:O4'	2.01	0.60
1:CA:1240:U:O2'	7:CG:32:ARG:HD3	2.02	0.60
1:AA:1025:U:H3	1:AA:1036:G:H1	1.49	0.60
1:AA:443:C:N3	1:AA:491:G:N1	2.39	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
38:DS:35:ILE:CD1	38:DS:101:LEU:HD12	2.32	0.60
1:CA:192:U:O2'	1:CA:193:C:H5'	2.02	0.60
38:DS:14:VAL:O	38:DS:18:ILE:HG12	2.01	0.60
1:CA:1288:A:H2'	1:CA:1289:A:C8	2.36	0.60
1:AA:890:G:O2'	1:AA:906:G:O6	2.14	0.60
25:BA:11:G:H2'	25:BA:12:U:H5'	1.82	0.60
1:AA:474:G:H2'	1:AA:475:G:C8	2.31	0.60
16:CP:43:LYS:HA	16:CP:48:TRP:HB3	1.82	0.60
34:BO:21:CYS:HB2	34:BO:39:ILE:HD12	1.83	0.60
25:BA:1846:A:OP2	27:BD:54:ARG:NH2	2.33	0.60
17:AQ:3:LYS:HD2	17:AQ:60:ILE:HD11	1.83	0.60
1:AA:701:C:O2	1:AA:703:G:N1	2.35	0.60
16:AP:50:LYS:HA	16:AP:50:LYS:HE2	1.84	0.60
1:AA:258:G:H2'	1:AA:259:G:H8	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BY:38:ILE:HD11	44:BY:66:PRO:HG3	1.83	0.60
1:CA:1138:G:C6	1:CA:1140:C:H1'	2.37	0.60
1:AA:67:C:H2'	1:AA:68:G:C8	2.36	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
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:AA:364:A:H2'	1:AA:365:U:H6	1.66	0.60
1:AA:1126:U:C5	10:AJ:71:LEU:HD22	2.34	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
1:CA:1237:C:HO2'	1:CA:1300:G:H1	1.47	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
7:AG:78:ARG:HG2	7:AG:79:ARG:HB2	1.83	0.60
44:BY:86:ARG:HH11	44:BY:100:ALA:HB1	1.67	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
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
15:AO:54:ARG:O	15:AO:58:MET:HG3	2.02	0.60
26:DB:43:C:H5''	50:D4:1:MET:HG2	1.83	0.60
4:AD:158:ILE:O	4:AD:162:LEU:N	2.35	0.60
1:CA:333:G:H4'	20:CT:16:HIS:CE1	2.37	0.60
31:DH:80:SER:OG	31:DH:81:GLU:N	2.32	0.60
1:CA:959:A:HO2'	1:CA:984:C:HO2'	1.47	0.60
1:AA:735:C:H2'	1:AA:736:C:H6	1.67	0.60
32:BI:3:VAL:HG12	32:BI:38:LEU:HA	1.83	0.60
1:AA:1286:A:C8	1:AA:1287:A:H4'	2.37	0.60
30:DG:122:PRO:HG3	30:DG:180:PHE:HB3	1.84	0.60
29:BF:183:VAL:O	29:BF:187:VAL:HG23	2.01	0.60
1:AA:1422:G:H5''	34:BO:48:PRO:HB3	1.84	0.60
25:BA:692:C:H2'	25:BA:693:G:O4'	2.02	0.60
1:AA:193:C:H2'	1:AA:194:C:H6	1.66	0.59
5:AE:78:HIS:CD2	5:AE:142:LEU:HD23	2.37	0.59
5:CE:78:HIS:HE1	5:CE:142:LEU:HA	1.67	0.59
1:CA:1266:G:N2	1:CA:1269:A:OP2	2.33	0.59
13:AM:15:VAL:O	13:AM:19:LEU:HD22	2.01	0.59
25:DA:1889:A:H2'	25:DA:1890:A:C8	2.36	0.59
20:AT:42:GLN:NE2	20:AT:46:GLU:OE2	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:957:A:H5'	36:DQ:76:LYS:HG3	1.84	0.59
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.36	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
43:DX:12:VAL:HG22	43:DX:29:TRP:CE2	2.37	0.59
1:CA:1119:C:N3	1:CA:1154:G:O6	2.35	0.59
1:AA:518:C:O2'	1:AA:530:G:N2	2.35	0.59
25:BA:1631:C:O2'	25:BA:1632:A:H5'	2.02	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
50:D4:68:ARG:HG3	50:D4:68:ARG:HH21	1.67	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
1:AA:192:U:HO2'	1:AA:193:C:H6	1.50	0.59
3:CC:58:GLU:HB3	10:CJ:92:THR:HG21	1.84	0.59
43:BX:31:HIS:CD2	43:BX:33:LYS:HB2	2.36	0.59
25:DA:2821:A:H2'	25:DA:2822:G:C8	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
18:CR:33:ASP:OD2	18:CR:36:ASN:HB2	2.01	0.59
25:BA:589:U:H5''	35:BP:29:LYS:HE3	1.84	0.59
1:AA:110:C:O2'	16:AP:25:ARG:O	2.20	0.59
41:BV:40:LEU:HB2	41:BV:46:VAL:HG13	1.83	0.59
25:DA:1470:G:H5''	25:DA:1471:A:OP1	2.02	0.59
3:AC:3:ASN:OD1	3:AC:3:ASN:N	2.35	0.59
45:DZ:140:ASP:OD1	45:DZ:142:SER:OG	2.17	0.59
25:BA:1232:G:H5''	41:BV:81:TYR:CE1	2.37	0.59
8:AH:7:ALA:HB2	8:AH:85:ARG:HD2	1.85	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
25:BA:310:C:H2'	25:BA:311:C:C6	2.37	0.59
23:CX:10:G:N2	23:CX:26:G:H1'	2.18	0.59
1:AA:1442:G:O2'	1:AA:1442(A):G:OP1	2.17	0.59
25:DA:1031:G:H5''	55:D9:8:LYS:HE3	1.84	0.59
1:AA:1025:U:C2	1:AA:1036:G:O6	2.55	0.59
25:DA:2298:A:N1	25:DA:2321:G:C6	2.70	0.59
1:AA:1271:G:H5''	1:AA:1314:C:OP1	2.03	0.59
29:BF:8:GLN:HE21	29:BF:21:ALA:HB2	1.68	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
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)
1:AA:17:U:H2'	1:AA:18:C:C6	2.37	0.59
1:AA:159:G:O2'	1:AA:161:A:N6	2.26	0.59
1:CA:1138:G:C5	1:CA:1140:C:H1'	2.38	0.59
1:CA:738:C:OP1	6:CF:2:ARG:NH1	2.36	0.59
19:AS:38:SER:HB2	19:AS:71:LEU:HD12	1.84	0.59
1:AA:1216:G:OP1	14:AN:2:ALA:HA	2.03	0.59
1:AA:78:G:H1	1:AA:92:C:H42	1.50	0.59
1:CA:742:G:OP2	15:CO:35:ARG:NH2	2.36	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
25:DA:1200:C:H5'	61:DA:3774:HOH:O	2.01	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
35:BP:59:LEU:HD11	54:B8:10:ALA:HB2	1.83	0.59
25:BA:945:A:O2'	25:BA:946:A:H8	1.85	0.59
27:DD:132:PRO:HG2	27:DD:135:PHE:HD2	1.67	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
45:BZ:151:HIS:O	45:BZ:153:SER:N	2.35	0.59
29:DF:126:VAL:HG21	29:DF:129:PHE:CZ	2.36	0.59
25:BA:709:G:H5''	35:BP:16:ARG:HG2	1.85	0.59
26:DB:9:G:H1	26:DB:112:U:H3	1.51	0.59
25:BA:2450:U:O2'	25:BA:2452:C:OP1	2.21	0.59
7:CG:26:PHE:O	7:CG:30:ILE:HG13	2.02	0.59
1:CA:1279:A:H5''	1:CA:1280:A:OP1	2.02	0.59
1:AA:1030(D):A:H2'	1:AA:1031:G:O4'	2.03	0.59
2:CB:76:GLN:HB2	2:CB:208:ILE:HG12	1.84	0.59
1:CA:1048:G:OP1	14:CN:3:ARG:NH2	2.35	0.59
1:CA:1288:A:H2'	1:CA:1289:A:H8	1.68	0.59
25:DA:184:C:H1'	25:DA:217:G:H1'	1.85	0.59
23:CX:4:G:H1	23:CX:69:C:H42	1.51	0.59
25:DA:1256:G:H5'	25:DA:1257:C:OP2	2.01	0.59
1:CA:1368:G:OP1	9:CI:111:ARG:NH2	2.36	0.59
38:DS:71:ARG:NH2	38:DS:107:GLU:OE1	2.36	0.59
27:BD:26:LYS:HB3	27:BD:83:GLU:HG2	1.84	0.59
25:DA:2404:C:O3'	35:DP:77:ARG:NH2	2.36	0.59
25:BA:1201:A:OP1	40:BU:55:ARG:HD3	2.03	0.59
1:CA:664:G:H22	1:CA:741:G:H1	1.51	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
10:AJ:38:ILE:HD11	10:AJ:71:LEU:HD23	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DG:16:ARG:HB2	30:DG:17:PRO:HD3	1.85	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
50:D4:59:PHE:HA	50:D4:61:ARG:N	2.17	0.59
25:DA:1405:U:H2'	25:DA:1406:U:C6	2.38	0.59
41:DV:62:LEU:HD11	41:DV:95:LEU:HB2	1.85	0.59
25:BA:639:G:O2'	61:BA:3869:HOH:O	2.17	0.59
6:CF:69:GLU:O	6:CF:72:VAL:HG12	2.03	0.59
25:DA:2189:U:H2'	25:DA:2190:G:C8	2.38	0.59
1:AA:583:A:N6	1:AA:758:G:O2'	2.35	0.59
45:DZ:6:LYS:HE2	45:DZ:43:GLU:OE1	2.03	0.59
1:AA:1259:C:H42	1:AA:1276:G:H1	1.50	0.59
39:DT:59:THR:HG23	39:DT:78:LEU:HB2	1.85	0.59
59:AX:101:FME:HCN	25:BA:2463:A:H2	1.68	0.59
1:AA:1272:G:H2'	1:AA:1273:G:O4'	2.03	0.59
25:BA:1094:A:OP2	25:BA:1155:C:N4	2.29	0.58
25:DA:300:A:H1'	25:DA:319:C:H1'	1.83	0.58
4:CD:31:CYS:SG	4:CD:32:ALA:N	2.76	0.58
1:AA:552:U:H2'	1:AA:553:A:H5'	1.84	0.58
17:CQ:66:SER:O	17:CQ:70:ARG:NH1	2.36	0.58
25:DA:2363:C:O2	46:D0:39:ARG:NH2	2.31	0.58
2:AB:145:LEU:HD12	2:AB:149:LEU:HD12	1.84	0.58
38:DS:11:LYS:O	38:DS:15:ARG:HG3	2.02	0.58
28:DE:143:ASN:HD22	28:DE:147:PRO:HD3	1.67	0.58
3:AC:112:SER:O	3:AC:116:VAL:HG23	2.03	0.58
2:CB:102:LEU:HD23	2:CB:182:ILE:HD12	1.85	0.58
32:DI:77:LEU:HB3	32:DI:142:VAL:HG12	1.84	0.58
25:DA:311:A:OP2	61:DA:4575:HOH:O	2.17	0.58
26:DB:5:C:H42	26:DB:116:G:H1	1.50	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
30:DG:39:ILE:HG23	30:DG:157:ILE:HG12	1.85	0.58
27:BD:242:ARG:HG2	27:BD:246:PRO:HG3	1.84	0.58
25:DA:1614:A:OP1	61:DA:3881:HOH:O	2.17	0.58
1:AA:713:G:H2'	1:AA:714:G:C8	2.38	0.58
1:CA:1376:U:H2'	1:CA:1377:A:H8	1.68	0.58
25:BA:1221:G:H1'	25:BA:1222:A:O5'	2.03	0.58
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.04	0.58
31:DH:169:VAL:HG12	31:DH:171:LEU:HD22	1.86	0.58
25:DA:1014:U:H2'	25:DA:1015:G:H8	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:6:GLY:HA3	9:CI:80:GLY:O	2.03	0.58
1:CA:79:G:H1	1:CA:90:U:H3	1.50	0.58
25:DA:236:C:H2'	25:DA:237:C:H6	1.66	0.58
33:DN:102:ALA:O	33:DN:106:MET:HG3	2.03	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
54:B8:62:LEU:HB3	54:B8:65:GLU:HG2	1.85	0.58
14:AN:23:ARG:NH1	14:AN:30:ALA:HB2	2.19	0.58
1:CA:1128:C:H1'	1:CA:1147:C:H42	1.67	0.58
26:BB:64:C:O2'	61:BB:4001:HOH:O	2.17	0.58
13:AM:122:LYS:HD3	13:AM:123:ALA:H	1.67	0.58
1:AA:501:C:H1'	1:AA:549:C:H1'	1.85	0.58
2:CB:48:MET:HA	2:CB:51:LEU:HB2	1.86	0.58
1:CA:1491:G:H3'	1:CA:1492:A:C8	2.38	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: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
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
20:AT:86:ARG:O	20:AT:90:GLN:NE2	2.36	0.58
25:DA:662:G:OP1	61:DA:4092:HOH:O	2.16	0.58
3:AC:130:VAL:HG21	3:AC:157:ILE:HG23	1.85	0.58
4:CD:15:GLU:OE2	4:CD:66:ARG:NH1	2.35	0.58
1:CA:1002:G:H1	1:CA:1038:C:H42	0.72	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
2:CB:16:HIS:HB2	2:CB:204:ASN:CB	2.24	0.58
35:DP:97:PRO:HD3	35:DP:126:VAL:O	2.04	0.58
1:CA:1223:C:P	19:CS:78:ARG:HH21	2.26	0.58
11:CK:99:GLN:HG2	11:CK:105:VAL:HG21	1.85	0.58
25:BA:776:G:H4'	25:BA:810:G:H5'	1.85	0.58
1:AA:396:G:O2'	1:AA:398:C:OP1	2.13	0.58
48:B2:32:LEU:HD23	48:B2:53:LEU:HB3	1.85	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
25:BA:536:U:OP2	61:BA:4619:HOH:O	2.17	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.04	0.58
25:DA:2393:A:H5''	35:DP:63:PRO:HB3	1.85	0.58
25:DA:571:A:N6	25:DA:2499:C:O3'	2.36	0.58
25:DA:500:G:N1	25:DA:503:A:OP2	2.36	0.58
5:AE:110:LEU:HD13	5:AE:118:ILE:HG21	1.84	0.58
1:CA:664:G:H5''	18:CR:64:ARG:NH2	2.19	0.58
25:BA:2299:A:N6	25:BA:2356:U:H3	2.00	0.58
25:BA:1199:C:OP1	40:BU:92:ARG:NH1	2.37	0.58
25:DA:1359:A:N6	25:DA:1372:U:H3	2.01	0.58
25:DA:784:A:C5	27:DD:229:VAL:HG21	2.38	0.58
25:DA:2772:C:H2'	25:DA:2773:C:H6	1.68	0.58
25:BA:2514:G:OP2	61:BA:4400:HOH:O	2.17	0.58
14:CN:6:LEU:HB3	14:CN:23:ARG:NH2	2.19	0.58
45:DZ:108:PRO:HG3	45:DZ:141:VAL:HB	1.85	0.58
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.39	0.58
28:DE:167:VAL:HG11	28:DE:189:PRO:HD3	1.86	0.58
25:BA:1360:C:OP1	61:BA:4469:HOH:O	2.16	0.58
1:CA:543:C:C2'	1:CA:544:G:H5'	2.33	0.58
25:BA:1003:U:O2	26:BB:90:A:O2'	2.21	0.58
20:CT:64:ASP:OD2	20:CT:81:LYS:NZ	2.35	0.58
32:DI:77:LEU:HD21	32:DI:101:LEU:HA	1.86	0.58
5:AE:145:LYS:O	5:AE:149:GLU:HG2	2.04	0.58
25:DA:2693:A:H2'	25:DA:2694:G:H8	1.68	0.58
25:DA:2343:C:HO2'	25:DA:2373:G:HO2'	1.47	0.58
18:AR:40:LEU:HD22	18:AR:70:ILE:HG12	1.86	0.58
25:BA:1779:G:H5''	25:BA:1779:G:H8	1.68	0.58
25:BA:346:A:OP1	29:BF:168:ARG:HD2	2.04	0.58
25:BA:325:G:OP2	44:BY:84:ARG:NH2	2.36	0.58
2:CB:189:ASP:HB3	2:CB:204:ASN:HA	1.85	0.58
41:DV:5:VAL:HG11	41:DV:57:VAL:HG21	1.86	0.58
27:DD:71:ASP:CB	27:DD:103:ARG:HH22	2.17	0.58
12:AL:59:ARG:HD3	24:AW:1:2QZ:OG1	2.04	0.58
1:CA:1516:G:H2'	1:CA:1518:A:OP2	2.03	0.58
25:BA:326:C:OP2	44:BY:73:ARG:NH2	2.36	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
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
25:DA:847:U:OP2	61:DA:3962:HOH:O	2.16	0.58
25:BA:1261:G:P	40:BU:12:ARG:HH21	2.27	0.58
25:BA:231:G:C8	54:B8:5:LYS:HG2	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:598:U:H4'	8:AH:94:TYR:CD2	2.38	0.58
38:BS:10:ARG:O	38:BS:14:VAL:HG13	2.04	0.58
2:AB:16:HIS:CB	2:AB:204:ASN:HB3	2.31	0.58
1:CA:147:G:O2'	1:CA:148:G:H8	1.87	0.58
31:BH:40:GLU:OE2	31:BH:60:ARG:NH1	2.37	0.58
1:CA:192:U:C2'	1:CA:193:C:H5'	2.34	0.58
40:DU:66:ASN:O	40:DU:70:ARG:HG3	2.04	0.58
25:DA:2802:G:H2'	25:DA:2803:C:O4'	2.04	0.58
25:BA:1086:C:H2'	25:BA:1087:C:O4'	2.04	0.58
1:CA:433:C:H2'	1:CA:434:U:H6	1.68	0.58
33:DN:15:LEU:HB2	33:DN:135:PRO:HB2	1.85	0.58
25:DA:839:U:H2'	25:DA:840:C:C6	2.39	0.58
25:BA:1985:U:H4'	25:BA:1986:G:OP1	2.03	0.58
1:CA:662:G:O2'	1:CA:836:G:OP1	2.21	0.57
5:CE:137:GLU:HA	5:CE:140:ARG:HB3	1.85	0.57
1:CA:953:G:H5'	1:CA:965:A:H61	1.69	0.57
1:AA:991:U:O2'	1:AA:992:U:OP2	2.21	0.57
25:DA:1796:U:H2'	25:DA:1797:C:C6	2.38	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
23:CX:73:A:H5''	23:CX:74:C:H5'	1.86	0.57
26:BB:76:G:N2	26:BB:101:G:O6	2.30	0.57
2:CB:71:VAL:HG23	2:CB:164:VAL:HA	1.85	0.57
25:DA:854:G:H2'	25:DA:855:G:H8	1.69	0.57
25:DA:579:G:H2'	25:DA:580:C:C6	2.38	0.57
25:BA:988:U:OP2	61:BA:4599:HOH:O	2.17	0.57
32:BI:4:ILE:HG12	32:BI:18:VAL:HG22	1.85	0.57
1:AA:33:A:H2'	1:AA:34:C:C6	2.39	0.57
1:AA:1142:G:H3'	1:AA:1143:G:H8	1.68	0.57
25:BA:1525:G:O2'	25:BA:1605:A:N1	2.35	0.57
3:CC:36:ASP:O	3:CC:40:ARG:HG3	2.03	0.57
19:CS:64:GLU:HB2	50:D4:59:PHE:CE1	2.39	0.57
1:CA:45:U:H2'	1:CA:46:G:C8	2.39	0.57
48:D2:10:LEU:HD22	48:D2:14:ARG:NH1	2.19	0.57
47:B1:21:ARG:HG2	47:B1:21:ARG:NH1	2.18	0.57
1:AA:44:G:C2	1:AA:45:U:H1'	2.39	0.57
25:BA:1825:U:H2'	25:BA:1826:C:H6	1.69	0.57
1:CA:1182:G:H4'	1:CA:1183:A:H3'	1.86	0.57
25:BA:2457:G:OP1	29:BF:74:ARG:NH2	2.37	0.57
33:DN:4:TYR:CD2	40:DU:100:VAL:HG11	2.39	0.57
1:CA:715:A:H2'	1:CA:716:A:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1925:G:OP1	27:BD:241:PRO:HB2	2.04	0.57
38:DS:99:LYS:HE2	38:DS:103:GLU:OE2	2.03	0.57
28:DE:119:ARG:HB3	28:DE:120:TRP:CD1	2.39	0.57
8:CH:21:LYS:O	8:CH:65:TYR:OH	2.20	0.57
11:CK:34:ASP:HB3	11:CK:40:ILE:HD11	1.85	0.57
9:CI:121:ARG:NH1	9:CI:122:ALA:O	2.36	0.57
3:CC:98:ASN:N	3:CC:98:ASN:OD1	2.37	0.57
8:AH:40:ALA:HA	8:AH:45:ILE:HG13	1.87	0.57
1:AA:272:C:H2'	1:AA:273:A:H8	1.69	0.57
28:BE:111:ARG:HG3	28:BE:160:TYR:CD2	2.39	0.57
23:CX:9:G:O2'	23:CX:10:G:N7	2.33	0.57
1:CA:1427:U:H2'	1:CA:1428:A:C8	2.39	0.57
46:D0:24:LYS:HA	46:D0:24:LYS:HE2	1.87	0.57
25:DA:333:G:H5''	25:DA:334:C:OP2	2.04	0.57
1:CA:900:A:H2'	1:CA:901:A:C8	2.39	0.57
44:BY:6:HIS:H	44:BY:6:HIS:CD2	2.21	0.57
25:DA:2336:A:H61	46:D0:43:THR:CG2	2.17	0.57
25:DA:1032:A:H2	25:DA:1122:G:H22	1.51	0.57
7:CG:153:HIS:CE1	11:CK:58:PRO:HD2	2.39	0.57
19:CS:41:VAL:HB	19:CS:44:MET:HG3	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
30:BG:102:PHE:HE1	30:BG:141:PHE:HE2	1.52	0.57
25:BA:1211:U:H2'	25:BA:1212:C:C6	2.39	0.57
25:DA:2639:A:OP2	61:DA:3812:HOH:O	2.16	0.57
25:BA:1091:A:OP1	25:BA:1092:A:H3'	2.04	0.57
1:CA:487:A:H2'	1:CA:488:C:O4'	2.05	0.57
1:CA:59:A:H5''	1:CA:60:A:H5''	1.85	0.57
1:CA:1305:G:H5'	21:CU:4:GLY:HA3	1.87	0.57
25:DA:898:C:H2'	25:DA:899:A:O4'	2.05	0.57
1:CA:623:C:H2'	1:CA:624:C:H6	1.69	0.57
50:D4:68:ARG:HH21	50:D4:68:ARG:CG	2.16	0.57
9:CI:116:LYS:HA	9:CI:123:PRO:HD3	1.86	0.57
8:CH:29:SER:HB3	8:CH:32:LYS:HG3	1.86	0.57
35:DP:38:GLN:O	35:DP:39:LYS:HB3	2.05	0.57
25:BA:606:G:OP2	40:BU:10:ARG:NH1	2.37	0.57
17:AQ:53:LEU:HD23	17:AQ:82:MET:HE1	1.86	0.57
1:AA:959:A:O2'	1:AA:984:C:O2'	2.22	0.57
30:BG:131:TYR:HB3	30:BG:159:VAL:HG13	1.86	0.57
5:CE:10:MET:HG2	5:CE:13:ILE:HD11	1.86	0.57
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BU:105:VAL:HG11	41:BV:39:LEU:HD21	1.85	0.57
5:AE:50:GLU:HB2	5:AE:53:LEU:HD13	1.86	0.57
3:CC:140:ARG:NH1	3:CC:140:ARG:HB2	2.19	0.57
1:CA:1007:C:N4	1:CA:1022:G:C6	2.72	0.57
1:AA:342:C:N3	1:AA:343:U:H5	2.03	0.57
1:CA:1154:G:N7	1:CA:1155:G:C8	2.73	0.57
25:DA:1038:C:N4	25:DA:1117:G:H1	2.01	0.57
17:CQ:66:SER:OG	17:CQ:67:LYS:N	2.37	0.57
36:BQ:51:ARG:HD3	36:BQ:66:ILE:HD11	1.87	0.57
25:DA:1430:C:H2'	25:DA:1431:U:C6	2.40	0.57
27:BD:108:PRO:HG3	27:BD:143:HIS:CE1	2.39	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
25:DA:1292:U:H2'	25:DA:1293:C:C6	2.40	0.57
10:AJ:20:ALA:HA	10:AJ:23:ILE:HG22	1.87	0.57
25:DA:867:C:O2	25:DA:913:U:H5'	2.05	0.57
1:AA:1007:C:O2	1:AA:1022:G:N1	2.32	0.57
1:CA:1217:C:H2'	1:CA:1218:C:O4'	2.05	0.57
25:DA:601:C:O2	25:DA:605:C:H4'	2.04	0.57
1:CA:1269:A:N1	1:CA:1312:G:O2'	2.30	0.57
29:DF:129:PHE:CD2	29:DF:163:VAL:HG21	2.40	0.57
25:DA:2680:C:H1'	28:DE:187:ALA:HB1	1.86	0.57
25:BA:1261:G:OP2	40:BU:12:ARG:NH2	2.37	0.57
25:DA:855:G:H2'	25:DA:856:C:C6	2.40	0.57
1:AA:877:C:H5''	8:AH:88:LYS:HD3	1.87	0.57
25:DA:2000:G:N7	61:DA:4010:HOH:O	2.33	0.57
32:DI:40:THR:O	32:DI:44:LEU:HB2	2.04	0.57
25:BA:1660:A:OP1	25:BA:1663:C:N4	2.32	0.57
1:CA:947:G:O3'	13:CM:109:THR:OG1	2.22	0.57
50:B4:63:TYR:N	50:B4:64:GLY:HA2	2.19	0.57
25:BA:8:A:H2'	25:BA:9:U:H6	1.70	0.57
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.86	0.57
1:AA:1270:C:C2'	1:AA:1271:G:H5'	2.35	0.57
25:DA:1314:C:OP1	61:DA:4078:HOH:O	2.18	0.57
1:AA:1241:G:H1	1:AA:1296:C:N4	2.00	0.57
43:DX:44:GLU:O	43:DX:48:LYS:N	2.38	0.57
36:DQ:135:ASP:OD2	45:DZ:49:ARG:NH2	2.38	0.57
25:BA:1778:G:H2'	25:BA:1779:G:H5''	1.86	0.57
25:DA:1291:C:H2'	25:DA:1292:U:C6	2.40	0.57
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.19	0.57
12:AL:117:ARG:HB3	12:AL:122:THR:HB	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:42:ILE:HG23	7:AG:117:ALA:HA	1.87	0.57
36:BQ:16:ARG:HG2	36:BQ:18:LYS:HE2	1.87	0.57
25:DA:116:C:H2'	25:DA:117:G:O4'	2.04	0.57
1:CA:426:G:OP1	4:CD:36:ARG:NH1	2.36	0.57
1:AA:102:G:H2'	1:AA:103:C:C6	2.40	0.57
25:BA:1405:A:N1	25:BA:1418:U:O4	2.38	0.57
38:BS:3:ARG:HE	38:BS:4:LEU:H	1.52	0.57
1:AA:1369:C:H2'	1:AA:1370:G:H8	1.69	0.57
29:DF:101:LEU:HD12	29:DF:102:PRO:HD2	1.86	0.57
3:CC:6:HIS:HD2	3:CC:8:ILE:H	1.51	0.57
25:BA:721:G:H1'	29:BF:74:ARG:HD3	1.87	0.57
32:BI:48:GLU:HG2	32:BI:52:ARG:HH22	1.69	0.57
4:AD:172:PRO:HB2	4:AD:187:ARG:NH2	2.20	0.57
1:AA:545:C:H5'	4:AD:72:GLU:HG2	1.87	0.57
27:BD:71:ASP:CB	27:BD:103:ARG:HH22	2.15	0.57
36:DQ:24:GLY:HA2	36:DQ:67:ARG:NH2	2.20	0.57
25:DA:754:C:H2'	25:DA:755:C:C6	2.40	0.57
13:CM:108:ARG:CZ	13:CM:114:ARG:HG2	2.34	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
25:DA:491:G:H2'	25:DA:492:A:C8	2.40	0.57
1:CA:1327:C:H2'	1:CA:1328:C:H6	1.70	0.57
12:CL:75:HIS:HA	12:CL:102:ARG:HH22	1.69	0.57
2:CB:137:ARG:O	2:CB:141:GLU:N	2.33	0.57
1:CA:1003:G:C6	1:CA:1004:A:C2	2.93	0.56
10:AJ:35:SER:CB	10:AJ:73:ASP:HB2	2.31	0.56
1:AA:458:C:H2'	1:AA:460:G:C8	2.40	0.56
25:DA:600:G:N3	61:DA:3736:HOH:O	2.32	0.56
1:CA:1023:G:H3'	1:CA:1024:G:C8	2.38	0.56
32:BI:72:LEU:O	32:BI:74:ASN:N	2.37	0.56
25:BA:801:C:H2'	25:BA:802:C:H6	1.69	0.56
30:DG:25:TYR:HB3	30:DG:30:GLU:HB2	1.87	0.56
32:BI:65:ALA:HB1	32:BI:136:VAL:HG11	1.87	0.56
25:DA:1364:G:OP2	47:D1:3:LYS:HG3	2.05	0.56
25:BA:1940:A:O2'	25:BA:1942:C:N4	2.38	0.56
1:CA:5:U:H5'	1:CA:6:G:C5	2.40	0.56
1:AA:1138:G:C6	1:AA:1140:C:H1'	2.39	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
25:BA:2510:C:OP2	61:BA:4508:HOH:O	2.18	0.56
24:AW:8:2R3:H65	24:AW:10:2QY:CE1	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B4:61:ARG:HG3	50:B4:62:ARG:N	2.21	0.56
46:B0:24:LYS:O	46:B0:25:ARG:NH1	2.33	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
25:BA:2092:G:N3	61:BA:3833:HOH:O	2.32	0.56
1:AA:161:A:H2'	1:AA:162:A:C8	2.40	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
1:CA:975:A:N1	10:CJ:48:THR:HB	2.20	0.56
1:AA:146:G:N2	1:AA:176:C:O2	2.31	0.56
25:DA:1636:C:H2'	25:DA:1637:A:C8	2.40	0.56
31:BH:56:SER:HB3	31:BH:61:HIS:ND1	2.20	0.56
25:DA:2887:U:H2'	25:DA:2888:C:C6	2.41	0.56
25:BA:2847:G:H21	37:BR:45:ARG:HH12	1.53	0.56
25:DA:1514:U:H2'	25:DA:1515:G:H8	1.70	0.56
51:D5:41:PRO:O	51:D5:44:THR:OG1	2.23	0.56
25:DA:2293:C:H42	25:DA:2339:G:H1	1.53	0.56
1:AA:1494:G:HO2'	25:BA:1934:A:HO2'	1.53	0.56
34:DO:71:ARG:NE	34:DO:105:GLU:OE2	2.36	0.56
25:DA:1271:G:OP2	61:DA:4114:HOH:O	2.18	0.56
53:B7:33:ARG:NH2	61:B7:4001:HOH:O	2.38	0.56
1:AA:605:U:H2'	1:AA:606:G:C8	2.40	0.56
25:DA:2397:G:N2	25:DA:2420:C:H1'	2.20	0.56
1:AA:1064:G:H4'	1:AA:1065:U:OP1	2.03	0.56
28:DE:52:LEU:O	28:DE:76:ARG:N	2.25	0.56
25:DA:271(E):U:H2'	25:DA:271(F):C:C6	2.40	0.56
25:BA:1830:G:O2'	27:BD:181:GLU:OE2	2.15	0.56
25:BA:2897:U:H2'	25:BA:2898:C:C6	2.40	0.56
25:BA:407:U:OP1	61:BA:4096:HOH:O	2.17	0.56
1:CA:1179:A:H4'	9:CI:103:THR:HA	1.87	0.56
1:CA:410:G:H5''	1:CA:411:A:OP1	2.05	0.56
3:AC:181:ASN:HD21	3:AC:204:LEU:HD12	1.69	0.56
19:CS:41:VAL:HG12	19:CS:43:GLU:H	1.70	0.56
25:DA:184:C:H2'	25:DA:185:U:C6	2.40	0.56
1:CA:78:G:H2'	1:CA:79:G:H5'	1.87	0.56
25:BA:2902:G:O2'	25:BA:2903:G:OP2	2.22	0.56
25:DA:819:A:OP2	25:DA:1187:G:N2	2.30	0.56
44:DY:5:MET:HE1	44:DY:32:PRO:HA	1.88	0.56
28:DE:13:ARG:HG2	39:DT:58:ASN:HD21	1.70	0.56
1:CA:920:U:H2'	1:CA:921:U:C6	2.41	0.56
10:CJ:55:LYS:HG3	10:CJ:56:HIS:CD2	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2899:C:H2'	25:BA:2900:G:O4'	2.05	0.56
25:DA:1656:C:H2'	25:DA:1657:C:H6	1.71	0.56
33:BN:58:ASP:OD1	33:BN:58:ASP:N	2.34	0.56
4:AD:88:VAL:O	4:AD:92:VAL:HG23	2.05	0.56
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.39	0.56
2:CB:51:LEU:HD23	2:CB:201:ILE:HD12	1.87	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:1493:A:H1'	25:DA:1913:A:N6	2.21	0.56
1:AA:1030:C:H3'	1:AA:1030(A):G:H4'	1.87	0.56
7:CG:107:ALA:O	7:CG:111:ARG:HG3	2.05	0.56
51:B5:16:ARG:O	51:B5:20:ARG:HG3	2.04	0.56
42:DW:78:GLU:OE1	42:DW:99:ARG:NH1	2.36	0.56
1:CA:1327:C:H2'	1:CA:1328:C:C6	2.41	0.56
45:DZ:8:TYR:HB2	45:DZ:38:TYR:CE2	2.41	0.56
25:DA:1028:A:H2'	25:DA:1029:A:C8	2.40	0.56
1:CA:509:A:C8	1:CA:509:A:H3'	2.40	0.56
25:BA:469:A:H1'	25:BA:1246:C:O4'	2.04	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
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
38:DS:37:ALA:HB2	38:DS:101:LEU:HD11	1.88	0.56
1:CA:859:A:OP2	1:CA:869:G:N2	2.39	0.56
1:AA:600:C:H2'	1:AA:601:C:C6	2.41	0.56
25:DA:2336:A:H61	46:D0:43:THR:HG21	1.69	0.56
4:AD:65:ARG:HG2	4:AD:75:PHE:CD1	2.40	0.56
28:DE:163:GLU:HG2	28:DE:164:ARG:N	2.20	0.56
25:DA:539:G:H2'	25:DA:540:C:C6	2.41	0.56
43:DX:59:VAL:N	43:DX:76:ARG:O	2.34	0.56
25:DA:2590:A:OP2	27:DD:238:GLY:HA2	2.05	0.56
25:BA:2332:A:H2'	25:BA:2332:A:N3	2.20	0.56
25:BA:147:U:O4	61:BA:4548:HOH:O	2.16	0.56
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.70	0.56
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
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
1:AA:974:A:OP2	14:AN:41:ARG:NH1	2.39	0.56
1:AA:187:C:H2'	1:AA:188:C:H6	1.70	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)
25:DA:2816:C:O3'	37:DR:99:LYS:NZ	2.37	0.56
25:DA:894:C:H2'	25:DA:895:U:C6	2.41	0.56
25:DA:1755:A:OP2	39:DT:113:LYS:NZ	2.38	0.56
25:BA:1296:G:N7	35:BP:18:ARG:NH2	2.54	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
23:CX:23:C:H2'	23:CX:24:U:C6	2.40	0.56
3:CC:179:ARG:NH1	3:CC:206:GLU:OE1	2.39	0.56
25:DA:1774:C:OP1	61:DA:3938:HOH:O	2.18	0.56
25:BA:144:C:H5'	43:BX:2:LYS:HE2	1.86	0.56
25:DA:1025:G:C4	25:DA:1135:C:H1'	2.41	0.56
1:CA:1004:A:H2'	1:CA:1005:A:H5'	1.88	0.56
1:AA:1002:G:H3'	1:AA:1003:G:H8	1.71	0.56
50:D4:15:ILE:N	50:D4:31:ILE:O	2.28	0.56
1:AA:1223:C:H5''	1:AA:1224:G:C5'	2.35	0.56
52:D6:13:CYS:SG	52:D6:47:THR:HG21	2.45	0.56
30:DG:179:PRO:HB2	50:D4:42:PHE:HE1	1.70	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:BA:2860:A:OP2	25:BA:2876:U:H5	1.88	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:DA:330:A:HO2'	25:DA:331:A:H8	1.53	0.56
1:CA:560:U:O2'	1:CA:561:U:OP2	2.20	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
9:CI:85:LEU:HB3	9:CI:92:TYR:CD2	2.41	0.56
1:CA:1269:A:C8	1:CA:1270:C:H1'	2.41	0.56
1:AA:134:A:H61	16:AP:25:ARG:NH1	2.04	0.56
1:AA:78:G:N2	1:AA:92:C:N3	2.54	0.56
28:DE:119:ARG:HD2	28:DE:120:TRP:CE2	2.41	0.56
25:DA:437:G:H2'	25:DA:438:G:H8	1.70	0.56
26:BB:50:G:H5''	38:BS:61:ASN:HD22	1.71	0.56
10:CJ:57:LYS:HD2	10:CJ:60:ARG:HH21	1.69	0.56
1:CA:1504:G:OP1	1:CA:1507:A:H4'	2.06	0.56
1:CA:1119:C:H2'	1:CA:1120:G:H8	1.71	0.56
1:CA:838:G:H1	1:CA:848:C:N4	2.01	0.56
25:DA:1778:U:H2'	25:DA:1784:A:N6	2.21	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B6:12:GLU:OE2	52:B6:52:VAL:HG21	2.06	0.56
1:AA:920:U:H2'	1:AA:921:U:C6	2.41	0.56
27:DD:3:VAL:HG13	27:DD:17:THR:HB	1.86	0.56
1:AA:447:G:H2'	1:AA:485:G:N2	2.21	0.56
12:AL:70:ILE:HD13	12:AL:77:LEU:HD12	1.86	0.56
25:BA:2877:G:OP2	39:BT:119:LYS:NZ	2.39	0.56
45:BZ:152:ALA:HA	45:BZ:155:LEU:HD22	1.87	0.56
25:DA:2708:G:H1'	37:DR:71:GLN:HE22	1.70	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:269:C:H2'	1:AA:270:A:C8	2.41	0.56
25:BA:436:C:OP1	61:BA:3960:HOH:O	2.18	0.56
29:BF:101:LEU:HD12	29:BF:102:PRO:HD2	1.86	0.56
1:CA:1492:A:H2'	1:CA:1493:A:H1'	1.87	0.55
1:AA:376:G:O3'	16:AP:5:ARG:NH2	2.39	0.55
19:AS:36:ARG:HB3	19:AS:72:GLY:HA3	1.86	0.55
25:DA:2079:U:OP1	47:D1:21:ARG:NH2	2.38	0.55
3:CC:189:ALA:HB3	3:CC:196:LEU:HB2	1.88	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
1:CA:552:U:C2'	1:CA:553:A:H5'	2.37	0.55
55:D9:13:LYS:HD3	55:D9:28:GLU:OE2	2.06	0.55
2:CB:188:ALA:HB1	2:CB:192:SER:OG	2.05	0.55
1:AA:691:G:H2'	1:AA:692:U:C6	2.41	0.55
7:CG:146:GLU:OE2	7:CG:149:ARG:NE	2.39	0.55
25:DA:247:G:H4'	25:DA:386:G:C5	2.41	0.55
4:AD:57:ARG:NH2	5:AE:107:ARG:HD3	2.21	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
23:AX:59:A:C2'	23:AX:60:U:H5'	2.36	0.55
20:AT:45:GLN:HA	20:AT:91:LEU:HB3	1.88	0.55
25:DA:1709:U:H2'	25:DA:1710:C:H6	1.71	0.55
25:DA:839:U:H2'	25:DA:840:C:H6	1.70	0.55
3:CC:140:ARG:CZ	3:CC:140:ARG:HB2	2.37	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
25:BA:2879:G:H2'	25:BA:2880:C:O4'	2.07	0.55
23:CX:40:C:H2'	23:CX:41:C:H6	1.71	0.55
28:BE:59:VAL:HG21	28:BE:74:PRO:HB3	1.88	0.55
2:AB:16:HIS:HB3	2:AB:210:SER:CB	2.35	0.55
25:BA:1248:G:OP2	25:BA:1249:A:O2'	2.19	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:B1:65:SER:OG	47:B1:66:HIS:ND1	2.27	0.55
1:AA:232:G:H1'	1:AA:262:A:N1	2.22	0.55
5:CE:78:HIS:CE1	5:CE:143:ARG:H	2.23	0.55
13:AM:3:ARG:HG3	13:AM:4:ILE:H	1.71	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
7:AG:78:ARG:HH21	7:AG:156:TRP:HB3	1.70	0.55
25:BA:310:C:H2'	25:BA:311:C:H6	1.71	0.55
25:DA:1025:G:O2'	61:DA:4221:HOH:O	1.99	0.55
15:CO:39:LEU:HD13	15:CO:56:LEU:HB2	1.89	0.55
5:AE:36:ASP:OD1	5:AE:38:GLN:N	2.29	0.55
25:DA:271(Q):G:H2'	25:DA:271(R):G:H8	1.71	0.55
1:CA:937:A:H1'	1:CA:1379:G:N2	2.21	0.55
25:DA:190:A:OP2	47:D1:39:LYS:HE3	2.06	0.55
10:CJ:8:LEU:HD12	10:CJ:20:ALA:HB2	1.88	0.55
1:AA:491:G:H2'	1:AA:492:G:O4'	2.06	0.55
7:AG:113:GLU:HG2	7:AG:119:ARG:HG2	1.87	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
33:BN:67:LEU:O	33:BN:88:GLU:HG3	2.06	0.55
25:BA:2108:U:H2'	25:BA:2109:G:C8	2.42	0.55
11:CK:18:ARG:NH2	11:CK:35:PRO:O	2.39	0.55
47:B1:51:VAL:HG11	47:B1:74:VAL:HG21	1.87	0.55
25:BA:2116:G:OP1	32:BI:22:LYS:HD2	2.06	0.55
10:CJ:30:SER:O	10:CJ:81:THR:HG23	2.07	0.55
1:AA:102:G:O2'	1:AA:151:A:N3	2.38	0.55
25:BA:868:A:O2'	25:BA:991:G:OP2	2.20	0.55
31:DH:26:VAL:HG12	31:DH:79:VAL:HG11	1.89	0.55
1:CA:457:C:H2'	1:CA:458:C:H6	1.71	0.55
25:BA:2211:U:H2'	25:BA:2212:G:H5'	1.88	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:DA:984:A:H5''	25:DA:985:C:H5	1.70	0.55
7:CG:106:GLN:O	7:CG:110:GLN:HG3	2.05	0.55
25:BA:2623:U:H6	25:BA:2623:U:H5'	1.71	0.55
19:CS:27:GLU:HG2	19:CS:47:HIS:NE2	2.21	0.55
25:DA:956:G:H8	25:DA:956:G:H5''	1.72	0.55
1:CA:1401:G:C2	1:CA:1402:C:H1'	2.41	0.55
14:CN:26:ARG:HB3	14:CN:43:CYS:SG	2.46	0.55
1:CA:1004:A:C8	1:CA:1005:A:H4'	2.38	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1005:A:O2'	1:CA:1006:C:OP1	2.19	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
25:BA:1541:A:H2'	25:BA:1542:A:C8	2.42	0.55
39:DT:24:PRO:HA	39:DT:49:VAL:HG22	1.89	0.55
25:DA:1653:G:H3'	37:DR:2:ARG:HD3	1.89	0.55
25:BA:1513:G:HO2'	25:BA:1593:C:HO2'	1.55	0.55
1:CA:537:G:H5''	12:CL:113:ARG:NH1	2.22	0.55
10:AJ:5:ARG:NE	10:AJ:73:ASP:OD1	2.39	0.55
1:CA:1316:G:O2'	1:CA:1318:A:N7	2.35	0.55
25:BA:139:A:C8	25:BA:1454:C:O2'	2.57	0.55
1:CA:1133:G:H1	1:CA:1141:C:N4	2.05	0.55
1:CA:418:C:H2'	1:CA:419:C:C6	2.41	0.55
1:CA:1245:A:H2'	1:CA:1246:C:O4'	2.06	0.55
25:BA:2299:A:H2	25:BA:2358:A:H62	1.53	0.55
25:BA:599:U:H2'	25:BA:600:G:C8	2.42	0.55
1:AA:1182:G:C4'	1:AA:1183:A:H5'	2.37	0.55
1:AA:382:A:C2	1:AA:383:A:N7	2.75	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
16:CP:3:LYS:HZ2	16:CP:65:GLN:HB2	1.72	0.55
16:AP:28:ARG:HG2	16:AP:29:ASP:OD1	2.07	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
11:AK:20:TYR:CZ	11:AK:83:ILE:HD12	2.42	0.55
17:CQ:45:HIS:HA	17:CQ:69:LYS:HE3	1.87	0.55
1:AA:1110:A:OP2	61:AA:4115:HOH:O	2.18	0.55
41:DV:16:PRO:HD3	41:DV:99:ILE:HD11	1.89	0.55
25:DA:2286:A:H4'	25:DA:2287:A:O4'	2.06	0.55
25:BA:272:U:OP1	32:BI:50:ARG:NH2	2.38	0.55
1:AA:1030(B):C:H2'	1:AA:1030(C):G:H5'	1.88	0.55
1:AA:192:U:O2'	1:AA:193:C:H6	1.90	0.55
19:AS:38:SER:O	19:AS:70:LYS:HD3	2.06	0.55
25:BA:945:A:O2'	25:BA:946:A:O5'	2.17	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
25:DA:1469:A:H2'	25:DA:1470:G:O4'	2.07	0.55
1:AA:78:G:H1	1:AA:92:C:N4	2.05	0.55
25:BA:2820:A:N6	25:BA:2900:G:O2'	2.38	0.55
5:CE:100:VAL:O	5:CE:107:ARG:NH2	2.40	0.55
6:AF:22:GLU:OE2	6:AF:82:ARG:HG2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DW:65:LEU:HD12	42:DW:68:ARG:HE	1.71	0.55
25:BA:676:G:OP1	54:B8:19:SER:OG	2.23	0.55
18:CR:40:LEU:HB3	18:CR:79:LEU:HD11	1.89	0.55
39:BT:16:ARG:NH1	39:BT:18:ASP:OD2	2.40	0.55
1:CA:1120:G:C6	1:CA:1121:U:C4	2.95	0.55
1:CA:1157:A:N6	1:CA:1180:A:C4	2.74	0.55
30:DG:11:TYR:O	30:DG:16:ARG:HG2	2.07	0.55
1:CA:1135:U:O2'	1:CA:1137:C:O2	2.18	0.55
1:AA:1492:A:H5''	1:AA:1493:A:OP2	2.06	0.55
46:D0:53:MET:HG3	46:D0:59:LEU:CD2	2.37	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
12:AL:70:ILE:HG12	12:AL:100:ILE:HD12	1.89	0.55
25:DA:2409:G:H2'	25:DA:2410:G:O4'	2.06	0.55
25:BA:2396:G:OP2	46:B0:55:ARG:NH1	2.40	0.55
26:DB:90:A:N7	26:DB:91:C:H1'	2.21	0.55
41:BV:98:GLU:OE2	41:BV:100:ARG:NH1	2.40	0.55
25:DA:637:A:H2'	35:DP:117:GLU:OE2	2.06	0.55
1:CA:986:A:O2'	19:CS:55:LYS:O	2.24	0.55
1:CA:839:U:O2'	1:CA:840:C:OP1	2.16	0.55
25:BA:1775:C:H6	25:BA:1775:C:H5''	1.72	0.55
2:CB:52:GLU:HG2	2:CB:56:ARG:NH2	2.22	0.55
45:DZ:131:ARG:HD2	45:DZ:131:ARG:H	1.72	0.55
1:AA:66:G:O3'	1:AA:199:G:H4'	2.07	0.55
30:DG:136:ARG:HD2	30:DG:137:GLU:HG3	1.87	0.55
32:BI:37:VAL:HG12	32:BI:38:LEU:HD12	1.89	0.55
19:AS:64:GLU:HB2	50:B4:59:PHE:HE1	1.72	0.55
6:AF:22:GLU:O	6:AF:26:ILE:HG13	2.06	0.55
32:DI:117:GLU:HG3	32:DI:118:LYS:H	1.71	0.55
1:AA:932:C:H2'	1:AA:933:G:H8	1.72	0.55
25:BA:1553:A:O2'	25:BA:1554:A:O4'	2.26	0.55
25:DA:265:A:C8	25:DA:266:G:H1'	2.42	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
45:BZ:145:GLU:O	45:BZ:148:ASP:N	2.39	0.55
25:BA:1233:U:H4'	41:BV:79:VAL:HG22	1.88	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
25:DA:2600:A:C6	25:DA:2601:C:N4	2.75	0.55
25:DA:1141:U:OP2	33:DN:63:THR:OG1	2.21	0.54
1:CA:1320:C:O4'	19:CS:73:GLU:HG3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1803:A:H4'	27:DD:259:THR:HG23	1.90	0.54
29:DF:53:THR:HG23	29:DF:55:GLY:N	2.17	0.54
1:AA:558:G:H5''	1:AA:559:A:OP2	2.07	0.54
1:AA:190:U:H2'	1:AA:191:G:H8	1.71	0.54
1:AA:1158:C:H5	1:AA:1181:G:N1	2.04	0.54
25:BA:1848:G:OP1	27:BD:88:ARG:NH2	2.40	0.54
35:BP:62:LEU:O	54:B8:13:ARG:HD3	2.07	0.54
4:AD:65:ARG:NH1	4:AD:70:ILE:O	2.40	0.54
25:BA:1451:U:H2'	25:BA:1452:U:C6	2.42	0.54
31:BH:3:ARG:CG	31:BH:6:ARG:HG2	2.38	0.54
25:BA:560:C:O3'	40:BU:53:ARG:NH1	2.38	0.54
1:AA:794:A:OP2	61:AA:4035:HOH:O	2.18	0.54
25:DA:2061:G:H5''	25:DA:2503:A:C2	2.42	0.54
6:AF:68:PRO:HB2	6:AF:71:ARG:HG3	1.89	0.54
1:AA:1129:C:N4	1:AA:1143:G:N1	2.30	0.54
1:CA:1164:G:H1	1:CA:1172:C:H42	1.53	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
25:DA:1359:A:N1	25:DA:1372:U:O4	2.40	0.54
1:CA:885:G:O2'	1:CA:914:A:N1	2.39	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
45:BZ:151:HIS:C	45:BZ:153:SER:H	2.09	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
25:BA:287:G:N7	25:BA:448:U:H2'	2.21	0.54
25:DA:615:G:OP1	29:DF:40:GLN:NE2	2.33	0.54
44:DY:7:VAL:HG21	44:DY:72:VAL:HG12	1.89	0.54
25:BA:934:A:H4'	25:BA:935:C:C5	2.42	0.54
29:DF:11:VAL:HG22	29:DF:125:LEU:HB2	1.89	0.54
25:DA:272:G:H4'	25:DA:272(A):U:C5'	2.37	0.54
45:DZ:5:LEU:HG	45:DZ:47:VAL:HG21	1.89	0.54
4:CD:43:HIS:HA	4:CD:46:LYS:HG3	1.88	0.54
1:CA:202:U:H3'	1:CA:203:U:C6	2.42	0.54
25:DA:143:G:H2'	25:DA:143(A):C:C6	2.42	0.54
29:DF:167:ALA:HB1	29:DF:173:VAL:HG11	1.88	0.54
1:AA:1111:A:N1	3:AC:177:THR:OG1	2.34	0.54
25:DA:30:G:H2'	25:DA:31:C:C6	2.43	0.54
25:BA:2507:G:O6	61:BA:4440:HOH:O	2.19	0.54
25:DA:1766:U:H2'	25:DA:1767:C:C6	2.42	0.54
1:CA:41:G:H2'	1:CA:42:G:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2314:G:N2	25:BA:2327:G:C4	2.75	0.54
6:AF:35:ALA:HA	6:AF:67:MET:HB3	1.89	0.54
6:AF:19:LEU:HD11	6:AF:59:TYR:CE2	2.42	0.54
16:AP:34:GLU:OE2	16:AP:55:ARG:NH2	2.30	0.54
27:DD:182:LEU:HB2	27:DD:272:ALA:HB3	1.89	0.54
3:AC:150:LYS:HD3	3:AC:152:ILE:HD11	1.89	0.54
41:DV:40:LEU:HB2	41:DV:46:VAL:HG13	1.89	0.54
36:DQ:125:LEU:O	61:DQ:3102:HOH:O	2.18	0.54
1:AA:1256:A:N6	1:AA:1278:U:O4'	2.37	0.54
3:AC:58:GLU:O	3:AC:59:ARG:HG3	2.07	0.54
1:CA:376:G:H5''	16:CP:5:ARG:HB2	1.88	0.54
50:D4:15:ILE:HB	50:D4:32:TYR:HD1	1.69	0.54
25:DA:848:G:H2'	25:DA:849:A:C8	2.42	0.54
1:CA:616:G:N2	1:CA:624:C:O2	2.38	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
29:BF:164:ARG:O	29:BF:168:ARG:HB2	2.07	0.54
25:DA:2803:C:H2'	25:DA:2804:C:H6	1.73	0.54
25:DA:1270:C:H5''	25:DA:1271:G:O5'	2.07	0.54
1:CA:1111:A:H2'	1:CA:1112:C:C6	2.42	0.54
45:BZ:19:ARG:NH1	45:BZ:84:GLU:O	2.40	0.54
11:CK:20:TYR:CZ	11:CK:83:ILE:HD12	2.42	0.54
26:DB:78:A:N6	26:DB:99:G:O2'	2.40	0.54
4:CD:112:VAL:HG22	4:CD:116:GLN:OE1	2.08	0.54
1:AA:1095:U:H5''	1:AA:1109:C:O2	2.07	0.54
25:DA:2074:U:H2'	25:DA:2075:U:C6	2.42	0.54
1:CA:344:A:H4'	1:CA:345:C:OP2	2.07	0.54
17:CQ:41:LYS:HZ2	17:CQ:92:ARG:HH21	1.55	0.54
1:CA:1373:G:H5''	7:CG:36:LYS:HB2	1.88	0.54
9:AI:7:THR:O	9:AI:83:ARG:NH1	2.41	0.54
27:BD:145:VAL:HG12	27:BD:146:GLU:O	2.08	0.54
16:CP:74:LEU:O	16:CP:79:VAL:HG23	2.07	0.54
41:BV:21:ARG:HG2	41:BV:91:TYR:CD1	2.43	0.54
2:AB:127:ILE:HD11	2:AB:130:ARG:HD3	1.90	0.54
25:BA:1312:G:O5'	42:BW:15:ARG:NH2	2.41	0.54
25:DA:857:C:H4'	46:D0:23:VAL:HG21	1.90	0.54
41:DV:31:ALA:O	41:DV:61:VAL:HG12	2.07	0.54
16:AP:52:ASP:OD1	16:AP:54:GLU:HG3	2.06	0.54
1:AA:527:G:O2'	1:AA:535:A:N1	2.31	0.54
9:CI:79:LEU:HD22	9:CI:104:ARG:HB2	1.90	0.54
1:CA:848:C:H2'	1:CA:849:C:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BT:53:ARG:NH1	39:BT:60:THR:OG1	2.41	0.54
25:DA:1395:A:OP1	61:DA:4394:HOH:O	2.18	0.54
1:AA:1183:A:HO2'	1:AA:1184:G:P	2.29	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
25:DA:1740:G:H2'	25:DA:1741:A:C8	2.42	0.54
25:BA:574:G:O2'	25:BA:1265:A:N3	2.34	0.54
2:CB:144:ARG:NH1	2:CB:148:TYR:OH	2.40	0.54
1:AA:358:U:H2'	1:AA:359:U:H6	1.72	0.54
7:CG:69:VAL:HG22	7:CG:135:VAL:HG22	1.90	0.54
25:DA:660:G:H5'	29:DF:99:TYR:CE2	2.42	0.54
25:DA:250:G:H2'	25:DA:251:A:C8	2.43	0.54
9:AI:8:GLY:HA3	9:AI:76:ALA:O	2.07	0.54
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.43	0.54
6:AF:6:VAL:HG22	6:AF:90:VAL:HG22	1.90	0.54
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.42	0.54
15:CO:24:SER:OG	15:CO:25:THR:N	2.41	0.54
25:BA:1157:A:N3	25:BA:1158:G:H1'	2.23	0.54
1:CA:1025:U:H1'	1:CA:1026:G:C8	2.43	0.54
1:AA:96:U:H2'	1:AA:97:G:C8	2.42	0.54
2:CB:178:ARG:HH22	8:CH:68:ARG:NH1	2.04	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
4:CD:33:MET:HB2	57:CD:501:SF4:S3	2.48	0.54
3:CC:29:TYR:HE1	3:CC:33:LEU:HD22	1.71	0.54
32:BI:72:LEU:HA	32:BI:75:LEU:HD11	1.90	0.54
20:AT:90:GLN:O	20:AT:93:GLU:HB3	2.08	0.54
25:DA:2293:C:OP1	25:DA:2377:A:N6	2.41	0.54
25:DA:816:C:O2'	25:DA:932:G:O6	2.25	0.54
2:AB:20:GLU:O	2:AB:40:HIS:HB2	2.08	0.54
17:CQ:56:VAL:O	17:CQ:77:VAL:HB	2.08	0.54
25:DA:645:C:OP2	25:DA:645:C:H3'	2.08	0.54
1:AA:1086:U:H3	1:AA:1099:G:H22	1.56	0.54
1:CA:1362:C:H2'	1:CA:1363:C:H5''	1.88	0.54
9:AI:48:GLU:OE2	9:AI:51:ARG:HD2	2.08	0.54
1:CA:564:C:O2'	8:CH:91:ARG:NH2	2.40	0.54
1:AA:473:G:C2	1:AA:474:G:C5	2.96	0.54
26:DB:33:G:C2'	26:DB:34:U:H5'	2.37	0.54
25:DA:411:G:C5	35:DP:72:PRO:HB3	2.43	0.54
1:CA:1220:G:O3'	19:CS:36:ARG:HD3	2.08	0.54
25:DA:873:G:N2	25:DA:905:U:C2	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1359:A:C2	25:DA:1372:U:O4	2.61	0.54
1:CA:758:G:H5''	1:CA:758:G:H8	1.72	0.54
37:DR:103:ARG:NH1	37:DR:110:PRO:HD3	2.23	0.54
25:DA:585:G:H2'	25:DA:1251:C:H42	1.73	0.54
1:CA:276:G:H2'	1:CA:277:C:H5'	1.89	0.54
25:DA:2099:U:H5'	25:DA:2100:G:OP2	2.08	0.54
11:CK:48:ILE:HD11	11:CK:64:ALA:HA	1.89	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
25:DA:656:G:H2'	25:DA:657:U:O4'	2.07	0.54
29:BF:103:LYS:HA	29:BF:106:ARG:HG3	1.90	0.54
2:CB:163:PHE:HA	2:CB:185:ILE:HG12	1.89	0.54
3:AC:157:ILE:HD12	3:AC:164:ARG:HB3	1.90	0.54
25:DA:1514:U:H2'	25:DA:1515:G:C8	2.43	0.54
54:B8:33:ASN:HA	54:B8:36:LYS:HD2	1.90	0.54
25:DA:2218:U:N3	47:D1:55:GLY:O	2.41	0.54
1:CA:199:G:O2'	1:CA:200:G:H5'	2.07	0.54
43:BX:12:VAL:HG22	43:BX:29:TRP:CE2	2.43	0.54
28:DE:101:ARG:NH2	28:DE:171:GLU:HB2	2.23	0.54
1:CA:791:G:C6	1:CA:792:A:N7	2.76	0.54
2:CB:7:VAL:HG12	2:CB:8:LYS:HG2	1.90	0.54
10:AJ:5:ARG:O	10:AJ:98:ILE:HA	2.08	0.54
1:CA:1133:G:H1	1:CA:1141:C:H42	1.56	0.54
39:BT:95:ARG:HG2	39:BT:95:ARG:NH1	2.22	0.54
1:CA:939:G:H1	1:CA:1344:C:N4	2.04	0.54
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.90	0.54
25:BA:493:G:OP1	53:B7:33:ARG:NH1	2.41	0.54
25:BA:715:G:H5'	25:BA:716:G:OP2	2.07	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
38:BS:34:HIS:ND1	38:BS:53:SER:OG	2.37	0.54
6:CF:81:ILE:HD11	27:DD:125:ILE:HB	1.90	0.54
25:DA:1351:C:OP2	61:DA:4267:HOH:O	2.18	0.54
25:BA:555:G:O4'	25:BA:555:G:N3	2.39	0.54
37:BR:29:LEU:HD12	37:BR:116:LEU:HD11	1.89	0.54
23:AX:23:C:H2'	23:AX:24:U:C6	2.43	0.54
25:BA:821:A:H2'	25:BA:821:A:N3	2.22	0.54
1:AA:76:C:H5''	1:AA:76:C:H6	1.73	0.54
1:AA:345:C:H4'	1:AA:346:G:C4	2.43	0.53
25:DA:2299:G:N1	25:DA:2318:G:C8	2.76	0.53
1:CA:1170:A:O2'	1:CA:1171:G:O4'	2.25	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1014:A:H4'	19:CS:14:HIS:CE1	2.43	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
29:DF:21:ALA:HB3	29:DF:22:ALA:HA	1.89	0.53
1:CA:254:G:OP1	17:CQ:66:SER:OG	2.26	0.53
1:AA:598:U:H2'	1:AA:599:C:H6	1.73	0.53
38:BS:6:ALA:O	38:BS:10:ARG:HB2	2.08	0.53
1:AA:630:G:H2'	1:AA:631:G:H8	1.72	0.53
4:AD:89:THR:HG22	4:AD:204:ILE:HD12	1.90	0.53
31:DH:56:SER:OG	31:DH:57:ASP:N	2.41	0.53
1:CA:101:A:C2'	1:CA:102:G:H5'	2.37	0.53
25:DA:1283:G:N2	25:DA:1285:G:H3'	2.24	0.53
8:AH:13:ILE:O	8:AH:17:THR:HG23	2.08	0.53
32:BI:77:LEU:HB3	32:BI:142:VAL:HG12	1.90	0.53
15:CO:26:GLU:HB3	15:CO:81:LEU:HD13	1.90	0.53
1:CA:999:C:N4	1:CA:1042:G:C2	2.76	0.53
1:AA:346:G:OP1	39:BT:41:ARG:NH1	2.41	0.53
39:BT:60:THR:HG22	39:BT:77:PRO:HA	1.90	0.53
30:DG:17:PRO:HA	30:DG:20:ILE:HD12	1.89	0.53
1:CA:922:G:N3	1:CA:1398:A:H2	2.06	0.53
5:CE:122:GLU:O	5:CE:126:ARG:NH1	2.42	0.53
38:BS:3:ARG:HE	38:BS:4:LEU:N	2.07	0.53
27:BD:206:LEU:HD22	27:BD:211:ARG:HG2	1.89	0.53
25:BA:1218:G:O2'	25:BA:1219:A:O5'	2.25	0.53
1:AA:189:G:H2'	1:AA:189(A):C:O4'	2.09	0.53
45:DZ:108:PRO:HB2	45:DZ:111:VAL:HG23	1.89	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
1:CA:605:U:O2'	1:CA:606:G:H5'	2.07	0.53
1:CA:944:G:N1	1:CA:1338:G:OP2	2.39	0.53
12:CL:80:HIS:HD1	24:CW:6:2R1:CG2	2.20	0.53
25:BA:2759:U:OP2	61:BA:4008:HOH:O	2.18	0.53
31:BH:113:VAL:HG11	31:BH:151:ILE:HD13	1.90	0.53
25:DA:345:A:H1'	25:DA:346:A:N7	2.23	0.53
1:CA:500:G:N2	1:CA:546:G:H1'	2.23	0.53
3:CC:15:THR:HG21	3:CC:181:ASN:HA	1.90	0.53
36:BQ:84:GLY:O	36:BQ:85:LYS:HB2	2.07	0.53
52:B6:10:LEU:HD23	52:B6:22:ALA:HB2	1.90	0.53
25:BA:1698:G:OP1	37:BR:40:LYS:HE3	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1864:U:O2'	25:BA:1991:A:N1	2.32	0.53
5:CE:9:LYS:HB2	5:CE:112:LEU:HD11	1.89	0.53
1:CA:1120:G:O6	1:CA:1154:G:N2	2.41	0.53
25:BA:1577:C:H1'	25:BA:1578:C:OP1	2.08	0.53
1:CA:1375:A:O2'	7:CG:29:LYS:NZ	2.39	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
25:DA:1371:G:H2'	25:DA:1372:U:H5	1.73	0.53
25:BA:346:A:OP2	29:BF:169:ASN:HB2	2.08	0.53
26:DB:90:A:C5	26:DB:91:C:H1'	2.44	0.53
1:CA:520:A:N1	1:CA:536:C:H1'	2.23	0.53
25:DA:747:U:O2	25:DA:2014:A:H1'	2.08	0.53
25:BA:61:C:H5''	25:BA:62:U:OP2	2.08	0.53
25:DA:191:A:N1	61:DA:4123:HOH:O	2.34	0.53
6:AF:8:ILE:HD11	6:AF:79:LEU:HD13	1.89	0.53
13:CM:14:ARG:CZ	13:CM:42:ALA:HA	2.38	0.53
3:AC:121:ALA:O	3:AC:125:GLU:HG3	2.08	0.53
36:DQ:56:ARG:HG3	36:DQ:56:ARG:HH11	1.73	0.53
3:CC:106:VAL:HG11	3:CC:115:LEU:HD21	1.90	0.53
25:DA:1495:A:H2'	25:DA:1496:A:C8	2.43	0.53
3:AC:153:VAL:HG22	3:AC:198:VAL:HG22	1.91	0.53
61:BA:3851:HOH:O	33:BN:73:THR:HG21	2.09	0.53
25:BA:1067:A:H2'	25:BA:1069:U:H5'	1.90	0.53
1:AA:1005:A:O2'	1:AA:1037:C:O2'	2.11	0.53
25:DA:1313:U:OP1	61:DA:3983:HOH:O	2.18	0.53
1:CA:1346:A:H5''	9:CI:120:ARG:HH12	1.73	0.53
25:BA:174:U:H4'	25:BA:207:A:H4'	1.91	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:AA:6:G:O2'	1:AA:7:G:H5'	2.08	0.53
31:BH:3:ARG:HG2	31:BH:6:ARG:HG2	1.89	0.53
27:BD:72:LYS:HB3	27:BD:75:ILE:HD12	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:1435:G:H2'	1:CA:1436:U:C6	2.43	0.53
7:AG:146:GLU:O	7:AG:149:ARG:HB2	2.08	0.53
25:DA:1805:U:O2	27:DD:50:THR:HB	2.08	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:542:G:P	4:CD:10:ARG:HH22	2.32	0.53
1:AA:174:C:H2'	1:AA:175:C:C6	2.44	0.53
8:AH:119:LEU:HB3	8:AH:123:GLU:HB3	1.90	0.53
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.43	0.53
3:AC:8:ILE:HG23	3:AC:16:ARG:HG2	1.91	0.53
1:CA:441:A:H3'	1:CA:442:C:C6	2.44	0.53
1:AA:973:G:OP1	10:AJ:57:LYS:NZ	2.34	0.53
26:DB:41:U:H5	30:DG:70:VAL:H	1.57	0.53
25:BA:2255:U:H2'	25:BA:2256:U:C6	2.44	0.53
38:DS:84:GLN:H	38:DS:111:GLU:HB2	1.73	0.53
1:AA:448:A:H2'	1:AA:449:C:C6	2.43	0.53
47:D1:65:SER:OG	47:D1:66:HIS:ND1	2.30	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
1:CA:543:C:O2'	1:CA:544:G:H5'	2.08	0.53
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.90	0.53
5:AE:20:GLN:NE2	5:AE:21:ALA:O	2.42	0.53
25:DA:997:G:O2'	25:DA:998:C:H5'	2.09	0.53
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.08	0.53
38:DS:15:ARG:O	38:DS:19:LYS:HG2	2.08	0.53
25:DA:2772:C:H2'	25:DA:2773:C:C6	2.44	0.53
6:CF:9:VAL:HB	6:CF:87:ARG:HB2	1.91	0.53
34:BO:120:GLU:OE1	39:BT:67:SER:OG	2.24	0.53
28:DE:116:VAL:HG13	28:DE:122:PHE:HB2	1.91	0.53
3:CC:157:ILE:HD12	3:CC:164:ARG:HB3	1.91	0.53
25:DA:639:U:H2'	25:DA:640:C:C6	2.43	0.53
25:BA:851:A:H5''	25:BA:852:G:OP1	2.09	0.53
1:CA:129(A):G:C6	1:CA:189(E):U:H4'	2.44	0.53
31:DH:69:ARG:HG3	31:DH:70:THR:N	2.24	0.53
32:BI:130:TYR:HB3	32:BI:138:ILE:HB	1.91	0.53
25:BA:595:A:OP2	41:BV:78:LYS:NZ	2.40	0.53
25:BA:236:G:H4'	25:BA:413:G:C5	2.43	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
25:DA:1247:A:OP1	29:DF:95:ARG:NH2	2.39	0.53
1:CA:1320:C:H5'	19:CS:70:LYS:HG3	1.90	0.53
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.44	0.53
25:DA:154:G:O6	25:DA:172:C:N4	2.42	0.53
1:CA:138:G:C8	1:CA:138:G:H5'	2.36	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:116:GLN:NE2	4:AD:157:LEU:HD21	2.23	0.53
25:BA:2053:A:C6	25:BA:2510:C:H1'	2.44	0.53
24:CW:1:2QZ:H5	24:CW:2:VAL:N	2.24	0.53
30:BG:47:LYS:HG3	30:BG:48:GLU:H	1.74	0.53
25:BA:1223:C:H2'	25:BA:1224:C:C6	2.44	0.53
11:CK:58:PRO:HG3	11:CK:89:ALA:O	2.08	0.53
17:AQ:52:LYS:HG3	17:AQ:53:LEU:N	2.22	0.53
25:DA:867:C:H2'	25:DA:868:U:H6	1.74	0.53
25:DA:266:G:N2	25:DA:427:U:H1'	2.24	0.53
25:BA:1451:U:H2'	25:BA:1452:U:H6	1.73	0.53
1:AA:1243:C:H2'	1:AA:1244:C:H6	1.74	0.53
25:DA:1237:A:OP1	61:DA:4360:HOH:O	2.19	0.53
25:BA:63:A:O3'	43:BX:71:GLY:HA3	2.09	0.53
29:DF:195:ASP:OD1	29:DF:196:LEU:N	2.42	0.53
25:DA:220:G:O2'	25:DA:233:A:N3	2.37	0.53
10:AJ:47:PHE:CZ	14:AN:37:PHE:HE1	2.26	0.53
5:AE:41:VAL:O	5:AE:67:VAL:HG12	2.08	0.53
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.43	0.53
1:AA:1292:U:OP2	7:AG:41:ARG:NH2	2.34	0.53
1:CA:1151:A:H5''	10:CJ:41:PRO:HA	1.90	0.53
25:DA:1798:U:H5'	27:DD:259:THR:CG2	2.33	0.53
14:CN:24:CYS:SG	14:CN:40:CYS:N	2.76	0.53
25:DA:773:U:O2'	27:DD:48:ARG:HD3	2.09	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
25:BA:1628:G:H5''	25:BA:1628:G:H8	1.73	0.53
25:DA:236:C:H2'	25:DA:237:C:C6	2.43	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:DA:2228:G:C6	25:DA:2229:C:C4	2.97	0.53
1:CA:977:A:N3	1:CA:977:A:H2'	2.22	0.53
27:DD:72:LYS:HB3	27:DD:75:ILE:HD12	1.90	0.53
25:DA:2823:A:OP1	28:DE:159:HIS:NE2	2.36	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
3:AC:62:ASP:HA	3:AC:97:LYS:HD3	1.91	0.53
9:AI:64:THR:HG23	9:AI:66:ARG:HD2	1.90	0.53
1:CA:619:U:C4	4:CD:135:LEU:HD11	2.44	0.53
26:DB:19:G:H2'	26:DB:20:C:O4'	2.09	0.53
25:DA:62:C:N3	25:DA:93:G:N2	2.45	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DT:16:ARG:HD2	39:DT:18:ASP:OD1	2.09	0.53
1:AA:266:G:O3'	17:AQ:67:LYS:HB2	2.09	0.53
25:DA:962:G:OP1	61:DA:4175:HOH:O	2.19	0.53
45:BZ:111:VAL:HG12	45:BZ:112:ARG:H	1.74	0.53
1:CA:278:G:OP2	17:CQ:41:LYS:NZ	2.37	0.53
25:BA:1087:C:H42	25:BA:1160:G:H1	1.55	0.53
1:AA:959:A:HO2'	1:AA:984:C:HO2'	1.55	0.53
3:CC:11:ARG:HB3	3:CC:15:THR:HB	1.90	0.53
3:AC:121:ALA:HB1	3:AC:189:ALA:HB2	1.90	0.53
31:DH:24:VAL:HG13	31:DH:37:VAL:HG21	1.90	0.53
1:AA:837:G:H1	1:AA:849:C:H42	1.57	0.53
11:CK:19:ALA:HA	11:CK:32:ILE:HD13	1.91	0.53
55:D9:10:ILE:HD12	55:D9:32:HIS:HA	1.91	0.53
50:B4:24:THR:OG1	50:B4:25:TYR:N	2.42	0.53
1:CA:1205:U:O2'	3:CC:195:VAL:HG23	2.09	0.53
1:AA:159:G:N2	1:AA:161:A:H3'	2.22	0.53
25:BA:1815:A:OP1	61:BA:4185:HOH:O	2.19	0.53
1:AA:446:G:H1	1:AA:488:C:H42	1.56	0.53
43:BX:92:LEU:C	43:BX:94:GLY:H	2.13	0.53
25:DA:297:C:H2'	25:DA:298:G:O4'	2.09	0.53
45:BZ:30:ASN:ND2	45:BZ:90:VAL:HB	2.24	0.53
35:DP:47:ASP:OD2	35:DP:50:ARG:NH2	2.41	0.53
1:AA:627:G:H2'	1:AA:628:G:C8	2.44	0.53
1:AA:364:A:H2'	1:AA:365:U:C6	2.44	0.53
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.09	0.53
25:BA:533:G:N2	42:BW:80:PRO:HG2	2.24	0.53
4:CD:150:GLU:OE2	4:CD:151:LYS:N	2.42	0.53
25:DA:588:U:H2'	25:DA:589:C:C6	2.44	0.53
35:DP:101:VAL:HA	35:DP:106:LEU:O	2.09	0.53
5:AE:33:VAL:HG21	5:AE:109:ILE:HA	1.90	0.53
25:BA:1833:A:N1	25:BA:1853:G:H1'	2.24	0.53
1:AA:138:G:H8	1:AA:138:G:H5'	1.74	0.53
25:DA:463:G:O6	61:DA:3740:HOH:O	2.14	0.53
25:BA:771:U:H2'	25:BA:772:G:O4'	2.09	0.53
25:DA:2303:G:O2'	30:DG:132:ASN:HB2	2.09	0.53
12:AL:38:THR:HG22	24:AW:3:004:HD1	1.90	0.53
1:CA:964:A:N3	1:CA:969:A:O2'	2.30	0.53
45:BZ:150:LEU:HG	45:BZ:154:ASP:OD1	2.08	0.53
1:CA:1392:G:C2'	1:CA:1393:U:H5'	2.39	0.52
43:DX:11:PRO:HG2	43:DX:13:LEU:HD21	1.90	0.52
1:CA:598:U:H2'	1:CA:599:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DG:117:PHE:CE1	30:DG:119:GLY:HA2	2.44	0.52
9:CI:116:LYS:HD2	9:CI:122:ALA:HA	1.91	0.52
35:DP:39:LYS:HB2	35:DP:45:LEU:HG	1.91	0.52
45:BZ:109:ALA:HB3	45:BZ:145:GLU:HG3	1.92	0.52
41:DV:30:GLY:H	41:DV:61:VAL:HG13	1.74	0.52
20:AT:44:ALA:HB2	20:AT:52:ALA:HB1	1.89	0.52
25:BA:1506:G:H5''	25:BA:1507:A:OP2	2.08	0.52
1:AA:414:A:H2'	1:AA:415:A:O4'	2.09	0.52
12:CL:57:LYS:NZ	12:CL:65:GLU:OE2	2.21	0.52
1:CA:73:G:C6	1:CA:97:G:C6	2.97	0.52
25:DA:770:G:OP2	61:DA:4150:HOH:O	2.19	0.52
1:AA:1297:C:O2'	7:AG:114:ARG:NH2	2.43	0.52
1:CA:1272:G:H2'	1:CA:1273:G:O4'	2.09	0.52
1:CA:1256:A:N6	1:CA:1278:U:H1'	2.24	0.52
1:CA:1014:A:H2'	1:CA:1015:A:C8	2.45	0.52
28:DE:55:ASN:O	28:DE:58:ARG:HG2	2.09	0.52
1:AA:985:C:H2'	1:AA:986:A:H8	1.74	0.52
30:DG:97:ASP:O	30:DG:101:ILE:HG13	2.09	0.52
29:DF:20:LEU:HD22	29:DF:21:ALA:H	1.74	0.52
1:CA:433:C:H2'	1:CA:434:U:C6	2.44	0.52
25:BA:2044:U:O2'	25:BA:2629:C:H5'	2.09	0.52
1:AA:1376:U:H2'	1:AA:1377:A:H8	1.74	0.52
1:CA:97:G:O2'	1:CA:98:G:H8	1.92	0.52
25:DA:958:U:OP2	36:DQ:14:ARG:NH1	2.41	0.52
1:CA:1254:C:O4'	1:CA:1356:G:H5''	2.09	0.52
29:DF:157:VAL:HB	29:DF:194:MET:HG2	1.91	0.52
34:DO:7:TYR:CZ	34:DO:44:LYS:HG3	2.45	0.52
1:AA:560:U:O2'	1:AA:561:U:OP2	2.20	0.52
25:DA:1328:G:H2'	25:DA:1330:C:C5	2.43	0.52
3:AC:33:LEU:O	3:AC:37:GLN:HG2	2.09	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
1:AA:404:U:H2'	1:AA:405:U:C6	2.45	0.52
36:DQ:108:GLY:HA3	45:DZ:116:VAL:HG13	1.91	0.52
2:CB:100:GLY:O	2:CB:104:ASN:N	2.39	0.52
2:AB:19:HIS:HE1	2:AB:189:ASP:CB	2.22	0.52
28:BE:47:VAL:HG12	28:BE:49:LEU:HD13	1.91	0.52
25:BA:240:A:C5	25:BA:241:G:H1'	2.44	0.52
8:CH:68:ARG:NH1	8:CH:74:PRO:HB3	2.24	0.52
33:DN:30:ILE:HG22	33:DN:34:LEU:HD22	1.91	0.52
1:AA:1530:G:H4'	1:AA:1530:G:OP1	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2821:A:H2'	25:DA:2822:G:H8	1.75	0.52
1:CA:8:A:N6	4:CD:209:ARG:HB2	2.23	0.52
1:AA:650:G:C2'	1:AA:651:C:H5'	2.40	0.52
25:DA:234:C:H2'	25:DA:235:U:C6	2.44	0.52
4:CD:64:LEU:HD22	4:CD:198:VAL:HG11	1.91	0.52
25:DA:1190:G:O2'	25:DA:1191:G:H5'	2.10	0.52
12:AL:38:THR:O	12:AL:79:GLU:HG3	2.09	0.52
25:BA:265:U:H2'	25:BA:266:C:C6	2.44	0.52
30:BG:67:LYS:H	50:B4:6:HIS:CE1	2.27	0.52
37:BR:44:LEU:HD22	37:BR:48:VAL:HG23	1.90	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
31:BH:72:ILE:O	31:BH:76:VAL:HG23	2.09	0.52
31:DH:86:GLU:CD	31:DH:130:ARG:HD3	2.29	0.52
25:DA:918:A:H5''	26:DB:98:G:O2'	2.09	0.52
4:AD:128:VAL:HG12	4:AD:129:ASN:HD22	1.72	0.52
1:AA:1270:C:H2'	1:AA:1271:G:H5'	1.91	0.52
10:AJ:27:ALA:HA	10:AJ:81:THR:CG2	2.39	0.52
2:CB:84:GLU:OE1	2:CB:216:SER:HA	2.10	0.52
25:BA:572:A:O2'	25:BA:573:G:OP1	2.20	0.52
49:D3:8:LEU:O	49:D3:32:GLN:N	2.34	0.52
2:AB:231:GLU:HB3	2:AB:232:PRO:HD3	1.91	0.52
50:B4:62:ARG:C	50:B4:64:GLY:HA2	2.30	0.52
28:DE:101:ARG:CZ	28:DE:171:GLU:HB2	2.39	0.52
1:AA:560:U:HO2'	1:AA:561:U:P	2.29	0.52
25:BA:2474:U:H1'	25:BA:2503:U:O4	2.10	0.52
35:DP:27:HIS:O	35:DP:31:ALA:HA	2.10	0.52
31:BH:11:VAL:HG21	31:BH:50:VAL:HG23	1.90	0.52
1:CA:174:C:H2'	1:CA:175:C:H6	1.75	0.52
8:AH:112:LEU:HB3	8:AH:133:LEU:HA	1.91	0.52
42:DW:86:LEU:HD22	42:DW:96:ILE:HD11	1.91	0.52
1:AA:586:C:O2'	1:AA:878:G:H4'	2.10	0.52
12:CL:7:ILE:O	12:CL:11:VAL:HG23	2.09	0.52
10:CJ:64:GLU:OE2	10:CJ:66:ARG:NH1	2.42	0.52
2:CB:73:THR:HB	2:CB:95:GLN:O	2.10	0.52
1:CA:130:A:H5'	17:CQ:63:ARG:HE	1.74	0.52
2:CB:127:ILE:O	2:CB:128:GLU:HB2	2.09	0.52
32:DI:93:THR:O	32:DI:97:ILE:HG13	2.09	0.52
1:AA:129(A):G:C6	1:AA:189(E):U:H4'	2.44	0.52
1:CA:1492:A:H3'	1:CA:1493:A:H8	1.75	0.52
26:DB:11:C:H3'	26:DB:12:C:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:179:A:H2'	1:AA:180:U:C6	2.44	0.52
1:AA:688:G:H2'	1:AA:689:C:H6	1.74	0.52
1:AA:613:C:H42	1:AA:627:G:H1	1.58	0.52
19:CS:22:LEU:HB3	19:CS:27:GLU:HG3	1.90	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:AA:310:G:OP2	16:AP:27:LYS:NZ	2.40	0.52
13:CM:92:HIS:CE1	13:CM:98:VAL:HG11	2.44	0.52
1:CA:918:A:H2'	1:CA:919:A:C8	2.44	0.52
1:AA:1164:G:H2'	1:AA:1165:C:C6	2.44	0.52
8:CH:10:LEU:HD22	8:CH:83:ILE:HD11	1.91	0.52
1:CA:1116:C:H2'	1:CA:1117:G:H5''	1.90	0.52
30:DG:28:VAL:O	30:DG:31:VAL:HG12	2.10	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
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
25:DA:2261:C:O2'	25:DA:2262:U:H5'	2.09	0.52
25:BA:2117:C:H2'	25:BA:2118:U:O4'	2.10	0.52
25:DA:873:G:H1	25:DA:904:C:H42	1.56	0.52
33:DN:38:HIS:ND1	33:DN:39:ARG:HG3	2.24	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
12:CL:57:LYS:HG2	12:CL:67:THR:HG22	1.90	0.52
25:BA:1715:A:H4'	25:BA:1716:A:O5'	2.10	0.52
25:DA:1505:C:H2'	25:DA:1506:C:H6	1.75	0.52
35:DP:42:SER:O	61:DP:303:HOH:O	2.18	0.52
25:DA:1574:C:H2'	25:DA:1575:C:C6	2.43	0.52
1:AA:261:U:OP2	20:AT:79:ARG:NH2	2.42	0.52
2:CB:197:VAL:HB	2:CB:200:ILE:HG22	1.91	0.52
1:CA:67:C:H2'	1:CA:68:G:C8	2.45	0.52
9:CI:125:TYR:HD1	9:CI:126:SER:N	2.06	0.52
8:AH:34:GLU:OE2	8:AH:37:ARG:NH1	2.40	0.52
38:DS:34:HIS:HD1	38:DS:53:SER:HG	1.57	0.52
30:DG:11:TYR:CE2	30:DG:16:ARG:HD3	2.44	0.52
1:AA:1007:C:N3	1:AA:1022:G:C6	2.78	0.52
25:DA:674:G:H1'	29:DF:74:ARG:HD3	1.91	0.52
25:DA:2680:C:H5'	28:DE:189:PRO:HA	1.92	0.52
1:AA:921:U:O2	5:AE:19:MET:HB2	2.09	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)
3:AC:134:ILE:HD11	3:AC:153:VAL:HG23	1.91	0.52
25:DA:1219:G:H1	25:DA:1230:C:H42	1.56	0.52
1:AA:1103:C:OP1	2:AB:96:ARG:NH2	2.41	0.52
20:AT:56:MET:HE3	20:AT:88:VAL:HG11	1.91	0.52
11:CK:21:ILE:HB	11:CK:84:VAL:HG22	1.92	0.52
25:BA:930:G:O6	25:BA:939:C:C2	2.62	0.52
2:AB:109:SER:O	2:AB:112:VAL:HG22	2.10	0.52
2:CB:17:PHE:HB2	2:CB:44:LEU:HD12	1.92	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
19:AS:50:ALA:HA	19:AS:58:VAL:O	2.09	0.52
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.44	0.52
25:BA:1222:A:H3'	25:BA:1223:C:C6	2.44	0.52
1:AA:840:C:H5''	1:AA:841:U:C5	2.44	0.52
1:AA:433:C:H2'	1:AA:434:U:H6	1.74	0.52
27:DD:132:PRO:HG2	27:DD:135:PHE:CD2	2.44	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
8:CH:17:THR:HG22	8:CH:63:LEU:HD12	1.92	0.52
45:DZ:93:ASP:O	45:DZ:131:ARG:NH1	2.43	0.52
30:BG:103:LEU:HD23	30:BG:106:LEU:HD23	1.90	0.52
42:DW:9:TYR:H	42:DW:102:HIS:CE1	2.27	0.52
6:CF:96:PRO:HB3	18:CR:30:ASP:CG	2.30	0.52
25:BA:1500:A:OP2	61:BA:3908:HOH:O	2.19	0.52
1:AA:229:U:O2'	16:AP:23:ASP:OD2	2.27	0.52
25:BA:1425:A:H4'	25:BA:1426:G:OP2	2.09	0.52
1:AA:532:A:O2'	1:AA:533:A:OP1	2.25	0.52
25:DA:2345:G:OP2	52:D6:38:LYS:HG3	2.10	0.52
1:AA:160:A:N1	1:AA:343:U:C2	2.78	0.52
1:AA:20:U:H4'	1:AA:572:A:C6	2.44	0.52
1:AA:193:C:H2'	1:AA:194:C:C6	2.44	0.52
24:AW:6:2R1:C	24:AW:8:2R3:N	2.73	0.52
43:DX:9:LEU:HA	48:D2:36:ARG:HH21	1.75	0.52
6:AF:97:PHE:CD2	18:AR:31:LEU:HD23	2.44	0.52
52:B6:6:ARG:NH1	52:B6:26:ASN:HB2	2.25	0.52
25:DA:2887:U:H2'	25:DA:2888:C:H6	1.75	0.52
1:CA:793:U:O2	1:CA:1516:G:H4'	2.10	0.52
25:DA:492:A:H2'	25:DA:493:G:O4'	2.10	0.52
1:CA:202:U:H3'	1:CA:203:U:H6	1.75	0.52
11:CK:62:GLN:HG3	11:CK:97:ALA:HB2	1.92	0.52
1:AA:303:A:O2'	1:AA:555:C:O2'	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:708:C:H2'	1:CA:709:G:H8	1.75	0.52
8:CH:33:GLU:HG2	8:CH:48:TYR:CE2	2.45	0.52
1:CA:352:C:H4'	1:CA:354:G:OP1	2.10	0.52
1:AA:1392:G:C2'	1:AA:1393:U:H5'	2.40	0.52
1:AA:987:G:H1	1:AA:1218:C:H42	1.58	0.52
25:DA:303:U:H2'	25:DA:304:G:H8	1.75	0.52
1:CA:1036:G:H3'	1:CA:1037:C:O4'	2.09	0.52
1:CA:565:U:OP2	1:CA:566:G:O2'	2.18	0.52
2:AB:170:GLU:O	2:AB:174:VAL:HG23	2.09	0.52
1:CA:1183:A:H5'	1:CA:1183:A:H8	1.75	0.52
1:CA:833:U:H2'	1:CA:834:C:H6	1.74	0.52
25:DA:2228:G:C5	25:DA:2229:C:C4	2.98	0.52
1:CA:174:C:H2'	1:CA:175:C:C6	2.45	0.52
23:CX:48:C:C2	23:CX:59:A:H1'	2.45	0.52
1:CA:1446:U:O2'	1:CA:1447:A:O5'	2.28	0.52
25:BA:641:G:OP1	29:BF:40:GLN:NE2	2.33	0.52
37:DR:21:TYR:OH	37:DR:43:GLU:HG2	2.10	0.52
25:BA:768:C:H2'	25:BA:769:A:H8	1.75	0.52
5:AE:51:VAL:O	5:AE:55:VAL:HG23	2.09	0.52
4:CD:188:LEU:HD23	4:CD:188:LEU:H	1.75	0.52
31:DH:33:LEU:HD21	31:DH:136:ILE:HG13	1.91	0.52
25:DA:2615:U:H2'	25:DA:2616:C:H6	1.74	0.52
3:CC:125:GLU:HG3	3:CC:190:ARG:O	2.10	0.52
1:AA:1075:C:C2'	1:AA:1076:C:H5'	2.40	0.51
25:DA:1040:C:N4	25:DA:1115:G:O6	2.41	0.51
25:DA:341:G:H2'	25:DA:342:G:O4'	2.10	0.51
27:DD:206:LEU:HD22	27:DD:211:ARG:HG2	1.92	0.51
25:BA:276:C:O3'	32:BI:42:SER:OG	2.27	0.51
1:AA:562:C:H1'	12:AL:15:ARG:HB3	1.92	0.51
25:DA:1529:G:O2'	25:DA:1530:C:H5'	2.11	0.51
36:BQ:110:THR:HG23	36:BQ:113:GLN:OE1	2.10	0.51
25:BA:1653:C:H4'	25:BA:1654:A:O5'	2.10	0.51
25:BA:2799:U:O2'	28:BE:62:PRO:O	2.12	0.51
25:BA:762:G:H2'	25:BA:763:A:O4'	2.10	0.51
25:BA:2603:C:P	27:BD:239:ARG:HG3	2.50	0.51
25:DA:774:A:N3	25:DA:774:A:H2'	2.25	0.51
29:DF:165:ARG:HG2	29:DF:168:ARG:NH2	2.25	0.51
40:BU:69:CYS:HB3	40:BU:74:LEU:HD13	1.91	0.51
27:BD:9:TYR:CZ	27:BD:13:ARG:HG2	2.45	0.51
9:CI:4:TYR:CE1	9:CI:88:TYR:HA	2.44	0.51
26:DB:6:C:H2'	26:DB:7:G:H5''	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:768:A:H4'	1:CA:1523:G:N2	2.25	0.51
1:AA:1183:A:H3'	1:AA:1184:G:H5''	1.92	0.51
25:BA:2013:U:H2'	25:BA:2014:G:H5''	1.93	0.51
1:CA:1311:G:H1	1:CA:1326:C:H42	1.58	0.51
25:BA:2880:C:H2'	25:BA:2881:C:O4'	2.10	0.51
9:AI:110:GLU:OE2	9:AI:113:LYS:NZ	2.43	0.51
25:DA:528:A:H2	25:DA:2043:C:H5'	1.75	0.51
38:BS:48:LEU:HD23	38:BS:82:ILE:HD11	1.91	0.51
25:BA:225:C:H2'	25:BA:226:C:C6	2.45	0.51
9:CI:51:ARG:HG2	9:CI:56:LEU:HD21	1.92	0.51
25:DA:1448:G:H1'	25:DA:1528:A:N1	2.26	0.51
25:BA:2855:G:H5''	39:BT:54:ARG:O	2.09	0.51
1:AA:1131:G:O2'	1:AA:1132:C:H5'	2.09	0.51
1:CA:931:C:H42	1:CA:1386:G:H1	1.58	0.51
25:BA:1555:C:H4'	25:BA:1555:C:OP2	2.09	0.51
2:CB:78:GLN:O	2:CB:94:ASN:ND2	2.44	0.51
25:BA:2555:G:H2'	25:BA:2556:G:C8	2.44	0.51
3:CC:119:ARG:HG2	3:CC:123:GLN:HE21	1.76	0.51
1:AA:1129:C:O2'	1:AA:1139:G:N7	2.26	0.51
1:CA:1040:U:C4	1:CA:1041:A:C8	2.98	0.51
25:BA:1067:A:C3'	25:BA:1067:A:C8	2.94	0.51
25:BA:926:G:H2'	25:BA:927:G:C1'	2.41	0.51
7:AG:50:ILE:HD11	7:AG:58:PRO:CA	2.39	0.51
25:DA:1153:C:H2'	25:DA:1154:G:O4'	2.11	0.51
1:AA:384:G:H2'	1:AA:385:C:C6	2.46	0.51
1:CA:1220:G:H5'	19:CS:34:TRP:O	2.11	0.51
20:AT:10:LEU:HD22	20:AT:12:ALA:HB2	1.91	0.51
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.90	0.51
1:CA:532:A:H2	1:CA:1207:G:H4'	1.76	0.51
1:CA:1104:G:H4'	2:CB:111:ARG:NH1	2.26	0.51
1:CA:814:A:H2'	1:CA:816:A:H5''	1.90	0.51
25:BA:1071:G:C4	25:BA:1180:C:H1'	2.46	0.51
16:CP:51:VAL:HG12	16:CP:53:VAL:H	1.74	0.51
52:D6:35:GLU:HG2	52:D6:50:ARG:HD3	1.92	0.51
52:D6:18:ARG:HD2	52:D6:42:TRP:CE2	2.46	0.51
1:AA:679:C:C2'	1:AA:680:C:H5'	2.41	0.51
30:DG:56:ALA:O	30:DG:60:LEU:HB2	2.10	0.51
29:BF:157:VAL:HB	29:BF:194:MET:HG2	1.91	0.51
19:AS:19:VAL:O	19:AS:22:LEU:HB2	2.10	0.51
41:DV:37:VAL:O	41:DV:51:VAL:HG23	2.10	0.51
1:CA:1007:C:N4	1:CA:1022:G:H1	1.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:204:ASN:OD1	2:AB:206:ASP:N	2.37	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
50:D4:16:CYS:SG	50:D4:17:GLY:N	2.83	0.51
19:AS:23:ASN:HA	19:AS:27:GLU:CD	2.31	0.51
1:AA:985:C:H2'	1:AA:986:A:C8	2.45	0.51
1:AA:929:G:H1	1:AA:1388:C:N4	2.06	0.51
25:DA:2364:C:H2'	25:DA:2365:G:O4'	2.10	0.51
25:DA:2285:C:OP2	52:D6:6:ARG:NH1	2.44	0.51
1:AA:671:G:H2'	1:AA:672:U:O4'	2.11	0.51
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.44	0.51
23:CX:23:C:H2'	23:CX:24:U:H6	1.75	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:AA:731:G:OP1	1:AA:766:A:H1'	2.08	0.51
1:CA:1307:U:H6	1:CA:1307:U:O5'	1.93	0.51
25:DA:1539:G:H2'	25:DA:1540:U:C6	2.45	0.51
26:DB:31:C:C2'	26:DB:32:C:H5'	2.40	0.51
5:AE:68:GLU:HG2	5:AE:70:PRO:HG3	1.93	0.51
28:DE:174:ASP:OD1	28:DE:175:VAL:N	2.43	0.51
23:CX:27:U:O2	23:CX:44:A:H2	1.93	0.51
1:AA:1125:U:H3'	10:AJ:5:ARG:HH22	1.75	0.51
34:BO:35:VAL:HG11	34:BO:103:ALA:CB	2.35	0.51
1:AA:661:G:H1	1:AA:744:C:N4	2.05	0.51
25:DA:829:A:N7	25:DA:2248:C:H5'	2.25	0.51
25:DA:2785:C:O2'	28:DE:66:HIS:ND1	2.38	0.51
4:AD:31:CYS:SG	4:AD:32:ALA:N	2.83	0.51
8:AH:121:ASP:HB2	8:AH:125:ARG:HH12	1.75	0.51
26:DB:46:A:H2'	26:DB:47:C:C6	2.45	0.51
1:AA:918:A:H2'	1:AA:919:A:C8	2.45	0.51
25:BA:2661:U:H2'	25:BA:2662:U:C6	2.45	0.51
1:CA:1301:U:O2'	1:CA:1302:U:H5'	2.10	0.51
49:B3:11:SER:OG	49:B3:13:ILE:HG13	2.10	0.51
3:AC:73:PRO:HB3	3:AC:103:VAL:HG11	1.93	0.51
1:AA:537:G:H5''	12:AL:113:ARG:NH1	2.24	0.51
25:DA:1563:G:H2'	25:DA:1564:C:C6	2.45	0.51
4:AD:196:LEU:H	4:AD:196:LEU:HD12	1.76	0.51
1:AA:799:G:H5''	1:AA:799:G:H8	1.76	0.51
38:DS:87:PHE:CZ	38:DS:102:ALA:HB2	2.45	0.51
1:CA:1118:C:H1'	1:CA:1179:A:C5	2.46	0.51
1:CA:1492:A:H3'	1:CA:1493:A:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1279:A:O2'	1:CA:1281:U:OP2	2.14	0.51
25:DA:92:A:H2'	25:DA:93:G:H8	1.76	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
30:BG:16:ARG:HB2	30:BG:17:PRO:HD3	1.92	0.51
25:DA:879:G:H3'	25:DA:880:G:H5''	1.93	0.51
1:CA:552:U:H2'	1:CA:553:A:H5'	1.93	0.51
25:DA:2823:A:OP1	28:DE:113:PHE:HB2	2.10	0.51
25:DA:704:G:H1'	25:DA:726:G:N2	2.26	0.51
12:CL:6:THR:OG1	12:CL:9:GLN:HG3	2.10	0.51
4:CD:191:ARG:O	4:CD:191:ARG:HD2	2.11	0.51
15:CO:33:THR:HG21	15:CO:85:LEU:HD22	1.93	0.51
1:CA:1004:A:H5''	1:CA:1025:U:C5	2.46	0.51
1:CA:999:C:N4	1:CA:1043:C:C4	2.79	0.51
1:CA:1150:U:O4	1:CA:1151:A:N6	2.44	0.51
1:AA:221:C:H2'	1:AA:222:U:C6	2.42	0.51
25:DA:1341:U:OP1	25:DA:1397:U:N3	2.33	0.51
1:CA:44:G:H2'	1:CA:45:U:O4'	2.10	0.51
3:CC:18:TRP:O	3:CC:21:ARG:NH1	2.43	0.51
1:AA:649:G:H2'	1:AA:650:G:H8	1.75	0.51
35:BP:121:LYS:O	35:BP:123:LEU:N	2.43	0.51
25:DA:2853:C:O2'	25:DA:2854:G:H5'	2.11	0.51
8:CH:6:ILE:O	8:CH:10:LEU:HG	2.10	0.51
47:B1:23:LYS:HB3	47:B1:29:GLY:HA3	1.93	0.51
25:DA:2745:C:C4	25:DA:2746:U:C4	2.98	0.51
25:DA:858:U:O2	25:DA:2268:A:H2'	2.11	0.51
25:DA:375:C:H2'	25:DA:376:C:C6	2.46	0.51
25:DA:45:C:H2'	25:DA:47:C:C6	2.45	0.51
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.11	0.51
14:CN:47:LEU:O	14:CN:51:GLY:N	2.43	0.51
1:CA:1120:G:C6	1:CA:1154:G:C2	2.99	0.51
25:BA:1576:G:O2'	25:BA:1577:C:H5'	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
25:DA:71:A:N7	43:DX:31:HIS:HE1	2.08	0.51
30:DG:114:ILE:HD12	30:DG:117:PHE:CD2	2.46	0.51
34:DO:111:PHE:O	34:DO:115:VAL:HG23	2.10	0.51
1:AA:625:G:O2'	1:AA:626:U:H5'	2.11	0.51
1:AA:7:G:H5''	1:AA:298:A:O4'	2.11	0.51
25:DA:2773:C:OP1	28:DE:166:THR:OG1	2.26	0.51
25:DA:1291:C:H2'	25:DA:1292:U:H6	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DG:179:PRO:HG3	50:D4:43:TYR:OH	2.11	0.51
2:CB:192:SER:O	2:CB:194:PRO:HD3	2.11	0.51
25:BA:1775:C:H5'	25:BA:1776:G:OP2	2.11	0.51
1:AA:358:U:H2'	1:AA:359:U:C6	2.46	0.51
25:DA:814:C:O2'	25:DA:815:C:H5'	2.11	0.51
1:CA:1323:G:H4'	1:CA:1363:C:C2	2.46	0.51
1:CA:429:U:H3'	4:CD:9:CYS:SG	2.50	0.51
25:DA:668:G:H5'	25:DA:669:G:OP2	2.11	0.51
25:BA:906:G:O2'	25:BA:962:G:O6	2.22	0.51
2:AB:50:GLU:OE1	2:AB:53:ARG:NH1	2.44	0.51
25:DA:2526:G:H2'	25:DA:2527:C:H6	1.75	0.51
25:DA:1472:A:H2'	25:DA:1473:G:O4'	2.11	0.51
1:CA:881:G:OP1	12:CL:12:ARG:NH2	2.42	0.51
1:AA:276:G:H2'	1:AA:277:C:H5'	1.92	0.51
1:AA:159:G:H2'	1:AA:161:A:OP2	2.10	0.51
2:CB:163:PHE:HA	2:CB:185:ILE:O	2.11	0.51
2:AB:15:VAL:HG11	2:AB:213:LEU:HD12	1.91	0.51
1:CA:426:G:H2'	1:CA:427:U:C6	2.46	0.51
1:AA:96:U:H2'	1:AA:97:G:H8	1.75	0.51
27:DD:148:GLU:CB	27:DD:151:LYS:HD2	2.41	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
1:AA:933:G:O6	7:AG:3:ARG:NH2	2.44	0.51
1:CA:790:A:H2'	1:CA:791:G:C8	2.46	0.51
25:BA:910:A:H2'	25:BA:911:G:C8	2.45	0.51
25:BA:289:G:H2'	25:BA:290:G:C8	2.46	0.51
1:CA:818:G:O2'	1:CA:819:A:H5'	2.11	0.51
37:DR:28:LEU:HD12	37:DR:48:VAL:HG21	1.91	0.51
35:BP:88:LEU:HD11	35:BP:114:ILE:HD12	1.93	0.51
4:AD:190:ASP:H	4:AD:193:ASP:HB2	1.75	0.51
36:BQ:12:GLN:HG2	36:BQ:73:PRO:HD2	1.93	0.51
1:AA:1328:C:H5'	13:AM:28:ALA:CB	2.41	0.51
25:BA:592:U:C4	25:BA:593:G:C6	2.99	0.51
43:BX:95:LEU:H	43:BX:95:LEU:HD12	1.76	0.51
30:DG:145:THR:HG23	30:DG:148:MET:HE3	1.92	0.51
25:BA:238:C:O2	54:B8:12:LYS:NZ	2.37	0.51
27:DD:127:VAL:HA	27:DD:193:VAL:HG22	1.92	0.51
25:DA:1963:U:O2'	61:DA:4443:HOH:O	2.16	0.51
1:AA:1125:U:HO2'	1:AA:1126:U:P	2.34	0.51
25:DA:1337:G:H2'	25:DA:1338:G:H8	1.76	0.51
10:AJ:49:VAL:HG23	14:AN:41:ARG:HD2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:36:ARG:HD2	19:CS:52:TYR:O	2.11	0.51
1:AA:42:G:O2'	1:AA:622:A:N1	2.32	0.51
15:CO:54:ARG:HD3	15:CO:58:MET:HE2	1.93	0.51
25:DA:1710:C:H2'	25:DA:1711:C:C6	2.46	0.51
1:AA:78:G:C6	1:AA:91:C:N4	2.79	0.51
25:DA:271(Q):G:H2'	25:DA:271(R):G:C8	2.46	0.51
11:AK:31:THR:HA	11:AK:42:TRP:HA	1.93	0.51
2:CB:52:GLU:HG2	2:CB:56:ARG:HH22	1.76	0.51
4:AD:79:PHE:CE1	4:AD:204:ILE:HD13	2.46	0.51
39:BT:127:ALA:O	39:BT:128:GLU:HB3	2.09	0.51
29:DF:110:LEU:HD12	29:DF:205:ARG:HG2	1.92	0.51
1:CA:1191:A:OP2	3:CC:3:ASN:ND2	2.44	0.51
25:BA:2504:U:H2'	25:BA:2505:U:H6	1.76	0.51
37:DR:75:LEU:O	37:DR:75:LEU:HD22	2.11	0.51
29:BF:197:ASP:OD1	29:BF:197:ASP:N	2.44	0.51
1:CA:438:G:N1	1:CA:495:A:OP2	2.33	0.51
5:CE:51:VAL:O	5:CE:55:VAL:HG23	2.10	0.51
1:CA:1007:C:N3	1:CA:1022:G:C2	2.79	0.50
2:CB:16:HIS:CG	2:CB:17:PHE:N	2.79	0.50
1:AA:216:G:H2'	1:AA:217:C:C6	2.46	0.50
4:AD:3:ARG:HE	4:AD:118:ARG:CD	2.23	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
25:BA:780:G:N7	61:BA:3904:HOH:O	2.35	0.50
1:AA:975:A:N6	1:AA:1367:C:O4'	2.43	0.50
36:BQ:54:MET:HG3	36:BQ:117:ALA:HB1	1.92	0.50
25:DA:2342:C:O2	25:DA:2374:C:H4'	2.12	0.50
16:AP:39:TYR:HA	16:AP:48:TRP:O	2.10	0.50
30:BG:11:TYR:CZ	30:BG:16:ARG:HD3	2.46	0.50
9:CI:78:LYS:HD3	9:CI:101:PHE:HD2	1.76	0.50
1:AA:606:G:H1'	1:AA:632:A:H61	1.76	0.50
26:BB:77:U:OP1	45:BZ:19:ARG:NH2	2.43	0.50
1:AA:404:U:H2'	1:AA:405:U:H6	1.77	0.50
8:AH:86:ILE:HG13	8:AH:133:LEU:HD22	1.93	0.50
1:AA:1164:G:H2'	1:AA:1165:C:H6	1.75	0.50
6:AF:80:ARG:NH1	6:AF:88:VAL:O	2.44	0.50
3:AC:175:LEU:HD21	3:AC:201:TYR:CE2	2.46	0.50
25:BA:2762:A:H3'	25:BA:2763:A:H2'	1.93	0.50
1:CA:1360:A:OP2	14:CN:35:ARG:NH2	2.43	0.50
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:852:G:H2'	25:DA:853:G:C8	2.46	0.50
42:BW:71:VAL:HA	42:BW:107:LEU:HD12	1.94	0.50
25:DA:1022:G:C6	25:DA:1140:C:C4	3.00	0.50
1:CA:677:U:H3	1:CA:713:G:N2	1.99	0.50
1:CA:1262:C:N3	1:CA:1273:G:N2	2.56	0.50
4:CD:36:ARG:HG3	4:CD:38:TYR:CE2	2.46	0.50
10:CJ:48:THR:O	14:CN:34:TYR:OH	2.30	0.50
25:DA:302:C:N4	25:DA:315:G:H1	2.09	0.50
28:BE:47:VAL:HG21	28:BE:86:PRO:CD	2.36	0.50
1:CA:1346:A:N1	1:CA:1374:A:H5''	2.26	0.50
48:B2:32:LEU:CD1	48:B2:36:ARG:HH11	2.23	0.50
1:AA:112:G:H4'	1:AA:389:A:H4'	1.92	0.50
48:D2:29:LYS:HG2	48:D2:57:ILE:HD13	1.92	0.50
25:BA:623:G:N2	25:BA:628:C:O3'	2.44	0.50
1:CA:1061:G:H2'	1:CA:1062:U:H5'	1.93	0.50
25:DA:1239:G:H2'	25:DA:1240:U:O4'	2.11	0.50
1:AA:202:U:O2'	1:AA:203:U:O5'	2.17	0.50
4:CD:159:ARG:O	4:CD:163:GLU:N	2.42	0.50
1:AA:72:C:H2'	1:AA:73:G:O4'	2.11	0.50
40:BU:36:ARG:HD2	40:BU:40:PHE:CZ	2.46	0.50
31:DH:3:ARG:HD3	31:DH:6:ARG:HH12	1.77	0.50
36:BQ:137:TYR:O	36:BQ:141:GLN:HG2	2.10	0.50
25:DA:275:G:H2'	25:DA:276:A:C8	2.46	0.50
4:CD:22:LYS:HB2	4:CD:26:CYS:SG	2.52	0.50
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.94	0.50
1:CA:1002:G:N2	1:CA:1039:C:C4	2.80	0.50
1:AA:1279:A:H5''	1:AA:1280:A:OP1	2.12	0.50
1:CA:1122:U:C4	1:CA:1123:A:N7	2.79	0.50
25:DA:1489:U:O2	25:DA:1489:U:H2'	2.11	0.50
25:DA:322:A:OP2	29:DF:169:ASN:HB2	2.09	0.50
25:BA:2442:A:N3	25:BA:2442:A:H2'	2.25	0.50
1:AA:370:C:H2'	1:AA:371:G:C8	2.46	0.50
9:CI:99:LEU:HB3	9:CI:101:PHE:CE1	2.46	0.50
9:AI:24:GLY:HA2	9:AI:59:PHE:O	2.12	0.50
1:CA:957:U:H2'	1:CA:959:A:OP2	2.11	0.50
1:AA:540:G:H2'	1:AA:541:G:O4'	2.11	0.50
25:DA:839:U:H1'	25:DA:1191:G:H1'	1.93	0.50
30:BG:140:ILE:HG22	30:BG:141:PHE:CD1	2.46	0.50
25:BA:296:U:H2'	25:BA:297:C:H6	1.75	0.50
25:DA:471:A:H2'	25:DA:472:A:O4'	2.11	0.50
7:CG:101:LEU:O	7:CG:104:LEU:HB2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:69:VAL:HG11	7:CG:134:ALA:HB1	1.93	0.50
2:CB:230:VAL:HG22	2:CB:231:GLU:H	1.76	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
25:DA:1149:G:H2'	25:DA:1150:C:C6	2.46	0.50
1:AA:662:G:H2'	1:AA:663:A:C8	2.45	0.50
25:DA:614(C):A:C4	29:DF:180:GLY:HA2	2.46	0.50
25:BA:1002:A:N1	25:BA:2470:G:H4'	2.27	0.50
1:CA:1028:C:O2	1:CA:1034:G:H1'	2.11	0.50
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.46	0.50
48:D2:16:LEU:O	48:D2:67:LYS:NZ	2.43	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
16:AP:21:VAL:HG11	16:AP:59:TRP:NE1	2.27	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:AA:1038:C:C2'	1:AA:1039:C:H5'	2.42	0.50
25:DA:1041:C:N4	25:DA:1114:G:H1	2.10	0.50
2:CB:87:ARG:NE	2:CB:233:SER:HB3	2.27	0.50
14:AN:29:ARG:HD3	14:AN:40:CYS:SG	2.52	0.50
25:DA:1036:G:H1	25:DA:1119:C:N4	2.06	0.50
1:AA:262:A:C6	1:AA:263:A:C6	2.99	0.50
25:BA:1219:A:H1'	25:BA:1220:U:H5''	1.93	0.50
27:DD:177:LEU:HD11	27:DD:183:ARG:HD2	1.92	0.50
1:AA:757:U:H2'	1:AA:758:G:O4'	2.10	0.50
1:CA:6:G:O2'	1:CA:7:G:H5'	2.12	0.50
6:AF:44:GLY:HA2	6:AF:59:TYR:CZ	2.46	0.50
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.47	0.50
1:CA:790:A:C6	1:CA:791:G:C6	3.00	0.50
25:BA:768:C:H2'	25:BA:769:A:C8	2.46	0.50
1:CA:153:C:H2'	1:CA:154:C:C6	2.47	0.50
48:D2:17:SER:N	48:D2:20:GLU:OE2	2.41	0.50
7:AG:28:ASN:HA	7:AG:31:MET:HE2	1.94	0.50
1:AA:106:C:O2'	1:AA:379:C:H5''	2.10	0.50
3:CC:134:ILE:HD11	3:CC:153:VAL:CG2	2.42	0.50
25:DA:1666:G:P	34:DO:66:LYS:HE3	2.52	0.50
27:DD:242:ARG:N	27:DD:242:ARG:HD3	2.25	0.50
1:AA:785:G:C2'	1:AA:786:G:H5'	2.42	0.50
1:AA:1142:G:H3'	1:AA:1143:G:C8	2.46	0.50
2:CB:187:LEU:HA	2:CB:201:ILE:HB	1.92	0.50
39:BT:53:ARG:HH11	39:BT:53:ARG:HB3	1.76	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
2:AB:21:ARG:HH21	2:AB:21:ARG:H	1.58	0.50
25:BA:1809:U:H2'	25:BA:1815:A:N6	2.27	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
1:AA:103:C:P	20:AT:17:ARG:HH21	2.35	0.50
25:BA:70:A:H3'	25:BA:70:A:OP2	2.11	0.50
1:AA:407:G:OP1	4:AD:115:ARG:HD3	2.12	0.50
30:DG:15:VAL:HG13	30:DG:175:LEU:HB3	1.93	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
1:CA:1226:C:C4	13:CM:104:ARG:HG2	2.46	0.50
2:AB:208:ILE:HA	2:AB:211:ILE:HD12	1.94	0.50
1:CA:473:G:O2'	1:CA:474:G:H5'	2.11	0.50
1:CA:200:G:H2'	1:CA:201:C:C6	2.46	0.50
5:CE:33:VAL:HG13	5:CE:112:LEU:HD12	1.92	0.50
29:DF:31:HIS:NE2	29:DF:35:GLU:OE2	2.44	0.50
25:DA:2657:A:O3'	31:DH:160:LYS:NZ	2.43	0.50
25:DA:2447:G:OP2	61:DA:4551:HOH:O	2.20	0.50
44:BY:98:VAL:HG12	44:BY:105:ALA:HA	1.93	0.50
1:AA:1318:A:H4'	19:AS:10:PHE:CZ	2.46	0.50
1:AA:69:G:H2'	1:AA:70:G:C8	2.46	0.50
1:CA:641:U:O3'	1:CA:642:A:H8	1.94	0.50
25:BA:2784:C:H2'	25:BA:2785:C:C6	2.46	0.50
44:DY:43:ASN:CG	44:DY:65:ALA:HB3	2.31	0.50
45:BZ:136:PHE:O	45:BZ:137:ILE:HG13	2.12	0.50
54:D8:34:TRP:CG	54:D8:35:GLN:N	2.79	0.50
40:BU:102:GLU:HG3	41:BV:2:PHE:CE2	2.47	0.50
25:DA:57:C:H2'	25:DA:58:G:O4'	2.12	0.50
45:BZ:44:PHE:CZ	45:BZ:86:VAL:HG11	2.46	0.50
25:DA:2320:A:N3	25:DA:2320:A:H2'	2.25	0.50
2:CB:19:HIS:CE1	2:CB:206:ASP:HB2	2.46	0.50
1:AA:1241:G:H2'	1:AA:1242:C:C6	2.47	0.50
25:DA:2406:U:C4	35:DP:72:PRO:HD2	2.46	0.50
25:BA:160:G:C2'	25:BA:161:C:H5'	2.42	0.50
25:DA:2272:U:H5''	25:DA:2273:A:OP1	2.11	0.50
34:DO:68:GLU:CB	34:DO:78:ARG:HB2	2.41	0.50
25:BA:1846:A:OP1	25:BA:1846:A:H8	1.95	0.50
50:B4:62:ARG:HB2	50:B4:63:TYR:CD1	2.46	0.50
7:CG:102:ARG:O	7:CG:106:GLN:HG3	2.12	0.50
1:CA:93:G:O2'	1:CA:96:U:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:626:A:H4'	25:BA:627:G:H5'	1.94	0.50
1:AA:646:U:H2'	1:AA:647:C:C6	2.45	0.50
50:D4:2:LYS:HB2	50:D4:5:ILE:HD13	1.93	0.50
20:CT:13:LEU:O	20:CT:17:ARG:HG3	2.11	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
25:BA:1385:G:H5''	43:BX:16:LYS:HD3	1.94	0.50
39:DT:51:ARG:HG3	39:DT:98:LYS:HD2	1.93	0.50
1:AA:819:A:H4'	1:AA:820:U:OP2	2.12	0.50
1:CA:999:C:C2	1:CA:1042:G:N2	2.80	0.50
25:BA:2227:G:H3'	25:BA:2228:G:N7	2.26	0.50
4:AD:3:ARG:HE	4:AD:118:ARG:HD3	1.76	0.50
25:BA:1578:C:H5''	25:BA:1579:C:OP2	2.11	0.50
25:BA:1093:G:HO2'	25:BA:1094:A:H8	1.59	0.50
25:DA:1313:U:H2'	25:DA:1610:A:C2	2.46	0.50
1:AA:947:G:H2'	1:AA:948:C:C6	2.46	0.50
1:AA:445:G:H2'	1:AA:446:G:H8	1.74	0.50
25:DA:889:C:HO2'	25:DA:890:A:H8	1.58	0.50
25:DA:118:A:N3	25:DA:178:G:H1'	2.27	0.50
1:CA:540:G:H2'	1:CA:541:G:O4'	2.12	0.50
25:BA:1629:C:H2'	25:BA:1630:A:H8	1.77	0.50
25:BA:294:C:N3	25:BA:390:G:N2	2.40	0.50
1:CA:833:U:H2'	1:CA:834:C:C6	2.47	0.50
1:CA:1509:C:H2'	1:CA:1510:U:O4'	2.12	0.50
25:DA:307:G:N1	25:DA:310:A:OP2	2.39	0.50
19:AS:3:ARG:NH1	19:AS:8:GLY:O	2.44	0.50
29:BF:65:TRP:CZ2	29:BF:75:HIS:HD2	2.29	0.50
25:DA:1188:U:H4'	41:DV:79:VAL:HG22	1.94	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
1:AA:1232:U:OP1	9:AI:124:GLN:HG2	2.12	0.50
39:DT:2:ASN:O	39:DT:6:LEU:HD22	2.11	0.50
31:BH:20:ALA:HB1	31:BH:21:PRO:HD2	1.94	0.50
9:CI:49:PRO:HG2	9:CI:81:ILE:HG23	1.93	0.50
39:DT:60:THR:HG22	39:DT:77:PRO:HA	1.94	0.50
25:DA:1007:C:P	33:DN:37:LYS:HZ1	2.34	0.50
1:CA:1315:U:H2'	1:CA:1316:G:O4'	2.11	0.50
1:CA:677:U:H1'	11:CK:119:CYS:SG	2.51	0.50
1:AA:1059:C:H42	1:AA:1198:G:H1	1.60	0.50
15:AO:43:LEU:HD12	15:AO:56:LEU:HD22	1.94	0.50
3:CC:56:ASP:O	3:CC:57:ILE:HD12	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:672:G:H8	25:BA:672:G:O5'	1.95	0.50
19:CS:41:VAL:HG13	19:CS:42:PRO:HD2	1.92	0.50
1:CA:377:G:OP1	16:CP:3:LYS:HD2	2.12	0.50
7:CG:65:ALA:HB3	7:CG:124:LEU:HD23	1.94	0.50
3:CC:18:TRP:HB3	3:CC:20:SER:O	2.12	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
29:DF:7:TYR:O	29:DF:22:ALA:N	2.45	0.50
1:AA:626:U:H2'	1:AA:627:G:C8	2.47	0.50
45:BZ:110:GLY:O	45:BZ:113:ALA:HB3	2.12	0.50
25:DA:491:G:H2'	25:DA:492:A:H8	1.76	0.50
19:CS:22:LEU:HB3	19:CS:27:GLU:CG	2.41	0.50
25:DA:2267:A:H5''	25:DA:2268:A:H5'	1.93	0.50
1:AA:1318:A:H4'	19:AS:10:PHE:CE2	2.47	0.50
25:BA:718:C:N4	61:BA:4670:HOH:O	2.44	0.50
1:AA:1267:C:O2	21:AU:20:LYS:HD2	2.12	0.50
27:BD:166:GLN:HB2	27:BD:174:ILE:HG22	1.94	0.50
25:BA:2418:U:OP1	61:BA:4136:HOH:O	2.20	0.50
1:CA:866:C:C4	1:CA:867:G:H1'	2.46	0.50
4:AD:81:GLU:OE2	4:AD:139:ARG:NH2	2.44	0.50
3:AC:119:ARG:HH11	3:AC:140:ARG:NH2	2.10	0.50
13:CM:37:THR:HG21	13:CM:56:LEU:HA	1.94	0.50
1:CA:1038:C:O2'	1:CA:1039:C:H5'	2.12	0.50
30:DG:5:VAL:HG13	30:DG:8:LYS:HD3	1.94	0.50
1:AA:836:G:P	18:AR:61:LYS:HZ1	2.33	0.50
1:AA:406:G:N3	4:AD:119:GLN:NE2	2.58	0.50
25:DA:2319:G:C2	38:DS:3:ARG:HA	2.46	0.50
1:AA:657:G:C2	1:AA:658:G:C8	3.00	0.50
44:DY:49:VAL:CG2	44:DY:61:ILE:HG23	2.40	0.50
25:BA:1359:U:H2'	25:BA:1656:A:C2	2.46	0.50
3:CC:87:LEU:O	3:CC:91:LEU:N	2.34	0.50
9:CI:85:LEU:HB3	9:CI:92:TYR:HD2	1.76	0.50
25:BA:2745:G:P	28:BE:203:LYS:HZ1	2.34	0.50
25:DA:910:A:C5	36:DQ:13:GLN:HG3	2.47	0.50
1:CA:192:U:O2'	20:CT:60:GLU:OE2	2.24	0.50
28:DE:143:ASN:HD22	28:DE:147:PRO:CD	2.25	0.50
54:D8:9:GLY:O	54:D8:13:ARG:HG2	2.11	0.50
1:CA:171:A:H2'	1:CA:172:A:C8	2.47	0.50
13:CM:19:LEU:HD11	13:CM:56:LEU:HD11	1.93	0.50
34:BO:68:GLU:OE2	34:BO:78:ARG:NH1	2.44	0.50
25:DA:2540:C:H2'	25:DA:2541:A:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:CA:364:A:H2'	1:CA:365:U:H6	1.77	0.50
30:BG:179:PRO:HB2	50:B4:42:PHE:HE2	1.77	0.50
25:DA:709:U:H2'	25:DA:710:G:C8	2.47	0.50
25:BA:2873:C:O2'	25:BA:2874:G:H5'	2.12	0.50
25:BA:1709:C:O2'	25:BA:2699:U:OP1	2.24	0.50
37:BR:72:ASP:OD2	37:BR:75:LEU:HB2	2.11	0.50
36:BQ:21:THR:HG21	36:BQ:101:ARG:HB2	1.93	0.50
1:AA:620:C:H2'	1:AA:621:A:O4'	2.11	0.50
2:CB:44:LEU:H	2:CB:44:LEU:HD22	1.77	0.49
1:CA:1492:A:H5''	1:CA:1493:A:OP2	2.11	0.49
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.12	0.49
1:AA:67:C:O2'	1:AA:171:A:N3	2.34	0.49
2:AB:174:VAL:O	2:AB:178:ARG:HB2	2.12	0.49
25:BA:933:C:H4'	25:BA:933:C:OP1	2.11	0.49
1:AA:1348:U:H4'	9:AI:120:ARG:HD2	1.94	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:CA:59:A:H5''	1:CA:60:A:C5'	2.42	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:337:C:H2'	1:CA:338:A:H8	1.74	0.49
25:DA:892:G:H2'	25:DA:893:C:O4'	2.12	0.49
20:AT:59:ALA:O	20:AT:63:ILE:HG13	2.12	0.49
1:CA:1515:C:H2'	1:CA:1516:G:C8	2.47	0.49
30:DG:23:PHE:HB2	30:DG:25:TYR:CZ	2.47	0.49
1:CA:921:U:O2	5:CE:19:MET:HB2	2.12	0.49
25:DA:1507:A:O2'	25:DA:1508:A:O5'	2.29	0.49
2:AB:100:GLY:N	2:AB:176:GLU:OE2	2.37	0.49
36:DQ:18:LYS:O	36:DQ:98:LYS:NZ	2.24	0.49
29:DF:152:GLU:HA	29:DF:190:GLU:OE2	2.12	0.49
25:BA:2402:U:P	54:B8:35:GLN:HE22	2.34	0.49
31:DH:20:ALA:HB1	31:DH:21:PRO:HD2	1.94	0.49
25:DA:2647:U:H2'	25:DA:2648:C:C6	2.47	0.49
2:AB:62:ALA:HB3	2:AB:225:ALA:HB3	1.93	0.49
16:AP:18:ARG:NH1	16:AP:32:TYR:OH	2.45	0.49
54:D8:54:GLU:O	54:D8:58:ILE:HG13	2.12	0.49
1:AA:250:A:H4'	1:AA:251:G:O5'	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)
4:CD:98:GLU:HG2	4:CD:189:PRO:HG2	1.93	0.49
19:AS:65:ASN:HD22	19:AS:65:ASN:N	2.08	0.49
12:CL:11:VAL:HG11	17:CQ:36:ILE:HG21	1.94	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
20:AT:99:LEU:HA	20:AT:100:ILE:O	2.12	0.49
8:AH:96:GLY:H	8:AH:99:GLU:CD	2.15	0.49
25:BA:2041:A:OP2	51:B5:9:LYS:NZ	2.35	0.49
31:DH:89:ILE:O	31:DH:129:THR:HG23	2.12	0.49
48:B2:44:LEU:HD23	48:B2:47:ASN:HA	1.94	0.49
1:AA:1326:C:OP1	21:AU:17:THR:OG1	2.29	0.49
30:BG:15:VAL:HG13	30:BG:175:LEU:HB3	1.94	0.49
23:AX:54:U:H2'	23:AX:55:U:O4'	2.12	0.49
17:AQ:26:GLN:HG2	17:AQ:37:LYS:HG2	1.93	0.49
23:AX:61:C:H2'	23:AX:62:C:H6	1.75	0.49
16:CP:18:ARG:O	16:CP:20:VAL:HG23	2.12	0.49
1:CA:1417:G:O6	61:CA:4047:HOH:O	2.14	0.49
2:AB:163:PHE:HA	2:AB:185:ILE:HG13	1.93	0.49
1:CA:1320:C:H2'	1:CA:1321:C:O4'	2.12	0.49
2:AB:213:LEU:HD22	2:AB:214:ILE:HD13	1.94	0.49
1:AA:20:U:H2'	1:AA:21:G:O4'	2.13	0.49
1:CA:1129:C:H1'	1:CA:1130:A:N7	2.27	0.49
25:DA:872:A:H2'	25:DA:873:G:O4'	2.11	0.49
1:AA:692:U:O2'	1:AA:694:A:N7	2.31	0.49
1:CA:605:U:H2'	1:CA:606:G:C8	2.47	0.49
25:DA:1857:G:O2'	25:DA:1885:A:N6	2.45	0.49
1:AA:1260:C:O5'	1:AA:1284:C:H4'	2.13	0.49
25:BA:32:C:O2'	25:BA:33:U:H5'	2.12	0.49
25:DA:1937:A:C8	25:DA:1939:U:H2'	2.46	0.49
1:CA:628:G:H2'	1:CA:629:G:C8	2.48	0.49
25:DA:440:G:H2'	25:DA:441:U:C6	2.47	0.49
1:AA:950:U:OP2	13:AM:102:ARG:HD3	2.13	0.49
25:BA:1153:G:H2'	25:BA:1153:G:N3	2.27	0.49
1:CA:1414:U:H3	1:CA:1486:G:H1	1.60	0.49
25:DA:1221(A):C:C2	25:DA:1229:G:C2	3.00	0.49
1:AA:1127:G:H22	1:AA:1147:C:N4	2.10	0.49
1:CA:1157:A:N7	1:CA:1180:A:C6	2.80	0.49
25:BA:831:A:H5'	25:BA:832:G:OP1	2.12	0.49
39:DT:16:ARG:HG3	39:DT:79:HIS:HA	1.95	0.49
3:CC:56:ASP:HB2	3:CC:67:THR:HB	1.94	0.49
25:DA:450:G:OP1	25:DA:1248:G:N2	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:509:A:H3'	1:AA:509:A:C8	2.48	0.49
1:CA:460:G:H1'	1:CA:472:A:H61	1.76	0.49
1:AA:991:U:H1'	1:AA:993:G:H8	1.78	0.49
41:DV:62:LEU:CD1	41:DV:95:LEU:HB2	2.42	0.49
25:BA:867:A:N3	25:BA:988:U:O2'	2.42	0.49
1:CA:441:A:H3'	1:CA:442:C:H6	1.76	0.49
25:DA:861:A:C2	25:DA:917:A:C4	3.00	0.49
1:CA:1068:G:OP2	1:CA:1068:G:H8	1.94	0.49
9:CI:77:ILE:O	9:CI:81:ILE:HG22	2.12	0.49
5:CE:76:ILE:HG12	5:CE:118:ILE:HD11	1.93	0.49
25:DA:705:A:H1'	27:DD:9:TYR:CE1	2.48	0.49
43:BX:88:LYS:NZ	43:BX:90:GLU:OE1	2.31	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:1688:A:H2'	25:BA:1689:G:O4'	2.12	0.49
26:DB:53:A:H8	26:DB:53:A:O5'	1.96	0.49
1:CA:650:G:C2'	1:CA:651:C:H5'	2.43	0.49
54:D8:3:LYS:HB2	54:D8:64:TYR:OH	2.13	0.49
39:DT:61:PHE:CE1	39:DT:76:PHE:HB2	2.48	0.49
37:DR:56:LYS:NZ	37:DR:90:ARG:O	2.45	0.49
1:CA:1117:G:N2	1:CA:1180:A:O2'	2.43	0.49
25:BA:1155:C:C5	25:BA:1156:G:C6	3.01	0.49
25:DA:1339:G:N2	25:DA:1603:A:H1'	2.28	0.49
20:AT:18:GLN:O	20:AT:22:ARG:HG3	2.12	0.49
1:CA:952:U:C4	13:CM:104:ARG:NH1	2.81	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
1:CA:458:C:C2	1:CA:460:G:C8	3.01	0.49
3:CC:179:ARG:O	3:CC:206:GLU:HA	2.13	0.49
29:DF:9:ILE:O	29:DF:11:VAL:HG23	2.12	0.49
1:CA:41:G:H2'	1:CA:42:G:H8	1.76	0.49
7:CG:135:VAL:O	7:CG:139:GLU:N	2.31	0.49
25:BA:1505:C:H4'	25:BA:1506:G:O5'	2.12	0.49
2:CB:200:ILE:O	2:CB:200:ILE:HG12	2.11	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
25:BA:507:G:H1'	25:BA:532:A:N1	2.28	0.49
18:AR:51:LEU:HD23	18:AR:52:PRO:HD2	1.94	0.49
9:CI:28:VAL:HA	9:CI:63:ILE:HB	1.93	0.49
1:CA:187:C:H2'	1:CA:188:C:H6	1.76	0.49
25:DA:1545:A:H2'	25:DA:1546:C:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:581:G:OP1	33:BN:111:PRO:HD2	2.13	0.49
39:BT:105:LEU:HB2	39:BT:110:ILE:HG13	1.95	0.49
25:BA:2519:C:OP2	61:BA:4083:HOH:O	2.20	0.49
1:CA:667:G:OP1	1:CA:732:C:O2'	2.26	0.49
5:CE:12:LEU:HB3	5:CE:31:LEU:HB2	1.95	0.49
1:CA:123:C:O2'	1:CA:290:C:O2	2.30	0.49
4:CD:65:ARG:HG2	4:CD:75:PHE:CD1	2.47	0.49
25:BA:1040:C:P	40:BU:54:LYS:HZ1	2.35	0.49
1:CA:1001(A):G:N3	1:CA:1002:G:H1'	2.28	0.49
25:DA:1488:G:N1	25:DA:1489:U:H5	2.09	0.49
1:AA:1002:G:H3'	1:AA:1003:G:C8	2.48	0.49
25:DA:2227:A:OP1	27:DD:263:ARG:HD2	2.13	0.49
25:BA:895:G:N9	25:BA:978:A:H8	2.11	0.49
1:CA:1057:G:C4	1:CA:1204:A:C2	3.01	0.49
1:CA:953:G:C6	1:CA:1229:A:C6	3.01	0.49
8:CH:20:TYR:HA	8:CH:65:TYR:CZ	2.48	0.49
25:BA:934:A:O2'	25:BA:935:C:OP2	2.29	0.49
25:BA:2326:C:H2'	25:BA:2327:G:C8	2.48	0.49
1:AA:1392:G:H2'	1:AA:1393:U:H5'	1.95	0.49
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.47	0.49
28:BE:120:TRP:CE3	28:BE:155:LYS:HD3	2.46	0.49
2:AB:160:ASP:O	2:AB:183:PRO:HD2	2.13	0.49
36:BQ:56:ARG:HG3	36:BQ:56:ARG:HH11	1.78	0.49
6:CF:68:PRO:HB2	6:CF:71:ARG:HG3	1.95	0.49
27:DD:164:GLN:NE2	27:DD:176:ARG:HH22	2.10	0.49
25:BA:2303:U:H2'	25:BA:2304:C:C6	2.48	0.49
1:CA:689:C:OP1	11:CK:27:ASN:ND2	2.42	0.49
44:DY:51:VAL:HG13	44:DY:56:PRO:HA	1.94	0.49
12:CL:54:LYS:O	12:CL:70:ILE:HG13	2.13	0.49
1:AA:1052:U:H5''	1:AA:1053:G:OP2	2.11	0.49
15:CO:17:ARG:HG3	15:CO:17:ARG:HH11	1.78	0.49
30:DG:110:ALA:HA	30:DG:140:ILE:O	2.12	0.49
39:BT:88:ILE:HG21	39:BT:91:ARG:NE	2.27	0.49
23:CX:19:G:H4'	23:CX:20:U:OP2	2.13	0.49
1:AA:153:C:H42	1:AA:169:C:N4	2.09	0.49
16:CP:14:ASN:OD1	16:CP:16:HIS:HE1	1.94	0.49
25:DA:2348:U:OP2	54:D8:42:ARG:NH2	2.45	0.49
1:CA:1038:C:C2'	1:CA:1039:C:H5'	2.42	0.49
1:CA:999:C:OP1	1:CA:999:C:H4'	2.11	0.49
25:DA:740:U:H2'	25:DA:741:G:C8	2.47	0.49
1:CA:1277:C:HO2'	1:CA:1279:A:H8	1.57	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DP:83:VAL:HG12	35:DP:112:LEU:HD21	1.94	0.49
14:CN:34:TYR:N	14:CN:39:LEU:O	2.40	0.49
1:CA:1243:C:H2'	1:CA:1244:C:H6	1.77	0.49
25:BA:927:G:C2	25:BA:928:G:C8	3.01	0.49
1:AA:102:G:H2'	1:AA:103:C:H6	1.77	0.49
7:CG:111:ARG:HB3	7:CG:113:GLU:OE2	2.12	0.49
36:DQ:66:ILE:HG12	36:DQ:104:PHE:CE2	2.48	0.49
1:CA:692:U:O2'	1:CA:694:A:N7	2.33	0.49
1:CA:598:U:H4'	8:CH:94:TYR:CD2	2.47	0.49
25:BA:1001:G:OP2	36:BQ:87:LYS:HE2	2.13	0.49
25:BA:1829:U:H5'	27:BD:259:THR:CG2	2.41	0.49
48:D2:48:HIS:O	48:D2:52:ASP:HB2	2.12	0.49
1:AA:649:G:H2'	1:AA:650:G:C8	2.48	0.49
10:CJ:42:THR:CG2	10:CJ:68:HIS:HD2	2.26	0.49
30:DG:66:GLN:HG3	50:D4:1:MET:HE3	1.95	0.49
25:DA:585:G:O2'	25:DA:1254:A:N6	2.40	0.49
30:BG:3:LEU:HD22	50:B4:25:TYR:CE1	2.48	0.49
8:AH:33:GLU:O	8:AH:37:ARG:N	2.41	0.49
25:DA:2646:C:H2'	25:DA:2647:U:O4'	2.13	0.49
25:DA:1579:A:H2'	25:DA:1580:A:C8	2.47	0.49
25:DA:468:G:N7	53:D7:39:ARG:NH2	2.47	0.49
36:DQ:111:GLU:O	36:DQ:115:MET:HG2	2.12	0.49
1:AA:977:A:O2'	1:AA:979:C:OP2	2.26	0.49
25:DA:1927:A:H2'	25:DA:1928:A:C8	2.48	0.49
25:DA:1418:G:O5'	25:DA:1418:G:H8	1.96	0.49
21:CU:10:ARG:HH11	21:CU:10:ARG:HG3	1.77	0.49
25:BA:794:U:O2	25:BA:2036:A:H1'	2.13	0.49
25:DA:568:U:H5'	25:DA:945:A:N1	2.27	0.49
25:BA:510:C:H2'	25:BA:511:C:C6	2.48	0.49
25:BA:1699:A:O2'	25:BA:1700:G:H5'	2.13	0.49
1:CA:1399:C:C2	1:CA:1502:A:N6	2.80	0.49
25:BA:831:A:C5	27:BD:229:VAL:HG21	2.48	0.49
4:CD:100:ARG:NH2	4:CD:102:ASP:OD2	2.46	0.49
1:AA:191:G:C6	1:AA:192:U:C4	3.00	0.49
25:BA:926:G:H2'	25:BA:927:G:O4'	2.12	0.49
3:CC:58:GLU:O	3:CC:59:ARG:HG3	2.12	0.49
1:CA:1012:U:H2'	1:CA:1013:G:C8	2.47	0.49
1:CA:736:C:H2'	1:CA:737:A:C8	2.48	0.49
1:AA:384:G:H2'	1:AA:385:C:H6	1.76	0.49
25:BA:1224:C:O2'	25:BA:1225:C:H5'	2.11	0.49
25:BA:2584:A:N7	28:BE:145:LYS:HB2	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:784:A:O4'	27:DD:227:ASN:ND2	2.45	0.49
19:AS:64:GLU:O	19:AS:67:VAL:HG23	2.12	0.49
1:CA:1329:A:P	13:CM:28:ALA:HB3	2.52	0.49
28:DE:52:LEU:HB2	28:DE:76:ARG:HB2	1.93	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
25:BA:2486:C:H5''	25:BA:2487:C:OP2	2.11	0.49
53:B7:34:ARG:NH1	53:B7:41:ARG:O	2.46	0.49
1:CA:804:U:H5''	1:CA:805:C:OP2	2.13	0.49
25:DA:708:C:H42	25:DA:723:G:H1	1.61	0.49
25:BA:64:C:H2'	25:BA:65:C:H6	1.77	0.49
2:AB:74:LYS:NZ	2:AB:205:ASP:OD2	2.46	0.49
45:BZ:161:VAL:HG13	45:BZ:161:VAL:O	2.12	0.49
3:AC:44:GLU:HG2	3:AC:52:LEU:HD22	1.94	0.49
25:DA:753:C:O5'	25:DA:753:C:H6	1.95	0.49
25:DA:1682:G:H1'	25:DA:1762:A:C6	2.47	0.49
7:AG:51:GLN:O	7:AG:55:GLY:HA2	2.12	0.49
25:DA:84:A:N1	25:DA:98:G:O2'	2.43	0.49
1:CA:1121:U:C4	1:CA:1122:U:C5	3.01	0.49
4:CD:121:VAL:O	4:CD:134:ASP:HA	2.13	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
1:CA:1170:A:O2'	1:CA:1171:G:C8	2.66	0.49
1:AA:141:A:H2	1:AA:222:U:O2	1.96	0.49
1:CA:671:G:H2'	1:CA:672:U:O4'	2.13	0.49
27:DD:108:PRO:HB3	27:DD:143:HIS:CE1	2.47	0.49
19:CS:64:GLU:O	19:CS:67:VAL:HG23	2.12	0.49
19:CS:28:LYS:CB	19:CS:29:ARG:HA	2.43	0.49
25:BA:155:C:H6	25:BA:155:C:OP2	1.96	0.49
1:AA:433:C:H2'	1:AA:434:U:C6	2.47	0.49
9:AI:4:TYR:CZ	9:AI:88:TYR:HD1	2.31	0.49
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.95	0.49
2:CB:53:ARG:O	2:CB:56:ARG:HG2	2.13	0.49
1:AA:863:U:H2'	1:AA:865:A:OP2	2.12	0.49
25:BA:2564:U:C2	25:BA:2566:U:H5'	2.48	0.49
33:DN:42:TRP:CH2	33:DN:44:PRO:HB3	2.48	0.49
25:DA:2716:U:O2'	25:DA:2717:G:H5'	2.13	0.49
25:DA:947:G:N2	25:DA:971:C:C2	2.81	0.49
25:DA:2812:G:H2'	25:DA:2813:A:C8	2.48	0.49
37:DR:87:TYR:OH	37:DR:116:LEU:HB3	2.13	0.49
25:BA:1821:C:H5''	25:BA:1822:A:OP1	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:82:VAL:HB	11:AK:108:ILE:HG12	1.94	0.49
18:CR:52:PRO:O	18:CR:56:THR:HG23	2.13	0.49
25:DA:2356:C:H2'	25:DA:2357:U:O4'	2.12	0.49
47:B1:72:GLU:O	47:B1:76:ARG:HG3	2.13	0.49
31:DH:83:TYR:CE2	31:DH:138:LYS:HB2	2.48	0.49
1:CA:785:G:C2'	1:CA:786:G:H5'	2.42	0.49
25:BA:1900:G:H2'	25:BA:1901:C:C6	2.47	0.49
25:DA:953:A:C2	25:DA:954:G:C8	3.00	0.49
1:CA:1318:A:H5''	19:CS:3:ARG:NH2	2.10	0.49
1:CA:1256:A:H2	1:CA:1277:C:H42	1.60	0.49
32:BI:92:VAL:HG11	32:BI:144:VAL:HG11	1.94	0.49
1:CA:1291:G:H4'	9:CI:39:GLY:HA3	1.94	0.49
1:CA:1142:G:C2	1:CA:1143:G:H1'	2.47	0.49
25:DA:1041:C:N3	25:DA:1114:G:N2	2.57	0.49
13:CM:93:ARG:NH1	25:DA:888:C:OP1	2.46	0.49
25:BA:1003:U:HO2'	25:BA:1004:A:P	2.36	0.49
30:DG:114:ILE:HD12	30:DG:117:PHE:HD2	1.78	0.49
3:CC:29:TYR:OH	14:CN:54:PRO:O	2.22	0.49
59:CX:101:FME:HCN	25:DA:2451:A:C2	2.45	0.49
1:CA:625:G:H2'	1:CA:626:U:H6	1.77	0.49
26:DB:45:A:OP2	30:DG:96:ARG:NH2	2.46	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
25:BA:2843:G:H4'	25:BA:2844:G:OP2	2.13	0.49
25:BA:2713:C:H2'	25:BA:2714:U:H2'	1.95	0.49
25:DA:2659:G:N2	25:DA:2661:G:H3'	2.28	0.49
25:DA:176:G:O2'	25:DA:177:G:H5'	2.12	0.49
26:DB:24:G:H4'	26:DB:25:A:N7	2.28	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
25:BA:359:C:H6	25:BA:359:C:O5'	1.96	0.49
15:CO:5:LYS:CD	15:CO:5:LYS:H	2.26	0.49
45:DZ:28:MET:HB3	45:DZ:88:PHE:HB2	1.95	0.49
25:BA:2904:U:O5'	25:BA:2904:U:H6	1.96	0.49
25:DA:1022:G:C5	25:DA:1140:C:C4	3.01	0.48
1:AA:145:G:H2'	1:AA:146:G:H5''	1.95	0.48
24:CW:9:MVA:HG13	24:CW:10:2QY:H82	1.95	0.48
25:BA:672:G:H2'	25:BA:673:G:O4'	2.13	0.48
1:CA:586:C:HO2'	1:CA:878:G:H4'	1.78	0.48
6:CF:10:LEU:HD12	6:CF:85:VAL:HA	1.94	0.48
23:AX:4:G:H1	23:AX:69:C:N4	2.10	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:540:G:H2'	1:CA:541:G:H8	1.78	0.48
1:AA:737:A:H5''	6:AF:92:LYS:HD3	1.95	0.48
1:AA:1422:G:O3'	34:BO:49:ARG:NH1	2.37	0.48
14:AN:23:ARG:HH11	14:AN:30:ALA:HB2	1.77	0.48
1:AA:1118:C:OP1	9:AI:104:ARG:NH1	2.46	0.48
5:AE:36:ASP:OD2	5:AE:40:ARG:HB2	2.13	0.48
25:BA:1506:G:C3'	25:BA:1507:A:H5''	2.43	0.48
42:DW:50:VAL:HG12	42:DW:105:VAL:HB	1.96	0.48
1:AA:1104:G:H4'	2:AB:111:ARG:NH1	2.28	0.48
44:DY:44:ILE:HA	44:DY:63:LYS:O	2.13	0.48
9:AI:17:VAL:HG21	9:AI:81:ILE:HB	1.95	0.48
1:AA:1123:A:H4'	10:AJ:37:PRO:HD2	1.95	0.48
25:BA:1952:G:O2'	25:BA:1990:G:O6	2.18	0.48
1:AA:410:G:H5''	1:AA:411:A:OP1	2.13	0.48
34:DO:29:ASN:OD1	34:DO:29:ASN:N	2.46	0.48
3:CC:113:ALA:HB2	3:CC:202:ILE:HG13	1.95	0.48
30:DG:16:ARG:NE	30:DG:31:VAL:HG11	2.26	0.48
1:CA:424:G:H2'	1:CA:425:G:C8	2.47	0.48
1:AA:457:C:H2'	1:AA:458:C:C5	2.48	0.48
20:CT:50:GLU:HG3	20:CT:100:ILE:HD13	1.93	0.48
25:DA:997:G:OP2	40:DU:58:ARG:NH1	2.40	0.48
43:DX:31:HIS:CD2	43:DX:33:LYS:H	2.32	0.48
25:BA:1834:A:O2'	27:BD:259:THR:HG21	2.13	0.48
33:DN:38:HIS:NE2	33:DN:50:ASP:OD2	2.25	0.48
1:CA:625:G:H2'	1:CA:626:U:C6	2.48	0.48
28:DE:120:TRP:CE3	28:DE:155:LYS:HD3	2.48	0.48
25:BA:1941:A:H5''	25:BA:1942:C:OP2	2.13	0.48
1:CA:202:U:O2'	1:CA:203:U:O5'	2.17	0.48
1:CA:96:U:O2'	1:CA:97:G:H5'	2.13	0.48
1:CA:745:C:OP1	1:CA:851:G:O2'	2.20	0.48
1:AA:202:U:H3'	1:AA:203:U:H6	1.78	0.48
25:BA:2481:A:C2	25:BA:2494:G:C8	3.01	0.48
25:DA:952:G:C6	25:DA:966:G:C6	3.01	0.48
25:DA:1786:A:H1'	25:DA:1938:A:N6	2.28	0.48
8:AH:73:ASP:OD2	8:AH:75:ARG:NH1	2.46	0.48
28:DE:108:SER:HB3	28:DE:165:VAL:HG21	1.94	0.48
25:BA:374:U:H2'	25:BA:375:G:O4'	2.12	0.48
49:D3:10:LYS:NZ	49:D3:15:TYR:OH	2.41	0.48
11:AK:48:ILE:O	11:AK:50:TYR:N	2.45	0.48
25:DA:1819:A:H5''	27:DD:161:THR:HG21	1.93	0.48
17:CQ:62:SER:OG	17:CQ:72:ARG:HD3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
25:BA:1790:A:H5''	25:BA:2728:C:H1'	1.95	0.48
31:DH:95:ARG:HB2	31:DH:128:PRO:CB	2.44	0.48
25:DA:2257:U:O2'	25:DA:2258:C:H5'	2.12	0.48
1:CA:1118:C:H2'	1:CA:1119:C:H6	1.77	0.48
35:BP:148:LEU:H	35:BP:148:LEU:HD23	1.79	0.48
3:AC:15:THR:CG2	3:AC:181:ASN:HA	2.40	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
25:DA:83:G:OP2	44:DY:95:LYS:NZ	2.31	0.48
6:CF:82:ARG:HB2	6:CF:85:VAL:HG23	1.95	0.48
13:CM:16:ASP:N	13:CM:16:ASP:OD1	2.46	0.48
25:BA:2343:G:O2'	46:B0:43:THR:HG22	2.13	0.48
4:CD:200:GLU:O	4:CD:204:ILE:HG12	2.13	0.48
1:CA:1264:C:H2'	1:CA:1265:G:H8	1.78	0.48
1:CA:1104:G:H4'	2:CB:111:ARG:HH11	1.77	0.48
14:CN:6:LEU:HB3	14:CN:23:ARG:HH21	1.77	0.48
26:DB:78:A:H2'	26:DB:79:C:O4'	2.13	0.48
25:DA:815:C:H2'	25:DA:816:C:C6	2.48	0.48
25:BA:1899:A:H5'	25:BA:1900:G:OP2	2.13	0.48
25:BA:1533:G:H1	25:BA:1548:C:H42	1.61	0.48
2:AB:27:LYS:NZ	2:AB:193:ASP:OD2	2.45	0.48
4:AD:20:TYR:HA	4:AD:26:CYS:SG	2.53	0.48
5:CE:80:ILE:HG22	5:CE:91:LEU:HB2	1.94	0.48
1:CA:991:U:H3'	1:CA:1212:U:H3	1.78	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
14:AN:26:ARG:NH2	14:AN:47:LEU:HD21	2.28	0.48
2:AB:220:ASP:O	2:AB:223:ILE:HG12	2.13	0.48
25:DA:291:C:H2'	25:DA:292:C:H5'	1.95	0.48
36:BQ:7:MET:HB2	36:BQ:7:MET:HE3	1.82	0.48
39:BT:31:SER:OG	39:BT:85:LYS:HE3	2.13	0.48
25:DA:1027:A:C6	25:DA:1126:A:C4	3.01	0.48
31:DH:102:ALA:HA	31:DH:117:PRO:HD3	1.95	0.48
14:CN:32:SER:O	14:CN:40:CYS:HA	2.13	0.48
1:AA:1030(A):G:H2'	1:AA:1030(C):G:OP2	2.13	0.48
25:BA:173:C:H2'	25:BA:174:U:C6	2.48	0.48
40:DU:79:PHE:CZ	40:DU:83:LEU:HD21	2.48	0.48
32:DI:72:LEU:HA	32:DI:75:LEU:HD22	1.96	0.48
1:CA:460:G:C6	1:CA:470:C:H5''	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DB:42:C:O2'	30:DG:66:GLN:HG2	2.13	0.48
25:BA:922:G:H1	25:BA:948:C:H42	1.62	0.48
25:BA:279:G:H5''	25:BA:279:G:H8	1.78	0.48
47:D1:3:LYS:HB2	47:D1:61:ARG:HH11	1.77	0.48
25:DA:272:G:H4'	25:DA:272(A):U:H5''	1.94	0.48
25:DA:2740:A:C6	25:DA:2741:A:C6	3.01	0.48
41:DV:60:GLU:OE2	41:DV:97:LYS:NZ	2.30	0.48
34:BO:80:ASP:OD1	39:BT:64:ARG:NH2	2.46	0.48
1:AA:1106:G:C6	1:AA:1107:C:C4	3.00	0.48
5:CE:88:LYS:HB3	5:CE:123:LEU:HB2	1.96	0.48
1:CA:1093:A:H5''	1:CA:1094:G:OP2	2.13	0.48
31:BH:67:LEU:O	31:BH:71:LEU:HB2	2.14	0.48
1:AA:113:G:H2'	1:AA:114:U:C6	2.48	0.48
27:DD:134:ARG:NH1	27:DD:188:GLU:OE2	2.45	0.48
23:AX:19:G:C5	23:AX:57:A:C2	3.02	0.48
13:AM:37:THR:HG21	13:AM:56:LEU:HA	1.95	0.48
25:DA:1197:G:H2'	25:DA:1198:U:C6	2.48	0.48
4:AD:25:ARG:HG2	4:AD:25:ARG:O	2.12	0.48
26:DB:55:U:O3'	30:DG:27:ASN:ND2	2.46	0.48
25:BA:1346:U:H4'	25:BA:1347:A:H5'	1.94	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
25:DA:172:C:H2'	25:DA:173:G:C8	2.38	0.48
28:BE:47:VAL:HG23	28:BE:84:PHE:O	2.12	0.48
1:CA:1169:A:H8	1:CA:1169:A:H3'	1.78	0.48
1:CA:397:A:H3'	1:CA:397:A:N3	2.27	0.48
25:DA:2271:G:H2'	25:DA:2272:U:C6	2.48	0.48
25:DA:2722:G:H2'	25:DA:2723:C:C6	2.49	0.48
45:BZ:107:THR:HG21	45:BZ:112:ARG:HH21	1.78	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
25:DA:489:G:H2'	25:DA:491:G:O4'	2.14	0.48
27:BD:133:LEU:HG	27:BD:189:CYS:O	2.13	0.48
25:DA:2742:C:OP1	55:D9:35:ARG:HD3	2.14	0.48
23:AX:19:G:H4'	23:AX:20:U:OP2	2.12	0.48
25:BA:2104:A:H2'	25:BA:2105:G:O4'	2.13	0.48
1:CA:617:G:H4'	16:CP:44:THR:O	2.12	0.48
25:DA:2632:A:O2'	25:DA:2811:G:O2'	2.20	0.48
25:DA:244:A:H2'	25:DA:245:G:O4'	2.13	0.48
25:BA:1913:G:H2'	25:BA:1914:C:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:189:G:C5	1:CA:189(A):C:C4	3.00	0.48
61:BA:3803:HOH:O	51:B5:15:ARG:HG2	2.13	0.48
1:CA:960:U:O2	1:CA:960:U:H2'	2.12	0.48
1:AA:1134:G:N3	1:AA:1134:G:H2'	2.29	0.48
11:AK:92:GLU:O	11:AK:95:ILE:HG13	2.13	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:BA:1702:A:H3'	25:BA:1703:C:C6	2.48	0.48
1:AA:391:G:C6	1:AA:392:G:C5	3.01	0.48
1:CA:504:C:H1'	1:CA:510:A:C4	2.49	0.48
25:DA:370:G:OP2	61:DA:3768:HOH:O	2.20	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
25:DA:1125:G:H5'	55:D9:37:GLY:HA2	1.96	0.48
2:AB:32:ILE:HD13	2:AB:40:HIS:CD2	2.48	0.48
1:CA:977:A:O2'	1:CA:979:C:OP2	2.20	0.48
25:DA:528:A:C2	25:DA:2042:A:H2'	2.48	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
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:AA:300:A:O2'	1:AA:564:C:N3	2.38	0.48
1:CA:1458:G:H5'	20:CT:32:ALA:HB2	1.96	0.48
16:AP:13:HIS:O	16:AP:42:ARG:NH2	2.47	0.48
28:BE:174:ASP:OD1	28:BE:175:VAL:N	2.46	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
25:DA:384:U:H2'	25:DA:385:C:H6	1.78	0.48
25:DA:67:U:H2'	25:DA:68:G:O4'	2.13	0.48
25:DA:1023:U:H4'	25:DA:1123:C:OP1	2.13	0.48
2:AB:95:GLN:HG3	2:AB:147:LYS:HD3	1.94	0.48
25:BA:403:C:H2'	25:BA:404:C:C6	2.47	0.48
5:AE:105:VAL:HG21	5:AE:128:PRO:HB3	1.96	0.48
25:DA:1142(A):A:C8	25:DA:1144:G:N7	2.81	0.48
25:BA:8:A:H2'	25:BA:9:U:C6	2.48	0.48
26:DB:12:C:H6	26:DB:12:C:O5'	1.96	0.48
25:DA:2299:G:H2'	25:DA:2300:G:H8	1.79	0.48
49:B3:59:VAL:O	49:B3:60:GLU:HG2	2.13	0.48
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.49	0.48
12:CL:24:VAL:HG12	12:CL:24:VAL:O	2.14	0.48
7:CG:62:PHE:HA	7:CG:124:LEU:HD22	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DE:28:ALA:HB3	28:DE:93:VAL:HG12	1.95	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
25:DA:454:A:H4'	25:DA:455:C:OP2	2.12	0.48
1:AA:1086:U:C2'	1:AA:1087:G:H5'	2.43	0.48
45:BZ:150:LEU:HB3	45:BZ:171:ILE:HD11	1.96	0.48
25:DA:361:G:O2'	25:DA:362:U:H5'	2.13	0.48
25:DA:1839:G:C8	25:DA:1927:A:H1'	2.48	0.48
15:CO:5:LYS:HD2	15:CO:5:LYS:H	1.78	0.48
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
49:D3:46:ASN:O	49:D3:50:VAL:HG22	2.14	0.48
35:BP:81:GLN:HB2	35:BP:110:TYR:CD2	2.49	0.48
55:B9:13:LYS:HD2	55:B9:28:GLU:OE2	2.14	0.48
1:AA:438:G:O2'	1:AA:494:U:O4	2.19	0.48
32:BI:117:GLU:HG3	32:BI:118:LYS:H	1.77	0.48
41:DV:65:GLY:HA3	41:DV:91:TYR:CZ	2.48	0.48
1:AA:308:C:H2'	1:AA:309:G:H8	1.78	0.48
9:CI:96:LEU:O	9:CI:100:GLY:N	2.47	0.48
1:AA:35:G:O2'	12:AL:118:SER:O	2.23	0.48
25:DA:1289:C:H2'	25:DA:1290:C:C6	2.47	0.48
36:DQ:133:ARG:HG2	36:DQ:134:ARG:N	2.27	0.48
1:CA:1239:A:H62	1:CA:1299:A:H62	1.60	0.48
1:AA:901:A:C5	1:AA:902:G:H1'	2.48	0.48
1:AA:346:G:N1	1:AA:347:G:H1'	2.28	0.48
1:CA:1121:U:H2'	1:CA:1122:U:O4'	2.13	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
19:AS:65:ASN:HD22	19:AS:65:ASN:H	1.61	0.48
25:BA:927:G:C2'	25:BA:928:G:H5'	2.44	0.48
25:BA:160:G:O2'	25:BA:161:C:H5'	2.14	0.48
8:CH:61:VAL:HG12	8:CH:63:LEU:HD22	1.95	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
2:AB:20:GLU:HG2	2:AB:191:ASP:HB3	1.94	0.48
32:BI:77:LEU:CB	32:BI:142:VAL:HG12	2.44	0.48
25:BA:2857:U:OP1	39:BT:98:LYS:NZ	2.41	0.48
48:D2:29:LYS:HE2	48:D2:57:ILE:HG21	1.96	0.48
1:CA:1028:C:C2	1:CA:1033:G:N1	2.80	0.48
3:CC:134:ILE:HD11	3:CC:153:VAL:HG23	1.94	0.48
1:CA:364:A:H2'	1:CA:365:U:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B5:11:THR:HG23	51:B5:15:ARG:HB3	1.95	0.48
49:D3:23:LEU:HD13	49:D3:50:VAL:HG11	1.96	0.48
25:DA:1932:A:H2'	25:DA:1933:G:O4'	2.13	0.48
8:AH:124:ALA:O	8:AH:128:GLY:N	2.47	0.48
25:DA:2735:G:H2'	25:DA:2736:G:H8	1.79	0.48
25:BA:2038:U:H1'	51:B5:6:VAL:HG13	1.96	0.48
8:AH:104:ARG:HG3	8:AH:138:TRP:CD2	2.48	0.48
2:CB:170:GLU:O	2:CB:174:VAL:HG23	2.13	0.48
25:DA:574:C:OP1	61:DA:3792:HOH:O	2.20	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
25:BA:2352:G:H2'	25:BA:2353:G:H8	1.78	0.48
25:DA:1452:A:OP2	61:DA:4348:HOH:O	2.20	0.48
25:BA:553:A:N1	25:BA:2064:A:H2'	2.28	0.48
25:BA:125:A:H5'	25:BA:126:C:O4'	2.14	0.48
51:B5:48:GLU:HA	51:B5:48:GLU:OE1	2.13	0.48
28:DE:38:THR:O	28:DE:42:ASP:N	2.39	0.48
45:DZ:153:SER:OG	45:DZ:154:ASP:OD1	2.23	0.48
1:CA:1026:G:N3	1:CA:1026:G:H3'	2.29	0.48
1:CA:1119:C:C2	1:CA:1154:G:O6	2.66	0.48
1:AA:836:G:H1	1:AA:850:U:H3	1.60	0.48
1:AA:1004:A:N7	1:AA:1036:G:N2	2.62	0.48
1:CA:297:G:N2	1:CA:300:A:OP2	2.45	0.48
13:CM:3:ARG:HE	13:CM:4:ILE:HG22	1.79	0.48
54:B8:39:LYS:O	54:B8:43:GLN:HG3	2.14	0.48
1:AA:991:U:O2'	1:AA:992:U:P	2.72	0.48
1:CA:625:G:O2'	1:CA:626:U:H5'	2.14	0.48
25:DA:1614:A:C2	42:DW:93:ALA:HB2	2.49	0.48
12:AL:79:GLU:HB3	12:AL:80:HIS:HD2	1.78	0.48
31:DH:86:GLU:OE1	31:DH:130:ARG:HD3	2.13	0.48
25:BA:2798:C:H2'	25:BA:2799:U:O4'	2.14	0.48
1:CA:1027:C:C2	1:CA:1034:G:N2	2.68	0.48
25:BA:2650:G:P	28:BE:82:ARG:HH22	2.37	0.48
5:AE:152:ARG:HA	8:AH:64:LYS:NZ	2.29	0.48
25:BA:1537:G:O2'	27:BD:101:GLU:HB2	2.13	0.48
25:BA:747:G:H2'	25:BA:748:G:O4'	2.14	0.48
38:DS:88:ASP:OD1	38:DS:90:GLY:N	2.42	0.48
21:CU:22:ARG:HA	21:CU:23:PRO:HD3	1.69	0.48
13:CM:10:PRO:HB2	13:CM:13:LYS:HB2	1.94	0.48
26:BB:66:A:H61	26:BB:109:C:H5'	1.79	0.48
13:AM:97:PRO:HG2	13:AM:103:THR:HG22	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:22:THR:HA	16:AP:33:ILE:HG12	1.94	0.48
29:DF:51:THR:HG23	29:DF:92:PRO:HG2	1.96	0.48
10:CJ:65:LEU:HD12	14:CN:55:GLY:O	2.14	0.48
15:AO:48:LYS:HD2	15:AO:48:LYS:HA	1.75	0.48
26:BB:75:G:H5''	26:BB:75:G:H8	1.79	0.48
25:DA:1488:G:C5	25:DA:1489:U:H5	2.22	0.48
4:CD:117:ALA:O	4:CD:121:VAL:HG23	2.13	0.48
1:CA:1125:U:C2	10:CJ:38:ILE:HD13	2.49	0.48
26:DB:73:A:C4	26:DB:105:A:C2	3.01	0.48
10:AJ:30:SER:O	10:AJ:81:THR:HG23	2.14	0.48
2:AB:71:VAL:HG13	2:AB:93:VAL:HG21	1.95	0.48
2:AB:24:TRP:CE3	2:AB:26:PRO:HA	2.48	0.48
1:CA:1304:G:C6	1:CA:1305:G:N1	2.81	0.48
25:DA:937:U:H2'	25:DA:938:G:O4'	2.14	0.48
25:BA:1462:G:O2'	25:BA:1463:C:OP2	2.32	0.48
4:CD:15:GLU:HG2	4:CD:63:LYS:HB3	1.96	0.48
1:AA:598:U:H2'	1:AA:599:C:C6	2.48	0.48
1:CA:714:G:H2'	1:CA:715:A:C8	2.49	0.48
4:AD:188:LEU:H	4:AD:188:LEU:HD23	1.79	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
1:CA:1067:A:N3	1:CA:1068:G:H1'	2.29	0.48
25:DA:2647:U:H2'	25:DA:2648:C:H6	1.79	0.48
29:BF:60:SER:OG	29:BF:61:GLY:N	2.47	0.48
25:DA:1412:A:H2'	25:DA:1413:G:C8	2.49	0.48
12:AL:34:ARG:HG2	12:AL:35:GLY:N	2.29	0.48
25:DA:2461:C:H2'	25:DA:2462:U:C6	2.49	0.48
25:DA:1348:G:O6	25:DA:1349:A:N6	2.47	0.48
33:DN:71:ILE:HG21	33:DN:84:LYS:HB3	1.95	0.48
45:DZ:54:HIS:NE2	45:DZ:123:ASP:HB3	2.28	0.48
25:BA:202:A:H2'	25:BA:203:G:O4'	2.14	0.48
35:DP:92:GLU:HA	35:DP:123:LEU:HD21	1.96	0.48
11:AK:70:LYS:HB2	11:AK:70:LYS:NZ	2.28	0.48
1:AA:15:G:H5'	1:AA:1396:A:O2'	2.13	0.48
45:BZ:8:TYR:HB2	45:BZ:38:TYR:CE2	2.49	0.48
1:CA:1256:A:H61	1:CA:1278:U:C1'	2.27	0.47
1:AA:472:A:N6	1:AA:473:G:C2	2.82	0.47
2:CB:19:HIS:CG	2:CB:20:GLU:H	2.31	0.47
1:CA:1223:C:OP2	19:CS:78:ARG:NH2	2.41	0.47
36:DQ:51:ARG:HD3	36:DQ:66:ILE:HD11	1.95	0.47
25:BA:2363:G:O6	54:B8:39:LYS:HG3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1326:C:H5''	21:CU:18:TYR:O	2.14	0.47
12:AL:25:PRO:HD2	12:AL:98:TYR:OH	2.14	0.47
26:DB:45:A:H2'	26:DB:46:A:H8	1.78	0.47
5:AE:12:LEU:HD22	5:AE:13:ILE:N	2.29	0.47
25:DA:784:A:OP2	61:DA:4065:HOH:O	2.20	0.47
25:DA:2331:G:O2'	46:D0:43:THR:HG22	2.14	0.47
25:DA:1658:C:H2'	25:DA:1659:U:C6	2.49	0.47
27:DD:17:THR:O	27:DD:211:ARG:NH2	2.47	0.47
35:DP:62:LEU:O	54:D8:13:ARG:HD3	2.14	0.47
1:AA:1292:U:C2'	1:AA:1293:G:H5'	2.44	0.47
31:DH:94:TYR:CE2	31:DH:160:LYS:HG2	2.49	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
25:DA:272(G):C:H42	25:DA:363(C):G:H1	1.62	0.47
1:CA:1106:G:H2'	1:CA:1107:C:C6	2.49	0.47
1:AA:880:C:OP1	12:AL:8:ASN:ND2	2.45	0.47
28:DE:9:VAL:HG22	28:DE:25:VAL:HB	1.96	0.47
25:BA:615:G:O2'	54:B8:4:MET:HG3	2.14	0.47
1:AA:1125:U:O2'	1:AA:1126:U:P	2.72	0.47
1:CA:1118:C:OP1	9:CI:104:ARG:NH1	2.46	0.47
1:CA:663:A:C2'	1:CA:664:G:H5'	2.44	0.47
25:BA:1249:A:H61	25:BA:1286:U:H2'	1.78	0.47
25:BA:70:A:N7	43:BX:31:HIS:HE1	2.12	0.47
25:DA:30:G:H2'	25:DA:31:C:H6	1.78	0.47
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.49	0.47
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.50	0.47
50:D4:59:PHE:HA	50:D4:60:GLN:C	2.35	0.47
1:CA:719:C:O2'	18:CR:49:LYS:HB3	2.13	0.47
25:DA:994:C:OP2	40:DU:54:LYS:NZ	2.38	0.47
2:AB:60:ASP:O	2:AB:64:ARG:HB2	2.14	0.47
1:CA:1207:G:H2'	1:CA:1208:C:H6	1.79	0.47
25:DA:1710:C:H2'	25:DA:1711:C:H6	1.78	0.47
1:AA:36:C:O2'	1:AA:501:C:OP1	2.32	0.47
25:BA:1957:G:H1'	25:BA:1986:G:N2	2.29	0.47
41:DV:76:LYS:HD2	41:DV:81:TYR:CD2	2.49	0.47
19:AS:3:ARG:NH1	19:AS:10:PHE:HB2	2.29	0.47
1:CA:589:C:O2'	1:CA:590:C:H5'	2.14	0.47
14:AN:26:ARG:CZ	14:AN:47:LEU:HD21	2.43	0.47
31:BH:7:LEU:HD12	31:BH:8:PRO:HD2	1.96	0.47
1:CA:1216:G:H5''	14:CN:5:ALA:CB	2.44	0.47
25:BA:2490:A:H5'	55:B9:31:LYS:HE2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1226:C:C5	13:AM:104:ARG:HA	2.49	0.47
18:CR:61:LYS:O	18:CR:65:ILE:HG12	2.14	0.47
45:BZ:70:LEU:HA	45:BZ:70:LEU:HD23	1.67	0.47
1:AA:430:A:OP1	4:AD:9:CYS:HB2	2.14	0.47
26:BB:40:U:H2'	50:B4:2:LYS:HE3	1.95	0.47
34:BO:7:TYR:CZ	34:BO:44:LYS:HG3	2.49	0.47
11:AK:15:ALA:HB1	11:AK:78:GLN:HB2	1.95	0.47
30:DG:125:PHE:HB3	30:DG:166:ASP:OD1	2.14	0.47
23:AX:66:C:H2'	23:AX:67:C:O4'	2.14	0.47
1:CA:300:A:O2'	1:CA:564:C:N3	2.36	0.47
1:AA:1315:U:O2'	1:AA:1360:A:N3	2.39	0.47
1:CA:1169:A:N7	1:CA:1170:A:N7	2.62	0.47
45:DZ:53:ILE:CD1	45:DZ:99:TYR:HB2	2.44	0.47
1:CA:1286:A:H2	21:CU:18:TYR:HH	1.61	0.47
25:BA:1047:A:H2'	25:BA:1048:G:O4'	2.15	0.47
46:D0:27:GLU:HB2	46:D0:69:PHE:HD1	1.78	0.47
25:DA:1639:U:H2'	25:DA:1640:C:H5''	1.95	0.47
26:BB:48:A:H2'	26:BB:49:C:C6	2.49	0.47
1:CA:1270:C:H2'	1:CA:1271:G:H5'	1.96	0.47
25:DA:592:G:O2'	54:D8:4:MET:HG3	2.14	0.47
1:CA:1442:G:H2'	1:CA:1442(A):G:H5'	1.95	0.47
1:CA:650:G:H2'	1:CA:651:C:H5'	1.96	0.47
25:BA:2481:A:O2'	36:BQ:56:ARG:HD2	2.14	0.47
25:DA:568:U:H5'	25:DA:945:A:C2	2.50	0.47
52:B6:18:ARG:HD2	52:B6:42:TRP:CG	2.49	0.47
25:BA:1171:G:H5'	55:B9:37:GLY:HA2	1.97	0.47
18:CR:35:ARG:O	18:CR:37:VAL:N	2.46	0.47
15:AO:8:LYS:O	15:AO:12:ILE:HG13	2.14	0.47
45:BZ:132:ASN:O	45:BZ:134:PRO:HD3	2.14	0.47
9:CI:110:GLU:OE2	9:CI:113:LYS:HE2	2.14	0.47
25:DA:652(D):C:H42	25:DA:652(U):G:H1	1.62	0.47
53:B7:1:MET:H3	53:B7:1:MET:HE3	1.80	0.47
1:AA:782:A:O3'	1:AA:1515:C:H4'	2.14	0.47
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.14	0.47
1:CA:1002:G:C2	1:CA:1003:G:N7	2.83	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
2:AB:16:HIS:CG	2:AB:17:PHE:N	2.71	0.47
1:CA:20:U:H2'	1:CA:21:G:O4'	2.14	0.47
1:AA:1316:G:H4'	14:AN:18:VAL:HG13	1.97	0.47
19:AS:41:VAL:HG12	19:AS:43:GLU:N	2.23	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1162:C:C2	1:AA:1175:G:C2	3.02	0.47
43:DX:92:LEU:C	43:DX:94:GLY:H	2.17	0.47
1:CA:1237:C:O2'	1:CA:1300:G:N1	2.37	0.47
25:DA:530:G:C5	25:DA:2022:U:H5''	2.50	0.47
1:CA:540:G:H2'	1:CA:541:G:C8	2.48	0.47
48:B2:32:LEU:HD21	48:B2:54:LYS:HG3	1.97	0.47
13:AM:15:VAL:HG13	13:AM:43:THR:O	2.14	0.47
1:AA:865:A:C2	1:AA:918:A:H4'	2.49	0.47
25:DA:242:G:H5''	54:D8:64:TYR:CE2	2.50	0.47
25:DA:954:G:C2	25:DA:964:C:O2	2.67	0.47
25:BA:1074:A:N6	25:BA:1171:G:H2'	2.29	0.47
27:DD:58:HIS:ND1	27:DD:59:LYS:N	2.62	0.47
25:DA:1525:G:H2'	25:DA:1526:G:C8	2.50	0.47
1:AA:1187:G:N3	14:AN:60:SER:OG	2.48	0.47
4:AD:30:LYS:HA	4:AD:35:ARG:HH11	1.79	0.47
25:BA:1495:G:O2'	25:BA:1575:A:N1	2.38	0.47
11:AK:69:ALA:O	11:AK:73:MET:HG3	2.14	0.47
1:AA:860:A:OP2	61:AA:4055:HOH:O	2.20	0.47
42:DW:82:LEU:HD22	42:DW:84:ARG:NH2	2.29	0.47
1:CA:1009:G:N2	1:CA:1021:G:H1'	2.29	0.47
13:AM:120:LYS:HA	13:AM:121:LYS:HE3	1.95	0.47
44:BY:19:LYS:HE2	44:BY:20:TYR:CE1	2.49	0.47
25:DA:2439:A:C8	25:DA:2439:A:H5'	2.50	0.47
33:BN:138:LEU:HD23	33:BN:138:LEU:HA	1.52	0.47
1:AA:1125:U:H1'	1:AA:1126:U:O5'	2.14	0.47
2:CB:163:PHE:CD1	2:CB:185:ILE:HG13	2.47	0.47
1:CA:1492:A:H2'	1:CA:1493:A:C1'	2.43	0.47
25:DA:1803:A:HO2'	27:DD:259:THR:HG21	1.79	0.47
1:CA:1134:G:H1	1:CA:1140:C:H42	1.62	0.47
25:DA:287:C:H2'	25:DA:288:C:H6	1.79	0.47
29:DF:184:TYR:CE2	29:DF:188:ARG:HD2	2.50	0.47
25:BA:1001:G:OP2	36:BQ:14:ARG:NH2	2.47	0.47
25:BA:839:G:O2'	61:BA:4651:HOH:O	2.20	0.47
15:CO:54:ARG:HD3	15:CO:58:MET:CE	2.43	0.47
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.50	0.47
27:BD:108:PRO:HD2	27:BD:111:LEU:HG	1.96	0.47
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
1:CA:160:A:H61	1:CA:347:G:H1'	1.80	0.47
25:DA:2741:A:H2'	25:DA:2742:C:O4'	2.13	0.47
25:BA:2504:U:H2'	25:BA:2505:U:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:705:C:H2'	25:BA:706:C:C6	2.49	0.47
1:CA:1077:G:N1	1:CA:1081:G:C6	2.83	0.47
37:BR:57:ARG:HB3	37:BR:59:ASP:OD1	2.13	0.47
19:AS:69:HIS:HD2	19:AS:73:GLU:OE1	1.97	0.47
25:DA:2297:C:C6	25:DA:2297:C:H3'	2.49	0.47
45:DZ:31:ARG:HD2	45:DZ:94:GLU:OE2	2.15	0.47
3:CC:117:ALA:HB2	3:CC:200:ALA:HB2	1.97	0.47
29:DF:178:PRO:HG2	29:DF:179:GLU:OE1	2.15	0.47
45:DZ:33:LEU:HD21	45:DZ:90:VAL:HG21	1.96	0.47
25:BA:207:A:C2	25:BA:224:U:H4'	2.50	0.47
1:CA:954:G:H2'	1:CA:955:U:C6	2.49	0.47
31:BH:40:GLU:OE1	31:BH:61:HIS:NE2	2.44	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
25:DA:2771:C:H5''	28:DE:202:LYS:HD3	1.95	0.47
25:DA:2332:U:H5'	25:DA:2336:A:N6	2.30	0.47
25:DA:1429:G:H2'	25:DA:1430:C:C6	2.49	0.47
1:CA:979:C:H2'	1:CA:980:C:H5'	1.96	0.47
38:DS:53:SER:OG	38:DS:54:LEU:N	2.47	0.47
25:DA:1826:G:H4'	27:DD:242:ARG:CZ	2.45	0.47
25:DA:2356:C:O3'	46:D0:20:ARG:HD2	2.14	0.47
25:DA:574:C:H1'	25:DA:2055:C:C6	2.50	0.47
20:CT:47:GLY:HA2	20:CT:48:LYS:CB	2.44	0.47
25:DA:1463:C:H2'	25:DA:1464:C:H6	1.79	0.47
27:DD:139:GLY:N	27:DD:165:ILE:O	2.47	0.47
25:DA:1668:A:O2'	25:DA:1674:G:N7	2.34	0.47
25:BA:248:G:O2'	25:BA:646:A:O2'	2.25	0.47
25:DA:1773:A:H5''	61:DA:4250:HOH:O	2.13	0.47
31:BH:22:GLY:HA2	31:BH:37:VAL:O	2.14	0.47
44:DY:13:VAL:HG12	44:DY:74:PRO:HA	1.96	0.47
2:CB:189:ASP:OD1	2:CB:189:ASP:N	2.46	0.47
1:AA:1125:U:H1'	1:AA:1126:U:H2'	1.97	0.47
1:CA:1122:U:H5'	1:CA:1123:A:OP2	2.14	0.47
10:CJ:8:LEU:HB3	10:CJ:16:LEU:HD22	1.96	0.47
1:CA:1134:G:H2'	1:CA:1135:U:H5'	1.97	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
1:CA:149:A:H2'	1:CA:150:C:C6	2.50	0.47
1:CA:1130:A:H5'	9:CI:18:PHE:CE2	2.50	0.47
25:DA:652(B):A:N1	25:DA:655:A:H1'	2.30	0.47
1:AA:196:A:H8	1:AA:196:A:O5'	1.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:68:G:H22	1:AA:101:A:H2	1.63	0.47
7:AG:46:ALA:HA	7:AG:49:ILE:HD12	1.97	0.47
1:AA:407:G:O2'	4:AD:116:GLN:HG3	2.15	0.47
25:DA:30:G:OP2	40:DU:5:LYS:HE2	2.15	0.47
19:CS:14:HIS:O	19:CS:18:LYS:HG3	2.14	0.47
29:BF:14:PRO:HD2	29:BF:127:GLU:OE2	2.15	0.47
24:AW:9:MVA:O	24:AW:10:2QY:CD2	2.63	0.47
35:BP:63:PRO:HB2	54:B8:30:ARG:NH2	2.29	0.47
26:BB:31:C:H4'	30:BG:29:TRP:CH2	2.50	0.47
25:DA:2291:U:H2'	25:DA:2292:C:H6	1.76	0.47
1:CA:502:G:C6	1:CA:503:C:N3	2.83	0.47
4:AD:166:LYS:HB2	4:AD:168:ARG:NH2	2.30	0.47
4:AD:31:CYS:SG	4:AD:33:MET:N	2.83	0.47
1:CA:875:C:O2'	8:CH:14:ARG:HD2	2.15	0.47
25:DA:1707:G:H2'	25:DA:1708:C:C6	2.49	0.47
32:DI:77:LEU:HD13	32:DI:79:ILE:HD11	1.96	0.47
25:DA:854:G:H2'	25:DA:855:G:C8	2.49	0.47
27:BD:106:ILE:O	27:BD:108:PRO:HD3	2.15	0.47
12:CL:71:PRO:O	12:CL:102:ARG:HD2	2.15	0.47
1:AA:631:G:H2'	1:AA:632:A:C8	2.50	0.47
25:DA:34:C:O2'	25:DA:35:G:OP1	2.26	0.47
1:CA:1111:A:N1	3:CC:177:THR:OG1	2.37	0.47
4:CD:150:GLU:HA	4:CD:153:ARG:HE	1.79	0.47
1:AA:532:A:O2'	1:AA:533:A:P	2.73	0.47
25:DA:303:U:H2'	25:DA:304:G:C8	2.50	0.47
1:CA:1238:A:C2	1:CA:1303:C:H4'	2.50	0.47
25:BA:956:A:N1	25:BA:2289:G:H1'	2.30	0.47
1:CA:773:G:H1	1:CA:806:C:H42	1.61	0.47
28:DE:37:ARG:O	28:DE:45:THR:HA	2.14	0.47
34:DO:120:GLU:HB2	39:DT:68:TYR:HE2	1.79	0.47
3:AC:138:VAL:HG23	3:AC:151:VAL:HG23	1.96	0.47
42:BW:28:SER:O	42:BW:31:GLU:N	2.47	0.47
36:DQ:63:LYS:HE2	36:DQ:65:PHE:CE2	2.49	0.47
1:CA:576:G:N2	1:CA:760:G:OP2	2.48	0.47
34:DO:91:LEU:N	34:DO:91:LEU:HD23	2.30	0.47
25:DA:2687:U:H2'	25:DA:2688:U:O4'	2.15	0.47
1:CA:1051:C:H2'	1:CA:1052:U:H6	1.78	0.47
5:AE:57:LYS:HD3	5:AE:61:TYR:HE2	1.80	0.47
11:AK:84:VAL:HG11	11:AK:91:ARG:HD2	1.95	0.47
25:DA:1030:G:OP2	36:DQ:128:LYS:NZ	2.44	0.47
1:AA:49:U:H3	1:AA:362:G:H1'	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:28:ALA:HB3	8:CH:57:PRO:HB2	1.96	0.47
1:AA:323:U:H5'	20:AT:23:ARG:HB2	1.96	0.47
1:AA:1068:G:N7	1:AA:1094:G:H2'	2.30	0.47
27:DD:63:ARG:HD3	27:DD:92:ILE:HD11	1.96	0.47
25:DA:1167:U:O2	25:DA:1183:G:N2	2.48	0.47
9:AI:86:VAL:HG13	9:AI:96:LEU:HD12	1.97	0.47
25:BA:82:G:N2	25:BA:101:A:OP2	2.47	0.47
31:DH:11:VAL:HG21	31:DH:50:VAL:HG23	1.97	0.47
1:CA:658:G:C6	1:CA:659:U:C4	3.02	0.47
31:DH:104:GLU:HG3	31:DH:114:VAL:HG22	1.97	0.47
25:BA:2891:C:H2'	25:BA:2892:A:O4'	2.14	0.47
49:D3:18:ASP:N	49:D3:18:ASP:OD1	2.48	0.47
15:AO:17:ARG:HG3	15:AO:17:ARG:HH11	1.79	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
38:DS:7:TYR:CZ	38:DS:91:PRO:HG3	2.49	0.47
1:CA:1179:A:N6	1:CA:1180:A:N7	2.62	0.47
1:AA:1005:A:H1'	1:AA:1036:G:H22	1.79	0.47
1:CA:923:A:OP1	5:CE:21:ALA:HB2	2.15	0.47
9:CI:38:GLN:HG2	9:CI:39:GLY:N	2.29	0.47
25:BA:354:A:HO2'	25:BA:355:A:H8	1.57	0.47
54:B8:61:LEU:O	54:B8:63:PRO:HD3	2.14	0.47
25:BA:895:G:O6	25:BA:974:G:H2'	2.15	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
24:AW:5:MVA:O	24:AW:6:2R1:H51	2.15	0.47
28:DE:72:VAL:HA	28:DE:73:GLU:CB	2.44	0.47
6:CF:10:LEU:HD11	6:CF:85:VAL:HG22	1.95	0.47
25:DA:185:U:H4'	25:DA:218:A:H4'	1.97	0.47
1:AA:1118:C:H1'	1:AA:1179:A:C5	2.50	0.47
1:CA:839:U:HO2'	1:CA:840:C:P	2.35	0.47
1:CA:590:C:H2'	1:CA:591:U:C6	2.49	0.47
37:DR:38:VAL:HG22	37:DR:112:ALA:HB2	1.97	0.47
25:BA:2649:U:O3'	28:BE:82:ARG:NH2	2.48	0.47
1:AA:652:U:O2'	1:AA:653:A:OP2	2.29	0.47
39:BT:24:PRO:HA	39:BT:49:VAL:HG22	1.96	0.47
26:BB:1:U:H2'	26:BB:2:C:C6	2.50	0.47
1:CA:58:C:O2'	1:CA:388:G:N7	2.45	0.47
28:BE:73:GLU:H	28:BE:73:GLU:HG3	1.54	0.47
1:AA:397:A:N3	1:AA:397:A:H3'	2.30	0.47
33:BN:4:TYR:CD2	40:BU:100:VAL:HG11	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:543:C:C2'	1:AA:544:G:H5'	2.45	0.47
2:AB:54:THR:O	2:AB:58:ILE:HG13	2.15	0.47
1:AA:1314:C:H5	19:AS:4:SER:HB2	1.80	0.47
1:AA:1236:A:O2'	1:AA:1304:G:H4'	2.15	0.47
1:AA:180:U:O2'	1:AA:181:G:H5'	2.15	0.47
1:AA:149:A:H2'	1:AA:150:C:C6	2.50	0.47
1:AA:1346:A:H5''	9:AI:120:ARG:NH1	2.29	0.47
50:D4:59:PHE:O	50:D4:62:ARG:NH2	2.48	0.47
25:DA:923:C:H1'	46:D0:29:GLN:HG2	1.97	0.47
25:BA:312:C:H2'	25:BA:313:A:H8	1.79	0.47
11:CK:48:ILE:O	11:CK:50:TYR:N	2.47	0.47
1:AA:403:C:H2'	1:AA:404:U:H6	1.80	0.47
50:B4:6:HIS:HA	50:B4:7:PRO:HD3	1.77	0.47
25:DA:2369:A:H2'	25:DA:2370:G:C8	2.50	0.47
25:BA:1699:A:OP1	37:BR:8:ARG:NH1	2.48	0.47
35:BP:2:LYS:NZ	35:BP:4:SER:HB3	2.29	0.47
1:AA:909:A:H2'	1:AA:910:C:O4'	2.14	0.47
25:BA:1810:U:H2'	61:BA:4798:HOH:O	2.15	0.47
3:CC:92:ALA:HB2	3:CC:99:VAL:CB	2.45	0.47
23:CX:61:C:H2'	23:CX:62:C:H6	1.79	0.47
7:CG:18:TYR:HB3	7:CG:59:LEU:HD13	1.97	0.47
1:CA:304:U:H2'	1:CA:305:G:C8	2.49	0.47
25:BA:1650:C:H5''	61:BA:4275:HOH:O	2.15	0.47
1:CA:771:G:N7	61:CA:4038:HOH:O	2.36	0.47
25:BA:2692:C:H5'	28:BE:189:PRO:HA	1.96	0.47
1:AA:1189:C:H5''	1:AA:1190:G:OP2	2.15	0.47
1:CA:1005:A:H1'	1:CA:1036:G:C6	2.49	0.47
1:CA:1003:G:H1	1:CA:1035:A:N6	2.12	0.47
1:AA:1149:C:H2'	1:AA:1150:U:H6	1.79	0.47
30:DG:32:PRO:HB2	30:DG:172:LEU:HD22	1.97	0.47
1:CA:425:G:C2	1:CA:426:G:C8	3.02	0.47
3:CC:73:PRO:HB3	3:CC:103:VAL:CG1	2.40	0.47
1:AA:1030(B):C:C2'	1:AA:1030(C):G:H5'	2.45	0.47
25:DA:195:A:H5''	25:DA:196:A:O5'	2.15	0.47
1:AA:664:G:N2	1:AA:741:G:H1	2.12	0.47
1:CA:1376:U:C2	1:CA:1377:A:N7	2.83	0.47
7:CG:113:GLU:O	7:CG:119:ARG:HD3	2.15	0.47
1:AA:486:U:H2'	1:AA:487:A:H8	1.80	0.47
1:CA:953:G:N7	13:CM:104:ARG:NH1	2.63	0.47
25:DA:71:A:H5''	25:DA:73:A:C8	2.50	0.47
25:DA:848:G:N3	25:DA:933:A:H1'	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1517:G:C6	25:BA:1567:G:N7	2.83	0.47
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.50	0.47
36:DQ:135:ASP:HB2	36:DQ:138:ASP:OD2	2.15	0.47
1:CA:532:A:H62	3:CC:156:ARG:HH12	1.61	0.47
29:BF:116:ASP:OD2	35:BP:1:MET:HB2	2.15	0.47
9:CI:6:GLY:O	9:CI:17:VAL:HG12	2.15	0.47
1:CA:947:G:H2'	1:CA:948:C:O4'	2.15	0.47
50:B4:63:TYR:CD1	50:B4:63:TYR:N	2.83	0.47
25:DA:1364:G:P	47:D1:3:LYS:HG3	2.54	0.47
43:DX:59:VAL:HG21	43:DX:78:LYS:HE3	1.96	0.47
25:BA:934:A:H4'	25:BA:935:C:H5	1.80	0.47
25:DA:143:G:H2'	25:DA:143(A):C:H6	1.76	0.47
1:CA:1191:A:OP1	3:CC:4:LYS:HG3	2.15	0.47
1:CA:1032:G:H2'	1:CA:1033:G:C8	2.50	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
25:BA:1790:A:H1'	25:BA:2723:A:C2	2.50	0.47
1:AA:308:C:H2'	1:AA:309:G:C8	2.50	0.47
33:BN:75:TYR:CE2	33:BN:77:GLY:HA2	2.50	0.47
1:CA:583:A:H2'	1:CA:584:G:O4'	2.15	0.47
49:D3:3:ARG:HH11	49:D3:60:GLU:CB	2.28	0.47
11:AK:34:ASP:HB2	11:AK:35:PRO:HD2	1.97	0.47
20:AT:31:SER:HA	20:AT:34:LYS:HE2	1.97	0.47
6:AF:99:ALA:O	18:AR:28:GLU:HG3	2.14	0.47
25:BA:2858:G:C8	39:BT:97:ALA:HB2	2.50	0.47
25:DA:536:A:H2'	25:DA:537:C:C6	2.50	0.47
25:DA:26:G:OP1	42:DW:80:PRO:HB3	2.14	0.47
29:DF:137:LYS:HA	29:DF:140:LEU:HD23	1.97	0.47
25:DA:1142:U:H2'	25:DA:1142:U:O2	2.14	0.47
25:BA:1921:G:H2'	25:BA:1921:G:N3	2.29	0.47
54:D8:62:LEU:HB3	54:D8:65:GLU:HG2	1.97	0.47
45:BZ:24:LEU:HB2	45:BZ:41:LEU:HD23	1.96	0.47
44:BY:54:LYS:HA	44:BY:56:PRO:CD	2.36	0.46
1:CA:1292:U:OP2	7:CG:41:ARG:NH2	2.49	0.46
19:AS:52:TYR:HB2	19:AS:57:HIS:CE1	2.50	0.46
25:DA:1352:U:OP1	61:DA:3789:HOH:O	2.20	0.46
1:CA:1220:G:N2	1:CA:1221:G:H1'	2.30	0.46
1:AA:834:C:H2'	1:AA:835:U:C6	2.50	0.46
3:CC:12:LEU:HA	3:CC:16:ARG:HB3	1.98	0.46
1:AA:997:U:H3	1:AA:1044:A:N6	2.13	0.46
35:DP:99:LEU:HD23	35:DP:99:LEU:H	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DB:95:C:H2'	26:DB:96:U:H6	1.78	0.46
25:DA:1028:A:N6	25:DA:1125:G:H2'	2.30	0.46
25:DA:984:A:H5''	25:DA:985:C:C5	2.49	0.46
6:AF:1:MET:HA	6:AF:67:MET:O	2.14	0.46
16:CP:57:ARG:HH21	16:CP:79:VAL:HA	1.80	0.46
1:AA:1217:C:H2'	1:AA:1218:C:O4'	2.15	0.46
39:DT:121:ILE:O	39:DT:124:ASP:HB2	2.14	0.46
15:CO:3:ILE:HG21	15:CO:34:LEU:HD21	1.97	0.46
52:D6:25:LYS:HE3	52:D6:27:LYS:HA	1.96	0.46
25:BA:1372:U:H2'	25:BA:1373:C:C6	2.50	0.46
32:BI:9:LEU:HD13	32:BI:10:GLU:HG2	1.97	0.46
13:AM:16:ASP:N	13:AM:16:ASP:OD1	2.48	0.46
25:DA:1899:G:N3	25:DA:1899:G:H2'	2.30	0.46
31:DH:137:ASP:HB3	31:DH:140:LYS:HB3	1.97	0.46
28:BE:34:VAL:HG21	28:BE:78:LEU:HD11	1.97	0.46
1:CA:427:U:H2'	1:CA:428:G:C8	2.50	0.46
1:AA:437:U:O3'	4:AD:125:HIS:HE1	1.98	0.46
1:AA:1305:G:N2	1:AA:1331:G:H1'	2.30	0.46
25:DA:1397:U:OP2	25:DA:1398:C:N4	2.42	0.46
26:DB:33:G:C6	26:DB:34:U:C4	3.03	0.46
25:DA:2807:G:N2	25:DA:2893:G:O6	2.48	0.46
46:D0:56:ASP:OD1	46:D0:58:THR:OG1	2.31	0.46
1:CA:1015:A:H2'	1:CA:1016:A:C8	2.50	0.46
1:AA:380:G:N1	1:AA:384:G:C6	2.83	0.46
25:DA:2291:U:O2'	25:DA:2374:C:O2	2.30	0.46
25:DA:994:C:H1'	41:DV:10:LYS:HE3	1.98	0.46
1:AA:839:U:H5''	1:AA:840:C:H5	1.81	0.46
13:CM:60:VAL:HG23	13:CM:64:TRP:HE3	1.78	0.46
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.80	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
3:AC:12:LEU:HA	3:AC:16:ARG:HB3	1.97	0.46
1:CA:1207:G:H2'	1:CA:1208:C:C6	2.49	0.46
25:DA:475:U:C4	25:DA:481:G:O6	2.69	0.46
25:BA:1629:C:C2	25:BA:1630:A:C8	3.03	0.46
1:CA:78:G:C2'	1:CA:79:G:H5'	2.45	0.46
4:CD:64:LEU:HB2	4:CD:198:VAL:HG21	1.97	0.46
1:AA:272:C:H2'	1:AA:273:A:C8	2.49	0.46
25:DA:2591:C:OP1	27:DD:239:ARG:HD2	2.15	0.46
27:DD:206:LEU:HD23	27:DD:206:LEU:HA	1.49	0.46
25:BA:1592:A:H2'	25:BA:1593:C:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BS:34:HIS:HD1	38:BS:53:SER:HG	1.62	0.46
13:CM:92:HIS:CE1	13:CM:98:VAL:HG21	2.50	0.46
52:D6:36:LEU:HB3	52:D6:38:LYS:HZ1	1.79	0.46
1:CA:629:G:H2'	1:CA:630:G:O4'	2.14	0.46
1:AA:300:A:H1'	1:AA:565:U:O2	2.15	0.46
25:BA:662:A:H8	35:BP:117:GLU:HG3	1.81	0.46
2:AB:115:LEU:O	2:AB:119:GLU:HG2	2.15	0.46
1:CA:380:G:C2	1:CA:384:G:C6	3.04	0.46
1:AA:1057:G:H2'	1:AA:1058:G:O4'	2.16	0.46
1:AA:791:G:C2'	1:AA:792:A:H5'	2.46	0.46
8:CH:86:ILE:HG13	8:CH:133:LEU:HD22	1.97	0.46
42:BW:33:ARG:NE	42:BW:52:GLU:OE1	2.48	0.46
33:DN:58:ASP:N	33:DN:58:ASP:OD1	2.39	0.46
25:DA:1945:G:H2'	25:DA:1946:U:C6	2.50	0.46
53:B7:11:LYS:HE3	53:B7:15:THR:OG1	2.15	0.46
25:BA:2735:G:H2'	25:BA:2736:C:C6	2.50	0.46
50:B4:68:ARG:O	50:B4:69:LYS:HB3	2.15	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
1:AA:1025:U:O2	1:AA:1036:G:C6	2.67	0.46
25:DA:300:A:H3'	44:DY:84:ARG:NH2	2.31	0.46
1:CA:662:G:H2'	1:CA:663:A:C8	2.51	0.46
3:AC:11:ARG:HD3	3:AC:15:THR:HB	1.97	0.46
1:AA:1305:G:H22	1:AA:1331:G:H1'	1.80	0.46
20:AT:14:LYS:O	20:AT:18:GLN:HG3	2.15	0.46
31:BH:126:PRO:HB2	31:BH:127:GLU:H	1.41	0.46
2:AB:178:ARG:HH22	8:AH:68:ARG:HH12	1.63	0.46
25:DA:2262:U:H4'	25:DA:2328:A:C2	2.49	0.46
45:BZ:69:THR:HG22	45:BZ:90:VAL:HG22	1.98	0.46
25:DA:1531:C:N4	25:DA:1538:G:H1	2.12	0.46
1:CA:942:G:C2	1:CA:1342:C:C2	3.03	0.46
36:DQ:18:LYS:HE3	36:DQ:18:LYS:HB2	1.71	0.46
25:DA:2880:C:O3'	37:DR:90:ARG:NH1	2.48	0.46
25:BA:1041:C:OP2	40:BU:54:LYS:NZ	2.45	0.46
30:DG:106:LEU:HA	30:DG:110:ALA:HB3	1.96	0.46
25:DA:2563:U:O2	25:DA:2565:A:H8	1.98	0.46
42:DW:59:VAL:HA	42:DW:64:MET:O	2.16	0.46
20:CT:58:LYS:HE3	20:CT:62:LEU:HD12	1.97	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
7:CG:132:GLY:O	7:CG:136:LYS:HG2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DP:138:LEU:HD11	35:DP:143:GLY:HA3	1.97	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:BA:1521:C:H2'	25:BA:1522:G:C8	2.49	0.46
53:B7:24:THR:HG22	53:B7:26:GLY:H	1.80	0.46
53:B7:24:THR:HG22	53:B7:26:GLY:N	2.29	0.46
1:CA:1003:G:C6	1:CA:1004:A:H2	2.32	0.46
45:DZ:30:ASN:ND2	45:DZ:90:VAL:HB	2.31	0.46
4:AD:173:TRP:HZ3	4:AD:174:LEU:HG	1.74	0.46
1:AA:741:G:H2'	1:AA:742:G:O4'	2.15	0.46
1:AA:146:G:C4	1:AA:147:G:C8	3.03	0.46
25:DA:2704:C:H2'	25:DA:2705:A:O4'	2.15	0.46
25:DA:649:G:C5	25:DA:650:C:C4	3.03	0.46
24:CW:8:2R3:H62	24:CW:9:MVA:HN1	1.51	0.46
1:CA:955:U:H2'	1:CA:956:U:O4'	2.15	0.46
40:DU:79:PHE:O	40:DU:83:LEU:HD22	2.15	0.46
28:DE:72:VAL:HG22	28:DE:73:GLU:HG2	1.98	0.46
1:AA:622:A:C8	1:AA:623:C:C5	3.03	0.46
25:DA:1800:C:OP2	27:DD:183:ARG:NH2	2.47	0.46
35:DP:52:GLU:OE2	54:D8:57:ARG:NH1	2.44	0.46
25:DA:370:G:H4'	25:DA:371:A:OP2	2.16	0.46
8:CH:20:TYR:CE2	8:CH:75:ARG:HG2	2.51	0.46
1:AA:958:A:C6	1:AA:959:A:N1	2.83	0.46
1:AA:1433:A:C6	1:AA:1468:A:C4	3.03	0.46
1:AA:1291:G:H4'	9:AI:39:GLY:HA3	1.97	0.46
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.51	0.46
1:CA:67:C:H2'	1:CA:68:G:H8	1.80	0.46
1:AA:16:A:N1	1:AA:919:A:H2	2.13	0.46
25:DA:1651:G:H5'	37:DR:39:PRO:HG2	1.97	0.46
25:BA:319:G:H1	25:BA:367:C:H42	1.63	0.46
5:CE:71:LEU:HD11	5:CE:115:VAL:HG22	1.96	0.46
25:BA:196:A:H2'	25:BA:197:C:O4'	2.14	0.46
1:AA:1302:U:OP2	13:AM:21:TYR:OH	2.26	0.46
25:BA:664:U:H2'	25:BA:665:C:C6	2.51	0.46
2:CB:180:LEU:O	2:CB:181:PHE:HB2	2.15	0.46
32:BI:27:ARG:HD2	47:B1:71:TYR:CE1	2.51	0.46
38:DS:38:GLN:HB2	38:DS:47:THR:HG23	1.98	0.46
25:BA:2262:G:C8	25:BA:2508:C:H5''	2.50	0.46
8:CH:98:LYS:HE3	8:CH:98:LYS:HB2	1.73	0.46
1:CA:971:G:OP1	1:CA:971:G:H3'	2.16	0.46
52:D6:19:ARG:N	52:D6:19:ARG:HD2	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:34:ARG:HG3	12:CL:105:TYR:CE2	2.50	0.46
25:BA:1421:C:H2'	25:BA:1422:C:H6	1.79	0.46
1:AA:804:U:H5''	1:AA:805:C:OP2	2.15	0.46
25:DA:687:C:H2'	25:DA:688:U:O4'	2.15	0.46
1:CA:1127:G:H5'	1:CA:1280:A:O2'	2.15	0.46
10:CJ:9:ARG:HG2	10:CJ:69:ASN:OD1	2.14	0.46
30:DG:82:LEU:HA	30:DG:86:MET:SD	2.55	0.46
2:CB:20:GLU:HG3	2:CB:191:ASP:HB3	1.97	0.46
1:AA:55:A:C5	1:AA:56:U:C5	3.04	0.46
45:DZ:52:SER:OG	45:DZ:53:ILE:N	2.48	0.46
1:AA:376:G:P	16:AP:67:THR:HG21	2.56	0.46
25:DA:530:G:O4'	25:DA:530:G:N3	2.49	0.46
25:DA:848:G:C4	25:DA:933:A:H8	2.34	0.46
1:CA:757:U:O2'	1:CA:879:C:O2	2.21	0.46
25:DA:1319:G:C6	25:DA:1320:C:N4	2.84	0.46
1:AA:583:A:H2'	1:AA:584:G:O4'	2.16	0.46
8:CH:49:GLU:HG2	8:CH:62:TYR:CE2	2.48	0.46
38:BS:14:VAL:O	38:BS:18:ILE:HG12	2.15	0.46
28:DE:163:GLU:HG2	28:DE:164:ARG:H	1.80	0.46
25:BA:211:A:H3'	25:BA:448:U:H5'	1.97	0.46
1:CA:1061:G:C2'	1:CA:1062:U:H5'	2.46	0.46
20:CT:14:LYS:O	20:CT:18:GLN:HG3	2.15	0.46
25:DA:625:G:N7	35:DP:107:LYS:NZ	2.59	0.46
1:CA:1124:G:C5'	10:CJ:36:GLY:H	2.29	0.46
25:DA:1274:A:N1	25:DA:1644:C:O2'	2.40	0.46
1:AA:1136:U:H5''	1:AA:1137:C:N3	2.31	0.46
1:CA:688:G:H5'	11:CK:46:GLY:C	2.36	0.46
25:BA:2517:G:O6	25:BA:2588:G:H2'	2.15	0.46
7:AG:26:PHE:O	7:AG:30:ILE:HG13	2.15	0.46
1:AA:1418:A:C2	1:AA:1483:A:C2	3.03	0.46
1:CA:799:G:H8	1:CA:799:G:H5''	1.80	0.46
2:CB:22:LYS:HB3	2:CB:22:LYS:HE2	1.60	0.46
38:DS:78:LEU:HD11	38:DS:108:GLY:O	2.15	0.46
4:AD:138:TYR:HE1	4:AD:140:VAL:HA	1.80	0.46
1:CA:1036:G:N7	1:CA:1037:C:O2	2.48	0.46
2:CB:207:ALA:O	2:CB:210:SER:OG	2.20	0.46
10:AJ:38:ILE:HD11	10:AJ:71:LEU:HB3	1.97	0.46
10:CJ:62:HIS:HB3	14:CN:59:ALA:HB3	1.96	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
1:CA:1131:G:OP1	9:CI:20:ARG:NH2	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:54:LYS:HA	20:CT:57:ARG:CZ	2.46	0.46
1:AA:826:C:H2'	1:AA:827:U:C6	2.51	0.46
43:DX:44:GLU:HG3	43:DX:51:VAL:HG23	1.97	0.46
1:CA:1305:G:H22	1:CA:1331:G:H1'	1.80	0.46
32:BI:93:THR:HG22	32:BI:119:PRO:HB3	1.98	0.46
5:AE:100:VAL:O	5:AE:107:ARG:NH2	2.49	0.46
1:AA:932:C:H2'	1:AA:933:G:C8	2.51	0.46
25:DA:1264:G:H2'	25:DA:2014:A:N6	2.30	0.46
29:DF:164:ARG:O	29:DF:168:ARG:HB2	2.15	0.46
1:CA:1308:U:OP2	13:CM:99:ARG:HD3	2.15	0.46
25:BA:1042:A:H4'	40:BU:91:ASP:OD2	2.16	0.46
25:BA:403:C:H2'	25:BA:404:C:H6	1.79	0.46
30:DG:173:LEU:HD22	30:DG:178:PHE:CE1	2.50	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
25:BA:1836:U:H5''	27:BD:250:TRP:CE2	2.50	0.46
32:DI:27:ARG:HD2	47:D1:71:TYR:CE1	2.51	0.46
25:BA:1471:G:H2'	25:BA:1472:G:C8	2.51	0.46
18:CR:59:SER:H	18:CR:62:GLU:CG	2.29	0.46
25:DA:1824:G:N3	27:DD:254:THR:OG1	2.48	0.46
27:DD:10:THR:OG1	27:DD:13:ARG:HG2	2.15	0.46
32:DI:134:PRO:C	32:DI:136:VAL:H	2.19	0.46
26:DB:118:G:H2'	26:DB:119:G:O4'	2.16	0.46
25:DA:2747:G:N2	25:DA:2757:A:H62	2.13	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
1:CA:458:C:H2'	1:CA:460:G:H8	1.81	0.46
30:BG:102:PHE:CE1	30:BG:141:PHE:HE2	2.32	0.46
1:CA:814:A:N7	1:CA:816:A:C4	2.84	0.46
7:CG:69:VAL:HG21	7:CG:104:LEU:HD11	1.97	0.46
32:BI:77:LEU:HA	32:BI:77:LEU:HD23	1.75	0.46
25:BA:1709:C:H1'	25:BA:2699:U:H5''	1.97	0.46
2:AB:115:LEU:O	2:AB:119:GLU:N	2.47	0.46
25:DA:2545:G:N3	25:DA:2565:A:H2	2.13	0.46
20:CT:18:GLN:O	20:CT:22:ARG:HG3	2.15	0.46
25:BA:640:A:C4	29:BF:180:GLY:HA2	2.51	0.46
16:CP:55:ARG:O	16:CP:58:TYR:HB3	2.15	0.46
27:DD:221:VAL:HG22	27:DD:226:MET:CE	2.46	0.46
2:AB:124:SER:HB3	2:AB:125:PRO:HA	1.98	0.46
4:CD:175:SER:HB3	4:CD:186:LEU:HD11	1.98	0.46
35:BP:135:LEU:HD23	35:BP:135:LEU:HA	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:330:U:H2'	25:BA:331:G:O4'	2.15	0.46
25:DA:212:G:H2'	25:DA:213:A:O4'	2.16	0.46
1:CA:1484:C:O2'	25:DA:1960:A:O2'	2.30	0.46
1:CA:109:A:H2'	1:CA:326:G:N2	2.29	0.46
2:CB:17:PHE:HB2	2:CB:44:LEU:CD1	2.46	0.46
1:CA:1120:G:N1	1:CA:1154:G:N3	2.64	0.46
1:CA:411:A:H1'	1:CA:413:G:O4'	2.16	0.46
25:DA:2318:G:N2	38:DS:3:ARG:HH11	2.13	0.46
4:CD:98:GLU:OE1	4:CD:103:ASN:ND2	2.44	0.46
1:CA:664:G:N2	1:CA:741:G:H1	2.12	0.46
1:AA:184:G:N2	1:AA:194:C:C2	2.84	0.46
1:AA:62:U:OP1	1:AA:385:C:O2'	2.29	0.46
1:AA:452:A:OP1	16:AP:43:LYS:NZ	2.39	0.46
1:AA:376:G:H2'	1:AA:377:G:H8	1.81	0.46
6:CF:10:LEU:HD12	6:CF:10:LEU:HA	1.78	0.46
1:CA:458:C:H2'	1:CA:460:G:C8	2.51	0.46
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.51	0.46
30:DG:141:PHE:HD1	30:DG:142:PRO:HD2	1.80	0.46
25:DA:2040:C:H2'	25:DA:2041:U:O4'	2.16	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
25:DA:2693:A:H2'	25:DA:2694:G:C8	2.49	0.46
1:CA:1515:C:H2'	1:CA:1516:G:H8	1.80	0.46
8:AH:39:LEU:HB3	8:AH:45:ILE:HD11	1.97	0.46
30:DG:25:TYR:CD2	30:DG:30:GLU:HB3	2.51	0.46
1:AA:630:G:H2'	1:AA:631:G:C8	2.50	0.46
25:DA:437:G:H2'	25:DA:438:G:C8	2.49	0.46
15:CO:56:LEU:O	15:CO:60:VAL:HG23	2.15	0.46
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.50	0.46
25:BA:2326:C:H2'	25:BA:2327:G:H8	1.80	0.46
25:DA:251:A:C5	25:DA:252:G:H1'	2.51	0.46
9:CI:4:TYR:HB2	9:CI:19:LEU:HB2	1.98	0.46
25:DA:2266:A:H4'	25:DA:2267:A:N3	2.31	0.46
1:AA:276:G:C2'	1:AA:277:C:H5'	2.45	0.46
1:CA:568:G:N7	12:CL:5:PRO:HD3	2.31	0.46
25:DA:1197:G:H2'	25:DA:1198:U:H6	1.81	0.46
52:B6:18:ARG:HD2	52:B6:42:TRP:CD1	2.51	0.46
2:CB:180:LEU:HD23	2:CB:180:LEU:HA	1.67	0.46
2:CB:145:LEU:O	2:CB:149:LEU:HB2	2.15	0.46
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.16	0.46
10:CJ:23:ILE:HD13	10:CJ:26:ALA:HB3	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1739:U:H2'	25:BA:1741:C:C5	2.50	0.46
55:D9:15:LYS:HE2	55:D9:17:ILE:HD13	1.98	0.46
2:CB:40:HIS:HB3	2:CB:190:THR:HG21	1.97	0.46
14:AN:46:GLU:O	14:AN:50:LYS:HG3	2.16	0.46
25:DA:1748:G:O2'	25:DA:1749:A:H5'	2.16	0.46
37:BR:65:LEU:HD13	37:BR:65:LEU:HA	1.72	0.46
12:CL:117:ARG:HB3	12:CL:122:THR:HB	1.98	0.46
31:DH:149:ARG:NH1	31:DH:167:GLU:OE2	2.49	0.46
25:BA:2825:C:H5'	51:B5:29:THR:HG21	1.98	0.46
25:BA:904:C:N4	25:BA:905:U:O4	2.49	0.46
25:DA:409:C:O2'	25:DA:410:G:H5'	2.15	0.46
45:DZ:157:LEU:HB3	45:DZ:161:VAL:HG13	1.98	0.46
39:BT:16:ARG:HD2	39:BT:18:ASP:OD1	2.16	0.46
25:DA:1019:U:OP1	25:DA:1035:U:O2'	2.23	0.46
30:DG:14:GLU:O	30:DG:17:PRO:HD2	2.15	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
14:CN:24:CYS:O	14:CN:28:GLY:N	2.43	0.46
45:DZ:27:VAL:HG12	45:DZ:85:HIS:HE1	1.81	0.46
25:BA:2299:A:C4	25:BA:2301:G:C8	3.04	0.46
25:DA:1427:A:H8	25:DA:1427:A:O5'	1.99	0.46
4:CD:25:ARG:HG2	4:CD:25:ARG:O	2.16	0.46
3:CC:43:LEU:HD23	3:CC:43:LEU:N	2.31	0.46
1:CA:671:G:N2	1:CA:735:C:O2	2.49	0.46
38:BS:15:ARG:NE	38:BS:88:ASP:OD2	2.41	0.46
25:DA:1782:C:O2'	25:DA:2609:U:H5''	2.15	0.46
1:AA:604:G:C6	1:AA:605:U:C4	3.04	0.46
25:DA:415:A:H2'	25:DA:416:C:O4'	2.16	0.46
1:CA:1030:C:N4	1:CA:1032:G:O6	2.49	0.46
1:CA:991:U:H3'	1:CA:1212:U:N3	2.31	0.46
25:BA:696:C:P	25:BA:696:C:H6	2.39	0.46
28:BE:167:VAL:HG11	28:BE:189:PRO:HD3	1.96	0.46
7:CG:51:GLN:O	7:CG:55:GLY:HA2	2.16	0.46
42:DW:54:ALA:HB1	42:DW:107:LEU:HD22	1.97	0.46
54:D8:19:SER:OG	54:D8:21:LYS:HE3	2.16	0.46
2:AB:101:MET:HA	2:AB:108:ILE:HD12	1.97	0.46
25:BA:1859:G:OP1	61:BA:4531:HOH:O	2.20	0.46
1:CA:685:G:C2	1:CA:686:U:C4	3.04	0.46
28:BE:54:GLN:OE1	28:BE:55:ASN:N	2.46	0.46
25:DA:1851:U:H2'	25:DA:1852:C:O4'	2.16	0.46
25:BA:2630:G:C6	25:BA:2631:C:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1163:C:N4	1:CA:1173:G:N1	2.35	0.46
26:DB:5:C:OP1	26:DB:61:G:O2'	2.29	0.46
1:CA:1277:C:O2'	1:CA:1279:A:C8	2.66	0.46
1:AA:473:G:O2'	1:AA:474:G:H5'	2.16	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
1:CA:1097:C:H4'	1:CA:1170:A:H5'	1.97	0.46
35:DP:21:ARG:HA	35:DP:21:ARG:HD3	1.78	0.46
25:DA:996:A:C2	25:DA:997:G:C8	3.03	0.46
16:CP:21:VAL:HG22	16:CP:33:ILE:HD12	1.97	0.46
3:CC:70:VAL:HG22	3:CC:72:LYS:H	1.80	0.46
23:AX:48:C:C2	23:AX:59:A:H1'	2.51	0.46
1:AA:637:G:C2	1:AA:638:G:C4	3.04	0.46
25:DA:1999:C:OP1	25:DA:2723:C:O2'	2.28	0.46
25:BA:1854:G:OP1	27:BD:54:ARG:NH1	2.49	0.46
26:DB:42:C:O2	30:DG:93:THR:N	2.37	0.46
25:BA:1496:A:H5''	25:BA:1496:A:H8	1.80	0.46
1:AA:693:G:H2'	1:AA:694:A:C8	2.51	0.46
3:CC:23:TYR:HA	10:CJ:11:PHE:CE2	2.50	0.46
25:DA:1528(A):A:C8	25:DA:1529:G:C8	3.03	0.46
1:AA:1068:G:OP2	1:AA:1068:G:H8	1.99	0.46
52:D6:11:LEU:HA	52:D6:11:LEU:HD23	1.64	0.46
45:DZ:128:VAL:HG23	45:DZ:160:GLY:O	2.15	0.46
25:BA:1369:U:H2'	25:BA:1370:G:H5'	1.97	0.46
42:BW:19:LEU:HB3	51:B5:25:LEU:HD11	1.97	0.46
25:DA:1259:G:H2'	25:DA:1260:G:C8	2.51	0.46
41:DV:64:HIS:CD2	41:DV:92:THR:HG1	2.33	0.46
42:BW:18:ARG:NH1	42:BW:76:VAL:O	2.48	0.46
25:BA:886:U:H2'	25:BA:887:C:C6	2.51	0.46
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.50	0.46
36:DQ:137:TYR:O	36:DQ:141:GLN:HG2	2.16	0.46
1:CA:1002:G:H5''	1:CA:1003:G:OP2	2.16	0.45
1:CA:1041:A:N6	1:CA:1042:G:O6	2.48	0.45
1:AA:166:G:H2'	1:AA:167:G:N7	2.30	0.45
25:BA:1188:A:C4	25:BA:1190:G:C8	3.04	0.45
1:AA:1361:G:H2'	1:AA:1362:C:O4'	2.15	0.45
1:AA:1237:C:O2'	1:AA:1300:G:N1	2.38	0.45
28:BE:143:ASN:HD22	28:BE:147:PRO:CD	2.24	0.45
1:CA:1013:G:N2	1:CA:1016:A:OP2	2.35	0.45
1:AA:975:A:H8	1:AA:975:A:H5'	1.82	0.45
9:AI:85:LEU:HB3	9:AI:92:TYR:HD2	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:600:C:C2	1:CA:639:G:C2	3.04	0.45
25:DA:2342:C:O2'	25:DA:2374:C:OP1	2.31	0.45
4:CD:33:MET:SD	4:CD:37:PRO:HA	2.56	0.45
1:CA:540:G:C4	1:CA:541:G:C8	3.04	0.45
45:BZ:111:VAL:C	45:BZ:113:ALA:N	2.69	0.45
25:DA:1739:U:O2'	25:DA:1740:G:H8	1.98	0.45
25:DA:1014:U:H2'	25:DA:1015:G:C8	2.49	0.45
25:DA:1614:A:H8	25:DA:1614:A:P	2.39	0.45
4:CD:15:GLU:CG	4:CD:63:LYS:HB3	2.46	0.45
27:BD:127:VAL:HA	27:BD:193:VAL:HG22	1.98	0.45
25:DA:230:U:H2'	25:DA:231:C:H6	1.81	0.45
26:BB:13:A:N1	26:BB:69:G:O2'	2.41	0.45
1:AA:1325:C:O2'	1:AA:1326:C:H5'	2.16	0.45
4:AD:30:LYS:HA	4:AD:35:ARG:NH1	2.30	0.45
12:CL:34:ARG:HB3	12:CL:34:ARG:HE	1.40	0.45
18:AR:32:ARG:HH11	18:AR:65:ILE:HD12	1.82	0.45
25:BA:1919:G:H2'	25:BA:1920:U:O4'	2.16	0.45
30:BG:72:ARG:NH1	30:BG:87:PRO:HG3	2.30	0.45
3:AC:129:ALA:HB3	3:AC:132:ARG:HB2	1.97	0.45
42:DW:18:ARG:NH1	42:DW:76:VAL:O	2.50	0.45
25:DA:446:G:H8	61:DA:3775:HOH:O	1.98	0.45
5:CE:152:ARG:HG2	8:CH:42:GLU:O	2.16	0.45
5:CE:36:ASP:O	5:CE:38:GLN:N	2.47	0.45
1:AA:1091:U:H2'	1:AA:1093:A:OP2	2.16	0.45
35:BP:97:PRO:HD3	35:BP:126:VAL:O	2.17	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
1:CA:1256:A:H61	1:CA:1278:U:H1'	1.81	0.45
51:D5:16:ARG:O	51:D5:20:ARG:HG3	2.16	0.45
8:CH:51:VAL:CG1	8:CH:52:ASP:H	2.24	0.45
25:DA:1339:G:H21	25:DA:1603:A:H1'	1.80	0.45
1:AA:222:U:H2'	1:AA:223:U:C6	2.51	0.45
2:CB:178:ARG:CZ	8:CH:74:PRO:HG3	2.47	0.45
25:DA:1593:G:C2	25:DA:1594:G:C4	3.04	0.45
1:CA:1189:C:H5''	1:CA:1190:G:OP2	2.16	0.45
3:AC:35:GLU:CD	3:AC:59:ARG:HH22	2.19	0.45
1:AA:375:U:C4	1:AA:376:G:N7	2.84	0.45
25:DA:2070:G:C2	25:DA:2442:C:C2	3.04	0.45
1:AA:501:C:O2'	1:AA:549:C:O2	2.34	0.45
25:DA:817:C:O2'	25:DA:839:U:H5''	2.16	0.45
12:AL:77:LEU:HD21	12:AL:107:ALA:HA	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:265:A:H1'	25:DA:266:G:O4'	2.16	0.45
35:DP:27:HIS:HB2	61:DP:313:HOH:O	2.16	0.45
18:AR:43:PHE:O	18:AR:51:LEU:HD12	2.17	0.45
25:DA:468:G:H2'	25:DA:469:G:O4'	2.15	0.45
1:CA:991:U:N3	1:CA:1212:U:O2	2.49	0.45
31:BH:71:LEU:HA	31:BH:71:LEU:HD12	1.79	0.45
34:DO:87:ILE:HD12	34:DO:91:LEU:HA	1.98	0.45
29:DF:34:TRP:CZ3	35:DP:8:PRO:HB3	2.51	0.45
25:DA:2689:U:P	25:DA:2719:G:H22	2.39	0.45
18:CR:29:PHE:HE1	18:CR:31:LEU:HD13	1.81	0.45
25:BA:2760:G:O6	25:BA:2768:C:H5''	2.17	0.45
9:CI:31:GLN:HB2	9:CI:35:GLU:OE2	2.16	0.45
1:CA:817:C:H42	1:CA:1529:G:H1	1.63	0.45
45:BZ:98:MET:O	45:BZ:125:LEU:HD12	2.16	0.45
17:CQ:43:LEU:HG	17:CQ:68:ARG:HG2	1.97	0.45
25:DA:2578:G:H1'	61:DE:404:HOH:O	2.15	0.45
26:BB:6:C:H2'	26:BB:7:G:H5''	1.98	0.45
30:DG:76:SER:CB	30:DG:84:LYS:H	2.29	0.45
1:CA:113:G:H2'	1:CA:114:U:H6	1.82	0.45
25:DA:1386:C:H2'	25:DA:1387:C:C6	2.51	0.45
5:AE:27:ARG:HE	5:AE:27:ARG:HB2	1.46	0.45
2:CB:122:PHE:HD1	2:CB:123:ALA:H	1.63	0.45
2:CB:85:ALA:O	2:CB:89:GLY:N	2.49	0.45
24:CW:4:PRO:HA	24:CW:5:MVA:HN1	1.30	0.45
1:AA:160:A:H2'	1:AA:161:A:C8	2.52	0.45
14:CN:37:PHE:HB3	14:CN:39:LEU:HD12	1.99	0.45
1:AA:193:C:C2	1:AA:194:C:C5	3.04	0.45
35:DP:29:LYS:HG3	35:DP:30:THR:HG23	1.98	0.45
43:BX:92:LEU:HA	43:BX:92:LEU:HD12	1.79	0.45
25:BA:1613:A:OP1	27:BD:211:ARG:NH1	2.50	0.45
1:CA:353:A:C8	1:CA:353:A:H5'	2.45	0.45
16:AP:71:ARG:O	16:AP:75:ARG:N	2.45	0.45
5:CE:53:LEU:HD12	5:CE:53:LEU:H	1.80	0.45
2:AB:77:ALA:O	2:AB:81:VAL:HG22	2.16	0.45
1:CA:1145:C:H4'	1:CA:1146:A:C5'	2.44	0.45
1:CA:461:A:C5	1:CA:471:G:C6	3.04	0.45
1:CA:251:G:H4'	1:CA:252:U:O5'	2.16	0.45
1:AA:994:A:N7	1:AA:1216:G:H4'	2.32	0.45
14:CN:21:TYR:HE1	14:CN:23:ARG:NE	2.14	0.45
5:AE:52:PRO:HG2	5:AE:53:LEU:HD12	1.98	0.45
1:CA:1422:G:O3'	34:DO:49:ARG:NH1	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:690:G:C6	1:AA:691:G:C6	3.04	0.45
1:AA:1298:C:H2'	7:AG:114:ARG:NH1	2.32	0.45
26:DB:31:C:O2'	26:DB:32:C:H5'	2.16	0.45
25:BA:581:G:P	33:BN:111:PRO:HD2	2.56	0.45
25:BA:2304:C:H2'	25:BA:2305:C:C6	2.51	0.45
1:CA:243:A:H4'	1:CA:244:U:H5''	1.97	0.45
1:CA:1309:G:H5'	13:CM:78:ILE:HD11	1.98	0.45
1:AA:938:A:C6	1:AA:939:G:C5	3.05	0.45
25:DA:1252:G:C2	25:DA:1253:A:C2	3.03	0.45
25:DA:623:G:C6	25:DA:624:C:C4	3.05	0.45
5:AE:15:ARG:HD2	5:AE:26:PHE:CD2	2.51	0.45
1:CA:292:G:N2	1:CA:309:G:C4	2.85	0.45
1:CA:555:C:H2'	1:CA:556:C:C6	2.51	0.45
8:AH:11:THR:HG22	8:AH:15:ASN:ND2	2.31	0.45
25:BA:596:G:O2'	25:BA:597:C:H3'	2.17	0.45
27:DD:33:LEU:HD23	27:DD:33:LEU:HA	1.74	0.45
40:BU:16:LYS:HE2	40:BU:16:LYS:HB3	1.71	0.45
2:AB:8:LYS:HG2	2:AB:8:LYS:H	1.59	0.45
2:CB:118:LEU:HB3	2:CB:142:LEU:HD12	1.97	0.45
2:CB:47:THR:HG22	2:CB:51:LEU:HG	1.99	0.45
1:AA:1125:U:O4	1:AA:1128:C:C5	2.70	0.45
45:DZ:30:ASN:HA	45:DZ:89:PHE:HE1	1.80	0.45
2:CB:211:ILE:O	2:CB:215:LEU:HB2	2.16	0.45
25:BA:1285:G:H2'	25:BA:1286:U:O4'	2.16	0.45
1:AA:658:G:H2'	1:AA:659:U:H6	1.81	0.45
25:DA:888:C:H2'	25:DA:889:C:N3	2.31	0.45
12:CL:24:VAL:CG1	12:CL:27:LEU:HD22	2.46	0.45
1:CA:731:G:H5'	1:CA:766:A:H4'	1.97	0.45
7:CG:65:ALA:HB1	7:CG:127:ALA:HB3	1.99	0.45
35:DP:47:ASP:HA	35:DP:48:PRO:HD3	1.82	0.45
1:AA:1118:C:H2'	1:AA:1119:C:C6	2.51	0.45
8:CH:17:THR:HA	8:CH:65:TYR:HE2	1.81	0.45
1:CA:605:U:C2'	1:CA:606:G:H5'	2.46	0.45
2:CB:127:ILE:HG12	2:CB:128:GLU:H	1.81	0.45
25:DA:528:A:H2	25:DA:2043:C:C5'	2.30	0.45
25:DA:1527:G:H2'	25:DA:1542:A:N1	2.31	0.45
1:AA:251:G:N2	1:AA:253:U:C5	2.84	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:2354:C:O2'	25:BA:2386:C:H5''	2.17	0.45
25:DA:966:G:H2'	25:DA:967:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:299:G:H2'	1:AA:300:A:C8	2.51	0.45
27:DD:61:LEU:O	27:DD:63:ARG:NH1	2.50	0.45
4:AD:23:GLY:HA3	4:AD:112:VAL:HB	1.98	0.45
1:AA:1206:G:C6	1:AA:1207:G:C5	3.04	0.45
25:BA:860:U:H2'	25:BA:861:C:C6	2.52	0.45
20:CT:46:GLU:O	20:CT:46:GLU:HG2	2.14	0.45
25:BA:306:A:N3	25:BA:306:A:H2'	2.31	0.45
6:AF:100:ASN:H	18:AR:23:LYS:HZ1	1.63	0.45
25:DA:2400:G:H2'	25:DA:2401:U:H6	1.81	0.45
1:AA:1254:C:H2'	1:AA:1255:G:C8	2.52	0.45
25:DA:2219:G:H2'	25:DA:2220:G:H8	1.81	0.45
1:AA:278:G:OP2	17:AQ:92:ARG:NH2	2.50	0.45
4:CD:122:ARG:HH11	4:CD:122:ARG:HA	1.82	0.45
2:AB:55:PHE:HE1	2:AB:218:ALA:HA	1.82	0.45
1:CA:413:G:N2	1:CA:428:G:H1'	2.32	0.45
1:AA:1316:G:N1	1:AA:1319:A:OP2	2.48	0.45
10:CJ:22:LYS:HA	10:CJ:25:GLU:HB2	1.98	0.45
25:BA:2614:A:C8	46:B0:3:HIS:HE1	2.34	0.45
1:AA:658:G:H2'	1:AA:659:U:C6	2.51	0.45
25:DA:2497:A:H5''	61:DA:3744:HOH:O	2.16	0.45
1:CA:737:A:H2'	1:CA:738:C:C6	2.52	0.45
25:BA:1056:A:N3	25:BA:1199:C:H1'	2.32	0.45
9:CI:53:VAL:HG23	9:CI:55:ALA:HB3	1.98	0.45
25:DA:1223:G:N1	25:DA:1227:G:C6	2.85	0.45
1:AA:627:G:O2'	1:AA:628:G:H5'	2.17	0.45
45:BZ:107:THR:HG21	45:BZ:112:ARG:NH2	2.30	0.45
32:DI:126:TYR:HB2	32:DI:142:VAL:HG23	1.98	0.45
1:CA:1328:C:H2'	1:CA:1329:A:O4'	2.16	0.45
25:DA:644:A:H4'	25:DA:645:C:C4	2.50	0.45
25:BA:2289:G:OP2	46:B0:10:THR:HG21	2.16	0.45
25:DA:276:A:H5''	25:DA:277:C:H5'	1.99	0.45
1:AA:977:A:H1'	1:AA:982:U:O4	2.16	0.45
1:CA:780:A:H1'	1:CA:803:G:N2	2.32	0.45
44:BY:20:TYR:CE1	44:BY:43:ASN:HA	2.51	0.45
44:DY:74:PRO:O	44:DY:82:PRO:HA	2.17	0.45
29:DF:137:LYS:HE3	29:DF:137:LYS:HB3	1.57	0.45
1:CA:380:G:N2	1:CA:384:G:C5	2.85	0.45
1:AA:1202:G:N2	14:AN:46:GLU:OE1	2.48	0.45
25:DA:1138:G:H2'	25:DA:1139:G:O4'	2.16	0.45
45:BZ:48:PHE:CE1	45:BZ:52:SER:HA	2.51	0.45
45:DZ:125:LEU:HG	45:DZ:164:ALA:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2879:C:OP2	61:DA:4047:HOH:O	2.21	0.45
4:AD:8:VAL:O	4:AD:11:LEU:HB2	2.17	0.45
25:DA:2728:U:H2'	25:DA:2729:G:C8	2.52	0.45
25:DA:2097:C:H2'	25:DA:2098:U:H6	1.81	0.45
15:CO:69:TYR:O	15:CO:73:GLU:HG2	2.17	0.45
43:BX:38:GLU:HA	61:BX:201:HOH:O	2.16	0.45
25:DA:2751:G:H3'	25:DA:2752:C:C6	2.51	0.45
9:AI:99:LEU:HB3	9:AI:101:PHE:HE1	1.81	0.45
35:DP:82:GLY:HA2	35:DP:113:LYS:O	2.17	0.45
1:AA:1410:G:H2'	1:AA:1411:C:C6	2.51	0.45
25:BA:1230:C:H5''	25:BA:1231:G:OP1	2.17	0.45
41:BV:62:LEU:HD12	41:BV:62:LEU:HA	1.83	0.45
35:BP:46:LYS:HB3	35:BP:46:LYS:HE3	1.74	0.45
25:BA:1839:U:H6	25:BA:1839:U:O5'	1.99	0.45
25:DA:761:A:N7	61:DA:3757:HOH:O	2.36	0.45
42:DW:20:VAL:HG21	42:DW:43:GLY:HA3	1.99	0.45
40:DU:49:HIS:HA	40:DU:52:ARG:HB3	1.98	0.45
1:AA:1127:G:H21	1:AA:1128:C:H1'	1.80	0.45
25:DA:1664:A:N7	61:DA:3965:HOH:O	2.36	0.45
25:DA:1647:G:H3'	61:DA:4113:HOH:O	2.17	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
25:DA:196:A:H2'	25:DA:196:A:N3	2.32	0.45
25:DA:1789:A:H2'	25:DA:1790:C:C6	2.52	0.45
25:DA:1248:G:O2'	40:DU:3:ARG:HA	2.17	0.45
1:CA:557:G:N1	1:CA:558:G:C2	2.84	0.45
25:DA:2290:G:C6	25:DA:2291:U:C4	3.05	0.45
1:AA:589:C:O2'	1:AA:590:C:H5'	2.17	0.45
25:DA:1227:G:H2'	25:DA:1228:G:O4'	2.16	0.45
9:AI:19:LEU:HB3	9:AI:59:PHE:CD2	2.50	0.45
29:DF:132:VAL:HG21	29:DF:163:VAL:HG22	1.99	0.45
1:CA:1423:G:H2'	1:CA:1424:C:C6	2.51	0.45
19:CS:22:LEU:HD23	19:CS:27:GLU:HA	1.99	0.45
1:AA:236:G:H2'	1:AA:237:C:C6	2.51	0.45
4:AD:129:ASN:N	4:AD:145:GLU:O	2.43	0.45
16:AP:4:ILE:HG13	16:AP:64:ALA:HB1	1.99	0.45
9:AI:77:ILE:O	9:AI:81:ILE:HG22	2.17	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
12:CL:34:ARG:O	12:CL:61:THR:HG23	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:109:A:C6	1:CA:326:G:C6	3.05	0.45
10:CJ:23:ILE:HD13	10:CJ:23:ILE:HA	1.72	0.45
1:AA:1353:G:OP1	21:AU:10:ARG:NH1	2.46	0.45
25:DA:870:A:C2'	25:DA:871:U:H5'	2.46	0.45
1:AA:719:C:O2'	18:AR:49:LYS:HB3	2.15	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
30:BG:101:ILE:HG22	30:BG:105:LYS:HE2	1.98	0.45
44:BY:106:LEU:O	44:BY:107:ASP:HB2	2.17	0.45
42:DW:4:LYS:HD3	42:DW:6:ILE:HD11	1.98	0.45
34:BO:115:VAL:HG13	34:BO:121:VAL:HG21	1.98	0.45
25:DA:610:G:N2	25:DA:619:G:H1'	2.32	0.45
25:BA:1204:C:H4'	49:B3:32:GLN:HB2	1.97	0.45
1:AA:1327:C:OP2	21:AU:12:LYS:NZ	2.37	0.45
25:BA:2323:A:H3'	25:BA:2323:A:OP1	2.17	0.45
5:AE:87:SER:HB3	5:AE:131:ILE:HD13	1.97	0.45
1:CA:1005:A:H5''	1:CA:1006:C:C5	2.52	0.45
1:CA:690:G:H2'	1:CA:691:G:O4'	2.16	0.45
1:AA:1504:G:H4'	1:AA:1505:G:C4	2.52	0.45
42:DW:60:ASN:ND2	42:DW:60:ASN:N	2.65	0.45
30:DG:143:GLU:H	30:DG:143:GLU:HG2	1.35	0.45
1:AA:684:A:H2'	1:AA:685:G:C8	2.52	0.45
25:DA:479:A:HO2'	25:DA:481:G:H8	1.62	0.45
1:AA:736:C:H2'	1:AA:737:A:C8	2.51	0.45
25:DA:1032:A:O3'	55:D9:16:VAL:HG11	2.16	0.45
25:BA:605:G:H2'	25:BA:606:G:C8	2.52	0.45
25:DA:493:G:H2'	25:DA:494:G:O4'	2.16	0.45
25:DA:1165:U:H2'	25:DA:1166:C:C6	2.52	0.45
30:DG:70:VAL:HA	30:DG:90:LEU:HD23	1.98	0.45
1:AA:389:A:C6	1:AA:390:C:H1'	2.51	0.45
25:DA:528:A:OP2	33:DN:114:ARG:NH1	2.44	0.45
25:BA:2661:U:H2'	25:BA:2662:U:H6	1.82	0.45
1:AA:580:U:H2'	1:AA:581:G:C8	2.51	0.45
1:AA:430:A:H2'	1:AA:431:A:O4'	2.17	0.45
25:DA:1525:G:H2'	25:DA:1526:G:H8	1.80	0.45
1:CA:1249:C:O4'	9:CI:70:LYS:HE2	2.17	0.45
9:CI:15:ALA:HB2	9:CI:65:VAL:HG23	1.98	0.45
25:DA:2046:G:H2'	25:DA:2047:U:C6	2.52	0.45
1:AA:124:G:H4'	1:AA:291:C:O2'	2.16	0.45
36:DQ:29:PHE:HB2	36:DQ:105:GLU:OE2	2.17	0.45
25:DA:1159:U:O2'	25:DA:1160:G:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:42:ILE:HD13	7:CG:116:ALA:HB3	1.98	0.45
19:CS:40:ILE:HD12	19:CS:71:LEU:HD12	1.99	0.45
25:DA:2019:A:OP2	51:D5:9:LYS:NZ	2.27	0.45
31:BH:13:LYS:HA	31:BH:14:GLY:HA2	1.77	0.45
25:BA:2612:A:H2'	25:BA:2613:C:C6	2.52	0.45
4:CD:110:PHE:N	4:CD:110:PHE:CD1	2.84	0.45
1:AA:524:G:H2'	1:AA:525:C:C6	2.52	0.45
1:AA:1073:U:O2'	2:AB:104:ASN:OD1	2.30	0.45
25:DA:1212:G:H1'	25:DA:1236:G:N2	2.31	0.45
18:AR:33:ASP:OD2	18:AR:36:ASN:HB2	2.16	0.45
1:AA:721:G:H4'	1:AA:722:A:O4'	2.16	0.45
2:CB:12:GLU:HA	2:CB:15:VAL:HG23	1.98	0.45
39:BT:53:ARG:NH1	39:BT:53:ARG:HB3	2.32	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:148:G:O2'	1:AA:149:A:H8	2.00	0.45
46:D0:53:MET:HA	46:D0:58:THR:O	2.16	0.45
50:D4:61:ARG:O	50:D4:61:ARG:NH1	2.49	0.45
12:CL:27:LEU:HD13	12:CL:98:TYR:CE1	2.52	0.45
25:BA:2658:C:H2'	25:BA:2659:U:O4'	2.17	0.45
1:CA:443:C:C2	1:CA:444:C:C5	3.05	0.45
1:AA:1223:C:P	19:AS:78:ARG:HH21	2.39	0.45
1:CA:580:U:H5''	15:CO:58:MET:HG2	1.99	0.45
25:DA:7:G:O4'	33:DN:133:GLN:NE2	2.49	0.45
25:DA:848:G:O6	25:DA:928:G:H2'	2.16	0.45
25:BA:1541:A:O2'	25:BA:1542:A:H5'	2.17	0.45
4:CD:196:LEU:O	4:CD:198:VAL:N	2.41	0.45
1:AA:1299:A:H5''	1:AA:1299:A:N3	2.32	0.45
25:DA:940:G:H21	25:DA:1191:G:C4'	2.30	0.45
1:AA:127:G:OP1	1:AA:635:G:H1'	2.17	0.45
45:BZ:15:PRO:O	45:BZ:19:ARG:HB2	2.17	0.45
2:AB:19:HIS:HE1	2:AB:189:ASP:HB3	1.80	0.45
13:CM:81:LEU:HD22	13:CM:88:ARG:HB3	1.98	0.45
1:CA:1342:C:H4'	9:CI:125:TYR:HB3	1.98	0.45
39:BT:51:ARG:HG3	39:BT:98:LYS:HD2	1.99	0.45
1:AA:865:A:H2	1:AA:918:A:H4'	1.81	0.45
1:CA:1027:C:O2'	1:CA:1034:G:N2	2.49	0.45
45:DZ:121:HIS:HB3	45:DZ:123:ASP:O	2.17	0.45
1:CA:1009:G:H2'	1:CA:1010:G:O4'	2.16	0.45
25:DA:2297:C:H6	25:DA:2297:C:H3'	1.81	0.45
1:AA:665:A:H1'	1:AA:733:A:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1417:G:N2	1:AA:1482:G:H2'	2.32	0.45
28:DE:111:ARG:HG3	28:DE:160:TYR:CD2	2.52	0.45
1:CA:728:A:H2'	1:CA:729:A:C8	2.52	0.45
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.51	0.45
40:BU:24:TYR:HB2	40:BU:29:SER:HB3	1.99	0.45
25:BA:476:G:O6	61:BA:4177:HOH:O	2.21	0.45
25:DA:81:G:C2	25:DA:106:C:N3	2.85	0.45
37:BR:104:ARG:HG3	37:BR:111:LEU:HD21	1.99	0.45
25:DA:1486:A:O2'	25:DA:1487:G:H5'	2.17	0.45
25:DA:271(S):G:C2'	25:DA:271(T):C:H5'	2.46	0.45
25:BA:83:A:H5'	44:BY:8:LYS:HG2	1.98	0.45
25:BA:2619:G:O3'	61:BA:4187:HOH:O	2.21	0.45
25:BA:2451:A:H5'	25:BA:2451:A:C8	2.52	0.45
25:DA:2882:A:OP1	37:DR:96:ARG:NE	2.49	0.45
2:CB:130:ARG:HA	2:CB:131:PRO:HD3	1.82	0.45
1:CA:420:U:H1'	1:CA:424:G:N2	2.32	0.45
25:DA:1790:C:H2'	25:DA:1791:A:C5	2.52	0.45
24:AW:6:2R1:O	24:AW:8:2R3:N	2.50	0.45
11:CK:99:GLN:C	11:CK:101:SER:H	2.20	0.45
1:CA:437:U:O2'	4:CD:125:HIS:HE1	2.00	0.45
25:DA:1637:A:H4'	25:DA:2711:A:O2'	2.17	0.45
1:AA:1041:A:C2'	1:AA:1042:G:H5'	2.46	0.45
4:CD:88:VAL:O	4:CD:92:VAL:HG23	2.16	0.45
25:DA:921:G:C6	25:DA:922:U:C4	3.05	0.45
43:DX:40:LYS:HG3	43:DX:51:VAL:HB	1.99	0.45
13:CM:22:ILE:HB	13:CM:25:ILE:HD13	1.99	0.45
1:AA:1015:A:H8	1:AA:1015:A:O5'	2.00	0.45
25:DA:1796:U:H2'	25:DA:1797:C:H6	1.81	0.45
25:DA:2408:U:H2'	25:DA:2409:G:C8	2.52	0.45
25:BA:2399:U:OP1	46:B0:55:ARG:NH2	2.50	0.45
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.52	0.45
2:AB:63:MET:HB3	2:AB:225:ALA:O	2.16	0.45
44:BY:43:ASN:HD22	44:BY:43:ASN:HA	1.50	0.45
25:DA:445:C:O2'	25:DA:446:G:H5'	2.17	0.45
34:BO:97:ARG:HA	34:BO:117:LEU:HD22	1.99	0.45
25:DA:2698:U:H2'	25:DA:2699:C:C6	2.52	0.45
35:BP:124:LYS:HG3	35:BP:144:GLU:HG2	1.99	0.45
25:DA:524:U:H2'	25:DA:525:U:C6	2.52	0.45
1:AA:1205:U:O2'	3:AC:195:VAL:HG23	2.17	0.45
25:DA:1903:G:OP1	27:DD:241:PRO:HB2	2.17	0.45
36:BQ:133:ARG:HG2	36:BQ:134:ARG:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:44:SER:OG	11:CK:47:VAL:HG23	2.17	0.45
25:DA:1266:G:O5'	42:DW:15:ARG:NH2	2.50	0.45
1:AA:1424:C:H2'	1:AA:1425:U:O4'	2.16	0.45
30:DG:151:ALA:O	30:DG:153:ARG:HD3	2.16	0.45
25:DA:2335:A:C8	25:DA:2337:G:C5	3.05	0.45
25:BA:613:A:H2'	25:BA:614:C:O4'	2.17	0.45
47:B1:94:LEU:O	47:B1:97:LEU:HB2	2.17	0.45
5:CE:6:PHE:HD2	5:CE:63:ARG:HD3	1.82	0.45
1:CA:1007:C:O2	1:CA:1007:C:H2'	2.16	0.45
1:AA:1127:G:H21	1:AA:1148:U:H3	1.64	0.45
25:BA:2695:C:OP1	39:BT:53:ARG:NH2	2.50	0.45
50:B4:57:GLU:HB3	50:B4:58:ARG:CA	2.44	0.45
25:BA:927:G:OP2	25:BA:927:G:H8	2.01	0.45
1:AA:66:G:N2	1:AA:172:A:N3	2.65	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
13:CM:57:ARG:NH1	50:D4:17:GLY:HA3	2.32	0.45
1:AA:486:U:H2'	1:AA:487:A:C8	2.52	0.45
1:AA:384:G:C2	1:AA:385:C:C4	3.05	0.45
40:BU:76:TYR:HH	40:BU:92:ARG:HH11	1.59	0.45
1:AA:674:G:O2'	1:AA:675:A:H5'	2.17	0.45
25:BA:154:G:C6	25:BA:155:C:N4	2.85	0.45
25:DA:2315:G:H2'	25:DA:2316:C:C6	2.52	0.45
8:AH:121:ASP:OD1	8:AH:121:ASP:N	2.49	0.45
25:BA:1828:C:H4'	27:BD:257:LEU:O	2.17	0.45
29:DF:160:ASN:HB3	29:DF:163:VAL:HB	1.98	0.45
28:DE:119:ARG:HD2	28:DE:120:TRP:NE1	2.32	0.45
10:CJ:55:LYS:HE3	10:CJ:56:HIS:NE2	2.32	0.45
3:CC:179:ARG:HD2	3:CC:206:GLU:HB2	1.98	0.45
27:BD:146:GLU:HB2	27:BD:189:CYS:HB3	1.98	0.45
10:CJ:11:PHE:CD1	10:CJ:67:THR:HG22	2.52	0.45
1:CA:649:G:H2'	1:CA:650:G:O4'	2.16	0.45
1:AA:309:G:H1'	1:AA:608:A:C2	2.51	0.45
28:DE:144:ARG:HB3	28:DE:145:LYS:H	1.52	0.45
1:CA:1216:G:OP1	14:CN:2:ALA:HA	2.17	0.45
25:DA:2461:C:H2'	25:DA:2462:U:H6	1.82	0.45
28:BE:55:ASN:HB3	28:BE:58:ARG:HG3	1.97	0.45
25:DA:271(S):G:C6	25:DA:271(T):C:C4	3.05	0.45
25:BA:804:U:H2'	25:BA:805:C:O4'	2.17	0.45
25:BA:2328:C:H1'	30:BG:128:ARG:HH21	1.81	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)
1:AA:1203:C:H2'	1:AA:1204:A:C8	2.52	0.45
25:BA:2444:A:C8	47:B1:33:LYS:HD2	2.52	0.45
27:DD:99:ASP:HB3	27:DD:101:GLU:H	1.82	0.45
2:CB:37:ASN:O	2:CB:39:ILE:HG12	2.17	0.45
25:DA:335:C:H4'	44:DY:73:ARG:CD	2.47	0.45
25:BA:1971:G:C6	25:BA:1972:G:C6	3.05	0.45
2:AB:196:LEU:HA	2:AB:196:LEU:HD12	1.78	0.45
38:DS:85:VAL:O	38:DS:112:PHE:HB3	2.16	0.45
25:BA:335:A:C6	25:BA:352:U:C4	3.05	0.45
1:CA:1026:G:N7	1:CA:1036:G:N2	2.66	0.44
10:CJ:81:THR:HA	10:CJ:84:GLN:HB2	1.99	0.44
1:AA:146:G:C6	1:AA:147:G:N7	2.84	0.44
1:CA:599:C:H5''	8:CH:95:VAL:O	2.17	0.44
25:BA:1217:G:C5	25:BA:1218:G:C8	3.05	0.44
26:DB:66:A:N6	26:DB:109:C:H5'	2.28	0.44
9:AI:3:GLN:CG	9:AI:20:ARG:HE	2.28	0.44
3:CC:68:VAL:HG12	3:CC:70:VAL:HG12	1.99	0.44
1:CA:401:C:H1'	1:CA:622:A:H1'	1.98	0.44
4:CD:90:GLY:HA2	4:CD:204:ILE:HD11	1.97	0.44
25:DA:1710:C:H5'	25:DA:2859:G:H1'	1.99	0.44
30:DG:96:ARG:O	30:DG:99:MET:HB3	2.17	0.44
1:AA:542:G:OP1	4:AD:10:ARG:NH1	2.49	0.44
25:DA:2293:C:H6	25:DA:2293:C:H5''	1.82	0.44
25:DA:1187:G:H5''	41:DV:81:TYR:CE1	2.51	0.44
16:CP:6:LEU:HD23	16:CP:17:TYR:CD1	2.50	0.44
6:AF:44:GLY:HA2	6:AF:59:TYR:CE2	2.52	0.44
25:DA:484:C:H2'	25:DA:485:C:H6	1.82	0.44
1:CA:977:A:H2'	1:CA:978:A:H5''	1.98	0.44
25:DA:668:G:H5''	25:DA:668:G:H8	1.82	0.44
25:DA:2740:A:C6	25:DA:2764:A:C8	3.06	0.44
25:DA:852:G:N2	25:DA:926:A:H1'	2.32	0.44
16:CP:42:ARG:CB	16:CP:44:THR:HG23	2.48	0.44
38:DS:27:SER:HA	38:DS:88:ASP:HB3	1.99	0.44
1:CA:1106:G:H2'	1:CA:1107:C:H6	1.82	0.44
13:AM:121:LYS:HE3	13:AM:121:LYS:H	1.82	0.44
34:DO:119:PRO:HB2	39:DT:68:TYR:CE2	2.52	0.44
25:BA:1314:A:H2'	25:BA:1315:A:O4'	2.17	0.44
26:DB:119:G:C6	26:DB:120:A:C6	3.05	0.44
55:D9:17:ILE:HG21	55:D9:26:ILE:HD11	1.99	0.44
28:DE:96:PHE:HA	28:DE:100:GLU:OE1	2.17	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:BA:1557:A:H2'	25:BA:1558:G:C8	2.52	0.44
25:BA:834:U:H5'	25:BA:835:A:H5'	1.98	0.44
23:AX:12:G:H4'	25:BA:1930:C:O2	2.17	0.44
40:BU:34:LYS:NZ	40:BU:37:GLU:OE2	2.41	0.44
44:DY:35:TYR:CE2	44:DY:69:ALA:HB3	2.52	0.44
38:BS:67:ARG:HG2	38:BS:71:ARG:CZ	2.47	0.44
38:BS:67:ARG:HG2	38:BS:71:ARG:NH1	2.32	0.44
37:BR:98:LEU:HB2	37:BR:113:LEU:HD11	1.98	0.44
37:DR:65:LEU:HA	37:DR:65:LEU:HD12	1.81	0.44
40:BU:98:LEU:HA	40:BU:98:LEU:HD23	1.75	0.44
25:BA:2087:C:H2'	25:BA:2088:C:C6	2.52	0.44
25:DA:2508:G:C2	25:DA:2582:G:C6	3.05	0.44
4:CD:134:ASP:O	4:CD:136:PRO:HD3	2.18	0.44
8:AH:51:VAL:HG11	8:AH:60:ARG:NH1	2.28	0.44
1:CA:1126:U:H4'	1:CA:1281:U:H1'	1.98	0.44
14:CN:24:CYS:SG	14:CN:39:LEU:HA	2.58	0.44
2:CB:208:ILE:HA	2:CB:211:ILE:HD12	2.00	0.44
35:BP:50:ARG:HG2	54:B8:61:LEU:HD11	1.99	0.44
26:DB:33:G:O2'	26:DB:34:U:H5'	2.17	0.44
25:DA:52:A:C5	25:DA:118:A:C2	3.05	0.44
1:CA:1225:A:H2'	1:CA:1226:C:C5	2.52	0.44
1:CA:321:A:C2	1:CA:333:G:C2	3.06	0.44
13:CM:25:ILE:HD11	13:CM:66:LEU:HD13	1.98	0.44
1:CA:1206:G:C6	1:CA:1207:G:C5	3.05	0.44
13:AM:40:ASN:O	13:AM:43:THR:OG1	2.30	0.44
1:AA:1216:G:P	14:AN:2:ALA:HA	2.57	0.44
25:DA:1506:C:H2'	25:DA:1507:A:H5'	1.99	0.44
25:DA:94(A):G:H2'	25:DA:95:G:O4'	2.16	0.44
2:AB:30:ARG:HH21	2:AB:194:PRO:HB2	1.82	0.44
28:BE:175:VAL:HG22	28:BE:177:PRO:HD3	1.99	0.44
1:AA:1066:C:O2'	1:AA:1067:A:H5'	2.16	0.44
25:BA:1334:U:C4	25:BA:1373:C:H1'	2.52	0.44
18:CR:58:LEU:HD12	18:CR:62:GLU:HG3	1.99	0.44
45:DZ:125:LEU:HB3	45:DZ:165:VAL:CG1	2.47	0.44
1:CA:422:C:H4'	1:CA:423:G:C4	2.51	0.44
19:AS:31:ILE:HB	19:AS:49:ILE:HG12	1.99	0.44
25:BA:1095:C:C4	25:BA:1096:A:N7	2.85	0.44
8:CH:41:ARG:HH22	8:CH:123:GLU:CD	2.20	0.44
25:DA:1802:A:N1	25:DA:1822:G:H1'	2.33	0.44
7:CG:70:LYS:HG2	7:CG:96:GLN:O	2.18	0.44
26:BB:4:C:H42	26:BB:117:G:H1	1.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:27:ARG:HE	5:CE:27:ARG:HB2	1.62	0.44
25:DA:1681:G:O5'	25:DA:1681:G:H8	2.01	0.44
25:BA:401:A:C2	25:BA:428:A:C4	3.06	0.44
32:BI:14:ASP:OD1	32:BI:15:VAL:N	2.51	0.44
25:DA:797:C:H2'	25:DA:798:G:C8	2.53	0.44
25:BA:1073:A:C6	25:BA:1172:A:C4	3.06	0.44
1:AA:1124:G:P	10:AJ:36:GLY:H	2.40	0.44
25:DA:900:A:C2'	25:DA:901:A:H8	2.30	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
30:DG:15:VAL:HG13	30:DG:175:LEU:HD23	1.99	0.44
2:AB:71:VAL:HG12	2:AB:170:GLU:HG2	2.00	0.44
24:CW:1:2QZ:CG2	24:CW:10:2QY:H83	2.48	0.44
25:DA:997:G:H2'	25:DA:998:C:H6	1.83	0.44
46:B0:27:GLU:HB2	46:B0:69:PHE:HD1	1.82	0.44
25:BA:1904:C:H2'	25:BA:1905:G:O4'	2.18	0.44
1:AA:373:A:C2	1:AA:374:A:C8	3.06	0.44
4:CD:88:VAL:HG22	5:CE:96:PRO:HB2	1.99	0.44
25:DA:910:A:C6	25:DA:911:A:C6	3.05	0.44
1:AA:435:C:H2'	1:AA:436:C:H6	1.83	0.44
1:CA:1144:G:N2	1:CA:1146:A:H62	2.16	0.44
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
25:BA:323:A:N1	25:BA:346:A:O2'	2.44	0.44
1:AA:1291:G:H2'	1:AA:1292:U:C6	2.52	0.44
25:DA:1654:A:OP1	37:DR:1:MET:HA	2.18	0.44
36:BQ:109:VAL:HG22	36:BQ:113:GLN:OE1	2.17	0.44
25:BA:2856:G:H2'	25:BA:2857:U:O4'	2.17	0.44
1:CA:932:C:H2'	1:CA:933:G:C8	2.52	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
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:DA:1266:G:O2'	25:DA:2012:G:O6	2.21	0.44
3:CC:79:ARG:O	3:CC:82:GLU:HB2	2.17	0.44
25:DA:1475:G:C2	25:DA:1517:G:C2	3.05	0.44
25:BA:917:A:C2	25:BA:954:C:C2	3.05	0.44
1:CA:35:G:H2'	1:CA:36:C:C6	2.53	0.44
25:BA:1014:U:OP1	49:B3:17:LYS:N	2.50	0.44
15:AO:25:THR:HG21	15:AO:70:LEU:HB2	2.00	0.44
25:DA:828:U:H4'	25:DA:831:G:N1	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DZ:63:ASP:OD1	45:DZ:65:GLN:HG3	2.17	0.44
15:CO:48:LYS:N	15:CO:48:LYS:HD2	2.32	0.44
41:BV:20:LEU:HA	41:BV:20:LEU:HD12	1.75	0.44
29:BF:195:ASP:HB3	29:BF:198:ALA:H	1.82	0.44
1:AA:1129:C:H1'	1:AA:1130:A:N7	2.33	0.44
25:DA:1493:C:N4	25:DA:2206:G:O2'	2.47	0.44
1:CA:1179:A:C6	1:CA:1180:A:N7	2.85	0.44
1:AA:457:C:H2'	1:AA:458:C:H6	1.82	0.44
1:CA:974:A:OP2	14:CN:41:ARG:NH1	2.50	0.44
1:CA:1030(C):G:H2'	1:CA:1030(D):A:C8	2.53	0.44
19:CS:15:LEU:HD11	19:CS:33:THR:HB	1.99	0.44
3:CC:19:GLU:HB3	3:CC:40:ARG:NH2	2.33	0.44
1:CA:671:G:H5'	6:CF:77:ARG:NH2	2.27	0.44
9:AI:53:VAL:HG11	9:AI:92:TYR:CE1	2.53	0.44
6:AF:62:TRP:CD1	18:AR:35:ARG:HD2	2.53	0.44
25:DA:2819:G:H2'	25:DA:2821:A:N7	2.32	0.44
1:CA:38:G:N2	1:CA:397:A:H5''	2.31	0.44
13:CM:20:THR:HG21	13:CM:27:LYS:HE2	1.99	0.44
32:DI:79:ILE:HA	32:DI:80:PRO:HD2	1.73	0.44
25:BA:1993:A:OP2	27:BD:242:ARG:NH2	2.51	0.44
25:DA:854:G:C2	25:DA:855:G:C5	3.06	0.44
1:AA:257:G:N2	1:AA:269:C:O2	2.20	0.44
29:DF:40:GLN:NE2	29:DF:182:ASN:HB2	2.32	0.44
45:BZ:150:LEU:HA	45:BZ:150:LEU:HD12	1.59	0.44
1:CA:1028:C:N3	1:CA:1033:G:O6	2.50	0.44
1:AA:784:C:H4'	25:BA:1868:C:OP1	2.18	0.44
37:BR:8:ARG:NH1	37:BR:39:PRO:HB3	2.32	0.44
1:CA:805:C:C2'	1:CA:806:C:H5'	2.48	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
29:DF:49:ALA:O	29:DF:92:PRO:HB2	2.17	0.44
53:B7:1:MET:N	53:B7:1:MET:HE3	2.32	0.44
27:DD:61:LEU:HA	27:DD:61:LEU:HD12	1.57	0.44
4:AD:138:TYR:CE1	4:AD:140:VAL:HA	2.52	0.44
28:BE:127:ASP:OD2	61:BE:410:HOH:O	2.21	0.44
46:D0:82:ARG:HA	46:D0:83:PRO:HD3	1.73	0.44
43:BX:72:LYS:HG2	43:BX:73:ARG:O	2.18	0.44
2:AB:36:ARG:C	2:AB:38:GLY:H	2.20	0.44
25:BA:412:C:O2	35:BP:71:VAL:HG21	2.17	0.44
6:CF:7:ASN:ND2	18:CR:34:TYR:OH	2.46	0.44
25:DA:2780:G:OP2	33:DN:118:LYS:HD3	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:64:G:H4'	1:AA:65:U:H3'	1.98	0.44
32:BI:68:LEU:HD11	32:BI:109:ILE:HD11	2.00	0.44
25:DA:2653:U:O2'	31:DH:110:SER:HB3	2.17	0.44
8:CH:116:LYS:O	8:CH:119:LEU:HD21	2.17	0.44
2:CB:126:GLU:HG3	2:CB:126:GLU:H	1.63	0.44
27:BD:33:LEU:HA	27:BD:33:LEU:HD23	1.75	0.44
31:DH:90:LYS:HD2	31:DH:163:TYR:CD1	2.52	0.44
1:CA:110:C:O2'	16:CP:25:ARG:O	2.33	0.44
1:CA:1007:C:C2	1:CA:1022:G:N2	2.75	0.44
1:AA:159:G:O2'	1:AA:161:A:N7	2.47	0.44
1:CA:1118:C:H2'	1:CA:1119:C:C6	2.52	0.44
1:AA:1034:G:H5''	1:AA:1035:A:OP2	2.17	0.44
1:AA:184:G:H2'	1:AA:185:A:H8	1.82	0.44
25:DA:764:A:N1	25:DA:1789:A:O2'	2.49	0.44
41:DV:35:LEU:HB2	41:DV:57:VAL:CG2	2.46	0.44
5:AE:75:THR:HG23	5:AE:76:ILE:O	2.18	0.44
25:DA:2261:C:C5	46:D0:16:SER:HB3	2.53	0.44
9:CI:53:VAL:HG21	9:CI:92:TYR:OH	2.18	0.44
19:CS:50:ALA:HA	19:CS:58:VAL:O	2.17	0.44
25:DA:1359:A:N6	25:DA:1372:U:N3	2.61	0.44
32:DI:80:PRO:HA	32:DI:145:VAL:HG23	1.99	0.44
50:B4:61:ARG:HG3	50:B4:62:ARG:H	1.82	0.44
4:AD:187:ARG:HG2	4:AD:188:LEU:H	1.82	0.44
1:CA:937:A:H1'	1:CA:1379:G:H22	1.83	0.44
1:CA:276:G:C2'	1:CA:277:C:H5'	2.48	0.44
25:DA:1574:C:H2'	25:DA:1575:C:H6	1.83	0.44
42:DW:8:ARG:HA	42:DW:102:HIS:ND1	2.31	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
13:CM:13:LYS:HA	13:CM:44:ARG:HH11	1.81	0.44
27:DD:221:VAL:HG22	27:DD:226:MET:HE3	1.98	0.44
1:CA:35:G:O2'	12:CL:118:SER:O	2.36	0.44
25:BA:2635:G:H4'	25:BA:2835:C:O2	2.16	0.44
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	2.00	0.44
52:B6:11:LEU:HB3	52:B6:49:HIS:HB3	1.99	0.44
26:BB:24:G:N3	26:BB:27:C:N4	2.58	0.44
1:CA:679:C:O2'	1:CA:680:C:H5'	2.18	0.44
13:CM:97:PRO:HB3	13:CM:101:GLN:OE1	2.17	0.44
25:DA:2197:U:O3'	25:DA:2198:A:H8	2.01	0.44
25:DA:719:C:H2'	25:DA:720:C:H6	1.82	0.44
30:DG:111:LEU:HB2	30:DG:112:PRO:HD3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B4:16:CYS:SG	50:B4:17:GLY:N	2.90	0.44
25:BA:2827:G:OP1	37:BR:99:LYS:HE2	2.17	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
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
7:AG:16:LEU:HD11	9:AI:45:ALA:HB2	1.99	0.44
26:DB:62:C:H2'	26:DB:63:G:C8	2.53	0.44
1:CA:564:C:H5'	17:CQ:32:TYR:CE1	2.52	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
25:DA:2319:G:H4'	25:DA:2320:A:OP1	2.17	0.44
9:CI:24:GLY:HA2	9:CI:59:PHE:O	2.18	0.44
25:DA:154:G:C6	25:DA:173:G:C6	3.05	0.44
1:AA:184:G:O4'	1:AA:224:C:H4'	2.18	0.44
35:BP:59:LEU:HG	54:B8:58:ILE:HD13	2.00	0.44
1:CA:939:G:H2'	1:CA:940:C:C6	2.53	0.44
25:DA:2262:U:OP2	46:D0:19:LYS:HD3	2.16	0.44
1:AA:1399:C:C2	1:AA:1401:G:C5	3.06	0.44
15:CO:54:ARG:O	15:CO:58:MET:HG3	2.17	0.44
1:AA:688:G:O2'	1:AA:704:A:N1	2.47	0.44
38:DS:67:ARG:O	38:DS:71:ARG:HG2	2.17	0.44
10:AJ:57:LYS:HD2	10:AJ:60:ARG:HH21	1.81	0.44
34:DO:7:TYR:CE1	34:DO:44:LYS:HG3	2.53	0.44
38:DS:36:TYR:OH	38:DS:54:LEU:HD22	2.17	0.44
38:DS:26:LEU:HD22	38:DS:87:PHE:CE1	2.52	0.44
1:AA:581:G:N2	1:AA:582:U:C4	2.85	0.44
25:DA:652(D):C:H2'	25:DA:652(E):G:O4'	2.17	0.44
25:DA:652(E):G:H8	25:DA:652(E):G:OP2	2.00	0.44
1:CA:292:G:N7	1:CA:293:G:H1'	2.32	0.44
52:B6:40:CYS:HA	52:B6:41:PRO:HD3	1.80	0.44
1:CA:1431:C:H2'	1:CA:1432:G:O4'	2.18	0.44
31:BH:117:PRO:HG3	31:BH:123:PHE:CD2	2.52	0.44
25:DA:1169:G:H1	25:DA:1180:C:H42	1.65	0.44
27:DD:85:ASP:OD2	27:DD:88:ARG:HD2	2.18	0.44
25:DA:572:A:OP2	41:DV:78:LYS:NZ	2.50	0.44
27:BD:2:ALA:N	27:BD:20:ASP:OD2	2.50	0.44
25:DA:1392:A:C6	25:DA:1393:A:C6	3.06	0.44
25:DA:1365:A:O4'	47:D1:41:ARG:NH2	2.51	0.44
25:DA:542:C:C2	25:DA:552:G:N2	2.86	0.44
8:CH:82:HIS:NE2	8:CH:84:ARG:HG2	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:715:A:H2'	1:AA:716:A:C8	2.52	0.44
46:D0:34:GLY:N	46:D0:61:ALA:O	2.46	0.44
25:DA:78:A:H2'	25:DA:79:G:C8	2.53	0.44
2:AB:51:LEU:O	2:AB:55:PHE:HD2	2.01	0.44
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.82	0.44
2:CB:76:GLN:NE2	2:CB:206:ASP:O	2.50	0.44
1:AA:1173:G:H2'	1:AA:1174:G:H8	1.83	0.44
25:BA:1359:U:H2'	25:BA:1656:A:N1	2.33	0.44
25:DA:1788:C:C2	25:DA:1789:A:C8	3.05	0.44
1:CA:502:G:OP2	12:CL:116:SER:HA	2.17	0.44
25:DA:71:A:N7	43:DX:31:HIS:CE1	2.86	0.44
3:CC:33:LEU:HD21	14:CN:53:LEU:CD2	2.47	0.44
50:B4:14:ILE:HG12	50:B4:31:ILE:HB	2.00	0.44
1:CA:453:A:H4'	16:CP:72:ARG:HG3	2.00	0.44
20:CT:60:GLU:HG3	20:CT:81:LYS:HD2	2.00	0.44
25:DA:2536:G:C5	25:DA:2537:U:C5	3.05	0.44
33:BN:67:LEU:HD12	33:BN:67:LEU:HA	1.71	0.44
38:DS:15:ARG:HB3	38:DS:19:LYS:NZ	2.32	0.44
25:DA:595:C:H2'	25:DA:596:G:O4'	2.17	0.44
25:DA:1514:U:O2'	25:DA:1515:G:H5'	2.18	0.44
25:BA:2623:U:C4	51:B5:3:LYS:HG2	2.53	0.44
28:DE:101:ARG:HD2	28:DE:169:ASN:OD1	2.18	0.44
25:BA:555:G:C5	25:BA:2044:U:H5''	2.52	0.44
25:DA:344:G:N2	25:DA:345:A:H62	2.15	0.44
38:DS:34:HIS:ND1	38:DS:53:SER:OG	2.36	0.44
3:AC:175:LEU:HD21	3:AC:201:TYR:HE2	1.82	0.44
25:DA:954:G:C5	25:DA:955:C:C5	3.05	0.44
25:BA:1702:A:H3'	25:BA:1703:C:H6	1.82	0.44
28:BE:188:VAL:HA	28:BE:189:PRO:HD3	1.80	0.44
28:BE:78:LEU:O	28:BE:79:ARG:HG2	2.18	0.44
5:CE:152:ARG:HG3	8:CH:43:GLY:O	2.17	0.44
5:CE:36:ASP:C	5:CE:38:GLN:H	2.20	0.44
25:BA:171:A:H2'	25:BA:172:C:O4'	2.18	0.44
25:DA:2080:G:O2'	25:DA:2081:C:H5'	2.18	0.44
1:CA:1349:A:H2'	1:CA:1350:A:H8	1.82	0.44
25:DA:2817:G:C5	25:DA:2830:G:C2	3.05	0.44
40:DU:76:TYR:CZ	40:DU:80:ILE:HG13	2.53	0.44
25:DA:447:A:H4'	25:DA:449:A:C8	2.51	0.44
6:CF:89:MET:HG2	6:CF:91:VAL:HG23	2.00	0.44
25:BA:1588:G:H5''	25:BA:1589:A:OP2	2.17	0.44
29:BF:9:ILE:HA	29:BF:10:PRO:HD2	1.76	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:395:U:H1'	25:DA:396:G:N7	2.32	0.44
43:BX:24:GLY:O	43:BX:83:VAL:HG22	2.18	0.44
1:AA:1285:A:O5'	1:AA:1285:A:H8	2.01	0.44
8:CH:36:LEU:HA	8:CH:36:LEU:HD23	1.80	0.44
1:CA:399:G:H2'	1:CA:400:C:C6	2.53	0.44
6:AF:10:LEU:HD23	6:AF:61:LEU:HD13	2.00	0.44
1:CA:1154:G:H2'	1:CA:1154:G:H8	1.36	0.44
1:CA:1151:A:H5'	10:CJ:41:PRO:HA	1.97	0.44
25:DA:2298:A:N6	25:DA:2321:G:H1	2.15	0.44
19:AS:65:ASN:C	50:B4:58:ARG:HG3	2.38	0.44
19:CS:15:LEU:HD12	19:CS:18:LYS:HD2	1.99	0.44
1:CA:738:C:H2'	1:CA:739:C:H6	1.83	0.44
24:CW:1:2QZ:CB	24:CW:10:2QY:H83	2.47	0.44
54:B8:30:ARG:HD3	54:B8:30:ARG:HA	1.45	0.44
25:DA:2261:C:H1'	25:DA:2388:A:N3	2.33	0.44
1:AA:59:A:H5''	1:AA:60:A:H5''	2.00	0.44
12:CL:24:VAL:HG13	12:CL:98:TYR:CE1	2.46	0.44
29:BF:53:THR:HB	29:BF:56:GLU:OE2	2.18	0.44
1:AA:1220:G:O3'	19:AS:36:ARG:HD3	2.18	0.44
40:DU:113:ALA:O	40:DU:117:GLN:HG2	2.18	0.44
2:CB:69:LEU:HB3	2:CB:162:ILE:HG22	2.00	0.44
30:BG:16:ARG:HE	30:BG:31:VAL:HG21	1.82	0.44
1:CA:472:A:H2'	1:CA:473:G:O4'	2.18	0.44
25:DA:2078:C:H2'	25:DA:2079:U:O4'	2.17	0.44
25:DA:1656:C:H2'	25:DA:1657:C:C6	2.53	0.44
2:CB:100:GLY:HA2	2:CB:103:THR:OG1	2.18	0.44
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.52	0.44
25:DA:616:G:H5'	29:DF:205:ARG:HD2	2.00	0.44
1:CA:189:G:H2'	1:CA:189(A):C:C6	2.53	0.44
25:BA:248:G:HO2'	25:BA:646:A:HO2'	1.54	0.44
25:DA:623:G:C2	25:DA:624:C:C2	3.06	0.44
4:CD:110:PHE:N	4:CD:110:PHE:HD1	2.16	0.44
1:AA:1375:A:H4'	7:AG:29:LYS:HD3	2.00	0.44
12:AL:88:GLY:O	12:AL:99:HIS:HD2	2.01	0.44
25:BA:1722:C:H2'	25:BA:1723:A:O4'	2.18	0.44
37:DR:33:ARG:NH1	37:DR:115:GLU:OE2	2.49	0.44
25:DA:519:U:H2'	25:DA:520:G:H8	1.83	0.44
31:BH:84:SER:HA	31:BH:133:VAL:O	2.18	0.44
45:BZ:146:ILE:HA	45:BZ:147:GLY:HA2	1.67	0.44
25:BA:1766:G:H8	25:BA:1770:A:H62	1.66	0.44
15:AO:67:LEU:HA	15:AO:67:LEU:HD23	1.74	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BY:55:TYR:CD2	44:BY:55:TYR:N	2.85	0.44
10:AJ:84:GLN:O	10:AJ:84:GLN:HG2	2.18	0.44
47:B1:77:ALA:HA	47:B1:80:LEU:HD13	1.99	0.44
25:BA:2369:U:OP1	46:B0:20:ARG:NH1	2.51	0.44
1:AA:437:U:O3'	4:AD:125:HIS:CE1	2.71	0.44
25:BA:2734:A:O2'	25:BA:2884:C:H5'	2.17	0.44
19:CS:30:LEU:CD1	19:CS:32:LYS:HG3	2.40	0.44
1:CA:1168:A:N3	1:CA:1168:A:H3'	2.33	0.44
1:AA:660:G:H2'	1:AA:661:G:H8	1.81	0.44
1:AA:658:G:C2	1:AA:749:C:N3	2.86	0.44
1:CA:1227:A:H8	1:CA:1227:A:H3'	1.83	0.44
4:AD:164:ALA:O	4:AD:168:ARG:NH1	2.48	0.44
13:CM:20:THR:C	13:CM:22:ILE:H	2.21	0.44
25:DA:1131:G:O6	25:DA:2040:C:H1'	2.18	0.44
25:DA:478:A:N1	25:DA:500:G:H4'	2.33	0.44
25:DA:330:A:H2	25:DA:1210:A:H2'	1.82	0.44
11:CK:20:TYR:CE1	11:CK:83:ILE:HD12	2.52	0.44
2:AB:35:GLU:HB2	2:AB:40:HIS:HA	2.00	0.44
27:BD:77:ALA:HB2	27:BD:97:TYR:CG	2.52	0.44
1:CA:1342:C:H1'	9:CI:124:GLN:NE2	2.32	0.44
25:BA:956:A:C5	36:BQ:13:GLN:HG3	2.53	0.44
25:DA:1857:G:C6	25:DA:1858:G:N1	2.86	0.44
20:AT:57:ARG:HH22	20:AT:100:ILE:HD12	1.83	0.44
25:BA:2303:U:O2'	25:BA:2386:C:O2	2.30	0.44
45:BZ:126:VAL:CG1	45:BZ:161:VAL:HG23	2.47	0.44
25:DA:2750:A:H4'	25:DA:2751:G:OP2	2.13	0.44
48:D2:22:GLU:OE2	48:D2:68:ARG:NH2	2.51	0.44
47:D1:7:ILE:HG23	47:D1:98:LEU:HD11	1.99	0.44
25:DA:2387:U:H1'	46:D0:41:ARG:NE	2.32	0.44
1:AA:592:G:C2	1:AA:648:A:C2	3.06	0.44
1:CA:1380:U:C4	7:CG:3:ARG:HG2	2.52	0.44
31:DH:5:GLY:HA3	31:DH:65:HIS:CG	2.52	0.44
2:AB:133:LYS:O	2:AB:137:ARG:HG3	2.18	0.44
38:DS:57:LYS:HE2	38:DS:57:LYS:HB2	1.61	0.44
23:CX:8:U:O5'	23:CX:8:U:H6	2.01	0.44
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.17	0.44
1:CA:1049:U:C5	1:CA:1201:A:H5'	2.52	0.44
34:DO:80:ASP:OD1	39:DT:64:ARG:NH2	2.49	0.44
30:BG:43:LEU:HB3	30:BG:44:GLY:H	1.53	0.44
8:AH:53:VAL:HG12	8:AH:54:ASP:OD1	2.17	0.44
1:CA:1003:G:H22	1:CA:1035:A:H61	1.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.17	0.43
2:CB:213:LEU:HD22	2:CB:214:ILE:HD13	1.99	0.43
1:CA:1178:G:H2'	1:CA:1180:A:OP2	2.17	0.43
28:BE:110:GLY:HA2	28:BE:161:GLY:HA3	2.00	0.43
25:DA:876:C:H2'	25:DA:877:U:O4'	2.17	0.43
1:AA:181:G:N1	1:AA:195:A:C8	2.85	0.43
25:BA:927:G:H2'	25:BA:928:G:H5'	2.00	0.43
1:CA:1203:C:H2'	1:CA:1204:A:C8	2.53	0.43
25:BA:671:A:H2'	25:BA:672:G:O4'	2.18	0.43
13:AM:49:THR:OG1	13:AM:52:GLU:OE1	2.24	0.43
13:AM:3:ARG:HG2	13:AM:8:GLU:HA	2.00	0.43
25:DA:1297:C:OP1	25:DA:2710:C:H4'	2.18	0.43
2:CB:162:ILE:HG13	2:CB:162:ILE:O	2.17	0.43
16:CP:72:ARG:NH2	16:CP:73:LEU:HD21	2.33	0.43
13:CM:29:ARG:HH11	13:CM:64:TRP:HB3	1.83	0.43
17:AQ:60:ILE:HG12	17:AQ:61:GLU:N	2.33	0.43
44:BY:86:ARG:NH1	44:BY:100:ALA:HB1	2.31	0.43
25:DA:333:G:H2'	25:DA:333:G:N3	2.33	0.43
25:BA:2092:G:H2'	25:BA:2093:A:O4'	2.17	0.43
1:AA:630:G:O2'	1:AA:631:G:H5'	2.19	0.43
3:CC:112:SER:HB3	3:CC:115:LEU:HD23	2.00	0.43
31:DH:86:GLU:OE2	31:DH:132:ARG:NH2	2.38	0.43
1:CA:67:C:O2'	1:CA:171:A:H1'	2.18	0.43
25:DA:321:G:H4'	29:DF:165:ARG:O	2.18	0.43
29:BF:125:LEU:HD12	29:BF:194:MET:HB2	2.00	0.43
25:BA:31:C:C4	25:BA:32:C:C5	3.06	0.43
33:DN:42:TRP:HA	33:DN:48:MET:HE1	2.00	0.43
17:AQ:92:ARG:O	17:AQ:95:TYR:HB2	2.18	0.43
25:DA:1160:G:C6	25:DA:1161:C:C4	3.06	0.43
1:CA:1425:U:H2'	1:CA:1426:C:C6	2.53	0.43
18:AR:59:SER:H	18:AR:62:GLU:CG	2.31	0.43
25:BA:2710:U:H2'	25:BA:2711:C:C6	2.53	0.43
9:AI:15:ALA:HB2	9:AI:65:VAL:HG23	2.00	0.43
25:DA:1957:C:O2'	25:DA:1985:G:H1'	2.18	0.43
25:BA:2023:A:H2'	25:BA:2024:G:C8	2.52	0.43
40:BU:75:ASN:OD1	40:BU:78:THR:OG1	2.19	0.43
27:BD:175:LEU:HD12	27:BD:185:VAL:HG21	2.00	0.43
25:BA:26:G:C6	25:BA:27:G:C6	3.06	0.43
25:BA:233:A:C2	25:BA:244:A:C4	3.06	0.43
25:DA:775:G:C4	25:DA:794:G:C8	3.06	0.43
1:CA:69:G:H2'	1:CA:70:G:H8	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1002:G:H2'	1:CA:1003:G:H8	1.83	0.43
1:AA:1277:C:H1'	1:AA:1282:C:C2	2.53	0.43
1:CA:1157:A:N6	1:CA:1178:G:H21	2.15	0.43
9:CI:14:VAL:HG22	9:CI:66:ARG:O	2.18	0.43
25:DA:1489:U:O2'	25:DA:1490:A:H5''	2.18	0.43
1:CA:1072:G:C6	1:CA:1073:U:C4	3.07	0.43
1:AA:472:A:H2'	1:AA:473:G:O4'	2.17	0.43
25:DA:89:G:C3'	25:DA:90:U:H5''	2.44	0.43
1:CA:1243:C:H2'	1:CA:1244:C:C6	2.53	0.43
1:AA:1030:C:N4	1:AA:1030(A):G:N3	2.66	0.43
25:DA:2298:A:C8	25:DA:2299:G:C8	3.07	0.43
19:AS:41:VAL:HB	19:AS:44:MET:HG3	1.99	0.43
1:AA:1304:G:C6	1:AA:1305:G:N1	2.86	0.43
30:DG:3:LEU:HD22	50:D4:25:TYR:CE2	2.53	0.43
28:BE:119:ARG:CG	28:BE:160:TYR:HB2	2.48	0.43
25:DA:2849:U:H4'	25:DA:2868:A:C2	2.52	0.43
6:AF:38:GLU:OE1	6:AF:64:GLN:NE2	2.35	0.43
1:AA:454:C:OP1	16:AP:75:ARG:NH2	2.49	0.43
4:AD:177:ASP:OD2	4:AD:180:GLY:HA3	2.18	0.43
25:DA:936:C:H2'	25:DA:937:U:C6	2.52	0.43
7:AG:78:ARG:NH2	7:AG:156:TRP:HB3	2.33	0.43
30:DG:170:ARG:HD3	30:DG:170:ARG:C	2.39	0.43
1:AA:1047:G:O3'	14:AN:4:LYS:HB2	2.17	0.43
28:DE:166:THR:HG21	28:DE:199:ARG:HH22	1.83	0.43
1:CA:1427:U:H2'	1:CA:1428:A:H8	1.80	0.43
25:DA:2820:A:OP1	37:DR:2:ARG:NH2	2.51	0.43
6:AF:30:LEU:O	6:AF:35:ALA:N	2.51	0.43
1:CA:1323:G:H4'	1:CA:1363:C:N3	2.32	0.43
2:CB:24:TRP:CH2	2:CB:26:PRO:HA	2.53	0.43
25:DA:590:A:OP1	29:DF:95:ARG:NH1	2.51	0.43
1:CA:640:A:C2'	1:CA:641:U:H5'	2.48	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
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
37:BR:36:THR:O	37:BR:111:LEU:HD12	2.18	0.43
9:AI:29:ASN:ND2	9:AI:65:VAL:O	2.51	0.43
9:AI:18:PHE:HD2	9:AI:62:TYR:HD2	1.66	0.43
5:CE:105:VAL:HG21	5:CE:128:PRO:HB3	2.00	0.43
27:DD:77:ALA:HA	27:DD:97:TYR:HA	2.00	0.43
47:D1:76:ARG:HH11	47:D1:97:LEU:HD22	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:D7:22:MET:HA	53:D7:28:ARG:HG2	2.00	0.43
25:DA:262:A:H2'	25:DA:263:C:O4'	2.19	0.43
12:AL:71:PRO:O	12:AL:102:ARG:HD2	2.18	0.43
1:CA:926:G:H22	22:CV:16:A:P	2.41	0.43
27:BD:275:LYS:HB3	27:BD:276:LYS:H	1.40	0.43
44:DY:76:CYS:SG	44:DY:78:ALA:HB3	2.59	0.43
26:BB:12:C:H2'	46:B0:73:GLY:HA3	1.99	0.43
20:AT:92:LEU:HA	20:AT:92:LEU:HD23	1.72	0.43
38:BS:32:LEU:HD23	38:BS:32:LEU:HA	1.81	0.43
25:BA:518:G:H2'	25:BA:519:G:O4'	2.18	0.43
40:BU:66:ASN:O	40:BU:70:ARG:HG3	2.17	0.43
16:AP:6:LEU:HB3	16:AP:17:TYR:CD2	2.53	0.43
43:DX:26:TYR:CE2	43:DX:89:ILE:HG13	2.53	0.43
41:BV:55:ALA:HB2	41:BV:101:GLY:HA2	1.99	0.43
30:DG:16:ARG:HA	30:DG:16:ARG:HD2	1.65	0.43
1:CA:1137:C:H5'	1:CA:1138:G:OP1	2.18	0.43
10:CJ:38:ILE:HG13	10:CJ:38:ILE:O	2.18	0.43
16:AP:57:ARG:NH2	16:AP:79:VAL:O	2.42	0.43
1:CA:1169:A:C8	1:CA:1169:A:H3'	2.53	0.43
1:AA:195:A:H3'	1:AA:196:A:C8	2.52	0.43
30:BG:11:TYR:CE2	30:BG:16:ARG:HD3	2.53	0.43
16:CP:72:ARG:HH21	16:CP:73:LEU:HD21	1.82	0.43
25:DA:2312:U:H5'	30:DG:88:ILE:HD11	2.01	0.43
48:B2:32:LEU:HD12	48:B2:36:ARG:NH1	2.33	0.43
1:CA:1240:U:C2	7:CG:32:ARG:HD2	2.53	0.43
38:DS:19:LYS:H	38:DS:19:LYS:HG2	1.56	0.43
38:DS:94:TYR:CE1	38:DS:99:LYS:HG3	2.53	0.43
1:CA:509:A:C8	1:CA:509:A:C3'	3.01	0.43
10:CJ:57:LYS:HD2	10:CJ:60:ARG:NH2	2.33	0.43
2:AB:127:ILE:CD1	2:AB:130:ARG:HD3	2.49	0.43
25:DA:2852:G:H2'	25:DA:2853:C:C6	2.53	0.43
25:DA:917:A:H5'	25:DA:918:A:OP2	2.17	0.43
1:CA:160:A:H2'	1:CA:161:A:H8	1.83	0.43
23:CX:59:A:H2'	23:CX:60:U:H5'	2.00	0.43
14:AN:13:THR:HA	14:AN:14:PRO:HD3	1.85	0.43
25:BA:2352:G:H2'	25:BA:2353:G:C8	2.53	0.43
25:DA:1996:C:H4'	25:DA:1997:G:OP1	2.18	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
30:BG:125:PHE:HB3	30:BG:166:ASP:OD1	2.19	0.43
4:AD:107:ARG:NH2	4:AD:194:LEU:HD22	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:966:G:H21	9:AI:127:LYS:NZ	2.17	0.43
25:DA:1916:A:H2'	25:DA:1917:U:O4'	2.18	0.43
30:DG:73:ALA:HB3	30:DG:85:GLY:H	1.83	0.43
25:DA:2031:A:C6	25:DA:2498:C:H1'	2.53	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
25:DA:289:A:H2'	25:DA:290:G:O4'	2.19	0.43
35:BP:6:LEU:HD23	35:BP:6:LEU:HA	1.74	0.43
17:CQ:81:ARG:HD2	17:CQ:81:ARG:HA	1.76	0.43
26:DB:3:C:H2'	26:DB:4:C:C6	2.53	0.43
25:DA:2236:C:H2'	25:DA:2237:G:O4'	2.19	0.43
25:BA:2453:C:OP2	25:BA:2598:C:O2'	2.35	0.43
25:BA:1894:G:H2'	25:BA:1895:U:C6	2.53	0.43
1:AA:1262:C:H2'	1:AA:1263:C:C6	2.53	0.43
15:AO:74:ASP:CG	15:AO:77:ARG:HG3	2.38	0.43
1:CA:1035:A:C2	1:CA:1036:G:C8	3.06	0.43
1:AA:1095:U:H2'	1:AA:1096:C:O4'	2.17	0.43
20:AT:13:LEU:HD12	20:AT:14:LYS:N	2.33	0.43
2:AB:71:VAL:HA	2:AB:93:VAL:HG23	2.01	0.43
54:B8:39:LYS:HA	54:B8:42:ARG:NH1	2.33	0.43
1:AA:673:G:N2	1:AA:674:G:C2	2.86	0.43
25:DA:2831:G:P	28:DE:58:ARG:NH2	2.91	0.43
5:CE:110:LEU:HD21	5:CE:139:LEU:HD21	2.00	0.43
1:CA:646:U:H2'	1:CA:647:C:H6	1.77	0.43
25:DA:2243:U:OP1	61:DA:4352:HOH:O	2.21	0.43
1:CA:1270:C:C2'	1:CA:1271:G:H5'	2.47	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
1:CA:1263:C:H2'	1:CA:1264:C:C5	2.54	0.43
26:DB:45:A:H2'	26:DB:46:A:C8	2.53	0.43
1:AA:33:A:H2'	1:AA:34:C:H6	1.82	0.43
9:CI:116:LYS:NZ	9:CI:122:ALA:HB2	2.33	0.43
1:CA:832:C:N4	1:CA:833:U:C4	2.87	0.43
1:CA:708:C:H2'	1:CA:709:G:C8	2.54	0.43
15:CO:33:THR:O	15:CO:36:ILE:HB	2.19	0.43
4:AD:117:ALA:O	4:AD:121:VAL:HG23	2.18	0.43
1:AA:784:C:H2'	1:AA:785:G:O4'	2.18	0.43
1:CA:642:A:C6	1:CA:643:C:C4	3.06	0.43
25:DA:1939:U:OP1	25:DA:2604:U:O2'	2.36	0.43
25:BA:564:G:H2'	25:BA:565:C:C6	2.52	0.43
37:DR:87:TYR:OH	37:DR:117:VAL:O	2.24	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:966:G:C6	25:DA:967:C:N4	2.86	0.43
1:AA:413:G:N2	1:AA:428:G:H1'	2.34	0.43
27:DD:139:GLY:H	27:DD:165:ILE:HB	1.83	0.43
7:AG:26:PHE:CE2	7:AG:30:ILE:HD11	2.53	0.43
25:DA:2751:G:OP2	31:DH:2:SER:HB3	2.18	0.43
40:BU:78:THR:HG22	40:BU:117:GLN:HE22	1.84	0.43
25:BA:711:C:H4'	25:BA:986:A:OP1	2.18	0.43
4:CD:72:GLU:OE1	4:CD:207:TYR:OH	2.37	0.43
25:DA:140:G:N2	25:DA:1596:A:H4'	2.33	0.43
25:BA:814:U:O2'	25:BA:815:G:H5'	2.17	0.43
36:BQ:2:LEU:HD23	36:BQ:69:PHE:CD2	2.53	0.43
25:DA:608:A:H2'	25:DA:609:A:C8	2.53	0.43
8:CH:39:LEU:HB3	8:CH:45:ILE:HG12	2.00	0.43
1:AA:1394:A:C6	1:AA:1501:C:H4'	2.53	0.43
25:BA:1008:U:H2'	25:BA:1009:C:C6	2.54	0.43
34:DO:73:ASP:HB2	39:DT:82:LEU:HD13	2.00	0.43
1:CA:1517:G:H1'	25:DA:1919:A:O3'	2.18	0.43
25:BA:2336:C:H5''	25:BA:2337:G:H5'	2.00	0.43
25:BA:977:G:OP2	49:B3:29:ARG:NH2	2.50	0.43
31:DH:25:LYS:HG2	31:DH:25:LYS:HZ3	1.75	0.43
25:BA:2367:C:H1'	46:B0:39:ARG:HH21	1.82	0.43
36:BQ:35:VAL:HG13	36:BQ:130:LYS:HB3	1.99	0.43
26:DB:6:C:C2	26:DB:116:G:N2	2.87	0.43
25:BA:1987:C:H3'	25:BA:1988:A:H2'	1.99	0.43
25:DA:2259:G:H1'	25:DA:2427:C:C2	2.53	0.43
39:DT:16:ARG:NH1	39:DT:18:ASP:OD2	2.51	0.43
1:AA:1266:G:N2	1:AA:1270:C:C2	2.86	0.43
25:DA:1341:U:H3'	25:DA:1397:U:O2	2.18	0.43
1:CA:1017:G:H2'	1:CA:1018:C:O4'	2.18	0.43
31:DH:98:LEU:CD2	31:DH:125:VAL:HG23	2.46	0.43
25:DA:450:G:P	25:DA:1248:G:H22	2.41	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
8:AH:10:LEU:HD22	8:AH:83:ILE:HD11	2.00	0.43
25:DA:2380:C:O5'	25:DA:2380:C:H6	2.01	0.43
16:CP:21:VAL:HG11	16:CP:59:TRP:NE1	2.33	0.43
43:DX:31:HIS:HD2	43:DX:33:LYS:H	1.67	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
1:CA:1271:G:H5''	1:CA:1314:C:OP1	2.18	0.43
25:BA:2122:G:N3	25:BA:2122:G:H2'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BZ:111:VAL:HG12	45:BZ:112:ARG:N	2.33	0.43
26:DB:42:C:O2	30:DG:92:VAL:HA	2.18	0.43
25:DA:1032:A:O2'	25:DA:1034:G:OP2	2.21	0.43
25:BA:2108:U:H2'	25:BA:2109:G:H8	1.83	0.43
1:AA:1379:G:C5	1:AA:1380:U:C5	3.06	0.43
1:AA:276:G:O3'	17:AQ:68:ARG:NH1	2.52	0.43
25:DA:275:G:C6	25:DA:276:A:C6	3.07	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
31:BH:117:PRO:HA	31:BH:118:PRO:HD2	1.83	0.43
1:AA:727:G:N2	1:AA:730:G:OP2	2.45	0.43
1:AA:1288:A:C6	1:AA:1289:A:C5	3.06	0.43
45:DZ:11:GLU:HB3	45:DZ:12:GLY:H	1.70	0.43
2:CB:101:MET:HA	2:CB:108:ILE:HD13	2.01	0.43
45:DZ:14:LYS:HA	45:DZ:15:PRO:HD3	1.87	0.43
21:AU:18:TYR:CE2	21:AU:24:ARG:HD3	2.53	0.43
37:DR:20:LEU:O	37:DR:24:GLN:HG3	2.19	0.43
9:AI:128:ARG:NH1	23:AX:35:A:OP2	2.51	0.43
45:BZ:102:LEU:HD13	45:BZ:123:ASP:HA	2.00	0.43
25:BA:2042:A:O2'	25:BA:2043:C:H5'	2.19	0.43
25:DA:2845:G:H5''	39:DT:54:ARG:O	2.18	0.43
25:DA:2573:C:H3'	61:DA:4461:HOH:O	2.18	0.43
31:BH:88:LEU:HD23	31:BH:165:ALA:HA	2.01	0.43
2:AB:156:LYS:HB3	2:AB:156:LYS:HE2	1.64	0.43
13:AM:84:ILE:HD12	19:AS:74:PHE:HZ	1.83	0.43
25:BA:1618:A:H2'	25:BA:1619:A:C8	2.53	0.43
25:DA:2870:C:H2'	25:DA:2871:C:O4'	2.17	0.43
1:AA:1145:C:H4'	1:AA:1146:A:C5'	2.47	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:AA:1075:C:H2'	1:AA:1076:C:H5'	2.01	0.43
1:AA:1030(A):G:N2	1:AA:1032:G:O6	2.51	0.43
8:CH:51:VAL:HG11	8:CH:60:ARG:NH1	2.30	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
16:CP:22:THR:HA	16:CP:33:ILE:HG13	2.01	0.43
25:BA:154:G:O6	25:BA:155:C:N4	2.52	0.43
30:BG:11:TYR:OH	30:BG:32:PRO:O	2.31	0.43
1:CA:1269:A:H2	1:CA:1312:G:N3	2.16	0.43
27:BD:38:LYS:HD2	27:BD:38:LYS:HA	1.59	0.43
1:AA:684:A:O2'	11:AK:39:PRO:O	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:18:LYS:HG2	57:AD:501:SF4:S1	2.57	0.43
1:AA:626:U:C2	1:AA:627:G:C8	3.06	0.43
26:DB:43:C:C5	26:DB:45:A:N6	2.87	0.43
35:DP:45:LEU:HD23	35:DP:45:LEU:HA	1.43	0.43
20:CT:10:LEU:HD12	20:CT:10:LEU:HA	1.61	0.43
1:CA:577:G:C8	1:CA:816:A:C6	3.07	0.43
34:BO:101:PRO:HG3	39:BT:67:SER:OG	2.18	0.43
1:CA:933:G:C6	1:CA:1385:G:C6	3.07	0.43
30:DG:145:THR:H	30:DG:148:MET:HE3	1.84	0.43
25:DA:1761:C:H3'	25:DA:1762:A:H5''	1.99	0.43
20:AT:34:LYS:HE2	20:AT:34:LYS:HB2	1.85	0.43
25:BA:1836:U:H5''	27:BD:250:TRP:CD2	2.54	0.43
18:AR:59:SER:H	18:AR:62:GLU:HG3	1.84	0.43
25:BA:864:C:H4'	25:BA:977:G:C5	2.54	0.43
25:DA:2845:G:H2'	25:DA:2846:G:C8	2.54	0.43
25:DA:1827:C:OP2	27:DD:222:ARG:NH1	2.52	0.43
44:DY:86:ARG:HH11	44:DY:100:ALA:HA	1.84	0.43
10:CJ:5:ARG:O	10:CJ:98:ILE:HA	2.18	0.43
1:AA:353:A:H5'	1:AA:353:A:H8	1.84	0.43
29:DF:106:ARG:H	29:DF:106:ARG:HG2	1.48	0.43
25:DA:2607:G:H2'	25:DA:2608:G:O4'	2.19	0.43
1:AA:1003:G:C2'	1:AA:1004:A:H4'	2.49	0.43
1:AA:442:C:H5'	1:AA:443:C:OP2	2.19	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
43:BX:31:HIS:HA	43:BX:32:PRO:HD3	1.86	0.43
25:DA:649:G:C4'	54:D8:46:ARG:HH22	2.28	0.43
1:AA:381:C:C5	1:AA:382:A:C5	3.06	0.43
1:AA:1367:C:N3	1:AA:1368:G:C8	2.87	0.43
6:AF:62:TRP:CH2	6:AF:64:GLN:HB2	2.53	0.43
1:CA:391:G:C6	1:CA:392:G:C5	3.06	0.43
27:DD:183:ARG:HG3	27:DD:270:ILE:HG12	2.01	0.43
1:CA:38:G:C2	1:CA:397:A:C2	3.07	0.43
26:DB:28:C:H2'	26:DB:29:A:O4'	2.19	0.43
25:DA:2712:U:H1'	25:DA:2712(A):A:C8	2.53	0.43
25:BA:2348:A:H61	46:B0:43:THR:HG22	1.81	0.43
45:DZ:45:ASP:OD2	45:DZ:49:ARG:HD2	2.19	0.43
1:CA:811:C:O2'	1:CA:901:A:N1	2.46	0.43
35:DP:38:GLN:O	35:DP:39:LYS:CB	2.66	0.43
1:AA:957:U:H2'	1:AA:959:A:OP2	2.19	0.43
4:AD:57:ARG:HH22	5:AE:107:ARG:HD3	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1654:A:O2'	28:DE:113:PHE:O	2.34	0.43
1:CA:93:G:H2'	1:CA:96:U:O4'	2.19	0.43
25:DA:362:U:H6	25:DA:362:U:H2'	1.68	0.43
1:AA:646:U:H2'	1:AA:647:C:H6	1.84	0.43
25:DA:2646:C:OP2	25:DA:2732:G:O2'	2.27	0.43
31:BH:7:LEU:O	31:BH:69:ARG:HD3	2.19	0.43
27:DD:13:ARG:HA	27:DD:13:ARG:HD2	1.67	0.43
17:CQ:57:VAL:HG12	17:CQ:75:ARG:O	2.18	0.43
1:AA:1203:C:H2'	1:AA:1204:A:H8	1.84	0.43
1:CA:909:A:H2'	1:CA:910:C:O4'	2.19	0.43
1:AA:1263:C:H2'	1:AA:1264:C:C6	2.54	0.43
25:DA:1503:U:O2'	25:DA:1504:C:H5'	2.18	0.43
30:BG:77:ILE:HD12	30:BG:82:LEU:HD12	2.01	0.43
25:DA:348:G:H2'	25:DA:349:G:H8	1.82	0.43
25:BA:1473:A:H4'	25:BA:1474:C:O4'	2.19	0.43
36:BQ:78:PRO:O	36:BQ:81:VAL:HG13	2.18	0.43
5:AE:69:VAL:HG22	5:AE:71:LEU:HD23	2.00	0.43
4:CD:158:ILE:HG22	4:CD:162:LEU:HD12	2.01	0.43
25:BA:99:G:O3'	48:B2:7:ARG:NH2	2.52	0.43
25:DA:635:C:H2'	25:DA:636:G:O4'	2.19	0.43
25:DA:2776:A:H4'	25:DA:2777:G:H5''	2.00	0.43
2:AB:122:PHE:CD2	2:AB:139:LYS:HE2	2.53	0.43
25:BA:2679:C:H6	25:BA:2679:C:O5'	2.02	0.43
15:CO:76:GLU:HA	15:CO:76:GLU:OE1	2.19	0.43
27:BD:123:ALA:HB3	27:BD:131:LEU:HG	1.99	0.43
1:AA:1127:G:N2	1:AA:1147:C:N4	2.67	0.43
1:AA:97:G:O2'	1:AA:98:G:H8	2.02	0.43
25:DA:301:G:C4	25:DA:302:C:C5	3.07	0.43
25:DA:1338:G:O2'	25:DA:1339:G:H5'	2.19	0.43
1:CA:738:C:H2'	1:CA:739:C:C6	2.53	0.43
36:BQ:54:MET:HB3	36:BQ:64:ILE:CD1	2.46	0.43
50:D4:60:GLN:N	50:D4:62:ARG:HE	2.17	0.43
1:CA:1226:C:H4'	19:CS:80:TYR:CZ	2.53	0.43
1:CA:382:A:H2'	1:CA:383:A:H8	1.77	0.43
25:DA:2821:A:C2	25:DA:2822:G:C4	3.06	0.43
10:AJ:78:ASN:C	10:AJ:80:LYS:H	2.22	0.43
25:DA:2048:G:C6	25:DA:2049:G:C5	3.07	0.43
3:AC:12:LEU:HD23	3:AC:16:ARG:HB3	2.01	0.43
1:AA:728:A:C6	15:AO:54:ARG:HD2	2.54	0.43
25:BA:311:C:H2'	25:BA:312:C:O4'	2.18	0.43
1:AA:1442:G:H2'	1:AA:1442(A):G:H5'	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:242:C:OP2	54:B8:5:LYS:NZ	2.43	0.43
50:B4:59:PHE:CA	50:B4:61:ARG:H	2.31	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:1164:G:H2'	25:DA:1165:U:C6	2.54	0.43
1:CA:414:A:H2'	1:CA:415:A:O4'	2.18	0.43
16:AP:27:LYS:HB2	16:AP:27:LYS:HE3	1.73	0.43
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.54	0.43
25:DA:2526:G:H2'	25:DA:2527:C:C6	2.53	0.43
1:CA:642:A:N3	8:CH:113:SER:OG	2.40	0.43
25:BA:64:C:H2'	25:BA:65:C:C6	2.54	0.43
19:AS:48:THR:HG22	19:AS:61:TYR:HA	2.01	0.43
5:AE:152:ARG:NH2	8:AH:107:LEU:O	2.52	0.43
1:AA:1067:A:N3	1:AA:1068:G:H1'	2.34	0.43
32:DI:62:LYS:HG2	32:DI:133:HIS:NE2	2.34	0.43
28:DE:59:VAL:HG21	28:DE:74:PRO:HB3	2.00	0.43
25:DA:2469:A:H5''	25:DA:2470:G:OP2	2.19	0.43
4:AD:61:LYS:HD2	4:AD:207:TYR:CZ	2.54	0.43
25:BA:1345:G:O5'	25:BA:1345:G:H8	2.01	0.43
1:AA:773:G:H5''	1:AA:773:G:H8	1.84	0.43
30:DG:165:THR:OG1	30:DG:168:GLU:HG3	2.19	0.43
5:AE:136:MET:O	5:AE:139:LEU:N	2.52	0.43
9:CI:9:ARG:H	9:CI:79:LEU:HD23	1.84	0.43
1:CA:620:C:C2	4:CD:135:LEU:HG	2.52	0.43
30:DG:14:GLU:C	30:DG:17:PRO:HD2	2.39	0.43
25:DA:2298:A:N1	25:DA:2321:G:C2	2.86	0.43
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.19	0.43
1:AA:742:G:P	15:AO:35:ARG:HH22	2.40	0.43
24:AW:8:2R3:H62	24:AW:9:MVA:HN1	1.67	0.43
29:BF:7:TYR:O	29:BF:21:ALA:HA	2.18	0.43
1:AA:1220:G:N2	19:AS:54:GLY:O	2.45	0.43
34:DO:35:VAL:HA	34:DO:62:VAL:HG12	2.01	0.43
1:AA:41:G:O2'	1:AA:42:G:H5'	2.19	0.43
35:DP:50:ARG:O	35:DP:52:GLU:HG3	2.19	0.43
25:DA:2617:C:H2'	25:DA:2618:G:O4'	2.19	0.43
25:DA:1380:G:N2	25:DA:1570:A:N1	2.59	0.43
1:AA:625:G:C2'	1:AA:626:U:H5'	2.49	0.43
1:AA:600:C:H2'	1:AA:601:C:H6	1.83	0.43
25:DA:218:A:N1	25:DA:235:U:O2'	2.48	0.43
1:AA:1259:C:N4	1:AA:1276:G:H1	2.16	0.43
8:AH:39:LEU:HD12	8:AH:39:LEU:HA	1.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:868:U:C4	25:DA:869:G:N7	2.87	0.43
10:CJ:50:ILE:HD11	10:CJ:57:LYS:HD3	2.01	0.43
1:AA:256:U:H2'	1:AA:257:G:C8	2.54	0.43
25:DA:1494:A:H2'	25:DA:1495:A:C8	2.53	0.43
25:BA:939:C:O2'	25:BA:940:C:H5'	2.19	0.43
1:AA:516:U:C4	1:AA:517:G:C6	3.06	0.43
19:AS:22:LEU:HD13	19:AS:47:HIS:CD2	2.54	0.43
1:AA:203:U:OP2	1:AA:203:U:H2'	2.19	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
5:CE:11:ILE:HB	5:CE:31:LEU:HB3	2.01	0.43
26:BB:75:G:C5'	26:BB:75:G:H8	2.32	0.43
1:AA:429:U:H4'	1:AA:430:A:O5'	2.19	0.43
1:CA:1052:U:H5''	1:CA:1053:G:OP2	2.19	0.43
5:CE:148:VAL:HG13	5:CE:152:ARG:CZ	2.49	0.43
1:CA:817:C:N4	1:CA:1529:G:H1	2.16	0.43
25:BA:83:A:C5'	44:BY:8:LYS:HG2	2.49	0.43
11:CK:43:SER:HA	11:CK:47:VAL:HG21	1.99	0.43
40:DU:36:ARG:HD2	40:DU:40:PHE:CZ	2.54	0.43
25:BA:2624:C:H2'	25:BA:2625:U:H5'	2.00	0.43
1:CA:32:A:C2	1:CA:33:A:C4	3.07	0.43
25:BA:383:A:H2'	25:BA:384:G:O4'	2.19	0.43
1:CA:860:A:H2'	1:CA:861:G:O4'	2.19	0.43
25:DA:2489:G:C6	25:DA:2490:G:C6	3.07	0.43
31:BH:103:LEU:HD23	31:BH:148:ILE:HD13	1.99	0.43
26:DB:37:C:C5	26:DB:38:C:C5	3.07	0.43
47:B1:64:ALA:HA	47:B1:67:ILE:HG13	2.00	0.43
25:BA:1805:C:O5'	25:BA:1805:C:H6	2.02	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
25:DA:1009:A:O5'	25:DA:1009:A:H8	2.02	0.43
25:BA:252:C:H2'	25:BA:253:C:O4'	2.19	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:1003:G:H2'	1:AA:1004:A:H4'	2.01	0.43
54:B8:6:THR:HG23	54:B8:64:TYR:HD2	1.84	0.43
1:AA:148:G:N3	1:AA:149:A:C8	2.87	0.43
1:CA:1065:U:H6	1:CA:1190:G:H21	1.65	0.43
2:CB:219:VAL:HA	2:CB:222:ILE:CD1	2.48	0.43
1:CA:600:C:OP1	8:CH:97:VAL:N	2.38	0.43
25:BA:302:A:H8	25:BA:302:A:P	2.42	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:42:PRO:CG	50:D4:61:ARG:HG2	2.44	0.43
13:AM:3:ARG:CG	13:AM:4:ILE:H	2.32	0.43
25:BA:1889:G:H22	25:BA:1905:G:H2'	1.83	0.43
1:AA:374:A:C6	1:AA:375:U:C4	3.07	0.43
28:BE:176:ILE:HB	28:BE:181:LEU:HB2	2.00	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
1:CA:226:G:C2	1:CA:227:G:C8	3.07	0.43
25:DA:754:C:H4'	25:DA:1272:A:N6	2.34	0.43
1:AA:1423:G:OP1	34:BO:49:ARG:NH2	2.47	0.43
45:BZ:155:LEU:HA	45:BZ:155:LEU:HD12	1.73	0.43
25:DA:1448:G:H4'	25:DA:1542:A:OP1	2.19	0.43
25:BA:956:A:H62	36:BQ:12:GLN:HA	1.83	0.43
1:CA:1063:C:H5''	1:CA:1064:G:H2'	2.01	0.43
27:DD:164:GLN:HE22	27:DD:176:ARG:HH22	1.65	0.43
25:DA:945:A:C4	25:DA:2448:A:C2	3.07	0.43
1:AA:322:C:O2'	20:AT:23:ARG:HD2	2.19	0.43
45:DZ:161:VAL:O	45:DZ:161:VAL:HG13	2.19	0.43
1:CA:113:G:H2'	1:CA:114:U:C6	2.53	0.43
1:AA:1409:C:H2'	1:AA:1410:G:H8	1.84	0.43
12:AL:102:ARG:HB3	12:AL:102:ARG:HE	1.58	0.43
31:BH:103:LEU:CD2	31:BH:148:ILE:HD13	2.48	0.43
48:D2:28:LYS:HD3	48:D2:60:LEU:HD11	2.00	0.43
25:BA:273:G:H2'	25:BA:273:G:H8	1.64	0.43
33:BN:42:TRP:HA	33:BN:48:MET:SD	2.58	0.43
1:AA:292:G:N7	1:AA:293:G:H1'	2.34	0.43
38:BS:38:GLN:OE1	38:BS:47:THR:HG21	2.19	0.43
1:CA:654:G:H2'	1:CA:655:A:O4'	2.19	0.43
25:BA:1586:G:H2'	25:BA:1587:U:O4'	2.19	0.43
45:DZ:91:LEU:HD12	45:DZ:91:LEU:HA	1.77	0.43
49:B3:23:LEU:HD12	49:B3:23:LEU:HA	1.85	0.43
25:BA:1337:C:H2'	25:BA:1338:U:C6	2.54	0.43
1:AA:1456:G:O6	20:AT:54:LYS:NZ	2.34	0.43
1:CA:1003:G:C2'	1:CA:1004:A:H4'	2.49	0.42
1:AA:341:C:C2'	1:AA:342:C:H5'	2.49	0.42
1:CA:1119:C:C4	1:CA:1154:G:O6	2.71	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:DA:1297:C:H2'	25:DA:1298:C:H6	1.84	0.42
1:AA:684:A:C6	1:AA:685:G:C6	3.07	0.42
1:AA:589:C:C2'	1:AA:590:C:H5'	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:880:G:N2	25:DA:898:C:H1'	2.33	0.42
1:CA:624:C:H2'	1:CA:625:G:H8	1.84	0.42
1:AA:615:C:H2'	1:AA:616:G:O4'	2.19	0.42
1:CA:1206:G:H4'	3:CC:192:THR:O	2.19	0.42
6:AF:92:LYS:HB2	6:AF:92:LYS:HE2	1.85	0.42
7:CG:26:PHE:CE2	7:CG:30:ILE:HD11	2.54	0.42
1:CA:89:C:C4	1:CA:90:U:C5	3.07	0.42
1:CA:1159:U:C6	1:CA:1182:G:C4	3.07	0.42
25:DA:1657:C:H2'	25:DA:1658:C:C6	2.54	0.42
1:CA:936:C:H2'	1:CA:937:A:O4'	2.18	0.42
25:BA:1552:C:O2'	25:BA:1553:A:H5'	2.19	0.42
15:CO:25:THR:HG21	15:CO:70:LEU:HB2	2.01	0.42
52:D6:36:LEU:HB3	52:D6:38:LYS:NZ	2.34	0.42
36:DQ:32:TYR:OH	36:DQ:111:GLU:OE1	2.28	0.42
28:DE:9:VAL:HG22	28:DE:25:VAL:O	2.19	0.42
12:CL:117:ARG:NH2	12:CL:124:LYS:HB2	2.34	0.42
25:DA:881:G:H2'	25:DA:882:G:C8	2.54	0.42
13:AM:9:ILE:HB	13:AM:18:ALA:HB1	2.01	0.42
25:DA:2695:C:H2'	25:DA:2696:U:C6	2.54	0.42
25:DA:999:U:O2'	25:DA:1000:A:H5'	2.19	0.42
25:BA:1478:C:H2'	25:BA:1479:U:O4'	2.19	0.42
25:DA:357:A:H2'	25:DA:358:U:C6	2.54	0.42
25:BA:2792:U:OP1	61:BA:4641:HOH:O	2.22	0.42
25:DA:653:A:H2'	25:DA:654:A:O4'	2.19	0.42
25:BA:185:A:H2'	25:BA:185:A:N3	2.33	0.42
45:DZ:35:ARG:HD2	45:DZ:35:ARG:HA	1.82	0.42
35:DP:6:LEU:HA	35:DP:6:LEU:HD23	1.79	0.42
14:AN:6:LEU:HA	14:AN:6:LEU:HD12	1.87	0.42
27:BD:65:ILE:HB	27:BD:67:PHE:CE2	2.54	0.42
25:BA:2274:U:OP2	46:B0:19:LYS:NZ	2.50	0.42
1:AA:1312:G:N7	19:AS:2:PRO:HG3	2.33	0.42
50:B4:53:GLU:HG2	50:B4:55:ARG:H	1.84	0.42
10:CJ:7:LYS:HB2	10:CJ:97:GLU:HB2	2.00	0.42
13:AM:88:ARG:HG3	13:AM:98:VAL:HG12	2.01	0.42
35:BP:44:GLY:N	61:BP:302:HOH:O	2.52	0.42
51:D5:11:THR:HG22	51:D5:12:SER:O	2.19	0.42
1:CA:1001(A):G:C4	1:CA:1002:G:H1'	2.53	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:300:A:H1'	1:CA:565:U:O2	2.20	0.42
25:BA:1605:A:O4'	25:BA:1605:A:N3	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1292:U:C2	1:CA:1293:G:C8	3.07	0.42
25:DA:2287:A:O2'	25:DA:2288:A:H3'	2.19	0.42
1:AA:1314:C:N4	1:AA:1315:U:O4	2.52	0.42
1:AA:147:G:C6	1:AA:148:G:C5	3.07	0.42
26:DB:50:G:OP2	38:DS:62:LYS:HD3	2.18	0.42
1:CA:1030(A):G:HO2'	1:CA:1030(B):C:H5	1.62	0.42
19:CS:64:GLU:HB2	50:D4:59:PHE:HE1	1.82	0.42
4:CD:190:ASP:O	4:CD:193:ASP:HB2	2.19	0.42
1:AA:392:G:C4	1:AA:393:A:C8	3.06	0.42
1:CA:491:G:H2'	1:CA:492:G:O4'	2.18	0.42
2:AB:219:VAL:HA	2:AB:222:ILE:CG1	2.47	0.42
25:BA:2584:A:C8	28:BE:144:ARG:HD2	2.55	0.42
25:DA:2313:C:O2	25:DA:2313:C:H2'	2.19	0.42
25:DA:1510:G:H2'	25:DA:1511:C:O4'	2.18	0.42
17:CQ:22:LEU:HD11	17:CQ:39:SER:HB2	2.01	0.42
39:BT:118:ARG:HH11	39:BT:118:ARG:HG3	1.84	0.42
28:DE:199:ARG:NH1	28:DE:202:LYS:HZ1	2.17	0.42
1:CA:1347:G:O2'	1:CA:1373:G:O6	2.24	0.42
1:AA:604:G:C2	1:AA:635:G:C5	3.08	0.42
25:DA:143:G:H5''	25:DA:1598:C:O2'	2.19	0.42
25:DA:815:C:C2	25:DA:1193:G:C2	3.06	0.42
33:DN:110:GLY:O	33:DN:114:ARG:HG3	2.18	0.42
3:CC:119:ARG:HG2	3:CC:123:GLN:NE2	2.34	0.42
23:CX:19:G:H1	23:CX:56:C:H42	1.67	0.42
25:DA:1289:C:H2'	25:DA:1290:C:H6	1.84	0.42
8:CH:84:ARG:NH1	8:CH:85:ARG:O	2.52	0.42
2:AB:122:PHE:HD2	2:AB:139:LYS:HE2	1.84	0.42
35:BP:101:VAL:HG22	35:BP:106:LEU:O	2.18	0.42
2:CB:60:ASP:O	2:CB:64:ARG:HG2	2.19	0.42
25:BA:829:A:O2'	25:BA:1819:C:H4'	2.20	0.42
9:AI:80:GLY:O	9:AI:84:ALA:N	2.50	0.42
1:AA:1210:C:C2'	1:AA:1211:U:H5'	2.49	0.42
25:BA:1485:A:H2'	25:BA:1486:G:O4'	2.19	0.42
12:CL:28:LYS:NZ	12:CL:62:SER:HB2	2.34	0.42
28:DE:178:GLU:OE2	28:DE:178:GLU:N	2.44	0.42
25:BA:124:A:H5''	25:BA:124:A:H8	1.83	0.42
17:CQ:89:LEU:HA	17:CQ:89:LEU:HD23	1.63	0.42
25:DA:763:G:H1'	25:DA:765:G:O4'	2.19	0.42
25:BA:137:G:O2'	25:BA:138:G:H5'	2.19	0.42
25:DA:1590:U:H2'	25:DA:1591:G:C8	2.54	0.42
25:BA:2284:U:H5''	25:BA:2285:A:OP1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:16:ARG:HD3	9:AI:64:THR:HG21	2.01	0.42
1:CA:999:C:H3'	1:CA:1000:U:H5	1.84	0.42
25:DA:1005:C:C2	25:DA:1143:A:C5	3.08	0.42
2:AB:214:ILE:O	2:AB:218:ALA:HB2	2.19	0.42
1:CA:419:C:N3	1:CA:425:G:C2	2.87	0.42
4:AD:173:TRP:HA	4:AD:186:LEU:HB2	2.00	0.42
25:BA:1093:G:H2'	25:BA:1156:G:H1	1.84	0.42
25:BA:1091:A:C8	25:BA:1093:G:N2	2.88	0.42
25:DA:2298:A:N7	25:DA:2299:G:C4	2.88	0.42
38:DS:3:ARG:O	38:DS:4:LEU:HD23	2.20	0.42
25:DA:2755:C:HO2'	25:DA:2756:U:H6	1.65	0.42
25:DA:195:A:H2'	25:DA:198:C:N4	2.34	0.42
3:CC:32:LEU:HD12	3:CC:59:ARG:HH12	1.84	0.42
25:BA:174:U:H2'	25:BA:175:G:H8	1.85	0.42
35:DP:29:LYS:HG3	35:DP:30:THR:N	2.35	0.42
1:AA:1220:G:N3	19:AS:54:GLY:HA2	2.34	0.42
25:DA:911:A:H2'	36:DQ:9:TYR:CZ	2.54	0.42
25:DA:1227:G:C2	25:DA:1228:G:C4	3.08	0.42
1:AA:44:G:H2'	1:AA:45:U:O4'	2.18	0.42
39:BT:118:ARG:HG3	39:BT:118:ARG:NH1	2.35	0.42
2:AB:145:LEU:O	2:AB:149:LEU:HB2	2.20	0.42
2:CB:71:VAL:CG2	2:CB:164:VAL:HG22	2.49	0.42
1:AA:126:G:OP1	1:AA:605:U:O2'	2.28	0.42
2:AB:127:ILE:HG13	2:AB:130:ARG:HG2	2.02	0.42
12:AL:79:GLU:C	12:AL:80:HIS:CD2	2.93	0.42
1:CA:130:A:O2'	1:CA:131:C:O5'	2.36	0.42
13:CM:88:ARG:HG3	13:CM:98:VAL:HG12	2.00	0.42
9:CI:50:LEU:CD1	9:CI:56:LEU:HD23	2.50	0.42
25:DA:2876:G:H4'	39:DT:2:ASN:ND2	2.34	0.42
25:DA:1221(A):C:C2	25:DA:1229:G:N2	2.87	0.42
1:AA:1053:G:N2	61:AA:4013:HOH:O	2.46	0.42
25:DA:1580:A:OP2	25:DA:1580:A:H8	2.03	0.42
1:AA:652:U:C4	1:AA:752:G:N3	2.87	0.42
25:DA:2019:A:H4'	40:DU:34:LYS:HD2	2.01	0.42
31:BH:144:VAL:O	31:BH:148:ILE:HG13	2.19	0.42
4:CD:120:LEU:HB3	4:CD:126:ILE:HD11	2.00	0.42
25:BA:1639:G:H2'	25:BA:1640:G:C8	2.53	0.42
25:BA:1376:C:O2'	25:BA:1377:A:H5'	2.19	0.42
27:DD:26:LYS:HB3	27:DD:83:GLU:HG2	2.01	0.42
1:AA:1343:G:O2'	9:AI:121:ARG:HD2	2.19	0.42
25:DA:2009:G:OP1	42:DW:41:LYS:HE2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:5:ASP:OD2	61:AU:101:HOH:O	2.20	0.42
25:BA:503:A:C6	25:BA:504:A:C6	3.07	0.42
1:AA:872:A:C8	1:AA:874:G:C8	3.07	0.42
11:CK:81:ASP:OD1	11:CK:106:LYS:HB2	2.20	0.42
25:BA:2779:G:H2'	25:BA:2779:G:N3	2.34	0.42
11:CK:85:ARG:HA	11:CK:112:THR:OG1	2.20	0.42
25:DA:949:C:H2'	25:DA:950:G:C8	2.55	0.42
1:CA:328:C:H4'	1:CA:329:A:H5'	2.01	0.42
1:CA:1003:G:H2'	1:CA:1004:A:C4'	2.48	0.42
1:CA:542:G:C2	1:CA:543:C:C4	3.07	0.42
1:CA:1126:U:H6	1:CA:1281:U:O2	2.02	0.42
25:DA:878:A:C6	25:DA:900:A:N7	2.86	0.42
1:CA:1129:C:H4'	9:CI:16:ARG:HH22	1.84	0.42
1:AA:445:G:C2	1:AA:446:G:C4	3.07	0.42
27:DD:79:VAL:HG21	27:DD:111:LEU:HD11	2.02	0.42
5:CE:78:HIS:CE1	5:CE:142:LEU:HD23	2.54	0.42
1:CA:332:G:C2	1:CA:333:G:C8	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
30:DG:105:LYS:HB3	30:DG:142:PRO:HG3	2.01	0.42
25:DA:2365:G:O6	54:D8:39:LYS:HE3	2.19	0.42
48:B2:28:LYS:HG3	48:B2:53:LEU:HD21	2.01	0.42
25:DA:1403:C:O5'	25:DA:1471:A:H1'	2.19	0.42
23:CX:22:G:H2'	23:CX:23:C:C6	2.54	0.42
25:DA:1425:G:N2	25:DA:1573:G:N7	2.67	0.42
3:CC:181:ASN:ND2	3:CC:204:LEU:HD12	2.34	0.42
37:BR:28:LEU:HD12	37:BR:48:VAL:HG21	2.01	0.42
1:CA:130:A:H5'	17:CQ:63:ARG:NE	2.34	0.42
1:CA:1310:G:H5'	13:CM:77:ASN:ND2	2.34	0.42
31:DH:105:LEU:HD11	31:DH:148:ILE:HG23	2.01	0.42
25:DA:2051:A:H5'	25:DA:2578:G:O4'	2.20	0.42
25:BA:476:G:OP2	61:BA:4507:HOH:O	2.22	0.42
25:DA:797:C:H2'	25:DA:798:G:H8	1.83	0.42
25:BA:917:A:OP1	36:BQ:6:ARG:NE	2.50	0.42
25:DA:1288:U:C2	25:DA:1327:C:O2	2.72	0.42
25:BA:2753:A:C6	25:BA:2777:A:C8	3.07	0.42
25:BA:2627:U:OP1	61:BA:4253:HOH:O	2.21	0.42
25:DA:1665:A:H4'	34:DO:67:LYS:HB2	2.01	0.42
48:B2:22:GLU:OE2	48:B2:68:ARG:NH2	2.51	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1051:C:O2'	33:BN:28:THR:HG21	2.20	0.42
15:AO:32:LEU:O	15:AO:36:ILE:HG13	2.20	0.42
25:BA:950:C:H2'	25:BA:951:U:C6	2.54	0.42
26:BB:113:G:H2'	26:BB:114:C:C6	2.54	0.42
1:AA:11:G:O2'	1:AA:506:G:N2	2.52	0.42
25:DA:1208:C:C4	25:DA:1209:G:N7	2.87	0.42
10:AJ:13:HIS:HA	10:AJ:16:LEU:HB3	2.02	0.42
1:CA:505:G:H2'	1:CA:506:G:H8	1.84	0.42
47:B1:95:LEU:O	47:B1:98:LEU:HB2	2.20	0.42
40:DU:102:GLU:CG	41:DV:13:ARG:HH12	2.33	0.42
25:BA:163:C:H2'	25:BA:164:G:O4'	2.19	0.42
1:AA:342:C:C2'	1:AA:343:U:H5'	2.49	0.42
25:DA:1022:G:N7	33:DN:66:LYS:HE2	2.33	0.42
25:BA:1717:C:O2	28:BE:129:HIS:NE2	2.43	0.42
1:CA:922:G:C6	1:CA:923:A:C6	3.08	0.42
39:DT:16:ARG:HB2	39:DT:79:HIS:ND1	2.35	0.42
25:DA:2319:G:N2	38:DS:3:ARG:HA	2.34	0.42
25:DA:2747:G:H21	25:DA:2757:A:H62	1.67	0.42
1:AA:1007:C:C4	1:AA:1022:G:O6	2.72	0.42
25:DA:1876:A:H2'	25:DA:1877:A:H8	1.81	0.42
1:CA:691:G:H2'	1:CA:692:U:C6	2.54	0.42
3:CC:19:GLU:O	3:CC:56:ASP:HA	2.19	0.42
38:BS:4:LEU:HA	38:BS:4:LEU:HD23	1.64	0.42
25:DA:2262:U:H4'	25:DA:2328:A:H2	1.85	0.42
50:D4:61:ARG:HA	50:D4:61:ARG:HH11	1.84	0.42
1:AA:1399:C:C2	1:AA:1502:A:N6	2.87	0.42
1:AA:926:G:C6	1:AA:1505:G:C6	3.08	0.42
1:CA:445:G:C6	1:CA:490:G:C6	3.08	0.42
25:BA:2804:C:H2'	25:BA:2805:G:H8	1.81	0.42
1:AA:1016:A:H2'	1:AA:1017:G:O4'	2.20	0.42
3:CC:118:GLN:HE21	3:CC:118:GLN:HB3	1.68	0.42
1:AA:1442:G:HO2'	1:AA:1442(A):G:P	2.37	0.42
9:CI:17:VAL:HG11	9:CI:80:GLY:C	2.39	0.42
18:AR:66:LEU:O	18:AR:70:ILE:HG13	2.20	0.42
25:DA:2355:C:H4'	46:D0:24:LYS:HG3	2.01	0.42
27:DD:238:GLY:O	27:DD:239:ARG:O	2.37	0.42
26:BB:33:G:C2	26:BB:50:G:C2	3.07	0.42
25:DA:577:G:O2'	25:DA:1254:A:OP1	2.35	0.42
15:CO:26:GLU:H	15:CO:26:GLU:HG2	1.53	0.42
36:DQ:56:ARG:CG	36:DQ:56:ARG:HH11	2.31	0.42
1:CA:414:A:C5	1:CA:431:A:C2	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:363:G:H2'	25:DA:363(A):A:H8	1.83	0.42
25:DA:861:A:H2'	25:DA:862:G:O4'	2.19	0.42
25:DA:1540:U:C2'	25:DA:1541:G:H5'	2.49	0.42
3:CC:3:ASN:N	3:CC:3:ASN:OD1	2.53	0.42
39:BT:101:PHE:HD2	39:BT:105:LEU:HD11	1.83	0.42
25:BA:2304:C:H2'	25:BA:2305:C:H6	1.83	0.42
25:DA:48:G:N2	25:DA:177:G:H21	2.18	0.42
25:BA:1954:A:H2'	25:BA:1955:G:O4'	2.20	0.42
25:BA:694:G:N1	25:BA:696:C:O2	2.52	0.42
25:DA:1287:A:H5''	25:DA:1288:U:OP2	2.20	0.42
26:DB:83:G:H4'	49:D3:52:HIS:CG	2.55	0.42
25:DA:1794:U:H2'	25:DA:1795:C:C6	2.54	0.42
6:CF:35:ALA:HA	6:CF:67:MET:HB3	2.00	0.42
25:DA:1991:U:H2'	25:DA:1992:G:H5''	2.01	0.42
34:BO:10:VAL:HG13	34:BO:17:ARG:C	2.40	0.42
25:BA:2372:A:H8	25:BA:2372:A:O5'	2.02	0.42
12:CL:77:LEU:HA	12:CL:77:LEU:HD23	1.84	0.42
33:DN:96:GLU:H	33:DN:96:GLU:CD	2.22	0.42
3:CC:66:VAL:O	3:CC:101:LEU:HA	2.19	0.42
50:D4:19:GLY:O	50:D4:21:VAL:HG23	2.19	0.42
36:BQ:39:PRO:HA	36:BQ:97:VAL:O	2.19	0.42
25:DA:86:C:O2'	25:DA:87:C:H5'	2.20	0.42
25:DA:1132:A:H2'	25:DA:1133:U:C6	2.55	0.42
1:CA:1006:C:C4	1:CA:1007:C:C5	3.08	0.42
1:CA:1358:U:H2'	1:CA:1359:C:O4'	2.20	0.42
19:AS:65:ASN:HA	50:B4:58:ARG:HG3	2.00	0.42
1:AA:67:C:H4'	1:AA:172:A:O4'	2.20	0.42
31:BH:98:LEU:HA	31:BH:98:LEU:HD12	1.80	0.42
13:CM:57:ARG:NH1	50:D4:34:GLU:HA	2.35	0.42
1:AA:445:G:C6	1:AA:446:G:C6	3.08	0.42
1:AA:975:A:H4'	1:AA:976:G:C5'	2.44	0.42
50:D4:46:GLN:HB3	50:D4:48:ARG:HG2	2.01	0.42
1:CA:1227:A:H3'	1:CA:1227:A:C8	2.55	0.42
1:AA:538:G:O2'	1:AA:539:A:H5'	2.20	0.42
1:AA:434:U:H2'	1:AA:435:C:C6	2.54	0.42
25:DA:848:G:N9	25:DA:933:A:H8	2.18	0.42
28:DE:93:VAL:C	28:DE:95:ILE:H	2.23	0.42
1:CA:532:A:H62	3:CC:156:ARG:NH1	2.17	0.42
44:BY:86:ARG:HD2	44:BY:100:ALA:HA	2.02	0.42
32:BI:38:LEU:HD12	32:BI:38:LEU:H	1.84	0.42
30:DG:122:PRO:HB3	30:DG:170:ARG:NH2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:541:G:O2'	1:AA:542:G:H5'	2.20	0.42
32:DI:140:LEU:HD13	32:DI:142:VAL:HG13	2.01	0.42
25:BA:2802:C:O2	25:BA:2903:G:N1	2.49	0.42
32:DI:38:LEU:C	32:DI:40:THR:H	2.22	0.42
1:CA:1402:C:O2	1:CA:1500:A:N1	2.53	0.42
14:CN:27:CYS:HB3	14:CN:43:CYS:SG	2.59	0.42
1:CA:841:U:H6	1:CA:841:U:OP1	2.01	0.42
25:DA:484:C:H2'	25:DA:485:C:C6	2.54	0.42
20:AT:56:MET:HG3	20:AT:84:LEU:HD22	2.01	0.42
1:AA:300:A:H2'	1:AA:301:G:O4'	2.19	0.42
25:DA:2360:A:H2'	25:DA:2361:A:O4'	2.20	0.42
1:AA:1137:C:H6	1:AA:1137:C:H3'	1.84	0.42
1:CA:688:G:C6	1:CA:700:G:C2	3.07	0.42
38:DS:24:LEU:O	38:DS:85:VAL:HG23	2.19	0.42
15:AO:24:SER:OG	15:AO:25:THR:N	2.53	0.42
25:DA:2081:C:H2'	25:DA:2082:A:H8	1.85	0.42
25:BA:1337:C:H2'	25:BA:1338:U:H6	1.85	0.42
1:CA:1241:G:H2'	1:CA:1242:C:C6	2.54	0.42
7:AG:72:ARG:O	7:AG:73:MET:HE2	2.20	0.42
19:CS:17:GLU:O	19:CS:21:GLU:N	2.43	0.42
30:BG:109:VAL:C	30:BG:112:PRO:HD2	2.40	0.42
25:DA:1378:A:OP1	53:D7:10:ARG:NH2	2.52	0.42
39:BT:37:GLY:HA2	39:BT:38:ASN:HA	1.50	0.42
37:BR:33:ARG:HA	37:BR:114:VAL:O	2.19	0.42
4:CD:12:CYS:SG	4:CD:19:LEU:HB2	2.59	0.42
1:AA:769:G:H4'	1:AA:1513:A:H4'	2.01	0.42
25:DA:1462:C:H4'	25:DA:2703:C:H5'	2.01	0.42
1:AA:1229:A:O2'	23:AX:30:G:OP1	2.35	0.42
13:CM:40:ASN:HB3	13:CM:43:THR:HG23	2.01	0.42
31:BH:90:LYS:HD3	31:BH:159:GLU:HG2	2.01	0.42
1:CA:191:G:N2	20:CT:102:GLY:O	2.40	0.42
44:DY:19:LYS:HB3	44:DY:19:LYS:HE2	1.91	0.42
7:CG:64:GLN:HA	7:CG:64:GLN:OE1	2.19	0.42
25:DA:189:G:H2'	25:DA:205:G:N2	2.35	0.42
1:CA:1234:C:C2'	1:CA:1235:U:H5'	2.50	0.42
1:CA:880:C:OP1	12:CL:8:ASN:ND2	2.49	0.42
11:CK:80:VAL:HG22	11:CK:103:LEU:HB3	2.02	0.42
2:CB:16:HIS:ND1	2:CB:17:PHE:N	2.66	0.42
25:DA:1140:C:H5'	33:DN:24:GLY:HA3	2.01	0.42
10:CJ:48:THR:HG1	10:CJ:62:HIS:CE1	2.37	0.42
25:DA:652(B):A:C2	25:DA:655:A:H1'	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:82:MET:O	13:CM:93:ARG:NH2	2.52	0.42
25:DA:2203:U:O2'	25:DA:2205:C:H5'	2.20	0.42
3:AC:32:LEU:HD13	3:AC:59:ARG:HD3	2.01	0.42
1:CA:1325:C:O2'	1:CA:1326:C:H5'	2.20	0.42
42:DW:14:PRO:HG2	42:DW:78:GLU:CG	2.45	0.42
25:DA:2291:U:H5''	25:DA:2380:C:H1'	2.01	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
1:AA:924:C:H2'	1:AA:925:G:H8	1.85	0.42
25:DA:1299:G:C5	25:DA:1639:U:C5	3.07	0.42
12:AL:33:ARG:HG2	12:AL:60:LEU:HD12	2.02	0.42
1:AA:829:G:O2'	1:AA:830:G:H5'	2.19	0.42
30:DG:128:ARG:HE	30:DG:128:ARG:HB2	1.51	0.42
1:AA:993:G:N3	1:AA:993:G:H2'	2.34	0.42
28:DE:2:LYS:NZ	28:DE:95:ILE:O	2.44	0.42
25:DA:784:A:P	61:DA:4065:HOH:O	2.78	0.42
1:AA:597:G:H5''	1:AA:598:U:OP2	2.19	0.42
8:CH:13:ILE:O	8:CH:17:THR:HG23	2.20	0.42
25:BA:1212:C:H2'	25:BA:1213:U:H6	1.84	0.42
25:DA:539:G:H2'	25:DA:540:C:H6	1.81	0.42
1:CA:407:G:H5''	4:CD:115:ARG:HB3	2.02	0.42
5:AE:33:VAL:HG13	5:AE:112:LEU:HD12	2.02	0.42
23:CX:27:U:O2	23:CX:44:A:C2	2.72	0.42
25:DA:2265:U:C4	25:DA:2266:A:C5	3.08	0.42
4:CD:156:GLU:O	4:CD:159:ARG:HB2	2.19	0.42
26:BB:16:G:C6	26:BB:69:G:C2	3.07	0.42
25:DA:442:G:N2	29:DF:48:THR:O	2.52	0.42
1:AA:1104:G:C4	1:AA:1105:A:C8	3.08	0.42
25:DA:448:U:O4	25:DA:583:G:H1'	2.19	0.42
25:BA:1740:U:H4'	25:BA:1741:C:OP2	2.19	0.42
29:DF:29:ASN:O	29:DF:33:LEU:HD22	2.19	0.42
25:BA:540:A:H2	25:BA:1306:G:N3	2.18	0.42
1:AA:1261:A:H3'	1:AA:1262:C:C6	2.55	0.42
25:BA:1338:U:H2'	25:BA:1339:C:C6	2.55	0.42
27:DD:264:LYS:HD3	27:DD:266:SER:OG	2.20	0.42
25:BA:1183:G:H2'	25:BA:1184:G:O4'	2.20	0.42
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
1:CA:1086:U:C2'	1:CA:1087:G:H5'	2.49	0.42
25:DA:284:U:H2'	25:DA:285:C:H6	1.83	0.42
46:D0:31:VAL:HG11	46:D0:37:LEU:HD21	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:415:G:O2'	25:BA:416:G:N7	2.48	0.42
25:BA:2081:A:O2'	29:BF:69:HIS:HD2	2.03	0.42
6:CF:30:LEU:H	6:CF:30:LEU:HG	1.57	0.42
28:BE:9:VAL:HB	39:BT:3:ARG:HG2	2.02	0.42
25:BA:2275:C:H2'	25:BA:2276:C:O4'	2.20	0.42
25:DA:1214:A:H61	25:DA:1235:G:H1'	1.85	0.42
4:CD:61:LYS:HA	4:CD:203:VAL:HG22	2.02	0.42
25:BA:2831:A:H2'	25:BA:2832:G:C8	2.55	0.42
25:DA:1020:A:N1	25:DA:1141:U:O2'	2.35	0.42
1:AA:1034:G:H3'	1:AA:1035:A:H8	1.85	0.42
25:DA:2259:G:C2	25:DA:2282:G:C6	3.08	0.42
1:CA:1244:C:H42	1:CA:1293:G:H1	1.67	0.42
1:CA:147:G:N2	1:CA:148:G:C4	2.88	0.42
4:AD:155:LEU:HB3	4:AD:158:ILE:CD1	2.42	0.42
25:DA:1394:U:C4	25:DA:1395:A:C5	3.07	0.42
31:BH:125:VAL:HG12	31:BH:127:GLU:O	2.20	0.42
25:DA:1593:G:C4	25:DA:1594:G:C8	3.07	0.42
2:AB:93:VAL:HG21	2:AB:97:TRP:CD1	2.54	0.42
1:AA:1356:G:O2'	1:AA:1357:A:H5'	2.20	0.42
31:BH:56:SER:OG	31:BH:58:GLU:HG2	2.20	0.42
30:DG:114:ILE:HG23	30:DG:136:ARG:NH2	2.35	0.42
45:BZ:45:ASP:OD2	45:BZ:49:ARG:NH1	2.52	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
25:BA:1541:A:C6	25:BA:1542:A:C6	3.08	0.42
26:DB:46:A:C5	26:DB:47:C:C4	3.08	0.42
39:DT:90:GLN:HG3	39:DT:91:ARG:N	2.35	0.42
38:BS:10:ARG:HH21	38:BS:91:PRO:HB2	1.84	0.42
8:AH:40:ALA:CA	8:AH:45:ILE:HG13	2.49	0.42
43:DX:57:LEU:HD13	43:DX:78:LYS:HG3	2.02	0.42
25:DA:307:G:H21	25:DA:330:A:H62	1.68	0.42
26:BB:33:G:N2	26:BB:50:G:C4	2.88	0.42
1:CA:407:G:O2'	4:CD:116:GLN:HG3	2.20	0.42
3:CC:23:TYR:HA	10:CJ:11:PHE:CD2	2.55	0.42
25:DA:344:G:N2	25:DA:345:A:N6	2.68	0.42
10:AJ:50:ILE:HD11	10:AJ:57:LYS:HE3	2.02	0.42
25:BA:1506:G:H3'	25:BA:1507:A:H5''	2.02	0.42
25:DA:2526:G:H5'	25:DA:2742:C:O2'	2.18	0.42
25:DA:852:G:H2'	25:DA:853:G:H8	1.83	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2847:U:OP1	39:DT:98:LYS:NZ	2.40	0.42
25:BA:2904:U:H2'	25:BA:2905:C:O4'	2.20	0.42
42:DW:50:VAL:HG21	42:DW:103:ILE:HB	2.01	0.42
1:CA:991:U:O4	1:CA:1212:U:H1'	2.20	0.42
31:DH:123:PHE:CZ	31:DH:148:ILE:HD11	2.54	0.42
23:AX:8:U:H6	23:AX:8:U:O5'	2.03	0.42
1:CA:1053:G:N7	1:CA:1200:C:H5''	2.34	0.42
25:DA:2097:C:H2'	25:DA:2098:U:C6	2.55	0.42
40:DU:59:ARG:HH11	40:DU:59:ARG:HB3	1.85	0.42
25:DA:506:G:O3'	25:DA:507:A:H8	2.03	0.42
31:DH:12:PRO:O	31:DH:15:VAL:HG13	2.20	0.42
27:BD:223:GLY:HA3	27:BD:231:HIS:CE1	2.55	0.42
25:BA:1737:A:H3'	25:BA:1738:C:H6	1.84	0.42
36:BQ:58:PHE:HB3	36:BQ:61:GLY:O	2.20	0.42
20:CT:63:ILE:HD13	20:CT:80:ARG:HB3	2.01	0.42
26:BB:82:G:C2'	26:BB:83:G:H5'	2.49	0.42
8:CH:124:ALA:O	8:CH:128:GLY:N	2.52	0.42
25:DA:2768:C:H2'	25:DA:2769:C:O4'	2.19	0.42
25:DA:29:U:H4'	40:DU:11:ARG:HH22	1.84	0.42
45:DZ:67:LEU:HA	45:DZ:68:PRO:HD3	1.66	0.42
25:BA:324:A:H2'	25:BA:358:C:H1'	2.01	0.42
15:AO:57:LEU:HA	15:AO:57:LEU:HD23	1.92	0.42
25:BA:1098:C:O5'	25:BA:1098:C:H6	2.03	0.42
25:BA:943:C:H6	25:BA:943:C:O5'	2.03	0.42
32:BI:87:LYS:HE3	32:BI:87:LYS:HB2	1.77	0.42
1:AA:1426:C:H2'	1:AA:1427:U:C6	2.55	0.42
32:DI:83:ALA:HB1	32:DI:87:LYS:O	2.19	0.42
25:DA:1698:A:C8	25:DA:1700:A:H5''	2.55	0.42
1:AA:1002:G:C6	1:AA:1003:G:C2	3.08	0.42
25:DA:153:C:H2'	25:DA:154:G:O4'	2.19	0.42
25:BA:927:G:H1	25:BA:944:C:N4	2.16	0.42
25:DA:2500:U:H2'	25:DA:2504:U:C5	2.55	0.42
25:BA:932:C:H3'	25:BA:933:C:C5'	2.46	0.42
25:DA:2280:G:O2'	25:DA:2388:A:N1	2.46	0.42
25:DA:226:G:H21	25:DA:228:A:N6	2.13	0.42
19:CS:58:VAL:HA	19:CS:59:PRO:HD2	1.82	0.42
25:DA:600:G:N2	25:DA:605:C:O3'	2.52	0.42
25:DA:1638:C:H4'	25:DA:2710:C:O2	2.19	0.42
1:CA:874:G:O2'	1:CA:875:C:H5'	2.20	0.42
1:CA:1128:C:H1'	1:CA:1147:C:N4	2.34	0.42
50:B4:63:TYR:H	50:B4:63:TYR:HD1	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: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:AA:105:G:H2'	1:AA:106:C:C6	2.55	0.42
39:DT:61:PHE:CZ	39:DT:76:PHE:HB2	2.55	0.42
23:CX:19:G:C4	23:CX:57:A:C2	3.08	0.42
1:AA:438:G:O2'	1:AA:493:G:C2	2.73	0.42
25:DA:628:G:H2'	25:DA:629:G:C8	2.55	0.42
2:CB:114:ARG:NH1	2:CB:118:LEU:HD21	2.35	0.42
47:B1:60:PHE:HE2	47:B1:95:LEU:HD11	1.85	0.42
25:BA:918:U:OP1	36:BQ:5:ARG:HD3	2.20	0.42
25:DA:521:G:O2'	25:DA:522:G:H5'	2.20	0.42
26:DB:15:A:OP2	26:DB:69:G:N2	2.52	0.42
25:DA:2391:G:O6	25:DA:2425:A:H8	2.02	0.42
28:DE:14:ILE:HG13	28:DE:21:VAL:HG13	2.01	0.42
26:BB:103:G:O2'	45:BZ:73:GLN:NE2	2.52	0.42
12:AL:124:LYS:HA	12:AL:125:PRO:HD3	1.82	0.42
36:DQ:75:THR:HA	36:DQ:89:ASN:O	2.19	0.42
31:BH:121:ILE:HD13	31:BH:121:ILE:HA	1.93	0.42
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.19	0.42
25:DA:2836:U:C4	25:DA:2883:A:N6	2.88	0.42
10:AJ:19:SER:OG	10:AJ:91:PRO:HD2	2.19	0.42
47:D1:4:VAL:HG11	47:D1:11:ARG:NH1	2.34	0.42
4:AD:91:SER:O	4:AD:94:LEU:HB2	2.20	0.42
25:DA:776:G:H4'	25:DA:777:A:O5'	2.20	0.42
7:CG:85:TYR:HB3	7:CG:151:TYR:CE2	2.54	0.42
1:CA:976:G:P	14:CN:32:SER:H	2.42	0.42
26:DB:75:G:N3	45:DZ:85:HIS:CE1	2.88	0.42
16:CP:5:ARG:CZ	16:CP:22:THR:HG21	2.50	0.42
1:CA:502:G:P	12:CL:116:SER:HA	2.60	0.42
25:DA:1639:U:C2'	25:DA:1640:C:H5''	2.50	0.42
30:DG:114:ILE:HB	30:DG:117:PHE:HB2	2.01	0.42
4:AD:178:VAL:C	4:AD:180:GLY:H	2.24	0.42
25:BA:2804:C:O2	25:BA:2816:G:N1	2.46	0.42
3:CC:6:HIS:HA	3:CC:7:PRO:HD3	1.86	0.42
31:DH:29:PRO:HG2	31:DH:80:SER:HA	2.02	0.42
1:AA:670:G:C2	1:AA:671:G:C4	3.07	0.42
1:AA:110:C:H2'	1:AA:111:G:O4'	2.20	0.42
3:AC:112:SER:HB3	3:AC:115:LEU:HD22	2.01	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:434:U:H2'	1:CA:435:C:C6	2.55	0.42
25:DA:1190:G:H5''	35:DP:32:THR:HA	2.01	0.42
1:CA:948:C:OP2	13:CM:108:ARG:HB2	2.20	0.42
7:AG:38:LEU:O	7:AG:42:ILE:HG13	2.19	0.42
1:CA:1423:G:P	34:DO:49:ARG:HH12	2.43	0.42
25:DA:642:G:N2	25:DA:645:C:OP1	2.52	0.42
1:AA:1292:U:O2'	1:AA:1293:G:H5'	2.20	0.42
25:DA:2615:U:OP1	61:DA:3945:HOH:O	2.20	0.42
45:BZ:126:VAL:HG13	45:BZ:161:VAL:HG23	2.02	0.42
25:DA:1447:G:N2	25:DA:1464:C:O2	2.30	0.42
28:BE:167:VAL:CG1	28:BE:189:PRO:HD3	2.50	0.42
2:CB:35:GLU:HA	2:CB:39:ILE:O	2.20	0.42
30:BG:43:LEU:HD12	30:BG:43:LEU:HA	1.89	0.42
25:BA:1306:G:C6	25:BA:1307:C:C4	3.08	0.42
25:BA:26:G:C6	25:BA:27:G:N1	2.88	0.42
25:BA:815:G:C6	25:BA:816:G:C5	3.08	0.42
25:BA:552:C:C5	25:BA:2792:U:H2'	2.55	0.42
1:CA:283:C:H2'	1:CA:284:G:O4'	2.20	0.42
25:DA:2283:C:C2	25:DA:2389:G:C2	3.08	0.42
25:DA:2761:G:N3	25:DA:2761:G:H2'	2.34	0.42
6:CF:5:GLU:HG3	6:CF:93:SER:OG	2.20	0.42
1:CA:562:C:H1'	12:CL:15:ARG:HB3	2.02	0.42
25:DA:735:A:C6	25:DA:736:C:C2	3.08	0.42
32:BI:133:HIS:ND1	32:BI:134:PRO:O	2.52	0.42
15:CO:67:LEU:HD23	15:CO:67:LEU:HA	1.75	0.42
4:CD:169:LYS:HB3	4:CD:169:LYS:NZ	2.35	0.42
1:CA:402:G:C2'	1:CA:403:C:H5'	2.49	0.42
25:BA:2647:C:H2'	25:BA:2648:U:O4'	2.20	0.42
1:AA:1277:C:O2'	1:AA:1279:A:H1'	2.19	0.41
25:BA:1066:A:H4'	25:BA:1067:A:O5'	2.20	0.41
1:AA:25:C:H2'	1:AA:26:A:C8	2.56	0.41
26:DB:33:G:N3	26:DB:50:G:C2	2.88	0.41
25:DA:2850:A:H5'	25:DA:2868:A:C2	2.55	0.41
25:DA:118:A:H1'	25:DA:178:G:O4'	2.19	0.41
1:CA:1286:A:H2'	1:CA:1287:A:H4'	2.01	0.41
25:DA:2292:C:H4'	25:DA:2375:G:H4'	2.01	0.41
25:DA:271(H):G:H2'	25:DA:271(I):G:C8	2.53	0.41
1:AA:393:A:OP2	16:AP:12:LYS:HD2	2.20	0.41
25:DA:1298:C:H5''	25:DA:1299:G:OP2	2.20	0.41
1:AA:41:G:C6	1:AA:402:G:C6	3.08	0.41
25:DA:875:G:N2	25:DA:903:C:C2	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DN:38:HIS:O	40:DU:67:ALA:HB1	2.20	0.41
3:CC:8:ILE:HG22	14:CN:49:HIS:O	2.20	0.41
25:DA:665:C:H2'	25:DA:666:G:H8	1.84	0.41
25:DA:2685:G:H5'	34:DO:68:GLU:OE1	2.19	0.41
1:CA:872:A:C2	1:CA:874:G:C6	3.08	0.41
31:DH:169:VAL:HG12	31:DH:171:LEU:CD2	2.50	0.41
25:DA:1708:C:O2'	25:DA:1709:U:H5'	2.20	0.41
3:AC:114:PRO:O	3:AC:118:GLN:NE2	2.53	0.41
11:CK:33:THR:HA	11:CK:39:PRO:HA	2.02	0.41
46:D0:24:LYS:O	46:D0:25:ARG:HD3	2.20	0.41
25:DA:942:G:OP2	35:DP:39:LYS:NZ	2.49	0.41
2:CB:134:GLU:O	2:CB:138:LEU:HG	2.20	0.41
25:BA:2860:A:C2	25:BA:2861:A:C4	3.08	0.41
25:BA:1513:G:O2'	25:BA:1593:C:O2'	2.27	0.41
14:AN:37:PHE:HB3	14:AN:39:LEU:HD12	2.02	0.41
25:BA:316:C:C2	25:BA:373:G:C2	3.07	0.41
1:CA:66:G:C2	1:CA:67:C:C6	3.08	0.41
25:DA:704:G:N3	25:DA:726:G:C2	2.87	0.41
25:DA:1188:U:C4'	41:DV:79:VAL:HG22	2.50	0.41
20:AT:53:LEU:HD13	20:AT:100:ILE:O	2.20	0.41
5:CE:31:LEU:HA	5:CE:31:LEU:HD23	1.73	0.41
25:DA:966:G:H2'	25:DA:967:C:H6	1.85	0.41
55:B9:28:GLU:O	55:B9:30:PRO:HD3	2.18	0.41
1:AA:428:G:O4'	1:AA:430:A:C8	2.74	0.41
42:DW:82:LEU:HD22	42:DW:84:ARG:HH22	1.84	0.41
25:BA:491:G:H2'	25:BA:492:A:C8	2.55	0.41
25:DA:1266:G:C8	42:DW:15:ARG:NH2	2.87	0.41
25:DA:2335:A:C8	25:DA:2337:G:N7	2.88	0.41
15:AO:74:ASP:OD2	15:AO:77:ARG:HG3	2.20	0.41
25:BA:504:A:C6	25:BA:506:A:C6	3.08	0.41
1:AA:640:A:C2'	1:AA:641:U:H5'	2.49	0.41
25:DA:328:U:H4'	44:DY:68:HIS:CD2	2.55	0.41
1:AA:895:G:H2'	1:AA:896:C:C6	2.55	0.41
6:CF:62:TRP:C	6:CF:63:TYR:HD1	2.23	0.41
1:AA:935:A:C2	1:AA:936:C:C2	3.08	0.41
25:DA:1434:A:H2'	25:DA:1435:G:O4'	2.20	0.41
5:CE:93:PRO:HG2	8:CH:105:ARG:NE	2.34	0.41
25:BA:714:U:O2	54:B8:2:PRO:HD2	2.20	0.41
25:DA:724:U:H2'	25:DA:725:G:O4'	2.20	0.41
25:BA:2235:G:OP1	27:BD:172:TYR:OH	2.36	0.41
36:DQ:59:ARG:O	36:DQ:61:GLY:N	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DI:45:LYS:O	32:DI:49:ALA:N	2.50	0.41
25:DA:2671:A:H2'	25:DA:2672:G:O4'	2.20	0.41
1:CA:1330:U:O3'	13:CM:23:TYR:HE1	2.03	0.41
12:CL:123:LYS:H	12:CL:123:LYS:HG2	1.52	0.41
25:BA:234:G:H2'	25:BA:235:C:H6	1.84	0.41
43:DX:5:TYR:CE1	48:D2:30:ARG:HB2	2.55	0.41
1:CA:310:G:C5'	16:CP:31:LYS:HB2	2.50	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
1:AA:814:A:H2'	1:AA:816:A:H5''	2.02	0.41
1:CA:1005:A:H8	1:CA:1005:A:O5'	2.03	0.41
1:CA:999:C:H3'	1:CA:1000:U:C5	2.55	0.41
1:AA:1125:U:N3	1:AA:1127:G:C6	2.89	0.41
1:CA:1118:C:C2	1:CA:1119:C:C5	3.09	0.41
2:AB:187:LEU:HD23	2:AB:201:ILE:HB	2.02	0.41
25:BA:1577:C:O2'	25:BA:1578:C:P	2.76	0.41
25:DA:322:A:P	29:DF:169:ASN:HB2	2.60	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:1252:A:H61	1:CA:1285:A:H61	1.67	0.41
29:BF:11:VAL:HB	29:BF:18:ARG:HB3	2.01	0.41
25:DA:1815:A:C6	25:DA:1817:G:C6	3.08	0.41
15:CO:54:ARG:HH11	15:CO:58:MET:CE	2.33	0.41
1:CA:454:C:N4	1:CA:479:C:N3	2.68	0.41
1:CA:194:C:H5''	1:CA:195:A:OP2	2.20	0.41
25:DA:2271:G:OP1	46:D0:18:ALA:HB1	2.20	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:1228:C:OP2	13:CM:111:LYS:HD3	2.20	0.41
1:CA:983:A:H3'	1:CA:983:A:N3	2.36	0.41
1:AA:677:U:H6	1:AA:677:U:O5'	2.03	0.41
25:BA:1159:U:H2'	25:BA:1160:G:C8	2.55	0.41
25:DA:1774:C:H5''	25:DA:1775:U:OP2	2.20	0.41
25:DA:576:U:H2'	25:DA:577:G:C8	2.54	0.41
25:DA:1163:G:C2	25:DA:1164:G:C8	3.08	0.41
27:BD:72:LYS:HD3	27:BD:97:TYR:CE2	2.55	0.41
1:AA:1131:G:O5'	1:AA:1131:G:H8	2.03	0.41
1:CA:1063:C:H3'	1:CA:1064:G:H2'	2.02	0.41
2:CB:229:VAL:HG12	2:CB:230:VAL:N	2.35	0.41
1:CA:991:U:H3'	1:CA:1212:U:C4	2.55	0.41
32:BI:104:GLN:HG3	32:BI:105:HIS:CD2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1051:C:H2'	1:CA:1052:U:C6	2.54	0.41
4:AD:99:SER:O	4:AD:140:VAL:HG23	2.20	0.41
32:DI:62:LYS:HG2	32:DI:133:HIS:CE1	2.54	0.41
45:BZ:125:LEU:HG	45:BZ:164:ALA:HB3	2.01	0.41
8:CH:82:HIS:HB3	8:CH:138:TRP:NE1	2.35	0.41
47:D1:95:LEU:O	47:D1:98:LEU:HB2	2.20	0.41
1:CA:348:G:C2	1:CA:349:A:C5	3.08	0.41
25:DA:328:U:H4'	44:DY:68:HIS:CG	2.55	0.41
25:DA:2801(A):A:N3	25:DA:2895:U:H1'	2.35	0.41
41:DV:58:VAL:HG21	41:DV:100:ARG:NH1	2.35	0.41
36:BQ:52:VAL:HA	36:BQ:55:VAL:HG13	2.02	0.41
20:AT:43:LEU:HD12	20:AT:55:ILE:HG13	2.01	0.41
6:AF:12:PRO:HG3	6:AF:57:GLN:O	2.20	0.41
25:DA:556:G:C6	25:DA:557:U:C4	3.08	0.41
25:BA:875:U:C5	25:BA:2259:A:H4'	2.55	0.41
1:CA:1054:C:H6	1:CA:1054:C:H2'	1.49	0.41
30:DG:181:ARG:CZ	30:DG:181:ARG:HB3	2.49	0.41
4:AD:110:PHE:CD1	4:AD:110:PHE:N	2.88	0.41
5:CE:28:PHE:O	5:CE:47:LYS:HA	2.20	0.41
25:DA:864:G:C6	25:DA:865:C:N4	2.88	0.41
28:BE:52:LEU:HD12	28:BE:77:ILE:HD13	2.01	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
26:DB:21:G:H2'	26:DB:22:U:O4'	2.20	0.41
10:CJ:8:LEU:HD23	10:CJ:96:ILE:HG23	2.03	0.41
30:DG:31:VAL:HA	30:DG:32:PRO:HD2	1.87	0.41
46:B0:12:ASN:O	46:B0:14:ARG:N	2.52	0.41
4:AD:13:ARG:HB2	4:AD:40:PRO:HD3	2.02	0.41
4:AD:13:ARG:NH2	4:AD:40:PRO:HA	2.35	0.41
10:CJ:49:VAL:HG23	14:CN:41:ARG:HD2	2.01	0.41
3:AC:11:ARG:HD3	3:AC:15:THR:CB	2.51	0.41
2:CB:215:LEU:HA	2:CB:215:LEU:HD23	1.67	0.41
26:DB:33:G:H1'	26:DB:50:G:H22	1.85	0.41
1:CA:1188:A:H2'	1:CA:1189:C:O4'	2.21	0.41
3:AC:32:LEU:HD13	3:AC:59:ARG:NH1	2.35	0.41
1:CA:1311:G:H1	1:CA:1326:C:N4	2.18	0.41
2:AB:24:TRP:HD1	2:AB:24:TRP:H	1.68	0.41
1:AA:840:C:H4'	1:AA:841:U:OP1	2.20	0.41
1:CA:503:C:H2'	1:CA:504:C:H6	1.85	0.41
1:CA:489:C:H2'	1:CA:490:G:H8	1.85	0.41
2:AB:211:ILE:H	2:AB:211:ILE:HG13	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2274:A:C5	25:DA:2276:G:C8	3.08	0.41
7:CG:47:CYS:O	7:CG:50:ILE:HG12	2.20	0.41
25:DA:2285:C:C2	25:DA:2384:G:N2	2.88	0.41
7:CG:78:ARG:HG2	7:CG:79:ARG:HB2	2.03	0.41
25:BA:922:G:H1	25:BA:948:C:N4	2.18	0.41
25:DA:662:G:H2'	25:DA:663:G:H8	1.85	0.41
4:CD:63:LYS:HG3	4:CD:198:VAL:CG2	2.50	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
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:AA:1071:C:H5''	5:AE:49:PRO:HG2	2.02	0.41
25:BA:2589:A:O4'	51:B5:3:LYS:HB2	2.20	0.41
31:BH:6:ARG:HE	31:BH:6:ARG:HB3	1.57	0.41
25:BA:2045:G:H5'	25:BA:2629:C:H4'	2.03	0.41
25:BA:266:C:H2'	25:BA:267:C:O4'	2.21	0.41
3:AC:52:LEU:HA	3:AC:70:VAL:HG22	2.01	0.41
12:CL:119:LYS:O	12:CL:120:TYR:HB2	2.20	0.41
25:DA:2055:C:H5'	25:DA:2056:G:O5'	2.20	0.41
25:BA:1836:U:O2	27:BD:50:THR:HB	2.20	0.41
25:BA:1470:G:H2'	25:BA:1471:G:O4'	2.20	0.41
25:BA:1096:A:N3	25:BA:1096:A:H2'	2.35	0.41
8:CH:104:ARG:HG3	8:CH:138:TRP:CD2	2.55	0.41
25:BA:2711:C:H2'	25:BA:2712:C:O4'	2.20	0.41
25:DA:950:G:C6	25:DA:951:C:C4	3.08	0.41
1:CA:340:U:H2'	1:CA:341:C:C6	2.55	0.41
25:DA:2744:G:C2	25:DA:2761:G:C4	3.08	0.41
25:DA:799:G:H3'	25:DA:800:A:H2'	2.03	0.41
47:D1:83:GLU:HA	47:D1:84:GLY:HA2	1.58	0.41
1:AA:481:G:H1'	1:AA:483:C:N4	2.36	0.41
1:AA:142:G:H2'	1:AA:143:A:H8	1.85	0.41
30:BG:9:ARG:O	30:BG:13:GLU:HG2	2.20	0.41
45:DZ:146:ILE:H	45:DZ:146:ILE:HG13	1.58	0.41
37:DR:100:LEU:HA	37:DR:100:LEU:HD12	1.90	0.41
27:BD:68:LYS:HD2	27:BD:70:TRP:CH2	2.55	0.41
42:BW:38:TYR:CE1	51:B5:41:PRO:HD3	2.56	0.41
25:DA:686:G:N2	25:DA:788:A:H61	2.18	0.41
8:AH:58:TYR:O	8:AH:59:LEU:HD23	2.20	0.41
1:AA:347:G:H21	1:AA:348:G:H3'	1.85	0.41
1:CA:1157:A:N6	1:CA:1180:A:N3	2.67	0.41
25:DA:1664:A:OP1	61:DA:4387:HOH:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:71:ASP:HB3	27:BD:103:ARG:NH2	2.21	0.41
1:AA:1491:G:H5''	1:AA:1492:A:OP2	2.20	0.41
1:CA:147:G:O2'	1:CA:148:G:P	2.79	0.41
2:CB:80:ILE:HD13	2:CB:80:ILE:O	2.20	0.41
24:CW:8:2R3:H69	24:CW:8:2R3:H67	1.81	0.41
25:DA:2850:A:H5'	25:DA:2868:A:H2	1.85	0.41
46:D0:19:LYS:HE2	46:D0:19:LYS:HB2	1.46	0.41
9:CI:89:ASN:O	9:CI:92:TYR:HB2	2.19	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
34:DO:104:ARG:NH2	34:DO:121:VAL:O	2.54	0.41
28:BE:4:ILE:HG12	28:BE:5:LEU:N	2.35	0.41
25:DA:1371:G:HO2'	25:DA:1372:U:H5	1.63	0.41
45:DZ:75:ASN:O	45:DZ:84:GLU:N	2.35	0.41
9:CI:95:LYS:HA	9:CI:99:LEU:HD13	2.02	0.41
29:DF:117:ARG:NH2	29:DF:187:VAL:HA	2.35	0.41
25:DA:1721:G:H5'	25:DA:1722:A:OP2	2.20	0.41
1:CA:983:A:H2	1:CA:984:C:C6	2.38	0.41
25:DA:1478:G:C2	25:DA:1479:G:C8	3.09	0.41
8:CH:73:ASP:OD1	8:CH:75:ARG:HD3	2.20	0.41
50:B4:61:ARG:O	50:B4:62:ARG:C	2.58	0.41
25:BA:289:G:H2'	25:BA:290:G:H8	1.83	0.41
23:AX:61:C:H2'	23:AX:62:C:C6	2.54	0.41
8:AH:75:ARG:HA	8:AH:76:PRO:HD2	1.84	0.41
1:AA:113:G:H2'	1:AA:114:U:H6	1.84	0.41
48:D2:44:LEU:HD23	48:D2:47:ASN:HA	2.02	0.41
25:BA:553:A:C2	25:BA:2065:C:H4'	2.55	0.41
1:CA:780:A:N3	1:CA:803:G:N1	2.67	0.41
5:AE:57:LYS:HD3	5:AE:61:TYR:CE2	2.55	0.41
25:BA:1314:A:C2	25:BA:2035:A:C4	3.08	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:DA:1959:G:C6	25:DA:1960:A:C5	3.08	0.41
24:CW:3:004:HA	24:CW:4:PRO:HD3	1.73	0.41
39:DT:64:ARG:HB2	39:DT:73:GLU:HG2	2.02	0.41
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.55	0.41
25:BA:873:U:H2'	25:BA:875:U:O4'	2.20	0.41
5:CE:67:VAL:HG13	5:CE:69:VAL:HG12	2.03	0.41
31:DH:87:LEU:HD23	31:DH:164:TYR:HA	2.02	0.41
1:AA:109:A:H2'	1:AA:326:G:H21	1.86	0.41
37:BR:55:ALA:HB2	37:BR:79:LEU:HD13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:126:ASP:HB3	30:BG:130:ASN:H	1.85	0.41
25:DA:460:A:C2	25:DA:470:A:C4	3.09	0.41
23:AX:50:U:H2'	23:AX:51:C:C6	2.55	0.41
25:DA:569:U:C4	25:DA:570:G:C6	3.08	0.41
26:BB:85:G:H8	26:BB:85:G:H5''	1.85	0.41
7:AG:104:LEU:HA	7:AG:104:LEU:HD13	1.84	0.41
7:AG:69:VAL:O	7:AG:69:VAL:HG12	2.19	0.41
37:BR:100:LEU:HD12	37:BR:100:LEU:HA	1.93	0.41
27:BD:253:GLN:HE21	27:BD:253:GLN:HB3	1.56	0.41
40:DU:17:ILE:HG23	40:DU:17:ILE:HD12	1.73	0.41
25:BA:1882:U:C4	25:BA:1883:C:C4	3.09	0.41
25:DA:207:A:H2'	25:DA:208:C:O4'	2.21	0.41
25:DA:1587:A:H2'	25:DA:1588:C:C6	2.55	0.41
50:B4:49:PHE:HB3	50:B4:50:VAL:H	1.37	0.41
1:AA:119:A:C5	1:AA:240:C:C4	3.08	0.41
25:BA:1343:C:OP1	25:BA:2722:C:H4'	2.20	0.41
1:CA:1155:G:C6	1:CA:1156:G:C2	3.09	0.41
30:DG:176:LEU:HA	30:DG:176:LEU:HD23	1.77	0.41
1:CA:1133:G:N2	1:CA:1141:C:N3	2.69	0.41
1:CA:1392:G:N2	1:CA:1502:A:H8	2.19	0.41
1:CA:544:G:C2	1:CA:545:C:C2	3.08	0.41
25:DA:2756:U:H5''	55:D9:19:ARG:HB3	2.02	0.41
4:CD:173:TRP:CE2	4:CD:189:PRO:HG3	2.56	0.41
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.38	0.41
1:AA:946:A:C6	1:AA:947:G:C6	3.09	0.41
25:DA:2807:G:C2	25:DA:2893:G:O6	2.73	0.41
1:CA:406:G:N2	4:CD:119:GLN:HE22	2.18	0.41
28:BE:111:ARG:HA	37:BR:1:MET:SD	2.61	0.41
25:BA:865:G:H4'	25:BA:885:C:O3'	2.20	0.41
38:BS:19:LYS:H	38:BS:19:LYS:HG2	1.76	0.41
8:CH:97:VAL:HA	8:CH:100:ILE:HD11	2.01	0.41
25:BA:672:G:O2'	25:BA:2363:G:H4'	2.21	0.41
25:DA:1380:G:N3	25:DA:1380:G:H2'	2.36	0.41
1:CA:1240:U:OP2	7:CG:115:ARG:HA	2.20	0.41
6:AF:91:VAL:HG12	6:AF:92:LYS:O	2.20	0.41
25:BA:922:G:H2'	25:BA:923:C:O4'	2.20	0.41
36:BQ:18:LYS:HB2	36:BQ:18:LYS:HE3	1.67	0.41
25:BA:1933:U:H2'	25:BA:1940:A:N1	2.35	0.41
44:DY:5:MET:HG2	44:DY:30:VAL:HG11	2.03	0.41
27:BD:72:LYS:HB3	27:BD:72:LYS:HE3	1.85	0.41
2:CB:30:ARG:HG3	2:CB:31:TYR:CD1	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:57:LYS:HD2	10:AJ:60:ARG:NH2	2.36	0.41
1:AA:112:G:H21	1:AA:354:G:C4'	2.34	0.41
1:AA:310:G:H5''	16:AP:31:LYS:HB2	2.03	0.41
25:DA:527:C:H4'	25:DA:528:A:O5'	2.20	0.41
12:CL:42:THR:HA	12:CL:53:ARG:O	2.21	0.41
25:BA:501:U:C4	25:BA:507:G:O6	2.74	0.41
23:AX:8:U:O2	23:AX:21:A:H2	2.03	0.41
2:AB:30:ARG:HG3	2:AB:31:TYR:CD1	2.55	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
12:CL:28:LYS:N	12:CL:29:GLY:HA2	2.35	0.41
25:BA:2814:C:H2'	25:BA:2815:C:O4'	2.20	0.41
1:CA:402:G:H2'	1:CA:403:C:H5'	2.01	0.41
20:CT:89:ARG:O	20:CT:93:GLU:HB2	2.19	0.41
27:DD:68:LYS:O	27:DD:69:ARG:HB2	2.20	0.41
25:DA:2558:C:H2'	25:DA:2559:C:O4'	2.20	0.41
25:DA:1344:G:O2'	25:DA:1385:G:H2'	2.20	0.41
34:BO:98:VAL:HG11	34:BO:114:ILE:HG23	2.03	0.41
25:BA:1298:G:C2	25:BA:1299:A:C2	3.08	0.41
1:AA:955:U:H2'	1:AA:956:U:O4'	2.20	0.41
25:DA:1814:G:H4'	27:DD:51:VAL:HG21	2.02	0.41
25:DA:398:G:H2'	25:DA:399:G:O4'	2.20	0.41
34:DO:98:VAL:HG22	34:DO:118:ALA:HA	2.02	0.41
25:BA:2906:U:O2	25:BA:2906:U:H2'	2.21	0.41
45:DZ:163:LEU:HD12	45:DZ:163:LEU:HA	1.77	0.41
7:CG:12:LEU:O	7:CG:21:VAL:HG12	2.21	0.41
4:AD:141:ARG:HG3	4:AD:144:ASP:OD2	2.20	0.41
1:AA:1153:C:H2'	1:AA:1154:G:H5''	2.03	0.41
4:CD:13:ARG:HB2	4:CD:40:PRO:HD3	2.02	0.41
1:CA:300:A:H2'	1:CA:301:G:O4'	2.20	0.41
5:CE:40:ARG:NH2	5:CE:68:GLU:HA	2.23	0.41
25:BA:1988:A:H1'	61:BA:4655:HOH:O	2.21	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
25:DA:2298:A:H8	25:DA:2299:G:C8	2.37	0.41
25:DA:322:A:C5	25:DA:340:A:C2	3.09	0.41
9:CI:5:TYR:OH	9:CI:16:ARG:HG2	2.20	0.41
25:DA:1337:G:H2'	25:DA:1338:G:C8	2.53	0.41
1:CA:1168:A:N1	1:CA:1169:A:C6	2.89	0.41
1:AA:145:G:C6	1:AA:146:G:N7	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:6:ILE:O	8:AH:10:LEU:HG	2.21	0.41
13:AM:3:ARG:CG	13:AM:8:GLU:HA	2.51	0.41
1:AA:401:C:H2'	1:AA:402:G:C8	2.56	0.41
25:DA:872:A:P	36:DQ:5:ARG:HH12	2.44	0.41
1:CA:471:G:H2'	1:CA:471:G:N3	2.36	0.41
1:AA:553:A:H2'	1:AA:554:C:C6	2.55	0.41
25:BA:2226:C:O2	25:BA:2232:G:C2	2.74	0.41
1:CA:1084:G:C5	1:CA:1085:U:C4	3.09	0.41
1:CA:539:A:C6	1:CA:540:G:C6	3.08	0.41
32:BI:37:VAL:CG1	32:BI:38:LEU:HD12	2.51	0.41
1:AA:92:C:H2'	1:AA:93:G:O4'	2.21	0.41
38:DS:68:GLN:O	38:DS:71:ARG:HG3	2.20	0.41
25:DA:942:G:O2'	25:DA:943:U:H5'	2.21	0.41
35:DP:44:GLY:CA	35:DP:45:LEU:HB2	2.51	0.41
25:DA:1430:C:H2'	25:DA:1431:U:H6	1.81	0.41
25:DA:471:A:H8	25:DA:471:A:O5'	2.02	0.41
55:D9:27:CYS:SG	55:D9:28:GLU:N	2.94	0.41
1:CA:97:G:O2'	1:CA:98:G:O4'	2.37	0.41
13:CM:77:ASN:O	13:CM:81:LEU:HD12	2.21	0.41
1:CA:1385:G:C4	1:CA:1386:G:C8	3.09	0.41
15:AO:18:PHE:CZ	15:AO:21:ASP:HB2	2.56	0.41
1:CA:784:C:H2'	1:CA:785:G:O4'	2.21	0.41
25:BA:402:C:H2'	25:BA:403:C:C6	2.56	0.41
25:DA:574:C:N3	28:DE:145:LYS:HE3	2.36	0.41
25:BA:1074:A:H61	25:BA:1171:G:H2'	1.84	0.41
6:AF:100:ASN:H	18:AR:23:LYS:NZ	2.17	0.41
9:AI:18:PHE:O	9:AI:61:ALA:HA	2.20	0.41
1:CA:245:C:O2	1:CA:283:C:N3	2.53	0.41
5:CE:41:VAL:O	5:CE:67:VAL:HG12	2.20	0.41
25:DA:1785:A:C8	25:DA:1787:A:C5	3.08	0.41
12:AL:7:ILE:O	12:AL:11:VAL:HG23	2.20	0.41
29:BF:29:ASN:H	29:BF:112:MET:CE	2.34	0.41
25:BA:2544:G:O2'	25:BA:2669:A:N1	2.48	0.41
8:CH:64:LYS:HD2	8:CH:79:VAL:HG21	2.02	0.41
27:DD:228:PRO:HD3	27:DD:235:GLY:CA	2.51	0.41
25:BA:2321:A:H2'	25:BA:2322:A:C8	2.56	0.41
25:BA:2050:U:H2'	25:BA:2051:G:O4'	2.21	0.41
29:DF:155:LEU:HB2	29:DF:189:THR:HG21	2.03	0.41
25:BA:2240:G:C5	25:BA:2241:C:C4	3.08	0.41
28:DE:29:GLY:HA2	28:DE:30:PRO:HA	1.84	0.41
17:AQ:45:HIS:NE2	17:AQ:47:PRO:HG3	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BO:4:PRO:O	34:BO:5:GLN:HB2	2.20	0.41
44:DY:9:LYS:HA	44:DY:10:GLY:HA2	1.51	0.41
23:CX:3:C:H5'	25:DA:2255:G:O2'	2.20	0.41
1:CA:1039:C:N4	1:CA:1040:U:O4	2.54	0.41
30:DG:11:TYR:OH	30:DG:16:ARG:HD3	2.21	0.41
4:AD:3:ARG:HH12	4:AD:5:ILE:HG13	1.85	0.41
4:CD:14:ARG:HB2	4:CD:40:PRO:HD2	2.02	0.41
25:BA:1093:G:O2'	25:BA:1094:A:H8	2.03	0.41
1:AA:197:A:N6	1:AA:221:C:H5'	2.35	0.41
25:DA:2850:A:OP2	25:DA:2866:U:H5	2.03	0.41
30:BG:48:GLU:HA	30:BG:51:ARG:NE	2.31	0.41
25:BA:2701:U:OP2	25:BA:2732:G:N2	2.43	0.41
25:DA:411:G:C4	35:DP:72:PRO:HB3	2.56	0.41
1:AA:332:G:OP2	20:AT:10:LEU:HD13	2.20	0.41
29:DF:13:SER:HB2	29:DF:15:SER:H	1.84	0.41
12:AL:24:VAL:O	12:AL:24:VAL:HG12	2.20	0.41
13:CM:16:ASP:HB3	13:CM:34:LEU:CD1	2.50	0.41
1:CA:540:G:H8	1:CA:540:G:O5'	2.04	0.41
39:DT:26:ASP:OD1	39:DT:91:ARG:HA	2.21	0.41
27:DD:227:ASN:C	27:DD:234:GLY:HA3	2.41	0.41
25:BA:364:A:H2'	25:BA:365:G:O4'	2.21	0.41
1:AA:631:G:H2'	1:AA:632:A:H8	1.85	0.41
1:AA:1380:U:C4	7:AG:3:ARG:HG2	2.56	0.41
25:BA:1018:A:H5'	25:BA:1233:U:H1'	2.03	0.41
25:DA:647:G:H8	25:DA:647:G:O5'	2.04	0.41
12:AL:79:GLU:HB3	12:AL:80:HIS:CD2	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:CA:1009:G:N2	1:CA:1010:G:H1'	2.36	0.41
11:AK:18:ARG:NH2	11:AK:35:PRO:O	2.41	0.41
55:D9:17:ILE:HD12	55:D9:17:ILE:HA	1.70	0.41
25:BA:2631:C:H4'	28:BE:151:TYR:O	2.21	0.41
52:D6:11:LEU:HB2	52:D6:21:TYR:HB2	2.03	0.41
36:DQ:4:PRO:HG3	36:DQ:69:PHE:HE2	1.86	0.41
1:AA:1289:A:H2	1:AA:1372:U:O4'	2.04	0.41
31:BH:86:GLU:HB3	31:BH:165:ALA:HB2	2.02	0.41
45:DZ:118:GLN:N	45:DZ:173:ALA:O	2.54	0.41
25:BA:1733:C:H2'	25:BA:1734:G:O4'	2.21	0.41
1:CA:19:C:H5"	5:CE:86:ALA:HB3	2.02	0.41
10:AJ:64:GLU:HG2	14:AN:59:ALA:HB2	2.02	0.41
25:DA:2730:C:H4'	28:DE:168:MET:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2398:U:H2'	25:DA:2399:G:C8	2.56	0.41
1:CA:652:U:O2'	1:CA:653:A:OP2	2.27	0.41
25:BA:116:A:H3'	25:BA:117:A:C5'	2.49	0.41
42:BW:20:VAL:O	42:BW:23:LEU:HB2	2.20	0.41
34:BO:12:ASP:CG	34:BO:14:THR:HG23	2.41	0.41
47:D1:22:GLY:O	47:D1:32:LYS:HE3	2.21	0.41
13:AM:67:GLU:HB3	13:AM:68:GLY:H	1.65	0.41
1:CA:853:G:C4	1:CA:854:G:C8	3.09	0.41
45:DZ:120:ILE:HD12	45:DZ:120:ILE:N	2.36	0.41
37:DR:113:LEU:HD12	37:DR:113:LEU:O	2.20	0.41
45:BZ:13:GLU:HB3	45:BZ:18:LEU:HD21	2.02	0.41
42:BW:9:TYR:H	42:BW:102:HIS:CE1	2.38	0.41
45:DZ:95:PRO:HA	45:DZ:129:SER:HA	2.02	0.41
25:DA:127:A:H5''	25:DA:128:C:C6	2.55	0.41
25:BA:702:A:H8	25:BA:703:G:O4'	2.04	0.41
34:BO:104:ARG:NH2	39:BT:43:GLN:OE1	2.54	0.41
1:AA:633:G:H2'	1:AA:634:C:C6	2.56	0.41
1:CA:1258:G:H21	1:CA:1279:A:H62	1.69	0.41
1:AA:456:C:H2'	1:AA:457:C:C6	2.55	0.41
2:AB:162:ILE:O	2:AB:162:ILE:HG13	2.20	0.41
25:DA:1339:G:H5''	43:DX:16:LYS:HD3	2.03	0.41
8:CH:68:ARG:HH11	8:CH:68:ARG:HG3	1.86	0.41
1:AA:1162:C:H2'	1:AA:1163:C:C6	2.56	0.41
25:DA:465:G:C6	25:DA:466:A:N6	2.89	0.41
1:CA:954:G:C5	1:CA:955:U:C4	3.09	0.41
29:DF:184:TYR:CE1	35:DP:3:LEU:HD21	2.56	0.41
1:AA:1349:A:C2	1:AA:1374:A:C4	3.09	0.41
25:DA:83:G:N2	25:DA:103:A:OP2	2.53	0.41
5:CE:139:LEU:HA	5:CE:142:LEU:HD12	2.02	0.41
21:CU:2:GLY:O	21:CU:4:GLY:N	2.54	0.41
25:BA:2119:C:H2'	25:BA:2120:U:O4'	2.21	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:1212:C:H2'	25:BA:1213:U:C6	2.55	0.41
27:BD:111:LEU:HD23	27:BD:127:VAL:HG12	2.03	0.41
1:AA:605:U:O2'	1:AA:606:G:H5'	2.21	0.41
10:CJ:54:PHE:CD2	10:CJ:55:LYS:HG2	2.55	0.41
25:DA:1425:G:H2'	25:DA:1426:G:O4'	2.21	0.41
25:BA:1553:A:O2'	25:BA:1554:A:O5'	2.31	0.41
27:DD:125:ILE:HG13	27:DD:137:PRO:HD3	2.01	0.41
25:DA:280:C:C2	25:DA:361:G:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:27:ASN:OD1	11:CK:28:THR:N	2.49	0.41
8:CH:39:LEU:HA	8:CH:39:LEU:HD13	1.93	0.41
33:BN:28:THR:HG22	33:BN:29:LYS:N	2.33	0.41
38:DS:92:TYR:HB3	38:DS:98:VAL:HG21	2.02	0.41
25:DA:141:A:C8	25:DA:1408:C:O2'	2.72	0.41
49:D3:6:VAL:HG12	49:D3:54:VAL:HG13	2.02	0.41
44:DY:38:ILE:HD13	44:DY:66:PRO:HA	2.03	0.41
26:BB:29:A:C2	26:BB:30:C:C2	3.08	0.41
40:BU:19:LYS:O	40:BU:22:LYS:HG3	2.21	0.41
25:BA:1560:U:H2'	25:BA:1561:C:C6	2.56	0.41
2:CB:27:LYS:HE3	2:CB:193:ASP:OD1	2.20	0.41
1:CA:1468:A:H2'	1:CA:1469:G:O4'	2.20	0.41
28:BE:108:SER:O	28:BE:162:ALA:HA	2.21	0.41
26:DB:13:A:O2'	26:DB:14:U:H3'	2.20	0.41
1:CA:1198:G:H2'	1:CA:1199:U:C6	2.54	0.41
31:BH:137:ASP:HB3	31:BH:140:LYS:HB3	2.02	0.41
29:DF:134:GLY:HA2	29:DF:162:LEU:O	2.21	0.41
34:BO:25:LEU:O	34:BO:26:LYS:HG3	2.21	0.41
25:BA:908:A:N3	26:BB:79:C:O2'	2.44	0.41
29:BF:181:LEU:HD12	29:BF:181:LEU:HA	1.83	0.41
25:BA:1771:G:H8	25:BA:1771:G:O5'	2.04	0.41
1:CA:1121:U:N3	1:CA:1122:U:C5	2.88	0.41
1:CA:1316:G:H2'	1:CA:1318:A:OP2	2.21	0.41
25:BA:1403:U:H2'	25:BA:1404:G:O4'	2.21	0.41
1:CA:1390:U:H2'	1:CA:1391:U:C6	2.56	0.41
1:CA:1075:C:H2'	1:CA:1076:C:H5'	2.02	0.41
25:DA:90:U:O3'	25:DA:92:A:H8	2.04	0.41
25:DA:2683:C:O2	34:DO:70:LYS:HE3	2.20	0.41
1:CA:1139:G:N2	1:CA:1143:G:C6	2.88	0.41
9:CI:20:ARG:HA	9:CI:21:PRO:HD3	1.90	0.41
25:BA:1712:A:C4'	34:BO:67:LYS:HB2	2.51	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
30:DG:72:ARG:HA	30:DG:86:MET:O	2.21	0.41
5:CE:18:ARG:HE	5:CE:25:ARG:HB2	1.86	0.41
7:CG:75:VAL:O	7:CG:76:ARG:HG3	2.21	0.41
10:CJ:25:GLU:O	10:CJ:29:ARG:HD3	2.21	0.41
1:AA:100:C:H2'	1:AA:101:A:C8	2.56	0.41
46:D0:36:ILE:HD12	46:D0:58:THR:CG2	2.51	0.41
54:D8:31:HIS:O	54:D8:36:LYS:NZ	2.53	0.41
1:CA:734:G:H2'	1:CA:735:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:735:C:H5'	18:CR:71:LYS:HD3	2.02	0.41
1:AA:382:A:H2	1:AA:383:A:N7	2.19	0.41
25:DA:1782:C:O4'	25:DA:2609:U:C2	2.74	0.41
25:DA:631:A:H2'	25:DA:632:A:O4'	2.19	0.41
3:AC:35:GLU:HG2	3:AC:39:ILE:HD11	2.03	0.41
1:CA:1353:G:C2	1:CA:1370:G:C2	3.09	0.41
25:BA:989:G:H5'	25:BA:990:A:H5'	2.02	0.41
25:DA:77:C:H42	25:DA:109:G:H1	1.68	0.41
25:BA:1355:G:P	53:B7:9:ARG:HD3	2.61	0.41
42:BW:14:PRO:HG2	42:BW:78:GLU:CG	2.45	0.41
1:AA:1220:G:H2'	1:AA:1221:G:O4'	2.20	0.41
1:AA:375:U:C2	1:AA:376:G:C8	3.09	0.41
34:DO:2:ILE:HD11	34:DO:82:ASN:HB3	2.03	0.41
2:AB:211:ILE:O	2:AB:215:LEU:HB2	2.21	0.41
1:CA:451:A:N1	1:CA:480:U:H2'	2.36	0.41
3:CC:6:HIS:NE2	3:CC:8:ILE:HB	2.36	0.41
1:CA:1305:G:H5'	21:CU:4:GLY:CA	2.51	0.41
1:CA:757:U:H2'	1:CA:758:G:O4'	2.21	0.41
1:CA:868:C:H2'	1:CA:869:G:O4'	2.20	0.41
3:AC:6:HIS:HA	3:AC:7:PRO:HD3	1.96	0.41
34:BO:47:ILE:HB	34:BO:48:PRO:HD2	2.03	0.41
1:AA:6:G:C4	5:AE:119:LEU:HD11	2.56	0.41
25:BA:922:G:H4'	45:BZ:151:HIS:HE1	1.86	0.41
7:CG:26:PHE:CD2	7:CG:30:ILE:HD11	2.56	0.41
1:AA:599:C:H5''	8:AH:95:VAL:O	2.20	0.41
1:AA:998:G:H2'	1:AA:999:C:C6	2.56	0.41
41:DV:40:LEU:CB	41:DV:46:VAL:HG13	2.51	0.41
2:AB:127:ILE:HB	2:AB:129:GLU:H	1.85	0.41
1:AA:357:G:C2	1:AA:358:U:C5	3.08	0.41
25:DA:2302:G:C6	25:DA:2303:G:N7	2.89	0.41
20:AT:56:MET:O	20:AT:56:MET:HG2	2.21	0.41
1:CA:112:G:H21	1:CA:354:G:C4'	2.33	0.41
23:CX:59:A:C2'	23:CX:60:U:H5'	2.51	0.41
25:BA:2856:G:OP2	39:BT:54:ARG:HB2	2.21	0.41
1:CA:932:C:H2'	1:CA:933:G:H8	1.86	0.41
25:DA:1539:G:H2'	25:DA:1540:U:H6	1.84	0.41
1:AA:1329:A:OP1	13:AM:28:ALA:HB3	2.21	0.41
4:CD:20:TYR:CD1	4:CD:26:CYS:HB3	2.56	0.41
1:CA:649:G:C5	1:CA:650:G:C8	3.09	0.41
1:CA:1093:A:N3	1:CA:1109:C:O2'	2.46	0.41
13:AM:60:VAL:HG13	13:AM:64:TRP:CE3	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BI:102:SER:HA	32:BI:106:GLY:HA3	2.03	0.41
1:CA:780:A:C2	1:CA:803:G:C6	3.09	0.41
1:CA:114:U:H2'	1:CA:115:G:C8	2.56	0.41
29:DF:34:TRP:CH2	35:DP:8:PRO:HB3	2.56	0.41
1:CA:308:C:H2'	1:CA:309:G:H8	1.86	0.41
25:DA:760:G:H2'	25:DA:761:A:O4'	2.19	0.41
17:CQ:57:VAL:HG12	17:CQ:76:LEU:HA	2.03	0.41
25:DA:335:C:H4'	44:DY:73:ARG:NE	2.36	0.41
38:DS:24:LEU:HD23	38:DS:24:LEU:HA	1.89	0.41
25:BA:1013:G:H2'	25:BA:1014:U:C6	2.56	0.41
31:DH:154:PRO:HB3	31:DH:163:TYR:CZ	2.56	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
25:BA:273:G:O2'	25:BA:274:U:H5''	2.20	0.41
1:CA:341:C:C2'	1:CA:342:C:H5'	2.50	0.41
25:DA:1461:G:H2'	25:DA:1462:C:H6	1.85	0.41
28:DE:14:ILE:HD11	28:DE:173:VAL:HG11	2.03	0.41
1:CA:853:G:C2	1:CA:854:G:C8	3.08	0.41
26:BB:78:A:H2'	26:BB:79:C:O4'	2.20	0.41
17:CQ:29:HIS:HA	17:CQ:30:PRO:HD2	1.88	0.41
2:AB:87:ARG:NH1	2:AB:233:SER:HB3	2.36	0.41
25:DA:1655:A:H4'	28:DE:115:GLY:N	2.36	0.41
1:AA:394:G:H2'	1:AA:395:C:H6	1.86	0.41
25:BA:1845:G:H4'	27:BD:51:VAL:HG21	2.03	0.41
25:DA:2758:A:H2'	25:DA:2759:G:O4'	2.20	0.41
25:DA:272(E):G:C2	25:DA:364:C:C2	3.09	0.41
25:BA:1679:A:OP2	61:BA:4621:HOH:O	2.22	0.41
25:DA:2028:U:H2'	25:DA:2029:G:O4'	2.21	0.41
1:CA:447:G:H2'	1:CA:485:G:N2	2.36	0.41
1:AA:461:A:O5'	1:AA:461:A:H8	2.04	0.41
33:BN:82:LEU:HD12	33:BN:82:LEU:HA	1.76	0.41
42:BW:88:ARG:HD2	42:BW:88:ARG:HA	1.94	0.41
13:AM:79:LYS:NZ	13:AM:83:ASP:OD2	2.45	0.41
1:AA:1445:C:C4	1:AA:1446:U:C4	3.09	0.41
25:DA:1263:U:H1'	51:D5:10:LYS:HG3	2.03	0.41
5:AE:90:VAL:O	5:AE:91:LEU:HD13	2.21	0.41
5:CE:60:TYR:CZ	5:CE:64:ARG:HD3	2.56	0.41
2:CB:158:LEU:HA	2:CB:159:PRO:HD3	1.74	0.41
31:BH:97:ARG:NE	31:BH:104:GLU:OE1	2.53	0.41
1:CA:358:U:H2'	1:CA:359:U:H6	1.86	0.41
25:BA:2495:C:N3	36:BQ:124:LYS:NZ	2.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:802:A:OP1	61:DA:4454:HOH:O	2.21	0.41
25:DA:1353:A:H2'	25:DA:1354:A:C8	2.55	0.41
25:BA:2797:C:H1'	28:BE:37:ARG:NH1	2.36	0.41
23:AX:37:A:H2'	23:AX:38:A:O4'	2.20	0.41
25:BA:866:A:C4	25:BA:1234:A:C2	3.08	0.41
25:DA:1717:G:C2	25:DA:1745(A):C:O2	2.74	0.41
13:CM:47:ASP:N	13:CM:47:ASP:OD1	2.54	0.41
40:BU:85:LYS:HE2	40:BU:85:LYS:HB3	1.88	0.41
25:DA:2250:G:N3	25:DA:2250:G:H5''	2.36	0.41
3:AC:178:LEU:HA	3:AC:178:LEU:HD13	1.80	0.41
20:AT:36:LEU:HA	20:AT:36:LEU:HD23	1.82	0.41
25:DA:352:G:H8	25:DA:352:G:OP1	2.04	0.41
12:AL:54:LYS:HD3	12:AL:54:LYS:N	2.36	0.41
31:DH:71:LEU:HA	31:DH:71:LEU:HD12	1.86	0.41
25:DA:1581:G:H2'	25:DA:1582:C:O4'	2.21	0.41
1:AA:815:A:N7	1:AA:1509:C:O2'	2.43	0.41
1:CA:1153:C:H2'	1:CA:1154:G:H5''	2.02	0.41
30:DG:11:TYR:HA	30:DG:176:LEU:HD21	2.03	0.41
30:DG:8:LYS:O	30:DG:11:TYR:HB3	2.21	0.41
1:CA:1272:G:C2	1:CA:1273:G:H1'	2.56	0.41
1:AA:460:G:C6	1:AA:470:C:H5''	2.56	0.41
25:DA:2318:G:H21	38:DS:3:ARG:CD	2.34	0.41
25:DA:2371:G:C2	25:DA:2372:G:C8	3.09	0.41
25:DA:2755:C:C4	55:D9:19:ARG:NH1	2.89	0.41
25:DA:2494:G:C4	25:DA:2495:G:C8	3.08	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
25:BA:2074:G:H4'	28:BE:143:ASN:O	2.21	0.41
2:AB:71:VAL:HG13	2:AB:93:VAL:CG2	2.50	0.41
13:CM:90:LEU:HD23	13:CM:93:ARG:NE	2.36	0.41
1:CA:1227:A:C2	19:CS:83:HIS:HB3	2.56	0.41
45:DZ:48:PHE:CE1	45:DZ:52:SER:HA	2.56	0.41
47:B1:21:ARG:CG	47:B1:21:ARG:HH11	2.29	0.41
25:DA:271(G):C:H2'	25:DA:271(H):G:H8	1.86	0.41
32:BI:99:GLU:O	32:BI:103:ARG:NH1	2.54	0.41
25:BA:2745:G:H3'	25:BA:2746:A:O4'	2.21	0.41
4:AD:178:VAL:HG12	4:AD:179:GLU:N	2.36	0.41
25:BA:2214:G:H5'	25:BA:2215:G:OP2	2.21	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:6:HIS:CD2	3:CC:8:ILE:H	2.36	0.41
1:AA:685:G:C2	1:AA:686:U:C4	3.08	0.41
44:BY:38:ILE:HD13	44:BY:66:PRO:HA	2.03	0.41
25:BA:1629:C:H2'	25:BA:1630:A:C8	2.56	0.41
1:AA:91:C:H2'	1:AA:92:C:C6	2.56	0.41
1:CA:78:G:N2	1:CA:92:C:C2	2.88	0.41
25:BA:474:U:C4	25:BA:606:G:H1'	2.56	0.41
6:AF:82:ARG:HB3	6:AF:85:VAL:HG23	2.03	0.41
1:AA:125:U:O2	1:AA:236:G:N2	2.46	0.41
25:DA:658:C:H2'	25:DA:659:C:C6	2.55	0.41
25:BA:275:C:H2'	25:BA:276:C:C6	2.56	0.41
25:DA:2745:C:H4'	31:DH:142:GLY:O	2.21	0.41
18:AR:58:LEU:HA	18:AR:58:LEU:HD13	1.79	0.41
25:DA:2348:U:O4	25:DA:2382:G:N1	2.54	0.41
1:CA:783:C:N4	1:CA:784:C:H41	2.19	0.41
35:BP:81:GLN:HB2	35:BP:110:TYR:HD2	1.86	0.41
25:DA:652(T):C:H2'	25:DA:652(U):G:C8	2.56	0.41
1:AA:1206:G:O6	1:AA:1207:G:C6	2.74	0.41
25:DA:106:C:O4'	44:DY:1:MET:HG3	2.21	0.41
26:BB:4:C:H2'	26:BB:5:C:O4'	2.22	0.41
1:CA:1049:U:C6	1:CA:1201:A:H5'	2.56	0.41
25:BA:26:G:O3'	25:BA:1306:G:H4'	2.20	0.41
5:CE:127:ASN:HA	5:CE:128:PRO:HD3	1.83	0.41
30:BG:77:ILE:HG22	30:BG:80:PHE:H	1.86	0.41
5:CE:41:VAL:HG23	5:CE:67:VAL:CG1	2.51	0.41
1:AA:108:G:H5''	1:AA:109:A:H5''	2.03	0.41
26:DB:14:U:O3'	26:DB:108:U:O2'	2.38	0.41
1:CA:358:U:H2'	1:CA:359:U:C6	2.56	0.41
4:AD:150:GLU:HG3	4:AD:151:LYS:N	2.36	0.41
54:D8:22:VAL:CG2	54:D8:59:LYS:HG3	2.51	0.41
32:DI:9:LEU:HD11	32:DI:35:LEU:HD13	2.03	0.41
25:BA:751:G:O2'	25:BA:773:G:N2	2.40	0.41
1:CA:216:G:H2'	1:CA:217:C:C6	2.56	0.41
1:CA:456:C:N3	1:CA:476:G:C2	2.89	0.41
20:CT:42:GLN:O	20:CT:45:GLN:HB3	2.20	0.41
1:CA:484:G:C8	1:CA:486:U:C2	3.09	0.41
23:CX:12:G:H1'	25:DA:1923:U:O2'	2.21	0.41
25:BA:2430:A:H2'	25:BA:2431:U:C6	2.56	0.41
35:DP:135:LEU:HD23	35:DP:135:LEU:HA	1.93	0.41
8:CH:121:ASP:OD1	8:CH:121:ASP:N	2.53	0.41
40:DU:16:LYS:HB3	40:DU:16:LYS:HE2	1.80	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DZ:70:LEU:HA	45:DZ:70:LEU:HD23	1.79	0.41
6:CF:22:GLU:O	6:CF:26:ILE:HG13	2.21	0.41
9:AI:9:ARG:HG2	9:AI:14:VAL:HG13	2.02	0.41
1:CA:1005:A:H3'	1:CA:1006:C:O4'	2.20	0.40
1:CA:1134:G:C2'	1:CA:1135:U:H5'	2.50	0.40
1:CA:1073:U:C4	1:CA:1074:G:N7	2.90	0.40
25:DA:2298:A:C6	25:DA:2321:G:C2	3.09	0.40
4:CD:173:TRP:CD1	4:CD:174:LEU:HG	2.56	0.40
25:DA:1114:G:H2'	25:DA:1115:G:C8	2.55	0.40
1:CA:559:A:H4'	1:CA:560:U:H5''	2.03	0.40
25:BA:895:G:C4	25:BA:978:A:H8	2.39	0.40
7:AG:111:ARG:HB3	7:AG:113:GLU:OE2	2.21	0.40
1:CA:674:G:H2'	1:CA:675:A:H8	1.84	0.40
25:BA:2701:U:O2	25:BA:2701:U:H5'	2.21	0.40
35:DP:88:LEU:O	35:DP:91:PHE:HD1	2.02	0.40
30:DG:136:ARG:NH1	30:DG:137:GLU:H	2.16	0.40
28:BE:144:ARG:HB3	28:BE:145:LYS:H	1.45	0.40
13:CM:29:ARG:HB3	13:CM:64:TRP:CZ3	2.55	0.40
25:DA:848:G:C2	25:DA:933:A:H1'	2.57	0.40
5:AE:116:THR:HG23	5:AE:117:ASP:OD2	2.21	0.40
16:CP:43:LYS:HG2	16:CP:48:TRP:CD2	2.56	0.40
7:CG:27:ILE:HA	7:CG:30:ILE:HD12	2.03	0.40
25:BA:390:G:H2'	25:BA:391:G:O4'	2.21	0.40
1:CA:1128:C:H1'	1:CA:1147:C:N3	2.35	0.40
4:CD:64:LEU:O	4:CD:64:LEU:HD12	2.21	0.40
2:CB:164:VAL:HB	2:CB:186:ALA:HB2	2.03	0.40
29:BF:74:ARG:H	29:BF:74:ARG:HG3	1.63	0.40
30:DG:179:PRO:HG3	50:D4:43:TYR:CZ	2.56	0.40
29:DF:125:LEU:HD21	29:DF:199:TRP:CD2	2.56	0.40
41:BV:65:GLY:HA3	41:BV:91:TYR:CZ	2.55	0.40
3:CC:112:SER:O	3:CC:115:LEU:HB2	2.22	0.40
6:CF:95:GLU:HA	6:CF:96:PRO:HD3	1.90	0.40
1:CA:881:G:P	12:CL:12:ARG:NH2	2.94	0.40
14:AN:12:ARG:HG2	14:AN:13:THR:N	2.36	0.40
1:AA:251:G:H4'	1:AA:252:U:O5'	2.21	0.40
25:BA:1347:A:C8	25:BA:1349:G:C8	3.09	0.40
8:AH:64:LYS:HG2	8:AH:79:VAL:HG21	2.02	0.40
38:DS:78:LEU:HG	38:DS:78:LEU:H	1.29	0.40
4:AD:107:ARG:HD2	4:AD:107:ARG:HA	1.71	0.40
25:DA:2044:C:C2	25:DA:2625:G:C2	3.08	0.40
1:AA:1269:A:H2	1:AA:1312:G:N3	2.19	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1210:C:H2'	1:AA:1211:U:H5'	2.03	0.40
26:DB:83:G:H5''	49:D3:52:HIS:CE1	2.55	0.40
1:CA:341:C:H6	1:CA:341:C:O5'	2.04	0.40
28:BE:9:VAL:HG22	28:BE:25:VAL:HB	2.03	0.40
25:DA:1334:G:H2'	25:DA:1335:U:C6	2.57	0.40
25:BA:1735:U:O2	25:BA:1747:A:H5'	2.21	0.40
25:DA:1309:G:O2'	25:DA:1611:C:O2'	2.26	0.40
5:CE:84:PHE:CE2	5:CE:133:TYR:HD2	2.39	0.40
1:CA:127:G:O2'	17:CQ:2:PRO:O	2.40	0.40
45:DZ:144:LEU:HD23	45:DZ:144:LEU:HA	1.85	0.40
4:CD:108:LEU:HD12	4:CD:108:LEU:HA	1.67	0.40
1:AA:720:C:H6	1:AA:720:C:O5'	2.04	0.40
37:DR:70:LEU:O	37:DR:72:ASP:N	2.54	0.40
21:CU:15:ARG:HB2	21:CU:15:ARG:HH11	1.86	0.40
4:AD:45:GLN:HB3	4:AD:45:GLN:HE21	1.66	0.40
16:AP:38:TYR:O	16:AP:49:LEU:HD12	2.21	0.40
25:DA:1583:A:H5'	25:DA:1584:C:O5'	2.20	0.40
36:DQ:73:PRO:HA	36:DQ:93:TYR:CD1	2.55	0.40
42:DW:24:ILE:HA	42:DW:27:LYS:HG3	2.02	0.40
4:AD:68:TYR:CE2	4:AD:97:LEU:HB3	2.56	0.40
10:AJ:38:ILE:HA	10:AJ:39:PRO:HD3	1.90	0.40
25:BA:1091:A:O2'	25:BA:1093:G:C4	2.68	0.40
1:CA:973:G:H3'	1:CA:974:A:H5''	2.03	0.40
25:DA:2756:U:H4'	25:DA:2757:A:OP1	2.21	0.40
25:DA:1338:G:C4	25:DA:1339:G:C8	3.10	0.40
1:CA:1222:G:C6	1:CA:1223:C:C4	3.10	0.40
25:DA:30:G:C5	25:DA:31:C:C4	3.10	0.40
15:AO:39:LEU:HB3	15:AO:56:LEU:HD13	2.03	0.40
25:DA:14:A:C6	25:DA:526:A:C2	3.09	0.40
14:AN:33:VAL:HA	14:AN:40:CYS:HA	2.03	0.40
27:BD:206:LEU:HD23	27:BD:206:LEU:HA	1.79	0.40
25:BA:1220:U:H1'	25:BA:1221:G:OP1	2.21	0.40
1:AA:391:G:OP1	16:AP:28:ARG:NH1	2.41	0.40
30:DG:101:ILE:O	30:DG:104:GLU:HB3	2.21	0.40
1:AA:129:U:H5'	17:AQ:3:LYS:NZ	2.35	0.40
25:BA:1629:C:O2'	25:BA:1632:A:N3	2.53	0.40
11:CK:33:THR:OG1	11:CK:34:ASP:O	2.29	0.40
26:BB:33:G:C2'	26:BB:34:U:H5'	2.50	0.40
25:BA:630:U:OP1	29:BF:102:PRO:HA	2.21	0.40
1:CA:986:A:H1'	19:CS:54:GLY:O	2.21	0.40
50:B4:5:ILE:HG12	50:B4:6:HIS:CD2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1385:G:C6	1:CA:1386:G:C5	3.09	0.40
25:DA:919:G:C6	25:DA:920:G:C5	3.09	0.40
25:BA:1703:C:H5''	28:BE:136:ARG:HB2	2.02	0.40
25:DA:2360:A:C2	25:DA:2361:A:H1'	2.57	0.40
1:CA:1021:G:N3	1:CA:1021:G:H2'	2.35	0.40
25:DA:1667:G:H1'	25:DA:1991:U:O4	2.21	0.40
25:DA:521:G:H2'	25:DA:522:G:H8	1.86	0.40
28:DE:21:VAL:HA	28:DE:22:PRO:HD3	1.74	0.40
34:BO:104:ARG:HH22	39:BT:43:GLN:NE2	2.19	0.40
10:AJ:31:GLY:HA2	10:AJ:32:ALA:HA	1.49	0.40
10:CJ:35:SER:N	10:CJ:73:ASP:O	2.34	0.40
1:AA:130:A:N7	17:AQ:63:ARG:HB2	2.35	0.40
48:D2:62:THR:O	48:D2:65:ASN:HB3	2.21	0.40
1:AA:963:G:N3	10:AJ:54:PHE:HZ	2.19	0.40
43:BX:26:TYR:CE2	43:BX:89:ILE:HG13	2.55	0.40
42:DW:26:GLY:HA2	42:DW:71:VAL:O	2.20	0.40
5:CE:144:THR:H	5:CE:147:ASP:HB2	1.86	0.40
25:DA:2016:U:H2'	25:DA:2017:U:C6	2.56	0.40
25:BA:2410:U:H2'	25:BA:2411:G:C8	2.56	0.40
25:DA:182:A:C6	25:DA:183:C:C4	3.09	0.40
27:BD:109:ASP:HB2	27:BD:197:GLY:HA2	2.01	0.40
25:BA:218:A:H3'	25:BA:218:A:C8	2.57	0.40
27:DD:253:GLN:HB3	27:DD:253:GLN:HE21	1.53	0.40
1:CA:687:A:C2	1:CA:704:A:C5	3.09	0.40
7:AG:44:TYR:O	7:AG:47:CYS:HB2	2.21	0.40
1:AA:1347:G:H5''	9:AI:107:ARG:HB3	2.02	0.40
5:CE:34:VAL:N	5:CE:42:GLY:O	2.51	0.40
1:AA:347:G:O2'	1:AA:348:G:N2	2.54	0.40
1:AA:342:C:N3	1:AA:348:G:O6	2.55	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:CA:1118:C:H1'	1:CA:1179:A:C4	2.56	0.40
1:AA:1001(A):G:C5	1:AA:1002:G:C8	3.08	0.40
45:DZ:30:ASN:OD1	45:DZ:33:LEU:HD23	2.22	0.40
25:DA:2287:A:C5	25:DA:2289:G:C5	3.10	0.40
32:BI:50:ARG:H	32:BI:50:ARG:HG2	1.59	0.40
1:AA:437:U:C5'	4:AD:155:LEU:HD11	2.47	0.40
25:DA:1336:A:H2'	25:DA:1337:G:C8	2.56	0.40
1:CA:1169:A:C8	1:CA:1169:A:C3'	3.04	0.40
25:DA:466:A:H1'	25:DA:683:C:O4'	2.21	0.40
39:DT:31:SER:OG	39:DT:85:LYS:HE3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1370:G:C2	1:AA:1371:G:C8	3.09	0.40
36:BQ:14:ARG:HG2	36:BQ:41:TRP:HH2	1.87	0.40
1:AA:1220:G:H21	19:AS:54:GLY:C	2.23	0.40
7:CG:120:ILE:CG2	7:CG:124:LEU:HD12	2.52	0.40
25:DA:921:G:C5	25:DA:922:U:C4	3.09	0.40
25:DA:1406:U:H2'	25:DA:1407:C:C6	2.56	0.40
38:DS:77:ALA:O	38:DS:81:GLY:N	2.54	0.40
1:CA:828:A:N6	1:CA:858:G:O2'	2.50	0.40
52:D6:6:ARG:NH1	52:D6:26:ASN:HB2	2.36	0.40
25:DA:414:C:C2'	25:DA:415:A:H5'	2.51	0.40
1:CA:840:C:H5''	1:CA:841:U:H5	1.86	0.40
4:CD:43:HIS:CA	4:CD:46:LYS:HG3	2.51	0.40
27:DD:182:LEU:O	27:DD:271:ILE:N	2.45	0.40
25:BA:2642:G:H2'	25:BA:2643:G:O4'	2.21	0.40
1:CA:943:U:H2'	1:CA:944:G:H5'	2.02	0.40
25:DA:1813:G:H1'	27:DD:50:THR:OG1	2.22	0.40
16:AP:59:TRP:HB3	16:AP:64:ALA:HB2	2.03	0.40
25:DA:2564:A:OP1	25:DA:2648:C:H4'	2.20	0.40
25:DA:442:G:H21	29:DF:48:THR:HB	1.84	0.40
25:DA:952:G:C6	25:DA:953:A:N7	2.90	0.40
25:BA:403:C:H42	25:BA:425:G:H1	1.68	0.40
20:CT:43:LEU:O	20:CT:47:GLY:N	2.54	0.40
25:DA:628:G:H2'	25:DA:629:G:H8	1.85	0.40
25:BA:2087:C:H2'	25:BA:2088:C:H6	1.86	0.40
1:AA:1427:U:H2'	1:AA:1428:A:C8	2.56	0.40
25:BA:1026:A:C4	25:BA:1181:G:O4'	2.74	0.40
25:BA:39:C:H2'	25:BA:40:C:C6	2.56	0.40
25:BA:561:A:H2'	25:BA:562:C:C6	2.56	0.40
38:BS:69:VAL:HG23	38:BS:101:LEU:HG	2.04	0.40
26:BB:100:A:O5'	61:BB:4021:HOH:O	2.22	0.40
1:AA:960:U:C2	1:AA:1225:A:N7	2.89	0.40
25:BA:227:C:H2'	25:BA:228:U:O4'	2.21	0.40
17:AQ:29:HIS:HA	17:AQ:30:PRO:HD2	1.88	0.40
25:BA:1423:G:H2'	61:BA:3831:HOH:O	2.20	0.40
1:CA:601:C:H2'	1:CA:602:A:C8	2.55	0.40
1:CA:1155:G:H2'	1:CA:1156:G:O4'	2.22	0.40
2:AB:48:MET:HA	2:AB:51:LEU:HD12	2.03	0.40
1:AA:573:A:N3	1:AA:883:C:O2'	2.43	0.40
1:AA:1492:A:H1'	25:BA:1935:A:H61	1.86	0.40
1:AA:1317:C:OP1	14:AN:18:VAL:HG22	2.22	0.40
1:AA:945:G:C2	1:AA:946:A:C8	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:807:G:H2'	25:BA:808:A:O4'	2.22	0.40
1:AA:103:C:C4	1:AA:104:G:N7	2.89	0.40
26:DB:33:G:H5'	30:DG:2:PRO:HD3	2.03	0.40
25:DA:2805:G:C6	25:DA:2807:G:C6	3.09	0.40
2:CB:219:VAL:HA	2:CB:222:ILE:HD11	2.02	0.40
1:AA:974:A:OP1	1:AA:974:A:H8	2.04	0.40
25:BA:868:A:H2'	25:BA:991:G:H5''	2.04	0.40
25:DA:2831:G:P	28:DE:58:ARG:HH22	2.38	0.40
35:DP:90:ARG:HG2	35:DP:91:PHE:CD1	2.56	0.40
25:BA:2576:A:C2	25:BA:2659:U:H4'	2.56	0.40
7:CG:65:ALA:CB	7:CG:124:LEU:HD23	2.50	0.40
1:CA:491:G:C2	1:CA:492:G:C4	3.10	0.40
1:CA:391:G:P	16:CP:28:ARG:HH22	2.44	0.40
1:AA:1321:C:H5''	1:AA:1322:C:H2'	2.03	0.40
25:DA:875:G:C2	25:DA:903:C:C2	3.10	0.40
20:CT:82:SER:O	20:CT:86:ARG:HG3	2.22	0.40
25:BA:12:U:O2	25:BA:12:U:H2'	2.21	0.40
14:AN:4:LYS:HD3	14:AN:7:ILE:CG2	2.51	0.40
23:CX:4:G:H1	23:CX:69:C:N4	2.17	0.40
3:AC:115:LEU:HD12	3:AC:118:GLN:OE1	2.21	0.40
25:DA:663:G:C6	25:DA:664:C:C4	3.10	0.40
28:DE:188:VAL:HA	28:DE:189:PRO:HD3	1.98	0.40
1:CA:811:C:N4	61:CA:4026:HOH:O	2.52	0.40
25:DA:1292:U:H2'	25:DA:1293:C:H6	1.86	0.40
25:DA:912:C:C2	25:DA:913:U:C5	3.10	0.40
32:BI:65:ALA:CB	32:BI:136:VAL:HG11	2.50	0.40
25:DA:895:U:O2'	25:DA:896:A:H2'	2.22	0.40
37:BR:87:TYR:OH	37:BR:116:LEU:HB3	2.21	0.40
2:CB:230:VAL:HG13	2:CB:231:GLU:O	2.22	0.40
25:BA:1040:C:O2'	25:BA:1042:A:OP1	2.34	0.40
25:DA:955:C:OP1	36:DQ:87:LYS:HE3	2.22	0.40
31:DH:103:LEU:HB3	31:DH:123:PHE:CD2	2.57	0.40
45:DZ:54:HIS:CG	45:DZ:101:PRO:HG3	2.56	0.40
1:CA:1106:G:N2	1:CA:1107:C:C2	2.89	0.40
25:BA:254:A:H1'	25:BA:255:G:O4'	2.21	0.40
52:D6:10:LEU:O	52:D6:11:LEU:HD23	2.21	0.40
26:BB:11:C:OP2	26:BB:12:C:H5	2.05	0.40
13:AM:92:HIS:CE1	13:AM:98:VAL:HG11	2.56	0.40
1:AA:240:C:H2'	1:AA:241:C:C6	2.56	0.40
50:D4:49:PHE:HB3	50:D4:50:VAL:HG12	2.04	0.40
5:AE:147:ASP:O	5:AE:151:LEU:HG	2.21	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
34:DO:101:PRO:HG3	39:DT:67:SER:OG	2.21	0.40
6:AF:89:MET:SD	18:AR:76:LEU:HD21	2.61	0.40
1:AA:943:U:H2'	1:AA:944:G:H5'	2.04	0.40
51:D5:48:GLU:O	51:D5:60:VAL:HG11	2.22	0.40
25:DA:990:A:C6	25:DA:1186:G:H1'	2.57	0.40
25:BA:1929:G:C2	25:BA:1946:C:C2	3.10	0.40
19:CS:51:VAL:HB	19:CS:75:ALA:HB2	2.03	0.40
53:D7:5:TRP:CD1	53:D7:7:PRO:HD3	2.56	0.40
1:CA:1488:G:C2'	1:CA:1489:G:H5'	2.52	0.40
1:CA:528:C:H41	12:CL:49:ASN:ND2	2.19	0.40
32:BI:140:LEU:HA	32:BI:140:LEU:HD23	1.87	0.40
2:CB:224:GLN:HG2	2:CB:225:ALA:N	2.36	0.40
1:AA:341:C:O2'	1:AA:342:C:H5'	2.21	0.40
2:CB:167:PRO:HD3	2:CB:187:LEU:O	2.21	0.40
1:CA:1122:U:C4	1:CA:1151:A:N1	2.89	0.40
10:CJ:16:LEU:HD23	10:CJ:94:VAL:HG22	2.04	0.40
1:CA:1126:U:C4	10:CJ:71:LEU:HD22	2.56	0.40
1:CA:922:G:H2'	1:CA:923:A:C8	2.56	0.40
1:AA:288:A:H2'	1:AA:289:G:H4'	2.04	0.40
1:CA:567:G:N2	61:CA:4065:HOH:O	2.48	0.40
28:BE:49:LEU:HA	28:BE:49:LEU:HD12	1.85	0.40
2:CB:211:ILE:HG13	2:CB:211:ILE:H	1.71	0.40
25:DA:1268:A:H2'	25:DA:1269:A:O4'	2.22	0.40
25:BA:207:A:N1	25:BA:224:U:H4'	2.36	0.40
1:CA:954:G:C6	1:CA:955:U:C4	3.10	0.40
5:AE:76:ILE:HB	5:AE:77:PRO:HD2	2.04	0.40
25:DA:1630:G:H2'	25:DA:1631:C:C6	2.56	0.40
6:AF:96:PRO:HB3	18:AR:30:ASP:CG	2.41	0.40
54:D8:30:ARG:HD3	54:D8:30:ARG:HA	1.57	0.40
25:BA:2225:U:O4'	27:BD:151:LYS:HE2	2.21	0.40
1:AA:701:C:H1'	1:AA:703:G:C6	2.56	0.40
25:BA:390:G:H8	25:BA:390:G:O5'	2.04	0.40
4:AD:65:ARG:HG2	4:AD:75:PHE:CG	2.56	0.40
1:AA:920:U:H2'	1:AA:921:U:H6	1.84	0.40
25:DA:657:U:H2'	25:DA:658:C:C6	2.56	0.40
1:CA:101:A:H2'	1:CA:102:G:H5'	2.03	0.40
25:DA:858:U:H1'	25:DA:2268:A:H2'	2.04	0.40
25:DA:1472:A:C2	25:DA:1473:G:H1'	2.56	0.40
25:BA:1521:C:H2'	25:BA:1522:G:H8	1.87	0.40
25:BA:1471:G:H2'	25:BA:1472:G:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:59:SER:H	18:CR:62:GLU:HG3	1.86	0.40
32:DI:133:HIS:CD2	32:DI:134:PRO:O	2.75	0.40
25:DA:871:U:H5''	36:DQ:69:PHE:CE2	2.56	0.40
1:AA:1072:G:C5	1:AA:1073:U:C4	3.10	0.40
25:BA:2328:C:H1'	30:BG:128:ARG:NH2	2.36	0.40
25:DA:679:C:H2'	25:DA:680:G:H8	1.86	0.40
1:AA:1261:A:H3'	1:AA:1262:C:H6	1.86	0.40
44:DY:86:ARG:HD2	44:DY:100:ALA:HA	2.04	0.40
25:DA:949:C:H2'	25:DA:950:G:H8	1.86	0.40
1:CA:310:G:H5''	16:CP:31:LYS:HB2	2.03	0.40
1:AA:107:G:H2'	1:AA:108:G:O4'	2.22	0.40
33:BN:39:ARG:HA	33:BN:40:PRO:HD3	1.96	0.40
27:BD:92:ILE:HD12	27:BD:104:TYR:CE1	2.57	0.40
2:AB:37:ASN:HB2	2:AB:41:ILE:HD11	2.03	0.40
8:AH:82:HIS:O	8:AH:137:VAL:HA	2.21	0.40
29:DF:109:GLY:O	29:DF:113:ALA:N	2.43	0.40
25:BA:2862:G:H2'	25:BA:2863:C:O4'	2.22	0.40
54:D8:15:LYS:HG2	54:D8:16:ILE:N	2.35	0.40
46:B0:82:ARG:HA	46:B0:83:PRO:HD3	1.94	0.40
41:BV:8:GLY:O	41:BV:10:LYS:HE2	2.22	0.40
25:DA:2611:U:C4	51:D5:3:LYS:HG2	2.57	0.40
2:CB:97:TRP:HZ3	2:CB:176:GLU:OE2	2.04	0.40
25:DA:1498:C:O4'	25:DA:1577:C:H4'	2.22	0.40
25:BA:796:C:C5	25:BA:1664:A:C6	3.10	0.40
28:BE:12:THR:HG21	39:BT:11:GLU:HG2	2.03	0.40
3:CC:187:ALA:HB3	3:CC:198:VAL:HB	2.04	0.40
25:BA:2427:G:C5	25:BA:2428:C:C4	3.10	0.40
28:DE:150:VAL:HG13	28:DE:154:LYS:HG3	2.03	0.40
1:AA:1160:G:H8	1:AA:1160:G:H5'	1.87	0.40
3:CC:178:LEU:HD13	3:CC:178:LEU:HA	1.82	0.40
34:BO:2:ILE:HD12	34:BO:6:THR:HG21	2.02	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AB	229/256 (90%)	201 (88%)	23 (10%)	5 (2%)	8	38
2	CB	229/256 (90%)	201 (88%)	21 (9%)	7 (3%)	5	28
3	AC	204/239 (85%)	182 (89%)	20 (10%)	2 (1%)	19	61
3	CC	204/239 (85%)	181 (89%)	21 (10%)	2 (1%)	19	61
4	AD	206/209 (99%)	184 (89%)	20 (10%)	2 (1%)	19	61
4	CD	206/209 (99%)	185 (90%)	18 (9%)	3 (2%)	13	50
5	AE	146/162 (90%)	136 (93%)	8 (6%)	2 (1%)	14	51
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%)	26	70
7	CG	153/156 (98%)	139 (91%)	13 (8%)	1 (1%)	26	70
8	AH	135/138 (98%)	131 (97%)	4 (3%)	0	100	100
8	CH	135/138 (98%)	131 (97%)	3 (2%)	1 (1%)	26	70
9	AI	125/128 (98%)	112 (90%)	10 (8%)	3 (2%)	7	35
9	CI	125/128 (98%)	115 (92%)	8 (6%)	2 (2%)	12	48
10	AJ	95/105 (90%)	84 (88%)	8 (8%)	3 (3%)	5	27
10	CJ	94/105 (90%)	84 (89%)	8 (8%)	2 (2%)	9	40
11	AK	112/129 (87%)	101 (90%)	10 (9%)	1 (1%)	21	64
11	CK	112/129 (87%)	101 (90%)	10 (9%)	1 (1%)	21	64
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%)	24	66
13	CM	120/126 (95%)	113 (94%)	6 (5%)	1 (1%)	24	66
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%)	15	53

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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%)	13	50
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%)	17	58
20	CT	94/106 (89%)	86 (92%)	5 (5%)	3 (3%)	5	27
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%)	39	80
27	DD	273/276 (99%)	258 (94%)	13 (5%)	2 (1%)	26	70
28	BE	202/206 (98%)	194 (96%)	7 (4%)	1 (0%)	34	76
28	DE	202/206 (98%)	195 (96%)	4 (2%)	3 (2%)	13	50
29	BF	201/210 (96%)	195 (97%)	5 (2%)	1 (0%)	34	76
29	DF	201/210 (96%)	195 (97%)	4 (2%)	2 (1%)	19	61
30	BG	179/182 (98%)	167 (93%)	9 (5%)	3 (2%)	11	46
30	DG	179/182 (98%)	161 (90%)	14 (8%)	4 (2%)	8	38
31	BH	172/180 (96%)	165 (96%)	6 (4%)	1 (1%)	30	72
31	DH	172/180 (96%)	164 (95%)	7 (4%)	1 (1%)	30	72
32	BI	144/148 (97%)	124 (86%)	14 (10%)	6 (4%)	3	20
32	DI	144/148 (97%)	124 (86%)	17 (12%)	3 (2%)	9	40
33	BN	138/140 (99%)	133 (96%)	5 (4%)	0	100	100
33	DN	138/140 (99%)	132 (96%)	5 (4%)	1 (1%)	26	70
34	BO	120/122 (98%)	116 (97%)	3 (2%)	1 (1%)	24	66
34	DO	120/122 (98%)	117 (98%)	2 (2%)	1 (1%)	24	66
35	BP	147/150 (98%)	138 (94%)	8 (5%)	1 (1%)	26	70
35	DP	147/150 (98%)	135 (92%)	9 (6%)	3 (2%)	9	41
36	BQ	139/141 (99%)	131 (94%)	7 (5%)	1 (1%)	26	70

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
36	DQ	139/141 (99%)	129 (93%)	9 (6%)	1 (1%)	26	70
37	BR	116/118 (98%)	110 (95%)	5 (4%)	1 (1%)	21	64
37	DR	116/118 (98%)	111 (96%)	5 (4%)	0	100	100
38	BS	108/112 (96%)	103 (95%)	4 (4%)	1 (1%)	21	64
38	DS	108/112 (96%)	102 (94%)	5 (5%)	1 (1%)	21	64
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%)	19	61
41	DV	99/101 (98%)	94 (95%)	4 (4%)	1 (1%)	19	61
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%)	30	72
45	DZ	172/206 (84%)	162 (94%)	10 (6%)	0	100	100
46	B0	81/85 (95%)	76 (94%)	4 (5%)	1 (1%)	16	56
46	D0	81/85 (95%)	76 (94%)	4 (5%)	1 (1%)	16	56
47	B1	95/98 (97%)	93 (98%)	1 (1%)	1 (1%)	17	58
47	D1	95/98 (97%)	92 (97%)	2 (2%)	1 (1%)	17	58
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	6
50	D4	67/71 (94%)	52 (78%)	8 (12%)	7 (10%)	1	3
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%)	8	38
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%)	21	64

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	8
2	CB	187/220 (85%)	155 (83%)	32 (17%)	2	12
3	AC	143/188 (76%)	128 (90%)	15 (10%)	8	32
3	CC	140/188 (74%)	123 (88%)	17 (12%)	6	25
4	AD	170/181 (94%)	146 (86%)	24 (14%)	4	19
4	CD	173/181 (96%)	152 (88%)	21 (12%)	6	25
5	AE	113/123 (92%)	102 (90%)	11 (10%)	10	37
5	CE	114/123 (93%)	104 (91%)	10 (9%)	12	42
6	AF	83/90 (92%)	76 (92%)	7 (8%)	14	45
6	CF	85/90 (94%)	79 (93%)	6 (7%)	18	54
7	AG	119/127 (94%)	100 (84%)	19 (16%)	3	15
7	CG	120/127 (94%)	102 (85%)	18 (15%)	3	17
8	AH	114/119 (96%)	97 (85%)	17 (15%)	4	17
8	CH	114/119 (96%)	102 (90%)	12 (10%)	8	32
9	AI	90/99 (91%)	78 (87%)	12 (13%)	5	21
9	CI	89/99 (90%)	75 (84%)	14 (16%)	3	15
10	AJ	66/92 (72%)	59 (89%)	7 (11%)	8	31
10	CJ	69/92 (75%)	65 (94%)	4 (6%)	25	63
11	AK	82/99 (83%)	75 (92%)	7 (8%)	13	45
11	CK	83/99 (84%)	77 (93%)	6 (7%)	18	53
12	AL	97/109 (89%)	87 (90%)	10 (10%)	9	33
12	CL	97/109 (89%)	83 (86%)	14 (14%)	4	18
13	AM	93/101 (92%)	81 (87%)	12 (13%)	5	23
13	CM	92/101 (91%)	78 (85%)	14 (15%)	3	16
14	AN	49/50 (98%)	41 (84%)	8 (16%)	3	14
14	CN	49/50 (98%)	41 (84%)	8 (16%)	3	14

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
15	AO	78/80 (98%)	68 (87%)	10 (13%)	5	23
15	CO	78/80 (98%)	66 (85%)	12 (15%)	3	16
16	AP	69/74 (93%)	61 (88%)	8 (12%)	7	27
16	CP	68/74 (92%)	64 (94%)	4 (6%)	24	63
17	AQ	94/97 (97%)	88 (94%)	6 (6%)	22	59
17	CQ	94/97 (97%)	86 (92%)	8 (8%)	13	45
18	AR	59/77 (77%)	56 (95%)	3 (5%)	29	69
18	CR	59/77 (77%)	53 (90%)	6 (10%)	9	33
19	AS	69/80 (86%)	63 (91%)	6 (9%)	13	43
19	CS	67/80 (84%)	59 (88%)	8 (12%)	6	26
20	AT	70/82 (85%)	60 (86%)	10 (14%)	4	19
20	CT	70/82 (85%)	61 (87%)	9 (13%)	5	23
21	AU	18/22 (82%)	15 (83%)	3 (17%)	3	13
21	CU	18/22 (82%)	16 (89%)	2 (11%)	8	29
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%)	9	33
27	DD	215/218 (99%)	195 (91%)	20 (9%)	11	39
28	BE	164/166 (99%)	140 (85%)	24 (15%)	4	18
28	DE	164/166 (99%)	140 (85%)	24 (15%)	4	18
29	BF	160/166 (96%)	145 (91%)	15 (9%)	11	39
29	DF	159/166 (96%)	142 (89%)	17 (11%)	8	31
30	BG	143/156 (92%)	124 (87%)	19 (13%)	5	21
30	DG	142/156 (91%)	117 (82%)	25 (18%)	2	12
31	BH	144/148 (97%)	128 (89%)	16 (11%)	8	29
31	DH	144/148 (97%)	131 (91%)	13 (9%)	12	41
32	BI	110/124 (89%)	85 (77%)	25 (23%)	1	5
32	DI	104/124 (84%)	90 (86%)	14 (14%)	5	20
33	BN	118/119 (99%)	100 (85%)	18 (15%)	3	16
33	DN	118/119 (99%)	102 (86%)	16 (14%)	5	20
34	BO	100/100 (100%)	95 (95%)	5 (5%)	30	70

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
34	DO	100/100 (100%)	92 (92%)	8 (8%)	15	47
35	BP	115/116 (99%)	103 (90%)	12 (10%)	9	32
35	DP	115/116 (99%)	102 (89%)	13 (11%)	7	28
36	BQ	111/111 (100%)	96 (86%)	15 (14%)	5	20
36	DQ	111/111 (100%)	97 (87%)	14 (13%)	5	24
37	BR	101/101 (100%)	83 (82%)	18 (18%)	2	11
37	DR	101/101 (100%)	84 (83%)	17 (17%)	2	13
38	BS	87/88 (99%)	78 (90%)	9 (10%)	9	33
38	DS	85/88 (97%)	73 (86%)	12 (14%)	4	19
39	BT	115/127 (91%)	103 (90%)	12 (10%)	9	32
39	DT	113/127 (89%)	103 (91%)	10 (9%)	12	42
40	BU	93/94 (99%)	85 (91%)	8 (9%)	13	44
40	DU	93/94 (99%)	79 (85%)	14 (15%)	3	17
41	BV	80/82 (98%)	68 (85%)	12 (15%)	3	17
41	DV	80/82 (98%)	70 (88%)	10 (12%)	6	24
42	BW	90/92 (98%)	83 (92%)	7 (8%)	16	49
42	DW	90/92 (98%)	82 (91%)	8 (9%)	12	42
43	BX	77/78 (99%)	74 (96%)	3 (4%)	39	77
43	DX	77/78 (99%)	73 (95%)	4 (5%)	29	68
44	BY	85/91 (93%)	76 (89%)	9 (11%)	8	31
44	DY	85/91 (93%)	77 (91%)	8 (9%)	11	39
45	BZ	145/179 (81%)	127 (88%)	18 (12%)	6	24
45	DZ	145/179 (81%)	128 (88%)	17 (12%)	7	27
46	B0	65/67 (97%)	62 (95%)	3 (5%)	33	73
46	D0	65/67 (97%)	60 (92%)	5 (8%)	16	50
47	B1	80/83 (96%)	70 (88%)	10 (12%)	6	24
47	D1	80/83 (96%)	69 (86%)	11 (14%)	4	20
48	B2	65/67 (97%)	56 (86%)	9 (14%)	4	20
48	D2	65/67 (97%)	57 (88%)	8 (12%)	6	25
49	B3	51/52 (98%)	44 (86%)	7 (14%)	4	20
49	D3	50/52 (96%)	42 (84%)	8 (16%)	3	15

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
50	B4	59/63 (94%)	47 (80%)	12 (20%)	1	7
50	D4	53/63 (84%)	44 (83%)	9 (17%)	2	13
51	B5	50/52 (96%)	45 (90%)	5 (10%)	9	34
51	D5	50/52 (96%)	45 (90%)	5 (10%)	9	34
52	B6	51/52 (98%)	47 (92%)	4 (8%)	16	49
52	D6	50/52 (96%)	43 (86%)	7 (14%)	4	19
53	B7	41/42 (98%)	39 (95%)	2 (5%)	31	71
53	D7	41/42 (98%)	38 (93%)	3 (7%)	17	52
54	B8	53/55 (96%)	50 (94%)	3 (6%)	25	64
54	D8	54/55 (98%)	52 (96%)	2 (4%)	41	79
55	B9	34/34 (100%)	33 (97%)	1 (3%)	50	84
55	D9	34/34 (100%)	31 (91%)	3 (9%)	12	42
All	All	9325/10072 (93%)	8217 (88%)	1108 (12%)	6	26

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

Some 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	AW	1	24	7,8,9	0.38	0	7,10,12	2.64	1 (14%)
24	2QY	AW	10	24	13,13,14	2.79	3 (23%)	12,16,18	1.75	4 (33%)
24	004	AW	3	24	9,10,11	1.06	1 (11%)	10,12,14	1.00	0
24	MVA	AW	5	24	6,7,8	0.53	0	6,8,10	1.97	1 (16%)
24	2R1	AW	6	24	7,10,11	2.03	3 (42%)	2,13,15	2.74	2 (100%)
24	2R3	AW	8	24	13,14,15	0.72	0	16,18,20	2.03	6 (37%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	MVA	AW	9	24	6,7,8	0.35	0	6,8,10	1.32	2 (33%)
24	2QZ	CW	1	24	7,8,9	0.80	0	7,10,12	3.88	3 (42%)
24	2QY	CW	10	24	13,13,14	2.87	3 (23%)	12,16,18	1.78	1 (8%)
24	004	CW	3	24	9,10,11	1.24	1 (11%)	10,12,14	0.75	0
24	MVA	CW	5	24	6,7,8	0.91	0	6,8,10	1.01	0
24	2R1	CW	6	24	7,10,11	1.91	2 (28%)	2,13,15	2.39	1 (50%)
24	2R3	CW	8	24	13,14,15	0.60	0	16,18,20	2.12	5 (31%)
24	MVA	CW	9	24	6,7,8	1.18	1 (16%)	6,8,10	1.47	1 (16%)

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	AW	1	24	-	0/6/10/12	0/0/0/0
24	2QY	AW	10	24	-	0/3/8/10	0/1/1/1
24	004	AW	3	24	-	0/4/6/8	0/1/1/1
24	MVA	AW	5	24	-	1/5/8/10	0/0/0/0
24	2R1	AW	6	24	-	0/1/14/16	0/0/1/1
24	2R3	AW	8	24	-	0/10/12/14	0/1/1/1
24	MVA	AW	9	24	-	0/5/8/10	0/0/0/0
24	2QZ	CW	1	24	-	0/6/10/12	0/0/0/0
24	2QY	CW	10	24	-	0/3/8/10	0/1/1/1
24	004	CW	3	24	-	0/4/6/8	0/1/1/1
24	MVA	CW	5	24	-	0/5/8/10	0/0/0/0
24	2R1	CW	6	24	-	0/1/14/16	0/0/1/1
24	2R3	CW	8	24	-	0/10/12/14	0/1/1/1
24	MVA	CW	9	24	-	0/5/8/10	0/0/0/0

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	CW	3	004	CB-CA	-3.33	1.49	1.52
24	AW	3	004	CB-CA	-2.60	1.49	1.52
24	AW	6	2R1	CB-CA	2.06	1.36	1.34
24	AW	10	2QY	CG-CB	2.24	1.51	1.46
24	CW	10	2QY	CG-CB	2.61	1.52	1.46
24	CW	9	MVA	CB-CA	2.76	1.57	1.54
24	AW	6	2R1	C-CA	2.77	1.49	1.45
24	CW	6	2R1	C-CA	3.15	1.49	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	CW	6	2R1	CA-N	3.45	1.45	1.36
24	AW	6	2R1	CA-N	3.72	1.46	1.36
24	CW	10	2QY	CA-N	5.10	1.47	1.34
24	AW	10	2QY	CA-N	5.37	1.48	1.34
24	AW	10	2QY	C-CA	7.92	1.53	1.43
24	CW	10	2QY	C-CA	8.37	1.53	1.43

All (27) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	CW	10	2QY	O-C-CA	-5.07	117.93	125.40
24	AW	10	2QY	O-C-CA	-4.03	119.46	125.40
24	CW	6	2R1	O-C-CA	-3.30	118.97	125.35
24	CW	8	2R3	CO-OH-CZ	-3.04	110.40	117.51
24	AW	6	2R1	O-C-CA	-2.97	119.61	125.35
24	AW	8	2R3	CO-OH-CZ	-2.86	110.83	117.51
24	CW	8	2R3	CE1-CD1-CG	-2.68	118.45	121.20
24	CW	8	2R3	CD2-CG-CB	-2.49	117.08	120.72
24	AW	6	2R1	CG2-CB-CA	-2.48	119.98	123.61
24	CW	1	2QZ	CN1-N-CN2	-2.39	102.89	110.43
24	AW	8	2R3	CE1-CD1-CG	-2.38	118.75	121.20
24	AW	10	2QY	CG-CB-CA	-2.25	126.71	130.60
24	CW	1	2QZ	CG2-CB-CA	-2.17	109.46	112.53
24	AW	10	2QY	CE1-CD1-CG	-2.15	118.61	121.29
24	AW	9	MVA	O-C-CA	-2.13	119.19	125.74
24	CW	8	2R3	CE2-CD2-CG	2.12	123.38	121.20
24	AW	8	2R3	CD1-CE1-CZ	2.13	122.42	119.74
24	AW	10	2QY	CD2-CG-CD1	2.15	120.93	117.64
24	AW	9	MVA	CN-N-CA	2.22	120.49	113.65
24	AW	8	2R3	CD1-CG-CB	2.27	124.04	120.72
24	CW	9	MVA	CN-N-CA	2.73	122.05	113.65
24	AW	8	2R3	CE2-CD2-CG	3.00	124.29	121.20
24	AW	8	2R3	OB-CB-CA	3.97	116.28	107.44
24	AW	5	MVA	CN-N-CA	4.17	126.51	113.65
24	CW	8	2R3	OB-CB-CA	5.00	118.56	107.44
24	AW	1	2QZ	OG1-CB-CG2	6.23	127.64	109.61
24	CW	1	2QZ	OG1-CB-CG2	9.54	137.20	109.61

There are no chirality outliers.

All (1) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
24	AW	5	MVA	CB-CA-N-CN

There are no ring outliers.

14 monomers are involved in 20 short contacts:

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

5.5 Carbohydrates [i](#)

There are no carbohydrates 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	$\# Z > 2$
57	SF4	AD	501	4	0,12,12	0.00	-	0,24,24	0.00	-
59	FME	AX	101	23	8,9,10	0.99	1 (12%)	6,9,11	1.42	1 (16%)
57	SF4	CD	501	4	0,12,12	0.00	-	0,24,24	0.00	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
59	FME	CX	101	23	8,9,10	0.84	0	6,9,11	1.54	2 (33%)

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
57	SF4	AD	501	4	-	0/0/48/48	0/6/5/5
59	FME	AX	101	23	-	1/6/9/11	0/0/0/0
57	SF4	CD	501	4	-	0/0/48/48	0/6/5/5
59	FME	CX	101	23	-	1/6/9/11	0/0/0/0

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	AX	101	FME	CA-N	2.19	1.49	1.46

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	CX	101	FME	O1-CN-N	-2.58	121.04	124.76
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

There are no chirality outliers.

All (2) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
59	CX	101	FME	O1-CN-N-CA
59	AX	101	FME	O1-CN-N-CA

There are no ring outliers.

4 monomers are involved in 5 short contacts:

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

6.1 Protein, DNA and RNA chains i

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	AA	1498/1522 (98%)	-0.04	47 (3%) 52 24	39, 80, 103, 118	0
1	CA	1503/1522 (98%)	-0.09	41 (2%) 58 28	41, 80, 103, 119	0
2	AB	231/256 (90%)	-0.00	6 (2%) 59 29	69, 86, 97, 105	0
2	CB	231/256 (90%)	0.23	10 (4%) 39 16	70, 88, 98, 107	0
3	AC	206/239 (86%)	0.23	9 (4%) 38 16	73, 87, 95, 104	0
3	CC	206/239 (86%)	0.38	14 (6%) 20 7	72, 89, 97, 104	0
4	AD	208/209 (99%)	-0.05	4 (1%) 70 41	61, 80, 90, 97	0
4	CD	208/209 (99%)	-0.20	0 100 100	61, 79, 89, 97	0
5	AE	148/162 (91%)	-0.33	0 100 100	51, 73, 82, 93	0
5	CE	148/162 (91%)	-0.26	0 100 100	53, 75, 84, 96	0
6	AF	100/101 (99%)	-0.27	0 100 100	63, 77, 87, 94	0
6	CF	100/101 (99%)	-0.37	0 100 100	62, 78, 87, 95	0
7	AG	155/156 (99%)	0.41	13 (8%) 14 5	74, 86, 99, 106	0
7	CG	155/156 (99%)	0.49	16 (10%) 9 3	75, 86, 99, 105	0
8	AH	137/138 (99%)	-0.09	0 100 100	60, 74, 82, 89	0
8	CH	137/138 (99%)	-0.13	0 100 100	62, 75, 83, 89	0
9	AI	127/128 (99%)	0.48	8 (6%) 23 9	73, 91, 99, 101	0
9	CI	127/128 (99%)	1.13	32 (25%) 1 1	72, 93, 100, 102	0
10	AJ	97/105 (92%)	0.76	12 (12%) 5 2	73, 91, 100, 105	0
10	CJ	96/105 (91%)	1.03	20 (20%) 1 1	77, 93, 100, 104	0
11	AK	114/129 (88%)	-0.26	0 100 100	53, 74, 87, 91	0
11	CK	114/129 (88%)	0.04	1 (0%) 85 64	55, 76, 87, 92	0
12	AL	122/132 (92%)	-0.24	0 100 100	53, 68, 80, 87	0
12	CL	122/132 (92%)	-0.20	0 100 100	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%)	0.39	9 (7%) 18 6	67, 85, 95, 105	0
13	CM	122/126 (96%)	0.58	9 (7%) 17 6	77, 92, 100, 109	0
14	AN	60/61 (98%)	0.14	1 (1%) 73 45	75, 87, 94, 103	0
14	CN	60/61 (98%)	0.83	6 (10%) 9 4	77, 89, 94, 100	0
15	AO	88/89 (98%)	-0.16	0 100 100	55, 72, 85, 90	0
15	CO	88/89 (98%)	-0.12	0 100 100	55, 72, 85, 91	0
16	AP	82/88 (93%)	0.50	2 (2%) 62 32	67, 78, 89, 94	0
16	CP	82/88 (93%)	0.21	3 (3%) 45 19	66, 76, 88, 94	0
17	AQ	99/105 (94%)	-0.23	0 100 100	59, 72, 83, 90	0
17	CQ	99/105 (94%)	-0.12	1 (1%) 84 60	58, 72, 83, 89	0
18	AR	68/88 (77%)	0.19	2 (2%) 55 26	65, 73, 87, 91	0
18	CR	68/88 (77%)	0.27	1 (1%) 76 49	64, 75, 87, 91	0
19	AS	83/93 (89%)	0.99	15 (18%) 2 1	77, 92, 99, 106	0
19	CS	83/93 (89%)	1.19	13 (15%) 3 1	79, 92, 101, 106	0
20	AT	96/106 (90%)	0.13	3 (3%) 52 24	62, 76, 86, 90	0
20	CT	96/106 (90%)	0.14	1 (1%) 84 60	62, 74, 86, 92	0
21	AU	23/27 (85%)	1.44	5 (21%) 1 1	73, 88, 93, 94	0
21	CU	23/27 (85%)	1.55	10 (43%) 0 0	73, 89, 92, 94	0
22	AV	7/24 (29%)	0.66	1 (14%) 4 1	65, 77, 102, 104	0
22	CV	6/24 (25%)	0.84	1 (16%) 2 1	67, 78, 103, 103	0
23	AX	76/77 (98%)	0.51	2 (2%) 59 29	52, 80, 97, 105	0
23	CX	76/77 (98%)	0.39	3 (3%) 43 18	52, 82, 100, 106	0
24	AW	3/10 (30%)	-0.28	0 100 100	67, 67, 82, 98	0
24	CW	3/10 (30%)	-0.43	0 100 100	67, 67, 78, 82	0
25	BA	2731/2915 (93%)	-0.22	14 (0%) 91 76	23, 44, 85, 111	0
25	DA	2714/2915 (93%)	-0.44	19 (0%) 89 70	26, 47, 85, 118	0
26	BB	120/122 (98%)	-0.35	0 100 100	42, 68, 80, 95	0
26	DB	120/122 (98%)	-0.24	0 100 100	48, 74, 84, 97	0
27	BD	275/276 (99%)	-0.47	0 100 100	22, 42, 58, 77	0
27	DD	275/276 (99%)	-0.52	0 100 100	23, 44, 60, 79	0
28	BE	204/206 (99%)	-0.38	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%)	-0.45	0 100 100	24, 47, 70, 88	0
29	BF	203/210 (96%)	-0.34	0 100 100	20, 51, 77, 94	0
29	DF	203/210 (96%)	-0.48	1 (0%) 91 76	22, 54, 78, 93	0
30	BG	181/182 (99%)	-0.33	1 (0%) 90 73	59, 77, 90, 103	0
30	DG	181/182 (99%)	0.16	9 (4%) 32 13	63, 80, 92, 102	0
31	BH	174/180 (96%)	-0.36	0 100 100	50, 66, 78, 84	0
31	DH	174/180 (96%)	0.32	16 (9%) 11 4	54, 71, 82, 87	0
32	BI	146/148 (98%)	-0.35	0 100 100	45, 75, 87, 92	0
32	DI	146/148 (98%)	0.07	4 (2%) 58 28	48, 76, 86, 91	0
33	BN	140/140 (100%)	-0.42	0 100 100	32, 49, 68, 80	0
33	DN	140/140 (100%)	-0.47	0 100 100	34, 53, 72, 81	0
34	BO	122/122 (100%)	-0.48	0 100 100	25, 39, 60, 78	0
34	DO	122/122 (100%)	-0.47	0 100 100	34, 52, 68, 79	0
35	BP	149/150 (99%)	-0.34	0 100 100	26, 54, 76, 84	0
35	DP	149/150 (99%)	-0.16	0 100 100	30, 57, 79, 86	0
36	BQ	141/141 (100%)	-0.34	0 100 100	33, 51, 65, 79	0
36	DQ	141/141 (100%)	-0.45	0 100 100	35, 54, 70, 80	0
37	BR	118/118 (100%)	-0.53	0 100 100	22, 35, 51, 64	0
37	DR	118/118 (100%)	-0.41	0 100 100	36, 50, 64, 81	0
38	BS	110/112 (98%)	-0.32	0 100 100	38, 55, 69, 81	0
38	DS	110/112 (98%)	0.18	2 (1%) 71 43	66, 78, 90, 100	0
39	BT	131/146 (89%)	-0.47	0 100 100	33, 45, 75, 91	0
39	DT	131/146 (89%)	-0.52	0 100 100	44, 56, 80, 86	0
40	BU	116/118 (98%)	-0.63	0 100 100	19, 30, 50, 63	0
40	DU	116/118 (98%)	-0.34	2 (1%) 73 45	39, 61, 79, 88	0
41	BV	101/101 (100%)	-0.37	0 100 100	29, 52, 70, 77	0
41	DV	101/101 (100%)	-0.16	0 100 100	32, 58, 74, 79	0
42	BW	112/113 (99%)	-0.48	1 (0%) 85 64	27, 37, 61, 94	0
42	DW	112/113 (99%)	-0.43	0 100 100	31, 40, 63, 94	0
43	BX	95/96 (98%)	-0.39	0 100 100	32, 46, 69, 82	0
43	DX	95/96 (98%)	-0.32	1 (1%) 82 58	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%)	-0.27	1 (0%) 85 64	44, 59, 77, 82	0
44	DY	107/110 (97%)	0.27	4 (3%) 45 19	46, 63, 80, 85	0
45	BZ	171/206 (83%)	-0.44	0 100 100	52, 71, 85, 93	0
45	DZ	174/206 (84%)	-0.15	0 100 100	56, 74, 87, 95	0
46	B0	83/85 (97%)	-0.14	7 (8%) 14 5	22, 40, 75, 104	0
46	D0	83/85 (97%)	0.22	5 (6%) 25 9	45, 66, 87, 98	0
47	B1	97/98 (98%)	-0.24	1 (1%) 84 60	25, 42, 71, 77	0
47	D1	97/98 (98%)	-0.23	1 (1%) 84 60	35, 56, 79, 85	0
48	B2	70/72 (97%)	-0.50	0 100 100	31, 48, 64, 77	0
48	D2	70/72 (97%)	-0.33	0 100 100	56, 73, 84, 86	0
49	B3	59/60 (98%)	-0.32	0 100 100	26, 38, 63, 86	0
49	D3	59/60 (98%)	0.04	2 (3%) 49 21	49, 62, 80, 93	0
50	B4	69/71 (97%)	-0.01	1 (1%) 78 51	64, 87, 101, 104	0
50	D4	69/71 (97%)	0.55	4 (5%) 26 10	85, 95, 104, 107	0
51	B5	59/60 (98%)	-0.60	0 100 100	14, 35, 55, 71	0
51	D5	59/60 (98%)	-0.54	0 100 100	29, 51, 70, 77	0
52	B6	53/54 (98%)	-0.35	0 100 100	40, 54, 68, 74	0
52	D6	53/54 (98%)	-0.37	0 100 100	42, 58, 68, 74	0
53	B7	48/49 (97%)	-0.26	0 100 100	26, 32, 67, 78	0
53	D7	48/49 (97%)	-0.16	1 (2%) 67 36	27, 34, 66, 79	0
54	B8	64/65 (98%)	-0.33	0 100 100	33, 43, 51, 57	0
54	D8	64/65 (98%)	-0.28	0 100 100	34, 46, 56, 60	0
55	B9	37/37 (100%)	0.12	1 (2%) 58 28	43, 52, 68, 77	0
55	D9	37/37 (100%)	0.89	5 (13%) 4 1	48, 57, 72, 78	0
All	All	20462/21468 (95%)	-0.15	424 (2%) 67 36	14, 65, 95, 119	0

All (424) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
13	CM	124	PRO	16.3
13	CM	123	ALA	12.1
13	AM	123	ALA	9.0
13	AM	124	PRO	8.0
7	CG	78	ARG	7.6

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Mol	Chain	Res	Type	RSRZ
13	CM	122	LYS	6.7
1	AA	1036	G	6.5
7	AG	80	VAL	6.0
1	CA	1030(B)	C	5.9
1	CA	1001(A)	G	5.8
1	AA	1000	U	5.8
46	B0	3	HIS	5.7
13	AM	122	LYS	5.6
1	CA	1001	A	5.6
7	AG	78	ARG	5.4
46	B0	7	LEU	5.3
1	AA	1028	C	5.2
3	CC	155	GLY	5.2
1	AA	1030(C)	G	5.1
3	CC	160	ALA	5.1
1	AA	1001(A)	G	5.1
1	AA	1030(B)	C	5.0
7	CG	79	ARG	5.0
13	AM	121	LYS	4.9
1	AA	1037	C	4.8
1	CA	1036	G	4.8
46	D0	6	GLY	4.8
1	CA	1002	G	4.8
46	B0	6	GLY	4.8
9	CI	7	THR	4.8
1	AA	1002	G	4.7
25	DA	229	A	4.7
1	AA	1030	C	4.6
7	AG	79	ARG	4.6
7	CG	156	TRP	4.5
1	CA	1030(A)	G	4.5
1	AA	1001	A	4.5
9	CI	30	GLY	4.5
10	CJ	6	ILE	4.5
1	CA	1030(C)	G	4.5
1	AA	999	C	4.4
13	CM	121	LYS	4.4
25	DA	2802	G	4.4
13	CM	119	GLY	4.4
9	CI	36	TYR	4.4
55	D9	13	LYS	4.2
1	AA	1026	G	4.2

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Mol	Chain	Res	Type	RSRZ
1	CA	1532	U	4.2
7	CG	2	ALA	4.2
25	BA	935	C	4.1
3	CC	159	GLY	4.1
19	CS	12	ASP	4.0
19	AS	40	ILE	4.0
46	D0	7	LEU	4.0
1	CA	1026	G	4.0
1	CA	1035	A	4.0
13	CM	120	LYS	3.9
25	BA	1555	C	3.9
2	CB	232	PRO	3.9
1	AA	1038	C	3.9
1	AA	1030(A)	G	3.8
1	AA	1029	C	3.8
55	D9	16	VAL	3.8
25	BA	1221	G	3.8
10	AJ	7	LYS	3.8
53	D7	48	LYS	3.8
14	CN	2	ALA	3.7
7	AG	156	TRP	3.7
7	CG	154	TYR	3.7
10	AJ	35	SER	3.7
49	D3	60	GLU	3.7
1	AA	202	U	3.7
25	DA	652(B)	A	3.6
1	CA	1257	U	3.6
3	AC	193	TYR	3.6
7	CG	77	SER	3.6
10	AJ	98	ILE	3.6
44	BY	1	MET	3.6
50	D4	68	ARG	3.6
9	CI	61	ALA	3.6
1	AA	1034	G	3.6
9	CI	62	TYR	3.5
10	CJ	26	ALA	3.5
50	D4	69	LYS	3.5
10	AJ	8	LEU	3.5
30	DG	2	PRO	3.5
25	DA	1509	C	3.5
25	DA	2793	G	3.5
7	CG	80	VAL	3.5

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Mol	Chain	Res	Type	RSRZ
7	AG	85	TYR	3.4
7	AG	153	HIS	3.4
3	CC	154	SER	3.4
7	CG	84	ASN	3.4
1	CA	1034	G	3.4
1	AA	1027	C	3.4
10	AJ	71	LEU	3.4
44	DY	1	MET	3.4
7	AG	77	SER	3.3
7	CG	82	GLY	3.3
9	CI	5	TYR	3.3
10	CJ	85	LEU	3.3
55	D9	12	ASP	3.3
10	AJ	5	ARG	3.3
19	AS	71	LEU	3.3
3	CC	177	THR	3.3
7	CG	83	ALA	3.3
10	AJ	72	VAL	3.3
46	D0	8	GLY	3.3
9	AI	47	LEU	3.3
1	CA	1037	C	3.3
19	CS	49	ILE	3.3
40	DU	117	GLN	3.3
1	CA	1041	A	3.2
25	DA	2801(A)	A	3.2
19	AS	50	ALA	3.2
10	CJ	89	ASP	3.2
9	CI	64	THR	3.2
1	CA	1027	C	3.2
3	AC	192	THR	3.2
25	DA	2803	C	3.2
1	CA	1042	G	3.2
9	CI	21	PRO	3.2
1	CA	1286	A	3.2
21	AU	22	ARG	3.2
1	CA	1040	U	3.1
31	DH	111	HIS	3.1
50	D4	52	THR	3.1
25	BA	2814	C	3.1
30	DG	137	GLU	3.1
2	AB	135	GLN	3.1
9	CI	9	ARG	3.1

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Mol	Chain	Res	Type	RSRZ
1	AA	1031	G	3.1
2	AB	122	PHE	3.1
1	AA	1274	G	3.1
21	AU	11	GLY	3.1
10	AJ	73	ASP	3.0
21	CU	18	TYR	3.0
1	AA	1257	U	3.0
10	CJ	65	LEU	3.0
14	CN	25	VAL	3.0
46	B0	2	ALA	3.0
3	CC	193	TYR	3.0
9	AI	19	LEU	3.0
25	BA	2807	C	3.0
25	DA	2896	C	3.0
20	CT	9	ASN	3.0
19	CS	30	LEU	3.0
2	CB	140	HIS	2.9
25	BA	2815	C	2.9
1	AA	1137	C	2.9
14	CN	17	LYS	2.9
1	AA	204	U	2.9
10	CJ	20	ALA	2.9
21	AU	18	TYR	2.9
19	CS	53	ASN	2.9
21	CU	8	THR	2.9
31	DH	112	PRO	2.9
25	DA	2805	G	2.9
9	CI	102	LEU	2.9
19	AS	4	SER	2.9
19	CS	52	TYR	2.9
1	AA	1024	G	2.8
25	BA	2806	G	2.8
9	CI	6	GLY	2.8
19	CS	47	HIS	2.8
31	DH	105	LEU	2.8
32	DI	12	LEU	2.8
16	AP	19	ILE	2.8
1	AA	1286	A	2.8
7	CG	6	ARG	2.8
46	B0	8	GLY	2.8
47	D1	2	SER	2.8
7	CG	4	ARG	2.8

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Mol	Chain	Res	Type	RSRZ
1	CA	1023	G	2.8
31	DH	93	GLY	2.8
2	CB	135	GLN	2.8
3	AC	160	ALA	2.8
9	CI	66	ARG	2.8
10	CJ	72	VAL	2.8
25	DA	888	C	2.8
10	CJ	62	HIS	2.7
10	CJ	64	GLU	2.7
14	CN	34	TYR	2.7
1	CA	1000	U	2.7
19	AS	74	PHE	2.7
19	AS	27	GLU	2.7
1	AA	1035	A	2.7
10	AJ	47	PHE	2.7
1	AA	1039	C	2.7
3	CC	124	ILE	2.7
14	CN	38	GLY	2.7
23	CX	70	G	2.7
1	CA	1029	C	2.7
10	CJ	8	LEU	2.7
10	CJ	38	ILE	2.7
9	CI	128	ARG	2.7
50	B4	66	SER	2.7
13	AM	120	LYS	2.7
1	AA	78	G	2.7
9	CI	35	GLU	2.6
1	AA	1023	G	2.6
10	CJ	27	ALA	2.6
19	AS	39	THR	2.6
25	DA	1042	G	2.6
1	CA	1531	A	2.6
25	BA	2816	G	2.6
11	CK	13	GLN	2.6
3	AC	206	GLU	2.6
7	CG	8	GLU	2.6
4	AD	3	ARG	2.6
30	BG	49	ASP	2.6
30	DG	152	LEU	2.6
1	AA	1531	A	2.6
25	BA	218	A	2.6
31	DH	103	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
10	CJ	78	ASN	2.6
9	CI	28	VAL	2.6
19	CS	6	LYS	2.6
1	AA	1021	G	2.6
1	CA	1021	G	2.6
9	CI	32	ASP	2.6
46	B0	4	LYS	2.6
10	AJ	34	VAL	2.6
3	AC	87	LEU	2.6
1	AA	1003	G	2.6
1	AA	1006	C	2.6
16	CP	59	TRP	2.5
30	DG	136	ARG	2.5
1	AA	1033	G	2.5
4	AD	179	GLU	2.5
30	DG	34	LEU	2.5
3	CC	65	ALA	2.5
1	CA	1030(D)	A	2.5
9	AI	33	PHE	2.5
9	CI	92	TYR	2.5
46	D0	5	LYS	2.5
2	CB	48	MET	2.5
31	DH	82	GLY	2.5
1	AA	201	C	2.5
10	AJ	25	GLU	2.5
18	CR	58	LEU	2.5
9	CI	27	THR	2.5
9	CI	87	GLN	2.5
1	AA	1007	C	2.5
9	CI	20	ARG	2.5
25	BA	696	C	2.5
3	AC	151	VAL	2.5
7	AG	154	TYR	2.5
3	CC	156	ARG	2.5
21	AU	12	LYS	2.5
1	CA	80	G	2.5
10	CJ	34	VAL	2.5
25	BA	2813	G	2.5
20	AT	18	GLN	2.5
23	CX	17	C	2.5
21	CU	24	ARG	2.5
43	DX	92	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
1	CA	1031	G	2.4
13	AM	119	GLY	2.4
25	DA	2100	G	2.4
21	CU	5	ASP	2.4
7	AG	21	VAL	2.4
4	AD	164	ALA	2.4
7	AG	76	ARG	2.4
19	CS	48	THR	2.4
1	AA	1041	A	2.4
2	AB	94	ASN	2.4
19	AS	72	GLY	2.4
13	AM	2	ALA	2.4
9	CI	88	TYR	2.4
10	CJ	98	ILE	2.4
1	CA	1024	G	2.4
25	DA	2807	G	2.4
1	AA	1044	A	2.4
1	CA	202	U	2.4
2	CB	123	ALA	2.4
21	CU	10	ARG	2.4
16	CP	48	TRP	2.4
1	CA	998	G	2.4
16	CP	19	ILE	2.4
31	DH	94	TYR	2.4
44	DY	45	VAL	2.4
2	CB	132	LYS	2.4
19	AS	75	ALA	2.4
9	CI	29	ASN	2.3
30	DG	27	ASN	2.3
10	CJ	63	PHE	2.3
9	CI	105	ASP	2.3
1	AA	72	C	2.3
10	CJ	67	THR	2.3
1	AA	1042	G	2.3
7	CG	155	ARG	2.3
32	DI	81	VAL	2.3
9	CI	31	GLN	2.3
9	AI	62	TYR	2.3
18	AR	24	ALA	2.3
18	AR	54	ARG	2.3
31	DH	43	VAL	2.3
1	CA	1003	G	2.3

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Mol	Chain	Res	Type	RSRZ
1	CA	1030	C	2.3
9	CI	26	VAL	2.3
49	D3	59	VAL	2.3
23	AX	47	U	2.3
2	AB	95	GLN	2.3
47	B1	2	SER	2.3
3	AC	153	VAL	2.3
3	AC	189	ALA	2.3
19	AS	19	VAL	2.3
31	DH	113	VAL	2.3
55	D9	25	VAL	2.3
9	AI	37	PHE	2.3
1	AA	1005	A	2.3
46	D0	3	HIS	2.3
19	CS	35	SER	2.3
32	DI	86	THR	2.3
1	CA	1043	C	2.2
25	DA	2794	C	2.2
9	AI	81	ILE	2.2
21	AU	6	ARG	2.2
1	CA	204	U	2.2
9	CI	37	PHE	2.2
3	CC	64	VAL	2.2
9	CI	98	PRO	2.2
21	CU	6	ARG	2.2
31	DH	115	VAL	2.2
19	CS	69	HIS	2.2
1	CA	1006	C	2.2
30	DG	29	TRP	2.2
21	CU	11	GLY	2.2
19	AS	59	PRO	2.2
22	CV	14	A	2.2
23	AX	45	G	2.2
25	BA	2905	C	2.2
2	AB	165	VAL	2.2
2	CB	95	GLN	2.2
2	AB	19	HIS	2.2
2	CB	130	ARG	2.2
10	CJ	5	ARG	2.2
19	AS	61	TYR	2.2
31	DH	114	VAL	2.2
29	DF	14	PRO	2.2

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Mol	Chain	Res	Type	RSRZ
17	CQ	8	GLY	2.2
31	DH	95	ARG	2.2
30	DG	19	LEU	2.2
1	AA	1030(D)	A	2.2
1	AA	91	C	2.2
13	AM	87	TYR	2.2
1	CA	1131	G	2.2
9	CI	97	LYS	2.2
9	CI	127	LYS	2.2
30	DG	49	ASP	2.2
19	AS	66	MET	2.1
2	CB	187	LEU	2.1
9	AI	46	ALA	2.1
20	AT	41	ILE	2.1
1	CA	1004	A	2.1
1	CA	1044	A	2.1
19	AS	56	GLN	2.1
50	D4	66	SER	2.1
25	DA	2897	U	2.1
4	AD	137	SER	2.1
1	AA	71	C	2.1
7	CG	153	HIS	2.1
25	DA	652(T)	C	2.1
3	CC	190	ARG	2.1
7	AG	16	LEU	2.1
14	CN	39	LEU	2.1
21	CU	22	ARG	2.1
2	CB	188	ALA	2.1
3	CC	171	GLY	2.1
55	D9	15	LYS	2.1
1	AA	1138	G	2.1
19	CS	43	GLU	2.1
7	CG	18	TYR	2.1
9	AI	93	ARG	2.1
19	CS	13	ASP	2.1
38	DS	58	LEU	2.1
25	DA	2188	C	2.1
10	CJ	10	GLY	2.1
21	CU	16	GLY	2.1
9	CI	83	ARG	2.1
25	DA	879	G	2.1
22	AV	15	A	2.1

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Mol	Chain	Res	Type	RSRZ
1	CA	1028	C	2.1
31	DH	169	VAL	2.1
3	CC	172	ARG	2.1
7	AG	3	ARG	2.1
25	BA	2906	U	2.1
14	AN	16	PHE	2.1
42	BW	111	HIS	2.1
13	AM	32	GLU	2.1
23	CX	71	C	2.1
46	B0	5	LYS	2.1
1	CA	1020	U	2.1
44	DY	5	MET	2.1
44	DY	58	GLY	2.1
19	AS	30	LEU	2.1
1	AA	1532	U	2.1
9	CI	81	ILE	2.1
9	CI	18	PHE	2.1
31	DH	48	GLY	2.1
1	AA	1276	G	2.1
31	DH	110	SER	2.1
21	CU	14	TRP	2.1
3	AC	81	GLY	2.1
19	CS	38	SER	2.0
1	CA	1033	G	2.0
38	DS	55	ALA	2.0
25	BA	937	A	2.0
55	B9	29	ASN	2.0
13	CM	82	MET	2.0
32	DI	107	VAL	2.0
10	AJ	10	GLY	2.0
31	DH	97	ARG	2.0
7	AG	86	GLN	2.0
13	CM	6	GLY	2.0
1	CA	1025	U	2.0
3	CC	163	ALA	2.0
13	CM	78	ILE	2.0
40	DU	116	ALA	2.0
25	DA	2804	C	2.0
16	AP	38	TYR	2.0
20	AT	55	ILE	2.0
10	CJ	47	PHE	2.0

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

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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. 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	LLDF	B-factors(Å ²)	Q<0.9
24	2QZ	AW	1	9/10	0.95	0.23	-	50,71,82,83	0
24	MVA	AW	5	8/9	0.92	0.19	-	69,82,86,91	0
24	2R3	AW	8	14/15	0.93	0.24	-	70,78,86,87	0
24	2R3	CW	8	14/15	0.96	0.14	-	62,69,77,78	0
24	2QY	CW	10	13/14	0.92	0.16	-	60,72,80,86	0
24	MVA	CW	5	8/9	0.95	0.21	-	76,88,91,99	0
24	2QZ	CW	1	9/10	0.97	0.27	-	63,71,80,101	0
24	2R1	CW	6	10/11	0.92	0.13	-	68,82,90,91	0
24	MVA	CW	9	8/9	0.94	0.22	-	70,73,84,91	0
24	004	CW	3	10/11	0.97	0.16	-	69,78,82,83	0
24	2QY	AW	10	13/14	0.96	0.14	-	49,70,87,100	0
24	2R1	AW	6	10/11	0.91	0.14	-	66,72,84,91	0
24	004	AW	3	10/11	0.93	0.11	-	67,87,95,97	0
24	MVA	AW	9	8/9	0.96	0.28	-	63,74,87,88	0

6.3 Carbohydrates ⓘ

There are no carbohydrates 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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. 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	LLDF	B-factors(Å ²)	Q<0.9
56	MG	BA	3637	1/1	0.98	0.79	109.54	52,52,52,52	0
56	MG	BA	3095	1/1	0.97	0.70	103.36	55,55,55,55	0
56	MG	BA	3610	1/1	0.94	1.01	89.10	49,49,49,49	0
56	MG	BA	3148	1/1	0.96	0.60	70.52	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	DA	3035	1/1	0.87	0.71	51.32	58,58,58,58	0
56	MG	BA	3037	1/1	0.94	0.56	50.10	39,39,39,39	0
56	MG	BA	3221	1/1	0.95	0.63	47.56	55,55,55,55	0
56	MG	CA	3053	1/1	0.41	1.37	43.88	87,87,87,87	0
56	MG	BA	3143	1/1	0.63	0.82	39.93	41,41,41,41	0
56	MG	BU	209	1/1	0.96	0.96	38.25	36,36,36,36	0
56	MG	BA	3023	1/1	0.90	0.43	38.24	34,34,34,34	0
56	MG	BA	3732	1/1	0.93	0.48	37.17	56,56,56,56	0
56	MG	DA	3477	1/1	0.97	0.53	36.46	35,35,35,35	0
56	MG	BN	3005	1/1	0.90	1.01	34.93	63,63,63,63	0
56	MG	DA	3405	1/1	0.91	0.33	31.77	53,53,53,53	0
56	MG	BA	3563	1/1	0.88	0.39	31.24	66,66,66,66	0
56	MG	BA	3230	1/1	0.69	1.02	31.09	70,70,70,70	0
56	MG	DA	3174	1/1	0.98	0.44	29.57	26,26,26,26	0
56	MG	BA	3033	1/1	0.92	0.49	29.49	54,54,54,54	0
56	MG	D5	101	1/1	0.94	0.62	28.31	44,44,44,44	0
56	MG	BU	201	1/1	0.95	0.64	28.15	33,33,33,33	0
56	MG	BD	302	1/1	0.95	0.60	27.71	44,44,44,44	0
56	MG	AA	3011	1/1	0.95	0.65	27.19	44,44,44,44	0
56	MG	BF	301	1/1	0.97	0.56	26.28	46,46,46,46	0
56	MG	AA	3215	1/1	0.92	0.94	25.05	77,77,77,77	0
56	MG	BP	203	1/1	0.90	0.63	24.53	39,39,39,39	0
56	MG	BA	3419	1/1	0.99	0.31	24.32	36,36,36,36	0
56	MG	DA	3612	1/1	0.94	0.32	24.04	46,46,46,46	0
56	MG	BA	3041	1/1	0.97	0.42	24.01	45,45,45,45	0
56	MG	BA	3193	1/1	0.95	0.48	23.64	53,53,53,53	0
56	MG	DA	3647	1/1	0.88	0.56	22.31	45,45,45,45	0
56	MG	BA	3046	1/1	0.92	0.41	22.07	52,52,52,52	0
56	MG	CA	3007	1/1	0.87	0.41	20.45	63,63,63,63	0
56	MG	DA	3179	1/1	0.99	0.41	20.37	36,36,36,36	0
56	MG	DA	3027	1/1	0.92	0.63	20.15	49,49,49,49	0
56	MG	BU	204	1/1	0.91	0.34	20.14	49,49,49,49	0
56	MG	BA	3044	1/1	0.92	0.37	19.92	32,32,32,32	0
56	MG	AA	3038	1/1	0.72	0.45	19.90	64,64,64,64	0
56	MG	DA	3056	1/1	0.93	0.38	19.46	37,37,37,37	0
56	MG	DD	303	1/1	0.95	0.62	19.22	48,48,48,48	0
56	MG	BU	202	1/1	0.96	0.71	19.18	41,41,41,41	0
56	MG	BW	3004	1/1	0.95	0.61	18.66	46,46,46,46	0
56	MG	BD	312	1/1	0.93	0.96	18.56	72,72,72,72	0
56	MG	BA	3059	1/1	0.91	0.37	18.26	35,35,35,35	0
56	MG	DE	301	1/1	0.90	0.83	18.06	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å ²)	Q<0.9
56	MG	BA	3209	1/1	0.97	0.43	18.04	39,39,39,39	0
56	MG	DA	3100	1/1	0.83	0.63	17.91	55,55,55,55	0
56	MG	BA	3085	1/1	0.86	0.38	17.87	35,35,35,35	0
56	MG	BA	3740	1/1	0.79	1.12	17.79	57,57,57,57	0
56	MG	BA	3182	1/1	0.90	0.36	17.69	43,43,43,43	0
56	MG	BA	3685	1/1	0.96	0.26	17.18	58,58,58,58	0
56	MG	DU	3001	1/1	0.83	0.90	17.14	61,61,61,61	0
56	MG	AA	3180	1/1	0.76	0.47	17.08	75,75,75,75	0
56	MG	DA	3036	1/1	0.86	0.27	17.08	35,35,35,35	0
56	MG	DD	304	1/1	0.84	0.52	16.45	40,40,40,40	0
56	MG	DD	302	1/1	0.82	0.60	16.43	48,48,48,48	0
56	MG	BA	3496	1/1	0.99	0.45	16.24	21,21,21,21	0
56	MG	DA	3116	1/1	0.90	0.39	16.11	43,43,43,43	0
56	MG	BA	3198	1/1	0.98	0.35	15.95	29,29,29,29	0
56	MG	DA	3601	1/1	0.94	0.23	15.61	50,50,50,50	0
56	MG	BA	3197	1/1	0.97	0.44	15.59	39,39,39,39	0
56	MG	DA	3112	1/1	0.87	0.31	15.28	49,49,49,49	0
56	MG	BU	207	1/1	0.93	0.34	15.25	38,38,38,38	0
56	MG	BF	304	1/1	0.93	0.48	15.00	30,30,30,30	0
56	MG	DF	301	1/1	0.95	0.38	14.39	40,40,40,40	0
56	MG	AA	3107	1/1	0.95	0.31	14.18	44,44,44,44	0
56	MG	DA	3249	1/1	0.91	0.20	13.94	25,25,25,25	0
56	MG	DA	3018	1/1	0.92	0.28	13.91	41,41,41,41	0
56	MG	DA	3585	1/1	0.92	0.26	13.91	62,62,62,62	0
56	MG	BA	3515	1/1	0.96	0.24	13.64	46,46,46,46	0
56	MG	DA	3129	1/1	0.97	0.38	13.60	45,45,45,45	0
56	MG	DA	3099	1/1	0.89	0.34	13.45	39,39,39,39	0
56	MG	BP	201	1/1	0.92	0.57	13.41	37,37,37,37	0
56	MG	DA	3094	1/1	0.95	0.25	13.18	26,26,26,26	0
56	MG	BA	3627	1/1	0.94	0.29	13.01	50,50,50,50	0
56	MG	DV	202	1/1	0.92	0.61	12.75	45,45,45,45	0
56	MG	DF	304	1/1	0.84	0.51	12.64	39,39,39,39	0
56	MG	CA	3078	1/1	0.94	0.25	12.58	51,51,51,51	0
56	MG	DA	3012	1/1	0.82	0.39	12.51	52,52,52,52	0
56	MG	BA	3145	1/1	0.97	0.30	12.44	40,40,40,40	0
56	MG	BA	3301	1/1	0.93	0.52	12.35	44,44,44,44	0
56	MG	BA	3733	1/1	0.86	0.42	12.28	40,40,40,40	0
56	MG	BA	3047	1/1	0.94	0.35	12.26	30,30,30,30	0
56	MG	DA	3121	1/1	0.89	0.26	11.94	46,46,46,46	0
56	MG	BE	304	1/1	0.94	0.49	11.68	45,45,45,45	0
56	MG	BA	3579	1/1	0.97	0.30	11.65	21,21,21,21	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	AA	3159	1/1	0.98	0.32	11.63	57,57,57,57	0
56	MG	BE	307	1/1	0.95	0.28	11.53	51,51,51,51	0
56	MG	BA	3674	1/1	0.82	0.30	11.47	67,67,67,67	0
56	MG	DA	3436	1/1	0.91	0.32	11.41	61,61,61,61	0
56	MG	B3	3403	1/1	0.95	0.40	11.28	37,37,37,37	0
56	MG	BA	3731	1/1	0.97	0.39	11.05	52,52,52,52	0
56	MG	CA	3075	1/1	0.98	0.35	10.97	76,76,76,76	0
56	MG	AA	3209	1/1	0.86	0.38	10.89	66,66,66,66	0
56	MG	BA	3051	1/1	0.93	0.30	10.81	34,34,34,34	0
56	MG	DA	3328	1/1	0.91	0.28	10.78	33,33,33,33	0
56	MG	DA	3172	1/1	0.92	0.33	10.62	46,46,46,46	0
56	MG	BA	3603	1/1	0.98	0.29	10.47	40,40,40,40	0
56	MG	BA	3739	1/1	0.90	0.37	10.39	50,50,50,50	0
56	MG	DA	3192	1/1	0.94	0.48	10.38	48,48,48,48	0
56	MG	BA	3549	1/1	0.93	0.30	10.37	49,49,49,49	0
56	MG	AA	3008	1/1	0.97	0.27	10.32	61,61,61,61	0
56	MG	AA	3031	1/1	0.93	0.22	10.27	41,41,41,41	0
56	MG	BA	3548	1/1	0.96	0.28	10.24	40,40,40,40	0
56	MG	B7	103	1/1	0.97	0.40	10.15	46,46,46,46	0
56	MG	BA	3617	1/1	0.99	0.35	10.00	30,30,30,30	0
56	MG	BA	3013	1/1	0.96	0.44	9.86	36,36,36,36	0
56	MG	AA	3060	1/1	0.94	0.38	9.84	52,52,52,52	0
56	MG	DA	3038	1/1	0.89	0.33	9.69	37,37,37,37	0
56	MG	DA	3282	1/1	0.89	0.31	9.60	58,58,58,58	0
56	MG	BN	3004	1/1	0.98	0.47	9.59	69,69,69,69	0
56	MG	CA	3119	1/1	0.85	0.48	9.56	73,73,73,73	0
56	MG	BD	307	1/1	0.97	0.26	9.47	36,36,36,36	0
56	MG	BA	3194	1/1	0.95	0.52	9.47	43,43,43,43	0
56	MG	CA	3135	1/1	0.89	0.37	9.37	61,61,61,61	0
56	MG	DA	3613	1/1	0.89	0.31	9.34	64,64,64,64	0
56	MG	BA	3428	1/1	0.95	0.42	9.32	36,36,36,36	0
56	MG	BR	201	1/1	0.97	0.38	9.27	44,44,44,44	0
56	MG	DA	3025	1/1	0.92	0.49	9.21	38,38,38,38	0
56	MG	B0	104	1/1	0.93	0.33	9.18	55,55,55,55	0
59	FME	AX	101	10/11	0.86	0.45	9.15	55,74,92,107	0
56	MG	BE	306	1/1	0.94	0.45	9.14	38,38,38,38	0
56	MG	DA	3198	1/1	0.96	0.30	9.13	34,34,34,34	0
56	MG	BV	3002	1/1	0.98	0.55	9.08	42,42,42,42	0
56	MG	BA	3734	1/1	0.95	0.33	9.05	42,42,42,42	0
56	MG	BA	3099	1/1	0.87	0.31	9.04	55,55,55,55	0
56	MG	BA	3276	1/1	0.97	0.27	8.98	9,9,9,9	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	AA	3091	1/1	0.98	0.27	8.98	75,75,75,75	0
56	MG	BA	3560	1/1	0.97	0.27	8.97	24,24,24,24	0
56	MG	CA	3152	1/1	0.82	0.32	8.73	45,45,45,45	0
56	MG	AA	3071	1/1	0.86	0.23	8.66	60,60,60,60	0
56	MG	BA	3405	1/1	0.81	0.25	8.61	57,57,57,57	0
56	MG	AA	3160	1/1	0.95	0.29	8.61	52,52,52,52	0
56	MG	DA	3033	1/1	0.93	0.22	8.58	41,41,41,41	0
56	MG	BA	3596	1/1	0.85	0.25	8.58	79,79,79,79	0
56	MG	DA	3007	1/1	0.96	0.26	8.56	43,43,43,43	0
56	MG	DA	3171	1/1	0.83	0.89	8.45	58,58,58,58	0
56	MG	DA	3267	1/1	0.92	0.28	8.44	40,40,40,40	0
56	MG	BA	3434	1/1	0.96	0.31	8.42	22,22,22,22	0
56	MG	BD	306	1/1	0.98	0.46	8.36	47,47,47,47	0
56	MG	DA	3016	1/1	0.92	0.22	8.28	33,33,33,33	0
56	MG	DA	3428	1/1	0.91	0.28	8.11	30,30,30,30	0
56	MG	DA	3265	1/1	0.98	0.29	7.92	44,44,44,44	0
56	MG	AA	3168	1/1	0.98	0.27	7.92	80,80,80,80	0
56	MG	BD	308	1/1	0.98	0.34	7.85	21,21,21,21	0
56	MG	DA	3217	1/1	0.98	0.27	7.79	33,33,33,33	0
56	MG	BA	3226	1/1	0.94	0.31	7.78	31,31,31,31	0
56	MG	DA	3645	1/1	0.86	0.41	7.68	57,57,57,57	0
56	MG	BA	3135	1/1	0.88	0.26	7.67	57,57,57,57	0
56	MG	BA	3032	1/1	0.97	0.30	7.65	36,36,36,36	0
56	MG	DA	3389	1/1	0.97	0.23	7.59	32,32,32,32	0
56	MG	DA	3444	1/1	0.92	0.27	7.55	43,43,43,43	0
56	MG	DA	3301	1/1	0.98	0.28	7.54	30,30,30,30	0
56	MG	BA	3224	1/1	0.87	0.40	7.51	48,48,48,48	0
56	MG	BA	3441	1/1	0.99	0.23	7.49	29,29,29,29	0
56	MG	BA	3201	1/1	0.98	0.27	7.41	36,36,36,36	0
56	MG	BR	203	1/1	0.87	0.51	7.19	48,48,48,48	0
56	MG	BA	3109	1/1	0.88	0.28	7.16	62,62,62,62	0
56	MG	DA	3002	1/1	0.95	0.23	7.15	47,47,47,47	0
56	MG	BA	3506	1/1	0.86	0.25	7.14	33,33,33,33	0
56	MG	CA	3042	1/1	0.80	0.28	7.12	69,69,69,69	0
56	MG	BA	3234	1/1	0.95	0.35	7.10	48,48,48,48	0
56	MG	DB	3007	1/1	0.96	0.29	7.10	45,45,45,45	0
56	MG	AA	3064	1/1	0.85	0.27	7.07	65,65,65,65	0
56	MG	BA	3127	1/1	0.96	0.36	7.06	42,42,42,42	0
56	MG	BA	3315	1/1	0.98	0.31	7.01	43,43,43,43	0
56	MG	DA	3351	1/1	0.92	0.24	6.95	58,58,58,58	0
56	MG	AA	3120	1/1	0.80	0.44	6.90	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	BA	3702	1/1	0.91	0.24	6.88	56,56,56,56	0
56	MG	DA	3040	1/1	0.91	0.21	6.86	45,45,45,45	0
56	MG	BA	3078	1/1	0.95	0.33	6.86	44,44,44,44	0
56	MG	DA	3557	1/1	0.81	0.26	6.85	74,74,74,74	0
56	MG	CA	3043	1/1	0.88	0.35	6.85	62,62,62,62	0
56	MG	BA	3586	1/1	0.96	0.25	6.80	26,26,26,26	0
56	MG	BA	3514	1/1	0.86	0.21	6.79	49,49,49,49	0
59	FME	CX	101	10/11	0.80	0.43	6.77	59,80,100,106	0
56	MG	AA	3088	1/1	0.85	0.34	6.75	53,53,53,53	0
56	MG	AA	3084	1/1	0.82	0.32	6.71	71,71,71,71	0
56	MG	DA	3270	1/1	0.94	0.28	6.70	55,55,55,55	0
56	MG	DA	3411	1/1	0.93	0.23	6.70	33,33,33,33	0
56	MG	BD	310	1/1	0.96	0.33	6.65	48,48,48,48	0
56	MG	BA	3604	1/1	0.89	0.38	6.64	64,64,64,64	0
56	MG	BN	3001	1/1	0.93	0.34	6.59	65,65,65,65	0
56	MG	BU	205	1/1	0.91	0.36	6.54	39,39,39,39	0
56	MG	BA	3444	1/1	0.88	0.27	6.53	29,29,29,29	0
56	MG	BF	305	1/1	0.93	0.31	6.52	38,38,38,38	0
56	MG	CA	3162	1/1	0.83	0.25	6.47	60,60,60,60	0
56	MG	BA	3533	1/1	0.95	0.29	6.37	30,30,30,30	0
56	MG	BA	3123	1/1	0.90	0.27	6.33	47,47,47,47	0
56	MG	BA	3597	1/1	0.94	0.29	6.29	46,46,46,46	0
56	MG	DA	3017	1/1	0.90	0.24	6.29	51,51,51,51	0
56	MG	BA	3529	1/1	0.96	0.22	6.28	22,22,22,22	0
56	MG	AX	105	1/1	0.78	0.47	6.28	72,72,72,72	0
56	MG	DA	3643	1/1	0.95	0.27	6.23	18,18,18,18	0
56	MG	DA	3350	1/1	0.98	0.24	6.23	21,21,21,21	0
56	MG	DA	3142	1/1	0.95	0.23	6.23	33,33,33,33	0
56	MG	CA	3027	1/1	0.80	0.27	6.12	64,64,64,64	0
56	MG	DA	3316	1/1	0.95	0.27	6.10	47,47,47,47	0
56	MG	DA	3298	1/1	0.90	0.26	6.01	45,45,45,45	0
56	MG	BA	3308	1/1	0.97	0.18	6.00	33,33,33,33	0
56	MG	BA	3229	1/1	0.97	0.35	5.98	50,50,50,50	0
56	MG	DA	3522	1/1	0.98	0.24	5.97	46,46,46,46	0
56	MG	BA	3153	1/1	0.91	0.31	5.96	47,47,47,47	0
56	MG	BA	3458	1/1	0.96	0.21	5.93	46,46,46,46	0
56	MG	BA	3407	1/1	0.99	0.22	5.88	35,35,35,35	0
56	MG	BA	3056	1/1	0.94	0.25	5.87	39,39,39,39	0
56	MG	CA	3100	1/1	0.95	0.17	5.85	72,72,72,72	0
56	MG	BA	3009	1/1	0.95	0.24	5.84	36,36,36,36	0
56	MG	DA	3339	1/1	0.97	0.29	5.82	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	BA	3406	1/1	0.96	0.22	5.80	54,54,54,54	0
56	MG	DA	3579	1/1	0.98	0.21	5.74	38,38,38,38	0
56	MG	D3	101	1/1	0.89	0.56	5.71	54,54,54,54	0
56	MG	AA	3050	1/1	0.85	0.31	5.70	50,50,50,50	0
56	MG	BA	3618	1/1	0.95	0.22	5.63	37,37,37,37	0
56	MG	DA	3019	1/1	0.94	0.21	5.55	32,32,32,32	0
56	MG	BA	3116	1/1	0.96	0.25	5.50	30,30,30,30	0
56	MG	AA	3208	1/1	0.97	0.34	5.49	38,38,38,38	0
56	MG	BQ	3001	1/1	0.96	0.32	5.48	38,38,38,38	0
56	MG	BA	3735	1/1	0.96	0.28	5.46	47,47,47,47	0
56	MG	DA	3599	1/1	0.93	0.25	5.44	69,69,69,69	0
56	MG	DA	3648	1/1	0.97	0.23	5.42	43,43,43,43	0
56	MG	DA	3652	1/1	0.99	0.26	5.36	26,26,26,26	0
56	MG	DP	201	1/1	0.97	0.31	5.30	52,52,52,52	0
56	MG	BA	3483	1/1	0.99	0.21	5.25	18,18,18,18	0
56	MG	DA	3305	1/1	0.96	0.20	5.24	33,33,33,33	0
56	MG	BA	3546	1/1	0.97	0.26	5.23	46,46,46,46	0
56	MG	BA	3700	1/1	0.96	0.25	5.14	26,26,26,26	0
56	MG	BA	3220	1/1	0.97	0.27	5.12	27,27,27,27	0
56	MG	CA	3061	1/1	0.89	0.48	5.06	68,68,68,68	0
56	MG	BD	305	1/1	0.94	0.25	5.06	41,41,41,41	0
56	MG	CA	3170	1/1	0.95	0.39	5.04	44,44,44,44	0
56	MG	BA	3555	1/1	0.96	0.25	4.98	31,31,31,31	0
56	MG	DA	3295	1/1	0.79	0.23	4.94	31,31,31,31	0
56	MG	CA	3048	1/1	0.85	0.24	4.93	70,70,70,70	0
56	MG	DA	3197	1/1	0.93	0.34	4.92	43,43,43,43	0
56	MG	DF	303	1/1	0.97	0.28	4.89	42,42,42,42	0
56	MG	AA	3027	1/1	0.84	0.27	4.85	67,67,67,67	0
56	MG	DA	3422	1/1	0.99	0.23	4.79	45,45,45,45	0
56	MG	BQ	3004	1/1	0.90	0.33	4.79	41,41,41,41	0
56	MG	BA	3640	1/1	0.88	0.21	4.77	31,31,31,31	0
56	MG	DA	3583	1/1	0.94	0.24	4.74	35,35,35,35	0
56	MG	BD	303	1/1	0.96	0.25	4.63	35,35,35,35	0
56	MG	BA	3509	1/1	0.92	0.21	4.63	29,29,29,29	0
56	MG	B0	101	1/1	0.93	0.26	4.51	57,57,57,57	0
56	MG	DA	3637	1/1	0.91	0.20	4.48	59,59,59,59	0
56	MG	BA	3527	1/1	0.97	0.23	4.42	45,45,45,45	0
56	MG	DA	3620	1/1	0.94	0.21	4.35	66,66,66,66	0
56	MG	AA	3033	1/1	0.86	0.45	4.31	68,68,68,68	0
56	MG	BA	3132	1/1	0.94	0.21	4.31	28,28,28,28	0
56	MG	DA	3418	1/1	0.90	0.22	4.26	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	DA	3177	1/1	0.95	0.21	4.21	30,30,30,30	0
56	MG	BA	3354	1/1	0.92	0.29	4.15	45,45,45,45	0
56	MG	AA	3035	1/1	0.93	0.27	4.11	59,59,59,59	0
56	MG	DA	3464	1/1	0.78	0.20	4.05	51,51,51,51	0
56	MG	DA	3657	1/1	0.96	0.36	4.04	55,55,55,55	0
56	MG	DA	3026	1/1	0.99	0.22	4.01	36,36,36,36	0
56	MG	DA	3065	1/1	0.93	0.19	3.99	40,40,40,40	0
56	MG	BA	3399	1/1	0.95	0.25	3.97	22,22,22,22	0
56	MG	CA	3072	1/1	0.96	0.23	3.87	57,57,57,57	0
56	MG	BA	3268	1/1	0.98	0.19	3.86	29,29,29,29	0
56	MG	BA	3528	1/1	0.99	0.22	3.73	44,44,44,44	0
56	MG	BA	3396	1/1	0.97	0.20	3.73	41,41,41,41	0
56	MG	B7	102	1/1	0.98	0.29	3.73	29,29,29,29	0
56	MG	BA	3040	1/1	0.97	0.23	3.70	40,40,40,40	0
56	MG	DA	3399	1/1	0.96	0.21	3.69	39,39,39,39	0
56	MG	BA	3657	1/1	0.95	0.19	3.67	29,29,29,29	0
56	MG	BA	3185	1/1	0.73	0.21	3.61	40,40,40,40	0
56	MG	DA	3275	1/1	0.98	0.26	3.59	34,34,34,34	0
56	MG	BA	3137	1/1	0.80	0.19	3.58	59,59,59,59	0
56	MG	BA	3124	1/1	0.98	0.20	3.55	46,46,46,46	0
56	MG	BA	3073	1/1	0.93	0.20	3.50	43,43,43,43	0
56	MG	DA	3304	1/1	0.98	0.20	3.48	44,44,44,44	0
56	MG	DA	3268	1/1	0.94	0.18	3.43	42,42,42,42	0
56	MG	BA	3462	1/1	0.97	0.23	3.40	30,30,30,30	0
56	MG	DA	3462	1/1	0.88	0.22	3.39	71,71,71,71	0
56	MG	BA	3382	1/1	0.97	0.20	3.27	21,21,21,21	0
56	MG	DA	3632	1/1	0.97	0.18	3.27	60,60,60,60	0
56	MG	AA	3015	1/1	0.72	0.24	3.27	74,74,74,74	0
56	MG	BB	3003	1/1	0.86	0.23	3.26	40,40,40,40	0
56	MG	BA	3303	1/1	0.96	0.21	3.23	11,11,11,11	0
56	MG	DA	3117	1/1	0.88	0.17	3.17	46,46,46,46	0
56	MG	CA	3094	1/1	0.98	0.22	3.15	37,37,37,37	0
56	MG	BA	3454	1/1	0.93	0.24	3.11	20,20,20,20	0
56	MG	DA	3631	1/1	0.97	0.19	3.05	49,49,49,49	0
56	MG	CA	3004	1/1	0.94	0.35	3.04	88,88,88,88	0
56	MG	BA	3728	1/1	0.96	0.24	3.04	56,56,56,56	0
56	MG	BV	3001	1/1	0.95	0.26	3.01	42,42,42,42	0
56	MG	DA	3252	1/1	0.95	0.23	2.97	36,36,36,36	0
56	MG	DA	3565	1/1	0.91	0.22	2.95	48,48,48,48	0
56	MG	BA	3076	1/1	0.88	0.22	2.94	40,40,40,40	0
56	MG	BA	3695	1/1	0.98	0.25	2.94	34,34,34,34	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	DA	3300	1/1	0.96	0.17	2.89	47,47,47,47	0
56	MG	DA	3010	1/1	0.94	0.25	2.88	42,42,42,42	0
56	MG	BU	203	1/1	0.96	0.26	2.87	26,26,26,26	0
56	MG	DA	3386	1/1	0.94	0.17	2.86	18,18,18,18	0
56	MG	DA	3114	1/1	0.95	0.19	2.84	47,47,47,47	0
56	MG	BA	3025	1/1	0.94	0.19	2.79	48,48,48,48	0
56	MG	AA	3146	1/1	0.94	0.20	2.77	55,55,55,55	0
56	MG	DA	3654	1/1	0.91	0.29	2.74	50,50,50,50	0
56	MG	DA	3433	1/1	0.96	0.23	2.72	39,39,39,39	0
56	MG	DA	3465	1/1	0.88	0.17	2.65	41,41,41,41	0
56	MG	AA	3179	1/1	0.94	0.24	2.58	34,34,34,34	0
56	MG	BA	3151	1/1	0.94	0.21	2.46	40,40,40,40	0
56	MG	DA	3641	1/1	0.94	0.21	2.45	47,47,47,47	0
56	MG	BA	3320	1/1	0.98	0.21	2.43	41,41,41,41	0
56	MG	BA	3724	1/1	0.96	0.21	2.42	22,22,22,22	0
56	MG	AA	3145	1/1	0.96	0.24	2.38	63,63,63,63	0
56	MG	BA	3253	1/1	0.92	0.28	2.37	63,63,63,63	0
56	MG	CA	3020	1/1	0.96	0.22	2.35	45,45,45,45	0
56	MG	DV	201	1/1	0.95	0.30	2.31	56,56,56,56	0
56	MG	DA	3580	1/1	0.97	0.17	2.30	35,35,35,35	0
56	MG	AA	3109	1/1	0.92	0.21	2.30	59,59,59,59	0
56	MG	DA	3292	1/1	0.94	0.18	2.28	34,34,34,34	0
56	MG	DD	301	1/1	0.93	0.24	2.26	23,23,23,23	0
56	MG	AA	3171	1/1	0.95	0.29	2.26	77,77,77,77	0
56	MG	AA	3039	1/1	0.87	0.20	2.23	62,62,62,62	0
56	MG	CA	3026	1/1	0.93	0.18	2.22	52,52,52,52	0
56	MG	DA	3548	1/1	0.95	0.16	2.20	60,60,60,60	0
56	MG	BA	3321	1/1	0.97	0.20	2.17	47,47,47,47	0
56	MG	BA	3136	1/1	0.96	0.19	2.17	47,47,47,47	0
56	MG	BA	3438	1/1	0.96	0.21	2.12	30,30,30,30	0
56	MG	BA	3264	1/1	0.91	0.18	2.11	29,29,29,29	0
56	MG	BA	3547	1/1	0.95	0.19	2.09	30,30,30,30	0
56	MG	BA	3477	1/1	0.91	0.16	2.09	52,52,52,52	0
56	MG	DA	3539	1/1	0.94	0.20	2.05	35,35,35,35	0
56	MG	DA	3493	1/1	0.92	0.25	2.05	38,38,38,38	0
56	MG	AA	3124	1/1	0.63	0.21	2.01	61,61,61,61	0
56	MG	BA	3328	1/1	0.95	0.19	1.96	41,41,41,41	0
56	MG	CA	3032	1/1	0.77	0.20	1.95	44,44,44,44	0
56	MG	BA	3120	1/1	0.97	0.26	1.95	56,56,56,56	0
56	MG	BA	3213	1/1	0.91	0.14	1.95	63,63,63,63	0
56	MG	BA	3738	1/1	0.90	0.22	1.94	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å ²)	Q<0.9
56	MG	DA	3004	1/1	0.96	0.17	1.93	24,24,24,24	0
56	MG	BF	302	1/1	0.91	0.26	1.92	49,49,49,49	0
56	MG	BA	3353	1/1	0.95	0.25	1.90	31,31,31,31	0
56	MG	DA	3143	1/1	0.89	0.20	1.88	53,53,53,53	0
56	MG	BX	102	1/1	0.91	0.23	1.86	60,60,60,60	0
56	MG	BA	3371	1/1	0.95	0.17	1.84	38,38,38,38	0
56	MG	BA	3435	1/1	0.89	0.21	1.81	59,59,59,59	0
56	MG	CA	3056	1/1	0.79	0.18	1.74	63,63,63,63	0
56	MG	CA	3125	1/1	0.93	0.20	1.74	64,64,64,64	0
56	MG	DA	3097	1/1	0.92	0.17	1.71	58,58,58,58	0
56	MG	DA	3284	1/1	0.95	0.17	1.69	45,45,45,45	0
56	MG	BA	3692	1/1	0.93	0.20	1.68	36,36,36,36	0
56	MG	DA	3110	1/1	0.86	0.17	1.68	46,46,46,46	0
56	MG	BD	309	1/1	0.94	0.18	1.61	43,43,43,43	0
56	MG	AA	3114	1/1	0.73	0.18	1.60	73,73,73,73	0
56	MG	DQ	3003	1/1	0.94	0.21	1.55	58,58,58,58	0
56	MG	DA	3191	1/1	1.00	0.17	1.54	31,31,31,31	0
56	MG	CA	3120	1/1	0.97	0.21	1.54	59,59,59,59	0
56	MG	DA	3353	1/1	0.90	0.17	1.47	54,54,54,54	0
56	MG	BA	3336	1/1	0.97	0.18	1.44	46,46,46,46	0
56	MG	BA	3539	1/1	0.94	0.20	1.44	23,23,23,23	0
56	MG	AA	3216	1/1	0.95	0.30	1.41	60,60,60,60	0
56	MG	CA	3064	1/1	0.91	0.14	1.38	74,74,74,74	0
56	MG	BA	3417	1/1	0.99	0.19	1.37	21,21,21,21	0
56	MG	CA	3098	1/1	0.97	0.17	1.36	37,37,37,37	0
56	MG	DA	3313	1/1	0.97	0.18	1.30	30,30,30,30	0
56	MG	BA	3097	1/1	0.91	0.16	1.28	30,30,30,30	0
56	MG	BA	3281	1/1	0.91	0.23	1.27	45,45,45,45	0
56	MG	DA	3402	1/1	0.91	0.17	1.26	33,33,33,33	0
56	MG	DA	3297	1/1	0.96	0.16	1.23	36,36,36,36	0
56	MG	DA	3088	1/1	0.96	0.16	1.22	47,47,47,47	0
56	MG	DA	3452	1/1	0.94	0.19	1.20	64,64,64,64	0
56	MG	AA	3036	1/1	0.96	0.22	1.20	69,69,69,69	0
56	MG	BA	3357	1/1	0.93	0.17	1.19	45,45,45,45	0
56	MG	CA	3023	1/1	0.93	0.20	1.18	37,37,37,37	0
56	MG	CA	3172	1/1	0.84	0.22	1.18	65,65,65,65	0
56	MG	BA	3578	1/1	0.94	0.19	1.16	47,47,47,47	0
56	MG	CA	3050	1/1	0.97	0.18	1.15	54,54,54,54	0
56	MG	BA	3233	1/1	0.96	0.19	1.12	49,49,49,49	0
56	MG	BA	3585	1/1	0.94	0.22	1.12	25,25,25,25	0
56	MG	BA	3456	1/1	0.94	0.20	1.12	24,24,24,24	0
56	MG	DA	3342	1/1	0.97	0.18	1.11	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	AA	3072	1/1	0.76	0.24	1.11	69,69,69,69	0
56	MG	CN	502	1/1	0.90	0.31	1.09	70,70,70,70	0
56	MG	DA	3456	1/1	0.76	0.20	1.09	58,58,58,58	0
56	MG	AA	3194	1/1	0.92	0.18	1.07	50,50,50,50	0
56	MG	AA	3095	1/1	0.96	0.19	1.07	54,54,54,54	0
56	MG	DA	3658	1/1	0.94	0.30	1.05	50,50,50,50	0
56	MG	AA	3082	1/1	0.89	0.16	1.03	52,52,52,52	0
56	MG	BA	3191	1/1	0.91	0.20	0.99	56,56,56,56	0
56	MG	DA	3266	1/1	0.95	0.19	0.96	32,32,32,32	0
56	MG	DA	3303	1/1	0.96	0.17	0.94	37,37,37,37	0
56	MG	DA	3640	1/1	0.95	0.19	0.87	53,53,53,53	0
56	MG	CE	3001	1/1	0.91	0.20	0.84	66,66,66,66	0
56	MG	BA	3507	1/1	0.95	0.20	0.80	37,37,37,37	0
56	MG	CA	3058	1/1	0.92	0.20	0.80	36,36,36,36	0
56	MG	DA	3528	1/1	0.87	0.15	0.77	33,33,33,33	0
56	MG	BA	3107	1/1	0.82	0.15	0.73	60,60,60,60	0
56	MG	B7	101	1/1	0.90	0.19	0.70	45,45,45,45	0
56	MG	BA	3427	1/1	0.96	0.19	0.65	20,20,20,20	0
56	MG	AA	3070	1/1	0.95	0.19	0.64	68,68,68,68	0
56	MG	AA	3020	1/1	0.87	0.18	0.63	80,80,80,80	0
56	MG	DA	3435	1/1	0.96	0.16	0.63	56,56,56,56	0
56	MG	BA	3572	1/1	0.93	0.19	0.62	23,23,23,23	0
56	MG	AA	3054	1/1	0.94	0.19	0.62	46,46,46,46	0
56	MG	DA	3073	1/1	0.91	0.16	0.59	50,50,50,50	0
56	MG	DA	3078	1/1	0.90	0.15	0.57	49,49,49,49	0
56	MG	DA	3309	1/1	0.97	0.17	0.57	25,25,25,25	0
56	MG	DA	3049	1/1	0.88	0.18	0.56	56,56,56,56	0
56	MG	BB	3016	1/1	0.98	0.15	0.53	24,24,24,24	0
56	MG	CF	3001	1/1	0.94	0.18	0.50	56,56,56,56	0
56	MG	BA	3190	1/1	0.90	0.25	0.50	42,42,42,42	0
56	MG	DQ	3004	1/1	0.72	0.20	0.49	52,52,52,52	0
56	MG	DA	3383	1/1	0.99	0.18	0.45	27,27,27,27	0
56	MG	DA	3480	1/1	0.98	0.17	0.37	42,42,42,42	0
56	MG	BE	302	1/1	0.93	0.17	0.36	29,29,29,29	0
56	MG	AA	3170	1/1	0.95	0.17	0.34	83,83,83,83	0
56	MG	BA	3232	1/1	0.94	0.19	0.28	32,32,32,32	0
56	MG	BA	3036	1/1	0.96	0.17	0.26	25,25,25,25	0
56	MG	DA	3573	1/1	0.99	0.17	0.23	32,32,32,32	0
56	MG	B0	105	1/1	0.98	0.27	0.23	44,44,44,44	0
56	MG	DA	3651	1/1	0.95	0.14	0.22	48,48,48,48	0
56	MG	AA	3003	1/1	0.88	0.25	0.19	70,70,70,70	0
56	MG	BA	3553	1/1	0.98	0.17	0.19	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	BA	3416	1/1	0.92	0.17	0.17	25,25,25,25	0
56	MG	BA	3411	1/1	0.98	0.19	0.16	21,21,21,21	0
56	MG	AA	3219	1/1	0.91	0.18	0.15	54,54,54,54	0
56	MG	BA	3049	1/1	0.97	0.17	0.11	17,17,17,17	0
56	MG	BN	3002	1/1	0.91	0.20	0.10	52,52,52,52	0
56	MG	DA	3395	1/1	0.91	0.14	0.08	40,40,40,40	0
56	MG	DA	3558	1/1	0.97	0.17	0.06	77,77,77,77	0
56	MG	BA	3583	1/1	0.94	0.18	0.04	57,57,57,57	0
56	MG	BA	3403	1/1	0.97	0.20	0.04	28,28,28,28	0
56	MG	BA	3400	1/1	0.96	0.18	0.03	29,29,29,29	0
56	MG	DA	3376	1/1	0.96	0.16	0.03	42,42,42,42	0
56	MG	BB	3007	1/1	0.95	0.14	0.02	49,49,49,49	0
56	MG	CA	3171	1/1	0.89	0.15	-0.00	61,61,61,61	0
56	MG	BA	3050	1/1	0.96	0.17	-0.02	33,33,33,33	0
56	MG	DA	3199	1/1	0.95	0.15	-0.03	46,46,46,46	0
56	MG	DA	3592	1/1	0.97	0.15	-0.04	49,49,49,49	0
56	MG	DA	3642	1/1	0.81	0.18	-0.07	67,67,67,67	0
56	MG	CA	3059	1/1	0.95	0.18	-0.08	51,51,51,51	0
56	MG	BA	3542	1/1	0.95	0.19	-0.10	37,37,37,37	0
56	MG	BA	3551	1/1	0.97	0.17	-0.10	31,31,31,31	0
56	MG	DE	303	1/1	0.96	0.15	-0.16	36,36,36,36	0
56	MG	D8	5001	1/1	0.97	0.23	-0.16	53,53,53,53	0
56	MG	BA	3291	1/1	0.81	0.15	-0.18	44,44,44,44	0
56	MG	DA	3655	1/1	0.91	0.17	-0.19	62,62,62,62	0
56	MG	DA	3392	1/1	0.89	0.14	-0.23	60,60,60,60	0
56	MG	DA	3570	1/1	0.94	0.12	-0.23	67,67,67,67	0
56	MG	BA	3134	1/1	0.91	0.14	-0.23	34,34,34,34	0
56	MG	CA	3097	1/1	0.97	0.16	-0.24	60,60,60,60	0
56	MG	DA	3119	1/1	0.87	0.15	-0.26	44,44,44,44	0
56	MG	BA	3556	1/1	0.97	0.18	-0.29	25,25,25,25	0
56	MG	CA	3124	1/1	0.90	0.17	-0.30	64,64,64,64	0
56	MG	CT	3001	1/1	0.92	0.21	-0.33	57,57,57,57	0
56	MG	AA	3218	1/1	0.77	0.21	-0.33	73,73,73,73	0
56	MG	BA	3424	1/1	0.97	0.17	-0.35	44,44,44,44	0
56	MG	AK	3001	1/1	0.95	0.13	-0.37	48,48,48,48	0
56	MG	DA	3483	1/1	0.91	0.14	-0.38	55,55,55,55	0
56	MG	AA	3004	1/1	0.94	0.16	-0.41	50,50,50,50	0
56	MG	DA	3324	1/1	0.97	0.17	-0.41	24,24,24,24	0
56	MG	DA	3412	1/1	0.98	0.16	-0.41	34,34,34,34	0
56	MG	DA	3269	1/1	0.95	0.14	-0.41	47,47,47,47	0
56	MG	AA	3101	1/1	0.95	0.12	-0.45	61,61,61,61	0
56	MG	DA	3133	1/1	0.96	0.12	-0.46	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	BA	3285	1/1	0.99	0.17	-0.46	44,44,44,44	0
56	MG	BA	3508	1/1	0.97	0.17	-0.48	46,46,46,46	0
56	MG	BA	3592	1/1	0.96	0.16	-0.51	43,43,43,43	0
56	MG	BA	3723	1/1	0.90	0.17	-0.52	25,25,25,25	0
56	MG	BA	3034	1/1	0.95	0.15	-0.53	37,37,37,37	0
56	MG	BA	3720	1/1	0.94	0.17	-0.58	51,51,51,51	0
56	MG	AA	3198	1/1	0.94	0.16	-0.61	73,73,73,73	0
56	MG	BA	3409	1/1	0.79	0.17	-0.62	40,40,40,40	0
56	MG	BA	3410	1/1	0.98	0.18	-0.65	21,21,21,21	0
56	MG	BA	3227	1/1	0.97	0.16	-0.65	67,67,67,67	0
56	MG	BA	3645	1/1	0.98	0.16	-0.66	63,63,63,63	0
56	MG	BA	3360	1/1	0.97	0.18	-0.66	39,39,39,39	0
56	MG	DA	3566	1/1	0.93	0.12	-0.67	55,55,55,55	0
56	MG	BA	3160	1/1	0.98	0.17	-0.68	24,24,24,24	0
56	MG	AA	3021	1/1	0.96	0.16	-0.68	76,76,76,76	0
56	MG	DA	3183	1/1	0.98	0.14	-0.75	42,42,42,42	0
56	MG	CA	3012	1/1	0.92	0.13	-0.77	50,50,50,50	0
56	MG	BA	3369	1/1	0.97	0.12	-0.79	49,49,49,49	0
56	MG	AN	101	1/1	0.88	0.17	-0.79	64,64,64,64	0
56	MG	BA	3717	1/1	0.85	0.12	-0.83	51,51,51,51	0
56	MG	DA	3454	1/1	0.91	0.11	-0.84	52,52,52,52	0
56	MG	BA	3189	1/1	0.93	0.17	-0.86	39,39,39,39	0
56	MG	BA	3008	1/1	0.92	0.14	-0.86	30,30,30,30	0
56	MG	BA	3450	1/1	0.98	0.14	-0.87	40,40,40,40	0
58	ZN	D6	501	1/1	0.98	0.11	-0.90	65,65,65,65	0
56	MG	DA	3343	1/1	0.96	0.12	-0.92	37,37,37,37	0
56	MG	DA	3427	1/1	0.93	0.14	-0.93	29,29,29,29	0
56	MG	AA	3175	1/1	0.94	0.14	-0.96	70,70,70,70	0
56	MG	BA	3035	1/1	0.98	0.15	-0.96	32,32,32,32	0
56	MG	DE	306	1/1	0.94	0.13	-0.97	44,44,44,44	0
56	MG	BA	3375	1/1	0.94	0.17	-0.97	44,44,44,44	0
56	MG	BA	3038	1/1	0.93	0.12	-1.03	51,51,51,51	0
56	MG	DA	3401	1/1	0.98	0.13	-1.04	41,41,41,41	0
56	MG	AA	3025	1/1	0.78	0.13	-1.07	78,78,78,78	0
57	SF4	AD	501	8/8	0.99	0.13	-1.07	62,75,82,88	0
56	MG	DA	3207	1/1	0.97	0.11	-1.07	41,41,41,41	0
56	MG	DA	3656	1/1	0.97	0.07	-1.09	62,62,62,62	0
56	MG	BA	3389	1/1	0.97	0.14	-1.13	52,52,52,52	0
56	MG	DA	3254	1/1	0.91	0.14	-1.16	52,52,52,52	0
56	MG	BA	3333	1/1	0.95	0.15	-1.16	27,27,27,27	0
56	MG	BA	3595	1/1	0.95	0.15	-1.16	37,37,37,37	0
56	MG	CA	3071	1/1	0.71	0.12	-1.19	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	BA	3699	1/1	0.95	0.14	-1.19	23,23,23,23	0
58	ZN	CN	501	1/1	0.95	0.11	-1.20	104,104,104,104	0
56	MG	BA	3335	1/1	0.96	0.15	-1.21	51,51,51,51	0
58	ZN	B4	501	1/1	0.75	0.09	-1.21	152,152,152,152	0
58	ZN	B6	501	1/1	0.99	0.12	-1.26	51,51,51,51	0
56	MG	BA	3537	1/1	0.97	0.16	-1.27	45,45,45,45	0
56	MG	DA	3293	1/1	0.99	0.10	-1.28	34,34,34,34	0
57	SF4	CD	501	8/8	0.99	0.11	-1.28	63,76,87,96	0
56	MG	DA	3332	1/1	0.97	0.12	-1.29	29,29,29,29	0
58	ZN	B5	501	1/1	0.99	0.10	-1.29	49,49,49,49	0
56	MG	DA	3285	1/1	0.95	0.12	-1.31	41,41,41,41	0
56	MG	DA	3547	1/1	0.95	0.12	-1.36	47,47,47,47	0
56	MG	DA	3345	1/1	0.93	0.13	-1.38	16,16,16,16	0
58	ZN	D9	501	1/1	0.98	0.05	-1.39	63,63,63,63	0
56	MG	AX	110	1/1	0.98	0.17	-1.39	45,45,45,45	0
56	MG	AA	3184	1/1	0.95	0.14	-1.40	81,81,81,81	0
56	MG	BA	3562	1/1	0.98	0.14	-1.41	42,42,42,42	0
56	MG	AA	3201	1/1	0.94	0.12	-1.42	76,76,76,76	0
56	MG	AA	3182	1/1	0.91	0.13	-1.46	48,48,48,48	0
56	MG	BA	3415	1/1	0.91	0.14	-1.47	28,28,28,28	0
56	MG	BA	3392	1/1	0.91	0.13	-1.48	53,53,53,53	0
56	MG	BA	3500	1/1	0.98	0.13	-1.49	43,43,43,43	0
58	ZN	AN	102	1/1	0.97	0.11	-1.50	88,88,88,88	0
58	ZN	B9	501	1/1	1.00	0.12	-1.50	49,49,49,49	0
56	MG	DA	3029	1/1	0.87	0.12	-1.54	62,62,62,62	0
56	MG	DA	3321	1/1	0.98	0.13	-1.59	31,31,31,31	0
56	MG	CA	3068	1/1	0.94	0.11	-1.60	47,47,47,47	0
56	MG	B1	3002	1/1	0.97	0.14	-1.60	29,29,29,29	0
56	MG	DA	3486	1/1	0.98	0.08	-1.61	52,52,52,52	0
56	MG	DA	3330	1/1	0.93	0.13	-1.62	30,30,30,30	0
56	MG	BA	3362	1/1	1.00	0.17	-1.63	23,23,23,23	0
56	MG	BB	3001	1/1	0.98	0.15	-1.65	56,56,56,56	0
56	MG	BA	3112	1/1	0.95	0.11	-1.68	46,46,46,46	0
58	ZN	D4	501	1/1	0.83	0.08	-1.75	155,155,155,155	0
56	MG	BA	3703	1/1	0.98	0.14	-1.77	44,44,44,44	0
56	MG	DA	3476	1/1	0.96	0.13	-1.80	35,35,35,35	0
56	MG	AM	3001	1/1	0.94	0.08	-1.82	76,76,76,76	0
56	MG	DA	3504	1/1	0.95	0.15	-1.83	46,46,46,46	0
56	MG	DA	3629	1/1	0.92	0.14	-1.84	30,30,30,30	0
56	MG	CA	3019	1/1	0.87	0.15	-1.87	62,62,62,62	0
56	MG	CE	3002	1/1	0.96	0.07	-1.87	69,69,69,69	0
56	MG	BA	3287	1/1	0.97	0.14	-1.90	11,11,11,11	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
58	ZN	BY	501	1/1	0.98	0.09	-1.91	67,67,67,67	0
56	MG	BA	3421	1/1	0.98	0.15	-1.93	28,28,28,28	0
56	MG	DA	3471	1/1	0.96	0.13	-1.95	32,32,32,32	0
56	MG	DA	3307	1/1	0.98	0.11	-1.97	40,40,40,40	0
56	MG	DA	3224	1/1	0.97	0.10	-2.00	53,53,53,53	0
56	MG	DA	3572	1/1	0.95	0.10	-2.02	39,39,39,39	0
56	MG	DA	3253	1/1	0.98	0.13	-2.03	35,35,35,35	0
56	MG	CA	3087	1/1	0.95	0.14	-2.08	40,40,40,40	0
56	MG	DA	3650	1/1	0.98	0.05	-2.10	35,35,35,35	0
56	MG	BA	3002	1/1	0.96	0.13	-2.12	38,38,38,38	0
56	MG	DA	3319	1/1	0.94	0.13	-2.14	31,31,31,31	0
56	MG	DA	3501	1/1	0.96	0.11	-2.15	67,67,67,67	0
56	MG	DA	3148	1/1	0.93	0.13	-2.15	41,41,41,41	0
56	MG	DA	3559	1/1	0.98	0.12	-2.16	47,47,47,47	0
58	ZN	DY	501	1/1	0.93	0.04	-2.16	90,90,90,90	0
56	MG	CX	104	1/1	0.94	0.11	-2.17	52,52,52,52	0
56	MG	DA	3315	1/1	0.98	0.12	-2.17	39,39,39,39	0
58	ZN	D5	103	1/1	0.98	0.07	-2.20	61,61,61,61	0
56	MG	BA	3347	1/1	0.97	0.14	-2.21	44,44,44,44	0
56	MG	DA	3494	1/1	0.94	0.12	-2.21	50,50,50,50	0
56	MG	BX	101	1/1	0.99	0.09	-2.22	38,38,38,38	0
56	MG	DA	3162	1/1	0.95	0.06	-2.25	69,69,69,69	0
56	MG	AA	3010	1/1	0.97	0.16	-2.31	71,71,71,71	0
56	MG	DA	3556	1/1	0.94	0.10	-2.32	35,35,35,35	0
56	MG	DA	3384	1/1	0.94	0.13	-2.36	24,24,24,24	0
56	MG	AA	3057	1/1	0.92	0.16	-2.42	45,45,45,45	0
56	MG	DA	3047	1/1	0.97	0.09	-2.43	36,36,36,36	0
56	MG	BA	3524	1/1	0.89	0.13	-2.45	50,50,50,50	0
56	MG	BG	3002	1/1	0.80	0.11	-2.46	51,51,51,51	0
56	MG	BA	3295	1/1	0.96	0.14	-2.55	30,30,30,30	0
56	MG	DA	3372	1/1	0.97	0.10	-2.56	37,37,37,37	0
56	MG	BA	3461	1/1	0.96	0.14	-2.56	33,33,33,33	0
56	MG	AA	3023	1/1	0.86	0.12	-2.57	56,56,56,56	0
56	MG	AA	3062	1/1	0.93	0.15	-2.60	30,30,30,30	0
56	MG	CA	3101	1/1	0.90	0.11	-2.62	58,58,58,58	0
56	MG	DA	3054	1/1	0.93	0.10	-2.62	34,34,34,34	0
56	MG	AA	3103	1/1	0.99	0.12	-2.62	43,43,43,43	0
56	MG	BA	3010	1/1	0.95	0.09	-2.66	35,35,35,35	0
56	MG	BA	3383	1/1	0.97	0.14	-2.69	51,51,51,51	0
56	MG	CA	3044	1/1	0.96	0.12	-2.69	52,52,52,52	0
56	MG	DA	3624	1/1	0.96	0.11	-2.72	54,54,54,54	0
56	MG	DG	3001	1/1	0.84	0.11	-2.74	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	BA	3318	1/1	0.97	0.13	-2.76	30,30,30,30	0
56	MG	AA	3125	1/1	0.87	0.15	-2.77	56,56,56,56	0
56	MG	BA	3536	1/1	0.95	0.17	-2.77	37,37,37,37	0
56	MG	BA	3181	1/1	0.94	0.13	-2.78	37,37,37,37	0
56	MG	DA	3322	1/1	0.94	0.06	-2.90	41,41,41,41	0
56	MG	DA	3250	1/1	0.96	0.09	-2.90	42,42,42,42	0
56	MG	CA	3006	1/1	0.90	0.09	-2.90	72,72,72,72	0
56	MG	BA	3368	1/1	0.94	0.14	-2.90	22,22,22,22	0
56	MG	BA	3725	1/1	0.93	0.11	-2.91	29,29,29,29	0
56	MG	AA	3152	1/1	0.97	0.12	-2.96	29,29,29,29	0
56	MG	AA	3102	1/1	0.89	0.05	-2.97	68,68,68,68	0
56	MG	DA	3475	1/1	0.91	0.12	-2.99	35,35,35,35	0
56	MG	BA	3480	1/1	0.99	0.12	-3.03	22,22,22,22	0
56	MG	DA	3360	1/1	0.99	0.10	-3.03	36,36,36,36	0
56	MG	DA	3341	1/1	0.97	0.07	-3.06	40,40,40,40	0
56	MG	DA	3518	1/1	0.98	0.10	-3.12	40,40,40,40	0
56	MG	DA	3006	1/1	0.88	0.08	-3.16	41,41,41,41	0
56	MG	AX	106	1/1	0.95	0.09	-3.16	64,64,64,64	0
56	MG	AA	3177	1/1	0.95	0.13	-3.17	58,58,58,58	0
56	MG	BA	3397	1/1	0.85	0.07	-3.19	44,44,44,44	0
56	MG	DA	3503	1/1	0.96	0.09	-3.29	41,41,41,41	0
56	MG	BA	3069	1/1	0.95	0.10	-3.43	33,33,33,33	0
56	MG	DA	3239	1/1	0.96	0.11	-3.49	54,54,54,54	0
56	MG	BA	3024	1/1	0.96	0.13	-3.50	31,31,31,31	0
56	MG	BA	3432	1/1	0.91	0.14	-3.51	27,27,27,27	0
56	MG	CA	3083	1/1	0.96	0.10	-3.52	30,30,30,30	0
56	MG	BA	3373	1/1	0.96	0.08	-3.56	48,48,48,48	0
56	MG	CA	3118	1/1	0.96	0.08	-3.60	39,39,39,39	0
56	MG	BA	3634	1/1	0.85	0.11	-3.64	77,77,77,77	0
56	MG	BA	3691	1/1	0.99	0.10	-3.71	40,40,40,40	0
56	MG	BA	3330	1/1	0.96	0.09	-3.74	35,35,35,35	0
56	MG	DA	3617	1/1	0.91	0.07	-3.79	51,51,51,51	0
56	MG	DB	3004	1/1	0.94	0.11	-3.79	56,56,56,56	0
56	MG	BA	3471	1/1	0.95	0.11	-3.81	28,28,28,28	0
56	MG	BA	3012	1/1	0.94	0.11	-3.84	34,34,34,34	0
56	MG	DA	3196	1/1	0.99	0.09	-3.90	54,54,54,54	0
56	MG	AA	3149	1/1	0.97	0.07	-3.92	49,49,49,49	0
56	MG	BA	3644	1/1	0.92	0.10	-3.97	38,38,38,38	0
56	MG	CA	3066	1/1	0.93	0.08	-3.97	47,47,47,47	0
56	MG	DA	3406	1/1	0.94	0.07	-4.14	48,48,48,48	0
56	MG	BB	3014	1/1	0.89	0.09	-4.18	68,68,68,68	0
56	MG	DA	3287	1/1	0.88	0.06	-4.19	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å ²)	Q<0.9
56	MG	DA	3398	1/1	0.95	0.10	-4.20	50,50,50,50	0
56	MG	DA	3028	1/1	0.96	0.07	-4.30	34,34,34,34	0
56	MG	DA	3276	1/1	0.91	0.11	-4.33	26,26,26,26	0
56	MG	CA	3167	1/1	0.81	0.08	-4.42	68,68,68,68	0
56	MG	BA	3475	1/1	0.95	0.07	-4.56	42,42,42,42	0
56	MG	DA	3059	1/1	0.94	0.05	-4.61	42,42,42,42	0
56	MG	BA	3426	1/1	0.97	0.08	-4.63	34,34,34,34	0
56	MG	CA	3111	1/1	0.95	0.10	-4.71	69,69,69,69	0
56	MG	BA	3332	1/1	0.95	0.13	-4.80	52,52,52,52	0
56	MG	BA	3322	1/1	0.97	0.14	-5.35	46,46,46,46	0
56	MG	CA	3013	1/1	0.94	0.09	-5.43	46,46,46,46	0
56	MG	AA	3014	1/1	0.92	0.13	-5.46	24,24,24,24	0
56	MG	BA	3606	1/1	0.81	0.10	-5.64	44,44,44,44	0
56	MG	DA	3508	1/1	0.98	0.06	-5.64	30,30,30,30	0
56	MG	DA	3394	1/1	0.95	0.07	-5.77	46,46,46,46	0
56	MG	AA	3156	1/1	0.98	0.13	-5.89	31,31,31,31	0
56	MG	DA	3149	1/1	0.98	0.07	-5.89	47,47,47,47	0
56	MG	BA	3605	1/1	0.94	0.10	-5.92	35,35,35,35	0
56	MG	DA	3440	1/1	0.94	0.07	-6.27	48,48,48,48	0
56	MG	BA	3437	1/1	0.98	0.12	-6.38	37,37,37,37	0
56	MG	DA	3463	1/1	0.98	0.06	-6.41	32,32,32,32	0
56	MG	BA	3381	1/1	0.99	0.07	-6.60	25,25,25,25	0
56	MG	DA	3569	1/1	0.95	0.07	-6.82	54,54,54,54	0
56	MG	BA	3457	1/1	0.97	0.11	-7.08	25,25,25,25	0
56	MG	AA	3024	1/1	0.99	0.11	-7.49	49,49,49,49	0
56	MG	BA	3195	1/1	0.96	0.12	-7.54	37,37,37,37	0
56	MG	BA	3215	1/1	0.94	0.09	-7.89	32,32,32,32	0
56	MG	BA	3345	1/1	0.99	0.05	-8.21	37,37,37,37	0
56	MG	BA	3355	1/1	0.98	0.09	-8.71	39,39,39,39	0
56	MG	DA	3551	1/1	0.97	0.10	-9.48	43,43,43,43	0
56	MG	BA	3639	1/1	0.98	0.10	-10.18	35,35,35,35	0
56	MG	BA	3519	1/1	0.95	0.07	-10.54	57,57,57,57	0
56	MG	DA	3511	1/1	0.98	0.10	-10.97	47,47,47,47	0
56	MG	BA	3567	1/1	0.89	0.10	-12.05	54,54,54,54	0
56	MG	DA	3349	1/1	0.98	0.09	-16.18	27,27,27,27	0
56	MG	AA	3016	1/1	0.95	0.10	-	70,70,70,70	0
56	MG	DA	3072	1/1	0.92	0.14	-	40,40,40,40	0
56	MG	BE	308	1/1	0.96	0.26	-	27,27,27,27	0
56	MG	BA	3658	1/1	0.96	0.25	-	62,62,62,62	0
56	MG	BA	3622	1/1	0.96	0.26	-	32,32,32,32	0
56	MG	BA	3262	1/1	0.92	0.31	-	44,44,44,44	0
56	MG	BA	3004	1/1	0.80	0.22	-	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	DB	3010	1/1	0.90	0.19	-	66,66,66,66	0
56	MG	DA	3271	1/1	0.97	0.08	-	45,45,45,45	0
56	MG	CA	3166	1/1	0.97	0.09	-	71,71,71,71	0
56	MG	AA	3052	1/1	0.90	0.24	-	58,58,58,58	0
56	MG	DA	3039	1/1	0.95	0.60	-	46,46,46,46	0
56	MG	DA	3263	1/1	0.79	0.14	-	48,48,48,48	0
56	MG	DA	3220	1/1	0.85	0.36	-	61,61,61,61	0
56	MG	AA	3069	1/1	0.84	0.09	-	77,77,77,77	0
56	MG	DA	3502	1/1	0.92	0.18	-	48,48,48,48	0
56	MG	DA	3649	1/1	0.98	0.08	-	39,39,39,39	0
56	MG	DA	3442	1/1	0.96	0.29	-	58,58,58,58	0
56	MG	BA	3219	1/1	0.95	0.36	-	36,36,36,36	0
56	MG	BA	3598	1/1	0.98	0.23	-	32,32,32,32	0
56	MG	DA	3615	1/1	0.97	0.08	-	57,57,57,57	0
56	MG	BA	3337	1/1	0.99	0.10	-	48,48,48,48	0
56	MG	BA	3089	1/1	0.90	0.23	-	50,50,50,50	0
56	MG	CA	3037	1/1	0.92	0.23	-	45,45,45,45	0
56	MG	DA	3317	1/1	0.97	0.19	-	34,34,34,34	0
56	MG	CA	3126	1/1	0.90	0.25	-	56,56,56,56	0
56	MG	BW	3005	1/1	0.90	0.44	-	38,38,38,38	0
56	MG	DA	3041	1/1	0.85	0.41	-	54,54,54,54	0
56	MG	BA	3440	1/1	0.97	0.10	-	40,40,40,40	0
56	MG	BB	3011	1/1	0.92	0.16	-	45,45,45,45	0
56	MG	BA	3272	1/1	0.97	0.07	-	49,49,49,49	0
56	MG	DA	3187	1/1	0.88	0.67	-	52,52,52,52	0
56	MG	DA	3385	1/1	0.94	0.32	-	58,58,58,58	0
56	MG	BA	3676	1/1	0.91	0.16	-	63,63,63,63	0
56	MG	AA	3199	1/1	0.92	0.15	-	62,62,62,62	0
56	MG	BA	3243	1/1	0.97	0.09	-	43,43,43,43	0
56	MG	DA	3067	1/1	0.90	0.29	-	35,35,35,35	0
56	MG	BA	3693	1/1	0.93	0.27	-	57,57,57,57	0
56	MG	DA	3325	1/1	0.93	0.24	-	31,31,31,31	0
56	MG	DA	3610	1/1	0.96	0.11	-	49,49,49,49	0
56	MG	BA	3488	1/1	0.98	0.29	-	43,43,43,43	0
56	MG	BA	3312	1/1	0.95	0.11	-	43,43,43,43	0
56	MG	BE	305	1/1	0.95	0.68	-	44,44,44,44	0
56	MG	CA	3169	1/1	0.96	0.19	-	52,52,52,52	0
56	MG	DA	3457	1/1	0.87	0.15	-	44,44,44,44	0
56	MG	DA	3554	1/1	0.85	0.27	-	62,62,62,62	0
56	MG	DA	3373	1/1	0.78	0.28	-	52,52,52,52	0
56	MG	CA	3028	1/1	0.86	0.56	-	62,62,62,62	0
56	MG	BA	3128	1/1	0.94	0.16	-	28,28,28,28	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	DA	3153	1/1	0.82	0.32	-	51,51,51,51	0
56	MG	AA	3204	1/1	0.91	0.17	-	70,70,70,70	0
56	MG	DA	3024	1/1	0.72	0.61	-	59,59,59,59	0
56	MG	BA	3180	1/1	0.90	0.33	-	48,48,48,48	0
56	MG	DA	3314	1/1	0.67	0.19	-	56,56,56,56	0
56	MG	AX	109	1/1	0.96	0.10	-	56,56,56,56	0
56	MG	DA	3574	1/1	0.93	0.20	-	22,22,22,22	0
56	MG	DA	3311	1/1	0.98	0.32	-	33,33,33,33	0
56	MG	DA	3409	1/1	0.90	0.10	-	54,54,54,54	0
56	MG	BA	3499	1/1	0.91	0.18	-	50,50,50,50	0
56	MG	BA	3714	1/1	0.92	0.15	-	72,72,72,72	0
56	MG	DA	3168	1/1	0.93	0.67	-	46,46,46,46	0
56	MG	AA	3196	1/1	0.96	0.28	-	78,78,78,78	0
56	MG	BA	3395	1/1	0.96	0.41	-	56,56,56,56	0
56	MG	AA	3133	1/1	0.86	0.69	-	71,71,71,71	0
56	MG	DA	3051	1/1	0.94	0.14	-	39,39,39,39	0
56	MG	BA	3305	1/1	0.97	0.13	-	48,48,48,48	0
56	MG	AA	3193	1/1	0.98	0.13	-	65,65,65,65	0
56	MG	BA	3443	1/1	0.98	0.34	-	34,34,34,34	0
56	MG	BA	3341	1/1	0.95	0.17	-	31,31,31,31	0
56	MG	BA	3651	1/1	0.97	0.34	-	52,52,52,52	0
56	MG	BA	3452	1/1	0.98	0.11	-	16,16,16,16	0
56	MG	BA	3708	1/1	0.77	0.29	-	38,38,38,38	0
56	MG	BA	3084	1/1	0.86	0.50	-	47,47,47,47	0
56	MG	DA	3219	1/1	0.90	0.36	-	49,49,49,49	0
56	MG	DA	3227	1/1	0.84	0.17	-	40,40,40,40	0
56	MG	BA	3216	1/1	0.92	0.29	-	46,46,46,46	0
56	MG	BA	3608	1/1	0.96	0.15	-	51,51,51,51	0
56	MG	AA	3097	1/1	0.92	0.41	-	53,53,53,53	0
56	MG	DV	203	1/1	0.94	0.31	-	41,41,41,41	0
56	MG	BA	3175	1/1	0.93	0.50	-	40,40,40,40	0
56	MG	DA	3134	1/1	0.94	0.22	-	37,37,37,37	0
56	MG	CA	3062	1/1	0.85	0.35	-	67,67,67,67	0
56	MG	BA	3257	1/1	0.81	0.25	-	56,56,56,56	0
56	MG	BA	3006	1/1	0.83	0.27	-	46,46,46,46	0
56	MG	AA	3022	1/1	0.81	0.24	-	56,56,56,56	0
56	MG	BA	3352	1/1	0.97	0.16	-	58,58,58,58	0
56	MG	DA	3060	1/1	0.90	0.34	-	51,51,51,51	0
56	MG	DA	3510	1/1	0.98	0.13	-	67,67,67,67	0
56	MG	BA	3327	1/1	0.98	0.16	-	21,21,21,21	0
56	MG	DA	3338	1/1	0.87	0.16	-	58,58,58,58	0
56	MG	DA	3512	1/1	0.97	0.07	-	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	BA	3571	1/1	0.86	0.20	-	48,48,48,48	0
56	MG	BA	3183	1/1	0.94	0.24	-	40,40,40,40	0
56	MG	BA	3447	1/1	0.92	0.12	-	76,76,76,76	0
56	MG	BA	3616	1/1	0.62	0.27	-	73,73,73,73	0
56	MG	B0	103	1/1	0.94	0.17	-	46,46,46,46	0
56	MG	BA	3244	1/1	0.90	0.19	-	46,46,46,46	0
56	MG	BP	202	1/1	0.94	0.41	-	47,47,47,47	0
56	MG	DA	3144	1/1	0.89	0.34	-	37,37,37,37	0
56	MG	BA	3465	1/1	0.92	0.09	-	51,51,51,51	0
56	MG	CA	3165	1/1	0.97	0.15	-	47,47,47,47	0
56	MG	DA	3063	1/1	0.97	0.10	-	55,55,55,55	0
56	MG	CA	3146	1/1	0.91	0.19	-	61,61,61,61	0
56	MG	DA	3248	1/1	0.96	0.20	-	30,30,30,30	0
56	MG	AA	3085	1/1	0.93	0.43	-	57,57,57,57	0
56	MG	BA	3263	1/1	0.97	0.58	-	35,35,35,35	0
56	MG	BA	3736	1/1	0.97	0.14	-	40,40,40,40	0
56	MG	BA	3267	1/1	0.91	0.18	-	56,56,56,56	0
56	MG	CA	3088	1/1	0.97	0.19	-	49,49,49,49	0
56	MG	BA	3588	1/1	0.93	0.20	-	41,41,41,41	0
56	MG	BA	3601	1/1	0.82	0.19	-	61,61,61,61	0
56	MG	DA	3214	1/1	0.82	0.09	-	48,48,48,48	0
56	MG	DA	3081	1/1	0.89	0.23	-	56,56,56,56	0
56	MG	DA	3568	1/1	0.65	0.43	-	58,58,58,58	0
56	MG	DA	3538	1/1	0.96	0.19	-	37,37,37,37	0
56	MG	BA	3052	1/1	0.94	0.26	-	29,29,29,29	0
56	MG	BA	3236	1/1	0.95	0.33	-	37,37,37,37	0
56	MG	DA	3318	1/1	0.89	0.19	-	47,47,47,47	0
56	MG	DA	3280	1/1	0.96	0.25	-	46,46,46,46	0
56	MG	BA	3284	1/1	0.91	0.72	-	76,76,76,76	0
56	MG	AA	3118	1/1	0.94	0.42	-	39,39,39,39	0
56	MG	BA	3196	1/1	0.92	0.19	-	45,45,45,45	0
56	MG	DA	3337	1/1	0.97	0.15	-	50,50,50,50	0
56	MG	DA	3575	1/1	0.92	0.11	-	51,51,51,51	0
56	MG	BA	3307	1/1	0.82	0.16	-	35,35,35,35	0
56	MG	BA	3459	1/1	0.96	0.13	-	51,51,51,51	0
56	MG	DA	3113	1/1	0.67	1.16	-	61,61,61,61	0
56	MG	DA	3290	1/1	0.95	0.20	-	59,59,59,59	0
56	MG	BE	301	1/1	0.98	0.22	-	28,28,28,28	0
56	MG	CA	3077	1/1	0.98	0.27	-	51,51,51,51	0
56	MG	AA	3183	1/1	0.98	0.11	-	56,56,56,56	0
56	MG	DA	3070	1/1	0.94	0.43	-	51,51,51,51	0
56	MG	DA	3460	1/1	0.88	0.10	-	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	AA	3127	1/1	0.84	0.21	-	50,50,50,50	0
56	MG	AA	3009	1/1	0.79	0.22	-	71,71,71,71	0
56	MG	CA	3149	1/1	0.98	0.18	-	81,81,81,81	0
56	MG	BA	3694	1/1	0.81	0.27	-	48,48,48,48	0
56	MG	DA	3374	1/1	0.91	0.14	-	40,40,40,40	0
56	MG	BA	3680	1/1	0.89	0.24	-	62,62,62,62	0
56	MG	BA	3258	1/1	0.93	0.17	-	35,35,35,35	0
56	MG	BA	3159	1/1	0.99	0.29	-	47,47,47,47	0
56	MG	D5	102	1/1	0.93	0.59	-	44,44,44,44	0
56	MG	AA	3138	1/1	0.93	0.39	-	38,38,38,38	0
56	MG	DA	3291	1/1	0.99	0.18	-	42,42,42,42	0
56	MG	BB	3018	1/1	0.96	0.27	-	54,54,54,54	0
56	MG	BA	3314	1/1	0.96	0.14	-	22,22,22,22	0
56	MG	BA	3697	1/1	0.79	0.19	-	63,63,63,63	0
56	MG	DA	3562	1/1	0.96	0.22	-	41,41,41,41	0
56	MG	DA	3470	1/1	0.94	0.17	-	45,45,45,45	0
56	MG	DA	3521	1/1	0.90	0.19	-	46,46,46,46	0
56	MG	DA	3209	1/1	0.95	0.10	-	44,44,44,44	0
56	MG	DA	3157	1/1	0.84	0.49	-	56,56,56,56	0
56	MG	DA	3542	1/1	0.92	0.23	-	44,44,44,44	0
56	MG	BA	3043	1/1	0.94	0.37	-	33,33,33,33	0
56	MG	AA	3221	1/1	0.96	0.11	-	52,52,52,52	0
56	MG	BA	3212	1/1	0.92	0.16	-	47,47,47,47	0
56	MG	BA	3568	1/1	0.92	0.22	-	68,68,68,68	0
56	MG	DB	3011	1/1	0.94	0.33	-	49,49,49,49	0
56	MG	AL	3001	1/1	0.95	0.15	-	50,50,50,50	0
56	MG	DA	3434	1/1	0.89	0.19	-	51,51,51,51	0
56	MG	CA	3129	1/1	0.93	0.23	-	54,54,54,54	0
56	MG	BA	3566	1/1	0.96	0.22	-	43,43,43,43	0
56	MG	DA	3203	1/1	0.82	0.14	-	48,48,48,48	0
56	MG	AA	3123	1/1	0.93	0.38	-	38,38,38,38	0
56	MG	AA	3080	1/1	0.91	0.22	-	58,58,58,58	0
56	MG	B3	3401	1/1	0.98	0.18	-	24,24,24,24	0
56	MG	AA	3086	1/1	0.28	0.72	-	65,65,65,65	0
56	MG	BA	3380	1/1	0.98	0.10	-	32,32,32,32	0
56	MG	BA	3017	1/1	0.94	0.32	-	38,38,38,38	0
56	MG	DA	3058	1/1	0.96	0.16	-	56,56,56,56	0
56	MG	BA	3564	1/1	0.95	0.17	-	26,26,26,26	0
56	MG	BA	3022	1/1	0.70	0.16	-	66,66,66,66	0
56	MG	BA	3087	1/1	0.94	0.33	-	48,48,48,48	0
56	MG	DA	3424	1/1	0.87	0.19	-	58,58,58,58	0
56	MG	BA	3164	1/1	0.89	0.49	-	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	DA	3173	1/1	0.94	0.29	-	50,50,50,50	0
56	MG	BA	3275	1/1	0.99	0.18	-	28,28,28,28	0
56	MG	DA	3419	1/1	0.97	0.11	-	53,53,53,53	0
56	MG	BA	3504	1/1	0.93	0.18	-	54,54,54,54	0
56	MG	CA	3106	1/1	0.90	0.39	-	72,72,72,72	0
56	MG	CA	3127	1/1	0.79	0.20	-	72,72,72,72	0
56	MG	BA	3325	1/1	0.97	0.20	-	39,39,39,39	0
56	MG	BQ	3002	1/1	0.79	0.23	-	51,51,51,51	0
56	MG	DA	3022	1/1	0.94	0.18	-	41,41,41,41	0
56	MG	BA	3358	1/1	0.81	0.15	-	78,78,78,78	0
56	MG	BA	3467	1/1	0.91	0.15	-	44,44,44,44	0
56	MG	CA	3104	1/1	0.97	0.14	-	60,60,60,60	0
56	MG	DA	3331	1/1	0.97	0.17	-	27,27,27,27	0
56	MG	AA	3206	1/1	0.95	0.12	-	79,79,79,79	0
56	MG	AA	3212	1/1	0.97	0.15	-	36,36,36,36	0
56	MG	BN	3006	1/1	0.96	0.06	-	33,33,33,33	0
56	MG	DA	3120	1/1	0.96	0.62	-	50,50,50,50	0
56	MG	BA	3260	1/1	0.92	0.12	-	47,47,47,47	0
56	MG	AA	3041	1/1	0.92	0.14	-	41,41,41,41	0
56	MG	DA	3277	1/1	0.96	0.07	-	46,46,46,46	0
56	MG	DD	305	1/1	0.95	0.14	-	73,73,73,73	0
56	MG	DA	3540	1/1	0.91	0.13	-	76,76,76,76	0
56	MG	BA	3393	1/1	0.98	0.23	-	27,27,27,27	0
56	MG	AA	3214	1/1	0.93	0.31	-	42,42,42,42	0
56	MG	DA	3240	1/1	0.91	0.17	-	58,58,58,58	0
56	MG	DA	3102	1/1	0.88	0.27	-	49,49,49,49	0
56	MG	CA	3099	1/1	0.98	0.39	-	64,64,64,64	0
56	MG	CA	3035	1/1	0.90	0.26	-	49,49,49,49	0
56	MG	BA	3540	1/1	0.94	0.33	-	29,29,29,29	0
56	MG	DA	3136	1/1	0.97	0.08	-	39,39,39,39	0
56	MG	BA	3423	1/1	0.91	0.35	-	45,45,45,45	0
56	MG	DA	3598	1/1	0.91	0.17	-	45,45,45,45	0
56	MG	DA	3414	1/1	0.97	0.18	-	59,59,59,59	0
56	MG	BA	3719	1/1	0.95	0.07	-	63,63,63,63	0
56	MG	BA	3131	1/1	0.95	0.13	-	31,31,31,31	0
56	MG	BA	3600	1/1	0.97	0.33	-	54,54,54,54	0
56	MG	BA	3205	1/1	0.97	0.29	-	38,38,38,38	0
56	MG	BA	3668	1/1	0.95	0.21	-	42,42,42,42	0
56	MG	DA	3633	1/1	0.98	0.26	-	25,25,25,25	0
56	MG	CA	3031	1/1	0.92	0.31	-	55,55,55,55	0
56	MG	CA	3003	1/1	0.94	0.13	-	69,69,69,69	0
56	MG	DA	3128	1/1	0.95	0.33	-	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	CA	3122	1/1	0.86	0.19	-	70,70,70,70	0
56	MG	BA	3296	1/1	0.52	0.67	-	69,69,69,69	0
56	MG	BA	3093	1/1	0.94	0.46	-	52,52,52,52	0
56	MG	CA	3063	1/1	0.80	0.12	-	57,57,57,57	0
56	MG	BA	3105	1/1	0.88	0.19	-	54,54,54,54	0
56	MG	CA	3154	1/1	0.95	0.16	-	54,54,54,54	0
56	MG	BA	3176	1/1	0.98	0.21	-	50,50,50,50	0
56	MG	BA	3130	1/1	0.98	0.40	-	51,51,51,51	0
56	MG	BA	3245	1/1	0.93	0.23	-	45,45,45,45	0
56	MG	DA	3363	1/1	0.95	0.20	-	56,56,56,56	0
56	MG	DA	3046	1/1	0.97	0.08	-	48,48,48,48	0
56	MG	DA	3478	1/1	0.94	0.10	-	58,58,58,58	0
56	MG	DN	5001	1/1	0.94	0.12	-	71,71,71,71	0
56	MG	CA	3139	1/1	0.79	0.24	-	76,76,76,76	0
56	MG	DA	3195	1/1	0.91	0.20	-	51,51,51,51	0
56	MG	AA	3129	1/1	0.78	0.22	-	77,77,77,77	0
56	MG	DA	3445	1/1	0.95	0.44	-	60,60,60,60	0
56	MG	BU	208	1/1	0.94	0.18	-	42,42,42,42	0
56	MG	BA	3626	1/1	0.88	0.13	-	50,50,50,50	0
56	MG	BE	309	1/1	0.97	0.14	-	37,37,37,37	0
56	MG	DA	3101	1/1	0.98	0.28	-	59,59,59,59	0
56	MG	CA	3024	1/1	0.83	0.34	-	57,57,57,57	0
56	MG	DA	3639	1/1	0.94	0.14	-	55,55,55,55	0
56	MG	DA	3092	1/1	0.93	0.30	-	48,48,48,48	0
56	MG	DA	3622	1/1	0.98	0.17	-	40,40,40,40	0
56	MG	BA	3021	1/1	0.68	0.36	-	62,62,62,62	0
56	MG	DA	3507	1/1	0.92	0.20	-	53,53,53,53	0
56	MG	AA	3126	1/1	0.85	0.17	-	54,54,54,54	0
56	MG	AA	3106	1/1	0.92	0.27	-	68,68,68,68	0
56	MG	CA	3141	1/1	0.92	0.31	-	85,85,85,85	0
56	MG	BA	3020	1/1	0.91	0.29	-	43,43,43,43	0
56	MG	BA	3310	1/1	0.94	0.12	-	59,59,59,59	0
56	MG	DA	3175	1/1	0.89	0.30	-	52,52,52,52	0
56	MG	BA	3266	1/1	0.92	0.19	-	47,47,47,47	0
56	MG	DA	3469	1/1	0.93	0.15	-	52,52,52,52	0
56	MG	BA	3057	1/1	0.98	0.40	-	36,36,36,36	0
56	MG	BA	3168	1/1	0.94	0.45	-	52,52,52,52	0
56	MG	DA	3431	1/1	0.79	0.40	-	56,56,56,56	0
56	MG	BA	3115	1/1	0.97	0.16	-	28,28,28,28	0
56	MG	AA	3111	1/1	0.96	0.16	-	70,70,70,70	0
56	MG	AA	3166	1/1	0.94	0.21	-	55,55,55,55	0
56	MG	CA	3113	1/1	0.96	0.26	-	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	AA	3068	1/1	0.90	0.11	-	67,67,67,67	0
56	MG	CA	3057	1/1	0.85	0.22	-	40,40,40,40	0
56	MG	DA	3393	1/1	0.97	0.26	-	35,35,35,35	0
56	MG	CA	3010	1/1	0.94	0.15	-	34,34,34,34	0
56	MG	DA	3491	1/1	0.80	0.28	-	55,55,55,55	0
56	MG	DA	3127	1/1	0.95	0.16	-	44,44,44,44	0
56	MG	DA	3076	1/1	0.95	0.45	-	38,38,38,38	0
56	MG	BA	3055	1/1	0.93	0.31	-	44,44,44,44	0
56	MG	CA	3147	1/1	0.26	0.37	-	77,77,77,77	0
56	MG	BA	3088	1/1	0.91	0.25	-	55,55,55,55	0
56	MG	BA	3061	1/1	0.93	0.35	-	44,44,44,44	0
56	MG	BA	3155	1/1	0.81	0.46	-	56,56,56,56	0
56	MG	DA	3527	1/1	0.96	0.11	-	58,58,58,58	0
56	MG	AA	3005	1/1	0.94	0.28	-	66,66,66,66	0
56	MG	BA	3363	1/1	0.97	0.17	-	29,29,29,29	0
56	MG	DA	3403	1/1	0.94	0.21	-	42,42,42,42	0
56	MG	BA	3554	1/1	0.97	0.21	-	25,25,25,25	0
56	MG	DA	3519	1/1	0.97	0.10	-	39,39,39,39	0
56	MG	DA	3299	1/1	0.91	0.12	-	35,35,35,35	0
56	MG	DA	3123	1/1	0.93	0.17	-	61,61,61,61	0
56	MG	BA	3177	1/1	0.95	0.56	-	35,35,35,35	0
56	MG	DA	3505	1/1	0.98	0.14	-	24,24,24,24	0
56	MG	AX	104	1/1	0.86	0.25	-	62,62,62,62	0
56	MG	BA	3485	1/1	0.82	0.19	-	67,67,67,67	0
56	MG	BA	3722	1/1	0.86	0.26	-	49,49,49,49	0
56	MG	BA	3636	1/1	0.86	0.13	-	54,54,54,54	0
56	MG	DA	3125	1/1	0.84	0.48	-	55,55,55,55	0
56	MG	BA	3171	1/1	0.93	0.40	-	42,42,42,42	0
56	MG	CA	3011	1/1	0.97	0.26	-	27,27,27,27	0
56	MG	CA	3030	1/1	0.86	0.36	-	74,74,74,74	0
56	MG	DA	3449	1/1	0.95	0.29	-	46,46,46,46	0
56	MG	BA	3615	1/1	0.94	0.22	-	55,55,55,55	0
56	MG	DA	3563	1/1	0.96	0.15	-	49,49,49,49	0
56	MG	BA	3152	1/1	0.97	0.08	-	52,52,52,52	0
56	MG	B7	104	1/1	0.90	0.22	-	55,55,55,55	0
56	MG	BW	3002	1/1	0.88	0.18	-	34,34,34,34	0
56	MG	DA	3535	1/1	0.97	0.14	-	58,58,58,58	0
56	MG	BW	3001	1/1	0.86	0.29	-	55,55,55,55	0
56	MG	BA	3673	1/1	0.98	0.16	-	60,60,60,60	0
56	MG	DA	3417	1/1	0.94	0.19	-	54,54,54,54	0
56	MG	BA	3058	1/1	0.89	0.39	-	41,41,41,41	0
56	MG	BA	3726	1/1	0.94	0.32	-	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	DA	3042	1/1	0.90	0.35	-	38,38,38,38	0
56	MG	DA	3533	1/1	0.95	0.14	-	59,59,59,59	0
56	MG	BA	3632	1/1	0.91	0.15	-	55,55,55,55	0
56	MG	BA	3713	1/1	0.88	0.22	-	49,49,49,49	0
56	MG	BA	3238	1/1	0.86	0.17	-	48,48,48,48	0
56	MG	DA	3228	1/1	0.96	0.19	-	49,49,49,49	0
56	MG	DA	3441	1/1	0.76	0.20	-	46,46,46,46	0
56	MG	BA	3103	1/1	0.68	0.33	-	58,58,58,58	0
56	MG	DA	3362	1/1	0.97	0.36	-	42,42,42,42	0
56	MG	BU	206	1/1	0.94	0.27	-	41,41,41,41	0
56	MG	BA	3248	1/1	0.82	0.37	-	68,68,68,68	0
56	MG	DA	3576	1/1	0.96	0.18	-	57,57,57,57	0
56	MG	DA	3348	1/1	0.95	0.10	-	39,39,39,39	0
56	MG	DA	3430	1/1	0.98	0.18	-	75,75,75,75	0
56	MG	AA	3205	1/1	0.95	0.20	-	66,66,66,66	0
56	MG	BA	3670	1/1	0.99	0.10	-	55,55,55,55	0
56	MG	DA	3590	1/1	0.95	0.18	-	39,39,39,39	0
56	MG	AA	3047	1/1	0.95	0.47	-	59,59,59,59	0
56	MG	BA	3669	1/1	0.93	0.21	-	61,61,61,61	0
56	MG	BA	3298	1/1	0.94	0.38	-	45,45,45,45	0
56	MG	DF	305	1/1	0.98	0.43	-	55,55,55,55	0
56	MG	BA	3290	1/1	0.95	0.15	-	35,35,35,35	0
56	MG	AA	3083	1/1	0.96	0.09	-	56,56,56,56	0
56	MG	DA	3165	1/1	0.87	0.32	-	48,48,48,48	0
56	MG	DA	3347	1/1	0.98	0.20	-	39,39,39,39	0
56	MG	BA	3133	1/1	0.87	0.61	-	53,53,53,53	0
56	MG	BA	3039	1/1	0.88	0.29	-	44,44,44,44	0
56	MG	CA	3033	1/1	0.75	0.18	-	64,64,64,64	0
56	MG	BA	3351	1/1	0.98	0.25	-	21,21,21,21	0
56	MG	AA	3174	1/1	0.96	0.18	-	49,49,49,49	0
56	MG	BA	3222	1/1	0.97	0.52	-	56,56,56,56	0
56	MG	DA	3232	1/1	0.82	0.11	-	39,39,39,39	0
56	MG	BA	3356	1/1	0.98	0.13	-	33,33,33,33	0
56	MG	BA	3125	1/1	0.98	0.30	-	26,26,26,26	0
56	MG	CA	3008	1/1	0.92	1.01	-	59,59,59,59	0
56	MG	CA	3018	1/1	0.75	0.30	-	55,55,55,55	0
56	MG	AA	3121	1/1	0.86	0.46	-	52,52,52,52	0
56	MG	BA	3718	1/1	0.92	0.16	-	52,52,52,52	0
56	MG	CA	3076	1/1	0.93	0.28	-	48,48,48,48	0
56	MG	DA	3532	1/1	0.90	0.10	-	60,60,60,60	0
56	MG	BA	3104	1/1	0.94	0.39	-	34,34,34,34	0
56	MG	CA	3130	1/1	0.97	0.10	-	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	BA	3491	1/1	0.98	0.23	-	38,38,38,38	0
56	MG	CA	3074	1/1	0.78	0.25	-	56,56,56,56	0
56	MG	DA	3549	1/1	0.79	0.37	-	73,73,73,73	0
56	MG	AA	3110	1/1	0.93	0.13	-	41,41,41,41	0
56	MG	BA	3671	1/1	0.96	0.10	-	44,44,44,44	0
56	MG	DW	202	1/1	0.69	0.39	-	53,53,53,53	0
56	MG	BA	3401	1/1	0.97	0.14	-	49,49,49,49	0
56	MG	BA	3062	1/1	0.95	0.44	-	46,46,46,46	0
56	MG	AX	103	1/1	0.89	0.10	-	57,57,57,57	0
56	MG	CA	3132	1/1	0.98	0.08	-	66,66,66,66	0
56	MG	BA	3018	1/1	0.80	0.27	-	54,54,54,54	0
56	MG	DA	3531	1/1	0.82	0.12	-	44,44,44,44	0
56	MG	BA	3316	1/1	0.97	0.14	-	51,51,51,51	0
56	MG	BA	3001	1/1	0.92	0.33	-	52,52,52,52	0
56	MG	DB	3003	1/1	0.80	0.20	-	70,70,70,70	0
56	MG	DA	3500	1/1	0.73	0.25	-	66,66,66,66	0
56	MG	DB	3012	1/1	0.93	0.19	-	50,50,50,50	0
56	MG	DA	3176	1/1	0.99	0.08	-	52,52,52,52	0
56	MG	BA	3223	1/1	0.71	0.39	-	49,49,49,49	0
56	MG	CA	3015	1/1	0.91	0.33	-	53,53,53,53	0
56	MG	DA	3233	1/1	0.98	0.34	-	58,58,58,58	0
56	MG	DA	3020	1/1	0.98	0.32	-	45,45,45,45	0
56	MG	DA	3488	1/1	0.97	0.19	-	48,48,48,48	0
56	MG	BA	3108	1/1	0.95	0.17	-	32,32,32,32	0
56	MG	BA	3331	1/1	0.86	0.17	-	61,61,61,61	0
56	MG	BA	3172	1/1	0.88	0.12	-	54,54,54,54	0
56	MG	DA	3009	1/1	0.91	0.11	-	33,33,33,33	0
56	MG	DA	3243	1/1	0.88	0.41	-	49,49,49,49	0
56	MG	BA	3231	1/1	0.96	0.26	-	50,50,50,50	0
56	MG	BA	3110	1/1	0.85	0.24	-	43,43,43,43	0
56	MG	AA	3046	1/1	0.98	0.15	-	60,60,60,60	0
56	MG	BA	3081	1/1	0.87	0.29	-	44,44,44,44	0
56	MG	DA	3390	1/1	0.93	0.20	-	58,58,58,58	0
56	MG	DA	3600	1/1	0.97	0.17	-	73,73,73,73	0
56	MG	BA	3064	1/1	0.89	0.38	-	49,49,49,49	0
56	MG	BA	3532	1/1	0.95	0.21	-	42,42,42,42	0
56	MG	DA	3064	1/1	0.61	0.43	-	55,55,55,55	0
56	MG	BA	3251	1/1	0.86	0.27	-	45,45,45,45	0
56	MG	BA	3581	1/1	0.91	0.32	-	54,54,54,54	0
56	MG	BA	3086	1/1	0.90	0.32	-	50,50,50,50	0
56	MG	BA	3412	1/1	0.99	0.27	-	29,29,29,29	0
56	MG	CA	3001	1/1	0.95	0.20	-	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	AA	3074	1/1	0.94	0.30	-	40,40,40,40	0
56	MG	DA	3530	1/1	0.91	0.16	-	57,57,57,57	0
56	MG	BA	3015	1/1	0.94	0.28	-	30,30,30,30	0
56	MG	BA	3098	1/1	0.79	0.25	-	42,42,42,42	0
56	MG	BA	3309	1/1	0.98	0.13	-	43,43,43,43	0
56	MG	BA	3689	1/1	0.92	0.18	-	25,25,25,25	0
56	MG	BA	3239	1/1	0.77	0.21	-	33,33,33,33	0
56	MG	BA	3186	1/1	0.94	0.17	-	50,50,50,50	0
56	MG	DA	3446	1/1	0.97	0.16	-	46,46,46,46	0
56	MG	DA	3388	1/1	0.98	0.11	-	25,25,25,25	0
56	MG	BR	202	1/1	0.95	0.25	-	25,25,25,25	0
56	MG	BA	3202	1/1	0.94	0.47	-	29,29,29,29	0
56	MG	DA	3208	1/1	0.87	0.19	-	46,46,46,46	0
56	MG	AA	3192	1/1	0.98	0.08	-	73,73,73,73	0
56	MG	DA	3231	1/1	0.93	0.11	-	45,45,45,45	0
56	MG	AA	3128	1/1	0.76	0.15	-	64,64,64,64	0
56	MG	DE	304	1/1	0.97	0.18	-	30,30,30,30	0
56	MG	BA	3589	1/1	0.98	0.23	-	34,34,34,34	0
56	MG	BA	3481	1/1	0.92	0.20	-	41,41,41,41	0
56	MG	DA	3361	1/1	0.85	0.13	-	58,58,58,58	0
56	MG	BA	3534	1/1	0.98	0.22	-	36,36,36,36	0
56	MG	AA	3178	1/1	0.94	0.17	-	63,63,63,63	0
56	MG	BA	3420	1/1	0.96	0.18	-	13,13,13,13	0
56	MG	BA	3174	1/1	0.92	0.22	-	52,52,52,52	0
56	MG	BB	3002	1/1	0.95	0.19	-	49,49,49,49	0
56	MG	AA	3113	1/1	0.93	0.12	-	56,56,56,56	0
56	MG	DA	3614	1/1	0.92	0.12	-	46,46,46,46	0
56	MG	BA	3237	1/1	0.95	0.16	-	43,43,43,43	0
56	MG	BA	3574	1/1	0.97	0.08	-	52,52,52,52	0
56	MG	DA	3215	1/1	0.96	0.30	-	43,43,43,43	0
56	MG	DA	3561	1/1	0.92	0.14	-	40,40,40,40	0
56	MG	DA	3048	1/1	0.97	0.36	-	29,29,29,29	0
56	MG	DA	3200	1/1	0.95	0.92	-	48,48,48,48	0
56	MG	DA	3164	1/1	0.85	0.16	-	40,40,40,40	0
56	MG	DA	3421	1/1	0.97	0.16	-	43,43,43,43	0
56	MG	DY	502	1/1	0.96	0.07	-	66,66,66,66	0
56	MG	DA	3529	1/1	0.90	0.48	-	72,72,72,72	0
56	MG	BA	3252	1/1	0.51	0.59	-	65,65,65,65	0
56	MG	DA	3140	1/1	0.95	0.31	-	55,55,55,55	0
56	MG	DA	3080	1/1	0.98	0.11	-	43,43,43,43	0
56	MG	DA	3225	1/1	0.85	0.12	-	64,64,64,64	0
56	MG	AV	101	1/1	0.89	0.24	-	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	BA	3510	1/1	0.95	0.15	-	66,66,66,66	0
56	MG	DA	3013	1/1	0.92	0.10	-	38,38,38,38	0
56	MG	DA	3095	1/1	0.96	0.24	-	53,53,53,53	0
56	MG	AA	3053	1/1	0.93	0.40	-	56,56,56,56	0
56	MG	BA	3141	1/1	0.92	0.56	-	43,43,43,43	0
56	MG	BA	3344	1/1	0.96	0.15	-	65,65,65,65	0
56	MG	DA	3354	1/1	0.89	0.17	-	39,39,39,39	0
56	MG	BA	3439	1/1	0.96	0.09	-	35,35,35,35	0
56	MG	BA	3256	1/1	0.93	0.12	-	60,60,60,60	0
56	MG	DA	3368	1/1	0.97	0.17	-	34,34,34,34	0
56	MG	AA	3108	1/1	0.96	0.31	-	72,72,72,72	0
56	MG	BA	3016	1/1	0.92	0.52	-	50,50,50,50	0
56	MG	DA	3616	1/1	0.99	0.18	-	41,41,41,41	0
56	MG	DA	3221	1/1	0.86	0.27	-	56,56,56,56	0
56	MG	BA	3593	1/1	0.94	0.13	-	51,51,51,51	0
56	MG	BA	3391	1/1	0.95	0.20	-	39,39,39,39	0
56	MG	BA	3614	1/1	0.94	0.20	-	48,48,48,48	0
56	MG	BA	3210	1/1	0.98	0.30	-	39,39,39,39	0
56	MG	BA	3660	1/1	0.94	0.15	-	58,58,58,58	0
56	MG	BA	3476	1/1	0.97	0.09	-	47,47,47,47	0
56	MG	DA	3400	1/1	0.98	0.18	-	42,42,42,42	0
56	MG	BA	3079	1/1	0.98	0.33	-	50,50,50,50	0
56	MG	BA	3094	1/1	0.88	0.47	-	62,62,62,62	0
56	MG	DA	3111	1/1	0.92	0.20	-	67,67,67,67	0
56	MG	CA	3016	1/1	0.70	0.44	-	72,72,72,72	0
56	MG	CA	3134	1/1	0.85	0.23	-	92,92,92,92	0
56	MG	DA	3543	1/1	0.95	0.20	-	52,52,52,52	0
56	MG	AA	3073	1/1	0.90	0.11	-	63,63,63,63	0
56	MG	BA	3681	1/1	0.96	0.15	-	54,54,54,54	0
56	MG	DA	3356	1/1	0.72	0.45	-	57,57,57,57	0
56	MG	BA	3729	1/1	0.93	0.14	-	54,54,54,54	0
56	MG	BA	3543	1/1	0.97	0.22	-	24,24,24,24	0
56	MG	BA	3667	1/1	0.91	0.23	-	72,72,72,72	0
56	MG	BA	3361	1/1	0.95	0.12	-	39,39,39,39	0
56	MG	BW	3003	1/1	0.91	0.26	-	39,39,39,39	0
56	MG	BA	3653	1/1	0.97	0.15	-	46,46,46,46	0
56	MG	AA	3049	1/1	0.90	0.39	-	46,46,46,46	0
56	MG	CA	3159	1/1	0.91	0.74	-	76,76,76,76	0
56	MG	BA	3259	1/1	0.79	0.22	-	59,59,59,59	0
56	MG	DA	3236	1/1	0.94	0.16	-	38,38,38,38	0
56	MG	AA	3087	1/1	0.90	0.21	-	87,87,87,87	0
56	MG	BA	3158	1/1	0.86	0.44	-	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	BA	3199	1/1	0.95	0.31	-	31,31,31,31	0
56	MG	BA	3531	1/1	0.98	0.18	-	28,28,28,28	0
56	MG	BA	3451	1/1	0.96	0.10	-	31,31,31,31	0
56	MG	CA	3105	1/1	0.95	0.07	-	59,59,59,59	0
56	MG	BA	3503	1/1	0.98	0.14	-	56,56,56,56	0
56	MG	CA	3080	1/1	0.97	0.13	-	51,51,51,51	0
56	MG	BA	3493	1/1	0.97	0.13	-	51,51,51,51	0
56	MG	BA	3178	1/1	0.74	0.50	-	51,51,51,51	0
60	K	DA	3234	1/1	0.88	0.27	-	102,102,102,102	0
56	MG	DA	3514	1/1	0.95	0.20	-	60,60,60,60	0
56	MG	BA	3377	1/1	0.95	0.14	-	27,27,27,27	0
56	MG	AA	3150	1/1	0.97	0.27	-	67,67,67,67	0
56	MG	DA	3188	1/1	0.86	0.51	-	52,52,52,52	0
56	MG	AF	3001	1/1	0.89	0.16	-	62,62,62,62	0
56	MG	BA	3484	1/1	0.87	0.16	-	40,40,40,40	0
56	MG	DA	3124	1/1	0.92	0.13	-	66,66,66,66	0
56	MG	BA	3538	1/1	0.76	0.20	-	29,29,29,29	0
56	MG	BA	3121	1/1	0.85	0.26	-	50,50,50,50	0
56	MG	BA	3319	1/1	0.96	0.14	-	34,34,34,34	0
56	MG	AA	3061	1/1	0.95	0.09	-	57,57,57,57	0
56	MG	AA	3130	1/1	0.74	0.19	-	55,55,55,55	0
56	MG	BA	3422	1/1	0.97	0.14	-	23,23,23,23	0
56	MG	BA	3101	1/1	0.93	0.42	-	47,47,47,47	0
56	MG	DP	202	1/1	0.94	0.22	-	54,54,54,54	0
56	MG	CA	3091	1/1	0.84	0.15	-	95,95,95,95	0
56	MG	BA	3080	1/1	0.98	0.09	-	12,12,12,12	0
56	MG	BA	3706	1/1	0.97	0.14	-	38,38,38,38	0
56	MG	DA	3152	1/1	0.97	0.26	-	43,43,43,43	0
56	MG	DA	3544	1/1	0.98	0.37	-	42,42,42,42	0
56	MG	BA	3565	1/1	0.95	0.13	-	75,75,75,75	0
56	MG	BA	3602	1/1	0.90	0.16	-	44,44,44,44	0
56	MG	CA	3143	1/1	0.96	0.06	-	91,91,91,91	0
56	MG	CA	3123	1/1	0.94	0.12	-	75,75,75,75	0
56	MG	AX	102	1/1	0.75	0.14	-	66,66,66,66	0
56	MG	CA	3049	1/1	0.96	0.14	-	51,51,51,51	0
56	MG	DA	3206	1/1	0.95	0.42	-	36,36,36,36	0
56	MG	DF	302	1/1	0.93	0.20	-	47,47,47,47	0
56	MG	DA	3103	1/1	0.84	0.36	-	52,52,52,52	0
56	MG	BA	3269	1/1	0.90	0.11	-	32,32,32,32	0
56	MG	AA	3136	1/1	0.91	0.11	-	68,68,68,68	0
56	MG	DA	3085	1/1	0.97	0.09	-	35,35,35,35	0
56	MG	DA	3262	1/1	0.92	0.22	-	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	DA	3359	1/1	0.98	0.20	-	21,21,21,21	0
56	MG	BA	3179	1/1	0.93	0.32	-	53,53,53,53	0
56	MG	BA	3187	1/1	0.92	0.23	-	53,53,53,53	0
56	MG	BA	3404	1/1	0.95	0.10	-	42,42,42,42	0
56	MG	BA	3520	1/1	0.97	0.08	-	69,69,69,69	0
56	MG	BA	3628	1/1	0.98	0.10	-	39,39,39,39	0
56	MG	BA	3418	1/1	0.99	0.25	-	20,20,20,20	0
56	MG	BA	3448	1/1	0.99	0.22	-	23,23,23,23	0
56	MG	DA	3289	1/1	0.88	0.17	-	64,64,64,64	0
56	MG	BA	3119	1/1	0.91	0.11	-	56,56,56,56	0
56	MG	DA	3166	1/1	0.95	0.08	-	37,37,37,37	0
56	MG	DA	3329	1/1	0.96	0.13	-	40,40,40,40	0
56	MG	BA	3696	1/1	0.93	0.27	-	36,36,36,36	0
56	MG	BA	3513	1/1	0.96	0.31	-	51,51,51,51	0
56	MG	BA	3701	1/1	0.97	0.15	-	69,69,69,69	0
56	MG	BA	3140	1/1	0.99	0.31	-	50,50,50,50	0
56	MG	AA	3142	1/1	0.87	0.37	-	60,60,60,60	0
56	MG	DA	3626	1/1	0.87	0.17	-	63,63,63,63	0
56	MG	AA	3066	1/1	0.96	0.20	-	41,41,41,41	0
56	MG	CA	3052	1/1	0.96	0.15	-	47,47,47,47	0
56	MG	B2	101	1/1	0.93	0.28	-	34,34,34,34	0
56	MG	BA	3656	1/1	0.95	0.28	-	70,70,70,70	0
56	MG	BA	3611	1/1	0.93	0.11	-	61,61,61,61	0
56	MG	DA	3118	1/1	0.97	0.09	-	44,44,44,44	0
56	MG	DA	3257	1/1	0.98	0.20	-	25,25,25,25	0
56	MG	BA	3157	1/1	0.78	0.32	-	52,52,52,52	0
56	MG	BA	3672	1/1	0.94	0.25	-	63,63,63,63	0
56	MG	AA	3157	1/1	0.98	0.06	-	26,26,26,26	0
56	MG	AA	3165	1/1	0.97	0.13	-	24,24,24,24	0
56	MG	DA	3525	1/1	0.95	0.10	-	56,56,56,56	0
56	MG	DA	3139	1/1	0.90	0.22	-	47,47,47,47	0
56	MG	AA	3217	1/1	0.94	0.42	-	64,64,64,64	0
56	MG	DA	3423	1/1	0.76	0.18	-	29,29,29,29	0
56	MG	DA	3185	1/1	0.93	0.33	-	42,42,42,42	0
56	MG	DA	3278	1/1	0.89	0.08	-	39,39,39,39	0
56	MG	BA	3541	1/1	0.99	0.14	-	37,37,37,37	0
56	MG	BA	3398	1/1	0.96	0.13	-	36,36,36,36	0
56	MG	BA	3106	1/1	0.95	0.32	-	52,52,52,52	0
56	MG	BA	3518	1/1	0.92	0.10	-	52,52,52,52	0
56	MG	DA	3222	1/1	0.83	0.22	-	45,45,45,45	0
56	MG	BA	3635	1/1	0.91	0.20	-	52,52,52,52	0
56	MG	DA	3159	1/1	0.99	0.13	-	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	AA	3045	1/1	0.74	0.23	-	71,71,71,71	0
56	MG	DA	3451	1/1	0.96	0.06	-	68,68,68,68	0
56	MG	BA	3659	1/1	0.98	0.10	-	42,42,42,42	0
56	MG	BD	311	1/1	0.78	0.84	-	53,53,53,53	0
60	K	BA	3304	1/1	0.91	0.32	-	93,93,93,93	0
56	MG	DA	3638	1/1	0.98	0.10	-	53,53,53,53	0
56	MG	BA	3630	1/1	0.96	0.13	-	48,48,48,48	0
56	MG	BA	3091	1/1	0.97	0.34	-	55,55,55,55	0
56	MG	AA	3077	1/1	0.82	0.39	-	67,67,67,67	0
56	MG	CA	3045	1/1	0.98	0.09	-	60,60,60,60	0
56	MG	DA	3646	1/1	0.92	0.20	-	42,42,42,42	0
56	MG	BB	3009	1/1	0.92	0.12	-	49,49,49,49	0
56	MG	DA	3555	1/1	0.98	0.15	-	43,43,43,43	0
56	MG	DA	3438	1/1	0.96	0.30	-	50,50,50,50	0
56	MG	AA	3104	1/1	0.98	0.16	-	35,35,35,35	0
56	MG	CA	3102	1/1	0.95	0.06	-	55,55,55,55	0
56	MG	BA	3624	1/1	0.95	0.17	-	73,73,73,73	0
56	MG	BA	3286	1/1	0.98	0.23	-	42,42,42,42	0
56	MG	BA	3113	1/1	0.93	0.20	-	48,48,48,48	0
56	MG	BA	3487	1/1	0.96	0.20	-	47,47,47,47	0
56	MG	DA	3212	1/1	0.79	0.07	-	48,48,48,48	0
56	MG	DA	3145	1/1	0.97	0.42	-	52,52,52,52	0
56	MG	AA	3134	1/1	0.91	0.37	-	70,70,70,70	0
56	MG	CA	3121	1/1	0.94	0.45	-	59,59,59,59	0
56	MG	BA	3678	1/1	0.97	0.10	-	47,47,47,47	0
56	MG	BA	3349	1/1	0.84	0.17	-	31,31,31,31	0
56	MG	AA	3185	1/1	0.95	0.28	-	47,47,47,47	0
56	MG	BA	3250	1/1	0.86	0.28	-	61,61,61,61	0
56	MG	AA	3210	1/1	0.98	0.07	-	48,48,48,48	0
56	MG	DA	3623	1/1	0.91	0.12	-	63,63,63,63	0
56	MG	DA	3245	1/1	0.94	0.25	-	43,43,43,43	0
56	MG	BA	3270	1/1	0.94	0.30	-	29,29,29,29	0
56	MG	DA	3397	1/1	0.95	0.19	-	40,40,40,40	0
56	MG	DA	3499	1/1	0.94	0.22	-	44,44,44,44	0
56	MG	BA	3207	1/1	0.86	0.37	-	44,44,44,44	0
56	MG	BA	3641	1/1	0.86	0.14	-	33,33,33,33	0
56	MG	BA	3374	1/1	0.98	0.28	-	26,26,26,26	0
56	MG	AA	3173	1/1	0.91	0.15	-	37,37,37,37	0
56	MG	BA	3431	1/1	0.91	0.25	-	54,54,54,54	0
56	MG	DA	3003	1/1	0.86	0.18	-	43,43,43,43	0
56	MG	AA	3058	1/1	0.92	0.36	-	59,59,59,59	0
56	MG	DA	3189	1/1	0.90	0.21	-	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	DA	3079	1/1	0.86	0.28	-	44,44,44,44	0
56	MG	DA	3083	1/1	0.98	0.18	-	44,44,44,44	0
56	MG	BA	3192	1/1	0.87	0.36	-	48,48,48,48	0
56	MG	BA	3478	1/1	0.97	0.21	-	36,36,36,36	0
56	MG	AA	3135	1/1	0.82	0.31	-	49,49,49,49	0
56	MG	AA	3213	1/1	0.94	0.12	-	74,74,74,74	0
56	MG	DA	3011	1/1	0.76	0.35	-	42,42,42,42	0
56	MG	BA	3642	1/1	0.97	0.16	-	52,52,52,52	0
56	MG	DA	3448	1/1	0.85	0.33	-	67,67,67,67	0
56	MG	CA	3145	1/1	0.90	0.11	-	67,67,67,67	0
56	MG	BA	3339	1/1	0.98	0.14	-	47,47,47,47	0
56	MG	DB	3009	1/1	0.94	0.38	-	41,41,41,41	0
56	MG	BA	3379	1/1	0.97	0.08	-	43,43,43,43	0
56	MG	BA	3007	1/1	0.89	0.25	-	55,55,55,55	0
56	MG	BA	3359	1/1	0.94	0.15	-	63,63,63,63	0
56	MG	BA	3060	1/1	0.85	0.59	-	64,64,64,64	0
56	MG	BA	3027	1/1	0.92	0.19	-	53,53,53,53	0
56	MG	DA	3323	1/1	0.96	0.19	-	60,60,60,60	0
56	MG	AA	3051	1/1	0.83	0.16	-	56,56,56,56	0
56	MG	DA	3109	1/1	0.75	0.26	-	55,55,55,55	0
56	MG	BA	3599	1/1	0.89	0.10	-	56,56,56,56	0
56	MG	AA	3162	1/1	0.93	0.13	-	79,79,79,79	0
56	MG	BA	3490	1/1	0.98	0.11	-	40,40,40,40	0
56	MG	BA	3090	1/1	0.92	0.24	-	42,42,42,42	0
56	MG	AA	3089	1/1	0.76	0.33	-	80,80,80,80	0
56	MG	BA	3092	1/1	0.85	0.26	-	28,28,28,28	0
56	MG	BA	3071	1/1	0.86	0.22	-	55,55,55,55	0
56	MG	BA	3067	1/1	0.84	0.46	-	55,55,55,55	0
56	MG	DA	3031	1/1	0.97	0.18	-	60,60,60,60	0
56	MG	BA	3029	1/1	0.86	0.66	-	53,53,53,53	0
56	MG	DA	3366	1/1	0.97	0.09	-	43,43,43,43	0
56	MG	BA	3324	1/1	0.92	0.30	-	54,54,54,54	0
56	MG	BA	3014	1/1	0.98	0.37	-	48,48,48,48	0
56	MG	AA	3042	1/1	0.86	0.27	-	50,50,50,50	0
56	MG	BA	3575	1/1	0.99	0.13	-	26,26,26,26	0
56	MG	DA	3186	1/1	0.88	0.29	-	38,38,38,38	0
56	MG	BA	3638	1/1	0.96	0.09	-	73,73,73,73	0
56	MG	CA	3168	1/1	0.99	0.46	-	79,79,79,79	0
56	MG	CA	3040	1/1	0.96	0.36	-	47,47,47,47	0
56	MG	BA	3445	1/1	0.98	0.17	-	16,16,16,16	0
56	MG	BA	3648	1/1	0.90	0.16	-	54,54,54,54	0
56	MG	BA	3161	1/1	0.89	0.13	-	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	DA	3370	1/1	0.97	0.23	-	40,40,40,40	0
56	MG	AA	3056	1/1	0.93	0.23	-	61,61,61,61	0
56	MG	BA	3294	1/1	0.92	0.16	-	59,59,59,59	0
56	MG	DA	3621	1/1	0.86	0.17	-	46,46,46,46	0
56	MG	BA	3643	1/1	0.94	0.20	-	59,59,59,59	0
56	MG	CA	3092	1/1	0.97	0.08	-	56,56,56,56	0
56	MG	CA	3014	1/1	0.92	0.18	-	56,56,56,56	0
56	MG	BA	3066	1/1	0.90	0.24	-	49,49,49,49	0
56	MG	DA	3450	1/1	0.98	0.18	-	47,47,47,47	0
56	MG	AA	3191	1/1	0.96	0.11	-	56,56,56,56	0
56	MG	DA	3075	1/1	0.94	0.21	-	45,45,45,45	0
56	MG	DA	3235	1/1	0.94	0.41	-	46,46,46,46	0
56	MG	BA	3623	1/1	0.96	0.15	-	43,43,43,43	0
56	MG	CA	3103	1/1	0.84	0.50	-	101,101,101,101	0
56	MG	BA	3026	1/1	0.92	0.15	-	36,36,36,36	0
56	MG	BA	3686	1/1	0.91	0.29	-	65,65,65,65	0
56	MG	DA	3340	1/1	0.94	0.12	-	29,29,29,29	0
56	MG	BA	3323	1/1	0.95	0.17	-	25,25,25,25	0
56	MG	CA	3108	1/1	0.95	0.17	-	45,45,45,45	0
56	MG	BA	3247	1/1	0.89	0.21	-	58,58,58,58	0
56	MG	DA	3636	1/1	0.92	0.11	-	64,64,64,64	0
56	MG	DA	3296	1/1	0.83	0.46	-	65,65,65,65	0
56	MG	BA	3684	1/1	0.95	0.16	-	44,44,44,44	0
56	MG	AA	3117	1/1	0.86	0.15	-	64,64,64,64	0
56	MG	DA	3355	1/1	0.99	0.38	-	39,39,39,39	0
56	MG	BA	3498	1/1	0.96	0.29	-	81,81,81,81	0
56	MG	DA	3541	1/1	0.95	0.16	-	55,55,55,55	0
56	MG	DA	3369	1/1	0.98	0.05	-	53,53,53,53	0
56	MG	DA	3364	1/1	0.92	0.17	-	40,40,40,40	0
56	MG	BA	3561	1/1	0.89	0.25	-	39,39,39,39	0
56	MG	BZ	3001	1/1	0.79	0.19	-	47,47,47,47	0
56	MG	AA	3176	1/1	0.95	0.11	-	60,60,60,60	0
56	MG	AD	502	1/1	0.90	0.63	-	56,56,56,56	0
56	MG	BA	3367	1/1	0.93	0.19	-	29,29,29,29	0
56	MG	CA	3025	1/1	0.90	0.12	-	102,102,102,102	0
56	MG	DA	3591	1/1	0.77	0.14	-	67,67,67,67	0
56	MG	DA	3479	1/1	0.98	0.14	-	35,35,35,35	0
56	MG	AA	3007	1/1	0.94	0.17	-	68,68,68,68	0
56	MG	DA	3439	1/1	0.95	0.23	-	45,45,45,45	0
56	MG	CA	3137	1/1	0.98	0.12	-	59,59,59,59	0
56	MG	BB	3017	1/1	0.81	0.20	-	80,80,80,80	0
56	MG	CX	102	1/1	0.96	0.07	-	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	BA	3429	1/1	0.89	0.16	-	55,55,55,55	0
56	MG	DA	3135	1/1	0.71	0.31	-	58,58,58,58	0
56	MG	AA	3161	1/1	0.98	0.08	-	61,61,61,61	0
56	MG	BA	3326	1/1	0.94	0.24	-	15,15,15,15	0
56	MG	BA	3265	1/1	0.90	0.23	-	39,39,39,39	0
56	MG	AM	3002	1/1	0.93	0.58	-	60,60,60,60	0
56	MG	CA	3090	1/1	0.95	0.15	-	63,63,63,63	0
56	MG	BA	3502	1/1	0.95	0.21	-	59,59,59,59	0
56	MG	BA	3716	1/1	0.90	0.24	-	77,77,77,77	0
56	MG	CA	3158	1/1	0.97	0.11	-	64,64,64,64	0
56	MG	DA	3098	1/1	0.83	1.02	-	45,45,45,45	0
56	MG	DA	3096	1/1	0.75	0.34	-	68,68,68,68	0
56	MG	AA	3203	1/1	0.86	0.15	-	76,76,76,76	0
56	MG	DA	3581	1/1	0.99	0.24	-	41,41,41,41	0
56	MG	BA	3609	1/1	0.96	0.26	-	29,29,29,29	0
56	MG	BF	303	1/1	0.98	0.12	-	42,42,42,42	0
56	MG	BA	3464	1/1	0.96	0.18	-	40,40,40,40	0
56	MG	BA	3118	1/1	0.91	0.26	-	53,53,53,53	0
56	MG	DA	3596	1/1	0.82	0.13	-	68,68,68,68	0
56	MG	CA	3142	1/1	0.88	0.20	-	80,80,80,80	0
56	MG	BA	3698	1/1	0.97	0.38	-	58,58,58,58	0
56	MG	DB	3001	1/1	0.93	0.19	-	80,80,80,80	0
56	MG	DA	3516	1/1	0.93	0.19	-	54,54,54,54	0
56	MG	BA	3300	1/1	0.86	0.29	-	48,48,48,48	0
56	MG	DA	3335	1/1	0.96	0.21	-	36,36,36,36	0
56	MG	BA	3559	1/1	0.98	0.40	-	29,29,29,29	0
56	MG	DW	201	1/1	0.91	0.33	-	45,45,45,45	0
56	MG	BA	3495	1/1	0.98	0.27	-	27,27,27,27	0
56	MG	DA	3484	1/1	0.94	0.05	-	47,47,47,47	0
56	MG	DB	3002	1/1	0.88	0.20	-	72,72,72,72	0
56	MG	DA	3594	1/1	0.96	0.31	-	63,63,63,63	0
56	MG	DA	3132	1/1	0.94	0.64	-	47,47,47,47	0
56	MG	BA	3063	1/1	0.95	0.14	-	34,34,34,34	0
56	MG	BA	3273	1/1	0.96	0.61	-	35,35,35,35	0
56	MG	BA	3170	1/1	0.98	0.48	-	34,34,34,34	0
56	MG	BA	3011	1/1	0.93	0.17	-	39,39,39,39	0
56	MG	BA	3146	1/1	0.90	0.39	-	56,56,56,56	0
56	MG	DA	3130	1/1	0.93	0.09	-	34,34,34,34	0
56	MG	DA	3447	1/1	0.90	0.18	-	56,56,56,56	0
56	MG	AA	3186	1/1	0.98	0.14	-	51,51,51,51	0
56	MG	DA	3310	1/1	0.96	0.27	-	30,30,30,30	0
56	MG	BA	3666	1/1	0.97	0.34	-	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	AA	3153	1/1	0.98	0.10	-	46,46,46,46	0
56	MG	BA	3102	1/1	0.97	0.08	-	45,45,45,45	0
56	MG	DA	3497	1/1	0.97	0.06	-	37,37,37,37	0
56	MG	BA	3297	1/1	0.95	0.39	-	43,43,43,43	0
56	MG	DA	3283	1/1	0.90	0.19	-	47,47,47,47	0
56	MG	CA	3112	1/1	0.97	0.26	-	69,69,69,69	0
56	MG	DA	3256	1/1	0.90	0.12	-	41,41,41,41	0
56	MG	BA	3688	1/1	0.91	0.05	-	58,58,58,58	0
56	MG	BF	306	1/1	0.65	0.41	-	52,52,52,52	0
56	MG	BA	3394	1/1	0.98	0.21	-	45,45,45,45	0
56	MG	DA	3155	1/1	0.79	0.28	-	50,50,50,50	0
56	MG	BA	3737	1/1	0.94	0.22	-	39,39,39,39	0
56	MG	BA	3675	1/1	0.88	0.26	-	68,68,68,68	0
56	MG	BA	3577	1/1	0.98	0.15	-	63,63,63,63	0
56	MG	DA	3489	1/1	0.96	0.08	-	36,36,36,36	0
56	MG	BA	3470	1/1	0.96	0.05	-	44,44,44,44	0
56	MG	DA	3260	1/1	0.99	0.07	-	32,32,32,32	0
56	MG	AA	3158	1/1	0.97	0.17	-	47,47,47,47	0
56	MG	AA	3063	1/1	0.87	0.14	-	57,57,57,57	0
56	MG	BA	3166	1/1	0.89	0.19	-	41,41,41,41	0
56	MG	BA	3521	1/1	0.97	0.12	-	38,38,38,38	0
56	MG	BA	3727	1/1	0.97	0.18	-	27,27,27,27	0
56	MG	BA	3387	1/1	0.97	0.26	-	49,49,49,49	0
56	MG	BA	3334	1/1	0.90	0.14	-	41,41,41,41	0
56	MG	BA	3299	1/1	0.85	0.32	-	56,56,56,56	0
56	MG	BA	3473	1/1	0.93	0.15	-	55,55,55,55	0
56	MG	BB	3004	1/1	0.78	0.27	-	57,57,57,57	0
56	MG	BA	3590	1/1	0.94	0.17	-	23,23,23,23	0
56	MG	BA	3072	1/1	0.97	0.69	-	45,45,45,45	0
56	MG	AA	3093	1/1	0.66	0.39	-	90,90,90,90	0
56	MG	DA	3218	1/1	0.97	0.11	-	31,31,31,31	0
56	MG	BA	3117	1/1	0.93	0.27	-	37,37,37,37	0
56	MG	BA	3147	1/1	0.93	0.60	-	42,42,42,42	0
56	MG	CA	3021	1/1	0.88	0.25	-	54,54,54,54	0
56	MG	DA	3147	1/1	0.94	0.20	-	46,46,46,46	0
56	MG	DA	3320	1/1	0.98	0.21	-	50,50,50,50	0
56	MG	BA	3569	1/1	0.94	0.08	-	55,55,55,55	0
56	MG	AA	3019	1/1	0.95	0.42	-	64,64,64,64	0
56	MG	DA	3205	1/1	0.88	0.26	-	41,41,41,41	0
56	MG	BA	3163	1/1	0.83	0.37	-	50,50,50,50	0
56	MG	DA	3066	1/1	0.86	0.31	-	59,59,59,59	0
56	MG	AA	3116	1/1	0.93	0.41	-	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	CA	3156	1/1	0.89	0.26	-	80,80,80,80	0
56	MG	BA	3242	1/1	0.88	0.18	-	45,45,45,45	0
56	MG	BA	3704	1/1	0.88	0.34	-	58,58,58,58	0
56	MG	BA	3552	1/1	0.96	0.28	-	30,30,30,30	0
56	MG	DA	3611	1/1	0.95	0.16	-	51,51,51,51	0
56	MG	BA	3446	1/1	0.94	0.21	-	25,25,25,25	0
56	MG	DU	3002	1/1	0.87	0.57	-	52,52,52,52	0
56	MG	CA	3069	1/1	0.97	0.21	-	63,63,63,63	0
56	MG	BA	3364	1/1	0.96	0.21	-	30,30,30,30	0
56	MG	DA	3443	1/1	0.95	0.23	-	30,30,30,30	0
56	MG	BA	3162	1/1	0.96	0.28	-	43,43,43,43	0
56	MG	BA	3721	1/1	0.95	0.33	-	56,56,56,56	0
56	MG	AA	3187	1/1	0.95	0.06	-	72,72,72,72	0
56	MG	DA	3410	1/1	0.97	0.09	-	40,40,40,40	0
56	MG	AA	3163	1/1	0.95	0.24	-	23,23,23,23	0
56	MG	DA	3032	1/1	0.96	0.10	-	36,36,36,36	0
56	MG	B8	5001	1/1	0.95	0.15	-	62,62,62,62	0
56	MG	AA	3181	1/1	0.95	0.19	-	46,46,46,46	0
56	MG	BA	3709	1/1	0.92	0.16	-	77,77,77,77	0
56	MG	DA	3378	1/1	0.98	0.09	-	38,38,38,38	0
56	MG	BA	3254	1/1	0.92	0.30	-	40,40,40,40	0
56	MG	DA	3567	1/1	0.92	0.10	-	68,68,68,68	0
56	MG	CA	3046	1/1	0.94	0.25	-	52,52,52,52	0
56	MG	CA	3065	1/1	0.63	0.33	-	81,81,81,81	0
56	MG	BA	3433	1/1	0.94	0.29	-	46,46,46,46	0
56	MG	BA	3649	1/1	0.88	0.25	-	43,43,43,43	0
56	MG	BA	3149	1/1	0.97	0.04	-	58,58,58,58	0
56	MG	AA	3048	1/1	0.93	0.10	-	52,52,52,52	0
56	MG	DA	3273	1/1	0.98	0.23	-	32,32,32,32	0
56	MG	BA	3486	1/1	0.94	0.27	-	55,55,55,55	0
56	MG	BA	3582	1/1	0.66	0.23	-	52,52,52,52	0
56	MG	BA	3184	1/1	0.91	0.82	-	51,51,51,51	0
56	MG	AA	3078	1/1	0.94	0.32	-	55,55,55,55	0
56	MG	DA	3167	1/1	0.93	0.25	-	46,46,46,46	0
56	MG	DA	3178	1/1	0.95	0.19	-	43,43,43,43	0
56	MG	AA	3140	1/1	0.82	0.12	-	65,65,65,65	0
56	MG	BA	3274	1/1	0.96	0.14	-	54,54,54,54	0
56	MG	DA	3182	1/1	0.99	0.20	-	29,29,29,29	0
56	MG	BA	3288	1/1	0.95	0.10	-	45,45,45,45	0
56	MG	DA	3158	1/1	0.99	0.40	-	47,47,47,47	0
56	MG	DA	3333	1/1	0.94	0.14	-	61,61,61,61	0
56	MG	BN	3003	1/1	0.84	0.42	-	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	CA	3051	1/1	0.95	0.16	-	77,77,77,77	0
56	MG	BA	3240	1/1	0.87	0.26	-	54,54,54,54	0
56	MG	DA	3055	1/1	0.93	0.20	-	55,55,55,55	0
56	MG	DA	3302	1/1	0.96	0.27	-	42,42,42,42	0
56	MG	BA	3365	1/1	0.96	0.06	-	63,63,63,63	0
56	MG	BQ	3003	1/1	0.98	0.19	-	15,15,15,15	0
56	MG	BA	3425	1/1	0.94	0.22	-	42,42,42,42	0
56	MG	CA	3114	1/1	0.78	0.19	-	67,67,67,67	0
56	MG	B3	3402	1/1	0.95	0.08	-	49,49,49,49	0
56	MG	DA	3261	1/1	0.93	0.24	-	44,44,44,44	0
56	MG	BA	3466	1/1	0.95	0.12	-	53,53,53,53	0
56	MG	BA	3463	1/1	0.98	0.10	-	32,32,32,32	0
56	MG	CA	3084	1/1	0.86	0.18	-	80,80,80,80	0
56	MG	CA	3115	1/1	0.95	0.08	-	81,81,81,81	0
56	MG	DA	3461	1/1	0.98	0.08	-	40,40,40,40	0
56	MG	BA	3523	1/1	0.99	0.16	-	32,32,32,32	0
56	MG	DA	3336	1/1	0.97	0.16	-	36,36,36,36	0
56	MG	AX	107	1/1	0.89	0.44	-	82,82,82,82	0
56	MG	AA	3105	1/1	0.90	0.30	-	54,54,54,54	0
56	MG	CA	3009	1/1	0.90	0.13	-	55,55,55,55	0
56	MG	BA	3292	1/1	0.75	0.22	-	59,59,59,59	0
56	MG	BA	3682	1/1	0.98	0.35	-	50,50,50,50	0
56	MG	DA	3453	1/1	0.98	0.10	-	44,44,44,44	0
56	MG	AA	3090	1/1	0.84	0.18	-	64,64,64,64	0
56	MG	DA	3490	1/1	0.98	0.14	-	46,46,46,46	0
56	MG	DA	3244	1/1	0.93	0.19	-	23,23,23,23	0
56	MG	BA	3343	1/1	0.97	0.19	-	37,37,37,37	0
56	MG	DA	3044	1/1	0.96	0.22	-	45,45,45,45	0
56	MG	DA	3588	1/1	0.95	0.12	-	47,47,47,47	0
56	MG	BA	3283	1/1	0.80	0.18	-	61,61,61,61	0
56	MG	BA	3122	1/1	0.88	0.65	-	68,68,68,68	0
56	MG	BA	3687	1/1	0.88	0.14	-	59,59,59,59	0
56	MG	DA	3334	1/1	0.96	0.16	-	37,37,37,37	0
56	MG	BA	3246	1/1	0.89	0.33	-	38,38,38,38	0
56	MG	DA	3367	1/1	0.97	0.07	-	55,55,55,55	0
56	MG	BA	3217	1/1	0.86	0.33	-	59,59,59,59	0
56	MG	DA	3122	1/1	0.73	0.14	-	60,60,60,60	0
56	MG	DA	3627	1/1	0.85	0.24	-	52,52,52,52	0
56	MG	BA	3647	1/1	0.91	0.26	-	40,40,40,40	0
56	MG	DA	3050	1/1	0.93	0.48	-	30,30,30,30	0
56	MG	DA	3365	1/1	0.98	0.06	-	52,52,52,52	0
56	MG	B5	502	1/1	0.98	0.10	-	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	BA	3591	1/1	0.98	0.22	-	38,38,38,38	0
56	MG	BA	3489	1/1	0.97	0.12	-	50,50,50,50	0
56	MG	AA	3098	1/1	0.90	0.44	-	76,76,76,76	0
56	MG	DA	3258	1/1	0.96	0.28	-	39,39,39,39	0
56	MG	CA	3036	1/1	0.86	0.24	-	56,56,56,56	0
56	MG	BA	3261	1/1	0.88	0.28	-	45,45,45,45	0
56	MG	DA	3272	1/1	0.99	0.14	-	36,36,36,36	0
56	MG	BA	3449	1/1	0.95	0.10	-	59,59,59,59	0
56	MG	BA	3677	1/1	0.95	0.22	-	47,47,47,47	0
56	MG	CA	3067	1/1	0.85	0.27	-	66,66,66,66	0
56	MG	AA	3012	1/1	0.92	0.16	-	58,58,58,58	0
56	MG	BA	3045	1/1	0.99	0.16	-	27,27,27,27	0
56	MG	DA	3602	1/1	0.92	0.17	-	63,63,63,63	0
56	MG	BA	3306	1/1	0.96	0.16	-	19,19,19,19	0
56	MG	BA	3587	1/1	0.98	0.22	-	23,23,23,23	0
56	MG	DA	3030	1/1	0.95	0.26	-	49,49,49,49	0
56	MG	DA	3455	1/1	0.88	0.21	-	53,53,53,53	0
56	MG	AA	3143	1/1	0.88	0.20	-	67,67,67,67	0
56	MG	DA	3090	1/1	0.90	0.27	-	59,59,59,59	0
56	MG	DA	3415	1/1	0.95	0.11	-	22,22,22,22	0
56	MG	CA	3095	1/1	0.98	0.15	-	35,35,35,35	0
56	MG	CA	3148	1/1	0.96	0.17	-	65,65,65,65	0
56	MG	AA	3034	1/1	0.96	0.20	-	46,46,46,46	0
56	MG	DA	3237	1/1	0.94	0.34	-	37,37,37,37	0
56	MG	DA	3107	1/1	0.95	0.14	-	50,50,50,50	0
56	MG	CA	3029	1/1	0.87	0.17	-	54,54,54,54	0
56	MG	BB	3012	1/1	1.00	0.16	-	42,42,42,42	0
56	MG	BA	3317	1/1	0.92	0.24	-	40,40,40,40	0
56	MG	BA	3211	1/1	0.92	0.08	-	43,43,43,43	0
56	MG	DA	3458	1/1	0.88	0.22	-	47,47,47,47	0
56	MG	DA	3487	1/1	0.98	0.09	-	44,44,44,44	0
56	MG	DA	3437	1/1	0.95	0.21	-	46,46,46,46	0
56	MG	BA	3311	1/1	0.98	0.27	-	52,52,52,52	0
56	MG	AA	3115	1/1	0.80	0.19	-	67,67,67,67	0
56	MG	BA	3650	1/1	0.94	0.13	-	44,44,44,44	0
56	MG	DA	3396	1/1	0.90	0.14	-	37,37,37,37	0
56	MG	BE	303	1/1	0.98	0.10	-	39,39,39,39	0
56	MG	DA	3474	1/1	0.96	0.09	-	49,49,49,49	0
56	MG	BA	3545	1/1	0.95	0.19	-	20,20,20,20	0
56	MG	CA	3150	1/1	0.83	0.18	-	63,63,63,63	0
56	MG	DA	3084	1/1	0.92	0.18	-	55,55,55,55	0
56	MG	BA	3225	1/1	0.89	0.40	-	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	BA	3460	1/1	0.90	0.18	-	66,66,66,66	0
56	MG	DA	3404	1/1	0.94	0.17	-	57,57,57,57	0
56	MG	BA	3655	1/1	0.97	0.12	-	44,44,44,44	0
56	MG	AA	3141	1/1	0.97	0.23	-	51,51,51,51	0
56	MG	DA	3093	1/1	0.95	0.12	-	51,51,51,51	0
56	MG	DA	3184	1/1	0.94	0.17	-	54,54,54,54	0
56	MG	DA	3181	1/1	0.92	0.33	-	55,55,55,55	0
56	MG	AS	3001	1/1	0.56	0.17	-	79,79,79,79	0
56	MG	BA	3511	1/1	0.97	0.13	-	40,40,40,40	0
56	MG	DA	3008	1/1	0.74	0.27	-	56,56,56,56	0
56	MG	AA	3001	1/1	0.71	0.25	-	74,74,74,74	0
56	MG	DA	3593	1/1	0.92	0.25	-	62,62,62,62	0
56	MG	DA	3382	1/1	0.99	0.06	-	44,44,44,44	0
56	MG	BA	3154	1/1	0.78	0.40	-	55,55,55,55	0
56	MG	BA	3348	1/1	0.98	0.10	-	29,29,29,29	0
56	MG	DB	3008	1/1	0.88	0.12	-	36,36,36,36	0
56	MG	DA	3077	1/1	0.85	0.32	-	48,48,48,48	0
56	MG	BA	3271	1/1	0.91	0.32	-	40,40,40,40	0
56	MG	DA	3052	1/1	0.98	0.10	-	20,20,20,20	0
56	MG	BA	3070	1/1	0.86	0.24	-	46,46,46,46	0
56	MG	DA	3251	1/1	0.97	0.29	-	50,50,50,50	0
56	MG	DA	3495	1/1	0.98	0.07	-	53,53,53,53	0
56	MG	DA	3053	1/1	0.80	0.19	-	47,47,47,47	0
56	MG	BA	3472	1/1	0.92	0.12	-	53,53,53,53	0
56	MG	BA	3208	1/1	0.94	0.13	-	50,50,50,50	0
56	MG	BA	3289	1/1	0.89	0.13	-	53,53,53,53	0
56	MG	DA	3154	1/1	0.91	0.49	-	45,45,45,45	0
56	MG	BA	3042	1/1	0.94	0.13	-	50,50,50,50	0
56	MG	BA	3505	1/1	0.93	0.26	-	45,45,45,45	0
56	MG	DA	3226	1/1	0.94	0.18	-	47,47,47,47	0
56	MG	DA	3526	1/1	0.98	0.13	-	49,49,49,49	0
56	MG	DA	3546	1/1	0.98	0.22	-	38,38,38,38	0
56	MG	BA	3378	1/1	0.98	0.18	-	24,24,24,24	0
56	MG	CA	3034	1/1	0.79	0.27	-	66,66,66,66	0
56	MG	BA	3173	1/1	0.94	0.23	-	41,41,41,41	0
56	MG	BB	3010	1/1	1.00	0.20	-	44,44,44,44	0
56	MG	BA	3278	1/1	0.92	0.19	-	53,53,53,53	0
56	MG	CA	3153	1/1	0.93	0.10	-	85,85,85,85	0
56	MG	BA	3570	1/1	0.98	0.20	-	33,33,33,33	0
56	MG	AX	108	1/1	0.79	0.14	-	66,66,66,66	0
56	MG	AA	3055	1/1	0.93	0.28	-	56,56,56,56	0
56	MG	DA	3550	1/1	0.96	0.10	-	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	BA	3705	1/1	0.94	0.22	-	64,64,64,64	0
56	MG	DA	3255	1/1	0.93	0.16	-	46,46,46,46	0
56	MG	DA	3391	1/1	0.90	0.14	-	54,54,54,54	0
56	MG	DA	3379	1/1	0.95	0.13	-	63,63,63,63	0
56	MG	DA	3595	1/1	0.94	0.22	-	53,53,53,53	0
56	MG	DA	3156	1/1	0.97	0.64	-	38,38,38,38	0
56	MG	DA	3425	1/1	0.93	0.19	-	51,51,51,51	0
56	MG	BB	3013	1/1	0.98	0.17	-	31,31,31,31	0
56	MG	DA	3105	1/1	0.96	0.15	-	56,56,56,56	0
56	MG	BA	3111	1/1	0.96	0.17	-	43,43,43,43	0
56	MG	DA	3138	1/1	0.91	0.41	-	53,53,53,53	0
56	MG	BV	3003	1/1	0.93	0.26	-	27,27,27,27	0
56	MG	DA	3141	1/1	0.80	0.19	-	63,63,63,63	0
56	MG	DA	3126	1/1	0.96	0.12	-	61,61,61,61	0
56	MG	DA	3069	1/1	0.97	0.20	-	49,49,49,49	0
56	MG	DA	3246	1/1	0.94	0.16	-	55,55,55,55	0
56	MG	AA	3169	1/1	0.99	0.26	-	62,62,62,62	0
56	MG	DB	3006	1/1	0.72	0.17	-	54,54,54,54	0
56	MG	AA	3151	1/1	0.96	0.07	-	49,49,49,49	0
56	MG	DA	3520	1/1	0.94	0.10	-	38,38,38,38	0
56	MG	BA	3054	1/1	0.94	0.18	-	39,39,39,39	0
56	MG	BA	3613	1/1	0.95	0.19	-	47,47,47,47	0
56	MG	DA	3492	1/1	0.95	0.09	-	44,44,44,44	0
56	MG	AA	3092	1/1	0.90	0.50	-	59,59,59,59	0
56	MG	BG	3003	1/1	0.93	0.21	-	53,53,53,53	0
56	MG	DA	3607	1/1	0.95	0.17	-	68,68,68,68	0
56	MG	CA	3070	1/1	0.69	0.35	-	59,59,59,59	0
56	MG	BA	3376	1/1	0.95	0.32	-	35,35,35,35	0
56	MG	BA	3665	1/1	0.99	0.19	-	39,39,39,39	0
56	MG	AA	3119	1/1	0.90	0.31	-	42,42,42,42	0
56	MG	DA	3043	1/1	0.91	0.54	-	56,56,56,56	0
56	MG	AA	3172	1/1	0.96	0.07	-	36,36,36,36	0
56	MG	AA	3040	1/1	0.97	0.07	-	46,46,46,46	0
56	MG	AA	3220	1/1	0.98	0.09	-	42,42,42,42	0
56	MG	AA	3006	1/1	0.93	0.09	-	84,84,84,84	0
56	MG	DR	5001	1/1	0.96	0.19	-	39,39,39,39	0
56	MG	CA	3160	1/1	0.85	0.14	-	49,49,49,49	0
56	MG	DA	3087	1/1	0.76	0.24	-	43,43,43,43	0
56	MG	AA	3190	1/1	0.94	0.31	-	61,61,61,61	0
56	MG	DA	3644	1/1	0.93	0.62	-	50,50,50,50	0
56	MG	DA	3509	1/1	0.92	0.09	-	57,57,57,57	0
56	MG	DA	3577	1/1	0.96	0.19	-	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	BA	3280	1/1	0.95	0.33	-	44,44,44,44	0
56	MG	AA	3188	1/1	0.97	0.25	-	52,52,52,52	0
56	MG	DA	3023	1/1	0.92	0.39	-	64,64,64,64	0
56	MG	CA	3128	1/1	0.94	0.28	-	55,55,55,55	0
56	MG	BA	3497	1/1	0.98	0.42	-	28,28,28,28	0
56	MG	CA	3081	1/1	0.97	0.09	-	72,72,72,72	0
56	MG	DA	3327	1/1	0.99	0.12	-	45,45,45,45	0
56	MG	CA	3117	1/1	0.89	0.15	-	58,58,58,58	0
56	MG	DA	3485	1/1	0.90	0.20	-	44,44,44,44	0
56	MG	DA	3294	1/1	0.97	0.20	-	30,30,30,30	0
56	MG	DA	3259	1/1	0.95	0.22	-	45,45,45,45	0
56	MG	BA	3469	1/1	0.97	0.13	-	60,60,60,60	0
56	MG	DA	3170	1/1	0.79	0.24	-	45,45,45,45	0
56	MG	DA	3582	1/1	0.98	0.36	-	44,44,44,44	0
56	MG	BA	3662	1/1	0.92	0.15	-	46,46,46,46	0
56	MG	BA	3522	1/1	0.98	0.13	-	42,42,42,42	0
56	MG	DA	3553	1/1	0.96	0.18	-	58,58,58,58	0
56	MG	DA	3161	1/1	0.95	0.19	-	51,51,51,51	0
56	MG	CA	3038	1/1	0.95	0.26	-	54,54,54,54	0
56	MG	DA	3014	1/1	0.96	0.26	-	38,38,38,38	0
56	MG	DA	3131	1/1	0.76	0.23	-	60,60,60,60	0
56	MG	CA	3082	1/1	0.92	0.12	-	46,46,46,46	0
56	MG	DA	3201	1/1	0.92	0.24	-	43,43,43,43	0
56	MG	DA	3312	1/1	0.98	0.23	-	24,24,24,24	0
56	MG	DA	3163	1/1	0.77	0.20	-	52,52,52,52	0
56	MG	DA	3635	1/1	0.95	0.12	-	39,39,39,39	0
56	MG	DA	3286	1/1	0.97	0.22	-	26,26,26,26	0
56	MG	BA	3594	1/1	0.94	0.28	-	55,55,55,55	0
56	MG	DA	3618	1/1	0.89	0.25	-	61,61,61,61	0
56	MG	CA	3096	1/1	0.97	0.10	-	54,54,54,54	0
56	MG	BA	3517	1/1	0.84	0.12	-	52,52,52,52	0
56	MG	DA	3371	1/1	0.86	0.23	-	37,37,37,37	0
56	MG	AA	3189	1/1	0.85	0.15	-	74,74,74,74	0
56	MG	DA	3416	1/1	0.97	0.37	-	34,34,34,34	0
56	MG	BA	3329	1/1	0.97	0.08	-	49,49,49,49	0
56	MG	BA	3188	1/1	0.81	0.29	-	49,49,49,49	0
56	MG	DA	3534	1/1	0.93	0.14	-	62,62,62,62	0
56	MG	BA	3065	1/1	0.97	0.30	-	31,31,31,31	0
56	MG	DA	3523	1/1	0.92	0.12	-	47,47,47,47	0
56	MG	B1	3001	1/1	0.96	0.79	-	63,63,63,63	0
56	MG	BA	3255	1/1	0.84	0.21	-	53,53,53,53	0
56	MG	DA	3606	1/1	0.89	0.18	-	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	BA	3048	1/1	0.90	0.35	-	33,33,33,33	0
56	MG	DA	3091	1/1	0.91	0.50	-	50,50,50,50	0
56	MG	DA	3432	1/1	0.95	0.22	-	37,37,37,37	0
56	MG	DA	3180	1/1	0.88	0.20	-	47,47,47,47	0
56	MG	DA	3071	1/1	0.91	0.52	-	46,46,46,46	0
56	MG	AA	3148	1/1	0.80	0.23	-	72,72,72,72	0
56	MG	BA	3030	1/1	0.98	0.33	-	26,26,26,26	0
56	MG	AA	3200	1/1	0.95	0.30	-	79,79,79,79	0
56	MG	DA	3358	1/1	0.97	0.16	-	38,38,38,38	0
56	MG	DA	3216	1/1	0.97	0.18	-	47,47,47,47	0
56	MG	DA	3513	1/1	0.95	0.18	-	58,58,58,58	0
56	MG	BA	3129	1/1	0.98	0.67	-	44,44,44,44	0
56	MG	DA	3357	1/1	0.98	0.12	-	50,50,50,50	0
56	MG	BA	3114	1/1	0.96	0.25	-	46,46,46,46	0
56	MG	DA	3545	1/1	0.98	0.28	-	35,35,35,35	0
56	MG	DA	3106	1/1	0.90	0.40	-	45,45,45,45	0
56	MG	DA	3057	1/1	0.85	0.25	-	57,57,57,57	0
56	MG	AA	3029	1/1	0.79	1.02	-	60,60,60,60	0
56	MG	BA	3442	1/1	0.95	0.18	-	33,33,33,33	0
56	MG	DA	3346	1/1	0.81	0.20	-	64,64,64,64	0
56	MG	BO	201	1/1	0.97	0.10	-	63,63,63,63	0
56	MG	BA	3346	1/1	0.91	0.17	-	33,33,33,33	0
56	MG	BA	3619	1/1	0.97	0.15	-	42,42,42,42	0
56	MG	BA	3156	1/1	0.85	0.42	-	61,61,61,61	0
56	MG	BA	3200	1/1	0.97	0.28	-	32,32,32,32	0
56	MG	DA	3061	1/1	0.90	0.27	-	47,47,47,47	0
56	MG	DA	3625	1/1	0.99	0.16	-	48,48,48,48	0
56	MG	CA	3039	1/1	0.62	0.51	-	82,82,82,82	0
56	MG	CA	3002	1/1	0.92	0.07	-	74,74,74,74	0
56	MG	BA	3414	1/1	0.99	0.22	-	51,51,51,51	0
56	MG	BA	3100	1/1	0.93	0.21	-	42,42,42,42	0
56	MG	DA	3634	1/1	0.97	0.20	-	33,33,33,33	0
56	MG	CA	3017	1/1	0.93	0.17	-	54,54,54,54	0
56	MG	DA	3515	1/1	0.96	0.07	-	57,57,57,57	0
56	MG	BA	3430	1/1	0.99	0.12	-	47,47,47,47	0
56	MG	BA	3077	1/1	0.99	0.18	-	20,20,20,20	0
56	MG	BA	3338	1/1	0.92	0.21	-	62,62,62,62	0
56	MG	DA	3352	1/1	0.95	0.26	-	24,24,24,24	0
56	MG	DA	3578	1/1	0.95	0.15	-	68,68,68,68	0
56	MG	DA	3517	1/1	0.90	0.28	-	47,47,47,47	0
56	MG	CA	3144	1/1	0.76	0.95	-	84,84,84,84	0
56	MG	BA	3235	1/1	0.95	0.38	-	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	DA	3584	1/1	0.90	0.15	-	47,47,47,47	0
56	MG	BA	3621	1/1	0.93	0.22	-	57,57,57,57	0
56	MG	AA	3043	1/1	0.94	0.32	-	63,63,63,63	0
56	MG	DQ	3002	1/1	0.96	0.34	-	51,51,51,51	0
56	MG	BA	3479	1/1	0.96	0.15	-	44,44,44,44	0
56	MG	DA	3137	1/1	0.90	0.31	-	62,62,62,62	0
56	MG	CA	3005	1/1	0.94	0.38	-	37,37,37,37	0
56	MG	DA	3308	1/1	0.96	0.09	-	32,32,32,32	0
56	MG	CA	3140	1/1	0.96	0.13	-	75,75,75,75	0
56	MG	BA	3712	1/1	0.95	0.25	-	47,47,47,47	0
56	MG	DA	3115	1/1	0.87	0.08	-	64,64,64,64	0
56	MG	BA	3390	1/1	0.94	0.08	-	40,40,40,40	0
56	MG	BA	3126	1/1	0.78	0.34	-	47,47,47,47	0
56	MG	AA	3144	1/1	0.96	0.09	-	56,56,56,56	0
56	MG	BA	3075	1/1	0.92	0.24	-	36,36,36,36	0
56	MG	BA	3664	1/1	0.98	0.12	-	63,63,63,63	0
56	MG	DA	3160	1/1	0.89	0.24	-	47,47,47,47	0
56	MG	DA	3628	1/1	0.93	0.15	-	38,38,38,38	0
56	MG	BA	3679	1/1	0.95	0.12	-	39,39,39,39	0
56	MG	CA	3079	1/1	0.94	0.10	-	37,37,37,37	0
56	MG	BA	3214	1/1	0.96	0.23	-	37,37,37,37	0
56	MG	BA	3142	1/1	0.94	0.23	-	57,57,57,57	0
56	MG	DA	3597	1/1	0.96	0.14	-	66,66,66,66	0
56	MG	BA	3558	1/1	0.95	0.19	-	47,47,47,47	0
56	MG	CA	3089	1/1	0.93	0.17	-	54,54,54,54	0
56	MG	DA	3279	1/1	0.98	0.29	-	32,32,32,32	0
56	MG	B0	106	1/1	0.93	0.08	-	43,43,43,43	0
56	MG	BA	3663	1/1	0.96	0.21	-	73,73,73,73	0
56	MG	BA	3005	1/1	0.93	0.17	-	43,43,43,43	0
56	MG	CA	3022	1/1	0.96	0.05	-	67,67,67,67	0
56	MG	DA	3459	1/1	0.97	0.12	-	43,43,43,43	0
56	MG	BA	3413	1/1	0.96	0.08	-	19,19,19,19	0
56	MG	BD	304	1/1	0.91	0.44	-	41,41,41,41	0
56	MG	AA	3018	1/1	0.97	0.22	-	51,51,51,51	0
56	MG	DA	3230	1/1	0.93	0.18	-	61,61,61,61	0
56	MG	DA	3151	1/1	0.92	0.33	-	48,48,48,48	0
56	MG	AA	3222	1/1	0.82	0.14	-	64,64,64,64	0
56	MG	DA	3104	1/1	0.93	0.17	-	46,46,46,46	0
56	MG	BA	3031	1/1	0.92	0.62	-	44,44,44,44	0
56	MG	DA	3564	1/1	0.98	0.11	-	29,29,29,29	0
56	MG	BA	3206	1/1	0.98	0.28	-	32,32,32,32	0
56	MG	BA	3710	1/1	0.94	0.06	-	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	BA	3683	1/1	0.98	0.29	-	37,37,37,37	0
56	MG	AA	3099	1/1	0.92	0.51	-	49,49,49,49	0
56	MG	CA	3163	1/1	0.89	0.24	-	60,60,60,60	0
56	MG	DA	3326	1/1	0.97	0.08	-	61,61,61,61	0
56	MG	CA	3093	1/1	0.97	0.09	-	65,65,65,65	0
56	MG	DA	3587	1/1	0.95	0.22	-	57,57,57,57	0
56	MG	AA	3100	1/1	0.93	0.59	-	43,43,43,43	0
56	MG	DA	3274	1/1	0.93	0.40	-	49,49,49,49	0
56	MG	BD	301	1/1	0.92	0.41	-	35,35,35,35	0
56	MG	DA	3241	1/1	0.78	0.10	-	74,74,74,74	0
56	MG	BA	3530	1/1	0.80	0.23	-	72,72,72,72	0
56	MG	AA	3067	1/1	0.75	0.36	-	76,76,76,76	0
56	MG	DA	3146	1/1	0.91	0.20	-	34,34,34,34	0
56	MG	DA	3247	1/1	0.98	0.32	-	34,34,34,34	0
56	MG	BA	3218	1/1	0.99	0.12	-	58,58,58,58	0
56	MG	BG	3001	1/1	0.98	0.09	-	65,65,65,65	0
56	MG	CA	3047	1/1	0.94	0.18	-	56,56,56,56	0
56	MG	BA	3068	1/1	0.85	0.45	-	43,43,43,43	0
56	MG	BA	3083	1/1	0.96	0.10	-	33,33,33,33	0
56	MG	BG	3004	1/1	0.94	0.06	-	53,53,53,53	0
56	MG	DA	3264	1/1	0.95	0.20	-	38,38,38,38	0
56	MG	DA	3420	1/1	0.98	0.06	-	43,43,43,43	0
56	MG	DA	3537	1/1	0.91	0.16	-	74,74,74,74	0
56	MG	DA	3605	1/1	0.96	0.07	-	58,58,58,58	0
56	MG	AA	3002	1/1	0.68	0.20	-	74,74,74,74	0
56	MG	DA	3062	1/1	0.88	0.39	-	58,58,58,58	0
56	MG	AA	3037	1/1	0.88	0.28	-	53,53,53,53	0
56	MG	BA	3468	1/1	0.94	0.18	-	45,45,45,45	0
56	MG	DA	3536	1/1	0.93	0.15	-	57,57,57,57	0
56	MG	CA	3041	1/1	0.80	0.39	-	71,71,71,71	0
56	MG	DA	3202	1/1	0.91	0.21	-	39,39,39,39	0
56	MG	BA	3096	1/1	0.95	0.22	-	35,35,35,35	0
56	MG	DA	3001	1/1	0.86	0.27	-	76,76,76,76	0
56	MG	DA	3604	1/1	0.96	0.08	-	50,50,50,50	0
56	MG	BA	3557	1/1	0.97	0.28	-	35,35,35,35	0
56	MG	DA	3068	1/1	0.83	0.22	-	52,52,52,52	0
56	MG	BA	3652	1/1	0.98	0.22	-	54,54,54,54	0
56	MG	DA	3037	1/1	0.93	0.37	-	37,37,37,37	0
56	MG	AA	3195	1/1	0.96	0.21	-	58,58,58,58	0
56	MG	BA	3366	1/1	0.95	0.14	-	30,30,30,30	0
56	MG	BA	3074	1/1	0.85	0.17	-	38,38,38,38	0
56	MG	BA	3139	1/1	0.74	0.74	-	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	CA	3054	1/1	0.79	0.41	-	74,74,74,74	0
56	MG	AA	3017	1/1	0.89	0.29	-	57,57,57,57	0
56	MG	AA	3167	1/1	0.91	0.18	-	78,78,78,78	0
56	MG	B0	102	1/1	0.96	0.18	-	50,50,50,50	0
56	MG	BA	3690	1/1	0.95	0.23	-	55,55,55,55	0
56	MG	BA	3019	1/1	0.95	0.10	-	42,42,42,42	0
56	MG	DA	3288	1/1	0.93	0.22	-	68,68,68,68	0
56	MG	DA	3552	1/1	0.95	0.13	-	42,42,42,42	0
56	MG	CA	3133	1/1	0.98	0.20	-	45,45,45,45	0
56	MG	BA	3455	1/1	0.93	0.38	-	47,47,47,47	0
56	MG	BA	3408	1/1	0.92	0.13	-	28,28,28,28	0
56	MG	BA	3282	1/1	0.97	0.15	-	34,34,34,34	0
56	MG	CA	3131	1/1	0.90	0.14	-	48,48,48,48	0
56	MG	DA	3429	1/1	0.97	0.09	-	30,30,30,30	0
56	MG	BA	3241	1/1	0.91	0.40	-	41,41,41,41	0
56	MG	DA	3089	1/1	0.83	0.27	-	51,51,51,51	0
56	MG	BA	3302	1/1	0.83	0.26	-	48,48,48,48	0
56	MG	BA	3482	1/1	0.98	0.09	-	59,59,59,59	0
56	MG	DB	3005	1/1	0.89	0.25	-	41,41,41,41	0
56	MG	DA	3619	1/1	0.94	0.13	-	67,67,67,67	0
56	MG	BA	3167	1/1	0.89	0.46	-	50,50,50,50	0
56	MG	BA	3169	1/1	0.95	0.23	-	39,39,39,39	0
56	MG	BA	3607	1/1	0.98	0.20	-	74,74,74,74	0
56	MG	AA	3094	1/1	0.76	0.25	-	78,78,78,78	0
56	MG	BB	3008	1/1	0.92	0.21	-	49,49,49,49	0
56	MG	DA	3021	1/1	0.96	0.09	-	43,43,43,43	0
56	MG	CA	3073	1/1	0.83	0.50	-	74,74,74,74	0
56	MG	CA	3116	1/1	0.94	0.15	-	76,76,76,76	0
56	MG	AA	3075	1/1	0.89	0.10	-	50,50,50,50	0
56	MG	BA	3661	1/1	0.81	0.27	-	69,69,69,69	0
56	MG	CA	3110	1/1	0.78	0.13	-	93,93,93,93	0
56	MG	DA	3472	1/1	0.91	0.18	-	38,38,38,38	0
56	MG	DA	3407	1/1	0.93	0.14	-	35,35,35,35	0
56	MG	BA	3340	1/1	0.97	0.19	-	57,57,57,57	0
56	MG	BA	3277	1/1	0.95	0.45	-	45,45,45,45	0
56	MG	BA	3436	1/1	0.98	0.29	-	35,35,35,35	0
56	MG	BA	3386	1/1	0.95	0.13	-	29,29,29,29	0
56	MG	DA	3467	1/1	0.96	0.37	-	48,48,48,48	0
56	MG	DA	3589	1/1	0.92	0.11	-	65,65,65,65	0
56	MG	BA	3584	1/1	0.97	0.10	-	43,43,43,43	0
56	MG	BA	3633	1/1	0.97	0.32	-	54,54,54,54	0
56	MG	CA	3060	1/1	0.95	0.35	-	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å ²)	Q<0.9
56	MG	DA	3074	1/1	0.87	0.31	-	60,60,60,60	0
56	MG	BA	3053	1/1	0.91	0.19	-	52,52,52,52	0
56	MG	BA	3228	1/1	0.86	0.35	-	23,23,23,23	0
56	MG	BA	3631	1/1	0.93	0.16	-	41,41,41,41	0
56	MG	BB	3006	1/1	0.92	0.29	-	34,34,34,34	0
56	MG	AA	3211	1/1	0.94	0.11	-	58,58,58,58	0
56	MG	DA	3377	1/1	0.94	0.19	-	32,32,32,32	0
56	MG	DA	3381	1/1	0.95	0.24	-	68,68,68,68	0
56	MG	CA	3151	1/1	0.98	0.14	-	80,80,80,80	0
56	MG	DA	3496	1/1	0.67	0.35	-	76,76,76,76	0
56	MG	AA	3131	1/1	0.56	0.38	-	65,65,65,65	0
56	MG	DA	3387	1/1	0.98	0.15	-	50,50,50,50	0
56	MG	CA	3161	1/1	0.70	0.19	-	71,71,71,71	0
56	MG	DA	3229	1/1	0.97	0.14	-	44,44,44,44	0
56	MG	AA	3122	1/1	0.96	0.42	-	40,40,40,40	0
56	MG	BA	3384	1/1	0.94	0.28	-	47,47,47,47	0
56	MG	BB	3015	1/1	0.95	0.09	-	35,35,35,35	0
56	MG	DA	3560	1/1	0.91	0.07	-	57,57,57,57	0
56	MG	BA	3620	1/1	0.94	0.29	-	57,57,57,57	0
56	MG	DA	3034	1/1	0.96	0.19	-	40,40,40,40	0
56	MG	DA	3408	1/1	0.98	0.18	-	35,35,35,35	0
56	MG	DA	3375	1/1	0.97	0.08	-	40,40,40,40	0
56	MG	DA	3306	1/1	0.92	0.16	-	51,51,51,51	0
56	MG	BA	3492	1/1	0.95	0.18	-	48,48,48,48	0
56	MG	AA	3065	1/1	0.79	0.25	-	50,50,50,50	0
56	MG	DA	3211	1/1	0.94	0.20	-	46,46,46,46	0
56	MG	BA	3516	1/1	0.97	0.19	-	64,64,64,64	0
56	MG	DA	3608	1/1	0.88	0.30	-	63,63,63,63	0
56	MG	BA	3654	1/1	0.90	0.15	-	49,49,49,49	0
56	MG	BB	3005	1/1	0.79	0.19	-	62,62,62,62	0
56	MG	DA	3473	1/1	0.92	0.17	-	50,50,50,50	0
56	MG	AA	3112	1/1	0.93	0.09	-	53,53,53,53	0
56	MG	AA	3059	1/1	0.93	0.70	-	49,49,49,49	0
56	MG	DA	3108	1/1	0.89	0.41	-	50,50,50,50	0
56	MG	BA	3576	1/1	0.96	0.10	-	45,45,45,45	0
56	MG	BA	3138	1/1	0.92	0.16	-	54,54,54,54	0
56	MG	DA	3426	1/1	0.93	0.14	-	41,41,41,41	0
56	MG	BA	3550	1/1	0.91	0.19	-	32,32,32,32	0
56	MG	BA	3612	1/1	0.92	0.17	-	41,41,41,41	0
56	MG	DA	3194	1/1	0.95	0.60	-	65,65,65,65	0
56	MG	AA	3044	1/1	0.92	0.13	-	60,60,60,60	0
56	MG	BA	3535	1/1	0.97	0.18	-	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	DA	3204	1/1	0.98	0.36	-	44,44,44,44	0
56	MG	DA	3571	1/1	0.96	0.09	-	57,57,57,57	0
56	MG	AA	3147	1/1	0.79	0.41	-	51,51,51,51	0
56	MG	BA	3203	1/1	0.86	0.22	-	45,45,45,45	0
56	MG	DA	3466	1/1	0.97	0.09	-	43,43,43,43	0
56	MG	AA	3137	1/1	0.94	0.14	-	40,40,40,40	0
56	MG	BA	3350	1/1	0.95	0.27	-	36,36,36,36	0
56	MG	CA	3085	1/1	0.96	0.27	-	58,58,58,58	0
56	MG	CA	3055	1/1	0.86	0.26	-	61,61,61,61	0
56	MG	DA	3193	1/1	0.95	0.19	-	42,42,42,42	0
56	MG	DA	3190	1/1	0.85	0.10	-	54,54,54,54	0
56	MG	BA	3388	1/1	0.95	0.26	-	30,30,30,30	0
56	MG	DA	3468	1/1	0.84	0.28	-	47,47,47,47	0
56	MG	DA	3213	1/1	0.87	0.08	-	48,48,48,48	0
56	MG	AA	3032	1/1	0.74	0.29	-	65,65,65,65	0
56	MG	BA	3165	1/1	0.96	0.47	-	44,44,44,44	0
56	MG	CA	3138	1/1	0.92	0.12	-	59,59,59,59	0
56	MG	DA	3086	1/1	0.88	0.29	-	43,43,43,43	0
56	MG	B9	502	1/1	0.86	0.26	-	49,49,49,49	0
56	MG	BA	3402	1/1	0.95	0.22	-	23,23,23,23	0
56	MG	DA	3506	1/1	0.94	0.09	-	61,61,61,61	0
56	MG	BA	3003	1/1	0.98	0.08	-	24,24,24,24	0
56	MG	BA	3544	1/1	0.97	0.22	-	35,35,35,35	0
56	MG	AA	3030	1/1	0.76	0.63	-	66,66,66,66	0
56	MG	BA	3711	1/1	0.95	0.45	-	64,64,64,64	0
56	MG	DA	3481	1/1	0.97	0.08	-	59,59,59,59	0
56	MG	DA	3524	1/1	0.93	0.24	-	51,51,51,51	0
56	MG	CA	3109	1/1	0.96	0.11	-	79,79,79,79	0
56	MG	BA	3625	1/1	0.49	0.48	-	80,80,80,80	0
56	MG	AA	3081	1/1	0.91	0.38	-	46,46,46,46	0
56	MG	BA	3082	1/1	0.86	0.16	-	54,54,54,54	0
56	MG	BA	3580	1/1	0.94	0.17	-	58,58,58,58	0
56	MG	BA	3150	1/1	0.95	0.32	-	42,42,42,42	0
56	MG	AA	3139	1/1	0.90	0.20	-	58,58,58,58	0
56	MG	DA	3150	1/1	0.94	0.09	-	57,57,57,57	0
56	MG	BA	3526	1/1	0.96	0.09	-	49,49,49,49	0
56	MG	CX	103	1/1	0.80	0.23	-	57,57,57,57	0
56	MG	AA	3028	1/1	0.84	0.47	-	72,72,72,72	0
56	MG	AA	3096	1/1	0.91	0.27	-	52,52,52,52	0
56	MG	BP	204	1/1	0.95	0.08	-	53,53,53,53	0
56	MG	AA	3197	1/1	0.91	0.19	-	64,64,64,64	0
56	MG	CA	3136	1/1	0.95	0.23	-	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	BA	3313	1/1	0.81	0.12	-	56,56,56,56	0
56	MG	AA	3026	1/1	0.86	0.18	-	52,52,52,52	0
56	MG	DA	3242	1/1	0.97	0.23	-	31,31,31,31	0
56	MG	DA	3082	1/1	0.98	0.08	-	7,7,7,7	0
56	MG	BA	3204	1/1	0.85	0.20	-	48,48,48,48	0
56	MG	DA	3482	1/1	0.95	0.18	-	45,45,45,45	0
56	MG	BA	3293	1/1	0.87	0.28	-	69,69,69,69	0
56	MG	DA	3498	1/1	0.97	0.12	-	75,75,75,75	0
56	MG	AA	3154	1/1	0.97	0.08	-	60,60,60,60	0
56	MG	DA	3210	1/1	0.91	0.28	-	46,46,46,46	0
56	MG	DA	3603	1/1	0.83	0.23	-	66,66,66,66	0
56	MG	AA	3164	1/1	0.88	0.22	-	61,61,61,61	0
56	MG	BA	3646	1/1	0.92	0.25	-	39,39,39,39	0
56	MG	AA	3202	1/1	0.96	0.22	-	72,72,72,72	0
56	MG	AA	3076	1/1	0.72	0.38	-	74,74,74,74	0
56	MG	CA	3155	1/1	0.96	0.18	-	71,71,71,71	0
56	MG	BA	3372	1/1	0.91	0.17	-	42,42,42,42	0
56	MG	DA	3238	1/1	0.97	0.13	-	37,37,37,37	0
56	MG	BA	3144	1/1	0.93	0.13	-	52,52,52,52	0
56	MG	DO	5001	1/1	0.95	0.10	-	33,33,33,33	0
56	MG	BA	3279	1/1	0.91	0.16	-	60,60,60,60	0
56	MG	DA	3586	1/1	0.91	0.12	-	57,57,57,57	0
56	MG	AA	3079	1/1	0.69	0.91	-	65,65,65,65	0
56	MG	CA	3164	1/1	0.92	0.35	-	43,43,43,43	0
56	MG	BA	3370	1/1	0.97	0.07	-	39,39,39,39	0
56	MG	BA	3525	1/1	0.96	0.16	-	31,31,31,31	0
56	MG	BA	3573	1/1	0.95	0.14	-	53,53,53,53	0
56	MG	DA	3015	1/1	0.86	0.33	-	54,54,54,54	0
56	MG	DA	3169	1/1	0.97	0.25	-	58,58,58,58	0
56	MG	BA	3707	1/1	0.88	0.17	-	57,57,57,57	0
56	MG	DA	3281	1/1	0.95	0.14	-	33,33,33,33	0
56	MG	DA	3380	1/1	0.94	0.09	-	40,40,40,40	0
56	MG	B8	5002	1/1	0.94	0.23	-	48,48,48,48	0
56	MG	BA	3474	1/1	0.97	0.26	-	43,43,43,43	0
56	MG	DA	3413	1/1	0.97	0.18	-	44,44,44,44	0
56	MG	BA	3715	1/1	0.96	0.33	-	44,44,44,44	0
56	MG	BA	3501	1/1	0.98	0.18	-	35,35,35,35	0
56	MG	CA	3107	1/1	0.92	0.08	-	71,71,71,71	0
56	MG	BA	3730	1/1	0.97	0.19	-	43,43,43,43	0
56	MG	BA	3512	1/1	0.96	0.18	-	42,42,42,42	0
56	MG	DE	302	1/1	0.92	0.33	-	46,46,46,46	0
56	MG	DA	3630	1/1	0.90	0.09	-	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
56	MG	BA	3028	1/1	0.86	0.31	-	59,59,59,59	0
56	MG	DE	305	1/1	0.92	0.45	-	68,68,68,68	0
56	MG	AA	3132	1/1	0.94	0.21	-	59,59,59,59	0
56	MG	DA	3653	1/1	0.97	0.12	-	52,52,52,52	0
56	MG	BA	3342	1/1	0.96	0.24	-	46,46,46,46	0
56	MG	DA	3045	1/1	0.98	0.25	-	49,49,49,49	0
56	MG	AA	3207	1/1	0.94	0.19	-	51,51,51,51	0
56	MG	DA	3609	1/1	0.98	0.23	-	49,49,49,49	0
56	MG	BA	3494	1/1	0.98	0.27	-	28,28,28,28	0
56	MG	DA	3223	1/1	0.98	0.09	-	41,41,41,41	0
56	MG	BA	3385	1/1	0.92	0.06	-	56,56,56,56	0
56	MG	CA	3157	1/1	0.85	0.18	-	56,56,56,56	0
56	MG	DQ	3001	1/1	0.92	0.26	-	40,40,40,40	0
56	MG	AA	3155	1/1	0.97	0.19	-	54,54,54,54	0
56	MG	CA	3086	1/1	0.96	0.13	-	70,70,70,70	0
56	MG	BA	3629	1/1	0.89	0.14	-	51,51,51,51	0
56	MG	AA	3013	1/1	0.99	0.25	-	75,75,75,75	0
56	MG	BA	3249	1/1	0.85	0.39	-	46,46,46,46	0
56	MG	DA	3005	1/1	0.84	0.40	-	50,50,50,50	0
56	MG	DA	3344	1/1	0.84	0.12	-	48,48,48,48	0
56	MG	BA	3453	1/1	0.94	0.31	-	54,54,54,54	0

6.5 Other polymers

There are no such residues in this entry.