



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 10:11 PM GMT

PDB ID : 4V9B
Title : Crystal Structure of the 70S ribosome with tigecycline.
Authors : Jenner, L.; Yusupov, M.; Yusupova, G.
Deposited on : 2012-07-18
Resolution : 3.10 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at
<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

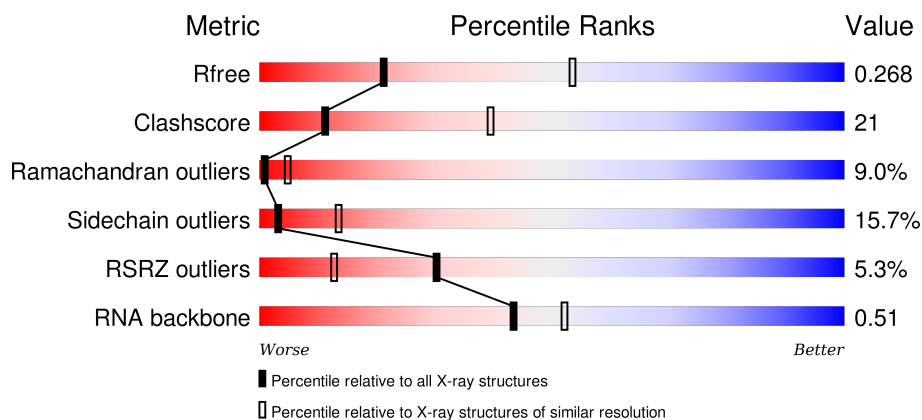
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

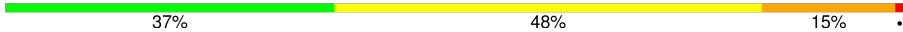
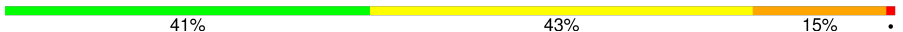
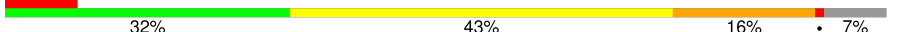
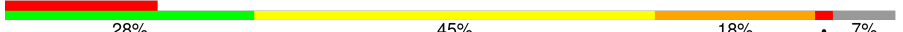
The reported resolution of this entry is 3.10 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	91344	1114 (3.14-3.06)
Clashscore	102246	1222 (3.14-3.06)
Ramachandran outliers	100387	1174 (3.14-3.06)
Sidechain outliers	100360	1174 (3.14-3.06)
RSRZ outliers	91569	1119 (3.14-3.06)
RNA backbone	2183	1010 (3.52-2.68)

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	1506	
1	CA	1506	
2	AE	256	
2	CE	256	


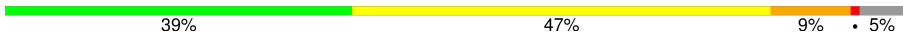
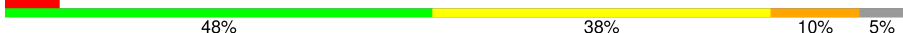



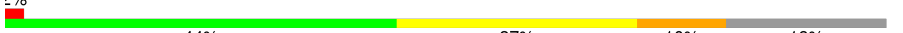




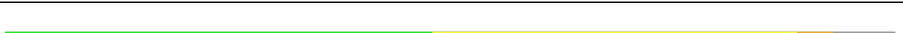













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Mol	Chain	Length	Quality of chain
3	AF	239	
3	CF	239	
4	AG	208	
4	CG	208	
5	AH	162	
5	CH	162	
6	AI	101	
6	CI	101	
7	AJ	156	
7	CJ	156	
8	AK	138	
8	CK	138	
9	AL	128	
9	CL	128	
10	AM	105	
10	CM	105	
11	AN	129	
11	CN	129	
12	AO	128	
12	CO	128	
13	AP	126	
13	CP	126	
14	AQ	61	
14	CQ	61	
15	AR	89	

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Mol	Chain	Length	Quality of chain
15	CR	89	
16	AS	88	
16	CS	88	
17	AT	105	
17	CT	105	
18	AU	88	
18	CU	88	
19	AV	93	
19	CV	93	
20	AW	106	
20	CW	106	
21	AX	27	
21	CX	27	
22	AC	77	
22	AD	77	
22	CC	77	
22	CD	77	
23	A1	6	
23	C1	6	
24	BA	2912	
24	DA	2912	
25	BB	122	
25	DB	122	
26	BD	276	
26	DD	276	





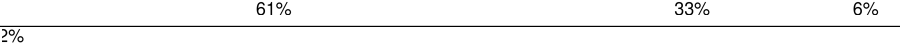
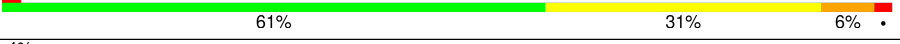



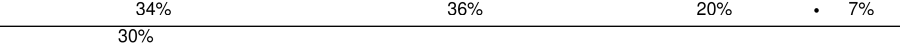
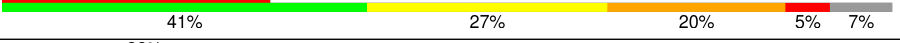
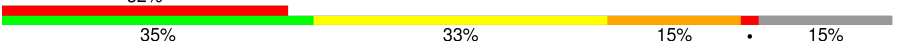

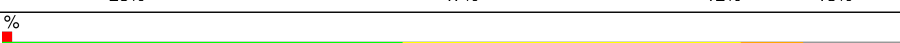
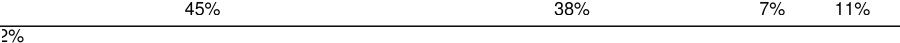
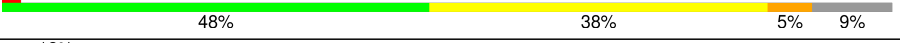



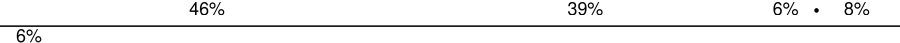
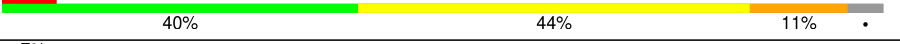




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Mol	Chain	Length	Quality of chain
27	BE	206	
27	DE	206	
28	BF	210	
28	DF	210	
29	BG	182	
29	DG	182	
30	BH	180	
30	DH	180	
31	BK	148	
31	DK	148	
32	BM	140	
32	DM	140	
33	BN	122	
33	DN	122	
34	BO	150	
34	DO	150	
35	BP	141	
35	DP	141	
36	B0	118	
36	D0	118	
37	BQ	112	
37	DQ	112	
38	BR	146	
38	DR	146	
39	B1	118	

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

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Mol	Chain	Length	Quality of chain
52	B7	49	
52	D7	49	
53	B8	65	
53	D8	65	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
54	MG	AA	1601	-	-	-	X
54	MG	AA	1607	-	-	-	X
54	MG	AA	1609	-	-	-	X
54	MG	AA	1618	-	-	-	X
54	MG	AA	1619	-	-	-	X
54	MG	AA	1627	-	-	-	X
54	MG	AA	1634	-	-	-	X
54	MG	AA	1638	-	-	-	X
54	MG	AA	1643	-	-	-	X
54	MG	AA	1644	-	-	-	X
54	MG	AA	1650	-	-	-	X
54	MG	AA	1657	-	-	-	X
54	MG	AA	1666	-	-	-	X
54	MG	AA	1667	-	-	-	X
54	MG	AA	1672	-	-	-	X
54	MG	AA	1676	-	-	-	X
54	MG	AA	1677	-	-	-	X
54	MG	AA	1689	-	-	-	X
54	MG	AA	1694	-	-	-	X
54	MG	AA	1698	-	-	-	X
54	MG	AA	1713	-	-	-	X
54	MG	AA	1717	-	-	-	X
54	MG	AA	1759	-	-	-	X
54	MG	AA	1764	-	-	-	X
54	MG	AA	1769	-	-	-	X
54	MG	AA	1773	-	-	-	X
54	MG	AA	1778	-	-	-	X
54	MG	AA	1790	-	-	-	X
54	MG	AA	1792	-	-	-	X
54	MG	AA	1799	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
54	MG	AA	1808	-	-	-	X
54	MG	AA	1821	-	-	-	X
54	MG	AA	1822	-	-	-	X
54	MG	AA	1829	-	-	-	X
54	MG	AA	1831	-	-	-	X
54	MG	AC	101	-	-	-	X
54	MG	AC	106	-	-	-	X
54	MG	B1	201	-	-	-	X
54	MG	B7	101	-	-	-	X
54	MG	BA	3001	-	-	-	X
54	MG	BA	3002	-	-	-	X
54	MG	BA	3005	-	-	-	X
54	MG	BA	3006	-	-	-	X
54	MG	BA	3008	-	-	-	X
54	MG	BA	3010	-	-	-	X
54	MG	BA	3013	-	-	-	X
54	MG	BA	3016	-	-	-	X
54	MG	BA	3018	-	-	-	X
54	MG	BA	3021	-	-	-	X
54	MG	BA	3023	-	-	-	X
54	MG	BA	3024	-	-	-	X
54	MG	BA	3027	-	-	-	X
54	MG	BA	3028	-	-	-	X
54	MG	BA	3029	-	-	-	X
54	MG	BA	3035	-	-	-	X
54	MG	BA	3038	-	-	-	X
54	MG	BA	3040	-	-	-	X
54	MG	BA	3050	-	-	-	X
54	MG	BA	3053	-	-	-	X
54	MG	BA	3055	-	-	-	X
54	MG	BA	3057	-	-	-	X
54	MG	BA	3059	-	-	-	X
54	MG	BA	3060	-	-	-	X
54	MG	BA	3065	-	-	-	X
54	MG	BA	3067	-	-	-	X
54	MG	BA	3069	-	-	-	X
54	MG	BA	3076	-	-	-	X
54	MG	BA	3081	-	-	-	X
54	MG	BA	3086	-	-	-	X
54	MG	BA	3092	-	-	-	X
54	MG	BA	3095	-	-	-	X
54	MG	BA	3096	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
54	MG	BA	3097	-	-	-	X
54	MG	BA	3103	-	-	-	X
54	MG	BA	3104	-	-	-	X
54	MG	BA	3105	-	-	-	X
54	MG	BA	3108	-	-	-	X
54	MG	BA	3116	-	-	-	X
54	MG	BA	3123	-	-	-	X
54	MG	BA	3133	-	-	-	X
54	MG	BA	3140	-	-	-	X
54	MG	BA	3142	-	-	-	X
54	MG	BA	3145	-	-	-	X
54	MG	BA	3148	-	-	-	X
54	MG	BA	3154	-	-	-	X
54	MG	BA	3155	-	-	-	X
54	MG	BA	3156	-	-	-	X
54	MG	BA	3159	-	-	-	X
54	MG	BA	3162	-	-	-	X
54	MG	BA	3166	-	-	-	X
54	MG	BA	3167	-	-	-	X
54	MG	BA	3168	-	-	-	X
54	MG	BA	3170	-	-	-	X
54	MG	BA	3171	-	-	-	X
54	MG	BA	3172	-	-	-	X
54	MG	BA	3173	-	-	-	X
54	MG	BA	3175	-	-	-	X
54	MG	BA	3177	-	-	-	X
54	MG	BA	3179	-	-	-	X
54	MG	BA	3188	-	-	-	X
54	MG	BA	3189	-	-	-	X
54	MG	BA	3197	-	-	-	X
54	MG	BA	3198	-	-	-	X
54	MG	BA	3208	-	-	-	X
54	MG	BA	3210	-	-	-	X
54	MG	BA	3211	-	-	-	X
54	MG	BA	3222	-	-	-	X
54	MG	BA	3231	-	-	-	X
54	MG	BA	3232	-	-	-	X
54	MG	BA	3236	-	-	-	X
54	MG	BA	3245	-	-	-	X
54	MG	BA	3252	-	-	-	X
54	MG	BA	3254	-	-	-	X
54	MG	BA	3255	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
54	MG	BA	3261	-	-	-	X
54	MG	BA	3267	-	-	-	X
54	MG	BA	3268	-	-	-	X
54	MG	BA	3272	-	-	-	X
54	MG	BA	3285	-	-	-	X
54	MG	BA	3287	-	-	-	X
54	MG	BA	3290	-	-	-	X
54	MG	BA	3291	-	-	-	X
54	MG	BA	3298	-	-	-	X
54	MG	BA	3299	-	-	-	X
54	MG	BA	3302	-	-	-	X
54	MG	BA	3303	-	-	-	X
54	MG	BA	3304	-	-	-	X
54	MG	BA	3327	-	-	-	X
54	MG	BA	3336	-	-	-	X
54	MG	BA	3337	-	-	-	X
54	MG	BA	3338	-	-	-	X
54	MG	BA	3341	-	-	-	X
54	MG	BA	3343	-	-	-	X
54	MG	BA	3351	-	-	-	X
54	MG	BA	3352	-	-	-	X
54	MG	BA	3355	-	-	-	X
54	MG	BA	3359	-	-	-	X
54	MG	BA	3361	-	-	-	X
54	MG	BA	3363	-	-	-	X
54	MG	BA	3371	-	-	-	X
54	MG	BA	3402	-	-	-	X
54	MG	BA	3409	-	-	-	X
54	MG	BA	3422	-	-	-	X
54	MG	BA	3430	-	-	-	X
54	MG	BA	3444	-	-	-	X
54	MG	BA	3472	-	-	-	X
54	MG	BA	3481	-	-	-	X
54	MG	BA	3484	-	-	-	X
54	MG	BA	3508	-	-	-	X
54	MG	BA	3517	-	-	-	X
54	MG	BA	3525	-	-	-	X
54	MG	BA	3534	-	-	-	X
54	MG	BA	3535	-	-	-	X
54	MG	BA	3541	-	-	-	X
54	MG	BA	3551	-	-	-	X
54	MG	BA	3556	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
54	MG	BA	3558	-	-	-	X
54	MG	BA	3559	-	-	-	X
54	MG	BA	3560	-	-	-	X
54	MG	BA	3561	-	-	-	X
54	MG	BA	3567	-	-	-	X
54	MG	BA	3571	-	-	-	X
54	MG	BA	3574	-	-	-	X
54	MG	BA	3579	-	-	-	X
54	MG	BA	3589	-	-	-	X
54	MG	BA	3602	-	-	-	X
54	MG	BA	3607	-	-	-	X
54	MG	BA	3612	-	-	-	X
54	MG	BA	3613	-	-	-	X
54	MG	BA	3628	-	-	-	X
54	MG	BB	202	-	-	-	X
54	MG	BB	209	-	-	-	X
54	MG	BE	301	-	-	-	X
54	MG	CA	1606	-	-	-	X
54	MG	CA	1610	-	-	-	X
54	MG	CA	1633	-	-	-	X
54	MG	CA	1638	-	-	-	X
54	MG	CA	1644	-	-	-	X
54	MG	CA	1653	-	-	-	X
54	MG	CA	1654	-	-	-	X
54	MG	CA	1660	-	-	-	X
54	MG	CA	1665	-	-	-	X
54	MG	CA	1668	-	-	-	X
54	MG	CA	1673	-	-	-	X
54	MG	CA	1682	-	-	-	X
54	MG	CA	1683	-	-	-	X
54	MG	CA	1687	-	-	-	X
54	MG	CA	1688	-	-	-	X
54	MG	CA	1697	-	-	-	X
54	MG	CA	1715	-	-	-	X
54	MG	CA	1742	-	-	-	X
54	MG	CA	1746	-	-	-	X
54	MG	CA	1747	-	-	-	X
54	MG	CA	1768	-	-	-	X
54	MG	CA	1775	-	-	-	X
54	MG	CA	1776	-	-	-	X
54	MG	CA	1793	-	-	-	X
54	MG	CC	102	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
54	MG	CC	109	-	-	-	X
54	MG	D1	201	-	-	-	X
54	MG	DA	3004	-	-	-	X
54	MG	DA	3020	-	-	-	X
54	MG	DA	3028	-	-	-	X
54	MG	DA	3043	-	-	-	X
54	MG	DA	3048	-	-	-	X
54	MG	DA	3050	-	-	-	X
54	MG	DA	3053	-	-	-	X
54	MG	DA	3054	-	-	-	X
54	MG	DA	3067	-	-	-	X
54	MG	DA	3081	-	-	-	X
54	MG	DA	3083	-	-	-	X
54	MG	DA	3084	-	-	-	X
54	MG	DA	3085	-	-	-	X
54	MG	DA	3090	-	-	-	X
54	MG	DA	3096	-	-	-	X
54	MG	DA	3100	-	-	-	X
54	MG	DA	3103	-	-	-	X
54	MG	DA	3106	-	-	-	X
54	MG	DA	3108	-	-	-	X
54	MG	DA	3109	-	-	-	X
54	MG	DA	3112	-	-	-	X
54	MG	DA	3114	-	-	-	X
54	MG	DA	3119	-	-	-	X
54	MG	DA	3124	-	-	-	X
54	MG	DA	3128	-	-	-	X
54	MG	DA	3132	-	-	-	X
54	MG	DA	3140	-	-	-	X
54	MG	DA	3141	-	-	-	X
54	MG	DA	3145	-	-	-	X
54	MG	DA	3153	-	-	-	X
54	MG	DA	3158	-	-	-	X
54	MG	DA	3159	-	-	-	X
54	MG	DA	3160	-	-	-	X
54	MG	DA	3165	-	-	-	X
54	MG	DA	3170	-	-	-	X
54	MG	DA	3171	-	-	-	X
54	MG	DA	3172	-	-	-	X
54	MG	DA	3173	-	-	-	X
54	MG	DA	3175	-	-	-	X
54	MG	DA	3177	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
54	MG	DA	3178	-	-	-	X
54	MG	DA	3181	-	-	-	X
54	MG	DA	3194	-	-	-	X
54	MG	DA	3195	-	-	-	X
54	MG	DA	3199	-	-	-	X
54	MG	DA	3202	-	-	-	X
54	MG	DA	3209	-	-	-	X
54	MG	DA	3210	-	-	-	X
54	MG	DA	3211	-	-	-	X
54	MG	DA	3212	-	-	-	X
54	MG	DA	3213	-	-	-	X
54	MG	DA	3215	-	-	-	X
54	MG	DA	3218	-	-	-	X
54	MG	DA	3219	-	-	-	X
54	MG	DA	3221	-	-	-	X
54	MG	DA	3224	-	-	-	X
54	MG	DA	3225	-	-	-	X
54	MG	DA	3227	-	-	-	X
54	MG	DA	3229	-	-	-	X
54	MG	DA	3230	-	-	-	X
54	MG	DA	3232	-	-	-	X
54	MG	DA	3236	-	-	-	X
54	MG	DA	3242	-	-	-	X
54	MG	DA	3251	-	-	-	X
54	MG	DA	3254	-	-	-	X
54	MG	DA	3255	-	-	-	X
54	MG	DA	3257	-	-	-	X
54	MG	DA	3267	-	-	-	X
54	MG	DA	3272	-	-	-	X
54	MG	DA	3281	-	-	-	X
54	MG	DA	3285	-	-	-	X
54	MG	DA	3295	-	-	-	X
54	MG	DA	3297	-	-	-	X
54	MG	DA	3302	-	-	-	X
54	MG	DA	3305	-	-	-	X
54	MG	DA	3310	-	-	-	X
54	MG	DA	3312	-	-	-	X
54	MG	DA	3313	-	-	-	X
54	MG	DA	3316	-	-	-	X
54	MG	DA	3317	-	-	-	X
54	MG	DA	3318	-	-	-	X
54	MG	DA	3331	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
54	MG	DA	3336	-	-	-	X
54	MG	DA	3341	-	-	-	X
54	MG	DA	3346	-	-	-	X
54	MG	DA	3348	-	-	-	X
54	MG	DA	3355	-	-	-	X
54	MG	DA	3369	-	-	-	X
54	MG	DA	3370	-	-	-	X
54	MG	DA	3371	-	-	-	X
54	MG	DA	3381	-	-	-	X
54	MG	DA	3386	-	-	-	X
54	MG	DA	3388	-	-	-	X
54	MG	DA	3397	-	-	-	X
54	MG	DA	3413	-	-	-	X
54	MG	DA	3414	-	-	-	X
54	MG	DA	3418	-	-	-	X
54	MG	DA	3465	-	-	-	X
54	MG	DA	3467	-	-	-	X
54	MG	DA	3469	-	-	-	X
54	MG	DA	3471	-	-	-	X
54	MG	DA	3473	-	-	-	X
54	MG	DA	3475	-	-	-	X
54	MG	DA	3478	-	-	-	X
54	MG	DA	3479	-	-	-	X
54	MG	DA	3480	-	-	-	X
54	MG	DA	3481	-	-	-	X
54	MG	DA	3491	-	-	-	X
54	MG	DA	3506	-	-	-	X
54	MG	DA	3508	-	-	-	X
54	MG	DA	3511	-	-	-	X
54	MG	DA	3512	-	-	-	X
54	MG	DB	202	-	-	-	X
54	MG	DB	206	-	-	-	X
54	MG	DB	207	-	-	-	X

2 Entry composition

There are 56 unique types of molecules in this entry. The entry contains 295766 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	1506	Total	C	N	O	P	0	0	0
			32369	14408	5997	10459	1505			
1	CA	1506	Total	C	N	O	P	0	0	0
			32372	14408	5997	10461	1506			

- Molecule 2 is a protein called 30S RIBOSOMAL PROTEIN S2.

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

- Molecule 3 is a protein called 30S RIBOSOMAL PROTEIN S3.

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

- Molecule 4 is a protein called 30S RIBOSOMAL PROTEIN S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AG	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			
4	CG	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

- Molecule 5 is a protein called 30S RIBOSOMAL PROTEIN S5.

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

- Molecule 6 is a protein called 30S RIBOSOMAL PROTEIN S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AI	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			
6	CI	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 7 is a protein called 30S RIBOSOMAL PROTEIN S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AJ	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			
7	CJ	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

- Molecule 8 is a protein called 30S RIBOSOMAL PROTEIN S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AK	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			
8	CK	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 9 is a protein called 30S RIBOSOMAL PROTEIN S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AL	127	Total	C	N	O		0	0	0
			1010	639	197	174				
9	CL	127	Total	C	N	O		0	0	0
			1010	639	197	174				

- Molecule 10 is a protein called 30S RIBOSOMAL PROTEIN S10.

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

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

- Molecule 11 is a protein called 30S RIBOSOMAL PROTEIN S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AN	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			
11	CN	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			

- Molecule 12 is a protein called 30S RIBOSOMAL PROTEIN S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AO	125	Total	C	N	O	S	0	0	0
			975	614	196	164	1			
12	CO	125	Total	C	N	O	S	0	0	0
			975	614	196	164	1			

- Molecule 13 is a protein called 30S RIBOSOMAL PROTEIN S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AP	116	Total	C	N	O	S	0	0	0
			928	574	191	161	2			
13	CP	117	Total	C	N	O	S	0	0	0
			933	577	192	162	2			

- Molecule 14 is a protein called 30S RIBOSOMAL PROTEIN S14.

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

- Molecule 15 is a protein called 30S RIBOSOMAL PROTEIN S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AR	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			
15	CR	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			

- Molecule 16 is a protein called 30S RIBOSOMAL PROTEIN S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AS	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			
16	CS	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			

- Molecule 17 is a protein called 30S RIBOSOMAL PROTEIN S17.

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

- Molecule 18 is a protein called 30S RIBOSOMAL PROTEIN S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	AU	72	Total	C	N	O	0	0	0
			591	376	117	98			
18	CU	72	Total	C	N	O	0	0	0
			591	376	117	98			

- Molecule 19 is a protein called 30S RIBOSOMAL PROTEIN S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AV	83	Total	C	N	O	S	0	0	0
			665	424	124	115	2			
19	CV	78	Total	C	N	O	S	0	0	0
			624	398	115	109	2			

- Molecule 20 is a protein called 30S RIBOSOMAL PROTEIN S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AW	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			
20	CW	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			

- Molecule 21 is a protein called 30S RIBOSOMAL PROTEIN THX.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	AX	25	Total	C	N	O	0	0	0
			217	134	52	31			
21	CX	25	Total	C	N	O	0	0	0
			217	134	52	31			

- Molecule 22 is a RNA chain called TRNA-FMET.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AC	77	Total	C	N	O	P	0	0	0
			1640	732	298	534	76			
22	AD	77	Total	C	N	O	P	0	0	0
			1640	732	298	534	76			
22	CC	77	Total	C	N	O	P	0	0	0
			1640	732	298	534	76			
22	CD	77	Total	C	N	O	P	0	0	0
			1640	732	298	534	76			

There are 16 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AC	17A	C	U	CONFLICT	GB AP008226.1
AC	50	U	C	CONFLICT	GB AP008226.1
AC	51	C	G	CONFLICT	GB AP008226.1
AC	63	G	C	CONFLICT	GB AP008226.1
AD	17A	C	U	CONFLICT	GB AP008226.1
AD	50	U	C	CONFLICT	GB AP008226.1
AD	51	C	G	CONFLICT	GB AP008226.1
AD	63	G	C	CONFLICT	GB AP008226.1
CC	17A	C	U	CONFLICT	GB AP008226.1
CC	50	U	C	CONFLICT	GB AP008226.1
CC	51	C	G	CONFLICT	GB AP008226.1
CC	63	G	C	CONFLICT	GB AP008226.1
CD	17A	C	U	CONFLICT	GB AP008226.1
CD	50	U	C	CONFLICT	GB AP008226.1
CD	51	C	G	CONFLICT	GB AP008226.1
CD	63	G	C	CONFLICT	GB AP008226.1

- Molecule 23 is a RNA chain called MRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	A1	6	Total	C	N	O	P	0	0	0
			129	58	24	41	6			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	C1	6	Total	C	N	O	P	0	0	0
			129	58	24	41	6			

- Molecule 24 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	BA	2912	Total	C	N	O	P	0	0	0
			62707	27911	11722	20163	2911			
24	DA	2906	Total	C	N	O	P	0	0	0
			62587	27857	11709	20116	2905			

There are 14 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BA	161	U	-	EXPRESSION TAG	GB AP008226.1
BA	654A	A	G	CONFLICT	GB AP008226.1
BA	654E	C	G	CONFLICT	GB AP008226.1
BA	654P	G	C	CONFLICT	GB AP008226.1
BA	654T	A	C	CONFLICT	GB AP008226.1
BA	1058	U	G	CONFLICT	GB AP008226.1
BA	1080	A	C	CONFLICT	GB AP008226.1
DA	166	U	-	INSERTION	GB AP008226.1
DA	654A	A	G	CONFLICT	GB AP008226.1
DA	654E	C	G	CONFLICT	GB AP008226.1
DA	654P	G	C	CONFLICT	GB AP008226.1
DA	654T	A	C	CONFLICT	GB AP008226.1
DA	1058	U	G	CONFLICT	GB AP008226.1
DA	1080	A	C	CONFLICT	GB AP008226.1

- Molecule 25 is a RNA chain called 5S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BB	122	Total	C	N	O	P	0	0	0
			2617	1166	486	844	121			
25	DB	122	Total	C	N	O	P	0	0	0
			2617	1166	486	844	121			

- Molecule 26 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	BD	272	Total	C	N	O	S	0	0	0
			2115	1335	420	357	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	DD	272	Total	C	N	O	S	0	0	0
			2115	1335	420	357	3			

- Molecule 27 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BE	205	Total	C	N	O	S	0	0	0
			1568	991	300	271	6			
27	DE	205	Total	C	N	O	S	0	0	0
			1568	991	300	271	6			

- Molecule 28 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	BF	202	Total	C	N	O	S	0	0	0
			1585	1011	297	275	2			
28	DF	208	Total	C	N	O	S	0	0	0
			1627	1037	304	283	3			

- Molecule 29 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	BG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			
29	DG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			

- Molecule 30 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	BH	170	Total	C	N	O	S	0	0	0
			1307	829	245	232	1			
30	DH	170	Total	C	N	O	S	0	0	0
			1307	829	245	232	1			

- Molecule 31 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	BK	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			
31	DK	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			

- Molecule 32 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BM	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			
32	DM	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			

- Molecule 33 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	BN	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			
33	DN	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			

- Molecule 34 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BO	150	Total	C	N	O	S	0	0	0
			1145	712	232	198	3			
34	DO	150	Total	C	N	O	S	0	0	0
			1145	712	232	198	3			

- Molecule 35 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BP	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			
35	DP	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			

- Molecule 36 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	B0	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			
36	D0	117	Total	C	N	O		0	0	0
			960	599	202	159				

- Molecule 37 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
37	BQ	111	Total	C	N	O	0	0	0
			882	556	176	150			
37	DQ	111	Total	C	N	O	0	0	0
			882	556	176	150			

- Molecule 38 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BR	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			
38	DR	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			

- Molecule 39 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	B1	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			
39	D1	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			

- Molecule 40 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	B2	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			
40	D2	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 41 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BS	113	Total	C	N	O	S	0	0	0
			900	566	177	155	2			
41	DS	113	Total	C	N	O	S	0	0	0
			900	566	177	155	2			

- Molecule 42 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	BT	92	Total	C	N	O	0	0	0
			725	471	131	123			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	DT	92	Total	C	N	O	0	0	0
			725	471	131	123			

- Molecule 43 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BU	102	Total	C	N	O	S	0	0	0
			785	505	150	125	5			
43	DU	102	Total	C	N	O	S	0	0	0
			785	505	150	125	5			

- Molecule 44 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	BV	175	Total	C	N	O	S	0	0	0
			1397	892	251	251	3			
44	DV	179	Total	C	N	O	S	0	0	0
			1428	911	255	259	3			

- Molecule 45 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	B3	76	Total	C	N	O	S	0	0	0
			607	376	128	102	1			
45	D3	77	Total	C	N	O	S	0	0	0
			613	379	129	104	1			

- Molecule 46 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BZ	97	Total	C	N	O	S	0	0	0
			763	481	150	131	1			
46	DZ	97	Total	C	N	O	S	0	0	0
			763	481	150	131	1			

- Molecule 47 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BW	66	Total	C	N	O	S	0	0	0
			558	346	113	98	1			
47	DW	69	Total	C	N	O	S	0	0	0
			581	358	118	104	1			

- Molecule 48 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
48	BX	59	Total	C	N	O	0	0	0
			469	298	90	81			
48	DX	59	Total	C	N	O	0	0	0
			469	298	90	81			

- Molecule 49 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	B4	66	Total	C	N	O	S	0	0	0
			533	335	96	97	5			
49	D4	63	Total	C	N	O	S	0	0	0
			515	326	93	91	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	B5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			
50	D5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			

- Molecule 51 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	B6	45	Total	C	N	O	S	0	0	0
			389	241	79	65	4			
51	D6	45	Total	C	N	O	S	0	0	0
			389	241	79	65	4			

- Molecule 52 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	B7	49	Total	C	N	O	S	0	0	0
			430	263	108	57	2			
52	D7	49	Total	C	N	O	S	0	0	0
			430	263	108	57	2			

- Molecule 53 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	B8	61	Total 488	C 312	N 99	O 75	S 2	0	0	0
53	D8	61	Total 488	C 312	N 99	O 75	S 2	0	0	0

- Molecule 54 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	BA	632	Total 632	Mg 632	0	0
54	CA	199	Total 199	Mg 199	0	0
54	B8	2	Total 2	Mg 2	0	0
54	BE	4	Total 4	Mg 4	0	0
54	DU	2	Total 2	Mg 2	0	0
54	B1	1	Total 1	Mg 1	0	0
54	AN	2	Total 2	Mg 2	0	0
54	CN	1	Total 1	Mg 1	0	0
54	B5	1	Total 1	Mg 1	0	0
54	BB	16	Total 16	Mg 16	0	0
54	D8	1	Total 1	Mg 1	0	0
54	D3	1	Total 1	Mg 1	0	0
54	BF	2	Total 2	Mg 2	0	0
54	DR	1	Total 1	Mg 1	0	0
54	B2	1	Total 1	Mg 1	0	0
54	AA	236	Total 236	Mg 236	0	0
54	CX	1	Total 1	Mg 1	0	0
54	CG	2	Total 2	Mg 2	0	0

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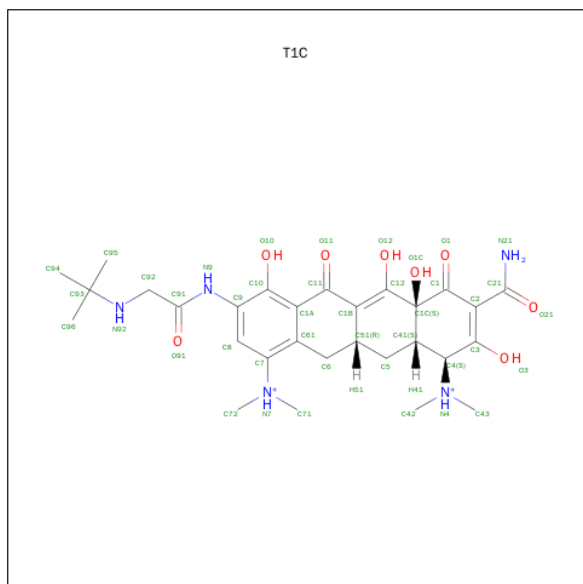
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	BU	2	Total 2	Mg 2	0	0
54	A1	1	Total 1	Mg 1	0	0
54	AD	1	Total 1	Mg 1	0	0
54	CC	9	Total 9	Mg 9	0	0
54	DE	4	Total 4	Mg 4	0	0
54	B3	2	Total 2	Mg 2	0	0
54	DA	523	Total 523	Mg 523	0	0
54	B7	3	Total 3	Mg 3	0	0
54	AG	1	Total 1	Mg 1	0	0
54	BO	2	Total 2	Mg 2	0	0
54	AQ	1	Total 1	Mg 1	0	0
54	D1	1	Total 1	Mg 1	0	0
54	AH	1	Total 1	Mg 1	0	0
54	DP	1	Total 1	Mg 1	0	0
54	AC	8	Total 8	Mg 8	0	0
54	D5	1	Total 1	Mg 1	0	0
54	BD	1	Total 1	Mg 1	0	0
54	AT	1	Total 1	Mg 1	0	0
54	B0	1	Total 1	Mg 1	0	0
54	CS	1	Total 1	Mg 1	0	0
54	CL	1	Total 1	Mg 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	DB	15	Total	Mg	0	0
			15	15		

- Molecule 55 is TIGECYCLINE (three-letter code: T1C) (formula: C₂₉H₄₁N₅O₈).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
55	AA	1	Total	C	N	O	0	0
			42	29	5	8		
55	CA	1	Total	C	N	O	0	0
			42	29	5	8		

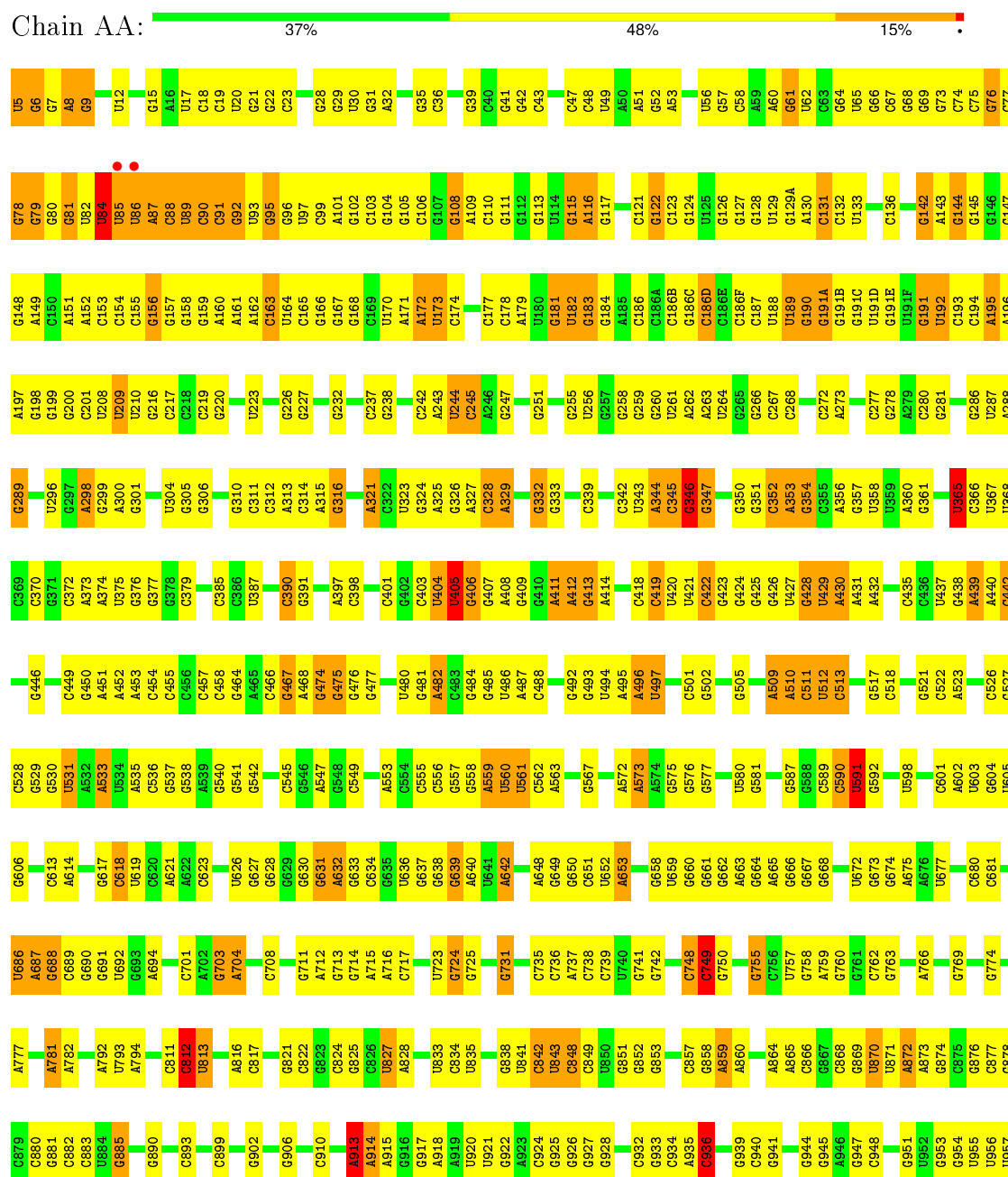
- Molecule 56 is ZINC ION (three-letter code: ZN) (formula: Zn).

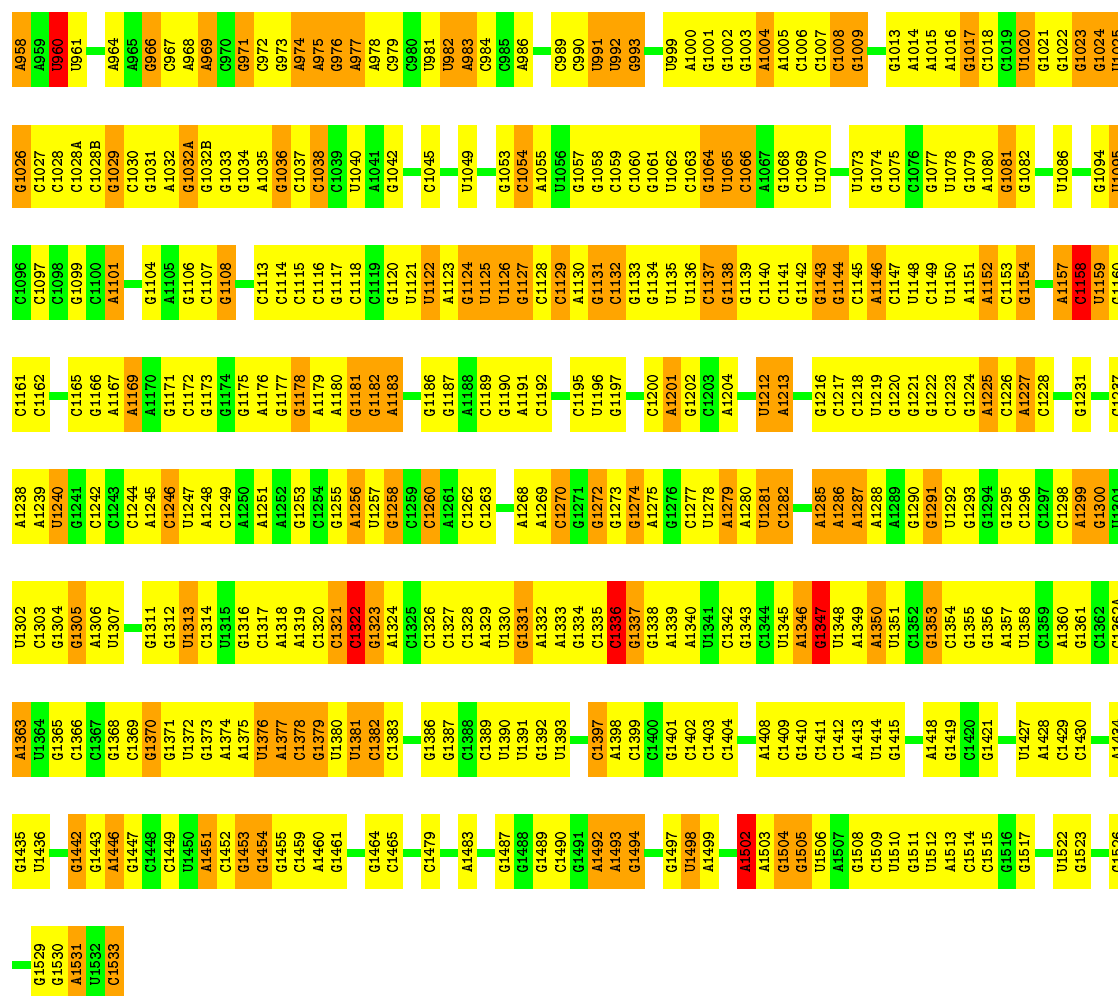
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	AG	1	Total	Zn	0	0
			1	1		
56	AQ	1	Total	Zn	0	0
			1	1		
56	CQ	1	Total	Zn	0	0
			1	1		
56	CG	1	Total	Zn	0	0
			1	1		

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.

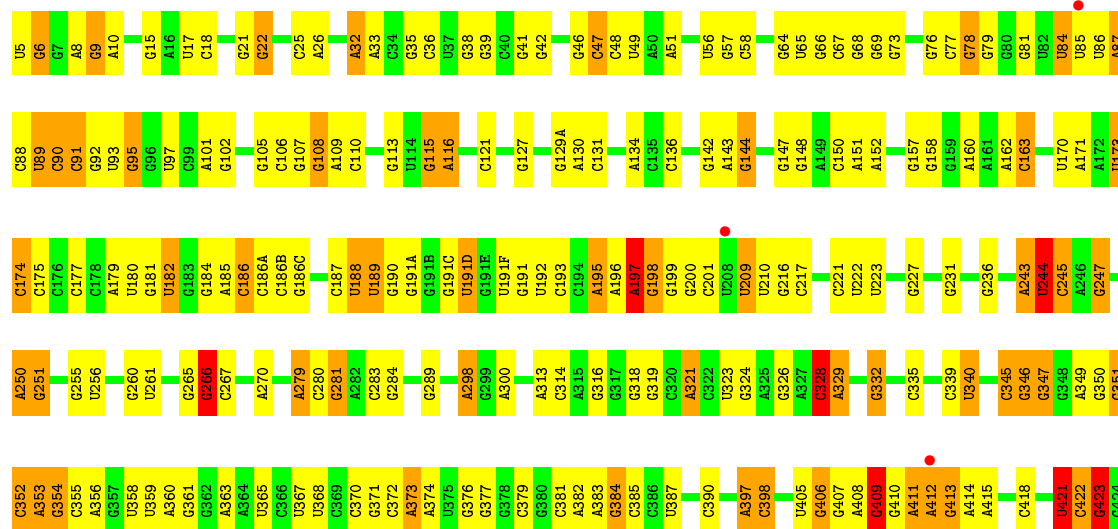
- Molecule 1: 16S ribosomal RNA





• Molecule 1: 16S ribosomal RNA

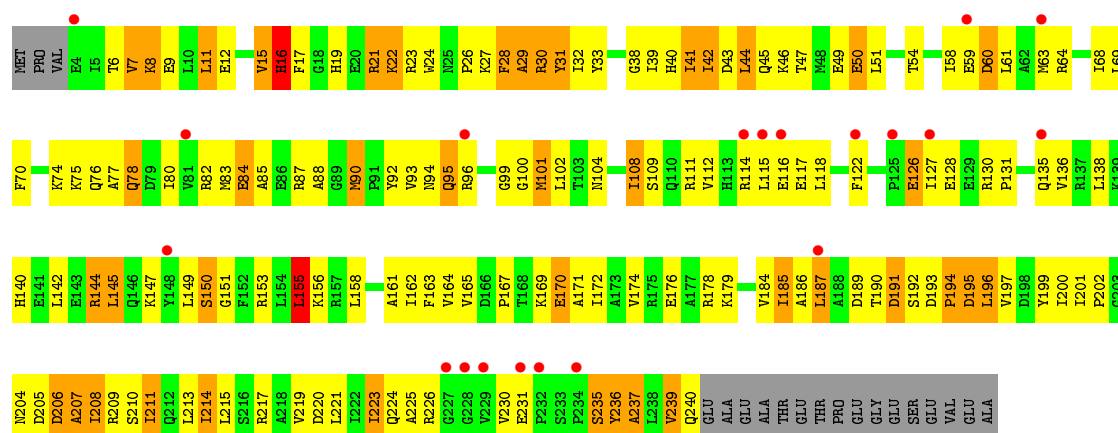
Chain CA: 41% 43% 15%



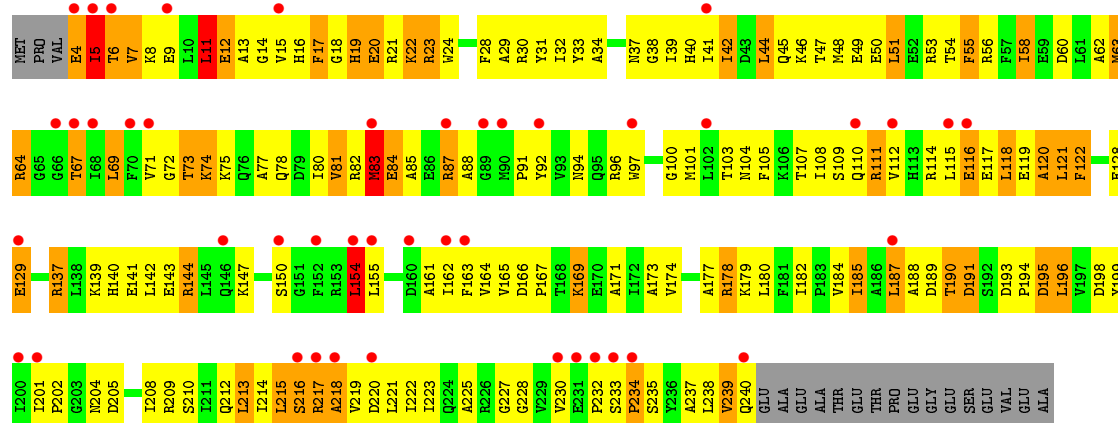
A1493	G1373	A1306	C1243	G1175	G1107	G1042	C985	U921	U841	G755	G671	A583	C511	G425
A1374	A1374	U1307	C1244	A1176	G1108	C1043	A986	G922	C842	C756	U672	G584	C514	G426
G1375	U1375	U1308	A1245	G1177	C1109	A1044	G987	A923	U843	C757	G673	G585	G514	G427
U1376	G1376	G1309	A1245	G1178	C1110	C1045	G988	C924	C844	U757	G674	G586	G515	G428
A1377	A1377	G1310	C1249	G1179	C1111	A1046	C989	G925	U849	G758	U675	G587	U516	U429
C1378	A1250	G1311	A1250	A1180	C1112	G1047	C990	G926	U850	G761	U677	G588	G517	U430
G1379	A1251	G1312	A1251	G1181	C1113	G1048	U991	G927	G851	U676	U677	G589	C518	A431
	A1252		A1252	G1182	G1117	G1049	U992	G928	G852	U686	U686	C590	G521	A432
	G1253		G1253	A1183	C1118	C1050	U993	G929	G853	A766	A687	U591	G522	C433
	G1254		G1254	G1186	C1119	U1051	A994	C932	G854	A767	G688	G595	A523	C436
	G1255		G1255	G1187	C1120	G1052	U997	C933	C857	U768	C689	G595	G524	U437
	A1256		A1256	G1187	U1121	G1053	G998	C934	G857	G769	G690	C596	G525	U438
	U1257		U1257	A1188	U1122	C1054	C998A	C935	G858	G775	U692	C600	C526	A439
	G1258		G1258	C1189	A1123	A1055	U999	C936	A859	G776	G693	G601	G527	U440
	C1259		C1259	G1190	G1124	U1056	U999	A937	A860	U777	G693	A602	C528	U442
	C1260		C1260	A1191	U1125	G1057	U999	A938	G861	A777	C701	U603	G529	C443
	A1261		A1261	C1192	U1126	G1058	G1001	C939	C862	G778	G702	G604	G530	U444
	C1262		C1262	C1192	U1127	C1059	G1002	C940	U863	G785	G703	U605	U531	U445
	G1263		G1263	C1195	C1128	C1060	G1003	C941	A864	G786	A704	G606	A532	U447
	C1264		C1264	U1196	C1129	U1061	A1004	G944	A865	U787	C707	A614	U534	U448
	G1265		G1265	G1197	A1130	U1062	A1005	A945	G866	A790	C708	A535	U535	C449
	G1266		G1266	G1198	C1131	C1063	C1006	A946	C867	G791	G713	G618	C536	U452
	C1267		C1267	U1199	C1132	G1064	C1007	A947	C868	U792	G714	U619	G537	A453
	A1268		A1268	C1200	G1133	U1065	C1008	C948	G869	U793	G715	G620	A539	C457
	C1269		C1269	A1201	G1134	C1066	G1009	C949	A872	U794	A716	A621	G540	C458
	G1270		G1270	G1202	U1135	C1069	G1011	G951	A873	C795	G717	G622	G541	U464
	G1271		G1271	C1203	C1137	G1072	A1014	U952	C874	C796	G718	G623	G542	U465
	U1272		U1272	A1204	U1136	U1073	A1015	G953	C875	C797	G719	G627	C544	U466
	G1273		G1273	G1197	U1137	G1074	A1016	G954	C876	G798	C720	G628	C545	U467
	A1275		A1275	G1207	C1140	G1075	U1017	U955	C877	G799	G721	G629	G546	U468
	G1276		G1276	C1217	C1141	C1076	G1018	U956	C878	G800	G724	G630	G547	U474
	C1277		C1277	U1212	G1142	U1076	C1019	U957	C879	U801	G725	G631	G548	U475
	U1278		U1278	A1213	G1143	U1077	C1020	A958	C880	A802	G726	G632	C549	U476
	A1279		A1279	C1214	U1144	U1078	G1021	U959	C881	G803	G727	G633	G550	U480
	U1280		U1280	G1215	C1145	G1079	U1022	U960	C882	U804	A728	G634	U551	C483
	G1281		G1281	G1216	A1146	A1080	G1023	U961	C883	C905	G735	A640	U552	C484
	C1282		C1282	C1217	G1147	G1081	G1024	C962	U884	C905	G736	U641	U559	U485
	G1283		G1283	U1148	C1149	G1084	U1025	G963	G885	C911	G737	A640	U560	U486
	C1284		C1284	C1218	U1149	U1085	G1026	A964	A889	C912	G738	A641	U561	U487
	A1285		A1285	G1220	C1152	U1086	C1027	G966	G890	U813	C739	G650	C562	C490
	U1286		U1286	G1221	C1153	G1087	G1028	G967	C899	U814	U740	G651	C564	C492
	A1287		A1287	G1224	U1154	G1088	C1028A	A968	C899	A815	G741	A653	U571	U495
	C1288		C1288	A1225	G1155	U1091	C1028B	A969	A900	A816	G742	U659	A572	A496
	U1290		U1290	C1226	G1156	C1091	G1029	G970	A901	C817	G743	G660	A573	U497
	G1291		G1291	A1227	U1157	U1092	G1030	C971	G902	C818	C744	G661	G576	C501
	U1292		U1292	C1228	C1158	G1094	G1031	C972	G903	A819	C745	G662	G577	G502
	G1293		G1293	U1229	U1159	U1095	A1032	G973	U820	U820	G746	A663	C578	G505
				A1230	G1160	C1096	G1032A	A974	G906	G821	G747	U659	G579	G506
				G1231	C1161	C1097	G1032B	A975	A909	C826	U743	G660	U580	A509
				U1232	G1162	C1098	G1033	G976	C910	U827	C745	G661	G581	A510
				U1235	G1166	G1099	G1034	A977	C910	U828	C746	G662	G582	A511
				U1236	G1167	C1100	A1035	A978	A913	A828	C747	A663	G583	A512
				C1237	A1170	A1102	G1036	C979	A914	U833	C748	G664	G584	A513
				A1238	G1171	C1103	C1038	U981	A918	G836	C749	A665	G585	A514
				A1239	C1172	G1104	C1039	U982	A919	U837	G750	G666	G586	A515
				U1240	G1173	A1105	U1039	U983	A919	U837	A753	G667	G587	A516
					G1174	G1106	A1041	C984	U920	G838	C754		G588	A517

• Molecule 2: 30S RIBOSOMAL PROTEIN S2

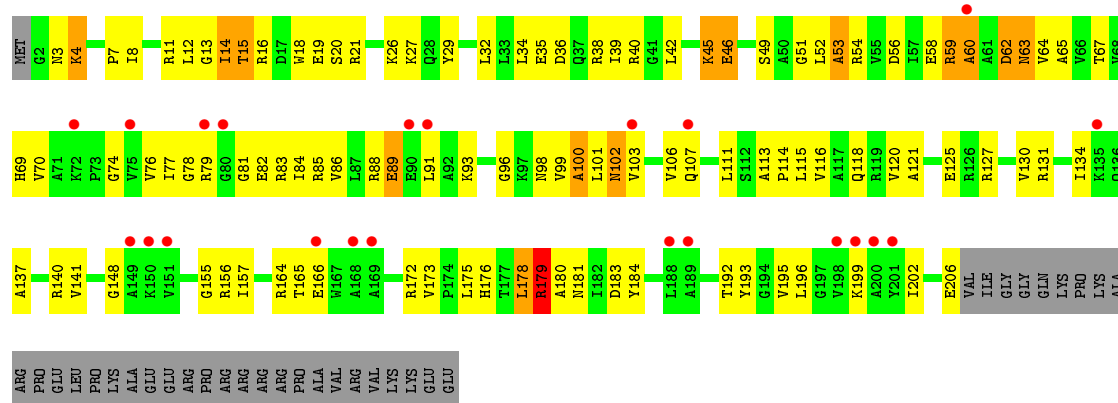
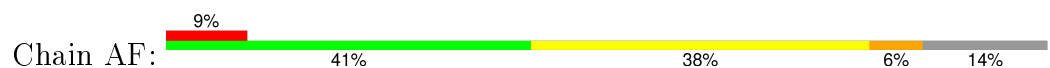




• Molecule 2: 30S RIBOSOMAL PROTEIN S2

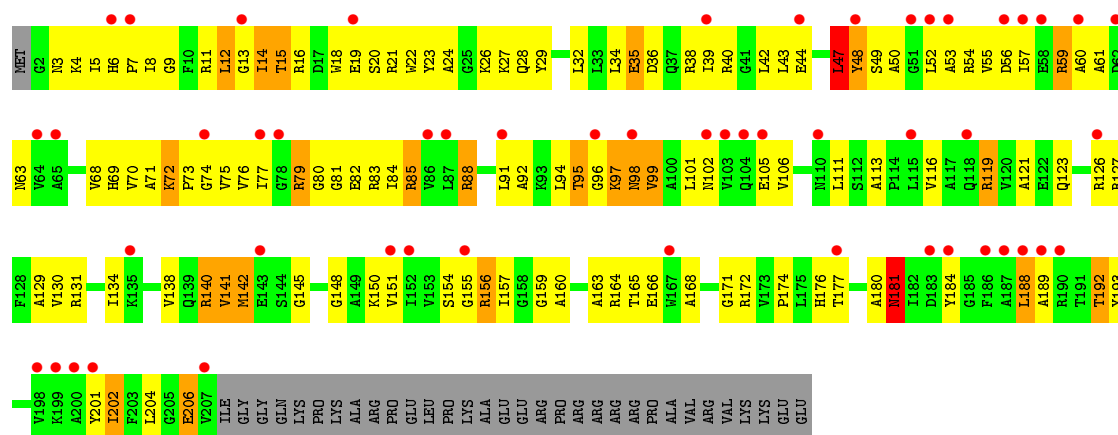


• Molecule 3: 30S RIBOSOMAL PROTEIN S3



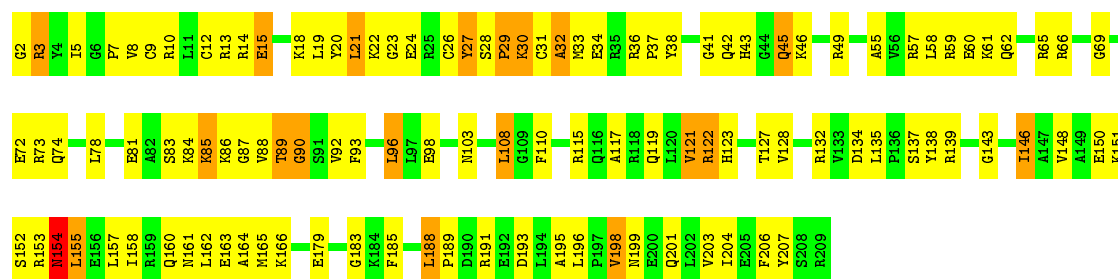
• Molecule 3: 30S RIBOSOMAL PROTEIN S3





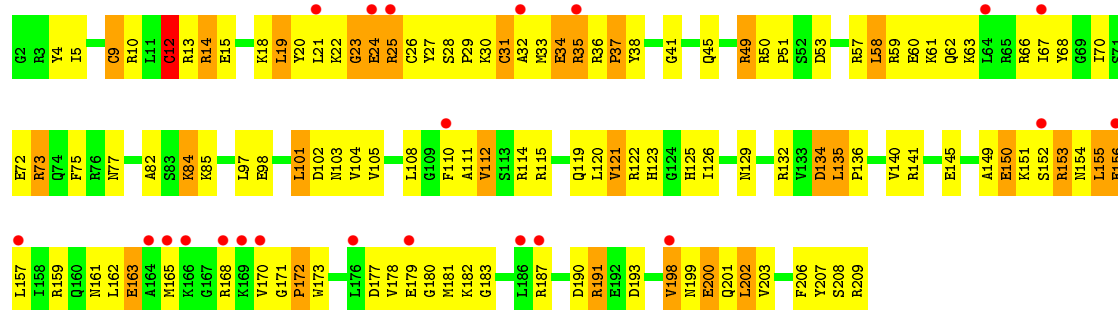
• Molecule 4: 30S RIBOSOMAL PROTEIN S4

Chain AG: 45% 45% 9%



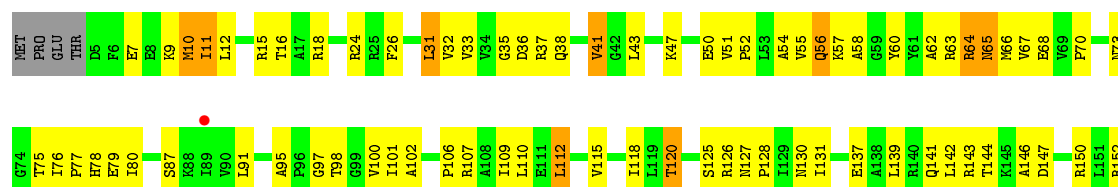
• Molecule 4: 30S RIBOSOMAL PROTEIN S4

Chain CG: 11% 42% 44% 14%



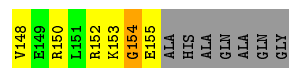
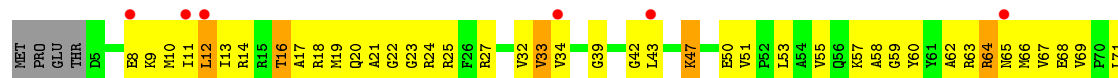
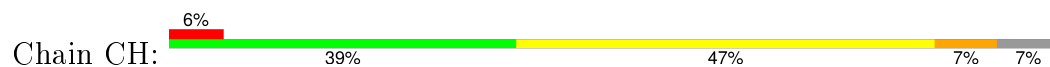
• Molecule 5: 30S RIBOSOMAL PROTEIN S5

Chain AH: % 45% 42% 6% 7%

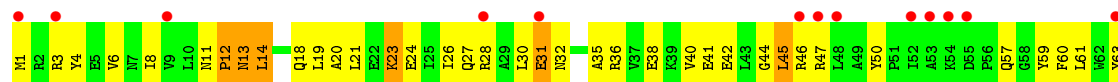




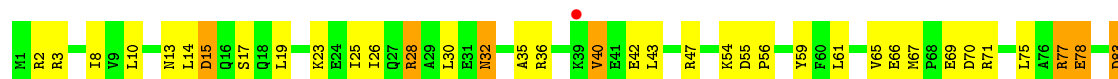
• Molecule 5: 30S RIBOSOMAL PROTEIN S5



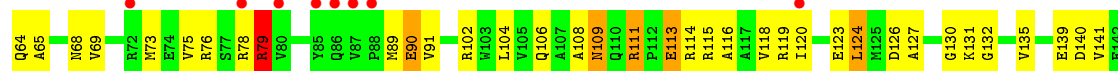
• Molecule 6: 30S RIBOSOMAL PROTEIN S6



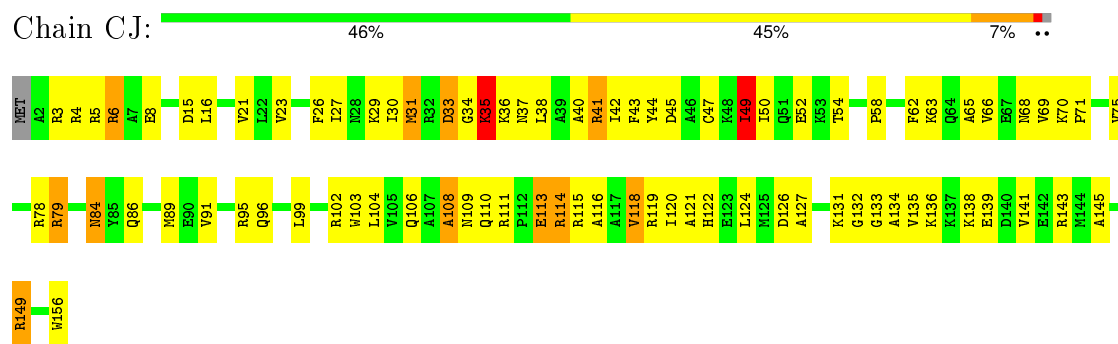
• Molecule 6: 30S RIBOSOMAL PROTEIN S6



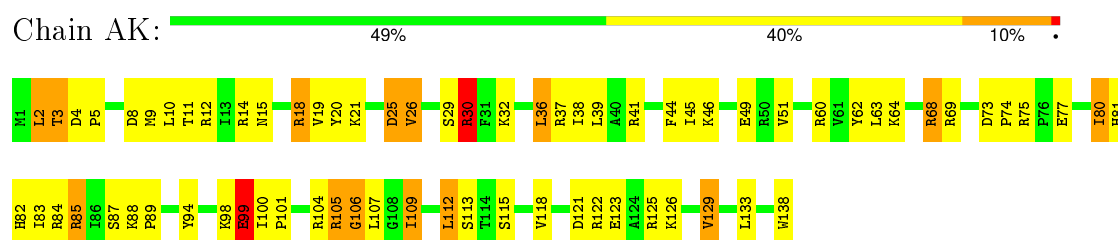
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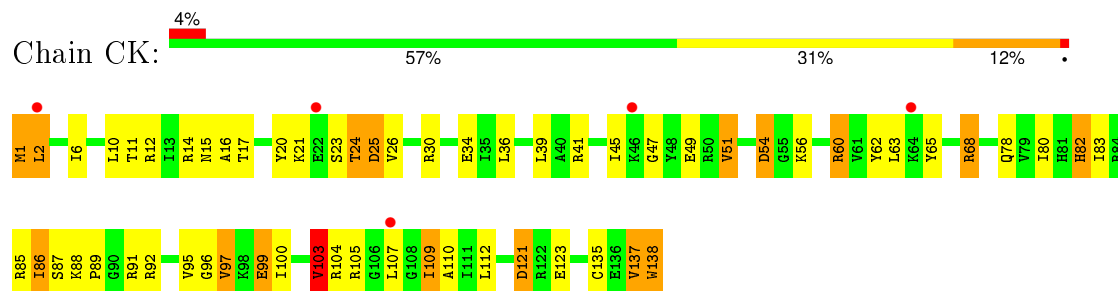
- Molecule 7: 30S RIBOSOMAL PROTEIN S7



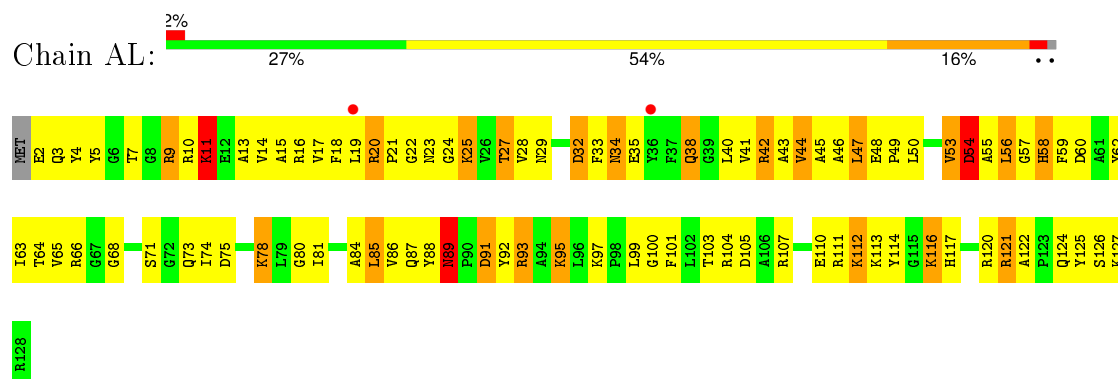
- Molecule 8: 30S RIBOSOMAL PROTEIN S8



- Molecule 8: 30S RIBOSOMAL PROTEIN S8

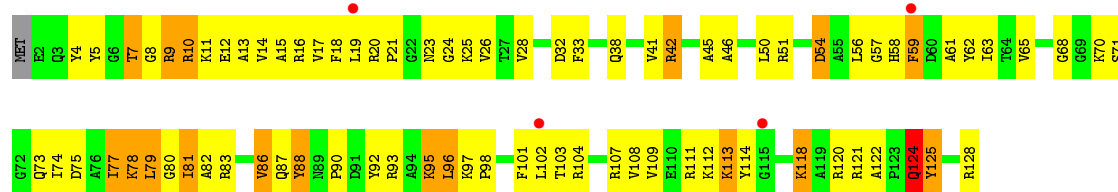


- Molecule 9: 30S RIBOSOMAL PROTEIN S9

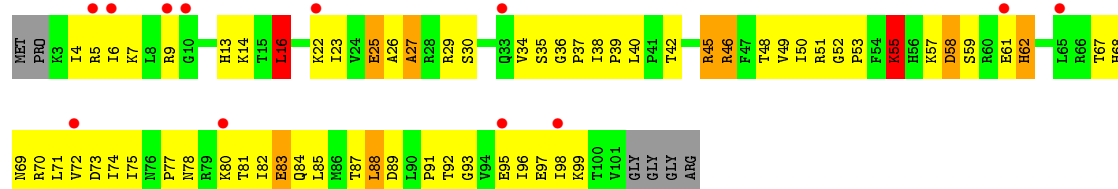


- Molecule 9: 30S RIBOSOMAL PROTEIN S9

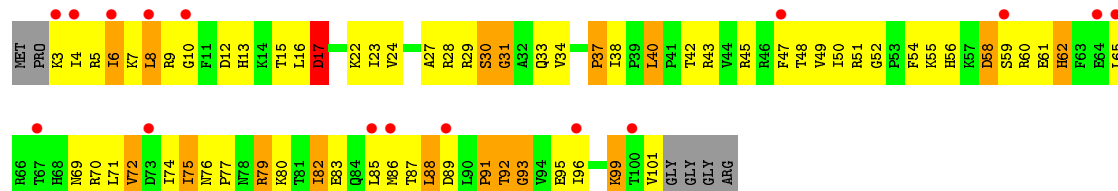




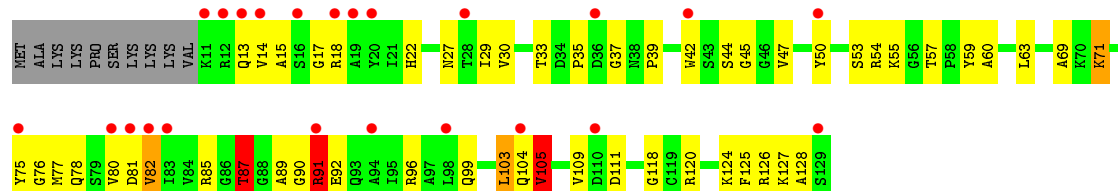
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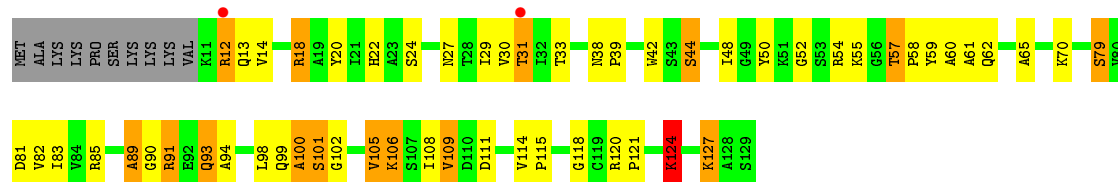
• Molecule 10: 30S RIBOSOMAL PROTEIN S10



• Molecule 11: 30S RIBOSOMAL PROTEIN S11

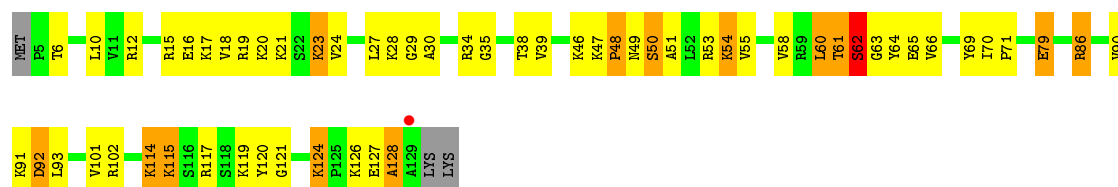


• Molecule 11: 30S RIBOSOMAL PROTEIN S11

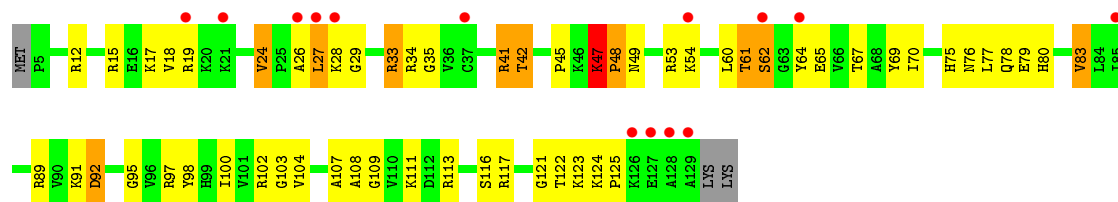


• Molecule 12: 30S RIBOSOMAL PROTEIN S12

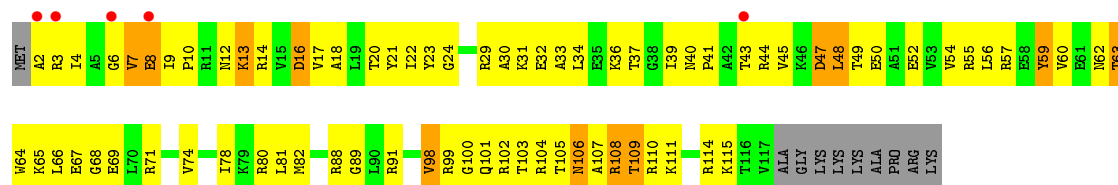




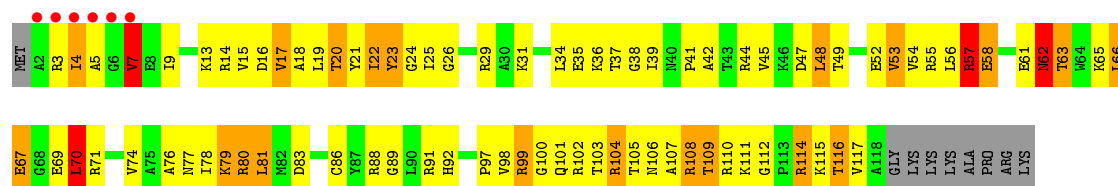
• Molecule 12: 30S RIBOSOMAL PROTEIN S12



• Molecule 13: 30S RIBOSOMAL PROTEIN S13



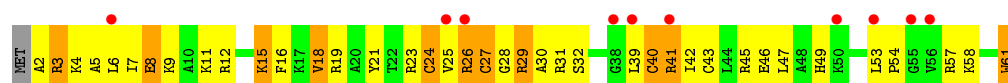
• Molecule 13: 30S RIBOSOMAL PROTEIN S13



• Molecule 14: 30S RIBOSOMAL PROTEIN S14

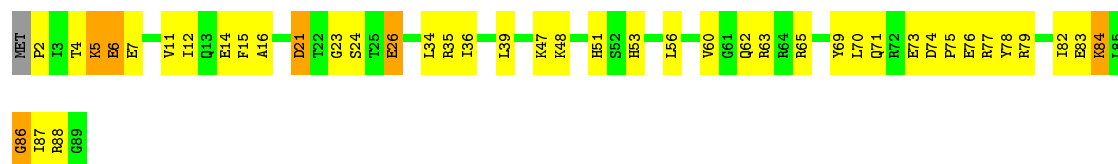


• Molecule 14: 30S RIBOSOMAL PROTEIN S14



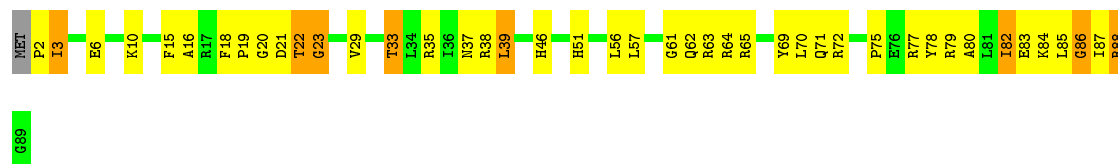
- Molecule 15: 30S RIBOSOMAL PROTEIN S15

Chain AR: 



- Molecule 15: 30S RIBOSOMAL PROTEIN S15

Chain CR: 



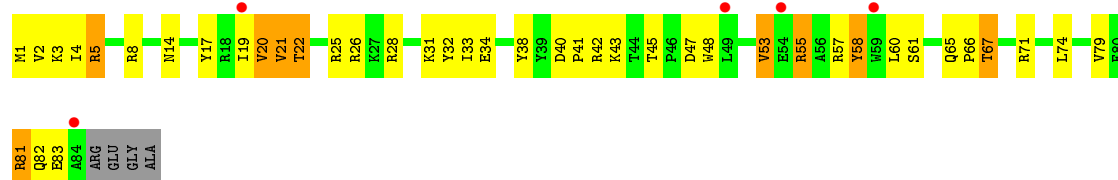
- Molecule 16: 30S RIBOSOMAL PROTEIN S16

Chain AS: 



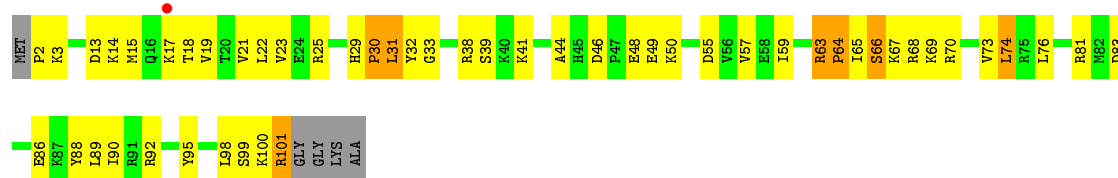
- Molecule 16: 30S RIBOSOMAL PROTEIN S16

Chain CS: 

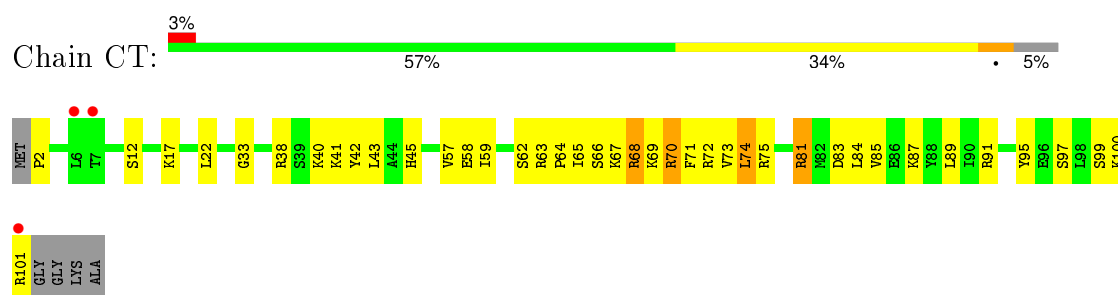


- Molecule 17: 30S RIBOSOMAL PROTEIN S17

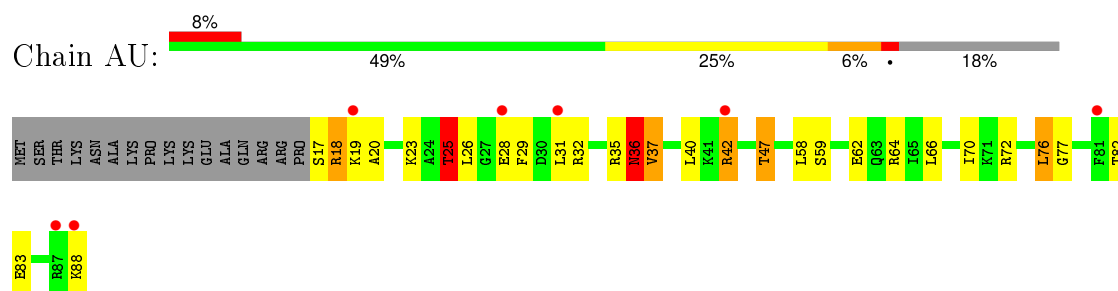
Chain AT: 



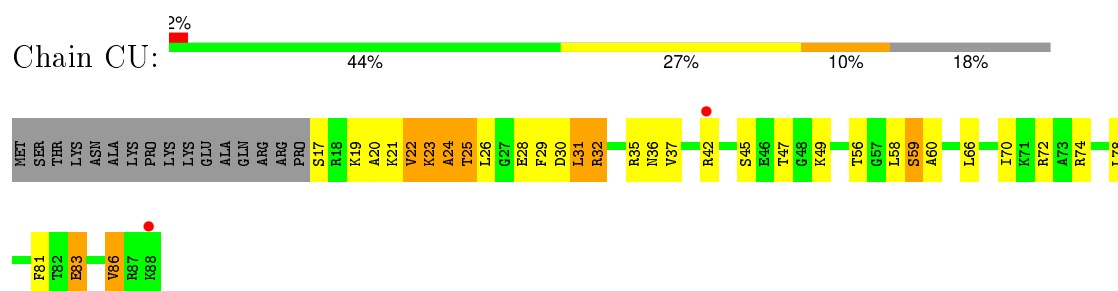
- Molecule 17: 30S RIBOSOMAL PROTEIN S17



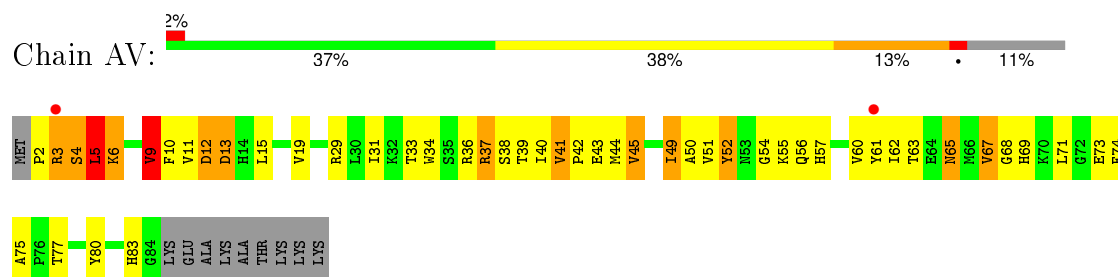
- Molecule 18: 30S RIBOSOMAL PROTEIN S18



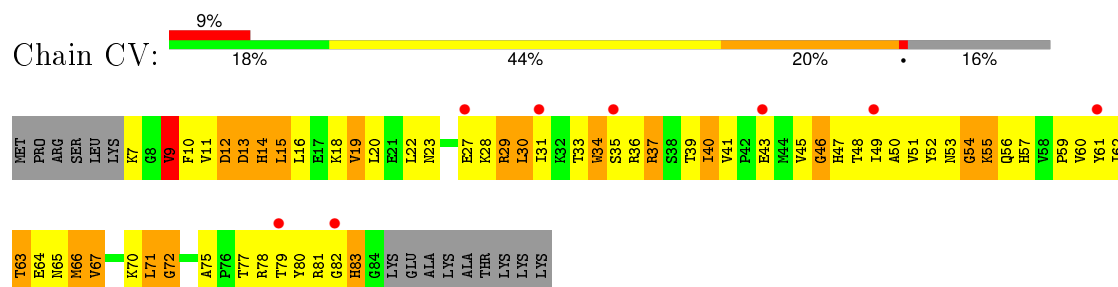
- Molecule 18: 30S RIBOSOMAL PROTEIN S18



- Molecule 19: 30S RIBOSOMAL PROTEIN S19

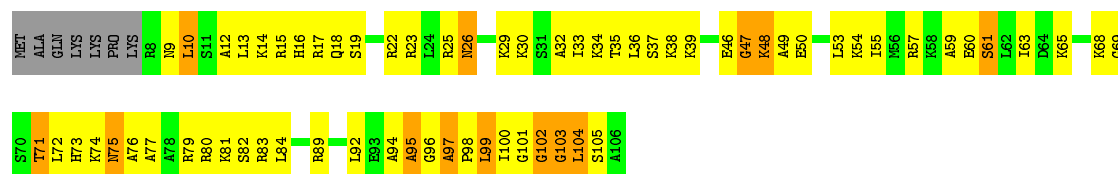


- Molecule 19: 30S RIBOSOMAL PROTEIN S19



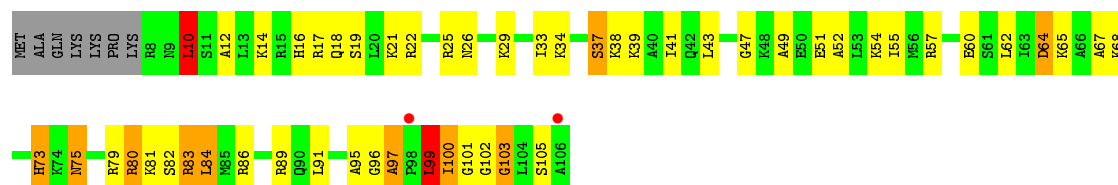
- Molecule 20: 30S RIBOSOMAL PROTEIN S20

Chain AW:  30% 51% 12% 7%



● Molecule 20: 30S RIBOSOMAL PROTEIN S20

Chain CW: 



● Molecule 21: 30S RIBOSOMAL PROTEIN THX

Chain AX: 48% 41% 7%



- Molecule 21: 30S RIBOSOMAL PROTEIN THX

Chain CX: 

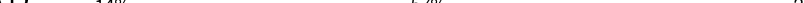


- Molecule 22: tRNA-FMET

Chain AC: 61% 32% 5%



- Molecule 22: tRNA-FMET

Chain AD: 

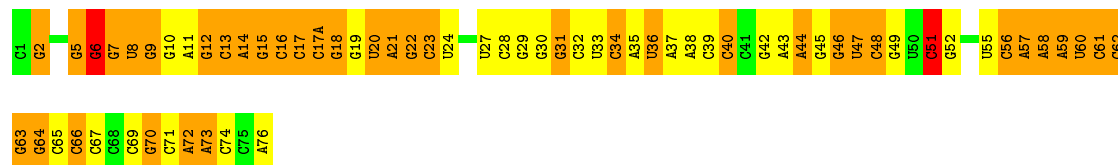


- Molecule 22: tRNA-FMET

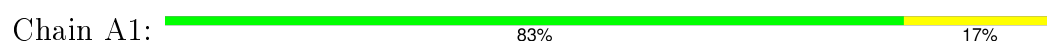
Chain CC: 



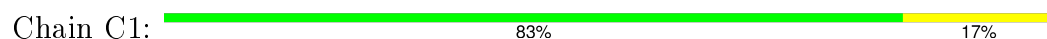
• Molecule 22: TRNA-FMET



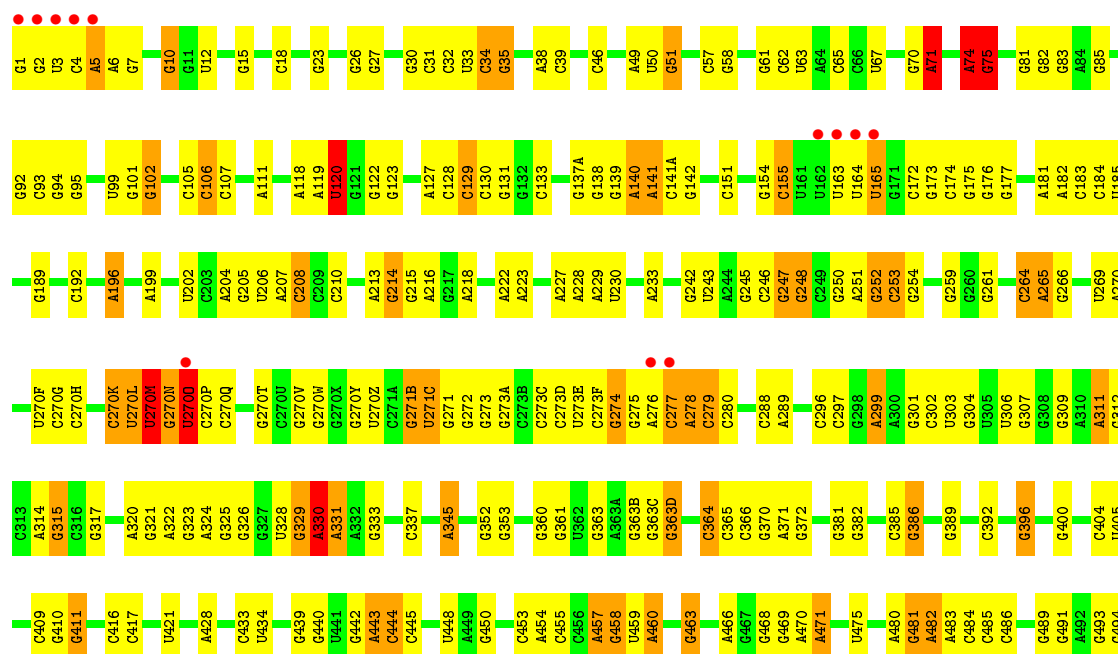
• Molecule 23: MRNA



• Molecule 23: MRNA



• Molecule 24: 23S ribosomal RNA

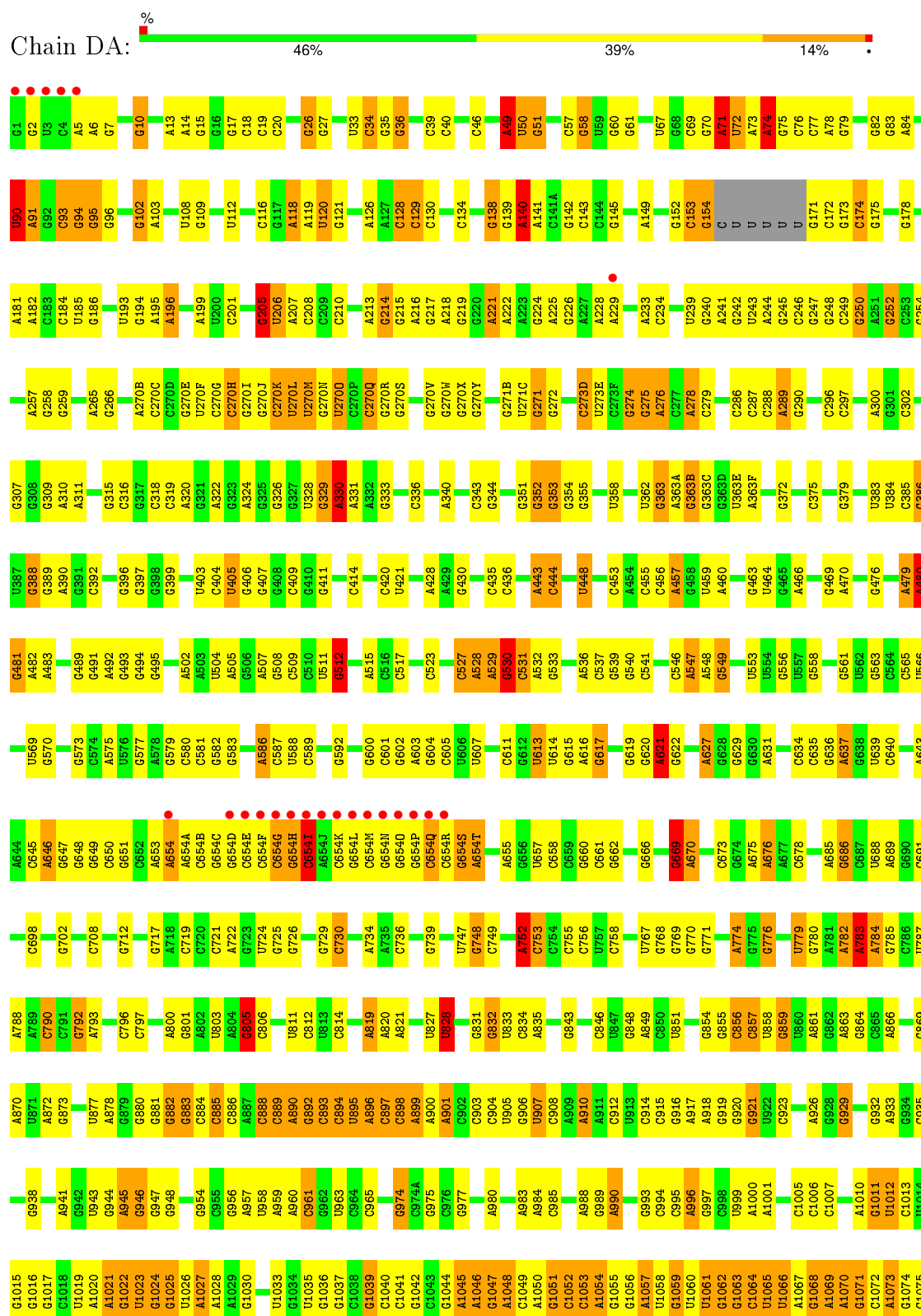


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A1579	C1506	G1425	G1344	G1243	G1171	U1094	U1033	U963	G883	U803	C721	G498
A1580	A1507	G1426	G1344	G1244	A1173	A1095	G1034	C964	C884	A804	G722	U499
C1581	A1508	A1427	G1345	G1245	A1174	A1096	U1035	G968	C885	A805	G723	G500
C1582	C1509	C1428	A1349	A1253	G1175	U1097	G1036	G974	C886	G805	G724	A501
C1583	A1510	G1432	A1354	A1254	G1176	A1098	U1037	A973	C887	C506	G725	A502
C1584	A1511	U1433	G1355	U1255	A1177	C1099	C1038	G974	C888	C812	G726	A503
A1586	C1512	U1434	G1356	G1256	C1178	C1100	G1039	G975	C889	U813	G727	U504
A1587	C1513	A1434	G1357	C1257	C1179	U1101	C1040	G976	A890	C814	G728	A505
C1588	U1514	G1435	U1357	G1258	C1180	C1102	C1041	C976	C892	C815	G729	G506
C1589	C1515	G1358	G1358	G1259	C1181	A1103	G1042	G977	C893	C816	C730	A507
U1590	U1516	A1359	A1359	G1264	A1182	U1105	G1043	G977	C894	C817	C730	A508
G1591	G1517	A1360	A1360	G1265	G1186	U1106	A1045	A980	U895	C818	G733	C509
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G1594	U1520	G1442	A1366	A1268	A1189	G1108	A1048	A983	C898	U825	U740	U511
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U1602	G1522	G1444	G1368	C1270	G1191	G1111	U1050	C985	A900	U826	G742	A513
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C1607	G1526	G1447	U1373	U1273	U1198	G1122	U1055	A988	C903	U828	A746	C517
A1608	A1528	A1448	C1375	U1274	U1199	G1123	G1056	A989	C904	U829	U747	C523
A1609	A1529	G1449	C1376	A1287	C1200	G1125	A1057	C991	U907	U833	A752	A526
A1610	G1530	G1450	G1377	C1291	C1201	A1126	U1058	C992	C908	C838	C753	C527
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A1617	U1535	G1457	A1382	G1296	G1206	G1132	G1063	G997	U913	U847	A762	A532
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C1619	G1537	G1461	A1392	U1298	U1211	G1134	U1065	A1000	A917	U849	G766	U534
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U1629	U1541	C1467	A1395	A1301	A1214	C1140	G1068	G1003	G919	U852	A675	G540
G1630	G1542	G1470	C1398	G1309	G1215	U1141	A1070	C1004	G929	C857	A676	C541
C1636	A1543	A1471	C1402	U1312	G1216	U1142	G1071	C1005	U930	U858	A677	G545
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C1638	G1545	G1473	C1404	C1314	C1218	A1144	A1073	C1007	G932	U860	A777	A547
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C1640	U1547	G1480	U1406	U1316	C1220	G1146	C1075	A1009	G938	G862	U779	G549
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G1649	A1558	G1488	G1414	G1328	G1228	A1156	U1081	U1015	G946	A870	G785	G563
U1652	G1559	U1489	U1415	U1329	G1229	G1157	U1082	U1019	G946	A870	G786	U566
G1653	G1560	A1490	G1416	C1330	G1230	C1161	A1084	A1020	G950	C873	U787	A567
A1654	C1492	G1491	C1417	A1331	C1231	G1162	A1085	G1022	C951	C874	A788	U568
A1655	C1493	G1418	G1418	G1332	G1232	G1163	A1086	U1023	G956	C875	C790	G569
C1656	A1566	A1419	A1419	C1333	G1236	G1164	G1087	G1024	G957	U877	G791	U570
C1657	G1568	U1496	U1420	G1334	A1237	U1165	U1088	U1026	U958	A876	A793	A571
C1658	A1569	C1497	G1421	U1335	G1238	C1166	G1089	A1028	A959	C879	G794	A572
			G1422	U1336	G1239	G1167	U1090	A1028	A960	C795	G796	G573
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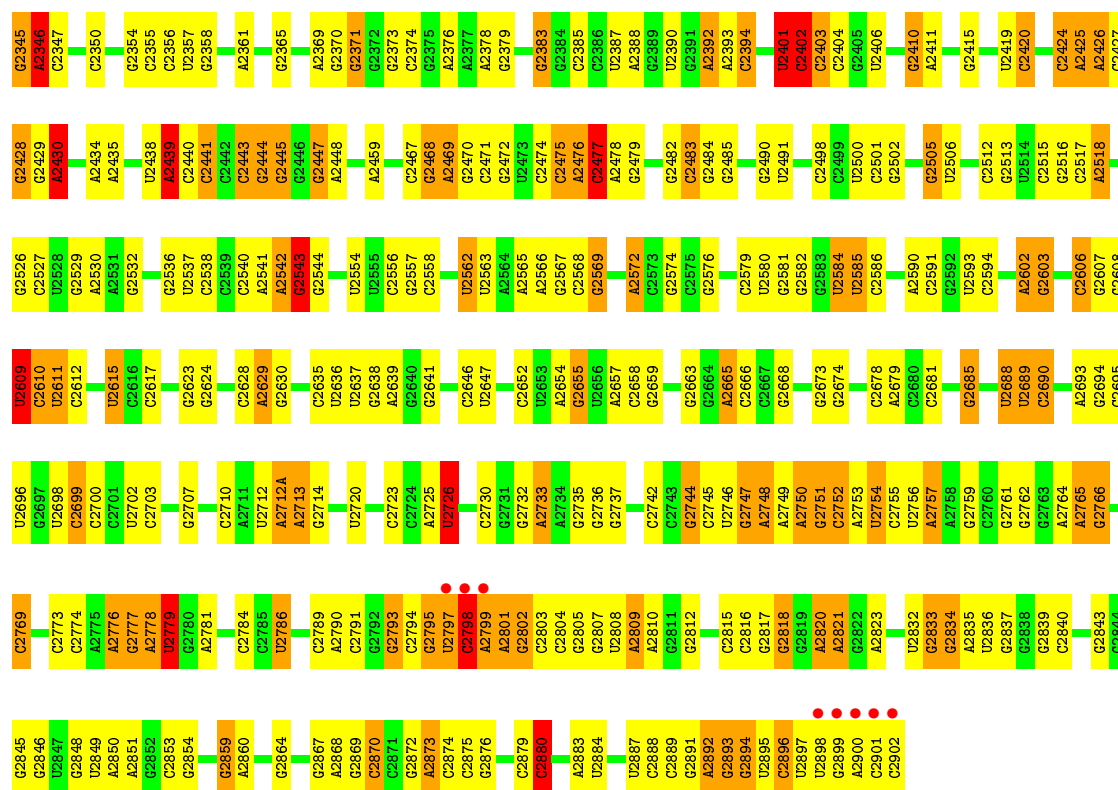


U2897
U2898
G2899
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C2901
C2902

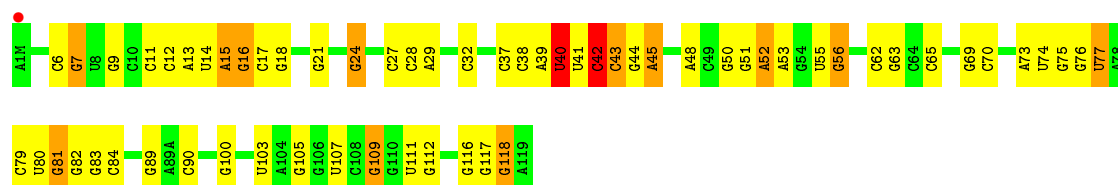
• Molecule 24: 23S ribosomal RNA



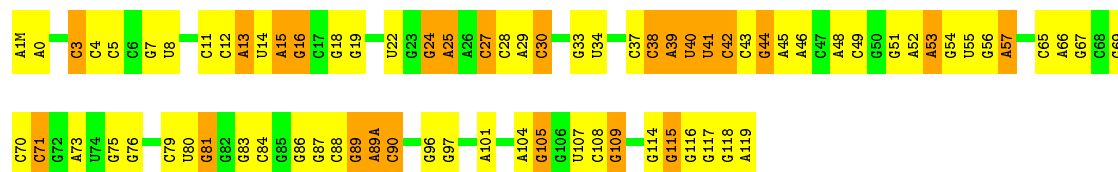




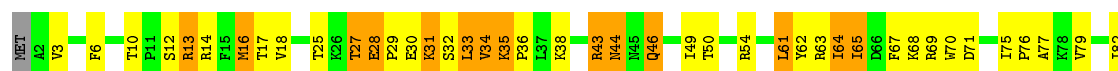
• Molecule 25: 5S RIBOSOMAL RNA

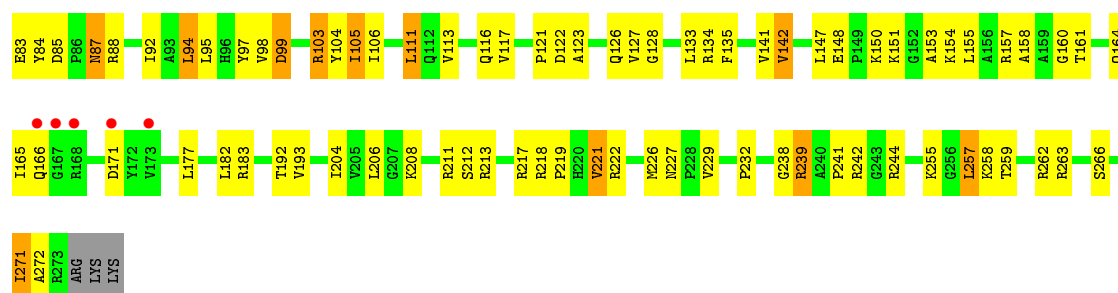


• Molecule 25: 5S RIBOSOMAL RNA

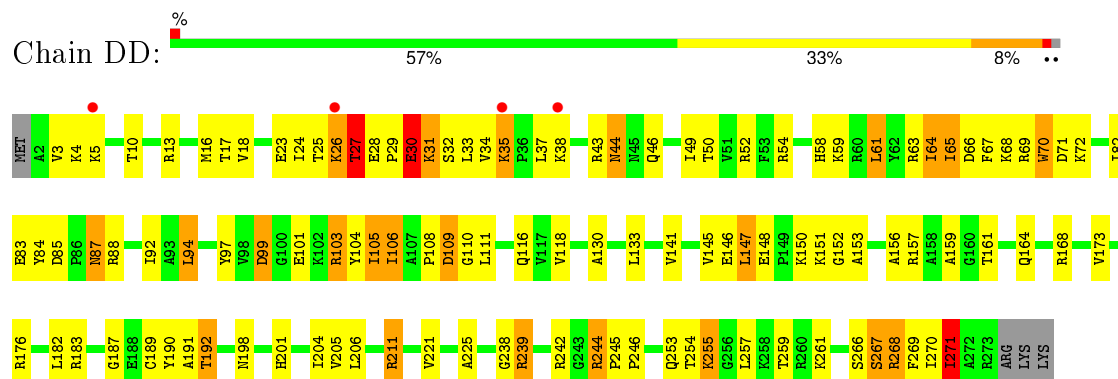


• Molecule 26: 50S ribosomal protein L2

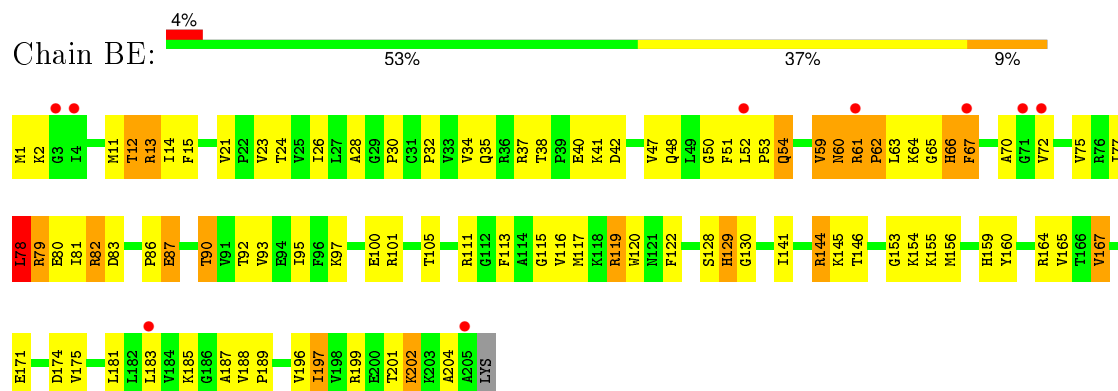




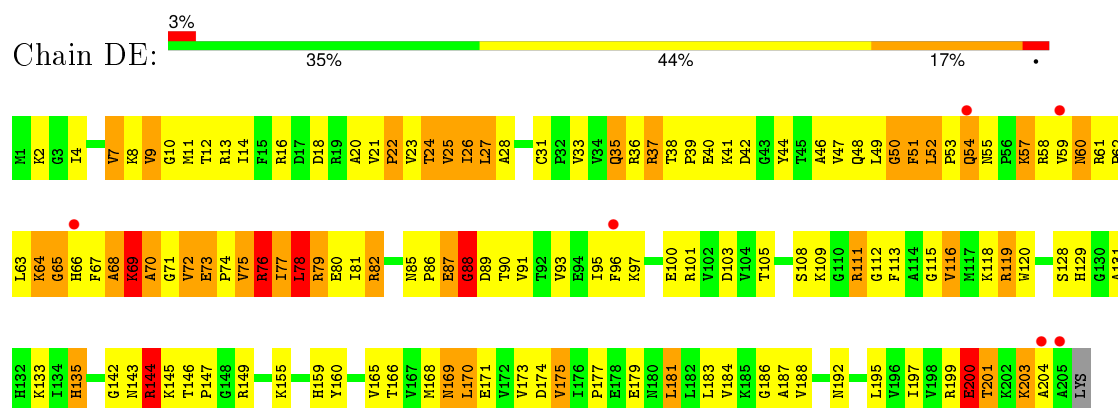
- Molecule 26: 50S ribosomal protein L2



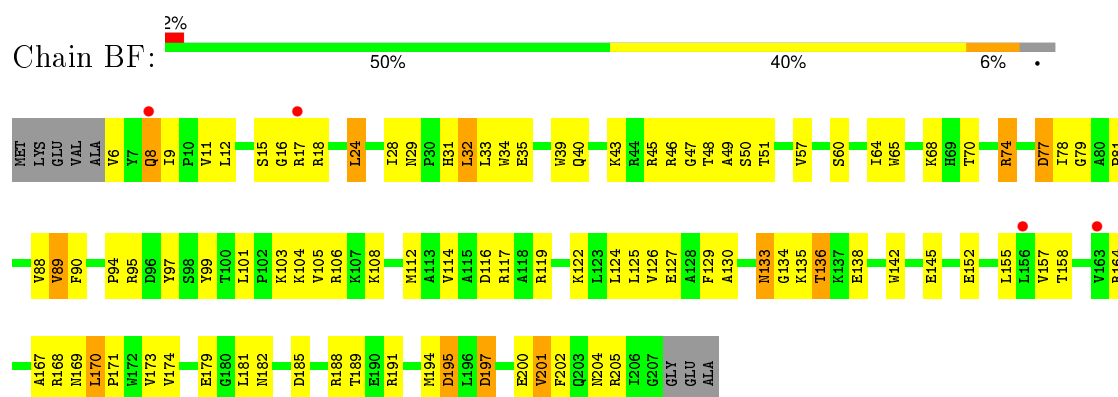
- Molecule 27: 50S ribosomal protein L3



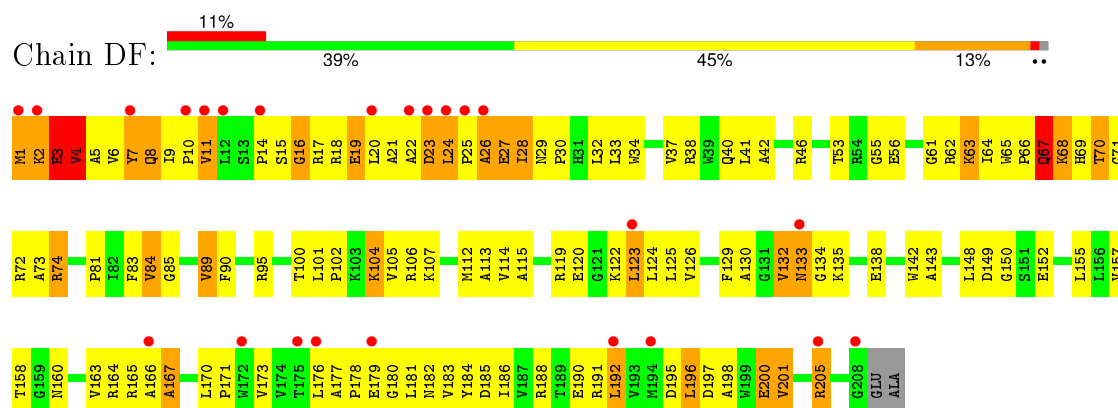
- Molecule 27: 50S ribosomal protein L3



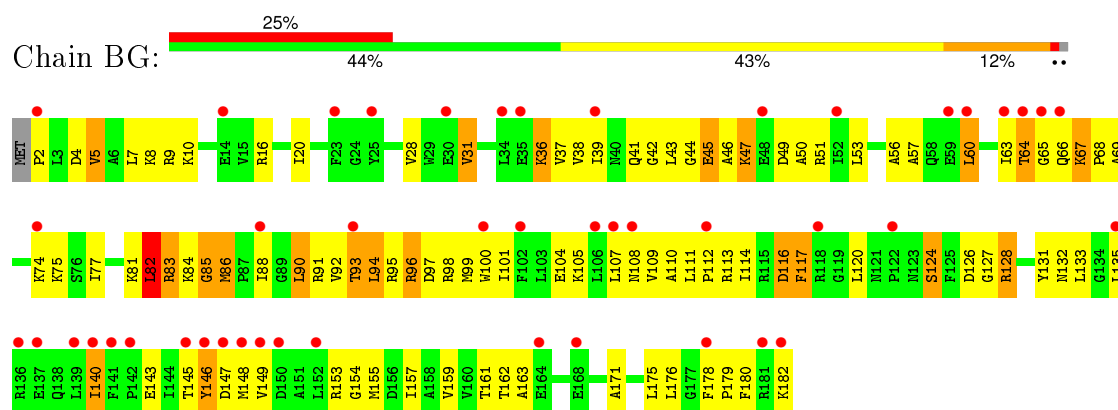
- Molecule 28: 50S ribosomal protein L4



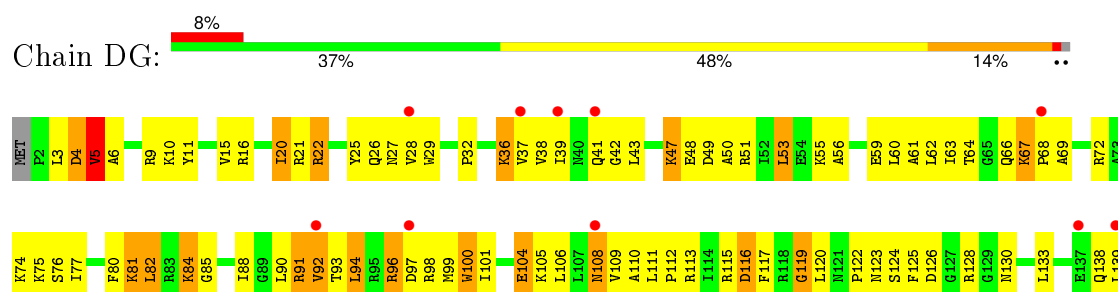
• Molecule 28: 50S ribosomal protein L4



• Molecule 29: 50S ribosomal protein L5

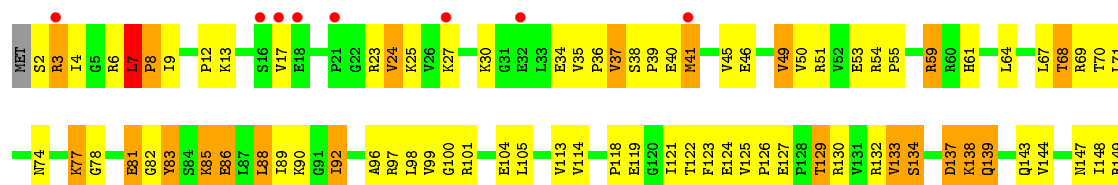


• Molecule 29: 50S ribosomal protein L5

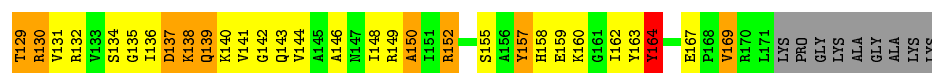
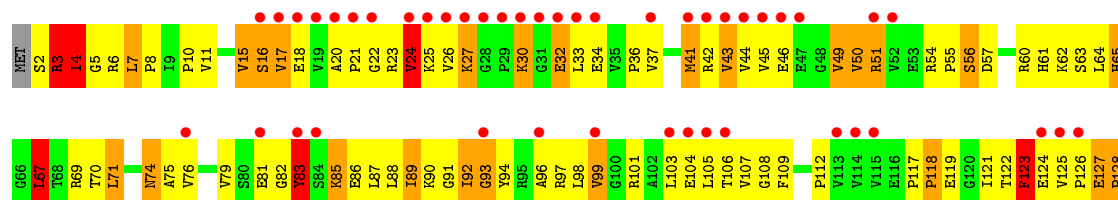




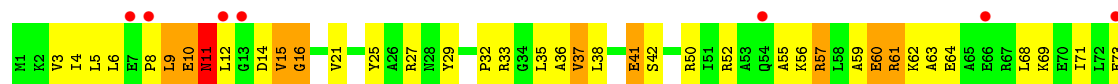
• Molecule 30: 50S ribosomal protein L6



• Molecule 30: 50S ribosomal protein L6

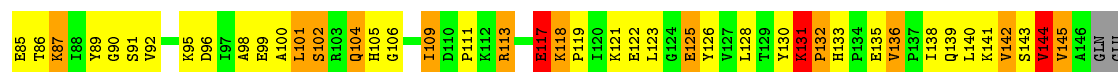


• Molecule 31: 50S ribosomal protein L9

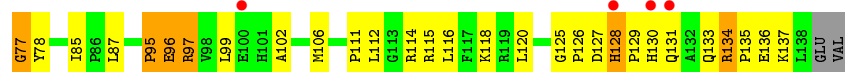
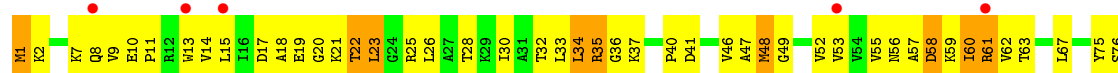


• Molecule 31: 50S ribosomal protein L9





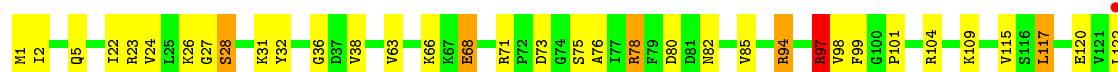
• Molecule 32: 50S ribosomal protein L13



• Molecule 32: 50S ribosomal protein L13



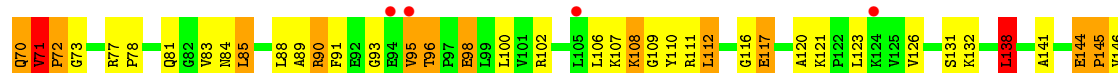
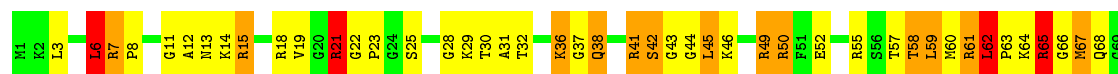
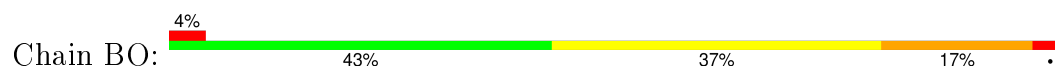
• Molecule 33: 50S ribosomal protein L14



• Molecule 33: 50S ribosomal protein L14

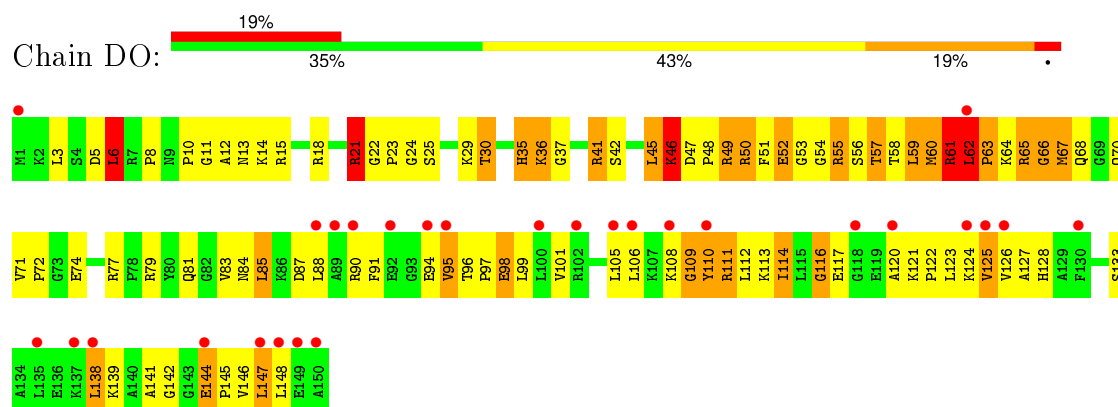


• Molecule 34: 50S ribosomal protein L15

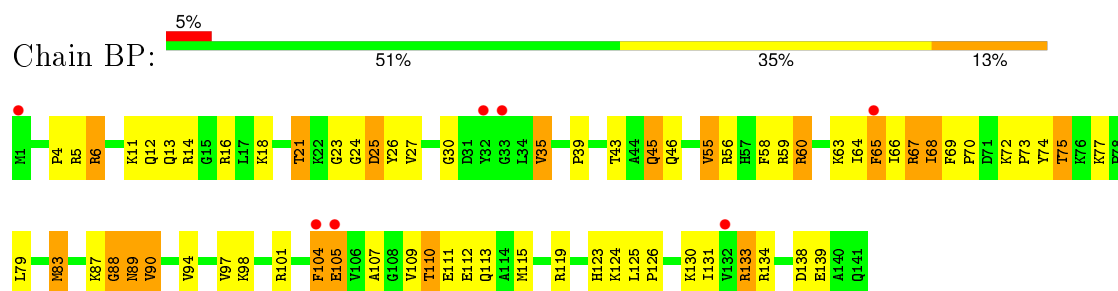




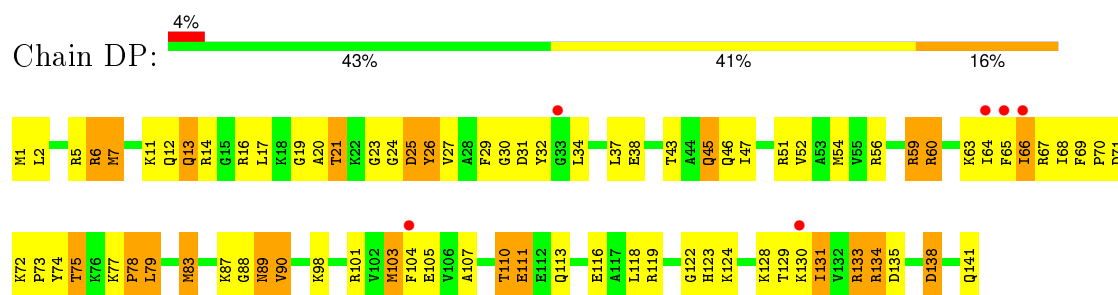
- Molecule 34: 50S ribosomal protein L15



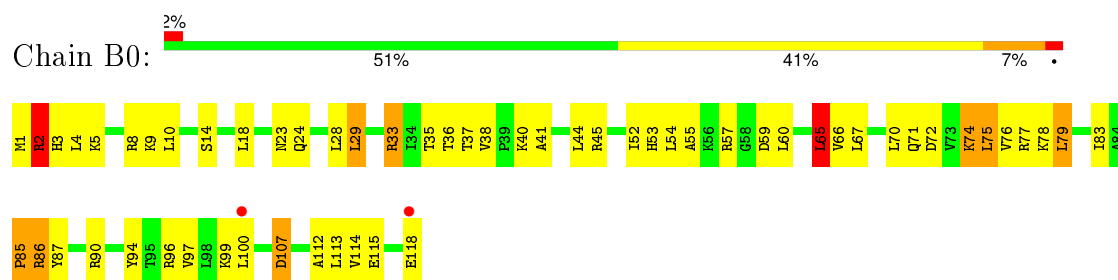
- Molecule 35: 50S ribosomal protein L16



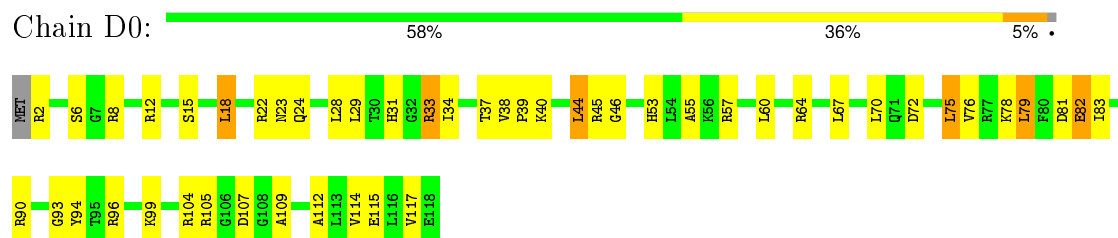
- Molecule 35: 50S ribosomal protein L16



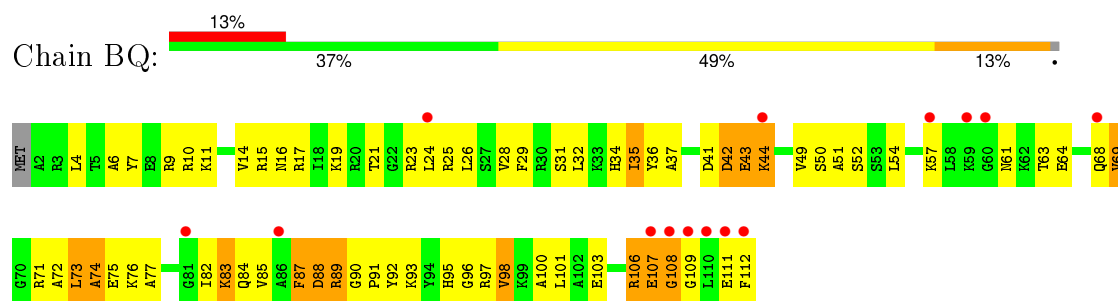
- Molecule 36: 50S ribosomal protein L17



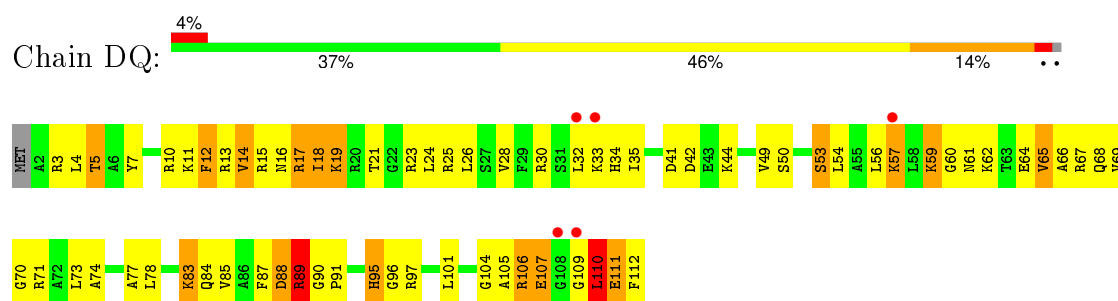
- Molecule 36: 50S ribosomal protein L17



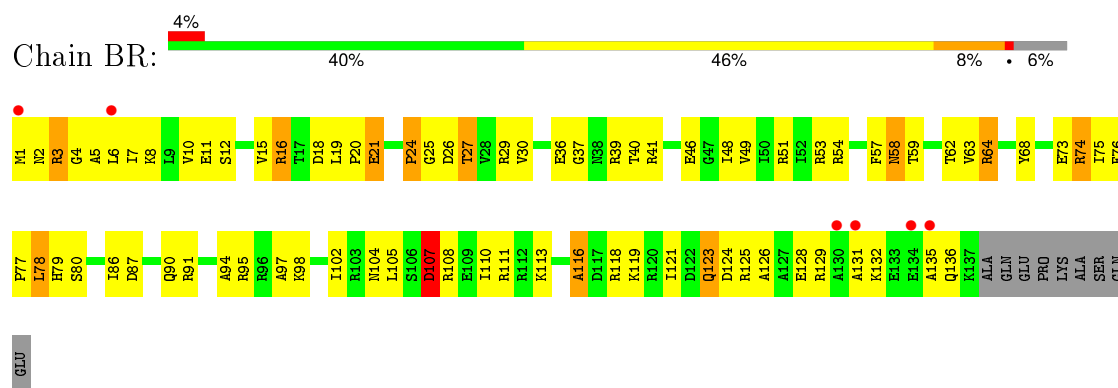
• Molecule 37: 50S ribosomal protein L18



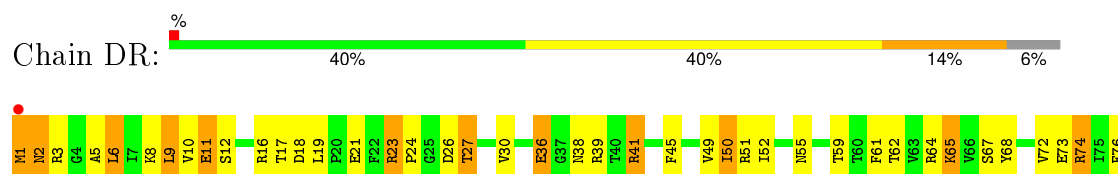
• Molecule 37: 50S ribosomal protein L18



• Molecule 38: 50S ribosomal protein L19



• Molecule 38: 50S ribosomal protein L19



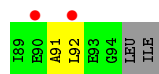




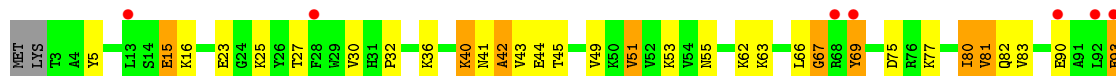
- Molecule 41: 50S ribosomal protein L22



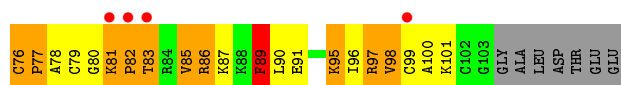
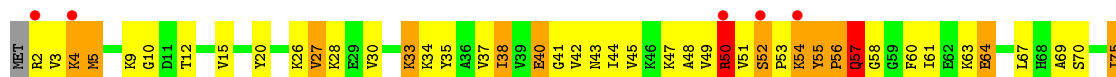
- Molecule 42: 50S ribosomal protein L23



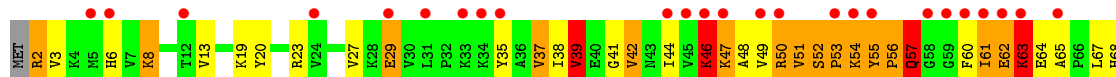
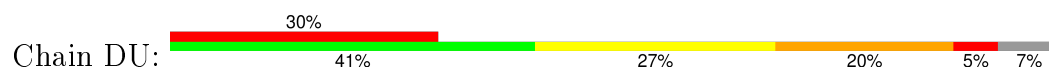
- Molecule 42: 50S ribosomal protein L23



- Molecule 43: 50S ribosomal protein L24

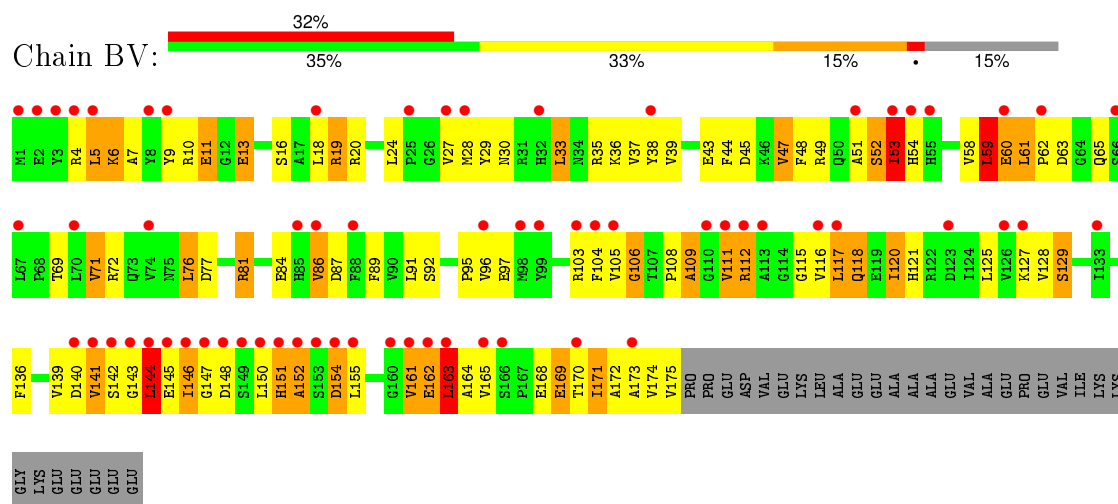


- Molecule 43: 50S ribosomal protein L24

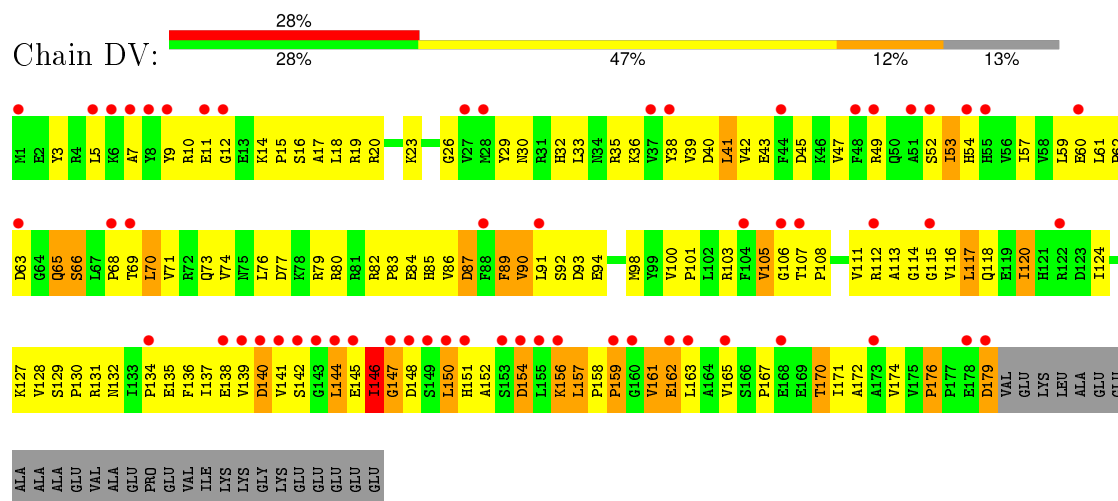




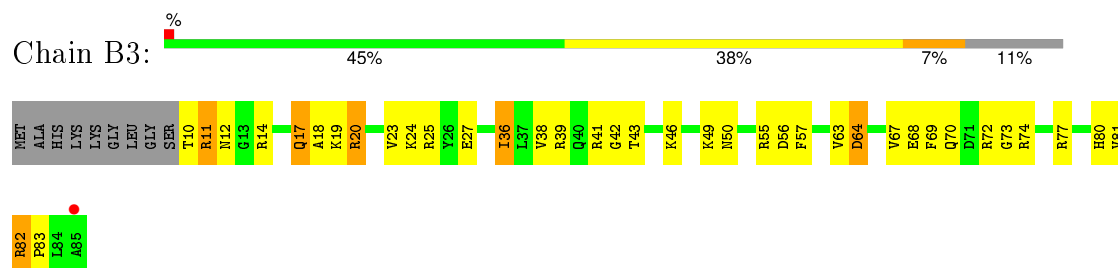
• Molecule 44: 50S ribosomal protein L25



• Molecule 44: 50S ribosomal protein L25

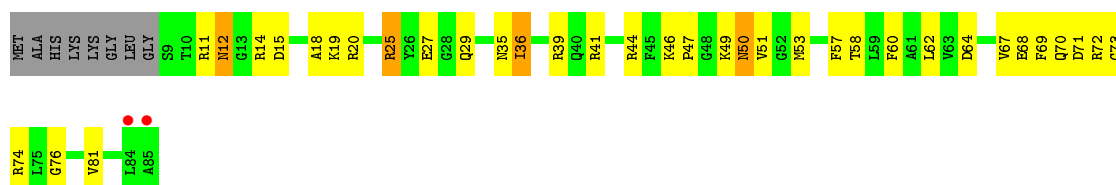


• Molecule 45: 50S ribosomal protein L27

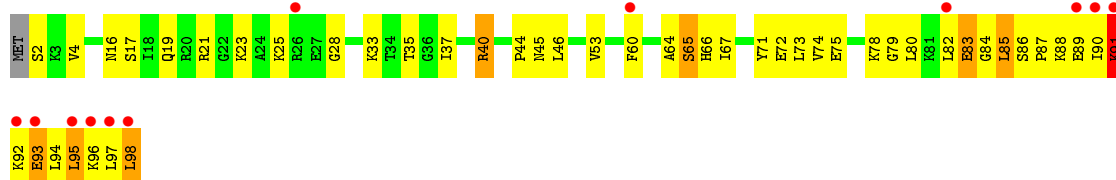


• Molecule 45: 50S ribosomal protein L27

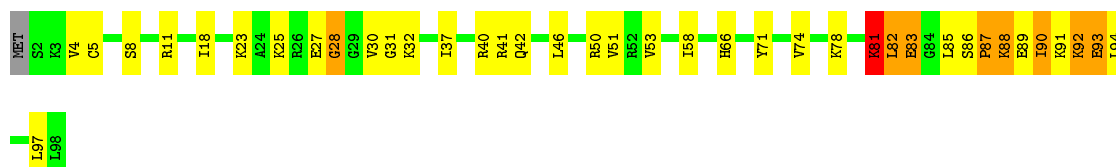




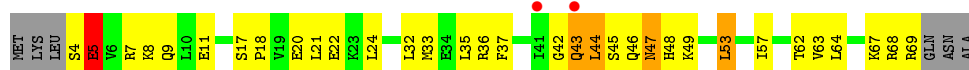
- Molecule 46: 50S ribosomal protein L28



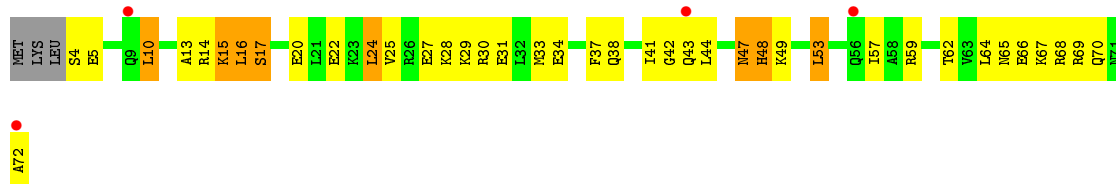
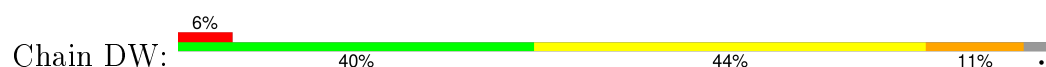
- Molecule 46: 50S ribosomal protein L28



- Molecule 47: 50S ribosomal protein L29



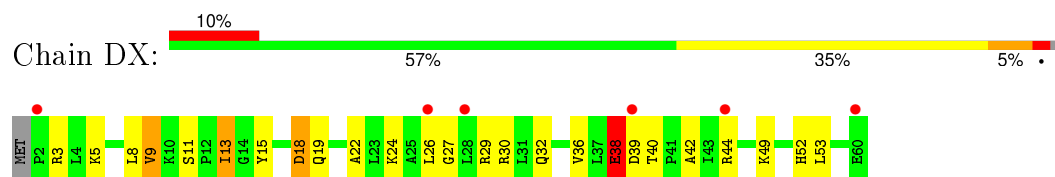
- Molecule 47: 50S ribosomal protein L29



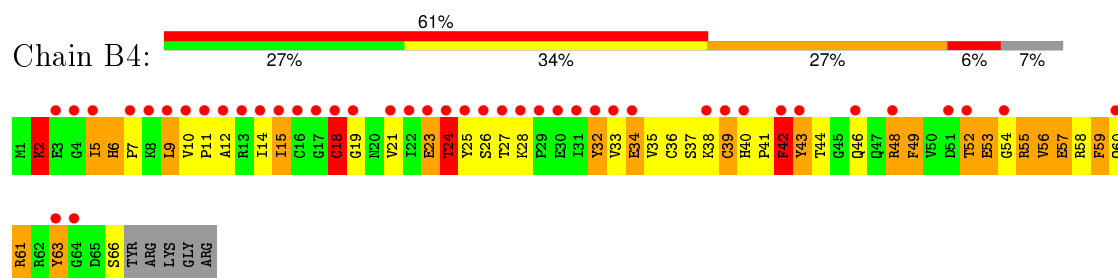
- Molecule 48: 50S ribosomal protein L30



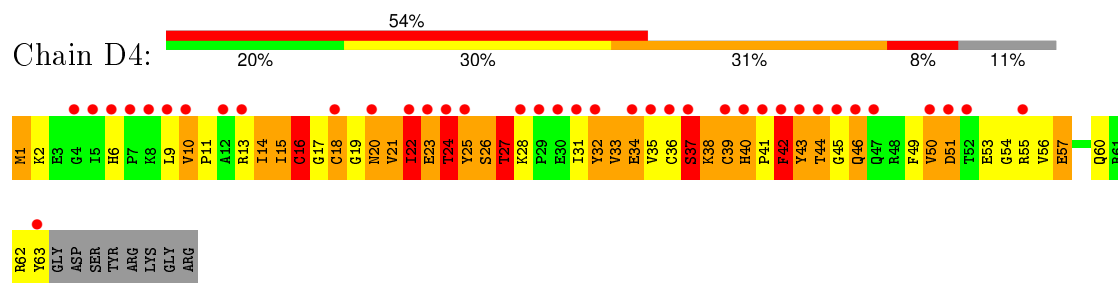
- Molecule 48: 50S ribosomal protein L30



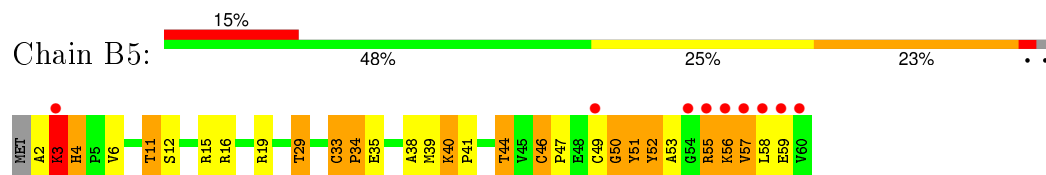
- Molecule 49: 50S ribosomal protein L31



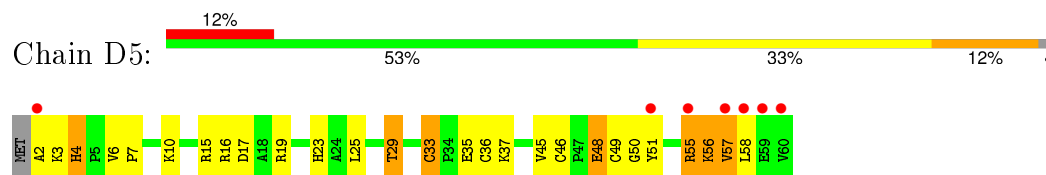
- Molecule 49: 50S ribosomal protein L31



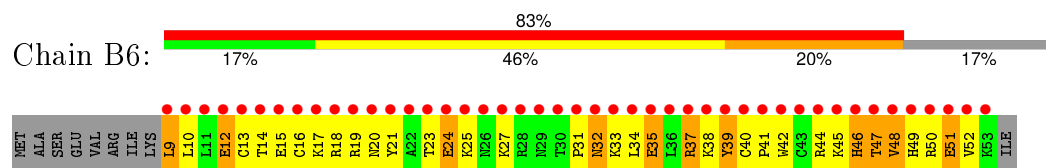
- Molecule 50: 50S ribosomal protein L32



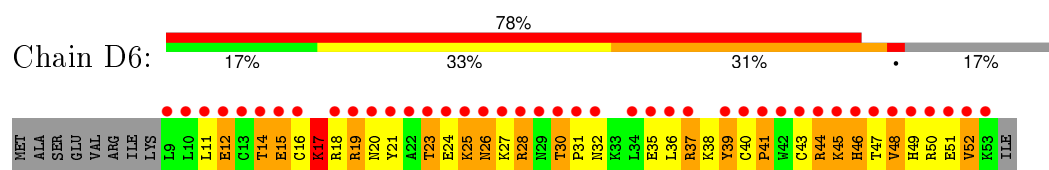
- Molecule 50: 50S ribosomal protein L32



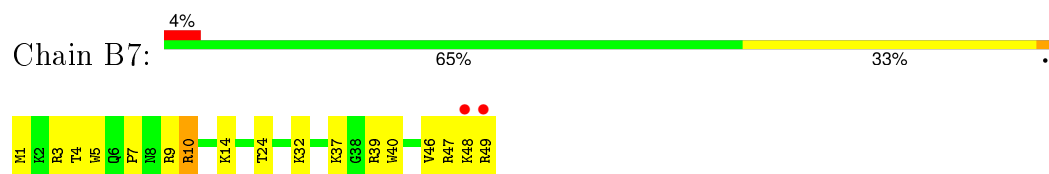
- Molecule 51: 50S ribosomal protein L33



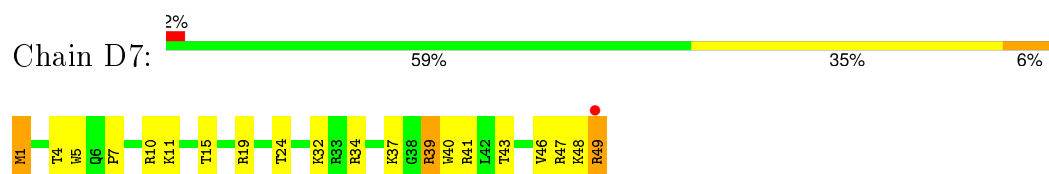
- Molecule 51: 50S ribosomal protein L33



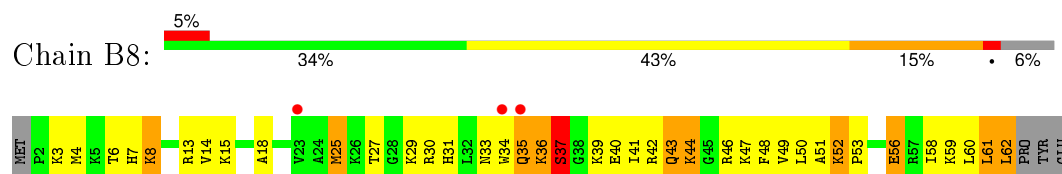
- Molecule 52: 50S ribosomal protein L34



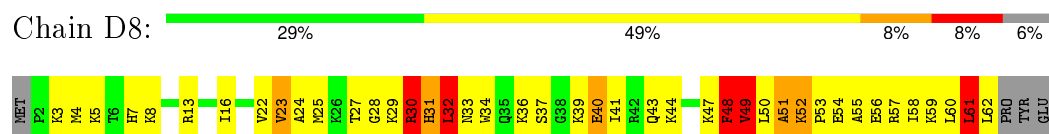
- Molecule 52: 50S ribosomal protein L34



- Molecule 53: 50S ribosomal protein L35



- Molecule 53: 50S ribosomal protein L35



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	210.06Å 450.27Å 616.89Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	153.59 – 3.10 254.47 – 3.10	Depositor EDS
% Data completeness (in resolution range)	99.9 (153.59-3.10) 93.4 (254.47-3.10)	Depositor EDS
R_{merge}	0.47	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.64 (at 3.07Å)	Xtriage
Refinement program	PHENIX (phenix.refine: dev_987)	Depositor
R, R_{free}	0.213 , 0.269 0.213 , 0.268	Depositor DCC
R_{free} test set	2000 reflections (0.21%)	DCC
Wilson B-factor (Å ²)	81.8	Xtriage
Anisotropy	0.190	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.25 , 56.7	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.42$, $\langle L^2 \rangle = 0.25$	Xtriage
Outliers	0 of 1045188 reflections	Xtriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	295766	wwPDB-VP
Average B, all atoms (Å ²)	111.0	wwPDB-VP

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

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: ZN, MG, T1C

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	AA	0.58	23/36234 (0.1%)	1.04	97/56554 (0.2%)
1	CA	0.50	5/36237 (0.0%)	0.95	67/56558 (0.1%)
2	AE	0.37	0/1959	0.60	1/2642 (0.0%)
2	CE	0.38	0/1959	0.68	4/2642 (0.2%)
3	AF	0.39	0/1629	0.57	0/2195
3	CF	0.37	0/1636	0.56	0/2205
4	AG	0.48	1/1733 (0.1%)	0.66	1/2318 (0.0%)
4	CG	0.45	1/1733 (0.1%)	0.63	1/2318 (0.0%)
5	AH	0.42	0/1171	0.60	0/1576
5	CH	0.38	0/1171	0.57	0/1576
6	AI	0.43	0/856	0.61	0/1154
6	CI	0.37	0/856	0.52	0/1154
7	AJ	0.45	0/1276	0.65	2/1709 (0.1%)
7	CJ	0.39	0/1276	0.59	0/1709
8	AK	0.39	0/1136	0.68	3/1527 (0.2%)
8	CK	0.35	0/1136	0.56	0/1527
9	AL	0.45	0/1029	0.65	0/1379
9	CL	0.41	0/1029	0.62	0/1379
10	AM	0.34	0/814	0.56	0/1095
10	CM	0.38	0/814	0.58	0/1095
11	AN	0.41	0/900	0.58	0/1213
11	CN	0.52	1/900 (0.1%)	0.66	1/1213 (0.1%)
12	AO	0.44	0/991	0.62	0/1327
12	CO	0.42	0/991	0.65	1/1327 (0.1%)
13	AP	0.39	0/938	0.59	0/1258
13	CP	0.35	0/943	0.63	1/1265 (0.1%)
14	AQ	0.45	0/501	0.68	0/664
14	CQ	0.45	0/501	0.64	0/664
15	AR	0.41	0/745	0.57	0/992
15	CR	0.42	0/745	0.54	0/992
16	AS	0.40	0/721	0.79	3/970 (0.3%)
16	CS	0.40	0/721	0.58	0/970

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AT	0.40	0/847	0.57	0/1131
17	CT	0.39	0/847	0.55	0/1131
18	AU	0.41	0/596	0.64	0/790
18	CU	0.41	0/596	0.60	0/790
19	AV	0.46	0/680	0.75	1/915 (0.1%)
19	CV	0.47	0/638	0.78	0/860
20	AW	0.36	0/765	0.59	0/1007
20	CW	0.37	0/765	0.58	0/1007
21	AX	0.37	0/221	0.55	0/288
21	CX	0.36	0/221	0.63	0/288
22	AC	0.66	2/1832 (0.1%)	1.08	8/2855 (0.3%)
22	AD	0.52	2/1832 (0.1%)	1.08	9/2855 (0.3%)
22	CC	0.56	2/1832 (0.1%)	1.00	9/2855 (0.3%)
22	CD	0.54	2/1832 (0.1%)	1.15	11/2855 (0.4%)
23	A1	0.63	0/144	0.84	0/222
23	C1	0.55	0/144	0.86	0/222
24	BA	0.67	14/70233 (0.0%)	1.18	443/109643 (0.4%)
24	DA	0.61	4/70100 (0.0%)	1.09	282/109435 (0.3%)
25	BB	0.63	0/2928	1.12	12/4568 (0.3%)
25	DB	0.55	0/2928	0.99	3/4568 (0.1%)
26	BD	0.54	0/2165	0.73	0/2919
26	DD	0.57	1/2165 (0.0%)	0.70	0/2919
27	BE	0.49	0/1601	0.64	0/2160
27	DE	0.50	0/1601	0.67	1/2160 (0.0%)
28	BF	0.49	0/1620	0.69	0/2194
28	DF	0.44	0/1662	0.64	0/2249
29	BG	0.42	0/1499	0.59	0/2016
29	DG	0.36	0/1499	0.59	0/2016
30	BH	0.44	0/1332	0.63	1/1802 (0.1%)
30	DH	0.34	0/1332	0.70	1/1802 (0.1%)
31	BK	0.41	0/1151	0.63	0/1558
31	DK	0.40	0/1151	0.63	1/1558 (0.1%)
32	BM	0.47	0/1131	0.62	0/1525
32	DM	0.39	0/1131	0.58	0/1525
33	BN	0.47	0/943	0.61	0/1269
33	DN	0.46	0/943	0.61	0/1269
34	BO	0.54	0/1162	0.82	2/1544 (0.1%)
34	DO	0.42	0/1162	0.71	0/1544
35	BP	0.50	0/1143	0.66	0/1527
35	DP	0.45	0/1143	0.63	0/1527
36	B0	0.51	0/982	0.74	1/1312 (0.1%)
36	D0	0.46	0/974	0.63	0/1302
37	BQ	0.51	0/892	0.69	1/1187 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
37	DQ	0.44	0/892	0.73	1/1187 (0.1%)
38	BR	0.45	0/1155	0.62	0/1542
38	DR	0.43	0/1155	0.60	0/1542
39	B1	0.52	0/982	0.67	0/1306
39	D1	0.42	0/982	0.64	0/1306
40	B2	0.50	0/790	0.68	1/1057 (0.1%)
40	D2	0.42	0/790	0.69	1/1057 (0.1%)
41	BS	0.47	0/911	0.63	0/1220
41	DS	0.47	0/911	0.59	0/1220
42	BT	0.58	0/739	0.65	0/993
42	DT	0.55	0/739	0.64	0/993
43	BU	0.54	0/798	0.74	0/1064
43	DU	0.50	0/798	0.69	1/1064 (0.1%)
44	BV	0.40	0/1427	0.63	0/1935
44	DV	0.37	0/1460	0.67	1/1982 (0.1%)
45	B3	0.65	2/615 (0.3%)	0.70	0/819
45	D3	0.46	0/621	0.61	0/827
46	BZ	0.50	0/770	0.65	0/1022
46	DZ	0.49	0/770	0.68	0/1022
47	BW	0.56	1/560 (0.2%)	0.70	0/741
47	DW	0.48	0/583	0.71	1/771 (0.1%)
48	BX	0.44	0/474	0.58	0/635
48	DX	0.40	0/474	0.56	0/635
49	B4	0.65	2/545 (0.4%)	0.77	1/733 (0.1%)
49	D4	0.44	0/527	0.69	0/709
50	B5	0.52	0/473	0.76	0/639
50	D5	0.45	0/473	0.67	0/639
51	B6	0.48	0/396	0.70	0/529
51	D6	0.52	0/396	0.68	0/529
52	B7	0.59	0/438	0.74	0/575
52	D7	0.54	0/438	0.65	0/575
53	B8	0.66	0/494	0.77	0/649
53	D8	0.61	0/494	0.93	1/649 (0.2%)
All	All	0.57	63/319716 (0.0%)	0.99	976/478502 (0.2%)

All (63) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	193	C	P-O5'	13.92	1.73	1.59
1	AA	193	C	C5'-C4'	13.77	1.67	1.51
1	AA	1381	U	C2-N3	-13.28	1.28	1.37
22	AD	17(A)	C	C4-N4	-11.47	1.23	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	CC	17(A)	C	C4-N4	-11.41	1.23	1.33
22	CD	17(A)	C	C4-N4	-11.38	1.23	1.33
22	AC	17(A)	C	C4-N4	-11.08	1.24	1.33
1	AA	1381	U	C4-O4	-11.04	1.14	1.23
1	AA	192	U	O3'-P	10.36	1.73	1.61
1	AA	1381	U	C1'-N1	9.87	1.63	1.48
1	AA	1382	C	N1-C2	9.41	1.49	1.40
11	CN	124	LYS	CD-CE	8.56	1.72	1.51
4	AG	12	CYS	CB-SG	7.96	1.95	1.82
1	AA	192	U	C3'-C2'	7.75	1.61	1.52
1	AA	193	C	O5'-C5'	7.74	1.56	1.44
1	AA	1382	C	N1-C6	7.62	1.41	1.37
1	AA	1382	C	P-O5'	7.09	1.66	1.59
22	AC	17(A)	C	N3-C4	6.93	1.38	1.33
1	AA	193	C	C1'-N1	6.83	1.58	1.48
24	BA	783	A	N9-C4	-6.81	1.33	1.37
49	B4	18	CYS	CB-SG	-6.78	1.70	1.82
1	AA	192	U	C1'-N1	6.71	1.58	1.48
45	B3	17	GLN	CB-CG	6.67	1.70	1.52
24	BA	1142(A)	A	N9-C4	-6.44	1.33	1.37
1	AA	193	C	O4'-C1'	6.39	1.50	1.41
22	CD	17(A)	C	N3-C4	6.33	1.38	1.33
1	AA	193	C	C4'-O4'	6.32	1.53	1.45
22	AD	17(A)	C	N3-C4	6.27	1.38	1.33
1	AA	192	U	C2'-C1'	-6.21	1.46	1.53
24	BA	774	A	N9-C4	-6.13	1.34	1.37
45	B3	17	GLN	CG-CD	6.03	1.65	1.51
24	BA	1992	G	N9-C4	5.99	1.42	1.38
1	AA	1381	U	C2-O2	-5.99	1.17	1.22
24	DA	2430	A	N9-C4	-5.89	1.34	1.37
24	DA	2518	A	N9-C4	-5.88	1.34	1.37
24	BA	2000	G	P-OP2	-5.84	1.39	1.49
24	BA	676	A	N9-C4	-5.83	1.34	1.37
24	BA	2000	G	P-O5'	5.82	1.65	1.59
22	CC	17(A)	C	N3-C4	5.78	1.38	1.33
24	BA	1799	G	N9-C4	5.56	1.42	1.38
1	AA	474	G	N9-C4	-5.54	1.33	1.38
1	CA	1104	G	C5-C4	-5.51	1.34	1.38
24	BA	2751	G	N9-C4	-5.49	1.33	1.38
24	DA	2443	C	N1-C6	-5.46	1.33	1.37
1	CA	797	C	P-O5'	5.45	1.65	1.59
1	AA	193	C	N1-C2	5.39	1.45	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
49	B4	39	CYS	CB-SG	-5.32	1.73	1.81
47	BW	5	GLU	CB-CG	5.32	1.62	1.52
24	BA	777	A	N3-C4	-5.26	1.31	1.34
4	CG	9	CYS	CB-SG	-5.25	1.73	1.81
1	AA	193	C	C4-C5	-5.20	1.38	1.43
1	AA	192	U	C4-O4	5.18	1.27	1.23
1	CA	1104	G	C8-N7	-5.13	1.27	1.30
1	AA	590	C	N1-C6	-5.11	1.34	1.37
1	CA	1104	G	C5'-C4'	-5.10	1.45	1.51
24	BA	2751	G	N3-C4	-5.10	1.31	1.35
24	DA	1992	G	N9-C4	5.06	1.42	1.38
24	BA	1999	C	N1-C6	-5.04	1.34	1.37
24	BA	1786	A	N9-C4	-5.03	1.34	1.37
24	BA	2751	G	C5-C4	5.03	1.41	1.38
1	AA	1382	C	C2-N3	5.02	1.39	1.35
26	DD	30	GLU	CG-CD	5.02	1.59	1.51
1	CA	1104	G	C2'-C1'	5.01	1.58	1.53

All (976) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1381	U	N3-C4-C5	34.37	135.22	114.60
1	AA	193	C	C6-N1-C2	-33.39	106.94	120.30
1	AA	193	C	C5-C6-N1	30.48	136.24	121.00
1	AA	1381	U	C4-C5-C6	-26.85	103.59	119.70
22	CD	17(A)	C	N3-C4-C5	-19.72	114.01	121.90
22	AD	17(A)	C	N3-C4-C5	-19.52	114.09	121.90
22	CC	17(A)	C	N3-C4-C5	-18.15	114.64	121.90
1	AA	1381	U	C2-N3-C4	-17.69	116.39	127.00
22	AC	17(A)	C	N3-C4-C5	-17.36	114.96	121.90
25	BB	40	U	C5-C6-N1	16.71	131.06	122.70
1	AA	1381	U	N3-C4-O4	-16.54	107.82	119.40
22	AD	17(A)	C	C2-N3-C4	15.63	127.72	119.90
22	CD	17(A)	C	C2-N3-C4	15.12	127.46	119.90
1	AA	192	U	C6-N1-C2	-14.92	112.05	121.00
1	AA	1381	U	C5-C4-O4	-14.91	116.95	125.90
16	AS	81	ARG	NE-CZ-NH1	-14.00	113.30	120.30
22	CC	17(A)	C	C2-N3-C4	13.98	126.89	119.90
22	AC	17(A)	C	C2-N3-C4	13.76	126.78	119.90
24	BA	2751	G	N7-C8-N9	13.04	119.62	113.10
24	BA	2447	G	N1-C6-O6	11.97	127.08	119.90
1	CA	1104	G	N3-C4-C5	11.78	134.49	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	774	A	C2-N3-C4	-11.70	104.75	110.60
25	BB	40	U	C2-N1-C1'	11.68	131.72	117.70
24	BA	2751	G	C5-C6-N1	-11.59	105.70	111.50
1	AA	1382	C	C4-C5-C6	11.35	123.07	117.40
25	BB	40	U	C6-N1-C2	-11.28	114.23	121.00
1	AA	475	G	C8-N9-C4	-11.13	101.95	106.40
1	AA	192	U	P-O3'-C3'	11.12	133.04	119.70
24	BA	2401	U	C5-C6-N1	10.96	128.18	122.70
24	DA	2401	U	C5-C6-N1	10.78	128.09	122.70
24	BA	676	A	C5-N7-C8	-10.75	98.53	103.90
1	CA	1104	G	N9-C4-C5	-10.74	101.10	105.40
1	CA	1104	G	C4-C5-N7	10.74	115.10	110.80
24	BA	2751	G	C5-N7-C8	-10.71	98.94	104.30
1	AA	405	U	C5-C4-O4	10.69	132.31	125.90
24	BA	2699	C	C6-N1-C2	10.65	124.56	120.30
24	BA	2751	G	C6-N1-C2	10.62	131.47	125.10
24	DA	1786	A	C5-N7-C8	-10.44	98.68	103.90
24	BA	1332	G	C5-N7-C8	-10.40	99.10	104.30
24	BA	783	A	C5-N7-C8	-10.29	98.75	103.90
1	AA	192	U	N3-C4-C5	-10.28	108.43	114.60
24	BA	2000	G	N9-C4-C5	10.21	109.48	105.40
24	DA	1786	A	N7-C8-N9	10.20	118.90	113.80
24	BA	676	A	C2-N3-C4	-10.14	105.53	110.60
24	BA	1332	G	C6-C5-N7	-10.11	124.34	130.40
7	AJ	79	ARG	NE-CZ-NH2	-10.03	115.29	120.30
24	BA	1178	C	N1-C2-O2	9.96	124.87	118.90
1	AA	192	U	O4'-C1'-N1	9.91	116.12	108.20
24	BA	1899	G	C2-N3-C4	-9.86	106.97	111.90
25	BB	40	U	N1-C2-O2	9.78	129.64	122.80
1	AA	192	U	N1-C2-N3	9.77	120.76	114.90
24	BA	120	U	C4-C5-C6	9.64	125.49	119.70
24	BA	1786	A	C5-N7-C8	-9.64	99.08	103.90
24	BA	1332	G	C4-C5-N7	9.62	114.65	110.80
36	B0	2	ARG	NE-CZ-NH1	-9.59	115.50	120.30
24	BA	2751	G	N3-C4-C5	9.58	133.39	128.60
4	CG	12	CYS	CA-CB-SG	9.58	131.24	114.00
22	AD	17(A)	C	N1-C2-O2	9.55	124.63	118.90
24	BA	2000	G	C6-C5-N7	9.55	136.13	130.40
24	BA	1332	G	N7-C8-N9	9.54	117.87	113.10
24	DA	2447	G	N1-C6-O6	9.54	125.62	119.90
24	BA	2000	G	N3-C4-N9	-9.54	120.28	126.00
24	BA	1799	G	N3-C4-C5	-9.51	123.85	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	654(I)	C	C2-N1-C1'	9.46	129.21	118.80
24	BA	528	A	C2-N3-C4	-9.45	105.88	110.60
24	BA	676	A	N1-C6-N6	9.44	124.26	118.60
25	BB	40	U	C2-N3-C4	9.43	132.66	127.00
24	BA	1178	C	N3-C2-O2	-9.43	115.30	121.90
24	BA	2388	A	C8-N9-C4	9.38	109.55	105.80
24	BA	1332	G	C2-N3-C4	-9.34	107.23	111.90
24	DA	2401	U	C5-C4-O4	-9.33	120.30	125.90
25	BB	40	U	N3-C4-O4	9.32	125.92	119.40
24	BA	1178	C	C2-N1-C1'	9.24	128.97	118.80
22	CD	17(A)	C	N1-C2-O2	9.15	124.39	118.90
22	CC	17(A)	C	C5-C4-N4	9.06	126.55	120.20
24	BA	1992	G	N3-C4-C5	-9.06	124.07	128.60
24	BA	1049	C	N1-C2-O2	8.92	124.25	118.90
1	CA	1267	C	C2-N1-C1'	8.89	128.58	118.80
24	BA	2400	G	C8-N9-C4	-8.88	102.85	106.40
24	BA	2056	G	N3-C2-N2	-8.86	113.70	119.90
1	AA	192	U	C5-C6-N1	8.82	127.11	122.70
1	AA	192	U	N3-C2-O2	-8.79	116.05	122.20
22	AD	17(A)	C	C5-C4-N4	8.78	126.35	120.20
1	AA	193	C	C4-C5-C6	-8.75	113.02	117.40
24	BA	2751	G	C2-N3-C4	-8.74	107.53	111.90
24	DA	90	U	N3-C2-O2	-8.71	116.10	122.20
22	AC	17(A)	C	C5-C4-N4	8.68	126.28	120.20
1	CA	1267	C	N1-C2-O2	8.66	124.09	118.90
24	BA	330	A	C2-N3-C4	-8.64	106.28	110.60
24	DA	783	A	C5-N7-C8	-8.63	99.59	103.90
24	BA	1496	A	C8-N9-C4	-8.62	102.35	105.80
24	BA	140	A	C5-N7-C8	-8.61	99.60	103.90
24	BA	74	A	C2-N3-C4	-8.60	106.30	110.60
24	BA	676	A	C4-C5-N7	8.58	114.99	110.70
24	BA	654(I)	C	C6-N1-C2	-8.58	116.87	120.30
1	AA	193	C	N3-C4-N4	8.57	124.00	118.00
1	CA	1104	G	C8-N9-C4	8.55	109.82	106.40
24	DA	74	A	C2-N3-C4	-8.53	106.33	110.60
24	BA	1528	A	C8-N9-C4	-8.51	102.39	105.80
24	DA	783	A	N1-C6-N6	8.50	123.70	118.60
24	BA	783	A	C2-N3-C4	-8.48	106.36	110.60
24	DA	2430	A	C2-N3-C4	-8.46	106.37	110.60
22	CD	17(A)	C	C5-C4-N4	8.46	126.12	120.20
24	BA	2751	G	N3-C4-N9	-8.43	120.94	126.00
24	DA	783	A	C4-C5-N7	8.43	114.91	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	450	G	N1-C6-O6	8.41	124.95	119.90
24	BA	1049	C	C6-N1-C2	-8.41	116.94	120.30
24	BA	790	C	C6-N1-C2	8.39	123.66	120.30
24	DA	90	U	C2-N1-C1'	8.34	127.71	117.70
24	DA	801	G	N1-C6-O6	-8.31	114.91	119.90
1	AA	193	C	N3-C2-O2	-8.30	116.09	121.90
24	BA	1992	G	C8-N9-C4	-8.29	103.08	106.40
24	BA	783	A	N7-C8-N9	8.27	117.94	113.80
24	BA	140	A	N7-C8-N9	8.21	117.90	113.80
25	BB	40	U	N3-C2-O2	-8.20	116.46	122.20
24	DA	90	U	N1-C2-O2	8.17	128.52	122.80
1	AA	1158	C	C6-N1-C2	-8.15	117.04	120.30
24	DA	676	A	C2-N3-C4	-8.13	106.53	110.60
24	BA	2751	G	C4-N9-C1'	8.12	137.06	126.50
1	AA	475	G	N9-C4-C5	8.09	108.64	105.40
24	BA	2000	G	C4-C5-N7	-8.09	107.56	110.80
24	DA	1992	G	N3-C4-C5	-8.06	124.57	128.60
1	AA	192	U	C5-C4-O4	8.06	130.73	125.90
24	BA	1950	G	C8-N9-C4	-8.05	103.18	106.40
2	CE	111	ARG	CG-CD-NE	-8.05	94.89	111.80
1	AA	193	C	N3-C4-C5	-8.04	118.69	121.90
24	BA	1142(A)	A	C2-N3-C4	-8.02	106.59	110.60
24	BA	1786	A	N7-C8-N9	8.00	117.80	113.80
24	DA	130	C	C6-N1-C2	8.00	123.50	120.30
24	BA	1787	A	N9-C4-C5	-8.00	102.60	105.80
24	BA	1786	A	C4-C5-N7	7.98	114.69	110.70
24	DA	2477	C	N1-C2-O2	7.97	123.68	118.90
1	AA	193	C	C2-N3-C4	7.95	123.87	119.90
1	AA	193	C	N1-C2-O2	7.94	123.66	118.90
24	BA	676	A	N7-C8-N9	7.90	117.75	113.80
24	BA	1931	U	N3-C2-O2	-7.87	116.69	122.20
24	DA	774	A	C2-N3-C4	-7.87	106.66	110.60
24	DA	2699	C	C6-N1-C2	7.85	123.44	120.30
24	BA	71	A	C5-N7-C8	-7.80	100.00	103.90
24	DA	2430	A	N1-C6-N6	7.80	123.28	118.60
24	BA	1210	A	C8-N9-C4	-7.80	102.68	105.80
24	BA	2447	G	C5-C6-O6	-7.79	123.93	128.60
1	AA	474	G	N3-C4-C5	7.78	132.49	128.60
24	DA	2688	U	N3-C2-O2	-7.75	116.77	122.20
1	AA	405	U	N1-C2-N3	7.74	119.54	114.90
24	DA	828	U	N1-C2-O2	7.72	128.21	122.80
24	BA	654(I)	C	N1-C2-O2	7.72	123.53	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	405	U	C6-N1-C1'	7.72	132.00	121.20
24	DA	2067	G	C8-N9-C4	-7.72	103.31	106.40
1	AA	193	C	C2-N1-C1'	7.71	127.28	118.80
24	BA	270(M)	U	C2-N1-C1'	7.69	126.93	117.70
24	BA	828	U	C5-C4-O4	7.67	130.50	125.90
1	AA	405	U	C6-N1-C2	-7.65	116.41	121.00
24	BA	1049	C	N3-C2-O2	-7.65	116.55	121.90
24	BA	2400	G	N9-C4-C5	7.63	108.45	105.40
22	CC	17(A)	C	N1-C2-O2	7.63	123.48	118.90
4	AG	12	CYS	CA-CB-SG	7.61	127.69	114.00
24	DA	530	G	C4-C5-N7	7.60	113.84	110.80
24	DA	2477	C	C2-N1-C1'	7.54	127.10	118.80
24	DA	1332	G	N7-C8-N9	7.52	116.86	113.10
24	BA	1787	A	C8-N9-C4	7.49	108.79	105.80
24	DA	1786	A	C6-C5-N7	-7.48	127.06	132.30
1	AA	474	G	C8-N9-C4	7.48	109.39	106.40
24	BA	210	C	C6-N1-C2	7.48	123.29	120.30
24	DA	2401	U	C2-N1-C1'	7.47	126.67	117.70
24	BA	2452	C	C6-N1-C2	7.47	123.29	120.30
24	DA	1992	G	C8-N9-C4	-7.46	103.42	106.40
25	BB	40	U	N3-C4-C5	-7.46	110.12	114.60
24	BA	2591	C	N1-C2-O2	-7.45	114.43	118.90
24	DA	676	A	C5-N7-C8	-7.43	100.19	103.90
24	BA	471	A	N1-C6-N6	7.42	123.05	118.60
24	BA	585	G	C8-N9-C4	-7.41	103.44	106.40
24	DA	1786	A	C2-N3-C4	-7.41	106.89	110.60
24	BA	1210	A	N7-C8-N9	7.40	117.50	113.80
24	BA	2699	C	C5-C6-N1	-7.40	117.30	121.00
24	BA	1496	A	N7-C8-N9	7.38	117.49	113.80
1	AA	1158	C	C2-N1-C1'	7.38	126.92	118.80
1	AA	591	U	C5-C4-O4	7.38	130.32	125.90
1	AA	1336	C	N1-C2-O2	7.37	123.32	118.90
24	DA	1980	G	C8-N9-C4	-7.37	103.45	106.40
1	AA	405	U	N3-C4-C5	-7.37	110.18	114.60
24	BA	828	U	N3-C2-O2	-7.36	117.05	122.20
24	BA	621	A	C5-N7-C8	-7.36	100.22	103.90
24	BA	2710	C	C6-N1-C2	7.35	123.24	120.30
24	DA	2287	A	C2-N3-C4	-7.31	106.94	110.60
1	AA	475	G	N7-C8-N9	7.30	116.75	113.10
24	DA	2426	A	C8-N9-C4	-7.28	102.89	105.80
24	BA	2392	A	N7-C8-N9	7.26	117.43	113.80
24	DA	1786	A	C4-C5-N7	7.25	114.33	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	2873	A	N7-C8-N9	7.25	117.42	113.80
22	AC	17(A)	C	N1-C2-O2	7.24	123.25	118.90
24	BA	71	A	C2-N3-C4	-7.24	106.98	110.60
24	BA	1049	C	C5-C6-N1	7.21	124.61	121.00
24	DA	121	G	C5-C6-O6	-7.21	124.27	128.60
24	DA	405	U	C2-N1-C1'	7.20	126.34	117.70
24	DA	530	G	C6-C5-N7	-7.20	126.08	130.40
1	AA	1336	C	C2-N1-C1'	7.16	126.68	118.80
24	DA	49	A	C8-N9-C4	-7.15	102.94	105.80
24	DA	2518	A	C2-N3-C4	-7.15	107.03	110.60
24	BA	1313	U	C2-N1-C1'	7.14	126.27	117.70
24	BA	1931	U	C5-C4-O4	7.14	130.18	125.90
24	DA	1332	G	C8-N9-C4	-7.13	103.55	106.40
24	BA	1616	A	C5-N7-C8	-7.13	100.33	103.90
24	BA	2430	A	C2-N3-C4	-7.12	107.04	110.60
24	DA	2067	G	N9-C4-C5	7.12	108.25	105.40
24	DA	2056	G	C5-C6-O6	-7.11	124.33	128.60
24	BA	1644	C	C6-N1-C2	-7.10	117.46	120.30
24	BA	917	A	C2-N3-C4	-7.10	107.05	110.60
24	BA	2284	C	N3-C4-C5	-7.10	119.06	121.90
24	DA	140	A	C5-N7-C8	-7.10	100.35	103.90
24	BA	621	A	C2-N3-C4	-7.09	107.05	110.60
24	DA	2873	A	C5-N7-C8	-7.09	100.36	103.90
19	AV	5	LEU	CB-CG-CD2	-7.07	98.98	111.00
24	BA	1178	C	C6-N1-C2	-7.07	117.47	120.30
24	DA	828	U	N3-C2-O2	-7.07	117.25	122.20
24	BA	270(O)	U	C2-N1-C1'	7.05	126.16	117.70
24	BA	1022	G	C8-N9-C4	-7.04	103.58	106.40
24	BA	677	A	C8-N9-C4	7.03	108.61	105.80
22	CC	39	C	C6-N1-C2	-7.02	117.49	120.30
24	BA	2330	G	C8-N9-C4	7.02	109.21	106.40
24	DA	140	A	N7-C8-N9	7.02	117.31	113.80
24	DA	530	G	C5-C6-O6	-6.99	124.41	128.60
24	BA	1678	G	C2-N3-C4	-6.96	108.42	111.90
24	DA	767	U	C5-C4-O4	6.95	130.07	125.90
24	BA	654(I)	C	N3-C2-O2	-6.93	117.05	121.90
24	DA	2713	A	C5-N7-C8	-6.92	100.44	103.90
24	DA	1021	A	C2-N3-C4	-6.92	107.14	110.60
24	DA	2477	C	N3-C2-O2	-6.91	117.06	121.90
24	BA	120	U	C5-C6-N1	-6.89	119.25	122.70
24	BA	1332	G	N1-C2-N3	6.89	128.03	123.90
1	AA	192	U	C6-N1-C1'	6.89	130.84	121.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	1698	A	C2-N3-C4	-6.88	107.16	110.60
24	BA	1989	G	N3-C2-N2	-6.87	115.09	119.90
24	BA	2575	C	N3-C2-O2	-6.86	117.10	121.90
24	BA	1799	G	N3-C4-N9	6.86	130.11	126.00
24	BA	783	A	C4-C5-N7	6.84	114.12	110.70
24	DA	2688	U	C5-C6-N1	-6.84	119.28	122.70
24	BA	2688	U	N3-C2-O2	-6.84	117.41	122.20
24	BA	1698	A	C2-N3-C4	-6.83	107.18	110.60
24	DA	530	G	N1-C6-O6	6.83	124.00	119.90
24	BA	576	U	N1-C2-O2	-6.83	118.02	122.80
24	DA	2241	A	N1-C6-N6	-6.83	114.50	118.60
24	BA	1665	A	N1-C6-N6	6.81	122.69	118.60
24	BA	1297	C	C6-N1-C2	-6.81	117.58	120.30
8	AK	30	ARG	NE-CZ-NH1	-6.80	116.90	120.30
24	DA	1899	G	C2-N3-C4	-6.78	108.51	111.90
24	BA	528	A	N3-C4-C5	6.77	131.54	126.80
1	AA	1397	C	C6-N1-C2	-6.77	117.59	120.30
24	BA	676	A	N3-C4-C5	6.77	131.54	126.80
24	DA	1332	G	C2-N3-C4	-6.76	108.52	111.90
24	DA	528	A	C2-N3-C4	-6.74	107.23	110.60
24	DA	1787	A	N9-C4-C5	-6.74	103.10	105.80
24	BA	1786	A	C2-N3-C4	-6.74	107.23	110.60
24	DA	2444	G	N3-C2-N2	-6.74	115.18	119.90
24	BA	513	A	C8-N9-C4	-6.73	103.11	105.80
24	BA	1950	G	N7-C8-N9	6.73	116.47	113.10
24	BA	1831	G	C8-N9-C4	-6.72	103.71	106.40
24	DA	2685	G	N3-C2-N2	-6.72	115.19	119.90
24	BA	2751	G	C8-N9-C1'	-6.71	118.27	127.00
24	DA	94	G	N9-C4-C5	6.71	108.09	105.40
24	BA	917	A	N1-C6-N6	6.70	122.62	118.60
24	DA	2447	G	C5-C6-O6	-6.68	124.59	128.60
24	DA	2873	A	C2-N3-C4	-6.67	107.26	110.60
24	DA	1396	U	N3-C2-O2	-6.67	117.53	122.20
2	CE	111	ARG	CA-CB-CG	-6.67	98.73	113.40
24	DA	1313	U	C2-N1-C1'	6.67	125.70	117.70
24	BA	889	C	C6-N1-C2	-6.64	117.65	120.30
24	BA	1528	A	N7-C8-N9	6.63	117.12	113.80
24	BA	1786	A	N1-C6-N6	6.63	122.58	118.60
24	DA	783	A	C2-N3-C4	-6.63	107.28	110.60
24	BA	1614	A	C5-N7-C8	-6.62	100.59	103.90
24	BA	1210	A	C5-N7-C8	-6.62	100.59	103.90
24	BA	140	A	C4-C5-N7	6.62	114.01	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	CN	124	LYS	N-CA-CB	-6.62	98.68	110.60
24	BA	140	A	N1-C6-N6	6.62	122.57	118.60
1	CA	1267	C	C6-N1-C2	-6.61	117.66	120.30
24	BA	1021	A	C2-N3-C4	-6.61	107.30	110.60
24	BA	774	A	N3-C4-C5	6.61	131.43	126.80
1	AA	827	U	N3-C2-O2	-6.59	117.59	122.20
24	BA	2455	G	C8-N9-C4	6.59	109.04	106.40
24	BA	2518	A	C5-N7-C8	-6.59	100.60	103.90
24	BA	2258	C	C6-N1-C2	-6.59	117.67	120.30
24	BA	580	C	C6-N1-C2	-6.59	117.67	120.30
1	AA	193	C	P-O5'-C5'	6.57	131.42	120.90
24	BA	2688	U	C5-C4-O4	6.57	129.84	125.90
22	AC	17(A)	C	N1-C2-N3	-6.57	114.60	119.20
24	BA	442	G	N3-C4-C5	-6.56	125.32	128.60
24	DA	1989	G	N3-C2-N2	-6.56	115.31	119.90
1	AA	449	C	C6-N1-C2	-6.55	117.68	120.30
1	CA	449	C	C6-N1-C2	-6.55	117.68	120.30
24	DA	2609	U	C5-C6-N1	-6.55	119.43	122.70
1	AA	781	A	N1-C6-N6	6.54	122.53	118.60
24	DA	1616	A	C5-N7-C8	-6.54	100.63	103.90
24	DA	330	A	C2-N3-C4	-6.54	107.33	110.60
24	BA	676	A	C5-C6-N1	-6.53	114.43	117.70
24	BA	2324	C	C6-N1-C2	6.53	122.91	120.30
24	BA	2028	U	C6-N1-C2	-6.52	117.09	121.00
24	DA	512	G	N9-C4-C5	6.52	108.01	105.40
24	BA	1786	A	C6-C5-N7	-6.52	127.74	132.30
1	CA	197	A	N7-C8-N9	6.52	117.06	113.80
1	AA	84	U	N1-C2-O2	6.51	127.36	122.80
24	DA	1899	G	N1-C2-N2	-6.51	110.34	116.20
24	BA	208	C	C6-N1-C2	6.50	122.90	120.30
1	CA	197	A	C8-N9-C4	-6.50	103.20	105.80
24	BA	2474	C	C6-N1-C2	-6.50	117.70	120.30
24	BA	71	A	C4-C5-N7	6.49	113.95	110.70
1	CA	812	C	C6-N1-C2	-6.49	117.70	120.30
1	AA	1382	C	C5-C6-N1	-6.48	117.76	121.00
24	BA	828	U	N1-C2-O2	6.48	127.33	122.80
37	DQ	110	LEU	CA-CB-CG	6.48	130.20	115.30
24	DA	1786	A	N1-C6-N6	6.46	122.47	118.60
24	DA	2779	U	N3-C2-O2	-6.45	117.68	122.20
24	DA	2401	U	C4-C5-C6	-6.45	115.83	119.70
1	CA	963	G	N3-C4-N9	6.44	129.87	126.00
24	BA	803	U	C5-C6-N1	-6.44	119.48	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BB	42	C	N3-C4-C5	6.43	124.47	121.90
24	BA	2438	U	N1-C2-O2	6.43	127.30	122.80
1	AA	913	A	C8-N9-C4	-6.42	103.23	105.80
24	DA	2070	G	N1-C6-O6	-6.42	116.05	119.90
24	DA	530	G	N9-C4-C5	-6.42	102.83	105.40
24	BA	1899	G	N3-C4-C5	6.41	131.81	128.60
24	BA	246	C	C6-N1-C2	6.40	122.86	120.30
24	BA	676	A	C6-C5-N7	-6.39	127.83	132.30
24	DA	805	G	C5-C6-O6	-6.39	124.77	128.60
1	AA	422	C	C6-N1-C2	-6.39	117.74	120.30
24	DA	121	G	N1-C6-O6	6.39	123.73	119.90
24	BA	1243	G	C4-N9-C1'	-6.38	118.20	126.50
1	AA	84	U	C2-N1-C1'	6.38	125.35	117.70
1	AA	193	C	O4'-C1'-N1	6.38	113.30	108.20
24	DA	1787	A	C8-N9-C4	6.38	108.35	105.80
1	CA	1301	U	C2-N1-C1'	6.37	125.35	117.70
24	BA	2345	G	C8-N9-C4	-6.37	103.85	106.40
24	DA	270(H)	C	C6-N1-C2	-6.37	117.75	120.30
30	DH	67	LEU	CB-CG-CD1	-6.36	100.19	111.00
24	BA	2575	C	C6-N1-C2	-6.34	117.76	120.30
24	BA	2712	U	C5-C4-O4	6.32	129.69	125.90
24	DA	2713	A	N1-C6-N6	6.32	122.39	118.60
24	DA	480	A	N3-C4-N9	6.31	132.45	127.40
24	BA	2401	U	C6-N1-C2	-6.31	117.21	121.00
1	CA	986	A	C5-C6-N1	-6.30	114.55	117.70
24	DA	774	A	N3-C4-C5	6.30	131.21	126.80
24	DA	1332	G	N1-C2-N3	6.30	127.68	123.90
1	AA	910	C	C6-N1-C2	6.30	122.82	120.30
24	DA	1616	A	N7-C8-N9	6.30	116.95	113.80
24	DA	2859	G	C8-N9-C4	-6.30	103.88	106.40
24	DA	792	G	N3-C4-C5	-6.29	125.45	128.60
24	BA	2261	C	N3-C4-C5	-6.29	119.38	121.90
24	BA	2544	G	N1-C6-O6	6.29	123.67	119.90
24	DA	1569	A	C8-N9-C4	-6.29	103.28	105.80
24	BA	141	A	C5-N7-C8	-6.29	100.76	103.90
1	AA	1382	C	N1-C2-O2	6.28	122.67	118.90
24	DA	613	U	N3-C2-O2	-6.28	117.81	122.20
24	DA	116	C	C6-N1-C2	-6.27	117.79	120.30
24	BA	1489	U	C5-C4-O4	6.27	129.66	125.90
24	BA	1955	U	C5-C6-N1	-6.27	119.57	122.70
24	BA	2286	A	C8-N9-C4	-6.26	103.30	105.80
24	BA	74	A	C5-N7-C8	-6.26	100.77	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	1673	U	C6-N1-C2	6.26	124.76	121.00
1	CA	1060	C	C6-N1-C2	-6.26	117.80	120.30
1	AA	590	C	N3-C4-C5	-6.26	119.40	121.90
24	BA	1392	A	N1-C6-N6	-6.26	114.85	118.60
24	DA	270(C)	C	C6-N1-C2	-6.26	117.80	120.30
24	DA	767	U	N3-C2-O2	-6.25	117.82	122.20
24	BA	71	A	N1-C6-N6	6.24	122.34	118.60
24	DA	2426	A	N7-C8-N9	6.23	116.92	113.80
24	BA	528	A	N3-C4-N9	-6.22	122.42	127.40
1	CA	1267	C	N3-C2-O2	-6.22	117.55	121.90
24	BA	1254	A	C8-N9-C4	6.21	108.28	105.80
24	BA	2392	A	C5-N7-C8	-6.21	100.80	103.90
24	BA	575	A	C8-N9-C4	6.21	108.28	105.80
24	DA	94	G	C4-C5-N7	-6.21	108.32	110.80
24	DA	1158	C	C6-N1-C2	-6.20	117.82	120.30
24	DA	2286	A	C8-N9-C4	-6.20	103.32	105.80
24	BA	2388	A	N9-C4-C5	-6.20	103.32	105.80
24	BA	2713	A	N1-C6-N6	6.20	122.32	118.60
24	BA	1825	A	N1-C6-N6	-6.20	114.88	118.60
24	DA	2441	C	N3-C4-N4	-6.19	113.67	118.00
24	DA	1565	C	C6-N1-C2	-6.18	117.83	120.30
24	BA	1973	G	N1-C6-O6	-6.18	116.19	119.90
24	DA	2501	C	C2-N1-C1'	-6.18	112.01	118.80
24	BA	1021	A	C5-N7-C8	-6.17	100.81	103.90
1	CA	1104	G	C4-C5-C6	-6.17	115.10	118.80
24	BA	1775	U	C5-C6-N1	-6.16	119.62	122.70
24	DA	1569	A	N9-C4-C5	6.15	108.26	105.80
24	DA	270(Y)	G	C5-C6-O6	6.15	132.29	128.60
24	BA	2618	G	C8-N9-C4	-6.14	103.94	106.40
43	DU	46	LYS	CB-CG-CD	-6.14	95.64	111.60
1	AA	1321	C	C6-N1-C2	-6.13	117.85	120.30
1	AA	960	U	C2-N1-C1'	6.13	125.06	117.70
24	BA	860	U	C4-C5-C6	6.13	123.38	119.70
24	DA	13	A	C8-N9-C4	-6.13	103.35	105.80
8	AK	30	ARG	NE-CZ-NH2	6.13	123.36	120.30
24	BA	621	A	N7-C8-N9	6.13	116.86	113.80
24	BA	2000	G	C8-N9-C1'	6.13	134.97	127.00
24	BA	654(I)	C	C5-C6-N1	6.13	124.06	121.00
24	BA	691	C	C6-N1-C2	6.12	122.75	120.30
24	DA	2870	C	C6-N1-C2	-6.12	117.85	120.30
24	BA	1178	C	C6-N1-C1'	-6.12	113.46	120.80
24	DA	749	C	C6-N1-C2	6.12	122.75	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	140	A	C8-N9-C4	-6.12	103.35	105.80
1	AA	1158	C	N1-C2-O2	6.10	122.56	118.90
24	BA	2331	G	N1-C6-O6	6.10	123.56	119.90
1	CA	1502	A	N1-C2-N3	6.10	132.35	129.30
24	BA	208	C	C5-C6-N1	-6.10	117.95	121.00
24	BA	1992	G	N9-C4-C5	6.10	107.84	105.40
1	AA	474	G	N3-C2-N2	-6.09	115.64	119.90
24	DA	2441	C	N3-C2-O2	-6.08	117.64	121.90
24	BA	1799	G	C2-N3-C4	6.08	114.94	111.90
24	BA	1925	C	C6-N1-C2	-6.07	117.87	120.30
24	BA	2699	C	N3-C4-C5	6.07	124.33	121.90
24	DA	138	G	C8-N9-C4	-6.07	103.97	106.40
1	CA	84	U	N3-C2-O2	-6.07	117.95	122.20
24	BA	253	C	C6-N1-C2	6.07	122.73	120.30
24	DA	2443	C	C4-C5-C6	6.06	120.43	117.40
24	BA	2447	G	N3-C2-N2	-6.06	115.66	119.90
24	DA	140	A	N1-C6-N6	6.06	122.23	118.60
24	DA	1898	U	N3-C4-C5	-6.06	110.97	114.60
1	CA	1267	C	C5-C6-N1	6.05	124.03	121.00
24	BA	204	A	C8-N9-C4	-6.05	103.38	105.80
24	BA	2028	U	N3-C4-C5	-6.05	110.97	114.60
1	AA	827	U	C2-N1-C1'	6.03	124.94	117.70
24	BA	2392	A	C8-N9-C4	-6.03	103.39	105.80
24	BA	2751	G	C5-C6-O6	6.03	132.22	128.60
24	BA	774	A	N3-C4-N9	-6.03	122.58	127.40
24	DA	1786	A	C8-N9-C4	-6.02	103.39	105.80
24	DA	2491	U	C6-N1-C2	6.02	124.61	121.00
24	BA	206	U	N3-C2-O2	-6.01	117.99	122.20
24	BA	774	A	N1-C2-N3	6.01	132.31	129.30
49	B4	2	LYS	CD-CE-NZ	6.01	125.53	111.70
24	BA	2271	G	C5-C6-N1	6.01	114.51	111.50
1	AA	193	C	C5'-C4'-O4'	6.01	116.31	109.10
24	BA	345	A	C8-N9-C4	-6.01	103.40	105.80
22	AD	17(A)	C	N1-C2-N3	-6.01	115.00	119.20
24	BA	1157	G	C5-C6-O6	-6.00	125.00	128.60
1	CA	1147	C	C6-N1-C2	-6.00	117.90	120.30
1	AA	522	C	C6-N1-C2	6.00	122.70	120.30
24	BA	74	A	C5-C6-N1	-6.00	114.70	117.70
24	BA	546	C	C6-N1-C2	-5.99	117.90	120.30
24	DA	2231	C	C6-N1-C2	5.99	122.70	120.30
24	BA	2430	A	N1-C6-N6	5.99	122.19	118.60
1	AA	812	C	C6-N1-C2	-5.99	117.90	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	792	G	C8-N9-C4	-5.99	104.00	106.40
24	BA	385	C	C6-N1-C2	-5.99	117.91	120.30
24	BA	2880	C	C6-N1-C2	-5.98	117.91	120.30
24	BA	165	U	C2-N1-C1'	5.98	124.87	117.70
24	BA	1786	A	C5-C6-N1	-5.97	114.72	117.70
1	CA	1465	C	C6-N1-C2	-5.97	117.91	120.30
22	CC	17(A)	C	N1-C2-N3	-5.97	115.02	119.20
24	DA	205	G	N3-C4-C5	-5.97	125.62	128.60
24	BA	576	U	N3-C2-O2	5.96	126.38	122.20
24	DA	90	U	C6-N1-C2	-5.96	117.42	121.00
22	AC	1	C	C2-N1-C1'	5.96	125.36	118.80
1	AA	474	G	N3-C4-N9	-5.96	122.42	126.00
24	BA	74	A	N7-C8-N9	5.96	116.78	113.80
24	DA	2518	A	N3-C4-C5	5.95	130.97	126.80
24	BA	831	G	C8-N9-C4	5.94	108.78	106.40
24	DA	1902	C	N3-C4-C5	5.94	124.28	121.90
24	DA	2795	G	N3-C4-C5	-5.94	125.63	128.60
24	BA	2699	C	C2-N1-C1'	-5.94	112.27	118.80
1	CA	486	U	C2-N1-C1'	5.94	124.83	117.70
24	DA	1972	A	C8-N9-C4	5.94	108.17	105.80
24	BA	1559	G	N1-C6-O6	5.93	123.46	119.90
24	BA	192	C	C6-N1-C2	5.92	122.67	120.30
24	BA	270(M)	U	N1-C2-O2	5.92	126.94	122.80
53	D8	31	HIS	CB-CA-C	5.92	122.24	110.40
24	BA	1204	A	C5-C6-N1	-5.92	114.74	117.70
24	BA	1782	C	C6-N1-C2	5.91	122.67	120.30
1	CA	1158	C	C6-N1-C2	-5.91	117.94	120.30
24	DA	1673	U	C5-C6-N1	-5.91	119.74	122.70
24	BA	1799	G	C8-N9-C4	-5.91	104.04	106.40
1	CA	47	C	N1-C2-O2	-5.90	115.36	118.90
24	BA	2210	G	C8-N9-C4	-5.89	104.04	106.40
24	BA	2388	A	N7-C8-N9	-5.89	110.85	113.80
24	DA	205	G	N3-C4-N9	5.89	129.53	126.00
24	BA	2496	C	C6-N1-C2	5.88	122.65	120.30
24	BA	2430	A	C5-C6-N1	-5.88	114.76	117.70
24	BA	140	A	C6-C5-N7	-5.88	128.18	132.30
24	DA	570	G	C4-C5-N7	-5.88	108.45	110.80
1	CA	963	G	C4-N9-C1'	5.88	134.14	126.50
24	DA	2430	A	C5-C6-N1	-5.88	114.76	117.70
24	BA	2611	U	N3-C2-O2	-5.88	118.09	122.20
24	BA	786	C	N3-C4-N4	-5.87	113.89	118.00
24	DA	2726	U	C5-C4-O4	5.87	129.42	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	696	G	N1-C6-O6	-5.87	116.38	119.90
1	CA	957	U	C6-N1-C2	-5.87	117.48	121.00
24	BA	1313	U	C6-N1-C1'	-5.86	112.99	121.20
1	CA	1267	C	C6-N1-C1'	-5.86	113.76	120.80
24	BA	2507	C	N1-C2-O2	5.86	122.42	118.90
24	DA	74	A	N1-C6-N6	5.86	122.12	118.60
24	DA	2518	A	C5-N7-C8	-5.85	100.97	103.90
16	AS	81	ARG	CD-NE-CZ	-5.85	115.41	123.60
25	BB	7	G	N1-C6-O6	5.85	123.41	119.90
24	BA	774	A	C5-N7-C8	-5.85	100.98	103.90
24	DA	828	U	C2-N1-C1'	5.85	124.72	117.70
1	AA	936	C	C6-N1-C2	-5.84	117.96	120.30
24	DA	528	A	N1-C2-N3	5.84	132.22	129.30
24	BA	2713	A	C2-N3-C4	-5.84	107.68	110.60
24	BA	860	U	C2-N1-C1'	5.83	124.70	117.70
24	BA	786	C	C2-N1-C1'	-5.83	112.39	118.80
24	BA	664	C	C5-C6-N1	-5.82	118.09	121.00
13	CP	70	LEU	CA-CB-CG	5.82	128.68	115.30
24	DA	2606	C	C2-N1-C1'	-5.81	112.41	118.80
24	BA	468	G	C8-N9-C4	5.81	108.72	106.40
1	AA	1404	C	C6-N1-C2	-5.80	117.98	120.30
24	DA	776	G	C5-C6-O6	5.80	132.08	128.60
24	BA	1049	C	C4-C5-C6	-5.80	114.50	117.40
24	BA	1821	A	N1-C2-N3	5.80	132.20	129.30
24	DA	1558	A	C2-N3-C4	-5.79	107.70	110.60
24	BA	450	G	C5-C6-O6	-5.79	125.13	128.60
24	BA	2691	C	C6-N1-C2	5.79	122.62	120.30
24	DA	2401	U	N3-C4-C5	5.79	118.07	114.60
24	DA	479	A	N9-C4-C5	5.79	108.11	105.80
24	DA	140	A	C4-C5-N7	5.78	113.59	110.70
24	DA	1332	G	C5-N7-C8	-5.78	101.41	104.30
24	DA	1528	A	N7-C8-N9	5.78	116.69	113.80
24	BA	1332	G	C4-N9-C1'	5.78	134.01	126.50
24	DA	512	G	N3-C4-N9	-5.78	122.53	126.00
24	BA	889	C	C2-N1-C1'	5.78	125.15	118.80
22	CC	17(A)	C	C4-C5-C6	5.78	120.29	117.40
24	DA	1251	C	N3-C4-C5	-5.77	119.59	121.90
24	BA	1314	C	C2-N1-C1'	5.77	125.15	118.80
40	D2	37	VAL	CB-CA-C	-5.77	100.44	111.40
24	BA	654(I)	C	C6-N1-C1'	-5.77	113.88	120.80
24	BA	1673	U	C5-C6-N1	-5.77	119.82	122.70
1	CA	150	C	C6-N1-C2	-5.76	118.00	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	2401	U	C6-N1-C2	-5.75	117.55	121.00
24	BA	1695	G	C8-N9-C4	-5.75	104.10	106.40
24	DA	929	G	N1-C6-O6	5.75	123.35	119.90
24	BA	133	C	C6-N1-C2	5.75	122.60	120.30
22	AD	13	C	C5-C6-N1	5.74	123.87	121.00
24	BA	784	A	N1-C6-N6	-5.74	115.15	118.60
24	BA	2392	A	C5-C6-N1	-5.74	114.83	117.70
1	AA	1381	U	C5-C6-N1	5.74	125.57	122.70
22	AC	1	C	N1-C2-O2	5.74	122.34	118.90
24	BA	2258	C	C2-N1-C1'	5.74	125.11	118.80
24	BA	2454	G	N1-C6-O6	-5.74	116.46	119.90
24	DA	1564	C	C6-N1-C2	-5.74	118.01	120.30
24	DA	621	A	C5-C6-N1	-5.73	114.83	117.70
1	CA	1126	U	C5-C4-O4	-5.73	122.46	125.90
24	DA	2447	G	C6-C5-N7	-5.73	126.96	130.40
24	BA	210	C	N3-C4-C5	5.72	124.19	121.90
24	BA	528	A	C5-C6-N1	-5.72	114.84	117.70
22	CD	6	G	C5-C6-O6	-5.72	125.17	128.60
1	AA	990	C	C6-N1-C2	-5.72	118.01	120.30
24	BA	270(O)	U	N3-C2-O2	-5.71	118.20	122.20
24	BA	1899	G	N1-C6-O6	5.71	123.33	119.90
24	DA	1980	G	N9-C4-C5	5.71	107.69	105.40
24	BA	1313	U	N1-C2-O2	5.71	126.80	122.80
24	DA	130	C	N3-C4-C5	5.71	124.18	121.90
24	BA	1665	A	N9-C4-C5	-5.70	103.52	105.80
24	BA	2544	G	C5-C6-O6	-5.70	125.18	128.60
24	BA	914	C	C5-C4-N4	5.70	124.19	120.20
24	BA	270(M)	U	C6-N1-C1'	-5.69	113.23	121.20
24	BA	1032	A	N1-C6-N6	5.69	122.02	118.60
22	CC	20	U	C2-N1-C1'	5.69	124.53	117.70
1	CA	1301	U	N1-C2-O2	5.69	126.78	122.80
24	BA	512	G	N1-C6-O6	-5.68	116.49	119.90
24	BA	2000	G	C4-N9-C1'	-5.68	119.11	126.50
24	BA	400	G	C8-N9-C4	-5.68	104.13	106.40
24	BA	265	A	N1-C6-N6	5.68	122.01	118.60
24	DA	2371	G	C4-C5-C6	5.68	122.21	118.80
7	AJ	79	ARG	CD-NE-CZ	-5.67	115.66	123.60
24	DA	2477	C	C6-N1-C2	-5.67	118.03	120.30
24	DA	1902	C	N3-C4-N4	-5.67	114.03	118.00
24	BA	2719	G	N1-C6-O6	-5.67	116.50	119.90
24	DA	1658	C	C2-N1-C1'	5.66	125.03	118.80
24	BA	1614	A	N7-C8-N9	5.66	116.63	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1342	C	N3-C4-C5	-5.65	119.64	121.90
24	DA	71	A	C5-N7-C8	-5.65	101.07	103.90
24	BA	1616	A	N7-C8-N9	5.65	116.62	113.80
24	DA	2798	C	C6-N1-C2	-5.65	118.04	120.30
2	CE	213	LEU	CA-CB-CG	-5.64	102.32	115.30
12	CO	47	LYS	C-N-CD	5.64	140.25	128.40
24	BA	2447	G	C8-N9-C4	5.64	108.66	106.40
47	DW	17	SER	C-N-CD	-5.64	108.19	120.60
24	BA	2320	A	C8-N9-C4	-5.63	103.55	105.80
24	BA	1902	C	N3-C4-N4	-5.63	114.06	118.00
24	DA	669	G	N3-C4-C5	-5.63	125.78	128.60
24	BA	141	A	N7-C8-N9	5.63	116.61	113.80
22	AD	17(A)	C	C5-C6-N1	5.63	123.81	121.00
24	BA	381	G	C8-N9-C4	5.63	108.65	106.40
24	DA	676	A	C4-C5-N7	5.63	113.51	110.70
24	BA	585	G	N3-C4-C5	-5.62	125.79	128.60
24	BA	662	G	N1-C6-O6	-5.62	116.53	119.90
24	DA	2713	A	C4-C5-N7	5.62	113.51	110.70
24	BA	1814	G	C4-C5-N7	-5.62	108.55	110.80
24	DA	736	C	N1-C2-O2	-5.62	115.53	118.90
24	DA	405	U	N1-C2-O2	5.61	126.73	122.80
24	DA	600	G	N3-C2-N2	-5.61	115.97	119.90
24	BA	1332	G	N1-C2-N2	-5.61	111.15	116.20
24	DA	676	A	N7-C8-N9	5.61	116.60	113.80
24	DA	783	A	N7-C8-N9	5.61	116.60	113.80
24	DA	933	A	N1-C6-N6	5.60	121.96	118.60
1	AA	449	C	C2-N1-C1'	5.59	124.95	118.80
24	DA	2443	C	N3-C4-C5	-5.59	119.66	121.90
24	BA	130	C	C6-N1-C2	5.59	122.53	120.30
1	CA	328	C	C6-N1-C2	-5.59	118.06	120.30
1	CA	815	A	C8-N9-C4	5.58	108.03	105.80
30	BH	7	LEU	C-N-CD	5.58	140.12	128.40
24	BA	575	A	N9-C4-C5	-5.58	103.57	105.80
24	DA	512	G	C5-C6-O6	5.58	131.95	128.60
24	DA	1950	G	C4-N9-C1'	5.58	133.75	126.50
24	BA	120	U	N3-C2-O2	-5.58	118.30	122.20
24	DA	2688	U	C4-C5-C6	5.58	123.05	119.70
1	AA	1336	C	C6-N1-C1'	-5.57	114.11	120.80
24	BA	129	C	C2-N3-C4	-5.57	117.11	119.90
22	CD	17(A)	C	N1-C2-N3	-5.57	115.30	119.20
1	AA	1299	A	C8-N9-C4	-5.57	103.57	105.80
1	CA	799	G	C5-C6-O6	-5.56	125.26	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	783	A	C6-C5-N7	-5.56	128.41	132.30
1	AA	346	G	C4-N9-C1'	5.56	133.73	126.50
24	DA	2779	U	N1-C2-O2	5.56	126.69	122.80
1	CA	963	G	C8-N9-C1'	-5.56	119.78	127.00
24	BA	1379	A	N7-C8-N9	5.56	116.58	113.80
24	BA	442	G	N3-C4-N9	5.55	129.33	126.00
24	BA	2496	C	N3-C4-C5	5.55	124.12	121.90
40	B2	35	LEU	CA-CB-CG	5.55	128.07	115.30
24	BA	2578	G	C8-N9-C4	5.55	108.62	106.40
24	BA	664	C	C2-N3-C4	-5.54	117.13	119.90
24	BA	1241	A	C5-C6-N1	-5.54	114.93	117.70
1	CA	244	U	C5-C4-O4	-5.54	122.57	125.90
24	DA	2610	C	N1-C2-O2	5.54	122.23	118.90
24	BA	2490	G	N3-C4-N9	-5.54	122.67	126.00
24	DA	2447	G	P-O3'-C3'	5.54	126.35	119.70
24	BA	2507	C	N3-C2-O2	-5.54	118.02	121.90
24	DA	1342	A	C2-N3-C4	-5.54	107.83	110.60
24	BA	1142(A)	A	N3-C4-C5	5.53	130.67	126.80
24	DA	1396	U	N1-C2-O2	5.53	126.67	122.80
24	DA	1899	G	N1-C2-N3	5.53	127.22	123.90
24	BA	513	A	N9-C4-C5	5.53	108.01	105.80
1	CA	84	U	N1-C2-O2	5.53	126.67	122.80
24	BA	246	C	C5-C6-N1	-5.53	118.24	121.00
1	CA	421	U	C2-N1-C1'	5.53	124.33	117.70
24	BA	2571	C	C6-N1-C2	-5.53	118.09	120.30
24	BA	2712	U	N3-C4-O4	-5.53	115.53	119.40
24	BA	946	G	C8-N9-C4	5.52	108.61	106.40
1	AA	1158	C	C5-C6-N1	5.52	123.76	121.00
24	BA	137(A)	G	N9-C4-C5	5.52	107.61	105.40
24	BA	1992	G	C2-N3-C4	5.52	114.66	111.90
24	DA	74	A	N1-C2-N3	5.52	132.06	129.30
25	DB	38	C	N1-C2-O2	-5.52	115.59	118.90
24	BA	678	C	C6-N1-C2	5.51	122.51	120.30
24	BA	813	U	N3-C4-C5	-5.51	111.29	114.60
24	BA	1899	G	N1-C2-N3	5.51	127.21	123.90
24	BA	450	G	C6-C5-N7	-5.51	127.09	130.40
24	BA	1535	U	C2-N1-C1'	5.51	124.31	117.70
24	BA	2259	G	C5-C6-O6	-5.51	125.29	128.60
34	BO	138	LEU	CA-CB-CG	5.51	127.98	115.30
24	DA	1950	G	N7-C8-N9	5.51	115.86	113.10
24	BA	123	G	C5-C6-O6	-5.50	125.30	128.60
24	BA	1695	G	C5-C6-O6	5.50	131.90	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DA	933	A	C5-N7-C8	-5.50	101.15	103.90
24	BA	621	A	C4-C5-N7	5.49	113.45	110.70
24	BA	1602	U	C5-C6-N1	-5.49	119.95	122.70
1	CA	1267	C	C2-N3-C4	5.49	122.65	119.90
24	DA	678	C	C6-N1-C2	5.49	122.50	120.30
24	BA	677	A	N9-C4-C5	-5.49	103.60	105.80
24	BA	1022	G	N3-C4-C5	-5.49	125.86	128.60
24	BA	2490	G	C5-N7-C8	-5.49	101.56	104.30
24	DA	1088	A	C8-N9-C4	-5.49	103.61	105.80
24	BA	2401	U	C2-N1-C1'	5.48	124.28	117.70
1	AA	365	U	C2-N1-C1'	5.48	124.28	117.70
1	AA	1158	C	N3-C2-O2	-5.48	118.06	121.90
1	CA	409	G	N3-C4-C5	-5.48	125.86	128.60
1	CA	1519	A	C5-C6-N6	5.48	128.08	123.70
24	BA	463	G	C8-N9-C4	5.48	108.59	106.40
24	DA	2606	C	C5-C6-N1	-5.48	118.26	121.00
25	BB	40	U	C6-N1-C1'	-5.47	113.54	121.20
24	DA	1698	A	C5-C6-N1	-5.47	114.97	117.70
24	BA	2699	C	C2-N3-C4	-5.47	117.17	119.90
24	DA	621	A	C5-N7-C8	-5.47	101.17	103.90
24	BA	790	C	N3-C4-C5	5.47	124.09	121.90
24	BA	2284	C	C2-N3-C4	5.46	122.63	119.90
22	AD	65	C	C6-N1-C2	-5.46	118.11	120.30
24	BA	247	G	C8-N9-C4	5.46	108.58	106.40
24	DA	1900	A	C8-N9-C4	-5.46	103.62	105.80
24	BA	2779	U	C5-C6-N1	-5.45	119.97	122.70
24	DA	1675	C	C6-N1-C2	5.45	122.48	120.30
22	CD	6	G	N9-C4-C5	-5.45	103.22	105.40
16	AS	81	ARG	NH1-CZ-NH2	5.45	125.39	119.40
24	DA	570	G	C5-C6-O6	5.45	131.87	128.60
24	DA	2818	G	C8-N9-C4	5.45	108.58	106.40
24	DA	2134	A	N1-C6-N6	-5.44	115.33	118.60
24	BA	761	A	C5-N7-C8	-5.44	101.18	103.90
24	DA	2239	G	N1-C2-N2	-5.44	111.31	116.20
24	DA	790	C	C6-N1-C2	5.43	122.47	120.30
24	DA	2441	C	C5-C4-N4	5.43	124.00	120.20
24	DA	1698	A	C5-N7-C8	-5.43	101.18	103.90
24	DA	479	A	C8-N9-C4	-5.43	103.63	105.80
24	DA	2779	U	C2-N1-C1'	5.43	124.21	117.70
24	BA	1025	G	N3-C4-C5	-5.43	125.89	128.60
25	BB	7	G	C5-C6-O6	-5.43	125.34	128.60
24	DA	480	A	N1-C2-N3	5.42	132.01	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	578	A	C8-N9-C4	-5.42	103.63	105.80
24	DA	963	U	N3-C2-O2	-5.42	118.41	122.20
1	AA	191	G	N3-C4-C5	-5.42	125.89	128.60
24	BA	2059	A	C8-N9-C4	5.42	107.97	105.80
24	BA	2244	U	C5-C6-N1	-5.42	119.99	122.70
24	DA	26	G	C8-N9-C4	-5.42	104.23	106.40
24	DA	2500	U	N3-C4-O4	-5.42	115.61	119.40
24	BA	783	A	N3-C4-C5	5.41	130.59	126.80
24	DA	2609	U	C2-N3-C4	-5.41	123.76	127.00
24	BA	270(O)	U	N1-C2-O2	5.40	126.58	122.80
24	BA	2779	U	C4-C5-C6	5.40	122.94	119.70
24	DA	2286	A	N7-C8-N9	5.40	116.50	113.80
24	DA	805	G	N9-C4-C5	-5.40	103.24	105.40
24	BA	2713	A	C5-N7-C8	-5.40	101.20	103.90
24	BA	2503	A	N1-C2-N3	-5.40	126.60	129.30
1	AA	687	A	C8-N9-C4	-5.39	103.64	105.80
24	BA	2518	A	C4-C5-N7	5.39	113.40	110.70
24	BA	2345	G	N9-C4-C5	5.39	107.56	105.40
24	DA	2515	C	N3-C2-O2	-5.39	118.12	121.90
24	BA	529	A	N1-C6-N6	5.39	121.83	118.60
24	BA	814	C	C5-C6-N1	-5.39	118.31	121.00
1	CA	1053	G	C4-N9-C1'	-5.39	119.50	126.50
1	AA	866	C	N3-C4-C5	-5.38	119.75	121.90
24	DA	1956	U	N3-C2-O2	-5.38	118.43	122.20
24	DA	921	G	C8-N9-C4	-5.38	104.25	106.40
24	DA	479	A	C8-N9-C1'	5.38	137.38	127.70
24	DA	2056	G	N1-C6-O6	5.38	123.13	119.90
24	BA	678	C	N3-C4-C5	5.37	124.05	121.90
24	DA	541	C	C6-N1-C2	-5.37	118.15	120.30
1	AA	1382	C	N3-C2-O2	-5.37	118.14	121.90
1	CA	423	G	C8-N9-C4	-5.37	104.25	106.40
24	BA	2742	C	C6-N1-C2	5.37	122.45	120.30
24	BA	1063	G	C8-N9-C4	-5.37	104.25	106.40
24	BA	1427	A	C8-N9-C4	-5.37	103.65	105.80
25	DB	71	C	C6-N1-C2	-5.37	118.15	120.30
24	BA	681	G	N1-C2-N2	-5.36	111.38	116.20
1	CA	266	G	C8-N9-C4	-5.36	104.26	106.40
24	DA	2371	G	C5-N7-C8	5.36	106.98	104.30
1	AA	1108	G	C5-C6-O6	5.36	131.81	128.60
1	CA	812	C	C2-N1-C1'	5.35	124.69	118.80
24	BA	1064	C	C6-N1-C2	-5.35	118.16	120.30
24	DA	621	A	C2-N3-C4	-5.35	107.92	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	729	G	C8-N9-C4	-5.35	104.26	106.40
24	BA	1625	C	N3-C2-O2	-5.35	118.16	121.90
24	BA	2345	G	N1-C6-O6	-5.35	116.69	119.90
24	DA	1381	G	N1-C6-O6	-5.35	116.69	119.90
24	BA	2830	G	C8-N9-C4	-5.34	104.26	106.40
24	DA	965	C	C6-N1-C2	-5.34	118.16	120.30
24	DA	388	G	C8-N9-C4	-5.34	104.26	106.40
22	CD	51	C	C6-N1-C2	-5.34	118.17	120.30
24	DA	678	C	N3-C4-C5	5.34	124.03	121.90
24	BA	1427	A	N9-C4-C5	5.33	107.93	105.80
2	AE	155	LEU	CA-CB-CG	5.33	127.56	115.30
24	BA	137(A)	G	N3-C2-N2	-5.33	116.17	119.90
24	DA	1914	C	N1-C2-O2	5.32	122.09	118.90
24	BA	1931	U	N1-C2-O2	5.32	126.53	122.80
24	DA	2518	A	C4-C5-N7	5.32	113.36	110.70
1	AA	811	C	C6-N1-C2	5.32	122.43	120.30
1	AA	1322	C	C6-N1-C2	-5.32	118.17	120.30
24	BA	106	C	C6-N1-C2	-5.32	118.17	120.30
24	DA	736	C	N3-C2-O2	5.31	125.62	121.90
24	DA	676	A	N1-C6-N6	5.31	121.79	118.60
1	AA	749	C	C2-N1-C1'	5.31	124.64	118.80
24	BA	2422	A	C8-N9-C4	-5.31	103.68	105.80
24	DA	210	C	C5-C6-N1	-5.31	118.35	121.00
24	DA	383	U	C5-C6-N1	-5.31	120.05	122.70
24	BA	1787	A	N1-C6-N6	5.30	121.78	118.60
1	CA	754	C	C2-N1-C1'	5.30	124.64	118.80
24	BA	974(A)	C	N3-C2-O2	-5.30	118.19	121.90
24	BA	1259	G	C8-N9-C4	5.29	108.52	106.40
24	DA	90	U	C5-C6-N1	5.29	125.35	122.70
24	DA	828	U	C5-C4-O4	5.29	129.07	125.90
24	DA	1557	C	C6-N1-C2	5.29	122.42	120.30
24	DA	2518	A	N1-C6-N6	5.29	121.77	118.60
24	DA	619	G	C8-N9-C4	-5.29	104.28	106.40
24	BA	140	A	C2-N3-C4	-5.29	107.96	110.60
1	CA	409	G	C6-C5-N7	-5.28	127.23	130.40
24	BA	812	C	N1-C2-O2	-5.28	115.73	118.90
24	BA	1204	A	N7-C8-N9	5.28	116.44	113.80
24	BA	264	C	N1-C2-O2	5.28	122.06	118.90
1	CA	687	A	C8-N9-C4	-5.28	103.69	105.80
24	BA	1072	C	C6-N1-C2	-5.27	118.19	120.30
24	BA	482	A	C8-N9-C4	-5.27	103.69	105.80
1	CA	632	A	C5-N7-C8	5.27	106.54	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	346	G	N3-C4-C5	-5.27	125.97	128.60
24	BA	1931	U	N3-C4-O4	-5.27	115.71	119.40
24	DA	2346	A	C2-N3-C4	-5.27	107.97	110.60
24	BA	784	A	C5-C6-N6	5.27	127.91	123.70
24	BA	1616	A	C4-C5-N7	5.27	113.33	110.70
24	BA	453	C	C6-N1-C2	5.26	122.41	120.30
1	CA	1290	G	C8-N9-C1'	-5.26	120.16	127.00
24	DA	2873	A	C5-C6-N1	-5.26	115.07	117.70
24	BA	1332	G	C8-N9-C4	-5.26	104.30	106.40
24	BA	1535	U	N3-C2-O2	-5.26	118.52	122.20
24	BA	2618	G	N3-C4-C5	-5.26	125.97	128.60
24	DA	1895	C	C6-N1-C2	-5.26	118.20	120.30
24	BA	2540	C	N3-C2-O2	-5.25	118.22	121.90
24	DA	669	G	C3'-C2'-C1'	5.25	105.70	101.50
1	AA	404	U	C6-N1-C2	-5.25	117.85	121.00
24	DA	2562	U	C5-C6-N1	-5.25	120.08	122.70
24	BA	2306	C	C6-N1-C2	5.25	122.40	120.30
24	BA	783	A	C8-N9-C4	-5.24	103.70	105.80
24	BA	2785	C	C6-N1-C2	-5.24	118.20	120.30
1	CA	816	A	N1-C6-N6	-5.24	115.46	118.60
24	DA	783	A	N9-C4-C5	-5.24	103.70	105.80
24	BA	1955	U	C6-N1-C2	5.24	124.14	121.00
24	DA	1342	A	N7-C8-N9	5.24	116.42	113.80
24	BA	2422	A	C3'-C2'-C1'	5.24	105.69	101.50
24	BA	137(A)	G	C8-N9-C4	-5.23	104.31	106.40
24	BA	1992	G	C4-C5-N7	-5.23	108.71	110.80
24	BA	1314	C	N1-C2-O2	5.23	122.04	118.90
24	BA	1814	G	N1-C6-O6	-5.23	116.76	119.90
24	BA	2779	U	N3-C2-O2	-5.23	118.54	122.20
24	BA	729	G	N7-C8-N9	5.23	115.72	113.10
24	BA	1630	G	N1-C6-O6	-5.23	116.76	119.90
34	BO	37	GLY	N-CA-C	-5.23	100.03	113.10
1	CA	449	C	N3-C2-O2	-5.23	118.24	121.90
24	BA	697	C	C6-N1-C2	5.23	122.39	120.30
1	AA	591	U	C6-N1-C1'	5.22	128.51	121.20
24	BA	122	G	C6-N1-C2	-5.22	121.97	125.10
24	DA	2084	C	C6-N1-C2	5.22	122.39	120.30
24	DA	2401	U	N1-C2-O2	5.21	126.45	122.80
24	BA	202	U	N1-C2-O2	5.21	126.45	122.80
24	DA	570	G	N9-C4-C5	5.21	107.48	105.40
2	CE	11	LEU	CA-CB-CG	-5.20	103.33	115.30
24	DA	1695	G	C4-N9-C1'	5.20	133.26	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	828	U	N3-C4-O4	-5.20	115.76	119.40
1	AA	1128	C	C6-N1-C2	-5.20	118.22	120.30
24	DA	270(K)	C	N1-C2-O2	5.20	122.02	118.90
24	DA	453	C	C6-N1-C2	5.20	122.38	120.30
1	AA	781	A	C5-C6-N6	-5.20	119.54	123.70
24	BA	1026	U	C2-N1-C1'	-5.19	111.47	117.70
1	AA	474	G	N1-C2-N2	5.19	120.87	116.20
24	BA	1314	C	C6-N1-C1'	-5.19	114.57	120.80
1	CA	1290	G	C4-N9-C1'	5.19	133.25	126.50
24	BA	616	A	C8-N9-C4	-5.19	103.72	105.80
24	BA	2422	A	C4-N9-C1'	5.19	135.64	126.30
24	BA	2447	G	N9-C4-C5	-5.19	103.32	105.40
24	BA	2287	A	C2-N3-C4	-5.19	108.00	110.60
24	DA	140	A	C6-C5-N7	-5.19	128.67	132.30
1	CA	1053	G	N3-C4-C5	5.19	131.19	128.60
24	DA	2439	A	P-O3'-C3'	5.19	125.92	119.70
24	BA	330	A	N3-C4-C5	5.18	130.43	126.80
24	DA	201	C	C6-N1-C2	5.18	122.37	120.30
24	DA	2685	G	N3-C4-N9	-5.18	122.89	126.00
24	BA	1265	A	C8-N9-C4	-5.18	103.73	105.80
1	AA	191	G	C8-N9-C4	-5.18	104.33	106.40
22	CD	17(A)	C	C5-C6-N1	5.17	123.59	121.00
24	DA	1328	G	C5-C6-O6	-5.17	125.50	128.60
24	BA	2351	G	C8-N9-C4	-5.17	104.33	106.40
24	BA	460	A	C8-N9-C4	5.17	107.87	105.80
24	DA	1786	A	C5-C6-N1	-5.17	115.12	117.70
24	BA	796	C	C6-N1-C2	5.17	122.37	120.30
24	DA	2873	A	C8-N9-C4	-5.17	103.73	105.80
24	DA	933	A	C4-C5-N7	5.17	113.28	110.70
22	CD	34	C	C6-N1-C2	-5.16	118.23	120.30
24	DA	2402	C	C4-C5-C6	5.16	119.98	117.40
1	AA	827	U	C4-C5-C6	5.16	122.80	119.70
24	BA	2848	G	N3-C4-C5	-5.16	126.02	128.60
24	BA	1204	A	C5-N7-C8	-5.16	101.32	103.90
22	CD	17(A)	C	C4-C5-C6	5.16	119.98	117.40
24	BA	696	G	C5-C6-O6	5.15	131.69	128.60
24	BA	1243	G	C8-N9-C1'	5.15	133.70	127.00
24	DA	2342	C	C6-N1-C2	-5.15	118.24	120.30
24	BA	457	A	C8-N9-C4	-5.15	103.74	105.80
24	BA	1950	G	C4-N9-C1'	5.15	133.19	126.50
24	BA	2090	G	N1-C6-O6	-5.14	116.81	119.90
1	CA	1519	A	N1-C6-N6	-5.14	115.52	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	814	C	C2-N1-C1'	-5.14	113.15	118.80
24	BA	1951	U	N1-C2-O2	-5.14	119.20	122.80
24	BA	622	G	N3-C4-C5	-5.14	126.03	128.60
1	CA	409	G	C4-C5-C6	5.14	121.88	118.80
24	DA	912	C	C6-N1-C2	-5.14	118.25	120.30
24	BA	2490	G	N3-C4-C5	5.13	131.17	128.60
24	BA	1535	U	N1-C2-O2	5.13	126.39	122.80
24	BA	2056	G	N1-C2-N2	5.13	120.82	116.20
24	BA	2345	G	C5-C6-O6	5.13	131.68	128.60
24	BA	106	C	C6-N1-C1'	5.13	126.95	120.80
1	AA	880	C	C6-N1-C2	5.12	122.35	120.30
24	BA	1201	C	C6-N1-C2	5.12	122.35	120.30
24	DA	1171	G	P-O3'-C3'	5.12	125.85	119.70
24	DA	1208	C	C6-N1-C2	-5.12	118.25	120.30
24	DA	1614	A	N7-C8-N9	5.12	116.36	113.80
24	BA	1312	U	C2-N1-C1'	5.12	123.84	117.70
24	BA	1975	G	C8-N9-C4	-5.12	104.35	106.40
24	BA	2430	A	C5-N7-C8	-5.12	101.34	103.90
1	AA	346	G	N3-C4-N9	5.11	129.07	126.00
1	CA	355	C	C6-N1-C2	-5.11	118.26	120.30
24	DA	2390	U	C6-N1-C2	-5.11	117.94	121.00
1	CA	1061	G	C8-N9-C4	-5.11	104.36	106.40
1	CA	1342	C	C6-N1-C1'	5.11	126.93	120.80
24	BA	2271	G	C6-N1-C2	-5.10	122.04	125.10
1	AA	405	U	C2-N1-C1'	-5.10	111.58	117.70
24	BA	2249	U	N3-C4-C5	-5.10	111.54	114.60
1	AA	893	C	C6-N1-C2	5.10	122.34	120.30
24	BA	1978	A	N1-C6-N6	-5.10	115.54	118.60
24	BA	2626	C	N3-C4-C5	5.10	123.94	121.90
44	DV	147	GLY	N-CA-C	-5.10	100.36	113.10
24	BA	1379	A	C8-N9-C4	-5.09	103.76	105.80
24	BA	165	U	N1-C2-O2	5.09	126.36	122.80
25	DB	39	A	C8-N9-C4	-5.09	103.76	105.80
27	DE	88	GLY	N-CA-C	5.09	125.83	113.10
24	DA	1653	G	C8-N9-C4	-5.09	104.36	106.40
24	DA	691	C	N1-C2-O2	-5.08	115.85	118.90
22	AD	58	A	C2-N3-C4	5.08	113.14	110.60
24	BA	2448	A	N1-C6-N6	5.08	121.65	118.60
1	CA	899	C	C6-N1-C2	5.08	122.33	120.30
24	BA	912	C	C6-N1-C2	-5.08	118.27	120.30
24	BA	1614	A	C4-C5-N7	5.07	113.24	110.70
24	BA	1790	C	C2-N1-C1'	-5.07	113.22	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	1951	U	C6-N1-C1'	5.07	128.30	121.20
24	DA	2483	C	C6-N1-C2	-5.07	118.27	120.30
24	BA	1077	A	C2-N3-C4	5.07	113.14	110.60
22	CC	20	U	N1-C2-O2	5.07	126.35	122.80
24	DA	2606	C	C6-N1-C2	5.07	122.33	120.30
24	BA	2000	G	N1-C6-O6	-5.07	116.86	119.90
24	BA	2246	G	N3-C4-N9	5.07	129.04	126.00
24	BA	813	U	C4-C5-C6	5.06	122.74	119.70
1	CA	721	G	C8-N9-C4	-5.06	104.37	106.40
24	BA	2259	G	N1-C6-O6	5.06	122.94	119.90
24	DA	74	A	C5-C6-N1	-5.06	115.17	117.70
24	DA	2070	G	C5-C6-O6	5.06	131.64	128.60
24	BA	2483	C	C6-N1-C2	-5.06	118.28	120.30
24	BA	2490	G	N7-C8-N9	5.06	115.63	113.10
24	BA	208	C	C2-N3-C4	-5.06	117.37	119.90
24	BA	2615	U	N3-C4-C5	5.06	117.64	114.60
24	DA	2490	G	N7-C8-N9	5.06	115.63	113.10
1	CA	110	C	C6-N1-C2	5.06	122.32	120.30
24	DA	1407	C	C6-N1-C2	-5.06	118.28	120.30
1	AA	1498	U	P-O3'-C3'	5.05	125.77	119.70
24	BA	2059	A	N9-C4-C5	-5.05	103.78	105.80
24	BA	680	G	N3-C2-N2	-5.05	116.36	119.90
24	BA	860	U	N3-C2-O2	-5.05	118.67	122.20
24	BA	2271	G	N3-C4-N9	5.05	129.03	126.00
1	AA	1347	G	C4-C5-N7	-5.05	108.78	110.80
24	BA	2508	G	C5-C6-O6	5.05	131.63	128.60
24	DA	611	C	C6-N1-C2	5.04	122.32	120.30
24	DA	1248	G	C8-N9-C4	5.04	108.42	106.40
24	BA	664	C	N3-C4-C5	5.04	123.92	121.90
1	CA	409	G	N1-C6-O6	5.04	122.93	119.90
1	CA	1243	C	N3-C4-C5	-5.04	119.88	121.90
24	DA	2880	C	C6-N1-C2	-5.04	118.28	120.30
1	AA	899	C	C2-N1-C1'	5.04	124.34	118.80
24	BA	75	G	N3-C4-C5	-5.04	126.08	128.60
1	CA	370	C	N3-C2-O2	-5.04	118.37	121.90
24	DA	2079	U	C4-C5-C6	5.04	122.72	119.70
24	DA	512	G	C4-C5-N7	-5.04	108.78	110.80
24	BA	815	C	C6-N1-C2	5.04	122.31	120.30
24	BA	1665	A	C5-C6-N6	-5.04	119.67	123.70
24	DA	270(K)	C	C2-N1-C1'	5.04	124.34	118.80
1	AA	1502	A	C6-C5-N7	-5.03	128.78	132.30
24	DA	792	G	C4-C5-C6	5.03	121.82	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BA	62	C	C5-C6-N1	-5.03	118.48	121.00
22	AC	48	C	C6-N1-C2	-5.03	118.29	120.30
24	DA	748	G	N1-C6-O6	-5.03	116.88	119.90
24	DA	1379	A	C4-C5-N7	5.03	113.22	110.70
24	DA	2688	U	N1-C2-O2	5.03	126.32	122.80
24	BA	1992	G	P-O3'-C3'	5.03	125.73	119.70
24	DA	1528	A	C8-N9-C4	-5.03	103.79	105.80
31	DK	131	LYS	C-N-CD	-5.03	109.54	120.60
24	BA	1328	G	C5-C6-O6	-5.02	125.59	128.60
24	BA	1773	A	C8-N9-C4	5.02	107.81	105.80
37	BQ	54	LEU	CA-CB-CG	5.02	126.86	115.30
24	DA	570	G	C8-N9-C4	-5.02	104.39	106.40
24	DA	2015	A	N1-C6-N6	-5.02	115.59	118.60
8	AK	30	ARG	CB-CA-C	-5.02	100.35	110.40
24	DA	1277	G	C8-N9-C4	5.02	108.41	106.40
24	BA	2447	G	C5-C6-N1	-5.02	108.99	111.50
24	BA	2596	U	N1-C2-O2	-5.02	119.28	122.80
24	DA	600	G	N1-C6-O6	5.02	122.91	119.90
24	DA	752	A	C8-N9-C4	-5.02	103.79	105.80
24	DA	2543	G	N7-C8-N9	5.02	115.61	113.10
24	BA	1831	G	N7-C8-N9	5.02	115.61	113.10
24	BA	2763	G	C8-N9-C4	5.02	108.41	106.40
1	CA	6	G	N3-C4-N9	5.02	129.01	126.00
24	BA	912	C	C2-N1-C1'	5.01	124.31	118.80
24	BA	2070	G	C8-N9-C4	5.01	108.41	106.40
24	DA	669	G	N1-C2-N2	-5.01	111.69	116.20
24	BA	2713	A	C4-C5-N7	5.01	113.21	110.70
24	BA	2391	G	N1-C6-O6	-5.01	116.89	119.90
24	DA	783	A	N3-C4-C5	5.00	130.30	126.80
24	DA	654(I)	C	C2-N1-C1'	5.00	124.30	118.80
24	DA	805	G	N1-C6-O6	5.00	122.90	119.90

There are no chirality outliers.

There are no planarity outliers.

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	32369	0	16338	913	10
1	CA	32372	0	16336	884	0
2	AE	1924	0	1975	117	0
2	CE	1924	0	1975	144	0
3	AF	1605	0	1668	70	0
3	CF	1612	0	1677	118	0
4	AG	1703	0	1763	112	0
4	CG	1703	0	1764	215	0
5	AH	1155	0	1213	58	0
5	CH	1155	0	1212	56	0
6	AI	843	0	857	42	0
6	CI	843	0	857	28	0
7	AJ	1257	0	1296	74	0
7	CJ	1257	0	1296	67	0
8	AK	1116	0	1177	58	0
8	CK	1116	0	1177	43	0
9	AL	1010	0	1037	91	0
9	CL	1010	0	1037	94	0
10	AM	801	0	849	57	0
10	CM	801	0	849	56	1
11	AN	885	0	904	38	0
11	CN	885	0	904	39	0
12	AO	975	0	1062	76	0
12	CO	975	0	1062	44	0
13	AP	928	0	987	62	0
13	CP	933	0	992	89	0
14	AQ	492	0	529	40	0
14	CQ	492	0	531	43	0
15	AR	734	0	771	25	0
15	CR	734	0	771	32	0
16	AS	705	0	725	37	0
16	CS	705	0	725	29	0
17	AT	834	0	904	44	0
17	CT	834	0	904	28	0
18	AU	591	0	662	23	0
18	CU	591	0	662	25	0
19	AV	665	0	686	49	0
19	CV	624	0	636	80	0
20	AW	763	0	861	57	0
20	CW	763	0	861	48	0
21	AX	217	0	234	8	0
21	CX	217	0	234	20	0
22	AC	1640	0	836	20	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	AD	1640	0	836	97	0
22	CC	1640	0	836	23	0
22	CD	1640	0	836	90	0
23	A1	129	0	65	0	0
23	C1	129	0	65	0	0
24	BA	62707	0	31612	1372	0
24	DA	62587	0	31554	1346	0
25	BB	2617	0	1328	59	0
25	DB	2617	0	1328	85	0
26	BD	2115	0	2195	113	0
26	DD	2115	0	2195	141	0
27	BE	1568	0	1634	101	0
27	DE	1568	0	1634	207	0
28	BF	1585	0	1632	76	0
28	DF	1627	0	1680	130	0
29	BG	1474	0	1535	88	0
29	DG	1474	0	1535	105	0
30	BH	1307	0	1382	135	0
30	DH	1307	0	1382	122	9
31	BK	1136	0	1223	49	0
31	DK	1136	0	1223	47	0
32	BM	1104	0	1180	70	0
32	DM	1104	0	1180	50	0
33	BN	933	0	996	29	0
33	DN	933	0	996	43	0
34	BO	1145	0	1227	112	0
34	DO	1145	0	1228	155	0
35	BP	1122	0	1179	86	0
35	DP	1122	0	1179	59	0
36	B0	968	0	1033	59	0
36	D0	960	0	1021	37	0
37	BQ	882	0	943	54	0
37	DQ	882	0	943	72	0
38	BR	1141	0	1202	68	0
38	DR	1141	0	1202	65	0
39	B1	964	0	1022	64	0
39	D1	964	0	1022	69	0
40	B2	779	0	852	43	1
40	D2	779	0	852	89	0
41	BS	900	0	964	27	0
41	DS	900	0	964	27	0
42	BT	725	0	778	25	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
42	DT	725	0	778	20	0
43	BU	785	0	878	79	0
43	DU	785	0	878	57	0
44	BV	1397	0	1430	79	0
44	DV	1428	0	1454	87	0
45	B3	607	0	628	40	0
45	D3	613	0	633	35	0
46	BZ	763	0	848	30	0
46	DZ	763	0	848	34	0
47	BW	558	0	610	25	0
47	DW	581	0	629	30	0
48	BX	469	0	518	17	0
48	DX	469	0	518	19	0
49	B4	533	0	522	57	0
49	D4	515	0	510	74	0
50	B5	459	0	480	35	1
50	D5	459	0	480	25	0
51	B6	389	0	404	42	0
51	D6	389	0	404	76	0
52	B7	430	0	480	16	0
52	D7	430	0	480	13	0
53	B8	488	0	559	51	0
53	D8	488	0	560	71	0
54	A1	1	0	0	0	0
54	AA	236	0	0	0	0
54	AC	8	0	0	0	0
54	AD	1	0	0	0	0
54	AG	1	0	0	0	0
54	AH	1	0	0	0	0
54	AN	2	0	0	0	0
54	AQ	1	0	0	0	0
54	AT	1	0	0	0	0
54	B0	1	0	0	0	0
54	B1	1	0	0	0	0
54	B2	1	0	0	0	0
54	B3	2	0	0	0	0
54	B5	1	0	0	0	0
54	B7	3	0	0	0	0
54	B8	2	0	0	0	0
54	BA	632	0	0	0	0
54	BB	16	0	0	0	0
54	BD	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
54	BE	4	0	0	0	0
54	BF	2	0	0	0	0
54	BO	2	0	0	0	0
54	BU	2	0	0	0	0
54	CA	199	0	0	0	0
54	CC	9	0	0	0	0
54	CG	2	0	0	0	0
54	CL	1	0	0	0	0
54	CN	1	0	0	0	0
54	CS	1	0	0	0	0
54	CX	1	0	0	0	0
54	D1	1	0	0	0	0
54	D3	1	0	0	0	0
54	D5	1	0	0	0	0
54	D8	1	0	0	0	0
54	DA	523	0	0	0	0
54	DB	15	0	0	0	0
54	DE	4	0	0	0	0
54	DP	1	0	0	0	0
54	DR	1	0	0	0	0
54	DU	2	0	0	0	0
55	AA	42	0	39	2	0
55	CA	42	0	38	5	0
56	AG	1	0	0	0	0
56	AQ	1	0	0	0	0
56	CG	1	0	0	0	0
56	CQ	1	0	0	0	0
All	All	295766	0	199075	9375	11

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 21.

All (9375) 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)
24:BA:2751:G:C2	30:BH:3:ARG:HD3	1.42	1.55
30:DH:127:GLU:CG	30:DH:128:PRO:HD3	1.36	1.54
27:DE:11:MET:SD	27:DE:24:THR:HG22	1.47	1.52
40:D2:49:THR:HB	40:D2:50:PRO:CD	1.45	1.47
26:DD:34:VAL:HG22	26:DD:35:LYS:CE	1.44	1.46
34:DO:71:VAL:CG1	34:DO:72:PRO:HD3	1.44	1.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:34:VAL:CG2	26:DD:35:LYS:NZ	1.76	1.45
26:DD:34:VAL:HG23	26:DD:35:LYS:NZ	1.22	1.43
1:CA:412:A:N6	4:CG:35:ARG:HG3	1.34	1.41
4:CG:22:LYS:HG2	4:CG:26:CYS:CB	1.50	1.39
4:CG:9:CYS:SG	4:CG:31:CYS:SG	1.40	1.39
12:AO:46:LYS:HG2	12:AO:48:PRO:CD	1.53	1.38
12:AO:46:LYS:C	12:AO:48:PRO:HD2	1.44	1.36
26:DD:35:LYS:CD	26:DD:64:ILE:HG23	1.52	1.35
34:DO:62:LEU:HD11	53:D8:25:MET:C	1.47	1.34
12:AO:46:LYS:HE3	12:AO:48:PRO:CG	1.58	1.33
34:BO:71:VAL:HG13	34:BO:72:PRO:CD	1.62	1.28
26:DD:34:VAL:HG22	26:DD:35:LYS:CD	1.62	1.28
4:CG:22:LYS:HG3	4:CG:26:CYS:N	1.47	1.28
34:BO:71:VAL:HG22	34:BO:72:PRO:CD	1.62	1.28
12:AO:46:LYS:CE	12:AO:48:PRO:HG2	1.63	1.27
26:DD:34:VAL:CG2	26:DD:35:LYS:CE	2.11	1.26
43:BU:82:PRO:HD2	43:BU:97:ARG:CD	1.64	1.26
40:D2:38:LEU:O	40:D2:51:VAL:HG13	1.18	1.26
4:AG:28:SER:OG	4:AG:29:PRO:HD2	1.36	1.25
4:CG:9:CYS:SG	4:CG:22:LYS:HE3	1.76	1.24
4:CG:33:MET:CE	4:CG:37:PRO:HB3	1.68	1.24
27:DE:11:MET:SD	27:DE:24:THR:CG2	2.26	1.24
1:CA:429:U:C2'	4:CG:25:ARG:HH21	1.50	1.23
34:BO:71:VAL:CG2	34:BO:72:PRO:HD3	1.68	1.23
4:CG:12:CYS:SG	4:CG:31:CYS:SG	1.21	1.21
30:BH:4:ILE:HD12	30:BH:4:ILE:O	1.36	1.20
12:AO:46:LYS:HG2	12:AO:48:PRO:HD3	1.21	1.20
4:AG:9:CYS:HB3	4:AG:32:ALA:CB	1.70	1.20
34:BO:71:VAL:CG1	34:BO:72:PRO:HD3	1.72	1.20
30:BH:153:LYS:CG	30:BH:154:PRO:HD2	1.72	1.20
35:BP:66:ILE:HA	35:BP:104:PHE:HA	1.21	1.19
30:BH:92:ILE:CD1	30:BH:160:LYS:HE2	1.73	1.18
27:DE:11:MET:CG	27:DE:24:THR:HG22	1.74	1.18
26:DD:34:VAL:CG2	26:DD:35:LYS:HZ3	1.45	1.18
4:CG:22:LYS:HD2	4:CG:25:ARG:CG	1.73	1.18
1:CA:412:A:C6	4:CG:35:ARG:HG3	1.80	1.17
51:D6:15:GLU:HG2	51:D6:16:CYS:N	1.45	1.17
4:AG:9:CYS:CB	4:AG:32:ALA:HB2	1.74	1.16
35:BP:66:ILE:HG22	35:BP:104:PHE:CD1	1.79	1.16
34:DO:71:VAL:HG12	34:DO:72:PRO:CD	1.75	1.16
27:BE:63:LEU:HD12	27:BE:63:LEU:O	1.43	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:66:HIS:NE2	27:DE:67:PHE:HD1	1.43	1.15
35:BP:65:PHE:O	35:BP:104:PHE:O	1.65	1.15
34:DO:62:LEU:HD11	53:D8:25:MET:O	1.41	1.14
1:CA:429:U:H2'	4:CG:25:ARG:NH2	1.63	1.14
26:DD:35:LYS:HD2	26:DD:64:ILE:CG2	1.76	1.14
35:BP:66:ILE:HG22	35:BP:104:PHE:HD1	1.10	1.14
26:DD:35:LYS:HE3	26:DD:64:ILE:O	1.45	1.13
34:BO:6:LEU:HD13	34:BO:7:ARG:H	1.13	1.13
24:BA:2751:G:C2	30:BH:3:ARG:CD	2.30	1.13
4:CG:22:LYS:HZ2	4:CG:26:CYS:N	1.44	1.12
27:BE:59:VAL:HG12	27:BE:60:ASN:H	1.00	1.12
27:DE:78:LEU:O	27:DE:79:ARG:HD2	1.50	1.12
34:DO:49:ARG:O	34:DO:49:ARG:HG2	1.49	1.11
34:BO:6:LEU:CD1	34:BO:7:ARG:H	1.62	1.11
32:BM:15:LEU:HD21	32:BM:128:HIS:CE1	1.85	1.10
4:CG:22:LYS:CG	4:CG:26:CYS:HB2	1.80	1.10
34:BO:71:VAL:HG13	34:BO:72:PRO:HD2	1.23	1.10
40:D2:49:THR:CB	40:D2:50:PRO:HD2	1.81	1.10
4:CG:33:MET:HE3	4:CG:37:PRO:CB	1.81	1.10
24:DA:2114:A:N6	24:DA:2119:A:N7	1.99	1.10
30:BH:92:ILE:HD12	30:BH:160:LYS:HE2	1.13	1.10
28:DF:24:LEU:HB3	28:DF:25:PRO:CD	1.82	1.09
24:BA:2531:A:H5'	30:BH:157:TYR:CE2	1.86	1.09
30:DH:127:GLU:CB	30:DH:128:PRO:CD	2.30	1.09
49:D4:39:CYS:C	49:D4:41:PRO:HD3	1.71	1.09
34:DO:71:VAL:CG1	34:DO:72:PRO:CD	2.30	1.08
4:CG:22:LYS:NZ	4:CG:25:ARG:HG3	1.65	1.08
4:CG:22:LYS:CG	4:CG:26:CYS:CB	2.30	1.08
34:DO:62:LEU:CD1	53:D8:25:MET:O	2.00	1.08
30:DH:127:GLU:CG	30:DH:128:PRO:CD	2.30	1.08
4:CG:33:MET:CE	4:CG:37:PRO:CB	2.32	1.08
28:DF:24:LEU:HB3	28:DF:25:PRO:HD2	1.09	1.07
34:DO:64:LYS:HB3	53:D8:25:MET:HG3	1.36	1.07
34:DO:62:LEU:HD21	53:D8:25:MET:O	1.54	1.07
43:DU:52:SER:CA	43:DU:56:PRO:HA	1.85	1.07
27:DE:11:MET:HA	27:DE:24:THR:HA	1.07	1.07
34:BO:71:VAL:CG1	34:BO:72:PRO:CD	2.30	1.07
43:BU:82:PRO:HD2	43:BU:97:ARG:HD3	1.23	1.06
34:DO:48:PRO:O	34:DO:50:ARG:N	1.87	1.06
30:BH:113:VAL:HG11	30:BH:151:ILE:HD13	1.36	1.06
26:DD:34:VAL:C	26:DD:35:LYS:HD3	1.74	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DO:61:ARG:O	34:DO:62:LEU:HB2	1.45	1.06
34:BO:71:VAL:HG22	34:BO:72:PRO:N	1.55	1.06
3:CF:164:ARG:HG2	3:CF:165:THR:H	1.16	1.06
34:DO:62:LEU:CG	53:D8:25:MET:O	2.03	1.06
26:DD:34:VAL:HG22	26:DD:35:LYS:HD3	1.33	1.05
1:CA:412:A:N6	4:CG:35:ARG:CG	2.20	1.05
51:D6:14:THR:HB	51:D6:20:ASN:O	1.56	1.05
30:DH:127:GLU:CB	30:DH:128:PRO:HD3	1.83	1.05
4:CG:22:LYS:HG2	4:CG:26:CYS:HB2	1.07	1.05
1:AA:528:C:H41	12:AO:49:ASN:ND2	1.54	1.05
4:CG:22:LYS:CD	4:CG:25:ARG:HG3	1.85	1.05
43:DU:52:SER:HA	43:DU:56:PRO:CA	1.86	1.05
24:DA:2638:G:P	27:DE:82:ARG:HH22	1.78	1.05
30:BH:153:LYS:HG3	30:BH:154:PRO:HD2	1.36	1.04
27:DE:9:VAL:HG21	27:DE:25:VAL:CG1	1.87	1.04
34:BO:71:VAL:CG2	34:BO:72:PRO:CD	2.30	1.04
27:BE:59:VAL:HG12	27:BE:60:ASN:N	1.71	1.04
26:DD:35:LYS:HE3	26:DD:64:ILE:HG12	1.36	1.04
43:BU:81:LYS:CA	43:BU:81:LYS:HE3	1.83	1.04
24:BA:1112:G:O2'	30:BH:2:SER:HB3	1.55	1.03
27:DE:60:ASN:HB3	27:DE:63:LEU:HD11	1.36	1.03
40:D2:49:THR:CB	40:D2:50:PRO:CD	2.30	1.03
26:DD:35:LYS:CD	26:DD:35:LYS:N	2.21	1.03
34:BO:71:VAL:CB	34:BO:72:PRO:HD3	1.88	1.03
30:BH:149:ARG:NH2	30:BH:167:GLU:OE2	1.92	1.03
43:DU:50:ARG:HB3	43:DU:53:PRO:HG3	1.05	1.03
4:CG:22:LYS:HD2	4:CG:25:ARG:HG2	1.40	1.02
43:BU:81:LYS:CE	43:BU:81:LYS:HA	1.86	1.02
28:DF:21:ALA:O	28:DF:24:LEU:HD23	1.56	1.02
49:D4:40:HIS:HA	49:D4:44:THR:O	1.59	1.02
24:BA:2751:G:N2	30:BH:3:ARG:CD	2.21	1.02
40:D2:39:LEU:HG	40:D2:51:VAL:HG22	1.06	1.02
26:DD:35:LYS:CE	26:DD:64:ILE:O	2.06	1.02
12:AO:46:LYS:HE3	12:AO:48:PRO:HG2	1.03	1.02
34:DO:64:LYS:HD3	34:DO:64:LYS:O	1.59	1.02
40:D2:39:LEU:HG	40:D2:51:VAL:CG2	1.88	1.01
43:DU:50:ARG:HB3	43:DU:53:PRO:CG	1.89	1.01
24:BA:2400:G:O6	24:BA:2416:C:N4	1.91	1.01
4:CG:22:LYS:HG2	4:CG:26:CYS:HB3	1.39	1.01
49:D4:38:LYS:HZ3	49:D4:38:LYS:HB2	1.25	1.01
24:DA:2638:G:OP2	27:DE:82:ARG:NH2	1.93	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AW:57:ARG:HD2	20:AW:102:GLY:O	1.59	1.01
24:DA:2444:G:OP2	28:DF:68:LYS:NZ	1.94	1.01
4:CG:22:LYS:CE	4:CG:25:ARG:HG3	1.90	1.01
30:BH:153:LYS:HG2	30:BH:154:PRO:HD2	1.42	1.01
24:BA:2531:A:H4'	30:BH:157:TYR:CD2	1.95	1.00
43:BU:83:THR:HG22	43:BU:83:THR:O	1.57	1.00
28:DF:2:LYS:O	28:DF:24:LEU:HG	1.62	1.00
43:DU:52:SER:HA	43:DU:56:PRO:HA	1.01	1.00
34:BO:71:VAL:O	34:BO:73:GLY:N	1.94	1.00
44:DV:146:ILE:HD12	44:DV:147:GLY:H	1.24	1.00
4:CG:22:LYS:HZ2	4:CG:25:ARG:C	1.64	0.99
27:DE:55:ASN:ND2	27:DE:73:GLU:O	1.95	0.99
43:DU:56:PRO:O	43:DU:57:GLN:HB2	1.58	0.99
30:DH:127:GLU:HG3	30:DH:128:PRO:HD3	1.03	0.99
51:D6:12:GLU:HG3	51:D6:21:TYR:CD1	1.97	0.99
27:DE:9:VAL:HG21	27:DE:25:VAL:HG12	1.43	0.99
24:BA:2531:A:H5'	30:BH:157:TYR:HE2	1.14	0.99
27:DE:66:HIS:NE2	27:DE:67:PHE:CD1	2.30	0.99
26:BD:43:ARG:NH1	26:BD:44:ASN:OD1	1.96	0.99
30:DH:127:GLU:HB3	30:DH:128:PRO:HD2	1.44	0.99
30:DH:127:GLU:HG3	30:DH:128:PRO:CD	1.90	0.98
28:DF:3:GLU:HA	28:DF:24:LEU:CG	1.91	0.98
12:AO:46:LYS:C	12:AO:48:PRO:CD	2.30	0.98
24:DA:2096:U:H3	24:DA:2193:G:H1	1.11	0.98
29:DG:112:PRO:HG2	49:D4:37:SER:CB	1.94	0.98
29:DG:112:PRO:CG	49:D4:37:SER:HB2	1.92	0.98
26:DD:34:VAL:HG22	26:DD:35:LYS:HE2	1.46	0.98
4:CG:22:LYS:HZ3	4:CG:25:ARG:HG3	1.21	0.98
34:DO:62:LEU:CD2	53:D8:25:MET:O	2.09	0.98
24:DA:93:C:O5'	43:DU:54:LYS:NZ	1.96	0.98
40:D2:38:LEU:O	40:D2:51:VAL:CG1	2.12	0.98
4:CG:22:LYS:CG	4:CG:26:CYS:H	1.76	0.98
27:DE:11:MET:CA	27:DE:24:THR:HA	1.93	0.98
51:D6:17:LYS:N	51:D6:17:LYS:HD2	1.77	0.97
26:DD:35:LYS:CE	26:DD:64:ILE:HG12	1.94	0.97
1:CA:412:A:C6	4:CG:35:ARG:CG	2.47	0.97
1:AA:1129:C:N4	1:AA:1133:G:N7	2.11	0.97
4:CG:22:LYS:HG3	4:CG:26:CYS:H	0.82	0.97
1:AA:458:C:N3	1:AA:474:G:N1	2.11	0.97
1:AA:529:G:O6	12:AO:49:ASN:HB3	1.65	0.97
30:DH:127:GLU:HB3	30:DH:128:PRO:CD	1.94	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:11:MET:HA	27:DE:24:THR:CA	1.94	0.97
28:DF:3:GLU:HA	28:DF:24:LEU:CD1	1.95	0.97
49:D4:16:CYS:SG	49:D4:17:GLY:N	2.38	0.96
28:DF:66:PRO:O	28:DF:67:GLN:HB3	1.62	0.96
25:DB:18:G:H1	25:DB:65:C:H42	1.09	0.96
43:BU:82:PRO:HD2	43:BU:97:ARG:HD2	1.44	0.95
27:DE:60:ASN:HD22	27:DE:63:LEU:HD21	1.30	0.95
1:AA:1305:G:H22	1:AA:1331:G:H2'	1.30	0.95
34:BO:71:VAL:CB	34:BO:72:PRO:CD	2.44	0.95
34:BO:71:VAL:HG22	34:BO:72:PRO:HD3	1.34	0.95
12:AO:46:LYS:CG	12:AO:48:PRO:CD	2.44	0.95
24:BA:2015:A:H1'	50:B5:2:ALA:HA	1.48	0.94
27:DE:23:VAL:HA	27:DE:184:VAL:O	1.66	0.94
4:CG:33:MET:SD	4:CG:37:PRO:HA	2.07	0.94
43:BU:81:LYS:HE3	43:BU:81:LYS:HA	0.96	0.94
40:D2:49:THR:HB	40:D2:50:PRO:HD3	1.49	0.94
24:DA:1070:A:C8	24:DA:1096:A:H1'	2.03	0.94
24:BA:676:A:H8	24:BA:2069:G:H21	1.10	0.94
1:CA:412:A:H61	4:CG:35:ARG:HG3	1.19	0.94
27:DE:66:HIS:HE2	27:DE:67:PHE:HD1	1.09	0.94
49:D4:40:HIS:N	49:D4:41:PRO:CD	2.30	0.94
9:AL:10:ARG:NH1	9:AL:75:ASP:OD2	2.01	0.94
40:D2:91:TYR:C	40:D2:91:TYR:HD2	1.71	0.94
34:BO:6:LEU:CD1	34:BO:7:ARG:N	2.30	0.94
10:AM:48:THR:HG23	10:AM:62:HIS:HB3	1.49	0.94
40:D2:47:VAL:O	40:D2:47:VAL:HG22	1.66	0.94
24:DA:330:A:H2	24:DA:1210:A:HO2'	1.10	0.94
24:BA:2751:G:N2	30:BH:3:ARG:HD3	1.81	0.94
1:CA:429:U:H2'	4:CG:25:ARG:HH21	0.77	0.94
28:DF:3:GLU:HA	28:DF:24:LEU:HG	1.49	0.94
51:D6:39:TYR:HD2	51:D6:39:TYR:O	1.51	0.93
51:D6:14:THR:O	51:D6:49:HIS:HA	1.68	0.93
1:CA:1147:C:H2'	9:CL:16:ARG:HH21	1.32	0.93
35:BP:66:ILE:HA	35:BP:104:PHE:CA	1.97	0.93
29:DG:112:PRO:HG2	49:D4:37:SER:HB2	0.98	0.93
24:DA:93:C:H4'	43:DU:54:LYS:HZ2	1.31	0.93
34:BO:6:LEU:O	34:BO:7:ARG:HG2	1.69	0.93
2:CE:185:ILE:HG22	2:CE:199:TYR:HB2	1.50	0.92
49:D4:38:LYS:HB2	49:D4:38:LYS:NZ	1.77	0.92
12:AO:46:LYS:O	12:AO:48:PRO:HD2	1.69	0.92
26:DD:35:LYS:HD2	26:DD:64:ILE:HG23	0.92	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CG:19:LEU:HD21	4:CG:67:ILE:HG12	1.50	0.92
4:CG:22:LYS:HD2	4:CG:25:ARG:HG3	1.44	0.92
21:CX:6:ARG:HH21	21:CX:15:ARG:HH22	1.13	0.92
34:BO:71:VAL:CG2	34:BO:72:PRO:N	2.30	0.92
22:CD:51:C:O2	22:CD:63:G:N1	2.02	0.92
27:DE:78:LEU:C	27:DE:79:ARG:HD2	1.88	0.91
24:DA:1054:A:N6	24:DA:1105:U:O4	2.01	0.91
24:DA:676:A:H8	24:DA:2069:G:H21	1.18	0.91
22:CC:75:C:H3'	22:CC:76:A:H5''	1.52	0.91
34:BO:71:VAL:HG13	34:BO:72:PRO:HD3	1.38	0.91
24:BA:2531:A:C5'	30:BH:157:TYR:CE2	2.53	0.91
28:DF:26:ALA:O	28:DF:27:GLU:HG3	1.70	0.91
43:DU:52:SER:OG	43:DU:56:PRO:HG3	1.70	0.91
4:CG:33:MET:HE3	4:CG:37:PRO:HB3	0.91	0.91
34:DO:62:LEU:H	34:DO:63:PRO:HD3	1.35	0.91
35:BP:66:ILE:HG13	35:BP:67:ARG:H	1.35	0.91
27:BE:35:GLN:HB2	27:BE:64:LYS:HZ1	1.34	0.91
28:DF:24:LEU:CB	28:DF:25:PRO:HD2	1.99	0.90
1:AA:686:U:H1'	11:AN:42:TRP:HE1	1.36	0.90
1:CA:1127:G:N3	1:CA:1147:C:N4	2.19	0.90
24:DA:2061:G:OP1	28:DF:68:LYS:HE3	1.71	0.90
24:BA:2873:A:C2	36:B0:5:LYS:HA	2.06	0.90
26:DD:49:ILE:HD11	26:DD:52:ARG:HA	1.53	0.90
1:CA:1028(A):C:N4	1:CA:1032(B):G:O6	2.03	0.90
1:CA:1189:C:OP1	10:CM:51:ARG:NH2	2.05	0.90
24:BA:2811:G:OP1	27:BE:60:ASN:HB2	1.71	0.90
2:CE:7:VAL:HG13	2:CE:8:LYS:HG3	1.54	0.90
27:DE:66:HIS:CE1	27:DE:67:PHE:HB2	2.07	0.90
20:AW:57:ARG:CG	20:AW:102:GLY:O	2.20	0.90
4:CG:22:LYS:CG	4:CG:26:CYS:N	2.34	0.89
49:D4:39:CYS:C	49:D4:41:PRO:CD	2.40	0.89
24:DA:1073:A:OP2	24:DA:1094:U:N3	2.04	0.89
51:D6:15:GLU:HG3	51:D6:47:THR:CG2	2.03	0.89
24:BA:2334:G:O6	45:B3:74:ARG:NH2	2.05	0.89
12:AO:46:LYS:HE3	12:AO:48:PRO:HG3	1.53	0.89
1:AA:1270:C:HO2'	1:AA:1313:U:HO2'	1.03	0.89
40:D2:39:LEU:CG	40:D2:51:VAL:HG22	2.00	0.89
20:AW:57:ARG:CD	20:AW:102:GLY:O	2.19	0.89
24:DA:1169:G:H1	24:DA:1180:C:H42	1.12	0.89
2:AE:12:GLU:HA	2:AE:16:HIS:HD2	1.32	0.89
4:CG:22:LYS:HZ2	4:CG:26:CYS:CA	1.85	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1310:G:OP1	13:CP:80:ARG:NH2	2.06	0.89
24:DA:2807:G:N1	24:DA:2893:G:O6	2.06	0.89
25:DB:3:C:H42	25:DB:117:G:H1	1.21	0.89
40:D2:49:THR:HB	40:D2:50:PRO:HD2	0.91	0.89
1:CA:1128:C:H1'	1:CA:1146:A:H61	1.37	0.89
24:DA:93:C:C5'	43:DU:54:LYS:HZ1	1.85	0.89
51:D6:39:TYR:C	51:D6:39:TYR:CD2	2.47	0.88
24:BA:1410:G:O6	24:BA:1592:C:N4	2.06	0.88
24:BA:2419:U:P	53:B8:33:ASN:HD22	1.95	0.88
35:DP:75:THR:HG21	35:DP:87:LYS:HE3	1.53	0.88
26:DD:34:VAL:CG2	26:DD:35:LYS:CD	2.49	0.88
4:CG:9:CYS:SG	4:CG:31:CYS:CB	2.61	0.88
34:BO:3:LEU:O	34:BO:6:LEU:HG	1.73	0.88
27:DE:63:LEU:O	27:DE:64:LYS:HG2	1.72	0.88
27:DE:13:ARG:HA	27:DE:21:VAL:O	1.73	0.88
34:DO:49:ARG:HD2	53:D8:59:LYS:HG3	1.52	0.88
1:AA:1006:C:N3	1:AA:1023:G:N1	2.22	0.88
24:BA:2811:G:OP1	27:BE:61:ARG:HD3	1.73	0.88
3:CF:164:ARG:HG2	3:CF:165:THR:N	1.88	0.88
34:DO:62:LEU:HD12	53:D8:25:MET:HB2	1.54	0.88
51:D6:15:GLU:HG2	51:D6:16:CYS:H	1.05	0.88
24:BA:259:G:H21	24:BA:621:A:H8	1.22	0.88
4:CG:12:CYS:SG	4:CG:31:CYS:CB	2.61	0.87
22:CD:52:G:O6	22:CD:62:C:N4	2.07	0.87
4:CG:49:ARG:HE	4:CG:50:ARG:H	1.22	0.87
26:DD:34:VAL:CG2	26:DD:35:LYS:HD3	2.05	0.87
34:DO:64:LYS:HB3	53:D8:25:MET:CG	2.05	0.87
30:BH:154:PRO:HB3	30:BH:163:TYR:CZ	2.09	0.87
35:BP:66:ILE:CA	35:BP:104:PHE:HA	2.05	0.87
11:CN:29:ILE:HG22	11:CN:44:SER:HB2	1.54	0.87
24:BA:2287:A:H62	24:BA:2344:U:H3	1.22	0.87
1:AA:1007:C:N3	1:AA:1022:G:N1	2.23	0.87
24:DA:617:G:OP1	28:DF:40:GLN:NE2	2.07	0.87
1:CA:1305:G:H22	1:CA:1331:G:H2'	1.39	0.87
43:BU:49:VAL:O	43:BU:51:VAL:N	2.08	0.87
27:DE:9:VAL:CG2	27:DE:25:VAL:HG12	2.05	0.86
34:DO:47:ASP:HB3	34:DO:48:PRO:CA	2.05	0.86
36:D0:37:THR:HG22	36:D0:39:PRO:HD2	1.57	0.86
30:BH:153:LYS:CG	30:BH:154:PRO:CD	2.52	0.86
40:D2:91:TYR:CD2	40:D2:91:TYR:C	2.47	0.86
1:CA:686:U:H1'	11:CN:42:TRP:HE1	1.39	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AV:68:GLY:H	49:B4:55:ARG:HH22	1.21	0.86
43:DU:50:ARG:CB	43:DU:53:PRO:HG3	2.00	0.86
36:B0:53:HIS:HD1	36:B0:94:TYR:HH	1.17	0.86
1:CA:1158:C:O2	1:CA:1181:G:N2	2.07	0.86
1:AA:1382:C:O5'	7:AJ:79:ARG:NH2	2.09	0.86
1:CA:1009:G:N1	1:CA:1020:U:O2	2.08	0.86
2:AE:63:MET:HB3	2:AE:225:ALA:HB1	1.56	0.86
24:DA:287:C:N4	24:DA:354:G:O6	2.09	0.86
12:AO:46:LYS:HG2	12:AO:48:PRO:CG	2.06	0.86
45:D3:11:ARG:O	45:D3:14:ARG:NH2	2.07	0.86
24:DA:2777:G:H5''	24:DA:2778:A:H5'	1.58	0.86
26:DD:35:LYS:HD3	26:DD:35:LYS:N	1.87	0.86
35:BP:66:ILE:HG13	35:BP:67:ARG:N	1.91	0.86
24:DA:833:U:O2	34:DO:55:ARG:NH1	2.09	0.86
1:CA:963:G:H21	10:CM:55:LYS:HE2	1.41	0.86
53:D8:32:LEU:HD12	53:D8:34:TRP:H	1.41	0.86
50:B5:40:LYS:NZ	50:B5:46:CYS:SG	2.48	0.86
4:CG:35:ARG:O	4:CG:36:ARG:HG3	1.75	0.85
51:D6:44:ARG:HD3	51:D6:47:THR:HG21	1.57	0.85
24:BA:2680:C:OP2	27:BE:111:ARG:NH2	2.09	0.85
24:DA:252:G:OP2	34:DO:50:ARG:NH2	2.10	0.85
43:BU:82:PRO:CD	43:BU:97:ARG:HD2	2.05	0.85
47:BW:47:ASN:O	47:BW:49:LYS:N	2.08	0.85
4:CG:13:ARG:HD3	4:CG:32:ALA:HB1	1.57	0.85
27:DE:66:HIS:CD2	27:DE:67:PHE:HD1	1.94	0.85
51:B6:19:ARG:NH1	51:B6:21:TYR:CE2	2.43	0.85
51:B6:12:GLU:HB3	51:B6:23:THR:HG22	1.57	0.85
1:AA:1182:G:H4'	1:AA:1183:A:H5'	1.55	0.85
30:BH:92:ILE:CD1	30:BH:160:LYS:CE	2.53	0.85
51:B6:20:ASN:OD1	51:B6:42:TRP:CZ3	2.29	0.85
24:BA:2127:G:O6	24:BA:2161:C:N4	2.10	0.85
34:DO:62:LEU:CD1	53:D8:25:MET:C	2.38	0.85
24:BA:1052:C:N3	24:BA:1107:G:N2	2.24	0.85
4:CG:22:LYS:HZ3	4:CG:25:ARG:CG	1.88	0.85
35:BP:64:ILE:O	35:BP:65:PHE:CD2	2.30	0.85
24:DA:2379:G:O2'	37:DQ:17:ARG:NH1	2.09	0.85
30:BH:4:ILE:C	30:BH:4:ILE:HD12	1.98	0.85
1:CA:962:C:H42	1:CA:973:G:H1	1.25	0.85
30:DH:83:TYR:HA	30:DH:134:SER:HB3	1.58	0.85
1:AA:1260:C:O2	1:AA:1275:A:N6	2.10	0.85
4:CG:22:LYS:NZ	4:CG:25:ARG:C	2.30	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D6:15:GLU:CG	51:D6:16:CYS:N	2.34	0.84
33:DN:115:VAL:HG13	33:DN:121:VAL:HG21	1.59	0.84
1:CA:412:A:C6	4:CG:35:ARG:CD	2.59	0.84
24:BA:2810:A:O3'	27:BE:61:ARG:HG2	1.78	0.84
22:CD:12:G:O6	22:CD:23:C:N4	2.11	0.84
32:BM:128:HIS:HB2	32:BM:129:PRO:HD2	1.58	0.84
24:DA:2130:U:HO2'	24:DA:2133:G:HO2'	1.12	0.84
24:BA:1728:G:H8	24:BA:1732:A:H62	1.25	0.84
24:BA:2751:G:N3	30:BH:3:ARG:HD3	1.93	0.84
1:CA:1006:C:N3	1:CA:1023:G:N1	2.25	0.84
24:DA:1019:U:H3	24:DA:1142(A):A:H62	1.25	0.84
1:CA:1324:A:H4'	1:CA:1362:C:H4'	1.56	0.84
43:BU:81:LYS:HD3	43:BU:97:ARG:CZ	2.08	0.84
2:CE:78:GLN:O	2:CE:94:ASN:ND2	2.10	0.84
2:CE:21:ARG:HH21	2:CE:38:GLY:HA3	1.42	0.84
24:DA:2115:G:O3'	24:DA:2165:G:N2	2.11	0.84
46:BZ:60:PHE:HE2	46:BZ:91:LYS:HZ1	1.26	0.84
26:DD:35:LYS:N	26:DD:35:LYS:HD2	1.91	0.84
34:DO:64:LYS:CB	53:D8:25:MET:HG3	2.08	0.84
22:CD:15:G:N1	22:CD:48:C:N3	2.26	0.84
24:DA:2292:C:OP1	37:DQ:17:ARG:NH2	2.11	0.84
22:AD:16:C:H4'	22:AD:60:U:H4'	1.59	0.84
24:DA:2125:G:N1	24:DA:2172:U:OP1	2.10	0.83
28:DF:3:GLU:HA	28:DF:24:LEU:HD11	1.58	0.83
51:D6:39:TYR:CE2	51:D6:40:CYS:O	2.30	0.83
34:DO:47:ASP:HB3	34:DO:48:PRO:C	1.98	0.83
19:CV:33:THR:HG22	19:CV:34:TRP:H	1.42	0.83
19:CV:36:ARG:HH11	19:CV:51:VAL:HG11	1.42	0.83
34:DO:62:LEU:H	34:DO:63:PRO:CD	1.90	0.83
27:BE:59:VAL:CG1	27:BE:60:ASN:H	1.80	0.83
24:BA:654(D):G:N2	24:BA:654(Q):C:N3	2.25	0.83
24:BA:1138:G:H21	32:BM:106:MET:HE3	1.43	0.83
4:CG:13:ARG:CD	4:CG:32:ALA:HB1	2.08	0.83
1:AA:1320:C:N3	19:AV:36:ARG:NH1	2.26	0.83
51:D6:15:GLU:HB2	51:D6:47:THR:HG23	1.59	0.83
24:BA:2808:U:O2	24:BA:2892:A:N6	2.09	0.83
1:CA:1502:A:H2	1:CA:1505:G:H1	1.25	0.83
4:CG:9:CYS:SG	4:CG:22:LYS:CE	2.65	0.83
24:BA:2867:G:OP2	38:BR:119:LYS:NZ	2.12	0.83
1:CA:279:A:OP2	17:CT:95:TYR:OH	1.96	0.83
1:AA:954:G:O6	1:AA:1225:A:N6	2.11	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2873:A:N3	36:B0:5:LYS:HA	1.94	0.83
28:BF:155:LEU:HB2	28:BF:189:THR:HG21	1.60	0.83
8:AK:30:ARG:HB2	8:AK:30:ARG:CZ	2.09	0.83
2:AE:12:GLU:HA	2:AE:16:HIS:CD2	2.14	0.83
42:BT:27:THR:HG23	42:BT:80:ILE:HB	1.60	0.83
24:BA:602:G:HO2'	24:BA:604:G:HO2'	1.27	0.83
24:BA:2751:G:O2'	24:BA:2752:C:O5'	1.96	0.83
35:BP:64:ILE:O	35:BP:65:PHE:CG	2.32	0.83
4:CG:125:HIS:HD1	4:CG:152:SER:HG	1.23	0.83
9:CL:4:TYR:HB2	9:CL:19:LEU:HB2	1.60	0.83
25:DB:90:C:OP2	35:DP:16:ARG:NH2	2.11	0.83
24:BA:2168:G:N7	24:BA:2171:A:N6	2.27	0.82
3:CF:116:VAL:HG11	3:CF:141:VAL:HG21	1.60	0.82
26:DD:34:VAL:HG23	26:DD:35:LYS:HZ2	1.01	0.82
1:CA:429:U:C2'	4:CG:25:ARG:NH2	2.29	0.82
51:D6:39:TYR:O	51:D6:39:TYR:CD2	2.32	0.82
24:DA:654(B):C:N3	24:DA:654(S):G:N1	2.25	0.82
1:AA:468:A:H5''	16:AS:80:PHE:HB3	1.59	0.82
24:DA:1899:G:H21	24:DA:1902:C:H41	1.24	0.82
43:BU:82:PRO:CD	43:BU:97:ARG:CD	2.53	0.82
19:CV:31:ILE:HD11	19:CV:50:ALA:H	1.45	0.82
1:AA:1009:G:O6	1:AA:1020:U:N3	2.09	0.82
45:B3:27:GLU:HG3	45:B3:68:GLU:HA	1.62	0.82
34:DO:71:VAL:HG13	34:DO:72:PRO:HD3	1.59	0.82
28:DF:28:ILE:CD1	28:DF:119:ARG:HE	1.91	0.82
25:BB:42:C:O2'	29:BG:67:LYS:O	1.98	0.82
5:CH:78:HIS:HA	8:CK:105:ARG:HG3	1.62	0.82
26:DD:34:VAL:HG21	26:DD:35:LYS:HZ3	1.44	0.82
3:CF:44:GLU:HA	3:CF:52:LEU:HD11	1.61	0.82
24:BA:1409:C:N4	24:BA:1593:G:O6	2.12	0.82
24:BA:49:A:N7	24:BA:120:U:H5	1.78	0.82
51:D6:14:THR:O	51:D6:49:HIS:CA	2.28	0.81
1:CA:1202:G:O2'	14:CQ:27:CYS:SG	2.38	0.81
24:BA:1899:G:N2	24:BA:1902:C:H41	1.77	0.81
1:AA:928:G:O2'	1:AA:1533:C:OP1	1.96	0.81
30:DH:127:GLU:HG2	30:DH:128:PRO:HD3	1.57	0.81
34:BO:64:LYS:O	34:BO:66:GLY:N	2.13	0.81
24:DA:1063:G:O6	24:DA:1075:C:N4	2.14	0.81
22:CD:47:U:H3'	22:CD:48:C:H4'	1.62	0.81
1:CA:1007:C:N3	1:CA:1022:G:N1	2.26	0.81
19:AV:4:SER:OG	19:AV:5:LEU:N	2.12	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DB:5:C:H42	25:DB:115:G:H1	1.28	0.81
1:AA:455:C:H42	1:AA:477:G:H1	1.27	0.81
27:DE:69:LYS:H	27:DE:69:LYS:HD2	1.43	0.81
30:DH:149:ARG:HA	30:DH:162:ILE:HG21	1.63	0.81
24:DA:2658:C:N4	24:DA:2663:G:O6	2.11	0.81
3:AF:20:SER:HB2	3:AF:40:ARG:HH22	1.43	0.81
24:BA:1678:G:N2	24:BA:1989:G:H22	1.79	0.81
7:AJ:15:ASP:OD1	7:AJ:44:TYR:OH	1.96	0.81
3:CF:164:ARG:CG	3:CF:165:THR:H	1.91	0.81
24:DA:1652:A:OP1	36:D0:8:ARG:NH1	2.13	0.81
27:DE:87:GLU:O	27:DE:89:ASP:N	2.13	0.81
30:BH:113:VAL:HG11	30:BH:151:ILE:CD1	2.10	0.81
24:BA:2415:G:H4'	34:BO:67:MET:H	1.45	0.81
30:DH:3:ARG:HG3	30:DH:4:ILE:HG12	1.62	0.81
27:DE:23:VAL:HG21	27:DE:183:LEU:HG	1.63	0.81
24:BA:620:G:H4'	24:BA:621:A:H5''	1.63	0.81
37:BQ:106:ARG:HH21	37:BQ:107:GLU:HB3	1.44	0.81
34:BO:38:GLN:HG2	34:BO:45:LEU:HD12	1.63	0.81
27:DE:11:MET:HG3	27:DE:24:THR:HG22	1.61	0.81
1:AA:1023:G:H3'	1:AA:1024:G:H5''	1.63	0.81
24:BA:1538:G:H2'	24:BA:1539:G:H8	1.46	0.81
1:AA:390:C:O3'	16:AS:28:ARG:NH2	2.13	0.81
11:AN:99:GLN:HG2	11:AN:105:VAL:HG11	1.62	0.81
24:DA:1079:C:N4	24:DA:1088:A:OP1	2.14	0.80
24:BA:2327:A:H2'	24:BA:2328:A:C8	2.16	0.80
34:BO:13:ASN:O	34:BO:15:ARG:N	2.14	0.80
1:AA:1447:G:O6	1:AA:1459:C:N4	2.13	0.80
22:CD:8:U:O4	22:CD:14:A:N6	2.15	0.80
24:DA:1019:U:OP1	24:DA:1035:U:O2'	1.99	0.80
24:BA:661:C:O2'	34:BO:13:ASN:O	1.98	0.80
24:DA:84:A:N6	24:DA:102:G:O2'	2.14	0.80
22:CC:8:U:O2	22:CC:14:A:N6	2.14	0.80
27:DE:66:HIS:CD2	27:DE:67:PHE:CD1	2.69	0.80
24:DA:219:G:N2	24:DA:234:C:O2	2.14	0.80
51:D6:15:GLU:HG3	51:D6:47:THR:HG21	1.61	0.80
24:DA:2749:A:H4'	30:DH:62:LYS:HG2	1.62	0.80
24:DA:2542:A:O2'	24:DA:2543:G:O5'	1.99	0.80
8:CK:12:ARG:HD2	8:CK:26:VAL:HG12	1.63	0.80
7:AJ:16:LEU:HD11	9:AL:42:ARG:HA	1.62	0.80
24:BA:993:G:OP1	39:B1:50:ARG:NH2	2.13	0.80
34:BO:70:GLN:N	34:BO:70:GLN:NE2	2.30	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BM:15:LEU:HD21	32:BM:128:HIS:HE1	1.46	0.80
28:DF:26:ALA:O	28:DF:27:GLU:CG	2.30	0.80
24:BA:630:G:OP1	53:B8:46:ARG:NH1	2.15	0.80
25:DB:30:C:H42	25:DB:54:G:H1	1.28	0.80
2:AE:87:ARG:NH1	2:AE:220:ASP:OD1	2.14	0.80
32:BM:128:HIS:HB2	32:BM:129:PRO:CD	2.11	0.80
28:DF:63:LYS:NZ	28:DF:67:GLN:HE21	1.79	0.80
34:BO:6:LEU:HD13	34:BO:7:ARG:N	1.93	0.80
30:DH:6:ARG:HE	30:DH:62:LYS:HE3	1.44	0.80
1:AA:559:A:H4'	1:AA:560:U:H3'	1.64	0.80
4:CG:108:LEU:HD21	4:CG:183:GLY:HA3	1.64	0.80
2:AE:69:LEU:HB3	2:AE:162:ILE:HG22	1.62	0.80
24:BA:2485:G:H5''	35:BP:46:GLN:HE21	1.47	0.80
24:BA:2056:G:N2	50:B5:4:HIS:O	2.15	0.80
34:DO:60:MET:O	34:DO:61:ARG:CD	2.30	0.80
24:DA:1800:C:OP2	26:DD:183:ARG:NH2	2.15	0.80
24:BA:771:G:OP1	52:B7:10:ARG:NH1	2.15	0.80
22:CD:6:G:O6	22:CD:67:C:N4	2.15	0.80
26:DD:35:LYS:CG	26:DD:64:ILE:HG23	2.10	0.80
44:DV:59:LEU:O	44:DV:61:LEU:N	2.14	0.79
30:DH:92:ILE:HG22	30:DH:93:GLY:H	1.45	0.79
27:DE:26:ILE:O	27:DE:27:LEU:HB2	1.83	0.79
4:CG:22:LYS:NZ	4:CG:26:CYS:N	2.30	0.79
25:BB:43:C:OP1	49:B4:6:HIS:NE2	2.11	0.79
34:BO:6:LEU:O	34:BO:7:ARG:CG	2.30	0.79
25:DB:86:G:N1	25:DB:90:C:N3	2.27	0.79
24:DA:2795:G:N7	24:DA:2797:U:O2'	2.15	0.79
26:DD:35:LYS:HE3	26:DD:64:ILE:CG1	2.13	0.79
4:CG:23:GLY:HA3	4:CG:112:VAL:CG2	2.13	0.79
43:BU:83:THR:O	43:BU:83:THR:CG2	2.30	0.79
24:DA:2849:U:O4	38:DR:23:ARG:NH2	2.14	0.79
26:DD:35:LYS:HE3	26:DD:64:ILE:C	2.02	0.79
34:DO:60:MET:O	34:DO:61:ARG:CG	2.30	0.79
1:AA:1133:G:N2	1:AA:1141:C:O2	2.16	0.79
24:DA:1069:A:H5'	24:DA:1070:A:C8	2.18	0.79
1:CA:987:G:N2	1:CA:1218:C:O2	2.14	0.79
24:DA:2808:U:O2	24:DA:2892:A:N6	2.16	0.79
1:CA:617:G:H1	1:CA:623:C:H42	1.29	0.79
26:DD:25:THR:HG22	26:DD:82:ILE:H	1.46	0.79
1:AA:974:A:OP2	14:AQ:41:ARG:NH1	2.14	0.79
51:D6:19:ARG:HH21	51:D6:52:VAL:HG11	1.46	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1006:C:O2	1:CA:1023:G:N2	2.16	0.79
24:DA:1111:A:H1'	30:DH:2:SER:HA	1.65	0.79
24:DA:886:C:H2'	24:DA:888:C:H42	1.46	0.79
1:AA:17:U:O2	1:AA:1079:G:N2	2.16	0.79
29:DG:67:LYS:HB3	49:D4:6:HIS:HD2	1.46	0.79
27:DE:26:ILE:HG22	27:DE:27:LEU:N	1.98	0.79
27:DE:63:LEU:O	27:DE:64:LYS:CG	2.30	0.79
1:AA:1007:C:O2	1:AA:1022:G:N2	2.12	0.79
24:BA:1059:G:O6	24:BA:1079:C:N4	2.10	0.79
16:CS:14:ASN:OD1	16:CS:42:ARG:NH2	2.16	0.79
24:BA:2784:C:O2'	27:BE:37:ARG:NH1	2.16	0.79
24:BA:2701:C:H3'	24:BA:2702:U:H5''	1.64	0.79
4:CG:187:ARG:NH2	4:CG:193:ASP:OD2	2.15	0.78
43:BU:81:LYS:HB3	43:BU:97:ARG:CD	2.12	0.78
3:CF:35:GLU:OE2	3:CF:59:ARG:NH2	2.15	0.78
28:DF:188:ARG:HA	34:DO:3:LEU:HD11	1.65	0.78
24:DA:2068:U:H3	24:DA:2430:A:H2	1.29	0.78
26:DD:35:LYS:HG3	26:DD:64:ILE:N	1.97	0.78
34:DO:64:LYS:CD	34:DO:64:LYS:O	2.32	0.78
51:D6:14:THR:CB	51:D6:20:ASN:O	2.31	0.78
24:BA:1105:U:H2'	24:BA:1106:G:H8	1.47	0.78
4:CG:22:LYS:CD	4:CG:25:ARG:CG	2.48	0.78
4:AG:28:SER:HG	4:AG:29:PRO:HD2	1.46	0.78
28:BF:185:ASP:OD1	28:BF:188:ARG:NH1	2.15	0.78
1:CA:1007:C:O2	1:CA:1022:G:N2	2.16	0.78
25:BB:40:U:C4	49:B4:2:LYS:HE2	2.19	0.78
25:DB:80:U:H2'	25:DB:81:G:H21	1.48	0.78
1:AA:941:G:O6	1:AA:1342:C:N4	2.15	0.78
24:DA:2287:A:H62	24:DA:2344:U:H3	1.32	0.78
27:BE:63:LEU:CD1	27:BE:63:LEU:O	2.30	0.78
1:AA:1381:U:O2	7:AJ:79:ARG:HG2	1.84	0.78
34:BO:88:LEU:HD12	34:BO:95:VAL:HG11	1.65	0.78
19:CV:29:ARG:HD2	19:CV:48:THR:H	1.47	0.78
24:DA:654(B):C:O2	24:DA:654(S):G:N2	2.12	0.78
37:BQ:26:LEU:HB3	37:BQ:87:PHE:HA	1.65	0.78
53:D8:40:GLU:H	53:D8:43:GLN:HG3	1.48	0.78
34:DO:11:GLY:O	34:DO:13:ASN:N	2.17	0.78
25:DB:18:G:N2	25:DB:65:C:N3	2.30	0.78
35:DP:43:THR:HB	35:DP:45:GLN:HE21	1.48	0.78
20:AW:69:GLY:O	20:AW:73:HIS:NE2	2.17	0.78
27:BE:61:ARG:N	27:BE:61:ARG:HD3	1.99	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1104:G:OP1	2:CE:144:ARG:NH1	2.13	0.78
24:DA:288:C:N4	24:DA:353:G:O6	2.15	0.78
8:AK:25:ASP:N	8:AK:25:ASP:OD1	2.16	0.78
4:CG:9:CYS:O	4:CG:32:ALA:HB2	1.84	0.78
22:AD:57:A:H2'	22:AD:58:A:H8	1.49	0.78
24:DA:2746:U:OP1	30:DH:85:LYS:NZ	2.14	0.78
24:BA:2390:U:OP2	53:B8:34:TRP:CZ2	2.37	0.78
24:DA:1188:U:H4'	40:D2:79:VAL:HG11	1.66	0.78
28:DF:53:THR:HG23	28:DF:55:GLY:H	1.48	0.78
24:DA:1332:G:N2	24:DA:1609:A:O2'	2.16	0.78
1:AA:64:G:O6	1:AA:99:C:N4	2.16	0.78
50:B5:33:CYS:HB2	50:B5:40:LYS:HD3	1.65	0.78
1:CA:1296:C:OP1	13:CP:14:ARG:NH2	2.17	0.78
24:DA:2137:C:N4	24:DA:2154:G:O6	2.18	0.77
25:DB:24:G:N3	25:DB:27:C:N4	2.32	0.77
12:AO:46:LYS:HG2	12:AO:48:PRO:HD2	1.62	0.77
34:BO:6:LEU:HD12	34:BO:7:ARG:N	1.99	0.77
1:CA:589:C:H42	1:CA:650:G:H1	1.32	0.77
24:BA:1525:G:H2'	24:BA:1526:G:H8	1.48	0.77
26:DD:35:LYS:NZ	26:DD:64:ILE:HG12	1.99	0.77
20:AW:53:LEU:O	20:AW:57:ARG:HG3	1.84	0.77
24:BA:2580:U:H4'	27:BE:130:GLY:HA3	1.66	0.77
24:DA:2744:G:N2	30:DH:143:GLN:OE1	2.18	0.77
24:DA:2467:C:H4'	35:DP:123:HIS:CD2	2.19	0.77
24:DA:1678:G:N2	24:DA:1989:G:H22	1.80	0.77
24:DA:660:G:H21	34:DO:12:ALA:HA	1.49	0.77
1:CA:411:A:C5	1:CA:413:G:H1'	2.19	0.77
30:BH:4:ILE:HD11	30:BH:7:LEU:HG	1.66	0.77
26:DD:34:VAL:CG2	26:DD:35:LYS:HE2	2.09	0.77
34:DO:71:VAL:HG12	34:DO:72:PRO:HD3	0.79	0.77
24:BA:1071:G:N2	24:BA:1091:G:OP2	2.17	0.77
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.15	0.77
13:CP:37:THR:O	13:CP:55:ARG:NH2	2.17	0.77
24:BA:1091:G:N1	24:BA:1100:C:N3	2.30	0.77
1:AA:446:G:H1	1:AA:488:C:H42	1.30	0.77
1:AA:198:G:O6	1:AA:219:C:N4	2.17	0.77
41:DS:65:LEU:HD13	41:DS:68:ARG:HD2	1.67	0.77
24:DA:2666:C:N3	30:DH:152:ARG:NH2	2.33	0.77
26:DD:35:LYS:HZ1	26:DD:64:ILE:HG12	1.50	0.77
4:CG:19:LEU:O	4:CG:26:CYS:SG	2.43	0.77
12:AO:47:LYS:N	12:AO:48:PRO:CD	2.46	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2789:C:O2	24:BA:2894:G:N2	2.17	0.77
24:BA:1085:A:H4'	24:BA:1086:A:H5'	1.67	0.77
24:BA:1086:A:O2'	24:BA:1103:A:N1	2.18	0.77
10:AM:49:VAL:HG23	14:AQ:41:ARG:HB2	1.67	0.77
24:DA:2357:U:OP1	45:D3:20:ARG:NH1	2.15	0.77
5:CH:92:LYS:HB3	5:CH:119:LEU:HB2	1.66	0.77
27:DE:67:PHE:HE2	27:DE:69:LYS:HZ2	1.29	0.77
28:DF:25:PRO:HB3	28:DF:119:ARG:HD3	1.65	0.77
44:BV:19:ARG:NH1	44:BV:84:GLU:O	2.18	0.77
44:DV:92:SER:O	44:DV:94:GLU:N	2.17	0.77
34:DO:71:VAL:HG13	34:DO:72:PRO:CD	2.14	0.77
24:BA:780:G:H21	24:BA:783:A:H62	1.33	0.77
24:DA:1049:C:N3	30:DH:2:SER:N	2.33	0.77
1:CA:78:G:O6	1:CA:91:C:N4	2.16	0.77
24:DA:1542:G:H3'	24:DA:1543:A:H5''	1.67	0.77
24:DA:2343:C:O2'	24:DA:2373:G:O2'	1.97	0.77
1:CA:415:A:N6	1:CA:428:G:O6	2.17	0.77
28:DF:3:GLU:CA	28:DF:24:LEU:HG	2.14	0.77
1:CA:1309:G:O2'	13:CP:77:ASN:ND2	2.18	0.77
24:BA:640:C:H42	24:BA:648:G:H1	1.30	0.77
24:DA:529:A:H4'	24:DA:530:G:H5'	1.67	0.77
1:CA:1289:A:OP1	21:CX:9:ARG:NH2	2.17	0.77
24:DA:1689:A:H62	24:DA:1698:A:H2	1.31	0.77
1:CA:412:A:C6	4:CG:35:ARG:HD2	2.20	0.76
34:DO:62:LEU:CD1	53:D8:25:MET:HB2	2.14	0.76
43:BU:81:LYS:CD	43:BU:97:ARG:CZ	2.62	0.76
43:BU:80:GLY:C	43:BU:81:LYS:NZ	2.38	0.76
32:BM:53:VAL:HG11	32:BM:128:HIS:CD2	2.20	0.76
43:DU:50:ARG:C	43:DU:53:PRO:HD3	2.05	0.76
3:CF:131:ARG:HH21	3:CF:164:ARG:NH2	1.82	0.76
53:B8:34:TRP:CZ3	53:B8:35:GLN:OE1	2.38	0.76
24:BA:601:C:OP1	28:BF:108:LYS:NZ	2.18	0.76
27:DE:9:VAL:CG2	27:DE:25:VAL:CG1	2.61	0.76
12:AO:47:LYS:N	12:AO:48:PRO:HD2	2.00	0.76
27:DE:66:HIS:CG	27:DE:67:PHE:HA	2.20	0.76
27:DE:63:LEU:O	27:DE:64:LYS:CB	2.32	0.76
1:AA:1006:C:O2	1:AA:1023:G:N2	2.15	0.76
29:DG:68:PRO:HA	29:DG:92:VAL:HB	1.66	0.76
24:BA:631:A:OP2	53:B8:46:ARG:NH2	2.19	0.76
1:AA:1502:A:H2	1:AA:1505:G:H1	1.29	0.76
22:CC:54:U:O2	22:CC:58:A:N6	2.13	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DV:151:HIS:HB3	44:DV:167:PRO:HB3	1.67	0.76
26:DD:34:VAL:HG23	26:DD:35:LYS:HZ3	1.07	0.76
51:D6:15:GLU:CG	51:D6:16:CYS:H	1.91	0.76
24:BA:2811:G:H5'	27:BE:60:ASN:HD22	1.50	0.76
1:AA:78:G:O6	1:AA:90:C:N4	2.17	0.76
24:BA:1169:G:H1	24:BA:1180:C:H42	1.30	0.76
27:BE:47:VAL:HG11	27:BE:86:PRO:HD2	1.67	0.76
1:AA:339:C:OP2	33:BN:97:ARG:NH1	2.19	0.76
24:DA:993:G:OP1	39:D1:50:ARG:NH2	2.17	0.76
22:CD:16:C:H5''	22:CD:17:C:H5	1.49	0.76
24:DA:2873:A:H8	36:D0:6:SER:H	1.33	0.76
51:B6:13:CYS:HA	51:B6:51:GLU:HA	1.68	0.76
38:DR:55:ASN:H	38:DR:59:THR:HG22	1.50	0.76
44:DV:77:ASP:OD2	44:DV:80:ARG:NH1	2.19	0.76
24:DA:2297:C:O2	24:DA:2321:G:N2	2.15	0.76
24:BA:2531:A:H4'	30:BH:157:TYR:CE2	2.21	0.76
1:AA:1060:C:H5''	10:AM:51:ARG:HG2	1.66	0.76
32:DM:56:ASN:H	32:DM:125:GLY:HA3	1.51	0.76
1:CA:186:C:H42	1:CA:191:G:H1	1.33	0.76
32:DM:4:TYR:O	39:D1:64:ARG:NH1	2.18	0.76
28:DF:66:PRO:O	28:DF:67:GLN:CB	2.32	0.76
25:BB:39:A:H2'	25:BB:40:U:C6	2.21	0.76
35:DP:26:TYR:OH	35:DP:141:GLN:OE1	2.03	0.76
1:CA:1260:C:O2	1:CA:1275:A:N6	2.18	0.76
44:DV:161:VAL:HG23	44:DV:162:GLU:HG2	1.67	0.76
40:D2:10:LYS:NZ	40:D2:23:GLU:OE1	2.15	0.76
27:BE:61:ARG:N	27:BE:62:PRO:HD2	2.01	0.76
30:BH:157:TYR:O	30:BH:158:HIS:CG	2.39	0.76
24:BA:1087:G:N2	24:BA:1102:C:O2	2.18	0.76
24:BA:2142:C:O2	24:BA:2149:G:N2	2.14	0.76
1:AA:1360:A:OP2	14:AQ:35:ARG:NH2	2.19	0.76
28:DF:8:GLN:HA	28:DF:15:SER:HA	1.68	0.76
30:BH:4:ILE:HD11	30:BH:7:LEU:H	1.51	0.76
4:CG:12:CYS:CB	4:CG:31:CYS:SG	2.74	0.76
51:D6:14:THR:O	51:D6:49:HIS:CB	2.33	0.76
24:DA:2638:G:P	27:DE:82:ARG:NH2	2.55	0.76
1:AA:79:G:H22	1:AA:89:U:H3	1.33	0.76
44:DV:103:ARG:HB2	44:DV:138:GLU:HA	1.66	0.76
26:DD:17:THR:O	26:DD:211:ARG:NH2	2.19	0.76
5:CH:100:VAL:O	5:CH:107:ARG:NH2	2.18	0.76
1:AA:1129:C:H4'	1:AA:1130:A:H5'	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BB:40:U:O2	25:BB:45:A:N6	2.18	0.75
24:DA:1093:G:N1	24:DA:1097:U:OP2	2.19	0.75
24:BA:2419:U:O4	53:B8:30:ARG:NE	2.18	0.75
37:DQ:3:ARG:HE	37:DQ:4:LEU:N	1.83	0.75
27:DE:11:MET:CE	27:DE:24:THR:CG2	2.64	0.75
4:CG:35:ARG:O	4:CG:36:ARG:CG	2.33	0.75
24:BA:2392:A:H8	34:BO:60:MET:HB3	1.51	0.75
3:CF:13:GLY:HA3	14:CQ:57:ARG:HE	1.50	0.75
4:CG:30:LYS:O	4:CG:31:CYS:HB3	1.86	0.75
2:CE:82:ARG:H	2:CE:94:ASN:HD21	1.34	0.75
20:CW:57:ARG:HH21	20:CW:102:GLY:HA2	1.51	0.75
24:DA:1728:G:H8	24:DA:1732:A:H62	1.33	0.75
22:AD:51:C:N3	22:AD:63:G:N1	2.29	0.75
24:BA:2123:G:O6	24:BA:2175:C:N4	2.19	0.75
1:CA:1103:C:O2'	2:CE:111:ARG:NH1	2.20	0.75
16:AS:19:ILE:HG22	16:AS:36:ILE:HG13	1.67	0.75
26:BD:35:LYS:HG2	26:BD:64:ILE:N	2.02	0.75
30:BH:4:ILE:CD1	30:BH:7:LEU:H	1.99	0.75
4:AG:9:CYS:HB3	4:AG:32:ALA:HB2	0.84	0.75
53:D8:29:LYS:HB2	53:D8:44:LYS:HB3	1.67	0.75
24:BA:1062:G:N1	24:BA:1076:C:N3	2.33	0.75
19:CV:50:ALA:HB1	19:CV:57:HIS:HB3	1.68	0.75
34:BO:65:ARG:HH21	53:B8:15:LYS:HB2	1.50	0.75
18:CU:45:SER:HG	18:CU:47:THR:HG1	1.32	0.75
26:BD:69:ARG:NH2	26:BD:128:GLY:O	2.19	0.75
43:BU:80:GLY:C	43:BU:81:LYS:HZ1	1.90	0.75
30:BH:92:ILE:HD12	30:BH:160:LYS:CE	2.06	0.75
49:D4:39:CYS:HB3	49:D4:41:PRO:CD	2.17	0.75
24:DA:93:C:C5'	43:DU:54:LYS:NZ	2.50	0.75
24:DA:1036:G:N1	24:DA:1119:C:N3	2.29	0.75
2:CE:195:ASP:O	8:CK:68:ARG:NH2	2.19	0.75
34:DO:62:LEU:HD22	53:D8:27:THR:CG2	2.17	0.75
24:DA:1899:G:H21	24:DA:1902:C:N4	1.84	0.75
24:DA:1036:G:N2	24:DA:1119:C:O2	2.15	0.75
11:AN:54:ARG:NH2	22:AD:39:C:O2'	2.19	0.75
34:DO:62:LEU:N	34:DO:63:PRO:HD3	1.96	0.75
25:DB:86:G:O6	25:DB:90:C:N4	2.15	0.75
21:CX:9:ARG:O	21:CX:13:ILE:N	2.19	0.75
2:AE:100:GLY:N	2:AE:176:GLU:OE2	2.20	0.75
20:AW:22:ARG:O	20:AW:26:ASN:ND2	2.20	0.75
1:CA:5:U:O2'	4:CG:84:LYS:NZ	2.20	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:13:ARG:CA	27:DE:21:VAL:O	2.35	0.74
24:BA:654(B):C:N4	24:BA:654(S):G:O6	2.20	0.74
4:CG:30:LYS:O	4:CG:31:CYS:CB	2.35	0.74
34:DO:60:MET:C	34:DO:61:ARG:HG2	2.06	0.74
27:BE:50:GLY:HA2	27:BE:77:ILE:HA	1.69	0.74
25:DB:1(M):A:N6	25:DB:117:G:N7	2.35	0.74
24:BA:2756:U:O4	24:BA:2758:A:N6	2.19	0.74
42:BT:8:ILE:HD11	42:BT:43:VAL:HG22	1.69	0.74
2:AE:21:ARG:HG2	2:AE:22:LYS:HG2	1.69	0.74
24:BA:2751:G:N2	30:BH:3:ARG:NE	2.35	0.74
1:CA:1147:C:H2'	9:CL:16:ARG:NH2	2.02	0.74
24:DA:2420:C:H41	53:D8:31:HIS:HB3	1.52	0.74
25:BB:42:C:O2	29:BG:93:THR:N	2.17	0.74
44:BV:145:GLU:HB3	44:BV:148:ASP:HB2	1.69	0.74
37:DQ:12:PHE:O	37:DQ:16:ASN:ND2	2.20	0.74
1:AA:438:G:H2'	1:AA:494:U:O4	1.87	0.74
24:BA:1509:C:H3'	24:BA:1510:A:H5''	1.69	0.74
39:D1:90:VAL:O	39:D1:92:ARG:N	2.21	0.74
27:DE:69:LYS:HD2	27:DE:69:LYS:N	2.03	0.74
41:DS:59:VAL:HG23	41:DS:65:LEU:H	1.51	0.74
1:AA:966:G:O2'	9:AL:127:LYS:O	2.04	0.74
49:D4:56:VAL:HA	49:D4:60:GLN:HE22	1.50	0.74
24:BA:2133:G:H1'	24:BA:2158:A:H61	1.52	0.74
1:CA:1139:G:N2	1:CA:1142:G:O6	2.21	0.74
24:BA:2127:G:N1	24:BA:2161:C:N3	2.35	0.74
24:BA:469:G:O6	52:B7:37:LYS:NZ	2.20	0.74
28:DF:101:LEU:O	28:DF:106:ARG:NH1	2.20	0.74
1:AA:154:C:O2	1:AA:167:G:N2	2.19	0.74
35:BP:64:ILE:HG22	35:BP:65:PHE:N	2.01	0.74
1:CA:1305:G:N2	1:CA:1331:G:H2'	2.02	0.74
24:BA:1064:C:N3	24:BA:1074:G:N2	2.34	0.74
19:CV:33:THR:HG22	19:CV:35:SER:H	1.53	0.74
24:BA:882:G:O6	24:BA:893:C:N4	2.20	0.74
1:AA:439:A:OP2	1:AA:493:G:N1	2.20	0.74
4:AG:157:LEU:O	4:AG:161:ASN:ND2	2.20	0.74
7:CJ:35:LYS:HG3	7:CJ:38:LEU:HB3	1.68	0.74
24:DA:527:C:N4	24:DA:2779:U:OP2	2.21	0.74
24:BA:2099:U:N3	24:BA:2190:G:O6	2.16	0.74
24:BA:2789:C:N3	24:BA:2894:G:N1	2.34	0.74
1:CA:1148:U:H2'	1:CA:1149:C:O4'	1.88	0.74
24:BA:2000:G:OP1	36:B0:5:LYS:NZ	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AV:41:VAL:HG12	19:AV:44:MET:HB2	1.68	0.74
24:DA:780:G:H21	24:DA:783:A:H62	1.35	0.74
24:DA:2139:C:H42	24:DA:2152:G:H1	1.36	0.74
24:DA:1171:G:O2'	24:DA:1173:G:O5'	2.04	0.74
32:DM:91:LEU:HA	32:DM:95:PRO:HB3	1.68	0.74
25:DB:15:A:H5'	25:DB:16:G:C8	2.21	0.74
1:AA:1454:G:OP1	20:AW:39:LYS:NZ	2.18	0.74
1:AA:528:C:H41	12:AO:49:ASN:HD22	1.34	0.74
24:DA:93:C:H4'	43:DU:54:LYS:NZ	2.03	0.74
43:BU:38:ILE:HD11	43:BU:64:GLU:HG3	1.67	0.74
24:DA:774:A:H2	24:DA:787:U:HO2'	1.35	0.74
24:BA:2820:A:H4'	36:B0:3:HIS:HD2	1.53	0.74
24:DA:403:U:H4'	24:DA:404:C:H5'	1.70	0.74
24:DA:1477:A:N6	24:DA:1516:U:O4	2.18	0.74
24:DA:854:G:O6	24:DA:923:C:N4	2.20	0.74
24:DA:1037:G:O6	24:DA:1118:C:N4	2.17	0.74
24:DA:1039:G:O6	24:DA:1116:C:N4	2.19	0.73
30:BH:46:GLU:HB2	30:BH:49:VAL:HG23	1.70	0.73
24:DA:989:G:OP2	48:DX:11:SER:OG	2.05	0.73
24:DA:2652:C:H42	24:DA:2668:G:H1	1.36	0.73
24:DA:768:G:O2'	24:DA:1379:A:N6	2.21	0.73
24:DA:2124:G:O6	24:DA:2174:C:N4	2.16	0.73
50:B5:38:ALA:HB3	50:B5:40:LYS:HE3	1.70	0.73
24:BA:1093:G:N1	24:BA:1097:U:OP2	2.20	0.73
5:AH:35:GLY:HA3	5:AH:112:LEU:HB3	1.70	0.73
22:AD:76:A:O2'	24:BA:2394:C:N3	2.17	0.73
24:DA:2875:C:H4'	38:DR:5:ALA:HB2	1.69	0.73
47:BW:4:SER:HB2	47:BW:5:GLU:OE2	1.87	0.73
1:AA:450:G:OP1	16:AS:43:LYS:NZ	2.20	0.73
1:CA:1232:U:H5''	9:CL:124:GLN:HB3	1.69	0.73
24:BA:1112:G:O3'	30:BH:2:SER:N	2.22	0.73
34:DO:62:LEU:HD11	53:D8:25:MET:CA	2.16	0.73
24:DA:889:C:H2'	24:DA:890:A:H4'	1.70	0.73
5:CH:101:ILE:HD11	5:CH:119:LEU:HD23	1.71	0.73
4:AG:163:GLU:OE2	4:AG:166:LYS:NZ	2.20	0.73
24:BA:1778:U:H2'	24:BA:1784:A:N6	2.03	0.73
24:BA:2370:G:N3	51:B6:45:LYS:NZ	2.36	0.73
28:DF:25:PRO:O	28:DF:26:ALA:HB3	1.89	0.73
3:CF:70:VAL:HG12	3:CF:72:LYS:H	1.51	0.73
3:CF:20:SER:OG	3:CF:40:ARG:NH2	2.20	0.73
27:DE:69:LYS:O	27:DE:70:ALA:HB2	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:25:PRO:O	28:DF:26:ALA:CB	2.36	0.73
49:D4:39:CYS:C	49:D4:40:HIS:ND1	2.42	0.73
24:DA:2757:A:N1	30:DH:67:LEU:HD11	2.03	0.73
1:CA:411:A:H62	1:CA:413:G:H21	1.35	0.73
1:CA:1028(A):C:N3	1:CA:1032(B):G:N1	2.31	0.73
1:CA:963:G:N3	10:CM:55:LYS:NZ	2.35	0.73
24:BA:881:G:N1	24:BA:895:U:O4	2.19	0.73
33:DN:63:VAL:HG12	33:DN:106:LEU:HD11	1.71	0.73
1:CA:526:C:OP2	12:CO:91:LYS:NZ	2.22	0.73
4:AG:191:ARG:HH12	4:AG:195:ALA:HA	1.54	0.73
3:AF:127:ARG:NH2	3:AF:192:THR:OG1	2.21	0.73
39:B1:92:ARG:O	39:B1:94:ASN:N	2.20	0.73
2:CE:5:ILE:HG13	2:CE:56:ARG:HH12	1.54	0.73
1:CA:429:U:O2'	4:CG:25:ARG:NE	2.21	0.73
24:DA:1070:A:H8	24:DA:1096:A:H1'	1.52	0.73
24:DA:2749:A:N1	24:DA:2750:A:N6	2.36	0.73
24:BA:873:G:H1	24:BA:904:C:H42	1.36	0.73
1:CA:1326:C:OP1	21:CX:17:THR:OG1	2.07	0.73
24:BA:2393:A:H4'	34:BO:61:ARG:H	1.54	0.73
24:BA:2438:U:O3'	24:BA:2439:A:H3'	1.88	0.73
13:AP:37:THR:O	13:AP:55:ARG:NH2	2.21	0.73
32:BM:76:SER:O	32:BM:78:TYR:N	2.20	0.73
1:AA:1125:U:OP2	1:AA:1145:C:N4	2.22	0.73
4:CG:199:ASN:O	4:CG:201:GLN:N	2.22	0.73
17:CT:66:SER:O	17:CT:70:ARG:NH1	2.21	0.73
1:AA:358:U:O3'	31:DK:87:LYS:HD3	1.89	0.73
43:BU:81:LYS:HD3	43:BU:97:ARG:NH1	2.03	0.73
51:D6:14:THR:HG21	51:D6:19:ARG:HG3	1.69	0.73
51:D6:12:GLU:HG3	51:D6:21:TYR:CE1	2.23	0.73
9:AL:16:ARG:HB2	9:AL:64:THR:HG22	1.69	0.73
22:AD:15:G:O6	22:AD:48:C:O2'	2.04	0.73
1:CA:1117:G:N2	1:CA:1180:A:O2'	2.22	0.73
24:DA:2365:G:N7	53:D8:39:LYS:NZ	2.36	0.73
24:BA:1403:C:H5''	24:BA:1471:A:H1'	1.69	0.73
24:BA:2404:C:O3'	34:BO:77:ARG:NH2	2.21	0.73
24:BA:67:U:H3	24:BA:74:A:H2	1.33	0.73
2:CE:33:TYR:HB3	2:CE:41:ILE:HG22	1.71	0.73
38:BR:26:ASP:HB3	38:BR:91:ARG:HA	1.70	0.73
30:BH:153:LYS:HG2	30:BH:154:PRO:CD	2.15	0.73
1:CA:988:G:N1	1:CA:1217:C:N3	2.32	0.73
38:BR:1:MET:O	38:BR:3:ARG:N	2.20	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2681:C:H5	24:DA:2725:A:H62	1.36	0.73
36:D0:34:ILE:HG22	36:D0:114:VAL:HB	1.69	0.73
14:CQ:24:CYS:SG	14:CQ:29:ARG:NH1	2.61	0.72
5:CH:122:GLU:O	5:CH:126:ARG:NH1	2.22	0.72
2:AE:77:ALA:HB2	2:AE:211:ILE:HD13	1.70	0.72
1:AA:1127:G:N1	1:AA:1145:C:O2	2.22	0.72
24:BA:270(F):U:H3	24:BA:270(T):G:H1	1.36	0.72
1:AA:1114:C:H42	1:AA:1186:G:H1	1.37	0.72
9:AL:46:ALA:HA	9:AL:78:LYS:HB2	1.70	0.72
31:BK:59:ALA:O	31:BK:63:ALA:N	2.21	0.72
34:BO:52:GLU:HG3	34:BO:57:THR:HG22	1.71	0.72
28:DF:28:ILE:HD13	28:DF:119:ARG:HH21	1.53	0.72
24:DA:1057:A:N6	24:DA:1088:A:OP 2	2.21	0.72
2:AE:15:VAL:HG22	2:AE:209:ARG:HB2	1.71	0.72
21:CX:2:GLY:O	21:CX:4:GLY:N	2.17	0.72
2:AE:88:ALA:HB2	2:AE:219:VAL:HG13	1.71	0.72
1:AA:590:C:OP1	8:AK:30:ARG:NH1	2.21	0.72
7:CJ:23:VAL:HG13	7:CJ:43:PHE:HE2	1.54	0.72
2:AE:208:ILE:HD13	2:AE:239:VAL:HG13	1.70	0.72
47:DW:22:GLU:HG2	47:DW:64:LEU:HD11	1.71	0.72
36:D0:67:LEU:HD12	36:D0:76:VAL:HG21	1.71	0.72
1:CA:412:A:C5	4:CG:35:ARG:HD2	2.25	0.72
1:CA:1037:C:H2'	1:CA:1038:C:C6	2.24	0.72
25:DB:49:C:OP2	37:DQ:30:ARG:NH1	2.23	0.72
11:CN:127:LYS:H	11:CN:127:LYS:HE3	1.54	0.72
30:BH:153:LYS:HG3	30:BH:154:PRO:CD	2.14	0.72
1:AA:1304:G:OP1	21:AX:2:GLY:N	2.23	0.72
1:CA:1075:C:H5''	2:CE:179:LYS:HZ1	1.54	0.72
24:DA:1105:U:H2'	24:DA:1106:G:H8	1.53	0.72
9:CL:16:ARG:HD3	9:CL:18:PHE:CZ	2.24	0.72
1:CA:890:G:O2'	1:CA:906:G:O6	2.07	0.72
24:DA:1247:A:OP1	28:DF:95:ARG:NH2	2.22	0.72
33:DN:120:GLU:OE2	38:DR:67:SER:OG	2.07	0.72
43:BU:4:LYS:HE3	43:BU:5:MET:H	1.53	0.72
24:DA:7:G:H1	24:DA:2896:C:H42	1.38	0.72
4:AG:29:PRO:O	4:AG:30:LYS:HB3	1.89	0.72
34:DO:47:ASP:HB3	34:DO:48:PRO:HA	1.72	0.72
24:DA:883:G:H1	24:DA:893:C:N4	1.87	0.72
24:DA:661:C:O2'	34:DO:13:ASN:O	2.06	0.72
24:DA:1225:C:O2'	40:D2:85:LYS:N	2.15	0.72
1:AA:1319:A:OP2	19:AV:5:LEU:HD21	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:D1:90:VAL:HG22	40:D2:39:LEU:HB3	1.71	0.71
19:AV:41:VAL:HB	19:AV:42:PRO:HA	1.71	0.71
1:AA:1161:C:N4	1:AA:1175:G:O6	2.19	0.71
2:AE:60:ASP:OD1	2:AE:60:ASP:N	2.22	0.71
5:AH:144:THR:HG22	5:AH:146:ALA:H	1.54	0.71
20:AW:89:ARG:HD2	20:AW:104:LEU:HD11	1.72	0.71
24:DA:1071:G:N3	24:DA:1089:G:O2'	2.22	0.71
24:DA:1093:G:H22	24:DA:1097:U:H5''	1.54	0.71
24:BA:1899:G:O2'	24:BA:1900:A:O5'	2.07	0.71
8:CK:10:LEU:HD22	8:CK:83:ILE:HD11	1.71	0.71
1:CA:438:G:H4'	4:CG:123:HIS:HD1	1.54	0.71
1:AA:403:C:O2'	4:AG:122:ARG:NH1	2.21	0.71
24:BA:1888:G:OP2	24:BA:1888:G:N2	2.23	0.71
24:DA:2163:C:H5''	24:DA:2171:A:C8	2.25	0.71
1:AA:591:U:H2'	1:AA:592:G:H8	1.55	0.71
2:AE:235:SER:O	2:AE:237:ALA:N	2.22	0.71
24:BA:2610:C:H4'	24:BA:2611:U:OP2	1.88	0.71
29:DG:11:TYR:HA	29:DG:15:VAL:HB	1.73	0.71
30:BH:154:PRO:O	30:BH:155:SER:CB	2.38	0.71
24:DA:2023:G:OP2	24:DA:2617:C:H4'	1.90	0.71
24:BA:774:A:H2	24:BA:787:U:HO2'	1.38	0.71
1:CA:1057:G:H1	1:CA:1203:C:H42	1.37	0.71
22:CD:8:U:H3	22:CD:15:G:H22	1.38	0.71
24:BA:2635:C:H5''	27:BE:78:LEU:HA	1.72	0.71
32:BM:95:PRO:O	32:BM:97:ARG:N	2.24	0.71
12:CO:70:ILE:HD13	12:CO:77:LEU:HD12	1.72	0.71
24:DA:2611:U:H2'	50:D5:3:LYS:HG3	1.72	0.71
28:DF:133:ASN:ND2	28:DF:138:GLU:OE2	2.23	0.71
22:CD:36:U:H2'	22:CD:37:A:H8	1.54	0.71
1:CA:1004:A:O2'	1:CA:1036:G:N1	2.24	0.71
53:D8:33:ASN:HA	53:D8:34:TRP:CE3	2.26	0.71
24:BA:1064:C:N4	24:BA:1070:A:OP1	2.24	0.71
26:DD:85:ASP:HB2	26:DD:92:ILE:HD13	1.72	0.71
31:BK:21:VAL:HG21	31:BK:25:TYR:HD2	1.55	0.71
15:AR:26:GLU:OE2	15:AR:77:ARG:NH1	2.23	0.71
26:BD:12:SER:HB2	26:BD:208:LYS:HB3	1.73	0.71
44:BV:72:ARG:NH2	44:BV:97:GLU:O	2.24	0.71
24:DA:2:G:H1	24:DA:2901:C:H42	1.38	0.71
44:DV:33:LEU:HD23	44:DV:90:VAL:HG21	1.73	0.71
25:BB:43:C:O2	29:BG:95:ARG:NH2	2.18	0.71
1:AA:76:G:N1	1:AA:93:U:O2	2.19	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1228:G:OP2	39:D1:16:LYS:NZ	2.22	0.71
6:CI:15:ASP:OD1	6:CI:17:SER:N	2.23	0.71
6:AI:23:LYS:HZ3	6:AI:23:LYS:HB2	1.55	0.71
39:B1:97:ASP:OD2	39:B1:101:ARG:NH1	2.23	0.71
24:DA:1569:A:H2'	24:DA:1570:A:C8	2.26	0.71
1:AA:528:C:N4	12:AO:49:ASN:ND2	2.36	0.71
24:BA:2723:C:O2'	36:B0:2:ARG:NH1	2.24	0.71
1:CA:947:G:H4'	13:CP:109:THR:HG23	1.72	0.71
30:DH:6:ARG:NE	30:DH:62:LYS:HE3	2.05	0.71
19:CV:29:ARG:NH1	19:CV:46:GLY:O	2.23	0.71
1:CA:708:C:OP1	11:CN:85:ARG:NH2	2.18	0.71
24:BA:2884:U:O2	50:B5:52:TYR:OH	2.09	0.71
7:CJ:113:GLU:O	7:CJ:119:ARG:NH1	2.22	0.71
24:BA:138:G:N2	42:BT:44:GLU:OE2	2.18	0.71
27:DE:76:ARG:O	27:DE:78:LEU:N	2.22	0.71
49:D4:43:TYR:O	49:D4:46:GLN:N	2.23	0.71
19:CV:40:ILE:HD11	19:CV:67:VAL:H	1.56	0.71
3:CF:75:VAL:O	3:CF:83:ARG:NE	2.23	0.71
24:DA:907:U:O2'	35:DP:101:ARG:NH2	2.21	0.71
1:AA:601:C:H2'	1:AA:602:A:H8	1.54	0.71
35:BP:55:VAL:HG12	35:BP:64:ILE:HD11	1.72	0.71
27:DE:60:ASN:ND2	27:DE:63:LEU:HD21	2.03	0.71
27:DE:72:VAL:O	27:DE:72:VAL:HG12	1.90	0.71
1:CA:1224:G:O3'	13:CP:102:ARG:NH1	2.23	0.71
49:B4:2:LYS:N	49:B4:2:LYS:HE3	2.06	0.71
31:BK:130:TYR:HB3	31:BK:136:VAL:HG13	1.73	0.71
24:BA:792:G:H5''	24:BA:793:A:H5'	1.73	0.71
24:DA:2315:G:OP1	29:DG:36:LYS:NZ	2.22	0.71
29:DG:36:LYS:HE2	29:DG:160:VAL:HG21	1.72	0.71
24:DA:958:U:OP2	35:DP:14:ARG:NH1	2.23	0.71
34:DO:62:LEU:N	34:DO:63:PRO:CD	2.52	0.70
9:CL:17:VAL:HA	9:CL:63:ILE:HG12	1.71	0.70
24:BA:2419:U:OP2	53:B8:33:ASN:ND2	2.24	0.70
44:BV:59:LEU:HD12	44:BV:69:THR:HG21	1.73	0.70
24:BA:2102:U:H3	24:BA:2187:G:H1	1.39	0.70
1:CA:1443:G:H3'	1:CA:1446:A:H5''	1.71	0.70
1:CA:961:U:O2	1:CA:1201:A:N6	2.18	0.70
12:CO:117:ARG:HB3	12:CO:122:THR:HB	1.71	0.70
1:CA:409:G:H1	1:CA:433:C:H42	1.39	0.70
24:DA:1058:U:H2'	24:DA:1059:G:C8	2.26	0.70
1:CA:1023:G:H3'	1:CA:1024:G:H5''	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AV:40:ILE:HG12	19:AV:41:VAL:HG13	1.71	0.70
1:AA:936:C:O2	1:AA:1382:C:N4	2.20	0.70
24:BA:1070:A:H4'	24:BA:1071:G:H5''	1.72	0.70
3:CF:81:GLY:HA2	3:CF:85:ARG:HH21	1.54	0.70
24:BA:273(F):C:H3'	24:BA:274:G:H5''	1.73	0.70
1:AA:664:G:H22	1:AA:741:G:H1	1.39	0.70
8:AK:85:ARG:NE	8:AK:87:SER:O	2.24	0.70
24:BA:1689:A:H62	24:BA:1698:A:H2	1.35	0.70
27:DE:9:VAL:HG21	27:DE:25:VAL:HG11	1.72	0.70
1:CA:427:U:OP1	4:CG:13:ARG:NH2	2.24	0.70
43:BU:81:LYS:HB3	43:BU:82:PRO:HD2	1.73	0.70
1:CA:1129:C:N4	1:CA:1141:C:H41	1.89	0.70
22:CC:8:U:O2'	22:CC:21:A:N1	2.25	0.70
9:CL:9:ARG:HH21	9:CL:104:ARG:HD2	1.56	0.70
34:BO:61:ARG:HB3	53:B8:13:ARG:HD3	1.72	0.70
2:CE:101:MET:HA	2:CE:108:ILE:HG13	1.73	0.70
10:CM:61:GLU:HG3	14:CQ:58:LYS:HE2	1.73	0.70
1:AA:748:C:H4'	1:AA:749:C:O5'	1.92	0.70
30:BH:126:PRO:HG2	30:BH:130:ARG:HH12	1.55	0.70
49:B4:52:THR:OG1	49:B4:53:GLU:N	2.22	0.70
19:AV:40:ILE:HD11	19:AV:62:ILE:HD13	1.73	0.70
24:BA:1057:A:N6	24:BA:1087:G:OP1	2.18	0.70
1:AA:977:A:H8	1:AA:1223:C:C4	2.10	0.70
7:AJ:15:ASP:HB3	7:AJ:20:ASP:H	1.56	0.70
19:CV:29:ARG:HH12	19:CV:61:TYR:HD1	1.40	0.70
1:AA:403:C:OP2	4:AG:74:GLN:NE2	2.24	0.70
4:CG:157:LEU:O	4:CG:161:ASN:ND2	2.24	0.70
43:BU:10:GLY:O	43:BU:26:LYS:NZ	2.24	0.70
9:AL:28:VAL:HG22	9:AL:63:ILE:HB	1.72	0.70
24:BA:998:C:OP2	39:B1:58:ARG:NH1	2.23	0.70
1:CA:136:C:H42	1:CA:227:G:H1	1.38	0.70
24:BA:1695:G:N7	26:BD:14:ARG:NH2	2.38	0.70
39:D1:92:ARG:HG3	39:D1:94:ASN:HB3	1.73	0.70
36:B0:2:ARG:N	36:B0:2:ARG:HD3	2.05	0.70
44:DV:157:LEU:HB3	44:DV:161:VAL:HG12	1.71	0.70
26:BD:35:LYS:NZ	26:BD:104:TYR:HB2	2.06	0.70
14:CQ:45:ARG:O	14:CQ:49:HIS:ND1	2.23	0.70
1:AA:1192:C:OP2	3:AF:4:LYS:NZ	2.22	0.70
13:AP:13:LYS:O	13:AP:44:ARG:NH1	2.24	0.70
24:BA:1649:G:O2'	36:B0:107:ASP:OD2	2.10	0.70
13:CP:57:ARG:NH1	49:D4:34:GLU:O	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:416:C:N4	24:BA:2407:G:O6	2.16	0.70
24:BA:2068:U:H3	24:BA:2430:A:H2	1.37	0.70
34:BO:71:VAL:O	34:BO:72:PRO:C	2.30	0.70
1:CA:1224:G:C6	1:CA:1322:C:H1'	2.26	0.70
1:CA:979:C:N4	14:CQ:18:VAL:O	2.24	0.70
3:CF:50:ALA:HB1	3:CF:70:VAL:HG11	1.74	0.70
1:CA:1291:G:OP1	7:CJ:37:ASN:ND2	2.24	0.70
40:B2:24:LYS:HA	40:B2:92:THR:HG23	1.71	0.70
24:DA:1012:U:H3	24:DA:1143:A:H2	1.37	0.70
44:BV:154:ASP:OD1	44:BV:154:ASP:N	2.25	0.70
41:BS:88:ARG:HB3	41:BS:92:ARG:HB2	1.72	0.70
44:DV:10:ARG:NH2	44:DV:26:GLY:O	2.25	0.70
37:DQ:35:ILE:HD11	37:DQ:97:ARG:HE	1.57	0.70
27:DE:11:MET:HE3	27:DE:24:THR:CG2	2.22	0.70
34:DO:62:LEU:HD22	53:D8:27:THR:HG23	1.73	0.70
10:AM:40:LEU:HB2	10:AM:69:ASN:HB3	1.72	0.70
1:AA:148:G:H2'	1:AA:149:A:H8	1.57	0.70
30:BH:154:PRO:O	30:BH:155:SER:HB2	1.90	0.70
51:D6:47:THR:HG23	51:D6:47:THR:O	1.89	0.70
51:B6:20:ASN:OD1	51:B6:42:TRP:CE3	2.44	0.70
24:DA:2343:C:HO2'	24:DA:2373:G:HO2'	1.21	0.70
24:BA:2134:A:OP2	24:BA:2157:G:N2	2.23	0.70
24:BA:276:A:H2'	24:BA:277:C:H5''	1.74	0.70
24:DA:2471:C:N4	24:DA:2476:A:O2'	2.24	0.70
1:AA:1347:G:N7	9:AL:11:LYS:NZ	2.39	0.70
1:CA:426:G:OP1	4:CG:38:TYR:OH	2.06	0.70
1:AA:1492:A:OP1	12:AO:47:LYS:N	2.21	0.70
25:DB:57:A:H1'	29:DG:29:TRP:HB2	1.74	0.70
22:CD:36:U:H2'	22:CD:37:A:C8	2.27	0.70
26:BD:71:ASP:OD2	26:BD:103:ARG:NH2	2.25	0.70
24:BA:102:G:OP1	47:BW:7:ARG:NH2	2.24	0.70
1:CA:827:U:H3	1:CA:872:A:H62	1.38	0.70
40:D2:35:LEU:HG	40:D2:37:VAL:HG13	1.72	0.70
40:D2:47:VAL:O	40:D2:47:VAL:CG2	2.40	0.70
1:CA:1002:G:N2	1:CA:1038:C:N3	2.31	0.70
11:CN:54:ARG:NH2	22:CD:39:C:O2'	2.25	0.70
26:DD:30:GLU:OE1	26:DD:63:ARG:NE	2.22	0.70
24:BA:1903:G:OP1	26:BD:241:PRO:HB2	1.91	0.70
24:DA:602:G:HO2'	24:DA:604:G:HO2'	1.32	0.69
24:BA:574:C:N3	27:BE:145:LYS:NZ	2.33	0.69
35:BP:21:THR:H	35:BP:98:LYS:HB2	1.55	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:270(H):C:O2	46:DZ:78:LYS:NZ	2.24	0.69
24:DA:443:A:N6	28:DF:41:LEU:O	2.25	0.69
40:B2:44:LYS:O	40:B2:46:VAL:N	2.23	0.69
1:CA:833:U:H3	1:CA:853:G:H1	1.39	0.69
40:D2:34:GLU:OE1	40:D2:56:SER:OG	2.10	0.69
27:DE:71:GLY:C	27:DE:73:GLU:H	1.95	0.69
29:BG:66:GLN:OE1	29:BG:98:ARG:NH1	2.25	0.69
24:DA:1225:C:HO2'	40:D2:85:LYS:H	1.37	0.69
40:D2:69:LYS:HD2	40:D2:86:GLY:HA3	1.73	0.69
4:CG:105:VAL:HG13	4:CG:110:PHE:HB2	1.75	0.69
1:AA:964:A:O2'	10:AM:55:LYS:NZ	2.24	0.69
2:CE:16:HIS:CD2	2:CE:209:ARG:HB3	2.26	0.69
4:CG:33:MET:HE1	4:CG:37:PRO:CB	2.20	0.69
34:DO:64:LYS:HD2	53:D8:25:MET:SD	2.32	0.69
24:DA:2134:A:N6	24:DA:2157:G:O2'	2.24	0.69
49:D4:23:GLU:O	49:D4:25:TYR:N	2.24	0.69
29:DG:105:LYS:HG2	49:D4:24:THR:HG22	1.73	0.69
24:BA:607:U:H3	24:BA:621:A:H2	1.38	0.69
24:DA:2318:G:H22	37:DQ:3:ARG:HB2	1.56	0.69
3:CF:19:GLU:O	3:CF:40:ARG:NH2	2.24	0.69
2:AE:165:VAL:O	2:AE:205:ASP:HB2	1.92	0.69
53:B8:53:PRO:HA	53:B8:56:GLU:HB2	1.74	0.69
43:DU:49:VAL:O	43:DU:51:VAL:N	2.25	0.69
27:DE:26:ILE:O	27:DE:27:LEU:CB	2.41	0.69
40:D2:91:TYR:O	40:D2:91:TYR:HD2	1.75	0.69
24:DA:1141:U:OP2	32:DM:63:THR:OG1	2.10	0.69
5:CH:102:ALA:HB1	5:CH:106:PRO:HG2	1.74	0.69
39:B1:75:ASN:HB2	39:B1:78:THR:HG23	1.74	0.69
46:DZ:92:LYS:O	46:DZ:94:LEU:N	2.24	0.69
51:B6:12:GLU:HA	51:B6:23:THR:HA	1.73	0.69
24:BA:1057:A:OP2	24:BA:1102:C:N4	2.25	0.69
25:DB:28:C:H42	25:DB:56:G:H1	1.38	0.69
1:AA:438:G:H4'	4:AG:123:HIS:CG	2.28	0.69
25:DB:48:A:H4'	37:DQ:95:HIS:HD2	1.58	0.69
2:CE:12:GLU:O	2:CE:14:GLY:N	2.25	0.69
25:BB:9:G:N1	25:BB:111:U:O2	2.16	0.69
24:BA:2306:C:N4	29:BG:42:GLY:O	2.24	0.69
24:BA:2791:C:N4	24:BA:2805:G:O6	2.18	0.69
24:DA:1105:U:H2'	24:DA:1106:G:C8	2.28	0.69
24:BA:1411:C:H42	24:BA:1591:G:H1	1.41	0.69
24:BA:1069:A:O2'	24:BA:1070:A:H5''	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:67:LYS:HB3	49:D4:6:HIS:CD2	2.28	0.69
24:DA:1332:G:H21	24:DA:1610:A:H8	1.40	0.69
11:CN:100:ALA:O	11:CN:102:GLY:N	2.25	0.69
3:AF:65:ALA:HA	3:AF:100:ALA:HB3	1.74	0.69
26:DD:35:LYS:CE	26:DD:64:ILE:HG23	2.22	0.69
22:CD:51:C:H2'	22:CD:52:G:C8	2.28	0.69
24:BA:2820:A:H4'	36:B0:3:HIS:CD2	2.26	0.69
24:BA:1058:U:H2'	24:BA:1059:G:H8	1.57	0.69
24:BA:1063:G:N2	24:BA:1076:C:O2	2.26	0.69
24:DA:1141:U:OP1	32:DM:25:ARG:NH1	2.21	0.69
26:BD:35:LYS:NZ	26:BD:64:ILE:O	2.22	0.69
24:BA:1510:A:O2'	24:BA:1512:G:N7	2.26	0.69
39:B1:92:ARG:NH1	40:B2:11:GLN:O	2.24	0.69
2:CE:12:GLU:OE1	2:CE:16:HIS:N	2.25	0.69
24:BA:2816:C:O3'	36:B0:99:LYS:NZ	2.25	0.69
1:CA:1503:A:OP1	1:CA:1531:A:O2'	2.10	0.69
50:D5:16:ARG:NH1	50:D5:17:ASP:OD1	2.25	0.69
25:BB:15:A:H5'	25:BB:16:G:C8	2.28	0.69
13:CP:62:ASN:OD1	13:CP:62:ASN:N	2.25	0.69
33:DN:88:ASN:HB3	33:DN:94:ARG:HD3	1.74	0.69
3:AF:20:SER:OG	3:AF:36:ASP:OD2	2.11	0.69
2:CE:16:HIS:O	2:CE:204:ASN:ND2	2.25	0.69
27:DE:105:THR:OG1	27:DE:199:ARG:NH2	2.25	0.69
24:BA:2315:G:O2'	29:BG:128:ARG:NH2	2.26	0.69
43:DU:42:VAL:HG13	43:DU:65:ALA:HB3	1.74	0.69
24:DA:2438:U:O3'	24:DA:2439:A:H3'	1.93	0.69
43:BU:99:CYS:SG	43:BU:100:ALA:N	2.66	0.69
3:CF:131:ARG:NH2	3:CF:164:ARG:NH2	2.40	0.69
24:DA:1077:A:O2'	24:DA:1078:U:O4'	2.09	0.69
24:BA:1105:U:H2'	24:BA:1106:G:C8	2.27	0.69
24:BA:2470:G:O6	24:BA:2480:C:N4	2.16	0.69
2:AE:197:VAL:O	8:AK:68:ARG:NH2	2.26	0.69
1:CA:662:G:O2'	1:CA:836:G:OP1	2.11	0.69
4:CG:13:ARG:CG	4:CG:32:ALA:HB1	2.23	0.68
34:DO:52:GLU:OE1	34:DO:54:GLY:N	2.26	0.68
1:CA:978:A:O2'	1:CA:1322:C:N3	2.25	0.68
24:BA:2470:G:N1	24:BA:2480:C:N3	2.37	0.68
24:DA:2120:G:H1	24:DA:2178:C:H42	1.41	0.68
30:BH:40:GLU:OE1	30:BH:61:HIS:NE2	2.25	0.68
3:AF:35:GLU:OE2	3:AF:59:ARG:NH2	2.24	0.68
29:BG:101:ILE:HD12	49:B4:25:TYR:HB2	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BP:66:ILE:O	35:BP:67:ARG:CB	2.40	0.68
24:DA:2162:G:H2'	24:DA:2163:C:H6	1.58	0.68
49:D4:16:CYS:H	49:D4:20:ASN:H	1.41	0.68
22:AD:15:G:N2	22:AD:48:C:O2	2.26	0.68
1:CA:1069:C:H42	1:CA:1106:G:H1	1.38	0.68
38:BR:25:GLY:H	38:BR:49:VAL:HG23	1.58	0.68
1:AA:749:C:H2'	1:AA:750:G:H8	1.57	0.68
29:BG:64:THR:HG23	29:BG:94:LEU:HD13	1.73	0.68
8:AK:41:ARG:NH1	8:AK:123:GLU:OE2	2.25	0.68
8:AK:36:LEU:O	8:AK:39:LEU:N	2.26	0.68
26:DD:148:GLU:HB2	26:DD:151:LYS:HD2	1.75	0.68
30:DH:30:LYS:NZ	30:DH:79:VAL:O	2.26	0.68
27:BE:105:THR:OG1	27:BE:199:ARG:NH2	2.26	0.68
27:DE:26:ILE:HG22	27:DE:27:LEU:H	1.57	0.68
43:BU:81:LYS:HG3	43:BU:97:ARG:NE	2.08	0.68
4:AG:15:GLU:OE1	4:AG:66:ARG:NH1	2.24	0.68
24:BA:1062:G:O6	24:BA:1075:C:N4	2.26	0.68
24:BA:2471:C:N4	24:BA:2476:A:O2'	2.24	0.68
3:AF:56:ASP:OD2	3:AF:69:HIS:NE2	2.26	0.68
4:CG:34:GLU:O	4:CG:35:ARG:HB2	1.93	0.68
1:CA:1015:A:N3	1:CA:1218:C:O2'	2.25	0.68
37:DQ:26:LEU:HD22	37:DQ:87:PHE:HD1	1.58	0.68
1:CA:1280:A:OP1	10:CM:7:LYS:NZ	2.26	0.68
24:DA:2173:A:N6	24:DA:2174:C:HO2'	1.92	0.68
27:DE:36:ARG:NH1	27:DE:85:ASN:OD1	2.26	0.68
1:AA:474:G:H5''	16:AS:81:ARG:NH1	2.08	0.68
1:CA:1148:U:O4'	9:CL:16:ARG:NH2	2.25	0.68
3:CF:47:LEU:HB3	3:CF:52:LEU:HD22	1.76	0.68
34:BO:65:ARG:O	34:BO:68:GLN:NE2	2.27	0.68
44:DV:70:LEU:HD11	44:DV:98:MET:HE3	1.75	0.68
19:CV:20:LEU:HA	19:CV:23:ASN:HB2	1.74	0.68
24:BA:1021:A:H61	24:BA:1142(A):A:H61	1.41	0.68
24:BA:1434:A:H61	24:BA:1558:A:N6	1.92	0.68
39:B1:102:GLU:OE1	40:B2:13:ARG:NH2	2.26	0.68
1:AA:581:G:OP1	15:AR:65:ARG:NH1	2.27	0.68
24:DA:873:G:H1	24:DA:904:C:H42	1.39	0.68
1:AA:562:C:H1'	12:AO:15:ARG:HB3	1.74	0.68
44:DV:132:ASN:HD22	44:DV:159:PRO:HB2	1.58	0.68
29:DG:94:LEU:HD12	29:DG:99:MET:HA	1.76	0.68
1:AA:1148:U:O2	9:AL:66:ARG:NH2	2.22	0.68
24:DA:561:G:H1'	39:D1:45:TYR:HE1	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CG:22:LYS:O	4:CG:25:ARG:HB3	1.93	0.68
2:CE:8:LYS:HD3	2:CE:11:LEU:HD13	1.74	0.68
27:DE:12:THR:O	27:DE:22:PRO:HA	1.93	0.68
45:D3:18:ALA:HB3	45:D3:20:ARG:HH21	1.58	0.68
24:BA:1178:C:O2'	24:BA:1179:C:O4'	2.11	0.68
43:BU:4:LYS:HE3	43:BU:5:MET:N	2.09	0.68
1:AA:1086:U:H3	1:AA:1099:G:H22	1.42	0.68
13:AP:10:PRO:HB2	13:AP:18:ALA:HB1	1.74	0.68
22:CC:33:U:N3	22:CC:36:U:OP2	2.26	0.68
38:DR:125:ARG:NH1	38:DR:128:GLU:OE2	2.26	0.68
2:CE:18:GLY:O	2:CE:19:HIS:ND1	2.26	0.68
35:BP:66:ILE:HG22	35:BP:104:PHE:CE1	2.29	0.68
1:CA:1309:G:N7	13:CP:99:ARG:NH2	2.41	0.68
26:BD:35:LYS:HD2	26:BD:104:TYR:CE2	2.29	0.68
10:CM:27:ALA:HA	10:CM:30:SER:HB3	1.75	0.68
1:AA:62:U:O2'	1:AA:379:C:O2	2.11	0.68
10:CM:10:GLY:H	10:CM:16:LEU:HD11	1.59	0.68
30:BH:143:GLN:NE2	30:BH:147:ASN:OD1	2.27	0.68
38:DR:64:ARG:HB2	38:DR:73:GLU:HG2	1.76	0.68
51:B6:32:ASN:N	51:B6:32:ASN:OD1	2.25	0.68
27:DE:11:MET:HG3	27:DE:24:THR:CG2	2.23	0.68
28:DF:63:LYS:HZ1	28:DF:67:GLN:HE21	1.43	0.68
1:CA:1132:C:H42	1:CA:1142:G:H1	1.40	0.68
45:D3:27:GLU:HB2	45:D3:69:PHE:HD2	1.59	0.68
44:DV:10:ARG:HH21	44:DV:26:GLY:H	1.42	0.68
1:CA:975:A:H4'	1:CA:976:G:H5''	1.74	0.68
2:CE:167:PRO:O	2:CE:171:ALA:N	2.27	0.68
37:BQ:35:ILE:HD11	37:BQ:101:LEU:HD22	1.76	0.68
40:D2:37:VAL:O	40:D2:51:VAL:CG1	2.42	0.67
36:B0:4:LEU:HD12	36:B0:4:LEU:N	2.09	0.67
2:CE:7:VAL:HG22	2:CE:8:LYS:H	1.60	0.67
49:B4:59:PHE:O	49:B4:63:TYR:N	2.26	0.67
53:B8:36:LYS:HD2	53:B8:40:GLU:OE2	1.94	0.67
1:CA:36:C:OP1	12:CO:123:LYS:NZ	2.27	0.67
28:DF:102:PRO:HB2	28:DF:105:VAL:HG23	1.76	0.67
1:AA:171:A:H2'	1:AA:172:A:C8	2.29	0.67
24:BA:2365:G:N7	53:B8:39:LYS:NZ	2.37	0.67
13:CP:22:ILE:HB	13:CP:25:ILE:HG13	1.75	0.67
34:DO:21:ARG:HE	34:DO:21:ARG:HA	1.57	0.67
49:D4:39:CYS:O	49:D4:40:HIS:CB	2.43	0.67
3:CF:14:ILE:O	3:CF:16:ARG:N	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1179:A:H4'	9:AL:103:THR:HA	1.75	0.67
42:DT:90:GLU:HA	42:DT:93:GLU:HB2	1.75	0.67
8:CK:17:THR:O	8:CK:78:GLN:NE2	2.28	0.67
1:CA:1226:C:O2'	13:CP:111:LYS:NZ	2.26	0.67
24:BA:321:G:O3'	28:BF:168:ARG:NH2	2.27	0.67
24:BA:1805:U:O2	26:BD:50:THR:HB	1.93	0.67
30:BH:4:ILE:HD13	30:BH:6:ARG:HG3	1.75	0.67
26:DD:35:LYS:CD	26:DD:64:ILE:CG2	2.49	0.67
51:D6:15:GLU:CG	51:D6:47:THR:HG21	2.23	0.67
27:DE:67:PHE:HE2	27:DE:69:LYS:NZ	1.93	0.67
1:AA:1005:A:H1'	1:AA:1036:G:H22	1.59	0.67
3:CF:32:LEU:HB3	3:CF:59:ARG:HH12	1.59	0.67
13:CP:108:ARG:HH21	13:CP:111:LYS:HE3	1.59	0.67
1:CA:632:A:H4'	1:CA:633:G:O5'	1.95	0.67
26:BD:27:THR:HG21	26:BD:84:TYR:HB3	1.77	0.67
1:CA:582:U:OP1	15:CR:64:ARG:NH1	2.28	0.67
24:DA:1725:G:N1	24:DA:1735:C:N3	2.34	0.67
24:DA:300:A:OP2	43:DU:84:ARG:NH1	2.23	0.67
14:CQ:8:GLU:OE2	14:CQ:11:LYS:NZ	2.27	0.67
26:DD:35:LYS:HE2	26:DD:64:ILE:O	1.94	0.67
28:DF:23:ASP:C	28:DF:24:LEU:HD22	2.15	0.67
24:DA:1022:G:O2'	24:DA:1023:U:OP2	2.11	0.67
1:AA:877:C:OP1	8:AK:88:LYS:NZ	2.21	0.67
1:CA:201:C:O2'	1:CA:209:U:OP2	2.12	0.67
1:AA:368:U:OP1	31:DK:91:SER:OG	2.11	0.67
4:AG:29:PRO:O	4:AG:30:LYS:CB	2.41	0.67
34:DO:47:ASP:OD2	34:DO:50:ARG:NH1	2.28	0.67
44:DV:146:ILE:HD12	44:DV:147:GLY:N	2.04	0.67
24:BA:768:G:O2'	24:BA:1379:A:N6	2.27	0.67
12:CO:53:ARG:HH12	12:CO:92:ASP:HB3	1.60	0.67
24:BA:764:A:N3	26:BD:213:ARG:NH1	2.42	0.67
14:AQ:59:ALA:HB1	14:AQ:61:TRP:HZ3	1.57	0.67
24:DA:2135:A:H62	24:DA:2156:G:H21	1.43	0.67
36:B0:2:ARG:HG3	36:B0:5:LYS:NZ	2.09	0.67
24:BA:2371:G:H21	51:B6:46:HIS:CE1	2.12	0.67
24:BA:2344:U:OP1	51:B6:38:LYS:NZ	2.28	0.67
1:AA:95:G:H3'	1:AA:96:G:C8	2.29	0.67
33:BN:76:ALA:HB3	38:BR:75:ILE:HB	1.75	0.67
1:CA:1270:C:OP2	21:CX:24:ARG:NH2	2.27	0.67
24:BA:1686:C:H42	24:BA:1702:G:H1	1.43	0.67
1:AA:429:U:H3'	4:AG:9:CYS:SG	2.34	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1002:G:H1	1:CA:1038:C:H42	1.41	0.67
1:CA:1158:C:N3	1:CA:1181:G:N1	2.40	0.67
3:CF:141:VAL:HG11	3:CF:202:ILE:HD13	1.77	0.67
1:AA:129(A):G:H4'	1:AA:130:A:H5''	1.76	0.67
24:BA:2843:G:H1	24:BA:2874:C:H42	1.43	0.67
16:AS:20:VAL:HG23	16:AS:35:LYS:HA	1.77	0.67
4:CG:13:ARG:O	4:CG:15:GLU:N	2.27	0.67
1:AA:1159:U:O4'	1:AA:1182:G:N2	2.27	0.67
39:D1:66:ASN:HD21	39:D1:70:ARG:HE	1.43	0.67
22:AC:47:U:HO2'	22:AC:48:C:P	2.18	0.67
1:AA:1446:A:O2'	38:BR:125:ARG:NH1	2.28	0.67
24:BA:919:G:N2	24:BA:2269:A:OP2	2.28	0.67
27:DE:4:ILE:HD11	27:DE:28:ALA:HB1	1.77	0.67
24:DA:390:A:C6	34:DO:71:VAL:HG21	2.30	0.67
24:BA:2286:A:O2'	51:B6:37:ARG:NH2	2.27	0.67
26:BD:35:LYS:HG2	26:BD:64:ILE:H	1.59	0.67
3:CF:123:GLN:HA	3:CF:126:ARG:HB2	1.75	0.67
17:CT:67:LYS:O	17:CT:69:LYS:N	2.22	0.67
1:AA:343:U:O2	1:AA:346:G:N2	2.22	0.67
8:CK:85:ARG:NH1	8:CK:87:SER:O	2.26	0.67
27:DE:66:HIS:CD2	27:DE:67:PHE:HA	2.30	0.67
24:DA:1084:A:N7	24:DA:1085:A:N6	2.42	0.67
24:DA:675:A:N3	24:DA:2443:C:O2'	2.28	0.67
37:BQ:25:ARG:NH1	37:BQ:42:ASP:OD1	2.25	0.67
2:CE:223:ILE:O	2:CE:227:GLY:N	2.27	0.67
1:CA:1187:G:O2'	9:CL:111:ARG:NH1	2.28	0.67
1:CA:560:U:O2'	1:CA:561:U:OP2	2.10	0.67
49:D4:39:CYS:O	49:D4:41:PRO:HD3	1.95	0.66
9:CL:5:TYR:N	9:CL:87:GLN:OE1	2.27	0.66
22:AD:51:C:O2	22:AD:63:G:N2	2.17	0.66
1:CA:985:C:H2'	1:CA:986:A:O4'	1.95	0.66
1:CA:998:G:N2	1:CA:1043:C:O2	2.28	0.66
24:DA:2183:C:H2'	24:DA:2184:G:H8	1.59	0.66
6:CI:2:ARG:HH21	6:CI:69:GLU:HG3	1.59	0.66
6:CI:35:ALA:HB2	6:CI:67:MET:HE3	1.76	0.66
7:CJ:70:LYS:HD3	7:CJ:96:GLN:HB3	1.77	0.66
13:AP:105:THR:OG1	13:AP:106:ASN:N	2.27	0.66
35:BP:66:ILE:CG1	35:BP:67:ARG:H	2.06	0.66
1:AA:1382:C:O4'	7:AJ:79:ARG:CZ	2.43	0.66
24:DA:1141:U:P	32:DM:25:ARG:HH12	2.18	0.66
22:AD:52:G:O6	22:AD:62:C:N4	2.27	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:975:A:H4'	1:AA:976:G:H5''	1.78	0.66
1:AA:86:U:O2'	1:AA:87:A:O4'	2.11	0.66
24:BA:998:C:N4	24:BA:1157:G:O6	2.17	0.66
24:BA:2261:C:H5'	24:BA:2388:A:H4'	1.76	0.66
1:AA:405:U:H5''	1:AA:495:A:H2	1.58	0.66
34:DO:85:LEU:HA	34:DO:88:LEU:HB3	1.77	0.66
40:D2:52:VAL:CG1	40:D2:55:ALA:HB3	2.25	0.66
22:CC:75:C:H3'	22:CC:76:A:C5'	2.24	0.66
1:CA:1304:G:N1	1:CA:1332:A:OP2	2.27	0.66
25:DB:56:G:H5'	29:DG:27:ASN:HD22	1.59	0.66
32:DM:42:TRP:O	39:D1:64:ARG:NH2	2.28	0.66
1:AA:642:A:N3	8:AK:113:SER:OG	2.27	0.66
1:CA:113:G:N3	1:CA:353:A:O2'	2.25	0.66
1:CA:113:G:H1'	1:CA:354:G:H5'	1.77	0.66
6:AI:87:ARG:HH11	6:AI:87:ARG:HG3	1.59	0.66
24:DA:1414:G:O6	24:DA:1587:A:N6	2.28	0.66
25:DB:114:G:O2'	37:DQ:50:SER:OG	2.13	0.66
4:CG:22:LYS:HE3	4:CG:26:CYS:HB2	1.76	0.66
24:BA:2788:C:O2'	24:BA:2809:A:N3	2.28	0.66
1:CA:1308:U:OP1	13:CP:101:GLN:NE2	2.28	0.66
13:CP:80:ARG:HD2	19:CV:66:MET:SD	2.35	0.66
43:BU:48:ALA:HB1	43:BU:50:ARG:HG2	1.76	0.66
24:DA:288:C:N3	24:DA:353:G:N1	2.34	0.66
22:AD:36:U:H2'	22:AD:37:A:H8	1.60	0.66
24:BA:288:C:H2'	24:BA:289:A:H8	1.60	0.66
8:AK:8:ASP:OD1	8:AK:12:ARG:NH1	2.28	0.66
15:AR:16:ALA:HB1	15:AR:21:ASP:HB3	1.76	0.66
1:AA:598:U:H4'	8:AK:94:TYR:CD2	2.30	0.66
9:CL:46:ALA:HB1	9:CL:77:ILE:HD11	1.77	0.66
30:BH:4:ILE:C	30:BH:4:ILE:CD1	2.63	0.66
40:D2:37:VAL:O	40:D2:51:VAL:HG11	1.95	0.66
35:BP:66:ILE:O	35:BP:67:ARG:HB2	1.96	0.66
19:AV:39:THR:HG22	19:AV:40:ILE:H	1.60	0.66
24:BA:2164:C:OP2	24:BA:2166:G:N2	2.29	0.66
34:DO:13:ASN:O	34:DO:15:ARG:N	2.26	0.66
1:AA:674:G:N2	1:AA:717:C:O2	2.28	0.66
24:BA:617:G:OP1	28:BF:40:GLN:NE2	2.28	0.66
1:CA:345:C:H1'	1:CA:346:G:C2	2.30	0.66
1:CA:1073:U:O2	2:CE:104:ASN:ND2	2.28	0.66
24:BA:1398:C:OP1	42:BT:53:LYS:NZ	2.29	0.66
8:AK:69:ARG:NH2	8:AK:73:ASP:O	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:159:GLU:O	30:BH:159:GLU:HG2	1.94	0.66
3:CF:34:LEU:HG	3:CF:38:ARG:HH21	1.60	0.66
12:AO:46:LYS:HE2	12:AO:48:PRO:HG2	1.72	0.66
1:CA:1325:C:OP2	21:CX:15:ARG:NH2	2.27	0.66
24:BA:1999:C:OP1	24:BA:2723:C:O2'	2.14	0.66
1:CA:988:G:O6	1:CA:1217:C:N4	2.18	0.66
1:CA:421:U:H5	3:CF:127:ARG:HH12	1.42	0.66
29:BG:112:PRO:HG3	49:B4:38:LYS:HD3	1.78	0.66
1:CA:522:C:H1'	1:CA:536:C:H5''	1.78	0.66
24:DA:2313:C:H4'	29:DG:91:ARG:HG3	1.77	0.66
1:AA:1242:C:N4	1:AA:1295:G:O6	2.18	0.66
26:DD:246:PRO:HD2	26:DD:255:LYS:HG2	1.76	0.66
24:BA:2293:C:H5''	37:BQ:89:ARG:HH12	1.58	0.66
34:BO:58:THR:OG1	53:B8:52:LYS:NZ	2.25	0.66
4:CG:33:MET:O	4:CG:35:ARG:N	2.29	0.66
24:BA:2787:C:O2'	27:BE:61:ARG:CB	2.43	0.66
27:DE:63:LEU:O	27:DE:64:LYS:HB2	1.95	0.66
3:CF:131:ARG:HH21	3:CF:164:ARG:HH22	1.40	0.66
1:AA:475:G:H2'	1:AA:476:G:O4'	1.96	0.66
1:CA:589:C:N3	1:CA:650:G:N2	2.40	0.66
24:DA:1725:G:O6	24:DA:1735:C:N4	2.16	0.66
24:DA:1184:G:OP2	48:DX:30:ARG:NH2	2.29	0.66
24:DA:1011:G:N2	24:DA:1150:C:N3	2.41	0.66
1:CA:664:G:H22	1:CA:741:G:H1	1.43	0.66
33:BN:1:MET:HB2	33:BN:32:TYR:HB3	1.77	0.66
1:AA:376:G:H1	1:AA:387:U:H3	1.44	0.66
4:CG:13:ARG:HG2	4:CG:32:ALA:CB	2.26	0.66
28:DF:28:ILE:HD12	28:DF:119:ARG:HE	1.61	0.66
28:DF:24:LEU:N	28:DF:24:LEU:HD22	2.11	0.66
28:DF:63:LYS:HE2	28:DF:67:GLN:HB2	1.77	0.66
1:CA:636:U:H2'	1:CA:637:G:H8	1.59	0.66
2:AE:46:LYS:HA	2:AE:49:GLU:HB2	1.77	0.66
5:AH:11:ILE:HD11	5:AH:31:LEU:HD13	1.76	0.66
44:BV:53:ILE:H	44:BV:71:VAL:HG13	1.61	0.66
51:D6:14:THR:HB	51:D6:20:ASN:C	2.17	0.66
1:CA:6:G:H4'	1:CA:298:A:H4'	1.76	0.66
28:DF:132:VAL:HG22	28:DF:133:ASN:H	1.61	0.66
9:AL:11:LYS:O	9:AL:13:ALA:N	2.26	0.66
24:BA:1434:A:H61	24:BA:1558:A:H62	1.43	0.66
24:DA:2816:C:O3'	36:D0:99:LYS:NZ	2.28	0.66
20:AW:75:ASN:N	20:AW:75:ASN:OD1	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DG:145:THR:O	29:DG:147:ASP:N	2.28	0.66
32:BM:47:ALA:HB2	32:BM:112:LEU:HD11	1.79	0.66
4:CG:22:LYS:CE	4:CG:26:CYS:HB2	2.26	0.65
12:AO:46:LYS:CG	12:AO:48:PRO:CG	2.72	0.65
34:BO:71:VAL:CG1	34:BO:72:PRO:HD2	2.09	0.65
25:BB:42:C:C6	29:BG:69:ALA:HB2	2.31	0.65
25:BB:43:C:OP2	49:B4:2:LYS:NZ	2.28	0.65
14:CQ:23:ARG:NH1	14:CQ:29:ARG:O	2.29	0.65
26:BD:35:LYS:HZ1	26:BD:104:TYR:HB2	1.61	0.65
39:D1:72:HIS:HD2	39:D1:110:VAL:HG21	1.59	0.65
34:DO:121:LYS:HB3	34:DO:123:LEU:HD22	1.76	0.65
8:AK:121:ASP:OD1	8:AK:121:ASP:N	2.29	0.65
24:DA:908:C:O2'	35:DP:71:ASP:OD2	2.12	0.65
26:DD:31:LYS:NZ	26:DD:94:LEU:HD11	2.10	0.65
4:AG:18:LYS:HG3	4:AG:33:MET:SD	2.36	0.65
27:DE:67:PHE:CE2	27:DE:69:LYS:NZ	2.64	0.65
27:DE:60:ASN:CB	27:DE:63:LEU:HD11	2.21	0.65
24:DA:2130:U:H2'	24:DA:2158:A:N1	2.10	0.65
51:B6:20:ASN:O	51:B6:21:TYR:HB2	1.97	0.65
4:CG:153:ARG:NH1	4:CG:181:MET:SD	2.69	0.65
3:CF:79:ARG:NH2	3:CF:81:GLY:O	2.25	0.65
1:AA:1202:G:O2'	14:AQ:27:CYS:O	2.14	0.65
24:BA:2154:G:H2'	24:BA:2155:G:H8	1.62	0.65
1:CA:1454:G:OP1	20:CW:39:LYS:NZ	2.29	0.65
30:DH:20:ALA:HB3	30:DH:23:ARG:HB2	1.78	0.65
3:AF:77:ILE:HA	3:AF:84:ILE:HB	1.76	0.65
24:BA:2346:A:H5''	24:BA:2383:G:H1'	1.78	0.65
24:BA:1071:G:H22	24:BA:1090:U:H3'	1.61	0.65
24:BA:2394:C:OP1	34:BO:63:PRO:HD2	1.95	0.65
44:DV:76:LEU:HA	44:DV:83:PRO:HA	1.77	0.65
2:CE:53:ARG:NH2	2:CE:198:ASP:O	2.29	0.65
30:BH:4:ILE:HD13	30:BH:6:ARG:H	1.62	0.65
24:BA:2632:A:HO2'	24:BA:2811:G:HO2'	1.40	0.65
24:DA:2134:A:H62	24:DA:2158:A:H8	1.45	0.65
1:CA:1301:U:O3'	13:CP:21:TYR:OH	2.12	0.65
1:CA:501:C:H2'	1:CA:502:G:H8	1.61	0.65
24:BA:528:A:O2'	24:BA:529:A:H5''	1.97	0.65
15:CR:70:LEU:HD11	15:CR:77:ARG:HG3	1.79	0.65
36:B0:75:LEU:O	36:B0:79:LEU:N	2.28	0.65
8:CK:11:THR:O	8:CK:15:ASN:ND2	2.28	0.65
10:CM:48:THR:HA	10:CM:62:HIS:HB3	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AG:72:GLU:OE1	4:AG:207:TYR:OH	2.13	0.65
1:AA:1003:G:H2'	1:AA:1004:A:O3'	1.96	0.65
30:DH:6:ARG:HH11	30:DH:6:ARG:HB2	1.60	0.65
1:AA:81:G:N2	1:AA:82:U:O2	2.30	0.65
5:CH:102:ALA:O	5:CH:107:ARG:NH1	2.28	0.65
24:BA:1557:C:OP2	24:BA:1558:A:O2'	2.13	0.65
2:CE:63:MET:HG3	2:CE:225:ALA:HB1	1.77	0.65
31:DK:143:SER:OG	31:DK:144:VAL:N	2.25	0.65
15:AR:14:GLU:OE2	15:AR:84:LYS:NZ	2.28	0.65
31:BK:78:THR:HG23	31:BK:141:LYS:HG3	1.79	0.65
24:BA:2807:G:N1	24:BA:2893:G:O6	2.16	0.65
1:CA:1255:G:OP1	10:CM:45:ARG:NH2	2.29	0.65
24:BA:1093:G:H1'	24:BA:1099:G:N1	2.12	0.65
24:BA:1899:G:HO2'	24:BA:1900:A:P	2.20	0.65
25:DB:56:G:H5'	29:DG:27:ASN:ND2	2.11	0.65
24:DA:1332:G:N2	24:DA:1609:A:HO2'	1.94	0.65
24:DA:1225:C:O2	40:D2:84:LYS:NZ	2.27	0.65
24:BA:2343:C:HO2'	24:BA:2373:G:HO2'	1.43	0.65
44:BV:4:ARG:HA	44:BV:58:VAL:HB	1.78	0.65
32:DM:103:VAL:HG11	32:DM:120:LEU:HD13	1.79	0.65
28:BF:32:LEU:HD13	28:BF:105:VAL:HG13	1.79	0.65
38:DR:93:ARG:HG2	38:DR:117:ASP:HB3	1.79	0.65
24:BA:2880:C:O2'	36:B0:90:ARG:NH1	2.28	0.65
34:BO:21:ARG:HA	34:BO:21:ARG:HE	1.62	0.65
24:DA:1359:A:H62	24:DA:1372:U:H3	1.43	0.65
27:BE:63:LEU:HD12	27:BE:63:LEU:C	2.16	0.65
24:DA:2133:G:H2'	24:DA:2157:G:H1	1.62	0.65
49:D4:13:ARG:HG2	49:D4:22:ILE:HG23	1.79	0.65
28:DF:132:VAL:O	28:DF:134:GLY:N	2.24	0.65
5:AH:101:ILE:O	5:AH:120:THR:OG1	2.15	0.65
6:AI:41:GLU:OE2	18:AU:35:ARG:NH2	2.29	0.65
2:AE:101:MET:HA	2:AE:108:ILE:HG13	1.79	0.65
24:DA:2210:G:H3'	24:DA:2211:G:C5	2.31	0.65
24:BA:1227:A:OP1	40:B2:84:LYS:NZ	2.27	0.65
4:CG:23:GLY:HA3	4:CG:112:VAL:HG21	1.79	0.65
27:DE:71:GLY:O	27:DE:73:GLU:N	2.30	0.65
21:CX:6:ARG:HH21	21:CX:15:ARG:NH2	1.91	0.65
24:BA:1055:G:O2'	24:BA:1085:A:N1	2.23	0.65
24:DA:2290:G:H1	24:DA:2342:C:H42	1.44	0.65
53:B8:35:GLN:O	53:B8:36:LYS:C	2.34	0.65
31:BK:110:ASP:N	31:BK:130:TYR:OH	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2817:G:P	36:D0:99:LYS:HZ3	2.20	0.65
29:DG:120:LEU:HB2	29:DG:180:PHE:HD1	1.61	0.65
1:AA:143:A:H2	1:AA:220:G:H1	1.43	0.65
29:BG:16:ARG:O	29:BG:20:ILE:HG13	1.97	0.65
30:DH:89:ILE:HD12	30:DH:129:THR:HB	1.79	0.65
5:CH:10:MET:HA	5:CH:32:VAL:HG22	1.78	0.65
24:BA:1111:A:O2'	30:BH:2:SER:HA	1.95	0.65
24:DA:2287:A:N6	24:DA:2344:U:H3	1.93	0.65
34:DO:49:ARG:O	34:DO:49:ARG:CG	2.30	0.65
49:D4:39:CYS:O	49:D4:40:HIS:HB2	1.96	0.65
30:DH:86:GLU:HG3	30:DH:132:ARG:HB3	1.77	0.65
14:CQ:27:CYS:O	14:CQ:29:ARG:NH1	2.29	0.65
4:AG:27:TYR:OH	6:CI:15:ASP:OD2	2.15	0.65
28:BF:133:ASN:O	28:BF:135:LYS:N	2.27	0.65
32:DM:15:LEU:HD23	32:DM:134:ARG:HG3	1.79	0.65
5:AH:137:GLU:OE1	5:AH:141:GLN:NE2	2.27	0.65
44:BV:170:THR:O	44:BV:172:ALA:N	2.27	0.65
45:B3:24:LYS:O	45:B3:25:ARG:NH1	2.29	0.65
24:DA:1434:A:H61	24:DA:1558:A:H62	1.44	0.65
24:DA:1467:C:H42	24:DA:1525:G:H1	1.44	0.65
7:CJ:68:ASN:ND2	7:CJ:127:ALA:O	2.30	0.65
1:AA:1503:A:H5'	1:AA:1531:A:H1'	1.77	0.65
4:AG:28:SER:O	4:AG:30:LYS:N	2.30	0.65
49:D4:40:HIS:N	49:D4:41:PRO:HD2	2.11	0.65
19:CV:72:GLY:HA2	19:CV:75:ALA:HB3	1.78	0.65
39:B1:92:ARG:C	39:B1:94:ASN:H	2.00	0.65
2:AE:187:LEU:HA	2:AE:201:ILE:HB	1.79	0.65
10:CM:34:VAL:HG22	10:CM:74:ILE:HG12	1.78	0.65
32:BM:131:GLN:N	32:BM:131:GLN:OE1	2.30	0.64
1:AA:686:U:O4	1:AA:703:G:H1'	1.97	0.64
24:BA:2286:A:H2'	51:B6:31:PRO:HD3	1.79	0.64
26:BD:35:LYS:HD2	26:BD:104:TYR:CD2	2.31	0.64
24:BA:729:G:OP2	26:BD:13:ARG:NH1	2.30	0.64
41:DS:88:ARG:NH1	41:DS:94:ASP:OD2	2.24	0.64
38:DR:26:ASP:OD1	38:DR:120:ARG:NH2	2.27	0.64
29:BG:56:ALA:HB2	29:BG:153:ARG:HE	1.62	0.64
25:DB:33:G:OP2	29:DG:96:ARG:NH2	2.30	0.64
24:BA:2612:C:H5'	50:B5:3:LYS:HD3	1.79	0.64
30:DH:7:LEU:HD12	30:DH:8:PRO:HD3	1.79	0.64
26:BD:27:THR:HA	26:BD:83:GLU:HG2	1.79	0.64
26:DD:31:LYS:HE3	26:DD:33:LEU:HD12	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BK:9:LEU:HD21	31:BK:35:LEU:HD12	1.79	0.64
24:DA:2485:G:H5''	35:DP:46:GLN:HE21	1.62	0.64
1:CA:376:G:H1	1:CA:387:U:H3	1.45	0.64
1:AA:517:G:N1	1:AA:533:A:OP2	2.30	0.64
29:BG:65:GLY:HA2	49:B4:7:PRO:HG2	1.80	0.64
1:CA:407:G:OP1	4:CG:115:ARG:NH2	2.30	0.64
43:BU:81:LYS:HB3	43:BU:97:ARG:HD3	1.77	0.64
9:AL:10:ARG:HE	9:AL:105:ASP:HB3	1.62	0.64
1:CA:1124:G:O2'	1:CA:1145:C:N4	2.30	0.64
1:CA:1330:U:H4'	13:CP:23:TYR:CE1	2.31	0.64
1:CA:956:U:O3'	19:CV:81:ARG:NH2	2.29	0.64
24:DA:1899:G:N2	24:DA:1902:C:H41	1.95	0.64
24:BA:1525:G:H2'	24:BA:1526:G:C8	2.32	0.64
1:AA:1348:U:H3	1:AA:1374:A:H2	1.46	0.64
10:CM:79:ARG:O	10:CM:83:GLU:N	2.31	0.64
25:BB:21:G:H1	25:BB:62:C:H42	1.45	0.64
40:D2:62:LEU:HD11	40:D2:95:LEU:HD12	1.80	0.64
24:BA:860:U:H5	24:BA:917:A:C2	2.13	0.64
24:DA:2059:A:H5'	24:DA:2060:A:OP2	1.96	0.64
13:AP:3:ARG:HD2	49:B4:34:GLU:HB2	1.79	0.64
24:DA:1300:U:H4'	24:DA:1301:A:H5'	1.78	0.64
4:CG:13:ARG:HG2	4:CG:32:ALA:HB1	1.79	0.64
1:AA:1025:U:O2'	1:AA:1026:G:OP2	2.15	0.64
24:BA:1537:C:H2'	24:BA:1538:G:C8	2.32	0.64
1:AA:153:C:H42	1:AA:168:G:H1	1.45	0.64
34:BO:84:ASN:ND2	34:BO:117:GLU:OE2	2.31	0.64
24:BA:50:U:H3'	24:BA:51:G:H5'	1.79	0.64
27:DE:131:ALA:HB1	27:DE:135:HIS:CE1	2.33	0.64
27:DE:11:MET:CG	27:DE:24:THR:CG2	2.63	0.64
24:DA:2392:A:H2	24:DA:2424:C:H42	1.43	0.64
1:AA:1145:C:H4'	1:AA:1146:A:H8	1.61	0.64
1:CA:1145:C:H4'	1:CA:1146:A:H5'	1.80	0.64
24:BA:1070:A:O2'	24:BA:1097:U:O5'	2.15	0.64
24:DA:2415:G:O3'	34:DO:66:GLY:HA3	1.97	0.64
24:BA:410:G:O6	24:BA:417:C:N4	2.29	0.64
8:AK:20:TYR:HE2	8:AK:75:ARG:HD2	1.60	0.64
4:CG:23:GLY:O	4:CG:25:ARG:N	2.30	0.64
24:BA:2371:G:H21	51:B6:46:HIS:HE1	1.44	0.64
24:BA:2111:C:N4	24:BA:2147:G:H21	1.94	0.64
24:BA:654(B):C:N3	24:BA:654(S):G:N1	2.43	0.64
37:DQ:19:LYS:O	37:DQ:21:THR:N	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1075:C:H5''	2:CE:179:LYS:NZ	2.11	0.64
40:D2:68:LYS:HD2	40:D2:69:LYS:H	1.62	0.64
1:AA:129(A):G:O2'	1:AA:189:U:OP1	2.14	0.64
24:BA:2849:U:H4'	24:BA:2868:A:C2	2.33	0.64
24:BA:1014:U:H2'	24:BA:1015:G:H5''	1.80	0.64
24:DA:859:G:O2'	24:DA:916:G:O6	2.15	0.64
38:DR:3:ARG:HG2	38:DR:6:LEU:HB2	1.79	0.64
24:BA:956:G:OP2	35:BP:14:ARG:NH2	2.31	0.64
47:BW:22:GLU:OE2	47:BW:68:ARG:NH2	2.30	0.64
40:D2:49:THR:O	40:D2:50:PRO:C	2.36	0.64
4:CG:22:LYS:NZ	4:CG:26:CYS:CA	2.61	0.64
26:BD:43:ARG:HD2	26:BD:44:ASN:OD1	1.98	0.64
1:CA:1032(B):G:H5'	1:CA:1033:G:OP2	1.98	0.64
3:CF:47:LEU:HD12	3:CF:52:LEU:HB3	1.80	0.64
24:BA:1535:U:OP2	24:BA:1537:C:N4	2.25	0.64
24:BA:2306:C:H3'	24:BA:2307:G:H5'	1.79	0.64
24:BA:2474:C:H5''	24:BA:2475:C:H5	1.62	0.64
7:AJ:143:ARG:NH1	22:AD:41:C:O3'	2.27	0.64
25:DB:44:G:OP1	29:DG:98:ARG:NH2	2.30	0.64
29:BG:113:ARG:HD2	49:B4:33:VAL:HG13	1.79	0.64
28:BF:64:ILE:HD11	28:BF:78:ILE:HG23	1.80	0.64
1:CA:260:G:OP1	20:CW:80:ARG:NH2	2.30	0.64
1:CA:1095:U:P	1:CA:1108:G:H1	2.21	0.64
44:BV:147:GLY:H	44:BV:174:VAL:HB	1.62	0.64
24:DA:1394:U:O2	42:DT:16:LYS:NZ	2.29	0.64
1:CA:89:U:O2'	1:CA:90:C:O5'	2.14	0.64
4:AG:13:ARG:O	4:AG:15:GLU:N	2.30	0.64
35:BP:66:ILE:O	35:BP:67:ARG:HG3	1.97	0.64
51:D6:14:THR:OG1	51:D6:15:GLU:N	2.30	0.64
27:DE:63:LEU:HB3	27:DE:73:GLU:OE1	1.98	0.64
24:DA:2469:A:O2'	35:DP:56:ARG:NE	2.31	0.64
24:BA:861:A:N3	25:BB:79:C:O2'	2.30	0.64
37:DQ:88:ASP:OD1	37:DQ:90:GLY:N	2.19	0.64
15:AR:76:GLU:OE2	15:AR:79:ARG:NH2	2.31	0.64
40:D2:32:THR:HG22	40:D2:60:GLU:HB3	1.79	0.64
15:AR:87:ILE:HG22	15:AR:88:ARG:HG2	1.79	0.64
18:CU:37:VAL:HG11	18:CU:78:LEU:HB3	1.79	0.64
38:DR:107:ASP:OD1	38:DR:107:ASP:N	2.29	0.64
28:DF:107:LYS:NZ	28:DF:205:ARG:O	2.30	0.64
12:AO:46:LYS:CA	12:AO:48:PRO:HD2	2.26	0.64
4:AG:28:SER:OG	4:AG:29:PRO:CD	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DU:55:TYR:O	43:DU:56:PRO:C	2.36	0.64
24:BA:1593:G:H2'	24:BA:1594:G:C8	2.33	0.64
9:AL:41:VAL:O	9:AL:43:ALA:N	2.31	0.64
24:DA:34:C:O2'	24:DA:35:G:OP2	2.14	0.64
1:AA:160:A:N6	1:AA:347:G:O2'	2.31	0.64
1:CA:1025:U:H2'	1:CA:1026:G:C8	2.33	0.64
1:AA:992:U:H4'	1:AA:993:G:O5'	1.98	0.64
40:D2:1:MET:HG3	40:D2:43:GLU:H	1.63	0.64
30:BH:152:ARG:NH1	30:BH:153:LYS:O	2.30	0.64
22:CD:12:G:O2'	22:CD:13:C:OP1	2.14	0.64
1:AA:674:G:H2'	1:AA:675:A:H8	1.62	0.64
30:DH:129:THR:OG1	30:DH:130:ARG:N	2.27	0.64
10:CM:50:ILE:HG22	10:CM:52:GLY:H	1.63	0.64
27:DE:10:GLY:O	27:DE:24:THR:O	2.16	0.63
26:DD:69:ARG:O	26:DD:71:ASP:N	2.31	0.63
43:BU:81:LYS:HB3	43:BU:82:PRO:CD	2.27	0.63
51:D6:17:LYS:O	51:D6:19:ARG:N	2.30	0.63
29:DG:112:PRO:HB2	49:D4:35:VAL:HG11	1.80	0.63
3:CF:164:ARG:CZ	3:CF:166:GLU:OE1	2.46	0.63
24:BA:1091:G:N2	24:BA:1100:C:O2	2.19	0.63
1:CA:1202:G:HO2'	14:CQ:27:CYS:HG	1.34	0.63
1:AA:982:U:H5''	14:AQ:6:LEU:HD11	1.80	0.63
1:CA:1075:C:OP1	2:CE:179:LYS:NZ	2.31	0.63
1:CA:1186:G:O3'	9:CL:113:LYS:NZ	2.32	0.63
1:CA:243:A:H4'	1:CA:244:U:O5'	1.97	0.63
24:DA:851:U:OP1	48:DX:49:LYS:NZ	2.26	0.63
7:CJ:79:ARG:NH2	22:CD:34:C:OP2	2.22	0.63
44:BV:13:GLU:HB3	44:BV:18:LEU:HD11	1.79	0.63
11:AN:33:THR:HA	11:AN:39:PRO:HA	1.79	0.63
27:BE:174:ASP:HB3	27:BE:183:LEU:HD13	1.80	0.63
24:DA:523:C:O2	24:DA:553:U:O2'	2.15	0.63
24:DA:39:C:O2	28:DF:46:ARG:NH2	2.32	0.63
42:BT:67:GLY:O	42:BT:69:TYR:N	2.24	0.63
24:DA:1007:C:OP1	32:DM:35:ARG:NH1	2.30	0.63
7:CJ:126:ASP:O	7:CJ:132:GLY:N	2.31	0.63
19:CV:22:LEU:HG	19:CV:27:GLU:HA	1.79	0.63
24:BA:1019:U:OP1	24:BA:1035:U:O2'	2.10	0.63
34:DO:60:MET:C	34:DO:61:ARG:CG	2.66	0.63
9:AL:18:PHE:HD2	9:AL:62:TYR:HD2	1.46	0.63
1:CA:1004:A:H5''	1:CA:1024:G:H2'	1.79	0.63
22:AD:18:G:H22	22:AD:55:U:H1'	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1224:G:O2'	1:AA:1322:C:OP2	2.16	0.63
24:BA:2747:G:O6	24:BA:2755:C:H5''	1.98	0.63
1:CA:1290:G:H5'	7:CJ:35:LYS:HE2	1.79	0.63
1:CA:1249:C:O2'	9:CL:73:GLN:OE1	2.14	0.63
24:DA:995:C:O2	32:DM:3:THR:OG1	2.16	0.63
30:DH:33:LEU:HD12	30:DH:75:ALA:HA	1.79	0.63
47:DW:42:GLY:O	47:DW:44:LEU:N	2.28	0.63
27:DE:23:VAL:CG2	27:DE:183:LEU:HG	2.26	0.63
26:DD:35:LYS:HG3	26:DD:64:ILE:H	1.61	0.63
4:CG:18:LYS:HE3	4:CG:20:TYR:HE1	1.63	0.63
34:DO:61:ARG:O	34:DO:62:LEU:CB	2.32	0.63
35:BP:64:ILE:HG22	35:BP:65:PHE:H	1.63	0.63
24:BA:2111:C:N3	24:BA:2118:U:O2'	2.26	0.63
19:AV:36:ARG:NH2	19:AV:75:ALA:O	2.28	0.63
32:DM:24:GLY:O	32:DM:28:THR:HG22	1.99	0.63
1:CA:376:G:H5''	16:CS:5:ARG:HD3	1.80	0.63
16:AS:57:ARG:HH21	16:AS:79:VAL:HA	1.62	0.63
26:BD:147:LEU:HD22	26:BD:155:LEU:HD11	1.80	0.63
1:CA:280:C:O4'	17:CT:38:ARG:NH1	2.31	0.63
17:AT:57:VAL:HG12	17:AT:76:LEU:HA	1.79	0.63
6:AI:28:ARG:O	6:AI:32:ASN:ND2	2.32	0.63
24:DA:1593:G:H2'	24:DA:1594:G:C8	2.34	0.63
1:CA:971:G:N2	1:CA:1363:A:OP2	2.30	0.63
51:D6:47:THR:O	51:D6:48:VAL:O	2.16	0.63
22:AD:51:C:N4	22:AD:63:G:O6	2.27	0.63
24:BA:1170:G:N2	24:BA:1180:C:N3	2.45	0.63
24:BA:270(O):U:O2	31:BK:52:ARG:NH2	2.30	0.63
24:DA:1817:G:OP1	26:DD:88:ARG:NH2	2.30	0.63
37:BQ:11:LYS:HD3	37:BQ:91:PRO:HD3	1.79	0.63
37:DQ:23:ARG:NH2	37:DQ:84:GLN:OE1	2.31	0.63
1:AA:1137:C:O2	1:AA:1138:G:N1	2.32	0.63
1:AA:1329:A:H5'	13:AP:29:ARG:HD2	1.79	0.63
7:CJ:106:GLN:O	7:CJ:110:GLN:NE2	2.27	0.63
1:AA:631:G:H2'	1:AA:632:A:H8	1.62	0.63
24:DA:892:G:N7	24:DA:893:C:N4	2.46	0.63
24:DA:1075:C:OP2	24:DA:1077:A:N6	2.32	0.63
29:BG:67:LYS:HG2	49:B4:5:ILE:HG13	1.79	0.63
3:CF:71:ALA:HB2	3:CF:106:VAL:HB	1.80	0.63
1:AA:69:G:H3'	1:AA:73:G:H21	1.64	0.63
2:CE:30:ARG:HH21	2:CE:194:PRO:HG2	1.64	0.63
1:AA:1277:C:HO2'	1:AA:1279:A:H8	1.43	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AF:21:ARG:NH2	3:AF:56:ASP:OD1	2.31	0.63
28:BF:122:LYS:NZ	28:BF:152:GLU:OE2	2.27	0.63
1:AA:933:G:N7	7:AJ:3:ARG:NH1	2.46	0.63
1:AA:1016:A:H5'	14:AQ:15:LYS:HZ2	1.64	0.63
1:AA:757:U:H2'	1:AA:758:G:O4'	1.99	0.63
1:CA:545:C:OP1	4:CG:61:LYS:NZ	2.31	0.63
30:BH:83:TYR:OH	30:BH:133:VAL:HB	1.99	0.63
8:CK:109:ILE:HG12	8:CK:137:VAL:HG23	1.80	0.63
13:AP:67:GLU:CD	13:AP:68:GLY:H	2.02	0.63
1:CA:967:C:O2'	9:CL:125:TYR:OH	2.17	0.63
24:DA:389:G:H22	34:DO:71:VAL:HG12	1.63	0.63
12:AO:46:LYS:CB	12:AO:48:PRO:HD2	2.29	0.63
51:D6:15:GLU:CG	51:D6:47:THR:CG2	2.75	0.63
30:DH:81:GLU:HG2	30:DH:83:TYR:HB2	1.80	0.63
29:DG:67:LYS:H	49:D4:6:HIS:CD2	2.17	0.63
1:CA:1180:A:H5'	9:CL:103:THR:HG23	1.80	0.63
3:CF:8:ILE:HG23	3:CF:16:ARG:HD3	1.81	0.63
1:AA:1449:C:O2'	1:AA:1451:A:N6	2.32	0.63
24:DA:2415:G:H4'	34:DO:67:MET:N	2.13	0.63
37:DQ:15:ARG:HH12	37:DQ:90:GLY:HA2	1.63	0.63
3:AF:89:GLU:HG3	3:AF:93:LYS:HD2	1.80	0.63
24:BA:280:C:N3	24:BA:360:G:N1	2.38	0.63
3:CF:181:ASN:HD21	3:CF:204:LEU:HB2	1.64	0.63
43:DU:88:LYS:O	43:DU:90:LEU:N	2.32	0.63
24:DA:635:C:O2'	24:DA:639:U:OP1	2.17	0.63
38:DR:36:GLU:OE1	38:DR:41:ARG:NH1	2.32	0.63
1:CA:1512:U:H2'	1:CA:1513:A:C8	2.34	0.63
28:BF:101:LEU:O	28:BF:106:ARG:NH1	2.32	0.63
27:BE:61:ARG:CD	27:BE:61:ARG:N	2.61	0.63
34:DO:52:GLU:OE1	34:DO:55:ARG:N	2.21	0.63
30:DH:4:ILE:HG21	30:DH:6:ARG:NH2	2.13	0.63
24:BA:279:C:H42	24:BA:361:G:H1	1.45	0.63
24:BA:907:U:O2'	35:BP:101:ARG:NH2	2.32	0.63
35:DP:19:GLY:H	35:DP:98:LYS:NZ	1.95	0.63
24:BA:571:A:O2'	40:B2:78:LYS:NZ	2.32	0.63
9:CL:128:ARG:NH2	22:CC:32:C:OP2	2.23	0.63
24:BA:1019:U:H3	24:BA:1142(A):A:H62	1.46	0.63
12:AO:47:LYS:HG2	12:AO:48:PRO:HD3	1.81	0.63
43:BU:81:LYS:CG	43:BU:97:ARG:NE	2.61	0.63
24:BA:654(N):G:H2'	24:BA:654(O):G:O4'	1.99	0.63
6:AI:20:ALA:HA	6:AI:23:LYS:HZ3	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CM:61:GLU:OE2	14:CQ:45:ARG:NH1	2.31	0.63
9:CL:128:ARG:NH1	22:CC:31:G:OP2	2.26	0.63
27:DE:120:TRP:CD1	27:DE:155:LYS:HB3	2.33	0.63
24:DA:1266:G:O5'	41:DS:15:ARG:NH2	2.32	0.63
1:AA:1455:G:H5'	20:AW:32:ALA:HB2	1.81	0.63
5:CH:127:ASN:OD1	5:CH:130:ASN:ND2	2.31	0.63
24:DA:2306:C:N4	29:DG:42:GLY:O	2.31	0.63
24:BA:2387:U:OP1	45:B3:55:ARG:NH1	2.31	0.63
22:CD:22:G:P	22:CD:46:G:H1	2.21	0.63
24:BA:1061:U:O2'	24:BA:1070:A:O4'	2.13	0.63
24:BA:2114:A:N6	24:BA:2118:U:OP2	2.24	0.63
3:CF:47:LEU:HD13	3:CF:50:ALA:HB3	1.81	0.63
1:AA:601:C:H2'	1:AA:602:A:C8	2.34	0.63
48:DX:3:ARG:NH1	48:DX:38:GLU:OE2	2.32	0.63
4:AG:128:VAL:HG22	4:AG:146:ILE:HG23	1.81	0.63
6:CI:91:VAL:HG11	18:CU:72:ARG:NH1	2.13	0.63
31:BK:133:HIS:HB2	31:BK:134:PRO:HD2	1.80	0.63
24:BA:2284:C:H41	51:B6:25:LYS:NZ	1.97	0.63
12:AO:46:LYS:CE	12:AO:48:PRO:CG	2.40	0.62
24:DA:1062:G:N2	24:DA:1076:C:H42	1.96	0.62
1:AA:1504:G:P	1:AA:1504:G:H3'	2.39	0.62
29:BG:112:PRO:HB3	49:B4:37:SER:HB2	1.81	0.62
37:DQ:109:GLY:O	37:DQ:111:GLU:N	2.32	0.62
20:CW:89:ARG:NH1	20:CW:105:SER:O	2.32	0.62
24:DA:96:G:H4'	47:DW:48:HIS:CD2	2.34	0.62
2:CE:84:GLU:HA	2:CE:87:ARG:HD2	1.81	0.62
44:DV:100:VAL:HG11	44:DV:134:PRO:HG2	1.81	0.62
1:CA:377:G:OP1	16:CS:3:LYS:HD2	1.98	0.62
34:DO:125:VAL:HG13	34:DO:144:GLU:HB3	1.81	0.62
24:BA:2096:U:H3	24:BA:2193:G:H1	1.47	0.62
1:AA:1131:G:OP1	9:AL:20:ARG:NH2	2.31	0.62
24:BA:747:U:H5	50:B5:3:LYS:HZ2	1.47	0.62
22:AD:17:C:H41	22:AD:18:G:H5'	1.64	0.62
3:CF:75:VAL:HG12	3:CF:83:ARG:HH21	1.64	0.62
30:DH:158:HIS:O	30:DH:158:HIS:ND1	2.32	0.62
34:BO:91:PHE:O	34:BO:121:LYS:NZ	2.32	0.62
2:CE:204:ASN:HB2	2:CE:210:SER:HB3	1.81	0.62
27:BE:197:ILE:HD11	27:BE:199:ARG:HE	1.63	0.62
44:DV:129:SER:OG	44:DV:132:ASN:OD1	2.17	0.62
5:AH:60:TYR:O	5:AH:64:ARG:NH2	2.32	0.62
24:DA:326:G:H1	24:DA:336:C:H42	1.46	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:B0:74:LYS:O	36:B0:76:VAL:N	2.32	0.62
20:CW:10:LEU:HD21	20:CW:12:ALA:HB3	1.81	0.62
9:CL:95:LYS:NZ	9:CL:95:LYS:O	2.31	0.62
24:BA:2795:G:H3'	24:BA:2797:U:C5'	2.29	0.62
27:DE:51:PHE:O	27:DE:74:PRO:HB2	1.99	0.62
24:BA:2791:C:H2'	24:BA:2792:G:H8	1.64	0.62
29:DG:108:ASN:HB3	49:D4:38:LYS:CD	2.29	0.62
24:DA:1093:G:H1	24:DA:1097:U:P	2.22	0.62
1:CA:1220:G:O2'	19:CV:52:TYR:O	2.16	0.62
24:DA:2658:C:N3	24:DA:2663:G:N1	2.34	0.62
1:AA:74:C:H42	1:AA:96:G:H1	1.46	0.62
24:DA:1542:G:O6	24:DA:1543:A:N6	2.32	0.62
24:DA:1534:G:H2'	24:DA:1537:C:H42	1.63	0.62
13:AP:3:ARG:HG2	13:AP:7:VAL:HG13	1.79	0.62
6:AI:97:PHE:HB2	18:AU:32:ARG:HE	1.64	0.62
18:AU:47:THR:O	18:AU:83:GLU:N	2.33	0.62
1:CA:1348:U:H3	1:CA:1374:A:H2	1.46	0.62
4:AG:196:LEU:HB3	4:AG:198:VAL:HG23	1.81	0.62
33:DN:68:GLU:HB3	33:DN:78:ARG:NH1	2.15	0.62
1:AA:244:U:H4'	1:AA:245:C:O5'	1.97	0.62
35:BP:66:ILE:CG1	35:BP:67:ARG:N	2.62	0.62
49:D4:43:TYR:O	49:D4:45:GLY:N	2.32	0.62
24:DA:1061:U:H4'	24:DA:1070:A:H1'	1.81	0.62
19:CV:10:PHE:O	19:CV:39:THR:OG1	2.15	0.62
19:AV:68:GLY:H	49:B4:55:ARG:NH2	1.93	0.62
4:CG:101:LEU:HD23	4:CG:121:VAL:HG11	1.81	0.62
39:B1:92:ARG:HD2	40:B2:11:GLN:HB2	1.79	0.62
1:CA:17:U:H2'	1:CA:18:C:C6	2.34	0.62
13:CP:108:ARG:NH1	13:CP:112:GLY:O	2.33	0.62
4:CG:72:GLU:OE1	4:CG:207:TYR:OH	2.14	0.62
20:AW:10:LEU:HG	20:AW:12:ALA:H	1.64	0.62
24:BA:2684:U:O2'	33:BN:68:GLU:HG3	1.99	0.62
24:DA:2135:A:N3	24:DA:2159:G:O2'	2.32	0.62
24:DA:1064:C:H2'	24:DA:1065:U:H5	1.64	0.62
1:CA:989:C:HO2'	1:CA:1016:A:H2	1.45	0.62
1:AA:1073:U:O2'	2:AE:104:ASN:OD1	2.16	0.62
24:DA:1568:G:OP2	26:DD:63:ARG:NH2	2.30	0.62
10:CM:28:ARG:HH21	10:CM:34:VAL:HB	1.64	0.62
34:DO:30:THR:HG21	34:DO:35:HIS:H	1.64	0.62
4:CG:53:ASP:O	4:CG:57:ARG:NH1	2.32	0.62
2:AE:8:LYS:HZ1	2:AE:11:LEU:HD13	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2126:A:N6	24:DA:2163:C:O2	2.31	0.62
27:DE:47:VAL:HG22	27:DE:48:GLN:H	1.63	0.62
9:AL:10:ARG:NH2	9:AL:105:ASP:OD2	2.26	0.62
44:DV:29:TYR:HE1	44:DV:87:ASP:HB3	1.64	0.62
7:AJ:34:GLY:O	7:AJ:36:LYS:N	2.33	0.62
24:DA:1464:C:HO2'	24:DA:1528:A:H8	1.45	0.62
24:BA:1026:U:H1'	24:BA:1027:A:O5'	1.98	0.62
12:AO:55:VAL:HG12	12:AO:69:TYR:HA	1.80	0.62
7:CJ:62:PHE:HA	7:CJ:124:LEU:HD22	1.80	0.62
1:AA:1421:G:O6	1:AA:1479:C:N4	2.29	0.62
27:DE:101:ARG:NH1	27:DE:171:GLU:HB2	2.13	0.62
4:CG:33:MET:HE1	4:CG:37:PRO:HB2	1.80	0.62
43:BU:81:LYS:CA	43:BU:81:LYS:CE	2.57	0.62
28:DF:63:LYS:NZ	28:DF:67:GLN:NE2	2.46	0.62
1:CA:947:G:O3'	13:CP:109:THR:OG1	2.17	0.62
2:AE:100:GLY:O	2:AE:104:ASN:N	2.22	0.62
24:DA:783:A:H8	24:DA:784:A:H4'	1.64	0.62
26:DD:63:ARG:H	26:DD:87:ASN:HD21	1.48	0.62
1:AA:179:A:N6	1:AA:196:A:OP2	2.32	0.62
2:CE:187:LEU:HA	2:CE:201:ILE:HB	1.82	0.62
24:DA:1183:G:O3'	48:DX:29:ARG:NH2	2.33	0.62
15:AR:82:ILE:O	15:AR:86:GLY:N	2.26	0.62
14:AQ:3:ARG:HH11	14:AQ:3:ARG:HA	1.65	0.62
4:CG:33:MET:SD	4:CG:37:PRO:CA	2.85	0.62
34:DO:60:MET:O	34:DO:61:ARG:CB	2.48	0.62
27:BE:60:ASN:CG	27:BE:62:PRO:HD2	2.20	0.62
1:CA:1259:C:O2'	1:CA:1283:G:N3	2.33	0.62
13:CP:97:PRO:HB2	13:CP:101:GLN:HG3	1.80	0.62
24:BA:996:A:OP2	39:B1:92:ARG:NH2	2.33	0.62
1:CA:501:C:H2'	1:CA:502:G:C8	2.34	0.62
24:BA:274:G:O2'	24:BA:275:G:O4'	2.18	0.62
1:AA:827:U:H5	1:AA:872:A:N1	1.98	0.62
39:B1:11:ARG:O	39:B1:15:LYS:HG3	1.99	0.62
26:DD:146:GLU:HB2	26:DD:189:CYS:HB3	1.81	0.62
50:D5:45:VAL:HG13	50:D5:50:GLY:HA2	1.80	0.62
3:AF:14:ILE:O	3:AF:16:ARG:N	2.27	0.62
41:BS:79:GLY:HA3	41:BS:100:THR:HG22	1.82	0.62
41:BS:73:ALA:HB3	41:BS:106:ILE:HG23	1.80	0.62
24:DA:153:C:OP2	46:DZ:88:LYS:NZ	2.20	0.62
28:DF:143:ALA:HB1	28:DF:148:LEU:HB2	1.80	0.62
7:CJ:115:ARG:HB2	7:CJ:118:VAL:HG12	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:18:ASP:HB3	38:DR:82:LEU:HD11	1.80	0.62
34:BO:58:THR:HB	34:BO:61:ARG:HH12	1.64	0.62
1:CA:1079:G:O3'	5:CH:14:ARG:NH2	2.33	0.62
24:BA:746:A:C5	24:BA:2611:U:H5''	2.34	0.62
1:AA:964:A:N3	1:AA:969:A:O2'	2.32	0.62
24:BA:280:C:N4	24:BA:360:G:O6	2.17	0.62
40:D2:2:PHE:H	40:D2:42:GLY:HA3	1.65	0.62
1:CA:1352:C:OP1	21:CX:3:LYS:NZ	2.27	0.62
16:CS:21:VAL:HG22	16:CS:33:ILE:HD12	1.81	0.62
28:BF:47:GLY:HA3	28:BF:95:ARG:O	2.00	0.62
50:B5:41:PRO:O	50:B5:44:THR:OG1	2.17	0.62
41:BS:13:SER:HB3	41:BS:16:LYS:HE2	1.80	0.62
30:BH:4:ILE:CD1	30:BH:6:ARG:H	2.13	0.62
40:D2:45:THR:O	40:D2:47:VAL:HG12	1.99	0.62
1:AA:1132:C:H2'	1:AA:1133:G:C8	2.35	0.62
24:BA:2873:A:C2	36:B0:5:LYS:CA	2.83	0.62
24:BA:2111:C:H42	24:BA:2147:G:H21	1.47	0.62
1:CA:1317:C:N3	19:CV:37:ARG:NH1	2.47	0.62
1:AA:78:G:H3'	1:AA:79:G:H8	1.65	0.62
13:CP:13:LYS:HA	13:CP:44:ARG:HH11	1.64	0.62
26:BD:92:ILE:HD12	26:BD:104:TYR:CE1	2.34	0.62
24:DA:1139:G:HO2'	24:DA:1143:A:H62	1.48	0.62
24:BA:2306:C:H3'	24:BA:2307:G:C5'	2.30	0.62
37:DQ:26:LEU:HB3	37:DQ:87:PHE:HA	1.82	0.62
27:DE:28:ALA:HB3	27:DE:93:VAL:HG22	1.82	0.62
37:BQ:11:LYS:HD2	37:BQ:15:ARG:NH2	2.15	0.62
24:DA:2191:G:O2'	24:DA:2192:G:OP1	2.15	0.62
24:BA:2023:G:H5'	24:BA:2617:C:H4'	1.82	0.62
43:BU:54:LYS:H	43:BU:54:LYS:HD2	1.64	0.62
32:BM:114:ARG:O	32:BM:116:LEU:N	2.29	0.62
24:BA:517:C:OP1	50:B5:16:ARG:NH2	2.33	0.62
1:AA:1059:C:O3'	14:AQ:45:ARG:NH2	2.33	0.62
4:AG:9:CYS:O	4:AG:32:ALA:HB1	2.00	0.61
30:BH:92:ILE:HD13	30:BH:160:LYS:CE	2.29	0.61
28:DF:2:LYS:C	28:DF:24:LEU:HG	2.19	0.61
24:BA:1069:A:H2'	24:BA:1073:A:N7	2.14	0.61
2:CE:23:ARG:O	2:CE:23:ARG:NE	2.33	0.61
24:BA:2118:U:H3	24:BA:2148:G:H4'	1.64	0.61
25:DB:38:C:O4'	37:DQ:95:HIS:NE2	2.32	0.61
24:DA:1138:G:H21	32:DM:106:MET:HE3	1.65	0.61
4:CG:22:LYS:CD	4:CG:26:CYS:HB2	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:156:ALA:O	30:BH:157:TYR:HB2	2.00	0.61
19:CV:33:THR:CG2	19:CV:34:TRP:H	2.11	0.61
1:AA:591:U:H2'	1:AA:592:G:C8	2.35	0.61
34:BO:59:LEU:O	53:B8:13:ARG:NH1	2.33	0.61
9:AL:50:LEU:HD23	9:AL:85:LEU:HD22	1.83	0.61
24:DA:2228:G:OP1	26:DD:261:LYS:NZ	2.25	0.61
24:DA:1309:G:HO2'	24:DA:1611:C:HO2'	1.46	0.61
1:CA:390:C:O2'	16:CS:28:ARG:NH1	2.33	0.61
24:DA:1203:G:H3'	24:DA:1204:A:H5''	1.82	0.61
1:AA:677:U:H3	1:AA:713:G:H22	1.48	0.61
6:AI:30:LEU:HB3	6:AI:35:ALA:HB3	1.81	0.61
24:BA:2432:A:C4	46:BZ:33:LYS:HG2	2.35	0.61
30:BH:92:ILE:H	30:BH:92:ILE:HD12	1.64	0.61
51:D6:35:GLU:O	51:D6:37:ARG:NH1	2.34	0.61
24:DA:883:G:H1	24:DA:893:C:H42	1.46	0.61
3:CF:59:ARG:HE	3:CF:97:LYS:HE2	1.65	0.61
24:DA:2297:C:N3	24:DA:2321:G:N1	2.36	0.61
24:BA:654(I):C:O2'	24:BA:654(J):A:O4'	2.14	0.61
28:BF:133:ASN:ND2	28:BF:138:GLU:OE2	2.32	0.61
1:AA:160:A:H1'	1:AA:344:A:N7	2.14	0.61
3:AF:74:GLY:HA2	3:AF:77:ILE:HB	1.83	0.61
24:DA:2415:G:H4'	34:DO:67:MET:H	1.65	0.61
1:CA:9:G:H1	1:CA:25:C:H42	1.47	0.61
29:DG:64:THR:HG23	29:DG:66:GLN:H	1.64	0.61
24:BA:2682:U:O2'	38:BR:58:ASN:OD1	2.13	0.61
24:BA:71:A:H2	42:BT:31:HIS:HE2	1.48	0.61
24:BA:1790:C:H5''	24:BA:1791:A:OP1	2.00	0.61
1:AA:523:A:H61	12:AO:92:ASP:HB2	1.66	0.61
4:AG:110:PHE:HE2	4:AG:148:VAL:HG23	1.65	0.61
8:AK:11:THR:HG23	8:AK:14:ARG:HH12	1.64	0.61
31:DK:75:LEU:HD13	31:DK:139:GLN:HB3	1.83	0.61
4:AG:31:CYS:C	4:AG:33:MET:H	2.04	0.61
24:BA:2531:A:C4'	30:BH:157:TYR:CE2	2.82	0.61
49:D4:41:PRO:O	49:D4:42:PHE:CB	2.49	0.61
1:CA:1281:U:OP2	1:CA:1282:C:N4	2.26	0.61
1:CA:1308:U:P	13:CP:101:GLN:HE22	2.23	0.61
22:AD:8:U:O2'	22:AD:46:G:N2	2.33	0.61
1:AA:406:G:H5'	4:AG:5:ILE:HD13	1.83	0.61
30:BH:126:PRO:HG2	30:BH:130:ARG:NH1	2.16	0.61
1:AA:1347:G:H5''	9:AL:107:ARG:HG2	1.82	0.61
1:AA:130:A:H5'	17:AT:63:ARG:HH21	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AK:121:ASP:HB2	8:AK:125:ARG:NH2	2.16	0.61
31:DK:123:LEU:HD22	31:DK:143:SER:HA	1.82	0.61
36:B0:85:PRO:O	36:B0:87:TYR:N	2.33	0.61
1:AA:1013:G:N2	1:AA:1016:A:OP2	2.34	0.61
24:BA:1645:G:H5'	24:BA:1646:C:H5'	1.82	0.61
24:DA:848:G:H2'	24:DA:849:A:C8	2.35	0.61
7:CJ:111:ARG:CZ	7:CJ:122:HIS:HB3	2.31	0.61
40:D2:52:VAL:HG11	40:D2:55:ALA:HB3	1.83	0.61
35:BP:64:ILE:C	35:BP:65:PHE:CD2	2.74	0.61
22:CD:18:G:H1'	22:CD:58:A:C2	2.35	0.61
24:BA:2346:A:O2'	51:B6:24:GLU:OE1	2.17	0.61
22:AD:12:G:H2'	22:AD:13:C:C6	2.36	0.61
1:AA:974:A:OP2	14:AQ:29:ARG:NH2	2.34	0.61
24:BA:640:C:N4	24:BA:648:G:H1	1.98	0.61
1:AA:1296:C:OP1	13:AP:44:ARG:NH2	2.32	0.61
24:BA:320:A:OP1	28:BF:135:LYS:NZ	2.29	0.61
24:BA:1264:G:H5'	50:B5:11:THR:HG21	1.82	0.61
24:DA:69:C:O2	24:DA:73:A:O2'	2.17	0.61
24:BA:330:A:HO2'	24:BA:331:A:H8	1.48	0.61
24:DA:2602:A:H4'	24:DA:2603:G:O5'	1.99	0.61
24:DA:1771:C:H1'	24:DA:1786:A:C8	2.36	0.61
49:D4:42:PHE:HD1	49:D4:43:TYR:N	1.99	0.61
24:BA:2415:G:H4'	34:BO:67:MET:N	2.15	0.61
24:BA:1065:U:O2	24:BA:1073:A:N6	2.21	0.61
24:BA:2146:C:O2'	24:BA:2147:G:N7	2.29	0.61
1:AA:674:G:H2'	1:AA:675:A:C8	2.35	0.61
37:BQ:11:LYS:HD2	37:BQ:15:ARG:HH21	1.65	0.61
1:AA:501:C:OP1	12:AO:117:ARG:NH2	2.34	0.61
10:CM:79:ARG:HA	10:CM:82:ILE:HG22	1.82	0.61
44:BV:109:ALA:HB3	44:BV:115:GLY:HA3	1.81	0.61
31:BK:14:ASP:O	31:BK:16:GLY:N	2.32	0.61
24:DA:328:U:H4'	43:DU:68:HIS:CE1	2.36	0.61
41:BS:35:ILE:O	41:BS:39:THR:OG1	2.17	0.61
10:AM:22:LYS:NZ	10:AM:88:LEU:O	2.34	0.61
16:AS:67:THR:H	16:AS:70:ALA:HB3	1.66	0.61
9:CL:10:ARG:NH1	9:CL:75:ASP:OD2	2.33	0.61
24:DA:2392:A:H1'	34:DO:61:ARG:NH2	2.16	0.61
43:DU:52:SER:N	43:DU:53:PRO:CD	2.63	0.61
1:CA:1128:C:O2'	1:CA:1129:C:OP1	2.17	0.61
22:AD:56:C:H2'	22:AD:57:A:C8	2.34	0.61
25:DB:48:A:OP2	37:DQ:30:ARG:NH2	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DB:104:A:O2'	44:DV:30:ASN:O	2.18	0.61
28:BF:200:GLU:OE2	28:BF:204:ASN:ND2	2.33	0.61
5:AH:100:VAL:O	5:AH:107:ARG:NH2	2.33	0.61
24:BA:1:G:N2	24:BA:2902:C:O2	2.33	0.61
1:CA:382:A:H2'	1:CA:383:A:C8	2.36	0.61
4:CG:103:ASN:OD1	4:CG:114:ARG:NE	2.26	0.61
24:BA:1332:G:H21	24:BA:1610:A:H8	1.48	0.61
4:AG:9:CYS:O	4:AG:32:ALA:CB	2.49	0.61
28:DF:21:ALA:O	28:DF:24:LEU:CD2	2.42	0.61
1:CA:690:G:H22	11:CN:55:LYS:HE2	1.66	0.61
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.35	0.61
24:BA:1593:G:H2'	24:BA:1594:G:H8	1.66	0.61
1:AA:173:U:H5''	1:AA:197:A:O4'	2.01	0.61
24:BA:635:C:O2'	24:BA:639:U:OP1	2.19	0.61
24:DA:1568:G:P	26:DD:63:ARG:HH22	2.23	0.61
22:AC:47:U:O2'	22:AC:48:C:O5'	2.18	0.61
4:CG:191:ARG:NH1	4:CG:200:GLU:OE1	2.34	0.61
2:AE:112:VAL:HG21	2:AE:153:ARG:HA	1.81	0.61
26:BD:28:GLU:OE1	26:BD:28:GLU:N	2.34	0.61
42:DT:55:ASN:HB2	42:DT:80:ILE:HG12	1.81	0.61
2:AE:82:ARG:NH1	2:AE:92:TYR:OH	2.34	0.61
24:BA:1141:U:H6	32:BM:63:THR:HG1	1.49	0.61
24:DA:2172:U:O2'	24:DA:2174:C:OP2	2.14	0.61
22:CD:7:G:H4'	22:CD:8:U:OP2	2.00	0.61
24:BA:1534:G:O2'	24:BA:1535:U:O4'	2.18	0.61
1:CA:1104:G:H4'	2:CE:111:ARG:CZ	2.31	0.61
1:AA:1286:A:N6	1:AA:1354:C:O3'	2.34	0.61
5:CH:39:GLY:HA2	5:CH:69:VAL:HB	1.82	0.61
24:DA:586:A:H5'	28:DF:89:VAL:HG21	1.82	0.61
29:BG:41:GLN:HG2	29:BG:155:MET:HB3	1.83	0.61
51:B6:9:LEU:N	51:B6:27:LYS:HD3	2.16	0.61
4:AG:18:LYS:NZ	4:AG:34:GLU:OE1	2.34	0.61
24:DA:2119:A:N7	24:DA:2170:A:N6	2.49	0.61
24:BA:620:G:H4'	24:BA:621:A:C5'	2.31	0.61
29:DG:39:ILE:HB	29:DG:92:VAL:HG13	1.83	0.61
3:CF:6:HIS:HD2	3:CF:8:ILE:H	1.49	0.61
24:BA:278:A:H5'	24:BA:279:C:C5	2.36	0.61
38:BR:62:THR:HG22	38:BR:75:ILE:HG12	1.82	0.61
38:BR:123:GLN:O	38:BR:125:ARG:N	2.33	0.61
24:DA:2212:A:H1'	24:DA:2215:G:C5	2.35	0.61
7:CJ:65:ALA:HB1	7:CJ:127:ALA:HB3	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AT:48:GLU:O	17:AT:50:LYS:N	2.34	0.61
1:CA:245:C:N3	1:CA:283:C:N4	2.48	0.61
17:AT:59:ILE:HG22	17:AT:73:VAL:HA	1.83	0.61
1:CA:753:A:OP1	15:CR:69:TYR:OH	2.16	0.61
24:DA:729:G:OP2	26:DD:13:ARG:NH1	2.34	0.61
24:DA:654(O):G:H2'	24:DA:654(P):G:H8	1.66	0.61
1:CA:951:G:O2'	1:CA:970:C:O2'	2.17	0.61
2:CE:6:THR:HG22	2:CE:221:LEU:HD22	1.83	0.60
45:D3:27:GLU:HG3	45:D3:68:GLU:HA	1.83	0.60
1:AA:1157:A:N7	1:AA:1178:G:N2	2.49	0.60
1:AA:1329:A:N7	21:AX:7:ARG:NH2	2.45	0.60
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.36	0.60
24:BA:1188:U:H4'	40:B2:79:VAL:HG22	1.83	0.60
44:BV:10:ARG:HG2	44:BV:38:TYR:HD2	1.66	0.60
3:CF:63:ASN:HB2	3:CF:98:ASN:HB3	1.81	0.60
24:DA:1488:G:H5'	24:DA:1489:U:OP2	2.00	0.60
24:DA:2839:G:H5'	36:D0:46:GLY:HA2	1.81	0.60
20:AW:57:ARG:HG2	20:AW:102:GLY:O	1.99	0.60
24:DA:2748:A:H1'	30:DH:67:LEU:HG	1.83	0.60
1:AA:1244:C:H2'	1:AA:1245:A:H8	1.64	0.60
1:AA:80:G:H5''	1:AA:81:G:C8	2.36	0.60
9:CL:8:GLY:HA2	9:CL:79:LEU:HB3	1.83	0.60
24:BA:1568:G:OP2	26:BD:63:ARG:NH2	2.33	0.60
24:DA:1171:G:H1'	24:DA:1173:G:OP1	2.00	0.60
34:BO:52:GLU:OE1	34:BO:55:ARG:NH1	2.30	0.60
24:DA:517:C:OP1	50:D5:16:ARG:NH2	2.34	0.60
4:AG:65:ARG:O	4:AG:69:GLY:N	2.29	0.60
1:AA:243:A:H4'	1:AA:244:U:H3'	1.82	0.60
44:DV:17:ALA:HA	44:DV:20:ARG:HD2	1.82	0.60
24:BA:579:G:H2'	24:BA:580:C:C6	2.35	0.60
47:BW:33:MET:HG2	47:BW:37:PHE:HE1	1.66	0.60
20:AW:30:LYS:HE2	20:AW:80:ARG:HH12	1.66	0.60
27:DE:55:ASN:O	27:DE:57:LYS:NZ	2.26	0.60
24:DA:1071:G:H1'	24:DA:1089:G:H2'	1.83	0.60
2:CE:67:THR:HG21	2:CE:155:LEU:HG	1.82	0.60
1:AA:1005:A:O2'	1:AA:1036:G:N2	2.35	0.60
24:BA:1077:A:H3'	24:BA:1077:A:N3	2.17	0.60
24:BA:1072:C:N3	24:BA:1092:C:N4	2.46	0.60
1:CA:1237:C:O2'	1:CA:1300:G:N2	2.34	0.60
1:CA:1118:C:H42	1:CA:1155:G:H1	1.47	0.60
29:DG:11:TYR:OH	29:DG:16:ARG:NH2	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CD:43:A:H2'	22:CD:44:A:C8	2.35	0.60
29:DG:145:THR:OG1	29:DG:145:THR:O	2.14	0.60
29:DG:120:LEU:HB2	29:DG:180:PHE:CD1	2.36	0.60
1:CA:1251:A:N3	1:CA:1369:C:O2'	2.32	0.60
1:AA:736:C:H2'	1:AA:737:A:H8	1.66	0.60
15:AR:6:GLU:N	15:AR:6:GLU:OE2	2.33	0.60
35:BP:138:ASP:OD1	44:BV:81:ARG:NH2	2.34	0.60
10:AM:58:ASP:OD1	10:AM:58:ASP:N	2.34	0.60
27:BE:60:ASN:OD1	27:BE:62:PRO:HG2	2.01	0.60
27:DE:69:LYS:O	27:DE:70:ALA:CB	2.49	0.60
22:CD:16:C:H5'	22:CD:18:G:OP2	2.01	0.60
50:B5:40:LYS:HG2	50:B5:47:PRO:HD2	1.83	0.60
9:AL:42:ARG:NH1	9:AL:71:SER:OG	2.34	0.60
39:B1:92:ARG:NH2	40:B2:10:LYS:HB3	2.17	0.60
1:AA:128:G:O2'	17:AT:3:LYS:NZ	2.33	0.60
24:DA:1418:G:OP1	24:DA:1588:C:O2'	2.19	0.60
1:AA:28:G:H1	1:AA:555:C:H42	1.49	0.60
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.36	0.60
24:BA:272:G:H1	24:BA:365:C:H42	1.49	0.60
43:DU:39:VAL:HG23	43:DU:41:GLY:H	1.66	0.60
24:BA:1005:C:O2'	32:BM:28:THR:HG21	2.01	0.60
24:DA:643:A:N1	24:DA:2369:A:O2'	2.32	0.60
48:BX:18:ASP:N	48:BX:18:ASP:OD1	2.34	0.60
1:CA:316:G:OP2	1:CA:351:G:O2'	2.18	0.60
8:AK:10:LEU:HD22	8:AK:83:ILE:HD11	1.83	0.60
12:AO:47:LYS:CG	12:AO:48:PRO:HD3	2.32	0.60
49:D4:39:CYS:O	49:D4:40:HIS:ND1	2.35	0.60
1:CA:1255:G:P	10:CM:45:ARG:HH22	2.25	0.60
22:CD:56:C:H2'	22:CD:57:A:H8	1.66	0.60
1:AA:1025:U:H4'	1:AA:1026:G:O5'	2.01	0.60
19:AV:40:ILE:HG23	19:AV:41:VAL:HG22	1.83	0.60
1:AA:977:A:H8	1:AA:1223:C:N3	1.99	0.60
30:DH:6:ARG:NH1	30:DH:54:ARG:HH12	2.00	0.60
1:AA:75:C:N3	1:AA:96:G:N2	2.49	0.60
2:AE:74:LYS:HG2	2:AE:169:LYS:HE3	1.82	0.60
1:CA:745:C:OP1	1:CA:851:G:O2'	2.17	0.60
1:CA:1452:C:H4'	1:CA:1453:G:H5'	1.84	0.60
38:DR:1:MET:O	38:DR:3:ARG:N	2.34	0.60
11:AN:92:GLU:OE1	18:AU:88:LYS:NZ	2.35	0.60
1:CA:485:G:O2'	1:CA:486:U:O5'	2.19	0.60
15:CR:39:LEU:HD12	15:CR:56:LEU:HD13	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:584:G:OP1	17:CT:91:ARG:NH2	2.30	0.60
1:CA:1438:G:O6	1:CA:1463:C:N4	2.19	0.60
51:B6:47:THR:OG1	51:B6:48:VAL:N	2.33	0.60
45:B3:12:ASN:HA	45:B3:14:ARG:HH21	1.66	0.60
19:CV:63:THR:OG1	19:CV:65:ASN:O	2.20	0.60
24:DA:141:A:H8	24:DA:1595:G:H21	1.48	0.60
4:CG:22:LYS:NZ	4:CG:26:CYS:HA	2.17	0.60
24:DA:94:G:H2'	24:DA:95:G:O4'	2.02	0.60
27:DE:35:GLN:HE21	27:DE:36:ARG:H	1.48	0.60
36:B0:4:LEU:H	36:B0:4:LEU:HD12	1.65	0.60
1:CA:1004:A:H1'	1:CA:1036:G:H1	1.66	0.60
1:AA:1024:G:H4'	1:AA:1024:G:OP1	1.99	0.60
24:BA:2116:G:OP1	24:BA:2166:G:O2'	2.19	0.60
19:CV:31:ILE:HD13	19:CV:33:THR:OG1	2.02	0.60
19:CV:36:ARG:HH12	19:CV:75:ALA:HB3	1.66	0.60
1:AA:977:A:O2'	1:AA:981:U:N3	2.30	0.60
24:DA:2655:G:N2	24:DA:2665:A:OP2	2.35	0.60
24:BA:654(F):C:C4	24:BA:654(G):C:H1'	2.36	0.60
22:CD:43:A:H2'	22:CD:44:A:H8	1.66	0.60
44:DV:10:ARG:NH2	44:DV:26:GLY:H	2.00	0.60
36:D0:78:LYS:HE2	36:D0:83:ILE:HD11	1.83	0.60
4:AG:88:VAL:HA	5:AH:97:GLY:HA3	1.82	0.60
24:BA:2302:G:O2'	29:BG:126:ASP:O	2.19	0.60
6:CI:13:ASN:ND2	6:CI:55:ASP:OD2	2.33	0.60
2:AE:194:PRO:O	2:AE:196:LEU:N	2.35	0.60
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.37	0.60
1:AA:613:C:H2'	1:AA:614:A:H8	1.66	0.60
24:BA:247:G:H4'	24:BA:386:G:C5	2.36	0.60
29:DG:37:VAL:HG22	29:DG:159:VAL:HG12	1.82	0.60
24:BA:2646:C:OP2	24:BA:2732:G:O2'	2.18	0.60
1:AA:278:G:OP2	17:AT:92:ARG:NH2	2.34	0.60
27:DE:23:VAL:C	27:DE:25:VAL:H	2.04	0.60
4:CG:31:CYS:O	4:CG:33:MET:N	2.30	0.60
1:CA:412:A:N1	4:CG:35:ARG:HG3	2.15	0.60
24:BA:1243:G:H4'	34:BO:7:ARG:HH21	1.67	0.60
1:AA:1147:C:O2	9:AL:16:ARG:NH2	2.35	0.60
24:DA:1064:C:H2'	24:DA:1065:U:C5	2.36	0.60
1:AA:1381:U:C2	7:AJ:79:ARG:HG2	2.37	0.60
24:BA:1062:G:N2	24:BA:1076:C:N3	2.48	0.60
22:AD:50:U:H3	22:AD:64:G:H1	1.50	0.60
30:BH:124:GLU:HG2	30:BH:126:PRO:HD3	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DV:11:GLU:O	44:DV:36:LYS:NZ	2.29	0.60
29:BG:5:VAL:HG11	29:BG:100:TRP:HB3	1.84	0.60
25:BB:24:G:N7	25:BB:56:G:H2'	2.17	0.60
1:AA:262:A:H2'	1:AA:263:A:C8	2.37	0.60
2:AE:32:ILE:HD11	2:AE:40:HIS:HB3	1.84	0.60
33:DN:4:PRO:O	33:DN:5:GLN:HB2	2.00	0.60
20:CW:75:ASN:N	20:CW:75:ASN:OD1	2.35	0.60
26:BD:182:LEU:H	26:BD:272:ALA:HB3	1.66	0.60
24:DA:296:C:H2'	24:DA:297:C:H6	1.66	0.60
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.37	0.60
24:BA:796:C:H2'	24:BA:797:C:C6	2.37	0.60
16:AS:15:PRO:O	16:AS:16:HIS:ND1	2.35	0.60
4:CG:22:LYS:CG	4:CG:26:CYS:CA	2.80	0.60
51:D6:15:GLU:CB	51:D6:47:THR:HG23	2.31	0.60
24:BA:1091:G:O6	24:BA:1100:C:N4	2.24	0.60
24:BA:2125:G:N2	24:BA:2172:U:OP1	2.34	0.60
1:CA:977:A:HO2'	1:CA:981:U:H3	1.49	0.60
24:DA:2542:A:O2'	24:DA:2543:G:H8	1.84	0.60
7:AJ:16:LEU:HD13	9:AL:44:VAL:HG13	1.83	0.60
24:BA:270(M):U:OP1	31:BK:50:ARG:NH1	2.30	0.60
24:BA:2815:C:H5'	50:B5:29:THR:HG21	1.83	0.60
24:BA:545:G:O2'	24:BA:547:A:N6	2.32	0.60
18:AU:66:LEU:O	18:AU:70:ILE:HG13	2.02	0.60
24:DA:1454:U:O2	36:D0:60:LEU:HD11	2.02	0.60
25:DB:8:U:OP1	37:DQ:11:LYS:NZ	2.33	0.60
14:CQ:9:LYS:HA	14:CQ:12:ARG:HD3	1.84	0.60
34:BO:70:GLN:N	34:BO:70:GLN:HE21	1.99	0.60
27:BE:61:ARG:H	27:BE:61:ARG:HD3	1.65	0.60
24:DA:2131:G:O4'	24:DA:2158:A:N6	2.34	0.60
24:DA:1055:G:N2	24:DA:1104:C:N3	2.50	0.60
1:CA:1325:C:P	21:CX:15:ARG:HE	2.25	0.60
22:AD:8:U:H2'	22:AD:13:C:H41	1.66	0.60
8:CK:12:ARG:NH1	8:CK:25:ASP:O	2.34	0.60
1:AA:1032(A):G:H2'	1:AA:1032(B):G:H8	1.67	0.60
3:AF:35:GLU:O	3:AF:39:ILE:N	2.34	0.60
24:BA:2842:G:H2'	24:BA:2843:G:H8	1.66	0.60
1:AA:405:U:O4	4:AG:2:GLY:N	2.35	0.60
12:AO:86:ARG:HG3	12:AO:101:VAL:HG22	1.84	0.60
43:DU:74:PRO:O	43:DU:80:GLY:HA2	2.01	0.60
31:BK:118:LYS:HD2	31:BK:119:PRO:HD2	1.84	0.60
40:D2:49:THR:O	40:D2:51:VAL:N	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:34:VAL:CA	26:DD:35:LYS:HD3	2.31	0.60
24:BA:1070:A:C4'	24:BA:1071:G:H5''	2.31	0.60
22:AD:12:G:O6	22:AD:23:C:N4	2.28	0.60
19:CV:33:THR:HG22	19:CV:35:SER:N	2.17	0.60
24:DA:2365:G:H4'	45:D3:60:PHE:CZ	2.37	0.60
1:CA:436:C:H4'	4:CG:156:GLU:HB2	1.84	0.60
41:BS:12:ILE:HG13	41:BS:42:ARG:HH11	1.67	0.60
1:CA:920:U:H2'	1:CA:921:U:C6	2.36	0.60
2:CE:81:VAL:O	2:CE:85:ALA:N	2.33	0.60
25:DB:12:C:O2	45:D3:74:ARG:NH1	2.35	0.60
24:DA:2199:A:OP1	46:DZ:50:ARG:NH2	2.35	0.60
24:DA:274:G:O2'	24:DA:275:G:O4'	2.20	0.60
1:CA:750:G:N3	15:CR:23:GLY:HA3	2.16	0.60
1:AA:1330:U:H4'	13:AP:23:TYR:HE1	1.66	0.60
24:BA:1165:U:H2'	24:BA:1166:C:C6	2.37	0.60
34:DO:63:PRO:HB3	53:D8:13:ARG:HG2	1.83	0.59
51:D6:43:CYS:O	51:D6:44:ARG:C	2.39	0.59
49:D4:39:CYS:CB	49:D4:41:PRO:CD	2.80	0.59
24:BA:1079:C:H41	24:BA:1088:A:P	2.24	0.59
24:BA:1092:C:O2'	30:BH:170:ARG:NH1	2.30	0.59
1:AA:1319:A:H3'	19:AV:3:ARG:HH21	1.67	0.59
1:CA:1118:C:H5'	9:CL:104:ARG:HD3	1.84	0.59
2:CE:5:ILE:HD12	2:CE:56:ARG:HH22	1.66	0.59
15:CR:16:ALA:HB1	15:CR:21:ASP:HB3	1.84	0.59
28:BF:114:VAL:HG21	28:BF:202:PHE:CZ	2.37	0.59
24:BA:1486:A:H2'	24:BA:1487:G:H8	1.67	0.59
49:B4:15:ILE:HB	49:B4:32:TYR:CD1	2.36	0.59
1:CA:573:A:N3	1:CA:883:C:O2'	2.30	0.59
1:AA:690:G:H22	11:AN:55:LYS:HZ2	1.48	0.59
28:DF:160:ASN:OD1	28:DF:163:VAL:N	2.33	0.59
35:BP:35:VAL:HG13	35:BP:130:LYS:HB3	1.82	0.59
29:DG:161:THR:HG22	29:DG:163:ALA:H	1.66	0.59
34:BO:70:GLN:HE21	34:BO:70:GLN:H	1.50	0.59
43:BU:76:CYS:HB3	43:BU:96:ILE:HD13	1.84	0.59
24:DA:2130:U:O2'	24:DA:2133:G:O2'	2.00	0.59
19:CV:33:THR:HG22	19:CV:34:TRP:N	2.13	0.59
1:CA:1202:G:N2	14:CQ:46:GLU:OE1	2.27	0.59
1:AA:391:G:O3'	16:AS:8:ARG:NH2	2.36	0.59
24:BA:1817:G:OP1	26:BD:88:ARG:NH2	2.33	0.59
25:DB:51:G:N7	37:DQ:62:LYS:NZ	2.45	0.59
47:DW:41:ILE:HD11	47:DW:44:LEU:HD22	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2483:C:N3	35:BP:124:LYS:NZ	2.44	0.59
24:DA:1671:U:HO2'	24:DA:1673:U:H5	1.50	0.59
1:CA:142:G:H1	1:CA:221:C:H42	1.49	0.59
1:AA:1492:A:H5'	1:AA:1493:A:OP2	2.02	0.59
34:DO:62:LEU:CD1	53:D8:25:MET:CB	2.80	0.59
34:BO:70:GLN:NE2	34:BO:70:GLN:H	1.99	0.59
24:DA:2287:A:O2'	24:DA:2288:A:H5''	2.01	0.59
13:CP:98:VAL:O	13:CP:100:GLY:N	2.34	0.59
1:CA:1027:C:H2'	1:CA:1028:C:H6	1.66	0.59
1:CA:957:U:H1'	1:CA:960:U:H5	1.65	0.59
1:CA:1502:A:H2	1:CA:1505:G:N1	1.98	0.59
9:AL:43:ALA:HA	9:AL:74:ILE:HD13	1.84	0.59
1:CA:1300:G:O2'	1:CA:1301:U:O5'	2.18	0.59
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.37	0.59
8:AK:44:PHE:HE2	8:AK:109:ILE:HG21	1.66	0.59
17:AT:64:PRO:HA	17:AT:70:ARG:HG3	1.84	0.59
1:CA:544:G:OP2	4:CG:66:ARG:NH2	2.35	0.59
24:DA:960:A:H61	35:DP:83:MET:CE	2.14	0.59
24:BA:931:G:O2'	48:BX:24:LYS:NZ	2.28	0.59
1:CA:56:U:H2'	1:CA:57:G:C8	2.37	0.59
42:DT:43:VAL:HG23	42:DT:51:VAL:HG21	1.84	0.59
31:BK:120:ILE:HD11	31:BK:126:TYR:CZ	2.37	0.59
44:BV:95:PRO:HA	44:BV:129:SER:HA	1.82	0.59
1:AA:1127:G:H21	1:AA:1146:A:H62	1.50	0.59
24:DA:330:A:H2	24:DA:1210:A:O2'	1.81	0.59
30:DH:6:ARG:O	30:DH:69:ARG:HG2	2.02	0.59
22:CD:66:C:H2'	22:CD:67:C:C6	2.37	0.59
24:DA:1245:G:OP1	34:DO:13:ASN:ND2	2.35	0.59
1:CA:953:G:H5'	1:CA:965:A:H61	1.66	0.59
24:DA:139:G:N2	24:DA:141:A:N1	2.44	0.59
1:AA:914:A:H2'	1:AA:915:A:H8	1.67	0.59
18:AU:25:THR:O	18:AU:42:ARG:NH2	2.34	0.59
43:BU:47:LYS:HG2	43:BU:60:PHE:CE1	2.38	0.59
24:DA:1191:G:P	34:DO:18:ARG:HH22	2.26	0.59
1:CA:954:G:O6	13:CP:104:ARG:NH1	2.35	0.59
51:D6:44:ARG:HD3	51:D6:47:THR:CG2	2.31	0.59
49:D4:42:PHE:O	49:D4:44:THR:N	2.34	0.59
1:CA:1256:A:H62	1:CA:1277:C:H3'	1.67	0.59
24:BA:654(A):A:H2	24:BA:654(T):A:N1	2.00	0.59
4:CG:104:VAL:O	4:CG:108:LEU:N	2.33	0.59
1:AA:1292:U:P	7:AJ:41:ARG:HH22	2.25	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1171:G:O2'	24:DA:1173:G:O4'	2.19	0.59
24:DA:1113:U:H2'	24:DA:1114:G:C8	2.38	0.59
24:BA:1287:A:N7	36:B0:107:ASP:HB2	2.17	0.59
1:AA:673:G:H5''	6:AI:87:ARG:NH1	2.17	0.59
1:CA:1109:C:OP2	3:CF:176:HIS:ND1	2.36	0.59
1:AA:375:U:O3'	16:AS:6:LEU:HB2	2.03	0.59
1:CA:382:A:H2'	1:CA:383:A:H8	1.67	0.59
1:CA:422:C:O2'	1:CA:423:G:N3	2.33	0.59
5:AH:78:HIS:HE1	5:AH:143:ARG:H	1.50	0.59
24:DA:2836:U:H2'	24:DA:2837:G:C8	2.37	0.59
24:DA:1496:A:H8	24:DA:1577:C:HO2'	1.49	0.59
5:AH:152:ARG:NH2	8:AK:107:LEU:O	2.29	0.59
24:BA:1224:G:OP2	40:B2:66:ARG:NH2	2.32	0.59
29:BG:161:THR:HG22	29:BG:163:ALA:H	1.66	0.59
1:AA:618:C:H5''	1:AA:619:U:H5''	1.85	0.59
24:DA:1582:C:HO2'	24:DA:1586:A:H8	1.48	0.59
24:BA:1783:A:H5'	24:BA:2608:G:H4'	1.84	0.59
33:DN:34:THR:OG1	33:DN:35:VAL:N	2.34	0.59
4:CG:31:CYS:C	4:CG:33:MET:H	2.06	0.59
24:BA:2787:C:O2'	27:BE:61:ARG:HB3	2.02	0.59
28:DF:3:GLU:HB3	28:DF:24:LEU:CD2	2.31	0.59
28:DF:26:ALA:C	28:DF:27:GLU:HG3	2.22	0.59
24:BA:1068:G:H2'	24:BA:1069:A:C8	2.38	0.59
24:BA:1061:U:O3'	24:BA:1070:A:H4'	2.03	0.59
1:CA:957:U:P	19:CV:81:ARG:HH22	2.25	0.59
24:BA:654(F):C:N4	24:BA:654(G):C:O2	2.35	0.59
5:AH:147:ASP:HA	5:AH:150:ARG:NH1	2.17	0.59
1:AA:67:C:H2'	1:AA:68:G:C8	2.37	0.59
1:CA:877:C:OP1	8:CK:88:LYS:NZ	2.34	0.59
1:AA:553:A:H5''	12:AO:24:VAL:HG21	1.84	0.59
24:BA:1228:G:OP2	39:B1:16:LYS:NZ	2.35	0.59
18:CU:22:VAL:HG12	18:CU:56:THR:HA	1.83	0.59
24:DA:1645:G:H5''	24:DA:1646:C:H5'	1.83	0.59
24:BA:910:A:H62	35:BP:12:GLN:HA	1.68	0.59
51:D6:46:HIS:CD2	51:D6:46:HIS:H	2.20	0.59
37:BQ:24:LEU:HB2	37:BQ:85:VAL:HG12	1.84	0.59
38:DR:21:GLU:O	38:DR:91:ARG:NH2	2.36	0.59
35:BP:66:ILE:HA	35:BP:104:PHE:N	2.17	0.59
29:DG:113:ARG:HD3	29:DG:140:ILE:O	2.03	0.59
1:CA:963:G:H21	10:CM:55:LYS:CE	2.13	0.59
22:AD:17:C:OP2	22:AD:60:U:O2'	2.15	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2757:A:C2	30:DH:67:LEU:HD11	2.38	0.59
26:DD:25:THR:O	26:DD:27:THR:N	2.36	0.59
1:CA:1069:C:O2'	1:CA:1192:C:O2	2.16	0.59
24:DA:1175:U:O2'	24:DA:1176:G:N3	2.29	0.59
55:CA:1800:T1C:H92	55:CA:1800:T1C:H8	1.68	0.59
24:BA:2468:G:OP1	35:BP:119:ARG:NH2	2.26	0.59
1:AA:1348:U:H2'	1:AA:1349:A:H8	1.68	0.59
29:BG:5:VAL:HG12	29:BG:8:LYS:H	1.66	0.59
26:DD:70:TRP:HZ3	26:DD:146:GLU:CD	2.06	0.59
24:DA:1024:G:H3'	24:DA:1025:G:H5''	1.85	0.59
24:DA:654(F):C:O2	24:DA:654(P):G:N2	2.35	0.59
1:AA:186(D):C:H42	1:AA:191(C):G:H1	1.51	0.59
25:DB:39:A:C6	49:D4:1:MET:HB2	2.37	0.59
1:AA:951:G:OP2	13:AP:102:ARG:NH2	2.36	0.59
24:DA:2108:C:O2	24:DA:2181:G:N2	2.24	0.59
40:B2:34:GLU:HB3	40:B2:58:VAL:HG12	1.84	0.59
24:BA:581:C:H2'	24:BA:582:G:C8	2.38	0.59
30:DH:135:GLY:O	30:DH:137:ASP:N	2.35	0.59
40:D2:49:THR:CB	40:D2:50:PRO:HD3	2.18	0.59
49:D4:37:SER:OG	49:D4:38:LYS:N	2.33	0.59
24:DA:880:G:O6	24:DA:897:C:N4	2.36	0.59
49:D4:14:ILE:HG13	49:D4:33:VAL:HG11	1.84	0.59
24:DA:1070:A:C5'	24:DA:1071:G:H5''	2.33	0.59
30:DH:163:TYR:HE2	30:DH:169:VAL:HG11	1.68	0.59
1:AA:437:U:H5'	4:AG:155:LEU:HD21	1.85	0.59
44:DV:70:LEU:O	44:DV:89:PHE:N	2.23	0.59
1:AA:877:C:H5''	8:AK:88:LYS:HD3	1.85	0.59
37:DQ:85:VAL:HG22	37:DQ:110:LEU:HB3	1.84	0.59
1:AA:183:G:H2'	1:AA:184:G:H8	1.67	0.59
13:AP:30:ALA:O	13:AP:32:GLU:N	2.36	0.59
40:B2:35:LEU:C	40:B2:37:VAL:H	2.05	0.59
16:CS:4:ILE:HB	16:CS:66:PRO:HB3	1.84	0.59
1:CA:318:G:H1	1:CA:335:C:H42	1.49	0.59
2:AE:126:GLU:OE1	2:AE:130:ARG:NH1	2.36	0.59
4:CG:22:LYS:HG3	4:CG:26:CYS:CA	2.32	0.59
43:BU:76:CYS:SG	43:BU:77:PRO:HD2	2.42	0.59
34:DO:46:LYS:HD3	34:DO:51:PHE:CD1	2.38	0.59
24:DA:2133:G:H2'	24:DA:2157:G:N1	2.18	0.59
1:AA:458:C:N4	1:AA:474:G:O6	2.27	0.59
1:AA:474:G:H2'	1:AA:475:G:C8	2.37	0.59
1:AA:1381:U:H2'	7:AJ:79:ARG:NE	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1058:U:H2'	24:BA:1059:G:C8	2.37	0.59
25:BB:42:C:N3	29:BG:93:THR:OG1	2.33	0.59
24:DA:2849:U:H4'	24:DA:2868:A:C2	2.38	0.59
29:DG:38:VAL:HG22	29:DG:93:THR:HG23	1.85	0.59
25:BB:111:U:H2'	25:BB:112:G:H8	1.66	0.59
1:AA:196:A:OP1	20:AW:68:LYS:NZ	2.36	0.59
24:DA:1593:G:H2'	24:DA:1594:G:H8	1.67	0.59
19:AV:31:ILE:HB	19:AV:49:ILE:HG23	1.85	0.59
17:AT:65:ILE:HG21	17:AT:69:LYS:HE2	1.84	0.59
36:B0:100:LEU:HD11	36:B0:113:LEU:HD13	1.84	0.59
24:BA:1007:C:H5''	32:BM:35:ARG:HH11	1.67	0.59
2:AE:76:GLN:NE2	2:AE:206:ASP:HB3	2.17	0.59
5:AH:10:MET:HB3	5:AH:32:VAL:HG22	1.84	0.59
24:BA:527:C:OP2	24:BA:2779:U:H5	1.86	0.59
36:B0:2:ARG:HD3	36:B0:2:ARG:H	1.68	0.59
2:AE:223:ILE:HA	2:AE:226:ARG:HG2	1.84	0.59
2:CE:21:ARG:HA	2:CE:40:HIS:HD2	1.68	0.59
3:CF:88:ARG:HA	3:CF:91:LEU:HD13	1.84	0.59
30:DH:61:HIS:O	30:DH:65:HIS:N	2.28	0.59
24:DA:536:A:OP1	39:D1:53:ARG:NH1	2.35	0.59
1:CA:191:G:O2'	20:CW:103:GLY:HA2	2.02	0.59
22:AD:36:U:H2'	22:AD:37:A:C8	2.38	0.59
31:BK:56:LYS:O	31:BK:59:ALA:N	2.35	0.59
7:AJ:120:ILE:O	7:AJ:124:LEU:HB2	2.03	0.59
33:DN:75:SER:OG	38:DR:74:ARG:NH1	2.36	0.59
1:CA:837:G:O6	1:CA:849:C:N4	2.36	0.59
52:D7:32:LYS:HB3	52:D7:32:LYS:NZ	2.18	0.59
24:BA:1889:A:H2'	24:BA:1890:A:C8	2.38	0.59
31:DK:130:TYR:HB3	31:DK:136:VAL:HG13	1.85	0.59
24:BA:2751:G:H8	24:BA:2751:G:O5'	1.86	0.58
51:D6:44:ARG:O	51:D6:45:LYS:HG3	2.03	0.58
27:DE:52:LEU:O	27:DE:75:VAL:N	2.36	0.58
1:AA:1305:G:N2	1:AA:1331:G:H2'	2.10	0.58
27:BE:120:TRP:CE3	27:BE:155:LYS:HD3	2.38	0.58
26:DD:43:ARG:NH1	26:DD:44:ASN:ND2	2.51	0.58
24:BA:1138:G:H21	32:BM:106:MET:CE	2.14	0.58
24:DA:1111:A:O2'	30:DH:3:ARG:N	2.36	0.58
1:AA:1150:U:O2'	10:AM:39:PRO:O	2.20	0.58
1:AA:1029:G:O2'	1:AA:1032(A):G:N1	2.35	0.58
24:DA:1567:A:H5'	26:DD:58:HIS:CD2	2.38	0.58
1:CA:707:C:OP1	11:CN:85:ARG:NH1	2.29	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:976:G:N2	1:CA:1362(A):C:OP2	2.34	0.58
5:AH:12:LEU:HB3	5:AH:31:LEU:HB2	1.83	0.58
8:AK:11:THR:O	8:AK:15:ASN:ND2	2.19	0.58
24:BA:2683:C:OP1	38:BR:53:ARG:NH2	2.36	0.58
9:CL:92:TYR:O	9:CL:96:LEU:HB2	2.03	0.58
24:BA:1652:A:OP1	36:B0:8:ARG:NH1	2.35	0.58
24:BA:1861:G:H1	24:BA:1881:C:H42	1.50	0.58
28:BF:8:GLN:NE2	28:BF:8:GLN:O	2.36	0.58
15:CR:6:GLU:OE1	15:CR:6:GLU:N	2.32	0.58
30:DH:74:ASN:OD1	30:DH:74:ASN:N	2.35	0.58
1:AA:43:C:O2'	1:AA:623:C:O2'	2.21	0.58
27:DE:68:ALA:O	27:DE:69:LYS:C	2.41	0.58
24:BA:2791:C:H2'	24:BA:2792:G:C8	2.38	0.58
22:CD:22:G:O2'	22:CD:23:C:OP1	2.20	0.58
16:AS:28:ARG:NH1	16:AS:29:ASP:OD1	2.35	0.58
1:CA:1117:G:H2'	9:CL:104:ARG:NH1	2.18	0.58
38:DR:24:PRO:HA	38:DR:49:VAL:HG13	1.85	0.58
24:DA:2306:C:H3'	24:DA:2307:G:H5''	1.84	0.58
7:AJ:69:VAL:HG22	7:AJ:135:VAL:HG22	1.85	0.58
41:DS:73:ALA:HB3	41:DS:106:ILE:HG12	1.85	0.58
24:DA:2562:U:H1'	33:DN:23:ARG:HD3	1.84	0.58
1:AA:1216:G:OP1	14:AQ:2:ALA:N	2.36	0.58
6:AI:91:VAL:HG11	18:AU:72:ARG:NH1	2.18	0.58
9:AL:110:GLU:OE2	9:AL:113:LYS:NZ	2.33	0.58
27:DE:23:VAL:HG21	27:DE:183:LEU:CG	2.32	0.58
43:BU:80:GLY:O	43:BU:81:LYS:NZ	2.34	0.58
34:DO:47:ASP:CB	34:DO:48:PRO:HA	2.30	0.58
32:BM:130:HIS:HB2	32:BM:134:ARG:NH2	2.18	0.58
24:DA:2130:U:H4'	24:DA:2134:A:H5'	1.85	0.58
22:CD:62:C:H2'	22:CD:63:G:H8	1.68	0.58
24:DA:779:U:OP1	26:DD:49:ILE:HG22	2.02	0.58
25:BB:12:C:N3	45:B3:74:ARG:NH1	2.51	0.58
24:BA:1067:A:H5''	24:BA:1068:G:C8	2.37	0.58
25:BB:15:A:H5'	25:BB:16:G:H8	1.68	0.58
26:DD:146:GLU:OE1	26:DD:190:TYR:N	2.18	0.58
24:DA:328:U:H4'	43:DU:68:HIS:ND1	2.17	0.58
16:CS:1:MET:HE1	16:CS:65:GLN:HB2	1.85	0.58
1:CA:913:A:OP1	12:CO:47:LYS:NZ	2.36	0.58
10:AM:25:GLU:O	10:AM:27:ALA:N	2.29	0.58
2:AE:68:ILE:HG13	2:AE:161:ALA:HB3	1.85	0.58
34:BO:126:VAL:HG13	34:BO:145:PRO:HG2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DK:68:LEU:HA	31:DK:71:ILE:HG22	1.85	0.58
4:CG:162:LEU:HD22	4:CG:178:VAL:HG13	1.86	0.58
4:CG:9:CYS:SG	4:CG:26:CYS:SG	3.01	0.58
12:AO:47:LYS:O	12:AO:49:ASN:N	2.36	0.58
1:CA:1132:C:H2'	1:CA:1133:G:H8	1.68	0.58
24:BA:2820:A:O2'	24:BA:2821:A:OP1	2.18	0.58
22:AD:62:C:H2'	22:AD:63:G:H8	1.67	0.58
25:DB:89(A):A:H5'	25:DB:90:C:OP2	2.04	0.58
21:CX:10:ARG:HA	21:CX:13:ILE:HB	1.85	0.58
26:BD:85:ASP:OD2	26:BD:88:ARG:NH1	2.36	0.58
2:CE:16:HIS:CG	2:CE:209:ARG:HB3	2.38	0.58
1:CA:542:G:H5'	4:CG:41:GLY:HA3	1.84	0.58
5:AH:102:ALA:HB1	5:AH:106:PRO:HG2	1.84	0.58
22:CC:1:C:O2'	22:CC:2:G:O5'	2.20	0.58
3:AF:15:THR:HG23	3:AF:181:ASN:HA	1.85	0.58
24:BA:1980:G:O2'	24:BA:1982:C:OP2	2.16	0.58
39:D1:92:ARG:CZ	40:D2:11:GLN:H	2.15	0.58
43:BU:81:LYS:HG3	43:BU:97:ARG:CZ	2.32	0.58
27:DE:37:ARG:HA	27:DE:42:ASP:OD2	2.03	0.58
1:AA:1124:G:H3'	1:AA:1145:C:H41	1.67	0.58
1:CA:1325:C:OP1	21:CX:15:ARG:NE	2.33	0.58
1:CA:1027:C:H2'	1:CA:1028:C:C6	2.39	0.58
24:DA:2889:C:H3'	24:DA:2891:G:H8	1.68	0.58
24:DA:1171:G:H1	24:DA:1174:A:H61	1.51	0.58
1:AA:1149:C:OP2	9:AL:9:ARG:NH2	2.36	0.58
2:AE:45:GLN:NE2	2:AE:49:GLU:OE2	2.36	0.58
24:BA:874:G:O2'	44:BV:170:THR:HG21	2.03	0.58
24:BA:330:A:O2'	24:BA:331:A:H8	1.86	0.58
47:BW:33:MET:HG2	47:BW:37:PHE:CE1	2.39	0.58
24:BA:910:A:C5	35:BP:13:GLN:HG3	2.38	0.58
1:AA:108:G:OP2	1:AA:326:G:N1	2.22	0.58
24:BA:960:A:H61	35:BP:83:MET:CE	2.17	0.58
38:BR:64:ARG:HB2	38:BR:73:GLU:HG2	1.85	0.58
24:DA:2843:G:H1	24:DA:2874:C:H42	1.51	0.58
1:AA:973:G:OP1	10:AM:57:LYS:NZ	2.23	0.58
4:CG:22:LYS:NZ	4:CG:25:ARG:NH1	2.52	0.58
24:BA:483:A:H4'	43:BU:49:VAL:HA	1.85	0.58
1:CA:468:A:H2'	1:CA:474:G:O4'	2.04	0.58
30:DH:2:SER:O	30:DH:4:ILE:N	2.37	0.58
1:AA:82:U:H3	1:AA:87:A:H2	1.52	0.58
24:BA:2154:G:H2'	24:BA:2155:G:C8	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:406:G:H21	4:CG:119:GLN:HE22	1.52	0.58
24:BA:2102:U:O2	24:BA:2187:G:N2	2.26	0.58
24:BA:2470:G:H5'	35:BP:56:ARG:HH21	1.68	0.58
1:CA:941:G:O6	1:CA:1342:C:N4	2.37	0.58
24:DA:654(O):G:H2'	24:DA:654(P):G:C8	2.38	0.58
1:AA:690:G:H22	11:AN:55:LYS:NZ	2.02	0.58
36:B0:33:ARG:HH22	50:B5:55:ARG:HB3	1.67	0.58
44:DV:19:ARG:NE	44:DV:84:GLU:OE2	2.36	0.58
24:DA:2387:U:O2'	45:D3:41:ARG:NH1	2.36	0.58
1:AA:859:A:H2'	1:AA:860:A:O4'	2.03	0.58
38:BR:129:ARG:HA	38:BR:132:LYS:HB3	1.85	0.58
24:BA:2257:U:O2'	24:BA:2258:C:H5'	2.03	0.58
1:CA:588:G:O6	1:CA:651:C:N4	2.36	0.58
24:BA:2818:G:H1	24:BA:2828:C:H42	1.50	0.58
24:DA:592:G:H21	53:D8:4:MET:HE1	1.66	0.58
1:AA:890:G:O2'	1:AA:906:G:O6	2.15	0.58
39:D1:92:ARG:NH1	40:D2:11:GLN:O	2.37	0.58
1:CA:408:A:H2'	1:CA:409:G:O4'	2.04	0.58
4:CG:22:LYS:HZ2	4:CG:26:CYS:HA	1.63	0.58
34:DO:62:LEU:HG	53:D8:25:MET:O	1.98	0.58
1:CA:1142:G:H3'	1:CA:1143:G:H8	1.67	0.58
24:BA:1063:G:H1'	24:BA:1077:A:H62	1.68	0.58
22:AD:56:C:H2'	22:AD:57:A:H8	1.68	0.58
1:AA:1346:A:H5''	9:AL:120:ARG:NH1	2.18	0.58
29:DG:167:GLU:O	29:DG:170:ARG:HB3	2.04	0.58
24:DA:1858:G:O2'	24:DA:1884:A:N6	2.36	0.58
1:AA:5:U:O2'	1:AA:6:G:O5'	2.21	0.58
7:AJ:130:GLY:O	7:AJ:132:GLY:N	2.37	0.58
18:CU:59:SER:OG	18:CU:60:ALA:N	2.36	0.58
24:BA:685:A:OP1	24:BA:686:G:N2	2.37	0.58
32:DM:58:ASP:OD1	32:DM:58:ASP:N	2.36	0.58
3:CF:3:ASN:N	3:CF:3:ASN:OD1	2.36	0.58
24:DA:2327:A:H2'	24:DA:2328:A:C8	2.39	0.58
1:AA:1070:U:OP1	5:AH:18:ARG:NH1	2.26	0.58
38:BR:16:ARG:HD3	38:BR:79:HIS:HA	1.85	0.58
3:AF:13:GLY:HA2	14:AQ:57:ARG:HH21	1.67	0.58
40:D2:35:LEU:HG	40:D2:37:VAL:CG1	2.33	0.58
1:CA:1015:A:O3'	14:CQ:15:LYS:NZ	2.33	0.58
1:AA:162:A:H3'	1:AA:163:C:H4'	1.86	0.58
1:AA:664:G:N2	1:AA:741:G:H1	2.00	0.58
1:AA:545:C:O2'	1:AA:549:C:OP1	2.16	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2839:G:C5'	36:D0:46:GLY:HA2	2.34	0.58
13:AP:23:TYR:HE2	13:AP:71:ARG:HB2	1.68	0.58
1:AA:1195:C:O3'	55:AA:1837:T1C:N21	2.36	0.58
1:CA:627:G:H2'	1:CA:628:G:H8	1.67	0.58
27:DE:174:ASP:OD1	27:DE:175:VAL:N	2.36	0.58
1:AA:272:C:H2'	1:AA:273:A:H8	1.67	0.58
24:BA:2751:G:H21	30:BH:3:ARG:NE	2.02	0.58
27:DE:7:VAL:O	27:DE:26:ILE:HG23	2.03	0.58
24:DA:889:C:N3	24:DA:890:A:O2'	2.36	0.58
24:DA:1210:A:H5''	24:DA:1211:U:H3'	1.86	0.58
9:CL:28:VAL:HG22	9:CL:63:ILE:HB	1.85	0.58
53:B8:50:LEU:HD12	53:B8:51:ALA:H	1.67	0.58
24:DA:1478:G:H2'	24:DA:1479:G:H8	1.69	0.58
24:DA:242:G:O5'	53:D8:3:LYS:HE3	2.04	0.58
15:CR:33:THR:HG23	15:CR:63:ARG:HH11	1.69	0.58
24:BA:1190:G:H5'	34:BO:32:THR:HA	1.86	0.58
1:CA:1086:U:H3	1:CA:1099:G:H22	1.52	0.58
4:CG:73:ARG:O	4:CG:77:ASN:ND2	2.32	0.58
9:AL:4:TYR:HB2	9:AL:19:LEU:HB2	1.85	0.58
43:BU:56:PRO:O	43:BU:58:GLY:N	2.37	0.58
3:AF:76:VAL:HG21	3:AF:103:VAL:HG21	1.86	0.58
44:DV:45:ASP:O	44:DV:49:ARG:HG2	2.03	0.58
24:BA:2751:G:C8	24:BA:2751:G:O5'	2.57	0.58
40:D2:5:VAL:HB	40:D2:37:VAL:HG12	1.86	0.58
26:DD:69:ARG:C	26:DD:71:ASP:H	2.07	0.58
1:CA:429:U:C3'	4:CG:25:ARG:NH2	2.67	0.58
29:DG:104:GLU:HG2	49:D4:23:GLU:HG2	1.85	0.58
24:DA:1059:G:H3'	24:DA:1060:U:H2'	1.84	0.58
19:AV:40:ILE:O	49:B4:63:TYR:OH	2.21	0.58
24:DA:1899:G:O2'	24:DA:1900:A:H5''	2.04	0.58
29:BG:66:GLN:HA	49:B4:6:HIS:CE1	2.38	0.58
1:AA:976:G:OP1	14:AQ:32:SER:N	2.37	0.58
24:BA:2390:U:P	53:B8:34:TRP:CZ2	2.97	0.58
1:CA:1239:A:O2'	7:CJ:114:ARG:O	2.16	0.58
24:DA:1728:G:C6	24:DA:1730:U:H5'	2.38	0.58
2:AE:210:SER:O	2:AE:214:ILE:HG22	2.04	0.58
1:CA:1440:C:O2'	1:CA:1442:G:N2	2.35	0.58
27:DE:4:ILE:CD1	27:DE:28:ALA:HB1	2.34	0.58
24:DA:140:A:H8	24:DA:1408:C:HO2'	1.51	0.58
24:DA:960:A:H61	35:DP:83:MET:HE2	1.68	0.58
1:CA:530:G:O2'	1:CA:531:U:OP1	2.20	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CM:5:ARG:N	10:CM:99:LYS:O	2.34	0.58
24:DA:221:A:N1	24:DA:265:A:O2'	2.33	0.58
18:AU:59:SER:N	18:AU:62:GLU:OE1	2.36	0.58
24:DA:2053:G:H5'	27:DE:144:ARG:O	2.04	0.58
24:BA:2789:C:O2'	24:BA:2893:G:N2	2.37	0.57
24:BA:2531:A:C4'	30:BH:157:TYR:CD2	2.82	0.57
24:DA:806:C:O2	24:DA:2444:G:O2'	2.22	0.57
13:CP:81:LEU:O	13:CP:89:GLY:HA3	2.04	0.57
24:BA:2112:G:H1	24:BA:2169:A:H61	1.50	0.57
1:AA:589:C:H42	1:AA:650:G:H1	1.50	0.57
3:CF:91:LEU:O	3:CF:95:THR:OG1	2.22	0.57
7:AJ:16:LEU:HD12	9:AL:41:VAL:HG12	1.85	0.57
1:AA:1244:C:H2'	1:AA:1245:A:C8	2.38	0.57
1:AA:1453:G:O2'	20:AW:39:LYS:NZ	2.34	0.57
49:B4:12:ALA:HB3	49:B4:24:THR:OG1	2.04	0.57
1:AA:62:U:H3	1:AA:105:G:H1	1.51	0.57
1:CA:1266:G:N2	1:CA:1270:C:N3	2.51	0.57
19:AV:50:ALA:HB1	19:AV:57:HIS:HB3	1.86	0.57
9:CL:50:LEU:HG	9:CL:81:ILE:HD11	1.84	0.57
1:CA:776:G:N2	1:CA:802:A:OP2	2.35	0.57
16:CS:53:VAL:HG12	16:CS:79:VAL:HG22	1.85	0.57
35:DP:65:PHE:O	35:DP:67:ARG:N	2.37	0.57
24:DA:463:G:N2	24:DA:466:A:OP2	2.33	0.57
24:BA:1024:G:H3'	24:BA:1025:G:H5''	1.84	0.57
24:BA:2781:A:H5''	24:BA:2782:G:H5'	1.85	0.57
24:DA:270(R):G:H21	46:DZ:78:LYS:HD3	1.67	0.57
24:BA:70:G:H21	24:BA:71:A:H62	1.51	0.57
24:BA:942:G:O2'	24:BA:1189:A:N3	2.34	0.57
2:CE:72:GLY:HA3	2:CE:81:VAL:HG21	1.85	0.57
24:BA:1164:G:H2'	24:BA:1165:U:C6	2.39	0.57
9:CL:97:LYS:HB3	9:CL:98:PRO:HD3	1.86	0.57
19:CV:49:ILE:HD13	19:CV:62:ILE:HD11	1.85	0.57
7:AJ:155:ARG:HH21	7:AJ:156:TRP:HA	1.69	0.57
24:DA:2823:A:OP1	27:DE:113:PHE:HB2	2.04	0.57
24:BA:2210:G:H3'	24:BA:2211:G:C8	2.39	0.57
1:CA:1091:U:N3	1:CA:1094:G:OP2	2.27	0.57
24:DA:2404:C:O3'	34:DO:77:ARG:NH2	2.37	0.57
24:DA:654(I):C:N4	24:DA:654(M):C:O2	2.36	0.57
16:AS:76:GLN:NE2	16:AS:76:GLN:O	2.35	0.57
1:AA:510:A:OP2	4:AG:49:ARG:NH2	2.37	0.57
4:CG:165:MET:SD	4:CG:168:ARG:NH2	2.78	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CL:112:LYS:HG2	9:CL:118:LYS:HA	1.86	0.57
1:AA:428:G:O3'	4:AG:36:ARG:NH2	2.36	0.57
35:BP:65:PHE:C	35:BP:104:PHE:O	2.41	0.57
35:BP:64:ILE:CG2	35:BP:65:PHE:N	2.67	0.57
24:DA:1093:G:N2	24:DA:1098:A:H62	2.02	0.57
1:AA:701:C:O2	1:AA:703:G:N1	2.37	0.57
1:CA:1306:A:N6	1:CA:1331:G:O2'	2.37	0.57
24:DA:1019:U:HO2'	24:DA:1021:A:H2	1.49	0.57
1:CA:1219:U:P	14:CQ:19:ARG:HH12	2.26	0.57
24:BA:1538:G:O5'	24:BA:1538:G:H8	1.87	0.57
1:AA:1342:C:H4'	9:AL:125:TYR:HB3	1.85	0.57
24:BA:2884:U:H2'	24:BA:2885:C:O4'	2.03	0.57
24:DA:2816:C:O2	24:DA:2883:A:O2'	2.21	0.57
13:AP:3:ARG:HB3	49:B4:34:GLU:HG3	1.86	0.57
24:BA:958:U:OP2	35:BP:14:ARG:NH1	2.36	0.57
5:AH:54:ALA:O	5:AH:58:ALA:N	2.30	0.57
24:DA:1753:G:OP2	38:DR:115:ARG:NH2	2.37	0.57
22:AD:43:A:H2'	22:AD:44:A:H8	1.69	0.57
3:AF:52:LEU:HA	3:AF:70:VAL:HG22	1.85	0.57
24:DA:270(L):U:O2'	24:DA:270(M):U:OP1	2.21	0.57
1:AA:835:U:OP1	18:AU:64:ARG:NH1	2.38	0.57
1:CA:147:G:H1	1:CA:175:C:H42	1.52	0.57
12:AO:126:LYS:HE3	12:AO:128:ALA:H	1.69	0.57
24:DA:2370:G:H2'	24:DA:2371:G:O4'	2.05	0.57
34:BO:6:LEU:C	34:BO:7:ARG:HG2	2.24	0.57
30:BH:157:TYR:O	30:BH:158:HIS:ND1	2.38	0.57
24:DA:1050:A:H3'	24:DA:1051:G:H8	1.69	0.57
24:DA:1071:G:H2'	24:DA:1072:C:C6	2.39	0.57
1:AA:1321:C:H3'	1:AA:1322:C:H5''	1.85	0.57
1:AA:1077:G:O6	5:AH:47:LYS:NZ	2.38	0.57
26:BD:62:TYR:CE2	26:BD:64:ILE:HA	2.40	0.57
11:CN:54:ARG:HH12	22:CD:40:C:P	2.28	0.57
42:BT:68:ARG:NH1	42:BT:69:TYR:OH	2.38	0.57
46:DZ:86:SER:N	46:DZ:87:PRO:HD2	2.20	0.57
8:AK:105:ARG:O	8:AK:107:LEU:N	2.30	0.57
38:DR:92:GLY:HA2	38:DR:116:ALA:HA	1.85	0.57
24:BA:1912:A:H4'	24:BA:1913:A:OP1	2.04	0.57
26:BD:158:ALA:O	26:BD:161:THR:OG1	2.16	0.57
3:CF:134:ILE:CG2	3:CF:168:ALA:HB3	2.34	0.57
2:AE:185:ILE:HA	2:AE:199:TYR:O	2.05	0.57
24:BA:1406:U:H2'	24:BA:1407:C:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DO:62:LEU:HD22	53:D8:27:THR:HG22	1.87	0.57
19:CV:40:ILE:HD11	19:CV:67:VAL:N	2.18	0.57
19:AV:4:SER:O	19:AV:5:LEU:HB2	2.04	0.57
2:CE:30:ARG:NH2	2:CE:195:ASP:OD1	2.38	0.57
24:DA:1037:G:N1	24:DA:1118:C:N3	2.32	0.57
24:BA:746:A:C6	24:BA:2611:U:H5'	2.39	0.57
29:BG:97:ASP:O	29:BG:101:ILE:HG12	2.05	0.57
1:CA:636:U:H2'	1:CA:637:G:C8	2.38	0.57
36:B0:83:ILE:HG22	36:B0:87:TYR:HE2	1.69	0.57
3:CF:134:ILE:HG21	3:CF:168:ALA:HB3	1.86	0.57
20:AW:50:GLU:HB2	20:AW:99:LEU:HG	1.86	0.57
9:CL:42:ARG:NH1	9:CL:71:SER:OG	2.38	0.57
29:DG:97:ASP:HA	29:DG:100:TRP:CD1	2.39	0.57
37:DQ:66:ALA:HA	37:DQ:69:VAL:HG12	1.85	0.57
12:AO:35:GLY:HA2	12:AO:60:LEU:HA	1.86	0.57
34:BO:23:PRO:O	34:BO:25:SER:N	2.37	0.57
24:DA:1030:G:H1	24:DA:1124:C:H42	1.52	0.57
12:AO:46:LYS:O	12:AO:48:PRO:CD	2.44	0.57
24:BA:2893:G:H4'	24:BA:2894:G:O4'	2.04	0.57
28:DF:2:LYS:O	28:DF:24:LEU:CG	2.46	0.57
51:B6:18:ARG:HB2	51:B6:18:ARG:NH1	2.19	0.57
25:DB:66:A:H61	25:DB:108:C:H5'	1.70	0.57
24:BA:2114:A:C8	24:BA:2117:A:H5'	2.39	0.57
19:CV:31:ILE:HD11	19:CV:50:ALA:O	2.05	0.57
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.05	0.57
26:BD:35:LYS:HA	26:BD:64:ILE:HG22	1.87	0.57
1:CA:1244:C:H2'	1:CA:1245:A:C8	2.39	0.57
2:CE:42:ILE:HD11	2:CE:202:PRO:HB2	1.87	0.57
28:BF:40:GLN:HE22	28:BF:182:ASN:HB2	1.69	0.57
32:DM:38:HIS:NE2	32:DM:50:ASP:OD2	2.24	0.57
24:DA:1856:G:H1	24:DA:1886:C:H42	1.52	0.57
1:AA:7:G:H5'	1:AA:298:A:O4'	2.04	0.57
24:DA:1819:A:H4'	24:DA:1820:U:O5'	2.04	0.57
45:D3:25:ARG:HD2	45:D3:29:GLN:NE2	2.19	0.57
35:BP:30:GLY:HA2	35:BP:107:ALA:HB2	1.87	0.57
1:CA:426:G:OP1	4:CG:36:ARG:NH2	2.37	0.57
24:DA:666:G:OP1	34:DO:47:ASP:O	2.22	0.57
49:D4:21:VAL:HG22	49:D4:22:ILE:H	1.69	0.57
2:CE:82:ARG:NH1	2:CE:92:TYR:OH	2.38	0.57
22:AD:70:G:N2	22:AD:71:C:O4'	2.37	0.57
1:AA:967:C:H4'	9:AL:125:TYR:HE1	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:108:LYS:O	28:BF:112:MET:HG3	2.05	0.57
2:CE:15:VAL:O	2:CE:209:ARG:NH2	2.37	0.57
31:DK:91:SER:HB2	31:DK:119:PRO:HB2	1.87	0.57
1:AA:673:G:H2'	1:AA:674:G:C8	2.39	0.57
1:AA:714:G:H2'	1:AA:715:A:C8	2.39	0.57
13:CP:31:LYS:HA	13:CP:34:LEU:HB2	1.87	0.57
17:AT:22:LEU:HD11	17:AT:39:SER:HB3	1.85	0.57
1:CA:765:G:N2	1:CA:813:U:OP2	2.36	0.57
29:BG:83:ARG:O	29:BG:85:GLY:N	2.38	0.57
2:CE:233:SER:OG	2:CE:234:PRO:HD2	2.04	0.57
29:DG:77:ILE:H	29:DG:82:LEU:HB2	1.70	0.57
1:AA:425:G:O3'	4:AG:45:GLN:NE2	2.37	0.57
4:CG:35:ARG:C	4:CG:36:ARG:HG3	2.24	0.57
24:BA:1065:U:N3	24:BA:1066:U:H1'	2.20	0.57
1:CA:977:A:O2'	1:CA:981:U:N3	2.37	0.57
1:CA:979:C:H3'	1:CA:980:C:H5''	1.85	0.57
3:CF:11:ARG:O	3:CF:14:ILE:N	2.34	0.57
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.04	0.57
4:CG:60:GLU:OE2	4:CG:199:ASN:N	2.38	0.57
24:BA:74:A:H4'	24:BA:75:G:O5'	2.05	0.57
24:BA:654(M):C:H3'	24:BA:654(N):G:H8	1.69	0.57
27:BE:13:ARG:HD2	38:BR:58:ASN:HB2	1.86	0.57
24:BA:1332:G:N2	24:BA:1609:A:O2'	2.38	0.57
2:AE:61:LEU:HD22	2:AE:68:ILE:HD11	1.87	0.57
1:AA:1167:A:H2'	1:AA:1169:A:C8	2.39	0.57
30:BH:64:LEU:O	30:BH:68:THR:OG1	2.22	0.57
2:CE:137:ARG:NH1	2:CE:141:GLU:OE1	2.37	0.57
24:DA:1472:A:H2'	24:DA:1473:G:O4'	2.05	0.57
4:AG:60:GLU:OE2	4:AG:199:ASN:N	2.32	0.57
39:D1:61:TRP:CZ3	39:D1:94:ASN:HB2	2.40	0.57
34:DO:64:LYS:CG	34:DO:64:LYS:O	2.52	0.57
29:DG:108:ASN:HB3	49:D4:38:LYS:HD3	1.87	0.57
24:DA:894:C:H5'	24:DA:895:U:OP2	2.05	0.57
24:DA:1052:C:H42	24:DA:1106:G:H1	1.51	0.57
24:BA:2346:A:O3'	51:B6:39:TYR:OH	2.20	0.57
13:CP:54:VAL:O	13:CP:58:GLU:N	2.38	0.57
24:BA:2469:A:O2'	35:BP:56:ARG:NE	2.37	0.57
49:B4:23:GLU:O	49:B4:25:TYR:N	2.37	0.57
24:DA:531:C:OP1	24:DA:561:G:N2	2.38	0.57
1:AA:130:A:O2'	1:AA:131:C:O5'	2.21	0.57
24:DA:1192:G:OP2	34:DO:18:ARG:NH2	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BK:3:VAL:HG12	31:BK:38:LEU:HA	1.85	0.57
46:BZ:53:VAL:HG22	46:BZ:74:VAL:HG23	1.87	0.57
24:BA:857:C:H4'	45:B3:23:VAL:HG21	1.86	0.57
12:CO:34:ARG:HG2	12:CO:35:GLY:H	1.70	0.57
1:AA:328:C:H4'	1:AA:329:A:H5'	1.86	0.57
17:CT:81:ARG:NH2	17:CT:83:ASP:OD2	2.37	0.57
34:DO:62:LEU:CD1	53:D8:25:MET:CA	2.81	0.57
22:CD:76:A:O2'	24:DA:2394:C:N3	2.22	0.57
24:BA:2612:C:H3'	50:B5:3:LYS:HE2	1.85	0.57
24:BA:1063:G:H2'	24:BA:1064:C:O4'	2.04	0.57
24:DA:1021:A:H62	24:DA:1141:U:H3	1.52	0.57
22:AD:7:G:N2	22:AD:67:C:O2	2.38	0.57
1:CA:1014:A:H2'	1:CA:1015:A:C8	2.40	0.57
30:DH:92:ILE:HG22	30:DH:93:GLY:N	2.18	0.57
1:CA:1105:A:H2'	1:CA:1106:G:H8	1.69	0.57
1:AA:1304:G:N1	1:AA:1332:A:OP2	2.37	0.57
40:D2:85:LYS:HE3	40:D2:87:HIS:CD2	2.40	0.57
14:CQ:40:CYS:O	14:CQ:42:ILE:N	2.38	0.57
2:CE:218:ALA:O	2:CE:222:ILE:N	2.35	0.57
24:DA:1534:G:H2'	24:DA:1537:C:N4	2.19	0.57
24:BA:874:G:H1	24:BA:903:C:H42	1.52	0.57
35:DP:21:THR:H	35:DP:98:LYS:HB2	1.70	0.57
24:BA:2298:A:H2'	24:BA:2299:G:O4'	2.05	0.57
17:AT:99:SER:O	17:AT:101:ARG:N	2.37	0.57
27:BE:28:ALA:HB3	27:BE:93:VAL:HG12	1.87	0.57
46:BZ:65:SER:OG	46:BZ:66:HIS:N	2.38	0.57
16:CS:57:ARG:HA	16:CS:60:LEU:HD12	1.87	0.57
4:CG:23:GLY:O	4:CG:24:GLU:C	2.43	0.56
24:DA:2394:C:OP1	34:DO:63:PRO:HG2	2.04	0.56
24:BA:2791:C:O2	24:BA:2807:G:N2	2.38	0.56
32:BM:15:LEU:HD21	32:BM:128:HIS:NE2	2.16	0.56
29:DG:112:PRO:HA	29:DG:117:PHE:HD2	1.70	0.56
30:BH:113:VAL:HG21	30:BH:151:ILE:HG21	1.87	0.56
1:CA:1140:C:H2'	1:CA:1141:C:C6	2.39	0.56
24:DA:2532:G:O2'	24:DA:2657:A:N1	2.37	0.56
41:DS:59:VAL:HA	41:DS:64:MET:H	1.70	0.56
1:AA:1285:A:H4'	1:AA:1286:A:O5'	2.05	0.56
25:DB:15:A:H5'	25:DB:16:G:H8	1.69	0.56
24:BA:2370:G:N2	51:B6:40:CYS:SG	2.78	0.56
19:CV:83:HIS:O	19:CV:83:HIS:ND1	2.38	0.56
37:BQ:88:ASP:OD1	37:BQ:90:GLY:N	2.32	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:247:G:H4'	24:DA:386:G:C5	2.40	0.56
12:AO:71:PRO:O	12:AO:102:ARG:NH1	2.38	0.56
24:DA:2401:U:H3'	24:DA:2402:C:H5''	1.87	0.56
39:D1:92:ARG:HD2	40:D2:11:GLN:HB2	1.86	0.56
24:DA:2168:G:H1	24:DA:2170:A:H8	1.53	0.56
1:CA:1029:G:O2'	1:CA:1031:G:OP2	2.23	0.56
30:DH:69:ARG:NH1	30:DH:69:ARG:O	2.30	0.56
1:AA:737:A:H2'	1:AA:738:C:C6	2.40	0.56
24:BA:2010:G:H5''	41:BS:42:ARG:HB2	1.87	0.56
1:AA:1368:G:OP1	9:AL:111:ARG:NH2	2.37	0.56
24:DA:2401:U:H2'	24:DA:2402:C:C6	2.40	0.56
24:DA:1155:A:O3'	39:D1:55:ARG:NH1	2.38	0.56
10:AM:78:ASN:HB2	10:AM:81:THR:HG23	1.86	0.56
1:CA:452:A:O2'	1:CA:453:A:O4'	2.23	0.56
24:DA:2015:A:H1'	50:D5:2:ALA:HA	1.87	0.56
10:AM:4:ILE:HB	10:AM:74:ILE:HG13	1.87	0.56
47:BW:8:LYS:HA	47:BW:11:GLU:HG2	1.87	0.56
24:BA:588:U:H1'	28:BF:90:PHE:HB3	1.87	0.56
13:AP:65:LYS:HE3	13:AP:69:GLU:HG2	1.87	0.56
39:D1:92:ARG:O	39:D1:94:ASN:N	2.38	0.56
4:CG:33:MET:O	4:CG:34:GLU:C	2.44	0.56
4:CG:36:ARG:HA	4:CG:38:TYR:CE2	2.40	0.56
4:AG:24:GLU:O	4:AG:28:SER:N	2.38	0.56
27:DE:63:LEU:C	27:DE:64:LYS:HG2	2.25	0.56
34:DO:48:PRO:O	34:DO:51:PHE:N	2.39	0.56
24:DA:2163:C:H5''	24:DA:2171:A:H8	1.68	0.56
20:AW:100:ILE:HG12	20:AW:102:GLY:H	1.71	0.56
2:CE:6:THR:OG1	2:CE:7:VAL:N	2.36	0.56
24:BA:1068:G:O2'	24:BA:1070:A:N7	2.38	0.56
46:BZ:86:SER:O	46:BZ:89:GLU:N	2.34	0.56
24:BA:2164:C:H3'	24:BA:2165:G:H8	1.71	0.56
19:CV:12:ASP:OD1	19:CV:37:ARG:NE	2.39	0.56
24:DA:2747:G:O6	24:DA:2755:C:H5''	2.05	0.56
22:CD:65:C:H2'	22:CD:66:C:C6	2.40	0.56
20:CW:64:ASP:OD1	20:CW:81:LYS:HD2	2.05	0.56
1:AA:1157:A:O2'	1:AA:1181:G:N2	2.38	0.56
1:AA:1121:U:O4	1:AA:1151:A:N6	2.38	0.56
1:AA:191:G:O2'	20:AW:101:GLY:O	2.20	0.56
1:CA:1057:G:OP1	3:CF:154:SER:OG	2.22	0.56
24:DA:587:C:OP2	34:DO:21:ARG:NH2	2.39	0.56
24:DA:300:A:OP1	43:DU:84:ARG:NH2	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CQ:4:LYS:HA	14:CQ:7:ILE:HG12	1.86	0.56
24:BA:1607:C:H4'	24:BA:1608:A:O5'	2.05	0.56
24:DA:654(D):G:H1	24:DA:654(Q):C:N4	2.04	0.56
24:DA:274:G:H2'	24:DA:275:G:C8	2.39	0.56
13:AP:33:ALA:HA	13:AP:36:LYS:HB2	1.86	0.56
28:BF:11:VAL:HG22	28:BF:125:LEU:HB2	1.87	0.56
24:BA:533:G:H5'	39:B1:24:TYR:CD1	2.40	0.56
24:DA:2576:G:O2'	24:DA:2579:C:OP2	2.18	0.56
37:DQ:61:ASN:OD1	37:DQ:64:GLU:N	2.35	0.56
29:DG:72:ARG:NE	29:DG:85:GLY:O	2.35	0.56
31:BK:77:LEU:HA	31:BK:105:HIS:CE1	2.41	0.56
24:BA:1427:A:H4'	24:BA:1428:C:O5'	2.05	0.56
24:BA:242:G:H5'	53:B8:62:LEU:HD13	1.86	0.56
1:AA:1104:G:OP1	2:AE:144:ARG:NH2	2.30	0.56
24:DA:796:C:H2'	24:DA:797:C:C6	2.40	0.56
24:BA:740:U:H2'	24:BA:741:G:C8	2.40	0.56
16:CS:20:VAL:HG21	16:CS:32:TYR:CG	2.40	0.56
30:DH:42:ARG:NH2	30:DH:43:VAL:O	2.38	0.56
17:CT:43:LEU:HD12	17:CT:68:ARG:HG2	1.86	0.56
24:BA:4:C:H2'	24:BA:5:A:C8	2.40	0.56
28:DF:5:ALA:O	28:DF:7:TYR:N	2.38	0.56
24:DA:1085:A:O2'	24:DA:1086:A:H8	1.88	0.56
24:DA:2277:G:OP2	45:D3:12:ASN:ND2	2.39	0.56
24:DA:1022:G:H22	24:DA:1142(A):A:H2	1.50	0.56
22:AD:8:U:H4'	22:AD:48:C:H4'	1.88	0.56
24:BA:2119:A:N1	24:BA:2170:A:C6	2.74	0.56
27:BE:37:ARG:NH1	27:BE:42:ASP:OD1	2.37	0.56
1:AA:76:G:H2'	1:AA:77:C:H5'	1.87	0.56
24:DA:2318:G:N2	37:DQ:3:ARG:HB2	2.20	0.56
24:DA:300:A:O2'	24:DA:318:C:O2	2.23	0.56
24:BA:627:A:N1	24:BA:636:G:O2'	2.35	0.56
26:DD:108:PRO:HD2	26:DD:111:LEU:HG	1.86	0.56
48:DX:19:GLN:HE22	48:DX:52:HIS:CE1	2.24	0.56
46:DZ:18:ILE:HG12	46:DZ:37:ILE:HG13	1.87	0.56
24:BA:987:G:O2'	24:BA:1000:A:N3	2.34	0.56
1:CA:553:A:O2'	12:CO:29:GLY:O	2.23	0.56
1:AA:881:G:OP2	12:AO:12:ARG:NH2	2.34	0.56
1:AA:513:C:H42	1:AA:538:G:H1	1.53	0.56
27:BE:59:VAL:CG1	27:BE:60:ASN:N	2.45	0.56
49:D4:41:PRO:O	49:D4:42:PHE:HB3	2.05	0.56
24:DA:286:C:H2'	24:DA:287:C:H6	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1069:A:H5''	24:BA:1070:A:OP1	2.05	0.56
1:CA:974:A:OP2	14:CQ:41:ARG:NH1	2.39	0.56
24:DA:1533:C:C2	24:DA:1534:G:H1'	2.40	0.56
44:BV:121:HIS:ND1	44:BV:169:GLU:OE1	2.37	0.56
24:BA:1264:G:OP1	50:B5:19:ARG:NH2	2.27	0.56
43:DU:68:HIS:HB3	43:DU:71:LYS:HG3	1.87	0.56
24:BA:533:G:H5'	39:B1:24:TYR:CE1	2.41	0.56
24:DA:1871:A:H2'	24:DA:1872:A:C8	2.40	0.56
24:BA:2051:A:H4'	27:BE:141:ILE:HG12	1.85	0.56
40:B2:28:GLU:O	40:B2:30:GLY:N	2.39	0.56
44:BV:16:SER:O	44:BV:20:ARG:NH1	2.38	0.56
20:AW:47:GLY:O	20:AW:49:ALA:N	2.37	0.56
1:CA:73:G:H1	1:CA:97:U:H3	1.51	0.56
44:BV:63:ASP:HB3	44:BV:65:GLN:HG3	1.87	0.56
24:DA:1070:A:H2'	24:DA:1096:A:N3	2.20	0.56
24:DA:1093:G:H1'	24:DA:1099:G:C2	2.41	0.56
24:DA:1046:A:H5''	24:DA:1047:G:H5'	1.87	0.56
1:AA:91:C:H2'	1:AA:92:G:O4'	2.05	0.56
40:B2:25:LEU:H	40:B2:92:THR:HG21	1.70	0.56
13:CP:107:ALA:HB3	13:CP:111:LYS:HE2	1.86	0.56
1:CA:345:C:OP2	38:DR:39:ARG:NH2	2.31	0.56
44:BV:52:SER:O	44:BV:54:HIS:N	2.38	0.56
35:BP:75:THR:HB	35:BP:89:ASN:H	1.70	0.56
51:B6:15:GLU:OE2	51:B6:47:THR:OG1	2.23	0.56
24:BA:2566:A:H4'	24:BA:2567:G:O5'	2.05	0.56
37:BQ:83:LYS:O	37:BQ:109:GLY:HA2	2.06	0.56
31:DK:14:ASP:N	31:DK:17:GLN:OE1	2.39	0.56
24:DA:1164:G:H1	24:DA:1185:C:H42	1.54	0.56
35:DP:111:GLU:OE1	35:DP:133:ARG:NH2	2.39	0.56
41:DS:29:LEU:O	41:DS:33:ARG:HG3	2.05	0.56
7:CJ:95:ARG:HH21	7:CJ:99:LEU:HD11	1.70	0.56
40:D2:37:VAL:HG21	40:D2:57:VAL:H	1.70	0.56
51:D6:44:ARG:HG3	51:D6:45:LYS:N	2.20	0.56
1:CA:1129:C:H42	1:CA:1141:C:H41	1.54	0.56
2:CE:54:THR:HG23	2:CE:199:TYR:HB3	1.87	0.56
26:DD:43:ARG:HD2	26:DD:44:ASN:CG	2.26	0.56
1:CA:988:G:H5'	1:CA:989:C:OP2	2.05	0.56
24:DA:654(B):C:N4	24:DA:654(S):G:O6	2.25	0.56
1:CA:1291:G:OP1	7:CJ:41:ARG:NH2	2.39	0.56
1:AA:453:A:O2'	16:AS:68:ASP:O	2.23	0.56
5:AH:91:LEU:HD12	5:AH:120:THR:HG22	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DK:72:LEU:O	31:DK:74:ASN:N	2.39	0.56
38:BR:78:LEU:HB3	38:BR:79:HIS:CD2	2.41	0.56
27:BE:128:SER:OG	27:BE:129:HIS:N	2.36	0.56
27:DE:14:ILE:HD11	27:DE:173:VAL:HG11	1.86	0.56
47:DW:15:LYS:HA	47:DW:67:LYS:HD2	1.86	0.56
1:AA:870:U:H4'	1:AA:871:U:H5''	1.87	0.56
48:BX:12:PRO:O	48:BX:20:LYS:NZ	2.38	0.56
24:DA:67:U:N3	24:DA:74:A:H2	2.03	0.56
30:BH:25:LYS:NZ	30:BH:34:GLU:OE1	2.38	0.56
24:BA:2397:G:H5''	46:BZ:28:GLY:HA2	1.86	0.56
27:DE:11:MET:HE3	27:DE:24:THR:HG23	1.86	0.56
27:DE:51:PHE:CE2	27:DE:52:LEU:HG	2.40	0.56
27:DE:71:GLY:O	27:DE:73:GLU:HG2	2.06	0.56
1:CA:1014:A:H4'	19:CV:14:HIS:CG	2.41	0.56
35:DP:24:GLY:HA2	35:DP:101:ARG:HD2	1.86	0.56
44:DV:89:PHE:O	44:DV:91:LEU:N	2.39	0.56
1:CA:1226:C:O2	19:CV:83:HIS:NE2	2.36	0.56
30:BH:90:LYS:HD3	30:BH:159:GLU:OE2	2.04	0.56
1:AA:533:A:O2'	1:AA:535:A:OP2	2.18	0.56
24:DA:2147:G:H2'	24:DA:2148:G:O4'	2.05	0.56
24:BA:545:G:H2'	24:BA:546:C:H5''	1.87	0.56
24:BA:910:A:N7	35:BP:13:GLN:HG3	2.19	0.56
40:D2:33:VAL:N	40:D2:59:ALA:O	2.35	0.56
31:DK:125:GLU:HB2	31:DK:141:LYS:HD3	1.88	0.56
24:DA:1131:G:O6	24:DA:2040:C:H1'	2.06	0.56
3:CF:111:LEU:HD11	3:CF:145:GLY:HA3	1.88	0.56
13:AP:91:ARG:HB2	13:AP:98:VAL:HG13	1.88	0.56
2:AE:6:THR:O	2:AE:217:ARG:NH2	2.39	0.56
26:DD:34:VAL:CG2	26:DD:35:LYS:HZ2	1.79	0.56
35:BP:66:ILE:O	35:BP:67:ARG:CG	2.53	0.56
24:DA:2173:A:N6	24:DA:2174:C:O2'	2.38	0.56
1:AA:1147:C:C2	9:AL:16:ARG:NH2	2.73	0.56
22:CD:21:A:H2	22:CD:48:C:C5	2.24	0.56
24:DA:2777:G:OP2	24:DA:2781:A:O2'	2.19	0.56
24:BA:2864:G:OP1	38:BR:119:LYS:HD2	2.06	0.56
24:BA:1533:C:H2'	24:BA:1534:G:C8	2.41	0.56
24:BA:630:G:N2	24:BA:633:A:OP2	2.35	0.56
28:DF:53:THR:HG22	28:DF:56:GLU:HG3	1.88	0.56
1:AA:95:G:H3'	1:AA:96:G:H8	1.69	0.56
1:AA:1149:C:H2'	1:AA:1150:U:H6	1.71	0.56
1:CA:501:C:OP1	12:CO:117:ARG:NH2	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1347:G:H22	1:AA:1374:A:P	2.28	0.56
2:CE:178:ARG:NH1	2:CE:196:LEU:O	2.32	0.56
32:DM:128:HIS:NE2	32:DM:134:ARG:HD3	2.21	0.56
19:CV:22:LEU:HD22	19:CV:30:LEU:HD11	1.88	0.56
43:DU:68:HIS:H	43:DU:71:LYS:HZ3	1.53	0.56
44:BV:30:ASN:HA	44:BV:89:PHE:HE1	1.71	0.56
24:DA:2046:G:H5'	50:D5:19:ARG:HG3	1.88	0.56
24:DA:1936:A:OP2	24:DA:1962:C:N4	2.35	0.56
10:AM:35:SER:N	10:AM:73:ASP:O	2.38	0.56
6:AI:82:ARG:HB2	6:AI:85:VAL:HG23	1.88	0.56
5:CH:43:LEU:O	5:CH:65:ASN:ND2	2.33	0.56
37:BQ:92:TYR:HB2	37:BQ:98:VAL:HG11	1.88	0.56
24:DA:1279:G:H4'	36:D0:31:HIS:CD2	2.40	0.56
24:BA:2882:A:OP1	36:B0:96:ARG:NH1	2.39	0.56
24:BA:1335:U:OP2	42:BT:65:ARG:NH2	2.37	0.56
19:CV:53:ASN:ND2	19:CV:56:GLN:O	2.39	0.56
38:DR:129:ARG:HA	38:DR:132:LYS:HB2	1.88	0.56
24:DA:771:G:OP1	52:D7:10:ARG:NH1	2.39	0.56
1:CA:1132:C:H2'	1:CA:1133:G:C8	2.41	0.56
1:CA:1131:G:H2'	1:CA:1132:C:H6	1.71	0.56
22:CD:60:U:H3'	22:CD:61:C:C6	2.41	0.56
24:BA:2347:C:O5'	51:B6:39:TYR:OH	2.23	0.56
1:AA:590:C:P	8:AK:30:ARG:HH12	2.28	0.56
2:AE:162:ILE:HD11	2:AE:184:VAL:HG22	1.88	0.56
39:B1:92:ARG:CZ	40:B2:11:GLN:H	2.19	0.56
5:AH:147:ASP:HA	5:AH:150:ARG:HH12	1.70	0.56
24:DA:872:A:P	35:DP:5:ARG:HH22	2.29	0.56
24:BA:617:G:OP2	28:BF:43:LYS:NZ	2.34	0.56
13:AP:2:ALA:HA	13:AP:9:ILE:HG23	1.88	0.56
24:BA:1414:G:H1	24:BA:1588:C:H42	1.52	0.56
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.88	0.56
4:CG:190:ASP:OD1	4:CG:191:ARG:N	2.39	0.56
42:DT:53:LYS:HB3	42:DT:82:GLN:HB3	1.88	0.56
2:AE:82:ARG:HB2	2:AE:94:ASN:HD22	1.71	0.56
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.21	0.56
32:BM:35:ARG:O	32:BM:37:LYS:N	2.39	0.56
40:B2:14:VAL:HB	40:B2:96:ILE:HG13	1.87	0.56
32:DM:104:LYS:HA	32:DM:107:LEU:HD12	1.88	0.56
24:DA:2355:C:H1'	45:D3:39:ARG:HH21	1.71	0.56
24:BA:523:C:O2	24:BA:553:U:O2'	2.20	0.56
24:DA:480:A:OP2	43:DU:46:LYS:HD2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CO:24:VAL:HG12	12:CO:26:ALA:HB2	1.87	0.56
28:BF:197:ASP:OD1	28:BF:197:ASP:N	2.39	0.56
4:AG:98:GLU:HG3	4:AG:103:ASN:HD21	1.71	0.56
4:AG:22:LYS:HB2	4:AG:26:CYS:HB2	1.88	0.55
24:BA:1059:G:H2'	24:BA:1060:U:C5	2.41	0.55
19:CV:46:GLY:HA2	19:CV:61:TYR:CE1	2.42	0.55
24:BA:638:G:C5	24:BA:651:G:C2	2.95	0.55
24:BA:1479:G:H2'	24:BA:1480:G:H8	1.70	0.55
24:BA:1154:G:OP2	39:B1:58:ARG:NH2	2.39	0.55
13:CP:57:ARG:HG3	13:CP:61:GLU:HG3	1.87	0.55
12:AO:117:ARG:NH2	12:AO:124:LYS:HB2	2.21	0.55
4:CG:61:LYS:HD3	4:CG:62:GLN:HG2	1.88	0.55
24:DA:620:G:H4'	24:DA:621:A:H5''	1.88	0.55
24:DA:654(H):G:H3'	24:DA:654(I):C:C5'	2.36	0.55
7:CJ:16:LEU:HD12	9:CL:41:VAL:HG12	1.87	0.55
8:AK:9:MET:HG3	8:AK:26:VAL:HG21	1.86	0.55
24:DA:1638:C:O2	24:DA:2698:U:O2'	2.19	0.55
6:CI:36:ARG:NH2	6:CI:66:GLU:OE1	2.39	0.55
1:CA:33:A:O2'	1:CA:363:A:N3	2.38	0.55
44:BV:127:LYS:HE2	44:BV:161:VAL:HG11	1.88	0.55
24:BA:1844:C:H5''	26:BD:258:LYS:HG3	1.88	0.55
44:DV:106:GLY:HA3	44:DV:140:ASP:HB3	1.88	0.55
3:AF:148:GLY:HA3	3:AF:172:ARG:O	2.06	0.55
24:BA:141:A:H8	24:BA:1595:G:H21	1.55	0.55
1:CA:731:G:OP1	1:CA:766:A:H1'	2.06	0.55
3:CF:24:ALA:HB1	3:CF:28:GLN:HB2	1.88	0.55
27:DE:71:GLY:C	27:DE:73:GLU:N	2.59	0.55
27:DE:63:LEU:HD22	27:DE:73:GLU:HG3	1.88	0.55
43:DU:56:PRO:O	43:DU:57:GLN:CB	2.41	0.55
34:BO:64:LYS:HB2	53:B8:25:MET:HG2	1.88	0.55
1:AA:1003:G:N2	1:AA:1005:A:O5'	2.39	0.55
22:AD:17:C:N4	22:AD:19:G:OP1	2.39	0.55
1:CA:979:C:O2'	1:CA:1220:G:OP2	2.24	0.55
14:CQ:21:TYR:HE1	14:CQ:23:ARG:HE	1.52	0.55
24:DA:2801:A:H2'	24:DA:2802:G:C4'	2.36	0.55
24:DA:2666:C:H42	30:DH:152:ARG:HH22	1.54	0.55
44:DV:127:LYS:NZ	44:DV:162:GLU:OE2	2.39	0.55
24:BA:2133:G:H2'	24:BA:2157:G:N2	2.21	0.55
1:AA:186(B):C:O4'	20:AW:89:ARG:NH2	2.38	0.55
26:DD:31:LYS:HZ2	26:DD:94:LEU:HD11	1.70	0.55
44:DV:76:LEU:H	44:DV:76:LEU:HD23	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BN:80:ASP:OD2	38:BR:64:ARG:NH2	2.37	0.55
24:BA:2655:G:O2'	24:BA:2664:G:O6	2.20	0.55
24:BA:1748:G:H2'	24:BA:1749:A:C8	2.42	0.55
1:CA:200:G:H1	1:CA:217:C:H42	1.52	0.55
39:B1:88:ILE:HD11	39:B1:112:ARG:HD3	1.88	0.55
17:AT:19:VAL:HG23	17:AT:44:ALA:HB3	1.88	0.55
1:CA:1366:C:O2'	10:CM:60:ARG:NH2	2.38	0.55
4:CG:22:LYS:H	4:CG:26:CYS:HB3	1.69	0.55
24:DA:93:C:C4'	43:DU:54:LYS:NZ	2.69	0.55
26:DD:44:ASN:OD1	26:DD:44:ASN:N	2.37	0.55
19:AV:68:GLY:N	49:B4:55:ARG:HH22	1.98	0.55
2:AE:84:GLU:OE1	2:AE:87:ARG:NH2	2.35	0.55
19:CV:29:ARG:HB3	19:CV:48:THR:OG1	2.07	0.55
20:CW:100:ILE:C	20:CW:102:GLY:H	2.10	0.55
40:D2:84:LYS:HB2	40:D2:84:LYS:HZ2	1.71	0.55
16:AS:20:VAL:HG21	16:AS:32:TYR:CD2	2.40	0.55
1:CA:537:G:H5''	12:CO:113:ARG:NH1	2.22	0.55
8:AK:121:ASP:HB2	8:AK:125:ARG:HH21	1.71	0.55
37:DQ:105:ALA:O	37:DQ:107:GLU:N	2.39	0.55
1:CA:1342:C:H4'	9:CL:125:TYR:HB3	1.87	0.55
1:CA:448:A:H2'	1:CA:449:C:O2	2.05	0.55
24:BA:1268:A:H2'	24:BA:1269:A:O4'	2.06	0.55
1:CA:677:U:H3	1:CA:713:G:H22	1.54	0.55
6:AI:69:GLU:O	6:AI:72:VAL:HG12	2.06	0.55
1:CA:928:G:O2'	1:CA:1533:C:OP1	2.24	0.55
34:BO:83:VAL:HG12	34:BO:112:LEU:HD21	1.87	0.55
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.41	0.55
24:BA:817:C:O2'	24:BA:839:U:OP1	2.13	0.55
24:DA:2584:U:H2'	24:DA:2585:U:C6	2.41	0.55
44:DV:5:LEU:HD21	44:DV:39:VAL:HB	1.87	0.55
9:CL:114:TYR:HE2	10:CM:59:SER:HA	1.71	0.55
24:BA:2557:G:H2'	24:BA:2558:C:C6	2.41	0.55
40:D2:53:GLU:O	40:D2:55:ALA:N	2.36	0.55
26:DD:69:ARG:C	26:DD:71:ASP:N	2.60	0.55
28:DF:28:ILE:HD12	28:DF:119:ARG:NE	2.21	0.55
1:CA:1142:G:H3'	1:CA:1143:G:C8	2.40	0.55
22:CD:16:C:OP1	22:CD:20:U:N3	2.28	0.55
1:CA:1002:G:H2'	1:CA:1003:G:C8	2.42	0.55
27:DE:21:VAL:HG12	27:DE:22:PRO:N	2.22	0.55
13:AP:80:ARG:NH1	19:AV:65:ASN:O	2.39	0.55
24:BA:1062:G:N2	24:BA:1088:A:N1	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1219:U:O2'	19:CV:34:TRP:HB3	2.06	0.55
1:AA:1226:C:O2'	13:AP:111:LYS:NZ	2.40	0.55
44:DV:157:LEU:HD12	44:DV:161:VAL:HA	1.88	0.55
26:BD:69:ARG:HD3	26:BD:105:ILE:HD11	1.87	0.55
6:AI:12:PRO:O	6:AI:14:LEU:N	2.39	0.55
38:DR:3:ARG:CZ	38:DR:6:LEU:HD13	2.37	0.55
4:AG:88:VAL:O	4:AG:90:GLY:N	2.39	0.55
24:DA:654(H):G:H3'	24:DA:654(I):C:H5''	1.88	0.55
16:AS:49:LEU:HD12	16:AS:50:LYS:H	1.70	0.55
44:DV:113:ALA:O	44:DV:115:GLY:N	2.39	0.55
24:DA:1403:C:OP1	24:DA:1522:G:N2	2.35	0.55
24:BA:2533:A:H2'	24:BA:2534:A:O4'	2.06	0.55
1:AA:419:C:H5'	1:AA:420:U:OP2	2.07	0.55
20:AW:55:ILE:O	20:AW:59:ALA:N	2.25	0.55
48:DX:18:ASP:OD1	48:DX:18:ASP:N	2.32	0.55
24:DA:863:A:H2'	24:DA:864:G:C8	2.42	0.55
35:BP:68:ILE:O	35:BP:69:PHE:HB2	2.06	0.55
24:DA:2286:A:H4'	24:DA:2287:A:O4'	2.06	0.55
34:DO:47:ASP:N	34:DO:48:PRO:HA	2.20	0.55
28:DF:63:LYS:HZ3	28:DF:67:GLN:HE21	1.55	0.55
25:DB:18:G:H1	25:DB:65:C:N4	1.91	0.55
24:BA:1068:G:O2'	24:BA:1070:A:N6	2.40	0.55
24:BA:1069:A:H4'	24:BA:1070:A:O5'	2.06	0.55
1:CA:1292:U:H2'	1:CA:1293:G:C8	2.42	0.55
24:BA:724:U:H2'	24:BA:725:G:O4'	2.06	0.55
1:CA:177:C:OP1	20:CW:65:LYS:NZ	2.34	0.55
1:AA:833:U:H3	1:AA:853:G:H1	1.54	0.55
5:CH:60:TYR:O	5:CH:64:ARG:NH1	2.39	0.55
28:DF:126:VAL:O	28:DF:196:LEU:N	2.39	0.55
24:DA:1657:C:H2'	24:DA:1658:C:H6	1.71	0.55
24:BA:2086:U:H2'	24:BA:2087:G:C8	2.41	0.55
24:BA:2093:G:H1	24:BA:2196:C:H42	1.54	0.55
1:CA:328:C:H4'	1:CA:329:A:H5'	1.88	0.55
27:DE:11:MET:SD	27:DE:24:THR:HG21	2.38	0.55
27:DE:9:VAL:HG13	27:DE:26:ILE:O	2.06	0.55
51:D6:19:ARG:HH21	51:D6:52:VAL:CG1	2.18	0.55
24:BA:2418:A:OP2	53:B8:29:LYS:NZ	2.30	0.55
25:DB:42:C:O2	29:DG:93:THR:N	2.39	0.55
24:BA:1479:G:N7	24:BA:1510:A:N6	2.54	0.55
1:AA:452:A:H62	1:AA:480:U:H3	1.54	0.55
24:DA:483:A:H4'	43:DU:49:VAL:HA	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:B1:78:THR:OG1	39:B1:79:PHE:N	2.39	0.55
38:BR:57:PHE:O	38:BR:58:ASN:ND2	2.39	0.55
1:AA:1251:A:N3	1:AA:1369:C:O2'	2.39	0.55
17:AT:15:MET:HB3	17:AT:18:THR:HB	1.89	0.55
24:DA:1883:G:HO2'	24:DA:1884:A:H8	1.54	0.55
1:CA:627:G:H2'	1:CA:628:G:C8	2.42	0.55
3:AF:52:LEU:HD23	3:AF:52:LEU:H	1.72	0.55
24:BA:2848:G:C8	38:BR:97:ALA:HB2	2.41	0.55
45:D3:71:ASP:OD1	45:D3:72:ARG:N	2.39	0.55
30:BH:70:THR:O	30:BH:74:ASN:ND2	2.40	0.55
50:D5:46:CYS:SG	50:D5:48:GLU:HG2	2.46	0.55
4:AG:150:GLU:HA	4:AG:153:ARG:HG2	1.87	0.55
30:DH:34:GLU:OE1	30:DH:34:GLU:N	2.34	0.55
11:AN:126:ARG:O	11:AN:128:ALA:N	2.40	0.55
2:CE:58:ILE:O	2:CE:62:ALA:N	2.32	0.55
4:CG:22:LYS:CG	4:CG:26:CYS:HB3	2.18	0.55
12:AO:47:LYS:O	12:AO:48:PRO:C	2.44	0.55
1:AA:1007:C:N4	1:AA:1022:G:O6	2.20	0.55
24:BA:2148:G:H2'	24:BA:2149:G:C8	2.41	0.55
30:DH:60:ARG:O	30:DH:63:SER:OG	2.20	0.55
24:DA:83:G:N2	24:DA:103:A:OP2	2.36	0.55
26:DD:25:THR:CG2	26:DD:82:ILE:H	2.16	0.55
28:DF:185:ASP:OD1	28:DF:188:ARG:NH2	2.37	0.55
37:BQ:26:LEU:HD11	37:BQ:73:LEU:HD13	1.89	0.55
25:DB:24:G:H4'	25:DB:25:A:C8	2.42	0.55
24:DA:2873:A:H8	36:D0:6:SER:N	2.03	0.55
24:DA:782:A:N7	26:DD:221:VAL:HG21	2.21	0.55
40:D2:85:LYS:HE3	40:D2:87:HIS:HD2	1.72	0.55
24:BA:279:C:N4	24:BA:361:G:H1	2.04	0.55
40:B2:25:LEU:HD11	40:B2:94:LEU:HD11	1.89	0.55
34:DO:85:LEU:HB3	34:DO:114:ILE:HD11	1.89	0.55
24:BA:529:A:H4'	24:BA:530:G:H5'	1.87	0.55
25:DB:8:U:O3'	37:DQ:25:ARG:NH2	2.37	0.55
12:AO:24:VAL:HB	12:AO:27:LEU:HD12	1.89	0.55
1:CA:1373:G:OP1	9:CL:42:ARG:NH1	2.38	0.55
2:CE:116:GLU:O	2:CE:120:ALA:N	2.38	0.55
1:CA:200:G:H1	1:CA:217:C:N4	2.04	0.55
28:DF:125:LEU:H	28:DF:125:LEU:HD23	1.72	0.55
2:AE:230:VAL:HG12	2:AE:231:GLU:H	1.72	0.55
41:DS:41:LYS:HD2	50:D5:25:LEU:HD11	1.88	0.55
26:DD:72:LYS:NZ	26:DD:99:ASP:OD2	2.35	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:22:GLY:O	30:DH:37:VAL:N	2.40	0.55
34:DO:101:VAL:HG23	34:DO:106:LEU:HD23	1.88	0.55
24:BA:297:C:H5''	43:BU:85:VAL:CG2	2.36	0.55
27:DE:66:HIS:CG	27:DE:67:PHE:CA	2.88	0.55
49:D4:39:CYS:O	49:D4:40:HIS:CG	2.60	0.55
1:CA:1279:A:O2'	1:CA:1281:U:OP2	2.14	0.55
22:AD:62:C:H2'	22:AD:63:G:C8	2.42	0.55
1:CA:1152:A:O3'	10:CM:13:HIS:NE2	2.40	0.55
7:CJ:43:PHE:O	7:CJ:47:CYS:N	2.36	0.55
24:DA:1427:A:H4'	24:DA:1428:C:O5'	2.06	0.55
1:AA:67:C:H2'	1:AA:68:G:H8	1.71	0.55
24:BA:528:A:N1	24:BA:2042:A:H2'	2.22	0.55
24:DA:1434:A:H61	24:DA:1558:A:N6	2.04	0.55
35:BP:75:THR:HG21	35:BP:87:LYS:HE3	1.88	0.55
1:AA:1368:G:H5''	9:AL:112:LYS:HB3	1.89	0.55
1:CA:529:G:O6	12:CO:49:ASN:ND2	2.39	0.55
29:DG:170:ARG:HH22	29:DG:182:LYS:HD3	1.70	0.55
11:CN:20:TYR:CZ	11:CN:83:ILE:HD12	2.42	0.55
1:CA:811:C:O2'	1:CA:901:A:N1	2.38	0.55
34:DO:79:ARG:NE	34:DO:109:GLY:O	2.38	0.55
44:BV:29:TYR:HE1	44:BV:87:ASP:HB2	1.72	0.55
24:BA:2561:A:H2	33:BN:23:ARG:NH1	2.05	0.55
4:AG:154:ASN:OD1	4:AG:154:ASN:N	2.32	0.55
13:CP:92:HIS:CE1	13:CP:98:VAL:HG21	2.41	0.55
22:AD:8:U:H1'	22:AD:14:A:N6	2.22	0.55
1:AA:89:U:O2'	1:AA:90:C:O4'	2.24	0.55
7:CJ:113:GLU:HB2	7:CJ:119:ARG:HG2	1.89	0.55
30:DH:26:VAL:HG21	30:DH:76:VAL:HA	1.88	0.55
5:AH:64:ARG:O	5:AH:66:MET:N	2.39	0.55
1:AA:1059:C:O2	10:AM:53:PRO:HG3	2.07	0.55
24:DA:1771:C:HO2'	24:DA:1786:A:H8	1.55	0.55
35:BP:64:ILE:CG2	35:BP:65:PHE:H	2.19	0.55
24:BA:2636:U:OP1	27:BE:79:ARG:HA	2.06	0.55
27:DE:13:ARG:CB	27:DE:21:VAL:O	2.54	0.55
1:CA:957:U:H1'	1:CA:960:U:C5	2.42	0.55
14:AQ:24:CYS:SG	14:AQ:27:CYS:N	2.80	0.55
24:BA:2134:A:OP2	24:BA:2156:G:N1	2.40	0.55
24:BA:2186:G:H2'	24:BA:2187:G:C8	2.42	0.55
1:AA:131:C:HO2'	1:AA:262:A:HO2'	1.48	0.55
1:CA:352:C:O2'	1:CA:353:A:O5'	2.20	0.55
39:D1:75:ASN:HB2	39:D1:78:THR:HG23	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:41:GLN:NE2	29:BG:154:GLY:O	2.38	0.55
16:AS:26:ARG:NH1	16:AS:31:LYS:HB3	2.21	0.55
14:CQ:39:LEU:HD13	14:CQ:47:LEU:HD12	1.89	0.55
24:DA:2820:A:O2'	24:DA:2821:A:OP1	2.24	0.55
24:BA:1613:G:O2'	52:B7:3:ARG:NE	2.39	0.55
24:DA:1186:G:H2'	24:DA:1187:G:O4'	2.07	0.55
24:DA:1449(A):G:N2	24:DA:1462:C:N3	2.44	0.55
33:BN:73:ASP:N	33:BN:73:ASP:OD1	2.35	0.55
5:AH:36:ASP:OD2	5:AH:38:GLN:HB2	2.06	0.55
25:BB:90:C:H5'	35:BP:18:LYS:HA	1.88	0.55
27:DE:25:VAL:HG12	27:DE:26:ILE:N	2.22	0.54
43:BU:96:ILE:HG12	43:BU:99:CYS:H	1.71	0.54
24:DA:2345:G:OP2	51:D6:39:TYR:HA	2.07	0.54
29:DG:109:VAL:O	29:DG:113:ARG:HG3	2.07	0.54
1:CA:1256:A:N6	1:CA:1277:C:H3'	2.21	0.54
3:CF:70:VAL:O	3:CF:106:VAL:N	2.37	0.54
1:AA:1343:G:H4'	9:AL:122:ALA:HB3	1.89	0.54
1:AA:437:U:O2	4:AG:119:GLN:NE2	2.39	0.54
24:BA:1359:A:H2'	24:BA:1360:A:H5'	1.89	0.54
24:DA:1536:A:OP2	24:DA:1537:C:N4	2.40	0.54
27:DE:131:ALA:HB1	27:DE:135:HIS:HE1	1.72	0.54
1:CA:545:C:H5'	4:CG:72:GLU:HB2	1.89	0.54
24:BA:128:C:O2'	52:B7:49:ARG:NH1	2.28	0.54
38:BR:15:VAL:HG23	38:BR:79:HIS:CE1	2.42	0.54
1:AA:420:U:O2'	1:AA:423:G:O6	2.17	0.54
22:CD:70:G:H2'	22:CD:71:C:O4'	2.07	0.54
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.42	0.54
30:BH:122:THR:O	30:BH:134:SER:N	2.40	0.54
32:DM:93:THR:O	32:DM:94:HIS:ND1	2.41	0.54
1:AA:1115:C:H2'	1:AA:1116:C:H6	1.71	0.54
1:CA:736:C:H2'	1:CA:737:A:C8	2.42	0.54
1:AA:126:G:H4'	1:AA:634:C:H1'	1.87	0.54
43:BU:96:ILE:HD11	43:BU:98:VAL:HG12	1.88	0.54
24:DA:2784:C:O2	27:DE:37:ARG:NH2	2.40	0.54
1:CA:1145:C:H5''	1:CA:1146:A:OP1	2.07	0.54
24:BA:1062:G:H3'	24:BA:1063:G:C8	2.42	0.54
24:BA:1071:G:H3'	24:BA:1071:G:OP1	2.08	0.54
24:BA:1104:C:H2'	24:BA:1105:U:C6	2.42	0.54
24:BA:2148:G:H2'	24:BA:2149:G:H8	1.72	0.54
1:AA:67:C:H1'	1:AA:171:A:C2	2.42	0.54
1:AA:405:U:H5''	1:AA:495:A:C2	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:64:ILE:HG22	28:BF:65:TRP:CD1	2.42	0.54
24:BA:1009:A:OP2	32:BM:37:LYS:NZ	2.40	0.54
24:BA:1191:G:OP1	34:BO:32:THR:OG1	2.25	0.54
29:DG:5:VAL:HG11	29:DG:100:TRP:HB2	1.88	0.54
18:AU:17:SER:O	18:AU:18:ARG:NH1	2.40	0.54
29:DG:173:LEU:HB3	29:DG:178:PHE:CG	2.42	0.54
34:BO:49:ARG:HE	53:B8:58:ILE:HG22	1.73	0.54
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.42	0.54
24:DA:637:A:OP1	34:DO:133:SER:OG	2.14	0.54
24:BA:2173:A:OP2	24:BA:2173:A:H8	1.90	0.54
32:DM:34:LEU:O	32:DM:49:GLY:HA3	2.07	0.54
26:DD:145:VAL:HG13	26:DD:191:ALA:HB2	1.90	0.54
1:CA:409:G:H1	1:CA:433:C:N4	2.03	0.54
4:CG:22:LYS:NZ	4:CG:25:ARG:CG	2.53	0.54
27:DE:67:PHE:O	27:DE:67:PHE:CD2	2.60	0.54
24:BA:2790:A:H2	24:BA:2894:G:H5''	1.72	0.54
24:BA:2400:G:H2'	24:BA:2400:G:N3	2.20	0.54
1:CA:1023:G:O5'	1:CA:1024:G:N2	2.39	0.54
1:AA:1382:C:H2'	1:AA:1383:C:H6	1.73	0.54
47:BW:53:LEU:O	47:BW:57:ILE:HG13	2.06	0.54
24:BA:1074:G:H2'	24:BA:1075:C:C6	2.42	0.54
22:AD:8:U:H2'	22:AD:13:C:N4	2.21	0.54
25:DB:24:G:N2	25:DB:27:C:N3	2.40	0.54
24:BA:1175:U:O2	24:BA:1176:G:N2	2.39	0.54
9:AL:93:ARG:HD2	9:AL:97:LYS:HB2	1.88	0.54
10:AM:16:LEU:HD12	10:AM:70:ARG:HD2	1.89	0.54
1:CA:1054:C:O2'	1:CA:1055:A:OP2	2.22	0.54
24:DA:270(I):G:H2'	24:DA:270(J):G:H8	1.73	0.54
5:AH:54:ALA:HA	5:AH:57:LYS:HG2	1.89	0.54
26:DD:16:MET:HG3	26:DD:206:LEU:O	2.07	0.54
19:CV:63:THR:OG1	19:CV:65:ASN:OD1	2.24	0.54
24:BA:1486:A:H2'	24:BA:1487:G:C8	2.42	0.54
14:AQ:9:LYS:HA	14:AQ:12:ARG:HG2	1.90	0.54
1:CA:718:G:O6	18:CU:74:ARG:NH1	2.41	0.54
1:CA:1166:G:N2	1:CA:1170:A:OP2	2.40	0.54
52:B7:9:ARG:HH21	52:B7:47:ARG:HG3	1.70	0.54
24:BA:1209:G:H21	24:BA:1210:A:H62	1.55	0.54
24:BA:2246:G:H2'	24:BA:2247:A:H8	1.71	0.54
38:BR:131:ALA:O	38:BR:135:ALA:N	2.36	0.54
1:CA:667:G:H4'	15:CR:51:HIS:ND1	2.23	0.54
24:BA:1316:U:H2'	24:BA:1317:A:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2378:A:H4'	37:BQ:23:ARG:NH1	2.22	0.54
30:BH:154:PRO:HB3	30:BH:163:TYR:OH	2.07	0.54
24:BA:2791:C:N3	24:BA:2805:G:N1	2.52	0.54
24:DA:1070:A:H5'	24:DA:1071:G:H5''	1.89	0.54
24:BA:2146:C:H4'	24:BA:2147:G:C4	2.42	0.54
25:DB:55:U:H2'	25:DB:56:G:C8	2.42	0.54
24:DA:2798:C:OP1	24:DA:2801:A:N6	2.31	0.54
24:DA:2801:A:OP1	24:DA:2895:U:O2'	2.17	0.54
4:AG:119:GLN:HE21	4:AG:123:HIS:CD2	2.25	0.54
49:B4:24:THR:OG1	49:B4:25:TYR:N	2.38	0.54
24:DA:752:A:H3'	52:D7:1:MET:SD	2.46	0.54
24:DA:1856:G:N2	24:DA:1886:C:N3	2.50	0.54
8:CK:96:GLY:N	8:CK:99:GLU:OE2	2.40	0.54
24:DA:2815:C:H5'	50:D5:29:THR:HG21	1.89	0.54
25:DB:84:C:OP1	48:DX:15:TYR:OH	2.20	0.54
12:CO:83:VAL:HG21	12:CO:100:ILE:HD13	1.88	0.54
6:CI:25:ILE:HA	6:CI:28:ARG:HB2	1.89	0.54
1:CA:148:G:H1	1:CA:174:C:H42	1.55	0.54
1:AA:838:G:OP2	1:AA:842:C:N4	2.41	0.54
24:BA:2822:G:H5''	27:BE:159:HIS:NE2	2.23	0.54
24:DA:747:U:O2	24:DA:2014:A:H1'	2.07	0.54
3:AF:53:ALA:HB2	3:AF:115:LEU:HD11	1.88	0.54
34:DO:23:PRO:O	34:DO:25:SER:N	2.40	0.54
43:BU:89:PHE:HD2	43:BU:90:LEU:HD13	1.72	0.54
51:B6:18:ARG:O	51:B6:19:ARG:HB2	2.08	0.54
24:DA:1071:G:H2'	24:DA:1072:C:H6	1.72	0.54
1:CA:1106:G:H5''	3:CF:172:ARG:HG2	1.89	0.54
24:BA:270(K):C:HO2'	24:BA:270(L):U:H5	1.53	0.54
1:AA:452:A:O2'	1:AA:453:A:O4'	2.24	0.54
29:DG:10:LYS:HG2	29:DG:15:VAL:HG23	1.88	0.54
24:BA:2640:G:H1	24:BA:2774:C:H42	1.55	0.54
3:AF:98:ASN:O	3:AF:100:ALA:N	2.32	0.54
29:DG:97:ASP:HA	29:DG:100:TRP:HD1	1.71	0.54
34:DO:112:LEU:H	34:DO:128:HIS:CE1	2.25	0.54
39:B1:44:ASN:HD21	40:B2:75:PHE:H	1.56	0.54
24:BA:851:U:OP1	48:BX:49:LYS:NZ	2.39	0.54
24:DA:2887:U:H2'	24:DA:2888:C:H6	1.72	0.54
33:BN:63:VAL:HG11	33:BN:85:VAL:HG23	1.89	0.54
24:DA:861:A:N3	25:DB:79:C:O2'	2.35	0.54
24:BA:2801:A:OP1	24:BA:2895:U:O2'	2.24	0.54
34:DO:47:ASP:H	34:DO:48:PRO:HA	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BM:130:HIS:HB2	32:BM:134:ARG:CZ	2.37	0.54
49:D4:39:CYS:HB3	49:D4:41:PRO:CG	2.38	0.54
24:DA:1091:G:H2'	24:DA:1092:C:C6	2.42	0.54
1:AA:1022:G:H2'	1:AA:1023:G:O4'	2.07	0.54
1:AA:1037:C:H2'	1:AA:1038:C:C6	2.42	0.54
24:BA:1061:U:H1'	24:BA:1070:A:N3	2.23	0.54
46:BZ:87:PRO:O	46:BZ:91:LYS:HB2	2.08	0.54
24:BA:604:G:OP2	34:BO:90:ARG:NH2	2.39	0.54
4:CG:150:GLU:OE2	4:CG:150:GLU:N	2.35	0.54
4:CG:150:GLU:O	4:CG:152:SER:N	2.41	0.54
24:DA:547:A:H3'	24:DA:548:A:H8	1.72	0.54
1:AA:1202:G:O4'	14:AQ:29:ARG:NH1	2.41	0.54
37:BQ:26:LEU:HD23	37:BQ:87:PHE:HD1	1.72	0.54
43:BU:43:ASN:HA	43:BU:64:GLU:HA	1.89	0.54
24:DA:1114:G:H2'	24:DA:1115:G:C8	2.42	0.54
38:DR:65:LYS:HD2	38:DR:67:SER:HB2	1.90	0.54
20:AW:101:GLY:O	20:AW:103:GLY:N	2.31	0.54
1:AA:1373:G:O3'	7:AJ:36:LYS:NZ	2.40	0.54
16:AS:4:ILE:HD12	16:AS:66:PRO:HB3	1.90	0.54
24:DA:259:G:H21	24:DA:621:A:H8	1.56	0.54
24:BA:70:G:H21	24:BA:71:A:N6	2.05	0.54
37:DQ:65:VAL:HA	37:DQ:68:GLN:HG3	1.88	0.54
1:AA:538:G:H5''	12:AO:114:LYS:HB2	1.89	0.54
24:BA:1844:C:H2'	24:BA:1845:G:H8	1.73	0.54
1:CA:730:G:C5	1:CA:731:G:H1'	2.42	0.54
14:AQ:12:ARG:C	14:AQ:14:PRO:HD2	2.28	0.54
24:BA:1266:G:O5'	41:BS:15:ARG:NH2	2.41	0.54
24:DA:1912:A:H4'	24:DA:1913:A:OP1	2.08	0.54
45:D3:51:VAL:N	45:D3:62:LEU:HD12	2.23	0.54
1:AA:113:G:H1'	1:AA:354:G:H5'	1.90	0.54
2:AE:24:TRP:CZ3	2:AE:26:PRO:HA	2.42	0.54
24:BA:500:G:N2	24:BA:502:A:H3'	2.21	0.54
33:DN:8:LEU:HD13	33:DN:82:ASN:HB3	1.90	0.54
28:DF:122:LYS:O	28:DF:124:LEU:N	2.39	0.54
5:CH:83:GLU:HB3	5:CH:88:LYS:HG2	1.88	0.54
1:CA:939:G:H1	1:CA:1344:C:H42	1.54	0.54
44:DV:9:TYR:CE1	44:DV:35:ARG:HD3	2.42	0.54
30:DH:140:LYS:O	30:DH:144:VAL:HG23	2.08	0.54
24:DA:389:G:H22	34:DO:72:PRO:HD3	1.72	0.54
7:AJ:151:TYR:OH	11:AN:54:ARG:NE	2.40	0.54
1:AA:1177:G:O5'	9:AL:97:LYS:NZ	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1123:A:H4'	10:AM:36:GLY:HA3	1.89	0.54
22:CD:29:G:H2'	22:CD:30:G:C8	2.42	0.54
24:BA:2816:C:O2	24:BA:2883:A:O2'	2.22	0.54
1:AA:545:C:OP2	4:AG:62:GLN:NE2	2.41	0.54
1:CA:1212:U:O2'	1:CA:1213:A:O4'	2.25	0.54
1:AA:989:C:H42	1:AA:1216:G:H1	1.56	0.54
12:CO:47:LYS:HB3	12:CO:48:PRO:HD3	1.90	0.54
30:DH:46:GLU:N	30:DH:49:VAL:O	2.41	0.54
14:CQ:26:ARG:CZ	14:CQ:47:LEU:HD21	2.36	0.54
1:CA:600:C:H5''	8:CK:97:VAL:HG22	1.90	0.54
12:CO:102:ARG:HB3	12:CO:109:GLY:HA2	1.90	0.54
44:DV:144:LEU:HD22	44:DV:174:VAL:HG21	1.89	0.54
30:DH:56:SER:OG	30:DH:57:ASP:N	2.40	0.54
2:AE:42:ILE:HD11	2:AE:202:PRO:HB2	1.90	0.54
31:BK:73:GLU:HG3	31:BK:137:PRO:HD2	1.89	0.54
2:AE:116:GLU:OE2	2:AE:156:LYS:NZ	2.38	0.54
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.88	0.54
24:DA:1853:A:N3	24:DA:2233:U:O2'	2.35	0.54
26:DD:38:LYS:HG2	26:DD:38:LYS:O	2.07	0.54
24:DA:1589:C:H2'	24:DA:1590:U:H6	1.73	0.54
49:D4:39:CYS:HB3	49:D4:41:PRO:HD3	1.90	0.54
24:DA:1056:G:H5''	24:DA:1057:A:H5'	1.89	0.54
9:CL:18:PHE:HD2	9:CL:62:TYR:CE2	2.26	0.54
19:CV:66:MET:HA	19:CV:67:VAL:O	2.07	0.54
36:B0:1:MET:HG2	36:B0:3:HIS:CE1	2.43	0.54
19:AV:42:PRO:O	19:AV:45:VAL:HG22	2.07	0.54
24:BA:1729:A:O2'	24:BA:1730:U:H5''	2.08	0.54
22:AD:18:G:H1'	22:AD:58:A:C6	2.42	0.54
24:BA:2163:C:H3'	24:BA:2164:C:H6	1.71	0.54
24:BA:1178:C:H2'	24:BA:1179:C:C6	2.43	0.54
1:CA:948:C:H3'	13:CP:106:ASN:HD22	1.72	0.54
24:DA:1139:G:O2'	24:DA:1143:A:N6	2.31	0.54
1:CA:1226:C:H2'	13:CP:103:THR:HB	1.88	0.54
18:CU:22:VAL:HG22	18:CU:23:LYS:H	1.71	0.54
24:BA:2246:G:H2'	24:BA:2247:A:C8	2.43	0.54
1:AA:824:C:N4	1:AA:876:G:H1	2.06	0.54
30:BH:8:PRO:HG2	30:BH:69:ARG:HE	1.71	0.54
24:BA:1161:C:O2'	40:B2:8:GLY:HA2	2.08	0.54
24:BA:2749:A:H5''	30:BH:6:ARG:HD3	1.90	0.54
4:CG:9:CYS:O	4:CG:32:ALA:CB	2.55	0.54
1:AA:521:G:OP2	12:AO:54:LYS:NZ	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AG:30:LYS:N	4:AG:34:GLU:HG3	2.23	0.54
35:BP:65:PHE:O	35:BP:67:ARG:HG3	2.08	0.54
34:DO:49:ARG:HD2	53:D8:59:LYS:CG	2.31	0.54
32:BM:13:TRP:O	32:BM:134:ARG:HA	2.08	0.54
24:DA:779:U:P	26:DD:49:ILE:HG22	2.48	0.54
22:AD:18:G:N3	22:AD:58:A:N6	2.56	0.54
24:DA:2795:G:N2	24:DA:2802:G:N7	2.56	0.54
24:DA:2795:G:H1'	24:DA:2802:G:N1	2.23	0.54
24:DA:2808:U:H5''	24:DA:2891:G:O6	2.08	0.54
24:BA:2159:G:H2'	24:BA:2160:G:H5'	1.89	0.54
1:AA:1151:A:H1'	10:AM:39:PRO:HG2	1.90	0.54
25:DB:104:A:H2'	25:DB:105:G:O4'	2.08	0.54
1:AA:145:G:H1	1:AA:177:C:H42	1.54	0.54
10:CM:3:LYS:N	10:CM:74:ILE:O	2.40	0.54
19:CV:28:LYS:HZ3	19:CV:30:LEU:HB3	1.73	0.54
44:DV:134:PRO:O	44:DV:136:PHE:N	2.41	0.54
1:CA:321:A:N6	1:CA:329:A:OP2	2.41	0.54
24:DA:302:C:H42	24:DA:315:G:H1	1.55	0.54
33:BN:104:ARG:NH1	38:BR:36:GLU:OE1	2.41	0.54
24:DA:2735:G:H2'	24:DA:2736:G:H8	1.71	0.54
47:DW:68:ARG:HA	47:DW:72:ALA:HB2	1.89	0.54
7:AJ:111:ARG:NH1	7:AJ:113:GLU:OE2	2.41	0.54
43:DU:37:VAL:HG23	43:DU:67:LEU:HB3	1.90	0.54
2:CE:74:LYS:NZ	2:CE:205:ASP:O	2.30	0.54
45:B3:50:ASN:HB3	45:B3:63:VAL:HG22	1.90	0.54
8:CK:86:ILE:HG12	8:CK:135:CYS:HA	1.90	0.54
38:DR:27:THR:HG23	38:DR:90:GLN:HB3	1.89	0.54
27:DE:23:VAL:HG21	27:DE:183:LEU:CD2	2.38	0.54
1:AA:411:A:C5	1:AA:413:G:H1'	2.43	0.54
51:D6:17:LYS:H	51:D6:17:LYS:HD2	1.64	0.54
24:DA:666:G:H5''	34:DO:47:ASP:O	2.08	0.54
24:BA:6:A:H1'	32:BM:131:GLN:HB3	1.90	0.54
10:CM:49:VAL:HG11	14:CQ:41:ARG:HA	1.90	0.54
1:CA:1118:C:N4	1:CA:1155:G:H1	2.06	0.54
1:CA:345:C:O2'	1:CA:346:G:O5'	2.26	0.54
1:CA:345:C:O2	1:CA:346:G:N2	2.41	0.54
1:CA:1512:U:H2'	1:CA:1513:A:H8	1.72	0.54
2:CE:120:ALA:O	2:CE:122:PHE:N	2.41	0.54
30:DH:42:ARG:HH21	30:DH:44:VAL:HB	1.70	0.54
22:AC:67:C:H2'	22:AC:68:C:H6	1.73	0.54
9:AL:32:ASP:O	9:AL:35:GLU:N	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AF:19:GLU:HA	3:AF:54:ARG:HH12	1.73	0.54
28:BF:157:VAL:HB	28:BF:194:MET:HG2	1.90	0.54
1:AA:136:C:H42	1:AA:227:G:H1	1.55	0.54
39:B1:59:ARG:O	39:B1:63:VAL:HG23	2.08	0.54
24:DA:2869:G:H2'	24:DA:2870:C:O4'	2.07	0.54
42:DT:15:GLU:N	42:DT:15:GLU:OE1	2.37	0.54
31:DK:54:GLN:HA	31:DK:57:ARG:HB3	1.90	0.54
10:CM:8:LEU:HA	10:CM:96:ILE:HA	1.90	0.54
17:AT:86:GLU:O	17:AT:90:ILE:HG13	2.08	0.54
24:DA:2316:C:O2'	29:DG:128:ARG:NH2	2.40	0.54
6:AI:44:GLY:O	6:AI:60:PHE:N	2.34	0.54
39:D1:61:TRP:CD2	39:D1:94:ASN:HA	2.43	0.53
12:AO:46:LYS:CG	12:AO:48:PRO:HD2	2.26	0.53
27:DE:69:LYS:CD	27:DE:69:LYS:N	2.70	0.53
25:DB:13:A:N1	25:DB:69:G:O2'	2.29	0.53
1:CA:1129:C:OP2	9:CL:62:TYR:OH	2.19	0.53
1:CA:457:C:H2'	1:CA:458:C:C6	2.43	0.53
4:CG:125:HIS:ND1	4:CG:152:SER:OG	2.32	0.53
24:DA:1111:A:H4'	30:DH:3:ARG:HB2	1.90	0.53
30:DH:6:ARG:HB2	30:DH:6:ARG:NH1	2.23	0.53
24:DA:2646:C:H2'	24:DA:2647:U:O4'	2.07	0.53
26:BD:35:LYS:HZ1	26:BD:65:ILE:HA	1.73	0.53
22:AD:31:G:H1	22:AD:39:C:H42	1.56	0.53
44:DV:54:HIS:CG	44:DV:101:PRO:HD3	2.43	0.53
26:BD:28:GLU:HB3	26:BD:29:PRO:CD	2.38	0.53
1:CA:448:A:H62	1:CA:486:U:H3	1.56	0.53
30:DH:42:ARG:HE	30:DH:44:VAL:HG12	1.73	0.53
24:BA:2086:U:H5'	26:BD:262:ARG:NH2	2.23	0.53
31:BK:6:LEU:HD13	31:BK:36:ALA:HA	1.91	0.53
1:CA:652:U:H1'	1:CA:653:A:H2	1.73	0.53
17:CT:45:HIS:CD2	17:CT:65:ILE:HG12	2.42	0.53
9:CL:70:LYS:O	9:CL:74:ILE:HG13	2.07	0.53
4:AG:30:LYS:O	4:AG:30:LYS:HG3	2.08	0.53
35:BP:63:LYS:HG3	35:BP:65:PHE:CZ	2.43	0.53
26:BD:44:ASN:HB3	26:BD:49:ILE:HA	1.89	0.53
24:DA:307:G:H21	24:DA:330:A:H62	1.55	0.53
1:CA:1221:G:H5'	19:CV:36:ARG:HD3	1.90	0.53
1:AA:925:G:H1	1:AA:1391:U:H3	1.55	0.53
1:AA:1347:G:N2	1:AA:1374:A:OP2	2.36	0.53
1:AA:501:C:H2'	1:AA:502:G:H8	1.73	0.53
24:DA:1025:G:C4	24:DA:1135:C:H1'	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B6:41:PRO:HG3	51:B6:47:THR:HG22	1.90	0.53
1:CA:173:U:O2	1:CA:197:A:N6	2.42	0.53
42:DT:49:VAL:HB	42:DT:83:VAL:HG21	1.90	0.53
24:BA:582:G:H1	24:BA:1258:C:H42	1.56	0.53
34:DO:22:GLY:O	34:DO:25:SER:HB3	2.07	0.53
24:BA:1364:G:OP2	46:BZ:2:SER:OG	2.26	0.53
4:CG:120:LEU:HB3	4:CG:126:ILE:HD11	1.90	0.53
24:DA:2751:G:H5''	24:DA:2752:C:OP2	2.08	0.53
5:CH:71:LEU:HD21	5:CH:74:GLY:H	1.73	0.53
1:CA:571:U:O2	1:CA:918:A:H5'	2.09	0.53
1:CA:64:G:H4'	1:CA:65:U:H3'	1.90	0.53
24:DA:2880:C:O2	36:D0:93:GLY:N	2.40	0.53
2:AE:70:PHE:O	2:AE:93:VAL:N	2.32	0.53
12:AO:61:THR:OG1	12:AO:62:SER:N	2.41	0.53
28:DF:1:MET:HB2	28:DF:2:LYS:HD3	1.90	0.53
24:DA:1072:C:H5	24:DA:1097:U:H5'	1.73	0.53
46:BZ:91:LYS:HZ3	46:BZ:91:LYS:HA	1.73	0.53
24:BA:873:G:H1	24:BA:904:C:N4	2.06	0.53
24:BA:363(B):G:H2'	24:BA:363(C):G:H8	1.74	0.53
13:CP:15:VAL:O	13:CP:19:LEU:N	2.35	0.53
24:BA:973:A:H5'	24:BA:1188:U:H1'	1.91	0.53
29:BG:126:ASP:OD1	29:BG:127:GLY:N	2.41	0.53
1:CA:261:U:OP2	20:CW:79:ARG:NH2	2.41	0.53
5:AH:142:LEU:O	5:AH:143:ARG:NH1	2.35	0.53
4:AG:98:GLU:O	4:AG:103:ASN:ND2	2.41	0.53
8:AK:51:VAL:HG11	8:AK:60:ARG:HD2	1.90	0.53
37:DQ:24:LEU:HD12	37:DQ:41:ASP:HA	1.89	0.53
12:AO:17:LYS:O	12:AO:19:ARG:N	2.41	0.53
24:DA:2898:U:H2'	24:DA:2899:G:C8	2.43	0.53
27:BE:116:VAL:O	27:BE:117:MET:HB3	2.08	0.53
47:DW:53:LEU:O	47:DW:57:ILE:HG13	2.08	0.53
30:BH:24:VAL:HG13	30:BH:35:VAL:HB	1.91	0.53
36:D0:29:LEU:HB3	36:D0:75:LEU:HD11	1.90	0.53
4:CG:12:CYS:SG	4:CG:31:CYS:O	2.67	0.53
4:AG:30:LYS:HA	4:AG:34:GLU:HB2	1.89	0.53
25:DB:18:G:H2'	25:DB:19:G:C8	2.44	0.53
24:DA:1044:G:O2'	24:DA:1111:A:N1	2.39	0.53
1:CA:998(A):C:H2'	1:CA:999:U:O4'	2.08	0.53
28:DF:184:TYR:O	28:DF:188:ARG:HB2	2.08	0.53
24:DA:1188:U:H4'	40:D2:79:VAL:CG1	2.36	0.53
13:CP:14:ARG:NH1	13:CP:14:ARG:HB2	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BU:63:LYS:HD2	43:BU:64:GLU:H	1.72	0.53
9:AL:9:ARG:HB3	9:AL:14:VAL:HG13	1.90	0.53
16:AS:20:VAL:HG21	16:AS:32:TYR:CG	2.44	0.53
26:DD:31:LYS:O	26:DD:31:LYS:HG3	2.07	0.53
1:AA:143:A:OP1	1:AA:144:G:H5'	2.09	0.53
1:CA:544:G:OP1	4:CG:59:ARG:NH2	2.36	0.53
1:CA:8:A:N6	4:CG:209:ARG:HG3	2.22	0.53
1:CA:332:G:OP2	20:CW:10:LEU:HD22	2.08	0.53
24:DA:819:A:OP2	24:DA:1187:G:N2	2.22	0.53
1:AA:731:G:OP1	1:AA:766:A:H1'	2.07	0.53
24:BA:173:G:H2'	24:BA:174:C:C6	2.42	0.53
1:AA:667:G:H4'	15:AR:51:HIS:CE1	2.44	0.53
24:DA:1999:C:H4'	24:DA:2723:C:O2	2.08	0.53
13:CP:65:LYS:HB2	13:CP:69:GLU:CD	2.28	0.53
1:AA:115:G:H4'	1:AA:116:A:O5'	2.09	0.53
24:BA:572:A:H5''	24:BA:573:G:OP2	2.07	0.53
11:AN:85:ARG:NH2	11:AN:111:ASP:OD2	2.37	0.53
1:AA:22:G:H4'	1:AA:885:G:C8	2.43	0.53
10:AM:6:ILE:HG22	10:AM:98:ILE:HG12	1.90	0.53
24:BA:1050:A:N6	24:BA:1051:G:C6	2.77	0.53
30:BH:4:ILE:HD13	30:BH:6:ARG:N	2.24	0.53
1:CA:412:A:N1	4:CG:35:ARG:CG	2.72	0.53
24:DA:1055:G:H1	24:DA:1104:C:H42	1.54	0.53
24:DA:1169:G:N2	24:DA:1180:C:N3	2.35	0.53
1:AA:649:G:H2'	1:AA:650:G:H8	1.73	0.53
25:DB:28:C:N4	25:DB:56:G:H1	2.06	0.53
30:DH:109:PHE:CZ	30:DH:152:ARG:HB2	2.43	0.53
26:BD:65:ILE:HD11	26:BD:67:PHE:CZ	2.43	0.53
35:DP:24:GLY:HA3	35:DP:25:ASP:HB2	1.91	0.53
32:DM:15:LEU:HD22	32:DM:53:VAL:HB	1.90	0.53
1:CA:544:G:OP1	4:CG:62:GLN:NE2	2.34	0.53
24:BA:1416:G:H1	24:BA:1582:C:H42	1.56	0.53
24:DA:1771:C:O2'	24:DA:1786:A:H8	1.91	0.53
1:AA:989:C:N4	1:AA:1216:G:H1	2.07	0.53
13:AP:57:ARG:HD2	49:B4:35:VAL:HG23	1.90	0.53
24:DA:2688:U:H5	24:DA:2720:U:OP2	1.90	0.53
24:DA:1688:U:O2	24:DA:1700:A:H5'	2.08	0.53
40:D2:98:GLU:OE1	40:D2:100:ARG:NH1	2.39	0.53
9:AL:22:GLY:N	9:AL:58:HIS:O	2.29	0.53
1:AA:688:G:H2'	1:AA:689:C:H6	1.74	0.53
3:AF:7:PRO:O	3:AF:11:ARG:NH1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2355:C:H1'	45:B3:39:ARG:HH21	1.73	0.53
44:BV:45:ASP:O	44:BV:49:ARG:HG2	2.09	0.53
27:DE:53:PRO:O	27:DE:55:ASN:ND2	2.42	0.53
27:DE:81:ILE:HG22	27:DE:81:ILE:O	2.09	0.53
27:BE:48:GLN:OE1	27:BE:64:LYS:NZ	2.23	0.53
1:CA:464:G:C6	1:CA:466:C:H5'	2.43	0.53
3:CF:81:GLY:HA2	3:CF:85:ARG:NH2	2.23	0.53
1:CA:1260:C:OP1	1:CA:1284:C:O2'	2.17	0.53
1:CA:1274:G:H2'	1:CA:1275:A:H8	1.74	0.53
1:AA:1453:G:HO2'	20:AW:39:LYS:NZ	2.06	0.53
24:DA:855:G:O2'	45:D3:27:GLU:OE2	2.25	0.53
24:DA:814:C:O3'	40:D2:84:LYS:NZ	2.40	0.53
24:DA:1011:G:OP1	39:D1:75:ASN:HB3	2.08	0.53
1:CA:79:G:H1	1:CA:90:C:H42	1.56	0.53
30:DH:26:VAL:HG11	30:DH:75:ALA:HB1	1.90	0.53
24:BA:2284:C:H41	51:B6:25:LYS:HZ1	1.56	0.53
24:DA:1165:U:H2'	24:DA:1166:C:C6	2.44	0.53
47:DW:14:ARG:HG3	47:DW:15:LYS:HG2	1.91	0.53
24:BA:1490:A:O2'	26:BD:99:ASP:OD1	2.27	0.53
24:DA:320:A:H4'	24:DA:322:A:C8	2.44	0.53
2:AE:150:SER:OG	2:AE:151:GLY:N	2.42	0.53
24:DA:712:G:H1	24:DA:719:C:H42	1.57	0.53
24:BA:444:C:H4'	28:BF:49:ALA:HB2	1.89	0.53
53:D8:28:GLY:O	53:D8:36:LYS:NZ	2.42	0.53
24:DA:469:G:O6	52:D7:37:LYS:HE2	2.09	0.53
24:BA:1516:U:H2'	24:BA:1517:G:H8	1.73	0.53
1:AA:1427:U:H2'	1:AA:1428:A:H8	1.74	0.53
20:CW:33:ILE:O	20:CW:37:SER:OG	2.22	0.53
24:BA:1142(A):A:H4'	32:BM:25:ARG:HH22	1.72	0.53
51:D6:47:THR:CG2	51:D6:47:THR:O	2.57	0.53
24:DA:1066:U:H3	24:DA:1069:A:H5''	1.74	0.53
1:CA:1000:A:H2'	1:CA:1001:G:H8	1.73	0.53
1:CA:1189:C:H5''	3:CF:5:ILE:HD12	1.89	0.53
1:CA:984:C:H42	1:CA:1221:G:H1	1.54	0.53
24:BA:2863:C:H2'	24:BA:2864:G:H8	1.74	0.53
24:DA:1729:A:O2'	24:DA:1731:G:N2	2.42	0.53
34:BO:61:ARG:HH21	34:BO:61:ARG:HB2	1.73	0.53
22:CD:32:C:C4	22:CD:33:U:C4	2.97	0.53
1:CA:976:G:H5'	1:CA:1358:U:O2'	2.09	0.53
36:B0:87:TYR:HD1	36:B0:90:ARG:HD2	1.72	0.53
1:CA:390:C:O3'	16:CS:28:ARG:NH2	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2142:C:H2'	24:DA:2143:C:C6	2.44	0.53
1:AA:277:C:H2'	1:AA:278:G:H8	1.73	0.53
1:CA:192:U:O2'	20:CW:60:GLU:OE2	2.17	0.53
2:AE:6:THR:OG1	2:AE:7:VAL:N	2.36	0.53
24:BA:297:C:H5''	43:BU:85:VAL:HG21	1.91	0.53
45:D3:49:LYS:O	45:D3:50:ASN:ND2	2.42	0.53
26:DD:65:ILE:HD11	26:DD:106:ILE:HG22	1.91	0.53
34:DO:65:ARG:HB3	34:DO:68:GLN:HE22	1.73	0.53
19:CV:13:ASP:HA	19:CV:16:LEU:HB3	1.90	0.53
24:BA:309:G:N3	24:BA:329:G:O2'	2.41	0.53
18:AU:36:ASN:H	18:AU:36:ASN:HD22	1.55	0.53
49:B4:42:PHE:O	49:B4:44:THR:N	2.42	0.53
24:BA:2564:A:C2	24:BA:2647:U:H4'	2.44	0.53
28:DF:167:ALA:HB1	28:DF:173:VAL:HG11	1.90	0.53
24:BA:2803:C:H2'	24:BA:2804:C:C6	2.43	0.53
24:DA:2115:G:H2'	24:DA:2116:G:N7	2.24	0.53
13:CP:7:VAL:HG13	29:DG:115:ARG:HB3	1.91	0.53
1:AA:1129:C:OP1	9:AL:62:TYR:OH	2.25	0.53
1:CA:1126:U:H4'	1:CA:1127:G:C8	2.43	0.53
36:B0:4:LEU:CD1	36:B0:4:LEU:N	2.72	0.53
2:CE:11:LEU:HD22	2:CE:217:ARG:HH12	1.74	0.53
1:CA:946:A:H2'	1:CA:947:G:C8	2.44	0.53
24:BA:1063:G:N3	24:BA:1077:A:N6	2.57	0.53
32:DM:25:ARG:NH1	32:DM:25:ARG:HG3	2.23	0.53
24:BA:2147:G:H2'	24:BA:2148:G:O4'	2.09	0.53
1:AA:977:A:C8	1:AA:1223:C:C4	2.95	0.53
24:DA:2068:U:N3	24:DA:2430:A:H2	2.03	0.53
20:AW:72:LEU:HD21	20:AW:77:ALA:N	2.23	0.53
24:BA:2103:C:H2'	24:BA:2104:G:C8	2.43	0.53
24:DA:2439:A:H5'	24:DA:2439:A:C8	2.44	0.53
1:AA:347:G:OP1	38:BR:41:ARG:NH1	2.41	0.53
24:BA:860:U:C5	24:BA:917:A:C2	2.96	0.53
1:CA:1095:U:OP1	1:CA:1108:G:N2	2.38	0.53
37:DQ:83:LYS:HZ2	37:DQ:84:GLN:H	1.57	0.53
24:BA:1416:G:HO2'	24:BA:1417:C:H6	1.55	0.53
24:DA:1540:G:H2'	24:DA:1541:U:O4'	2.09	0.53
24:DA:1025:G:H8	24:DA:1025:G:OP1	1.91	0.53
38:BR:53:ARG:O	38:BR:59:THR:OG1	2.27	0.53
24:BA:839:U:H3	24:BA:939:G:H1	1.57	0.53
24:BA:443:A:H1'	24:BA:1201:C:O4'	2.09	0.53
20:CW:29:LYS:O	20:CW:33:ILE:HG12	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AN:57:THR:HG22	11:AN:59:TYR:H	1.74	0.53
1:AA:781:A:O2'	1:AA:1522:U:O2	2.24	0.53
1:AA:530:G:O2'	1:AA:531:U:OP1	2.26	0.53
24:BA:989:G:OP2	48:BX:11:SER:OG	2.20	0.53
1:AA:1366:C:OP1	9:AL:117:HIS:NE2	2.41	0.53
4:CG:22:LYS:HZ3	4:CG:25:ARG:CD	2.21	0.53
51:D6:14:THR:OG1	51:D6:20:ASN:N	2.30	0.53
27:DE:66:HIS:HA	27:DE:68:ALA:H	1.73	0.53
1:AA:1132:C:H2'	1:AA:1133:G:H8	1.72	0.53
2:CE:69:LEU:O	2:CE:163:PHE:N	2.37	0.53
1:CA:468:A:H1'	16:CS:82:GLN:HE22	1.73	0.53
28:BF:117:ARG:NH2	28:BF:189:THR:O	2.39	0.53
44:DV:59:LEU:HG	44:DV:69:THR:OG1	2.09	0.53
2:AE:100:GLY:O	2:AE:102:LEU:N	2.42	0.53
24:BA:2439:A:C8	24:BA:2439:A:H5'	2.43	0.53
24:BA:2640:G:OP1	32:BM:97:ARG:NH2	2.41	0.53
1:AA:581:G:N2	1:AA:760:G:N7	2.56	0.53
1:AA:377:G:OP1	16:AS:3:LYS:HD2	2.09	0.53
24:BA:1418:G:OP1	24:BA:1588:C:O2'	2.26	0.53
24:BA:2377:A:H2'	24:BA:2378:A:C8	2.44	0.53
24:DA:320:A:H4'	24:DA:322:A:N7	2.24	0.53
27:DE:97:LYS:N	27:DE:100:GLU:OE1	2.39	0.53
24:DA:2099:U:H3	24:DA:2190:G:H1	1.55	0.53
11:CN:98:LEU:O	11:CN:101:SER:OG	2.19	0.53
16:CS:40:ASP:OD2	16:CS:43:LYS:N	2.42	0.53
24:DA:646:A:H2'	24:DA:647:G:O4'	2.09	0.53
24:BA:1129:A:N6	24:BA:2491:U:OP1	2.41	0.53
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.44	0.53
10:AM:7:LYS:HB2	10:AM:97:GLU:HB2	1.90	0.53
24:BA:1036:G:H1	24:BA:1119:C:H42	1.57	0.53
51:B6:18:ARG:HB2	51:B6:18:ARG:CZ	2.39	0.53
20:AW:53:LEU:O	20:AW:57:ARG:CG	2.54	0.53
24:DA:1094:U:O2'	24:DA:1096:A:OP1	2.26	0.53
29:BG:66:GLN:HA	49:B4:6:HIS:ND1	2.23	0.53
24:DA:2754:U:H5'	24:DA:2755:C:OP2	2.08	0.53
44:DV:127:LYS:O	44:DV:162:GLU:HB2	2.08	0.53
1:AA:153:C:N4	1:AA:168:G:H1	2.07	0.53
24:DA:271(B):G:N7	24:DA:421:U:H2'	2.24	0.53
1:AA:1178:G:N2	1:AA:1181:G:N7	2.34	0.53
24:BA:774:A:H2	24:BA:787:U:O2'	1.90	0.53
24:DA:270(I):G:O6	24:DA:270(Q):C:N4	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1287:A:C8	36:B0:107:ASP:HB2	2.44	0.53
1:AA:60:A:H4'	1:AA:61:G:H5'	1.90	0.53
29:BG:108:ASN:HA	49:B4:38:LYS:HB3	1.90	0.53
37:DQ:14:VAL:HG11	37:DQ:89:ARG:HH11	1.74	0.53
30:DH:46:GLU:OE1	30:DH:51:ARG:NH1	2.41	0.53
44:BV:142:SER:HB3	44:BV:143:GLY:HA2	1.91	0.53
39:D1:82:GLY:HA2	39:D1:85:LYS:HG3	1.91	0.53
24:BA:1786:A:C2	24:BA:2606:C:H1'	2.43	0.53
33:DN:111:PHE:HB3	33:DN:114:ILE:HG13	1.90	0.53
24:BA:82:G:H5''	24:BA:296:C:H5'	1.91	0.53
27:BE:2:LYS:NZ	27:BE:100:GLU:OE2	2.32	0.53
35:BP:39:PRO:HA	35:BP:97:VAL:O	2.08	0.53
24:BA:2645:G:N2	24:BA:2767:C:OP2	2.41	0.53
1:AA:259:G:OP2	20:AW:83:ARG:NH2	2.42	0.53
27:DE:11:MET:HG3	27:DE:24:THR:HA	1.91	0.52
35:BP:63:LYS:CG	35:BP:65:PHE:CZ	2.93	0.52
35:BP:66:ILE:C	35:BP:67:ARG:HG3	2.30	0.52
24:DA:2133:G:N2	24:DA:2158:A:OP2	2.43	0.52
43:DU:52:SER:CB	43:DU:56:PRO:HA	2.37	0.52
24:BA:2820:A:C4'	36:B0:3:HIS:CD2	2.92	0.52
24:DA:1169:G:H1	24:DA:1180:C:N4	1.95	0.52
24:DA:2420:C:OP2	53:D8:34:TRP:CE2	2.62	0.52
14:CQ:24:CYS:SG	14:CQ:25:VAL:N	2.82	0.52
1:CA:1298:C:O2'	1:CA:1299:A:OP2	2.22	0.52
24:BA:2135:A:O4'	24:BA:2160:G:H5''	2.08	0.52
24:BA:2279:G:OP2	45:B3:11:ARG:NH2	2.42	0.52
1:CA:198:G:H2'	1:CA:199:G:C8	2.45	0.52
1:CA:838:G:N2	1:CA:849:C:N3	2.57	0.52
10:AM:34:VAL:HG12	10:AM:74:ILE:HG22	1.91	0.52
24:DA:1470:G:N2	24:DA:1522:G:OP2	2.39	0.52
30:BH:137:ASP:OD1	30:BH:139:GLN:N	2.43	0.52
47:BW:43:GLN:C	47:BW:45:SER:H	2.12	0.52
24:DA:511:U:H3'	24:DA:512:G:H5''	1.90	0.52
8:CK:51:VAL:HG21	8:CK:60:ARG:NH1	2.25	0.52
30:DH:10:PRO:HG2	30:DH:50:VAL:HG13	1.91	0.52
24:DA:379:G:N2	46:DZ:42:GLN:OE1	2.28	0.52
36:B0:54:LEU:HD21	36:B0:65:LEU:HD23	1.91	0.52
1:AA:1409:C:H2'	1:AA:1410:G:H8	1.74	0.52
35:DP:37:LEU:HD21	35:DP:130:LYS:HE2	1.91	0.52
46:DZ:82:LEU:H	46:DZ:82:LEU:HD23	1.74	0.52
1:AA:1358:U:H5''	14:AQ:34:TYR:HA	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:542:G:H5'	4:AG:41:GLY:HA3	1.90	0.52
1:AA:181:G:N2	1:AA:195:A:N3	2.57	0.52
4:CG:32:ALA:O	4:CG:36:ARG:C	2.47	0.52
24:BA:2795:G:OP2	24:BA:2797:U:H5'	2.09	0.52
28:DF:2:LYS:HG2	28:DF:25:PRO:HD2	1.90	0.52
24:DA:890:A:H2'	24:DA:892:G:N7	2.23	0.52
25:DB:13:A:O2'	25:DB:14:U:H3'	2.09	0.52
2:AE:207:ALA:O	2:AE:209:ARG:N	2.42	0.52
24:BA:1177:A:H4'	24:BA:1178:C:H5''	1.92	0.52
24:BA:2099:U:H2'	24:BA:2100:G:C8	2.43	0.52
1:AA:1178:G:O5'	9:AL:93:ARG:NH2	2.41	0.52
43:BU:35:TYR:CE2	43:BU:69:ALA:HB3	2.45	0.52
26:DD:85:ASP:OD2	26:DD:88:ARG:NH1	2.37	0.52
43:DU:42:VAL:O	43:DU:65:ALA:N	2.29	0.52
24:BA:2474:C:H5''	24:BA:2475:C:C5	2.42	0.52
1:AA:264:U:O2'	17:AT:64:PRO:O	2.19	0.52
24:DA:1537:C:H2'	24:DA:1538:G:O4'	2.10	0.52
24:DA:77:C:H42	24:DA:109:G:H1	1.57	0.52
1:CA:1162:C:H42	1:CA:1174:G:H1	1.55	0.52
10:AM:23:ILE:HD11	10:AM:72:VAL:HG11	1.90	0.52
32:DM:55:VAL:HB	32:DM:126:PRO:HA	1.92	0.52
24:BA:2212:A:H1'	24:BA:2215:G:C5	2.45	0.52
24:DA:627:A:N7	34:DO:84:ASN:ND2	2.50	0.52
28:DF:149:ASP:OD1	28:DF:150:GLY:N	2.42	0.52
42:BT:15:GLU:CD	42:BT:15:GLU:H	2.13	0.52
36:D0:55:ALA:HB2	36:D0:79:LEU:HD13	1.91	0.52
34:DO:127:ALA:O	34:DO:147:LEU:N	2.37	0.52
29:DG:150:ASP:OD1	29:DG:153:ARG:NH2	2.40	0.52
29:DG:165:THR:HG23	29:DG:168:GLU:HG3	1.91	0.52
24:BA:2749:A:N3	30:BH:59:ARG:NH1	2.57	0.52
12:AO:46:LYS:CG	12:AO:48:PRO:HG2	2.38	0.52
22:CC:75:C:OP2	22:CC:76:A:H5'	2.10	0.52
45:B3:70:GLN:HG2	45:B3:72:ARG:HG2	1.91	0.52
2:AE:15:VAL:HB	2:AE:204:ASN:HD22	1.74	0.52
4:CG:49:ARG:HE	4:CG:50:ARG:N	1.99	0.52
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.09	0.52
3:CF:72:LYS:HD2	3:CF:75:VAL:HG23	1.92	0.52
1:AA:1314:C:H41	19:AV:5:LEU:HA	1.73	0.52
32:DM:17:ASP:OD1	32:DM:56:ASN:ND2	2.42	0.52
24:BA:729:G:C5	26:BD:208:LYS:HB2	2.44	0.52
1:AA:190:G:O6	1:AA:264:U:H5''	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AJ:143:ARG:NH2	22:AD:42:G:H5'	2.25	0.52
44:BV:48:PHE:O	44:BV:52:SER:HB3	2.10	0.52
1:AA:606:G:H22	1:AA:631:G:H5''	1.74	0.52
24:DA:139:G:N2	24:DA:1596:A:H4'	2.24	0.52
44:BV:30:ASN:OD1	44:BV:33:LEU:N	2.39	0.52
2:CE:47:THR:O	2:CE:51:LEU:HB2	2.09	0.52
16:AS:34:GLU:OE2	16:AS:59:TRP:NE1	2.41	0.52
37:DQ:53:SER:O	37:DQ:56:LEU:N	2.35	0.52
3:CF:21:ARG:HB3	3:CF:21:ARG:NH1	2.23	0.52
24:BA:2422:A:O2'	24:BA:2423:U:H5''	2.10	0.52
52:D7:5:TRP:NE1	52:D7:7:PRO:HG3	2.24	0.52
38:DR:134:GLU:N	38:DR:134:GLU:OE2	2.39	0.52
38:DR:11:GLU:OE1	38:DR:11:GLU:N	2.33	0.52
33:DN:89:ASN:N	33:DN:89:ASN:OD1	2.42	0.52
24:DA:2425:A:H4'	24:DA:2426:A:H5''	1.92	0.52
34:BO:71:VAL:C	34:BO:73:GLY:N	2.60	0.52
24:DA:2155:G:H3'	24:DA:2156:G:H8	1.75	0.52
24:DA:1063:G:C6	24:DA:1064:C:H1'	2.43	0.52
35:DP:43:THR:OG1	35:DP:45:GLN:HG2	2.09	0.52
1:CA:1300:G:HO2'	1:CA:1301:U:P	2.32	0.52
28:BF:28:ILE:HG22	28:BF:112:MET:HB3	1.92	0.52
24:BA:1174:A:H62	24:BA:1175:U:H5	1.57	0.52
24:BA:2469:A:H61	24:BA:2481:G:H1'	1.75	0.52
24:DA:602:G:O2'	24:DA:604:G:O2'	2.13	0.52
40:D2:68:LYS:HD2	40:D2:69:LYS:N	2.25	0.52
39:B1:74:LEU:HD22	39:B1:78:THR:OG1	2.09	0.52
1:AA:352:C:O2'	1:AA:353:A:O3'	2.28	0.52
44:BV:169:GLU:OE2	44:BV:171:ILE:N	2.43	0.52
1:CA:587:G:N2	1:CA:754:C:OP2	2.40	0.52
16:AS:57:ARG:O	16:AS:61:SER:N	2.41	0.52
1:AA:1328:C:OP1	21:AX:21:TYR:OH	2.22	0.52
1:AA:375:U:O2'	16:AS:6:LEU:O	2.26	0.52
1:CA:1047:G:HO2'	1:CA:1215:G:HO2'	1.55	0.52
3:AF:16:ARG:NH1	3:AF:183:ASP:OD1	2.35	0.52
24:DA:153:C:P	46:DZ:88:LYS:HZ1	2.31	0.52
1:AA:237:C:H4'	17:AT:25:ARG:HH12	1.75	0.52
24:DA:242:G:C5'	53:D8:62:LEU:HD13	2.39	0.52
1:AA:1255:G:P	10:AM:45:ARG:HH22	2.32	0.52
30:BH:70:THR:HG22	30:BH:74:ASN:HD21	1.74	0.52
1:AA:1218:C:OP1	14:AQ:9:LYS:NZ	2.29	0.52
44:BV:5:LEU:O	44:BV:6:LYS:HB2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2591:C:OP1	26:DD:239:ARG:HD2	2.10	0.52
39:D1:13:LYS:O	39:D1:17:ILE:HG12	2.08	0.52
2:AE:50:GLU:OE1	2:AE:54:THR:OG1	2.27	0.52
4:CG:27:TYR:HD2	4:CG:28:SER:HG	1.56	0.52
11:AN:89:ALA:O	11:AN:91:ARG:N	2.42	0.52
24:BA:1036:G:P	30:BH:59:ARG:HB2	2.49	0.52
43:BU:81:LYS:CG	43:BU:97:ARG:CZ	2.87	0.52
24:DA:2371:G:H4'	51:D6:45:LYS:CD	2.40	0.52
28:BF:185:ASP:HA	28:BF:188:ARG:HD3	1.91	0.52
24:DA:2169:A:N3	24:DA:2169:A:H2'	2.25	0.52
1:CA:1000:A:H2'	1:CA:1001:G:C8	2.45	0.52
1:CA:690:G:H2'	1:CA:691:G:O4'	2.10	0.52
24:DA:2420:C:OP2	24:DA:2420:C:H6	1.92	0.52
1:AA:1224:G:N2	1:AA:1362(A):C:O2	2.42	0.52
19:AV:5:LEU:HD23	19:AV:10:PHE:CE1	2.44	0.52
19:AV:12:ASP:OD1	19:AV:37:ARG:NH1	2.42	0.52
24:DA:2745:C:H4'	30:DH:142:GLY:O	2.10	0.52
25:DB:30:C:N3	25:DB:54:G:N2	2.42	0.52
24:BA:897:C:H2'	24:BA:898:C:C6	2.45	0.52
24:BA:363(B):G:H2'	24:BA:363(C):G:C8	2.44	0.52
13:CP:53:VAL:HG12	13:CP:57:ARG:HE	1.74	0.52
24:DA:33:U:O2'	24:DA:34:C:O2	2.18	0.52
28:BF:181:LEU:O	28:BF:205:ARG:NH2	2.43	0.52
27:BE:174:ASP:OD1	27:BE:175:VAL:N	2.43	0.52
5:AH:77:PRO:HD2	5:AH:142:LEU:HD13	1.91	0.52
38:DR:91:ARG:HD2	38:DR:124:ASP:OD2	2.10	0.52
1:CA:1373:G:P	9:CL:42:ARG:HH12	2.33	0.52
2:CE:118:LEU:HD12	2:CE:142:LEU:HB2	1.92	0.52
24:DA:1449(A):G:H1	24:DA:1462:C:H42	1.57	0.52
1:CA:1173:G:OP1	7:CJ:5:ARG:NH1	2.40	0.52
10:CM:37:PRO:HA	10:CM:72:VAL:HG23	1.90	0.52
10:CM:91:PRO:HB2	10:CM:93:GLY:H	1.75	0.52
39:D1:98:LEU:HB3	39:D1:102:GLU:HB2	1.91	0.52
9:AL:5:TYR:HH	9:AL:7:THR:HG1	1.55	0.52
4:CG:82:ALA:HA	4:CG:85:LYS:HB2	1.91	0.52
1:CA:585:G:C6	1:CA:586:C:C4	2.98	0.52
24:DA:17:G:H4'	39:D1:25:TRP:CH2	2.44	0.52
13:AP:49:THR:HB	13:AP:52:GLU:HG3	1.91	0.52
24:BA:2726:U:O2'	24:BA:2727:G:H8	1.92	0.52
17:CT:58:GLU:OE1	17:CT:75:ARG:NH2	2.42	0.52
27:DE:26:ILE:CG2	27:DE:27:LEU:H	2.19	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:D2:38:LEU:HB3	40:D2:52:VAL:HG12	1.90	0.52
4:AG:20:TYR:HA	4:AG:26:CYS:HB3	1.92	0.52
24:DA:2638:G:HO2'	24:DA:2639:A:H8	1.56	0.52
24:BA:2415:G:H4'	34:BO:66:GLY:HA3	1.91	0.52
24:DA:309:G:N3	24:DA:329:G:O2'	2.41	0.52
1:CA:1128:C:H1'	1:CA:1146:A:N6	2.17	0.52
22:CD:21:A:H2	22:CD:48:C:H5	1.58	0.52
22:AD:58:A:H3'	22:AD:61:C:H41	1.75	0.52
22:AD:6:G:C6	22:AD:7:G:C6	2.97	0.52
1:AA:1316:G:H4'	14:AQ:18:VAL:HG11	1.92	0.52
30:DH:149:ARG:HH12	30:DH:163:TYR:HA	1.74	0.52
53:D8:40:GLU:HA	53:D8:43:GLN:HB2	1.91	0.52
13:CP:14:ARG:HG3	13:CP:42:ALA:HA	1.91	0.52
24:BA:270(M):U:H1'	24:BA:270(N):G:C2	2.45	0.52
1:AA:164:U:H2'	1:AA:165:C:C6	2.45	0.52
24:DA:854:G:H2'	24:DA:855:G:C8	2.45	0.52
24:DA:1278:A:O2'	36:D0:34:ILE:HD11	2.09	0.52
1:AA:1279:A:OP2	10:AM:9:ARG:NH1	2.42	0.52
26:BD:77:ALA:HB2	26:BD:97:TYR:CD2	2.45	0.52
16:AS:4:ILE:HA	16:AS:20:VAL:O	2.09	0.52
2:CE:216:SER:O	2:CE:218:ALA:N	2.41	0.52
24:DA:1149:G:H2'	24:DA:1150:C:C6	2.44	0.52
1:AA:606:G:O2'	1:AA:632:A:N6	2.43	0.52
1:AA:736:C:H2'	1:AA:737:A:C8	2.45	0.52
17:CT:81:ARG:HA	17:CT:81:ARG:HE	1.75	0.52
48:DX:52:HIS:CE1	48:DX:53:LEU:HD23	2.45	0.52
24:BA:1041:C:H2'	24:BA:1042:G:H8	1.75	0.52
1:CA:196:A:P	20:CW:68:LYS:HZ1	2.32	0.52
24:DA:491:G:O6	41:DS:49:LYS:HE2	2.09	0.52
2:AE:9:GLU:H	2:AE:9:GLU:CD	2.12	0.52
7:CJ:139:GLU:O	7:CJ:143:ARG:N	2.39	0.52
30:DH:146:ALA:O	30:DH:150:ALA:N	2.33	0.52
32:BM:30:ILE:HG23	32:BM:52:VAL:HG11	1.90	0.52
24:DA:1996:C:OP1	33:DN:31:LYS:HE2	2.10	0.52
24:DA:2527:C:H42	24:DA:2536:G:H1	1.58	0.52
30:BH:4:ILE:HD13	30:BH:6:ARG:CG	2.38	0.52
39:D1:61:TRP:CH2	39:D1:94:ASN:HB2	2.45	0.52
26:DD:35:LYS:HD2	26:DD:35:LYS:H	1.72	0.52
1:AA:427:U:OP2	4:AG:36:ARG:NH1	2.43	0.52
51:D6:15:GLU:HG3	51:D6:47:THR:OG1	2.10	0.52
28:DF:3:GLU:HB3	28:DF:24:LEU:HD21	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CE:50:GLU:O	2:CE:54:THR:OG1	2.19	0.52
13:CP:98:VAL:N	13:CP:101:GLN:HE21	2.07	0.52
22:CD:60:U:OP2	22:CD:61:C:N4	2.35	0.52
24:DA:2420:C:P	53:D8:34:TRP:CD2	3.03	0.52
22:AD:21:A:N1	22:AD:46:G:H2'	2.25	0.52
22:AD:58:A:H2	22:AD:60:U:H3'	1.75	0.52
24:BA:2169:A:H3'	24:BA:2170:A:C8	2.45	0.52
1:CA:1392:G:H21	1:CA:1502:A:H8	1.55	0.52
20:CW:54:LYS:HA	20:CW:57:ARG:NH1	2.25	0.52
24:BA:2439:A:H3'	24:BA:2439:A:P	2.49	0.52
49:B4:23:GLU:OE1	49:B4:24:THR:N	2.42	0.52
24:BA:322:A:P	28:BF:168:ARG:HH21	2.31	0.52
1:AA:261:U:OP2	20:AW:79:ARG:NH2	2.43	0.52
1:CA:536:C:H2'	1:CA:537:G:C8	2.45	0.52
29:DG:77:ILE:HG22	29:DG:80:PHE:H	1.75	0.52
1:AA:881:G:P	12:AO:12:ARG:HH22	2.32	0.52
33:DN:47:ILE:HG13	33:DN:48:PRO:HD2	1.91	0.52
24:BA:2019:A:O4'	39:B1:34:LYS:HD2	2.09	0.52
49:D4:49:PHE:HD2	49:D4:50:VAL:HG22	1.74	0.52
24:BA:1423:G:H2'	24:BA:1424:G:H8	1.74	0.52
36:B0:86:ARG:NH2	36:B0:118:GLU:OXT	2.43	0.52
9:AL:54:ASP:OD1	9:AL:54:ASP:N	2.42	0.52
8:CK:45:ILE:HD11	8:CK:80:ILE:HD11	1.90	0.52
34:BO:98:GLU:OE1	34:BO:102:ARG:NH1	2.43	0.52
1:AA:640:A:O2'	8:AK:115:SER:O	2.23	0.52
24:BA:1049:C:H2'	24:BA:1050:A:H5''	1.91	0.52
49:D4:25:TYR:O	49:D4:27:THR:N	2.42	0.52
1:CA:1003:G:N2	1:CA:1038:C:O2	2.42	0.52
10:CM:55:LYS:O	10:CM:56:HIS:ND1	2.43	0.52
24:DA:84:A:OP2	43:DU:8:LYS:NZ	2.26	0.52
24:BA:2156:G:H2'	24:BA:2157:G:C4	2.44	0.52
40:B2:4:ILE:HG22	40:B2:39:LEU:HD13	1.90	0.52
29:DG:16:ARG:O	29:DG:20:ILE:HG22	2.10	0.52
22:CD:30:G:H2'	22:CD:31:G:H8	1.73	0.52
13:AP:3:ARG:HH12	29:BG:113:ARG:HB3	1.75	0.52
17:AT:18:THR:OG1	17:AT:69:LYS:NZ	2.34	0.52
24:BA:960:A:H61	35:BP:83:MET:HE2	1.74	0.52
38:BR:132:LYS:O	38:BR:136:GLN:NE2	2.31	0.52
46:BZ:65:SER:OG	46:BZ:66:HIS:ND1	2.38	0.52
24:BA:2557:G:H2'	24:BA:2558:C:H6	1.75	0.52
32:BM:58:ASP:OD1	32:BM:125:GLY:N	2.30	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:686:G:N2	24:DA:788:A:H61	2.08	0.52
45:D3:47:PRO:HG3	45:D3:53:MET:HB2	1.91	0.52
26:DD:267:SER:O	26:DD:269:PHE:N	2.43	0.52
52:B7:5:TRP:NE1	52:B7:7:PRO:HG3	2.25	0.52
24:DA:154:G:O6	24:DA:172:C:N4	2.41	0.52
22:CC:23:C:H2'	22:CC:24:U:C6	2.44	0.52
34:DO:122:PRO:HA	34:DO:142:GLY:H	1.74	0.52
40:B2:3:ALA:HB1	40:B2:38:LEU:HD11	1.92	0.52
16:CS:58:TYR:O	16:CS:61:SER:N	2.42	0.52
2:CE:73:THR:O	2:CE:73:THR:OG1	2.16	0.52
1:CA:992:U:O2'	1:CA:993:G:OP2	2.18	0.52
49:D4:36:CYS:O	49:D4:38:LYS:N	2.43	0.52
1:AA:475:G:H8	1:AA:475:G:P	2.33	0.52
49:D4:14:ILE:HG13	49:D4:33:VAL:CG1	2.40	0.52
26:DD:44:ASN:HB3	26:DD:49:ILE:HA	1.92	0.52
24:DA:1651:G:OP1	36:D0:40:LYS:HE3	2.09	0.52
49:B4:57:GLU:O	49:B4:61:ARG:N	2.30	0.52
24:BA:1533:C:H2'	24:BA:1534:G:H8	1.74	0.52
1:AA:1447:G:N1	1:AA:1459:C:N3	2.39	0.52
4:CG:119:GLN:HG2	4:CG:123:HIS:CD2	2.45	0.52
41:BS:88:ARG:NH1	41:BS:94:ASP:OD2	2.42	0.52
1:AA:1346:A:N1	1:AA:1374:A:H5"	2.25	0.52
28:BF:164:ARG:O	28:BF:168:ARG:HB2	2.09	0.52
44:BV:120:ILE:HG12	44:BV:121:HIS:N	2.24	0.52
13:AP:3:ARG:HD2	29:BG:113:ARG:HH21	1.75	0.52
24:DA:639:U:H3	24:DA:649:G:H1	1.58	0.52
26:DD:70:TRP:CZ3	26:DD:146:GLU:CD	2.83	0.52
24:BA:272:G:H2'	24:BA:273:G:C8	2.45	0.52
37:BQ:10:ARG:O	37:BQ:14:VAL:HG12	2.09	0.52
1:CA:359:U:H2'	1:CA:360:A:C8	2.45	0.52
24:BA:382:G:H1	24:BA:392:C:H42	1.56	0.52
24:DA:271:G:H2'	24:DA:272:G:C8	2.45	0.52
3:AF:46:GLU:O	3:AF:83:ARG:NH2	2.43	0.52
1:AA:716:A:N3	11:AN:118:GLY:HA2	2.25	0.52
24:DA:71:A:H4'	24:DA:72:U:H5"	1.91	0.52
24:DA:5:A:H2'	24:DA:6:A:H8	1.75	0.52
12:AO:38:THR:O	12:AO:79:GLU:HG3	2.10	0.52
1:CA:425:G:O3'	4:CG:45:GLN:NE2	2.43	0.52
24:DA:2162:G:H2'	24:DA:2163:C:C6	2.41	0.52
24:BA:1069:A:H3'	24:BA:1073:A:H62	1.75	0.52
22:AD:3:C:H2'	22:AD:4:G:H8	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DR:119:LYS:O	38:DR:123:GLN:HG3	2.10	0.52
24:BA:2475:C:H2'	24:BA:2477:C:OP1	2.10	0.52
24:BA:587:C:OP2	34:BO:21:ARG:NH2	2.43	0.52
4:CG:57:ARG:HB3	4:CG:206:PHE:HB2	1.92	0.52
31:DK:75:LEU:HD12	31:DK:76:THR:H	1.75	0.52
37:DQ:25:ARG:HB2	37:DQ:25:ARG:HH11	1.75	0.52
31:DK:68:LEU:O	31:DK:70:GLU:N	2.43	0.52
1:AA:108:G:P	1:AA:326:G:H22	2.33	0.52
2:CE:137:ARG:NH1	2:CE:141:GLU:HB2	2.25	0.52
22:CD:71:C:C4	22:CD:72:A:C6	2.98	0.52
24:DA:322:A:H5'	24:DA:340:A:H1'	1.90	0.52
29:DG:55:LYS:NZ	29:DG:148:MET:SD	2.80	0.52
46:BZ:85:LEU:HD12	46:BZ:88:LYS:HB2	1.92	0.52
1:AA:1253:G:P	10:AM:46:ARG:HH22	2.33	0.52
47:DW:13:ALA:HA	47:DW:16:LEU:HD21	1.92	0.52
49:D4:51:ASP:N	49:D4:51:ASP:OD1	2.43	0.52
1:CA:785:G:H1	1:CA:797:C:H42	1.56	0.52
50:B5:49:CYS:O	50:B5:51:TYR:N	2.44	0.52
1:CA:790:A:OP1	22:CC:38:A:O2'	2.23	0.52
28:DF:164:ARG:NH1	28:DF:177:ALA:HB2	2.25	0.52
1:AA:540:G:H2'	1:AA:541:G:O4'	2.09	0.52
4:CG:36:ARG:C	4:CG:38:TYR:H	2.12	0.51
24:BA:2797:U:OP1	24:BA:2798:C:N4	2.43	0.51
28:DF:3:GLU:CB	28:DF:24:LEU:HD21	2.40	0.51
24:BA:2419:U:H4'	51:B6:23:THR:HG21	1.93	0.51
34:DO:52:GLU:OE1	34:DO:53:GLY:N	2.42	0.51
24:BA:1086:A:H1'	24:BA:1103:A:H61	1.75	0.51
1:CA:1318:A:O2'	19:CV:37:ARG:HB3	2.11	0.51
13:CP:39:ILE:HD13	13:CP:52:GLU:HB3	1.91	0.51
24:BA:880:G:O2'	24:BA:881:G:OP1	2.27	0.51
24:BA:2157:G:O2'	24:BA:2158:A:O5'	2.28	0.51
26:BD:27:THR:HG23	26:BD:83:GLU:HB3	1.91	0.51
37:BQ:15:ARG:NH1	37:BQ:88:ASP:OD2	2.40	0.51
44:BV:53:ILE:HG22	44:BV:71:VAL:HG22	1.91	0.51
24:BA:1264:G:H5'	50:B5:11:THR:CG2	2.39	0.51
10:AM:25:GLU:C	10:AM:27:ALA:H	2.12	0.51
10:AM:25:GLU:O	10:AM:29:ARG:N	2.43	0.51
24:DA:2006:C:O2'	24:DA:2823:A:N3	2.42	0.51
10:AM:35:SER:HB2	10:AM:73:ASP:HB2	1.92	0.51
1:AA:1253:G:OP1	10:AM:46:ARG:NH2	2.37	0.51
24:DA:2262:U:OP2	45:D3:19:LYS:NZ	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1754:C:OP1	38:DR:96:ARG:NH1	2.43	0.51
24:DA:1757:U:O2	24:DA:1762:A:N6	2.19	0.51
29:DG:49:ASP:OD2	29:DG:51:ARG:NH1	2.42	0.51
24:BA:106:C:H2'	24:BA:107:C:H6	1.75	0.51
24:BA:2321:G:H5''	24:BA:2322:A:OP2	2.10	0.51
24:BA:589:C:H2'	24:BA:590:A:C8	2.45	0.51
24:BA:1140:C:OP1	32:BM:23:LEU:HB3	2.09	0.51
24:BA:780:G:OP1	26:BD:218:ARG:NH2	2.43	0.51
2:CE:91:PRO:HD3	2:CE:155:LEU:HD23	1.93	0.51
19:AV:41:VAL:O	49:B4:63:TYR:OH	2.29	0.51
22:AD:7:G:H5''	22:AD:8:U:H5'	1.92	0.51
24:BA:2149:G:H2'	24:BA:2150:U:O4'	2.10	0.51
1:CA:959:A:HO2'	1:CA:984:C:HO2'	1.58	0.51
1:CA:1216:G:OP1	14:CQ:2:ALA:N	2.43	0.51
24:DA:1899:G:N2	24:DA:1902:C:N4	2.54	0.51
25:BB:42:C:H1'	29:BG:69:ALA:N	2.26	0.51
14:CQ:27:CYS:SG	14:CQ:29:ARG:NH2	2.83	0.51
24:DA:1112:G:H5'	30:DH:3:ARG:CZ	2.41	0.51
24:BA:2159:G:C2'	24:BA:2160:G:H5'	2.39	0.51
22:CD:30:G:H2'	22:CD:31:G:C8	2.45	0.51
24:BA:270(P):C:H2'	24:BA:270(Q):C:C6	2.44	0.51
24:BA:528:A:C2	24:BA:2043:C:H4'	2.46	0.51
28:BF:32:LEU:HD13	28:BF:105:VAL:CG1	2.41	0.51
38:DR:6:LEU:HA	38:DR:9:LEU:HB2	1.92	0.51
4:AG:108:LEU:HB3	4:AG:110:PHE:CD1	2.45	0.51
31:DK:76:THR:O	31:DK:78:THR:OG1	2.28	0.51
51:D6:46:HIS:CD2	51:D6:46:HIS:N	2.78	0.51
13:CP:34:LEU:O	13:CP:38:GLY:N	2.42	0.51
24:BA:2651:C:H42	24:BA:2669:G:H1	1.59	0.51
1:AA:1240:U:O4	7:AJ:109:ASN:ND2	2.43	0.51
24:DA:616:A:C8	28:DF:176:LEU:HD11	2.46	0.51
5:CH:73:ASN:N	5:CH:73:ASN:OD1	2.44	0.51
24:BA:314:A:C2'	24:BA:315:G:H5'	2.40	0.51
3:CF:156:ARG:NE	3:CF:160:ALA:O	2.35	0.51
24:DA:2512:C:H2'	24:DA:2513:G:O4'	2.10	0.51
49:B4:54:GLY:O	49:B4:56:VAL:N	2.44	0.51
4:AG:188:LEU:HD22	4:AG:189:PRO:HD2	1.93	0.51
27:DE:8:LYS:HB3	27:DE:192:ASN:HA	1.90	0.51
27:DE:60:ASN:HA	27:DE:63:LEU:HD21	1.92	0.51
24:DA:1087:G:H1	24:DA:1102:C:N4	2.09	0.51
19:AV:41:VAL:HB	19:AV:42:PRO:CA	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1106:G:H2'	24:BA:1107:G:O4'	2.10	0.51
11:AN:78:GLN:O	11:AN:103:LEU:HA	2.10	0.51
9:CL:8:GLY:O	9:CL:15:ALA:N	2.35	0.51
24:BA:882:G:HO2'	24:BA:883:G:H8	1.54	0.51
24:BA:882:G:O2'	24:BA:883:G:O5'	2.28	0.51
24:BA:898:C:H2'	24:BA:899:A:O4'	2.11	0.51
24:BA:897:C:H2'	24:BA:898:C:H6	1.75	0.51
1:AA:437:U:H2'	1:AA:438:G:O4'	2.09	0.51
24:DA:1171:G:H1	24:DA:1174:A:N6	2.08	0.51
1:AA:1347:G:C8	9:AL:11:LYS:NZ	2.73	0.51
1:CA:853:G:H2'	1:CA:854:G:H8	1.74	0.51
2:CE:12:GLU:HA	2:CE:15:VAL:HG12	1.92	0.51
1:CA:266:G:H2'	1:CA:266:G:N3	2.24	0.51
32:DM:128:HIS:O	32:DM:130:HIS:ND1	2.40	0.51
7:CJ:132:GLY:O	7:CJ:134:ALA:N	2.34	0.51
34:DO:30:THR:CG2	34:DO:35:HIS:H	2.23	0.51
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.46	0.51
3:CF:56:ASP:OD1	3:CF:57:ILE:N	2.44	0.51
24:DA:601:C:O2'	28:DF:104:LYS:NZ	2.44	0.51
5:CH:8:GLU:OE2	5:CH:63:ARG:NH2	2.43	0.51
31:BK:41:GLU:OE2	31:BK:42:SER:N	2.39	0.51
24:BA:2695:C:H2'	24:BA:2696:U:H6	1.74	0.51
24:BA:2271:G:OP1	45:B3:18:ALA:HB1	2.09	0.51
2:AE:167:PRO:HG2	2:AE:192:SER:HB3	1.91	0.51
40:B2:62:LEU:HD22	40:B2:95:LEU:HB2	1.93	0.51
51:D6:47:THR:O	51:D6:48:VAL:C	2.49	0.51
24:DA:2115:G:H2'	24:DA:2116:G:C5	2.45	0.51
1:AA:1131:G:C4	1:AA:1132:C:H5	2.28	0.51
1:CA:994:A:C5	1:CA:1216:G:H4'	2.46	0.51
30:DH:4:ILE:HG21	30:DH:6:ARG:HH21	1.76	0.51
30:DH:67:LEU:O	30:DH:71:LEU:HB3	2.09	0.51
1:CA:77:C:H2'	1:CA:78:G:O4'	2.11	0.51
24:BA:1971:A:C4	26:BD:241:PRO:HD3	2.45	0.51
2:CE:16:HIS:ND1	2:CE:209:ARG:O	2.43	0.51
44:BV:48:PHE:CE1	44:BV:71:VAL:HG11	2.45	0.51
24:BA:2849:U:OP2	38:BR:95:ARG:NH1	2.43	0.51
2:CE:188:ALA:N	2:CE:201:ILE:O	2.31	0.51
46:DZ:87:PRO:O	46:DZ:91:LYS:N	2.42	0.51
29:DG:60:LEU:O	29:DG:64:THR:HG22	2.10	0.51
2:CE:47:THR:O	2:CE:51:LEU:N	2.43	0.51
24:BA:2698:U:H2'	24:BA:2699:C:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CK:21:LYS:HG2	8:CK:23:SER:O	2.10	0.51
24:DA:1812:A:H2'	24:DA:1813:G:C8	2.46	0.51
24:BA:1203:G:H3'	24:BA:1204:A:H5''	1.91	0.51
29:BG:39:ILE:HG23	29:BG:157:ILE:HG12	1.92	0.51
30:BH:129:THR:O	30:BH:129:THR:OG1	2.28	0.51
13:AP:16:ASP:OD1	13:AP:16:ASP:N	2.44	0.51
22:AD:74:C:H4'	46:BZ:23:LYS:HB2	1.92	0.51
33:DN:24:VAL:HB	33:DN:33:ALA:HB2	1.92	0.51
27:DE:66:HIS:NE2	27:DE:67:PHE:HB2	2.24	0.51
27:DE:72:VAL:CG1	27:DE:72:VAL:O	2.58	0.51
27:DE:37:ARG:NH1	27:DE:80:GLU:OE2	2.37	0.51
9:AL:3:GLN:OE1	9:AL:20:ARG:NH1	2.35	0.51
24:DA:1063:G:C4	24:DA:1076:C:C2	2.98	0.51
24:DA:1094:U:H5'	24:DA:1098:A:H61	1.74	0.51
9:AL:10:ARG:HE	9:AL:105:ASP:CB	2.23	0.51
1:CA:1131:G:H2'	1:CA:1132:C:C6	2.45	0.51
1:CA:1320:C:H5'	19:CV:70:LYS:NZ	2.25	0.51
1:AA:1081:G:H2'	1:AA:1082:G:H8	1.76	0.51
1:AA:1392:G:N2	1:AA:1502:A:H8	2.08	0.51
24:BA:2439:A:H4'	24:BA:2440:C:O5'	2.11	0.51
24:DA:1486:A:H2'	24:DA:1487:G:H8	1.76	0.51
30:DH:23:ARG:HA	30:DH:36:PRO:HA	1.93	0.51
18:AU:35:ARG:O	18:AU:37:VAL:N	2.43	0.51
10:CM:33:GLN:HB2	10:CM:75:ILE:HG12	1.92	0.51
20:AW:35:THR:O	20:AW:38:LYS:HB2	2.11	0.51
41:BS:12:ILE:HD13	41:BS:17:VAL:HB	1.91	0.51
38:DR:45:PHE:CD2	38:DR:74:ARG:HD2	2.46	0.51
29:DG:76:SER:HA	29:DG:82:LEU:HB3	1.90	0.51
24:BA:2561:A:H2	33:BN:23:ARG:HH11	1.57	0.51
9:AL:5:TYR:N	9:AL:87:GLN:OE1	2.36	0.51
3:AF:46:GLU:HB2	3:AF:83:ARG:NH2	2.24	0.51
24:DA:6:A:N3	32:DM:131:GLN:HG3	2.26	0.51
24:BA:95:G:O2'	47:BW:46:GLN:O	2.27	0.51
32:BM:17:ASP:OD1	32:BM:56:ASN:ND2	2.35	0.51
31:DK:1:MET:N	31:DK:21:VAL:O	2.39	0.51
48:BX:41:PRO:HA	48:BX:44:ARG:HG3	1.91	0.51
4:CG:22:LYS:NZ	4:CG:25:ARG:HH11	2.07	0.51
30:BH:150:ALA:O	30:BH:151:ILE:C	2.49	0.51
1:CA:686:U:H2'	1:CA:687:A:C8	2.46	0.51
1:CA:1216:G:H5''	14:CQ:5:ALA:CB	2.41	0.51
1:CA:1322:C:OP2	19:CV:78:ARG:NH1	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:38:VAL:HG22	29:BG:93:THR:HG23	1.91	0.51
24:BA:1678:G:H22	24:BA:1989:G:H22	1.55	0.51
1:AA:1279:A:O2'	1:AA:1281:U:OP2	2.16	0.51
1:CA:1329:A:O3'	13:CP:25:ILE:N	2.36	0.51
24:BA:2685:G:P	38:BR:51:ARG:HH22	2.33	0.51
28:BF:31:HIS:O	28:BF:35:GLU:N	2.34	0.51
1:AA:8:A:H5'	5:AH:101:ILE:HG22	1.91	0.51
35:DP:19:GLY:H	35:DP:98:LYS:HZ3	1.57	0.51
1:CA:1230:C:O2'	9:CL:128:ARG:O	2.29	0.51
27:DE:201:THR:HG21	27:DE:203:LYS:HE2	1.93	0.51
1:CA:954:G:H21	1:CA:1227:A:H62	1.57	0.51
40:B2:35:LEU:HB2	40:B2:37:VAL:HG22	1.92	0.51
10:AM:81:THR:OG1	10:AM:82:ILE:N	2.44	0.51
25:DB:83:G:H4'	48:DX:52:HIS:CG	2.46	0.51
12:CO:26:ALA:HB2	12:CO:98:TYR:HE1	1.74	0.51
1:CA:1162:C:N4	1:CA:1174:G:H1	2.08	0.51
10:CM:87:THR:O	10:CM:89:ASP:N	2.44	0.51
24:DA:2641:G:O3'	32:DM:76:SER:OG	2.27	0.51
27:DE:119:ARG:HG2	27:DE:160:TYR:HB2	1.92	0.51
29:DG:106:LEU:HA	29:DG:110:ALA:HB3	1.92	0.51
24:BA:1766:U:H2'	24:BA:1767:C:H6	1.74	0.51
28:DF:83:PHE:O	28:DF:85:GLY:N	2.44	0.51
17:AT:81:ARG:NH2	17:AT:83:ASP:OD2	2.37	0.51
24:BA:2290:G:H1	24:BA:2342:C:H42	1.59	0.51
24:DA:2232:U:P	46:DZ:40:ARG:HH12	2.33	0.51
6:CI:94:GLN:OE1	18:CU:32:ARG:NH1	2.43	0.51
39:D1:49:HIS:HA	39:D1:52:ARG:HB2	1.92	0.51
24:BA:2810:A:N6	24:BA:2891:G:O2'	2.43	0.51
27:BE:61:ARG:O	27:BE:63:LEU:N	2.43	0.51
3:CF:155:GLY:O	3:CF:157:ILE:N	2.42	0.51
24:DA:1063:G:C2	24:DA:1064:C:H4'	2.45	0.51
40:D2:65:GLY:O	40:D2:91:TYR:N	2.39	0.51
22:AD:18:G:N1	22:AD:55:U:O2'	2.44	0.51
4:CG:104:VAL:HG21	4:CG:140:VAL:HG21	1.91	0.51
4:CG:108:LEU:HD12	4:CG:170:VAL:HG21	1.93	0.51
1:CA:1104:G:H2'	1:CA:1105:A:C8	2.45	0.51
1:CA:191(F):U:H2'	1:CA:191:G:H8	1.75	0.51
44:DV:103:ARG:N	44:DV:137:ILE:O	2.36	0.51
10:AM:9:ARG:HG2	10:AM:69:ASN:OD1	2.10	0.51
29:DG:96:ARG:O	29:DG:98:ARG:N	2.40	0.51
31:BK:33:ARG:HB3	31:BK:35:LEU:HD23	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:114:ILE:HD13	29:BG:140:ILE:HG21	1.92	0.51
26:BD:155:LEU:HD23	26:BD:177:LEU:HD22	1.93	0.51
1:CA:920:U:H2'	1:CA:921:U:H6	1.76	0.51
10:CM:99:LYS:HD3	10:CM:101:VAL:HG23	1.92	0.51
2:AE:58:ILE:HD11	2:AE:185:ILE:HD12	1.93	0.51
24:BA:2533:A:OP1	24:BA:2665:A:H1'	2.11	0.51
2:CE:74:LYS:HZ3	2:CE:166:ASP:HB2	1.76	0.51
12:AO:62:SER:C	12:AO:64:TYR:H	2.14	0.51
46:BZ:17:SER:HB2	46:BZ:40:ARG:HG2	1.93	0.51
4:CG:159:ARG:O	4:CG:163:GLU:N	2.37	0.51
27:DE:109:LYS:O	27:DE:111:ARG:NH2	2.44	0.51
30:BH:67:LEU:O	30:BH:71:LEU:HB2	2.11	0.51
27:DE:128:SER:OG	27:DE:129:HIS:N	2.43	0.51
39:B1:62:ILE:HG23	39:B1:76:TYR:CE2	2.46	0.51
1:AA:1237:C:O2'	1:AA:1300:G:N1	2.39	0.51
35:DP:138:ASP:OD1	35:DP:138:ASP:N	2.44	0.51
24:DA:769:G:H2'	24:DA:770:G:H8	1.75	0.51
24:BA:1528:A:C2	24:BA:1542:G:C2	2.99	0.51
30:BH:4:ILE:HD13	30:BH:6:ARG:CB	2.41	0.51
40:D2:22:VAL:HG22	40:D2:23:GLU:H	1.76	0.51
12:AO:49:ASN:O	12:AO:50:SER:HB2	2.11	0.51
9:CL:5:TYR:HA	9:CL:17:VAL:O	2.11	0.51
22:CD:62:C:O2'	22:CD:63:G:H5'	2.11	0.51
2:AE:223:ILE:C	2:AE:225:ALA:H	2.14	0.51
24:BA:1060:U:C5	24:BA:1062:G:H4'	2.45	0.51
24:BA:2168:G:N3	24:BA:2168:G:H3'	2.25	0.51
24:DA:546:C:H2'	24:DA:547:A:O4'	2.10	0.51
24:DA:2542:A:H1'	24:DA:2543:G:C8	2.46	0.51
1:CA:1106:G:H4'	3:CF:171:GLY:O	2.11	0.51
26:BD:85:ASP:OD1	26:BD:87:ASN:ND2	2.44	0.51
24:DA:1567:A:O2'	26:DD:63:ARG:NH2	2.44	0.51
1:AA:110:C:H2'	1:AA:111:G:O4'	2.10	0.51
38:DR:24:PRO:HD3	38:DR:52:ILE:HG13	1.93	0.51
37:DQ:15:ARG:NH1	37:DQ:90:GLY:HA2	2.26	0.51
4:AG:196:LEU:C	4:AG:198:VAL:H	2.14	0.51
24:BA:514:A:N3	24:BA:581:C:O2'	2.37	0.51
2:AE:138:LEU:O	2:AE:142:LEU:N	2.41	0.51
50:B5:49:CYS:HA	50:B5:56:LYS:HB2	1.92	0.51
35:DP:6:ARG:O	35:DP:7:MET:HG2	2.10	0.51
15:AR:11:VAL:HG21	15:AR:34:LEU:HD22	1.92	0.51
29:BG:37:VAL:HG22	29:BG:159:VAL:HG12	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1991:U:H2'	24:DA:1992:G:H5''	1.93	0.51
1:AA:324:G:N1	1:AA:327:A:OP2	2.42	0.51
12:CO:28:LYS:HD2	12:CO:33:ARG:HH22	1.76	0.51
12:CO:27:LEU:HD22	12:CO:60:LEU:HD23	1.93	0.51
31:BK:127:VAL:HG22	31:BK:139:GLN:HB3	1.93	0.51
13:AP:59:TYR:CE1	13:AP:63:THR:HG21	2.46	0.51
24:BA:1019:U:H3	24:BA:1142(A):A:N6	2.09	0.51
27:DE:11:MET:HE3	27:DE:187:ALA:H	1.76	0.51
34:DO:62:LEU:CD2	53:D8:27:THR:HG23	2.38	0.51
28:DF:3:GLU:O	28:DF:5:ALA:N	2.44	0.51
24:BA:1590:U:H2'	24:BA:1591:G:C8	2.46	0.51
22:AD:21:A:N6	22:AD:47:U:OP2	2.42	0.51
3:CF:47:LEU:O	3:CF:50:ALA:N	2.33	0.51
24:DA:2801:A:H2'	24:DA:2802:G:O4'	2.11	0.51
24:BA:1171:G:C5	24:BA:1174:A:C6	2.99	0.51
24:BA:276:A:C2'	24:BA:277:C:H5''	2.40	0.51
13:CP:54:VAL:HA	13:CP:57:ARG:HB3	1.92	0.51
13:CP:15:VAL:HA	13:CP:18:ALA:HB3	1.91	0.51
44:BV:4:ARG:HE	44:BV:58:VAL:HG11	1.75	0.51
24:DA:1478:G:H2'	24:DA:1479:G:C8	2.45	0.51
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.46	0.51
4:AG:110:PHE:CE2	4:AG:148:VAL:HG23	2.45	0.51
9:AL:4:TYR:O	9:AL:19:LEU:N	2.35	0.51
24:DA:1856:G:H1	24:DA:1886:C:N4	2.09	0.51
18:AU:18:ARG:HB3	18:AU:19:LYS:HD2	1.93	0.51
12:AO:62:SER:O	12:AO:64:TYR:N	2.43	0.51
24:BA:1449:A:O2'	24:BA:1530:G:N2	2.42	0.51
24:DA:1846:G:H1	24:DA:1894:C:H42	1.59	0.51
35:DP:34:LEU:HD11	35:DP:129:THR:HB	1.93	0.51
24:DA:2031:A:C6	24:DA:2498:C:H1'	2.46	0.51
5:AH:68:GLU:HG3	5:AH:68:GLU:O	2.11	0.51
28:BF:45:ARG:HD3	28:BF:97:TYR:CG	2.45	0.51
24:DA:1864:U:OP1	24:DA:2410:G:O2'	2.23	0.51
24:BA:1025:G:C4	24:BA:1135:C:H1'	2.46	0.51
30:BH:53:GLU:OE1	30:BH:54:ARG:N	2.42	0.51
9:CL:4:TYR:CZ	9:CL:88:TYR:HB3	2.46	0.51
27:BE:111:ARG:HA	36:B0:1:MET:SD	2.50	0.51
35:DP:11:LYS:NZ	35:DP:87:LYS:O	2.43	0.51
43:BU:49:VAL:HG12	43:BU:50:ARG:CZ	2.41	0.51
49:B4:60:GLN:HA	49:B4:63:TYR:HB3	1.91	0.51
24:BA:1071:G:N2	24:BA:1090:U:H3'	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1092:C:H2'	24:BA:1093:G:H5'	1.91	0.51
24:BA:1899:G:H21	24:BA:1902:C:H41	1.56	0.51
34:BO:13:ASN:OD1	34:BO:15:ARG:HB2	2.10	0.51
1:AA:1151:A:H2'	1:AA:1152:A:C8	2.46	0.51
24:BA:337:C:H5''	43:BU:4:LYS:HD3	1.93	0.51
1:CA:1442:G:O6	1:CA:1446:A:N6	2.42	0.51
3:AF:86:VAL:O	3:AF:89:GLU:HB3	2.10	0.51
1:CA:848:C:H2'	1:CA:849:C:C6	2.45	0.51
53:D8:61:LEU:HD13	53:D8:62:LEU:HD12	1.92	0.51
20:AW:49:ALA:HB2	20:AW:92:LEU:HD22	1.92	0.51
1:AA:323:U:H2'	1:AA:324:G:O4'	2.11	0.51
1:AA:932:C:O3'	7:AJ:4:ARG:NH2	2.44	0.51
24:DA:2730:C:O2'	27:DE:168:MET:O	2.28	0.51
38:BR:107:ASP:H	38:BR:110:ILE:HG22	1.76	0.51
7:CJ:49:ILE:HA	7:CJ:52:GLU:HG2	1.93	0.51
36:D0:104:ARG:HD2	36:D0:109:ALA:HB3	1.93	0.51
24:DA:670:A:H5''	34:DO:42:SER:O	2.11	0.51
30:DH:96:ALA:HB1	30:DH:99:VAL:HG21	1.93	0.51
24:BA:1049:C:C4	24:BA:1050:A:C2	2.99	0.50
51:D6:14:THR:CB	51:D6:20:ASN:H	2.22	0.50
27:BE:61:ARG:N	27:BE:62:PRO:CD	2.72	0.50
49:D4:16:CYS:SG	49:D4:18:CYS:N	2.80	0.50
24:DA:1054:A:H2	24:DA:1084:A:N1	2.09	0.50
24:BA:2111:C:C2	24:BA:2118:U:H4'	2.46	0.50
1:AA:957:U:H1'	1:AA:960:U:C5	2.47	0.50
45:B3:68:GLU:OE2	45:B3:82:ARG:NH1	2.44	0.50
3:CF:85:ARG:HA	3:CF:88:ARG:HG2	1.93	0.50
24:DA:2748:A:H2'	24:DA:2749:A:C8	2.45	0.50
29:DG:27:ASN:OD1	29:DG:28:VAL:N	2.44	0.50
24:BA:2389:G:H5''	24:BA:2390:U:O4'	2.11	0.50
31:BK:57:ARG:HA	31:BK:60:GLU:HB2	1.93	0.50
14:CQ:45:ARG:HG3	14:CQ:49:HIS:CE1	2.46	0.50
37:BQ:37:ALA:HB2	37:BQ:101:LEU:HD21	1.92	0.50
1:AA:186(F):C:H2'	1:AA:187:C:O4'	2.11	0.50
37:DQ:83:LYS:O	37:DQ:110:LEU:N	2.41	0.50
24:DA:635:C:H2'	24:DA:636:G:O4'	2.12	0.50
43:DU:37:VAL:O	43:DU:67:LEU:N	2.42	0.50
4:CG:111:ALA:HB2	4:CG:120:LEU:HD12	1.93	0.50
24:BA:1771:C:HO2'	24:BA:1786:A:H8	1.58	0.50
24:BA:2212:A:O2'	24:BA:2213:U:O5'	2.28	0.50
24:BA:439:G:O2'	24:BA:440:G:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:41:ASP:OD2	37:BQ:44:LYS:NZ	2.34	0.50
37:BQ:64:GLU:O	37:BQ:68:GLN:HG3	2.11	0.50
11:AN:22:HIS:HB3	11:AN:29:ILE:HG23	1.93	0.50
2:CE:28:PHE:O	2:CE:32:ILE:HG23	2.11	0.50
24:DA:207:A:H2'	24:DA:208:C:O4'	2.11	0.50
24:BA:2751:G:H1'	24:BA:2752:C:OP1	2.12	0.50
40:D2:35:LEU:O	40:D2:37:VAL:HG22	2.11	0.50
26:DD:35:LYS:HE3	26:DD:64:ILE:CB	2.41	0.50
51:D6:27:LYS:HZ3	51:D6:28:ARG:NH1	2.08	0.50
51:D6:39:TYR:O	51:D6:41:PRO:HD3	2.12	0.50
24:DA:2637:U:H5''	27:DE:82:ARG:HH21	1.75	0.50
51:B6:19:ARG:NH1	51:B6:21:TYR:CZ	2.76	0.50
22:CD:57:A:H4'	22:CD:58:A:OP1	2.11	0.50
24:BA:2287:A:N6	24:BA:2344:U:H3	2.01	0.50
1:AA:75:C:C4	1:AA:76:G:C8	2.99	0.50
24:BA:1177:A:H5'	24:BA:1178:C:C6	2.47	0.50
40:D2:84:LYS:HG3	40:D2:85:LYS:HB2	1.92	0.50
22:CD:27:U:H3	22:CD:43:A:H61	1.57	0.50
24:BA:2842:G:H2'	24:BA:2843:G:C8	2.45	0.50
29:DG:69:ALA:HB3	29:DG:91:ARG:HH21	1.76	0.50
40:B2:71:LEU:HD22	40:B2:84:LYS:HE2	1.93	0.50
29:BG:109:VAL:O	29:BG:113:ARG:HG3	2.10	0.50
1:AA:1327:C:P	21:AX:12:LYS:HZ1	2.35	0.50
24:DA:1266:G:O4'	41:DS:15:ARG:NH2	2.43	0.50
1:AA:972:C:O3'	10:AM:57:LYS:HD3	2.11	0.50
24:BA:1869:G:H5'	24:BA:1870:C:OP2	2.12	0.50
24:BA:2402:C:H2'	24:BA:2403:C:H5'	1.93	0.50
24:DA:863:A:H2'	24:DA:864:G:H8	1.75	0.50
24:BA:1210:A:H8	24:BA:1210:A:H5'	1.75	0.50
3:CF:21:ARG:HB3	3:CF:21:ARG:HH11	1.76	0.50
1:AA:639:G:H2'	1:AA:640:A:H8	1.75	0.50
24:BA:2540:C:O2'	24:BA:2740:A:N3	2.38	0.50
26:DD:4:LYS:HB3	26:DD:18:VAL:HG12	1.93	0.50
32:BM:59:LYS:O	32:BM:61:ARG:NH1	2.44	0.50
1:AA:958:A:C2	19:AV:55:LYS:HB2	2.46	0.50
24:BA:637:A:OP2	34:BO:131:SER:OG	2.20	0.50
22:AC:25:C:H2'	22:AC:26:G:O4'	2.11	0.50
1:AA:52:G:H2'	1:AA:53:A:H8	1.76	0.50
37:BQ:111:GLU:HG2	37:BQ:112:PHE:CD2	2.46	0.50
5:CH:51:VAL:O	5:CH:55:VAL:HG23	2.11	0.50
1:AA:1075:C:OP1	2:AE:179:LYS:HE2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:145:THR:O	29:BG:147:ASP:N	2.43	0.50
36:B0:57:ARG:HB3	36:B0:59:ASP:OD1	2.11	0.50
24:BA:943:U:OP2	34:BO:36:LYS:NZ	2.34	0.50
1:CA:619:U:C2	4:CG:135:LEU:HD21	2.46	0.50
27:DE:23:VAL:O	27:DE:25:VAL:N	2.44	0.50
4:CG:12:CYS:SG	4:CG:26:CYS:SG	3.10	0.50
51:D6:27:LYS:HZ3	51:D6:28:ARG:HH12	1.60	0.50
34:DO:49:ARG:CZ	53:D8:59:LYS:HG2	2.41	0.50
53:B8:42:ARG:C	53:B8:44:LYS:H	2.15	0.50
1:AA:1130:A:H62	1:AA:1144:G:N2	2.08	0.50
1:AA:468:A:H4'	16:AS:80:PHE:O	2.11	0.50
28:DF:64:ILE:O	28:DF:65:TRP:HD1	1.94	0.50
24:BA:747:U:C4	50:B5:2:ALA:N	2.79	0.50
24:DA:1061:U:H4'	24:DA:1070:A:O2'	2.10	0.50
1:CA:1126:U:N3	1:CA:1281:U:O4'	2.44	0.50
9:CL:4:TYR:HA	9:CL:87:GLN:HE22	1.76	0.50
2:AE:16:HIS:HE1	2:AE:209:ARG:HB3	1.75	0.50
8:AK:30:ARG:HB2	8:AK:30:ARG:NH1	2.26	0.50
29:BG:66:GLN:NE2	29:BG:93:THR:O	2.40	0.50
24:DA:2657:A:O3'	30:DH:160:LYS:NZ	2.44	0.50
24:DA:2803:C:H2'	24:DA:2804:C:O4'	2.11	0.50
1:AA:1502:A:H2	1:AA:1505:G:N1	2.05	0.50
24:BA:1520:U:H2'	24:BA:1521:G:O4'	2.11	0.50
25:DB:38:C:O2	25:DB:48:A:H1'	2.11	0.50
26:DD:85:ASP:OD1	26:DD:87:ASN:ND2	2.44	0.50
24:BA:2186:G:H2'	24:BA:2187:G:H8	1.75	0.50
25:BB:28:C:H2'	25:BB:29:A:O4'	2.11	0.50
47:DW:38:GLN:HB3	47:DW:44:LEU:O	2.12	0.50
5:AH:143:ARG:NE	8:AK:77:GLU:OE1	2.28	0.50
27:DE:96:PHE:O	27:DE:175:VAL:HG11	2.10	0.50
7:AJ:108:ALA:HA	7:AJ:111:ARG:HD2	1.93	0.50
31:DK:1:MET:N	31:DK:20:ASP:OD1	2.28	0.50
24:BA:38:A:N3	28:BF:48:THR:OG1	2.45	0.50
12:CO:124:LYS:HD2	12:CO:125:PRO:HD2	1.94	0.50
50:B5:12:SER:OG	50:B5:15:ARG:HB2	2.11	0.50
24:DA:494:G:OP1	41:DS:8:ARG:NH1	2.37	0.50
1:CA:881:G:P	12:CO:12:ARG:HH12	2.34	0.50
39:D1:92:ARG:HG2	39:D1:95:LEU:HB2	1.93	0.50
32:BM:127:ASP:O	32:BM:128:HIS:HB3	2.10	0.50
24:DA:2138:C:C2	24:DA:2154:G:C2	2.99	0.50
1:AA:1133:G:N1	1:AA:1141:C:N3	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:947:G:H2'	1:AA:948:C:C6	2.47	0.50
1:CA:1328:C:OP1	21:CX:21:TYR:OH	2.27	0.50
24:DA:2893:G:H4'	24:DA:2894:G:O5'	2.11	0.50
24:BA:1061:U:H1'	24:BA:1070:A:C2	2.46	0.50
22:AD:48:C:OP2	22:AD:49:G:H5''	2.11	0.50
3:CF:47:LEU:O	3:CF:49:SER:N	2.45	0.50
24:DA:2748:A:N7	24:DA:2753:A:N6	2.60	0.50
1:AA:78:G:H3'	1:AA:79:G:C8	2.46	0.50
13:CP:16:ASP:OD1	13:CP:16:ASP:N	2.45	0.50
24:DA:1542:G:H3'	24:DA:1543:A:C5'	2.40	0.50
13:AP:3:ARG:HG3	13:AP:9:ILE:HD11	1.94	0.50
1:CA:189:U:O2'	17:CT:63:ARG:NH2	2.43	0.50
3:AF:13:GLY:HA3	14:AQ:57:ARG:HE	1.76	0.50
44:DV:41:LEU:O	44:DV:45:ASP:N	2.27	0.50
1:AA:536:C:H2'	1:AA:537:G:C8	2.47	0.50
44:BV:63:ASP:C	44:BV:65:GLN:H	2.14	0.50
30:BH:23:ARG:HA	30:BH:37:VAL:HB	1.93	0.50
24:BA:2881:C:H2'	24:BA:2882:A:H8	1.77	0.50
31:BK:69:LYS:O	31:BK:73:GLU:HB2	2.10	0.50
5:CH:63:ARG:HA	5:CH:66:MET:HE1	1.93	0.50
3:AF:137:ALA:O	3:AF:141:VAL:HG23	2.12	0.50
12:CO:103:GLY:N	12:CO:107:ALA:O	2.39	0.50
44:DV:116:VAL:N	44:DV:179:ASP:OD1	2.44	0.50
24:BA:463:G:N2	24:BA:466:A:OP2	2.42	0.50
1:CA:300:A:O2'	1:CA:564:C:N3	2.36	0.50
31:DK:27:ARG:HD2	46:DZ:71:TYR:CE1	2.47	0.50
29:BG:143:GLU:OE1	49:B4:26:SER:OG	2.18	0.50
24:DA:254:G:N7	53:D8:5:LYS:HE2	2.26	0.50
3:AF:3:ASN:N	3:AF:3:ASN:OD1	2.43	0.50
38:BR:11:GLU:CD	38:BR:11:GLU:H	2.14	0.50
32:BM:115:ARG:HA	32:BM:118:LYS:HE2	1.93	0.50
38:DR:77:PRO:HB2	38:DR:80:SER:HB2	1.93	0.50
2:CE:48:MET:HE2	2:CE:49:GLU:HG3	1.93	0.50
24:BA:1991:U:H2'	24:BA:1992:G:H5''	1.93	0.50
34:DO:71:VAL:HG13	34:DO:72:PRO:N	2.25	0.50
12:AO:46:LYS:CD	12:AO:48:PRO:HG2	2.38	0.50
30:BH:164:TYR:N	30:BH:167:GLU:OE1	2.42	0.50
51:D6:15:GLU:OE2	51:D6:16:CYS:O	2.30	0.50
24:BA:2629:A:O2'	24:BA:2630:G:H5''	2.11	0.50
24:BA:2801:A:C4	24:BA:2802:G:H1'	2.46	0.50
24:BA:7:G:H4'	32:BM:13:TRP:HH2	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:783:A:H8	24:BA:784:A:H4'	1.77	0.50
24:DA:1069:A:H3'	24:DA:1073:A:H62	1.77	0.50
24:DA:1087:G:O6	24:DA:1089:G:N2	2.43	0.50
1:CA:1309:G:OP1	13:CP:88:ARG:NH2	2.43	0.50
1:CA:1036:G:H3'	1:CA:1037:C:C6	2.46	0.50
24:BA:1097:U:H3'	24:BA:1098:A:H8	1.76	0.50
1:CA:1224:G:N1	1:CA:1322:C:O2'	2.41	0.50
1:CA:983:A:H2	1:CA:984:C:C6	2.30	0.50
1:AA:975:A:HO2'	14:AQ:32:SER:HG	1.57	0.50
44:DV:127:LYS:N	44:DV:162:GLU:O	2.44	0.50
44:BV:106:GLY:N	44:BV:139:VAL:O	2.45	0.50
1:AA:1162:C:C2	1:AA:1175:G:C2	3.00	0.50
1:AA:404:U:H5'	4:AG:122:ARG:HG3	1.94	0.50
25:DB:118:G:H3'	25:DB:119:A:C8	2.45	0.50
13:CP:48:LEU:HD11	13:CP:53:VAL:HG22	1.92	0.50
1:AA:1086:U:H3	1:AA:1099:G:N2	2.09	0.50
1:AA:501:C:H2'	1:AA:502:G:C8	2.47	0.50
1:AA:1016:A:O2'	1:AA:1217:C:O2	2.29	0.50
46:DZ:91:LYS:O	46:DZ:93:GLU:N	2.45	0.50
1:CA:1250:A:N3	1:CA:1370:G:O2'	2.45	0.50
24:BA:581:C:H2'	24:BA:582:G:H8	1.77	0.50
30:DH:137:ASP:OD2	30:DH:139:GLN:N	2.44	0.50
36:B0:33:ARG:HG2	36:B0:115:GLU:HB3	1.94	0.50
39:B1:34:LYS:NZ	39:B1:37:GLU:OE1	2.32	0.50
24:DA:974:G:O2'	24:DA:975:G:N7	2.34	0.50
8:AK:98:LYS:O	8:AK:100:ILE:N	2.45	0.50
9:AL:53:VAL:O	9:AL:55:ALA:N	2.43	0.50
29:DG:75:LYS:HA	29:DG:84:LYS:HE2	1.94	0.50
11:AN:44:SER:OG	11:AN:47:VAL:HG23	2.12	0.50
39:B1:66:ASN:O	39:B1:70:ARG:HB2	2.11	0.50
24:BA:1221:C:H2'	24:BA:1222:C:H6	1.77	0.50
30:DH:41:MET:N	30:DH:41:MET:SD	2.84	0.50
24:DA:582:G:H2'	24:DA:583:G:C8	2.47	0.50
1:AA:711:G:H2'	1:AA:712:A:H8	1.75	0.50
28:BF:50:SER:HB2	28:BF:94:PRO:HD3	1.93	0.50
7:AJ:22:LEU:HG	7:AJ:62:PHE:HE2	1.76	0.50
24:DA:389:G:N2	34:DO:71:VAL:HG12	2.26	0.50
27:DE:67:PHE:O	27:DE:68:ALA:C	2.49	0.50
32:BM:134:ARG:O	32:BM:136:GLU:N	2.44	0.50
25:DB:66:A:H61	25:DB:107:U:H2'	1.76	0.50
27:DE:13:ARG:HB2	27:DE:21:VAL:O	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BZ:73:LEU:HD13	46:BZ:90:ILE:O	2.12	0.50
24:BA:2142:C:H2'	24:BA:2143:C:C6	2.47	0.50
30:DH:8:PRO:O	30:DH:69:ARG:NE	2.41	0.50
24:BA:2326:C:H42	24:BA:2389:G:H1	1.60	0.50
24:BA:2394:C:OP1	34:BO:62:LEU:HG	2.12	0.50
24:DA:2875:C:H4'	38:DR:5:ALA:CB	2.41	0.50
1:AA:453:A:H4'	16:AS:72:ARG:HB2	1.94	0.50
24:BA:2642:G:OP1	32:BM:76:SER:OG	2.30	0.50
24:DA:2120:G:H1	24:DA:2178:C:N4	2.08	0.50
2:AE:31:TYR:HA	2:AE:46:LYS:HD3	1.92	0.50
24:BA:2043:C:OP1	24:BA:2777:G:O2'	2.22	0.50
4:AG:65:ARG:NE	4:AG:72:GLU:OE2	2.45	0.50
28:BF:103:LYS:HA	28:BF:106:ARG:HG3	1.94	0.50
26:DD:10:THR:OG1	26:DD:13:ARG:HB2	2.11	0.50
24:BA:818:G:H4'	24:BA:838:C:O3'	2.12	0.50
1:AA:1255:G:H1	1:AA:1282:C:H42	1.59	0.50
24:BA:2848:G:H8	38:BR:97:ALA:HB2	1.76	0.50
50:D5:33:CYS:HG	50:D5:46:CYS:HG	1.59	0.50
24:BA:1447:G:H1'	24:BA:1545(A):A:H1'	1.93	0.50
22:AC:23:C:H2'	22:AC:24:U:C6	2.47	0.50
24:BA:185:U:H4'	24:BA:218:A:H4'	1.94	0.50
3:CF:150:LYS:HB3	3:CF:201:TYR:HB2	1.92	0.50
1:CA:1466:C:H2'	1:CA:1467:G:O4'	2.12	0.50
36:D0:53:HIS:ND1	36:D0:94:TYR:OH	2.32	0.50
22:CC:59:A:H2'	22:CC:60:U:H5'	1.94	0.50
1:CA:933:G:O6	7:CJ:3:ARG:NH2	2.45	0.50
19:AV:13:ASP:OD1	19:AV:13:ASP:N	2.45	0.50
1:AA:426:G:OP1	4:AG:38:TYR:OH	2.26	0.50
24:BA:2291:U:H2'	24:BA:2292:C:C6	2.46	0.50
1:AA:429:U:P	4:AG:13:ARG:HH21	2.34	0.50
28:DF:63:LYS:HZ3	28:DF:67:GLN:NE2	2.08	0.50
22:CD:8:U:H5''	22:CD:12:G:OP2	2.11	0.50
22:CD:22:G:H2'	22:CD:23:C:C6	2.47	0.50
22:CD:62:C:C2'	22:CD:63:G:H5'	2.42	0.50
24:BA:2114:A:N6	24:BA:2115:G:O6	2.45	0.50
8:CK:12:ARG:NH1	8:CK:26:VAL:HA	2.26	0.50
24:DA:1331:A:O2'	24:DA:1332:G:H8	1.94	0.50
1:AA:74:C:H2'	1:AA:75:C:O4'	2.12	0.50
33:BN:97:ARG:HG2	33:BN:99:PHE:CE1	2.47	0.50
26:BD:35:LYS:HB3	26:BD:36:PRO:HA	1.92	0.50
24:DA:1175:U:O2	24:DA:1176:G:N1	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DZ:92:LYS:NZ	46:DZ:97:LEU:HD21	2.27	0.50
24:DA:2472:G:N2	24:DA:2477:C:OP1	2.44	0.50
44:DV:91:LEU:HD22	44:DV:130:PRO:HG3	1.94	0.50
1:AA:346:G:H5'	38:BR:41:ARG:HD3	1.93	0.50
29:DG:145:THR:OG1	29:DG:147:ASP:OD1	2.29	0.50
29:BG:135:LEU:HD23	29:BG:140:ILE:HD11	1.92	0.50
24:DA:2378:A:H4'	37:DQ:23:ARG:NH1	2.27	0.50
37:DQ:78:LEU:HD11	37:DQ:107:GLU:HB3	1.94	0.50
1:AA:605:U:H2'	1:AA:606:G:O4'	2.12	0.50
4:AG:108:LEU:HB3	4:AG:110:PHE:HD1	1.77	0.50
44:BV:10:ARG:HD3	44:BV:38:TYR:HB3	1.93	0.50
1:CA:143:A:O3'	1:CA:144:G:H8	1.95	0.50
24:DA:270(L):U:H3'	24:DA:270(M):U:H5''	1.92	0.50
1:CA:1373:G:H4'	7:CJ:31:MET:SD	2.52	0.50
1:AA:708:C:OP1	11:AN:85:ARG:NH2	2.34	0.50
1:AA:689:C:OP1	11:AN:27:ASN:ND2	2.43	0.50
24:DA:2086:U:H2'	24:DA:2087:G:C8	2.47	0.50
5:CH:148:VAL:HG21	8:CK:107:LEU:HD23	1.94	0.50
1:AA:573:A:N3	1:AA:883:C:O2'	2.39	0.50
20:AW:14:LYS:HB2	20:AW:17:ARG:HH21	1.77	0.50
24:BA:2593:U:H2'	24:BA:2594:C:C6	2.47	0.50
5:AH:80:ILE:HG13	8:AK:104:ARG:NH2	2.27	0.50
6:CI:8:ILE:HD12	6:CI:26:ILE:HD13	1.92	0.50
5:CH:80:ILE:HG22	8:CK:104:ARG:NH2	2.26	0.50
1:AA:878:G:H1'	8:AK:3:THR:HG21	1.94	0.50
4:CG:129:ASN:OD1	4:CG:145:GLU:N	2.34	0.50
1:AA:1249:C:O2'	9:AL:73:GLN:OE1	2.27	0.50
24:DA:1295:C:O4'	36:D0:23:ASN:ND2	2.38	0.50
26:BD:206:LEU:HD12	26:BD:211:ARG:HG2	1.93	0.50
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.47	0.50
1:AA:407:G:H1	1:AA:435:C:H42	1.59	0.50
35:BP:67:ARG:O	35:BP:68:ILE:O	2.30	0.50
27:DE:81:ILE:O	27:DE:82:ARG:O	2.30	0.50
27:BE:111:ARG:HD3	27:BE:160:TYR:CD2	2.47	0.50
1:CA:1305:G:H8	21:CX:5:ASP:HB2	1.77	0.50
22:AD:7:G:N1	22:AD:66:C:O2	2.43	0.50
24:DA:1110:G:H2'	24:DA:1111:A:H8	1.76	0.50
53:B8:36:LYS:O	53:B8:37:SER:O	2.30	0.50
1:CA:1287:A:H2'	1:CA:1288:A:C8	2.47	0.50
1:CA:1243:C:OP2	21:CX:10:ARG:NH2	2.44	0.50
44:BV:141:VAL:HB	44:BV:144:LEU:HG	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DV:29:TYR:CE1	44:DV:87:ASP:HB3	2.46	0.50
1:AA:344:A:H8	1:AA:346:G:N7	2.09	0.50
24:BA:272:G:H2'	24:BA:273:G:H8	1.77	0.50
24:DA:1155:A:O2'	24:DA:1156:A:H2'	2.11	0.50
40:B2:28:GLU:O	40:B2:31:ALA:N	2.39	0.50
24:DA:1638:C:H4'	24:DA:2710:C:O2	2.11	0.50
13:AP:74:VAL:O	13:AP:78:ILE:HG12	2.11	0.50
1:AA:102:G:C6	1:AA:103:C:C4	3.00	0.50
24:DA:2264:C:N4	45:D3:15:ASP:OD2	2.45	0.50
24:BA:991:C:H42	24:BA:1163:G:H1	1.60	0.50
1:AA:971:G:N2	1:AA:1363:A:OP2	2.34	0.50
40:D2:48:GLY:O	40:D2:49:THR:O	2.30	0.50
4:CG:22:LYS:O	4:CG:23:GLY:O	2.30	0.50
27:BE:59:VAL:O	27:BE:60:ASN:HB3	2.12	0.50
27:DE:76:ARG:HG3	27:DE:195:LEU:HD22	1.94	0.50
24:DA:2115:G:H4'	24:DA:2166:G:C8	2.47	0.50
24:BA:2015:A:N3	50:B5:2:ALA:N	2.59	0.50
24:DA:1071:G:C8	24:DA:1097:U:H4'	2.47	0.50
1:AA:1002:G:H2'	1:AA:1003:G:O4'	2.11	0.50
22:AD:3:C:H2'	22:AD:4:G:C8	2.47	0.50
22:AD:69:C:C2	22:AD:70:G:H1'	2.47	0.50
24:BA:1138:G:O2'	32:BM:102:ALA:O	2.30	0.50
3:CF:74:GLY:HA2	3:CF:77:ILE:HB	1.94	0.50
24:BA:1899:G:H22	24:BA:1902:C:H41	1.56	0.50
24:DA:2746:U:H4'	30:DH:138:LYS:HG3	1.93	0.50
24:BA:1534:G:N1	24:BA:1539:G:H1'	2.27	0.50
1:AA:1291:G:O2'	9:AL:38:GLN:OE1	2.30	0.50
24:DA:2799:A:H5''	24:DA:2801:A:OP2	2.12	0.50
44:BV:150:LEU:HG	44:BV:154:ASP:HB2	1.94	0.50
25:BB:15:A:H1'	25:BB:109:G:N9	2.27	0.50
44:BV:48:PHE:HE1	44:BV:71:VAL:HG21	1.75	0.50
24:DA:2293:C:O3'	37:DQ:89:ARG:NH2	2.28	0.50
27:DE:120:TRP:CG	27:DE:155:LYS:HB3	2.46	0.50
4:AG:93:PHE:HA	4:AG:96:LEU:HD23	1.94	0.50
1:CA:843:U:C5	1:CA:848:C:H1'	2.47	0.50
1:CA:452:A:H62	1:CA:480:U:H3	1.58	0.50
24:DA:2505:G:O6	24:DA:2576:G:H2'	2.12	0.50
13:AP:98:VAL:O	13:AP:100:GLY:N	2.45	0.50
37:BQ:28:VAL:HG11	37:BQ:98:VAL:HG12	1.92	0.50
7:AJ:149:ARG:HD3	11:AN:59:TYR:CE1	2.46	0.50
32:BM:26:LEU:O	32:BM:30:ILE:HG13	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AO:90:VAL:HG12	12:AO:93:LEU:H	1.75	0.50
6:AI:63:TYR:O	6:AI:65:VAL:HG13	2.12	0.50
29:DG:56:ALA:HA	29:DG:59:GLU:HG2	1.93	0.50
2:CE:140:HIS:ND1	2:CE:143:GLU:OE2	2.45	0.50
1:CA:1379:G:OP2	7:CJ:6:ARG:NH1	2.45	0.50
24:DA:2845:G:O2'	24:DA:2846:G:H5'	2.11	0.50
27:DE:147:PRO:HB2	27:DE:149:ARG:HG2	1.94	0.50
24:DA:1797:C:O2'	26:DD:259:THR:OG1	2.25	0.50
27:BE:51:PHE:CE2	27:BE:52:LEU:HG	2.47	0.50
34:BO:42:SER:O	34:BO:44:GLY:N	2.45	0.50
24:BA:2735:G:H2'	24:BA:2736:G:H8	1.76	0.50
9:CL:121:ARG:NH1	9:CL:122:ALA:O	2.45	0.50
24:BA:1022:G:N2	24:BA:1142(A):A:N1	2.58	0.49
27:DE:24:THR:O	27:DE:25:VAL:O	2.30	0.49
1:CA:412:A:C5	4:CG:35:ARG:CD	2.91	0.49
1:AA:407:G:H2'	1:AA:408:A:H8	1.76	0.49
1:AA:413:G:H2'	1:AA:428:G:N2	2.27	0.49
24:DA:2124:G:C6	24:DA:2125:G:H1'	2.47	0.49
53:B8:42:ARG:O	53:B8:44:LYS:N	2.42	0.49
24:DA:1088:A:O3'	24:DA:1089:G:H8	1.95	0.49
1:CA:1310:G:H5'	13:CP:77:ASN:HD21	1.77	0.49
53:B8:34:TRP:CE3	53:B8:35:GLN:HB2	2.46	0.49
1:AA:73:G:H2'	1:AA:74:C:O4'	2.12	0.49
1:AA:87:A:H2'	1:AA:88:C:C6	2.46	0.49
24:BA:2392:A:H2	24:BA:2424:C:H42	1.60	0.49
1:AA:452:A:H2'	1:AA:453:A:H8	1.77	0.49
1:AA:1152:A:OP1	10:AM:68:HIS:NE2	2.44	0.49
1:CA:1200:C:H1'	1:CA:1204:A:N6	2.27	0.49
6:AI:13:ASN:OD1	6:AI:57:GLN:NE2	2.45	0.49
1:AA:1347:G:C8	9:AL:107:ARG:HB3	2.47	0.49
19:CV:15:LEU:HD12	19:CV:18:LYS:HD2	1.94	0.49
1:CA:1228:C:OP2	13:CP:108:ARG:NH2	2.45	0.49
44:BV:48:PHE:HE1	44:BV:71:VAL:HG11	1.75	0.49
29:BG:111:LEU:HD23	29:BG:120:LEU:HD21	1.94	0.49
24:BA:956:G:OP1	35:BP:88:GLY:N	2.36	0.49
1:CA:244:U:H6	1:CA:244:U:H5'	1.77	0.49
51:B6:15:GLU:HG3	51:B6:16:CYS:H	1.77	0.49
24:DA:1657:C:H4'	27:DE:133:LYS:HB3	1.92	0.49
37:DQ:41:ASP:OD2	37:DQ:44:LYS:NZ	2.44	0.49
24:BA:265:A:H1'	24:BA:266:G:O4'	2.11	0.49
24:BA:2109:U:O4	24:BA:2179:C:N4	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2689:U:H4'	24:DA:2690:C:O5'	2.11	0.49
1:AA:834:C:H42	1:AA:852:G:H1	1.59	0.49
1:AA:659:U:H2'	1:AA:660:G:H8	1.76	0.49
1:AA:486:U:H2'	1:AA:487:A:C8	2.47	0.49
39:B1:17:ILE:HG23	39:B1:39:LEU:HD12	1.94	0.49
10:CM:17:ASP:HB2	10:CM:70:ARG:HH12	1.77	0.49
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.12	0.49
35:DP:12:GLN:HG2	35:DP:73:PRO:HD2	1.92	0.49
24:DA:375:C:H42	24:DA:399:G:H1	1.59	0.49
24:DA:920:G:H2'	24:DA:921:G:H8	1.77	0.49
36:B0:70:LEU:O	36:B0:72:ASP:N	2.45	0.49
10:CM:58:ASP:OD1	10:CM:58:ASP:N	2.45	0.49
24:BA:245:G:O6	53:B8:8:LYS:NZ	2.41	0.49
27:BE:40:GLU:N	27:BE:40:GLU:OE2	2.44	0.49
24:BA:1021:A:H8	24:BA:1021:A:H3'	1.77	0.49
40:D2:47:VAL:O	40:D2:48:GLY:O	2.30	0.49
24:BA:2795:G:C5	24:BA:2802:G:C6	3.00	0.49
24:DA:882:G:H1	24:DA:894:C:H42	1.59	0.49
1:AA:947:G:H4'	13:AP:109:THR:HG23	1.93	0.49
1:AA:703:G:H4'	1:AA:704:A:O5'	2.12	0.49
1:CA:1028:C:N3	1:CA:1028(A):C:N4	2.59	0.49
24:DA:548:A:C2	24:DA:549:G:H1'	2.47	0.49
3:CF:52:LEU:HD23	3:CF:52:LEU:H	1.77	0.49
35:DP:52:VAL:O	35:DP:56:ARG:HB2	2.12	0.49
8:CK:12:ARG:O	8:CK:16:ALA:N	2.43	0.49
1:AA:1292:U:P	7:AJ:41:ARG:HH12	2.34	0.49
3:CF:92:ALA:HB2	3:CF:99:VAL:HG21	1.94	0.49
1:AA:1392:G:H21	1:AA:1502:A:H8	1.58	0.49
25:DB:37:C:N3	25:DB:48:A:O2'	2.45	0.49
1:AA:1028(B):C:H3'	1:AA:1029:G:H5''	1.94	0.49
22:CD:35:A:H2'	22:CD:36:U:C6	2.46	0.49
3:AF:59:ARG:HG2	3:AF:64:VAL:HG12	1.94	0.49
1:CA:631:G:H3'	1:CA:632:A:C8	2.47	0.49
1:AA:130:A:H5'	17:AT:63:ARG:NH2	2.26	0.49
29:DG:119:GLY:HA3	29:DG:180:PHE:O	2.12	0.49
1:CA:754:C:O5'	15:CR:72:ARG:NH2	2.44	0.49
2:AE:109:SER:O	2:AE:112:VAL:HG12	2.12	0.49
16:CS:74:LEU:O	16:CS:79:VAL:HG23	2.12	0.49
7:AJ:108:ALA:O	7:AJ:119:ARG:HD2	2.12	0.49
49:B4:26:SER:OG	49:B4:27:THR:N	2.44	0.49
1:AA:1351:U:H1'	7:AJ:33:ASP:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:116:ASP:OD2	28:BF:119:ARG:NH2	2.45	0.49
7:CJ:15:ASP:OD1	7:CJ:44:TYR:OH	2.30	0.49
17:AT:41:LYS:HD3	17:AT:88:TYR:CE2	2.46	0.49
48:DX:13:ILE:H	48:DX:13:ILE:HD12	1.78	0.49
8:CK:110:ALA:HB3	8:CK:121:ASP:HB3	1.94	0.49
24:DA:2427:C:H5''	24:DA:2428:G:OP1	2.13	0.49
7:CJ:149:ARG:HD2	11:CN:59:TYR:CZ	2.48	0.49
25:DB:70:C:H2'	25:DB:71:C:H6	1.77	0.49
30:BH:3:ARG:O	30:BH:4:ILE:CG2	2.60	0.49
30:BH:3:ARG:O	30:BH:4:ILE:HG23	2.12	0.49
24:DA:389:G:H22	34:DO:72:PRO:CD	2.24	0.49
4:CG:22:LYS:HG3	4:CG:25:ARG:HB3	1.94	0.49
4:CG:34:GLU:O	4:CG:35:ARG:CB	2.60	0.49
34:DO:62:LEU:HD11	53:D8:25:MET:CB	2.40	0.49
27:DE:67:PHE:CE2	27:DE:69:LYS:HD3	2.48	0.49
24:DA:2445:G:OP1	28:DF:74:ARG:NH2	2.46	0.49
49:D4:18:CYS:N	49:D4:19:GLY:HA2	2.27	0.49
28:DF:65:TRP:HB3	28:DF:66:PRO:HD2	1.94	0.49
24:DA:1106:G:C2	24:DA:1107:G:C4	3.01	0.49
25:BB:11:C:H3'	25:BB:12:C:H6	1.76	0.49
2:AE:17:PHE:CZ	2:AE:44:LEU:HD11	2.47	0.49
1:CA:1015:A:H2'	1:CA:1016:A:C8	2.46	0.49
19:CV:31:ILE:CD1	19:CV:50:ALA:H	2.21	0.49
1:CA:1239:A:H4'	1:CA:1240:U:H5''	1.93	0.49
1:AA:197:A:H4'	1:AA:198:G:O5'	2.12	0.49
24:BA:1176:G:H3'	24:BA:1177:A:C8	2.47	0.49
8:CK:14:ARG:HE	8:CK:83:ILE:HG23	1.76	0.49
1:CA:560:U:H4'	1:CA:561:U:O5'	2.12	0.49
1:CA:1108:G:H5'	3:CF:176:HIS:ND1	2.28	0.49
24:DA:629:G:H4'	24:DA:650:C:O2	2.13	0.49
24:DA:1448:G:H1'	24:DA:1528:A:H62	1.77	0.49
24:DA:1204:A:O2'	24:DA:1205:U:OP2	2.30	0.49
24:DA:654(E):C:N4	24:DA:654(P):G:H1	2.10	0.49
20:AW:30:LYS:CE	20:AW:80:ARG:HH12	2.25	0.49
5:AH:10:MET:HA	5:AH:32:VAL:HA	1.94	0.49
1:CA:818:G:O2'	1:CA:819:A:H5'	2.12	0.49
24:DA:1223:C:OP2	40:D2:88:ARG:NH2	2.45	0.49
24:BA:1472:A:H2'	24:BA:1473:G:O4'	2.12	0.49
16:CS:34:GLU:OE2	16:CS:55:ARG:NH1	2.45	0.49
35:DP:116:GLU:OE2	35:DP:119:ARG:NE	2.44	0.49
26:DD:26:LYS:H	26:DD:26:LYS:HD2	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1788:C:OP1	26:BD:222:ARG:NH2	2.39	0.49
24:DA:1405:U:H2'	24:DA:1406:U:C6	2.48	0.49
1:CA:410:G:N1	1:CA:431:A:OP2	2.42	0.49
24:DA:1069:A:H4'	24:DA:1096:A:O2'	2.12	0.49
24:DA:1097:U:H3'	24:DA:1098:A:C8	2.47	0.49
27:BE:120:TRP:CD1	27:BE:155:LYS:HB3	2.47	0.49
1:AA:1004:A:C8	1:AA:1026:G:C6	3.00	0.49
22:AD:55:U:H3	22:AD:57:A:H3'	1.76	0.49
3:AF:20:SER:HB2	3:AF:40:ARG:NH2	2.21	0.49
1:CA:998:G:H2'	1:CA:998(A):C:C6	2.47	0.49
1:CA:659:U:H2'	1:CA:660:G:O4'	2.12	0.49
46:DZ:89:GLU:O	46:DZ:93:GLU:HB2	2.12	0.49
24:BA:1265:A:OP1	24:BA:1265:A:H8	1.96	0.49
7:AJ:155:ARG:NH2	7:AJ:156:TRP:HA	2.27	0.49
1:CA:1264:C:H2'	1:CA:1265:G:C8	2.47	0.49
1:CA:195:A:O5'	20:CW:68:LYS:NZ	2.45	0.49
1:AA:711:G:H2'	1:AA:712:A:C8	2.47	0.49
1:AA:49:U:C2	1:AA:361:G:N2	2.81	0.49
13:AP:81:LEU:O	13:AP:89:GLY:HA3	2.12	0.49
24:BA:32:C:O2'	24:BA:33:U:H5'	2.13	0.49
1:AA:1408:A:O2'	24:BA:1916:A:N1	2.41	0.49
1:AA:1101:A:C4	2:AE:99:GLY:HA3	2.47	0.49
25:BB:48:A:H4'	37:BQ:95:HIS:HD2	1.76	0.49
8:CK:20:TYR:HA	8:CK:65:TYR:CZ	2.47	0.49
40:D2:83:ARG:N	40:D2:83:ARG:HD2	2.28	0.49
1:AA:431:A:H2'	1:AA:432:A:O4'	2.12	0.49
33:BN:2:ILE:HD11	33:BN:82:ASN:HB3	1.93	0.49
24:DA:2335:A:C8	24:DA:2337:G:C5	3.01	0.49
24:DA:128:C:O5'	52:D7:48:LYS:NZ	2.46	0.49
24:BA:1438:U:H2'	24:BA:1439:A:H8	1.78	0.49
32:BM:131:GLN:CD	32:BM:131:GLN:H	2.15	0.49
24:DA:2115:G:N2	24:DA:2172:U:O4	2.46	0.49
49:D4:20:ASN:ND2	49:D4:21:VAL:H	2.10	0.49
36:B0:2:ARG:HG3	36:B0:5:LYS:HZ1	1.77	0.49
24:BA:1069:A:O2'	24:BA:1072:C:OP2	2.29	0.49
24:DA:1021:A:OP2	32:DM:65:LYS:NZ	2.45	0.49
22:AD:53:G:N2	22:AD:61:C:O2	2.44	0.49
25:BB:77:U:P	44:BV:19:ARG:HH22	2.36	0.49
1:AA:1117:G:O3'	9:AL:104:ARG:NH1	2.45	0.49
24:BA:1011:G:OP1	39:B1:75:ASN:HB3	2.13	0.49
24:BA:617:G:O2'	28:BF:205:ARG:NH1	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DS:11:ARG:CZ	41:DS:98:LYS:HB3	2.42	0.49
1:AA:835:U:H3	1:AA:851:G:H1	1.59	0.49
37:DQ:66:ALA:O	37:DQ:70:GLY:N	2.33	0.49
1:AA:824:C:H42	1:AA:876:G:H1	1.60	0.49
6:AI:4:TYR:HD1	6:AI:92:LYS:HA	1.78	0.49
24:BA:1339:G:H5''	42:BT:16:LYS:HD2	1.94	0.49
11:CN:79:SER:OG	11:CN:106:LYS:HD3	2.12	0.49
24:DA:224:G:N7	24:DA:420:C:H4'	2.28	0.49
26:DD:28:GLU:HB3	26:DD:29:PRO:HD3	1.94	0.49
24:DA:20:C:OP1	39:D1:22:LYS:NZ	2.28	0.49
41:BS:70:TYR:HD1	41:BS:70:TYR:H	1.61	0.49
3:AF:179:ARG:HD3	3:AF:206:GLU:HG2	1.94	0.49
29:DG:166:ASP:N	29:DG:166:ASP:OD1	2.45	0.49
24:BA:1050:A:C8	24:BA:2751:G:C5	3.01	0.49
51:D6:16:CYS:O	51:D6:17:LYS:O	2.30	0.49
24:DA:1051:G:N2	24:DA:1052:C:O4'	2.45	0.49
24:DA:1057:A:N6	24:DA:1058:U:H3	2.10	0.49
1:CA:1140:C:H2'	1:CA:1141:C:H6	1.77	0.49
28:DF:40:GLN:HE22	28:DF:182:ASN:HB2	1.76	0.49
11:CN:31:THR:HA	11:CN:42:TRP:HA	1.94	0.49
13:AP:80:ARG:HH22	19:AV:69:HIS:CE1	2.30	0.49
1:AA:1382:C:C6	1:AA:1383:C:H5	2.30	0.49
50:B5:46:CYS:SG	50:B5:50:GLY:HA3	2.53	0.49
3:CF:116:VAL:HG11	3:CF:141:VAL:CG2	2.39	0.49
1:AA:560:U:H4'	1:AA:561:U:O5'	2.13	0.49
55:CA:1800:T1C:N21	55:CA:1800:T1C:O3	2.43	0.49
24:BA:2468:G:H22	24:BA:2481:G:H2'	1.77	0.49
26:BD:97:TYR:CE1	26:BD:103:ARG:HG3	2.48	0.49
25:BB:116:G:H2'	25:BB:117:G:O4'	2.13	0.49
24:DA:851:U:O2'	48:DX:42:ALA:O	2.24	0.49
1:AA:757:U:OP1	1:AA:822:C:O2'	2.28	0.49
5:CH:127:ASN:O	5:CH:131:ILE:HG12	2.12	0.49
24:BA:818:G:N1	24:BA:1188:U:OP2	2.34	0.49
24:DA:2334:G:O6	45:D3:74:ARG:NH2	2.46	0.49
1:AA:690:G:H1	11:AN:55:LYS:HZ1	1.61	0.49
24:DA:2401:U:H2'	24:DA:2402:C:H6	1.75	0.49
24:BA:2516:G:C6	24:BA:2517:C:N4	2.80	0.49
8:CK:95:VAL:HG23	8:CK:99:GLU:HB2	1.95	0.49
24:BA:2291:U:O2'	24:BA:2374:C:O2	2.22	0.49
1:AA:1355:G:H2'	1:AA:1356:G:C8	2.46	0.49
29:DG:22:ARG:HH12	29:DG:175:LEU:HD21	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:148:GLU:HB2	26:BD:151:LYS:HD2	1.93	0.49
9:CL:24:GLY:N	9:CL:58:HIS:O	2.46	0.49
24:DA:270(V):G:H2'	24:DA:270(W):G:C8	2.47	0.49
25:BB:6:C:HO2'	37:BQ:29:PHE:HE2	1.61	0.49
31:BK:8:PRO:HD3	31:BK:15:VAL:HG12	1.94	0.49
24:BA:1322:A:N1	24:BA:1333:C:O2'	2.39	0.49
24:DA:918:A:O2'	25:DB:96:G:N2	2.42	0.49
24:BA:2243:U:H2'	24:BA:2244:U:C6	2.47	0.49
7:AJ:73:MET:HA	7:AJ:90:GLU:HA	1.94	0.49
3:CF:192:THR:HG23	3:CF:193:TYR:HD2	1.78	0.49
12:CO:41:ARG:HD2	12:CO:42:THR:H	1.77	0.49
30:BH:6:ARG:NH2	30:BH:54:ARG:HH22	2.11	0.49
30:BH:149:ARG:HH12	30:BH:163:TYR:HA	1.78	0.49
51:D6:14:THR:CA	51:D6:20:ASN:O	2.61	0.49
24:DA:1062:G:H22	24:DA:1076:C:H42	1.59	0.49
24:DA:1072:C:O2	24:DA:1092:C:H5	1.95	0.49
1:CA:1022:G:C2	1:CA:1023:G:C4	3.01	0.49
24:BA:1078:U:O2'	24:BA:1079:C:H5''	2.12	0.49
24:BA:2148:G:C2	24:BA:2149:G:C4	3.01	0.49
24:DA:2808:U:H3'	24:DA:2891:G:H1	1.78	0.49
4:CG:172:PRO:O	4:CG:187:ARG:NH1	2.38	0.49
24:DA:351:G:O3'	24:DA:352:G:H8	1.94	0.49
20:CW:100:ILE:O	20:CW:102:GLY:N	2.41	0.49
1:AA:148:G:H2'	1:AA:149:A:C8	2.44	0.49
3:AF:60:ALA:N	3:AF:63:ASN:OD1	2.46	0.49
1:CA:660:G:H2'	1:CA:661:G:O4'	2.13	0.49
24:DA:2212:A:O2'	24:DA:2213:U:O5'	2.31	0.49
15:AR:78:TYR:CZ	15:AR:82:ILE:HD11	2.48	0.49
24:BA:546:C:H6	24:BA:546:C:OP1	1.95	0.49
1:AA:617:G:H1	1:AA:623:C:H42	1.61	0.49
1:AA:662:G:H2'	1:AA:663:A:C8	2.47	0.49
2:CE:137:ARG:HH12	2:CE:141:GLU:HB2	1.78	0.49
24:BA:523:C:H5''	24:BA:541:C:O2'	2.13	0.49
1:AA:314:C:O2'	1:AA:315:A:H5'	2.13	0.49
24:BA:2271:G:H5''	45:B3:20:ARG:HH11	1.77	0.49
24:BA:2361:A:O5'	53:B8:27:THR:OG1	2.31	0.49
35:BP:111:GLU:OE1	35:BP:133:ARG:NH2	2.44	0.49
43:BU:20:TYR:CE1	43:BU:42:VAL:HA	2.47	0.49
7:CJ:34:GLY:O	7:CJ:36:LYS:N	2.41	0.49
5:CH:9:LYS:CB	5:CH:112:LEU:HD11	2.43	0.49
37:DQ:7:TYR:CE2	37:DQ:91:PRO:HG2	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:271(B):G:O2'	24:BA:271(C):U:OP2	2.29	0.49
3:CF:121:ALA:HB1	3:CF:188:LEU:O	2.13	0.49
15:AR:36:ILE:HD12	15:AR:63:ARG:HH11	1.78	0.49
20:AW:60:GLU:HG3	20:AW:81:LYS:HD2	1.95	0.49
26:DD:34:VAL:CB	26:DD:35:LYS:HD3	2.43	0.49
12:AO:46:LYS:O	12:AO:47:LYS:C	2.51	0.49
27:DE:60:ASN:HB3	27:DE:63:LEU:CD1	2.25	0.49
28:DF:5:ALA:N	28:DF:18:ARG:O	2.45	0.49
1:AA:1127:G:N3	1:AA:1147:C:N4	2.60	0.49
24:BA:2345:G:H1'	24:BA:2382:G:H5'	1.94	0.49
45:D3:12:ASN:HA	45:D3:14:ARG:HH21	1.77	0.49
19:CV:31:ILE:HD11	19:CV:50:ALA:N	2.22	0.49
25:DB:86:G:N2	25:DB:90:C:O2	2.26	0.49
24:DA:2542:A:O2'	24:DA:2543:G:P	2.71	0.49
53:B8:37:SER:O	53:B8:41:ILE:HG22	2.12	0.49
24:BA:1176:G:OP1	24:BA:1176:G:H4'	2.11	0.49
1:CA:439:A:C5	1:CA:440:A:H1'	2.48	0.49
1:AA:1157:A:N3	1:AA:1157:A:H2'	2.27	0.49
24:BA:275:G:O2'	24:BA:276:A:O4'	2.30	0.49
2:CE:16:HIS:HB2	2:CE:210:SER:HB2	1.94	0.49
24:DA:300:A:P	43:DU:84:ARG:HH22	2.34	0.49
22:AC:47:U:H1'	22:AC:48:C:C6	2.48	0.49
2:CE:219:VAL:O	2:CE:223:ILE:HG13	2.13	0.49
2:CE:212:GLN:HG3	2:CE:235:SER:O	2.13	0.49
9:CL:13:ALA:HB2	9:CL:68:GLY:HA3	1.95	0.49
24:DA:2097:C:H2'	24:DA:2098:U:O4'	2.12	0.49
24:DA:2145:C:H3'	24:DA:2147:G:N2	2.28	0.49
24:BA:273:G:H1	24:BA:364:C:N4	2.10	0.49
7:AJ:61:VAL:HG12	7:AJ:124:LEU:HD22	1.94	0.49
1:AA:617:G:O6	1:AA:623:C:N4	2.44	0.49
24:DA:592:G:H21	53:D8:4:MET:CE	2.25	0.49
24:BA:2665:A:H2'	24:BA:2666:C:O4'	2.13	0.49
8:CK:110:ALA:N	8:CK:121:ASP:OD1	2.38	0.49
31:DK:128:LEU:O	31:DK:138:ILE:N	2.33	0.49
42:BT:11:PRO:HG2	42:BT:13:LEU:HD21	1.93	0.49
24:BA:655:A:H8	24:BA:656:G:O4'	1.96	0.49
36:B0:41:ALA:O	36:B0:44:LEU:N	2.42	0.49
24:DA:2107:C:H42	24:DA:2182:G:H1	1.60	0.49
27:BE:11:MET:HG2	27:BE:24:THR:HA	1.93	0.49
1:CA:222:U:H2'	1:CA:223:U:C6	2.48	0.49
24:DA:2246:G:H2'	24:DA:2247:A:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:26:G:OP1	41:DS:80:PRO:HB3	2.11	0.49
1:AA:408:A:H2'	1:AA:409:G:O4'	2.12	0.49
24:BA:3:U:H2'	24:BA:4:C:O4'	2.12	0.49
24:BA:2418:A:P	53:B8:29:LYS:HZ1	2.32	0.49
24:BA:2398:U:H2'	24:BA:2399:G:C8	2.48	0.49
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.13	0.49
1:CA:1278:U:H5''	1:CA:1279:A:O4'	2.13	0.49
11:CN:52:GLY:H	11:CN:55:LYS:HE3	1.77	0.49
24:BA:1064:C:N4	24:BA:1069:A:H5''	2.28	0.49
24:BA:1093:G:H2'	24:BA:1094:U:H5'	1.94	0.49
22:AD:70:G:H2'	22:AD:70:G:N3	2.28	0.49
1:AA:1318:A:H1'	19:AV:37:ARG:HH21	1.78	0.49
10:AM:49:VAL:CG2	14:AQ:41:ARG:HB2	2.42	0.49
30:DH:108:GLY:O	30:DH:152:ARG:NH1	2.46	0.49
24:BA:2138:C:C2	24:BA:2154:G:C2	3.00	0.49
26:BD:10:THR:OG1	26:BD:13:ARG:HB2	2.13	0.49
50:B5:52:TYR:HD1	50:B5:53:ALA:H	1.59	0.49
7:AJ:36:LYS:HB2	7:AJ:36:LYS:HZ2	1.77	0.49
1:CA:1262:C:H42	1:CA:1273:G:H1	1.61	0.49
27:DE:179:GLU:HB2	27:DE:181:LEU:HD23	1.94	0.49
29:BG:113:ARG:HB2	29:BG:140:ILE:HB	1.95	0.49
27:DE:116:VAL:O	27:DE:118:LYS:N	2.39	0.49
2:CE:83:MET:HG3	2:CE:87:ARG:HH22	1.77	0.49
24:BA:2095:C:H2'	24:BA:2096:U:O4'	2.12	0.49
5:AH:102:ALA:O	5:AH:107:ARG:NH1	2.46	0.49
1:CA:1087:G:H2'	1:CA:1088:G:H8	1.77	0.49
35:DP:66:ILE:HG13	35:DP:67:ARG:H	1.78	0.49
24:BA:2401:U:H2'	24:BA:2402:C:H6	1.77	0.49
27:BE:97:LYS:N	27:BE:100:GLU:OE1	2.43	0.49
39:D1:98:LEU:HA	39:D1:100:VAL:O	2.13	0.49
32:BM:58:ASP:N	32:BM:58:ASP:OD1	2.28	0.49
24:BA:2295:C:OP1	37:BQ:10:ARG:NH1	2.45	0.49
1:AA:1240:U:OP2	7:AJ:116:ALA:N	2.46	0.49
24:DA:363(B):G:H2'	24:DA:363(C):G:H8	1.77	0.49
24:BA:2593:U:H2'	24:BA:2594:C:H6	1.78	0.49
1:AA:1107:C:C4	1:AA:1108:G:C8	3.00	0.49
1:AA:1108:G:H5'	3:AF:176:HIS:CE1	2.48	0.49
1:AA:991:U:O4	1:AA:1212:U:O2'	2.26	0.49
1:AA:200:G:H1	1:AA:217:C:H42	1.60	0.49
25:BB:76:G:N2	25:BB:100:G:O6	2.32	0.49
30:BH:144:VAL:O	30:BH:148:ILE:HG13	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:124:GLU:O	30:DH:125:VAL:C	2.51	0.49
1:AA:816:A:OP1	1:AA:1526:G:O2'	2.25	0.49
30:BH:2:SER:O	30:BH:3:ARG:O	2.30	0.49
4:CG:32:ALA:O	4:CG:36:ARG:O	2.31	0.49
24:BA:389:G:H1	34:BO:71:VAL:H	1.61	0.49
35:BP:66:ILE:HA	35:BP:104:PHE:H	1.78	0.49
27:DE:53:PRO:O	27:DE:55:ASN:N	2.46	0.49
34:DO:48:PRO:O	34:DO:49:ARG:C	2.48	0.49
32:BM:130:HIS:O	32:BM:130:HIS:ND1	2.45	0.49
24:DA:2061:G:OP1	28:DF:68:LYS:CE	2.53	0.49
40:D2:91:TYR:CD2	40:D2:91:TYR:O	2.62	0.49
1:CA:1031:G:O6	1:CA:1032:A:N6	2.46	0.49
1:AA:936:C:C2	1:AA:1382:C:N4	2.80	0.49
24:BA:1098:A:H3'	24:BA:1099:G:H8	1.78	0.49
24:DA:1019:U:H3	24:DA:1142(A):A:N6	2.04	0.49
22:AD:7:G:H2'	22:AD:49:G:O4'	2.13	0.49
24:BA:2123:G:H2'	24:BA:2124:G:O4'	2.13	0.49
24:BA:2702:U:OP1	24:BA:2702:U:C6	2.66	0.49
1:AA:1149:C:H2'	1:AA:1150:U:C6	2.48	0.49
1:CA:975:A:H5'	1:CA:975:A:H8	1.78	0.49
1:AA:130:A:C8	17:AT:63:ARG:HB2	2.48	0.49
29:BG:16:ARG:HH12	29:BG:31:VAL:HG11	1.77	0.49
10:CM:3:LYS:N	10:CM:75:ILE:HA	2.28	0.49
42:BT:68:ARG:HD2	42:BT:69:TYR:CE1	2.48	0.49
1:AA:186(C):G:C6	1:AA:191(E):G:C6	3.01	0.49
31:DK:69:LYS:HA	31:DK:136:VAL:HG21	1.94	0.49
1:AA:108:G:H5''	1:AA:109:A:H5''	1.94	0.49
20:AW:95:ALA:O	20:AW:97:ALA:N	2.37	0.49
1:AA:636:U:H2'	1:AA:637:G:H8	1.77	0.49
37:BQ:6:ALA:O	37:BQ:10:ARG:HB3	2.12	0.49
32:BM:20:GLY:HA2	32:BM:61:ARG:HD3	1.95	0.49
1:AA:986:A:H1'	19:AV:55:LYS:HA	1.95	0.49
3:AF:137:ALA:HA	3:AF:140:ARG:HE	1.78	0.49
1:AA:1355:G:H2'	1:AA:1356:G:H8	1.78	0.49
1:AA:659:U:C2	1:AA:660:G:C8	3.01	0.49
1:AA:1095:U:OP1	1:AA:1108:G:N2	2.39	0.49
5:AH:33:VAL:HG11	5:AH:109:ILE:HG12	1.93	0.49
24:BA:1454:U:O2'	24:BA:1455:G:N7	2.41	0.49
29:DG:50:ALA:HA	29:DG:53:LEU:HB3	1.94	0.49
3:AF:173:VAL:HG12	3:AF:175:LEU:HD11	1.95	0.49
24:BA:1048:A:P	24:BA:1110:G:H22	2.36	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DP:74:TYR:O	35:DP:90:VAL:HA	2.12	0.49
24:BA:2364:C:H4'	45:B3:56:ASP:OD1	2.13	0.49
11:AN:13:GLN:NE2	11:AN:75:TYR:O	2.46	0.49
1:CA:107:G:C2	1:CA:108:G:H1'	2.48	0.49
43:BU:97:ARG:HD3	43:BU:97:ARG:H	1.79	0.48
1:AA:407:G:H2'	1:AA:408:A:C8	2.48	0.48
24:DA:2161:C:H2'	24:DA:2162:G:H8	1.78	0.48
29:DG:105:LYS:CE	49:D4:26:SER:HB3	2.42	0.48
51:B6:31:PRO:C	51:B6:35:GLU:HG2	2.33	0.48
24:BA:1061:U:O2'	24:BA:1070:A:N3	2.46	0.48
24:BA:1094:U:H4'	24:BA:1096:A:OP2	2.13	0.48
37:BQ:26:LEU:HD23	37:BQ:87:PHE:CD1	2.47	0.48
1:CA:1104:G:H2'	1:CA:1105:A:H8	1.77	0.48
24:DA:2297:C:N4	24:DA:2321:G:O6	2.42	0.48
26:BD:34:VAL:HG22	26:BD:35:LYS:HG3	1.94	0.48
24:BA:2134:A:O2'	24:BA:2159:G:N3	2.45	0.48
24:DA:988:A:H3'	48:DX:11:SER:OG	2.12	0.48
24:DA:270(I):G:H2'	24:DA:270(J):G:C8	2.48	0.48
37:BQ:7:TYR:CE1	37:BQ:91:PRO:HG3	2.48	0.48
44:BV:4:ARG:HH21	44:BV:58:VAL:HG11	1.76	0.48
44:BV:146:ILE:HA	44:BV:174:VAL:HB	1.95	0.48
8:AK:11:THR:HG23	8:AK:14:ARG:NH1	2.28	0.48
24:BA:582:G:H2'	24:BA:583:G:C8	2.48	0.48
24:BA:127:A:H5''	24:BA:128:C:O4'	2.12	0.48
29:DG:170:ARG:NH2	29:DG:182:LYS:HD3	2.27	0.48
1:AA:272:C:H2'	1:AA:273:A:C8	2.46	0.48
44:DV:111:VAL:O	44:DV:113:ALA:N	2.46	0.48
24:BA:918:A:N3	25:BB:80:U:O2'	2.38	0.48
6:AI:50:TYR:CE1	18:AU:77:GLY:HA2	2.48	0.48
9:AL:21:PRO:HA	9:AL:59:PHE:HA	1.95	0.48
34:DO:37:GLY:HA2	34:DO:41:ARG:NH2	2.28	0.48
24:DA:2695:C:H2'	24:DA:2696:U:C6	2.48	0.48
24:DA:702:G:H1	24:DA:730:C:H42	1.61	0.48
1:AA:1298:C:N4	7:AJ:114:ARG:HB3	2.27	0.48
33:BN:71:ARG:HH11	38:BR:74:ARG:HH21	1.61	0.48
12:CO:89:ARG:HA	12:CO:97:ARG:HA	1.95	0.48
1:AA:1414:U:H2'	1:AA:1415:G:H8	1.78	0.48
8:AK:82:HIS:N	8:AK:138:TRP:O	2.45	0.48
26:DD:35:LYS:CE	26:DD:64:ILE:CG1	2.79	0.48
4:CG:23:GLY:HA3	4:CG:112:VAL:HG22	1.94	0.48
51:D6:14:THR:HA	51:D6:20:ASN:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DO:49:ARG:O	34:DO:50:ARG:HB2	2.13	0.48
28:DF:16:GLY:O	28:DF:18:ARG:N	2.46	0.48
49:D4:39:CYS:CB	49:D4:41:PRO:HD2	2.43	0.48
24:DA:892:G:C8	24:DA:893:C:C4	3.01	0.48
24:DA:1056:G:H5''	24:DA:1057:A:C5'	2.43	0.48
47:BW:47:ASN:OD1	47:BW:47:ASN:N	2.46	0.48
1:AA:1322:C:H6	1:AA:1322:C:OP1	1.96	0.48
1:AA:589:C:OP1	8:AK:32:LYS:NZ	2.46	0.48
24:BA:1533:C:N4	24:BA:1538:G:H1	2.12	0.48
44:DV:30:ASN:HB2	44:DV:33:LEU:HB3	1.94	0.48
6:AI:23:LYS:HA	6:AI:26:ILE:HD12	1.96	0.48
24:DA:270(I):G:H1	24:DA:270(Q):C:H42	1.60	0.48
24:BA:83:G:H1	24:BA:102:G:HO2'	1.61	0.48
27:BE:144:ARG:HB3	27:BE:145:LYS:H	1.40	0.48
25:BB:111:U:H2'	25:BB:112:G:C8	2.47	0.48
1:AA:60:A:N6	1:AA:110:C:N3	2.59	0.48
44:BV:52:SER:C	44:BV:54:HIS:H	2.15	0.48
47:DW:33:MET:HG2	47:DW:37:PHE:HE1	1.78	0.48
24:BA:1264:G:H3'	24:BA:1265:A:H5''	1.94	0.48
3:CF:60:ALA:HB3	3:CF:63:ASN:HD21	1.78	0.48
5:AH:78:HIS:CE1	5:AH:143:ARG:H	2.31	0.48
38:DR:21:GLU:OE2	38:DR:21:GLU:N	2.45	0.48
1:CA:838:G:N1	1:CA:842:C:H1'	2.27	0.48
27:DE:112:GLY:O	27:DE:159:HIS:HA	2.13	0.48
24:DA:2899:G:H2'	24:DA:2900:A:C8	2.48	0.48
24:DA:392:C:H5''	24:DA:409:C:H5''	1.95	0.48
35:DP:20:ALA:HB2	44:DV:79:ARG:NH2	2.28	0.48
17:AT:31:LEU:HD22	17:AT:32:TYR:CE1	2.48	0.48
11:CN:89:ALA:O	11:CN:91:ARG:N	2.43	0.48
35:DP:51:ARG:O	35:DP:54:MET:N	2.45	0.48
1:AA:857:C:H2'	1:AA:858:G:O4'	2.13	0.48
1:CA:922:G:C6	1:CA:923:A:C6	3.01	0.48
8:AK:112:LEU:HB3	8:AK:133:LEU:HA	1.94	0.48
1:AA:1247:U:H2'	1:AA:1248:A:O4'	2.13	0.48
1:CA:409:G:OP1	4:CG:22:LYS:O	2.31	0.48
24:DA:2155:G:H3'	24:DA:2156:G:C8	2.49	0.48
28:DF:28:ILE:CD1	28:DF:119:ARG:NE	2.69	0.48
28:DF:64:ILE:C	28:DF:65:TRP:CD1	2.87	0.48
24:DA:1086:A:OP1	24:DA:1104:C:H1'	2.13	0.48
1:CA:1277:C:O2'	1:CA:1279:A:H8	1.96	0.48
2:CE:163:PHE:HD2	2:CE:185:ILE:HG13	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:973:G:O3'	14:CQ:41:ARG:NH2	2.35	0.48
11:AN:15:ALA:HB1	11:AN:78:GLN:HB2	1.96	0.48
1:AA:9:G:H5''	5:AH:126:ARG:HE	1.78	0.48
44:DV:59:LEU:HD12	44:DV:69:THR:HG21	1.94	0.48
1:AA:87:A:H2'	1:AA:88:C:H6	1.78	0.48
24:DA:2271:G:OP1	45:D3:18:ALA:HB1	2.13	0.48
37:DQ:16:ASN:HA	37:DQ:19:LYS:HD2	1.95	0.48
7:CJ:41:ARG:O	7:CJ:45:ASP:N	2.35	0.48
2:AE:214:ILE:HG23	2:AE:215:LEU:HD22	1.94	0.48
1:CA:438:G:N1	1:CA:495:A:OP2	2.44	0.48
24:DA:1567:A:OP2	26:DD:84:TYR:OH	2.21	0.48
8:AK:4:ASP:OD2	8:AK:85:ARG:NH1	2.46	0.48
13:CP:19:LEU:O	13:CP:22:ILE:HG13	2.13	0.48
1:CA:559:A:H4'	1:CA:560:U:H5''	1.95	0.48
1:CA:1250:A:H4'	9:CL:68:GLY:N	2.28	0.48
1:CA:371:G:H1	1:CA:390:C:H42	1.61	0.48
1:CA:1347:G:O6	9:CL:10:ARG:NH2	2.46	0.48
1:CA:187:C:H2'	1:CA:188:U:O4'	2.13	0.48
1:CA:198:G:H2'	1:CA:199:G:H8	1.77	0.48
1:AA:619:U:C2	4:AG:135:LEU:HD21	2.48	0.48
7:CJ:16:LEU:HD11	9:CL:42:ARG:HA	1.93	0.48
1:AA:881:G:H2'	1:AA:882:C:O4'	2.13	0.48
1:AA:401:C:O2'	1:AA:621:A:N3	2.45	0.48
45:B3:36:ILE:HD13	45:B3:39:ARG:HG2	1.94	0.48
5:CH:8:GLU:HG2	5:CH:34:VAL:HG22	1.95	0.48
1:AA:1237:C:HO2'	1:AA:1300:G:H1	1.58	0.48
1:CA:1378:C:H5''	1:CA:1379:G:OP2	2.13	0.48
24:BA:906:G:OP1	35:BP:26:TYR:OH	2.28	0.48
19:CV:9:VAL:HG21	49:D4:63:TYR:CZ	2.49	0.48
46:DZ:51:VAL:HG23	46:DZ:58:ILE:HB	1.95	0.48
24:BA:950:G:H2'	24:BA:951:C:C6	2.49	0.48
24:BA:2065:C:H2'	24:BA:2066:C:C6	2.48	0.48
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.14	0.48
6:AI:36:ARG:NH2	6:AI:38:GLU:OE2	2.46	0.48
1:CA:412:A:N6	4:CG:35:ARG:CD	2.70	0.48
4:CG:22:LYS:HZ3	4:CG:25:ARG:HH11	1.61	0.48
4:AG:26:CYS:HA	4:AG:31:CYS:CB	2.41	0.48
27:DE:55:ASN:C	27:DE:57:LYS:H	2.16	0.48
24:DA:2165:G:P	24:DA:2166:G:H21	2.35	0.48
28:DF:63:LYS:CE	28:DF:67:GLN:HB2	2.42	0.48
24:DA:1060:U:O4'	24:DA:1062:G:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1085:A:C4	24:DA:1086:A:C8	3.00	0.48
1:AA:1002:G:H2'	1:AA:1003:G:C8	2.49	0.48
1:CA:974:A:H5'	14:CQ:31:ARG:HD3	1.95	0.48
22:AD:61:C:H3'	22:AD:61:C:OP2	2.13	0.48
1:AA:1227:A:OP1	19:AV:80:TYR:OH	2.19	0.48
24:DA:2749:A:H1'	30:DH:63:SER:HB3	1.95	0.48
11:AN:103:LEU:O	11:AN:105:VAL:N	2.46	0.48
1:AA:559:A:OP1	5:AH:126:ARG:NH2	2.45	0.48
1:AA:941:G:O2'	1:AA:1350:A:H4'	2.12	0.48
9:CL:8:GLY:HA3	9:CL:80:GLY:H	1.79	0.48
24:DA:1428:C:O2'	24:DA:1569:A:OP2	2.19	0.48
24:DA:2150:U:H2'	24:DA:2151:G:C8	2.48	0.48
24:BA:2572:A:N7	27:BE:145:LYS:HB2	2.28	0.48
3:AF:58:GLU:HB2	3:AF:65:ALA:HB3	1.95	0.48
1:AA:1272:G:C6	1:AA:1273:G:C4	3.01	0.48
1:AA:67:C:O2'	1:AA:171:A:H1'	2.13	0.48
13:AP:105:THR:O	13:AP:107:ALA:N	2.46	0.48
15:AR:12:ILE:O	15:AR:16:ALA:N	2.36	0.48
2:CE:174:VAL:HA	2:CE:177:ALA:HB3	1.94	0.48
44:BV:4:ARG:NH1	44:BV:60:GLU:OE2	2.46	0.48
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.78	0.48
1:CA:1108:G:H5'	3:CF:176:HIS:HD1	1.78	0.48
2:CE:212:GLN:CD	2:CE:235:SER:HA	2.34	0.48
1:CA:1347:G:N7	9:CL:10:ARG:NH2	2.58	0.48
1:CA:448:A:OP2	1:CA:485:G:N2	2.42	0.48
34:DO:108:LYS:O	34:DO:110:TYR:N	2.43	0.48
30:DH:124:GLU:N	30:DH:124:GLU:OE1	2.47	0.48
24:BA:1044:G:O2'	24:BA:1047:G:O2'	2.29	0.48
24:DA:142:G:H2'	24:DA:143:C:H6	1.78	0.48
24:BA:2687:U:H2'	24:BA:2688:U:O4'	2.14	0.48
24:BA:151:C:H42	24:BA:175:G:H1	1.61	0.48
24:DA:631:A:OP1	34:DO:64:LYS:NZ	2.46	0.48
51:D6:43:CYS:O	51:D6:44:ARG:O	2.32	0.48
24:DA:2135:A:OP2	24:DA:2136:C:N4	2.46	0.48
24:DA:2790:A:H4'	24:DA:2893:G:H21	1.78	0.48
1:CA:689:C:OP1	11:CN:44:SER:OG	2.25	0.48
24:BA:2344:U:C2	51:B6:37:ARG:HD3	2.48	0.48
1:AA:1382:C:P	7:AJ:79:ARG:HH21	2.36	0.48
24:DA:2748:A:O5'	30:DH:70:THR:HG21	2.13	0.48
1:AA:162:A:N7	1:AA:163:C:H1'	2.28	0.48
39:B1:95:LEU:HD22	40:B2:4:ILE:HG12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2393:A:H4'	34:BO:61:ARG:N	2.25	0.48
11:CN:85:ARG:HG2	11:CN:111:ASP:O	2.14	0.48
1:AA:342:C:H2'	1:AA:343:U:O4'	2.13	0.48
24:BA:433:C:H2'	24:BA:434:U:C6	2.48	0.48
1:CA:1095:U:H2'	1:CA:1096:C:O4'	2.13	0.48
1:AA:123:C:OP1	1:AA:311:C:O2'	2.28	0.48
17:AT:67:LYS:O	17:AT:69:LYS:N	2.46	0.48
2:AE:76:GLN:HE22	2:AE:206:ASP:HB3	1.79	0.48
24:DA:67:U:H3	24:DA:74:A:H2	1.56	0.48
24:BA:2401:U:H2'	24:BA:2402:C:C6	2.48	0.48
30:BH:77:LYS:HE2	30:BH:138:LYS:HD3	1.94	0.48
18:CU:66:LEU:O	18:CU:70:ILE:HG13	2.14	0.48
24:DA:1788:C:H5''	26:DD:225:ALA:HB1	1.95	0.48
11:CN:58:PRO:HB3	11:CN:93:GLN:HG3	1.96	0.48
48:DX:39:ASP:O	48:DX:44:ARG:NH2	2.46	0.48
24:BA:2391:G:C6	24:BA:2427:C:H1'	2.48	0.48
24:BA:270(V):G:H2'	24:BA:270(W):G:H8	1.79	0.48
44:DV:117:LEU:HD22	44:DV:118:GLN:H	1.78	0.48
44:BV:11:GLU:HA	44:BV:36:LYS:HE3	1.95	0.48
1:CA:373:A:H2'	1:CA:374:A:H8	1.79	0.48
24:BA:1663:C:HO2'	24:BA:1664:A:H8	1.61	0.48
1:AA:122:G:H4'	1:AA:312:C:O2'	2.14	0.48
24:BA:1021:A:H2'	24:BA:1023:U:H5'	1.96	0.48
24:DA:2113:U:O4	24:DA:2168:G:O2'	2.24	0.48
29:DG:111:LEU:HB3	29:DG:117:PHE:CE2	2.49	0.48
22:AD:57:A:H2'	22:AD:58:A:C8	2.40	0.48
1:CA:984:C:H2'	1:CA:985:C:H6	1.78	0.48
24:DA:2674:G:OP1	33:DN:26:LYS:NZ	2.45	0.48
26:BD:68:LYS:O	26:BD:69:ARG:HG2	2.14	0.48
1:AA:156:G:C2	1:AA:166:G:C2	3.01	0.48
53:B8:52:LYS:H	53:B8:53:PRO:HD2	1.79	0.48
1:AA:191:G:C6	1:AA:192:U:C4	3.02	0.48
20:AW:89:ARG:NH2	20:AW:104:LEU:HD21	2.29	0.48
40:B2:25:LEU:H	40:B2:92:THR:CG2	2.27	0.48
46:DZ:92:LYS:C	46:DZ:94:LEU:H	2.17	0.48
1:CA:266:G:O3'	17:CT:67:LYS:HB2	2.14	0.48
4:CG:61:LYS:HA	4:CG:203:VAL:HG22	1.96	0.48
24:BA:307:G:H21	24:BA:330:A:H62	1.62	0.48
42:BT:5:TYR:HB3	47:BW:33:MET:HB2	1.95	0.48
24:DA:141:A:C8	24:DA:1408:C:H1'	2.48	0.48
1:CA:15:G:H4'	5:CH:24:ARG:NH1	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:12:U:H4'	1:AA:526:C:H4'	1.95	0.48
40:D2:20:LEU:O	40:D2:94:LEU:N	2.29	0.48
24:BA:720:C:H2'	24:BA:721:C:H6	1.79	0.48
19:AV:15:LEU:HD23	19:AV:15:LEU:H	1.78	0.48
1:CA:714:G:H2'	1:CA:715:A:C8	2.49	0.48
24:DA:343:C:H2'	24:DA:344:G:H8	1.77	0.48
24:DA:245:G:O3'	34:DO:70:GLN:O	2.32	0.48
24:DA:246:C:P	34:DO:70:GLN:O	2.72	0.48
24:DA:1181:C:H2'	24:DA:1182:A:C8	2.48	0.48
24:BA:1496:A:H2'	24:BA:1577:C:O2'	2.14	0.48
39:B1:52:ARG:HA	39:B1:55:ARG:HG3	1.95	0.48
24:BA:2121:G:H1	24:BA:2177:C:H42	1.60	0.48
9:CL:54:ASP:N	9:CL:54:ASP:OD1	2.47	0.48
30:BH:51:ARG:HH11	30:BH:51:ARG:HB2	1.78	0.48
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.48	0.48
24:DA:956:G:H2'	24:DA:957:A:H2'	1.96	0.48
24:DA:2393:A:H4'	34:DO:61:ARG:HA	1.96	0.48
24:DA:2114:A:N6	24:DA:2115:G:O6	2.47	0.48
20:AW:100:ILE:HD13	20:AW:102:GLY:HA3	1.95	0.48
13:CP:3:ARG:HD2	29:DG:113:ARG:HH21	1.78	0.48
24:DA:1060:U:H5''	24:DA:1061:U:C4	2.49	0.48
36:B0:2:ARG:CG	36:B0:5:LYS:HZ1	2.27	0.48
1:AA:1034:G:H2'	1:AA:1035:A:C8	2.49	0.48
49:B4:55:ARG:O	49:B4:59:PHE:HB2	2.14	0.48
2:CE:82:ARG:NH1	2:CE:150:SER:OG	2.47	0.48
1:AA:96:G:C2	1:AA:97:U:C2	3.02	0.48
26:BD:92:ILE:HD12	26:BD:104:TYR:CD1	2.49	0.48
26:DD:63:ARG:H	26:DD:87:ASN:ND2	2.10	0.48
25:BB:29:A:OP2	37:BQ:31:SER:HB2	2.14	0.48
7:AJ:140:ASP:OD1	7:AJ:143:ARG:NH2	2.41	0.48
44:BV:48:PHE:CE1	44:BV:71:VAL:HG21	2.47	0.48
29:BG:56:ALA:HB2	29:BG:153:ARG:NE	2.27	0.48
37:DQ:10:ARG:O	37:DQ:14:VAL:HG13	2.14	0.48
4:AG:90:GLY:O	4:AG:93:PHE:HB2	2.14	0.48
35:BP:12:GLN:HG2	35:BP:73:PRO:HD2	1.95	0.48
1:CA:812:C:H4'	1:CA:813:U:O5'	2.14	0.48
30:DH:44:VAL:O	30:DH:51:ARG:N	2.40	0.48
40:B2:30:GLY:N	40:B2:61:VAL:O	2.46	0.48
24:DA:1812:A:H2'	24:DA:1813:G:H8	1.78	0.48
15:AR:7:GLU:O	15:AR:11:VAL:HG23	2.13	0.48
22:AC:23:C:H2'	22:AC:24:U:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2427:C:H5''	24:BA:2428:G:OP1	2.13	0.48
24:BA:2031:A:C6	24:BA:2498:C:H1'	2.49	0.48
3:AF:155:GLY:O	3:AF:157:ILE:N	2.47	0.48
48:BX:26:LEU:O	48:BX:35:ARG:NE	2.47	0.48
1:AA:1307:U:OP1	13:AP:101:GLN:NE2	2.42	0.48
29:DG:126:ASP:OD2	29:DG:130:ASN:ND2	2.46	0.48
20:CW:14:LYS:HB2	20:CW:17:ARG:HH21	1.78	0.48
39:B1:109:LEU:O	39:B1:113:ALA:N	2.46	0.48
24:BA:1803:A:O2'	26:BD:259:THR:HG21	2.13	0.48
41:DS:26:GLY:H	41:DS:71:VAL:HB	1.79	0.48
24:DA:1779:U:OP2	24:DA:1784:A:N6	2.36	0.48
27:DE:23:VAL:O	27:DE:24:THR:OG1	2.30	0.48
43:BU:81:LYS:HD3	43:BU:97:ARG:NE	2.29	0.48
1:AA:409:G:OP1	4:AG:24:GLU:N	2.47	0.48
43:DU:54:LYS:C	43:DU:55:TYR:HD2	2.17	0.48
24:DA:1071:G:H1'	24:DA:1089:G:C2'	2.43	0.48
24:DA:330:A:O2'	24:DA:331:A:H8	1.97	0.48
13:CP:78:ILE:HD12	13:CP:92:HIS:CD2	2.48	0.48
22:CD:63:G:H2'	22:CD:64:G:H8	1.79	0.48
24:BA:1101:U:H2'	24:BA:1102:C:H6	1.79	0.48
24:BA:1728:G:N2	24:BA:1730:U:OP2	2.46	0.48
24:BA:654(C):G:H3'	24:BA:654(D):G:H8	1.78	0.48
24:DA:1111:A:O3'	24:DA:1112:G:H4'	2.14	0.48
24:BA:458:G:O2'	24:BA:469:G:O6	2.22	0.48
1:AA:163:C:H2'	1:AA:164:U:C6	2.48	0.48
1:CA:405:U:OP1	1:CA:406:G:O2'	2.21	0.48
1:CA:1203:C:H2'	1:CA:1204:A:O4'	2.14	0.48
1:CA:501:C:H1'	1:CA:549:C:H1'	1.96	0.48
1:AA:567:G:O6	12:AO:15:ARG:NH1	2.28	0.48
1:AA:260:G:H2'	1:AA:261:U:C6	2.48	0.48
1:CA:490:G:OP2	4:CG:132:ARG:NH2	2.47	0.48
29:BG:111:LEU:HD12	29:BG:111:LEU:H	1.78	0.48
37:DQ:14:VAL:O	37:DQ:18:ILE:HG23	2.14	0.48
1:CA:26:A:N3	4:CG:209:ARG:NH2	2.61	0.48
1:CA:542:G:P	4:CG:10:ARG:HH22	2.37	0.48
7:CJ:58:PRO:O	7:CJ:62:PHE:N	2.37	0.48
46:DZ:91:LYS:HZ3	46:DZ:91:LYS:HA	1.79	0.48
31:BK:92:VAL:HG13	31:BK:120:ILE:HG23	1.96	0.48
1:AA:280:C:N3	17:AT:39:SER:N	2.61	0.48
47:DW:15:LYS:HD2	47:DW:67:LYS:NZ	2.29	0.48
24:DA:1913:A:H4'	24:DA:1914:C:OP1	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2080:G:O2'	24:DA:2081:C:H5'	2.14	0.48
1:AA:1171:G:H2'	1:AA:1172:C:C6	2.48	0.48
20:AW:14:LYS:HA	20:AW:17:ARG:HE	1.78	0.48
24:DA:2468:G:P	35:DP:119:ARG:HH22	2.36	0.48
8:AK:19:VAL:HG23	8:AK:21:LYS:HG3	1.95	0.48
38:BR:29:ARG:NH1	38:BR:46:GLU:OE1	2.42	0.48
20:CW:82:SER:OG	20:CW:86:ARG:NH2	2.47	0.48
37:BQ:69:VAL:HA	37:BQ:72:ALA:HB3	1.96	0.48
28:DF:70:THR:HG23	28:DF:71:GLY:N	2.28	0.48
24:BA:534:U:H5'	39:B1:42:ALA:HB1	1.95	0.48
13:AP:8:GLU:OE2	13:AP:22:ILE:HA	2.13	0.48
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.49	0.48
44:DV:15:PRO:HA	44:DV:18:LEU:HD23	1.95	0.48
9:AL:95:LYS:HB2	9:AL:95:LYS:HE3	1.46	0.48
24:DA:856:C:HO2'	24:DA:857:C:P	2.34	0.48
24:BA:1152:C:H5''	39:B1:80:ILE:HB	1.94	0.48
24:DA:1782:C:H1'	24:DA:2609:U:H5''	1.95	0.48
20:CW:21:LYS:O	20:CW:25:ARG:HG3	2.14	0.48
24:BA:1021:A:H3'	24:BA:1021:A:C8	2.48	0.48
30:BH:149:ARG:CZ	30:BH:167:GLU:OE2	2.61	0.48
1:AA:1146:A:H2'	1:AA:1147:C:O4'	2.13	0.48
1:CA:1143:G:H2'	1:CA:1144:G:C8	2.48	0.48
1:CA:1032:A:H3'	1:CA:1032(A):G:H4'	1.94	0.48
24:DA:2889:C:H2'	24:DA:2891:G:O4'	2.13	0.48
24:DA:2467:C:O2	35:DP:124:LYS:NZ	2.40	0.48
20:CW:57:ARG:HE	20:CW:102:GLY:HA2	1.78	0.48
24:BA:629:G:OP2	53:B8:15:LYS:NZ	2.47	0.48
4:AG:191:ARG:NH1	4:AG:195:ALA:HA	2.27	0.48
24:BA:654(F):C:O2	24:BA:654(O):G:N2	2.43	0.48
50:D5:3:LYS:HE3	50:D5:4:HIS:HB2	1.95	0.48
13:CP:15:VAL:HG12	13:CP:45:VAL:HG22	1.95	0.48
24:BA:529:A:H8	24:BA:530:G:C6	2.32	0.48
24:DA:2212:A:H4'	24:DA:2213:U:C4	2.49	0.48
25:DB:33:G:C6	25:DB:34:U:C4	3.02	0.48
24:BA:1458:C:H4'	24:BA:1459:G:O4'	2.14	0.48
1:CA:921:U:O2	5:CH:19:MET:HB3	2.12	0.48
32:DM:30:ILE:O	32:DM:34:LEU:HD22	2.14	0.48
24:BA:1496:A:H5'	24:BA:1497:U:OP1	2.13	0.48
5:CH:21:ALA:O	5:CH:23:GLY:N	2.40	0.48
24:BA:1357:U:H2'	24:BA:1358:G:O4'	2.13	0.48
15:CR:82:ILE:HB	15:CR:87:ILE:HB	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1412:A:H2'	24:DA:1413:G:C8	2.49	0.48
26:BD:232:PRO:HB3	26:BD:244:ARG:NH1	2.29	0.48
7:AJ:45:ASP:O	7:AJ:49:ILE:HG12	2.13	0.48
35:BP:72:LYS:HB3	35:BP:94:VAL:HG23	1.96	0.48
1:CA:134:A:H61	16:CS:25:ARG:NH1	2.11	0.48
24:BA:845:G:OP2	24:BA:845:G:H8	1.97	0.48
31:DK:9:LEU:HD11	31:DK:12:LEU:HD22	1.96	0.48
1:CA:755:G:OP2	15:CR:65:ARG:HD3	2.13	0.48
15:CR:61:GLY:O	15:CR:65:ARG:NH1	2.47	0.48
53:D8:48:PHE:CG	53:D8:49:VAL:N	2.82	0.48
1:AA:467:G:OP2	1:AA:467:G:H3'	2.13	0.48
11:AN:80:VAL:HG23	11:AN:82:VAL:HG23	1.94	0.48
1:AA:1493:A:H5'	1:AA:1494:G:OP2	2.14	0.48
24:DA:2134:A:C2	24:DA:2135:A:C8	3.02	0.48
24:BA:1074:G:H2'	24:BA:1075:C:H6	1.79	0.48
26:DD:27:THR:HB	26:DD:83:GLU:HG2	1.96	0.48
20:CW:57:ARG:NH2	20:CW:102:GLY:HA2	2.24	0.48
24:BA:1508:A:O2'	24:BA:1509:C:O5'	2.32	0.48
24:BA:459:U:OP2	52:B7:39:ARG:NH1	2.46	0.48
50:D5:3:LYS:HG2	50:D5:4:HIS:N	2.28	0.48
13:AP:12:ASN:O	13:AP:14:ARG:N	2.47	0.48
1:AA:501:C:H1'	1:AA:549:C:H1'	1.96	0.48
24:DA:620:G:H5'	24:DA:620:G:N3	2.29	0.48
24:DA:1024:G:C3'	24:DA:1025:G:H5''	2.44	0.48
24:BA:247:G:H4'	24:BA:386:G:C6	2.49	0.48
4:AG:150:GLU:N	4:AG:150:GLU:OE2	2.47	0.48
40:B2:60:GLU:O	40:B2:62:LEU:N	2.47	0.48
38:BR:107:ASP:N	38:BR:107:ASP:OD1	2.46	0.48
29:BG:105:LYS:HD3	49:B4:26:SER:HB2	1.95	0.48
24:BA:1796:U:H2'	24:BA:1797:C:C6	2.49	0.48
1:AA:1464:G:H2'	1:AA:1465:C:H6	1.78	0.48
1:CA:768:A:H5'	1:CA:1524:C:H1'	1.96	0.48
1:CA:534:U:H5'	1:CA:535:A:OP2	2.13	0.48
42:BT:40:LYS:HG3	42:BT:51:VAL:HB	1.95	0.48
41:BS:18:ARG:HD3	41:BS:76:VAL:HG13	1.96	0.48
24:BA:207:A:H2'	24:BA:208:C:O4'	2.14	0.48
41:BS:82:LEU:HB2	41:BS:98:LYS:HB2	1.95	0.48
46:BZ:92:LYS:HA	46:BZ:95:LEU:HB2	1.95	0.48
17:CT:59:ILE:CG2	17:CT:71:PHE:HB3	2.44	0.48
1:CA:115:G:H4'	1:CA:116:A:O5'	2.13	0.48
38:DR:18:ASP:OD1	38:DR:18:ASP:N	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1056:U:H5'	3:CF:163:ALA:HB2	1.95	0.48
35:BP:64:ILE:C	35:BP:65:PHE:CG	2.87	0.47
29:DG:115:ARG:O	29:DG:117:PHE:N	2.46	0.47
1:CA:1256:A:H5''	1:CA:1258:G:N3	2.28	0.47
24:DA:2790:A:OP2	24:DA:2790:A:H8	1.97	0.47
24:BA:259:G:N2	24:BA:621:A:H8	2.01	0.47
24:BA:1057:A:C8	24:BA:1086:A:H2'	2.49	0.47
32:DM:25:ARG:HH11	32:DM:25:ARG:HG3	1.79	0.47
24:DA:1140:C:O3'	32:DM:25:ARG:NH2	2.47	0.47
24:BA:2114:A:N7	24:BA:2117:A:H5'	2.28	0.47
25:DB:89:G:N3	25:DB:89(A):A:H2	2.11	0.47
3:CF:43:LEU:O	3:CF:47:LEU:HB2	2.14	0.47
25:DB:55:U:C1'	29:DG:29:TRP:HE1	2.27	0.47
33:DN:88:ASN:O	33:DN:91:LEU:N	2.47	0.47
38:DR:107:ASP:O	38:DR:111:ARG:NH1	2.47	0.47
1:CA:56:U:H2'	1:CA:57:G:H8	1.78	0.47
1:AA:255:G:P	17:AT:69:LYS:HZ3	2.37	0.47
24:BA:2313:C:H4'	29:BG:91:ARG:HG3	1.94	0.47
24:BA:1993:U:H4'	27:BE:128:SER:HB3	1.96	0.47
13:AP:91:ARG:HH22	13:AP:103:THR:HG21	1.78	0.47
1:AA:41:G:H2'	1:AA:42:G:C8	2.48	0.47
1:CA:1422:G:O3'	33:DN:49:ARG:NH1	2.47	0.47
11:AN:13:GLN:HG3	11:AN:76:GLY:HA3	1.96	0.47
10:CM:40:LEU:HD13	10:CM:71:LEU:HB2	1.96	0.47
24:DA:1505:C:H2'	24:DA:1506:C:H6	1.79	0.47
22:AC:18:G:O2'	22:AC:19:G:O5'	2.28	0.47
24:DA:1785:A:H4'	24:DA:1982:C:O2'	2.14	0.47
24:BA:2679:A:H4'	27:BE:165:VAL:HG11	1.96	0.47
24:BA:2689:U:OP2	24:BA:2719:G:N2	2.44	0.47
1:CA:757:U:O2'	1:CA:879:C:O2	2.32	0.47
2:AE:114:ARG:HA	2:AE:117:GLU:HB3	1.96	0.47
24:DA:820:A:N3	24:DA:943:U:H4'	2.29	0.47
20:CW:47:GLY:O	20:CW:49:ALA:N	2.47	0.47
1:AA:411:A:C6	1:AA:429:U:C4	3.02	0.47
30:BH:153:LYS:O	30:BH:154:PRO:O	2.32	0.47
27:DE:72:VAL:O	27:DE:73:GLU:C	2.52	0.47
24:DA:2155:G:C6	24:DA:2156:G:C6	3.01	0.47
27:DE:47:VAL:O	27:DE:80:GLU:HA	2.14	0.47
10:AM:38:ILE:HG23	10:AM:71:LEU:HB3	1.97	0.47
24:BA:2162:G:H2'	24:BA:2163:C:H6	1.79	0.47
1:CA:1014:A:P	1:CA:1014:A:H8	2.37	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:B3:27:GLU:HB2	45:B3:69:PHE:HD1	1.79	0.47
3:CF:73:PRO:O	3:CF:77:ILE:N	2.36	0.47
20:AW:72:LEU:HD21	20:AW:77:ALA:H	1.79	0.47
40:D2:85:LYS:HG3	40:D2:87:HIS:HB2	1.96	0.47
39:D1:62:ILE:HG13	39:D1:76:TYR:CZ	2.49	0.47
1:AA:1311:G:O3'	49:B4:58:ARG:NH2	2.47	0.47
1:AA:374:A:O4'	1:AA:481:G:N2	2.48	0.47
14:AQ:45:ARG:NH1	14:AQ:49:HIS:HE1	2.12	0.47
1:AA:737:A:H2'	1:AA:738:C:H6	1.79	0.47
1:AA:663:A:O3'	18:AU:64:ARG:NH2	2.45	0.47
50:D5:56:LYS:HZ3	50:D5:58:LEU:HD11	1.79	0.47
14:CQ:26:ARG:HB3	14:CQ:43:CYS:SG	2.54	0.47
13:AP:57:ARG:HD2	49:B4:35:VAL:CG2	2.44	0.47
24:BA:2726:U:HO2'	24:BA:2727:G:H8	1.60	0.47
24:DA:363(B):G:H2'	24:DA:363(C):G:C8	2.49	0.47
24:DA:2730:C:O3'	27:DE:169:ASN:HB3	2.14	0.47
15:CR:15:PHE:CZ	15:CR:84:LYS:HG2	2.48	0.47
1:CA:179:A:H2'	1:CA:180:U:H6	1.79	0.47
31:BK:4:ILE:N	31:BK:37:VAL:O	2.47	0.47
1:AA:939:G:H5''	7:AJ:102:ARG:NH1	2.29	0.47
24:DA:2832:U:H3'	24:DA:2833:G:C8	2.49	0.47
1:AA:692:U:O2'	1:AA:694:A:N7	2.35	0.47
1:CA:1111:A:H2'	1:CA:1112:C:C6	2.50	0.47
24:BA:1312:U:H4'	24:BA:1313:U:O5'	2.14	0.47
51:D6:14:THR:O	51:D6:49:HIS:HB3	2.13	0.47
27:DE:36:ARG:HH21	27:DE:88:GLY:HA2	1.80	0.47
1:CA:977:A:H2'	1:CA:978:A:H5'	1.95	0.47
24:DA:219:G:N2	24:DA:430:G:O6	2.48	0.47
28:DF:185:ASP:HA	28:DF:188:ARG:HE	1.78	0.47
3:CF:11:ARG:O	3:CF:13:GLY:N	2.47	0.47
1:AA:1120:G:H2'	1:AA:1121:U:H6	1.79	0.47
1:AA:403:C:OP1	4:AG:137:SER:OG	2.28	0.47
2:CE:219:VAL:HA	2:CE:222:ILE:HB	1.96	0.47
24:DA:1416:G:O2'	24:DA:1417:C:O4'	2.31	0.47
24:DA:948:G:H21	24:DA:985:C:P	2.37	0.47
24:DA:984:A:H5''	24:DA:985:C:H5	1.80	0.47
22:CC:1:C:HO2'	22:CC:2:G:P	2.36	0.47
4:CG:73:ARG:HA	4:CG:73:ARG:HD2	1.64	0.47
44:BV:27:VAL:HG13	44:BV:29:TYR:CD1	2.49	0.47
24:DA:108:U:H2'	24:DA:109:G:H8	1.78	0.47
24:DA:686:G:OP1	52:D7:11:LYS:HE2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:565:C:H4'	24:DA:1253:A:C6	2.49	0.47
20:AW:29:LYS:O	20:AW:33:ILE:HG12	2.14	0.47
37:DQ:67:ARG:HA	37:DQ:104:GLY:HA3	1.96	0.47
11:CN:18:ARG:HB2	11:CN:33:THR:CG2	2.44	0.47
24:BA:1706:U:C2	24:BA:1757:U:H5'	2.49	0.47
46:BZ:16:ASN:HB3	46:BZ:37:ILE:HG23	1.95	0.47
32:BM:22:THR:HB	32:BM:25:ARG:HB2	1.96	0.47
26:DD:34:VAL:C	26:DD:35:LYS:CD	2.56	0.47
12:AO:54:LYS:HB3	12:AO:70:ILE:HD12	1.96	0.47
34:DO:60:MET:O	34:DO:61:ARG:HG2	2.09	0.47
27:DE:65:GLY:O	27:DE:66:HIS:HB2	2.12	0.47
27:DE:49:LEU:O	27:DE:78:LEU:HB3	2.14	0.47
28:DF:24:LEU:N	28:DF:24:LEU:CD2	2.75	0.47
24:DA:93:C:H5'	24:DA:94:G:OP2	2.14	0.47
24:DA:1063:G:N1	24:DA:1075:C:N3	2.54	0.47
1:CA:1004:A:C2	1:CA:1006:C:C2	3.02	0.47
1:CA:1034:G:H2'	1:CA:1035:A:H8	1.79	0.47
24:BA:1087:G:H2'	24:BA:1089:G:H4'	1.96	0.47
46:BZ:86:SER:N	46:BZ:87:PRO:HD2	2.30	0.47
19:CV:12:ASP:HB3	19:CV:14:HIS:CD2	2.50	0.47
4:CG:150:GLU:HA	4:CG:153:ARG:HD2	1.94	0.47
3:CF:79:ARG:CZ	3:CF:79:ARG:H	2.28	0.47
1:AA:1389:C:H2'	1:AA:1390:U:O4'	2.14	0.47
24:DA:1111:A:C1'	30:DH:2:SER:HA	2.42	0.47
25:DB:28:C:H2'	25:DB:29:A:O4'	2.14	0.47
24:BA:2579:C:H2'	24:BA:2580:U:O4'	2.15	0.47
41:DS:59:VAL:HG23	41:DS:65:LEU:N	2.26	0.47
44:BV:151:HIS:ND1	44:BV:154:ASP:OD2	2.26	0.47
1:CA:862:C:H1'	1:CA:874:G:H5''	1.95	0.47
2:CE:12:GLU:O	2:CE:15:VAL:N	2.45	0.47
25:BB:117:G:H2'	25:BB:118:G:O4'	2.13	0.47
4:CG:207:TYR:O	4:CG:209:ARG:N	2.40	0.47
1:AA:242:C:H2'	1:AA:243:A:H5''	1.96	0.47
1:AA:827:U:C5	1:AA:872:A:N1	2.79	0.47
24:BA:2023:G:H4'	24:BA:2617:C:O3'	2.14	0.47
2:AE:149:LEU:O	2:AE:153:ARG:N	2.47	0.47
24:BA:273:G:H1	24:BA:364:C:H42	1.60	0.47
1:CA:142:G:H2'	1:CA:143:A:H8	1.79	0.47
1:CA:184:G:H2'	1:CA:185:A:C8	2.49	0.47
27:DE:14:ILE:O	27:DE:20:ALA:HA	2.15	0.47
24:BA:1871:A:H2'	24:BA:1872:A:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BV:161:VAL:HG12	44:BV:162:GLU:HG2	1.95	0.47
1:AA:1106:G:H5''	3:AF:172:ARG:HG2	1.95	0.47
1:CA:619:U:C4	4:CG:135:LEU:HD11	2.50	0.47
20:AW:14:LYS:HG2	20:AW:18:GLN:HG3	1.96	0.47
39:B1:105:VAL:O	39:B1:109:LEU:HG	2.15	0.47
24:DA:856:C:H3'	24:DA:856:C:H6	1.78	0.47
14:CQ:53:LEU:HA	14:CQ:53:LEU:HD23	1.66	0.47
35:DP:30:GLY:HA2	35:DP:107:ALA:HB2	1.96	0.47
24:DA:2311:A:C2	29:DG:47:LYS:HE3	2.50	0.47
24:BA:1669:A:H5''	24:BA:2550:G:OP1	2.15	0.47
31:BK:5:LEU:HD11	31:BK:12:LEU:HB3	1.96	0.47
24:DA:459:U:H5''	52:D7:40:TRP:CD2	2.49	0.47
24:BA:576:U:O5'	24:BA:576:U:H6	1.98	0.47
32:BM:48:MET:N	32:BM:48:MET:SD	2.82	0.47
31:DK:102:SER:O	31:DK:106:GLY:N	2.47	0.47
1:CA:1049:U:H4'	1:CA:1050:G:H5''	1.96	0.47
1:AA:442:C:H42	1:AA:492:G:H1	1.60	0.47
13:AP:24:GLY:HA3	13:AP:66:LEU:HD22	1.96	0.47
34:DO:71:VAL:H	34:DO:72:PRO:CD	2.28	0.47
24:DA:2393:A:HO2'	53:D8:13:ARG:HH12	1.58	0.47
24:DA:250:G:C5'	34:DO:60:MET:HE1	2.44	0.47
24:DA:2135:A:N6	24:DA:2156:G:H21	2.12	0.47
24:DA:1069:A:O2'	24:DA:1072:C:OP2	2.28	0.47
13:CP:97:PRO:HA	13:CP:110:ARG:HD3	1.95	0.47
22:CD:15:G:C2	22:CD:48:C:N3	2.82	0.47
24:BA:2319:G:N1	24:BA:2334:G:OP2	2.47	0.47
24:DA:286:C:H2'	24:DA:287:C:C6	2.49	0.47
24:BA:1534:G:H2'	24:BA:1538:G:N2	2.28	0.47
24:DA:2795:G:HO2'	24:DA:2802:G:N2	2.12	0.47
25:DB:40:U:H1'	25:DB:46:A:N1	2.29	0.47
1:CA:1238:A:OP1	1:CA:1335:C:O2'	2.26	0.47
38:BR:26:ASP:O	38:BR:49:VAL:HG22	2.14	0.47
2:CE:103:THR:HG21	2:CE:179:LYS:NZ	2.30	0.47
1:CA:1196:U:O2'	1:CA:1197:G:P	2.72	0.47
1:AA:1455:G:OP1	20:AW:35:THR:OG1	2.17	0.47
24:DA:2145:C:H3'	24:DA:2147:G:H21	1.78	0.47
7:AJ:78:ARG:NH2	7:AJ:155:ARG:O	2.46	0.47
24:DA:2187:G:H2'	24:DA:2188:C:O4'	2.14	0.47
1:AA:878:G:H5'	8:AK:89:PRO:HG2	1.96	0.47
1:AA:526:C:OP2	12:AO:91:LYS:HE2	2.13	0.47
24:BA:176:G:O2'	24:BA:177:G:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1321:A:H2'	24:DA:1322:A:O4'	2.14	0.47
24:DA:1607:C:H4'	24:DA:1608:A:O5'	2.14	0.47
12:CO:61:THR:O	12:CO:62:SER:OG	2.28	0.47
24:BA:2445:G:OP1	28:BF:74:ARG:NH2	2.48	0.47
1:CA:859:A:H2'	1:CA:860:A:O4'	2.15	0.47
27:BE:21:VAL:HG13	27:BE:185:LYS:HG3	1.96	0.47
33:BN:94:ARG:HH11	33:BN:94:ARG:HB3	1.80	0.47
5:CH:153:LYS:O	5:CH:155:GLU:N	2.47	0.47
27:DE:23:VAL:C	27:DE:25:VAL:N	2.66	0.47
39:D1:92:ARG:NH2	40:D2:11:GLN:H	2.12	0.47
12:AO:49:ASN:O	12:AO:50:SER:CB	2.62	0.47
51:D6:14:THR:HG21	51:D6:19:ARG:CG	2.44	0.47
29:DG:101:ILE:C	29:DG:105:LYS:HZ3	2.18	0.47
1:AA:1228:C:OP1	13:AP:108:ARG:NH2	2.46	0.47
24:DA:1069:A:H3'	24:DA:1073:A:N6	2.30	0.47
36:B0:2:ARG:HG3	36:B0:5:LYS:HZ2	1.80	0.47
24:BA:1072:C:N4	24:BA:1099:G:O6	2.47	0.47
30:DH:86:GLU:HA	30:DH:132:ARG:HA	1.96	0.47
1:CA:1320:C:H42	19:CV:36:ARG:NE	2.13	0.47
1:CA:1321:C:P	1:CA:1322:C:H3'	2.55	0.47
24:DA:2794:C:H2'	24:DA:2795:G:O4'	2.15	0.47
28:BF:29:ASN:HB3	28:BF:112:MET:HE1	1.95	0.47
26:DD:17:THR:OG1	26:DD:205:VAL:N	2.45	0.47
24:DA:2299:G:C2	24:DA:2318:G:H8	2.32	0.47
32:BM:96:GLU:HG2	32:BM:97:ARG:N	2.29	0.47
11:CN:54:ARG:O	11:CN:57:THR:OG1	2.30	0.47
37:DQ:35:ILE:HD11	37:DQ:97:ARG:NE	2.27	0.47
13:CP:108:ARG:NH2	13:CP:111:LYS:HE3	2.27	0.47
22:AC:47:U:O2'	22:AC:48:C:P	2.69	0.47
1:AA:345:C:H4'	1:AA:346:G:C4	2.50	0.47
1:CA:560:U:HO2'	1:CA:561:U:P	2.34	0.47
24:BA:1026:U:H1'	24:BA:1027:A:P	2.55	0.47
31:DK:78:THR:HG21	31:DK:104:GLN:HG3	1.96	0.47
24:DA:1786:A:C2	24:DA:2606:C:H1'	2.50	0.47
15:CR:39:LEU:HD12	15:CR:56:LEU:HB2	1.96	0.47
1:CA:142:G:H2'	1:CA:143:A:C8	2.49	0.47
1:CA:57:G:H2'	1:CA:58:C:C6	2.49	0.47
3:CF:134:ILE:HG23	3:CF:151:VAL:HB	1.95	0.47
29:DG:81:LYS:HB3	29:DG:82:LEU:H	1.49	0.47
2:CE:119:GLU:HG3	2:CE:142:LEU:HD11	1.97	0.47
19:CV:53:ASN:OD1	19:CV:55:LYS:N	2.41	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DU:46:LYS:O	43:DU:48:ALA:N	2.47	0.47
30:BH:137:ASP:OD1	30:BH:138:LYS:N	2.48	0.47
18:CU:74:ARG:HB3	18:CU:81:PHE:CE1	2.50	0.47
47:DW:16:LEU:HD12	47:DW:20:GLU:HB2	1.95	0.47
50:B5:49:CYS:HB3	50:B5:56:LYS:HD2	1.96	0.47
28:BF:51:THR:HB	28:BF:88:VAL:HG21	1.95	0.47
15:CR:15:PHE:HZ	15:CR:84:LYS:HG2	1.78	0.47
1:CA:339:C:C2'	1:CA:340:U:H5'	2.45	0.47
24:BA:1939:U:OP1	24:BA:2604:U:O2'	2.31	0.47
6:AI:99:ALA:O	18:AU:28:GLU:HA	2.13	0.47
24:BA:1858:G:O2'	24:BA:1884:A:N6	2.47	0.47
1:AA:350:G:H2'	1:AA:351:G:C8	2.50	0.47
24:BA:213:A:H2'	24:BA:214:G:O4'	2.14	0.47
6:CI:83:ASP:N	6:CI:83:ASP:OD1	2.48	0.47
24:BA:1095:A:N3	24:BA:1095:A:H2'	2.30	0.47
48:BX:6:VAL:HB	48:BX:54:VAL:HG21	1.95	0.47
24:BA:1112:G:HO2'	30:BH:2:SER:HB3	1.72	0.47
40:D2:35:LEU:O	40:D2:37:VAL:HG13	2.15	0.47
4:CG:22:LYS:O	4:CG:23:GLY:C	2.52	0.47
24:DA:2393:A:OP1	53:D8:30:ARG:HB3	2.14	0.47
24:BA:2406:U:O4	34:BO:70:GLN:HB2	2.15	0.47
27:DE:35:GLN:OE1	27:DE:37:ARG:NH2	2.47	0.47
24:DA:2065:C:H5''	24:DA:2252:G:H1'	1.96	0.47
1:AA:1127:G:N2	1:AA:1146:A:H62	2.13	0.47
1:AA:475:G:OP2	1:AA:475:G:C8	2.67	0.47
24:DA:1094:U:C5'	24:DA:1098:A:H61	2.27	0.47
13:CP:98:VAL:H	13:CP:101:GLN:HE21	1.62	0.47
22:CD:18:G:H2'	22:CD:57:A:C2	2.50	0.47
22:CD:62:C:H2'	22:CD:63:G:C8	2.50	0.47
2:AE:16:HIS:CD2	2:AE:213:LEU:HD22	2.49	0.47
24:BA:1062:G:H8	24:BA:1062:G:O5'	1.97	0.47
24:BA:1060:U:C4	24:BA:1062:G:H4'	2.49	0.47
22:AD:67:C:H2'	22:AD:68:C:H6	1.80	0.47
22:AD:67:C:H2'	22:AD:68:C:C6	2.50	0.47
24:BA:654(D):G:N2	24:BA:654(P):G:O6	2.47	0.47
1:AA:975:A:O2'	14:AQ:32:SER:OG	2.29	0.47
34:BO:89:ALA:O	34:BO:91:PHE:N	2.47	0.47
1:CA:1300:G:O2'	1:CA:1301:U:P	2.73	0.47
24:DA:2356:C:H4'	45:D3:20:ARG:HG3	1.97	0.47
51:B6:34:LEU:O	51:B6:51:GLU:HB3	2.15	0.47
1:CA:191(F):U:H2'	1:CA:191:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1728:G:O6	24:DA:1730:U:H5'	2.14	0.47
26:BD:35:LYS:HD3	26:BD:63:ARG:CB	2.45	0.47
26:BD:30:GLU:HG3	26:BD:63:ARG:CZ	2.45	0.47
24:BA:2756:U:H4'	24:BA:2757:A:OP1	2.14	0.47
1:AA:1152:A:O3'	10:AM:13:HIS:NE2	2.48	0.47
53:D8:37:SER:OG	53:D8:39:LYS:O	2.29	0.47
31:BK:52:ARG:O	31:BK:56:LYS:N	2.46	0.47
22:CD:42:G:H2'	22:CD:43:A:H8	1.80	0.47
8:AK:44:PHE:CE2	8:AK:109:ILE:HG21	2.48	0.47
44:DV:68:PRO:HG2	44:DV:91:LEU:O	2.14	0.47
1:AA:232:G:H1'	1:AA:262:A:N1	2.29	0.47
24:BA:288:C:H2'	24:BA:289:A:C8	2.43	0.47
24:DA:539:G:H2'	24:DA:540:G:H8	1.79	0.47
42:DT:5:TYR:HB3	47:DW:33:MET:HB2	1.95	0.47
41:BS:79:GLY:N	41:BS:100:THR:O	2.45	0.47
4:AG:108:LEU:HD21	4:AG:183:GLY:HA3	1.96	0.47
24:BA:498:G:H21	43:BU:47:LYS:HZ2	1.63	0.47
8:CK:88:LYS:HB2	8:CK:89:PRO:HD2	1.95	0.47
1:AA:109:A:C6	1:AA:326:G:C6	3.03	0.47
9:AL:4:TYR:CE2	9:AL:88:TYR:HB2	2.50	0.47
1:AA:1097:C:H1'	1:AA:1169:A:C2	2.49	0.47
1:CA:69:G:H2'	1:CA:73:G:H8	1.79	0.47
24:BA:141:A:C8	24:BA:1408:C:H1'	2.49	0.47
1:CA:216:G:O2'	1:CA:217:C:O4'	2.33	0.47
17:AT:13:ASP:HA	17:AT:19:VAL:HG12	1.97	0.47
34:DO:79:ARG:CZ	34:DO:109:GLY:HA3	2.45	0.47
24:DA:5:A:H2'	24:DA:6:A:C8	2.50	0.47
2:AE:192:SER:OG	2:AE:193:ASP:OD1	2.25	0.47
24:DA:2635:C:H5''	27:DE:77:ILE:O	2.15	0.47
25:BB:38:C:O4'	37:BQ:95:HIS:NE2	2.47	0.47
1:CA:595:G:O2'	1:CA:641:U:O4	2.30	0.47
24:BA:1422:G:H1'	24:BA:1496:A:H62	1.79	0.47
20:CW:49:ALA:HA	20:CW:52:ALA:HB3	1.97	0.47
28:DF:37:VAL:HG21	34:DO:6:LEU:HD21	1.97	0.47
20:CW:67:ALA:O	20:CW:73:HIS:ND1	2.48	0.47
24:BA:1460:A:O2'	24:BA:1461:G:OP1	2.27	0.47
24:DA:257:A:H2'	24:DA:258:G:O4'	2.15	0.47
45:B3:64:ASP:OD1	45:B3:64:ASP:N	2.48	0.47
5:CH:16:THR:OG1	5:CH:16:THR:O	2.33	0.47
24:BA:2272:U:H5''	24:BA:2273:A:OP1	2.15	0.47
2:AE:136:VAL:O	2:AE:140:HIS:N	2.38	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1354:A:OP1	26:BD:38:LYS:NZ	2.44	0.47
1:AA:1068:G:N2	1:AA:1191:A:N3	2.46	0.47
24:DA:1219:G:H1	24:DA:1230:C:H42	1.61	0.47
1:AA:286:G:C6	1:AA:287:U:C4	3.03	0.47
33:DN:50:GLY:O	33:DN:53:LYS:NZ	2.41	0.47
43:BU:75:ILE:HG22	43:BU:79:CYS:C	2.35	0.47
7:AJ:64:GLN:OE1	7:AJ:68:ASN:ND2	2.44	0.47
24:DA:196:A:H2'	24:DA:196:A:N3	2.30	0.47
24:DA:2032:G:H21	27:DE:146:THR:HG23	1.80	0.47
22:CD:5:G:N3	22:CD:5:G:H2'	2.30	0.47
24:BA:870:A:P	35:BP:6:ARG:HH21	2.38	0.47
24:BA:2721:A:H2'	24:BA:2722:G:O4'	2.14	0.47
4:CG:38:TYR:CE1	4:CG:45:GLN:HG2	2.50	0.47
49:D4:36:CYS:SG	49:D4:36:CYS:O	2.72	0.47
21:CX:6:ARG:NH2	21:CX:15:ARG:HH22	1.96	0.47
22:CD:16:C:OP2	22:CD:17:C:N4	2.38	0.47
36:B0:1:MET:HB3	36:B0:2:ARG:H	1.43	0.47
24:BA:1062:G:C2	24:BA:1076:C:N3	2.83	0.47
22:AD:48:C:OP2	22:AD:48:C:H3'	2.14	0.47
24:BA:2116:G:H1	24:BA:2162:G:P	2.38	0.47
24:BA:2163:C:H3'	24:BA:2164:C:C6	2.50	0.47
24:BA:2170:A:H8	24:BA:2170:A:O5'	1.98	0.47
1:CA:1322:C:O2'	1:CA:1323:G:O5'	2.33	0.47
1:CA:1220:G:H5'	19:CV:34:TRP:O	2.14	0.47
1:AA:1226:C:H4'	19:AV:80:TYR:CZ	2.50	0.47
1:AA:961:U:OP2	1:AA:1223:C:H1'	2.15	0.47
25:DB:43:C:P	49:D4:6:HIS:HE1	2.37	0.47
1:CA:1192:C:OP2	3:CF:4:LYS:NZ	2.37	0.47
7:CJ:114:ARG:H	7:CJ:114:ARG:HG2	1.41	0.47
2:CE:195:ASP:N	2:CE:195:ASP:OD1	2.48	0.47
22:AD:38:A:H2'	22:AD:39:C:O4'	2.15	0.47
11:AN:45:GLY:O	11:AN:50:TYR:HB2	2.14	0.47
24:DA:1114:G:H2'	24:DA:1115:G:H8	1.78	0.47
1:AA:1028(A):C:H2'	1:AA:1028(B):C:H6	1.79	0.47
1:AA:1346:A:H5''	9:AL:120:ARG:HH12	1.79	0.47
36:D0:78:LYS:O	36:D0:82:GLU:HB3	2.15	0.47
15:CR:29:VAL:O	15:CR:33:THR:OG1	2.30	0.47
1:CA:812:C:OP1	1:CA:903:G:H1'	2.13	0.47
24:DA:2735:G:H1	24:DA:2769:C:H42	1.62	0.47
7:AJ:111:ARG:HD2	7:AJ:123:GLU:HB2	1.96	0.47
34:DO:146:VAL:HG22	34:DO:147:LEU:HD23	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1797:C:O2'	26:BD:259:THR:HG22	2.15	0.47
6:AI:46:ARG:HG3	6:AI:47:ARG:H	1.79	0.47
2:CE:114:ARG:NH1	2:CE:117:GLU:OE1	2.48	0.47
1:CA:1349:A:H2'	1:CA:1350:A:H8	1.80	0.47
1:CA:716:A:N3	11:CN:118:GLY:HA2	2.30	0.47
7:AJ:57:GLU:HB2	7:AJ:60:LYS:HG2	1.95	0.47
24:DA:1805:U:O2	26:DD:50:THR:HB	2.15	0.47
38:BR:108:ARG:HA	38:BR:111:ARG:HG3	1.96	0.47
29:DG:143:GLU:O	49:D4:28:LYS:NZ	2.36	0.47
6:CI:97:PHE:O	18:CU:31:LEU:HD23	2.15	0.47
24:DA:1027:A:OP2	24:DA:1027:A:H8	1.97	0.47
2:CE:17:PHE:HD2	2:CE:44:LEU:HD22	1.79	0.47
4:AG:8:VAL:HG21	4:AG:115:ARG:CZ	2.43	0.47
27:BE:66:HIS:CG	27:BE:67:PHE:N	2.82	0.47
4:AG:31:CYS:O	4:AG:33:MET:N	2.48	0.47
35:BP:63:LYS:HG3	35:BP:65:PHE:CE2	2.50	0.47
24:DA:2153:G:C2	24:DA:2154:G:C8	3.03	0.47
24:DA:94:G:P	43:DU:54:LYS:HE3	2.55	0.47
24:DA:893:C:O2'	24:DA:894:C:P	2.73	0.47
1:CA:1133:G:H1	1:CA:1141:C:H42	1.62	0.47
1:CA:1004:A:C2	1:CA:1024:G:H1'	2.50	0.47
1:CA:1020:U:H2'	1:CA:1021:G:H8	1.79	0.47
22:AD:66:C:H2'	22:AD:67:C:C6	2.50	0.47
22:AD:68:C:H2'	22:AD:69:C:H6	1.80	0.47
24:BA:2863:C:H2'	24:BA:2864:G:C8	2.50	0.47
37:BQ:71:ARG:NH2	37:BQ:107:GLU:OE1	2.48	0.47
1:CA:1104:G:C2	1:CA:1105:A:C4	3.03	0.47
44:DV:152:ALA:HB3	44:DV:167:PRO:HA	1.97	0.47
24:BA:2756:U:H1'	24:BA:2757:A:H5''	1.97	0.47
43:BU:4:LYS:NZ	43:BU:35:TYR:OH	2.30	0.47
24:DA:2611:U:H2'	50:D5:3:LYS:HZ2	1.79	0.47
22:CD:33:U:O2'	22:CD:35:A:N7	2.40	0.47
8:AK:68:ARG:HD2	8:AK:74:PRO:HB2	1.96	0.47
30:BH:55:PRO:HG2	30:BH:61:HIS:CE1	2.50	0.47
1:CA:740:U:H2'	1:CA:741:G:H8	1.80	0.47
24:BA:902:C:H2'	24:BA:903:C:C6	2.50	0.47
35:BP:75:THR:HA	35:BP:90:VAL:H	1.78	0.47
1:AA:1015:A:H2'	1:AA:1016:A:O4'	2.15	0.47
35:BP:24:GLY:HA3	35:BP:25:ASP:HB2	1.97	0.47
24:DA:2853:C:H2'	24:DA:2854:G:H8	1.80	0.47
30:BH:23:ARG:HH12	30:BH:25:LYS:HE2	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AE:42:ILE:CD1	2:AE:202:PRO:HB2	2.45	0.47
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.50	0.47
3:AF:7:PRO:O	3:AF:11:ARG:HG2	2.15	0.47
24:BA:392:C:H5''	24:BA:409:C:H5''	1.96	0.47
24:DA:2030:A:H4'	24:DA:2031:A:C8	2.50	0.47
24:BA:2292:C:P	37:BQ:17:ARG:HH22	2.38	0.47
40:D2:66:ARG:HB2	40:D2:88:ARG:HB3	1.97	0.47
7:AJ:102:ARG:O	7:AJ:106:GLN:HG3	2.15	0.47
29:BG:49:ASP:OD2	29:BG:51:ARG:NH2	2.48	0.47
1:CA:247:G:OP2	17:CT:100:LYS:HG3	2.14	0.47
15:CR:20:GLY:O	15:CR:22:THR:HG22	2.15	0.47
24:BA:1187:G:H5''	40:B2:81:TYR:CE1	2.50	0.47
24:DA:1716:U:O2'	24:DA:1717:G:H5'	2.15	0.47
24:BA:503:A:H4'	24:BA:504:U:H5''	1.96	0.47
27:BE:30:PRO:O	27:BE:32:PRO:HD3	2.15	0.47
24:DA:1842:G:O2'	26:DD:253:GLN:OE1	2.32	0.47
48:BX:4:LEU:HD23	48:BX:4:LEU:HA	1.55	0.47
13:AP:45:VAL:O	13:AP:48:LEU:HD22	2.14	0.47
1:AA:365:U:H5''	1:AA:366:C:OP1	2.15	0.47
24:DA:217:G:H2'	24:DA:218:A:O4'	2.15	0.47
5:CH:11:ILE:HG22	5:CH:12:LEU:HB2	1.96	0.47
39:D1:109:LEU:HA	39:D1:112:ARG:HG3	1.97	0.47
27:DE:60:ASN:HD22	27:DE:63:LEU:CD2	2.15	0.47
24:BA:2804:C:H2'	24:BA:2805:G:O4'	2.15	0.47
32:BM:15:LEU:CD2	32:BM:128:HIS:CE1	2.78	0.47
27:DE:37:ARG:HD2	27:DE:44:TYR:OH	2.15	0.47
24:DA:1090:U:N3	24:DA:1102:C:N3	2.63	0.47
1:AA:1005:A:N1	1:AA:1024:G:H8	2.13	0.47
47:BW:49:LYS:O	47:BW:53:LEU:HB2	2.14	0.47
24:BA:2119:A:H61	24:BA:2170:A:H61	1.62	0.47
25:DB:89:G:H2'	25:DB:89(A):A:N3	2.30	0.47
37:BQ:103:GLU:O	37:BQ:106:ARG:HG2	2.14	0.47
24:DA:2543:G:H2'	24:DA:2544:G:C8	2.50	0.47
24:DA:2793:G:C5	24:DA:2794:C:C4	3.03	0.47
25:DB:40:U:N3	25:DB:43:C:H5''	2.30	0.47
4:CG:60:GLU:HG2	4:CG:202:LEU:HB2	1.96	0.47
32:BM:96:GLU:HG2	32:BM:97:ARG:H	1.79	0.47
24:DA:2:G:N2	24:DA:2901:C:N3	2.63	0.47
2:AE:75:LYS:HA	2:AE:78:GLN:HG3	1.96	0.47
1:CA:523:A:N1	12:CO:92:ASP:HB2	2.29	0.47
6:CI:30:LEU:O	6:CI:35:ALA:HB3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CI:35:ALA:HB1	6:CI:65:VAL:HG11	1.97	0.47
1:AA:376:G:H5''	16:AS:5:ARG:HB2	1.96	0.47
24:DA:2012:G:OP1	41:DS:11:ARG:NH2	2.43	0.47
46:DZ:87:PRO:HA	46:DZ:90:ILE:HG23	1.97	0.47
47:BW:33:MET:O	47:BW:36:ARG:HB2	2.15	0.47
42:DT:43:VAL:CG2	42:DT:51:VAL:HG21	2.45	0.47
1:CA:452:A:H2'	1:CA:453:A:C8	2.50	0.47
30:BH:101:ARG:CZ	30:BH:122:THR:HG23	2.45	0.47
47:BW:43:GLN:O	47:BW:45:SER:N	2.48	0.47
24:DA:616:A:H8	28:DF:176:LEU:HD11	1.80	0.47
10:CM:38:ILE:HB	10:CM:71:LEU:HB3	1.96	0.47
24:DA:184:C:H2'	24:DA:185:U:H6	1.80	0.47
22:AC:9:G:O2'	22:AC:10:G:N7	2.35	0.47
10:CM:4:ILE:HD11	10:CM:77:PRO:HB3	1.96	0.47
35:DP:29:PHE:N	35:DP:105:GLU:OE1	2.45	0.47
28:DF:178:PRO:HB3	28:DF:198:ALA:HB1	1.97	0.47
4:AG:83:SER:HA	4:AG:89:THR:O	2.15	0.47
47:DW:66:GLU:HG2	47:DW:69:ARG:HH22	1.79	0.47
1:AA:1078:U:O2'	5:AH:130:ASN:OD1	2.18	0.47
24:BA:606:U:OP2	28:BF:104:LYS:NZ	2.41	0.47
1:AA:953:G:N7	13:AP:104:ARG:NH2	2.61	0.47
1:CA:41:G:H2'	1:CA:42:G:C8	2.49	0.47
12:AO:28:LYS:O	12:AO:30:ALA:N	2.48	0.47
1:AA:1512:U:H3	1:AA:1523:G:H1	1.63	0.47
24:DA:57:C:H2'	24:DA:58:G:O4'	2.15	0.47
30:DH:91:GLY:HA3	30:DH:94:TYR:CE2	2.49	0.47
44:DV:23:LYS:HE2	44:DV:40:ASP:HB2	1.97	0.47
37:BQ:34:HIS:HB2	37:BQ:36:TYR:HE1	1.80	0.47
24:BA:2789:C:H1'	24:BA:2892:A:H2	1.80	0.46
24:DA:2161:C:H2'	24:DA:2162:G:C8	2.50	0.46
24:BA:2415:G:O3'	34:BO:66:GLY:HA3	2.15	0.46
24:DA:1080:A:H62	24:DA:1088:A:P	2.38	0.46
24:BA:2635:C:OP1	27:BE:78:LEU:HB2	2.14	0.46
1:CA:1034:G:H2'	1:CA:1035:A:C8	2.50	0.46
24:DA:1019:U:O2'	24:DA:1021:A:H2	1.98	0.46
37:BQ:74:ALA:HB1	37:BQ:107:GLU:O	2.16	0.46
24:DA:2542:A:H1'	24:DA:2543:G:N7	2.29	0.46
39:D1:50:ARG:HG2	39:D1:53:ARG:NH2	2.30	0.46
18:CU:47:THR:O	18:CU:83:GLU:N	2.44	0.46
1:CA:1290:G:H5''	1:CA:1291:G:OP2	2.15	0.46
3:CF:20:SER:HG	3:CF:40:ARG:HH22	1.57	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:B1:92:ARG:C	39:B1:94:ASN:N	2.68	0.46
53:B8:50:LEU:HD12	53:B8:51:ALA:N	2.30	0.46
24:BA:74:A:C8	24:BA:74:A:O5'	2.68	0.46
7:AJ:143:ARG:HH22	22:AD:42:G:H5'	1.80	0.46
1:CA:1095:U:H5''	1:CA:1109:C:O2	2.14	0.46
2:AE:8:LYS:O	2:AE:8:LYS:NZ	2.46	0.46
1:AA:255:G:H4'	17:AT:17:LYS:HG2	1.97	0.46
24:DA:654(G):C:H2'	24:DA:654(H):G:O4'	2.15	0.46
24:DA:654(H):G:N1	24:DA:654(I):C:N3	2.63	0.46
19:CV:13:ASP:OD1	19:CV:13:ASP:N	2.47	0.46
1:AA:1409:C:H2'	1:AA:1410:G:C8	2.50	0.46
1:AA:182:U:O4	1:AA:223:U:H1'	2.15	0.46
1:CA:785:G:N2	1:CA:797:C:N3	2.55	0.46
24:BA:106:C:H2'	24:BA:107:C:C6	2.50	0.46
35:DP:122:GLY:HA2	35:DP:129:THR:HG21	1.97	0.46
24:DA:669:G:O2'	24:DA:670:A:P	2.73	0.46
24:BA:720:C:H2'	24:BA:721:C:C6	2.50	0.46
39:B1:105:VAL:HG11	40:B2:40:LEU:HD11	1.97	0.46
24:BA:2712:U:H1'	24:BA:2712(A):A:C8	2.50	0.46
12:CO:76:ASN:HD21	12:CO:108:ALA:H	1.63	0.46
30:BH:78:GLY:HA2	30:BH:82:GLY:HA3	1.97	0.46
8:CK:36:LEU:HA	8:CK:39:LEU:HD23	1.97	0.46
20:AW:61:SER:O	20:AW:65:LYS:HB2	2.15	0.46
6:CI:101:ALA:OXT	18:CU:28:GLU:HB2	2.15	0.46
35:DP:69:PHE:HA	35:DP:70:PRO:HD3	1.80	0.46
32:BM:34:LEU:HA	32:BM:34:LEU:HD13	1.76	0.46
43:DU:2:ARG:HA	43:DU:2:ARG:NH1	2.31	0.46
14:AQ:53:LEU:HA	14:AQ:53:LEU:HD23	1.71	0.46
1:AA:258:G:H1	1:AA:268:C:H42	1.62	0.46
26:BD:17:THR:HG22	26:BD:204:ILE:HA	1.97	0.46
24:BA:1470:G:N2	24:BA:1522:G:OP2	2.33	0.46
36:D0:70:LEU:O	36:D0:72:ASP:N	2.46	0.46
1:CA:429:U:H3'	4:CG:25:ARG:NH2	2.30	0.46
34:DO:60:MET:O	34:DO:61:ARG:HD3	2.12	0.46
30:BH:154:PRO:HA	30:BH:160:LYS:O	2.16	0.46
51:D6:37:ARG:O	51:D6:49:HIS:NE2	2.48	0.46
24:DA:2156:G:H3'	24:DA:2157:G:C8	2.49	0.46
24:DA:2112:G:H1	24:DA:2169:A:N6	2.12	0.46
53:B8:43:GLN:C	53:B8:44:LYS:HD2	2.35	0.46
24:DA:1063:G:C5	24:DA:1076:C:C2	3.03	0.46
13:CP:91:ARG:NE	13:CP:97:PRO:O	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1035:A:C2	1:AA:1036:G:H1'	2.50	0.46
1:CA:1235:U:O2'	1:CA:1305:G:O5'	2.34	0.46
13:CP:23:TYR:HE2	13:CP:71:ARG:HD3	1.80	0.46
13:CP:49:THR:N	13:CP:52:GLU:OE1	2.40	0.46
9:CL:9:ARG:CB	9:CL:14:VAL:HG12	2.45	0.46
20:CW:51:GLU:HA	20:CW:54:LYS:HB3	1.96	0.46
1:AA:1454:G:H4'	20:AW:36:LEU:HD21	1.98	0.46
22:CD:31:G:C5	22:CD:32:C:C4	3.04	0.46
26:BD:12:SER:O	26:BD:16:MET:HB2	2.14	0.46
44:DV:30:ASN:ND2	44:DV:90:VAL:O	2.47	0.46
44:DV:10:ARG:HB3	44:DV:36:LYS:HB3	1.98	0.46
1:AA:1374:A:P	7:AJ:36:LYS:HZ1	2.38	0.46
1:CA:666:G:OP2	1:CA:725:G:N2	2.40	0.46
1:CA:740:U:H2'	1:CA:741:G:C8	2.50	0.46
24:BA:902:C:H2'	24:BA:903:C:H6	1.80	0.46
38:DR:24:PRO:O	38:DR:94:ALA:HB2	2.15	0.46
24:DA:1464:C:O2'	24:DA:1528:A:H8	1.96	0.46
3:CF:130:VAL:O	3:CF:134:ILE:HG12	2.15	0.46
24:DA:2233:U:H2'	24:DA:2234:G:C8	2.51	0.46
3:AF:8:ILE:HD11	3:AF:184:TYR:HB3	1.96	0.46
24:BA:39:C:O2	28:BF:46:ARG:NH2	2.48	0.46
1:CA:109:A:C6	1:CA:326:G:C6	3.03	0.46
35:BP:43:THR:HG22	35:BP:94:VAL:HG12	1.97	0.46
1:CA:1402:C:H2'	1:CA:1403:C:O4'	2.15	0.46
24:DA:134:C:H42	24:DA:145:G:H1	1.62	0.46
24:BA:2464:C:H42	24:BA:2486:G:H1	1.64	0.46
38:DR:16:ARG:HH12	38:DR:83:ILE:HB	1.81	0.46
1:CA:46:G:O2'	1:CA:365:U:H1'	2.15	0.46
26:BD:6:PHE:HE1	26:BD:18:VAL:HG23	1.80	0.46
24:BA:593:G:H1'	53:B8:4:MET:HE1	1.96	0.46
9:AL:34:ASN:OD1	9:AL:34:ASN:N	2.45	0.46
24:BA:2467:C:H4'	35:BP:123:HIS:CD2	2.50	0.46
24:DA:2346:A:N6	51:D6:28:ARG:HH21	2.13	0.46
24:DA:2129:C:O2'	24:DA:2130:U:H5'	2.15	0.46
24:DA:896:A:H3'	24:DA:897:C:H5''	1.97	0.46
1:CA:1014:A:H4'	19:CV:14:HIS:ND1	2.30	0.46
26:BD:33:LEU:CD2	26:BD:34:VAL:H	2.28	0.46
1:AA:406:G:N2	4:AG:119:GLN:HE22	2.13	0.46
24:BA:996:A:H4'	39:B1:92:ARG:HE	1.80	0.46
1:AA:1151:A:H2'	1:AA:1152:A:H8	1.80	0.46
1:AA:1118:C:P	9:AL:104:ARG:HH11	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BR:26:ASP:CB	38:BR:91:ARG:HA	2.43	0.46
5:CH:32:VAL:HB	5:CH:58:ALA:HB1	1.96	0.46
1:AA:1269:A:H2	1:AA:1312:G:N3	2.13	0.46
24:DA:10:G:C5	24:DA:2629:A:C6	3.03	0.46
44:DV:54:HIS:HB3	44:DV:101:PRO:HD3	1.96	0.46
1:CA:147:G:H1	1:CA:175:C:N4	2.12	0.46
24:DA:2853:C:H2'	24:DA:2854:G:C8	2.50	0.46
34:DO:111:ARG:HG2	34:DO:128:HIS:CD2	2.51	0.46
24:BA:2695:C:H2'	24:BA:2696:U:C6	2.50	0.46
1:AA:1237:C:O2'	1:AA:1300:G:N2	2.46	0.46
12:CO:27:LEU:HD23	12:CO:33:ARG:HG2	1.96	0.46
25:BB:80:U:H2'	25:BB:81:G:H21	1.80	0.46
25:BB:38:C:O2	25:BB:48:A:H1'	2.15	0.46
1:CA:108:G:H5''	1:CA:109:A:H5''	1.97	0.46
24:BA:1375:C:H2'	24:BA:1376:C:H6	1.81	0.46
24:BA:1657:C:H2'	24:BA:1658:C:H6	1.80	0.46
19:AV:33:THR:OG1	19:AV:34:TRP:N	2.43	0.46
1:CA:591:U:OP2	8:CK:30:ARG:NH1	2.49	0.46
13:AP:34:LEU:O	13:AP:39:ILE:N	2.28	0.46
44:BV:76:LEU:HD23	44:BV:76:LEU:H	1.79	0.46
6:CI:32:ASN:OD1	6:CI:32:ASN:N	2.48	0.46
8:AK:80:ILE:HG12	8:AK:80:ILE:H	1.36	0.46
26:DD:130:ALA:HA	26:DD:192:THR:HA	1.98	0.46
24:BA:250:G:H2'	24:BA:251:A:C8	2.50	0.46
24:BA:1024:G:N2	24:BA:1142(A):A:H2	2.13	0.46
4:AG:9:CYS:CB	4:AG:32:ALA:CB	2.59	0.46
1:CA:1256:A:OP2	3:CF:26:LYS:NZ	2.37	0.46
22:CD:56:C:C2	22:CD:57:A:C8	3.04	0.46
2:AE:17:PHE:CE1	2:AE:44:LEU:HD11	2.50	0.46
22:AD:8:U:H5''	22:AD:48:C:H4'	1.98	0.46
22:AD:7:G:O2'	22:AD:8:U:OP2	2.24	0.46
24:BA:2115:G:N3	24:BA:2171:A:C6	2.83	0.46
1:CA:984:C:H2'	1:CA:985:C:C6	2.51	0.46
5:CH:76:ILE:HG23	5:CH:142:LEU:HD13	1.96	0.46
14:CQ:29:ARG:HH11	14:CQ:29:ARG:HG2	1.81	0.46
24:BA:2056:G:H2'	24:BA:2056:G:N3	2.30	0.46
24:BA:270(N):G:N2	31:BK:50:ARG:HH12	2.13	0.46
24:BA:2157:G:O2'	24:BA:2158:A:P	2.74	0.46
24:BA:459:U:H2'	24:BA:460:A:H8	1.81	0.46
7:CJ:41:ARG:HG3	7:CJ:42:ILE:N	2.30	0.46
44:DV:70:LEU:HD23	44:DV:70:LEU:HA	1.73	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:320:A:H4'	24:BA:322:A:N7	2.29	0.46
2:AE:46:LYS:HE2	2:AE:46:LYS:HB3	1.64	0.46
29:BG:16:ARG:NH1	29:BG:31:VAL:HG11	2.31	0.46
1:CA:236:G:OP1	17:CT:40:LYS:NZ	2.41	0.46
28:BF:122:LYS:HD2	28:BF:191:ARG:HG3	1.97	0.46
24:BA:2387:U:P	45:B3:55:ARG:HH12	2.38	0.46
38:BR:78:LEU:HB3	38:BR:79:HIS:HD2	1.80	0.46
24:DA:2572:A:N7	27:DE:145:LYS:HB2	2.31	0.46
14:AQ:13:THR:N	14:AQ:14:PRO:HD2	2.31	0.46
1:CA:1264:C:H2'	1:CA:1265:G:H8	1.80	0.46
29:BG:131:TYR:HB3	29:BG:159:VAL:CG2	2.45	0.46
24:DA:1342:A:C2	24:DA:1397:U:C2	3.03	0.46
15:AR:69:TYR:CZ	15:AR:73:GLU:HG3	2.50	0.46
6:AI:76:ALA:O	6:AI:80:ARG:HG3	2.15	0.46
24:DA:698:C:O2'	24:DA:734:A:N6	2.47	0.46
1:CA:580:U:H2'	1:CA:581:G:O4'	2.16	0.46
8:AK:99:GLU:H	8:AK:99:GLU:HG3	1.40	0.46
1:AA:19:C:H2'	1:AA:20:U:H6	1.81	0.46
24:BA:558:G:P	32:BM:111:PRO:HG2	2.55	0.46
24:DA:495:G:N3	41:DS:61:ASN:ND2	2.62	0.46
24:DA:213:A:H2'	24:DA:214:G:O4'	2.15	0.46
31:DK:117:GLU:HB2	31:DK:118:LYS:H	1.51	0.46
34:DO:71:VAL:N	34:DO:72:PRO:CD	2.78	0.46
34:DO:59:LEU:O	34:DO:61:ARG:N	2.48	0.46
1:AA:458:C:H2'	1:AA:464:G:C8	2.50	0.46
1:AA:458:C:H2'	1:AA:464:G:H8	1.80	0.46
13:CP:9:ILE:HD12	29:DG:146:TYR:CD2	2.51	0.46
1:AA:947:G:OP1	13:AP:108:ARG:HB3	2.15	0.46
1:AA:1006:C:N4	1:AA:1023:G:O6	2.39	0.46
24:DA:2419:U:H5''	53:D8:34:TRP:CD1	2.51	0.46
22:AD:51:C:H2'	22:AD:52:G:C8	2.50	0.46
30:DH:163:TYR:CE2	30:DH:169:VAL:HG11	2.49	0.46
24:BA:1174:A:N7	24:BA:1175:U:H6	2.13	0.46
24:DA:443:A:H1'	24:DA:1201:C:O4'	2.15	0.46
28:BF:32:LEU:HA	28:BF:35:GLU:HB2	1.97	0.46
1:CA:1109:C:H2'	1:CA:1110:A:O4'	2.16	0.46
37:DQ:14:VAL:HG21	37:DQ:89:ARG:HG2	1.97	0.46
1:CA:1348:U:N3	1:CA:1374:A:H2	2.12	0.46
1:AA:872:A:C5	1:AA:874:G:C8	3.04	0.46
1:CA:9:G:H1	1:CA:25:C:N4	2.14	0.46
29:DG:41:GLN:NE2	29:DG:60:LEU:HD12	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2602:A:H4'	24:DA:2603:G:C5'	2.46	0.46
26:BD:182:LEU:H	26:BD:272:ALA:CB	2.27	0.46
1:AA:914:A:H2'	1:AA:915:A:C8	2.48	0.46
24:BA:2567:G:H2'	24:BA:2568:C:C6	2.51	0.46
44:DV:105:VAL:HG13	44:DV:106:GLY:H	1.79	0.46
4:AG:150:GLU:C	4:AG:152:SER:H	2.18	0.46
24:BA:1445:C:H42	24:BA:1466:G:H1	1.63	0.46
24:BA:2182:G:H2'	24:BA:2183:C:C6	2.51	0.46
24:DA:616:A:C5	28:DF:180:GLY:HA3	2.51	0.46
1:AA:1095:U:P	1:AA:1108:G:H1	2.38	0.46
37:DQ:104:GLY:O	37:DQ:106:ARG:HG2	2.16	0.46
28:DF:34:TRP:CE3	34:DO:8:PRO:HB3	2.51	0.46
1:AA:1064:G:H1'	1:AA:1190:G:H21	1.81	0.46
10:CM:23:ILE:HG23	10:CM:85:LEU:HD22	1.97	0.46
7:CJ:26:PHE:CE1	7:CJ:30:ILE:HD11	2.51	0.46
43:DU:96:ILE:HD12	43:DU:98:VAL:HG12	1.97	0.46
26:DD:133:LEU:HB3	26:DD:173:VAL:HG21	1.98	0.46
24:DA:1255:U:H5''	24:DA:1256:G:H5''	1.96	0.46
28:DF:123:LEU:HA	28:DF:192:LEU:HB3	1.97	0.46
2:AE:28:PHE:CD2	2:AE:190:THR:HG22	2.51	0.46
1:CA:170:U:H2'	1:CA:171:A:H8	1.81	0.46
2:CE:46:LYS:HA	2:CE:46:LYS:HD3	1.70	0.46
19:CV:64:GLU:N	19:CV:64:GLU:OE1	2.48	0.46
29:BG:43:LEU:HD23	29:BG:53:LEU:HD12	1.96	0.46
4:CG:18:LYS:HE3	4:CG:20:TYR:CE1	2.48	0.46
12:AO:46:LYS:CD	12:AO:48:PRO:CG	2.92	0.46
24:BA:411:G:N3	34:BO:71:VAL:HG21	2.31	0.46
27:DE:72:VAL:O	27:DE:73:GLU:O	2.33	0.46
24:DA:2131:G:OP1	24:DA:2132:U:H3'	2.16	0.46
27:DE:47:VAL:HG22	27:DE:48:GLN:N	2.30	0.46
24:DA:881:G:H3'	24:DA:882:G:H8	1.81	0.46
24:DA:893:C:O2'	24:DA:894:C:OP2	2.27	0.46
24:DA:1094:U:H5'	24:DA:1098:A:N1	2.31	0.46
19:CV:11:VAL:HG23	19:CV:39:THR:HB	1.97	0.46
36:B0:1:MET:HE2	36:B0:1:MET:HB2	1.80	0.46
2:AE:15:VAL:O	2:AE:17:PHE:N	2.43	0.46
1:CA:984:C:N4	1:CA:1221:G:H1	2.13	0.46
1:AA:981:U:H5	1:AA:982:U:HO2'	1.62	0.46
25:DB:55:U:O3'	29:DG:27:ASN:ND2	2.48	0.46
53:B8:35:GLN:O	53:B8:36:LYS:O	2.33	0.46
1:CA:5:U:C3'	4:CG:84:LYS:HZ1	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:165:C:H2'	1:AA:166:G:C8	2.50	0.46
1:AA:452:A:O2'	1:AA:453:A:O5'	2.34	0.46
1:AA:1028(B):C:H3'	1:AA:1029:G:C5'	2.45	0.46
50:D5:3:LYS:HZ1	50:D5:4:HIS:CE1	2.33	0.46
6:AI:23:LYS:NZ	6:AI:23:LYS:HB2	2.26	0.46
1:CA:606:G:N2	1:CA:631:G:O2'	2.48	0.46
27:DE:93:VAL:HG11	27:DE:181:LEU:O	2.16	0.46
7:CJ:66:VAL:HG12	7:CJ:70:LYS:NZ	2.31	0.46
1:CA:514:C:C2	1:CA:515:G:C8	3.04	0.46
26:DD:31:LYS:CE	26:DD:33:LEU:HD12	2.46	0.46
2:CE:174:VAL:O	2:CE:178:ARG:N	2.42	0.46
7:CJ:69:VAL:HG22	7:CJ:135:VAL:HG22	1.98	0.46
24:DA:1410:G:H2'	24:DA:1411:C:C6	2.50	0.46
37:DQ:107:GLU:H	37:DQ:110:LEU:HD21	1.80	0.46
44:DV:52:SER:O	44:DV:52:SER:OG	2.29	0.46
1:CA:1048:G:O4'	1:CA:1215:G:H4'	2.16	0.46
3:AF:16:ARG:NH1	3:AF:183:ASP:HA	2.31	0.46
20:CW:75:ASN:O	20:CW:79:ARG:N	2.38	0.46
24:DA:1582:C:O2'	24:DA:1586:A:H8	1.98	0.46
33:DN:75:SER:OG	33:DN:76:ALA:N	2.48	0.46
24:BA:2846:G:P	38:BR:54:ARG:HB2	2.56	0.46
24:DA:2402:C:H2'	24:DA:2403:C:H5'	1.97	0.46
18:CU:70:ILE:O	18:CU:74:ARG:HG3	2.14	0.46
1:AA:1429:C:H2'	1:AA:1430:C:H6	1.80	0.46
1:CA:618:C:H5'	1:CA:619:U:H5''	1.98	0.46
20:CW:14:LYS:O	20:CW:18:GLN:HG3	2.16	0.46
28:DF:70:THR:HG23	28:DF:72:ARG:H	1.79	0.46
2:AE:114:ARG:O	2:AE:118:LEU:N	2.46	0.46
1:CA:603:U:H2'	1:CA:604:G:C8	2.50	0.46
30:BH:17:VAL:HG21	30:BH:50:VAL:HG21	1.96	0.46
24:DA:1162:G:H21	40:D2:89:GLN:HE22	1.64	0.46
24:BA:1932:A:H2'	24:BA:1933:G:O4'	2.16	0.46
40:D2:14:VAL:HB	40:D2:96:ILE:HG13	1.98	0.46
26:DD:105:ILE:HD13	26:DD:105:ILE:HA	1.82	0.46
24:BA:1763:G:H4'	24:BA:1763:G:OP1	2.15	0.46
9:CL:25:LYS:O	9:CL:61:ALA:N	2.33	0.46
43:BU:95:LYS:HB2	43:BU:95:LYS:HE3	1.62	0.46
26:BD:76:PRO:HG2	26:BD:98:VAL:HG21	1.98	0.46
3:AF:116:VAL:O	3:AF:120:VAL:HG23	2.16	0.46
1:CA:409:G:H8	1:CA:409:G:O5'	1.99	0.46
1:CA:409:G:H3'	1:CA:410:G:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:414:A:OP2	1:AA:428:G:N2	2.44	0.46
27:BE:65:GLY:HA2	27:BE:70:ALA:HB2	1.98	0.46
26:BD:54:ARG:O	26:BD:218:ARG:HD3	2.16	0.46
1:AA:458:C:O2	1:AA:474:G:N2	2.48	0.46
24:BA:2285:C:H5'	24:BA:2288:A:C6	2.51	0.46
1:CA:1330:U:H3'	1:CA:1331:G:O4'	2.15	0.46
2:AE:88:ALA:O	2:AE:226:ARG:NH1	2.49	0.46
24:BA:1071:G:N3	24:BA:1089:G:H3'	2.30	0.46
1:AA:166:G:H2'	1:AA:167:G:H8	1.81	0.46
1:CA:1291:G:O2'	9:CL:38:GLN:HB3	2.15	0.46
33:DN:68:GLU:OE2	33:DN:78:ARG:NH1	2.49	0.46
14:AQ:3:ARG:C	14:AQ:3:ARG:HD3	2.35	0.46
9:CL:12:GLU:O	9:CL:68:GLY:N	2.49	0.46
5:AH:110:LEU:HD13	5:AH:118:ILE:HD13	1.98	0.46
3:CF:63:ASN:CB	3:CF:98:ASN:HB3	2.45	0.46
1:CA:130:A:C8	17:CT:63:ARG:HG3	2.51	0.46
24:BA:2646:C:H6	24:BA:2646:C:O5'	1.99	0.46
1:CA:422:C:H1'	1:CA:423:G:C2	2.51	0.46
24:BA:1007:C:OP1	32:BM:35:ARG:NH1	2.49	0.46
24:DA:242:G:H5''	53:D8:62:LEU:HD13	1.98	0.46
17:AT:23:VAL:O	17:AT:39:SER:HA	2.16	0.46
24:DA:2401:U:H3'	24:DA:2402:C:C5'	2.45	0.46
24:DA:2401:U:O2	24:DA:2402:C:H5	1.99	0.46
31:BK:75:LEU:HD21	31:BK:105:HIS:HB3	1.98	0.46
24:BA:1316:U:H2'	24:BA:1317:A:H8	1.80	0.46
24:BA:1529:A:C8	24:BA:1530:G:C8	3.04	0.46
24:DA:581:C:H2'	24:DA:582:G:C8	2.51	0.46
1:AA:858:G:O6	1:AA:869:G:H3'	2.16	0.46
26:BD:76:PRO:O	26:BD:98:VAL:HG23	2.15	0.46
24:BA:1543:A:H1'	24:BA:1544:C:H3'	1.98	0.46
24:BA:270(Y):G:C2	24:BA:270(Z):U:O4	2.69	0.46
24:BA:1198:U:H2'	24:BA:1199:U:C6	2.50	0.46
48:BX:5:LYS:HD2	48:BX:34:GLU:OE1	2.15	0.46
24:BA:57:C:H2'	24:BA:58:G:O4'	2.16	0.46
24:BA:445:C:OP1	39:B1:2:PRO:HA	2.16	0.46
6:CI:77:ARG:HH22	6:CI:78:GLU:HG2	1.79	0.46
27:BE:167:VAL:CG1	27:BE:189:PRO:HD3	2.46	0.46
34:DO:94:GLU:HG3	34:DO:124:LYS:HD3	1.96	0.46
12:AO:20:LYS:HB3	12:AO:20:LYS:HE2	1.80	0.46
24:DA:118:A:N3	24:DA:178:G:H1'	2.31	0.46
24:DA:1783:A:H5'	24:DA:2608:G:H4'	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BM:75:TYR:CE2	32:BM:77:GLY:HA2	2.51	0.46
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.16	0.46
24:BA:705:A:C2	24:BA:706:A:C4	3.04	0.46
3:AF:121:ALA:O	3:AF:125:GLU:HG3	2.15	0.46
43:BU:82:PRO:HD3	43:BU:97:ARG:HD2	1.93	0.46
4:AG:22:LYS:HB2	4:AG:26:CYS:H	1.81	0.46
27:DE:67:PHE:CD2	27:DE:69:LYS:HD3	2.51	0.46
24:DA:2116:G:N1	24:DA:2163:C:OP1	2.49	0.46
28:DF:24:LEU:CB	28:DF:25:PRO:CD	2.62	0.46
13:CP:3:ARG:HB3	13:CP:9:ILE:HG12	1.97	0.46
1:CA:1004:A:H1'	1:CA:1036:G:H22	1.80	0.46
49:B4:60:GLN:HA	49:B4:63:TYR:CB	2.46	0.46
50:B5:46:CYS:HA	50:B5:47:PRO:HD2	1.63	0.46
24:DA:2291:U:O2'	24:DA:2374:C:O2	2.27	0.46
24:BA:2150:U:H2'	24:BA:2151:G:C8	2.51	0.46
1:CA:1014:A:C6	1:CA:1015:A:C6	3.03	0.46
25:DB:87:G:H2'	25:DB:89:G:N7	2.30	0.46
35:BP:46:GLN:HE22	35:BP:126:PRO:HG3	1.81	0.46
4:CG:171:GLY:HA2	4:CG:172:PRO:HD3	1.80	0.46
26:BD:70:TRP:CZ2	26:BD:150:LYS:HA	2.51	0.46
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.51	0.46
24:BA:654(H):G:H1	24:BA:654(M):C:H2'	1.81	0.46
7:CJ:116:ALA:O	7:CJ:120:ILE:HG12	2.16	0.46
35:DP:23:GLY:HA2	35:DP:25:ASP:HB2	1.98	0.46
24:DA:602:G:N2	24:DA:655:A:N7	2.56	0.46
44:DV:132:ASN:ND2	44:DV:159:PRO:HB2	2.26	0.46
13:CP:25:ILE:HG22	13:CP:26:GLY:O	2.16	0.46
1:CA:1186:G:H21	14:CQ:61:TRP:C	2.19	0.46
7:CJ:79:ARG:HH12	22:CD:34:C:P	2.39	0.46
1:CA:281:G:OP2	1:CA:281:G:H8	1.98	0.46
4:CG:58:LEU:HD22	4:CG:62:GLN:HG3	1.98	0.46
38:DR:45:PHE:CE2	38:DR:74:ARG:HD2	2.50	0.46
19:CV:49:ILE:HG21	19:CV:71:LEU:HD22	1.97	0.46
1:CA:321:A:H62	1:CA:328:C:H1'	1.79	0.46
42:BT:60:ARG:HH22	52:B7:47:ARG:NH2	2.14	0.46
1:AA:313:A:H2'	1:AA:314:C:C6	2.51	0.46
11:AN:71:LYS:O	11:AN:75:TYR:N	2.45	0.46
1:CA:922:G:N3	1:CA:1398:A:H2	2.14	0.46
6:AI:1:MET:HE3	6:AI:68:PRO:HD3	1.97	0.46
6:AI:3:ARG:HD3	6:AI:64:GLN:NE2	2.31	0.46
24:DA:2786:U:O2	27:DE:62:PRO:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CT:62:SER:OG	17:CT:72:ARG:HG3	2.16	0.46
24:DA:1262:A:N3	50:D5:10:LYS:HE3	2.31	0.46
5:CH:59:GLY:HA2	5:CH:62:ALA:HB3	1.98	0.46
1:CA:186(C):G:H1	1:CA:191(D):U:H3	1.64	0.46
33:BN:22:ILE:HA	33:BN:22:ILE:HD12	1.78	0.46
34:DO:120:ALA:HB1	34:DO:138:LEU:HB3	1.97	0.46
34:BO:46:LYS:HB3	34:BO:46:LYS:HE2	1.63	0.46
24:DA:2530:A:C4	30:DH:157:TYR:HE2	2.33	0.46
24:BA:10:G:N2	24:BA:2801:A:O3'	2.48	0.46
24:DA:2129:C:H2'	24:DA:2130:U:O4'	2.15	0.46
43:DU:54:LYS:O	43:DU:55:TYR:HB3	2.15	0.46
27:DE:46:ALA:HB2	27:DE:82:ARG:HA	1.96	0.46
24:DA:882:G:H1	24:DA:894:C:N4	2.14	0.46
1:CA:1255:G:O2'	1:CA:1259:C:O4'	2.26	0.46
25:BB:11:C:H3'	25:BB:12:C:C6	2.51	0.46
11:CN:27:ASN:ND2	11:CN:55:LYS:HD2	2.31	0.46
24:BA:1079:C:H5'	24:BA:1080:A:OP2	2.16	0.46
22:AD:56:C:N3	24:BA:2112:G:N2	2.63	0.46
24:DA:2795:G:H1'	24:DA:2802:G:C6	2.51	0.46
1:CA:1118:C:H5'	9:CL:104:ARG:CD	2.45	0.46
24:BA:2154:G:C2	24:BA:2155:G:C5	3.04	0.46
24:DA:782:A:H4'	24:DA:783:A:H5'	1.98	0.46
25:DB:15:A:H1'	25:DB:109:G:N9	2.31	0.46
31:BK:56:LYS:NZ	31:BK:60:GLU:HG2	2.31	0.46
24:BA:654(M):C:H5''	24:BA:654(N):G:N7	2.31	0.46
24:DA:2:G:H22	24:DA:2901:C:H42	1.64	0.46
24:BA:2068:U:N3	24:BA:2430:A:H2	2.10	0.46
9:AL:13:ALA:HB2	9:AL:68:GLY:HA3	1.98	0.46
25:BB:15:A:H1'	25:BB:109:G:C4	2.51	0.46
9:CL:111:ARG:O	9:CL:113:LYS:HE2	2.16	0.46
2:AE:29:ALA:O	2:AE:31:TYR:N	2.49	0.46
30:BH:85:LYS:O	30:BH:133:VAL:HG23	2.16	0.46
3:CF:61:ALA:N	3:CF:63:ASN:OD1	2.31	0.46
24:BA:1432:C:H2'	24:BA:1433:U:O4'	2.15	0.46
24:DA:2387:U:H1'	45:D3:41:ARG:HD2	1.98	0.46
24:DA:1186:G:O5'	24:DA:1186:G:H8	1.99	0.46
24:DA:108:U:H2'	24:DA:109:G:C8	2.51	0.46
10:CM:12:ASP:O	10:CM:15:THR:OG1	2.29	0.46
9:CL:56:LEU:O	9:CL:58:HIS:N	2.41	0.46
3:CF:18:TRP:NE1	14:CQ:53:LEU:O	2.48	0.46
47:DW:62:THR:O	47:DW:66:GLU:HG3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:577:G:O2'	24:DA:1254:A:OP1	2.33	0.46
1:AA:999:U:H2'	1:AA:1000:A:C8	2.51	0.46
1:CA:719:C:O2'	18:CU:49:LYS:HB3	2.15	0.46
24:BA:1292:U:H2'	24:BA:1293:C:C6	2.50	0.46
22:CC:9:G:O2'	22:CC:10:G:N7	2.40	0.46
13:CP:66:LEU:HA	13:CP:70:LEU:HB3	1.98	0.46
1:AA:127:G:O2'	17:AT:2:PRO:O	2.34	0.46
4:CG:134:ASP:OD1	4:CG:134:ASP:N	2.49	0.46
46:BZ:96:LYS:O	46:BZ:98:LEU:N	2.49	0.46
24:DA:2685:G:O2'	24:DA:2726:U:H5	1.99	0.46
24:BA:1218:C:H42	24:BA:1231:G:H1	1.63	0.46
6:CI:71:ARG:O	6:CI:75:LEU:N	2.45	0.46
4:AG:143:GLY:N	4:AG:185:PHE:O	2.40	0.46
44:BV:168:GLU:N	44:BV:168:GLU:OE2	2.49	0.46
24:DA:397:G:O2'	24:DA:2231:C:H1'	2.16	0.46
24:BA:1891:G:H2'	24:BA:1892:C:O4'	2.16	0.46
36:D0:115:GLU:OE2	50:D5:55:ARG:HB2	2.16	0.46
34:DO:59:LEU:HG	53:D8:56:GLU:OE2	2.16	0.46
4:AG:31:CYS:H	4:AG:34:GLU:HG2	1.82	0.46
24:BA:2897:U:H2'	24:BA:2898:U:O4'	2.16	0.46
24:DA:2128:C:H2'	24:DA:2129:C:C1'	2.45	0.46
30:BH:157:TYR:C	30:BH:158:HIS:CG	2.90	0.46
24:BA:1823:G:P	26:BD:54:ARG:HH21	2.39	0.46
24:BA:2635:C:C5'	27:BE:78:LEU:HA	2.43	0.46
45:B3:70:GLN:OE1	45:B3:72:ARG:HD3	2.16	0.46
1:AA:1023:G:H3'	1:AA:1024:G:C5'	2.39	0.46
24:DA:547:A:H3'	24:DA:548:A:C8	2.50	0.46
1:AA:974:A:O2'	1:AA:975:A:O5'	2.33	0.46
24:DA:662:G:OP1	34:DO:15:ARG:NE	2.49	0.46
1:AA:90:C:H2'	1:AA:91:C:N1	2.31	0.46
1:CA:1274:G:H2'	1:CA:1275:A:C8	2.49	0.46
3:CF:6:HIS:HA	3:CF:7:PRO:HD3	1.74	0.46
26:BD:35:LYS:HE3	26:BD:63:ARG:C	2.36	0.46
12:CO:117:ARG:NE	12:CO:123:LYS:O	2.41	0.46
1:AA:1346:A:OP1	9:AL:120:ARG:NH1	2.44	0.46
1:AA:1016:A:H5'	14:AQ:15:LYS:NZ	2.29	0.46
2:AE:8:LYS:H	2:AE:8:LYS:HZ2	1.62	0.46
46:DZ:87:PRO:O	46:DZ:89:GLU:N	2.49	0.46
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.50	0.46
16:CS:65:GLN:HA	16:CS:66:PRO:HD3	1.74	0.46
12:AO:126:LYS:HD2	12:AO:126:LYS:HA	1.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2402:C:OP1	24:DA:2402:C:H4'	2.15	0.46
24:DA:2355:C:O2	45:D3:39:ARG:NH2	2.49	0.46
30:BH:99:VAL:O	30:BH:101:ARG:N	2.49	0.46
52:B7:9:ARG:CZ	52:B7:48:LYS:HB2	2.46	0.46
24:DA:2880:C:O2'	36:D0:90:ARG:NH1	2.40	0.46
46:DZ:81:LYS:HZ2	46:DZ:82:LEU:HB3	1.81	0.46
2:AE:51:LEU:HA	2:AE:54:THR:HB	1.98	0.46
5:CH:9:LYS:HB3	5:CH:112:LEU:HD11	1.98	0.46
24:DA:2833:G:O2'	24:DA:2834:G:OP1	2.25	0.46
26:BD:134:ARG:HG3	26:BD:135:PHE:CE1	2.50	0.46
5:CH:27:ARG:HH11	5:CH:47:LYS:HZ1	1.64	0.46
29:BG:4:ASP:OD1	29:BG:9:ARG:NH1	2.49	0.46
1:CA:356:A:N3	1:CA:368:U:O2'	2.37	0.46
24:DA:2773:C:P	27:DE:166:THR:HG1	2.39	0.46
47:BW:18:PRO:HA	47:BW:21:LEU:HB2	1.98	0.46
9:CL:21:PRO:HA	9:CL:59:PHE:HA	1.97	0.46
24:BA:303:U:H2'	24:BA:304:G:H8	1.81	0.46
21:AX:6:ARG:C	21:AX:8:THR:H	2.19	0.46
24:DA:673:C:H5''	28:DF:81:PRO:HD2	1.97	0.46
1:CA:1137:C:H5''	1:CA:1138:G:OP1	2.16	0.46
31:BK:79:ILE:O	31:BK:143:SER:N	2.49	0.46
38:BR:27:THR:HG23	38:BR:90:GLN:HB3	1.98	0.46
30:BH:3:ARG:C	30:BH:4:ILE:HG23	2.37	0.45
34:DO:71:VAL:H	34:DO:72:PRO:HD2	1.80	0.45
27:DE:74:PRO:O	27:DE:75:VAL:C	2.55	0.45
24:BA:2898:U:O2'	32:BM:131:GLN:O	2.27	0.45
24:DA:1083:U:O2	24:DA:1085:A:H2'	2.16	0.45
22:CD:16:C:O2'	22:CD:61:C:OP1	2.31	0.45
27:BE:115:GLY:O	27:BE:119:ARG:HB2	2.16	0.45
27:BE:119:ARG:HG2	27:BE:160:TYR:HB2	1.98	0.45
22:AD:56:C:N4	22:AD:57:A:H62	2.13	0.45
24:DA:2802:G:C6	24:DA:2803:C:C2	3.04	0.45
25:DB:42:C:H4'	29:DG:67:LYS:HD2	1.96	0.45
9:CL:9:ARG:HB2	9:CL:14:VAL:HG12	1.97	0.45
26:BD:31:LYS:HE3	26:BD:94:LEU:HD11	1.97	0.45
26:BD:68:LYS:HA	26:BD:70:TRP:CH2	2.51	0.45
24:BA:2099:U:H2'	24:BA:2100:G:H8	1.82	0.45
1:CA:1232:U:OP1	9:CL:124:GLN:HG3	2.16	0.45
3:AF:63:ASN:ND2	3:AF:65:ALA:H	2.13	0.45
24:BA:1435:G:H1	24:BA:1557:C:H42	1.64	0.45
1:AA:131:C:OP1	1:AA:190:G:N2	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:20:ALA:HB1	30:DH:23:ARG:HH21	1.82	0.45
44:BV:109:ALA:HB1	44:BV:174:VAL:HG13	1.97	0.45
24:DA:173:G:C2	24:DA:174:C:C2	3.04	0.45
24:BA:1188:U:O2'	24:BA:1189:A:H5'	2.16	0.45
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.51	0.45
18:CU:22:VAL:O	18:CU:24:ALA:N	2.50	0.45
24:BA:1408:C:C2	24:BA:1595:G:N2	2.84	0.45
40:D2:76:LYS:HD2	40:D2:80:GLN:O	2.16	0.45
52:B7:9:ARG:NE	52:B7:48:LYS:HB2	2.31	0.45
11:AN:60:ALA:HA	11:AN:63:LEU:HD12	1.98	0.45
1:AA:1410:G:H2'	1:AA:1411:C:H6	1.81	0.45
35:DP:37:LEU:HD21	35:DP:130:LYS:HB3	1.98	0.45
46:DZ:81:LYS:NZ	46:DZ:82:LEU:HB3	2.31	0.45
24:DA:171:G:H2'	24:DA:172:C:H6	1.81	0.45
24:BA:2231:C:H2'	24:BA:2232:U:O4'	2.17	0.45
24:DA:769:G:H2'	24:DA:770:G:C8	2.51	0.45
24:BA:593:G:H4'	53:B8:61:LEU:HD22	1.98	0.45
24:DA:901:A:H2'	24:DA:901:A:N3	2.30	0.45
32:DM:112:LEU:HD12	32:DM:112:LEU:HA	1.75	0.45
24:DA:1511:A:H2'	24:DA:1512:G:O4'	2.15	0.45
1:CA:804:U:H5''	1:CA:805:C:OP2	2.16	0.45
24:BA:1131:G:C8	24:BA:2025:C:H4'	2.51	0.45
24:DA:482:A:OP2	24:DA:507:A:N6	2.37	0.45
6:CI:3:ARG:HB2	6:CI:93:SER:HB2	1.98	0.45
12:CO:67:THR:OG1	12:CO:95:GLY:O	2.32	0.45
24:DA:270(B):A:H62	24:DA:270(X):G:N2	2.13	0.45
7:CJ:50:ILE:HD11	7:CJ:121:ALA:HA	1.98	0.45
24:DA:828:U:H4'	24:DA:831:G:N1	2.30	0.45
24:DA:2052:G:O4'	27:DE:142:GLY:HA3	2.15	0.45
12:CO:54:LYS:HE2	12:CO:54:LYS:HB3	1.78	0.45
36:B0:97:VAL:HG22	36:B0:114:VAL:HG22	1.98	0.45
24:BA:875:G:H2'	24:BA:876:C:O4'	2.16	0.45
17:AT:95:TYR:HA	17:AT:98:LEU:HD12	1.98	0.45
24:BA:1111:A:O2'	24:BA:1112:G:H4'	2.17	0.45
30:BH:4:ILE:HB	30:BH:6:ARG:HG3	1.98	0.45
24:DA:389:G:OP1	46:DZ:25:LYS:HD2	2.16	0.45
4:AG:30:LYS:H	4:AG:34:GLU:HG3	1.81	0.45
24:BA:2896:C:H2'	24:BA:2897:U:H6	1.81	0.45
24:BA:5:A:H2'	24:BA:6:A:C8	2.51	0.45
24:DA:2168:G:H2'	24:DA:2168:G:N3	2.31	0.45
13:CP:91:ARG:HB2	13:CP:98:VAL:HG22	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CD:48:C:N4	22:CD:59:A:C5	2.84	0.45
10:CM:54:PHE:CE2	10:CM:55:LYS:HD2	2.51	0.45
24:BA:1091:G:C2	24:BA:1092:C:C2	3.05	0.45
1:AA:960:U:H3	1:AA:1225:A:H1'	1.82	0.45
5:CH:76:ILE:HG22	5:CH:78:HIS:H	1.81	0.45
24:DA:2646:C:OP2	24:DA:2732:G:O2'	2.20	0.45
1:AA:75:C:C2	1:AA:96:G:N2	2.84	0.45
1:CA:1290:G:H5'	7:CJ:35:LYS:CE	2.46	0.45
24:DA:1171:G:N2	24:DA:1173:G:O2'	2.49	0.45
10:AM:39:PRO:HA	10:AM:70:ARG:HA	1.96	0.45
24:BA:2611:U:H6	24:BA:2611:U:OP2	1.99	0.45
8:AK:36:LEU:O	8:AK:38:ILE:N	2.50	0.45
39:D1:66:ASN:HB2	39:D1:76:TYR:HB2	1.98	0.45
1:AA:1442:G:C6	1:AA:1446:A:N6	2.84	0.45
49:B4:37:SER:HB3	49:B4:41:PRO:O	2.16	0.45
40:D2:2:PHE:O	40:D2:42:GLY:N	2.41	0.45
24:BA:2732:G:H3'	24:BA:2733:A:O4'	2.16	0.45
25:DB:11:C:H3'	25:DB:12:C:C6	2.51	0.45
24:BA:1007:C:H5''	32:BM:35:ARG:NH1	2.30	0.45
44:DV:16:SER:HA	44:DV:19:ARG:HD2	1.98	0.45
24:BA:2516:G:O6	24:BA:2517:C:N4	2.49	0.45
24:BA:723:G:H2'	24:BA:724:U:O4'	2.15	0.45
30:DH:144:VAL:O	30:DH:148:ILE:HG12	2.16	0.45
1:AA:983:A:H2	1:AA:984:C:C6	2.34	0.45
28:BF:50:SER:OG	28:BF:51:THR:N	2.49	0.45
20:CW:43:LEU:O	20:CW:47:GLY:N	2.43	0.45
24:BA:1657:C:H2'	24:BA:1658:C:C6	2.51	0.45
1:CA:67:C:H2'	1:CA:68:G:H8	1.81	0.45
1:AA:652:U:H1'	1:AA:653:A:C2	2.51	0.45
1:AA:304:U:H2'	1:AA:305:G:C8	2.51	0.45
47:BW:17:SER:HB2	47:BW:20:GLU:HG3	1.97	0.45
27:BE:101:ARG:HD2	27:BE:171:GLU:HA	1.98	0.45
24:BA:982:C:O5'	24:BA:982:C:H6	1.98	0.45
24:DA:1851:U:H2'	24:DA:1852:C:O4'	2.16	0.45
3:AF:113:ALA:HB2	3:AF:202:ILE:HG13	1.97	0.45
37:BQ:43:GLU:HB2	45:B3:49:LYS:HE2	1.98	0.45
34:DO:47:ASP:HB3	34:DO:48:PRO:O	2.15	0.45
24:DA:2131:G:H5'	24:DA:2132:U:H5''	1.98	0.45
43:DU:52:SER:OG	43:DU:56:PRO:CG	2.54	0.45
24:BA:2399:G:H2'	24:BA:2400:G:O4'	2.15	0.45
9:AL:29:ASN:OD1	9:AL:64:THR:HA	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2636:U:OP1	27:BE:80:GLU:N	2.45	0.45
3:AF:36:ASP:HB3	3:AF:40:ARG:NH1	2.30	0.45
1:CA:1178:G:N2	1:CA:1180:A:H3'	2.31	0.45
26:BD:35:LYS:NZ	26:BD:65:ILE:HA	2.31	0.45
24:BA:1568:G:P	26:BD:63:ARG:HH22	2.38	0.45
25:BB:103:U:O3'	44:BV:72:ARG:HD3	2.16	0.45
1:AA:1069:C:O2'	1:AA:1192:C:O2	2.28	0.45
1:CA:1195:C:C4	1:CA:1197:G:C8	3.04	0.45
1:AA:263:A:OP2	20:AW:79:ARG:NH1	2.49	0.45
24:DA:2294:C:OP2	37:DQ:13:ARG:NH1	2.48	0.45
6:CI:100:ASN:HB2	18:CU:23:LYS:HD2	1.98	0.45
24:DA:242:G:H5'	53:D8:62:LEU:HD13	1.97	0.45
24:BA:857:C:OP1	45:B3:77:ARG:NH2	2.45	0.45
2:AE:144:ARG:HG3	2:AE:145:LEU:N	2.32	0.45
17:AT:13:ASP:OD1	17:AT:13:ASP:N	2.42	0.45
24:BA:817:C:H4'	24:BA:932:G:C5	2.51	0.45
47:DW:31:GLU:HB2	47:DW:53:LEU:HD11	1.98	0.45
1:CA:1423:G:H5'	33:DN:49:ARG:HH12	1.81	0.45
11:CN:62:GLN:HB2	11:CN:93:GLN:OE1	2.16	0.45
43:DU:81:LYS:HD3	43:DU:97:ARG:NH2	2.31	0.45
1:CA:601:C:H2'	1:CA:602:A:C8	2.51	0.45
31:DK:90:GLY:O	31:DK:121:LYS:HG2	2.16	0.45
44:DV:63:ASP:HB3	44:DV:65:GLN:HG3	1.99	0.45
1:AA:920:U:H2'	1:AA:921:U:C6	2.52	0.45
22:AC:29:G:H1	22:AC:41:C:H42	1.64	0.45
24:DA:1601:G:O2'	52:D7:49:ARG:NH2	2.47	0.45
19:AV:73:GLU:HB2	19:AV:74:PHE:CD1	2.52	0.45
29:BG:10:LYS:HE2	29:BG:175:LEU:O	2.17	0.45
9:AL:99:LEU:HD23	9:AL:101:PHE:HE2	1.81	0.45
35:DP:118:LEU:HB2	35:DP:131:ILE:HD13	1.97	0.45
24:DA:2027:G:H2'	24:DA:2028:U:O4'	2.15	0.45
11:CN:12:ARG:NH1	11:CN:13:GLN:O	2.49	0.45
43:BU:9:LYS:HA	43:BU:27:VAL:HG22	1.97	0.45
3:CF:174:PRO:HB2	3:CF:177:THR:HB	1.99	0.45
49:B4:43:TYR:O	49:B4:46:GLN:NE2	2.49	0.45
11:AN:124:LYS:HG2	11:AN:125:PHE:CE1	2.51	0.45
1:CA:428:G:C5	1:CA:430:A:C6	3.03	0.45
4:AG:31:CYS:C	4:AG:33:MET:N	2.69	0.45
51:D6:44:ARG:HG3	51:D6:45:LYS:H	1.81	0.45
3:CF:164:ARG:O	3:CF:165:THR:OG1	2.30	0.45
24:DA:2065:C:H2'	24:DA:2066:C:H6	1.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1133:G:C6	1:CA:1134:G:C6	3.05	0.45
27:BE:111:ARG:HD3	27:BE:160:TYR:CE2	2.52	0.45
1:CA:1330:U:H4'	13:CP:23:TYR:HE1	1.77	0.45
22:AD:48:C:H5''	22:AD:49:G:H5'	1.97	0.45
1:CA:1392:G:N2	1:CA:1502:A:H8	2.13	0.45
1:AA:1360:A:H2'	1:AA:1361:G:O4'	2.16	0.45
24:DA:2542:A:O2'	24:DA:2543:G:C8	2.67	0.45
34:BO:85:LEU:HD22	34:BO:120:ALA:HA	1.97	0.45
28:BF:29:ASN:H	28:BF:112:MET:CE	2.30	0.45
24:BA:2157:G:N3	24:BA:2158:A:H2	2.14	0.45
43:BU:63:LYS:HD2	43:BU:64:GLU:N	2.31	0.45
24:DA:1040:C:H2'	24:DA:1041:C:C6	2.51	0.45
22:CD:38:A:H2'	22:CD:39:C:O4'	2.17	0.45
43:DU:84:ARG:HB3	43:DU:95:LYS:HG3	1.97	0.45
1:AA:188:U:H2'	1:AA:189:U:H5''	1.97	0.45
1:AA:129:U:H5'	17:AT:3:LYS:NZ	2.31	0.45
39:D1:75:ASN:HD22	39:D1:78:THR:CG2	2.30	0.45
1:CA:280:C:H3'	1:CA:281:G:H5'	1.98	0.45
4:CG:61:LYS:HB2	4:CG:203:VAL:HG13	1.98	0.45
20:AW:35:THR:HA	20:AW:38:LYS:HD2	1.99	0.45
24:DA:1416:G:H2'	24:DA:1417:C:C6	2.51	0.45
1:AA:1282:C:OP2	1:AA:1282:C:H6	1.99	0.45
28:DF:125:LEU:HD12	28:DF:196:LEU:HD22	1.99	0.45
24:BA:1210:A:OP1	24:BA:1211:U:O2'	2.31	0.45
24:DA:2186:G:C2	24:DA:2187:G:C8	3.05	0.45
1:CA:1378:C:H5	1:CA:1379:G:N9	2.13	0.45
8:AK:82:HIS:HE1	8:AK:84:ARG:HD3	1.82	0.45
15:CR:82:ILE:O	15:CR:86:GLY:N	2.48	0.45
7:AJ:45:ASP:O	7:AJ:49:ILE:N	2.49	0.45
18:AU:23:LYS:HD2	18:AU:58:LEU:HD23	1.99	0.45
24:BA:2467:C:H4'	35:BP:123:HIS:CG	2.51	0.45
38:DR:51:ARG:HG2	38:DR:98:LYS:HE3	1.99	0.45
24:DA:1823:G:P	26:DD:54:ARG:HH21	2.40	0.45
9:AL:15:ALA:HA	9:AL:65:VAL:HA	1.98	0.45
5:CH:50:GLU:HB2	5:CH:53:LEU:HD13	1.97	0.45
1:AA:944:G:O6	1:AA:1337:G:H8	2.00	0.45
53:B8:7:HIS:CD2	53:B8:59:LYS:HD2	2.52	0.45
1:CA:1371:G:P	9:CL:11:LYS:HZ2	2.39	0.45
24:DA:388:G:OP1	46:DZ:32:LYS:N	2.49	0.45
26:DD:182:LEU:O	26:DD:271:ILE:HG12	2.17	0.45
26:BD:25:THR:HB	26:BD:82:ILE:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CT:85:VAL:HG12	17:CT:89:LEU:HG	1.99	0.45
1:AA:812:C:H4'	1:AA:813:U:O5'	2.16	0.45
26:DD:35:LYS:HZ1	26:DD:64:ILE:CG1	2.23	0.45
24:BA:2811:G:OP1	27:BE:61:ARG:CD	2.55	0.45
13:CP:7:VAL:HG11	29:DG:115:ARG:NH2	2.32	0.45
50:B5:3:LYS:HG3	50:B5:3:LYS:H	1.43	0.45
24:BA:2113:U:H5''	24:BA:2114:A:C8	2.52	0.45
1:CA:924:C:H42	1:CA:1392:G:H1	1.65	0.45
1:AA:1080:A:H5''	1:AA:1081:G:OP2	2.17	0.45
24:DA:289:A:H5'	24:DA:290:G:OP2	2.17	0.45
24:BA:1568:G:P	26:BD:63:ARG:HH12	2.39	0.45
1:CA:298:A:O5'	1:CA:298:A:H8	1.99	0.45
2:AE:21:ARG:HB3	2:AE:39:ILE:HA	1.98	0.45
1:AA:1118:C:OP1	9:AL:9:ARG:HD3	2.16	0.45
22:CD:29:G:H2'	22:CD:30:G:H8	1.81	0.45
1:CA:1272:G:H2'	1:CA:1273:G:C8	2.51	0.45
24:DA:270(R):G:H2'	24:DA:270(S):G:C8	2.52	0.45
24:DA:2883:A:H3'	24:DA:2884:U:H5'	1.98	0.45
18:AU:37:VAL:O	18:AU:40:LEU:N	2.48	0.45
1:AA:1531:A:H8	1:AA:1531:A:OP2	1.99	0.45
31:BK:10:GLU:OE2	31:BK:11:ASN:N	2.46	0.45
40:D2:62:LEU:HD21	40:D2:95:LEU:HB2	1.98	0.45
47:DW:33:MET:HG2	47:DW:37:PHE:CE1	2.52	0.45
1:AA:238:G:P	17:AT:25:ARG:HH22	2.39	0.45
9:CL:86:VAL:HG23	9:CL:90:PRO:HA	1.98	0.45
24:DA:637:A:P	34:DO:116:GLY:H	2.39	0.45
24:DA:363:G:C6	24:DA:363(A):A:C5	3.05	0.45
30:DH:45:VAL:HA	30:DH:50:VAL:HA	1.98	0.45
24:BA:1638:C:O2	24:BA:2698:U:O2'	2.29	0.45
7:CJ:149:ARG:HD2	11:CN:59:TYR:CE1	2.52	0.45
15:CR:82:ILE:HD13	15:CR:83:GLU:H	1.81	0.45
24:DA:565:C:H4'	24:DA:1253:A:N6	2.31	0.45
7:CJ:26:PHE:O	7:CJ:30:ILE:HG13	2.16	0.45
30:DH:18:GLU:HB2	30:DH:25:LYS:HD2	1.98	0.45
24:BA:1935:G:H1'	24:BA:1964:G:N2	2.30	0.45
8:CK:24:THR:OG1	8:CK:63:LEU:HD21	2.17	0.45
1:AA:587:G:C2	1:AA:755:G:C5	3.04	0.45
24:DA:1628:G:H2'	24:DA:1629:U:C6	2.51	0.45
41:BS:3:ALA:HB2	41:BS:64:MET:HE3	1.98	0.45
5:AH:153:LYS:O	8:AK:64:LYS:NZ	2.41	0.45
3:AF:102:ASN:OD1	3:AF:102:ASN:N	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AI:27:GLN:O	6:AI:31:GLU:HB2	2.17	0.45
33:BN:101:PRO:HB3	33:BN:122:LEU:HD12	1.99	0.45
24:BA:411:G:C2	34:BO:71:VAL:CG2	3.00	0.45
27:DE:50:GLY:HA2	27:DE:78:LEU:HD22	1.99	0.45
1:CA:1130:A:H5''	9:CL:20:ARG:NH2	2.31	0.45
22:CD:22:G:HO2'	22:CD:23:C:P	2.37	0.45
24:BA:1091:G:C6	24:BA:1092:C:C4	3.05	0.45
24:BA:2141:G:H2'	24:BA:2142:C:C6	2.52	0.45
24:DA:2542:A:HO2'	24:DA:2543:G:P	2.39	0.45
4:CG:101:LEU:O	4:CG:104:VAL:N	2.47	0.45
24:BA:2755:C:O2'	24:BA:2756:U:H2'	2.16	0.45
1:CA:1054:C:H2'	55:CA:1800:T1C:H9	1.81	0.45
24:DA:2472:G:N1	24:DA:2477:C:OP1	2.50	0.45
1:CA:1226:C:HO2'	13:CP:111:LYS:NZ	2.13	0.45
24:BA:320:A:H2'	28:BF:136:THR:HG21	1.99	0.45
1:AA:145:G:H1	1:AA:177:C:N4	2.14	0.45
37:DQ:83:LYS:HB3	37:DQ:109:GLY:N	2.32	0.45
20:AW:12:ALA:O	20:AW:15:ARG:HB2	2.16	0.45
1:CA:539:A:H2'	1:CA:540:G:C8	2.51	0.45
19:CV:65:ASN:HD22	49:D4:55:ARG:HH11	1.65	0.45
1:CA:422:C:O2'	1:CA:423:G:H5''	2.17	0.45
9:CL:82:ALA:O	9:CL:86:VAL:HG12	2.16	0.45
29:DG:122:PRO:HB3	29:DG:170:ARG:HH11	1.81	0.45
20:AW:97:ALA:O	20:AW:99:LEU:N	2.49	0.45
24:BA:588:U:C2	28:BF:90:PHE:CD1	3.05	0.45
28:BF:197:ASP:O	28:BF:201:VAL:HG12	2.17	0.45
24:BA:2401:U:H5''	24:BA:2402:C:OP2	2.16	0.45
24:BA:1771:C:O2'	24:BA:1786:A:H8	1.99	0.45
1:AA:639:G:H2'	1:AA:640:A:C8	2.50	0.45
1:AA:1165:C:H2'	1:AA:1166:G:O4'	2.17	0.45
24:DA:142:G:H2'	24:DA:143:C:C6	2.52	0.45
1:CA:339:C:H2'	1:CA:340:U:H5'	1.99	0.45
4:AG:8:VAL:HG13	4:AG:21:LEU:HD13	1.97	0.45
44:DV:23:LYS:HA	44:DV:23:LYS:HD3	1.80	0.45
8:CK:30:ARG:O	8:CK:34:GLU:HG2	2.16	0.45
43:BU:86:ARG:HD3	43:BU:95:LYS:HD3	1.98	0.45
53:D8:52:LYS:HG2	53:D8:52:LYS:H	1.51	0.45
1:AA:1378:C:O2	7:AJ:76:ARG:NH1	2.49	0.45
24:DA:832:G:H5'	34:DO:45:LEU:HD11	1.97	0.45
24:DA:954:G:O2'	24:DA:2274:A:N1	2.47	0.45
27:DE:103:ASP:N	27:DE:200:GLU:O	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1200:C:H4'	1:AA:1201:A:H5''	1.98	0.45
9:AL:24:GLY:N	9:AL:57:GLY:O	2.49	0.45
24:BA:1492:G:H1	24:BA:1498:C:H42	1.63	0.45
1:AA:1058:G:OP1	3:AF:199:LYS:NZ	2.33	0.45
24:BA:142:G:O3'	42:BT:35:THR:HG21	2.16	0.45
24:BA:976:C:H2'	24:BA:977:G:H8	1.82	0.45
24:BA:2811:G:C5'	27:BE:60:ASN:HD22	2.22	0.45
27:BE:63:LEU:C	27:BE:65:GLY:H	2.19	0.45
24:DA:2113:U:OP1	24:DA:2118:U:H5'	2.16	0.45
28:DF:64:ILE:O	28:DF:65:TRP:CD1	2.69	0.45
22:CD:22:G:O2'	22:CD:23:C:P	2.75	0.45
25:DB:1(M):A:N6	25:DB:117:G:O6	2.50	0.45
1:AA:1382:C:C6	7:AJ:79:ARG:NH2	2.85	0.45
24:DA:833:U:H2'	24:DA:834:C:C6	2.52	0.45
1:CA:1198:G:HO2'	10:CM:54:PHE:HD2	1.65	0.45
24:BA:1063:G:O6	24:BA:1075:C:N4	2.50	0.45
22:AD:53:G:H22	22:AD:61:C:H1'	1.81	0.45
3:CF:73:PRO:O	3:CF:76:VAL:N	2.49	0.45
24:DA:2659:G:OP1	30:DH:158:HIS:NE2	2.50	0.45
1:AA:370:C:O2'	1:AA:482:A:O2'	2.27	0.45
24:BA:1508:A:H4'	24:BA:1509:C:C1'	2.47	0.45
1:CA:1291:G:H4'	9:CL:38:GLN:O	2.17	0.45
24:BA:2190:G:N2	24:BA:2191:G:H1'	2.32	0.45
24:DA:1171:G:N1	24:DA:1174:A:N1	2.64	0.45
8:CK:6:ILE:O	8:CK:10:LEU:HG	2.17	0.45
24:BA:2315:G:H2'	24:BA:2316:C:C6	2.52	0.45
10:CM:48:THR:CA	10:CM:62:HIS:HB3	2.47	0.45
27:DE:101:ARG:HD3	27:DE:171:GLU:HA	1.99	0.45
24:BA:1405:U:H2'	24:BA:1406:U:C6	2.51	0.45
48:DX:19:GLN:HE22	48:DX:52:HIS:HE1	1.63	0.45
45:D3:70:GLN:OE1	45:D3:72:ARG:HD2	2.17	0.45
45:B3:36:ILE:CD1	45:B3:39:ARG:HG2	2.46	0.45
44:BV:5:LEU:HD22	44:BV:47:VAL:HG11	1.99	0.45
24:DA:1798:U:H5'	26:DD:259:THR:OG1	2.16	0.45
3:CF:159:GLY:HA2	3:CF:193:TYR:CZ	2.51	0.45
33:BN:75:SER:HB2	38:BR:74:ARG:HH12	1.82	0.45
1:AA:357:G:OP1	1:AA:366:C:O2'	2.31	0.45
24:BA:2074:U:H2'	24:BA:2075:U:C6	2.51	0.45
24:DA:1017:G:H1	24:DA:1145:C:H42	1.64	0.45
46:BZ:64:ALA:HA	46:BZ:67:ILE:HG13	1.98	0.45
24:DA:2008:C:H2'	24:DA:2009:G:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2441:C:OP2	24:BA:2586:C:O2'	2.30	0.45
21:AX:17:THR:O	21:AX:22:ARG:NH1	2.35	0.45
9:AL:116:LYS:HB3	9:AL:121:ARG:O	2.17	0.45
4:CG:14:ARG:HG3	4:CG:14:ARG:HH11	1.82	0.45
24:BA:2199:A:N3	24:BA:2199:A:H2'	2.32	0.45
9:AL:47:LEU:H	9:AL:47:LEU:HD13	1.82	0.45
24:DA:1028:A:N6	24:DA:1125:G:H2'	2.32	0.45
32:BM:62:VAL:HG22	32:BM:63:THR:H	1.82	0.45
24:DA:996:A:O4'	39:D1:92:ARG:NH2	2.50	0.45
4:CG:12:CYS:CB	4:CG:26:CYS:SG	3.05	0.45
1:AA:528:C:N4	12:AO:49:ASN:HD22	2.09	0.45
34:DO:49:ARG:HG3	53:D8:55:ALA:O	2.16	0.45
53:B8:29:LYS:HB3	53:B8:44:LYS:HG2	1.98	0.45
1:AA:1130:A:H62	1:AA:1144:G:H21	1.63	0.45
1:CA:1133:G:H1	1:CA:1141:C:N4	2.15	0.45
22:CD:12:G:N1	22:CD:23:C:N3	2.52	0.45
24:BA:2345:G:N3	24:BA:2381:C:H2'	2.32	0.45
25:DB:40:U:H3'	25:DB:41:U:H5'	1.99	0.45
1:CA:1072:G:O6	1:CA:1102:A:N6	2.50	0.45
13:CP:13:LYS:NZ	13:CP:21:TYR:OH	2.50	0.45
24:BA:1510:A:O2'	24:BA:1511:A:N7	2.49	0.45
22:CD:29:G:C6	22:CD:30:G:C6	3.05	0.45
22:CD:38:A:C6	22:CD:39:C:C2	3.05	0.45
25:BB:103:U:O2'	44:BV:72:ARG:HG2	2.15	0.45
24:DA:2864:G:OP1	38:DR:119:LYS:HD2	2.16	0.45
1:AA:1348:U:H5	1:AA:1373:G:C2	2.35	0.45
35:BP:75:THR:OG1	35:BP:88:GLY:HA3	2.17	0.45
27:BE:12:THR:OG1	27:BE:13:ARG:N	2.50	0.45
24:DA:2516:G:C6	24:DA:2517:C:N4	2.85	0.45
24:DA:654(C):G:H2'	24:DA:654(D):G:O4'	2.16	0.45
4:AG:92:VAL:HG22	4:AG:96:LEU:HD21	1.99	0.45
22:CD:9:G:H4'	22:CD:10:G:OP2	2.17	0.45
1:AA:690:G:H2'	1:AA:691:G:O4'	2.17	0.45
48:BX:12:PRO:HB2	48:BX:20:LYS:HG2	1.98	0.45
1:AA:1115:C:H2'	1:AA:1116:C:C6	2.50	0.45
46:BZ:83:GLU:C	46:BZ:85:LEU:H	2.20	0.45
24:DA:270(V):G:H2'	24:DA:270(W):G:H8	1.81	0.45
3:CF:159:GLY:HA2	3:CF:193:TYR:CE1	2.52	0.45
20:CW:67:ALA:HA	20:CW:73:HIS:H	1.82	0.45
44:BV:103:ARG:HG3	44:BV:136:PHE:CG	2.51	0.45
24:BA:664:C:P	34:BO:18:ARG:HH21	2.40	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2593:U:H2'	24:DA:2594:C:C6	2.52	0.45
1:CA:857:C:H2'	1:CA:858:G:O4'	2.17	0.45
24:DA:1758:G:H5''	24:DA:1758:G:N3	2.31	0.45
24:DA:929:G:H8	24:DA:929:G:O5'	2.00	0.45
16:AS:22:THR:OG1	16:AS:23:ASP:N	2.49	0.45
27:DE:11:MET:CB	27:DE:24:THR:HA	2.45	0.45
4:CG:19:LEU:HD23	4:CG:20:TYR:H	1.82	0.45
24:BA:6:A:H2'	24:BA:7:G:O4'	2.16	0.45
24:DA:1210:A:H5'	24:DA:1212:G:H5'	1.99	0.45
24:DA:676:A:H8	24:DA:2069:G:N2	2.01	0.45
24:BA:2334:G:H5'	37:BQ:9:ARG:HG2	1.98	0.45
24:BA:1591:G:H2'	24:BA:1592:C:C6	2.52	0.45
24:BA:1063:G:H2'	24:BA:1064:C:C6	2.52	0.45
22:AD:5:G:C2	22:AD:69:C:C2	3.05	0.45
24:BA:2124:G:H2'	24:BA:2125:G:O4'	2.16	0.45
25:BB:39:A:C2	25:BB:40:U:C4	3.05	0.45
37:BQ:100:ALA:HA	37:BQ:103:GLU:HB2	1.99	0.45
1:AA:976:G:P	14:AQ:32:SER:H	2.39	0.45
21:CX:9:ARG:O	21:CX:13:ILE:HG13	2.17	0.45
1:CA:1179:A:N3	9:CL:104:ARG:NH1	2.65	0.45
26:BD:31:LYS:O	26:BD:33:LEU:N	2.50	0.45
24:DA:1039:G:N1	24:DA:1116:C:N3	2.52	0.45
30:BH:159:GLU:O	30:BH:159:GLU:CG	2.65	0.45
37:BQ:15:ARG:HG3	37:BQ:19:LYS:HD2	1.99	0.45
24:BA:2294:C:P	37:BQ:89:ARG:HH22	2.40	0.45
1:CA:1048:G:OP2	14:CQ:3:ARG:NH2	2.36	0.45
4:CG:68:TYR:OH	4:CG:98:GLU:OE1	2.18	0.45
1:AA:124:G:H1	1:AA:237:C:H42	1.65	0.45
4:CG:162:LEU:HA	4:CG:162:LEU:HD23	1.81	0.45
27:DE:175:VAL:HG22	27:DE:177:PRO:HD3	1.98	0.45
38:DR:116:ALA:HB1	38:DR:121:ILE:HD11	1.99	0.45
40:D2:76:LYS:HZ1	40:D2:82:ARG:HH11	1.65	0.45
1:AA:41:G:H2'	1:AA:42:G:H8	1.81	0.45
24:DA:2688:U:C5	24:DA:2720:U:OP2	2.69	0.45
1:AA:102:G:O2'	1:AA:151:A:N3	2.40	0.45
25:BB:80:U:O2'	25:BB:81:G:H5''	2.17	0.45
24:DA:2694:G:O2'	24:DA:2695:C:H5'	2.17	0.45
24:BA:2012:G:OP1	41:BS:11:ARG:NH2	2.38	0.45
6:AI:99:ALA:HB3	18:AU:29:PHE:CE1	2.52	0.45
1:AA:316:G:OP2	1:AA:351:G:O2'	2.34	0.45
1:AA:739:C:OP1	15:AR:2:PRO:HD3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AM:75:ILE:O	10:AM:77:PRO:HD3	2.17	0.45
24:DA:1655:A:H4'	27:DE:115:GLY:N	2.32	0.45
31:BK:29:TYR:C	31:BK:32:PRO:HD2	2.37	0.45
31:BK:29:TYR:O	31:BK:32:PRO:HD2	2.16	0.45
24:BA:1820:U:C4	26:BD:160:GLY:HA3	2.52	0.45
6:CI:42:GLU:OE1	6:CI:59:TYR:OH	2.29	0.45
27:DE:41:LYS:HE3	27:DE:41:LYS:HB2	1.75	0.45
24:DA:2376:A:OP1	24:DA:2376:A:H8	2.00	0.45
46:DZ:46:LEU:HD12	46:DZ:46:LEU:HA	1.85	0.45
3:AF:45:LYS:HB2	3:AF:45:LYS:NZ	2.32	0.45
49:B4:48:ARG:NH2	49:B4:49:PHE:O	2.50	0.45
47:DW:24:LEU:O	47:DW:28:LYS:HG2	2.16	0.45
24:DA:910:A:C5	35:DP:13:GLN:HG3	2.51	0.45
24:BA:2751:G:O2'	24:BA:2752:C:P	2.75	0.45
4:CG:31:CYS:C	4:CG:33:MET:N	2.70	0.45
34:BO:70:GLN:O	34:BO:71:VAL:O	2.35	0.45
28:BF:188:ARG:HG2	34:BO:3:LEU:HD11	1.99	0.45
24:DA:2115:G:OP2	24:DA:2115:G:H3'	2.16	0.45
13:CP:92:HIS:HE1	13:CP:98:VAL:HG21	1.79	0.45
24:BA:1411:C:N4	24:BA:1591:G:H1	2.09	0.45
24:BA:1591:G:H2'	24:BA:1592:C:H6	1.81	0.45
27:DE:21:VAL:HG13	27:DE:22:PRO:HD2	1.97	0.45
1:AA:1381:U:H2'	7:AJ:79:ARG:HG3	1.99	0.45
24:BA:1063:G:O6	24:BA:1074:G:N1	2.49	0.45
1:CA:1220:G:H21	19:CV:54:GLY:HA2	1.82	0.45
3:AF:20:SER:CB	3:AF:40:ARG:HH22	2.21	0.45
13:CP:14:ARG:HG2	13:CP:16:ASP:OD1	2.17	0.45
44:DV:151:HIS:N	44:DV:154:ASP:OD2	2.49	0.45
3:CF:8:ILE:HD11	3:CF:184:TYR:HB3	1.98	0.45
2:CE:4:GLU:HB3	2:CE:5:ILE:H	1.63	0.45
1:AA:1152:A:H4'	10:AM:13:HIS:CD2	2.51	0.45
38:BR:3:ARG:HB2	38:BR:7:ILE:HG13	1.99	0.45
5:AH:144:THR:H	5:AH:147:ASP:HB2	1.82	0.45
20:AW:101:GLY:O	20:AW:104:LEU:N	2.49	0.45
1:CA:345:C:H1'	1:CA:346:G:N1	2.32	0.45
1:AA:143:A:H5''	1:AA:144:G:O5'	2.17	0.45
24:DA:639:U:H2'	24:DA:640:C:C6	2.51	0.45
2:CE:87:ARG:HB3	2:CE:87:ARG:HE	1.49	0.45
24:DA:1006:C:C2	24:DA:1138:G:N2	2.85	0.45
1:CA:188:U:O2'	1:CA:189:U:H5'	2.17	0.45
24:BA:795:C:H2'	24:BA:796:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CE:118:LEU:HD11	2:CE:141:GLU:HB3	1.98	0.45
12:AO:102:ARG:HG3	12:AO:120:TYR:HA	1.99	0.45
39:B1:44:ASN:HD21	40:B2:75:PHE:N	2.15	0.45
12:CO:27:LEU:HB3	12:CO:33:ARG:NE	2.32	0.45
29:BG:49:ASP:OD1	29:BG:50:ALA:N	2.49	0.45
1:AA:652:U:H1'	1:AA:653:A:H2	1.81	0.45
7:CJ:71:PRO:HD3	7:CJ:103:TRP:CZ3	2.52	0.45
31:DK:8:PRO:HD3	31:DK:15:VAL:HG22	1.98	0.45
24:BA:2331:G:O2'	45:B3:43:THR:HG22	2.17	0.45
1:AA:1418:A:C2	1:AA:1483:A:C2	3.05	0.45
24:DA:1396:U:H2'	24:DA:1396:U:O2	2.17	0.45
31:BK:135:GLU:N	31:BK:135:GLU:OE2	2.49	0.45
49:D4:15:ILE:HG13	49:D4:15:ILE:H	1.46	0.45
15:AR:39:LEU:HD23	15:AR:39:LEU:HA	1.86	0.45
34:DO:36:LYS:HG2	34:DO:36:LYS:HZ3	1.67	0.45
33:DN:70:LYS:HB3	33:DN:70:LYS:NZ	2.32	0.45
24:BA:984:A:H5''	24:BA:985:C:H5	1.81	0.45
24:BA:2823:A:OP1	27:BE:113:PHE:HB2	2.16	0.45
31:DK:111:PRO:C	31:DK:113:ARG:H	2.20	0.45
28:DF:170:LEU:HA	28:DF:171:PRO:HD2	1.85	0.45
24:BA:2751:G:N2	30:BH:3:ARG:HD2	2.25	0.44
4:CG:26:CYS:HA	4:CG:31:CYS:HB2	1.97	0.44
51:D6:28:ARG:HD3	51:D6:28:ARG:HA	1.84	0.44
28:DF:67:GLN:HB2	28:DF:67:GLN:HE21	1.60	0.44
24:DA:1054:A:OP2	24:DA:1054:A:H8	2.00	0.44
24:DA:1052:C:C2	24:DA:1107:G:N2	2.85	0.44
24:DA:307:G:N2	24:DA:309:G:H3'	2.32	0.44
24:BA:1069:A:O3'	24:BA:1074:G:N1	2.50	0.44
30:DH:131:VAL:HG12	30:DH:132:ARG:O	2.17	0.44
24:BA:2126:A:N6	24:BA:2163:C:H4'	2.32	0.44
1:AA:1318:A:H5''	19:AV:10:PHE:CD2	2.52	0.44
24:DA:1110:G:H2'	24:DA:1111:A:C8	2.52	0.44
24:BA:1534:G:H2'	24:BA:1538:G:H22	1.81	0.44
24:DA:83:G:N1	24:DA:102:G:H2'	2.32	0.44
24:DA:2321:G:N3	24:DA:2321:G:H2'	2.32	0.44
20:CW:99:LEU:HB2	20:CW:100:ILE:H	1.45	0.44
24:DA:1729:A:O2'	24:DA:1730:U:H5''	2.17	0.44
22:AD:37:A:H2'	22:AD:38:A:O4'	2.17	0.44
1:AA:155:C:O2	1:AA:166:G:N1	2.50	0.44
39:B1:90:VAL:O	40:B2:11:GLN:NE2	2.26	0.44
31:BK:52:ARG:HA	31:BK:55:ALA:HB3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:654(N):G:C6	24:BA:654(O):G:C5	3.05	0.44
7:CJ:86:GLN:NE2	22:CD:40:C:O4'	2.46	0.44
24:DA:270(R):G:H2'	24:DA:270(S):G:H8	1.80	0.44
1:AA:580:U:H2'	1:AA:581:G:O4'	2.16	0.44
1:AA:129:U:H3	1:AA:232:G:H1	1.65	0.44
1:AA:129(A):G:C2	1:AA:191(A):G:C8	3.05	0.44
24:DA:2105:C:H2'	24:DA:2106:G:H8	1.83	0.44
24:DA:1416:G:O2'	24:DA:1417:C:O5'	2.29	0.44
24:DA:1540:G:C2	24:DA:1541:U:C2	3.05	0.44
27:DE:101:ARG:O	27:DE:201:THR:OG1	2.35	0.44
1:AA:237:C:H4'	17:AT:25:ARG:NH1	2.32	0.44
1:CA:192:U:H2'	1:CA:193:C:H6	1.82	0.44
3:CF:28:GLN:OE1	3:CF:28:GLN:N	2.50	0.44
10:CM:15:THR:HG21	10:CM:92:THR:HG21	1.99	0.44
24:DA:601:C:H4'	28:DF:104:LYS:HZ3	1.82	0.44
7:CJ:149:ARG:HD3	7:CJ:149:ARG:O	2.17	0.44
35:BP:111:GLU:CD	35:BP:133:ARG:HH21	2.21	0.44
1:AA:1464:G:H2'	1:AA:1465:C:C6	2.52	0.44
1:CA:579:G:C6	1:CA:580:U:C4	3.05	0.44
53:D8:52:LYS:HE2	53:D8:52:LYS:HB3	1.78	0.44
31:DK:79:ILE:HB	31:DK:142:VAL:HB	1.98	0.44
32:DM:6:PRO:HB3	32:DM:41:ASP:OD1	2.17	0.44
28:BF:77:ASP:HB2	28:BF:79:GLY:H	1.81	0.44
31:DK:131:LYS:HB3	31:DK:132:PRO:HA	1.99	0.44
24:BA:1636:C:H2'	24:BA:1637:A:C8	2.52	0.44
47:DW:4:SER:HB3	47:DW:5:GLU:OE2	2.16	0.44
31:DK:92:VAL:HG23	31:DK:96:ASP:HB2	1.99	0.44
32:DM:69:GLN:O	32:DM:71:ILE:HG23	2.17	0.44
24:BA:742:G:H2'	24:BA:743:G:C8	2.52	0.44
13:CP:114:ARG:O	13:CP:116:THR:N	2.51	0.44
24:DA:1441:G:H2'	24:DA:1442:G:H8	1.82	0.44
24:DA:1270:C:H5''	24:DA:1271:G:O5'	2.17	0.44
1:AA:1220:G:N2	19:AV:54:GLY:O	2.49	0.44
1:CA:673:G:H2'	1:CA:674:G:C8	2.52	0.44
24:BA:2238:G:N3	24:BA:2238:G:H2'	2.32	0.44
19:AV:6:LYS:HD2	19:AV:6:LYS:N	2.31	0.44
28:BF:179:GLU:OE1	28:BF:179:GLU:N	2.38	0.44
8:CK:54:ASP:N	8:CK:54:ASP:OD1	2.49	0.44
24:BA:886:C:C2	24:BA:887:A:H1'	2.52	0.44
24:BA:1142:U:H5'	24:BA:1142(A):A:C8	2.52	0.44
1:CA:1142:G:H2'	1:CA:1143:G:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CD:16:C:H5''	22:CD:17:C:C5	2.40	0.44
27:BE:119:ARG:HD2	27:BE:120:TRP:CE2	2.51	0.44
1:AA:1036:G:C6	1:AA:1037:C:C2	3.05	0.44
24:DA:2776:A:H3'	24:DA:2776:A:OP1	2.17	0.44
24:BA:1080:A:C6	24:BA:1081:U:C4	3.05	0.44
24:BA:1100:C:C4	24:BA:1101:U:C4	3.05	0.44
24:BA:2163:C:OP1	24:BA:2172:U:H5	2.01	0.44
24:DA:2750:A:OP2	30:DH:62:LYS:NZ	2.40	0.44
3:CF:8:ILE:HD12	3:CF:16:ARG:CD	2.46	0.44
1:AA:439:A:H2'	1:AA:440:A:O4'	2.16	0.44
37:DQ:19:LYS:O	37:DQ:21:THR:HG22	2.18	0.44
24:BA:1479:G:H2'	24:BA:1480:G:C8	2.50	0.44
32:DM:95:PRO:O	32:DM:98:VAL:HG22	2.18	0.44
2:CE:34:ALA:O	2:CE:41:ILE:N	2.51	0.44
1:AA:1345:U:H4'	1:AA:1346:A:H5'	1.99	0.44
33:DN:87:ILE:HG23	33:DN:88:ASN:O	2.17	0.44
2:CE:189:ASP:O	2:CE:191:ASP:N	2.50	0.44
1:AA:344:A:H5''	1:AA:345:C:OP2	2.17	0.44
24:DA:1011:G:C2	24:DA:1151:G:C2	3.05	0.44
24:DA:1614:A:C6	41:DS:91:GLY:HA2	2.52	0.44
24:BA:860:U:H5	24:BA:917:A:N1	2.16	0.44
19:CV:30:LEU:HD12	19:CV:30:LEU:O	2.17	0.44
27:DE:116:VAL:C	27:DE:118:LYS:H	2.19	0.44
1:CA:129(A):G:C2	1:CA:188:U:O2'	2.70	0.44
38:DR:91:ARG:NH1	38:DR:124:ASP:OD1	2.47	0.44
24:BA:2298:A:H62	24:BA:2318:G:H8	1.65	0.44
18:CU:30:ASP:C	18:CU:32:ARG:H	2.21	0.44
2:AE:189:ASP:OD1	2:AE:190:THR:N	2.50	0.44
49:D4:31:ILE:HG22	49:D4:32:TYR:HB2	1.98	0.44
39:D1:65:ILE:O	39:D1:68:ALA:N	2.50	0.44
7:AJ:46:ALA:O	7:AJ:50:ILE:HG12	2.17	0.44
1:CA:250:A:H4'	1:CA:251:G:O5'	2.17	0.44
27:DE:2:LYS:NZ	27:DE:95:ILE:O	2.50	0.44
2:CE:97:TRP:CH2	2:CE:173:ALA:HA	2.52	0.44
24:DA:528:A:C2	24:DA:2042:A:H2'	2.52	0.44
32:DM:67:LEU:HA	32:DM:87:LEU:HB3	1.98	0.44
1:CA:181:G:H4'	1:CA:182:U:H5'	1.98	0.44
5:AH:95:ALA:O	5:AH:98:THR:OG1	2.30	0.44
4:AG:158:ILE:O	4:AG:162:LEU:N	2.37	0.44
24:DA:2016:U:H1'	50:D5:6:VAL:HG13	1.99	0.44
24:BA:489:G:N7	41:BS:49:LYS:NZ	2.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1276:A:O2'	36:D0:12:ARG:NH2	2.48	0.44
33:DN:25:LEU:HB2	33:DN:38:VAL:HG23	1.98	0.44
31:BK:94:ALA:HB1	31:BK:111:PRO:HB2	1.98	0.44
48:DX:22:ALA:O	48:DX:26:LEU:HG	2.17	0.44
39:D1:91:ASP:O	39:D1:92:ARG:HG2	2.17	0.44
24:BA:1093:G:H1'	24:BA:1099:G:C2	2.51	0.44
22:AD:59:A:C6	22:AD:60:U:C4	3.04	0.44
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.31	0.44
24:DA:2658:C:O3'	30:DH:158:HIS:NE2	2.51	0.44
1:CA:1237:C:H42	1:CA:1337:G:H1	1.63	0.44
22:AD:34:C:H2'	22:AD:35:A:H8	1.82	0.44
2:AE:60:ASP:HB2	2:AE:64:ARG:HH22	1.82	0.44
44:BV:97:GLU:HG2	44:BV:125:LEU:HD11	1.99	0.44
2:CE:19:HIS:HB3	2:CE:20:GLU:H	1.46	0.44
22:AC:47:U:H1'	22:AC:48:C:H6	1.82	0.44
24:DA:636:G:OP2	34:DO:113:LYS:NZ	2.37	0.44
24:DA:649:G:H2'	24:DA:650:C:O4'	2.17	0.44
44:DV:100:VAL:HG13	44:DV:101:PRO:HD2	1.99	0.44
10:AM:61:GLU:OE1	14:AQ:58:LYS:HE2	2.17	0.44
55:AA:1837:T1C:H41	55:AA:1837:T1C:H433	1.74	0.44
30:BH:23:ARG:HB3	30:BH:36:PRO:HA	2.00	0.44
22:CD:72:A:H2'	22:CD:73:A:O4'	2.17	0.44
3:AF:11:ARG:HH21	3:AF:180:ALA:HB3	1.82	0.44
34:DO:65:ARG:HH22	53:D8:47:LYS:HE2	1.82	0.44
24:BA:1771:C:HO2'	24:BA:1786:A:C1'	2.30	0.44
24:BA:1638:C:H5''	24:BA:2710:C:O2'	2.17	0.44
30:DH:97:ARG:O	30:DH:99:VAL:N	2.49	0.44
1:CA:932:C:OP2	7:CJ:3:ARG:HB3	2.18	0.44
1:AA:357:G:O2'	31:DK:89:TYR:O	2.30	0.44
24:DA:2017:U:O2	50:D5:10:LYS:HB2	2.17	0.44
26:BD:134:ARG:HG3	26:BD:135:PHE:CD1	2.52	0.44
34:BO:78:PRO:HB3	34:BO:111:ARG:HD2	1.99	0.44
24:DA:977:G:N3	24:DA:1001:A:H2	2.16	0.44
24:DA:126:A:O5'	52:D7:19:ARG:HG3	2.18	0.44
33:BN:98:VAL:HG12	33:BN:117:LEU:CB	2.47	0.44
24:DA:2474:C:H5''	24:DA:2475:C:C5	2.53	0.44
9:CL:32:ASP:OD1	9:CL:33:PHE:N	2.50	0.44
32:DM:14:VAL:HA	32:DM:135:PRO:HD2	1.98	0.44
24:BA:1344:G:H4'	24:BA:1384:A:C5	2.52	0.44
1:AA:412:A:O2'	1:AA:413:G:OP2	2.21	0.44
30:BH:149:ARG:HH21	30:BH:153:LYS:HE3	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BP:55:VAL:HG12	35:BP:64:ILE:CD1	2.45	0.44
24:DA:895:U:H5'	44:DV:146:ILE:HG12	1.98	0.44
24:DA:1063:G:H1	24:DA:1064:C:HO2'	1.63	0.44
9:CL:4:TYR:N	9:CL:19:LEU:O	2.50	0.44
24:BA:2635:C:O2'	27:BE:48:GLN:NE2	2.50	0.44
24:BA:2286:A:H61	51:B6:24:GLU:HG2	1.83	0.44
1:CA:467:G:C6	1:CA:468:A:C5	3.06	0.44
1:CA:474:G:H5'	16:CS:81:ARG:HB3	1.99	0.44
24:BA:2168:G:C5	24:BA:2171:A:N6	2.85	0.44
7:AJ:23:VAL:O	7:AJ:27:ILE:N	2.45	0.44
24:DA:2756:U:H4'	24:DA:2757:A:OP1	2.17	0.44
24:DA:2543:G:H21	24:DA:2646:C:H5''	1.82	0.44
24:DA:2851:A:O2'	36:D0:64:ARG:NH2	2.50	0.44
1:AA:1350:A:H61	1:AA:1372:U:H3	1.65	0.44
24:BA:881:G:C6	24:BA:882:G:C5	3.05	0.44
1:AA:1060:C:C5'	10:AM:51:ARG:HG2	2.42	0.44
1:CA:87:A:N3	1:CA:87:A:H2'	2.32	0.44
1:AA:438:G:O2'	1:AA:496:A:N6	2.50	0.44
4:AG:163:GLU:O	4:AG:165:MET:N	2.50	0.44
1:AA:1157:A:H62	1:AA:1178:G:N2	2.14	0.44
1:AA:1157:A:N1	1:AA:1180:A:H2'	2.33	0.44
24:DA:1292:U:H2'	24:DA:1293:C:C6	2.52	0.44
29:DG:20:ILE:HG13	29:DG:20:ILE:O	2.16	0.44
55:CA:1800:T1C:N92	55:CA:1800:T1C:H8	2.30	0.44
24:BA:1038:C:H2'	24:BA:1039:G:O4'	2.17	0.44
1:AA:1262:C:H2'	1:AA:1263:C:C6	2.52	0.44
26:DD:97:TYR:HB2	26:DD:101:GLU:O	2.17	0.44
13:CP:62:ASN:HB2	13:CP:63:THR:H	1.60	0.44
8:AK:41:ARG:HH12	8:AK:123:GLU:CD	2.20	0.44
1:AA:129(A):G:C2	1:AA:188:U:O2'	2.70	0.44
24:BA:2843:G:H1	24:BA:2874:C:N4	2.14	0.44
3:AF:77:ILE:HG12	3:AF:84:ILE:HD12	2.00	0.44
16:CS:22:THR:HA	16:CS:33:ILE:HG13	2.00	0.44
24:BA:1608:A:H1'	24:BA:1610:A:OP2	2.18	0.44
26:DD:13:ARG:HD2	26:DD:16:MET:HE3	2.00	0.44
24:BA:2250:G:C5	35:BP:83:MET:HB3	2.53	0.44
31:BK:104:GLN:HG2	31:BK:105:HIS:CD2	2.52	0.44
26:DD:109:ASP:O	26:DD:111:LEU:N	2.51	0.44
2:AE:230:VAL:HG12	2:AE:231:GLU:N	2.33	0.44
2:CE:166:ASP:HB3	2:CE:169:LYS:HB2	1.98	0.44
24:BA:1771:C:H1'	24:BA:1786:A:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:686:G:H21	24:DA:788:A:H61	1.65	0.44
33:BN:71:ARG:NH1	38:BR:74:ARG:HH21	2.15	0.44
15:CR:87:ILE:O	15:CR:88:ARG:HB2	2.17	0.44
10:CM:76:ASN:HA	10:CM:77:PRO:HD2	1.89	0.44
53:D8:52:LYS:C	53:D8:54:GLU:H	2.21	0.44
24:BA:813:U:H2'	24:BA:814:C:C6	2.53	0.44
30:DH:27:LYS:HB2	30:DH:32:GLU:HB3	1.98	0.44
2:CE:128:GLU:HG3	2:CE:129:GLU:HG3	1.99	0.44
24:BA:480:A:O4'	43:BU:44:ILE:HG12	2.18	0.44
24:BA:81:G:H1	24:BA:105:C:H42	1.65	0.44
28:DF:129:PHE:HA	28:DF:142:TRP:NE1	2.32	0.44
2:CE:208:ILE:HD12	2:CE:208:ILE:H	1.82	0.44
24:DA:588:U:H1'	28:DF:90:PHE:CG	2.53	0.44
24:BA:1864:U:H3	24:BA:1878:G:H1	1.65	0.44
24:DA:78:A:H2'	24:DA:79:G:H8	1.82	0.44
27:DE:8:LYS:O	27:DE:10:GLY:N	2.51	0.44
27:DE:11:MET:HG3	27:DE:24:THR:CA	2.48	0.44
27:DE:25:VAL:CG1	27:DE:26:ILE:N	2.80	0.44
24:BA:2406:U:C2	34:BO:72:PRO:HB2	2.52	0.44
24:DA:2134:A:H2'	24:DA:2134:A:N3	2.33	0.44
24:DA:1093:G:N7	24:DA:1094:U:C4	2.86	0.44
26:DD:43:ARG:HH11	26:DD:44:ASN:ND2	2.14	0.44
1:CA:1028(B):C:H3'	1:CA:1029:G:H5''	1.98	0.44
1:AA:1036:G:H3'	1:AA:1037:C:H6	1.82	0.44
19:AV:67:VAL:HG21	49:B4:60:GLN:HE21	1.82	0.44
2:AE:59:GLU:O	2:AE:63:MET:HG2	2.18	0.44
24:BA:1063:G:H22	24:BA:1076:C:H1'	1.82	0.44
24:DA:2850:A:C2	24:DA:2851:A:C4	3.05	0.44
1:AA:1399:C:C2	1:AA:1502:A:N6	2.86	0.44
24:BA:883:G:H2'	24:BA:884:C:O4'	2.17	0.44
31:BK:57:ARG:O	31:BK:61:ARG:HG2	2.17	0.44
1:CA:1443:G:H3'	1:CA:1446:A:C5'	2.44	0.44
10:CM:30:SER:HG	10:CM:80:LYS:HB3	1.82	0.44
1:AA:346:G:H2'	1:AA:346:G:N3	2.33	0.44
9:CL:73:GLN:O	9:CL:77:ILE:HG23	2.18	0.44
1:AA:178:C:H2'	1:AA:179:A:O4'	2.16	0.44
1:AA:1015:A:O2'	14:AQ:15:LYS:NZ	2.50	0.44
24:BA:1417:C:H2'	24:BA:1418:G:O4'	2.18	0.44
24:BA:1587:A:H2'	24:BA:1588:C:C6	2.52	0.44
35:BP:23:GLY:HA2	35:BP:24:GLY:HA3	1.62	0.44
27:DE:101:ARG:CZ	27:DE:171:GLU:HB2	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2110:G:H5''	24:DA:2145:C:H42	1.82	0.44
24:DA:2148:G:H2'	24:DA:2149:G:H8	1.82	0.44
20:AW:76:ALA:O	20:AW:80:ARG:HG2	2.17	0.44
45:B3:11:ARG:O	45:B3:14:ARG:NH2	2.50	0.44
1:AA:1255:G:O2'	1:AA:1258:G:N3	2.38	0.44
25:BB:90:C:OP2	35:BP:16:ARG:NH2	2.50	0.44
45:D3:50:ASN:ND2	45:D3:81:VAL:O	2.38	0.44
8:AK:49:GLU:HG2	8:AK:62:TYR:HE2	1.81	0.44
1:AA:181:G:O2'	1:AA:182:U:H6	2.00	0.44
24:BA:2121:G:H2'	24:BA:2122:U:O4'	2.17	0.44
24:BA:2122:U:H3	24:BA:2176:A:H61	1.66	0.44
48:BX:26:LEU:HD21	48:BX:46:ASN:HB3	2.00	0.44
41:BS:76:VAL:HG23	41:BS:101:SER:HB3	2.00	0.44
2:CE:17:PHE:CD2	2:CE:44:LEU:HD22	2.52	0.44
12:CO:76:ASN:N	12:CO:76:ASN:OD1	2.50	0.44
30:DH:87:LEU:HD23	30:DH:164:TYR:HA	1.99	0.44
24:DA:435:C:H2'	24:DA:436:C:H5'	1.99	0.44
20:CW:95:ALA:O	20:CW:97:ALA:N	2.45	0.44
44:BV:173:ALA:HB1	44:BV:175:VAL:HG23	1.98	0.44
24:BA:396:G:O3'	46:BZ:44:PRO:HA	2.17	0.44
35:DP:110:THR:OG1	35:DP:113:GLN:N	2.48	0.44
24:BA:493:G:H2'	24:BA:494:G:O4'	2.18	0.44
24:DA:19:C:OP2	39:D1:30:LYS:NZ	2.48	0.44
29:BG:47:LYS:HE3	29:BG:47:LYS:HB2	1.87	0.44
5:AH:52:PRO:O	5:AH:56:GLN:N	2.39	0.44
4:AG:201:GLN:HA	4:AG:204:ILE:HD12	1.99	0.44
51:D6:15:GLU:CB	51:D6:47:THR:CG2	2.95	0.44
24:BA:2896:C:H2'	24:BA:2897:U:C6	2.52	0.44
28:DF:68:LYS:HB3	28:DF:69:HIS:H	1.68	0.44
24:BA:784:A:H5'	24:BA:785:G:OP1	2.17	0.44
24:DA:1106:G:N2	24:DA:1107:G:N3	2.66	0.44
13:AP:80:ARG:NH1	49:B4:55:ARG:HE	2.14	0.44
24:BA:1057:A:OP2	24:BA:1089:G:N2	2.50	0.44
24:BA:2149:G:C6	24:BA:2150:U:C2	3.05	0.44
24:BA:654(A):A:C2	24:BA:654(T):A:N1	2.85	0.44
1:CA:1202:G:H22	14:CQ:46:GLU:CD	2.18	0.44
24:DA:1332:G:N2	24:DA:1610:A:C8	2.86	0.44
33:BN:97:ARG:HG2	33:BN:99:PHE:HE1	1.82	0.44
2:CE:30:ARG:NH2	2:CE:194:PRO:HG2	2.31	0.44
1:AA:452:A:H2'	1:AA:453:A:C8	2.53	0.44
1:AA:1153:C:H2'	1:AA:1154:G:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AI:12:PRO:HG3	6:AI:57:GLN:O	2.18	0.44
24:BA:2468:G:N2	24:BA:2481:G:H2'	2.33	0.44
1:AA:160:A:H1'	1:AA:344:A:C5	2.53	0.44
15:AR:15:PHE:CE1	15:AR:84:LYS:HG2	2.52	0.44
1:AA:1311:G:N7	19:AV:2:PRO:HA	2.32	0.44
27:DE:203:LYS:O	27:DE:204:ALA:HB3	2.18	0.44
41:BS:4:LYS:HB3	41:BS:106:ILE:HB	1.99	0.44
24:DA:2145:C:H6	24:DA:2147:G:N2	2.15	0.44
24:BA:2845:G:H2'	24:BA:2846:G:C8	2.52	0.44
24:DA:2572:A:OP1	24:DA:2574:G:H4'	2.17	0.44
2:CE:116:GLU:HA	2:CE:119:GLU:HB2	2.00	0.44
17:CT:83:ASP:OD1	17:CT:84:LEU:N	2.50	0.44
17:AT:99:SER:HB2	17:AT:101:ARG:HH11	1.83	0.44
2:AE:142:LEU:O	2:AE:145:LEU:N	2.50	0.44
1:AA:1014:A:N3	1:AA:1219:U:H1'	2.33	0.44
24:BA:1517:G:H2'	24:BA:1518:C:C6	2.52	0.44
24:BA:1309:G:H4'	52:B7:7:PRO:HB2	2.00	0.44
24:BA:1638:C:H4'	24:BA:2710:C:O2	2.17	0.44
24:BA:38:A:H2'	24:BA:39:C:C6	2.53	0.44
35:DP:63:LYS:HB2	44:DV:116:VAL:HG11	1.99	0.44
24:DA:26:G:C6	24:DA:27:G:N1	2.85	0.44
6:AI:98:LEU:HD13	18:AU:28:GLU:HG3	1.99	0.44
24:DA:118:A:H1'	24:DA:178:G:O4'	2.18	0.44
32:DM:112:LEU:O	32:DM:115:ARG:N	2.50	0.44
1:CA:601:C:H2'	1:CA:602:A:H8	1.83	0.44
35:BP:4:PRO:HD3	35:BP:70:PRO:O	2.18	0.44
24:DA:2176:A:H2'	24:DA:2177:C:H6	1.82	0.44
24:DA:1239:G:H2'	24:DA:1240:U:O4'	2.17	0.44
16:AS:58:TYR:O	16:AS:62:VAL:HG22	2.17	0.44
24:BA:1213:A:H1'	24:BA:1238:G:N3	2.32	0.44
24:DA:2207:C:H42	24:DA:2217:G:H1	1.64	0.44
24:DA:476:G:H4'	24:DA:502:A:N1	2.33	0.44
37:DQ:49:VAL:HG21	37:DQ:77:ALA:HB2	1.98	0.44
35:BP:45:GLN:HG2	35:BP:45:GLN:H	1.46	0.44
24:DA:2257:U:O2'	24:DA:2258:C:H5'	2.17	0.44
30:BH:92:ILE:HD13	30:BH:160:LYS:NZ	2.32	0.44
24:BA:2629:A:N6	24:BA:2895:U:C2	2.86	0.44
27:DE:55:ASN:HD21	27:DE:75:VAL:N	2.15	0.44
24:DA:2115:G:C6	24:DA:2117:A:C8	3.06	0.44
1:AA:1124:G:O2'	10:AM:38:ILE:HD12	2.17	0.44
22:CD:8:U:N3	22:CD:48:C:O2	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1029:G:H1'	1:CA:1032(A):G:H1	1.83	0.44
27:DE:21:VAL:CG1	27:DE:22:PRO:N	2.80	0.44
22:AD:1:C:H41	22:AD:71:C:H42	1.66	0.44
24:BA:654(C):G:H3'	24:BA:654(D):G:C8	2.53	0.44
3:CF:79:ARG:NH2	3:CF:83:ARG:H	2.16	0.44
1:CA:1237:C:OP1	1:CA:1238:A:H1'	2.18	0.44
24:BA:639:U:H2'	24:BA:640:C:C6	2.53	0.44
24:BA:2134:A:N6	24:BA:2156:G:O2'	2.49	0.44
24:BA:459:U:H5''	52:B7:40:TRP:CD2	2.53	0.44
24:BA:654(H):G:H1	24:BA:654(M):C:C2'	2.30	0.44
1:AA:1029:G:O2'	1:AA:1031:G:OP2	2.35	0.44
22:CD:30:G:C4	22:CD:31:G:C8	3.06	0.44
1:CA:35:G:C2	1:CA:550:G:C2	3.06	0.44
44:BV:152:ALA:N	44:BV:154:ASP:OD1	2.50	0.44
39:B1:78:THR:O	39:B1:81:HIS:N	2.50	0.44
29:BG:101:ILE:HG23	49:B4:24:THR:O	2.17	0.44
1:AA:171:A:H2'	1:AA:172:A:H8	1.80	0.44
1:CA:1226:C:H4'	19:CV:80:TYR:CZ	2.53	0.44
29:BG:111:LEU:O	29:BG:114:ILE:HB	2.18	0.44
24:DA:523:C:O2'	24:DA:553:U:O2	2.35	0.44
12:CO:47:LYS:HB3	12:CO:48:PRO:CD	2.47	0.44
45:B3:23:VAL:HA	45:B3:38:VAL:HG22	1.98	0.44
24:DA:2015:A:N3	50:D5:2:ALA:N	2.65	0.44
1:AA:537:G:H2'	1:AA:538:G:C8	2.53	0.44
24:DA:1131:G:O6	24:DA:2024:G:N2	2.43	0.44
2:CE:51:LEU:O	2:CE:55:PHE:N	2.36	0.44
50:D5:25:LEU:HA	50:D5:25:LEU:HD23	1.66	0.44
5:CH:79:GLU:OE1	8:CK:104:ARG:HA	2.18	0.44
24:DA:128:C:H4'	24:DA:129:C:OP1	2.18	0.44
6:AI:4:TYR:CD1	6:AI:92:LYS:HA	2.53	0.44
5:CH:33:VAL:HB	5:CH:112:LEU:HD12	1.99	0.44
1:AA:991:U:C4	1:AA:1212:U:H1'	2.52	0.44
24:BA:1186:G:H2'	24:BA:1187:G:O4'	2.18	0.44
28:DF:157:VAL:HG12	28:DF:198:ALA:HB1	2.00	0.44
24:BA:2712:U:OP1	24:BA:2714:G:H4'	2.16	0.44
43:DU:97:ARG:NH2	43:DU:98:VAL:HB	2.33	0.44
26:BD:121:PRO:HB3	26:BD:135:PHE:CE2	2.53	0.44
24:DA:78:A:H2'	24:DA:79:G:C8	2.53	0.44
26:BD:221:VAL:HG22	26:BD:226:MET:CE	2.48	0.44
44:DV:3:TYR:O	44:DV:57:ILE:HA	2.18	0.44
32:DM:66:LYS:O	32:DM:70:LYS:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BP:58:PHE:O	35:BP:60:ARG:N	2.49	0.44
3:AF:88:ARG:NH1	3:AF:101:LEU:O	2.50	0.44
24:BA:34:C:O2'	24:BA:35:G:OP2	2.33	0.44
2:AE:170:GLU:O	2:AE:174:VAL:HG23	2.18	0.44
1:AA:603:U:H2'	1:AA:604:G:H8	1.82	0.44
31:BK:101:LEU:HD23	31:BK:101:LEU:HA	1.73	0.44
24:DA:205:G:O2'	24:DA:206:U:OP2	2.36	0.44
41:DS:111:HIS:CG	41:DS:113:LYS:HZ1	2.36	0.44
24:BA:1514:U:H2'	24:BA:1515:C:C6	2.52	0.44
24:BA:1514:U:H2'	24:BA:1515:C:H6	1.83	0.44
24:BA:253:C:H2'	24:BA:254:G:O4'	2.17	0.44
1:AA:411:A:N7	1:AA:413:G:H1'	2.32	0.44
35:BP:104:PHE:HE2	35:BP:125:LEU:HD11	1.83	0.44
24:DA:2168:G:N2	24:DA:2169:A:H3'	2.33	0.44
3:CF:166:GLU:HA	3:CF:166:GLU:OE2	2.18	0.44
24:BA:783:A:C8	24:BA:784:A:H4'	2.52	0.44
1:AA:1036:G:H3'	1:AA:1037:C:C6	2.53	0.44
24:BA:621:A:OP2	34:BO:108:LYS:NZ	2.49	0.44
24:BA:94:G:H21	47:BW:47:ASN:HD22	1.64	0.44
24:BA:1088:A:N3	24:BA:1088:A:H3'	2.33	0.44
1:AA:1321:C:C3'	1:AA:1322:C:H5''	2.48	0.44
30:DH:7:LEU:H	30:DH:7:LEU:HG	1.63	0.44
19:CV:29:ARG:CD	19:CV:48:THR:H	2.25	0.44
24:BA:2282:G:H4'	24:BA:2389:G:O2'	2.18	0.44
13:CP:14:ARG:HH11	13:CP:14:ARG:HB2	1.82	0.44
1:CA:1118:C:C5'	9:CL:9:ARG:HE	2.30	0.44
1:AA:1504:G:H4'	1:AA:1505:G:O4'	2.18	0.44
1:AA:924:C:H2'	1:AA:925:G:C8	2.53	0.44
3:CF:7:PRO:HB3	3:CF:11:ARG:HH12	1.83	0.44
1:AA:158:G:H2'	1:AA:159:G:H8	1.82	0.44
38:BR:3:ARG:O	38:BR:5:ALA:N	2.50	0.44
24:BA:1697:G:OP2	24:BA:1698:A:O2'	2.32	0.44
19:CV:15:LEU:O	19:CV:19:VAL:HG23	2.18	0.44
2:CE:189:ASP:N	2:CE:189:ASP:OD1	2.51	0.44
37:BQ:35:ILE:HG22	37:BQ:97:ARG:HH21	1.83	0.44
28:BF:135:LYS:HB3	28:BF:138:GLU:HG3	1.98	0.44
1:AA:130:A:N7	17:AT:63:ARG:HB2	2.33	0.44
24:DA:1010:A:H5'	39:D1:62:ILE:HG21	2.00	0.44
30:BH:88:LEU:HG	30:BH:90:LYS:HZ3	1.82	0.44
26:DD:31:LYS:HZ3	26:DD:94:LEU:HD11	1.80	0.44
24:BA:860:U:H2'	24:BA:861:A:H8	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2295:C:OP2	37:DQ:10:ARG:HD3	2.18	0.44
42:BT:67:GLY:C	42:BT:69:TYR:H	2.17	0.44
7:CJ:132:GLY:C	7:CJ:134:ALA:H	2.19	0.44
1:AA:1134:G:C6	1:AA:1135:U:C2	3.06	0.44
1:AA:631:G:HO2'	1:AA:632:A:H8	1.66	0.44
14:CQ:3:ARG:O	14:CQ:7:ILE:HG23	2.16	0.44
1:CA:445:G:H2'	1:CA:446:G:C8	2.53	0.44
37:DQ:25:ARG:HH12	37:DQ:42:ASP:CG	2.21	0.44
24:BA:2817:G:H2'	24:BA:2818:G:O4'	2.17	0.44
1:CA:530:G:HO2'	1:CA:531:U:P	2.41	0.44
29:BG:83:ARG:H	29:BG:86:MET:HE3	1.82	0.44
53:B8:6:THR:HG23	53:B8:62:LEU:HD12	2.00	0.44
1:CA:328:C:H4'	1:CA:329:A:C5'	2.47	0.44
24:BA:2376:A:H2'	24:BA:2377:A:O4'	2.18	0.44
2:CE:74:LYS:HG2	2:CE:169:LYS:HE2	2.00	0.44
22:CC:23:C:H2'	22:CC:24:U:H6	1.83	0.44
24:DA:271:G:H2'	24:DA:272:G:H8	1.81	0.44
7:CJ:36:LYS:O	7:CJ:40:ALA:N	2.51	0.44
24:DA:2693:A:H2'	24:DA:2694:G:H8	1.83	0.44
1:AA:1414:U:H2'	1:AA:1415:G:C8	2.53	0.44
41:BS:76:VAL:CG2	41:BS:101:SER:HB3	2.48	0.44
1:AA:127:G:H4'	17:AT:2:PRO:HD2	1.99	0.44
3:AF:130:VAL:O	3:AF:134:ILE:HG12	2.18	0.44
42:DT:25:LYS:HA	42:DT:81:VAL:O	2.18	0.44
24:BA:869:G:H1	24:BA:908:C:H42	1.66	0.44
24:DA:479:A:N3	24:DA:481:G:H5''	2.33	0.44
5:CH:84:PHE:O	5:CH:86:ALA:N	2.50	0.44
10:AM:80:LYS:NZ	10:AM:83:GLU:OE1	2.49	0.44
4:AG:61:LYS:HA	4:AG:203:VAL:HG22	1.99	0.44
51:D6:25:LYS:HE2	51:D6:27:LYS:HZ2	1.82	0.44
27:DE:50:GLY:HA3	27:DE:74:PRO:HG3	2.00	0.44
24:DA:2156:G:C6	24:DA:2157:G:N1	2.86	0.44
51:B6:17:LYS:O	51:B6:18:ARG:HB3	2.18	0.44
24:DA:883:G:O2'	24:DA:884:C:H5'	2.18	0.44
24:DA:1053:C:N4	24:DA:1106:G:C6	2.86	0.44
1:CA:1134:G:N2	1:CA:1141:C:N3	2.66	0.44
1:AA:1007:C:H2'	1:AA:1008:C:C6	2.53	0.44
1:CA:1015:A:C6	1:CA:1016:A:C6	3.06	0.44
1:CA:1220:G:H2'	1:CA:1221:G:O4'	2.18	0.44
1:CA:957:U:O2	1:CA:959:A:C8	2.71	0.44
11:AN:99:GLN:OE1	11:AN:105:VAL:HG21	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:84:A:H3'	43:DU:8:LYS:HG2	2.00	0.44
9:AL:46:ALA:HB2	9:AL:74:ILE:HG23	2.00	0.44
25:DB:24:G:H4'	25:DB:25:A:H8	1.82	0.44
1:CA:1288:A:H2'	1:CA:1289:A:C8	2.52	0.44
1:CA:1118:C:O4'	9:CL:104:ARG:NH1	2.50	0.44
24:BA:1175:U:H1'	24:BA:1176:G:N3	2.33	0.44
24:DA:1517:G:H4'	24:DA:1556:C:O2'	2.16	0.44
5:AH:7:GLU:OE1	5:AH:37:ARG:NE	2.35	0.44
1:AA:1178:G:P	9:AL:93:ARG:HE	2.40	0.44
1:AA:1028(A):C:H2'	1:AA:1028(B):C:C6	2.53	0.44
26:DD:92:ILE:HD12	26:DD:104:TYR:CD2	2.52	0.44
44:BV:7:ALA:HB2	44:BV:59:LEU:CD2	2.47	0.44
44:BV:150:LEU:HD21	44:BV:155:LEU:HG	2.00	0.44
44:DV:26:GLY:HA2	44:DV:86:VAL:H	1.82	0.44
1:AA:1256:A:N3	1:AA:1277:C:N4	2.66	0.44
14:AQ:59:ALA:HB1	14:AQ:61:TRP:CZ3	2.46	0.44
2:CE:215:LEU:O	2:CE:219:VAL:HG12	2.18	0.44
24:DA:1151:G:H4'	39:D1:81:HIS:CG	2.53	0.44
25:BB:21:G:H1	25:BB:62:C:N4	2.14	0.44
7:CJ:102:ARG:HG2	7:CJ:106:GLN:NE2	2.33	0.44
1:AA:827:U:H5	1:AA:872:A:H61	1.65	0.44
1:CA:528:C:H41	12:CO:49:ASN:ND2	2.14	0.44
24:BA:2303:G:O2'	29:BG:132:ASN:HB2	2.18	0.44
43:BU:56:PRO:HG2	43:BU:57:GLN:HG3	2.00	0.44
24:DA:1869:G:H2'	24:DA:1871:A:N7	2.33	0.44
43:DU:67:LEU:HD12	43:DU:67:LEU:HA	1.62	0.44
1:CA:652:U:H1'	1:CA:653:A:C2	2.53	0.44
24:DA:1550:C:OP1	24:DA:1727:U:O2'	2.17	0.44
1:CA:255:G:O6	1:CA:270:A:N6	2.51	0.44
1:CA:358:U:H2'	1:CA:359:U:H6	1.83	0.44
45:D3:19:LYS:HA	45:D3:19:LYS:HD3	1.83	0.44
33:DN:24:VAL:HA	33:DN:39:ILE:HG22	2.00	0.44
25:BB:37:C:H2'	25:BB:38:C:H5'	2.00	0.44
1:CA:516:U:C4	1:CA:517:G:C6	3.05	0.44
24:DA:2685:G:P	38:DR:51:ARG:HH22	2.41	0.44
24:BA:1218:C:N4	24:BA:1231:G:H1	2.16	0.44
24:DA:2537:U:H2'	24:DA:2538:C:C6	2.53	0.44
24:DA:843:G:H1	24:DA:935:C:H42	1.66	0.44
24:BA:1818:U:O4	26:BD:154:LYS:HD3	2.17	0.44
33:DN:65:THR:O	33:DN:79:PHE:HB2	2.18	0.44
24:BA:1795:C:O2	26:BD:255:LYS:HE2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:569:U:C4	24:BA:570:G:C6	3.06	0.44
24:BA:111:A:H4'	47:BW:69:ARG:NH2	2.33	0.44
24:DA:657:U:H2'	24:DA:658:C:C6	2.52	0.44
33:BN:78:ARG:HB3	33:BN:78:ARG:HE	1.51	0.44
33:DN:44:LYS:HA	33:DN:44:LYS:HD3	1.79	0.44
24:BA:2543:G:H2'	24:BA:2544:G:O4'	2.18	0.44
31:DK:64:GLU:HA	31:DK:67:ARG:HB2	2.00	0.44
1:CA:323:U:H2'	1:CA:324:G:O4'	2.17	0.44
4:CG:19:LEU:HD23	4:CG:20:TYR:N	2.33	0.43
43:BU:97:ARG:NH2	43:BU:98:VAL:HB	2.33	0.43
24:DA:2344:U:O2'	51:D6:37:ARG:HG2	2.18	0.43
24:BA:3:U:OP1	24:BA:2790:A:N6	2.49	0.43
24:BA:7:G:H4'	32:BM:13:TRP:CH2	2.52	0.43
24:DA:896:A:N3	44:DV:176:PRO:HG2	2.33	0.43
1:AA:1382:C:O2'	1:AA:1383:C:H5'	2.17	0.43
2:CE:22:LYS:H	2:CE:40:HIS:CD2	2.35	0.43
1:CA:1216:G:H2'	1:CA:1217:C:C6	2.53	0.43
24:DA:2755:C:O2'	24:DA:2756:U:H2'	2.18	0.43
24:DA:1112:G:O3'	30:DH:3:ARG:HA	2.18	0.43
24:DA:1800:C:H3'	26:DD:147:LEU:HD23	2.00	0.43
24:DA:2795:G:H2'	24:DA:2798:C:P	2.58	0.43
24:BA:880:G:HO2'	24:BA:881:G:P	2.41	0.43
1:CA:1119:C:H2'	1:CA:1120:G:O4'	2.18	0.43
1:AA:1285:A:H1'	1:AA:1286:A:OP2	2.18	0.43
24:BA:273(C):C:C2	24:BA:363(D):G:N2	2.86	0.43
1:AA:105:G:H2'	1:AA:106:C:C6	2.53	0.43
1:CA:631:G:OP2	1:CA:632:A:N6	2.38	0.43
1:CA:1196:U:HO2'	1:CA:1197:G:P	2.40	0.43
37:DQ:88:ASP:OD1	37:DQ:89:ARG:N	2.44	0.43
24:DA:2294:C:P	37:DQ:89:ARG:HH12	2.40	0.43
7:CJ:135:VAL:HA	7:CJ:138:LYS:HB3	2.00	0.43
24:DA:1592:C:H2'	24:DA:1593:G:C8	2.53	0.43
24:DA:2143:C:H2'	24:DA:2144:U:C6	2.53	0.43
1:CA:448:A:P	1:CA:485:G:H22	2.40	0.43
1:AA:1386:G:O2'	1:AA:1387:G:H5'	2.17	0.43
24:BA:498:G:H21	43:BU:47:LYS:NZ	2.16	0.43
1:CA:1087:G:H22	1:CA:1099:G:H1'	1.82	0.43
24:DA:2710:C:OP1	36:D0:15:SER:HB3	2.18	0.43
1:AA:1218:C:H2'	1:AA:1219:U:H6	1.82	0.43
1:CA:196:A:OP1	20:CW:68:LYS:NZ	2.51	0.43
7:CJ:136:LYS:NZ	7:CJ:143:ARG:HH12	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:993:G:H1	1:CA:1045:C:H42	1.66	0.43
24:BA:314:A:H2'	24:BA:315:G:H5'	1.99	0.43
24:DA:459:U:H2'	24:DA:460:A:H8	1.83	0.43
38:DR:19:LEU:HD22	38:DR:86:ILE:HG22	2.00	0.43
1:AA:603:U:H2'	1:AA:604:G:C8	2.53	0.43
24:DA:90:U:H3'	24:DA:90:U:O2	2.18	0.43
15:AR:56:LEU:O	15:AR:60:VAL:HG23	2.18	0.43
24:DA:239:U:H2'	24:DA:240:G:O4'	2.18	0.43
24:DA:456:C:O2'	24:DA:457:A:H5'	2.17	0.43
1:CA:944:G:C2	1:CA:1340:A:C6	3.06	0.43
9:AL:91:ASP:N	9:AL:91:ASP:OD1	2.43	0.43
29:BG:180:PHE:C	29:BG:182:LYS:H	2.21	0.43
1:CA:1040:U:H2'	1:CA:1041:A:O4'	2.18	0.43
24:DA:1955:U:O3'	24:DA:1956:U:H6	2.02	0.43
24:DA:2224:G:OP1	26:DD:268:ARG:NH1	2.51	0.43
24:BA:1142:U:H5'	24:BA:1142(A):A:H8	1.83	0.43
4:CG:22:LYS:N	4:CG:26:CYS:HB3	2.32	0.43
1:AA:1306:A:H61	1:AA:1331:G:H1'	1.83	0.43
1:AA:1306:A:O2'	13:AP:109:THR:OG1	2.33	0.43
24:DA:1071:G:N7	24:DA:1097:U:H4'	2.33	0.43
24:BA:2345:G:OP2	51:B6:39:TYR:HA	2.18	0.43
1:CA:1181:G:O2'	1:CA:1182:G:O5'	2.31	0.43
24:BA:1077:A:H5'	24:BA:1078:U:H5'	2.00	0.43
24:BA:1093:G:H1	24:BA:1097:U:P	2.40	0.43
24:BA:1102:C:H2'	24:BA:1103:A:C8	2.53	0.43
24:BA:1731:G:H8	24:BA:1731:G:OP2	2.01	0.43
22:AD:8:U:O4	22:AD:13:C:H3'	2.18	0.43
22:AD:48:C:H5''	22:AD:49:G:C5'	2.49	0.43
24:DA:1110:G:O5'	24:DA:1110:G:H8	2.00	0.43
24:DA:2748:A:C8	24:DA:2753:A:N6	2.86	0.43
24:BA:1534:G:H1	24:BA:1539:G:H1'	1.84	0.43
26:DD:23:GLU:O	26:DD:25:THR:N	2.51	0.43
1:CA:1105:A:H2'	1:CA:1106:G:C8	2.52	0.43
24:BA:1510:A:OP1	24:BA:1511:A:H5'	2.18	0.43
13:CP:22:ILE:HB	13:CP:25:ILE:CG1	2.46	0.43
38:BR:51:ARG:HG3	38:BR:98:LYS:HE3	1.99	0.43
1:AA:377:G:OP1	16:AS:5:ARG:NH1	2.52	0.43
26:DD:31:LYS:HE3	26:DD:31:LYS:HB2	1.83	0.43
1:CA:105:G:C6	1:CA:106:C:C4	3.05	0.43
24:DA:2294:C:H5'	37:DQ:10:ARG:HD2	2.00	0.43
38:DR:107:ASP:HB2	38:DR:108:ARG:H	1.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AF:89:GLU:O	3:AF:93:LYS:HG3	2.18	0.43
24:DA:2148:G:H2'	24:DA:2149:G:C8	2.53	0.43
25:DB:39:A:N1	49:D4:1:MET:N	2.61	0.43
31:DK:109:ILE:HB	31:DK:130:TYR:OH	2.18	0.43
24:DA:265:A:H1'	24:DA:266:G:O4'	2.18	0.43
47:DW:10:LEU:HD12	47:DW:10:LEU:HA	1.86	0.43
24:DA:1314:C:H42	24:DA:1338:G:H1	1.65	0.43
39:B1:44:ASN:HD21	40:B2:74:LYS:HA	1.83	0.43
24:BA:1129:A:O2'	24:BA:2515:C:O2	2.36	0.43
39:D1:25:TRP:C	39:D1:25:TRP:CD1	2.92	0.43
24:BA:2356:C:H4'	45:B3:20:ARG:HG3	2.00	0.43
29:BG:63:ILE:HG22	29:BG:143:GLU:OE2	2.18	0.43
24:BA:1047:G:N2	24:BA:1110:G:H2'	2.33	0.43
1:CA:757:U:H2'	1:CA:758:G:O4'	2.18	0.43
24:BA:705:A:C8	24:BA:727:A:C2	3.06	0.43
24:BA:2502:G:H5''	24:BA:2503:A:H5''	2.00	0.43
28:DF:152:GLU:OE1	28:DF:191:ARG:HD2	2.18	0.43
33:DN:98:VAL:HG22	33:DN:117:LEU:HB3	2.01	0.43
33:BN:26:LYS:HB3	33:BN:27:GLY:H	1.68	0.43
28:BF:167:ALA:HB1	28:BF:173:VAL:HG11	1.99	0.43
24:DA:919:G:N2	24:DA:2269:A:OP2	2.51	0.43
11:CN:38:ASN:HA	11:CN:39:PRO:HD3	1.83	0.43
11:AN:17:GLY:HA3	11:AN:77:MET:SD	2.58	0.43
39:D1:8:VAL:HG12	39:D1:11:ARG:HH21	1.82	0.43
5:AH:51:VAL:O	5:AH:55:VAL:HG23	2.18	0.43
30:BH:4:ILE:O	30:BH:4:ILE:CD1	2.30	0.43
1:CA:426:G:OP1	4:CG:36:ARG:CZ	2.66	0.43
4:CG:36:ARG:N	4:CG:37:PRO:CD	2.81	0.43
24:BA:2801:A:C5	24:BA:2802:G:H1'	2.53	0.43
27:DE:63:LEU:O	27:DE:73:GLU:OE1	2.36	0.43
27:DE:36:ARG:NH2	27:DE:88:GLY:HA2	2.33	0.43
24:DA:880:G:H2'	24:DA:881:G:H8	1.82	0.43
24:DA:892:G:C5	24:DA:893:C:N4	2.86	0.43
1:AA:1126:U:C6	1:AA:1127:G:C8	3.06	0.43
24:DA:1061:U:O3'	24:DA:1070:A:H4'	2.18	0.43
10:CM:45:ARG:O	10:CM:65:LEU:N	2.39	0.43
11:CN:22:HIS:HB3	11:CN:29:ILE:HG12	2.00	0.43
24:DA:1651:G:OP1	36:D0:37:THR:HG21	2.19	0.43
22:AD:63:G:C6	22:AD:64:G:C5	3.06	0.43
24:BA:1532:C:H2'	24:BA:1533:C:O4'	2.18	0.43
11:AN:69:ALA:HB1	11:AN:103:LEU:HD21	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AE:80:ILE:O	2:AE:84:GLU:HG2	2.17	0.43
2:CE:109:SER:O	2:CE:111:ARG:N	2.52	0.43
32:DM:56:ASN:H	32:DM:125:GLY:CA	2.27	0.43
1:CA:1260:C:N4	1:CA:1274:G:O6	2.51	0.43
1:CA:1121:U:C4	1:CA:1122:U:C4	3.06	0.43
24:DA:2317:C:H2'	24:DA:2318:G:O4'	2.18	0.43
20:CW:51:GLU:O	20:CW:55:ILE:HG12	2.18	0.43
26:BD:61:LEU:HB2	26:BD:63:ARG:NH1	2.34	0.43
44:BV:144:LEU:HB3	44:BV:145:GLU:H	1.58	0.43
43:BU:28:LYS:HE2	43:BU:64:GLU:OE2	2.18	0.43
34:BO:58:THR:CB	34:BO:61:ARG:HH12	2.31	0.43
24:BA:1688:U:H2'	24:BA:1698:A:N6	2.33	0.43
49:B4:12:ALA:HB3	49:B4:24:THR:HG1	1.82	0.43
1:CA:523:A:H61	12:CO:92:ASP:HB2	1.84	0.43
1:AA:142:G:H2'	1:AA:143:A:H8	1.83	0.43
24:DA:39:C:H2'	24:DA:40:C:C6	2.53	0.43
24:DA:1416:G:H2'	24:DA:1417:C:H6	1.83	0.43
38:BR:57:PHE:CG	38:BR:58:ASN:N	2.87	0.43
1:AA:184:G:O6	1:AA:194:C:N4	2.51	0.43
4:AG:96:LEU:HD12	4:AG:139:ARG:NH1	2.34	0.43
8:CK:88:LYS:C	8:CK:92:ARG:HH21	2.21	0.43
13:AP:32:GLU:OE2	13:AP:33:ALA:N	2.50	0.43
7:AJ:65:ALA:O	7:AJ:69:VAL:HG23	2.17	0.43
24:DA:1688:U:H1'	24:DA:1701:A:C6	2.54	0.43
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.52	0.43
39:D1:17:ILE:HG23	39:D1:39:LEU:HD12	2.00	0.43
10:AM:46:ARG:HE	10:AM:46:ARG:HB2	1.45	0.43
24:DA:2840:C:H4'	36:D0:53:HIS:CE1	2.54	0.43
24:BA:264:C:O2'	24:BA:265:A:H2'	2.17	0.43
1:CA:373:A:N3	1:CA:374:A:C8	2.86	0.43
20:AW:25:ARG:O	20:AW:29:LYS:HG3	2.17	0.43
1:CA:67:C:H2'	1:CA:68:G:C8	2.54	0.43
24:BA:1952:A:C5	33:BN:22:ILE:HD11	2.53	0.43
28:DF:155:LEU:HD22	28:DF:186:ILE:HA	2.00	0.43
4:AG:57:ARG:HB3	4:AG:206:PHE:HB2	2.01	0.43
29:BG:7:LEU:HD11	29:BG:176:LEU:O	2.17	0.43
1:AA:917:G:H2'	1:AA:918:A:C8	2.53	0.43
24:DA:1324:G:H4'	24:DA:1616:A:C2	2.53	0.43
24:DA:138:G:N2	42:DT:44:GLU:OE2	2.44	0.43
1:CA:1375:A:H4'	7:CJ:29:LYS:NZ	2.33	0.43
34:BO:138:LEU:HD11	34:BO:144:GLU:HG2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CG:63:LYS:HD2	4:CG:198:VAL:HG13	1.99	0.43
38:BR:102:ILE:C	38:BR:104:ASN:H	2.21	0.43
24:DA:193:U:O3'	24:DA:803:U:H4'	2.18	0.43
1:AA:1489:G:H2'	1:AA:1490:C:O4'	2.19	0.43
21:AX:9:ARG:HG3	21:AX:13:ILE:HD11	1.99	0.43
11:CN:30:VAL:HG21	11:CN:65:ALA:HA	1.99	0.43
26:BD:46:GLN:HG3	26:BD:46:GLN:H	1.21	0.43
7:CJ:78:ARG:O	7:CJ:84:ASN:HA	2.18	0.43
34:BO:96:THR:O	34:BO:100:LEU:HD12	2.18	0.43
8:CK:82:HIS:N	8:CK:138:TRP:O	2.51	0.43
4:CG:34:GLU:OE2	4:CG:34:GLU:HA	2.18	0.43
30:BH:156:ALA:O	30:BH:157:TYR:CB	2.64	0.43
24:BA:784:A:O4'	26:BD:227:ASN:ND2	2.51	0.43
28:DF:63:LYS:HZ1	28:DF:67:GLN:NE2	2.08	0.43
24:DA:1055:G:N3	24:DA:1085:A:H2	2.16	0.43
24:DA:307:G:N1	24:DA:310:A:OP2	2.51	0.43
13:CP:76:ALA:O	13:CP:80:ARG:HG3	2.18	0.43
1:CA:1325:C:P	21:CX:15:ARG:HH21	2.37	0.43
45:B3:70:GLN:HB3	45:B3:80:HIS:HE2	1.82	0.43
1:CA:690:G:C6	1:CA:691:G:C6	3.06	0.43
43:BU:49:VAL:N	43:BU:50:ARG:HE	2.17	0.43
1:CA:458:C:H42	1:CA:474:G:H1	1.66	0.43
53:D8:29:LYS:O	53:D8:31:HIS:N	2.51	0.43
24:DA:2420:C:OP1	53:D8:34:TRP:CE3	2.72	0.43
24:BA:1089:G:H5''	24:BA:1090:U:OP1	2.18	0.43
24:BA:1068:G:H1'	24:BA:1096:A:N3	2.34	0.43
24:BA:1096:A:H5'	24:BA:1097:U:H5''	2.00	0.43
24:BA:1728:G:O6	24:BA:1730:U:H5'	2.18	0.43
22:AD:18:G:H1	22:AD:55:U:H1'	1.83	0.43
1:CA:983:A:H3'	1:CA:983:A:N3	2.34	0.43
25:BB:39:A:C2'	25:BB:40:U:C6	2.98	0.43
52:B7:10:ARG:O	52:B7:14:LYS:HB2	2.19	0.43
24:BA:2157:G:H1'	24:BA:2158:A:C2	2.52	0.43
24:DA:1436:G:H1'	24:DA:1477:A:O2'	2.19	0.43
13:AP:37:THR:HB	13:AP:55:ARG:HH21	1.83	0.43
24:BA:654(G):C:H42	24:BA:654(L):G:H5''	1.83	0.43
6:AI:14:LEU:HD13	6:AI:19:LEU:HA	2.00	0.43
35:DP:23:GLY:HA2	35:DP:24:GLY:HA3	1.63	0.43
24:BA:2307:G:O6	29:BG:44:GLY:N	2.51	0.43
24:DA:1491:G:O2'	26:DD:101:GLU:HB2	2.18	0.43
19:CV:19:VAL:HB	19:CV:20:LEU:HD22	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:322:A:OP1	28:BF:168:ARG:NE	2.51	0.43
1:AA:1328:C:O3'	13:AP:29:ARG:HG3	2.19	0.43
38:BR:57:PHE:C	38:BR:58:ASN:HD22	2.21	0.43
4:AG:81:GLU:OE1	4:AG:139:ARG:NH2	2.52	0.43
9:CL:82:ALA:HB1	9:CL:96:LEU:HD21	1.99	0.43
36:B0:33:ARG:HH12	50:B5:55:ARG:CB	2.31	0.43
24:DA:1819:A:OP1	26:DD:161:THR:HG21	2.18	0.43
24:DA:2735:G:H2'	24:DA:2736:G:C8	2.52	0.43
33:DN:114:ILE:O	33:DN:118:ALA:N	2.49	0.43
29:DG:25:TYR:OH	29:DG:168:GLU:OE2	2.34	0.43
24:BA:1766:U:H2'	24:BA:1767:C:C6	2.52	0.43
24:DA:1275:A:N1	24:DA:1295:C:O2'	2.47	0.43
1:AA:1212:U:H5''	1:AA:1213:A:OP1	2.17	0.43
41:BS:11:ARG:CZ	41:BS:98:LYS:HB3	2.49	0.43
22:AC:19:G:H3'	22:AC:20:U:H6	1.82	0.43
1:AA:1333:A:C8	1:AA:1334:G:C8	3.07	0.43
13:CP:67:GLU:N	13:CP:70:LEU:HD12	2.33	0.43
24:DA:2773:C:OP1	27:DE:166:THR:OG1	2.36	0.43
1:AA:865:A:H2	1:AA:918:A:H4'	1.83	0.43
24:BA:2690:C:OP2	36:B0:14:SER:HB3	2.17	0.43
24:DA:1790:C:H2'	24:DA:1791:A:C5	2.54	0.43
1:AA:1065:U:H4'	1:AA:1066:C:O5'	2.18	0.43
1:CA:21:G:H2'	1:CA:22:G:C8	2.53	0.43
1:CA:728:A:H2'	1:CA:729:A:C8	2.53	0.43
24:BA:2444:G:OP2	28:BF:68:LYS:HD2	2.18	0.43
52:D7:34:ARG:NH1	52:D7:41:ARG:O	2.51	0.43
26:DD:159:ALA:HB1	26:DD:198:ASN:O	2.18	0.43
9:CL:78:LYS:HZ3	9:CL:101:PHE:HA	1.83	0.43
20:CW:22:ARG:O	20:CW:26:ASN:ND2	2.52	0.43
24:BA:1050:A:H2'	24:BA:1051:G:O4'	2.18	0.43
49:D4:39:CYS:C	49:D4:41:PRO:HD2	2.32	0.43
29:DG:112:PRO:HB2	49:D4:35:VAL:CG1	2.48	0.43
1:AA:1147:C:H2'	9:AL:16:ARG:NH2	2.34	0.43
24:DA:1051:G:H2'	24:DA:1052:C:H5'	2.01	0.43
13:CP:77:ASN:HA	13:CP:80:ARG:HE	1.84	0.43
36:B0:3:HIS:O	36:B0:4:LEU:C	2.56	0.43
25:DB:3:C:N4	25:DB:117:G:H1	2.02	0.43
24:BA:2286:A:C8	24:BA:2287:A:N6	2.87	0.43
1:CA:1306:A:N6	1:CA:1331:G:H1'	2.33	0.43
53:D8:29:LYS:HB2	53:D8:44:LYS:CB	2.42	0.43
24:BA:1057:A:O2'	24:BA:1058:U:O5'	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1070:A:H3'	24:BA:1072:C:OP2	2.18	0.43
24:BA:1728:G:H2'	24:BA:1731:G:O6	2.18	0.43
7:AJ:24:THR:HA	7:AJ:27:ILE:HB	2.00	0.43
28:DF:53:THR:HG22	28:DF:56:GLU:CG	2.48	0.43
1:CA:1117:G:H2'	9:CL:104:ARG:CZ	2.47	0.43
24:BA:154:G:H2'	24:BA:155:C:C6	2.54	0.43
24:BA:1693:U:O2'	26:BD:14:ARG:NH2	2.52	0.43
1:CA:1081:G:OP1	5:CH:18:ARG:HB2	2.17	0.43
1:CA:1160:G:H22	1:CA:1176:A:H2	1.66	0.43
1:CA:1226:C:H4'	19:CV:80:TYR:OH	2.19	0.43
24:DA:2191:G:C4	24:DA:2192:G:C8	3.06	0.43
1:CA:9:G:H2'	1:CA:10:A:H8	1.84	0.43
1:CA:162:A:C5	1:CA:163:C:H1'	2.54	0.43
25:DB:12:C:OP2	25:DB:12:C:H6	2.01	0.43
5:AH:139:LEU:HA	5:AH:142:LEU:HG	2.01	0.43
12:CO:48:PRO:O	12:CO:49:ASN:ND2	2.51	0.43
29:DG:174:GLU:OE1	29:DG:182:LYS:NZ	2.41	0.43
10:AM:45:ARG:HD3	14:AQ:36:PHE:CE2	2.54	0.43
5:CH:42:GLY:HA2	5:CH:65:ASN:O	2.19	0.43
1:CA:938:A:N6	1:CA:939:G:C6	2.86	0.43
24:DA:254:G:H4'	24:DA:384:U:H5'	1.99	0.43
1:AA:103:C:H2'	1:AA:104:G:C8	2.53	0.43
8:AK:81:HIS:HB2	8:AK:138:TRP:CE3	2.54	0.43
12:AO:10:LEU:HB3	17:AT:32:TYR:CE2	2.53	0.43
24:DA:856:C:O2'	24:DA:857:C:OP1	2.23	0.43
41:DS:111:HIS:HB2	41:DS:112:GLY:H	1.61	0.43
4:AG:121:VAL:O	4:AG:134:ASP:HA	2.18	0.43
16:AS:46:PRO:O	16:AS:48:TRP:HD1	2.00	0.43
47:BW:42:GLY:O	47:BW:44:LEU:N	2.52	0.43
18:CU:19:LYS:CG	18:CU:20:ALA:H	2.32	0.43
2:AE:33:TYR:HB2	2:AE:43:ASP:N	2.34	0.43
45:B3:41:ARG:HE	45:B3:41:ARG:HA	1.82	0.43
35:DP:31:ASP:O	35:DP:134:ARG:HB3	2.19	0.43
34:DO:46:LYS:HD3	34:DO:51:PHE:CG	2.54	0.43
24:DA:1084:A:O2'	24:DA:1105:U:H1'	2.19	0.43
24:DA:1094:U:O2'	24:DA:1095:A:H5''	2.19	0.43
24:BA:1063:G:C5	24:BA:1064:C:C4	3.07	0.43
24:BA:1065:U:C2	24:BA:1066:U:H1'	2.53	0.43
1:CA:1219:U:OP1	14:CQ:19:ARG:NH1	2.52	0.43
24:DA:2749:A:O3'	30:DH:62:LYS:HE2	2.18	0.43
1:AA:1079:G:C6	1:AA:1080:A:N6	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:897:C:O2'	24:BA:898:C:OP1	2.34	0.43
26:BD:67:PHE:CD1	26:BD:153:ALA:HB3	2.53	0.43
26:BD:92:ILE:HB	26:BD:104:TYR:HD1	1.82	0.43
2:AE:21:ARG:O	2:AE:23:ARG:N	2.44	0.43
1:AA:1151:A:O2'	10:AM:70:ARG:NH1	2.52	0.43
4:AG:3:ARG:HH21	4:AG:3:ARG:CG	2.31	0.43
24:DA:226:G:H21	24:DA:228:A:H62	1.66	0.43
38:BR:125:ARG:HA	38:BR:128:GLU:HB3	2.01	0.43
2:CE:174:VAL:HG13	2:CE:184:VAL:HG21	2.01	0.43
24:BA:528:A:C2	24:BA:2042:A:H2'	2.54	0.43
24:BA:958:U:OP1	35:BP:74:TYR:OH	2.20	0.43
24:DA:1339:G:H21	24:DA:1603:A:H1'	1.83	0.43
47:DW:37:PHE:O	47:DW:41:ILE:HG23	2.19	0.43
1:CA:1342:C:H2'	1:CA:1343:G:H8	1.82	0.43
27:DE:116:VAL:HG23	27:DE:120:TRP:HD1	1.83	0.43
2:CE:80:ILE:HG21	2:CE:212:GLN:HG2	1.99	0.43
24:DA:152:G:H2'	24:DA:153:C:O4'	2.18	0.43
1:AA:713:G:H2'	1:AA:714:G:C8	2.53	0.43
42:BT:5:TYR:O	47:BW:36:ARG:NH2	2.51	0.43
1:AA:913:A:H4'	1:AA:914:A:O5'	2.19	0.43
1:CA:318:G:H2'	1:CA:319:G:H8	1.84	0.43
24:DA:686:G:H2'	24:DA:788:A:N1	2.34	0.43
29:DG:123:ASN:C	29:DG:125:PHE:H	2.22	0.43
37:DQ:5:THR:OG1	37:DQ:7:TYR:HB3	2.19	0.43
24:BA:2688:U:H5	24:BA:2720:U:OP2	2.02	0.43
24:DA:343:C:H2'	24:DA:344:G:C8	2.53	0.43
24:DA:2224:G:H4'	24:DA:2226:C:C2	2.53	0.43
51:D6:11:LEU:HD23	51:D6:51:GLU:OE1	2.18	0.43
24:BA:2590:A:OP2	26:BD:238:GLY:HA2	2.18	0.43
26:DD:67:PHE:HB3	26:DD:153:ALA:HB3	1.99	0.43
38:BR:48:ILE:O	38:BR:63:VAL:HA	2.18	0.43
1:CA:1077:G:N2	1:CA:1080:A:OP2	2.47	0.43
11:CN:82:VAL:HB	11:CN:108:ILE:HG23	2.00	0.43
24:BA:92:G:H2'	24:BA:93:C:C6	2.53	0.43
46:BZ:72:GLU:O	46:BZ:75:GLU:HB2	2.18	0.43
11:CN:61:ALA:HB1	11:CN:94:ALA:HB2	2.01	0.43
24:DA:1579:A:H2'	24:DA:1580:A:C8	2.53	0.43
42:BT:24:GLY:O	42:BT:82:GLN:HA	2.18	0.43
5:CH:135:THR:O	5:CH:138:ALA:HB3	2.19	0.43
25:BB:69:G:C5	25:BB:70:C:C5	3.07	0.43
44:BV:61:LEU:HA	44:BV:62:PRO:HD3	1.76	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:579:G:H2'	24:DA:580:C:C6	2.54	0.43
3:CF:180:ALA:HA	3:CF:206:GLU:HB3	2.00	0.43
24:BA:1035:U:H2'	24:BA:1036:G:C8	2.53	0.43
24:BA:2751:G:N1	30:BH:3:ARG:HD3	2.14	0.43
4:AG:34:GLU:HA	4:AG:34:GLU:OE2	2.18	0.43
24:DA:2784:C:H4'	27:DE:42:ASP:OD1	2.18	0.43
24:BA:747:U:OP1	50:B5:3:LYS:HG2	2.19	0.43
1:CA:1147:C:C5	1:CA:1148:U:C4	3.07	0.43
22:CD:20:U:H5''	22:CD:21:A:O4'	2.18	0.43
36:B0:2:ARG:CG	36:B0:5:LYS:NZ	2.81	0.43
2:AE:12:GLU:OE2	2:AE:12:GLU:N	2.51	0.43
24:DA:2419:U:H3'	53:D8:34:TRP:NE1	2.34	0.43
24:BA:1071:G:C8	24:BA:1089:G:C5	3.07	0.43
24:BA:1075:C:C2	24:BA:1076:C:H1'	2.54	0.43
24:BA:1090:U:H1'	24:BA:1102:C:H1'	2.00	0.43
30:DH:83:TYR:OH	30:DH:132:ARG:NH2	2.51	0.43
24:BA:2169:A:C5	24:BA:2170:A:C6	3.07	0.43
1:CA:1316:G:N1	1:CA:1319:A:OP2	2.50	0.43
24:BA:654(B):C:H2'	24:BA:654(C):G:O4'	2.19	0.43
24:DA:1112:G:H5'	30:DH:3:ARG:NE	2.34	0.43
16:AS:8:ARG:HB3	16:AS:28:ARG:NH1	2.34	0.43
1:AA:92:G:H2'	1:AA:93:U:O4'	2.19	0.43
44:BV:106:GLY:HA3	44:BV:144:LEU:HD12	2.00	0.43
24:BA:1471:A:OP2	24:BA:1521:G:N1	2.34	0.43
25:DB:48:A:H4'	37:DQ:95:HIS:CD2	2.45	0.43
24:BA:337:C:H5''	43:BU:4:LYS:CD	2.49	0.43
43:BU:35:TYR:CD2	43:BU:69:ALA:HB3	2.53	0.43
24:DA:814:C:H5''	40:D2:84:LYS:HB3	2.00	0.43
1:CA:1052:U:H5''	1:CA:1053:G:OP2	2.18	0.43
1:CA:1057:G:C4	1:CA:1204:A:C2	3.06	0.43
44:BV:151:HIS:HD1	44:BV:151:HIS:H	1.67	0.43
24:BA:1151:G:H4'	39:B1:81:HIS:CD2	2.54	0.43
24:BA:2311:A:C2	29:BG:88:ILE:HD11	2.53	0.43
1:CA:443:C:H2'	1:CA:444:C:H6	1.84	0.43
24:DA:1525:G:H2'	24:DA:1526:G:H8	1.84	0.43
38:DR:26:ASP:O	38:DR:49:VAL:HG12	2.18	0.43
28:BF:64:ILE:HD12	28:BF:64:ILE:HG23	1.87	0.43
28:BF:64:ILE:HG22	28:BF:65:TRP:NE1	2.33	0.43
7:CJ:134:ALA:O	7:CJ:138:LYS:N	2.45	0.43
1:AA:735:C:H2'	1:AA:736:C:H6	1.84	0.43
12:AO:86:ARG:HB3	12:AO:86:ARG:HE	1.60	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:581:C:OP1	39:B1:33:ARG:HG3	2.18	0.43
28:DF:120:GLU:HG3	28:DF:122:LYS:HG2	2.00	0.43
44:DV:108:PRO:HB3	44:DV:144:LEU:HD11	2.00	0.43
31:BK:129:THR:HA	31:BK:137:PRO:HA	1.99	0.43
26:DD:37:LEU:O	26:DD:38:LYS:C	2.57	0.43
1:AA:1410:G:H2'	1:AA:1411:C:C6	2.54	0.43
46:BZ:40:ARG:HB2	46:BZ:40:ARG:HE	1.64	0.43
24:BA:1153:C:H5'	39:B1:76:TYR:HE1	1.83	0.43
24:BA:2292:C:OP1	37:BQ:17:ARG:NH1	2.46	0.43
24:BA:825:C:H4'	24:BA:2428:G:N7	2.34	0.43
24:DA:856:C:H3'	24:DA:856:C:C6	2.53	0.43
24:DA:1484:G:C2	24:DA:1506:C:C2	3.07	0.43
24:BA:2008:C:H2'	24:BA:2009:G:H8	1.84	0.43
41:BS:58:ALA:HB1	41:BS:64:MET:HB2	2.01	0.43
24:BA:1819:A:H4'	24:BA:1820:U:O5'	2.19	0.43
24:DA:2623:G:H2'	24:DA:2624:G:C8	2.54	0.43
27:BE:1:MET:N	27:BE:83:ASP:O	2.36	0.43
33:DN:2:ILE:HD12	33:DN:6:THR:HG21	1.99	0.43
24:DA:2556:C:H2'	24:DA:2557:G:O4'	2.19	0.43
28:DF:200:GLU:OE2	28:DF:201:VAL:N	2.52	0.43
1:CA:885:G:O2'	1:CA:914:A:N1	2.42	0.43
30:BH:98:LEU:HD22	30:BH:125:VAL:HG23	2.01	0.43
24:DA:1810:A:H2'	24:DA:1811:G:O4'	2.19	0.43
38:BR:77:PRO:HB2	38:BR:80:SER:HB2	2.01	0.43
11:AN:18:ARG:NH2	11:AN:35:PRO:O	2.52	0.43
2:CE:180:LEU:C	2:CE:182:ILE:H	2.22	0.43
1:AA:1057:G:C4	1:AA:1204:A:C2	3.07	0.43
24:DA:2615:U:C2	50:D5:7:PRO:HA	2.53	0.43
24:DA:2115:G:C6	24:DA:2117:A:H8	2.36	0.43
24:DA:2129:C:C2'	24:DA:2130:U:H5'	2.49	0.43
24:DA:2130:U:O2'	24:DA:2134:A:H8	2.01	0.43
24:DA:2157:G:H2'	24:DA:2158:A:H8	1.84	0.43
1:CA:1277:C:O2'	1:CA:1279:A:H1'	2.19	0.43
13:AP:80:ARG:CZ	49:B4:55:ARG:HE	2.31	0.43
34:BO:91:PHE:HD2	34:BO:95:VAL:HG22	1.83	0.43
32:DM:56:ASN:HB3	32:DM:59:LYS:HB2	2.00	0.43
20:AW:26:ASN:HB2	20:AW:71:THR:OG1	2.19	0.43
24:DA:783:A:C8	24:DA:784:A:H4'	2.49	0.43
2:AE:215:LEU:HD13	2:AE:215:LEU:HA	1.81	0.43
24:DA:2:G:H1	24:DA:2901:C:N4	2.10	0.43
1:CA:1011:G:C2	1:CA:1019:C:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:105:THR:HB	27:BE:197:ILE:HG12	2.01	0.43
1:AA:1295:G:O3'	13:AP:14:ARG:NH1	2.52	0.43
37:DQ:110:LEU:HB2	37:DQ:112:PHE:CZ	2.54	0.43
24:DA:640:C:H42	24:DA:648:G:H1	1.67	0.43
12:AO:53:ARG:HB3	12:AO:69:TYR:HE1	1.83	0.43
31:DK:74:ASN:HB2	31:DK:75:LEU:H	1.51	0.43
29:DG:170:ARG:NH2	29:DG:174:GLU:OE1	2.37	0.43
1:CA:1099:G:C6	1:CA:1100:C:N3	2.86	0.43
43:DU:46:LYS:HB2	43:DU:46:LYS:HE3	1.28	0.43
5:CH:74:GLY:HA3	5:CH:116:THR:OG1	2.19	0.43
1:AA:52:G:H2'	1:AA:53:A:C8	2.54	0.43
4:CG:129:ASN:HA	4:CG:145:GLU:HB3	1.99	0.43
18:CU:29:PHE:CE2	18:CU:31:LEU:HB3	2.54	0.43
24:DA:184:C:H2'	24:DA:185:U:C6	2.54	0.43
24:DA:270(E):G:H2'	24:DA:270(F):U:O4'	2.18	0.43
32:BM:34:LEU:O	32:BM:49:GLY:HA3	2.18	0.43
24:BA:1543:A:C2	24:BA:1545:A:C4	3.06	0.43
48:BX:7:LYS:HB2	48:BX:34:GLU:HG2	2.01	0.43
9:AL:49:PRO:HD3	9:AL:101:PHE:CE1	2.54	0.43
24:DA:588:U:H2'	24:DA:589:C:C6	2.54	0.43
24:BA:2591:C:P	26:BD:239:ARG:HG3	2.58	0.43
29:BG:107:LEU:HD11	29:BG:178:PHE:CE1	2.53	0.43
4:AG:85:LYS:HB3	4:AG:86:LYS:H	1.59	0.43
31:DK:10:GLU:OE2	31:DK:11:ASN:ND2	2.52	0.43
29:BG:146:TYR:O	29:BG:149:VAL:HG22	2.19	0.43
24:BA:2887:U:H2'	24:BA:2888:C:H6	1.84	0.43
32:BM:41:ASP:HA	39:B1:64:ARG:HH22	1.82	0.43
46:DZ:53:VAL:HG22	46:DZ:74:VAL:HG13	2.00	0.43
20:CW:34:LYS:O	20:CW:38:LYS:N	2.42	0.43
10:AM:87:THR:O	10:AM:89:ASP:N	2.50	0.43
40:D2:44:LYS:O	40:D2:46:VAL:HG12	2.19	0.43
1:AA:310:G:P	16:AS:27:LYS:HZ1	2.42	0.43
2:AE:85:ALA:O	2:AE:90:MET:N	2.31	0.43
14:AQ:4:LYS:O	14:AQ:7:ILE:HG12	2.19	0.43
24:BA:2658:C:H4'	30:BH:158:HIS:CE1	2.53	0.43
1:CA:1255:G:H2'	1:CA:1258:G:H21	1.82	0.43
9:CL:17:VAL:HG22	9:CL:63:ILE:HD11	2.00	0.43
9:CL:5:TYR:HE1	9:CL:16:ARG:HG3	1.83	0.43
22:CD:14:A:N1	22:CD:15:G:N2	2.67	0.43
2:AE:12:GLU:O	2:AE:17:PHE:HE1	2.02	0.43
1:AA:1382:C:O4'	7:AJ:79:ARG:NE	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:475:G:H2'	1:CA:476:G:H8	1.84	0.43
22:AD:7:G:C6	22:AD:49:G:C5	3.07	0.43
24:BA:2123:G:C6	24:BA:2124:G:C4	3.07	0.43
19:CV:33:THR:CG2	19:CV:34:TRP:N	2.79	0.43
45:B3:27:GLU:HA	45:B3:67:VAL:HG12	2.01	0.43
1:CA:589:C:N4	1:CA:650:G:H1	2.08	0.43
20:CW:64:ASP:N	20:CW:64:ASP:OD1	2.51	0.43
5:CH:100:VAL:HA	5:CH:118:ILE:HG22	2.00	0.43
24:BA:458:G:O2'	52:B7:39:ARG:HD3	2.19	0.43
24:DA:988:A:P	48:DX:11:SER:HB2	2.59	0.43
24:BA:994:C:O2'	24:BA:996:A:OP1	2.25	0.43
53:B8:52:LYS:N	53:B8:53:PRO:HD2	2.33	0.43
1:AA:1153:C:H5''	10:AM:14:LYS:NZ	2.34	0.43
1:AA:1175:G:H2'	1:AA:1176:A:H8	1.83	0.43
14:CQ:42:ILE:HA	14:CQ:45:ARG:HB3	1.99	0.43
24:DA:2477:C:H5'	24:DA:2479:G:O6	2.19	0.43
49:B4:14:ILE:HG13	49:B4:24:THR:HG21	2.01	0.43
30:BH:88:LEU:HG	30:BH:90:LYS:NZ	2.34	0.43
25:BB:17:C:H2'	25:BB:18:G:O4'	2.19	0.43
7:CJ:108:ALA:O	7:CJ:110:GLN:N	2.52	0.43
1:AA:631:G:H2'	1:AA:632:A:C8	2.48	0.43
1:CA:909:A:H2'	1:CA:910:C:O4'	2.19	0.43
31:BK:133:HIS:HB2	31:BK:134:PRO:CD	2.49	0.43
24:BA:1332:G:C8	24:BA:1332:G:H5'	2.53	0.43
24:BA:1332:G:N2	24:BA:1610:A:C8	2.83	0.43
24:DA:2516:G:C6	24:DA:2517:C:C4	3.07	0.43
1:CA:197:A:H1'	1:CA:198:G:O4'	2.18	0.43
22:CC:1:C:HO2'	22:CC:2:G:C5'	2.28	0.43
19:CV:71:LEU:HA	19:CV:71:LEU:HD23	1.76	0.43
24:BA:1406:U:H2'	24:BA:1407:C:H6	1.82	0.43
1:AA:298:A:H2'	1:AA:299:G:O4'	2.19	0.43
24:DA:1187:G:H5''	40:D2:76:LYS:HZ3	1.84	0.43
44:DV:144:LEU:HB2	44:DV:174:VAL:HG21	2.01	0.43
1:AA:22:G:H2'	1:AA:23:C:C6	2.54	0.43
24:DA:601:C:O2'	24:DA:605:C:H5''	2.18	0.43
2:AE:193:ASP:N	2:AE:193:ASP:OD1	2.52	0.43
24:DA:2694:G:H2'	24:DA:2695:C:H6	1.84	0.43
1:CA:922:G:H4'	5:CH:20:GLN:HA	2.01	0.43
37:BQ:72:ALA:O	37:BQ:76:LYS:HG3	2.19	0.43
1:CA:757:U:O2'	1:CA:879:C:H1'	2.18	0.43
24:BA:1354:A:H2'	24:BA:1355:G:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AI:1:MET:HE2	6:AI:67:MET:HA	2.00	0.43
41:DS:110:LYS:HG3	41:DS:111:HIS:CD2	2.53	0.43
33:BN:26:LYS:HB2	33:BN:26:LYS:HE3	1.77	0.43
51:D6:11:LEU:HD23	51:D6:51:GLU:CD	2.40	0.43
32:BM:57:ALA:O	32:BM:60:ILE:HG23	2.19	0.43
16:CS:8:ARG:HD3	16:CS:17:TYR:CE1	2.54	0.43
30:BH:104:GLU:HG3	30:BH:114:VAL:HG22	2.00	0.43
24:BA:849:A:N6	24:BA:929:G:O2'	2.48	0.43
41:BS:33:ARG:NH2	41:BS:52:GLU:OE1	2.51	0.43
33:DN:66:LYS:NZ	33:DN:80:ASP:O	2.48	0.43
24:DA:244:A:O3'	34:DO:74:GLU:HB3	2.18	0.43
24:BA:507:A:H5''	24:BA:508:G:H5'	2.01	0.43
24:BA:1328:G:H8	24:BA:1328:G:OP2	2.02	0.43
24:DA:653:A:H5''	24:DA:654:A:OP1	2.18	0.43
20:AW:54:LYS:HB2	20:AW:54:LYS:HE3	1.78	0.43
34:BO:41:ARG:N	34:BO:41:ARG:HD2	2.34	0.43
6:AI:45:LEU:HD12	6:AI:59:TYR:HD1	1.84	0.43
1:CA:410:G:C2	1:CA:429:U:C2	3.07	0.43
49:D4:26:SER:OG	49:D4:27:THR:N	2.51	0.43
24:DA:890:A:H2'	24:DA:892:G:C8	2.54	0.43
1:AA:457:C:H2'	1:AA:458:C:C6	2.53	0.43
24:DA:1068:G:C2	24:DA:1069:A:C4	3.07	0.43
22:CD:46:G:OP1	22:CD:46:G:H8	2.01	0.43
1:CA:1028:C:H2'	1:CA:1028(A):C:C5	2.53	0.43
1:CA:1035:A:N6	1:CA:1036:G:C5	2.87	0.43
2:CE:217:ARG:HA	2:CE:220:ASP:HB2	2.00	0.43
1:AA:1025:U:H4'	1:AA:1026:G:H8	1.84	0.43
22:AD:49:G:O5'	22:AD:49:G:H8	2.01	0.43
19:CV:81:ARG:HE	19:CV:81:ARG:HB2	1.30	0.43
30:DH:61:HIS:HA	30:DH:64:LEU:HD12	2.00	0.43
24:BA:1533:C:H3'	24:BA:1534:G:H5''	2.01	0.43
24:DA:2666:C:N4	30:DH:152:ARG:HH22	2.17	0.43
44:DV:150:LEU:HD22	44:DV:154:ASP:CG	2.39	0.43
1:AA:1180:A:OP1	9:AL:103:THR:OG1	2.35	0.43
24:DA:2314:C:O2'	24:DA:2315:G:H5'	2.18	0.43
13:AP:44:ARG:O	13:AP:47:ASP:N	2.51	0.43
24:DA:35:G:H2'	24:DA:36:G:O4'	2.19	0.43
2:AE:74:LYS:O	2:AE:78:GLN:HG3	2.19	0.43
24:DA:1534:G:H5'	24:DA:1535:U:OP2	2.19	0.43
36:B0:75:LEU:O	36:B0:79:LEU:HB2	2.19	0.43
24:DA:1359:A:H2'	24:DA:1360:A:H5'	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2378:A:O2'	37:DQ:23:ARG:HD2	2.19	0.43
8:CK:103:VAL:HG21	8:CK:109:ILE:C	2.39	0.43
22:CC:31:G:H2'	22:CC:32:C:H6	1.84	0.43
24:BA:312:G:H5'	24:BA:331:A:O2'	2.19	0.43
1:CA:157:G:H2'	1:CA:158:G:H8	1.84	0.43
1:AA:28:G:O2'	1:AA:296:U:OP1	2.33	0.43
38:DR:74:ARG:HD3	38:DR:76:PHE:CZ	2.54	0.43
1:CA:842:C:H4'	1:CA:843:U:C5	2.54	0.43
24:BA:128:C:H2'	24:BA:129:C:C6	2.54	0.43
2:AE:58:ILE:HD11	2:AE:185:ILE:CD1	2.49	0.43
29:DG:178:PHE:HA	29:DG:179:PRO:HD2	1.66	0.43
24:BA:1424:G:H2'	24:BA:1425:G:O4'	2.19	0.43
53:D8:50:LEU:O	53:D8:51:ALA:HB2	2.18	0.43
24:DA:1607:C:N4	24:DA:1622:G:OP2	2.42	0.43
24:DA:1255:U:C5	28:DF:73:ALA:HA	2.54	0.43
24:BA:848:G:H2'	24:BA:849:A:C8	2.54	0.43
31:DK:122:GLU:HB3	31:DK:126:TYR:OH	2.18	0.43
46:DZ:4:VAL:HG12	46:DZ:11:ARG:HB3	2.01	0.43
17:AT:29:HIS:CD2	17:AT:30:PRO:HD2	2.53	0.43
35:BP:110:THR:HG23	35:BP:113:GLN:OE1	2.19	0.43
11:CN:120:ARG:HA	11:CN:121:PRO:HD3	1.76	0.43
24:DA:899:A:O2'	24:DA:900:A:H5'	2.19	0.43
10:CM:9:ARG:HB2	10:CM:95:GLU:HB3	2.01	0.43
24:DA:1363:C:O2'	24:DA:1809:A:N3	2.44	0.43
41:BS:6:ILE:HG12	41:BS:104:THR:HG23	2.01	0.43
1:AA:300:A:C5	1:AA:301:G:H1'	2.54	0.43
45:B3:19:LYS:HA	45:B3:19:LYS:HD3	1.83	0.43
15:CR:3:ILE:HG22	15:CR:38:ARG:NH1	2.33	0.43
24:DA:2198:A:OP1	31:DK:33:ARG:NH2	2.51	0.43
24:BA:1973:G:H2'	24:BA:1974:C:H6	1.84	0.43
24:BA:311:A:C6	24:BA:328:U:C4	3.07	0.43
12:CO:17:LYS:HD3	12:CO:17:LYS:HA	1.71	0.43
38:BR:87:ASP:OD1	38:BR:87:ASP:N	2.51	0.43
48:BX:17:LYS:H	48:BX:17:LYS:HG2	1.57	0.43
1:CA:792:A:H1'	1:CA:794:A:N7	2.34	0.43
24:DA:250:G:H5'	34:DO:60:MET:HE1	2.01	0.42
24:DA:2115:G:N2	24:DA:2172:U:C4	2.87	0.42
24:DA:2168:G:N1	24:DA:2170:A:H8	2.15	0.42
43:DU:54:LYS:C	43:DU:55:TYR:CD2	2.92	0.42
24:DA:1097:U:C4	24:DA:1098:A:C5	3.07	0.42
2:CE:69:LEU:HG	2:CE:91:PRO:HB2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:78:LEU:HG	27:BE:79:ARG:HG3	2.01	0.42
24:BA:1060:U:H3	24:BA:1088:A:H8	1.67	0.42
22:AD:52:G:C2	22:AD:53:G:C8	3.07	0.42
24:BA:662:G:H5'	34:BO:15:ARG:HA	2.01	0.42
1:AA:1291:G:OP1	7:AJ:37:ASN:ND2	2.53	0.42
13:CP:52:GLU:HA	13:CP:55:ARG:HG3	2.01	0.42
24:DA:2665:A:H2'	24:DA:2666:C:C6	2.54	0.42
24:DA:1036:G:O6	24:DA:1119:C:N4	2.39	0.42
4:AG:119:GLN:HG2	4:AG:123:HIS:CD2	2.54	0.42
25:DB:104:A:O4'	44:DV:29:TYR:HE2	2.02	0.42
6:AI:19:LEU:O	6:AI:23:LYS:NZ	2.52	0.42
9:AL:11:LYS:HG2	9:AL:11:LYS:HZ2	1.70	0.42
9:AL:11:LYS:C	9:AL:13:ALA:H	2.19	0.42
44:DV:68:PRO:O	44:DV:91:LEU:N	2.52	0.42
2:CE:18:GLY:HA2	2:CE:42:ILE:HG22	2.00	0.42
1:CA:113:G:C1'	1:CA:354:G:H5'	2.47	0.42
37:BQ:88:ASP:O	37:BQ:89:ARG:HB3	2.19	0.42
39:D1:72:HIS:CD2	39:D1:110:VAL:HG21	2.46	0.42
12:AO:115:LYS:O	12:AO:117:ARG:N	2.45	0.42
18:CU:35:ARG:O	18:CU:37:VAL:N	2.51	0.42
7:CJ:69:VAL:HG21	7:CJ:104:LEU:HD11	2.00	0.42
9:CL:128:ARG:NH2	22:CC:31:G:O5'	2.49	0.42
5:AH:62:ALA:C	5:AH:64:ARG:H	2.22	0.42
46:DZ:87:PRO:O	46:DZ:88:LYS:C	2.58	0.42
31:DK:76:THR:CG2	31:DK:140:LEU:HD13	2.49	0.42
24:DA:139:G:H22	24:DA:1596:A:H4'	1.84	0.42
24:DA:1576:U:H2'	24:DA:1577:C:H6	1.84	0.42
8:AK:105:ARG:C	8:AK:107:LEU:H	2.19	0.42
1:CA:151:A:H2'	1:CA:152:A:O4'	2.19	0.42
27:DE:144:ARG:HB3	27:DE:145:LYS:H	1.37	0.42
1:CA:552:U:H2'	1:CA:553:A:C8	2.54	0.42
1:AA:843:U:H3'	1:AA:848:C:C6	2.54	0.42
1:CA:571:U:O4	1:CA:864:A:N6	2.52	0.42
24:BA:443:A:H5''	24:BA:444:C:OP1	2.19	0.42
53:D8:23:VAL:HG22	53:D8:47:LYS:HB3	2.01	0.42
29:BG:131:TYR:HB3	29:BG:159:VAL:HG23	2.00	0.42
27:DE:169:ASN:HD22	27:DE:169:ASN:C	2.23	0.42
24:BA:271(B):G:N7	24:BA:421:U:H2'	2.34	0.42
27:BE:34:VAL:O	27:BE:67:PHE:HB3	2.19	0.42
24:DA:2607:G:H2'	24:DA:2608:G:O4'	2.18	0.42
5:CH:53:LEU:O	5:CH:57:LYS:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:528:A:H2	24:DA:2043:C:C5'	2.31	0.42
6:CI:23:LYS:HE2	6:CI:23:LYS:HB3	1.83	0.42
28:BF:127:GLU:O	28:BF:129:PHE:N	2.51	0.42
38:DR:10:VAL:O	38:DR:12:SER:N	2.52	0.42
48:DX:9:VAL:HG12	48:DX:32:GLN:HE22	1.84	0.42
24:BA:1378:A:O2'	24:BA:1380:G:N7	2.42	0.42
22:CC:17:C:OP2	22:CC:17(A):C:O2'	2.37	0.42
22:CC:25:C:H2'	22:CC:26:G:O4'	2.19	0.42
8:AK:106:GLY:HA2	8:AK:122:ARG:HH12	1.83	0.42
1:CA:936:C:O2	1:CA:1382:C:N4	2.32	0.42
36:D0:24:GLN:HB3	36:D0:44:LEU:HD11	2.01	0.42
13:AP:50:GLU:O	13:AP:54:VAL:HG23	2.19	0.42
31:DK:56:LYS:O	31:DK:60:GLU:HB2	2.19	0.42
26:BD:79:VAL:HG21	26:BD:111:LEU:HD21	2.00	0.42
39:D1:92:ARG:HH22	40:D2:10:LYS:HB3	1.84	0.42
24:DA:994:C:O2	40:D2:10:LYS:HE2	2.19	0.42
24:DA:2115:G:O2'	24:DA:2165:G:N2	2.52	0.42
28:DF:3:GLU:CA	28:DF:24:LEU:HD11	2.41	0.42
36:B0:3:HIS:O	36:B0:5:LYS:HG3	2.20	0.42
1:CA:689:C:OP1	11:CN:27:ASN:ND2	2.43	0.42
1:CA:468:A:O2'	16:CS:81:ARG:HA	2.18	0.42
24:BA:1061:U:H3'	24:BA:1062:G:C5'	2.50	0.42
24:BA:1063:G:C6	24:BA:1064:C:N3	2.87	0.42
22:AD:8:U:C2	22:AD:14:A:C5	3.07	0.42
1:CA:955:U:H2'	1:CA:956:U:H6	1.84	0.42
2:AE:83:MET:O	2:AE:87:ARG:N	2.45	0.42
24:BA:879:G:OP2	24:BA:879:G:H8	2.01	0.42
1:CA:186:C:H1'	20:CW:81:LYS:HE2	2.01	0.42
20:CW:100:ILE:HG22	20:CW:102:GLY:H	1.83	0.42
22:AD:36:U:C2	22:AD:37:A:C8	3.06	0.42
24:BA:2135:A:C2	24:BA:2136:C:H1'	2.54	0.42
7:CJ:35:LYS:HA	7:CJ:35:LYS:HD3	1.78	0.42
7:CJ:33:ASP:C	7:CJ:35:LYS:H	2.21	0.42
53:B8:52:LYS:N	53:B8:53:PRO:CD	2.82	0.42
24:BA:2642:G:P	32:BM:76:SER:HG	2.41	0.42
1:CA:35:G:H1	1:CA:549:C:H42	1.67	0.42
24:BA:277:C:H5'	24:BA:278:A:C8	2.54	0.42
1:CA:826:C:H42	1:CA:874:G:H1	1.66	0.42
40:D2:71:LEU:HA	40:D2:86:GLY:HA2	2.01	0.42
3:CF:119:ARG:HD3	3:CF:123:GLN:NE2	2.34	0.42
24:BA:1181:C:H2'	24:BA:1182:A:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:851:G:H2'	1:CA:852:G:H8	1.83	0.42
24:DA:1614:A:N6	41:DS:88:ARG:H	2.17	0.42
24:DA:2294:C:P	37:DQ:89:ARG:HH22	2.42	0.42
24:DA:1545:A:N6	24:DA:1545(A):A:N1	2.66	0.42
1:CA:1251:A:H2'	1:CA:1252:A:C8	2.54	0.42
4:AG:108:LEU:HD23	4:AG:110:PHE:CE1	2.54	0.42
4:AG:78:LEU:HB2	4:AG:93:PHE:HE1	1.84	0.42
2:CE:77:ALA:O	2:CE:81:VAL:HG23	2.19	0.42
40:B2:35:LEU:H	40:B2:35:LEU:HD22	1.84	0.42
24:BA:243:U:OP1	53:B8:6:THR:OG1	2.28	0.42
1:AA:575:G:C4	1:AA:881:G:C2	3.08	0.42
2:CE:55:PHE:HA	2:CE:58:ILE:HD11	2.01	0.42
2:CE:55:PHE:HA	2:CE:55:PHE:HD1	1.73	0.42
53:D8:24:ALA:O	53:D8:47:LYS:HA	2.19	0.42
8:CK:45:ILE:HG22	8:CK:47:GLY:H	1.83	0.42
47:DW:13:ALA:HA	47:DW:16:LEU:CD2	2.48	0.42
32:BM:17:ASP:O	32:BM:56:ASN:HB2	2.19	0.42
24:DA:1252:G:O4'	39:D1:33:ARG:HD2	2.20	0.42
13:AP:78:ILE:HG22	13:AP:82:MET:HG3	2.00	0.42
24:BA:475:U:C4	24:BA:481:G:O6	2.72	0.42
16:AS:23:ASP:OD2	16:AS:25:ARG:NH1	2.52	0.42
39:D1:68:ALA:O	39:D1:71:GLN:HB3	2.18	0.42
28:DF:152:GLU:HA	28:DF:190:GLU:OE2	2.20	0.42
13:AP:50:GLU:N	13:AP:50:GLU:OE2	2.34	0.42
11:CN:109:VAL:HG12	18:CU:86:VAL:HA	2.01	0.42
2:CE:71:VAL:O	2:CE:164:VAL:HA	2.19	0.42
24:BA:733:G:C8	24:BA:761:A:N6	2.87	0.42
32:DM:54:VAL:HB	32:DM:122:VAL:HG22	2.01	0.42
1:AA:922:G:N3	1:AA:1398:A:H2	2.17	0.42
24:BA:2209:C:O2	24:BA:2216:G:C2	2.73	0.42
1:AA:1113:C:H42	1:AA:1187:G:H1	1.65	0.42
28:BF:126:VAL:HG11	28:BF:142:TRP:HH2	1.84	0.42
33:DN:104:ARG:N	33:DN:122:LEU:O	2.52	0.42
5:CH:75:THR:OG1	5:CH:117:ASP:O	2.23	0.42
20:AW:46:GLU:O	20:AW:48:LYS:N	2.49	0.42
24:BA:679:C:H2'	24:BA:680:G:H8	1.85	0.42
13:CP:36:LYS:HE2	13:CP:36:LYS:HB3	1.72	0.42
44:BV:35:ARG:NH1	44:BV:35:ARG:HB3	2.34	0.42
1:AA:968:A:H8	1:AA:968:A:OP1	2.02	0.42
40:B2:49:THR:OG1	40:B2:50:PRO:HD2	2.19	0.42
27:DE:9:VAL:HG23	27:DE:10:GLY:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:154:PRO:HA	30:BH:161:GLY:HA3	2.00	0.42
24:DA:2346:A:H5''	24:DA:2383:G:H1'	2.01	0.42
27:DE:53:PRO:HA	27:DE:74:PRO:HA	2.02	0.42
32:BM:15:LEU:HB3	32:BM:136:GLU:HA	2.01	0.42
24:DA:2169:A:N1	24:DA:2170:A:C4	2.87	0.42
13:AP:108:ARG:NH2	13:AP:114:ARG:HA	2.34	0.42
24:DA:1073:A:H2'	24:DA:1074:G:C8	2.54	0.42
2:CE:69:LEU:HB3	2:CE:162:ILE:HG22	2.01	0.42
22:CD:22:G:OP2	22:CD:46:G:N1	2.30	0.42
2:CE:8:LYS:O	2:CE:9:GLU:HB3	2.19	0.42
1:CA:1305:G:N2	1:CA:1332:A:OP2	2.51	0.42
16:CS:82:GLN:NE2	16:CS:83:GLU:H	2.18	0.42
1:CA:1014:A:H2	1:CA:1219:U:H1'	1.85	0.42
1:CA:1320:C:H42	19:CV:36:ARG:CZ	2.33	0.42
1:CA:1320:C:N4	19:CV:36:ARG:HB2	2.34	0.42
24:BA:2854:G:H2'	24:BA:2855:C:H6	1.84	0.42
7:AJ:20:ASP:OD2	7:AJ:23:VAL:N	2.45	0.42
24:DA:2747:G:OP1	30:DH:138:LYS:HE2	2.18	0.42
30:DH:7:LEU:N	30:DH:8:PRO:HD2	2.34	0.42
1:CA:997:U:H2'	1:CA:998:G:H8	1.85	0.42
26:DD:147:LEU:HA	26:DD:147:LEU:HD13	1.90	0.42
1:AA:17:U:H2'	1:AA:18:C:C6	2.54	0.42
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.18	0.42
3:CF:148:GLY:HA3	3:CF:172:ARG:O	2.19	0.42
29:DG:61:ALA:HB2	29:DG:68:PRO:HD3	2.01	0.42
26:BD:61:LEU:HD12	26:BD:61:LEU:HA	1.91	0.42
24:BA:270(N):G:H21	31:BK:50:ARG:HH12	1.67	0.42
1:AA:159:G:H1'	1:AA:162:A:N6	2.34	0.42
24:BA:2098:U:H2'	24:BA:2099:U:O4'	2.20	0.42
24:BA:994:C:OP1	39:B1:53:ARG:NH2	2.52	0.42
24:BA:833:U:O2	34:BO:55:ARG:NH2	2.43	0.42
24:DA:2:G:H22	24:DA:2901:C:N4	2.16	0.42
24:BA:1694:C:H4'	24:BA:1695:G:O5'	2.19	0.42
8:AK:39:LEU:O	8:AK:44:PHE:N	2.45	0.42
24:DA:1178:C:N4	24:DA:1179:C:N3	2.67	0.42
5:AH:64:ARG:HB3	5:AH:65:ASN:H	1.61	0.42
43:DU:68:HIS:H	43:DU:71:LYS:NZ	2.18	0.42
1:CA:245:C:C2	1:CA:284:G:C2	3.08	0.42
24:DA:2568:C:H2'	24:DA:2569:G:O4'	2.19	0.42
9:CL:96:LEU:H	9:CL:98:PRO:HD2	1.83	0.42
24:DA:2765:A:H2	24:DA:2766:G:O4'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DP:32:TYR:OH	35:DP:133:ARG:NH2	2.52	0.42
22:AC:63:G:H2'	22:AC:64:G:H8	1.84	0.42
3:CF:21:ARG:NH1	10:CM:92:THR:OG1	2.51	0.42
4:AG:188:LEU:HA	4:AG:189:PRO:HD2	1.86	0.42
1:AA:1351:U:C1'	7:AJ:33:ASP:HB3	2.50	0.42
24:DA:128:C:H2'	24:DA:129:C:H6	1.85	0.42
1:CA:640:A:N6	1:CA:641:U:O4	2.53	0.42
6:AI:99:ALA:HB1	18:AU:23:LYS:NZ	2.34	0.42
43:BU:75:ILE:HG22	43:BU:79:CYS:O	2.18	0.42
38:DR:16:ARG:NH2	38:DR:19:LEU:HD21	2.35	0.42
1:AA:35:G:H2'	1:AA:36:C:H6	1.84	0.42
29:BG:57:ALA:HB2	29:BG:90:LEU:HD21	2.01	0.42
2:CE:60:ASP:O	2:CE:64:ARG:HB2	2.20	0.42
24:DA:858:U:O2	24:DA:2268:A:H2'	2.19	0.42
24:DA:1246:A:OP1	28:DF:38:ARG:NH1	2.51	0.42
24:DA:724:U:H2'	24:DA:725:G:O4'	2.19	0.42
34:DO:87:ASP:O	34:DO:90:ARG:HD3	2.19	0.42
1:AA:1508:G:H2'	1:AA:1509:C:C6	2.54	0.42
24:DA:2590:A:OP2	26:DD:238:GLY:HA2	2.20	0.42
48:BX:28:LEU:HD23	48:BX:33:GLN:HG2	2.01	0.42
45:B3:46:LYS:HB3	45:B3:46:LYS:HE2	1.84	0.42
3:AF:178:LEU:HD13	3:AF:178:LEU:HA	1.77	0.42
24:BA:2545:G:H2'	24:BA:2546:U:O4'	2.19	0.42
26:DD:71:ASP:CG	26:DD:103:ARG:HH22	2.22	0.42
27:DE:73:GLU:OE2	27:DE:73:GLU:HA	2.18	0.42
28:DF:23:ASP:O	28:DF:115:ALA:HA	2.18	0.42
29:DG:105:LYS:CD	49:D4:26:SER:HB3	2.49	0.42
24:BA:1064:C:C4	24:BA:1065:U:C2	3.06	0.42
24:BA:2171:A:O2'	24:BA:2172:U:O5'	2.37	0.42
1:CA:957:U:O2	1:CA:959:A:H8	2.02	0.42
25:DB:89:G:C4	25:DB:89(A):A:C2	3.08	0.42
3:CF:113:ALA:HB2	3:CF:202:ILE:HG13	2.00	0.42
24:DA:1046:A:H5''	24:DA:1047:G:C5'	2.49	0.42
24:BA:2262:U:H4'	24:BA:2328:A:C2	2.55	0.42
1:CA:1338:G:C6	1:CA:1339:A:C6	3.07	0.42
1:CA:1118:C:O4'	9:CL:104:ARG:HD3	2.19	0.42
1:CA:1261:A:H62	1:CA:1274:G:H21	1.67	0.42
26:BD:35:LYS:HZ2	26:BD:64:ILE:C	2.17	0.42
9:AL:127:LYS:NZ	22:AC:33:U:OP1	2.52	0.42
1:AA:165:C:H2'	1:AA:166:G:H8	1.84	0.42
7:CJ:41:ARG:O	7:CJ:45:ASP:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B6:45:LYS:HA	51:B6:45:LYS:HD3	1.68	0.42
43:BU:5:MET:HG2	43:BU:30:VAL:HG11	2.01	0.42
22:CD:28:C:H2'	22:CD:29:G:C8	2.54	0.42
24:DA:1569:A:O5'	26:DD:59:LYS:NZ	2.40	0.42
24:BA:2314:C:H2'	24:BA:2315:G:H8	1.84	0.42
39:D1:66:ASN:ND2	39:D1:70:ARG:HE	2.14	0.42
2:AE:29:ALA:O	2:AE:32:ILE:N	2.52	0.42
1:CA:1190:G:H5'	3:CF:176:HIS:NE2	2.34	0.42
37:DQ:83:LYS:HZ2	37:DQ:84:GLN:HG2	1.84	0.42
4:AG:196:LEU:HA	4:AG:196:LEU:HD23	1.86	0.42
5:AH:106:PRO:O	5:AH:110:LEU:HG	2.19	0.42
1:CA:197:A:C6	1:CA:221:C:H4'	2.54	0.42
24:BA:686:G:N2	24:BA:788:A:H61	2.16	0.42
24:DA:2401:U:O2	24:DA:2402:C:C5	2.73	0.42
31:DK:125:GLU:HA	31:DK:141:LYS:HA	2.02	0.42
1:AA:1017:G:H2'	1:AA:1018:C:O4'	2.19	0.42
1:AA:848:C:H2'	1:AA:849:C:C6	2.55	0.42
45:D3:50:ASN:C	45:D3:62:LEU:HD12	2.39	0.42
20:CW:41:ILE:HG22	20:CW:91:LEU:HD11	2.02	0.42
16:CS:40:ASP:HA	16:CS:41:PRO:HD2	1.89	0.42
1:CA:993:G:H1	1:CA:1045:C:N4	2.17	0.42
1:CA:256:U:H5''	17:CT:17:LYS:HZ1	1.85	0.42
32:BM:17:ASP:O	32:BM:19:GLU:N	2.48	0.42
24:DA:721:C:H2'	24:DA:722:A:C8	2.54	0.42
2:CE:29:ALA:HA	2:CE:32:ILE:HG12	2.02	0.42
24:DA:515:A:H1'	24:DA:581:C:H1'	2.02	0.42
9:CL:23:ASN:N	9:CL:58:HIS:O	2.53	0.42
20:CW:83:ARG:HA	20:CW:86:ARG:HH12	1.83	0.42
1:CA:67:C:H1'	1:CA:171:A:C2	2.55	0.42
17:AT:29:HIS:HA	17:AT:30:PRO:HD2	1.80	0.42
24:DA:70:G:OP1	24:DA:112:U:N3	2.43	0.42
1:AA:288:A:H2'	1:AA:289:G:H4'	2.02	0.42
24:BA:30:G:H2'	24:BA:31:C:C6	2.54	0.42
24:DA:243:U:OP2	53:D8:8:LYS:HE2	2.19	0.42
28:BF:81:PRO:HB3	28:BF:89:VAL:HG22	2.01	0.42
5:AH:127:ASN:HA	5:AH:128:PRO:HD2	1.86	0.42
24:BA:2131:G:OP1	24:BA:2132:U:H3'	2.20	0.42
24:BA:2040:C:H2'	24:BA:2041:U:O4'	2.19	0.42
1:CA:743:U:H2'	1:CA:744:C:C6	2.54	0.42
26:DD:164:GLN:OE1	26:DD:176:ARG:NH2	2.40	0.42
3:AF:85:ARG:HA	3:AF:85:ARG:HD2	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:196:A:H2'	24:BA:196:A:N3	2.34	0.42
47:BW:35:LEU:HA	47:BW:35:LEU:HD12	1.83	0.42
9:CL:93:ARG:HG3	9:CL:102:LEU:HD11	2.01	0.42
8:CK:41:ARG:HH22	8:CK:123:GLU:CD	2.22	0.42
28:BF:6:VAL:N	28:BF:24:LEU:O	2.52	0.42
40:B2:69:LYS:HA	40:B2:88:ARG:HG2	2.01	0.42
26:DD:34:VAL:HG11	26:DD:103:ARG:HA	2.01	0.42
24:DA:390:A:C6	34:DO:71:VAL:CG2	3.00	0.42
24:BA:2658:C:O3'	30:BH:158:HIS:NE2	2.53	0.42
30:BH:157:TYR:N	30:BH:171:LEU:O	2.53	0.42
1:AA:475:G:H8	1:AA:475:G:OP2	2.02	0.42
22:CD:18:G:H21	22:CD:57:A:H3'	1.84	0.42
24:BA:2680:C:H1'	27:BE:187:ALA:HB1	2.02	0.42
1:CA:1001:G:C2	1:CA:1002:G:H1'	2.55	0.42
1:CA:1022:G:H3'	1:CA:1023:G:H8	1.83	0.42
1:CA:1034:G:C4	1:CA:1035:A:C8	3.08	0.42
7:AJ:79:ARG:HH11	7:AJ:79:ARG:HD3	1.68	0.42
24:BA:2147:G:C6	24:BA:2148:G:C4	3.07	0.42
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.34	0.42
35:DP:16:ARG:O	35:DP:17:LEU:HD23	2.19	0.42
3:CF:52:LEU:HD12	3:CF:55:VAL:HG21	2.01	0.42
14:AQ:29:ARG:HD3	14:AQ:40:CYS:HB2	2.01	0.42
14:AQ:40:CYS:SG	14:AQ:43:CYS:N	2.78	0.42
1:AA:93:U:H2'	1:AA:95:G:C8	2.54	0.42
9:CL:7:THR:O	9:CL:83:ARG:NH1	2.52	0.42
34:BO:65:ARG:NH2	53:B8:15:LYS:HB2	2.25	0.42
1:CA:1326:C:H2'	1:CA:1327:C:C6	2.54	0.42
38:BR:91:ARG:O	38:BR:116:ALA:HA	2.19	0.42
2:AE:164:VAL:HB	2:AE:186:ALA:HB2	2.02	0.42
1:CA:1055:A:N6	1:CA:1206:G:N7	2.67	0.42
30:BH:40:GLU:HB2	30:BH:41:MET:HE1	2.01	0.42
13:CP:20:THR:HA	13:CP:25:ILE:HG21	2.01	0.42
24:DA:1538:G:H2'	24:DA:1539:G:C8	2.54	0.42
1:CA:491:G:C2	1:CA:492:G:C4	3.08	0.42
1:CA:1451:A:OP2	1:CA:1452:C:N4	2.52	0.42
34:BO:21:ARG:NE	34:BO:21:ARG:HA	2.31	0.42
29:BG:65:GLY:HA3	49:B4:9:LEU:HD22	2.00	0.42
24:BA:51:G:OP2	24:BA:51:G:H8	2.03	0.42
40:D2:32:THR:HA	40:D2:60:GLU:HA	2.01	0.42
2:CE:84:GLU:CD	2:CE:87:ARG:HH11	2.23	0.42
24:BA:365:C:H2'	24:BA:366:C:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AN:92:GLU:O	11:AN:96:ARG:HG3	2.20	0.42
1:AA:627:G:H2'	1:AA:628:G:H8	1.85	0.42
1:AA:1353:G:C2	1:AA:1370:G:C2	3.07	0.42
42:DT:51:VAL:HA	42:DT:83:VAL:HA	2.01	0.42
18:CU:23:LYS:O	18:CU:25:THR:N	2.52	0.42
7:CJ:16:LEU:HD11	9:CL:45:ALA:HB2	1.99	0.42
24:DA:2698:U:H2'	24:DA:2699:C:C6	2.54	0.42
24:BA:2663:G:C6	24:BA:2664:G:C4	3.08	0.42
22:CD:2:G:H1	22:CD:71:C:N4	2.17	0.42
1:AA:1436:U:OP1	20:AW:23:ARG:NH2	2.48	0.42
39:D1:85:LYS:HB2	39:D1:116:ALA:HB1	2.01	0.42
44:BV:5:LEU:HB3	44:BV:6:LYS:H	1.60	0.42
3:AF:46:GLU:CD	3:AF:46:GLU:H	2.22	0.42
24:BA:1996:C:OP1	33:BN:31:LYS:HE3	2.19	0.42
27:BE:52:LEU:O	27:BE:75:VAL:N	2.31	0.42
22:AC:19:G:C2	22:AC:57:A:N3	2.87	0.42
24:DA:2685:G:OP1	38:DR:51:ARG:NH2	2.50	0.42
28:BF:77:ASP:OD1	28:BF:77:ASP:N	2.52	0.42
24:DA:90:U:H2'	24:DA:91:A:H5''	2.02	0.42
24:BA:92:G:H2'	24:BA:93:C:H6	1.84	0.42
32:BM:18:ALA:HA	32:BM:21:LYS:HG3	2.01	0.42
24:DA:2563:U:O2	24:DA:2565:A:C8	2.72	0.42
24:BA:2312:U:OP1	29:BG:74:LYS:N	2.50	0.42
3:CF:138:VAL:O	3:CF:142:MET:HB2	2.19	0.42
25:BB:50:G:C2	25:BB:51:G:H1'	2.55	0.42
32:BM:137:LYS:HD2	32:BM:137:LYS:HA	1.69	0.42
42:BT:63:LYS:HG2	42:BT:63:LYS:H	1.49	0.42
24:BA:1050:A:C6	24:BA:1051:G:C5	3.07	0.42
39:D1:92:ARG:HD2	40:D2:11:GLN:OE1	2.20	0.42
24:DA:389:G:H8	24:DA:389:G:O5'	2.03	0.42
12:AO:47:LYS:HG3	12:AO:48:PRO:N	2.34	0.42
51:D6:15:GLU:HG3	51:D6:47:THR:HG23	1.97	0.42
27:DE:58:ARG:O	27:DE:60:ASN:ND2	2.52	0.42
28:DF:22:ALA:C	28:DF:24:LEU:H	2.23	0.42
49:D4:43:TYR:O	49:D4:44:THR:C	2.58	0.42
29:DG:109:VAL:HG13	49:D4:33:VAL:HG23	2.01	0.42
10:CM:45:ARG:HB3	10:CM:65:LEU:HB3	2.02	0.42
1:CA:686:U:O4	1:CA:703:G:H1'	2.19	0.42
49:B4:57:GLU:HA	49:B4:60:GLN:HB2	2.00	0.42
25:BB:39:A:C2	25:BB:44:G:C4	3.06	0.42
30:DH:67:LEU:HA	30:DH:70:THR:HG22	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2732:G:H3'	24:DA:2733:A:O4'	2.18	0.42
1:AA:97:U:H2'	1:AA:99:C:C6	2.55	0.42
24:BA:884:C:O5'	24:BA:884:C:H6	2.03	0.42
24:BA:2392:A:H8	34:BO:60:MET:CB	2.26	0.42
24:DA:1728:G:H8	24:DA:1732:A:N6	2.10	0.42
22:AD:35:A:H2'	22:AD:36:U:O4'	2.20	0.42
2:AE:21:ARG:HG3	2:AE:38:GLY:O	2.19	0.42
1:AA:159:G:C2	1:AA:163:C:C2	3.08	0.42
25:DB:15:A:O2'	25:DB:109:G:C8	2.70	0.42
1:CA:265:G:O3'	17:CT:66:SER:HA	2.19	0.42
1:CA:1057:G:H2'	1:CA:1058:G:O4'	2.19	0.42
1:CA:1443:G:O2'	38:DR:122:ASP:OD2	2.38	0.42
24:DA:443:A:H5''	24:DA:444:C:OP1	2.19	0.42
2:CE:31:TYR:O	2:CE:42:ILE:HG13	2.20	0.42
16:AS:5:ARG:HH12	16:AS:24:ALA:HA	1.83	0.42
44:BV:118:GLN:HE22	44:BV:171:ILE:C	2.23	0.42
44:BV:169:GLU:OE2	44:BV:170:THR:N	2.53	0.42
24:DA:1299:G:H5'	24:DA:1301:A:O4'	2.20	0.42
1:CA:236:G:H5''	17:CT:42:TYR:OH	2.19	0.42
9:CL:128:ARG:NH2	22:CC:31:G:H3'	2.35	0.42
1:CA:1213:A:N1	1:CA:1215:G:H1'	2.34	0.42
46:DZ:88:LYS:HB3	46:DZ:88:LYS:HE2	1.85	0.42
31:DK:78:THR:OG1	31:DK:104:GLN:OE1	2.37	0.42
1:CA:129(A):G:C2	1:CA:191(A):G:C8	3.08	0.42
24:DA:752:A:H4'	24:DA:753:C:O5'	2.19	0.42
24:BA:2657:A:N6	24:BA:2664:G:O2'	2.53	0.42
1:CA:1170:A:N6	1:CA:1171:G:N3	2.66	0.42
1:AA:762:C:H2'	1:AA:763:G:H8	1.83	0.42
1:AA:181:G:O2'	1:AA:182:U:O5'	2.35	0.42
24:BA:1541:U:H2'	24:BA:1542:G:O4'	2.20	0.42
27:BE:52:LEU:HD23	27:BE:52:LEU:HA	1.80	0.42
48:DX:39:ASP:OD1	48:DX:44:ARG:NH2	2.39	0.42
1:CA:580:U:H3	1:CA:761:G:H1	1.68	0.42
9:AL:45:ALA:HA	9:AL:48:GLU:HG2	2.01	0.42
24:DA:835:A:OP1	53:D8:52:LYS:HD3	2.20	0.42
9:AL:56:LEU:HB3	9:AL:57:GLY:H	1.55	0.42
43:BU:44:ILE:HG13	43:BU:45:VAL:H	1.83	0.42
3:AF:88:ARG:HA	3:AF:91:LEU:HD12	2.01	0.42
11:AN:18:ARG:HH21	11:AN:37:GLY:N	2.17	0.42
7:AJ:26:PHE:O	7:AJ:30:ILE:HG13	2.20	0.42
24:BA:1367:A:N7	24:BA:1368:G:H1'	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:397:A:H5'	1:CA:398:C:OP1	2.20	0.42
24:BA:1295:C:O4'	36:B0:23:ASN:ND2	2.36	0.42
1:CA:562:C:H4'	1:CA:563:A:H5'	2.02	0.42
24:DA:2679:A:H4'	27:DE:165:VAL:HG11	2.02	0.42
24:BA:595:C:H2'	24:BA:596:G:O4'	2.20	0.42
24:DA:566:U:H5''	34:DO:29:LYS:HE3	2.02	0.42
45:B3:57:PHE:HD1	45:B3:57:PHE:N	2.18	0.42
24:DA:492:A:H2'	24:DA:493:G:O4'	2.20	0.42
24:BA:699:A:H2'	24:BA:700:G:O4'	2.20	0.42
4:CG:22:LYS:CG	4:CG:25:ARG:HB3	2.50	0.42
24:DA:2361:A:O5'	53:D8:27:THR:OG1	2.37	0.42
4:AG:33:MET:O	4:AG:34:GLU:C	2.58	0.42
1:AA:429:U:H1'	1:AA:430:A:H5''	2.01	0.42
35:BP:63:LYS:HG2	35:BP:65:PHE:CZ	2.54	0.42
51:D6:25:LYS:HB2	51:D6:26:ASN:H	1.54	0.42
51:D6:44:ARG:CG	51:D6:45:LYS:H	2.32	0.42
24:DA:2371:G:H5'	51:D6:45:LYS:HE2	2.01	0.42
24:BA:2795:G:H3'	24:BA:2797:U:H5''	2.02	0.42
24:DA:2133:G:N2	24:DA:2157:G:H2'	2.35	0.42
24:DA:882:G:C2	24:DA:883:G:C8	3.07	0.42
1:AA:457:C:H2'	1:AA:458:C:H6	1.83	0.42
24:BA:2612:C:H5'	50:B5:3:LYS:CD	2.49	0.42
1:CA:1310:G:C6	1:CA:1311:G:C5	3.07	0.42
13:CP:74:VAL:HA	13:CP:77:ASN:HB3	2.02	0.42
27:BE:119:ARG:NH1	27:BE:156:MET:O	2.53	0.42
2:AE:44:LEU:HA	2:AE:47:THR:OG1	2.19	0.42
1:CA:1217:C:H2'	1:CA:1218:C:O4'	2.19	0.42
25:BB:42:C:O2	29:BG:92:VAL:HA	2.19	0.42
24:DA:2849:U:OP2	38:DR:95:ARG:NH1	2.53	0.42
34:BO:85:LEU:HA	34:BO:88:LEU:CD2	2.50	0.42
1:CA:1298:C:C5	7:CJ:114:ARG:HD2	2.55	0.42
1:CA:411:A:C4	1:CA:413:G:H1'	2.52	0.42
41:DS:66:GLU:O	41:DS:68:ARG:N	2.42	0.42
1:CA:1118:C:O3'	9:CL:83:ARG:NH2	2.41	0.42
24:DA:2299:G:N1	24:DA:2318:G:C8	2.88	0.42
11:AN:50:TYR:HD2	11:AN:54:ARG:CB	2.31	0.42
24:DA:1113:U:H2'	24:DA:1114:G:H8	1.84	0.42
9:AL:9:ARG:HB2	9:AL:14:VAL:HG22	2.02	0.42
36:D0:34:ILE:HD12	36:D0:34:ILE:HA	1.90	0.42
24:BA:684:G:C2	24:BA:774:A:C2	3.08	0.42
31:BK:109:ILE:HB	31:BK:130:TYR:CZ	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.34	0.42
1:CA:1272:G:H2'	1:CA:1273:G:H8	1.84	0.42
29:BG:5:VAL:HG13	49:B4:23:GLU:OE2	2.19	0.42
8:CK:17:THR:HB	8:CK:78:GLN:NE2	2.34	0.42
1:AA:57:G:H2'	1:AA:58:C:C6	2.55	0.42
1:AA:376:G:OP1	16:AS:5:ARG:HB2	2.20	0.42
1:AA:631:G:C2'	1:AA:632:A:H8	2.32	0.42
3:AF:16:ARG:HH12	3:AF:183:ASP:HA	1.85	0.42
24:BA:1265:A:H3'	50:B5:19:ARG:NH1	2.35	0.42
24:BA:1331:A:O2'	24:BA:1332:G:H8	2.03	0.42
24:DA:140:A:H8	24:DA:1408:C:O2'	2.02	0.42
24:BA:1861:G:H1	24:BA:1881:C:N4	2.16	0.42
1:CA:102:G:O2'	1:CA:151:A:N3	2.38	0.42
44:BV:9:TYR:OH	44:BV:63:ASP:OD2	2.34	0.42
46:DZ:81:LYS:H	46:DZ:82:LEU:HD23	1.83	0.42
11:AN:87:THR:HA	11:AN:91:ARG:NH1	2.35	0.42
29:BG:124:SER:HB2	29:BG:131:TYR:CE1	2.55	0.42
20:AW:33:ILE:O	20:AW:37:SER:OG	2.18	0.42
24:DA:185:U:H2'	24:DA:186:G:C8	2.55	0.42
22:AD:25:C:H2'	22:AD:26:G:C8	2.55	0.42
34:BO:50:ARG:HD3	53:B8:7:HIS:CD2	2.55	0.42
13:AP:62:ASN:HA	49:B4:49:PHE:CE2	2.55	0.42
35:BP:109:VAL:HG13	35:BP:113:GLN:HB3	2.00	0.42
24:DA:997:G:OP1	39:D1:93:LYS:HD3	2.20	0.42
39:D1:97:ASP:OD2	39:D1:101:ARG:NE	2.53	0.42
24:BA:2228:G:OP2	26:BD:263:ARG:NH1	2.44	0.42
44:BV:24:LEU:N	44:BV:39:VAL:O	2.51	0.42
24:BA:325:G:O2'	24:BA:326:G:H5'	2.19	0.42
16:CS:67:THR:O	16:CS:71:ARG:N	2.47	0.42
10:CM:29:ARG:C	10:CM:31:GLY:H	2.22	0.42
11:CN:124:LYS:H	11:CN:124:LYS:HG2	1.48	0.42
30:BH:30:LYS:NZ	30:BH:81:GLU:HA	2.34	0.42
1:AA:1338:G:C6	1:AA:1339:A:C6	3.08	0.42
1:CA:407:G:C6	1:CA:408:A:C6	3.08	0.42
24:BA:411:G:C2	34:BO:71:VAL:HG23	2.54	0.42
43:BU:97:ARG:HH21	43:BU:98:VAL:HB	1.85	0.42
29:DG:108:ASN:N	29:DG:108:ASN:OD1	2.50	0.42
51:B6:14:THR:O	51:B6:50:ARG:N	2.47	0.42
24:DA:1066:U:H1'	24:DA:1073:A:N1	2.35	0.42
24:DA:1096:A:C6	24:DA:1097:U:C2	3.08	0.42
24:BA:1655:A:H4'	27:BE:115:GLY:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1999:C:H2'	24:BA:2000:G:H8	1.84	0.42
24:BA:2171:A:H2'	24:BA:2172:U:C6	2.55	0.42
1:CA:989:C:O2'	1:CA:1016:A:H2	2.01	0.42
1:CA:1014:A:H4'	19:CV:14:HIS:HB2	2.02	0.42
1:AA:955:U:H1'	1:AA:1227:A:H61	1.84	0.42
1:AA:1227:A:O2'	13:AP:115:LYS:HE2	2.19	0.42
3:CF:43:LEU:HD21	3:CF:68:VAL:HG21	2.01	0.42
25:DB:30:C:N4	25:DB:54:G:H1	2.07	0.42
53:B8:36:LYS:O	53:B8:37:SER:C	2.58	0.42
24:DA:1332:G:C8	24:DA:1332:G:H5'	2.55	0.42
13:CP:39:ILE:HD12	13:CP:56:LEU:HG	2.02	0.42
24:DA:2665:A:H2'	24:DA:2666:C:H6	1.85	0.42
44:BV:104:PHE:HA	44:BV:139:VAL:HB	2.01	0.42
1:AA:153:C:H2'	1:AA:154:C:O4'	2.19	0.42
24:DA:2139:C:N4	24:DA:2152:G:H1	2.12	0.42
24:DA:2652:C:N4	24:DA:2668:G:H1	2.09	0.42
3:CF:20:SER:O	14:CQ:54:PRO:HG3	2.20	0.42
24:BA:996:A:H4'	39:B1:92:ARG:HG2	2.01	0.42
38:BR:116:ALA:HB1	38:BR:121:ILE:HD11	2.02	0.42
27:BE:181:LEU:HD21	38:BR:7:ILE:HG23	2.02	0.42
21:AX:2:GLY:O	21:AX:4:GLY:N	2.53	0.42
2:CE:12:GLU:HB3	2:CE:213:LEU:HD22	2.02	0.42
1:AA:562:C:O2	12:AO:16:GLU:N	2.52	0.42
1:CA:1329:A:H4'	13:CP:24:GLY:HA2	2.00	0.42
1:AA:160:A:N6	1:AA:161:A:N1	2.68	0.42
22:AD:29:G:H2'	22:AD:30:G:C8	2.55	0.42
24:BA:526:A:O2'	24:BA:2043:C:O2	2.24	0.42
24:DA:2210:G:H5'	24:DA:2211:G:C6	2.55	0.42
24:DA:2212:A:H4'	24:DA:2213:U:N3	2.35	0.42
24:DA:1394:U:H4'	24:DA:1603:A:H4'	2.02	0.42
3:AF:82:GLU:O	3:AF:86:VAL:HG13	2.19	0.42
34:DO:144:GLU:HA	34:DO:145:PRO:HD3	1.81	0.42
33:DN:1:MET:HB2	33:DN:32:TYR:HB3	2.02	0.42
1:AA:374:A:C6	1:AA:375:U:C4	3.08	0.42
27:DE:16:ARG:NH2	27:DE:171:GLU:OE1	2.49	0.42
10:AM:61:GLU:OE2	14:AQ:45:ARG:HD2	2.20	0.42
47:BW:33:MET:O	47:BW:37:PHE:HD1	2.02	0.42
24:BA:1165:U:H2'	24:BA:1166:C:H6	1.84	0.42
38:DR:88:ILE:HD11	38:DR:91:ARG:HG2	2.01	0.42
34:BO:126:VAL:HG12	34:BO:147:LEU:HB2	2.00	0.42
24:DA:270(N):G:O2'	24:DA:270(O):U:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:32:A:C2	1:CA:33:A:C4	3.08	0.42
20:CW:62:LEU:HA	20:CW:65:LYS:HB2	2.02	0.42
24:DA:1461:G:H2'	24:DA:1462:C:H6	1.85	0.42
1:AA:1221:G:H2'	1:AA:1222:G:H8	1.85	0.42
24:DA:1726:G:C6	24:DA:1727:U:C4	3.08	0.42
29:DG:125:PHE:HB3	29:DG:166:ASP:HB2	2.02	0.42
24:DA:957:A:N6	24:DA:2459:A:C8	2.88	0.42
1:AA:1460:A:H2'	1:AA:1461:G:O4'	2.20	0.42
1:CA:775:G:N2	1:CA:804:U:O4	2.53	0.42
24:BA:2331:G:H4'	45:B3:43:THR:H	1.85	0.42
24:DA:588:U:H1'	28:DF:90:PHE:HB3	2.02	0.42
39:D1:29:SER:C	39:D1:30:LYS:HD2	2.40	0.42
33:DN:79:PHE:CD2	38:DR:72:VAL:HG22	2.54	0.42
1:CA:38:G:H22	1:CA:397:A:P	2.43	0.42
38:BR:39:ARG:HG2	38:BR:40:THR:H	1.85	0.42
2:CE:112:VAL:O	2:CE:115:LEU:HB3	2.20	0.42
1:CA:524:G:H2'	1:CA:525:C:C6	2.55	0.42
24:BA:1811:G:H2'	24:BA:1812:A:O4'	2.20	0.42
50:D5:36:CYS:HB3	50:D5:37:LYS:H	1.65	0.42
1:CA:620:C:H2'	1:CA:621:A:O4'	2.20	0.42
46:DZ:23:LYS:HD2	46:DZ:28:GLY:HA3	2.01	0.42
24:DA:755:C:H2'	24:DA:756:C:C6	2.55	0.42
41:DS:13:SER:HA	41:DS:99:ARG:HB2	2.02	0.42
1:CA:49:U:C2	1:CA:361:G:N2	2.88	0.42
1:CA:1386:G:H2'	1:CA:1387:G:H8	1.84	0.42
10:AM:50:ILE:HG22	10:AM:52:GLY:H	1.85	0.42
26:BD:127:VAL:HA	26:BD:193:VAL:HG22	2.02	0.42
34:BO:22:GLY:O	34:BO:28:GLY:HA3	2.20	0.42
29:BG:82:LEU:HA	29:BG:82:LEU:HD23	1.75	0.42
41:DS:23:LEU:HD12	41:DS:23:LEU:HA	1.87	0.42
38:DR:50:ILE:HA	38:DR:50:ILE:HD13	1.76	0.42
1:CA:313:A:H2'	1:CA:314:C:C6	2.55	0.42
47:DW:25:VAL:O	47:DW:29:LYS:HG3	2.19	0.42
1:AA:15:G:H4'	5:AH:24:ARG:NH1	2.34	0.42
1:AA:321:A:C2	1:AA:333:G:C2	3.08	0.42
30:BH:6:ARG:NH2	30:BH:54:ARG:HH12	2.16	0.42
24:DA:2286:A:H5'	51:D6:28:ARG:NE	2.34	0.42
32:BM:133:GLN:O	32:BM:134:ARG:NH1	2.52	0.42
24:DA:2116:G:N1	24:DA:2165:G:O6	2.52	0.42
43:DU:52:SER:N	43:DU:53:PRO:HD3	2.35	0.42
51:B6:14:THR:HG1	51:B6:21:TYR:H	1.65	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:780:G:N2	24:BA:783:A:H62	2.08	0.42
13:CP:74:VAL:O	13:CP:77:ASN:HB3	2.20	0.42
22:CD:60:U:P	22:CD:62:C:H41	2.39	0.42
27:BE:119:ARG:HD2	27:BE:120:TRP:NE1	2.34	0.42
1:CA:1028(A):C:H2'	1:CA:1028(B):C:C6	2.55	0.42
4:CG:50:ARG:HA	4:CG:51:PRO:HD3	1.79	0.42
1:CA:960:U:N3	1:CA:1225:A:C4	2.83	0.42
1:AA:590:C:C2'	1:AA:591:U:O5'	2.68	0.42
25:DB:87:G:O2'	25:DB:89:G:O6	2.32	0.42
29:BG:95:ARG:O	29:BG:99:MET:N	2.42	0.42
3:CF:70:VAL:HG12	3:CF:71:ALA:N	2.35	0.42
30:DH:107:VAL:HB	30:DH:109:PHE:HE1	1.84	0.42
24:BA:1512:G:C6	24:BA:1513:C:C4	3.08	0.42
1:CA:1351:U:O4'	7:CJ:33:ASP:HB3	2.20	0.42
24:BA:1359:A:C2	24:BA:1372:U:O4	2.73	0.42
38:BR:25:GLY:N	38:BR:49:VAL:HG23	2.28	0.42
44:BV:59:LEU:HA	44:BV:59:LEU:HD23	1.66	0.42
1:CA:1441:G:H4'	1:CA:1442:G:C4	2.55	0.42
24:DA:1012:U:O4	32:DM:28:THR:HG21	2.19	0.42
24:BA:2815:C:H2'	24:BA:2816:C:C6	2.55	0.42
39:D1:66:ASN:CG	39:D1:76:TYR:HB2	2.40	0.42
2:CE:184:VAL:N	2:CE:198:ASP:OD2	2.48	0.42
1:AA:1268:A:N3	1:AA:1326:C:O2'	2.44	0.42
30:BH:123:PHE:CD1	30:BH:133:VAL:HG13	2.55	0.42
2:CE:80:ILE:HA	2:CE:83:MET:HB2	2.01	0.42
44:DV:100:VAL:O	44:DV:124:ILE:HG22	2.19	0.42
1:CA:1348:U:H4'	9:CL:120:ARG:HD2	2.01	0.42
24:DA:1465:G:H4'	24:DA:1528:A:H1'	2.01	0.42
1:AA:626:U:H2'	1:AA:627:G:C8	2.55	0.42
1:AA:627:G:H2'	1:AA:628:G:C8	2.55	0.42
38:DR:61:PHE:CE1	38:DR:76:PHE:HB2	2.55	0.42
1:AA:509:A:H5''	4:AG:55:ALA:HB2	2.02	0.42
24:BA:1870:C:H2'	24:BA:1871:A:O4'	2.19	0.42
1:CA:321:A:N7	1:CA:328:C:C6	2.88	0.42
24:DA:1460:A:H4'	24:DA:1461:G:OP2	2.20	0.42
43:BU:90:LEU:HB3	43:BU:91:GLU:H	1.38	0.42
24:DA:1914:C:H2'	24:DA:1915:U:O4'	2.19	0.42
27:BE:116:VAL:HG21	27:BE:122:PHE:CE2	2.54	0.42
8:CK:51:VAL:HG11	8:CK:60:ARG:NH1	2.35	0.42
39:D1:100:VAL:O	39:D1:102:GLU:N	2.40	0.42
24:DA:1257:C:H4'	28:DF:83:PHE:CE1	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1153:C:H5'	39:B1:76:TYR:CE1	2.55	0.42
35:DP:72:LYS:HA	35:DP:73:PRO:HD3	1.75	0.42
12:CO:41:ARG:HB3	12:CO:41:ARG:HH11	1.84	0.42
43:BU:15:VAL:HB	43:BU:20:TYR:O	2.20	0.42
30:DH:122:THR:C	30:DH:123:PHE:CG	2.93	0.42
5:AH:9:LYS:N	5:AH:33:VAL:O	2.52	0.42
24:DA:1788:C:H2'	24:DA:1789:A:O4'	2.19	0.42
24:DA:246:C:OP1	34:DO:70:GLN:O	2.38	0.42
24:DA:185:U:H4'	24:DA:218:A:H4'	2.02	0.42
25:BB:27:C:O3'	37:BQ:36:TYR:OH	2.37	0.42
1:CA:250:A:H1'	1:CA:251:G:OP2	2.20	0.42
32:BM:40:PRO:O	39:B1:64:ARG:NH2	2.51	0.42
24:BA:806:C:OP2	34:BO:41:ARG:HD3	2.20	0.42
24:DA:1508:A:H4'	24:DA:1510:A:C2	2.55	0.42
29:BG:116:ASP:HB2	29:BG:117:PHE:H	1.43	0.42
27:BE:92:THR:O	27:BE:95:ILE:HG12	2.19	0.42
31:DK:95:LYS:O	31:DK:99:GLU:HG3	2.20	0.42
7:AJ:115:ARG:HB3	7:AJ:118:VAL:HG12	2.00	0.42
2:CE:237:ALA:C	2:CE:239:VAL:H	2.24	0.42
24:BA:2785:C:OP1	27:BE:41:LYS:NZ	2.46	0.42
24:BA:484:C:H2'	24:BA:485:C:C6	2.54	0.42
1:AA:680:C:H2'	1:AA:681:C:H6	1.85	0.42
25:BB:83:G:OP1	48:BX:19:GLN:NE2	2.51	0.42
30:BH:96:ALA:HA	30:BH:105:LEU:HA	2.02	0.42
24:DA:1280:G:OP1	36:D0:33:ARG:NH1	2.53	0.42
41:DS:47:VAL:HA	41:DS:50:VAL:HG12	2.01	0.42
34:BO:132:LYS:HD3	34:BO:132:LYS:HA	1.87	0.42
39:B1:30:LYS:HA	39:B1:30:LYS:HD3	1.89	0.42
24:BA:974(A):C:H4'	24:BA:975:G:O5'	2.20	0.42
24:DA:2848:G:C8	38:DR:97:ALA:HB2	2.55	0.42
27:DE:23:VAL:HG11	27:DE:183:LEU:HB3	2.01	0.42
4:CG:13:ARG:HD2	4:CG:38:TYR:O	2.20	0.42
4:CG:22:LYS:HZ3	4:CG:25:ARG:NH1	2.16	0.42
4:CG:33:MET:C	4:CG:35:ARG:N	2.72	0.42
4:AG:29:PRO:O	4:AG:30:LYS:CG	2.67	0.42
34:BO:6:LEU:O	34:BO:7:ARG:O	2.37	0.42
24:DA:2124:G:H3'	24:DA:2125:G:C8	2.55	0.42
24:DA:1063:G:N2	24:DA:1064:C:HO2'	2.18	0.42
22:CD:12:G:HO2'	22:CD:13:C:P	2.41	0.42
24:BA:2334:G:N2	37:BQ:16:ASN:OD1	2.44	0.42
21:CX:2:GLY:O	21:CX:5:ASP:N	2.41	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2628:C:H1'	24:DA:2781:A:H2'	2.02	0.42
50:B5:39:MET:C	50:B5:40:LYS:HD2	2.41	0.42
1:CA:980:C:H3'	1:CA:981:U:H6	1.84	0.42
24:DA:2795:G:H1'	24:DA:2802:G:H1	1.85	0.42
1:AA:1399:C:C2	1:AA:1401:G:C5	3.08	0.42
49:D4:60:GLN:OE1	49:D4:60:GLN:N	2.49	0.42
24:DA:1115:G:H2'	24:DA:1116:C:C6	2.54	0.42
24:BA:270(O):U:O2	24:BA:270(O):U:H2'	2.20	0.42
35:DP:23:GLY:CA	35:DP:25:ASP:HB2	2.50	0.42
37:DQ:62:LYS:HB3	37:DQ:97:ARG:HD3	2.02	0.42
24:BA:1971:A:C5	26:BD:241:PRO:HD3	2.55	0.42
43:DU:20:TYR:CZ	43:DU:42:VAL:HA	2.55	0.42
24:BA:2477:C:H5'	24:BA:2479:G:O6	2.20	0.42
24:DA:903:C:H2'	24:DA:904:C:C6	2.55	0.42
1:AA:130:A:H2	1:AA:263:A:N3	2.18	0.42
4:AG:62:GLN:HE22	4:AG:65:ARG:HH21	1.67	0.42
38:DR:1:MET:HB3	38:DR:2:ASN:H	1.43	0.42
30:BH:123:PHE:CE1	30:BH:133:VAL:HG13	2.55	0.42
42:BT:31:HIS:HA	42:BT:32:PRO:HD3	1.79	0.42
24:DA:1191:G:OP1	34:DO:18:ARG:NH1	2.37	0.42
7:AJ:120:ILE:HG12	7:AJ:120:ILE:H	1.69	0.42
24:DA:2843:G:H1	24:DA:2874:C:N4	2.18	0.42
16:CS:20:VAL:HG21	16:CS:32:TYR:CD2	2.55	0.42
50:D5:48:GLU:HA	50:D5:56:LYS:NZ	2.35	0.42
34:DO:110:TYR:HB3	34:DO:111:ARG:H	1.59	0.42
5:CH:88:LYS:HB2	5:CH:123:LEU:HB2	2.02	0.42
30:DH:10:PRO:HD2	30:DH:50:VAL:O	2.20	0.42
1:CA:300:A:H2'	1:CA:564:C:H42	1.84	0.42
1:AA:868:C:H2'	1:AA:869:G:O4'	2.18	0.42
24:DA:1788:C:H5''	26:DD:225:ALA:CB	2.50	0.42
22:AD:24:U:H2'	22:AD:25:C:H6	1.84	0.42
1:CA:604:G:H2'	1:CA:605:U:O4'	2.20	0.42
4:CG:134:ASP:O	4:CG:136:PRO:HD3	2.19	0.42
1:CA:1135:U:O2'	1:CA:1138:G:O6	2.26	0.42
29:BG:171:ALA:O	29:BG:175:LEU:HG	2.20	0.42
24:BA:664:C:OP1	34:BO:18:ARG:NH2	2.40	0.42
15:CR:2:PRO:HB2	15:CR:3:ILE:H	1.62	0.42
1:AA:556:C:C2	1:AA:557:G:C8	3.07	0.42
51:D6:30:THR:HA	51:D6:31:PRO:HA	1.74	0.42
1:CA:866:C:C4	1:CA:867:G:H1'	2.54	0.42
37:DQ:59:LYS:HD3	37:DQ:60:GLY:H	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:1288:U:C2	24:DA:1327:C:O2	2.73	0.42
2:AE:111:ARG:HD3	2:AE:111:ARG:HA	1.89	0.42
1:CA:1450:U:H4'	1:CA:1450:U:OP1	2.20	0.42
30:BH:86:GLU:OE2	30:BH:86:GLU:N	2.51	0.42
1:CA:1393:U:HO2'	1:CA:1501:C:HO2'	1.50	0.42
42:DT:67:GLY:O	42:DT:69:TYR:N	2.46	0.42
34:DO:62:LEU:HD13	34:DO:62:LEU:HA	1.79	0.41
43:BU:81:LYS:HD3	43:BU:97:ARG:HD2	2.02	0.41
4:AG:33:MET:HG3	4:AG:37:PRO:HA	2.01	0.41
4:AG:18:LYS:CG	4:AG:33:MET:SD	3.05	0.41
32:BM:55:VAL:HB	32:BM:126:PRO:HA	2.01	0.41
24:BA:2348:U:O2'	51:B6:42:TRP:HD1	2.03	0.41
24:DA:1096:A:H8	24:DA:1096:A:OP2	2.03	0.41
2:CE:185:ILE:HA	2:CE:199:TYR:O	2.20	0.41
24:BA:2636:U:P	27:BE:79:ARG:HA	2.59	0.41
1:CA:1032:A:H3'	1:CA:1032(A):G:C5'	2.50	0.41
25:DB:116:G:H2'	25:DB:117:G:O4'	2.20	0.41
1:AA:1021:G:H2'	1:AA:1022:G:O4'	2.19	0.41
1:CA:1305:G:O2'	1:CA:1306:A:H8	2.03	0.41
24:DA:2342:C:O2	24:DA:2374:C:H4'	2.20	0.41
2:CE:40:HIS:CB	2:CE:190:THR:HG21	2.50	0.41
25:BB:39:A:H2'	25:BB:40:U:C5	2.54	0.41
29:BG:36:LYS:HE2	29:BG:38:VAL:HG21	2.02	0.41
37:BQ:106:ARG:NH2	37:BQ:107:GLU:HB3	2.23	0.41
1:AA:1292:U:H2'	1:AA:1293:G:C8	2.55	0.41
24:DA:2794:C:C4	24:DA:2795:G:C5	3.07	0.41
53:B8:51:ALA:N	53:B8:53:PRO:HD2	2.35	0.41
25:DB:52:A:N6	37:DQ:33:LYS:HG2	2.35	0.41
35:BP:56:ARG:HA	35:BP:56:ARG:HD2	1.85	0.41
1:AA:62:U:OP1	1:AA:385:C:O2'	2.36	0.41
13:CP:17:VAL:O	13:CP:20:THR:OG1	2.21	0.41
22:CC:49:G:H2'	22:CC:50:U:O4'	2.20	0.41
2:AE:30:ARG:O	2:AE:46:LYS:NZ	2.31	0.41
1:AA:177:C:H2'	1:AA:178:C:C6	2.55	0.41
24:DA:2876:G:O5'	38:DR:3:ARG:HA	2.20	0.41
24:DA:1591:G:H2'	24:DA:1592:C:C6	2.54	0.41
24:DA:1465:G:N3	24:DA:1545(A):A:H2	2.17	0.41
24:DA:2191:G:O2'	24:DA:2192:G:P	2.78	0.41
1:AA:736:C:O2'	6:AI:90:VAL:O	2.38	0.41
1:CA:197:A:H3'	1:CA:197:A:OP2	2.20	0.41
24:DA:960:A:H5''	24:DA:961:C:OP1	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CG:178:VAL:O	4:CG:180:GLY:N	2.46	0.41
24:BA:128:C:O3'	52:B7:49:ARG:NH2	2.53	0.41
1:AA:509:A:O2'	1:AA:510:A:OP1	2.33	0.41
24:DA:1935:G:O2'	24:DA:1936:A:H5''	2.20	0.41
1:CA:735:C:H2'	1:CA:736:C:H6	1.85	0.41
44:DV:108:PRO:HB3	44:DV:144:LEU:HD21	2.01	0.41
24:DA:469:G:C6	52:D7:39:ARG:NH1	2.88	0.41
11:AN:59:TYR:O	11:AN:63:LEU:HG	2.20	0.41
39:D1:39:LEU:HA	39:D1:39:LEU:HD23	1.79	0.41
12:AO:90:VAL:O	12:AO:91:LYS:HB3	2.20	0.41
1:AA:939:G:H2'	1:AA:940:C:H6	1.84	0.41
35:DP:2:LEU:HD13	35:DP:69:PHE:CD1	2.55	0.41
26:DD:168:ARG:HG2	26:DD:173:VAL:HG12	2.02	0.41
24:DA:118:A:OP2	24:DA:119:A:H2'	2.20	0.41
24:BA:2443:C:H2'	24:BA:2444:G:H8	1.84	0.41
24:DA:2678:C:H2'	24:DA:2679:A:O4'	2.20	0.41
24:BA:1392:A:C6	24:BA:1393:A:C6	3.07	0.41
6:CI:10:LEU:HD11	6:CI:61:LEU:HD22	2.01	0.41
24:BA:675:A:C8	24:BA:804:A:C6	3.08	0.41
24:BA:506:G:H5''	24:BA:509:C:H1'	2.02	0.41
26:DD:244:ARG:HB2	26:DD:245:PRO:HD2	2.01	0.41
35:DP:77:LYS:O	35:DP:79:LEU:N	2.53	0.41
22:AC:76:A:N1	24:BA:2450:A:O2'	2.49	0.41
26:DD:61:LEU:HD12	26:DD:61:LEU:HA	1.79	0.41
1:AA:945:G:H2'	1:AA:945:G:N3	2.35	0.41
43:BU:55:TYR:CG	43:BU:61:ILE:HD11	2.54	0.41
27:DE:9:VAL:CG1	27:DE:26:ILE:O	2.68	0.41
1:CA:430:A:H2'	1:CA:431:A:O4'	2.20	0.41
4:AG:59:ARG:HH21	4:AG:66:ARG:NH1	2.18	0.41
24:BA:1243:G:H4'	34:BO:7:ARG:NH2	2.35	0.41
32:BM:130:HIS:O	32:BM:130:HIS:CG	2.72	0.41
49:D4:36:CYS:HB3	49:D4:39:CYS:HB2	1.32	0.41
9:AL:27:THR:HG1	9:AL:62:TYR:HD1	1.68	0.41
1:CA:1127:G:N2	1:CA:1145:C:O2	2.53	0.41
1:CA:1002:G:O6	1:CA:1037:C:N4	2.53	0.41
19:AV:42:PRO:C	19:AV:44:MET:H	2.23	0.41
24:BA:1059:G:N1	24:BA:1079:C:N3	2.56	0.41
24:BA:1070:A:N7	24:BA:1096:A:C8	2.88	0.41
1:CA:1324:A:C4'	1:CA:1362:C:H4'	2.40	0.41
3:CF:80:GLY:O	3:CF:85:ARG:NH2	2.53	0.41
24:DA:2470:G:H5'	35:DP:56:ARG:NH2	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CX:9:ARG:HG3	21:CX:10:ARG:H	1.85	0.41
20:AW:71:THR:HB	20:AW:72:LEU:H	1.56	0.41
34:BO:61:ARG:HA	34:BO:61:ARG:HD3	1.56	0.41
2:AE:186:ALA:O	2:AE:201:ILE:N	2.38	0.41
1:AA:404:U:OP1	4:AG:3:ARG:NH2	2.47	0.41
55:CA:1800:T1C:H41	55:CA:1800:T1C:H423	1.48	0.41
11:CN:54:ARG:NH1	22:CD:40:C:OP1	2.50	0.41
29:BG:104:GLU:HG2	49:B4:23:GLU:OE1	2.19	0.41
8:AK:39:LEU:HB3	8:AK:45:ILE:HG23	2.01	0.41
1:AA:130:A:OP2	17:AT:63:ARG:NH2	2.53	0.41
22:AD:29:G:H2'	22:AD:30:G:H8	1.85	0.41
1:CA:346:G:N2	1:CA:347:G:C8	2.88	0.41
26:DD:246:PRO:O	26:DD:254:THR:HG22	2.21	0.41
29:DG:119:GLY:O	29:DG:181:ARG:HG3	2.20	0.41
24:DA:1266:G:O2'	24:DA:2012:G:O6	2.24	0.41
24:BA:973:A:O4'	24:BA:1188:U:C6	2.74	0.41
52:D7:32:LYS:HZ3	52:D7:32:LYS:HB3	1.84	0.41
53:D8:60:LEU:O	53:D8:61:LEU:HD12	2.19	0.41
24:BA:242:G:C5'	53:B8:62:LEU:HD13	2.51	0.41
1:AA:637:G:H2'	1:AA:638:G:C8	2.54	0.41
24:DA:1461:G:H2'	24:DA:1462:C:C6	2.55	0.41
24:BA:1466:G:N2	24:BA:1547:C:N3	2.68	0.41
44:BV:6:LYS:NZ	44:BV:43:GLU:HG3	2.35	0.41
45:D3:46:LYS:HA	45:D3:47:PRO:HD3	1.81	0.41
2:CE:140:HIS:ND1	2:CE:140:HIS:O	2.54	0.41
27:DE:143:ASN:HD22	27:DE:147:PRO:HD3	1.85	0.41
24:BA:844:C:H2'	24:BA:845:G:O4'	2.20	0.41
1:AA:356:A:H2'	1:AA:357:G:O4'	2.20	0.41
24:BA:592:G:H21	53:B8:4:MET:HE1	1.83	0.41
24:DA:1342:A:C2	24:DA:1602:U:N3	2.86	0.41
40:D2:89:GLN:HA	40:D2:90:PRO:HD3	1.83	0.41
24:BA:1198:U:H2'	24:BA:1199:U:H6	1.85	0.41
6:CI:77:ARG:HB3	6:CI:77:ARG:HH11	1.85	0.41
26:BD:25:THR:OG1	26:BD:113:VAL:HG21	2.20	0.41
5:AH:153:LYS:NZ	5:AH:154:GLY:O	2.50	0.41
24:BA:1491:G:H2'	24:BA:1492:G:H8	1.83	0.41
9:AL:25:LYS:O	9:AL:60:ASP:HB3	2.20	0.41
28:BF:39:TRP:NE1	28:BF:99:TYR:O	2.52	0.41
35:DP:68:ILE:HD13	35:DP:103:MET:HG2	2.02	0.41
36:B0:38:VAL:HG22	36:B0:112:ALA:HB2	2.01	0.41
20:CW:16:HIS:O	20:CW:19:SER:OG	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:963:U:H2'	24:BA:964:C:C6	2.55	0.41
1:CA:1496:C:H2'	1:CA:1497:G:C8	2.55	0.41
1:CA:1497:G:H2'	1:CA:1498:U:H5'	2.03	0.41
24:DA:944:G:H5''	24:DA:945:A:O5'	2.19	0.41
31:DK:101:LEU:HA	31:DK:105:HIS:HB2	2.01	0.41
14:AQ:22:THR:O	14:AQ:23:ARG:HD3	2.20	0.41
28:DF:29:ASN:HA	28:DF:30:PRO:HD2	1.76	0.41
24:DA:2393:A:P	53:D8:30:ARG:HB3	2.60	0.41
30:BH:167:GLU:HA	30:BH:168:PRO:HD3	1.80	0.41
24:BA:2811:G:P	27:BE:60:ASN:HB2	2.58	0.41
27:BE:61:ARG:HB2	27:BE:62:PRO:HD3	2.02	0.41
27:DE:76:ARG:HG2	27:DE:195:LEU:HD13	2.02	0.41
24:DA:2134:A:N7	24:DA:2158:A:C8	2.88	0.41
24:DA:2638:G:O2'	24:DA:2639:A:H8	2.02	0.41
24:BA:2399:G:H1'	51:B6:21:TYR:CE2	2.55	0.41
24:DA:1056:G:O2'	24:DA:1086:A:O2'	2.19	0.41
24:BA:2347:C:P	51:B6:39:TYR:OH	2.79	0.41
43:BU:49:VAL:H	43:BU:50:ARG:HH21	1.68	0.41
24:BA:49:A:N7	24:BA:120:U:C5	2.71	0.41
1:AA:979:C:OP1	1:AA:1223:C:N4	2.53	0.41
24:DA:2747:G:O2'	24:DA:2748:A:O4'	2.38	0.41
30:DH:4:ILE:HB	30:DH:5:GLY:H	1.72	0.41
1:AA:560:U:H2'	1:AA:560:U:H6	1.66	0.41
30:DH:109:PHE:HZ	30:DH:152:ARG:HB2	1.84	0.41
2:AE:201:ILE:HG21	2:AE:214:ILE:HG13	2.02	0.41
4:CG:119:GLN:HG2	4:CG:123:HIS:NE2	2.36	0.41
6:AI:11:ASN:HA	6:AI:12:PRO:HD2	1.82	0.41
24:BA:138:G:O2'	24:BA:139:G:H5'	2.20	0.41
3:AF:32:LEU:O	3:AF:35:GLU:HB2	2.19	0.41
24:BA:322:A:OP2	28:BF:169:ASN:HB2	2.20	0.41
24:DA:1479:G:O2'	24:DA:1558:A:H5'	2.21	0.41
42:DT:53:LYS:NZ	42:DT:55:ASN:OD1	2.49	0.41
2:AE:194:PRO:HB2	2:AE:195:ASP:H	1.62	0.41
9:AL:112:LYS:HD3	9:AL:113:LYS:N	2.36	0.41
1:AA:329:A:C5	1:AA:332:G:C6	3.09	0.41
24:BA:242:G:O5'	53:B8:3:LYS:HE3	2.20	0.41
34:DO:98:GLU:HA	34:DO:101:VAL:HB	2.02	0.41
38:BR:11:GLU:N	38:BR:11:GLU:OE1	2.37	0.41
24:BA:1992:G:N2	24:BA:1996:C:O2'	2.52	0.41
27:BE:51:PHE:CD2	27:BE:52:LEU:HG	2.55	0.41
38:BR:74:ARG:HD3	38:BR:76:PHE:CZ	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:B1:105:VAL:CG1	40:B2:40:LEU:HD11	2.50	0.41
29:BG:43:LEU:HD12	29:BG:43:LEU:HA	1.84	0.41
8:AK:46:LYS:N	8:AK:64:LYS:HG3	2.36	0.41
28:DF:170:LEU:HA	28:DF:170:LEU:HD23	1.90	0.41
2:AE:171:ALA:HA	2:AE:174:VAL:HB	2.01	0.41
24:BA:569:U:O2'	24:BA:983:A:N1	2.45	0.41
24:BA:1324:G:C4	24:BA:1328:G:O6	2.73	0.41
1:CA:792:A:O2'	1:CA:794:A:N6	2.37	0.41
32:DM:16:ILE:HB	32:DM:54:VAL:HG22	2.01	0.41
1:AA:29:G:O2'	1:AA:30:U:H5'	2.20	0.41
24:DA:1161:C:O2'	40:D2:8:GLY:HA2	2.20	0.41
11:CN:99:GLN:HG2	11:CN:105:VAL:HG21	2.02	0.41
24:BA:1441:G:C2	24:BA:1551:C:N3	2.88	0.41
24:BA:26:G:C6	24:BA:27:G:N1	2.88	0.41
19:AV:38:SER:O	19:AV:71:LEU:HD12	2.20	0.41
24:BA:370:G:H4'	24:BA:371:A:OP2	2.20	0.41
1:AA:825:G:O4'	8:AK:2:LEU:HD21	2.21	0.41
24:DA:448:U:H1'	28:DF:84:VAL:HG13	2.02	0.41
1:CA:127:G:HO2'	17:CT:2:PRO:N	2.18	0.41
24:BA:1936:A:C8	24:BA:1940:U:O2	2.73	0.41
42:BT:36:LYS:HE2	42:BT:54:VAL:O	2.20	0.41
8:CK:49:GLU:HG2	8:CK:62:TYR:HE1	1.84	0.41
24:DA:194:G:H2'	24:DA:195:A:O4'	2.20	0.41
2:CE:147:LYS:O	2:CE:147:LYS:NZ	2.45	0.41
1:AA:782:A:O3'	1:AA:1515:C:H4'	2.20	0.41
24:DA:821:A:H2'	24:DA:946:G:H5''	2.03	0.41
27:BE:201:THR:OG1	27:BE:202:LYS:N	2.52	0.41
7:CJ:141:VAL:O	7:CJ:145:ALA:N	2.52	0.41
40:D2:37:VAL:O	40:D2:51:VAL:HG13	2.18	0.41
40:D2:52:VAL:HG13	40:D2:55:ALA:HB3	2.01	0.41
4:CG:22:LYS:NZ	4:CG:25:ARG:O	2.52	0.41
24:DA:2154:G:C4	24:DA:2155:G:C8	3.08	0.41
27:DE:37:ARG:HB2	27:DE:46:ALA:O	2.21	0.41
24:DA:896:A:OP2	44:DV:146:ILE:HD11	2.20	0.41
24:DA:1065:U:C2	24:DA:1074:G:C2	3.08	0.41
22:CD:59:A:C8	22:CD:60:U:C5	3.09	0.41
1:AA:1379:G:O2'	1:AA:1380:U:H5'	2.20	0.41
1:AA:954:G:N2	1:AA:1226:C:O2	2.46	0.41
1:AA:1319:A:H3'	19:AV:3:ARG:NH2	2.34	0.41
24:BA:1677:A:H2'	24:BA:1678:G:O4'	2.21	0.41
4:CG:171:GLY:C	4:CG:173:TRP:H	2.23	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:1568:G:O5'	26:BD:61:LEU:HD22	2.19	0.41
38:BR:5:ALA:HA	38:BR:8:LYS:HG2	2.02	0.41
1:AA:1031:G:O6	1:AA:1032:A:N6	2.53	0.41
29:BG:88:ILE:HD12	29:BG:88:ILE:HA	1.86	0.41
24:BA:2815:C:H2'	24:BA:2816:C:H6	1.85	0.41
1:CA:976:G:OP1	14:CQ:32:SER:N	2.40	0.41
1:CA:738:C:H5''	6:CI:69:GLU:HB2	2.02	0.41
1:CA:1251:A:H5'	9:CL:12:GLU:HB3	2.02	0.41
45:B3:12:ASN:HA	45:B3:14:ARG:NH2	2.32	0.41
40:B2:35:LEU:O	40:B2:37:VAL:N	2.31	0.41
17:AT:67:LYS:C	17:AT:69:LYS:H	2.23	0.41
1:AA:108:G:N2	1:AA:108:G:OP2	2.54	0.41
24:DA:2328:A:H2'	24:DA:2329:G:C8	2.55	0.41
15:CR:33:THR:HG23	15:CR:63:ARG:NH1	2.33	0.41
47:DW:27:GLU:O	47:DW:31:GLU:HG3	2.20	0.41
1:AA:1434:A:H2'	1:AA:1435:G:O4'	2.20	0.41
34:DO:122:PRO:HA	34:DO:142:GLY:N	2.34	0.41
1:AA:1172:C:H2'	1:AA:1173:G:H8	1.85	0.41
1:AA:1239:A:H4'	1:AA:1240:U:H5''	2.02	0.41
24:DA:273(D):C:N4	24:DA:273(E):U:O4	2.53	0.41
1:AA:216:G:O6	1:AA:217:C:N4	2.54	0.41
24:BA:1454:U:OP1	36:B0:77:ARG:NH1	2.46	0.41
24:BA:1047:G:H3'	24:BA:1110:G:H1	1.84	0.41
13:AP:20:THR:C	13:AP:22:ILE:H	2.24	0.41
46:BZ:92:LYS:NZ	46:BZ:92:LYS:HB2	2.35	0.41
24:BA:1668:A:H4'	24:BA:1669:A:O5'	2.20	0.41
18:AU:58:LEU:HA	18:AU:58:LEU:HD23	1.91	0.41
1:AA:20:U:H2'	1:AA:21:G:O4'	2.21	0.41
24:BA:1952:A:C6	33:BN:22:ILE:HD11	2.55	0.41
24:BA:876:C:H2'	24:BA:877:U:O4'	2.20	0.41
1:AA:724:G:C2	1:AA:725:G:C8	3.08	0.41
9:AL:80:GLY:O	9:AL:84:ALA:N	2.34	0.41
41:BS:55:ALA:C	41:BS:57:ASN:H	2.23	0.41
41:BS:55:ALA:O	41:BS:59:VAL:HG23	2.20	0.41
24:BA:2077:A:H2'	24:BA:2078:C:H6	1.86	0.41
46:DZ:8:SER:HB3	46:DZ:66:HIS:CD2	2.55	0.41
19:AV:52:TYR:HA	19:AV:56:GLN:O	2.21	0.41
24:DA:1475:G:C2	24:DA:1519:G:C2	3.08	0.41
15:CR:85:LEU:HA	15:CR:85:LEU:HD23	1.91	0.41
8:CK:1:MET:SD	8:CK:1:MET:N	2.88	0.41
36:D0:38:VAL:HG22	36:D0:112:ALA:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:685:A:C2	24:DA:689:A:C6	3.08	0.41
28:BF:34:TRP:NE1	34:BO:8:PRO:HD3	2.36	0.41
24:DA:2526:G:H5'	24:DA:2742:C:O2'	2.21	0.41
30:BH:154:PRO:HB2	30:BH:155:SER:H	1.60	0.41
3:CF:157:ILE:CD1	3:CF:166:GLU:HG2	2.50	0.41
13:CP:88:ARG:O	13:CP:92:HIS:ND1	2.54	0.41
19:CV:39:THR:HG22	19:CV:40:ILE:H	1.85	0.41
27:BE:48:GLN:OE1	27:BE:77:ILE:HD12	2.19	0.41
1:CA:688:G:H2'	1:CA:689:C:H6	1.85	0.41
19:AV:63:THR:OG1	19:AV:65:ASN:OD1	2.26	0.41
1:AA:936:C:H42	1:AA:1379:G:H1	1.69	0.41
1:CA:458:C:N4	1:CA:464:G:C6	2.89	0.41
24:DA:2420:C:OP2	53:D8:34:TRP:CD2	2.73	0.41
1:CA:958:A:N1	19:CV:54:GLY:HA3	2.34	0.41
1:AA:960:U:H3	1:AA:1225:A:C1'	2.33	0.41
1:AA:648:A:H2'	1:AA:649:G:C8	2.56	0.41
37:BQ:74:ALA:HA	37:BQ:108:GLY:HA3	2.02	0.41
1:AA:974:A:HO2'	1:AA:975:A:P	2.43	0.41
34:DO:3:LEU:HD12	34:DO:3:LEU:H	1.86	0.41
1:CA:1104:G:H4'	2:CE:111:ARG:NH2	2.36	0.41
24:DA:1313:U:H2'	24:DA:1610:A:N1	2.36	0.41
9:CL:79:LEU:HD12	9:CL:83:ARG:HD2	2.01	0.41
26:BD:65:ILE:HD11	26:BD:67:PHE:CE1	2.56	0.41
1:CA:6:G:H4'	1:CA:298:A:C4'	2.46	0.41
1:CA:87:A:C2	1:CA:88:C:C6	3.09	0.41
42:BT:39:ILE:O	42:BT:43:VAL:HG23	2.20	0.41
1:AA:157:G:C2	1:AA:165:C:C2	3.08	0.41
24:DA:2141:G:C6	24:DA:2151:G:C6	3.09	0.41
3:CF:9:GLY:HA3	14:CQ:49:HIS:HA	2.02	0.41
39:B1:108:GLU:HG3	40:B2:44:LYS:HD3	2.03	0.41
24:DA:2472:G:H1'	24:DA:2478:A:H61	1.86	0.41
38:DR:64:ARG:CB	38:DR:73:GLU:HG2	2.48	0.41
38:BR:51:ARG:HH21	38:BR:62:THR:HG21	1.85	0.41
1:CA:536:C:H2'	1:CA:537:G:H8	1.86	0.41
24:DA:2211:G:O2'	24:DA:2212:A:OP1	2.28	0.41
1:AA:1312:G:P	49:B4:58:ARG:HH22	2.43	0.41
24:DA:1525:G:H2'	24:DA:1526:G:C8	2.55	0.41
2:CE:84:GLU:OE2	2:CE:87:ARG:NH1	2.53	0.41
26:DD:70:TRP:HH2	26:DD:152:GLY:H	1.69	0.41
9:AL:81:ILE:O	9:AL:85:LEU:HD23	2.21	0.41
1:CA:1438:G:N1	1:CA:1463:C:N3	2.42	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DT:49:VAL:HG23	42:DT:51:VAL:HG23	2.02	0.41
25:DB:39:A:N6	49:D4:1:MET:HB2	2.35	0.41
31:DK:98:ALA:HA	31:DK:109:ILE:HD11	2.01	0.41
45:D3:29:GLN:O	45:D3:67:VAL:HG23	2.20	0.41
47:BW:8:LYS:HE3	47:BW:8:LYS:HB2	1.89	0.41
32:DM:89:LYS:O	32:DM:93:THR:OG1	2.39	0.41
24:DA:2887:U:H2'	24:DA:2888:C:C6	2.53	0.41
1:CA:939:G:C6	1:CA:940:C:N4	2.89	0.41
12:AO:62:SER:HB2	12:AO:64:TYR:HD2	1.85	0.41
24:BA:566:U:H2'	24:BA:567:A:O4'	2.20	0.41
24:DA:2086:U:H2'	24:DA:2087:G:H8	1.84	0.41
10:CM:38:ILE:O	10:CM:71:LEU:N	2.45	0.41
24:BA:674:G:O2'	28:BF:74:ARG:HG3	2.20	0.41
29:DG:63:ILE:HG22	29:DG:143:GLU:HB2	2.01	0.41
18:CU:31:LEU:HD23	18:CU:31:LEU:H	1.85	0.41
24:BA:1491:G:H2'	24:BA:1492:G:C8	2.55	0.41
24:BA:141(A):C:H2'	24:BA:142:G:O4'	2.20	0.41
24:BA:1213:A:N3	24:BA:1238:G:O2'	2.46	0.41
28:DF:155:LEU:HA	28:DF:155:LEU:HD12	1.91	0.41
45:B3:42:GLY:C	45:B3:57:PHE:HD2	2.24	0.41
24:DA:1878:G:H2'	24:DA:1879:C:C6	2.55	0.41
24:DA:2330:G:H4'	45:D3:44:ARG:HH12	1.85	0.41
17:CT:97:SER:N	17:CT:101:ARG:HH11	2.19	0.41
47:DW:47:ASN:O	47:DW:49:LYS:N	2.54	0.41
37:BQ:49:VAL:HG21	37:BQ:77:ALA:HB2	2.02	0.41
1:CA:186(A):C:H2'	1:CA:186(B):C:H6	1.85	0.41
24:DA:1356:G:H2'	24:DA:1357:U:O4'	2.21	0.41
24:BA:2841:C:H42	24:BA:2876:G:H1	1.68	0.41
36:B0:52:ILE:O	36:B0:55:ALA:N	2.52	0.41
40:D2:25:LEU:HD23	40:D2:25:LEU:HA	1.85	0.41
1:CA:778:G:O5'	1:CA:778:G:H8	2.03	0.41
39:D1:114:LYS:H	39:D1:114:LYS:HG2	1.50	0.41
27:DE:26:ILE:CG2	27:DE:27:LEU:N	2.66	0.41
12:AO:46:LYS:CG	12:AO:48:PRO:HD3	2.15	0.41
51:D6:18:ARG:O	51:D6:19:ARG:HB3	2.21	0.41
27:DE:76:ARG:C	27:DE:78:LEU:H	2.19	0.41
24:DA:2135:A:H3'	24:DA:2136:C:C6	2.56	0.41
24:DA:2156:G:C6	24:DA:2157:G:C2	3.08	0.41
49:D4:16:CYS:HA	49:D4:33:VAL:HG13	2.03	0.41
2:CE:163:PHE:HA	2:CE:185:ILE:HG12	2.02	0.41
19:CV:66:MET:HA	19:CV:67:VAL:C	2.40	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:2636:U:H1'	24:BA:2783:G:N2	2.35	0.41
1:AA:1002:G:C6	1:AA:1003:G:C6	3.08	0.41
1:CA:1305:G:HO2'	1:CA:1306:A:H8	1.67	0.41
24:BA:2127:G:N2	24:BA:2161:C:O2	2.50	0.41
1:CA:986:A:N3	19:CV:52:TYR:OH	2.32	0.41
24:DA:82:G:N1	24:DA:103:A:OP2	2.53	0.41
24:DA:2889:C:H3'	24:DA:2891:G:C8	2.51	0.41
19:CV:29:ARG:HD3	19:CV:47:HIS:HA	2.03	0.41
24:DA:1188:U:O2'	24:DA:1189:A:H5'	2.20	0.41
1:CA:1275:A:H2'	1:CA:1276:G:O4'	2.21	0.41
24:BA:2392:A:H2	24:BA:2424:C:N4	2.18	0.41
22:AD:31:G:H1	22:AD:39:C:N4	2.19	0.41
1:CA:1326:C:H2'	1:CA:1327:C:H6	1.86	0.41
24:BA:273(E):U:H2'	24:BA:273(F):C:O4'	2.21	0.41
24:BA:275:G:N2	24:BA:278:A:H61	2.18	0.41
4:CG:155:LEU:O	4:CG:157:LEU:N	2.50	0.41
40:B2:44:LYS:O	40:B2:46:VAL:HG12	2.21	0.41
39:B1:69:CYS:SG	39:B1:79:PHE:HD2	2.44	0.41
27:BE:105:THR:HG21	27:BE:164:ARG:CZ	2.51	0.41
24:BA:1717:G:C5	24:BA:1743:G:C2	3.08	0.41
24:DA:811:U:O2'	34:DO:21:ARG:HG3	2.20	0.41
1:AA:244:U:H4'	1:AA:245:C:C5'	2.50	0.41
1:CA:1213:A:C5	1:CA:1215:G:C4	3.08	0.41
5:AH:100:VAL:HG13	5:AH:107:ARG:HH21	1.86	0.41
24:DA:2823:A:OP1	27:DE:159:HIS:NE2	2.51	0.41
10:AM:45:ARG:HD3	14:AQ:36:PHE:HE2	1.85	0.41
29:DG:173:LEU:HB3	29:DG:178:PHE:CD2	2.55	0.41
24:DA:315:G:C6	24:DA:316:C:C4	3.09	0.41
7:AJ:111:ARG:H	7:AJ:111:ARG:HG3	1.57	0.41
1:CA:918:A:H2'	1:CA:919:A:O4'	2.20	0.41
24:BA:172:C:H2'	24:BA:173:G:C8	2.56	0.41
24:BA:1516:U:C2	24:BA:1517:G:C8	3.09	0.41
33:DN:47:ILE:HA	33:DN:47:ILE:HD12	1.83	0.41
24:DA:583:G:OP2	39:D1:10:ARG:HD2	2.20	0.41
24:DA:581:C:OP1	39:D1:33:ARG:HG3	2.20	0.41
1:AA:201:C:N4	1:AA:209:U:O2	2.53	0.41
24:BA:270(V):G:C4	24:BA:270(W):G:C8	3.09	0.41
53:D8:49:VAL:HG13	53:D8:50:LEU:N	2.35	0.41
1:AA:939:G:H5''	7:AJ:102:ARG:HH12	1.86	0.41
24:BA:606:U:H4'	24:BA:658:C:H4'	2.02	0.41
13:AP:40:ASN:HA	13:AP:41:PRO:HD3	1.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:248:G:H5'	24:BA:250:G:N7	2.35	0.41
24:DA:1254:A:H5''	24:DA:1255:U:H5'	2.02	0.41
32:BM:41:ASP:HA	39:B1:64:ARG:NH2	2.36	0.41
1:CA:791:G:C6	1:CA:792:A:N7	2.89	0.41
26:BD:142:VAL:HG23	26:BD:193:VAL:HA	2.02	0.41
24:BA:1629:U:H2'	24:BA:1630:G:C8	2.55	0.41
11:CN:114:VAL:HA	11:CN:115:PRO:HD3	1.90	0.41
24:BA:182:A:H2'	24:BA:183:C:C6	2.55	0.41
36:D0:18:LEU:HD22	36:D0:22:ARG:CD	2.50	0.41
28:BF:16:GLY:O	28:BF:18:ARG:N	2.53	0.41
10:AM:5:ARG:HH21	10:AM:99:LYS:HD2	1.84	0.41
28:BF:170:LEU:HA	28:BF:170:LEU:HD13	1.88	0.41
24:DA:1659:U:C4	24:DA:1660:C:C5	3.09	0.41
46:BZ:94:LEU:HD23	46:BZ:94:LEU:HA	1.84	0.41
18:AU:76:LEU:HA	18:AU:76:LEU:HD13	1.88	0.41
24:BA:1394:U:H4'	24:BA:1603:A:H4'	2.03	0.41
34:DO:49:ARG:NE	53:D8:59:LYS:HD3	2.36	0.41
24:DA:2155:G:C5	24:DA:2156:G:C5	3.08	0.41
24:DA:2157:G:H2'	24:DA:2158:A:C8	2.55	0.41
24:DA:2134:A:H2	24:DA:2159:G:H1'	1.86	0.41
29:DG:104:GLU:OE2	29:DG:108:ASN:ND2	2.54	0.41
24:DA:61:G:H1	24:DA:93:C:H42	1.66	0.41
1:AA:1381:U:H2'	7:AJ:79:ARG:HE	1.86	0.41
46:BZ:87:PRO:HA	46:BZ:90:ILE:HB	2.03	0.41
22:AD:14:A:N7	22:AD:15:G:C5	2.88	0.41
3:CF:47:LEU:HG	3:CF:52:LEU:HD13	2.01	0.41
1:AA:977:A:H2'	1:AA:978:A:H5''	2.02	0.41
37:BQ:51:ALA:HB3	37:BQ:73:LEU:HG	2.02	0.41
24:BA:1171:G:C2	24:BA:1179:C:N3	2.89	0.41
40:B2:10:LYS:NZ	40:B2:23:GLU:OE1	2.54	0.41
1:AA:1175:G:H2'	1:AA:1176:A:C8	2.55	0.41
24:BA:654(I):C:O2	24:BA:654(I):C:H2'	2.21	0.41
1:CA:1206:G:C4	1:CA:1207:G:C8	3.09	0.41
22:CD:36:U:OP2	22:CD:36:U:H6	2.04	0.41
1:AA:741:G:H2'	1:AA:742:G:O4'	2.21	0.41
1:CA:975:A:H4'	1:CA:976:G:C5'	2.47	0.41
2:CE:88:ALA:HB2	2:CE:219:VAL:HG23	2.02	0.41
31:DK:144:VAL:HG13	31:DK:145:VAL:O	2.21	0.41
29:BG:111:LEU:CD2	29:BG:120:LEU:HD21	2.51	0.41
1:CA:445:G:H2'	1:CA:446:G:H8	1.85	0.41
24:BA:1791:A:C8	24:BA:1792:G:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:742:G:OP2	15:CR:35:ARG:NH2	2.53	0.41
1:AA:1370:G:H2'	1:AA:1371:G:H8	1.86	0.41
30:DH:82:GLY:O	30:DH:135:GLY:N	2.48	0.41
17:AT:66:SER:HB3	17:AT:69:LYS:HD3	2.01	0.41
1:CA:628:G:H2'	1:CA:629:G:O4'	2.20	0.41
43:BU:57:GLN:CD	43:BU:58:GLY:H	2.24	0.41
12:CO:34:ARG:HG2	12:CO:35:GLY:N	2.34	0.41
37:DQ:65:VAL:O	37:DQ:68:GLN:HB2	2.21	0.41
2:AE:115:LEU:HD13	2:AE:145:LEU:HB3	2.02	0.41
30:DH:46:GLU:CD	30:DH:51:ARG:HD2	2.41	0.41
1:AA:537:G:H2'	1:AA:538:G:H8	1.85	0.41
24:DA:1338:G:N7	42:DT:62:LYS:NZ	2.63	0.41
7:AJ:113:GLU:HB2	7:AJ:119:ARG:HG2	2.03	0.41
8:AK:49:GLU:O	8:AK:51:VAL:HG13	2.21	0.41
24:DA:319:C:H2'	24:DA:320:A:O4'	2.21	0.41
30:DH:122:THR:HB	30:DH:124:GLU:OE2	2.21	0.41
24:BA:2065:C:H2'	24:BA:2066:C:H6	1.85	0.41
24:DA:196:A:O2'	24:DA:805:G:O6	2.20	0.41
39:D1:105:VAL:O	39:D1:109:LEU:HG	2.21	0.41
24:DA:2773:C:H2'	24:DA:2774:C:H6	1.85	0.41
24:DA:1000:A:C6	24:DA:1001:A:N1	2.88	0.41
24:BA:975:G:H1'	24:BA:990:A:C2	2.56	0.41
46:DZ:5:CYS:HG	46:DZ:8:SER:HG	1.66	0.41
28:BF:170:LEU:HA	28:BF:171:PRO:HD2	1.91	0.41
7:AJ:28:ASN:HA	7:AJ:31:MET:HE3	2.02	0.41
2:AE:95:GLN:HG3	2:AE:147:LYS:O	2.20	0.41
5:AH:87:SER:HB3	5:AH:131:ILE:HD13	2.02	0.41
24:DA:1626:G:H5''	24:DA:1627:G:H5'	2.03	0.41
24:BA:2310:A:N3	29:BG:77:ILE:HD11	2.35	0.41
53:D8:16:ILE:HD13	53:D8:57:ARG:HG3	2.01	0.41
7:AJ:139:GLU:C	7:AJ:141:VAL:H	2.24	0.41
24:DA:2312:U:O5'	29:DG:74:LYS:NZ	2.54	0.41
24:BA:2167:U:P	24:BA:2167:U:H6	2.43	0.41
24:BA:980:A:C4	24:BA:1136:G:O4'	2.74	0.41
12:AO:23:LYS:HE2	12:AO:23:LYS:HB3	1.75	0.41
1:AA:511:C:O2'	1:AA:512:U:H5''	2.21	0.41
3:AF:114:PRO:O	3:AF:118:GLN:HG3	2.21	0.41
30:BH:38:SER:HA	30:BH:39:PRO:HD3	1.90	0.41
4:CG:177:ASP:OD2	4:CG:182:LYS:HE2	2.21	0.41
24:BA:1025:G:OP1	24:BA:1025:G:H8	2.04	0.41
4:CG:23:GLY:CA	4:CG:112:VAL:CG2	2.93	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CG:23:GLY:C	4:CG:25:ARG:N	2.74	0.41
1:AA:427:U:O4	1:AA:428:G:N1	2.54	0.41
24:BA:2790:A:H1'	24:BA:2893:G:O2'	2.21	0.41
32:BM:15:LEU:CD2	32:BM:128:HIS:NE2	2.84	0.41
24:DA:2128:C:C4	24:DA:2129:C:C4	3.08	0.41
24:DA:2637:U:H2'	24:DA:2638:G:O4'	2.21	0.41
24:BA:2399:G:H2'	24:BA:2400:G:C1'	2.51	0.41
24:BA:2415:G:C4'	34:BO:67:MET:H	2.24	0.41
26:BD:43:ARG:HB3	26:BD:54:ARG:HB2	2.02	0.41
26:BD:43:ARG:CB	26:BD:54:ARG:HB2	2.50	0.41
24:DA:1053:C:N4	24:DA:1054:A:C6	2.88	0.41
13:CP:81:LEU:HD22	13:CP:88:ARG:HE	1.86	0.41
24:BA:2287:A:C6	24:BA:2289:G:C4	3.09	0.41
1:CA:458:C:C4	1:CA:464:G:C5	3.09	0.41
24:BA:1073:A:N6	24:BA:1074:G:N3	2.69	0.41
24:DA:2341:G:H2'	24:DA:2342:C:C6	2.56	0.41
22:AD:1:C:H41	22:AD:71:C:N4	2.19	0.41
22:AD:18:G:N2	22:AD:55:U:H1'	2.33	0.41
24:DA:1045:A:H4'	24:DA:1047:G:C5'	2.51	0.41
24:DA:83:G:C2	24:DA:102:G:H2'	2.56	0.41
1:AA:1291:G:H2'	1:AA:1292:U:H6	1.84	0.41
1:CA:1297:C:H4'	1:CA:1298:C:O5'	2.20	0.41
13:CP:14:ARG:H	13:CP:44:ARG:HH11	1.68	0.41
24:BA:1178:C:H4'	24:BA:1179:C:OP1	2.21	0.41
3:CF:14:ILE:HD13	3:CF:15:THR:N	2.35	0.41
26:BD:63:ARG:H	26:BD:87:ASN:HD21	1.68	0.41
44:BV:106:GLY:HA2	44:BV:140:ASP:HA	2.01	0.41
33:DN:106:LEU:HA	33:DN:106:LEU:HD23	1.83	0.41
10:AM:42:THR:HG23	10:AM:68:HIS:HA	2.02	0.41
22:CD:31:G:C6	22:CD:32:C:N3	2.88	0.41
22:CD:31:G:H2'	22:CD:32:C:O4'	2.21	0.41
9:AL:11:LYS:NZ	9:AL:107:ARG:O	2.54	0.41
24:BA:2471:C:H2'	24:BA:2472:G:O4'	2.20	0.41
19:CV:80:TYR:O	19:CV:82:GLY:N	2.50	0.41
2:CE:100:GLY:O	2:CE:104:ASN:N	2.33	0.41
1:CA:384:G:H2'	1:CA:385:C:H6	1.86	0.41
18:CU:37:VAL:CG1	18:CU:78:LEU:HB3	2.47	0.41
1:AA:1138:G:N3	1:AA:1138:G:H3'	2.36	0.41
5:AH:58:ALA:O	5:AH:62:ALA:N	2.45	0.41
39:B1:8:VAL:HG23	39:B1:11:ARG:HH21	1.86	0.41
8:AK:14:ARG:O	8:AK:18:ARG:HD3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CG:68:TYR:CD2	4:CG:97:LEU:HD13	2.56	0.41
1:AA:1287:A:C6	1:AA:1288:A:C6	3.09	0.41
19:AV:31:ILE:O	19:AV:50:ALA:N	2.48	0.41
15:CR:33:THR:HG22	15:CR:37:ASN:OD1	2.20	0.41
44:DV:139:VAL:HG12	44:DV:140:ASP:H	1.85	0.41
30:BH:74:ASN:HA	30:BH:77:LYS:HB3	2.02	0.41
30:BH:101:ARG:HH22	30:BH:122:THR:HA	1.86	0.41
37:DQ:34:HIS:ND1	37:DQ:53:SER:HB2	2.36	0.41
3:CF:39:ILE:HG21	3:CF:57:ILE:HD11	2.03	0.41
1:CA:922:G:H2'	1:CA:923:A:C8	2.56	0.41
19:AV:15:LEU:O	19:AV:19:VAL:HG23	2.21	0.41
10:CM:40:LEU:HB3	10:CM:69:ASN:HB3	2.03	0.41
43:BU:12:THR:O	43:BU:75:ILE:HG12	2.21	0.41
27:BE:32:PRO:HA	27:BE:90:THR:HA	2.02	0.41
24:BA:657:U:H2'	24:BA:658:C:C6	2.56	0.41
26:DD:133:LEU:HB2	26:DD:187:GLY:HA2	2.02	0.41
7:CJ:71:PRO:HB2	7:CJ:91:VAL:HG21	2.03	0.41
24:DA:1287:A:C5	24:DA:1288:U:C4	3.08	0.41
1:CA:1153:C:C4	1:CA:1154:G:N7	2.89	0.41
35:DP:38:GLU:OE1	35:DP:128:LYS:N	2.47	0.41
15:AR:74:ASP:HA	15:AR:75:PRO:HD2	1.89	0.41
16:CS:26:ARG:HH21	16:CS:31:LYS:HD3	1.86	0.41
24:DA:1814:G:C6	24:DA:1815:A:C6	3.08	0.41
1:CA:868:C:H2'	1:CA:869:G:O4'	2.21	0.41
24:DA:2580:U:C5	24:DA:2581:G:C6	3.08	0.41
39:D1:27:LEU:HD22	39:D1:31:SER:HB2	2.03	0.41
38:BR:24:PRO:O	38:BR:94:ALA:HB2	2.21	0.41
3:AF:62:ASP:N	3:AF:62:ASP:OD1	2.54	0.41
46:BZ:25:LYS:HB2	46:BZ:25:LYS:HE3	1.82	0.41
44:DV:163:LEU:H	44:DV:163:LEU:HD23	1.86	0.41
3:CF:22:TRP:HB2	3:CF:23:TYR:H	1.55	0.41
39:B1:87:GLY:O	39:B1:89:GLU:N	2.51	0.41
24:DA:49:A:H4'	24:DA:50:U:O5'	2.20	0.41
24:DA:49:A:H5'	24:DA:51:G:O4'	2.20	0.41
47:DW:30:ARG:NH2	47:DW:34:GLU:OE2	2.32	0.41
39:D1:91:ASP:OD2	39:D1:96:ALA:HB2	2.21	0.41
4:AG:26:CYS:HA	4:AG:31:CYS:HB2	2.01	0.41
4:AG:29:PRO:O	4:AG:30:LYS:HG2	2.21	0.41
51:D6:44:ARG:CZ	51:D6:47:THR:HB	2.50	0.41
27:DE:31:CYS:SG	27:DE:51:PHE:HB2	2.60	0.41
24:BA:5:A:H2'	24:BA:6:A:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BM:55:VAL:CG1	32:BM:128:HIS:ND1	2.84	0.41
24:BA:2531:A:H2	24:BA:2658:C:O2	2.03	0.41
3:CF:131:ARG:NH2	3:CF:166:GLU:OE2	2.53	0.41
24:BA:2415:G:C6	24:BA:2416:C:C4	3.08	0.41
24:DA:1053:C:N3	24:DA:1106:G:C2	2.89	0.41
24:DA:1056:G:H5'	24:DA:1086:A:N3	2.36	0.41
1:CA:1311:G:H2'	1:CA:1312:G:O4'	2.20	0.41
22:CD:14:A:N1	22:CD:15:G:N3	2.69	0.41
22:CD:52:G:O6	22:CD:62:C:C4	2.72	0.41
22:CD:60:U:H3'	22:CD:61:C:C5	2.56	0.41
1:CA:1028:C:C2	1:CA:1034:G:C2	3.09	0.41
24:BA:1055:G:H3'	24:BA:1056:G:H8	1.85	0.41
24:BA:1059:G:OP2	24:BA:1060:U:H3'	2.21	0.41
22:AD:51:C:C2	22:AD:64:G:N2	2.89	0.41
24:BA:2147:G:H3'	24:BA:2147:G:C8	2.56	0.41
24:BA:2165:G:O6	24:BA:2166:G:N2	2.54	0.41
1:CA:994:A:N7	1:CA:1216:G:H4'	2.36	0.41
1:CA:1014:A:C5	19:CV:34:TRP:CD1	3.09	0.41
24:BA:2854:G:H2'	24:BA:2855:C:C6	2.55	0.41
24:DA:654(B):C:C2	24:DA:654(T):A:C2	3.08	0.41
3:CF:47:LEU:HD22	3:CF:47:LEU:HA	1.91	0.41
1:AA:977:A:H1'	1:AA:982:U:O4	2.21	0.41
24:DA:1044:G:H4'	24:DA:1048:A:H1'	2.03	0.41
24:DA:1047:G:C5	24:DA:1110:G:O6	2.73	0.41
24:BA:2262:U:H4'	24:BA:2328:A:H2	1.86	0.41
24:DA:2798:C:H5''	24:DA:2801:A:N6	2.36	0.41
1:AA:1081:G:H2'	1:AA:1082:G:C8	2.54	0.41
24:DA:885:C:H3'	24:DA:886:C:C6	2.55	0.41
1:CA:1299:A:C6	1:CA:1301:U:C2	3.09	0.41
24:DA:1678:G:N2	24:DA:1989:G:N2	2.58	0.41
24:BA:881:G:H22	24:BA:895:U:H3	1.67	0.41
1:CA:1152:A:H4'	10:CM:13:HIS:CD2	2.56	0.41
26:BD:35:LYS:HD3	26:BD:63:ARG:CA	2.51	0.41
26:BD:35:LYS:HB3	26:BD:63:ARG:HA	2.03	0.41
49:D4:56:VAL:HG13	49:D4:57:GLU:HG3	2.03	0.41
1:CA:1291:G:C6	1:CA:1292:U:C4	3.09	0.41
25:DB:15:A:H3'	25:DB:16:G:H5'	2.02	0.41
38:BR:21:GLU:OE2	38:BR:91:ARG:NH2	2.54	0.41
1:CA:406:G:C4	1:CA:495:A:C6	3.09	0.41
28:DF:134:GLY:HA2	28:DF:166:ALA:HB2	2.02	0.41
24:BA:2640:G:H1	24:BA:2774:C:N4	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CJ:116:ALA:HA	7:CJ:119:ARG:HG3	2.03	0.41
32:DM:28:THR:O	32:DM:32:THR:OG1	2.38	0.41
25:BB:9:G:O6	25:BB:111:U:N3	2.45	0.41
1:AA:1273:G:C6	1:AA:1274:G:C4	3.09	0.41
25:BB:29:A:P	37:BQ:32:LEU:HD13	2.60	0.41
24:DA:1178:C:C4	24:DA:1179:C:C4	3.09	0.41
1:AA:56:U:H2'	1:AA:57:G:C8	2.55	0.41
1:AA:129(A):G:N2	1:AA:191(A):G:N7	2.69	0.41
24:BA:2261:C:H1'	24:BA:2388:A:N3	2.36	0.41
1:AA:672:U:O2'	1:AA:673:G:H5'	2.21	0.41
28:BF:40:GLN:NE2	28:BF:182:ASN:HB2	2.35	0.41
1:CA:160:A:H61	1:CA:347:G:H1'	1.85	0.41
39:D1:78:THR:OG1	39:D1:79:PHE:N	2.53	0.41
2:AE:27:LYS:C	2:AE:29:ALA:H	2.23	0.41
24:DA:1424:G:OP1	26:DD:33:LEU:HD23	2.21	0.41
24:BA:1014:U:C2'	24:BA:1015:G:H5''	2.49	0.41
28:DF:179:GLU:HA	28:DF:205:ARG:HH22	1.86	0.41
20:CW:10:LEU:HG	20:CW:12:ALA:H	1.85	0.41
1:AA:451:A:OP1	1:AA:481:G:N1	2.42	0.41
24:DA:1447:G:H1'	24:DA:1545(A):A:H1'	2.02	0.41
24:BA:2432:A:C5	46:BZ:33:LYS:HG2	2.55	0.41
42:DT:27:THR:HG22	42:DT:80:ILE:HG22	2.02	0.41
17:AT:46:ASP:C	17:AT:48:GLU:H	2.24	0.41
24:BA:270:A:N1	24:BA:366:C:O2'	2.49	0.41
24:BA:273(A):G:C6	24:BA:364:C:N4	2.88	0.41
15:CR:35:ARG:O	15:CR:39:LEU:HB2	2.21	0.41
24:DA:141:A:H1'	24:DA:1408:C:O4'	2.21	0.41
24:DA:276:A:H8	24:DA:278:A:N7	2.19	0.41
24:DA:275:G:H21	24:DA:276:A:N6	2.19	0.41
24:BA:1164:G:H2'	24:BA:1165:U:H6	1.83	0.41
1:CA:842:C:H4'	1:CA:843:U:H5	1.85	0.41
10:AM:81:THR:O	10:AM:85:LEU:HG	2.21	0.41
24:BA:2881:C:H2'	24:BA:2882:A:C8	2.54	0.41
50:D5:56:LYS:HB3	50:D5:57:VAL:H	1.58	0.41
52:B7:9:ARG:H	52:B7:9:ARG:HG3	1.70	0.41
1:AA:667:G:H4'	15:AR:51:HIS:ND1	2.36	0.41
3:AF:8:ILE:O	3:AF:11:ARG:N	2.53	0.41
4:CG:28:SER:HA	4:CG:29:PRO:HA	1.57	0.41
10:CM:6:ILE:HG23	10:CM:72:VAL:HG12	2.02	0.41
24:DA:171:G:H2'	24:DA:172:C:C6	2.55	0.41
47:DW:16:LEU:HD12	47:DW:20:GLU:OE2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:564:C:OP1	12:CO:15:ARG:NH2	2.53	0.41
24:BA:184:C:H2'	24:BA:185:U:C6	2.56	0.41
1:AA:658:G:H2'	1:AA:659:U:C6	2.55	0.41
37:BQ:93:LYS:HG2	37:BQ:95:HIS:HB2	2.03	0.41
29:DG:22:ARG:H	29:DG:22:ARG:HG2	1.41	0.41
9:CL:51:ARG:HH12	9:CL:56:LEU:HD13	1.86	0.41
24:BA:2687:U:C4	24:BA:2688:U:C5	3.09	0.41
24:DA:459:U:H2'	24:DA:460:A:C8	2.55	0.41
26:BD:38:LYS:HG3	26:BD:38:LYS:O	2.20	0.41
44:DV:23:LYS:HB3	44:DV:38:TYR:CD1	2.56	0.41
24:DA:118:A:OP2	24:DA:119:A:H5''	2.20	0.41
9:AL:48:GLU:N	9:AL:49:PRO:HD2	2.36	0.41
1:AA:1336:C:O2'	1:AA:1337:G:N3	2.47	0.41
1:AA:944:G:C2	1:AA:1340:A:C6	3.08	0.41
24:BA:252:G:OP2	34:BO:50:ARG:NH2	2.50	0.41
1:AA:666:G:OP2	1:AA:725:G:N2	2.44	0.41
1:CA:828:A:N6	1:CA:858:G:O2'	2.48	0.41
28:DF:130:ALA:H	28:DF:142:TRP:HD1	1.67	0.41
24:DA:1910:G:O2'	24:DA:1911:U:H5'	2.21	0.41
32:DM:96:GLU:HB2	32:DM:122:VAL:HG12	2.02	0.41
25:BB:51:G:H5'	25:BB:52:A:OP2	2.21	0.41
39:B1:89:GLU:HG3	39:B1:89:GLU:H	1.77	0.41
43:DU:35:TYR:CE2	43:DU:69:ALA:HB3	2.56	0.41
20:AW:16:HIS:O	20:AW:19:SER:HB2	2.20	0.41
33:DN:119:PRO:HB2	38:DR:68:TYR:CE2	2.56	0.41
45:D3:73:GLY:O	45:D3:76:GLY:N	2.44	0.41
24:BA:1291:C:H5'	24:BA:1536:A:H5'	2.03	0.41
24:DA:2261:C:H1'	24:DA:2388:A:N3	2.36	0.41
4:CG:70:ILE:HD11	4:CG:75:PHE:HD1	1.86	0.41
24:DA:2018:G:H2'	24:DA:2019:A:O4'	2.20	0.41
24:BA:2110:G:H5''	24:BA:2145:C:H42	1.85	0.41
34:DO:97:PRO:HD3	34:DO:126:VAL:O	2.21	0.41
24:BA:189:G:H2'	24:BA:205:G:N2	2.35	0.41
24:BA:1949:G:H2'	24:BA:1950:G:O4'	2.20	0.41
1:AA:1231:G:O3'	9:AL:126:SER:OG	2.26	0.41
26:BD:133:LEU:HD23	26:BD:133:LEU:HA	1.85	0.41
35:DP:60:ARG:HA	35:DP:60:ARG:HD3	1.86	0.41
3:AF:42:LEU:HA	3:AF:42:LEU:HD12	1.78	0.41
41:DS:2:GLU:OE1	41:DS:72:LYS:NZ	2.41	0.41
38:BR:19:LEU:HA	38:BR:20:PRO:HD3	1.95	0.41
19:AV:9:VAL:HB	49:B4:66:SER:CB	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AI:6:VAL:HG12	6:AI:8:ILE:HG13	2.02	0.41
32:DM:68:GLU:HG2	32:DM:88:GLU:OE1	2.21	0.41
1:AA:668:G:H4'	15:AR:48:LYS:HB2	2.02	0.41
30:BH:118:PRO:O	30:BH:121:ILE:HB	2.20	0.41
24:BA:2563:U:H4'	33:BN:28:SER:HA	2.02	0.41
30:DH:118:PRO:HB2	30:DH:119:GLU:H	1.53	0.41
41:BS:86:LEU:HD12	41:BS:87:PRO:HD2	2.03	0.41
17:AT:74:LEU:HA	17:AT:74:LEU:HD22	1.86	0.41
5:CH:150:ARG:O	5:CH:154:GLY:HA3	2.21	0.41
27:DE:38:THR:HA	27:DE:39:PRO:HD2	1.82	0.41
39:D1:108:GLU:OE1	40:D2:45:THR:HA	2.21	0.41
34:BO:6:LEU:C	34:BO:7:ARG:CG	2.88	0.41
24:DA:2114:A:H61	24:DA:2170:A:N6	2.18	0.41
24:BA:782:A:H5'	24:BA:783:A:C2	2.56	0.41
24:DA:1079:C:H41	24:DA:1088:A:H5''	1.86	0.41
24:DA:1093:G:H1'	24:DA:1099:G:N1	2.36	0.41
1:CA:1132:C:N4	1:CA:1142:G:H1	2.14	0.41
24:BA:2636:U:H2'	24:BA:2637:U:C6	2.56	0.41
24:DA:1651:G:P	36:D0:37:THR:HG21	2.61	0.41
2:CE:21:ARG:O	2:CE:23:ARG:N	2.54	0.41
22:AD:64:G:H2'	22:AD:65:C:O4'	2.21	0.41
24:BA:2124:G:C6	24:BA:2125:G:C2	3.09	0.41
24:BA:654(A):A:H2'	24:BA:654(B):C:C6	2.56	0.41
24:BA:654(S):G:O2'	24:BA:654(T):A:O5'	2.23	0.41
3:CF:76:VAL:HA	3:CF:83:ARG:HE	1.86	0.41
24:DA:2808:U:H2'	24:DA:2809:A:H8	1.86	0.41
1:AA:1342:C:H2'	1:AA:1343:G:H8	1.85	0.41
24:BA:880:G:C4	24:BA:881:G:C8	3.09	0.41
24:BA:1509:C:C2'	24:BA:1510:A:OP1	2.68	0.41
24:DA:1039:G:C6	24:DA:1040:C:C4	3.08	0.41
5:AH:7:GLU:N	5:AH:35:GLY:O	2.51	0.41
24:BA:1784:A:H4'	24:BA:1785:A:C5'	2.51	0.41
24:BA:273(D):C:H2'	24:BA:273(E):U:H6	1.85	0.41
9:AL:17:VAL:HG22	9:AL:63:ILE:HG12	2.03	0.41
2:CE:209:ARG:HD3	2:CE:240:GLN:OE1	2.21	0.41
5:CH:18:ARG:N	5:CH:25:ARG:O	2.54	0.41
29:BG:2:PRO:HB3	49:B4:25:TYR:CD1	2.56	0.41
34:DO:88:LEU:HD11	34:DO:95:VAL:HG21	2.03	0.41
1:CA:876:G:H1'	8:CK:11:THR:HG21	2.02	0.41
24:DA:540:G:H1	24:DA:553:U:H3	1.67	0.41
6:AI:24:GLU:OE1	6:AI:28:ARG:NH2	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1135:U:H2'	1:AA:1137:C:N3	2.35	0.41
36:B0:67:LEU:HD22	36:B0:76:VAL:HG21	2.02	0.41
24:BA:2022:U:O2'	24:BA:2617:C:H5'	2.20	0.41
17:CT:63:ARG:HA	17:CT:64:PRO:HD3	1.96	0.41
38:BR:54:ARG:HA	38:BR:59:THR:HG1	1.86	0.41
12:CO:47:LYS:CB	12:CO:48:PRO:HD3	2.51	0.41
2:CE:116:GLU:H	2:CE:116:GLU:HG2	1.53	0.41
30:BH:74:ASN:HA	30:BH:77:LYS:HD3	2.01	0.41
29:DG:173:LEU:HD12	29:DG:178:PHE:CZ	2.55	0.41
1:AA:116:A:H2'	1:AA:117:G:O4'	2.21	0.41
24:DA:1761:C:H3'	24:DA:1762:A:H5''	2.02	0.41
24:BA:1530:G:C6	24:BA:1531:C:C4	3.09	0.41
24:DA:721:C:H2'	24:DA:722:A:H8	1.86	0.41
24:DA:975:G:H1'	24:DA:990:A:C2	2.56	0.41
1:AA:103:C:H2'	1:AA:104:G:H8	1.86	0.41
1:AA:1363:A:H1'	1:AA:1365:G:N7	2.36	0.41
24:DA:920:G:H2'	24:DA:921:G:C8	2.54	0.41
36:B0:70:LEU:C	36:B0:72:ASP:H	2.25	0.41
31:DK:128:LEU:O	31:DK:138:ILE:HG22	2.21	0.41
24:BA:1045:A:C8	24:BA:1047:G:C2	3.08	0.41
20:CW:14:LYS:HB2	20:CW:17:ARG:NH2	2.36	0.41
1:AA:1061:G:OP1	10:AM:59:SER:OG	2.28	0.41
24:BA:1625:C:H2'	24:BA:1626:G:O4'	2.21	0.41
42:DT:40:LYS:O	42:DT:42:ALA:N	2.45	0.41
26:DD:66:ASP:CG	26:DD:68:LYS:O	2.59	0.41
39:D1:99:ALA:HB2	39:D1:106:PHE:CD1	2.56	0.41
12:CO:78:GLN:O	12:CO:80:HIS:N	2.53	0.41
24:DA:18:C:O3'	39:D1:23:GLY:HA2	2.21	0.41
5:CH:67:VAL:HG22	5:CH:68:GLU:O	2.21	0.41
16:CS:38:TYR:OH	16:CS:47:ASP:OD2	2.37	0.41
24:BA:65:C:H5'	42:BT:71:GLY:HA3	2.03	0.41
25:BB:14:U:H1'	25:BB:107:U:H1'	2.03	0.41
24:BA:301:G:C4	24:BA:302:C:C5	3.09	0.41
31:BK:87:LYS:HD3	31:BK:87:LYS:HA	1.96	0.41
7:AJ:12:LEU:HA	7:AJ:12:LEU:HD13	1.95	0.41
33:DN:105:GLU:OE1	33:DN:105:GLU:N	2.54	0.41
24:BA:299:A:OP2	24:BA:299:A:H8	2.02	0.41
24:DA:2320:A:N6	24:DA:2333:A:H2'	2.36	0.41
49:D4:10:VAL:HA	49:D4:11:PRO:HD2	1.84	0.41
38:BR:6:LEU:O	38:BR:10:VAL:HG23	2.21	0.41
44:DV:43:GLU:O	44:DV:47:VAL:HG23	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:18:C:O3'	39:B1:23:GLY:HA2	2.21	0.41
4:CG:38:TYR:CD1	4:CG:45:GLN:HG2	2.56	0.40
35:BP:63:LYS:CG	35:BP:65:PHE:CE2	3.04	0.40
24:BA:2898:U:H2'	24:BA:2899:G:C8	2.56	0.40
24:DA:897:C:H5'	24:DA:898:C:P	2.60	0.40
1:CA:1129:C:N3	1:CA:1139:G:N1	2.69	0.40
24:DA:1651:G:H2'	24:DA:1652:A:O4'	2.21	0.40
24:BA:2115:G:N2	24:BA:2119:A:N3	2.70	0.40
1:AA:956:U:H2'	1:AA:957:U:O4'	2.21	0.40
1:CA:997:U:H2'	1:CA:998:G:C8	2.55	0.40
24:BA:638:G:H2'	24:BA:639:U:C6	2.57	0.40
1:CA:1118:C:C4'	9:CL:104:ARG:HD3	2.51	0.40
9:CL:14:VAL:O	9:CL:65:VAL:HG23	2.22	0.40
24:BA:1800:C:OP2	26:BD:183:ARG:NH2	2.46	0.40
2:CE:193:ASP:HA	2:CE:194:PRO:HD2	1.94	0.40
1:AA:152:A:N6	1:AA:170:U:C2	2.89	0.40
1:AA:1157:A:H1'	1:AA:1158:C:C4	2.55	0.40
1:AA:1176:A:C6	1:AA:1177:G:C2	3.09	0.40
1:CA:1443:G:N2	38:DR:119:LYS:HB2	2.36	0.40
39:D1:41:ALA:HB1	39:D1:45:TYR:CE2	2.56	0.40
2:CE:20:GLU:HG3	2:CE:189:ASP:OD2	2.21	0.40
24:BA:322:A:H3'	28:BF:169:ASN:OD1	2.21	0.40
1:AA:405:U:O2'	1:AA:497:U:H5'	2.21	0.40
1:CA:522:C:OP2	12:CO:69:TYR:OH	2.30	0.40
25:DB:44:G:P	29:DG:98:ARG:HH22	2.43	0.40
31:BK:9:LEU:O	31:BK:10:GLU:HB3	2.21	0.40
40:D2:60:GLU:HG2	40:D2:97:LYS:HD3	2.04	0.40
1:CA:8:A:N7	4:CG:209:ARG:HA	2.36	0.40
24:BA:1580:A:OP2	24:BA:1580:A:H8	2.03	0.40
44:DV:52:SER:C	44:DV:54:HIS:H	2.23	0.40
27:DE:101:ARG:HA	27:DE:170:LEU:O	2.21	0.40
24:BA:306:U:H2'	24:BA:307:G:O4'	2.21	0.40
1:CA:969:A:H2'	1:CA:970:C:O4'	2.21	0.40
24:BA:2299:G:OP1	29:BG:75:LYS:NZ	2.53	0.40
37:DQ:64:GLU:O	37:DQ:68:GLN:HG2	2.20	0.40
44:BV:162:GLU:HB2	44:BV:163:LEU:H	1.64	0.40
24:BA:140:A:H8	24:BA:1408:C:HO2'	1.64	0.40
24:DA:1460:A:O2'	24:DA:1461:G:OP2	2.33	0.40
1:CA:1171:G:H2'	1:CA:1172:C:C6	2.56	0.40
1:AA:983:A:H1'	1:AA:1049:U:O2	2.20	0.40
26:BD:75:ILE:HD13	26:BD:99:ASP:OD2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:D3:53:MET:HG2	45:D3:57:PHE:HA	2.02	0.40
40:B2:38:LEU:H	40:B2:51:VAL:HG13	1.86	0.40
24:DA:870:A:OP1	35:DP:6:ARG:NH1	2.48	0.40
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.31	0.40
24:BA:1045:A:OP1	24:BA:1045:A:H4'	2.21	0.40
24:BA:1152:C:H4'	39:B1:77:SER:HA	2.02	0.40
1:CA:505:G:OP2	1:CA:534:U:H2'	2.20	0.40
24:DA:820:A:C2	24:DA:943:U:H4'	2.56	0.40
30:DH:94:TYR:HA	30:DH:106:THR:O	2.21	0.40
24:DA:1342:A:H2	24:DA:1602:U:N3	2.18	0.40
30:DH:24:VAL:HB	30:DH:25:LYS:H	1.52	0.40
24:BA:270(G):C:H2'	24:BA:270(H):C:C6	2.55	0.40
28:DF:155:LEU:N	28:DF:191:ARG:O	2.42	0.40
1:CA:794:A:H4'	1:CA:1521:G:O2'	2.20	0.40
8:AK:122:ARG:O	8:AK:126:LYS:HG3	2.21	0.40
45:B3:57:PHE:N	45:B3:57:PHE:CD1	2.89	0.40
27:BE:41:LYS:HE2	27:BE:41:LYS:HB2	1.77	0.40
33:BN:120:GLU:HB2	38:BR:68:TYR:HE2	1.85	0.40
24:DA:1666:G:H1'	33:DN:3:GLN:HE21	1.86	0.40
5:CH:90:VAL:O	5:CH:120:THR:HA	2.20	0.40
3:AF:164:ARG:NH1	3:AF:166:GLU:OE1	2.54	0.40
15:CR:71:GLN:HB2	15:CR:78:TYR:CD2	2.56	0.40
15:CR:75:PRO:O	15:CR:78:TYR:HB3	2.20	0.40
24:BA:2053:G:H1	24:BA:2616:C:H42	1.68	0.40
38:DR:85:LYS:NZ	38:DR:87:ASP:OD2	2.47	0.40
13:AP:56:LEU:O	13:AP:60:VAL:N	2.47	0.40
24:BA:1036:G:OP1	30:BH:59:ARG:HB2	2.21	0.40
24:DA:2344:U:OP1	51:D6:38:LYS:HD2	2.21	0.40
28:DF:7:TYR:CE2	28:DF:16:GLY:HA3	2.55	0.40
28:DF:4:VAL:HA	28:DF:19:GLU:HB3	2.04	0.40
24:DA:2095:C:H2'	24:DA:2096:U:O4'	2.21	0.40
2:CE:161:ALA:HB1	2:CE:185:ILE:CD1	2.52	0.40
24:DA:676:A:H1'	24:DA:2443:C:O4'	2.21	0.40
25:BB:11:C:OP1	45:B3:72:ARG:HD2	2.21	0.40
2:AE:12:GLU:HG2	2:AE:44:LEU:HD22	2.02	0.40
24:DA:2776:A:H4'	24:DA:2777:G:O5'	2.21	0.40
24:BA:1085:A:N3	24:BA:1086:A:C5	2.89	0.40
24:DA:1141:U:H2'	32:DM:63:THR:HG21	2.02	0.40
22:AD:18:G:N2	22:AD:58:A:N7	2.58	0.40
1:CA:980:C:H3'	1:CA:981:U:C6	2.56	0.40
1:AA:589:C:N4	1:AA:650:G:H1	2.17	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BG:67:LYS:HA	29:BG:68:PRO:HD3	1.89	0.40
7:AJ:27:ILE:HD11	7:AJ:43:PHE:CD2	2.57	0.40
1:AA:558:G:H2'	1:AA:559:A:H2	1.86	0.40
24:DA:2850:A:N7	24:DA:2868:A:O2'	2.37	0.40
3:CF:97:LYS:O	3:CF:99:VAL:N	2.54	0.40
1:CA:1337:G:H5''	1:CA:1338:G:OP1	2.21	0.40
1:AA:453:A:C6	1:AA:454:C:C4	3.09	0.40
39:B1:92:ARG:HB3	39:B1:95:LEU:HD12	2.03	0.40
22:CD:37:A:C5	22:CD:38:A:C5	3.08	0.40
24:DA:2867:G:OP2	38:DR:119:LYS:NZ	2.34	0.40
35:BP:24:GLY:HA2	35:BP:101:ARG:HD2	2.03	0.40
27:DE:18:ASP:N	27:DE:18:ASP:OD1	2.55	0.40
4:CG:98:GLU:OE2	4:CG:103:ASN:ND2	2.42	0.40
15:AR:4:THR:OG1	15:AR:6:GLU:HG2	2.21	0.40
1:AA:972:C:H4'	10:AM:57:LYS:HB2	2.02	0.40
3:AF:70:VAL:N	3:AF:106:VAL:HG23	2.35	0.40
24:DA:2401:U:O5'	24:DA:2401:U:C6	2.74	0.40
24:BA:242:G:H5'	53:B8:62:LEU:HD22	2.02	0.40
43:DU:46:LYS:O	43:DU:47:LYS:C	2.59	0.40
24:DA:1459:G:C2'	24:DA:1460:A:H5'	2.51	0.40
1:AA:1375:A:C6	1:AA:1376:U:C4	3.09	0.40
24:BA:2232:U:P	46:BZ:40:ARG:HH12	2.44	0.40
1:CA:881:G:H2'	1:CA:882:C:O4'	2.21	0.40
44:DV:116:VAL:HG23	44:DV:179:ASP:OD1	2.21	0.40
1:AA:658:G:H2'	1:AA:659:U:H6	1.86	0.40
10:CM:17:ASP:OD1	10:CM:70:ARG:NH1	2.54	0.40
24:DA:918:A:H5''	25:DB:97:G:O2'	2.21	0.40
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.57	0.40
1:CA:1111:A:H2'	1:CA:1112:C:H6	1.84	0.40
13:AP:39:ILE:HG22	13:AP:40:ASN:O	2.20	0.40
1:AA:19:C:OP1	5:AH:125:SER:OG	2.27	0.40
22:AC:28:C:H2'	22:AC:29:G:H8	1.86	0.40
4:AG:117:ALA:O	4:AG:121:VAL:HG23	2.22	0.40
24:DA:2557:G:H2'	24:DA:2558:C:C6	2.57	0.40
24:DA:858:U:H1'	24:DA:2268:A:H2'	2.02	0.40
37:DQ:59:LYS:HD3	37:DQ:60:GLY:N	2.37	0.40
35:DP:77:LYS:HA	35:DP:78:PRO:HD3	1.93	0.40
42:DT:32:PRO:HA	42:DT:77:LYS:HB2	2.03	0.40
30:DH:15:VAL:HG23	30:DH:17:VAL:HG23	2.03	0.40
24:BA:1907:G:H2'	24:BA:1908:C:C6	2.56	0.40
35:BP:115:MET:HG2	35:BP:131:ILE:HG21	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:32:LEU:HB3	28:DF:112:MET:HE1	2.03	0.40
24:BA:754:C:H2'	24:BA:755:C:C6	2.57	0.40
5:CH:110:LEU:O	5:CH:115:VAL:HG22	2.22	0.40
24:BA:486:C:N3	24:BA:495:G:C2	2.89	0.40
17:CT:22:LEU:HD13	17:CT:41:LYS:HG2	2.02	0.40
44:BV:44:PHE:CZ	44:BV:86:VAL:HG11	2.57	0.40
33:BN:36:GLY:HA3	33:BN:109:LYS:HG3	2.02	0.40
24:DA:1471:A:OP2	24:DA:1521:G:N1	2.47	0.40
17:CT:74:LEU:HD23	17:CT:74:LEU:HA	1.76	0.40
32:DM:127:ASP:OD1	32:DM:127:ASP:N	2.55	0.40
2:AE:41:ILE:HA	2:AE:41:ILE:HD12	1.82	0.40
50:B5:34:PRO:HB2	50:B5:35:GLU:H	1.79	0.40
47:BW:63:VAL:O	47:BW:67:LYS:HG3	2.21	0.40
11:CN:50:TYR:HD2	11:CN:60:ALA:HB2	1.86	0.40
24:BA:1024:G:C3'	24:BA:1025:G:H5''	2.48	0.40
24:BA:1112:G:O2'	30:BH:2:SER:CB	2.47	0.40
51:D6:39:TYR:CD2	51:D6:40:CYS:O	2.71	0.40
24:BA:2630:G:H2'	24:BA:2631:G:C8	2.56	0.40
24:DA:2129:C:C4	24:DA:2130:U:N3	2.90	0.40
24:DA:2159:G:H2'	24:DA:2160:G:O4'	2.21	0.40
28:DF:3:GLU:HG3	28:DF:19:GLU:HB2	2.02	0.40
1:AA:1129:C:N4	1:AA:1133:G:C5	2.87	0.40
24:DA:1093:G:N2	24:DA:1097:U:H5''	2.28	0.40
34:BO:108:LYS:O	34:BO:110:TYR:N	2.54	0.40
24:BA:2286:A:H4'	24:BA:2287:A:O4'	2.22	0.40
1:CA:701:C:O2	1:CA:703:G:N1	2.54	0.40
19:AV:68:GLY:N	49:B4:55:ARG:HH12	2.20	0.40
1:CA:474:G:H2'	1:CA:475:G:H8	1.85	0.40
24:DA:834:C:H1'	24:DA:2358:G:N3	2.36	0.40
22:AD:52:G:C6	22:AD:53:G:N7	2.89	0.40
1:CA:1016:A:H2'	1:CA:1017:G:O4'	2.20	0.40
19:CV:37:ARG:H	19:CV:37:ARG:HG3	1.50	0.40
30:DH:2:SER:OG	30:DH:2:SER:O	2.39	0.40
26:BD:85:ASP:HB2	26:BD:92:ILE:HG12	2.04	0.40
24:DA:1516:U:H2'	24:DA:1517:G:H8	1.86	0.40
31:BK:61:ARG:HB2	31:BK:62:LYS:H	1.77	0.40
25:DB:52:A:O3'	25:DB:53:A:H8	2.05	0.40
24:BA:1557:C:H5''	24:BA:1558:A:OP2	2.21	0.40
24:DA:872:A:H2'	24:DA:873:G:C8	2.56	0.40
1:CA:1048:G:OP1	14:CQ:3:ARG:HB3	2.21	0.40
26:DD:70:TRP:CZ3	26:DD:146:GLU:OE2	2.74	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:547:A:H2'	24:BA:548:A:C4	2.56	0.40
1:AA:191(C):G:C6	1:AA:191(D):U:C4	3.10	0.40
36:B0:33:ARG:HH12	50:B5:55:ARG:HB3	1.87	0.40
24:DA:1999:C:H5''	24:DA:2723:C:O2'	2.21	0.40
20:CW:37:SER:O	20:CW:41:ILE:HG13	2.22	0.40
16:CS:43:LYS:HA	16:CS:48:TRP:CD1	2.55	0.40
1:CA:256:U:P	17:CT:17:LYS:HZ2	2.39	0.40
28:DF:164:ARG:HH12	28:DF:177:ALA:HB2	1.87	0.40
24:BA:2271:G:C5'	45:B3:20:ARG:HH11	2.33	0.40
24:DA:2103:C:H2'	24:DA:2104:G:C8	2.56	0.40
44:DV:14:LYS:HA	44:DV:15:PRO:HD2	1.89	0.40
24:DA:134:C:N4	24:DA:145:G:H1	2.20	0.40
31:BK:79:ILE:HA	31:BK:79:ILE:HD13	1.82	0.40
9:AL:99:LEU:HB3	9:AL:101:PHE:CE2	2.56	0.40
27:DE:2:LYS:HD2	27:DE:95:ILE:CG2	2.51	0.40
5:CH:84:PHE:HB2	5:CH:134:ALA:HB2	2.02	0.40
15:AR:56:LEU:HD21	24:BA:715:G:C2	2.56	0.40
24:BA:2590:A:H2'	24:BA:2591:C:C6	2.56	0.40
24:DA:51:G:N2	24:DA:120:U:O2	2.50	0.40
3:CF:54:ARG:HB2	3:CF:69:HIS:CG	2.57	0.40
28:BF:12:LEU:HD13	28:BF:124:LEU:HD11	2.04	0.40
44:DV:170:THR:O	44:DV:172:ALA:N	2.54	0.40
24:BA:2300:G:H2'	24:BA:2301:C:C6	2.56	0.40
22:AC:43:A:H2'	22:AC:44:A:C8	2.55	0.40
31:BK:27:ARG:HD3	46:BZ:71:TYR:CE1	2.57	0.40
36:B0:10:LEU:HD13	36:B0:40:LYS:HG2	2.03	0.40
24:BA:2233:U:H2'	24:BA:2234:G:C8	2.56	0.40
24:BA:863:A:H2'	24:BA:864:G:C8	2.56	0.40
24:DA:1654:A:OP1	36:D0:2:ARG:HD3	2.21	0.40
35:BP:77:LYS:HA	35:BP:77:LYS:HD3	1.91	0.40
24:BA:997:G:OP1	39:B1:93:LYS:HD2	2.21	0.40
39:D1:92:ARG:HD3	39:D1:95:LEU:HD12	2.04	0.40
24:DA:2371:G:H4'	51:D6:45:LYS:HD2	2.04	0.40
24:DA:2125:G:H8	24:DA:2125:G:O5'	2.04	0.40
24:DA:892:G:H2'	24:DA:893:C:C6	2.57	0.40
1:AA:475:G:H8	1:AA:475:G:O5'	2.04	0.40
24:DA:1088:A:O2'	24:DA:1089:G:OP2	2.39	0.40
27:BE:119:ARG:HH11	27:BE:120:TRP:HE1	1.69	0.40
3:CF:5:ILE:HD11	10:CM:51:ARG:HH12	1.86	0.40
24:BA:2147:G:H3'	24:BA:2147:G:H8	1.87	0.40
29:BG:60:LEU:HB3	29:BG:68:PRO:HG3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:2745:C:H2'	24:DA:2746:U:O4'	2.22	0.40
9:AL:41:VAL:C	9:AL:43:ALA:H	2.23	0.40
1:AA:1245:A:H2'	1:AA:1246:C:O4'	2.21	0.40
24:DA:2795:G:N3	24:DA:2802:G:C6	2.90	0.40
34:DO:3:LEU:C	34:DO:5:ASP:H	2.25	0.40
24:BA:651:G:H4'	53:B8:18:ALA:HB3	2.03	0.40
44:DV:77:ASP:N	44:DV:82:ARG:O	2.51	0.40
1:CA:6:G:P	4:CG:84:LYS:HZ3	2.45	0.40
24:DA:1516:U:H2'	24:DA:1517:G:C8	2.57	0.40
24:DA:1041:C:H2'	24:DA:1042:G:C8	2.56	0.40
2:AE:211:ILE:O	2:AE:215:LEU:HB2	2.21	0.40
2:AE:74:LYS:NZ	2:AE:205:ASP:OD1	2.53	0.40
26:DD:255:LYS:O	26:DD:255:LYS:HD2	2.21	0.40
36:B0:78:LYS:O	36:B0:83:ILE:HG13	2.22	0.40
24:BA:1026:U:O2	24:BA:1027:A:H3'	2.21	0.40
1:CA:93:U:H2'	1:CA:95:G:H5"	2.03	0.40
6:CI:55:ASP:HA	6:CI:56:PRO:HD3	1.78	0.40
15:CR:18:PHE:CE1	15:CR:21:ASP:HB2	2.56	0.40
36:B0:33:ARG:HH21	50:B5:57:VAL:HG22	1.85	0.40
24:DA:753:C:H6	24:DA:753:C:O5'	2.03	0.40
45:D3:25:ARG:HD2	45:D3:29:GLN:HE22	1.85	0.40
47:DW:10:LEU:O	47:DW:14:ARG:N	2.27	0.40
28:BF:195:ASP:OD1	28:BF:197:ASP:N	2.53	0.40
34:DO:98:GLU:HG2	34:DO:99:LEU:N	2.36	0.40
1:CA:1492:A:C6	24:DA:1913:A:N6	2.90	0.40
7:AJ:108:ALA:HB2	7:AJ:123:GLU:HG2	2.03	0.40
24:DA:363:G:H5'	24:DA:363(A):A:OP2	2.22	0.40
1:CA:785:G:H1	1:CA:797:C:N4	2.19	0.40
24:BA:1449:A:HO2'	24:BA:1530:G:N2	2.20	0.40
6:AI:61:LEU:HB3	6:AI:63:TYR:HE1	1.86	0.40
24:BA:2688:U:C5	24:BA:2720:U:OP2	2.75	0.40
24:BA:825:C:H4'	24:BA:2428:G:C5	2.57	0.40
24:DA:185:U:H2'	24:DA:186:G:H8	1.86	0.40
12:CO:75:HIS:HB2	12:CO:76:ASN:H	1.72	0.40
31:DK:117:GLU:OE1	31:DK:118:LYS:N	2.54	0.40
6:AI:67:MET:SD	6:AI:75:LEU:HD12	2.61	0.40
1:AA:651:C:H2'	1:AA:652:U:C6	2.56	0.40
24:DA:1850:G:H2'	24:DA:1851:U:O4'	2.21	0.40
30:DH:16:SER:HB2	30:DH:27:LYS:HB3	2.03	0.40
44:BV:35:ARG:HH11	44:BV:35:ARG:HB3	1.87	0.40
24:BA:1441:G:H2'	24:BA:1442:G:H8	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:946:G:H2'	24:DA:947:G:C8	2.57	0.40
24:DA:414:C:H4'	24:DA:1879:C:O2	2.21	0.40
1:AA:511:C:O3'	4:AG:43:HIS:NE2	2.54	0.40
1:CA:1333:A:H2'	1:CA:1334:G:O4'	2.21	0.40
1:CA:1063:C:H2'	1:CA:1064:G:C8	2.56	0.40
24:DA:2712:U:HO2'	24:DA:2712(A):A:P	2.45	0.40
27:BE:81:ILE:O	27:BE:82:ARG:HB3	2.22	0.40
26:DD:201:HIS:O	26:DD:204:ILE:HG12	2.22	0.40
29:DG:4:ASP:HA	29:DG:9:ARG:NH2	2.37	0.40
24:BA:1753:G:H2'	24:BA:1755:A:OP2	2.22	0.40
24:DA:2101:G:C6	24:DA:2102:U:C4	3.09	0.40
1:AA:133:U:OP1	20:AW:74:LYS:NZ	2.52	0.40
44:BV:28:MET:HB2	44:BV:37:VAL:HG11	2.02	0.40
5:AH:15:ARG:NE	5:AH:26:PHE:CE2	2.90	0.40
9:AL:89:ASN:OD1	9:AL:89:ASN:N	2.53	0.40
28:DF:165:ARG:HH11	28:DF:165:ARG:HB3	1.86	0.40
48:BX:60:GLU:N	48:BX:60:GLU:OE1	2.54	0.40
15:CR:57:LEU:HD23	15:CR:57:LEU:HA	1.94	0.40
24:BA:2320:A:H2'	24:BA:2320:A:N3	2.36	0.40
28:DF:135:LYS:HD2	28:DF:135:LYS:HA	1.82	0.40
6:AI:18:GLN:O	6:AI:21:LEU:HB2	2.20	0.40
7:AJ:13:GLN:HA	7:AJ:14:PRO:HD3	1.95	0.40
33:DN:7:TYR:HE1	33:DN:20:MET:HE3	1.86	0.40
24:DA:76:C:O3'	47:DW:59:ARG:HG3	2.21	0.40
45:D3:36:ILE:HG13	45:D3:58:THR:CG2	2.51	0.40
27:DE:52:LEU:HA	27:DE:52:LEU:HD23	1.95	0.40
24:DA:1072:C:C4	24:DA:1093:G:C6	3.10	0.40
2:CE:91:PRO:HG3	2:CE:154:LEU:HB3	2.02	0.40
1:AA:1381:U:C4	7:AJ:79:ARG:NH1	2.89	0.40
24:BA:1087:G:H2'	24:BA:1089:G:C4'	2.52	0.40
22:AD:53:G:N1	22:AD:61:C:C2	2.89	0.40
30:DH:54:ARG:HB3	30:DH:65:HIS:HB2	2.03	0.40
40:D2:78:LYS:O	40:D2:79:VAL:HG13	2.22	0.40
1:AA:91:C:N4	1:AA:92:G:C6	2.89	0.40
1:CA:1118:C:C5'	9:CL:104:ARG:HD3	2.52	0.40
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.22	0.40
24:BA:1170:G:N2	24:BA:1180:C:C2	2.89	0.40
24:BA:459:U:H2'	24:BA:460:A:C8	2.57	0.40
1:AA:152:A:C8	1:AA:153:C:C5	3.10	0.40
24:DA:1174:A:C6	24:DA:1176:G:H1'	2.56	0.40
39:B1:92:ARG:HD3	39:B1:94:ASN:HB3	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BA:996:A:H4'	39:B1:92:ARG:CG	2.51	0.40
1:AA:1122:U:O4	1:AA:1123:A:N6	2.54	0.40
24:BA:2405:G:OP1	34:BO:77:ARG:NH2	2.55	0.40
2:AE:187:LEU:HD23	2:AE:201:ILE:O	2.21	0.40
1:CA:1057:G:H1	1:CA:1203:C:N4	2.10	0.40
1:CA:1200:C:H1'	1:CA:1204:A:H61	1.85	0.40
1:CA:872:A:C4	1:CA:874:G:C8	3.09	0.40
5:CH:18:ARG:O	5:CH:25:ARG:N	2.46	0.40
24:BA:2314:C:H2'	24:BA:2315:G:C8	2.57	0.40
25:BB:55:U:H2'	25:BB:56:G:O4'	2.22	0.40
1:CA:1060:C:H2'	1:CA:1061:G:H8	1.86	0.40
1:AA:191(A):G:C6	1:AA:191(B):G:C5	3.09	0.40
38:BR:125:ARG:HG2	38:BR:126:ALA:N	2.36	0.40
10:CM:82:ILE:O	10:CM:86:MET:HB2	2.21	0.40
1:CA:106:C:O2	1:CA:379:C:H4'	2.22	0.40
37:DQ:110:LEU:HD12	37:DQ:111:GLU:H	1.86	0.40
37:DQ:110:LEU:CD1	37:DQ:111:GLU:H	2.34	0.40
24:BA:1581:G:C6	24:BA:1582:C:C4	3.10	0.40
33:DN:1:MET:H1	33:DN:67:LYS:HB3	1.86	0.40
33:DN:67:LYS:HE3	33:DN:68:GLU:OE1	2.21	0.40
24:BA:582:G:H1	24:BA:1258:C:N4	2.19	0.40
24:BA:960:A:C8	24:BA:962:G:C8	3.09	0.40
24:DA:270(L):U:O2'	24:DA:270(N):G:N2	2.55	0.40
13:CP:34:LEU:HD13	13:CP:41:PRO:HB3	2.03	0.40
1:AA:1097:C:H1'	1:AA:1169:A:H2	1.86	0.40
1:AA:1255:G:OP1	10:AM:45:ARG:NH2	2.39	0.40
37:BQ:83:LYS:HB3	37:BQ:84:GLN:H	1.56	0.40
1:CA:736:C:O2'	6:CI:90:VAL:O	2.35	0.40
24:DA:2736:G:H2'	24:DA:2737:G:H8	1.85	0.40
1:AA:136:C:N4	1:AA:227:G:H1	2.17	0.40
16:AS:21:VAL:HG22	16:AS:34:GLU:O	2.21	0.40
1:AA:52:G:C6	1:AA:360:A:C2	3.10	0.40
26:BD:206:LEU:O	26:BD:211:ARG:HD3	2.22	0.40
1:AA:660:G:OP1	15:AR:5:LYS:NZ	2.44	0.40
27:BE:38:THR:HB	27:BE:40:GLU:OE2	2.21	0.40
24:BA:1797:C:C2'	24:BA:1798:U:H5'	2.52	0.40
24:DA:688:U:H5'	24:DA:1780:A:C2	2.56	0.40
9:CL:26:VAL:HG13	9:CL:61:ALA:HB3	2.04	0.40
24:DA:1323:U:H2'	24:DA:1324:G:H5'	2.03	0.40
45:B3:17:GLN:O	45:B3:19:LYS:HE3	2.22	0.40
6:CI:19:LEU:O	6:CI:23:LYS:HG3	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DA:558:G:P	32:DM:111:PRO:HD2	2.62	0.40
43:DU:63:LYS:HE3	43:DU:64:GLU:OE2	2.21	0.40
24:BA:1440:G:O6	24:BA:1552:G:C2	2.75	0.40
22:AC:17:C:C4	22:AC:17(A):C:C4	3.10	0.40
24:DA:2540:C:H2'	24:DA:2541:A:O4'	2.22	0.40
5:AH:75:THR:OG1	5:AH:76:ILE:N	2.53	0.40
24:BA:2048:G:C2	24:BA:2621:A:C2	3.10	0.40
10:AM:30:SER:OG	10:AM:84:GLN:NE2	2.28	0.40
43:BU:37:VAL:O	43:BU:67:LEU:N	2.54	0.40
24:BA:1215:G:H2'	24:BA:1216:G:O4'	2.22	0.40
24:BA:1028:A:N6	24:BA:1125:G:H2'	2.36	0.40
12:AO:58:VAL:O	12:AO:65:GLU:HA	2.21	0.40
1:AA:1053:G:H4'	1:AA:1054:C:H3'	2.03	0.40
24:DA:1599:C:OP1	42:DT:36:LYS:HG3	2.21	0.40
3:CF:12:LEU:HD23	3:CF:12:LEU:HA	1.89	0.40
32:BM:1:MET:HE3	32:BM:1:MET:HB3	1.88	0.40
9:CL:107:ARG:H	9:CL:107:ARG:HG3	1.76	0.40
19:CV:7:LYS:HD2	19:CV:7:LYS:HA	1.87	0.40
13:CP:79:LYS:O	13:CP:79:LYS:HD3	2.22	0.40
42:BT:91:ALA:O	42:BT:92:LEU:HD23	2.21	0.40
5:AH:41:VAL:O	5:AH:67:VAL:HG12	2.20	0.40

All (11) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:85:U:O5'	30:DH:126:PRO:CA[3_555]	1.25	0.95
1:AA:85:U:C4'	30:DH:126:PRO:CB[3_555]	1.47	0.73
1:AA:84:U:O3'	30:DH:127:GLU:N[3_555]	1.76	0.44
1:AA:84:U:OP2	30:DH:127:GLU:CG[3_555]	1.98	0.22
1:AA:85:U:C5'	30:DH:126:PRO:CB[3_555]	2.00	0.20
1:AA:82:U:O2'	30:DH:125:VAL:CG1[3_555]	2.10	0.10
1:AA:85:U:O5'	30:DH:126:PRO:CB[3_555]	2.12	0.08
40:B2:49:THR:OG1	50:B5:59:GLU:OE2[4_465]	2.13	0.07
1:AA:85:U:C5'	30:DH:126:PRO:CA[3_555]	2.16	0.04
1:AA:85:U:O5'	30:DH:126:PRO:N[3_555]	2.17	0.03
1:AA:1162:C:O2'	10:CM:80:LYS:NZ[4_555]	2.19	0.01

5.3 Torsion angles

5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AE	235/256 (92%)	170 (72%)	41 (17%)	24 (10%)	1	4
2	CE	235/256 (92%)	165 (70%)	38 (16%)	32 (14%)	0	1
3	AF	203/239 (85%)	138 (68%)	44 (22%)	21 (10%)	1	4
3	CF	204/239 (85%)	135 (66%)	48 (24%)	21 (10%)	1	4
4	AG	206/208 (99%)	154 (75%)	35 (17%)	17 (8%)	1	6
4	CG	206/208 (99%)	150 (73%)	36 (18%)	20 (10%)	1	4
5	AH	149/162 (92%)	118 (79%)	26 (17%)	5 (3%)	5	25
5	CH	149/162 (92%)	130 (87%)	13 (9%)	6 (4%)	4	21
6	AI	99/101 (98%)	86 (87%)	9 (9%)	4 (4%)	4	21
6	CI	99/101 (98%)	87 (88%)	10 (10%)	2 (2%)	9	38
7	AJ	153/156 (98%)	127 (83%)	21 (14%)	5 (3%)	5	26
7	CJ	153/156 (98%)	120 (78%)	25 (16%)	8 (5%)	2	15
8	AK	136/138 (99%)	103 (76%)	23 (17%)	10 (7%)	1	7
8	CK	136/138 (99%)	120 (88%)	10 (7%)	6 (4%)	3	18
9	AL	125/128 (98%)	87 (70%)	26 (21%)	12 (10%)	1	4
9	CL	125/128 (98%)	90 (72%)	31 (25%)	4 (3%)	5	26
10	AM	97/105 (92%)	70 (72%)	18 (19%)	9 (9%)	1	4
10	CM	97/105 (92%)	65 (67%)	24 (25%)	8 (8%)	1	6
11	AN	117/129 (91%)	90 (77%)	19 (16%)	8 (7%)	1	8
11	CN	117/129 (91%)	96 (82%)	16 (14%)	5 (4%)	3	19
12	AO	123/128 (96%)	87 (71%)	24 (20%)	12 (10%)	1	4
12	CO	123/128 (96%)	103 (84%)	10 (8%)	10 (8%)	1	6
13	AP	114/126 (90%)	81 (71%)	20 (18%)	13 (11%)	0	2
13	CP	115/126 (91%)	75 (65%)	22 (19%)	18 (16%)	0	0
14	AQ	58/61 (95%)	40 (69%)	7 (12%)	11 (19%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	CQ	58/61 (95%)	40 (69%)	12 (21%)	6 (10%)	1	4
15	AR	86/89 (97%)	60 (70%)	20 (23%)	6 (7%)	1	8
15	CR	86/89 (97%)	73 (85%)	6 (7%)	7 (8%)	1	6
16	AS	82/88 (93%)	65 (79%)	16 (20%)	1 (1%)	16	52
16	CS	82/88 (93%)	66 (80%)	15 (18%)	1 (1%)	16	52
17	AT	98/105 (93%)	78 (80%)	14 (14%)	6 (6%)	2	11
17	CT	98/105 (93%)	85 (87%)	11 (11%)	2 (2%)	9	38
18	AU	70/88 (80%)	59 (84%)	7 (10%)	4 (6%)	2	12
18	CU	70/88 (80%)	56 (80%)	7 (10%)	7 (10%)	1	4
19	AV	81/93 (87%)	54 (67%)	19 (24%)	8 (10%)	1	4
19	CV	76/93 (82%)	44 (58%)	17 (22%)	15 (20%)	0	0
20	AW	97/106 (92%)	72 (74%)	12 (12%)	13 (13%)	0	1
20	CW	97/106 (92%)	70 (72%)	18 (19%)	9 (9%)	1	4
21	AX	23/27 (85%)	14 (61%)	7 (30%)	2 (9%)	1	5
21	CX	23/27 (85%)	17 (74%)	3 (13%)	3 (13%)	0	1
26	BD	270/276 (98%)	231 (86%)	26 (10%)	13 (5%)	3	17
26	DD	270/276 (98%)	217 (80%)	40 (15%)	13 (5%)	3	17
27	BE	203/206 (98%)	161 (79%)	28 (14%)	14 (7%)	1	8
27	DE	203/206 (98%)	133 (66%)	33 (16%)	37 (18%)	0	0
28	BF	200/210 (95%)	175 (88%)	20 (10%)	5 (2%)	7	32
28	DF	206/210 (98%)	151 (73%)	29 (14%)	26 (13%)	0	1
29	BG	179/182 (98%)	120 (67%)	42 (24%)	17 (10%)	1	4
29	DG	179/182 (98%)	121 (68%)	38 (21%)	20 (11%)	0	3
30	BH	168/180 (93%)	124 (74%)	24 (14%)	20 (12%)	0	2
30	DH	168/180 (93%)	92 (55%)	45 (27%)	31 (18%)	0	0
31	BK	144/148 (97%)	102 (71%)	25 (17%)	17 (12%)	0	2
31	DK	144/148 (97%)	104 (72%)	28 (19%)	12 (8%)	1	6
32	BM	136/140 (97%)	101 (74%)	25 (18%)	10 (7%)	1	7
32	DM	136/140 (97%)	110 (81%)	22 (16%)	4 (3%)	6	29
33	BN	120/122 (98%)	113 (94%)	5 (4%)	2 (2%)	11	43
33	DN	120/122 (98%)	103 (86%)	14 (12%)	3 (2%)	7	32

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
34	BO	148/150 (99%)	99 (67%)	21 (14%)	28 (19%)	0	0
34	DO	148/150 (99%)	83 (56%)	44 (30%)	21 (14%)	0	1
35	BP	139/141 (99%)	96 (69%)	26 (19%)	17 (12%)	0	2
35	DP	139/141 (99%)	105 (76%)	19 (14%)	15 (11%)	0	3
36	B0	116/118 (98%)	88 (76%)	19 (16%)	9 (8%)	1	6
36	D0	115/118 (98%)	99 (86%)	13 (11%)	3 (3%)	7	32
37	BQ	109/112 (97%)	78 (72%)	19 (17%)	12 (11%)	0	3
37	DQ	109/112 (97%)	78 (72%)	20 (18%)	11 (10%)	1	4
38	BR	135/146 (92%)	101 (75%)	25 (18%)	9 (7%)	1	9
38	DR	135/146 (92%)	110 (82%)	19 (14%)	6 (4%)	3	18
39	B1	115/118 (98%)	101 (88%)	10 (9%)	4 (4%)	4	24
39	D1	115/118 (98%)	88 (76%)	18 (16%)	9 (8%)	1	6
40	B2	99/101 (98%)	78 (79%)	11 (11%)	10 (10%)	1	4
40	D2	99/101 (98%)	73 (74%)	12 (12%)	14 (14%)	0	1
41	BS	111/113 (98%)	102 (92%)	6 (5%)	3 (3%)	6	31
41	DS	111/113 (98%)	98 (88%)	8 (7%)	5 (4%)	3	17
42	BT	90/96 (94%)	78 (87%)	10 (11%)	2 (2%)	8	36
42	DT	90/96 (94%)	69 (77%)	13 (14%)	8 (9%)	1	5
43	BU	100/110 (91%)	69 (69%)	14 (14%)	17 (17%)	0	0
43	DU	100/110 (91%)	53 (53%)	22 (22%)	25 (25%)	0	0
44	BV	173/206 (84%)	117 (68%)	31 (18%)	25 (14%)	0	1
44	DV	177/206 (86%)	111 (63%)	35 (20%)	31 (18%)	0	0
45	B3	74/85 (87%)	65 (88%)	7 (10%)	2 (3%)	6	31
45	D3	75/85 (88%)	66 (88%)	7 (9%)	2 (3%)	6	31
46	BZ	95/98 (97%)	78 (82%)	10 (10%)	7 (7%)	1	7
46	DZ	95/98 (97%)	71 (75%)	14 (15%)	10 (10%)	1	3
47	BW	64/72 (89%)	52 (81%)	9 (14%)	3 (5%)	3	17
47	DW	67/72 (93%)	53 (79%)	6 (9%)	8 (12%)	0	2
48	BX	57/60 (95%)	51 (90%)	4 (7%)	2 (4%)	4	24
48	DX	57/60 (95%)	49 (86%)	5 (9%)	3 (5%)	2	14
49	B4	64/71 (90%)	34 (53%)	15 (23%)	15 (23%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
49	D4	61/71 (86%)	25 (41%)	18 (30%)	18 (30%)	0	0
50	B5	57/60 (95%)	41 (72%)	9 (16%)	7 (12%)	0	2
50	D5	57/60 (95%)	46 (81%)	7 (12%)	4 (7%)	1	8
51	B6	43/54 (80%)	24 (56%)	14 (33%)	5 (12%)	0	2
51	D6	43/54 (80%)	19 (44%)	13 (30%)	11 (26%)	0	0
52	B7	47/49 (96%)	43 (92%)	4 (8%)	0	100	100
52	D7	47/49 (96%)	45 (96%)	2 (4%)	0	100	100
53	B8	59/65 (91%)	45 (76%)	8 (14%)	6 (10%)	1	4
53	D8	59/65 (91%)	42 (71%)	8 (14%)	9 (15%)	0	0
All	All	11341/12044 (94%)	8521 (75%)	1799 (16%)	1021 (9%)	1	5

All (1021) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AE	29	ALA
2	AE	30	ARG
2	AE	95	GLN
2	AE	101	MET
2	AE	208	ILE
2	AE	236	TYR
3	AF	45	LYS
3	AF	99	VAL
3	AF	100	ALA
3	AF	107	GLN
4	AG	14	ARG
4	AG	30	LYS
4	AG	89	THR
4	AG	154	ASN
4	AG	155	LEU
5	AH	115	VAL
6	AI	13	ASN
7	AJ	35	LYS
7	AJ	131	LYS
8	AK	37	ARG
8	AK	99	GLU
9	AL	42	ARG
10	AM	26	ALA
10	AM	91	PRO
11	AN	127	LYS

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Mol	Chain	Res	Type
12	AO	18	VAL
12	AO	62	SER
13	AP	31	LYS
13	AP	99	ARG
13	AP	106	ASN
14	AQ	14	PRO
15	AR	21	ASP
15	AR	26	GLU
17	AT	49	GLU
17	AT	100	LYS
19	AV	5	LEU
19	AV	9	VAL
19	AV	41	VAL
20	AW	71	THR
26	BD	27	THR
26	BD	28	GLU
26	BD	33	LEU
26	BD	122	ASP
26	BD	239	ARG
27	BE	53	PRO
27	BE	87	GLU
28	BF	15	SER
28	BF	134	GLY
29	BG	45	GLU
29	BG	47	LYS
29	BG	84	LYS
30	BH	3	ARG
30	BH	12	PRO
30	BH	137	ASP
30	BH	151	ILE
30	BH	154	PRO
31	BK	15	VAL
31	BK	133	HIS
32	BM	22	THR
32	BM	36	GLY
32	BM	77	GLY
32	BM	96	GLU
34	BO	6	LEU
34	BO	42	SER
34	BO	65	ARG
34	BO	71	VAL
34	BO	72	PRO

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Mol	Chain	Res	Type
34	BO	90	ARG
34	BO	108	LYS
35	BP	21	THR
35	BP	67	ARG
35	BP	68	ILE
35	BP	88	GLY
35	BP	105	GLU
36	B0	86	ARG
37	BQ	74	ALA
37	BQ	88	ASP
37	BQ	89	ARG
38	BR	2	ASN
38	BR	107	ASP
39	B1	93	LYS
40	B2	31	ALA
40	B2	45	THR
40	B2	47	VAL
40	B2	61	VAL
43	BU	40	GLU
43	BU	50	ARG
43	BU	53	PRO
43	BU	57	GLN
43	BU	77	PRO
43	BU	78	ALA
44	BV	6	LYS
44	BV	51	ALA
44	BV	53	ILE
44	BV	60	GLU
44	BV	111	VAL
44	BV	117	LEU
44	BV	165	VAL
44	BV	171	ILE
46	BZ	91	LYS
46	BZ	97	LEU
47	BW	48	HIS
49	B4	5	ILE
49	B4	18	CYS
49	B4	24	THR
49	B4	43	TYR
50	B5	50	GLY
50	B5	58	LEU
51	B6	33	LYS

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Mol	Chain	Res	Type
53	B8	36	LYS
53	B8	37	SER
53	B8	52	LYS
2	CE	5	ILE
2	CE	7	VAL
2	CE	13	ALA
2	CE	64	ARG
2	CE	74	LYS
2	CE	154	LEU
2	CE	190	THR
2	CE	191	ASP
2	CE	232	PRO
2	CE	234	PRO
3	CF	12	LEU
3	CF	48	TYR
3	CF	53	ALA
3	CF	156	ARG
4	CG	14	ARG
4	CG	24	GLU
4	CG	31	CYS
4	CG	34	GLU
4	CG	35	ARG
4	CG	150	GLU
4	CG	151	LYS
4	CG	200	GLU
5	CH	154	GLY
7	CJ	35	LYS
8	CK	99	GLU
8	CK	103	VAL
9	CL	124	GLN
11	CN	100	ALA
11	CN	101	SER
12	CO	47	LYS
12	CO	48	PRO
12	CO	62	SER
12	CO	79	GLU
13	CP	5	ALA
13	CP	80	ARG
13	CP	99	ARG
13	CP	116	THR
14	CQ	41	ARG
18	CU	24	ALA

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Mol	Chain	Res	Type
19	CV	9	VAL
20	CW	100	ILE
21	CX	3	LYS
26	DD	26	LYS
26	DD	32	SER
26	DD	267	SER
27	DE	25	VAL
27	DE	27	LEU
27	DE	54	GLN
27	DE	61	ARG
27	DE	64	LYS
27	DE	70	ALA
27	DE	72	VAL
27	DE	77	ILE
27	DE	82	ARG
27	DE	86	PRO
27	DE	87	GLU
27	DE	88	GLY
27	DE	200	GLU
28	DF	4	VAL
28	DF	6	VAL
28	DF	17	ARG
28	DF	26	ALA
28	DF	132	VAL
29	DG	4	ASP
29	DG	81	LYS
29	DG	84	LYS
29	DG	116	ASP
30	DH	3	ARG
30	DH	24	VAL
30	DH	55	PRO
30	DH	83	TYR
30	DH	123	PHE
30	DH	128	PRO
30	DH	130	ARG
30	DH	136	ILE
30	DH	152	ARG
31	DK	69	LYS
31	DK	83	ALA
31	DK	102	SER
31	DK	117	GLU
31	DK	132	PRO

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Mol	Chain	Res	Type
34	DO	10	PRO
34	DO	21	ARG
34	DO	46	LYS
34	DO	49	ARG
34	DO	50	ARG
34	DO	56	SER
34	DO	60	MET
34	DO	61	ARG
34	DO	62	LEU
34	DO	63	PRO
35	DP	7	MET
35	DP	13	GLN
35	DP	21	THR
35	DP	66	ILE
35	DP	89	ASN
37	DQ	54	LEU
37	DQ	88	ASP
37	DQ	89	ARG
37	DQ	96	GLY
37	DQ	106	ARG
37	DQ	110	LEU
38	DR	2	ASN
38	DR	134	GLU
39	D1	91	ASP
40	D2	47	VAL
40	D2	50	PRO
40	D2	79	VAL
43	DU	44	ILE
43	DU	50	ARG
43	DU	53	PRO
43	DU	56	PRO
43	DU	77	PRO
43	DU	78	ALA
43	DU	85	VAL
43	DU	89	PHE
44	DV	53	ILE
44	DV	60	GLU
44	DV	93	ASP
44	DV	112	ARG
44	DV	114	GLY
44	DV	120	ILE
44	DV	131	ARG

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Mol	Chain	Res	Type
44	DV	135	GLU
44	DV	146	ILE
44	DV	159	PRO
44	DV	176	PRO
46	DZ	81	LYS
46	DZ	83	GLU
46	DZ	88	LYS
46	DZ	93	GLU
47	DW	17	SER
49	D4	16	CYS
49	D4	20	ASN
49	D4	21	VAL
49	D4	22	ILE
49	D4	24	THR
49	D4	33	VAL
49	D4	40	HIS
49	D4	44	THR
49	D4	46	GLN
50	D5	4	HIS
50	D5	57	VAL
51	D6	26	ASN
51	D6	44	ARG
51	D6	48	VAL
53	D8	49	VAL
53	D8	51	ALA
53	D8	61	LEU
2	AE	28	PHE
2	AE	155	LEU
2	AE	194	PRO
2	AE	224	GLN
2	AE	235	SER
2	AE	237	ALA
3	AF	12	LEU
3	AF	14	ILE
3	AF	26	LYS
3	AF	46	GLU
3	AF	60	ALA
4	AG	29	PRO
4	AG	85	LYS
4	AG	90	GLY
4	AG	164	ALA
5	AH	65	ASN

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Mol	Chain	Res	Type
8	AK	2	LEU
8	AK	36	LEU
8	AK	68	ARG
8	AK	106	GLY
9	AL	33	PHE
9	AL	53	VAL
9	AL	54	ASP
9	AL	58	HIS
11	AN	87	THR
11	AN	90	GLY
11	AN	104	GLN
12	AO	29	GLY
12	AO	50	SER
12	AO	63	GLY
12	AO	79	GLU
12	AO	121	GLY
12	AO	128	ALA
13	AP	6	GLY
13	AP	13	LYS
13	AP	110	ARG
14	AQ	12	ARG
14	AQ	24	CYS
14	AQ	28	GLY
17	AT	55	ASP
18	AU	36	ASN
19	AV	45	VAL
20	AW	48	LYS
20	AW	95	ALA
20	AW	96	GLY
20	AW	102	GLY
26	BD	32	SER
27	BE	15	PHE
27	BE	54	GLN
27	BE	60	ASN
27	BE	204	ALA
28	BF	17	ARG
28	BF	130	ALA
29	BG	5	VAL
29	BG	148	MET
30	BH	8	PRO
30	BH	81	GLU
30	BH	100	GLY

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Mol	Chain	Res	Type
30	BH	138	LYS
30	BH	155	SER
30	BH	156	ALA
31	BK	106	GLY
31	BK	143	SER
31	BK	145	VAL
32	BM	9	VAL
34	BO	14	LYS
34	BO	43	GLY
34	BO	109	GLY
34	BO	116	GLY
35	BP	6	ARG
35	BP	25	ASP
35	BP	27	VAL
35	BP	79	LEU
35	BP	133	ARG
37	BQ	75	GLU
37	BQ	96	GLY
38	BR	12	SER
38	BR	123	GLN
38	BR	124	ASP
39	B1	79	PHE
39	B1	88	ILE
39	B1	115	ALA
40	B2	29	PRO
41	BS	56	ALA
41	BS	93	ALA
43	BU	5	MET
43	BU	41	GLY
43	BU	52	SER
43	BU	56	PRO
43	BU	82	PRO
43	BU	83	THR
43	BU	98	VAL
44	BV	105	VAL
44	BV	106	GLY
44	BV	112	ARG
44	BV	151	HIS
44	BV	161	VAL
44	BV	163	LEU
48	BX	38	GLU
49	B4	23	GLU

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Mol	Chain	Res	Type
49	B4	55	ARG
49	B4	56	VAL
50	B5	34	PRO
53	B8	31	HIS
53	B8	43	GLN
2	CE	11	LEU
2	CE	20	GLU
2	CE	22	LYS
2	CE	75	LYS
2	CE	81	VAL
2	CE	83	MET
2	CE	121	LEU
2	CE	122	PHE
2	CE	165	VAL
2	CE	214	ILE
2	CE	217	ARG
3	CF	27	LYS
3	CF	42	LEU
3	CF	47	LEU
3	CF	98	ASN
3	CF	129	ALA
3	CF	189	ALA
3	CF	206	GLU
4	CG	23	GLY
4	CG	154	ASN
4	CG	156	GLU
5	CH	85	GLY
5	CH	152	ARG
7	CJ	109	ASN
7	CJ	131	LYS
9	CL	59	PHE
9	CL	96	LEU
10	CM	30	SER
10	CM	88	LEU
11	CN	89	ALA
12	CO	19	ARG
13	CP	58	GLU
13	CP	86	CYS
13	CP	104	ARG
13	CP	114	ARG
13	CP	117	VAL
14	CQ	15	LYS

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Mol	Chain	Res	Type
14	CQ	28	GLY
14	CQ	29	ARG
15	CR	62	GLN
15	CR	79	ARG
16	CS	81	ARG
18	CU	25	THR
18	CU	36	ASN
19	CV	29	ARG
19	CV	34	TRP
19	CV	45	VAL
19	CV	71	LEU
20	CW	84	LEU
20	CW	96	GLY
20	CW	99	LEU
21	CX	7	ARG
26	DD	30	GLU
26	DD	70	TRP
27	DE	9	VAL
27	DE	26	ILE
27	DE	37	ARG
27	DE	51	PHE
27	DE	59	VAL
27	DE	78	LEU
27	DE	90	THR
28	DF	10	PRO
28	DF	27	GLU
28	DF	28	ILE
28	DF	61	GLY
28	DF	67	GLN
28	DF	70	THR
28	DF	84	VAL
28	DF	89	VAL
28	DF	133	ASN
29	DG	5	VAL
29	DG	32	PRO
29	DG	36	LYS
29	DG	96	ARG
29	DG	119	GLY
29	DG	146	TYR
30	DH	4	ILE
30	DH	92	ILE
30	DH	93	GLY

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Mol	Chain	Res	Type
30	DH	118	PRO
30	DH	138	LYS
31	DK	68	LEU
31	DK	73	GLU
31	DK	101	LEU
31	DK	144	VAL
32	DM	135	PRO
33	DN	5	GLN
33	DN	28	SER
34	DO	6	LEU
34	DO	57	THR
34	DO	66	GLY
34	DO	109	GLY
34	DO	141	ALA
35	DP	27	VAL
35	DP	88	GLY
35	DP	90	VAL
36	D0	82	GLU
36	D0	107	ASP
37	DQ	57	LYS
37	DQ	74	ALA
38	DR	11	GLU
38	DR	17	THR
39	D1	72	HIS
39	D1	90	VAL
39	D1	93	LYS
39	D1	98	LEU
39	D1	100	VAL
40	D2	48	GLY
40	D2	49	THR
40	D2	54	GLY
40	D2	83	ARG
40	D2	99	ILE
41	DS	63	ASP
41	DS	67	ASP
42	DT	41	ASN
42	DT	93	GLU
43	DU	39	VAL
43	DU	47	LYS
43	DU	57	GLN
43	DU	61	ILE
43	DU	99	CYS

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Mol	Chain	Res	Type
44	DV	7	ALA
44	DV	66	SER
44	DV	90	VAL
44	DV	105	VAL
44	DV	140	ASP
44	DV	142	SER
44	DV	145	GLU
44	DV	156	LYS
44	DV	158	PRO
44	DV	171	ILE
46	DZ	27	GLU
46	DZ	87	PRO
46	DZ	92	LYS
47	DW	48	HIS
47	DW	70	GLN
48	DX	38	GLU
49	D4	26	SER
49	D4	37	SER
49	D4	43	TYR
50	D5	49	CYS
51	D6	17	LYS
51	D6	45	LYS
53	D8	30	ARG
53	D8	32	LEU
53	D8	41	ILE
2	AE	191	ASP
2	AE	195	ASP
3	AF	15	THR
3	AF	18	TRP
3	AF	53	ALA
3	AF	79	ARG
3	AF	156	ARG
4	AG	42	GLN
4	AG	73	ARG
5	AH	63	ARG
6	AI	42	GLU
7	AJ	127	ALA
9	AL	11	LYS
9	AL	32	ASP
10	AM	27	ALA
10	AM	37	PRO
10	AM	55	LYS

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Mol	Chain	Res	Type
12	AO	48	PRO
12	AO	51	ALA
12	AO	61	THR
12	AO	115	LYS
13	AP	4	ILE
13	AP	8	GLU
13	AP	43	THR
14	AQ	3	ARG
14	AQ	15	LYS
14	AQ	16	PHE
14	AQ	52	GLN
15	AR	23	GLY
15	AR	71	GLN
18	AU	20	ALA
18	AU	37	VAL
19	AV	43	GLU
19	AV	65	ASN
20	AW	82	SER
20	AW	94	ALA
20	AW	97	ALA
20	AW	98	PRO
21	AX	3	LYS
21	AX	7	ARG
26	BD	123	ALA
27	BE	62	PRO
27	BE	72	VAL
27	BE	79	ARG
27	BE	153	GLY
29	BG	36	LYS
29	BG	46	ALA
29	BG	64	THR
29	BG	96	ARG
29	BG	117	PHE
29	BG	124	SER
30	BH	27	LYS
30	BH	83	TYR
30	BH	85	LYS
30	BH	167	GLU
31	BK	10	GLU
31	BK	11	ASN
31	BK	103	ARG
31	BK	117	GLU

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Mol	Chain	Res	Type
32	BM	11	PRO
33	BN	97	ARG
34	BO	7	ARG
34	BO	21	ARG
34	BO	29	LYS
34	BO	36	LYS
34	BO	38	GLN
34	BO	50	ARG
34	BO	117	GLU
34	BO	141	ALA
35	BP	59	ARG
35	BP	89	ASN
36	B0	29	LEU
36	B0	45	ARG
36	B0	65	LEU
36	B0	66	VAL
37	BQ	4	LEU
37	BQ	21	THR
37	BQ	57	LYS
43	BU	33	LYS
43	BU	34	LYS
44	BV	13	GLU
44	BV	109	ALA
44	BV	164	ALA
46	BZ	45	ASN
47	BW	44	LEU
49	B4	34	GLU
49	B4	40	HIS
49	B4	42	PHE
50	B5	3	LYS
50	B5	57	VAL
51	B6	46	HIS
51	B6	49	HIS
2	CE	6	THR
2	CE	63	MET
2	CE	96	ARG
2	CE	216	SER
2	CE	218	ALA
3	CF	15	THR
3	CF	82	GLU
3	CF	141	VAL
3	CF	181	ASN

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Mol	Chain	Res	Type
4	CG	101	LEU
4	CG	153	ARG
6	CI	70	ASP
7	CJ	108	ALA
8	CK	2	LEU
8	CK	68	ARG
8	CK	100	ILE
10	CM	17	ASP
10	CM	91	PRO
12	CO	65	GLU
13	CP	20	THR
13	CP	57	ARG
13	CP	63	THR
14	CQ	30	ALA
15	CR	80	ALA
15	CR	86	GLY
18	CU	23	LYS
19	CV	19	VAL
20	CW	10	LEU
20	CW	73	HIS
20	CW	103	GLY
26	DD	3	VAL
26	DD	110	GLY
27	DE	24	THR
27	DE	60	ASN
27	DE	69	LYS
27	DE	144	ARG
27	DE	203	LYS
28	DF	3	GLU
28	DF	9	ILE
28	DF	11	VAL
28	DF	42	ALA
28	DF	62	ARG
29	DG	6	ALA
29	DG	82	LEU
29	DG	124	SER
29	DG	179	PRO
30	DH	17	VAL
30	DH	21	PRO
30	DH	27	LYS
30	DH	90	LYS
30	DH	98	LEU

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Mol	Chain	Res	Type
30	DH	99	VAL
30	DH	112	PRO
30	DH	127	GLU
30	DH	150	ALA
30	DH	164	TYR
32	DM	3	THR
34	DO	14	LYS
35	DP	104	PHE
35	DP	134	ARG
36	D0	45	ARG
37	DQ	19	LYS
37	DQ	111	GLU
38	DR	116	ALA
39	D1	101	ARG
39	D1	117	GLN
41	DS	93	ALA
41	DS	111	HIS
42	DT	42	ALA
43	DU	23	ARG
43	DU	55	TYR
43	DU	62	GLU
43	DU	102	CYS
44	DV	12	GLY
44	DV	161	VAL
45	D3	35	ASN
46	DZ	28	GLY
47	DW	10	LEU
47	DW	47	ASN
48	DX	13	ILE
49	D4	10	VAL
49	D4	27	THR
49	D4	42	PHE
49	D4	54	GLY
50	D5	55	ARG
51	D6	28	ARG
51	D6	41	PRO
2	AE	19	HIS
2	AE	78	GLN
2	AE	207	ALA
3	AF	4	LYS
3	AF	179	ARG
4	AG	151	LYS

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Mol	Chain	Res	Type
5	AH	73	ASN
7	AJ	8	GLU
8	AK	105	ARG
9	AL	56	LEU
9	AL	78	LYS
10	AM	92	THR
11	AN	82	VAL
13	AP	59	TYR
20	AW	84	LEU
26	BD	31	LYS
26	BD	257	LEU
27	BE	90	THR
28	BF	133	ASN
29	BG	82	LEU
29	BG	86	MET
30	BH	13	LYS
30	BH	168	PRO
31	BK	16	GLY
31	BK	118	LYS
32	BM	23	LEU
32	BM	95	PRO
32	BM	128	HIS
33	BN	5	GLN
34	BO	31	ALA
34	BO	62	LEU
34	BO	107	LYS
35	BP	11	LYS
35	BP	65	PHE
36	B0	75	LEU
37	BQ	61	ASN
37	BQ	87	PHE
38	BR	24	PRO
38	BR	37	GLY
38	BR	116	ALA
40	B2	36	PRO
40	B2	49	THR
40	B2	50	PRO
42	BT	68	ARG
43	BU	89	PHE
44	BV	108	PRO
44	BV	152	ALA
45	B3	73	GLY

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Mol	Chain	Res	Type
46	BZ	79	GLY
47	BW	43	GLN
49	B4	9	LEU
50	B5	56	LYS
51	B6	35	GLU
2	CE	39	ILE
2	CE	110	GLN
3	CF	96	GLY
3	CF	140	ARG
3	CF	142	MET
4	CG	25	ARG
4	CG	149	ALA
5	CH	22	GLY
5	CH	146	ALA
7	CJ	31	MET
9	CL	57	GLY
10	CM	31	GLY
11	CN	90	GLY
11	CN	91	ARG
12	CO	18	VAL
12	CO	45	PRO
12	CO	61	THR
12	CO	121	GLY
13	CP	62	ASN
13	CP	115	LYS
14	CQ	3	ARG
17	CT	99	SER
19	CV	30	LEU
19	CV	55	LYS
26	DD	27	THR
26	DD	156	ALA
26	DD	268	ARG
27	DE	22	PRO
27	DE	57	LYS
27	DE	68	ALA
28	DF	14	PRO
28	DF	123	LEU
28	DF	167	ALA
29	DG	62	LEU
29	DG	104	GLU
30	DH	85	LYS
30	DH	167	GLU

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Mol	Chain	Res	Type
31	DK	26	ALA
31	DK	30	LEU
32	DM	47	ALA
33	DN	26	LYS
34	DO	35	HIS
34	DO	55	ARG
35	DP	25	ASP
35	DP	78	PRO
37	DQ	53	SER
38	DR	126	ALA
39	D1	94	ASN
40	D2	85	LYS
42	DT	23	GLU
42	DT	40	LYS
43	DU	29	GLU
43	DU	52	SER
43	DU	90	LEU
44	DV	41	LEU
44	DV	65	GLN
47	DW	15	LYS
47	DW	43	GLN
49	D4	25	TYR
51	D6	23	THR
53	D8	48	PHE
53	D8	53	PRO
2	AE	16	HIS
2	AE	22	LYS
2	AE	126	GLU
3	AF	78	GLY
3	AF	89	GLU
4	AG	32	ALA
4	AG	132	ARG
7	AJ	7	ALA
8	AK	101	PRO
8	AK	129	VAL
9	AL	89	ASN
9	AL	100	GLY
9	AL	116	LYS
10	AM	16	LEU
10	AM	93	GLY
11	AN	91	ARG
11	AN	103	LEU

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Mol	Chain	Res	Type
11	AN	105	VAL
13	AP	21	TYR
14	AQ	19	ARG
17	AT	64	PRO
17	AT	68	ARG
18	AU	25	THR
19	AV	12	ASP
27	BE	59	VAL
27	BE	78	LEU
27	BE	129	HIS
29	BG	110	ALA
29	BG	146	TYR
31	BK	61	ARG
31	BK	84	GLY
31	BK	110	ASP
31	BK	115	ALA
31	BK	122	GLU
34	BO	11	GLY
34	BO	12	ALA
34	BO	19	VAL
34	BO	95	VAL
35	BP	134	ARG
36	B0	71	GLN
36	B0	107	ASP
40	B2	48	GLY
41	BS	65	LEU
44	BV	118	GLN
44	BV	141	VAL
44	BV	162	GLU
46	BZ	93	GLU
46	BZ	95	LEU
48	BX	39	ASP
49	B4	11	PRO
49	B4	53	GLU
51	B6	47	THR
2	CE	120	ALA
2	CE	230	VAL
3	CF	35	GLU
3	CF	36	ASP
4	CG	102	ASP
7	CJ	4	ARG
10	CM	37	PRO

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Mol	Chain	Res	Type
13	CP	29	ARG
15	CR	88	ARG
17	CT	33	GLY
18	CU	22	VAL
18	CU	31	LEU
18	CU	59	SER
19	CV	46	GLY
19	CV	59	PRO
19	CV	67	VAL
26	DD	239	ARG
27	DE	52	LEU
27	DE	73	GLU
27	DE	76	ARG
29	DG	21	ARG
29	DG	138	GLN
29	DG	150	ASP
30	DH	65	HIS
30	DH	117	PRO
30	DH	137	ASP
30	DH	155	SER
31	DK	100	ALA
34	DO	117	GLU
35	DP	59	ARG
40	D2	44	LYS
42	DT	15	GLU
42	DT	51	VAL
43	DU	3	VAL
43	DU	63	LYS
44	DV	62	PRO
44	DV	141	VAL
44	DV	162	GLU
44	DV	165	VAL
45	D3	64	ASP
46	DZ	30	VAL
49	D4	57	GLU
51	D6	19	ARG
51	D6	25	LYS
51	D6	36	LEU
53	D8	7	HIS
2	AE	239	VAL
6	AI	12	PRO
10	AM	88	LEU

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Mol	Chain	Res	Type
13	AP	16	ASP
14	AQ	36	PHE
15	AR	70	LEU
16	AS	81	ARG
17	AT	33	GLY
20	AW	63	ILE
26	BD	34	VAL
26	BD	111	LEU
29	BG	85	GLY
30	BH	7	LEU
30	BH	127	GLU
31	BK	87	LYS
35	BP	90	VAL
35	BP	104	PHE
36	B0	85	PRO
43	BU	3	VAL
44	BV	52	SER
44	BV	59	LEU
44	BV	144	LEU
45	B3	83	PRO
53	B8	35	GLN
4	CG	208	SER
5	CH	17	ALA
7	CJ	133	GLY
19	CV	66	MET
19	CV	79	THR
27	DE	7	VAL
27	DE	65	GLY
28	DF	113	ALA
29	DG	147	ASP
35	DP	79	LEU
40	D2	38	LEU
40	D2	84	LYS
41	DS	65	LEU
42	DT	67	GLY
43	DU	80	GLY
44	DV	148	ASP
47	DW	16	LEU
2	AE	15	VAL
5	AH	70	PRO
20	AW	47	GLY
32	BM	135	PRO

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Mol	Chain	Res	Type
34	BO	145	PRO
40	B2	79	VAL
49	B4	19	GLY
7	CJ	49	ILE
10	CM	24	VAL
13	CP	4	ILE
13	CP	53	VAL
15	CR	19	PRO
15	CR	23	GLY
19	CV	54	GLY
20	CW	101	GLY
21	CX	4	GLY
26	DD	24	ILE
27	DE	50	GLY
27	DE	75	VAL
27	DE	116	VAL
27	DE	186	GLY
28	DF	24	LEU
28	DF	114	VAL
48	DX	27	GLY
2	AE	131	PRO
3	AF	96	GLY
4	AG	7	PRO
6	AI	40	VAL
13	AP	7	VAL
19	AV	11	VAL
26	BD	271	ILE
42	BT	67	GLY
46	BZ	84	GLY
4	CG	172	PRO
10	CM	93	GLY
28	DF	16	GLY
44	DV	157	LEU
4	AG	23	GLY
4	AG	87	GLY
29	BG	179	PRO
34	BO	93	GLY
37	BQ	82	ILE
38	BR	4	GLY
49	B4	28	LYS
2	CE	239	VAL
13	CP	7	VAL

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Mol	Chain	Res	Type
19	CV	72	GLY
26	DD	271	ILE
35	DP	47	ILE
43	DU	42	VAL
43	DU	98	VAL
46	DZ	31	GLY
2	AE	211	ILE
3	AF	51	GLY
3	AF	81	GLY
14	AQ	25	VAL
20	AW	103	GLY
26	BD	35	LYS
30	BH	92	ILE
37	BQ	108	GLY
50	B5	4	HIS
2	CE	228	GLY
3	CF	99	VAL
4	CG	5	ILE
4	CG	37	PRO
6	CI	40	VAL
8	CK	86	ILE
20	CW	97	ALA
30	DH	15	VAL
32	DM	113	GLY
34	DO	24	GLY
40	D2	36	PRO
40	D2	52	VAL
8	AK	5	PRO
15	AR	86	GLY
34	DO	116	GLY

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	AE	205/220 (93%)	166 (81%)	39 (19%)	2 8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	CE	205/220 (93%)	166 (81%)	39 (19%)	2	8
3	AF	159/188 (85%)	141 (89%)	18 (11%)	7	28
3	CF	160/188 (85%)	138 (86%)	22 (14%)	4	19
4	AG	180/180 (100%)	157 (87%)	23 (13%)	5	21
4	CG	180/180 (100%)	160 (89%)	20 (11%)	8	29
5	AH	116/123 (94%)	103 (89%)	13 (11%)	7	29
5	CH	116/123 (94%)	102 (88%)	14 (12%)	6	24
6	AI	90/90 (100%)	82 (91%)	8 (9%)	12	42
6	CI	90/90 (100%)	77 (86%)	13 (14%)	4	17
7	AJ	126/127 (99%)	105 (83%)	21 (17%)	3	11
7	CJ	126/127 (99%)	107 (85%)	19 (15%)	3	15
8	AK	119/119 (100%)	105 (88%)	14 (12%)	6	25
8	CK	119/119 (100%)	102 (86%)	17 (14%)	4	17
9	AL	98/99 (99%)	74 (76%)	24 (24%)	1	3
9	CL	98/99 (99%)	80 (82%)	18 (18%)	2	9
10	AM	89/92 (97%)	78 (88%)	11 (12%)	6	23
10	CM	89/92 (97%)	72 (81%)	17 (19%)	2	8
11	AN	90/99 (91%)	80 (89%)	10 (11%)	8	29
11	CN	90/99 (91%)	73 (81%)	17 (19%)	2	8
12	AO	104/107 (97%)	89 (86%)	15 (14%)	4	17
12	CO	104/107 (97%)	93 (89%)	11 (11%)	8	31
13	AP	94/101 (93%)	85 (90%)	9 (10%)	10	37
13	CP	94/101 (93%)	75 (80%)	19 (20%)	1	7
14	AQ	49/50 (98%)	39 (80%)	10 (20%)	1	6
14	CQ	49/50 (98%)	40 (82%)	9 (18%)	2	9
15	AR	79/80 (99%)	70 (89%)	9 (11%)	7	28
15	CR	79/80 (99%)	72 (91%)	7 (9%)	12	42
16	AS	72/74 (97%)	55 (76%)	17 (24%)	1	3
16	CS	72/74 (97%)	61 (85%)	11 (15%)	3	14
17	AT	95/97 (98%)	85 (90%)	10 (10%)	8	31
17	CT	95/97 (98%)	87 (92%)	8 (8%)	14	46

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
18	AU	63/77 (82%)	54 (86%)	9 (14%)	4	17
18	CU	63/77 (82%)	55 (87%)	8 (13%)	5	22
19	AV	72/80 (90%)	56 (78%)	16 (22%)	1	5
19	CV	67/80 (84%)	54 (81%)	13 (19%)	2	7
20	AW	76/82 (93%)	66 (87%)	10 (13%)	5	20
20	CW	76/82 (93%)	68 (90%)	8 (10%)	8	31
21	AX	20/22 (91%)	20 (100%)	0	100	100
21	CX	20/22 (91%)	19 (95%)	1 (5%)	30	67
26	BD	214/218 (98%)	178 (83%)	36 (17%)	2	11
26	DD	214/218 (98%)	183 (86%)	31 (14%)	4	16
27	BE	165/166 (99%)	144 (87%)	21 (13%)	5	22
27	DE	165/166 (99%)	143 (87%)	22 (13%)	5	20
28	BF	161/166 (97%)	142 (88%)	19 (12%)	6	25
28	DF	165/166 (99%)	138 (84%)	27 (16%)	3	12
29	BG	155/156 (99%)	138 (89%)	17 (11%)	8	30
29	DG	155/156 (99%)	132 (85%)	23 (15%)	4	16
30	BH	142/148 (96%)	123 (87%)	19 (13%)	5	20
30	DH	142/148 (96%)	109 (77%)	33 (23%)	1	4
31	BK	122/124 (98%)	103 (84%)	19 (16%)	3	14
31	DK	122/124 (98%)	92 (75%)	30 (25%)	1	3
32	BM	117/119 (98%)	95 (81%)	22 (19%)	2	8
32	DM	117/119 (98%)	96 (82%)	21 (18%)	2	10
33	BN	100/100 (100%)	90 (90%)	10 (10%)	9	34
33	DN	100/100 (100%)	87 (87%)	13 (13%)	5	21
34	BO	116/116 (100%)	91 (78%)	25 (22%)	1	5
34	DO	116/116 (100%)	84 (72%)	32 (28%)	0	1
35	BP	111/111 (100%)	100 (90%)	11 (10%)	10	34
35	DP	111/111 (100%)	94 (85%)	17 (15%)	3	14
36	B0	101/101 (100%)	87 (86%)	14 (14%)	4	19
36	D0	100/101 (99%)	89 (89%)	11 (11%)	8	30
37	BQ	87/88 (99%)	74 (85%)	13 (15%)	4	15

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
37	DQ	87/88 (99%)	69 (79%)	18 (21%)	1	6
38	BR	120/127 (94%)	105 (88%)	15 (12%)	6	22
38	DR	120/127 (94%)	98 (82%)	22 (18%)	2	9
39	B1	93/94 (99%)	79 (85%)	14 (15%)	3	15
39	D1	93/94 (99%)	79 (85%)	14 (15%)	3	15
40	B2	82/82 (100%)	69 (84%)	13 (16%)	3	13
40	D2	82/82 (100%)	62 (76%)	20 (24%)	1	3
41	BS	92/92 (100%)	80 (87%)	12 (13%)	5	21
41	DS	92/92 (100%)	75 (82%)	17 (18%)	2	9
42	BT	74/78 (95%)	63 (85%)	11 (15%)	4	15
42	DT	74/78 (95%)	66 (89%)	8 (11%)	8	30
43	BU	85/91 (93%)	62 (73%)	23 (27%)	0	1
43	DU	85/91 (93%)	59 (69%)	26 (31%)	0	1
44	BV	154/179 (86%)	126 (82%)	28 (18%)	2	9
44	DV	158/179 (88%)	136 (86%)	22 (14%)	4	19
45	B3	61/67 (91%)	54 (88%)	7 (12%)	7	27
45	D3	62/67 (92%)	58 (94%)	4 (6%)	21	57
46	BZ	82/83 (99%)	67 (82%)	15 (18%)	2	9
46	DZ	82/83 (99%)	76 (93%)	6 (7%)	17	52
47	BW	62/67 (92%)	54 (87%)	8 (13%)	5	21
47	DW	64/67 (96%)	61 (95%)	3 (5%)	32	70
48	BX	51/52 (98%)	44 (86%)	7 (14%)	4	19
48	DX	51/52 (98%)	43 (84%)	8 (16%)	3	13
49	B4	59/63 (94%)	41 (70%)	18 (30%)	0	1
49	D4	57/63 (90%)	36 (63%)	21 (37%)	0	0
50	B5	51/52 (98%)	40 (78%)	11 (22%)	1	5
50	D5	51/52 (98%)	43 (84%)	8 (16%)	3	13
51	B6	44/52 (85%)	33 (75%)	11 (25%)	1	2
51	D6	44/52 (85%)	31 (70%)	13 (30%)	0	1
52	B7	42/42 (100%)	36 (86%)	6 (14%)	4	17
52	D7	42/42 (100%)	33 (79%)	9 (21%)	1	5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
53	B8	51/55 (93%)	39 (76%)	12 (24%)	1	4
53	D8	51/55 (93%)	41 (80%)	10 (20%)	1	7
All	All	9584/9992 (96%)	8081 (84%)	1503 (16%)	3	13

All (1503) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AE	7	VAL
2	AE	8	LYS
2	AE	11	LEU
2	AE	16	HIS
2	AE	21	ARG
2	AE	31	TYR
2	AE	41	ILE
2	AE	42	ILE
2	AE	44	LEU
2	AE	50	GLU
2	AE	60	ASP
2	AE	84	GLU
2	AE	90	MET
2	AE	96	ARG
2	AE	108	ILE
2	AE	122	PHE
2	AE	127	ILE
2	AE	128	GLU
2	AE	135	GLN
2	AE	144	ARG
2	AE	145	LEU
2	AE	150	SER
2	AE	155	LEU
2	AE	158	LEU
2	AE	163	PHE
2	AE	170	GLU
2	AE	172	ILE
2	AE	178	ARG
2	AE	185	ILE
2	AE	187	LEU
2	AE	191	ASP
2	AE	196	LEU
2	AE	200	ILE
2	AE	206	ASP

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Mol	Chain	Res	Type
2	AE	214	ILE
2	AE	221	LEU
2	AE	223	ILE
2	AE	236	TYR
2	AE	240	GLN
3	AF	27	LYS
3	AF	29	TYR
3	AF	34	LEU
3	AF	38	ARG
3	AF	49	SER
3	AF	59	ARG
3	AF	62	ASP
3	AF	63	ASN
3	AF	67	THR
3	AF	102	ASN
3	AF	111	LEU
3	AF	131	ARG
3	AF	165	THR
3	AF	178	LEU
3	AF	179	ARG
3	AF	193	TYR
3	AF	195	VAL
3	AF	196	LEU
4	AG	3	ARG
4	AG	10	ARG
4	AG	15	GLU
4	AG	19	LEU
4	AG	21	LEU
4	AG	27	TYR
4	AG	45	GLN
4	AG	46	LYS
4	AG	58	LEU
4	AG	84	LYS
4	AG	96	LEU
4	AG	108	LEU
4	AG	121	VAL
4	AG	122	ARG
4	AG	127	THR
4	AG	138	TYR
4	AG	146	ILE
4	AG	154	ASN
4	AG	160	GLN

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Mol	Chain	Res	Type
4	AG	179	GLU
4	AG	188	LEU
4	AG	193	ASP
4	AG	198	VAL
5	AH	10	MET
5	AH	11	ILE
5	AH	16	THR
5	AH	31	LEU
5	AH	41	VAL
5	AH	43	LEU
5	AH	50	GLU
5	AH	56	GLN
5	AH	64	ARG
5	AH	79	GLU
5	AH	112	LEU
5	AH	120	THR
5	AH	153	LYS
6	AI	14	LEU
6	AI	23	LYS
6	AI	31	GLU
6	AI	45	LEU
6	AI	74	ASP
6	AI	75	LEU
6	AI	86	ARG
6	AI	92	LYS
7	AJ	5	ARG
7	AJ	8	GLU
7	AJ	21	VAL
7	AJ	35	LYS
7	AJ	38	LEU
7	AJ	51	GLN
7	AJ	54	THR
7	AJ	75	VAL
7	AJ	79	ARG
7	AJ	89	MET
7	AJ	90	GLU
7	AJ	91	VAL
7	AJ	104	LEU
7	AJ	109	ASN
7	AJ	111	ARG
7	AJ	113	GLU
7	AJ	124	LEU

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Mol	Chain	Res	Type
7	AJ	126	ASP
7	AJ	148	ASN
7	AJ	155	ARG
7	AJ	156	TRP
8	AK	3	THR
8	AK	18	ARG
8	AK	25	ASP
8	AK	26	VAL
8	AK	29	SER
8	AK	30	ARG
8	AK	63	LEU
8	AK	80	ILE
8	AK	85	ARG
8	AK	99	GLU
8	AK	109	ILE
8	AK	112	LEU
8	AK	118	VAL
8	AK	129	VAL
9	AL	2	GLU
9	AL	9	ARG
9	AL	11	LYS
9	AL	20	ARG
9	AL	23	ASN
9	AL	25	LYS
9	AL	27	THR
9	AL	34	ASN
9	AL	38	GLN
9	AL	40	LEU
9	AL	44	VAL
9	AL	47	LEU
9	AL	54	ASP
9	AL	85	LEU
9	AL	86	VAL
9	AL	89	ASN
9	AL	91	ASP
9	AL	92	TYR
9	AL	93	ARG
9	AL	95	LYS
9	AL	112	LYS
9	AL	114	TYR
9	AL	121	ARG
9	AL	124	GLN

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Mol	Chain	Res	Type
10	AM	16	LEU
10	AM	25	GLU
10	AM	45	ARG
10	AM	46	ARG
10	AM	55	LYS
10	AM	58	ASP
10	AM	62	HIS
10	AM	67	THR
10	AM	83	GLU
10	AM	95	GLU
10	AM	96	ILE
11	AN	14	VAL
11	AN	30	VAL
11	AN	53	SER
11	AN	71	LYS
11	AN	81	ASP
11	AN	87	THR
11	AN	91	ARG
11	AN	105	VAL
11	AN	109	VAL
11	AN	120	ARG
12	AO	6	THR
12	AO	21	LYS
12	AO	23	LYS
12	AO	34	ARG
12	AO	39	VAL
12	AO	54	LYS
12	AO	60	LEU
12	AO	62	SER
12	AO	66	VAL
12	AO	86	ARG
12	AO	92	ASP
12	AO	114	LYS
12	AO	119	LYS
12	AO	124	LYS
12	AO	127	GLU
13	AP	17	VAL
13	AP	47	ASP
13	AP	48	LEU
13	AP	63	THR
13	AP	64	TRP
13	AP	88	ARG

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Mol	Chain	Res	Type
13	AP	98	VAL
13	AP	108	ARG
13	AP	109	THR
14	AQ	3	ARG
14	AQ	6	LEU
14	AQ	9	LYS
14	AQ	17	LYS
14	AQ	22	THR
14	AQ	23	ARG
14	AQ	27	CYS
14	AQ	32	SER
14	AQ	35	ARG
14	AQ	44	LEU
15	AR	5	LYS
15	AR	6	GLU
15	AR	24	SER
15	AR	35	ARG
15	AR	47	LYS
15	AR	53	HIS
15	AR	62	GLN
15	AR	83	GLU
15	AR	84	LYS
16	AS	2	VAL
16	AS	4	ILE
16	AS	8	ARG
16	AS	16	HIS
16	AS	20	VAL
16	AS	25	ARG
16	AS	33	ILE
16	AS	38	TYR
16	AS	46	PRO
16	AS	47	ASP
16	AS	53	VAL
16	AS	55	ARG
16	AS	60	LEU
16	AS	62	VAL
16	AS	71	ARG
16	AS	76	GLN
16	AS	81	ARG
17	AT	14	LYS
17	AT	21	VAL
17	AT	30	PRO

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Mol	Chain	Res	Type
17	AT	31	LEU
17	AT	38	ARG
17	AT	63	ARG
17	AT	66	SER
17	AT	74	LEU
17	AT	89	LEU
17	AT	101	ARG
18	AU	18	ARG
18	AU	25	THR
18	AU	26	LEU
18	AU	31	LEU
18	AU	36	ASN
18	AU	42	ARG
18	AU	47	THR
18	AU	76	LEU
18	AU	82	THR
19	AV	3	ARG
19	AV	4	SER
19	AV	5	LEU
19	AV	6	LYS
19	AV	9	VAL
19	AV	13	ASP
19	AV	29	ARG
19	AV	37	ARG
19	AV	49	ILE
19	AV	51	VAL
19	AV	52	TYR
19	AV	60	VAL
19	AV	61	TYR
19	AV	67	VAL
19	AV	77	THR
19	AV	83	HIS
20	AW	9	ASN
20	AW	10	LEU
20	AW	13	LEU
20	AW	26	ASN
20	AW	34	LYS
20	AW	61	SER
20	AW	75	ASN
20	AW	99	LEU
20	AW	104	LEU
20	AW	105	SER

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Mol	Chain	Res	Type
26	BD	3	VAL
26	BD	13	ARG
26	BD	16	MET
26	BD	43	ARG
26	BD	44	ASN
26	BD	46	GLN
26	BD	61	LEU
26	BD	64	ILE
26	BD	65	ILE
26	BD	87	ASN
26	BD	94	LEU
26	BD	95	LEU
26	BD	99	ASP
26	BD	103	ARG
26	BD	105	ILE
26	BD	106	ILE
26	BD	116	GLN
26	BD	117	VAL
26	BD	126	GLN
26	BD	141	VAL
26	BD	142	VAL
26	BD	157	ARG
26	BD	164	GLN
26	BD	165	ILE
26	BD	166	GLN
26	BD	171	ASP
26	BD	192	THR
26	BD	212	SER
26	BD	217	ARG
26	BD	219	PRO
26	BD	221	VAL
26	BD	229	VAL
26	BD	242	ARG
26	BD	257	LEU
26	BD	266	SER
26	BD	271	ILE
27	BE	12	THR
27	BE	13	ARG
27	BE	14	ILE
27	BE	23	VAL
27	BE	26	ILE
27	BE	54	GLN

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Mol	Chain	Res	Type
27	BE	61	ARG
27	BE	66	HIS
27	BE	67	PHE
27	BE	78	LEU
27	BE	82	ARG
27	BE	87	GLU
27	BE	119	ARG
27	BE	144	ARG
27	BE	146	THR
27	BE	154	LYS
27	BE	167	VAL
27	BE	188	VAL
27	BE	196	VAL
27	BE	197	ILE
27	BE	202	LYS
28	BF	8	GLN
28	BF	9	ILE
28	BF	24	LEU
28	BF	32	LEU
28	BF	33	LEU
28	BF	57	VAL
28	BF	60	SER
28	BF	70	THR
28	BF	74	ARG
28	BF	77	ASP
28	BF	89	VAL
28	BF	136	THR
28	BF	145	GLU
28	BF	158	THR
28	BF	170	LEU
28	BF	174	VAL
28	BF	195	ASP
28	BF	197	ASP
28	BF	201	VAL
29	BG	28	VAL
29	BG	31	VAL
29	BG	45	GLU
29	BG	60	LEU
29	BG	67	LYS
29	BG	81	LYS
29	BG	82	LEU
29	BG	83	ARG

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Mol	Chain	Res	Type
29	BG	90	LEU
29	BG	93	THR
29	BG	94	LEU
29	BG	96	ARG
29	BG	116	ASP
29	BG	128	ARG
29	BG	133	LEU
29	BG	140	ILE
29	BG	162	THR
30	BH	9	ILE
30	BH	24	VAL
30	BH	37	VAL
30	BH	41	MET
30	BH	45	VAL
30	BH	49	VAL
30	BH	59	ARG
30	BH	68	THR
30	BH	77	LYS
30	BH	86	GLU
30	BH	88	LEU
30	BH	89	ILE
30	BH	97	ARG
30	BH	119	GLU
30	BH	129	THR
30	BH	132	ARG
30	BH	133	VAL
30	BH	134	SER
30	BH	139	GLN
31	BK	9	LEU
31	BK	11	ASN
31	BK	37	VAL
31	BK	41	GLU
31	BK	57	ARG
31	BK	60	GLU
31	BK	64	GLU
31	BK	68	LEU
31	BK	71	ILE
31	BK	77	LEU
31	BK	86	THR
31	BK	92	VAL
31	BK	96	ASP
31	BK	108	THR

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Mol	Chain	Res	Type
31	BK	130	TYR
31	BK	131	LYS
31	BK	136	VAL
31	BK	140	LEU
31	BK	143	SER
32	BM	1	MET
32	BM	2	LYS
32	BM	7	LYS
32	BM	8	GLN
32	BM	10	GLU
32	BM	14	VAL
32	BM	32	THR
32	BM	33	LEU
32	BM	34	LEU
32	BM	35	ARG
32	BM	46	VAL
32	BM	48	MET
32	BM	58	ASP
32	BM	60	ILE
32	BM	61	ARG
32	BM	67	LEU
32	BM	85	ILE
32	BM	87	LEU
32	BM	97	ARG
32	BM	99	LEU
32	BM	120	LEU
32	BM	134	ARG
33	BN	24	VAL
33	BN	28	SER
33	BN	38	VAL
33	BN	66	LYS
33	BN	68	GLU
33	BN	78	ARG
33	BN	94	ARG
33	BN	97	ARG
33	BN	115	VAL
33	BN	117	LEU
34	BO	6	LEU
34	BO	15	ARG
34	BO	21	ARG
34	BO	30	THR
34	BO	41	ARG

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Mol	Chain	Res	Type
34	BO	45	LEU
34	BO	49	ARG
34	BO	58	THR
34	BO	59	LEU
34	BO	61	ARG
34	BO	62	LEU
34	BO	65	ARG
34	BO	67	MET
34	BO	70	GLN
34	BO	71	VAL
34	BO	81	GLN
34	BO	85	LEU
34	BO	96	THR
34	BO	98	GLU
34	BO	106	LEU
34	BO	112	LEU
34	BO	123	LEU
34	BO	138	LEU
34	BO	144	GLU
34	BO	146	VAL
35	BP	5	ARG
35	BP	35	VAL
35	BP	45	GLN
35	BP	55	VAL
35	BP	60	ARG
35	BP	75	THR
35	BP	83	MET
35	BP	105	GLU
35	BP	110	THR
35	BP	112	GLU
35	BP	139	GLU
36	B0	2	ARG
36	B0	9	LYS
36	B0	18	LEU
36	B0	24	GLN
36	B0	28	LEU
36	B0	29	LEU
36	B0	33	ARG
36	B0	35	THR
36	B0	36	THR
36	B0	37	THR
36	B0	60	LEU

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Mol	Chain	Res	Type
36	B0	65	LEU
36	B0	74	LYS
36	B0	79	LEU
37	BQ	35	ILE
37	BQ	42	ASP
37	BQ	43	GLU
37	BQ	44	LYS
37	BQ	50	SER
37	BQ	52	SER
37	BQ	63	THR
37	BQ	69	VAL
37	BQ	73	LEU
37	BQ	83	LYS
37	BQ	98	VAL
37	BQ	106	ARG
37	BQ	107	GLU
38	BR	3	ARG
38	BR	16	ARG
38	BR	18	ASP
38	BR	21	GLU
38	BR	27	THR
38	BR	30	VAL
38	BR	58	ASN
38	BR	64	ARG
38	BR	74	ARG
38	BR	78	LEU
38	BR	86	ILE
38	BR	105	LEU
38	BR	107	ASP
38	BR	113	LYS
38	BR	118	ARG
39	B1	5	LYS
39	B1	31	SER
39	B1	52	ARG
39	B1	70	ARG
39	B1	74	LEU
39	B1	79	PHE
39	B1	81	HIS
39	B1	83	LEU
39	B1	89	GLU
39	B1	90	VAL
39	B1	94	ASN

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Mol	Chain	Res	Type
39	B1	100	VAL
39	B1	104	GLN
39	B1	108	GLU
40	B2	12	TYR
40	B2	13	ARG
40	B2	35	LEU
40	B2	39	LEU
40	B2	40	LEU
40	B2	47	VAL
40	B2	49	THR
40	B2	52	VAL
40	B2	57	VAL
40	B2	62	LEU
40	B2	71	LEU
40	B2	72	VAL
40	B2	79	VAL
41	BS	11	ARG
41	BS	16	LYS
41	BS	51	LEU
41	BS	59	VAL
41	BS	67	ASP
41	BS	69	LEU
41	BS	70	TYR
41	BS	76	VAL
41	BS	88	ARG
41	BS	96	ILE
41	BS	106	ILE
41	BS	107	LEU
42	BT	15	GLU
42	BT	23	GLU
42	BT	27	THR
42	BT	49	VAL
42	BT	57	LEU
42	BT	63	LYS
42	BT	65	ARG
42	BT	66	LEU
42	BT	70	LEU
42	BT	80	ILE
42	BT	88	LYS
43	BU	2	ARG
43	BU	4	LYS
43	BU	27	VAL

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Mol	Chain	Res	Type
43	BU	33	LYS
43	BU	38	ILE
43	BU	40	GLU
43	BU	50	ARG
43	BU	52	SER
43	BU	54	LYS
43	BU	55	TYR
43	BU	57	GLN
43	BU	64	GLU
43	BU	70	SER
43	BU	75	ILE
43	BU	76	CYS
43	BU	81	LYS
43	BU	85	VAL
43	BU	86	ARG
43	BU	87	LYS
43	BU	89	PHE
43	BU	95	LYS
43	BU	97	ARG
43	BU	101	LYS
44	BV	5	LEU
44	BV	11	GLU
44	BV	19	ARG
44	BV	33	LEU
44	BV	47	VAL
44	BV	53	ILE
44	BV	59	LEU
44	BV	61	LEU
44	BV	71	VAL
44	BV	76	LEU
44	BV	77	ASP
44	BV	81	ARG
44	BV	86	VAL
44	BV	91	LEU
44	BV	92	SER
44	BV	96	VAL
44	BV	111	VAL
44	BV	112	ARG
44	BV	116	VAL
44	BV	117	LEU
44	BV	120	ILE
44	BV	128	VAL

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Mol	Chain	Res	Type
44	BV	129	SER
44	BV	144	LEU
44	BV	146	ILE
44	BV	154	ASP
44	BV	163	LEU
44	BV	169	GLU
45	B3	10	THR
45	B3	11	ARG
45	B3	20	ARG
45	B3	36	ILE
45	B3	64	ASP
45	B3	81	VAL
45	B3	82	ARG
46	BZ	4	VAL
46	BZ	19	GLN
46	BZ	21	ARG
46	BZ	35	THR
46	BZ	40	ARG
46	BZ	46	LEU
46	BZ	65	SER
46	BZ	78	LYS
46	BZ	80	LEU
46	BZ	82	LEU
46	BZ	83	GLU
46	BZ	85	LEU
46	BZ	91	LYS
46	BZ	93	GLU
46	BZ	98	LEU
47	BW	5	GLU
47	BW	9	GLN
47	BW	24	LEU
47	BW	32	LEU
47	BW	47	ASN
47	BW	53	LEU
47	BW	62	THR
47	BW	64	LEU
48	BX	8	LEU
48	BX	11	SER
48	BX	30	ARG
48	BX	32	GLN
48	BX	40	THR
48	BX	44	ARG

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Mol	Chain	Res	Type
48	BX	58	VAL
49	B4	2	LYS
49	B4	6	HIS
49	B4	10	VAL
49	B4	15	ILE
49	B4	18	CYS
49	B4	21	VAL
49	B4	24	THR
49	B4	32	TYR
49	B4	36	CYS
49	B4	39	CYS
49	B4	42	PHE
49	B4	48	ARG
49	B4	49	PHE
49	B4	52	THR
49	B4	57	GLU
49	B4	59	PHE
49	B4	61	ARG
49	B4	63	TYR
50	B5	3	LYS
50	B5	6	VAL
50	B5	11	THR
50	B5	29	THR
50	B5	33	CYS
50	B5	40	LYS
50	B5	44	THR
50	B5	46	CYS
50	B5	51	TYR
50	B5	52	TYR
50	B5	55	ARG
51	B6	9	LEU
51	B6	10	LEU
51	B6	12	GLU
51	B6	24	GLU
51	B6	32	ASN
51	B6	37	ARG
51	B6	39	TYR
51	B6	44	ARG
51	B6	48	VAL
51	B6	51	GLU
51	B6	52	VAL
52	B7	1	MET

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Mol	Chain	Res	Type
52	B7	4	THR
52	B7	10	ARG
52	B7	24	THR
52	B7	32	LYS
52	B7	46	VAL
53	B8	8	LYS
53	B8	14	VAL
53	B8	25	MET
53	B8	37	SER
53	B8	44	LYS
53	B8	47	LYS
53	B8	48	PHE
53	B8	49	VAL
53	B8	56	GLU
53	B8	60	LEU
53	B8	61	LEU
53	B8	62	LEU
2	CE	4	GLU
2	CE	5	ILE
2	CE	11	LEU
2	CE	12	GLU
2	CE	17	PHE
2	CE	19	HIS
2	CE	23	ARG
2	CE	24	TRP
2	CE	37	ASN
2	CE	42	ILE
2	CE	44	LEU
2	CE	45	GLN
2	CE	51	LEU
2	CE	55	PHE
2	CE	58	ILE
2	CE	67	THR
2	CE	69	LEU
2	CE	73	THR
2	CE	83	MET
2	CE	84	GLU
2	CE	87	ARG
2	CE	105	PHE
2	CE	107	THR
2	CE	116	GLU
2	CE	118	LEU

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Mol	Chain	Res	Type
2	CE	121	LEU
2	CE	129	GLU
2	CE	137	ARG
2	CE	139	LYS
2	CE	144	ARG
2	CE	154	LEU
2	CE	169	LYS
2	CE	178	ARG
2	CE	185	ILE
2	CE	187	LEU
2	CE	195	ASP
2	CE	196	LEU
2	CE	215	LEU
2	CE	238	LEU
3	CF	14	ILE
3	CF	29	TYR
3	CF	47	LEU
3	CF	48	TYR
3	CF	59	ARG
3	CF	72	LYS
3	CF	79	ARG
3	CF	84	ILE
3	CF	85	ARG
3	CF	88	ARG
3	CF	94	LEU
3	CF	95	THR
3	CF	97	LYS
3	CF	101	LEU
3	CF	102	ASN
3	CF	105	GLU
3	CF	119	ARG
3	CF	140	ARG
3	CF	181	ASN
3	CF	188	LEU
3	CF	192	THR
3	CF	202	ILE
4	CG	4	TYR
4	CG	12	CYS
4	CG	19	LEU
4	CG	21	LEU
4	CG	49	ARG
4	CG	58	LEU

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Mol	Chain	Res	Type
4	CG	73	ARG
4	CG	84	LYS
4	CG	112	VAL
4	CG	121	VAL
4	CG	122	ARG
4	CG	134	ASP
4	CG	135	LEU
4	CG	141	ARG
4	CG	155	LEU
4	CG	163	GLU
4	CG	179	GLU
4	CG	191	ARG
4	CG	198	VAL
4	CG	202	LEU
5	CH	12	LEU
5	CH	13	ILE
5	CH	16	THR
5	CH	33	VAL
5	CH	47	LYS
5	CH	64	ARG
5	CH	73	ASN
5	CH	75	THR
5	CH	79	GLU
5	CH	81	GLU
5	CH	91	LEU
5	CH	120	THR
5	CH	126	ARG
5	CH	135	THR
6	CI	14	LEU
6	CI	15	ASP
6	CI	28	ARG
6	CI	32	ASN
6	CI	40	VAL
6	CI	43	LEU
6	CI	47	ARG
6	CI	54	LYS
6	CI	77	ARG
6	CI	78	GLU
6	CI	83	ASP
6	CI	87	ARG
6	CI	98	LEU
7	CJ	6	ARG

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Mol	Chain	Res	Type
7	CJ	8	GLU
7	CJ	21	VAL
7	CJ	27	ILE
7	CJ	33	ASP
7	CJ	35	LYS
7	CJ	41	ARG
7	CJ	49	ILE
7	CJ	54	THR
7	CJ	63	LYS
7	CJ	75	VAL
7	CJ	79	ARG
7	CJ	84	ASN
7	CJ	89	MET
7	CJ	113	GLU
7	CJ	114	ARG
7	CJ	118	VAL
7	CJ	149	ARG
7	CJ	156	TRP
8	CK	1	MET
8	CK	2	LEU
8	CK	24	THR
8	CK	25	ASP
8	CK	51	VAL
8	CK	54	ASP
8	CK	56	LYS
8	CK	60	ARG
8	CK	82	HIS
8	CK	91	ARG
8	CK	97	VAL
8	CK	103	VAL
8	CK	109	ILE
8	CK	112	LEU
8	CK	121	ASP
8	CK	137	VAL
8	CK	138	TRP
9	CL	7	THR
9	CL	9	ARG
9	CL	10	ARG
9	CL	42	ARG
9	CL	54	ASP
9	CL	77	ILE
9	CL	78	LYS

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Mol	Chain	Res	Type
9	CL	79	LEU
9	CL	81	ILE
9	CL	86	VAL
9	CL	88	TYR
9	CL	95	LYS
9	CL	108	VAL
9	CL	109	VAL
9	CL	113	LYS
9	CL	118	LYS
9	CL	124	GLN
9	CL	125	TYR
10	CM	6	ILE
10	CM	8	LEU
10	CM	17	ASP
10	CM	22	LYS
10	CM	40	LEU
10	CM	42	THR
10	CM	43	ARG
10	CM	47	PHE
10	CM	58	ASP
10	CM	62	HIS
10	CM	72	VAL
10	CM	75	ILE
10	CM	79	ARG
10	CM	82	ILE
10	CM	88	LEU
10	CM	92	THR
10	CM	99	LYS
11	CN	12	ARG
11	CN	14	VAL
11	CN	18	ARG
11	CN	24	SER
11	CN	31	THR
11	CN	44	SER
11	CN	48	ILE
11	CN	57	THR
11	CN	70	LYS
11	CN	79	SER
11	CN	81	ASP
11	CN	93	GLN
11	CN	105	VAL
11	CN	106	LYS

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Mol	Chain	Res	Type
11	CN	109	VAL
11	CN	124	LYS
11	CN	127	LYS
12	CO	24	VAL
12	CO	27	LEU
12	CO	33	ARG
12	CO	41	ARG
12	CO	42	THR
12	CO	64	TYR
12	CO	83	VAL
12	CO	92	ASP
12	CO	104	VAL
12	CO	111	LYS
12	CO	116	SER
13	CP	4	ILE
13	CP	7	VAL
13	CP	17	VAL
13	CP	22	ILE
13	CP	23	TYR
13	CP	35	GLU
13	CP	47	ASP
13	CP	48	LEU
13	CP	57	ARG
13	CP	62	ASN
13	CP	66	LEU
13	CP	67	GLU
13	CP	70	LEU
13	CP	79	LYS
13	CP	81	LEU
13	CP	83	ASP
13	CP	105	THR
13	CP	108	ARG
13	CP	109	THR
14	CQ	6	LEU
14	CQ	8	GLU
14	CQ	16	PHE
14	CQ	18	VAL
14	CQ	24	CYS
14	CQ	26	ARG
14	CQ	27	CYS
14	CQ	40	CYS
14	CQ	61	TRP

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Mol	Chain	Res	Type
15	CR	3	ILE
15	CR	10	LYS
15	CR	22	THR
15	CR	33	THR
15	CR	39	LEU
15	CR	46	HIS
15	CR	82	ILE
16	CS	2	VAL
16	CS	5	ARG
16	CS	19	ILE
16	CS	20	VAL
16	CS	21	VAL
16	CS	22	THR
16	CS	45	THR
16	CS	53	VAL
16	CS	55	ARG
16	CS	58	TYR
16	CS	67	THR
17	CT	12	SER
17	CT	57	VAL
17	CT	68	ARG
17	CT	70	ARG
17	CT	73	VAL
17	CT	74	LEU
17	CT	81	ARG
17	CT	87	LYS
18	CU	17	SER
18	CU	21	LYS
18	CU	26	LEU
18	CU	32	ARG
18	CU	42	ARG
18	CU	58	LEU
18	CU	83	GLU
18	CU	86	VAL
19	CV	9	VAL
19	CV	12	ASP
19	CV	13	ASP
19	CV	14	HIS
19	CV	15	LEU
19	CV	37	ARG
19	CV	40	ILE
19	CV	41	VAL

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Mol	Chain	Res	Type
19	CV	43	GLU
19	CV	60	VAL
19	CV	63	THR
19	CV	77	THR
19	CV	83	HIS
20	CW	10	LEU
20	CW	37	SER
20	CW	64	ASP
20	CW	75	ASN
20	CW	80	ARG
20	CW	83	ARG
20	CW	84	LEU
20	CW	99	LEU
21	CX	8	THR
26	DD	5	LYS
26	DD	27	THR
26	DD	31	LYS
26	DD	35	LYS
26	DD	44	ASN
26	DD	46	GLN
26	DD	61	LEU
26	DD	64	ILE
26	DD	65	ILE
26	DD	87	ASN
26	DD	94	LEU
26	DD	99	ASP
26	DD	103	ARG
26	DD	105	ILE
26	DD	106	ILE
26	DD	109	ASP
26	DD	116	GLN
26	DD	118	VAL
26	DD	141	VAL
26	DD	147	LEU
26	DD	150	LYS
26	DD	157	ARG
26	DD	192	THR
26	DD	211	ARG
26	DD	242	ARG
26	DD	244	ARG
26	DD	255	LYS
26	DD	257	LEU

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Mol	Chain	Res	Type
26	DD	266	SER
26	DD	270	ILE
26	DD	271	ILE
27	DE	33	VAL
27	DE	35	GLN
27	DE	40	GLU
27	DE	54	GLN
27	DE	69	LYS
27	DE	76	ARG
27	DE	78	LEU
27	DE	79	ARG
27	DE	91	VAL
27	DE	108	SER
27	DE	111	ARG
27	DE	119	ARG
27	DE	135	HIS
27	DE	144	ARG
27	DE	169	ASN
27	DE	170	LEU
27	DE	175	VAL
27	DE	181	LEU
27	DE	188	VAL
27	DE	197	ILE
27	DE	200	GLU
27	DE	201	THR
28	DF	1	MET
28	DF	2	LYS
28	DF	3	GLU
28	DF	4	VAL
28	DF	7	TYR
28	DF	8	GLN
28	DF	11	VAL
28	DF	19	GLU
28	DF	20	LEU
28	DF	23	ASP
28	DF	33	LEU
28	DF	63	LYS
28	DF	67	GLN
28	DF	68	LYS
28	DF	74	ARG
28	DF	100	THR
28	DF	104	LYS

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Mol	Chain	Res	Type
28	DF	158	THR
28	DF	181	LEU
28	DF	183	VAL
28	DF	192	LEU
28	DF	195	ASP
28	DF	196	LEU
28	DF	197	ASP
28	DF	200	GLU
28	DF	201	VAL
28	DF	205	ARG
29	DG	3	LEU
29	DG	5	VAL
29	DG	20	ILE
29	DG	22	ARG
29	DG	26	GLN
29	DG	43	LEU
29	DG	47	LYS
29	DG	48	GLU
29	DG	53	LEU
29	DG	67	LYS
29	DG	88	ILE
29	DG	90	LEU
29	DG	91	ARG
29	DG	92	VAL
29	DG	94	LEU
29	DG	100	TRP
29	DG	108	ASN
29	DG	116	ASP
29	DG	133	LEU
29	DG	139	LEU
29	DG	145	THR
29	DG	148	MET
29	DG	165	THR
30	DH	3	ARG
30	DH	4	ILE
30	DH	7	LEU
30	DH	11	VAL
30	DH	16	SER
30	DH	24	VAL
30	DH	30	LYS
30	DH	32	GLU
30	DH	41	MET

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Mol	Chain	Res	Type
30	DH	43	VAL
30	DH	49	VAL
30	DH	50	VAL
30	DH	51	ARG
30	DH	56	SER
30	DH	67	LEU
30	DH	71	LEU
30	DH	74	ASN
30	DH	83	TYR
30	DH	88	LEU
30	DH	89	ILE
30	DH	101	ARG
30	DH	103	LEU
30	DH	104	GLU
30	DH	105	LEU
30	DH	121	ILE
30	DH	123	PHE
30	DH	129	THR
30	DH	139	GLN
30	DH	141	VAL
30	DH	157	TYR
30	DH	159	GLU
30	DH	164	TYR
30	DH	169	VAL
31	DK	9	LEU
31	DK	37	VAL
31	DK	44	LEU
31	DK	50	ARG
31	DK	52	ARG
31	DK	56	LYS
31	DK	61	ARG
31	DK	66	GLU
31	DK	67	ARG
31	DK	74	ASN
31	DK	76	THR
31	DK	77	LEU
31	DK	78	THR
31	DK	81	VAL
31	DK	85	GLU
31	DK	86	THR
31	DK	87	LYS
31	DK	104	GLN

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Mol	Chain	Res	Type
31	DK	109	ILE
31	DK	113	ARG
31	DK	117	GLU
31	DK	118	LYS
31	DK	125	GLU
31	DK	131	LYS
31	DK	133	HIS
31	DK	135	GLU
31	DK	136	VAL
31	DK	142	VAL
31	DK	144	VAL
31	DK	145	VAL
32	DM	7	LYS
32	DM	9	VAL
32	DM	15	LEU
32	DM	22	THR
32	DM	28	THR
32	DM	29	LYS
32	DM	32	THR
32	DM	33	LEU
32	DM	34	LEU
32	DM	38	HIS
32	DM	43	THR
32	DM	48	MET
32	DM	58	ASP
32	DM	60	ILE
32	DM	63	THR
32	DM	65	LYS
32	DM	69	GLN
32	DM	87	LEU
32	DM	93	THR
32	DM	94	HIS
32	DM	137	LYS
33	DN	9	GLU
33	DN	21	CYS
33	DN	23	ARG
33	DN	24	VAL
33	DN	34	THR
33	DN	47	ILE
33	DN	49	ARG
33	DN	70	LYS
33	DN	78	ARG

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Mol	Chain	Res	Type
33	DN	80	ASP
33	DN	87	ILE
33	DN	89	ASN
33	DN	94	ARG
34	DO	6	LEU
34	DO	21	ARG
34	DO	30	THR
34	DO	36	LYS
34	DO	41	ARG
34	DO	45	LEU
34	DO	46	LYS
34	DO	52	GLU
34	DO	57	THR
34	DO	58	THR
34	DO	59	LEU
34	DO	61	ARG
34	DO	62	LEU
34	DO	65	ARG
34	DO	67	MET
34	DO	81	GLN
34	DO	83	VAL
34	DO	85	LEU
34	DO	91	PHE
34	DO	95	VAL
34	DO	96	THR
34	DO	98	GLU
34	DO	105	LEU
34	DO	110	TYR
34	DO	111	ARG
34	DO	114	ILE
34	DO	125	VAL
34	DO	138	LEU
34	DO	139	LYS
34	DO	144	GLU
34	DO	147	LEU
34	DO	148	LEU
35	DP	1	MET
35	DP	6	ARG
35	DP	26	TYR
35	DP	45	GLN
35	DP	59	ARG
35	DP	60	ARG

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Mol	Chain	Res	Type
35	DP	64	ILE
35	DP	75	THR
35	DP	83	MET
35	DP	89	ASN
35	DP	103	MET
35	DP	110	THR
35	DP	111	GLU
35	DP	131	ILE
35	DP	133	ARG
35	DP	135	ASP
35	DP	138	ASP
36	D0	18	LEU
36	D0	28	LEU
36	D0	33	ARG
36	D0	44	LEU
36	D0	57	ARG
36	D0	75	LEU
36	D0	79	LEU
36	D0	81	ASP
36	D0	96	ARG
36	D0	105	ARG
36	D0	117	VAL
37	DQ	5	THR
37	DQ	12	PHE
37	DQ	14	VAL
37	DQ	17	ARG
37	DQ	18	ILE
37	DQ	28	VAL
37	DQ	32	LEU
37	DQ	57	LYS
37	DQ	59	LYS
37	DQ	65	VAL
37	DQ	71	ARG
37	DQ	73	LEU
37	DQ	83	LYS
37	DQ	89	ARG
37	DQ	95	HIS
37	DQ	101	LEU
37	DQ	107	GLU
37	DQ	110	LEU
38	DR	1	MET
38	DR	6	LEU

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Mol	Chain	Res	Type
38	DR	8	LYS
38	DR	9	LEU
38	DR	23	ARG
38	DR	27	THR
38	DR	30	VAL
38	DR	36	GLU
38	DR	38	ASN
38	DR	41	ARG
38	DR	50	ILE
38	DR	62	THR
38	DR	65	LYS
38	DR	74	ARG
38	DR	85	LYS
38	DR	86	ILE
38	DR	88	ILE
38	DR	91	ARG
38	DR	93	ARG
38	DR	99	LEU
38	DR	107	ASP
38	DR	112	ARG
39	D1	8	VAL
39	D1	51	LYS
39	D1	64	ARG
39	D1	74	LEU
39	D1	84	LYS
39	D1	92	ARG
39	D1	93	LYS
39	D1	95	LEU
39	D1	97	ASP
39	D1	100	VAL
39	D1	101	ARG
39	D1	111	GLU
39	D1	112	ARG
39	D1	114	LYS
40	D2	23	GLU
40	D2	26	ASP
40	D2	28	GLU
40	D2	40	LEU
40	D2	46	VAL
40	D2	49	THR
40	D2	52	VAL
40	D2	57	VAL

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Mol	Chain	Res	Type
40	D2	61	VAL
40	D2	68	LYS
40	D2	73	SER
40	D2	79	VAL
40	D2	81	TYR
40	D2	83	ARG
40	D2	84	LYS
40	D2	85	LYS
40	D2	89	GLN
40	D2	91	TYR
40	D2	95	LEU
40	D2	100	ARG
41	DS	11	ARG
41	DS	15	ARG
41	DS	20	VAL
41	DS	40	ASN
41	DS	51	LEU
41	DS	52	GLU
41	DS	59	VAL
41	DS	60	ASN
41	DS	65	LEU
41	DS	70	TYR
41	DS	76	VAL
41	DS	94	ASP
41	DS	98	LYS
41	DS	106	ILE
41	DS	107	LEU
41	DS	111	HIS
41	DS	113	LYS
42	DT	30	VAL
42	DT	45	THR
42	DT	63	LYS
42	DT	66	LEU
42	DT	69	TYR
42	DT	75	ASP
42	DT	80	ILE
42	DT	81	VAL
43	DU	2	ARG
43	DU	6	HIS
43	DU	8	LYS
43	DU	13	VAL
43	DU	19	LYS

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Mol	Chain	Res	Type
43	DU	27	VAL
43	DU	29	GLU
43	DU	37	VAL
43	DU	38	ILE
43	DU	39	VAL
43	DU	46	LYS
43	DU	51	VAL
43	DU	54	LYS
43	DU	57	GLN
43	DU	60	PHE
43	DU	61	ILE
43	DU	62	GLU
43	DU	63	LYS
43	DU	75	ILE
43	DU	76	CYS
43	DU	81	LYS
43	DU	84	ARG
43	DU	88	LYS
43	DU	96	ILE
43	DU	97	ARG
43	DU	98	VAL
44	DV	32	HIS
44	DV	42	VAL
44	DV	53	ILE
44	DV	66	SER
44	DV	70	LEU
44	DV	71	VAL
44	DV	73	GLN
44	DV	74	VAL
44	DV	85	HIS
44	DV	87	ASP
44	DV	89	PHE
44	DV	107	THR
44	DV	117	LEU
44	DV	120	ILE
44	DV	128	VAL
44	DV	144	LEU
44	DV	146	ILE
44	DV	150	LEU
44	DV	154	ASP
44	DV	156	LYS
44	DV	170	THR

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Mol	Chain	Res	Type
44	DV	179	ASP
45	D3	12	ASN
45	D3	25	ARG
45	D3	36	ILE
45	D3	50	ASN
46	DZ	41	ARG
46	DZ	81	LYS
46	DZ	82	LEU
46	DZ	83	GLU
46	DZ	85	LEU
46	DZ	90	ILE
47	DW	24	LEU
47	DW	53	LEU
47	DW	65	ASN
48	DX	5	LYS
48	DX	8	LEU
48	DX	9	VAL
48	DX	18	ASP
48	DX	24	LYS
48	DX	36	VAL
48	DX	38	GLU
48	DX	40	THR
49	D4	1	MET
49	D4	2	LYS
49	D4	9	LEU
49	D4	14	ILE
49	D4	15	ILE
49	D4	16	CYS
49	D4	18	CYS
49	D4	22	ILE
49	D4	23	GLU
49	D4	24	THR
49	D4	27	THR
49	D4	32	TYR
49	D4	34	GLU
49	D4	37	SER
49	D4	38	LYS
49	D4	39	CYS
49	D4	42	PHE
49	D4	50	VAL
49	D4	51	ASP
49	D4	53	GLU

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Mol	Chain	Res	Type
49	D4	62	ARG
50	D5	15	ARG
50	D5	23	HIS
50	D5	29	THR
50	D5	33	CYS
50	D5	35	GLU
50	D5	48	GLU
50	D5	51	TYR
50	D5	56	LYS
51	D6	12	GLU
51	D6	14	THR
51	D6	15	GLU
51	D6	17	LYS
51	D6	23	THR
51	D6	24	GLU
51	D6	30	THR
51	D6	32	ASN
51	D6	37	ARG
51	D6	39	TYR
51	D6	46	HIS
51	D6	50	ARG
51	D6	52	VAL
52	D7	1	MET
52	D7	4	THR
52	D7	15	THR
52	D7	24	THR
52	D7	39	ARG
52	D7	43	THR
52	D7	46	VAL
52	D7	47	ARG
52	D7	49	ARG
53	D8	22	VAL
53	D8	23	VAL
53	D8	30	ARG
53	D8	32	LEU
53	D8	40	GLU
53	D8	48	PHE
53	D8	49	VAL
53	D8	52	LYS
53	D8	58	ILE
53	D8	61	LEU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (57) such

sidechains are listed below:

Mol	Chain	Res	Type
2	AE	76	GLN
3	AF	6	HIS
3	AF	28	GLN
4	AG	74	GLN
4	AG	103	ASN
4	AG	123	HIS
5	AH	78	HIS
12	AO	49	ASN
26	BD	46	GLN
28	BF	8	GLN
31	BK	105	HIS
33	BN	3	GLN
34	BO	70	GLN
36	B0	3	HIS
39	B1	44	ASN
47	BW	56	GLN
51	B6	20	ASN
51	B6	26	ASN
51	B6	46	HIS
53	B8	33	ASN
2	CE	94	ASN
2	CE	135	GLN
3	CF	6	HIS
3	CF	69	HIS
3	CF	181	ASN
4	CG	43	HIS
4	CG	45	GLN
4	CG	119	GLN
7	CJ	28	ASN
10	CM	56	HIS
11	CN	26	ASN
12	CO	49	ASN
13	CP	77	ASN
13	CP	101	GLN
16	CS	82	GLN
17	CT	45	HIS
19	CV	23	ASN
19	CV	47	HIS
20	CW	18	GLN
26	DD	143	HIS
27	DE	35	GLN
27	DE	55	ASN

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Mol	Chain	Res	Type
27	DE	60	ASN
28	DF	67	GLN
29	DG	41	GLN
33	DN	3	GLN
34	DO	68	GLN
35	DP	45	GLN
39	D1	49	HIS
39	D1	72	HIS
39	D1	81	HIS
40	D2	89	GLN
41	DS	40	ASN
45	D3	35	ASN
48	DX	19	GLN
48	DX	52	HIS
51	D6	46	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1506/1506 (100%)	316 (20%)	26 (1%)
1	CA	1505/1506 (99%)	312 (20%)	30 (1%)
22	AC	76/77 (98%)	8 (10%)	1 (1%)
22	AD	76/77 (98%)	24 (31%)	1 (1%)
22	CC	77/77 (100%)	12 (15%)	1 (1%)
22	CD	76/77 (98%)	45 (59%)	5 (6%)
23	A1	5/6 (83%)	1 (20%)	0
23	C1	5/6 (83%)	1 (20%)	0
24	BA	2911/2912 (99%)	593 (20%)	44 (1%)
24	DA	2904/2912 (99%)	645 (22%)	39 (1%)
25	BB	121/122 (99%)	27 (22%)	0
25	DB	121/122 (99%)	32 (26%)	0
All	All	9383/9400 (99%)	2016 (21%)	147 (1%)

All (2016) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	6	G
1	AA	8	A
1	AA	9	G
1	AA	31	G
1	AA	32	A

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Mol	Chain	Res	Type
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	51	A
1	AA	61	G
1	AA	65	U
1	AA	66	G
1	AA	76	G
1	AA	78	G
1	AA	79	G
1	AA	81	G
1	AA	84	U
1	AA	85	U
1	AA	86	U
1	AA	87	A
1	AA	88	C
1	AA	89	U
1	AA	90	C
1	AA	91	C
1	AA	92	G
1	AA	95	G
1	AA	101	A
1	AA	108	G
1	AA	116	A
1	AA	121	C
1	AA	122	G
1	AA	131	C
1	AA	132	C
1	AA	142	G
1	AA	144	G
1	AA	147	G
1	AA	156	G
1	AA	163	C
1	AA	172	A
1	AA	173	U
1	AA	174	C
1	AA	182	U
1	AA	183	G
1	AA	186	C
1	AA	186(D)	C
1	AA	189	U
1	AA	190	G

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Mol	Chain	Res	Type
1	AA	191(A)	G
1	AA	195	A
1	AA	199	G
1	AA	208	U
1	AA	209	U
1	AA	210	U
1	AA	226	G
1	AA	245	C
1	AA	247	G
1	AA	251	G
1	AA	256	U
1	AA	266	G
1	AA	267	C
1	AA	281	G
1	AA	289	G
1	AA	298	A
1	AA	306	G
1	AA	316	G
1	AA	321	A
1	AA	325	A
1	AA	328	C
1	AA	329	A
1	AA	332	G
1	AA	344	A
1	AA	345	C
1	AA	346	G
1	AA	347	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	365	U
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	390	C
1	AA	397	A
1	AA	398	C
1	AA	405	U
1	AA	406	G
1	AA	411	A
1	AA	412	A
1	AA	413	G

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Mol	Chain	Res	Type
1	AA	418	C
1	AA	419	C
1	AA	421	U
1	AA	422	C
1	AA	424	G
1	AA	429	U
1	AA	430	A
1	AA	439	A
1	AA	442	C
1	AA	466	C
1	AA	467	G
1	AA	482	A
1	AA	485	G
1	AA	496	A
1	AA	497	U
1	AA	505	G
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	512	U
1	AA	513	C
1	AA	518	C
1	AA	527	G
1	AA	531	U
1	AA	533	A
1	AA	547	A
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	563	A
1	AA	572	A
1	AA	573	A
1	AA	576	G
1	AA	577	G
1	AA	591	U
1	AA	618	C
1	AA	630	G
1	AA	631	G
1	AA	632	A
1	AA	633	G
1	AA	639	G
1	AA	642	A

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Mol	Chain	Res	Type
1	AA	653	A
1	AA	661	G
1	AA	665	A
1	AA	686	U
1	AA	688	G
1	AA	703	G
1	AA	704	A
1	AA	723	U
1	AA	724	G
1	AA	731	G
1	AA	748	C
1	AA	749	C
1	AA	755	G
1	AA	759	A
1	AA	774	G
1	AA	777	A
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	812	C
1	AA	813	U
1	AA	817	C
1	AA	821	G
1	AA	828	A
1	AA	841	U
1	AA	842	C
1	AA	843	U
1	AA	848	C
1	AA	859	A
1	AA	864	A
1	AA	870	U
1	AA	872	A
1	AA	873	A
1	AA	885	G
1	AA	902	G
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	936	C
1	AA	958	A

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Mol	Chain	Res	Type
1	AA	960	U
1	AA	966	G
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	982	U
1	AA	983	A
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	1001	G
1	AA	1004	A
1	AA	1008	C
1	AA	1009	G
1	AA	1017	G
1	AA	1020	U
1	AA	1023	G
1	AA	1024	G
1	AA	1025	U
1	AA	1026	G
1	AA	1028	C
1	AA	1029	G
1	AA	1030	C
1	AA	1032(A)	G
1	AA	1033	G
1	AA	1036	G
1	AA	1038	C
1	AA	1040	U
1	AA	1042	G
1	AA	1045	C
1	AA	1054	C
1	AA	1055	A
1	AA	1064	G
1	AA	1065	U
1	AA	1066	C
1	AA	1081	G
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A

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Mol	Chain	Res	Type
1	AA	1122	U
1	AA	1124	G
1	AA	1125	U
1	AA	1126	U
1	AA	1127	G
1	AA	1129	C
1	AA	1131	G
1	AA	1132	C
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1143	G
1	AA	1144	G
1	AA	1146	A
1	AA	1152	A
1	AA	1154	G
1	AA	1157	A
1	AA	1158	C
1	AA	1159	U
1	AA	1160	G
1	AA	1169	A
1	AA	1178	G
1	AA	1181	G
1	AA	1182	G
1	AA	1183	A
1	AA	1189	C
1	AA	1196	U
1	AA	1197	G
1	AA	1201	A
1	AA	1212	U
1	AA	1213	A
1	AA	1225	A
1	AA	1227	A
1	AA	1238	A
1	AA	1240	U
1	AA	1246	C
1	AA	1256	A
1	AA	1257	U
1	AA	1258	G
1	AA	1260	C

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Mol	Chain	Res	Type
1	AA	1270	C
1	AA	1272	G
1	AA	1274	G
1	AA	1278	U
1	AA	1279	A
1	AA	1280	A
1	AA	1281	U
1	AA	1282	C
1	AA	1286	A
1	AA	1287	A
1	AA	1290	G
1	AA	1291	G
1	AA	1299	A
1	AA	1300	G
1	AA	1302	U
1	AA	1303	C
1	AA	1305	G
1	AA	1313	U
1	AA	1317	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1335	C
1	AA	1336	C
1	AA	1337	G
1	AA	1346	A
1	AA	1347	G
1	AA	1350	A
1	AA	1353	G
1	AA	1363	A
1	AA	1370	G
1	AA	1376	U
1	AA	1377	A
1	AA	1378	C
1	AA	1379	G
1	AA	1397	C
1	AA	1419	G
1	AA	1442	G
1	AA	1443	G
1	AA	1446	A
1	AA	1451	A
1	AA	1452	C

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Mol	Chain	Res	Type
1	AA	1453	G
1	AA	1454	G
1	AA	1487	G
1	AA	1492	A
1	AA	1493	A
1	AA	1494	G
1	AA	1497	G
1	AA	1499	A
1	AA	1502	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G
1	AA	1529	G
1	AA	1530	G
1	AA	1531	A
1	AA	1533	C
22	AC	2	G
22	AC	7	G
22	AC	9	G
22	AC	19	G
22	AC	31	G
22	AC	34	C
22	AC	47	U
22	AC	48	C
22	AD	2	G
22	AD	7	G
22	AD	8	U
22	AD	9	G
22	AD	14	A
22	AD	17	C
22	AD	17(A)	C
22	AD	18	G
22	AD	19	G
22	AD	20	U
22	AD	21	A
22	AD	34	C
22	AD	47	U
22	AD	48	C
22	AD	49	G
22	AD	56	C
22	AD	59	A

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Mol	Chain	Res	Type
22	AD	60	U
22	AD	61	C
22	AD	70	G
22	AD	71	C
22	AD	72	A
22	AD	73	A
22	AD	76	A
23	A1	19	U
24	BA	2	G
24	BA	5	A
24	BA	10	G
24	BA	12	U
24	BA	15	G
24	BA	23	G
24	BA	34	C
24	BA	35	G
24	BA	46	C
24	BA	51	G
24	BA	61	G
24	BA	63	U
24	BA	71	A
24	BA	74	A
24	BA	75	G
24	BA	85	G
24	BA	99	U
24	BA	101	G
24	BA	102	G
24	BA	118	A
24	BA	119	A
24	BA	120	U
24	BA	131	G
24	BA	155	C
24	BA	163	U
24	BA	164	U
24	BA	165	U
24	BA	181	A
24	BA	196	A
24	BA	199	A
24	BA	214	G
24	BA	215	G
24	BA	216	A
24	BA	222	A

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Mol	Chain	Res	Type
24	BA	223	A
24	BA	227	A
24	BA	228	A
24	BA	229	A
24	BA	230	U
24	BA	233	A
24	BA	248	G
24	BA	252	G
24	BA	261	G
24	BA	269	U
24	BA	270(K)	C
24	BA	270(L)	U
24	BA	270(M)	U
24	BA	270(N)	G
24	BA	270(O)	U
24	BA	271(C)	U
24	BA	271	G
24	BA	274	G
24	BA	277	C
24	BA	278	A
24	BA	279	C
24	BA	299	A
24	BA	311	A
24	BA	315	G
24	BA	317	G
24	BA	323	G
24	BA	324	A
24	BA	329	G
24	BA	330	A
24	BA	331	A
24	BA	333	G
24	BA	345	A
24	BA	352	G
24	BA	353	G
24	BA	363	G
24	BA	363(D)	G
24	BA	364	C
24	BA	372	G
24	BA	386	G
24	BA	396	G
24	BA	405	U
24	BA	411	G

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Mol	Chain	Res	Type
24	BA	428	A
24	BA	443	A
24	BA	444	C
24	BA	448	U
24	BA	454	A
24	BA	455	C
24	BA	457	A
24	BA	458	G
24	BA	470	A
24	BA	471	A
24	BA	481	G
24	BA	482	A
24	BA	491	G
24	BA	504	U
24	BA	505	A
24	BA	508	G
24	BA	509	C
24	BA	510	C
24	BA	528	A
24	BA	529	A
24	BA	530	G
24	BA	531	C
24	BA	532	A
24	BA	533	G
24	BA	537	C
24	BA	539	G
24	BA	540	G
24	BA	546	C
24	BA	549	G
24	BA	563	G
24	BA	573	G
24	BA	575	A
24	BA	586	A
24	BA	603	A
24	BA	607	U
24	BA	614	U
24	BA	615	G
24	BA	617	G
24	BA	621	A
24	BA	622	G
24	BA	627	A
24	BA	631	A

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Mol	Chain	Res	Type
24	BA	634	C
24	BA	637	A
24	BA	644	A
24	BA	645	C
24	BA	646	A
24	BA	654	A
24	BA	654(A)	A
24	BA	654(B)	C
24	BA	654(D)	G
24	BA	654(E)	C
24	BA	654(G)	C
24	BA	654(H)	G
24	BA	654(I)	C
24	BA	654(K)	C
24	BA	654(O)	G
24	BA	654(T)	A
24	BA	686	G
24	BA	722	A
24	BA	730	C
24	BA	747	U
24	BA	753	C
24	BA	765	G
24	BA	776	G
24	BA	777	A
24	BA	779	U
24	BA	782	A
24	BA	784	A
24	BA	785	G
24	BA	790	C
24	BA	791	C
24	BA	792	G
24	BA	805	G
24	BA	812	C
24	BA	819	A
24	BA	827	U
24	BA	828	U
24	BA	847	U
24	BA	859	G
24	BA	866	A
24	BA	877	U
24	BA	879	G
24	BA	880	G

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Mol	Chain	Res	Type
24	BA	881	G
24	BA	882	G
24	BA	883	G
24	BA	885	C
24	BA	886	C
24	BA	887	A
24	BA	888	C
24	BA	890	A
24	BA	892	G
24	BA	893	C
24	BA	894	C
24	BA	895	U
24	BA	897	C
24	BA	898	C
24	BA	900	A
24	BA	901	A
24	BA	907	U
24	BA	910	A
24	BA	917	A
24	BA	932	G
24	BA	938	G
24	BA	941	A
24	BA	946	G
24	BA	959	A
24	BA	961	C
24	BA	968	G
24	BA	974	G
24	BA	974(A)	C
24	BA	975	G
24	BA	983	A
24	BA	989	G
24	BA	996	A
24	BA	1003	G
24	BA	1005	C
24	BA	1011	G
24	BA	1012	U
24	BA	1013	C
24	BA	1015	G
24	BA	1022	G
24	BA	1023	U
24	BA	1025	G
24	BA	1026	U

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Mol	Chain	Res	Type
24	BA	1027	A
24	BA	1033	U
24	BA	1045	A
24	BA	1046	A
24	BA	1047	G
24	BA	1050	A
24	BA	1055	G
24	BA	1056	G
24	BA	1057	A
24	BA	1059	G
24	BA	1060	U
24	BA	1061	U
24	BA	1062	G
24	BA	1066	U
24	BA	1067	A
24	BA	1068	G
24	BA	1070	A
24	BA	1071	G
24	BA	1073	A
24	BA	1076	C
24	BA	1077	A
24	BA	1078	U
24	BA	1079	C
24	BA	1083	U
24	BA	1085	A
24	BA	1086	A
24	BA	1087	G
24	BA	1088	A
24	BA	1090	U
24	BA	1092	C
24	BA	1095	A
24	BA	1097	U
24	BA	1104	C
24	BA	1105	U
24	BA	1111	A
24	BA	1122	G
24	BA	1126	A
24	BA	1129	A
24	BA	1130	U
24	BA	1131	G
24	BA	1135	C
24	BA	1136	G

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Mol	Chain	Res	Type
24	BA	1139	G
24	BA	1142	U
24	BA	1142(A)	A
24	BA	1148	A
24	BA	1149	G
24	BA	1151	G
24	BA	1155	A
24	BA	1156	A
24	BA	1173	G
24	BA	1174	A
24	BA	1175	U
24	BA	1176	G
24	BA	1177	A
24	BA	1178	C
24	BA	1179	C
24	BA	1180	C
24	BA	1195	G
24	BA	1204	A
24	BA	1205	U
24	BA	1210	A
24	BA	1211	U
24	BA	1218	C
24	BA	1220	A
24	BA	1229(A)	G
24	BA	1236	G
24	BA	1244	G
24	BA	1253	A
24	BA	1256	G
24	BA	1265	A
24	BA	1271	G
24	BA	1272	A
24	BA	1273	U
24	BA	1298	C
24	BA	1300	U
24	BA	1301	A
24	BA	1313	U
24	BA	1314	C
24	BA	1329	U
24	BA	1338	G
24	BA	1344	G
24	BA	1349	A
24	BA	1359	A

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Mol	Chain	Res	Type
24	BA	1360	A
24	BA	1365	A
24	BA	1368	G
24	BA	1380	G
24	BA	1385	G
24	BA	1395	A
24	BA	1402	C
24	BA	1411	C
24	BA	1416	G
24	BA	1420	U
24	BA	1421	G
24	BA	1428	C
24	BA	1444(A)	A
24	BA	1449	A
24	BA	1449(A)	G
24	BA	1453	A
24	BA	1455	G
24	BA	1459	G
24	BA	1460	A
24	BA	1461	G
24	BA	1467	C
24	BA	1471	A
24	BA	1483	G
24	BA	1493	C
24	BA	1497	U
24	BA	1505	C
24	BA	1507	A
24	BA	1509	C
24	BA	1510	A
24	BA	1511	A
24	BA	1520	U
24	BA	1522	G
24	BA	1534	G
24	BA	1535	U
24	BA	1536	A
24	BA	1537	C
24	BA	1543	A
24	BA	1544	C
24	BA	1545	A
24	BA	1554	A
24	BA	1558	A
24	BA	1559	G

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Mol	Chain	Res	Type
24	BA	1560	G
24	BA	1566	A
24	BA	1569	A
24	BA	1578	U
24	BA	1580	A
24	BA	1585	C
24	BA	1586	A
24	BA	1608	A
24	BA	1609	A
24	BA	1616	A
24	BA	1617	C
24	BA	1618	A
24	BA	1640	C
24	BA	1648	C
24	BA	1654	A
24	BA	1674	G
24	BA	1675	C
24	BA	1695	G
24	BA	1727	U
24	BA	1728	G
24	BA	1729	A
24	BA	1730	U
24	BA	1731	G
24	BA	1733	G
24	BA	1735	C
24	BA	1742	C
24	BA	1743	G
24	BA	1750	G
24	BA	1756	G
24	BA	1762	A
24	BA	1763	G
24	BA	1764	G
24	BA	1773	A
24	BA	1791	A
24	BA	1799	G
24	BA	1800	C
24	BA	1802	A
24	BA	1816	G
24	BA	1820	U
24	BA	1829	A
24	BA	1835	G
24	BA	1836	C

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Mol	Chain	Res	Type
24	BA	1839	G
24	BA	1847	A
24	BA	1858	G
24	BA	1869	G
24	BA	1870	C
24	BA	1878	G
24	BA	1882	C
24	BA	1888	G
24	BA	1900	A
24	BA	1906	G
24	BA	1912	A
24	BA	1913	A
24	BA	1914	C
24	BA	1919	A
24	BA	1929	G
24	BA	1930	G
24	BA	1931	U
24	BA	1936	A
24	BA	1938	A
24	BA	1955	U
24	BA	1963	U
24	BA	1967	C
24	BA	1969	A
24	BA	1970	A
24	BA	1971	A
24	BA	1972	A
24	BA	1982	C
24	BA	1993	U
24	BA	2023	G
24	BA	2030	A
24	BA	2031	A
24	BA	2032	G
24	BA	2033	A
24	BA	2039	C
24	BA	2043	C
24	BA	2051	A
24	BA	2052	G
24	BA	2054	A
24	BA	2055	C
24	BA	2056	G
24	BA	2060	A
24	BA	2061	G

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Mol	Chain	Res	Type
24	BA	2062	A
24	BA	2069	G
24	BA	2096	U
24	BA	2099	U
24	BA	2110	G
24	BA	2111	C
24	BA	2112	G
24	BA	2113	U
24	BA	2114	A
24	BA	2115	G
24	BA	2117	A
24	BA	2118	U
24	BA	2119	A
24	BA	2120	G
24	BA	2126	A
24	BA	2128	C
24	BA	2129	C
24	BA	2131	G
24	BA	2132	U
24	BA	2133	G
24	BA	2135	A
24	BA	2137	C
24	BA	2139	C
24	BA	2146	C
24	BA	2148	G
24	BA	2151	G
24	BA	2157	G
24	BA	2158	A
24	BA	2160	G
24	BA	2165	G
24	BA	2166	G
24	BA	2168	G
24	BA	2169	A
24	BA	2171	A
24	BA	2173	A
24	BA	2174	C
24	BA	2176	A
24	BA	2178	C
24	BA	2189	U
24	BA	2190	G
24	BA	2192	G
24	BA	2198	A

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Mol	Chain	Res	Type
24	BA	2199	A
24	BA	2210	G
24	BA	2211	G
24	BA	2212	A
24	BA	2213	U
24	BA	2215	G
24	BA	2225	A
24	BA	2238	G
24	BA	2239	G
24	BA	2261	C
24	BA	2264	C
24	BA	2267	A
24	BA	2275	C
24	BA	2283	C
24	BA	2287	A
24	BA	2288	A
24	BA	2305	A
24	BA	2307	G
24	BA	2308	G
24	BA	2309	A
24	BA	2310	A
24	BA	2311	A
24	BA	2319	G
24	BA	2320	A
24	BA	2321	G
24	BA	2325	G
24	BA	2327	A
24	BA	2334	G
24	BA	2336	A
24	BA	2342	C
24	BA	2343	C
24	BA	2346	A
24	BA	2347	C
24	BA	2350	C
24	BA	2377	A
24	BA	2383	G
24	BA	2385	C
24	BA	2392	A
24	BA	2393	A
24	BA	2400	G
24	BA	2402	C
24	BA	2403	C

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Mol	Chain	Res	Type
24	BA	2405	G
24	BA	2406	U
24	BA	2410	G
24	BA	2414	G
24	BA	2422	A
24	BA	2423	U
24	BA	2424	C
24	BA	2425	A
24	BA	2428	G
24	BA	2429	G
24	BA	2430	A
24	BA	2434	A
24	BA	2435	A
24	BA	2439	A
24	BA	2440	C
24	BA	2441	C
24	BA	2448	A
24	BA	2469	A
24	BA	2474	C
24	BA	2476	A
24	BA	2478	A
24	BA	2480	C
24	BA	2482	G
24	BA	2484	G
24	BA	2498	C
24	BA	2502	G
24	BA	2505	G
24	BA	2513	G
24	BA	2518	A
24	BA	2529	G
24	BA	2554	U
24	BA	2567	G
24	BA	2572	A
24	BA	2573	C
24	BA	2602	A
24	BA	2609	U
24	BA	2611	U
24	BA	2612	C
24	BA	2614	A
24	BA	2615	U
24	BA	2629	A
24	BA	2636	U

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Mol	Chain	Res	Type
24	BA	2654	A
24	BA	2665	A
24	BA	2673	G
24	BA	2682	U
24	BA	2689	U
24	BA	2690	C
24	BA	2691	C
24	BA	2702	U
24	BA	2707	G
24	BA	2712(A)	A
24	BA	2713	A
24	BA	2714	G
24	BA	2726	U
24	BA	2733	A
24	BA	2752	C
24	BA	2757	A
24	BA	2758	A
24	BA	2764	A
24	BA	2765	A
24	BA	2766	G
24	BA	2778	A
24	BA	2779	U
24	BA	2789	C
24	BA	2790	A
24	BA	2791	C
24	BA	2793	G
24	BA	2794	C
24	BA	2795	G
24	BA	2797	U
24	BA	2798	C
24	BA	2799	A
24	BA	2801	A
24	BA	2802	G
24	BA	2803	C
24	BA	2807	G
24	BA	2808	U
24	BA	2818	G
24	BA	2820	A
24	BA	2821	A
24	BA	2832	U
24	BA	2833	G
24	BA	2834	G

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Mol	Chain	Res	Type
24	BA	2835	A
24	BA	2836	U
24	BA	2850	A
24	BA	2851	A
24	BA	2858	C
24	BA	2872	G
24	BA	2880	C
24	BA	2891	G
24	BA	2892	A
24	BA	2893	G
24	BA	2894	G
24	BA	2900	A
24	BA	2901	C
25	BB	7	G
25	BB	13	A
25	BB	15	A
25	BB	16	G
25	BB	24	G
25	BB	32	C
25	BB	40	U
25	BB	41	U
25	BB	42	C
25	BB	43	C
25	BB	45	A
25	BB	52	A
25	BB	53	A
25	BB	56	G
25	BB	63	G
25	BB	65	C
25	BB	73	A
25	BB	74	U
25	BB	75	G
25	BB	77	U
25	BB	81	G
25	BB	82	G
25	BB	84	C
25	BB	89	G
25	BB	105	G
25	BB	109	G
25	BB	118	G
1	CA	9	G
1	CA	22	G

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Mol	Chain	Res	Type
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	51	A
1	CA	66	G
1	CA	76	G
1	CA	78	G
1	CA	81	G
1	CA	84	U
1	CA	85	U
1	CA	86	U
1	CA	87	A
1	CA	90	C
1	CA	91	C
1	CA	92	G
1	CA	95	G
1	CA	101	A
1	CA	108	G
1	CA	116	A
1	CA	121	C
1	CA	131	C
1	CA	144	G
1	CA	163	C
1	CA	173	U
1	CA	174	C
1	CA	182	U
1	CA	186	C
1	CA	188	U
1	CA	189	U
1	CA	190	G
1	CA	191(C)	G
1	CA	191(D)	U
1	CA	195	A
1	CA	197	A
1	CA	198	G
1	CA	209	U
1	CA	210	U
1	CA	231	G
1	CA	244	U
1	CA	245	C
1	CA	247	G

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Mol	Chain	Res	Type
1	CA	251	G
1	CA	266	G
1	CA	267	C
1	CA	279	A
1	CA	281	G
1	CA	289	G
1	CA	298	A
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	332	G
1	CA	340	U
1	CA	345	C
1	CA	346	G
1	CA	347	G
1	CA	349	A
1	CA	350	G
1	CA	351	G
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	367	U
1	CA	372	C
1	CA	373	A
1	CA	381	C
1	CA	384	G
1	CA	397	A
1	CA	398	C
1	CA	406	G
1	CA	409	G
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	418	C
1	CA	421	U
1	CA	422	C
1	CA	423	G
1	CA	429	U
1	CA	439	A
1	CA	452	A
1	CA	466	C

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Mol	Chain	Res	Type
1	CA	467	G
1	CA	483	C
1	CA	484	G
1	CA	485	G
1	CA	486	U
1	CA	495	A
1	CA	496	A
1	CA	497	U
1	CA	505	G
1	CA	509	A
1	CA	510	A
1	CA	511	C
1	CA	518	C
1	CA	521	G
1	CA	527	G
1	CA	530	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	535	A
1	CA	536	C
1	CA	547	A
1	CA	550	G
1	CA	559	A
1	CA	561	U
1	CA	563	A
1	CA	572	A
1	CA	573	A
1	CA	576	G
1	CA	577	G
1	CA	596	C
1	CA	614	A
1	CA	618	C
1	CA	630	G
1	CA	632	A
1	CA	633	G
1	CA	653	A
1	CA	661	G
1	CA	665	A
1	CA	671	G
1	CA	688	G
1	CA	693	G

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Mol	Chain	Res	Type
1	CA	704	A
1	CA	724	G
1	CA	731	G
1	CA	749	C
1	CA	755	G
1	CA	777	A
1	CA	787	A
1	CA	792	A
1	CA	793	U
1	CA	794	A
1	CA	796	C
1	CA	801	U
1	CA	802	A
1	CA	812	C
1	CA	813	U
1	CA	817	C
1	CA	819	A
1	CA	821	G
1	CA	828	A
1	CA	841	U
1	CA	842	C
1	CA	843	U
1	CA	848	C
1	CA	859	A
1	CA	874	G
1	CA	885	G
1	CA	889	A
1	CA	914	A
1	CA	919	A
1	CA	922	G
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	936	C
1	CA	958	A
1	CA	960	U
1	CA	961	U
1	CA	966	G
1	CA	968	A
1	CA	969	A
1	CA	971	G

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Mol	Chain	Res	Type
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	978	A
1	CA	980	C
1	CA	981	U
1	CA	983	A
1	CA	989	C
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	994	A
1	CA	1002	G
1	CA	1004	A
1	CA	1006	C
1	CA	1007	C
1	CA	1009	G
1	CA	1021	G
1	CA	1024	G
1	CA	1025	U
1	CA	1028	C
1	CA	1028(A)	C
1	CA	1029	G
1	CA	1030	C
1	CA	1031	G
1	CA	1032(A)	G
1	CA	1032(B)	G
1	CA	1033	G
1	CA	1036	G
1	CA	1038	C
1	CA	1040	U
1	CA	1042	G
1	CA	1052	U
1	CA	1054	C
1	CA	1055	A
1	CA	1066	C
1	CA	1081	G
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1117	G
1	CA	1124	G

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Mol	Chain	Res	Type
1	CA	1125	U
1	CA	1126	U
1	CA	1127	G
1	CA	1129	C
1	CA	1130	A
1	CA	1131	G
1	CA	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1140	C
1	CA	1145	C
1	CA	1146	A
1	CA	1147	C
1	CA	1148	U
1	CA	1154	G
1	CA	1157	A
1	CA	1158	C
1	CA	1159	U
1	CA	1171	G
1	CA	1179	A
1	CA	1180	A
1	CA	1181	G
1	CA	1182	G
1	CA	1183	A
1	CA	1187	G
1	CA	1190	G
1	CA	1196	U
1	CA	1197	G
1	CA	1201	A
1	CA	1202	G
1	CA	1212	U
1	CA	1213	A
1	CA	1214	C
1	CA	1225	A
1	CA	1227	A
1	CA	1228	C
1	CA	1238	A
1	CA	1253	G
1	CA	1257	U
1	CA	1258	G
1	CA	1260	C

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Mol	Chain	Res	Type
1	CA	1267	C
1	CA	1269	A
1	CA	1270	C
1	CA	1275	A
1	CA	1278	U
1	CA	1280	A
1	CA	1286	A
1	CA	1287	A
1	CA	1288	A
1	CA	1290	G
1	CA	1291	G
1	CA	1297	C
1	CA	1298	C
1	CA	1299	A
1	CA	1300	G
1	CA	1301	U
1	CA	1303	C
1	CA	1305	G
1	CA	1312	G
1	CA	1317	C
1	CA	1319	A
1	CA	1322	C
1	CA	1323	G
1	CA	1324	A
1	CA	1329	A
1	CA	1331	G
1	CA	1346	A
1	CA	1347	G
1	CA	1363	A
1	CA	1364	U
1	CA	1370	G
1	CA	1378	C
1	CA	1379	G
1	CA	1397	C
1	CA	1419	G
1	CA	1442	G
1	CA	1443	G
1	CA	1446	A
1	CA	1449	C
1	CA	1450	U
1	CA	1452	C
1	CA	1453	G

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Mol	Chain	Res	Type
1	CA	1454	G
1	CA	1487	G
1	CA	1492	A
1	CA	1493	A
1	CA	1497	G
1	CA	1499	A
1	CA	1502	A
1	CA	1503	A
1	CA	1504	G
1	CA	1506	U
1	CA	1517	G
1	CA	1519	A
1	CA	1520	G
1	CA	1529	G
1	CA	1530	G
1	CA	1531	A
22	CC	2	G
22	CC	8	U
22	CC	9	G
22	CC	18	G
22	CC	20	U
22	CC	21	A
22	CC	22	G
22	CC	46	G
22	CC	47	U
22	CC	49	G
22	CC	61	C
22	CC	76	A
22	CD	2	G
22	CD	5	G
22	CD	7	G
22	CD	8	U
22	CD	9	G
22	CD	11	A
22	CD	13	C
22	CD	14	A
22	CD	15	G
22	CD	16	C
22	CD	17	C
22	CD	17(A)	C
22	CD	18	G
22	CD	19	G

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Mol	Chain	Res	Type
22	CD	20	U
22	CD	21	A
22	CD	22	G
22	CD	23	C
22	CD	24	U
22	CD	31	G
22	CD	36	U
22	CD	40	C
22	CD	44	A
22	CD	45	G
22	CD	46	G
22	CD	47	U
22	CD	48	C
22	CD	49	G
22	CD	51	C
22	CD	55	U
22	CD	56	C
22	CD	57	A
22	CD	58	A
22	CD	59	A
22	CD	60	U
22	CD	61	C
22	CD	62	C
22	CD	63	G
22	CD	64	G
22	CD	66	C
22	CD	69	C
22	CD	70	G
22	CD	72	A
22	CD	73	A
22	CD	74	C
23	C1	19	U
24	DA	10	G
24	DA	14	A
24	DA	15	G
24	DA	34	C
24	DA	36	G
24	DA	46	C
24	DA	49	A
24	DA	50	U
24	DA	51	G
24	DA	58	G

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Mol	Chain	Res	Type
24	DA	60	G
24	DA	71	A
24	DA	72	U
24	DA	74	A
24	DA	75	G
24	DA	90	U
24	DA	91	A
24	DA	93	C
24	DA	95	G
24	DA	102	G
24	DA	118	A
24	DA	120	U
24	DA	129	C
24	DA	140	A
24	DA	149	A
24	DA	153	C
24	DA	154	G
24	DA	174	C
24	DA	175	G
24	DA	181	A
24	DA	182	A
24	DA	196	A
24	DA	199	A
24	DA	205	G
24	DA	206	U
24	DA	214	G
24	DA	215	G
24	DA	216	A
24	DA	221	A
24	DA	222	A
24	DA	225	A
24	DA	229	A
24	DA	233	A
24	DA	241	A
24	DA	248	G
24	DA	250	G
24	DA	252	G
24	DA	270(G)	C
24	DA	270(K)	C
24	DA	270(L)	U
24	DA	270(M)	U
24	DA	270(O)	U

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Mol	Chain	Res	Type
24	DA	270(Q)	C
24	DA	271(C)	U
24	DA	271	G
24	DA	273(D)	C
24	DA	274	G
24	DA	275	G
24	DA	276	A
24	DA	279	C
24	DA	289	A
24	DA	311	A
24	DA	324	A
24	DA	329	G
24	DA	330	A
24	DA	333	G
24	DA	352	G
24	DA	353	G
24	DA	355	G
24	DA	358	U
24	DA	362	U
24	DA	363	G
24	DA	363(B)	G
24	DA	363(E)	U
24	DA	363(F)	A
24	DA	372	G
24	DA	385	C
24	DA	386	G
24	DA	396	G
24	DA	405	U
24	DA	406	G
24	DA	407	G
24	DA	411	G
24	DA	428	A
24	DA	443	A
24	DA	444	C
24	DA	448	U
24	DA	455	C
24	DA	457	A
24	DA	464	U
24	DA	470	A
24	DA	480	A
24	DA	481	G
24	DA	489	G

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Mol	Chain	Res	Type
24	DA	504	U
24	DA	505	A
24	DA	508	G
24	DA	509	C
24	DA	512	G
24	DA	527	C
24	DA	529	A
24	DA	530	G
24	DA	531	C
24	DA	532	A
24	DA	533	G
24	DA	537	C
24	DA	547	A
24	DA	549	G
24	DA	556	G
24	DA	563	G
24	DA	569	U
24	DA	573	G
24	DA	575	A
24	DA	586	A
24	DA	603	A
24	DA	607	U
24	DA	613	U
24	DA	614	U
24	DA	615	G
24	DA	617	G
24	DA	621	A
24	DA	622	G
24	DA	627	A
24	DA	634	C
24	DA	637	A
24	DA	645	C
24	DA	646	A
24	DA	651	G
24	DA	654	A
24	DA	654(A)	A
24	DA	654(G)	C
24	DA	654(H)	G
24	DA	654(I)	C
24	DA	654(K)	C
24	DA	654(L)	G
24	DA	654(N)	G

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Mol	Chain	Res	Type
24	DA	654(Q)	C
24	DA	654(R)	C
24	DA	654(T)	A
24	DA	669	G
24	DA	670	A
24	DA	686	G
24	DA	708	C
24	DA	717	G
24	DA	726	G
24	DA	730	C
24	DA	739	G
24	DA	748	G
24	DA	753	C
24	DA	758	C
24	DA	776	G
24	DA	779	U
24	DA	782	A
24	DA	783	A
24	DA	784	A
24	DA	785	G
24	DA	790	C
24	DA	792	G
24	DA	793	A
24	DA	800	A
24	DA	805	G
24	DA	812	C
24	DA	819	A
24	DA	827	U
24	DA	828	U
24	DA	832	G
24	DA	846	C
24	DA	857	C
24	DA	859	G
24	DA	866	A
24	DA	869	G
24	DA	878	A
24	DA	882	G
24	DA	883	G
24	DA	885	C
24	DA	888	C
24	DA	889	C
24	DA	890	A

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Mol	Chain	Res	Type
24	DA	892	G
24	DA	893	C
24	DA	894	C
24	DA	895	U
24	DA	896	A
24	DA	897	C
24	DA	898	C
24	DA	899	A
24	DA	901	A
24	DA	905	U
24	DA	906	G
24	DA	907	U
24	DA	910	A
24	DA	914	C
24	DA	915	C
24	DA	917	A
24	DA	926	A
24	DA	932	G
24	DA	938	G
24	DA	941	A
24	DA	945	A
24	DA	946	G
24	DA	959	A
24	DA	961	C
24	DA	974	G
24	DA	980	A
24	DA	983	A
24	DA	990	A
24	DA	996	A
24	DA	999	U
24	DA	1005	C
24	DA	1011	G
24	DA	1012	U
24	DA	1013	C
24	DA	1015	G
24	DA	1016	G
24	DA	1020	A
24	DA	1022	G
24	DA	1023	U
24	DA	1024	G
24	DA	1025	G
24	DA	1026	U

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Mol	Chain	Res	Type
24	DA	1027	A
24	DA	1033	U
24	DA	1039	G
24	DA	1045	A
24	DA	1046	A
24	DA	1047	G
24	DA	1048	A
24	DA	1051	G
24	DA	1052	C
24	DA	1053	C
24	DA	1054	A
24	DA	1057	A
24	DA	1059	G
24	DA	1061	U
24	DA	1062	G
24	DA	1063	G
24	DA	1064	C
24	DA	1065	U
24	DA	1066	U
24	DA	1067	A
24	DA	1068	G
24	DA	1069	A
24	DA	1070	A
24	DA	1071	G
24	DA	1073	A
24	DA	1076	C
24	DA	1079	C
24	DA	1082	U
24	DA	1083	U
24	DA	1086	A
24	DA	1087	G
24	DA	1088	A
24	DA	1089	G
24	DA	1091	G
24	DA	1092	C
24	DA	1094	U
24	DA	1095	A
24	DA	1096	A
24	DA	1098	A
24	DA	1099	G
24	DA	1105	U
24	DA	1112	G

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Mol	Chain	Res	Type
24	DA	1122	G
24	DA	1126	A
24	DA	1129	A
24	DA	1130	U
24	DA	1135	C
24	DA	1136	G
24	DA	1142(A)	A
24	DA	1143	A
24	DA	1149	G
24	DA	1155	A
24	DA	1160	G
24	DA	1170	G
24	DA	1173	G
24	DA	1174	A
24	DA	1175	U
24	DA	1176	G
24	DA	1177	A
24	DA	1178	C
24	DA	1180	C
24	DA	1204	A
24	DA	1205	U
24	DA	1220	A
24	DA	1236	G
24	DA	1247	A
24	DA	1253	A
24	DA	1255	U
24	DA	1256	G
24	DA	1269	A
24	DA	1271	G
24	DA	1272	A
24	DA	1273	U
24	DA	1286	A
24	DA	1300	U
24	DA	1301	A
24	DA	1314	C
24	DA	1325	G
24	DA	1329	U
24	DA	1349	A
24	DA	1352	U
24	DA	1359	A
24	DA	1360	A
24	DA	1365	A

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Mol	Chain	Res	Type
24	DA	1368	G
24	DA	1379	A
24	DA	1380	G
24	DA	1384	A
24	DA	1385	G
24	DA	1386	C
24	DA	1389	G
24	DA	1392	A
24	DA	1393	A
24	DA	1395	A
24	DA	1403	C
24	DA	1407	C
24	DA	1416	G
24	DA	1419	A
24	DA	1420	U
24	DA	1421	G
24	DA	1428	C
24	DA	1437	C
24	DA	1444(A)	A
24	DA	1449	A
24	DA	1449(A)	G
24	DA	1451	C
24	DA	1455	G
24	DA	1458	C
24	DA	1460	A
24	DA	1461	G
24	DA	1467	C
24	DA	1471	A
24	DA	1475	G
24	DA	1483	G
24	DA	1488	G
24	DA	1490	A
24	DA	1493	C
24	DA	1497	U
24	DA	1509	C
24	DA	1510	A
24	DA	1522	G
24	DA	1534	G
24	DA	1535	U
24	DA	1536	A
24	DA	1537	C
24	DA	1543	A

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Mol	Chain	Res	Type
24	DA	1544	C
24	DA	1545	A
24	DA	1558	A
24	DA	1559	G
24	DA	1560	G
24	DA	1569	A
24	DA	1578	U
24	DA	1580	A
24	DA	1585	C
24	DA	1586	A
24	DA	1588	C
24	DA	1593	G
24	DA	1598	C
24	DA	1608	A
24	DA	1610	A
24	DA	1616	A
24	DA	1618	A
24	DA	1640	C
24	DA	1648	C
24	DA	1654	A
24	DA	1674	G
24	DA	1675	C
24	DA	1696	G
24	DA	1700	A
24	DA	1701	A
24	DA	1725	G
24	DA	1728	G
24	DA	1729	A
24	DA	1730	U
24	DA	1731	G
24	DA	1742	C
24	DA	1743	G
24	DA	1756	G
24	DA	1758	G
24	DA	1762	A
24	DA	1763	G
24	DA	1764	G
24	DA	1773	A
24	DA	1780	A
24	DA	1782	C
24	DA	1791	A
24	DA	1800	C

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Mol	Chain	Res	Type
24	DA	1801	G
24	DA	1802	A
24	DA	1816	G
24	DA	1820	U
24	DA	1829	A
24	DA	1834	U
24	DA	1835	G
24	DA	1839	G
24	DA	1847	A
24	DA	1848	A
24	DA	1858	G
24	DA	1869	G
24	DA	1871	A
24	DA	1878	G
24	DA	1888	G
24	DA	1889	A
24	DA	1900	A
24	DA	1906	G
24	DA	1912	A
24	DA	1913	A
24	DA	1914	C
24	DA	1917	U
24	DA	1929	G
24	DA	1930	G
24	DA	1931	U
24	DA	1936	A
24	DA	1952	A
24	DA	1955	U
24	DA	1956	U
24	DA	1963	U
24	DA	1965	C
24	DA	1967	C
24	DA	1970	A
24	DA	1971	A
24	DA	1972	A
24	DA	1992	G
24	DA	1993	U
24	DA	1994	C
24	DA	2020	A
24	DA	2023	G
24	DA	2031	A
24	DA	2032	G

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Mol	Chain	Res	Type
24	DA	2033	A
24	DA	2036	C
24	DA	2043	C
24	DA	2049	G
24	DA	2055	C
24	DA	2056	G
24	DA	2059	A
24	DA	2060	A
24	DA	2061	G
24	DA	2062	A
24	DA	2069	G
24	DA	2082	A
24	DA	2093	G
24	DA	2099	U
24	DA	2100	G
24	DA	2108	C
24	DA	2110	G
24	DA	2111	C
24	DA	2112	G
24	DA	2113	U
24	DA	2114	A
24	DA	2115	G
24	DA	2116	G
24	DA	2117	A
24	DA	2118	U
24	DA	2119	A
24	DA	2120	G
24	DA	2123	G
24	DA	2124	G
24	DA	2125	G
24	DA	2126	A
24	DA	2127	G
24	DA	2128	C
24	DA	2129	C
24	DA	2130	U
24	DA	2131	G
24	DA	2132	U
24	DA	2133	G
24	DA	2135	A
24	DA	2136	C
24	DA	2137	C
24	DA	2139	C

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Mol	Chain	Res	Type
24	DA	2145	C
24	DA	2146	C
24	DA	2147	G
24	DA	2148	G
24	DA	2156	G
24	DA	2158	A
24	DA	2159	G
24	DA	2160	G
24	DA	2162	G
24	DA	2164	C
24	DA	2165	G
24	DA	2166	G
24	DA	2167	U
24	DA	2168	G
24	DA	2169	A
24	DA	2170	A
24	DA	2171	A
24	DA	2173	A
24	DA	2174	C
24	DA	2178	C
24	DA	2189	U
24	DA	2190	G
24	DA	2192	G
24	DA	2198	A
24	DA	2199	A
24	DA	2210	G
24	DA	2211	G
24	DA	2212	A
24	DA	2213	U
24	DA	2215	G
24	DA	2225	A
24	DA	2226	C
24	DA	2238	G
24	DA	2239	G
24	DA	2245	U
24	DA	2275	C
24	DA	2280	G
24	DA	2283	C
24	DA	2287	A
24	DA	2288	A
24	DA	2297	C
24	DA	2305	A

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Mol	Chain	Res	Type
24	DA	2307	G
24	DA	2308	G
24	DA	2309	A
24	DA	2321	G
24	DA	2325	G
24	DA	2334	G
24	DA	2335	A
24	DA	2336	A
24	DA	2342	C
24	DA	2345	G
24	DA	2346	A
24	DA	2347	C
24	DA	2350	C
24	DA	2354	G
24	DA	2383	G
24	DA	2385	C
24	DA	2392	A
24	DA	2394	C
24	DA	2401	U
24	DA	2402	C
24	DA	2403	C
24	DA	2406	U
24	DA	2410	G
24	DA	2411	A
24	DA	2420	C
24	DA	2424	C
24	DA	2425	A
24	DA	2428	G
24	DA	2429	G
24	DA	2430	A
24	DA	2434	A
24	DA	2435	A
24	DA	2439	A
24	DA	2440	C
24	DA	2441	C
24	DA	2445	G
24	DA	2448	A
24	DA	2468	G
24	DA	2469	A
24	DA	2475	C
24	DA	2476	A
24	DA	2477	C

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Mol	Chain	Res	Type
24	DA	2482	G
24	DA	2483	C
24	DA	2484	G
24	DA	2502	G
24	DA	2505	G
24	DA	2506	U
24	DA	2518	A
24	DA	2529	G
24	DA	2543	G
24	DA	2554	U
24	DA	2566	A
24	DA	2567	G
24	DA	2569	G
24	DA	2572	A
24	DA	2582	G
24	DA	2584	U
24	DA	2585	U
24	DA	2586	C
24	DA	2602	A
24	DA	2603	G
24	DA	2609	U
24	DA	2610	C
24	DA	2611	U
24	DA	2612	C
24	DA	2615	U
24	DA	2629	A
24	DA	2630	G
24	DA	2636	U
24	DA	2654	A
24	DA	2655	G
24	DA	2665	A
24	DA	2673	G
24	DA	2689	U
24	DA	2690	C
24	DA	2700	C
24	DA	2702	U
24	DA	2703	C
24	DA	2707	G
24	DA	2712(A)	A
24	DA	2713	A
24	DA	2714	G
24	DA	2726	U

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Mol	Chain	Res	Type
24	DA	2733	A
24	DA	2744	G
24	DA	2748	A
24	DA	2750	A
24	DA	2751	G
24	DA	2752	C
24	DA	2754	U
24	DA	2757	A
24	DA	2759	G
24	DA	2761	G
24	DA	2762	G
24	DA	2764	A
24	DA	2765	A
24	DA	2766	G
24	DA	2769	C
24	DA	2777	G
24	DA	2778	A
24	DA	2779	U
24	DA	2786	U
24	DA	2789	C
24	DA	2791	C
24	DA	2793	G
24	DA	2797	U
24	DA	2798	C
24	DA	2799	A
24	DA	2801	A
24	DA	2802	G
24	DA	2805	G
24	DA	2809	A
24	DA	2810	A
24	DA	2812	G
24	DA	2818	G
24	DA	2820	A
24	DA	2821	A
24	DA	2833	G
24	DA	2834	G
24	DA	2835	A
24	DA	2860	A
24	DA	2872	G
24	DA	2879	C
24	DA	2880	C
24	DA	2892	A

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Mol	Chain	Res	Type
24	DA	2893	G
24	DA	2894	G
24	DA	2896	C
24	DA	2897	U
24	DA	2902	C
25	DB	0	A
25	DB	3	C
25	DB	4	C
25	DB	7	G
25	DB	13	A
25	DB	15	A
25	DB	16	G
25	DB	22	U
25	DB	24	G
25	DB	25	A
25	DB	27	C
25	DB	30	C
25	DB	40	U
25	DB	41	U
25	DB	42	C
25	DB	44	G
25	DB	45	A
25	DB	53	A
25	DB	57	A
25	DB	67	G
25	DB	73	A
25	DB	75	G
25	DB	76	G
25	DB	81	G
25	DB	88	C
25	DB	89	G
25	DB	89(A)	A
25	DB	90	C
25	DB	101	A
25	DB	105	G
25	DB	109	G
25	DB	115	G

All (147) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	5	U

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Mol	Chain	Res	Type
1	AA	115	G
1	AA	181	G
1	AA	244	U
1	AA	266	G
1	AA	412	A
1	AA	428	G
1	AA	429	U
1	AA	484	G
1	AA	509	A
1	AA	560	U
1	AA	687	A
1	AA	703	G
1	AA	748	C
1	AA	812	C
1	AA	842	C
1	AA	913	A
1	AA	974	A
1	AA	992	U
1	AA	1025	U
1	AA	1027	C
1	AA	1065	U
1	AA	1256	A
1	AA	1285	A
1	AA	1498	U
1	AA	1504	G
22	AC	47	U
22	AD	7	G
24	BA	74	A
24	BA	196	A
24	BA	222	A
24	BA	229	A
24	BA	271(B)	G
24	BA	404	C
24	BA	654(S)	G
24	BA	752	A
24	BA	880	G
24	BA	897	C
24	BA	974(A)	C
24	BA	1022	G
24	BA	1026	U
24	BA	1060	U
24	BA	1069	A

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Mol	Chain	Res	Type
24	BA	1103	A
24	BA	1173	G
24	BA	1178	C
24	BA	1210	A
24	BA	1312	U
24	BA	1379	A
24	BA	1427	A
24	BA	1508	A
24	BA	1536	A
24	BA	1558	A
24	BA	1608	A
24	BA	1617	C
24	BA	1653	G
24	BA	1694	C
24	BA	1799	G
24	BA	1819	A
24	BA	1899	G
24	BA	1912	A
24	BA	1992	G
24	BA	2157	G
24	BA	2211	G
24	BA	2422	A
24	BA	2439	A
24	BA	2481	G
24	BA	2566	A
24	BA	2610	C
24	BA	2689	U
24	BA	2751	G
24	BA	2756	U
1	CA	89	U
1	CA	115	G
1	CA	197	A
1	CA	243	A
1	CA	244	U
1	CA	250	A
1	CA	266	G
1	CA	328	C
1	CA	345	C
1	CA	352	C
1	CA	412	A
1	CA	485	G
1	CA	509	A

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Mol	Chain	Res	Type
1	CA	560	U
1	CA	632	A
1	CA	687	A
1	CA	748	C
1	CA	812	C
1	CA	913	A
1	CA	992	U
1	CA	1126	U
1	CA	1128	C
1	CA	1196	U
1	CA	1285	A
1	CA	1297	C
1	CA	1300	G
1	CA	1346	A
1	CA	1442	G
1	CA	1453	G
1	CA	1498	U
22	CC	1	C
22	CD	6	G
22	CD	7	G
22	CD	12	G
22	CD	22	G
22	CD	57	A
24	DA	49	A
24	DA	128	C
24	DA	205	G
24	DA	249	C
24	DA	278	A
24	DA	654(S)	G
24	DA	669	G
24	DA	752	A
24	DA	856	C
24	DA	877	U
24	DA	888	C
24	DA	1022	G
24	DA	1066	U
24	DA	1085	A
24	DA	1088	A
24	DA	1171	G
24	DA	1300	U
24	DA	1427	A
24	DA	1460	A

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Mol	Chain	Res	Type
24	DA	1558	A
24	DA	1653	G
24	DA	1819	A
24	DA	1912	A
24	DA	1913	A
24	DA	1955	U
24	DA	1992	G
24	DA	2191	G
24	DA	2211	G
24	DA	2406	U
24	DA	2439	A
24	DA	2447	G
24	DA	2542	A
24	DA	2602	A
24	DA	2610	C
24	DA	2689	U
24	DA	2747	G
24	DA	2776	A
24	DA	2859	G
24	DA	2893	G

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

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

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

Of 1692 ligands modelled in this entry, 1690 are monoatomic - leaving 2 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
55	T1C	AA	1837	54	44,45,45	0.85	4 (9%)	48,72,72	2.05	11 (22%)
55	T1C	CA	1800	54	44,45,45	0.89	3 (6%)	48,72,72	1.76	10 (20%)

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 Torsions and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
55	T1C	AA	1837	54	-	0/22/80/80	0/4/4/4
55	T1C	CA	1800	54	-	0/22/80/80	0/4/4/4

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	CA	1800	T1C	C9-N9	-2.71	1.36	1.41
55	AA	1837	T1C	C9-N9	-2.62	1.36	1.41
55	CA	1800	T1C	C1B-C12	-2.39	1.33	1.36
55	CA	1800	T1C	C93-N92	-2.17	1.45	1.49
55	AA	1837	T1C	C1C-C1	-2.07	1.51	1.55
55	AA	1837	T1C	C1A-C11	2.03	1.51	1.46
55	AA	1837	T1C	C1C-C12	2.25	1.54	1.52

All (21) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	AA	1837	T1C	C41-C1C-C1	-6.76	103.46	111.17
55	CA	1800	T1C	O12-C12-C1B	-6.38	117.73	123.84
55	AA	1837	T1C	O12-C12-C1B	-6.15	117.95	123.84
55	CA	1800	T1C	C51-C5-C41	-3.44	104.07	110.71
55	AA	1837	T1C	C9-N9-C91	-3.34	112.97	126.55
55	CA	1800	T1C	O1C-C1C-C41	-3.33	105.98	110.17
55	CA	1800	T1C	C9-N9-C91	-3.10	113.95	126.55
55	CA	1800	T1C	C41-C1C-C1	-2.67	108.12	111.17
55	AA	1837	T1C	C51-C5-C41	-2.15	106.55	110.71
55	AA	1837	T1C	C5-C41-C4	-2.15	108.21	111.47
55	AA	1837	T1C	C72-N7-C71	-2.15	108.86	115.96
55	CA	1800	T1C	O1C-C1C-C12	-2.04	106.19	109.85
55	CA	1800	T1C	O1-C1-C1C	2.05	123.00	118.72
55	CA	1800	T1C	C6-C61-C1A	2.32	122.32	117.77
55	AA	1837	T1C	C6-C61-C1A	2.57	122.81	117.77
55	AA	1837	T1C	C92-C91-N9	2.85	118.65	114.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	AA	1837	T1C	C1C-C41-C4	3.35	116.22	111.73
55	CA	1800	T1C	O12-C12-C1C	3.61	119.25	113.50
55	AA	1837	T1C	C11-C1B-C12	3.84	122.19	118.93
55	CA	1800	T1C	C1-C1C-C12	3.97	114.71	109.73
55	AA	1837	T1C	O12-C12-C1C	4.30	120.35	113.50

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 7 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
55	AA	1837	T1C	2	0
55	CA	1800	T1C	5	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å ²)	Q<0.9
1	AA	1506/1506 (100%)	-0.70	2 (0%)	95	91	66, 112, 190, 248	0
1	CA	1506/1506 (100%)	-0.72	7 (0%)	91	83	76, 117, 189, 249	0
2	AE	237/256 (92%)	0.33	20 (8%)	14	4	116, 147, 183, 193	0
2	CE	237/256 (92%)	0.96	44 (18%)	2	1	126, 162, 192, 208	0
3	AF	205/239 (85%)	0.63	22 (10%)	8	3	99, 124, 157, 164	0
3	CF	206/239 (86%)	1.38	52 (25%)	1	0	121, 145, 174, 184	0
4	AG	208/208 (100%)	-0.42	0	100	100	95, 118, 140, 145	0
4	CG	208/208 (100%)	0.62	22 (10%)	8	3	93, 113, 133, 142	0
5	AH	151/162 (93%)	-0.00	1 (0%)	89	78	90, 110, 132, 163	0
5	CH	151/162 (93%)	0.51	9 (5%)	25	10	97, 117, 139, 165	0
6	AI	101/101 (100%)	1.02	15 (14%)	3	1	91, 112, 125, 144	0
6	CI	101/101 (100%)	-0.02	1 (0%)	84	69	90, 107, 128, 148	0
7	AJ	155/156 (99%)	0.60	20 (12%)	5	2	111, 129, 157, 167	0
7	CJ	155/156 (99%)	0.09	0	100	100	116, 133, 162, 173	0
8	AK	138/138 (100%)	-0.33	0	100	100	97, 117, 127, 137	0
8	CK	138/138 (100%)	0.22	5 (3%)	46	23	105, 122, 135, 143	0
9	AL	127/128 (99%)	0.15	2 (1%)	74	55	100, 144, 163, 167	0
9	CL	127/128 (99%)	0.13	4 (3%)	52	28	114, 155, 170, 176	0
10	AM	99/105 (94%)	0.62	12 (12%)	6	2	100, 146, 171, 175	0
10	CM	99/105 (94%)	0.85	16 (16%)	3	1	117, 159, 174, 180	0
11	AN	119/129 (92%)	1.15	23 (19%)	2	1	83, 108, 138, 168	0
11	CN	119/129 (92%)	0.23	2 (1%)	73	52	91, 112, 138, 163	0
12	AO	125/128 (97%)	-0.18	1 (0%)	87	75	78, 92, 116, 168	0
12	CO	125/128 (97%)	0.77	14 (11%)	7	2	84, 104, 129, 170	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AP	116/126 (92%)	0.11	5 (4%) 39 18	100, 133, 147, 157	0
13	CP	117/126 (92%)	-0.09	6 (5%) 32 13	121, 155, 170, 177	0
14	AQ	60/61 (98%)	-0.23	0 100 100	103, 114, 127, 135	0
14	CQ	60/61 (98%)	0.86	10 (16%) 2 1	130, 139, 155, 162	0
15	AR	88/89 (98%)	-0.19	0 100 100	89, 108, 124, 127	0
15	CR	88/89 (98%)	-0.17	0 100 100	89, 113, 131, 136	0
16	AS	84/88 (95%)	-0.57	0 100 100	107, 122, 145, 171	0
16	CS	84/88 (95%)	0.32	5 (5%) 25 10	91, 107, 126, 167	0
17	AT	100/105 (95%)	-0.39	1 (1%) 84 69	96, 114, 126, 133	0
17	CT	100/105 (95%)	0.33	3 (3%) 54 29	91, 111, 128, 149	0
18	AU	72/88 (81%)	0.84	7 (9%) 10 3	95, 112, 141, 169	0
18	CU	72/88 (81%)	-0.02	2 (2%) 56 32	96, 117, 152, 173	0
19	AV	83/93 (89%)	-0.22	2 (2%) 62 39	115, 136, 151, 157	0
19	CV	78/93 (83%)	0.37	8 (10%) 9 3	135, 166, 181, 188	0
20	AW	99/106 (93%)	-0.49	0 100 100	111, 127, 157, 162	0
20	CW	99/106 (93%)	0.06	2 (2%) 68 46	91, 116, 148, 165	0
21	AX	25/27 (92%)	-0.34	0 100 100	111, 120, 140, 160	0
21	CX	25/27 (92%)	-0.43	0 100 100	117, 138, 154, 170	0
22	AC	77/77 (100%)	-0.66	0 100 100	77, 100, 135, 151	0
22	AD	77/77 (100%)	0.19	2 (2%) 59 35	93, 214, 228, 234	0
22	CC	77/77 (100%)	-0.83	0 100 100	80, 118, 151, 171	0
22	CD	77/77 (100%)	-0.62	0 100 100	93, 220, 238, 248	0
23	A1	6/6 (100%)	-0.59	0 100 100	85, 89, 129, 143	0
23	C1	6/6 (100%)	-0.52	0 100 100	103, 111, 138, 153	0
24	BA	2912/2912 (100%)	-0.37	37 (1%) 79 62	53, 82, 212, 247	0
24	DA	2906/2912 (99%)	-0.56	32 (1%) 82 66	60, 90, 232, 251	0
25	BB	122/122 (100%)	-0.59	1 (0%) 87 75	78, 106, 126, 184	0
25	DB	122/122 (100%)	-0.79	0 100 100	91, 127, 154, 200	0
26	BD	272/276 (98%)	0.16	5 (1%) 71 50	55, 75, 94, 102	0
26	DD	272/276 (98%)	-0.26	4 (1%) 76 58	58, 81, 99, 122	0
27	BE	205/206 (99%)	0.17	9 (4%) 38 17	60, 92, 135, 153	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
27	DE	205/206 (99%)	-0.16	6 (2%) 55 31	60, 97, 142, 165	0
28	BF	202/210 (96%)	0.18	4 (1%) 68 46	54, 84, 118, 133	0
28	DF	208/210 (99%)	0.73	24 (11%) 6 2	66, 102, 156, 182	0
29	BG	181/182 (99%)	1.27	46 (25%) 1 0	95, 116, 145, 154	0
29	DG	181/182 (99%)	0.46	15 (8%) 14 5	117, 141, 165, 177	0
30	BH	170/180 (94%)	0.34	8 (4%) 35 16	88, 113, 132, 151	0
30	DH	170/180 (94%)	1.28	45 (26%) 1 0	146, 200, 223, 235	0
31	BK	146/148 (98%)	0.69	16 (10%) 7 2	87, 129, 146, 151	0
31	DK	146/148 (98%)	-0.37	0 100 100	88, 132, 151, 159	0
32	BM	138/140 (98%)	0.44	9 (6%) 22 8	78, 93, 128, 145	0
32	DM	138/140 (98%)	0.09	1 (0%) 89 78	80, 107, 137, 157	0
33	BN	122/122 (100%)	0.17	1 (0%) 87 75	69, 87, 102, 112	0
33	DN	122/122 (100%)	0.28	2 (1%) 74 55	70, 91, 109, 116	0
34	BO	150/150 (100%)	0.25	6 (4%) 42 20	60, 91, 114, 167	0
34	DO	150/150 (100%)	0.98	28 (18%) 2 1	66, 105, 140, 179	0
35	BP	141/141 (100%)	0.40	7 (4%) 32 13	68, 91, 113, 135	0
35	DP	141/141 (100%)	0.30	6 (4%) 39 18	80, 106, 130, 152	0
36	B0	118/118 (100%)	0.23	2 (1%) 73 52	72, 89, 104, 118	0
36	D0	117/118 (99%)	-0.03	0 100 100	71, 89, 108, 119	0
37	BQ	111/112 (99%)	0.76	14 (12%) 5 2	85, 104, 127, 137	0
37	DQ	111/112 (99%)	0.17	5 (4%) 37 17	98, 121, 142, 151	0
38	BR	137/146 (93%)	0.02	6 (4%) 38 17	80, 102, 150, 169	0
38	DR	137/146 (93%)	-0.01	1 (0%) 89 78	80, 99, 159, 185	0
39	B1	117/118 (99%)	-0.00	3 (2%) 59 35	63, 83, 112, 138	0
39	D1	117/118 (99%)	-0.00	0 100 100	72, 101, 136, 155	0
40	B2	101/101 (100%)	0.47	6 (5%) 26 11	64, 102, 126, 145	0
40	D2	101/101 (100%)	1.03	17 (16%) 2 1	71, 123, 139, 148	0
41	BS	113/113 (100%)	0.22	3 (2%) 58 34	63, 80, 110, 161	0
41	DS	113/113 (100%)	0.29	2 (1%) 71 50	68, 83, 113, 161	0
42	BT	92/96 (95%)	0.53	4 (4%) 39 18	64, 78, 101, 111	0
42	DT	92/96 (95%)	0.26	7 (7%) 17 6	77, 94, 118, 128	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å ²)	Q<0.9
43	BU	102/110 (92%)	0.66	9 (8%)	12	4	75, 99, 149, 163	0
43	DU	102/110 (92%)	1.59	33 (32%)	1	0	93, 118, 160, 182	0
44	BV	175/206 (84%)	1.96	66 (37%)	0	0	97, 131, 195, 201	0
44	DV	179/206 (86%)	1.78	58 (32%)	1	0	118, 157, 213, 219	0
45	B3	76/85 (89%)	0.34	1 (1%)	79	62	69, 85, 101, 140	0
45	D3	77/85 (90%)	0.27	2 (2%)	59	35	74, 95, 111, 151	0
46	BZ	97/98 (98%)	1.09	12 (12%)	5	2	65, 85, 132, 164	0
46	DZ	97/98 (98%)	-0.18	0	100	100	67, 91, 135, 157	0
47	BW	66/72 (91%)	0.26	2 (3%)	54	29	70, 87, 108, 132	0
47	DW	69/72 (95%)	0.55	4 (5%)	26	11	90, 112, 133, 164	0
48	BX	59/60 (98%)	0.28	4 (6%)	20	7	73, 86, 121, 137	0
48	DX	59/60 (98%)	0.78	6 (10%)	9	3	79, 102, 145, 162	0
49	B4	66/71 (92%)	2.85	43 (65%)	0	0	122, 158, 180, 186	0
49	D4	63/71 (88%)	2.56	38 (60%)	0	0	154, 187, 197, 205	0
50	B5	59/60 (98%)	0.63	9 (15%)	3	1	57, 90, 166, 172	0
50	D5	59/60 (98%)	0.66	7 (11%)	6	2	68, 91, 178, 192	0
51	B6	45/54 (83%)	9.47	45 (100%)	0	0	128, 153, 163, 164	0
51	D6	45/54 (83%)	5.10	42 (93%)	0	0	138, 164, 181, 183	0
52	B7	49/49 (100%)	0.08	2 (4%)	41	19	55, 61, 92, 120	0
52	D7	49/49 (100%)	0.15	1 (2%)	68	46	63, 70, 107, 130	0
53	B8	61/65 (93%)	0.41	3 (4%)	33	14	66, 81, 98, 124	0
53	D8	61/65 (93%)	0.46	0	100	100	73, 87, 106, 121	0
All	All	20927/21444 (97%)	0.01	1116 (5%)	30	13	53, 106, 186, 251	0

All (1116) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
51	B6	16	CYS	22.0
44	DV	143	GLY	18.8
51	B6	15	GLU	17.7
34	DO	150	ALA	16.4
51	B6	43	CYS	16.0
24	DA	654(K)	C	15.5
51	B6	19	ARG	15.5

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Mol	Chain	Res	Type	RSRZ
51	B6	42	TRP	14.9
51	B6	50	ARG	14.9
51	B6	18	ARG	14.3
51	B6	52	VAL	14.2
51	B6	49	HIS	14.0
51	B6	26	ASN	14.0
24	DA	654(J)	A	13.6
51	D6	13	CYS	13.6
51	B6	53	LYS	12.9
50	D5	60	VAL	12.5
46	BZ	98	LEU	12.4
51	B6	21	TYR	12.3
44	DV	142	SER	12.2
51	B6	22	ALA	12.1
51	B6	14	THR	11.9
51	B6	51	GLU	11.8
34	DO	149	GLU	11.5
40	B2	36	PRO	11.5
50	D5	59	GLU	11.4
24	BA	2900	A	10.7
51	B6	17	LYS	10.7
51	B6	20	ASN	10.4
51	B6	34	LEU	10.4
51	B6	13	CYS	10.3
51	D6	14	THR	10.3
51	B6	48	VAL	10.2
51	D6	9	LEU	10.0
24	DA	654(L)	G	9.9
44	BV	161	VAL	9.8
49	D4	40	HIS	9.8
44	BV	1	MET	9.6
51	B6	35	GLU	9.5
24	BA	2901	C	9.4
51	D6	50	ARG	9.2
11	AN	11	LYS	9.1
50	D5	58	LEU	9.1
51	B6	44	ARG	9.1
24	BA	654(K)	C	9.0
49	D4	42	PHE	9.0
24	DA	2901	C	8.9
51	D6	22	ALA	8.8
51	D6	18	ARG	8.8

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Mol	Chain	Res	Type	RSRZ
51	B6	47	THR	8.8
44	DV	107	THR	8.5
51	B6	12	GLU	8.5
30	DH	33	LEU	8.5
24	BA	1	G	8.3
24	BA	2902	C	8.3
50	B5	60	VAL	8.3
28	DF	1	MET	8.0
51	D6	52	VAL	8.0
51	D6	43	CYS	8.0
51	B6	9	LEU	7.9
24	BA	4	C	7.9
51	D6	21	TYR	7.8
29	BG	2	PRO	7.8
51	B6	36	LEU	7.8
41	BS	113	LYS	7.7
11	AN	12	ARG	7.7
24	BA	2899	G	7.6
51	B6	41	PRO	7.6
45	D3	85	ALA	7.6
49	B4	30	GLU	7.5
51	D6	20	ASN	7.4
28	DF	208	GLY	7.4
51	B6	31	PRO	7.3
24	BA	2	G	7.3
29	BG	182	LYS	7.3
51	B6	28	ARG	7.2
30	DH	43	VAL	7.2
41	DS	113	LYS	7.2
34	BO	149	GLU	7.2
46	BZ	97	LEU	7.1
28	DF	25	PRO	7.1
44	BV	142	SER	7.0
28	DF	23	ASP	7.0
49	D4	41	PRO	6.9
37	BQ	108	GLY	6.9
44	BV	149	SER	6.9
44	DV	112	ARG	6.9
43	DU	55	TYR	6.8
51	B6	40	CYS	6.8
24	DA	654(I)	C	6.8
24	BA	163	U	6.8

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Mol	Chain	Res	Type	RSRZ
45	B3	85	ALA	6.7
49	D4	24	THR	6.7
34	BO	150	ALA	6.6
51	B6	32	ASN	6.5
51	B6	29	ASN	6.4
24	DA	2899	G	6.4
51	B6	23	THR	6.4
2	CE	68	ILE	6.3
51	D6	12	GLU	6.3
43	BU	99	CYS	6.2
44	BV	145	GLU	6.2
44	BV	148	ASP	6.2
51	B6	46	HIS	6.2
2	CE	5	ILE	6.2
50	B5	59	GLU	6.2
30	BH	3	ARG	6.1
51	B6	33	LYS	6.1
46	BZ	96	LYS	6.1
49	B4	28	LYS	6.1
12	CO	127	GLU	6.1
49	B4	12	ALA	6.1
51	D6	46	HIS	6.1
7	AJ	86	GLN	6.0
49	D4	63	TYR	6.0
12	CO	128	ALA	6.0
44	DV	141	VAL	6.0
44	DV	149	SER	5.9
30	DH	24	VAL	5.9
51	B6	25	LYS	5.9
44	BV	113	ALA	5.9
24	DA	654(F)	C	5.9
24	DA	654(M)	C	5.8
49	B4	22	ILE	5.8
2	CE	4	GLU	5.8
49	D4	47	GLN	5.8
51	D6	26	ASN	5.8
49	B4	38	LYS	5.8
30	DH	25	LYS	5.8
40	D2	101	GLY	5.7
51	B6	10	LEU	5.7
44	DV	138	GLU	5.7
51	D6	25	LYS	5.7

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Mol	Chain	Res	Type	RSRZ
49	D4	10	VAL	5.7
3	AF	201	TYR	5.6
44	BV	166	SER	5.6
51	D6	45	LYS	5.6
49	B4	34	GLU	5.5
51	D6	42	TRP	5.5
12	AO	129	ALA	5.5
43	DU	53	PRO	5.5
44	BV	112	ARG	5.5
51	B6	11	LEU	5.5
43	DU	86	ARG	5.5
49	B4	24	THR	5.5
51	D6	40	CYS	5.5
24	DA	654(N)	G	5.5
13	CP	6	GLY	5.4
49	B4	31	ILE	5.4
2	CE	163	PHE	5.4
30	DH	26	VAL	5.4
51	B6	27	LYS	5.4
51	B6	45	LYS	5.4
4	CG	156	GLU	5.4
51	D6	23	THR	5.4
30	DH	29	PRO	5.3
44	BV	144	LEU	5.3
43	DU	79	CYS	5.3
40	D2	34	GLU	5.3
17	CT	101	ARG	5.2
49	B4	9	LEU	5.2
49	B4	25	TYR	5.1
51	D6	51	GLU	5.1
24	BA	2799	A	5.1
44	BV	2	GLU	5.1
44	BV	38	TYR	5.0
12	CO	129	ALA	5.0
30	DH	51	ARG	5.0
51	D6	39	TYR	5.0
43	DU	62	GLU	5.0
24	BA	2898	U	5.0
2	CE	240	GLN	4.9
49	B4	64	GLY	4.9
18	AU	88	LYS	4.9
34	DO	118	GLY	4.9

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Mol	Chain	Res	Type	RSRZ
34	DO	110	TYR	4.9
40	B2	45	THR	4.9
51	D6	49	HIS	4.9
32	BM	131	GLN	4.9
30	DH	96	ALA	4.9
3	CF	207	VAL	4.8
49	B4	19	GLY	4.8
4	CG	152	SER	4.8
4	CG	32	ALA	4.8
49	B4	13	ARG	4.8
44	BV	141	VAL	4.8
47	BW	43	GLN	4.8
37	BQ	110	LEU	4.7
49	B4	27	THR	4.7
40	D2	1	MET	4.7
30	DH	115	VAL	4.7
37	BQ	59	LYS	4.7
24	DA	4	C	4.7
35	DP	104	PHE	4.7
2	AE	63	MET	4.7
44	DV	151	HIS	4.7
24	DA	654(G)	C	4.6
44	BV	140	ASP	4.6
43	BU	50	ARG	4.6
22	AD	17(A)	C	4.6
24	BA	654(L)	G	4.6
24	DA	654(H)	G	4.6
30	DH	99	VAL	4.6
2	CE	232	PRO	4.6
28	DF	24	LEU	4.6
37	DQ	108	GLY	4.6
29	BG	63	ILE	4.6
3	CF	65	ALA	4.6
51	D6	41	PRO	4.6
44	BV	143	GLY	4.6
43	DU	92	ASN	4.6
49	D4	28	LYS	4.6
24	DA	2902	C	4.6
28	DF	10	PRO	4.6
49	B4	52	THR	4.6
29	BG	118	ARG	4.5
24	DA	2900	A	4.5

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Mol	Chain	Res	Type	RSRZ
44	DV	9	TYR	4.5
24	DA	654(E)	C	4.5
11	AN	129	SER	4.5
49	D4	46	GLN	4.5
24	DA	654(O)	G	4.5
3	AF	200	ALA	4.5
20	CW	98	PRO	4.4
30	DH	34	GLU	4.4
44	DV	150	LEU	4.4
3	CF	87	LEU	4.4
4	CG	166	LYS	4.4
27	DE	205	ALA	4.4
44	BV	98	MET	4.4
27	DE	204	ALA	4.4
49	B4	14	ILE	4.4
2	AE	4	GLU	4.4
51	D6	27	LYS	4.4
46	BZ	89	GLU	4.4
49	B4	29	PRO	4.4
49	B4	32	TYR	4.4
11	AN	81	ASP	4.3
24	BA	5	A	4.3
10	CM	64	GLU	4.3
24	DA	1535	U	4.3
34	DO	148	LEU	4.3
51	D6	29	ASN	4.3
1	CA	1029	G	4.3
2	CE	67	THR	4.3
2	CE	150	SER	4.3
44	DV	144	LEU	4.3
11	AN	16	SER	4.3
49	D4	9	LEU	4.3
44	DV	153	SER	4.3
45	D3	84	LEU	4.3
3	CF	135	LYS	4.3
3	CF	53	ALA	4.3
51	D6	24	GLU	4.3
2	CE	70	PHE	4.3
49	B4	15	ILE	4.2
24	DA	2799	A	4.2
51	D6	31	PRO	4.2
44	BV	3	TYR	4.2

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Mol	Chain	Res	Type	RSRZ
24	BA	3	U	4.2
44	DV	115	GLY	4.2
30	DH	42	ARG	4.2
3	CF	199	LYS	4.2
2	CE	231	GLU	4.1
29	BG	137	GLU	4.1
12	CO	62	SER	4.1
24	BA	2798	C	4.1
49	D4	29	PRO	4.1
3	CF	143	GLU	4.1
30	DH	21	PRO	4.1
34	DO	92	GLU	4.1
31	BK	12	LEU	4.1
34	DO	124	LYS	4.0
24	DA	654(P)	G	4.0
44	BV	111	VAL	4.0
47	DW	43	GLN	4.0
24	BA	654(H)	G	4.0
43	DU	58	GLY	4.0
44	BV	4	ARG	4.0
52	B7	49	ARG	4.0
29	DG	139	LEU	4.0
51	D6	16	CYS	4.0
14	CQ	39	LEU	3.9
40	D2	36	PRO	3.9
44	BV	86	VAL	3.9
42	DT	92	LEU	3.9
51	D6	10	LEU	3.9
51	D6	53	LYS	3.9
39	B1	117	GLN	3.9
49	D4	45	GLY	3.9
49	D4	39	CYS	3.9
41	BS	111	HIS	3.9
24	BA	654(J)	A	3.9
3	CF	56	ASP	3.9
2	AE	232	PRO	3.9
30	DH	18	GLU	3.9
28	DF	11	VAL	3.9
44	BV	67	LEU	3.9
50	B5	58	LEU	3.9
24	BA	1536	A	3.9
24	DA	1177	A	3.9

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Mol	Chain	Res	Type	RSRZ
43	DU	46	LYS	3.9
49	B4	4	GLY	3.9
2	CE	6	THR	3.9
29	BG	136	ARG	3.9
3	CF	91	LEU	3.9
39	B1	118	GLY	3.9
44	BV	66	SER	3.9
35	BP	104	PHE	3.8
6	AI	55	ASP	3.8
50	D5	55	ARG	3.8
34	DO	95	VAL	3.8
7	AJ	85	TYR	3.8
29	BG	23	PHE	3.8
53	B8	34	TRP	3.8
31	BK	73	GLU	3.8
44	BV	153	SER	3.8
24	DA	2797	U	3.8
29	BG	181	ARG	3.8
34	DO	94	GLU	3.8
44	BV	162	GLU	3.8
2	CE	230	VAL	3.8
44	DV	145	GLU	3.8
49	B4	16	CYS	3.8
44	DV	5	LEU	3.8
3	CF	44	GLU	3.7
2	AE	231	GLU	3.7
2	CE	220	ASP	3.7
44	BV	99	TYR	3.7
29	DG	137	GLU	3.7
48	BX	60	GLU	3.7
51	B6	39	TYR	3.7
34	BO	124	LYS	3.7
44	BV	152	ALA	3.7
24	DA	654(Q)	C	3.7
44	DV	88	PHE	3.7
43	DU	45	VAL	3.7
43	DU	102	CYS	3.7
47	DW	72	ALA	3.7
2	CE	233	SER	3.7
24	DA	654(R)	C	3.7
3	AF	60	ALA	3.7
44	BV	60	GLU	3.7

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Mol	Chain	Res	Type	RSRZ
19	CV	49	ILE	3.7
38	BR	134	GLU	3.6
44	BV	165	VAL	3.6
43	DU	29	GLU	3.6
2	CE	234	PRO	3.6
10	CM	10	GLY	3.6
30	DH	84	SER	3.6
43	DU	5	MET	3.6
44	BV	96	VAL	3.6
43	DU	50	ARG	3.6
44	DV	155	LEU	3.6
43	DU	47	LYS	3.6
29	BG	14	GLU	3.6
12	CO	19	ARG	3.6
50	B5	54	GLY	3.6
51	D6	19	ARG	3.6
49	D4	7	PRO	3.6
35	DP	66	ILE	3.6
13	AP	6	GLY	3.6
34	BO	95	VAL	3.6
3	CF	177	THR	3.6
51	B6	24	GLU	3.6
44	DV	148	ASP	3.6
13	CP	3	ARG	3.5
30	DH	37	VAL	3.5
44	BV	70	LEU	3.5
51	D6	36	LEU	3.5
12	CO	64	TYR	3.5
30	DH	19	VAL	3.5
34	DO	62	LEU	3.5
11	AN	36	ASP	3.5
9	CL	102	LEU	3.5
29	BG	35	GLU	3.5
44	DV	147	GLY	3.5
18	AU	87	ARG	3.5
29	BG	141	PHE	3.5
44	BV	28	MET	3.5
40	D2	32	THR	3.5
44	BV	155	LEU	3.5
44	DV	179	ASP	3.5
46	BZ	92	LYS	3.5
3	CF	104	GLN	3.4

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Mol	Chain	Res	Type	RSRZ
6	AI	46	ARG	3.4
24	BA	2797	U	3.4
30	DH	124	GLU	3.4
43	DU	61	ILE	3.4
51	D6	28	ARG	3.4
33	BN	122	LEU	3.4
49	B4	18	CYS	3.4
10	CM	4	ILE	3.4
3	CF	103	VAL	3.4
29	BG	65	GLY	3.4
44	BV	25	PRO	3.4
49	B4	51	ASP	3.4
37	BQ	68	GLN	3.4
51	B6	38	LYS	3.4
50	D5	51	TYR	3.4
3	AF	79	ARG	3.4
7	AJ	58	PRO	3.4
30	DH	126	PRO	3.4
4	CG	179	GLU	3.4
10	CM	6	ILE	3.4
43	DU	54	LYS	3.4
30	DH	47	GLU	3.4
10	AM	72	VAL	3.4
32	BM	130	HIS	3.4
30	DH	31	GLY	3.4
44	BV	163	LEU	3.4
49	D4	13	ARG	3.4
29	DG	108	ASN	3.4
51	D6	32	ASN	3.4
44	DV	106	GLY	3.4
29	BG	59	GLU	3.4
10	CM	89	ASP	3.4
30	DH	52	VAL	3.4
2	CE	115	LEU	3.4
44	DV	1	MET	3.4
7	AJ	78	ARG	3.4
43	DU	88	LYS	3.4
49	B4	40	HIS	3.3
29	BG	147	ASP	3.3
44	BV	85	HIS	3.3
49	B4	26	SER	3.3
37	DQ	57	LYS	3.3

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Mol	Chain	Res	Type	RSRZ
34	DO	126	VAL	3.3
1	CA	1032	A	3.3
30	BH	27	LYS	3.3
44	BV	8	TYR	3.3
3	AF	135	LYS	3.3
30	DH	20	ALA	3.3
49	B4	7	PRO	3.3
28	DF	176	LEU	3.3
3	CF	184	TYR	3.3
49	B4	3	GLU	3.3
51	D6	30	THR	3.3
29	BG	152	LEU	3.3
33	DN	1	MET	3.3
2	CE	155	LEU	3.2
3	AF	91	LEU	3.2
29	BG	135	LEU	3.2
28	BF	17	ARG	3.2
3	CF	189	ALA	3.2
44	BV	88	PHE	3.2
3	CF	190	ARG	3.2
28	DF	14	PRO	3.2
9	CL	59	PHE	3.2
43	BU	82	PRO	3.2
5	CH	109	ILE	3.2
7	AJ	55	GLY	3.2
11	AN	13	GLN	3.2
29	BG	25	TYR	3.2
11	AN	18	ARG	3.2
18	AU	19	LYS	3.2
30	DH	45	VAL	3.2
3	CF	52	LEU	3.2
4	CG	157	LEU	3.2
30	DH	103	LEU	3.2
44	DV	55	HIS	3.2
6	AI	89	MET	3.2
10	CM	67	THR	3.2
44	BV	110	GLY	3.2
44	DV	168	GLU	3.2
51	D6	35	GLU	3.2
3	CF	60	ALA	3.2
29	BG	107	LEU	3.2
13	AP	3	ARG	3.2

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Mol	Chain	Res	Type	RSRZ
44	BV	55	HIS	3.2
3	CF	39	ILE	3.2
30	DH	114	VAL	3.2
44	BV	117	LEU	3.2
3	AF	80	GLY	3.2
24	BA	654(F)	C	3.1
10	CM	85	LEU	3.1
2	CE	9	GLU	3.1
34	BO	94	GLU	3.1
2	CE	152	PHE	3.1
4	CG	169	LYS	3.1
49	D4	55	ARG	3.1
30	DH	46	GLU	3.1
12	CO	21	LYS	3.1
14	CQ	50	LYS	3.1
49	D4	31	ILE	3.1
49	D4	32	TYR	3.1
2	AE	96	ARG	3.1
10	CM	47	PHE	3.1
34	DO	138	LEU	3.1
48	BX	56	VAL	3.1
44	DV	162	GLU	3.1
29	DG	41	GLN	3.1
3	CF	198	VAL	3.1
4	CG	170	VAL	3.1
29	DG	178	PHE	3.1
10	CM	96	ILE	3.1
24	BA	654(I)	C	3.1
24	DA	2898	U	3.1
29	DG	39	ILE	3.1
50	B5	57	VAL	3.1
12	CO	126	LYS	3.1
3	CF	167	TRP	3.1
29	BG	64	THR	3.1
1	AA	86	U	3.1
29	BG	164	GLU	3.1
49	D4	6	HIS	3.1
10	AM	98	ILE	3.1
29	BG	60	LEU	3.1
3	CF	126	ARG	3.1
30	DH	104	GLU	3.1
24	BA	654(Q)	C	3.1

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Mol	Chain	Res	Type	RSRZ
7	AJ	62	PHE	3.1
34	DO	108	LYS	3.1
2	AE	227	GLY	3.1
3	CF	200	ALA	3.1
24	DA	3	U	3.1
3	CF	183	ASP	3.1
38	DR	1	MET	3.0
46	BZ	82	LEU	3.0
24	DA	654(D)	G	3.0
44	DV	134	PRO	3.0
44	DV	28	MET	3.0
52	D7	49	ARG	3.0
30	DH	106	THR	3.0
44	BV	104	PHE	3.0
3	CF	13	GLY	3.0
10	AM	6	ILE	3.0
44	DV	156	LYS	3.0
27	DE	54	GLN	3.0
10	AM	5	ARG	3.0
29	DG	92	VAL	3.0
49	B4	39	CYS	3.0
3	CF	77	ILE	3.0
24	DA	654	A	3.0
14	CQ	6	LEU	3.0
44	BV	150	LEU	3.0
49	D4	8	LYS	3.0
30	DH	17	VAL	3.0
11	AN	98	LEU	3.0
28	DF	192	LEU	3.0
34	DO	106	LEU	3.0
29	BG	146	TYR	3.0
35	DP	130	LYS	3.0
3	CF	155	GLY	3.0
3	CF	110	ASN	3.0
3	CF	187	ALA	3.0
29	BG	100	TRP	3.0
29	BG	142	PRO	3.0
28	DF	133	ASN	3.0
49	D4	44	THR	3.0
13	CP	4	ILE	3.0
4	CG	25	ARG	3.0
11	AN	19	ALA	3.0

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Mol	Chain	Res	Type	RSRZ
40	D2	5	VAL	3.0
49	B4	21	VAL	3.0
1	AA	85	U	3.0
19	CV	43	GLU	2.9
3	CF	188	LEU	2.9
49	D4	4	GLY	2.9
24	BA	2793	G	2.9
9	AL	19	LEU	2.9
2	AE	228	GLY	2.9
29	BG	102	PHE	2.9
49	B4	10	VAL	2.9
49	B4	23	GLU	2.9
37	BQ	86	ALA	2.9
34	DO	137	LYS	2.9
3	CF	6	HIS	2.9
4	CG	198	VAL	2.9
30	DH	44	VAL	2.9
35	BP	33	GLY	2.9
40	D2	15	GLU	2.9
31	BK	79	ILE	2.9
4	CG	35	ARG	2.9
37	BQ	24	LEU	2.9
44	BV	32	HIS	2.9
11	AN	83	ILE	2.9
41	DS	112	GLY	2.9
6	AI	1	MET	2.9
2	AE	122	PHE	2.9
43	DU	60	PHE	2.9
43	DU	49	VAL	2.9
16	CS	19	ILE	2.9
3	CF	118	GLN	2.9
18	CU	42	ARG	2.9
29	BG	34	LEU	2.9
4	CG	24	GLU	2.9
3	CF	102	ASN	2.9
49	D4	5	ILE	2.9
29	DG	28	VAL	2.9
30	DH	83	TYR	2.9
49	D4	25	TYR	2.9
3	CF	186	PHE	2.8
31	BK	146	ALA	2.8
24	BA	546	C	2.8

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Mol	Chain	Res	Type	RSRZ
34	DO	88	LEU	2.8
37	BQ	111	GLU	2.8
17	CT	7	THR	2.8
44	DV	48	PHE	2.8
44	BV	103	ARG	2.8
10	CM	8	LEU	2.8
37	BQ	60	GLY	2.8
37	BQ	107	GLU	2.8
44	DV	49	ARG	2.8
51	D6	48	VAL	2.8
49	B4	11	PRO	2.8
35	BP	32	TYR	2.8
40	B2	101	GLY	2.8
19	CV	79	THR	2.8
26	DD	26	LYS	2.8
7	AJ	88	PRO	2.8
40	D2	100	ARG	2.8
44	DV	104	PHE	2.8
3	AF	90	GLU	2.8
2	CE	112	VAL	2.8
11	AN	104	GLN	2.8
29	BG	150	ASP	2.8
49	D4	43	TYR	2.8
44	DV	11	GLU	2.8
28	DF	26	ALA	2.8
2	CE	90	MET	2.8
50	D5	57	VAL	2.8
8	CK	2	LEU	2.8
16	CS	54	GLU	2.8
44	DV	8	TYR	2.8
24	DA	5	A	2.8
43	DU	65	ALA	2.8
26	DD	35	LYS	2.8
47	DW	9	GLN	2.8
27	BE	205	ALA	2.8
44	BV	27	VAL	2.8
7	AJ	56	GLN	2.8
24	BA	654(P)	G	2.8
28	DF	194	MET	2.8
2	AE	127	ILE	2.7
44	BV	147	GLY	2.7
32	BM	15	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
40	D2	35	LEU	2.7
34	DO	144	GLU	2.7
44	BV	127	LYS	2.7
47	DW	56	GLN	2.7
2	CE	97	TRP	2.7
13	CP	7	VAL	2.7
28	DF	172	TRP	2.7
29	BG	149	VAL	2.7
49	D4	37	SER	2.7
43	DU	35	TYR	2.7
48	DX	39	ASP	2.7
34	DO	1	MET	2.7
14	CQ	53	LEU	2.7
44	DV	139	VAL	2.7
44	DV	140	ASP	2.7
3	CF	7	PRO	2.7
37	BQ	109	GLY	2.7
51	D6	34	LEU	2.7
24	DA	2	G	2.7
7	AJ	17	VAL	2.7
7	AJ	80	VAL	2.7
3	CF	78	GLY	2.7
24	DA	229	A	2.7
7	AJ	87	VAL	2.7
50	B5	55	ARG	2.7
1	CA	1450	U	2.7
11	AN	50	TYR	2.7
25	BB	1(M)	A	2.7
30	DH	105	LEU	2.7
38	BR	1	MET	2.7
42	BT	92	LEU	2.7
44	DV	68	PRO	2.7
3	CF	201	TYR	2.7
22	AD	47	U	2.7
28	DF	20	LEU	2.7
44	DV	44	PHE	2.7
29	DG	155	MET	2.7
12	CO	37	CYS	2.7
52	B7	48	LYS	2.7
48	DX	44	ARG	2.7
51	D6	47	THR	2.7
27	BE	67	PHE	2.7

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Mol	Chain	Res	Type	RSRZ
40	D2	38	LEU	2.7
4	CG	67	ILE	2.7
7	AJ	11	GLN	2.7
44	BV	74	VAL	2.7
7	AJ	153	HIS	2.7
30	DH	93	GLY	2.7
51	D6	44	ARG	2.7
3	AF	151	VAL	2.7
26	BD	173	VAL	2.7
40	D2	14	VAL	2.7
10	AM	22	LYS	2.6
44	BV	9	TYR	2.6
2	AE	81	VAL	2.6
7	AJ	63	LYS	2.6
24	BA	164	U	2.6
30	DH	81	GLU	2.6
34	DO	147	LEU	2.6
37	DQ	32	LEU	2.6
48	DX	26	LEU	2.6
51	D6	11	LEU	2.6
3	AF	199	LYS	2.6
12	CO	28	LYS	2.6
17	AT	17	LYS	2.6
29	BG	108	ASN	2.6
29	DG	37	VAL	2.6
28	DF	179	GLU	2.6
44	DV	38	TYR	2.6
49	B4	8	LYS	2.6
49	D4	20	ASN	2.6
4	CG	64	LEU	2.6
5	CH	133	TYR	2.6
49	B4	43	TYR	2.6
18	AU	42	ARG	2.6
30	DH	32	GLU	2.6
10	AM	10	GLY	2.6
5	CH	8	GLU	2.6
24	BA	654(R)	C	2.6
34	DO	125	VAL	2.6
44	DV	165	VAL	2.6
51	B6	37	ARG	2.6
24	BA	2167	U	2.6
2	CE	200	ILE	2.6

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Mol	Chain	Res	Type	RSRZ
6	AI	9	VAL	2.6
49	D4	36	CYS	2.6
2	AE	59	GLU	2.6
31	BK	66	GLU	2.6
31	BK	76	THR	2.6
44	DV	163	LEU	2.6
29	DG	142	PRO	2.6
28	BF	156	LEU	2.6
42	DT	90	GLU	2.6
27	DE	59	VAL	2.6
44	BV	151	HIS	2.6
3	CF	151	VAL	2.6
4	CG	168	ARG	2.6
24	BA	277	C	2.6
2	AE	234	PRO	2.6
3	CF	86	VAL	2.6
11	AN	82	VAL	2.6
44	BV	170	THR	2.6
51	B6	30	THR	2.6
49	B4	42	PHE	2.6
3	AF	150	LYS	2.5
19	CV	31	ILE	2.5
10	CM	100	THR	2.5
49	B4	33	VAL	2.5
46	BZ	95	LEU	2.5
44	DV	12	GLY	2.5
34	DO	89	ALA	2.5
49	D4	30	GLU	2.5
44	BV	5	LEU	2.5
3	CF	51	GLY	2.5
3	CF	74	GLY	2.5
40	D2	96	ILE	2.5
31	BK	125	GLU	2.5
53	B8	23	VAL	2.5
30	DH	30	LYS	2.5
3	CF	57	ILE	2.5
7	AJ	120	ILE	2.5
3	AF	168	ALA	2.5
44	DV	60	GLU	2.5
5	CH	43	LEU	2.5
2	CE	218	ALA	2.5
13	AP	8	GLU	2.5

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Mol	Chain	Res	Type	RSRZ
31	BK	139	GLN	2.5
5	CH	12	LEU	2.5
31	BK	140	LEU	2.5
9	CL	115	GLY	2.5
2	AE	148	TYR	2.5
28	BF	8	GLN	2.5
40	D2	27	ALA	2.5
49	D4	35	VAL	2.5
2	CE	66	GLY	2.5
2	CE	87	ARG	2.5
6	AI	47	ARG	2.5
26	BD	167	GLY	2.5
48	DX	60	GLU	2.5
51	D6	15	GLU	2.5
3	AF	189	ALA	2.5
43	DU	90	LEU	2.5
3	CF	62	ASP	2.5
34	DO	90	ARG	2.5
43	BU	2	ARG	2.5
14	CQ	25	VAL	2.5
29	BG	168	GLU	2.5
43	DU	31	LEU	2.5
11	AN	75	TYR	2.5
44	BV	173	ALA	2.5
43	DU	63	LYS	2.5
14	CQ	26	ARG	2.5
40	B2	38	LEU	2.5
43	DU	85	VAL	2.5
29	BG	140	ILE	2.5
2	CE	154	LEU	2.5
27	BE	52	LEU	2.5
34	DO	105	LEU	2.5
29	DG	97	ASP	2.4
12	CO	27	LEU	2.4
12	CO	54	LYS	2.4
30	BH	17	VAL	2.4
3	AF	149	ALA	2.4
3	AF	166	GLU	2.4
7	AJ	72	ARG	2.4
18	CU	88	LYS	2.4
29	BG	30	GLU	2.4
3	AF	169	ALA	2.4

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Mol	Chain	Res	Type	RSRZ
31	BK	13	GLY	2.4
29	DG	182	LYS	2.4
31	BK	7	GLU	2.4
31	BK	117	GLU	2.4
4	CG	21	LEU	2.4
35	DP	33	GLY	2.4
37	BQ	81	GLY	2.4
30	DH	76	VAL	2.4
30	DH	125	VAL	2.4
44	BV	105	VAL	2.4
28	DF	166	ALA	2.4
2	CE	201	ILE	2.4
18	AU	28	GLU	2.4
50	B5	49	CYS	2.4
6	AI	3	ARG	2.4
31	BK	141	LYS	2.4
43	BU	81	LYS	2.4
31	BK	54	GLN	2.4
44	BV	53	ILE	2.4
48	BX	2	PRO	2.4
48	DX	2	PRO	2.4
28	DF	12	LEU	2.4
20	CW	106	ALA	2.4
24	BA	2795	G	2.4
28	DF	175	THR	2.4
42	BT	90	GLU	2.4
43	BU	83	THR	2.4
49	D4	34	GLU	2.4
26	DD	38	LYS	2.4
49	B4	54	GLY	2.4
8	CK	46	LYS	2.4
14	CQ	41	ARG	2.4
18	AU	81	PHE	2.4
24	BA	276	A	2.4
24	BA	654(T)	A	2.4
43	DU	44	ILE	2.4
29	DG	152	LEU	2.4
44	DV	37	VAL	2.4
48	BX	59	VAL	2.4
2	CE	217	ARG	2.4
35	BP	65	PHE	2.4
49	B4	5	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
51	D6	37	ARG	2.4
34	DO	120	ALA	2.4
44	DV	91	LEU	2.4
44	DV	159	PRO	2.4
6	AI	54	LYS	2.4
10	CM	65	LEU	2.4
11	AN	80	VAL	2.4
19	AV	61	TYR	2.4
27	BE	183	LEU	2.4
41	BS	69	LEU	2.4
42	DT	13	LEU	2.4
10	CM	59	SER	2.3
19	CV	35	SER	2.3
8	CK	64	LYS	2.3
28	DF	2	LYS	2.3
37	DQ	33	LYS	2.3
49	D4	52	THR	2.3
46	BZ	93	GLU	2.3
18	AU	31	LEU	2.3
49	D4	50	VAL	2.3
44	DV	154	ASP	2.3
6	AI	53	ALA	2.3
2	CE	92	TYR	2.3
8	CK	22	GLU	2.3
36	B0	118	GLU	2.3
44	BV	123	ASP	2.3
2	CE	89	GLY	2.3
27	BE	71	GLY	2.3
29	BG	145	THR	2.3
30	BH	21	PRO	2.3
40	B2	54	GLY	2.3
4	CG	176	LEU	2.3
50	B5	3	LYS	2.3
1	CA	85	U	2.3
28	DF	205	ARG	2.3
38	BR	130	ALA	2.3
46	BZ	90	ILE	2.3
44	BV	116	VAL	2.3
50	B5	56	LYS	2.3
24	BA	645	C	2.3
7	AJ	18	TYR	2.3
5	CH	11	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
32	DM	15	LEU	2.3
35	DP	64	ILE	2.3
50	D5	2	ALA	2.3
2	AE	125	PRO	2.3
32	BM	61	ARG	2.3
49	B4	48	ARG	2.3
12	CO	26	ALA	2.3
29	BG	39	ILE	2.3
3	CF	96	GLY	2.3
7	AJ	156	TRP	2.3
10	AM	9	ARG	2.3
10	AM	33	GLN	2.3
44	DV	69	THR	2.3
2	CE	187	LEU	2.3
35	DP	65	PHE	2.3
46	BZ	60	PHE	2.3
28	BF	163	VAL	2.3
29	BG	112	PRO	2.3
2	AE	114	ARG	2.3
6	AI	63	TYR	2.3
11	AN	20	TYR	2.3
29	BG	106	LEU	2.3
30	DH	22	GLY	2.3
40	D2	30	GLY	2.3
49	B4	60	GLN	2.3
12	CO	85	ILE	2.3
44	BV	146	ILE	2.3
43	BU	54	LYS	2.3
3	CF	58	GLU	2.3
29	BG	122	PRO	2.3
13	AP	43	THR	2.3
30	BH	41	MET	2.3
2	CE	129	GLU	2.3
49	D4	23	GLU	2.3
3	CF	48	TYR	2.3
29	DG	68	PRO	2.3
3	AF	188	LEU	2.3
4	CG	110	PHE	2.3
14	CQ	55	GLY	2.3
19	CV	82	GLY	2.3
44	BV	160	GLY	2.3
29	BG	52	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
44	BV	51	ALA	2.2
2	CE	160	ASP	2.2
6	CI	39	LYS	2.2
8	CK	107	LEU	2.2
43	DU	59	GLY	2.2
7	AJ	61	VAL	2.2
24	BA	270(O)	U	2.2
44	BV	126	VAL	2.2
10	AM	61	GLU	2.2
11	CN	31	THR	2.2
5	CH	65	ASN	2.2
6	AI	48	LEU	2.2
34	DO	135	LEU	2.2
42	BT	28	PHE	2.2
44	DV	160	GLY	2.2
3	CF	64	VAL	2.2
10	CM	86	MET	2.2
27	BE	72	VAL	2.2
1	CA	208	U	2.2
11	AN	94	ALA	2.2
19	CV	27	GLU	2.2
46	BZ	91	LYS	2.2
28	DF	7	TYR	2.2
2	CE	71	VAL	2.2
3	AF	198	VAL	2.2
5	CH	82	VAL	2.2
10	CM	73	ASP	2.2
26	BD	171	ASP	2.2
29	BG	66	GLN	2.2
32	BM	53	VAL	2.2
40	D2	21	ARG	2.2
32	BM	128	HIS	2.2
24	DA	2798	C	2.2
30	BH	16	SER	2.2
43	BU	52	SER	2.2
31	BK	138	ILE	2.2
35	BP	1	MET	2.2
42	BT	87	GLN	2.2
49	D4	51	ASP	2.2
43	BU	4	LYS	2.2
6	AI	28	ARG	2.2
33	DN	36	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
49	B4	17	GLY	2.2
6	AI	52	ILE	2.2
2	AE	187	LEU	2.2
37	BQ	112	PHE	2.2
2	CE	15	VAL	2.2
3	AF	103	VAL	2.2
49	B4	63	TYR	2.2
2	CE	110	GLN	2.2
6	AI	31	GLU	2.2
29	BG	48	GLU	2.2
2	CE	162	ILE	2.2
30	DH	113	VAL	2.2
44	DV	52	SER	2.2
44	DV	122	ARG	2.2
11	AN	110	ASP	2.2
3	CF	115	LEU	2.2
43	DU	33	LYS	2.2
44	DV	7	ALA	2.2
4	CG	186	LEU	2.2
27	DE	66	HIS	2.2
4	CG	187	ARG	2.2
10	AM	95	GLU	2.2
4	CG	165	MET	2.2
7	AJ	53	LYS	2.2
16	CS	84	ALA	2.2
40	D2	45	THR	2.2
2	AE	116	GLU	2.2
26	BD	166	GLN	2.2
38	BR	6	LEU	2.2
44	DV	51	ALA	2.2
27	BE	3	GLY	2.2
11	AN	14	VAL	2.2
44	DV	178	GLU	2.1
49	D4	22	ILE	2.2
9	AL	36	TYR	2.1
19	CV	61	TYR	2.1
11	CN	12	ARG	2.1
3	CF	98	ASN	2.1
3	AF	107	GLN	2.1
27	BE	61	ARG	2.1
37	DQ	109	GLY	2.1
29	BG	93	THR	2.1

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Mol	Chain	Res	Type	RSRZ
31	BK	8	PRO	2.1
44	BV	154	ASP	2.1
13	CP	2	ALA	2.1
34	DO	100	LEU	2.1
48	DX	28	LEU	2.1
5	CH	34	VAL	2.1
6	AI	88	VAL	2.1
42	DT	93	GLU	2.1
44	DV	6	LYS	2.1
49	D4	18	CYS	2.1
32	BM	13	TRP	2.1
34	DO	130	PHE	2.1
13	CP	5	ALA	2.1
37	BQ	57	LYS	2.1
2	CE	41	ILE	2.1
43	DU	24	VAL	2.1
2	CE	216	SER	2.1
29	BG	178	PHE	2.1
26	DD	5	LYS	2.1
2	CE	146	GLN	2.1
32	BM	8	GLN	2.1
14	CQ	56	VAL	2.1
24	BA	1534	G	2.1
19	AV	3	ARG	2.1
26	BD	168	ARG	2.1
24	BA	165	U	2.1
42	DT	28	PHE	2.1
28	DF	22	ALA	2.1
38	BR	135	ALA	2.1
29	BG	148	MET	2.1
30	DH	16	SER	2.1
44	DV	54	HIS	2.1
49	D4	12	ALA	2.1
44	DV	63	ASP	2.1
3	CF	152	ILE	2.1
5	AH	89	ILE	2.1
29	BG	88	ILE	2.1
53	B8	35	GLN	2.1
1	CA	1031	G	2.1
27	DE	96	PHE	2.1
2	AE	229	VAL	2.1
10	CM	3	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
44	DV	27	VAL	2.1
2	AE	115	LEU	2.1
28	DF	123	LEU	2.1
29	BG	74	LYS	2.1
30	DH	27	LYS	2.1
35	BP	105	GLU	2.1
43	DU	6	HIS	2.1
37	BQ	44	LYS	2.1
44	BV	62	PRO	2.1
27	BE	4	ILE	2.0
44	BV	54	HIS	2.0
1	CA	412	A	2.0
39	B1	104	GLN	2.0
11	AN	28	THR	2.0
36	B0	100	LEU	2.0
43	DU	89	PHE	2.0
3	CF	19	GLU	2.0
14	CQ	38	GLY	2.0
3	AF	75	VAL	2.0
4	CG	164	ALA	2.0
44	BV	133	ILE	2.0
46	BZ	26	ARG	2.0
49	B4	46	GLN	2.0
16	CS	49	LEU	2.0
34	BO	105	LEU	2.0
3	AF	72	LYS	2.0
24	BA	162	U	2.0
44	DV	173	ALA	2.0
47	BW	41	ILE	2.0
29	BG	139	LEU	2.0
43	DU	34	LYS	2.0
16	CS	59	TRP	2.0
30	BH	32	GLU	2.0
32	BM	100	GLU	2.0
30	DH	28	GLY	2.0
35	BP	132	VAL	2.0
34	DO	102	ARG	2.0
2	CE	102	LEU	2.0
9	CL	19	LEU	2.0
17	CT	6	LEU	2.0
40	B2	35	LEU	2.0
2	CE	116	GLU	2.0

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Mol	Chain	Res	Type	RSRZ
24	DA	1	G	2.0
30	BH	18	GLU	2.0
40	D2	93	GLU	2.0
11	AN	42	TRP	2.0
2	CE	83	MET	2.0
11	AN	91	ARG	2.0
13	AP	2	ALA	2.0
30	DH	41	MET	2.0
43	DU	12	THR	2.0
2	AE	135	GLN	2.0
3	CF	105	GLU	2.0
10	AM	80	LYS	2.0
42	DT	68	ARG	2.0
42	DT	69	TYR	2.0
38	BR	131	ALA	2.0
10	AM	65	LEU	2.0
44	BV	18	LEU	2.0

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

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

6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. 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(\AA^2)	Q<0.9
54	MG	AA	1672	1/1	0.89	0.46	81.41	86,86,86,86	0
54	MG	CA	1673	1/1	0.93	0.31	44.15	74,74,74,74	0
54	MG	BA	3172	1/1	0.99	0.47	42.65	62,62,62,62	0
54	MG	BA	3198	1/1	0.92	0.41	38.10	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	AA	1689	1/1	0.95	0.36	35.45	73,73,73,73	0
54	MG	BA	3579	1/1	0.97	0.50	34.48	51,51,51,51	0
54	MG	DA	3370	1/1	0.61	0.40	34.33	87,87,87,87	0
54	MG	BA	3559	1/1	0.98	0.43	31.52	65,65,65,65	0
54	MG	DA	3242	1/1	0.89	0.44	31.10	66,66,66,66	0
54	MG	DA	3336	1/1	0.92	0.47	30.88	90,90,90,90	0
54	MG	AA	1799	1/1	0.86	0.45	30.54	111,111,111,111	0
54	MG	BA	3171	1/1	0.89	0.52	28.03	92,92,92,92	0
54	MG	DA	3141	1/1	0.96	0.32	27.95	88,88,88,88	0
54	MG	BA	3355	1/1	0.81	0.40	27.79	86,86,86,86	0
54	MG	BA	3517	1/1	0.79	0.37	27.44	90,90,90,90	0
54	MG	BA	3179	1/1	0.97	0.52	26.75	60,60,60,60	0
54	MG	BA	3123	1/1	0.97	0.41	26.71	74,74,74,74	0
54	MG	BA	3140	1/1	0.98	0.41	26.63	47,47,47,47	0
54	MG	DA	3085	1/1	0.82	0.41	26.09	89,89,89,89	0
54	MG	BA	3008	1/1	0.99	0.44	25.90	59,59,59,59	0
54	MG	AA	1778	1/1	0.96	0.47	25.87	70,70,70,70	0
54	MG	AA	1713	1/1	0.86	0.42	25.81	82,82,82,82	0
54	MG	DA	3153	1/1	0.83	0.31	25.53	88,88,88,88	0
54	MG	DA	3096	1/1	0.82	0.43	25.39	88,88,88,88	0
54	MG	AA	1667	1/1	0.90	0.52	25.13	82,82,82,82	0
54	MG	DA	3388	1/1	0.94	0.25	24.33	78,78,78,78	0
54	MG	CA	1668	1/1	0.98	0.39	24.24	61,61,61,61	0
54	MG	BA	3189	1/1	0.99	0.41	24.12	52,52,52,52	0
54	MG	BA	3145	1/1	0.96	0.43	23.97	61,61,61,61	0
54	MG	BA	3055	1/1	0.92	0.37	23.90	84,84,84,84	0
54	MG	BA	3254	1/1	0.98	0.31	23.53	72,72,72,72	0
54	MG	BA	3197	1/1	0.88	0.28	23.41	89,89,89,89	0
54	MG	DA	3297	1/1	0.95	0.40	23.30	84,84,84,84	0
54	MG	DA	3386	1/1	0.85	0.26	23.06	71,71,71,71	0
54	MG	BA	3155	1/1	0.98	0.40	22.95	55,55,55,55	0
54	MG	DA	3371	1/1	0.97	0.34	22.26	98,98,98,98	0
54	MG	BA	3272	1/1	0.92	0.19	22.14	53,53,53,53	0
54	MG	BA	3168	1/1	0.91	0.35	22.04	85,85,85,85	0
54	MG	DA	3171	1/1	0.89	0.38	21.80	64,64,64,64	0
54	MG	CC	109	1/1	0.76	0.22	21.65	111,111,111,111	0
54	MG	DA	3054	1/1	0.96	0.36	21.43	65,65,65,65	0
54	MG	BA	3534	1/1	0.83	0.44	21.10	85,85,85,85	0
54	MG	BA	3024	1/1	0.89	0.35	21.07	56,56,56,56	0
54	MG	DA	3508	1/1	0.93	0.38	20.43	65,65,65,65	0
54	MG	BA	3065	1/1	0.88	0.46	20.42	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	BA	3092	1/1	0.85	0.37	20.24	72,72,72,72	0
54	MG	B7	101	1/1	0.88	0.38	20.12	69,69,69,69	0
54	MG	DA	3224	1/1	0.96	0.46	19.86	49,49,49,49	0
54	MG	BA	3556	1/1	0.98	0.38	19.79	49,49,49,49	0
54	MG	BA	3159	1/1	0.95	0.33	19.69	69,69,69,69	0
54	MG	DA	3178	1/1	0.88	0.38	19.54	70,70,70,70	0
54	MG	DA	3194	1/1	0.91	0.43	19.31	54,54,54,54	0
54	MG	BA	3086	1/1	0.96	0.50	18.91	73,73,73,73	0
54	MG	BA	3002	1/1	0.96	0.35	18.88	58,58,58,58	0
54	MG	DA	3218	1/1	0.98	0.39	18.87	56,56,56,56	0
54	MG	BA	3040	1/1	0.97	0.34	18.80	58,58,58,58	0
54	MG	BA	3304	1/1	0.85	0.41	18.74	81,81,81,81	0
54	MG	CA	1742	1/1	0.94	0.27	18.45	90,90,90,90	0
54	MG	BA	3252	1/1	0.97	0.49	18.26	63,63,63,63	0
54	MG	DA	3506	1/1	0.95	0.38	18.25	91,91,91,91	0
54	MG	BA	3148	1/1	0.95	0.32	18.09	85,85,85,85	0
54	MG	AA	1666	1/1	0.94	0.40	17.91	88,88,88,88	0
54	MG	DA	3067	1/1	0.82	0.43	17.79	93,93,93,93	0
54	MG	DA	3043	1/1	0.92	0.31	17.70	88,88,88,88	0
54	MG	DA	3158	1/1	0.89	0.34	17.61	71,71,71,71	0
54	MG	DA	3202	1/1	0.96	0.28	17.46	60,60,60,60	0
54	MG	BA	3028	1/1	0.97	0.38	17.27	59,59,59,59	0
54	MG	DA	3221	1/1	0.87	0.32	17.19	74,74,74,74	0
54	MG	DA	3112	1/1	0.93	0.30	17.10	58,58,58,58	0
54	MG	BA	3287	1/1	0.84	0.46	17.06	70,70,70,70	0
54	MG	DA	3348	1/1	0.73	0.28	16.96	90,90,90,90	0
54	MG	BA	3156	1/1	0.98	0.34	16.84	57,57,57,57	0
54	MG	DA	3267	1/1	0.95	0.29	16.76	78,78,78,78	0
54	MG	CA	1746	1/1	0.97	0.36	16.73	97,97,97,97	0
54	MG	DA	3048	1/1	0.92	0.33	16.66	61,61,61,61	0
54	MG	DA	3381	1/1	0.96	0.22	16.65	93,93,93,93	0
54	MG	BA	3010	1/1	0.97	0.34	16.60	45,45,45,45	0
54	MG	BA	3222	1/1	0.72	0.25	16.52	62,62,62,62	0
54	MG	DA	3172	1/1	0.92	0.36	16.52	66,66,66,66	0
54	MG	BA	3095	1/1	0.89	0.46	16.52	57,57,57,57	0
54	MG	BA	3105	1/1	0.96	0.36	16.49	60,60,60,60	0
54	MG	DA	3478	1/1	0.99	0.40	16.45	63,63,63,63	0
54	MG	BA	3607	1/1	0.97	0.40	16.38	62,62,62,62	0
54	MG	BA	3096	1/1	0.95	0.39	16.37	56,56,56,56	0
54	MG	BA	3299	1/1	0.95	0.36	16.30	79,79,79,79	0
54	MG	AA	1694	1/1	0.75	0.29	16.28	87,87,87,87	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	BA	3303	1/1	0.93	0.31	16.02	69,69,69,69	0
54	MG	DA	3257	1/1	0.96	0.37	15.95	56,56,56,56	0
54	MG	DA	3316	1/1	0.78	0.30	15.80	76,76,76,76	0
54	MG	BA	3628	1/1	0.93	0.33	15.62	78,78,78,78	0
54	MG	BA	3006	1/1	0.91	0.35	15.49	56,56,56,56	0
54	MG	BA	3005	1/1	0.94	0.38	15.43	59,59,59,59	0
54	MG	DA	3305	1/1	0.93	0.34	15.41	78,78,78,78	0
54	MG	BA	3236	1/1	0.93	0.34	15.29	74,74,74,74	0
54	MG	BA	3208	1/1	0.97	0.48	15.27	67,67,67,67	0
54	MG	AA	1808	1/1	0.70	0.35	15.12	125,125,125,125	0
54	MG	DA	3210	1/1	0.94	0.32	14.85	57,57,57,57	0
54	MG	BA	3343	1/1	0.88	0.42	14.74	73,73,73,73	0
54	MG	DA	3128	1/1	0.97	0.29	14.68	56,56,56,56	0
54	MG	DA	3219	1/1	0.97	0.33	14.63	70,70,70,70	0
54	MG	DA	3397	1/1	0.98	0.41	14.62	52,52,52,52	0
54	MG	AA	1717	1/1	0.55	0.28	14.58	87,87,87,87	0
54	MG	BA	3571	1/1	0.97	0.35	14.28	45,45,45,45	0
54	MG	AA	1609	1/1	0.97	0.30	14.23	61,61,61,61	0
54	MG	BA	3097	1/1	0.94	0.49	14.18	69,69,69,69	0
54	MG	DA	3255	1/1	0.92	0.32	14.07	62,62,62,62	0
54	MG	AA	1657	1/1	0.97	0.38	14.07	58,58,58,58	0
54	MG	DA	3355	1/1	0.94	0.39	14.01	84,84,84,84	0
54	MG	BA	3076	1/1	0.86	0.41	13.77	86,86,86,86	0
54	MG	CA	1747	1/1	0.83	0.34	13.69	96,96,96,96	0
54	MG	DA	3511	1/1	0.86	0.31	13.60	77,77,77,77	0
54	MG	AA	1677	1/1	0.68	0.37	13.56	109,109,109,109	0
54	MG	DA	3475	1/1	0.96	0.35	13.55	66,66,66,66	0
54	MG	BA	3558	1/1	0.98	0.34	13.52	58,58,58,58	0
54	MG	DA	3181	1/1	0.99	0.27	13.47	78,78,78,78	0
54	MG	BA	3103	1/1	0.96	0.29	13.36	76,76,76,76	0
54	MG	DA	3236	1/1	0.98	0.30	13.32	56,56,56,56	0
54	MG	DA	3225	1/1	0.97	0.33	13.29	57,57,57,57	0
54	MG	DA	3469	1/1	0.98	0.38	13.25	50,50,50,50	0
54	MG	BA	3298	1/1	0.97	0.32	13.24	43,43,43,43	0
54	MG	DA	3471	1/1	0.97	0.31	13.11	51,51,51,51	0
54	MG	BA	3327	1/1	0.77	0.35	13.06	85,85,85,85	0
54	MG	DA	3215	1/1	0.96	0.29	13.06	68,68,68,68	0
54	MG	BA	3038	1/1	0.99	0.30	12.98	53,53,53,53	0
54	MG	BA	3133	1/1	0.96	0.34	12.92	72,72,72,72	0
54	MG	DA	3318	1/1	0.89	0.33	12.81	88,88,88,88	0
54	MG	BA	3422	1/1	0.98	0.33	12.78	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	DA	3317	1/1	0.97	0.26	12.77	67,67,67,67	0
54	MG	BA	3268	1/1	0.95	0.36	12.76	86,86,86,86	0
54	MG	BA	3154	1/1	0.96	0.36	12.55	59,59,59,59	0
54	MG	BA	3561	1/1	0.95	0.34	12.47	57,57,57,57	0
54	MG	AA	1831	1/1	0.91	0.31	12.40	91,91,91,91	0
54	MG	DB	206	1/1	0.68	0.32	12.26	104,104,104,104	0
54	MG	DA	3114	1/1	0.97	0.28	12.16	70,70,70,70	0
54	MG	DA	3331	1/1	0.87	0.28	12.05	79,79,79,79	0
54	MG	DA	3229	1/1	0.97	0.36	11.94	57,57,57,57	0
54	MG	BE	301	1/1	0.96	0.33	11.89	59,59,59,59	0
54	MG	DA	3230	1/1	0.96	0.28	11.88	64,64,64,64	0
54	MG	BA	3444	1/1	0.87	0.30	11.71	81,81,81,81	0
54	MG	BA	3371	1/1	0.91	0.26	11.55	77,77,77,77	0
54	MG	BA	3472	1/1	0.97	0.28	11.45	114,114,114,114	0
54	MG	BA	3589	1/1	0.86	0.28	11.41	66,66,66,66	0
54	MG	BA	3541	1/1	0.98	0.33	11.39	74,74,74,74	0
54	MG	BA	3013	1/1	0.97	0.28	11.37	65,65,65,65	0
54	MG	BA	3016	1/1	0.99	0.39	11.22	57,57,57,57	0
54	MG	DA	3232	1/1	0.97	0.31	11.18	54,54,54,54	0
54	MG	DA	3199	1/1	0.96	0.26	11.10	63,63,63,63	0
54	MG	AA	1644	1/1	0.92	0.35	11.10	68,68,68,68	0
54	MG	DA	3467	1/1	0.93	0.27	11.09	72,72,72,72	0
54	MG	DA	3341	1/1	0.87	0.30	11.06	68,68,68,68	0
54	MG	CC	102	1/1	0.94	0.31	10.98	77,77,77,77	0
54	MG	BA	3059	1/1	0.92	0.25	10.87	78,78,78,78	0
54	MG	BA	3211	1/1	0.99	0.24	10.82	48,48,48,48	0
54	MG	BA	3267	1/1	0.96	0.34	10.74	75,75,75,75	0
54	MG	BA	3021	1/1	0.95	0.32	10.65	63,63,63,63	0
54	MG	BB	209	1/1	0.90	0.24	10.57	112,112,112,112	0
54	MG	B1	201	1/1	0.90	0.30	10.45	68,68,68,68	0
54	MG	BA	3602	1/1	0.92	0.26	10.36	71,71,71,71	0
54	MG	AA	1634	1/1	0.85	0.22	10.25	97,97,97,97	0
54	MG	AA	1650	1/1	0.94	0.36	10.21	87,87,87,87	0
54	MG	BA	3001	1/1	0.98	0.40	10.17	57,57,57,57	0
54	MG	BA	3560	1/1	0.94	0.28	10.07	54,54,54,54	0
54	MG	BA	3337	1/1	0.92	0.43	9.96	64,64,64,64	0
54	MG	BA	3069	1/1	0.96	0.25	9.96	68,68,68,68	0
54	MG	AA	1764	1/1	0.95	0.37	9.91	111,111,111,111	0
54	MG	BA	3409	1/1	0.93	0.23	9.90	73,73,73,73	0
54	MG	AA	1773	1/1	0.67	0.42	9.86	125,125,125,125	0
54	MG	DA	3369	1/1	0.90	0.28	9.81	91,91,91,91	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	DA	3480	1/1	0.95	0.33	9.80	64,64,64,64	0
54	MG	BA	3302	1/1	0.98	0.42	9.78	59,59,59,59	0
54	MG	AA	1821	1/1	0.94	0.21	9.77	96,96,96,96	0
54	MG	DA	3481	1/1	0.98	0.27	9.66	55,55,55,55	0
54	MG	BA	3525	1/1	0.84	0.30	9.52	47,47,47,47	0
54	MG	BA	3567	1/1	0.97	0.30	9.47	62,62,62,62	0
54	MG	BA	3142	1/1	0.96	0.30	9.43	66,66,66,66	0
54	MG	DA	3081	1/1	0.88	0.21	9.42	91,91,91,91	0
54	MG	DA	3302	1/1	0.95	0.21	9.42	64,64,64,64	0
54	MG	BA	3104	1/1	0.98	0.34	9.39	45,45,45,45	0
54	MG	CA	1683	1/1	0.96	0.37	9.36	86,86,86,86	0
54	MG	BA	3053	1/1	0.97	0.29	9.24	90,90,90,90	0
54	MG	CA	1638	1/1	0.94	0.28	9.23	100,100,100,100	0
54	MG	BA	3108	1/1	0.98	0.28	9.22	56,56,56,56	0
54	MG	AA	1790	1/1	0.85	0.26	9.17	97,97,97,97	0
54	MG	DA	3100	1/1	0.95	0.39	9.15	64,64,64,64	0
54	MG	BA	3057	1/1	0.94	0.36	9.12	70,70,70,70	0
54	MG	CA	1644	1/1	0.91	0.27	9.07	85,85,85,85	0
54	MG	DA	3285	1/1	0.95	0.24	8.86	57,57,57,57	0
54	MG	BA	3352	1/1	0.88	0.27	8.81	112,112,112,112	0
54	MG	DA	3108	1/1	0.96	0.29	8.76	65,65,65,65	0
54	MG	BA	3081	1/1	0.97	0.20	8.67	72,72,72,72	0
54	MG	AA	1627	1/1	0.87	0.46	8.67	76,76,76,76	0
54	MG	DA	3160	1/1	0.98	0.32	8.62	69,69,69,69	0
54	MG	BA	3245	1/1	0.78	0.32	8.60	67,67,67,67	0
54	MG	AA	1601	1/1	0.95	0.29	8.59	76,76,76,76	0
54	MG	DA	3132	1/1	0.94	0.27	8.46	80,80,80,80	0
54	MG	DA	3465	1/1	0.92	0.30	8.38	50,50,50,50	0
54	MG	DA	3170	1/1	0.98	0.23	8.37	58,58,58,58	0
54	MG	DA	3119	1/1	0.98	0.30	8.31	58,58,58,58	0
54	MG	BA	3361	1/1	0.79	0.26	8.04	76,76,76,76	0
54	MG	DB	207	1/1	0.83	0.27	8.02	133,133,133,133	0
54	MG	BA	3060	1/1	0.91	0.22	8.00	92,92,92,92	0
54	MG	DA	3414	1/1	0.88	0.23	7.98	92,92,92,92	0
54	MG	DA	3109	1/1	0.94	0.30	7.84	61,61,61,61	0
54	MG	BA	3029	1/1	0.98	0.33	7.83	62,62,62,62	0
54	MG	BA	3027	1/1	0.98	0.28	7.80	53,53,53,53	0
54	MG	DA	3165	1/1	0.93	0.31	7.65	64,64,64,64	0
54	MG	AA	1676	1/1	0.96	0.27	7.65	109,109,109,109	0
54	MG	DA	3211	1/1	0.97	0.27	7.63	52,52,52,52	0
54	MG	DA	3473	1/1	0.94	0.22	7.53	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	AA	1822	1/1	0.87	0.17	7.39	101,101,101,101	0
54	MG	AC	106	1/1	0.94	0.24	7.35	104,104,104,104	0
54	MG	BA	3035	1/1	0.95	0.32	7.30	52,52,52,52	0
54	MG	DA	3028	1/1	0.94	0.28	7.28	74,74,74,74	0
54	MG	DA	3312	1/1	0.92	0.28	7.26	81,81,81,81	0
54	MG	BA	3188	1/1	0.97	0.28	7.25	47,47,47,47	0
54	MG	CA	1633	1/1	0.93	0.23	7.24	85,85,85,85	0
54	MG	BA	3018	1/1	0.98	0.36	7.21	55,55,55,55	0
54	MG	BA	3612	1/1	0.94	0.21	7.16	67,67,67,67	0
54	MG	BA	3166	1/1	0.88	0.26	7.12	72,72,72,72	0
54	MG	BA	3338	1/1	0.90	0.22	7.06	77,77,77,77	0
54	MG	BA	3363	1/1	0.94	0.22	6.91	79,79,79,79	0
54	MG	BA	3336	1/1	0.80	0.21	6.85	72,72,72,72	0
54	MG	DA	3140	1/1	0.95	0.29	6.78	80,80,80,80	0
54	MG	BA	3231	1/1	0.61	0.21	6.68	89,89,89,89	0
54	MG	DA	3209	1/1	0.96	0.31	6.49	61,61,61,61	0
54	MG	AA	1769	1/1	0.93	0.27	6.47	122,122,122,122	0
54	MG	DA	3145	1/1	0.91	0.19	6.46	86,86,86,86	0
54	MG	DA	3020	1/1	0.84	0.28	6.41	81,81,81,81	0
54	MG	CA	1768	1/1	0.73	0.21	6.41	97,97,97,97	0
54	MG	CA	1688	1/1	0.93	0.26	6.37	88,88,88,88	0
54	MG	BA	3430	1/1	0.96	0.19	6.35	93,93,93,93	0
54	MG	BA	3484	1/1	0.95	0.27	6.34	76,76,76,76	0
54	MG	BA	3210	1/1	0.97	0.29	6.25	59,59,59,59	0
54	MG	DA	3103	1/1	0.96	0.21	6.22	66,66,66,66	0
54	MG	DA	3106	1/1	0.96	0.24	6.14	66,66,66,66	0
54	MG	CA	1697	1/1	0.63	0.30	6.07	95,95,95,95	0
54	MG	AA	1829	1/1	0.78	0.19	6.02	81,81,81,81	0
54	MG	CA	1715	1/1	0.64	0.21	5.98	102,102,102,102	0
54	MG	DA	3159	1/1	0.96	0.24	5.94	67,67,67,67	0
54	MG	BA	3341	1/1	0.64	0.21	5.84	67,67,67,67	0
54	MG	CA	1653	1/1	0.85	0.21	5.71	124,124,124,124	0
54	MG	CA	1793	1/1	0.98	0.33	5.68	82,82,82,82	0
54	MG	BA	3232	1/1	0.88	0.21	5.55	95,95,95,95	0
54	MG	BA	3285	1/1	0.96	0.39	5.48	67,67,67,67	0
54	MG	CA	1606	1/1	0.97	0.21	5.43	83,83,83,83	0
54	MG	CA	1654	1/1	0.94	0.23	5.34	107,107,107,107	0
54	MG	BA	3177	1/1	0.91	0.20	5.26	87,87,87,87	0
54	MG	DA	3173	1/1	0.98	0.29	5.24	53,53,53,53	0
54	MG	DA	3175	1/1	0.92	0.21	5.16	71,71,71,71	0
54	MG	AA	1619	1/1	0.95	0.23	5.15	96,96,96,96	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	AA	1759	1/1	0.73	0.18	4.99	101,101,101,101	0
54	MG	DA	3195	1/1	0.93	0.23	4.97	82,82,82,82	0
54	MG	BA	3175	1/1	0.98	0.27	4.95	61,61,61,61	0
54	MG	AA	1698	1/1	0.86	0.21	4.87	85,85,85,85	0
54	MG	CA	1682	1/1	0.93	0.27	4.81	94,94,94,94	0
54	MG	DA	3346	1/1	0.95	0.20	4.81	93,93,93,93	0
54	MG	DA	3281	1/1	0.66	0.19	4.77	92,92,92,92	0
54	MG	BA	3116	1/1	0.98	0.25	4.76	84,84,84,84	0
54	MG	DA	3251	1/1	0.96	0.25	4.74	87,87,87,87	0
54	MG	DA	3083	1/1	0.93	0.34	4.73	90,90,90,90	0
54	MG	AA	1792	1/1	0.97	0.22	4.68	108,108,108,108	0
54	MG	DA	3177	1/1	0.91	0.34	4.61	65,65,65,65	0
54	MG	DA	3295	1/1	0.96	0.19	4.58	128,128,128,128	0
54	MG	BA	3574	1/1	0.92	0.19	4.57	60,60,60,60	0
54	MG	DA	3090	1/1	0.93	0.18	4.52	119,119,119,119	0
54	MG	BA	3351	1/1	0.93	0.20	4.38	62,62,62,62	0
54	MG	DA	3491	1/1	0.95	0.19	4.36	71,71,71,71	0
54	MG	BA	3290	1/1	0.80	0.19	4.33	82,82,82,82	0
54	MG	BB	202	1/1	0.97	0.20	4.26	101,101,101,101	0
54	MG	DA	3213	1/1	0.91	0.21	4.21	64,64,64,64	0
54	MG	DA	3254	1/1	0.79	0.26	4.05	79,79,79,79	0
54	MG	AA	1638	1/1	0.83	0.19	3.98	109,109,109,109	0
54	MG	DA	3227	1/1	0.90	0.16	3.98	67,67,67,67	0
54	MG	CA	1687	1/1	0.91	0.19	3.94	84,84,84,84	0
54	MG	BA	3067	1/1	0.95	0.21	3.87	60,60,60,60	0
54	MG	AA	1618	1/1	0.96	0.26	3.84	82,82,82,82	0
54	MG	BA	3162	1/1	0.94	0.21	3.81	85,85,85,85	0
54	MG	DA	3124	1/1	0.96	0.26	3.81	71,71,71,71	0
54	MG	BA	3167	1/1	0.85	0.23	3.80	68,68,68,68	0
54	MG	AC	101	1/1	0.97	0.24	3.79	68,68,68,68	0
54	MG	DA	3313	1/1	0.94	0.34	3.78	54,54,54,54	0
54	MG	DA	3310	1/1	0.90	0.34	3.78	85,85,85,85	0
54	MG	BA	3402	1/1	0.93	0.20	3.69	83,83,83,83	0
54	MG	BA	3173	1/1	0.97	0.23	3.66	60,60,60,60	0
54	MG	BA	3359	1/1	0.86	0.24	3.64	83,83,83,83	0
54	MG	DA	3050	1/1	0.93	0.19	3.50	67,67,67,67	0
54	MG	CA	1610	1/1	0.97	0.17	3.43	97,97,97,97	0
54	MG	DA	3479	1/1	0.95	0.17	3.35	68,68,68,68	0
54	MG	CA	1776	1/1	0.94	0.27	3.32	98,98,98,98	0
54	MG	DA	3418	1/1	0.85	0.16	3.31	97,97,97,97	0
54	MG	BA	3050	1/1	0.93	0.22	3.28	79,79,79,79	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	DA	3512	1/1	0.96	0.22	3.28	63,63,63,63	0
54	MG	DA	3053	1/1	0.86	0.30	3.22	70,70,70,70	0
54	MG	CA	1660	1/1	0.64	0.15	3.19	101,101,101,101	0
54	MG	BA	3255	1/1	0.93	0.19	3.17	69,69,69,69	0
54	MG	BA	3291	1/1	0.96	0.22	3.15	85,85,85,85	0
54	MG	DB	202	1/1	0.85	0.18	3.14	116,116,116,116	0
54	MG	BA	3535	1/1	0.91	0.19	3.10	79,79,79,79	0
54	MG	DA	3004	1/1	0.87	0.43	3.04	105,105,105,105	0
54	MG	DA	3084	1/1	0.79	0.15	3.02	67,67,67,67	0
54	MG	BA	3170	1/1	0.88	0.19	2.91	57,57,57,57	0
54	MG	BA	3481	1/1	0.66	0.20	2.90	79,79,79,79	0
54	MG	BA	3613	1/1	0.98	0.18	2.84	64,64,64,64	0
54	MG	BA	3261	1/1	0.93	0.20	2.79	65,65,65,65	0
54	MG	DA	3212	1/1	0.96	0.32	2.71	48,48,48,48	0
54	MG	DA	3272	1/1	0.87	0.17	2.65	65,65,65,65	0
54	MG	DA	3413	1/1	0.93	0.17	2.59	84,84,84,84	0
54	MG	BA	3551	1/1	0.95	0.17	2.42	93,93,93,93	0
54	MG	AA	1643	1/1	0.86	0.16	2.35	91,91,91,91	0
54	MG	BA	3023	1/1	0.96	0.30	2.23	45,45,45,45	0
54	MG	AA	1607	1/1	0.97	0.17	2.20	89,89,89,89	0
54	MG	CA	1775	1/1	0.89	0.14	2.19	84,84,84,84	0
54	MG	BA	3508	1/1	0.90	0.19	2.13	83,83,83,83	0
54	MG	CA	1665	1/1	0.94	0.16	2.11	82,82,82,82	0
54	MG	D1	201	1/1	0.84	0.27	2.03	72,72,72,72	0
54	MG	BA	3630	1/1	0.81	0.21	1.92	93,93,93,93	0
54	MG	CA	1717	1/1	0.93	0.21	1.86	86,86,86,86	0
54	MG	BA	3084	1/1	0.96	0.15	1.85	109,109,109,109	0
54	MG	BA	3577	1/1	0.94	0.17	1.81	72,72,72,72	0
54	MG	DA	3016	1/1	0.89	0.17	1.80	74,74,74,74	0
54	MG	AA	1757	1/1	0.86	0.14	1.77	102,102,102,102	0
54	MG	DA	3351	1/1	0.96	0.15	1.76	85,85,85,85	0
54	MG	CA	1661	1/1	0.92	0.23	1.75	88,88,88,88	0
54	MG	CA	1762	1/1	0.87	0.14	1.74	83,83,83,83	0
54	MG	CA	1725	1/1	0.75	0.19	1.71	115,115,115,115	0
54	MG	BA	3114	1/1	0.68	0.16	1.70	98,98,98,98	0
54	MG	B0	201	1/1	0.99	0.26	1.59	67,67,67,67	0
54	MG	DA	3402	1/1	0.96	0.15	1.57	91,91,91,91	0
54	MG	CA	1794	1/1	0.95	0.15	1.55	112,112,112,112	0
54	MG	DE	304	1/1	0.96	0.21	1.55	66,66,66,66	0
55	T1C	CA	1800	42/42	0.90	0.15	1.53	101,116,124,127	0
54	MG	AA	1680	1/1	0.97	0.13	1.52	105,105,105,105	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	CA	1617	1/1	0.96	0.21	1.50	109,109,109,109	0
54	MG	BA	3214	1/1	0.98	0.29	1.39	56,56,56,56	0
54	MG	BB	214	1/1	0.73	0.15	1.35	99,99,99,99	0
54	MG	BA	3009	1/1	0.97	0.17	1.34	66,66,66,66	0
54	MG	AA	1660	1/1	0.83	0.16	1.31	68,68,68,68	0
54	MG	AA	1739	1/1	0.89	0.12	1.27	191,191,191,191	0
54	MG	DA	3135	1/1	0.93	0.14	1.24	79,79,79,79	0
54	MG	BA	3066	1/1	0.94	0.20	1.22	60,60,60,60	0
54	MG	BA	3037	1/1	0.98	0.17	1.22	68,68,68,68	0
54	MG	DA	3502	1/1	0.89	0.16	1.19	67,67,67,67	0
54	MG	CA	1749	1/1	0.81	0.24	1.19	91,91,91,91	0
55	T1C	AA	1837	42/42	0.90	0.15	1.17	81,103,111,117	0
54	MG	DA	3055	1/1	0.92	0.21	1.10	51,51,51,51	0
54	MG	CA	1741	1/1	0.90	0.14	1.07	114,114,114,114	0
54	MG	CA	1772	1/1	0.90	0.13	1.04	128,128,128,128	0
54	MG	DA	3174	1/1	0.95	0.21	0.95	52,52,52,52	0
54	MG	BA	3063	1/1	0.93	0.20	0.94	67,67,67,67	0
54	MG	DA	3138	1/1	0.94	0.10	0.78	121,121,121,121	0
54	MG	DA	3271	1/1	0.98	0.16	0.75	67,67,67,67	0
54	MG	AA	1817	1/1	0.76	0.13	0.71	137,137,137,137	0
54	MG	AA	1662	1/1	0.93	0.16	0.60	71,71,71,71	0
54	MG	DA	3367	1/1	0.90	0.34	0.59	89,89,89,89	0
54	MG	DA	3082	1/1	0.83	0.15	0.53	97,97,97,97	0
54	MG	DA	3488	1/1	0.82	0.14	0.52	77,77,77,77	0
54	MG	BA	3195	1/1	0.90	0.20	0.51	43,43,43,43	0
54	MG	BA	3608	1/1	0.92	0.15	0.44	89,89,89,89	0
54	MG	AA	1741	1/1	0.90	0.13	0.43	99,99,99,99	0
54	MG	CA	1656	1/1	0.94	0.16	0.43	127,127,127,127	0
54	MG	DU	201	1/1	0.90	0.24	0.43	89,89,89,89	0
54	MG	DA	3283	1/1	0.86	0.16	0.43	69,69,69,69	0
54	MG	BF	302	1/1	0.86	0.19	0.37	71,71,71,71	0
54	MG	CL	201	1/1	0.86	0.32	0.36	104,104,104,104	0
54	MG	BA	3581	1/1	0.90	0.16	0.30	59,59,59,59	0
54	MG	B7	103	1/1	0.94	0.27	0.29	79,79,79,79	0
56	ZN	AG	302	1/1	0.93	0.29	0.25	115,115,115,115	0
54	MG	DA	3447	1/1	0.96	0.12	0.23	80,80,80,80	0
54	MG	AA	1784	1/1	0.96	0.13	0.20	82,82,82,82	0
54	MG	CC	108	1/1	0.84	0.12	0.15	120,120,120,120	0
54	MG	CA	1663	1/1	0.95	0.13	0.13	90,90,90,90	0
54	MG	CA	1671	1/1	0.94	0.14	0.12	77,77,77,77	0
54	MG	AA	1635	1/1	0.97	0.15	0.12	111,111,111,111	0
54	MG	AA	1624	1/1	0.88	0.13	0.03	92,92,92,92	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	BA	3152	1/1	0.93	0.15	0.00	80,80,80,80	0
54	MG	AA	1604	1/1	0.98	0.14	-0.03	88,88,88,88	0
54	MG	DA	3464	1/1	0.94	0.14	-0.04	89,89,89,89	0
54	MG	DA	3389	1/1	0.82	0.12	-0.08	82,82,82,82	0
54	MG	DA	3486	1/1	0.91	0.15	-0.08	78,78,78,78	0
54	MG	DA	3489	1/1	0.91	0.15	-0.13	79,79,79,79	0
54	MG	CA	1650	1/1	0.95	0.14	-0.21	93,93,93,93	0
54	MG	DA	3357	1/1	0.59	0.12	-0.21	123,123,123,123	0
54	MG	BA	3015	1/1	0.96	0.13	-0.38	88,88,88,88	0
54	MG	BA	3590	1/1	0.90	0.16	-0.44	83,83,83,83	0
54	MG	AA	1826	1/1	0.95	0.12	-0.45	117,117,117,117	0
54	MG	DA	3352	1/1	0.91	0.14	-0.46	71,71,71,71	0
54	MG	BA	3474	1/1	0.87	0.14	-0.46	86,86,86,86	0
54	MG	DA	3309	1/1	0.76	0.14	-0.60	64,64,64,64	0
54	MG	BA	3099	1/1	0.70	0.14	-0.60	68,68,68,68	0
54	MG	DE	303	1/1	0.78	0.12	-0.62	85,85,85,85	0
54	MG	CA	1624	1/1	0.84	0.11	-0.62	92,92,92,92	0
56	ZN	CG	303	1/1	0.78	0.27	-0.65	139,139,139,139	0
54	MG	CA	1630	1/1	0.86	0.11	-0.68	91,91,91,91	0
54	MG	CA	1646	1/1	0.94	0.13	-0.72	92,92,92,92	0
54	MG	DA	3477	1/1	0.89	0.14	-0.80	67,67,67,67	0
54	MG	DA	3162	1/1	0.85	0.13	-0.83	81,81,81,81	0
54	MG	DA	3392	1/1	0.71	0.12	-0.83	82,82,82,82	0
56	ZN	CQ	101	1/1	0.93	0.12	-0.84	123,123,123,123	0
54	MG	D5	101	1/1	0.89	0.13	-0.86	63,63,63,63	0
54	MG	CA	1604	1/1	0.82	0.11	-0.94	91,91,91,91	0
54	MG	BA	3070	1/1	0.97	0.15	-0.96	64,64,64,64	0
54	MG	DA	3443	1/1	0.73	0.12	-0.97	85,85,85,85	0
54	MG	BA	3456	1/1	0.62	0.13	-1.04	225,225,225,225	0
56	ZN	AQ	102	1/1	0.95	0.08	-1.05	138,138,138,138	0
54	MG	AA	1699	1/1	0.96	0.10	-1.12	96,96,96,96	0
54	MG	DA	3034	1/1	0.91	0.12	-1.13	82,82,82,82	0
54	MG	CA	1695	1/1	0.75	0.12	-1.15	119,119,119,119	0
54	MG	CA	1799	1/1	0.84	0.10	-1.18	115,115,115,115	0
54	MG	BA	3450	1/1	0.71	0.11	-1.20	166,166,166,166	0
54	MG	BE	304	1/1	0.89	0.10	-1.21	90,90,90,90	0
54	MG	AA	1710	1/1	0.86	0.12	-1.23	118,118,118,118	0
54	MG	BA	3213	1/1	0.89	0.15	-1.30	61,61,61,61	0
54	MG	CN	201	1/1	0.93	0.07	-1.35	95,95,95,95	0
54	MG	BE	302	1/1	0.94	0.11	-1.38	76,76,76,76	0
54	MG	AN	201	1/1	0.89	0.09	-1.57	91,91,91,91	0
54	MG	DA	3041	1/1	0.90	0.11	-1.61	82,82,82,82	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	AA	1629	1/1	0.95	0.08	-1.67	134,134,134,134	0
54	MG	BA	3427	1/1	0.69	0.10	-1.77	160,160,160,160	0
54	MG	BF	301	1/1	0.92	0.08	-1.77	76,76,76,76	0
54	MG	AA	1750	1/1	0.97	0.09	-1.79	92,92,92,92	0
54	MG	CA	1662	1/1	0.95	0.10	-1.88	110,110,110,110	0
54	MG	DA	3319	1/1	0.86	0.09	-1.90	97,97,97,97	0
54	MG	CG	302	1/1	0.87	0.09	-1.90	114,114,114,114	0
54	MG	DA	3143	1/1	0.92	0.10	-1.91	84,84,84,84	0
54	MG	AG	301	1/1	0.72	0.08	-2.28	122,122,122,122	0
54	MG	BB	216	1/1	0.91	0.07	-2.33	111,111,111,111	0
54	MG	CA	1736	1/1	0.91	0.10	-2.40	90,90,90,90	0
54	MG	BA	3570	1/1	0.87	0.13	-2.45	65,65,65,65	0
54	MG	CA	1623	1/1	0.87	0.07	-2.48	142,142,142,142	0
54	MG	CA	1757	1/1	0.88	0.10	-2.56	100,100,100,100	0
54	MG	BA	3233	1/1	0.92	0.08	-2.64	82,82,82,82	0
54	MG	BA	3564	1/1	0.96	0.14	-3.32	71,71,71,71	0
54	MG	DA	3450	1/1	0.96	0.07	-3.49	94,94,94,94	0
54	MG	CA	1628	1/1	0.94	0.06	-3.60	110,110,110,110	0
54	MG	DA	3079	1/1	0.94	0.07	-3.65	95,95,95,95	0
54	MG	BA	3552	1/1	0.90	0.07	-3.72	79,79,79,79	0
54	MG	CA	1666	1/1	0.95	0.06	-3.97	76,76,76,76	0
54	MG	AA	1605	1/1	0.86	0.07	-4.58	103,103,103,103	0
54	MG	DA	3372	1/1	0.95	0.11	-4.66	84,84,84,84	0
54	MG	DA	3303	1/1	0.93	0.07	-5.00	94,94,94,94	0
54	MG	DA	3030	1/1	0.98	0.05	-6.43	64,64,64,64	0
54	MG	BA	3606	1/1	0.95	0.10	-7.53	81,81,81,81	0
54	MG	AA	1820	1/1	0.97	0.06	-10.36	112,112,112,112	0
54	MG	AA	1740	1/1	0.70	0.42	-	83,83,83,83	0
54	MG	CA	1699	1/1	0.89	0.36	-	80,80,80,80	0
54	MG	CA	1679	1/1	0.83	0.24	-	97,97,97,97	0
54	MG	CA	1702	1/1	0.88	0.23	-	84,84,84,84	0
54	MG	AA	1746	1/1	0.95	0.19	-	110,110,110,110	0
54	MG	DA	3356	1/1	0.85	0.12	-	84,84,84,84	0
54	MG	DA	3115	1/1	0.96	0.33	-	66,66,66,66	0
54	MG	DA	3063	1/1	0.93	0.19	-	95,95,95,95	0
54	MG	CA	1779	1/1	0.84	0.22	-	97,97,97,97	0
54	MG	CA	1763	1/1	0.92	0.28	-	80,80,80,80	0
54	MG	CA	1647	1/1	0.91	0.18	-	84,84,84,84	0
54	MG	BA	3620	1/1	0.97	0.15	-	63,63,63,63	0
54	MG	BA	3373	1/1	0.93	0.24	-	85,85,85,85	0
54	MG	DA	3396	1/1	0.97	0.26	-	73,73,73,73	0
54	MG	DA	3094	1/1	0.95	0.16	-	107,107,107,107	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	DA	3446	1/1	0.39	0.19	-	99,99,99,99	0
54	MG	DA	3052	1/1	0.98	0.35	-	60,60,60,60	0
54	MG	DA	3113	1/1	0.70	0.36	-	83,83,83,83	0
54	MG	BA	3314	1/1	0.96	0.38	-	81,81,81,81	0
54	MG	BA	3466	1/1	0.88	0.16	-	81,81,81,81	0
54	MG	DA	3025	1/1	0.46	0.17	-	91,91,91,91	0
54	MG	AA	1726	1/1	0.90	0.17	-	95,95,95,95	0
54	MG	BA	3205	1/1	0.88	0.28	-	51,51,51,51	0
54	MG	BA	3619	1/1	0.80	0.32	-	87,87,87,87	0
54	MG	CA	1724	1/1	0.68	0.30	-	94,94,94,94	0
54	MG	CA	1734	1/1	0.94	0.25	-	78,78,78,78	0
54	MG	BA	3019	1/1	0.95	0.34	-	48,48,48,48	0
54	MG	BA	3550	1/1	0.80	0.23	-	98,98,98,98	0
54	MG	BA	3460	1/1	0.86	0.08	-	189,189,189,189	0
54	MG	DA	3012	1/1	0.93	0.35	-	87,87,87,87	0
54	MG	BA	3165	1/1	0.85	0.37	-	48,48,48,48	0
54	MG	DA	3472	1/1	0.95	0.13	-	88,88,88,88	0
54	MG	CA	1627	1/1	0.93	0.07	-	111,111,111,111	0
54	MG	DA	3074	1/1	0.90	0.44	-	102,102,102,102	0
54	MG	BA	3090	1/1	0.70	0.26	-	85,85,85,85	0
54	MG	CA	1751	1/1	0.71	0.20	-	95,95,95,95	0
54	MG	DA	3360	1/1	0.80	0.36	-	86,86,86,86	0
54	MG	DA	3378	1/1	0.94	0.28	-	70,70,70,70	0
54	MG	CA	1729	1/1	0.98	0.08	-	108,108,108,108	0
54	MG	DA	3520	1/1	0.79	0.33	-	99,99,99,99	0
54	MG	DA	3072	1/1	0.77	0.11	-	109,109,109,109	0
54	MG	AA	1803	1/1	0.90	0.36	-	75,75,75,75	0
54	MG	DA	3037	1/1	0.73	0.35	-	101,101,101,101	0
54	MG	BA	3420	1/1	0.95	0.14	-	65,65,65,65	0
54	MG	DA	3423	1/1	0.86	0.14	-	83,83,83,83	0
54	MG	CA	1651	1/1	0.94	0.13	-	114,114,114,114	0
54	MG	DA	3275	1/1	0.85	0.20	-	76,76,76,76	0
54	MG	DA	3466	1/1	0.88	0.15	-	123,123,123,123	0
54	MG	AC	107	1/1	0.95	0.22	-	94,94,94,94	0
54	MG	BA	3393	1/1	0.79	0.51	-	89,89,89,89	0
54	MG	BA	3368	1/1	0.88	0.18	-	98,98,98,98	0
54	MG	CA	1711	1/1	0.91	0.21	-	100,100,100,100	0
54	MG	BA	3445	1/1	0.96	0.48	-	64,64,64,64	0
54	MG	BA	3369	1/1	0.96	0.49	-	68,68,68,68	0
54	MG	BA	3126	1/1	0.95	0.40	-	73,73,73,73	0
54	MG	BA	3529	1/1	0.85	0.24	-	87,87,87,87	0
54	MG	BA	3271	1/1	0.90	0.14	-	98,98,98,98	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	BA	3178	1/1	0.96	0.36	-	51,51,51,51	0
54	MG	AA	1632	1/1	0.97	0.17	-	94,94,94,94	0
54	MG	AA	1770	1/1	0.96	0.11	-	110,110,110,110	0
54	MG	BA	3288	1/1	0.51	0.41	-	115,115,115,115	0
54	MG	DA	3333	1/1	0.85	0.38	-	90,90,90,90	0
54	MG	BA	3193	1/1	0.97	0.39	-	56,56,56,56	0
54	MG	AA	1737	1/1	0.96	0.32	-	95,95,95,95	0
54	MG	BA	3515	1/1	0.97	0.33	-	93,93,93,93	0
54	MG	BA	3305	1/1	0.95	0.45	-	79,79,79,79	0
54	MG	DA	3231	1/1	0.92	0.17	-	74,74,74,74	0
54	MG	BA	3513	1/1	0.86	0.30	-	78,78,78,78	0
54	MG	DA	3125	1/1	0.90	0.30	-	71,71,71,71	0
54	MG	BA	3417	1/1	0.84	0.41	-	82,82,82,82	0
54	MG	BA	3412	1/1	0.87	0.43	-	78,78,78,78	0
54	MG	CA	1722	1/1	0.88	0.33	-	104,104,104,104	0
54	MG	CA	1756	1/1	0.97	0.39	-	76,76,76,76	0
54	MG	BA	3240	1/1	0.80	0.23	-	84,84,84,84	0
54	MG	BA	3080	1/1	0.96	0.21	-	82,82,82,82	0
54	MG	CA	1636	1/1	0.86	0.27	-	100,100,100,100	0
54	MG	AA	1686	1/1	0.86	0.27	-	88,88,88,88	0
54	MG	CA	1784	1/1	0.92	0.31	-	95,95,95,95	0
54	MG	AA	1749	1/1	0.94	0.12	-	130,130,130,130	0
54	MG	DA	3023	1/1	0.77	0.15	-	76,76,76,76	0
54	MG	DA	3458	1/1	0.81	0.12	-	91,91,91,91	0
54	MG	CA	1771	1/1	0.84	0.34	-	96,96,96,96	0
54	MG	DA	3122	1/1	0.91	0.31	-	84,84,84,84	0
54	MG	BA	3382	1/1	0.91	0.47	-	89,89,89,89	0
54	MG	AA	1767	1/1	0.84	0.21	-	82,82,82,82	0
54	MG	DA	3167	1/1	0.84	0.31	-	105,105,105,105	0
54	MG	BA	3311	1/1	0.92	0.21	-	73,73,73,73	0
54	MG	DA	3201	1/1	0.97	0.37	-	66,66,66,66	0
54	MG	DB	215	1/1	0.85	0.11	-	120,120,120,120	0
54	MG	CA	1766	1/1	0.82	0.23	-	74,74,74,74	0
54	MG	B8	102	1/1	0.85	0.57	-	107,107,107,107	0
54	MG	DA	3334	1/1	0.95	0.24	-	84,84,84,84	0
54	MG	DA	3495	1/1	0.87	0.16	-	125,125,125,125	0
54	MG	BA	3467	1/1	0.97	0.27	-	62,62,62,62	0
54	MG	BA	3365	1/1	0.76	0.17	-	86,86,86,86	0
54	MG	BA	3278	1/1	0.96	0.43	-	64,64,64,64	0
54	MG	BA	3149	1/1	0.66	0.27	-	91,91,91,91	0
54	MG	BA	3530	1/1	0.82	0.26	-	85,85,85,85	0
54	MG	DA	3376	1/1	0.93	0.24	-	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	AA	1626	1/1	0.94	0.30	-	84,84,84,84	0
54	MG	CA	1664	1/1	0.85	0.22	-	169,169,169,169	0
54	MG	BA	3511	1/1	0.95	0.12	-	80,80,80,80	0
54	MG	AA	1724	1/1	0.86	0.58	-	126,126,126,126	0
54	MG	AC	102	1/1	0.89	0.38	-	102,102,102,102	0
54	MG	CA	1770	1/1	0.86	0.14	-	65,65,65,65	0
54	MG	DA	3196	1/1	0.85	0.19	-	72,72,72,72	0
54	MG	DA	3441	1/1	0.96	0.15	-	111,111,111,111	0
54	MG	BA	3323	1/1	0.96	0.33	-	87,87,87,87	0
54	MG	AA	1602	1/1	0.94	0.22	-	82,82,82,82	0
54	MG	DA	3463	1/1	0.89	0.31	-	75,75,75,75	0
54	MG	BA	3051	1/1	0.87	0.34	-	74,74,74,74	0
54	MG	DA	3051	1/1	0.84	0.36	-	78,78,78,78	0
54	MG	BA	3350	1/1	0.89	0.47	-	72,72,72,72	0
54	MG	DA	3129	1/1	0.85	0.24	-	79,79,79,79	0
54	MG	AA	1728	1/1	0.94	0.41	-	70,70,70,70	0
54	MG	BA	3122	1/1	0.92	0.38	-	98,98,98,98	0
54	MG	AA	1623	1/1	0.98	0.17	-	82,82,82,82	0
54	MG	DA	3223	1/1	0.85	0.35	-	73,73,73,73	0
54	MG	BA	3129	1/1	0.93	0.27	-	84,84,84,84	0
54	MG	BA	3487	1/1	0.90	0.17	-	72,72,72,72	0
54	MG	BA	3309	1/1	0.90	0.38	-	69,69,69,69	0
54	MG	AA	1730	1/1	0.77	0.23	-	90,90,90,90	0
54	MG	AA	1815	1/1	0.92	0.41	-	98,98,98,98	0
54	MG	BA	3621	1/1	0.68	0.20	-	93,93,93,93	0
54	MG	DA	3505	1/1	0.94	0.25	-	73,73,73,73	0
54	MG	BA	3319	1/1	0.88	0.24	-	82,82,82,82	0
54	MG	DA	3387	1/1	0.82	0.18	-	89,89,89,89	0
54	MG	A1	101	1/1	0.83	0.19	-	94,94,94,94	0
54	MG	DA	3427	1/1	0.90	0.24	-	74,74,74,74	0
54	MG	DA	3430	1/1	0.89	0.20	-	110,110,110,110	0
54	MG	BA	3262	1/1	0.97	0.23	-	61,61,61,61	0
54	MG	AA	1716	1/1	0.92	0.28	-	106,106,106,106	0
54	MG	DA	3516	1/1	0.87	0.28	-	76,76,76,76	0
54	MG	CA	1705	1/1	0.87	0.11	-	135,135,135,135	0
54	MG	BA	3234	1/1	0.94	0.11	-	79,79,79,79	0
54	MG	BA	3113	1/1	0.98	0.28	-	54,54,54,54	0
54	MG	DA	3077	1/1	0.82	0.35	-	110,110,110,110	0
54	MG	DA	3416	1/1	0.79	0.30	-	86,86,86,86	0
54	MG	BA	3196	1/1	0.68	0.26	-	85,85,85,85	0
54	MG	AA	1612	1/1	0.65	0.19	-	131,131,131,131	0
54	MG	DA	3385	1/1	0.95	0.30	-	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	DB	211	1/1	0.71	0.39	-	90,90,90,90	0
54	MG	BA	3110	1/1	0.97	0.28	-	58,58,58,58	0
54	MG	AA	1758	1/1	0.79	0.22	-	71,71,71,71	0
54	MG	BA	3342	1/1	0.74	0.23	-	85,85,85,85	0
54	MG	BA	3141	1/1	0.83	0.31	-	76,76,76,76	0
54	MG	AA	1756	1/1	0.94	0.33	-	121,121,121,121	0
54	MG	DB	201	1/1	0.86	0.35	-	90,90,90,90	0
54	MG	BA	3220	1/1	0.94	0.11	-	76,76,76,76	0
54	MG	DB	204	1/1	0.92	0.15	-	87,87,87,87	0
54	MG	DA	3492	1/1	0.77	0.22	-	96,96,96,96	0
54	MG	AA	1751	1/1	0.73	0.25	-	90,90,90,90	0
54	MG	AA	1734	1/1	0.77	0.33	-	135,135,135,135	0
54	MG	DA	3186	1/1	0.85	0.19	-	84,84,84,84	0
54	MG	CA	1670	1/1	0.98	0.35	-	73,73,73,73	0
54	MG	AA	1832	1/1	0.94	0.27	-	87,87,87,87	0
54	MG	BA	3372	1/1	0.85	0.36	-	81,81,81,81	0
54	MG	DA	3144	1/1	0.78	0.23	-	79,79,79,79	0
54	MG	BA	3499	1/1	0.75	0.21	-	82,82,82,82	0
54	MG	DA	3407	1/1	0.83	0.16	-	94,94,94,94	0
54	MG	AA	1763	1/1	0.91	0.41	-	89,89,89,89	0
54	MG	AA	1708	1/1	0.94	0.13	-	96,96,96,96	0
54	MG	CA	1774	1/1	0.89	0.15	-	105,105,105,105	0
54	MG	DA	3320	1/1	0.92	0.05	-	105,105,105,105	0
54	MG	DA	3419	1/1	0.92	0.15	-	97,97,97,97	0
54	MG	BA	3354	1/1	0.93	0.19	-	83,83,83,83	0
54	MG	BA	3036	1/1	0.93	0.40	-	73,73,73,73	0
54	MG	BA	3257	1/1	0.83	0.36	-	73,73,73,73	0
54	MG	BA	3562	1/1	0.98	0.40	-	53,53,53,53	0
54	MG	D3	101	1/1	0.91	0.34	-	78,78,78,78	0
54	MG	DA	3183	1/1	0.97	0.32	-	70,70,70,70	0
54	MG	BA	3610	1/1	0.99	0.28	-	55,55,55,55	0
54	MG	DA	3207	1/1	0.96	0.31	-	72,72,72,72	0
54	MG	BA	3632	1/1	0.96	0.13	-	114,114,114,114	0
54	MG	BA	3284	1/1	0.87	0.23	-	76,76,76,76	0
54	MG	BA	3380	1/1	0.75	0.24	-	74,74,74,74	0
54	MG	BA	3505	1/1	0.95	0.20	-	51,51,51,51	0
54	MG	BA	3026	1/1	0.96	0.30	-	59,59,59,59	0
54	MG	CC	105	1/1	0.80	0.38	-	86,86,86,86	0
54	MG	DA	3015	1/1	0.96	0.37	-	64,64,64,64	0
54	MG	B5	1701	1/1	0.97	0.28	-	60,60,60,60	0
54	MG	BA	3493	1/1	0.78	0.27	-	74,74,74,74	0
54	MG	DB	213	1/1	0.81	0.50	-	111,111,111,111	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	BA	3455	1/1	0.94	0.17	-	74,74,74,74	0
54	MG	DA	3379	1/1	0.74	0.30	-	88,88,88,88	0
54	MG	BB	207	1/1	0.95	0.22	-	84,84,84,84	0
54	MG	DA	3069	1/1	0.94	0.27	-	85,85,85,85	0
54	MG	DA	3279	1/1	0.81	0.17	-	70,70,70,70	0
54	MG	CA	1781	1/1	0.55	0.25	-	148,148,148,148	0
54	MG	CA	1626	1/1	0.83	0.24	-	115,115,115,115	0
54	MG	CA	1795	1/1	0.76	0.11	-	87,87,87,87	0
54	MG	DA	3308	1/1	0.88	0.24	-	78,78,78,78	0
54	MG	BB	205	1/1	0.86	0.36	-	91,91,91,91	0
54	MG	AA	1706	1/1	0.71	0.21	-	94,94,94,94	0
54	MG	BA	3572	1/1	0.97	0.44	-	45,45,45,45	0
54	MG	DA	3136	1/1	0.91	0.24	-	63,63,63,63	0
54	MG	CA	1621	1/1	0.81	0.21	-	82,82,82,82	0
54	MG	DA	3311	1/1	0.82	0.42	-	74,74,74,74	0
54	MG	BA	3498	1/1	0.86	0.27	-	94,94,94,94	0
54	MG	CA	1744	1/1	0.93	0.10	-	70,70,70,70	0
54	MG	CA	1639	1/1	0.67	0.18	-	95,95,95,95	0
54	MG	BA	3139	1/1	0.96	0.45	-	48,48,48,48	0
54	MG	BA	3226	1/1	0.96	0.13	-	64,64,64,64	0
54	MG	BA	3258	1/1	0.91	0.40	-	74,74,74,74	0
54	MG	AA	1654	1/1	0.85	0.28	-	99,99,99,99	0
54	MG	AA	1755	1/1	0.77	0.21	-	88,88,88,88	0
54	MG	BA	3312	1/1	0.91	0.49	-	84,84,84,84	0
54	MG	BA	3519	1/1	0.65	0.38	-	115,115,115,115	0
54	MG	BA	3443	1/1	0.97	0.12	-	116,116,116,116	0
54	MG	BA	3413	1/1	0.87	0.32	-	87,87,87,87	0
54	MG	BA	3537	1/1	0.83	0.13	-	65,65,65,65	0
54	MG	BA	3429	1/1	0.80	0.55	-	103,103,103,103	0
54	MG	DA	3383	1/1	0.85	0.32	-	87,87,87,87	0
54	MG	DA	3322	1/1	0.92	0.23	-	104,104,104,104	0
54	MG	BA	3143	1/1	0.96	0.41	-	63,63,63,63	0
54	MG	CA	1789	1/1	0.92	0.14	-	82,82,82,82	0
54	MG	DA	3293	1/1	0.87	0.36	-	72,72,72,72	0
54	MG	DA	3008	1/1	0.91	0.20	-	77,77,77,77	0
54	MG	AH	201	1/1	0.90	0.20	-	91,91,91,91	0
54	MG	BA	3587	1/1	0.95	0.12	-	88,88,88,88	0
54	MG	DA	3036	1/1	0.82	0.40	-	114,114,114,114	0
54	MG	DA	3350	1/1	0.88	0.37	-	85,85,85,85	0
54	MG	B3	102	1/1	0.86	0.18	-	80,80,80,80	0
54	MG	BA	3094	1/1	0.82	0.29	-	103,103,103,103	0
54	MG	AA	1679	1/1	0.77	0.33	-	86,86,86,86	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	CA	1677	1/1	0.95	0.31	-	73,73,73,73	0
54	MG	CA	1773	1/1	0.93	0.24	-	113,113,113,113	0
54	MG	BA	3471	1/1	0.92	0.40	-	78,78,78,78	0
54	MG	BA	3398	1/1	0.92	0.29	-	78,78,78,78	0
54	MG	BA	3153	1/1	0.94	0.16	-	76,76,76,76	0
54	MG	AA	1785	1/1	0.67	0.32	-	146,146,146,146	0
54	MG	AA	1783	1/1	0.94	0.46	-	88,88,88,88	0
54	MG	BA	3469	1/1	0.76	0.44	-	94,94,94,94	0
54	MG	BA	3238	1/1	0.95	0.44	-	63,63,63,63	0
54	MG	BA	3135	1/1	0.85	0.39	-	85,85,85,85	0
54	MG	CA	1674	1/1	0.92	0.22	-	87,87,87,87	0
54	MG	BA	3265	1/1	0.94	0.39	-	82,82,82,82	0
54	MG	BB	215	1/1	0.85	0.15	-	110,110,110,110	0
54	MG	AA	1754	1/1	0.77	0.18	-	91,91,91,91	0
54	MG	DA	3326	1/1	0.84	0.27	-	82,82,82,82	0
54	MG	BA	3379	1/1	0.94	0.21	-	101,101,101,101	0
54	MG	BA	3102	1/1	0.93	0.29	-	80,80,80,80	0
54	MG	DA	3517	1/1	0.65	0.39	-	80,80,80,80	0
54	MG	DA	3278	1/1	0.71	0.22	-	91,91,91,91	0
54	MG	DA	3056	1/1	0.79	0.24	-	97,97,97,97	0
54	MG	AA	1828	1/1	0.82	0.24	-	107,107,107,107	0
54	MG	BA	3333	1/1	0.91	0.17	-	83,83,83,83	0
54	MG	DA	3110	1/1	0.96	0.33	-	60,60,60,60	0
54	MG	AA	1659	1/1	0.93	0.24	-	56,56,56,56	0
54	MG	AA	1636	1/1	0.83	0.21	-	76,76,76,76	0
54	MG	AA	1668	1/1	0.94	0.40	-	81,81,81,81	0
54	MG	BA	3465	1/1	0.76	0.20	-	79,79,79,79	0
54	MG	AA	1810	1/1	0.85	0.26	-	89,89,89,89	0
54	MG	AA	1825	1/1	0.84	0.15	-	92,92,92,92	0
54	MG	DA	3237	1/1	0.99	0.35	-	52,52,52,52	0
54	MG	DA	3394	1/1	0.90	0.20	-	75,75,75,75	0
54	MG	BA	3239	1/1	0.94	0.30	-	71,71,71,71	0
54	MG	B7	102	1/1	0.89	0.29	-	78,78,78,78	0
54	MG	BA	3077	1/1	0.94	0.31	-	82,82,82,82	0
54	MG	BA	3362	1/1	0.69	0.30	-	83,83,83,83	0
54	MG	DA	3523	1/1	0.90	0.18	-	90,90,90,90	0
54	MG	CA	1672	1/1	0.92	0.27	-	79,79,79,79	0
54	MG	DA	3434	1/1	0.74	0.22	-	92,92,92,92	0
54	MG	CA	1767	1/1	0.75	0.31	-	80,80,80,80	0
54	MG	BA	3480	1/1	0.94	0.32	-	75,75,75,75	0
54	MG	BA	3221	1/1	0.81	0.34	-	93,93,93,93	0
54	MG	CA	1622	1/1	0.84	0.40	-	113,113,113,113	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	AA	1835	1/1	0.83	0.30	-	100,100,100,100	0
54	MG	BA	3321	1/1	0.97	0.43	-	100,100,100,100	0
54	MG	DA	3014	1/1	0.95	0.32	-	67,67,67,67	0
54	MG	BA	3045	1/1	0.89	0.16	-	64,64,64,64	0
54	MG	BB	210	1/1	0.92	0.38	-	76,76,76,76	0
54	MG	CA	1685	1/1	0.94	0.18	-	82,82,82,82	0
54	MG	DA	3323	1/1	0.89	0.16	-	84,84,84,84	0
54	MG	DA	3426	1/1	0.87	0.18	-	95,95,95,95	0
54	MG	DA	3439	1/1	0.56	0.13	-	95,95,95,95	0
54	MG	BA	3358	1/1	0.88	0.33	-	82,82,82,82	0
54	MG	CA	1603	1/1	0.76	0.33	-	115,115,115,115	0
54	MG	AA	1683	1/1	0.81	0.25	-	97,97,97,97	0
54	MG	BA	3260	1/1	0.99	0.38	-	62,62,62,62	0
54	MG	BA	3462	1/1	0.81	0.27	-	94,94,94,94	0
54	MG	BA	3522	1/1	0.66	0.46	-	100,100,100,100	0
54	MG	DA	3499	1/1	0.94	0.12	-	92,92,92,92	0
54	MG	DB	214	1/1	0.66	0.12	-	101,101,101,101	0
54	MG	CA	1721	1/1	0.91	0.27	-	74,74,74,74	0
54	MG	DA	3435	1/1	0.88	0.09	-	134,134,134,134	0
54	MG	DA	3131	1/1	0.92	0.21	-	77,77,77,77	0
54	MG	DA	3010	1/1	0.95	0.33	-	74,74,74,74	0
54	MG	DA	3163	1/1	0.95	0.32	-	66,66,66,66	0
54	MG	BA	3264	1/1	0.90	0.31	-	78,78,78,78	0
54	MG	CA	1745	1/1	0.88	0.29	-	102,102,102,102	0
54	MG	BA	3441	1/1	0.86	0.23	-	95,95,95,95	0
54	MG	BA	3394	1/1	0.77	0.22	-	102,102,102,102	0
54	MG	AA	1656	1/1	0.95	0.34	-	73,73,73,73	0
54	MG	BA	3414	1/1	0.82	0.79	-	102,102,102,102	0
54	MG	DA	3380	1/1	0.88	0.17	-	90,90,90,90	0
54	MG	BA	3486	1/1	0.95	0.40	-	73,73,73,73	0
54	MG	BA	3158	1/1	0.99	0.18	-	79,79,79,79	0
54	MG	BA	3025	1/1	0.97	0.33	-	61,61,61,61	0
54	MG	CA	1740	1/1	0.97	0.17	-	103,103,103,103	0
54	MG	BA	3600	1/1	0.90	0.25	-	65,65,65,65	0
54	MG	BA	3209	1/1	0.99	0.37	-	64,64,64,64	0
54	MG	DA	3042	1/1	0.60	0.19	-	78,78,78,78	0
54	MG	BA	3397	1/1	0.76	0.36	-	84,84,84,84	0
54	MG	BA	3322	1/1	0.84	0.27	-	76,76,76,76	0
54	MG	CA	1752	1/1	0.79	0.11	-	94,94,94,94	0
54	MG	BA	3243	1/1	0.92	0.38	-	63,63,63,63	0
54	MG	DA	3294	1/1	0.93	0.25	-	77,77,77,77	0
54	MG	DA	3353	1/1	0.55	0.28	-	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	AA	1670	1/1	0.92	0.22	-	86,86,86,86	0
54	MG	BU	201	1/1	0.94	0.11	-	95,95,95,95	0
54	MG	CA	1797	1/1	0.92	0.35	-	101,101,101,101	0
54	MG	CA	1643	1/1	0.89	0.24	-	86,86,86,86	0
54	MG	BA	3496	1/1	0.86	0.31	-	97,97,97,97	0
54	MG	CA	1696	1/1	0.97	0.10	-	121,121,121,121	0
54	MG	BA	3512	1/1	0.93	0.15	-	87,87,87,87	0
54	MG	BA	3306	1/1	0.89	0.51	-	94,94,94,94	0
54	MG	BA	3289	1/1	0.64	0.32	-	94,94,94,94	0
54	MG	BA	3047	1/1	0.99	0.31	-	77,77,77,77	0
54	MG	BA	3615	1/1	0.91	0.12	-	83,83,83,83	0
54	MG	CA	1616	1/1	0.84	0.11	-	102,102,102,102	0
54	MG	AA	1637	1/1	0.66	0.33	-	122,122,122,122	0
54	MG	DA	3226	1/1	0.92	0.29	-	75,75,75,75	0
54	MG	DA	3111	1/1	0.74	0.35	-	105,105,105,105	0
54	MG	BA	3554	1/1	0.92	0.18	-	94,94,94,94	0
54	MG	DA	3429	1/1	0.83	0.27	-	103,103,103,103	0
54	MG	BA	3163	1/1	0.67	0.29	-	94,94,94,94	0
54	MG	DA	3086	1/1	0.41	0.24	-	109,109,109,109	0
54	MG	DA	3497	1/1	0.89	0.30	-	86,86,86,86	0
54	MG	CA	1648	1/1	0.89	0.24	-	88,88,88,88	0
54	MG	BA	3217	1/1	0.85	0.29	-	98,98,98,98	0
54	MG	BA	3275	1/1	0.90	0.33	-	90,90,90,90	0
54	MG	DA	3007	1/1	0.82	0.34	-	76,76,76,76	0
54	MG	BA	3183	1/1	0.78	0.37	-	75,75,75,75	0
54	MG	AA	1794	1/1	0.89	0.48	-	93,93,93,93	0
54	MG	AA	1628	1/1	0.93	0.32	-	96,96,96,96	0
54	MG	AA	1705	1/1	0.93	0.10	-	104,104,104,104	0
54	MG	DA	3327	1/1	0.70	0.22	-	75,75,75,75	0
54	MG	CA	1791	1/1	0.82	0.14	-	95,95,95,95	0
54	MG	BA	3276	1/1	0.97	0.45	-	91,91,91,91	0
54	MG	AA	1738	1/1	0.87	0.41	-	120,120,120,120	0
54	MG	AA	1712	1/1	0.91	0.36	-	94,94,94,94	0
54	MG	DA	3411	1/1	0.79	0.34	-	88,88,88,88	0
54	MG	BA	3566	1/1	0.76	0.44	-	70,70,70,70	0
54	MG	BA	3184	1/1	0.97	0.28	-	66,66,66,66	0
54	MG	DA	3245	1/1	0.94	0.31	-	76,76,76,76	0
54	MG	BA	3349	1/1	0.76	0.14	-	64,64,64,64	0
54	MG	BA	3543	1/1	0.72	0.30	-	98,98,98,98	0
54	MG	AA	1673	1/1	0.81	0.13	-	131,131,131,131	0
54	MG	BA	3212	1/1	0.97	0.43	-	52,52,52,52	0
54	MG	DA	3234	1/1	0.96	0.12	-	94,94,94,94	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	BA	3425	1/1	0.85	0.14	-	87,87,87,87	0
54	MG	BA	3083	1/1	0.94	0.22	-	68,68,68,68	0
54	MG	DA	3440	1/1	0.96	0.12	-	86,86,86,86	0
54	MG	DA	3453	1/1	0.89	0.45	-	92,92,92,92	0
54	MG	BA	3410	1/1	0.84	0.44	-	83,83,83,83	0
54	MG	BA	3085	1/1	0.89	0.27	-	75,75,75,75	0
54	MG	DA	3155	1/1	0.83	0.22	-	74,74,74,74	0
54	MG	CA	1652	1/1	0.90	0.31	-	106,106,106,106	0
54	MG	BA	3483	1/1	0.97	0.28	-	105,105,105,105	0
54	MG	CA	1632	1/1	0.93	0.20	-	88,88,88,88	0
54	MG	BA	3199	1/1	0.96	0.32	-	80,80,80,80	0
54	MG	DA	3522	1/1	0.87	0.23	-	81,81,81,81	0
54	MG	CA	1607	1/1	0.94	0.27	-	81,81,81,81	0
54	MG	BA	3416	1/1	0.84	0.15	-	92,92,92,92	0
54	MG	AA	1613	1/1	0.90	0.34	-	97,97,97,97	0
54	MG	BA	3125	1/1	0.93	0.28	-	75,75,75,75	0
54	MG	AA	1630	1/1	0.90	0.23	-	88,88,88,88	0
54	MG	DA	3292	1/1	0.87	0.31	-	78,78,78,78	0
54	MG	BA	3160	1/1	0.85	0.46	-	92,92,92,92	0
54	MG	BA	3428	1/1	0.84	0.12	-	90,90,90,90	0
54	MG	DA	3409	1/1	0.81	0.30	-	95,95,95,95	0
54	MG	CA	1719	1/1	0.74	0.12	-	104,104,104,104	0
54	MG	BA	3293	1/1	0.96	0.22	-	89,89,89,89	0
54	MG	DA	3193	1/1	0.91	0.17	-	76,76,76,76	0
54	MG	BA	3331	1/1	0.89	0.19	-	88,88,88,88	0
54	MG	DA	3180	1/1	0.93	0.32	-	68,68,68,68	0
54	MG	BA	3041	1/1	0.97	0.48	-	66,66,66,66	0
54	MG	CA	1708	1/1	0.75	0.19	-	98,98,98,98	0
54	MG	DA	3501	1/1	0.75	0.17	-	82,82,82,82	0
54	MG	DA	3233	1/1	0.92	0.15	-	75,75,75,75	0
54	MG	BA	3017	1/1	0.93	0.31	-	53,53,53,53	0
54	MG	BA	3458	1/1	0.88	0.47	-	78,78,78,78	0
54	MG	CA	1676	1/1	0.61	0.20	-	90,90,90,90	0
54	MG	CA	1678	1/1	0.82	0.31	-	75,75,75,75	0
54	MG	AA	1682	1/1	0.91	0.29	-	103,103,103,103	0
54	MG	DA	3306	1/1	0.87	0.14	-	88,88,88,88	0
54	MG	DA	3188	1/1	0.95	0.22	-	82,82,82,82	0
54	MG	BA	3318	1/1	0.85	0.38	-	71,71,71,71	0
54	MG	AA	1782	1/1	0.69	0.42	-	124,124,124,124	0
54	MG	DA	3260	1/1	0.95	0.39	-	72,72,72,72	0
54	MG	BA	3216	1/1	0.96	0.30	-	62,62,62,62	0
54	MG	DA	3405	1/1	0.94	0.10	-	153,153,153,153	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	BA	3130	1/1	0.73	0.29	-	105,105,105,105	0
54	MG	DA	3448	1/1	0.91	0.41	-	89,89,89,89	0
54	MG	AT	201	1/1	0.95	0.11	-	87,87,87,87	0
54	MG	AA	1813	1/1	0.91	0.25	-	88,88,88,88	0
54	MG	CA	1669	1/1	0.93	0.28	-	81,81,81,81	0
54	MG	BA	3385	1/1	0.85	0.36	-	79,79,79,79	0
54	MG	BA	3603	1/1	0.81	0.23	-	93,93,93,93	0
54	MG	BA	3300	1/1	0.79	0.42	-	95,95,95,95	0
54	MG	BA	3087	1/1	0.85	0.21	-	72,72,72,72	0
54	MG	BA	3555	1/1	0.80	0.15	-	105,105,105,105	0
54	MG	DA	3246	1/1	0.91	0.28	-	89,89,89,89	0
54	MG	AA	1687	1/1	0.81	0.14	-	137,137,137,137	0
54	MG	AA	1807	1/1	0.88	0.46	-	79,79,79,79	0
54	MG	BA	3432	1/1	0.72	0.27	-	81,81,81,81	0
54	MG	CA	1684	1/1	0.55	0.21	-	91,91,91,91	0
54	MG	BA	3032	1/1	0.95	0.33	-	56,56,56,56	0
54	MG	CA	1618	1/1	0.60	0.19	-	108,108,108,108	0
54	MG	DA	3235	1/1	0.93	0.33	-	74,74,74,74	0
54	MG	BA	3580	1/1	0.72	0.42	-	68,68,68,68	0
54	MG	DA	3060	1/1	0.95	0.36	-	78,78,78,78	0
54	MG	BA	3586	1/1	0.92	0.39	-	71,71,71,71	0
54	MG	DA	3259	1/1	0.96	0.39	-	78,78,78,78	0
54	MG	CA	1659	1/1	0.92	0.17	-	92,92,92,92	0
54	MG	BA	3473	1/1	0.91	0.48	-	84,84,84,84	0
54	MG	DA	3340	1/1	0.95	0.27	-	83,83,83,83	0
54	MG	BB	204	1/1	0.95	0.40	-	87,87,87,87	0
54	MG	BA	3542	1/1	0.92	0.21	-	77,77,77,77	0
54	MG	DA	3266	1/1	0.89	0.15	-	87,87,87,87	0
54	MG	DA	3157	1/1	0.99	0.30	-	58,58,58,58	0
54	MG	CA	1743	1/1	0.93	0.10	-	85,85,85,85	0
54	MG	BB	211	1/1	0.83	0.27	-	99,99,99,99	0
54	MG	DA	3151	1/1	0.72	0.16	-	106,106,106,106	0
54	MG	DA	3410	1/1	0.72	0.15	-	67,67,67,67	0
54	MG	DA	3507	1/1	0.91	0.15	-	117,117,117,117	0
54	MG	CA	1701	1/1	0.84	0.24	-	90,90,90,90	0
54	MG	DA	3425	1/1	0.88	0.15	-	82,82,82,82	0
54	MG	DA	3454	1/1	0.91	0.29	-	90,90,90,90	0
54	MG	BA	3446	1/1	0.91	0.47	-	94,94,94,94	0
54	MG	BA	3626	1/1	0.85	0.20	-	87,87,87,87	0
54	MG	DA	3116	1/1	0.98	0.26	-	60,60,60,60	0
54	MG	BA	3383	1/1	0.93	0.25	-	86,86,86,86	0
54	MG	CA	1681	1/1	0.80	0.33	-	88,88,88,88	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	DA	3415	1/1	0.93	0.25	-	92,92,92,92	0
54	MG	CA	1645	1/1	0.94	0.35	-	78,78,78,78	0
54	MG	BA	3549	1/1	0.93	0.10	-	74,74,74,74	0
54	MG	BA	3120	1/1	0.92	0.17	-	76,76,76,76	0
54	MG	BA	3014	1/1	0.99	0.36	-	49,49,49,49	0
54	MG	BA	3186	1/1	0.94	0.38	-	69,69,69,69	0
54	MG	AA	1614	1/1	0.48	0.17	-	132,132,132,132	0
54	MG	AA	1812	1/1	0.82	0.51	-	99,99,99,99	0
54	MG	DA	3027	1/1	0.95	0.17	-	93,93,93,93	0
54	MG	BA	3423	1/1	0.79	0.40	-	100,100,100,100	0
54	MG	AA	1771	1/1	0.93	0.17	-	94,94,94,94	0
54	MG	DA	3190	1/1	0.90	0.31	-	67,67,67,67	0
54	MG	DA	3457	1/1	0.70	0.22	-	84,84,84,84	0
54	MG	BA	3157	1/1	0.73	0.21	-	72,72,72,72	0
54	MG	DA	3519	1/1	0.74	0.12	-	81,81,81,81	0
54	MG	DA	3314	1/1	0.85	0.25	-	91,91,91,91	0
54	MG	CC	104	1/1	0.81	0.20	-	103,103,103,103	0
54	MG	AA	1818	1/1	0.62	0.53	-	121,121,121,121	0
54	MG	DA	3428	1/1	0.79	0.16	-	86,86,86,86	0
54	MG	AA	1752	1/1	0.95	0.13	-	134,134,134,134	0
54	MG	DA	3496	1/1	0.76	0.17	-	86,86,86,86	0
54	MG	BA	3593	1/1	0.96	0.28	-	78,78,78,78	0
54	MG	AA	1616	1/1	0.81	0.33	-	81,81,81,81	0
54	MG	DA	3146	1/1	0.93	0.13	-	86,86,86,86	0
54	MG	AA	1714	1/1	0.68	0.21	-	88,88,88,88	0
54	MG	BA	3627	1/1	0.94	0.34	-	69,69,69,69	0
54	MG	DA	3127	1/1	0.87	0.08	-	91,91,91,91	0
54	MG	BA	3536	1/1	0.89	0.29	-	74,74,74,74	0
54	MG	AA	1631	1/1	0.85	0.28	-	92,92,92,92	0
54	MG	DA	3222	1/1	0.86	0.52	-	82,82,82,82	0
54	MG	DA	3359	1/1	0.94	0.43	-	91,91,91,91	0
54	MG	DA	3390	1/1	0.68	0.23	-	76,76,76,76	0
54	MG	DB	209	1/1	0.85	0.14	-	97,97,97,97	0
54	MG	CA	1755	1/1	0.52	0.23	-	104,104,104,104	0
54	MG	BA	3629	1/1	0.81	0.26	-	100,100,100,100	0
54	MG	DA	3382	1/1	0.75	0.34	-	94,94,94,94	0
54	MG	CA	1611	1/1	0.96	0.40	-	106,106,106,106	0
54	MG	DA	3184	1/1	0.82	0.26	-	87,87,87,87	0
54	MG	BA	3281	1/1	0.97	0.37	-	72,72,72,72	0
54	MG	BA	3381	1/1	0.79	0.27	-	89,89,89,89	0
54	MG	AA	1814	1/1	0.80	0.16	-	91,91,91,91	0
54	MG	CA	1785	1/1	0.60	0.48	-	101,101,101,101	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	BA	3138	1/1	0.89	0.32	-	65,65,65,65	0
54	MG	BA	3248	1/1	0.80	0.21	-	76,76,76,76	0
54	MG	AA	1765	1/1	0.72	0.39	-	122,122,122,122	0
54	MG	BA	3491	1/1	0.96	0.12	-	84,84,84,84	0
54	MG	BA	3330	1/1	0.89	0.49	-	91,91,91,91	0
54	MG	DA	3343	1/1	0.97	0.42	-	72,72,72,72	0
54	MG	BA	3442	1/1	0.75	0.23	-	89,89,89,89	0
54	MG	DA	3009	1/1	0.95	0.22	-	71,71,71,71	0
54	MG	AA	1725	1/1	0.79	0.17	-	105,105,105,105	0
54	MG	DA	3451	1/1	0.87	0.32	-	81,81,81,81	0
54	MG	DA	3264	1/1	0.94	0.16	-	68,68,68,68	0
54	MG	DA	3490	1/1	0.86	0.06	-	77,77,77,77	0
54	MG	DA	3493	1/1	0.78	0.11	-	90,90,90,90	0
54	MG	CA	1783	1/1	0.95	0.32	-	80,80,80,80	0
54	MG	DA	3265	1/1	0.90	0.18	-	91,91,91,91	0
54	MG	BA	3518	1/1	0.79	0.54	-	87,87,87,87	0
54	MG	DA	3001	1/1	0.96	0.34	-	77,77,77,77	0
54	MG	DA	3363	1/1	0.96	0.32	-	92,92,92,92	0
54	MG	BA	3538	1/1	0.94	0.12	-	76,76,76,76	0
54	MG	BA	3507	1/1	0.88	0.28	-	79,79,79,79	0
54	MG	BA	3545	1/1	0.86	0.19	-	76,76,76,76	0
54	MG	BA	3012	1/1	0.98	0.28	-	66,66,66,66	0
54	MG	DA	3148	1/1	0.91	0.17	-	86,86,86,86	0
54	MG	CA	1739	1/1	0.61	0.26	-	120,120,120,120	0
54	MG	BA	3100	1/1	0.82	0.21	-	105,105,105,105	0
54	MG	BB	201	1/1	0.94	0.27	-	77,77,77,77	0
54	MG	AA	1642	1/1	0.86	0.27	-	88,88,88,88	0
54	MG	AA	1776	1/1	0.93	0.29	-	102,102,102,102	0
54	MG	BA	3253	1/1	0.90	0.31	-	82,82,82,82	0
54	MG	BA	3356	1/1	0.90	0.56	-	81,81,81,81	0
54	MG	AA	1611	1/1	0.93	0.10	-	118,118,118,118	0
54	MG	BA	3485	1/1	0.91	0.20	-	79,79,79,79	0
54	MG	BA	3479	1/1	0.90	0.34	-	80,80,80,80	0
54	MG	AA	1774	1/1	0.86	0.27	-	79,79,79,79	0
54	MG	DA	3189	1/1	0.96	0.39	-	56,56,56,56	0
54	MG	BA	3449	1/1	0.96	0.35	-	70,70,70,70	0
54	MG	BA	3563	1/1	0.98	0.40	-	59,59,59,59	0
54	MG	DA	3269	1/1	0.96	0.32	-	97,97,97,97	0
54	MG	DA	3483	1/1	0.90	0.32	-	79,79,79,79	0
54	MG	BA	3528	1/1	0.85	0.20	-	74,74,74,74	0
54	MG	DA	3268	1/1	0.88	0.36	-	76,76,76,76	0
54	MG	DA	3399	1/1	0.85	0.13	-	103,103,103,103	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	AA	1621	1/1	0.78	0.32	-	101,101,101,101	0
54	MG	AA	1780	1/1	0.91	0.28	-	90,90,90,90	0
54	MG	CA	1780	1/1	0.90	0.26	-	74,74,74,74	0
54	MG	DA	3191	1/1	0.92	0.34	-	62,62,62,62	0
54	MG	CA	1649	1/1	0.90	0.29	-	88,88,88,88	0
54	MG	BA	3246	1/1	0.94	0.37	-	62,62,62,62	0
54	MG	DA	3377	1/1	0.82	0.18	-	85,85,85,85	0
54	MG	BA	3033	1/1	0.96	0.35	-	62,62,62,62	0
54	MG	BA	3206	1/1	0.76	0.30	-	89,89,89,89	0
54	MG	BA	3034	1/1	0.91	0.38	-	78,78,78,78	0
54	MG	DA	3368	1/1	0.91	0.24	-	82,82,82,82	0
54	MG	BA	3269	1/1	0.96	0.20	-	49,49,49,49	0
54	MG	DA	3384	1/1	0.85	0.32	-	81,81,81,81	0
54	MG	AA	1647	1/1	0.74	0.37	-	92,92,92,92	0
54	MG	CA	1726	1/1	0.89	0.30	-	82,82,82,82	0
54	MG	BA	3068	1/1	0.83	0.36	-	94,94,94,94	0
54	MG	BA	3447	1/1	0.57	0.29	-	83,83,83,83	0
54	MG	B8	101	1/1	0.43	0.28	-	91,91,91,91	0
54	MG	BA	3407	1/1	0.92	0.47	-	85,85,85,85	0
54	MG	BA	3215	1/1	0.95	0.46	-	74,74,74,74	0
54	MG	BA	3190	1/1	0.94	0.32	-	75,75,75,75	0
54	MG	BA	3348	1/1	0.94	0.07	-	140,140,140,140	0
54	MG	BA	3533	1/1	0.75	0.25	-	89,89,89,89	0
54	MG	DA	3169	1/1	0.95	0.29	-	74,74,74,74	0
54	MG	AA	1639	1/1	0.94	0.33	-	88,88,88,88	0
54	MG	DA	3422	1/1	0.87	0.12	-	83,83,83,83	0
54	MG	BA	3411	1/1	0.92	0.26	-	80,80,80,80	0
54	MG	BA	3583	1/1	0.83	0.21	-	88,88,88,88	0
54	MG	AA	1652	1/1	0.91	0.40	-	93,93,93,93	0
54	MG	AA	1745	1/1	0.88	0.40	-	78,78,78,78	0
54	MG	DA	3487	1/1	0.91	0.15	-	95,95,95,95	0
54	MG	CA	1798	1/1	0.31	0.21	-	115,115,115,115	0
54	MG	CA	1675	1/1	0.92	0.14	-	96,96,96,96	0
54	MG	AA	1688	1/1	0.76	0.35	-	118,118,118,118	0
54	MG	AA	1633	1/1	0.95	0.29	-	90,90,90,90	0
54	MG	DA	3216	1/1	0.90	0.14	-	78,78,78,78	0
54	MG	BA	3201	1/1	0.97	0.28	-	66,66,66,66	0
54	MG	DA	3442	1/1	0.74	0.18	-	105,105,105,105	0
54	MG	BA	3502	1/1	0.98	0.20	-	113,113,113,113	0
54	MG	BA	3075	1/1	0.94	0.25	-	82,82,82,82	0
54	MG	BA	3408	1/1	0.68	0.30	-	79,79,79,79	0
54	MG	BA	3387	1/1	0.95	0.26	-	90,90,90,90	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	DA	3449	1/1	0.85	0.22	-	88,88,88,88	0
54	MG	BA	3325	1/1	0.89	0.14	-	79,79,79,79	0
54	MG	BA	3247	1/1	0.93	0.36	-	59,59,59,59	0
54	MG	AC	103	1/1	0.92	0.34	-	83,83,83,83	0
54	MG	DA	3011	1/1	0.97	0.15	-	103,103,103,103	0
54	MG	BA	3118	1/1	0.81	0.48	-	83,83,83,83	0
54	MG	BA	3478	1/1	0.96	0.41	-	64,64,64,64	0
54	MG	BA	3011	1/1	0.99	0.35	-	49,49,49,49	0
54	MG	BB	213	1/1	0.82	0.28	-	103,103,103,103	0
54	MG	DA	3198	1/1	0.93	0.30	-	57,57,57,57	0
54	MG	CA	1602	1/1	0.66	0.18	-	91,91,91,91	0
54	MG	DA	3179	1/1	0.95	0.24	-	73,73,73,73	0
54	MG	AA	1733	1/1	0.85	0.15	-	88,88,88,88	0
54	MG	AA	1800	1/1	0.80	0.21	-	89,89,89,89	0
54	MG	CA	1657	1/1	0.98	0.24	-	114,114,114,114	0
54	MG	AA	1697	1/1	0.89	0.18	-	90,90,90,90	0
54	MG	BA	3510	1/1	0.49	0.51	-	97,97,97,97	0
54	MG	DA	3332	1/1	0.88	0.20	-	94,94,94,94	0
54	MG	BA	3618	1/1	0.80	0.20	-	87,87,87,87	0
54	MG	BA	3263	1/1	0.85	0.19	-	73,73,73,73	0
54	MG	BA	3544	1/1	0.91	0.17	-	83,83,83,83	0
54	MG	AA	1824	1/1	0.86	0.29	-	93,93,93,93	0
54	MG	BA	3136	1/1	0.91	0.21	-	60,60,60,60	0
54	MG	BA	3448	1/1	0.92	0.24	-	79,79,79,79	0
54	MG	BA	3461	1/1	0.92	0.26	-	73,73,73,73	0
54	MG	BA	3049	1/1	0.89	0.20	-	59,59,59,59	0
54	MG	AA	1806	1/1	0.95	0.43	-	87,87,87,87	0
54	MG	DA	3345	1/1	0.87	0.16	-	91,91,91,91	0
54	MG	DA	3185	1/1	0.93	0.29	-	77,77,77,77	0
54	MG	BA	3476	1/1	0.95	0.20	-	71,71,71,71	0
54	MG	BA	3161	1/1	0.86	0.35	-	70,70,70,70	0
54	MG	CA	1723	1/1	0.92	0.41	-	82,82,82,82	0
54	MG	DA	3024	1/1	0.79	0.15	-	110,110,110,110	0
54	MG	DB	208	1/1	0.72	0.24	-	94,94,94,94	0
54	MG	DA	3277	1/1	0.78	0.36	-	76,76,76,76	0
54	MG	DA	3339	1/1	0.94	0.10	-	76,76,76,76	0
54	MG	CA	1731	1/1	0.95	0.19	-	70,70,70,70	0
54	MG	DA	3203	1/1	0.91	0.31	-	73,73,73,73	0
54	MG	BA	3366	1/1	0.93	0.37	-	65,65,65,65	0
54	MG	DA	3498	1/1	0.89	0.11	-	71,71,71,71	0
54	MG	DA	3300	1/1	0.86	0.26	-	83,83,83,83	0
54	MG	DA	3455	1/1	0.78	0.36	-	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	DA	3364	1/1	0.87	0.11	-	102,102,102,102	0
54	MG	DA	3258	1/1	0.80	0.37	-	86,86,86,86	0
54	MG	BA	3616	1/1	0.89	0.22	-	73,73,73,73	0
54	MG	BA	3434	1/1	0.90	0.15	-	86,86,86,86	0
54	MG	CA	1712	1/1	0.98	0.14	-	99,99,99,99	0
54	MG	AA	1788	1/1	0.67	0.25	-	91,91,91,91	0
54	MG	DA	3121	1/1	0.91	0.33	-	109,109,109,109	0
54	MG	DA	3270	1/1	0.79	0.41	-	90,90,90,90	0
54	MG	BA	3624	1/1	0.93	0.16	-	98,98,98,98	0
54	MG	CA	1615	1/1	0.68	0.25	-	113,113,113,113	0
54	MG	AA	1651	1/1	0.94	0.25	-	86,86,86,86	0
54	MG	DA	3375	1/1	0.92	0.10	-	96,96,96,96	0
54	MG	BA	3227	1/1	0.84	0.10	-	101,101,101,101	0
54	MG	BA	3573	1/1	0.82	0.19	-	87,87,87,87	0
54	MG	BA	3604	1/1	0.80	0.28	-	92,92,92,92	0
54	MG	BA	3482	1/1	0.92	0.40	-	84,84,84,84	0
54	MG	DA	3089	1/1	0.82	0.32	-	81,81,81,81	0
54	MG	DA	3403	1/1	0.98	0.12	-	62,62,62,62	0
54	MG	DA	3065	1/1	0.92	0.38	-	82,82,82,82	0
54	MG	AA	1732	1/1	0.80	0.11	-	104,104,104,104	0
54	MG	DA	3249	1/1	0.95	0.19	-	74,74,74,74	0
54	MG	DA	3022	1/1	0.95	0.21	-	61,61,61,61	0
54	MG	AA	1762	1/1	0.93	0.39	-	92,92,92,92	0
54	MG	AA	1617	1/1	0.83	0.25	-	97,97,97,97	0
54	MG	BA	3031	1/1	0.97	0.32	-	58,58,58,58	0
54	MG	CA	1748	1/1	0.86	0.13	-	110,110,110,110	0
54	MG	DA	3468	1/1	0.98	0.43	-	47,47,47,47	0
54	MG	CA	1788	1/1	0.91	0.22	-	91,91,91,91	0
54	MG	DA	3474	1/1	0.93	0.22	-	65,65,65,65	0
54	MG	AA	1671	1/1	0.82	0.38	-	81,81,81,81	0
54	MG	DA	3518	1/1	0.93	0.35	-	83,83,83,83	0
54	MG	BA	3332	1/1	0.72	0.36	-	92,92,92,92	0
54	MG	DA	3436	1/1	0.88	0.32	-	92,92,92,92	0
54	MG	AA	1795	1/1	0.90	0.33	-	86,86,86,86	0
54	MG	BA	3174	1/1	0.90	0.27	-	63,63,63,63	0
54	MG	DA	3064	1/1	0.73	0.39	-	88,88,88,88	0
54	MG	DA	3038	1/1	0.85	0.13	-	119,119,119,119	0
54	MG	AA	1830	1/1	0.96	0.12	-	89,89,89,89	0
54	MG	BA	3611	1/1	0.99	0.23	-	55,55,55,55	0
54	MG	BA	3228	1/1	0.81	0.17	-	62,62,62,62	0
54	MG	BA	3334	1/1	0.70	0.19	-	84,84,84,84	0
54	MG	CA	1609	1/1	0.94	0.14	-	121,121,121,121	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	BA	3259	1/1	0.93	0.38	-	56,56,56,56	0
54	MG	DA	3087	1/1	0.95	0.38	-	79,79,79,79	0
54	MG	BA	3370	1/1	0.94	0.18	-	100,100,100,100	0
54	MG	DA	3263	1/1	0.97	0.38	-	62,62,62,62	0
54	MG	AA	1704	1/1	0.96	0.33	-	88,88,88,88	0
54	MG	CA	1689	1/1	0.80	0.15	-	98,98,98,98	0
54	MG	DA	3420	1/1	0.80	0.21	-	84,84,84,84	0
54	MG	AA	1797	1/1	0.75	0.39	-	102,102,102,102	0
54	MG	BA	3374	1/1	0.81	0.36	-	74,74,74,74	0
54	MG	CA	1760	1/1	0.81	0.31	-	109,109,109,109	0
54	MG	DA	3274	1/1	0.72	0.37	-	100,100,100,100	0
54	MG	DA	3088	1/1	0.90	0.29	-	110,110,110,110	0
54	MG	DA	3003	1/1	0.89	0.08	-	77,77,77,77	0
54	MG	AA	1772	1/1	0.82	0.32	-	110,110,110,110	0
54	MG	CA	1655	1/1	0.91	0.34	-	93,93,93,93	0
54	MG	DA	3002	1/1	0.59	0.16	-	87,87,87,87	0
54	MG	DA	3412	1/1	0.94	0.19	-	89,89,89,89	0
54	MG	AA	1692	1/1	0.78	0.20	-	94,94,94,94	0
54	MG	BA	3137	1/1	0.95	0.22	-	54,54,54,54	0
54	MG	BD	301	1/1	0.95	0.10	-	91,91,91,91	0
54	MG	BA	3235	1/1	0.94	0.35	-	79,79,79,79	0
54	MG	DA	3070	1/1	0.91	0.29	-	68,68,68,68	0
54	MG	BA	3464	1/1	0.55	0.36	-	101,101,101,101	0
54	MG	BA	3459	1/1	0.95	0.32	-	78,78,78,78	0
54	MG	AA	1816	1/1	0.65	0.35	-	93,93,93,93	0
54	MG	AA	1793	1/1	0.81	0.26	-	71,71,71,71	0
54	MG	AA	1701	1/1	0.91	0.13	-	96,96,96,96	0
54	MG	BA	3297	1/1	0.89	0.33	-	86,86,86,86	0
54	MG	DA	3241	1/1	0.93	0.32	-	74,74,74,74	0
54	MG	CA	1658	1/1	0.55	0.24	-	104,104,104,104	0
54	MG	DA	3250	1/1	0.26	0.33	-	105,105,105,105	0
54	MG	BE	303	1/1	0.80	0.30	-	89,89,89,89	0
54	MG	BA	3595	1/1	0.94	0.12	-	91,91,91,91	0
54	MG	DA	3301	1/1	0.72	0.20	-	140,140,140,140	0
54	MG	CA	1761	1/1	0.87	0.18	-	103,103,103,103	0
54	MG	AA	1646	1/1	0.92	0.37	-	105,105,105,105	0
54	MG	BA	3308	1/1	0.83	0.18	-	108,108,108,108	0
54	MG	DA	3400	1/1	0.88	0.20	-	95,95,95,95	0
54	MG	BA	3064	1/1	0.97	0.31	-	63,63,63,63	0
54	MG	BA	3601	1/1	0.88	0.16	-	83,83,83,83	0
54	MG	DA	3485	1/1	0.87	0.29	-	77,77,77,77	0
54	MG	BA	3340	1/1	0.91	0.27	-	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	DA	3482	1/1	0.97	0.31	-	54,54,54,54	0
54	MG	CA	1782	1/1	0.81	0.32	-	93,93,93,93	0
54	MG	BA	3495	1/1	0.91	0.13	-	80,80,80,80	0
54	MG	AA	1648	1/1	0.92	0.10	-	115,115,115,115	0
54	MG	BA	3098	1/1	0.99	0.37	-	45,45,45,45	0
54	MG	DA	3107	1/1	0.94	0.18	-	56,56,56,56	0
54	MG	DA	3307	1/1	0.96	0.15	-	75,75,75,75	0
54	MG	CA	1709	1/1	0.54	0.24	-	97,97,97,97	0
54	MG	DA	3099	1/1	0.95	0.32	-	60,60,60,60	0
54	MG	CA	1710	1/1	0.93	0.18	-	102,102,102,102	0
54	MG	DA	3026	1/1	0.82	0.23	-	76,76,76,76	0
54	MG	DA	3503	1/1	0.94	0.29	-	76,76,76,76	0
54	MG	CA	1732	1/1	0.48	0.31	-	108,108,108,108	0
54	MG	AA	1690	1/1	0.93	0.19	-	131,131,131,131	0
54	MG	AA	1744	1/1	0.92	0.26	-	81,81,81,81	0
54	MG	DA	3080	1/1	0.93	0.21	-	74,74,74,74	0
54	MG	CX	101	1/1	0.96	0.24	-	101,101,101,101	0
54	MG	CC	107	1/1	0.72	0.22	-	105,105,105,105	0
54	MG	AA	1703	1/1	0.93	0.27	-	61,61,61,61	0
54	MG	CA	1686	1/1	0.91	0.17	-	96,96,96,96	0
54	MG	BA	3315	1/1	0.86	0.30	-	83,83,83,83	0
54	MG	AA	1696	1/1	0.89	0.16	-	80,80,80,80	0
54	MG	DA	3176	1/1	0.99	0.38	-	58,58,58,58	0
54	MG	AA	1802	1/1	0.88	0.08	-	100,100,100,100	0
54	MG	BA	3582	1/1	0.92	0.39	-	78,78,78,78	0
54	MG	DA	3366	1/1	0.86	0.30	-	78,78,78,78	0
54	MG	BA	3078	1/1	0.95	0.40	-	63,63,63,63	0
54	MG	DA	3298	1/1	0.97	0.27	-	73,73,73,73	0
54	MG	DA	3244	1/1	0.86	0.51	-	89,89,89,89	0
54	MG	AA	1715	1/1	0.85	0.35	-	112,112,112,112	0
54	MG	CC	103	1/1	0.95	0.27	-	73,73,73,73	0
54	MG	DA	3328	1/1	0.97	0.14	-	98,98,98,98	0
54	MG	BA	3470	1/1	0.90	0.26	-	90,90,90,90	0
54	MG	CC	101	1/1	0.90	0.10	-	110,110,110,110	0
54	MG	BA	3451	1/1	0.91	0.45	-	93,93,93,93	0
54	MG	DA	3521	1/1	0.88	0.40	-	104,104,104,104	0
54	MG	BA	3547	1/1	0.83	0.45	-	84,84,84,84	0
54	MG	DA	3358	1/1	0.67	0.18	-	113,113,113,113	0
54	MG	AA	1796	1/1	0.88	0.41	-	76,76,76,76	0
54	MG	AD	101	1/1	0.71	0.27	-	114,114,114,114	0
54	MG	BA	3022	1/1	0.97	0.37	-	66,66,66,66	0
54	MG	AA	1786	1/1	0.70	0.11	-	145,145,145,145	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	CA	1713	1/1	0.78	0.18	-	109,109,109,109	0
54	MG	AA	1791	1/1	0.92	0.22	-	96,96,96,96	0
54	MG	BA	3437	1/1	0.89	0.20	-	81,81,81,81	0
54	MG	CA	1692	1/1	0.89	0.29	-	93,93,93,93	0
54	MG	BA	3527	1/1	0.90	0.21	-	78,78,78,78	0
54	MG	BB	203	1/1	0.91	0.36	-	70,70,70,70	0
54	MG	BA	3237	1/1	0.78	0.49	-	64,64,64,64	0
54	MG	BA	3147	1/1	0.90	0.34	-	73,73,73,73	0
54	MG	BA	3224	1/1	0.90	0.46	-	76,76,76,76	0
54	MG	DA	3147	1/1	0.93	0.26	-	79,79,79,79	0
54	MG	CA	1700	1/1	0.89	0.10	-	133,133,133,133	0
54	MG	DA	3214	1/1	0.79	0.25	-	69,69,69,69	0
54	MG	DA	3401	1/1	0.87	0.30	-	93,93,93,93	0
54	MG	BA	3089	1/1	0.72	0.36	-	87,87,87,87	0
54	MG	BA	3295	1/1	0.94	0.37	-	78,78,78,78	0
54	MG	DA	3373	1/1	0.86	0.30	-	107,107,107,107	0
54	MG	BA	3553	1/1	0.97	0.33	-	50,50,50,50	0
54	MG	BA	3320	1/1	0.87	0.45	-	82,82,82,82	0
54	MG	BA	3400	1/1	0.80	0.17	-	72,72,72,72	0
54	MG	BA	3609	1/1	0.91	0.27	-	80,80,80,80	0
54	MG	BA	3134	1/1	0.90	0.29	-	66,66,66,66	0
54	MG	BA	3391	1/1	0.73	0.35	-	85,85,85,85	0
54	MG	AA	1721	1/1	0.87	0.35	-	95,95,95,95	0
54	MG	DA	3344	1/1	0.93	0.30	-	82,82,82,82	0
54	MG	BA	3375	1/1	0.83	0.46	-	99,99,99,99	0
54	MG	BA	3187	1/1	0.92	0.45	-	71,71,71,71	0
54	MG	BA	3256	1/1	0.96	0.53	-	80,80,80,80	0
54	MG	AA	1603	1/1	0.96	0.23	-	89,89,89,89	0
54	MG	BA	3335	1/1	0.91	0.27	-	75,75,75,75	0
54	MG	BA	3044	1/1	0.93	0.28	-	60,60,60,60	0
54	MG	DA	3217	1/1	0.90	0.35	-	89,89,89,89	0
54	MG	BA	3250	1/1	0.87	0.26	-	61,61,61,61	0
54	MG	DA	3515	1/1	0.85	0.29	-	101,101,101,101	0
54	MG	BA	3419	1/1	0.70	0.28	-	81,81,81,81	0
54	MG	BA	3494	1/1	0.87	0.24	-	72,72,72,72	0
54	MG	DA	3098	1/1	0.97	0.09	-	112,112,112,112	0
54	MG	AA	1620	1/1	0.88	0.07	-	140,140,140,140	0
54	MG	AA	1664	1/1	0.92	0.52	-	81,81,81,81	0
54	MG	AA	1655	1/1	0.90	0.43	-	97,97,97,97	0
54	MG	BA	3392	1/1	0.72	0.23	-	91,91,91,91	0
54	MG	DE	301	1/1	0.91	0.20	-	67,67,67,67	0
54	MG	BA	3121	1/1	0.83	0.24	-	98,98,98,98	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	DA	3120	1/1	0.97	0.25	-	60,60,60,60	0
54	MG	DA	3324	1/1	0.75	0.45	-	90,90,90,90	0
54	MG	AA	1622	1/1	0.91	0.40	-	70,70,70,70	0
54	MG	DA	3104	1/1	0.90	0.14	-	71,71,71,71	0
54	MG	DA	3456	1/1	0.90	0.10	-	105,105,105,105	0
54	MG	DA	3494	1/1	0.90	0.29	-	72,72,72,72	0
54	MG	DA	3510	1/1	0.94	0.15	-	77,77,77,77	0
54	MG	BA	3088	1/1	0.86	0.30	-	84,84,84,84	0
54	MG	DA	3342	1/1	0.92	0.29	-	90,90,90,90	0
54	MG	BA	3588	1/1	0.78	0.44	-	77,77,77,77	0
54	MG	AA	1823	1/1	0.97	0.09	-	151,151,151,151	0
54	MG	DA	3182	1/1	0.90	0.33	-	74,74,74,74	0
54	MG	DA	3139	1/1	0.85	0.20	-	63,63,63,63	0
54	MG	BA	3436	1/1	0.81	0.25	-	75,75,75,75	0
54	MG	BB	208	1/1	0.90	0.17	-	89,89,89,89	0
54	MG	BO	202	1/1	0.93	0.15	-	68,68,68,68	0
54	MG	AC	105	1/1	0.32	0.23	-	100,100,100,100	0
54	MG	BA	3020	1/1	0.99	0.40	-	49,49,49,49	0
54	MG	DA	3338	1/1	0.95	0.45	-	105,105,105,105	0
54	MG	BA	3180	1/1	0.75	0.50	-	92,92,92,92	0
54	MG	BA	3030	1/1	0.87	0.35	-	70,70,70,70	0
54	MG	BA	3277	1/1	0.72	0.30	-	89,89,89,89	0
54	MG	DA	3291	1/1	0.93	0.37	-	84,84,84,84	0
54	MG	AN	202	1/1	0.84	0.08	-	88,88,88,88	0
54	MG	DA	3417	1/1	0.89	0.25	-	81,81,81,81	0
54	MG	DA	3057	1/1	0.91	0.31	-	70,70,70,70	0
54	MG	BA	3242	1/1	0.98	0.32	-	59,59,59,59	0
54	MG	BA	3440	1/1	0.69	0.32	-	73,73,73,73	0
54	MG	CA	1691	1/1	0.98	0.30	-	89,89,89,89	0
54	MG	BA	3106	1/1	0.92	0.50	-	73,73,73,73	0
54	MG	CA	1764	1/1	0.88	0.21	-	89,89,89,89	0
54	MG	DA	3066	1/1	0.89	0.17	-	80,80,80,80	0
54	MG	DA	3438	1/1	0.93	0.25	-	82,82,82,82	0
54	MG	BA	3111	1/1	0.80	0.46	-	85,85,85,85	0
54	MG	DA	3433	1/1	0.97	0.30	-	91,91,91,91	0
54	MG	DA	3149	1/1	0.64	0.24	-	79,79,79,79	0
54	MG	BA	3151	1/1	0.68	0.37	-	91,91,91,91	0
54	MG	DA	3039	1/1	0.86	0.35	-	80,80,80,80	0
54	MG	AA	1709	1/1	0.61	0.21	-	106,106,106,106	0
54	MG	BA	3591	1/1	0.97	0.33	-	69,69,69,69	0
54	MG	BA	3218	1/1	0.90	0.25	-	90,90,90,90	0
54	MG	DA	3045	1/1	0.86	0.30	-	93,93,93,93	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	BA	3241	1/1	0.92	0.13	-	70,70,70,70	0
54	MG	BA	3056	1/1	0.93	0.34	-	109,109,109,109	0
54	MG	CA	1612	1/1	0.96	0.06	-	94,94,94,94	0
54	MG	AA	1761	1/1	0.86	0.16	-	94,94,94,94	0
54	MG	DA	3118	1/1	0.99	0.15	-	57,57,57,57	0
54	MG	BA	3229	1/1	0.88	0.39	-	64,64,64,64	0
54	MG	BA	3384	1/1	0.91	0.26	-	73,73,73,73	0
54	MG	AA	1641	1/1	0.83	0.22	-	74,74,74,74	0
54	MG	BA	3169	1/1	0.89	0.14	-	65,65,65,65	0
54	MG	BA	3415	1/1	0.93	0.35	-	80,80,80,80	0
54	MG	AA	1606	1/1	0.73	0.15	-	101,101,101,101	0
54	MG	DA	3033	1/1	0.94	0.22	-	93,93,93,93	0
54	MG	BA	3326	1/1	0.85	0.31	-	89,89,89,89	0
54	MG	DA	3329	1/1	0.78	0.46	-	88,88,88,88	0
54	MG	BA	3346	1/1	0.90	0.17	-	74,74,74,74	0
54	MG	CA	1778	1/1	0.67	0.23	-	107,107,107,107	0
54	MG	DA	3205	1/1	0.98	0.32	-	80,80,80,80	0
54	MG	BA	3207	1/1	0.91	0.33	-	78,78,78,78	0
54	MG	BA	3119	1/1	0.92	0.30	-	84,84,84,84	0
54	MG	DR	201	1/1	0.90	0.35	-	82,82,82,82	0
54	MG	BA	3584	1/1	0.96	0.13	-	66,66,66,66	0
54	MG	BA	3396	1/1	0.97	0.18	-	117,117,117,117	0
54	MG	AA	1760	1/1	0.96	0.19	-	87,87,87,87	0
54	MG	DA	3073	1/1	0.92	0.17	-	66,66,66,66	0
54	MG	DA	3500	1/1	0.36	0.18	-	98,98,98,98	0
54	MG	DA	3005	1/1	0.76	0.35	-	99,99,99,99	0
54	MG	BA	3388	1/1	0.85	0.49	-	82,82,82,82	0
54	MG	AA	1625	1/1	0.94	0.27	-	83,83,83,83	0
54	MG	DA	3075	1/1	0.88	0.28	-	93,93,93,93	0
54	MG	BA	3128	1/1	0.98	0.11	-	85,85,85,85	0
54	MG	CA	1620	1/1	0.78	0.25	-	75,75,75,75	0
54	MG	AA	1804	1/1	0.89	0.41	-	81,81,81,81	0
54	MG	BA	3132	1/1	0.94	0.12	-	65,65,65,65	0
54	MG	DA	3315	1/1	0.93	0.33	-	95,95,95,95	0
54	MG	DA	3432	1/1	0.52	0.23	-	102,102,102,102	0
54	MG	CA	1637	1/1	0.94	0.10	-	97,97,97,97	0
54	MG	AA	1789	1/1	0.94	0.33	-	109,109,109,109	0
54	MG	CA	1631	1/1	0.88	0.11	-	102,102,102,102	0
54	MG	BA	3324	1/1	0.87	0.28	-	70,70,70,70	0
54	MG	BA	3181	1/1	0.85	0.32	-	64,64,64,64	0
54	MG	CA	1750	1/1	0.85	0.33	-	97,97,97,97	0
54	MG	BA	3433	1/1	0.91	0.12	-	94,94,94,94	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	AA	1777	1/1	0.77	0.12	-	117,117,117,117	0
54	MG	DA	3431	1/1	0.92	0.09	-	81,81,81,81	0
54	MG	DA	3161	1/1	0.79	0.17	-	84,84,84,84	0
54	MG	DA	3290	1/1	0.81	0.22	-	75,75,75,75	0
54	MG	BA	3112	1/1	0.92	0.46	-	71,71,71,71	0
54	MG	DA	3514	1/1	0.96	0.22	-	92,92,92,92	0
54	MG	DA	3044	1/1	0.87	0.14	-	78,78,78,78	0
54	MG	DA	3095	1/1	0.85	0.15	-	88,88,88,88	0
54	MG	CA	1707	1/1	0.75	0.27	-	88,88,88,88	0
54	MG	DA	3168	1/1	0.83	0.11	-	69,69,69,69	0
54	MG	BA	3296	1/1	0.84	0.39	-	81,81,81,81	0
54	MG	CA	1680	1/1	0.98	0.05	-	104,104,104,104	0
54	MG	BA	3230	1/1	0.75	0.19	-	71,71,71,71	0
54	MG	BA	3504	1/1	0.90	0.10	-	90,90,90,90	0
54	MG	CA	1614	1/1	0.85	0.15	-	100,100,100,100	0
54	MG	AA	1766	1/1	0.95	0.14	-	98,98,98,98	0
54	MG	BA	3294	1/1	0.93	0.37	-	75,75,75,75	0
54	MG	DA	3445	1/1	0.85	0.10	-	96,96,96,96	0
54	MG	CA	1714	1/1	0.91	0.12	-	161,161,161,161	0
54	MG	BA	3501	1/1	0.94	0.23	-	90,90,90,90	0
54	MG	CA	1753	1/1	0.92	0.17	-	105,105,105,105	0
54	MG	DA	3068	1/1	0.91	0.34	-	86,86,86,86	0
54	MG	DA	3248	1/1	0.94	0.28	-	93,93,93,93	0
54	MG	BA	3395	1/1	0.97	0.36	-	84,84,84,84	0
54	MG	BA	3003	1/1	0.97	0.33	-	61,61,61,61	0
54	MG	BA	3054	1/1	0.88	0.29	-	100,100,100,100	0
54	MG	BA	3509	1/1	0.52	0.77	-	102,102,102,102	0
54	MG	BA	3468	1/1	0.50	0.28	-	99,99,99,99	0
54	MG	DA	3395	1/1	0.99	0.07	-	103,103,103,103	0
54	MG	BA	3546	1/1	0.90	0.15	-	98,98,98,98	0
54	MG	DA	3040	1/1	0.62	0.16	-	103,103,103,103	0
54	MG	BA	3367	1/1	0.69	0.23	-	91,91,91,91	0
54	MG	CA	1625	1/1	0.90	0.12	-	115,115,115,115	0
54	MG	DB	210	1/1	0.92	0.26	-	95,95,95,95	0
54	MG	BA	3435	1/1	0.94	0.15	-	94,94,94,94	0
54	MG	DA	3437	1/1	0.89	0.32	-	101,101,101,101	0
54	MG	CA	1698	1/1	0.79	0.19	-	96,96,96,96	0
54	MG	CA	1642	1/1	0.80	0.12	-	116,116,116,116	0
54	MG	DA	3365	1/1	0.91	0.25	-	73,73,73,73	0
54	MG	AA	1645	1/1	0.89	0.28	-	81,81,81,81	0
54	MG	AA	1753	1/1	0.87	0.17	-	97,97,97,97	0
54	MG	DA	3286	1/1	0.89	0.20	-	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	CA	1759	1/1	0.94	0.32	-	100,100,100,100	0
54	MG	AA	1675	1/1	0.46	0.37	-	112,112,112,112	0
54	MG	CA	1703	1/1	0.89	0.44	-	85,85,85,85	0
54	MG	DA	3284	1/1	0.95	0.27	-	76,76,76,76	0
54	MG	BA	3492	1/1	0.91	0.17	-	87,87,87,87	0
54	MG	BA	3401	1/1	0.94	0.12	-	73,73,73,73	0
54	MG	BA	3270	1/1	0.83	0.41	-	91,91,91,91	0
54	MG	AA	1781	1/1	0.96	0.12	-	103,103,103,103	0
54	MG	CA	1629	1/1	0.79	0.12	-	107,107,107,107	0
54	MG	BA	3280	1/1	0.58	0.32	-	106,106,106,106	0
54	MG	CA	1613	1/1	0.71	0.31	-	86,86,86,86	0
54	MG	BA	3071	1/1	0.91	0.24	-	90,90,90,90	0
54	MG	BA	3405	1/1	0.89	0.48	-	72,72,72,72	0
54	MG	DA	3282	1/1	0.72	0.30	-	88,88,88,88	0
54	MG	BA	3576	1/1	0.93	0.18	-	93,93,93,93	0
54	MG	DA	3097	1/1	0.96	0.15	-	89,89,89,89	0
54	MG	AA	1665	1/1	0.91	0.41	-	82,82,82,82	0
54	MG	DA	3150	1/1	0.82	0.29	-	91,91,91,91	0
54	MG	CA	1694	1/1	0.88	0.14	-	91,91,91,91	0
54	MG	DA	3276	1/1	0.96	0.21	-	91,91,91,91	0
54	MG	DA	3476	1/1	0.96	0.22	-	66,66,66,66	0
54	MG	AA	1722	1/1	0.24	0.34	-	96,96,96,96	0
54	MG	AA	1827	1/1	0.90	0.12	-	112,112,112,112	0
54	MG	AA	1801	1/1	0.85	0.28	-	113,113,113,113	0
54	MG	AA	1819	1/1	0.89	0.17	-	92,92,92,92	0
54	MG	BA	3357	1/1	0.93	0.48	-	77,77,77,77	0
54	MG	BA	3592	1/1	0.91	0.24	-	73,73,73,73	0
54	MG	AQ	101	1/1	0.91	0.29	-	94,94,94,94	0
54	MG	AA	1700	1/1	0.66	0.20	-	84,84,84,84	0
54	MG	DA	3239	1/1	0.93	0.28	-	64,64,64,64	0
54	MG	CA	1765	1/1	0.80	0.19	-	122,122,122,122	0
54	MG	BA	3378	1/1	0.89	0.42	-	80,80,80,80	0
54	MG	DA	3243	1/1	0.89	0.30	-	71,71,71,71	0
54	MG	BA	3569	1/1	0.97	0.40	-	51,51,51,51	0
54	MG	BA	3109	1/1	0.77	0.32	-	89,89,89,89	0
54	MG	DP	201	1/1	0.91	0.10	-	76,76,76,76	0
54	MG	DA	3006	1/1	0.82	0.38	-	95,95,95,95	0
54	MG	DA	3206	1/1	0.98	0.36	-	73,73,73,73	0
54	MG	BA	3399	1/1	0.92	0.22	-	77,77,77,77	0
54	MG	DB	212	1/1	0.59	0.21	-	101,101,101,101	0
54	MG	DA	3204	1/1	0.96	0.35	-	71,71,71,71	0
54	MG	BB	206	1/1	0.80	0.21	-	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	BA	3310	1/1	0.93	0.20	-	70,70,70,70	0
54	MG	AA	1695	1/1	0.88	0.13	-	76,76,76,76	0
54	MG	BA	3497	1/1	0.96	0.40	-	72,72,72,72	0
54	MG	BA	3622	1/1	0.83	0.24	-	97,97,97,97	0
54	MG	BA	3316	1/1	0.71	0.30	-	91,91,91,91	0
54	MG	DA	3321	1/1	0.93	0.31	-	78,78,78,78	0
54	MG	AA	1711	1/1	0.85	0.10	-	132,132,132,132	0
54	MG	DA	3126	1/1	0.97	0.25	-	67,67,67,67	0
54	MG	DA	3187	1/1	0.78	0.27	-	83,83,83,83	0
54	MG	AA	1811	1/1	0.83	0.63	-	102,102,102,102	0
54	MG	BA	3266	1/1	0.94	0.30	-	72,72,72,72	0
54	MG	BA	3520	1/1	0.94	0.15	-	86,86,86,86	0
54	MG	BA	3531	1/1	0.64	0.31	-	83,83,83,83	0
54	MG	BA	3421	1/1	0.92	0.34	-	73,73,73,73	0
54	MG	BA	3345	1/1	0.77	0.32	-	91,91,91,91	0
54	MG	BA	3439	1/1	0.87	0.40	-	70,70,70,70	0
54	MG	DA	3137	1/1	0.79	0.36	-	86,86,86,86	0
54	MG	AA	1718	1/1	0.73	0.23	-	87,87,87,87	0
54	MG	BA	3565	1/1	0.92	0.36	-	45,45,45,45	0
54	MG	BA	3061	1/1	0.95	0.23	-	84,84,84,84	0
54	MG	DA	3101	1/1	0.89	0.32	-	100,100,100,100	0
54	MG	BA	3488	1/1	0.86	0.37	-	94,94,94,94	0
54	MG	BA	3376	1/1	0.74	0.22	-	84,84,84,84	0
54	MG	DA	3017	1/1	0.63	0.34	-	105,105,105,105	0
54	MG	DA	3391	1/1	0.60	0.22	-	107,107,107,107	0
54	MG	AA	1809	1/1	0.96	0.30	-	105,105,105,105	0
54	MG	DA	3208	1/1	0.99	0.29	-	57,57,57,57	0
54	MG	AA	1678	1/1	0.85	0.27	-	87,87,87,87	0
54	MG	DA	3166	1/1	0.89	0.17	-	91,91,91,91	0
54	MG	AA	1707	1/1	0.93	0.11	-	127,127,127,127	0
54	MG	BA	3117	1/1	0.90	0.38	-	57,57,57,57	0
54	MG	CA	1619	1/1	0.92	0.10	-	75,75,75,75	0
54	MG	DA	3071	1/1	0.80	0.13	-	107,107,107,107	0
54	MG	DA	3192	1/1	0.84	0.27	-	92,92,92,92	0
54	MG	BA	3073	1/1	0.98	0.10	-	73,73,73,73	0
54	MG	AA	1736	1/1	0.79	0.23	-	92,92,92,92	0
54	MG	CC	106	1/1	0.90	0.13	-	98,98,98,98	0
54	MG	DA	3421	1/1	0.93	0.45	-	86,86,86,86	0
54	MG	BA	3124	1/1	0.87	0.34	-	85,85,85,85	0
54	MG	AA	1685	1/1	0.87	0.27	-	73,73,73,73	0
54	MG	DA	3299	1/1	0.85	0.29	-	99,99,99,99	0
54	MG	AA	1747	1/1	0.96	0.29	-	88,88,88,88	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	DA	3460	1/1	0.69	1.04	-	100,100,100,100	0
54	MG	BA	3514	1/1	0.92	0.27	-	76,76,76,76	0
54	MG	BA	3463	1/1	0.89	0.31	-	84,84,84,84	0
54	MG	BA	3418	1/1	0.60	0.39	-	104,104,104,104	0
54	MG	BA	3046	1/1	0.92	0.28	-	60,60,60,60	0
54	MG	BA	3004	1/1	0.95	0.28	-	72,72,72,72	0
54	MG	BA	3052	1/1	0.89	0.55	-	81,81,81,81	0
54	MG	BA	3438	1/1	0.58	0.22	-	90,90,90,90	0
54	MG	DA	3452	1/1	0.92	0.35	-	95,95,95,95	0
54	MG	DA	3252	1/1	0.99	0.23	-	67,67,67,67	0
54	MG	BA	3082	1/1	0.94	0.35	-	80,80,80,80	0
54	MG	DA	3261	1/1	0.90	0.38	-	97,97,97,97	0
54	MG	BA	3526	1/1	0.95	0.10	-	97,97,97,97	0
54	MG	CA	1634	1/1	0.96	0.24	-	87,87,87,87	0
54	MG	CA	1777	1/1	0.89	0.15	-	78,78,78,78	0
54	MG	DA	3133	1/1	0.95	0.09	-	76,76,76,76	0
54	MG	BA	3225	1/1	0.84	0.22	-	75,75,75,75	0
54	MG	CA	1720	1/1	0.93	0.24	-	86,86,86,86	0
54	MG	AA	1775	1/1	0.94	0.15	-	113,113,113,113	0
54	MG	BA	3490	1/1	0.71	0.32	-	102,102,102,102	0
54	MG	CA	1718	1/1	0.94	0.12	-	100,100,100,100	0
54	MG	DB	205	1/1	0.92	0.25	-	84,84,84,84	0
54	MG	AA	1663	1/1	0.97	0.16	-	72,72,72,72	0
54	MG	BA	3344	1/1	0.85	0.13	-	91,91,91,91	0
54	MG	AA	1748	1/1	0.83	0.15	-	152,152,152,152	0
54	MG	AA	1691	1/1	0.95	0.12	-	107,107,107,107	0
54	MG	AA	1658	1/1	0.96	0.25	-	68,68,68,68	0
54	MG	DA	3032	1/1	0.90	0.20	-	79,79,79,79	0
54	MG	BA	3283	1/1	0.91	0.34	-	78,78,78,78	0
54	MG	DA	3035	1/1	0.93	0.12	-	92,92,92,92	0
54	MG	DA	3459	1/1	0.70	0.33	-	87,87,87,87	0
54	MG	DA	3256	1/1	0.98	0.30	-	60,60,60,60	0
54	MG	AA	1723	1/1	0.80	0.21	-	82,82,82,82	0
54	MG	DA	3288	1/1	0.93	0.28	-	77,77,77,77	0
54	MG	DU	202	1/1	0.91	0.10	-	96,96,96,96	0
54	MG	DA	3091	1/1	0.96	0.29	-	73,73,73,73	0
54	MG	CG	301	1/1	0.72	0.21	-	113,113,113,113	0
54	MG	DA	3134	1/1	0.78	0.13	-	96,96,96,96	0
54	MG	DA	3296	1/1	0.31	0.20	-	104,104,104,104	0
54	MG	CA	1601	1/1	0.92	0.29	-	95,95,95,95	0
54	MG	BA	3523	1/1	0.80	0.35	-	82,82,82,82	0
54	MG	BA	3614	1/1	0.82	0.21	-	92,92,92,92	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	DA	3304	1/1	0.76	0.21	-	88,88,88,88	0
54	MG	BA	3043	1/1	0.92	0.34	-	57,57,57,57	0
54	MG	BA	3091	1/1	0.39	0.33	-	128,128,128,128	0
54	MG	BA	3292	1/1	0.93	0.13	-	78,78,78,78	0
54	MG	BA	3202	1/1	0.98	0.28	-	71,71,71,71	0
54	MG	DA	3361	1/1	0.95	0.31	-	77,77,77,77	0
54	MG	AA	1615	1/1	0.97	0.16	-	114,114,114,114	0
54	MG	DA	3280	1/1	0.97	0.27	-	44,44,44,44	0
54	MG	BA	3599	1/1	0.70	0.35	-	85,85,85,85	0
54	MG	BA	3058	1/1	0.88	0.25	-	68,68,68,68	0
54	MG	BA	3274	1/1	0.90	0.24	-	81,81,81,81	0
54	MG	DA	3330	1/1	0.85	0.38	-	95,95,95,95	0
54	MG	DA	3049	1/1	0.82	0.28	-	92,92,92,92	0
54	MG	BA	3597	1/1	0.75	0.29	-	103,103,103,103	0
54	MG	DA	3398	1/1	0.90	0.19	-	84,84,84,84	0
54	MG	CS	101	1/1	0.88	0.19	-	95,95,95,95	0
54	MG	CA	1786	1/1	0.90	0.25	-	83,83,83,83	0
54	MG	AA	1669	1/1	0.89	0.38	-	76,76,76,76	0
54	MG	AA	1610	1/1	0.68	0.16	-	102,102,102,102	0
54	MG	CA	1790	1/1	0.96	0.31	-	105,105,105,105	0
54	MG	AA	1719	1/1	0.88	0.19	-	98,98,98,98	0
54	MG	DA	3504	1/1	0.92	0.29	-	79,79,79,79	0
54	MG	BA	3313	1/1	0.81	0.48	-	94,94,94,94	0
54	MG	BA	3317	1/1	0.92	0.26	-	87,87,87,87	0
54	MG	BA	3585	1/1	0.81	0.44	-	77,77,77,77	0
54	MG	BA	3249	1/1	0.78	0.23	-	74,74,74,74	0
54	MG	BA	3389	1/1	0.89	0.26	-	74,74,74,74	0
54	MG	CA	1727	1/1	0.96	0.06	-	128,128,128,128	0
54	MG	DA	3152	1/1	0.91	0.14	-	86,86,86,86	0
54	MG	CA	1706	1/1	0.91	0.21	-	90,90,90,90	0
54	MG	DA	3123	1/1	0.96	0.36	-	92,92,92,92	0
54	MG	AA	1729	1/1	0.93	0.22	-	102,102,102,102	0
54	MG	DA	3509	1/1	0.95	0.26	-	64,64,64,64	0
54	MG	AA	1787	1/1	0.83	0.09	-	89,89,89,89	0
54	MG	CA	1704	1/1	0.85	0.32	-	99,99,99,99	0
54	MG	DA	3337	1/1	0.87	0.45	-	80,80,80,80	0
54	MG	AC	104	1/1	0.80	0.26	-	100,100,100,100	0
54	MG	BA	3079	1/1	0.88	0.26	-	103,103,103,103	0
54	MG	BA	3403	1/1	0.90	0.33	-	103,103,103,103	0
54	MG	DA	3197	1/1	0.94	0.11	-	82,82,82,82	0
54	MG	BA	3203	1/1	0.91	0.45	-	75,75,75,75	0
54	MG	DA	3374	1/1	0.80	0.25	-	87,87,87,87	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	AA	1661	1/1	0.96	0.26	-	81,81,81,81	0
54	MG	BA	3477	1/1	0.94	0.21	-	92,92,92,92	0
54	MG	CA	1730	1/1	0.97	0.19	-	117,117,117,117	0
54	MG	CA	1754	1/1	0.86	0.38	-	108,108,108,108	0
54	MG	BA	3191	1/1	0.84	0.26	-	78,78,78,78	0
54	MG	BA	3557	1/1	0.97	0.36	-	44,44,44,44	0
54	MG	BA	3192	1/1	0.91	0.25	-	100,100,100,100	0
54	MG	DA	3031	1/1	0.92	0.19	-	72,72,72,72	0
54	MG	CA	1758	1/1	0.91	0.21	-	94,94,94,94	0
54	MG	AA	1833	1/1	0.81	0.11	-	98,98,98,98	0
54	MG	AA	1798	1/1	0.89	0.40	-	93,93,93,93	0
54	MG	BA	3594	1/1	0.78	0.67	-	81,81,81,81	0
54	MG	AA	1834	1/1	0.95	0.26	-	86,86,86,86	0
54	MG	BA	3282	1/1	0.98	0.43	-	60,60,60,60	0
54	MG	BA	3007	1/1	0.99	0.38	-	59,59,59,59	0
54	MG	BA	3339	1/1	0.96	0.43	-	85,85,85,85	0
54	MG	DA	3142	1/1	0.85	0.28	-	83,83,83,83	0
54	MG	DA	3513	1/1	0.90	0.34	-	81,81,81,81	0
54	MG	CA	1796	1/1	0.80	0.11	-	81,81,81,81	0
54	MG	AA	1779	1/1	0.94	0.43	-	78,78,78,78	0
54	MG	DA	3154	1/1	0.83	0.17	-	102,102,102,102	0
54	MG	CA	1605	1/1	0.94	0.23	-	87,87,87,87	0
54	MG	DA	3247	1/1	0.94	0.34	-	76,76,76,76	0
54	MG	BA	3605	1/1	0.92	0.29	-	72,72,72,72	0
54	MG	DA	3362	1/1	0.92	0.39	-	79,79,79,79	0
54	MG	BA	3164	1/1	0.95	0.43	-	83,83,83,83	0
54	MG	DA	3287	1/1	0.85	0.18	-	102,102,102,102	0
54	MG	DA	3393	1/1	0.91	0.31	-	92,92,92,92	0
54	MG	DA	3461	1/1	0.76	0.21	-	93,93,93,93	0
54	MG	BA	3578	1/1	0.89	0.26	-	73,73,73,73	0
54	MG	DA	3164	1/1	0.92	0.25	-	84,84,84,84	0
54	MG	BA	3506	1/1	0.86	0.33	-	74,74,74,74	0
54	MG	AA	1681	1/1	0.83	0.20	-	101,101,101,101	0
54	MG	BA	3489	1/1	0.68	0.18	-	84,84,84,84	0
54	MG	BA	3424	1/1	0.83	0.26	-	86,86,86,86	0
54	MG	BA	3390	1/1	0.83	0.37	-	95,95,95,95	0
54	MG	AA	1836	1/1	0.61	0.16	-	91,91,91,91	0
54	MG	DA	3335	1/1	0.90	0.26	-	91,91,91,91	0
54	MG	DA	3046	1/1	0.91	0.22	-	78,78,78,78	0
54	MG	BA	3072	1/1	0.73	0.33	-	81,81,81,81	0
54	MG	DA	3021	1/1	0.94	0.30	-	63,63,63,63	0
54	MG	BA	3347	1/1	0.84	0.40	-	86,86,86,86	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	CA	1792	1/1	0.96	0.18	-	105,105,105,105	0
54	MG	BA	3406	1/1	0.89	0.19	-	88,88,88,88	0
54	MG	DA	3130	1/1	0.96	0.31	-	52,52,52,52	0
54	MG	BA	3568	1/1	0.92	0.23	-	55,55,55,55	0
54	MG	BO	201	1/1	0.90	0.19	-	79,79,79,79	0
54	MG	BA	3631	1/1	0.94	0.24	-	96,96,96,96	0
54	MG	CA	1737	1/1	0.87	0.16	-	93,93,93,93	0
54	MG	DA	3078	1/1	0.86	0.20	-	65,65,65,65	0
54	MG	BA	3521	1/1	0.97	0.40	-	81,81,81,81	0
54	MG	CA	1667	1/1	0.95	0.30	-	70,70,70,70	0
54	MG	DA	3240	1/1	0.81	0.16	-	86,86,86,86	0
54	MG	BA	3144	1/1	0.97	0.34	-	68,68,68,68	0
54	MG	AA	1702	1/1	0.91	0.24	-	80,80,80,80	0
54	MG	DA	3013	1/1	0.82	0.12	-	95,95,95,95	0
54	MG	BA	3540	1/1	0.86	0.20	-	78,78,78,78	0
54	MG	AA	1674	1/1	0.81	0.24	-	93,93,93,93	0
54	MG	DA	3019	1/1	0.85	0.15	-	79,79,79,79	0
54	MG	DA	3093	1/1	0.89	0.28	-	88,88,88,88	0
54	MG	BA	3146	1/1	0.94	0.29	-	75,75,75,75	0
54	MG	DA	3228	1/1	0.95	0.23	-	70,70,70,70	0
54	MG	BA	3377	1/1	0.86	0.17	-	81,81,81,81	0
54	MG	BA	3176	1/1	0.98	0.15	-	73,73,73,73	0
54	MG	CA	1690	1/1	0.94	0.26	-	86,86,86,86	0
54	MG	BU	202	1/1	0.79	0.20	-	71,71,71,71	0
54	MG	DA	3262	1/1	0.92	0.19	-	95,95,95,95	0
54	MG	BA	3516	1/1	0.83	0.49	-	90,90,90,90	0
54	MG	CA	1735	1/1	0.84	0.30	-	86,86,86,86	0
54	MG	BA	3200	1/1	0.98	0.39	-	76,76,76,76	0
54	MG	DA	3156	1/1	0.97	0.32	-	49,49,49,49	0
54	MG	DA	3289	1/1	0.74	0.34	-	110,110,110,110	0
54	MG	BA	3364	1/1	0.73	0.32	-	78,78,78,78	0
54	MG	BA	3548	1/1	0.88	0.36	-	76,76,76,76	0
54	MG	BA	3048	1/1	0.98	0.29	-	67,67,67,67	0
54	MG	DE	302	1/1	0.81	0.22	-	96,96,96,96	0
54	MG	BA	3131	1/1	0.84	0.40	-	80,80,80,80	0
54	MG	CA	1635	1/1	0.86	0.11	-	93,93,93,93	0
54	MG	BA	3223	1/1	0.79	0.19	-	84,84,84,84	0
54	MG	DA	3220	1/1	0.99	0.26	-	60,60,60,60	0
54	MG	BA	3500	1/1	0.86	0.17	-	92,92,92,92	0
54	MG	DA	3484	1/1	0.92	0.19	-	69,69,69,69	0
54	MG	DA	3076	1/1	0.97	0.27	-	93,93,93,93	0
54	MG	AA	1768	1/1	0.82	0.15	-	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	BA	3623	1/1	0.70	0.25	-	93,93,93,93	0
54	MG	BA	3453	1/1	0.66	0.17	-	78,78,78,78	0
54	MG	BA	3273	1/1	0.77	0.20	-	80,80,80,80	0
54	MG	AA	1684	1/1	0.78	0.37	-	90,90,90,90	0
54	MG	CA	1693	1/1	0.93	0.50	-	89,89,89,89	0
54	MG	D8	101	1/1	0.95	0.26	-	80,80,80,80	0
54	MG	BA	3039	1/1	0.69	0.29	-	76,76,76,76	0
54	MG	BA	3431	1/1	0.91	0.11	-	88,88,88,88	0
54	MG	DA	3406	1/1	0.59	0.29	-	113,113,113,113	0
54	MG	DA	3253	1/1	0.69	0.20	-	88,88,88,88	0
54	MG	BA	3404	1/1	0.77	0.29	-	90,90,90,90	0
54	MG	DA	3349	1/1	0.89	0.23	-	78,78,78,78	0
54	MG	BA	3307	1/1	0.89	0.30	-	75,75,75,75	0
54	MG	BA	3301	1/1	0.74	0.32	-	91,91,91,91	0
54	MG	CA	1608	1/1	0.71	0.17	-	94,94,94,94	0
54	MG	BA	3062	1/1	0.87	0.25	-	106,106,106,106	0
54	MG	AA	1743	1/1	0.54	0.24	-	100,100,100,100	0
54	MG	BA	3539	1/1	0.88	0.32	-	59,59,59,59	0
54	MG	DA	3029	1/1	0.79	0.18	-	96,96,96,96	0
54	MG	AA	1720	1/1	0.92	0.11	-	113,113,113,113	0
54	MG	DA	3444	1/1	0.73	0.11	-	133,133,133,133	0
54	MG	BA	3457	1/1	0.99	0.50	-	49,49,49,49	0
54	MG	BA	3185	1/1	0.96	0.53	-	62,62,62,62	0
54	MG	B2	201	1/1	0.96	0.16	-	104,104,104,104	0
54	MG	BA	3219	1/1	0.89	0.21	-	82,82,82,82	0
54	MG	BA	3244	1/1	0.99	0.33	-	53,53,53,53	0
54	MG	BA	3093	1/1	0.88	0.13	-	72,72,72,72	0
54	MG	DA	3058	1/1	0.72	0.19	-	84,84,84,84	0
54	MG	BA	3042	1/1	0.98	0.19	-	62,62,62,62	0
54	MG	BA	3074	1/1	0.91	0.16	-	76,76,76,76	0
54	MG	BA	3204	1/1	0.89	0.38	-	106,106,106,106	0
54	MG	BA	3107	1/1	0.98	0.39	-	76,76,76,76	0
54	MG	BA	3182	1/1	0.91	0.41	-	81,81,81,81	0
54	MG	BA	3329	1/1	0.88	0.44	-	62,62,62,62	0
54	MG	CA	1728	1/1	0.86	0.29	-	76,76,76,76	0
54	MG	BA	3625	1/1	0.90	0.19	-	113,113,113,113	0
54	MG	BA	3127	1/1	0.96	0.28	-	90,90,90,90	0
54	MG	CA	1641	1/1	0.84	0.30	-	78,78,78,78	0
54	MG	DA	3047	1/1	0.89	0.14	-	91,91,91,91	0
54	MG	DA	3462	1/1	0.83	0.28	-	94,94,94,94	0
54	MG	DA	3092	1/1	0.97	0.41	-	85,85,85,85	0
54	MG	BA	3115	1/1	0.92	0.41	-	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	DA	3062	1/1	0.99	0.31	-	60,60,60,60	0
54	MG	AA	1649	1/1	0.79	0.31	-	81,81,81,81	0
54	MG	AA	1640	1/1	0.98	0.33	-	77,77,77,77	0
54	MG	BA	3426	1/1	0.83	0.36	-	100,100,100,100	0
54	MG	BB	212	1/1	0.81	0.34	-	82,82,82,82	0
54	MG	AA	1735	1/1	0.68	0.28	-	104,104,104,104	0
54	MG	BA	3286	1/1	0.86	0.41	-	73,73,73,73	0
54	MG	DA	3238	1/1	0.85	0.19	-	65,65,65,65	0
54	MG	CA	1787	1/1	0.31	0.35	-	136,136,136,136	0
54	MG	BA	3194	1/1	0.93	0.26	-	64,64,64,64	0
54	MG	AC	108	1/1	0.90	0.17	-	95,95,95,95	0
54	MG	DA	3325	1/1	0.78	0.25	-	92,92,92,92	0
54	MG	DA	3354	1/1	0.96	0.19	-	126,126,126,126	0
54	MG	BA	3150	1/1	0.82	0.47	-	76,76,76,76	0
54	MG	AA	1742	1/1	0.95	0.23	-	82,82,82,82	0
54	MG	BA	3101	1/1	0.99	0.42	-	42,42,42,42	0
54	MG	DA	3105	1/1	0.94	0.24	-	65,65,65,65	0
54	MG	BA	3617	1/1	0.91	0.20	-	83,83,83,83	0
54	MG	AA	1727	1/1	0.80	0.21	-	88,88,88,88	0
54	MG	BA	3353	1/1	0.74	0.46	-	95,95,95,95	0
54	MG	DA	3200	1/1	0.97	0.36	-	58,58,58,58	0
54	MG	BA	3575	1/1	0.98	0.33	-	52,52,52,52	0
54	MG	DA	3404	1/1	0.99	0.22	-	86,86,86,86	0
54	MG	BA	3475	1/1	0.92	0.13	-	79,79,79,79	0
54	MG	B3	101	1/1	0.85	0.46	-	84,84,84,84	0
54	MG	CA	1733	1/1	0.95	0.40	-	79,79,79,79	0
54	MG	BA	3279	1/1	0.82	0.39	-	68,68,68,68	0
54	MG	BA	3598	1/1	0.89	0.20	-	75,75,75,75	0
54	MG	DA	3117	1/1	0.41	0.26	-	102,102,102,102	0
54	MG	AA	1653	1/1	0.95	0.35	-	89,89,89,89	0
54	MG	BA	3503	1/1	0.75	0.42	-	117,117,117,117	0
54	MG	BA	3452	1/1	0.88	0.28	-	108,108,108,108	0
54	MG	DA	3408	1/1	0.93	0.17	-	76,76,76,76	0
54	MG	BA	3596	1/1	0.83	0.24	-	85,85,85,85	0
54	MG	CA	1716	1/1	0.71	0.73	-	103,103,103,103	0
54	MG	BA	3454	1/1	0.96	0.38	-	92,92,92,92	0
54	MG	BA	3328	1/1	0.89	0.33	-	68,68,68,68	0
54	MG	DA	3424	1/1	0.81	0.47	-	114,114,114,114	0
54	MG	BA	3532	1/1	0.93	0.25	-	82,82,82,82	0
54	MG	AA	1693	1/1	0.76	0.21	-	106,106,106,106	0
54	MG	DA	3061	1/1	0.96	0.15	-	67,67,67,67	0
54	MG	DA	3273	1/1	0.95	0.25	-	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
54	MG	DA	3470	1/1	0.96	0.22	-	54,54,54,54	0
54	MG	BA	3524	1/1	0.92	0.26	-	77,77,77,77	0
54	MG	DA	3347	1/1	0.90	0.11	-	79,79,79,79	0
54	MG	CA	1640	1/1	0.83	0.24	-	99,99,99,99	0
54	MG	BA	3251	1/1	0.96	0.36	-	48,48,48,48	0
54	MG	AA	1608	1/1	0.90	0.35	-	91,91,91,91	0
54	MG	DA	3059	1/1	0.95	0.29	-	87,87,87,87	0
54	MG	BA	3360	1/1	0.75	0.24	-	85,85,85,85	0
54	MG	DB	203	1/1	0.90	0.27	-	81,81,81,81	0
54	MG	AA	1731	1/1	0.79	0.14	-	97,97,97,97	0
54	MG	CA	1769	1/1	0.79	0.29	-	101,101,101,101	0
54	MG	DA	3018	1/1	0.83	0.12	-	90,90,90,90	0
54	MG	CA	1738	1/1	0.97	0.42	-	74,74,74,74	0
54	MG	DA	3102	1/1	0.97	0.24	-	68,68,68,68	0
54	MG	BA	3386	1/1	0.87	0.20	-	76,76,76,76	0
54	MG	AA	1805	1/1	0.90	0.41	-	91,91,91,91	0

6.5 Other polymers [i](#)

There are no such residues in this entry.