



# Full wwPDB X-ray Structure Validation Report ⓘ

Nov 14, 2017 – 08:54 AM EST

PDB ID : 4V8D  
Title : Structure analysis of ribosomal decoding (cognate tRNA-tyr complex).  
Authors : Jenner, L.; Demeshkina, N.; Yusupov, M.; Yusupova, G.  
Deposited on : unknown  
Resolution : 3.00 Å(reported)

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

We welcome your comments at [validation@mail.wwpdb.org](mailto: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.

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

MolProbity : 4.02b-467  
Mogul : 1.7.2 (RC1), CSD as538be (2017)  
Xtriage (Phenix) : 1.9-1692  
EDS : rb-20030345  
Percentile statistics : 20161228.v01 (using entries in the PDB archive December 28th 2016)  
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) : rb-20030345

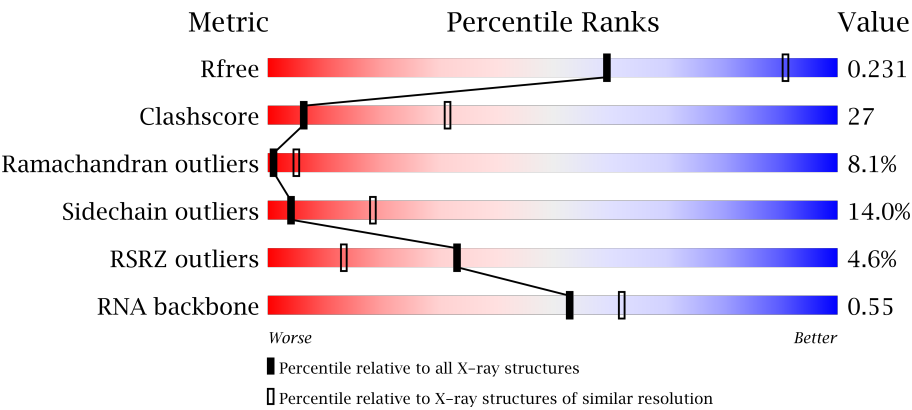
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.00 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	100719	1692 (3.00-3.00)
Clashscore	112137	2037 (3.00-3.00)
Ramachandran outliers	110173	1973 (3.00-3.00)
Sidechain outliers	110143	1976 (3.00-3.00)
RSRZ outliers	101464	1716 (3.00-3.00)
RNA backbone	2435	1007 (3.34-2.66)

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  $\geq 3$ , 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	<div><div></div><div><div></div><div>37%</div><div></div><div>45%</div><div></div><div>16%</div></div></div>
1	CA	1506	<div><div></div><div><div></div><div>38%</div><div></div><div>46%</div><div></div><div>16%</div></div></div>
2	AE	256	<div><div></div><div><div></div><div>4%</div><div></div><div>28%</div><div></div><div>48%</div><div></div><div>16%</div><div></div><div>7%</div></div></div>
2	CE	256	<div><div></div><div><div></div><div>6%</div><div></div><div>32%</div><div></div><div>46%</div><div></div><div>14%</div><div></div><div>7%</div></div></div>


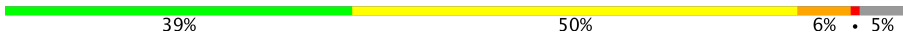



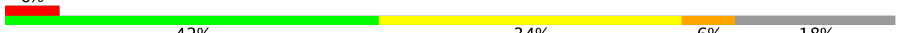
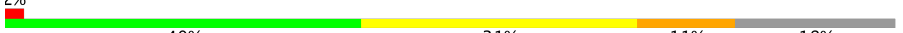




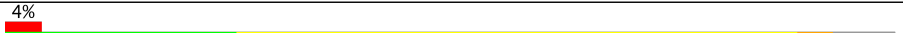








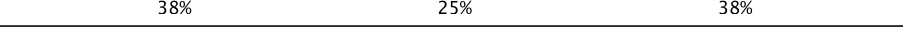




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Mol	Chain	Length	Quality of chain
3	AF	239	
3	CF	239	
4	AG	208	
4	CG	208	
5	AH	162	
5	CH	162	
6	AI	101	
6	CI	101	
7	AJ	156	
7	CJ	156	
8	AK	138	
8	CK	138	
9	AL	128	
9	CL	128	
10	AM	105	
10	CM	105	
11	AN	129	
11	CN	129	
12	AO	132	
12	CO	132	
13	AP	126	
13	CP	126	
14	AQ	61	
14	CQ	61	
15	AR	89	

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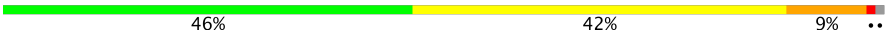

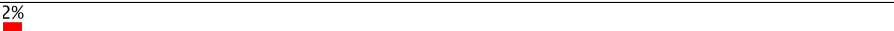
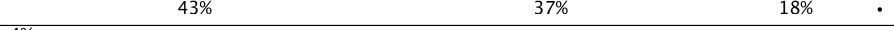
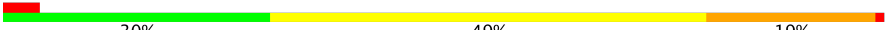
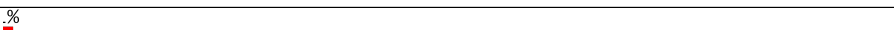

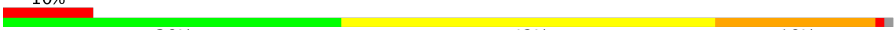
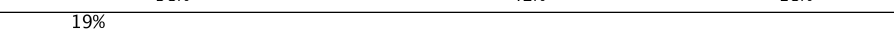


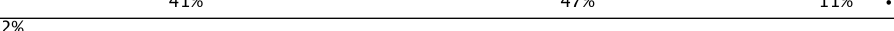
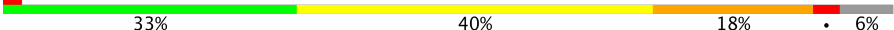

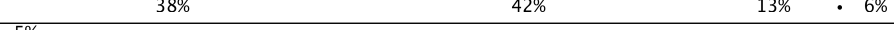
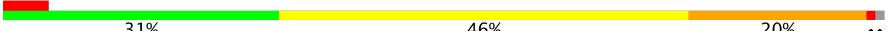


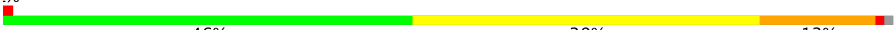
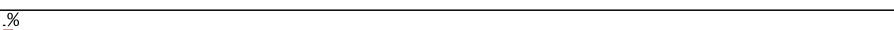





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Mol	Chain	Length	Quality of chain
15	CR	89	
16	AS	88	
16	CS	88	
17	AT	105	
17	CT	105	
18	AU	88	
18	CU	88	
19	AV	93	
19	CV	93	
20	AW	106	
20	CW	106	
21	AX	27	
21	CX	27	
22	AB	85	
22	AD	85	
22	CB	85	
22	CD	85	
23	AC	77	
23	CC	77	
24	A1	16	
24	C1	16	
25	BA	2912	
25	DA	2912	
26	BB	122	
26	DB	122	

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Mol	Chain	Length	Quality of chain
27	BD	276	
27	DD	276	
28	BE	206	
28	DE	206	
29	BF	210	
29	DF	210	
30	BG	182	
30	DG	182	
31	BH	180	
31	DH	180	
32	BK	148	
32	DK	148	
33	BM	140	
33	DM	140	
34	BN	122	
34	DN	122	
35	BO	150	
35	DO	150	
36	BP	141	
36	DP	141	
37	B0	118	
37	D0	118	
38	BQ	112	
38	DQ	112	
39	BR	146	

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Mol	Chain	Length	Quality of chain
39	DR	146	
40	B1	118	
40	D1	118	
41	B2	101	
41	D2	101	
42	BS	113	
42	DS	113	
43	BT	96	
43	DT	96	
44	BU	110	
44	DU	110	
45	BV	206	
45	DV	206	
46	B3	85	
46	D3	85	
47	BZ	98	
47	DZ	98	
48	BW	72	
48	DW	72	
49	BX	60	
49	DX	60	
50	B4	71	
50	D4	71	
51	B5	60	
51	D5	60	

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Mol	Chain	Length	Quality of chain
52	B6	54	
52	D6	54	
53	B7	49	
53	D7	49	
54	B8	65	
54	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
55	MG	AA	1601	-	-	-	X
55	MG	AA	1602	-	-	-	X
55	MG	AA	1605	-	-	-	X
55	MG	AA	1608	-	-	-	X
55	MG	AA	1610	-	-	-	X
55	MG	AA	1619	-	-	-	X
55	MG	AA	1620	-	-	-	X
55	MG	AA	1625	-	-	-	X
55	MG	AA	1628	-	-	-	X
55	MG	AA	1632	-	-	-	X
55	MG	AA	1636	-	-	-	X
55	MG	AA	1639	-	-	-	X
55	MG	AA	1646	-	-	-	X
55	MG	AA	1648	-	-	-	X
55	MG	AA	1652	-	-	-	X
55	MG	AA	1659	-	-	-	X
55	MG	AA	1662	-	-	-	X
55	MG	AA	1669	-	-	-	X
55	MG	AA	1681	-	-	-	X
55	MG	AA	1683	-	-	-	X
55	MG	AA	1698	-	-	-	X
55	MG	AA	1706	-	-	-	X
55	MG	AA	1709	-	-	-	X
55	MG	AA	1710	-	-	-	X
55	MG	AA	1739	-	-	-	X
55	MG	AA	1740	-	-	-	X
55	MG	AA	1788	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
55	MG	AA	1790	-	-	-	X
55	MG	AA	1811	-	-	-	X
55	MG	AC	101	-	-	-	X
55	MG	AC	107	-	-	-	X
55	MG	AD	103	-	-	-	X
55	MG	AG	301	-	-	-	X
55	MG	B1	201	-	-	-	X
55	MG	B1	202	-	-	-	X
55	MG	BA	3001	-	-	-	X
55	MG	BA	3002	-	-	-	X
55	MG	BA	3004	-	-	-	X
55	MG	BA	3006	-	-	-	X
55	MG	BA	3010	-	-	-	X
55	MG	BA	3012	-	-	-	X
55	MG	BA	3014	-	-	-	X
55	MG	BA	3016	-	-	-	X
55	MG	BA	3018	-	-	-	X
55	MG	BA	3020	-	-	-	X
55	MG	BA	3021	-	-	-	X
55	MG	BA	3024	-	-	-	X
55	MG	BA	3026	-	-	-	X
55	MG	BA	3027	-	-	-	X
55	MG	BA	3039	-	-	-	X
55	MG	BA	3042	-	-	-	X
55	MG	BA	3044	-	-	-	X
55	MG	BA	3047	-	-	-	X
55	MG	BA	3048	-	-	-	X
55	MG	BA	3054	-	-	-	X
55	MG	BA	3055	-	-	-	X
55	MG	BA	3056	-	-	-	X
55	MG	BA	3057	-	-	-	X
55	MG	BA	3059	-	-	-	X
55	MG	BA	3070	-	-	-	X
55	MG	BA	3074	-	-	-	X
55	MG	BA	3076	-	-	-	X
55	MG	BA	3080	-	-	-	X
55	MG	BA	3083	-	-	-	X
55	MG	BA	3084	-	-	-	X
55	MG	BA	3086	-	-	-	X
55	MG	BA	3087	-	-	-	X
55	MG	BA	3088	-	-	-	X
55	MG	BA	3090	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
55	MG	BA	3095	-	-	-	X
55	MG	BA	3101	-	-	-	X
55	MG	BA	3109	-	-	-	X
55	MG	BA	3110	-	-	-	X
55	MG	BA	3116	-	-	-	X
55	MG	BA	3117	-	-	-	X
55	MG	BA	3124	-	-	-	X
55	MG	BA	3127	-	-	-	X
55	MG	BA	3129	-	-	-	X
55	MG	BA	3130	-	-	-	X
55	MG	BA	3131	-	-	-	X
55	MG	BA	3134	-	-	-	X
55	MG	BA	3140	-	-	-	X
55	MG	BA	3144	-	-	-	X
55	MG	BA	3145	-	-	-	X
55	MG	BA	3147	-	-	-	X
55	MG	BA	3150	-	-	-	X
55	MG	BA	3157	-	-	-	X
55	MG	BA	3160	-	-	-	X
55	MG	BA	3161	-	-	-	X
55	MG	BA	3167	-	-	-	X
55	MG	BA	3169	-	-	-	X
55	MG	BA	3172	-	-	-	X
55	MG	BA	3174	-	-	-	X
55	MG	BA	3182	-	-	-	X
55	MG	BA	3184	-	-	-	X
55	MG	BA	3186	-	-	-	X
55	MG	BA	3202	-	-	-	X
55	MG	BA	3215	-	-	-	X
55	MG	BA	3223	-	-	-	X
55	MG	BA	3231	-	-	-	X
55	MG	BA	3232	-	-	-	X
55	MG	BA	3240	-	-	-	X
55	MG	BA	3241	-	-	-	X
55	MG	BA	3248	-	-	-	X
55	MG	BA	3262	-	-	-	X
55	MG	BA	3264	-	-	-	X
55	MG	BA	3272	-	-	-	X
55	MG	BA	3283	-	-	-	X
55	MG	BA	3286	-	-	-	X
55	MG	BA	3287	-	-	-	X
55	MG	BA	3290	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
55	MG	BA	3299	-	-	-	X
55	MG	BA	3300	-	-	-	X
55	MG	BA	3313	-	-	-	X
55	MG	BA	3328	-	-	-	X
55	MG	BA	3330	-	-	-	X
55	MG	BA	3332	-	-	-	X
55	MG	BA	3334	-	-	-	X
55	MG	BA	3337	-	-	-	X
55	MG	BA	3346	-	-	-	X
55	MG	BA	3352	-	-	-	X
55	MG	BA	3356	-	-	-	X
55	MG	BA	3368	-	-	-	X
55	MG	BA	3389	-	-	-	X
55	MG	BA	3392	-	-	-	X
55	MG	BA	3407	-	-	-	X
55	MG	BA	3415	-	-	-	X
55	MG	BA	3435	-	-	-	X
55	MG	BA	3448	-	-	-	X
55	MG	BA	3454	-	-	-	X
55	MG	BA	3460	-	-	-	X
55	MG	BA	3469	-	-	-	X
55	MG	BA	3475	-	-	-	X
55	MG	BA	3486	-	-	-	X
55	MG	BA	3488	-	-	-	X
55	MG	BA	3490	-	-	-	X
55	MG	BA	3492	-	-	-	X
55	MG	BA	3493	-	-	-	X
55	MG	BA	3495	-	-	-	X
55	MG	BA	3496	-	-	-	X
55	MG	BA	3497	-	-	-	X
55	MG	BA	3498	-	-	-	X
55	MG	BA	3499	-	-	-	X
55	MG	BA	3505	-	-	-	X
55	MG	BA	3507	-	-	-	X
55	MG	BA	3518	-	-	-	X
55	MG	BA	3520	-	-	-	X
55	MG	BA	3521	-	-	-	X
55	MG	BA	3522	-	-	-	X
55	MG	BA	3524	-	-	-	X
55	MG	BA	3528	-	-	-	X
55	MG	BA	3534	-	-	-	X
55	MG	BA	3538	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
55	MG	BA	3539	-	-	-	X
55	MG	BA	3540	-	-	-	X
55	MG	BA	3546	-	-	-	X
55	MG	BA	3549	-	-	-	X
55	MG	BA	3553	-	-	-	X
55	MG	BA	3555	-	-	-	X
55	MG	BB	202	-	-	-	X
55	MG	BB	210	-	-	-	X
55	MG	BB	215	-	-	-	X
55	MG	CA	1601	-	-	-	X
55	MG	CA	1602	-	-	-	X
55	MG	CA	1603	-	-	-	X
55	MG	CA	1613	-	-	-	X
55	MG	CA	1615	-	-	-	X
55	MG	CA	1616	-	-	-	X
55	MG	CA	1617	-	-	-	X
55	MG	CA	1631	-	-	-	X
55	MG	CA	1634	-	-	-	X
55	MG	CA	1638	-	-	-	X
55	MG	CA	1639	-	-	-	X
55	MG	CA	1645	-	-	-	X
55	MG	CA	1651	-	-	-	X
55	MG	CA	1656	-	-	-	X
55	MG	CA	1657	-	-	-	X
55	MG	CA	1676	-	-	-	X
55	MG	CA	1695	-	-	-	X
55	MG	CA	1720	-	-	-	X
55	MG	CA	1742	-	-	-	X
55	MG	CA	1744	-	-	-	X
55	MG	CA	1767	-	-	-	X
55	MG	CA	1776	-	-	-	X
55	MG	CA	1793	-	-	-	X
55	MG	CA	1806	-	-	-	X
55	MG	CA	1811	-	-	-	X
55	MG	CA	1813	-	-	-	X
55	MG	CA	1814	-	-	-	X
55	MG	CC	101	-	-	-	X
55	MG	CC	108	-	-	-	X
55	MG	CC	109	-	-	-	X
55	MG	DA	3002	-	-	-	X
55	MG	DA	3006	-	-	-	X
55	MG	DA	3008	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
55	MG	DA	3009	-	-	-	X
55	MG	DA	3010	-	-	-	X
55	MG	DA	3015	-	-	-	X
55	MG	DA	3017	-	-	-	X
55	MG	DA	3018	-	-	-	X
55	MG	DA	3020	-	-	-	X
55	MG	DA	3028	-	-	-	X
55	MG	DA	3030	-	-	-	X
55	MG	DA	3043	-	-	-	X
55	MG	DA	3044	-	-	-	X
55	MG	DA	3045	-	-	-	X
55	MG	DA	3055	-	-	-	X
55	MG	DA	3056	-	-	-	X
55	MG	DA	3057	-	-	-	X
55	MG	DA	3058	-	-	-	X
55	MG	DA	3059	-	-	-	X
55	MG	DA	3061	-	-	-	X
55	MG	DA	3063	-	-	-	X
55	MG	DA	3068	-	-	-	X
55	MG	DA	3070	-	-	-	X
55	MG	DA	3071	-	-	-	X
55	MG	DA	3075	-	-	-	X
55	MG	DA	3084	-	-	-	X
55	MG	DA	3089	-	-	-	X
55	MG	DA	3094	-	-	-	X
55	MG	DA	3098	-	-	-	X
55	MG	DA	3106	-	-	-	X
55	MG	DA	3107	-	-	-	X
55	MG	DA	3115	-	-	-	X
55	MG	DA	3116	-	-	-	X
55	MG	DA	3119	-	-	-	X
55	MG	DA	3123	-	-	-	X
55	MG	DA	3124	-	-	-	X
55	MG	DA	3129	-	-	-	X
55	MG	DA	3131	-	-	-	X
55	MG	DA	3137	-	-	-	X
55	MG	DA	3144	-	-	-	X
55	MG	DA	3159	-	-	-	X
55	MG	DA	3162	-	-	-	X
55	MG	DA	3173	-	-	-	X
55	MG	DA	3174	-	-	-	X
55	MG	DA	3187	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
55	MG	DA	3190	-	-	-	X
55	MG	DA	3196	-	-	-	X
55	MG	DA	3197	-	-	-	X
55	MG	DA	3200	-	-	-	X
55	MG	DA	3202	-	-	-	X
55	MG	DA	3207	-	-	-	X
55	MG	DA	3212	-	-	-	X
55	MG	DA	3220	-	-	-	X
55	MG	DA	3222	-	-	-	X
55	MG	DA	3233	-	-	-	X
55	MG	DA	3235	-	-	-	X
55	MG	DA	3236	-	-	-	X
55	MG	DA	3240	-	-	-	X
55	MG	DA	3241	-	-	-	X
55	MG	DA	3247	-	-	-	X
55	MG	DA	3250	-	-	-	X
55	MG	DA	3270	-	-	-	X
55	MG	DA	3282	-	-	-	X
55	MG	DA	3289	-	-	-	X
55	MG	DA	3307	-	-	-	X
55	MG	DA	3318	-	-	-	X
55	MG	DA	3321	-	-	-	X
55	MG	DA	3341	-	-	-	X
55	MG	DA	3362	-	-	-	X
55	MG	DA	3370	-	-	-	X
55	MG	DA	3383	-	-	-	X
55	MG	DA	3387	-	-	-	X
55	MG	DA	3390	-	-	-	X
55	MG	DA	3408	-	-	-	X
55	MG	DA	3428	-	-	-	X
55	MG	DA	3430	-	-	-	X
55	MG	DA	3432	-	-	-	X
55	MG	DA	3433	-	-	-	X
55	MG	DA	3435	-	-	-	X
55	MG	DA	3439	-	-	-	X
55	MG	DA	3450	-	-	-	X
55	MG	DA	3453	-	-	-	X
55	MG	DA	3456	-	-	-	X
55	MG	DA	3458	-	-	-	X
55	MG	DA	3463	-	-	-	X
55	MG	DA	3470	-	-	-	X
55	MG	DA	3471	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
55	MG	DA	3474	-	-	-	X
55	MG	DB	208	-	-	-	X
55	MG	DB	212	-	-	-	X
55	MG	DB	213	-	-	-	X
55	MG	DD	301	-	-	-	X
55	MG	DE	301	-	-	-	X

## 2 Entry composition

There are 56 unique types of molecules in this entry. The entry contains 299676 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	1502	Total	C	N	O	P	0	0	0
			32284	14370	5982	10431	1501			
1	CA	1502	Total	C	N	O	P	0	0	0
			32287	14370	5982	10433	1502			

- 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	58	Total	C	N	O	S	0	0	0
			476	303	99	70	4			
14	CQ	58	Total	C	N	O	S	0	0	0
			476	303	99	70	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	78	Total	C	N	O	S	0	0	0
			624	398	115	109	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-TYR.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
22	AB	85	Total	C	N	O	P	S	0	0	0
			1814	813	323	592	85	1			
22	AD	85	Total	C	N	O	P	S	0	0	0
			1814	813	323	592	85	1			
22	CB	85	Total	C	N	O	P	S	0	0	0
			1814	813	323	592	85	1			
22	CD	85	Total	C	N	O	P	S	0	0	0
			1814	813	323	592	85	1			

- Molecule 23 is a RNA chain called TRNA-FMET.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AC	77	Total	C	N	O	P	0	0	0
			1643	732	298	536	77			
23	CC	77	Total	C	N	O	P	0	0	0
			1643	732	298	536	77			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AC	18	C	U	CONFLICT	GB AP012306.1
CC	18	C	U	CONFLICT	GB AP012306.1

- Molecule 24 is a RNA chain called MRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	A1	16	Total	C	N	O	P	0	0	0
			346	156	69	105	16			
24	C1	16	Total	C	N	O	P	0	0	0
			346	156	69	105	16			

- Molecule 25 is a RNA chain called RNA (2912-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BA	2912	Total	C	N	O	P	0	0	0
			62707	27911	11722	20163	2911			
25	DA	2907	Total	C	N	O	P	0	0	0
			62607	27866	11712	20123	2906			

There are 14 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BA	161	U	-	INSERTION	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 26 is a RNA chain called 5S RIBOSOMAL RNA.

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

- Molecule 27 is a protein called 50S ribosomal protein L2.

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

- Molecule 28 is a protein called 50S ribosomal protein L3.



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

- Molecule 29 is a protein called 50S ribosomal protein L4.

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

- Molecule 30 is a protein called 50S ribosomal protein L5.

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

- Molecule 31 is a protein called 50S ribosomal protein L6.

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

- Molecule 32 is a protein called 50S ribosomal protein L9.

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

- Molecule 33 is a protein called 50S ribosomal protein L13.

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

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

- Molecule 34 is a protein called 50S ribosomal protein L14.

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

- Molecule 35 is a protein called 50S ribosomal protein L15.

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

- Molecule 36 is a protein called 50S ribosomal protein L16.

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

- Molecule 37 is a protein called 50S ribosomal protein L17.

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

- Molecule 38 is a protein called 50S ribosomal protein L18.

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

- Molecule 39 is a protein called 50S ribosomal protein L19.

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

- Molecule 40 is a protein called 50S ribosomal protein L20.

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

- Molecule 41 is a protein called 50S ribosomal protein L21.

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

- Molecule 42 is a protein called 50S ribosomal protein L22.

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

- Molecule 43 is a protein called 50S ribosomal protein L23.

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

- Molecule 44 is a protein called 50S ribosomal protein L24.

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

- Molecule 45 is a protein called 50S ribosomal protein L25.

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

- Molecule 46 is a protein called 50S ribosomal protein L27.

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

- Molecule 47 is a protein called 50S ribosomal protein L28.

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

- Molecule 48 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	BW	66	Total	C	N	O	S	0	0	0
			558	346	113	98	1			
48	DW	66	Total	C	N	O	S	0	0	0
			558	346	113	98	1			

- Molecule 49 is a protein called 50S ribosomal protein L30.

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

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

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

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

- Molecule 51 is a protein called 50S ribosomal protein L32.

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

- Molecule 52 is a protein called 50S ribosomal protein L33.

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

- Molecule 53 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	B7	45	Total	C	N	O	S	0	0	0
			391	240	97	52	2			
53	D7	45	Total	C	N	O	S	0	0	0
			391	240	97	52	2			

- Molecule 54 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	B8	60	Total	C	N	O	S	0	0	0
			480	306	98	74	2			
54	D8	60	Total	C	N	O	S	0	0	0
			480	306	98	74	2			

- Molecule 55 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	BA	568	Total 568	Mg 568	2	0
55	CA	219	Total 219	Mg 219	0	0
55	AB	4	Total 4	Mg 4	0	0
55	BE	3	Total 3	Mg 3	0	0
55	B1	2	Total 2	Mg 2	0	0
55	AN	1	Total 1	Mg 1	0	0
55	CR	1	Total 1	Mg 1	0	0
55	AS	1	Total 1	Mg 1	0	0
55	B5	1	Total 1	Mg 1	0	0
55	BB	18	Total 18	Mg 18	0	0
55	DO	1	Total 1	Mg 1	0	0
55	D8	1	Total 1	Mg 1	0	0
55	D3	1	Total 1	Mg 1	0	0
55	BF	3	Total 3	Mg 3	0	0
55	B2	1	Total 1	Mg 1	0	0
55	AA	220	Total 220	Mg 220	1	0
55	D7	1	Total 1	Mg 1	0	0
55	AR	1	Total 1	Mg 1	0	0
55	B6	1	Total 1	Mg 1	0	0
55	CG	2	Total 2	Mg 2	0	0
55	A1	1	Total 1	Mg 1	0	0

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	AD	3	Total 3	Mg 3	0	0
55	DD	3	Total 3	Mg 3	0	0
55	D0	1	Total 1	Mg 1	0	0
55	CC	9	Total 9	Mg 9	0	0
55	DE	1	Total 1	Mg 1	0	0
55	B3	3	Total 3	Mg 3	0	0
55	DA	488	Total 488	Mg 488	0	0
55	D5	2	Total 2	Mg 2	0	0
55	B7	1	Total 1	Mg 1	0	0
55	AG	2	Total 2	Mg 2	0	0
55	BO	2	Total 2	Mg 2	0	0
55	D1	1	Total 1	Mg 1	0	0
55	CB	4	Total 4	Mg 4	0	0
55	AC	8	Total 8	Mg 8	0	0
55	CD	1	Total 1	Mg 1	0	0
55	BD	1	Total 1	Mg 1	0	0
55	B0	1	Total 1	Mg 1	0	0
55	BW	1	Total 1	Mg 1	0	0
55	CK	1	Total 1	Mg 1	0	0
55	DB	20	Total 20	Mg 20	0	0

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

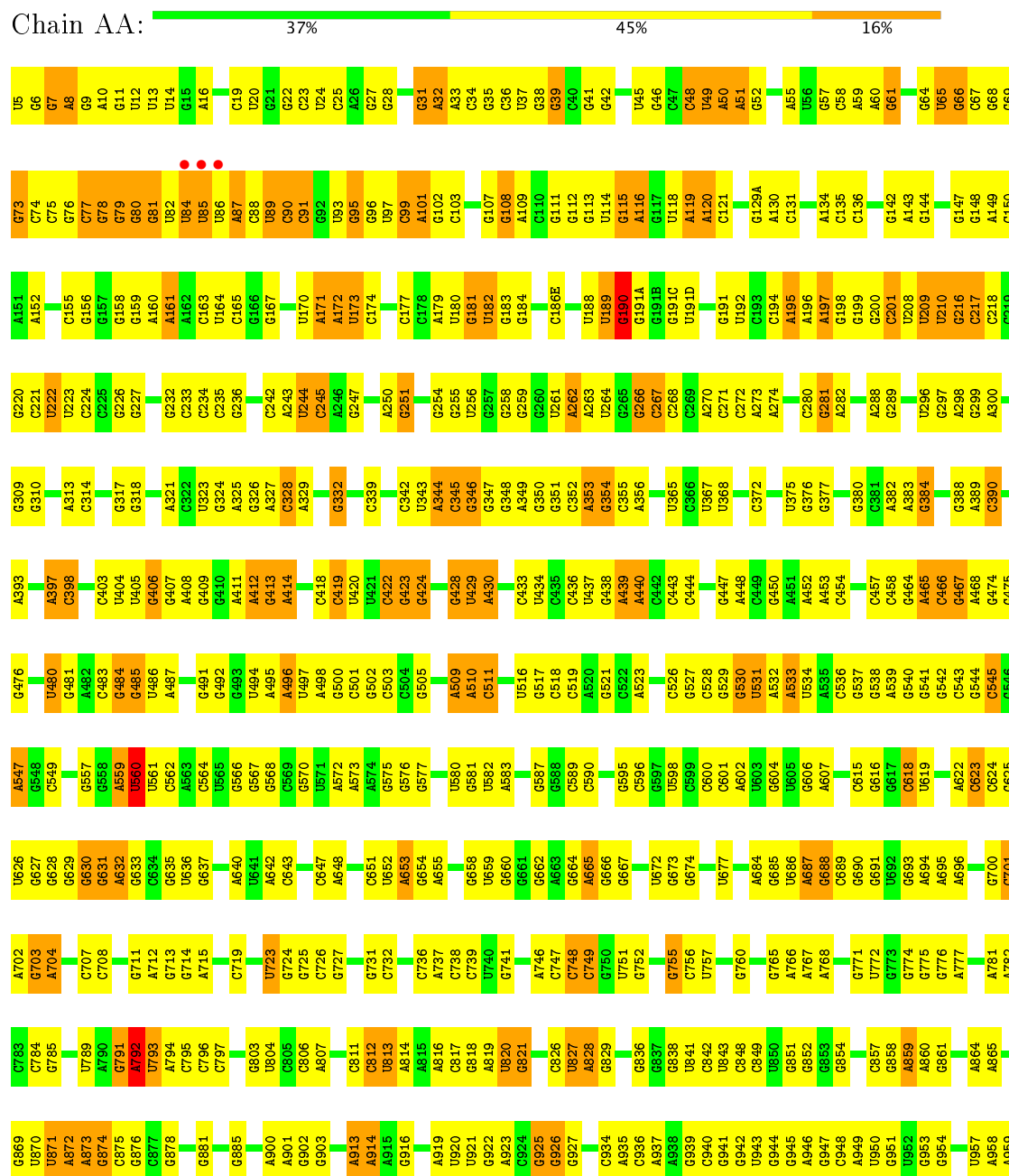
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	AG	1	Total 1	Zn 1	0	0
56	AQ	1	Total 1	Zn 1	0	0
56	CQ	1	Total 1	Zn 1	0	0
56	CG	1	Total 1	Zn 1	0	0

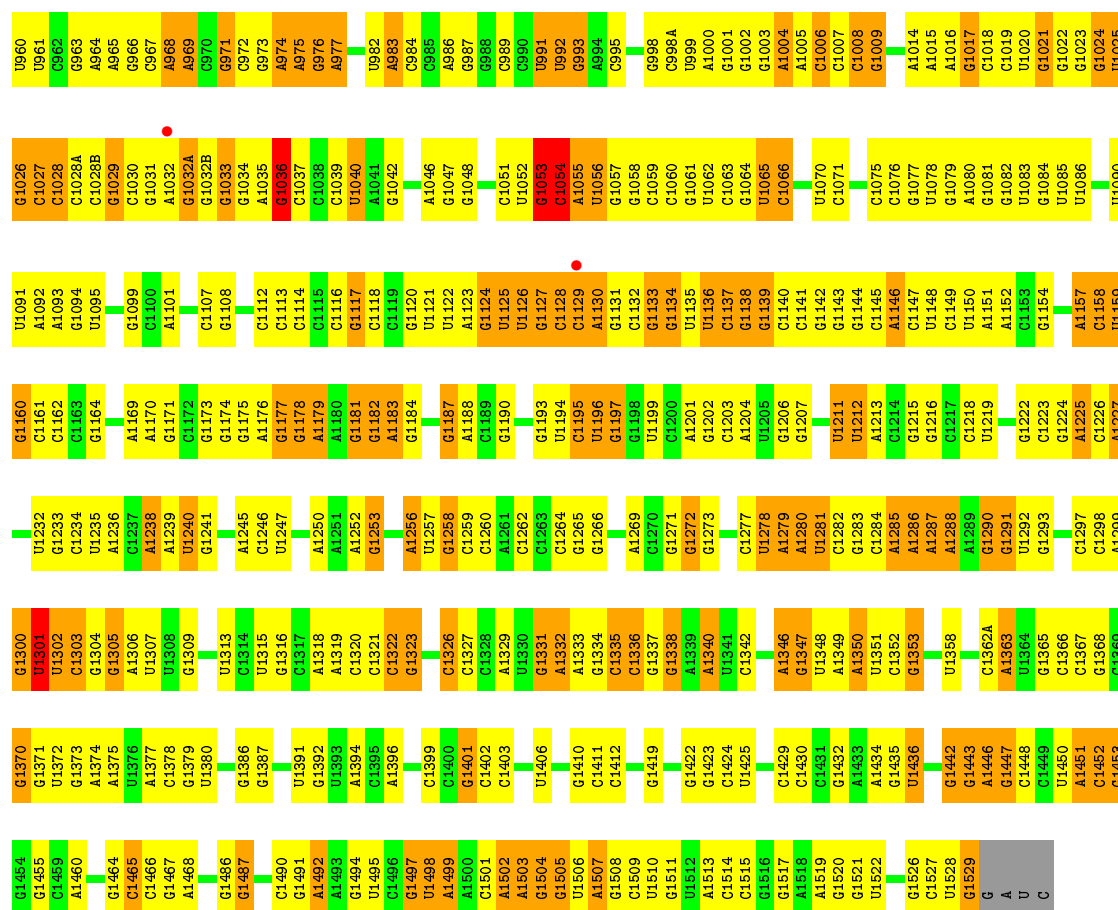


### 3 Residue-property plots

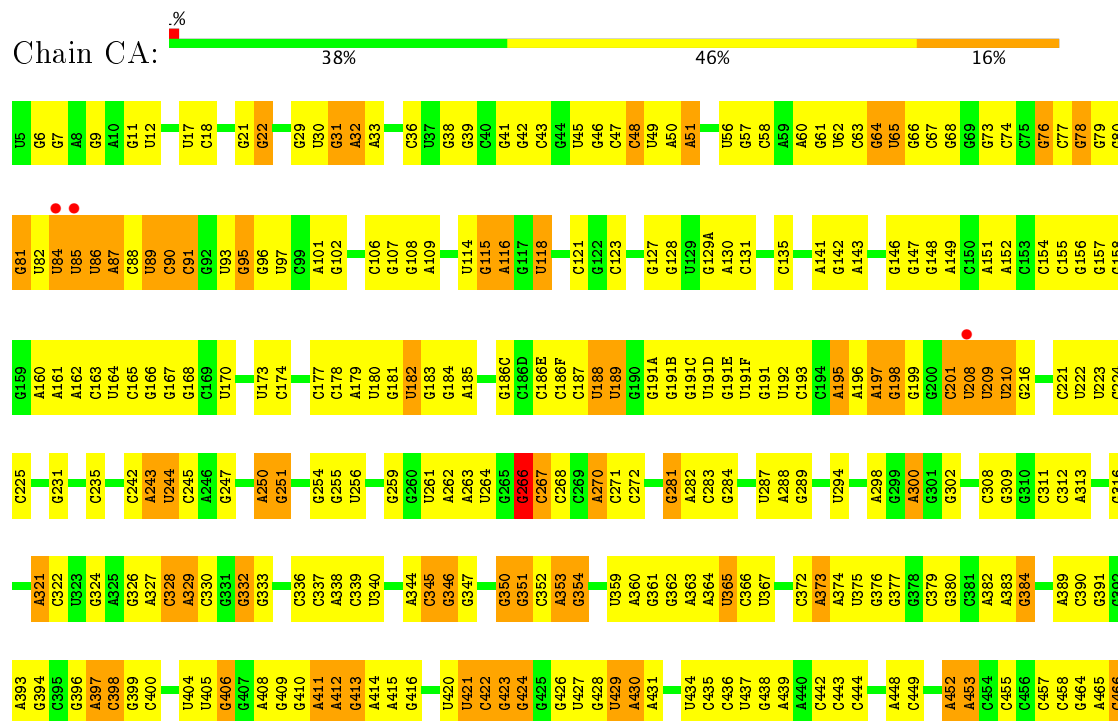
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ( $RSRZ > 2$ ). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

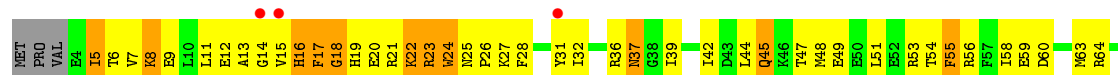
- Molecule 1: 16S ribosomal RNA

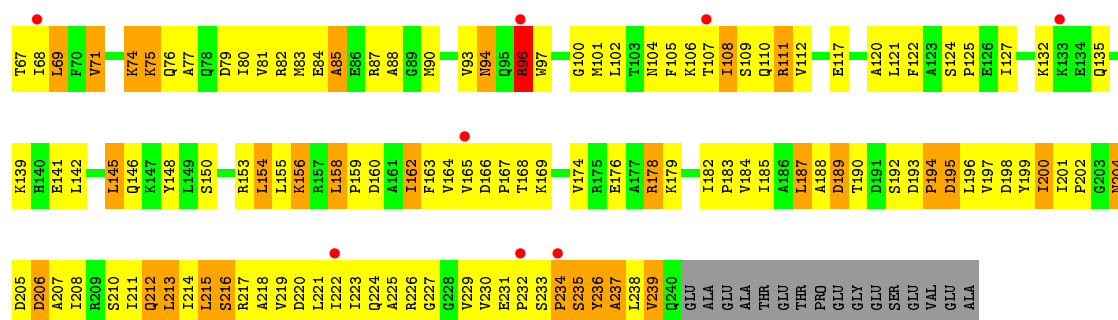




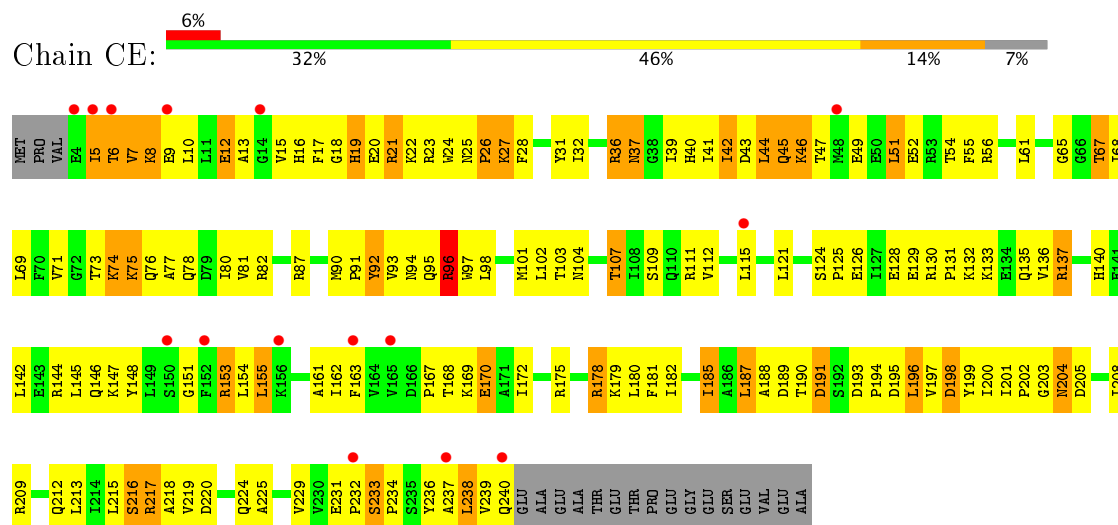
• Molecule 1: 16S ribosomal RNA



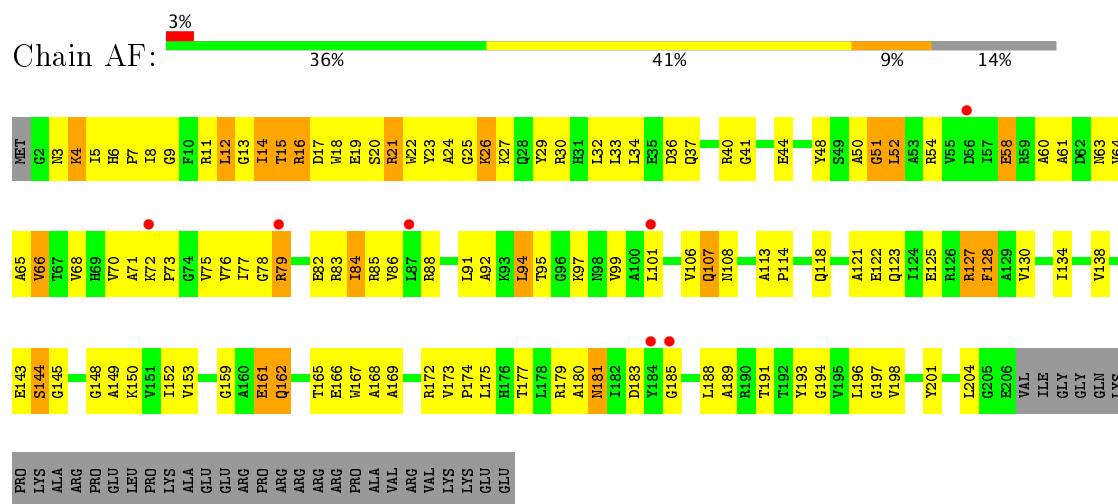




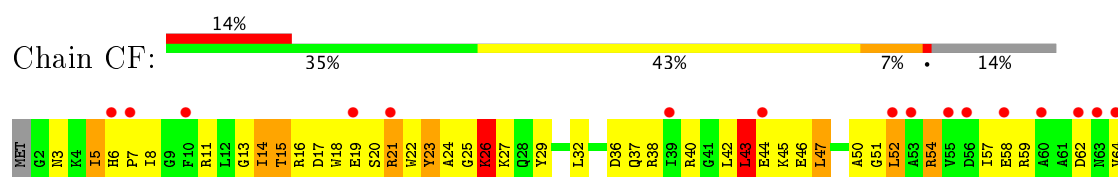
• Molecule 2: 30S RIBOSOMAL PROTEIN S2

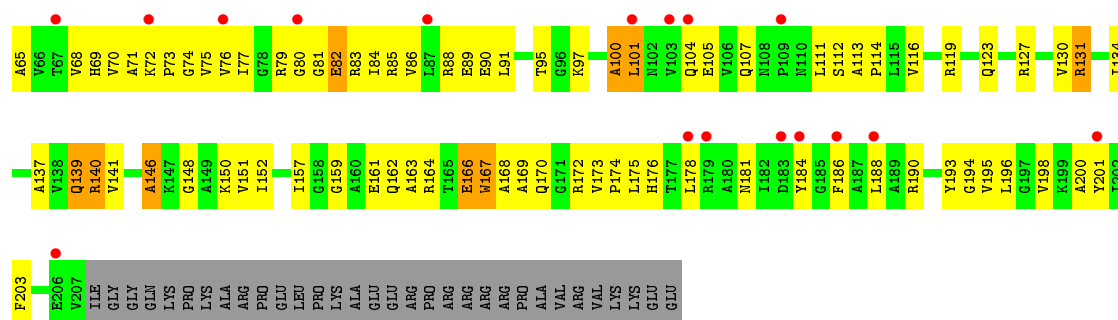


• Molecule 3: 30S RIBOSOMAL PROTEIN S3



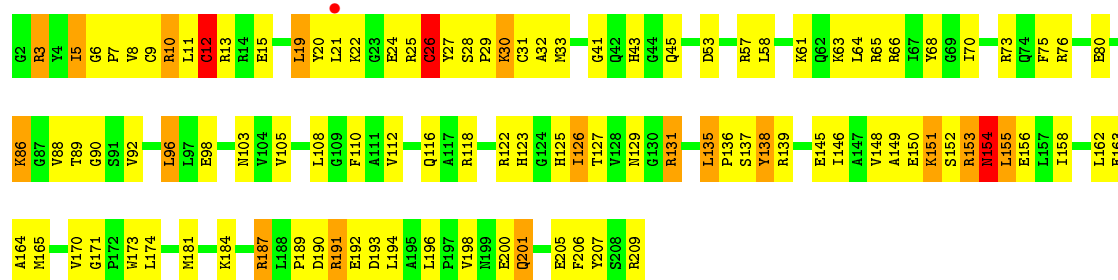
• Molecule 3: 30S RIBOSOMAL PROTEIN S3





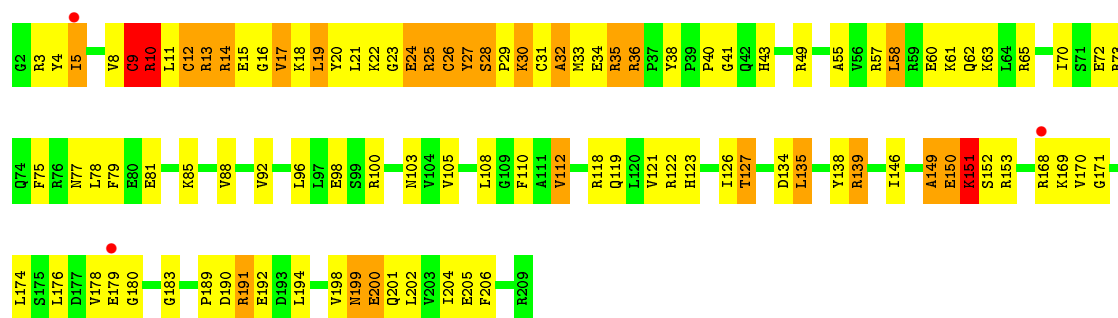
• Molecule 4: 30S RIBOSOMAL PROTEIN S4

Chain AG: 50% 41% 8% .



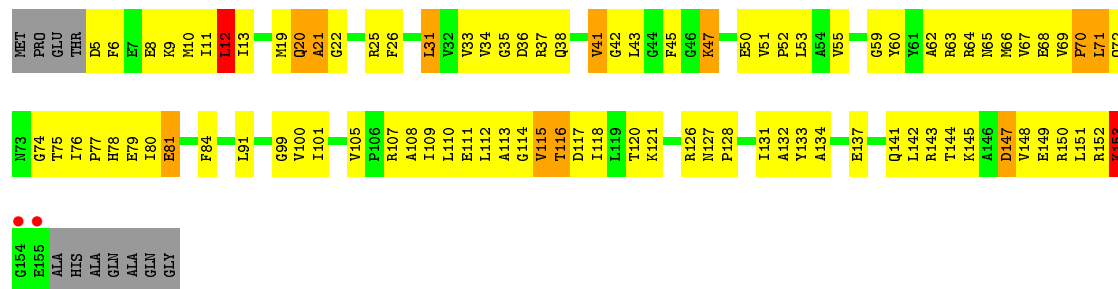
• Molecule 4: 30S RIBOSOMAL PROTEIN S4

Chain CG: 50% 37% 12% .

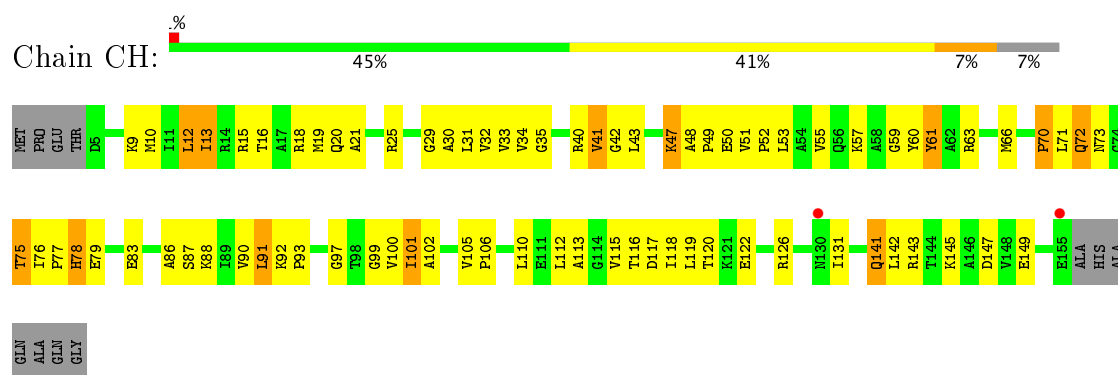


• Molecule 5: 30S RIBOSOMAL PROTEIN S5

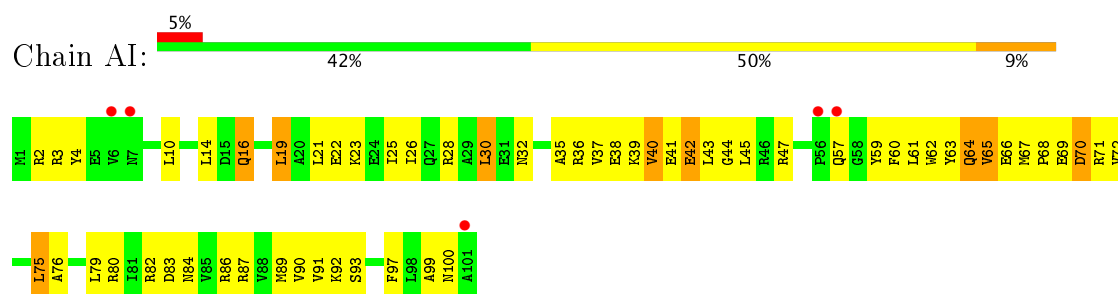
Chain AH: 36% 49% 7% 7% .



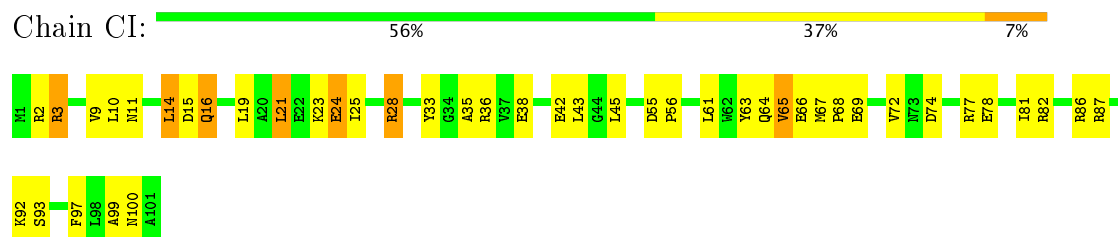
• Molecule 5: 30S RIBOSOMAL PROTEIN S5



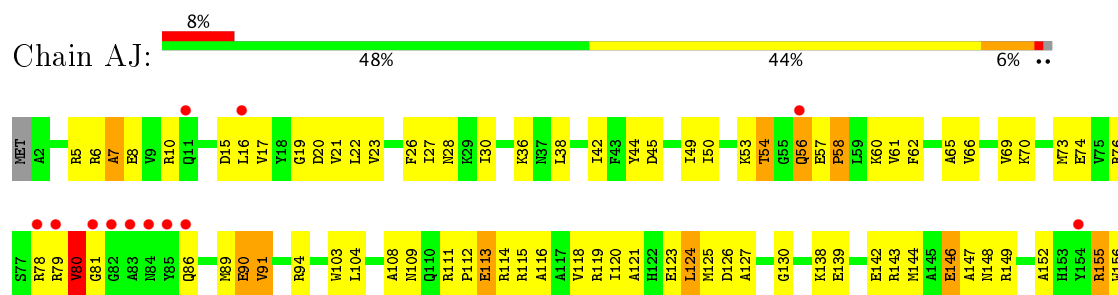
- Molecule 6: 30S RIBOSOMAL PROTEIN S6



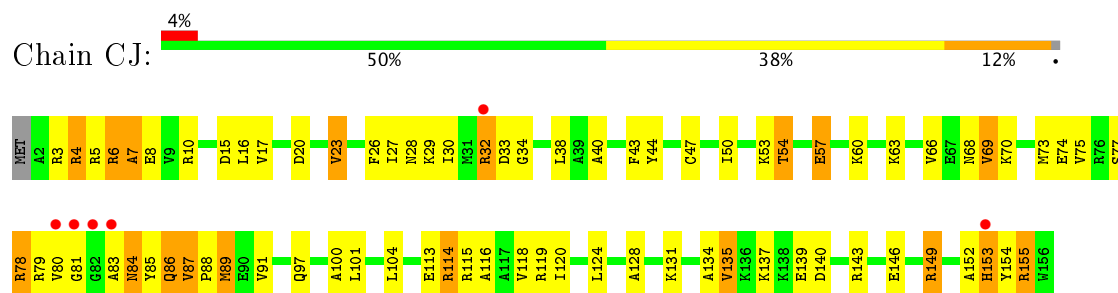
- Molecule 6: 30S RIBOSOMAL PROTEIN S6



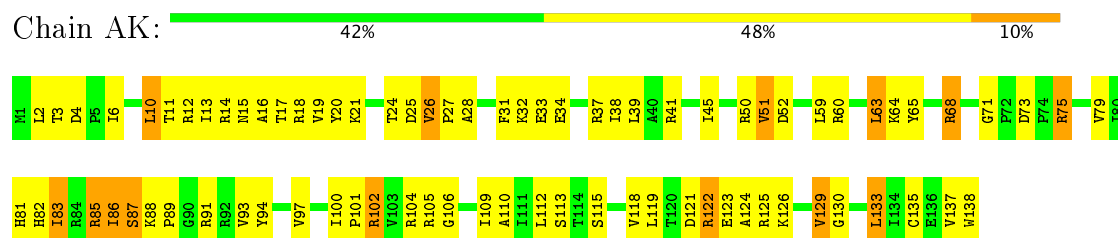
• Molecule 7: 30S RIBOSOMAL PROTEIN S7



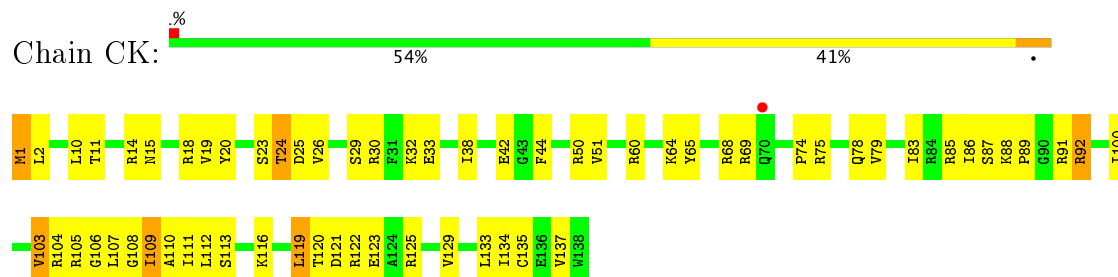
- Molecule 7: 30S RIBOSOMAL PROTEIN S7



- Molecule 8: 30S RIBOSOMAL PROTEIN S8



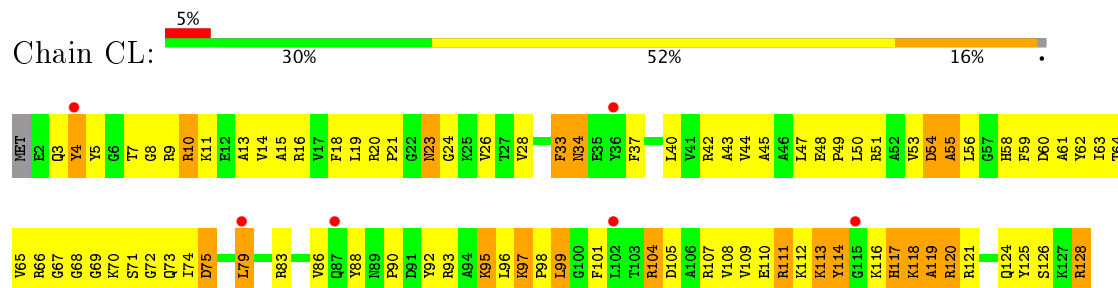
- Molecule 8: 30S RIBOSOMAL PROTEIN S8



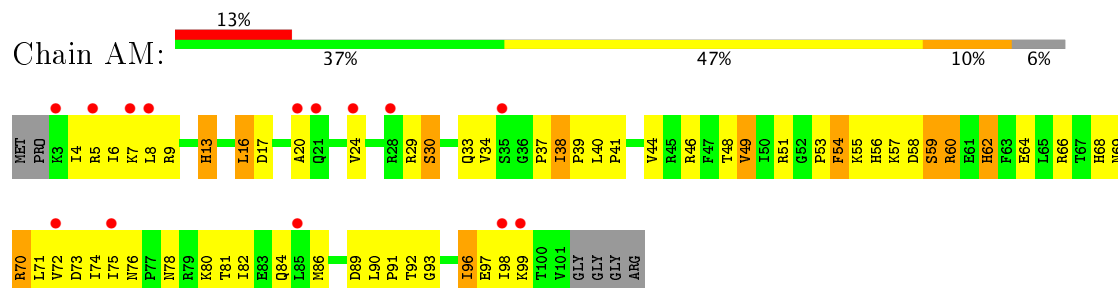
- Molecule 9: 30S RIBOSOMAL PROTEIN S9



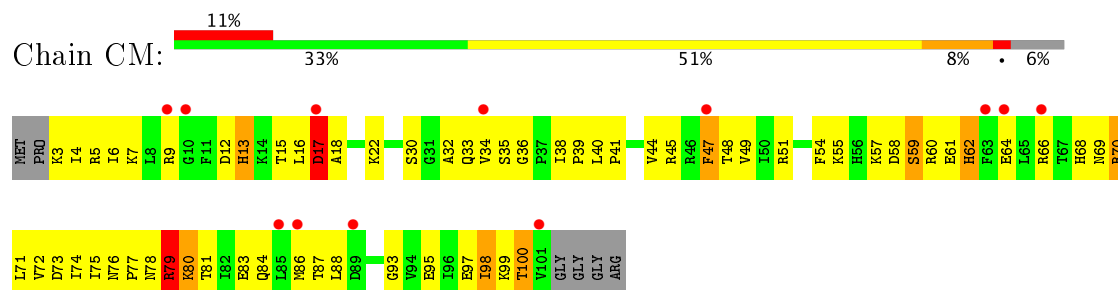
- Molecule 9: 30S RIBOSOMAL PROTEIN S9



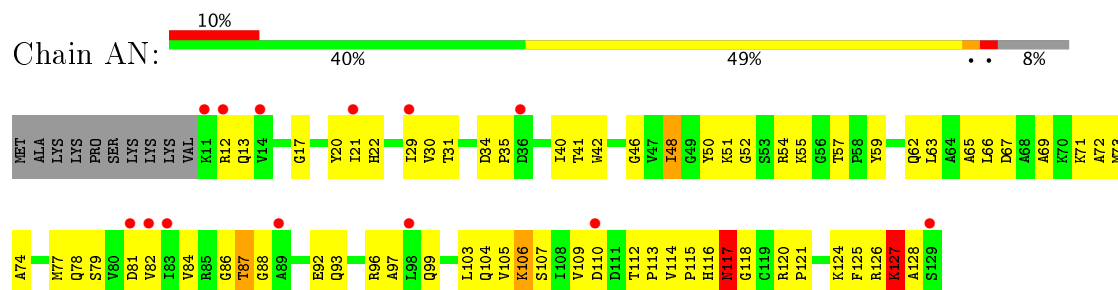
- Molecule 10: 30S RIBOSOMAL PROTEIN S10



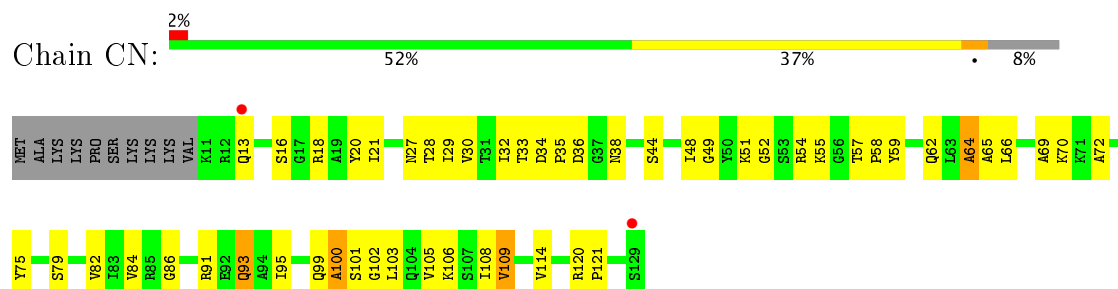
- Molecule 10: 30S RIBOSOMAL PROTEIN S10



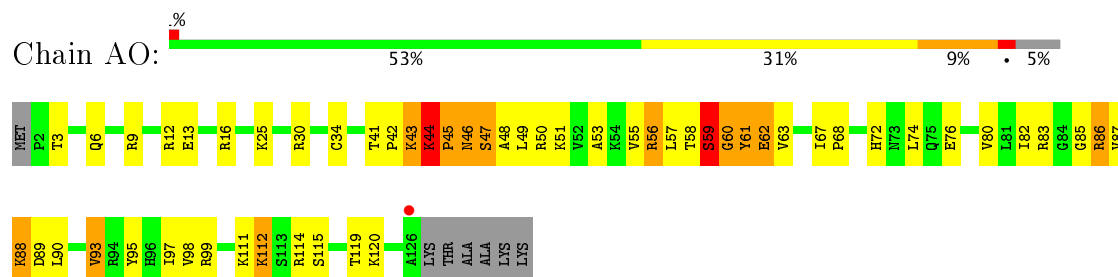
- Molecule 11: 30S RIBOSOMAL PROTEIN S11



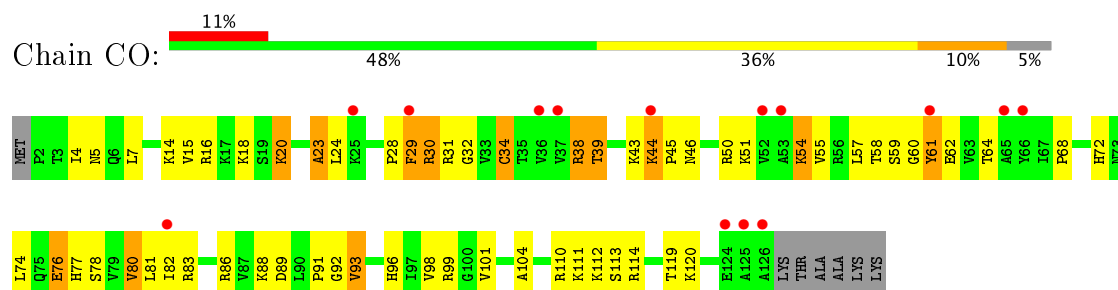
- Molecule 11: 30S RIBOSOMAL PROTEIN S11



- Molecule 12: 30S RIBOSOMAL PROTEIN S12

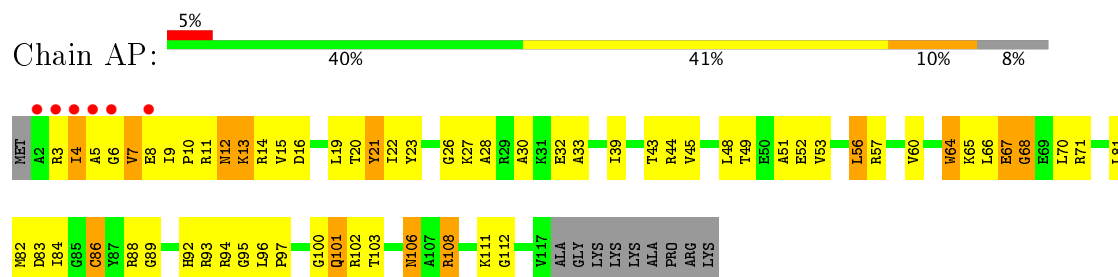


- Molecule 12: 30S RIBOSOMAL PROTEIN S12

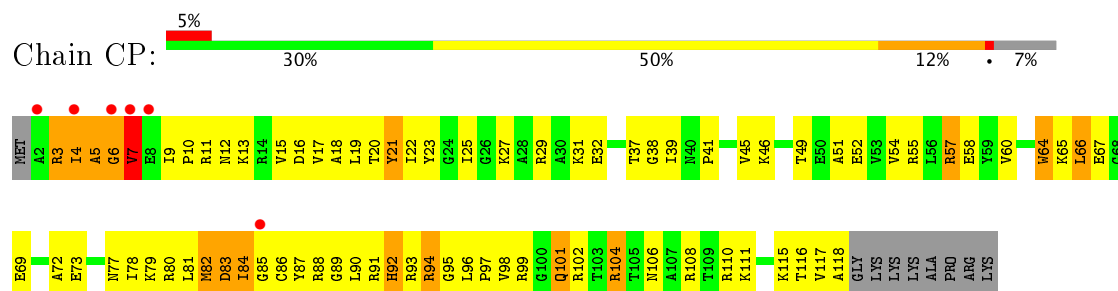




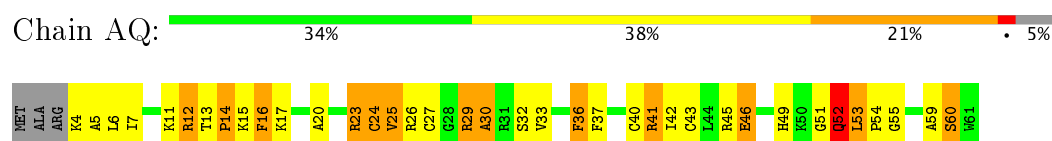
- Molecule 13: 30S RIBOSOMAL PROTEIN S13



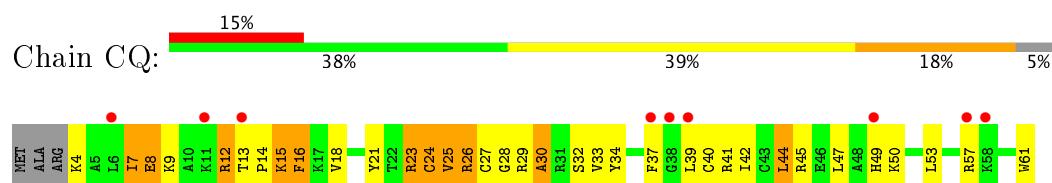
- Molecule 13: 30S RIBOSOMAL PROTEIN S13



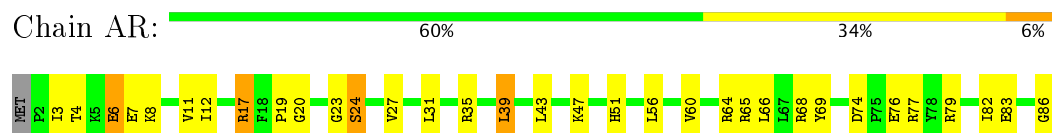
- Molecule 14: 30S RIBOSOMAL PROTEIN S14



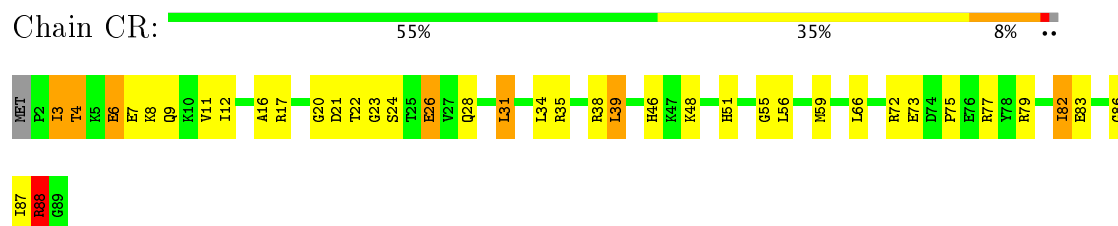
- Molecule 14: 30S RIBOSOMAL PROTEIN S14



- Molecule 15: 30S RIBOSOMAL PROTEIN S15

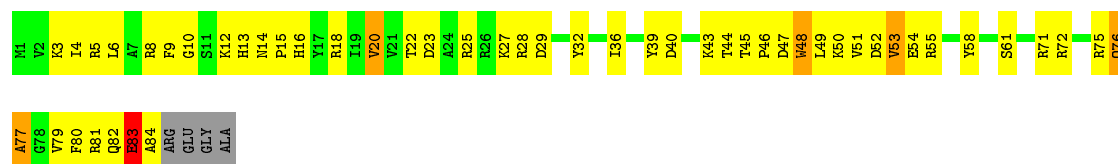


- Molecule 15: 30S RIBOSOMAL PROTEIN S15



● Molecule 16: 30S RIBOSOMAL PROTEIN S16

Chain AS: 



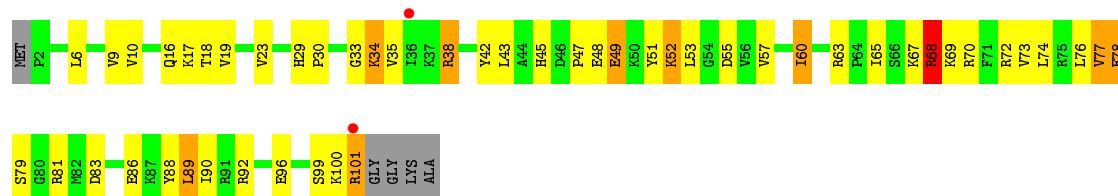
• Molecule 16: 30S RIBOSOMAL PROTEIN S16

Chain CS: 



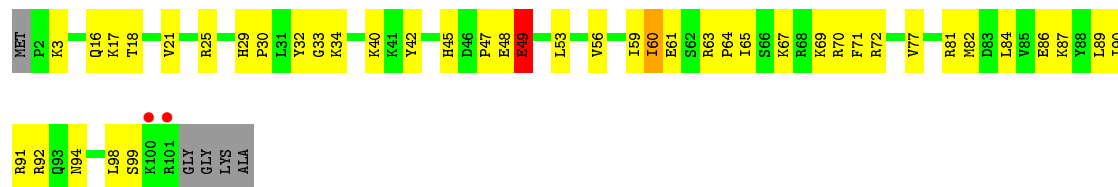
● Molecule 17: 30S RIBOSOMAL PROTEIN S17

Chain AT: 

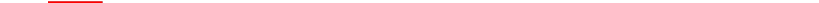


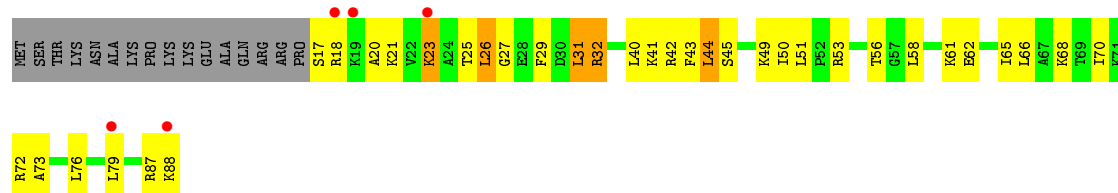
• Molecule 17: 30S RIBOSOMAL PROTEIN S17

Chain CT:  2% 54% 39% .. 5%



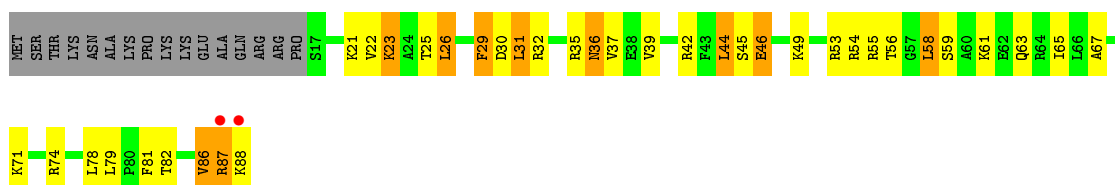
● Molecule 18: 30S RIBOSOMAL PROTEIN S18

Chain AU: 

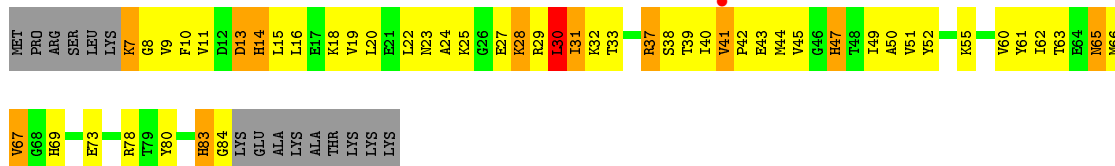


● Molecule 18: 30S RIBOSOMAL PROTEIN S18

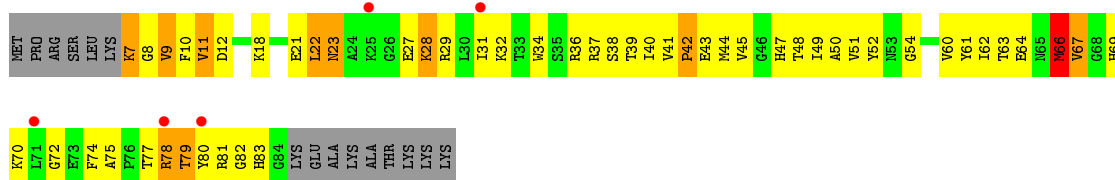
Chain CU: 



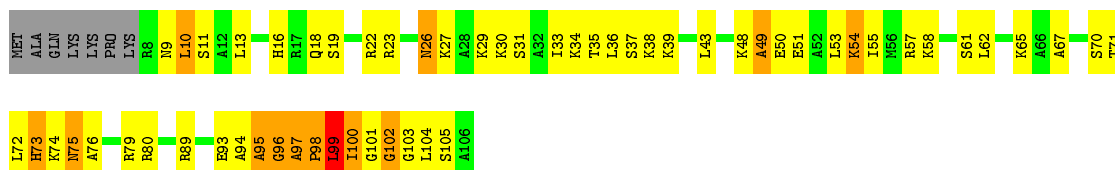
• Molecule 19: 30S RIBOSOMAL PROTEIN S19



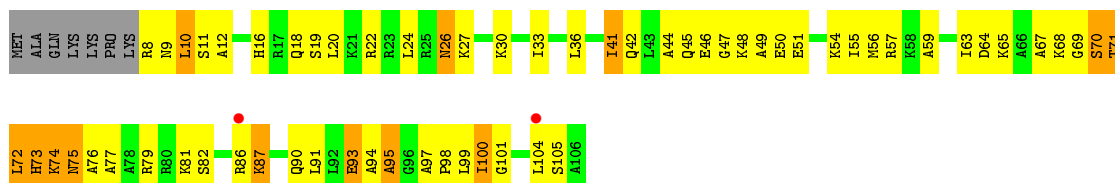
• Molecule 19: 30S RIBOSOMAL PROTEIN S19



• Molecule 20: 30S RIBOSOMAL PROTEIN S20

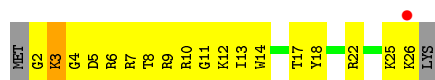


• Molecule 20: 30S RIBOSOMAL PROTEIN S20



• Molecule 21: 30S RIBOSOMAL PROTEIN THX

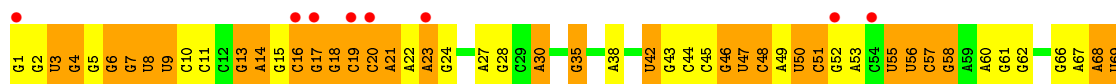
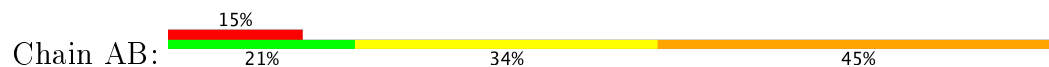




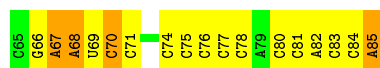
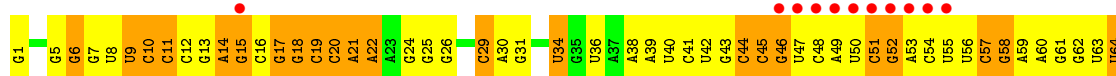
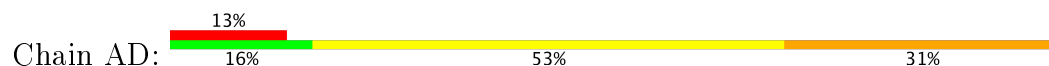
• Molecule 21: 30S RIBOSOMAL PROTEIN THX



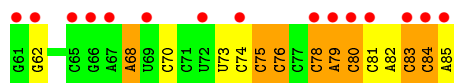
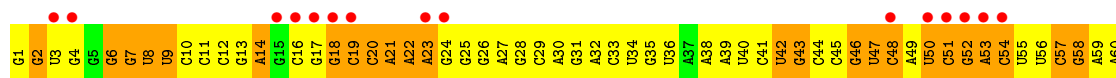
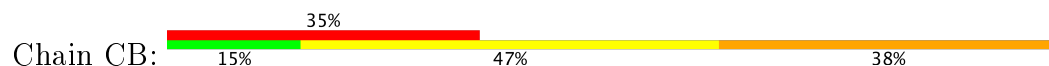
• Molecule 22: TRNA-TYR



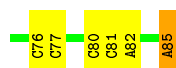
• Molecule 22: TRNA-TYR



• Molecule 22: TRNA-TYR



• Molecule 22: TRNA-TYR



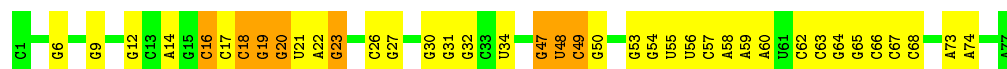
• Molecule 23: TRNA-FMET

Chain AC:



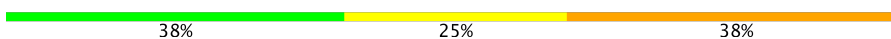
- Molecule 23: tRNA-FMET

Chain CC:



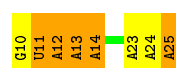
- Molecule 24: mRNA

Chain A1:



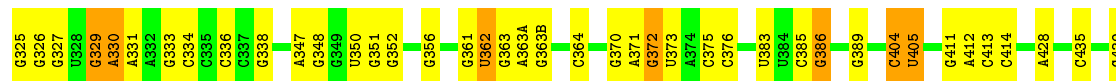
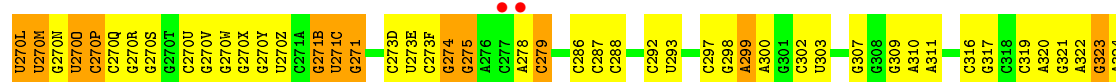
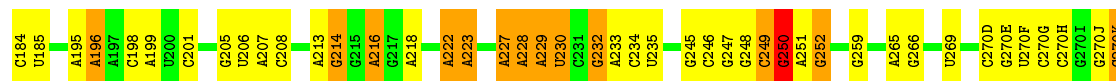
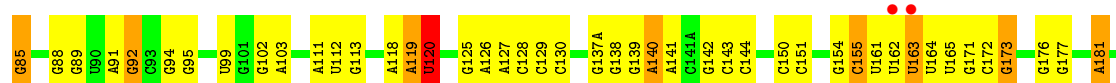
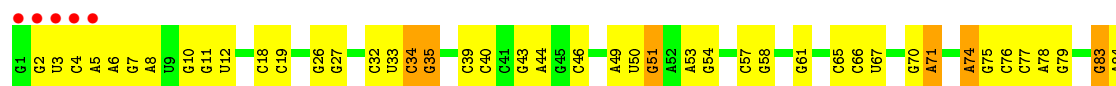
- Molecule 24: mRNA

Chain C1:

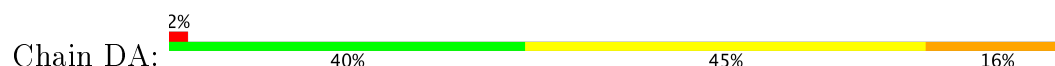


- Molecule 25: RNA (2912-MER)

Chain BA:



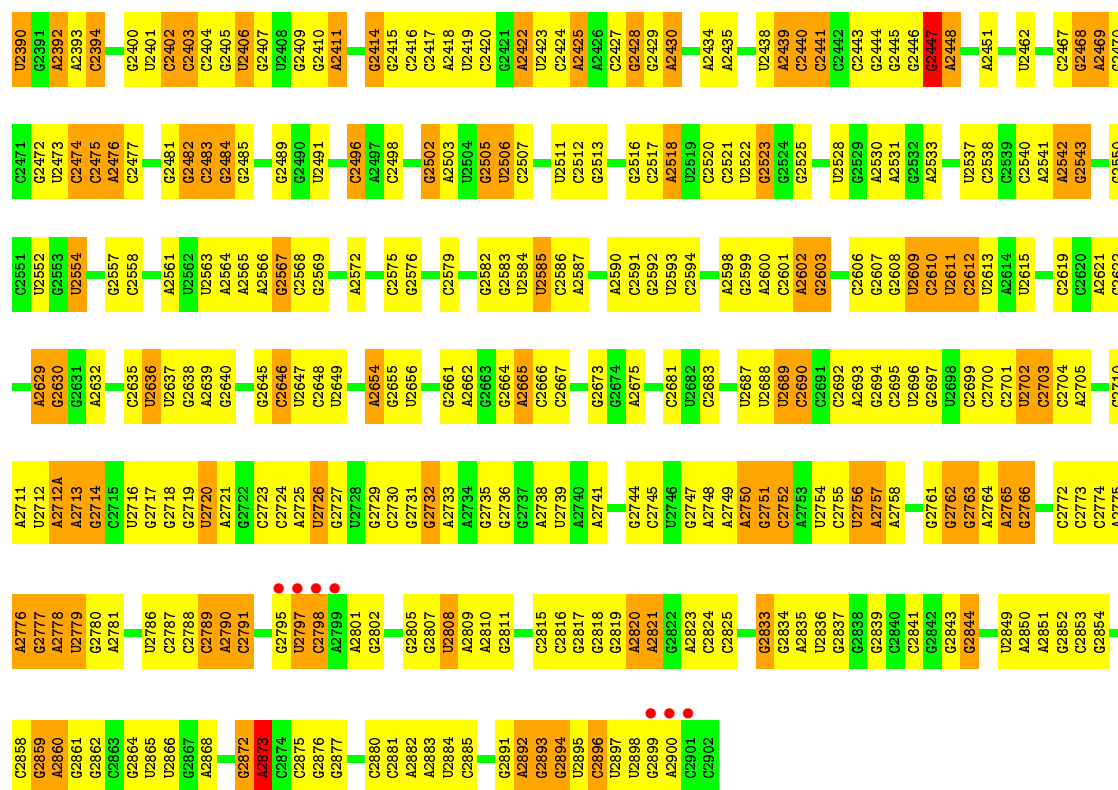




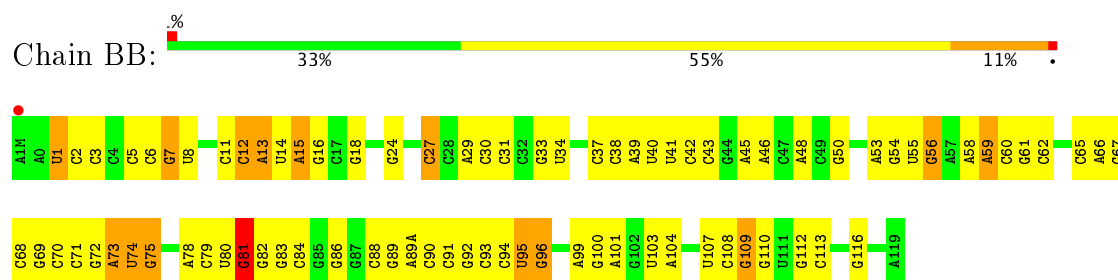
A1085	U1019	C951	C884	C817	A746	G666	G619	C537	U459	U358	A282	A241	C153	U72	G1
A1086	A1020	G962	C885	G818	U747	G667	G620	C543	G463	G361	A283	A242	C154	A73	G2
G1087	A1021	A953	C886	A819	G748	G668	G622	C543	U464	G362	C285	G243	C155	A74	U3
A1088	G1022	G954	A887	A820		G669		A547	G465	A363	C286	G247	U	G75	C4
U1089	G1023	C955	C888	A821	A751	A670	U626	A548	A466	A363A	C287	G248	U	A78	A5
U1090	G1024	A957	C889	A824	A752	C753	A627	A549	G467	G363B	C288	G249	U	G79	A6
G1091	G1025	A958	A890	C825	C754	C671	G628	G550	G468	G363C	C289	C249	U	A8	A7
C1092	U1026	G959	C893	U826	C755	C672			G469	G363D	C291	G250	G171	G83	U9
G1093	A1027	A960	C894	U827	C756	A674	A631		A470	A363E	C291	G251	C172	A84	G10
U1094	A1028	C961	C895	U828	C757	A675	A632			A363F	C291	G252	C173	G85	G11
A1095	A1029	U895	C896	U829	C758	A676	A633			C364	C297	A256	C174		A13
U1096	G1030	G962	C897	G830		A677	A634		A478	G370	C297	A256	C175	U90	
A1097			C898	G831	A761		C835		A479	A371	C298		G176	A91	G16
U1098			A899	G832	U762		C836		A480	G372	G259	G260	G177	G92	G17
C1099	G1036	C970	A900	U833	G763	G682	A637		G481	U373	G301	G261	G178	C93	G18
G1100	G1037	C971	A901	C834	A764	C683	G638				G302		G179	C94	C19
U1101	G1038	G972	C902	A835		G684	U639				U303	A265	C182	G95	C20
	A1045	A973	C903		G768	A685	C640			G386	U304	G266	C183	A21	C22
C1104	C1040	G974	C904	C838		G686	C641				G307	A270	C184	G98	
U1105	C1041	G975	C905	U839	U773		G642			G389	G308	A270A	U185	U99	
	G1042	G976	A906	A840	A774	G690	C574			A390	G309	A270B	U193	G101	G26
C1109	C1043	C977	G907	C844	G775		A644			G391	A310		U194	G102	G27
G1110	G1044	G978	C908	G845	G776	A699	C645				A311	U270F	G194	A103	
A1111	A1045	G979	A909	C846		G700	A646			A394	G312	C270G	A195	U104	G30
G1112	U1046	G980	A910	U847	U779	G701	G647			U395		C270H	A196	C105	C31
U1113	G1047	A980	A911	G848	G780	U702				G396	G315	C270I	A197	C106	C32
	A1048	C981	C912	A849	A781	U703	C650				G316	C270J	C198	C107	U33
C1116	G1049	A982	C913	G850	G782	G704	G651			U405		C270K	A199	U108	
G1117	A1050	U907	U914	C851	A783	A705	C652			G406		U270L	U200		G35
C1118	G1051	C985	C915	U851	A784	A706	A653				A320	G270M	C201	A111	
G1119		G985	G916	G854	G785	G707	A654			G411	G321	U270N		U112	A38
U1120		C986	A917	G855	C796	G708	A654A			A322	A322	G270O	A204	C39	
C1121	G1056	A988	A918	C856	U787	U709	C654B			A323	G325	C270P	G205	C40	
G1122	A1057	G989	G919	C857	A788	G710	C654C			A415	G326	G270Q	G206	C41	
	U1058	A990	G920	U858	A789	G715	G654D				G327	G270R	A119	G43	
G1125	G1059	C991	G921	G859	C790	G716	C654E			C420	G327	G270S	A213	A44	
A1126	U1060	C992		U860	C791	A716	C654F			U421	U328		G214	G45	
U1127	U1061	G993	C924	A861	G792	G717	C654G				U329		G215	C46	
A1128	G1062	C994	C925	A862	A793		C654H			G425	G329		G216	C47	
U1129	C1063	C995	A926	A863	A794	C720	C654I			C426	A330		G217	G48	
G1130	G1064	A996	G928	C864	C795	C721	A654J			U427	A331		A218	A49	
U1131	U1065	G997	C929	C865	C796	A722	C654K			A428	A332		G219	U50	
A1132	U1066	C998	U930	A866	C797	G723	C654L						A221	G51	
U1133	U1067	C999	G931	C867	C797	U724	C654M			G439	C335	U271B	A222	C128	
C1135	A1068	A1000	G932	U868	G725	U724	C654N			G440	C336	U271C	A223	G129	
G1136	G1069	A1001	A933	C869	G726	G726	C654O			U441	C337	G271	A224	G55	
U1138	A1070	G1002	G934	A870	U803	G733	G654P			G442	G338	G272	G224	A56	
G1139	G1071			U871	A804	G729	C654Q			A443	U339	G273	A225	C57	
C1140	C1072	C1005	G938		G805	C730	C654R			C444	A340		G226	G58	
U1141	A1073	C1006		G874	C806	C731	G654S			C445	G341	U273D	A227	U59	
G1142	G1074	C1007	A941	G875	U807	G732	A654T				G342	U273E	A228	G60	
A1142A	C1075		G942	C876	U810	G733	G654U			U449	C343	C273F	A229	A64	
U1143	C1076	G1011	U943	U877	U811	A734	A654V			A449	G344	G275	U230	A65	
G1144	A1077	U1012	G944	A878	U811		A655						G276	C66	
C1145	U1078	C812	A945	G879	C812	G738	G656			A454	G352	C277	A233	U67	
G1146	C1013	U1013	G946	G880	U813	G739	U857			C455	A278		U235	G68	
U1147	C1014	U1014	G947	G881	C814		U857			A456	C279		G239	G69	
A1148	A1080	G1015	G948	G882	C815	G744	C858			A457	G356	C280	U239	G70	
G1149	U1081	G1016		G883	C816	G745	G660			G458	A357	G281	G240	A71	



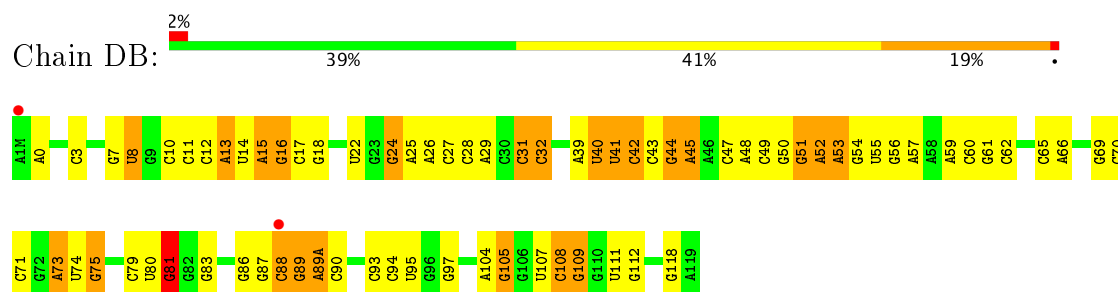




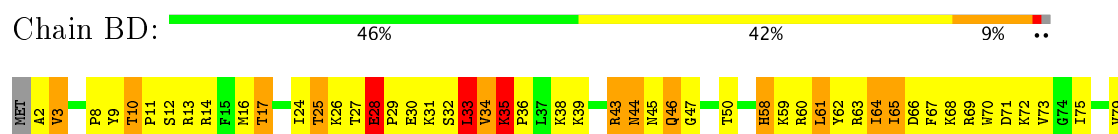
• Molecule 26: 5S RIBOSOMAL RNA

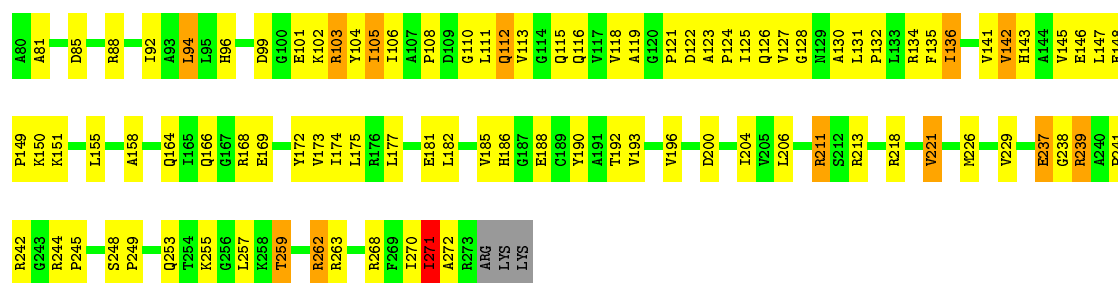


• Molecule 26: 5S RIBOSOMAL RNA



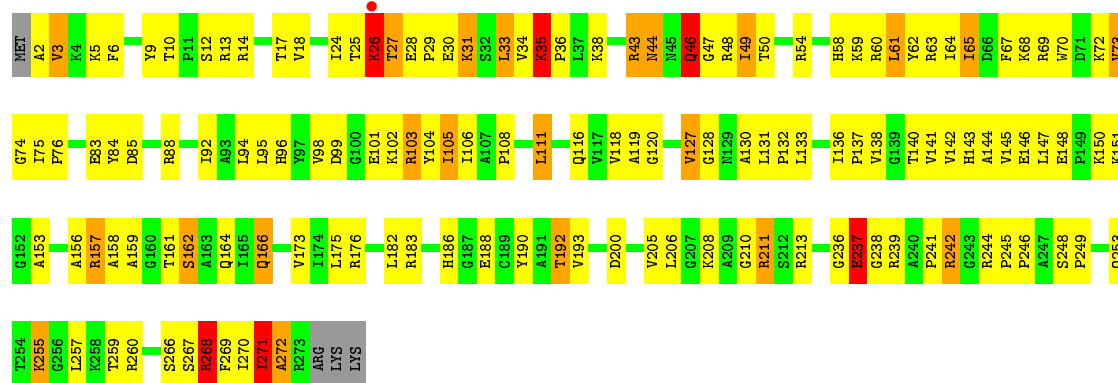
• Molecule 27: 50S ribosomal protein L2





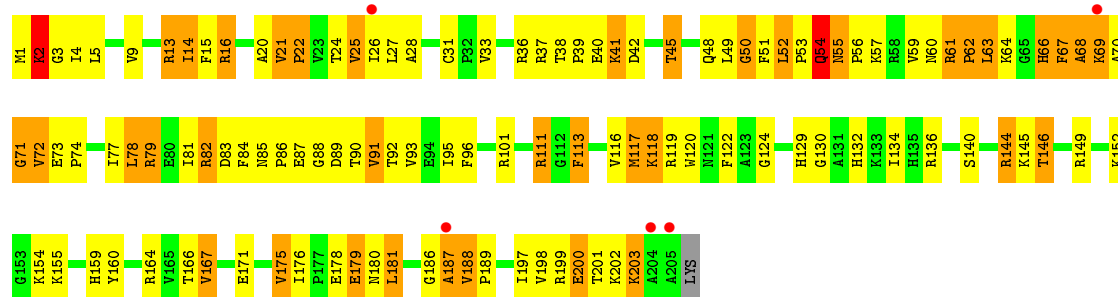
• Molecule 27: 50S ribosomal protein L2

Chain DD: 48% 41% 8% ..



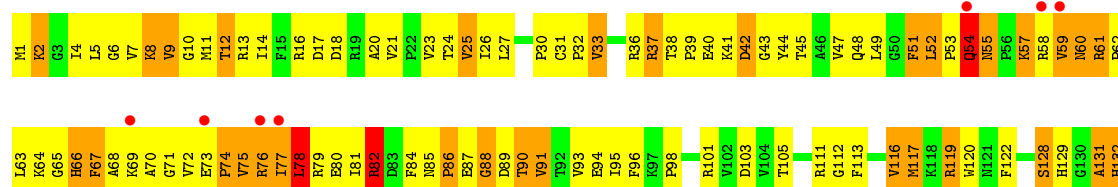
• Molecule 28: 50S ribosomal protein L3

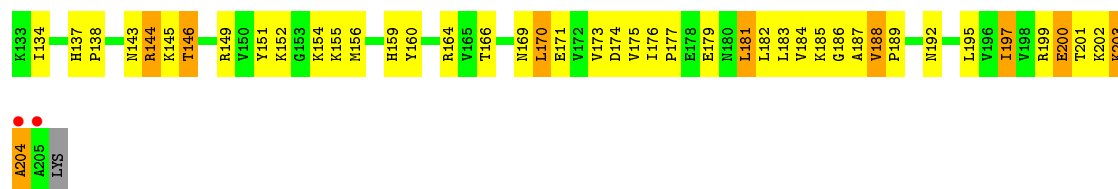
Chain BE: 2% 43% 37% 18% .



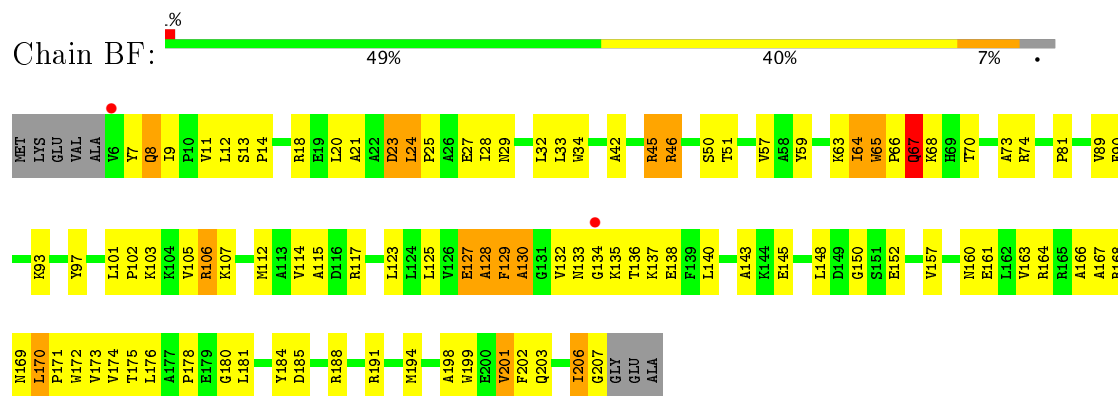
• Molecule 28: 50S ribosomal protein L3

Chain DE: 4% 30% 49% 19% .

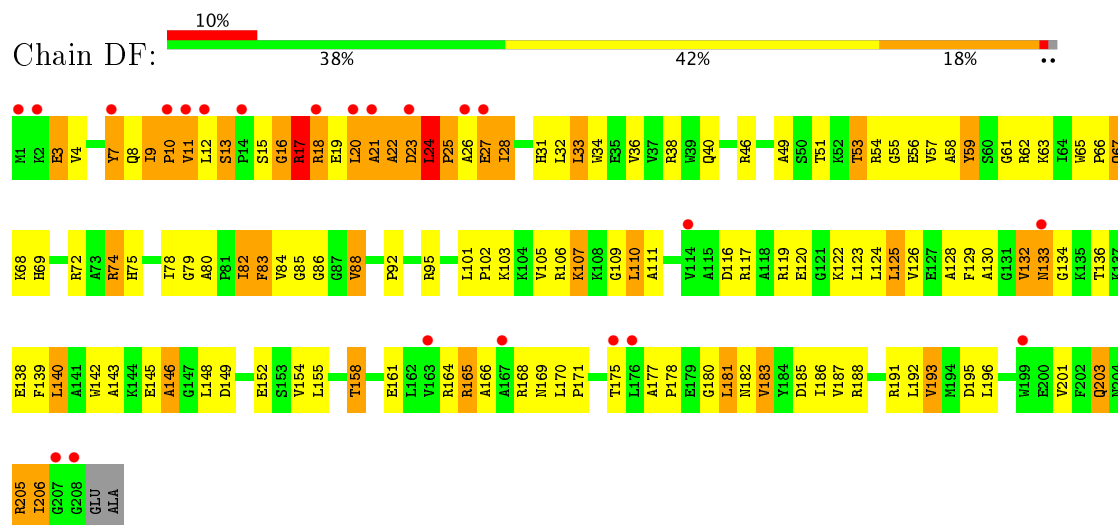




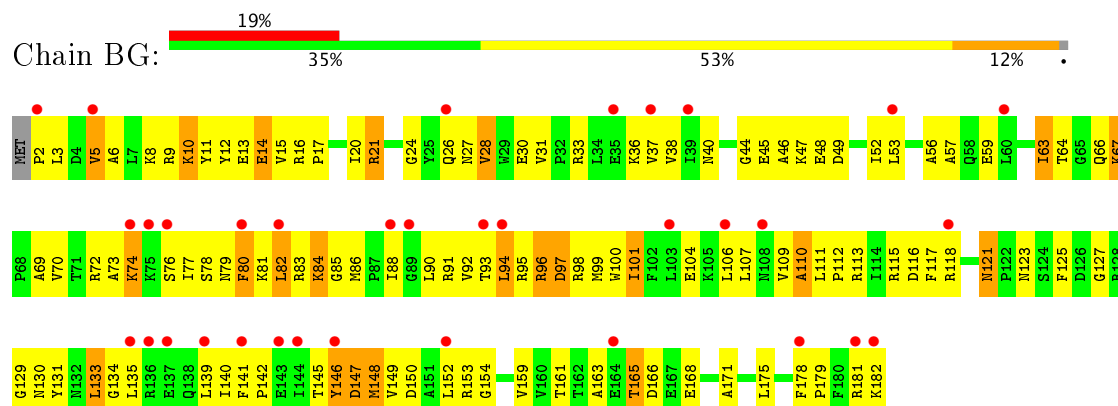
• Molecule 29: 50S ribosomal protein L4



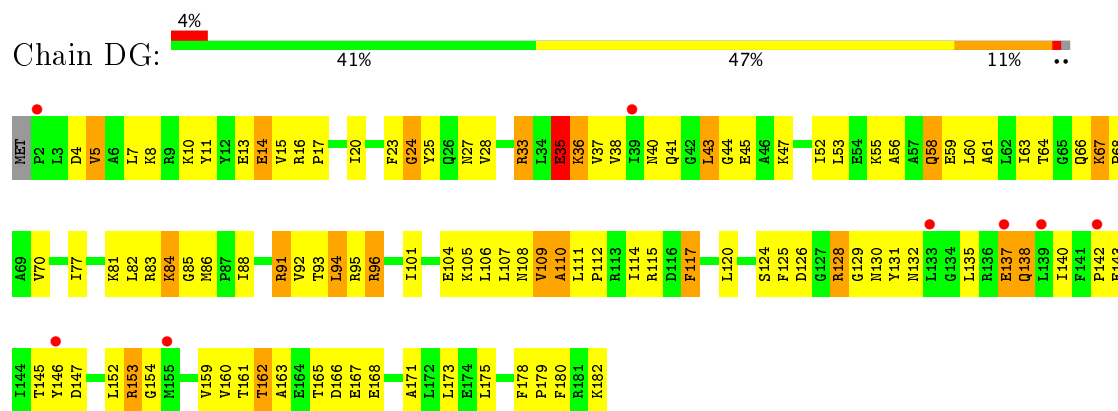
• Molecule 29: 50S ribosomal protein L4



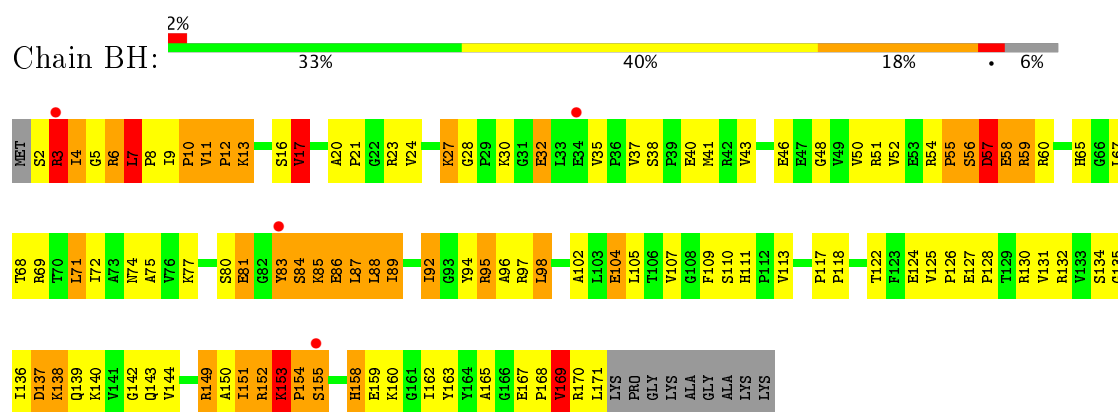
• Molecule 30: 50S ribosomal protein L5



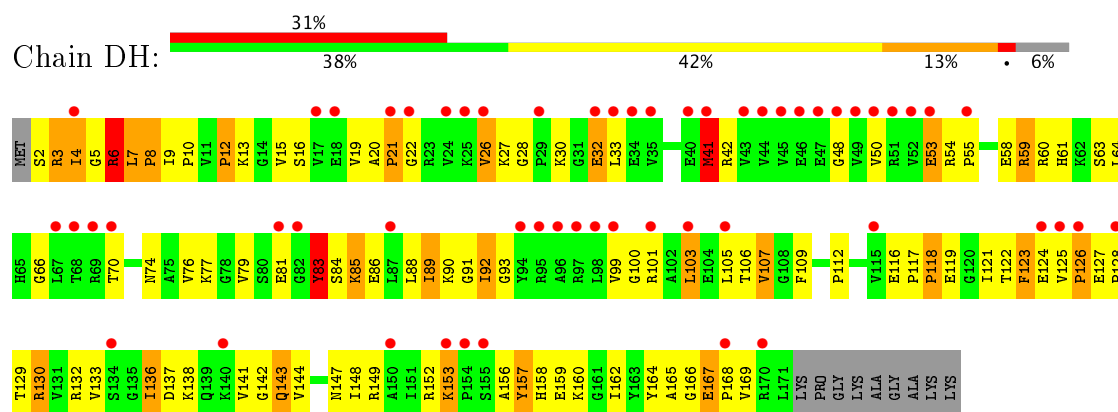
- Molecule 30: 50S ribosomal protein L5



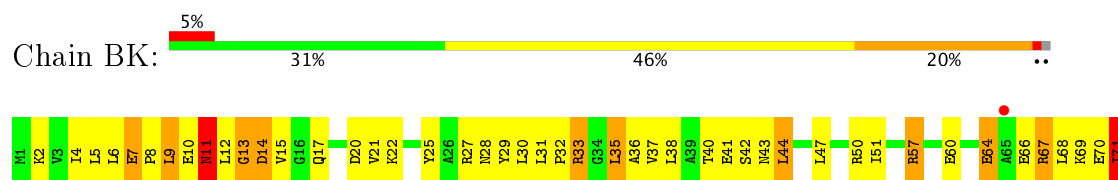
- Molecule 31: 50S ribosomal protein L6

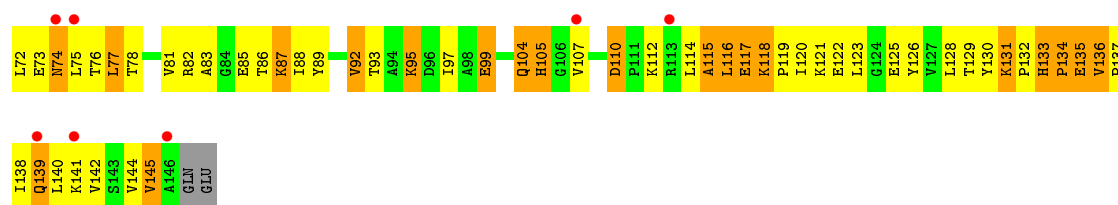


- Molecule 31: 50S ribosomal protein L6

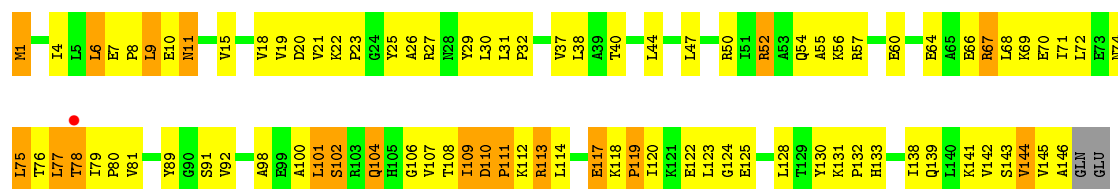


- Molecule 32: 50S ribosomal protein L9

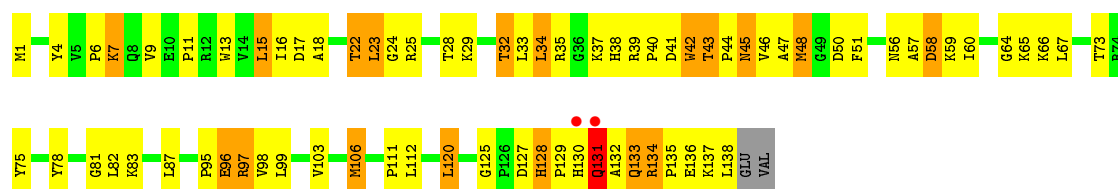




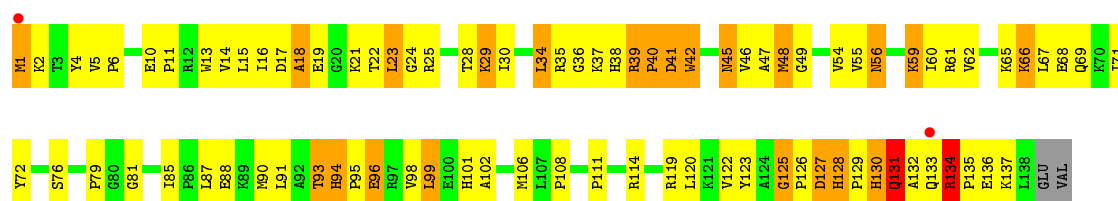
• Molecule 32: 50S ribosomal protein L9



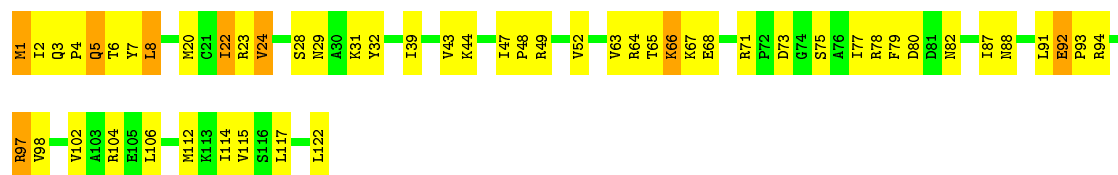
• Molecule 33: 50S ribosomal protein L13



• Molecule 33: 50S ribosomal protein L13

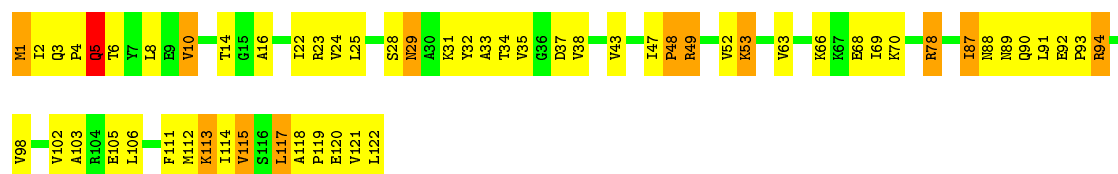


• Molecule 34: 50S ribosomal protein L14

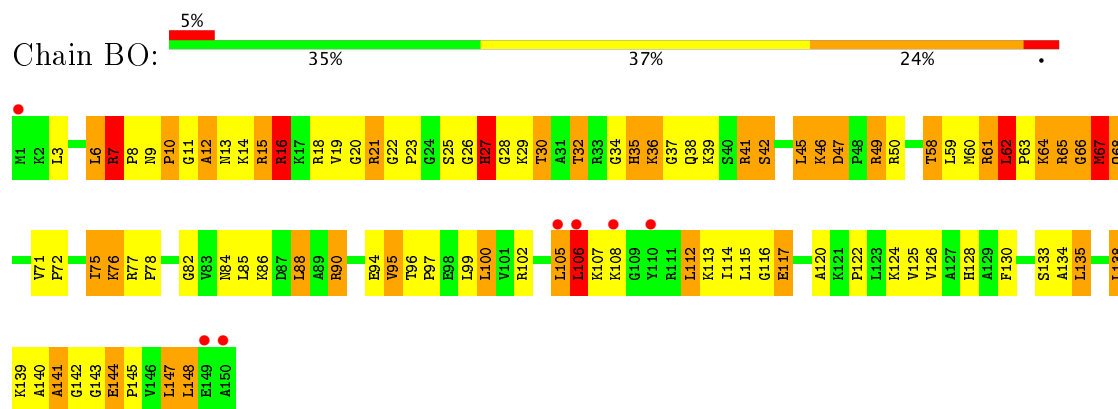


• Molecule 34: 50S ribosomal protein L14

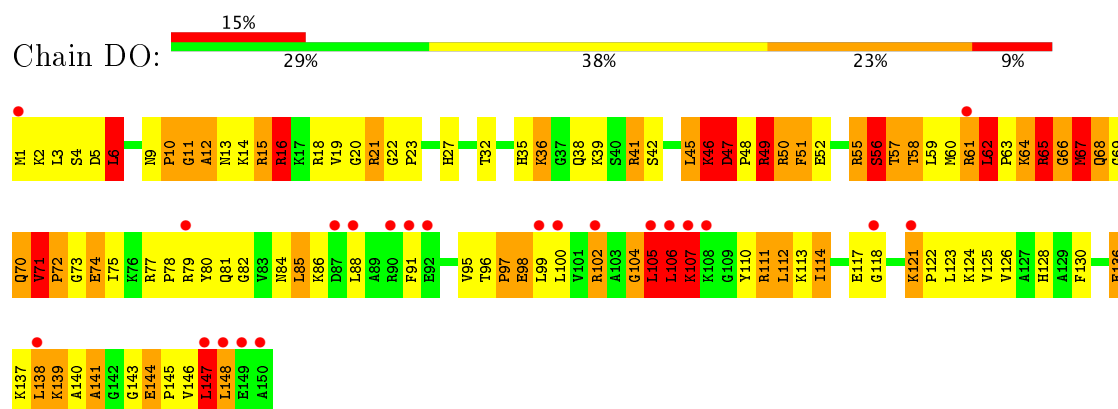




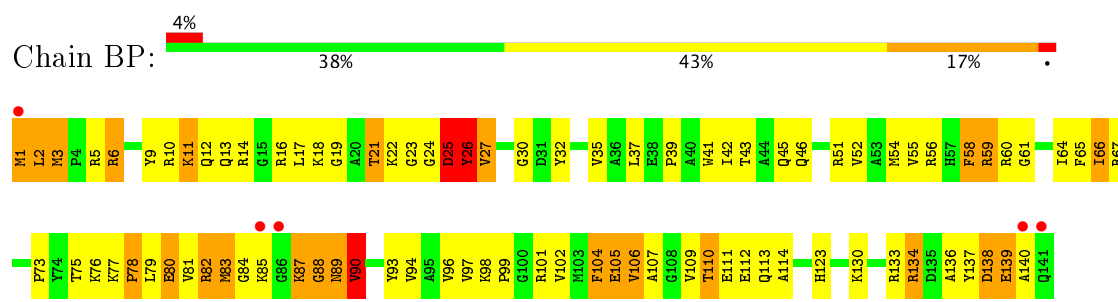
• Molecule 35: 50S ribosomal protein L15



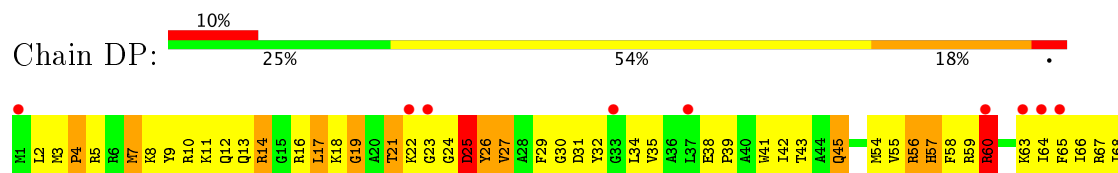
• Molecule 35: 50S ribosomal protein L15

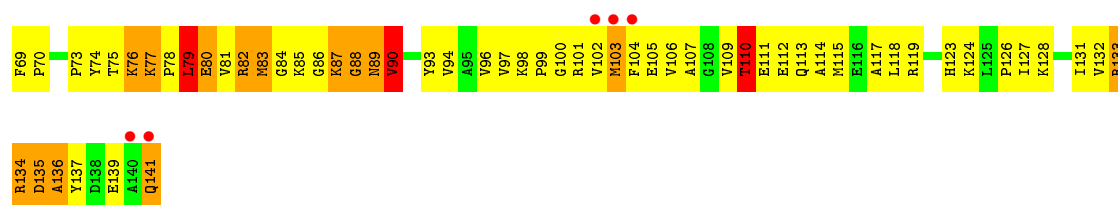


• Molecule 36: 50S ribosomal protein L16



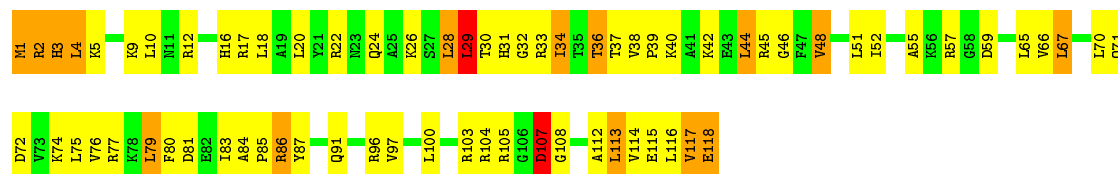
• Molecule 36: 50S ribosomal protein L16





- Molecule 37: 50S ribosomal protein L17

Chain B0: 40% 46% 13% .



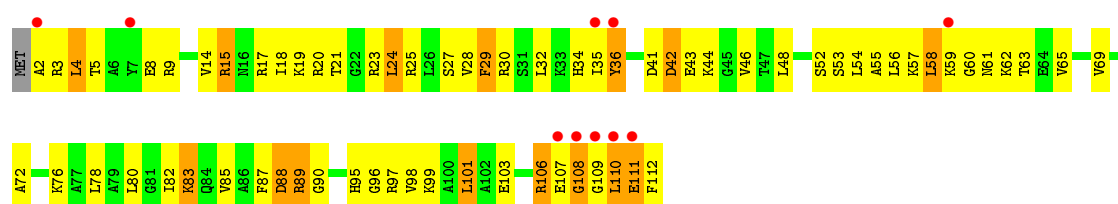
- Molecule 37: 50S ribosomal protein L17

Chain D0: 39% 49% 10% ..



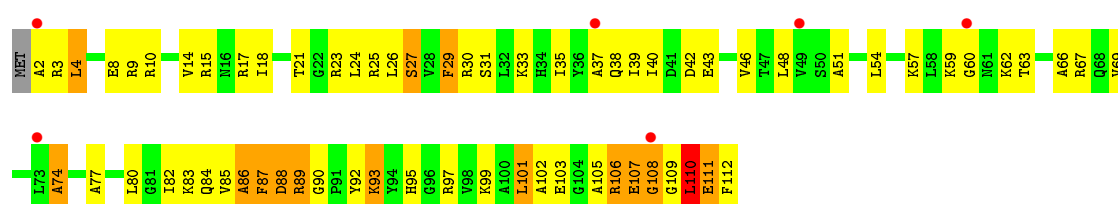
- Molecule 38: 50S ribosomal protein L18

Chain BQ: 9% 38% 48% 13% .



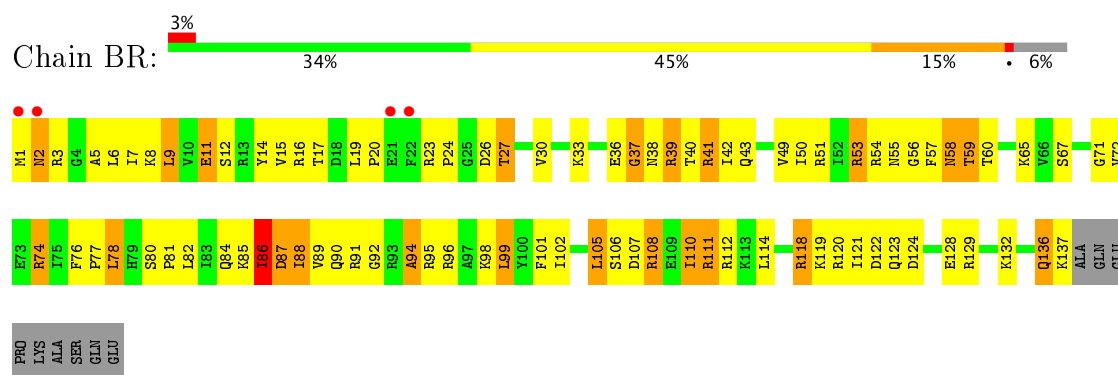
- Molecule 38: 50S ribosomal protein L18

Chain DQ: 5% 39% 46% 13% ..

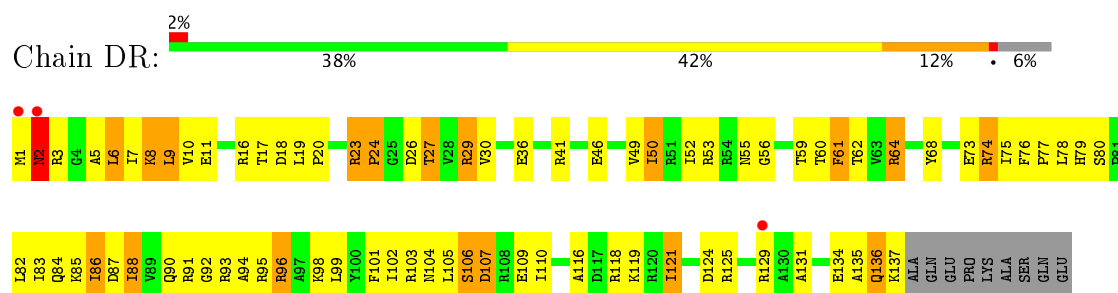


- Molecule 39: 50S ribosomal protein L19

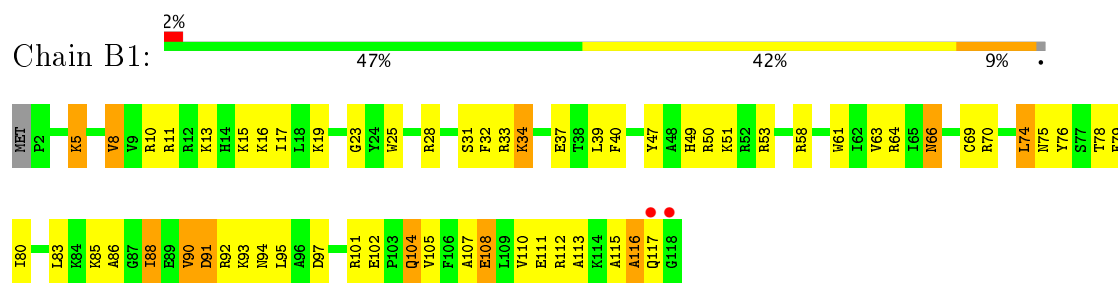




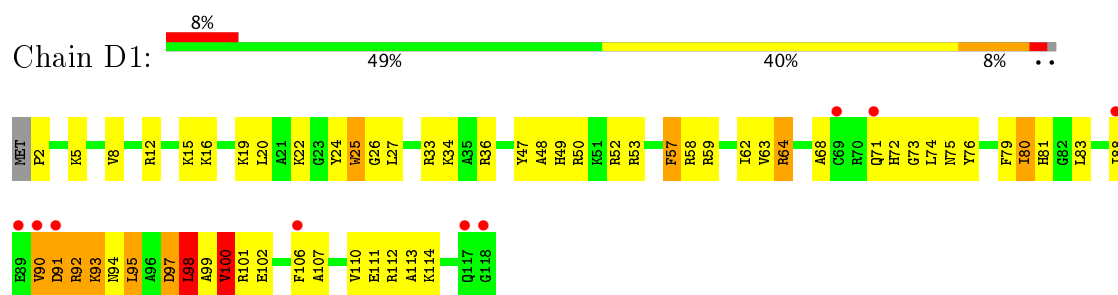
- Molecule 39: 50S ribosomal protein L19



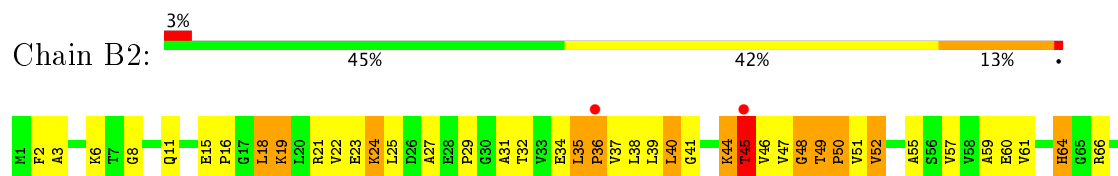
- Molecule 40: 50S ribosomal protein L20

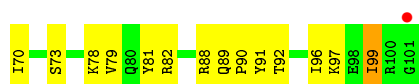


- Molecule 40: 50S ribosomal protein L20

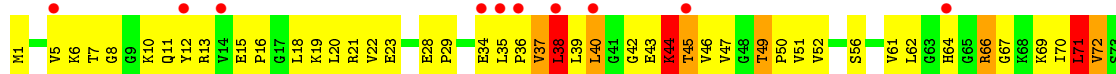


- Molecule 41: 50S ribosomal protein L21





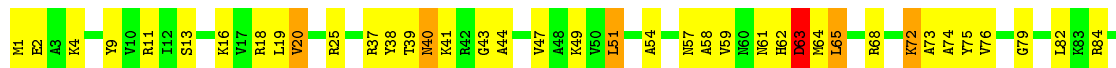
- Molecule 41: 50S ribosomal protein L21



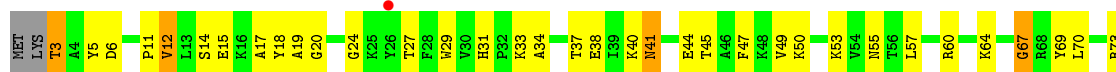
- Molecule 42: 50S ribosomal protein L22



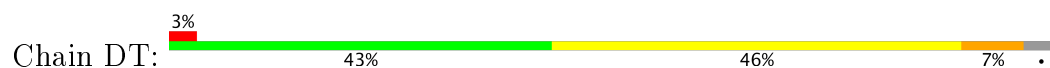
- Molecule 42: 50S ribosomal protein L22

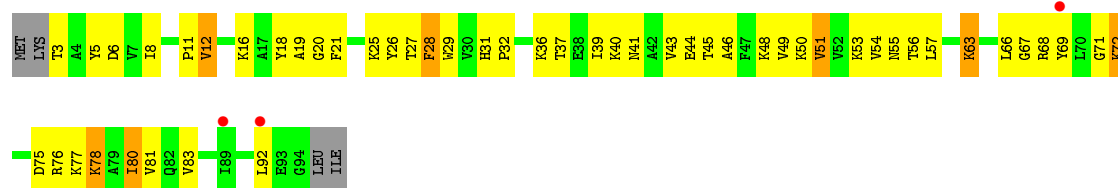


- Molecule 43: 50S ribosomal protein L23

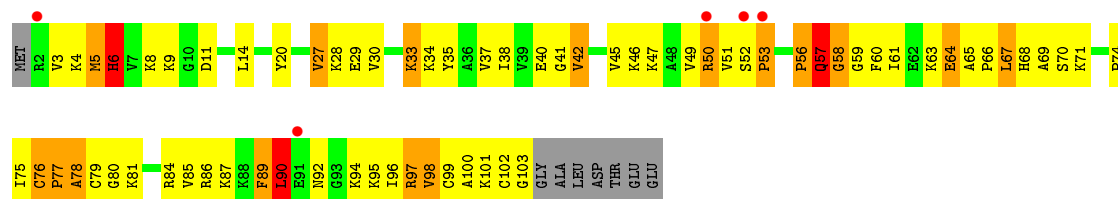
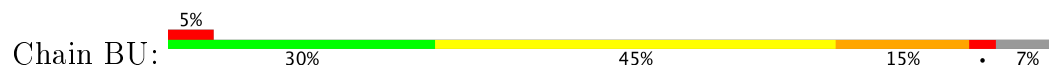


- Molecule 43: 50S ribosomal protein L23

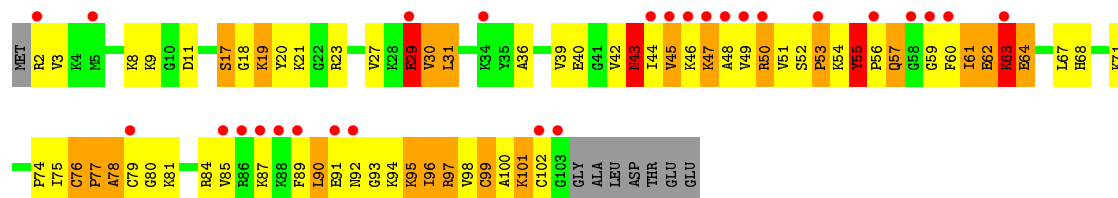




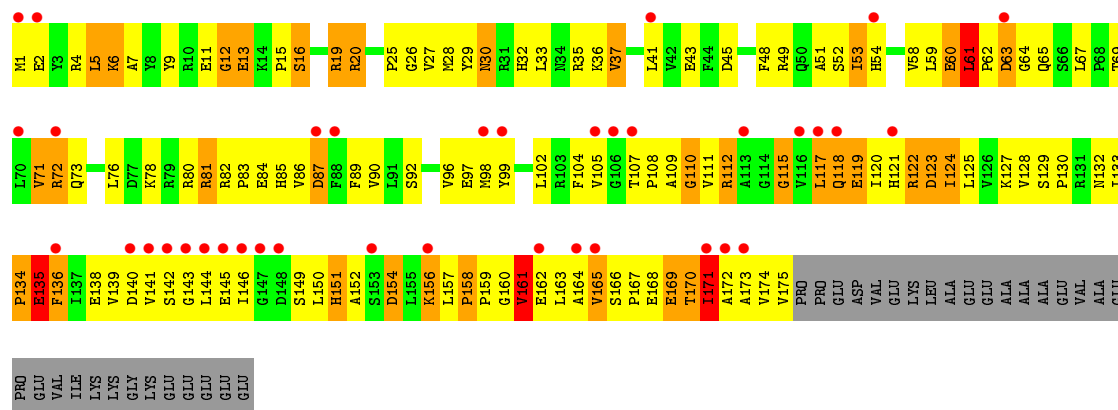
- Molecule 44: 50S ribosomal protein L24



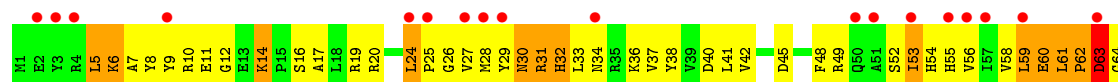
- Molecule 44: 50S ribosomal protein L24

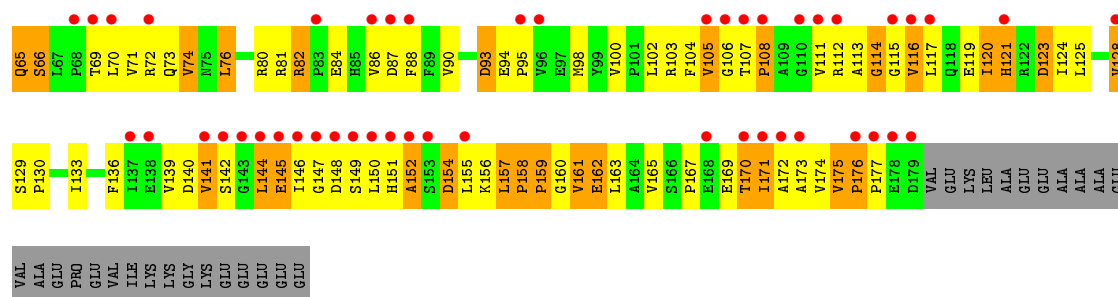


- Molecule 45: 50S ribosomal protein L25

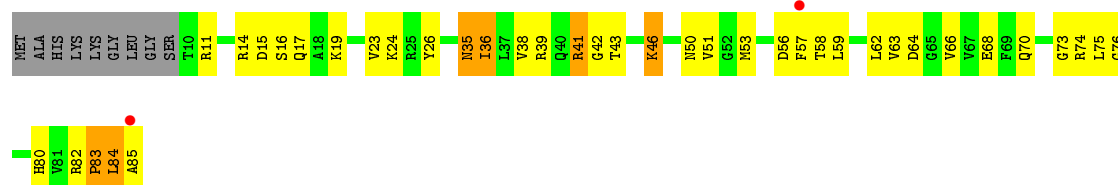
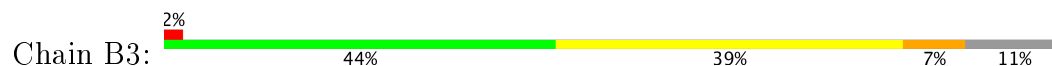


- Molecule 45: 50S ribosomal protein L25

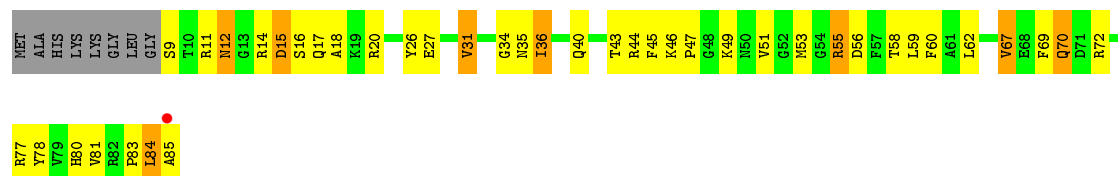
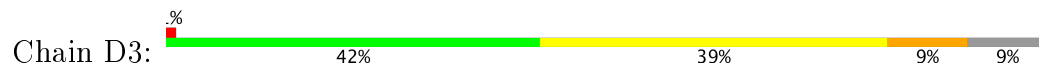




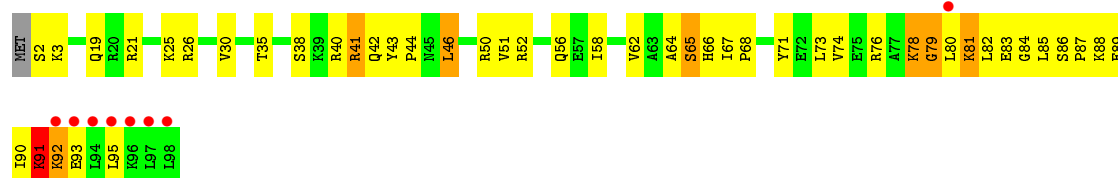
- Molecule 46: 50S ribosomal protein L27



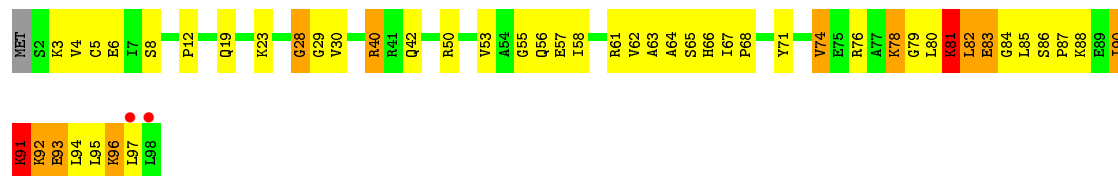
- Molecule 46: 50S ribosomal protein L27



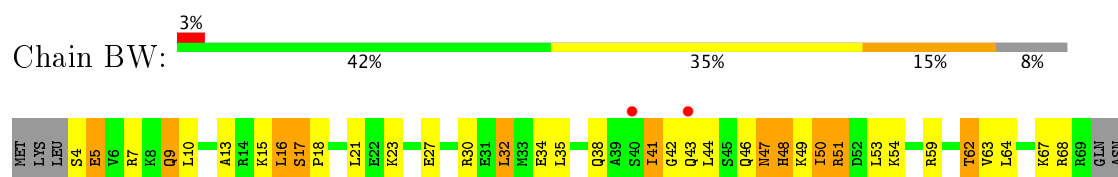
- Molecule 47: 50S ribosomal protein L28



- Molecule 47: 50S ribosomal protein L28

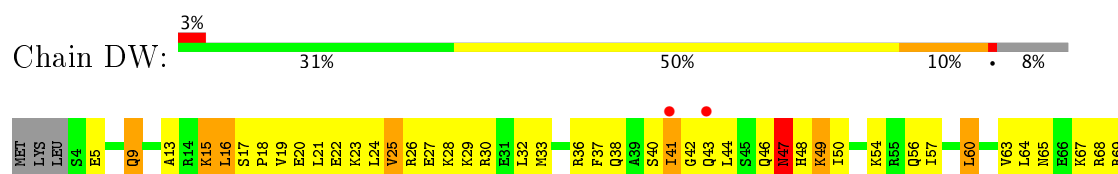


- Molecule 48: 50S ribosomal protein L29



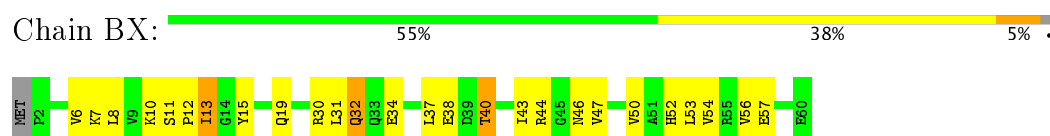
ALA

- Molecule 48: 50S ribosomal protein L29

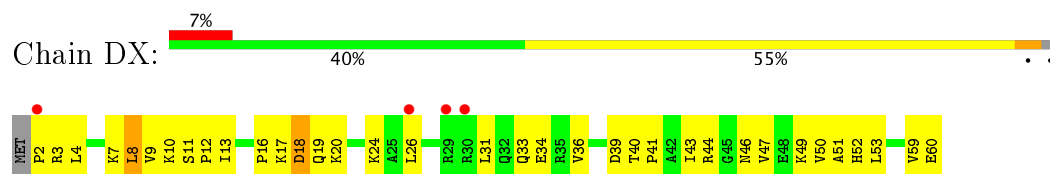


GLN ASN ALA

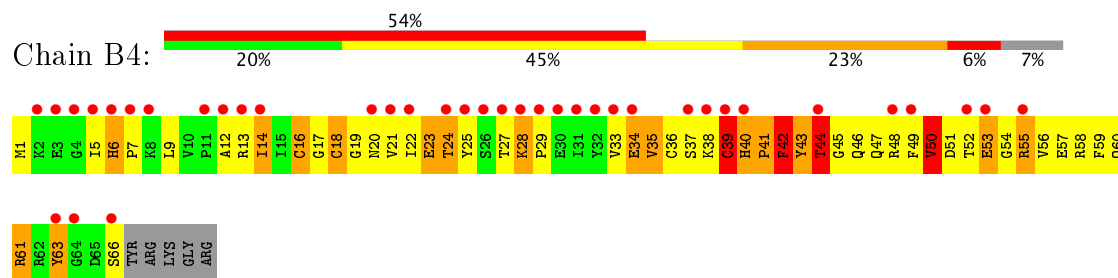
- Molecule 49: 50S ribosomal protein L30



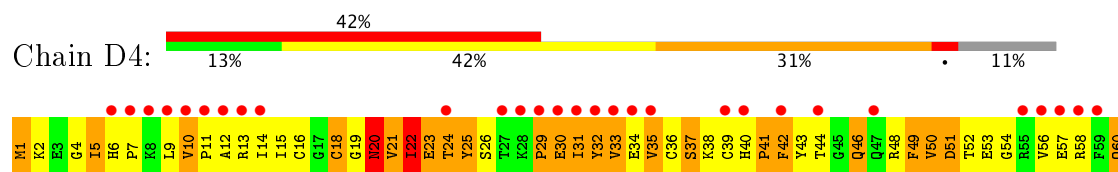
- Molecule 49: 50S ribosomal protein L30

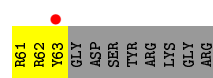


- Molecule 50: 50S ribosomal protein L31

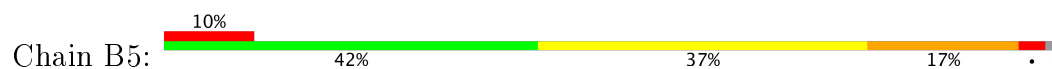


- Molecule 50: 50S ribosomal protein L31

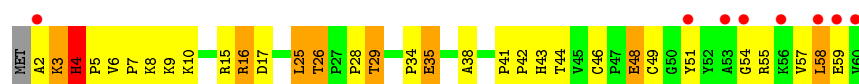




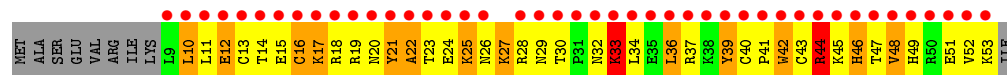
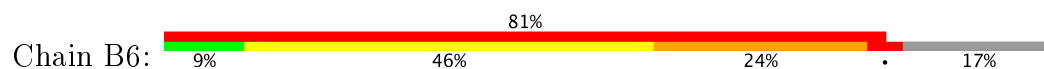
- Molecule 51: 50S ribosomal protein L32



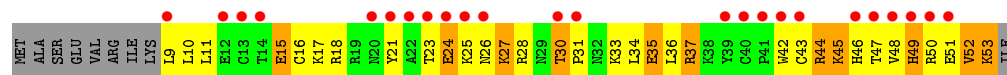
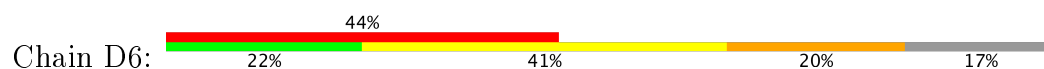
- Molecule 51: 50S ribosomal protein L32



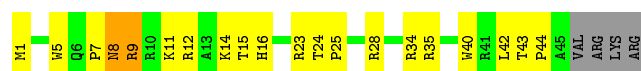
- Molecule 52: 50S ribosomal protein L33



- Molecule 52: 50S ribosomal protein L33



- Molecule 53: 50S ribosomal protein L34



- Molecule 53: 50S ribosomal protein L34



- Molecule 54: 50S ribosomal protein L35





• Molecule 54: 50S ribosomal protein L35



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	210.67Å 451.75Å 625.08Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	154.06 – 3.00 257.02 – 3.00	Depositor EDS
% Data completeness (in resolution range)	100.0 (154.06-3.00) 93.5 (257.02-3.00)	Depositor EDS
$R_{merge}$	0.22	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.91 (at 3.01Å)	Xtriage
Refinement program	PHENIX dev_810	Depositor
R, $R_{free}$	0.203 , 0.235 0.202 , 0.231	Depositor DCC
$R_{free}$ test set	2000 reflections (0.18%)	DCC
Wilson B-factor (Å <sup>2</sup> )	78.2	Xtriage
Anisotropy	0.220	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.28 , 83.3	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.47$ , $\langle L^2 \rangle = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
$F_o, F_c$ correlation	0.94	EDS
Total number of atoms	299676	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	100.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.46% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

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



## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

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

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	0.28	0/36139	0.67	20/56406 (0.0%)
1	CA	0.28	0/36142	0.66	20/56410 (0.0%)
2	AE	0.22	0/1959	0.42	0/2642
2	CE	0.22	0/1959	0.42	0/2642
3	AF	0.22	0/1629	0.42	0/2195
3	CF	0.21	0/1636	0.40	0/2205
4	AG	0.29	1/1733 (0.1%)	0.44	0/2318
4	CG	0.27	0/1733	0.47	0/2318
5	AH	0.24	0/1171	0.44	0/1576
5	CH	0.24	0/1171	0.44	0/1576
6	AI	0.24	0/856	0.42	0/1154
6	CI	0.24	0/856	0.42	0/1154
7	AJ	0.22	0/1276	0.40	0/1709
7	CJ	0.22	0/1276	0.38	0/1709
8	AK	0.23	0/1136	0.44	0/1527
8	CK	0.22	0/1136	0.42	0/1527
9	AL	0.23	0/1029	0.41	0/1379
9	CL	0.22	0/1029	0.42	0/1379
10	AM	0.22	0/814	0.42	0/1095
10	CM	0.21	0/814	0.43	0/1095
11	AN	0.24	0/900	0.44	0/1213
11	CN	0.24	0/900	0.43	0/1213
12	AO	0.26	0/991	0.49	0/1327
12	CO	0.25	0/991	0.49	0/1327
13	AP	0.22	0/938	0.45	0/1258
13	CP	0.20	0/943	0.41	0/1265
14	AQ	0.27	0/485	0.47	0/643
14	CQ	0.23	0/485	0.43	0/643
15	AR	0.24	0/745	0.43	0/992
15	CR	0.23	0/745	0.39	0/992
16	AS	0.22	0/721	0.44	0/970
16	CS	0.23	0/721	0.42	0/970

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	AT	0.23	0/847	0.43	0/1131
17	CT	0.24	0/847	0.42	0/1131
18	AU	0.25	0/596	0.45	0/790
18	CU	0.24	0/596	0.44	0/790
19	AV	0.23	0/638	0.45	0/860
19	CV	0.22	0/638	0.43	0/860
20	AW	0.22	0/765	0.42	0/1007
20	CW	0.23	0/765	0.45	0/1007
21	AX	0.22	0/221	0.41	0/288
21	CX	0.21	0/221	0.40	0/288
22	AB	0.28	0/1992	0.60	0/3099
22	AD	0.21	0/1992	0.50	0/3099
22	CB	0.26	0/1992	0.57	0/3099
22	CD	0.20	0/1992	0.49	0/3099
23	AC	0.25	0/1835	0.59	1/2859 (0.0%)
23	CC	0.24	0/1835	0.57	0/2859
24	A1	0.33	0/389	0.64	0/604
24	C1	0.38	0/389	0.65	0/604
25	BA	0.37	0/70233	0.75	52/109643 (0.0%)
25	DA	0.33	1/70122 (0.0%)	0.70	54/109469 (0.0%)
26	BB	0.33	0/2928	0.80	11/4568 (0.2%)
26	DB	0.29	0/2928	0.74	4/4568 (0.1%)
27	BD	0.32	0/2165	0.58	1/2919 (0.0%)
27	DD	0.29	0/2165	0.52	0/2919
28	BE	0.29	0/1601	0.55	0/2160
28	DE	0.27	0/1601	0.52	0/2160
29	BF	0.28	0/1620	0.50	0/2194
29	DF	0.26	0/1662	0.52	0/2249
30	BG	0.24	0/1499	0.43	0/2016
30	DG	0.21	0/1499	0.42	0/2016
31	BH	0.25	0/1332	0.50	0/1802
31	DH	0.21	0/1332	0.44	0/1802
32	BK	0.24	0/1151	0.49	0/1558
32	DK	0.23	0/1151	0.51	0/1558
33	BM	0.26	0/1131	0.49	0/1525
33	DM	0.23	0/1131	0.44	0/1525
34	BN	0.27	0/943	0.46	0/1269
34	DN	0.26	0/943	0.46	0/1269
35	BO	0.28	0/1162	0.58	0/1544
35	DO	0.24	0/1162	0.45	0/1544
36	BP	0.27	0/1143	0.46	0/1527
36	DP	0.24	0/1143	0.41	0/1527
37	B0	0.26	0/982	0.48	0/1312

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
37	D0	0.25	0/974	0.45	0/1302
38	BQ	0.26	0/892	0.50	0/1187
38	DQ	0.23	0/892	0.46	0/1187
39	BR	0.28	0/1155	0.49	0/1542
39	DR	0.25	0/1155	0.44	0/1542
40	B1	0.28	0/982	0.49	0/1306
40	D1	0.24	0/982	0.44	0/1306
41	B2	0.26	0/790	0.48	0/1057
41	D2	0.27	0/790	0.51	0/1057
42	BS	0.27	0/911	0.47	0/1220
42	DS	0.26	0/911	0.44	0/1220
43	BT	0.31	0/739	0.49	0/993
43	DT	0.28	0/739	0.46	0/993
44	BU	0.29	0/798	0.52	0/1064
44	DU	0.26	0/798	0.48	0/1064
45	BV	0.23	0/1427	0.48	1/1935 (0.1%)
45	DV	0.22	0/1460	0.43	0/1982
46	B3	0.28	0/615	0.46	0/819
46	D3	0.26	0/621	0.44	0/827
47	BZ	0.27	0/770	0.50	0/1022
47	DZ	0.26	0/770	0.50	0/1022
48	BW	0.28	0/560	0.52	0/741
48	DW	0.25	0/560	0.45	0/741
49	BX	0.25	0/474	0.42	0/635
49	DX	0.22	0/474	0.41	0/635
50	B4	0.22	0/545	0.49	0/733
50	D4	0.23	0/527	0.51	0/709
51	B5	0.25	0/473	0.51	0/639
51	D5	0.24	0/473	0.54	0/639
52	B6	0.26	0/396	0.46	0/529
52	D6	0.23	0/396	0.51	0/529
53	B7	0.31	0/399	0.44	0/526
53	D7	0.26	0/399	0.44	0/526
54	B8	0.33	0/486	0.55	0/638
54	D8	0.33	0/486	0.67	0/638
All	All	0.30	2/324157 (0.0%)	0.65	164/485451 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
31	BH	0	1

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	DA	2873	A	N7-C5	-5.99	1.35	1.39
4	AG	12	CYS	CB-SG	5.09	1.90	1.82

All (164) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	2311	A	N1-C2-N3	12.09	135.35	129.30
25	DA	2311	A	N1-C6-N6	10.02	124.61	118.60
25	BA	673	C	C2-N3-C4	-10.01	114.89	119.90
26	BB	95	U	C5-C4-O4	9.25	131.45	125.90
25	DA	673	C	C2-N3-C4	-9.13	115.33	119.90
25	DA	1899	G	N3-C4-N9	-9.07	120.56	126.00
26	BB	81	G	C5-C6-O6	-8.71	123.37	128.60
26	BB	81	G	C6-C5-N7	-8.51	125.29	130.40
25	BA	807	U	C2-N3-C4	-8.42	121.95	127.00
25	DA	807	U	C2-N3-C4	-8.37	121.98	127.00
1	CA	1495	U	N1-C2-O2	8.37	128.66	122.80
1	AA	1495	U	N1-C2-O2	8.23	128.56	122.80
25	DA	2311	A	C5-C6-N6	-8.11	117.21	123.70
1	CA	1529	G	C4-N9-C1'	7.98	136.87	126.50
25	DA	2720	U	C2-N3-C4	-7.94	122.23	127.00
26	DB	95	U	C5-C4-O4	7.88	130.63	125.90
25	DA	1899	G	C8-N9-C1'	7.83	137.18	127.00
1	AA	1054	C	C2-N1-C1'	7.83	127.41	118.80
25	DA	1899	G	C4-N9-C1'	-7.77	116.39	126.50
26	BB	81	G	C4-N9-C1'	7.74	136.57	126.50
25	BA	2447	G	C6-N1-C2	-7.72	120.47	125.10
25	BA	2447	G	C5-C6-O6	-7.72	123.97	128.60
25	BA	1899	G	N3-C4-N9	-7.68	121.39	126.00
25	DA	1602	U	C2-N3-C4	-7.63	122.42	127.00
25	BA	906	G	C5-C6-O6	7.55	133.13	128.60
1	CA	1529	G	N3-C4-C5	-7.52	124.84	128.60
25	BA	633	A	N1-C6-N6	7.52	123.11	118.60
26	BB	81	G	C4-C5-N7	7.40	113.76	110.80
26	BB	81	G	N3-C4-N9	7.37	130.42	126.00
25	DA	1899	G	N3-C4-C5	7.33	132.27	128.60
25	DA	2873	A	N1-C6-N6	7.29	122.97	118.60
1	AA	792	A	C3'-C2'-C1'	-7.29	95.67	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	2311	A	C6-N1-C2	-7.28	114.23	118.60
25	DA	2447	G	C6-N1-C2	-7.28	120.73	125.10
26	BB	81	G	C8-N9-C1'	-7.22	117.61	127.00
25	DA	2447	G	C5-C6-O6	-7.20	124.28	128.60
25	DA	2311	A	C2-N3-C4	-7.18	107.01	110.60
25	DA	1332	G	N3-C4-N9	-7.10	121.74	126.00
25	DA	1332	G	N3-C4-C5	7.00	132.10	128.60
25	DA	2311	A	C8-N9-C4	-6.88	103.05	105.80
25	DA	633	A	N1-C6-N6	6.85	122.71	118.60
1	AA	1301	U	C2-N1-C1'	6.84	125.90	117.70
25	DA	1602	U	N1-C2-O2	-6.79	118.05	122.80
1	CA	1529	G	C8-N9-C4	-6.76	103.69	106.40
25	BA	120	U	C5-C4-O4	6.71	129.93	125.90
25	BA	1899	G	N3-C4-C5	6.65	131.93	128.60
1	CA	1025	U	C5-C4-O4	-6.59	121.95	125.90
25	DA	2598	A	N1-C6-N6	6.54	122.53	118.60
25	BA	1021	A	C5-N7-C8	-6.53	100.63	103.90
25	BA	673	C	C5-C4-N4	-6.53	115.63	120.20
25	BA	250	G	N3-C2-N2	6.52	124.47	119.90
25	DA	783	A	C5-N7-C8	-6.44	100.68	103.90
25	DA	250	G	N3-C2-N2	6.42	124.39	119.90
1	AA	1465	C	C2-N3-C4	-6.38	116.71	119.90
1	CA	1465	C	C2-N3-C4	-6.32	116.74	119.90
25	DA	2447	G	N3-C4-C5	-6.28	125.46	128.60
25	DA	2378	A	N1-C6-N6	6.22	122.33	118.60
26	DB	81	G	C5-C6-O6	-6.19	124.89	128.60
25	BA	783	A	C4-C5-N7	6.18	113.79	110.70
25	BA	906	G	N1-C6-O6	-6.15	116.21	119.90
25	BA	250	G	N3-C4-N9	6.12	129.68	126.00
25	BA	1786	A	N7-C8-N9	6.10	116.85	113.80
25	BA	2451	A	C5-N7-C8	-6.09	100.85	103.90
1	AA	1054	C	C6-N1-C1'	-6.04	113.55	120.80
25	BA	673	C	N3-C4-C5	6.02	124.31	121.90
25	DA	2873	A	C6-C5-N7	-6.00	128.10	132.30
25	BA	2501	C	C2-N1-C1'	-5.96	112.25	118.80
25	BA	633	A	C4-C5-C6	5.96	119.98	117.00
25	BA	2598	A	N1-C6-N6	5.95	122.17	118.60
25	DA	1602	U	C5-C6-N1	-5.88	119.76	122.70
1	AA	1495	U	N3-C2-O2	-5.84	118.11	122.20
1	AA	1053	G	C4-N9-C1'	-5.83	118.92	126.50
25	BA	1899	G	C2-N3-C4	-5.83	108.99	111.90
1	CA	1529	G	C8-N9-C1'	-5.83	119.43	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	807	U	N1-C2-N3	5.82	118.39	114.90
25	BA	1142(A)	A	C5-N7-C8	-5.80	101.00	103.90
25	DA	906	G	C5-C6-O6	5.80	132.08	128.60
25	BA	83	G	N9-C4-C5	-5.80	103.08	105.40
25	DA	103	A	N1-C6-N6	5.80	122.08	118.60
25	BA	383	U	N1-C2-O2	5.76	126.83	122.80
1	AA	1495	U	C2-N1-C1'	5.75	124.61	117.70
25	DA	673	C	C5-C4-N4	-5.75	116.17	120.20
25	DA	2451	A	C5-N7-C8	-5.74	101.03	103.90
25	BA	807	U	N1-C2-N3	5.73	118.34	114.90
25	BA	103	A	N1-C6-N6	5.73	122.04	118.60
1	AA	1036	G	C5-C6-O6	5.72	132.03	128.60
1	CA	1436	U	C2-N3-C4	-5.71	123.57	127.00
25	DA	250	G	N3-C4-N9	5.68	129.41	126.00
1	CA	1529	G	N3-C4-N9	5.67	129.40	126.00
25	BA	633	A	C6-C5-N7	-5.67	128.33	132.30
25	DA	933	A	C4-N9-C1'	5.65	136.47	126.30
1	AA	1436	U	C2-N3-C4	-5.64	123.62	127.00
26	BB	59	A	C6-N1-C2	-5.63	115.22	118.60
25	DA	1602	U	C2-N1-C1'	-5.60	110.97	117.70
1	AA	1036	G	N1-C6-O6	-5.60	116.54	119.90
27	BD	33	LEU	CA-CB-CG	5.57	128.12	115.30
25	BA	783	A	C5-N7-C8	-5.57	101.12	103.90
26	BB	81	G	N1-C6-O6	5.56	123.24	119.90
25	DA	1312	U	C5-C4-O4	5.56	129.24	125.90
26	BB	81	G	N9-C4-C5	-5.56	103.17	105.40
1	AA	1406	U	C2-N3-C4	-5.53	123.68	127.00
25	BA	906	G	N9-C4-C5	5.52	107.61	105.40
26	BB	81	G	C6-N1-C2	-5.50	121.80	125.10
25	BA	2595	G	C2-N3-C4	-5.48	109.16	111.90
25	DA	633	A	C4-C5-C6	5.48	119.74	117.00
25	DA	2873	A	C4-C5-C6	5.47	119.73	117.00
1	CA	1529	G	N7-C8-N9	5.47	115.83	113.10
1	CA	270	A	N1-C6-N6	5.46	121.88	118.60
25	DA	201	C	C6-N1-C2	5.45	122.48	120.30
25	DA	673	C	N3-C4-C5	5.45	124.08	121.90
25	BA	2287	A	C5-N7-C8	-5.44	101.18	103.90
25	BA	140	A	N7-C8-N9	5.44	116.52	113.80
25	BA	1786	A	C8-N9-C4	-5.43	103.63	105.80
25	BA	1141	U	C2-N3-C4	-5.40	123.76	127.00
1	CA	560	U	C2-N1-C1'	5.40	124.18	117.70
25	DA	2474	C	C2-N1-C1'	5.39	124.73	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	2447	G	N3-C4-N9	5.39	129.24	126.00
1	AA	560	U	C2-N1-C1'	5.39	124.16	117.70
1	AA	190	G	C4-N9-C1'	5.37	133.48	126.50
25	BA	103	A	C4-C5-C6	5.37	119.68	117.00
1	CA	1495	U	C2-N1-C1'	5.36	124.14	117.70
1	CA	1200	C	C2-N1-C1'	5.36	124.70	118.80
25	DA	1992	G	C8-N9-C4	-5.35	104.26	106.40
25	BA	2430	A	C2-N3-C4	-5.34	107.93	110.60
1	CA	1495	U	N3-C2-O2	-5.34	118.47	122.20
26	DB	95	U	C2-N1-C1'	-5.33	111.30	117.70
25	DA	1899	G	N3-C2-N2	-5.33	116.17	119.90
25	BA	2344	U	N1-C2-O2	-5.33	119.07	122.80
25	BA	140	A	C5-N7-C8	-5.32	101.24	103.90
25	BA	1141	U	N1-C2-N3	5.32	118.09	114.90
25	BA	2430	A	N1-C6-N6	5.32	121.79	118.60
25	DA	2873	A	C5-C6-N1	-5.32	115.04	117.70
1	AA	1053	G	C8-N9-C1'	5.32	133.91	127.00
1	CA	1036	G	C5-C6-O6	5.30	131.78	128.60
25	BA	201	C	C2-N3-C4	-5.30	117.25	119.90
23	AC	1	C	C2-N1-C1'	5.30	124.63	118.80
25	BA	83	G	C2-N3-C4	-5.29	109.25	111.90
25	BA	2598	A	C4-C5-C6	5.28	119.64	117.00
1	AA	1301	U	C6-N1-C1'	-5.27	113.82	121.20
25	DA	783	A	C4-C5-N7	5.27	113.33	110.70
25	BA	1340	U	C2-N3-C4	-5.26	123.84	127.00
25	BA	807	U	N1-C2-O2	-5.25	119.12	122.80
25	DA	1602	U	N1-C2-N3	5.25	118.05	114.90
1	CA	300	A	N1-C6-N6	5.21	121.73	118.60
25	DA	1340	U	C2-N3-C4	-5.17	123.89	127.00
25	BA	906	G	C4-C5-N7	-5.17	108.73	110.80
45	BV	61	LEU	CA-CB-CG	5.16	127.17	115.30
26	DB	95	U	N3-C4-O4	-5.16	115.79	119.40
1	AA	560	U	C3'-C2'-C1'	5.15	105.62	101.50
25	BA	2447	G	N3-C4-N9	5.15	129.09	126.00
25	BA	2447	G	N3-C4-C5	-5.14	126.03	128.60
1	CA	1301	U	C2-N1-C1'	5.12	123.84	117.70
25	DA	1786	A	N7-C8-N9	5.11	116.36	113.80
25	DA	2311	A	N9-C4-C5	5.11	107.84	105.80
25	DA	1332	G	C2-N3-C4	-5.09	109.35	111.90
1	AA	1529	G	C8-N9-C4	-5.09	104.36	106.40
1	CA	266	G	C4-N9-C1'	5.09	133.12	126.50
1	CA	1200	C	N1-C2-O2	5.06	121.94	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DA	933	A	C8-N9-C1'	-5.06	118.59	127.70
25	DA	633	A	C6-C5-N7	-5.06	128.76	132.30
25	BA	1141	U	N1-C2-O2	-5.05	119.26	122.80
25	BA	250	G	N9-C4-C5	-5.05	103.38	105.40
1	AA	480	U	N1-C2-O2	-5.04	119.27	122.80
25	BA	783	A	N1-C6-N6	5.04	121.62	118.60

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
31	BH	153	LYS	Peptide

## 5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32284	0	16296	1132	1
1	CA	32287	0	16295	1151	1
2	AE	1924	0	1975	160	0
2	CE	1924	0	1975	155	0
3	AF	1605	0	1668	115	0
3	CF	1612	0	1677	117	0
4	AG	1703	0	1763	116	0
4	CG	1703	0	1763	116	0
5	AH	1155	0	1213	75	0
5	CH	1155	0	1213	63	0
6	AI	843	0	857	52	0
6	CI	843	0	857	41	0
7	AJ	1257	0	1296	66	0
7	CJ	1257	0	1296	73	0
8	AK	1116	0	1177	76	0
8	CK	1116	0	1177	48	0
9	AL	1010	0	1037	80	0
9	CL	1010	0	1037	112	0
10	AM	801	0	849	76	0
10	CM	801	0	849	83	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
11	AN	885	0	904	58	0
11	CN	885	0	904	38	0
12	AO	975	0	1062	96	0
12	CO	975	0	1062	66	0
13	AP	928	0	987	76	0
13	CP	933	0	992	81	0
14	AQ	476	0	511	42	0
14	CQ	476	0	511	39	0
15	AR	734	0	771	33	0
15	CR	734	0	771	32	0
16	AS	705	0	725	57	0
16	CS	705	0	725	23	0
17	AT	834	0	904	43	0
17	CT	834	0	904	39	0
18	AU	591	0	662	27	0
18	CU	591	0	662	37	0
19	AV	624	0	636	52	0
19	CV	624	0	636	67	0
20	AW	763	0	861	63	0
20	CW	763	0	861	58	0
21	AX	217	0	234	18	0
21	CX	217	0	234	20	0
22	AB	1814	0	932	112	0
22	AD	1814	0	932	110	0
22	CB	1814	0	932	111	0
22	CD	1814	0	932	99	0
23	AC	1643	0	837	41	0
23	CC	1643	0	837	38	0
24	A1	346	0	174	19	0
24	C1	346	0	174	17	0
25	BA	62707	0	31614	1935	0
25	DA	62607	0	31565	2087	1
26	BB	2617	0	1328	89	0
26	DB	2617	0	1328	108	0
27	BD	2115	0	2195	197	0
27	DD	2115	0	2195	189	0
28	BE	1568	0	1634	146	0
28	DE	1568	0	1634	183	0
29	BF	1585	0	1632	111	0
29	DF	1627	0	1680	162	0
30	BG	1474	0	1535	129	0
30	DG	1474	0	1535	101	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
31	BH	1307	0	1382	147	0
31	DH	1307	0	1382	101	1
32	BK	1136	0	1223	102	0
32	DK	1136	0	1223	79	0
33	BM	1104	0	1180	75	0
33	DM	1104	0	1180	82	0
34	BN	933	0	996	51	0
34	DN	933	0	996	55	0
35	BO	1145	0	1228	176	0
35	DO	1145	0	1228	299	0
36	BP	1122	0	1179	140	0
36	DP	1122	0	1179	166	0
37	B0	968	0	1033	75	0
37	D0	960	0	1021	66	0
38	BQ	882	0	943	84	0
38	DQ	882	0	943	79	0
39	BR	1141	0	1202	98	0
39	DR	1141	0	1202	94	0
40	B1	964	0	1022	74	0
40	D1	964	0	1022	84	0
41	B2	779	0	852	72	0
41	D2	779	0	852	114	0
42	BS	900	0	964	41	0
42	DS	900	0	964	52	0
43	BT	725	0	778	48	0
43	DT	725	0	778	50	0
44	BU	785	0	878	99	0
44	DU	785	0	878	91	0
45	BV	1397	0	1430	138	0
45	DV	1428	0	1454	125	0
46	B3	607	0	628	41	0
46	D3	613	0	633	45	0
47	BZ	763	0	848	50	0
47	DZ	763	0	848	48	0
48	BW	558	0	610	38	0
48	DW	558	0	610	43	0
49	BX	469	0	518	21	0
49	DX	469	0	518	24	0
50	B4	533	0	522	128	0
50	D4	515	0	510	71	0
51	B5	459	0	480	92	0
51	D5	459	0	476	39	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
52	B6	389	0	404	80	0
52	D6	389	0	404	51	0
53	B7	391	0	432	17	0
53	D7	391	0	432	25	0
54	B8	480	0	549	116	0
54	D8	480	0	549	81	0
55	A1	1	0	0	0	0
55	AA	220	0	0	0	0
55	AB	4	0	0	0	0
55	AC	8	0	0	0	0
55	AD	3	0	0	0	0
55	AG	2	0	0	0	0
55	AN	1	0	0	0	0
55	AR	1	0	0	0	0
55	AS	1	0	0	0	0
55	B0	1	0	0	0	0
55	B1	2	0	0	0	0
55	B2	1	0	0	0	0
55	B3	3	0	0	0	0
55	B5	1	0	0	0	0
55	B6	1	0	0	0	0
55	B7	1	0	0	0	0
55	BA	568	0	0	0	0
55	BB	18	0	0	0	0
55	BD	1	0	0	0	0
55	BE	3	0	0	0	0
55	BF	3	0	0	0	0
55	BO	2	0	0	0	0
55	BW	1	0	0	0	0
55	CA	219	0	0	0	0
55	CB	4	0	0	0	0
55	CC	9	0	0	0	0
55	CD	1	0	0	0	0
55	CG	2	0	0	0	0
55	CK	1	0	0	0	0
55	CR	1	0	0	0	0
55	D0	1	0	0	0	0
55	D1	1	0	0	0	0
55	D3	1	0	0	0	0
55	D5	2	0	0	0	0
55	D7	1	0	0	0	0
55	D8	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
55	DA	488	0	0	0	0
55	DB	20	0	0	0	0
55	DD	3	0	0	0	0
55	DE	1	0	0	0	0
55	DO	1	0	0	0	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	299676	0	200977	13379	2

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 27.

All (13379) 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)
35:DO:46:LYS:HD3	35:DO:51:PHE:CD1	1.38	1.55
54:B8:34:TRP:CB	54:B8:35:GLN:HB2	1.34	1.55
50:B4:37:SER:HB3	50:B4:42:PHE:CD1	1.40	1.52
35:DO:71:VAL:HG13	35:DO:72:PRO:CD	1.44	1.47
35:BO:19:VAL:HG23	35:BO:27:HIS:CB	1.45	1.46
52:B6:25:LYS:CB	54:B8:34:TRP:HE1	1.27	1.45
36:BP:24:GLY:HA3	36:BP:25:ASP:CB	1.42	1.45
52:B6:25:LYS:HB3	54:B8:34:TRP:NE1	1.28	1.43
35:DO:71:VAL:CG1	35:DO:72:PRO:HD3	1.50	1.39
25:DA:226:G:N2	25:DA:228:A:H61	1.12	1.39
25:DA:885:C:N4	25:DA:890:A:H62	1.21	1.38
25:DA:226:G:H21	25:DA:228:A:N6	0.88	1.37
35:DO:47:ASP:HB3	35:DO:48:PRO:C	1.42	1.37
36:DP:24:GLY:HA3	36:DP:25:ASP:CB	1.42	1.35
35:BO:19:VAL:CG2	35:BO:27:HIS:HB3	1.58	1.34
51:B5:4:HIS:HB3	51:B5:5:PRO:CD	1.58	1.33
50:B4:42:PHE:CE1	50:B4:43:TYR:HB3	1.62	1.33
50:B4:37:SER:HB3	50:B4:42:PHE:CG	1.65	1.31
25:BA:2014:A:O2'	51:B5:2:ALA:HB2	1.27	1.31
12:AO:44:LYS:CG	12:AO:45:PRO:HD3	1.60	1.30
25:DA:847:U:N3	25:DA:933:A:N6	1.78	1.30
25:BA:49:A:N7	25:BA:120:U:C5	2.02	1.27
25:DA:884:C:N4	25:DA:892:G:H1	1.29	1.25
54:B8:34:TRP:HB3	54:B8:35:GLN:CB	1.65	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DO:19:VAL:CG2	35:DO:27:HIS:HB3	1.66	1.25
25:DA:1332:G:N2	25:DA:1609:A:HO2'	1.37	1.23
35:DO:19:VAL:HG23	35:DO:27:HIS:CB	1.68	1.23
50:B4:37:SER:HB3	50:B4:42:PHE:CE1	1.74	1.22
52:B6:25:LYS:CB	54:B8:34:TRP:NE1	1.93	1.21
25:DA:226:G:N2	25:DA:228:A:N6	1.73	1.20
35:DO:62:LEU:HD11	54:D8:25:MET:O	1.37	1.20
25:DA:2681:C:C5	25:DA:2725:A:N6	2.11	1.18
12:AO:44:LYS:HG3	12:AO:45:PRO:CD	1.74	1.18
25:DA:2414:G:H21	35:DO:67:MET:CE	1.55	1.18
35:DO:47:ASP:OD2	35:DO:49:ARG:HB2	1.44	1.18
25:DA:885:C:C4	25:DA:890:A:N6	2.12	1.17
54:B8:34:TRP:CA	54:B8:35:GLN:HB2	1.73	1.17
35:DO:64:LYS:HD3	54:D8:25:MET:SD	1.84	1.17
27:DD:43:ARG:HH11	27:DD:44:ASN:ND2	1.40	1.17
25:DA:1899:G:H22	25:DA:1902:C:N4	1.42	1.16
25:BA:2015:A:H1'	51:B5:2:ALA:CA	1.75	1.16
25:DA:1332:G:N2	25:DA:1609:A:O2'	1.77	1.16
50:B4:42:PHE:CE1	50:B4:43:TYR:CB	2.29	1.16
35:BO:15:ARG:HH11	35:BO:15:ARG:HG2	1.10	1.16
25:BA:1533:C:H3'	25:BA:1534:G:H5''	1.27	1.15
25:BA:880:G:H1	25:BA:897:C:N4	1.43	1.15
36:DP:19:GLY:HA3	36:DP:98:LYS:NZ	1.62	1.15
25:DA:2777:G:H5''	25:DA:2778:A:H5'	1.15	1.14
51:D5:16:ARG:HG2	51:D5:16:ARG:HH11	1.12	1.14
36:BP:24:GLY:CA	36:BP:25:ASP:HB3	1.76	1.14
45:DV:158:PRO:HB2	45:DV:159:PRO:HD2	1.30	1.14
35:DO:46:LYS:CD	35:DO:51:PHE:CD1	2.30	1.13
25:DA:882:G:H1	25:DA:894:C:N4	1.47	1.12
35:DO:46:LYS:HD3	35:DO:51:PHE:CG	1.83	1.12
25:DA:885:C:N4	25:DA:890:A:N6	1.96	1.12
1:AA:1053:G:H5'	1:AA:1054:C:H5'	1.25	1.12
1:AA:1008:C:N4	1:AA:1021:G:H1	1.47	1.11
27:BD:43:ARG:NH1	27:BD:44:ASN:OD1	1.81	1.11
1:AA:1002:G:H2'	1:AA:1003:G:H8	1.13	1.11
25:DA:252:G:OP2	35:DO:50:ARG:NH1	1.82	1.11
35:DO:81:GLN:NE2	35:DO:107:LYS:HG2	1.65	1.11
1:AA:73:G:O6	1:AA:97:U:O2	1.67	1.11
22:CD:19:C:H2'	22:CD:20:C:H4'	1.23	1.11
50:B4:37:SER:CB	50:B4:42:PHE:CD1	2.32	1.11
25:BA:883:G:H1	25:BA:893:C:N4	1.48	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2015:A:H1'	51:B5:2:ALA:HA	1.18	1.10
35:DO:61:ARG:CB	35:DO:61:ARG:HH21	1.63	1.10
25:DA:1442:G:H2'	25:DA:1443:G:H5''	1.30	1.10
23:CC:17:C:H3'	23:CC:18:C:H5''	1.13	1.10
27:DD:136:ILE:HG22	27:DD:140:THR:HG21	1.30	1.10
29:BF:45:ARG:HH11	29:BF:45:ARG:HG2	1.13	1.09
30:BG:112:PRO:HB3	50:B4:37:SER:H	1.11	1.09
12:AO:44:LYS:CB	12:AO:45:PRO:CD	2.30	1.09
27:DD:236:GLY:O	27:DD:237:GLU:HB2	1.49	1.09
25:BA:1887:C:H2'	25:BA:1888:G:H5''	1.35	1.09
36:BP:24:GLY:CA	36:BP:25:ASP:CB	2.30	1.09
22:AD:14:A:H3'	22:AD:15:G:H5''	1.25	1.08
1:AA:1299:A:H2'	1:AA:1301:U:H1'	1.23	1.08
51:B5:3:LYS:HA	51:B5:3:LYS:NZ	1.67	1.08
14:AQ:51:GLY:O	14:AQ:53:LEU:N	1.85	1.08
25:BA:1899:G:H22	25:BA:1902:C:N4	1.49	1.08
27:DD:44:ASN:HB3	27:DD:49:ILE:HA	1.32	1.08
35:DO:62:LEU:HG	54:D8:25:MET:HB2	1.11	1.08
25:DA:1899:G:N2	25:DA:1902:C:H41	1.52	1.08
22:AD:19:C:H2'	22:AD:20:C:H4'	1.34	1.08
32:BK:131:LYS:HB3	32:BK:132:PRO:HA	1.33	1.08
25:BA:2689:U:H4'	25:BA:2690:C:H5'	1.30	1.08
35:DO:15:ARG:HH11	35:DO:15:ARG:CG	1.67	1.08
36:BP:75:THR:HB	36:BP:88:GLY:HA3	1.30	1.07
40:D1:92:ARG:HD2	40:D1:95:LEU:HD12	1.36	1.07
35:DO:61:ARG:HH21	35:DO:61:ARG:CG	1.66	1.07
35:DO:61:ARG:C	35:DO:62:LEU:HD22	1.73	1.07
12:AO:44:LYS:CG	12:AO:45:PRO:CD	2.29	1.07
36:DP:75:THR:HB	36:DP:88:GLY:HA3	1.31	1.07
45:DV:115:GLY:H	45:DV:177:PRO:HG2	1.18	1.07
24:A1:13:A:O2'	24:A1:14:A:OP1	1.72	1.07
36:DP:24:GLY:CA	36:DP:25:ASP:CB	2.30	1.07
25:BA:2133:G:H1'	25:BA:2158:A:H61	1.16	1.07
25:BA:2142:C:N4	25:BA:2149:G:H1	1.51	1.07
25:BA:882:G:N2	25:BA:894:C:N3	2.03	1.07
25:BA:1109:C:O2'	25:BA:1110:G:O4'	1.71	1.06
29:BF:46:ARG:HH11	29:BF:46:ARG:HG2	1.16	1.06
35:DO:65:ARG:HG3	35:DO:65:ARG:HH11	0.94	1.06
19:AV:41:VAL:HB	19:AV:42:PRO:HA	1.35	1.06
35:DO:81:GLN:HE22	35:DO:107:LYS:HG2	1.06	1.06
51:B5:4:HIS:CB	51:B5:5:PRO:CD	2.30	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2131:G:H5'	25:BA:2132:U:H5''	1.38	1.05
25:BA:882:G:H1	25:BA:894:C:N4	1.54	1.05
30:DG:104:GLU:HG2	50:D4:23:GLU:HG2	1.37	1.05
25:DA:1757:U:N3	25:DA:1762:A:H2	1.53	1.05
51:B5:3:LYS:O	51:B5:4:HIS:HB2	1.55	1.05
35:BO:15:ARG:CG	35:BO:15:ARG:HH11	1.67	1.05
44:BU:79:CYS:SG	44:BU:80:GLY:N	2.24	1.05
25:BA:864:G:N7	36:BP:22:LYS:NZ	2.03	1.05
40:B1:92:ARG:O	40:B1:94:ASN:N	1.87	1.05
54:B8:34:TRP:CB	54:B8:35:GLN:CB	2.30	1.05
25:BA:1055:G:H1	25:BA:1104:C:N4	1.54	1.05
25:BA:2210:G:H3'	25:BA:2211:G:C8	1.92	1.05
50:B4:37:SER:CB	50:B4:42:PHE:CG	2.39	1.04
50:B4:18:CYS:SG	50:B4:19:GLY:N	2.30	1.04
51:B5:4:HIS:HB3	51:B5:5:PRO:HD2	1.05	1.04
2:AE:8:LYS:H	2:AE:8:LYS:HE2	1.22	1.04
25:BA:620:G:H4'	25:BA:621:A:H5''	1.37	1.04
35:DO:15:ARG:HG2	35:DO:15:ARG:HH11	1.10	1.04
25:BA:1178:C:H4'	25:BA:1179:C:OP1	1.53	1.04
44:BU:49:VAL:O	44:BU:51:VAL:N	1.89	1.04
22:CD:18:G:H1'	22:CD:19:C:OP2	1.57	1.04
36:DP:19:GLY:CA	36:DP:98:LYS:HZ2	1.71	1.04
25:DA:2392:A:H8	35:DO:60:MET:HB2	1.23	1.04
27:DD:255:LYS:HE3	27:DD:255:LYS:H	1.19	1.03
25:DA:2701:C:H3'	25:DA:2702:U:H5''	1.36	1.03
36:DP:24:GLY:HA3	36:DP:25:ASP:HB2	1.04	1.03
27:BD:28:GLU:HB3	27:BD:29:PRO:CD	1.88	1.03
12:AO:44:LYS:HB3	12:AO:45:PRO:HD2	1.34	1.03
35:DO:46:LYS:HD3	35:DO:51:PHE:CE1	1.93	1.03
35:BO:64:LYS:O	35:BO:66:GLY:N	1.90	1.03
25:BA:880:G:N2	25:BA:897:C:N3	2.05	1.03
36:BP:17:LEU:CD2	36:BP:96:VAL:HG13	1.89	1.03
25:DA:2420:C:H41	54:D8:31:HIS:HB3	1.21	1.03
51:D5:4:HIS:HB3	51:D5:5:PRO:HD3	1.41	1.03
12:AO:44:LYS:HB3	12:AO:45:PRO:CD	1.89	1.02
27:BD:35:LYS:HD2	27:BD:104:TYR:CD1	1.94	1.02
25:DA:847:U:H3	25:DA:933:A:N6	1.47	1.02
1:AA:1139:G:N2	1:AA:1143:G:O6	1.92	1.02
1:CA:1176:A:H2'	1:CA:1177:G:H5'	1.42	1.02
1:AA:1160:G:O6	1:AA:1181:G:O6	1.78	1.02
1:AA:530:G:H4'	1:AA:531:U:OP2	1.59	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1864:U:H2'	25:BA:1869:G:H5''	1.40	1.02
25:BA:2392:A:H8	35:BO:60:MET:HB2	1.23	1.02
44:BU:76:CYS:O	44:BU:81:LYS:NZ	1.92	1.02
36:DP:24:GLY:HA3	36:DP:25:ASP:HB3	1.37	1.02
20:AW:71:THR:HG22	20:AW:72:LEU:H	1.25	1.01
35:DO:65:ARG:HG3	35:DO:65:ARG:NH1	1.65	1.01
36:BP:24:GLY:HA3	36:BP:25:ASP:HB2	1.39	1.01
35:DO:64:LYS:HG3	35:DO:65:ARG:N	1.69	1.01
27:DD:35:LYS:HG2	27:DD:64:ILE:H	1.24	1.01
25:BA:2701:C:H3'	25:BA:2702:U:H5''	1.42	1.01
1:AA:1492:A:OP1	12:AO:43:LYS:O	1.77	1.01
22:CD:48:C:H3'	22:CD:49:A:H8	1.25	1.01
25:DA:511:U:H3'	25:DA:512:G:H5''	1.39	1.01
15:AR:87:ILE:HG22	15:AR:88:ARG:H	1.22	1.01
25:BA:1055:G:N2	25:BA:1104:C:N3	2.09	1.01
35:DO:46:LYS:CD	35:DO:51:PHE:CE1	2.44	1.01
1:AA:1065:U:O2'	1:AA:1066:C:OP2	1.79	1.00
1:CA:632:A:H1'	1:CA:633:G:OP2	1.61	1.00
25:BA:2014:A:O2'	51:B5:2:ALA:CB	2.09	1.00
25:BA:847:U:O4	25:BA:933:A:N1	1.92	1.00
1:CA:328:C:O2'	1:CA:329:A:OP2	1.77	1.00
1:AA:975:A:H4'	1:AA:976:G:H5''	1.41	1.00
25:DA:330:A:H2	25:DA:1210:A:HO2'	1.04	1.00
25:DA:2414:G:H21	35:DO:67:MET:HE3	1.23	1.00
25:BA:860:U:H5	25:BA:917:A:C2	1.77	1.00
4:CG:22:LYS:HB2	4:CG:26:CYS:HB2	1.44	1.00
54:B8:34:TRP:CD2	54:B8:35:GLN:NE2	2.30	1.00
27:DD:25:THR:O	27:DD:27:THR:N	1.92	1.00
1:CA:631:G:OP1	1:CA:632:A:N6	1.95	1.00
35:DO:68:GLN:HA	35:DO:68:GLN:OE1	1.56	1.00
50:B4:16:CYS:HB2	50:B4:36:CYS:H	1.25	0.99
2:AE:16:HIS:HD2	2:AE:210:SER:HA	1.24	0.99
25:BA:881:G:O6	25:BA:895:U:O2	1.79	0.99
25:BA:882:G:N1	25:BA:894:C:N4	2.09	0.99
25:DA:2807:G:N1	25:DA:2893:G:O6	1.95	0.99
13:AP:82:MET:O	13:AP:84:ILE:N	1.96	0.99
1:AA:1002:G:H2'	1:AA:1003:G:C8	1.98	0.99
38:DQ:109:GLY:O	38:DQ:111:GLU:N	1.96	0.99
20:AW:100:ILE:HG13	20:AW:102:GLY:H	1.28	0.98
36:BP:24:GLY:HA3	36:BP:25:ASP:HB3	0.99	0.98
54:D8:49:VAL:HG12	54:D8:50:LEU:H	1.25	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:201:C:N4	1:AA:216:G:H1	1.59	0.98
30:BG:112:PRO:HB3	50:B4:37:SER:N	1.76	0.98
51:B5:4:HIS:CG	51:B5:5:PRO:HD3	1.97	0.98
36:DP:19:GLY:HA3	36:DP:98:LYS:HZ2	0.82	0.98
19:AV:63:THR:OG1	19:AV:65:ASN:ND2	1.95	0.98
25:BA:780:G:N2	25:BA:783:A:H62	1.60	0.98
25:BA:654(D):G:H1	25:BA:654(Q):C:N4	1.62	0.98
15:AR:17:ARG:HG3	15:AR:17:ARG:HH11	1.28	0.98
4:AG:22:LYS:HB2	4:AG:26:CYS:HB2	1.41	0.98
25:BA:2210:G:H5'	25:BA:2211:G:N7	1.78	0.98
9:CL:111:ARG:HG2	9:CL:112:LYS:H	1.22	0.98
40:D1:90:VAL:O	40:D1:92:ARG:N	1.95	0.98
25:BA:2469:A:N3	25:BA:2469:A:H5'	1.77	0.98
35:BO:64:LYS:C	35:BO:66:GLY:H	1.63	0.98
41:D2:79:VAL:C	41:D2:80:GLN:HE21	1.65	0.98
35:DO:64:LYS:HB3	54:D8:25:MET:HG3	1.46	0.98
36:DP:26:TYR:CD1	36:DP:139:GLU:HG2	1.98	0.97
1:AA:119:A:H4'	1:AA:120:A:O5'	1.63	0.97
44:BU:52:SER:HB2	44:BU:53:PRO:HD3	1.45	0.97
25:BA:2015:A:N3	51:B5:2:ALA:HA	1.80	0.97
54:B8:35:GLN:O	54:B8:36:LYS:HG3	1.65	0.97
25:DA:67:U:N3	25:DA:74:A:C2	2.32	0.97
25:BA:67:U:H3	25:BA:74:A:H2	0.99	0.97
26:BB:15:A:H5'	26:BB:16:G:C8	1.99	0.97
25:BA:1310:G:OP2	53:B7:9:ARG:NH1	1.96	0.97
48:DW:17:SER:HB2	48:DW:18:PRO:HA	1.44	0.97
52:B6:25:LYS:HB2	54:B8:34:TRP:CE2	2.00	0.97
4:CG:139:ARG:HG3	4:CG:139:ARG:HH11	1.26	0.97
4:CG:150:GLU:O	4:CG:152:SER:N	1.96	0.97
45:DV:115:GLY:HA3	45:DV:174:VAL:HG13	1.44	0.97
2:AE:18:GLY:H	2:AE:42:ILE:HG22	1.29	0.96
1:CA:448:A:OP2	1:CA:485:G:N2	1.96	0.96
25:DA:1689:A:N6	25:DA:1698:A:H2	1.62	0.96
25:DA:330:A:H2	25:DA:1210:A:O2'	1.47	0.96
36:DP:78:PRO:O	36:DP:79:LEU:HD12	1.64	0.96
30:BG:161:THR:HG22	30:BG:163:ALA:H	1.27	0.96
44:DU:97:ARG:HH21	44:DU:98:VAL:HB	1.28	0.96
2:CE:7:VAL:HG13	2:CE:8:LYS:HD3	1.47	0.96
25:DA:252:G:P	35:DO:50:ARG:HH12	1.89	0.96
25:BA:1077:A:H3'	25:BA:1078:U:C5'	1.95	0.96
25:BA:1899:G:N2	25:BA:1902:C:H41	1.63	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AB:48:C:H3'	22:AB:49:A:H8	1.31	0.96
25:BA:1062:G:N2	25:BA:1077:A:N7	2.12	0.96
1:CA:1443:G:H3'	1:CA:1446:A:H5''	1.47	0.96
25:DA:1171:G:H1	25:DA:1178:C:H42	1.11	0.96
27:DD:43:ARG:NH1	27:DD:44:ASN:HD21	1.62	0.96
45:BV:7:ALA:HB3	45:BV:61:LEU:HB3	1.45	0.96
25:DA:155:C:N4	25:DA:171:G:H1	1.63	0.96
25:DA:1652:A:H62	37:D0:11:ASN:HD21	0.98	0.96
1:AA:78:G:H1	1:AA:91:C:N4	1.64	0.96
12:AO:44:LYS:HD3	12:AO:45:PRO:N	1.79	0.96
1:CA:1305:G:H22	1:CA:1331:G:H2'	1.27	0.96
25:DA:2394:C:OP1	35:DO:63:PRO:HD2	1.64	0.96
25:BA:2591:C:OP1	27:BD:239:ARG:HG3	1.65	0.95
35:BO:65:ARG:HH21	54:B8:15:LYS:HB2	1.29	0.95
35:BO:75:ILE:H	35:BO:75:ILE:HD13	1.26	0.95
25:DA:2123:G:H1	25:DA:2175:C:N4	1.63	0.95
25:DA:2308:G:O2'	25:DA:2309:A:OP1	1.82	0.95
40:B1:90:VAL:O	40:B1:92:ARG:N	1.98	0.95
25:BA:593:G:H4'	54:B8:61:LEU:HD13	1.48	0.95
1:CA:1056:U:H5'	3:CF:163:ALA:HB2	1.47	0.95
22:CD:14:A:H3'	22:CD:15:G:H5''	1.46	0.95
1:AA:1322:C:O2'	1:AA:1323:G:O5'	1.84	0.95
1:CA:1129:C:N4	1:CA:1142:G:O6	2.00	0.95
1:AA:991:U:O4	1:AA:1212:U:O2'	1.84	0.95
1:CA:503:C:OP2	12:CO:113:SER:HB3	1.66	0.95
52:B6:25:LYS:CB	54:B8:34:TRP:CE2	2.49	0.95
1:CA:1028:C:N4	1:CA:1033:G:H1	1.63	0.95
35:DO:62:LEU:N	35:DO:62:LEU:HD22	1.82	0.95
1:AA:1028:C:N4	1:AA:1033:G:H1	1.64	0.95
54:B8:34:TRP:N	54:B8:35:GLN:CB	2.30	0.95
25:BA:1364:G:OP2	47:BZ:2:SER:OG	1.83	0.95
53:D7:8:ASN:ND2	53:D7:11:LYS:H	1.64	0.95
25:BA:163:U:H2'	25:BA:164:U:H5'	1.45	0.95
1:CA:266:G:H1	1:CA:270:A:H62	1.15	0.95
1:CA:664:G:H22	1:CA:741:G:H1	1.15	0.95
25:DA:2656:U:H3	25:DA:2665:A:H2	1.13	0.95
35:DO:9:ASN:HB3	35:DO:10:PRO:HD2	1.48	0.95
27:BD:33:LEU:HD13	27:BD:34:VAL:H	1.30	0.95
2:CE:233:SER:HB2	2:CE:234:PRO:HD2	1.47	0.95
36:DP:79:LEU:O	36:DP:79:LEU:HD12	1.67	0.95
25:BA:847:U:C4	25:BA:933:A:N1	2.35	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DO:104:GLY:O	35:DO:105:LEU:HG	1.66	0.95
3:AF:70:VAL:HG12	3:AF:72:LYS:H	1.32	0.94
25:BA:1019:U:HO2'	25:BA:1021:A:H2	1.12	0.94
25:BA:1689:A:N6	25:BA:1698:A:H2	1.64	0.94
25:BA:631:A:OP2	54:B8:46:ARG:NH2	1.99	0.94
2:CE:7:VAL:HG22	2:CE:8:LYS:H	1.32	0.94
45:BV:9:TYR:HE1	45:BV:35:ARG:HD3	1.31	0.94
1:CA:975:A:H4'	1:CA:976:G:H5''	1.48	0.94
23:CC:48:U:O2'	23:CC:49:C:OP2	1.86	0.94
25:DA:1021:A:H61	25:DA:1142(A):A:H61	1.13	0.94
25:DA:2141:G:O6	25:DA:2150:U:O2	1.85	0.94
1:AA:266:G:H5''	1:AA:267:C:C5	2.02	0.94
25:BA:2251:G:OP1	36:BP:82:ARG:NH1	2.01	0.94
25:DA:884:C:N3	25:DA:892:G:N2	2.15	0.94
25:DA:90:U:H2'	25:DA:91:A:H5''	1.48	0.94
25:BA:49:A:N7	25:BA:120:U:H5	1.47	0.94
27:DD:166:GLN:HE21	27:DD:166:GLN:HA	1.30	0.94
47:DZ:82:LEU:HD23	47:DZ:82:LEU:H	1.32	0.94
22:AD:48:C:H3'	22:AD:49:A:H8	1.30	0.94
32:DK:80:PRO:HA	32:DK:143:SER:HA	1.48	0.94
25:BA:993:G:OP1	40:B1:50:ARG:NH2	2.00	0.94
25:BA:2015:A:C1'	51:B5:2:ALA:HA	1.97	0.94
25:DA:1088:A:H5'	25:DA:1089:G:H5'	1.48	0.94
25:DA:155:C:H42	25:DA:171:G:H1	1.12	0.94
25:BA:654(B):C:N3	25:BA:654(S):G:N2	2.16	0.94
25:DA:1171:G:H1	25:DA:1178:C:N4	1.65	0.93
25:DA:2414:G:H21	35:DO:67:MET:HE1	1.33	0.93
25:DA:67:U:H3	25:DA:74:A:H2	1.07	0.93
35:DO:65:ARG:CG	35:DO:65:ARG:HH11	1.81	0.93
36:DP:19:GLY:H	36:DP:98:LYS:HZ3	1.16	0.93
25:BA:2143:C:N4	25:BA:2148:G:H1	1.65	0.93
35:DO:71:VAL:HG22	35:DO:72:PRO:N	1.80	0.93
22:AD:14:A:H3'	22:AD:15:G:C5'	1.98	0.93
5:AH:126:ARG:HG3	5:AH:126:ARG:HH11	1.33	0.93
39:DR:74:ARG:HG2	39:DR:74:ARG:HH11	1.31	0.93
25:BA:67:U:N3	25:BA:74:A:C2	2.35	0.93
22:AB:79:A:H3'	22:AB:80:C:H5''	1.47	0.93
25:BA:2142:C:N3	25:BA:2149:G:N2	2.15	0.93
1:AA:81:G:N2	1:AA:88:C:C2	2.36	0.93
3:CF:14:ILE:HG12	3:CF:15:THR:H	1.33	0.93
25:DA:2143:C:H42	25:DA:2148:G:H1	1.06	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:598:G:C1'	35:BO:12:ALA:HB2	1.97	0.93
36:BP:17:LEU:HD21	36:BP:96:VAL:HG13	1.48	0.93
44:BU:97:ARG:HH21	44:BU:98:VAL:HB	1.33	0.93
3:CF:58:GLU:HB2	3:CF:65:ALA:HB3	1.50	0.93
36:DP:31:ASP:O	36:DP:133:ARG:O	1.86	0.93
22:CD:49:A:HO2'	22:CD:50:U:H5	1.12	0.93
25:DA:483:A:H5'	44:DU:49:VAL:HG22	1.47	0.93
43:DT:11:PRO:HA	43:DT:28:PHE:HB3	1.51	0.93
37:B0:100:LEU:HD11	37:B0:113:LEU:HD13	1.52	0.92
25:BA:2142:C:H42	25:BA:2149:G:H1	1.00	0.92
25:BA:2308:G:N1	25:BA:2311:A:N1	2.15	0.92
25:BA:890:A:H8	25:BA:892:G:C8	1.87	0.92
29:DF:24:LEU:HD12	29:DF:25:PRO:HD3	1.49	0.92
1:AA:201:C:N3	1:AA:216:G:N2	2.17	0.92
50:B4:40:HIS:N	50:B4:41:PRO:CD	2.31	0.92
26:DB:74:U:H2'	26:DB:75:G:H5''	1.52	0.92
39:DR:55:ASN:H	39:DR:59:THR:HG22	1.34	0.92
25:BA:2287:A:H62	25:BA:2344:U:H3	0.93	0.92
25:BA:2308:G:H22	25:BA:2311:A:H2	1.10	0.92
25:BA:2346:A:H4'	25:BA:2347:C:OP2	1.69	0.92
25:BA:2467:C:H4'	36:BP:123:HIS:ND1	1.83	0.92
39:BR:105:LEU:O	39:BR:107:ASP:N	2.03	0.92
1:CA:992:U:H3	1:CA:1044:A:N6	1.68	0.92
1:AA:1004:A:O5'	1:AA:1025:U:N3	2.03	0.92
2:AE:77:ALA:HB2	2:AE:211:ILE:HD13	1.52	0.92
31:BH:86:GLU:HG3	31:BH:165:ALA:H	1.35	0.92
25:DA:993:G:H1'	41:D2:87:HIS:HE1	1.31	0.92
25:DA:676:A:H8	25:DA:2069:G:H21	1.17	0.92
35:DO:62:LEU:CD2	35:DO:62:LEU:N	2.31	0.92
1:CA:1446:A:N7	39:DR:118:ARG:NH1	2.18	0.92
51:B5:33:CYS:HB2	51:B5:40:LYS:HD3	1.52	0.92
25:DA:9:U:N3	25:DA:2629:A:N6	2.18	0.92
28:DE:39:PRO:HA	28:DE:43:GLY:HA2	1.49	0.92
40:D1:100:VAL:O	40:D1:101:ARG:HG2	1.69	0.92
50:B4:40:HIS:N	50:B4:41:PRO:HD2	1.85	0.92
25:BA:2136:C:H42	25:BA:2155:G:H1	1.08	0.92
25:BA:2143:C:H42	25:BA:2148:G:H1	1.09	0.92
35:BO:15:ARG:NH1	35:BO:15:ARG:HG2	1.77	0.92
25:DA:34:C:O2'	25:DA:35:G:OP2	1.85	0.92
1:AA:1211:U:H5''	1:AA:1212:U:OP1	1.70	0.92
30:BG:107:LEU:O	50:B4:38:LYS:HG2	1.68	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1678:G:N2	25:BA:1989:G:H22	1.67	0.92
25:BA:2015:A:H1'	51:B5:2:ALA:CB	1.99	0.92
35:DO:62:LEU:CG	54:D8:25:MET:HB2	1.97	0.92
25:BA:598:G:H1'	35:BO:12:ALA:HB2	1.51	0.92
35:DO:15:ARG:NH1	35:DO:15:ARG:HG2	1.76	0.92
3:AF:77:ILE:HA	3:AF:84:ILE:HB	1.51	0.91
25:BA:2393:A:H5'	35:BO:62:LEU:HB3	1.51	0.91
25:BA:607:U:H3	25:BA:621:A:H2	1.18	0.91
28:DE:116:VAL:O	28:DE:117:MET:HB2	1.65	0.91
25:DA:2276:G:OP1	36:DP:84:GLY:HA2	1.70	0.91
52:B6:34:LEU:HB2	52:B6:36:LEU:HD22	1.50	0.91
15:CR:17:ARG:HG3	15:CR:17:ARG:HH11	1.32	0.91
25:DA:2136:C:N4	25:DA:2155:G:N1	2.17	0.91
25:BA:879:G:O6	25:BA:898:C:N4	2.02	0.91
35:DO:106:LEU:O	35:DO:107:LYS:HB2	1.70	0.91
25:BA:2723:C:H4'	37:B0:1:MET:HE3	1.50	0.91
25:BA:2135:A:O2'	25:BA:2136:C:OP1	1.87	0.91
25:DA:1689:A:H62	25:DA:1698:A:H2	0.92	0.91
1:AA:1028:C:H42	1:AA:1033:G:H1	0.92	0.91
25:DA:2777:G:C5'	25:DA:2778:A:H5'	2.00	0.91
35:DO:47:ASP:HB3	35:DO:48:PRO:O	1.71	0.91
45:DV:128:VAL:HG22	45:DV:129:SER:H	1.35	0.91
25:BA:2015:A:C1'	51:B5:2:ALA:CB	2.48	0.91
3:CF:139:GLN:HE22	3:CF:170:GLN:HE22	1.18	0.91
12:CO:44:LYS:HB3	12:CO:45:PRO:CD	2.00	0.91
25:DA:2392:A:C8	35:DO:60:MET:HB2	2.05	0.91
22:CD:48:C:H42	22:CD:52:G:H1	0.97	0.91
50:B4:42:PHE:CZ	50:B4:43:TYR:HB2	2.05	0.91
25:DA:2795:G:H3'	25:DA:2797:U:H5''	1.51	0.91
22:AD:18:G:H1'	22:AD:19:C:OP2	1.69	0.91
25:BA:780:G:H21	25:BA:783:A:H62	0.93	0.91
35:BO:9:ASN:HB3	35:BO:10:PRO:HD2	1.51	0.91
1:CA:1285:A:H1'	1:CA:1286:A:OP2	1.71	0.91
13:CP:94:ARG:O	13:CP:96:LEU:N	2.02	0.91
25:DA:774:A:H2	25:DA:787:U:HO2'	1.17	0.91
1:AA:1004:A:H2'	1:AA:1005:A:O4'	1.71	0.90
25:BA:1858:G:O2'	25:BA:1884:A:N6	2.03	0.90
25:BA:67:U:N3	25:BA:74:A:H2	1.68	0.90
1:CA:1053:G:H4'	1:CA:1054:C:H5'	1.53	0.90
22:CB:48:C:H3'	22:CB:49:A:H8	1.36	0.90
28:DE:36:ARG:NH1	28:DE:85:ASN:OD1	2.04	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:468:G:N7	53:D7:39:ARG:NH2	2.18	0.90
35:DO:47:ASP:CB	35:DO:48:PRO:C	2.37	0.90
25:BA:2136:C:N4	25:BA:2155:G:H1	1.67	0.90
19:CV:11:VAL:HG22	19:CV:12:ASP:H	1.34	0.90
1:AA:791:G:C6	1:AA:792:A:N1	2.39	0.90
50:B4:7:PRO:HB2	50:B4:27:THR:HG21	1.53	0.90
25:BA:1026:U:H1'	25:BA:1027:A:O5'	1.72	0.90
29:BF:101:LEU:HD12	29:BF:102:PRO:HD2	1.51	0.90
1:AA:664:G:H22	1:AA:741:G:H1	1.20	0.90
54:B8:34:TRP:HB3	54:B8:35:GLN:HB2	0.92	0.90
25:BA:1899:G:O2'	25:BA:1900:A:OP2	1.90	0.90
25:BA:780:G:H21	25:BA:783:A:N6	1.69	0.90
25:DA:2438:U:O3'	25:DA:2439:A:H3'	1.71	0.90
13:CP:91:ARG:HB2	13:CP:98:VAL:HG12	1.54	0.90
25:DA:1464:C:HO2'	25:DA:1528:A:H8	0.97	0.90
23:AC:48:U:O2'	23:AC:49:C:OP2	1.88	0.90
32:BK:110:ASP:OD1	32:BK:130:TYR:OH	1.89	0.90
25:DA:2610:C:H4'	25:DA:2611:U:OP2	1.71	0.90
35:DO:61:ARG:CB	35:DO:61:ARG:NH2	2.34	0.90
1:AA:1305:G:H22	1:AA:1331:G:H2'	1.35	0.90
22:AD:62:G:H1	22:AD:70:C:H42	1.18	0.90
11:AN:79:SER:HB2	11:AN:106:LYS:HD2	1.51	0.90
25:DA:2701:C:H3'	25:DA:2702:U:C5'	1.98	0.90
27:DD:35:LYS:HG2	27:DD:64:ILE:N	1.86	0.90
32:DK:131:LYS:HB3	32:DK:132:PRO:HA	1.52	0.90
52:B6:25:LYS:HB2	54:B8:34:TRP:CZ2	2.06	0.90
48:BW:47:ASN:O	48:BW:49:LYS:N	2.05	0.90
28:DE:38:THR:HG22	28:DE:41:LYS:HG2	1.51	0.90
36:BP:79:LEU:O	36:BP:80:GLU:HB2	1.72	0.90
46:D3:12:ASN:HA	46:D3:14:ARG:HH21	1.37	0.90
29:DF:20:LEU:HD13	29:DF:21:ALA:H	1.34	0.90
33:DM:128:HIS:HB2	33:DM:129:PRO:HD2	1.52	0.90
44:DU:97:ARG:NH2	44:DU:98:VAL:HB	1.85	0.90
1:AA:1026:G:N7	1:AA:1036:G:N2	2.19	0.89
25:DA:1226:G:H5'	41:D2:85:LYS:H	1.37	0.89
25:DA:847:U:C4	25:DA:933:A:C6	2.59	0.89
11:AN:99:GLN:HG2	11:AN:105:VAL:HG21	1.53	0.89
19:AV:30:LEU:H	19:AV:30:LEU:HD13	1.36	0.89
1:AA:1023:G:H3'	1:AA:1024:G:H5''	1.54	0.89
1:CA:1325:C:H4'	21:CX:17:THR:HG21	1.54	0.89
27:DD:46:GLN:OE1	27:DD:46:GLN:N	2.05	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CD:47:U:H2'	22:CD:48:C:C6	2.07	0.89
46:D3:31:VAL:HG21	46:D3:67:VAL:HG23	1.53	0.89
2:AE:80:ILE:HD11	2:AE:208:ILE:HG23	1.51	0.89
41:B2:15:GLU:HG3	41:B2:16:PRO:HD2	1.55	0.89
11:CN:100:ALA:O	11:CN:102:GLY:N	2.05	0.89
52:B6:25:LYS:HB2	54:B8:34:TRP:NE1	1.86	0.89
25:BA:873:G:H1	25:BA:904:C:H42	1.21	0.89
44:DU:17:SER:HB3	44:DU:71:LYS:HB3	1.54	0.89
1:AA:789:U:H5	1:AA:792:A:OP2	1.53	0.89
25:BA:517:C:OP1	51:B5:16:ARG:NH2	2.04	0.89
1:CA:1039:C:H3'	1:CA:1040:U:H5''	1.54	0.89
1:CA:1321:C:H41	1:CA:1322:C:H41	1.18	0.89
34:DN:35:VAL:HG11	34:DN:103:ALA:HB3	1.55	0.89
25:BA:1496:A:H8	25:BA:1577:C:HO2'	1.18	0.89
22:CB:75:C:O2'	22:CB:76:C:OP1	1.91	0.89
28:BE:77:ILE:O	28:BE:79:ARG:N	2.05	0.89
31:BH:83:TYR:HB2	31:BH:134:SER:HA	1.52	0.89
45:DV:115:GLY:N	45:DV:177:PRO:HG2	1.88	0.89
32:BK:133:HIS:HB2	32:BK:134:PRO:HD2	1.52	0.88
25:DA:2872:G:C4	25:DA:2873:A:N1	2.40	0.88
25:BA:654(D):G:H1	25:BA:654(Q):C:H42	0.89	0.88
26:BB:6:C:H2'	26:BB:7:G:H5''	1.55	0.88
25:DA:483:A:H4'	44:DU:49:VAL:HA	1.55	0.88
35:DO:61:ARG:HH21	35:DO:61:ARG:HG2	1.37	0.88
50:B4:37:SER:CB	50:B4:42:PHE:CE1	2.56	0.88
10:CM:17:ASP:OD1	10:CM:70:ARG:NH1	2.05	0.88
25:DA:2275:C:O2'	36:DP:84:GLY:HA3	1.72	0.88
27:DD:182:LEU:H	27:DD:272:ALA:HB3	1.37	0.88
29:DF:24:LEU:HB3	29:DF:25:PRO:CD	2.03	0.88
33:DM:133:GLN:HG2	33:DM:135:PRO:HD3	1.55	0.88
1:CA:1221:G:OP1	1:CA:1321:C:N4	2.05	0.88
23:CC:17:C:H3'	23:CC:18:C:C5'	2.03	0.88
36:DP:19:GLY:CA	36:DP:98:LYS:NZ	2.34	0.88
3:AF:95:THR:HG22	3:AF:97:LYS:H	1.38	0.88
50:B4:39:CYS:C	50:B4:41:PRO:HD2	1.94	0.88
25:DA:2306:C:H3'	25:DA:2307:G:H5''	1.55	0.88
25:DA:864:G:N7	36:DP:22:LYS:NZ	2.20	0.88
25:DA:1342:A:C6	25:DA:1397:U:C5	2.62	0.88
25:BA:1021:A:H3'	25:BA:1022:G:H5''	1.56	0.88
25:BA:2126:A:N6	25:BA:2163:C:O2'	2.07	0.88
25:BA:2392:A:H2	25:BA:2424:C:H42	1.20	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2468:G:H2'	25:BA:2476:A:N6	1.88	0.88
25:BA:2656:U:H3	25:BA:2665:A:H2	1.18	0.88
25:BA:2591:C:P	27:BD:239:ARG:HG3	2.14	0.88
31:BH:20:ALA:HB1	31:BH:21:PRO:HD2	1.55	0.88
22:CD:19:C:H2'	22:CD:20:C:C4'	2.04	0.88
25:BA:71:A:C2	43:BT:31:HIS:HE1	1.91	0.87
44:BU:99:CYS:SG	44:BU:100:ALA:N	2.44	0.87
1:CA:652:U:H1'	1:CA:653:A:H2	1.39	0.87
25:BA:1332:G:H21	25:BA:1610:A:H8	1.20	0.87
20:CW:10:LEU:HD13	20:CW:12:ALA:H	1.38	0.87
25:DA:1310:G:OP2	53:D7:9:ARG:NH1	2.08	0.87
25:DA:204:A:O2'	25:DA:205:G:OP2	1.92	0.87
25:DA:2786:U:H4'	28:DE:65:GLY:H	1.39	0.87
25:DA:847:U:C4	25:DA:933:A:N6	2.41	0.87
25:BA:155:C:H42	25:BA:171:G:H1	1.18	0.87
25:BA:2438:U:O3'	25:BA:2439:A:H3'	1.74	0.87
15:CR:87:ILE:HG22	15:CR:88:ARG:H	1.38	0.87
52:D6:52:VAL:HG22	52:D6:53:LYS:H	1.39	0.87
25:DA:2123:G:H1	25:DA:2175:C:H42	0.88	0.87
9:AL:3:GLN:OE1	9:AL:20:ARG:NH1	2.08	0.87
25:BA:747:U:C4	51:B5:2:ALA:N	2.41	0.87
1:CA:1003:G:H1	1:CA:1037:C:N4	1.72	0.87
25:BA:273(F):C:H3'	25:BA:274:G:H5''	1.57	0.87
25:DA:900:A:H3'	25:DA:901:A:H8	1.37	0.87
3:AF:20:SER:HB2	3:AF:40:ARG:HH22	1.37	0.87
25:BA:860:U:H5	25:BA:917:A:H2	1.23	0.87
45:BV:105:VAL:HG13	45:BV:140:ASP:HB3	1.56	0.87
1:CA:82:U:N3	1:CA:87:A:N6	2.22	0.87
25:DA:84:A:N6	25:DA:102:G:O2'	2.06	0.87
25:DA:752:A:H4'	25:DA:753:C:O5'	1.75	0.87
25:BA:1250:G:N7	35:BO:18:ARG:NH2	2.23	0.87
35:DO:47:ASP:HB3	35:DO:48:PRO:CA	2.04	0.87
38:DQ:107:GLU:H	38:DQ:110:LEU:HD21	1.36	0.87
25:BA:1728:G:H3'	25:BA:1729:A:H5''	1.54	0.86
32:DK:4:ILE:HG12	32:DK:18:VAL:HG22	1.57	0.86
52:B6:25:LYS:HD2	54:B8:34:TRP:CZ2	2.10	0.86
25:BA:1061:U:H4'	25:BA:1070:A:H1'	1.55	0.86
25:BA:1899:G:H22	25:BA:1902:C:H41	0.88	0.86
1:CA:414:A:OP2	1:CA:428:G:N2	2.08	0.86
22:CD:19:C:C2'	22:CD:20:C:H4'	2.05	0.86
25:DA:2143:C:N4	25:DA:2148:G:H1	1.72	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DO:9:ASN:HB3	35:DO:10:PRO:CD	2.04	0.86
25:BA:1689:A:H62	25:BA:1698:A:H2	0.94	0.86
1:AA:78:G:H1	1:AA:91:C:H42	0.90	0.86
14:AQ:13:THR:N	14:AQ:14:PRO:HD2	1.90	0.86
27:BD:35:LYS:HG2	27:BD:64:ILE:N	1.89	0.86
1:CA:82:U:H3	1:CA:87:A:N6	1.73	0.86
25:DA:2136:C:N3	25:DA:2155:G:N2	2.23	0.86
27:DD:137:PRO:O	27:DD:140:THR:HG22	1.74	0.86
32:BK:95:LYS:HE3	32:BK:99:GLU:HG3	1.57	0.86
13:CP:4:ILE:HG23	13:CP:5:ALA:H	1.40	0.86
25:DA:1858:G:O2'	25:DA:1884:A:N6	2.09	0.86
27:DD:268:ARG:HH11	27:DD:268:ARG:HB3	1.38	0.86
50:B4:37:SER:HB3	50:B4:42:PHE:CD2	2.11	0.86
25:BA:1332:G:N2	25:BA:1609:A:O2'	2.09	0.86
36:DP:24:GLY:CA	36:DP:25:ASP:HB2	1.97	0.86
1:AA:1149:C:H2'	1:AA:1150:U:H6	1.40	0.86
1:CA:631:G:H5''	1:CA:632:A:N7	1.91	0.86
3:CF:70:VAL:HG12	3:CF:72:LYS:H	1.38	0.86
41:B2:44:LYS:O	41:B2:46:VAL:N	2.08	0.86
29:BF:185:ASP:OD1	29:BF:188:ARG:NH1	2.07	0.86
42:BS:9:TYR:H	42:BS:102:HIS:HD2	1.22	0.86
49:DX:59:VAL:HG12	49:DX:60:GLU:H	1.39	0.86
1:AA:826:C:H2'	1:AA:827:U:O2	1.76	0.86
2:AE:194:PRO:O	2:AE:196:LEU:N	2.07	0.86
12:AO:44:LYS:HG3	12:AO:45:PRO:HD3	0.86	0.86
40:B1:85:LYS:HE3	40:B1:117:GLN:HG3	1.57	0.86
25:BA:1899:G:N2	25:BA:1902:C:C5	2.44	0.86
31:BH:10:PRO:O	31:BH:11:VAL:HG13	1.74	0.86
1:CA:409:G:OP1	4:CG:24:GLU:HG2	1.76	0.86
8:CK:92:ARG:HH11	8:CK:92:ARG:HG2	1.38	0.86
15:CR:82:ILE:HD11	15:CR:88:ARG:HB2	1.57	0.86
25:DA:1442:G:C2'	25:DA:1443:G:H5''	2.05	0.86
25:DA:993:G:H1'	41:D2:87:HIS:CE1	2.11	0.86
25:DA:1072:C:O2	25:DA:1092:C:N4	2.07	0.86
39:DR:74:ARG:HH11	39:DR:74:ARG:CG	1.89	0.86
12:AO:44:LYS:HD3	12:AO:44:LYS:C	1.96	0.85
50:B4:39:CYS:C	50:B4:41:PRO:CD	2.44	0.85
25:BA:1416:G:O2'	25:BA:1417:C:O5'	1.94	0.85
22:CB:47:U:H2'	22:CB:48:C:C6	2.11	0.85
25:DA:2528:U:O2'	25:DA:2530:A:OP1	1.93	0.85
25:DA:2777:G:H5''	25:DA:2778:A:C5'	2.03	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B4:39:CYS:O	50:B4:40:HIS:HB2	1.74	0.85
11:CN:30:VAL:HG21	11:CN:65:ALA:HA	1.57	0.85
25:DA:389:G:H22	35:DO:72:PRO:CG	1.89	0.85
25:DA:2392:A:H8	35:DO:60:MET:CB	1.88	0.85
25:BA:155:C:N4	25:BA:171:G:H1	1.73	0.85
25:DA:2168:G:N2	25:DA:2170:A:OP2	2.08	0.85
25:DA:877:U:O4	25:DA:899:A:N6	2.09	0.85
22:AD:12:C:O2	22:AD:24:G:N2	2.09	0.85
25:BA:1535:U:H3'	25:BA:1536:A:H5''	1.57	0.85
25:BA:2262:U:C2'	25:BA:2263:C:H5'	2.05	0.85
28:BE:38:THR:HG23	28:BE:41:LYS:H	1.42	0.85
22:CB:6:G:O2'	22:CB:7:G:OP1	1.93	0.85
10:CM:51:ARG:HB2	10:CM:60:ARG:HA	1.57	0.85
35:DO:64:LYS:CG	35:DO:65:ARG:N	2.34	0.85
38:DQ:110:LEU:HD23	38:DQ:111:GLU:H	1.41	0.85
2:AE:204:ASN:ND2	2:AE:206:ASP:O	2.10	0.85
37:B0:3:HIS:O	37:B0:5:LYS:N	2.09	0.85
25:BA:1900:A:H5'	25:BA:1900:A:H8	1.39	0.85
1:CA:979:C:H3'	1:CA:980:C:H5''	1.58	0.85
26:DB:87:G:N2	26:DB:89(A):A:OP2	2.09	0.85
22:AB:78:C:O2'	22:AB:79:A:O5'	1.93	0.85
25:BA:527:C:OP2	25:BA:2779:U:H5	1.59	0.85
44:BU:38:ILE:HD11	44:BU:64:GLU:HG3	1.57	0.85
22:CB:52:G:H2'	22:CB:53:A:H8	1.41	0.85
37:D0:34:ILE:HG22	37:D0:114:VAL:HB	1.59	0.85
37:B0:91:GLN:N	37:B0:91:GLN:OE1	2.09	0.85
22:AB:21:A:H8	22:AB:46:G:C8	1.94	0.85
3:AF:58:GLU:HB2	3:AF:65:ALA:HB3	1.57	0.85
27:BD:35:LYS:HD2	27:BD:104:TYR:HD1	1.42	0.85
25:DA:205:G:H1'	25:DA:206:U:OP2	1.76	0.85
25:BA:654(D):G:N2	25:BA:654(Q):C:N3	2.24	0.85
27:BD:71:ASP:HB3	27:BD:103:ARG:HH22	1.41	0.85
1:AA:156:G:H1	1:AA:165:C:H42	1.20	0.85
1:CA:1157:A:O2'	1:CA:1158:C:O5'	1.95	0.85
1:CA:1335:C:O2'	1:CA:1336:C:OP2	1.95	0.85
1:AA:1238:A:N7	1:AA:1301:U:O4	2.10	0.84
1:AA:1503:A:O2'	1:AA:1504:G:O5'	1.95	0.84
2:AE:84:GLU:HB3	2:AE:219:VAL:HG21	1.59	0.84
25:BA:676:A:H8	25:BA:2069:G:H21	1.25	0.84
20:CW:50:GLU:HA	20:CW:100:ILE:HG21	1.57	0.84
20:CW:82:SER:OG	20:CW:86:ARG:NH2	2.10	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B7:8:ASN:ND2	53:B7:11:LYS:H	1.74	0.84
28:BE:67:PHE:O	28:BE:69:LYS:N	2.09	0.84
1:CA:1027:C:O2	1:CA:1035:A:N6	2.10	0.84
25:DA:2872:G:C5	25:DA:2873:A:N1	2.45	0.84
36:DP:14:ARG:HG2	36:DP:41:TRP:HH2	1.42	0.84
25:BA:2308:G:N2	25:BA:2311:A:C2	2.46	0.84
41:D2:85:LYS:HG3	41:D2:87:HIS:H	1.43	0.84
25:DA:1379:A:H4'	25:DA:1380:G:OP2	1.76	0.84
25:DA:71:A:OP2	25:DA:71:A:H3'	1.77	0.84
45:DV:158:PRO:HB2	45:DV:159:PRO:CD	2.07	0.84
1:CA:1160:G:O6	1:CA:1181:G:O6	1.96	0.84
1:CA:1321:C:N4	1:CA:1322:C:H41	1.74	0.84
1:CA:559:A:H4'	1:CA:560:U:H3'	1.59	0.84
25:DA:389:G:H22	35:DO:72:PRO:HG2	1.42	0.84
26:BB:7:G:H4'	38:BQ:29:PHE:HD1	1.42	0.84
25:DA:2127:G:H1	25:DA:2161:C:H42	1.23	0.84
3:AF:108:ASN:ND2	3:AF:144:SER:OG	2.11	0.84
38:BQ:83:LYS:HE3	38:BQ:109:GLY:HA2	1.57	0.84
17:AT:67:LYS:HA	17:AT:70:ARG:HH12	1.42	0.84
25:BA:2307:G:C8	25:BA:2311:A:C2	2.66	0.84
25:DA:882:G:N2	25:DA:894:C:N3	2.25	0.84
25:DA:90:U:C2'	25:DA:91:A:H5''	2.07	0.84
25:BA:1899:G:N2	25:BA:1902:C:H5	1.75	0.84
1:CA:1250:A:H4'	9:CL:68:GLY:H	1.41	0.84
35:DO:64:LYS:CB	54:D8:25:MET:HG3	2.07	0.84
25:BA:2162:G:H2'	25:BA:2163:C:O4'	1.77	0.84
25:BA:2392:A:C8	35:BO:60:MET:HB2	2.11	0.84
1:CA:82:U:O2	1:CA:87:A:N1	2.11	0.84
22:CB:46:G:O2'	22:CB:47:U:OP1	1.95	0.84
22:CD:15:G:N1	22:CD:57:C:O2	2.09	0.84
50:D4:38:LYS:HA	50:D4:44:THR:HG21	1.60	0.84
25:DA:1130:U:O2	28:DE:149:ARG:NH2	2.11	0.84
25:DA:2591:C:OP2	27:DD:238:GLY:O	1.96	0.84
1:AA:1008:C:N3	1:AA:1021:G:N2	2.24	0.84
27:BD:35:LYS:NZ	27:BD:104:TYR:HB2	1.93	0.84
1:CA:992:U:H3	1:CA:1044:A:H62	0.86	0.84
1:AA:1452:C:O2'	1:AA:1453:G:OP2	1.95	0.83
1:AA:412:A:H1'	1:AA:413:G:OP2	1.77	0.83
2:AE:185:ILE:HG22	2:AE:199:TYR:HB2	1.58	0.83
51:B5:6:VAL:HG22	51:B5:7:PRO:HD2	1.59	0.83
31:BH:83:TYR:CB	31:BH:135:GLY:H	1.90	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DO:46:LYS:HD2	35:DO:51:PHE:CE1	2.13	0.83
22:AD:48:C:H3'	22:AD:49:A:C8	2.12	0.83
45:BV:19:ARG:NH1	45:BV:84:GLU:O	2.11	0.83
1:AA:1028(B):C:N3	1:AA:1032(A):G:N2	2.27	0.83
3:AF:60:ALA:H	3:AF:63:ASN:HB3	1.43	0.83
25:BA:1678:G:H22	25:BA:1989:G:H22	1.25	0.83
25:BA:2210:G:H3'	25:BA:2211:G:N7	1.93	0.83
25:BA:653:A:H3'	25:BA:654:A:H5'	1.60	0.83
29:DF:40:GLN:HE22	29:DF:182:ASN:HB2	1.43	0.83
42:DS:25:ARG:NH2	42:DS:74:ALA:O	2.10	0.83
25:BA:860:U:C5	25:BA:917:A:C2	2.66	0.83
1:AA:1028(B):C:N4	1:AA:1032(A):G:N1	2.27	0.83
2:AE:162:ILE:HD11	2:AE:184:VAL:HG22	1.60	0.83
25:BA:654(B):C:N4	25:BA:654(S):G:N1	2.26	0.83
44:BU:76:CYS:HB3	44:BU:96:ILE:HD13	1.60	0.83
25:DA:910:A:H62	36:DP:12:GLN:HA	1.42	0.83
25:DA:847:U:O4	25:DA:933:A:C6	2.31	0.83
27:DD:69:ARG:NH2	27:DD:128:GLY:O	2.11	0.83
22:AD:50:U:H2'	22:AD:51:C:C6	2.14	0.83
25:BA:1864:U:C2'	25:BA:1869:G:H5''	2.09	0.83
25:BA:1887:C:C2'	25:BA:1888:G:H5''	2.09	0.83
8:CK:92:ARG:HH11	8:CK:92:ARG:CG	1.90	0.83
25:DA:259:G:H21	25:DA:621:A:H8	1.21	0.83
27:DD:35:LYS:NZ	27:DD:64:ILE:O	2.12	0.83
10:AM:48:THR:HA	10:AM:62:HIS:HB3	1.61	0.83
52:B6:24:GLU:O	54:B8:34:TRP:CD1	2.32	0.83
25:BA:1210:A:H8	25:BA:1210:A:H5'	1.40	0.83
25:BA:1533:C:H3'	25:BA:1534:G:C5'	2.08	0.83
26:BB:12:C:O2	46:B3:74:ARG:NH1	2.11	0.83
25:BA:2015:A:N3	51:B5:2:ALA:CA	2.42	0.83
1:CA:1301:U:O2'	1:CA:1302:U:OP1	1.97	0.83
25:DA:1022:G:O2'	25:DA:1023:U:OP2	1.96	0.83
25:DA:2068:U:H3	25:DA:2430:A:H2	1.25	0.83
28:DE:128:SER:OG	28:DE:129:HIS:N	2.09	0.83
31:BH:86:GLU:HG3	31:BH:165:ALA:N	1.94	0.83
1:CA:1449:C:O3'	1:CA:1450:U:H4'	1.76	0.83
1:AA:991:U:O2'	1:AA:992:U:H5''	1.79	0.83
22:AB:52:G:H2'	22:AB:53:A:H8	1.42	0.83
7:AJ:111:ARG:NH1	7:AJ:113:GLU:OE2	2.12	0.83
54:B8:34:TRP:CE3	54:B8:35:GLN:NE2	2.46	0.83
25:BA:1496:A:H8	25:BA:1577:C:O2'	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:201:THR:HG22	28:BE:203:LYS:H	1.43	0.83
25:BA:2875:C:H4'	39:BR:5:ALA:HB2	1.60	0.83
25:DA:155:C:N3	25:DA:171:G:N2	2.26	0.83
25:DA:906:G:OP1	36:DP:26:TYR:OH	1.96	0.83
36:DP:110:THR:HG23	36:DP:113:GLN:HG3	1.61	0.83
16:AS:53:VAL:HG12	16:AS:79:VAL:HG22	1.61	0.82
54:B8:34:TRP:HE3	54:B8:35:GLN:HG2	1.40	0.82
25:DA:362:U:H5'	25:DA:363:G:OP2	1.79	0.82
20:AW:22:ARG:O	20:AW:26:ASN:ND2	2.12	0.82
25:BA:141:A:H8	25:BA:1595:G:H21	1.28	0.82
1:CA:1266:G:N2	1:CA:1269:A:OP2	2.12	0.82
28:DE:8:LYS:O	28:DE:9:VAL:HG22	1.78	0.82
1:AA:748:C:H4'	1:AA:749:C:O5'	1.77	0.82
1:AA:78:G:N2	1:AA:91:C:N3	2.26	0.82
25:BA:1055:G:N1	25:BA:1104:C:N4	2.19	0.82
25:BA:1055:G:H1	25:BA:1104:C:H42	0.82	0.82
25:BA:1464:C:HO2'	25:BA:1528:A:H8	1.24	0.82
33:BM:4:TYR:OH	33:BM:7:LYS:NZ	2.12	0.82
1:CA:250:A:H1'	1:CA:251:G:OP2	1.79	0.82
1:CA:534:U:H5'	1:CA:535:A:OP2	1.79	0.82
42:DS:88:ARG:NH1	42:DS:94:ASP:OD1	2.13	0.82
25:BA:2151:G:H2'	25:BA:2152:G:C8	2.15	0.82
35:BO:62:LEU:HG	35:BO:62:LEU:O	1.77	0.82
25:BA:2255:G:N2	36:BP:85:LYS:HE2	1.95	0.82
12:CO:44:LYS:HB3	12:CO:45:PRO:HD3	1.60	0.82
25:DA:2557:G:H2'	25:DA:2558:C:C6	2.14	0.82
19:AV:40:ILE:HG12	19:AV:41:VAL:HG13	1.60	0.82
25:BA:1062:G:H2'	25:BA:1063:G:C8	2.14	0.82
31:BH:83:TYR:HB3	31:BH:135:GLY:H	1.42	0.82
44:DU:76:CYS:SG	44:DU:77:PRO:HD2	2.19	0.82
1:AA:266:G:H5''	1:AA:267:C:H5	1.44	0.82
22:AB:21:A:C8	22:AB:46:G:C8	2.67	0.82
17:AT:55:ASP:HA	17:AT:79:SER:HA	1.60	0.82
25:BA:882:G:H2'	25:BA:883:G:C8	2.15	0.82
40:D1:72:HIS:HE1	40:D1:107:ALA:HA	1.44	0.82
41:D2:35:LEU:O	41:D2:37:VAL:HG22	1.80	0.82
25:DA:2138:C:H42	25:DA:2153:G:H1	1.27	0.82
39:DR:11:GLU:OE1	39:DR:11:GLU:N	2.11	0.82
22:AB:20:C:O2'	22:AB:68:A:N7	2.11	0.82
25:BA:774:A:H2	25:BA:787:U:HO2'	0.84	0.82
44:BU:42:VAL:HB	44:BU:67:LEU:HD11	1.61	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:652:U:O2'	1:CA:653:A:H5'	1.78	0.82
1:AA:976:G:OP1	14:AQ:32:SER:N	2.11	0.82
35:BO:19:VAL:HG23	35:BO:27:HIS:CA	2.10	0.82
36:DP:11:LYS:HD3	36:DP:87:LYS:HG2	1.61	0.82
1:AA:1285:A:H4'	1:AA:1286:A:O5'	1.78	0.82
1:AA:963:G:H21	10:AM:55:LYS:NZ	1.77	0.82
2:AE:88:ALA:HB2	2:AE:219:VAL:HG13	1.62	0.82
25:BA:252:G:OP2	35:BO:50:ARG:NH1	2.13	0.82
25:BA:547:A:H2'	25:BA:548:A:C8	2.14	0.82
25:BA:907:U:H5'	36:BP:23:GLY:O	1.79	0.82
25:DA:1757:U:N3	25:DA:1762:A:C2	2.34	0.82
25:DA:1843:C:H5'	27:DD:253:GLN:NE2	1.94	0.82
27:DD:35:LYS:HG2	27:DD:64:ILE:HG12	1.62	0.82
2:AE:12:GLU:O	2:AE:16:HIS:ND1	2.13	0.81
11:AN:48:ILE:HG13	11:AN:63:LEU:HB2	1.62	0.81
19:AV:44:MET:O	19:AV:47:HIS:HB2	1.79	0.81
25:BA:1021:A:H61	25:BA:1142(A):A:H61	1.24	0.81
25:BA:883:G:N2	25:BA:893:C:N3	2.28	0.81
1:CA:652:U:O2'	1:CA:653:A:N3	2.12	0.81
25:DA:9:U:N3	25:DA:2629:A:C6	2.48	0.81
25:DA:329:G:O6	44:DU:19:LYS:HB3	1.80	0.81
25:DA:974:G:O2'	25:DA:975:G:N7	2.11	0.81
25:BA:49:A:C8	25:BA:120:U:C5	2.67	0.81
25:BA:1113:U:H5'	31:BH:2:SER:HB2	1.59	0.81
1:AA:7:G:H5'	1:AA:298:A:O4'	1.78	0.81
50:B4:42:PHE:CG	50:B4:43:TYR:N	2.48	0.81
54:B8:32:LEU:O	54:B8:36:LYS:HE3	1.80	0.81
1:CA:1056:U:O2	1:CA:1056:U:H2'	1.80	0.81
2:CE:17:PHE:CE2	2:CE:44:LEU:HA	2.13	0.81
29:DF:132:VAL:HG22	29:DF:133:ASN:H	1.44	0.81
1:AA:255:G:H1'	17:AT:16:GLN:HE21	1.42	0.81
52:B6:15:GLU:HA	52:B6:49:HIS:HA	1.59	0.81
54:B8:34:TRP:CE3	54:B8:35:GLN:HG2	2.14	0.81
52:B6:25:LYS:CG	54:B8:34:TRP:HZ2	1.93	0.81
28:BE:111:ARG:HG3	28:BE:160:TYR:CD1	2.15	0.81
38:BQ:14:VAL:O	38:BQ:18:ILE:HG12	1.81	0.81
35:DO:62:LEU:HD11	54:D8:25:MET:C	2.01	0.81
8:AK:4:ASP:OD1	8:AK:85:ARG:NH1	2.12	0.81
25:BA:602:G:HO2'	25:BA:604:G:HO2'	1.26	0.81
39:BR:36:GLU:HG3	39:BR:41:ARG:HD2	1.63	0.81
27:DD:65:ILE:HD11	27:DD:67:PHE:CE2	2.16	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1028:C:N3	1:CA:1033:G:N2	2.28	0.81
25:DA:2467:C:H4'	36:DP:123:HIS:CD2	2.15	0.81
25:DA:7:G:H1	25:DA:2896:C:H42	1.25	0.81
29:DF:181:LEU:HD21	29:DF:186:ILE:HD11	1.63	0.81
22:AB:6:G:HO2'	22:AB:7:G:P	2.04	0.81
2:AE:165:VAL:HG23	2:AE:166:ASP:H	1.46	0.81
52:B6:47:THR:HG22	52:B6:48:VAL:H	1.43	0.81
25:BA:885:C:N3	25:BA:890:A:N7	2.29	0.81
30:BG:83:ARG:H	30:BG:86:MET:CE	1.93	0.81
1:CA:1503:A:O2'	24:C1:13:A:N1	2.13	0.81
1:CA:812:C:H1'	1:CA:813:U:OP2	1.80	0.81
41:D2:69:LYS:HG3	41:D2:86:GLY:HA3	1.61	0.81
28:DE:201:THR:HG22	28:DE:202:LYS:H	1.45	0.81
39:DR:64:ARG:HB2	39:DR:73:GLU:HG2	1.59	0.81
25:BA:140:A:H8	25:BA:1408:C:HO2'	1.27	0.81
27:BD:30:GLU:HG3	27:BD:63:ARG:NH2	1.96	0.81
39:BR:77:PRO:HG2	39:BR:80:SER:HB2	1.63	0.81
25:DA:889:C:H2'	25:DA:890:A:H4'	1.61	0.81
25:DA:884:C:H42	25:DA:892:G:H1	0.81	0.81
27:DD:35:LYS:HD2	27:DD:104:TYR:HD1	1.46	0.81
28:DE:37:ARG:NH1	28:DE:80:GLU:OE2	2.14	0.81
34:DN:113:LYS:H	34:DN:113:LYS:HD3	1.44	0.81
35:DO:122:PRO:HB3	35:DO:141:ALA:HB1	1.63	0.81
1:AA:73:G:O6	1:AA:97:U:C2	2.32	0.81
25:BA:2468:G:H2'	25:BA:2476:A:H62	1.44	0.81
30:BG:135:LEU:HD23	30:BG:140:ILE:HD11	1.61	0.81
31:BH:4:ILE:HG13	31:BH:6:ARG:CZ	2.11	0.81
1:CA:428:G:H4'	1:CA:429:U:O5'	1.81	0.81
40:D1:83:LEU:HD23	40:D1:88:ILE:HG13	1.63	0.81
25:DA:1416:G:HO2'	25:DA:1417:C:H6	1.28	0.81
25:DA:1826:G:H4'	27:DD:242:ARG:HH21	1.45	0.81
36:DP:24:GLY:CA	36:DP:25:ASP:HB3	2.05	0.81
25:BA:102:G:OP1	48:BW:7:ARG:NH2	2.11	0.81
25:BA:2124:G:H1	25:BA:2174:C:H42	1.29	0.81
25:BA:2141:G:O6	25:BA:2150:U:O2	1.99	0.81
22:CB:57:C:O2'	22:CB:68:A:H4'	1.80	0.81
25:DA:2468:G:H3'	25:DA:2476:A:N1	1.96	0.81
22:AB:6:G:O2'	22:AB:7:G:OP1	1.97	0.81
54:B8:34:TRP:CA	54:B8:35:GLN:CB	2.47	0.81
25:BA:654(B):C:N4	25:BA:654(S):G:H1	1.79	0.81
4:AG:28:SER:HB2	4:AG:29:PRO:HD2	1.64	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:330:A:H2	25:BA:1210:A:H2'	1.47	0.80
27:BD:32:SER:O	27:BD:33:LEU:HB3	1.80	0.80
32:BK:110:ASP:N	32:BK:110:ASP:OD1	2.10	0.80
44:BU:76:CYS:SG	44:BU:77:PRO:HD2	2.21	0.80
41:D2:79:VAL:O	41:D2:80:GLN:HB2	1.80	0.80
25:DA:2127:G:H1	25:DA:2161:C:N4	1.79	0.80
34:DN:2:ILE:HD12	34:DN:6:THR:HG21	1.63	0.80
1:AA:1003:G:H2'	1:AA:1004:A:H5''	1.62	0.80
1:AA:1125:U:OP2	1:AA:1145:C:N4	2.14	0.80
25:BA:1771:C:H1'	25:BA:1786:A:C8	2.16	0.80
23:CC:6:G:O6	23:CC:68:C:N4	2.12	0.80
25:DA:1678:G:N2	25:DA:1989:G:H22	1.79	0.80
36:DP:79:LEU:C	36:DP:79:LEU:HD12	2.02	0.80
44:DU:81:LYS:HD3	44:DU:97:ARG:NH2	1.96	0.80
47:DZ:85:LEU:O	47:DZ:85:LEU:HD12	1.82	0.80
4:AG:150:GLU:O	4:AG:152:SER:N	2.13	0.80
12:AO:3:THR:H	12:AO:6:GLN:HE21	1.29	0.80
20:AW:26:ASN:HB2	20:AW:71:THR:HG23	1.63	0.80
52:B6:25:LYS:CB	54:B8:34:TRP:CZ2	2.64	0.80
25:BA:1069:A:H4'	25:BA:1070:A:H5''	1.63	0.80
25:BA:2701:C:H3'	25:BA:2702:U:C5'	2.09	0.80
2:AE:21:ARG:O	2:AE:23:ARG:N	2.15	0.80
25:BA:860:U:C5	25:BA:917:A:H2	1.98	0.80
25:BA:958:U:OP2	36:BP:14:ARG:NH1	2.14	0.80
23:CC:17:C:C3'	23:CC:18:C:H5''	2.06	0.80
2:CE:185:ILE:HG22	2:CE:199:TYR:HB2	1.60	0.80
25:DA:1043:C:H42	25:DA:1112:G:H1	1.29	0.80
35:DO:105:LEU:O	35:DO:105:LEU:HD12	1.80	0.80
45:DV:170:THR:O	45:DV:172:ALA:N	2.13	0.80
48:DW:65:ASN:HD22	48:DW:69:ARG:HH21	1.28	0.80
11:AN:87:THR:HG22	11:AN:88:GLY:H	1.46	0.80
1:CA:452:A:O2'	1:CA:453:A:O4'	1.98	0.80
4:CG:139:ARG:CG	4:CG:139:ARG:HH11	1.95	0.80
25:DA:2311:A:C8	30:DG:88:ILE:HG12	2.16	0.80
25:DA:2392:A:H2	25:DA:2424:C:H42	1.27	0.80
25:DA:884:C:N4	25:DA:892:G:N1	2.11	0.80
29:DF:46:ARG:HH11	29:DF:46:ARG:HG2	1.46	0.80
1:AA:792:A:H4'	1:AA:793:U:O5'	1.82	0.80
25:BA:2136:C:N3	25:BA:2155:G:N2	2.29	0.80
1:CA:1298:C:H41	7:CJ:114:ARG:HB3	1.45	0.80
1:CA:1057:G:H4'	3:CF:196:LEU:O	1.82	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:D2:1:MET:HA	41:D2:42:GLY:HA3	1.63	0.80
25:DA:1652:A:H62	37:D0:11:ASN:ND2	1.79	0.80
22:CB:85:A:H8	25:DA:2583:G:H21	1.27	0.80
27:DD:43:ARG:HH11	27:DD:44:ASN:HD21	0.80	0.80
35:DO:61:ARG:NH2	35:DO:61:ARG:CG	2.39	0.80
22:AD:20:C:H5''	22:AD:68:A:H62	1.47	0.80
2:CE:233:SER:HB2	2:CE:234:PRO:CD	2.11	0.80
9:CL:11:LYS:H	9:CL:104:ARG:HH21	1.30	0.80
41:D2:85:LYS:HD2	41:D2:86:GLY:H	1.47	0.80
25:DA:1342:A:C6	25:DA:1602:U:N3	2.50	0.80
25:DA:907:U:O2'	36:DP:101:ARG:NH2	2.14	0.80
25:DA:90:U:O2'	25:DA:91:A:H8	1.64	0.80
27:DD:30:GLU:HG3	27:DD:63:ARG:NH2	1.97	0.80
50:B4:54:GLY:HA2	50:B4:57:GLU:HB3	1.64	0.80
1:AA:1423:G:OP1	34:BN:49:ARG:NH2	2.14	0.80
1:AA:422:C:O2'	1:AA:423:G:N3	2.15	0.80
7:AJ:79:ARG:NH1	7:AJ:80:VAL:O	2.14	0.80
25:BA:2015:A:N3	51:B5:2:ALA:N	2.29	0.80
51:B5:2:ALA:O	51:B5:3:LYS:HB2	1.82	0.80
25:BA:2629:A:O2'	25:BA:2630:G:H5''	1.80	0.80
1:CA:1322:C:H2'	1:CA:1322:C:O2	1.81	0.80
8:CK:42:GLU:HG3	8:CK:109:ILE:HD12	1.63	0.80
25:DA:1048:A:OP2	25:DA:1110:G:N2	2.15	0.80
33:DM:13:TRP:O	33:DM:135:PRO:HD2	1.82	0.80
42:DS:9:TYR:H	42:DS:102:HIS:HD2	1.27	0.80
1:AA:93:U:H2'	1:AA:95:G:O4'	1.81	0.80
32:BK:116:LEU:O	32:BK:118:LYS:N	2.15	0.80
36:BP:21:THR:O	36:BP:21:THR:CG2	2.30	0.80
38:BQ:36:TYR:HD1	38:BQ:36:TYR:N	1.80	0.80
29:DF:164:ARG:HG3	29:DF:175:THR:OG1	1.81	0.80
41:B2:35:LEU:O	41:B2:37:VAL:N	2.14	0.79
25:BA:2014:A:HO2'	51:B5:2:ALA:HB2	1.43	0.79
22:AD:47:U:H2'	22:AD:48:C:C6	2.17	0.79
35:BO:105:LEU:O	35:BO:106:LEU:HB2	1.79	0.79
1:CA:1211:U:H5'	1:CA:1212:U:OP1	1.81	0.79
22:CD:48:C:N4	22:CD:52:G:H1	1.79	0.79
51:D5:16:ARG:CG	51:D5:16:ARG:HH11	1.93	0.79
25:DA:2415:G:H4'	35:DO:67:MET:H	1.46	0.79
36:DP:21:THR:CG2	36:DP:21:THR:O	2.30	0.79
45:DV:107:THR:H	45:DV:108:PRO:HD2	1.47	0.79
54:B8:35:GLN:O	54:B8:36:LYS:CG	2.30	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:910:A:C5	36:BP:13:GLN:HG3	2.17	0.79
29:DF:53:THR:HG22	29:DF:56:GLU:HG3	1.62	0.79
25:DA:2311:A:H8	30:DG:88:ILE:HG12	1.45	0.79
35:DO:105:LEU:CD1	35:DO:105:LEU:O	2.31	0.79
25:DA:2414:G:N2	35:DO:67:MET:HE3	1.96	0.79
2:AE:5:ILE:HG21	2:AE:221:LEU:HD23	1.65	0.79
12:AO:72:HIS:HD2	12:AO:74:LEU:H	1.30	0.79
1:CA:1151:A:O2'	10:CM:70:ARG:NH2	2.15	0.79
1:CA:827:U:H3	1:CA:872:A:H62	1.30	0.79
25:DA:1420:U:HO2'	25:DA:1421:G:H8	1.31	0.79
36:DP:2:LEU:O	36:DP:70:PRO:HG2	1.81	0.79
22:AB:52:G:H2'	22:AB:53:A:C8	2.18	0.79
2:AE:18:GLY:N	2:AE:42:ILE:HG22	1.97	0.79
2:AE:60:ASP:OD1	2:AE:64:ARG:NH2	2.15	0.79
30:BG:47:LYS:HD2	30:BG:81:LYS:HB2	1.64	0.79
33:BM:130:HIS:O	33:BM:132:ALA:N	2.15	0.79
22:CD:18:G:OP1	22:CD:69:U:N3	2.16	0.79
10:CM:48:THR:HA	10:CM:62:HIS:HB3	1.62	0.79
25:DA:1090:U:O4	25:DA:1101:U:O2	2.00	0.79
25:DA:1757:U:H3	25:DA:1762:A:H2	0.86	0.79
36:DP:26:TYR:CE1	36:DP:139:GLU:HG2	2.17	0.79
44:BU:35:TYR:CE1	44:BU:69:ALA:HB3	2.18	0.79
22:CD:22:A:N7	22:CD:57:C:N4	2.31	0.79
40:D1:92:ARG:HG2	41:D2:11:GLN:NE2	1.96	0.79
25:DA:1342:A:C2	25:DA:1397:U:C2	2.71	0.79
35:DO:105:LEU:O	35:DO:106:LEU:HB3	1.82	0.79
45:DV:76:LEU:HD23	45:DV:76:LEU:H	1.48	0.79
48:DW:47:ASN:O	48:DW:49:LYS:N	2.15	0.79
38:BQ:89:ARG:O	38:BQ:89:ARG:HG2	1.82	0.79
1:CA:677:U:H3	1:CA:713:G:H22	1.30	0.79
29:DF:203:GLN:HA	29:DF:203:GLN:HE21	1.48	0.79
1:AA:1028(A):C:N4	1:AA:1028(B):C:H41	1.81	0.79
25:BA:2321:G:H5''	25:BA:2322:A:OP2	1.83	0.79
29:BF:45:ARG:HG2	29:BF:45:ARG:NH1	1.93	0.79
1:CA:1028(A):C:O2	1:CA:1032(B):G:N1	2.14	0.79
25:DA:1171:G:H1'	25:DA:1173:G:O4'	1.83	0.79
25:DA:411:G:N2	35:DO:71:VAL:HG21	1.97	0.79
30:DG:161:THR:HG22	30:DG:163:ALA:H	1.47	0.79
1:AA:79:G:N2	1:AA:90:C:N3	2.30	0.79
4:AG:201:GLN:HE21	4:AG:201:GLN:HA	1.46	0.79
50:B4:59:PHE:O	50:B4:63:TYR:HB3	1.83	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1165:U:H2'	25:BA:1166:C:C6	2.17	0.79
28:BE:21:VAL:HB	28:BE:22:PRO:HB3	1.65	0.79
32:BK:92:VAL:HG13	32:BK:120:ILE:HG23	1.63	0.79
39:BR:84:GLN:HG2	39:BR:85:LYS:HG2	1.63	0.79
25:DA:2210:G:H3'	25:DA:2211:G:C5	2.17	0.79
29:DF:101:LEU:O	29:DF:106:ARG:NH1	2.15	0.79
36:DP:78:PRO:O	36:DP:79:LEU:CD1	2.31	0.79
50:B4:41:PRO:O	50:B4:42:PHE:HB3	1.80	0.79
54:B8:34:TRP:N	54:B8:35:GLN:HB3	1.97	0.79
25:BA:2262:U:O2'	25:BA:2263:C:H5'	1.83	0.79
25:BA:654(S):G:H4'	25:BA:654(T):A:OP1	1.82	0.79
27:BD:28:GLU:HB3	27:BD:29:PRO:HD3	1.63	0.79
30:BG:67:LYS:HE2	50:B4:6:HIS:CE1	2.18	0.79
35:BO:64:LYS:C	35:BO:66:GLY:N	2.33	0.79
25:BA:1754:C:OP1	39:BR:96:ARG:NH1	2.14	0.79
42:BS:18:ARG:HD3	42:BS:76:VAL:HG13	1.64	0.79
45:BV:5:LEU:O	45:BV:6:LYS:HB2	1.82	0.79
1:CA:1028:C:H42	1:CA:1033:G:H1	0.84	0.79
1:CA:1297:C:H1'	1:CA:1298:C:OP2	1.83	0.79
22:CB:46:G:O2'	22:CB:47:U:H5'	1.83	0.79
7:CJ:27:ILE:HD12	7:CJ:40:ALA:HA	1.64	0.79
51:D5:3:LYS:HA	51:D5:3:LYS:HE3	1.63	0.79
25:DA:2748:A:N7	25:DA:2754:U:O4	2.16	0.79
27:DD:35:LYS:CD	27:DD:104:TYR:HD1	1.95	0.79
39:DR:80:SER:HB3	39:DR:83:ILE:HG13	1.64	0.79
1:AA:201:C:H42	1:AA:216:G:H1	0.83	0.78
1:CA:1002:G:H2'	1:CA:1003:G:C8	2.18	0.78
44:DU:93:GLY:O	44:DU:95:LYS:HG3	1.83	0.78
1:AA:1348:U:H4'	9:AL:120:ARG:HD2	1.66	0.78
2:AE:111:ARG:HH11	2:AE:111:ARG:HA	1.48	0.78
25:BA:2469:A:H61	25:BA:2481:G:H1'	1.47	0.78
31:BH:150:ALA:O	31:BH:152:ARG:N	2.16	0.78
25:DA:1420:U:H1'	25:DA:1421:G:OP1	1.84	0.78
25:DA:2511:U:O4	25:DA:2575:C:N3	2.15	0.78
35:DO:64:LYS:CG	35:DO:65:ARG:H	1.93	0.78
1:AA:1280:A:H3'	1:AA:1281:U:H5'	1.65	0.78
25:BA:2580:U:H4'	28:BE:130:GLY:HA3	1.64	0.78
1:CA:1144:G:H2'	1:CA:1145:C:H5''	1.64	0.78
1:CA:1211:U:H1'	1:CA:1213:A:C2	2.18	0.78
1:CA:1305:G:N2	1:CA:1331:G:H2'	1.99	0.78
31:DH:106:THR:HG22	31:DH:112:PRO:HB3	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1190:G:OP1	3:AF:4:LYS:HA	1.84	0.78
25:BA:1689:A:N6	25:BA:1698:A:C2	2.44	0.78
25:BA:2469:A:N3	25:BA:2469:A:C5'	2.47	0.78
25:DA:2136:C:N4	25:DA:2155:G:H1	1.78	0.78
39:DR:50:ILE:HD11	39:DR:102:ILE:HD11	1.65	0.78
44:DU:63:LYS:HA	44:DU:63:LYS:NZ	1.97	0.78
1:AA:1086:U:H3	1:AA:1099:G:H22	1.30	0.78
25:BA:2688:U:H5	25:BA:2720:U:OP2	1.66	0.78
27:BD:33:LEU:HD13	27:BD:34:VAL:HG12	1.66	0.78
25:DA:1250:G:N7	35:DO:18:ARG:NH2	2.32	0.78
25:DA:2427:C:H5''	25:DA:2428:G:OP1	1.84	0.78
27:DD:236:GLY:O	27:DD:237:GLU:CB	2.31	0.78
29:DF:22:ALA:O	29:DF:24:LEU:N	2.16	0.78
25:DA:2378:A:O2'	38:DQ:21:THR:HG21	1.84	0.78
24:A1:12:A:H1'	24:A1:13:A:OP1	1.83	0.78
13:AP:3:ARG:HE	13:AP:9:ILE:HD11	1.48	0.78
25:BA:299:A:H5'	44:BU:84:ARG:HH21	1.49	0.78
45:BV:27:VAL:HG12	45:BV:87:ASP:HB3	1.64	0.78
25:DA:1434:A:H61	25:DA:1558:A:N6	1.82	0.78
25:DA:2472:G:O6	25:DA:2476:A:O2'	2.01	0.78
25:BA:2137:C:H42	25:BA:2154:G:H1	1.28	0.78
25:BA:2319:G:H4'	25:BA:2320:A:OP1	1.82	0.78
25:BA:2470:G:H5'	36:BP:56:ARG:NH2	1.98	0.78
25:BA:1798:U:H5''	27:BD:259:THR:HG22	1.64	0.78
25:DA:67:U:N3	25:DA:74:A:H2	1.74	0.78
36:DP:12:GLN:HE21	36:DP:73:PRO:HD2	1.48	0.78
1:AA:136:C:H42	1:AA:227:G:H1	1.29	0.78
1:AA:411:A:H62	1:AA:413:G:H21	1.30	0.78
1:AA:723:U:H2'	1:AA:723:U:O2	1.83	0.78
1:AA:975:A:C4'	1:AA:976:G:H5''	2.14	0.78
23:AC:5:G:N2	23:AC:69:C:O2	2.16	0.78
4:AG:200:GLU:OE1	4:AG:200:GLU:N	2.16	0.78
12:AO:43:LYS:N	12:AO:89:ASP:O	2.17	0.78
50:B4:42:PHE:CD1	50:B4:43:TYR:N	2.51	0.78
1:CA:1200:C:O2	1:CA:1200:C:H2'	1.83	0.78
4:CG:19:LEU:HB2	4:CG:21:LEU:HD11	1.64	0.78
11:CN:99:GLN:HG2	11:CN:105:VAL:HG21	1.66	0.78
40:D1:92:ARG:O	40:D1:94:ASN:N	2.15	0.78
1:AA:79:G:C2	1:AA:90:C:N3	2.52	0.78
1:AA:973:G:H3'	1:AA:974:A:H5''	1.66	0.78
1:AA:1346:A:H5''	9:AL:120:ARG:HH12	1.49	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:131:LYS:HB3	32:BK:132:PRO:CA	2.14	0.78
1:CA:1028(A):C:N3	1:CA:1032(B):G:O6	2.17	0.78
1:CA:141:A:H1'	1:CA:182:U:O2	1.83	0.78
25:DA:598:G:C1'	35:DO:12:ALA:HB2	2.13	0.78
22:AB:48:C:H3'	22:AB:49:A:C8	2.17	0.78
32:BK:11:ASN:O	32:BK:12:LEU:HB2	1.84	0.78
1:CA:1028(B):C:H3'	1:CA:1029:G:H5''	1.65	0.78
13:CP:13:LYS:NZ	13:CP:21:TYR:OH	2.17	0.78
14:CQ:26:ARG:HH12	14:CQ:47:LEU:HD21	1.47	0.78
31:DH:19:VAL:HG12	31:DH:20:ALA:H	1.49	0.78
36:DP:90:VAL:CG1	36:DP:90:VAL:O	2.32	0.78
1:AA:652:U:H1'	1:AA:653:A:C2	2.19	0.77
50:B4:42:PHE:CE1	50:B4:43:TYR:HB2	2.17	0.77
25:BA:654(M):C:H5''	25:BA:654(N):G:N7	1.99	0.77
36:BP:111:GLU:OE1	36:BP:133:ARG:NH2	2.17	0.77
9:CL:43:ALA:HA	9:CL:74:ILE:HD13	1.66	0.77
25:DA:1055:G:O2'	25:DA:1085:A:N1	2.16	0.77
25:BA:2646:C:OP2	25:BA:2732:G:O2'	2.02	0.77
20:CW:70:SER:O	20:CW:73:HIS:HB2	1.85	0.77
25:DA:885:C:C4	25:DA:890:A:C6	2.71	0.77
28:DE:2:LYS:NZ	28:DE:95:ILE:O	2.17	0.77
25:DA:2875:C:O2'	39:DR:3:ARG:HG3	1.84	0.77
1:AA:216:G:O2'	1:AA:217:C:O4'	2.00	0.77
2:AE:47:THR:HA	2:AE:202:PRO:HG2	1.64	0.77
6:AI:97:PHE:HD2	18:AU:31:LEU:HD21	1.48	0.77
25:BA:2347:C:H4'	52:B6:39:TYR:HE2	1.48	0.77
36:BP:17:LEU:CD2	36:BP:96:VAL:CG1	2.63	0.77
25:DA:2816:C:O3'	37:D0:99:LYS:NZ	2.17	0.77
27:DD:35:LYS:CG	27:DD:64:ILE:H	1.95	0.77
39:DR:27:THR:HG23	39:DR:90:GLN:HB3	1.65	0.77
44:DU:50:ARG:HB3	44:DU:53:PRO:HG3	1.66	0.77
1:AA:1053:G:O6	1:AA:1199:U:H2'	1.85	0.77
25:BA:2102:U:H3	25:BA:2187:G:H1	1.32	0.77
25:BA:890:A:H3'	25:BA:892:G:H8	1.47	0.77
27:BD:35:LYS:HZ1	27:BD:104:TYR:HB2	1.48	0.77
32:BK:126:TYR:HB2	32:BK:140:LEU:HD21	1.64	0.77
35:BO:19:VAL:CG2	35:BO:27:HIS:CB	2.36	0.77
38:BQ:59:LYS:HG2	38:BQ:60:GLY:H	1.48	0.77
39:BR:26:ASP:HB3	39:BR:92:GLY:H	1.49	0.77
1:CA:987:G:H1	1:CA:1218:C:H42	1.33	0.77
8:CK:10:LEU:HD22	8:CK:83:ILE:HD11	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:D4:21:VAL:HG22	50:D4:22:ILE:HD13	1.65	0.77
47:DZ:92:LYS:HB2	47:DZ:93:GLU:OE1	1.85	0.77
22:AB:75:C:O2'	22:AB:76:C:OP1	2.02	0.77
2:AE:16:HIS:CD2	2:AE:210:SER:HA	2.16	0.77
51:B5:3:LYS:HA	51:B5:3:LYS:HZ1	1.46	0.77
25:BA:2062:A:N3	25:BA:2062:A:H2'	1.96	0.77
35:BO:85:LEU:HA	35:BO:88:LEU:HD22	1.66	0.77
24:C1:12:A:H1'	24:C1:13:A:OP1	1.83	0.77
4:CG:8:VAL:HG11	4:CG:21:LEU:HB2	1.63	0.77
35:DO:16:ARG:HH11	35:DO:16:ARG:HG3	1.49	0.77
43:DT:67:GLY:O	43:DT:69:TYR:N	2.17	0.77
27:BD:35:LYS:NZ	27:BD:64:ILE:O	2.16	0.77
4:CG:150:GLU:HG2	4:CG:151:LYS:N	1.99	0.77
16:CS:23:ASP:OD1	16:CS:25:ARG:HG2	1.84	0.77
19:CV:66:MET:HA	19:CV:67:VAL:O	1.84	0.77
25:DA:1088:A:H4'	25:DA:1089:G:H8	1.50	0.77
25:DA:945:A:C5	25:DA:2448:A:C2	2.73	0.77
29:DF:22:ALA:C	29:DF:24:LEU:H	1.88	0.77
35:DO:146:VAL:HG13	35:DO:147:LEU:HD13	1.65	0.77
25:BA:583:G:OP2	40:B1:10:ARG:NH1	2.16	0.77
26:BB:48:A:H4'	38:BQ:95:HIS:HD2	1.49	0.77
25:BA:2744:G:H21	31:BH:143:GLN:HE22	1.30	0.77
35:BO:21:ARG:HA	35:BO:21:ARG:HE	1.48	0.77
35:BO:58:THR:HG22	35:BO:61:ARG:HH21	1.49	0.77
36:BP:14:ARG:HG2	36:BP:41:TRP:HH2	1.49	0.77
1:CA:509:A:O2'	1:CA:510:A:OP1	2.01	0.77
25:DA:2286:A:H5'	52:D6:28:ARG:HH22	1.47	0.77
27:DD:43:ARG:NH1	27:DD:44:ASN:ND2	2.23	0.77
25:BA:2015:A:O4'	51:B5:2:ALA:CB	2.33	0.77
25:BA:620:G:H4'	25:BA:621:A:C5'	2.14	0.77
22:CB:42:U:H5'	22:CB:43:G:OP2	1.85	0.77
25:DA:1860:G:H1	25:DA:1882:C:H42	1.33	0.77
39:DR:3:ARG:HG2	39:DR:6:LEU:H	1.49	0.77
1:AA:382:A:H2'	1:AA:383:A:C8	2.20	0.77
51:B5:2:ALA:O	51:B5:3:LYS:CB	2.33	0.77
54:D8:34:TRP:CG	54:D8:35:GLN:N	2.51	0.77
26:DB:52:A:O2'	26:DB:53:A:N7	2.18	0.77
45:DV:147:GLY:O	45:DV:149:SER:N	2.17	0.77
38:BQ:88:ASP:O	38:BQ:89:ARG:HB3	1.84	0.77
31:DH:27:LYS:HD3	31:DH:32:GLU:HB3	1.66	0.77
1:AA:736:C:H2'	1:AA:737:A:C8	2.20	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AE:74:LYS:HE3	2:AE:166:ASP:HB2	1.67	0.76
5:AH:153:LYS:H	8:AK:64:LYS:HZ1	1.32	0.76
12:AO:44:LYS:CE	12:AO:44:LYS:HA	2.15	0.76
51:B5:3:LYS:HA	51:B5:3:LYS:HZ2	1.50	0.76
25:BA:1278:A:OP1	37:B0:36:THR:HG23	1.86	0.76
22:AD:85:A:O2'	25:BA:2394:C:N3	2.15	0.76
29:BF:185:ASP:HA	29:BF:188:ARG:HD3	1.66	0.76
25:DA:1089:G:H4'	25:DA:1090:U:OP1	1.85	0.76
25:DA:1899:G:H21	25:DA:1902:C:H5	1.33	0.76
1:AA:1053:G:C5'	1:AA:1054:C:H5'	2.13	0.76
3:AF:27:LYS:HE2	3:AF:27:LYS:HA	1.67	0.76
9:AL:46:ALA:HA	9:AL:78:LYS:HB2	1.68	0.76
45:BV:7:ALA:HB2	45:BV:59:LEU:HD22	1.67	0.76
13:CP:37:THR:O	13:CP:55:ARG:NH2	2.14	0.76
25:DA:2420:C:OP1	54:D8:34:TRP:N	2.18	0.76
35:DO:70:GLN:N	35:DO:70:GLN:CD	2.39	0.76
36:DP:98:LYS:HB3	36:DP:99:PRO:HD2	1.65	0.76
1:AA:1157:A:O2'	1:AA:1158:C:O5'	2.02	0.76
4:AG:108:LEU:HB3	4:AG:110:PHE:HE1	1.49	0.76
7:AJ:111:ARG:HD2	7:AJ:123:GLU:HB2	1.67	0.76
21:AX:2:GLY:O	21:AX:4:GLY:N	2.18	0.76
54:B8:34:TRP:CE3	54:B8:35:GLN:CD	2.58	0.76
35:DO:62:LEU:CD1	54:D8:25:MET:O	2.26	0.76
41:B2:44:LYS:O	41:B2:46:VAL:HG12	1.86	0.76
1:CA:977:A:H2'	1:CA:978:A:H5'	1.67	0.76
25:DA:1068:G:O2'	25:DA:1096:A:O2'	2.02	0.76
25:DA:2602:A:H4'	25:DA:2603:G:O5'	1.83	0.76
25:DA:885:C:H41	25:DA:890:A:H62	1.33	0.76
25:DA:994:C:OP1	40:D1:53:ARG:NH2	2.19	0.76
1:CA:345:C:O2'	1:CA:346:G:O5'	2.02	0.76
2:CE:92:TYR:CE2	2:CE:151:GLY:HA3	2.19	0.76
25:DA:2420:C:N4	54:D8:31:HIS:HB3	2.01	0.76
30:DG:109:VAL:HG11	30:DG:142:PRO:HB3	1.68	0.76
35:DO:106:LEU:O	35:DO:106:LEU:HD12	1.86	0.76
18:AU:26:LEU:HB3	18:AU:42:ARG:HH22	1.49	0.76
19:AV:39:THR:HG22	19:AV:40:ILE:H	1.50	0.76
25:BA:674:G:H1'	29:BF:74:ARG:HD3	1.68	0.76
1:CA:1022:G:H2'	1:CA:1023:G:O4'	1.86	0.76
1:CA:266:G:H1	1:CA:270:A:N6	1.82	0.76
25:DA:2474:C:O2	25:DA:2474:C:H2'	1.84	0.76
36:DP:79:LEU:CD1	36:DP:79:LEU:C	2.54	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:B1:92:ARG:NH1	41:B2:11:GLN:O	2.19	0.76
50:B4:37:SER:HB3	50:B4:42:PHE:CZ	2.20	0.76
25:BA:528:A:N1	25:BA:2042:A:H2'	1.99	0.76
40:D1:50:ARG:HH12	41:D2:72:VAL:HA	1.51	0.76
25:DA:2272:U:H5''	25:DA:2273:A:OP1	1.86	0.76
29:DF:21:ALA:C	29:DF:23:ASP:H	1.89	0.76
29:DF:24:LEU:HB3	29:DF:25:PRO:HD2	1.67	0.76
22:AD:17:G:O2'	22:AD:66:G:N2	2.15	0.76
22:AD:22:A:N7	22:AD:57:C:N4	2.34	0.76
3:AF:6:HIS:HD2	3:AF:7:PRO:HD2	1.49	0.76
25:BA:2723:C:OP1	37:B0:3:HIS:HD2	1.69	0.76
50:B4:37:SER:CB	50:B4:42:PHE:CD2	2.68	0.76
44:BU:102:CYS:SG	44:BU:103:GLY:N	2.58	0.76
1:CA:1049:U:H4'	1:CA:1050:G:C5'	2.15	0.76
25:DA:1420:U:O2'	25:DA:1421:G:O5'	2.04	0.76
5:AH:110:LEU:HD13	5:AH:118:ILE:HD13	1.68	0.76
54:B8:35:GLN:O	54:B8:36:LYS:CB	2.34	0.76
25:BA:1204:A:O2'	25:BA:1205:U:OP2	2.03	0.76
25:BA:1533:C:C3'	25:BA:1534:G:H5''	2.13	0.76
25:BA:654:A:H2'	25:BA:654:A:N3	2.01	0.76
26:BB:7:G:H4'	38:BQ:29:PHE:CD1	2.20	0.76
31:BH:124:GLU:HG2	31:BH:126:PRO:HD3	1.66	0.76
35:BO:26:GLY:O	35:BO:28:GLY:N	2.19	0.76
1:CA:1004:A:H1'	1:CA:1036:G:C6	2.21	0.76
20:CW:73:HIS:O	20:CW:74:LYS:HB2	1.85	0.76
41:D2:70:ILE:O	41:D2:72:VAL:N	2.19	0.76
25:DA:1332:G:N2	25:DA:1610:A:H8	1.84	0.76
25:DA:2032:G:H21	28:DE:146:THR:HG23	1.49	0.76
25:DA:2286:A:H5'	52:D6:28:ARG:NH2	2.00	0.76
48:DW:17:SER:OG	48:DW:67:LYS:NZ	2.19	0.76
1:AA:1075:C:OP1	2:AE:179:LYS:NZ	2.14	0.76
1:AA:976:G:H5'	1:AA:1358:U:O2'	1.86	0.76
13:AP:108:ARG:NH1	13:AP:112:GLY:O	2.19	0.76
52:B6:25:LYS:CG	54:B8:34:TRP:CZ2	2.68	0.76
25:BA:2689:U:C4'	25:BA:2690:C:H5'	2.15	0.76
29:BF:66:PRO:O	29:BF:67:GLN:HB3	1.86	0.76
25:BA:957:A:OP1	36:BP:76:LYS:HD2	1.87	0.76
37:D0:33:ARG:HG3	37:D0:115:GLU:HG3	1.65	0.76
1:AA:8:A:N6	4:AG:205:GLU:O	2.18	0.75
15:AR:17:ARG:HH11	15:AR:17:ARG:CG	2.00	0.75
25:BA:747:U:N3	51:B5:2:ALA:N	2.34	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1509:C:H3'	25:BA:1510:A:H5''	1.67	0.75
25:BA:646:A:H2'	25:BA:647:G:O4'	1.86	0.75
43:BT:31:HIS:CD2	43:BT:33:LYS:H	2.04	0.75
1:CA:1176:A:H2'	1:CA:1177:G:C5'	2.16	0.75
10:CM:4:ILE:HB	10:CM:74:ILE:HD11	1.68	0.75
50:D4:46:GLN:NE2	50:D4:46:GLN:O	2.19	0.75
25:DA:2168:G:O6	25:DA:2171:A:N6	2.18	0.75
25:DA:2872:G:C4	25:DA:2873:A:C2	2.75	0.75
27:DD:75:ILE:HD12	27:DD:75:ILE:H	1.51	0.75
31:DH:3:ARG:HG3	31:DH:4:ILE:H	1.49	0.75
48:DW:17:SER:HB2	48:DW:18:PRO:CA	2.16	0.75
30:DG:66:GLN:HA	50:D4:6:HIS:HD2	1.49	0.75
36:DP:19:GLY:N	36:DP:98:LYS:HZ3	1.84	0.75
45:DV:33:LEU:HD23	45:DV:90:VAL:HG21	1.67	0.75
1:AA:642:A:N3	8:AK:113:SER:OG	2.18	0.75
30:BG:121:ASN:HD22	30:BG:123:ASN:H	1.32	0.75
45:BV:107:THR:O	45:BV:109:ALA:N	2.18	0.75
1:CA:1300:G:O2'	1:CA:1301:U:O5'	2.02	0.75
1:CA:382:A:H2'	1:CA:383:A:C8	2.22	0.75
25:DA:90:U:HO2'	25:DA:91:A:H8	1.33	0.75
1:AA:142:G:H1	1:AA:221:C:H42	1.34	0.75
2:AE:48:MET:HA	2:AE:51:LEU:HB2	1.67	0.75
31:BH:105:LEU:HD23	31:BH:105:LEU:H	1.51	0.75
4:CG:31:CYS:O	4:CG:33:MET:N	2.20	0.75
51:D5:4:HIS:HB3	51:D5:5:PRO:CD	2.08	0.75
25:DA:2119:A:N6	25:DA:2170:A:N7	2.33	0.75
29:DF:27:GLU:O	29:DF:28:ILE:HG12	1.85	0.75
1:AA:1145:C:H4'	1:AA:1146:A:C8	2.22	0.75
25:BA:1090:U:O4	25:BA:1101:U:O2	2.04	0.75
25:BA:1510:A:H2'	25:BA:1510:A:N3	2.01	0.75
25:BA:1537:C:H2'	25:BA:1538:G:O4'	1.87	0.75
25:BA:1130:U:O2	28:BE:149:ARG:NH2	2.20	0.75
28:BE:36:ARG:NH1	28:BE:85:ASN:OD1	2.20	0.75
31:BH:152:ARG:HH21	31:BH:153:LYS:HZ1	1.33	0.75
35:BO:16:ARG:HH11	35:BO:16:ARG:HG3	1.49	0.75
25:BA:1243:G:O2'	35:BO:7:ARG:NH2	2.19	0.75
24:C1:11:U:H1'	24:C1:12:A:OP1	1.86	0.75
25:DA:1169:G:H2'	25:DA:1170:G:O4'	1.86	0.75
25:DA:1899:G:N2	25:DA:1902:C:C5	2.53	0.75
25:DA:2389:G:H5''	25:DA:2390:U:H5'	1.67	0.75
1:AA:1301:U:H3'	1:AA:1302:U:H5'	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:992:U:H4'	1:AA:993:G:O5'	1.85	0.75
1:AA:1346:A:H5''	9:AL:120:ARG:NH1	2.02	0.75
46:B3:36:ILE:HD13	46:B3:36:ILE:O	1.86	0.75
50:B4:42:PHE:CZ	50:B4:43:TYR:CB	2.68	0.75
29:BF:46:ARG:NH1	29:BF:46:ARG:HG2	1.96	0.75
30:BG:21:ARG:HH11	30:BG:21:ARG:CG	2.00	0.75
30:BG:21:ARG:HH11	30:BG:21:ARG:HG2	1.51	0.75
35:BO:66:GLY:O	35:BO:67:MET:HB2	1.86	0.75
42:BS:68:ARG:O	42:BS:110:LYS:N	2.15	0.75
42:BS:9:TYR:H	42:BS:102:HIS:CD2	2.03	0.75
25:DA:1757:U:O2	25:DA:1762:A:N1	2.20	0.75
1:AA:1145:C:H4'	1:AA:1146:A:H8	1.52	0.75
50:B4:43:TYR:HD1	50:B4:44:THR:N	1.85	0.75
25:BA:2610:C:H4'	25:BA:2611:U:OP2	1.86	0.75
30:BG:83:ARG:H	30:BG:86:MET:HE3	1.50	0.75
1:CA:1129:C:H4'	1:CA:1130:A:C5'	2.17	0.75
22:CB:48:C:H3'	22:CB:49:A:C8	2.21	0.75
2:CE:22:LYS:HE3	2:CE:40:HIS:CE1	2.22	0.75
53:D7:8:ASN:HD22	53:D7:11:LYS:H	1.35	0.75
25:DA:1068:G:HO2'	25:DA:1096:A:HO2'	1.34	0.75
25:DA:907:U:H5'	36:DP:23:GLY:O	1.86	0.75
27:DD:255:LYS:HE3	27:DD:255:LYS:N	2.00	0.75
29:DF:125:LEU:HD23	29:DF:125:LEU:H	1.51	0.75
29:DF:16:GLY:O	29:DF:18:ARG:N	2.20	0.75
34:DN:24:VAL:HB	34:DN:33:ALA:HB2	1.69	0.75
42:DS:65:LEU:HD13	42:DS:68:ARG:HD2	1.66	0.75
37:B0:44:LEU:HD22	37:B0:48:VAL:HG12	1.69	0.75
41:B2:59:ALA:HB2	41:B2:96:ILE:HD13	1.67	0.75
54:B8:34:TRP:CG	54:B8:35:GLN:HB2	2.20	0.75
25:BA:660:G:H21	35:BO:12:ALA:HA	1.51	0.75
1:CA:266:G:H1'	1:CA:267:C:OP2	1.85	0.75
1:CA:415:A:N6	1:CA:428:G:O6	2.19	0.75
1:CA:957:U:O2'	1:CA:959:A:N7	2.16	0.75
9:CL:112:LYS:HA	9:CL:119:ALA:HB2	1.68	0.75
46:D3:31:VAL:HG12	46:D3:35:ASN:HB2	1.67	0.75
25:DA:2681:C:C4	25:DA:2725:A:N6	2.54	0.75
29:DF:116:ASP:OD1	35:DO:1:MET:N	2.15	0.75
1:AA:1032(A):G:H2'	1:AA:1032(B):G:C8	2.22	0.75
1:AA:1055:A:O2'	3:AF:161:GLU:OE1	2.02	0.75
54:B8:32:LEU:O	54:B8:36:LYS:CE	2.34	0.75
34:BN:4:PRO:O	34:BN:5:GLN:HB2	1.85	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:266:G:H5'	1:CA:268:C:H41	1.52	0.75
1:CA:542:G:OP1	4:CG:10:ARG:NH2	2.19	0.75
4:CG:25:ARG:O	4:CG:27:TYR:N	2.20	0.75
9:CL:7:THR:O	9:CL:83:ARG:NH1	2.20	0.75
12:CO:29:PHE:HB2	12:CO:82:ILE:O	1.87	0.75
25:DA:1460:A:H4'	25:DA:1461:G:OP2	1.87	0.75
5:AH:144:THR:OG1	5:AH:147:ASP:OD2	2.05	0.74
12:AO:44:LYS:CB	12:AO:45:PRO:HD3	2.07	0.74
41:B2:35:LEU:C	41:B2:37:VAL:H	1.88	0.74
51:B5:4:HIS:CB	51:B5:5:PRO:HD3	2.10	0.74
25:BA:2287:A:N6	25:BA:2344:U:H3	1.77	0.74
1:CA:1157:A:H1'	1:CA:1158:C:N3	2.01	0.74
1:CA:1392:G:N2	1:CA:1502:A:H8	1.84	0.74
3:CF:119:ARG:HH22	3:CF:140:ARG:HG2	1.51	0.74
9:CL:111:ARG:HG2	9:CL:112:LYS:N	2.02	0.74
27:DD:148:GLU:HB2	27:DD:151:LYS:HD2	1.67	0.74
1:AA:519:C:OP2	12:AO:47:SER:OG	2.05	0.74
22:AB:56:U:O2	22:AB:56:U:H2'	1.84	0.74
2:AE:124:SER:HB2	2:AE:125:PRO:HD2	1.69	0.74
12:AO:44:LYS:CD	12:AO:45:PRO:N	2.50	0.74
25:BA:1279:G:H4'	37:B0:31:HIS:CD2	2.22	0.74
25:BA:1081:U:O2'	25:BA:1082:U:OP1	2.04	0.74
25:BA:2702:U:H6	25:BA:2702:U:OP1	1.69	0.74
44:BU:56:PRO:O	44:BU:58:GLY:N	2.20	0.74
2:CE:172:ILE:HD12	2:CE:172:ILE:H	1.51	0.74
37:D0:57:ARG:HB3	37:D0:59:ASP:OD2	1.86	0.74
50:D4:22:ILE:HD13	50:D4:22:ILE:H	1.51	0.74
25:DA:895:U:H4'	25:DA:896:A:C5	2.21	0.74
2:AE:25:ASN:O	2:AE:27:LYS:N	2.20	0.74
36:BP:37:LEU:HD21	36:BP:130:LYS:HE3	1.69	0.74
45:BV:160:GLY:O	45:BV:161:VAL:HG13	1.87	0.74
22:CD:52:G:H2'	22:CD:53:A:C8	2.23	0.74
5:CH:51:VAL:HB	5:CH:52:PRO:HD3	1.67	0.74
12:CO:23:ALA:O	12:CO:24:LEU:HD22	1.88	0.74
25:DA:847:U:O4	25:DA:933:A:C5	2.40	0.74
35:DO:81:GLN:HE22	35:DO:107:LYS:CG	1.93	0.74
1:AA:81:G:N1	1:AA:88:C:C4	2.55	0.74
52:B6:29:ASN:O	52:B6:32:ASN:ND2	2.19	0.74
25:BA:1045:A:H1'	25:BA:1047:G:N3	2.02	0.74
32:BK:13:GLY:HA3	32:BK:17:GLN:OE1	1.87	0.74
25:DA:857:C:H1'	46:D3:26:TYR:HE2	1.51	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2123:G:N2	25:DA:2175:C:N3	2.31	0.74
1:AA:1124:G:H3'	1:AA:1145:C:H41	1.51	0.74
1:AA:81:G:N2	1:AA:88:C:N3	2.35	0.74
25:BA:49:A:C8	25:BA:120:U:H5	2.04	0.74
25:BA:1364:G:N7	47:BZ:2:SER:HB3	2.02	0.74
25:BA:2469:A:N6	25:BA:2481:G:H1'	2.03	0.74
44:BU:97:ARG:O	44:BU:97:ARG:NE	2.20	0.74
1:CA:526:C:OP2	12:CO:88:LYS:NZ	2.21	0.74
10:CM:54:PHE:CD2	10:CM:55:LYS:HD3	2.23	0.74
25:DA:1899:G:O2'	25:DA:1900:A:H5''	1.88	0.74
1:AA:1116:C:H2'	1:AA:1117:G:H5'	1.69	0.74
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.02	0.74
6:AI:41:GLU:O	6:AI:43:LEU:N	2.20	0.74
13:AP:13:LYS:O	13:AP:44:ARG:NH1	2.21	0.74
52:D6:18:ARG:HH12	52:D6:43:CYS:HB2	1.52	0.74
25:DA:932:G:H4'	25:DA:933:A:O5'	1.87	0.74
25:DA:847:U:C4	25:DA:933:A:C5	2.76	0.74
35:DO:15:ARG:CB	35:DO:15:ARG:HH11	2.01	0.74
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.51	0.74
1:AA:517:G:N1	1:AA:533:A:OP2	2.21	0.74
1:CA:976:G:H5'	1:CA:1358:U:O2'	1.88	0.74
9:CL:28:VAL:HG22	9:CL:63:ILE:HB	1.70	0.74
11:CN:69:ALA:HB1	11:CN:103:LEU:HD23	1.70	0.74
35:DO:62:LEU:HD13	54:D8:27:THR:HG22	1.69	0.74
25:DA:1047:G:H2'	25:DA:1110:G:H22	1.51	0.74
25:DA:2394:C:OP1	35:DO:63:PRO:CD	2.35	0.74
1:AA:267:C:OP1	17:AT:67:LYS:HD2	1.87	0.74
4:AG:92:VAL:O	4:AG:96:LEU:HD23	1.86	0.74
5:AH:100:VAL:O	5:AH:107:ARG:NH2	2.20	0.74
5:AH:68:GLU:HG2	5:AH:70:PRO:HD3	1.68	0.74
8:AK:73:ASP:OD2	8:AK:75:ARG:NE	2.21	0.74
10:AM:39:PRO:HB3	10:AM:70:ARG:NH1	2.03	0.74
25:BA:2143:C:N3	25:BA:2148:G:N2	2.32	0.74
32:BK:69:LYS:HB2	32:BK:136:VAL:HB	1.70	0.74
36:BP:66:ILE:HG13	36:BP:67:ARG:H	1.52	0.74
22:CD:48:C:H3'	22:CD:49:A:C8	2.16	0.74
20:CW:87:LYS:HE3	20:CW:87:LYS:HA	1.69	0.74
25:DA:747:U:OP2	51:D5:3:LYS:HD2	1.88	0.74
25:DA:1309:G:H3'	53:D7:9:ARG:HH12	1.51	0.74
25:DA:2776:A:H4'	25:DA:2777:G:O5'	1.86	0.74
31:DH:7:LEU:H	31:DH:8:PRO:HD3	1.51	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DS:59:VAL:HG23	42:DS:65:LEU:H	1.53	0.74
1:AA:498:A:H4'	1:AA:500:G:OP1	1.87	0.74
1:AA:963:G:H21	10:AM:55:LYS:HZ1	1.35	0.74
54:B8:48:PHE:HE2	54:B8:50:LEU:HD13	1.51	0.74
25:BA:2566:A:H4'	25:BA:2567:G:O5'	1.87	0.74
28:BE:61:ARG:HB2	28:BE:62:PRO:HD3	1.68	0.74
35:BO:19:VAL:CG2	35:BO:27:HIS:CA	2.66	0.74
1:CA:1347:G:O2'	1:CA:1373:G:O6	2.06	0.74
20:CW:100:ILE:HD12	20:CW:100:ILE:H	1.53	0.74
54:D8:24:ALA:H	54:D8:49:VAL:HG23	1.52	0.74
25:DA:1342:A:N1	25:DA:1397:U:C4	2.56	0.74
25:DA:2762:G:H3'	25:DA:2763:G:H5''	1.66	0.74
25:DA:2815:C:H5'	51:D5:29:THR:HG21	1.69	0.74
27:DD:64:ILE:O	27:DD:64:ILE:HG13	1.88	0.74
1:AA:161:A:N1	1:AA:347:G:O2'	2.21	0.74
13:AP:26:GLY:O	13:AP:28:ALA:N	2.21	0.74
25:BA:642:G:N2	25:BA:645:C:OP2	2.21	0.74
25:BA:889:C:H3'	25:BA:890:A:H4'	1.70	0.74
32:BK:72:LEU:HD11	32:BK:107:VAL:HG11	1.70	0.74
3:CF:164:ARG:NH2	3:CF:166:GLU:OE1	2.21	0.74
34:DN:4:PRO:O	34:DN:5:GLN:HB2	1.86	0.74
35:DO:85:LEU:HB3	35:DO:114:ILE:CD1	2.18	0.74
4:AG:126:ILE:HD13	4:AG:127:THR:H	1.51	0.73
36:BP:75:THR:CB	36:BP:88:GLY:HA3	2.13	0.73
25:DA:1416:G:O2'	25:DA:1417:C:O5'	2.04	0.73
27:DD:268:ARG:NH1	27:DD:268:ARG:HB3	2.02	0.73
27:DD:25:THR:C	27:DD:27:THR:H	1.91	0.73
25:DA:252:G:OP2	35:DO:50:ARG:CZ	2.35	0.73
37:B0:57:ARG:HB3	37:B0:59:ASP:OD2	1.88	0.73
46:B3:24:LYS:HG3	46:B3:36:ILE:HD11	1.70	0.73
25:BA:2635:C:H5''	28:BE:78:LEU:HA	1.71	0.73
38:BQ:36:TYR:N	38:BQ:36:TYR:CD1	2.53	0.73
16:CS:1:MET:HE1	16:CS:65:GLN:HB2	1.70	0.73
19:CV:39:THR:HG22	19:CV:40:ILE:H	1.53	0.73
28:DE:12:THR:O	28:DE:23:VAL:HG22	1.88	0.73
44:DU:8:LYS:O	44:DU:27:VAL:HG21	1.88	0.73
50:B4:42:PHE:CD1	50:B4:43:TYR:HB3	2.21	0.73
25:BA:2402:C:H5	25:BA:2415:G:H22	1.35	0.73
4:CG:127:THR:HG21	4:CG:149:ALA:HB3	1.70	0.73
1:CA:362:G:O2'	12:CO:30:ARG:NH2	2.20	0.73
25:DA:2298:A:H61	25:DA:2318:G:H2'	1.53	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:943:U:OP2	35:DO:36:LYS:HG3	1.87	0.73
35:DO:71:VAL:CG1	35:DO:72:PRO:CD	2.31	0.73
4:AG:190:ASP:O	4:AG:192:GLU:N	2.21	0.73
35:BO:64:LYS:HB2	54:B8:25:MET:HG3	1.68	0.73
25:BA:404:C:H1'	25:BA:405:U:OP2	1.88	0.73
30:BG:139:LEU:HD11	30:BG:152:LEU:HD22	1.68	0.73
42:BS:92:ARG:NH1	42:BS:94:ASP:OD2	2.22	0.73
1:CA:1278:U:H5'	1:CA:1279:A:O4'	1.88	0.73
25:DA:1049:C:N3	31:DH:2:SER:N	2.37	0.73
25:DA:2127:G:N2	25:DA:2161:C:N3	2.32	0.73
44:DU:43:ASN:HB3	44:DU:64:GLU:HA	1.69	0.73
50:B4:37:SER:HA	50:B4:42:PHE:HB3	1.69	0.73
52:B6:25:LYS:CD	54:B8:34:TRP:CZ2	2.72	0.73
25:BA:1292:U:H2'	25:BA:1293:C:C6	2.23	0.73
35:BO:15:ARG:CB	35:BO:15:ARG:HH11	2.01	0.73
22:CD:7:G:N2	22:CD:76:C:O2	2.21	0.73
4:CG:139:ARG:NH1	4:CG:139:ARG:HG3	2.01	0.73
13:CP:84:ILE:O	13:CP:86:CYS:N	2.20	0.73
41:D2:70:ILE:N	41:D2:86:GLY:O	2.21	0.73
25:DA:1323:U:H2'	25:DA:1324:G:H5'	1.71	0.73
25:DA:1535:U:H2'	25:DA:1535:U:O2	1.89	0.73
25:DA:2134:A:N6	25:DA:2157:G:H1'	2.03	0.73
27:DD:108:PRO:HB3	27:DD:143:HIS:CE1	2.23	0.73
25:DA:2414:G:N2	35:DO:67:MET:CE	2.41	0.73
38:DQ:88:ASP:O	38:DQ:89:ARG:HB3	1.89	0.73
45:DV:52:SER:O	45:DV:54:HIS:N	2.21	0.73
1:AA:1331:G:O2'	1:AA:1332:A:O5'	2.05	0.73
2:AE:69:LEU:HB3	2:AE:162:ILE:HG22	1.70	0.73
25:BA:2790:A:H1'	25:BA:2893:G:O2'	1.89	0.73
25:BA:882:G:H3'	25:BA:883:G:H5''	1.69	0.73
30:BG:64:THR:HG23	30:BG:94:LEU:HD13	1.68	0.73
3:CF:95:THR:HG22	3:CF:97:LYS:HG2	1.71	0.73
8:CK:103:VAL:HG21	8:CK:110:ALA:HB2	1.70	0.73
25:DA:1434:A:H61	25:DA:1558:A:H62	1.33	0.73
25:DA:1495:A:C2'	25:DA:1496:A:H5'	2.19	0.73
29:DF:21:ALA:O	29:DF:23:ASP:N	2.20	0.73
29:DF:25:PRO:HB3	29:DF:28:ILE:HG23	1.70	0.73
36:DP:90:VAL:HG12	36:DP:90:VAL:O	1.86	0.73
39:DR:61:PHE:CE2	39:DR:76:PHE:HB2	2.23	0.73
44:DU:81:LYS:HD3	44:DU:97:ARG:CZ	2.19	0.73
16:AS:28:ARG:HG2	16:AS:29:ASP:OD2	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2142:C:N4	25:BA:2149:G:N1	2.32	0.73
25:BA:2439:A:H5'	25:BA:2439:A:C8	2.23	0.73
27:BD:112:GLN:NE2	27:BD:115:GLN:OE1	2.21	0.73
43:BT:67:GLY:O	43:BT:69:TYR:N	2.21	0.73
25:DA:620:G:H5'	25:DA:620:G:N3	2.03	0.73
35:DO:105:LEU:O	35:DO:106:LEU:CB	2.37	0.73
47:DZ:29:GLY:O	47:DZ:30:VAL:HG22	1.88	0.73
1:AA:529:G:O6	12:AO:46:ASN:ND2	2.21	0.73
1:AA:618:C:H5''	1:AA:619:U:H5''	1.69	0.73
8:AK:51:VAL:HG11	8:AK:60:ARG:HH11	1.53	0.73
25:BA:1359:A:H2'	25:BA:1360:A:H5'	1.70	0.73
25:BA:1534:G:H3'	25:BA:1534:G:N3	2.04	0.73
36:BP:35:VAL:HG13	36:BP:130:LYS:HB3	1.71	0.73
1:CA:1279:A:O2'	1:CA:1281:U:OP2	2.03	0.73
35:DO:104:GLY:O	35:DO:105:LEU:CG	2.36	0.73
36:DP:135:ASP:O	36:DP:137:TYR:N	2.21	0.73
1:AA:1029:G:O2'	1:AA:1032(A):G:N2	2.22	0.73
10:AM:33:GLN:HB2	10:AM:75:ILE:HD11	1.71	0.73
15:AR:87:ILE:HG22	15:AR:88:ARG:N	2.02	0.73
28:BE:120:TRP:CE3	28:BE:155:LYS:HD3	2.24	0.73
33:BM:47:ALA:HB2	33:BM:112:LEU:HD11	1.70	0.73
29:DF:25:PRO:HB2	29:DF:27:GLU:H	1.53	0.73
42:DS:9:TYR:H	42:DS:102:HIS:CD2	2.07	0.73
24:A1:12:A:O2'	24:A1:13:A:O5'	2.06	0.73
1:AA:719:C:O2'	18:AU:49:LYS:HB3	1.89	0.73
4:AG:108:LEU:HB3	4:AG:110:PHE:CE1	2.23	0.73
40:B1:66:ASN:HD21	40:B1:70:ARG:HE	1.37	0.73
25:BA:1203:G:H3'	25:BA:1204:A:H5''	1.70	0.73
25:BA:2394:C:OP1	35:BO:63:PRO:HD2	1.88	0.73
39:BR:136:GLN:HG3	39:BR:137:LYS:H	1.54	0.73
1:CA:991:U:O2'	1:CA:992:U:O5'	2.07	0.73
12:CO:24:LEU:HD21	12:CO:57:LEU:HG	1.71	0.73
13:CP:83:ASP:O	13:CP:84:ILE:HB	1.89	0.73
25:DA:2212:A:H4'	25:DA:2213:U:C5	2.24	0.73
25:DA:2387:U:H5''	25:DA:2388:A:OP2	1.88	0.73
25:DA:463:G:N2	25:DA:466:A:OP2	2.19	0.73
35:DO:57:THR:O	35:DO:59:LEU:N	2.21	0.73
25:BA:1050:A:H2'	25:BA:1051:G:O4'	1.88	0.72
25:BA:1495:A:H1'	25:BA:1579:A:H5''	1.69	0.72
31:BH:86:GLU:CG	31:BH:165:ALA:H	2.02	0.72
34:BN:68:GLU:OE2	34:BN:78:ARG:NH1	2.21	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:974:A:OP2	14:CQ:41:ARG:NH1	2.22	0.72
25:DA:1024:G:H3'	25:DA:1025:G:H5''	1.68	0.72
25:DA:1342:A:N6	25:DA:1602:U:C2	2.57	0.72
25:DA:270(L):U:H3	32:DK:50:ARG:NH1	1.87	0.72
35:DO:57:THR:C	35:DO:59:LEU:H	1.90	0.72
35:DO:61:ARG:HH21	35:DO:61:ARG:HB3	1.54	0.72
49:DX:26:LEU:HD21	49:DX:46:ASN:HB2	1.69	0.72
3:AF:130:VAL:O	3:AF:134:ILE:HG12	1.89	0.72
52:B6:25:LYS:HD2	54:B8:34:TRP:CE2	2.24	0.72
25:BA:2015:A:O4'	51:B5:2:ALA:HB1	1.89	0.72
1:CA:345:C:H1'	1:CA:346:G:C2	2.24	0.72
19:CV:78:ARG:HD3	19:CV:78:ARG:N	2.04	0.72
25:DA:1386:C:H2'	25:DA:1387:C:H6	1.52	0.72
25:DA:2795:G:H3'	25:DA:2797:U:C5'	2.17	0.72
40:B1:108:GLU:OE2	40:B1:112:ARG:NH1	2.22	0.72
27:BD:148:GLU:HB2	27:BD:151:LYS:HD2	1.70	0.72
25:DA:1071:G:H5''	25:DA:1072:C:OP2	1.89	0.72
25:DA:1057:A:N1	25:DA:1081:U:O4	2.22	0.72
25:DA:2619:C:OP1	28:DE:152:LYS:HE2	1.89	0.72
34:DN:47:ILE:HG13	34:DN:48:PRO:HD2	1.71	0.72
38:DQ:93:LYS:NZ	38:DQ:93:LYS:HB2	2.05	0.72
37:B0:97:VAL:HG22	37:B0:114:VAL:HG22	1.71	0.72
25:BA:2015:A:C4	51:B5:2:ALA:HA	2.24	0.72
25:BA:2701:C:C3'	25:BA:2702:U:H5''	2.20	0.72
28:BE:78:LEU:O	28:BE:79:ARG:HB2	1.89	0.72
35:BO:112:LEU:H	35:BO:128:HIS:HD2	1.35	0.72
36:BP:21:THR:O	36:BP:21:THR:HG22	1.89	0.72
45:BV:63:ASP:N	45:BV:64:GLY:HA2	2.03	0.72
1:CA:1160:G:H1	1:CA:1177:G:N2	1.87	0.72
1:CA:1346:A:H1'	1:CA:1347:G:OP2	1.89	0.72
1:CA:1443:G:H3'	1:CA:1446:A:C5'	2.18	0.72
25:DA:914:C:H6	25:DA:915:C:H5''	1.55	0.72
36:DP:31:ASP:OD1	36:DP:134:ARG:NH2	2.22	0.72
1:AA:1157:A:N6	1:AA:1178:G:H21	1.87	0.72
4:AG:98:GLU:OE2	4:AG:103:ASN:ND2	2.22	0.72
40:B1:17:ILE:HG23	40:B1:39:LEU:HD12	1.71	0.72
25:BA:1778:U:H2'	25:BA:1784:A:N6	2.04	0.72
25:BA:1991:U:H2'	25:BA:1992:G:H5''	1.71	0.72
31:BH:3:ARG:NE	31:BH:3:ARG:HA	2.05	0.72
24:C1:11:U:O2'	24:C1:12:A:C4	2.39	0.72
1:CA:1199:U:H4'	10:CM:54:PHE:CE1	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:997:G:OP1	40:D1:93:LYS:HD2	1.89	0.72
25:DA:1826:G:H4'	27:DD:242:ARG:NH2	2.05	0.72
25:DA:2557:G:H2'	25:DA:2558:C:H6	1.52	0.72
25:DA:2762:G:C3'	25:DA:2763:G:H5''	2.19	0.72
25:DA:90:U:O2'	25:DA:91:A:C8	2.42	0.72
27:DD:35:LYS:HZ1	27:DD:104:TYR:HB2	1.54	0.72
35:DO:81:GLN:NE2	35:DO:107:LYS:CG	2.51	0.72
1:AA:173:U:H5''	1:AA:197:A:O4'	1.89	0.72
1:AA:411:A:C4	1:AA:413:G:H1'	2.23	0.72
3:AF:181:ASN:ND2	3:AF:204:LEU:HB2	2.04	0.72
41:B2:21:ARG:NH2	41:B2:91:TYR:OH	2.22	0.72
25:BA:163:U:C2'	25:BA:164:U:H5'	2.19	0.72
1:CA:1239:A:O2'	1:CA:1298:C:N4	2.22	0.72
52:D6:34:LEU:HD23	52:D6:34:LEU:H	1.53	0.72
28:DE:31:CYS:SG	28:DE:51:PHE:HB2	2.29	0.72
12:AO:59:SER:O	12:AO:61:TYR:N	2.22	0.72
25:BA:1899:G:H21	25:BA:1902:C:H5	1.36	0.72
25:BA:2470:G:H5'	36:BP:56:ARG:HH22	1.53	0.72
1:CA:1129:C:C4	1:CA:1139:G:N1	2.58	0.72
1:CA:1157:A:O2'	1:CA:1158:C:O2	2.05	0.72
1:CA:1176:A:C2'	1:CA:1177:G:H5'	2.18	0.72
3:CF:113:ALA:HB3	3:CF:114:PRO:HD3	1.72	0.72
3:CF:23:TYR:HD2	3:CF:24:ALA:N	1.88	0.72
4:CG:3:ARG:HE	4:CG:118:ARG:HD3	1.52	0.72
39:DR:60:THR:HG22	39:DR:77:PRO:HA	1.72	0.72
39:DR:85:LYS:NZ	39:DR:87:ASP:OD2	2.17	0.72
3:AF:6:HIS:CD2	3:AF:7:PRO:HD2	2.25	0.72
41:B2:16:PRO:HD3	41:B2:99:ILE:HD11	1.71	0.72
30:BG:145:THR:O	30:BG:147:ASP:N	2.22	0.72
39:BR:87:ASP:N	39:BR:87:ASP:OD1	2.21	0.72
1:CA:1321:C:H41	1:CA:1322:C:N4	1.85	0.72
1:CA:690:G:H1	11:CN:55:LYS:NZ	1.88	0.72
25:DA:2191:G:O2'	25:DA:2192:G:OP1	2.07	0.72
25:DA:2306:C:H3'	25:DA:2307:G:C5'	2.20	0.72
26:BB:13:A:N1	26:BB:69:G:O2'	2.20	0.72
42:BS:64:MET:O	42:BS:65:LEU:HB2	1.88	0.72
44:BU:34:LYS:O	44:BU:34:LYS:HD3	1.90	0.72
1:CA:1502:A:H2	1:CA:1505:G:H1	1.36	0.72
1:CA:818:G:O2'	1:CA:819:A:H5'	1.90	0.72
1:CA:975:A:C4'	1:CA:976:G:H5''	2.19	0.72
21:CX:2:GLY:O	21:CX:4:GLY:N	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DM:136:GLU:O	33:DM:137:LYS:NZ	2.23	0.72
43:DT:12:VAL:HG12	43:DT:28:PHE:HA	1.72	0.72
20:AW:71:THR:HG22	20:AW:72:LEU:N	2.03	0.72
50:B4:52:THR:O	50:B4:53:GLU:HB2	1.88	0.72
25:BA:1980:G:O2'	25:BA:1982:C:OP2	2.08	0.72
25:BA:2307:G:C8	25:BA:2311:A:H2	2.07	0.72
25:BA:908:C:OP1	36:BP:22:LYS:HB3	1.89	0.72
38:BQ:106:ARG:HA	38:BQ:110:LEU:HD22	1.72	0.72
20:CW:46:GLU:HG2	20:CW:48:LYS:HE2	1.72	0.72
25:DA:242:G:O5'	54:D8:3:LYS:HE3	1.88	0.72
35:DO:107:LYS:HB3	35:DO:110:TYR:HD2	1.55	0.72
45:DV:74:VAL:HG12	45:DV:86:VAL:HG22	1.71	0.72
1:AA:1497:G:H2'	1:AA:1498:U:H5'	1.70	0.71
1:AA:49:U:O2'	1:AA:50:A:H3'	1.90	0.71
11:AN:54:ARG:NH1	22:AD:40:U:O2'	2.24	0.71
25:BA:273(F):C:H3'	25:BA:274:G:C5'	2.20	0.71
25:BA:2795:G:H3'	25:BA:2797:U:C5'	2.20	0.71
27:BD:26:LYS:HD2	27:BD:26:LYS:H	1.55	0.71
32:BK:132:PRO:O	32:BK:133:HIS:ND1	2.23	0.71
38:BQ:108:GLY:H	38:BQ:110:LEU:HD21	1.55	0.71
38:BQ:24:LEU:HB3	38:BQ:85:VAL:HG12	1.72	0.71
34:BN:104:ARG:HH22	39:BR:43:GLN:NE2	1.88	0.71
1:CA:652:U:H1'	1:CA:653:A:C2	2.25	0.71
8:CK:113:SER:HB2	8:CK:134:ILE:HD11	1.72	0.71
25:DA:1011:G:H2'	25:DA:1013:C:O4'	1.89	0.71
25:DA:2275:C:O2'	36:DP:84:GLY:CA	2.37	0.71
25:DA:2355:C:H5'	46:D3:36:ILE:HD11	1.71	0.71
25:DA:2439:A:H5'	25:DA:2439:A:C8	2.23	0.71
35:DO:95:VAL:HG22	35:DO:125:VAL:HA	1.71	0.71
36:DP:26:TYR:HD1	36:DP:139:GLU:HG2	1.54	0.71
5:AH:31:LEU:HD23	5:AH:45:PHE:HD1	1.55	0.71
9:AL:47:LEU:HD13	9:AL:47:LEU:H	1.53	0.71
25:BA:1081:U:O2'	25:BA:1082:U:O4'	2.08	0.71
25:BA:2439:A:O2'	25:BA:2440:C:OP2	2.06	0.71
28:BE:111:ARG:HG3	28:BE:160:TYR:HD1	1.55	0.71
32:BK:73:GLU:HG3	32:BK:136:VAL:HG23	1.71	0.71
35:BO:19:VAL:HG23	35:BO:27:HIS:HB3	0.73	0.71
48:BW:42:GLY:O	48:BW:44:LEU:N	2.23	0.71
1:CA:422:C:O2'	1:CA:423:G:C2	2.43	0.71
1:CA:991:U:O2	1:CA:993:G:H8	1.73	0.71
26:DB:74:U:C2'	26:DB:75:G:H5''	2.19	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DP:83:MET:SD	36:DP:83:MET:N	2.63	0.71
23:AC:24:C:H2'	23:AC:25:U:C6	2.25	0.71
2:AE:67:THR:HG21	2:AE:155:LEU:HG	1.70	0.71
25:BA:71:A:C2	43:BT:31:HIS:CE1	2.78	0.71
27:BD:71:ASP:HB3	27:BD:103:ARG:NH2	2.06	0.71
48:BW:32:LEU:HD11	48:BW:54:LYS:HG2	1.71	0.71
4:CG:9:CYS:HA	4:CG:12:CYS:HB2	1.71	0.71
25:DA:2820:A:O2'	25:DA:2821:A:OP1	2.07	0.71
30:DG:125:PHE:HB3	30:DG:166:ASP:HB2	1.71	0.71
35:DO:47:ASP:CB	35:DO:48:PRO:O	2.36	0.71
1:AA:1020:U:H2'	1:AA:1021:G:C8	2.25	0.71
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.23	0.71
4:AG:150:GLU:N	4:AG:150:GLU:OE1	2.23	0.71
6:AI:69:GLU:O	6:AI:71:ARG:N	2.23	0.71
31:BH:80:SER:O	31:BH:81:GLU:HG3	1.89	0.71
45:BV:76:LEU:HD23	45:BV:76:LEU:H	1.54	0.71
1:CA:974:A:P	14:CQ:41:ARG:HH12	2.14	0.71
2:CE:104:ASN:OD1	2:CE:107:THR:OG1	2.07	0.71
12:CO:44:LYS:CB	12:CO:45:PRO:HD3	2.19	0.71
41:D2:85:LYS:HG3	41:D2:87:HIS:N	2.05	0.71
25:DA:2537:U:H2'	25:DA:2538:C:C6	2.24	0.71
35:DO:61:ARG:HG2	35:DO:61:ARG:NH2	2.02	0.71
1:AA:685:G:O2'	1:AA:686:U:H5'	1.90	0.71
5:AH:8:GLU:OE1	5:AH:63:ARG:NH2	2.23	0.71
10:AM:4:ILE:HB	10:AM:74:ILE:HG13	1.73	0.71
1:AA:192:U:H4'	20:AW:103:GLY:HA2	1.70	0.71
25:BA:1069:A:H4'	25:BA:1070:A:C5'	2.19	0.71
25:BA:1900:A:C8	25:BA:1900:A:H5'	2.23	0.71
25:BA:2114:A:N3	25:BA:2114:A:H2'	2.05	0.71
36:BP:83:MET:SD	36:BP:83:MET:N	2.63	0.71
24:C1:12:A:O2'	24:C1:13:A:P	2.47	0.71
1:AA:1502:A:H2	1:AA:1505:G:H1	1.36	0.71
1:AA:1504:G:OP1	1:AA:1507:A:H4'	1.90	0.71
1:AA:736:C:H2'	1:AA:737:A:H8	1.55	0.71
1:AA:963:G:N2	10:AM:55:LYS:HZ1	1.88	0.71
13:AP:4:ILE:HG22	13:AP:5:ALA:H	1.54	0.71
25:BA:996:A:OP2	40:B1:92:ARG:NH2	2.23	0.71
27:BD:35:LYS:CD	27:BD:104:TYR:CD1	2.72	0.71
35:BO:112:LEU:H	35:BO:128:HIS:CD2	2.09	0.71
36:BP:17:LEU:HD23	36:BP:96:VAL:CG1	2.20	0.71
1:CA:1286:A:H3'	1:CA:1287:A:H5''	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CF:91:LEU:HD11	3:CF:101:LEU:HD12	1.72	0.71
25:DA:1225:C:H4'	41:D2:85:LYS:HD3	1.73	0.71
51:D5:16:ARG:HG2	51:D5:16:ARG:NH1	1.92	0.71
25:DA:2468:G:H3'	25:DA:2476:A:C2	2.26	0.71
25:DA:38:A:H2'	25:DA:39:C:C6	2.26	0.71
29:DF:53:THR:HG23	29:DF:55:GLY:H	1.56	0.71
35:DO:15:ARG:NH1	35:DO:15:ARG:CG	2.39	0.71
27:BD:35:LYS:HG2	27:BD:64:ILE:H	1.53	0.71
24:C1:12:A:O2'	24:C1:13:A:O5'	2.09	0.71
1:CA:1158:C:C2	1:CA:1160:G:N7	2.58	0.71
1:CA:250:A:H4'	1:CA:251:G:O5'	1.91	0.71
3:CF:131:ARG:HE	3:CF:166:GLU:HG2	1.56	0.71
5:CH:91:LEU:HD12	5:CH:120:THR:HG22	1.73	0.71
8:CK:116:LYS:HD2	8:CK:129:VAL:HG11	1.72	0.71
51:D5:4:HIS:CB	51:D5:5:PRO:HD3	2.19	0.71
54:D8:49:VAL:HG12	54:D8:50:LEU:N	2.03	0.71
25:DA:1639:U:C2'	25:DA:1640:C:H5''	2.20	0.71
25:DA:27:G:N2	25:DA:512:G:H1'	2.04	0.71
25:DA:598:G:H1'	35:DO:12:ALA:HB2	1.72	0.71
1:AA:210:U:HO2'	1:AA:216:G:H8	1.38	0.71
6:AI:69:GLU:O	6:AI:72:VAL:HG12	1.91	0.71
14:AQ:4:LYS:O	14:AQ:7:ILE:HG13	1.91	0.71
52:B6:43:CYS:HB3	52:B6:44:ARG:HH11	1.55	0.71
54:B8:52:LYS:N	54:B8:53:PRO:HD2	2.05	0.71
26:BB:18:G:H1	26:BB:65:C:H42	1.39	0.71
1:CA:1023:G:H3'	1:CA:1024:G:H5''	1.71	0.71
22:CB:49:A:H2	22:CB:51:C:OP2	1.73	0.71
6:CI:11:ASN:O	6:CI:14:LEU:HD22	1.91	0.71
25:DA:252:G:P	35:DO:50:ARG:NH1	2.57	0.71
11:AN:21:ILE:HG12	11:AN:30:VAL:HG12	1.72	0.71
37:B0:33:ARG:NH1	51:B5:55:ARG:O	2.24	0.71
36:BP:51:ARG:HG2	36:BP:51:ARG:HH11	1.54	0.71
25:BA:960:A:H61	36:BP:83:MET:HE2	1.56	0.71
54:D8:23:VAL:HG22	54:D8:47:LYS:HB3	1.73	0.71
25:DA:2655:G:N2	25:DA:2665:A:OP2	2.24	0.71
25:DA:527:C:OP2	25:DA:2779:U:H5	1.73	0.71
25:DA:885:C:C5	25:DA:890:A:N6	2.59	0.71
27:DD:35:LYS:CG	27:DD:64:ILE:HG12	2.20	0.71
44:DU:17:SER:HB2	44:DU:71:LYS:HD2	1.71	0.71
45:DV:62:PRO:O	45:DV:64:GLY:N	2.24	0.71
1:AA:1027:C:H4'	1:AA:1028:C:OP1	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AO:42:PRO:HB2	12:AO:46:ASN:O	1.91	0.71
15:AR:82:ILE:HD11	15:AR:88:ARG:CG	2.21	0.71
25:BA:1434:A:H61	25:BA:1558:A:N6	1.88	0.71
25:BA:2133:G:H1'	25:BA:2158:A:N6	2.00	0.71
45:BV:30:ASN:OD1	45:BV:90:VAL:HB	1.91	0.71
1:CA:328:C:C2'	1:CA:329:A:OP2	2.38	0.71
41:D2:44:LYS:O	41:D2:46:VAL:N	2.24	0.71
50:D4:34:GLU:C	50:D4:36:CYS:H	1.94	0.71
25:DA:1444(A):A:H2'	25:DA:1444(A):A:N3	2.05	0.71
25:DA:2712:U:H1'	25:DA:2712(A):A:C8	2.26	0.71
36:DP:23:GLY:HA2	36:DP:25:ASP:HB2	1.73	0.71
1:AA:1027:C:C4'	1:AA:1028:C:OP1	2.38	0.70
1:AA:1178:G:N2	1:AA:1181:G:C8	2.58	0.70
19:AV:32:LYS:HG3	19:AV:50:ALA:HB3	1.74	0.70
29:BF:127:GLU:O	29:BF:129:PHE:N	2.24	0.70
1:CA:1095:U:P	1:CA:1108:G:H1	2.13	0.70
1:CA:1182:G:H4'	1:CA:1183:A:H5''	1.72	0.70
25:DA:2140:C:N3	25:DA:2151:G:O6	2.24	0.70
25:DA:2645:G:H3'	25:DA:2646:C:H5'	1.73	0.70
25:DA:2839:G:H5'	37:D0:46:GLY:HA2	1.72	0.70
17:AT:81:ARG:NH2	17:AT:83:ASP:OD2	2.23	0.70
50:B4:37:SER:OG	50:B4:42:PHE:CD2	2.44	0.70
52:B6:42:TRP:N	52:B6:42:TRP:CD1	2.59	0.70
33:BM:35:ARG:O	33:BM:42:TRP:CZ3	2.44	0.70
34:BN:24:VAL:HA	34:BN:39:ILE:HG22	1.73	0.70
22:CB:20:C:O2'	22:CB:68:A:N7	2.21	0.70
11:CN:29:ILE:HG22	11:CN:44:SER:HB2	1.72	0.70
25:DA:2108:C:H42	25:DA:2181:G:H1	1.39	0.70
27:DD:35:LYS:HD2	27:DD:104:TYR:CD1	2.25	0.70
29:DF:66:PRO:O	29:DF:67:GLN:HB3	1.91	0.70
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.56	0.70
1:AA:789:U:C5	1:AA:792:A:OP2	2.42	0.70
25:BA:18:C:O3'	40:B1:23:GLY:HA2	1.91	0.70
13:AP:3:ARG:CD	50:B4:34:GLU:HB2	2.21	0.70
25:BA:1729:A:H8	25:BA:1730:U:C5	2.09	0.70
42:BS:79:GLY:HA3	42:BS:100:THR:HG22	1.73	0.70
10:CM:79:ARG:H	10:CM:79:ARG:HD3	1.54	0.70
25:DA:517:C:OP1	51:D5:16:ARG:NH2	2.24	0.70
43:DT:28:PHE:CD1	43:DT:28:PHE:N	2.57	0.70
44:DU:63:LYS:HA	44:DU:63:LYS:HZ1	1.56	0.70
10:AM:49:VAL:CG2	14:AQ:41:ARG:HB2	2.22	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B4:18:CYS:HB3	50:B4:41:PRO:HG3	1.73	0.70
25:BA:1803:A:O2'	27:BD:259:THR:HG21	1.90	0.70
27:BD:34:VAL:C	27:BD:35:LYS:HG3	2.12	0.70
39:BR:107:ASP:O	39:BR:110:ILE:HG22	1.89	0.70
2:CE:237:ALA:O	2:CE:238:LEU:HB3	1.91	0.70
25:DA:2286:A:P	52:D6:28:ARG:HH12	2.13	0.70
25:DA:1043:C:N4	25:DA:1112:G:H1	1.89	0.70
25:DA:1174:A:N6	25:DA:1176:G:O2'	2.25	0.70
36:DP:14:ARG:HG2	36:DP:41:TRP:CH2	2.26	0.70
36:DP:21:THR:HG22	36:DP:21:THR:O	1.91	0.70
1:CA:1443:G:N2	39:DR:119:LYS:HB2	2.06	0.70
9:AL:18:PHE:HD1	9:AL:62:TYR:HD2	1.38	0.70
52:B6:25:LYS:HG3	54:B8:34:TRP:HZ2	1.56	0.70
25:BA:2317:C:H2'	25:BA:2318:G:H5'	1.72	0.70
30:BG:16:ARG:O	30:BG:20:ILE:HG13	1.92	0.70
22:CB:78:C:H4'	22:CB:79:A:OP1	1.91	0.70
25:DA:847:U:H3	25:DA:933:A:H61	1.39	0.70
47:DZ:86:SER:N	47:DZ:87:PRO:CD	2.54	0.70
1:AA:1175:G:H2'	1:AA:1176:A:C8	2.26	0.70
1:AA:339:C:OP2	34:BN:97:ARG:NH1	2.24	0.70
8:AK:87:SER:HB2	8:AK:93:VAL:HB	1.73	0.70
13:AP:94:ARG:O	13:AP:96:LEU:N	2.25	0.70
54:B8:34:TRP:CE3	54:B8:35:GLN:CG	2.73	0.70
38:BQ:29:PHE:HD2	38:BQ:30:ARG:N	1.89	0.70
1:CA:1200:C:H5'	1:CA:1201:A:H5'	1.73	0.70
2:CE:224:GLN:HA	2:CE:229:VAL:HG22	1.73	0.70
2:CE:52:GLU:HG2	2:CE:56:ARG:HH22	1.56	0.70
17:CT:63:ARG:HG2	17:CT:64:PRO:HD2	1.74	0.70
20:CW:64:ASP:OD1	20:CW:81:LYS:HD3	1.91	0.70
25:DA:2882:A:H5'	37:D0:96:ARG:HG3	1.71	0.70
5:AH:45:PHE:CD2	5:AH:47:LYS:HD2	2.26	0.70
25:BA:2015:A:C1'	51:B5:2:ALA:HB1	2.20	0.70
29:BF:107:LYS:HE3	29:BF:207:GLY:H	1.56	0.70
1:CA:1298:C:H4'	1:CA:1299:A:C8	2.27	0.70
10:CM:40:LEU:HG	10:CM:41:PRO:HD2	1.72	0.70
29:DF:152:GLU:CD	29:DF:191:ARG:HD2	2.11	0.70
2:AE:69:LEU:HB2	2:AE:159:PRO:HG3	1.72	0.70
13:AP:49:THR:HG22	13:AP:51:ALA:H	1.57	0.70
51:B5:40:LYS:HG2	51:B5:47:PRO:HD2	1.73	0.70
54:B8:52:LYS:H	54:B8:53:PRO:HD2	1.56	0.70
26:BB:13:A:O2'	26:BB:14:U:H3'	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:9:ILE:HD11	29:BF:125:LEU:HG	1.74	0.70
1:CA:1322:C:O2'	1:CA:1323:G:H5'	1.92	0.70
4:CG:62:GLN:HE22	4:CG:65:ARG:HE	1.40	0.70
25:DA:2328:A:H2'	25:DA:2329:G:C8	2.27	0.70
25:DA:2402:C:O2'	25:DA:2403:C:OP1	2.07	0.70
25:DA:2816:C:O2	25:DA:2883:A:O2'	2.09	0.70
25:DA:2880:C:O3'	37:D0:90:ARG:NH1	2.25	0.70
38:DQ:62:LYS:HB3	38:DQ:97:ARG:HD3	1.74	0.70
1:AA:1116:C:C2'	1:AA:1117:G:H5'	2.20	0.70
2:AE:8:LYS:N	2:AE:8:LYS:HE2	2.04	0.70
25:BA:1771:C:H1'	25:BA:1786:A:H8	1.56	0.70
25:BA:1854:A:H62	25:BA:1888:G:H8	1.38	0.70
1:CA:1054:C:O2'	1:CA:1055:A:O5'	2.09	0.70
22:CD:57:C:H4'	22:CD:58:G:O5'	1.91	0.70
3:CF:32:LEU:O	3:CF:36:ASP:HB2	1.91	0.70
25:DA:1110:G:O2'	25:DA:1111:A:O4'	2.08	0.70
27:DD:108:PRO:HB3	27:DD:143:HIS:HE1	1.56	0.70
1:AA:78:G:N1	1:AA:91:C:N4	2.28	0.70
22:AB:48:C:C3'	22:AB:49:A:H8	2.04	0.70
22:AD:9:U:O2	22:AD:9:U:H2'	1.91	0.70
10:AM:40:LEU:HB2	10:AM:69:ASN:HB2	1.73	0.70
13:AP:49:THR:HB	13:AP:52:GLU:HG3	1.72	0.70
37:B0:30:THR:HG22	37:B0:31:HIS:ND1	2.07	0.70
25:BA:559:G:H22	40:B1:49:HIS:CD2	2.09	0.70
25:BA:2068:U:H3	25:BA:2430:A:H2	1.39	0.70
25:BA:2636:U:OP1	28:BE:79:ARG:HA	1.92	0.70
44:BU:96:ILE:HG22	44:BU:101:LYS:HE2	1.72	0.70
45:BV:45:ASP:O	45:BV:49:ARG:HG2	1.92	0.70
3:CF:8:ILE:O	3:CF:11:ARG:N	2.20	0.70
25:DA:1899:G:N2	25:DA:1902:C:H5	1.89	0.70
25:DA:2210:G:H3'	25:DA:2211:G:C4	2.25	0.70
25:DA:91:A:C2'	25:DA:92:G:H5'	2.21	0.70
38:DQ:108:GLY:O	38:DQ:110:LEU:HD22	1.91	0.70
45:DV:139:VAL:HG21	45:DV:155:LEU:HD22	1.72	0.70
1:AA:411:A:C5	1:AA:413:G:H1'	2.27	0.69
1:AA:963:G:H21	10:AM:55:LYS:CE	2.05	0.69
22:AD:48:C:H2'	22:AD:49:A:O4'	1.91	0.69
50:B4:39:CYS:C	50:B4:41:PRO:HD3	2.13	0.69
54:B8:32:LEU:C	54:B8:36:LYS:HE3	2.13	0.69
25:BA:1019:U:O2'	25:BA:1021:A:H2	1.75	0.69
35:BO:71:VAL:HG13	35:BO:72:PRO:HD3	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BT:41:ASN:N	43:BT:41:ASN:HD22	1.87	0.69
48:BW:47:ASN:C	48:BW:49:LYS:H	1.96	0.69
1:CA:1129:C:H4'	1:CA:1130:A:H5'	1.74	0.69
5:CH:60:TYR:HA	5:CH:63:ARG:HG3	1.73	0.69
9:CL:65:VAL:HG21	9:CL:73:GLN:HB3	1.73	0.69
27:DD:166:GLN:HE21	27:DD:166:GLN:CA	2.05	0.69
39:DR:16:ARG:HE	39:DR:19:LEU:HD11	1.57	0.69
1:AA:999:U:O2'	25:DA:2137:C:H5'	1.91	0.69
3:AF:40:ARG:O	3:AF:44:GLU:HG2	1.92	0.69
16:AS:50:LYS:HD3	16:AS:51:VAL:H	1.57	0.69
25:BA:2135:A:N6	25:BA:2156:G:O2'	2.25	0.69
25:BA:2150:U:H2'	25:BA:2151:G:C8	2.27	0.69
36:BP:25:ASP:O	36:BP:25:ASP:CG	2.30	0.69
38:BQ:59:LYS:HG2	38:BQ:60:GLY:N	2.07	0.69
43:BT:31:HIS:HD2	43:BT:33:LYS:H	1.40	0.69
1:CA:365:U:H5''	1:CA:366:C:OP1	1.92	0.69
1:CA:1326:C:OP1	21:CX:12:LYS:NZ	2.24	0.69
25:DA:780:G:H21	25:DA:783:A:H62	1.41	0.69
27:DD:30:GLU:HG3	27:DD:63:ARG:CZ	2.22	0.69
30:DG:35:GLU:O	30:DG:36:LYS:HB3	1.91	0.69
35:DO:47:ASP:OD2	35:DO:49:ARG:CB	2.34	0.69
38:DQ:88:ASP:OD2	38:DQ:89:ARG:N	2.25	0.69
4:AG:25:ARG:C	4:AG:27:TYR:H	1.93	0.69
5:AH:8:GLU:HG2	5:AH:34:VAL:HG22	1.73	0.69
54:B8:43:GLN:C	54:B8:44:LYS:HD2	2.12	0.69
25:BA:1771:C:C1'	25:BA:1786:A:H8	2.05	0.69
28:BE:2:LYS:NZ	28:BE:95:ILE:O	2.25	0.69
32:BK:8:PRO:HD3	32:BK:15:VAL:HG23	1.74	0.69
38:BQ:78:LEU:HD12	38:BQ:108:GLY:HA2	1.74	0.69
39:BR:20:PRO:HD2	39:BR:86:ILE:HG23	1.73	0.69
1:CA:1026:G:N7	1:CA:1036:G:N2	2.39	0.69
1:CA:1392:G:H21	1:CA:1502:A:H8	1.40	0.69
22:CB:29:C:H2'	22:CB:30:A:C8	2.27	0.69
12:CO:55:VAL:HG21	12:CO:82:ILE:HD11	1.74	0.69
15:CR:11:VAL:HG21	15:CR:34:LEU:HD22	1.72	0.69
35:DO:64:LYS:CD	54:D8:25:MET:SD	2.75	0.69
25:DA:2872:G:C5	25:DA:2873:A:C2	2.79	0.69
27:DD:58:HIS:HD2	27:DD:59:LYS:O	1.75	0.69
39:DR:6:LEU:HD12	39:DR:9:LEU:HD13	1.73	0.69
25:BA:1535:U:H3'	25:BA:1536:A:C5'	2.22	0.69
26:BB:88:C:H2'	26:BB:89:G:O4'	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:35:LYS:HG2	27:BD:64:ILE:CG2	2.22	0.69
25:BA:2276:G:P	36:BP:84:GLY:HA2	2.31	0.69
1:CA:345:C:O2	1:CA:346:G:N2	2.24	0.69
1:CA:411:A:C5	1:CA:413:G:H1'	2.26	0.69
4:CG:73:ARG:O	4:CG:77:ASN:ND2	2.25	0.69
20:CW:67:ALA:HA	20:CW:73:HIS:HA	1.73	0.69
25:DA:848:G:H2'	25:DA:849:A:C8	2.28	0.69
44:DU:61:ILE:HG22	44:DU:62:GLU:H	1.57	0.69
3:AF:92:ALA:HB2	3:AF:99:VAL:HG22	1.74	0.69
13:AP:3:ARG:NE	13:AP:9:ILE:HD11	2.06	0.69
16:AS:8:ARG:HB3	16:AS:28:ARG:NH1	2.08	0.69
41:B2:15:GLU:O	41:B2:18:LEU:HB2	1.93	0.69
25:BA:1113:U:OP1	31:BH:2:SER:N	2.24	0.69
25:BA:1525:G:H2'	25:BA:1526:G:H8	1.56	0.69
25:BA:2035:G:H4'	25:BA:2036:C:OP2	1.91	0.69
25:BA:593:G:O3'	54:B8:61:LEU:HD22	1.92	0.69
27:BD:43:ARG:HD2	27:BD:44:ASN:OD1	1.93	0.69
32:BK:144:VAL:O	32:BK:145:VAL:HG22	1.91	0.69
1:CA:1004:A:H5''	1:CA:1025:U:O4	1.92	0.69
1:CA:1443:G:H22	39:DR:119:LYS:HB2	1.57	0.69
1:CA:455:C:H42	1:CA:477:G:H1	1.40	0.69
2:CE:236:TYR:HB2	2:CE:239:VAL:HB	1.75	0.69
5:CH:101:ILE:HD11	5:CH:119:LEU:HD23	1.72	0.69
41:D2:28:GLU:HB3	41:D2:29:PRO:HD2	1.73	0.69
25:DA:1453:A:C6	25:DA:2702:U:H1'	2.28	0.69
1:AA:87:A:H2'	1:AA:88:C:H6	1.56	0.69
25:BA:1888:G:N3	25:BA:1888:G:H5'	2.07	0.69
9:CL:16:ARG:HB3	9:CL:64:THR:HG22	1.74	0.69
25:DA:1171:G:N2	25:DA:1178:C:N3	2.35	0.69
25:DA:1341:U:H2'	25:DA:1397:U:O2	1.93	0.69
25:DA:1342:A:C6	25:DA:1397:U:C4	2.80	0.69
27:DD:35:LYS:HE3	27:DD:64:ILE:C	2.13	0.69
29:DF:119:ARG:HH11	29:DF:119:ARG:HG2	1.57	0.69
1:AA:1176:A:H3'	1:AA:1177:G:H5''	1.73	0.69
1:AA:160:A:H1'	1:AA:344:A:C8	2.28	0.69
25:BA:1534:G:H1	25:BA:1538:G:N2	1.90	0.69
1:CA:1218:C:OP2	14:CQ:9:LYS:NZ	2.25	0.69
1:CA:1366:C:OP1	9:CL:117:HIS:HE1	1.75	0.69
13:CP:15:VAL:O	13:CP:19:LEU:HG	1.92	0.69
34:DN:112:MET:O	34:DN:115:VAL:HG23	1.93	0.69
44:DU:43:ASN:N	44:DU:43:ASN:HD22	1.90	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DV:59:LEU:O	45:DV:60:GLU:HB3	1.91	0.69
1:AA:1498:U:H1'	1:AA:1499:A:OP2	1.92	0.69
1:AA:244:U:H4'	1:AA:245:C:O5'	1.92	0.69
22:AB:78:C:O2'	22:AB:79:A:P	2.50	0.69
13:AP:67:GLU:HG2	13:AP:71:ARG:NH2	2.08	0.69
51:B5:3:LYS:CE	51:B5:3:LYS:HA	2.22	0.69
25:BA:1728:G:H5'	25:BA:1729:A:OP2	1.93	0.69
25:BA:2820:A:O2'	25:BA:2821:A:OP1	2.09	0.69
25:BA:654(A):A:H2	25:BA:654(T):A:N1	1.90	0.69
30:BG:21:ARG:HG2	30:BG:21:ARG:NH1	2.06	0.69
1:CA:452:A:O2'	1:CA:453:A:O5'	2.11	0.69
1:CA:509:A:H2'	1:CA:510:A:C8	2.27	0.69
22:CB:52:G:H2'	22:CB:53:A:C8	2.26	0.69
1:CA:1250:A:H4'	9:CL:68:GLY:N	2.07	0.69
12:CO:72:HIS:HD2	12:CO:74:LEU:N	1.91	0.69
25:DA:2211:G:H3'	25:DA:2212:A:C2	2.27	0.69
25:DA:631:A:OP1	35:DO:64:LYS:HE2	1.93	0.69
1:AA:1004:A:O4'	1:AA:1036:G:C6	2.46	0.69
25:BA:2303:G:C2'	25:BA:2304:G:H5'	2.22	0.69
25:BA:2467:C:C2'	25:BA:2468:G:H5'	2.23	0.69
25:BA:259:G:O2'	25:BA:621:A:O2'	2.08	0.69
11:CN:48:ILE:HD11	11:CN:64:ALA:HA	1.75	0.69
1:CA:235:C:H5'	17:CT:70:ARG:HG2	1.75	0.69
25:DA:1496:A:H8	25:DA:1577:C:O2'	1.75	0.69
25:DA:2255:G:N2	36:DP:85:LYS:HE2	2.08	0.69
25:DA:660:G:N2	35:DO:12:ALA:HA	2.08	0.69
26:DB:89(A):A:N7	26:DB:90:C:H1'	2.07	0.69
33:DM:39:ARG:C	33:DM:41:ASP:H	1.96	0.69
1:AA:156:G:H1	1:AA:165:C:N4	1.90	0.69
1:AA:452:A:O2'	1:AA:453:A:O5'	2.10	0.69
1:AA:652:U:H1'	1:AA:653:A:H2	1.58	0.69
6:AI:35:ALA:HB1	6:AI:65:VAL:HG21	1.73	0.69
41:B2:24:LYS:HA	41:B2:92:THR:HG23	1.73	0.69
52:B6:27:LYS:H	52:B6:27:LYS:NZ	1.88	0.69
25:BA:1043:C:H2'	25:BA:1044:G:H5'	1.74	0.69
33:BM:13:TRP:O	33:BM:135:PRO:HD2	1.93	0.69
36:BP:79:LEU:C	36:BP:80:GLU:OE2	2.30	0.69
42:BS:86:LEU:HD12	42:BS:87:PRO:HD2	1.74	0.69
45:BV:28:MET:HB2	45:BV:37:VAL:HG11	1.73	0.69
25:DA:1689:A:N7	25:DA:1698:A:N1	2.41	0.69
25:DA:2748:A:H62	25:DA:2754:U:H3	1.38	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DD:35:LYS:NZ	27:DD:104:TYR:HB2	2.08	0.69
25:DA:322:A:H3'	29:DF:169:ASN:ND2	2.06	0.69
1:AA:1182:G:H4'	1:AA:1183:A:H5'	1.74	0.69
1:AA:422:C:O2'	1:AA:423:G:H5''	1.93	0.69
2:AE:211:ILE:O	2:AE:215:LEU:HB2	1.92	0.69
52:B6:11:LEU:HB3	52:B6:25:LYS:HA	1.75	0.69
25:BA:598:G:H1'	35:BO:12:ALA:CB	2.22	0.69
29:BF:11:VAL:HB	29:BF:18:ARG:HG3	1.75	0.69
33:BM:46:VAL:HG13	33:BM:48:MET:HG3	1.75	0.69
35:BO:50:ARG:HD3	54:B8:7:HIS:CD2	2.27	0.69
3:CF:162:GLN:HG2	24:C1:24:A:H1'	1.75	0.69
1:CA:1126:U:O2'	1:CA:1127:G:P	2.50	0.69
18:CU:22:VAL:HG22	18:CU:23:LYS:H	1.58	0.69
25:DA:1397:U:O2'	25:DA:1398:C:P	2.51	0.69
25:DA:2468:G:N2	25:DA:2481:G:O2'	2.25	0.69
25:DA:920:G:H2'	25:DA:921:G:H8	1.58	0.69
45:DV:174:VAL:O	45:DV:175:VAL:HB	1.93	0.69
1:AA:1301:U:O2	1:AA:1301:U:H2'	1.93	0.68
1:AA:677:U:H3	1:AA:713:G:H22	1.39	0.68
22:AB:48:C:H42	22:AB:52:G:H1	1.41	0.68
11:AN:21:ILE:HB	11:AN:84:VAL:HG12	1.74	0.68
50:B4:43:TYR:CD1	50:B4:44:THR:N	2.61	0.68
25:BA:2392:A:H2	25:BA:2424:C:N4	1.92	0.68
1:CA:1128:C:O2'	1:CA:1129:C:P	2.51	0.68
1:CA:1374:A:H2'	1:CA:1375:A:H5'	1.75	0.68
41:D2:79:VAL:O	41:D2:80:GLN:NE2	2.24	0.68
32:DK:78:THR:HB	32:DK:104:GLN:HE22	1.58	0.68
45:DV:157:LEU:HD21	45:DV:163:LEU:HD22	1.75	0.68
1:AA:1003:G:H2'	1:AA:1004:A:C5'	2.22	0.68
1:AA:992:U:H1'	1:AA:993:G:OP2	1.93	0.68
2:AE:31:TYR:O	2:AE:42:ILE:HG13	1.93	0.68
14:AQ:12:ARG:C	14:AQ:14:PRO:HD2	2.13	0.68
54:B8:23:VAL:HG11	54:B8:46:ARG:HD3	1.75	0.68
25:BA:1270:C:H5''	25:BA:1271:G:O5'	1.92	0.68
25:BA:2689:U:H4'	25:BA:2690:C:C5'	2.17	0.68
25:BA:890:A:C8	25:BA:892:G:C8	2.77	0.68
25:BA:1798:U:C5'	27:BD:259:THR:HG22	2.23	0.68
27:BD:35:LYS:HE3	27:BD:64:ILE:C	2.13	0.68
22:CD:18:G:C1'	22:CD:19:C:OP2	2.38	0.68
3:CF:15:THR:HG21	3:CF:181:ASN:HA	1.74	0.68
4:CG:15:GLU:HG3	4:CG:63:LYS:HG3	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CV:78:ARG:HD3	19:CV:78:ARG:H	1.58	0.68
46:D3:40:GLN:OE1	46:D3:44:ARG:N	2.25	0.68
25:DA:1019:U:H2'	25:DA:1020:A:H8	1.57	0.68
25:DA:1426:G:H5''	25:DA:1427:A:OP2	1.93	0.68
25:DA:65:C:H4'	43:DT:69:TYR:CD1	2.29	0.68
36:DP:66:ILE:HD12	36:DP:67:ARG:N	2.08	0.68
1:AA:630:G:H2'	1:AA:631:G:O4'	1.94	0.68
1:AA:688:G:H2'	1:AA:689:C:H6	1.59	0.68
3:AF:83:ARG:O	3:AF:86:VAL:N	2.26	0.68
25:BA:1069:A:N7	25:BA:1073:A:N6	2.40	0.68
25:BA:2167:U:O2'	25:BA:2168:G:OP1	2.11	0.68
26:BB:15:A:H5'	26:BB:16:G:H8	1.52	0.68
44:BU:49:VAL:HB	44:BU:50:ARG:HH21	1.58	0.68
40:D1:76:TYR:OH	40:D1:93:LYS:HE2	1.94	0.68
25:DA:2683:C:OP1	39:DR:53:ARG:NH2	2.23	0.68
29:DF:117:ARG:HH12	35:DO:1:MET:H2	1.39	0.68
48:DW:46:GLN:HB2	48:DW:49:LYS:HZ1	1.58	0.68
1:AA:1028:C:N3	1:AA:1033:G:N2	2.39	0.68
23:AC:20:G:H4'	23:AC:21:U:OP2	1.93	0.68
22:AD:22:A:H2'	22:AD:22:A:N3	2.07	0.68
21:AX:3:LYS:HB3	21:AX:14:TRP:CD1	2.29	0.68
25:BA:1332:G:N2	25:BA:1610:A:H8	1.91	0.68
25:BA:1871:A:H2'	25:BA:1872:A:C8	2.28	0.68
1:CA:1160:G:O6	1:CA:1181:G:C6	2.47	0.68
4:CG:70:ILE:HD11	4:CG:100:ARG:HD2	1.73	0.68
14:CQ:23:ARG:HD3	14:CQ:29:ARG:O	1.94	0.68
54:D8:48:PHE:CG	54:D8:49:VAL:N	2.61	0.68
25:DA:171:G:H2'	25:DA:172:C:C6	2.29	0.68
25:DA:1771:C:H1'	25:DA:1786:A:C8	2.28	0.68
25:DA:2059:A:H5'	25:DA:2060:A:OP2	1.93	0.68
25:DA:2439:A:O2'	25:DA:2440:C:OP2	2.09	0.68
35:DO:46:LYS:HG3	35:DO:51:PHE:CE2	2.29	0.68
45:DV:27:VAL:HG12	45:DV:87:ASP:HB3	1.74	0.68
37:B0:1:MET:O	37:B0:2:ARG:HB2	1.93	0.68
25:BA:1588:C:H2'	25:BA:1589:C:H6	1.59	0.68
25:BA:270(O):U:H5''	25:BA:270(P):C:OP2	1.93	0.68
25:BA:528:A:C2	25:BA:2043:C:H4'	2.29	0.68
33:BM:22:THR:HG22	33:BM:23:LEU:N	2.08	0.68
25:BA:910:A:N7	36:BP:13:GLN:HG3	2.09	0.68
1:CA:838:G:N1	1:CA:842:C:H1'	2.08	0.68
10:CM:54:PHE:CG	10:CM:55:LYS:HD3	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CP:78:ILE:HG23	13:CP:92:HIS:HD2	1.58	0.68
17:CT:67:LYS:HA	17:CT:70:ARG:HH12	1.58	0.68
41:D2:6:LYS:H	41:D2:37:VAL:HG12	1.59	0.68
29:DF:117:ARG:HH12	35:DO:1:MET:N	1.91	0.68
29:DF:32:LEU:O	29:DF:36:VAL:HG23	1.93	0.68
31:DH:7:LEU:N	31:DH:8:PRO:CD	2.57	0.68
35:DO:9:ASN:CB	35:DO:10:PRO:HD2	2.22	0.68
36:DP:75:THR:HG21	36:DP:87:LYS:HE2	1.75	0.68
41:B2:35:LEU:H	41:B2:35:LEU:HD22	1.58	0.68
25:BA:2418:A:OP2	54:B8:29:LYS:HE3	1.93	0.68
25:BA:1931:U:H5	25:BA:1969:A:N7	1.92	0.68
28:BE:144:ARG:HG3	28:BE:144:ARG:HH11	1.58	0.68
28:BE:51:PHE:CD1	28:BE:52:LEU:HG	2.28	0.68
30:BG:66:GLN:OE1	30:BG:98:ARG:NH1	2.27	0.68
43:BT:41:ASN:HD22	43:BT:41:ASN:H	1.40	0.68
1:CA:255:G:O6	1:CA:270:A:N6	2.26	0.68
1:CA:632:A:C1'	1:CA:633:G:OP2	2.39	0.68
1:CA:1318:A:O2'	19:CV:37:ARG:HB3	1.93	0.68
25:DA:1645:G:H5''	25:DA:1646:C:H5'	1.76	0.68
25:DA:2520:C:H41	25:DA:2542:A:H62	1.39	0.68
25:DA:329:G:H4'	25:DA:330:A:OP2	1.94	0.68
25:DA:528:A:C2	25:DA:2042:A:H2'	2.28	0.68
30:DG:104:GLU:HG2	50:D4:23:GLU:CG	2.20	0.68
30:DG:11:TYR:HA	30:DG:15:VAL:HB	1.76	0.68
34:DN:88:ASN:HB3	34:DN:94:ARG:HD3	1.74	0.68
52:B6:33:LYS:HG3	52:B6:34:LEU:HD22	1.75	0.68
54:B8:34:TRP:HB3	54:B8:35:GLN:CG	2.23	0.68
1:CA:992:U:H1'	1:CA:993:G:OP2	1.93	0.68
4:CG:191:ARG:NH1	4:CG:200:GLU:OE1	2.26	0.68
25:DA:2212:A:H1'	25:DA:2215:G:C5	2.29	0.68
25:DA:2786:U:H4'	28:DE:65:GLY:N	2.07	0.68
30:DG:83:ARG:HB2	30:DG:86:MET:HE3	1.74	0.68
25:BA:1420:U:O2'	25:BA:1421:G:OP1	2.11	0.68
27:BD:28:GLU:HB3	27:BD:29:PRO:HD2	1.75	0.68
31:BH:98:LEU:HD12	31:BH:102:ALA:O	1.94	0.68
25:BA:598:G:O4'	35:BO:12:ALA:HB2	1.92	0.68
36:BP:133:ARG:O	36:BP:134:ARG:HB2	1.92	0.68
22:CD:49:A:O2'	22:CD:50:U:H5	1.76	0.68
41:D2:85:LYS:CG	41:D2:87:HIS:H	2.07	0.68
54:D8:29:LYS:O	54:D8:31:HIS:N	2.26	0.68
25:DA:7:G:H1	25:DA:2896:C:N4	1.91	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DE:37:ARG:HD2	28:DE:44:TYR:OH	1.94	0.68
35:DO:58:THR:O	35:DO:58:THR:HG22	1.92	0.68
47:DZ:67:ILE:N	47:DZ:68:PRO:HD2	2.09	0.68
12:AO:44:LYS:CG	12:AO:45:PRO:N	2.56	0.68
25:BA:302:C:H2'	25:BA:303:U:H6	1.58	0.68
1:CA:328:C:H2'	1:CA:328:C:O2	1.94	0.68
22:CB:28:G:H22	22:CB:45:C:H1'	1.59	0.68
22:CB:50:U:H2'	22:CB:51:C:C6	2.28	0.68
1:CA:363:A:OP1	12:CO:30:ARG:HG3	1.94	0.68
1:CA:261:U:OP2	20:CW:79:ARG:NH2	2.27	0.68
22:AB:10:C:H2'	22:AB:11:C:C6	2.28	0.68
2:AE:235:SER:O	2:AE:237:ALA:N	2.24	0.68
7:AJ:23:VAL:O	7:AJ:27:ILE:HG13	1.93	0.68
8:AK:41:ARG:NH2	8:AK:123:GLU:OE1	2.27	0.68
25:BA:2344:U:O2'	52:B6:37:ARG:HG2	1.94	0.68
25:BA:1091:G:H2'	25:BA:1092:C:H5'	1.76	0.68
25:BA:1348:G:H2'	25:BA:1349:A:H5''	1.75	0.68
25:BA:2474:C:H2'	25:BA:2475:C:O4'	1.94	0.68
31:BH:4:ILE:O	31:BH:6:ARG:HG2	1.94	0.68
36:BP:1:MET:O	36:BP:2:LEU:HB2	1.94	0.68
1:CA:1349:A:OP2	9:CL:118:LYS:NZ	2.27	0.68
25:DA:1019:U:H2'	25:DA:1020:A:C8	2.28	0.68
25:BA:593:G:H1'	54:B8:4:MET:HE1	1.76	0.67
25:BA:1678:G:N2	25:BA:1989:G:N2	2.41	0.67
27:BD:35:LYS:HD2	27:BD:104:TYR:CE1	2.29	0.67
36:BP:90:VAL:O	36:BP:90:VAL:CG1	2.42	0.67
25:BA:2864:G:OP1	39:BR:119:LYS:HD2	1.94	0.67
1:CA:1285:A:C1'	1:CA:1286:A:OP2	2.42	0.67
1:CA:82:U:C2	1:CA:87:A:N1	2.61	0.67
1:CA:870:U:H4'	1:CA:871:U:H5'	1.76	0.67
13:CP:92:HIS:ND1	13:CP:98:VAL:HG11	2.09	0.67
31:DH:136:ILE:H	31:DH:136:ILE:HD12	1.59	0.67
31:DH:26:VAL:HG21	31:DH:76:VAL:HA	1.75	0.67
25:BA:2733:A:H2'	25:BA:2734:A:C5'	2.23	0.67
25:BA:910:A:H2'	25:BA:2264:C:O2'	1.94	0.67
27:BD:186:HIS:HD2	27:BD:188:GLU:H	1.42	0.67
27:BD:2:ALA:HB1	27:BD:200:ASP:OD2	1.93	0.67
25:DA:2702:U:H2'	25:DA:2703:C:C5	2.30	0.67
25:DA:2762:G:H3'	25:DA:2763:G:C5'	2.24	0.67
35:DO:68:GLN:CA	35:DO:68:GLN:OE1	2.33	0.67
2:AE:8:LYS:CE	2:AE:8:LYS:H	2.03	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AG:19:LEU:HG	4:AG:21:LEU:HD21	1.77	0.67
1:AA:974:A:OP2	14:AQ:41:ARG:NH1	2.28	0.67
19:AV:41:VAL:CB	19:AV:42:PRO:HA	2.19	0.67
19:AV:42:PRO:HD3	50:B4:63:TYR:OH	1.95	0.67
25:BA:1557:C:OP2	25:BA:1558:A:O2'	2.12	0.67
25:BA:1728:G:H3'	25:BA:1729:A:C5'	2.23	0.67
25:BA:660:G:N2	35:BO:12:ALA:HA	2.09	0.67
25:BA:889:C:H3'	25:BA:890:A:C4'	2.25	0.67
28:BE:116:VAL:O	28:BE:117:MET:HB3	1.94	0.67
28:BE:57:LYS:HD3	28:BE:59:VAL:HG12	1.75	0.67
31:BH:4:ILE:HG13	31:BH:6:ARG:NE	2.09	0.67
47:BZ:91:LYS:O	47:BZ:93:GLU:N	2.27	0.67
25:DA:2786:U:H4'	28:DE:64:LYS:HA	1.76	0.67
35:DO:61:ARG:CB	35:DO:62:LEU:HD22	2.24	0.67
36:DP:79:LEU:HD13	36:DP:80:GLU:HB2	1.76	0.67
38:DQ:106:ARG:NH1	38:DQ:107:GLU:OE2	2.27	0.67
44:DU:97:ARG:H	44:DU:97:ARG:HD3	1.59	0.67
45:DV:105:VAL:HG22	45:DV:106:GLY:H	1.59	0.67
1:AA:1023:G:H3'	1:AA:1024:G:C5'	2.23	0.67
1:AA:258:G:H2'	1:AA:259:G:H8	1.58	0.67
1:AA:1226:C:O2'	13:AP:111:LYS:NZ	2.27	0.67
50:B4:42:PHE:HE1	50:B4:43:TYR:HB3	1.50	0.67
25:BA:1077:A:H3'	25:BA:1078:U:H5''	1.76	0.67
25:BA:1606:G:H5''	25:BA:1607:C:OP1	1.95	0.67
25:BA:2712:U:O2'	25:BA:2712(A):A:OP2	2.12	0.67
25:BA:330:A:C2	25:BA:1210:A:H2'	2.28	0.67
27:BD:35:LYS:HD3	27:BD:63:ARG:CB	2.23	0.67
35:BO:11:GLY:C	35:BO:13:ASN:H	1.95	0.67
35:BO:19:VAL:HG23	35:BO:27:HIS:CG	2.28	0.67
25:DA:2723:C:OP1	37:D0:3:HIS:HD2	1.77	0.67
25:DA:1069:A:H4'	25:DA:1070:A:H5''	1.76	0.67
26:DB:89(A):A:C8	26:DB:90:C:H1'	2.30	0.67
35:DO:104:GLY:O	35:DO:105:LEU:CB	2.41	0.67
36:DP:34:LEU:HB2	36:DP:118:LEU:HD22	1.74	0.67
45:DV:19:ARG:HH11	45:DV:84:GLU:HB2	1.60	0.67
1:AA:530:G:C4'	1:AA:531:U:OP2	2.41	0.67
2:AE:236:TYR:HA	2:AE:239:VAL:HG21	1.76	0.67
20:AW:100:ILE:HG13	20:AW:102:GLY:N	2.06	0.67
50:B4:42:PHE:CD1	50:B4:42:PHE:C	2.67	0.67
25:BA:1026:U:H4'	25:BA:1027:A:OP1	1.95	0.67
25:BA:956:G:OP2	36:BP:14:ARG:NH2	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BV:30:ASN:HD22	45:BV:32:HIS:H	1.41	0.67
1:CA:1179:A:OP2	9:CL:93:ARG:NH2	2.26	0.67
1:CA:820:U:H4'	1:CA:821:G:OP2	1.94	0.67
2:CE:19:HIS:CE1	2:CE:204:ASN:HB3	2.30	0.67
25:DA:1047:G:H2'	25:DA:1110:G:N2	2.08	0.67
25:DA:2689:U:H4'	25:DA:2690:C:H5'	1.76	0.67
35:DO:125:VAL:HG13	35:DO:144:GLU:HB3	1.76	0.67
25:DA:871:U:OP1	36:DP:5:ARG:HG2	1.94	0.67
44:DU:9:LYS:NZ	44:DU:29:GLU:H	1.93	0.67
1:AA:1065:U:C2'	1:AA:1066:C:OP2	2.42	0.67
22:AB:46:G:H2'	22:AB:47:U:C6	2.30	0.67
52:B6:28:ARG:HH21	52:B6:30:THR:HG22	1.59	0.67
25:BA:2702:U:OP1	25:BA:2702:U:C6	2.48	0.67
25:BA:654(H):G:N3	25:BA:654(H):G:H2'	2.08	0.67
32:BK:93:THR:HG22	32:BK:119:PRO:HB3	1.76	0.67
36:BP:90:VAL:O	36:BP:90:VAL:HG12	1.93	0.67
1:CA:960:U:H3	1:CA:1225:A:H1'	1.58	0.67
22:CB:58:G:H1	22:CB:74:C:H42	1.42	0.67
16:CS:43:LYS:HG3	16:CS:48:TRP:NE1	2.08	0.67
25:DA:2131:G:H5'	25:DA:2132:U:OP1	1.95	0.67
25:DA:2420:C:H41	54:D8:31:HIS:CB	2.04	0.67
26:DB:44:G:H1'	26:DB:47:C:N4	2.09	0.67
38:DQ:18:ILE:O	38:DQ:21:THR:HG22	1.94	0.67
45:DV:158:PRO:CB	45:DV:159:PRO:HD2	2.18	0.67
1:AA:1142:G:H2'	1:AA:1143:G:O4'	1.94	0.67
3:AF:64:VAL:HG12	3:AF:66:VAL:HG23	1.76	0.67
9:AL:15:ALA:HB2	9:AL:65:VAL:HG23	1.76	0.67
12:AO:50:ARG:HG3	12:AO:90:LEU:HD21	1.75	0.67
1:AA:1227:A:OP2	13:AP:111:LYS:HE3	1.95	0.67
19:AV:67:VAL:HG11	50:B4:59:PHE:HB2	1.77	0.67
25:BA:1728:G:H8	25:BA:1732:A:H62	1.42	0.67
25:BA:2317:C:C2'	25:BA:2318:G:H5'	2.25	0.67
25:BA:2580:U:H4'	28:BE:130:GLY:CA	2.25	0.67
28:BE:120:TRP:CD2	28:BE:155:LYS:HD3	2.30	0.67
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.60	0.67
1:CA:870:U:H4'	1:CA:871:U:C5'	2.25	0.67
22:CB:73:U:H2'	22:CB:74:C:C6	2.30	0.67
54:D8:60:LEU:C	54:D8:61:LEU:HG	2.15	0.67
25:DA:2406:U:O4	35:DO:70:GLN:NE2	2.26	0.67
29:DF:188:ARG:HA	35:DO:3:LEU:HD11	1.76	0.67
3:AF:153:VAL:HG22	3:AF:198:VAL:HG22	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:547:A:OP1	4:AG:73:ARG:NH2	2.28	0.67
25:BA:229:A:C4'	25:BA:230:U:OP2	2.42	0.67
28:BE:4:ILE:HD13	28:BE:28:ALA:HB1	1.76	0.67
36:BP:88:GLY:O	36:BP:89:ASN:HB2	1.95	0.67
26:BB:103:U:O2'	45:BV:72:ARG:HG2	1.94	0.67
45:BV:92:SER:O	45:BV:130:PRO:HG2	1.94	0.67
1:CA:1129:C:H4'	1:CA:1130:A:O5'	1.95	0.67
1:CA:1337:G:H5'	1:CA:1338:G:OP1	1.94	0.67
1:CA:991:U:HO2'	1:CA:992:U:P	2.16	0.67
2:CE:91:PRO:HG3	2:CE:155:LEU:H	1.58	0.67
25:DA:259:G:O2'	25:DA:621:A:O2'	2.11	0.67
36:DP:2:LEU:O	36:DP:70:PRO:CG	2.42	0.67
45:DV:6:LYS:HG3	45:DV:7:ALA:H	1.58	0.67
1:AA:192:U:C4'	20:AW:103:GLY:HA2	2.25	0.67
17:AT:76:LEU:HD12	17:AT:77:VAL:H	1.59	0.67
51:B5:51:TYR:H	51:B5:56:LYS:HB3	1.60	0.67
25:BA:1534:G:H2'	25:BA:1535:U:H4'	1.77	0.67
30:BG:67:LYS:H	30:BG:67:LYS:CE	2.06	0.67
30:BG:67:LYS:HG2	50:B4:5:ILE:O	1.95	0.67
34:BN:88:ASN:HD21	34:BN:92:GLU:HG3	1.60	0.67
1:CA:750:G:N3	15:CR:23:GLY:HA3	2.10	0.67
2:CE:167:PRO:HG2	2:CE:188:ALA:HB2	1.77	0.67
6:CI:100:ASN:HD21	18:CU:23:LYS:HE3	1.59	0.67
14:CQ:26:ARG:NH1	14:CQ:47:LEU:HD21	2.10	0.67
25:DA:531:C:OP1	25:DA:561:G:N1	2.28	0.67
28:DE:70:ALA:O	28:DE:72:VAL:N	2.27	0.67
38:DQ:27:SER:HA	38:DQ:88:ASP:HB3	1.77	0.67
43:DT:5:TYR:CZ	48:DW:30:ARG:HG3	2.30	0.67
24:A1:13:A:C2'	24:A1:14:A:OP1	2.43	0.67
1:AA:1128:C:H2'	1:AA:1139:G:O6	1.94	0.67
1:AA:1366:C:OP1	9:AL:117:HIS:HE1	1.78	0.67
40:B1:92:ARG:HD2	41:B2:11:GLN:HB2	1.77	0.67
54:B8:34:TRP:H	54:B8:35:GLN:C	1.98	0.67
25:BA:1479:G:N7	25:BA:1510:A:N6	2.43	0.67
25:BA:1496:A:C8	25:BA:1577:C:O2'	2.42	0.67
25:BA:850:C:O2'	49:BX:46:ASN:ND2	2.28	0.67
28:BE:116:VAL:HG13	28:BE:122:PHE:HB2	1.76	0.67
29:BF:46:ARG:HH11	29:BF:46:ARG:CG	2.00	0.67
1:CA:108:G:H5'	1:CA:109:A:H5'	1.77	0.67
1:CA:1449:C:O2'	1:CA:1450:U:OP1	2.13	0.67
1:CA:1128:C:H4'	9:CL:16:ARG:HH12	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1651:G:H5'	37:D0:39:PRO:HG2	1.75	0.67
25:DA:1203:G:H3'	25:DA:1204:A:H5''	1.76	0.67
25:DA:1226:G:H5'	41:D2:85:LYS:N	2.09	0.67
27:DD:61:LEU:O	27:DD:63:ARG:NH1	2.28	0.67
33:DM:128:HIS:HB2	33:DM:129:PRO:CD	2.24	0.67
39:DR:16:ARG:HH21	39:DR:19:LEU:HD11	1.59	0.67
3:AF:21:ARG:HD3	3:AF:21:ARG:N	2.11	0.66
4:AG:126:ILE:HD13	4:AG:127:THR:N	2.09	0.66
18:AU:88:LYS:HB3	18:AU:88:LYS:NZ	2.09	0.66
25:BA:1156:A:C8	40:B1:51:LYS:HD2	2.30	0.66
31:BH:12:PRO:HG3	31:BH:48:GLY:HA2	1.76	0.66
45:BV:127:LYS:O	45:BV:161:VAL:HG21	1.95	0.66
1:CA:748:C:H4'	1:CA:749:C:O5'	1.94	0.66
22:CB:19:C:H4'	22:CB:20:C:OP1	1.95	0.66
9:CL:48:GLU:N	9:CL:49:PRO:HD2	2.10	0.66
25:DA:2169:A:N3	25:DA:2169:A:H3'	2.10	0.66
35:DO:49:ARG:HD2	54:D8:58:ILE:HG23	1.77	0.66
1:AA:1034:G:N2	1:AA:1035:A:N6	2.43	0.66
7:AJ:16:LEU:HD12	9:AL:42:ARG:HA	1.77	0.66
50:B4:39:CYS:SG	50:B4:39:CYS:O	2.52	0.66
25:BA:164:U:H5''	25:BA:165:U:OP2	1.94	0.66
25:BA:2473:U:O2	25:BA:2473:U:H2'	1.94	0.66
25:BA:524:U:H4'	25:BA:554:U:H4'	1.77	0.66
28:BE:68:ALA:O	28:BE:70:ALA:N	2.22	0.66
36:BP:23:GLY:HA2	36:BP:25:ASP:CB	2.26	0.66
25:BA:2318:G:H22	38:BQ:2:ALA:N	1.93	0.66
1:CA:1128:C:O2'	1:CA:1129:C:OP1	2.13	0.66
1:CA:209:U:H4'	1:CA:210:U:OP2	1.93	0.66
1:CA:528:C:H41	12:CO:46:ASN:ND2	1.92	0.66
1:CA:913:A:H1'	1:CA:914:A:OP2	1.94	0.66
17:CT:87:LYS:O	17:CT:91:ARG:HG3	1.94	0.66
37:D0:97:VAL:HA	37:D0:113:LEU:O	1.96	0.66
25:DA:1012:U:O4	33:DM:25:ARG:HA	1.95	0.66
25:DA:1088:A:H4'	25:DA:1089:G:C8	2.30	0.66
25:DA:900:A:H3'	25:DA:901:A:C8	2.25	0.66
30:DG:135:LEU:O	30:DG:154:GLY:HA3	1.96	0.66
35:DO:128:HIS:HA	35:DO:147:LEU:HA	1.77	0.66
25:DA:2849:U:O4	39:DR:23:ARG:NH2	2.27	0.66
43:DT:3:THR:HA	43:DT:6:ASP:OD2	1.96	0.66
1:AA:1285:A:H1'	1:AA:1286:A:OP2	1.96	0.66
1:AA:651:C:H2'	1:AA:652:U:C6	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AD:62:G:N2	22:AD:70:C:N3	2.42	0.66
22:AD:58:G:N2	22:AD:74:C:O2	2.19	0.66
41:B2:39:LEU:O	41:B2:40:LEU:HD23	1.96	0.66
25:BA:782:A:H5'	25:BA:783:A:C2	2.29	0.66
27:BD:69:ARG:NH2	27:BD:128:GLY:O	2.27	0.66
33:BM:35:ARG:HG3	33:BM:37:LYS:HG3	1.76	0.66
25:BA:811:U:O5'	35:BO:21:ARG:O	2.13	0.66
25:BA:631:A:OP1	35:BO:64:LYS:HE2	1.96	0.66
1:CA:1239:A:H4'	1:CA:1240:U:H5'	1.77	0.66
25:DA:1225:C:O2'	41:D2:85:LYS:N	2.27	0.66
25:DA:1054:A:H61	25:DA:1105:U:H3	1.40	0.66
25:DA:2327:A:H2'	25:DA:2328:A:C8	2.30	0.66
30:DG:180:PHE:O	30:DG:182:LYS:HG3	1.95	0.66
33:DM:71:ILE:HD12	33:DM:71:ILE:O	1.96	0.66
8:AK:63:LEU:HB3	8:AK:65:TYR:CE1	2.31	0.66
52:B6:27:LYS:HZ2	52:B6:27:LYS:H	1.42	0.66
54:B8:52:LYS:N	54:B8:53:PRO:CD	2.58	0.66
25:BA:1478:G:H2'	25:BA:1479:G:H8	1.61	0.66
25:BA:2898:U:H2'	25:BA:2899:G:C8	2.30	0.66
27:BD:36:PRO:HA	27:BD:62:TYR:O	1.94	0.66
25:BA:1354:A:OP1	27:BD:38:LYS:NZ	2.28	0.66
29:BF:23:ASP:CG	29:BF:24:LEU:H	1.99	0.66
41:D2:35:LEU:H	41:D2:35:LEU:HD23	1.60	0.66
25:DA:2318:G:H5'	25:DA:2319:G:OP2	1.96	0.66
25:DA:479:A:H4'	25:DA:480:A:OP1	1.94	0.66
27:DD:35:LYS:CE	27:DD:104:TYR:HD1	2.09	0.66
11:AN:22:HIS:HB3	11:AN:29:ILE:HG23	1.78	0.66
39:BR:33:LYS:NZ	39:BR:84:GLN:HB2	2.11	0.66
44:BU:96:ILE:CG2	44:BU:101:LYS:HG2	2.26	0.66
1:CA:1449:C:O2'	1:CA:1450:U:P	2.54	0.66
1:CA:1504:G:OP1	1:CA:1507:A:H4'	1.95	0.66
2:CE:7:VAL:HG22	2:CE:8:LYS:N	2.08	0.66
8:CK:107:LEU:HD12	8:CK:107:LEU:H	1.61	0.66
25:DA:140:A:C8	25:DA:1408:C:O2'	2.48	0.66
25:DA:1570:A:H2'	25:DA:1571:A:C8	2.31	0.66
25:DA:1570:A:H5'	27:DD:38:LYS:HG3	1.78	0.66
25:DA:279:C:N4	25:DA:361:G:H1	1.92	0.66
27:DD:5:LYS:HB2	27:DD:5:LYS:NZ	2.10	0.66
28:DE:1:MET:N	28:DE:84:PHE:HB2	2.09	0.66
34:DN:25:LEU:HB2	34:DN:38:VAL:HG23	1.77	0.66
35:DO:47:ASP:CB	35:DO:48:PRO:CA	2.70	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:26:ASP:O	39:DR:49:VAL:HG22	1.94	0.66
1:AA:135:C:H2'	1:AA:136:C:H5'	1.77	0.66
1:AA:1374:A:H2'	1:AA:1375:A:H5'	1.77	0.66
1:AA:464:G:O6	1:AA:466:C:H5'	1.95	0.66
1:AA:69:G:H2'	1:AA:73:G:H5'	1.78	0.66
9:AL:26:VAL:HG13	9:AL:61:ALA:HB3	1.78	0.66
30:BG:107:LEU:O	50:B4:38:LYS:CG	2.44	0.66
25:BA:1058:U:H2'	25:BA:1059:G:C8	2.29	0.66
25:BA:1486:A:H2'	25:BA:1487:G:H8	1.58	0.66
25:BA:2212:A:H1'	25:BA:2215:G:C5	2.31	0.66
25:BA:2306:C:H3'	25:BA:2307:G:C5'	2.24	0.66
25:BA:873:G:H1	25:BA:904:C:N4	1.91	0.66
1:CA:421:U:C5'	1:CA:422:C:OP2	2.44	0.66
22:CD:51:C:C5	22:CD:52:G:H1'	2.30	0.66
12:CO:59:SER:O	12:CO:61:TYR:N	2.29	0.66
14:CQ:47:LEU:O	14:CQ:50:LYS:N	2.28	0.66
25:DA:1762:A:H4'	25:DA:1763:G:OP2	1.93	0.66
25:DA:2153:G:H2'	25:DA:2154:G:C8	2.31	0.66
30:DG:83:ARG:O	30:DG:85:GLY:N	2.28	0.66
35:DO:61:ARG:HB2	35:DO:61:ARG:NH2	2.09	0.66
35:DO:70:GLN:C	35:DO:72:PRO:HD2	2.15	0.66
1:AA:1399:C:C2	1:AA:1502:A:N6	2.64	0.66
2:AE:167:PRO:HG3	2:AE:188:ALA:HB2	1.78	0.66
4:AG:15:GLU:HG2	4:AG:63:LYS:HB2	1.77	0.66
25:BA:1060:U:H3	25:BA:1088:A:H8	1.41	0.66
25:BA:1021:A:H61	25:BA:1142(A):A:N6	1.93	0.66
25:BA:1869:G:N2	25:BA:1872:A:OP2	2.26	0.66
25:BA:2133:G:O2'	25:BA:2158:A:N1	2.26	0.66
27:BD:35:LYS:HZ1	27:BD:65:ILE:HA	1.60	0.66
1:CA:1240:U:OP2	7:CJ:116:ALA:N	2.26	0.66
1:CA:963:G:H21	10:CM:55:LYS:HE2	1.61	0.66
54:D8:49:VAL:CG1	54:D8:50:LEU:H	1.97	0.66
25:DA:2114:A:H5''	25:DA:2115:G:OP2	1.96	0.66
25:DA:9:U:C4	25:DA:2629:A:C6	2.84	0.66
30:DG:44:GLY:HA2	30:DG:88:ILE:HD11	1.78	0.66
3:AF:50:ALA:HB1	3:AF:70:VAL:HG11	1.76	0.66
25:BA:1006:C:H1'	33:BM:106:MET:HG2	1.77	0.66
25:BA:1021:A:C3'	25:BA:1022:G:H5''	2.24	0.66
25:BA:2287:A:N1	25:BA:2346:A:C2	2.63	0.66
25:BA:385:C:O2	35:BO:71:VAL:HG21	1.95	0.66
27:BD:10:THR:HG23	27:BD:13:ARG:HB2	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:77:C:H2'	1:CA:78:G:H5'	1.77	0.66
20:CW:16:HIS:O	20:CW:19:SER:OG	2.13	0.66
27:DD:2:ALA:O	27:DD:3:VAL:HB	1.95	0.66
36:DP:19:GLY:N	36:DP:98:LYS:NZ	2.43	0.66
44:DU:17:SER:CB	44:DU:71:LYS:HD2	2.26	0.66
48:DW:13:ALA:HA	48:DW:16:LEU:HD23	1.78	0.66
1:AA:88:C:O2	1:AA:88:C:H2'	1.96	0.66
10:AM:8:LEU:HD12	10:AM:20:ALA:HB2	1.75	0.66
41:B2:35:LEU:HD21	41:B2:57:VAL:HG22	1.78	0.66
50:B4:41:PRO:O	50:B4:42:PHE:CB	2.43	0.66
25:BA:1359:A:C2	25:BA:1372:U:O4	2.49	0.66
25:BA:302:C:H2'	25:BA:303:U:C6	2.31	0.66
25:BA:880:G:O2'	25:BA:881:G:P	2.53	0.66
27:BD:121:PRO:HB3	27:BD:135:PHE:CE1	2.31	0.66
29:BF:32:LEU:HD21	29:BF:105:VAL:HG13	1.77	0.66
30:BG:6:ALA:HB3	30:BG:104:GLU:OE2	1.96	0.66
34:BN:102:VAL:HB	34:BN:106:LEU:HD12	1.78	0.66
22:CB:57:C:H4'	22:CB:58:G:O5'	1.94	0.66
10:CM:61:GLU:OE2	14:CQ:45:ARG:NH1	2.28	0.66
41:D2:44:LYS:HG2	41:D2:45:THR:N	2.11	0.66
25:DA:1427:A:H4'	25:DA:1428:C:O5'	1.94	0.66
25:DA:1266:G:O2'	25:DA:2012:G:O6	2.13	0.66
25:DA:2150:U:H2'	25:DA:2151:G:C8	2.31	0.66
28:DE:80:GLU:O	28:DE:82:ARG:N	2.28	0.66
29:DF:128:ALA:O	29:DF:130:ALA:N	2.29	0.66
25:DA:598:G:O4'	35:DO:12:ALA:HB2	1.96	0.66
45:DV:102:LEU:HD11	45:DV:124:ILE:HB	1.78	0.66
22:AD:52:G:H2'	22:AD:53:A:C8	2.30	0.66
52:B6:11:LEU:HD11	52:B6:51:GLU:HG3	1.76	0.66
25:BA:1332:G:N2	25:BA:1610:A:C8	2.64	0.66
25:BA:860:U:H5	25:BA:917:A:N1	1.94	0.66
28:BE:111:ARG:HB3	37:B0:1:MET:SD	2.37	0.66
28:BE:13:ARG:HH11	28:BE:21:VAL:HG12	1.61	0.66
30:BG:112:PRO:HA	50:B4:37:SER:HB2	1.78	0.66
31:BH:153:LYS:HB3	31:BH:162:ILE:H	1.60	0.66
45:BV:120:ILE:O	45:BV:121:HIS:ND1	2.29	0.66
7:CJ:23:VAL:HG12	7:CJ:43:PHE:CE2	2.30	0.66
15:CR:4:THR:HB	15:CR:7:GLU:H	1.60	0.66
40:D1:79:PHE:CE1	40:D1:83:LEU:HD12	2.31	0.66
32:DK:79:ILE:O	32:DK:79:ILE:HG22	1.97	0.66
1:AA:963:G:N3	10:AM:55:LYS:NZ	2.44	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AG:9:CYS:HA	4:AG:12:CYS:HB2	1.78	0.65
12:AO:43:LYS:HG2	12:AO:44:LYS:N	2.11	0.65
25:BA:165:U:H2'	25:BA:171:G:O4'	1.95	0.65
25:BA:2124:G:H1	25:BA:2174:C:N4	1.95	0.65
38:BQ:58:LEU:HD23	38:BQ:58:LEU:H	1.61	0.65
25:DA:1537:C:H2'	25:DA:1538:G:C8	2.31	0.65
25:DA:1607:C:H5''	25:DA:1608:A:H5'	1.77	0.65
25:DA:2287:A:H62	25:DA:2344:U:H3	1.42	0.65
25:DA:2681:C:H5	25:DA:2725:A:N6	1.92	0.65
29:DF:4:VAL:HA	29:DF:19:GLU:CB	2.26	0.65
1:AA:1238:A:H62	1:AA:1301:U:H3	1.45	0.65
1:AA:1502:A:H2	1:AA:1505:G:N1	1.94	0.65
1:AA:201:C:N4	1:AA:209:U:O2	2.28	0.65
50:B4:9:LEU:H	50:B4:27:THR:HG22	1.61	0.65
25:BA:1525:G:H2'	25:BA:1526:G:C8	2.32	0.65
38:BQ:108:GLY:N	38:BQ:110:LEU:HD21	2.11	0.65
42:BS:82:LEU:HB2	42:BS:98:LYS:HB2	1.77	0.65
1:CA:1137:C:H5''	1:CA:1138:G:OP1	1.96	0.65
22:CB:83:C:H2'	22:CB:84:C:H5'	1.78	0.65
2:CE:67:THR:HG21	2:CE:155:LEU:HG	1.78	0.65
10:CM:3:LYS:N	10:CM:74:ILE:O	2.30	0.65
40:D1:92:ARG:CZ	41:D2:11:GLN:H	2.09	0.65
25:DA:2747:G:O6	25:DA:2755:C:H5''	1.95	0.65
26:DB:59:A:H2'	26:DB:60:C:O4'	1.96	0.65
1:AA:1000:A:H2'	1:AA:1001:G:H8	1.62	0.65
1:AA:81:G:N1	1:AA:88:C:N4	2.45	0.65
22:AD:19:C:H2'	22:AD:20:C:C4'	2.21	0.65
3:AF:189:ALA:HB3	3:AF:196:LEU:HB2	1.79	0.65
4:AG:162:LEU:HD13	4:AG:181:MET:HG2	1.79	0.65
4:AG:12:CYS:HA	4:AG:19:LEU:CD2	2.27	0.65
40:B1:92:ARG:HD3	40:B1:94:ASN:HB3	1.78	0.65
25:BA:1095:A:N3	25:BA:1095:A:H2'	2.09	0.65
39:BR:20:PRO:HG2	39:BR:86:ILE:O	1.95	0.65
1:CA:422:C:O2'	1:CA:423:G:N3	2.29	0.65
1:CA:77:C:C2'	1:CA:78:G:H5'	2.26	0.65
10:CM:16:LEU:C	10:CM:18:ALA:H	2.00	0.65
25:DA:1420:U:O2'	25:DA:1421:G:H8	1.78	0.65
1:AA:1025:U:O2'	1:AA:1026:G:O5'	2.13	0.65
4:AG:7:PRO:HB2	4:AG:10:ARG:HD2	1.77	0.65
50:B4:39:CYS:O	50:B4:40:HIS:CB	2.42	0.65
25:BA:137(A):G:H2'	25:BA:139:G:N7	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2219:G:OP1	27:BD:172:TYR:OH	2.13	0.65
25:BA:2392:A:H8	35:BO:60:MET:CB	2.05	0.65
27:BD:130:ALA:C	27:BD:131:LEU:HD12	2.17	0.65
1:CA:1183:A:O2'	1:CA:1184:G:OP1	2.13	0.65
1:CA:485:G:H1'	1:CA:486:U:H5	1.62	0.65
28:DE:51:PHE:CE2	28:DE:52:LEU:HG	2.30	0.65
35:DO:97:PRO:HG3	35:DO:112:LEU:CB	2.25	0.65
1:AA:60:A:H4'	1:AA:61:G:H5'	1.79	0.65
22:AD:61:G:H1	22:AD:71:C:H42	1.43	0.65
2:AE:19:HIS:NE2	2:AE:206:ASP:HB2	2.10	0.65
3:AF:16:ARG:HH22	3:AF:183:ASP:HA	1.61	0.65
4:AG:149:ALA:O	4:AG:153:ARG:HB3	1.97	0.65
20:AW:97:ALA:O	20:AW:99:LEU:HD22	1.95	0.65
25:BA:2789:C:H1'	25:BA:2892:A:H2	1.60	0.65
1:CA:328:C:H1'	1:CA:329:A:OP2	1.97	0.65
25:DA:2370:G:H21	52:D6:45:LYS:NZ	1.94	0.65
27:DD:127:VAL:HA	27:DD:193:VAL:HG23	1.78	0.65
28:DE:98:PRO:HD3	28:DE:175:VAL:HG13	1.78	0.65
25:DA:617:G:OP1	29:DF:40:GLN:NE2	2.29	0.65
33:DM:134:ARG:HG2	33:DM:134:ARG:O	1.95	0.65
25:DA:631:A:OP1	35:DO:64:LYS:CE	2.44	0.65
35:DO:70:GLN:O	35:DO:71:VAL:C	2.34	0.65
25:DA:627:A:H62	35:DO:84:ASN:HD21	1.43	0.65
36:DP:19:GLY:H	36:DP:98:LYS:NZ	1.93	0.65
25:DA:329:G:N7	44:DU:19:LYS:HE2	2.11	0.65
2:AE:163:PHE:HD2	2:AE:185:ILE:HG13	1.62	0.65
1:AA:538:G:OP2	12:AO:112:LYS:HG3	1.97	0.65
19:AV:15:LEU:HD23	19:AV:15:LEU:H	1.61	0.65
50:B4:42:PHE:O	50:B4:43:TYR:C	2.35	0.65
25:BA:222:A:O3'	25:BA:223:A:H4'	1.97	0.65
30:BG:109:VAL:HG11	30:BG:142:PRO:HG3	1.78	0.65
32:BK:83:ALA:HB1	32:BK:123:LEU:HD11	1.79	0.65
35:BO:9:ASN:HB3	35:BO:10:PRO:CD	2.26	0.65
1:CA:179:A:H2'	1:CA:180:U:H6	1.61	0.65
9:CL:3:GLN:HE21	9:CL:20:ARG:NH1	1.95	0.65
41:D2:12:TYR:HE2	41:D2:22:VAL:HG23	1.61	0.65
25:DA:270(F):U:H2'	25:DA:270(G):C:C6	2.32	0.65
28:DE:103:ASP:OD1	28:DE:201:THR:HG23	1.97	0.65
28:DE:8:LYS:HG2	28:DE:192:ASN:HD22	1.61	0.65
33:DM:40:PRO:HB3	40:D1:68:ALA:HB2	1.79	0.65
35:DO:11:GLY:C	35:DO:13:ASN:H	2.00	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DQ:25:ARG:NH1	38:DQ:42:ASP:OD2	2.29	0.65
25:DA:481:G:OP2	44:DU:47:LYS:HB2	1.96	0.65
45:DV:80:ARG:O	45:DV:81:ARG:HB3	1.97	0.65
4:AG:145:GLU:HG2	4:AG:184:LYS:HE3	1.78	0.65
17:AT:18:THR:OG1	17:AT:69:LYS:NZ	2.23	0.65
25:BA:1130:U:H1'	25:BA:1131:G:OP1	1.96	0.65
25:BA:1175:U:O3'	25:BA:1176:G:H4'	1.96	0.65
25:BA:1210:A:C8	25:BA:1210:A:H5'	2.28	0.65
25:BA:2308:G:N2	25:BA:2311:A:H2	1.86	0.65
1:CA:1003:G:H1	1:CA:1037:C:H42	1.45	0.65
12:CO:34:CYS:HA	12:CO:55:VAL:HA	1.78	0.65
1:CA:377:G:OP1	16:CS:3:LYS:HD2	1.97	0.65
25:DA:1048:A:H2	25:DA:1112:G:H21	1.44	0.65
25:DA:1639:U:O2'	25:DA:1640:C:H5''	1.97	0.65
25:DA:911:A:H2'	36:DP:9:TYR:OH	1.96	0.65
36:DP:88:GLY:O	36:DP:89:ASN:HB2	1.95	0.65
9:AL:22:GLY:HA3	9:AL:60:ASP:OD2	1.95	0.65
12:AO:44:LYS:HA	12:AO:44:LYS:HE3	1.77	0.65
50:B4:48:ARG:HG2	50:B4:51:ASP:HB3	1.79	0.65
25:BA:2199:A:H3'	25:BA:2205:C:H6	1.61	0.65
25:BA:287:C:H2'	25:BA:288:C:C6	2.31	0.65
25:BA:883:G:H1	25:BA:893:C:H42	0.72	0.65
28:BE:20:ALA:O	28:BE:21:VAL:HG22	1.96	0.65
25:BA:71:A:H2	43:BT:31:HIS:CE1	2.14	0.65
25:DA:1397:U:H1'	25:DA:1398:C:OP1	1.96	0.65
25:DA:2872:G:C8	25:DA:2873:A:C2	2.85	0.65
25:DA:945:A:C6	25:DA:2448:A:C6	2.85	0.65
35:DO:63:PRO:O	35:DO:64:LYS:C	2.34	0.65
35:DO:64:LYS:O	35:DO:66:GLY:N	2.30	0.65
1:AA:129(A):G:C2	1:AA:188:U:O2'	2.50	0.65
19:AV:31:ILE:HG23	19:AV:49:ILE:HA	1.78	0.65
28:BE:1:MET:HG2	28:BE:83:ASP:O	1.97	0.65
44:BU:95:LYS:HA	44:BU:100:ALA:HA	1.79	0.65
1:CA:1003:G:N2	1:CA:1037:C:N3	2.43	0.65
1:CA:179:A:H2'	1:CA:180:U:C6	2.32	0.65
22:CD:22:A:H2'	22:CD:22:A:N3	2.10	0.65
50:D4:22:ILE:HG12	50:D4:23:GLU:H	1.62	0.65
25:DA:1386:C:H2'	25:DA:1387:C:C6	2.32	0.65
26:DB:13:A:N1	26:DB:69:G:O2'	2.25	0.65
27:DD:48:ARG:HG3	27:DD:48:ARG:HH11	1.62	0.65
31:DH:12:PRO:HD2	31:DH:48:GLY:O	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DO:71:VAL:CG2	35:DO:72:PRO:N	2.54	0.65
39:DR:61:PHE:HD2	39:DR:61:PHE:H	1.44	0.65
42:DS:18:ARG:HE	42:DS:76:VAL:HG13	1.61	0.65
1:AA:1054:C:H42	22:AB:35:G:H1'	1.62	0.65
22:AD:15:G:OP1	22:AD:15:G:H4'	1.97	0.65
25:BA:2137:C:N4	25:BA:2154:G:H1	1.94	0.65
26:BB:116:G:H4'	38:BQ:54:LEU:CD1	2.27	0.65
36:BP:109:VAL:HG13	36:BP:113:GLN:HB3	1.78	0.65
45:BV:143:GLY:HA2	45:BV:144:LEU:O	1.97	0.65
9:CL:8:GLY:HA3	9:CL:15:ALA:HB3	1.79	0.65
25:DA:1332:G:N2	25:DA:1610:A:C8	2.64	0.65
25:DA:2329:G:H2'	25:DA:2330:G:C8	2.32	0.65
25:DA:271(B):G:N7	25:DA:421:U:H2'	2.11	0.65
25:DA:654(S):G:H1'	25:DA:654(T):A:C8	2.32	0.65
28:DE:101:ARG:CZ	28:DE:171:GLU:HB2	2.27	0.65
35:DO:46:LYS:CD	35:DO:51:PHE:CG	2.68	0.65
39:DR:29:ARG:HH11	39:DR:29:ARG:HG3	1.61	0.65
43:DT:8:ILE:HD11	43:DT:43:VAL:HG12	1.79	0.65
22:AB:75:C:O2'	22:AB:76:C:P	2.54	0.64
10:AM:46:ARG:HG2	10:AM:64:GLU:HB3	1.79	0.64
25:BA:746:A:C5	25:BA:2611:U:H5''	2.32	0.64
31:BH:153:LYS:HD2	31:BH:153:LYS:N	2.11	0.64
36:BP:80:GLU:OE2	36:BP:80:GLU:N	2.30	0.64
47:BZ:64:ALA:HA	47:BZ:67:ILE:HG13	1.79	0.64
1:CA:1190:G:H5'	3:CF:176:HIS:NE2	2.12	0.64
4:CG:108:LEU:HD21	4:CG:183:GLY:HA3	1.78	0.64
9:CL:4:TYR:HB2	9:CL:19:LEU:O	1.97	0.64
25:DA:259:G:N2	25:DA:621:A:H8	1.94	0.64
25:DA:2415:G:O3'	35:DO:66:GLY:HA3	1.96	0.64
36:DP:27:VAL:HG13	36:DP:105:GLU:OE2	1.97	0.64
38:DQ:106:ARG:HD2	38:DQ:106:ARG:O	1.96	0.64
1:AA:149:A:H2'	1:AA:150:C:C6	2.33	0.64
2:AE:100:GLY:N	2:AE:176:GLU:OE2	2.25	0.64
5:AH:45:PHE:CE2	5:AH:47:LYS:HD2	2.32	0.64
10:AM:57:LYS:HE2	10:AM:60:ARG:HH12	1.61	0.64
25:BA:1075:C:H2'	25:BA:1076:C:O4'	1.97	0.64
25:BA:155:C:N3	25:BA:171:G:N2	2.42	0.64
25:BA:2124:G:H2'	25:BA:2125:G:H5'	1.79	0.64
25:BA:658:C:H2'	25:BA:659:C:C6	2.32	0.64
25:BA:320:A:H2'	29:BF:136:THR:HG21	1.79	0.64
1:CA:64:G:H3'	1:CA:64:G:OP1	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CF:14:ILE:HG12	3:CF:15:THR:N	2.10	0.64
5:CH:31:LEU:HD22	5:CH:43:LEU:HD11	1.79	0.64
9:CL:49:PRO:O	9:CL:53:VAL:HG22	1.97	0.64
25:DA:588:U:H2'	25:DA:589:C:C6	2.32	0.64
25:DA:910:A:C5	36:DP:13:GLN:HG3	2.33	0.64
28:DE:131:ALA:O	28:DE:132:HIS:HB3	1.96	0.64
30:DG:178:PHE:HB3	30:DG:180:PHE:HE1	1.61	0.64
35:DO:61:ARG:C	35:DO:62:LEU:CD2	2.59	0.64
25:DA:2251:G:OP1	36:DP:82:ARG:NH1	2.29	0.64
38:DQ:59:LYS:CD	38:DQ:60:GLY:H	2.09	0.64
45:DV:146:ILE:HG13	45:DV:147:GLY:H	1.61	0.64
12:AO:44:LYS:C	12:AO:44:LYS:CD	2.64	0.64
19:AV:15:LEU:O	19:AV:19:VAL:N	2.21	0.64
41:B2:34:GLU:O	41:B2:36:PRO:HD3	1.98	0.64
51:B5:45:VAL:HG13	51:B5:50:GLY:HA3	1.78	0.64
53:B7:8:ASN:HD22	53:B7:8:ASN:C	2.00	0.64
25:BA:1102:C:H2'	25:BA:1103:A:C8	2.31	0.64
27:BD:155:LEU:HD23	27:BD:177:LEU:HD22	1.79	0.64
35:BO:11:GLY:O	35:BO:13:ASN:N	2.30	0.64
35:BO:61:ARG:O	35:BO:62:LEU:HD23	1.97	0.64
1:CA:1053:G:O2'	1:CA:1054:C:P	2.55	0.64
1:CA:1159:U:H1'	1:CA:1181:G:H1	1.63	0.64
1:CA:64:G:H4'	1:CA:65:U:O5'	1.97	0.64
1:CA:736:C:H2'	1:CA:737:A:C8	2.31	0.64
3:CF:152:ILE:HG12	3:CF:167:TRP:HB2	1.80	0.64
25:DA:511:U:H3'	25:DA:512:G:C5'	2.24	0.64
25:DA:945:A:C4	25:DA:2448:A:C2	2.84	0.64
28:DE:87:GLU:O	28:DE:89:ASP:N	2.30	0.64
32:DK:79:ILE:O	32:DK:143:SER:N	2.30	0.64
45:DV:19:ARG:NH1	45:DV:84:GLU:HB2	2.11	0.64
47:DZ:93:GLU:HA	47:DZ:97:LEU:HB3	1.79	0.64
37:B0:117:VAL:O	37:B0:118:GLU:HB2	1.96	0.64
54:B8:29:LYS:HG2	54:B8:44:LYS:HG2	1.80	0.64
25:BA:2306:C:H3'	25:BA:2307:G:H5'	1.79	0.64
25:BA:2314:C:H2'	25:BA:2315:G:H8	1.61	0.64
25:BA:247:G:H4'	25:BA:386:G:C5	2.32	0.64
25:BA:2712:U:OP1	25:BA:2714:G:H4'	1.96	0.64
25:BA:844:C:H2'	25:BA:845:G:O4'	1.96	0.64
26:BB:6:C:C2'	26:BB:7:G:H5''	2.25	0.64
45:BV:52:SER:O	45:BV:54:HIS:N	2.31	0.64
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:81:G:H1	1:CA:88:C:H42	1.45	0.64
1:CA:86:U:C2'	1:CA:87:A:OP1	2.46	0.64
3:CF:8:ILE:HG23	3:CF:16:ARG:HG2	1.80	0.64
11:CN:27:ASN:OD1	11:CN:28:THR:N	2.30	0.64
37:D0:54:LEU:HD23	37:D0:66:VAL:HG23	1.80	0.64
40:D1:25:TRP:C	40:D1:25:TRP:CD1	2.71	0.64
31:DH:109:PHE:HE1	31:DH:152:ARG:HD3	1.62	0.64
32:DK:112:LYS:O	32:DK:113:ARG:HG2	1.98	0.64
35:DO:48:PRO:O	35:DO:50:ARG:N	2.31	0.64
45:DV:170:THR:OG1	45:DV:170:THR:O	2.13	0.64
1:AA:1053:G:O3'	1:AA:1054:C:H4'	1.97	0.64
1:AA:433:C:H2'	1:AA:434:U:H6	1.61	0.64
1:AA:464:G:C6	1:AA:466:C:H5'	2.33	0.64
22:AB:10:C:H2'	22:AB:11:C:H6	1.63	0.64
22:AB:46:G:O2'	22:AB:47:U:OP1	2.14	0.64
54:B8:35:GLN:O	54:B8:36:LYS:HB2	1.98	0.64
25:BA:1359:A:N1	25:BA:1372:U:C4	2.65	0.64
25:BA:2111:C:H5	25:BA:2147:G:H1	1.46	0.64
25:BA:2212:A:H1'	25:BA:2215:G:C4	2.32	0.64
36:BP:66:ILE:HA	36:BP:104:PHE:HA	1.78	0.64
25:BA:138:G:N2	43:BT:44:GLU:OE2	2.20	0.64
45:BV:9:TYR:CE1	45:BV:35:ARG:HD3	2.23	0.64
45:BV:6:LYS:NZ	45:BV:43:GLU:HG3	2.11	0.64
1:CA:1200:C:H5'	1:CA:1201:A:C5'	2.26	0.64
3:CF:79:ARG:O	3:CF:81:GLY:N	2.29	0.64
6:CI:100:ASN:ND2	18:CU:23:LYS:HE3	2.13	0.64
25:DA:1252:G:N7	40:D1:36:ARG:NH1	2.46	0.64
26:DB:15:A:H3'	26:DB:16:G:H5'	1.79	0.64
1:AA:1124:G:O2'	10:AM:38:ILE:HD12	1.97	0.64
16:AS:8:ARG:HB3	16:AS:28:ARG:HH12	1.63	0.64
19:AV:15:LEU:HA	19:AV:18:LYS:HB3	1.80	0.64
19:AV:40:ILE:HD11	19:AV:62:ILE:HD12	1.78	0.64
25:BA:2472:G:C4	25:BA:2475:C:N4	2.66	0.64
25:BA:481:G:H1'	25:BA:507:A:N1	2.12	0.64
27:BD:35:LYS:HD3	27:BD:63:ARG:CA	2.28	0.64
1:CA:1003:G:N2	1:CA:1037:C:C2	2.66	0.64
1:CA:951:G:OP2	13:CP:102:ARG:NH2	2.30	0.64
22:CB:78:C:C4'	22:CB:79:A:OP1	2.46	0.64
2:CE:8:LYS:HB2	2:CE:217:ARG:NE	2.13	0.64
9:CL:18:PHE:O	9:CL:62:TYR:N	2.30	0.64
41:D2:79:VAL:C	41:D2:80:GLN:NE2	2.46	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DG:179:PRO:HB3	50:D4:43:TYR:HE2	1.62	0.64
25:DA:1198:U:H2'	25:DA:1199:U:C6	2.33	0.64
25:DA:2166:G:N2	25:DA:2171:A:N7	2.46	0.64
27:DD:166:GLN:HA	27:DD:166:GLN:NE2	2.09	0.64
35:DO:64:LYS:O	35:DO:65:ARG:C	2.34	0.64
38:DQ:106:ARG:HB3	38:DQ:112:PHE:O	1.98	0.64
22:AD:43:G:O2'	22:AD:44:C:H5'	1.97	0.64
7:AJ:120:ILE:O	7:AJ:124:LEU:HB2	1.98	0.64
12:AO:59:SER:C	12:AO:61:TYR:H	2.00	0.64
20:AW:31:SER:HA	20:AW:34:LYS:HE3	1.80	0.64
25:BA:1102:C:H2'	25:BA:1103:A:H8	1.63	0.64
25:BA:140:A:C8	25:BA:1408:C:O2'	2.49	0.64
25:BA:2065:C:H2'	25:BA:2066:C:C6	2.33	0.64
25:BA:881:G:H5'	25:BA:882:G:OP2	1.97	0.64
1:CA:1033:G:H2'	1:CA:1034:G:C8	2.33	0.64
1:CA:266:G:O6	1:CA:270:A:N7	2.31	0.64
22:CD:20:C:C5'	22:CD:68:A:H62	2.10	0.64
2:CE:8:LYS:HB2	2:CE:217:ARG:HE	1.63	0.64
19:CV:49:ILE:HG13	19:CV:62:ILE:HD11	1.80	0.64
25:DA:2126:A:N6	25:DA:2163:C:O2'	2.30	0.64
25:DA:2208:U:O2'	25:DA:2209:C:H5'	1.97	0.64
25:DA:278:A:C4'	25:DA:279:C:OP1	2.46	0.64
38:DQ:24:LEU:HB2	38:DQ:85:VAL:HG12	1.78	0.64
45:DV:62:PRO:C	45:DV:64:GLY:H	2.00	0.64
48:DW:46:GLN:HB2	48:DW:49:LYS:NZ	2.12	0.64
1:AA:791:G:O6	1:AA:792:A:N1	2.30	0.64
3:AF:91:LEU:HB2	3:AF:99:VAL:HG21	1.78	0.64
16:AS:50:LYS:HD3	16:AS:51:VAL:N	2.12	0.64
25:BA:2886:G:O2'	51:B5:31:VAL:HG23	1.97	0.64
25:BA:1903:G:OP1	27:BD:241:PRO:HB2	1.98	0.64
25:BA:880:G:O2'	25:BA:881:G:OP1	2.16	0.64
27:BD:108:PRO:HB3	27:BD:143:HIS:CE1	2.32	0.64
29:BF:24:LEU:HD23	29:BF:115:ALA:HA	1.79	0.64
32:BK:71:ILE:HG12	32:BK:72:LEU:HD12	1.79	0.64
35:BO:19:VAL:HG22	35:BO:27:HIS:O	1.97	0.64
44:BU:49:VAL:HB	44:BU:50:ARG:NH2	2.13	0.64
44:BU:47:LYS:HG2	44:BU:60:PHE:CE1	2.33	0.64
44:BU:89:PHE:H	44:BU:90:LEU:HD12	1.63	0.64
1:CA:859:A:OP2	1:CA:869:G:N1	2.28	0.64
9:CL:95:LYS:HZ3	9:CL:96:LEU:HD13	1.63	0.64
13:CP:39:ILE:HD13	13:CP:52:GLU:HB3	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2469:A:O2'	36:DP:56:ARG:HG2	1.98	0.64
25:DA:2638:G:HO2'	25:DA:2639:A:H8	1.44	0.64
25:DA:274:G:C5	25:DA:275:G:C6	2.86	0.64
25:DA:2773:C:OP1	28:DE:166:THR:OG1	2.15	0.64
25:DA:847:U:C2	25:DA:933:A:N6	2.66	0.64
26:DB:44:G:H5''	26:DB:45:A:OP1	1.98	0.64
45:DV:94:GLU:O	45:DV:130:PRO:HD3	1.97	0.64
1:AA:1321:C:H3'	1:AA:1322:C:H5''	1.79	0.64
1:AA:1331:G:HO2'	1:AA:1332:A:H8	1.46	0.64
1:AA:539:A:OP1	12:AO:111:LYS:NZ	2.25	0.64
22:AB:77:C:H2'	22:AB:78:C:C5	2.33	0.64
17:AT:52:LYS:HD2	17:AT:53:LEU:O	1.96	0.64
21:AX:2:GLY:C	21:AX:4:GLY:H	2.00	0.64
50:B4:19:GLY:O	50:B4:20:ASN:ND2	2.30	0.64
25:BA:2476:A:N3	25:BA:2476:A:H2'	2.11	0.64
25:BA:2577:A:H5''	25:BA:2578:G:H5'	1.79	0.64
25:BA:654(I):C:O2	25:BA:654(I):C:H3'	1.98	0.64
25:BA:900:A:N3	25:BA:900:A:H2'	2.12	0.64
26:BB:73:A:C2'	26:BB:74:U:H5'	2.28	0.64
36:BP:75:THR:HG22	36:BP:90:VAL:H	1.63	0.64
1:CA:1191:A:OP1	3:CF:3:ASN:ND2	2.25	0.64
1:CA:631:G:O2'	1:CA:632:A:P	2.56	0.64
1:CA:957:U:H2'	1:CA:959:A:OP2	1.97	0.64
25:DA:1061:U:H5'	25:DA:1070:A:O2'	1.98	0.64
25:DA:2068:U:N3	25:DA:2430:A:H2	1.95	0.64
25:DA:888:C:H1'	25:DA:889:C:OP1	1.97	0.64
28:DE:8:LYS:HE3	28:DE:188:VAL:HG13	1.80	0.64
48:DW:47:ASN:HD22	48:DW:47:ASN:N	1.96	0.64
3:AF:70:VAL:HG12	3:AF:71:ALA:N	2.12	0.64
8:AK:129:VAL:HG23	8:AK:130:GLY:H	1.63	0.64
13:AP:11:ARG:HG2	13:AP:12:ASN:H	1.63	0.64
25:BA:880:G:H1	25:BA:897:C:H42	0.71	0.64
27:BD:33:LEU:CD1	27:BD:34:VAL:H	2.08	0.64
45:BV:69:THR:HG22	45:BV:90:VAL:HA	1.80	0.64
23:CC:19:G:H4'	23:CC:20:G:OP1	1.98	0.64
2:CE:52:GLU:HG2	2:CE:56:ARG:NH2	2.13	0.64
4:CG:34:GLU:O	4:CG:35:ARG:HB2	1.96	0.64
20:CW:97:ALA:O	20:CW:99:LEU:HD12	1.98	0.64
25:DA:1071:G:H22	25:DA:1090:U:H5	1.44	0.64
25:DA:1689:A:N6	25:DA:1698:A:C2	2.43	0.64
25:DA:443:A:H5''	25:DA:444:C:OP1	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:734:A:O2'	25:DA:1635:G:H5'	1.97	0.64
28:DE:23:VAL:HA	28:DE:184:VAL:O	1.97	0.64
33:DM:62:VAL:HG22	33:DM:66:LYS:HE3	1.79	0.64
44:DU:84:ARG:NH2	44:DU:97:ARG:HB2	2.13	0.64
47:DZ:91:LYS:CG	47:DZ:92:LYS:H	2.09	0.64
1:AA:1023:G:C3'	1:AA:1024:G:H5''	2.28	0.63
1:AA:1224:G:C6	1:AA:1322:C:H1'	2.34	0.63
1:AA:280:C:H3'	1:AA:281:G:H5'	1.80	0.63
22:AD:18:G:H4'	22:AD:19:C:O5'	1.98	0.63
5:AH:33:VAL:HG11	5:AH:109:ILE:HA	1.79	0.63
54:B8:33:ASN:HA	54:B8:35:GLN:O	1.98	0.63
25:BA:2173:A:H5'	25:BA:2174:C:OP2	1.98	0.63
36:BP:75:THR:HB	36:BP:88:GLY:CA	2.17	0.63
1:CA:687:A:H1'	1:CA:688:G:OP2	1.98	0.63
1:CA:86:U:H2'	1:CA:87:A:OP1	1.98	0.63
20:CW:26:ASN:O	20:CW:30:LYS:HB2	1.98	0.63
41:D2:22:VAL:HG22	41:D2:23:GLU:H	1.63	0.63
25:DA:543:C:H42	25:DA:550:G:H1	1.44	0.63
26:DB:83:G:H1	26:DB:93:C:H42	1.44	0.63
1:AA:989:C:H42	1:AA:1216:G:H1	1.44	0.63
1:AA:1305:G:H22	1:AA:1331:G:C2'	2.09	0.63
12:AO:44:LYS:CE	12:AO:44:LYS:CA	2.76	0.63
17:AT:67:LYS:O	17:AT:68:ARG:HB3	1.98	0.63
41:B2:60:GLU:HB2	41:B2:97:LYS:HE2	1.79	0.63
50:B4:16:CYS:SG	50:B4:17:GLY:N	2.72	0.63
25:BA:1694:C:H4'	25:BA:1695:G:O5'	1.97	0.63
44:BU:29:GLU:HB3	44:BU:38:ILE:CG2	2.29	0.63
1:CA:1148:U:H2'	1:CA:1149:C:O4'	1.97	0.63
1:CA:1267:C:H2'	1:CA:1267:C:O2	1.96	0.63
1:CA:748:C:H1'	1:CA:749:C:OP2	1.97	0.63
3:CF:139:GLN:NE2	3:CF:170:GLN:HE22	1.93	0.63
4:CG:119:GLN:HG2	4:CG:123:HIS:HD2	1.63	0.63
4:CG:119:GLN:HG2	4:CG:123:HIS:CD2	2.34	0.63
12:CO:43:LYS:HD3	12:CO:91:PRO:HG3	1.80	0.63
40:D1:92:ARG:NH2	41:D2:11:GLN:H	1.96	0.63
25:DA:2681:C:H6	25:DA:2683:C:H41	1.46	0.63
25:DA:2872:G:C8	25:DA:2873:A:H2	2.17	0.63
30:DG:13:GLU:O	30:DG:14:GLU:HB2	1.96	0.63
1:AA:1128:C:H5''	1:AA:1129:C:OP2	1.99	0.63
22:AB:46:G:O2'	22:AB:47:U:P	2.55	0.63
22:AD:8:U:H3	22:AD:14:A:H62	1.45	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1885:A:H2'	25:BA:1886:C:O4'	1.97	0.63
25:BA:847:U:C5	25:BA:933:A:C2	2.86	0.63
28:BE:87:GLU:O	28:BE:89:ASP:N	2.31	0.63
35:BO:115:LEU:HA	35:BO:134:ALA:HB2	1.80	0.63
1:CA:1371:G:O3'	9:CL:69:GLY:HA3	1.99	0.63
1:CA:266:G:H5''	1:CA:267:C:C5	2.34	0.63
22:CB:28:G:N2	22:CB:45:C:H1'	2.13	0.63
2:CE:74:LYS:NZ	2:CE:205:ASP:O	2.31	0.63
10:CM:9:ARG:HB2	10:CM:95:GLU:HB3	1.79	0.63
37:D0:73:VAL:O	37:D0:76:VAL:HG12	1.97	0.63
25:DA:1063:G:H2'	25:DA:1064:C:O4'	1.98	0.63
25:DA:1021:A:N6	25:DA:1142(A):A:H61	1.92	0.63
25:DA:1568:G:OP2	27:DD:63:ARG:NH2	2.32	0.63
25:DA:2467:C:H2'	25:DA:2468:G:O4'	1.98	0.63
25:DA:593:G:H1'	54:D8:4:MET:HE1	1.79	0.63
35:DO:39:LYS:HD3	35:DO:45:LEU:CD2	2.29	0.63
35:DO:71:VAL:CB	35:DO:72:PRO:HD3	2.26	0.63
45:DV:11:GLU:HG3	45:DV:12:GLY:N	2.14	0.63
1:AA:1065:U:H1'	1:AA:1066:C:OP2	1.98	0.63
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.13	0.63
1:AA:397:A:H5'	1:AA:398:C:OP1	1.98	0.63
2:AE:18:GLY:H	2:AE:42:ILE:CG2	2.08	0.63
41:B2:35:LEU:HD23	41:B2:35:LEU:O	1.98	0.63
41:B2:3:ALA:HB2	41:B2:99:ILE:HG21	1.79	0.63
27:BD:35:LYS:CG	27:BD:64:ILE:N	2.60	0.63
28:BE:68:ALA:C	28:BE:70:ALA:H	2.00	0.63
1:CA:197:A:H3'	1:CA:197:A:OP2	1.99	0.63
1:CA:266:G:H5''	1:CA:267:C:H5	1.64	0.63
1:CA:554:C:H2'	1:CA:555:C:H6	1.62	0.63
7:CJ:15:ASP:HB2	7:CJ:23:VAL:HG23	1.79	0.63
7:CJ:32:ARG:O	7:CJ:34:GLY:N	2.31	0.63
10:CM:54:PHE:CE1	10:CM:55:LYS:NZ	2.64	0.63
13:CP:86:CYS:O	13:CP:89:GLY:N	2.22	0.63
25:DA:1416:G:H1	25:DA:1582:C:H42	1.45	0.63
25:DA:1839:G:C8	25:DA:1927:A:H1'	2.34	0.63
25:DA:2145:C:H5''	25:DA:2146:C:OP2	1.99	0.63
25:DA:2141:G:C6	25:DA:2150:U:O2	2.51	0.63
25:DA:2298:A:N6	25:DA:2318:G:H2'	2.13	0.63
25:DA:854:G:H2'	25:DA:855:G:H8	1.63	0.63
29:DF:7:TYR:CE2	29:DF:16:GLY:HA3	2.33	0.63
39:DR:24:PRO:O	39:DR:94:ALA:HB2	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AB:51:C:C2	22:AB:52:G:H1'	2.34	0.63
2:AE:75:LYS:O	2:AE:75:LYS:HE3	1.98	0.63
6:AI:67:MET:HB2	6:AI:68:PRO:HD2	1.80	0.63
1:AA:390:C:O3'	16:AS:28:ARG:NH2	2.32	0.63
25:BA:2334:G:H5'	38:BQ:9:ARG:HG2	1.80	0.63
49:BX:31:LEU:O	49:BX:32:GLN:HB2	1.98	0.63
22:CD:17:G:O2'	22:CD:66:G:N2	2.31	0.63
10:CM:6:ILE:HD11	10:CM:72:VAL:HB	1.81	0.63
52:D6:24:GLU:HG3	52:D6:25:LYS:HG2	1.80	0.63
25:DA:1991:U:H2'	25:DA:1992:G:H5''	1.79	0.63
25:DA:2776:A:H3'	25:DA:2776:A:OP1	1.98	0.63
25:DA:883:G:H2'	25:DA:884:C:C5	2.33	0.63
45:DV:53:ILE:HG22	45:DV:71:VAL:O	1.99	0.63
22:AD:18:G:OP1	22:AD:69:U:N3	2.22	0.63
22:AD:43:G:C2'	22:AD:44:C:H5'	2.28	0.63
15:AR:6:GLU:OE2	15:AR:6:GLU:N	2.32	0.63
46:B3:64:ASP:HB2	46:B3:85:ALA:HA	1.81	0.63
52:B6:10:LEU:H	52:B6:10:LEU:HD12	1.62	0.63
25:BA:1081:U:C2'	25:BA:1082:U:O4'	2.47	0.63
29:BF:184:TYR:O	29:BF:188:ARG:HG3	1.99	0.63
39:BR:108:ARG:HA	39:BR:111:ARG:NE	2.14	0.63
45:BV:30:ASN:ND2	45:BV:33:LEU:H	1.97	0.63
1:CA:1244:C:H2'	1:CA:1245:A:C8	2.34	0.63
5:CH:142:LEU:O	5:CH:143:ARG:NE	2.29	0.63
25:DA:2143:C:N3	25:DA:2148:G:N2	2.37	0.63
25:DA:2419:U:H4'	52:D6:23:THR:HG21	1.80	0.63
25:DA:2552:U:H2'	25:DA:2554:U:OP2	1.98	0.63
25:DA:274:G:H2'	25:DA:275:G:C8	2.34	0.63
27:DD:69:ARG:HD3	27:DD:105:ILE:HD11	1.80	0.63
27:DD:130:ALA:C	27:DD:131:LEU:HD12	2.19	0.63
27:DD:35:LYS:HE3	27:DD:64:ILE:N	2.14	0.63
32:DK:81:VAL:HG22	32:DK:143:SER:HB2	1.81	0.63
25:DA:495:G:H1'	42:DS:57:ASN:ND2	2.14	0.63
1:AA:1182:G:H4'	1:AA:1183:A:C5'	2.28	0.63
25:BA:1188:U:O2'	25:BA:1189:A:H5'	1.97	0.63
25:BA:882:G:H2'	25:BA:883:G:N7	2.14	0.63
36:BP:84:GLY:O	36:BP:85:LYS:HB2	1.98	0.63
1:CA:1002:G:H2'	1:CA:1003:G:H8	1.58	0.63
22:CD:60:A:H2'	22:CD:61:G:C8	2.34	0.63
18:CU:87:ARG:O	18:CU:88:LYS:HB2	1.98	0.63
46:D3:49:LYS:HE2	46:D3:80:HIS:HB3	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2298:A:H61	25:DA:2318:G:C2'	2.11	0.63
25:DA:479:A:N3	25:DA:481:G:H5''	2.14	0.63
25:DA:795:C:H2'	25:DA:796:C:H6	1.64	0.63
33:DM:76:SER:HB3	33:DM:81:GLY:HA3	1.80	0.63
36:DP:84:GLY:O	36:DP:85:LYS:HB2	1.98	0.63
1:AA:413:G:C2'	1:AA:414:A:OP2	2.47	0.63
8:AK:64:LYS:HG2	8:AK:79:VAL:HG21	1.79	0.63
25:BA:2882:A:OP1	37:B0:96:ARG:NH1	2.29	0.63
46:B3:66:VAL:HG22	46:B3:82:ARG:HB3	1.81	0.63
50:B4:14:ILE:HG23	50:B4:21:VAL:HB	1.80	0.63
50:B4:19:GLY:C	50:B4:20:ASN:HD22	2.02	0.63
51:B5:3:LYS:O	51:B5:4:HIS:CB	2.35	0.63
52:B6:18:ARG:NH1	52:B6:43:CYS:SG	2.72	0.63
25:BA:2419:U:O4	54:B8:30:ARG:NE	2.32	0.63
25:BA:2511:U:O4	25:BA:2575:C:N3	2.32	0.63
25:BA:588:U:H2'	25:BA:589:C:C6	2.34	0.63
34:BN:47:ILE:HG13	34:BN:48:PRO:HD2	1.79	0.63
36:BP:59:ARG:O	36:BP:61:GLY:N	2.24	0.63
44:BU:81:LYS:HG2	44:BU:97:ARG:HB3	1.81	0.63
45:BV:60:GLU:O	45:BV:61:LEU:HD13	1.98	0.63
25:DA:2502:G:H5''	25:DA:2503:A:H5''	1.79	0.63
27:DD:95:LEU:HD11	27:DD:105:ILE:HD12	1.81	0.63
1:AA:1026:G:C5	1:AA:1036:G:N2	2.66	0.63
1:AA:509:A:H2'	1:AA:510:A:C8	2.34	0.63
1:AA:973:G:H3'	1:AA:974:A:C5'	2.29	0.63
51:B5:42:PRO:HB2	51:B5:43:HIS:HD2	1.64	0.63
25:BA:1930:G:N2	25:BA:1969:A:OP2	2.27	0.63
25:BA:2032:G:H21	28:BE:146:THR:HG23	1.63	0.63
25:BA:2157:G:O2'	25:BA:2158:A:O5'	2.15	0.63
25:BA:654(H):G:N7	25:BA:654(N):G:N2	2.46	0.63
25:BA:795:C:H2'	25:BA:796:C:H6	1.64	0.63
44:BU:97:ARG:NH2	44:BU:98:VAL:HB	2.11	0.63
48:BW:50:ILE:HD12	48:BW:51:ARG:H	1.64	0.63
1:CA:1157:A:O2'	1:CA:1158:C:P	2.57	0.63
1:CA:1159:U:H1'	1:CA:1181:G:N1	2.14	0.63
1:CA:1286:A:C8	1:CA:1287:A:H4'	2.34	0.63
2:CE:22:LYS:HE3	2:CE:40:HIS:NE2	2.14	0.63
2:CE:36:ARG:HB3	2:CE:41:ILE:HD11	1.81	0.63
4:CG:92:VAL:O	4:CG:96:LEU:HD23	1.99	0.63
25:DA:574:C:N3	28:DE:145:LYS:NZ	2.35	0.63
44:DU:89:PHE:CD1	44:DU:90:LEU:HG	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:969:U:OP1	49:DX:17:LYS:HD3	1.99	0.63
23:AC:6:G:H1	23:AC:68:C:H42	1.46	0.62
10:AM:78:ASN:HB2	10:AM:81:THR:HG23	1.81	0.62
19:AV:41:VAL:HB	19:AV:42:PRO:CA	2.23	0.62
41:B2:38:LEU:HD23	41:B2:39:LEU:H	1.63	0.62
41:B2:89:GLN:HA	41:B2:89:GLN:HE21	1.64	0.62
25:BA:1252:G:N3	40:B1:33:ARG:HD2	2.13	0.62
25:BA:319:C:P	29:BF:137:LYS:HZ1	2.22	0.62
25:BA:370:G:H4'	25:BA:371:A:OP2	2.00	0.62
27:BD:31:LYS:NZ	27:BD:33:LEU:HD12	2.14	0.62
27:BD:58:HIS:HD2	27:BD:59:LYS:O	1.81	0.62
30:BG:13:GLU:O	30:BG:14:GLU:HB2	1.99	0.62
36:BP:26:TYR:C	36:BP:26:TYR:HD2	2.02	0.62
43:BT:3:THR:HA	43:BT:6:ASP:OD2	1.98	0.62
1:CA:1321:C:H4'	13:CP:87:TYR:CZ	2.34	0.62
4:CG:8:VAL:O	4:CG:10:ARG:N	2.32	0.62
50:D4:40:HIS:N	50:D4:41:PRO:HD3	2.14	0.62
25:DA:528:A:H2	25:DA:2043:C:C5'	2.12	0.62
25:DA:2415:G:H4'	35:DO:67:MET:N	2.14	0.62
25:DA:900:A:H2'	25:DA:900:A:N3	2.12	0.62
34:DN:47:ILE:CG1	34:DN:48:PRO:HD2	2.29	0.62
35:DO:71:VAL:O	35:DO:72:PRO:C	2.37	0.62
36:DP:43:THR:HG22	36:DP:94:VAL:HG12	1.80	0.62
25:DA:751:A:H5'	42:DS:90:ARG:HA	1.81	0.62
47:DZ:92:LYS:O	47:DZ:94:LEU:N	2.32	0.62
25:BA:754:C:H2'	25:BA:755:C:H6	1.63	0.62
28:BE:199:ARG:HB3	28:BE:200:GLU:OE2	1.99	0.62
28:BE:27:LEU:HD13	39:BR:1:MET:HE2	1.81	0.62
31:BH:83:TYR:HB3	31:BH:135:GLY:N	2.11	0.62
31:BH:150:ALA:C	31:BH:152:ARG:H	2.03	0.62
35:BO:66:GLY:O	35:BO:67:MET:CB	2.48	0.62
47:BZ:65:SER:HB2	47:BZ:66:HIS:HD2	1.63	0.62
1:CA:1151:A:H5'	10:CM:41:PRO:HA	1.82	0.62
12:CO:15:VAL:HG23	12:CO:16:ARG:H	1.63	0.62
1:AA:1502:A:H2	1:AA:1505:G:H22	1.43	0.62
1:AA:376:G:O3'	16:AS:5:ARG:NH1	2.32	0.62
2:AE:11:LEU:HB3	2:AE:213:LEU:HD11	1.80	0.62
3:AF:16:ARG:NH2	3:AF:183:ASP:OD2	2.32	0.62
1:AA:738:C:H5''	6:AI:69:GLU:HB2	1.81	0.62
11:AN:127:LYS:NZ	11:AN:127:LYS:HA	2.14	0.62
25:BA:1060:U:H1'	25:BA:1061:U:OP2	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2138:C:H42	25:BA:2153:G:H1	1.45	0.62
25:BA:2309:A:O2'	25:BA:2310:A:OP1	2.17	0.62
32:BK:133:HIS:CB	32:BK:134:PRO:HD2	2.25	0.62
35:BO:114:ILE:HD11	35:BO:130:PHE:HD1	1.64	0.62
39:BR:120:ARG:HA	39:BR:123:GLN:HG2	1.80	0.62
48:BW:13:ALA:HA	48:BW:16:LEU:HD23	1.81	0.62
1:CA:608:A:H2'	1:CA:609:A:O4'	1.98	0.62
19:CV:47:HIS:O	19:CV:62:ILE:HD13	1.99	0.62
25:DA:1011:G:H1	25:DA:1150:C:N4	1.97	0.62
25:DA:1496:A:C8	25:DA:1577:C:O2'	2.51	0.62
25:DA:2141:G:H2'	25:DA:2142:C:O4'	1.99	0.62
26:DB:88:C:H3'	26:DB:89:G:H8	1.63	0.62
27:DD:34:VAL:O	27:DD:34:VAL:HG13	1.99	0.62
27:DD:35:LYS:CD	27:DD:104:TYR:CD1	2.81	0.62
36:DP:87:LYS:O	36:DP:88:GLY:C	2.37	0.62
39:DR:106:SER:HA	39:DR:110:ILE:CD1	2.29	0.62
8:AK:6:ILE:O	8:AK:10:LEU:HD23	2.00	0.62
11:AN:126:ARG:O	11:AN:128:ALA:N	2.32	0.62
12:AO:45:PRO:O	12:AO:46:ASN:CG	2.38	0.62
52:B6:17:LYS:O	52:B6:44:ARG:NH2	2.33	0.62
25:BA:2340:G:C2'	25:BA:2341:G:H5'	2.30	0.62
25:BA:1786:A:H2	25:BA:2606:C:H1'	1.64	0.62
25:BA:279:C:N4	25:BA:361:G:H1	1.96	0.62
33:BM:133:GLN:HG2	33:BM:134:ARG:H	1.64	0.62
4:CG:5:ILE:HD12	4:CG:5:ILE:H	1.65	0.62
9:CL:125:TYR:CD2	9:CL:126:SER:N	2.68	0.62
25:DA:550:G:O2'	25:DA:1220:A:N3	2.32	0.62
25:DA:1899:G:N2	25:DA:1902:C:N4	2.27	0.62
26:DB:88:C:H3'	26:DB:89:G:C8	2.34	0.62
35:DO:64:LYS:HD3	54:D8:25:MET:CE	2.28	0.62
42:DS:84:ARG:HB2	42:DS:96:ILE:HD11	1.80	0.62
1:AA:1028(B):C:N3	1:AA:1032(A):G:C2	2.67	0.62
1:AA:581:G:N2	1:AA:760:G:N7	2.47	0.62
22:AD:81:C:H2'	22:AD:82:A:O4'	1.99	0.62
12:AO:59:SER:HB2	12:AO:61:TYR:HD1	1.63	0.62
37:B0:38:VAL:HB	37:B0:39:PRO:HD3	1.80	0.62
25:BA:2303:G:H2'	25:BA:2304:G:H5'	1.80	0.62
25:BA:249:C:H4'	25:BA:250:G:O5'	1.99	0.62
27:BD:110:GLY:O	27:BD:112:GLN:HG3	2.00	0.62
35:BO:144:GLU:N	35:BO:144:GLU:OE2	2.32	0.62
35:BO:15:ARG:NH1	35:BO:15:ARG:CG	2.39	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BU:42:VAL:HG12	44:BU:65:ALA:HB3	1.81	0.62
48:BW:16:LEU:HG	48:BW:16:LEU:O	1.97	0.62
8:CK:106:GLY:O	8:CK:122:ARG:NH2	2.33	0.62
9:CL:48:GLU:HA	9:CL:51:ARG:HD2	1.81	0.62
19:CV:31:ILE:HG23	19:CV:49:ILE:HG23	1.81	0.62
19:CV:9:VAL:HG13	50:D4:63:TYR:OH	1.98	0.62
26:DB:14:U:O2'	26:DB:107:U:O2'	1.98	0.62
35:DO:16:ARG:NH1	35:DO:16:ARG:HG3	2.15	0.62
10:AM:57:LYS:CE	10:AM:60:ARG:HH12	2.12	0.62
13:AP:108:ARG:N	13:AP:108:ARG:HD2	2.14	0.62
13:AP:82:MET:C	13:AP:84:ILE:H	2.01	0.62
51:B5:47:PRO:HB2	51:B5:48:GLU:OE2	2.00	0.62
25:BA:2629:A:N6	25:BA:2895:U:C2	2.67	0.62
29:BF:66:PRO:O	29:BF:67:GLN:CB	2.48	0.62
31:BH:86:GLU:N	31:BH:86:GLU:OE1	2.28	0.62
32:BK:110:ASP:HB2	32:BK:112:LYS:N	2.14	0.62
33:BM:96:GLU:O	33:BM:97:ARG:HB2	1.98	0.62
25:BA:806:C:OP2	35:BO:41:ARG:HD3	1.99	0.62
38:BQ:15:ARG:HD2	38:BQ:88:ASP:OD1	2.00	0.62
45:BV:110:GLY:O	45:BV:111:VAL:HG22	1.99	0.62
20:CW:26:ASN:CB	20:CW:71:THR:HG23	2.29	0.62
25:DA:1490:A:O2'	27:DD:99:ASP:OD2	2.18	0.62
25:DA:1666:G:OP1	34:DN:66:LYS:HD3	1.99	0.62
28:DE:170:LEU:HD12	28:DE:185:LYS:HB2	1.81	0.62
28:DE:61:ARG:HB3	28:DE:62:PRO:HD3	1.81	0.62
29:DF:192:LEU:O	29:DF:193:VAL:HG23	2.00	0.62
1:AA:1002:G:C4	1:AA:1003:G:N7	2.68	0.62
1:AA:1280:A:C3'	1:AA:1281:U:H5'	2.30	0.62
5:AH:126:ARG:HG3	5:AH:126:ARG:NH1	2.09	0.62
8:AK:87:SER:HA	8:AK:93:VAL:HG23	1.81	0.62
10:AM:5:ARG:HH11	10:AM:99:LYS:HD3	1.64	0.62
1:AA:377:G:OP1	16:AS:3:LYS:HD2	2.00	0.62
25:BA:2820:A:O5'	37:B0:4:LEU:HD23	2.00	0.62
25:BA:287:C:H2'	25:BA:288:C:H6	1.64	0.62
25:BA:945:A:H2'	25:BA:945:A:N3	2.14	0.62
44:BU:78:ALA:HB3	44:BU:81:LYS:NZ	2.15	0.62
1:CA:1019:C:H2'	1:CA:1020:U:O4'	1.98	0.62
1:CA:509:A:H5''	4:CG:55:ALA:HB2	1.81	0.62
10:CM:16:LEU:HB3	10:CM:70:ARG:HD3	1.82	0.62
15:CR:26:GLU:OE2	15:CR:77:ARG:NH1	2.32	0.62
18:CU:29:PHE:HD2	18:CU:29:PHE:H	1.46	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DB:40:U:N3	50:D4:1:MET:SD	2.72	0.62
25:DA:1341:U:H3'	25:DA:1342:A:C2	2.34	0.62
25:DA:2287:A:C2	25:DA:2346:A:N1	2.68	0.62
25:DA:548:A:H2'	25:DA:549:G:O4'	1.99	0.62
27:DD:64:ILE:O	27:DD:64:ILE:CG1	2.48	0.62
1:AA:1176:A:N6	1:AA:1177:G:C5	2.68	0.62
1:AA:243:A:H4'	1:AA:244:U:H3'	1.82	0.62
22:AB:85:A:H8	25:BA:2583:G:H21	1.43	0.62
2:AE:100:GLY:O	2:AE:104:ASN:N	2.28	0.62
8:AK:63:LEU:HB3	8:AK:65:TYR:HE1	1.63	0.62
40:B1:105:VAL:HA	41:B2:44:LYS:HG3	1.81	0.62
25:BA:1126:A:H4'	25:BA:1127:A:O5'	1.99	0.62
25:BA:558:G:OP1	33:BM:111:PRO:HD2	1.99	0.62
2:CE:54:THR:HG23	2:CE:199:TYR:HB3	1.81	0.62
19:CV:18:LYS:O	19:CV:22:LEU:HB2	1.99	0.62
25:DA:1796:U:H2'	25:DA:1797:C:C6	2.35	0.62
25:DA:535:C:O2'	25:DA:536:A:H5'	1.99	0.62
12:AO:85:GLY:H	12:AO:95:TYR:HA	1.63	0.62
13:AP:7:VAL:HB	30:BG:115:ARG:HH22	1.63	0.62
1:AA:376:G:H5''	16:AS:5:ARG:HD2	1.81	0.62
37:B0:24:GLN:HE22	37:B0:36:THR:HG21	1.63	0.62
25:BA:2343:C:O2'	25:BA:2373:G:O2'	2.00	0.62
27:BD:121:PRO:HB3	27:BD:135:PHE:HE1	1.65	0.62
27:BD:33:LEU:HD22	27:BD:34:VAL:N	2.15	0.62
27:BD:70:TRP:CH2	27:BD:150:LYS:HA	2.35	0.62
30:BG:72:ARG:HD3	30:BG:85:GLY:O	1.99	0.62
4:CG:3:ARG:HG2	4:CG:118:ARG:NH2	2.14	0.62
5:CH:35:GLY:HA2	5:CH:40:ARG:O	2.00	0.62
37:D0:97:VAL:HG12	37:D0:114:VAL:HG22	1.80	0.62
25:DA:1225:C:O3'	41:D2:85:LYS:HA	1.99	0.62
25:DA:2143:C:H2'	25:DA:2144:U:O4'	2.00	0.62
25:DA:2140:C:O2	25:DA:2151:G:N1	2.28	0.62
25:DA:2801:A:H2'	25:DA:2802:G:O4'	1.98	0.62
25:DA:547:A:H3'	25:DA:548:A:C8	2.35	0.62
25:DA:602:G:HO2'	25:DA:604:G:HO2'	1.43	0.62
28:DE:201:THR:HG22	28:DE:202:LYS:N	2.13	0.62
30:DG:135:LEU:HD23	30:DG:140:ILE:HD11	1.82	0.62
25:DA:2275:C:HO2'	36:DP:84:GLY:HA3	1.63	0.62
1:AA:1005:A:H5''	1:AA:1006:C:C6	2.35	0.62
1:AA:448:A:P	1:AA:485:G:H22	2.23	0.62
7:AJ:144:MET:CE	22:AD:31:G:H21	2.12	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AI:72:VAL:HG23	6:AI:90:VAL:HG11	1.82	0.62
9:AL:114:TYR:N	9:AL:114:TYR:CD2	2.68	0.62
50:B4:27:THR:O	50:B4:28:LYS:HB2	1.98	0.62
52:B6:25:LYS:HB3	54:B8:34:TRP:HE1	0.48	0.62
25:BA:1292:U:H2'	25:BA:1293:C:H6	1.63	0.62
25:BA:1769:G:O2'	25:BA:1958:C:OP1	2.14	0.62
36:BP:87:LYS:O	36:BP:88:GLY:C	2.37	0.62
44:BU:28:LYS:NZ	44:BU:64:GLU:OE2	2.30	0.62
1:CA:1004:A:C2	1:CA:1024:G:C8	2.87	0.62
1:CA:1027:C:C2	1:CA:1035:A:N6	2.68	0.62
1:CA:1300:G:O2'	1:CA:1301:U:P	2.58	0.62
1:CA:6:G:H4'	1:CA:298:A:H4'	1.81	0.62
23:CC:48:U:H1'	23:CC:49:C:O5'	2.00	0.62
2:CE:187:LEU:HD23	2:CE:201:ILE:O	2.00	0.62
46:D3:36:ILE:HD13	46:D3:36:ILE:O	2.00	0.62
25:DA:1786:A:H1'	25:DA:1938:A:N6	2.15	0.62
25:DA:2122:U:H2'	25:DA:2123:G:O4'	1.99	0.62
25:DA:30:G:H2'	25:DA:31:C:C6	2.34	0.62
25:DA:626:U:H5''	25:DA:627:A:H5'	1.81	0.62
28:DE:188:VAL:HG23	28:DE:189:PRO:HD2	1.80	0.62
29:DF:36:VAL:CG1	29:DF:183:VAL:HG11	2.30	0.62
30:DG:4:ASP:O	30:DG:5:VAL:HB	2.00	0.62
35:DO:104:GLY:C	35:DO:105:LEU:HG	2.19	0.62
35:DO:47:ASP:H	35:DO:48:PRO:HA	1.65	0.62
1:AA:28:G:O2'	1:AA:296:U:OP1	2.17	0.61
1:AA:539:A:H2'	1:AA:540:G:C8	2.34	0.61
14:AQ:6:LEU:HB3	14:AQ:23:ARG:NH2	2.14	0.61
40:B1:8:VAL:HG23	40:B1:11:ARG:HH21	1.65	0.61
25:BA:2419:U:O4	54:B8:30:ARG:CZ	2.48	0.61
25:BA:1043:C:C2'	25:BA:1044:G:H5'	2.30	0.61
25:BA:2690:C:H6	25:BA:2690:C:OP2	1.82	0.61
27:BD:244:ARG:HB2	27:BD:245:PRO:HD2	1.82	0.61
29:BF:184:TYR:CE2	29:BF:188:ARG:HD2	2.34	0.61
31:BH:151:ILE:O	31:BH:153:LYS:CD	2.48	0.61
36:BP:14:ARG:HG2	36:BP:41:TRP:CH2	2.34	0.61
38:BQ:3:ARG:HG2	38:BQ:4:LEU:N	2.15	0.61
48:BW:4:SER:HB3	48:BW:5:GLU:OE2	2.00	0.61
47:BZ:51:VAL:HG21	47:BZ:74:VAL:HG21	1.81	0.61
1:CA:560:U:H4'	1:CA:561:U:O5'	1.99	0.61
1:CA:984:C:H2'	1:CA:985:C:H6	1.65	0.61
22:CD:60:A:H2'	22:CD:61:G:H8	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CM:13:HIS:CD2	10:CM:13:HIS:C	2.73	0.61
41:D2:80:GLN:HE21	41:D2:80:GLN:N	1.97	0.61
25:DA:1060:U:O4'	25:DA:1062:G:H5'	1.99	0.61
25:DA:1538:G:O2'	25:DA:1539:G:H5'	2.00	0.61
25:DA:2271:G:OP1	46:D3:18:ALA:HB1	2.00	0.61
25:DA:2320:A:H1'	25:DA:2321:G:C6	2.34	0.61
25:DA:2599:G:C8	27:DD:236:GLY:O	2.53	0.61
27:DD:238:GLY:O	27:DD:239:ARG:HB2	1.99	0.61
45:DV:107:THR:N	45:DV:108:PRO:HD2	2.15	0.61
45:DV:93:ASP:N	45:DV:130:PRO:HG2	2.14	0.61
1:AA:501:C:H2'	1:AA:502:G:H8	1.65	0.61
8:AK:21:LYS:O	8:AK:65:TYR:OH	2.16	0.61
10:AM:8:LEU:HD22	10:AM:96:ILE:HG22	1.82	0.61
25:BA:1091:G:C2'	25:BA:1092:C:H5'	2.30	0.61
25:BA:2328:A:H2'	25:BA:2329:G:C8	2.34	0.61
25:BA:796:C:H2'	25:BA:797:C:C6	2.35	0.61
27:BD:34:VAL:O	27:BD:34:VAL:HG13	2.00	0.61
31:BH:88:LEU:HD11	31:BH:165:ALA:HA	1.82	0.61
25:BA:953:A:OP2	36:BP:16:ARG:HD3	2.01	0.61
45:BV:26:GLY:HA2	45:BV:85:HIS:CD2	2.35	0.61
1:CA:1297:C:C1'	1:CA:1298:C:OP2	2.47	0.61
9:CL:97:LYS:HB3	9:CL:98:PRO:HD3	1.82	0.61
12:CO:72:HIS:HD2	12:CO:74:LEU:H	1.45	0.61
26:DB:39:A:C6	50:D4:1:MET:HB3	2.35	0.61
50:D4:12:ALA:HB1	50:D4:29:PRO:O	1.99	0.61
54:D8:33:ASN:OD1	54:D8:33:ASN:N	2.33	0.61
25:DA:2315:G:H2'	25:DA:2316:C:H6	1.65	0.61
25:DA:2425:A:H5''	25:DA:2427:C:O4'	2.00	0.61
25:DA:2777:G:OP2	25:DA:2781:A:O2'	2.12	0.61
1:AA:1502:A:H2	1:AA:1505:G:N2	1.98	0.61
22:AB:48:C:N4	22:AB:52:G:H1	1.97	0.61
6:AI:69:GLU:C	6:AI:71:ARG:H	2.03	0.61
1:AA:1060:C:H5''	10:AM:51:ARG:HG2	1.82	0.61
12:AO:56:ARG:HA	12:AO:62:GLU:HA	1.81	0.61
52:B6:48:VAL:O	52:B6:49:HIS:HB2	1.99	0.61
25:BA:2681:C:H1'	25:BA:2682:U:OP2	2.01	0.61
25:BA:70:G:H4'	25:BA:71:A:OP1	2.00	0.61
28:BE:51:PHE:CE1	28:BE:52:LEU:HG	2.35	0.61
38:BQ:28:VAL:HG11	38:BQ:98:VAL:HG13	1.81	0.61
39:BR:27:THR:HG23	39:BR:90:GLN:HB3	1.83	0.61
1:CA:1004:A:C5'	1:CA:1025:U:O4	2.49	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CG:24:GLU:O	4:CG:28:SER:N	2.32	0.61
1:CA:1298:C:OP2	7:CJ:114:ARG:NH2	2.32	0.61
52:D6:9:LEU:HD22	52:D6:11:LEU:HD13	1.81	0.61
54:D8:24:ALA:N	54:D8:49:VAL:HG23	2.15	0.61
25:DA:2712:U:OP1	25:DA:2714:G:H4'	2.00	0.61
30:DG:129:GLY:HA3	30:DG:163:ALA:O	2.00	0.61
25:DA:811:U:O5'	35:DO:21:ARG:O	2.17	0.61
35:DO:59:LEU:HD23	35:DO:59:LEU:O	1.99	0.61
36:DP:63:LYS:HD3	36:DP:65:PHE:CZ	2.35	0.61
44:DU:62:GLU:CD	44:DU:63:LYS:H	2.02	0.61
45:DV:27:VAL:HG23	45:DV:36:LYS:HA	1.82	0.61
1:AA:1157:A:H1'	1:AA:1158:C:N3	2.15	0.61
1:AA:963:G:N2	10:AM:55:LYS:NZ	2.47	0.61
1:AA:310:G:OP2	16:AS:27:LYS:NZ	2.33	0.61
25:BA:205:G:O2'	25:BA:206:U:OP2	2.18	0.61
25:BA:218:A:H2	25:BA:235:U:H4'	1.65	0.61
27:BD:75:ILE:HD13	27:BD:99:ASP:OD1	2.00	0.61
31:BH:109:PHE:C	31:BH:111:HIS:H	2.04	0.61
31:BH:83:TYR:O	31:BH:84:SER:OG	2.13	0.61
36:BP:23:GLY:HA2	36:BP:25:ASP:HB2	1.82	0.61
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.00	0.61
22:CD:50:U:H2'	22:CD:51:C:O4'	1.99	0.61
2:CE:6:THR:OG1	2:CE:7:VAL:N	2.33	0.61
3:CF:44:GLU:HA	3:CF:52:LEU:HD11	1.80	0.61
19:CV:36:ARG:NH2	19:CV:75:ALA:O	2.29	0.61
37:D0:13:HIS:CE1	37:D0:15:SER:HB3	2.36	0.61
25:DA:1536:A:H5''	25:DA:1537:C:OP2	2.00	0.61
25:DA:1688:U:O2	25:DA:1700:A:H5'	2.00	0.61
25:DA:91:A:H2'	25:DA:92:G:O4'	2.00	0.61
26:DB:44:G:H1'	26:DB:47:C:H42	1.65	0.61
28:DE:119:ARG:HG2	28:DE:160:TYR:HB2	1.81	0.61
31:DH:77:LYS:HE2	31:DH:81:GLU:HB3	1.82	0.61
32:DK:76:THR:HG22	32:DK:139:GLN:O	2.00	0.61
38:DQ:84:GLN:HA	38:DQ:110:LEU:H	1.66	0.61
1:AA:989:C:N4	1:AA:1216:G:H1	1.99	0.61
1:AA:210:U:O2'	1:AA:216:G:H8	1.84	0.61
1:AA:299:G:H2'	1:AA:300:A:C8	2.35	0.61
5:AH:100:VAL:HG22	5:AH:118:ILE:HG22	1.82	0.61
13:AP:8:GLU:O	13:AP:10:PRO:HD3	2.01	0.61
16:AS:28:ARG:NH1	16:AS:29:ASP:OD2	2.33	0.61
20:AW:29:LYS:O	20:AW:33:ILE:HG12	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1165:U:H2'	25:BA:1166:C:H6	1.66	0.61
25:BA:2286:A:H4'	25:BA:2287:A:O4'	2.00	0.61
25:BA:259:G:H21	25:BA:621:A:H8	1.48	0.61
27:BD:65:ILE:HD11	27:BD:67:PHE:CE2	2.35	0.61
39:BR:105:LEU:C	39:BR:107:ASP:H	2.01	0.61
25:BA:1754:C:P	39:BR:96:ARG:HH12	2.23	0.61
45:BV:109:ALA:HB1	45:BV:142:SER:O	1.99	0.61
1:CA:685:G:O2'	1:CA:686:U:H5'	2.00	0.61
8:CK:121:ASP:OD2	8:CK:125:ARG:NH2	2.33	0.61
25:DA:1653:G:C4	37:D0:9:LYS:HD2	2.35	0.61
25:DA:1967:C:H2'	25:DA:1968:G:H5'	1.82	0.61
25:DA:2702:U:HO2'	25:DA:2703:C:H5	1.49	0.61
25:DA:901:A:H2'	25:DA:901:A:N3	2.14	0.61
1:AA:1279:A:O2'	1:AA:1281:U:OP2	2.17	0.61
2:AE:12:GLU:O	2:AE:14:GLY:N	2.34	0.61
14:AQ:15:LYS:HG2	14:AQ:16:PHE:CE2	2.36	0.61
16:AS:47:ASP:O	16:AS:49:LEU:N	2.33	0.61
25:BA:1230:C:H2'	25:BA:1231:G:C8	2.36	0.61
25:BA:634:C:H2'	25:BA:635:C:C6	2.34	0.61
29:BF:164:ARG:HG3	29:BF:175:THR:OG1	2.00	0.61
33:BM:34:LEU:HD21	33:BM:120:LEU:HB2	1.83	0.61
25:BA:811:U:H2'	35:BO:21:ARG:O	2.00	0.61
36:BP:110:THR:HG23	36:BP:113:GLN:OE1	2.01	0.61
36:BP:75:THR:HG22	36:BP:90:VAL:N	2.16	0.61
1:CA:1160:G:N1	1:CA:1177:G:N2	2.48	0.61
1:CA:920:U:H2'	1:CA:921:U:C6	2.35	0.61
23:CC:62:C:H2'	23:CC:63:C:H6	1.64	0.61
12:CO:44:LYS:CB	12:CO:45:PRO:CD	2.76	0.61
25:DA:2296:U:OP2	38:DQ:9:ARG:NH1	2.34	0.61
25:DA:1786:A:C2	25:DA:2606:C:H1'	2.35	0.61
25:DA:607:U:H3	25:DA:621:A:H2	1.46	0.61
26:DB:66:A:H61	26:DB:107:U:H2'	1.65	0.61
39:DR:91:ARG:NH1	39:DR:124:ASP:OD1	2.33	0.61
1:AA:1122:U:O4	1:AA:1123:A:N6	2.33	0.61
1:AA:1132:C:O2'	1:AA:1133:G:H5'	2.01	0.61
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.00	0.61
13:AP:19:LEU:HD11	13:AP:56:LEU:HD11	1.82	0.61
19:AV:18:LYS:O	19:AV:22:LEU:HD13	2.01	0.61
41:B2:38:LEU:HD23	41:B2:39:LEU:N	2.15	0.61
46:B3:70:GLN:NE2	46:B3:80:HIS:HE2	1.99	0.61
50:B4:14:ILE:CG2	50:B4:21:VAL:HB	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:B8:43:GLN:O	54:B8:44:LYS:HD2	2.00	0.61
25:BA:2320:A:H2'	25:BA:2320:A:N3	2.16	0.61
25:BA:270(P):C:H2'	25:BA:270(Q):C:C6	2.34	0.61
25:BA:274:G:H2'	25:BA:275:G:O4'	2.00	0.61
35:BO:3:LEU:HA	35:BO:6:LEU:HD23	1.83	0.61
35:BO:75:ILE:H	35:BO:75:ILE:CD1	2.04	0.61
38:BQ:88:ASP:OD2	38:BQ:90:GLY:N	2.33	0.61
25:DA:2112:G:C2'	25:DA:2113:U:H5''	2.31	0.61
25:DA:2133:G:H1'	25:DA:2158:A:N6	2.16	0.61
25:DA:756:C:C2'	25:DA:757:U:H5'	2.31	0.61
27:DD:35:LYS:HD3	27:DD:63:ARG:HB3	1.82	0.61
27:DD:46:GLN:CD	27:DD:46:GLN:H	2.02	0.61
31:DH:20:ALA:O	31:DH:22:GLY:N	2.32	0.61
33:DM:67:LEU:O	33:DM:88:GLU:HG3	2.00	0.61
42:DS:92:ARG:O	42:DS:93:ALA:CB	2.49	0.61
44:DU:9:LYS:HZ2	44:DU:29:GLU:H	1.47	0.61
1:AA:1331:G:O2'	1:AA:1332:A:H8	1.82	0.61
1:AA:325:A:OP2	20:AW:70:SER:HB3	2.01	0.61
1:AA:79:G:N1	1:AA:90:C:N4	2.48	0.61
5:AH:71:LEU:HD11	5:AH:114:GLY:HA3	1.83	0.61
50:B4:37:SER:HB3	50:B4:42:PHE:CE2	2.35	0.61
25:BA:2564:A:C2	25:BA:2647:U:H4'	2.35	0.61
25:BA:1111:A:H4'	31:BH:3:ARG:HH11	1.65	0.61
34:BN:7:TYR:CZ	34:BN:44:LYS:HG3	2.35	0.61
24:C1:11:U:C1'	24:C1:12:A:OP1	2.48	0.61
1:CA:1129:C:C4	1:CA:1142:G:O6	2.54	0.61
1:CA:939:G:C6	1:CA:940:C:N4	2.69	0.61
12:CO:29:PHE:HB3	12:CO:83:ARG:HA	1.82	0.61
19:CV:42:PRO:HA	19:CV:45:VAL:HG13	1.83	0.61
52:D6:10:LEU:HD21	54:D8:34:TRP:HB2	1.82	0.61
25:DA:1412:A:H2'	25:DA:1413:G:H8	1.65	0.61
25:DA:2106:G:H2'	25:DA:2107:C:O4'	2.01	0.61
25:DA:902:C:O2'	25:DA:903:C:H5'	2.01	0.61
28:DE:64:LYS:HB2	28:DE:66:HIS:CD2	2.36	0.61
29:DF:4:VAL:HA	29:DF:19:GLU:HB2	1.81	0.61
34:DN:68:GLU:HB3	34:DN:78:ARG:NH1	2.16	0.61
45:DV:45:ASP:O	45:DV:49:ARG:HG2	2.01	0.61
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.35	0.61
1:AA:812:C:H4'	1:AA:813:U:O5'	1.99	0.61
41:B2:49:THR:HB	41:B2:50:PRO:CD	2.31	0.61
25:BA:2131:G:H5'	25:BA:2132:U:C5'	2.23	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2756:U:H4'	25:BA:2757:A:OP1	2.00	0.61
25:BA:754:C:H2'	25:BA:755:C:C6	2.36	0.61
25:BA:1568:G:H21	27:BD:58:HIS:CE1	2.18	0.61
29:BF:101:LEU:O	29:BF:106:ARG:NH1	2.33	0.61
30:BG:77:ILE:HG22	30:BG:82:LEU:HD12	1.82	0.61
31:BH:118:PRO:HG3	31:BH:144:VAL:HG21	1.83	0.61
32:BK:76:THR:HG23	32:BK:139:GLN:O	2.01	0.61
44:BU:81:LYS:NZ	44:BU:96:ILE:HD12	2.16	0.61
1:CA:1025:U:O2'	1:CA:1026:G:O5'	2.19	0.61
1:CA:1077:G:N2	1:CA:1080:A:OP2	2.33	0.61
1:CA:1278:U:H3'	1:CA:1278:U:O2	2.01	0.61
25:DA:1348:G:H2'	25:DA:1349:A:H5''	1.83	0.61
25:DA:2156:G:C6	25:DA:2157:G:C2	2.88	0.61
25:DA:2168:G:H2'	25:DA:2168:G:N3	2.14	0.61
25:DA:666:G:OP1	35:DO:47:ASP:O	2.19	0.61
35:DO:46:LYS:HG3	35:DO:51:PHE:CD2	2.36	0.61
36:DP:31:ASP:HA	36:DP:134:ARG:HE	1.66	0.61
36:DP:78:PRO:HG2	36:DP:81:VAL:HG11	1.82	0.61
1:AA:1322:C:H2'	1:AA:1322:C:O2	2.00	0.61
1:AA:422:C:H1'	1:AA:423:G:C2	2.36	0.61
1:AA:79:G:O2'	1:AA:80:G:O5'	2.15	0.61
18:AU:18:ARG:HD2	18:AU:18:ARG:N	2.15	0.61
25:BA:1971:A:C4	27:BD:241:PRO:HD3	2.36	0.61
25:BA:625:G:N7	35:BO:107:LYS:NZ	2.49	0.61
25:BA:881:G:O6	25:BA:895:U:C2	2.53	0.61
26:BB:86:G:H1	26:BB:90:C:H42	1.48	0.61
27:BD:70:TRP:CD1	27:BD:70:TRP:C	2.74	0.61
36:BP:25:ASP:O	36:BP:26:TYR:HB3	2.00	0.61
1:CA:1075:C:OP1	2:CE:179:LYS:HE2	2.01	0.61
1:CA:1331:G:OP1	1:CA:1331:G:H4'	2.01	0.61
1:CA:538:G:H5''	12:CO:111:LYS:HB2	1.83	0.61
18:CU:53:ARG:HA	18:CU:56:THR:OG1	2.01	0.61
54:D8:29:LYS:HG2	54:D8:44:LYS:HB3	1.82	0.61
25:DA:2112:G:O2'	25:DA:2113:U:H5''	2.01	0.61
25:DA:2138:C:N4	25:DA:2153:G:H1	1.98	0.61
25:DA:2370:G:H21	52:D6:45:LYS:HZ1	1.47	0.61
27:DD:34:VAL:C	27:DD:35:LYS:HG3	2.21	0.61
28:DE:39:PRO:HA	28:DE:43:GLY:CA	2.29	0.61
30:DG:55:LYS:HD2	30:DG:58:GLN:NE2	2.16	0.61
39:DR:134:GLU:O	39:DR:136:GLN:NE2	2.33	0.61
47:DZ:58:ILE:HD12	47:DZ:87:PRO:HD3	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AW:13:LEU:HD12	20:AW:13:LEU:C	2.22	0.60
25:BA:2168:G:OP1	25:BA:2168:G:H4'	1.99	0.60
29:BF:114:VAL:HG21	29:BF:202:PHE:CE1	2.36	0.60
30:BG:53:LEU:HD21	30:BG:70:VAL:HG23	1.83	0.60
31:BH:92:ILE:HD12	31:BH:92:ILE:H	1.65	0.60
32:BK:133:HIS:O	32:BK:134:PRO:C	2.39	0.60
1:CA:1129:C:N4	1:CA:1139:G:H1	1.99	0.60
1:CA:1503:A:O2'	1:CA:1504:G:O5'	2.19	0.60
25:DA:2019:A:H62	51:D5:9:LYS:HE3	1.65	0.60
25:DA:1328:G:H2'	25:DA:1330:C:C5	2.36	0.60
25:DA:389:G:H1	35:DO:71:VAL:CG1	2.14	0.60
29:DF:132:VAL:O	29:DF:134:GLY:N	2.34	0.60
32:DK:143:SER:O	32:DK:144:VAL:HB	2.01	0.60
35:DO:121:LYS:HG3	35:DO:122:PRO:HD2	1.83	0.60
44:DU:99:CYS:SG	44:DU:100:ALA:N	2.73	0.60
45:DV:30:ASN:N	45:DV:33:LEU:O	2.34	0.60
1:AA:1160:G:O6	1:AA:1181:G:C6	2.54	0.60
25:BA:1188:U:H4'	41:B2:79:VAL:HG22	1.83	0.60
25:BA:1077:A:H3'	25:BA:1078:U:H5'	1.80	0.60
25:BA:1316:U:H2'	25:BA:1317:A:C8	2.36	0.60
25:BA:1771:C:HO2'	25:BA:1786:A:H8	1.49	0.60
25:BA:2262:U:H4'	25:BA:2328:A:C2	2.35	0.60
25:BA:602:G:N2	25:BA:655:A:C8	2.68	0.60
26:BB:7:G:O5'	38:BQ:29:PHE:HE1	1.82	0.60
34:BN:4:PRO:O	34:BN:5:GLN:CB	2.49	0.60
36:BP:26:TYR:CD2	36:BP:26:TYR:C	2.74	0.60
45:BV:54:HIS:HE1	45:BV:123:ASP:OD1	1.84	0.60
1:CA:1200:C:H1'	1:CA:1204:A:N6	2.16	0.60
1:CA:160:A:H1'	1:CA:344:A:C5	2.37	0.60
1:CA:843:U:H3'	1:CA:848:C:O4'	2.01	0.60
1:CA:991:U:O4	1:CA:1212:U:O2'	2.19	0.60
4:CG:96:LEU:HD12	4:CG:139:ARG:NH2	2.15	0.60
17:CT:81:ARG:HH21	17:CT:84:LEU:HD21	1.66	0.60
25:DA:1070:A:H5'	25:DA:1071:G:C5'	2.31	0.60
25:DA:768:G:O2'	25:DA:1379:A:N6	2.33	0.60
25:DA:2763:G:H5'	25:DA:2763:G:H8	1.65	0.60
29:DF:22:ALA:C	29:DF:24:LEU:N	2.55	0.60
29:DF:25:PRO:HG2	29:DF:26:ALA:H	1.64	0.60
36:DP:10:ARG:HA	36:DP:10:ARG:NE	2.16	0.60
36:DP:29:PHE:HB3	36:DP:65:PHE:CZ	2.36	0.60
1:AA:411:A:N6	1:AA:413:G:H21	1.98	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AK:110:ALA:HB3	8:AK:121:ASP:HB3	1.83	0.60
37:B0:36:THR:HG22	37:B0:37:THR:H	1.65	0.60
25:BA:2065:C:H2'	25:BA:2066:C:H6	1.66	0.60
25:BA:270(R):G:H2'	25:BA:270(S):G:C8	2.36	0.60
25:BA:2845:G:O2'	25:BA:2846:G:H5'	2.01	0.60
33:BM:59:LYS:HA	33:BM:59:LYS:HE2	1.84	0.60
1:CA:1160:G:H2'	1:CA:1160:G:N3	2.16	0.60
1:CA:254:G:OP1	17:CT:67:LYS:O	2.19	0.60
1:CA:412:A:O2'	1:CA:413:G:OP2	2.14	0.60
1:CA:81:G:H1	1:CA:88:C:N4	2.00	0.60
22:CD:21:A:H4'	22:CD:22:A:OP1	2.00	0.60
8:CK:29:SER:HB3	8:CK:32:LYS:HG3	1.83	0.60
1:CA:539:A:OP2	12:CO:112:LYS:NZ	2.33	0.60
41:D2:15:GLU:HG3	41:D2:16:PRO:HD2	1.84	0.60
41:D2:78:LYS:O	41:D2:79:VAL:HG13	2.00	0.60
35:DO:63:PRO:HA	54:D8:13:ARG:HA	1.83	0.60
25:DA:1341:U:H3'	25:DA:1342:A:H2	1.66	0.60
25:DA:1899:G:C2'	25:DA:1900:A:OP2	2.49	0.60
25:DA:2693:A:H2'	25:DA:2694:G:H8	1.66	0.60
30:DG:66:GLN:HA	50:D4:6:HIS:CD2	2.34	0.60
26:DB:42:C:O2'	30:DG:67:LYS:O	2.13	0.60
38:DQ:15:ARG:NE	38:DQ:88:ASP:OD1	2.35	0.60
38:DQ:88:ASP:OD2	38:DQ:90:GLY:N	2.27	0.60
44:DU:27:VAL:HG12	44:DU:39:VAL:HG12	1.83	0.60
1:AA:1262:C:H42	1:AA:1273:G:H1	1.48	0.60
2:AE:22:LYS:H	2:AE:22:LYS:HZ3	1.50	0.60
13:AP:84:ILE:HD11	19:AV:66:MET:HG2	1.82	0.60
40:B1:69:CYS:HB3	40:B1:74:LEU:HD13	1.82	0.60
25:BA:1695:G:N7	27:BD:14:ARG:NH2	2.49	0.60
25:BA:2142:C:C2	25:BA:2149:G:N2	2.63	0.60
25:BA:676:A:N1	25:BA:802:A:N1	2.48	0.60
31:BH:20:ALA:HB3	31:BH:23:ARG:HG3	1.84	0.60
39:BR:26:ASP:HB2	39:BR:90:GLN:O	2.01	0.60
1:CA:980:C:H5'	1:CA:981:U:C5	2.36	0.60
22:CB:75:C:O2'	22:CB:76:C:P	2.59	0.60
9:CL:119:ALA:O	9:CL:120:ARG:HB2	2.02	0.60
41:D2:5:VAL:HB	41:D2:37:VAL:HG11	1.83	0.60
25:DA:1000:A:C6	25:DA:1001:A:N1	2.70	0.60
25:DA:2099:U:H3	25:DA:2190:G:H1	1.49	0.60
25:DA:83:G:H21	25:DA:103:A:H62	1.49	0.60
31:DH:4:ILE:HD12	31:DH:6:ARG:NE	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DO:71:VAL:HG13	35:DO:72:PRO:HD2	1.71	0.60
1:AA:1132:C:H2'	1:AA:1133:G:C8	2.36	0.60
1:AA:116:A:H61	1:AA:313:A:H1'	1.67	0.60
3:AF:83:ARG:O	3:AF:86:VAL:HG22	2.02	0.60
25:BA:1171:G:C5	25:BA:1174:A:N6	2.69	0.60
25:BA:140:A:H8	25:BA:1408:C:O2'	1.81	0.60
25:BA:2404:C:O3'	35:BO:77:ARG:NH2	2.35	0.60
25:BA:270(G):C:H2'	25:BA:270(H):C:H6	1.65	0.60
27:BD:181:GLU:HA	27:BD:272:ALA:HB3	1.82	0.60
29:BF:136:THR:O	29:BF:140:LEU:HB2	2.01	0.60
42:BS:79:GLY:CA	42:BS:100:THR:HG22	2.31	0.60
44:BU:96:ILE:HG13	44:BU:98:VAL:H	1.66	0.60
36:BP:136:ALA:HB1	45:BV:52:SER:HB2	1.84	0.60
47:BZ:83:GLU:HG2	47:BZ:85:LEU:H	1.66	0.60
1:CA:1160:G:H22	1:CA:1177:G:H21	1.49	0.60
1:CA:1057:G:C4	1:CA:1204:A:C2	2.90	0.60
22:CB:52:G:H8	22:CB:52:G:OP2	1.85	0.60
22:CD:50:U:H2'	22:CD:51:C:C6	2.37	0.60
1:CA:410:G:OP2	4:CG:25:ARG:HG2	2.01	0.60
46:D3:14:ARG:O	46:D3:15:ASP:HB2	2.01	0.60
54:D8:50:LEU:O	54:D8:51:ALA:CB	2.49	0.60
29:DF:24:LEU:CD1	29:DF:25:PRO:HD3	2.28	0.60
35:DO:71:VAL:O	35:DO:73:GLY:N	2.35	0.60
36:DP:111:GLU:O	36:DP:115:MET:HG2	2.02	0.60
38:DQ:110:LEU:HD23	38:DQ:111:GLU:N	2.15	0.60
38:DQ:29:PHE:CD2	38:DQ:30:ARG:N	2.69	0.60
45:DV:141:VAL:HB	45:DV:144:LEU:HD23	1.84	0.60
45:DV:175:VAL:HG22	45:DV:176:PRO:HB3	1.82	0.60
49:DX:4:LEU:O	49:DX:36:VAL:HA	2.02	0.60
1:AA:1423:G:P	34:BN:49:ARG:HH22	2.23	0.60
1:AA:1450:U:O2'	1:AA:1451:A:C8	2.55	0.60
1:AA:171:A:H2'	1:AA:172:A:C8	2.36	0.60
1:AA:181:G:O2'	1:AA:182:U:O5'	2.19	0.60
1:AA:791:G:C6	1:AA:792:A:C2	2.90	0.60
1:AA:795:C:H5''	1:AA:796:C:OP2	2.01	0.60
1:AA:575:G:O2'	1:AA:821:G:H5'	2.02	0.60
3:AF:8:ILE:HG23	3:AF:16:ARG:HG2	1.84	0.60
11:AN:86:GLY:N	11:AN:112:THR:OG1	2.22	0.60
50:B4:42:PHE:CD1	50:B4:43:TYR:CB	2.82	0.60
25:BA:2001:A:H2'	25:BA:2002:G:C8	2.36	0.60
25:BA:2139:C:H2'	25:BA:2140:C:H5'	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:654(M):C:H3'	25:BA:654(N):G:C8	2.37	0.60
35:BO:37:GLY:O	35:BO:41:ARG:HD2	2.01	0.60
25:BA:627:A:H62	35:BO:84:ASN:HD21	1.49	0.60
42:BS:110:LYS:O	42:BS:112:GLY:N	2.34	0.60
1:CA:84:U:O2	1:CA:84:U:H2'	2.01	0.60
22:CB:51:C:OP2	22:CB:51:C:H6	1.85	0.60
6:CI:36:ARG:NH1	6:CI:66:GLU:OE1	2.33	0.60
1:CA:933:G:O6	7:CJ:3:ARG:NH2	2.35	0.60
25:DA:1800:C:OP2	27:DD:183:ARG:NH2	2.33	0.60
25:DA:1971:A:C4	27:DD:241:PRO:HD3	2.36	0.60
25:DA:2191:G:O2'	25:DA:2192:G:P	2.59	0.60
32:DK:131:LYS:HB3	32:DK:132:PRO:CA	2.29	0.60
32:DK:124:GLY:O	32:DK:142:VAL:HG12	2.02	0.60
35:DO:55:ARG:O	35:DO:56:SER:C	2.40	0.60
45:DV:30:ASN:O	45:DV:32:HIS:N	2.35	0.60
45:DV:28:MET:O	45:DV:34:ASN:HA	2.00	0.60
1:AA:1003:G:N2	1:AA:1004:A:O3'	2.35	0.60
1:AA:406:G:H2'	1:AA:407:G:H8	1.67	0.60
1:AA:689:C:H2'	1:AA:690:G:H5'	1.84	0.60
1:AA:872:A:C4	1:AA:874:G:N7	2.70	0.60
7:AJ:113:GLU:HB2	7:AJ:119:ARG:HG2	1.83	0.60
19:AV:30:LEU:H	19:AV:30:LEU:CD1	2.12	0.60
52:B6:15:GLU:HG3	52:B6:49:HIS:CE1	2.36	0.60
54:B8:34:TRP:CD1	54:B8:34:TRP:C	2.75	0.60
25:BA:1026:U:C4'	25:BA:1027:A:OP1	2.50	0.60
25:BA:214:G:OP1	25:BA:214:G:H4'	2.02	0.60
25:BA:229:A:H4'	25:BA:230:U:OP2	2.01	0.60
25:BA:2327:A:H2'	25:BA:2328:A:C8	2.35	0.60
25:BA:330:A:O2'	25:BA:331:A:H8	1.84	0.60
32:BK:118:LYS:HD2	32:BK:119:PRO:HD2	1.83	0.60
1:CA:973:G:H1'	10:CM:55:LYS:CE	2.31	0.60
22:CD:57:C:O2'	22:CD:68:A:H4'	2.01	0.60
13:CP:84:ILE:C	13:CP:86:CYS:H	2.05	0.60
17:CT:53:LEU:HD12	17:CT:53:LEU:H	1.66	0.60
54:D8:40:GLU:H	54:D8:43:GLN:HG3	1.67	0.60
25:DA:1039:G:H1	25:DA:1116:C:H42	1.50	0.60
25:DA:747:U:O2	25:DA:2014:A:H1'	2.01	0.60
25:DA:2080:G:O2'	25:DA:2081:C:H5'	2.02	0.60
25:DA:2859:G:H2'	25:DA:2860:A:C8	2.37	0.60
31:DH:88:LEU:HD13	31:DH:164:TYR:O	2.02	0.60
31:DH:92:ILE:HD12	31:DH:92:ILE:H	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DM:19:GLU:OE1	33:DM:59:LYS:NZ	2.31	0.60
35:DO:80:TYR:CD1	35:DO:111:ARG:HB3	2.37	0.60
47:DZ:86:SER:N	47:DZ:87:PRO:HD2	2.14	0.60
51:B5:40:LYS:HZ3	51:B5:46:CYS:HB3	1.66	0.60
25:BA:1049:C:H2'	25:BA:1050:A:H5''	1.82	0.60
26:BB:73:A:H2'	26:BB:74:U:H5'	1.82	0.60
32:BK:130:TYR:C	32:BK:131:LYS:HD2	2.22	0.60
1:CA:406:G:H5'	4:CG:5:ILE:CG2	2.32	0.60
23:CC:19:G:C4'	23:CC:20:G:OP1	2.49	0.60
3:CF:73:PRO:O	3:CF:76:VAL:HG22	2.02	0.60
4:CG:13:ARG:O	4:CG:15:GLU:N	2.31	0.60
10:CM:4:ILE:HG23	10:CM:100:THR:HG22	1.84	0.60
13:CP:92:HIS:CE1	13:CP:98:VAL:HG11	2.36	0.60
1:CA:130:A:C8	17:CT:63:ARG:HG3	2.37	0.60
25:DA:1537:C:H2'	25:DA:1538:G:H8	1.65	0.60
25:DA:883:G:H2'	25:DA:884:C:C6	2.36	0.60
39:DR:107:ASP:OD2	39:DR:109:GLU:HB2	2.01	0.60
44:DU:46:LYS:O	44:DU:48:ALA:N	2.35	0.60
49:DX:7:LYS:HG3	49:DX:34:GLU:HG3	1.84	0.60
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.17	0.60
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.36	0.60
1:AA:429:U:H1'	1:AA:430:A:H5''	1.84	0.60
1:AA:67:C:H2'	1:AA:68:G:C8	2.37	0.60
3:AF:19:GLU:HG2	3:AF:40:ARG:HH21	1.67	0.60
4:AG:25:ARG:O	4:AG:27:TYR:N	2.34	0.60
9:AL:49:PRO:HG3	9:AL:101:PHE:CD2	2.36	0.60
9:AL:48:GLU:HB2	9:AL:78:LYS:HE3	1.82	0.60
1:AA:881:G:P	12:AO:9:ARG:HH22	2.24	0.60
18:AU:73:ALA:HB3	18:AU:79:LEU:HD12	1.84	0.60
25:BA:1065:U:H1'	25:BA:1074:G:N2	2.17	0.60
25:BA:1139:G:O2'	25:BA:1143:A:N1	2.26	0.60
25:BA:234:C:H2'	25:BA:235:U:H6	1.65	0.60
25:BA:546:C:H3'	25:BA:547:A:C8	2.37	0.60
29:BF:8:GLN:H	29:BF:8:GLN:CD	2.05	0.60
38:BQ:106:ARG:HA	38:BQ:110:LEU:CD2	2.31	0.60
39:BR:74:ARG:HD3	39:BR:76:PHE:CZ	2.36	0.60
15:CR:16:ALA:HB1	15:CR:21:ASP:HB3	1.83	0.60
19:CV:66:MET:N	19:CV:67:VAL:HB	2.17	0.60
25:DA:1538:G:H2'	25:DA:1539:G:H8	1.67	0.60
25:DA:1964:G:H4'	25:DA:1965:C:OP2	2.02	0.60
25:DA:1678:G:N2	25:DA:1989:G:N2	2.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2561:A:H2	34:DN:23:ARG:HH12	1.49	0.60
28:DE:9:VAL:HG23	28:DE:10:GLY:N	2.17	0.60
33:DM:18:ALA:HA	33:DM:21:LYS:HD2	1.83	0.60
35:DO:107:LYS:HB3	35:DO:110:TYR:CD2	2.35	0.60
35:DO:20:GLY:O	35:DO:21:ARG:NE	2.34	0.60
42:DS:95:ILE:HG12	42:DS:95:ILE:O	2.01	0.60
47:DZ:65:SER:OG	47:DZ:66:HIS:HD2	1.83	0.60
1:AA:560:U:H5'	1:AA:566:G:N2	2.17	0.60
1:AA:686:U:O4	1:AA:703:G:H1'	2.01	0.60
3:AF:78:GLY:HA3	3:AF:83:ARG:HB3	1.82	0.60
11:AN:124:LYS:HD2	11:AN:125:PHE:CE2	2.37	0.60
1:AA:254:G:OP1	17:AT:67:LYS:O	2.20	0.60
25:BA:1042:G:H2'	25:BA:1043:C:C6	2.37	0.60
25:BA:2127:G:O6	25:BA:2161:C:N3	2.34	0.60
25:BA:2335:A:C8	25:BA:2337:G:C5	2.89	0.60
28:BE:66:HIS:ND1	28:BE:66:HIS:C	2.55	0.60
33:BM:41:ASP:O	33:BM:48:MET:HE3	2.02	0.60
35:BO:16:ARG:HG3	35:BO:16:ARG:NH1	2.15	0.60
1:CA:485:G:C2'	1:CA:486:U:OP2	2.49	0.60
1:CA:57:G:H2'	1:CA:58:C:C6	2.37	0.60
9:CL:125:TYR:HD2	9:CL:126:SER:H	1.47	0.60
25:DA:1011:G:H1	25:DA:1150:C:H42	1.50	0.60
25:DA:1681:G:O2'	25:DA:1762:A:O2'	2.20	0.60
25:DA:2415:G:H4'	35:DO:66:GLY:HA3	1.84	0.60
25:DA:2797:U:H2'	25:DA:2798:C:H5'	1.83	0.60
25:DA:278:A:H4'	25:DA:279:C:OP1	2.00	0.60
25:DA:492:A:H2'	25:DA:493:G:O4'	2.01	0.60
26:DB:86:G:H1	26:DB:90:C:H42	1.48	0.60
29:DF:3:GLU:O	29:DF:19:GLU:HB2	2.02	0.60
35:DO:97:PRO:HG3	35:DO:112:LEU:HB2	1.83	0.60
39:DR:3:ARG:CZ	39:DR:6:LEU:HD13	2.32	0.60
25:DA:989:G:OP2	49:DX:11:SER:HB3	2.01	0.60
1:AA:411:A:H62	1:AA:413:G:N2	2.00	0.59
5:AH:63:ARG:HA	5:AH:66:MET:HE3	1.83	0.59
10:AM:40:LEU:HB2	10:AM:69:ASN:CB	2.31	0.59
25:BA:1081:U:O2'	25:BA:1082:U:P	2.60	0.59
25:BA:1101:U:H2'	25:BA:1102:C:C6	2.37	0.59
25:BA:2141:G:C6	25:BA:2150:U:O2	2.55	0.59
25:BA:2771:C:H2'	25:BA:2772:C:C6	2.37	0.59
25:BA:746:A:C6	25:BA:2611:U:H5''	2.37	0.59
25:BA:945:A:H1'	25:BA:946:G:OP1	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:8:LEU:N	34:BN:8:LEU:HD23	2.16	0.59
45:BV:99:TYR:HB3	45:BV:123:ASP:OD1	2.01	0.59
47:BZ:86:SER:N	47:BZ:87:PRO:CD	2.65	0.59
1:CA:452:A:H2'	1:CA:453:A:C8	2.37	0.59
1:CA:973:G:H3'	1:CA:974:A:C5'	2.31	0.59
2:CE:213:LEU:O	2:CE:213:LEU:HD23	2.02	0.59
3:CF:23:TYR:C	3:CF:23:TYR:CD2	2.74	0.59
16:CS:43:LYS:HG3	16:CS:48:TRP:CD1	2.37	0.59
40:D1:58:ARG:HG2	40:D1:62:ILE:HD13	1.84	0.59
25:DA:140:A:H8	25:DA:1408:C:O2'	1.82	0.59
25:DA:2275:C:O2	36:DP:85:LYS:HG2	2.02	0.59
25:DA:2688:U:O2	25:DA:2688:U:H3'	2.02	0.59
25:DA:620:G:H8	25:DA:622:G:O6	1.85	0.59
28:DE:116:VAL:O	28:DE:117:MET:CB	2.45	0.59
28:DE:5:LEU:HD11	28:DE:79:ARG:HB2	1.84	0.59
31:DH:153:LYS:HD3	31:DH:156:ALA:HB2	1.83	0.59
35:DO:112:LEU:H	35:DO:128:HIS:HD2	1.48	0.59
35:DO:57:THR:C	35:DO:59:LEU:N	2.56	0.59
38:DQ:87:PHE:CE1	38:DQ:102:ALA:HB2	2.37	0.59
44:DU:95:LYS:NZ	44:DU:96:ILE:O	2.35	0.59
1:AA:1213:A:C6	1:AA:1215:G:H1'	2.36	0.59
1:AA:73:G:H2'	1:AA:74:C:O4'	2.02	0.59
2:AE:178:ARG:HH11	2:AE:178:ARG:HG2	1.66	0.59
2:AE:231:GLU:HB2	2:AE:232:PRO:HD2	1.84	0.59
9:AL:29:ASN:ND2	9:AL:65:VAL:HG12	2.17	0.59
41:B2:31:ALA:O	41:B2:61:VAL:HG22	2.02	0.59
50:B4:50:VAL:HG13	50:B4:50:VAL:O	2.02	0.59
25:BA:639:U:H2'	25:BA:640:C:C6	2.37	0.59
28:BE:64:LYS:O	28:BE:70:ALA:HB2	2.02	0.59
1:CA:1053:G:O6	1:CA:1199:U:H2'	2.02	0.59
22:CD:42:U:H2'	22:CD:43:G:H8	1.67	0.59
3:CF:50:ALA:HB2	3:CF:75:VAL:HB	1.83	0.59
1:CA:1321:C:H4'	13:CP:87:TYR:CE2	2.37	0.59
19:CV:11:VAL:HG22	19:CV:12:ASP:N	2.11	0.59
41:D2:39:LEU:O	41:D2:40:LEU:HD12	2.02	0.59
40:D1:90:VAL:HG11	41:D2:40:LEU:HD13	1.84	0.59
25:DA:1889:A:H2'	25:DA:1890:A:C8	2.38	0.59
25:DA:2418:A:OP2	54:D8:29:LYS:NZ	2.31	0.59
25:DA:795:C:H2'	25:DA:796:C:C6	2.37	0.59
27:DD:270:ILE:C	27:DD:271:ILE:HG13	2.21	0.59
25:DA:411:G:C2	35:DO:71:VAL:HG21	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:908:C:OP1	36:DP:22:LYS:HB3	2.03	0.59
45:DV:10:ARG:NH2	45:DV:26:GLY:O	2.34	0.59
1:AA:1432:G:OP1	39:BR:107:ASP:HB2	2.02	0.59
1:AA:687:A:H1'	1:AA:688:G:OP2	2.02	0.59
1:AA:689:C:C2'	1:AA:690:G:H5'	2.33	0.59
1:AA:664:G:N2	1:AA:741:G:H1	1.97	0.59
25:BA:1654:A:OP1	37:B0:1:MET:O	2.19	0.59
25:BA:2415:G:H4'	35:BO:66:GLY:C	2.22	0.59
25:BA:325:G:O2'	25:BA:326:G:H5'	2.03	0.59
25:BA:4:C:H2'	25:BA:5:A:C8	2.36	0.59
27:BD:96:HIS:CE1	27:BD:102:LYS:HD3	2.37	0.59
35:BO:19:VAL:CG2	35:BO:27:HIS:HA	2.32	0.59
9:CL:23:ASN:H	9:CL:23:ASN:HD22	1.50	0.59
10:CM:4:ILE:HA	10:CM:100:THR:HA	1.84	0.59
15:CR:17:ARG:NH1	15:CR:17:ARG:HG3	2.08	0.59
25:DA:627:A:H4'	25:DA:628:G:OP1	2.02	0.59
25:DA:956:G:OP2	36:DP:14:ARG:NH2	2.35	0.59
26:DB:15:A:H1'	26:DB:109:G:C8	2.37	0.59
26:DB:40:U:C2'	26:DB:41:U:OP1	2.50	0.59
25:DA:2318:G:H1	38:DQ:2:ALA:N	2.00	0.59
44:DU:48:ALA:HB3	44:DU:59:GLY:O	2.02	0.59
44:DU:9:LYS:O	44:DU:27:VAL:HG23	2.02	0.59
1:AA:1152:A:OP1	10:AM:68:HIS:NE2	2.35	0.59
1:AA:1238:A:C8	1:AA:1301:U:O4	2.55	0.59
16:AS:28:ARG:HH11	16:AS:28:ARG:HG2	1.67	0.59
40:B1:92:ARG:HD2	40:B1:95:LEU:HD12	1.85	0.59
46:B3:68:GLU:CG	46:B3:80:HIS:HB2	2.33	0.59
51:B5:40:LYS:NZ	51:B5:46:CYS:HB3	2.16	0.59
25:BA:1545(A):A:H2'	25:BA:1546:C:H5'	1.84	0.59
25:BA:2151:G:H2'	25:BA:2152:G:H8	1.64	0.59
25:BA:2439:A:H5'	25:BA:2439:A:H8	1.67	0.59
31:BH:152:ARG:C	31:BH:153:LYS:HD2	2.22	0.59
36:BP:39:PRO:HA	36:BP:97:VAL:O	2.02	0.59
1:CA:1422:G:O3'	34:DN:49:ARG:NH1	2.35	0.59
1:CA:345:C:H1'	1:CA:346:G:N1	2.18	0.59
1:CA:85:U:O2'	1:CA:86:U:OP2	2.15	0.59
7:CJ:69:VAL:HG11	7:CJ:134:ALA:HB1	1.84	0.59
19:CV:41:VAL:HG22	50:D4:63:TYR:HD2	1.67	0.59
41:D2:67:GLY:O	41:D2:88:ARG:HD2	2.03	0.59
25:DA:1022:G:H1'	25:DA:1023:U:OP2	2.03	0.59
25:DA:639:U:H2'	25:DA:640:C:C6	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DE:16:ARG:O	28:DE:17:ASP:HB2	2.02	0.59
29:DF:178:PRO:HB2	29:DF:201:VAL:HG11	1.83	0.59
22:AB:83:C:H2'	22:AB:84:C:H5'	1.82	0.59
25:BA:1063:G:N2	25:BA:1076:C:O2	2.35	0.59
25:BA:2145:C:H2'	25:BA:2147:G:N1	2.17	0.59
25:BA:232:G:OP2	25:BA:232:G:H8	1.85	0.59
25:BA:2733:A:H2'	25:BA:2734:A:H5'	1.84	0.59
25:BA:882:G:N2	25:BA:894:C:C2	2.69	0.59
26:BB:41:U:H5	30:BG:69:ALA:HB1	1.67	0.59
25:BA:443:A:H3'	29:BF:45:ARG:NH1	2.16	0.59
31:BH:98:LEU:HD22	31:BH:125:VAL:HG23	1.83	0.59
31:BH:152:ARG:HE	31:BH:153:LYS:HZ3	1.50	0.59
32:BK:86:THR:HA	32:BK:123:LEU:HD13	1.83	0.59
43:BT:49:VAL:HG11	43:BT:83:VAL:HG12	1.84	0.59
1:CA:1126:U:O2'	1:CA:1127:G:OP2	2.19	0.59
1:CA:197:A:C8	1:CA:198:G:C1'	2.86	0.59
1:CA:421:U:H5''	1:CA:422:C:OP2	2.02	0.59
22:CD:19:C:H3'	22:CD:19:C:H6	1.67	0.59
3:CF:184:TYR:HD1	3:CF:201:TYR:CE2	2.20	0.59
16:CS:53:VAL:HG13	16:CS:79:VAL:HG22	1.84	0.59
17:CT:81:ARG:HE	17:CT:84:LEU:HD11	1.67	0.59
25:DA:1070:A:H5'	25:DA:1071:G:H5''	1.83	0.59
27:DD:65:ILE:CD1	27:DD:106:ILE:HG13	2.32	0.59
30:DG:40:ASN:HD22	30:DG:91:ARG:HB2	1.66	0.59
31:DH:6:ARG:HD3	31:DH:6:ARG:N	2.16	0.59
44:DU:40:GLU:N	44:DU:40:GLU:OE2	2.36	0.59
45:DV:151:HIS:HB3	45:DV:167:PRO:HB3	1.82	0.59
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.37	0.59
1:AA:1442:G:O6	1:AA:1446:A:N6	2.35	0.59
22:AB:79:A:H3'	22:AB:80:C:C5'	2.27	0.59
22:AD:21:A:H4'	22:AD:22:A:O5'	2.02	0.59
7:AJ:144:MET:HE1	22:AD:31:G:H21	1.66	0.59
5:AH:126:ARG:HH11	5:AH:126:ARG:CG	2.12	0.59
6:AI:69:GLU:N	6:AI:69:GLU:OE1	2.29	0.59
9:AL:43:ALA:HA	9:AL:74:ILE:HD13	1.85	0.59
10:AM:8:LEU:HB3	10:AM:16:LEU:HD21	1.84	0.59
13:AP:67:GLU:HG2	13:AP:71:ARG:HH21	1.64	0.59
54:B8:52:LYS:HG3	54:B8:52:LYS:O	2.02	0.59
25:BA:1022:G:O6	33:BM:66:LYS:NZ	2.35	0.59
25:BA:1164:G:H2'	25:BA:1165:U:C6	2.38	0.59
25:BA:2733:A:H2'	25:BA:2734:A:H5''	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:16:ARG:N	30:BG:17:PRO:HD2	2.18	0.59
45:BV:58:VAL:O	45:BV:60:GLU:N	2.32	0.59
49:BX:43:ILE:O	49:BX:47:VAL:HG23	2.03	0.59
1:CA:1028(A):C:O2	1:CA:1033:G:N2	2.36	0.59
1:CA:1055:A:N6	1:CA:1206:G:C5	2.70	0.59
1:CA:510:A:H5''	1:CA:511:C:OP2	2.01	0.59
1:CA:632:A:H4'	1:CA:633:G:O5'	2.03	0.59
1:CA:406:G:H5'	4:CG:5:ILE:HG21	1.84	0.59
11:CN:57:THR:HG22	11:CN:59:TYR:H	1.66	0.59
13:CP:6:GLY:O	13:CP:7:VAL:HG13	2.03	0.59
25:DA:2331:G:O2'	46:D3:43:THR:HG22	2.03	0.59
51:D5:41:PRO:HG2	51:D5:44:THR:OG1	2.02	0.59
25:DA:1534:G:H5'	25:DA:1535:U:OP2	2.03	0.59
29:DF:158:THR:HB	29:DF:195:ASP:HB2	1.84	0.59
29:DF:26:ALA:O	29:DF:27:GLU:HG3	2.02	0.59
29:DF:8:GLN:HG2	29:DF:124:LEU:HD11	1.83	0.59
32:DK:128:LEU:O	32:DK:138:ILE:HG22	2.03	0.59
33:DM:95:PRO:O	33:DM:98:VAL:HG22	2.03	0.59
35:DO:85:LEU:HB3	35:DO:114:ILE:HD13	1.85	0.59
45:DV:161:VAL:HG23	45:DV:162:GLU:H	1.66	0.59
1:AA:1004:A:H8	1:AA:1036:G:N2	2.00	0.59
1:AA:1178:G:O2'	1:AA:1179:A:OP1	2.19	0.59
1:AA:1225:A:N3	1:AA:1225:A:H2'	2.16	0.59
1:AA:182:U:O2	1:AA:182:U:H2'	2.01	0.59
41:B2:52:VAL:HG22	41:B2:55:ALA:HB3	1.84	0.59
41:B2:16:PRO:HA	41:B2:96:ILE:HG22	1.85	0.59
51:B5:25:LEU:HD12	51:B5:25:LEU:H	1.67	0.59
25:BA:899:A:O2'	25:BA:900:A:H8	1.86	0.59
26:BB:43:C:H5''	50:B4:1:MET:HG2	1.84	0.59
25:BA:1568:G:H21	27:BD:58:HIS:HE1	1.48	0.59
31:BH:77:LYS:HE3	31:BH:138:LYS:HD2	1.83	0.59
45:BV:117:LEU:HD13	45:BV:118:GLN:H	1.68	0.59
1:CA:201:C:H4'	1:CA:208:U:OP1	2.01	0.59
1:CA:31:G:O2'	1:CA:48:C:N4	2.35	0.59
1:CA:457:C:H2'	1:CA:458:C:H6	1.67	0.59
22:CB:78:C:O2'	22:CB:79:A:H5''	2.03	0.59
1:CA:1055:A:C2	3:CF:194:GLY:HA3	2.37	0.59
3:CF:175:LEU:HD21	3:CF:201:TYR:CE1	2.37	0.59
4:CG:26:CYS:HA	4:CG:31:CYS:HB2	1.84	0.59
5:CH:145:LYS:O	5:CH:149:GLU:HG2	2.03	0.59
1:CA:1151:A:H1'	10:CM:39:PRO:HB2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1309:G:H3'	53:D7:9:ARG:NH1	2.18	0.59
27:DD:72:LYS:HE2	27:DD:101:GLU:OE2	2.02	0.59
35:DO:15:ARG:O	35:DO:16:ARG:O	2.21	0.59
36:DP:114:ALA:O	36:DP:118:LEU:HB2	2.02	0.59
36:DP:132:VAL:HG21	45:DV:81:ARG:HH22	1.66	0.59
1:AA:939:G:C6	1:AA:940:C:N4	2.70	0.59
1:AA:964:A:N3	1:AA:969:A:O2'	2.26	0.59
22:AB:18:G:H4'	22:AB:19:C:OP2	2.01	0.59
1:AA:1054:C:N4	22:AB:35:G:H1'	2.18	0.59
25:BA:1528:A:N1	25:BA:1543:A:N1	2.51	0.59
25:BA:2172:U:H4'	25:BA:2173:A:OP1	2.02	0.59
25:BA:2468:G:C2'	25:BA:2476:A:H62	2.13	0.59
27:BD:182:LEU:H	27:BD:272:ALA:HB3	1.67	0.59
27:BD:2:ALA:O	27:BD:3:VAL:HB	2.03	0.59
28:BE:54:GLN:O	28:BE:55:ASN:HB2	2.03	0.59
29:BF:152:GLU:CD	29:BF:191:ARG:HD2	2.23	0.59
36:BP:66:ILE:HG13	36:BP:67:ARG:N	2.17	0.59
49:BX:8:LEU:HD13	49:BX:31:LEU:HD23	1.85	0.59
1:CA:812:C:C1'	1:CA:813:U:OP2	2.48	0.59
50:D4:22:ILE:HG12	50:D4:23:GLU:N	2.18	0.59
25:DA:902:C:C2'	25:DA:903:C:H5'	2.33	0.59
25:DA:908:C:OP1	36:DP:22:LYS:CB	2.51	0.59
25:DA:2414:G:N2	35:DO:67:MET:HE1	2.09	0.59
1:AA:1138:G:N3	1:AA:1138:G:H3'	2.18	0.59
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.02	0.59
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.38	0.59
1:AA:791:G:C5	1:AA:792:A:C2	2.90	0.59
22:AB:57:C:H4'	22:AB:58:G:O5'	2.00	0.59
7:AJ:26:PHE:O	7:AJ:30:ILE:HG13	2.03	0.59
1:AA:519:C:P	12:AO:47:SER:HG	2.26	0.59
50:B4:23:GLU:OE1	50:B4:24:THR:N	2.36	0.59
50:B4:45:GLY:O	50:B4:47:GLN:N	2.36	0.59
25:BA:1793:C:O2	25:BA:1900:A:H2	1.86	0.59
25:BA:2747:G:O6	25:BA:2755:C:H5''	2.03	0.59
25:BA:529:A:H8	25:BA:530:G:C6	2.20	0.59
25:BA:776:G:H4'	25:BA:777:A:O5'	2.02	0.59
26:BB:42:C:O2	30:BG:93:THR:N	2.32	0.59
27:BD:31:LYS:HD3	27:BD:94:LEU:HD11	1.85	0.59
28:BE:50:GLY:CA	28:BE:77:ILE:HG22	2.33	0.59
30:BG:64:THR:HG22	30:BG:66:GLN:H	1.67	0.59
1:CA:1086:U:H6	1:CA:1086:U:O5'	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1319:A:P	19:CV:10:PHE:HB3	2.42	0.59
1:CA:408:A:H2'	1:CA:409:G:O4'	2.02	0.59
1:CA:498:A:H4'	1:CA:500:G:OP1	2.02	0.59
4:CG:78:LEU:HD22	4:CG:96:LEU:HB3	1.83	0.59
7:CJ:20:ASP:HB3	7:CJ:23:VAL:HG22	1.84	0.59
13:CP:49:THR:HG22	13:CP:51:ALA:H	1.67	0.59
13:CP:78:ILE:CG2	13:CP:92:HIS:HD2	2.15	0.59
25:DA:1204:A:O2'	25:DA:1205:U:OP2	2.18	0.59
25:DA:1336:A:H2'	25:DA:1337:G:C8	2.38	0.59
25:DA:1451:C:H4'	25:DA:1453:A:C8	2.38	0.59
25:DA:2701:C:C3'	25:DA:2702:U:H5''	2.24	0.59
25:DA:756:C:H2'	25:DA:757:U:H5'	1.84	0.59
26:DB:40:U:C2	26:DB:43:C:OP2	2.56	0.59
28:DE:33:VAL:HG11	28:DE:88:GLY:HA2	1.85	0.59
47:DZ:87:PRO:O	47:DZ:91:LYS:N	2.27	0.59
24:A1:12:A:C1'	24:A1:13:A:OP1	2.50	0.59
4:AG:31:CYS:C	4:AG:33:MET:H	2.07	0.59
6:AI:86:ARG:O	6:AI:87:ARG:HG2	2.02	0.59
40:B1:66:ASN:ND2	40:B1:66:ASN:O	2.34	0.59
51:B5:4:HIS:CG	51:B5:5:PRO:CD	2.70	0.59
25:BA:1309:G:H4'	53:B7:7:PRO:HB2	1.84	0.59
53:B7:5:TRP:NE1	53:B7:7:PRO:HG3	2.18	0.59
25:BA:557:U:H2'	25:BA:558:G:H8	1.68	0.59
25:BA:607:U:N3	25:BA:621:A:C2	2.70	0.59
28:BE:70:ALA:O	28:BE:72:VAL:N	2.36	0.59
25:BA:588:U:C2	29:BF:90:PHE:CE1	2.91	0.59
30:BG:70:VAL:O	30:BG:70:VAL:HG22	2.01	0.59
1:CA:1157:A:H1'	1:CA:1158:C:C2	2.37	0.59
1:CA:1302:U:C5	13:CP:17:VAL:HG21	2.38	0.59
1:CA:583:A:H2'	1:CA:584:G:O4'	2.03	0.59
9:CL:96:LEU:HG	9:CL:101:PHE:HB2	1.83	0.59
37:D0:41:ALA:O	37:D0:43:GLU:N	2.36	0.59
25:DA:1480:G:C2	25:DA:1482:U:O2	2.56	0.59
25:DA:7:G:N2	25:DA:2896:C:N3	2.49	0.59
25:DA:389:G:N1	35:DO:71:VAL:CG1	2.65	0.59
25:DA:9:U:C2	25:DA:2629:A:N6	2.71	0.59
28:DE:36:ARG:HH21	28:DE:88:GLY:HA2	1.66	0.59
28:DE:68:ALA:C	28:DE:70:ALA:H	2.05	0.59
31:DH:105:LEU:H	31:DH:105:LEU:HD23	1.66	0.59
25:DA:2875:C:O2'	39:DR:5:ALA:HB3	2.03	0.59
49:DX:19:GLN:NE2	49:DX:52:HIS:HE1	2.00	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:244:U:H4'	1:AA:245:C:C5'	2.33	0.58
1:AA:457:C:H2'	1:AA:458:C:C6	2.37	0.58
1:AA:542:G:H5'	4:AG:41:GLY:HA3	1.85	0.58
1:AA:82:U:O4	1:AA:87:A:N1	2.36	0.58
3:AF:173:VAL:O	3:AF:175:LEU:HD12	2.02	0.58
3:AF:70:VAL:HG12	3:AF:72:LYS:N	2.11	0.58
9:AL:43:ALA:O	9:AL:45:ALA:N	2.36	0.58
15:AR:39:LEU:HD13	15:AR:56:LEU:HB2	1.84	0.58
20:AW:53:LEU:HB3	20:AW:102:GLY:HA3	1.83	0.58
37:B0:85:PRO:O	37:B0:87:TYR:N	2.36	0.58
25:BA:1578:U:H2'	25:BA:1579:A:H5'	1.83	0.58
25:BA:2115:G:O6	25:BA:2117:A:H3'	2.01	0.58
25:BA:330:A:O2'	25:BA:331:A:C8	2.54	0.58
25:BA:604:G:OP2	35:BO:90:ARG:NH2	2.36	0.58
25:BA:85:G:OP2	44:BU:9:LYS:HB2	2.03	0.58
25:BA:2620:C:OP1	28:BE:152:LYS:O	2.21	0.58
38:BQ:30:ARG:HG3	38:BQ:30:ARG:O	2.01	0.58
23:CC:56:U:O2	23:CC:58:A:C8	2.56	0.58
4:CG:63:LYS:HD2	4:CG:198:VAL:HG12	1.84	0.58
10:CM:35:SER:OG	10:CM:73:ASP:HB2	2.02	0.58
25:DA:2211:G:H3'	25:DA:2212:A:N3	2.16	0.58
25:DA:2765:A:H2	25:DA:2766:G:O4'	1.86	0.58
25:DA:2787:C:H1'	28:DE:62:PRO:HG3	1.85	0.58
25:DA:428:A:OP2	25:DA:428:A:H8	1.86	0.58
25:DA:495:G:H21	42:DS:61:ASN:HD21	1.49	0.58
25:DA:867:C:C5	25:DA:868:U:H5	2.21	0.58
28:DE:24:THR:HG23	28:DE:186:GLY:HA2	1.84	0.58
28:DE:58:ARG:O	28:DE:60:ASN:N	2.36	0.58
29:DF:9:ILE:O	29:DF:128:ALA:HB2	2.02	0.58
36:DP:57:HIS:CG	36:DP:117:ALA:HB2	2.38	0.58
48:DW:16:LEU:HG	48:DW:16:LEU:O	2.03	0.58
1:AA:1322:C:O2'	1:AA:1323:G:P	2.61	0.58
7:AJ:65:ALA:HB1	7:AJ:127:ALA:HB3	1.85	0.58
8:AK:12:ARG:NH1	8:AK:27:PRO:HD2	2.18	0.58
1:AA:1147:C:O2	9:AL:16:ARG:NH1	2.36	0.58
10:AM:7:LYS:HD2	10:AM:9:ARG:NH1	2.19	0.58
12:AO:44:LYS:CB	12:AO:45:PRO:HD2	2.06	0.58
40:B1:66:ASN:ND2	40:B1:70:ARG:HE	2.01	0.58
41:B2:44:LYS:C	41:B2:46:VAL:H	2.03	0.58
25:BA:1103:A:H2'	25:BA:1103:A:N3	2.17	0.58
25:BA:1771:C:C1'	25:BA:1786:A:C8	2.83	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:273(E):U:C2'	25:BA:273(F):C:H5'	2.33	0.58
28:BE:167:VAL:HG21	28:BE:187:ALA:HB3	1.84	0.58
1:CA:1055:A:C5	1:CA:1056:U:H6	2.21	0.58
1:CA:1286:A:H8	1:CA:1287:A:H5''	1.67	0.58
1:CA:735:C:H2'	1:CA:736:C:H6	1.66	0.58
1:CA:998(A):C:O2'	1:CA:999:U:H5'	2.04	0.58
3:CF:104:GLN:OE1	3:CF:105:GLU:N	2.35	0.58
3:CF:111:LEU:HD22	3:CF:146:ALA:HB2	1.84	0.58
17:CT:45:HIS:HB2	17:CT:65:ILE:HD13	1.84	0.58
25:DA:1557:C:OP2	25:DA:1558:A:O2'	2.21	0.58
25:DA:533:G:H5'	40:D1:24:TYR:CE2	2.38	0.58
25:DA:669:G:O2'	25:DA:670:A:P	2.61	0.58
25:DA:819:A:OP2	25:DA:1187:G:N2	2.31	0.58
29:DF:177:ALA:HB1	29:DF:178:PRO:HD2	1.85	0.58
35:DO:61:ARG:CA	35:DO:62:LEU:HD22	2.33	0.58
47:DZ:82:LEU:HD23	47:DZ:82:LEU:N	2.11	0.58
22:AB:19:C:H4'	22:AB:20:C:OP1	2.02	0.58
22:AB:50:U:H2'	22:AB:51:C:O4'	2.03	0.58
2:AE:16:HIS:HD2	2:AE:210:SER:CA	2.09	0.58
2:AE:200:ILE:H	2:AE:200:ILE:HD12	1.68	0.58
3:AF:79:ARG:NH1	18:CU:87:ARG:HH22	2.01	0.58
16:AS:4:ILE:HA	16:AS:20:VAL:O	2.03	0.58
25:BA:2126:A:C4	25:BA:2162:G:N2	2.70	0.58
25:BA:2729:G:H1'	28:BE:187:ALA:HB2	1.85	0.58
25:BA:479:A:H4'	25:BA:480:A:OP1	2.03	0.58
25:BA:2228:G:OP2	27:BD:263:ARG:NH2	2.36	0.58
27:BD:25:THR:O	27:BD:26:LYS:C	2.39	0.58
29:BF:103:LYS:HA	29:BF:106:ARG:HG3	1.85	0.58
31:BH:35:VAL:O	31:BH:37:VAL:HG23	2.03	0.58
35:BO:15:ARG:O	35:BO:16:ARG:O	2.21	0.58
39:BR:16:ARG:HH21	39:BR:19:LEU:HD21	1.68	0.58
1:CA:1056:U:O2	1:CA:1056:U:C2'	2.51	0.58
2:CE:97:TRP:CZ2	2:CE:101:MET:HB2	2.39	0.58
2:CE:78:GLN:NE2	2:CE:95:GLN:OE1	2.34	0.58
7:CJ:143:ARG:NH1	22:CD:43:G:H5'	2.19	0.58
41:D2:35:LEU:HG	41:D2:37:VAL:CG1	2.33	0.58
41:D2:85:LYS:HE3	41:D2:87:HIS:CA	2.33	0.58
25:DA:1161:C:H1'	41:D2:8:GLY:O	2.04	0.58
25:DA:674:G:O2'	29:DF:74:ARG:HG3	2.03	0.58
32:DK:109:ILE:HB	32:DK:130:TYR:OH	2.03	0.58
32:DK:81:VAL:O	32:DK:143:SER:OG	2.20	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DN:119:PRO:HB2	39:DR:68:TYR:CE2	2.38	0.58
35:DO:62:LEU:HG	54:D8:25:MET:CB	2.06	0.58
48:DW:22:GLU:O	48:DW:25:VAL:HG23	2.03	0.58
1:AA:1149:C:H2'	1:AA:1150:U:C6	2.31	0.58
1:AA:654:G:H2'	1:AA:655:A:H5'	1.83	0.58
22:AB:49:A:N3	22:AB:49:A:H2'	2.18	0.58
3:AF:134:ILE:HG22	3:AF:168:ALA:HB3	1.85	0.58
4:AG:26:CYS:HA	4:AG:31:CYS:HB2	1.85	0.58
7:AJ:22:LEU:HD23	7:AJ:62:PHE:HE2	1.66	0.58
13:AP:23:TYR:CE1	13:AP:70:LEU:HD22	2.38	0.58
15:AR:39:LEU:HD22	15:AR:43:LEU:HG	1.85	0.58
16:AS:43:LYS:HA	16:AS:48:TRP:HB2	1.85	0.58
25:BA:900:A:H3'	25:BA:901:A:H8	1.69	0.58
25:BA:899:A:O2'	25:BA:900:A:O4'	2.21	0.58
34:BN:112:MET:O	34:BN:115:VAL:HG22	2.04	0.58
1:CA:828:A:H2'	1:CA:829:G:O4'	2.03	0.58
2:CE:178:ARG:HH22	2:CE:196:LEU:HA	1.67	0.58
18:CU:36:ASN:HD22	18:CU:39:VAL:HG21	1.67	0.58
50:D4:61:ARG:HG2	50:D4:62:ARG:NH1	2.18	0.58
25:DA:1210:A:H4'	25:DA:1211:U:O5'	2.03	0.58
25:DA:395:U:H2'	25:DA:396:G:N7	2.19	0.58
38:DQ:99:LYS:O	38:DQ:103:GLU:HG2	2.04	0.58
1:AA:953:G:H5'	1:AA:965:A:H61	1.69	0.58
2:AE:8:LYS:HE3	2:AE:11:LEU:HB2	1.84	0.58
13:AP:108:ARG:HH11	13:AP:108:ARG:HA	1.68	0.58
27:BD:26:LYS:N	27:BD:26:LYS:HD2	2.18	0.58
30:BG:37:VAL:HG23	30:BG:99:MET:HE3	1.86	0.58
1:CA:1028(B):C:H3'	1:CA:1029:G:C5'	2.32	0.58
6:CI:3:ARG:NH1	6:CI:38:GLU:OE1	2.36	0.58
10:CM:44:VAL:HG22	10:CM:66:ARG:HG2	1.85	0.58
46:D3:49:LYS:HG3	46:D3:80:HIS:ND1	2.19	0.58
25:DA:1048:A:P	25:DA:1109:C:H42	2.26	0.58
25:DA:137(A):G:H2'	25:DA:139:G:N7	2.19	0.58
25:DA:1543:A:H1'	25:DA:1545:A:H1'	1.85	0.58
25:DA:1557:C:H5''	25:DA:1558:A:OP2	2.04	0.58
25:DA:2754:U:H5'	25:DA:2755:C:OP2	2.03	0.58
25:DA:846:C:C2	25:DA:847:U:C4	2.91	0.58
38:DQ:29:PHE:HD2	38:DQ:30:ARG:H	1.50	0.58
25:DA:1754:C:OP1	39:DR:96:ARG:NH1	2.36	0.58
42:DS:1:MET:HG2	42:DS:2:GLU:H	1.68	0.58
1:AA:1128:C:C5'	9:AL:16:ARG:HH22	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1346:A:O2'	7:AJ:10:ARG:NH2	2.36	0.58
25:BA:1799:G:H5'	25:BA:1819:A:N6	2.19	0.58
25:BA:2168:G:N3	25:BA:2168:G:H3'	2.18	0.58
25:BA:2346:A:O3'	52:B6:39:TYR:OH	2.21	0.58
25:BA:299:A:H5'	44:BU:84:ARG:NH2	2.19	0.58
27:BD:186:HIS:CD2	27:BD:188:GLU:H	2.20	0.58
25:BA:911:A:H2'	36:BP:9:TYR:OH	2.03	0.58
1:CA:1125:U:H2'	1:CA:1126:U:C6	2.38	0.58
1:CA:1399:C:C2	1:CA:1502:A:N6	2.72	0.58
1:CA:165:C:H2'	1:CA:166:G:C8	2.37	0.58
1:CA:89:U:H1'	1:CA:90:C:OP1	2.04	0.58
2:CE:92:TYR:HE2	2:CE:151:GLY:HA3	1.66	0.58
3:CF:157:ILE:CD1	3:CF:166:GLU:HB2	2.33	0.58
6:CI:24:GLU:OE1	6:CI:28:ARG:HD3	2.04	0.58
10:CM:49:VAL:O	10:CM:60:ARG:HB2	2.02	0.58
12:CO:54:LYS:HG3	12:CO:64:THR:HG22	1.83	0.58
13:CP:3:ARG:HG2	13:CP:9:ILE:HD11	1.84	0.58
25:DA:1043:C:H2'	25:DA:1044:G:H5'	1.83	0.58
25:DA:2262:U:O2'	25:DA:2263:C:H5'	2.03	0.58
25:DA:2308:G:HO2'	25:DA:2309:A:P	2.26	0.58
25:DA:2599:G:N7	27:DD:236:GLY:O	2.36	0.58
30:DG:20:ILE:O	30:DG:24:GLY:HA2	2.03	0.58
38:DQ:59:LYS:HD2	38:DQ:60:GLY:H	1.67	0.58
38:DQ:93:LYS:HZ2	38:DQ:93:LYS:HB2	1.69	0.58
44:DU:39:VAL:O	44:DU:40:GLU:HB2	2.04	0.58
1:AA:1178:G:HO2'	1:AA:1179:A:P	2.25	0.58
1:AA:1226:C:OP2	13:AP:103:THR:OG1	2.18	0.58
1:AA:501:C:H1'	1:AA:549:C:H1'	1.85	0.58
1:AA:814:A:N7	1:AA:816:A:C4	2.72	0.58
2:AE:108:ILE:O	2:AE:108:ILE:HD13	2.04	0.58
2:AE:42:ILE:HD11	2:AE:202:PRO:HB2	1.84	0.58
6:AI:43:LEU:HD23	6:AI:43:LEU:O	2.04	0.58
6:AI:10:LEU:HD13	6:AI:61:LEU:HD13	1.86	0.58
37:B0:87:TYR:HE1	37:B0:117:VAL:HG12	1.68	0.58
51:B5:38:ALA:HB3	51:B5:40:LYS:HE3	1.86	0.58
25:BA:1833:U:O2'	25:BA:1969:A:N1	2.34	0.58
25:BA:2055:C:H5'	25:BA:2056:G:H5''	1.86	0.58
25:BA:2171:A:O2'	25:BA:2172:U:O5'	2.21	0.58
25:BA:2309:A:C6	25:BA:2310:A:N7	2.72	0.58
25:BA:2377:A:H2'	25:BA:2378:A:C8	2.38	0.58
25:BA:2469:A:OP2	25:BA:2476:A:N7	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:329:G:H4'	25:BA:330:A:OP2	2.01	0.58
25:BA:945:A:C1'	25:BA:946:G:OP1	2.51	0.58
27:BD:121:PRO:HA	27:BD:135:PHE:HD1	1.67	0.58
33:BM:96:GLU:O	33:BM:98:VAL:N	2.36	0.58
35:BO:82:GLY:HA2	35:BO:113:LYS:O	2.03	0.58
36:BP:1:MET:O	36:BP:2:LEU:CB	2.51	0.58
39:BR:81:PRO:HG2	39:BR:82:LEU:HD12	1.85	0.58
1:CA:1126:U:O4	1:CA:1281:U:C6	2.57	0.58
1:CA:1127:G:H1	1:CA:1144:G:H1	1.50	0.58
1:CA:861:G:C5	1:CA:862:C:C5	2.92	0.58
22:CB:48:C:C3'	22:CB:49:A:H8	2.12	0.58
2:CE:87:ARG:NH1	2:CE:220:ASP:OD1	2.35	0.58
17:CT:60:ILE:HD13	17:CT:61:GLU:N	2.18	0.58
18:CU:29:PHE:N	18:CU:29:PHE:CD2	2.72	0.58
25:DA:1198:U:H2'	25:DA:1199:U:H6	1.66	0.58
25:DA:511:U:C3'	25:DA:512:G:H5''	2.24	0.58
27:DD:43:ARG:HD2	27:DD:44:ASN:ND2	2.19	0.58
28:DE:31:CYS:HB3	28:DE:49:LEU:HB3	1.86	0.58
29:DF:21:ALA:C	29:DF:23:ASP:N	2.57	0.58
30:DG:11:TYR:O	30:DG:16:ARG:HB2	2.02	0.58
42:DS:59:VAL:HA	42:DS:64:MET:H	1.67	0.58
25:DA:483:A:H5''	44:DU:49:VAL:HG13	1.84	0.58
44:DU:76:CYS:HB3	44:DU:96:ILE:HD11	1.86	0.58
1:AA:1032:A:H3'	1:AA:1032(A):G:C5'	2.34	0.58
1:AA:983:A:H5''	1:AA:984:C:OP2	2.03	0.58
22:AD:20:C:H5''	22:AD:68:A:N6	2.16	0.58
9:AL:113:LYS:HD3	9:AL:119:ALA:HA	1.86	0.58
9:AL:59:PHE:HZ	9:AL:88:TYR:CE1	2.22	0.58
1:AA:1199:U:H4'	10:AM:54:PHE:CE2	2.39	0.58
52:B6:27:LYS:HZ2	52:B6:27:LYS:HB2	1.69	0.58
25:BA:1473:G:C2'	25:BA:1474:C:H5'	2.34	0.58
25:BA:654(S):G:H1'	25:BA:654(T):A:N7	2.18	0.58
31:BH:30:LYS:HD2	31:BH:81:GLU:H	1.68	0.58
31:BH:7:LEU:N	31:BH:8:PRO:CD	2.67	0.58
32:BK:73:GLU:OE1	32:BK:137:PRO:HD2	2.04	0.58
39:BR:54:ARG:HA	39:BR:59:THR:HB	1.86	0.58
44:BU:5:MET:O	44:BU:6:HIS:HB3	2.02	0.58
1:CA:396:G:O2'	1:CA:398:C:OP1	2.09	0.58
1:CA:723:U:H2'	1:CA:724:G:OP1	2.04	0.58
22:CB:84:C:O2	25:DA:2507:C:O2'	2.22	0.58
2:CE:7:VAL:CG2	2:CE:8:LYS:H	2.12	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CF:131:ARG:NH1	5:CH:50:GLU:HG3	2.19	0.58
6:CI:33:TYR:OH	6:CI:78:GLU:HG3	2.03	0.58
1:CA:1149:C:OP2	9:CL:9:ARG:NH1	2.37	0.58
15:CR:87:ILE:HG22	15:CR:88:ARG:N	2.16	0.58
25:DA:1639:U:H2'	25:DA:1640:C:H5''	1.85	0.58
25:DA:2303:G:C2'	25:DA:2304:G:H5'	2.34	0.58
25:DA:654(M):C:H3'	25:DA:654(N):G:C8	2.39	0.58
27:DD:33:LEU:HD23	27:DD:34:VAL:N	2.18	0.58
42:DS:1:MET:HG2	42:DS:2:GLU:N	2.18	0.58
42:DS:84:ARG:HB2	42:DS:96:ILE:CD1	2.34	0.58
45:DV:87:ASP:OD2	45:DV:87:ASP:N	2.37	0.58
1:AA:1126:U:O2'	1:AA:1127:G:OP1	2.18	0.58
1:AA:953:G:H2'	1:AA:954:G:O4'	2.04	0.58
2:AE:141:GLU:O	2:AE:145:LEU:HB2	2.04	0.58
25:BA:1021:A:H8	25:BA:1022:G:H5''	1.66	0.58
25:BA:1728:G:C2	25:BA:1730:U:OP2	2.57	0.58
25:BA:2111:C:C2	25:BA:2118:U:H4'	2.38	0.58
25:BA:274:G:H2'	25:BA:275:G:C1'	2.34	0.58
25:BA:4:C:H2'	25:BA:5:A:H8	1.69	0.58
25:BA:890:A:H5'	25:BA:892:G:OP2	2.03	0.58
25:BA:919:G:N2	25:BA:2269:A:OP2	2.37	0.58
25:BA:94:G:H21	48:BW:47:ASN:ND2	2.02	0.58
27:BD:35:LYS:NZ	27:BD:65:ILE:HA	2.18	0.58
31:BH:137:ASP:O	31:BH:138:LYS:HB2	2.04	0.58
39:BR:91:ARG:HB2	39:BR:121:ILE:HG13	1.86	0.58
45:BV:128:VAL:HA	45:BV:161:VAL:CG2	2.33	0.58
1:CA:1418:A:H5''	1:CA:1419:G:OP2	2.04	0.58
2:CE:239:VAL:HG12	2:CE:240:GLN:HG3	1.84	0.58
6:CI:2:ARG:HD2	6:CI:69:GLU:HB3	1.85	0.58
25:DA:1027:A:N6	25:DA:1126:A:C4	2.72	0.58
25:DA:276:A:C4	25:DA:277:C:H5	2.21	0.58
25:DA:2789:C:C3'	25:DA:2790:A:H5''	2.33	0.58
25:DA:2815:C:H2'	25:DA:2816:C:H6	1.68	0.58
25:DA:654(D):G:H1	25:DA:654(Q):C:H42	1.50	0.58
27:DD:36:PRO:HB3	27:DD:61:LEU:HB3	1.86	0.58
30:DG:38:VAL:HG22	30:DG:93:THR:HG23	1.85	0.58
45:DV:24:LEU:HD12	45:DV:25:PRO:O	2.04	0.58
1:AA:1139:G:C2	1:AA:1143:G:O6	2.57	0.58
1:AA:1367:C:H5'	10:AM:60:ARG:HH21	1.68	0.58
1:AA:519:C:P	12:AO:47:SER:OG	2.62	0.58
2:AE:71:VAL:HG12	2:AE:93:VAL:HB	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:B1:69:CYS:O	40:B1:74:LEU:HD12	2.04	0.58
25:BA:1575:C:H2'	25:BA:1576:U:C6	2.39	0.58
25:BA:2287:A:C2	25:BA:2346:A:N1	2.71	0.58
25:BA:34:C:O4'	25:BA:34:C:OP2	2.22	0.58
26:BB:75:G:H21	45:BV:85:HIS:CE1	2.22	0.58
28:BE:21:VAL:HB	28:BE:22:PRO:CB	2.33	0.58
29:BF:64:ILE:HG23	29:BF:65:TRP:CD1	2.39	0.58
25:BA:674:G:C1'	29:BF:74:ARG:HD3	2.32	0.58
32:BK:93:THR:O	32:BK:97:ILE:HG12	2.04	0.58
35:BO:140:ALA:O	35:BO:141:ALA:HB2	2.03	0.58
45:BV:104:PHE:CZ	45:BV:119:GLU:HB3	2.38	0.58
1:CA:791:G:C6	1:CA:792:A:N7	2.72	0.58
1:CA:827:U:H5''	1:CA:828:A:OP2	2.04	0.58
1:CA:986:A:H1'	19:CV:54:GLY:O	2.04	0.58
9:CL:10:ARG:HD3	9:CL:75:ASP:HB3	1.86	0.58
37:D0:38:VAL:HG22	37:D0:112:ALA:HB2	1.86	0.58
25:DA:1068:G:H1'	25:DA:1096:A:H4'	1.84	0.58
27:DD:267:SER:O	27:DD:269:PHE:N	2.36	0.58
27:DD:48:ARG:NH1	27:DD:48:ARG:HG3	2.14	0.58
33:DM:45:ASN:HD22	33:DM:45:ASN:H	1.50	0.58
38:DQ:29:PHE:HD2	38:DQ:30:ARG:N	2.01	0.58
1:AA:1145:C:H5''	1:AA:1146:A:OP1	2.03	0.57
1:AA:1301:U:O4	1:AA:1303:C:H1'	2.04	0.57
12:AO:3:THR:N	12:AO:6:GLN:HE21	1.99	0.57
41:B2:29:PRO:HA	41:B2:61:VAL:HG23	1.86	0.57
52:B6:44:ARG:H	52:B6:44:ARG:HD3	1.69	0.57
25:BA:1405:U:H2'	25:BA:1406:U:C6	2.38	0.57
25:BA:142:G:H1'	43:BT:37:THR:HG21	1.86	0.57
25:BA:2172:U:H5'	25:BA:2173:A:OP2	2.04	0.57
25:BA:2611:U:H3'	25:BA:2611:U:OP1	2.04	0.57
25:BA:2790:A:H4'	25:BA:2791:C:OP2	2.04	0.57
25:BA:653:A:H3'	25:BA:654:A:C5'	2.33	0.57
27:BD:35:LYS:HG2	27:BD:64:ILE:HG23	1.85	0.57
31:BH:152:ARG:O	31:BH:153:LYS:HB2	2.04	0.57
1:CA:222:U:H2'	1:CA:223:U:C6	2.39	0.57
9:CL:5:TYR:HD2	9:CL:18:PHE:CE2	2.22	0.57
6:CI:99:ALA:HB3	18:CU:29:PHE:CE2	2.38	0.57
18:CU:29:PHE:HD2	18:CU:29:PHE:N	2.02	0.57
25:DA:1022:G:C2'	25:DA:1023:U:OP2	2.52	0.57
25:DA:2354:G:O2'	46:D3:36:ILE:HD12	2.04	0.57
25:DA:1805:U:O2	27:DD:50:THR:HB	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DE:111:ARG:HG2	37:D0:2:ARG:HH22	1.69	0.57
30:DG:137:GLU:HB3	30:DG:152:LEU:HD22	1.84	0.57
33:DM:91:LEU:O	33:DM:95:PRO:HG3	2.04	0.57
25:DA:943:U:OP2	35:DO:36:LYS:HE3	2.04	0.57
38:DQ:66:ALA:HA	38:DQ:69:VAL:HG12	1.86	0.57
49:DX:19:GLN:NE2	49:DX:52:HIS:CE1	2.72	0.57
1:AA:1271:G:C2'	1:AA:1272:G:H5'	2.34	0.57
1:AA:353:A:H2'	1:AA:354:G:OP2	2.05	0.57
22:AB:21:A:H2	22:AB:22:A:H62	1.50	0.57
22:AD:12:C:H2'	22:AD:13:G:O4'	2.04	0.57
2:AE:109:SER:O	2:AE:112:VAL:N	2.30	0.57
3:AF:113:ALA:HB3	3:AF:114:PRO:HD3	1.85	0.57
5:AH:10:MET:HE1	5:AH:13:ILE:HD11	1.86	0.57
6:AI:37:VAL:HG12	6:AI:38:GLU:H	1.68	0.57
7:AJ:103:TRP:CZ3	7:AJ:138:LYS:HA	2.39	0.57
7:AJ:15:ASP:OD2	7:AJ:44:TYR:OH	2.22	0.57
13:AP:15:VAL:O	13:AP:19:LEU:HD23	2.04	0.57
16:AS:43:LYS:HG2	16:AS:48:TRP:CE3	2.38	0.57
25:BA:1999:C:H4'	25:BA:2723:C:O2	2.04	0.57
25:BA:2310:A:H5''	25:BA:2311:A:OP2	2.04	0.57
25:BA:49:A:N7	25:BA:120:U:C4	2.69	0.57
25:BA:84:A:OP2	44:BU:8:LYS:NZ	2.37	0.57
27:BD:108:PRO:HB3	27:BD:143:HIS:HE1	1.69	0.57
30:BG:77:ILE:O	30:BG:81:LYS:O	2.22	0.57
33:BM:17:ASP:O	33:BM:18:ALA:HB3	2.03	0.57
35:BO:50:ARG:HD3	54:B8:59:LYS:HE3	1.86	0.57
45:BV:48:PHE:HE2	45:BV:71:VAL:HG21	1.69	0.57
1:CA:1053:G:O2'	1:CA:1054:C:OP2	2.22	0.57
1:CA:81:G:N2	1:CA:88:C:N3	2.51	0.57
22:CB:78:C:H1'	22:CB:79:A:O5'	2.04	0.57
22:CD:48:C:H2'	22:CD:49:A:O4'	2.04	0.57
2:CE:12:GLU:HB3	2:CE:213:LEU:HD13	1.84	0.57
5:CH:110:LEU:HD13	5:CH:118:ILE:HG21	1.85	0.57
7:CJ:27:ILE:CD1	7:CJ:40:ALA:HA	2.32	0.57
50:D4:22:ILE:CG1	50:D4:23:GLU:H	2.16	0.57
53:D7:43:THR:HG23	53:D7:44:PRO:HD2	1.87	0.57
25:DA:1336:A:H2'	25:DA:1337:G:H8	1.69	0.57
25:DA:2286:A:H4'	25:DA:2287:A:O4'	2.04	0.57
25:DA:2872:G:O2'	25:DA:2873:A:H5'	2.04	0.57
25:DA:443:A:H1'	25:DA:1201:C:O4'	2.04	0.57
25:DA:1569:A:H5'	27:DD:61:LEU:HD21	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:589:C:H5''	29:DF:95:ARG:HH12	1.69	0.57
31:DH:130:ARG:HH12	31:DH:132:ARG:HH12	1.52	0.57
36:DP:43:THR:HB	36:DP:45:GLN:HE21	1.69	0.57
24:A1:11:U:O2'	24:A1:12:A:C5	2.54	0.57
1:AA:377:G:P	16:AS:5:ARG:HH11	2.27	0.57
1:AA:486:U:H2'	1:AA:487:A:C8	2.38	0.57
1:AA:818:G:O2'	1:AA:819:A:H5'	2.04	0.57
2:AE:238:LEU:HD12	2:AE:238:LEU:H	1.69	0.57
1:AA:393:A:OP2	16:AS:12:LYS:HE3	2.04	0.57
50:B4:37:SER:CB	50:B4:42:PHE:CZ	2.84	0.57
25:BA:1316:U:H2'	25:BA:1317:A:H8	1.69	0.57
25:BA:1557:C:H5''	25:BA:1558:A:OP2	2.03	0.57
25:BA:478:A:C6	25:BA:480:A:C6	2.92	0.57
25:BA:492:A:H2'	25:BA:493:G:O4'	2.04	0.57
39:BR:53:ARG:NH1	39:BR:53:ARG:HB3	2.20	0.57
44:BU:74:PRO:O	44:BU:80:GLY:HA2	2.03	0.57
1:CA:1368:G:H5'	9:CL:112:LYS:HB3	1.86	0.57
1:CA:353:A:H5'	1:CA:353:A:H8	1.70	0.57
1:CA:554:C:H2'	1:CA:555:C:C6	2.39	0.57
22:CD:20:C:H5'	22:CD:68:A:H62	1.70	0.57
2:CE:19:HIS:CD2	2:CE:205:ASP:H	2.22	0.57
7:CJ:57:GLU:OE1	7:CJ:57:GLU:N	2.28	0.57
21:CX:2:GLY:C	21:CX:4:GLY:H	2.07	0.57
25:DA:1342:A:C8	25:DA:1345:C:C4	2.92	0.57
25:DA:2136:C:N4	25:DA:2155:G:C6	2.72	0.57
25:DA:2212:A:H1'	25:DA:2215:G:C4	2.39	0.57
25:DA:589:C:H5''	29:DF:95:ARG:NH1	2.20	0.57
25:DA:99:U:H1'	25:DA:102:G:N3	2.18	0.57
1:AA:136:C:N4	1:AA:227:G:H1	1.99	0.57
22:AD:57:C:H4'	22:AD:58:G:O5'	2.03	0.57
3:AF:9:GLY:HA2	3:AF:12:LEU:HG	1.86	0.57
4:AG:3:ARG:HG2	4:AG:118:ARG:CZ	2.35	0.57
17:AT:100:LYS:O	17:AT:101:ARG:HG3	2.03	0.57
25:BA:10:G:C2	25:BA:2629:A:C2	2.92	0.57
25:BA:1396:U:H2'	25:BA:1396:U:O2	2.03	0.57
25:BA:229:A:H4'	25:BA:230:U:H5'	1.85	0.57
25:BA:881:G:H3'	25:BA:882:G:O4'	2.04	0.57
13:AP:93:ARG:HH12	25:BA:888:C:H41	1.51	0.57
27:BD:134:ARG:HG3	27:BD:135:PHE:CD2	2.40	0.57
28:BE:39:PRO:HG2	28:BE:40:GLU:OE1	2.05	0.57
33:BM:133:GLN:HE21	33:BM:133:GLN:H	1.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BU:96:ILE:HG23	44:BU:101:LYS:HG2	1.85	0.57
1:CA:1227:A:OP2	13:CP:111:LYS:HD3	2.04	0.57
1:CA:197:A:C8	1:CA:198:G:H1'	2.40	0.57
1:CA:201:C:O2'	1:CA:209:U:OP2	2.22	0.57
1:CA:736:C:H2'	1:CA:737:A:H8	1.70	0.57
9:CL:11:LYS:HG3	9:CL:108:VAL:HG23	1.85	0.57
1:CA:742:G:OP2	15:CR:35:ARG:NH2	2.37	0.57
19:CV:80:TYR:CE1	19:CV:82:GLY:HA2	2.40	0.57
40:D1:16:LYS:O	40:D1:20:LEU:HD23	2.04	0.57
25:DA:1091:G:C6	25:DA:1092:C:N4	2.73	0.57
25:DA:1405:U:H2'	25:DA:1406:U:C6	2.40	0.57
25:DA:654(C):G:H2'	25:DA:654(D):G:C8	2.39	0.57
25:DA:784:A:C8	25:DA:792:G:C5	2.93	0.57
36:DP:54:MET:HG2	36:DP:117:ALA:O	2.04	0.57
45:DV:128:VAL:HG22	45:DV:129:SER:N	2.12	0.57
1:AA:35:G:H2'	1:AA:36:C:C6	2.38	0.57
1:AA:457:C:H2'	1:AA:458:C:H6	1.69	0.57
1:AA:97:U:H2'	1:AA:99:C:C6	2.39	0.57
52:B6:14:THR:OG1	52:B6:15:GLU:N	2.36	0.57
25:BA:1427:A:H4'	25:BA:1428:C:O5'	2.02	0.57
25:BA:1729:A:H8	25:BA:1730:U:C4	2.21	0.57
25:BA:2427:C:H5''	25:BA:2428:G:OP1	2.05	0.57
25:BA:442:G:O4'	29:BF:46:ARG:HD3	2.05	0.57
43:BT:41:ASN:O	43:BT:45:THR:HG23	2.04	0.57
45:BV:128:VAL:HA	45:BV:161:VAL:HG21	1.84	0.57
1:CA:1117:G:H5'	1:CA:1118:C:OP2	2.05	0.57
1:CA:1129:C:N3	1:CA:1132:C:N4	2.52	0.57
1:CA:1256:A:N6	1:CA:1278:U:OP2	2.37	0.57
22:CD:48:C:C6	22:CD:49:A:C8	2.92	0.57
4:CG:33:MET:O	4:CG:34:GLU:HB2	2.04	0.57
17:CT:48:GLU:O	17:CT:49:GLU:C	2.43	0.57
41:D2:85:LYS:CD	41:D2:87:HIS:H	2.16	0.57
25:DA:307:G:H21	25:DA:330:A:H62	1.53	0.57
31:DH:33:LEU:HD21	31:DH:136:ILE:O	2.04	0.57
32:DK:52:ARG:O	32:DK:52:ARG:HD2	2.05	0.57
25:DA:2275:C:O2	36:DP:85:LYS:CG	2.53	0.57
45:DV:52:SER:O	45:DV:53:ILE:HG13	2.04	0.57
1:AA:1346:A:C2'	7:AJ:10:ARG:HH22	2.17	0.57
23:AC:63:C:H2'	23:AC:64:G:C8	2.40	0.57
5:AH:149:GLU:O	5:AH:153:LYS:HG3	2.04	0.57
30:BG:109:VAL:HG13	50:B4:33:VAL:HG11	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:114:LEU:HD12	32:BK:129:THR:O	2.03	0.57
25:BA:943:U:OP2	35:BO:36:LYS:HG2	2.05	0.57
36:BP:27:VAL:H	36:BP:102:VAL:HG21	1.68	0.57
1:CA:1449:C:HO2'	1:CA:1450:U:P	2.25	0.57
1:CA:412:A:H1'	1:CA:413:G:OP2	2.04	0.57
13:CP:83:ASP:O	13:CP:84:ILE:CB	2.53	0.57
25:DA:2014:A:HO2'	51:D5:2:ALA:N	2.02	0.57
25:DA:2648:C:H2'	25:DA:2649:U:C6	2.40	0.57
25:DA:960:A:H5''	25:DA:961:C:OP1	2.04	0.57
28:DE:120:TRP:CE3	28:DE:155:LYS:HD3	2.40	0.57
29:DF:46:ARG:HG2	29:DF:46:ARG:NH1	2.18	0.57
31:DH:3:ARG:HG3	31:DH:4:ILE:N	2.19	0.57
35:DO:77:ARG:HB2	35:DO:78:PRO:HD2	1.85	0.57
7:AJ:26:PHE:CE2	7:AJ:30:ILE:HD11	2.40	0.57
13:AP:3:ARG:HD3	50:B4:34:GLU:HB2	1.87	0.57
25:BA:1060:U:C2	25:BA:1062:G:H5'	2.39	0.57
42:BS:28:SER:OG	42:BS:31:GLU:HG2	2.04	0.57
1:CA:957:U:H1'	1:CA:960:U:C5	2.40	0.57
2:CE:109:SER:HA	2:CE:112:VAL:HG23	1.85	0.57
5:CH:57:LYS:HG2	5:CH:61:TYR:CE2	2.38	0.57
42:DS:19:LEU:HB3	51:D5:25:LEU:HD12	1.86	0.57
25:DA:1043:C:N3	25:DA:1112:G:N2	2.51	0.57
25:DA:876:C:N4	25:DA:877:U:O4	2.38	0.57
26:DB:42:C:O2	30:DG:93:THR:N	2.21	0.57
25:DA:2744:G:N2	31:DH:143:GLN:OE1	2.38	0.57
35:DO:146:VAL:HG22	35:DO:147:LEU:H	1.68	0.57
38:DQ:54:LEU:HG	38:DQ:54:LEU:O	2.04	0.57
1:AA:1005:A:H3'	1:AA:1006:C:C5'	2.35	0.57
1:AA:1176:A:C3'	1:AA:1177:G:H5''	2.34	0.57
1:AA:1298:C:H4'	1:AA:1299:A:C4	2.40	0.57
1:AA:1452:C:O2'	1:AA:1453:G:P	2.62	0.57
9:AL:29:ASN:N	9:AL:63:ILE:O	2.27	0.57
11:AN:127:LYS:HZ2	11:AN:127:LYS:HA	1.70	0.57
18:AU:44:LEU:HD11	18:AU:70:ILE:HG21	1.86	0.57
41:B2:81:TYR:C	41:B2:82:ARG:HD2	2.25	0.57
25:BA:2167:U:HO2'	25:BA:2168:G:P	2.27	0.57
25:BA:2262:U:H2'	25:BA:2263:C:H5'	1.85	0.57
25:BA:443:A:H5''	25:BA:444:C:OP1	2.04	0.57
25:BA:899:A:H8	25:BA:899:A:OP2	1.88	0.57
26:BB:15:A:O2'	26:BB:109:G:C8	2.55	0.57
26:BB:7:G:O5'	38:BQ:29:PHE:CE1	2.58	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:51:ARG:NH1	36:BP:51:ARG:HG2	2.19	0.57
25:BA:751:A:H5'	42:BS:90:ARG:HA	1.85	0.57
1:CA:192:U:H2'	1:CA:193:C:H6	1.68	0.57
1:CA:197:A:H1'	1:CA:198:G:OP2	2.03	0.57
2:CE:132:LYS:HD2	2:CE:135:GLN:NE2	2.20	0.57
3:CF:70:VAL:HG12	3:CF:72:LYS:N	2.13	0.57
7:CJ:100:ALA:O	7:CJ:104:LEU:HB2	2.04	0.57
7:CJ:26:PHE:O	7:CJ:30:ILE:HG13	2.05	0.57
11:CN:18:ARG:NH1	11:CN:20:TYR:OH	2.37	0.57
25:DA:524:U:H2'	25:DA:525:U:C6	2.40	0.57
25:DA:654(U):A:H2'	25:DA:654(V):A:C8	2.40	0.57
26:DB:17:C:N4	26:DB:108:C:N3	2.53	0.57
27:DD:30:GLU:CD	27:DD:63:ARG:HE	2.08	0.57
28:DE:68:ALA:O	28:DE:70:ALA:N	2.33	0.57
31:DH:152:ARG:HD2	31:DH:153:LYS:H	1.70	0.57
36:DP:30:GLY:HA2	36:DP:107:ALA:HB2	1.87	0.57
1:AA:1000:A:H2'	1:AA:1001:G:C8	2.38	0.57
1:AA:1157:A:H1'	1:AA:1158:C:C4	2.40	0.57
1:AA:87:A:H2'	1:AA:88:C:C6	2.38	0.57
22:AB:46:G:HO2'	22:AB:47:U:P	2.27	0.57
2:AE:81:VAL:HG13	2:AE:82:ARG:N	2.20	0.57
37:B0:28:LEU:C	37:B0:30:THR:H	2.08	0.57
46:B3:70:GLN:NE2	46:B3:80:HIS:NE2	2.53	0.57
51:B5:4:HIS:CB	51:B5:5:PRO:HD2	1.99	0.57
25:BA:1006:C:C2	25:BA:1138:G:N2	2.73	0.57
25:BA:1796:U:H2'	25:BA:1797:C:C6	2.40	0.57
25:BA:18:C:H2'	25:BA:19:C:H6	1.69	0.57
25:BA:2115:G:C6	25:BA:2117:A:H8	2.23	0.57
25:BA:1786:A:C2	25:BA:2606:C:H1'	2.39	0.57
25:BA:675:A:H4'	29:BF:67:GLN:NE2	2.20	0.57
25:BA:905:U:H2'	25:BA:906:G:H5'	1.87	0.57
27:BD:155:LEU:HD23	27:BD:177:LEU:CD2	2.35	0.57
38:BQ:29:PHE:CD2	38:BQ:29:PHE:C	2.78	0.57
42:BS:65:LEU:O	42:BS:67:ASP:N	2.37	0.57
1:CA:1298:C:P	7:CJ:114:ARG:HH22	2.28	0.57
1:CA:7:G:H5'	1:CA:298:A:O4'	2.05	0.57
4:CG:30:LYS:HB2	4:CG:35:ARG:HH11	1.69	0.57
10:CM:6:ILE:CD1	10:CM:72:VAL:HB	2.34	0.57
11:CN:21:ILE:HG12	11:CN:30:VAL:HG12	1.86	0.57
14:CQ:13:THR:N	14:CQ:14:PRO:HD3	2.20	0.57
21:CX:9:ARG:HG3	21:CX:10:ARG:H	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:D3:12:ASN:HA	46:D3:14:ARG:NH2	2.15	0.57
25:DA:1048:A:H5'	25:DA:1049:C:OP2	2.04	0.57
25:DA:330:A:C2	25:DA:1210:A:O2'	2.40	0.57
25:DA:322:A:OP2	29:DF:169:ASN:HB2	2.05	0.57
28:DE:60:ASN:O	28:DE:62:PRO:HD2	2.04	0.57
29:DF:132:VAL:C	29:DF:134:GLY:H	2.07	0.57
29:DF:63:LYS:CE	29:DF:67:GLN:HB2	2.34	0.57
30:DG:55:LYS:HD2	30:DG:58:GLN:HE22	1.69	0.57
34:DN:4:PRO:O	34:DN:5:GLN:CB	2.52	0.57
36:DP:79:LEU:CD1	36:DP:80:GLU:HB2	2.35	0.57
2:AE:214:ILE:O	2:AE:218:ALA:HB2	2.04	0.57
5:AH:99:GLY:O	5:AH:117:ASP:HA	2.05	0.57
11:AN:34:ASP:HB2	11:AN:35:PRO:HD2	1.87	0.57
12:AO:57:LEU:HD21	12:AO:63:VAL:HG12	1.85	0.57
20:AW:75:ASN:N	20:AW:75:ASN:OD1	2.36	0.57
25:BA:2347:C:H4'	52:B6:39:TYR:CE2	2.34	0.57
25:BA:2340:G:O2'	25:BA:2341:G:H5'	2.05	0.57
25:BA:882:G:C2	25:BA:894:C:N3	2.72	0.57
30:BG:104:GLU:OE1	50:B4:23:GLU:HG3	2.05	0.57
35:BO:19:VAL:HG22	35:BO:20:GLY:H	1.70	0.57
44:BU:52:SER:HB2	44:BU:53:PRO:CD	2.26	0.57
1:CA:1142:G:H2'	1:CA:1143:G:O4'	2.05	0.57
1:CA:1143:G:H2'	1:CA:1144:G:C8	2.40	0.57
1:CA:1206:G:O2'	3:CF:193:TYR:HA	2.05	0.57
1:CA:781:A:C3'	1:CA:782:A:H5'	2.35	0.57
4:CG:19:LEU:HD12	4:CG:19:LEU:H	1.69	0.57
1:CA:1128:C:H4'	9:CL:16:ARG:NH1	2.19	0.57
9:CL:26:VAL:HG13	9:CL:61:ALA:HB3	1.86	0.57
25:DA:2286:A:OP2	52:D6:28:ARG:NH1	2.37	0.57
54:D8:30:ARG:HH11	54:D8:30:ARG:HA	1.67	0.57
25:DA:2135:A:C5	25:DA:2156:G:N2	2.72	0.57
25:DA:2638:G:O2'	25:DA:2639:A:H8	1.88	0.57
25:DA:2790:A:H4'	25:DA:2791:C:OP2	2.02	0.57
25:DA:826:U:H2'	25:DA:828:U:O4'	2.05	0.57
27:DD:136:ILE:CG2	27:DD:140:THR:HG21	2.19	0.57
29:DF:20:LEU:CD1	29:DF:21:ALA:H	2.12	0.57
36:DP:4:PRO:HD3	36:DP:70:PRO:O	2.05	0.57
38:DQ:38:GLN:O	38:DQ:40:ILE:HG13	2.04	0.57
48:DW:21:LEU:O	48:DW:25:VAL:HG22	2.05	0.57
1:AA:1348:U:H3	1:AA:1374:A:H2	1.51	0.56
2:AE:212:GLN:O	2:AE:216:SER:HB3	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AM:24:VAL:HG21	10:AM:37:PRO:HD3	1.86	0.56
1:AA:1318:A:H1'	19:AV:37:ARG:HH21	1.70	0.56
41:B2:64:HIS:ND1	41:B2:92:THR:HG22	2.20	0.56
25:BA:1581:G:H2'	25:BA:1582:C:O4'	2.05	0.56
25:BA:2163:C:H2'	25:BA:2164:C:H5'	1.85	0.56
25:BA:319:C:OP2	29:BF:137:LYS:NZ	2.29	0.56
25:BA:528:A:N1	25:BA:2043:C:O5'	2.38	0.56
25:BA:654(M):C:H3'	25:BA:654(N):G:H8	1.70	0.56
27:BD:65:ILE:HD11	27:BD:67:PHE:CD2	2.40	0.56
29:BF:45:ARG:CG	29:BF:45:ARG:HH11	2.01	0.56
35:BO:26:GLY:C	35:BO:28:GLY:H	2.08	0.56
25:BA:2318:G:H22	38:BQ:2:ALA:CA	2.17	0.56
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.70	0.56
1:CA:673:G:H2'	1:CA:674:G:C8	2.39	0.56
22:CD:22:A:C5	22:CD:57:C:N4	2.72	0.56
2:CE:189:ASP:O	2:CE:191:ASP:N	2.38	0.56
8:CK:92:ARG:NH1	8:CK:92:ARG:HG2	2.13	0.56
1:CA:1118:C:P	9:CL:104:ARG:HH11	2.27	0.56
12:CO:20:LYS:HE2	12:CO:20:LYS:N	2.19	0.56
6:CI:99:ALA:HB3	18:CU:29:PHE:HE2	1.70	0.56
25:DA:152:G:H1	25:DA:174:C:H42	1.52	0.56
25:DA:1568:G:H21	27:DD:58:HIS:CE1	2.23	0.56
25:DA:1819:A:H4'	25:DA:1820:U:O5'	2.04	0.56
25:DA:205:G:C1'	25:DA:206:U:OP2	2.52	0.56
25:DA:2133:G:O2'	25:DA:2158:A:N6	2.38	0.56
25:DA:2148:G:H2'	25:DA:2149:G:H8	1.69	0.56
25:DA:2335:A:C8	25:DA:2337:G:C5	2.93	0.56
25:DA:2447:G:H1'	25:DA:2448:A:OP2	2.04	0.56
25:DA:2720:U:C4	25:DA:2721:A:C5	2.93	0.56
25:DA:2807:G:H22	25:DA:2893:G:H1	1.50	0.56
25:DA:848:G:H1'	25:DA:933:A:H8	1.70	0.56
25:DA:1026:U:H2'	26:DB:88:C:H42	1.70	0.56
27:DD:271:ILE:O	27:DD:272:ALA:HB2	2.05	0.56
33:DM:134:ARG:CG	33:DM:134:ARG:O	2.52	0.56
35:DO:69:GLY:CA	35:DO:70:GLN:OE1	2.53	0.56
38:DQ:27:SER:HA	38:DQ:88:ASP:CB	2.35	0.56
45:DV:52:SER:C	45:DV:54:HIS:H	2.07	0.56
1:AA:31:G:H1'	1:AA:32:A:OP1	2.05	0.56
1:AA:450:G:N7	1:AA:481:G:C6	2.73	0.56
22:AD:18:G:C4'	22:AD:19:C:O5'	2.53	0.56
2:AE:219:VAL:HA	2:AE:222:ILE:HD12	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AE:59:GLU:HB2	2:AE:221:LEU:HD11	1.85	0.56
12:AO:43:LYS:HG2	12:AO:44:LYS:H	1.70	0.56
25:BA:1105:U:H2'	25:BA:1106:G:C8	2.39	0.56
25:BA:1084:A:C8	25:BA:1105:U:O2'	2.58	0.56
25:BA:1434:A:H61	25:BA:1558:A:H62	1.52	0.56
25:BA:909:A:H2'	25:BA:912:C:H5	1.69	0.56
26:BB:70:C:H2'	26:BB:71:C:H6	1.71	0.56
29:BF:143:ALA:HB1	29:BF:148:LEU:HB2	1.87	0.56
38:BQ:106:ARG:HH22	38:BQ:107:GLU:HB2	1.70	0.56
28:BE:27:LEU:HD13	39:BR:1:MET:CE	2.35	0.56
44:BU:81:LYS:HZ3	44:BU:96:ILE:HD12	1.70	0.56
1:CA:1008:C:N3	1:CA:1021:G:O6	2.38	0.56
1:CA:1170:A:O5'	1:CA:1170:A:H8	1.88	0.56
1:CA:1212:U:O2'	1:CA:1213:A:H8	1.87	0.56
1:CA:197:A:O2'	1:CA:198:G:OP2	2.16	0.56
1:CA:259:G:H1	1:CA:267:C:H42	1.53	0.56
1:CA:853:G:H2'	1:CA:854:G:H8	1.70	0.56
5:CH:78:HIS:CE1	8:CK:104:ARG:HE	2.23	0.56
8:CK:64:LYS:HG2	8:CK:79:VAL:HG21	1.88	0.56
14:CQ:24:CYS:O	14:CQ:26:ARG:N	2.38	0.56
14:CQ:4:LYS:O	14:CQ:7:ILE:HG23	2.05	0.56
15:CR:7:GLU:O	15:CR:11:VAL:HG23	2.05	0.56
19:CV:39:THR:HG22	19:CV:40:ILE:N	2.19	0.56
25:DA:1815:A:OP2	27:DD:54:ARG:NH2	2.31	0.56
25:DA:559:G:H22	40:D1:49:HIS:CD2	2.23	0.56
35:DO:19:VAL:HG22	35:DO:20:GLY:H	1.69	0.56
47:DZ:53:VAL:HG22	47:DZ:74:VAL:HG22	1.87	0.56
1:AA:1157:A:H8	1:AA:1158:C:N4	2.03	0.56
1:AA:690:G:H2'	1:AA:691:G:O4'	2.04	0.56
5:AH:69:VAL:O	5:AH:71:LEU:N	2.36	0.56
11:AN:59:TYR:CZ	11:AN:63:LEU:HD11	2.40	0.56
37:B0:18:LEU:HD11	37:B0:22:ARG:CZ	2.35	0.56
25:BA:548:A:O5'	25:BA:548:A:H8	1.89	0.56
44:BU:56:PRO:O	44:BU:57:GLN:HG3	2.05	0.56
1:CA:1301:U:O2	1:CA:1301:U:H2'	2.04	0.56
1:CA:266:G:N1	1:CA:270:A:N6	2.45	0.56
1:CA:309:G:H1'	1:CA:608:A:C2	2.40	0.56
1:CA:973:G:H3'	1:CA:974:A:H5'	1.88	0.56
1:CA:1256:A:OP2	3:CF:26:LYS:NZ	2.38	0.56
7:CJ:32:ARG:C	7:CJ:34:GLY:H	2.08	0.56
14:CQ:12:ARG:CZ	14:CQ:12:ARG:HB2	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:D2:34:GLU:OE1	41:D2:56:SER:HB2	2.06	0.56
41:D2:85:LYS:HD2	41:D2:86:GLY:N	2.18	0.56
25:DA:1085:A:C4'	25:DA:1086:A:OP1	2.52	0.56
25:DA:1170:G:H2'	25:DA:1170:G:N3	2.19	0.56
25:DA:1899:G:H22	25:DA:1902:C:H41	0.70	0.56
25:DA:1967:C:C2'	25:DA:1968:G:H5'	2.35	0.56
25:DA:2751:G:C6	31:DH:2:SER:HB3	2.40	0.56
25:DA:2873:A:H2'	25:DA:2873:A:N3	2.19	0.56
25:DA:782:A:H5'	25:DA:783:A:C2	2.39	0.56
25:DA:779:U:OP1	27:DD:49:ILE:HG22	2.06	0.56
33:DM:65:LYS:C	33:DM:67:LEU:H	2.09	0.56
36:DP:19:GLY:C	36:DP:98:LYS:HD3	2.25	0.56
47:DZ:53:VAL:HG11	47:DZ:90:ILE:HD11	1.87	0.56
1:AA:1175:G:C6	1:AA:1176:A:N6	2.72	0.56
1:AA:673:G:H2'	1:AA:674:G:C8	2.39	0.56
1:AA:67:C:H2'	1:AA:68:G:H8	1.71	0.56
5:AH:153:LYS:H	8:AK:64:LYS:NZ	2.03	0.56
6:AI:75:LEU:HD22	6:AI:79:LEU:HG	1.87	0.56
1:AA:598:U:H4'	8:AK:94:TYR:CD2	2.40	0.56
11:AN:63:LEU:HD12	11:AN:63:LEU:H	1.70	0.56
15:AR:8:LYS:O	15:AR:12:ILE:HG13	2.05	0.56
40:B1:58:ARG:HA	40:B1:61:TRP:CE3	2.41	0.56
51:B5:36:CYS:SG	51:B5:48:GLU:O	2.64	0.56
25:BA:1178:C:C4'	25:BA:1179:C:OP1	2.41	0.56
25:BA:1509:C:H2'	25:BA:1511:A:C8	2.40	0.56
25:BA:1416:G:H1	25:BA:1582:C:H42	1.52	0.56
25:BA:1869:G:H5'	25:BA:1869:G:H8	1.68	0.56
26:BB:66:A:H61	26:BB:107:U:H2'	1.69	0.56
27:BD:28:GLU:O	27:BD:30:GLU:HG2	2.04	0.56
36:BP:79:LEU:N	36:BP:79:LEU:HD12	2.20	0.56
1:CA:1442:G:O2'	1:CA:1443:G:OP1	2.20	0.56
22:CB:38:MIA:H14	22:CB:39:A:C2	2.40	0.56
22:CD:38:MIA:H111	22:CD:39:A:H1'	1.87	0.56
4:CG:105:VAL:HG21	4:CG:126:ILE:HG13	1.87	0.56
7:CJ:113:GLU:HB2	7:CJ:119:ARG:CG	2.35	0.56
7:CJ:69:VAL:HG12	7:CJ:69:VAL:O	2.05	0.56
25:DA:1180:C:H2'	25:DA:1181:C:C6	2.41	0.56
25:DA:1942:C:OP2	25:DA:1943:U:O2'	2.11	0.56
25:DA:676:A:N1	25:DA:802:A:N1	2.53	0.56
28:DE:24:THR:HG21	28:DE:188:VAL:HG12	1.86	0.56
29:DF:20:LEU:HD13	29:DF:21:ALA:N	2.12	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DM:17:ASP:O	33:DM:18:ALA:HB3	2.05	0.56
1:AA:1008:C:H42	1:AA:1021:G:H1	0.69	0.56
1:AA:1362(A):C:H5'	1:AA:1363:A:O5'	2.06	0.56
1:AA:437:U:O3'	4:AG:125:HIS:NE2	2.39	0.56
15:AR:17:ARG:HG3	15:AR:17:ARG:NH1	2.09	0.56
25:BA:1079:C:H5	25:BA:1088:A:OP1	1.87	0.56
25:BA:1110:G:H2'	25:BA:1111:A:C8	2.40	0.56
25:BA:1516:U:H2'	25:BA:1517:G:H8	1.70	0.56
25:BA:1641:A:H2'	25:BA:1642:G:O4'	2.04	0.56
25:BA:2101:G:H1	25:BA:2188:C:H42	1.54	0.56
27:BD:102:LYS:C	27:BD:103:ARG:HG2	2.24	0.56
28:BE:119:ARG:HG2	28:BE:120:TRP:NE1	2.20	0.56
25:BA:322:A:H3'	29:BF:169:ASN:ND2	2.20	0.56
45:BV:110:GLY:HA3	45:BV:145:GLU:HG2	1.86	0.56
45:BV:30:ASN:C	45:BV:30:ASN:HD22	2.09	0.56
45:BV:60:GLU:C	45:BV:61:LEU:HD13	2.25	0.56
1:CA:322:C:H5	1:CA:328:C:H5	1.54	0.56
23:CC:17:C:H5'	23:CC:62:C:OP1	2.05	0.56
4:CG:146:ILE:HD12	4:CG:146:ILE:N	2.19	0.56
7:CJ:26:PHE:CE2	7:CJ:30:ILE:HD11	2.40	0.56
1:CA:1375:A:H4'	7:CJ:29:LYS:HE3	1.88	0.56
9:CL:3:GLN:HG2	9:CL:20:ARG:HD2	1.86	0.56
13:CP:97:PRO:HA	13:CP:110:ARG:HD3	1.87	0.56
19:CV:12:ASP:CB	19:CV:38:SER:HB3	2.36	0.56
25:DA:2015:A:H1'	51:D5:2:ALA:HA	1.88	0.56
54:D8:32:LEU:HD22	54:D8:33:ASN:N	2.21	0.56
25:DA:1593:G:H2'	25:DA:1594:G:C8	2.40	0.56
25:DA:1810:A:H2'	25:DA:1811:G:O4'	2.05	0.56
25:DA:2287:A:H2	25:DA:2346:A:N1	2.01	0.56
25:DA:619:G:H5''	25:DA:620:G:OP2	2.05	0.56
25:DA:886:C:H1'	25:DA:890:A:H2	1.71	0.56
25:DA:1570:A:O4'	27:DD:38:LYS:HE2	2.04	0.56
29:DF:7:TYR:CD2	29:DF:18:ARG:HB3	2.40	0.56
32:DK:38:LEU:HB2	32:DK:40:THR:HG23	1.86	0.56
45:DV:8:TYR:HB2	45:DV:38:TYR:CE2	2.41	0.56
1:AA:433:C:H2'	1:AA:434:U:C6	2.39	0.56
1:AA:629:G:N1	1:AA:630:G:O6	2.39	0.56
2:AE:187:LEU:HD23	2:AE:201:ILE:HG22	1.88	0.56
3:AF:150:LYS:HE2	3:AF:152:ILE:HD11	1.86	0.56
8:AK:10:LEU:HD13	8:AK:83:ILE:HD11	1.86	0.56
9:AL:40:LEU:HD11	9:AL:70:LYS:HG2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AM:90:LEU:N	10:AM:91:PRO:HD3	2.20	0.56
13:AP:53:VAL:HG12	13:AP:57:ARG:HH12	1.71	0.56
16:AS:54:GLU:OE1	16:AS:55:ARG:HD2	2.05	0.56
40:B1:75:ASN:HB2	40:B1:78:THR:OG1	2.06	0.56
41:B2:49:THR:HB	41:B2:50:PRO:HD2	1.88	0.56
25:BA:1171:G:C6	25:BA:1174:A:N6	2.74	0.56
25:BA:2257:U:O2'	25:BA:2258:C:H5'	2.05	0.56
25:BA:2895:U:H2'	25:BA:2896:C:O4'	2.06	0.56
31:BH:43:VAL:HB	31:BH:52:VAL:HG22	1.86	0.56
33:BM:43:THR:HB	33:BM:46:VAL:HG12	1.86	0.56
33:BM:96:GLU:O	33:BM:98:VAL:HG12	2.04	0.56
26:BB:116:G:H4'	38:BQ:54:LEU:HD12	1.87	0.56
38:BQ:83:LYS:HE3	38:BQ:109:GLY:CA	2.33	0.56
42:BS:73:ALA:HB3	42:BS:106:ILE:HD12	1.85	0.56
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.41	0.56
1:CA:1417:G:C6	1:CA:1482:G:C6	2.94	0.56
1:CA:570:G:H1'	1:CA:820:U:C4	2.41	0.56
1:CA:618:C:N3	1:CA:622:A:N6	2.52	0.56
2:CE:69:LEU:HD21	2:CE:93:VAL:HG23	1.86	0.56
5:CH:101:ILE:HD13	5:CH:101:ILE:H	1.71	0.56
25:DA:1141:U:H4'	25:DA:1142(A):A:O4'	2.05	0.56
25:DA:2287:A:C4	25:DA:2289:G:C8	2.93	0.56
25:DA:881:G:O6	25:DA:895:U:O2	2.22	0.56
28:DE:116:VAL:HG13	28:DE:122:PHE:CD2	2.40	0.56
30:DG:111:LEU:HB2	30:DG:112:PRO:HD3	1.87	0.56
33:DM:133:GLN:O	33:DM:134:ARG:HB3	2.04	0.56
33:DM:136:GLU:C	33:DM:137:LYS:HZ3	2.09	0.56
36:DP:57:HIS:CD2	36:DP:117:ALA:HB2	2.41	0.56
44:DU:89:PHE:CE1	44:DU:90:LEU:HG	2.41	0.56
1:AA:942:G:C2	1:AA:1342:C:C2	2.94	0.56
1:AA:273:A:N6	1:AA:274:A:C6	2.74	0.56
1:AA:328:C:O2	1:AA:328:C:H2'	2.04	0.56
1:AA:509:A:O2'	1:AA:510:A:OP1	2.20	0.56
25:BA:2015:A:O4'	51:B5:2:ALA:HB2	2.03	0.56
52:B6:28:ARG:HB3	52:B6:30:THR:H	1.71	0.56
25:BA:297:C:H5''	44:BU:85:VAL:HG21	1.86	0.56
25:BA:573:G:O2'	25:BA:574:C:H3'	2.06	0.56
25:BA:2032:G:H21	28:BE:146:THR:CG2	2.18	0.56
28:BE:203:LYS:O	28:BE:203:LYS:HD2	2.06	0.56
31:BH:86:GLU:O	31:BH:87:LEU:HB2	2.04	0.56
38:BQ:83:LYS:O	38:BQ:109:GLY:HA3	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BS:57:ASN:O	42:BS:61:ASN:HB2	2.05	0.56
1:CA:1053:G:C2'	1:CA:1054:C:OP2	2.52	0.56
1:CA:1267:C:O2	1:CA:1267:C:C2'	2.54	0.56
25:DA:2365:G:O6	54:D8:39:LYS:HE3	2.04	0.56
25:DA:2065:C:H2'	25:DA:2066:C:C6	2.41	0.56
25:DA:363(B):G:O2'	25:DA:363(C):G:H5'	2.05	0.56
25:DA:633:A:H8	25:DA:633:A:O5'	1.87	0.56
25:DA:671:C:OP1	35:DO:42:SER:O	2.24	0.56
26:DB:11:C:OP2	26:DB:12:C:N4	2.36	0.56
27:DD:164:GLN:OE1	27:DD:176:ARG:NH2	2.39	0.56
29:DF:20:LEU:O	29:DF:21:ALA:O	2.23	0.56
35:DO:146:VAL:O	35:DO:147:LEU:O	2.23	0.56
25:DA:2875:C:H4'	39:DR:5:ALA:HB2	1.87	0.56
48:DW:40:SER:O	48:DW:42:GLY:N	2.36	0.56
2:AE:156:LYS:HB2	2:AE:156:LYS:HZ3	1.70	0.56
2:AE:189:ASP:OD2	2:AE:190:THR:N	2.39	0.56
11:AN:86:GLY:H	11:AN:112:THR:HG1	1.49	0.56
20:AW:67:ALA:HA	20:AW:72:LEU:O	2.06	0.56
54:B8:36:LYS:O	54:B8:37:SER:C	2.44	0.56
25:BA:1430:C:H2'	25:BA:1431:U:C6	2.41	0.56
25:BA:2797:U:H5''	25:BA:2798:C:OP2	2.06	0.56
27:BD:145:VAL:HG12	27:BD:146:GLU:O	2.06	0.56
30:BG:127:GLY:HA2	30:BG:166:ASP:OD1	2.04	0.56
45:BV:96:VAL:HG22	45:BV:97:GLU:N	2.20	0.56
48:BW:47:ASN:O	48:BW:49:LYS:HG3	2.05	0.56
1:CA:1226:C:H4'	1:CA:1227:A:OP1	2.05	0.56
1:CA:1442:G:N7	1:CA:1446:A:N1	2.53	0.56
1:CA:591:U:OP2	8:CK:30:ARG:NH1	2.38	0.56
2:CE:97:TRP:HZ2	2:CE:102:LEU:HD13	1.71	0.56
12:CO:34:CYS:SG	12:CO:78:SER:HB2	2.46	0.56
13:CP:57:ARG:NH1	50:D4:34:GLU:O	2.39	0.56
15:CR:82:ILE:HD13	15:CR:82:ILE:O	2.06	0.56
1:CA:135:C:O2	16:CS:1:MET:HB3	2.06	0.56
25:DA:1021:A:H61	25:DA:1142(A):A:N6	1.94	0.56
25:DA:265:A:H1'	25:DA:266:G:O4'	2.06	0.56
28:DE:26:ILE:O	28:DE:27:LEU:HB3	2.06	0.56
28:DE:60:ASN:HB2	28:DE:63:LEU:HB3	1.88	0.56
29:DF:4:VAL:HG22	29:DF:19:GLU:OE1	2.06	0.56
31:DH:10:PRO:HD2	31:DH:50:VAL:HG13	1.88	0.56
32:DK:7:GLU:O	32:DK:9:LEU:HD23	2.06	0.56
25:DA:2561:A:H2	34:DN:23:ARG:NH1	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DU:17:SER:OG	44:DU:18:GLY:N	2.38	0.56
1:AA:1007:C:H3'	1:AA:1008:C:H5''	1.88	0.56
1:AA:1226:C:H4'	19:AV:80:TYR:OH	2.06	0.56
1:AA:1366:C:O2'	10:AM:60:ARG:NH2	2.38	0.56
23:AC:48:U:H1'	23:AC:49:C:O5'	2.06	0.56
22:AD:16:C:H41	22:AD:68:A:H3'	1.70	0.56
2:AE:17:PHE:HB3	2:AE:44:LEU:HD21	1.87	0.56
2:AE:28:PHE:CD1	2:AE:190:THR:HA	2.40	0.56
4:AG:173:TRP:CD1	4:AG:174:LEU:HG	2.40	0.56
6:AI:39:LYS:O	6:AI:40:VAL:HB	2.06	0.56
8:AK:88:LYS:HB3	8:AK:89:PRO:HD2	1.88	0.56
18:AU:58:LEU:HD23	18:AU:62:GLU:HB3	1.88	0.56
25:BA:1230:C:H2'	25:BA:1231:G:H8	1.69	0.56
27:BD:64:ILE:O	27:BD:64:ILE:HG12	2.06	0.56
28:BE:63:LEU:C	28:BE:63:LEU:HD23	2.27	0.56
28:BE:9:VAL:HB	28:BE:25:VAL:HG22	1.87	0.56
30:BG:40:ASN:HD22	30:BG:91:ARG:HB2	1.70	0.56
33:BM:35:ARG:O	33:BM:42:TRP:HZ3	1.88	0.56
44:BU:79:CYS:HG	44:BU:80:GLY:H	1.45	0.56
1:CA:864:A:H5'	5:CH:86:ALA:HB2	1.86	0.56
1:CA:984:C:H2'	1:CA:985:C:C6	2.40	0.56
12:CO:38:ARG:HD2	12:CO:39:THR:H	1.70	0.56
1:CA:1226:C:N4	13:CP:104:ARG:HD2	2.20	0.56
40:D1:95:LEU:C	40:D1:97:ASP:H	2.08	0.56
50:D4:21:VAL:HG22	50:D4:22:ILE:H	1.71	0.56
25:DA:141:A:H8	25:DA:1595:G:H21	1.53	0.56
25:DA:2472:G:C4	25:DA:2475:C:N4	2.74	0.56
25:DA:2712:U:O2'	25:DA:2712(A):A:P	2.64	0.56
25:DA:774:A:H2	25:DA:787:U:O2'	1.84	0.56
28:DE:30:PRO:O	28:DE:32:PRO:HD3	2.05	0.56
29:DF:143:ALA:O	29:DF:148:LEU:HB2	2.05	0.56
31:DH:137:ASP:HB3	31:DH:141:VAL:HG23	1.88	0.56
48:DW:17:SER:CB	48:DW:18:PRO:HA	2.22	0.56
14:AQ:24:CYS:C	14:AQ:26:ARG:H	2.09	0.56
46:B3:15:ASP:OD1	46:B3:16:SER:N	2.35	0.56
50:B4:57:GLU:O	50:B4:60:GLN:HB2	2.05	0.56
25:BA:1939:U:OP1	25:BA:2604:U:O2'	2.23	0.56
28:BE:152:LYS:HG2	33:BM:78:TYR:CE1	2.41	0.56
25:BA:2255:G:H22	36:BP:85:LYS:HE2	1.67	0.56
1:CA:1453:G:HO2'	1:CA:1454:G:P	2.29	0.56
3:CF:21:ARG:HH11	3:CF:21:ARG:HB3	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CI:86:ARG:O	6:CI:87:ARG:HG2	2.06	0.56
9:CL:18:PHE:HD1	9:CL:62:TYR:HD2	1.54	0.56
25:DA:1024:G:C3'	25:DA:1025:G:H5''	2.35	0.56
25:DA:1151:G:H5''	40:D1:81:HIS:CE1	2.41	0.56
25:DA:1190:G:H2'	25:DA:1191:G:H8	1.70	0.56
25:DA:1843:C:H5'	27:DD:253:GLN:HE21	1.71	0.56
25:DA:2817:G:OP1	37:D0:99:LYS:NZ	2.38	0.56
31:DH:127:GLU:HG2	31:DH:129:THR:H	1.70	0.56
35:DO:112:LEU:H	35:DO:128:HIS:CD2	2.23	0.56
35:DO:112:LEU:HD22	35:DO:113:LYS:N	2.21	0.56
1:AA:255:G:P	17:AT:69:LYS:HZ3	2.28	0.56
1:AA:382:A:H2'	1:AA:383:A:H8	1.71	0.56
1:AA:870:U:H4'	1:AA:871:U:H3'	1.88	0.56
2:AE:53:ARG:HH12	2:AE:199:TYR:HA	1.70	0.56
4:AG:173:TRP:CZ3	4:AG:193:ASP:HB3	2.41	0.56
4:AG:28:SER:HB2	4:AG:29:PRO:CD	2.35	0.56
1:AA:1291:G:H4'	9:AL:38:GLN:O	2.05	0.56
13:AP:15:VAL:HG23	13:AP:43:THR:O	2.06	0.56
15:AR:64:ARG:NH1	15:AR:68:ARG:HH21	2.04	0.56
13:AP:57:ARG:HE	50:B4:35:VAL:HG23	1.70	0.56
25:BA:1418:G:H8	25:BA:1418:G:O5'	1.89	0.56
25:BA:1420:U:HO2'	25:BA:1421:G:P	2.28	0.56
25:BA:18:C:H2'	25:BA:19:C:C6	2.41	0.56
25:BA:1266:G:O2'	25:BA:2012:G:O6	2.14	0.56
25:BA:2210:G:H3'	25:BA:2211:G:H8	1.65	0.56
25:BA:2307:G:C5	25:BA:2311:A:C2	2.94	0.56
25:BA:2304:G:H22	25:BA:2312:U:H3	1.53	0.56
25:BA:2579:C:H2'	25:BA:2580:U:O4'	2.05	0.56
25:BA:2086:U:OP2	27:BD:263:ARG:NH1	2.39	0.56
27:BD:72:LYS:HB3	27:BD:75:ILE:HD12	1.88	0.56
29:BF:127:GLU:C	29:BF:129:PHE:H	2.09	0.56
29:BF:81:PRO:HB3	29:BF:89:VAL:HG23	1.87	0.56
35:BO:11:GLY:C	35:BO:13:ASN:N	2.60	0.56
49:BX:6:VAL:HB	49:BX:54:VAL:HG21	1.87	0.56
23:CC:59:A:H4'	23:CC:60:A:OP1	2.06	0.56
2:CE:163:PHE:HD2	2:CE:185:ILE:HG13	1.71	0.56
12:CO:38:ARG:HH11	12:CO:38:ARG:HB3	1.71	0.56
17:CT:59:ILE:HG22	17:CT:71:PHE:CD1	2.41	0.56
25:DA:1653:G:C5	37:D0:9:LYS:HD2	2.41	0.56
25:DA:1542:G:H3'	25:DA:1543:A:H5''	1.88	0.56
25:DA:2564:A:OP1	25:DA:2648:C:H4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:905:U:H2'	25:DA:906:G:H5'	1.87	0.56
27:DD:70:TRP:CH2	27:DD:150:LYS:HA	2.40	0.56
25:DA:2050:C:H1'	28:DE:156:MET:CE	2.35	0.56
1:AA:1004:A:O5'	1:AA:1025:U:C4	2.59	0.55
1:AA:1492:A:OP1	12:AO:44:LYS:HA	2.07	0.55
22:AB:9:U:H4'	22:AB:10:C:OP2	2.06	0.55
4:AG:25:ARG:C	4:AG:27:TYR:N	2.59	0.55
1:AA:976:G:P	14:AQ:32:SER:H	2.28	0.55
25:BA:1204:A:C2	25:BA:1241:A:N1	2.74	0.55
25:BA:1689:A:N7	25:BA:1698:A:N1	2.54	0.55
25:BA:1790:C:H5''	25:BA:1791:A:OP1	2.06	0.55
25:BA:2688:U:C5	25:BA:2720:U:OP2	2.53	0.55
27:BD:35:LYS:HE3	27:BD:63:ARG:C	2.25	0.55
28:BE:61:ARG:O	28:BE:63:LEU:HB3	2.05	0.55
31:BH:151:ILE:HG22	31:BH:151:ILE:O	2.06	0.55
32:BK:40:THR:O	32:BK:44:LEU:HB2	2.06	0.55
36:BP:3:MET:HB2	36:BP:93:TYR:CD1	2.40	0.55
42:BS:84:ARG:HB3	42:BS:96:ILE:HD11	1.88	0.55
45:BV:30:ASN:ND2	45:BV:32:HIS:H	2.02	0.55
47:BZ:40:ARG:NH2	47:BZ:42:GLN:HG2	2.21	0.55
1:CA:1194:U:H2'	1:CA:1195:C:C6	2.41	0.55
1:CA:1054:C:OP1	1:CA:1197:G:P	2.63	0.55
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.22	0.55
1:CA:197:A:H1'	1:CA:198:G:O4'	2.07	0.55
4:CG:26:CYS:HA	4:CG:31:CYS:CB	2.26	0.55
8:CK:103:VAL:CG2	8:CK:110:ALA:HB2	2.36	0.55
8:CK:103:VAL:HG12	8:CK:108:GLY:HA3	1.89	0.55
9:CL:114:TYR:HD1	10:CM:60:ARG:HG3	1.71	0.55
13:CP:91:ARG:CB	13:CP:98:VAL:HG12	2.33	0.55
25:DA:1049:C:H2'	25:DA:1050:A:H5'	1.87	0.55
25:DA:1224:G:N2	25:DA:1227:A:OP2	2.40	0.55
25:DA:1443:G:H8	25:DA:1443:G:H5'	1.71	0.55
25:DA:2298:A:H2'	25:DA:2299:G:O4'	2.05	0.55
25:DA:547:A:H3'	25:DA:548:A:H8	1.69	0.55
27:DD:35:LYS:CG	27:DD:64:ILE:N	2.61	0.55
25:DA:1049:C:N4	31:DH:2:SER:HB2	2.22	0.55
32:DK:78:THR:HB	32:DK:104:GLN:NE2	2.21	0.55
33:DM:19:GLU:HB2	33:DM:59:LYS:HB3	1.88	0.55
25:DA:2675:A:H4'	34:DN:29:ASN:ND2	2.21	0.55
39:DR:136:GLN:O	39:DR:137:LYS:HD2	2.05	0.55
1:AA:1028(B):C:N4	1:AA:1032(A):G:C6	2.69	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1363:A:H1'	1:AA:1365:G:N7	2.20	0.55
1:AA:81:G:C2	1:AA:88:C:N3	2.74	0.55
7:AJ:69:VAL:O	7:AJ:69:VAL:HG12	2.06	0.55
12:AO:68:PRO:O	12:AO:99:ARG:NH1	2.39	0.55
17:AT:6:LEU:HD22	17:AT:23:VAL:HG11	1.88	0.55
21:AX:10:ARG:HG3	21:AX:10:ARG:HH11	1.72	0.55
25:BA:2192:G:O2'	25:BA:2193:G:H5'	2.06	0.55
25:BA:2700:C:O2'	25:BA:2701:C:H5'	2.06	0.55
25:BA:635:C:O2'	25:BA:639:U:OP1	2.23	0.55
25:BA:67:U:O4	25:BA:74:A:N1	2.39	0.55
25:BA:900:A:H3'	25:BA:901:A:C8	2.41	0.55
30:BG:83:ARG:H	30:BG:86:MET:HE1	1.68	0.55
32:BK:122:GLU:HB3	32:BK:126:TYR:OH	2.05	0.55
48:BW:38:GLN:O	48:BW:41:ILE:HG22	2.06	0.55
1:CA:1144:G:C2'	1:CA:1145:C:H5''	2.36	0.55
22:CB:6:G:O2'	22:CB:7:G:P	2.63	0.55
8:CK:109:ILE:HG23	8:CK:137:VAL:HB	1.87	0.55
11:CN:34:ASP:HB2	11:CN:35:PRO:CD	2.36	0.55
40:D1:52:ARG:HB3	40:D1:52:ARG:NH1	2.21	0.55
52:D6:18:ARG:NH1	52:D6:43:CYS:HB2	2.20	0.55
54:D8:52:LYS:O	54:D8:54:GLU:N	2.36	0.55
25:DA:1268:A:H2'	25:DA:1269:A:O4'	2.06	0.55
25:DA:2328:A:H2'	25:DA:2329:G:H8	1.69	0.55
30:DG:60:LEU:HD22	30:DG:68:PRO:HG3	1.88	0.55
35:DO:140:ALA:O	35:DO:141:ALA:HB2	2.07	0.55
25:DA:805:G:OP2	35:DO:41:ARG:HG2	2.06	0.55
26:DB:51:G:OP2	38:DQ:59:LYS:NZ	2.39	0.55
38:DQ:62:LYS:HB3	38:DQ:97:ARG:CD	2.35	0.55
39:DR:56:GLY:O	39:DR:59:THR:HG23	2.05	0.55
48:DW:29:LYS:HE3	48:DW:57:ILE:HG21	1.88	0.55
47:DZ:85:LEU:HA	47:DZ:87:PRO:HD2	1.88	0.55
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.42	0.55
1:AA:468:A:H2'	1:AA:474:G:H5'	1.88	0.55
22:AD:5:G:H1	22:AD:77:C:H42	1.54	0.55
10:AM:58:ASP:O	10:AM:59:SER:CB	2.53	0.55
13:AP:4:ILE:HG22	13:AP:5:ALA:N	2.19	0.55
15:AR:3:ILE:HG13	15:AR:3:ILE:O	2.06	0.55
20:AW:98:PRO:C	20:AW:100:ILE:H	2.09	0.55
50:B4:37:SER:CA	50:B4:42:PHE:CD1	2.89	0.55
25:BA:1408:C:C2	25:BA:1595:G:N2	2.75	0.55
25:BA:658:C:H2'	25:BA:659:C:H6	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:805:G:OP2	35:BO:41:ARG:HG2	2.07	0.55
36:BP:32:TYR:CD1	36:BP:133:ARG:HA	2.41	0.55
45:BV:135:GLU:O	45:BV:136:PHE:HB3	2.06	0.55
45:BV:6:LYS:HZ1	45:BV:43:GLU:HG3	1.70	0.55
47:BZ:44:PRO:HG2	47:BZ:46:LEU:HD22	1.87	0.55
1:CA:350:G:H5'	1:CA:351:G:OP2	2.06	0.55
1:CA:36:C:OP1	12:CO:120:LYS:NZ	2.37	0.55
2:CE:47:THR:O	2:CE:51:LEU:HB2	2.06	0.55
3:CF:18:TRP:HE3	3:CF:18:TRP:H	1.53	0.55
5:CH:122:GLU:OE1	5:CH:126:ARG:HG2	2.06	0.55
10:CM:33:GLN:HB2	10:CM:75:ILE:HD11	1.87	0.55
12:CO:83:ARG:HB2	12:CO:98:VAL:HG23	1.87	0.55
15:CR:75:PRO:O	15:CR:79:ARG:HG3	2.06	0.55
40:D1:59:ARG:O	40:D1:63:VAL:HG23	2.06	0.55
41:D2:43:GLU:C	41:D2:44:LYS:HD3	2.26	0.55
26:DB:43:C:OP1	50:D4:6:HIS:HE1	1.90	0.55
25:DA:1397:U:O2'	25:DA:1398:C:OP1	2.23	0.55
25:DA:2115:G:H1'	25:DA:2171:A:N1	2.21	0.55
25:DA:530:G:O2'	25:DA:532:A:C8	2.55	0.55
26:DB:41:U:O4	30:DG:70:VAL:HG23	2.06	0.55
29:DF:145:GLU:O	29:DF:146:ALA:HB2	2.06	0.55
29:DF:110:LEU:HD21	29:DF:181:LEU:HD13	1.88	0.55
33:DM:36:GLY:O	33:DM:39:ARG:HG3	2.05	0.55
33:DM:93:THR:HB	33:DM:94:HIS:CD2	2.42	0.55
44:DU:76:CYS:CB	44:DU:77:PRO:HD2	2.37	0.55
44:DU:95:LYS:HB3	44:DU:100:ALA:HA	1.89	0.55
45:DV:69:THR:HG22	45:DV:90:VAL:HG22	1.87	0.55
1:AA:1054:C:H2'	1:AA:1054:C:O2	2.05	0.55
1:AA:95:G:H5'	1:AA:96:G:OP2	2.06	0.55
22:AB:3:U:C4'	22:AB:4:G:OP1	2.54	0.55
4:AG:65:ARG:NH1	4:AG:70:ILE:O	2.40	0.55
14:AQ:13:THR:N	14:AQ:14:PRO:CD	2.68	0.55
19:AV:65:ASN:H	19:AV:65:ASN:HD22	1.53	0.55
37:B0:118:GLU:OE1	37:B0:118:GLU:HA	2.06	0.55
50:B4:37:SER:CB	50:B4:42:PHE:CE2	2.89	0.55
25:BA:1403:C:C5'	25:BA:1471:A:H1'	2.36	0.55
25:BA:1969:A:O2'	25:BA:1972:A:N3	2.31	0.55
25:BA:511:U:C5	25:BA:512:G:C5	2.95	0.55
26:BB:42:C:O3'	30:BG:67:LYS:NZ	2.40	0.55
31:BH:88:LEU:HB3	31:BH:130:ARG:HG2	1.88	0.55
32:BK:115:ALA:C	32:BK:117:GLU:H	2.08	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BT:18:TYR:O	43:BT:20:GLY:N	2.39	0.55
45:BV:105:VAL:HG11	45:BV:138:GLU:OE1	2.07	0.55
1:CA:328:C:O2'	1:CA:329:A:P	2.64	0.55
1:CA:689:C:H3'	1:CA:690:G:H21	1.72	0.55
22:CD:11:C:H42	22:CD:25:G:H1	1.54	0.55
22:CD:19:C:OP1	22:CD:19:C:O4'	2.24	0.55
8:CK:120:THR:HG23	8:CK:123:GLU:H	1.72	0.55
25:DA:1019:U:H3	25:DA:1142(A):A:H62	1.53	0.55
25:DA:1420:U:C1'	25:DA:1421:G:OP1	2.53	0.55
25:DA:2151:G:H2'	25:DA:2152:G:H8	1.72	0.55
25:DA:2720:U:C2	25:DA:2873:A:C2	2.95	0.55
25:DA:273(E):U:O2'	25:DA:273(F):C:H5'	2.06	0.55
28:DE:61:ARG:C	28:DE:63:LEU:H	2.10	0.55
28:DE:64:LYS:C	28:DE:66:HIS:H	2.10	0.55
30:DG:61:ALA:HA	30:DG:64:THR:HG22	1.88	0.55
31:DH:70:THR:O	31:DH:74:ASN:ND2	2.39	0.55
35:DO:124:LYS:HA	35:DO:143:GLY:O	2.06	0.55
36:DP:38:GLU:HB2	36:DP:127:ILE:HG22	1.87	0.55
45:DV:10:ARG:HH21	45:DV:26:GLY:H	1.54	0.55
1:AA:1135:U:H4'	1:AA:1136:U:H5	1.71	0.55
22:AD:21:A:C4'	22:AD:22:A:O5'	2.53	0.55
10:AM:57:LYS:CD	10:AM:60:ARG:HH12	2.20	0.55
20:AW:26:ASN:HD22	20:AW:26:ASN:N	2.03	0.55
40:B1:90:VAL:HG12	40:B1:91:ASP:N	2.22	0.55
46:B3:11:ARG:O	46:B3:14:ARG:NH2	2.39	0.55
25:BA:1359:A:N1	25:BA:1372:U:O4	2.39	0.55
25:BA:1771:C:O2'	25:BA:1786:A:H8	1.88	0.55
25:BA:792:G:H5''	25:BA:793:A:H5'	1.89	0.55
27:BD:132:PRO:HD3	27:BD:190:TYR:CZ	2.41	0.55
27:BD:28:GLU:O	27:BD:29:PRO:C	2.42	0.55
27:BD:35:LYS:CD	27:BD:104:TYR:HD1	2.13	0.55
27:BD:25:THR:HG21	27:BD:81:ALA:HA	1.87	0.55
31:BH:126:PRO:O	31:BH:127:GLU:HB2	2.07	0.55
25:BA:484:C:OP1	44:BU:51:VAL:HG11	2.07	0.55
45:BV:89:PHE:CE1	45:BV:96:VAL:HG21	2.41	0.55
1:CA:707:C:H2'	1:CA:708:C:H6	1.71	0.55
1:CA:962:C:H42	1:CA:973:G:H1	1.54	0.55
4:CG:14:ARG:HG3	4:CG:14:ARG:HH11	1.72	0.55
15:CR:39:LEU:HD12	15:CR:56:LEU:HB2	1.87	0.55
25:DA:1025:G:C4	25:DA:1135:C:H1'	2.41	0.55
25:DA:1054:A:N6	25:DA:1105:U:H3	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1412:A:H2'	25:DA:1413:G:C8	2.40	0.55
25:DA:1543:A:C4'	25:DA:1543:A:OP1	2.55	0.55
25:DA:1342:A:N6	25:DA:1602:U:N3	2.54	0.55
25:DA:1791:A:OP2	25:DA:1791:A:H8	1.90	0.55
25:DA:2520:C:H41	25:DA:2542:A:N6	2.05	0.55
25:DA:2629:A:C4'	25:DA:2630:G:OP2	2.54	0.55
25:DA:247:G:H4'	25:DA:386:G:C5	2.41	0.55
25:DA:535:C:C2'	25:DA:536:A:H5'	2.36	0.55
25:DA:867:C:C4	25:DA:868:U:C5	2.94	0.55
26:DB:65:C:H41	26:DB:108:C:C2'	2.20	0.55
27:DD:96:HIS:CE1	27:DD:102:LYS:HE2	2.41	0.55
27:DD:36:PRO:HA	27:DD:62:TYR:O	2.07	0.55
28:DE:2:LYS:HZ3	28:DE:95:ILE:HG23	1.71	0.55
35:DO:55:ARG:HD2	35:DO:55:ARG:O	2.06	0.55
39:DR:78:LEU:HD23	39:DR:78:LEU:O	2.07	0.55
1:AA:1422:G:H5''	34:BN:48:PRO:HB3	1.88	0.55
1:AA:170:U:O2'	1:AA:171:A:H5'	2.06	0.55
2:AE:163:PHE:CD2	2:AE:185:ILE:HG13	2.42	0.55
19:AV:15:LEU:H	19:AV:15:LEU:CD2	2.19	0.55
37:B0:29:LEU:HB3	37:B0:75:LEU:HD21	1.87	0.55
13:AP:57:ARG:HE	50:B4:35:VAL:CG2	2.20	0.55
25:BA:1047:G:H2'	25:BA:1110:G:C6	2.42	0.55
25:BA:1188:U:C2'	25:BA:1189:A:H5'	2.37	0.55
25:BA:2118:U:H5''	25:BA:2119:A:OP1	2.07	0.55
25:BA:2307:G:C4	25:BA:2311:A:N1	2.74	0.55
25:BA:443:A:H1'	25:BA:1201:C:O4'	2.07	0.55
27:BD:39:LYS:HB2	27:BD:62:TYR:HB2	1.87	0.55
28:BE:70:ALA:O	28:BE:71:GLY:C	2.45	0.55
25:BA:607:U:OP1	29:BF:102:PRO:HA	2.06	0.55
32:BK:6:LEU:O	32:BK:7:GLU:HB3	2.06	0.55
48:BW:50:ILE:HD12	48:BW:51:ARG:N	2.21	0.55
1:CA:1442:G:O2'	1:CA:1443:G:P	2.63	0.55
1:CA:198:G:H2'	1:CA:199:G:H8	1.71	0.55
1:CA:316:G:OP2	1:CA:351:G:O2'	2.25	0.55
1:CA:82:U:N3	1:CA:87:A:C6	2.75	0.55
1:CA:89:U:C1'	1:CA:90:C:OP1	2.54	0.55
22:CB:81:C:H3'	22:CB:82:A:C2	2.42	0.55
2:CE:233:SER:CB	2:CE:234:PRO:HD2	2.32	0.55
25:DA:1075:C:H2'	25:DA:1076:C:C6	2.41	0.55
25:DA:1159:U:O2'	25:DA:1160:G:H5'	2.07	0.55
25:DA:1729:A:N6	25:DA:1731:G:C5	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:598:G:H1'	35:DO:12:ALA:CB	2.36	0.55
25:DA:886:C:H1'	25:DA:890:A:C2	2.42	0.55
31:DH:86:GLU:CD	31:DH:86:GLU:H	2.10	0.55
33:DM:22:THR:HA	33:DM:61:ARG:O	2.07	0.55
35:DO:46:LYS:CG	35:DO:51:PHE:CD2	2.90	0.55
1:AA:989:C:HO2'	1:AA:1017:G:HO2'	1.53	0.55
2:AE:94:ASN:H	2:AE:94:ASN:HD22	1.54	0.55
1:AA:542:G:OP1	4:AG:10:ARG:NH2	2.40	0.55
9:AL:121:ARG:NH1	9:AL:122:ALA:O	2.34	0.55
1:AA:881:G:OP2	12:AO:9:ARG:NH2	2.40	0.55
20:AW:23:ARG:O	20:AW:27:LYS:HB2	2.07	0.55
40:B1:66:ASN:HD21	40:B1:70:ARG:NE	2.03	0.55
41:B2:18:LEU:HD22	41:B2:19:LYS:N	2.22	0.55
50:B4:52:THR:OG1	50:B4:53:GLU:N	2.40	0.55
52:B6:11:LEU:HD22	52:B6:26:ASN:HD22	1.72	0.55
25:BA:1464:C:O2'	25:BA:1528:A:C8	2.58	0.55
25:BA:2502:G:H5''	25:BA:2503:A:H5''	1.88	0.55
26:BB:53:A:H2'	26:BB:54:G:O4'	2.06	0.55
32:BK:120:ILE:HD11	32:BK:126:TYR:OH	2.07	0.55
45:BV:59:LEU:O	45:BV:60:GLU:HB2	2.06	0.55
1:CA:1052:U:C2	1:CA:1200:C:N4	2.75	0.55
1:CA:1115:C:N3	1:CA:1185:G:O6	2.40	0.55
1:CA:1498:U:H1'	1:CA:1499:A:OP2	2.07	0.55
1:CA:942:G:H21	9:CL:124:GLN:NE2	2.03	0.55
52:D6:21:TYR:CD2	52:D6:21:TYR:N	2.74	0.55
25:DA:2261:C:C6	46:D3:16:SER:HB3	2.41	0.55
25:DA:394:A:H5''	25:DA:395:U:OP2	2.07	0.55
25:DA:660:G:H21	35:DO:12:ALA:HA	1.70	0.55
25:DA:830:G:H4'	25:DA:831:G:OP2	2.07	0.55
28:DE:8:LYS:HB3	28:DE:192:ASN:HA	1.88	0.55
25:DA:2788:C:OP1	28:DE:61:ARG:NH1	2.39	0.55
39:DR:88:ILE:HG21	39:DR:91:ARG:HH22	1.72	0.55
44:DU:95:LYS:CB	44:DU:100:ALA:HA	2.37	0.55
1:AA:1429:C:H2'	1:AA:1430:C:H6	1.70	0.55
1:AA:324:G:N1	1:AA:327:A:OP2	2.40	0.55
1:AA:376:G:OP1	16:AS:5:ARG:HB2	2.06	0.55
1:AA:57:G:H2'	1:AA:58:C:C6	2.41	0.55
8:AK:102:ARG:HG2	8:AK:102:ARG:O	2.06	0.55
8:AK:122:ARG:O	8:AK:126:LYS:HG3	2.07	0.55
12:AO:59:SER:HB2	12:AO:61:TYR:CD1	2.42	0.55
13:AP:81:LEU:O	13:AP:84:ILE:HG22	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:B0:75:LEU:HD23	37:B0:75:LEU:O	2.07	0.55
46:B3:68:GLU:HG2	46:B3:80:HIS:HB2	1.89	0.55
53:B7:8:ASN:C	53:B7:8:ASN:ND2	2.60	0.55
25:BA:1678:G:O5'	25:BA:1678:G:H8	1.89	0.55
25:BA:2807:G:H3'	25:BA:2808:U:H5''	1.89	0.55
25:BA:524:U:H2'	25:BA:525:U:C6	2.41	0.55
29:BF:129:PHE:O	29:BF:130:ALA:CB	2.55	0.55
29:BF:178:PRO:HB2	29:BF:201:VAL:HG11	1.89	0.55
35:BO:46:LYS:O	35:BO:47:ASP:HB3	2.06	0.55
1:CA:142:G:H2'	1:CA:143:A:H8	1.72	0.55
1:CA:540:G:H2'	1:CA:541:G:O4'	2.06	0.55
1:CA:833:U:H2'	1:CA:834:C:C6	2.42	0.55
20:CW:18:GLN:O	20:CW:22:ARG:HG3	2.07	0.55
41:D2:62:LEU:HB3	41:D2:93:GLU:O	2.06	0.55
46:D3:53:MET:HG3	46:D3:59:LEU:HD23	1.88	0.55
25:DA:1359:A:H2'	25:DA:1360:A:H5'	1.89	0.55
25:DA:1758:G:H4'	25:DA:1759:A:OP2	2.07	0.55
25:DA:2105:C:N4	25:DA:2184:G:H1	2.04	0.55
25:DA:2522:U:H2'	25:DA:2523:G:H5''	1.89	0.55
25:DA:573:G:O2'	25:DA:574:C:H3'	2.06	0.55
26:DB:50:G:OP1	38:DQ:63:THR:HG23	2.07	0.55
26:DB:79:C:H2'	26:DB:80:U:O4'	2.06	0.55
27:DD:83:GLU:OE1	27:DD:104:TYR:OH	2.19	0.55
25:DA:1111:A:H5'	31:DH:3:ARG:HD3	1.88	0.55
1:AA:1346:A:C4	7:AJ:10:ARG:NH2	2.75	0.55
1:AA:66:G:H4'	1:AA:173:U:C5	2.42	0.55
11:AN:17:GLY:HA3	11:AN:77:MET:SD	2.47	0.55
13:AP:84:ILE:HD13	19:AV:65:ASN:OD1	2.07	0.55
25:BA:2212:A:N3	25:BA:2215:G:C2	2.75	0.55
25:BA:2468:G:C2'	25:BA:2476:A:N6	2.67	0.55
25:BA:270(L):U:O4	32:BK:50:ARG:NH1	2.40	0.55
25:BA:528:A:C2	25:BA:2042:A:H2'	2.42	0.55
25:BA:580:C:H2'	25:BA:581:C:C6	2.42	0.55
28:BE:61:ARG:O	28:BE:62:PRO:C	2.46	0.55
25:BA:811:U:C4	35:BO:21:ARG:NH2	2.75	0.55
1:CA:960:U:N3	1:CA:1225:A:H1'	2.21	0.55
1:CA:827:U:H3	1:CA:872:A:N6	2.04	0.55
1:CA:909:A:H2'	1:CA:910:C:O4'	2.06	0.55
22:CD:80:C:H2'	22:CD:81:C:C6	2.42	0.55
3:CF:22:TRP:CH2	3:CF:32:LEU:HB2	2.41	0.55
7:CJ:115:ARG:O	7:CJ:118:VAL:HG22	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CM:54:PHE:CE2	10:CM:55:LYS:HD3	2.42	0.55
52:D6:34:LEU:O	52:D6:36:LEU:HG	2.06	0.55
54:D8:14:VAL:HG13	54:D8:15:LYS:N	2.21	0.55
25:DA:1590:U:H2'	25:DA:1591:G:C8	2.41	0.55
25:DA:1955:U:O3'	25:DA:1956:U:H6	1.89	0.55
25:DA:2859:G:H4'	25:DA:2860:A:OP1	2.07	0.55
25:DA:672:C:O2'	25:DA:673:C:H5'	2.07	0.55
25:DA:899:A:H5'	25:DA:900:A:OP2	2.07	0.55
28:DE:60:ASN:CB	28:DE:63:LEU:HB3	2.37	0.55
36:DP:59:ARG:O	36:DP:60:ARG:HD2	2.07	0.55
39:DR:24:PRO:HA	39:DR:49:VAL:HG23	1.89	0.55
45:DV:104:PHE:O	45:DV:105:VAL:HG12	2.06	0.55
1:AA:1277:C:O2'	1:AA:1279:A:H1'	2.07	0.55
1:AA:1286:A:C8	1:AA:1287:A:H4'	2.42	0.55
1:AA:580:U:H2'	1:AA:581:G:O4'	2.06	0.55
1:AA:652:U:C4	1:AA:752:G:N3	2.74	0.55
22:AD:47:U:H2'	22:AD:48:C:H6	1.71	0.55
2:AE:106:LYS:O	2:AE:110:GLN:HG3	2.07	0.55
4:AG:9:CYS:O	4:AG:13:ARG:HG2	2.06	0.55
2:AE:178:ARG:NH2	8:AK:68:ARG:HH12	2.05	0.55
50:B4:12:ALA:HB1	50:B4:29:PRO:HA	1.88	0.55
50:B4:55:ARG:H	50:B4:55:ARG:HD3	1.70	0.55
52:B6:41:PRO:HB2	52:B6:44:ARG:NH1	2.21	0.55
54:B8:29:LYS:HB3	54:B8:44:LYS:HG2	1.89	0.55
25:BA:1992:G:O2'	25:BA:1993:U:OP2	2.24	0.55
25:BA:234:C:H2'	25:BA:235:U:C6	2.40	0.55
27:BD:46:GLN:OE1	27:BD:46:GLN:N	2.40	0.55
35:BO:84:ASN:ND2	35:BO:115:LEU:HD12	2.22	0.55
35:BO:46:LYS:O	35:BO:47:ASP:CB	2.54	0.55
38:BQ:48:LEU:HD23	38:BQ:82:ILE:HD11	1.88	0.55
45:BV:158:PRO:C	45:BV:160:GLY:H	2.10	0.55
48:BW:4:SER:CB	48:BW:5:GLU:OE2	2.55	0.55
1:CA:987:G:H1	1:CA:1218:C:N4	2.00	0.55
1:CA:142:G:H2'	1:CA:143:A:C8	2.42	0.55
1:CA:191(F):U:O2	20:CW:105:SER:HB2	2.07	0.55
1:CA:652:U:O4	1:CA:752:G:H1'	2.06	0.55
22:CD:85:A:N6	25:DA:2422:A:O4'	2.40	0.55
2:CE:82:ARG:HD2	2:CE:92:TYR:CE1	2.42	0.55
1:CA:1055:A:H2	3:CF:194:GLY:HA3	1.71	0.55
5:CH:92:LYS:HB3	5:CH:119:LEU:HB2	1.88	0.55
12:CO:76:GLU:HG3	12:CO:77:HIS:CD2	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CP:22:ILE:HB	13:CP:25:ILE:CG1	2.37	0.55
1:CA:127:G:N2	17:CT:61:GLU:OE1	2.35	0.55
1:CA:1289:A:OP1	21:CX:9:ARG:NH2	2.40	0.55
25:DA:1111:A:H5'	31:DH:3:ARG:NH1	2.22	0.55
25:DA:1210:A:H5''	25:DA:1211:U:H3'	1.88	0.55
25:DA:1771:C:C1'	25:DA:1786:A:H8	2.20	0.55
27:DD:28:GLU:HB2	27:DD:29:PRO:HD3	1.88	0.55
27:DD:30:GLU:HG3	27:DD:63:ARG:HH21	1.70	0.55
28:DE:176:ILE:HB	28:DE:181:LEU:HB2	1.88	0.55
28:DE:81:ILE:O	28:DE:82:ARG:HB3	2.06	0.55
29:DF:111:ALA:HB2	29:DF:206:ILE:HG21	1.89	0.55
31:DH:129:THR:HG22	31:DH:130:ARG:HG3	1.88	0.55
35:DO:125:VAL:O	35:DO:144:GLU:HB3	2.06	0.55
35:DO:19:VAL:HG22	35:DO:27:HIS:O	2.07	0.55
38:DQ:84:GLN:CB	38:DQ:110:LEU:H	2.19	0.55
39:DR:74:ARG:HG2	39:DR:74:ARG:NH1	2.09	0.55
48:DW:28:LYS:HE3	48:DW:56:GLN:NE2	2.22	0.55
47:DZ:23:LYS:HD3	47:DZ:28:GLY:HA3	1.89	0.55
1:AA:1429:C:H2'	1:AA:1430:C:C6	2.42	0.54
1:AA:1498:U:C1'	1:AA:1499:A:OP2	2.56	0.54
10:AM:62:HIS:H	10:AM:62:HIS:CD2	2.25	0.54
14:AQ:15:LYS:HG2	14:AQ:16:PHE:CD2	2.42	0.54
3:AF:6:HIS:ND1	14:AQ:49:HIS:HB3	2.22	0.54
40:B1:97:ASP:O	40:B1:101:ARG:N	2.22	0.54
25:BA:1931:U:O4'	25:BA:1931:U:O2	2.25	0.54
25:BA:2307:G:N7	25:BA:2311:A:C2	2.75	0.54
28:BE:38:THR:HG22	28:BE:41:LYS:HB2	1.89	0.54
33:BM:127:ASP:O	33:BM:128:HIS:HB3	2.07	0.54
35:BO:32:THR:HG23	35:BO:32:THR:O	2.06	0.54
45:BV:134:PRO:O	45:BV:136:PHE:N	2.40	0.54
45:BV:169:GLU:OE1	45:BV:170:THR:N	2.41	0.54
1:CA:1056:U:H5'	3:CF:163:ALA:CB	2.29	0.54
1:CA:116:A:C8	1:CA:116:A:OP2	2.61	0.54
1:CA:197:A:H8	1:CA:198:G:N9	2.05	0.54
22:CB:79:A:H2'	22:CB:80:C:H5''	1.89	0.54
22:CD:13:G:H1'	22:CD:23:A:H61	1.72	0.54
2:CE:7:VAL:O	2:CE:8:LYS:HB2	2.07	0.54
8:CK:23:SER:OG	8:CK:24:THR:N	2.40	0.54
2:CE:178:ARG:NH2	8:CK:68:ARG:HH22	2.05	0.54
10:CM:84:GLN:O	10:CM:88:LEU:HB2	2.06	0.54
10:CM:84:GLN:HA	10:CM:88:LEU:HD13	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CU:22:VAL:O	18:CU:23:LYS:HB3	2.07	0.54
25:DA:1019:U:O2'	25:DA:1021:A:C2	2.59	0.54
25:DA:1495:A:H2'	25:DA:1496:A:H5'	1.89	0.54
25:DA:1380:G:N2	25:DA:1570:A:C2	2.75	0.54
25:DA:1729:A:C6	25:DA:1731:G:C5	2.95	0.54
25:DA:204:A:HO2'	25:DA:205:G:P	2.29	0.54
25:DA:2061:G:OP1	29:DF:68:LYS:NZ	2.40	0.54
25:DA:2298:A:N6	25:DA:2318:G:C8	2.74	0.54
25:DA:2639:A:H2'	25:DA:2640:G:H5'	1.88	0.54
25:DA:2756:U:H4'	25:DA:2757:A:OP1	2.08	0.54
25:DA:2854:G:N2	25:DA:2864:G:C4	2.75	0.54
25:DA:94:G:H2'	25:DA:95:G:O4'	2.06	0.54
26:DB:14:U:H5'	26:DB:71:C:H1'	1.89	0.54
25:DA:1569:A:O2'	27:DD:38:LYS:HG2	2.07	0.54
29:DF:31:HIS:HB2	35:DO:9:ASN:ND2	2.22	0.54
36:DP:68:ILE:HD13	36:DP:103:MET:HB3	1.89	0.54
39:DR:8:LYS:NZ	39:DR:8:LYS:HB2	2.21	0.54
1:AA:1086:U:H6	1:AA:1086:U:O5'	1.89	0.54
1:AA:349:A:O2'	1:AA:350:G:H5'	2.07	0.54
1:AA:703:G:H4'	1:AA:704:A:O5'	2.07	0.54
3:AF:143:GLU:C	3:AF:145:GLY:H	2.10	0.54
3:AF:48:TYR:O	3:AF:51:GLY:N	2.35	0.54
4:AG:163:GLU:C	4:AG:165:MET:H	2.10	0.54
20:AW:76:ALA:O	20:AW:80:ARG:HG2	2.07	0.54
50:B4:13:ARG:O	50:B4:14:ILE:HB	2.06	0.54
50:B4:14:ILE:HD11	50:B4:33:VAL:HG21	1.87	0.54
25:BA:2016:U:O2	51:B5:7:PRO:HG2	2.06	0.54
25:BA:1331:A:O2'	25:BA:1332:G:H8	1.90	0.54
25:BA:2829:C:H2'	25:BA:2830:G:H5'	1.89	0.54
25:BA:27:G:N2	25:BA:512:G:H1'	2.22	0.54
27:BD:35:LYS:CG	27:BD:64:ILE:H	2.16	0.54
28:BE:144:ARG:NH1	28:BE:144:ARG:HG3	2.22	0.54
44:BU:56:PRO:C	44:BU:57:GLN:HG3	2.27	0.54
1:CA:243:A:H4'	1:CA:244:U:O5'	2.06	0.54
22:CD:55:U:OP1	22:CD:55:U:H4'	2.07	0.54
2:CE:180:LEU:O	2:CE:181:PHE:HB2	2.07	0.54
3:CF:25:GLY:C	3:CF:27:LYS:H	2.11	0.54
3:CF:42:LEU:HD12	3:CF:45:LYS:HE3	1.89	0.54
5:CH:100:VAL:HG23	5:CH:118:ILE:HG22	1.89	0.54
6:CI:9:VAL:HB	6:CI:87:ARG:HB2	1.89	0.54
7:CJ:120:ILE:HG22	7:CJ:124:LEU:HD12	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CM:78:ASN:C	10:CM:80:LYS:H	2.11	0.54
25:DA:571:A:O2'	41:D2:78:LYS:NZ	2.40	0.54
25:DA:1028:A:N6	25:DA:1125:G:H2'	2.22	0.54
25:DA:528:A:H2	25:DA:2043:C:H5'	1.72	0.54
25:DA:2061:G:H5''	25:DA:2503:A:C2	2.42	0.54
25:DA:854:G:H2'	25:DA:855:G:C8	2.41	0.54
29:DF:10:PRO:HD2	29:DF:13:SER:OG	2.07	0.54
29:DF:24:LEU:CB	29:DF:25:PRO:CD	2.80	0.54
33:DM:46:VAL:O	33:DM:47:ALA:HB3	2.07	0.54
35:DO:20:GLY:O	35:DO:21:ARG:NH2	2.40	0.54
35:DO:61:ARG:HB3	35:DO:62:LEU:HD22	1.89	0.54
36:DP:2:LEU:HD11	36:DP:69:PHE:HE1	1.70	0.54
36:DP:77:LYS:HB3	36:DP:78:PRO:HD2	1.88	0.54
42:DS:40:ASN:O	42:DS:41:LYS:HG2	2.06	0.54
44:DU:76:CYS:O	44:DU:78:ALA:N	2.40	0.54
1:AA:1129:C:H4'	1:AA:1130:A:H5'	1.89	0.54
1:AA:1335:C:H5'	1:AA:1336:C:OP1	2.07	0.54
4:AG:28:SER:CB	4:AG:29:PRO:HD2	2.37	0.54
13:AP:13:LYS:O	13:AP:44:ARG:HD2	2.07	0.54
17:AT:101:ARG:HH21	17:AT:101:ARG:HB2	1.70	0.54
52:B6:42:TRP:N	52:B6:42:TRP:HD1	2.06	0.54
25:BA:1068:G:H4'	25:BA:1070:A:N6	2.22	0.54
25:BA:1081:U:H3'	25:BA:1082:U:C6	2.42	0.54
25:BA:2680:C:O2'	25:BA:2681:C:H5'	2.07	0.54
25:BA:259:G:N2	25:BA:621:A:H8	2.05	0.54
25:BA:780:G:N2	25:BA:783:A:N6	2.38	0.54
31:BH:8:PRO:HG2	31:BH:69:ARG:HH21	1.73	0.54
36:BP:27:VAL:HG13	36:BP:105:GLU:OE2	2.07	0.54
1:CA:1094:G:C2'	1:CA:1095:U:OP2	2.54	0.54
1:CA:167:G:O2'	1:CA:168:G:H5'	2.08	0.54
1:CA:266:G:C1'	1:CA:267:C:OP2	2.55	0.54
1:CA:860:A:H2'	1:CA:861:G:O4'	2.06	0.54
5:CH:141:GLN:HA	5:CH:143:ARG:NH2	2.22	0.54
9:CL:47:LEU:HB2	9:CL:50:LEU:HD12	1.89	0.54
14:CQ:45:ARG:O	14:CQ:49:HIS:CD2	2.61	0.54
25:DA:1999:C:H4'	25:DA:2723:C:O2	2.06	0.54
25:DA:2108:C:N4	25:DA:2181:G:H1	2.03	0.54
25:DA:2720:U:N3	25:DA:2873:A:C6	2.75	0.54
28:DE:11:MET:SD	28:DE:24:THR:HG22	2.48	0.54
25:DA:607:U:OP1	29:DF:103:LYS:HG3	2.07	0.54
31:DH:7:LEU:N	31:DH:8:PRO:HD3	2.15	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DV:59:LEU:O	45:DV:60:GLU:CB	2.55	0.54
1:AA:1004:A:C8	1:AA:1036:G:N2	2.75	0.54
1:AA:156:G:N2	1:AA:165:C:N3	2.50	0.54
2:AE:8:LYS:HZ1	2:AE:11:LEU:HD22	1.72	0.54
4:AG:76:ARG:HD2	4:AG:207:TYR:HE2	1.73	0.54
4:AG:8:VAL:CG1	4:AG:21:LEU:HB2	2.37	0.54
4:AG:88:VAL:O	4:AG:90:GLY:N	2.39	0.54
41:B2:49:THR:CB	41:B2:50:PRO:CD	2.85	0.54
25:BA:1519:G:C2'	25:BA:1520:U:H5'	2.38	0.54
25:BA:2114:A:N1	25:BA:2168:G:N2	2.54	0.54
27:BD:35:LYS:HB3	27:BD:63:ARG:HA	1.89	0.54
32:BK:70:GLU:OE1	32:BK:70:GLU:HA	2.07	0.54
36:BP:11:LYS:HD3	36:BP:87:LYS:HG2	1.90	0.54
38:BQ:5:THR:OG1	38:BQ:8:GLU:HG3	2.07	0.54
44:BU:29:GLU:HB3	44:BU:38:ILE:HG23	1.88	0.54
1:CA:1004:A:H2	1:CA:1024:G:C8	2.24	0.54
1:CA:173:U:H5''	1:CA:197:A:O4'	2.07	0.54
7:CJ:44:TYR:HA	7:CJ:47:CYS:HB2	1.89	0.54
1:CA:537:G:H5''	12:CO:110:ARG:NH1	2.22	0.54
19:CV:66:MET:HA	19:CV:67:VAL:C	2.25	0.54
19:CV:80:TYR:CZ	19:CV:82:GLY:HA2	2.43	0.54
20:CW:49:ALA:HB3	20:CW:100:ILE:HD13	1.89	0.54
20:CW:70:SER:O	20:CW:71:THR:C	2.46	0.54
40:D1:90:VAL:HG22	41:D2:39:LEU:HB3	1.90	0.54
46:D3:53:MET:HA	46:D3:58:THR:O	2.08	0.54
52:D6:35:GLU:O	52:D6:36:LEU:HB2	2.07	0.54
25:DA:2702:U:H2'	25:DA:2703:C:H5	1.72	0.54
27:DD:206:LEU:HD22	27:DD:211:ARG:HG2	1.88	0.54
30:DG:35:GLU:O	30:DG:160:VAL:HB	2.07	0.54
31:DH:149:ARG:HD3	31:DH:164:TYR:CE1	2.43	0.54
42:DS:82:LEU:HD22	42:DS:84:ARG:HH21	1.73	0.54
1:AA:1128:C:C2	1:AA:1144:G:N2	2.75	0.54
1:AA:1194:U:H2'	1:AA:1195:C:C6	2.42	0.54
23:AC:26:C:H2'	23:AC:27:G:O4'	2.08	0.54
5:AH:20:GLN:NE2	5:AH:22:GLY:H	2.04	0.54
7:AJ:76:ARG:HG3	7:AJ:89:MET:HB2	1.87	0.54
12:AO:87:VAL:O	12:AO:88:LYS:CB	2.55	0.54
20:AW:72:LEU:HD23	20:AW:73:HIS:N	2.23	0.54
41:B2:47:VAL:HG22	41:B2:48:GLY:N	2.22	0.54
46:B3:53:MET:HG3	46:B3:59:LEU:HD23	1.88	0.54
52:B6:15:GLU:HG3	52:B6:49:HIS:ND1	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:B8:32:LEU:O	54:B8:36:LYS:HE2	2.07	0.54
25:BA:1298:C:H5''	25:BA:1299:G:OP2	2.08	0.54
25:BA:1794:U:H2'	25:BA:1795:C:H6	1.71	0.54
25:BA:26:G:C6	25:BA:27:G:N1	2.75	0.54
27:BD:221:VAL:HG22	27:BD:226:MET:CE	2.38	0.54
27:BD:30:GLU:CG	27:BD:63:ARG:NH2	2.69	0.54
33:BM:47:ALA:HB2	33:BM:112:LEU:CD1	2.38	0.54
36:BP:137:TYR:CE2	45:BV:83:PRO:HG3	2.43	0.54
45:BV:29:TYR:CE2	45:BV:87:ASP:HB2	2.43	0.54
1:CA:1055:A:C6	1:CA:1056:U:C6	2.94	0.54
1:CA:833:U:H2'	1:CA:834:C:H6	1.72	0.54
22:CB:49:A:HO2'	22:CB:50:U:H5	1.55	0.54
3:CF:59:ARG:HH12	3:CF:97:LYS:HD2	1.73	0.54
6:CI:25:ILE:HD13	6:CI:82:ARG:HD2	1.89	0.54
7:CJ:16:LEU:HD13	9:CL:45:ALA:HB2	1.89	0.54
40:D1:91:ASP:C	40:D1:92:ARG:HG3	2.28	0.54
52:D6:28:ARG:HD2	52:D6:31:PRO:HD2	1.90	0.54
25:DA:1278:A:H2'	25:DA:1279:G:C8	2.42	0.54
25:DA:2153:G:H2'	25:DA:2154:G:H8	1.70	0.54
25:DA:2402:C:H5	25:DA:2415:G:H22	1.55	0.54
25:DA:287:C:H2'	25:DA:288:C:H6	1.73	0.54
25:DA:71:A:H5''	25:DA:73:A:C8	2.42	0.54
27:DD:267:SER:C	27:DD:269:PHE:H	2.11	0.54
34:DN:111:PHE:HB3	34:DN:114:ILE:HD12	1.88	0.54
48:DW:47:ASN:N	48:DW:47:ASN:ND2	2.55	0.54
47:DZ:91:LYS:HG3	47:DZ:92:LYS:H	1.72	0.54
23:AC:35:C:H42	24:A1:18:G:H1	1.55	0.54
1:AA:1374:A:C2'	1:AA:1375:A:H5'	2.38	0.54
1:AA:345:C:O2'	1:AA:346:G:N2	2.41	0.54
1:AA:765:G:H5''	1:AA:766:A:OP1	2.07	0.54
3:AF:181:ASN:HD21	3:AF:204:LEU:HD12	1.73	0.54
4:AG:139:ARG:HH11	4:AG:139:ARG:HG3	1.71	0.54
5:AH:43:LEU:HD21	5:AH:132:ALA:HB1	1.89	0.54
37:B0:20:LEU:HD21	37:B0:40:LYS:HD3	1.89	0.54
40:B1:25:TRP:O	40:B1:28:ARG:HB2	2.08	0.54
40:B1:92:ARG:CZ	41:B2:11:GLN:H	2.20	0.54
25:BA:1914:C:O4'	25:BA:1914:C:O2	2.24	0.54
25:BA:2635:C:OP1	28:BE:78:LEU:HG	2.07	0.54
25:BA:2712:U:O2'	25:BA:2712(A):A:P	2.66	0.54
25:BA:880:G:N1	25:BA:897:C:N4	2.19	0.54
26:BB:78:A:C2	26:BB:99:A:C4	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:117:MET:O	28:BE:118:LYS:CB	2.55	0.54
45:BV:134:PRO:C	45:BV:136:PHE:H	2.11	0.54
1:CA:1130:A:O3'	9:CL:3:GLN:NE2	2.41	0.54
1:CA:429:U:H4'	1:CA:430:A:O5'	2.06	0.54
1:CA:465:A:N7	1:CA:467:G:C6	2.76	0.54
1:CA:510:A:H5''	1:CA:511:C:P	2.47	0.54
22:CB:23:A:OP2	22:CB:23:A:H8	1.90	0.54
2:CE:6:THR:O	2:CE:7:VAL:HB	2.08	0.54
5:CH:71:LEU:HD22	5:CH:115:VAL:HG12	1.90	0.54
9:CL:92:TYR:HA	9:CL:95:LYS:HD2	1.89	0.54
9:CL:99:LEU:HB3	9:CL:101:PHE:CD1	2.43	0.54
20:CW:71:THR:HG22	20:CW:72:LEU:H	1.73	0.54
25:DA:2681:C:H2'	25:DA:2681:C:O2	2.07	0.54
25:DA:2720:U:N3	25:DA:2721:A:C5	2.76	0.54
25:DA:328:U:H4'	44:DU:68:HIS:CD2	2.41	0.54
25:DA:67:U:C2	25:DA:74:A:H2	2.25	0.54
29:DF:124:LEU:O	29:DF:124:LEU:HG	2.07	0.54
38:DQ:86:ALA:O	38:DQ:87:PHE:CB	2.56	0.54
44:DU:19:LYS:HG3	44:DU:20:TYR:H	1.73	0.54
45:DV:69:THR:HB	45:DV:88:PHE:HB3	1.90	0.54
48:DW:5:GLU:CD	48:DW:5:GLU:H	2.11	0.54
1:AA:1151:A:O2'	1:AA:1152:A:O5'	2.25	0.54
7:AJ:113:GLU:O	7:AJ:119:ARG:HD3	2.08	0.54
9:AL:8:GLY:HA2	9:AL:79:LEU:HD12	1.89	0.54
37:B0:32:GLY:HA2	37:B0:116:LEU:HD12	1.88	0.54
25:BA:1081:U:HO2'	25:BA:1082:U:P	2.31	0.54
25:BA:1173:G:H4'	25:BA:1174:A:C2	2.42	0.54
25:BA:1510:A:O2'	25:BA:1511:A:N7	2.38	0.54
25:BA:1955:U:O3'	25:BA:1956:U:H6	1.91	0.54
25:BA:2310:A:C5'	25:BA:2311:A:OP2	2.56	0.54
26:BB:89(A):A:H8	26:BB:89(A):A:O5'	1.90	0.54
30:BG:9:ARG:O	30:BG:13:GLU:HG2	2.07	0.54
30:BG:27:ASN:OD1	30:BG:28:VAL:N	2.40	0.54
35:BO:105:LEU:O	35:BO:106:LEU:CB	2.52	0.54
36:BP:65:PHE:O	36:BP:66:ILE:HG12	2.08	0.54
43:BT:29:TRP:CZ2	43:BT:76:ARG:NH2	2.76	0.54
44:BU:78:ALA:HB3	44:BU:81:LYS:HZ2	1.72	0.54
1:CA:1047:G:C2'	1:CA:1048:G:H5'	2.38	0.54
1:CA:1129:C:N4	1:CA:1139:G:N1	2.56	0.54
1:CA:956:U:C2	1:CA:1225:A:C2	2.95	0.54
1:CA:165:C:H2'	1:CA:166:G:H8	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:811:C:H4'	1:CA:900:A:N6	2.23	0.54
22:CD:16:C:N4	22:CD:68:A:C5	2.76	0.54
22:CD:51:C:H3'	22:CD:52:G:O4'	2.07	0.54
2:CE:17:PHE:HE2	2:CE:44:LEU:HA	1.72	0.54
1:CA:1372:U:OP1	9:CL:72:GLY:N	2.41	0.54
17:CT:56:VAL:O	17:CT:77:VAL:HB	2.07	0.54
19:CV:36:ARG:NH1	19:CV:52:TYR:O	2.38	0.54
20:CW:33:ILE:HD13	20:CW:63:ILE:HG12	1.89	0.54
20:CW:71:THR:HG22	20:CW:72:LEU:N	2.22	0.54
25:DA:17:G:H4'	40:D1:25:TRP:CZ3	2.42	0.54
40:D1:83:LEU:CD2	40:D1:88:ILE:HG13	2.37	0.54
50:D4:9:LEU:O	50:D4:10:VAL:HG12	2.08	0.54
25:DA:1019:U:HO2'	25:DA:1021:A:H2	1.52	0.54
25:DA:370:G:H4'	25:DA:371:A:OP2	2.08	0.54
30:DG:107:LEU:HD11	30:DG:178:PHE:CE1	2.43	0.54
35:DO:11:GLY:O	35:DO:13:ASN:N	2.40	0.54
45:DV:16:SER:O	45:DV:20:ARG:HG3	2.08	0.54
1:AA:1002:G:C4	1:AA:1003:G:C8	2.96	0.54
1:AA:1502:A:H2	1:AA:1505:G:C2	2.25	0.54
1:AA:966:G:O2'	9:AL:127:LYS:O	2.26	0.54
23:AC:1:C:O2	23:AC:1:C:H2'	2.08	0.54
6:AI:37:VAL:HG12	6:AI:38:GLU:N	2.23	0.54
7:AJ:56:GLN:HE21	7:AJ:56:GLN:HA	1.73	0.54
9:AL:81:ILE:H	9:AL:81:ILE:HD12	1.73	0.54
11:AN:34:ASP:HB3	11:AN:40:ILE:HD11	1.90	0.54
13:AP:15:VAL:HG22	13:AP:45:VAL:HG12	1.89	0.54
1:AA:1305:G:H5'	21:AX:4:GLY:HA3	1.90	0.54
40:B1:115:ALA:O	40:B1:116:ALA:HB3	2.07	0.54
25:BA:142:G:H2'	25:BA:143:C:C6	2.43	0.54
25:BA:2023:G:H5'	25:BA:2617:C:H4'	1.90	0.54
25:BA:2335:A:C8	25:BA:2337:G:N7	2.76	0.54
25:BA:76:C:O2'	48:BW:62:THR:HG21	2.07	0.54
25:BA:2680:C:H5'	28:BE:189:PRO:HA	1.90	0.54
32:BK:40:THR:HG22	32:BK:42:SER:H	1.73	0.54
1:CA:390:C:H2'	1:CA:391:G:C8	2.42	0.54
1:CA:57:G:C5	1:CA:58:C:C4	2.96	0.54
25:DA:1097:U:H2'	25:DA:1098:A:O4'	2.08	0.54
25:DA:155:C:N4	25:DA:171:G:N1	2.30	0.54
25:DA:2346:A:H5''	25:DA:2383:G:H1'	1.90	0.54
25:DA:2472:G:H1	25:DA:2477:C:P	2.31	0.54
25:DA:2854:G:C2	25:DA:2864:G:C2	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:543:C:O2	25:DA:543:C:H2'	2.07	0.54
25:DA:882:G:H1	25:DA:894:C:H42	0.69	0.54
25:DA:960:A:C8	25:DA:962:G:C8	2.95	0.54
31:DH:84:SER:O	31:DH:85:LYS:HB2	2.06	0.54
38:DQ:86:ALA:O	38:DQ:87:PHE:HB2	2.08	0.54
1:AA:31:G:O2'	1:AA:48:C:N4	2.41	0.54
1:AA:328:C:H4'	1:AA:329:A:H5'	1.88	0.54
1:AA:528:C:H41	12:AO:46:ASN:ND2	2.06	0.54
22:AD:34:U:H2'	22:AD:36:U:OP2	2.08	0.54
3:AF:150:LYS:HG3	3:AF:169:ALA:HB2	1.89	0.54
9:AL:118:LYS:O	9:AL:119:ALA:HB3	2.08	0.54
9:AL:43:ALA:C	9:AL:45:ALA:H	2.11	0.54
25:BA:1061:U:H4'	25:BA:1070:A:C1'	2.32	0.54
25:BA:2275:C:O2'	36:BP:84:GLY:HA3	2.08	0.54
25:BA:270(M):U:H1'	25:BA:270(N):G:N7	2.23	0.54
25:BA:363(A):A:H2'	25:BA:363(B):G:H8	1.73	0.54
25:BA:813:U:H2'	25:BA:814:C:C6	2.43	0.54
25:BA:905:U:C2'	25:BA:906:G:H5'	2.38	0.54
27:BD:65:ILE:HD12	27:BD:66:ASP:N	2.23	0.54
28:BE:176:ILE:HB	28:BE:181:LEU:HB2	1.89	0.54
30:BG:99:MET:HG3	30:BG:100:TRP:N	2.23	0.54
33:BM:45:ASN:H	33:BM:45:ASN:HD22	1.55	0.54
1:CA:38:G:C2	1:CA:397:A:C2	2.96	0.54
2:CE:8:LYS:O	2:CE:9:GLU:HB3	2.07	0.54
9:CL:4:TYR:CB	9:CL:19:LEU:HB2	2.37	0.54
18:CU:78:LEU:O	18:CU:79:LEU:HD23	2.07	0.54
25:DA:1259:G:H2'	25:DA:1260:G:C8	2.43	0.54
27:DD:5:LYS:HB2	27:DD:5:LYS:HZ2	1.73	0.54
27:DD:85:ASP:HB2	27:DD:92:ILE:HD13	1.90	0.54
29:DF:101:LEU:HD12	29:DF:102:PRO:HD2	1.89	0.54
32:DK:4:ILE:HD11	32:DK:44:LEU:HD23	1.89	0.54
35:DO:48:PRO:O	35:DO:49:ARG:C	2.46	0.54
43:DT:31:HIS:ND1	43:DT:32:PRO:HD2	2.22	0.54
44:DU:47:LYS:HA	44:DU:60:PHE:HB3	1.89	0.54
1:AA:1032(B):G:H2'	1:AA:1033:G:C1'	2.38	0.54
1:AA:1336:C:O2	1:AA:1336:C:H2'	2.07	0.54
1:AA:412:A:H4'	1:AA:413:G:O5'	2.07	0.54
2:AE:187:LEU:HD13	2:AE:205:ASP:HA	1.89	0.54
37:B0:52:ILE:O	37:B0:55:ALA:N	2.38	0.54
25:BA:176:G:O2'	25:BA:177:G:H5'	2.08	0.54
31:BH:87:LEU:HA	31:BH:163:TYR:O	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:6:A:H4'	33:BM:129:PRO:HB3	1.90	0.54
35:BO:61:ARG:CB	35:BO:61:ARG:CZ	2.85	0.54
36:BP:42:ILE:HD12	36:BP:97:VAL:HG21	1.90	0.54
38:BQ:60:GLY:O	38:BQ:65:VAL:HG23	2.08	0.54
47:BZ:79:GLY:C	47:BZ:80:LEU:HD12	2.27	0.54
3:CF:162:GLN:CG	24:C1:24:A:H1'	2.37	0.54
1:CA:1006:C:H2'	1:CA:1007:C:C6	2.43	0.54
1:CA:1028(B):C:C2	1:CA:1032(A):G:N2	2.75	0.54
1:CA:465:A:N6	1:CA:467:G:C2	2.76	0.54
2:CE:124:SER:C	2:CE:126:GLU:H	2.11	0.54
9:CL:99:LEU:HB3	9:CL:101:PHE:CE1	2.42	0.54
17:CT:18:THR:HG23	17:CT:69:LYS:HE3	1.90	0.54
41:D2:22:VAL:HG22	41:D2:23:GLU:N	2.23	0.54
25:DA:1056:G:H4'	25:DA:1086:A:H1'	1.89	0.54
25:DA:1430:C:H2'	25:DA:1431:U:C6	2.43	0.54
25:DA:1558:A:H1'	25:DA:1559:G:OP2	2.08	0.54
25:DA:2169:A:C2	25:DA:2170:A:C8	2.95	0.54
25:DA:2704:C:H2'	25:DA:2705:A:O4'	2.08	0.54
25:DA:449:A:OP1	29:DF:84:VAL:O	2.26	0.54
25:DA:676:A:C2	25:DA:677:A:C8	2.96	0.54
26:DB:66:A:N6	26:DB:107:U:H2'	2.22	0.54
27:DD:142:VAL:HG12	27:DD:193:VAL:HA	1.89	0.54
29:DF:132:VAL:HG22	29:DF:133:ASN:N	2.17	0.54
25:DA:322:A:H3'	29:DF:169:ASN:HD21	1.70	0.54
31:DH:125:VAL:HG23	31:DH:126:PRO:HB3	1.89	0.54
25:DA:1007:C:P	33:DM:37:LYS:HZ2	2.28	0.54
42:DS:95:ILE:HD13	42:DS:95:ILE:H	1.73	0.54
43:DT:28:PHE:HD1	43:DT:28:PHE:N	2.06	0.54
1:AA:183:G:H2'	1:AA:184:G:C8	2.43	0.53
1:AA:723:U:C2'	1:AA:723:U:O2	2.56	0.53
22:AB:79:A:C3'	22:AB:80:C:H5''	2.29	0.53
7:AJ:16:LEU:HD11	9:AL:45:ALA:HB2	1.90	0.53
1:AA:538:G:H5''	12:AO:111:LYS:HB2	1.90	0.53
13:AP:5:ALA:O	13:AP:7:VAL:N	2.41	0.53
16:AS:36:ILE:O	16:AS:36:ILE:HG13	2.07	0.53
1:AA:261:U:OP2	20:AW:79:ARG:NH2	2.41	0.53
37:B0:44:LEU:HD22	37:B0:48:VAL:CG1	2.36	0.53
54:B8:7:HIS:CB	54:B8:59:LYS:HE2	2.38	0.53
25:BA:154:G:H2'	25:BA:155:C:O4'	2.07	0.53
25:BA:1799:G:H5'	25:BA:1819:A:H61	1.73	0.53
25:BA:2182:G:H2'	25:BA:2183:C:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2378:A:H8	25:BA:2378:A:O5'	1.91	0.53
25:BA:2393:A:H5'	35:BO:62:LEU:CB	2.34	0.53
25:BA:2593:U:H2'	25:BA:2594:C:C6	2.43	0.53
25:BA:2688:U:H1'	25:BA:2721:A:N6	2.22	0.53
25:BA:2760:C:O2'	25:BA:2761:G:H5'	2.08	0.53
27:BD:35:LYS:HD3	27:BD:63:ARG:HB3	1.89	0.53
28:BE:61:ARG:HB2	28:BE:62:PRO:CD	2.37	0.53
32:BK:9:LEU:HD22	32:BK:9:LEU:N	2.23	0.53
34:BN:98:VAL:HG13	34:BN:117:LEU:HB3	1.89	0.53
42:BS:88:ARG:NH1	42:BS:94:ASP:OD1	2.32	0.53
45:BV:111:VAL:HG11	45:BV:146:ILE:HD11	1.90	0.53
1:CA:1003:G:H2'	1:CA:1004:A:H5'	1.88	0.53
1:CA:812:C:C2'	1:CA:813:U:OP2	2.55	0.53
22:CB:45:C:H5"	22:CB:46:G:P	2.49	0.53
23:CC:19:G:C6	23:CC:59:A:C6	2.96	0.53
9:CL:95:LYS:HZ3	9:CL:96:LEU:HB2	1.72	0.53
52:D6:15:GLU:HG2	52:D6:47:THR:HG21	1.90	0.53
25:DA:2393:A:OP1	54:D8:30:ARG:HB3	2.08	0.53
54:D8:50:LEU:O	54:D8:51:ALA:HB2	2.08	0.53
25:DA:1771:C:H1'	25:DA:1786:A:H8	1.72	0.53
25:DA:2250:G:O2'	25:DA:2496:C:OP1	2.16	0.53
25:DA:2859:G:HO2'	25:DA:2860:A:C5'	2.21	0.53
25:DA:298:G:OP1	44:DU:84:ARG:O	2.27	0.53
25:DA:456:C:O2'	25:DA:457:A:H5'	2.07	0.53
25:DA:645:C:O2	25:DA:645:C:H3'	2.08	0.53
25:DA:811:U:OP2	35:DO:21:ARG:O	2.26	0.53
25:DA:912:C:C2	25:DA:913:U:C5	2.96	0.53
26:DB:13:A:O2'	26:DB:15:A:O5'	2.26	0.53
27:DD:5:LYS:HG2	27:DD:6:PHE:H	1.73	0.53
32:DK:78:THR:CB	32:DK:104:GLN:HE22	2.21	0.53
38:DQ:89:ARG:HG3	38:DQ:92:TYR:O	2.07	0.53
39:DR:8:LYS:HZ2	39:DR:8:LYS:HB2	1.73	0.53
1:AA:1004:A:C4	1:AA:1025:U:C2	2.97	0.53
1:AA:1157:A:HO2'	1:AA:1158:C:P	2.30	0.53
1:AA:1319:A:C2	1:AA:1323:G:H1'	2.44	0.53
1:AA:142:G:H1	1:AA:221:C:N4	2.03	0.53
1:AA:177:C:OP1	20:AW:65:LYS:NZ	2.36	0.53
2:AE:185:ILE:CG2	2:AE:199:TYR:HB2	2.34	0.53
7:AJ:155:ARG:O	7:AJ:155:ARG:HD3	2.08	0.53
20:AW:89:ARG:HH21	20:AW:104:LEU:HD11	1.73	0.53
25:BA:1385:G:H4'	25:BA:1386:C:OP1	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:139:G:N3	25:BA:141:A:N1	2.55	0.53
25:BA:1537:C:H2'	25:BA:1538:G:O5'	2.07	0.53
29:BF:129:PHE:O	29:BF:130:ALA:HB3	2.08	0.53
30:BG:111:LEU:HB3	30:BG:117:PHE:CE2	2.44	0.53
30:BG:59:GLU:O	30:BG:63:ILE:HG23	2.09	0.53
1:CA:1003:G:C2'	1:CA:1004:A:H5'	2.38	0.53
1:CA:1183:A:C2'	1:CA:1184:G:OP1	2.56	0.53
1:CA:1207:G:C6	1:CA:1208:C:C4	2.96	0.53
22:CB:28:G:N2	22:CB:44:C:O2	2.41	0.53
23:CC:17:C:O2	23:CC:17:C:C2'	2.56	0.53
4:CG:60:GLU:OE2	4:CG:199:ASN:N	2.34	0.53
6:CI:78:GLU:O	6:CI:81:ILE:HG22	2.07	0.53
1:CA:362:G:H4'	12:CO:30:ARG:HH21	1.74	0.53
17:CT:29:HIS:CG	17:CT:30:PRO:HD2	2.42	0.53
46:D3:11:ARG:O	46:D3:14:ARG:NH2	2.42	0.53
25:DA:1112:G:H2'	25:DA:1113:U:C6	2.43	0.53
25:DA:2135:A:C6	25:DA:2156:G:N2	2.77	0.53
25:DA:2716:U:O2'	25:DA:2717:G:H5'	2.08	0.53
25:DA:315:G:H2'	25:DA:316:C:C6	2.42	0.53
26:DB:104:A:H2'	26:DB:105:G:O4'	2.07	0.53
26:DB:31:C:C2'	26:DB:32:C:H5'	2.38	0.53
27:DD:35:LYS:HE2	27:DD:104:TYR:CD1	2.43	0.53
28:DE:66:HIS:C	28:DE:68:ALA:H	2.10	0.53
29:DF:3:GLU:HA	29:DF:24:LEU:HD23	1.89	0.53
26:DB:42:C:P	30:DG:67:LYS:HE2	2.48	0.53
35:DO:50:ARG:O	35:DO:51:PHE:C	2.46	0.53
36:DP:42:ILE:HD12	36:DP:97:VAL:HG21	1.89	0.53
39:DR:50:ILE:HD11	39:DR:102:ILE:CD1	2.36	0.53
45:DV:145:GLU:HA	45:DV:174:VAL:CG1	2.38	0.53
45:DV:69:THR:HG22	45:DV:90:VAL:HA	1.90	0.53
1:AA:1018:C:H2'	1:AA:1019:C:O4'	2.08	0.53
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.43	0.53
1:AA:36:C:OP1	12:AO:120:LYS:NZ	2.29	0.53
1:AA:413:G:H2'	1:AA:428:G:N2	2.24	0.53
1:AA:827:U:H5''	1:AA:828:A:OP2	2.09	0.53
22:AD:20:C:C5'	22:AD:68:A:H62	2.19	0.53
2:AE:5:ILE:HG13	2:AE:6:THR:H	1.72	0.53
4:AG:146:ILE:HD12	4:AG:146:ILE:H	1.74	0.53
6:AI:89:MET:HG2	6:AI:91:VAL:HG23	1.91	0.53
20:AW:30:LYS:HE2	20:AW:72:LEU:HD12	1.91	0.53
50:B4:33:VAL:O	50:B4:34:GLU:C	2.47	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:B8:29:LYS:O	54:B8:29:LYS:HD2	2.08	0.53
25:BA:1516:U:H2'	25:BA:1517:G:C8	2.43	0.53
25:BA:1771:C:HO2'	25:BA:1786:A:C1'	2.20	0.53
25:BA:2143:C:H2'	25:BA:2144:U:O4'	2.08	0.53
25:BA:2584:U:H2'	25:BA:2585:U:H2'	1.90	0.53
25:BA:795:C:H2'	25:BA:796:C:C6	2.44	0.53
25:BA:847:U:O4	25:BA:933:A:C6	2.60	0.53
39:BR:3:ARG:O	39:BR:7:ILE:HG13	2.09	0.53
1:CA:1347:G:C8	9:CL:107:ARG:HB3	2.43	0.53
1:CA:674:G:H2'	1:CA:675:A:H8	1.73	0.53
22:CB:41:C:H3'	22:CB:42:U:H6	1.73	0.53
22:CD:42:U:H2'	22:CD:43:G:C8	2.42	0.53
6:CI:35:ALA:HB1	6:CI:65:VAL:HG11	1.89	0.53
10:CM:16:LEU:O	10:CM:18:ALA:N	2.41	0.53
41:D2:79:VAL:O	41:D2:80:GLN:CB	2.52	0.53
46:D3:70:GLN:OE1	46:D3:72:ARG:HD2	2.07	0.53
26:DB:40:U:C2	50:D4:1:MET:SD	3.01	0.53
54:D8:48:PHE:CD2	54:D8:49:VAL:N	2.74	0.53
25:DA:1030:G:OP2	36:DP:128:LYS:NZ	2.25	0.53
25:DA:2474:C:C2'	25:DA:2474:C:O2	2.55	0.53
25:DA:2484:G:C2	25:DA:2485:G:C8	2.97	0.53
25:DA:2572:A:C8	28:DE:144:ARG:HD2	2.43	0.53
25:DA:270(Y):G:C2	25:DA:270(Z):U:O4	2.62	0.53
25:DA:64:A:O3'	43:DT:71:GLY:HA3	2.08	0.53
25:DA:839:U:H1'	25:DA:1191:G:H1'	1.89	0.53
26:DB:41:U:C4	30:DG:70:VAL:HG23	2.44	0.53
32:DK:123:LEU:CD2	32:DK:143:SER:HB3	2.38	0.53
32:DK:77:LEU:HD13	32:DK:141:LYS:HB3	1.90	0.53
42:DS:75:TYR:CZ	42:DS:104:THR:HG21	2.44	0.53
43:DT:5:TYR:CE2	48:DW:30:ARG:HG3	2.42	0.53
1:AA:501:C:H2'	1:AA:502:G:C8	2.44	0.53
1:AA:625:G:H4'	16:AS:16:HIS:CD2	2.44	0.53
22:AB:75:C:H2'	22:AB:76:C:C6	2.44	0.53
4:AG:170:VAL:CG1	4:AG:174:LEU:HB2	2.38	0.53
10:AM:49:VAL:O	10:AM:60:ARG:HB3	2.08	0.53
10:AM:38:ILE:HG23	10:AM:71:LEU:HB3	1.89	0.53
18:AU:68:LYS:O	18:AU:72:ARG:HG3	2.08	0.53
19:AV:61:TYR:HD1	19:AV:66:MET:HE1	1.74	0.53
21:AX:10:ARG:HG3	21:AX:10:ARG:NH1	2.23	0.53
50:B4:55:ARG:HG2	50:B4:56:VAL:N	2.24	0.53
25:BA:1078:U:H1'	25:BA:1088:A:H2	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1464:C:O2'	25:BA:1528:A:H8	1.86	0.53
25:BA:1680:U:H2'	25:BA:1681:G:O4'	2.08	0.53
25:BA:633:A:H2'	25:BA:634:C:H5'	1.91	0.53
25:BA:654(N):G:H2'	25:BA:654(O):G:C8	2.43	0.53
29:BF:107:LYS:HD2	29:BF:206:ILE:HA	1.91	0.53
31:BH:83:TYR:HB3	31:BH:135:GLY:O	2.09	0.53
31:BH:12:PRO:HG3	31:BH:48:GLY:CA	2.38	0.53
32:BK:71:ILE:HD11	32:BK:107:VAL:HG22	1.91	0.53
35:BO:134:ALA:O	35:BO:138:LEU:HB2	2.08	0.53
36:BP:138:ASP:OD1	36:BP:138:ASP:N	2.41	0.53
36:BP:30:GLY:HA2	36:BP:107:ALA:HB2	1.89	0.53
44:BU:30:VAL:HG22	44:BU:37:VAL:HG12	1.90	0.53
1:CA:1049:U:H4'	1:CA:1050:G:O5'	2.07	0.53
1:CA:1058:G:C6	1:CA:1059:C:N3	2.77	0.53
1:CA:1162:C:H42	1:CA:1174:G:H1	1.57	0.53
1:CA:436:C:H2'	1:CA:437:U:H6	1.74	0.53
1:CA:711:G:O2'	1:CA:712:A:H5'	2.08	0.53
1:CA:82:U:O2	1:CA:87:A:C2	2.60	0.53
22:CB:21:A:C2	22:CB:55:U:H5	2.24	0.53
4:CG:18:LYS:HD3	4:CG:20:TYR:CE2	2.43	0.53
1:CA:1218:C:P	14:CQ:9:LYS:HZ1	2.29	0.53
50:D4:62:ARG:HD2	50:D4:62:ARG:N	2.23	0.53
52:D6:52:VAL:HG22	52:D6:53:LYS:N	2.18	0.53
54:D8:22:VAL:O	54:D8:49:VAL:HB	2.09	0.53
25:DA:1314:C:C2	25:DA:1339:G:N2	2.77	0.53
25:DA:1728:G:C6	25:DA:1730:U:OP2	2.62	0.53
25:DA:2119:A:N6	25:DA:2170:A:H62	2.06	0.53
25:DA:228:A:H2'	25:DA:230:U:O4'	2.08	0.53
25:DA:2512:C:H2'	25:DA:2513:G:O4'	2.08	0.53
25:DA:2872:G:C2	25:DA:2873:A:N6	2.76	0.53
25:DA:603:A:C2	25:DA:655:A:C2	2.96	0.53
25:DA:686:G:N2	25:DA:788:A:H61	2.07	0.53
32:DK:7:GLU:HA	32:DK:15:VAL:HG22	1.90	0.53
33:DM:65:LYS:O	33:DM:67:LEU:N	2.40	0.53
35:DO:99:LEU:HD12	35:DO:102:ARG:HH12	1.73	0.53
43:DT:63:LYS:HA	43:DT:72:LYS:HA	1.91	0.53
1:AA:24:U:H2'	1:AA:25:C:C6	2.43	0.53
1:AA:700:G:H4'	1:AA:704:A:H1'	1.91	0.53
2:AE:12:GLU:C	2:AE:14:GLY:H	2.12	0.53
17:AT:65:ILE:HG21	17:AT:69:LYS:HE3	1.91	0.53
25:BA:2330:G:H21	46:B3:42:GLY:HA2	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:112:PRO:CB	50:B4:37:SER:H	2.02	0.53
25:BA:1593:G:H2'	25:BA:1594:G:C8	2.43	0.53
25:BA:2141:G:O6	25:BA:2150:U:C2	2.62	0.53
25:BA:2212:A:N3	25:BA:2215:G:N1	2.56	0.53
25:BA:372:G:O2'	25:BA:373:U:OP2	2.26	0.53
31:BH:67:LEU:O	31:BH:71:LEU:HB2	2.08	0.53
47:BZ:85:LEU:HA	47:BZ:87:PRO:HD2	1.91	0.53
1:CA:1028:C:N4	1:CA:1028(A):C:N3	2.57	0.53
1:CA:1086:U:H3	1:CA:1099:G:H22	1.56	0.53
1:CA:115:G:H4'	1:CA:116:A:O5'	2.08	0.53
1:CA:1272:G:H2'	1:CA:1273:G:O4'	2.07	0.53
1:CA:485:G:H2'	1:CA:486:U:OP2	2.07	0.53
1:CA:812:C:O2'	1:CA:813:U:OP2	2.20	0.53
9:CL:9:ARG:HA	9:CL:13:ALA:O	2.08	0.53
11:CN:57:THR:HG22	11:CN:59:TYR:N	2.23	0.53
14:CQ:15:LYS:HG2	14:CQ:16:PHE:CE2	2.43	0.53
25:DA:2820:A:O5'	37:D0:4:LEU:HD23	2.08	0.53
51:D5:46:CYS:SG	51:D5:48:GLU:HG2	2.48	0.53
25:DA:125:G:H4'	25:DA:126:A:OP2	2.08	0.53
25:DA:1386:C:OP2	25:DA:1396:U:H5	1.92	0.53
25:DA:2593:U:H2'	25:DA:2594:C:C6	2.44	0.53
25:DA:617:G:OP1	29:DF:40:GLN:HG3	2.09	0.53
25:DA:444:C:H4'	29:DF:49:ALA:HB2	1.91	0.53
30:DG:15:VAL:HG13	30:DG:175:LEU:HB2	1.91	0.53
33:DM:126:PRO:O	33:DM:127:ASP:HB2	2.07	0.53
43:DT:5:TYR:HB3	48:DW:33:MET:HB2	1.89	0.53
1:AA:164:U:H2'	1:AA:165:C:C6	2.44	0.53
1:AA:49:U:H1'	1:AA:50:A:OP1	2.09	0.53
2:AE:105:PHE:HA	2:AE:108:ILE:HG22	1.91	0.53
3:AF:11:ARG:O	3:AF:13:GLY:N	2.41	0.53
3:AF:150:LYS:HB3	3:AF:201:TYR:HB2	1.91	0.53
4:AG:173:TRP:CD1	4:AG:189:PRO:HG3	2.44	0.53
6:AI:16:GLN:CD	6:AI:16:GLN:H	2.11	0.53
1:AA:191:G:N3	20:AW:105:SER:HB2	2.24	0.53
51:B5:56:LYS:HD2	51:B5:56:LYS:N	2.24	0.53
25:BA:2086:U:H2'	25:BA:2087:G:C8	2.44	0.53
25:BA:2135:A:O2'	25:BA:2136:C:P	2.66	0.53
25:BA:2136:C:C2	25:BA:2137:C:H1'	2.43	0.53
25:BA:270(G):C:H2'	25:BA:270(H):C:C6	2.44	0.53
25:BA:279:C:H42	25:BA:361:G:H1	1.54	0.53
28:BE:24:THR:HG21	28:BE:188:VAL:HG13	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:139:LEU:H	30:BG:139:LEU:HD12	1.74	0.53
30:BG:110:ALA:HA	30:BG:140:ILE:O	2.09	0.53
33:BM:46:VAL:O	33:BM:47:ALA:HB3	2.08	0.53
39:BR:53:ARG:CZ	39:BR:53:ARG:HB3	2.39	0.53
1:CA:160:A:H2'	1:CA:161:A:O4'	2.08	0.53
1:CA:243:A:H1'	1:CA:244:U:OP2	2.08	0.53
1:CA:495:A:H4'	1:CA:496:A:OP1	2.08	0.53
1:CA:631:G:H3'	1:CA:632:A:C8	2.43	0.53
1:CA:851:G:H2'	1:CA:852:G:H8	1.72	0.53
22:CB:52:G:O2'	22:CB:53:A:H5'	2.08	0.53
2:CE:233:SER:CB	2:CE:234:PRO:CD	2.85	0.53
4:CG:9:CYS:HA	4:CG:12:CYS:CB	2.38	0.53
5:CH:83:GLU:HG2	5:CH:88:LYS:CD	2.39	0.53
7:CJ:23:VAL:HG12	7:CJ:43:PHE:HE2	1.70	0.53
7:CJ:79:ARG:HA	7:CJ:84:ASN:HA	1.89	0.53
1:CA:973:G:H1'	10:CM:55:LYS:HE3	1.89	0.53
10:CM:6:ILE:O	10:CM:6:ILE:HD12	2.07	0.53
18:CU:30:ASP:C	18:CU:32:ARG:H	2.11	0.53
20:CW:100:ILE:CD1	20:CW:100:ILE:H	2.21	0.53
40:D1:110:VAL:O	40:D1:114:LYS:HG2	2.09	0.53
25:DA:987:G:O2'	25:DA:1000:A:N3	2.39	0.53
25:DA:1397:U:O2'	25:DA:1398:C:O5'	2.25	0.53
25:DA:1784:A:H4'	25:DA:1785:A:C5'	2.39	0.53
25:DA:213:A:H5''	25:DA:214:G:OP2	2.09	0.53
25:DA:2282:G:H4'	25:DA:2389:G:O2'	2.08	0.53
25:DA:2752:C:O4'	25:DA:2752:C:OP2	2.26	0.53
28:DE:37:ARG:HD3	28:DE:42:ASP:CG	2.29	0.53
30:DG:37:VAL:HG22	30:DG:159:VAL:HG12	1.90	0.53
35:DO:69:GLY:C	35:DO:70:GLN:OE1	2.46	0.53
36:DP:35:VAL:HG21	45:DV:81:ARG:HH21	1.74	0.53
39:DR:53:ARG:HG3	39:DR:53:ARG:O	2.07	0.53
44:DU:20:TYR:CD1	44:DU:20:TYR:N	2.76	0.53
1:AA:1152:A:H5'	10:AM:13:HIS:ND1	2.23	0.53
2:AE:218:ALA:O	2:AE:222:ILE:HG13	2.09	0.53
2:AE:22:LYS:C	2:AE:24:TRP:H	2.11	0.53
4:AG:61:LYS:HD2	4:AG:207:TYR:OH	2.09	0.53
41:B2:22:VAL:HG12	41:B2:23:GLU:N	2.24	0.53
25:BA:1542:G:OP2	25:BA:1543:A:O2'	2.25	0.53
25:BA:1558:A:H1'	25:BA:1559:G:OP2	2.09	0.53
25:BA:471:A:O5'	25:BA:471:A:H8	1.92	0.53
25:BA:488:G:H1'	25:BA:492:A:N6	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:546:C:H3'	25:BA:547:A:H8	1.74	0.53
25:BA:886:C:H2'	25:BA:887:A:O4'	2.09	0.53
32:BK:74:ASN:OD1	32:BK:75:LEU:HD13	2.09	0.53
42:BS:69:LEU:HA	42:BS:108:GLY:O	2.08	0.53
25:BA:329:G:P	44:BU:71:LYS:HE3	2.49	0.53
45:BV:150:LEU:HB3	45:BV:171:ILE:HG22	1.90	0.53
32:BK:27:ARG:HD2	47:BZ:71:TYR:CE1	2.44	0.53
1:CA:1119:C:OP2	9:CL:9:ARG:NH2	2.42	0.53
1:CA:1127:G:O6	1:CA:1145:C:N4	2.42	0.53
1:CA:1226:C:H4'	19:CV:80:TYR:OH	2.08	0.53
1:CA:838:G:N2	1:CA:849:C:C2	2.77	0.53
2:CE:82:ARG:HD2	2:CE:92:TYR:HE1	1.73	0.53
4:CG:31:CYS:C	4:CG:33:MET:N	2.62	0.53
8:CK:20:TYR:HE2	8:CK:75:ARG:HD2	1.73	0.53
13:CP:79:LYS:O	13:CP:82:MET:HB3	2.08	0.53
1:CA:191:G:H1'	20:CW:104:LEU:O	2.08	0.53
25:DA:2839:G:H5'	37:D0:46:GLY:CA	2.38	0.53
25:DA:1171:G:H2'	25:DA:1171:G:OP2	2.09	0.53
25:DA:71:A:C2	43:DT:31:HIS:CE1	2.97	0.53
27:DD:68:LYS:O	27:DD:68:LYS:HG3	2.08	0.53
28:DE:203:LYS:O	28:DE:204:ALA:HB3	2.08	0.53
28:DE:47:VAL:HG21	28:DE:86:PRO:HD2	1.91	0.53
35:DO:19:VAL:HG23	35:DO:27:HIS:HB3	0.74	0.53
25:DA:2482:G:N2	36:DP:56:ARG:HH12	2.07	0.53
36:DP:78:PRO:O	36:DP:79:LEU:CG	2.57	0.53
43:DT:18:TYR:O	43:DT:20:GLY:N	2.41	0.53
1:AA:255:G:H1'	17:AT:16:GLN:NE2	2.19	0.53
22:AB:57:C:C2	22:AB:68:A:H1'	2.44	0.53
1:AA:35:G:N2	12:AO:115:SER:OG	2.37	0.53
52:B6:20:ASN:O	52:B6:21:TYR:HB2	2.07	0.53
25:BA:1341:U:O4'	43:BT:57:LEU:HD23	2.09	0.53
25:BA:1533:C:H5'	25:BA:1534:G:OP2	2.09	0.53
25:BA:2472:G:H22	25:BA:2477:C:H5''	1.72	0.53
25:BA:2695:C:H2'	25:BA:2696:U:C6	2.44	0.53
25:BA:566:U:O4	41:B2:78:LYS:HD3	2.09	0.53
28:BE:167:VAL:HG21	28:BE:187:ALA:CB	2.39	0.53
29:BF:32:LEU:CD2	29:BF:105:VAL:HG13	2.39	0.53
29:BF:160:ASN:OD1	29:BF:163:VAL:HG23	2.08	0.53
29:BF:46:ARG:NH1	29:BF:46:ARG:CG	2.66	0.53
26:BB:43:C:P	30:BG:67:LYS:HZ2	2.32	0.53
32:BK:47:LEU:HA	32:BK:50:ARG:HB2	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BM:120:LEU:HD22	33:BM:120:LEU:C	2.29	0.53
35:BO:9:ASN:O	35:BO:10:PRO:C	2.47	0.53
36:BP:58:PHE:O	36:BP:58:PHE:HD1	1.91	0.53
39:BR:110:ILE:HG23	39:BR:111:ARG:HD3	1.90	0.53
44:BU:20:TYR:CE1	44:BU:42:VAL:HA	2.44	0.53
44:BU:68:HIS:ND1	44:BU:70:SER:HB3	2.24	0.53
25:BA:2213:U:O4'	47:BZ:52:ARG:NH2	2.41	0.53
22:CD:23:A:H2'	22:CD:24:G:O4'	2.08	0.53
22:CD:67:A:H4'	22:CD:68:A:OP1	2.08	0.53
4:CG:127:THR:HG21	4:CG:149:ALA:CB	2.38	0.53
50:D4:34:GLU:O	50:D4:36:CYS:N	2.41	0.53
25:DA:653:A:H4'	25:DA:654:A:OP2	2.09	0.53
27:DD:270:ILE:O	27:DD:271:ILE:HG13	2.09	0.53
28:DE:1:MET:H1	28:DE:84:PHE:HB2	1.73	0.53
28:DE:62:PRO:C	28:DE:64:LYS:H	2.10	0.53
39:DR:88:ILE:HG21	39:DR:91:ARG:NH2	2.23	0.53
1:AA:1004:A:H2	1:AA:1024:G:C8	2.26	0.53
1:AA:1132:C:H2'	1:AA:1133:G:H8	1.73	0.53
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.08	0.53
1:AA:1502:A:C2	1:AA:1505:G:N2	2.72	0.53
22:AB:16:C:H2'	22:AB:18:G:OP2	2.09	0.53
2:AE:127:ILE:HD11	2:AE:139:LYS:HE3	1.89	0.53
2:AE:25:ASN:ND2	2:AE:193:ASP:HB3	2.24	0.53
1:AA:624:C:H4'	16:AS:10:GLY:HA2	1.91	0.53
20:AW:10:LEU:O	20:AW:10:LEU:HD23	2.08	0.53
20:AW:58:LYS:HE3	20:AW:62:LEU:HD11	1.91	0.53
40:B1:86:ALA:HB3	40:B1:88:ILE:HG12	1.91	0.53
54:B8:39:LYS:HA	54:B8:42:ARG:NH2	2.24	0.53
25:BA:414:C:H1'	25:BA:1864:U:H1'	1.90	0.53
25:BA:2015:A:C1'	51:B5:2:ALA:HB2	2.39	0.53
25:BA:2055:C:H5'	25:BA:2056:G:OP1	2.09	0.53
25:BA:2137:C:N3	25:BA:2154:G:N2	2.49	0.53
25:BA:2481:G:HO2'	25:BA:2482:G:H8	1.57	0.53
25:BA:2572:A:N7	28:BE:145:LYS:HB2	2.24	0.53
26:BB:41:U:C5	30:BG:69:ALA:HB1	2.42	0.53
1:CA:1366:C:H2'	1:CA:1367:C:H6	1.73	0.53
1:CA:192:U:H2'	1:CA:193:C:C6	2.42	0.53
22:CB:51:C:C6	22:CB:51:C:OP2	2.62	0.53
2:CE:103:THR:HA	2:CE:180:LEU:HD11	1.91	0.53
7:CJ:113:GLU:HB2	7:CJ:119:ARG:HG3	1.90	0.53
1:CA:1349:A:P	9:CL:118:LYS:NZ	2.81	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CU:67:ALA:O	18:CU:71:LYS:HG3	2.08	0.53
40:D1:98:LEU:C	40:D1:100:VAL:N	2.59	0.53
25:DA:1011:G:N2	25:DA:1150:C:N3	2.55	0.53
25:DA:1342:A:N1	25:DA:1397:U:N3	2.56	0.53
25:DA:185:U:H4'	25:DA:218:A:H4'	1.91	0.53
25:DA:2563:U:H4'	34:DN:28:SER:HA	1.91	0.53
25:DA:312:G:C8	25:DA:312:G:OP2	2.61	0.53
25:DA:2513:G:N2	28:DE:143:ASN:HD21	2.06	0.53
28:DE:58:ARG:O	28:DE:59:VAL:C	2.47	0.53
35:DO:39:LYS:HD3	35:DO:45:LEU:HD22	1.91	0.53
25:DA:2467:C:H4'	36:DP:123:HIS:CG	2.43	0.53
47:DZ:23:LYS:CD	47:DZ:28:GLY:HA3	2.39	0.53
2:AE:22:LYS:O	2:AE:24:TRP:HD1	1.92	0.53
5:AH:34:VAL:O	5:AH:41:VAL:HA	2.09	0.53
10:AM:54:PHE:CZ	10:AM:55:LYS:NZ	2.68	0.53
40:B1:104:GLN:OE1	40:B1:105:VAL:HG23	2.09	0.53
41:B2:44:LYS:HG2	41:B2:45:THR:H	1.73	0.53
25:BA:1164:G:H2'	25:BA:1165:U:H6	1.73	0.53
25:BA:1535:U:N3	25:BA:1536:A:H3'	2.24	0.53
25:BA:2473:U:O2	25:BA:2473:U:C2'	2.56	0.53
25:BA:2695:C:H2'	25:BA:2696:U:H6	1.74	0.53
25:BA:535:C:O3'	40:B1:53:ARG:NH1	2.42	0.53
25:BA:557:U:H2'	25:BA:558:G:C8	2.44	0.53
39:BR:94:ALA:O	39:BR:95:ARG:CB	2.57	0.53
45:BV:130:PRO:O	45:BV:133:ILE:HG13	2.09	0.53
49:BX:32:GLN:HE21	49:BX:32:GLN:HA	1.73	0.53
1:CA:979:C:H3'	1:CA:980:C:C5'	2.34	0.53
22:CD:12:C:H2'	22:CD:13:G:O4'	2.09	0.53
2:CE:147:LYS:NZ	2:CE:147:LYS:HB2	2.23	0.53
4:CG:8:VAL:HG13	4:CG:21:LEU:HD22	1.90	0.53
9:CL:111:ARG:CG	9:CL:112:LYS:H	2.05	0.53
17:CT:67:LYS:O	17:CT:69:LYS:N	2.41	0.53
40:D1:97:ASP:OD2	40:D1:101:ARG:HD3	2.09	0.53
54:D8:22:VAL:H	54:D8:50:LEU:HD13	1.74	0.53
25:DA:1025:G:H8	25:DA:1025:G:OP1	1.92	0.53
25:DA:1060:U:C1'	25:DA:1062:G:H5'	2.39	0.53
25:DA:1142:U:H2'	25:DA:1142:U:O2	2.09	0.53
25:DA:1847:A:H3'	25:DA:1848:A:H5'	1.91	0.53
25:DA:2552:U:C2	25:DA:2554:U:H5''	2.44	0.53
25:DA:2689:U:H5''	25:DA:2713:A:H2	1.73	0.53
25:DA:2872:G:N9	25:DA:2873:A:C2	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:67:U:O4	25:DA:74:A:N1	2.41	0.53
25:DA:847:U:H3'	25:DA:847:U:H6	1.74	0.53
25:DA:877:U:H4'	25:DA:878:A:OP2	2.09	0.53
26:DB:15:A:H5'	26:DB:16:G:C8	2.44	0.53
26:DB:87:G:H3'	26:DB:88:C:C5'	2.37	0.53
34:DN:115:VAL:HG12	34:DN:121:VAL:HG21	1.89	0.53
36:DP:10:ARG:HA	36:DP:10:ARG:HE	1.73	0.53
26:DB:48:A:H4'	38:DQ:95:HIS:CD2	2.44	0.53
45:DV:107:THR:H	45:DV:108:PRO:CD	2.19	0.53
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.08	0.52
1:AA:160:A:H61	1:AA:347:G:H1'	1.73	0.52
1:AA:221:C:C2'	1:AA:222:U:H5'	2.39	0.52
1:AA:297:G:H4'	1:AA:557:G:H4'	1.91	0.52
1:AA:820:U:H4'	1:AA:821:G:OP2	2.09	0.52
22:AB:28:G:N2	22:AB:45:C:O2	2.42	0.52
11:AN:54:ARG:NH2	22:AD:40:U:O3'	2.40	0.52
10:AM:6:ILE:HG12	10:AM:72:VAL:O	2.08	0.52
12:AO:55:VAL:O	12:AO:62:GLU:HA	2.09	0.52
13:AP:93:ARG:NH1	25:BA:888:C:H41	2.06	0.52
20:AW:35:THR:O	20:AW:38:LYS:HB2	2.09	0.52
25:BA:1162:G:H21	41:B2:89:GLN:HE22	1.58	0.52
54:B8:34:TRP:H	54:B8:35:GLN:CA	2.21	0.52
54:B8:36:LYS:O	54:B8:37:SER:O	2.26	0.52
25:BA:1061:U:O2'	25:BA:1070:A:O4'	2.18	0.52
25:BA:1187:G:H5''	41:B2:81:TYR:CE2	2.44	0.52
25:BA:1545(A):A:C2'	25:BA:1546:C:H5'	2.40	0.52
25:BA:2163:C:C5	25:BA:2164:C:H5	2.28	0.52
25:BA:330:A:H2	25:BA:1210:A:C2'	2.20	0.52
25:BA:587:C:H4'	25:BA:588:U:O5'	2.08	0.52
25:BA:1805:U:O2	27:BD:50:THR:HB	2.09	0.52
28:BE:116:VAL:O	28:BE:117:MET:CB	2.58	0.52
25:BA:2638:G:P	28:BE:82:ARG:NH2	2.82	0.52
33:BM:39:ARG:NH1	33:BM:41:ASP:OD1	2.42	0.52
36:BP:12:GLN:HG2	36:BP:73:PRO:HD2	1.91	0.52
45:BV:53:ILE:HG22	45:BV:71:VAL:HG22	1.90	0.52
45:BV:7:ALA:HB2	45:BV:59:LEU:CD2	2.38	0.52
1:CA:1002:G:C6	1:CA:1003:G:C6	2.97	0.52
1:CA:1200:C:O2	1:CA:1200:C:C2'	2.56	0.52
1:CA:1346:A:C1'	1:CA:1347:G:OP2	2.58	0.52
1:CA:1497:G:H2'	1:CA:1498:U:H5'	1.90	0.52
9:CL:114:TYR:C	9:CL:116:LYS:H	2.12	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CL:71:SER:HA	9:CL:74:ILE:HD12	1.92	0.52
1:CA:1320:C:O2	19:CV:72:GLY:HA3	2.08	0.52
25:DA:1543:A:H2'	25:DA:1544:C:H3'	1.91	0.52
29:DF:21:ALA:HB3	29:DF:23:ASP:OD2	2.09	0.52
29:DF:4:VAL:HA	29:DF:19:GLU:HB3	1.91	0.52
34:DN:88:ASN:O	34:DN:91:LEU:N	2.40	0.52
38:DQ:26:LEU:HD22	38:DQ:87:PHE:CD1	2.44	0.52
25:DA:71:A:H2	43:DT:31:HIS:CE1	2.27	0.52
49:DX:18:ASP:N	49:DX:18:ASP:OD1	2.42	0.52
24:A1:12:A:N3	24:A1:12:A:H2'	2.24	0.52
24:A1:12:A:HO2'	24:A1:13:A:P	2.31	0.52
24:A1:13:A:HO2'	24:A1:14:A:P	2.17	0.52
1:AA:1024:G:H2'	1:AA:1025:U:C6	2.44	0.52
1:AA:1139:G:H1	1:AA:1144:G:H22	1.57	0.52
1:AA:383:A:H8	1:AA:383:A:O5'	1.93	0.52
1:AA:448:A:OP2	1:AA:485:G:N2	2.34	0.52
1:AA:589:C:H2'	1:AA:590:C:H6	1.75	0.52
22:AD:46:G:H2'	22:AD:47:U:C6	2.44	0.52
5:AH:51:VAL:HB	5:AH:52:PRO:HD3	1.90	0.52
9:AL:97:LYS:N	9:AL:98:PRO:HD2	2.24	0.52
12:AO:44:LYS:O	12:AO:46:ASN:N	2.42	0.52
25:BA:1228:G:OP1	40:B1:13:LYS:HE3	2.09	0.52
41:B2:38:LEU:H	41:B2:51:VAL:HG13	1.72	0.52
50:B4:49:PHE:O	50:B4:50:VAL:HG12	2.08	0.52
54:B8:34:TRP:N	54:B8:35:GLN:CA	2.72	0.52
25:BA:1727:U:H2'	25:BA:1728:G:O4'	2.09	0.52
25:BA:1786:A:H1'	25:BA:1938:A:N6	2.24	0.52
25:BA:1932:A:H2'	25:BA:1933:G:O4'	2.09	0.52
25:BA:2688:U:O5'	25:BA:2688:U:O2	2.27	0.52
25:BA:484:C:H2'	25:BA:485:C:C6	2.45	0.52
25:BA:67:U:C2	25:BA:74:A:H2	2.27	0.52
25:BA:830:G:H4'	25:BA:831:G:OP2	2.10	0.52
25:BA:917:A:H2'	25:BA:918:A:C5'	2.39	0.52
30:BG:56:ALA:HB2	30:BG:153:ARG:HE	1.74	0.52
36:BP:21:THR:HB	36:BP:99:PRO:O	2.09	0.52
36:BP:43:THR:HG22	36:BP:94:VAL:HG12	1.90	0.52
45:BV:5:LEU:HB3	45:BV:59:LEU:HA	1.90	0.52
1:CA:1015:A:H2'	1:CA:1016:A:C8	2.44	0.52
1:CA:1024:G:H2'	1:CA:1025:U:C6	2.44	0.52
1:CA:956:U:C2	1:CA:1225:A:H2	2.28	0.52
1:CA:187:C:O2	1:CA:191(A):G:C6	2.63	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:946:A:H2'	1:CA:947:G:C8	2.45	0.52
22:CD:20:C:H5''	22:CD:68:A:H62	1.74	0.52
1:CA:1076:C:P	2:CE:175:ARG:HH12	2.32	0.52
1:CA:1206:G:O4'	3:CF:194:GLY:N	2.42	0.52
6:CI:77:ARG:HB3	6:CI:77:ARG:NH1	2.24	0.52
13:CP:4:ILE:HG23	13:CP:5:ALA:N	2.19	0.52
17:CT:3:LYS:HB3	17:CT:61:GLU:HB3	1.91	0.52
25:DA:274:G:C6	25:DA:275:G:C6	2.96	0.52
28:DE:137:HIS:HB3	28:DE:138:PRO:HD2	1.91	0.52
30:DG:128:ARG:HH21	30:DG:128:ARG:HG2	1.73	0.52
30:DG:43:LEU:C	30:DG:45:GLU:H	2.12	0.52
35:DO:144:GLU:N	35:DO:144:GLU:OE1	2.42	0.52
44:DU:89:PHE:O	44:DU:90:LEU:C	2.47	0.52
45:DV:100:VAL:O	45:DV:124:ILE:HG22	2.09	0.52
1:AA:1181:G:O2'	1:AA:1184:G:H5'	2.09	0.52
22:AB:52:G:OP2	22:AB:52:G:H8	1.92	0.52
2:AE:53:ARG:HA	2:AE:56:ARG:NH1	2.24	0.52
6:AI:3:ARG:HB3	6:AI:93:SER:HB2	1.91	0.52
15:AR:82:ILE:HD11	15:AR:88:ARG:HG3	1.90	0.52
25:BA:1130:U:O2'	25:BA:1131:G:P	2.67	0.52
25:BA:1404:C:O2'	25:BA:1405:U:H5'	2.10	0.52
25:BA:2199:A:H5'	47:BZ:50:ARG:HH21	1.74	0.52
25:BA:2210:G:C3'	25:BA:2211:G:N7	2.70	0.52
25:BA:2402:C:H5	25:BA:2415:G:N2	2.05	0.52
25:BA:2611:U:OP2	25:BA:2611:U:H6	1.92	0.52
25:BA:50:U:H3'	25:BA:51:G:H5'	1.90	0.52
27:BD:35:LYS:CE	27:BD:104:TYR:CD1	2.92	0.52
27:BD:28:GLU:CB	27:BD:29:PRO:CD	2.76	0.52
28:BE:61:ARG:CB	28:BE:62:PRO:HD3	2.37	0.52
38:BQ:52:SER:HB2	38:BQ:55:ALA:H	1.75	0.52
38:BQ:87:PHE:CE2	38:BQ:89:ARG:HB2	2.44	0.52
43:BT:41:ASN:ND2	43:BT:41:ASN:H	2.06	0.52
44:BU:96:ILE:HG22	44:BU:101:LYS:HG2	1.90	0.52
44:BU:96:ILE:HG12	44:BU:99:CYS:H	1.74	0.52
1:CA:1004:A:OP1	1:CA:1025:U:O4	2.28	0.52
1:CA:1029:G:O2'	1:CA:1031:G:OP2	2.26	0.52
1:CA:1069:C:O2'	1:CA:1192:C:H1'	2.09	0.52
1:CA:1329:A:C2'	1:CA:1330:U:H5'	2.39	0.52
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.44	0.52
1:CA:201:C:C4'	1:CA:208:U:OP1	2.56	0.52
1:CA:824:C:H1'	8:CK:1:MET:HE2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CW:10:LEU:HD22	20:CW:11:SER:H	1.75	0.52
40:D1:48:ALA:O	40:D1:52:ARG:HG3	2.09	0.52
41:D2:35:LEU:H	41:D2:35:LEU:CD2	2.22	0.52
54:D8:16:ILE:HD11	54:D8:60:LEU:HD12	1.92	0.52
25:DA:270(R):G:H2'	25:DA:270(S):G:H8	1.74	0.52
25:DA:91:A:H2'	25:DA:92:G:H5'	1.90	0.52
25:DA:2572:A:N7	28:DE:145:LYS:HB2	2.25	0.52
28:DE:112:GLY:O	28:DE:159:HIS:HA	2.10	0.52
29:DF:128:ALA:O	29:DF:142:TRP:NE1	2.38	0.52
29:DF:132:VAL:HG13	29:DF:133:ASN:N	2.24	0.52
30:DG:7:LEU:O	30:DG:7:LEU:HD23	2.09	0.52
35:DO:105:LEU:HD13	35:DO:105:LEU:O	2.08	0.52
3:AF:162:GLN:NE2	24:A1:23:A:H8	2.08	0.52
1:AA:419:C:O2	1:AA:419:C:H2'	2.10	0.52
1:AA:491:G:H2'	1:AA:492:G:O4'	2.09	0.52
1:AA:502:G:OP1	12:AO:115:SER:HB3	2.09	0.52
3:AF:3:ASN:O	3:AF:4:LYS:HG2	2.09	0.52
8:AK:11:THR:HG22	8:AK:15:ASN:ND2	2.24	0.52
8:AK:81:HIS:HB2	8:AK:138:TRP:CE3	2.44	0.52
16:AS:5:ARG:HE	16:AS:22:THR:HG21	1.74	0.52
37:B0:30:THR:HG22	37:B0:31:HIS:CE1	2.44	0.52
25:BA:1291:C:H2'	25:BA:1292:U:C6	2.45	0.52
25:BA:1820:U:H4'	25:BA:1821:A:OP2	2.10	0.52
25:BA:2591:C:OP1	27:BD:239:ARG:CG	2.51	0.52
25:BA:1783:A:H5'	25:BA:2608:G:H4'	1.91	0.52
25:BA:2808:U:H2'	25:BA:2809:A:H8	1.75	0.52
25:BA:811:U:P	35:BO:21:ARG:O	2.67	0.52
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.44	0.52
1:CA:1224:G:H1	1:CA:1322:C:HO2'	1.56	0.52
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.45	0.52
1:CA:197:A:H8	1:CA:198:G:C1'	2.21	0.52
3:CF:40:ARG:NH1	3:CF:40:ARG:HB2	2.24	0.52
5:CH:48:ALA:HB1	5:CH:49:PRO:HD2	1.91	0.52
6:CI:69:GLU:O	6:CI:72:VAL:HG12	2.09	0.52
9:CL:112:LYS:HD3	9:CL:112:LYS:C	2.30	0.52
10:CM:78:ASN:ND2	10:CM:80:LYS:HB3	2.23	0.52
14:CQ:21:TYR:OH	14:CQ:23:ARG:NH2	2.42	0.52
37:D0:75:LEU:O	37:D0:75:LEU:HD22	2.10	0.52
25:DA:1171:G:H4'	25:DA:1173:G:OP1	2.09	0.52
25:DA:1757:U:C2	25:DA:1762:A:N1	2.77	0.52
25:DA:2567:G:H2'	25:DA:2568:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2702:U:C2'	25:DA:2703:C:H5	2.23	0.52
28:DE:36:ARG:O	28:DE:37:ARG:C	2.47	0.52
33:DM:111:PRO:HA	33:DM:114:ARG:CZ	2.39	0.52
1:AA:1003:G:C2'	1:AA:1004:A:H5''	2.37	0.52
1:AA:1024:G:H4'	1:AA:1024:G:OP1	2.08	0.52
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.09	0.52
1:AA:250:A:H4'	1:AA:251:G:C5'	2.40	0.52
1:AA:31:G:C1'	1:AA:32:A:OP1	2.58	0.52
22:AB:21:A:C2	22:AB:56:U:C2	2.97	0.52
2:AE:162:ILE:H	2:AE:162:ILE:HD13	1.74	0.52
1:AA:1112:C:O2	3:AF:179:ARG:HG2	2.10	0.52
3:AF:60:ALA:N	3:AF:63:ASN:HB3	2.19	0.52
5:AH:42:GLY:HA3	5:AH:66:MET:CE	2.38	0.52
52:B6:52:VAL:HG22	52:B6:53:LYS:HG3	1.92	0.52
25:BA:1025:G:C4	25:BA:1135:C:H1'	2.44	0.52
25:BA:1049:C:H2'	25:BA:1050:A:C5'	2.38	0.52
25:BA:1476:C:O2'	25:BA:1477:A:H5'	2.08	0.52
25:BA:1509:C:C2'	25:BA:1510:A:OP1	2.57	0.52
25:BA:1869:G:C5'	25:BA:1869:G:H8	2.23	0.52
25:BA:2094:G:C2'	25:BA:2095:C:H5'	2.39	0.52
25:BA:2308:G:N1	25:BA:2311:A:C2	2.66	0.52
25:BA:2807:G:C3'	25:BA:2808:U:H5''	2.39	0.52
30:BG:165:THR:OG1	30:BG:168:GLU:HG3	2.10	0.52
25:BA:2250:G:C6	36:BP:83:MET:HB2	2.45	0.52
45:BV:52:SER:C	45:BV:54:HIS:H	2.12	0.52
1:CA:1239:A:H4'	1:CA:1240:U:C5'	2.39	0.52
1:CA:1288:A:H1'	1:CA:1352:C:O2'	2.09	0.52
1:CA:1291:G:C6	1:CA:1292:U:C4	2.98	0.52
2:CE:69:LEU:HG	2:CE:91:PRO:HB2	1.92	0.52
3:CF:16:ARG:HH11	3:CF:16:ARG:HA	1.74	0.52
5:CH:102:ALA:HB1	5:CH:106:PRO:HG2	1.92	0.52
5:CH:13:ILE:HA	5:CH:29:GLY:O	2.10	0.52
7:CJ:97:GLN:HE21	7:CJ:101:LEU:HD11	1.73	0.52
12:CO:76:GLU:HG3	12:CO:77:HIS:CG	2.44	0.52
25:DA:1100:C:O2'	25:DA:1101:U:H5'	2.10	0.52
25:DA:1418:G:OP1	25:DA:1588:C:O2'	2.27	0.52
25:DA:1761:C:H5''	25:DA:1762:A:OP2	2.09	0.52
25:DA:228:A:H3'	25:DA:228:A:H8	1.74	0.52
25:DA:361:G:N2	25:DA:362:U:H1'	2.25	0.52
25:DA:405:U:O2	25:DA:405:U:H3'	2.09	0.52
26:DB:48:A:H4'	38:DQ:95:HIS:HD2	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DG:77:ILE:HB	30:DG:82:LEU:HD12	1.91	0.52
31:DH:103:LEU:HD23	31:DH:103:LEU:N	2.24	0.52
31:DH:136:ILE:HD12	31:DH:136:ILE:N	2.24	0.52
32:DK:10:GLU:OE1	32:DK:11:ASN:HB2	2.09	0.52
39:DR:16:ARG:HE	39:DR:19:LEU:CD1	2.21	0.52
1:AA:1113:C:H2'	1:AA:1114:C:H6	1.75	0.52
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.45	0.52
1:AA:413:G:H2'	1:AA:414:A:OP2	2.09	0.52
22:AB:20:C:O4'	22:AB:22:A:O4'	2.28	0.52
4:AG:158:ILE:HG22	4:AG:162:LEU:HD12	1.92	0.52
5:AH:11:ILE:HD12	5:AH:105:VAL:HG13	1.90	0.52
19:AV:65:ASN:HA	50:B4:56:VAL:HG22	1.92	0.52
50:B4:34:GLU:HG2	50:B4:35:VAL:N	2.24	0.52
25:BA:1108:U:C4	25:BA:1109:C:N4	2.78	0.52
25:BA:1609:A:O2'	25:BA:1610:A:H5'	2.09	0.52
25:BA:1728:G:N1	25:BA:1730:U:OP2	2.42	0.52
25:BA:1786:A:C4	25:BA:1938:A:C6	2.98	0.52
25:BA:34:C:O2'	25:BA:35:G:P	2.68	0.52
25:BA:463:G:N2	25:BA:466:A:OP2	2.36	0.52
25:BA:483:A:O2'	44:BU:59:GLY:HA2	2.10	0.52
25:BA:2636:U:OP1	28:BE:79:ARG:HD3	2.08	0.52
30:BG:37:VAL:O	30:BG:94:LEU:HD23	2.09	0.52
39:BR:60:THR:HG22	39:BR:77:PRO:HA	1.91	0.52
44:BU:77:PRO:O	44:BU:78:ALA:HB2	2.10	0.52
1:CA:1442:G:HO2'	1:CA:1443:G:P	2.33	0.52
1:CA:157:G:C2	1:CA:165:C:C2	2.98	0.52
2:CE:162:ILE:O	2:CE:185:ILE:HG12	2.10	0.52
5:CH:76:ILE:HG22	5:CH:78:HIS:H	1.75	0.52
9:CL:113:LYS:N	9:CL:113:LYS:HD2	2.25	0.52
17:CT:21:VAL:HG21	17:CT:59:ILE:HD11	1.91	0.52
25:DA:2817:G:P	37:D0:99:LYS:NZ	2.83	0.52
46:D3:27:GLU:HA	46:D3:67:VAL:HG12	1.90	0.52
25:DA:1543:A:H1'	25:DA:1545:A:C1'	2.39	0.52
25:DA:196:A:H2'	25:DA:196:A:N3	2.25	0.52
25:DA:289:A:H5'	25:DA:290:G:OP2	2.10	0.52
25:DA:925:C:H2'	25:DA:926:A:H5''	1.90	0.52
25:DA:971:C:H2'	25:DA:972:G:H5'	1.92	0.52
27:DD:242:ARG:H	27:DD:242:ARG:HD2	1.74	0.52
28:DE:101:ARG:C	28:DE:201:THR:OG1	2.47	0.52
28:DE:105:THR:HG21	28:DE:164:ARG:HE	1.72	0.52
28:DE:179:GLU:HB3	28:DE:181:LEU:HD22	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DG:4:ASP:O	30:DG:8:LYS:HD3	2.10	0.52
31:DH:107:VAL:CG1	31:DH:152:ARG:HG2	2.39	0.52
31:DH:86:GLU:HA	31:DH:132:ARG:HB3	1.91	0.52
35:DO:86:LYS:HB3	35:DO:118:GLY:HA3	1.91	0.52
25:DA:2404:C:O3'	35:DO:77:ARG:NH2	2.42	0.52
36:DP:109:VAL:HB	36:DP:113:GLN:HB3	1.91	0.52
44:DU:20:TYR:HD1	44:DU:20:TYR:N	2.08	0.52
44:DU:55:TYR:HB3	44:DU:56:PRO:HD2	1.91	0.52
1:AA:1016:A:O5'	1:AA:1016:A:H8	1.92	0.52
1:AA:1028(B):C:N4	1:AA:1032(A):G:H1	2.08	0.52
1:AA:1157:A:H1'	1:AA:1158:C:C2	2.45	0.52
1:AA:1281:U:O4'	1:AA:1281:U:O2	2.28	0.52
22:AB:13:G:H1'	22:AB:24:G:H1	1.75	0.52
23:AC:24:C:H2'	23:AC:25:U:H6	1.72	0.52
9:AL:24:GLY:HA2	9:AL:59:PHE:O	2.09	0.52
41:B2:66:ARG:CZ	41:B2:88:ARG:HD3	2.39	0.52
54:B8:23:VAL:CG1	54:B8:46:ARG:HD3	2.38	0.52
25:BA:2068:U:N3	25:BA:2430:A:H2	2.06	0.52
25:BA:2136:C:N4	25:BA:2155:G:N1	2.31	0.52
25:BA:2168:G:O2'	25:BA:2169:A:H5'	2.09	0.52
25:BA:2124:G:N2	25:BA:2174:C:N3	2.53	0.52
25:BA:2205:C:H42	25:BA:2219:G:H1	1.57	0.52
25:BA:2061:G:OP2	25:BA:2502:G:H5'	2.10	0.52
25:BA:2788:C:O2'	25:BA:2809:A:N3	2.39	0.52
25:BA:878:A:N1	25:BA:879:G:C2	2.78	0.52
25:BA:900:A:H5'	25:BA:901:A:OP2	2.09	0.52
25:BA:909:A:H2'	25:BA:912:C:C5	2.45	0.52
26:BB:80:U:O2'	26:BB:81:G:H5'	2.10	0.52
32:BK:129:THR:HA	32:BK:137:PRO:HA	1.91	0.52
35:BO:135:LEU:HD22	35:BO:139:LYS:HE2	1.92	0.52
38:BQ:69:VAL:HG13	38:BQ:101:LEU:HD22	1.91	0.52
39:BR:99:LEU:HB3	39:BR:101:PHE:HE1	1.75	0.52
45:BV:150:LEU:HD22	45:BV:171:ILE:HG21	1.91	0.52
1:CA:1025:U:O2	1:CA:1025:U:H2'	2.08	0.52
1:CA:1244:C:OP2	21:CX:9:ARG:HG2	2.10	0.52
1:CA:1279:A:H5''	1:CA:1280:A:P	2.48	0.52
1:CA:1321:C:O2	19:CV:77:THR:OG1	2.21	0.52
1:CA:1328:C:H2'	1:CA:1329:A:O4'	2.09	0.52
1:CA:920:U:H2'	1:CA:921:U:H6	1.75	0.52
2:CE:172:ILE:HD12	2:CE:172:ILE:N	2.22	0.52
2:CE:236:TYR:CB	2:CE:239:VAL:HB	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CG:105:VAL:HG13	4:CG:110:PHE:HB2	1.91	0.52
8:CK:51:VAL:HG11	8:CK:60:ARG:NH1	2.25	0.52
10:CM:58:ASP:O	10:CM:59:SER:C	2.48	0.52
13:CP:4:ILE:HG12	13:CP:5:ALA:N	2.25	0.52
17:CT:40:LYS:HD3	17:CT:42:TYR:CZ	2.45	0.52
54:D8:30:ARG:O	54:D8:31:HIS:C	2.48	0.52
25:DA:1860:G:H1	25:DA:1882:C:N4	2.04	0.52
25:DA:2181:G:H2'	25:DA:2182:G:H8	1.74	0.52
25:DA:2392:A:H2	25:DA:2424:C:N4	2.01	0.52
25:DA:1128:A:O4'	25:DA:2516:G:O2'	2.28	0.52
25:DA:2859:G:O2'	25:DA:2860:A:O5'	2.28	0.52
25:DA:290:G:H2'	25:DA:291:C:O4'	2.09	0.52
25:DA:709:U:H2'	25:DA:710:G:C8	2.45	0.52
32:DK:106:GLY:O	32:DK:108:THR:N	2.43	0.52
34:DN:14:THR:HG22	34:DN:52:VAL:HG23	1.92	0.52
35:DO:106:LEU:HD12	35:DO:106:LEU:C	2.29	0.52
35:DO:46:LYS:CD	35:DO:51:PHE:CZ	2.92	0.52
36:DP:126:PRO:O	36:DP:127:ILE:HG23	2.09	0.52
34:DN:120:GLU:HB2	39:DR:68:TYR:HE2	1.75	0.52
42:DS:13:SER:O	42:DS:16:LYS:HB2	2.09	0.52
45:DV:76:LEU:HD23	45:DV:76:LEU:N	2.22	0.52
1:AA:1004:A:P	1:AA:1025:U:C4	3.03	0.52
1:AA:538:G:OP2	12:AO:112:LYS:CG	2.58	0.52
1:AA:977:A:H1'	1:AA:982:U:O4	2.10	0.52
22:AD:14:A:C3'	22:AD:15:G:H5''	2.18	0.52
4:AG:194:LEU:HD22	4:AG:194:LEU:N	2.25	0.52
1:AA:1128:C:H5'	9:AL:16:ARG:HH22	1.73	0.52
10:AM:39:PRO:HB3	10:AM:70:ARG:HH12	1.71	0.52
12:AO:86:ARG:HD3	12:AO:88:LYS:CA	2.40	0.52
25:BA:1047:G:C6	25:BA:1110:G:N7	2.77	0.52
25:BA:1204:A:N1	25:BA:1241:A:C2	2.78	0.52
25:BA:1416:G:O2'	25:BA:1417:C:O4'	2.28	0.52
25:BA:1709:U:H2'	25:BA:1710:C:C6	2.45	0.52
31:BH:149:ARG:NH1	31:BH:154:PRO:HG3	2.24	0.52
31:BH:153:LYS:HG2	31:BH:162:ILE:HB	1.91	0.52
33:BM:28:THR:HG22	33:BM:29:LYS:N	2.23	0.52
48:BW:42:GLY:C	48:BW:44:LEU:H	2.13	0.52
1:CA:1292:U:H2'	1:CA:1293:G:C8	2.44	0.52
1:CA:1432:G:OP1	39:DR:107:ASP:HB2	2.09	0.52
1:CA:765:G:N2	1:CA:813:U:OP2	2.41	0.52
22:CB:13:G:C2	22:CB:23:A:N1	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CF:52:LEU:H	3:CF:52:LEU:CD2	2.21	0.52
7:CJ:73:MET:HA	7:CJ:91:VAL:HG23	1.92	0.52
13:CP:81:LEU:HD11	13:CP:88:ARG:NH1	2.25	0.52
37:D0:96:ARG:NH2	37:D0:117:VAL:HG23	2.25	0.52
40:D1:25:TRP:CD1	40:D1:26:GLY:N	2.77	0.52
25:DA:107:C:H2'	25:DA:108:U:H6	1.74	0.52
25:DA:1323:U:C2'	25:DA:1324:G:H5'	2.39	0.52
25:DA:1639:U:H2'	25:DA:1640:C:C5'	2.40	0.52
25:DA:2001:A:H2'	25:DA:2002:G:C8	2.45	0.52
25:DA:2019:A:H2'	25:DA:2020:A:O5'	2.09	0.52
25:DA:2130:U:H2'	25:DA:2131:G:H5''	1.92	0.52
25:DA:270(R):G:H2'	25:DA:270(S):G:C8	2.44	0.52
25:DA:2789:C:H3'	25:DA:2790:A:H5''	1.92	0.52
25:DA:283:A:H4'	25:DA:284:U:OP2	2.10	0.52
25:DA:729:G:C8	27:DD:208:LYS:HD2	2.45	0.52
31:DH:123:PHE:CE2	31:DH:133:VAL:HG22	2.44	0.52
36:DP:3:MET:HB2	36:DP:93:TYR:CD1	2.45	0.52
23:AC:1:C:O2	23:AC:2:G:H8	1.91	0.52
4:AG:64:LEU:HB2	4:AG:198:VAL:HG11	1.91	0.52
4:AG:24:GLU:O	4:AG:27:TYR:HB2	2.10	0.52
6:AI:61:LEU:HB3	6:AI:63:TYR:HE2	1.75	0.52
9:AL:114:TYR:HD2	9:AL:114:TYR:N	2.07	0.52
19:AV:45:VAL:HA	19:AV:62:ILE:HG22	1.92	0.52
54:B8:33:ASN:HA	54:B8:36:LYS:HE3	1.91	0.52
25:BA:2712:U:O2	25:BA:2712:U:H5'	2.10	0.52
25:BA:2818:G:O2'	25:BA:2819:G:H5'	2.09	0.52
25:BA:960:A:H5''	25:BA:961:C:OP1	2.10	0.52
27:BD:79:VAL:HG21	27:BD:111:LEU:HD11	1.91	0.52
45:BV:149:SER:HB2	45:BV:170:THR:HG22	1.91	0.52
1:CA:1306:A:N6	1:CA:1331:G:H1'	2.25	0.52
1:CA:723:U:C2'	1:CA:724:G:OP1	2.58	0.52
1:CA:830:G:N2	1:CA:857:C:C2	2.78	0.52
2:CE:75:LYS:HA	2:CE:78:GLN:HB2	1.91	0.52
10:CM:79:ARG:O	10:CM:83:GLU:HB2	2.09	0.52
52:D6:44:ARG:O	52:D6:45:LYS:HG2	2.10	0.52
25:DA:1210:A:H5'	25:DA:1212:G:H5'	1.90	0.52
25:DA:1444:G:N2	25:DA:1548:C:C2	2.78	0.52
25:DA:2134:A:H62	25:DA:2157:G:H1'	1.74	0.52
25:DA:2142:C:O2'	25:DA:2143:C:H5'	2.10	0.52
22:CD:65:C:C6	25:DA:2169:A:N7	2.78	0.52
25:DA:2389:G:H5''	25:DA:2390:U:C5'	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2872:G:C6	25:DA:2873:A:N1	2.78	0.52
25:DA:523:C:C2'	25:DA:524:U:H5'	2.40	0.52
26:DB:74:U:C3'	26:DB:75:G:H5''	2.39	0.52
27:DD:131:LEU:N	27:DD:131:LEU:HD12	2.25	0.52
25:DA:1815:A:P	27:DD:54:ARG:HH22	2.32	0.52
27:DD:35:LYS:HB3	27:DD:63:ARG:HA	1.91	0.52
25:DA:825:C:O2	35:DO:55:ARG:NH2	2.43	0.52
1:AA:1007:C:C3'	1:AA:1008:C:H5''	2.40	0.52
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.45	0.52
22:AB:46:G:H2'	22:AB:47:U:H6	1.74	0.52
22:AB:15:G:H2'	22:AB:68:A:N1	2.25	0.52
22:AD:18:G:H1'	22:AD:19:C:P	2.50	0.52
22:AD:51:C:H3'	22:AD:52:G:C8	2.45	0.52
3:AF:8:ILE:O	3:AF:11:ARG:N	2.29	0.52
5:AH:151:LEU:O	8:AK:64:LYS:HE2	2.10	0.52
10:AM:30:SER:OG	10:AM:84:GLN:NE2	2.42	0.52
12:AO:49:LEU:O	12:AO:51:LYS:NZ	2.43	0.52
17:AT:29:HIS:CD2	17:AT:30:PRO:HD2	2.44	0.52
25:BA:1900:A:C8	25:BA:1900:A:C5'	2.93	0.52
25:BA:2406:U:C4	35:BO:72:PRO:HG2	2.45	0.52
25:BA:2481:G:C2'	25:BA:2482:G:OP2	2.58	0.52
25:BA:2733:A:C2'	25:BA:2734:A:C5'	2.87	0.52
25:BA:604:G:P	35:BO:90:ARG:HH21	2.33	0.52
26:BB:73:A:C4	26:BB:104:A:C2	2.98	0.52
32:BK:128:LEU:O	32:BK:138:ILE:HG22	2.10	0.52
32:BK:2:LYS:CG	32:BK:20:ASP:HB3	2.40	0.52
35:BO:61:ARG:HH12	54:B8:14:VAL:HG23	1.74	0.52
38:BQ:15:ARG:O	38:BQ:19:LYS:HD3	2.09	0.52
39:BR:111:ARG:H	39:BR:111:ARG:HD3	1.75	0.52
39:BR:51:ARG:HB2	39:BR:98:LYS:CD	2.40	0.52
43:BT:3:THR:O	43:BT:6:ASP:HB2	2.09	0.52
45:BV:117:LEU:HD13	45:BV:118:GLN:N	2.24	0.52
1:CA:1206:G:C6	1:CA:1207:G:C5	2.98	0.52
1:CA:1316:G:H4'	14:CQ:18:VAL:HG11	1.91	0.52
1:CA:184:G:O2'	1:CA:185:A:H5'	2.10	0.52
1:CA:990:C:C2	1:CA:1216:G:C2	2.98	0.52
22:CD:18:G:N7	22:CD:66:G:N2	2.58	0.52
2:CE:61:LEU:HD23	2:CE:68:ILE:HD11	1.91	0.52
3:CF:150:LYS:HG3	3:CF:169:ALA:HB2	1.92	0.52
3:CF:81:GLY:O	3:CF:83:ARG:N	2.43	0.52
19:CV:41:VAL:CG1	19:CV:42:PRO:HD2	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:D0:33:ARG:HD3	37:D0:113:LEU:HD11	1.92	0.52
41:D2:28:GLU:O	41:D2:61:VAL:HG21	2.10	0.52
50:D4:34:GLU:C	50:D4:36:CYS:N	2.63	0.52
35:DO:61:ARG:HA	54:D8:27:THR:HG21	1.91	0.52
25:DA:1169:G:N2	25:DA:1181:C:C2	2.78	0.52
25:DA:2211:G:H1'	25:DA:2212:A:P	2.50	0.52
25:DA:2376:A:H2'	25:DA:2377:A:O4'	2.10	0.52
25:DA:270(N):G:O2'	25:DA:270(O):U:H5'	2.10	0.52
25:DA:607:U:O2	25:DA:621:A:N1	2.43	0.52
25:DA:90:U:O2	25:DA:90:U:C2'	2.58	0.52
26:DB:28:C:H2'	26:DB:29:A:C8	2.45	0.52
35:DO:61:ARG:HB3	35:DO:62:LEU:CD2	2.40	0.52
38:DQ:84:GLN:HB2	38:DQ:110:LEU:H	1.75	0.52
48:DW:32:LEU:HD11	48:DW:50:ILE:HG23	1.92	0.52
1:AA:27:G:H4'	4:AG:209:ARG:HG3	1.93	0.51
1:AA:412:A:C1'	1:AA:413:G:OP2	2.52	0.51
3:AF:123:GLN:O	3:AF:128:PHE:HB2	2.09	0.51
3:AF:21:ARG:H	3:AF:21:ARG:HD3	1.72	0.51
10:AM:9:ARG:NH2	10:AM:97:GLU:HG3	2.24	0.51
14:AQ:59:ALA:O	14:AQ:60:SER:HB2	2.10	0.51
37:B0:84:ALA:HB3	37:B0:85:PRO:HD3	1.92	0.51
52:B6:29:ASN:O	52:B6:32:ASN:HB3	2.10	0.51
25:BA:1379:A:C1'	25:BA:1380:G:OP1	2.58	0.51
25:BA:1416:G:O2'	25:BA:1417:C:P	2.68	0.51
25:BA:1794:U:H1'	25:BA:1900:A:N3	2.25	0.51
25:BA:2462:U:H1'	25:BA:2491:U:O4	2.10	0.51
25:BA:2836:U:C4	25:BA:2883:A:N6	2.78	0.51
25:BA:32:C:O2'	25:BA:33:U:H5'	2.11	0.51
25:BA:2053:G:H5'	28:BE:144:ARG:O	2.09	0.51
32:BK:135:GLU:OE1	32:BK:135:GLU:N	2.41	0.51
38:BQ:34:HIS:HB2	38:BQ:36:TYR:HE1	1.75	0.51
39:BR:24:PRO:HA	39:BR:49:VAL:HG13	1.92	0.51
45:BV:105:VAL:HG13	45:BV:140:ASP:CB	2.35	0.51
45:BV:63:ASP:HB2	45:BV:65:GLN:H	1.74	0.51
49:BX:56:VAL:HG12	49:BX:57:GLU:N	2.25	0.51
1:CA:328:C:C1'	1:CA:329:A:OP2	2.57	0.51
1:CA:559:A:C4'	1:CA:560:U:H3'	2.36	0.51
2:CE:163:PHE:CD2	2:CE:185:ILE:HG13	2.46	0.51
7:CJ:153:HIS:O	7:CJ:153:HIS:ND1	2.44	0.51
10:CM:6:ILE:HG22	10:CM:98:ILE:HA	1.90	0.51
11:CN:79:SER:HB2	11:CN:106:LYS:HD2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CN:84:VAL:HG11	11:CN:95:ILE:HD11	1.92	0.51
1:CA:363:A:C2	12:CO:28:PRO:HG2	2.45	0.51
1:CA:948:C:C5	13:CP:106:ASN:ND2	2.78	0.51
19:CV:23:ASN:HA	19:CV:27:GLU:CG	2.40	0.51
40:D1:100:VAL:O	40:D1:102:GLU:N	2.38	0.51
41:D2:35:LEU:HG	41:D2:37:VAL:HG11	1.91	0.51
46:D3:49:LYS:HE2	46:D3:80:HIS:CB	2.40	0.51
25:DA:752:A:H3'	53:D7:1:MET:SD	2.50	0.51
25:DA:1436:G:O2'	25:DA:1477:A:H4'	2.10	0.51
25:DA:2121:G:H2'	25:DA:2122:U:C6	2.45	0.51
25:DA:746:A:C5	25:DA:2611:U:H5''	2.45	0.51
25:DA:2720:U:H2'	25:DA:2721:A:O4'	2.09	0.51
25:DA:511:U:O4	25:DA:512:G:N1	2.43	0.51
25:DA:90:U:H2'	25:DA:91:A:C5'	2.33	0.51
25:DA:861:A:C2	25:DA:917:A:C4	2.98	0.51
25:DA:997:G:O2'	25:DA:998:C:H5'	2.10	0.51
28:DE:38:THR:HG23	28:DE:40:GLU:H	1.76	0.51
32:DK:8:PRO:HD3	32:DK:15:VAL:HG23	1.91	0.51
36:DP:132:VAL:HG21	45:DV:81:ARG:HH12	1.75	0.51
36:DP:111:GLU:OE1	36:DP:133:ARG:NH2	2.42	0.51
49:DX:43:ILE:O	49:DX:47:VAL:HG23	2.10	0.51
1:AA:1134:G:N3	1:AA:1134:G:H2'	2.25	0.51
1:AA:262:A:C6	1:AA:263:A:C6	2.99	0.51
2:AE:101:MET:HA	2:AE:108:ILE:HG21	1.91	0.51
3:AF:41:GLY:HA2	3:AF:44:GLU:HG3	1.92	0.51
20:AW:94:ALA:O	20:AW:95:ALA:HB3	2.10	0.51
25:BA:583:G:H5''	40:B1:10:ARG:HH12	1.76	0.51
50:B4:12:ALA:CB	50:B4:29:PRO:HA	2.40	0.51
25:BA:2219:G:H2'	25:BA:2224:G:H5'	1.93	0.51
25:BA:645:C:H2'	25:BA:645:C:O2	2.10	0.51
25:BA:654(S):G:H1'	25:BA:654(T):A:C8	2.45	0.51
25:BA:760:G:H2'	25:BA:761:A:O4'	2.09	0.51
25:BA:901:A:H2'	25:BA:902:C:H5'	1.91	0.51
27:BD:27:THR:CG2	27:BD:28:GLU:N	2.73	0.51
25:BA:2784:C:H1'	28:BE:37:ARG:HH12	1.74	0.51
32:BK:131:LYS:HA	32:BK:135:GLU:HB3	1.92	0.51
36:BP:66:ILE:O	36:BP:104:PHE:N	2.29	0.51
1:CA:1127:G:C6	1:CA:1145:C:C4	2.98	0.51
1:CA:976:G:OP1	14:CQ:32:SER:N	2.26	0.51
1:CA:991:U:O2	1:CA:993:G:C8	2.60	0.51
3:CF:134:ILE:HG23	3:CF:151:VAL:HB	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CG:149:ALA:O	4:CG:150:GLU:O	2.27	0.51
1:CA:1151:A:HO2'	10:CM:70:ARG:HH22	1.55	0.51
18:CU:22:VAL:CG1	18:CU:56:THR:HA	2.40	0.51
37:D0:70:LEU:O	37:D0:72:ASP:N	2.42	0.51
25:DA:1085:A:O2'	25:DA:1086:A:C8	2.64	0.51
25:DA:1778:U:H2'	25:DA:1784:A:N6	2.26	0.51
25:DA:244:A:C2	25:DA:255:A:C4	2.98	0.51
25:DA:958:U:O2'	25:DA:959:A:OP2	2.27	0.51
28:DE:41:LYS:HG3	28:DE:42:ASP:CG	2.31	0.51
29:DF:82:ILE:H	29:DF:82:ILE:HD13	1.74	0.51
31:DH:92:ILE:HD12	31:DH:92:ILE:N	2.25	0.51
44:DU:20:TYR:CE2	44:DU:42:VAL:HA	2.45	0.51
47:DZ:82:LEU:CD2	47:DZ:82:LEU:H	2.12	0.51
1:AA:1006:C:H42	1:AA:1023:G:H1	1.59	0.51
1:AA:1059:C:O2'	10:AM:53:PRO:HD3	2.09	0.51
1:AA:1497:G:C2'	1:AA:1498:U:H5'	2.36	0.51
1:AA:200:G:C2	1:AA:218:C:N3	2.79	0.51
1:AA:658:G:C5	1:AA:659:U:C5	2.98	0.51
7:AJ:49:ILE:O	7:AJ:53:LYS:HB2	2.11	0.51
8:AK:97:VAL:HB	8:AK:129:VAL:O	2.11	0.51
11:AN:69:ALA:HB1	11:AN:103:LEU:HD23	1.92	0.51
13:AP:66:LEU:O	13:AP:67:GLU:C	2.48	0.51
52:B6:43:CYS:HB3	52:B6:44:ARG:NH1	2.22	0.51
25:BA:1003:G:N2	25:BA:1153:C:C2	2.78	0.51
25:BA:222:A:H4'	25:BA:223:A:OP1	2.10	0.51
25:BA:2262:U:H4'	25:BA:2328:A:H2	1.73	0.51
25:BA:2563:U:H1'	25:BA:2566:A:N6	2.26	0.51
25:BA:2689:U:C4'	25:BA:2690:C:OP2	2.58	0.51
25:BA:481:G:H4'	25:BA:482:A:O5'	2.10	0.51
26:BB:71:C:C2	26:BB:72:G:C8	2.99	0.51
35:BO:124:LYS:HA	35:BO:143:GLY:O	2.10	0.51
45:BV:54:HIS:CE1	45:BV:123:ASP:OD1	2.62	0.51
48:BW:41:ILE:O	48:BW:41:ILE:HD13	2.10	0.51
1:CA:1238:A:N7	1:CA:1303:C:H1'	2.26	0.51
1:CA:1374:A:C2'	1:CA:1375:A:H5'	2.39	0.51
1:CA:634:C:H2'	1:CA:635:G:H8	1.75	0.51
23:CC:17:C:H2'	23:CC:17:C:O2	2.09	0.51
22:CD:5:G:H1	22:CD:77:C:H42	1.57	0.51
5:CH:41:VAL:HG13	5:CH:113:ALA:HA	1.92	0.51
7:CJ:146:GLU:O	7:CJ:149:ARG:HG3	2.10	0.51
10:CM:98:ILE:HD12	10:CM:98:ILE:H	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:D1:92:ARG:NH2	41:D2:10:LYS:HA	2.25	0.51
41:D2:74:LYS:HE2	41:D2:74:LYS:HA	1.90	0.51
46:D3:31:VAL:HG12	46:D3:35:ASN:CB	2.36	0.51
35:DO:62:LEU:HD21	54:D8:25:MET:O	2.11	0.51
25:DA:1963:U:O2	25:DA:1963:U:H2'	2.11	0.51
25:DA:996:A:C2	25:DA:997:G:C8	2.98	0.51
26:DB:89(A):A:C8	26:DB:90:C:C1'	2.94	0.51
27:DD:62:TYR:CD1	27:DD:64:ILE:HG22	2.45	0.51
31:DH:117:PRO:HB3	31:DH:123:PHE:HZ	1.74	0.51
32:DK:21:VAL:HG21	32:DK:26:ALA:HB2	1.93	0.51
35:DO:71:VAL:HG13	35:DO:72:PRO:HD3	0.61	0.51
26:DB:8:U:O2'	38:DQ:40:ILE:HD13	2.10	0.51
39:DR:62:THR:HG22	39:DR:75:ILE:HG12	1.92	0.51
1:AA:1378:C:H3'	1:AA:1378:C:O2	2.09	0.51
1:AA:201:C:N4	1:AA:216:G:N1	2.35	0.51
1:AA:771:G:O2'	1:AA:772:U:H5'	2.11	0.51
1:AA:81:G:C2	1:AA:88:C:C4	2.98	0.51
1:AA:991:U:O2	1:AA:993:G:H8	1.93	0.51
3:AF:114:PRO:HA	3:AF:185:GLY:HA3	1.92	0.51
6:AI:3:ARG:NH1	6:AI:38:GLU:OE2	2.44	0.51
8:AK:16:ALA:HB2	8:AK:24:THR:HG21	1.91	0.51
11:AN:41:THR:HG21	11:AN:71:LYS:HB2	1.92	0.51
15:AR:27:VAL:O	15:AR:31:LEU:HB2	2.11	0.51
13:AP:65:LYS:N	50:B4:50:VAL:HG21	2.26	0.51
25:BA:2136:C:H2'	25:BA:2137:C:O4'	2.10	0.51
26:BB:37:C:C2'	26:BB:38:C:H5'	2.41	0.51
27:BD:35:LYS:HD3	27:BD:63:ARG:HA	1.93	0.51
30:BG:64:THR:HG22	30:BG:66:GLN:N	2.25	0.51
30:BG:97:ASP:O	30:BG:101:ILE:HG23	2.10	0.51
31:BH:136:ILE:HD12	31:BH:136:ILE:N	2.25	0.51
31:BH:68:THR:O	31:BH:72:ILE:HG13	2.10	0.51
31:BH:88:LEU:HD23	31:BH:130:ARG:HD3	1.91	0.51
32:BK:140:LEU:H	32:BK:140:LEU:HD23	1.75	0.51
45:BV:158:PRO:O	45:BV:160:GLY:N	2.43	0.51
47:BZ:86:SER:N	47:BZ:87:PRO:HD2	2.23	0.51
1:CA:1124:G:O2'	1:CA:1145:C:C4	2.64	0.51
1:CA:222:U:H2'	1:CA:223:U:H6	1.75	0.51
3:CF:68:VAL:HG12	3:CF:70:VAL:HG23	1.90	0.51
3:CF:70:VAL:HG21	3:CF:76:VAL:HG11	1.92	0.51
1:CA:1348:U:H4'	9:CL:120:ARG:HD2	1.92	0.51
14:CQ:8:GLU:OE2	14:CQ:8:GLU:HA	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CX:5:ASP:O	21:CX:11:GLY:HA3	2.10	0.51
37:D0:81:ASP:O	37:D0:82:GLU:HB2	2.10	0.51
25:DA:1252:G:N3	40:D1:33:ARG:HD2	2.25	0.51
25:DA:1051:G:N3	25:DA:1051:G:H2'	2.26	0.51
25:DA:1171:G:H1'	25:DA:1173:G:C1'	2.40	0.51
25:DA:1340:U:H4'	25:DA:1341:U:OP2	2.09	0.51
25:DA:642:G:H21	25:DA:646:A:H2	1.58	0.51
26:DB:45:A:H1'	30:DG:95:ARG:NH2	2.24	0.51
36:DP:32:TYR:O	36:DP:105:GLU:HB2	2.11	0.51
44:DU:11:ASP:O	44:DU:27:VAL:HG22	2.10	0.51
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.45	0.51
1:AA:6:G:O2'	1:AA:7:G:O5'	2.26	0.51
1:AA:872:A:C4	1:AA:874:G:C8	2.99	0.51
1:AA:872:A:N3	1:AA:872:A:H2'	2.25	0.51
7:AJ:20:ASP:HB3	7:AJ:23:VAL:HG23	1.91	0.51
9:AL:48:GLU:N	9:AL:49:PRO:CD	2.74	0.51
10:AM:40:LEU:HB3	10:AM:41:PRO:HD2	1.93	0.51
11:AN:99:GLN:CG	11:AN:105:VAL:HG21	2.34	0.51
11:AN:30:VAL:HG21	11:AN:65:ALA:HA	1.93	0.51
12:AO:87:VAL:O	12:AO:88:LYS:HB3	2.10	0.51
14:AQ:12:ARG:O	14:AQ:12:ARG:HG3	2.09	0.51
37:B0:10:LEU:O	37:B0:12:ARG:NH1	2.44	0.51
25:BA:1022:G:H4'	25:BA:1023:U:O5'	2.11	0.51
25:BA:1323:U:H2'	25:BA:1324:G:H5'	1.92	0.51
25:BA:207:A:H2'	25:BA:208:C:O4'	2.09	0.51
25:BA:2171:A:O2'	25:BA:2172:U:O4'	2.19	0.51
25:BA:2557:G:H2'	25:BA:2558:C:C6	2.46	0.51
25:BA:743:G:C2'	25:BA:744:G:H5'	2.40	0.51
27:BD:65:ILE:HD11	27:BD:67:PHE:CZ	2.46	0.51
29:BF:67:GLN:HG3	29:BF:67:GLN:O	2.10	0.51
1:CA:960:U:H3	1:CA:1225:A:C1'	2.22	0.51
1:CA:1465:C:H2'	1:CA:1466:C:O4'	2.11	0.51
1:CA:995:C:H1'	14:CQ:4:LYS:HE3	1.91	0.51
22:CD:3:U:H2'	22:CD:4:G:C8	2.46	0.51
7:CJ:74:GLU:HG2	7:CJ:91:VAL:HG22	1.92	0.51
17:CT:45:HIS:HB3	17:CT:72:ARG:HG2	1.92	0.51
40:D1:102:GLU:HG3	41:D2:13:ARG:HH21	1.75	0.51
40:D1:92:ARG:HD3	40:D1:94:ASN:HB3	1.93	0.51
50:D4:22:ILE:O	50:D4:23:GLU:HB3	2.09	0.51
25:DA:1074:G:H2'	25:DA:1075:C:C6	2.45	0.51
25:DA:1681:G:HO2'	25:DA:1762:A:HO2'	1.56	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2188:C:H2'	25:DA:2189:U:O4'	2.11	0.51
25:DA:2274:A:C5	25:DA:2276:G:C8	2.98	0.51
25:DA:2720:U:C4	25:DA:2721:A:C6	2.98	0.51
25:DA:582:G:H2'	25:DA:583:G:H8	1.76	0.51
25:DA:2786:U:C4'	28:DE:65:GLY:H	2.17	0.51
34:DN:63:VAL:HG12	34:DN:106:LEU:HD11	1.91	0.51
49:DX:59:VAL:HG12	49:DX:60:GLU:N	2.18	0.51
1:AA:1014:A:H4'	19:AV:14:HIS:CE1	2.45	0.51
3:AF:121:ALA:O	3:AF:125:GLU:HG3	2.11	0.51
3:AF:68:VAL:HG12	3:AF:70:VAL:HG23	1.92	0.51
12:AO:3:THR:H	12:AO:6:GLN:NE2	2.03	0.51
13:AP:82:MET:CE	13:AP:92:HIS:HB3	2.40	0.51
1:AA:751:U:H4'	15:AR:24:SER:HA	1.91	0.51
20:AW:57:ARG:NH1	20:AW:102:GLY:HA2	2.26	0.51
37:B0:83:ILE:HD13	37:B0:86:ARG:NH1	2.26	0.51
41:B2:89:GLN:HA	41:B2:89:GLN:NE2	2.24	0.51
25:BA:1240:U:O2'	25:BA:1241:A:H5'	2.10	0.51
25:BA:1358:G:N2	25:BA:1372:U:C5	2.79	0.51
25:BA:270(Q):C:H2'	25:BA:270(R):G:O4'	2.11	0.51
25:BA:572:A:H5''	25:BA:573:G:OP2	2.10	0.51
25:BA:857:C:H4'	46:B3:23:VAL:HG21	1.93	0.51
29:BF:28:ILE:HG22	29:BF:112:MET:HB3	1.92	0.51
35:BO:65:ARG:O	35:BO:66:GLY:C	2.49	0.51
38:BQ:29:PHE:C	38:BQ:29:PHE:HD2	2.14	0.51
39:BR:65:LYS:HE3	39:BR:67:SER:HB2	1.92	0.51
25:BA:495:G:H1'	42:BS:57:ASN:ND2	2.25	0.51
48:BW:47:ASN:HB2	48:BW:50:ILE:HD11	1.91	0.51
49:BX:6:VAL:HG12	49:BX:56:VAL:HG22	1.92	0.51
1:CA:1149:C:H2'	1:CA:1150:U:C6	2.46	0.51
1:CA:509:A:HO2'	1:CA:510:A:P	2.30	0.51
22:CB:68:A:N3	22:CB:68:A:H2'	2.26	0.51
9:CL:5:TYR:HE2	9:CL:16:ARG:HG2	1.76	0.51
9:CL:33:PHE:CE1	9:CL:37:PHE:HD1	2.29	0.51
10:CM:6:ILE:HA	10:CM:97:GLU:O	2.11	0.51
19:CV:18:LYS:HG2	19:CV:31:ILE:HD13	1.92	0.51
50:D4:57:GLU:H	50:D4:60:GLN:CD	2.14	0.51
26:DB:88:C:H4'	26:DB:89:G:OP1	2.10	0.51
30:DG:138:GLN:HE22	30:DG:153:ARG:H	1.58	0.51
32:DK:123:LEU:HD23	32:DK:143:SER:HB3	1.92	0.51
25:DA:1012:U:H3	33:DM:25:ARG:HH11	1.59	0.51
35:DO:82:GLY:HA2	35:DO:113:LYS:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DO:62:LEU:HD23	35:DO:62:LEU:N	2.21	0.51
45:DV:158:PRO:HD2	45:DV:161:VAL:HG11	1.92	0.51
1:AA:1133:G:H1	1:AA:1141:C:H42	1.59	0.51
1:AA:954:G:H21	1:AA:1227:A:H62	1.58	0.51
1:AA:96:G:C6	1:AA:97:U:C2	2.99	0.51
14:AQ:24:CYS:O	14:AQ:26:ARG:N	2.44	0.51
46:B3:51:VAL:N	46:B3:62:LEU:HD12	2.26	0.51
25:BA:562:U:O4	25:BA:2036:C:H1'	2.10	0.51
25:BA:2171:A:H2'	25:BA:2172:U:H6	1.75	0.51
25:BA:2572:A:N7	28:BE:144:ARG:HD2	2.26	0.51
27:BD:147:LEU:HD13	27:BD:155:LEU:HD11	1.92	0.51
31:BH:113:VAL:HG11	31:BH:151:ILE:HD13	1.92	0.51
31:BH:58:GLU:O	31:BH:60:ARG:N	2.44	0.51
34:BN:64:ARG:O	34:BN:82:ASN:HA	2.11	0.51
39:BR:108:ARG:HA	39:BR:111:ARG:HE	1.74	0.51
25:BA:498:G:N3	44:BU:47:LYS:NZ	2.59	0.51
47:BZ:56:GLN:HE21	47:BZ:56:GLN:HA	1.76	0.51
1:CA:1051:C:C4	1:CA:1052:U:C4	2.99	0.51
1:CA:1056:U:O4	1:CA:1200:C:C6	2.64	0.51
1:CA:1335:C:HO2'	1:CA:1336:C:P	2.29	0.51
1:CA:1353:G:C2	1:CA:1370:G:C2	2.98	0.51
1:CA:1392:G:N2	1:CA:1502:A:C8	2.72	0.51
22:CB:11:C:H2'	22:CB:12:C:C6	2.45	0.51
9:CL:4:TYR:CZ	9:CL:59:PHE:HE2	2.28	0.51
12:CO:24:LEU:HB2	12:CO:30:ARG:HB2	1.92	0.51
12:CO:44:LYS:CG	12:CO:45:PRO:HD3	2.39	0.51
13:CP:79:LYS:O	13:CP:79:LYS:HD3	2.10	0.51
19:CV:22:LEU:O	19:CV:27:GLU:HA	2.11	0.51
37:D0:21:TYR:OH	37:D0:43:GLU:HG2	2.11	0.51
37:D0:84:ALA:HB3	37:D0:85:PRO:HD3	1.92	0.51
25:DA:1225:C:O2'	41:D2:85:LYS:HB2	2.11	0.51
46:D3:55:ARG:NH1	46:D3:55:ARG:HB3	2.26	0.51
25:DA:1449:A:H5'	25:DA:1449(A):G:OP2	2.10	0.51
25:DA:1533:C:H3'	25:DA:1534:G:O4'	2.11	0.51
25:DA:1538:G:C2'	25:DA:1539:G:H5'	2.41	0.51
25:DA:1443:G:C2	25:DA:1549:C:C2	2.99	0.51
25:DA:2303:G:O2'	25:DA:2304:G:H5'	2.10	0.51
29:DF:51:THR:HB	29:DF:88:VAL:HG11	1.92	0.51
25:DA:2443:C:OP1	29:DF:68:LYS:HG3	2.11	0.51
33:DM:123:TYR:CZ	33:DM:129:PRO:HD3	2.46	0.51
1:AA:1177:G:H2'	1:AA:1178:G:C4	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1336:C:O2	1:AA:1336:C:C2'	2.59	0.51
1:AA:1465:C:H2'	1:AA:1466:C:O4'	2.10	0.51
19:AV:15:LEU:HB2	19:AV:31:ILE:HD11	1.93	0.51
20:AW:95:ALA:O	20:AW:97:ALA:N	2.44	0.51
46:B3:41:ARG:NE	46:B3:41:ARG:HA	2.26	0.51
25:BA:1069:A:O2'	25:BA:1072:C:OP2	2.27	0.51
25:BA:1379:A:H1'	25:BA:1380:G:OP1	2.11	0.51
25:BA:1858:G:HO2'	25:BA:1884:A:N6	2.05	0.51
25:BA:57:C:H2'	25:BA:58:G:O4'	2.10	0.51
28:BE:117:MET:HE1	28:BE:124:GLY:HA3	1.92	0.51
32:BK:114:LEU:HD13	32:BK:130:TYR:HD1	1.75	0.51
33:BM:133:GLN:HG2	33:BM:134:ARG:N	2.25	0.51
25:BA:956:G:O2'	36:BP:83:MET:HE1	2.11	0.51
42:BS:29:LEU:HD21	42:BS:33:ARG:NH2	2.26	0.51
22:CB:13:G:N3	22:CB:13:G:H2'	2.26	0.51
22:CB:42:U:H3'	22:CB:43:G:H8	1.76	0.51
3:CF:40:ARG:O	3:CF:44:GLU:HG3	2.10	0.51
3:CF:81:GLY:HA3	3:CF:85:ARG:HH11	1.75	0.51
5:CH:110:LEU:O	5:CH:115:VAL:HG22	2.10	0.51
19:CV:41:VAL:C	19:CV:43:GLU:H	2.13	0.51
25:DA:128:C:H2'	25:DA:129:C:H6	1.75	0.51
25:DA:1686:C:H2'	25:DA:1687:G:O4'	2.10	0.51
25:DA:654(C):G:H2'	25:DA:654(D):G:H8	1.76	0.51
26:DB:55:U:O2'	26:DB:56:G:H5'	2.11	0.51
28:DE:14:ILE:HD11	28:DE:173:VAL:HG11	1.92	0.51
25:DA:674:G:P	29:DF:54:ARG:HH22	2.33	0.51
30:DG:114:ILE:HG22	30:DG:117:PHE:HB2	1.93	0.51
35:DO:11:GLY:C	35:DO:13:ASN:N	2.65	0.51
45:DV:14:LYS:H	45:DV:14:LYS:CE	2.24	0.51
45:DV:150:LEU:HD23	45:DV:154:ASP:HB2	1.92	0.51
45:DV:82:ARG:CZ	45:DV:82:ARG:HB2	2.41	0.51
1:AA:1178:G:C8	9:AL:97:LYS:HE3	2.46	0.51
1:AA:1252:A:H61	1:AA:1285:A:H61	1.56	0.51
1:AA:1305:G:C8	1:AA:1305:G:OP2	2.63	0.51
1:AA:14:U:H2'	1:AA:16:A:OP2	2.10	0.51
1:AA:77:C:H2'	1:AA:78:G:H5'	1.93	0.51
2:AE:88:ALA:HB2	2:AE:219:VAL:CG1	2.39	0.51
4:AG:189:PRO:HB2	4:AG:194:LEU:HD21	1.92	0.51
9:AL:77:ILE:O	9:AL:80:GLY:N	2.43	0.51
11:AN:46:GLY:HA2	11:AN:50:TYR:O	2.11	0.51
13:AP:89:GLY:O	13:AP:92:HIS:HB2	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:B0:12:ARG:HG2	37:B0:16:HIS:CD2	2.46	0.51
41:B2:64:HIS:CG	41:B2:92:THR:HG22	2.46	0.51
25:BA:1059:G:C6	25:BA:1060:U:N3	2.79	0.51
25:BA:1473:G:O2'	25:BA:1474:C:H5'	2.11	0.51
25:BA:2140:C:O2'	25:BA:2141:G:H5'	2.10	0.51
25:BA:2157:G:HO2'	25:BA:2158:A:P	2.32	0.51
25:BA:2665:A:H2'	25:BA:2666:C:O4'	2.11	0.51
25:BA:2681:C:O2'	25:BA:2682:U:P	2.69	0.51
25:BA:582:G:H2'	25:BA:583:G:H8	1.76	0.51
27:BD:134:ARG:HG3	27:BD:135:PHE:CE2	2.46	0.51
25:BA:588:U:H1'	29:BF:90:PHE:CD1	2.46	0.51
31:BH:150:ALA:C	31:BH:152:ARG:N	2.62	0.51
31:BH:4:ILE:HB	31:BH:6:ARG:HD3	1.92	0.51
32:BK:21:VAL:HG22	32:BK:22:LYS:N	2.25	0.51
34:BN:65:THR:HA	34:BN:82:ASN:HD22	1.75	0.51
38:BQ:34:HIS:CE1	38:BQ:54:LEU:HD23	2.46	0.51
39:BR:118:ARG:HH21	39:BR:121:ILE:HG21	1.76	0.51
1:CA:1328:C:OP1	21:CX:21:TYR:OH	2.26	0.51
1:CA:1502:A:H2	1:CA:1505:G:N1	2.06	0.51
1:CA:922:G:H4'	5:CH:20:GLN:HA	1.92	0.51
22:CD:65:C:N1	25:DA:2169:A:N7	2.59	0.51
3:CF:131:ARG:HE	3:CF:166:GLU:CG	2.23	0.51
3:CF:23:TYR:HD2	3:CF:23:TYR:C	2.11	0.51
6:CI:14:LEU:HD21	6:CI:19:LEU:HD12	1.93	0.51
7:CJ:152:ALA:O	7:CJ:155:ARG:HB3	2.11	0.51
9:CL:34:ASN:N	9:CL:34:ASN:OD1	2.44	0.51
10:CM:86:MET:O	10:CM:87:THR:OG1	2.26	0.51
12:CO:68:PRO:O	12:CO:99:ARG:NH1	2.42	0.51
18:CU:58:LEU:HD11	18:CU:63:GLN:OE1	2.11	0.51
19:CV:42:PRO:O	19:CV:45:VAL:HG22	2.10	0.51
41:D2:16:PRO:HA	41:D2:96:ILE:HG22	1.92	0.51
50:D4:38:LYS:C	50:D4:40:HIS:H	2.15	0.51
53:D7:17:GLY:O	53:D7:21:ARG:HG2	2.11	0.51
25:DA:1026:U:O2	25:DA:1026:U:H2'	2.11	0.51
25:DA:1154:G:OP1	40:D1:58:ARG:HD2	2.10	0.51
25:DA:1854:A:H62	25:DA:1888:G:H8	1.58	0.51
25:DA:2166:G:N2	25:DA:2171:A:H62	2.08	0.51
25:DA:2593:U:H2'	25:DA:2594:C:H6	1.76	0.51
25:DA:2654:A:H8	25:DA:2654:A:OP1	1.94	0.51
25:DA:654(D):G:H1	25:DA:654(Q):C:N4	2.08	0.51
25:DA:918:A:H5''	26:DB:97:G:O2'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DD:35:LYS:CE	27:DD:104:TYR:CD1	2.93	0.51
1:AA:1174:G:H2'	1:AA:1175:G:C8	2.46	0.51
2:AE:165:VAL:HG23	2:AE:166:ASP:N	2.22	0.51
5:AH:9:LYS:HD2	5:AH:108:ALA:HB1	1.92	0.51
8:AK:122:ARG:HB2	8:AK:122:ARG:HH11	1.75	0.51
1:AA:826:C:H4'	8:AK:12:ARG:HG2	1.92	0.51
10:AM:34:VAL:CG2	10:AM:74:ILE:HG22	2.40	0.51
12:AO:61:TYR:O	12:AO:62:GLU:CB	2.59	0.51
13:AP:11:ARG:HG2	13:AP:12:ASN:N	2.26	0.51
1:AA:112:G:OP1	16:AS:27:LYS:HD2	2.11	0.51
18:AU:40:LEU:O	18:AU:42:ARG:N	2.44	0.51
41:B2:35:LEU:C	41:B2:37:VAL:N	2.57	0.51
50:B4:48:ARG:HH11	50:B4:51:ASP:HB2	1.75	0.51
25:BA:2014:A:C2'	51:B5:2:ALA:HB2	2.34	0.51
25:BA:1221:C:H2'	25:BA:1222:C:H6	1.74	0.51
25:BA:1359:A:N6	25:BA:1372:U:H3	2.08	0.51
25:BA:2419:U:O4	54:B8:30:ARG:NH2	2.43	0.51
25:BA:2712:U:H1'	25:BA:2712(A):A:C8	2.46	0.51
25:BA:2815:C:H2'	25:BA:2816:C:H6	1.75	0.51
25:BA:654:A:C2'	25:BA:654:A:N3	2.73	0.51
25:BA:857:C:H1'	46:B3:26:TYR:CE2	2.46	0.51
26:BB:82:G:O2'	26:BB:83:G:H5'	2.10	0.51
25:BA:443:A:H3'	29:BF:45:ARG:HH12	1.74	0.51
30:BG:64:THR:HG23	30:BG:94:LEU:CD1	2.40	0.51
35:BO:29:LYS:HG2	35:BO:30:THR:N	2.26	0.51
35:BO:85:LEU:HA	35:BO:88:LEU:CD2	2.38	0.51
43:BT:41:ASN:N	43:BT:41:ASN:ND2	2.58	0.51
25:BA:336:C:H5''	44:BU:6:HIS:CD2	2.46	0.51
47:BZ:87:PRO:O	47:BZ:91:LYS:HB2	2.10	0.51
1:CA:1028(A):C:C2	1:CA:1032(B):G:N1	2.70	0.51
1:CA:1320:C:OP1	19:CV:70:LYS:HE3	2.11	0.51
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.46	0.51
1:CA:1152:A:OP1	10:CM:68:HIS:CD2	2.63	0.51
37:D0:24:GLN:HE22	37:D0:36:THR:HG21	1.75	0.51
41:D2:85:LYS:HE3	41:D2:87:HIS:HA	1.93	0.51
54:D8:55:ALA:O	54:D8:58:ILE:HG22	2.10	0.51
25:DA:1231:G:H2'	25:DA:1232:G:C8	2.45	0.51
25:DA:184:C:H2'	25:DA:185:U:C6	2.45	0.51
25:DA:2125:G:N2	25:DA:2172:U:OP1	2.44	0.51
25:DA:2277:G:OP1	36:DP:86:GLY:HA2	2.11	0.51
25:DA:2354:G:N2	25:DA:2355:C:C2	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2786:U:H4'	28:DE:64:LYS:CA	2.40	0.51
25:DA:528:A:H8	25:DA:528:A:H3'	1.76	0.51
25:DA:833:U:O2	35:DO:55:ARG:NH1	2.39	0.51
25:DA:869:G:O2'	25:DA:870:A:H5'	2.10	0.51
25:DA:870:A:C2	25:DA:908:C:C2	2.98	0.51
29:DF:67:GLN:O	29:DF:67:GLN:HG3	2.10	0.51
33:DM:102:ALA:O	33:DM:106:MET:HG2	2.10	0.51
35:DO:85:LEU:HB3	35:DO:114:ILE:HD11	1.92	0.51
26:DB:52:A:H62	38:DQ:33:LYS:HG2	1.76	0.51
43:DT:45:THR:OG1	43:DT:45:THR:O	2.29	0.51
44:DU:101:LYS:O	44:DU:101:LYS:HG3	2.11	0.51
44:DU:84:ARG:HH21	44:DU:97:ARG:HB2	1.76	0.51
43:DT:11:PRO:HD3	48:DW:37:PHE:CD2	2.45	0.51
1:AA:313:A:H2'	1:AA:314:C:C6	2.45	0.50
22:AD:13:G:H2'	22:AD:14:A:H8	1.76	0.50
2:AE:166:ASP:OD1	2:AE:169:LYS:HB2	2.11	0.50
2:AE:162:ILE:O	2:AE:185:ILE:HG12	2.12	0.50
2:AE:81:VAL:HG13	2:AE:82:ARG:H	1.76	0.50
11:AN:57:THR:HG22	11:AN:59:TYR:N	2.26	0.50
37:B0:103:ARG:HD2	37:B0:108:GLY:O	2.11	0.50
37:B0:87:TYR:CE1	37:B0:117:VAL:HG12	2.46	0.50
54:B8:2:PRO:O	54:B8:3:LYS:C	2.48	0.50
25:BA:2135:A:HO2'	25:BA:2136:C:P	2.32	0.50
25:BA:631:A:P	54:B8:46:ARG:HH21	2.33	0.50
25:BA:637:A:H4'	25:BA:638:G:O5'	2.11	0.50
25:BA:899:A:O2'	25:BA:900:A:C8	2.63	0.50
27:BD:8:PRO:HB3	27:BD:14:ARG:HB2	1.93	0.50
25:BA:2638:G:P	28:BE:82:ARG:HH22	2.35	0.50
31:BH:12:PRO:HD3	31:BH:48:GLY:O	2.10	0.50
44:BU:96:ILE:CG1	44:BU:99:CYS:H	2.24	0.50
24:C1:12:A:N3	24:C1:12:A:H2'	2.26	0.50
1:CA:1016:A:H2'	1:CA:1017:G:O4'	2.11	0.50
1:CA:1307:U:O3'	13:CP:110:ARG:HD2	2.11	0.50
2:CE:7:VAL:O	2:CE:217:ARG:NH2	2.43	0.50
4:CG:126:ILE:HG22	4:CG:127:THR:N	2.25	0.50
1:CA:963:G:H21	10:CM:55:LYS:CE	2.24	0.50
1:CA:719:C:O2'	18:CU:49:LYS:HB3	2.11	0.50
37:D0:30:THR:HG22	37:D0:31:HIS:ND1	2.26	0.50
40:D1:100:VAL:C	40:D1:102:GLU:H	2.15	0.50
25:DA:445:C:OP1	40:D1:2:PRO:HA	2.11	0.50
25:DA:176:G:O2'	25:DA:177:G:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1678:G:H22	25:DA:1989:G:H22	1.53	0.50
25:DA:2836:U:C4	25:DA:2883:A:N6	2.80	0.50
25:DA:4:C:H2'	25:DA:5:A:O4'	2.10	0.50
25:DA:654(V):A:O2'	25:DA:655:A:H5'	2.11	0.50
27:DD:65:ILE:HD13	27:DD:106:ILE:HG13	1.92	0.50
32:DK:91:SER:HB3	32:DK:119:PRO:HB3	1.94	0.50
33:DM:42:TRP:CD1	40:D1:63:VAL:HG11	2.46	0.50
35:DO:3:LEU:HD12	35:DO:3:LEU:H	1.76	0.50
25:DA:2496:C:OP1	36:DP:82:ARG:HB3	2.11	0.50
43:DT:36:LYS:HG2	43:DT:54:VAL:HB	1.93	0.50
49:DX:40:THR:HB	49:DX:41:PRO:HD2	1.91	0.50
1:AA:159:G:N2	1:AA:161:A:H5''	2.26	0.50
5:AH:43:LEU:HD23	5:AH:133:TYR:CD1	2.47	0.50
6:AI:26:ILE:HG22	6:AI:30:LEU:HD12	1.92	0.50
12:AO:42:PRO:HG2	12:AO:48:ALA:N	2.26	0.50
12:AO:43:LYS:CG	12:AO:44:LYS:N	2.72	0.50
13:AP:60:VAL:HG13	13:AP:64:TRP:HE1	1.76	0.50
14:AQ:40:CYS:O	14:AQ:42:ILE:N	2.45	0.50
51:B5:16:ARG:HG3	51:B5:17:ASP:N	2.27	0.50
25:BA:1042:G:N2	25:BA:1113:U:O2	2.40	0.50
25:BA:1655:A:H3'	25:BA:1656:C:H6	1.76	0.50
25:BA:2142:C:H2'	25:BA:2143:C:C6	2.47	0.50
25:BA:2733:A:C3'	25:BA:2734:A:H5'	2.41	0.50
30:BG:150:ASP:OD1	30:BG:150:ASP:N	2.43	0.50
30:BG:83:ARG:N	30:BG:86:MET:HE3	2.24	0.50
31:BH:153:LYS:HG2	31:BH:162:ILE:CG1	2.41	0.50
25:BA:227:A:H5'	35:BO:76:LYS:HE2	1.93	0.50
1:CA:242:C:H2'	1:CA:243:A:H5'	1.93	0.50
22:CB:31:G:H2'	22:CB:32:A:H8	1.76	0.50
23:CC:17:C:HO2'	23:CC:18:C:H5	1.49	0.50
22:CD:48:C:C2	22:CD:49:A:H1'	2.47	0.50
4:CG:21:LEU:HD12	4:CG:21:LEU:N	2.25	0.50
4:CG:24:GLU:N	4:CG:24:GLU:CD	2.64	0.50
6:CI:77:ARG:NH2	6:CI:78:GLU:HG2	2.26	0.50
12:CO:72:HIS:CD2	12:CO:74:LEU:H	2.27	0.50
46:D3:47:PRO:HG3	46:D3:53:MET:HB2	1.93	0.50
25:DA:1039:G:H1	25:DA:1116:C:N4	2.08	0.50
25:DA:1085:A:O2'	25:DA:1086:A:H8	1.93	0.50
25:DA:1174:A:N1	25:DA:1175:U:O2'	2.44	0.50
25:DA:2016:U:H1'	51:D5:6:VAL:HG13	1.92	0.50
25:DA:2378:A:O5'	25:DA:2378:A:H8	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2489:G:O2'	25:DA:2518:A:N6	2.45	0.50
25:DA:274:G:OP1	25:DA:274:G:C8	2.65	0.50
26:DB:15:A:H1'	26:DB:109:G:C4	2.47	0.50
26:DB:28:C:H2'	26:DB:29:A:H8	1.75	0.50
27:DD:246:PRO:HD2	27:DD:255:LYS:HD3	1.93	0.50
30:DG:56:ALA:HA	30:DG:59:GLU:HB3	1.93	0.50
25:DA:1111:A:H4'	31:DH:3:ARG:HD3	1.93	0.50
35:DO:100:LEU:HB3	35:DO:106:LEU:HD22	1.94	0.50
25:DA:2406:U:C4	35:DO:72:PRO:HB2	2.45	0.50
36:DP:55:VAL:HG23	36:DP:64:ILE:HD12	1.94	0.50
36:DP:67:ARG:HD2	36:DP:105:GLU:OE1	2.11	0.50
36:DP:12:GLN:NE2	36:DP:73:PRO:HD2	2.23	0.50
36:DP:21:THR:HB	36:DP:99:PRO:O	2.11	0.50
1:AA:1022:G:H2'	1:AA:1023:G:O4'	2.12	0.50
1:AA:345:C:O2'	1:AA:346:G:C2	2.62	0.50
1:AA:355:C:C4	1:AA:356:A:N7	2.79	0.50
1:AA:452:A:HO2'	1:AA:453:A:C4'	2.24	0.50
1:AA:667:G:H4'	15:AR:51:HIS:CE1	2.46	0.50
23:AC:77:A:H4'	25:BA:2602:A:C6	2.47	0.50
2:AE:67:THR:C	2:AE:68:ILE:HD12	2.31	0.50
12:AO:67:ILE:CD1	12:AO:74:LEU:HD12	2.42	0.50
40:B1:8:VAL:HG23	40:B1:11:ARG:NH2	2.26	0.50
40:B1:91:ASP:O	40:B1:92:ARG:C	2.49	0.50
25:BA:1079:C:N4	25:BA:1080:A:N6	2.59	0.50
25:BA:1286:A:C6	25:BA:1329:U:C2	3.00	0.50
25:BA:1444(A):A:OP2	25:BA:1445:C:H5	1.94	0.50
25:BA:185:U:H4'	25:BA:218:A:H4'	1.94	0.50
25:BA:2154:G:H2'	25:BA:2155:G:C8	2.47	0.50
25:BA:833:U:H2'	25:BA:834:C:C6	2.47	0.50
25:BA:880:G:HO2'	25:BA:881:G:P	2.28	0.50
26:BB:73:A:C3'	26:BB:74:U:H5'	2.41	0.50
27:BD:9:TYR:CD2	27:BD:10:THR:HG22	2.46	0.50
28:BE:186:GLY:O	28:BE:188:VAL:N	2.44	0.50
29:BF:32:LEU:HB3	29:BF:112:MET:HE1	1.94	0.50
34:BN:63:VAL:HG12	34:BN:106:LEU:HD11	1.92	0.50
35:BO:27:HIS:N	35:BO:27:HIS:ND1	2.58	0.50
38:BQ:106:ARG:HH22	38:BQ:107:GLU:CB	2.24	0.50
39:BR:26:ASP:O	39:BR:49:VAL:HG12	2.11	0.50
42:BS:110:LYS:O	42:BS:111:HIS:C	2.49	0.50
2:CE:92:TYR:HE2	2:CE:151:GLY:CA	2.24	0.50
5:CH:100:VAL:HG23	5:CH:118:ILE:CG2	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CH:90:VAL:O	5:CH:120:THR:HA	2.12	0.50
5:CH:33:VAL:HB	5:CH:112:LEU:HD12	1.93	0.50
7:CJ:97:GLN:NE2	7:CJ:101:LEU:HD11	2.26	0.50
10:CM:30:SER:OG	10:CM:81:THR:HA	2.11	0.50
11:CN:69:ALA:HB1	11:CN:103:LEU:CD2	2.40	0.50
20:CW:26:ASN:HB3	20:CW:71:THR:HG23	1.92	0.50
41:D2:71:LEU:O	41:D2:85:LYS:O	2.29	0.50
52:D6:10:LEU:HD21	54:D8:34:TRP:HE3	1.76	0.50
25:DA:1317:A:H2'	25:DA:1318:C:H6	1.76	0.50
25:DA:1348:G:C2'	25:DA:1349:A:H5''	2.40	0.50
25:DA:1386:C:C2	25:DA:1387:C:C5	2.99	0.50
25:DA:2127:G:N1	25:DA:2161:C:N4	2.38	0.50
25:DA:2415:G:H4'	35:DO:66:GLY:CA	2.40	0.50
25:DA:270(X):G:O6	25:DA:270(Y):G:N1	2.44	0.50
25:DA:2772:C:H2'	25:DA:2773:C:H6	1.76	0.50
25:DA:2865:U:C4	25:DA:2866:U:C4	2.99	0.50
25:DA:442:G:O4'	29:DF:46:ARG:HD3	2.11	0.50
25:DA:675:A:OP1	29:DF:63:LYS:NZ	2.42	0.50
25:DA:864:G:N2	25:DA:866:A:H61	2.10	0.50
25:DA:868:U:N3	25:DA:869:G:C5	2.79	0.50
27:DD:245:PRO:HB2	27:DD:253:GLN:OE1	2.11	0.50
28:DE:8:LYS:O	28:DE:9:VAL:HG13	2.12	0.50
29:DF:152:GLU:CG	29:DF:191:ARG:HD2	2.41	0.50
25:DA:2406:U:C2	35:DO:75:ILE:HD13	2.46	0.50
39:DR:29:ARG:HG2	39:DR:46:GLU:HB2	1.94	0.50
1:AA:1277:C:HO2'	1:AA:1279:A:H1'	1.76	0.50
1:AA:142:G:C2	1:AA:143:A:C5	2.99	0.50
1:AA:559:A:H4'	1:AA:560:U:H3'	1.92	0.50
22:AB:57:C:O2'	22:AB:68:A:H4'	2.11	0.50
22:AD:62:G:H1	22:AD:70:C:N4	1.99	0.50
22:AD:8:U:O2	22:AD:15:G:N1	2.45	0.50
2:AE:67:THR:O	2:AE:68:ILE:HD12	2.12	0.50
3:AF:3:ASN:C	3:AF:4:LYS:HG2	2.32	0.50
11:AN:54:ARG:HH12	22:AD:40:U:H4'	1.74	0.50
16:AS:49:LEU:HD12	16:AS:50:LYS:H	1.77	0.50
25:BA:2615:U:C2	51:B5:7:PRO:HA	2.46	0.50
54:B8:34:TRP:O	54:B8:34:TRP:CD1	2.64	0.50
25:BA:1655:A:H3'	25:BA:1656:C:C6	2.46	0.50
25:BA:1794:U:H2'	25:BA:1795:C:C6	2.46	0.50
25:BA:2119:A:N6	25:BA:2170:A:C6	2.79	0.50
25:BA:2309:A:H2'	25:BA:2310:A:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2783:G:H2'	25:BA:2784:C:C6	2.46	0.50
25:BA:2789:C:H2'	25:BA:2790:A:H5''	1.93	0.50
25:BA:845:G:H8	25:BA:845:G:OP2	1.93	0.50
25:BA:868:U:C4	25:BA:869:G:N7	2.79	0.50
28:BE:37:ARG:O	28:BE:45:THR:HA	2.12	0.50
30:BG:46:ALA:HB1	30:BG:49:ASP:O	2.11	0.50
31:BH:102:ALA:HA	31:BH:117:PRO:HD3	1.93	0.50
31:BH:6:ARG:H	31:BH:8:PRO:HD3	1.77	0.50
31:BH:83:TYR:HB2	31:BH:134:SER:CA	2.34	0.50
1:CA:1338:G:C6	1:CA:1339:A:N1	2.80	0.50
1:CA:1452:C:H5'	1:CA:1454:G:H1'	1.92	0.50
1:CA:267:C:OP1	17:CT:67:LYS:HD2	2.11	0.50
1:CA:359:U:H2'	1:CA:360:A:C8	2.47	0.50
1:CA:421:U:O2	1:CA:421:U:H3'	2.11	0.50
1:CA:438:G:H4'	4:CG:123:HIS:ND1	2.25	0.50
1:CA:838:G:H2'	1:CA:841:U:H5''	1.92	0.50
1:CA:945:G:C2	1:CA:946:A:C8	2.99	0.50
1:CA:980:C:H3'	1:CA:981:U:C6	2.46	0.50
7:CJ:68:ASN:ND2	7:CJ:128:ALA:O	2.45	0.50
10:CM:32:ALA:CB	10:CM:81:THR:HG21	2.41	0.50
15:CR:39:LEU:CD1	15:CR:56:LEU:HB2	2.40	0.50
18:CU:36:ASN:ND2	18:CU:39:VAL:HG21	2.25	0.50
19:CV:18:LYS:HD2	19:CV:21:GLU:OE1	2.12	0.50
13:CP:84:ILE:HG23	19:CV:74:PHE:CZ	2.47	0.50
1:CA:185:A:N3	20:CW:81:LYS:NZ	2.60	0.50
41:D2:12:TYR:CE2	41:D2:22:VAL:HG23	2.43	0.50
25:DA:2016:U:O2	51:D5:7:PRO:HG2	2.11	0.50
53:D7:8:ASN:C	53:D7:8:ASN:HD22	2.14	0.50
25:DA:1820:U:H4'	25:DA:1821:A:OP2	2.11	0.50
25:DA:2108:C:N3	25:DA:2181:G:N2	2.50	0.50
25:DA:2190:G:H2'	25:DA:2191:G:H5''	1.93	0.50
25:DA:2637:U:H2'	25:DA:2638:G:O4'	2.12	0.50
25:DA:582:G:H2'	25:DA:583:G:C8	2.46	0.50
25:DA:633:A:H2'	25:DA:634:C:H5'	1.93	0.50
25:DA:8:A:H2'	25:DA:9:U:H6	1.75	0.50
28:DE:55:ASN:O	28:DE:57:LYS:N	2.38	0.50
29:DF:28:ILE:HG13	29:DF:28:ILE:O	2.12	0.50
29:DF:34:TRP:HB2	35:DO:6:LEU:HD12	1.93	0.50
28:DE:151:TYR:HB3	33:DM:79:PRO:HG3	1.93	0.50
39:DR:106:SER:HA	39:DR:110:ILE:HD11	1.93	0.50
1:AA:1065:U:C1'	1:AA:1066:C:OP2	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1169:A:N6	1:AA:1170:A:N1	2.59	0.50
1:AA:1224:G:N1	1:AA:1322:C:H1'	2.25	0.50
1:AA:1322:C:H6	1:AA:1322:C:OP1	1.95	0.50
1:AA:353:A:C2'	1:AA:354:G:OP2	2.59	0.50
22:AB:83:C:H2'	22:AB:84:C:C5'	2.41	0.50
2:AE:71:VAL:HG23	2:AE:164:VAL:HA	1.94	0.50
6:AI:61:LEU:HD23	6:AI:63:TYR:OH	2.12	0.50
8:AK:86:ILE:HG22	8:AK:87:SER:N	2.26	0.50
9:AL:18:PHE:HD1	9:AL:62:TYR:CD2	2.24	0.50
11:AN:59:TYR:O	11:AN:62:GLN:HB3	2.11	0.50
37:B0:24:GLN:HE22	37:B0:36:THR:CG2	2.25	0.50
50:B4:42:PHE:O	50:B4:44:THR:O	2.30	0.50
19:AV:41:VAL:O	50:B4:63:TYR:OH	2.30	0.50
25:BA:1309:G:P	53:B7:9:ARG:HD3	2.51	0.50
25:BA:1028:A:N6	25:BA:1125:G:H2'	2.26	0.50
25:BA:1265:A:OP1	25:BA:1265:A:H8	1.94	0.50
25:BA:1657:C:H2'	25:BA:1658:C:C6	2.46	0.50
25:BA:1797:C:C2'	25:BA:1798:U:H5'	2.41	0.50
25:BA:2467:C:H4'	36:BP:123:HIS:CE1	2.45	0.50
25:BA:271(B):G:H4'	25:BA:271(C):U:C5'	2.41	0.50
25:BA:654(P):G:H2'	25:BA:654(Q):C:C6	2.46	0.50
25:BA:657:U:H2'	25:BA:658:C:C6	2.47	0.50
28:BE:167:VAL:CG1	28:BE:189:PRO:HD3	2.42	0.50
30:BG:49:ASP:OD2	30:BG:52:ILE:HG13	2.11	0.50
45:BV:102:LEU:HD12	45:BV:121:HIS:O	2.11	0.50
1:CA:1058:G:C5	1:CA:1059:C:C4	2.99	0.50
1:CA:195:A:C6	1:CA:196:A:N1	2.80	0.50
1:CA:954:G:H2'	1:CA:955:U:C6	2.47	0.50
22:CB:53:A:C2'	22:CB:54:C:H5'	2.41	0.50
22:CB:81:C:H3'	22:CB:82:A:H2	1.77	0.50
2:CE:189:ASP:HB3	2:CE:203:GLY:O	2.10	0.50
15:CR:17:ARG:NH1	15:CR:17:ARG:CG	2.74	0.50
20:CW:72:LEU:HD21	20:CW:77:ALA:N	2.26	0.50
25:DA:1116:C:H2'	25:DA:1117:G:C8	2.46	0.50
25:DA:128:C:O2'	25:DA:129:C:P	2.70	0.50
25:DA:2195:C:O2'	25:DA:2196:C:H5'	2.12	0.50
25:DA:2233:U:H2'	25:DA:2234:G:C8	2.46	0.50
25:DA:2600:A:H2'	25:DA:2601:C:C6	2.47	0.50
25:DA:681:G:H2'	25:DA:682:G:O4'	2.12	0.50
25:DA:986:C:C2'	25:DA:987:G:H5'	2.42	0.50
26:DB:40:U:H2'	26:DB:41:U:OP1	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DB:52:A:O2'	26:DB:53:A:C8	2.58	0.50
29:DF:79:GLY:HA2	29:DF:86:GLY:HA2	1.94	0.50
33:DM:16:ILE:HB	33:DM:54:VAL:HG22	1.92	0.50
35:DO:2:LYS:HE3	35:DO:4:SER:HB2	1.94	0.50
36:DP:103:MET:O	36:DP:104:PHE:HB2	2.12	0.50
39:DR:16:ARG:NH2	39:DR:19:LEU:HD11	2.26	0.50
1:AA:1160:G:N1	1:AA:1177:G:C2	2.79	0.50
1:AA:857:C:H2'	1:AA:858:G:O4'	2.12	0.50
22:AB:13:G:H1'	22:AB:24:G:N1	2.26	0.50
2:AE:235:SER:OG	2:AE:236:TYR:N	2.45	0.50
2:AE:94:ASN:N	2:AE:94:ASN:HD22	2.10	0.50
19:AV:13:ASP:O	19:AV:14:HIS:C	2.49	0.50
19:AV:41:VAL:HA	19:AV:44:MET:HB2	1.92	0.50
41:B2:52:VAL:O	41:B2:52:VAL:HG22	2.12	0.50
30:BG:101:ILE:HD13	50:B4:9:LEU:HD21	1.94	0.50
25:BA:1068:G:O2'	25:BA:1070:A:N7	2.44	0.50
25:BA:1179:C:H2'	25:BA:1180:C:H6	1.77	0.50
25:BA:1210:A:C8	25:BA:1210:A:C5'	2.94	0.50
25:BA:2127:G:H2'	25:BA:2128:C:O4'	2.12	0.50
25:BA:2371:G:H4'	52:B6:45:LYS:HG3	1.94	0.50
25:BA:2611:U:H3'	25:BA:2611:U:P	2.51	0.50
25:BA:481:G:C4	25:BA:507:A:C2	3.00	0.50
27:BD:131:LEU:HB2	27:BD:136:ILE:HD11	1.93	0.50
27:BD:270:ILE:HG22	27:BD:271:ILE:N	2.26	0.50
29:BF:63:LYS:HE2	29:BF:67:GLN:HB2	1.94	0.50
31:BH:154:PRO:O	31:BH:155:SER:C	2.49	0.50
42:BS:73:ALA:HB3	42:BS:106:ILE:HB	1.93	0.50
25:BA:988:A:N6	49:BX:13:ILE:HG21	2.27	0.50
1:CA:429:U:H1'	1:CA:430:A:H5'	1.93	0.50
1:CA:639:G:O2'	1:CA:640:A:H5'	2.11	0.50
2:CE:142:LEU:HG	2:CE:146:GLN:HG3	1.93	0.50
13:CP:49:THR:HB	13:CP:52:GLU:OE1	2.12	0.50
21:CX:9:ARG:HG3	21:CX:10:ARG:N	2.27	0.50
25:DA:1652:A:N6	37:D0:11:ASN:HD21	1.84	0.50
50:D4:24:THR:O	50:D4:25:TYR:HB2	2.12	0.50
25:DA:2371:G:H4'	52:D6:45:LYS:HG3	1.93	0.50
25:DA:2169:A:H2	25:DA:2170:A:C8	2.29	0.50
25:DA:2210:G:H2'	25:DA:2210:G:N3	2.27	0.50
25:DA:2238:G:N3	25:DA:2238:G:H2'	2.27	0.50
25:DA:2345:G:N3	25:DA:2381:C:H2'	2.27	0.50
25:DA:2748:A:C8	25:DA:2754:U:O4	2.65	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:39:C:H2'	25:DA:40:C:C6	2.46	0.50
25:DA:654(J):A:H3'	25:DA:654(J):A:N3	2.27	0.50
27:DD:25:THR:CG2	27:DD:26:LYS:N	2.75	0.50
29:DF:53:THR:HB	29:DF:56:GLU:OE2	2.12	0.50
36:DP:25:ASP:O	36:DP:25:ASP:OD1	2.30	0.50
43:DT:25:LYS:HA	43:DT:81:VAL:O	2.11	0.50
1:AA:1107:C:C4	1:AA:1108:G:C8	3.00	0.50
1:AA:1292:U:H2'	1:AA:1293:G:O4'	2.12	0.50
1:AA:243:A:H5''	1:AA:244:U:H3'	1.94	0.50
1:AA:943:U:H2'	1:AA:944:G:H5'	1.94	0.50
2:AE:54:THR:HG21	2:AE:201:ILE:HD11	1.93	0.50
4:AG:163:GLU:O	4:AG:165:MET:N	2.44	0.50
1:AA:1349:A:P	9:AL:118:LYS:NZ	2.85	0.50
19:AV:23:ASN:C	19:AV:25:LYS:H	2.15	0.50
25:BA:1536:A:H2'	25:BA:1537:C:OP1	2.11	0.50
25:BA:2400:G:O2'	25:BA:2401:U:H5'	2.11	0.50
25:BA:2789:C:C3'	25:BA:2790:A:H5''	2.42	0.50
25:BA:901:A:C2'	25:BA:902:C:H5'	2.42	0.50
25:BA:974(A):C:H4'	25:BA:975:G:O5'	2.10	0.50
26:BB:50:G:OP1	38:BQ:63:THR:HG23	2.12	0.50
26:BB:60:C:C2	26:BB:61:G:C8	3.00	0.50
27:BD:31:LYS:HZ2	27:BD:33:LEU:HD12	1.75	0.50
25:BA:2784:C:H1'	28:BE:37:ARG:NH1	2.27	0.50
32:BK:47:LEU:O	32:BK:51:ILE:HG13	2.11	0.50
39:BR:88:ILE:HG13	39:BR:88:ILE:O	2.12	0.50
25:BA:142:G:H1'	43:BT:37:THR:CG2	2.41	0.50
25:BA:297:C:H5''	44:BU:85:VAL:CG2	2.41	0.50
47:BZ:21:ARG:HG3	47:BZ:35:THR:HG23	1.92	0.50
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.47	0.50
1:CA:457:C:H2'	1:CA:458:C:C6	2.46	0.50
1:CA:622:A:C8	1:CA:623:C:C6	2.99	0.50
1:CA:939:G:C6	1:CA:940:C:C4	3.00	0.50
2:CE:237:ALA:O	2:CE:238:LEU:CB	2.59	0.50
3:CF:54:ARG:HB3	3:CF:69:HIS:CD2	2.47	0.50
3:CF:77:ILE:HA	3:CF:84:ILE:HB	1.92	0.50
12:CO:15:VAL:O	12:CO:16:ARG:HB3	2.11	0.50
19:CV:62:ILE:HD12	19:CV:62:ILE:N	2.26	0.50
25:DA:1607:C:H4'	25:DA:1608:A:C5'	2.41	0.50
25:DA:2315:G:OP1	30:DG:36:LYS:NZ	2.41	0.50
25:DA:2462:U:H1'	25:DA:2491:U:O4	2.11	0.50
25:DA:2610:C:C4'	25:DA:2611:U:OP2	2.54	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2702:U:OP1	25:DA:2702:U:O4'	2.29	0.50
26:DB:89:G:N2	26:DB:89(A):A:H2	2.09	0.50
29:DF:107:LYS:HD2	29:DF:205:ARG:HG3	1.94	0.50
29:DF:25:PRO:O	29:DF:26:ALA:HB3	2.12	0.50
32:DK:143:SER:OG	32:DK:144:VAL:N	2.45	0.50
35:DO:104:GLY:O	35:DO:105:LEU:HB3	2.11	0.50
36:DP:78:PRO:O	36:DP:79:LEU:O	2.30	0.50
38:DQ:66:ALA:O	38:DQ:69:VAL:HG12	2.10	0.50
42:DS:88:ARG:HB3	42:DS:92:ARG:HB3	1.94	0.50
43:DT:49:VAL:HB	43:DT:83:VAL:HG21	1.94	0.50
45:DV:115:GLY:HA3	45:DV:174:VAL:CG1	2.30	0.50
47:DZ:92:LYS:O	47:DZ:95:LEU:N	2.22	0.50
1:AA:1014:A:H4'	19:AV:14:HIS:NE2	2.27	0.50
1:AA:419:C:H42	1:AA:424:G:H1	1.60	0.50
1:AA:693:G:H2'	1:AA:694:A:C8	2.47	0.50
1:AA:724:G:O2'	1:AA:725:G:H5'	2.12	0.50
22:AB:21:A:C2	22:AB:56:U:O2	2.65	0.50
23:AC:1:C:O2	23:AC:1:C:C2'	2.59	0.50
22:AD:16:C:H2'	22:AD:18:G:OP2	2.12	0.50
4:AG:76:ARG:HD2	4:AG:207:TYR:CE2	2.47	0.50
1:AA:528:C:H41	12:AO:46:ASN:HD21	1.60	0.50
12:AO:42:PRO:HG2	12:AO:48:ALA:H	1.76	0.50
20:AW:26:ASN:ND2	20:AW:26:ASN:N	2.59	0.50
50:B4:36:CYS:SG	50:B4:36:CYS:O	2.69	0.50
50:B4:39:CYS:CA	50:B4:41:PRO:HD2	2.41	0.50
50:B4:36:CYS:O	50:B4:41:PRO:HG2	2.11	0.50
35:BO:49:ARG:HD2	54:B8:58:ILE:HG21	1.93	0.50
25:BA:1109:C:O2'	25:BA:1110:G:C4'	2.59	0.50
25:BA:1478:G:H2'	25:BA:1479:G:C8	2.45	0.50
25:BA:1534:G:C2'	25:BA:1535:U:H4'	2.41	0.50
25:BA:1913:A:H4'	25:BA:1914:C:H5'	1.94	0.50
25:BA:2015:A:H1'	51:B5:2:ALA:HB1	1.81	0.50
25:BA:2795:G:H3'	25:BA:2797:U:H5''	1.91	0.50
25:BA:2886:G:H2'	25:BA:2887:U:H6	1.77	0.50
25:BA:491:G:H2'	25:BA:492:A:H8	1.77	0.50
26:BB:1:U:H2'	26:BB:2:C:C6	2.47	0.50
27:BD:124:PRO:O	27:BD:126:GLN:N	2.45	0.50
30:BG:131:TYR:O	30:BG:159:VAL:HG22	2.12	0.50
32:BK:132:PRO:O	32:BK:133:HIS:CG	2.64	0.50
33:BM:15:LEU:HD13	33:BM:16:ILE:N	2.26	0.50
25:BA:196:A:O4'	35:BO:46:LYS:HD2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:106:VAL:HG21	36:BP:114:ALA:HB1	1.93	0.50
39:BR:19:LEU:HD22	39:BR:86:ILE:HG22	1.94	0.50
1:CA:1047:G:H2'	1:CA:1048:G:H5'	1.94	0.50
1:CA:1158:C:N3	1:CA:1160:G:N7	2.60	0.50
1:CA:1446:A:N6	39:DR:118:ARG:NH2	2.59	0.50
22:CB:31:G:H2'	22:CB:32:A:C8	2.47	0.50
22:CB:21:A:C2	22:CB:55:U:C5	3.00	0.50
2:CE:98:LEU:O	2:CE:101:MET:HG2	2.12	0.50
4:CG:88:VAL:HG13	5:CH:97:GLY:HA3	1.94	0.50
5:CH:76:ILE:HG23	5:CH:77:PRO:HD2	1.94	0.50
6:CI:67:MET:HB2	6:CI:68:PRO:HD2	1.94	0.50
9:CL:11:LYS:N	9:CL:104:ARG:HH21	2.02	0.50
17:CT:86:GLU:O	17:CT:90:ILE:HG12	2.12	0.50
20:CW:67:ALA:HA	20:CW:73:HIS:CA	2.42	0.50
25:DA:1006:C:C2	25:DA:1138:G:N2	2.79	0.50
25:DA:2197:U:H1'	25:DA:2198:A:C8	2.47	0.50
25:DA:945:A:C6	25:DA:2448:A:N1	2.79	0.50
25:DA:2561:A:C2	34:DN:23:ARG:NH1	2.80	0.50
25:DA:2563:U:O2	25:DA:2565:A:H8	1.94	0.50
25:DA:273(E):U:C2'	25:DA:273(F):C:H5'	2.42	0.50
31:DH:83:TYR:O	31:DH:84:SER:OG	2.24	0.50
36:DP:17:LEU:HD21	36:DP:41:TRP:HE1	1.77	0.50
25:DA:2295:C:OP2	38:DQ:10:ARG:HG3	2.12	0.50
25:DA:2718:G:O3'	39:DR:98:LYS:HG3	2.12	0.50
25:DA:491:G:O6	42:DS:49:LYS:HD3	2.12	0.50
1:AA:1160:G:N1	1:AA:1177:G:N2	2.60	0.50
1:AA:191:G:C4	20:AW:105:SER:HB2	2.47	0.50
1:AA:532:A:N6	1:AA:1206:G:O2'	2.45	0.50
1:AA:748:C:H1'	1:AA:749:C:OP2	2.12	0.50
1:AA:80:G:C6	1:AA:89:U:O2	2.64	0.50
2:AE:204:ASN:HD21	2:AE:206:ASP:C	2.14	0.50
14:AQ:37:PHE:CE1	14:AQ:53:LEU:HD13	2.47	0.50
17:AT:43:LEU:O	17:AT:69:LYS:HG3	2.11	0.50
20:AW:98:PRO:O	20:AW:100:ILE:N	2.43	0.50
46:B3:23:VAL:HA	46:B3:38:VAL:HG22	1.94	0.50
25:BA:2370:G:H21	52:B6:45:LYS:NZ	2.10	0.50
53:B7:43:THR:HG23	53:B7:44:PRO:HD2	1.94	0.50
25:BA:1092:C:N4	25:BA:1100:C:N3	2.60	0.50
25:BA:1373:A:H2'	25:BA:1374:G:O4'	2.12	0.50
25:BA:1509:C:H2'	25:BA:1510:A:OP1	2.12	0.50
29:BF:27:GLU:HG2	29:BF:28:ILE:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:74:LYS:O	30:BG:84:LYS:HG3	2.11	0.50
31:BH:151:ILE:O	31:BH:153:LYS:HD3	2.11	0.50
31:BH:92:ILE:HD12	31:BH:92:ILE:N	2.27	0.50
35:BO:122:PRO:HA	35:BO:142:GLY:CA	2.42	0.50
39:BR:102:ILE:HB	39:BR:110:ILE:HD13	1.93	0.50
45:BV:110:GLY:CA	45:BV:145:GLU:HG2	2.42	0.50
1:CA:1453:G:O2'	1:CA:1454:G:P	2.69	0.50
1:CA:836:G:C6	1:CA:851:G:C6	3.00	0.50
22:CB:21:A:C2	22:CB:56:U:C2	3.00	0.50
2:CE:80:ILE:HD13	2:CE:212:GLN:HG2	1.93	0.50
4:CG:14:ARG:HG3	4:CG:14:ARG:NH1	2.26	0.50
5:CH:126:ARG:HA	5:CH:131:ILE:HD11	1.93	0.50
6:CI:33:TYR:CE1	6:CI:78:GLU:HG3	2.47	0.50
7:CJ:53:LYS:HB3	7:CJ:53:LYS:NZ	2.27	0.50
7:CJ:4:ARG:HG3	7:CJ:5:ARG:H	1.75	0.50
1:CA:523:A:H61	12:CO:89:ASP:HB2	1.77	0.50
40:D1:47:TYR:HA	40:D1:50:ARG:NH2	2.26	0.50
41:D2:28:GLU:O	41:D2:61:VAL:HG11	2.12	0.50
40:D1:50:ARG:NH1	41:D2:72:VAL:HA	2.24	0.50
25:DA:1090:U:O4	25:DA:1101:U:C2	2.63	0.50
25:DA:51:G:N3	25:DA:119:A:C2	2.80	0.50
25:DA:2131:G:O4'	25:DA:2158:A:N1	2.45	0.50
25:DA:868:U:N3	25:DA:869:G:N7	2.59	0.50
25:DA:874:G:N2	25:DA:904:C:C2	2.80	0.50
25:DA:9:U:H3	25:DA:2629:A:N6	1.96	0.50
39:DR:121:ILE:O	39:DR:125:ARG:HG2	2.10	0.50
26:DB:75:G:N2	45:DV:73:GLN:OE1	2.36	0.50
1:AA:1059:C:O3'	14:AQ:45:ARG:NH2	2.45	0.49
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.12	0.49
1:AA:654:G:C2'	1:AA:655:A:H5'	2.42	0.49
3:AF:84:ILE:O	3:AF:88:ARG:HG3	2.12	0.49
4:AG:19:LEU:H	4:AG:19:LEU:CD2	2.25	0.49
6:AI:38:GLU:OE1	6:AI:64:GLN:NE2	2.44	0.49
10:AM:30:SER:HB2	10:AM:80:LYS:HG3	1.93	0.49
12:AO:119:THR:HG22	12:AO:120:LYS:O	2.12	0.49
12:AO:45:PRO:O	12:AO:46:ASN:CB	2.60	0.49
18:AU:32:ARG:HH11	18:AU:65:ILE:HD13	1.76	0.49
50:B4:16:CYS:C	50:B4:18:CYS:H	2.16	0.49
50:B4:43:TYR:O	50:B4:44:THR:O	2.30	0.49
52:B6:33:LYS:NZ	52:B6:33:LYS:HB2	2.27	0.49
25:BA:1218:C:H42	25:BA:1231:G:H1	1.59	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1348:G:C2'	25:BA:1349:A:H5''	2.40	0.49
25:BA:2127:G:O2'	25:BA:2173:A:N1	2.36	0.49
25:BA:2481:G:H2'	25:BA:2482:G:OP2	2.12	0.49
25:BA:2505:G:O6	25:BA:2576:G:H2'	2.12	0.49
25:BA:347:A:H2'	25:BA:348:G:C8	2.47	0.49
26:BB:43:C:OP1	30:BG:67:LYS:NZ	2.45	0.49
27:BD:206:LEU:HD22	27:BD:211:ARG:HG2	1.93	0.49
29:BF:176:LEU:HD21	29:BF:180:GLY:O	2.12	0.49
33:BM:133:GLN:CG	33:BM:135:PRO:HD3	2.41	0.49
25:BA:907:U:H4'	36:BP:101:ARG:HH22	1.76	0.49
1:CA:577:G:C8	1:CA:816:A:C6	3.00	0.49
4:CG:108:LEU:HB3	4:CG:110:PHE:CD1	2.47	0.49
4:CG:19:LEU:N	4:CG:19:LEU:HD12	2.27	0.49
4:CG:79:PHE:HE1	4:CG:204:ILE:HD13	1.77	0.49
8:CK:86:ILE:HB	8:CK:133:LEU:O	2.12	0.49
12:CO:44:LYS:HG3	12:CO:45:PRO:HD3	1.94	0.49
37:D0:52:ILE:HD13	37:D0:79:LEU:HD21	1.93	0.49
25:DA:1030:G:OP2	36:DP:128:LYS:HG2	2.11	0.49
25:DA:1050:A:H2'	25:DA:1051:G:O4'	2.12	0.49
25:DA:1329:U:H5''	25:DA:1330:C:H5	1.77	0.49
25:DA:1324:G:C2	25:DA:1331:A:C2	3.00	0.49
25:DA:1357:U:H2'	25:DA:1358:G:O4'	2.12	0.49
25:DA:1482:U:H5'	25:DA:1483:G:OP2	2.12	0.49
25:DA:1495:A:O2'	25:DA:1496:A:H5'	2.12	0.49
25:DA:2149:G:C6	25:DA:2150:U:C2	3.00	0.49
25:DA:858:U:O2	25:DA:2268:A:H2'	2.11	0.49
25:DA:813:U:H2'	25:DA:814:C:C6	2.47	0.49
28:DE:77:ILE:O	28:DE:78:LEU:O	2.30	0.49
28:DE:8:LYS:O	28:DE:9:VAL:CG2	2.57	0.49
35:DO:70:GLN:O	35:DO:72:PRO:HD2	2.11	0.49
43:DT:41:ASN:N	43:DT:41:ASN:HD22	2.09	0.49
45:DV:173:ALA:O	45:DV:174:VAL:HG23	2.12	0.49
47:DZ:92:LYS:O	47:DZ:93:GLU:C	2.50	0.49
1:AA:1004:A:H2'	1:AA:1005:A:C4'	2.42	0.49
1:AA:171:A:H2'	1:AA:172:A:H8	1.77	0.49
1:AA:22:G:H4'	1:AA:885:G:C8	2.47	0.49
3:AF:11:ARG:O	3:AF:14:ILE:N	2.45	0.49
4:AG:98:GLU:HG2	4:AG:189:PRO:HG2	1.94	0.49
7:AJ:115:ARG:O	7:AJ:118:VAL:HG12	2.12	0.49
10:AM:5:ARG:HG3	10:AM:71:LEU:HD11	1.93	0.49
20:AW:49:ALA:HB1	20:AW:99:LEU:HB2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:B0:79:LEU:HD23	37:B0:83:ILE:HB	1.94	0.49
51:B5:54:GLY:O	51:B5:56:LYS:N	2.44	0.49
35:BO:64:LYS:CB	54:B8:25:MET:HG3	2.40	0.49
54:B8:29:LYS:CG	54:B8:44:LYS:HG2	2.42	0.49
25:BA:1087:G:C6	25:BA:1089:G:O2'	2.62	0.49
25:BA:1385:G:O2'	25:BA:1396:U:C6	2.62	0.49
25:BA:2053:G:OP1	28:BE:144:ARG:HD3	2.13	0.49
25:BA:271(C):U:H2'	25:BA:271:G:OP1	2.12	0.49
27:BD:85:ASP:HB2	27:BD:92:ILE:HD13	1.94	0.49
31:BH:153:LYS:CG	31:BH:162:ILE:H	2.25	0.49
31:BH:46:GLU:CD	31:BH:51:ARG:HH11	2.15	0.49
36:BP:43:THR:O	36:BP:46:GLN:HB2	2.13	0.49
44:BU:49:VAL:C	44:BU:51:VAL:H	1.98	0.49
1:CA:1401:G:C2	1:CA:1402:C:H1'	2.46	0.49
1:CA:1451:A:H5''	1:CA:1452:C:C6	2.47	0.49
1:CA:84:U:O2	1:CA:84:U:C2'	2.59	0.49
2:CE:36:ARG:H	2:CE:41:ILE:HD13	1.77	0.49
4:CG:108:LEU:HG	4:CG:176:LEU:HD13	1.94	0.49
13:CP:54:VAL:O	13:CP:57:ARG:HB3	2.12	0.49
50:D4:4:GLY:C	50:D4:5:ILE:HG13	2.32	0.49
25:DA:1477:A:H2'	25:DA:1478:G:O4'	2.11	0.49
25:DA:2130:U:H2'	25:DA:2158:A:N1	2.26	0.49
25:DA:2335:A:C8	25:DA:2337:G:N7	2.80	0.49
25:DA:2681:C:C5	25:DA:2727:G:C2	3.00	0.49
26:DB:22:U:H3	26:DB:61:G:H1	1.60	0.49
30:DG:63:ILE:HG13	30:DG:63:ILE:O	2.11	0.49
31:DH:58:GLU:O	31:DH:60:ARG:N	2.45	0.49
32:DK:100:ALA:O	32:DK:102:SER:N	2.36	0.49
25:DA:811:U:O2'	35:DO:21:ARG:HG3	2.13	0.49
36:DP:3:MET:O	36:DP:4:PRO:O	2.30	0.49
38:DQ:26:LEU:HB3	38:DQ:87:PHE:HA	1.94	0.49
49:DX:46:ASN:O	49:DX:49:LYS:N	2.45	0.49
1:AA:1250:A:N3	1:AA:1370:G:O2'	2.42	0.49
1:AA:57:G:C5	1:AA:58:C:C4	3.00	0.49
22:AB:3:U:O2'	22:AB:4:G:H5''	2.13	0.49
2:AE:146:GLN:OE1	2:AE:153:ARG:NH2	2.45	0.49
2:AE:44:LEU:O	2:AE:47:THR:HB	2.11	0.49
3:AF:94:LEU:O	3:AF:95:THR:OG1	2.27	0.49
5:AH:127:ASN:OD1	5:AH:128:PRO:HD2	2.12	0.49
6:AI:2:ARG:HD2	6:AI:69:GLU:HB3	1.93	0.49
13:AP:16:ASP:OD2	13:AP:16:ASP:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:B0:85:PRO:C	37:B0:87:TYR:H	2.15	0.49
40:B1:102:GLU:HG3	41:B2:2:PHE:CZ	2.47	0.49
41:B2:35:LEU:HB2	41:B2:37:VAL:HG22	1.94	0.49
25:BA:2771:C:H2'	25:BA:2772:C:H6	1.76	0.49
25:BA:2863:C:O2'	25:BA:2864:G:H5'	2.12	0.49
25:BA:672:C:O2'	25:BA:673:C:H5'	2.12	0.49
27:BD:221:VAL:HG22	27:BD:226:MET:HE2	1.93	0.49
28:BE:92:THR:O	28:BE:95:ILE:HG12	2.12	0.49
44:BU:95:LYS:HG3	44:BU:95:LYS:O	2.11	0.49
45:BV:107:THR:C	45:BV:109:ALA:N	2.65	0.49
1:CA:1053:G:C4'	1:CA:1054:C:H5'	2.36	0.49
1:CA:559:A:H4'	1:CA:560:U:C3'	2.35	0.49
1:CA:873:A:H4'	1:CA:874:G:OP2	2.12	0.49
1:CA:901:A:O5'	1:CA:901:A:H8	1.96	0.49
1:CA:940:C:H2'	1:CA:941:G:H8	1.77	0.49
1:CA:973:G:OP1	10:CM:57:LYS:NZ	2.39	0.49
4:CG:121:VAL:O	4:CG:134:ASP:HA	2.11	0.49
5:CH:18:ARG:HH21	5:CH:25:ARG:HB3	1.77	0.49
9:CL:70:LYS:O	9:CL:74:ILE:HG13	2.12	0.49
15:CR:72:ARG:HD2	15:CR:73:GLU:OE2	2.12	0.49
37:D0:41:ALA:C	37:D0:43:GLU:H	2.15	0.49
50:D4:34:GLU:HG2	50:D4:35:VAL:N	2.27	0.49
25:DA:1141:U:H1'	25:DA:1142(A):A:C6	2.48	0.49
25:DA:2443:C:O2'	25:DA:2444:G:H5'	2.12	0.49
25:DA:2688:U:H5	25:DA:2720:U:OP2	1.95	0.49
25:DA:2720:U:O4	25:DA:2721:A:C6	2.65	0.49
25:DA:2880:C:O2	37:D0:93:GLY:N	2.45	0.49
25:DA:68:G:H2'	25:DA:69:C:C6	2.47	0.49
26:DB:24:G:N2	26:DB:28:C:O2	2.45	0.49
27:DD:26:LYS:H	27:DD:26:LYS:HD2	1.77	0.49
27:DD:35:LYS:HE3	27:DD:63:ARG:C	2.32	0.49
28:DE:36:ARG:HH21	28:DE:88:GLY:CA	2.25	0.49
33:DM:72:TYR:CE1	33:DM:101:HIS:HD2	2.29	0.49
35:DO:71:VAL:CB	35:DO:72:PRO:CD	2.75	0.49
36:DP:45:GLN:H	36:DP:45:GLN:CD	2.14	0.49
39:DR:16:ARG:NE	39:DR:19:LEU:HD11	2.26	0.49
44:DU:61:ILE:HG22	44:DU:62:GLU:N	2.23	0.49
47:DZ:62:VAL:HG12	47:DZ:63:ALA:O	2.11	0.49
47:DZ:83:GLU:N	47:DZ:83:GLU:OE2	2.44	0.49
1:AA:1305:G:N2	1:AA:1331:G:H2'	2.16	0.49
1:AA:1335:C:C5'	1:AA:1336:C:OP1	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1442:G:C6	1:AA:1446:A:N6	2.81	0.49
1:AA:925:G:H1'	1:AA:1502:A:C4	2.47	0.49
1:AA:756:C:H2'	1:AA:757:U:O4'	2.12	0.49
1:AA:819:A:H4'	1:AA:820:U:OP2	2.11	0.49
2:AE:8:LYS:NZ	2:AE:11:LEU:HD22	2.28	0.49
2:AE:96:ARG:HE	2:AE:96:ARG:N	2.10	0.49
8:AK:14:ARG:NH2	8:AK:83:ILE:O	2.42	0.49
33:BM:1:MET:HE1	40:B1:95:LEU:HD21	1.93	0.49
25:BA:459:U:H5''	53:B7:40:TRP:CD2	2.47	0.49
25:BA:2314:C:H2'	25:BA:2315:G:C8	2.45	0.49
25:BA:545:G:H3'	25:BA:546:C:C5'	2.42	0.49
25:BA:883:G:H2'	25:BA:884:C:C4'	2.43	0.49
31:BH:136:ILE:HD12	31:BH:136:ILE:H	1.78	0.49
31:BH:95:ARG:HB3	31:BH:95:ARG:HH11	1.77	0.49
35:BO:86:LYS:HD2	35:BO:117:GLU:HG3	1.94	0.49
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.45	0.49
1:CA:1125:U:C4'	1:CA:1125:U:OP2	2.60	0.49
1:CA:1128:C:O2'	1:CA:1130:A:C8	2.64	0.49
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.27	0.49
1:CA:1366:C:OP1	9:CL:117:HIS:CE1	2.63	0.49
1:CA:67:C:H2'	1:CA:68:G:C8	2.46	0.49
1:CA:685:G:C2	1:CA:686:U:C4	3.00	0.49
1:CA:735:C:H2'	1:CA:736:C:C6	2.47	0.49
22:CB:30:A:H2'	22:CB:31:G:C8	2.46	0.49
22:CD:62:G:H2'	22:CD:63:U:C6	2.47	0.49
2:CE:26:PRO:C	2:CE:28:PHE:H	2.15	0.49
3:CF:148:GLY:O	3:CF:203:PHE:N	2.34	0.49
4:CG:13:ARG:NH1	4:CG:38:TYR:O	2.43	0.49
7:CJ:6:ARG:O	7:CJ:7:ALA:C	2.51	0.49
41:D2:38:LEU:HD23	41:D2:40:LEU:O	2.11	0.49
52:D6:25:LYS:HE2	52:D6:27:LYS:HZ1	1.76	0.49
25:DA:99:U:H4'	25:DA:102:G:H1'	1.93	0.49
25:DA:1514:U:O2'	25:DA:1515:C:H5'	2.12	0.49
25:DA:2185:C:H2'	25:DA:2186:G:C8	2.47	0.49
25:DA:2801:A:OP1	25:DA:2895:U:O2'	2.24	0.49
26:DB:14:U:O2'	26:DB:107:U:H4'	2.12	0.49
29:DF:68:LYS:HB3	29:DF:69:HIS:CD2	2.47	0.49
13:CP:7:VAL:HG21	30:DG:115:ARG:HB3	1.93	0.49
25:DA:2531:A:C5'	31:DH:157:TYR:HE2	2.25	0.49
1:AA:55:A:C6	32:DK:89:TYR:CD1	3.00	0.49
25:DA:389:G:H1	35:DO:71:VAL:HG13	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DP:7:MET:HB3	36:DP:10:ARG:NH2	2.27	0.49
38:DQ:84:GLN:CA	38:DQ:110:LEU:H	2.25	0.49
2:AE:132:LYS:HA	2:AE:135:GLN:OE1	2.11	0.49
3:AF:162:GLN:CD	24:A1:23:A:H8	2.16	0.49
3:AF:83:ARG:O	3:AF:85:ARG:N	2.45	0.49
4:AG:76:ARG:NH2	4:AG:80:GLU:OE1	2.37	0.49
7:AJ:65:ALA:O	7:AJ:69:VAL:HG23	2.13	0.49
11:AN:52:GLY:H	11:AN:55:LYS:HE3	1.76	0.49
19:AV:65:ASN:N	19:AV:65:ASN:HD22	2.09	0.49
25:BA:2420:C:OP1	54:B8:33:ASN:O	2.31	0.49
25:BA:1528:A:H2'	25:BA:1529:A:O4'	2.13	0.49
25:BA:2139:C:N4	25:BA:2140:C:N3	2.60	0.49
25:BA:886:C:H1'	25:BA:890:A:C6	2.47	0.49
25:BA:978:G:C2	25:BA:986:C:C2	3.01	0.49
28:BE:24:THR:OG1	28:BE:186:GLY:HA2	2.13	0.49
33:BM:73:THR:HB	33:BM:82:LEU:HD11	1.94	0.49
35:BO:114:ILE:HD12	35:BO:134:ALA:HB1	1.95	0.49
35:BO:6:LEU:O	35:BO:7:ARG:HG2	2.12	0.49
36:BP:25:ASP:OD1	36:BP:25:ASP:O	2.30	0.49
38:BQ:27:SER:HA	38:BQ:88:ASP:CB	2.42	0.49
38:BQ:4:LEU:HD22	38:BQ:9:ARG:HG3	1.93	0.49
1:AA:1443:G:O2'	39:BR:122:ASP:OD2	2.27	0.49
25:BA:336:C:H5''	44:BU:6:HIS:HD2	1.76	0.49
45:BV:111:VAL:O	45:BV:111:VAL:HG23	2.11	0.49
49:BX:7:LYS:HG3	49:BX:34:GLU:HG3	1.94	0.49
1:CA:1181:G:O2'	1:CA:1184:G:H5'	2.13	0.49
1:CA:1229:A:H2'	1:CA:1230:C:C6	2.46	0.49
1:CA:186(E):C:C2	1:CA:191(C):G:N2	2.80	0.49
1:CA:45:U:H2'	1:CA:46:G:C8	2.47	0.49
1:CA:468:A:H2'	1:CA:474:G:H5'	1.95	0.49
1:CA:663:A:H5'	1:CA:836:G:OP1	2.12	0.49
22:CB:13:G:N2	22:CB:23:A:C2	2.80	0.49
22:CB:51:C:C5	22:CB:52:G:N3	2.80	0.49
22:CD:47:U:H2'	22:CD:48:C:H6	1.71	0.49
22:CD:51:C:C6	22:CD:52:G:H1'	2.48	0.49
3:CF:19:GLU:HG2	3:CF:19:GLU:O	2.12	0.49
1:CA:619:U:N3	4:CG:134:ASP:OD2	2.38	0.49
5:CH:10:MET:HB2	5:CH:32:VAL:HG22	1.93	0.49
7:CJ:57:GLU:CD	7:CJ:57:GLU:H	2.09	0.49
7:CJ:80:VAL:O	7:CJ:80:VAL:HG13	2.12	0.49
8:CK:29:SER:HB3	8:CK:32:LYS:CG	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CP:64:TRP:N	13:CP:64:TRP:CD1	2.78	0.49
14:CQ:24:CYS:HB2	14:CQ:39:LEU:HA	1.93	0.49
14:CQ:44:LEU:HD12	14:CQ:44:LEU:O	2.13	0.49
52:D6:10:LEU:O	52:D6:11:LEU:HD12	2.12	0.49
25:DA:1428:C:N4	25:DA:1570:A:OP2	2.37	0.49
25:DA:1753:G:N1	25:DA:1756:G:C2	2.80	0.49
25:DA:1914:C:O4'	25:DA:1914:C:O2	2.30	0.49
25:DA:2094:G:P	32:DK:22:LYS:HD2	2.52	0.49
25:DA:2135:A:O2'	25:DA:2136:C:OP1	2.25	0.49
25:DA:2267:A:H5''	25:DA:2268:A:H5'	1.94	0.49
25:DA:2343:C:HO2'	25:DA:2373:G:HO2'	1.60	0.49
25:DA:2346:A:H8	52:D6:24:GLU:HG2	1.76	0.49
25:DA:2726:U:O2'	25:DA:2727:G:H8	1.95	0.49
25:DA:2808:U:H5'	25:DA:2891:G:O6	2.12	0.49
25:DA:690:G:O2'	27:DD:43:ARG:NH2	2.39	0.49
25:DA:780:G:N2	25:DA:783:A:H62	2.09	0.49
25:DA:933:A:C5	25:DA:934:G:C8	3.00	0.49
27:DD:75:ILE:HD12	27:DD:75:ILE:N	2.26	0.49
32:DK:57:ARG:HA	32:DK:60:GLU:HG2	1.94	0.49
34:DN:43:VAL:HG21	34:DN:52:VAL:CG1	2.42	0.49
22:AD:8:U:H1'	22:AD:57:C:O2	2.13	0.49
2:AE:22:LYS:O	2:AE:24:TRP:N	2.39	0.49
8:AK:83:ILE:HG13	8:AK:137:VAL:HG22	1.93	0.49
12:AO:90:LEU:O	12:AO:93:VAL:HG13	2.13	0.49
40:B1:66:ASN:O	40:B1:70:ARG:HG2	2.13	0.49
46:B3:41:ARG:O	46:B3:57:PHE:HD2	1.95	0.49
19:AV:67:VAL:CG1	50:B4:59:PHE:HB2	2.42	0.49
25:BA:1403:C:H5''	25:BA:1471:A:H1'	1.95	0.49
25:BA:2314:C:H5''	30:BG:38:VAL:HG21	1.94	0.49
25:BA:2469:A:C2	25:BA:2469:A:H5'	2.45	0.49
25:BA:2648:C:H2'	25:BA:2649:U:C6	2.48	0.49
25:BA:582:G:H2'	25:BA:583:G:C8	2.47	0.49
25:BA:619:G:H5''	25:BA:620:G:OP2	2.13	0.49
25:BA:883:G:C6	25:BA:884:C:O2	2.65	0.49
39:BR:37:GLY:O	39:BR:38:ASN:HB2	2.11	0.49
1:CA:1316:G:H22	1:CA:1319:A:P	2.35	0.49
1:CA:631:G:HO2'	1:CA:632:A:P	2.34	0.49
1:CA:858:G:O6	1:CA:869:G:H3'	2.13	0.49
22:CB:59:A:H61	22:CB:73:U:H3	1.59	0.49
2:CE:18:GLY:O	2:CE:19:HIS:ND1	2.31	0.49
2:CE:32:ILE:HD11	2:CE:40:HIS:CG	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CF:45:LYS:HG3	3:CF:46:GLU:H	1.76	0.49
20:CW:10:LEU:CD1	20:CW:12:ALA:H	2.20	0.49
20:CW:65:LYS:HA	20:CW:68:LYS:HD3	1.94	0.49
25:DA:1041:C:O2'	25:DA:1042:G:H5'	2.11	0.49
25:DA:1817:G:OP1	27:DD:88:ARG:NH2	2.43	0.49
25:DA:2646:C:H2'	25:DA:2647:U:O4'	2.12	0.49
25:DA:329:G:O6	44:DU:19:LYS:CB	2.58	0.49
25:DA:975:G:H1'	25:DA:990:A:C2	2.47	0.49
31:DH:16:SER:HB3	31:DH:27:LYS:O	2.13	0.49
35:DO:50:ARG:HH21	54:D8:7:HIS:HD2	1.58	0.49
35:DO:69:GLY:HA2	35:DO:70:GLN:OE1	2.13	0.49
44:DU:30:VAL:O	44:DU:36:ALA:O	2.31	0.49
1:AA:1090:U:O2'	1:AA:1091:U:H5'	2.13	0.49
1:AA:1211:U:H4'	1:AA:1212:U:O5'	2.12	0.49
1:AA:448:A:C4	1:AA:487:A:C2	3.00	0.49
1:AA:940:C:H2'	1:AA:941:G:H8	1.77	0.49
2:AE:17:PHE:N	2:AE:17:PHE:HD2	2.11	0.49
10:AM:92:THR:HG23	10:AM:93:GLY:H	1.78	0.49
15:AR:87:ILE:CG2	15:AR:88:ARG:H	2.05	0.49
40:B1:107:ALA:O	40:B1:110:VAL:HB	2.13	0.49
40:B1:17:ILE:HD12	40:B1:32:PHE:HE1	1.78	0.49
41:B2:64:HIS:N	41:B2:64:HIS:ND1	2.61	0.49
50:B4:39:CYS:O	50:B4:41:PRO:HD3	2.12	0.49
25:BA:1108:U:O4	25:BA:1109:C:N4	2.46	0.49
25:BA:2275:C:H5'	25:BA:2275:C:H6	1.77	0.49
25:BA:34:C:O2'	25:BA:35:G:OP2	2.27	0.49
25:BA:996:A:H4'	40:B1:92:ARG:NE	2.28	0.49
27:BD:35:LYS:CB	27:BD:63:ARG:HA	2.43	0.49
28:BE:14:ILE:O	28:BE:15:PHE:HB2	2.12	0.49
33:BM:57:ALA:O	33:BM:58:ASP:HB3	2.11	0.49
33:BM:7:LYS:H	33:BM:7:LYS:CE	2.25	0.49
42:BS:65:LEU:C	42:BS:67:ASP:H	2.15	0.49
32:BK:27:ARG:HD2	47:BZ:71:TYR:CZ	2.48	0.49
47:BZ:91:LYS:HZ3	47:BZ:91:LYS:HA	1.77	0.49
1:CA:1124:G:H2'	1:CA:1145:C:H2'	1.95	0.49
1:CA:1353:G:N2	1:CA:1370:G:N3	2.61	0.49
1:CA:690:G:H2'	1:CA:691:G:O4'	2.11	0.49
23:CC:19:G:N2	23:CC:58:A:H2'	2.28	0.49
4:CG:190:ASP:OD1	4:CG:192:GLU:HG3	2.13	0.49
1:CA:1118:C:OP1	9:CL:104:ARG:NH1	2.46	0.49
9:CL:118:LYS:HB3	9:CL:121:ARG:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CR:8:LYS:O	15:CR:12:ILE:HG13	2.13	0.49
16:CS:49:LEU:HD12	16:CS:50:LYS:H	1.78	0.49
20:CW:26:ASN:HB2	20:CW:71:THR:HG23	1.93	0.49
25:DA:1278:A:O2'	37:D0:34:ILE:HD11	2.13	0.49
40:D1:58:ARG:O	40:D1:62:ILE:HD13	2.13	0.49
40:D1:88:ILE:HG22	41:D2:49:THR:HA	1.95	0.49
35:DO:23:PRO:HB3	41:D2:80:GLN:CG	2.42	0.49
52:D6:16:CYS:O	52:D6:17:LYS:HG3	2.13	0.49
54:D8:32:LEU:CD2	54:D8:33:ASN:N	2.75	0.49
25:DA:1144:G:C6	25:DA:1145:C:C4	3.01	0.49
25:DA:2516:G:C6	25:DA:2517:C:N4	2.81	0.49
25:DA:2645:G:C3'	25:DA:2646:C:H5'	2.41	0.49
25:DA:2852:G:H2'	25:DA:2853:C:C6	2.48	0.49
25:DA:580:C:H2'	25:DA:581:C:H6	1.76	0.49
25:DA:828:U:C5	25:DA:829:A:N6	2.81	0.49
26:DB:14:U:OP2	26:DB:70:C:O2'	2.19	0.49
26:DB:86:G:H1	26:DB:90:C:N4	2.09	0.49
28:DE:101:ARG:O	28:DE:201:THR:OG1	2.29	0.49
28:DE:37:ARG:HA	28:DE:41:LYS:HE3	1.94	0.49
30:DG:60:LEU:HD21	30:DG:92:VAL:HG11	1.95	0.49
34:DN:10:VAL:HG21	34:DN:16:ALA:O	2.13	0.49
35:DO:50:ARG:O	35:DO:51:PHE:O	2.30	0.49
26:DB:52:A:H62	38:DQ:33:LYS:CG	2.25	0.49
44:DU:30:VAL:HG12	44:DU:31:LEU:N	2.27	0.49
44:DU:55:TYR:CD2	44:DU:55:TYR:N	2.79	0.49
45:DV:115:GLY:CA	45:DV:177:PRO:HG2	2.43	0.49
1:AA:1232:U:H2'	1:AA:1233:G:O5'	2.13	0.49
1:AA:1452:C:HO2'	1:AA:1453:G:P	2.28	0.49
1:AA:1466:C:H2'	1:AA:1467:G:O4'	2.11	0.49
1:AA:191(C):G:N1	1:AA:191(D):U:O2	2.46	0.49
1:AA:510:A:H5''	1:AA:511:C:P	2.53	0.49
1:AA:640:A:O2'	8:AK:115:SER:HB3	2.12	0.49
1:AA:975:A:H4'	1:AA:976:G:C5'	2.29	0.49
22:AB:72:U:C2'	22:AB:73:U:H5'	2.43	0.49
2:AE:187:LEU:CD1	2:AE:205:ASP:HA	2.43	0.49
3:AF:181:ASN:HD21	3:AF:204:LEU:HB2	1.73	0.49
11:AN:22:HIS:HB3	11:AN:29:ILE:CG2	2.42	0.49
14:AQ:4:LYS:C	14:AQ:6:LEU:H	2.15	0.49
1:AA:323:U:H5'	20:AW:23:ARG:HB2	1.94	0.49
25:BA:1470:G:H5''	25:BA:1471:A:OP1	2.12	0.49
25:BA:2140:C:C2	25:BA:2151:G:N2	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2802:G:C6	25:BA:2803:C:C4	3.00	0.49
25:BA:491:G:H2'	25:BA:492:A:C8	2.47	0.49
26:BB:11:C:OP2	26:BB:12:C:N4	2.43	0.49
25:BA:2572:A:C4	28:BE:144:ARG:NH1	2.81	0.49
29:BF:202:PHE:O	29:BF:206:ILE:HG22	2.13	0.49
30:BG:76:SER:OG	30:BG:83:ARG:HA	2.13	0.49
31:BH:105:LEU:CD2	31:BH:105:LEU:H	2.22	0.49
33:BM:56:ASN:N	33:BM:125:GLY:O	2.40	0.49
36:BP:51:ARG:NH1	36:BP:55:VAL:HG11	2.27	0.49
36:BP:51:ARG:O	36:BP:55:VAL:HG13	2.13	0.49
25:BA:2849:U:O4	39:BR:23:ARG:NH2	2.46	0.49
43:BT:49:VAL:CG1	43:BT:50:LYS:N	2.74	0.49
1:CA:1055:A:C5	1:CA:1056:U:C6	3.00	0.49
1:CA:434:U:H2'	1:CA:435:C:C6	2.48	0.49
1:CA:509:A:O2'	1:CA:510:A:P	2.71	0.49
22:CD:43:G:O2'	22:CD:44:C:H5'	2.12	0.49
2:CE:19:HIS:NE2	2:CE:204:ASN:HB3	2.27	0.49
1:CA:1112:C:N3	3:CF:178:LEU:HD23	2.28	0.49
20:CW:72:LEU:HD23	20:CW:73:HIS:N	2.28	0.49
20:CW:74:LYS:C	20:CW:76:ALA:H	2.16	0.49
25:DA:1484:G:O6	25:DA:1505:C:N3	2.45	0.49
25:DA:1790:C:H5''	25:DA:1791:A:OP1	2.12	0.49
25:DA:1794:U:H2'	25:DA:1795:C:C6	2.47	0.49
25:DA:2766:G:N3	25:DA:2766:G:H2'	2.27	0.49
25:DA:2893:G:H4'	25:DA:2894:G:O5'	2.13	0.49
25:DA:654(B):C:H2'	25:DA:654(C):G:C8	2.48	0.49
25:DA:733:G:C8	25:DA:761:A:N6	2.81	0.49
25:DA:914:C:H3'	25:DA:915:C:H5''	1.94	0.49
27:DD:35:LYS:HD3	27:DD:63:ARG:CB	2.43	0.49
28:DE:11:MET:HA	28:DE:24:THR:HA	1.94	0.49
28:DE:197:ILE:O	28:DE:197:ILE:HG13	2.13	0.49
32:DK:81:VAL:H	32:DK:143:SER:CB	2.26	0.49
25:DA:1138:G:H21	33:DM:106:MET:HE3	1.77	0.49
34:DN:120:GLU:OE1	34:DN:122:LEU:HD21	2.13	0.49
28:DE:7:VAL:HG21	39:DR:1:MET:HE2	1.95	0.49
45:DV:107:THR:N	45:DV:108:PRO:CD	2.75	0.49
1:AA:1091:U:H2'	1:AA:1093:A:OP2	2.12	0.49
1:AA:1233:G:OP2	9:AL:124:GLN:HB2	2.13	0.49
1:AA:129(A):G:C2	1:AA:191(A):G:C8	3.01	0.49
1:AA:1379:G:O2'	1:AA:1380:U:H5'	2.13	0.49
1:AA:495:A:H4'	1:AA:496:A:OP1	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:827:U:C5	1:AA:870:U:C4	3.01	0.49
22:AB:51:C:N3	22:AB:52:G:H1'	2.27	0.49
2:AE:59:GLU:HG3	2:AE:225:ALA:HB2	1.94	0.49
4:AG:129:ASN:OD1	4:AG:145:GLU:N	2.26	0.49
4:AG:190:ASP:O	4:AG:191:ARG:C	2.51	0.49
9:AL:11:LYS:C	9:AL:13:ALA:H	2.16	0.49
10:AM:34:VAL:HG22	10:AM:74:ILE:HG22	1.94	0.49
10:AM:96:ILE:H	10:AM:96:ILE:HD13	1.77	0.49
15:AR:17:ARG:NH1	15:AR:17:ARG:CG	2.68	0.49
17:AT:101:ARG:NH2	17:AT:101:ARG:HB2	2.27	0.49
1:AA:1014:A:H4'	19:AV:14:HIS:CD2	2.48	0.49
37:B0:74:LYS:HD2	37:B0:77:ARG:NH2	2.27	0.49
25:BA:1287:A:H8	37:B0:104:ARG:HD3	1.78	0.49
25:BA:1541:U:H2'	25:BA:1542:G:O4'	2.13	0.49
25:BA:214:G:N2	25:BA:216:A:N3	2.61	0.49
25:BA:2185:C:H2'	25:BA:2186:G:C8	2.47	0.49
25:BA:250:G:C6	25:BA:251:A:C6	3.00	0.49
25:BA:270(F):U:H2'	25:BA:270(G):C:C6	2.48	0.49
25:BA:889:C:H5''	25:BA:890:A:P	2.53	0.49
31:BH:94:TYR:CD1	31:BH:107:VAL:HA	2.48	0.49
33:BM:133:GLN:O	33:BM:134:ARG:HD3	2.13	0.49
34:BN:87:ILE:HD12	34:BN:91:LEU:HA	1.93	0.49
36:BP:35:VAL:CG1	36:BP:130:LYS:HB3	2.41	0.49
36:BP:26:TYR:O	36:BP:27:VAL:O	2.30	0.49
44:BU:47:LYS:HG2	44:BU:60:PHE:CD1	2.47	0.49
1:CA:635:G:C6	1:CA:636:U:C4	3.01	0.49
22:CB:21:A:H5''	22:CB:56:U:H3	1.78	0.49
3:CF:162:GLN:HG3	3:CF:163:ALA:O	2.12	0.49
3:CF:186:PHE:HA	3:CF:198:VAL:O	2.12	0.49
1:CA:1060:C:H5''	10:CM:51:ARG:HG2	1.93	0.49
13:CP:116:THR:O	13:CP:116:THR:HG22	2.12	0.49
20:CW:44:ALA:C	20:CW:46:GLU:H	2.16	0.49
40:D1:91:ASP:O	40:D1:92:ARG:HG3	2.13	0.49
25:DA:1040:C:H2'	25:DA:1041:C:H6	1.77	0.49
25:DA:1225:C:C4'	41:D2:85:LYS:HD3	2.41	0.49
25:DA:1396:U:H2'	25:DA:1396:U:O2	2.12	0.49
25:DA:1484:G:C6	25:DA:1485:G:C5	3.01	0.49
25:DA:1794:U:H2'	25:DA:1795:C:H6	1.77	0.49
25:DA:2303:G:C2	25:DA:2314:C:N3	2.80	0.49
25:DA:2406:U:N3	35:DO:72:PRO:HB2	2.28	0.49
25:DA:2582:G:C2'	25:DA:2583:G:H5'	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:288:C:H2'	25:DA:289:A:C8	2.48	0.49
25:DA:301:G:C4	25:DA:302:C:C5	3.00	0.49
25:DA:389:G:O6	35:DO:71:VAL:HG12	2.13	0.49
25:DA:308:G:C8	25:DA:501:A:H1'	2.48	0.49
25:DA:57:C:H2'	25:DA:58:G:O4'	2.12	0.49
25:DA:811:U:P	35:DO:21:ARG:O	2.70	0.49
25:DA:84:A:OP2	44:DU:8:LYS:HD3	2.12	0.49
25:DA:900:A:C4	25:DA:901:A:C8	3.01	0.49
27:DD:30:GLU:HG3	27:DD:63:ARG:NE	2.27	0.49
29:DF:63:LYS:HE2	29:DF:67:GLN:HB2	1.94	0.49
30:DG:111:LEU:HD13	30:DG:120:LEU:HD21	1.95	0.49
30:DG:47:LYS:HD3	30:DG:81:LYS:CG	2.43	0.49
31:DH:121:ILE:HG23	31:DH:133:VAL:HG13	1.95	0.49
25:DA:1111:A:O3'	31:DH:3:ARG:HB3	2.13	0.49
47:DZ:78:LYS:N	47:DZ:78:LYS:HD3	2.27	0.49
1:AA:1160:G:C6	1:AA:1181:G:O6	2.62	0.49
1:AA:271:C:H2'	1:AA:272:C:C6	2.48	0.49
1:AA:816:A:OP1	1:AA:1526:G:O2'	2.21	0.49
1:AA:73:G:C6	1:AA:97:U:O2	2.56	0.49
1:AA:992:U:C1'	1:AA:993:G:OP2	2.60	0.49
22:AB:8:U:O2'	22:AB:22:A:N1	2.46	0.49
22:AB:51:C:C4	22:AB:52:G:H1'	2.47	0.49
2:AE:184:VAL:N	2:AE:198:ASP:OD1	2.26	0.49
4:AG:61:LYS:HD3	4:AG:206:PHE:CE2	2.47	0.49
4:AG:65:ARG:HG3	4:AG:75:PHE:CD1	2.48	0.49
7:AJ:74:GLU:HG2	7:AJ:91:VAL:HG13	1.95	0.49
7:AJ:16:LEU:CD1	9:AL:45:ALA:HB2	2.42	0.49
16:AS:22:THR:OG1	16:AS:23:ASP:N	2.46	0.49
18:AU:17:SER:C	18:AU:18:ARG:HD2	2.33	0.49
20:AW:39:LYS:HB2	20:AW:55:ILE:HG21	1.94	0.49
37:B0:30:THR:HG22	37:B0:31:HIS:HD1	1.76	0.49
41:B2:47:VAL:CG2	41:B2:48:GLY:N	2.75	0.49
50:B4:24:THR:O	50:B4:25:TYR:HB2	2.13	0.49
25:BA:2420:C:P	54:B8:33:ASN:O	2.71	0.49
25:BA:1130:U:C1'	25:BA:1131:G:OP1	2.61	0.49
25:BA:1735:C:O2'	25:BA:1741:C:H5'	2.13	0.49
25:BA:1810:A:H2'	25:BA:1811:G:O4'	2.13	0.49
25:BA:1991:U:C2'	25:BA:1992:G:H5''	2.41	0.49
25:BA:2607:G:H2'	25:BA:2608:G:O4'	2.13	0.49
25:BA:273(E):U:O2'	25:BA:273(F):C:H5'	2.13	0.49
25:BA:686:G:O6	53:B7:12:ARG:HG3	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:883:G:H2'	25:BA:884:C:H4'	1.93	0.49
28:BE:49:LEU:HD21	28:BE:91:VAL:HG21	1.93	0.49
28:BE:28:ALA:HB3	28:BE:93:VAL:HG22	1.94	0.49
29:BF:157:VAL:HB	29:BF:194:MET:HG2	1.95	0.49
25:BA:1093:G:H5'	31:BH:170:ARG:HE	1.78	0.49
1:CA:443:C:H2'	1:CA:444:C:H6	1.78	0.49
1:CA:900:A:H2'	1:CA:901:A:C8	2.48	0.49
2:CE:200:ILE:HD12	2:CE:200:ILE:N	2.27	0.49
3:CF:100:ALA:O	3:CF:101:LEU:CB	2.60	0.49
4:CG:96:LEU:HD12	4:CG:139:ARG:CZ	2.43	0.49
4:AG:20:TYR:HE1	6:CI:16:GLN:HE21	1.61	0.49
7:CJ:87:VAL:HG23	7:CJ:88:PRO:HD2	1.94	0.49
11:CN:34:ASP:OD2	11:CN:36:ASP:N	2.40	0.49
13:CP:3:ARG:NH2	13:CP:7:VAL:HG12	2.27	0.49
25:DA:1496:A:H1'	25:DA:1577:C:O2'	2.13	0.49
25:DA:2324:C:H5''	25:DA:2325:G:H5'	1.95	0.49
25:DA:957:A:N6	25:DA:959:A:C2	2.81	0.49
29:DF:122:LYS:HD2	29:DF:191:ARG:HG2	1.95	0.49
25:DA:2276:G:P	36:DP:84:GLY:HA2	2.53	0.49
36:DP:87:LYS:O	36:DP:88:GLY:O	2.30	0.49
1:AA:1025:U:HO2'	1:AA:1026:G:P	2.36	0.48
1:AA:1378:C:O2	1:AA:1379:G:O4'	2.31	0.48
1:AA:198:G:H2'	1:AA:199:G:H8	1.78	0.48
1:AA:242:C:H2'	1:AA:243:A:H5'	1.94	0.48
1:AA:266:G:H5'	1:AA:268:C:H41	1.78	0.48
1:AA:5:U:O2'	1:AA:6:G:N3	2.46	0.48
7:AJ:50:ILE:HG22	7:AJ:50:ILE:O	2.13	0.48
9:AL:117:HIS:O	9:AL:118:LYS:HG3	2.12	0.48
9:AL:23:ASN:HD22	9:AL:23:ASN:H	1.60	0.48
1:AA:624:C:O3'	16:AS:10:GLY:HA2	2.13	0.48
19:AV:7:LYS:O	19:AV:7:LYS:HG2	2.13	0.48
20:AW:43:LEU:HD13	20:AW:51:GLU:HB3	1.95	0.48
51:B5:44:THR:O	51:B5:46:CYS:N	2.46	0.48
53:B7:8:ASN:HD22	53:B7:11:LYS:H	1.58	0.48
25:BA:2157:G:O2'	25:BA:2158:A:P	2.71	0.48
25:BA:606:U:H4'	25:BA:658:C:H4'	1.95	0.48
25:BA:848:G:H2'	25:BA:849:A:C8	2.48	0.48
28:BE:116:VAL:HG13	28:BE:122:PHE:CB	2.43	0.48
31:BH:83:TYR:HB2	31:BH:135:GLY:H	1.72	0.48
1:CA:1003:G:N1	1:CA:1037:C:N4	2.54	0.48
1:CA:177:C:H2'	1:CA:178:C:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:339:C:H2'	1:CA:340:U:C6	2.48	0.48
25:DA:2065:C:H2'	25:DA:2066:C:H6	1.77	0.48
25:DA:2147:G:H2'	25:DA:2148:G:O4'	2.12	0.48
25:DA:226:G:N2	25:DA:228:A:H62	1.96	0.48
25:DA:901:A:H5'	25:DA:902:C:OP2	2.13	0.48
26:DB:17:C:H2'	26:DB:18:G:O4'	2.12	0.48
27:DD:69:ARG:CD	27:DD:105:ILE:HD11	2.43	0.48
27:DD:75:ILE:HG23	27:DD:98:VAL:HG22	1.93	0.48
31:DH:144:VAL:O	31:DH:148:ILE:HG12	2.13	0.48
35:DO:65:ARG:CG	35:DO:65:ARG:NH1	2.49	0.48
36:DP:79:LEU:HD13	36:DP:80:GLU:OE2	2.13	0.48
39:DR:6:LEU:O	39:DR:10:VAL:HG23	2.12	0.48
42:DS:54:ALA:HB1	42:DS:107:LEU:HD22	1.94	0.48
43:DT:39:ILE:O	43:DT:43:VAL:HG13	2.13	0.48
1:AA:1170:A:H2'	1:AA:1171:G:O4'	2.13	0.48
1:AA:11:G:O2'	1:AA:12:U:H5'	2.13	0.48
1:AA:1443:G:OP2	1:AA:1443:G:H3'	2.13	0.48
1:AA:45:U:H2'	1:AA:46:G:C8	2.48	0.48
1:AA:755:G:OP2	15:AR:65:ARG:HG2	2.14	0.48
1:AA:827:U:O4'	1:AA:827:U:O2	2.30	0.48
22:AD:19:C:H6	22:AD:19:C:H3'	1.78	0.48
22:AD:61:G:H1	22:AD:71:C:N4	2.10	0.48
2:AE:80:ILE:CD1	2:AE:208:ILE:HG23	2.33	0.48
3:AF:91:LEU:HD11	3:AF:101:LEU:HD12	1.95	0.48
4:AG:201:GLN:CA	4:AG:201:GLN:HE21	2.20	0.48
4:AG:30:LYS:C	4:AG:32:ALA:H	2.14	0.48
1:AA:10:A:OP2	5:AH:126:ARG:HD3	2.13	0.48
7:AJ:108:ALA:O	7:AJ:111:ARG:HG3	2.13	0.48
11:AN:78:GLN:O	11:AN:103:LEU:HA	2.13	0.48
50:B4:6:HIS:ND1	50:B4:7:PRO:HD2	2.27	0.48
51:B5:20:ARG:C	51:B5:22:HIS:H	2.16	0.48
25:BA:1312:U:H1'	25:BA:1313:U:OP2	2.12	0.48
25:BA:265:A:H1'	25:BA:266:G:O4'	2.13	0.48
25:BA:2723:C:OP1	37:B0:3:HIS:CD2	2.58	0.48
25:BA:2807:G:H2'	25:BA:2808:U:H5''	1.94	0.48
25:BA:2881:C:C2	25:BA:2882:A:C8	3.01	0.48
25:BA:77:C:H5''	48:BW:10:LEU:HD11	1.94	0.48
26:BB:86:G:H1	26:BB:90:C:N4	2.10	0.48
27:BD:35:LYS:CE	27:BD:104:TYR:HB2	2.42	0.48
27:BD:35:LYS:HG2	27:BD:64:ILE:CA	2.43	0.48
30:BG:111:LEU:HB2	30:BG:112:PRO:HD3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1111:A:H5'	31:BH:3:ARG:HD3	1.95	0.48
32:BK:81:VAL:HG23	32:BK:83:ALA:HB2	1.95	0.48
25:BA:2877:G:OP1	39:BR:2:ASN:ND2	2.46	0.48
44:BU:42:VAL:CB	44:BU:67:LEU:HD11	2.36	0.48
48:BW:32:LEU:HA	48:BW:35:LEU:HD23	1.95	0.48
47:BZ:3:LYS:HG3	47:BZ:46:LEU:HD23	1.94	0.48
47:BZ:83:GLU:CD	47:BZ:83:GLU:H	2.17	0.48
1:CA:1000:A:O2'	1:CA:1001:G:H5'	2.13	0.48
1:CA:1002:G:C2	1:CA:1003:G:C4	3.02	0.48
1:CA:1138:G:H3'	1:CA:1138:G:N3	2.28	0.48
1:CA:1129:C:N4	1:CA:1139:G:H22	2.11	0.48
1:CA:1329:A:OP2	21:CX:7:ARG:NH1	2.44	0.48
1:CA:287:U:O2'	1:CA:288:A:H5'	2.13	0.48
1:CA:353:A:H2'	1:CA:354:G:OP2	2.13	0.48
1:CA:765:G:C6	1:CA:812:C:C2	3.01	0.48
23:CC:56:U:O2'	23:CC:58:A:N7	2.40	0.48
2:CE:198:ASP:OD2	2:CE:198:ASP:N	2.44	0.48
4:CG:11:LEU:O	4:CG:12:CYS:C	2.51	0.48
4:CG:60:GLU:HG2	4:CG:202:LEU:HB2	1.96	0.48
7:CJ:23:VAL:HG12	7:CJ:43:PHE:CZ	2.47	0.48
7:CJ:84:ASN:O	22:CD:38:MIA:H151	2.14	0.48
19:CV:23:ASN:HA	19:CV:27:GLU:HG3	1.95	0.48
41:D2:1:MET:HG2	41:D2:43:GLU:OE1	2.13	0.48
46:D3:43:THR:O	46:D3:43:THR:HG23	2.12	0.48
25:DA:1019:U:OP1	25:DA:1035:U:O2'	2.21	0.48
25:DA:2772:C:H2'	25:DA:2773:C:C6	2.48	0.48
25:DA:817:C:C5	25:DA:818:G:N7	2.81	0.48
25:DA:2622:C:H5'	28:DE:159:HIS:ND1	2.28	0.48
34:DN:3:GLN:HB2	34:DN:4:PRO:HD2	1.93	0.48
35:DO:65:ARG:O	35:DO:66:GLY:O	2.30	0.48
36:DP:32:TYR:CZ	36:DP:111:GLU:HG3	2.48	0.48
39:DR:99:LEU:HD23	39:DR:101:PHE:HE1	1.77	0.48
42:DS:73:ALA:HB3	42:DS:106:ILE:CD1	2.42	0.48
1:AA:1501:C:OP2	1:AA:1504:G:H2'	2.12	0.48
1:AA:79:G:N2	1:AA:90:C:C2	2.82	0.48
22:AB:7:G:H3'	22:AB:8:U:C5'	2.42	0.48
2:AE:17:PHE:N	2:AE:17:PHE:CD2	2.81	0.48
3:AF:70:VAL:O	3:AF:106:VAL:N	2.40	0.48
5:AH:11:ILE:O	5:AH:12:LEU:HB2	2.14	0.48
16:AS:47:ASP:C	16:AS:49:LEU:H	2.15	0.48
20:AW:33:ILE:O	20:AW:37:SER:OG	2.23	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B6:24:GLU:O	54:B8:34:TRP:NE1	2.46	0.48
25:BA:2308:G:C2	25:BA:2311:A:C2	3.01	0.48
25:BA:2469:A:O2'	36:BP:56:ARG:NE	2.46	0.48
25:BA:6:A:H4'	33:BM:129:PRO:CB	2.43	0.48
25:BA:819:A:C4	25:BA:1189:A:C2	3.01	0.48
27:BD:136:ILE:O	27:BD:168:ARG:NH2	2.45	0.48
28:BE:63:LEU:O	28:BE:63:LEU:HD23	2.12	0.48
29:BF:101:LEU:HD12	29:BF:102:PRO:CD	2.32	0.48
32:BK:33:ARG:HB3	32:BK:35:LEU:CD2	2.43	0.48
25:BA:389:G:N1	35:BO:71:VAL:HG12	2.28	0.48
39:BR:55:ASN:H	39:BR:59:THR:HB	1.78	0.48
45:BV:143:GLY:HA2	45:BV:144:LEU:C	2.32	0.48
1:CA:1134:G:N3	1:CA:1134:G:H2'	2.28	0.48
1:CA:1275:A:H2'	1:CA:1276:G:O4'	2.13	0.48
1:CA:1322:C:O2	1:CA:1322:C:C2'	2.57	0.48
1:CA:376:G:H5''	16:CS:5:ARG:HD3	1.96	0.48
1:CA:465:A:N7	1:CA:467:G:C5	2.82	0.48
1:CA:485:G:O2'	1:CA:486:U:P	2.71	0.48
1:CA:748:C:C1'	1:CA:749:C:OP2	2.59	0.48
1:CA:842:C:O2'	1:CA:848:C:N3	2.43	0.48
3:CF:184:TYR:CD1	3:CF:201:TYR:HE2	2.30	0.48
3:CF:46:GLU:O	3:CF:47:LEU:HB2	2.13	0.48
5:CH:93:PRO:HG2	8:CK:105:ARG:CZ	2.43	0.48
9:CL:10:ARG:NH1	9:CL:105:ASP:OD1	2.46	0.48
11:CN:32:ILE:HD13	11:CN:72:ALA:HB2	1.94	0.48
12:CO:20:LYS:CE	12:CO:20:LYS:H	2.26	0.48
12:CO:55:VAL:O	12:CO:62:GLU:HA	2.13	0.48
19:CV:12:ASP:HB2	19:CV:38:SER:HB3	1.94	0.48
25:DA:1085:A:H4'	25:DA:1086:A:OP1	2.14	0.48
25:DA:1585:C:H3'	25:DA:1585:C:O2	2.13	0.48
25:DA:1653:G:C6	37:D0:9:LYS:HG3	2.48	0.48
25:DA:1757:U:C2	25:DA:1762:A:C2	2.99	0.48
25:DA:2020:A:P	40:D1:27:LEU:HD23	2.53	0.48
25:DA:2105:C:H42	25:DA:2184:G:H1	1.61	0.48
25:DA:2290:G:C2	25:DA:2343:C:O2	2.66	0.48
25:DA:815:C:OP2	41:D2:82:ARG:HD3	2.13	0.48
25:DA:90:U:H3'	25:DA:90:U:O2	2.13	0.48
25:DA:971:C:H2'	25:DA:972:G:C5'	2.43	0.48
23:CC:57:C:N4	30:DG:83:ARG:HH22	2.11	0.48
28:DE:181:LEU:HD11	39:DR:7:ILE:HD11	1.95	0.48
44:DU:51:VAL:O	44:DU:52:SER:HB3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DV:5:LEU:O	45:DV:6:LYS:C	2.52	0.48
25:DA:94:G:N3	48:DW:47:ASN:OD1	2.46	0.48
1:AA:1047:G:C2'	1:AA:1048:G:H5'	2.43	0.48
1:AA:998:G:H2'	1:AA:998(A):C:C6	2.48	0.48
22:AB:68:A:C2'	22:AB:69:U:H5'	2.43	0.48
2:AE:32:ILE:HD11	2:AE:190:THR:HG22	1.94	0.48
5:AH:50:GLU:OE2	5:AH:51:VAL:HG23	2.12	0.48
6:AI:10:LEU:N	6:AI:10:LEU:HD12	2.29	0.48
1:AA:643:C:H5'	8:AK:31:PHE:CD1	2.48	0.48
10:AM:29:ARG:O	10:AM:29:ARG:HG2	2.13	0.48
11:AN:57:THR:HG22	11:AN:59:TYR:H	1.77	0.48
1:AA:523:A:H61	12:AO:89:ASP:HB2	1.77	0.48
20:AW:26:ASN:ND2	20:AW:26:ASN:H	2.12	0.48
25:BA:1047:G:O2'	25:BA:1111:A:N6	2.46	0.48
25:BA:1406:U:H2'	25:BA:1407:C:C6	2.47	0.48
25:BA:2243:U:H2'	25:BA:2244:U:C6	2.47	0.48
26:BB:13:A:O2'	26:BB:15:A:O5'	2.30	0.48
27:BD:108:PRO:HA	27:BD:196:VAL:O	2.13	0.48
29:BF:133:ASN:O	29:BF:135:LYS:N	2.46	0.48
33:BM:131:GLN:OE1	33:BM:132:ALA:HB2	2.13	0.48
35:BO:20:GLY:N	35:BO:27:HIS:O	2.36	0.48
36:BP:3:MET:O	36:BP:3:MET:HG2	2.14	0.48
25:BA:2275:C:O2	36:BP:85:LYS:HG2	2.14	0.48
36:BP:87:LYS:O	36:BP:88:GLY:O	2.30	0.48
38:BQ:3:ARG:CG	38:BQ:4:LEU:N	2.76	0.48
1:CA:31:G:H1'	1:CA:32:A:OP1	2.12	0.48
1:CA:731:G:OP1	1:CA:766:A:H1'	2.13	0.48
1:CA:918:A:H2'	1:CA:919:A:C8	2.49	0.48
23:CC:20:G:C2	23:CC:58:A:N3	2.81	0.48
9:CL:86:VAL:O	9:CL:90:PRO:HA	2.13	0.48
1:CA:1186:G:H21	14:CQ:61:TRP:C	2.15	0.48
51:D5:35:GLU:N	51:D5:35:GLU:OE1	2.46	0.48
51:D5:42:PRO:O	51:D5:43:HIS:HB2	2.12	0.48
25:DA:1050:A:C4	25:DA:1051:G:C8	3.01	0.48
25:DA:1945:G:H2'	25:DA:1946:U:C6	2.48	0.48
25:DA:2067:G:O2'	25:DA:2069:G:H5''	2.13	0.48
25:DA:2103:C:O2	25:DA:2187:G:C2	2.66	0.48
25:DA:228:A:H3'	25:DA:228:A:C8	2.48	0.48
25:DA:644:A:O2'	25:DA:645:C:O2	2.31	0.48
25:DA:878:A:C6	25:DA:900:A:N7	2.82	0.48
26:DB:56:G:H4'	26:DB:57:A:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DF:8:GLN:HG2	29:DF:126:VAL:HG12	1.94	0.48
30:DG:43:LEU:C	30:DG:45:GLU:N	2.66	0.48
32:DK:77:LEU:HA	32:DK:141:LYS:HB3	1.94	0.48
36:DP:66:ILE:HD12	36:DP:67:ARG:H	1.78	0.48
39:DR:74:ARG:HD3	39:DR:76:PHE:CZ	2.48	0.48
1:AA:1195:C:H5''	1:AA:1196:U:O5'	2.13	0.48
1:AA:1281:U:H4'	1:AA:1282:C:OP2	2.13	0.48
1:AA:1448:C:H42	1:AA:1455:G:H1	1.61	0.48
1:AA:76:G:C6	1:AA:77:C:C2	3.02	0.48
1:AA:827:U:C5'	1:AA:828:A:OP2	2.62	0.48
1:AA:811:C:H4'	1:AA:900:A:N6	2.28	0.48
22:AB:1:G:C2	22:AB:2:G:C8	3.02	0.48
2:AE:216:SER:OG	2:AE:217:ARG:N	2.46	0.48
3:AF:7:PRO:O	3:AF:11:ARG:HG2	2.14	0.48
7:AJ:79:ARG:HD3	7:AJ:79:ARG:C	2.34	0.48
8:AK:51:VAL:HG11	8:AK:60:ARG:HD2	1.95	0.48
9:AL:29:ASN:ND2	9:AL:65:VAL:O	2.47	0.48
11:AN:116:HIS:O	11:AN:117:ASN:HB2	2.13	0.48
11:AN:87:THR:HG22	11:AN:88:GLY:N	2.22	0.48
12:AO:45:PRO:O	12:AO:46:ASN:ND2	2.47	0.48
14:AQ:23:ARG:O	14:AQ:25:VAL:N	2.46	0.48
1:AA:375:U:O3'	16:AS:6:LEU:HB2	2.12	0.48
20:AW:100:ILE:HD12	20:AW:101:GLY:H	1.78	0.48
40:B1:66:ASN:HB2	40:B1:76:TYR:HB2	1.94	0.48
50:B4:36:CYS:SG	50:B4:39:CYS:HB3	2.54	0.48
54:B8:29:LYS:CB	54:B8:44:LYS:HG2	2.44	0.48
25:BA:1210:A:H5''	25:BA:1212:G:O4'	2.14	0.48
25:BA:1210:A:H4'	25:BA:1211:U:O5'	2.13	0.48
25:BA:1887:C:C3'	25:BA:1888:G:H5''	2.44	0.48
25:BA:1667:G:O2'	25:BA:1991:U:O4	2.27	0.48
25:BA:2378:A:H2'	38:BQ:21:THR:HG21	1.96	0.48
25:BA:2698:U:H2'	25:BA:2699:C:C6	2.48	0.48
25:BA:456:C:O2'	25:BA:457:A:H5'	2.14	0.48
25:BA:83:G:C4	25:BA:102:G:N2	2.81	0.48
26:BB:66:A:N6	26:BB:107:U:H2'	2.28	0.48
27:BD:35:LYS:CE	27:BD:64:ILE:C	2.80	0.48
29:BF:63:LYS:CE	29:BF:67:GLN:HB2	2.44	0.48
31:BH:153:LYS:CB	31:BH:162:ILE:H	2.24	0.48
35:BO:115:LEU:HA	35:BO:134:ALA:CB	2.43	0.48
36:BP:79:LEU:H	36:BP:79:LEU:HD12	1.78	0.48
25:BA:2250:G:C6	36:BP:83:MET:CB	2.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2276:G:OP2	36:BP:84:GLY:HA2	2.13	0.48
43:BT:57:LEU:HD12	43:BT:57:LEU:O	2.13	0.48
45:BV:104:PHE:CE1	45:BV:119:GLU:HB3	2.49	0.48
45:BV:15:PRO:O	45:BV:19:ARG:HB2	2.12	0.48
1:CA:1004:A:O5'	1:CA:1025:U:O4	2.32	0.48
1:CA:1499:A:H1'	1:CA:1520:G:H5'	1.95	0.48
1:CA:186(F):C:H2'	1:CA:187:C:O4'	2.13	0.48
2:CE:80:ILE:CD1	2:CE:212:GLN:HG2	2.43	0.48
2:CE:25:ASN:O	2:CE:27:LYS:N	2.46	0.48
2:CE:28:PHE:CE1	2:CE:31:TYR:HB2	2.48	0.48
1:CA:1346:A:C5	7:CJ:10:ARG:NH2	2.81	0.48
9:CL:4:TYR:CE2	9:CL:88:TYR:HB3	2.48	0.48
9:CL:95:LYS:NZ	9:CL:96:LEU:HB2	2.28	0.48
30:DG:67:LYS:H	50:D4:6:HIS:CD2	2.31	0.48
25:DA:1026:U:C2'	25:DA:1026:U:O2	2.61	0.48
25:DA:2252:G:H2'	25:DA:2253:G:O4'	2.13	0.48
25:DA:2843:G:H2'	25:DA:2844:G:H5''	1.95	0.48
25:DA:342:G:C5	25:DA:343:C:C5	3.01	0.48
25:DA:931:G:C6	25:DA:933:A:C2	3.02	0.48
27:DD:26:LYS:H	27:DD:26:LYS:CD	2.26	0.48
25:DA:1049:C:H42	31:DH:2:SER:HB2	1.77	0.48
31:DH:86:GLU:N	31:DH:86:GLU:OE1	2.41	0.48
33:DM:28:THR:HG22	33:DM:29:LYS:N	2.29	0.48
34:DN:87:ILE:HD12	34:DN:93:PRO:HA	1.95	0.48
38:DQ:69:VAL:HG13	38:DQ:101:LEU:HD22	1.94	0.48
39:DR:19:LEU:H	39:DR:19:LEU:HD12	1.79	0.48
28:DE:7:VAL:HG21	39:DR:1:MET:CE	2.42	0.48
47:DZ:64:ALA:HA	47:DZ:67:ILE:HG13	1.95	0.48
47:DZ:81:LYS:H	47:DZ:82:LEU:HD23	1.78	0.48
1:AA:115:G:H4'	1:AA:116:A:O5'	2.13	0.48
1:AA:1306:A:H2'	1:AA:1307:U:O4'	2.14	0.48
1:AA:1224:G:O2'	1:AA:1322:C:OP2	2.32	0.48
1:AA:1446:A:H4'	1:AA:1446:A:OP1	2.13	0.48
1:AA:190:G:O6	1:AA:264:U:H5''	2.14	0.48
1:AA:403:C:OP1	4:AG:137:SER:OG	2.26	0.48
1:AA:626:U:C2	1:AA:627:G:C8	3.01	0.48
1:AA:629:G:C2	1:AA:630:G:C6	3.01	0.48
1:AA:812:C:H1'	1:AA:813:U:OP2	2.13	0.48
23:AC:62:C:H2'	23:AC:63:C:H6	1.78	0.48
22:AD:41:C:H2'	22:AD:42:U:H6	1.79	0.48
22:AD:83:C:H2'	22:AD:84:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AH:91:LEU:HD12	5:AH:120:THR:HG22	1.94	0.48
7:AJ:146:GLU:OE2	7:AJ:146:GLU:HA	2.13	0.48
5:AH:153:LYS:N	8:AK:64:LYS:HZ1	2.07	0.48
11:AN:106:LYS:O	11:AN:107:SER:OG	2.16	0.48
14:AQ:4:LYS:C	14:AQ:6:LEU:N	2.67	0.48
20:AW:71:THR:CG2	20:AW:72:LEU:H	2.03	0.48
54:B8:34:TRP:H	54:B8:35:GLN:CB	2.22	0.48
25:BA:1221:C:H2'	25:BA:1222:C:C6	2.48	0.48
25:BA:1354:A:H2'	25:BA:1355:G:O4'	2.13	0.48
25:BA:1385:G:O2'	25:BA:1396:U:H6	1.96	0.48
25:BA:1469:A:H2'	25:BA:1470:G:C8	2.48	0.48
25:BA:2287:A:H2	25:BA:2346:A:N1	2.12	0.48
25:BA:2331:G:O2'	46:B3:43:THR:HG22	2.13	0.48
25:BA:2376:A:H2'	25:BA:2377:A:O4'	2.13	0.48
25:BA:2439:A:H3'	25:BA:2439:A:P	2.53	0.48
25:BA:2566:A:H1'	25:BA:2567:G:OP2	2.14	0.48
25:BA:2787:C:O2	25:BA:2787:C:H2'	2.13	0.48
25:BA:882:G:C2'	25:BA:883:G:C8	2.94	0.48
26:BB:95:U:C2	26:BB:96:G:C8	3.01	0.48
25:BA:322:A:H3'	29:BF:169:ASN:HD21	1.78	0.48
30:BG:78:SER:O	30:BG:80:PHE:N	2.46	0.48
31:BH:124:GLU:HB3	31:BH:132:ARG:HB2	1.95	0.48
32:BK:29:TYR:C	32:BK:32:PRO:HD2	2.34	0.48
1:CA:1025:U:O2'	1:CA:1026:G:H8	1.96	0.48
1:CA:559:A:H5''	1:CA:560:U:H3'	1.95	0.48
1:CA:636:U:H2'	1:CA:637:G:C8	2.48	0.48
4:CG:29:PRO:HD2	4:CG:30:LYS:CD	2.43	0.48
15:CR:55:GLY:O	15:CR:59:MET:HG3	2.14	0.48
41:D2:21:ARG:HG2	41:D2:91:TYR:HB3	1.95	0.48
25:DA:2419:U:O4	54:D8:31:HIS:CE1	2.67	0.48
25:DA:1065:U:C2	25:DA:1073:A:N6	2.82	0.48
25:DA:1111:A:C5'	31:DH:3:ARG:HD3	2.42	0.48
25:DA:1288:U:C2	25:DA:1327:C:O2	2.67	0.48
25:DA:1445:C:H2'	25:DA:1446:C:H6	1.77	0.48
27:DD:186:HIS:CD2	27:DD:188:GLU:H	2.31	0.48
27:DD:182:LEU:N	27:DD:272:ALA:HB3	2.19	0.48
27:DD:62:TYR:CE1	27:DD:64:ILE:HG22	2.48	0.48
29:DF:132:VAL:HG13	29:DF:133:ASN:OD1	2.13	0.48
29:DF:51:THR:HG23	29:DF:92:PRO:HG2	1.96	0.48
32:DK:118:LYS:HB3	32:DK:119:PRO:HD2	1.95	0.48
35:DO:47:ASP:HB3	35:DO:49:ARG:N	2.16	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DP:58:PHE:CD1	36:DP:58:PHE:O	2.67	0.48
43:DT:72:LYS:NZ	43:DT:75:ASP:OD1	2.32	0.48
45:DV:9:TYR:OH	45:DV:61:LEU:HD13	2.13	0.48
1:AA:1245:A:C2	1:AA:1293:G:C2	3.01	0.48
1:AA:406:G:H2'	1:AA:407:G:C8	2.48	0.48
1:AA:667:G:H4'	15:AR:51:HIS:ND1	2.28	0.48
1:AA:738:C:H2'	1:AA:739:C:C6	2.48	0.48
23:AC:17:C:O2'	23:AC:18:C:C6	2.67	0.48
23:AC:55:U:C4	23:AC:56:U:C4	3.02	0.48
22:AD:38:MIA:H111	22:AD:39:A:H1'	1.95	0.48
5:AH:84:PHE:HB3	5:AH:134:ALA:HB2	1.95	0.48
5:AH:72:GLN:O	5:AH:75:THR:HG22	2.13	0.48
10:AM:98:ILE:H	10:AM:98:ILE:HD12	1.78	0.48
3:AF:22:TRP:CZ2	14:AQ:54:PRO:HG2	2.48	0.48
51:B5:45:VAL:O	51:B5:45:VAL:HG12	2.13	0.48
25:BA:1055:G:H1'	25:BA:1085:A:C2	2.49	0.48
25:BA:127:A:H5'	25:BA:128:C:C6	2.49	0.48
25:BA:1379:A:C4'	25:BA:1380:G:OP1	2.62	0.48
25:BA:2317:C:H2'	25:BA:2318:G:C5'	2.43	0.48
25:BA:2733:A:C2'	25:BA:2734:A:H5'	2.43	0.48
25:BA:2802:G:OP2	25:BA:2802:G:H8	1.97	0.48
25:BA:580:C:H2'	25:BA:581:C:H6	1.78	0.48
25:BA:847:U:C5	25:BA:933:A:H2	2.31	0.48
26:BB:30:C:H2'	26:BB:31:C:H5'	1.96	0.48
27:BD:10:THR:OG1	27:BD:11:PRO:O	2.31	0.48
29:BF:89:VAL:HG12	29:BF:90:PHE:CD2	2.49	0.48
33:BM:73:THR:HA	33:BM:83:LYS:O	2.13	0.48
35:BO:96:THR:HB	35:BO:97:PRO:HD2	1.96	0.48
36:BP:66:ILE:CA	36:BP:104:PHE:HA	2.42	0.48
45:BV:58:VAL:HA	45:BV:67:LEU:O	2.14	0.48
48:BW:59:ARG:O	48:BW:63:VAL:HG23	2.13	0.48
1:CA:1338:G:C6	1:CA:1339:A:C6	3.01	0.48
1:CA:1355:G:N2	1:CA:1368:G:H1'	2.28	0.48
2:CE:200:ILE:O	2:CE:202:PRO:HD3	2.14	0.48
2:CE:238:LEU:HD12	2:CE:238:LEU:O	2.14	0.48
2:CE:32:ILE:HD11	2:CE:40:HIS:ND1	2.28	0.48
10:CM:70:ARG:HH11	10:CM:70:ARG:HG2	1.78	0.48
11:CN:16:SER:HA	11:CN:79:SER:O	2.14	0.48
19:CV:41:VAL:HG12	19:CV:42:PRO:HD2	1.94	0.48
37:D0:49:ASP:OD1	37:D0:95:THR:HG22	2.14	0.48
41:D2:5:VAL:HA	41:D2:37:VAL:HB	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:D3:40:GLN:HE22	46:D3:45:PHE:HB2	1.79	0.48
54:D8:34:TRP:CE2	54:D8:35:GLN:HB3	2.49	0.48
54:D8:47:LYS:O	54:D8:48:PHE:HB3	2.14	0.48
25:DA:1263:U:H1'	51:D5:10:LYS:HG3	1.96	0.48
25:DA:141:A:C8	25:DA:1408:C:H1'	2.48	0.48
25:DA:1847:A:C3'	25:DA:1848:A:H5'	2.44	0.48
25:DA:1955:U:H4'	25:DA:1956:U:OP2	2.14	0.48
25:DA:273(D):C:H42	25:DA:363(B):G:H1	1.61	0.48
25:DA:851:U:O2	25:DA:928:G:C2	2.67	0.48
25:DA:99:U:H1'	25:DA:102:G:C2	2.49	0.48
27:DD:166:GLN:CA	27:DD:166:GLN:NE2	2.74	0.48
27:DD:253:GLN:HB3	27:DD:255:LYS:NZ	2.29	0.48
27:DD:44:ASN:OD1	27:DD:44:ASN:N	2.46	0.48
28:DE:16:ARG:HH21	28:DE:173:VAL:HG13	1.79	0.48
29:DF:83:PHE:O	29:DF:85:GLY:N	2.40	0.48
35:DO:100:LEU:HB3	35:DO:106:LEU:CD2	2.43	0.48
1:AA:1002:G:C2'	1:AA:1003:G:H8	2.04	0.48
1:AA:1051:C:H2'	1:AA:1052:U:C6	2.49	0.48
1:AA:107:G:C2	1:AA:108:G:H1'	2.49	0.48
1:AA:1161:C:C2	1:AA:1177:G:N2	2.81	0.48
1:AA:1211:U:C5'	1:AA:1212:U:OP1	2.52	0.48
1:AA:1260:C:O5'	1:AA:1284:C:H4'	2.14	0.48
1:AA:1291:G:H2'	1:AA:1292:U:H6	1.79	0.48
1:AA:714:G:H2'	1:AA:715:A:C8	2.49	0.48
23:AC:48:U:H1'	23:AC:49:C:P	2.54	0.48
23:AC:6:G:O2'	23:AC:7:G:H5'	2.14	0.48
2:AE:8:LYS:HZ1	2:AE:217:ARG:NH2	2.12	0.48
4:AG:76:ARG:CZ	4:AG:207:TYR:HD2	2.27	0.48
5:AH:42:GLY:HA3	5:AH:66:MET:HE1	1.94	0.48
7:AJ:113:GLU:CG	7:AJ:119:ARG:HG2	2.44	0.48
18:AU:43:PHE:HE2	18:AU:58:LEU:HD11	1.79	0.48
40:B1:92:ARG:HB2	41:B2:11:GLN:NE2	2.28	0.48
35:BO:49:ARG:HE	54:B8:58:ILE:HG23	1.79	0.48
25:BA:1174:A:N7	25:BA:1178:C:N4	2.62	0.48
25:BA:1466:G:H2'	25:BA:1547:C:H41	1.78	0.48
25:BA:1893:C:C5	25:BA:1894:C:C5	3.02	0.48
25:BA:2232:U:P	47:BZ:40:ARG:HH12	2.37	0.48
25:BA:2281:C:O2'	25:BA:2282:G:H5'	2.14	0.48
25:BA:2335:A:N7	25:BA:2337:G:C5	2.82	0.48
25:BA:2564:A:OP1	25:BA:2648:C:H4'	2.14	0.48
25:BA:270(N):G:O2'	25:BA:270(P):C:O5'	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2688:U:H1'	25:BA:2721:A:H61	1.78	0.48
25:BA:2733:A:C3'	25:BA:2734:A:C5'	2.91	0.48
25:BA:511:U:O4	25:BA:512:G:N1	2.47	0.48
25:BA:616:A:C4	29:BF:180:GLY:HA2	2.48	0.48
26:BB:39:A:O2'	26:BB:46:A:N1	2.38	0.48
30:BG:112:PRO:HB3	50:B4:37:SER:CB	2.43	0.48
30:BG:67:LYS:HE2	30:BG:67:LYS:H	1.76	0.48
33:BM:95:PRO:O	33:BM:96:GLU:CD	2.51	0.48
25:BA:1952:A:C2	34:BN:22:ILE:HG13	2.49	0.48
35:BO:120:ALA:HB1	35:BO:138:LEU:HD22	1.96	0.48
43:BT:5:TYR:CE1	48:BW:30:ARG:HB2	2.49	0.48
45:BV:98:MET:O	45:BV:125:LEU:HD12	2.13	0.48
47:BZ:82:LEU:HD22	47:BZ:82:LEU:N	2.28	0.48
1:CA:321:A:C2	1:CA:333:G:C2	3.02	0.48
1:CA:625:G:C6	1:CA:626:U:C4	3.00	0.48
22:CD:48:C:C5	22:CD:49:A:C5	3.01	0.48
5:CH:51:VAL:O	5:CH:55:VAL:HG23	2.14	0.48
13:CP:5:ALA:O	13:CP:6:GLY:C	2.52	0.48
52:D6:31:PRO:C	52:D6:33:LYS:H	2.17	0.48
25:DA:1071:G:P	25:DA:1097:U:H5'	2.54	0.48
25:DA:142:G:H5''	25:DA:1598:C:O2'	2.14	0.48
23:CC:12:G:H1'	25:DA:1923:U:O2'	2.12	0.48
25:DA:1926:U:H2'	25:DA:1928:A:OP2	2.13	0.48
25:DA:2688:U:C5	25:DA:2720:U:OP2	2.67	0.48
25:DA:390:A:H4'	25:DA:391:G:H5'	1.95	0.48
32:DK:66:GLU:HA	32:DK:69:LYS:HB2	1.95	0.48
1:AA:1178:G:N2	1:AA:1181:G:N7	2.62	0.48
1:AA:484:G:H1'	1:AA:485:G:OP2	2.14	0.48
1:AA:78:G:O6	1:AA:90:C:N4	2.47	0.48
11:AN:34:ASP:HB2	11:AN:35:PRO:CD	2.44	0.48
1:AA:1226:C:OP1	19:AV:78:ARG:NH1	2.47	0.48
25:BA:1049:C:N3	25:BA:2751:G:O6	2.47	0.48
25:BA:1178:C:H1'	25:BA:1179:C:O5'	2.14	0.48
25:BA:165:U:O2	25:BA:165:U:H3'	2.13	0.48
25:BA:528:A:C2	25:BA:2043:C:C5'	2.96	0.48
25:BA:2238:G:N3	25:BA:2238:G:H2'	2.28	0.48
25:BA:270(N):G:O2'	25:BA:270(O):U:O5'	2.32	0.48
25:BA:2731:G:C6	25:BA:2732:G:O6	2.66	0.48
25:BA:2865:U:C4	25:BA:2866:U:C4	3.02	0.48
25:BA:26:G:H1'	25:BA:514:A:N6	2.29	0.48
25:BA:531:C:H4'	25:BA:532:A:H5''	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:32:SER:HA	27:BD:36:PRO:CD	2.44	0.48
31:BH:153:LYS:CB	31:BH:154:PRO:CD	2.91	0.48
48:BW:35:LEU:HB3	48:BW:50:ILE:HG23	1.96	0.48
1:CA:101:A:C4	1:CA:102:G:C8	3.02	0.48
1:CA:1127:G:N2	1:CA:1144:G:N2	2.62	0.48
1:CA:987:G:N2	1:CA:1219:U:N3	2.62	0.48
1:CA:1348:U:N3	1:CA:1374:A:H2	2.11	0.48
1:CA:300:A:O5'	1:CA:300:A:H8	1.96	0.48
3:CF:50:ALA:HB1	3:CF:70:VAL:HG11	1.95	0.48
6:CI:61:LEU:HD23	6:CI:63:TYR:OH	2.14	0.48
14:CQ:12:ARG:HB2	14:CQ:14:PRO:HD3	1.95	0.48
50:D4:18:CYS:CB	50:D4:19:GLY:HA2	2.42	0.48
54:D8:23:VAL:HG22	54:D8:48:PHE:H	1.79	0.48
25:DA:1036:G:OP1	31:DH:59:ARG:N	2.47	0.48
25:DA:1149:G:C2	25:DA:1150:C:N3	2.82	0.48
25:DA:227:A:C2	25:DA:2407:G:H1'	2.49	0.48
25:DA:2741:A:N6	25:DA:2763:G:H1'	2.28	0.48
28:DE:76:ARG:O	28:DE:78:LEU:N	2.46	0.48
29:DF:57:VAL:HG11	29:DF:59:TYR:CD1	2.48	0.48
42:DS:40:ASN:HD22	42:DS:40:ASN:C	2.16	0.48
45:DV:14:LYS:HE2	45:DV:14:LYS:N	2.29	0.48
45:DV:40:ASP:OD1	45:DV:42:VAL:HB	2.14	0.48
1:AA:1028(B):C:C2	1:AA:1032(A):G:N2	2.81	0.48
1:AA:1063:C:H5	1:AA:1064:G:HO2'	1.60	0.48
1:AA:255:G:H2'	1:AA:256:U:C6	2.49	0.48
1:AA:355:C:H5'	1:AA:389:A:OP2	2.14	0.48
1:AA:380:G:N2	1:AA:384:G:C5	2.81	0.48
1:AA:544:G:C5	1:AA:545:C:C5	3.02	0.48
1:AA:632:A:C8	1:AA:633:G:C8	3.02	0.48
1:AA:636:U:H2'	1:AA:637:G:C8	2.48	0.48
1:AA:963:G:C2	10:AM:55:LYS:NZ	2.82	0.48
22:AB:28:G:H1	22:AB:44:C:H42	1.61	0.48
2:AE:5:ILE:HG13	2:AE:6:THR:N	2.29	0.48
9:AL:122:ALA:HB1	9:AL:123:PRO:HD2	1.96	0.48
13:AP:82:MET:HE3	13:AP:92:HIS:HB3	1.96	0.48
15:AR:56:LEU:O	15:AR:60:VAL:HG23	2.14	0.48
1:AA:1286:A:H5''	21:AX:26:LYS:HG2	1.96	0.48
33:BM:42:TRP:CD1	40:B1:63:VAL:HG11	2.49	0.48
25:BA:1021:A:C8	25:BA:1022:G:H5''	2.47	0.48
25:BA:1019:U:H3	25:BA:1142(A):A:H62	1.60	0.48
25:BA:1198:U:O2	25:BA:1249:U:H1'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1445:C:H2'	25:BA:1446:C:H6	1.77	0.48
25:BA:2274:A:C5	25:BA:2276:G:C8	3.02	0.48
25:BA:882:G:C6	25:BA:894:C:N4	2.78	0.48
27:BD:175:LEU:HD12	27:BD:185:VAL:HG21	1.96	0.48
29:BF:29:ASN:HB3	29:BF:112:MET:HE1	1.95	0.48
29:BF:150:GLY:HA2	29:BF:172:TRP:CD2	2.48	0.48
31:BH:56:SER:OG	31:BH:58:GLU:HG3	2.14	0.48
32:BK:114:LEU:HD13	32:BK:130:TYR:CD1	2.48	0.48
38:BQ:58:LEU:N	38:BQ:58:LEU:HD23	2.28	0.48
44:BU:40:GLU:OE1	44:BU:40:GLU:HA	2.12	0.48
44:BU:86:ARG:HB2	44:BU:95:LYS:HG2	1.96	0.48
49:BX:19:GLN:HE22	49:BX:52:HIS:HE1	1.61	0.48
47:BZ:21:ARG:HG3	47:BZ:35:THR:CG2	2.44	0.48
47:BZ:78:LYS:HG2	47:BZ:78:LYS:O	2.14	0.48
1:CA:1213:A:C6	1:CA:1215:G:H1'	2.49	0.48
1:CA:127:G:OP1	1:CA:635:G:H1'	2.14	0.48
1:CA:455:C:N4	1:CA:477:G:H1	2.09	0.48
1:CA:689:C:C2'	1:CA:690:G:H5'	2.44	0.48
1:CA:793:U:H5'	1:CA:794:A:O5'	2.14	0.48
22:CD:21:A:C6	22:CD:55:U:O4	2.67	0.48
2:CE:71:VAL:HG12	2:CE:170:GLU:HG2	1.96	0.48
1:CA:738:C:H5''	6:CI:69:GLU:HB2	1.95	0.48
10:CM:12:ASP:OD2	10:CM:13:HIS:N	2.47	0.48
16:CS:1:MET:O	16:CS:1:MET:HG3	2.12	0.48
17:CT:82:MET:O	17:CT:86:GLU:N	2.36	0.48
18:CU:22:VAL:HG12	18:CU:56:THR:HA	1.96	0.48
19:CV:80:TYR:C	19:CV:82:GLY:H	2.17	0.48
41:D2:51:VAL:HG12	41:D2:52:VAL:N	2.29	0.48
25:DA:1011:G:N2	25:DA:1151:G:C4	2.82	0.48
25:DA:1316:U:O2'	25:DA:1317:A:H5'	2.13	0.48
25:DA:1416:G:H1	25:DA:1582:C:N4	2.12	0.48
25:DA:195:A:H61	25:DA:198:C:H3'	1.78	0.48
25:DA:2629:A:H4'	25:DA:2630:G:OP2	2.13	0.48
25:DA:888:C:H1'	25:DA:889:C:P	2.54	0.48
26:DB:14:U:H5'	26:DB:71:C:C1'	2.43	0.48
26:DB:7:G:O5'	38:DQ:29:PHE:CE1	2.66	0.48
25:DA:2050:C:H1'	28:DE:156:MET:HE2	1.94	0.48
36:DP:32:TYR:CE2	36:DP:111:GLU:HG3	2.48	0.48
45:DV:113:ALA:O	45:DV:114:GLY:C	2.52	0.48
1:AA:1055:A:C2	1:AA:1056:U:H1'	2.49	0.47
1:AA:1240:U:P	7:AJ:116:ALA:HB2	2.53	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:130:A:OP2	17:AT:63:ARG:NE	2.44	0.47
1:AA:1288:A:H1'	1:AA:1352:C:O2'	2.14	0.47
1:AA:1368:G:OP2	9:AL:112:LYS:HD2	2.13	0.47
1:AA:35:G:H2'	1:AA:36:C:H6	1.77	0.47
1:AA:429:U:H4'	1:AA:430:A:OP1	2.14	0.47
22:AB:48:C:H2'	22:AB:49:A:O4'	2.14	0.47
22:AD:47:U:H2'	22:AD:48:C:O4'	2.14	0.47
22:AD:75:C:H2'	22:AD:76:C:C6	2.48	0.47
5:AH:145:LYS:HA	5:AH:148:VAL:HB	1.95	0.47
7:AJ:56:GLN:HE22	7:AJ:60:LYS:HD3	1.78	0.47
7:AJ:58:PRO:O	7:AJ:61:VAL:N	2.47	0.47
8:AK:28:ALA:HB2	8:AK:59:LEU:HG	1.95	0.47
8:AK:83:ILE:HG23	8:AK:83:ILE:O	2.14	0.47
18:AU:29:PHE:CE1	18:AU:31:LEU:HB3	2.48	0.47
21:AX:5:ASP:O	21:AX:11:GLY:HA3	2.14	0.47
25:BA:1582:C:O2'	25:BA:1586:A:H8	1.96	0.47
27:BD:35:LYS:CB	27:BD:36:PRO:HA	2.44	0.47
31:BH:83:TYR:O	31:BH:84:SER:CB	2.62	0.47
42:BS:110:LYS:HG3	42:BS:111:HIS:ND1	2.29	0.47
45:BV:150:LEU:HD23	45:BV:151:HIS:N	2.29	0.47
45:BV:62:PRO:O	45:BV:63:ASP:CB	2.62	0.47
1:CA:1028(B):C:N3	1:CA:1032(A):G:C2	2.82	0.47
1:CA:224:C:H2'	1:CA:225:C:C6	2.49	0.47
22:CB:21:A:H4'	22:CB:22:A:O5'	2.14	0.47
23:CC:66:C:O2'	23:CC:67:C:H5'	2.14	0.47
2:CE:73:THR:HA	2:CE:94:ASN:O	2.14	0.47
2:CE:92:TYR:HE2	2:CE:151:GLY:N	2.12	0.47
4:CG:126:ILE:CG2	4:CG:127:THR:N	2.76	0.47
5:CH:63:ARG:O	5:CH:66:MET:HE2	2.14	0.47
7:CJ:73:MET:HG3	7:CJ:89:MET:O	2.14	0.47
9:CL:119:ALA:O	9:CL:120:ARG:CB	2.62	0.47
20:CW:90:GLN:HA	20:CW:93:GLU:OE2	2.14	0.47
25:DA:1210:A:H5'	25:DA:1212:G:C5'	2.44	0.47
25:DA:1471:A:H2'	25:DA:1471:A:N3	2.27	0.47
25:DA:1791:A:OP2	25:DA:1791:A:C8	2.66	0.47
25:DA:1945:G:C4	25:DA:1946:U:C5	3.02	0.47
25:DA:2185:C:H2'	25:DA:2186:G:H8	1.79	0.47
25:DA:2302:G:C2'	25:DA:2303:G:H5'	2.44	0.47
25:DA:2303:G:O2'	30:DG:132:ASN:HB2	2.14	0.47
25:DA:2638:G:H1'	25:DA:2778:A:H61	1.79	0.47
25:DA:13:A:H61	25:DA:525:U:H3'	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DB:40:U:O2'	26:DB:43:C:H5	1.96	0.47
25:DA:2811:G:OP1	28:DE:61:ARG:HB2	2.15	0.47
29:DF:136:THR:O	29:DF:140:LEU:HB2	2.14	0.47
35:DO:74:GLU:HG2	35:DO:74:GLU:O	2.13	0.47
36:DP:21:THR:HG23	36:DP:21:THR:O	2.10	0.47
38:DQ:109:GLY:O	38:DQ:110:LEU:HD23	2.14	0.47
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.50	0.47
1:AA:1128:C:H4'	1:AA:1129:C:OP1	2.13	0.47
1:AA:1178:G:N7	9:AL:97:LYS:HE3	2.29	0.47
1:AA:946:A:C2	1:AA:1236:A:C2	3.02	0.47
1:AA:1279:A:H5''	1:AA:1280:A:P	2.54	0.47
1:AA:69:G:C2'	1:AA:73:G:H5'	2.44	0.47
1:AA:74:C:H2'	1:AA:75:C:O4'	2.13	0.47
22:AB:51:C:C5	22:AB:52:G:N3	2.82	0.47
22:AD:13:G:H2'	22:AD:14:A:C8	2.49	0.47
4:AG:150:GLU:O	4:AG:151:LYS:C	2.51	0.47
5:AH:142:LEU:O	5:AH:143:ARG:NH1	2.43	0.47
3:AF:40:ARG:NH1	14:AQ:52:GLN:HG3	2.30	0.47
18:AU:29:PHE:HE1	18:AU:31:LEU:HB3	1.79	0.47
21:AX:12:LYS:HG3	21:AX:17:THR:O	2.14	0.47
37:B0:70:LEU:O	37:B0:72:ASP:N	2.47	0.47
52:B6:19:ARG:HG3	52:B6:21:TYR:HE2	1.79	0.47
54:B8:34:TRP:CE2	54:B8:35:GLN:NE2	2.81	0.47
25:BA:1403:C:H5'	25:BA:1471:A:H1'	1.96	0.47
25:BA:1728:G:C6	25:BA:1730:U:OP2	2.66	0.47
25:BA:2567:G:H2'	25:BA:2568:C:C6	2.49	0.47
25:BA:633:A:H8	25:BA:633:A:O5'	1.97	0.47
25:BA:847:U:C5	25:BA:933:A:N1	2.80	0.47
26:BB:37:C:H2'	26:BB:38:C:H5'	1.96	0.47
25:BA:813:U:OP2	35:BO:23:PRO:O	2.31	0.47
35:BO:94:GLU:O	35:BO:95:VAL:HB	2.15	0.47
39:BR:11:GLU:N	39:BR:11:GLU:OE1	2.46	0.47
39:BR:2:ASN:O	39:BR:3:ARG:HG2	2.15	0.47
34:BN:73:ASP:HB2	39:BR:82:LEU:HD22	1.95	0.47
44:BU:101:LYS:HB3	44:BU:101:LYS:NZ	2.27	0.47
44:BU:5:MET:HE2	44:BU:5:MET:HB2	1.68	0.47
45:BV:125:LEU:HG	45:BV:164:ALA:HB3	1.96	0.47
1:CA:1049:U:H4'	1:CA:1050:G:H5''	1.93	0.47
1:CA:1240:U:O3'	7:CJ:38:LEU:HD21	2.15	0.47
1:CA:983:A:N1	1:CA:1222:G:N2	2.62	0.47
16:CS:11:SER:HB2	16:CS:14:ASN:HB3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CV:11:VAL:CG2	19:CV:12:ASP:H	2.15	0.47
25:DA:2285:C:N4	52:D6:25:LYS:HE2	2.29	0.47
35:DO:61:ARG:O	54:D8:27:THR:HG22	2.14	0.47
25:DA:1716:U:O2'	25:DA:1717:G:H5'	2.14	0.47
25:DA:2473:U:O2	25:DA:2473:U:C2'	2.61	0.47
25:DA:2689:U:H5''	25:DA:2713:A:C2	2.49	0.47
25:DA:2805:G:H2'	25:DA:2807:G:C8	2.49	0.47
25:DA:389:G:C6	35:DO:71:VAL:HG12	2.49	0.47
25:DA:626:U:H5''	25:DA:627:A:C5'	2.44	0.47
25:DA:796:C:H2'	25:DA:797:C:C6	2.49	0.47
30:DG:47:LYS:HD3	30:DG:81:LYS:HG3	1.96	0.47
31:DH:53:GLU:HG3	31:DH:54:ARG:H	1.79	0.47
32:DK:29:TYR:C	32:DK:32:PRO:HD2	2.34	0.47
35:DO:104:GLY:C	35:DO:105:LEU:CG	2.80	0.47
36:DP:134:ARG:O	36:DP:135:ASP:C	2.52	0.47
1:AA:1238:A:N7	1:AA:1301:U:C4	2.82	0.47
1:AA:616:G:H1'	1:AA:625:G:N2	2.28	0.47
1:AA:858:G:O6	1:AA:869:G:H3'	2.15	0.47
22:AB:48:C:H42	22:AB:53:A:N6	2.13	0.47
11:AN:59:TYR:O	11:AN:63:LEU:HD12	2.13	0.47
16:AS:43:LYS:C	16:AS:45:THR:H	2.17	0.47
40:B1:47:TYR:CD2	40:B1:47:TYR:C	2.87	0.47
46:B3:17:GLN:O	46:B3:19:LYS:HE3	2.15	0.47
51:B5:3:LYS:CE	51:B5:3:LYS:CA	2.92	0.47
53:B7:35:ARG:HG3	53:B7:42:LEU:HD11	1.96	0.47
25:BA:1042:G:H1	25:BA:1113:U:H3	1.61	0.47
25:BA:2298:A:H2'	25:BA:2299:G:O4'	2.14	0.47
25:BA:458:G:O2'	25:BA:469:G:O6	2.25	0.47
25:BA:528:A:C2	25:BA:2043:C:H5'	2.50	0.47
27:BD:10:THR:HG23	27:BD:13:ARG:CB	2.44	0.47
28:BE:92:THR:HG22	28:BE:93:VAL:N	2.28	0.47
29:BF:51:THR:O	29:BF:93:LYS:HE3	2.14	0.47
30:BG:134:GLY:C	30:BG:135:LEU:HD12	2.34	0.47
32:BK:115:ALA:C	32:BK:117:GLU:N	2.68	0.47
33:BM:137:LYS:HD2	33:BM:138:LEU:H	1.80	0.47
35:BO:138:LEU:HD12	35:BO:144:GLU:HG3	1.95	0.47
35:BO:15:ARG:O	35:BO:16:ARG:C	2.53	0.47
1:CA:1005:A:H5'	1:CA:1006:C:OP2	2.15	0.47
1:CA:1141:C:H2'	1:CA:1142:G:H8	1.79	0.47
1:CA:1374:A:C5	1:CA:1375:A:C8	3.02	0.47
1:CA:266:G:H4'	1:CA:267:C:O5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CB:1:G:N3	22:CB:1:G:H2'	2.30	0.47
22:CB:80:C:H2'	22:CB:81:C:O4'	2.14	0.47
22:CD:46:G:C2	22:CD:55:U:C4	3.02	0.47
3:CF:173:VAL:N	3:CF:174:PRO:HD3	2.29	0.47
8:CK:51:VAL:HG11	8:CK:60:ARG:CZ	2.44	0.47
9:CL:95:LYS:HD3	9:CL:95:LYS:N	2.29	0.47
30:DG:105:LYS:HZ3	50:D4:26:SER:HA	1.79	0.47
50:D4:56:VAL:O	50:D4:57:GLU:HB2	2.15	0.47
25:DA:1011:G:C6	25:DA:1013:C:N3	2.83	0.47
25:DA:1011:G:N2	25:DA:1150:C:C2	2.83	0.47
25:DA:1429:G:H2'	25:DA:1430:C:C6	2.50	0.47
25:DA:1496:A:H8	25:DA:1577:C:HO2'	1.44	0.47
25:DA:1782:C:H1'	25:DA:2609:U:H5''	1.96	0.47
25:DA:2378:A:C5	25:DA:2379:G:H1'	2.49	0.47
25:DA:239:U:H2'	25:DA:240:G:O4'	2.14	0.47
25:DA:2689:U:OP2	25:DA:2719:G:N2	2.45	0.47
25:DA:835:A:OP1	54:D8:52:LYS:HG2	2.14	0.47
25:DA:945:A:N6	25:DA:2448:A:C6	2.82	0.47
25:DA:1568:G:P	27:DD:63:ARG:HH22	2.36	0.47
29:DF:36:VAL:HG11	29:DF:183:VAL:HG11	1.96	0.47
25:DA:2531:A:H4'	31:DH:157:TYR:CD2	2.49	0.47
25:DA:1111:A:H4'	31:DH:3:ARG:HH11	1.79	0.47
33:DM:10:GLU:OE2	33:DM:11:PRO:HD2	2.14	0.47
34:DN:90:GLN:O	34:DN:92:GLU:HG3	2.14	0.47
35:DO:15:ARG:O	35:DO:16:ARG:C	2.53	0.47
36:DP:141:GLN:NE2	36:DP:141:GLN:H	2.12	0.47
38:DQ:102:ALA:HA	38:DQ:105:ALA:HB3	1.97	0.47
44:DU:97:ARG:CD	44:DU:97:ARG:H	2.27	0.47
45:DV:130:PRO:C	45:DV:133:ILE:HD11	2.35	0.47
1:AA:1004:A:P	1:AA:1025:U:N3	2.87	0.47
1:AA:1065:U:O2'	1:AA:1066:C:P	2.72	0.47
1:AA:109:A:C6	1:AA:326:G:C6	3.03	0.47
1:AA:1176:A:H8	1:AA:1176:A:O5'	1.96	0.47
1:AA:1283:G:O2'	1:AA:1284:C:H5'	2.14	0.47
1:AA:188:U:O2'	1:AA:189:U:H5'	2.14	0.47
1:AA:436:C:H2'	1:AA:437:U:C6	2.50	0.47
22:AB:83:C:C2'	22:AB:84:C:H5'	2.43	0.47
12:AO:86:ARG:HD3	12:AO:88:LYS:HB2	1.96	0.47
13:AP:23:TYR:HB3	13:AP:67:GLU:HA	1.96	0.47
16:AS:75:ARG:O	16:AS:77:ALA:N	2.42	0.47
41:B2:25:LEU:H	41:B2:92:THR:HG21	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1063:G:H22	25:BA:1076:C:H1'	1.79	0.47
25:BA:1382:G:O2'	25:BA:1383:C:H5'	2.14	0.47
25:BA:2163:C:C4	25:BA:2164:C:H5	2.32	0.47
25:BA:2287:A:C4	25:BA:2289:G:C8	3.02	0.47
25:BA:2468:G:O2'	25:BA:2469:A:OP2	2.30	0.47
25:BA:508:G:O2'	25:BA:509:C:OP1	2.27	0.47
25:BA:864:G:C6	25:BA:865:C:N4	2.83	0.47
25:BA:994:C:O2'	25:BA:996:A:OP1	2.23	0.47
30:BG:37:VAL:O	30:BG:94:LEU:CD2	2.62	0.47
31:BH:86:GLU:H	31:BH:86:GLU:CD	2.05	0.47
33:BM:95:PRO:O	33:BM:96:GLU:CG	2.63	0.47
34:BN:88:ASN:ND2	34:BN:92:GLU:HG3	2.28	0.47
35:BO:100:LEU:HA	35:BO:100:LEU:HD12	1.74	0.47
35:BO:99:LEU:HA	35:BO:102:ARG:HD3	1.97	0.47
42:BS:18:ARG:CD	42:BS:76:VAL:HG13	2.40	0.47
45:BV:143:GLY:HA2	45:BV:144:LEU:HB3	1.96	0.47
48:BW:16:LEU:O	48:BW:17:SER:HB3	2.15	0.47
48:BW:46:GLN:O	48:BW:47:ASN:O	2.32	0.47
1:CA:1127:G:O2'	1:CA:1128:C:H5'	2.14	0.47
1:CA:954:G:O6	1:CA:1225:A:N6	2.47	0.47
1:CA:443:C:H2'	1:CA:444:C:C6	2.49	0.47
1:CA:674:G:H2'	1:CA:675:A:C8	2.50	0.47
1:CA:986:A:H2'	1:CA:987:G:O4'	2.14	0.47
22:CB:75:C:HO2'	22:CB:76:C:P	2.35	0.47
2:CE:28:PHE:CZ	2:CE:189:ASP:HA	2.49	0.47
4:CG:11:LEU:C	4:CG:13:ARG:N	2.64	0.47
5:CH:12:LEU:HD13	5:CH:13:ILE:N	2.29	0.47
7:CJ:120:ILE:O	7:CJ:124:LEU:HB2	2.14	0.47
9:CL:20:ARG:O	9:CL:60:ASP:HB2	2.14	0.47
19:CV:78:ARG:O	19:CV:79:THR:OG1	2.24	0.47
20:CW:51:GLU:HA	20:CW:54:LYS:HB3	1.96	0.47
41:D2:70:ILE:H	41:D2:86:GLY:C	2.16	0.47
25:DA:857:C:C1'	46:D3:26:TYR:HE2	2.24	0.47
25:DA:1023:U:OP2	25:DA:1024:G:N7	2.47	0.47
25:DA:1153:C:H2'	25:DA:1154:G:O4'	2.14	0.47
25:DA:1485:G:O2'	25:DA:1486:A:H5'	2.14	0.47
25:DA:2107:C:H42	25:DA:2182:G:H1	1.63	0.47
25:DA:2355:C:H5'	46:D3:36:ILE:CD1	2.43	0.47
25:DA:2542:A:O2'	25:DA:2543:G:OP2	2.23	0.47
25:DA:2720:U:H2'	25:DA:2721:A:C8	2.49	0.47
25:DA:2741:A:H61	25:DA:2763:G:H1'	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:312:G:H2'	25:DA:312:G:N3	2.29	0.47
25:DA:322:A:H4'	25:DA:323:G:OP2	2.14	0.47
25:DA:847:U:C4	25:DA:933:A:N7	2.82	0.47
27:DD:145:VAL:HG11	27:DD:175:LEU:HD11	1.97	0.47
31:DH:92:ILE:HG22	31:DH:93:GLY:N	2.30	0.47
35:DO:56:SER:O	35:DO:57:THR:O	2.31	0.47
48:DW:23:LYS:O	48:DW:27:GLU:HG3	2.14	0.47
48:DW:43:GLN:HG2	48:DW:43:GLN:O	2.14	0.47
1:AA:1039:C:H2'	1:AA:1040:U:O4'	2.13	0.47
1:AA:1277:C:HO2'	1:AA:1279:A:H8	1.52	0.47
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.41	0.47
1:AA:452:A:H62	1:AA:480:U:H3	1.62	0.47
1:AA:509:A:O2'	1:AA:510:A:P	2.72	0.47
1:AA:775:G:C2'	1:AA:776:G:H5'	2.44	0.47
22:AB:17:G:O2'	22:AB:66:G:N2	2.47	0.47
22:AB:42:U:H3'	22:AB:43:G:H8	1.79	0.47
2:AE:154:LEU:O	2:AE:155:LEU:HB2	2.14	0.47
3:AF:70:VAL:CG1	3:AF:71:ALA:N	2.78	0.47
6:AI:25:ILE:HG21	6:AI:82:ARG:HD3	1.96	0.47
1:AA:1346:A:OP1	9:AL:120:ARG:NH1	2.47	0.47
14:AQ:11:LYS:O	14:AQ:13:THR:N	2.46	0.47
17:AT:52:LYS:HE3	17:AT:52:LYS:HB3	1.70	0.47
19:AV:40:ILE:O	19:AV:41:VAL:HG22	2.13	0.47
20:AW:89:ARG:O	20:AW:93:GLU:HB2	2.14	0.47
50:B4:37:SER:CA	50:B4:42:PHE:CG	2.96	0.47
25:BA:1177:A:H5''	25:BA:1178:C:OP1	2.14	0.47
25:BA:1558:A:O2'	25:BA:1559:G:OP2	2.31	0.47
25:BA:161:U:HO2'	25:BA:162:U:H5	1.61	0.47
25:BA:2396:G:O2'	25:BA:2397:G:H5'	2.14	0.47
25:BA:2721:A:H2'	25:BA:2722:G:O4'	2.15	0.47
25:BA:781:A:H2	25:BA:1776:G:N3	2.13	0.47
31:BH:153:LYS:HG2	31:BH:162:ILE:HG13	1.96	0.47
31:BH:4:ILE:HB	31:BH:6:ARG:CD	2.45	0.47
34:BN:104:ARG:HH22	39:BR:43:GLN:HE22	1.62	0.47
25:BA:864:G:OP2	36:BP:22:LYS:HG2	2.14	0.47
36:BP:64:ILE:HG22	36:BP:65:PHE:N	2.29	0.47
36:BP:87:LYS:HG3	36:BP:88:GLY:N	2.27	0.47
38:BQ:111:GLU:O	38:BQ:112:PHE:HB3	2.14	0.47
39:BR:42:ILE:HG21	39:BR:84:GLN:OE1	2.15	0.47
43:BT:12:VAL:HG13	43:BT:27:THR:HG23	1.96	0.47
36:BP:136:ALA:HB1	45:BV:52:SER:CB	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BV:76:LEU:HD23	45:BV:76:LEU:N	2.27	0.47
47:BZ:83:GLU:O	47:BZ:85:LEU:N	2.48	0.47
1:CA:1054:C:HO2'	1:CA:1055:A:P	2.38	0.47
1:CA:1065:U:O2'	1:CA:1066:C:OP2	2.33	0.47
1:CA:1497:G:C2'	1:CA:1498:U:H5'	2.44	0.47
1:CA:458:C:H2'	1:CA:464:G:O4'	2.15	0.47
1:CA:652:U:C2'	1:CA:653:A:H5''	2.45	0.47
1:CA:78:G:H2'	1:CA:79:G:O4'	2.14	0.47
1:CA:960:U:O2	1:CA:960:U:C2'	2.62	0.47
23:CC:48:U:H1'	23:CC:49:C:P	2.54	0.47
2:CE:137:ARG:NH2	2:CE:140:HIS:HB3	2.29	0.47
2:CE:71:VAL:CG1	2:CE:170:GLU:HG2	2.44	0.47
3:CF:119:ARG:NH2	3:CF:140:ARG:HG2	2.26	0.47
3:CF:184:TYR:CD1	3:CF:201:TYR:CE2	3.02	0.47
3:CF:47:LEU:HD21	3:CF:68:VAL:HG11	1.96	0.47
1:CA:1298:C:N4	7:CJ:114:ARG:HB3	2.23	0.47
7:CJ:113:GLU:HB2	7:CJ:119:ARG:HG2	1.96	0.47
7:CJ:135:VAL:O	7:CJ:139:GLU:HG3	2.14	0.47
9:CL:14:VAL:O	9:CL:65:VAL:HA	2.14	0.47
13:CP:80:ARG:HH22	19:CV:66:MET:HG2	1.79	0.47
25:DA:1445:C:H2'	25:DA:1446:C:C6	2.49	0.47
25:DA:1771:C:C1'	25:DA:1786:A:C8	2.95	0.47
25:DA:2281:C:O2'	25:DA:2282:G:H5'	2.14	0.47
25:DA:2402:C:HO2'	25:DA:2403:C:P	2.33	0.47
25:DA:2667:C:H1'	31:DH:109:PHE:CD2	2.48	0.47
25:DA:959:A:N6	25:DA:960:A:N1	2.62	0.47
25:DA:978:G:H1	25:DA:985:C:H42	1.63	0.47
25:DA:996:A:N6	25:DA:1160:G:C6	2.83	0.47
28:DE:134:ILE:HA	28:DE:137:HIS:CD2	2.49	0.47
31:DH:127:GLU:HG3	31:DH:128:PRO:HD2	1.96	0.47
32:DK:8:PRO:HD3	32:DK:15:VAL:CG2	2.44	0.47
35:DO:81:GLN:OE1	35:DO:106:LEU:CA	2.61	0.47
29:DF:31:HIS:HB2	35:DO:9:ASN:HD21	1.80	0.47
39:DR:24:PRO:HD3	39:DR:52:ILE:HG13	1.95	0.47
1:AA:1027:C:C6	1:AA:1028:C:H5	2.33	0.47
1:AA:1277:C:O2'	1:AA:1279:A:C8	2.60	0.47
1:AA:1239:A:H62	1:AA:1299:A:H62	1.63	0.47
1:AA:1424:C:H2'	1:AA:1425:U:O4'	2.14	0.47
1:AA:179:A:H2'	1:AA:180:U:H6	1.79	0.47
1:AA:447:G:H2'	1:AA:485:G:N2	2.29	0.47
1:AA:452:A:HO2'	1:AA:453:A:C5'	2.27	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:606:G:H1	1:AA:631:G:H5'	1.79	0.47
4:AG:138:TYR:CD2	4:AG:138:TYR:C	2.87	0.47
41:B2:48:GLY:O	41:B2:49:THR:O	2.32	0.47
46:B3:56:ASP:CG	46:B3:58:THR:HG1	2.18	0.47
30:BG:112:PRO:CA	50:B4:37:SER:HB2	2.44	0.47
51:B5:54:GLY:O	51:B5:55:ARG:C	2.53	0.47
52:B6:13:CYS:HB3	52:B6:22:ALA:O	2.15	0.47
54:B8:23:VAL:CG1	54:B8:46:ARG:HB3	2.44	0.47
25:BA:1047:G:C8	25:BA:1110:G:O6	2.68	0.47
25:BA:1076:C:O2	25:BA:1077:A:C8	2.67	0.47
25:BA:1578:U:C2'	25:BA:1579:A:H5'	2.44	0.47
25:BA:2233:U:H2'	25:BA:2234:G:C8	2.49	0.47
25:BA:2689:U:P	25:BA:2719:G:H22	2.38	0.47
25:BA:361:G:O2'	25:BA:362:U:H5'	2.14	0.47
25:BA:475:U:C4	25:BA:481:G:O6	2.68	0.47
25:BA:613:U:O2	25:BA:613:U:O4'	2.31	0.47
25:BA:861:A:C2	25:BA:917:A:C5	3.03	0.47
26:BB:18:G:H1	26:BB:65:C:N4	2.08	0.47
28:BE:38:THR:OG1	28:BE:39:PRO:HD2	2.15	0.47
36:BP:59:ARG:C	36:BP:61:GLY:H	2.14	0.47
38:BQ:107:GLU:N	38:BQ:110:LEU:HD21	2.29	0.47
38:BQ:24:LEU:HA	38:BQ:24:LEU:HD12	1.76	0.47
38:BQ:42:ASP:N	38:BQ:42:ASP:OD1	2.47	0.47
43:BT:55:ASN:HB2	43:BT:80:ILE:HG13	1.96	0.47
44:BU:52:SER:CB	44:BU:53:PRO:HD3	2.31	0.47
24:C1:12:A:O2'	24:C1:13:A:OP1	2.33	0.47
1:CA:1007:C:C2	1:CA:1023:G:N2	2.82	0.47
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.80	0.47
1:CA:373:A:O2'	1:CA:374:A:H5'	2.14	0.47
1:CA:399:G:H2'	1:CA:400:C:C6	2.50	0.47
1:CA:993:G:H2'	1:CA:995:C:H41	1.79	0.47
2:CE:182:ILE:H	2:CE:182:ILE:HD12	1.78	0.47
3:CF:134:ILE:HG22	3:CF:168:ALA:HB3	1.96	0.47
9:CL:118:LYS:HG2	9:CL:118:LYS:O	2.15	0.47
9:CL:128:ARG:NH2	23:CC:34:U:OP2	2.48	0.47
11:CN:34:ASP:HB2	11:CN:35:PRO:HD2	1.96	0.47
16:CS:43:LYS:N	16:CS:43:LYS:HD3	2.30	0.47
17:CT:63:ARG:HG2	17:CT:64:PRO:CD	2.43	0.47
37:D0:41:ALA:C	37:D0:43:GLU:N	2.68	0.47
54:D8:36:LYS:HB2	54:D8:41:ILE:HD11	1.97	0.47
25:DA:1590:U:H2'	25:DA:1591:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2261:C:O2'	25:DA:2262:U:H5'	2.15	0.47
25:DA:2320:A:H61	25:DA:2333:A:H2'	1.79	0.47
25:DA:1050:A:O2'	25:DA:2752:C:O2	2.32	0.47
25:DA:676:A:H8	25:DA:2069:G:N2	1.99	0.47
25:DA:803:U:C2'	25:DA:804:A:H5'	2.45	0.47
25:DA:885:C:N3	25:DA:890:A:C5	2.81	0.47
26:DB:75:G:H5'	26:DB:75:G:H8	1.79	0.47
30:DG:56:ALA:HB2	30:DG:153:ARG:NE	2.30	0.47
30:DG:171:ALA:O	30:DG:175:LEU:HG	2.15	0.47
25:DA:2745:C:H4'	31:DH:142:GLY:C	2.35	0.47
31:DH:85:LYS:HD2	31:DH:85:LYS:N	2.30	0.47
35:DO:81:GLN:CD	35:DO:106:LEU:O	2.52	0.47
45:DV:62:PRO:C	45:DV:64:GLY:N	2.67	0.47
1:AA:198:G:H2'	1:AA:199:G:C8	2.50	0.47
1:AA:5:U:O2'	1:AA:6:G:C4	2.67	0.47
22:AB:60:A:O2'	22:AB:61:G:H5'	2.15	0.47
41:B2:27:ALA:HB3	41:B2:61:VAL:HG11	1.97	0.47
25:BA:1093:G:H5'	31:BH:170:ARG:HH21	1.79	0.47
25:BA:1458:C:H4'	25:BA:1459:G:O4'	2.15	0.47
25:BA:1496:A:H5'	25:BA:1497:U:OP1	2.15	0.47
25:BA:2096:U:H2'	25:BA:2097:C:C6	2.49	0.47
25:BA:2496:C:OP1	36:BP:82:ARG:HB3	2.14	0.47
25:BA:274:G:O4'	25:BA:274:G:OP1	2.32	0.47
25:BA:890:A:H3'	25:BA:892:G:C8	2.37	0.47
25:BA:764:A:N3	27:BD:213:ARG:HD2	2.30	0.47
25:BA:2758:A:C4	31:BH:67:LEU:HD21	2.50	0.47
32:BK:122:GLU:HG3	32:BK:123:LEU:H	1.80	0.47
38:BQ:72:ALA:O	38:BQ:76:LYS:HG3	2.14	0.47
39:BR:56:GLY:O	39:BR:59:THR:CG2	2.62	0.47
43:BT:47:PHE:O	43:BT:49:VAL:HG23	2.15	0.47
1:CA:1127:G:N2	1:CA:1146:A:H62	2.12	0.47
1:CA:1423:G:OP1	34:DN:49:ARG:NH2	2.47	0.47
1:CA:523:A:H61	12:CO:50:ARG:HH12	1.62	0.47
1:CA:691:G:H1'	1:CA:696:A:N6	2.29	0.47
5:CH:100:VAL:O	5:CH:100:VAL:HG13	2.15	0.47
13:CP:96:LEU:HB3	13:CP:97:PRO:HD2	1.96	0.47
19:CV:41:VAL:O	19:CV:43:GLU:N	2.48	0.47
52:D6:15:GLU:OE1	52:D6:44:ARG:NH2	2.30	0.47
54:D8:32:LEU:CD2	54:D8:33:ASN:H	2.28	0.47
25:DA:2648:C:H2'	25:DA:2649:U:H6	1.79	0.47
25:DA:709:U:H2'	25:DA:710:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:820:A:H2'	25:DA:821:A:O4'	2.15	0.47
25:DA:895:U:H4'	25:DA:896:A:C4	2.50	0.47
25:DA:848:G:O6	25:DA:929:G:H2'	2.14	0.47
26:DB:39:A:N1	50:D4:1:MET:HB3	2.29	0.47
27:DD:9:TYR:CD2	27:DD:10:THR:HG23	2.49	0.47
27:DD:17:THR:O	27:DD:211:ARG:NH2	2.44	0.47
27:DD:35:LYS:CE	27:DD:64:ILE:C	2.82	0.47
30:DG:81:LYS:O	30:DG:82:LEU:HB2	2.15	0.47
36:DP:58:PHE:HD1	36:DP:58:PHE:O	1.98	0.47
44:DU:18:GLY:O	44:DU:21:LYS:N	2.47	0.47
44:DU:94:LYS:O	44:DU:101:LYS:HB3	2.15	0.47
47:DZ:29:GLY:O	47:DZ:30:VAL:CG2	2.60	0.47
1:AA:188:U:C2'	1:AA:189:U:H5'	2.45	0.47
1:AA:273:A:N6	1:AA:274:A:N6	2.63	0.47
1:AA:921:U:H2'	1:AA:922:G:O4'	2.14	0.47
1:AA:947:G:H2'	1:AA:948:C:O4'	2.15	0.47
22:AB:70:C:H2'	22:AB:70:C:O2	2.14	0.47
23:AC:2:G:H2'	23:AC:3:C:H6	1.79	0.47
4:AG:135:LEU:HD13	4:AG:135:LEU:N	2.30	0.47
6:AI:45:LEU:HD21	6:AI:57:GLN:NE2	2.30	0.47
6:AI:99:ALA:O	6:AI:100:ASN:HB2	2.14	0.47
8:AK:39:LEU:HB3	8:AK:45:ILE:HG12	1.96	0.47
8:AK:4:ASP:HB2	8:AK:89:PRO:HG3	1.97	0.47
13:AP:23:TYR:CE1	13:AP:71:ARG:HG3	2.50	0.47
14:AQ:43:CYS:HA	14:AQ:46:GLU:HG3	1.97	0.47
15:AR:64:ARG:HH11	15:AR:68:ARG:HH21	1.60	0.47
17:AT:48:GLU:O	17:AT:49:GLU:C	2.53	0.47
46:B3:53:MET:HA	46:B3:58:THR:O	2.14	0.47
25:BA:571:A:C8	25:BA:2030:A:N6	2.83	0.47
25:BA:2322:A:H2'	25:BA:2323:G:O4'	2.14	0.47
26:BB:100:G:H2'	26:BB:101:A:O4'	2.15	0.47
26:BB:15:A:OP1	26:BB:15:A:H4'	2.14	0.47
26:BB:48:A:H4'	38:BQ:95:HIS:CD2	2.39	0.47
27:BD:30:GLU:CD	27:BD:63:ARG:HH21	2.18	0.47
28:BE:13:ARG:HH11	28:BE:21:VAL:CG1	2.25	0.47
29:BF:125:LEU:HD21	29:BF:199:TRP:CE3	2.50	0.47
32:BK:4:ILE:HD11	32:BK:44:LEU:HD12	1.96	0.47
45:BV:63:ASP:N	45:BV:64:GLY:CA	2.75	0.47
1:CA:106:C:HO2'	1:CA:107:G:H5'	1.80	0.47
1:CA:123:C:OP1	1:CA:312:C:H5'	2.15	0.47
1:CA:1255:G:OP1	10:CM:45:ARG:NH2	2.41	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1292:U:H2'	1:CA:1293:G:H8	1.79	0.47
1:CA:1306:A:H61	1:CA:1331:G:H1'	1.78	0.47
1:CA:1507:A:C2	1:CA:1508:G:C4	3.02	0.47
1:CA:636:U:H2'	1:CA:637:G:H8	1.79	0.47
22:CB:9:U:H5	22:CB:21:A:C8	2.32	0.47
22:CB:21:A:H2	22:CB:56:U:C2	2.32	0.47
22:CB:51:C:H2'	22:CB:52:G:O4'	2.15	0.47
22:CD:21:A:C4'	22:CD:22:A:O5'	2.62	0.47
3:CF:119:ARG:HH22	3:CF:140:ARG:CG	2.25	0.47
3:CF:188:LEU:HD12	3:CF:195:VAL:HG11	1.96	0.47
5:CH:99:GLY:O	5:CH:117:ASP:HA	2.14	0.47
6:CI:38:GLU:OE1	6:CI:64:GLN:HG2	2.14	0.47
7:CJ:85:TYR:CZ	7:CJ:154:TYR:CE1	3.03	0.47
8:CK:69:ARG:HD3	8:CK:75:ARG:O	2.15	0.47
9:CL:3:GLN:HE21	9:CL:20:ARG:HH11	1.63	0.47
10:CM:16:LEU:C	10:CM:18:ALA:N	2.67	0.47
15:CR:21:ASP:OD2	15:CR:24:SER:HB2	2.15	0.47
19:CV:12:ASP:HB3	19:CV:38:SER:HB3	1.97	0.47
54:D8:8:LYS:HB3	54:D8:12:LYS:HE2	1.96	0.47
25:DA:140:A:H8	25:DA:1408:C:HO2'	1.43	0.47
25:DA:1428:C:O2'	25:DA:1569:A:OP2	2.26	0.47
25:DA:2035:G:H4'	25:DA:2036:C:OP2	2.15	0.47
25:DA:2287:A:N1	25:DA:2346:A:C2	2.83	0.47
25:DA:2859:G:O2'	25:DA:2860:A:P	2.73	0.47
25:DA:440:G:H2'	25:DA:441:U:C6	2.49	0.47
25:DA:654(S):G:C4'	25:DA:654(T):A:OP1	2.62	0.47
25:DA:704:G:N2	25:DA:726:G:C4	2.83	0.47
25:DA:971:C:C2'	25:DA:972:G:H5'	2.45	0.47
25:DA:973:A:H8	25:DA:973:A:OP1	1.98	0.47
25:DA:9:U:O4	25:DA:2629:A:C6	2.68	0.47
25:DA:2621:A:P	28:DE:119:ARG:HH22	2.37	0.47
28:DE:199:ARG:HG2	28:DE:200:GLU:OE1	2.14	0.47
35:DO:106:LEU:HD13	35:DO:112:LEU:HD23	1.97	0.47
36:DP:32:TYR:OH	36:DP:111:GLU:HG3	2.15	0.47
36:DP:39:PRO:HA	36:DP:97:VAL:O	2.15	0.47
39:DR:19:LEU:N	39:DR:19:LEU:HD12	2.30	0.47
1:AA:1076:C:C2	1:AA:1082:G:C2	3.03	0.47
1:AA:1203:C:H2'	1:AA:1204:A:O4'	2.15	0.47
1:AA:256:U:H5''	17:AT:17:LYS:HZ1	1.79	0.47
1:AA:707:C:O2'	1:AA:708:C:H5'	2.14	0.47
1:AA:919:A:O2'	1:AA:920:U:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AB:3:U:H1'	22:AB:4:G:O5'	2.15	0.47
5:AH:71:LEU:HD11	5:AH:113:ALA:O	2.15	0.47
1:AA:878:G:H5'	8:AK:89:PRO:HG2	1.96	0.47
1:AA:1152:A:O3'	10:AM:13:HIS:HE1	1.97	0.47
12:AO:53:ALA:HB2	12:AO:67:ILE:HD11	1.96	0.47
16:AS:28:ARG:HG2	16:AS:28:ARG:NH1	2.29	0.47
20:AW:97:ALA:O	20:AW:99:LEU:N	2.48	0.47
25:BA:1654:A:OP2	37:B0:2:ARG:HD3	2.14	0.47
25:BA:2285:C:OP1	52:B6:28:ARG:HD3	2.14	0.47
25:BA:1050:A:O2'	25:BA:2752:C:H1'	2.14	0.47
25:BA:1174:A:H2'	25:BA:1175:U:H4'	1.97	0.47
25:BA:1188:U:C4'	41:B2:79:VAL:HG22	2.45	0.47
25:BA:1332:G:N2	25:BA:1609:A:HO2'	2.08	0.47
25:BA:2031:A:C6	25:BA:2498:C:H1'	2.50	0.47
25:BA:309:G:N3	25:BA:329:G:O2'	2.44	0.47
25:BA:316:C:H2'	25:BA:317:G:O5'	2.15	0.47
25:BA:531:C:OP1	25:BA:561:G:N1	2.48	0.47
25:BA:590:A:H2'	25:BA:591:C:C6	2.49	0.47
25:BA:780:G:C2	25:BA:783:A:N6	2.83	0.47
25:BA:852:G:H2'	25:BA:853:G:C8	2.49	0.47
28:BE:38:THR:CG2	28:BE:41:LYS:HB2	2.45	0.47
30:BG:97:ASP:O	30:BG:100:TRP:N	2.48	0.47
33:BM:46:VAL:CG1	33:BM:48:MET:HG3	2.45	0.47
34:BN:64:ARG:HG2	34:BN:79:PHE:CG	2.49	0.47
36:BP:112:GLU:H	36:BP:112:GLU:CD	2.18	0.47
43:BT:11:PRO:HB3	43:BT:92:LEU:HD21	1.96	0.47
43:BT:57:LEU:HD11	43:BT:78:LYS:NZ	2.30	0.47
1:CA:1261:A:C6	1:CA:1262:C:C2	3.03	0.47
1:CA:1350:A:C4	1:CA:1351:U:C6	3.03	0.47
1:CA:148:G:H2'	1:CA:149:A:H8	1.80	0.47
1:CA:271:C:H2'	1:CA:272:C:C6	2.50	0.47
1:CA:60:A:H4'	1:CA:61:G:O5'	2.15	0.47
8:CK:86:ILE:O	8:CK:88:LYS:HG2	2.14	0.47
8:CK:92:ARG:NH1	8:CK:92:ARG:CG	2.61	0.47
18:CU:25:THR:O	18:CU:25:THR:HG22	2.14	0.47
50:D4:34:GLU:HG2	50:D4:35:VAL:H	1.80	0.47
52:D6:49:HIS:O	52:D6:50:ARG:HD3	2.15	0.47
25:DA:1013:C:H2'	25:DA:1014:U:H6	1.80	0.47
25:DA:1786:A:H2	25:DA:2606:C:H1'	1.77	0.47
25:DA:1817:G:H2'	25:DA:1818:U:H5'	1.97	0.47
25:DA:571:A:H5'	25:DA:2030:A:N7	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2164:C:H2'	25:DA:2165:G:O4'	2.14	0.47
25:DA:2591:C:H2'	25:DA:2592:G:C8	2.49	0.47
25:DA:2751:G:C5'	25:DA:2752:C:OP2	2.63	0.47
25:DA:2751:G:H5'	25:DA:2752:C:OP2	2.15	0.47
25:DA:302:C:H2'	25:DA:303:U:C6	2.50	0.47
25:DA:528:A:C8	25:DA:528:A:H3'	2.49	0.47
25:DA:706:A:H2'	25:DA:707:G:O4'	2.15	0.47
25:DA:78:A:H2'	25:DA:79:G:H8	1.80	0.47
26:DB:111:U:H2'	26:DB:112:G:H8	1.80	0.47
28:DE:11:MET:HG3	28:DE:24:THR:H	1.79	0.47
28:DE:24:THR:O	28:DE:25:VAL:HB	2.14	0.47
33:DM:34:LEU:O	33:DM:49:GLY:HA3	2.15	0.47
35:DO:136:GLU:O	35:DO:139:LYS:N	2.47	0.47
25:DA:806:C:OP2	35:DO:41:ARG:HD3	2.15	0.47
39:DR:29:ARG:NH1	39:DR:29:ARG:HG3	2.28	0.47
49:DX:50:VAL:C	49:DX:52:HIS:H	2.18	0.47
1:AA:1347:G:C8	9:AL:107:ARG:HB3	2.49	0.47
22:AB:72:U:H6	22:AB:72:U:OP2	1.98	0.47
23:AC:57:C:O2'	30:BG:78:SER:HB2	2.14	0.47
23:AC:63:C:H2'	23:AC:64:G:H8	1.78	0.47
5:AH:137:GLU:O	5:AH:141:GLN:HG3	2.15	0.47
6:AI:40:VAL:HA	6:AI:62:TRP:O	2.15	0.47
7:AJ:126:ASP:O	7:AJ:130:GLY:N	2.48	0.47
8:AK:20:TYR:HD1	8:AK:65:TYR:CE2	2.33	0.47
9:AL:9:ARG:HG3	9:AL:104:ARG:NH1	2.30	0.47
25:BA:1130:U:HO2'	25:BA:1131:G:P	2.37	0.47
25:BA:130:C:O3'	25:BA:1349:A:H1'	2.15	0.47
25:BA:1466:G:H2'	25:BA:1547:C:N4	2.29	0.47
25:BA:1825:A:OP1	27:BD:249:PRO:HD3	2.15	0.47
25:BA:2138:C:N4	25:BA:2153:G:H1	2.12	0.47
25:BA:2219:G:C2'	25:BA:2224:G:H5'	2.44	0.47
25:BA:2272:U:C5'	25:BA:2273:A:OP1	2.63	0.47
25:BA:2291:U:H2'	25:BA:2292:C:C6	2.50	0.47
25:BA:2308:G:N3	25:BA:2308:G:H2'	2.30	0.47
25:BA:2367:G:H2'	25:BA:2368:C:H6	1.80	0.47
25:BA:250:G:H2'	25:BA:251:A:C8	2.50	0.47
25:BA:2630:G:H2'	25:BA:2631:G:C8	2.50	0.47
25:BA:2751:G:C2	31:BH:3:ARG:HB3	2.50	0.47
25:BA:2789:C:O2	25:BA:2789:C:H2'	2.15	0.47
26:BB:42:C:O2	30:BG:92:VAL:HA	2.15	0.47
28:BE:27:LEU:O	28:BE:27:LEU:HD23	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:4:ILE:CD1	28:BE:28:ALA:HB1	2.45	0.47
28:BE:72:VAL:O	28:BE:73:GLU:C	2.53	0.47
32:BK:104:GLN:O	32:BK:105:HIS:CG	2.68	0.47
32:BK:110:ASP:OD2	32:BK:112:LYS:O	2.33	0.47
45:BV:150:LEU:HB3	45:BV:171:ILE:CG2	2.45	0.47
47:BZ:83:GLU:C	47:BZ:85:LEU:H	2.16	0.47
47:BZ:85:LEU:N	47:BZ:85:LEU:HD22	2.29	0.47
1:CA:1228:C:OP1	13:CP:115:LYS:NZ	2.44	0.47
1:CA:1297:C:OP2	1:CA:1297:C:H6	1.98	0.47
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.29	0.47
1:CA:1362(A):C:H5'	1:CA:1363:A:O5'	2.15	0.47
1:CA:436:C:H2'	1:CA:437:U:C6	2.49	0.47
1:CA:649:G:O2'	1:CA:650:G:H5'	2.15	0.47
1:CA:76:G:C6	1:CA:77:C:C4	3.03	0.47
1:CA:977:A:C2'	1:CA:978:A:H5'	2.42	0.47
23:CC:48:U:HO2'	23:CC:49:C:P	2.26	0.47
9:CL:21:PRO:HA	9:CL:59:PHE:HA	1.97	0.47
1:CA:1248:A:O2'	9:CL:70:LYS:NZ	2.48	0.47
10:CM:4:ILE:HG12	10:CM:100:THR:HB	1.96	0.47
13:CP:20:THR:C	13:CP:22:ILE:H	2.17	0.47
14:CQ:15:LYS:HG2	14:CQ:16:PHE:CD2	2.49	0.47
52:D6:44:ARG:HB3	52:D6:45:LYS:H	1.53	0.47
25:DA:1007:C:OP1	33:DM:37:LYS:NZ	2.25	0.47
25:DA:1162:G:H21	41:D2:89:GLN:HE22	1.63	0.47
25:DA:1543:A:H4'	25:DA:1543:A:OP1	2.15	0.47
25:DA:2059:A:C5'	25:DA:2060:A:OP2	2.60	0.47
25:DA:2086:U:H2'	25:DA:2087:G:C8	2.50	0.47
25:DA:2131:G:OP1	25:DA:2133:G:H4'	2.15	0.47
25:DA:2520:C:N4	25:DA:2542:A:H62	2.11	0.47
25:DA:2542:A:N3	25:DA:2542:A:H5''	2.30	0.47
25:DA:2749:A:N6	25:DA:2750:A:H62	2.13	0.47
25:DA:2824:C:H2'	25:DA:2825:C:O4'	2.15	0.47
25:DA:33:U:H4'	25:DA:34:C:OP1	2.15	0.47
25:DA:864:G:H21	25:DA:866:A:H61	1.63	0.47
27:DD:35:LYS:CE	27:DD:104:TYR:HB2	2.45	0.47
28:DE:98:PRO:HD3	28:DE:175:VAL:CG1	2.45	0.47
25:DA:2726:U:H4'	34:DN:1:MET:HE3	1.96	0.47
34:DN:34:THR:O	34:DN:37:ASP:HB2	2.14	0.47
35:DO:96:THR:HG23	35:DO:98:GLU:HB3	1.97	0.47
39:DR:125:ARG:HB2	39:DR:129:ARG:NH2	2.30	0.47
25:DA:2232:U:P	47:DZ:40:ARG:HH12	2.38	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DZ:85:LEU:CA	47:DZ:87:PRO:HD2	2.44	0.47
1:AA:210:U:H2'	1:AA:216:G:OP2	2.15	0.47
1:AA:258:G:H2'	1:AA:259:G:C8	2.44	0.47
1:AA:672:U:O2'	1:AA:673:G:H5'	2.15	0.47
1:AA:967:C:H5''	1:AA:968:A:OP2	2.14	0.47
22:AD:6:G:C6	22:AD:7:G:C6	3.03	0.47
3:AF:106:VAL:O	3:AF:107:GLN:C	2.54	0.47
4:AG:5:ILE:HG23	4:AG:6:GLY:N	2.29	0.47
6:AI:2:ARG:HD2	6:AI:4:TYR:OH	2.15	0.47
11:AN:20:TYR:HB2	11:AN:31:THR:HG23	1.96	0.47
1:AA:881:G:P	12:AO:9:ARG:NH2	2.87	0.47
10:AM:49:VAL:HG22	14:AQ:41:ARG:HB2	1.95	0.47
1:AA:377:G:H5'	16:AS:5:ARG:HH12	1.80	0.47
13:AP:84:ILE:HD11	19:AV:66:MET:CG	2.45	0.47
20:AW:54:LYS:HD2	20:AW:54:LYS:C	2.36	0.47
37:B0:59:ASP:OD2	37:B0:59:ASP:N	2.48	0.47
51:B5:6:VAL:HG13	51:B5:7:PRO:N	2.28	0.47
52:B6:47:THR:HG22	52:B6:48:VAL:N	2.22	0.47
25:BA:2287:A:N6	25:BA:2344:U:N3	2.49	0.47
25:BA:777:A:C2	25:BA:778:G:C4	3.03	0.47
28:BE:117:MET:HE1	28:BE:136:ARG:HA	1.97	0.47
28:BE:61:ARG:CB	28:BE:62:PRO:CD	2.91	0.47
32:BK:30:LEU:HB3	32:BK:36:ALA:HB3	1.97	0.47
38:BQ:78:LEU:HD12	38:BQ:108:GLY:CA	2.43	0.47
25:BA:2685:G:OP2	39:BR:51:ARG:NH2	2.48	0.47
45:BV:156:LYS:O	45:BV:157:LEU:C	2.53	0.47
1:CA:1157:A:N6	1:CA:1180:A:C5	2.82	0.47
1:CA:1212:U:O2'	1:CA:1213:A:C8	2.67	0.47
1:CA:518:C:H5''	1:CA:519:C:C6	2.49	0.47
1:CA:940:C:H2'	1:CA:941:G:C8	2.50	0.47
22:CD:17:G:N2	22:CD:67:A:C5	2.83	0.47
22:CD:46:G:H2'	22:CD:47:U:C6	2.49	0.47
22:CD:5:G:H1	22:CD:77:C:N4	2.13	0.47
2:CE:128:GLU:O	2:CE:129:GLU:HB2	2.15	0.47
5:CH:20:GLN:NE2	5:CH:21:ALA:O	2.47	0.47
10:CM:47:PHE:CZ	14:CQ:37:PHE:HE2	2.32	0.47
25:DA:533:G:H5'	40:D1:24:TYR:CD2	2.50	0.47
25:DA:993:G:C1'	41:D2:87:HIS:CE1	2.93	0.47
25:DA:2615:U:C6	51:D5:7:PRO:HA	2.50	0.47
25:DA:1443:G:H8	25:DA:1443:G:C5'	2.28	0.47
25:DA:311:A:C6	25:DA:328:U:C4	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:603:A:H1'	25:DA:604:G:O4'	2.15	0.47
25:DA:857:C:C4	25:DA:858:U:O4	2.67	0.47
29:DF:63:LYS:HE2	29:DF:67:GLN:CB	2.44	0.47
25:DA:1005:C:O2'	33:DM:28:THR:CG2	2.63	0.47
36:DP:43:THR:HG22	36:DP:94:VAL:CG1	2.45	0.47
39:DR:103:ARG:C	39:DR:105:LEU:H	2.18	0.47
45:DV:157:LEU:HB3	45:DV:161:VAL:HG21	1.96	0.47
45:DV:80:ARG:O	45:DV:81:ARG:CB	2.62	0.47
1:AA:1503:A:N6	24:A1:12:A:C8	2.84	0.46
1:AA:342:C:C2	1:AA:348:G:N2	2.84	0.46
1:AA:570:G:H1'	1:AA:820:U:C4	2.50	0.46
1:AA:84:U:O2	1:AA:84:U:H2'	2.14	0.46
2:AE:96:ARG:HD2	2:AE:148:TYR:HE1	1.81	0.46
3:AF:165:THR:O	3:AF:165:THR:HG23	2.16	0.46
3:AF:82:GLU:O	3:AF:86:VAL:HG13	2.15	0.46
8:AK:109:ILE:HG12	8:AK:110:ALA:N	2.30	0.46
9:AL:99:LEU:HB3	9:AL:101:PHE:CD1	2.50	0.46
16:AS:71:ARG:HG3	16:AS:80:PHE:HE1	1.80	0.46
25:BA:2723:C:C4'	37:B0:1:MET:HE3	2.35	0.46
37:B0:67:LEU:HD13	37:B0:76:VAL:HG21	1.97	0.46
25:BA:2015:A:N9	51:B5:2:ALA:HA	2.31	0.46
25:BA:2286:A:H8	52:B6:37:ARG:HH11	1.63	0.46
25:BA:259:G:N2	25:BA:621:A:C8	2.81	0.46
25:BA:2733:A:C2'	25:BA:2734:A:H5''	2.43	0.46
25:BA:91:A:H2'	25:BA:92:G:H8	1.80	0.46
25:BA:821:A:H2'	25:BA:946:G:H5''	1.98	0.46
25:BA:974(A):C:H2'	25:BA:974(A):C:O2	2.15	0.46
26:BB:71:C:O2	26:BB:71:C:H2'	2.14	0.46
28:BE:178:GLU:H	28:BE:178:GLU:CD	2.18	0.46
28:BE:51:PHE:O	28:BE:52:LEU:HB2	2.16	0.46
29:BF:11:VAL:HG12	29:BF:12:LEU:N	2.30	0.46
38:BQ:106:ARG:H	38:BQ:106:ARG:HG3	1.47	0.46
47:BZ:83:GLU:C	47:BZ:85:LEU:N	2.68	0.46
47:BZ:58:ILE:HD11	47:BZ:86:SER:HB2	1.97	0.46
1:CA:1051:C:H2'	1:CA:1052:U:C6	2.50	0.46
1:CA:116:A:H61	1:CA:313:A:H1'	1.79	0.46
1:CA:1514:C:H2'	1:CA:1515:C:H6	1.79	0.46
1:CA:467:G:C6	1:CA:468:A:C5	3.03	0.46
22:CD:49:A:N3	22:CD:49:A:H2'	2.29	0.46
2:CE:28:PHE:HD2	2:CE:194:PRO:HD3	1.80	0.46
4:CG:200:GLU:HG2	4:CG:201:GLN:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CP:96:LEU:C	13:CP:110:ARG:HE	2.18	0.46
25:DA:747:U:P	51:D5:3:LYS:HD2	2.55	0.46
35:DO:49:ARG:HG2	54:D8:59:LYS:HG3	1.97	0.46
25:DA:1265:A:O4'	25:DA:1267:U:C6	2.69	0.46
25:DA:1301:A:O2'	25:DA:1302:A:H3'	2.14	0.46
25:DA:142:G:H2'	25:DA:143:C:C6	2.50	0.46
25:DA:1523:U:O2'	25:DA:1524:G:H5'	2.14	0.46
25:DA:1669:A:H5''	25:DA:2550:G:OP1	2.15	0.46
25:DA:1735:C:C2'	25:DA:1741:C:H5'	2.44	0.46
25:DA:526:A:O2'	25:DA:2043:C:O2	2.22	0.46
25:DA:2056:G:H2'	25:DA:2056:G:N3	2.29	0.46
1:AA:999:U:HO2'	25:DA:2137:C:H5'	1.79	0.46
25:DA:2340:G:H2'	25:DA:2341:G:H8	1.80	0.46
25:DA:2819:G:H2'	25:DA:2821:A:N7	2.29	0.46
25:DA:38:A:H2'	25:DA:39:C:H6	1.75	0.46
25:DA:84:A:H61	25:DA:102:G:C2'	2.21	0.46
26:DB:48:A:H2'	26:DB:49:C:C6	2.50	0.46
42:DS:73:ALA:HB3	42:DS:106:ILE:HD11	1.97	0.46
45:DV:120:ILE:HB	45:DV:169:GLU:OE2	2.15	0.46
1:AA:1503:A:O2'	24:A1:13:A:N6	2.48	0.46
1:AA:404:U:H2'	1:AA:405:U:C6	2.50	0.46
1:AA:443:C:H2'	1:AA:444:C:H6	1.80	0.46
1:AA:466:C:H5''	1:AA:467:G:OP2	2.14	0.46
1:AA:438:G:O2'	1:AA:494:U:O4	2.33	0.46
1:AA:49:U:O2'	1:AA:50:A:C3'	2.60	0.46
22:AB:22:A:O3'	22:AB:23:A:O4'	2.33	0.46
22:AB:74:C:N4	22:AB:75:C:C4	2.83	0.46
8:AK:91:ARG:HG2	8:AK:91:ARG:HH11	1.80	0.46
41:B2:25:LEU:H	41:B2:92:THR:CG2	2.27	0.46
52:B6:44:ARG:O	52:B6:45:LYS:HG2	2.16	0.46
52:B6:41:PRO:HD2	52:B6:46:HIS:N	2.30	0.46
25:BA:1076:C:H2'	25:BA:1077:A:H5''	1.96	0.46
25:BA:1486:A:H2'	25:BA:1487:G:C8	2.44	0.46
25:BA:1510:A:OP1	25:BA:1511:A:H8	1.98	0.46
25:BA:1607:C:H4'	25:BA:1608:A:O5'	2.15	0.46
25:BA:1675:C:H2'	25:BA:1676:A:O4'	2.15	0.46
25:BA:2056:G:H2'	25:BA:2056:G:N3	2.30	0.46
25:BA:2593:U:H2'	25:BA:2594:C:H6	1.80	0.46
25:BA:270(R):G:H2'	25:BA:270(S):G:H8	1.78	0.46
25:BA:500:G:N2	25:BA:502:A:H3'	2.31	0.46
25:BA:917:A:H2'	25:BA:918:A:H5'	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:943:U:OP2	35:BO:36:LYS:CG	2.63	0.46
27:BD:182:LEU:O	27:BD:271:ILE:HG13	2.15	0.46
29:BF:101:LEU:CD1	29:BF:102:PRO:HD2	2.35	0.46
29:BF:45:ARG:CG	29:BF:45:ARG:NH1	2.69	0.46
31:BH:30:LYS:NZ	31:BH:83:TYR:HE2	2.13	0.46
25:BA:7:G:H4'	33:BM:13:TRP:CH2	2.50	0.46
34:BN:93:PRO:HG3	34:BN:114:ILE:HG12	1.97	0.46
34:BN:7:TYR:OH	34:BN:44:LYS:HG3	2.14	0.46
25:BA:1614:A:N6	42:BS:88:ARG:H	2.13	0.46
45:BV:117:LEU:CD2	45:BV:119:GLU:HG3	2.45	0.46
1:CA:1004:A:H1'	1:CA:1036:G:C5	2.51	0.46
1:CA:1055:A:C6	1:CA:1206:G:C4	3.03	0.46
1:CA:1127:G:C2	1:CA:1145:C:C2	3.03	0.46
1:CA:389:A:H2'	1:CA:389:A:N3	2.28	0.46
3:CF:43:LEU:HD13	3:CF:47:LEU:HD22	1.96	0.46
11:CN:93:GLN:HA	11:CN:93:GLN:HE21	1.81	0.46
1:CA:909:A:OP1	12:CO:18:LYS:HD3	2.15	0.46
14:CQ:24:CYS:SG	14:CQ:29:ARG:HB2	2.56	0.46
30:DG:5:VAL:HG13	50:D4:23:GLU:OE2	2.15	0.46
52:D6:17:LYS:O	52:D6:44:ARG:NH2	2.48	0.46
25:DA:2286:A:N3	52:D6:28:ARG:NH2	2.63	0.46
25:DA:1394:U:H3'	25:DA:1394:U:H6	1.81	0.46
25:DA:1606:G:H5''	25:DA:1607:C:OP1	2.15	0.46
25:DA:2010:G:OP1	42:DS:41:LYS:HD3	2.15	0.46
25:DA:1639:U:H4'	25:DA:2699:C:H4'	1.96	0.46
25:DA:270(K):C:N4	25:DA:270(N):G:H1	2.13	0.46
25:DA:2748:A:H2'	25:DA:2749:A:O4'	2.14	0.46
25:DA:78:A:H2'	25:DA:79:G:C8	2.51	0.46
25:DA:875:G:H2'	25:DA:876:C:O4'	2.15	0.46
25:DA:889:C:C4	25:DA:890:A:H1'	2.50	0.46
26:DB:15:A:OP2	26:DB:107:U:O2'	2.32	0.46
28:DE:21:VAL:O	28:DE:23:VAL:HG13	2.15	0.46
29:DF:16:GLY:O	29:DF:17:ARG:C	2.54	0.46
30:DG:165:THR:OG1	30:DG:168:GLU:HG3	2.15	0.46
35:DO:107:LYS:HG3	35:DO:110:TYR:CD2	2.50	0.46
38:DQ:67:ARG:NH1	38:DQ:67:ARG:HB2	2.30	0.46
39:DR:64:ARG:CB	39:DR:73:GLU:HG2	2.37	0.46
42:DS:2:GLU:CD	42:DS:72:LYS:HE3	2.35	0.46
44:DU:74:PRO:O	44:DU:80:GLY:HA2	2.16	0.46
24:A1:24:A:C6	24:A1:25:A:N6	2.83	0.46
1:AA:1120:G:H2'	1:AA:1121:U:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1206:G:C6	1:AA:1207:G:C5	3.04	0.46
1:AA:411:A:C5	1:AA:429:U:C5	3.03	0.46
1:AA:998:G:H2'	1:AA:998(A):C:H6	1.79	0.46
1:AA:8:A:H5''	5:AH:120:THR:O	2.15	0.46
5:AH:41:VAL:CG1	5:AH:113:ALA:HB2	2.45	0.46
6:AI:60:PHE:C	6:AI:61:LEU:HD12	2.36	0.46
13:AP:20:THR:C	13:AP:22:ILE:H	2.19	0.46
14:AQ:6:LEU:C	14:AQ:23:ARG:HH21	2.18	0.46
25:BA:2371:G:H21	52:B6:46:HIS:CE1	2.34	0.46
25:BA:1575:C:H2'	25:BA:1576:U:H6	1.81	0.46
25:BA:1598:C:H2'	25:BA:1599:C:H6	1.81	0.46
25:BA:1963:U:H6	25:BA:1963:U:OP1	1.99	0.46
25:BA:2099:U:O2	25:BA:2099:U:H2'	2.15	0.46
25:BA:2211:G:H3'	25:BA:2212:A:C4	2.51	0.46
25:BA:826:U:OP1	25:BA:2428:G:H3'	2.15	0.46
25:BA:2492:U:H2'	25:BA:2493:U:C6	2.50	0.46
25:BA:2681:C:O2'	25:BA:2682:U:OP2	2.33	0.46
25:BA:752:A:H4'	25:BA:753:C:H5'	1.98	0.46
26:BB:2:C:H2'	26:BB:3:C:C6	2.50	0.46
30:BG:2:PRO:HB3	50:B4:25:TYR:CE1	2.50	0.46
30:BG:57:ALA:HB2	30:BG:90:LEU:HD21	1.98	0.46
33:BM:78:TYR:CD1	33:BM:78:TYR:N	2.83	0.46
35:BO:3:LEU:HA	35:BO:6:LEU:CD2	2.43	0.46
36:BP:19:GLY:C	36:BP:98:LYS:HD3	2.36	0.46
39:BR:55:ASN:H	39:BR:59:THR:CG2	2.28	0.46
43:BT:89:ILE:O	43:BT:93:GLU:HG2	2.15	0.46
45:BV:15:PRO:HB2	45:BV:19:ARG:NH2	2.30	0.46
1:CA:1053:G:HO2'	1:CA:1054:C:P	2.38	0.46
1:CA:1128:C:O2'	1:CA:1129:C:O5'	2.33	0.46
1:CA:118:U:H2'	1:CA:118:U:O2	2.14	0.46
1:CA:1200:C:H1'	1:CA:1204:A:H62	1.81	0.46
1:CA:374:A:C6	1:CA:375:U:C4	3.03	0.46
1:CA:792:A:H1'	1:CA:794:A:N7	2.30	0.46
22:CB:59:A:C6	22:CB:60:A:C5	3.03	0.46
22:CD:46:G:C2	22:CD:47:U:C2	3.04	0.46
4:CG:178:VAL:C	4:CG:180:GLY:H	2.19	0.46
7:CJ:66:VAL:O	7:CJ:70:LYS:HG3	2.15	0.46
15:CR:56:LEU:HD21	25:DA:715:G:C2	2.51	0.46
17:CT:32:TYR:O	17:CT:34:LYS:N	2.45	0.46
21:CX:2:GLY:C	21:CX:4:GLY:N	2.67	0.46
41:D2:76:LYS:HD2	41:D2:80:GLN:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:D3:55:ARG:CZ	46:D3:55:ARG:HB3	2.46	0.46
25:DA:1170:G:O6	25:DA:1179:C:N3	2.48	0.46
25:DA:142:G:H1'	43:DT:37:THR:HG21	1.97	0.46
25:DA:1568:G:H5''	27:DD:61:LEU:HD22	1.96	0.46
25:DA:1667:G:O2'	25:DA:1991:U:O4	2.28	0.46
25:DA:2015:A:H1'	51:D5:2:ALA:CA	2.44	0.46
25:DA:2129:C:C2'	25:DA:2130:U:H5'	2.45	0.46
25:DA:2170:A:H4'	25:DA:2171:A:OP2	2.16	0.46
25:DA:824:A:H1'	25:DA:2358:G:N7	2.30	0.46
25:DA:2419:U:O4	54:D8:31:HIS:CG	2.69	0.46
25:DA:511:U:O4	25:DA:512:G:C2	2.68	0.46
25:DA:55:G:H2'	25:DA:56:A:H8	1.80	0.46
25:DA:613:U:O2	25:DA:613:U:O4'	2.33	0.46
25:DA:790:C:H1'	25:DA:791:C:OP1	2.15	0.46
25:DA:953:A:H2'	25:DA:954:G:H8	1.80	0.46
28:DE:11:MET:HE3	28:DE:186:GLY:HA2	1.97	0.46
29:DF:166:ALA:C	29:DF:168:ARG:H	2.18	0.46
45:DV:116:VAL:C	45:DV:117:LEU:HD22	2.36	0.46
1:AA:1158:C:O2	1:AA:1158:C:H3'	2.15	0.46
1:AA:959:A:C2	1:AA:1222:G:O4'	2.68	0.46
1:AA:971:G:N2	1:AA:1363:A:OP2	2.34	0.46
1:AA:407:G:H2'	1:AA:408:A:H8	1.80	0.46
1:AA:413:G:O2'	1:AA:414:A:P	2.74	0.46
1:AA:851:G:O2'	1:AA:852:G:H5'	2.15	0.46
1:AA:950:U:H2'	1:AA:951:G:C8	2.51	0.46
22:AB:49:A:H2	22:AB:51:C:P	2.38	0.46
22:AB:8:U:H5'	22:AB:58:G:OP2	2.15	0.46
8:AK:119:LEU:HD12	8:AK:124:ALA:HA	1.96	0.46
1:AA:1367:C:H4'	10:AM:48:THR:HG21	1.97	0.46
13:AP:39:ILE:HD12	13:AP:56:LEU:HD23	1.97	0.46
1:AA:1187:G:N2	14:AQ:60:SER:OG	2.42	0.46
18:AU:31:LEU:H	18:AU:31:LEU:CD2	2.29	0.46
40:B1:11:ARG:O	40:B1:15:LYS:HG3	2.15	0.46
51:B5:56:LYS:CE	51:B5:56:LYS:H	2.29	0.46
25:BA:1668:A:O2'	25:BA:1674:G:N7	2.45	0.46
25:BA:2098:U:C4	25:BA:2099:U:C5	3.03	0.46
25:BA:2307:G:C4	25:BA:2311:A:C2	3.03	0.46
25:BA:592:G:N3	54:B8:4:MET:HE2	2.31	0.46
25:BA:686:G:H4'	25:BA:686:G:OP2	2.14	0.46
25:BA:828:U:O2	25:BA:828:U:H3'	2.14	0.46
27:BD:132:PRO:HG3	27:BD:190:TYR:CE1	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:32:SER:O	27:BD:33:LEU:CB	2.59	0.46
28:BE:181:LEU:HD21	39:BR:7:ILE:CG2	2.44	0.46
31:BH:153:LYS:HG2	31:BH:162:ILE:CB	2.46	0.46
31:BH:97:ARG:O	31:BH:98:LEU:HB2	2.15	0.46
25:BA:637:A:OP2	35:BO:115:LEU:HB2	2.16	0.46
45:BV:145:GLU:O	45:BV:174:VAL:HB	2.16	0.46
1:CA:1129:C:C2	1:CA:1132:C:N4	2.75	0.46
1:CA:1131:G:H2'	1:CA:1132:C:C6	2.51	0.46
1:CA:979:C:OP1	1:CA:1223:C:N4	2.48	0.46
1:CA:1363:A:H1'	1:CA:1365:G:N7	2.31	0.46
1:CA:1446:A:OP1	1:CA:1446:A:C4'	2.64	0.46
1:CA:485:G:O2'	1:CA:486:U:C6	2.66	0.46
1:CA:707:C:H2'	1:CA:708:C:C6	2.51	0.46
1:CA:980:C:H5'	1:CA:981:U:H5	1.80	0.46
3:CF:131:ARG:HH12	5:CH:50:GLU:HG3	1.78	0.46
6:CI:10:LEU:HD13	6:CI:61:LEU:HD13	1.98	0.46
6:CI:69:GLU:CD	6:CI:69:GLU:H	2.19	0.46
19:CV:9:VAL:HG22	50:D4:63:TYR:CZ	2.50	0.46
41:D2:84:LYS:O	41:D2:85:LYS:O	2.34	0.46
50:D4:37:SER:C	50:D4:39:CYS:H	2.18	0.46
25:DA:2615:U:N1	51:D5:7:PRO:HA	2.30	0.46
53:D7:1:MET:HA	53:D7:1:MET:CE	2.46	0.46
25:DA:101:G:H2'	25:DA:102:G:OP1	2.16	0.46
25:DA:1342:A:N6	25:DA:1397:U:C5	2.83	0.46
25:DA:2019:A:C2'	25:DA:2020:A:O5'	2.63	0.46
25:DA:1638:C:H4'	25:DA:2710:C:O2	2.15	0.46
25:DA:287:C:H2'	25:DA:288:C:C6	2.50	0.46
25:DA:706:A:C2'	25:DA:707:G:H5'	2.45	0.46
25:DA:774:A:C2	25:DA:787:U:O2'	2.59	0.46
25:DA:686:G:H21	25:DA:788:A:H61	1.62	0.46
25:DA:981:A:N1	25:DA:2027:G:O2'	2.40	0.46
29:DF:119:ARG:HH11	29:DF:119:ARG:CG	2.27	0.46
32:DK:27:ARG:HG2	47:DZ:71:TYR:CZ	2.50	0.46
35:DO:47:ASP:N	35:DO:48:PRO:HA	2.28	0.46
36:DP:87:LYS:HG3	36:DP:88:GLY:N	2.27	0.46
39:DR:16:ARG:HG3	39:DR:79:HIS:HA	1.97	0.46
42:DS:13:SER:HB2	42:DS:16:LYS:HD2	1.97	0.46
44:DU:8:LYS:HG3	44:DU:94:LYS:HZ1	1.81	0.46
1:AA:1125:U:H5	10:AM:73:ASP:OD1	1.98	0.46
1:AA:1213:A:N7	1:AA:1215:G:C4	2.84	0.46
1:AA:1468:A:H8	1:AA:1468:A:O5'	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:184:G:N2	1:AA:194:C:C2	2.83	0.46
1:AA:422:C:O2'	1:AA:423:G:C2	2.62	0.46
1:AA:483:C:OP2	1:AA:484:G:O2'	2.34	0.46
1:AA:986:A:H2'	1:AA:987:G:C8	2.51	0.46
4:AG:31:CYS:O	4:AG:32:ALA:HB3	2.16	0.46
8:AK:14:ARG:O	8:AK:18:ARG:HD3	2.16	0.46
1:AA:963:G:H21	10:AM:55:LYS:HE2	1.77	0.46
10:AM:48:THR:CA	10:AM:62:HIS:HB3	2.41	0.46
17:AT:88:TYR:HD2	17:AT:89:LEU:HD23	1.80	0.46
52:B6:45:LYS:HA	52:B6:45:LYS:HD3	1.71	0.46
25:BA:2133:G:C6	25:BA:2157:G:O6	2.69	0.46
25:BA:2196:C:O2'	25:BA:2197:U:H5'	2.16	0.46
25:BA:2211:G:H3'	25:BA:2212:A:N3	2.31	0.46
25:BA:2285:C:N4	52:B6:25:LYS:HE2	2.30	0.46
25:BA:2371:G:H21	52:B6:46:HIS:HE1	1.63	0.46
25:BA:2467:C:O2'	25:BA:2468:G:H5'	2.14	0.46
25:BA:2756:U:H1'	25:BA:2757:A:H5''	1.97	0.46
25:BA:817:C:O2'	25:BA:839:U:H5''	2.16	0.46
26:BB:8:U:O3'	38:BQ:25:ARG:NH2	2.48	0.46
31:BH:86:GLU:O	31:BH:131:VAL:O	2.33	0.46
31:BH:30:LYS:CD	31:BH:81:GLU:H	2.29	0.46
38:BQ:62:LYS:HB3	38:BQ:97:ARG:CD	2.46	0.46
39:BR:19:LEU:HA	39:BR:20:PRO:HD3	1.77	0.46
39:BR:50:ILE:HD11	39:BR:102:ILE:HD11	1.98	0.46
43:BT:57:LEU:HD12	43:BT:57:LEU:C	2.36	0.46
45:BV:166:SER:O	45:BV:169:GLU:HB2	2.15	0.46
1:CA:1004:A:C8	1:CA:1025:U:C2	3.04	0.46
1:CA:1149:C:OP1	9:CL:9:ARG:HD3	2.16	0.46
1:CA:1178:G:N2	1:CA:1181:G:C8	2.83	0.46
1:CA:652:U:C4	1:CA:752:G:N3	2.83	0.46
22:CD:14:A:H3'	22:CD:15:G:C5'	2.32	0.46
2:CE:115:LEU:HD11	2:CE:146:GLN:HG2	1.97	0.46
16:CS:45:THR:OG1	16:CS:46:PRO:HD2	2.15	0.46
20:CW:71:THR:CG2	20:CW:72:LEU:H	2.28	0.46
46:D3:84:LEU:HG	46:D3:85:ALA:H	1.80	0.46
25:DA:1607:C:H4'	25:DA:1608:A:H5'	1.98	0.46
25:DA:2210:G:H1'	25:DA:2211:G:OP1	2.14	0.46
25:DA:2368:C:H2'	25:DA:2369:A:H8	1.80	0.46
25:DA:2446:G:H2'	25:DA:2447:G:H5''	1.96	0.46
25:DA:2576:G:O2'	25:DA:2579:C:OP2	2.23	0.46
25:DA:274:G:OP1	25:DA:274:G:O4'	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:26:G:C6	25:DA:27:G:N1	2.84	0.46
25:DA:3:U:O4	25:DA:2900:A:N1	2.48	0.46
25:DA:607:U:N3	25:DA:621:A:C2	2.77	0.46
25:DA:260:G:O4'	25:DA:621:A:H1'	2.16	0.46
25:DA:784:A:N7	25:DA:792:G:C4	2.84	0.46
28:DE:131:ALA:O	28:DE:132:HIS:CB	2.64	0.46
29:DF:122:LYS:O	29:DF:124:LEU:N	2.49	0.46
32:DK:7:GLU:CA	32:DK:15:VAL:HG22	2.45	0.46
34:DN:88:ASN:O	34:DN:90:GLN:N	2.48	0.46
35:DO:47:ASP:OD2	35:DO:49:ARG:NE	2.33	0.46
35:DO:9:ASN:CB	35:DO:10:PRO:CD	2.72	0.46
25:DA:908:C:OP1	36:DP:22:LYS:HB2	2.16	0.46
36:DP:35:VAL:HG13	36:DP:100:GLY:O	2.16	0.46
43:DT:57:LEU:N	43:DT:57:LEU:HD23	2.29	0.46
1:AA:1054:C:H6	1:AA:1196:U:HO2'	1.62	0.46
1:AA:632:A:N7	1:AA:633:G:C4	2.83	0.46
22:AB:7:G:H3'	22:AB:8:U:H5'	1.97	0.46
4:AG:11:LEU:O	4:AG:12:CYS:C	2.53	0.46
1:AA:1226:C:O2'	13:AP:103:THR:O	2.24	0.46
13:AP:12:ASN:OD1	13:AP:13:LYS:N	2.47	0.46
13:AP:84:ILE:HG23	13:AP:86:CYS:H	1.81	0.46
15:AR:74:ASP:CG	15:AR:77:ARG:HG2	2.36	0.46
16:AS:12:LYS:O	16:AS:13:HIS:HB2	2.15	0.46
20:AW:16:HIS:O	20:AW:19:SER:HB3	2.16	0.46
20:AW:48:LYS:HB3	20:AW:51:GLU:HB2	1.98	0.46
40:B1:85:LYS:HG3	40:B1:117:GLN:HB2	1.98	0.46
33:BM:42:TRP:O	40:B1:64:ARG:HD2	2.15	0.46
25:BA:1076:C:C2'	25:BA:1077:A:H5''	2.46	0.46
25:BA:1185:C:H5''	25:BA:1186:G:OP1	2.15	0.46
25:BA:1228:G:OP2	40:B1:16:LYS:NZ	2.47	0.46
25:BA:125:G:H4'	25:BA:126:A:OP2	2.16	0.46
25:BA:1514:U:H2'	25:BA:1515:C:C6	2.50	0.46
25:BA:1817:G:OP1	27:BD:88:ARG:NH2	2.47	0.46
25:BA:2140:C:O2	25:BA:2152:G:C2	2.69	0.46
25:BA:2612:C:H2'	25:BA:2613:U:O5'	2.15	0.46
25:BA:363(A):A:O2'	25:BA:363(B):G:H5'	2.16	0.46
25:BA:439:G:O2'	25:BA:440:G:H5'	2.15	0.46
25:BA:975:G:H1'	25:BA:990:A:C2	2.50	0.46
29:BF:136:THR:HG22	29:BF:166:ALA:O	2.16	0.46
30:BG:161:THR:HG22	30:BG:163:ALA:N	2.11	0.46
35:BO:147:LEU:HA	35:BO:147:LEU:HD12	1.71	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BV:150:LEU:HD21	45:BV:154:ASP:HB2	1.98	0.46
48:BW:17:SER:HB2	48:BW:18:PRO:CA	2.46	0.46
1:CA:1127:G:H1'	1:CA:1147:C:H42	1.81	0.46
1:CA:1190:G:OP1	3:CF:5:ILE:HD12	2.15	0.46
1:CA:1268:A:N3	1:CA:1326:C:O2'	2.48	0.46
1:CA:1286:A:H3'	1:CA:1287:A:C5'	2.42	0.46
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.16	0.46
1:CA:652:U:C5	1:CA:752:G:C4	3.03	0.46
22:CD:17:G:C4'	22:CD:18:G:OP1	2.63	0.46
22:CD:13:G:H1'	22:CD:23:A:N6	2.29	0.46
5:CH:83:GLU:HA	5:CH:87:SER:O	2.15	0.46
9:CL:33:PHE:HE1	9:CL:37:PHE:HD1	1.62	0.46
19:CV:41:VAL:C	19:CV:43:GLU:N	2.69	0.46
19:CV:49:ILE:HG22	19:CV:50:ALA:N	2.30	0.46
40:D1:68:ALA:O	40:D1:71:GLN:HB2	2.15	0.46
41:D2:49:THR:OG1	41:D2:50:PRO:HD2	2.16	0.46
52:D6:48:VAL:O	52:D6:49:HIS:HB2	2.16	0.46
25:DA:128:C:O2'	25:DA:129:C:O5'	2.31	0.46
25:DA:1678:G:O5'	25:DA:1678:G:H8	1.98	0.46
25:DA:1914:C:H2'	25:DA:1915:U:O4'	2.16	0.46
25:DA:2022:U:OP2	51:D5:15:ARG:NH2	2.47	0.46
25:DA:2439:A:C5'	25:DA:2439:A:C8	2.94	0.46
25:DA:2469:A:H2	25:DA:2481:G:N2	2.13	0.46
25:DA:2788:C:O2'	25:DA:2809:A:N3	2.43	0.46
25:DA:598:G:C6	25:DA:599:G:C5	3.04	0.46
38:DQ:10:ARG:O	38:DQ:14:VAL:HG13	2.15	0.46
24:A1:24:A:O5'	24:A1:24:A:H8	1.99	0.46
1:AA:1002:G:C5	1:AA:1003:G:N7	2.84	0.46
1:AA:1176:A:H3'	1:AA:1177:G:C5'	2.42	0.46
1:AA:1290:G:N3	1:AA:1290:G:H2'	2.31	0.46
1:AA:1112:C:H1'	3:AF:179:ARG:NH1	2.30	0.46
6:AI:68:PRO:HG3	6:AI:71:ARG:NH2	2.31	0.46
10:AM:96:ILE:HD13	10:AM:96:ILE:N	2.31	0.46
17:AT:51:TYR:CZ	17:AT:73:VAL:HG11	2.50	0.46
40:B1:83:LEU:HD12	40:B1:113:ALA:HB2	1.97	0.46
41:B2:18:LEU:HD22	41:B2:19:LYS:H	1.81	0.46
25:BA:1022:G:H1'	25:BA:1023:U:OP2	2.16	0.46
25:BA:1121:C:H2'	25:BA:1122:G:O4'	2.16	0.46
25:BA:1313:U:OP2	25:BA:1314:C:H5	1.98	0.46
25:BA:1386:C:OP2	25:BA:1396:U:H5	1.98	0.46
25:BA:1534:G:C3'	25:BA:1534:G:N3	2.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1728:G:H2'	25:BA:1731:G:O6	2.16	0.46
25:BA:1992:G:C2'	25:BA:1993:U:OP2	2.64	0.46
25:BA:2111:C:H5	25:BA:2147:G:N1	2.11	0.46
25:BA:2822:G:OP1	28:BE:159:HIS:NE2	2.47	0.46
25:BA:755:C:H2'	25:BA:756:C:C6	2.51	0.46
25:BA:879:G:OP2	25:BA:879:G:H8	1.98	0.46
26:BB:91:C:H2'	26:BB:92:G:H8	1.81	0.46
27:BD:33:LEU:C	27:BD:33:LEU:HD22	2.36	0.46
29:BF:127:GLU:OE2	29:BF:127:GLU:HA	2.15	0.46
32:BK:2:LYS:HG3	32:BK:20:ASP:HB3	1.98	0.46
32:BK:76:THR:O	32:BK:105:HIS:HE1	1.98	0.46
32:BK:82:ARG:O	32:BK:89:TYR:HD1	1.99	0.46
32:BK:9:LEU:O	32:BK:9:LEU:HD23	2.16	0.46
35:BO:15:ARG:CB	35:BO:15:ARG:NH1	2.75	0.46
1:CA:1346:A:C6	7:CJ:10:ARG:NH1	2.84	0.46
1:CA:620:C:H2'	1:CA:621:A:O4'	2.16	0.46
22:CB:56:U:O2	22:CB:56:U:H2'	2.14	0.46
2:CE:182:ILE:N	2:CE:182:ILE:HD12	2.29	0.46
2:CE:204:ASN:OD1	2:CE:204:ASN:N	2.46	0.46
3:CF:81:GLY:HA3	3:CF:85:ARG:NH1	2.30	0.46
4:CG:70:ILE:HG22	4:CG:75:PHE:HB2	1.96	0.46
10:CM:54:PHE:CD1	10:CM:55:LYS:HD3	2.51	0.46
16:CS:56:ALA:O	16:CS:60:LEU:HG	2.15	0.46
21:CX:8:THR:HG22	21:CX:10:ARG:H	1.81	0.46
41:D2:99:ILE:HG12	41:D2:99:ILE:O	2.15	0.46
25:DA:1088:A:H3'	25:DA:1088:A:N3	2.31	0.46
25:DA:1111:A:O3'	25:DA:1112:G:H4'	2.16	0.46
25:DA:1388:G:H2'	25:DA:1389:G:H8	1.81	0.46
25:DA:1729:A:N6	25:DA:1731:G:N7	2.63	0.46
25:DA:1936:A:C8	25:DA:1940:U:O2	2.69	0.46
25:DA:2331:G:H4'	46:D3:43:THR:H	1.80	0.46
25:DA:2353:G:H1'	46:D3:34:GLY:HA3	1.97	0.46
25:DA:2415:G:H1'	35:DO:67:MET:HE3	1.98	0.46
25:DA:2611:U:H3'	25:DA:2611:U:OP1	2.15	0.46
25:DA:864:G:C6	25:DA:865:C:N4	2.84	0.46
25:DA:920:G:H2'	25:DA:921:G:C8	2.44	0.46
27:DD:118:VAL:HG22	27:DD:119:ALA:N	2.31	0.46
28:DE:55:ASN:HB2	28:DE:72:VAL:HG12	1.97	0.46
28:DE:76:ARG:HG2	28:DE:195:LEU:HD13	1.98	0.46
32:DK:114:LEU:HA	32:DK:130:TYR:HD1	1.79	0.46
32:DK:143:SER:O	32:DK:144:VAL:CB	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:38:LEU:H	32:DK:38:LEU:HD12	1.81	0.46
33:DM:129:PRO:O	33:DM:131:GLN:N	2.42	0.46
35:DO:19:VAL:HG21	35:DO:32:THR:HG23	1.98	0.46
35:DO:79:ARG:O	35:DO:111:ARG:HB2	2.15	0.46
38:DQ:42:ASP:O	38:DQ:43:GLU:HB2	2.16	0.46
25:DA:309:G:O3'	44:DU:18:GLY:HA3	2.16	0.46
44:DU:87:LYS:HE3	44:DU:92:ASN:OD1	2.16	0.46
1:AA:1086:U:H3	1:AA:1099:G:N2	2.07	0.46
1:AA:936:C:H2'	1:AA:937:A:O4'	2.16	0.46
23:AC:41:C:O2'	23:AC:42:C:H5'	2.15	0.46
22:AD:55:U:OP1	22:AD:55:U:H4'	2.16	0.46
2:AE:233:SER:OG	2:AE:234:PRO:HD2	2.16	0.46
8:AK:13:ILE:O	8:AK:17:THR:HG23	2.16	0.46
14:AQ:13:THR:HG23	14:AQ:20:ALA:HB2	1.98	0.46
16:AS:14:ASN:N	16:AS:15:PRO:HD3	2.31	0.46
16:AS:45:THR:HG22	16:AS:47:ASP:H	1.81	0.46
1:AA:1318:A:H5''	19:AV:10:PHE:CD2	2.50	0.46
25:BA:2285:C:OP2	52:B6:27:LYS:O	2.34	0.46
25:BA:1593:G:H2'	25:BA:1594:G:H8	1.81	0.46
25:BA:2302:G:C6	25:BA:2315:G:C6	3.04	0.46
25:BA:2328:A:H2'	25:BA:2329:G:H8	1.81	0.46
25:BA:2352:A:C4	25:BA:2366:A:C2	3.04	0.46
27:BD:92:ILE:HD12	27:BD:104:TYR:CD2	2.50	0.46
27:BD:30:GLU:CG	27:BD:63:ARG:HH21	2.29	0.46
28:BE:21:VAL:HG23	28:BE:22:PRO:HG3	1.98	0.46
29:BF:20:LEU:HD12	29:BF:21:ALA:H	1.81	0.46
34:BN:47:ILE:CG1	34:BN:48:PRO:HD2	2.45	0.46
39:BR:86:ILE:HG12	39:BR:86:ILE:O	2.16	0.46
49:BX:46:ASN:O	49:BX:50:VAL:HG22	2.16	0.46
47:BZ:81:LYS:HD2	47:BZ:81:LYS:N	2.31	0.46
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.51	0.46
1:CA:115:G:H1'	1:CA:116:A:OP2	2.15	0.46
1:CA:1287:A:C6	1:CA:1288:A:C6	3.03	0.46
1:CA:1352:C:H42	1:CA:1370:G:H1	1.62	0.46
1:CA:1468:A:O5'	1:CA:1468:A:H8	1.99	0.46
1:CA:187:C:O2	1:CA:191(A):G:N1	2.49	0.46
1:CA:685:G:N2	1:CA:686:U:C4	2.84	0.46
4:CG:8:VAL:CG1	4:CG:21:LEU:HB2	2.43	0.46
7:CJ:50:ILE:O	7:CJ:50:ILE:HG22	2.16	0.46
20:CW:69:GLY:O	20:CW:73:HIS:CD2	2.69	0.46
37:D0:63:ARG:HA	37:D0:80:PHE:CZ	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1000:A:N6	25:DA:1001:A:N1	2.64	0.46
25:DA:1044:G:H1'	25:DA:1111:A:N1	2.30	0.46
25:DA:128:C:H2'	25:DA:129:C:C6	2.51	0.46
25:DA:1670:C:O2	28:DE:129:HIS:NE2	2.43	0.46
25:DA:152:G:H1	25:DA:174:C:N4	2.14	0.46
25:DA:1839:G:N3	25:DA:1839:G:H2'	2.30	0.46
25:DA:1858:G:C6	25:DA:1883:G:C6	3.04	0.46
25:DA:2118:U:C4	25:DA:2148:G:H4'	2.50	0.46
25:DA:2130:U:H2'	25:DA:2158:A:C2	2.51	0.46
25:DA:2174:C:O2'	25:DA:2175:C:H5'	2.16	0.46
25:DA:2182:G:H2'	25:DA:2183:C:C6	2.51	0.46
25:DA:2299:G:N1	25:DA:2318:G:C8	2.84	0.46
25:DA:2402:C:H2'	25:DA:2403:C:H5'	1.98	0.46
25:DA:200:U:O4	25:DA:250:G:N2	2.48	0.46
27:DD:182:LEU:H	27:DD:272:ALA:CB	2.20	0.46
31:DH:61:HIS:O	31:DH:64:LEU:N	2.48	0.46
34:DN:102:VAL:HB	34:DN:106:LEU:HD12	1.97	0.46
35:DO:70:GLN:N	35:DO:70:GLN:OE1	2.49	0.46
35:DO:85:LEU:HA	35:DO:88:LEU:HB3	1.97	0.46
43:DT:63:LYS:CE	43:DT:63:LYS:H	2.29	0.46
45:DV:29:TYR:HB3	45:DV:34:ASN:HD22	1.79	0.46
45:DV:72:ARG:HA	45:DV:72:ARG:HD2	1.70	0.46
1:AA:1029:G:H1'	1:AA:1032(A):G:H1	1.78	0.46
1:AA:961:U:OP2	1:AA:1223:C:H1'	2.15	0.46
1:AA:1277:C:HO2'	1:AA:1279:A:C1'	2.29	0.46
1:AA:152:A:N6	1:AA:170:U:C2	2.84	0.46
1:AA:690:G:O2'	1:AA:691:G:H5'	2.15	0.46
1:AA:666:G:H5'	1:AA:726:C:H1'	1.98	0.46
1:AA:900:A:H2'	1:AA:901:A:C8	2.51	0.46
1:AA:973:G:OP1	10:AM:57:LYS:HD3	2.15	0.46
8:AK:82:HIS:N	8:AK:138:TRP:O	2.49	0.46
10:AM:89:ASP:C	10:AM:90:LEU:HD12	2.36	0.46
12:AO:83:ARG:HG3	12:AO:98:VAL:HG22	1.97	0.46
13:AP:57:ARG:HB2	13:AP:57:ARG:HH11	1.81	0.46
14:AQ:51:GLY:C	14:AQ:53:LEU:H	2.08	0.46
37:B0:51:LEU:HD22	37:B0:66:VAL:HG13	1.97	0.46
41:B2:49:THR:CB	41:B2:50:PRO:HD2	2.45	0.46
25:BA:1570:A:H2'	25:BA:1571:A:C8	2.50	0.46
25:BA:1819:A:H5''	27:BD:158:ALA:HB3	1.98	0.46
25:BA:2270:G:C2'	25:BA:2271:G:H5'	2.45	0.46
25:BA:2292:C:P	38:BQ:17:ARG:HH22	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2291:U:O2'	25:BA:2374:C:H1'	2.16	0.46
25:BA:2400:G:H2'	25:BA:2401:U:C6	2.51	0.46
25:BA:2645:G:C3'	25:BA:2646:C:H5'	2.46	0.46
25:BA:78:A:H2'	25:BA:79:G:C8	2.51	0.46
27:BD:24:ILE:HG22	27:BD:27:THR:HB	1.98	0.46
28:BE:54:GLN:O	28:BE:55:ASN:CB	2.62	0.46
31:BH:170:ARG:HB3	31:BH:171:LEU:H	1.52	0.46
35:BO:21:ARG:HA	35:BO:21:ARG:NE	2.23	0.46
35:BO:94:GLU:OE1	35:BO:124:LYS:HD3	2.16	0.46
25:BA:2875:C:C4'	39:BR:5:ALA:HB2	2.41	0.46
44:BU:64:GLU:H	44:BU:64:GLU:HG2	1.37	0.46
1:CA:1052:U:C4	1:CA:1200:C:N3	2.84	0.46
1:CA:1403:C:H1'	1:CA:1500:A:N1	2.30	0.46
1:CA:160:A:O2'	1:CA:344:A:N6	2.49	0.46
1:CA:580:U:H2'	1:CA:581:G:O4'	2.15	0.46
1:CA:668:G:O2'	1:CA:669:U:H5'	2.16	0.46
22:CB:9:U:C5	22:CB:21:A:N7	2.84	0.46
23:CC:16:C:O2'	23:CC:62:C:OP1	2.31	0.46
2:CE:215:LEU:O	2:CE:219:VAL:HG12	2.15	0.46
3:CF:159:GLY:HA2	3:CF:193:TYR:CE1	2.51	0.46
7:CJ:78:ARG:O	7:CJ:78:ARG:HG3	2.15	0.46
10:CM:30:SER:OG	10:CM:81:THR:HG22	2.16	0.46
19:CV:74:PHE:CD2	19:CV:74:PHE:N	2.84	0.46
41:D2:5:VAL:HB	41:D2:37:VAL:CG1	2.45	0.46
46:D3:51:VAL:N	46:D3:62:LEU:HD12	2.30	0.46
25:DA:1057:A:N1	25:DA:1081:U:C4	2.84	0.46
25:DA:1059:G:OP2	25:DA:1060:U:H3'	2.16	0.46
25:DA:1171:G:O2'	25:DA:1173:G:N3	2.40	0.46
25:DA:1538:G:H2'	25:DA:1539:G:C8	2.48	0.46
25:DA:2133:G:C6	25:DA:2157:G:O6	2.69	0.46
25:DA:531:C:C5	25:DA:2035:G:C2	3.04	0.46
25:DA:580:C:H2'	25:DA:581:C:C6	2.51	0.46
25:DA:888:C:C1'	25:DA:889:C:P	3.04	0.46
25:DA:933:A:N7	25:DA:934:G:H1'	2.30	0.46
29:DF:180:GLY:O	29:DF:181:LEU:C	2.54	0.46
30:DG:138:GLN:HE22	30:DG:153:ARG:N	2.14	0.46
34:DN:2:ILE:HG21	34:DN:8:LEU:HD21	1.97	0.46
39:DR:18:ASP:N	39:DR:18:ASP:OD1	2.36	0.46
39:DR:74:ARG:NH1	39:DR:74:ARG:CG	2.59	0.46
45:DV:121:HIS:HB3	45:DV:123:ASP:O	2.16	0.46
45:DV:160:GLY:O	45:DV:161:VAL:C	2.54	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DX:31:LEU:C	49:DX:33:GLN:H	2.19	0.46
1:AA:913:A:H1'	1:AA:914:A:OP2	2.14	0.46
22:AB:3:U:H4'	22:AB:4:G:OP1	2.15	0.46
22:AB:51:C:C6	22:AB:51:C:OP2	2.69	0.46
23:AC:20:G:C2	23:AC:58:A:N3	2.84	0.46
4:AG:155:LEU:O	4:AG:156:GLU:C	2.55	0.46
19:AV:49:ILE:O	19:AV:60:VAL:HG12	2.15	0.46
20:AW:54:LYS:O	20:AW:54:LYS:HD2	2.16	0.46
51:B5:42:PRO:CB	51:B5:43:HIS:HD2	2.29	0.46
52:B6:27:LYS:CB	52:B6:27:LYS:HZ2	2.29	0.46
25:BA:1357:U:H2'	25:BA:1358:G:O4'	2.16	0.46
25:BA:1417:C:H42	25:BA:1581:G:H1	1.63	0.46
25:BA:1590:U:H2'	25:BA:1591:G:C8	2.51	0.46
25:BA:1931:U:C5	25:BA:1969:A:N7	2.80	0.46
25:BA:910:A:C2'	25:BA:2264:C:O2'	2.61	0.46
25:BA:2472:G:O6	25:BA:2476:A:H4'	2.15	0.46
25:BA:664:C:H4'	25:BA:941:A:OP1	2.16	0.46
28:BE:129:HIS:O	28:BE:130:GLY:C	2.54	0.46
31:BH:74:ASN:HA	31:BH:77:LYS:HG2	1.97	0.46
32:BK:8:PRO:HG3	32:BK:14:ASP:CB	2.46	0.46
39:BR:39:ARG:CG	39:BR:40:THR:H	2.29	0.46
39:BR:5:ALA:O	39:BR:8:LYS:HG2	2.15	0.46
43:BT:14:SER:H	43:BT:17:ALA:HB3	1.81	0.46
43:BT:53:LYS:HZ3	43:BT:55:ASN:HD21	1.64	0.46
1:CA:1004:A:C1'	1:CA:1036:G:C6	2.97	0.46
1:CA:1054:C:OP1	1:CA:1197:G:OP1	2.33	0.46
1:CA:1056:U:O2	1:CA:1057:G:C8	2.68	0.46
1:CA:1213:A:N7	1:CA:1215:G:C5	2.84	0.46
1:CA:618:C:H5'	1:CA:619:U:H5'	1.98	0.46
1:CA:797:C:O2'	1:CA:798:G:H5'	2.16	0.46
22:CB:18:G:H4'	22:CB:19:C:OP2	2.10	0.46
22:CB:13:G:H1'	22:CB:24:G:N1	2.30	0.46
7:CJ:143:ARG:HD2	22:CD:42:U:O3'	2.16	0.46
2:CE:97:TRP:HZ2	2:CE:102:LEU:CD1	2.29	0.46
3:CF:195:VAL:HG12	3:CF:196:LEU:N	2.31	0.46
7:CJ:43:PHE:O	7:CJ:47:CYS:N	2.48	0.46
1:CA:1151:A:H1'	10:CM:39:PRO:CB	2.45	0.46
10:CM:64:GLU:OE2	10:CM:66:ARG:HD2	2.16	0.46
15:CR:6:GLU:O	15:CR:9:GLN:HB2	2.16	0.46
18:CU:74:ARG:HB3	18:CU:81:PHE:CZ	2.51	0.46
19:CV:28:LYS:HD3	19:CV:29:ARG:H	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CV:66:MET:HB3	19:CV:69:HIS:CD2	2.51	0.46
20:CW:67:ALA:O	20:CW:73:HIS:CE1	2.70	0.46
40:D1:92:ARG:HG2	41:D2:11:GLN:CD	2.36	0.46
25:DA:1087:G:C8	25:DA:1089:G:H1'	2.51	0.46
25:DA:1204:A:HO2'	25:DA:1205:U:P	2.38	0.46
25:DA:1475:G:H5'	25:DA:1476:C:OP2	2.16	0.46
25:DA:1761:C:O5'	25:DA:1761:C:H6	1.99	0.46
25:DA:914:C:C6	25:DA:915:C:H5''	2.44	0.46
25:DA:928:G:H2'	25:DA:929:G:O4'	2.16	0.46
25:DA:951:C:O2'	25:DA:952:G:H5'	2.15	0.46
27:DD:260:ARG:NH1	27:DD:267:SER:OG	2.49	0.46
28:DE:67:PHE:CD1	28:DE:67:PHE:C	2.88	0.46
28:DE:68:ALA:C	28:DE:70:ALA:N	2.69	0.46
29:DF:155:LEU:HD23	29:DF:186:ILE:HD13	1.97	0.46
33:DM:126:PRO:O	33:DM:127:ASP:CB	2.63	0.46
44:DU:52:SER:N	44:DU:53:PRO:HD3	2.31	0.46
48:DW:50:ILE:O	48:DW:54:LYS:HB2	2.16	0.46
1:AA:1213:A:N7	1:AA:1215:G:C5	2.83	0.45
1:AA:767:A:H2'	1:AA:768:A:O4'	2.16	0.45
1:AA:944:G:C2	1:AA:1340:A:C6	3.03	0.45
23:AC:2:G:C5	23:AC:3:C:C5	3.04	0.45
2:AE:142:LEU:HD23	2:AE:142:LEU:O	2.16	0.45
1:AA:923:A:OP1	5:AH:21:ALA:HB2	2.15	0.45
11:AN:115:PRO:HB2	11:AN:118:GLY:H	1.82	0.45
13:AP:97:PRO:HB3	13:AP:101:GLN:NE2	2.31	0.45
1:AA:236:G:H5''	17:AT:42:TYR:OH	2.16	0.45
18:AU:25:THR:HG22	18:AU:25:THR:O	2.16	0.45
20:AW:50:GLU:HA	20:AW:100:ILE:HG21	1.98	0.45
40:B1:79:PHE:O	40:B1:83:LEU:HD13	2.16	0.45
40:B1:92:ARG:HB2	41:B2:11:GLN:CD	2.36	0.45
50:B4:48:ARG:NH1	50:B4:51:ASP:HB2	2.31	0.45
51:B5:40:LYS:HZ3	51:B5:46:CYS:C	2.19	0.45
52:B6:40:CYS:HA	52:B6:46:HIS:HA	1.98	0.45
25:BA:1368:G:C2	25:BA:1369:G:C8	3.04	0.45
25:BA:1430:C:H2'	25:BA:1431:U:H6	1.78	0.45
25:BA:1901:A:OP2	27:BD:255:LYS:HE2	2.16	0.45
25:BA:2113:U:O4'	25:BA:2113:U:O2	2.35	0.45
25:BA:2512:C:H2'	25:BA:2513:G:O4'	2.16	0.45
25:BA:2563:U:H4'	34:BN:28:SER:HA	1.97	0.45
25:BA:483:A:H4'	44:BU:49:VAL:HA	1.98	0.45
25:BA:654(M):C:H2'	25:BA:654(N):G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:888:C:O2'	25:BA:889:C:O4'	2.28	0.45
25:BA:916:G:C2'	25:BA:917:A:H5''	2.47	0.45
25:BA:974(A):C:OP2	25:BA:975:G:H5''	2.16	0.45
28:BE:117:MET:O	28:BE:118:LYS:HB2	2.16	0.45
28:BE:60:ASN:OD1	28:BE:62:PRO:HD2	2.16	0.45
25:BA:323:G:C8	29:BF:171:PRO:HG3	2.51	0.45
33:BM:7:LYS:HE3	33:BM:7:LYS:H	1.80	0.45
35:BO:140:ALA:O	35:BO:141:ALA:CB	2.65	0.45
44:BU:41:GLY:O	44:BU:42:VAL:C	2.54	0.45
5:CH:15:ARG:NH1	24:C1:25:A:H3'	2.31	0.45
1:CA:998:G:N2	1:CA:1044:A:H1'	2.32	0.45
1:CA:106:C:C2'	1:CA:107:G:H5'	2.46	0.45
1:CA:1129:C:N4	1:CA:1139:G:N2	2.64	0.45
1:CA:1316:G:N2	1:CA:1319:A:O5'	2.45	0.45
1:CA:186(C):G:C6	1:CA:191(E):G:N1	2.84	0.45
1:CA:302:G:O2'	1:CA:556:C:H5''	2.16	0.45
1:CA:363:A:O2'	1:CA:364:A:H5'	2.15	0.45
1:CA:413:G:C2'	1:CA:414:A:OP2	2.64	0.45
1:CA:914:A:C2'	1:CA:915:A:H5'	2.46	0.45
1:CA:93:U:H2'	1:CA:95:G:H5''	1.98	0.45
3:CF:36:ASP:OD2	3:CF:57:ILE:HG21	2.16	0.45
4:CG:189:PRO:HB2	4:CG:194:LEU:CD2	2.46	0.45
41:D2:84:LYS:HD2	41:D2:85:LYS:HB3	1.98	0.45
51:D5:3:LYS:CA	51:D5:3:LYS:HE3	2.40	0.45
53:D7:25:PRO:O	53:D7:29:LYS:HG2	2.16	0.45
25:DA:1342:A:C5	25:DA:1397:U:C6	3.04	0.45
25:DA:2898:U:H2'	25:DA:2899:G:C8	2.51	0.45
25:DA:532:A:O2'	25:DA:533:G:OP1	2.25	0.45
25:DA:627:A:C6	25:DA:637:A:C8	3.04	0.45
25:DA:639:U:H2'	25:DA:640:C:H6	1.76	0.45
28:DE:41:LYS:HG3	28:DE:42:ASP:OD1	2.16	0.45
32:DK:74:ASN:CG	32:DK:75:LEU:H	2.18	0.45
42:DS:64:MET:O	42:DS:65:LEU:HB2	2.16	0.45
43:DT:32:PRO:HA	43:DT:77:LYS:HB2	1.98	0.45
43:DT:80:ILE:HG12	43:DT:80:ILE:O	2.14	0.45
45:DV:48:PHE:CE2	45:DV:52:SER:HA	2.50	0.45
25:DA:95:G:O2'	48:DW:46:GLN:O	2.33	0.45
47:DZ:92:LYS:NZ	47:DZ:92:LYS:HB3	2.31	0.45
1:AA:1026:G:C6	1:AA:1036:G:N2	2.85	0.45
1:AA:108:G:OP2	1:AA:326:G:N1	2.36	0.45
1:AA:411:A:C6	1:AA:429:U:C4	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:995:C:N3	1:AA:1046:A:O2'	2.45	0.45
22:AB:68:A:H2'	22:AB:69:U:H5'	1.98	0.45
23:AC:21:U:H4'	23:AC:22:A:OP2	2.17	0.45
22:AD:57:C:O2'	22:AD:68:A:H4'	2.16	0.45
4:AG:13:ARG:HB3	4:AG:33:MET:HG2	1.98	0.45
5:AH:126:ARG:NH1	5:AH:126:ARG:CG	2.74	0.45
7:AJ:65:ALA:HB3	7:AJ:124:LEU:HD23	1.98	0.45
12:AO:44:LYS:HE2	12:AO:44:LYS:HA	1.98	0.45
14:AQ:23:ARG:NH1	14:AQ:30:ALA:HB2	2.31	0.45
15:AR:4:THR:OG1	15:AR:7:GLU:HG3	2.17	0.45
25:BA:1162:G:O2'	41:B2:90:PRO:HG2	2.17	0.45
25:BA:1084:A:N7	25:BA:1085:A:N7	2.64	0.45
25:BA:1219:G:OP2	40:B1:19:LYS:NZ	2.49	0.45
25:BA:1458:C:H5"	25:BA:1459:G:O4'	2.17	0.45
25:BA:1494:A:H2'	25:BA:1495:A:C8	2.51	0.45
25:BA:198:C:H5'	25:BA:2244:U:OP1	2.16	0.45
25:BA:2567:G:H2'	25:BA:2568:C:H6	1.82	0.45
25:BA:2656:U:C5	25:BA:2664:G:N2	2.84	0.45
25:BA:270(E):G:H1	25:BA:270(U):C:H42	1.65	0.45
27:BD:58:HIS:CD2	27:BD:59:LYS:O	2.67	0.45
28:BE:119:ARG:HG2	28:BE:120:TRP:CD1	2.51	0.45
28:BE:120:TRP:CD1	28:BE:155:LYS:HB3	2.51	0.45
33:BM:22:THR:O	33:BM:23:LEU:HB2	2.16	0.45
45:BV:53:ILE:HA	45:BV:71:VAL:HG13	1.97	0.45
1:CA:1028(B):C:N4	1:CA:1032(B):G:C6	2.85	0.45
1:CA:1200:C:C5'	1:CA:1201:A:H5'	2.45	0.45
1:CA:1288:A:H2'	1:CA:1289:A:C8	2.51	0.45
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.16	0.45
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.99	0.45
22:CB:83:C:C2'	22:CB:84:C:H5'	2.46	0.45
23:CC:30:G:H2'	23:CC:31:G:O4'	2.16	0.45
2:CE:97:TRP:CE2	2:CE:101:MET:HG3	2.50	0.45
2:CE:73:THR:HG21	2:CE:97:TRP:N	2.32	0.45
4:CG:81:GLU:O	4:CG:85:LYS:HB2	2.15	0.45
8:CK:38:ILE:HD11	8:CK:119:LEU:HA	1.98	0.45
11:CN:13:GLN:HA	11:CN:75:TYR:O	2.16	0.45
14:CQ:27:CYS:O	14:CQ:29:ARG:N	2.49	0.45
46:D3:70:GLN:O	46:D3:78:TYR:N	2.36	0.45
50:D4:13:ARG:O	50:D4:30:GLU:HB3	2.16	0.45
54:D8:30:ARG:O	54:D8:30:ARG:HG3	2.17	0.45
25:DA:1131:G:C8	25:DA:2025:C:H4'	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1510:A:H2'	25:DA:1511:A:O4'	2.17	0.45
25:DA:221:A:C4	25:DA:266:G:N7	2.85	0.45
25:DA:2306:C:H2'	25:DA:2307:G:H21	1.81	0.45
25:DA:2322:A:H2'	25:DA:2323:G:O4'	2.17	0.45
25:DA:2373:G:H2'	25:DA:2374:C:C6	2.51	0.45
25:DA:2378:A:H4'	38:DQ:23:ARG:NH1	2.32	0.45
25:DA:2427:C:C5'	25:DA:2428:G:OP1	2.60	0.45
25:DA:2788:C:H5''	25:DA:2789:C:OP2	2.16	0.45
25:DA:654(C):G:H2'	25:DA:654(D):G:O4'	2.16	0.45
25:DA:8:A:H2'	25:DA:9:U:C6	2.50	0.45
25:DA:959:A:C6	25:DA:960:A:C2	3.05	0.45
27:DD:35:LYS:CB	27:DD:63:ARG:HA	2.45	0.45
27:DD:68:LYS:HB2	27:DD:70:TRP:CH2	2.51	0.45
28:DE:48:GLN:CD	28:DE:78:LEU:HD12	2.37	0.45
31:DH:107:VAL:HG11	31:DH:152:ARG:HG2	1.98	0.45
31:DH:4:ILE:HD12	31:DH:6:ARG:HE	1.79	0.45
33:DM:22:THR:HB	33:DM:25:ARG:HG3	1.98	0.45
34:DN:1:MET:HB3	34:DN:32:TYR:HB3	1.98	0.45
43:DT:28:PHE:H	43:DT:28:PHE:HD1	1.63	0.45
43:DT:8:ILE:O	48:DW:36:ARG:NH2	2.45	0.45
1:AA:1160:G:O5'	1:AA:1160:G:H8	1.98	0.45
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.17	0.45
1:AA:200:G:N2	1:AA:218:C:N3	2.63	0.45
1:AA:991:U:O2	1:AA:993:G:C8	2.68	0.45
22:AB:1:G:N3	22:AB:1:G:H2'	2.31	0.45
2:AE:90:MET:HA	2:AE:90:MET:HE2	1.98	0.45
4:AG:28:SER:CB	4:AG:29:PRO:CD	2.94	0.45
6:AI:69:GLU:C	6:AI:71:ARG:N	2.66	0.45
8:AK:65:TYR:CD1	8:AK:65:TYR:N	2.83	0.45
9:AL:43:ALA:C	9:AL:45:ALA:N	2.70	0.45
12:AO:44:LYS:HB3	12:AO:45:PRO:HD3	1.82	0.45
41:B2:89:GLN:CA	41:B2:89:GLN:HE21	2.25	0.45
51:B5:16:ARG:O	51:B5:20:ARG:HG3	2.16	0.45
51:B5:40:LYS:HG2	51:B5:46:CYS:HB3	1.97	0.45
54:B8:31:HIS:O	54:B8:31:HIS:CG	2.69	0.45
25:BA:1071:G:N2	25:BA:1090:U:C5	2.84	0.45
25:BA:1084:A:N6	25:BA:1085:A:H62	2.14	0.45
25:BA:1209:G:H21	25:BA:1210:A:H62	1.63	0.45
25:BA:1239:G:H2'	25:BA:1240:U:O4'	2.16	0.45
25:BA:1535:U:H5''	25:BA:1537:C:N4	2.31	0.45
25:BA:631:A:H2'	25:BA:632:A:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:690:G:H2'	25:BA:691:C:C6	2.52	0.45
25:BA:898:C:C5	25:BA:899:A:C5	3.05	0.45
27:BD:30:GLU:HG3	27:BD:63:ARG:HH21	1.77	0.45
32:BK:77:LEU:O	32:BK:77:LEU:HD12	2.16	0.45
35:BO:147:LEU:O	35:BO:148:LEU:HB2	2.14	0.45
39:BR:57:PHE:O	39:BR:59:THR:N	2.49	0.45
43:BT:49:VAL:HG11	43:BT:83:VAL:CG1	2.45	0.45
47:BZ:92:LYS:HA	47:BZ:95:LEU:HB2	1.97	0.45
1:CA:128:G:O2'	17:CT:3:LYS:HE2	2.16	0.45
1:CA:1298:C:O2'	1:CA:1299:A:C2	2.69	0.45
1:CA:1342:C:O2'	1:CA:1343:G:H5'	2.17	0.45
1:CA:147:G:O2'	1:CA:148:G:H5'	2.17	0.45
1:CA:662:G:H2'	1:CA:663:A:C8	2.51	0.45
1:CA:879:C:O2'	1:CA:880:C:H5'	2.16	0.45
2:CE:42:ILE:HD13	2:CE:43:ASP:N	2.32	0.45
5:CH:75:THR:OG1	5:CH:117:ASP:O	2.26	0.45
2:CE:178:ARG:NH2	8:CK:74:PRO:HG3	2.32	0.45
1:CA:909:A:P	12:CO:18:LYS:HZ3	2.40	0.45
12:CO:59:SER:C	12:CO:61:TYR:H	2.18	0.45
12:CO:92:GLY:O	12:CO:93:VAL:C	2.54	0.45
18:CU:87:ARG:HB3	18:CU:88:LYS:H	1.49	0.45
40:D1:99:ALA:HB2	40:D1:106:PHE:CD1	2.51	0.45
41:D2:18:LEU:C	41:D2:18:LEU:HD23	2.36	0.45
50:D4:15:ILE:HG22	50:D4:15:ILE:O	2.16	0.45
51:D5:34:PRO:HG2	51:D5:35:GLU:OE1	2.15	0.45
25:DA:155:C:H2'	25:DA:155:C:O2	2.15	0.45
25:DA:1991:U:C2'	25:DA:1992:G:H5''	2.45	0.45
25:DA:2141:G:O6	25:DA:2150:U:C2	2.64	0.45
25:DA:2319:G:H4'	25:DA:2320:A:O4'	2.15	0.45
25:DA:2410:G:C2	25:DA:2411:A:H1'	2.51	0.45
25:DA:2582:G:H2'	25:DA:2583:G:H5'	1.99	0.45
25:DA:278:A:H1'	25:DA:279:C:O5'	2.16	0.45
25:DA:2872:G:N7	25:DA:2873:A:H2	2.13	0.45
25:DA:478:A:N1	25:DA:500:G:H4'	2.32	0.45
25:DA:948:G:C2	25:DA:970:C:O2	2.69	0.45
30:DG:15:VAL:HG13	30:DG:175:LEU:CB	2.46	0.45
31:DH:19:VAL:HG12	31:DH:20:ALA:N	2.24	0.45
33:DM:1:MET:HB2	33:DM:1:MET:HE2	1.84	0.45
35:DO:52:GLU:OE1	35:DO:55:ARG:NE	2.39	0.45
39:DR:105:LEU:O	39:DR:106:SER:C	2.55	0.45
1:AA:1253:G:H1	1:AA:1284:C:H42	1.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:19:C:H2'	1:AA:20:U:H6	1.82	0.45
1:AA:562:C:O2	12:AO:12:ARG:O	2.35	0.45
22:AB:49:A:H2	22:AB:51:C:OP2	2.00	0.45
22:AD:51:C:C5	22:AD:52:G:H1'	2.50	0.45
4:AG:11:LEU:C	4:AG:13:ARG:N	2.69	0.45
1:AA:511:C:O3'	4:AG:43:HIS:CE1	2.69	0.45
5:AH:51:VAL:O	5:AH:55:VAL:HG23	2.17	0.45
8:AK:26:VAL:O	8:AK:26:VAL:HG22	2.16	0.45
9:AL:53:VAL:O	9:AL:54:ASP:CB	2.64	0.45
9:AL:19:LEU:HD22	9:AL:59:PHE:HB3	1.97	0.45
12:AO:90:LEU:HB2	12:AO:93:VAL:HG13	1.98	0.45
13:AP:94:ARG:O	13:AP:96:LEU:HG	2.16	0.45
3:AF:30:ARG:HB2	14:AQ:36:PHE:O	2.17	0.45
37:B0:1:MET:O	37:B0:2:ARG:CB	2.63	0.45
37:B0:26:LYS:HE2	37:B0:70:LEU:O	2.16	0.45
50:B4:34:GLU:O	50:B4:35:VAL:HG23	2.16	0.45
51:B5:56:LYS:H	51:B5:56:LYS:CD	2.30	0.45
25:BA:150:C:H2'	25:BA:151:C:C6	2.52	0.45
25:BA:165:U:C4	25:BA:171:G:C4	3.05	0.45
25:BA:2123:G:H2'	25:BA:2124:G:O4'	2.17	0.45
25:BA:2360:A:H2'	25:BA:2361:A:O4'	2.17	0.45
25:BA:53:A:H2'	25:BA:54:G:O4'	2.16	0.45
29:BF:45:ARG:HD3	29:BF:97:TYR:CG	2.51	0.45
25:BA:1093:G:H4'	31:BH:170:ARG:HH21	1.81	0.45
32:BK:64:GLU:C	32:BK:66:GLU:H	2.20	0.45
33:BM:15:LEU:HB3	33:BM:136:GLU:HA	1.98	0.45
33:BM:6:PRO:HG3	33:BM:41:ASP:HB2	1.97	0.45
36:BP:21:THR:HG23	36:BP:21:THR:O	2.12	0.45
36:BP:77:LYS:HZ1	36:BP:83:MET:HA	1.81	0.45
38:BQ:34:HIS:HB2	38:BQ:36:TYR:CE1	2.51	0.45
25:BA:2199:A:H5'	47:BZ:50:ARG:NH2	2.31	0.45
1:CA:1127:G:N2	1:CA:1144:G:H22	2.14	0.45
1:CA:1159:U:C4'	1:CA:1181:G:H22	2.29	0.45
1:CA:177:C:H2'	1:CA:178:C:C6	2.52	0.45
1:CA:537:G:H2'	1:CA:538:G:C8	2.52	0.45
1:CA:952:U:C5	13:CP:104:ARG:NH2	2.77	0.45
22:CB:2:G:C6	22:CB:80:C:N4	2.82	0.45
22:CB:42:U:C5'	22:CB:43:G:OP2	2.61	0.45
22:CB:7:G:H3'	22:CB:8:U:C5'	2.47	0.45
22:CD:10:C:H2'	22:CD:11:C:H6	1.80	0.45
22:CD:16:C:N4	22:CD:68:A:C8	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CE:92:TYR:CD2	2:CE:151:GLY:HA3	2.51	0.45
11:CN:51:LYS:HE2	11:CN:51:LYS:HB3	1.81	0.45
17:CT:67:LYS:C	17:CT:69:LYS:H	2.19	0.45
18:CU:53:ARG:HA	18:CU:56:THR:HG1	1.81	0.45
19:CV:78:ARG:HH11	19:CV:79:THR:H	1.63	0.45
40:D1:76:TYR:CZ	40:D1:80:ILE:HG13	2.51	0.45
41:D2:80:GLN:CA	41:D2:80:GLN:HE21	2.30	0.45
50:D4:15:ILE:HD12	50:D4:15:ILE:N	2.32	0.45
50:D4:42:PHE:C	50:D4:44:THR:H	2.18	0.45
25:DA:812:C:H5''	25:DA:1250:G:O2'	2.17	0.45
25:DA:1291:C:H2'	25:DA:1292:U:C6	2.51	0.45
25:DA:2156:G:H2'	25:DA:2157:G:O4'	2.16	0.45
25:DA:2310:A:H5'	25:DA:2311:A:OP2	2.17	0.45
25:DA:2324:C:H5''	25:DA:2325:G:C5'	2.47	0.45
25:DA:2584:U:H2'	25:DA:2585:U:O2	2.15	0.45
25:DA:1999:C:H5''	25:DA:2723:C:O2'	2.16	0.45
25:DA:343:C:O2'	25:DA:344:G:H5'	2.16	0.45
25:DA:529:A:C2'	25:DA:529:A:N3	2.80	0.45
25:DA:74:A:H5'	25:DA:75:G:O4'	2.16	0.45
25:DA:90:U:H2'	25:DA:90:U:O2	2.16	0.45
25:DA:918:A:N6	25:DA:919:G:N3	2.64	0.45
26:DB:7:G:H4'	38:DQ:29:PHE:CD1	2.52	0.45
25:DA:764:A:H5''	27:DD:210:GLY:HA2	1.99	0.45
27:DD:28:GLU:N	27:DD:29:PRO:HD2	2.32	0.45
13:CP:7:VAL:HG21	30:DG:115:ARG:NH1	2.31	0.45
31:DH:99:VAL:HG13	31:DH:100:GLY:H	1.81	0.45
31:DH:118:PRO:HD2	31:DH:121:ILE:HG13	1.98	0.45
31:DH:109:PHE:CE1	31:DH:152:ARG:HD3	2.46	0.45
33:DM:39:ARG:C	33:DM:41:ASP:N	2.65	0.45
35:DO:15:ARG:NH1	35:DO:15:ARG:CB	2.75	0.45
43:DT:43:VAL:HG22	43:DT:51:VAL:HG21	1.99	0.45
44:DU:30:VAL:O	44:DU:31:LEU:HG	2.17	0.45
47:DZ:91:LYS:O	47:DZ:92:LYS:C	2.55	0.45
1:AA:1157:A:O2'	1:AA:1158:C:P	2.74	0.45
1:AA:1386:G:O2'	1:AA:1387:G:H5'	2.17	0.45
1:AA:536:C:H2'	1:AA:537:G:C8	2.51	0.45
1:AA:838:G:N2	1:AA:849:C:C2	2.85	0.45
1:AA:922:G:C6	1:AA:923:A:C6	3.04	0.45
4:AG:170:VAL:CG1	4:AG:171:GLY:N	2.80	0.45
8:AK:64:LYS:C	8:AK:65:TYR:CD1	2.90	0.45
12:AO:59:SER:C	12:AO:61:TYR:N	2.68	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1026:U:H1'	25:BA:1027:A:P	2.55	0.45
25:BA:1235:G:C6	25:BA:1236:G:N1	2.84	0.45
25:BA:1864:U:H5''	25:BA:2410:G:O2'	2.17	0.45
25:BA:2312:U:OP1	30:BG:74:LYS:HB2	2.17	0.45
25:BA:2299:G:N1	25:BA:2318:G:C8	2.84	0.45
25:BA:2818:G:OP2	37:B0:42:LYS:HE2	2.16	0.45
25:BA:671:C:OP1	35:BO:42:SER:O	2.35	0.45
28:BE:134:ILE:HD12	28:BE:134:ILE:C	2.37	0.45
28:BE:3:GLY:HA3	28:BE:81:ILE:HD12	1.98	0.45
29:BF:81:PRO:HB3	29:BF:89:VAL:CG2	2.45	0.45
30:BG:135:LEU:HD12	30:BG:135:LEU:N	2.32	0.45
30:BG:37:VAL:HG22	30:BG:159:VAL:HG12	1.97	0.45
31:BH:153:LYS:HB3	31:BH:154:PRO:CD	2.45	0.45
33:BM:43:THR:HB	33:BM:46:VAL:CG1	2.46	0.45
36:BP:52:VAL:O	36:BP:56:ARG:HB2	2.16	0.45
25:BA:748:G:C8	42:BS:89:ALA:HB1	2.51	0.45
1:CA:1111:A:H2'	1:CA:1112:C:C6	2.52	0.45
1:CA:1129:C:H5	1:CA:1141:C:N4	2.15	0.45
3:CF:195:VAL:HG12	3:CF:196:LEU:H	1.81	0.45
4:CG:16:GLY:O	4:CG:17:VAL:C	2.55	0.45
7:CJ:153:HIS:C	7:CJ:153:HIS:ND1	2.69	0.45
10:CM:99:LYS:HD3	10:CM:100:THR:N	2.32	0.45
19:CV:7:LYS:HZ1	19:CV:8:GLY:HA3	1.81	0.45
52:D6:51:GLU:HG2	52:D6:52:VAL:N	2.31	0.45
25:DA:1116:C:H2'	25:DA:1117:G:H8	1.81	0.45
25:DA:1229:G:N2	25:DA:1229(A):G:H1'	2.32	0.45
25:DA:1511:A:H2'	25:DA:1512:G:O4'	2.16	0.45
25:DA:2097:C:H2'	25:DA:2098:U:O4'	2.16	0.45
25:DA:2168:G:O6	25:DA:2171:A:C6	2.69	0.45
25:DA:218:A:C2	25:DA:235:U:H4'	2.51	0.45
25:DA:2405:G:O2'	25:DA:2406:U:OP1	2.24	0.45
25:DA:2662:A:H8	25:DA:2662:A:O5'	2.00	0.45
25:DA:2881:C:C2	25:DA:2882:A:C8	3.04	0.45
25:DA:2892:A:N7	25:DA:2893:G:C5	2.85	0.45
25:DA:26:G:H1'	25:DA:515:A:H61	1.82	0.45
26:DB:43:C:H1'	30:DG:93:THR:O	2.16	0.45
27:DD:245:PRO:HA	27:DD:246:PRO:HD3	1.86	0.45
35:DO:114:ILE:HG21	35:DO:130:PHE:CD1	2.51	0.45
35:DO:71:VAL:HG22	35:DO:72:PRO:CD	2.46	0.45
36:DP:54:MET:HB2	36:DP:64:ILE:HD13	1.98	0.45
38:DQ:83:LYS:HE2	38:DQ:83:LYS:HB3	1.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:92:GLY:HA2	39:DR:116:ALA:HA	1.98	0.45
39:DR:61:PHE:N	39:DR:61:PHE:CD2	2.80	0.45
42:DS:2:GLU:OE2	42:DS:72:LYS:HE3	2.16	0.45
43:DT:29:TRP:CZ2	43:DT:76:ARG:NH2	2.84	0.45
1:AA:1025:U:O2'	1:AA:1026:G:C5'	2.64	0.45
1:AA:1507:A:C2	1:AA:1508:G:C4	3.04	0.45
1:AA:411:A:N7	1:AA:413:G:N3	2.64	0.45
1:AA:438:G:H4'	4:AG:123:HIS:ND1	2.32	0.45
1:AA:452:A:O2'	1:AA:453:A:O4'	2.33	0.45
1:AA:458:C:H2'	1:AA:464:G:H8	1.81	0.45
1:AA:64:G:H4'	1:AA:65:U:H5'	1.98	0.45
1:AA:727:G:N1	1:AA:731:G:C6	2.84	0.45
1:AA:89:U:O2'	1:AA:90:C:P	2.75	0.45
22:AD:18:G:N2	22:AD:66:G:H1'	2.31	0.45
22:AD:5:G:H1	22:AD:77:C:N4	2.13	0.45
2:AE:160:ASP:O	2:AE:183:PRO:HG2	2.16	0.45
2:AE:55:PHE:CD1	2:AE:58:ILE:HD12	2.52	0.45
3:AF:15:THR:CG2	3:AF:181:ASN:HA	2.46	0.45
5:AH:147:ASP:HA	5:AH:150:ARG:NH1	2.31	0.45
5:AH:78:HIS:HB2	8:AK:104:ARG:HB3	1.98	0.45
12:AO:114:ARG:HB2	12:AO:114:ARG:CZ	2.46	0.45
1:AA:1316:G:H5''	14:AQ:17:LYS:HE3	1.97	0.45
50:B4:22:ILE:O	50:B4:23:GLU:C	2.55	0.45
52:B6:33:LYS:CG	52:B6:34:LEU:HD22	2.46	0.45
25:BA:1055:G:C2	25:BA:1104:C:N3	2.81	0.45
25:BA:1191:G:OP1	35:BO:32:THR:OG1	2.29	0.45
25:BA:550:G:O2'	25:BA:1220:A:N3	2.42	0.45
25:BA:1420:U:O2'	25:BA:1421:G:P	2.74	0.45
25:BA:1442:G:C2	25:BA:1550:C:O2	2.69	0.45
25:BA:2035:G:C4'	25:BA:2036:C:OP2	2.63	0.45
25:BA:2246:G:H2'	25:BA:2247:A:C8	2.51	0.45
25:BA:292:C:O2'	25:BA:293:U:H5'	2.17	0.45
25:BA:321:G:OP2	29:BF:135:LYS:HA	2.17	0.45
25:BA:547:A:H2'	25:BA:548:A:H8	1.75	0.45
27:BD:248:SER:HB2	27:BD:249:PRO:HD2	1.98	0.45
27:BD:35:LYS:HB3	27:BD:36:PRO:HA	1.99	0.45
28:BE:167:VAL:HG12	28:BE:189:PRO:HD3	1.99	0.45
28:BE:50:GLY:HA2	28:BE:77:ILE:HG22	1.97	0.45
25:BA:2638:G:OP2	28:BE:82:ARG:NH2	2.50	0.45
29:BF:133:ASN:HB3	29:BF:138:GLU:OE1	2.17	0.45
30:BG:27:ASN:HB3	30:BG:30:GLU:HG3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:2:ILE:N	34:BN:2:ILE:HD13	2.31	0.45
47:BZ:87:PRO:O	47:BZ:91:LYS:N	2.36	0.45
1:CA:1163:C:C2	1:CA:1174:G:N2	2.85	0.45
1:CA:1321:C:N4	1:CA:1322:C:N4	2.51	0.45
1:CA:1357:A:N7	1:CA:1358:U:C5	2.85	0.45
1:CA:1442:G:C2'	1:CA:1443:G:O5'	2.64	0.45
1:CA:631:G:H5''	1:CA:632:A:C8	2.50	0.45
1:CA:890:G:O2'	1:CA:906:G:O6	2.20	0.45
1:CA:932:C:O2	1:CA:932:C:H2'	2.16	0.45
22:CB:33:C:O2'	22:CB:38:MIA:H163	2.17	0.45
2:CE:197:VAL:HG12	2:CE:200:ILE:HG13	1.99	0.45
2:CE:97:TRP:CE3	2:CE:98:LEU:O	2.69	0.45
5:CH:12:LEU:O	5:CH:30:ALA:HA	2.17	0.45
5:CH:34:VAL:O	5:CH:42:GLY:N	2.50	0.45
5:CH:72:GLN:O	5:CH:73:ASN:HB2	2.16	0.45
9:CL:24:GLY:HA2	9:CL:59:PHE:O	2.17	0.45
13:CP:78:ILE:HG23	13:CP:92:HIS:CD2	2.46	0.45
13:CP:89:GLY:O	13:CP:92:HIS:HB2	2.17	0.45
20:CW:75:ASN:N	20:CW:75:ASN:OD1	2.44	0.45
1:CA:1325:C:C4'	21:CX:17:THR:HG21	2.38	0.45
37:D0:78:LYS:O	37:D0:82:GLU:HB3	2.16	0.45
25:DA:127:A:H5''	25:DA:128:C:C6	2.51	0.45
25:DA:2107:C:N3	25:DA:2182:G:N2	2.64	0.45
25:DA:2119:A:C6	25:DA:2170:A:N7	2.84	0.45
25:DA:224:G:N7	25:DA:420:C:H4'	2.31	0.45
25:DA:2311:A:N7	30:DG:44:GLY:HA3	2.31	0.45
25:DA:2607:G:H2'	25:DA:2608:G:O4'	2.16	0.45
25:DA:357:A:H2'	25:DA:358:U:C6	2.51	0.45
25:DA:702:G:C2	25:DA:731:C:C2	3.05	0.45
26:DB:10:C:C2'	26:DB:11:C:H5'	2.47	0.45
26:DB:83:G:H1	26:DB:93:C:N4	2.12	0.45
29:DF:9:ILE:HG12	29:DF:15:SER:H	1.82	0.45
33:DM:94:HIS:HA	33:DM:96:GLU:OE2	2.16	0.45
36:DP:98:LYS:HB3	36:DP:99:PRO:CD	2.41	0.45
25:DA:310:A:OP1	44:DU:17:SER:O	2.34	0.45
45:DV:98:MET:O	45:DV:125:LEU:HD12	2.17	0.45
1:AA:1084:G:OP1	1:AA:1086:U:C2	2.70	0.45
1:AA:1278:U:H3'	1:AA:1278:U:H6	1.81	0.45
1:AA:158:G:O2'	1:AA:159:G:H5'	2.15	0.45
1:AA:210:U:O2'	1:AA:216:G:O5'	2.35	0.45
1:AA:342:C:O2	1:AA:348:G:C2	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:939:G:C6	1:AA:940:C:C4	3.04	0.45
4:AG:146:ILE:N	4:AG:146:ILE:HD12	2.32	0.45
9:AL:65:VAL:HG21	9:AL:73:GLN:HB3	1.98	0.45
12:AO:58:THR:O	12:AO:60:GLY:N	2.40	0.45
15:AR:82:ILE:CG2	15:AR:83:GLU:N	2.80	0.45
37:B0:1:MET:SD	37:B0:1:MET:N	2.70	0.45
37:B0:1:MET:O	37:B0:2:ARG:HD2	2.17	0.45
46:B3:46:LYS:HE3	46:B3:76:GLY:HA3	1.98	0.45
25:BA:1028:A:H2'	25:BA:1029:A:C8	2.52	0.45
25:BA:1416:G:H2'	25:BA:1417:C:C6	2.52	0.45
25:BA:1899:G:HO2'	25:BA:1900:A:P	2.29	0.45
25:BA:2119:A:H2	25:BA:2171:A:H1'	1.80	0.45
25:BA:2199:A:H3'	25:BA:2205:C:C6	2.48	0.45
25:BA:2286:A:C8	25:BA:2287:A:N6	2.85	0.45
25:BA:2355:C:H4'	46:B3:36:ILE:CD1	2.47	0.45
25:BA:2854:G:H2'	25:BA:2855:C:C6	2.52	0.45
25:BA:592:G:O2'	54:B8:4:MET:HB2	2.16	0.45
26:BB:30:C:H2'	26:BB:31:C:C5'	2.47	0.45
27:BD:71:ASP:CB	27:BD:103:ARG:HH22	2.19	0.45
27:BD:32:SER:HA	27:BD:36:PRO:HD2	1.99	0.45
29:BF:128:ALA:O	29:BF:129:PHE:HB2	2.16	0.45
31:BH:158:HIS:O	31:BH:160:LYS:N	2.50	0.45
33:BM:133:GLN:HG3	33:BM:135:PRO:HD3	1.99	0.45
33:BM:40:PRO:O	40:B1:64:ARG:HG2	2.17	0.45
38:BQ:99:LYS:O	38:BQ:103:GLU:HG2	2.17	0.45
44:BU:75:ILE:HG22	44:BU:80:GLY:N	2.31	0.45
48:BW:42:GLY:C	48:BW:44:LEU:N	2.69	0.45
25:BA:1158:C:H4'	49:BX:32:GLN:HB2	1.98	0.45
24:C1:13:A:H2'	24:C1:14:A:OP1	2.17	0.45
1:CA:1298:C:O2'	1:CA:1299:A:C4	2.69	0.45
1:CA:1325:C:O2'	1:CA:1326:C:H5'	2.17	0.45
1:CA:160:A:H1'	1:CA:344:A:N7	2.32	0.45
1:CA:853:G:C4	1:CA:854:G:C8	3.05	0.45
22:CB:73:U:H2'	22:CB:74:C:H6	1.81	0.45
2:CE:180:LEU:HB2	2:CE:182:ILE:HD13	1.98	0.45
3:CF:14:ILE:O	3:CF:15:THR:C	2.54	0.45
3:CF:14:ILE:HG23	3:CF:15:THR:N	2.32	0.45
1:CA:542:G:H5'	4:CG:41:GLY:HA3	1.97	0.45
5:CH:101:ILE:N	5:CH:101:ILE:HD13	2.32	0.45
6:CI:2:ARG:HD3	6:CI:92:LYS:NZ	2.32	0.45
9:CL:5:TYR:CD2	9:CL:18:PHE:CE2	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CL:4:TYR:HB2	9:CL:19:LEU:HB2	1.98	0.45
13:CP:39:ILE:CD1	13:CP:52:GLU:HB3	2.45	0.45
15:CR:3:ILE:HD13	15:CR:3:ILE:N	2.31	0.45
17:CT:89:LEU:O	17:CT:92:ARG:HB3	2.17	0.45
26:DB:43:C:OP1	50:D4:6:HIS:CE1	2.70	0.45
51:D5:25:LEU:HD23	51:D5:26:THR:H	1.81	0.45
25:DA:1042:G:H1	25:DA:1113:U:H3	1.64	0.45
25:DA:1188:U:O2'	25:DA:1189:A:H5'	2.16	0.45
25:DA:1608:A:H1'	25:DA:1610:A:OP2	2.16	0.45
25:DA:68:G:H2'	25:DA:69:C:H6	1.81	0.45
25:DA:867:C:C4	25:DA:868:U:H5	2.33	0.45
25:DA:1797:C:HO2'	27:DD:259:THR:HG1	1.61	0.45
28:DE:52:LEU:O	28:DE:75:VAL:N	2.49	0.45
29:DF:120:GLU:HG3	29:DF:122:LYS:HG2	1.99	0.45
29:DF:57:VAL:CG1	29:DF:58:ALA:N	2.79	0.45
30:DG:5:VAL:HG21	30:DG:101:ILE:HG22	1.98	0.45
34:DN:105:GLU:OE1	34:DN:105:GLU:N	2.46	0.45
39:DR:106:SER:O	39:DR:107:ASP:CB	2.64	0.45
44:DU:44:ILE:HG12	44:DU:45:VAL:N	2.32	0.45
45:DV:17:ALA:O	45:DV:20:ARG:HB2	2.17	0.45
49:DX:2:PRO:HB2	49:DX:3:ARG:H	1.54	0.45
1:AA:1141:C:O2'	1:AA:1142:G:H5'	2.17	0.45
1:AA:1256:A:H4'	1:AA:1258:G:C4	2.52	0.45
1:AA:1299:A:H5'	1:AA:1300:G:OP1	2.16	0.45
1:AA:1303:C:H2'	1:AA:1304:G:H5'	1.99	0.45
1:AA:223:U:H2'	1:AA:224:C:H6	1.82	0.45
1:AA:38:G:C2	1:AA:397:A:C2	3.05	0.45
1:AA:659:U:O2'	1:AA:660:G:H5'	2.17	0.45
22:AB:8:U:H2'	22:AB:13:G:H1	1.82	0.45
11:AN:112:THR:HA	11:AN:113:PRO:HD3	1.82	0.45
11:AN:21:ILE:HG12	11:AN:30:VAL:CG1	2.45	0.45
11:AN:48:ILE:HA	11:AN:48:ILE:HD12	1.76	0.45
15:AR:64:ARG:HH11	15:AR:68:ARG:NH2	2.14	0.45
40:B1:8:VAL:CG2	40:B1:11:ARG:HH21	2.29	0.45
46:B3:35:ASN:HD22	46:B3:35:ASN:N	2.15	0.45
54:B8:34:TRP:HB3	54:B8:35:GLN:HG2	1.98	0.45
25:BA:1060:U:H1'	25:BA:1061:U:P	2.56	0.45
25:BA:1081:U:C2'	25:BA:1082:U:OP1	2.64	0.45
25:BA:2173:A:H2'	25:BA:2173:A:N3	2.32	0.45
25:BA:2209:C:O2	25:BA:2216:G:C2	2.70	0.45
25:BA:746:A:H2'	25:BA:2612:C:H5''	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:123:LEU:HA	32:BK:142:VAL:HG23	1.97	0.45
33:BM:38:HIS:CE1	33:BM:50:ASP:OD2	2.70	0.45
39:BR:33:LYS:HZ3	39:BR:84:GLN:HB2	1.79	0.45
47:BZ:91:LYS:HA	47:BZ:91:LYS:NZ	2.32	0.45
1:CA:1187:G:H2'	1:CA:1187:G:N3	2.30	0.45
1:CA:748:C:H6	1:CA:748:C:O5'	2.00	0.45
1:CA:785:G:N2	1:CA:798:G:C4	2.85	0.45
1:CA:848:C:O2'	1:CA:849:C:H5'	2.17	0.45
1:CA:976:G:C8	1:CA:1358:U:C2	3.04	0.45
22:CB:84:C:O2'	25:DA:2507:C:H4'	2.17	0.45
23:CC:47:G:H4'	23:CC:48:U:OP1	2.16	0.45
22:CD:48:C:C4	22:CD:49:A:C4	3.05	0.45
4:CG:13:ARG:HB2	4:CG:14:ARG:H	1.53	0.45
7:CJ:80:VAL:CG1	7:CJ:85:TYR:HE1	2.30	0.45
19:CV:41:VAL:O	19:CV:44:MET:N	2.49	0.45
19:CV:66:MET:H	19:CV:66:MET:HE3	1.81	0.45
40:D1:8:VAL:O	40:D1:12:ARG:HG3	2.16	0.45
51:D5:54:GLY:O	51:D5:55:ARG:HB3	2.16	0.45
25:DA:1404:C:O2	25:DA:1404:C:H2'	2.17	0.45
25:DA:1678:G:N2	25:DA:1989:G:H1	2.15	0.45
25:DA:2146:C:H4'	25:DA:2147:G:O4'	2.17	0.45
25:DA:2250:G:OP2	25:DA:2275:C:H2'	2.16	0.45
25:DA:2582:G:C2	25:DA:2583:G:C8	3.05	0.45
25:DA:2721:A:H1'	25:DA:2873:A:O2'	2.17	0.45
25:DA:2809:A:H62	25:DA:2891:G:H2'	1.82	0.45
25:DA:2893:G:H8	25:DA:2893:G:OP2	1.99	0.45
25:DA:986:C:O2'	25:DA:987:G:H5'	2.17	0.45
26:DB:89(A):A:H8	26:DB:90:C:O4'	1.99	0.45
29:DF:82:ILE:H	29:DF:82:ILE:CD1	2.28	0.45
30:DG:16:ARG:N	30:DG:17:PRO:HD2	2.32	0.45
32:DK:68:LEU:HB3	32:DK:72:LEU:HD12	1.97	0.45
35:DO:21:ARG:HB3	35:DO:22:GLY:H	1.55	0.45
25:DA:1339:G:H5''	43:DT:16:LYS:HD3	1.99	0.45
48:DW:17:SER:HB3	48:DW:21:LEU:HD12	1.99	0.45
49:DX:8:LEU:HD22	49:DX:10:LYS:O	2.17	0.45
1:AA:1464:G:O2'	1:AA:1465:C:H5'	2.17	0.45
1:AA:567:G:H2'	1:AA:568:G:O4'	2.17	0.45
22:AB:84:C:O2'	25:BA:2507:C:H4'	2.17	0.45
22:AD:1:G:H1	22:AD:81:C:H42	1.64	0.45
22:AD:53:A:H2'	22:AD:54:C:O4'	2.17	0.45
3:AF:11:ARG:O	3:AF:12:LEU:C	2.54	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AF:127:ARG:NH1	3:AF:193:TYR:HE2	2.15	0.45
3:AF:148:GLY:HA3	3:AF:172:ARG:O	2.16	0.45
4:AG:88:VAL:HG12	4:AG:88:VAL:O	2.17	0.45
5:AH:59:GLY:O	5:AH:62:ALA:HB3	2.16	0.45
7:AJ:113:GLU:CB	7:AJ:119:ARG:HG2	2.47	0.45
5:AH:152:ARG:HA	8:AK:64:LYS:NZ	2.32	0.45
12:AO:59:SER:O	12:AO:61:TYR:HD1	2.00	0.45
13:AP:81:LEU:O	13:AP:89:GLY:HA3	2.16	0.45
37:B0:34:ILE:HG22	37:B0:114:VAL:HB	1.99	0.45
41:B2:41:GLY:HA3	41:B2:46:VAL:CG1	2.46	0.45
41:B2:41:GLY:HA3	41:B2:46:VAL:HG13	1.98	0.45
41:B2:47:VAL:O	41:B2:48:GLY:O	2.35	0.45
25:BA:2355:C:H1'	46:B3:39:ARG:HH21	1.82	0.45
25:BA:1070:A:H5''	25:BA:1071:G:OP1	2.17	0.45
25:BA:1083:U:H2'	25:BA:1084:A:H5''	1.98	0.45
25:BA:1512:G:H2'	25:BA:1513:C:C6	2.52	0.45
25:BA:1537:C:C2'	25:BA:1538:G:O5'	2.65	0.45
25:BA:1478:G:O2'	25:BA:1558:A:H2	2.00	0.45
25:BA:184:C:H2'	25:BA:185:U:C6	2.52	0.45
25:BA:271(B):G:O2'	25:BA:271(C):U:OP2	2.25	0.45
25:BA:286:C:H2'	25:BA:287:C:C6	2.52	0.45
25:BA:910:A:H2'	25:BA:2264:C:HO2'	1.82	0.45
25:BA:966:G:C5	25:BA:967:C:C5	3.05	0.45
25:BA:322:A:OP2	29:BF:169:ASN:HB2	2.17	0.45
25:BA:39:C:O2	29:BF:46:ARG:NH2	2.49	0.45
35:BO:34:GLY:O	35:BO:35:HIS:HB2	2.17	0.45
43:BT:31:HIS:HD2	43:BT:33:LYS:N	2.09	0.45
49:BX:37:LEU:HD12	49:BX:43:ILE:HD13	1.99	0.45
49:BX:40:THR:HG23	49:BX:43:ILE:HG13	1.99	0.45
47:BZ:67:ILE:N	47:BZ:68:PRO:CD	2.80	0.45
1:CA:328:C:C2'	1:CA:328:C:O2	2.63	0.45
1:CA:468:A:C2'	1:CA:474:G:H5'	2.47	0.45
1:CA:56:U:H2'	1:CA:57:G:C8	2.52	0.45
1:CA:82:U:C4	1:CA:87:A:N6	2.83	0.45
22:CB:57:C:H4'	22:CB:58:G:C5'	2.46	0.45
22:CD:15:G:OP1	22:CD:15:G:H4'	2.17	0.45
2:CE:128:GLU:CD	2:CE:129:GLU:H	2.19	0.45
2:CE:132:LYS:HD2	2:CE:135:GLN:HE22	1.81	0.45
2:CE:153:ARG:HG2	2:CE:153:ARG:O	2.16	0.45
2:CE:172:ILE:H	2:CE:172:ILE:CD1	2.25	0.45
3:CF:112:SER:O	3:CF:116:VAL:HG23	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CH:31:LEU:HA	5:CH:31:LEU:HD23	1.75	0.45
8:CK:14:ARG:O	8:CK:18:ARG:HD3	2.16	0.45
9:CL:48:GLU:N	9:CL:49:PRO:CD	2.79	0.45
10:CM:33:GLN:HB2	10:CM:75:ILE:CD1	2.47	0.45
10:CM:3:LYS:HB2	10:CM:77:PRO:HG3	1.99	0.45
12:CO:15:VAL:HG23	12:CO:16:ARG:N	2.32	0.45
14:CQ:33:VAL:HA	14:CQ:40:CYS:HA	1.99	0.45
1:CA:1326:C:P	21:CX:17:THR:HG1	2.40	0.45
40:D1:95:LEU:C	40:D1:97:ASP:N	2.71	0.45
40:D1:112:ARG:HD3	41:D2:47:VAL:HG11	1.97	0.45
50:D4:31:ILE:HG22	50:D4:32:TYR:N	2.31	0.45
54:D8:32:LEU:HB2	54:D8:36:LYS:NZ	2.32	0.45
54:D8:22:VAL:H	54:D8:50:LEU:CD1	2.29	0.45
54:D8:52:LYS:N	54:D8:52:LYS:HD2	2.32	0.45
25:DA:1055:G:N2	25:DA:1086:A:H5'	2.32	0.45
25:DA:1072:C:N4	25:DA:1098:A:OP2	2.50	0.45
25:DA:1299:G:H5''	25:DA:1300:U:OP1	2.16	0.45
25:DA:19:C:H2'	25:DA:20:C:H6	1.81	0.45
25:DA:21:A:O2'	25:DA:22:C:H5'	2.17	0.45
25:DA:2353:G:H2'	25:DA:2354:G:O4'	2.14	0.45
25:DA:2755:C:HO2'	25:DA:2756:U:H6	1.65	0.45
25:DA:745:G:H2'	25:DA:746:A:H5'	1.99	0.45
25:DA:905:U:C2'	25:DA:906:G:H5'	2.47	0.45
25:DA:820:A:N3	25:DA:943:U:H4'	2.32	0.45
27:DD:35:LYS:HG2	27:DD:64:ILE:CA	2.46	0.45
27:DD:74:GLY:O	27:DD:76:PRO:HD3	2.17	0.45
28:DE:9:VAL:HG23	28:DE:10:GLY:H	1.82	0.45
30:DG:83:ARG:O	30:DG:84:LYS:C	2.56	0.45
33:DM:34:LEU:HA	33:DM:34:LEU:HD13	1.76	0.45
35:DO:58:THR:CG2	35:DO:58:THR:O	2.62	0.45
44:DU:91:GLU:CG	44:DU:92:ASN:N	2.79	0.45
45:DV:29:TYR:HA	45:DV:33:LEU:O	2.17	0.45
1:AA:134:A:H1'	1:AA:325:A:C5	2.51	0.45
1:AA:329:A:C2	1:AA:332:G:C4	3.05	0.45
1:AA:46:G:HO2'	1:AA:365:U:H1'	1.82	0.45
1:AA:68:G:N2	1:AA:69:G:H1'	2.32	0.45
1:AA:901:A:H8	1:AA:901:A:O5'	2.00	0.45
22:AB:55:U:O2	22:AB:55:U:O4'	2.35	0.45
22:AD:80:C:O2'	22:AD:81:C:H5'	2.16	0.45
3:AF:159:GLY:HA2	3:AF:193:TYR:CD1	2.52	0.45
3:AF:166:GLU:HG3	3:AF:167:TRP:H	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AI:28:ARG:O	6:AI:32:ASN:ND2	2.44	0.45
8:AK:82:HIS:HB3	8:AK:138:TRP:CD2	2.52	0.45
11:AN:41:THR:CG2	11:AN:42:TRP:N	2.79	0.45
18:AU:88:LYS:HB3	18:AU:88:LYS:HZ3	1.80	0.45
20:AW:11:SER:C	20:AW:13:LEU:H	2.19	0.45
25:BA:1063:G:N2	25:BA:1076:C:H1'	2.32	0.45
25:BA:1174:A:H2'	25:BA:1176:G:OP1	2.17	0.45
25:BA:1204:A:N1	25:BA:1241:A:N1	2.65	0.45
25:BA:1592:C:H2'	25:BA:1593:G:H8	1.82	0.45
25:BA:1695:G:H1'	27:BD:8:PRO:O	2.17	0.45
25:BA:2074:U:H2'	25:BA:2075:U:C6	2.51	0.45
25:BA:2094:G:OP1	32:BK:22:LYS:HG3	2.17	0.45
25:BA:2208:U:H4'	27:BD:151:LYS:HG2	1.99	0.45
25:BA:2282:G:H4'	25:BA:2389:G:O2'	2.16	0.45
25:BA:273(D):C:H2'	25:BA:273(E):U:H6	1.82	0.45
25:BA:2822:G:H2'	25:BA:2823:A:H5''	1.99	0.45
25:BA:34:C:O4'	25:BA:34:C:P	2.75	0.45
25:BA:588:U:C2	29:BF:90:PHE:CD1	3.05	0.45
31:BH:83:TYR:CB	31:BH:135:GLY:N	2.68	0.45
32:BK:67:ARG:NH2	32:BK:68:LEU:HD12	2.32	0.45
43:BT:5:TYR:CZ	48:BW:30:ARG:HB2	2.51	0.45
45:BV:124:ILE:HD12	45:BV:124:ILE:HA	1.88	0.45
1:CA:1160:G:C6	1:CA:1181:G:O6	2.70	0.45
1:CA:1410:G:H2'	1:CA:1411:C:C6	2.52	0.45
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.53	0.45
1:CA:1415:G:C6	1:CA:1486:G:C6	3.05	0.45
1:CA:157:G:H2'	1:CA:158:G:H8	1.81	0.45
1:CA:17:U:H2'	1:CA:18:C:C6	2.52	0.45
1:CA:255:G:H2'	1:CA:256:U:C6	2.52	0.45
1:CA:332:G:C2	1:CA:333:G:C8	3.04	0.45
1:CA:854:G:C2	1:CA:855:G:C8	3.05	0.45
1:CA:883:C:O2'	1:CA:884:U:H5'	2.17	0.45
1:CA:947:G:H2'	1:CA:948:C:C6	2.52	0.45
1:CA:975:A:H4'	1:CA:976:G:C5'	2.34	0.45
1:CA:991:U:C4	1:CA:1212:U:H1'	2.52	0.45
23:CC:55:U:C4	23:CC:56:U:C4	3.05	0.45
22:CD:16:C:N4	22:CD:68:A:C4	2.85	0.45
2:CE:216:SER:O	2:CE:218:ALA:N	2.45	0.45
4:CG:30:LYS:HB2	4:CG:35:ARG:NH1	2.30	0.45
10:CM:16:LEU:HD13	10:CM:70:ARG:HD2	1.99	0.45
10:CM:40:LEU:HB3	10:CM:69:ASN:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CN:70:LYS:HB2	11:CN:70:LYS:HE3	1.73	0.45
16:CS:1:MET:HB2	16:CS:1:MET:HE3	1.71	0.45
40:D1:90:VAL:HG12	40:D1:91:ASP:N	2.32	0.45
50:D4:16:CYS:HB3	50:D4:19:GLY:HA2	1.99	0.45
53:D7:26:GLY:O	53:D7:30:VAL:HG23	2.17	0.45
25:DA:1259:G:H2'	25:DA:1260:G:H8	1.81	0.45
25:DA:1668:A:C8	25:DA:1674:G:C6	3.05	0.45
25:DA:1794:U:H1'	25:DA:1900:A:N3	2.32	0.45
25:DA:2099:U:C2	25:DA:2191:G:C6	3.05	0.45
25:DA:2119:A:N1	25:DA:2170:A:N7	2.64	0.45
25:DA:270(K):C:O2	25:DA:270(K):C:H2'	2.17	0.45
25:DA:2892:A:N6	25:DA:2893:G:C2	2.85	0.45
25:DA:442:G:C6	25:DA:444:C:N4	2.85	0.45
26:DB:39:A:N6	50:D4:1:MET:HB3	2.31	0.45
36:DP:135:ASP:O	36:DP:136:ALA:C	2.56	0.45
42:DS:51:LEU:O	42:DS:51:LEU:HD22	2.17	0.45
45:DV:60:GLU:HA	45:DV:66:SER:HA	1.99	0.45
1:AA:1032:A:H3'	1:AA:1032(A):G:H5''	1.99	0.44
1:AA:1128:C:O2'	1:AA:1130:A:C8	2.61	0.44
1:AA:1503:A:N6	24:A1:12:A:N9	2.65	0.44
1:AA:209:U:O2'	1:AA:216:G:C2	2.69	0.44
1:AA:659:U:C2	1:AA:660:G:C8	3.04	0.44
1:AA:998:G:C6	1:AA:998(A):C:N4	2.85	0.44
3:AF:77:ILE:HG22	3:AF:78:GLY:O	2.16	0.44
4:AG:173:TRP:CG	4:AG:189:PRO:HG3	2.52	0.44
7:AJ:66:VAL:O	7:AJ:70:LYS:HG3	2.17	0.44
14:AQ:23:ARG:HG3	14:AQ:29:ARG:O	2.17	0.44
40:B1:92:ARG:HD2	40:B1:95:LEU:CD1	2.46	0.44
46:B3:46:LYS:NZ	46:B3:75:LEU:O	2.41	0.44
35:BO:63:PRO:HB3	54:B8:12:LYS:O	2.17	0.44
25:BA:1113:U:H5'	31:BH:2:SER:CB	2.38	0.44
25:BA:1027:A:C2	25:BA:2488:A:H5'	2.51	0.44
25:BA:2534:A:H2'	25:BA:2535:G:O5'	2.17	0.44
25:BA:725:G:C6	25:BA:726:G:N1	2.85	0.44
25:BA:945:A:O4'	25:BA:946:G:OP1	2.36	0.44
26:BB:112:G:H2'	26:BB:113:C:C6	2.52	0.44
26:BB:11:C:O5'	26:BB:12:C:H5	2.00	0.44
26:BB:91:C:H2'	26:BB:92:G:C8	2.52	0.44
27:BD:142:VAL:HG23	27:BD:193:VAL:HA	1.99	0.44
30:BG:107:LEU:HD11	30:BG:178:PHE:CE1	2.51	0.44
30:BG:44:GLY:C	30:BG:46:ALA:H	2.20	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:11:ASN:ND2	32:BK:12:LEU:HD13	2.32	0.44
34:BN:3:GLN:HB2	34:BN:4:PRO:HD2	1.99	0.44
38:BQ:56:LEU:HB2	38:BQ:58:LEU:HD22	1.99	0.44
42:BS:26:GLY:HA2	42:BS:71:VAL:O	2.17	0.44
45:BV:104:PHE:HZ	45:BV:119:GLU:HB3	1.81	0.44
45:BV:6:LYS:HZ3	45:BV:43:GLU:HG3	1.83	0.44
1:CA:1159:U:O2'	1:CA:1160:G:C5	2.70	0.44
1:CA:1161:C:O2'	1:CA:1162:C:H5'	2.17	0.44
1:CA:1175:G:N2	1:CA:1176:A:C6	2.84	0.44
1:CA:31:G:C1'	1:CA:32:A:OP1	2.65	0.44
1:CA:415:A:H2'	1:CA:416:G:O4'	2.17	0.44
22:CB:9:U:H5	22:CB:21:A:N7	2.15	0.44
3:CF:157:ILE:HD11	3:CF:166:GLU:HB2	1.98	0.44
3:CF:200:ALA:C	3:CF:201:TYR:HD2	2.20	0.44
4:CG:4:TYR:HE2	4:CG:11:LEU:HD11	1.82	0.44
4:CG:61:LYS:HE2	4:CG:206:PHE:CE2	2.52	0.44
12:CO:4:ILE:O	12:CO:7:LEU:HB2	2.18	0.44
12:CO:5:ASN:HD22	17:CT:34:LYS:HE2	1.82	0.44
25:DA:1649:G:O2'	37:D0:107:ASP:OD1	2.29	0.44
41:D2:44:LYS:HG2	41:D2:45:THR:H	1.82	0.44
41:D2:66:ARG:HB2	41:D2:88:ARG:HB3	1.97	0.44
50:D4:16:CYS:O	50:D4:19:GLY:HA3	2.16	0.44
25:DA:1002:G:N2	25:DA:1154:G:H1'	2.33	0.44
25:DA:107:C:H2'	25:DA:108:U:C6	2.52	0.44
25:DA:1039:G:N2	25:DA:1117:G:C4	2.85	0.44
25:DA:1331:A:O2'	25:DA:1332:G:H8	2.01	0.44
25:DA:2182:G:C2	25:DA:2183:C:C4	3.06	0.44
25:DA:2231:C:OP1	47:DZ:42:GLN:HA	2.16	0.44
25:DA:2468:G:OP1	36:DP:119:ARG:NH2	2.47	0.44
25:DA:2472:G:N1	25:DA:2477:C:OP1	2.45	0.44
26:DB:15:A:H5'	26:DB:16:G:H8	1.82	0.44
27:DD:34:VAL:CG1	27:DD:34:VAL:O	2.65	0.44
28:DE:49:LEU:O	28:DE:78:LEU:HB3	2.17	0.44
28:DE:63:LEU:O	28:DE:63:LEU:HG	2.17	0.44
29:DF:149:ASP:OD1	29:DF:149:ASP:N	2.42	0.44
31:DH:83:TYR:HB3	31:DH:84:SER:H	1.60	0.44
31:DH:91:GLY:O	31:DH:92:ILE:C	2.54	0.44
33:DM:68:GLU:HB3	33:DM:88:GLU:CD	2.38	0.44
38:DQ:39:ILE:HG21	38:DQ:82:ILE:HD13	1.99	0.44
39:DR:2:ASN:HB3	39:DR:3:ARG:H	1.61	0.44
44:DU:68:HIS:HB3	44:DU:71:LYS:HG3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DU:96:ILE:HD12	44:DU:98:VAL:HG12	1.99	0.44
26:DB:104:A:OP1	45:DV:72:ARG:NH1	2.50	0.44
1:AA:1034:G:H2'	1:AA:1035:A:C8	2.52	0.44
1:AA:1149:C:OP1	9:AL:9:ARG:NH2	2.40	0.44
1:AA:1372:U:C4	1:AA:1373:G:C5	3.06	0.44
1:AA:183:G:O2'	1:AA:224:C:H4'	2.17	0.44
1:AA:235:C:H2'	1:AA:236:G:C8	2.52	0.44
1:AA:413:G:HO2'	1:AA:414:A:P	2.39	0.44
1:AA:542:G:H2'	1:AA:543:C:H6	1.82	0.44
23:AC:48:U:C2'	23:AC:49:C:OP2	2.64	0.44
22:AD:9:U:O2	22:AD:9:U:C2'	2.61	0.44
5:AH:99:GLY:HA2	5:AH:116:THR:O	2.17	0.44
7:AJ:152:ALA:O	7:AJ:155:ARG:HB3	2.18	0.44
1:AA:1128:C:H5''	9:AL:16:ARG:HH22	1.81	0.44
10:AM:81:THR:OG1	10:AM:82:ILE:N	2.50	0.44
10:AM:92:THR:HG23	10:AM:93:GLY:N	2.33	0.44
11:AN:41:THR:HG21	11:AN:71:LYS:CB	2.47	0.44
13:AP:30:ALA:C	13:AP:32:GLU:H	2.20	0.44
19:AV:11:VAL:HA	19:AV:38:SER:HB2	1.99	0.44
19:AV:69:HIS:HB3	19:AV:73:GLU:OE1	2.16	0.44
50:B4:14:ILE:HG22	50:B4:21:VAL:O	2.17	0.44
25:BA:1019:U:O2'	25:BA:1021:A:C2	2.50	0.44
25:BA:1021:A:N6	25:BA:1142(A):A:H61	2.03	0.44
25:BA:11:G:H2'	25:BA:12:U:H5'	1.99	0.44
25:BA:2315:G:H2'	25:BA:2316:C:C6	2.52	0.44
25:BA:2556:C:H2'	25:BA:2557:G:O4'	2.17	0.44
25:BA:637:A:OP1	35:BO:133:SER:HB3	2.16	0.44
25:BA:643:A:N1	25:BA:2369:A:O2'	2.45	0.44
25:BA:71:A:OP2	25:BA:112:U:O2'	2.22	0.44
25:BA:860:U:O4'	25:BA:860:U:O2	2.35	0.44
30:BG:112:PRO:O	50:B4:37:SER:OG	2.34	0.44
31:BH:86:GLU:HB2	31:BH:165:ALA:HB2	2.00	0.44
39:BR:57:PHE:O	39:BR:58:ASN:C	2.56	0.44
1:CA:977:A:C8	1:CA:1223:C:N3	2.85	0.44
1:CA:123:C:OP1	1:CA:311:C:O2'	2.29	0.44
1:CA:1277:C:O2'	1:CA:1279:A:C8	2.64	0.44
1:CA:1301:U:C2'	1:CA:1302:U:OP1	2.65	0.44
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.51	0.44
1:CA:423:G:N2	1:CA:424:G:C8	2.85	0.44
1:CA:42:G:H2'	1:CA:43:C:O4'	2.18	0.44
1:CA:78:G:H1	1:CA:91:C:H42	1.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:841:U:H5'	1:CA:842:C:C5	2.53	0.44
22:CB:79:A:C3'	22:CB:80:C:H5''	2.47	0.44
2:CE:124:SER:O	2:CE:126:GLU:N	2.50	0.44
4:CG:178:VAL:HG12	4:CG:179:GLU:N	2.32	0.44
1:CA:426:G:H4'	4:CG:41:GLY:O	2.17	0.44
12:CO:110:ARG:HG3	12:CO:111:LYS:N	2.31	0.44
25:DA:1050:A:C6	25:DA:2751:G:C6	3.04	0.44
25:DA:1469:A:H2'	25:DA:1470:G:O4'	2.17	0.44
25:DA:1651:G:N2	25:DA:2007:C:C2	2.85	0.44
25:DA:2119:A:N6	25:DA:2170:A:C5	2.84	0.44
25:DA:2210:G:C2'	25:DA:2210:G:N3	2.79	0.44
25:DA:2286:A:H5'	52:D6:28:ARG:CZ	2.48	0.44
25:DA:2505:G:O6	25:DA:2576:G:H2'	2.17	0.44
25:DA:2695:C:H2'	25:DA:2696:U:C6	2.52	0.44
25:DA:2735:G:H2'	25:DA:2736:G:H8	1.81	0.44
25:DA:2754:U:H2'	25:DA:2756:U:OP1	2.16	0.44
25:DA:868:U:C2	25:DA:869:G:C8	3.05	0.44
25:DA:2572:A:N7	28:DE:144:ARG:HD2	2.33	0.44
25:DA:2786:U:C4'	28:DE:64:LYS:HA	2.45	0.44
28:DE:78:LEU:N	28:DE:78:LEU:HD23	2.33	0.44
33:DM:120:LEU:HD21	33:DM:122:VAL:HG23	1.99	0.44
25:DA:1266:G:O6	42:DS:13:SER:HB3	2.17	0.44
49:DX:7:LYS:O	49:DX:9:VAL:HG13	2.17	0.44
1:AA:1022:G:C4	1:AA:1023:G:C8	3.06	0.44
1:AA:1238:A:N6	1:AA:1301:U:H3	2.11	0.44
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.53	0.44
1:AA:280:C:O2	17:AT:38:ARG:HG3	2.18	0.44
2:AE:166:ASP:HB3	2:AE:169:LYS:HB2	1.98	0.44
2:AE:36:ARG:HD2	2:AE:36:ARG:HA	1.87	0.44
2:AE:45:GLN:HE21	2:AE:45:GLN:HB3	1.53	0.44
3:AF:70:VAL:HG12	3:AF:71:ALA:H	1.81	0.44
1:AA:438:G:OP1	4:AG:125:HIS:HE1	1.99	0.44
4:AG:138:TYR:HD2	4:AG:138:TYR:C	2.21	0.44
8:AK:34:GLU:OE1	8:AK:37:ARG:NH1	2.50	0.44
51:B5:33:CYS:CB	51:B5:40:LYS:HD3	2.36	0.44
25:BA:2182:G:N2	25:BA:2183:C:C2	2.86	0.44
25:BA:2645:G:H3'	25:BA:2646:C:H5'	1.99	0.44
25:BA:2764:A:N6	25:BA:2766:G:C2	2.86	0.44
25:BA:404:C:C1'	25:BA:405:U:OP2	2.62	0.44
26:BB:33:G:O2'	26:BB:34:U:H5'	2.16	0.44
26:BB:7:G:P	38:BQ:29:PHE:HE1	2.41	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1803:A:H4'	27:BD:259:THR:HG23	1.99	0.44
30:BG:69:ALA:O	30:BG:90:LEU:HD12	2.18	0.44
31:BH:72:ILE:O	31:BH:75:ALA:N	2.50	0.44
32:BK:120:ILE:HD12	32:BK:121:LYS:H	1.82	0.44
35:BO:9:ASN:CB	35:BO:10:PRO:CD	2.91	0.44
39:BR:90:GLN:HG3	39:BR:91:ARG:N	2.31	0.44
45:BV:11:GLU:O	45:BV:36:LYS:NZ	2.41	0.44
47:BZ:73:LEU:HB3	47:BZ:90:ILE:CG2	2.47	0.44
1:CA:1026:G:H5''	1:CA:1027:C:OP2	2.18	0.44
1:CA:1112:C:C4	3:CF:178:LEU:HD23	2.52	0.44
1:CA:1134:G:C2	1:CA:1141:C:O2	2.71	0.44
1:CA:1178:G:N2	1:CA:1181:G:N7	2.64	0.44
1:CA:154:C:O2'	1:CA:155:C:H5'	2.18	0.44
1:CA:182:U:C5	1:CA:183:G:C4	3.05	0.44
1:CA:420:U:O2'	1:CA:423:G:O6	2.36	0.44
22:CD:19:C:C6	22:CD:19:C:H3'	2.49	0.44
22:CD:24:G:H2'	22:CD:25:G:H8	1.81	0.44
4:CG:108:LEU:HD13	4:CG:174:LEU:HD13	1.99	0.44
5:CH:70:PRO:O	5:CH:77:PRO:HD3	2.17	0.44
9:CL:54:ASP:O	9:CL:56:LEU:N	2.50	0.44
14:CQ:24:CYS:SG	14:CQ:24:CYS:O	2.76	0.44
15:CR:24:SER:O	15:CR:28:GLN:HG3	2.17	0.44
37:D0:55:ALA:HA	37:D0:80:PHE:CZ	2.52	0.44
37:D0:78:LYS:HE2	37:D0:83:ILE:HD11	1.98	0.44
50:D4:42:PHE:HD2	50:D4:43:TYR:N	2.16	0.44
25:DA:1160:G:N2	41:D2:10:LYS:HE3	2.32	0.44
25:DA:1903:G:OP1	27:DD:241:PRO:HB2	2.15	0.44
25:DA:2031:A:C6	25:DA:2498:C:H1'	2.51	0.44
25:DA:2211:G:C1'	25:DA:2212:A:P	3.05	0.44
25:DA:270(Z):U:O3'	25:DA:271(A):C:H6	2.00	0.44
25:DA:527:C:OP2	25:DA:2779:U:C5	2.62	0.44
25:DA:531:C:OP1	25:DA:561:G:C2	2.71	0.44
25:DA:654(A):A:N1	25:DA:654(T):A:N1	2.65	0.44
27:DD:34:VAL:C	27:DD:35:LYS:O	2.54	0.44
28:DE:52:LEU:HD12	28:DE:76:ARG:HD3	1.99	0.44
34:DN:88:ASN:HD21	34:DN:92:GLU:HB2	1.82	0.44
35:DO:61:ARG:CB	35:DO:62:LEU:CD2	2.95	0.44
25:DA:2483:C:N3	36:DP:124:LYS:HE3	2.32	0.44
42:DS:82:LEU:HD22	42:DS:84:ARG:NH2	2.32	0.44
45:DV:156:LYS:O	45:DV:157:LEU:HB2	2.16	0.44
48:DW:36:ARG:O	48:DW:40:SER:N	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1178:G:H2'	1:AA:1179:A:O5'	2.17	0.44
1:AA:1260:C:H4'	1:AA:1284:C:H5'	1.98	0.44
1:AA:148:G:O2'	1:AA:149:A:H5'	2.17	0.44
1:AA:19:C:H2'	1:AA:20:U:C6	2.53	0.44
1:AA:317:G:C6	1:AA:318:G:C5	3.05	0.44
1:AA:342:C:C2	1:AA:348:G:C2	3.05	0.44
1:AA:346:G:N3	1:AA:346:G:H3'	2.32	0.44
1:AA:58:C:O2'	1:AA:388:G:N7	2.46	0.44
1:AA:41:G:H2'	1:AA:42:G:C8	2.53	0.44
1:AA:921:U:O2	5:AH:19:MET:HB2	2.17	0.44
3:AF:107:GLN:CD	3:AF:107:GLN:H	2.21	0.44
4:AG:163:GLU:C	4:AG:165:MET:N	2.70	0.44
5:AH:31:LEU:HD23	5:AH:45:PHE:CD1	2.43	0.44
7:AJ:50:ILE:HB	7:AJ:58:PRO:HG3	2.00	0.44
1:AA:1060:C:C5'	10:AM:51:ARG:HG2	2.46	0.44
16:AS:82:GLN:O	16:AS:83:GLU:HB2	2.18	0.44
17:AT:63:ARG:O	17:AT:65:ILE:HD12	2.17	0.44
17:AT:78:GLU:HG2	17:AT:78:GLU:O	2.17	0.44
40:B1:5:LYS:H	40:B1:5:LYS:HG3	1.57	0.44
40:B1:76:TYR:CZ	40:B1:80:ILE:HG13	2.52	0.44
40:B1:86:ALA:CB	40:B1:88:ILE:HG12	2.47	0.44
25:BA:1090:U:C4	25:BA:1102:C:O2	2.70	0.44
25:BA:1372:U:O5'	25:BA:1372:U:H6	1.99	0.44
25:BA:1600:C:O2'	25:BA:1601:G:H5'	2.18	0.44
25:BA:274:G:C8	25:BA:274:G:OP1	2.71	0.44
25:BA:527:C:OP2	25:BA:2779:U:C5	2.51	0.44
25:BA:882:G:N1	25:BA:894:C:C4	2.81	0.44
25:BA:902:C:O2'	25:BA:903:C:H5'	2.18	0.44
28:BE:21:VAL:HG23	28:BE:22:PRO:CG	2.48	0.44
29:BF:23:ASP:CG	29:BF:24:LEU:N	2.67	0.44
38:BQ:41:ASP:OD2	38:BQ:44:LYS:HD2	2.16	0.44
45:BV:81:ARG:HG3	45:BV:81:ARG:O	2.18	0.44
1:CA:1177:G:O2'	1:CA:1178:G:N3	2.40	0.44
1:CA:1311:G:N2	1:CA:1327:C:C2	2.84	0.44
1:CA:283:C:C2	1:CA:284:G:C8	3.05	0.44
1:CA:578:C:C2'	1:CA:579:G:O5'	2.66	0.44
22:CB:9:U:H4'	22:CB:10:C:OP2	2.18	0.44
22:CB:22:A:O3'	22:CB:23:A:C8	2.70	0.44
22:CD:19:C:C3'	22:CD:19:C:C6	3.01	0.44
3:CF:190:ARG:N	3:CF:190:ARG:HD2	2.33	0.44
7:CJ:81:GLY:C	7:CJ:83:ALA:H	2.20	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CW:97:ALA:HA	20:CW:98:PRO:HD3	1.78	0.44
50:D4:10:VAL:HG13	50:D4:10:VAL:O	2.18	0.44
50:D4:29:PRO:C	50:D4:30:GLU:HG3	2.38	0.44
52:D6:26:ASN:O	52:D6:28:ARG:NE	2.51	0.44
52:D6:34:LEU:HB2	52:D6:51:GLU:HB3	2.00	0.44
25:DA:1000:A:C6	25:DA:1001:A:C6	3.06	0.44
25:DA:1060:U:H5''	25:DA:1061:U:C5	2.52	0.44
25:DA:1077:A:O2'	25:DA:1088:A:N1	2.30	0.44
25:DA:1607:C:C5'	25:DA:1608:A:H5'	2.47	0.44
25:DA:2191:G:H2'	25:DA:2192:G:O4'	2.16	0.44
25:DA:2211:G:H1'	25:DA:2212:A:OP1	2.18	0.44
25:DA:2469:A:H2	25:DA:2481:G:H21	1.66	0.44
25:DA:2638:G:H1'	25:DA:2778:A:N6	2.32	0.44
25:DA:2776:A:H2	25:DA:2778:A:HO2'	1.61	0.44
25:DA:332:A:C2	25:DA:335:C:C5	3.06	0.44
25:DA:39:C:H2'	25:DA:40:C:H6	1.82	0.44
25:DA:67:U:C4	25:DA:74:A:N1	2.85	0.44
25:DA:866:A:C6	25:DA:914:C:N3	2.86	0.44
25:DA:953:A:O2'	25:DA:954:G:H5'	2.17	0.44
26:DB:31:C:H2'	26:DB:32:C:H5'	1.99	0.44
26:DB:93:C:O2'	26:DB:94:C:H5'	2.18	0.44
27:DD:70:TRP:HZ3	27:DD:146:GLU:OE2	2.00	0.44
28:DE:33:VAL:O	28:DE:67:PHE:HZ	2.01	0.44
29:DF:119:ARG:NH1	29:DF:119:ARG:HG2	2.30	0.44
30:DG:96:ARG:HH11	30:DG:96:ARG:HG2	1.83	0.44
31:DH:41:MET:SD	31:DH:41:MET:N	2.90	0.44
35:DO:62:LEU:O	35:DO:62:LEU:HD23	2.17	0.44
35:DO:85:LEU:HD13	35:DO:114:ILE:HD11	2.00	0.44
25:DA:2875:C:C4'	39:DR:5:ALA:HB2	2.46	0.44
44:DU:62:GLU:OE2	44:DU:63:LYS:N	2.34	0.44
48:DW:60:LEU:HA	48:DW:60:LEU:HD12	1.72	0.44
1:AA:1128:C:O2'	1:AA:1130:A:N7	2.41	0.44
1:AA:1162:C:C2	1:AA:1175:G:N2	2.85	0.44
1:AA:1245:A:OP2	21:AX:9:ARG:NH2	2.43	0.44
22:AB:8:U:H2'	22:AB:13:G:N1	2.32	0.44
2:AE:20:GLU:HB2	2:AE:190:THR:OG1	2.18	0.44
7:AJ:15:ASP:O	7:AJ:19:GLY:HA2	2.18	0.44
7:AJ:49:ILE:H	7:AJ:49:ILE:HG12	1.67	0.44
10:AM:37:PRO:HA	10:AM:72:VAL:HG22	1.99	0.44
18:AU:50:ILE:HD12	18:AU:50:ILE:H	1.82	0.44
35:BO:63:PRO:HA	54:B8:13:ARG:CB	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1027:A:N6	25:BA:1126:A:C4	2.85	0.44
25:BA:2019:A:H2'	25:BA:2020:A:O5'	2.18	0.44
25:BA:2163:C:C4	25:BA:2164:C:C5	3.05	0.44
25:BA:270(J):G:H2'	25:BA:270(K):C:O4'	2.18	0.44
25:BA:270(M):U:O2'	25:BA:270(N):G:O5'	2.34	0.44
25:BA:2749:A:N1	25:BA:2750:A:N6	2.64	0.44
25:BA:2:G:O2'	25:BA:3:U:H5'	2.17	0.44
27:BD:101:GLU:OE1	27:BD:103:ARG:HD3	2.18	0.44
28:BE:3:GLY:HA3	28:BE:81:ILE:HG21	1.99	0.44
31:BH:137:ASP:HB3	31:BH:140:LYS:HB3	1.98	0.44
32:BK:2:LYS:HA	32:BK:20:ASP:HA	1.99	0.44
33:BM:43:THR:HA	33:BM:44:PRO:HD3	1.81	0.44
34:BN:122:LEU:HD13	39:BR:72:VAL:HG11	1.99	0.44
34:BN:8:LEU:CD2	34:BN:8:LEU:N	2.79	0.44
35:BO:63:PRO:HA	54:B8:13:ARG:HB3	1.98	0.44
36:BP:27:VAL:CG1	36:BP:105:GLU:OE2	2.65	0.44
25:BA:2276:G:OP1	36:BP:84:GLY:HA2	2.17	0.44
43:BT:80:ILE:HG13	43:BT:80:ILE:O	2.16	0.44
49:BX:52:HIS:CD2	49:BX:52:HIS:H	2.35	0.44
1:CA:1039:C:C3'	1:CA:1040:U:H5''	2.38	0.44
1:CA:1162:C:C2	1:CA:1175:G:C2	3.05	0.44
1:CA:1261:A:H2'	1:CA:1262:C:H5'	1.99	0.44
1:CA:1308:U:H5''	13:CP:98:VAL:HG22	1.99	0.44
1:CA:161:A:N6	1:CA:162:A:C6	2.86	0.44
1:CA:405:U:H5''	1:CA:495:A:H2	1.83	0.44
22:CB:40:U:H2'	22:CB:41:C:H6	1.82	0.44
2:CE:193:ASP:C	2:CE:195:ASP:H	2.19	0.44
2:CE:96:ARG:N	2:CE:96:ARG:HD2	2.33	0.44
3:CF:7:PRO:HG2	3:CF:184:TYR:HB2	1.99	0.44
4:CG:10:ARG:HG3	4:CG:40:PRO:HG2	1.98	0.44
8:CK:20:TYR:CE1	8:CK:78:GLN:NE2	2.86	0.44
12:CO:114:ARG:HB3	12:CO:119:THR:HB	1.99	0.44
13:CP:73:GLU:O	13:CP:77:ASN:HB2	2.18	0.44
19:CV:66:MET:CA	19:CV:67:VAL:HB	2.47	0.44
20:CW:41:ILE:HG22	20:CW:91:LEU:CD1	2.48	0.44
50:D4:18:CYS:HB2	50:D4:20:ASN:ND2	2.32	0.44
25:DA:2418:A:P	54:D8:29:LYS:NZ	2.90	0.44
25:DA:1000:A:C6	25:DA:1155:A:C8	3.06	0.44
25:DA:1261:C:C2'	25:DA:1262:A:O5'	2.66	0.44
25:DA:1300:U:H4'	25:DA:1301:A:H5'	1.99	0.44
25:DA:1509:C:H5'	25:DA:1510:A:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2168:G:C2'	25:DA:2168:G:N3	2.81	0.44
25:DA:226:G:H21	25:DA:228:A:H61	0.44	0.44
25:DA:2590:A:H2'	25:DA:2591:C:C6	2.53	0.44
25:DA:69:C:O2	25:DA:73:A:O2'	2.25	0.44
28:DE:119:ARG:CG	28:DE:160:TYR:HB2	2.47	0.44
30:DG:126:ASP:OD2	30:DG:130:ASN:HB2	2.17	0.44
31:DH:89:ILE:O	31:DH:90:LYS:C	2.56	0.44
32:DK:44:LEU:HD23	32:DK:44:LEU:HA	1.78	0.44
33:DM:90:MET:O	33:DM:95:PRO:HA	2.17	0.44
33:DM:94:HIS:N	33:DM:95:PRO:HD3	2.32	0.44
38:DQ:37:ALA:HB3	38:DQ:51:ALA:HB3	2.00	0.44
43:DT:18:TYR:C	43:DT:20:GLY:N	2.71	0.44
43:DT:63:LYS:N	43:DT:63:LYS:NZ	2.66	0.44
45:DV:94:GLU:HG3	45:DV:95:PRO:HD2	1.99	0.44
1:AA:1084:G:C5	1:AA:1085:U:C4	3.06	0.44
1:AA:1143:G:N1	1:AA:1144:G:C2	2.86	0.44
1:AA:1158:C:N4	1:AA:1160:G:C4	2.86	0.44
1:AA:1246:C:C4	1:AA:1247:U:C4	3.06	0.44
1:AA:1299:A:C2'	1:AA:1301:U:H1'	2.17	0.44
1:AA:1316:G:H22	1:AA:1318:A:H3'	1.82	0.44
1:AA:695:A:H2'	1:AA:696:A:C8	2.53	0.44
22:AB:48:C:N4	22:AB:53:A:N6	2.65	0.44
22:AB:81:C:H2'	22:AB:81:C:O2	2.18	0.44
22:AD:10:C:H2'	22:AD:11:C:C6	2.52	0.44
4:AG:105:VAL:O	4:AG:105:VAL:HG12	2.17	0.44
4:AG:139:ARG:HG3	4:AG:139:ARG:NH1	2.32	0.44
4:AG:68:TYR:OH	4:AG:196:LEU:HD11	2.18	0.44
4:AG:86:LYS:HD2	4:AG:86:LYS:H	1.81	0.44
7:AJ:50:ILE:O	7:AJ:54:THR:HG23	2.17	0.44
7:AJ:90:GLU:H	7:AJ:90:GLU:CD	2.21	0.44
8:AK:121:ASP:HB2	8:AK:125:ARG:HH21	1.81	0.44
8:AK:64:LYS:C	8:AK:65:TYR:HD1	2.21	0.44
10:AM:6:ILE:HG22	10:AM:98:ILE:HG13	1.99	0.44
12:AO:61:TYR:O	12:AO:62:GLU:HB3	2.18	0.44
13:AP:13:LYS:O	13:AP:14:ARG:HG3	2.18	0.44
15:AR:82:ILE:HG23	15:AR:83:GLU:N	2.32	0.44
37:B0:33:ARG:HD2	37:B0:113:LEU:HG	1.99	0.44
40:B1:66:ASN:OD1	40:B1:76:TYR:HB3	2.18	0.44
25:BA:10:G:H2'	25:BA:11:G:C8	2.52	0.44
25:BA:1177:A:H5'	25:BA:1178:C:C6	2.53	0.44
25:BA:1519:G:O2'	25:BA:1520:U:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2300:G:N2	25:BA:2317:C:C2	2.86	0.44
25:BA:2444:G:OP2	29:BF:68:LYS:HD2	2.17	0.44
25:BA:2637:U:H5'	28:BE:82:ARG:HH21	1.82	0.44
25:BA:1803:A:H4'	27:BD:259:THR:CG2	2.48	0.44
42:BS:113:LYS:O	42:BS:113:LYS:HG2	2.17	0.44
45:BV:123:ASP:O	45:BV:124:ILE:HB	2.18	0.44
45:BV:53:ILE:H	45:BV:71:VAL:CG1	2.31	0.44
48:BW:23:LYS:O	48:BW:27:GLU:HG3	2.17	0.44
47:BZ:91:LYS:O	47:BZ:92:LYS:C	2.55	0.44
1:CA:1004:A:H3'	1:CA:1004:A:N3	2.32	0.44
1:CA:1024:G:H3'	1:CA:1024:G:N3	2.33	0.44
1:CA:1120:G:H2'	1:CA:1121:U:C6	2.52	0.44
1:CA:1402:C:H2'	1:CA:1403:C:O4'	2.18	0.44
1:CA:156:G:O2'	1:CA:157:G:H5'	2.18	0.44
1:CA:938:A:N6	1:CA:939:G:C6	2.86	0.44
1:CA:945:G:H2'	1:CA:945:G:N3	2.33	0.44
22:CB:43:G:H2'	22:CB:43:G:N3	2.33	0.44
22:CD:38:MIA:H2'	22:CD:39:A:C8	2.52	0.44
7:CJ:143:ARG:HH11	22:CD:43:G:H5'	1.81	0.44
2:CE:185:ILE:CG2	2:CE:199:TYR:HB2	2.42	0.44
2:CE:224:GLN:NE2	2:CE:225:ALA:HB2	2.32	0.44
2:CE:5:ILE:O	2:CE:5:ILE:HG12	2.16	0.44
2:CE:87:ARG:O	2:CE:87:ARG:HG2	2.17	0.44
12:CO:20:LYS:HE2	12:CO:20:LYS:H	1.82	0.44
14:CQ:29:ARG:HG3	14:CQ:40:CYS:SG	2.57	0.44
16:CS:40:ASP:O	16:CS:48:TRP:HB2	2.18	0.44
19:CV:74:PHE:HD2	19:CV:74:PHE:N	2.15	0.44
20:CW:10:LEU:HD13	20:CW:12:ALA:N	2.19	0.44
41:D2:98:GLU:O	41:D2:99:ILE:HB	2.18	0.44
50:D4:36:CYS:HB3	50:D4:41:PRO:HG3	1.98	0.44
50:D4:42:PHE:CD2	50:D4:43:TYR:N	2.86	0.44
25:DA:1155:A:O2'	25:DA:1156:A:H2'	2.18	0.44
25:DA:1297:C:OP1	25:DA:2710:C:H4'	2.18	0.44
25:DA:1317:A:H2'	25:DA:1318:C:C6	2.52	0.44
25:DA:1397:U:C1'	25:DA:1398:C:OP1	2.64	0.44
25:DA:1472:A:C2'	25:DA:1473:G:H5'	2.48	0.44
25:DA:2115:G:O2'	25:DA:2171:A:N6	2.50	0.44
25:DA:2156:G:C6	25:DA:2157:G:N2	2.85	0.44
25:DA:2299:G:C6	25:DA:2318:G:C8	3.05	0.44
25:DA:2445:G:OP1	29:DF:74:ARG:NH2	2.48	0.44
25:DA:2665:A:H2'	25:DA:2666:C:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:270(X):G:C6	25:DA:270(Y):G:N1	2.85	0.44
25:DA:2841:C:C2	25:DA:2877:G:N2	2.86	0.44
26:DB:40:U:H1'	26:DB:45:A:N6	2.32	0.44
25:DA:918:A:H1'	26:DB:80:U:O2'	2.18	0.44
28:DE:116:VAL:CG1	28:DE:122:PHE:CD2	3.01	0.44
28:DE:4:ILE:HG22	28:DE:91:VAL:HG21	1.99	0.44
29:DF:18:ARG:C	29:DF:18:ARG:HD3	2.38	0.44
30:DG:124:SER:HB2	30:DG:131:TYR:CE1	2.51	0.44
33:DM:15:LEU:HB2	33:DM:134:ARG:HG2	1.99	0.44
35:DO:102:ARG:HB3	35:DO:102:ARG:CZ	2.48	0.44
35:DO:147:LEU:CD2	35:DO:148:LEU:N	2.81	0.44
35:DO:19:VAL:HG22	35:DO:20:GLY:N	2.31	0.44
36:DP:26:TYR:HD2	36:DP:26:TYR:C	2.21	0.44
39:DR:106:SER:O	39:DR:107:ASP:HB3	2.17	0.44
43:DT:18:TYR:HA	43:DT:21:PHE:CE2	2.53	0.44
44:DU:43:ASN:N	44:DU:43:ASN:ND2	2.62	0.44
45:DV:115:GLY:CA	45:DV:174:VAL:HG13	2.32	0.44
1:AA:1232:U:C2'	1:AA:1233:G:O5'	2.66	0.44
22:AD:18:G:C1'	22:AD:19:C:P	3.05	0.44
3:AF:177:THR:HB	3:AF:180:ALA:HB2	1.99	0.44
4:AG:57:ARG:NE	4:AG:205:GLU:OE2	2.51	0.44
9:AL:10:ARG:HG2	9:AL:105:ASP:HB2	2.00	0.44
9:AL:11:LYS:O	9:AL:13:ALA:N	2.49	0.44
46:B3:83:PRO:O	46:B3:84:LEU:CB	2.66	0.44
25:BA:1081:U:H2'	25:BA:1082:U:O4'	2.18	0.44
25:BA:1144:G:H2'	25:BA:1145:C:H6	1.83	0.44
25:BA:1261:C:C2'	25:BA:1262:A:O5'	2.66	0.44
25:BA:2050:C:H2'	25:BA:2051:A:O4'	2.18	0.44
25:BA:2182:G:C2	25:BA:2183:C:C2	3.06	0.44
25:BA:2307:G:N9	25:BA:2311:A:C2	2.86	0.44
25:BA:2341:G:H2'	25:BA:2342:C:C6	2.53	0.44
25:BA:270(D):C:O2	25:BA:270(W):G:C2	2.70	0.44
25:BA:2870:C:H2'	25:BA:2871:C:O4'	2.17	0.44
25:BA:612:G:H2'	25:BA:613:U:O2	2.17	0.44
25:BA:773:U:H4'	27:BD:47:GLY:HA3	2.00	0.44
25:BA:774:A:C2	25:BA:787:U:O2'	2.52	0.44
26:BB:43:C:H1'	30:BG:93:THR:O	2.18	0.44
27:BD:12:SER:O	27:BD:16:MET:HB2	2.18	0.44
28:BE:84:PHE:CZ	28:BE:86:PRO:HB3	2.53	0.44
29:BF:198:ALA:O	29:BF:201:VAL:HG13	2.17	0.44
30:BG:8:LYS:HE2	30:BG:12:TYR:CE2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BO:144:GLU:HA	35:BO:145:PRO:HD3	1.71	0.44
25:BA:806:C:P	35:BO:41:ARG:HH21	2.40	0.44
39:BR:6:LEU:HA	39:BR:9:LEU:HB2	1.99	0.44
42:BS:96:ILE:H	42:BS:96:ILE:HD13	1.83	0.44
44:BU:94:LYS:O	44:BU:101:LYS:HG3	2.18	0.44
44:BU:95:LYS:HB2	44:BU:95:LYS:HE3	1.85	0.44
45:BV:16:SER:O	45:BV:20:ARG:HB2	2.18	0.44
45:BV:48:PHE:CE2	45:BV:71:VAL:HG21	2.51	0.44
36:BP:21:THR:CG2	45:BV:78:LYS:HB3	2.48	0.44
1:CA:1025:U:HO2'	1:CA:1026:G:P	2.41	0.44
1:CA:1202:G:C2	14:CQ:42:ILE:HG21	2.52	0.44
1:CA:1299:A:C6	1:CA:1301:U:C2	3.05	0.44
1:CA:224:C:H2'	1:CA:225:C:H6	1.81	0.44
1:CA:961:U:H2'	1:CA:962:C:O5'	2.17	0.44
22:CB:47:U:H2'	22:CB:48:C:H6	1.72	0.44
22:CD:34:U:H5''	22:CD:35:G:OP2	2.17	0.44
3:CF:127:ARG:HD2	3:CF:127:ARG:N	2.33	0.44
4:CG:62:GLN:NE2	4:CG:65:ARG:HE	2.12	0.44
8:CK:116:LYS:HD2	8:CK:129:VAL:CG1	2.45	0.44
8:CK:19:VAL:O	8:CK:20:TYR:C	2.56	0.44
12:CO:81:LEU:HD12	12:CO:101:VAL:HG11	2.00	0.44
13:CP:99:ARG:H	13:CP:101:GLN:NE2	2.16	0.44
40:D1:52:ARG:HH11	40:D1:52:ARG:HB3	1.82	0.44
46:D3:31:VAL:CG2	46:D3:67:VAL:HG23	2.37	0.44
25:DA:125:G:C6	53:D7:10:ARG:HG3	2.52	0.44
25:DA:1285:G:C5	25:DA:1329:U:C4	3.06	0.44
25:DA:1384:A:N3	25:DA:1405:U:H1'	2.31	0.44
25:DA:2014:A:H2'	25:DA:2015:A:C8	2.53	0.44
25:DA:2157:G:C2'	25:DA:2158:A:H8	2.31	0.44
25:DA:2180:U:H2'	25:DA:2181:G:O4'	2.17	0.44
25:DA:860:U:C2	25:DA:2268:A:C8	3.05	0.44
25:DA:2365:G:H4'	46:D3:60:PHE:CZ	2.52	0.44
25:DA:2731:G:C6	25:DA:2732:G:O6	2.70	0.44
25:DA:611:C:C2'	25:DA:612:G:H5'	2.47	0.44
28:DE:38:THR:OG1	28:DE:39:PRO:HD2	2.17	0.44
28:DE:5:LEU:HD23	28:DE:49:LEU:HB2	2.00	0.44
29:DF:80:ALA:O	29:DF:83:PHE:HB2	2.18	0.44
32:DK:77:LEU:O	32:DK:79:ILE:N	2.51	0.44
35:DO:6:LEU:HA	35:DO:6:LEU:HD13	1.69	0.44
1:AA:1227:A:H3'	1:AA:1227:A:H8	1.83	0.44
1:AA:1302:U:H3'	1:AA:1303:C:H5'	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1309:G:C6	1:AA:1329:A:C2	3.06	0.44
1:AA:1374:A:O2'	7:AJ:28:ASN:HB3	2.17	0.44
1:AA:109:A:N7	1:AA:326:G:H2'	2.33	0.44
1:AA:37:U:O2'	1:AA:38:G:H5'	2.18	0.44
1:AA:860:A:H2'	1:AA:861:G:O4'	2.17	0.44
22:AB:7:G:N1	22:AB:58:G:C5	2.86	0.44
22:AD:63:U:C4	22:AD:64:U:C4	3.06	0.44
22:AD:16:C:C4	22:AD:68:A:C4	3.05	0.44
3:AF:22:TRP:CH2	3:AF:32:LEU:HB2	2.52	0.44
4:AG:110:PHE:CE2	4:AG:148:VAL:HG23	2.53	0.44
8:AK:109:ILE:CG2	8:AK:137:VAL:HB	2.48	0.44
10:AM:57:LYS:HD2	10:AM:60:ARG:HH12	1.81	0.44
12:AO:61:TYR:HB3	12:AO:62:GLU:H	1.44	0.44
46:B3:43:THR:O	46:B3:43:THR:HG23	2.16	0.44
46:B3:66:VAL:CG2	46:B3:82:ARG:HB3	2.47	0.44
54:B8:52:LYS:H	54:B8:53:PRO:CD	2.18	0.44
54:B8:61:LEU:HG	54:B8:61:LEU:H	1.61	0.44
25:BA:1138:G:H21	33:BM:106:MET:CE	2.31	0.44
25:BA:205:G:O2'	25:BA:206:U:P	2.76	0.44
25:BA:2562:U:O2'	34:BN:23:ARG:NH1	2.41	0.44
25:BA:330:A:C2	25:BA:1210:A:C2'	2.98	0.44
25:BA:456:C:O5'	25:BA:456:C:H6	2.00	0.44
25:BA:638:G:H2'	25:BA:639:U:C6	2.53	0.44
25:BA:693:C:O2'	25:BA:694:U:H5'	2.18	0.44
27:BD:31:LYS:HB3	27:BD:104:TYR:OH	2.17	0.44
25:BA:1843:C:H5'	27:BD:253:GLN:OE1	2.17	0.44
28:BE:51:PHE:O	28:BE:74:PRO:HB2	2.18	0.44
30:BG:112:PRO:HA	50:B4:37:SER:CB	2.45	0.44
30:BG:116:ASP:O	30:BG:117:PHE:HB3	2.18	0.44
32:BK:126:TYR:HB2	32:BK:140:LEU:CD2	2.40	0.44
32:BK:57:ARG:HA	32:BK:60:GLU:HB3	2.00	0.44
32:BK:81:VAL:HG21	32:BK:88:ILE:HD13	2.00	0.44
35:BO:77:ARG:HB2	35:BO:78:PRO:HD2	2.00	0.44
36:BP:59:ARG:HD2	36:BP:59:ARG:H	1.82	0.44
36:BP:66:ILE:CG1	36:BP:67:ARG:H	2.27	0.44
38:BQ:106:ARG:NH2	38:BQ:107:GLU:CB	2.81	0.44
42:BS:75:TYR:CZ	42:BS:104:THR:HG21	2.53	0.44
25:BA:498:G:H21	44:BU:47:LYS:HZ2	1.65	0.44
22:CD:52:G:H2'	22:CD:53:A:H8	1.75	0.44
2:CE:12:GLU:O	2:CE:15:VAL:N	2.45	0.44
7:CJ:20:ASP:O	7:CJ:23:VAL:HG23	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CJ:89:MET:HA	7:CJ:89:MET:CE	2.47	0.44
13:CP:22:ILE:HB	13:CP:25:ILE:HG13	2.00	0.44
40:D1:19:LYS:O	40:D1:22:LYS:HB2	2.17	0.44
25:DA:996:A:H4'	40:D1:92:ARG:CZ	2.48	0.44
41:D2:39:LEU:HD23	41:D2:51:VAL:HA	1.98	0.44
51:D5:16:ARG:NH1	51:D5:17:ASP:OD1	2.51	0.44
51:D5:8:LYS:O	51:D5:9:LYS:HG3	2.17	0.44
52:D6:45:LYS:HD3	52:D6:45:LYS:HA	1.55	0.44
52:D6:48:VAL:HG21	52:D6:50:ARG:NH2	2.32	0.44
25:DA:1088:A:C5'	25:DA:1089:G:H5'	2.34	0.44
25:DA:1146:C:O2'	25:DA:1147:C:H5'	2.18	0.44
25:DA:1168:G:O2'	25:DA:1169:G:H5'	2.18	0.44
25:DA:1324:G:N2	25:DA:1331:A:C4	2.86	0.44
25:DA:1483:G:C2	25:DA:1484:G:C8	3.06	0.44
25:DA:1952:A:C5	34:DN:22:ILE:HD12	2.53	0.44
25:DA:528:A:C2	25:DA:2043:C:C5'	2.98	0.44
25:DA:2104:G:C2	25:DA:2186:G:C2	3.06	0.44
25:DA:228:A:C8	25:DA:228:A:C3'	3.01	0.44
25:DA:2873:A:H8	37:D0:5:LYS:HA	1.82	0.44
25:DA:2884:U:H2'	25:DA:2885:C:H5'	1.99	0.44
25:DA:754:C:H2'	25:DA:755:C:C6	2.52	0.44
25:DA:864:G:N2	25:DA:913:U:C2	2.85	0.44
28:DE:119:ARG:HG2	28:DE:160:TYR:CB	2.48	0.44
28:DE:14:ILE:HD11	28:DE:173:VAL:CG1	2.48	0.44
29:DF:161:GLU:O	29:DF:165:ARG:N	2.48	0.44
34:DN:1:MET:HE1	34:DN:32:TYR:CE2	2.53	0.44
29:DF:33:LEU:HD23	35:DO:1:MET:CE	2.47	0.44
42:DS:43:GLY:O	42:DS:44:ALA:C	2.56	0.44
42:DS:62:HIS:O	42:DS:63:ASP:C	2.56	0.44
48:DW:16:LEU:O	48:DW:16:LEU:CG	2.65	0.44
24:A1:16:A:H2'	24:A1:17:U:O4'	2.18	0.44
1:AA:1133:G:C4	1:AA:1134:G:C8	3.06	0.44
1:AA:1146:A:C2	1:AA:1147:C:H1'	2.53	0.44
1:AA:1319:A:O2'	1:AA:1323:G:N7	2.49	0.44
1:AA:1350:A:C6	1:AA:1351:U:N3	2.86	0.44
1:AA:1434:A:H2'	1:AA:1435:G:O4'	2.17	0.44
1:AA:420:U:O2'	1:AA:423:G:O6	2.33	0.44
1:AA:510:A:H5''	1:AA:511:C:OP2	2.18	0.44
1:AA:784:C:H2'	1:AA:785:G:C8	2.53	0.44
1:AA:81:G:N2	1:AA:88:C:C4	2.85	0.44
22:AB:62:G:C2	22:AB:71:C:C2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AB:84:C:H2'	22:AB:85:A:C4	2.53	0.44
2:AE:178:ARG:O	8:AK:71:GLY:HA2	2.18	0.44
7:AJ:147:ALA:C	7:AJ:149:ARG:H	2.20	0.44
9:AL:39:GLY:O	9:AL:41:VAL:N	2.51	0.44
46:B3:19:LYS:HD3	46:B3:19:LYS:HA	1.66	0.44
51:B5:56:LYS:CD	51:B5:56:LYS:N	2.81	0.44
25:BA:1535:U:H3'	25:BA:1535:U:O2	2.18	0.44
25:BA:1973:G:H2'	25:BA:1974:C:C6	2.52	0.44
25:BA:1981:A:H5''	25:BA:1982:C:OP2	2.18	0.44
25:BA:2111:C:C6	25:BA:2118:U:H5'	2.52	0.44
25:BA:2169:A:C6	25:BA:2170:A:C6	3.06	0.44
25:BA:2184:G:C6	25:BA:2185:C:C4	3.06	0.44
25:BA:222:A:C4'	25:BA:223:A:OP1	2.65	0.44
25:BA:2371:G:C4'	52:B6:45:LYS:HG3	2.48	0.44
25:BA:372:G:O2'	25:BA:373:U:P	2.76	0.44
25:BA:654(D):G:N1	25:BA:654(Q):C:N4	2.38	0.44
25:BA:7:G:O2'	25:BA:8:A:H5'	2.17	0.44
26:BB:7:G:H1	26:BB:113:C:H42	1.65	0.44
31:BH:77:LYS:CE	31:BH:138:LYS:HD2	2.46	0.44
31:BH:46:GLU:OE1	31:BH:51:ARG:NH1	2.50	0.44
32:BK:37:VAL:HG11	32:BK:43:ASN:ND2	2.33	0.44
25:BA:389:G:H1	35:BO:71:VAL:HG12	1.82	0.44
39:BR:14:TYR:N	39:BR:14:TYR:CD1	2.85	0.44
25:BA:2875:C:O2'	39:BR:5:ALA:HB3	2.18	0.44
34:BN:80:ASP:OD2	39:BR:71:GLY:HA3	2.18	0.44
39:BR:19:LEU:HD22	39:BR:86:ILE:CG2	2.48	0.44
1:CA:593:G:H1	1:CA:646:U:H3	1.65	0.44
1:CA:689:C:H2'	1:CA:690:G:H5'	2.00	0.44
1:CA:978:A:H5''	1:CA:979:C:OP2	2.18	0.44
22:CB:52:G:C8	22:CB:52:G:OP2	2.69	0.44
2:CE:18:GLY:H	2:CE:42:ILE:HG22	1.83	0.44
2:CE:45:GLN:O	2:CE:47:THR:N	2.51	0.44
1:CA:1205:U:O2'	3:CF:194:GLY:HA2	2.17	0.44
3:CF:77:ILE:O	3:CF:83:ARG:HB3	2.18	0.44
4:CG:98:GLU:OE2	4:CG:103:ASN:ND2	2.47	0.44
10:CM:80:LYS:HB2	10:CM:80:LYS:NZ	2.33	0.44
13:CP:90:LEU:HD21	13:CP:93:ARG:HH21	1.82	0.44
16:CS:3:LYS:O	16:CS:21:VAL:HA	2.18	0.44
25:DA:2019:A:O4'	40:D1:34:LYS:HE3	2.18	0.44
40:D1:90:VAL:HG12	40:D1:91:ASP:H	1.83	0.44
25:DA:1022:G:C1'	25:DA:1023:U:OP2	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1072:C:H6	25:DA:1072:C:O5'	2.01	0.44
25:DA:1217:C:P	40:D1:15:LYS:HE3	2.58	0.44
25:DA:1645:G:C5'	25:DA:1646:C:H5'	2.47	0.44
25:DA:2133:G:C5	25:DA:2157:G:O6	2.71	0.44
25:DA:2157:G:O2'	25:DA:2158:A:H8	2.01	0.44
25:DA:2271:G:C5	25:DA:2272:U:C4	3.06	0.44
25:DA:2439:A:P	25:DA:2439:A:H3'	2.58	0.44
25:DA:2711:A:OP1	25:DA:2712(A):A:OP2	2.35	0.44
25:DA:440:G:H2'	25:DA:441:U:H6	1.83	0.44
25:DA:704:G:N3	25:DA:726:G:C2	2.86	0.44
25:DA:684:G:O2'	25:DA:788:A:N7	2.47	0.44
25:DA:888:C:C4'	25:DA:889:C:OP2	2.66	0.44
27:DD:10:THR:OG1	27:DD:13:ARG:HB2	2.18	0.44
28:DE:182:LEU:C	28:DE:183:LEU:HD12	2.38	0.44
29:DF:12:LEU:O	29:DF:13:SER:C	2.56	0.44
30:DG:145:THR:C	30:DG:147:ASP:H	2.20	0.44
31:DH:26:VAL:O	31:DH:26:VAL:HG22	2.17	0.44
32:DK:125:GLU:OE1	32:DK:141:LYS:HB2	2.18	0.44
35:DO:106:LEU:O	35:DO:107:LYS:CB	2.51	0.44
36:DP:26:TYR:C	36:DP:26:TYR:CD2	2.91	0.44
47:DZ:91:LYS:CG	47:DZ:92:LYS:N	2.78	0.44
1:AA:101:A:C4	1:AA:102:G:C8	3.06	0.43
1:AA:1030:C:H6	1:AA:1030:C:O5'	2.01	0.43
1:AA:1058:G:H2'	1:AA:1059:C:O4'	2.17	0.43
1:AA:1262:C:N4	1:AA:1273:G:H1	2.15	0.43
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.53	0.43
23:AC:19:G:C4	23:AC:59:A:C2	3.06	0.43
22:AD:21:A:C5	22:AD:46:G:C8	3.05	0.43
2:AE:120:ALA:C	2:AE:121:LEU:HD12	2.38	0.43
4:AG:26:CYS:HA	4:AG:31:CYS:CB	2.48	0.43
5:AH:42:GLY:HA2	5:AH:65:ASN:O	2.18	0.43
8:AK:100:ILE:HA	8:AK:101:PRO:HD3	1.77	0.43
9:AL:50:LEU:HD23	9:AL:85:LEU:HD11	1.99	0.43
17:AT:6:LEU:CD2	17:AT:23:VAL:HG11	2.48	0.43
19:AV:16:LEU:O	19:AV:20:LEU:HG	2.18	0.43
19:AV:83:HIS:HB3	19:AV:84:GLY:H	1.49	0.43
37:B0:83:ILE:HD13	37:B0:86:ARG:HH12	1.83	0.43
53:B7:23:ARG:O	53:B7:28:ARG:NH1	2.50	0.43
53:B7:25:PRO:HA	53:B7:28:ARG:CZ	2.48	0.43
25:BA:1288:U:C2	25:BA:1327:C:C2	3.06	0.43
25:BA:1400:G:H2'	25:BA:1401:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1778:U:C4	25:BA:1784:A:C4	3.06	0.43
25:BA:2014:A:HO2'	51:B5:2:ALA:CB	2.17	0.43
25:BA:2115:G:N2	25:BA:2172:U:O2	2.51	0.43
25:BA:2114:A:C6	25:BA:2168:G:N2	2.86	0.43
25:BA:2261:C:C5	46:B3:16:SER:HB3	2.52	0.43
25:BA:2734:A:H2'	25:BA:2735:G:C5'	2.48	0.43
25:BA:639:U:H2'	25:BA:640:C:H6	1.80	0.43
25:BA:668:G:H2'	25:BA:670:A:H62	1.83	0.43
25:BA:722:A:H2'	25:BA:723:G:C8	2.53	0.43
25:BA:912:C:C2	25:BA:913:U:C5	3.06	0.43
27:BD:182:LEU:HD23	27:BD:182:LEU:HA	1.79	0.43
28:BE:21:VAL:HG23	28:BE:22:PRO:CD	2.48	0.43
29:BF:13:SER:OG	29:BF:14:PRO:HD2	2.17	0.43
30:BG:8:LYS:HE2	30:BG:12:TYR:HE2	1.83	0.43
30:BG:63:ILE:HD12	30:BG:141:PHE:CD1	2.53	0.43
31:BH:118:PRO:HG3	31:BH:144:VAL:CG2	2.48	0.43
31:BH:16:SER:O	31:BH:17:VAL:CB	2.65	0.43
31:BH:16:SER:O	31:BH:17:VAL:HB	2.18	0.43
33:BM:7:LYS:CD	33:BM:7:LYS:H	2.31	0.43
25:BA:1952:A:C5	34:BN:22:ILE:HD11	2.53	0.43
35:BO:97:PRO:HD3	35:BO:126:VAL:O	2.18	0.43
35:BO:99:LEU:HD12	35:BO:102:ARG:HH21	1.83	0.43
38:BQ:56:LEU:O	38:BQ:57:LYS:C	2.56	0.43
38:BQ:53:SER:HA	38:BQ:58:LEU:HD21	2.00	0.43
43:BT:50:LYS:H	43:BT:87:GLN:HE22	1.64	0.43
1:CA:1298:C:H5	7:CJ:114:ARG:NE	2.16	0.43
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.18	0.43
1:CA:281:G:H8	1:CA:281:G:OP2	2.00	0.43
1:CA:404:U:H2'	1:CA:405:U:C6	2.53	0.43
1:CA:505:G:C6	1:CA:535:A:C2	3.06	0.43
2:CE:111:ARG:HH11	2:CE:111:ARG:HA	1.83	0.43
6:CI:35:ALA:HB1	6:CI:65:VAL:CG1	2.48	0.43
7:CJ:32:ARG:C	7:CJ:34:GLY:N	2.69	0.43
9:CL:42:ARG:HD3	9:CL:71:SER:HB3	2.00	0.43
1:CA:1329:A:H5''	13:CP:25:ILE:O	2.19	0.43
40:D1:88:ILE:C	40:D1:90:VAL:H	2.20	0.43
41:D2:20:LEU:O	41:D2:94:LEU:N	2.34	0.43
46:D3:45:PHE:CE2	46:D3:69:PHE:HE2	2.36	0.43
25:DA:1037:G:C2	25:DA:1119:C:C2	3.06	0.43
25:DA:128:C:H4'	25:DA:129:C:OP1	2.18	0.43
25:DA:1397:U:C2'	25:DA:1398:C:OP1	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1510:A:H8	25:DA:1510:A:OP2	2.01	0.43
25:DA:270:A:OP2	25:DA:270(Y):G:N1	2.43	0.43
25:DA:2738:A:C2	25:DA:2739:U:H1'	2.52	0.43
25:DA:507:A:H5''	25:DA:508:G:H3'	2.00	0.43
25:DA:572:A:H5''	25:DA:573:G:OP2	2.18	0.43
25:DA:635:C:O2'	25:DA:639:U:OP1	2.34	0.43
27:DD:31:LYS:O	27:DD:35:LYS:O	2.36	0.43
28:DE:61:ARG:C	28:DE:63:LEU:N	2.71	0.43
30:DG:5:VAL:HG12	30:DG:8:LYS:H	1.84	0.43
32:DK:52:ARG:HD2	32:DK:52:ARG:C	2.38	0.43
34:DN:118:ALA:HA	34:DN:119:PRO:HD3	1.89	0.43
34:DN:47:ILE:CD1	34:DN:48:PRO:HD2	2.48	0.43
35:DO:64:LYS:HG2	35:DO:65:ARG:H	1.79	0.43
36:DP:102:VAL:HG12	36:DP:102:VAL:O	2.18	0.43
36:DP:78:PRO:O	36:DP:79:LEU:HG	2.18	0.43
38:DQ:84:GLN:HB3	38:DQ:109:GLY:HA3	1.99	0.43
1:AA:1003:G:H21	1:AA:1005:A:P	2.41	0.43
1:AA:1003:G:O3'	1:AA:1025:U:O4	2.35	0.43
1:AA:1137:C:O2'	1:AA:1138:G:C2	2.69	0.43
1:AA:1164:G:C6	1:AA:1173:G:C6	3.05	0.43
1:AA:1173:G:H2'	1:AA:1174:G:O4'	2.18	0.43
1:AA:1206:G:O4'	3:AF:194:GLY:HA2	2.18	0.43
1:AA:198:G:C6	1:AA:220:G:C2	3.05	0.43
1:AA:226:G:N2	1:AA:227:G:H1'	2.33	0.43
1:AA:109:A:H2'	1:AA:326:G:N2	2.33	0.43
1:AA:517:G:N2	1:AA:533:A:OP2	2.49	0.43
1:AA:542:G:O2'	1:AA:543:C:H5'	2.17	0.43
1:AA:647:C:H2'	1:AA:648:A:H8	1.83	0.43
1:AA:652:U:O2'	1:AA:653:A:H5''	2.18	0.43
1:AA:976:G:C8	1:AA:1358:U:C2	3.05	0.43
22:AB:66:G:H2'	22:AB:67:A:H5'	2.00	0.43
22:AD:21:A:C6	22:AD:55:U:O4	2.71	0.43
3:AF:12:LEU:C	3:AF:14:ILE:H	2.20	0.43
3:AF:76:VAL:O	3:AF:83:ARG:HG2	2.18	0.43
6:AI:14:LEU:HD11	6:AI:84:ASN:CG	2.38	0.43
9:AL:21:PRO:HA	9:AL:58:HIS:O	2.18	0.43
1:AA:538:G:P	12:AO:112:LYS:HG2	2.58	0.43
17:AT:60:ILE:HG21	17:AT:74:LEU:HD23	2.00	0.43
20:AW:30:LYS:NZ	20:AW:80:ARG:HH12	2.16	0.43
21:AX:2:GLY:C	21:AX:4:GLY:N	2.65	0.43
37:B0:81:ASP:O	37:B0:85:PRO:HG2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:B8:33:ASN:CA	54:B8:36:LYS:HE3	2.47	0.43
54:B8:58:ILE:HA	54:B8:58:ILE:HD13	1.68	0.43
25:BA:1049:C:C2'	25:BA:1050:A:H5''	2.46	0.43
25:BA:1066:U:H6	25:BA:1069:A:OP2	2.01	0.43
25:BA:1287:A:C8	37:B0:104:ARG:HD3	2.53	0.43
25:BA:1416:G:C2'	25:BA:1417:C:C6	3.02	0.43
25:BA:2346:A:H5''	25:BA:2383:G:O4'	2.18	0.43
25:BA:2469:A:H2'	25:BA:2470:G:O4'	2.18	0.43
25:BA:2471:C:H2'	25:BA:2472:G:O4'	2.18	0.43
25:BA:2667:C:H1'	31:BH:109:PHE:HD2	1.83	0.43
25:BA:2839:G:C5'	37:B0:46:GLY:HA2	2.48	0.43
25:BA:2849:U:H1'	25:BA:2866:U:O2	2.17	0.43
25:BA:333:G:C5	25:BA:334:C:C5	3.06	0.43
25:BA:2208:U:O4'	27:BD:151:LYS:HE2	2.18	0.43
27:BD:35:LYS:CG	27:BD:64:ILE:HG23	2.48	0.43
28:BE:179:GLU:O	28:BE:181:LEU:HD13	2.17	0.43
28:BE:31:CYS:HB3	28:BE:49:LEU:HG	2.00	0.43
31:BH:85:LYS:HE3	31:BH:142:GLY:HA2	2.00	0.43
32:BK:135:GLU:HB2	32:BK:136:VAL:H	1.42	0.43
34:BN:1:MET:CE	34:BN:67:LYS:HE2	2.48	0.43
25:BA:2562:U:H1'	34:BN:23:ARG:NH1	2.33	0.43
39:BR:121:ILE:O	39:BR:124:ASP:HB2	2.17	0.43
43:BT:64:LYS:HE3	43:BT:73:ARG:NH2	2.33	0.43
44:BU:81:LYS:CE	44:BU:96:ILE:HD12	2.47	0.43
45:BV:121:HIS:HB3	45:BV:123:ASP:O	2.18	0.43
1:CA:987:G:N2	1:CA:1218:C:N3	2.60	0.43
1:CA:1319:A:OP1	19:CV:10:PHE:HB3	2.18	0.43
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.53	0.43
1:CA:464:G:C5	1:CA:466:C:OP2	2.70	0.43
1:CA:558:G:H5''	1:CA:559:A:OP2	2.19	0.43
1:CA:926:G:C6	1:CA:1505:G:C6	3.06	0.43
2:CE:12:GLU:HB3	2:CE:213:LEU:CD1	2.48	0.43
2:CE:46:LYS:HA	2:CE:49:GLU:HB2	2.01	0.43
1:CA:542:G:P	4:CG:10:ARG:HH22	2.42	0.43
4:CG:110:PHE:HD1	4:CG:110:PHE:H	1.66	0.43
6:CI:33:TYR:CZ	6:CI:78:GLU:HG3	2.53	0.43
9:CL:4:TYR:CE1	9:CL:59:PHE:HE2	2.36	0.43
9:CL:28:VAL:HA	9:CL:63:ILE:O	2.18	0.43
13:CP:23:TYR:HB3	13:CP:67:GLU:HA	1.99	0.43
20:CW:100:ILE:HD12	20:CW:100:ILE:N	2.27	0.43
37:D0:59:ASP:N	37:D0:59:ASP:OD2	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:D2:85:LYS:HE3	41:D2:87:HIS:N	2.33	0.43
50:D4:6:HIS:HA	50:D4:7:PRO:HD3	1.87	0.43
42:DS:38:TYR:O	51:D5:28:PRO:HB3	2.18	0.43
51:D5:41:PRO:HA	51:D5:42:PRO:HD2	1.84	0.43
25:DA:1152:C:H5''	40:D1:80:ILE:HG22	2.00	0.43
25:DA:1170:G:C6	25:DA:1179:C:N3	2.86	0.43
25:DA:1218:C:H42	25:DA:1231:G:H1	1.66	0.43
25:DA:1385:G:H1'	25:DA:1386:C:C6	2.53	0.43
25:DA:1784:A:H4'	25:DA:1785:A:H5''	1.98	0.43
25:DA:668:G:H2'	25:DA:670:A:H62	1.83	0.43
25:DA:724:U:H2'	25:DA:725:G:O4'	2.18	0.43
25:DA:862:G:H2'	25:DA:863:A:O4'	2.18	0.43
25:DA:93:C:H5'	25:DA:94:G:OP2	2.17	0.43
27:DD:144:ALA:HB3	27:DD:192:THR:HG23	1.99	0.43
27:DD:24:ILE:CD1	27:DD:84:TYR:HB2	2.48	0.43
27:DD:35:LYS:NZ	27:DD:65:ILE:HA	2.34	0.43
32:DK:114:LEU:HD13	32:DK:114:LEU:O	2.18	0.43
33:DM:5:VAL:HA	33:DM:6:PRO:HD3	1.84	0.43
34:DN:53:LYS:HD2	34:DN:53:LYS:N	2.34	0.43
36:DP:79:LEU:O	36:DP:81:VAL:HG13	2.18	0.43
44:DU:80:GLY:O	44:DU:81:LYS:HG3	2.18	0.43
45:DV:24:LEU:C	45:DV:24:LEU:HD12	2.39	0.43
48:DW:25:VAL:HG12	48:DW:57:ILE:HG23	1.98	0.43
1:AA:210:U:C2'	1:AA:216:G:OP2	2.66	0.43
1:AA:422:C:O2	1:AA:422:C:H3'	2.17	0.43
1:AA:51:A:OP2	1:AA:52:G:H8	2.01	0.43
1:AA:543:C:O2'	1:AA:544:G:H5'	2.18	0.43
1:AA:595:G:H22	1:AA:643:C:H41	1.66	0.43
1:AA:693:G:C6	1:AA:694:A:C6	3.05	0.43
1:AA:942:G:H2'	1:AA:943:U:H6	1.83	0.43
22:AD:22:A:C2'	22:AD:22:A:N3	2.78	0.43
11:AN:54:ARG:NH1	22:AD:40:U:H4'	2.34	0.43
22:AD:70:C:O2'	22:AD:71:C:H5'	2.17	0.43
2:AE:141:GLU:O	2:AE:145:LEU:HD23	2.19	0.43
3:AF:188:LEU:HD23	3:AF:188:LEU:HA	1.82	0.43
4:AG:31:CYS:O	4:AG:31:CYS:SG	2.76	0.43
6:AI:64:GLN:HE21	6:AI:64:GLN:HB3	1.58	0.43
9:AL:79:LEU:O	9:AL:82:ALA:HB3	2.19	0.43
11:AN:67:ASP:OD2	11:AN:71:LYS:HE3	2.18	0.43
16:AS:45:THR:HG23	16:AS:46:PRO:HD2	1.99	0.43
17:AT:67:LYS:O	17:AT:68:ARG:CB	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AU:66:LEU:O	18:AU:70:ILE:HG13	2.18	0.43
25:BA:2355:C:C4'	46:B3:36:ILE:HD12	2.48	0.43
54:B8:22:VAL:HB	54:B8:53:PRO:HB2	2.00	0.43
25:BA:1053:C:C2	25:BA:1107:G:C2	3.07	0.43
25:BA:1264:G:OP1	51:B5:19:ARG:NH2	2.39	0.43
25:BA:1266:G:O5'	42:BS:15:ARG:NH2	2.52	0.43
25:BA:1416:G:O2'	25:BA:1417:C:H6	2.01	0.43
25:BA:1771:C:O2'	25:BA:1786:A:C8	2.67	0.43
25:BA:1871:A:H2'	25:BA:1872:A:H8	1.81	0.43
25:BA:2115:G:C6	25:BA:2117:A:C8	3.06	0.43
25:BA:2157:G:C2'	25:BA:2158:A:OP2	2.66	0.43
25:BA:2345:G:N3	25:BA:2381:C:H2'	2.33	0.43
25:BA:2630:G:H2'	25:BA:2631:G:H8	1.83	0.43
25:BA:2774:C:H2'	25:BA:2775:A:O4'	2.18	0.43
25:BA:880:G:O2'	25:BA:881:G:O5'	2.36	0.43
25:BA:889:C:O2	25:BA:889:C:O5'	2.37	0.43
28:BE:181:LEU:HD21	39:BR:7:ILE:HG23	1.99	0.43
30:BG:129:GLY:O	30:BG:161:THR:HB	2.17	0.43
30:BG:179:PRO:HG3	50:B4:38:LYS:CE	2.47	0.43
32:BK:86:THR:CA	32:BK:123:LEU:HD13	2.48	0.43
32:BK:37:VAL:HG12	32:BK:38:LEU:N	2.32	0.43
34:BN:66:LYS:H	34:BN:82:ASN:ND2	2.15	0.43
35:BO:39:LYS:HA	35:BO:45:LEU:HD13	1.99	0.43
44:BU:81:LYS:HG3	44:BU:97:ARG:NH1	2.32	0.43
36:BP:21:THR:HG22	45:BV:78:LYS:HB3	2.00	0.43
47:BZ:86:SER:O	47:BZ:90:ILE:HG13	2.18	0.43
1:CA:1055:A:N7	1:CA:1206:G:C2	2.87	0.43
1:CA:308:C:H2'	1:CA:309:G:C8	2.54	0.43
1:CA:410:G:N1	1:CA:431:A:OP2	2.47	0.43
1:CA:625:G:H2'	1:CA:626:U:C6	2.53	0.43
22:CB:42:U:O2	22:CB:42:U:H2'	2.18	0.43
1:CA:673:G:O3'	6:CI:87:ARG:NH2	2.51	0.43
10:CM:78:ASN:O	10:CM:80:LYS:N	2.51	0.43
13:CP:5:ALA:HB2	13:CP:22:ILE:HD13	2.00	0.43
15:CR:48:LYS:HA	15:CR:48:LYS:HD3	1.81	0.43
16:CS:19:ILE:N	16:CS:37:GLY:O	2.48	0.43
18:CU:26:LEU:HD13	18:CU:26:LEU:N	2.34	0.43
37:D0:84:ALA:N	37:D0:85:PRO:CD	2.80	0.43
25:DA:458:G:O2'	53:D7:39:ARG:HD3	2.19	0.43
25:DA:1036:G:P	31:DH:59:ARG:HB2	2.58	0.43
25:DA:1028:A:H61	25:DA:1125:G:H2'	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:138:G:H5'	25:DA:139:G:OP2	2.18	0.43
25:DA:1520:U:H2'	25:DA:1521:G:O4'	2.18	0.43
25:DA:2050:C:H1'	28:DE:156:MET:HE1	2.00	0.43
25:DA:2400:G:N2	25:DA:2417:C:C2	2.86	0.43
25:DA:2661:G:H2'	25:DA:2662:A:O4'	2.18	0.43
25:DA:2702:U:O2'	25:DA:2703:C:H5	1.99	0.43
25:DA:270(Q):C:H2'	25:DA:270(R):G:O4'	2.18	0.43
25:DA:284:U:H2'	25:DA:285:C:C6	2.53	0.43
25:DA:30:G:H2'	25:DA:31:C:H6	1.78	0.43
25:DA:372:G:O2'	25:DA:373:U:P	2.75	0.43
25:DA:543:C:N4	25:DA:550:G:H1	2.12	0.43
25:DA:638:G:H2'	25:DA:639:U:C6	2.53	0.43
28:DE:116:VAL:HG12	28:DE:116:VAL:O	2.18	0.43
28:DE:96:PHE:O	28:DE:175:VAL:HG11	2.18	0.43
29:DF:25:PRO:C	29:DF:27:GLU:H	2.21	0.43
32:DK:6:LEU:O	32:DK:6:LEU:HD23	2.18	0.43
35:DO:121:LYS:O	35:DO:123:LEU:HD23	2.19	0.43
35:DO:23:PRO:HB3	41:D2:80:GLN:HG2	1.98	0.43
35:DO:46:LYS:HD2	35:DO:51:PHE:CZ	2.52	0.43
25:DA:2319:G:N7	38:DQ:3:ARG:HB3	2.33	0.43
43:DT:18:TYR:C	43:DT:20:GLY:H	2.22	0.43
44:DU:89:PHE:HD1	44:DU:90:LEU:H	1.64	0.43
45:DV:169:GLU:HA	45:DV:169:GLU:OE1	2.18	0.43
45:DV:55:HIS:O	45:DV:70:LEU:HD21	2.17	0.43
47:DZ:82:LEU:HB2	47:DZ:83:GLU:OE2	2.17	0.43
1:AA:1215:G:C6	1:AA:1216:G:C5	3.06	0.43
1:AA:1227:A:H3'	1:AA:1227:A:C8	2.53	0.43
1:AA:1447:G:N2	1:AA:1460:A:H1'	2.33	0.43
1:AA:684:A:N6	1:AA:685:G:C6	2.87	0.43
1:AA:940:C:H2'	1:AA:941:G:C8	2.53	0.43
1:AA:958:A:C6	1:AA:959:A:C6	3.06	0.43
23:AC:59:A:H4'	23:AC:60:A:OP1	2.19	0.43
22:AD:59:A:C2	22:AD:74:C:C2	3.06	0.43
5:AH:36:ASP:CG	5:AH:38:GLN:HB2	2.37	0.43
5:AH:59:GLY:O	5:AH:63:ARG:HG2	2.17	0.43
9:AL:23:ASN:H	9:AL:23:ASN:ND2	2.15	0.43
11:AN:110:ASP:HB2	18:AU:88:LYS:HD3	2.00	0.43
12:AO:42:PRO:CG	12:AO:48:ALA:H	2.32	0.43
15:AR:47:LYS:HE2	15:AR:47:LYS:HB3	1.83	0.43
20:AW:73:HIS:HB3	20:AW:74:LYS:HG3	2.00	0.43
25:BA:1057:A:H2'	25:BA:1058:U:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1087:G:H5''	25:BA:1088:A:OP2	2.18	0.43
25:BA:1146:C:O2'	25:BA:1147:C:H5'	2.18	0.43
25:BA:1214:A:H2'	25:BA:1215:G:O4'	2.18	0.43
25:BA:1649:G:C6	25:BA:2009:G:C6	3.06	0.43
25:BA:2415:G:H4'	35:BO:67:MET:N	2.33	0.43
25:BA:2808:U:O2'	25:BA:2809:A:H5'	2.18	0.43
25:BA:492:A:H8	25:BA:492:A:O5'	2.01	0.43
27:BD:118:VAL:HG22	27:BD:119:ALA:N	2.32	0.43
27:BD:35:LYS:HB3	27:BD:64:ILE:H	1.83	0.43
28:BE:49:LEU:O	28:BE:50:GLY:C	2.56	0.43
30:BG:44:GLY:HA2	30:BG:88:ILE:HD11	2.01	0.43
31:BH:126:PRO:O	31:BH:127:GLU:CB	2.66	0.43
33:BM:75:TYR:HA	33:BM:81:GLY:O	2.18	0.43
34:BN:23:ARG:HG3	34:BN:24:VAL:N	2.33	0.43
35:BO:66:GLY:HA2	35:BO:68:GLN:HE22	1.83	0.43
36:BP:77:LYS:O	36:BP:78:PRO:O	2.35	0.43
45:BV:154:ASP:OD2	45:BV:154:ASP:N	2.50	0.43
49:BX:56:VAL:HG12	49:BX:57:GLU:H	1.84	0.43
47:BZ:78:LYS:CG	47:BZ:78:LYS:O	2.66	0.43
1:CA:1015:A:C5	1:CA:1016:A:C5	3.07	0.43
1:CA:1028:C:N3	1:CA:1033:G:C2	2.86	0.43
1:CA:1072:G:C5	1:CA:1073:U:C4	3.06	0.43
1:CA:1117:G:O3'	9:CL:104:ARG:HD2	2.18	0.43
1:CA:1158:C:H2'	1:CA:1160:G:H8	1.84	0.43
1:CA:1176:A:C2'	1:CA:1177:G:C5'	2.89	0.43
1:CA:1225:A:H8	1:CA:1225:A:OP2	2.01	0.43
1:CA:1224:G:C6	1:CA:1322:C:H1'	2.53	0.43
1:CA:1352:C:OP1	21:CX:3:LYS:NZ	2.46	0.43
1:CA:181:G:H4'	1:CA:182:U:H5'	1.99	0.43
1:CA:977:A:C8	1:CA:1223:C:C4	3.06	0.43
2:CE:137:ARG:HH21	2:CE:140:HIS:HB3	1.82	0.43
4:CG:4:TYR:CE2	4:CG:11:LEU:HD11	2.54	0.43
5:CH:50:GLU:OE2	5:CH:50:GLU:HA	2.19	0.43
9:CL:110:GLU:HG3	9:CL:111:ARG:N	2.34	0.43
10:CM:32:ALA:HB3	10:CM:81:THR:HG21	2.00	0.43
12:CO:80:VAL:HG13	12:CO:81:LEU:N	2.34	0.43
13:CP:11:ARG:O	13:CP:13:LYS:N	2.50	0.43
18:CU:29:PHE:HD1	18:CU:39:VAL:HG12	1.84	0.43
18:CU:22:VAL:HG12	18:CU:55:ARG:O	2.18	0.43
20:CW:33:ILE:CD1	20:CW:63:ILE:HA	2.47	0.43
20:CW:94:ALA:O	20:CW:95:ALA:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:D1:88:ILE:HG23	41:D2:49:THR:HG22	2.00	0.43
51:D5:58:LEU:HB3	51:D5:59:GLU:H	1.55	0.43
25:DA:1040:C:H2'	25:DA:1041:C:C6	2.52	0.43
25:DA:1448:G:H2'	25:DA:1449:A:C8	2.53	0.43
25:DA:16:G:H2'	25:DA:17:G:H8	1.83	0.43
25:DA:1748:G:O2'	25:DA:1749:A:H5'	2.18	0.43
25:DA:2134:A:H2'	25:DA:2134:A:N3	2.34	0.43
25:DA:2186:G:O2'	25:DA:2187:G:H5'	2.18	0.43
25:DA:2243:U:H2'	25:DA:2244:U:C6	2.53	0.43
25:DA:2292:C:H2'	25:DA:2293:C:C6	2.53	0.43
25:DA:2602:A:H4'	25:DA:2603:G:C5'	2.48	0.43
25:DA:2638:G:O2'	25:DA:2639:A:O5'	2.37	0.43
25:DA:997:G:OP1	40:D1:93:LYS:HB2	2.18	0.43
27:DD:248:SER:HB2	27:DD:249:PRO:HD2	1.99	0.43
28:DE:9:VAL:CG2	28:DE:10:GLY:N	2.80	0.43
25:DA:616:A:C4	29:DF:180:GLY:HA2	2.53	0.43
35:DO:3:LEU:HD12	35:DO:3:LEU:N	2.33	0.43
38:DQ:74:ALA:O	38:DQ:77:ALA:N	2.43	0.43
45:DV:81:ARG:O	45:DV:81:ARG:HG3	2.18	0.43
48:DW:41:ILE:HG13	48:DW:41:ILE:O	2.18	0.43
47:DZ:6:GLU:OE1	47:DZ:61:ARG:N	2.34	0.43
1:AA:1112:C:H1'	3:AF:179:ARG:HH11	1.84	0.43
1:AA:1126:U:O4'	1:AA:1126:U:O2	2.35	0.43
1:AA:1129:C:C4	1:AA:1139:G:C6	3.07	0.43
1:AA:1508:G:H2'	1:AA:1509:C:C6	2.53	0.43
1:AA:505:G:H5'	1:AA:534:U:H2'	1.99	0.43
1:AA:587:G:C2	1:AA:755:G:C5	3.07	0.43
1:AA:589:C:O2'	1:AA:590:C:H5'	2.18	0.43
1:AA:601:C:H2'	1:AA:602:A:H8	1.83	0.43
1:AA:782:A:O3'	1:AA:1515:C:H4'	2.18	0.43
23:AC:9:G:O2'	23:AC:10:G:N7	2.42	0.43
23:AC:2:G:C4	23:AC:3:C:C5	3.07	0.43
3:AF:118:GLN:O	3:AF:122:GLU:HG2	2.19	0.43
3:AF:73:PRO:C	3:AF:75:VAL:H	2.22	0.43
3:AF:83:ARG:C	3:AF:85:ARG:N	2.71	0.43
6:AI:76:ALA:O	6:AI:80:ARG:HG2	2.19	0.43
9:AL:73:GLN:O	9:AL:76:ALA:N	2.51	0.43
14:AQ:4:LYS:O	14:AQ:6:LEU:N	2.52	0.43
16:AS:58:TYR:O	16:AS:61:SER:OG	2.25	0.43
1:AA:958:A:C8	19:AV:55:LYS:HD2	2.54	0.43
37:B0:3:HIS:O	37:B0:5:LYS:HG3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B6:17:LYS:O	52:B6:18:ARG:HB2	2.17	0.43
25:BA:1142(A):A:C4	25:BA:1144:G:C8	3.05	0.43
25:BA:11:G:C2'	25:BA:12:U:H5'	2.48	0.43
25:BA:1309:G:OP1	53:B7:9:ARG:HD3	2.18	0.43
25:BA:1926:U:H2'	25:BA:1928:A:OP2	2.18	0.43
25:BA:2114:A:H2'	25:BA:2168:G:H5''	2.01	0.43
25:BA:2287:A:N1	25:BA:2346:A:H2	2.13	0.43
25:BA:521:G:H2'	25:BA:522:G:C8	2.53	0.43
25:BA:565:C:H2'	25:BA:566:U:O4'	2.18	0.43
25:BA:620:G:H2'	25:BA:620:G:N3	2.33	0.43
25:BA:723:G:H2'	25:BA:724:U:O4'	2.18	0.43
26:BB:5:C:O2'	26:BB:27:C:O2	2.36	0.43
26:BB:59:A:H2'	26:BB:60:C:H6	1.82	0.43
27:BD:237:GLU:HA	27:BD:238:GLY:HA2	1.69	0.43
28:BE:188:VAL:HA	28:BE:189:PRO:HD3	1.65	0.43
28:BE:166:THR:HG21	28:BE:199:ARG:HH22	1.83	0.43
29:BF:117:ARG:HD3	29:BF:117:ARG:HA	1.69	0.43
29:BF:184:TYR:CD2	29:BF:188:ARG:HD2	2.54	0.43
30:BG:115:ARG:O	30:BG:116:ASP:HB2	2.19	0.43
31:BH:153:LYS:HB3	31:BH:154:PRO:HD3	1.99	0.43
31:BH:9:ILE:HG13	31:BH:9:ILE:O	2.17	0.43
32:BK:78:THR:HG22	32:BK:141:LYS:HB3	1.99	0.43
32:BK:86:THR:O	32:BK:87:LYS:HB2	2.18	0.43
33:BM:11:PRO:HB3	33:BM:51:PHE:CE1	2.53	0.43
34:BN:43:VAL:HG21	34:BN:52:VAL:CG1	2.48	0.43
25:BA:637:A:H2'	35:BO:117:GLU:OE1	2.19	0.43
36:BP:140:ALA:HB2	45:BV:53:ILE:HD11	2.00	0.43
44:BU:35:TYR:CZ	44:BU:69:ALA:HB3	2.53	0.43
44:BU:87:LYS:HD3	44:BU:92:ASN:HB3	2.01	0.43
45:BV:158:PRO:C	45:BV:160:GLY:N	2.72	0.43
1:CA:1024:G:H2'	1:CA:1025:U:C5	2.54	0.43
1:CA:1053:G:O2'	1:CA:1054:C:O5'	2.36	0.43
1:CA:109:A:C6	1:CA:326:G:C6	3.07	0.43
1:CA:1127:G:H22	1:CA:1144:G:N2	2.17	0.43
1:CA:476:G:O2'	1:CA:477:G:H5'	2.18	0.43
1:CA:815:A:N7	1:CA:1509:C:O2'	2.43	0.43
1:CA:90:C:H2'	1:CA:91:C:O4'	2.18	0.43
23:CC:14:A:C6	23:CC:23:G:C6	3.06	0.43
22:CD:50:U:H2'	22:CD:51:C:H6	1.83	0.43
2:CE:144:ARG:O	2:CE:148:TYR:HB2	2.18	0.43
2:CE:73:THR:HB	2:CE:96:ARG:H	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CF:37:GLN:O	3:CF:40:ARG:N	2.47	0.43
4:CG:199:ASN:ND2	4:CG:201:GLN:HB2	2.34	0.43
5:CH:9:LYS:CB	5:CH:112:LEU:HD11	2.49	0.43
15:CR:21:ASP:OD1	15:CR:24:SER:HB2	2.19	0.43
18:CU:44:LEU:HA	18:CU:44:LEU:HD12	1.84	0.43
21:CX:9:ARG:O	21:CX:13:ILE:HG13	2.18	0.43
50:D4:1:MET:O	50:D4:2:LYS:HD3	2.18	0.43
54:D8:37:SER:O	54:D8:41:ILE:HG13	2.19	0.43
25:DA:1226:G:C6	25:DA:1227:A:N6	2.87	0.43
25:DA:1397:U:O2'	25:DA:1398:C:H6	2.01	0.43
25:DA:1472:A:H2'	25:DA:1473:G:H5'	2.00	0.43
25:DA:1494:A:C2	25:DA:1495:A:C4	3.06	0.43
25:DA:2274:A:N1	25:DA:2276:G:H1'	2.33	0.43
25:DA:2329:G:H2'	25:DA:2330:G:H8	1.83	0.43
25:DA:10:G:C5	25:DA:2629:A:N6	2.87	0.43
29:DF:7:TYR:HD2	29:DF:18:ARG:HB3	1.84	0.43
30:DG:145:THR:O	30:DG:146:TYR:HB3	2.18	0.43
30:DG:37:VAL:O	30:DG:94:LEU:CD2	2.67	0.43
31:DH:90:LYS:HG2	31:DH:159:GLU:OE2	2.17	0.43
32:DK:26:ALA:HA	32:DK:30:LEU:HB2	2.00	0.43
35:DO:65:ARG:O	35:DO:68:GLN:NE2	2.51	0.43
38:DQ:35:ILE:O	38:DQ:35:ILE:HG23	2.18	0.43
45:DV:158:PRO:HG2	45:DV:161:VAL:HG13	1.99	0.43
1:AA:1019:C:H2'	1:AA:1020:U:O4'	2.18	0.43
1:AA:102:G:C6	1:AA:103:C:C4	3.07	0.43
1:AA:1054:C:O2	1:AA:1054:C:C2'	2.66	0.43
1:AA:375:U:C4	1:AA:376:G:N7	2.87	0.43
22:AD:25:G:H2'	22:AD:26:G:C8	2.54	0.43
2:AE:12:GLU:C	2:AE:14:GLY:N	2.70	0.43
5:AH:45:PHE:HB2	5:AH:133:TYR:OH	2.17	0.43
8:AK:11:THR:HG23	8:AK:14:ARG:NH1	2.33	0.43
25:BA:142:G:H2'	25:BA:143:C:H6	1.83	0.43
25:BA:1797:C:H2'	25:BA:1798:U:H5'	2.00	0.43
25:BA:528:A:N1	25:BA:2043:C:C5'	2.82	0.43
25:BA:2143:C:N3	25:BA:2149:G:C2	2.87	0.43
25:BA:2716:U:O2'	25:BA:2717:G:H5'	2.18	0.43
25:BA:271(C):U:C2'	25:BA:271:G:OP1	2.67	0.43
25:BA:2836:U:H2'	25:BA:2837:G:C8	2.54	0.43
25:BA:320:A:H2'	29:BF:136:THR:CG2	2.47	0.43
25:BA:553:U:O2'	25:BA:554:U:H5'	2.19	0.43
25:BA:629:G:H4'	25:BA:650:C:O2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:738:G:C6	25:BA:739:G:C2	3.06	0.43
25:BA:910:A:H62	36:BP:12:GLN:HA	1.82	0.43
27:BD:35:LYS:CE	27:BD:104:TYR:HD1	2.32	0.43
27:BD:166:GLN:HB2	27:BD:174:ILE:HG22	2.00	0.43
28:BE:24:THR:HG21	28:BE:188:VAL:CG1	2.49	0.43
28:BE:87:GLU:HG3	28:BE:87:GLU:O	2.19	0.43
31:BH:37:VAL:HG12	31:BH:38:SER:N	2.33	0.43
32:BK:21:VAL:HG21	32:BK:25:TYR:HD1	1.84	0.43
36:BP:78:PRO:HB2	36:BP:81:VAL:HG11	2.00	0.43
42:BS:80:PRO:O	42:BS:100:THR:HB	2.18	0.43
45:BV:128:VAL:HG22	45:BV:129:SER:N	2.34	0.43
1:CA:1041:A:N6	1:CA:1042:G:C6	2.87	0.43
1:CA:1122:U:O4	1:CA:1123:A:N6	2.51	0.43
1:CA:687:A:H4'	1:CA:688:G:O5'	2.19	0.43
1:CA:870:U:H4'	1:CA:871:U:H5''	1.98	0.43
22:CB:46:G:HO2'	22:CB:47:U:P	2.29	0.43
22:CB:46:G:O2'	22:CB:47:U:P	2.76	0.43
22:CB:8:U:H4'	22:CB:58:G:OP2	2.19	0.43
23:CC:26:C:H2'	23:CC:27:G:O4'	2.18	0.43
3:CF:100:ALA:O	3:CF:101:LEU:HB3	2.17	0.43
4:CG:199:ASN:C	4:CG:199:ASN:HD22	2.21	0.43
9:CL:33:PHE:HE1	9:CL:37:PHE:CD1	2.37	0.43
13:CP:10:PRO:HB2	13:CP:18:ALA:HB1	1.99	0.43
13:CP:16:ASP:HB2	13:CP:31:LYS:HG2	2.00	0.43
19:CV:48:THR:HG22	19:CV:61:TYR:HA	2.01	0.43
19:CV:51:VAL:HG23	19:CV:60:VAL:HG11	1.99	0.43
33:DM:4:TYR:O	40:D1:64:ARG:NH1	2.51	0.43
41:D2:72:VAL:HG13	41:D2:72:VAL:O	2.19	0.43
25:DA:592:G:O2'	54:D8:4:MET:HB2	2.18	0.43
25:DA:1090:U:C4	25:DA:1091:G:C4	3.06	0.43
25:DA:1193:G:O2'	25:DA:1194:A:H5'	2.19	0.43
25:DA:1812:A:H2'	25:DA:1813:G:C8	2.53	0.43
25:DA:194:G:H2'	25:DA:195:A:O4'	2.19	0.43
25:DA:2134:A:H61	25:DA:2157:G:H1'	1.80	0.43
25:DA:234:C:H2'	25:DA:235:U:H6	1.83	0.43
25:DA:2401:U:C3'	25:DA:2402:C:H5''	2.48	0.43
25:DA:2689:U:P	25:DA:2719:G:H22	2.41	0.43
25:DA:2704:C:C4	25:DA:2705:A:C5	3.06	0.43
25:DA:654(V):A:H2	25:DA:655:A:C2	2.36	0.43
25:DA:880:G:N2	25:DA:881:G:H1'	2.33	0.43
26:DB:15:A:H1'	26:DB:109:G:N9	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DB:56:G:H4'	26:DB:57:A:C8	2.53	0.43
27:DD:111:LEU:HD23	27:DD:111:LEU:HA	1.79	0.43
27:DD:35:LYS:HZ1	27:DD:65:ILE:HA	1.82	0.43
28:DE:197:ILE:HD11	28:DE:199:ARG:CZ	2.49	0.43
29:DF:59:TYR:CG	29:DF:78:ILE:HD12	2.54	0.43
32:DK:19:VAL:HG22	32:DK:20:ASP:N	2.34	0.43
32:DK:77:LEU:HD12	32:DK:78:THR:N	2.34	0.43
39:DR:50:ILE:HD12	39:DR:50:ILE:HA	1.81	0.43
42:DS:79:GLY:HA3	42:DS:100:THR:HG22	1.99	0.43
45:DV:112:ARG:HD3	45:DV:112:ARG:N	2.33	0.43
49:DX:12:PRO:HB3	49:DX:20:LYS:HG3	2.00	0.43
1:AA:1078:U:C5	1:AA:1079:G:C5	3.06	0.43
1:AA:108:G:C2	1:AA:109:A:C2	3.07	0.43
1:AA:1321:C:C3'	1:AA:1322:C:H5''	2.45	0.43
1:AA:1331:G:O2'	1:AA:1332:A:P	2.75	0.43
1:AA:282:A:N3	1:AA:282:A:H2'	2.32	0.43
1:AA:631:G:O2'	1:AA:632:A:O4'	2.24	0.43
1:AA:691:G:H1'	1:AA:696:A:N6	2.34	0.43
1:AA:945:G:C2	1:AA:1337:G:C2	3.06	0.43
22:AB:15:G:H1'	22:AB:20:C:C5	2.53	0.43
3:AF:14:ILE:C	3:AF:16:ARG:H	2.22	0.43
4:AG:112:VAL:HG12	4:AG:116:GLN:OE1	2.19	0.43
4:AG:53:ASP:O	4:AG:57:ARG:HG3	2.18	0.43
25:BA:1085:A:H4'	25:BA:1086:A:OP2	2.14	0.43
25:BA:1078:U:H1'	25:BA:1088:A:C2	2.51	0.43
25:BA:1465:G:H5'	25:BA:1528:A:H1'	2.01	0.43
25:BA:2008:C:H2'	25:BA:2009:G:H8	1.84	0.43
25:BA:2015:A:C1'	51:B5:2:ALA:CA	2.60	0.43
25:BA:2040:C:H2'	25:BA:2041:U:C6	2.53	0.43
25:BA:2169:A:C6	25:BA:2170:A:C5	3.07	0.43
25:BA:2591:C:P	27:BD:239:ARG:CG	2.99	0.43
25:BA:654(C):G:H2'	25:BA:654(D):G:O4'	2.19	0.43
25:BA:654(J):A:N3	25:BA:654(J):A:H3'	2.34	0.43
30:BG:112:PRO:HB3	50:B4:37:SER:CA	2.45	0.43
30:BG:146:TYR:O	30:BG:149:VAL:HG22	2.18	0.43
31:BH:80:SER:O	31:BH:81:GLU:CG	2.62	0.43
32:BK:9:LEU:O	32:BK:10:GLU:C	2.57	0.43
25:BA:870:A:OP1	36:BP:6:ARG:CZ	2.67	0.43
38:BQ:46:VAL:HG12	38:BQ:48:LEU:HD12	1.99	0.43
44:BU:90:LEU:N	44:BU:90:LEU:HD12	2.33	0.43
45:BV:167:PRO:O	45:BV:169:GLU:N	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:C1:10:G:H2'	24:C1:11:U:O4'	2.19	0.43
1:CA:1266:G:N2	1:CA:1270:C:C4	2.87	0.43
22:CD:62:G:H2'	22:CD:63:U:H6	1.81	0.43
22:CD:15:G:N3	22:CD:68:A:N3	2.66	0.43
2:CE:42:ILE:HG21	2:CE:203:GLY:HA2	2.00	0.43
3:CF:137:ALA:O	3:CF:141:VAL:HG23	2.19	0.43
8:CK:111:ILE:C	8:CK:112:LEU:HD23	2.39	0.43
8:CK:33:GLU:OE2	8:CK:50:ARG:NH1	2.51	0.43
9:CL:3:GLN:O	9:CL:88:TYR:CE1	2.72	0.43
11:CN:57:THR:HA	11:CN:58:PRO:HD3	1.93	0.43
13:CP:69:GLU:O	13:CP:72:ALA:HB3	2.19	0.43
1:CA:668:G:O2'	15:CR:46:HIS:HD2	2.02	0.43
18:CU:45:SER:OG	18:CU:46:GLU:N	2.51	0.43
20:CW:42:GLN:O	20:CW:46:GLU:HB2	2.19	0.43
54:D8:23:VAL:CG2	54:D8:48:PHE:H	2.31	0.43
25:DA:1064:C:C4	25:DA:1065:U:C4	3.07	0.43
25:DA:1344:G:C2	25:DA:1385:G:C8	3.07	0.43
25:DA:139:G:N2	25:DA:141:A:N1	2.62	0.43
25:DA:1421:G:C2	25:DA:1422:G:C8	3.07	0.43
25:DA:1525:G:C2	25:DA:1526:G:C4	3.06	0.43
25:DA:2119:A:N6	25:DA:2170:A:N6	2.67	0.43
25:DA:2473:U:O2	25:DA:2473:U:H2'	2.18	0.43
25:DA:10:G:C6	25:DA:2629:A:C6	3.06	0.43
25:DA:2688:U:O2	25:DA:2688:U:C3'	2.67	0.43
25:DA:2720:U:N3	25:DA:2873:A:C2	2.86	0.43
25:DA:526:A:H5''	25:DA:527:C:OP1	2.19	0.43
25:DA:738:G:C6	25:DA:739:G:C2	3.07	0.43
25:DA:818:G:H4'	25:DA:838:C:O3'	2.18	0.43
25:DA:998:C:H2'	25:DA:999:U:O5'	2.18	0.43
26:DB:73:A:C4	26:DB:104:A:C2	3.06	0.43
26:DB:45:A:H2'	26:DB:45:A:N3	2.33	0.43
25:DA:1792:G:H5'	27:DD:205:VAL:HG13	2.00	0.43
29:DF:4:VAL:HG13	29:DF:19:GLU:OE2	2.18	0.43
30:DG:162:THR:O	30:DG:162:THR:OG1	2.33	0.43
30:DG:67:LYS:HE3	50:D4:5:ILE:HG21	2.01	0.43
32:DK:26:ALA:O	32:DK:31:LEU:HD13	2.19	0.43
43:DT:43:VAL:HG22	43:DT:51:VAL:CG2	2.49	0.43
45:DV:108:PRO:HB2	45:DV:142:SER:HA	2.01	0.43
48:DW:46:GLN:C	48:DW:49:LYS:HZ1	2.21	0.43
49:DX:19:GLN:HE22	49:DX:52:HIS:CE1	2.37	0.43
1:AA:1014:A:C2	1:AA:1219:U:H1'	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1187:G:N3	1:AA:1187:G:H2'	2.33	0.43
1:AA:1291:G:H2'	1:AA:1292:U:C6	2.54	0.43
1:AA:937:A:C2	1:AA:1379:G:O6	2.72	0.43
1:AA:1504:G:C4'	1:AA:1505:G:OP2	2.67	0.43
1:AA:186(E):C:N3	1:AA:191(C):G:C2	2.86	0.43
1:AA:439:A:C4	1:AA:496:A:C2	3.07	0.43
1:AA:724:G:C2	1:AA:725:G:C8	3.06	0.43
1:AA:784:C:H2'	1:AA:785:G:H8	1.83	0.43
2:AE:109:SER:C	2:AE:111:ARG:N	2.71	0.43
8:AK:34:GLU:O	8:AK:38:ILE:HG13	2.19	0.43
9:AL:117:HIS:HB2	9:AL:121:ARG:O	2.19	0.43
9:AL:3:GLN:HB3	9:AL:20:ARG:HH11	1.84	0.43
12:AO:114:ARG:HB3	12:AO:119:THR:HB	2.01	0.43
20:AW:96:GLY:O	20:AW:97:ALA:HB3	2.19	0.43
54:B8:50:LEU:O	54:B8:51:ALA:C	2.57	0.43
25:BA:1177:A:C5'	25:BA:1178:C:OP1	2.66	0.43
25:BA:1451:C:H42	25:BA:1459:G:H1	1.65	0.43
25:BA:1520:U:H2'	25:BA:1521:G:O4'	2.19	0.43
25:BA:2161:C:O2'	25:BA:2162:G:H5'	2.19	0.43
22:AD:85:A:O2'	25:BA:2394:C:C2	2.65	0.43
25:BA:2439:A:C5'	25:BA:2439:A:H8	2.30	0.43
25:BA:503:A:C6	25:BA:506:G:C6	3.07	0.43
25:BA:870:A:C2	25:BA:908:C:C2	3.06	0.43
25:BA:881:G:N7	25:BA:882:G:C4	2.86	0.43
25:BA:1568:G:H5'	27:BD:60:ARG:HA	2.00	0.43
27:BD:59:LYS:HG2	27:BD:60:ARG:N	2.34	0.43
30:BG:44:GLY:HA2	30:BG:88:ILE:CD1	2.48	0.43
31:BH:32:GLU:H	31:BH:32:GLU:HG3	1.48	0.43
31:BH:4:ILE:HG13	31:BH:6:ARG:NH2	2.34	0.43
31:BH:92:ILE:CD1	31:BH:92:ILE:H	2.31	0.43
34:BN:31:LYS:HB3	34:BN:32:TYR:CD1	2.53	0.43
1:AA:1432:G:P	39:BR:107:ASP:HB2	2.59	0.43
44:BU:81:LYS:CG	44:BU:97:ARG:HB3	2.49	0.43
1:CA:1104:G:C4	1:CA:1105:A:C8	3.06	0.43
1:CA:1208:C:H2'	1:CA:1209:C:C6	2.54	0.43
1:CA:18:C:H4'	1:CA:1078:U:O2	2.18	0.43
22:CD:43:G:C2'	22:CD:44:C:H5'	2.49	0.43
4:CG:25:ARG:C	4:CG:27:TYR:N	2.71	0.43
9:CL:53:VAL:O	9:CL:55:ALA:N	2.52	0.43
11:CN:29:ILE:CG2	11:CN:44:SER:HB2	2.46	0.43
19:CV:66:MET:H	19:CV:67:VAL:HB	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1305:G:H5'	21:CX:4:GLY:HA3	2.00	0.43
50:D4:32:TYR:HB3	50:D4:33:VAL:H	1.47	0.43
25:DA:1021:A:C6	25:DA:1023:U:C4	3.06	0.43
25:DA:1063:G:C6	25:DA:1064:C:N3	2.87	0.43
25:DA:1297:C:H2'	25:DA:1298:C:H6	1.84	0.43
25:DA:234:C:H2'	25:DA:235:U:C6	2.54	0.43
25:DA:995:C:O4'	40:D1:57:PHE:CD1	2.71	0.43
25:DA:2591:C:P	27:DD:239:ARG:HG3	2.59	0.43
27:DD:24:ILE:HD13	27:DD:84:TYR:HB2	2.00	0.43
28:DE:175:VAL:HG23	28:DE:177:PRO:HD3	2.00	0.43
28:DE:64:LYS:C	28:DE:66:HIS:N	2.72	0.43
28:DE:54:GLN:O	28:DE:75:VAL:HG22	2.18	0.43
32:DK:79:ILE:HD11	32:DK:100:ALA:HB2	2.00	0.43
34:DN:106:LEU:HD23	34:DN:106:LEU:HA	1.91	0.43
35:DO:9:ASN:O	35:DO:10:PRO:C	2.55	0.43
36:DP:23:GLY:HA2	36:DP:24:GLY:HA3	1.74	0.43
36:DP:76:LYS:O	36:DP:77:LYS:O	2.36	0.43
45:DV:103:ARG:O	45:DV:104:PHE:HB2	2.19	0.43
1:AA:111:G:H5''	16:AS:27:LYS:HG2	2.01	0.43
1:AA:1124:G:C8	1:AA:1145:C:C5	3.06	0.43
1:AA:1298:C:OP2	7:AJ:114:ARG:NH2	2.39	0.43
1:AA:343:U:O2	1:AA:347:G:C2	2.72	0.43
1:AA:453:A:C6	1:AA:454:C:C4	3.07	0.43
1:AA:491:G:C4	1:AA:492:G:C8	3.06	0.43
1:AA:509:A:HO2'	1:AA:510:A:P	2.39	0.43
1:AA:601:C:O2'	1:AA:602:A:H5'	2.18	0.43
22:AB:19:C:O5'	22:AB:20:C:OP2	2.37	0.43
23:AC:2:G:C6	23:AC:3:C:C4	3.07	0.43
23:AC:6:G:H1	23:AC:68:C:N4	2.15	0.43
23:AC:73:A:C6	23:AC:74:A:C6	3.06	0.43
22:AD:18:G:C1'	22:AD:19:C:OP2	2.55	0.43
2:AE:22:LYS:N	2:AE:22:LYS:HZ3	2.15	0.43
2:AE:37:ASN:C	2:AE:39:ILE:H	2.22	0.43
7:AJ:56:GLN:NE2	7:AJ:60:LYS:HD3	2.33	0.43
8:AK:121:ASP:HB2	8:AK:125:ARG:NH2	2.34	0.43
8:AK:20:TYR:HD1	8:AK:65:TYR:CD2	2.36	0.43
40:B1:66:ASN:CB	40:B1:76:TYR:HB2	2.49	0.43
40:B1:85:LYS:HG3	40:B1:117:GLN:HG3	2.01	0.43
46:B3:83:PRO:O	46:B3:84:LEU:HB3	2.19	0.43
25:BA:1341:U:OP1	25:BA:1397:U:N3	2.42	0.43
25:BA:1448:G:O2'	25:BA:1529:A:N1	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2273:A:O2'	25:BA:2274:A:H5'	2.19	0.43
25:BA:2517:C:C6	25:BA:2542:A:N7	2.86	0.43
25:BA:2681:C:C1'	25:BA:2682:U:OP2	2.65	0.43
25:BA:2852:G:C6	25:BA:2853:C:C4	3.06	0.43
25:BA:65:C:H2'	25:BA:66:C:C6	2.53	0.43
25:BA:6:A:N3	33:BM:131:GLN:HG3	2.33	0.43
25:BA:886:C:C2	25:BA:887:A:H1'	2.54	0.43
25:BA:956:G:O2'	36:BP:83:MET:CE	2.66	0.43
30:BG:106:LEU:HD12	30:BG:110:ALA:HB3	2.01	0.43
30:BG:133:LEU:HD12	30:BG:135:LEU:HD11	1.99	0.43
30:BG:181:ARG:HG2	30:BG:181:ARG:O	2.19	0.43
30:BG:73:ALA:HB3	30:BG:85:GLY:H	1.84	0.43
35:BO:106:LEU:HD22	35:BO:106:LEU:O	2.19	0.43
35:BO:114:ILE:HD11	35:BO:130:PHE:CD1	2.49	0.43
39:BR:107:ASP:C	39:BR:111:ARG:CZ	2.87	0.43
34:BN:75:SER:CB	39:BR:74:ARG:HH12	2.31	0.43
43:BT:15:GLU:CD	43:BT:15:GLU:H	2.22	0.43
45:BV:134:PRO:C	45:BV:136:PHE:N	2.73	0.43
45:BV:140:ASP:OD1	45:BV:156:LYS:NZ	2.52	0.43
1:CA:1067:A:N3	1:CA:1068:G:H1'	2.34	0.43
1:CA:1129:C:O2	1:CA:1131:G:N7	2.51	0.43
1:CA:66:G:H4'	1:CA:173:U:C5	2.54	0.43
1:CA:73:G:C6	1:CA:74:C:C4	3.07	0.43
1:CA:89:U:O2'	1:CA:90:C:H5''	2.19	0.43
1:CA:913:A:C1'	1:CA:914:A:OP2	2.63	0.43
1:CA:992:U:O4	1:CA:1044:A:N7	2.52	0.43
22:CB:57:C:C2	22:CB:68:A:H1'	2.54	0.43
22:CB:59:A:N6	22:CB:60:A:C6	2.87	0.43
23:CC:48:U:C1'	23:CC:49:C:O5'	2.67	0.43
2:CE:12:GLU:HA	2:CE:15:VAL:HB	2.01	0.43
2:CE:76:GLN:O	2:CE:208:ILE:HG12	2.18	0.43
2:CE:5:ILE:O	2:CE:6:THR:C	2.57	0.43
6:CI:23:LYS:NZ	6:CI:42:GLU:OE2	2.48	0.43
9:CL:43:ALA:CA	9:CL:74:ILE:HD13	2.44	0.43
10:CM:7:LYS:HG2	10:CM:71:LEU:HD13	2.00	0.43
11:CN:59:TYR:O	11:CN:62:GLN:HB3	2.18	0.43
12:CO:59:SER:C	12:CO:61:TYR:N	2.70	0.43
13:CP:60:VAL:HG12	13:CP:66:LEU:HD21	1.99	0.43
20:CW:67:ALA:O	20:CW:73:HIS:ND1	2.52	0.43
41:D2:12:TYR:HE2	41:D2:22:VAL:CG2	2.29	0.43
25:DA:1070:A:C5'	25:DA:1071:G:OP1	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1204:A:N1	25:DA:1241:A:N1	2.67	0.43
25:DA:1342:A:C6	25:DA:1397:U:C6	3.06	0.43
25:DA:1416:G:H2'	25:DA:1417:C:C6	2.54	0.43
25:DA:1535:U:C2'	25:DA:1535:U:O2	2.63	0.43
25:DA:1779:U:C6	25:DA:1783:A:N7	2.87	0.43
25:DA:1929:G:H4'	25:DA:1930:G:OP1	2.18	0.43
25:DA:1786:A:C1'	25:DA:1938:A:N6	2.82	0.43
25:DA:2833:G:C8	25:DA:2833:G:OP1	2.72	0.43
25:DA:414:C:O2'	25:DA:415:A:H5'	2.19	0.43
25:DA:223:A:O2'	25:DA:420:C:O2	2.32	0.43
25:DA:655:A:H8	25:DA:656:G:O4'	2.02	0.43
25:DA:669:G:O2'	25:DA:670:A:O5'	2.36	0.43
27:DD:186:HIS:HD2	27:DD:188:GLU:H	1.67	0.43
27:DD:35:LYS:HG2	27:DD:64:ILE:CG1	2.40	0.43
26:DB:56:G:H5'	30:DG:27:ASN:ND2	2.33	0.43
25:DA:1049:C:C2	31:DH:2:SER:N	2.86	0.43
31:DH:77:LYS:CE	31:DH:81:GLU:HB3	2.49	0.43
25:DA:831:G:O2'	35:DO:38:GLN:NE2	2.52	0.43
35:DO:62:LEU:CD1	54:D8:26:LYS:O	2.66	0.43
36:DP:3:MET:SD	36:DP:93:TYR:CE1	3.12	0.43
38:DQ:24:LEU:O	38:DQ:85:VAL:HB	2.18	0.43
42:DS:73:ALA:O	42:DS:106:ILE:HG12	2.18	0.43
44:DU:96:ILE:HD12	44:DU:98:VAL:CG1	2.49	0.43
1:AA:1176:A:N1	1:AA:1177:G:C4	2.87	0.43
1:AA:1177:G:OP1	1:AA:1177:G:H4'	2.19	0.43
1:AA:1213:A:C5	1:AA:1215:G:C4	3.06	0.43
1:AA:665:A:H2'	1:AA:732:C:O2	2.19	0.43
1:AA:75:C:O2	1:AA:96:G:N2	2.52	0.43
1:AA:78:G:C5	1:AA:79:G:C8	3.07	0.43
22:AB:18:G:C4	22:AB:66:G:N2	2.87	0.43
7:AJ:143:ARG:HD2	22:AD:42:U:O3'	2.19	0.43
2:AE:168:THR:OG1	2:AE:192:SER:HB2	2.18	0.43
2:AE:187:LEU:HD11	2:AE:204:ASN:O	2.18	0.43
2:AE:205:ASP:OD1	2:AE:206:ASP:N	2.52	0.43
3:AF:12:LEU:O	3:AF:16:ARG:O	2.37	0.43
3:AF:14:ILE:O	3:AF:16:ARG:N	2.52	0.43
15:AR:31:LEU:HD12	15:AR:31:LEU:HA	1.90	0.43
40:B1:34:LYS:HA	40:B1:34:LYS:HE3	2.01	0.43
41:B2:35:LEU:HD22	41:B2:57:VAL:O	2.19	0.43
52:B6:30:THR:HG23	52:B6:30:THR:O	2.19	0.43
52:B6:41:PRO:CG	52:B6:44:ARG:HG2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BO:61:ARG:NH1	54:B8:14:VAL:HG23	2.34	0.43
54:B8:50:LEU:O	54:B8:52:LYS:HB3	2.18	0.43
25:BA:1014:U:H2'	25:BA:1015:G:H5''	2.00	0.43
25:BA:1412:A:H2'	25:BA:1413:G:C8	2.54	0.43
25:BA:1817:G:H2'	25:BA:1818:U:H5'	2.00	0.43
25:BA:1945:G:H2'	25:BA:1946:U:C6	2.53	0.43
25:BA:478:A:N6	25:BA:480:A:C6	2.87	0.43
25:BA:542:C:H42	25:BA:551:G:H1	1.66	0.43
25:BA:765:G:H2'	25:BA:766:C:C6	2.53	0.43
25:BA:856:C:H2'	25:BA:857:C:H6	1.83	0.43
25:BA:881:G:O6	25:BA:882:G:C2	2.72	0.43
26:BB:78:A:H2'	26:BB:79:C:O4'	2.19	0.43
27:BD:102:LYS:O	27:BD:103:ARG:HG2	2.18	0.43
28:BE:93:VAL:HG21	28:BE:180:ASN:HA	1.99	0.43
29:BF:28:ILE:O	29:BF:28:ILE:HD12	2.18	0.43
25:BA:470:A:OP1	29:BF:59:TYR:HE2	2.02	0.43
31:BH:12:PRO:O	31:BH:13:LYS:HB2	2.19	0.43
32:BK:21:VAL:HG21	32:BK:25:TYR:CD1	2.54	0.43
32:BK:5:LEU:O	32:BK:6:LEU:HD12	2.18	0.43
34:BN:66:LYS:HA	34:BN:79:PHE:O	2.19	0.43
39:BR:90:GLN:OE1	39:BR:121:ILE:HD11	2.19	0.43
45:BV:111:VAL:O	45:BV:112:ARG:C	2.58	0.43
45:BV:115:GLY:HA3	45:BV:174:VAL:HG13	2.01	0.43
45:BV:60:GLU:O	45:BV:61:LEU:O	2.37	0.43
1:CA:1283:G:O2'	1:CA:1284:C:H5'	2.19	0.43
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.54	0.43
1:CA:412:A:C2'	1:CA:413:G:OP2	2.67	0.43
1:CA:575:G:C6	1:CA:821:G:N7	2.87	0.43
1:CA:80:G:H1	1:CA:89:U:H3	1.67	0.43
1:CA:916:G:H2'	1:CA:916:G:N3	2.34	0.43
1:CA:994:A:H2'	1:CA:994:A:N3	2.34	0.43
22:CD:3:U:H2'	22:CD:4:G:H8	1.82	0.43
7:CJ:16:LEU:CD1	9:CL:45:ALA:HB2	2.49	0.43
1:CA:878:G:H5'	8:CK:89:PRO:HG2	1.99	0.43
9:CL:43:ALA:HA	9:CL:74:ILE:HG21	2.01	0.43
10:CM:70:ARG:CG	10:CM:70:ARG:HH11	2.32	0.43
11:CN:21:ILE:HB	11:CN:84:VAL:HG12	1.99	0.43
13:CP:16:ASP:HB3	13:CP:41:PRO:HB3	2.00	0.43
1:CA:1060:C:OP1	14:CQ:45:ARG:NH2	2.52	0.43
3:CF:13:GLY:HA2	14:CQ:57:ARG:HH21	1.84	0.43
15:CR:26:GLU:HG2	15:CR:26:GLU:H	1.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:255:G:H1'	17:CT:16:GLN:OE1	2.19	0.43
17:CT:53:LEU:N	17:CT:53:LEU:HD12	2.34	0.43
53:D7:1:MET:HA	53:D7:1:MET:HE2	2.01	0.43
25:DA:105:C:H2'	25:DA:106:C:C6	2.54	0.43
25:DA:1301:A:C8	25:DA:1303:G:C8	3.07	0.43
25:DA:1385:G:HO2'	25:DA:1396:U:H6	1.65	0.43
25:DA:1657:C:H2'	25:DA:1658:C:C6	2.54	0.43
25:DA:1915:U:C2'	25:DA:1916:A:H5'	2.49	0.43
25:DA:196:A:C4	25:DA:805:G:C6	3.07	0.43
25:DA:2092:U:H4'	25:DA:2093:G:O5'	2.18	0.43
25:DA:2780:G:H4'	25:DA:2781:A:OP2	2.19	0.43
25:DA:279:C:N3	25:DA:361:G:N2	2.62	0.43
25:DA:2849:U:H4'	25:DA:2868:A:C2	2.54	0.43
25:DA:309:G:N3	25:DA:329:G:O2'	2.46	0.43
25:DA:48:G:C6	25:DA:178:G:O6	2.72	0.43
25:DA:547:A:H2'	25:DA:548:A:O4'	2.19	0.43
25:DA:646:A:H2'	25:DA:647:G:O4'	2.19	0.43
25:DA:751:A:C6	25:DA:789:A:C5	3.07	0.43
25:DA:773:U:H4'	27:DD:47:GLY:CA	2.49	0.43
27:DD:161:THR:O	27:DD:162:SER:HB3	2.18	0.43
28:DE:174:ASP:OD2	28:DE:175:VAL:N	2.52	0.43
29:DF:9:ILE:HG12	29:DF:15:SER:N	2.34	0.43
30:DG:10:LYS:O	30:DG:14:GLU:HB3	2.19	0.43
31:DH:123:PHE:HE2	31:DH:133:VAL:HG22	1.84	0.43
25:DA:2094:G:H5'	32:DK:25:TYR:CD2	2.54	0.43
34:DN:115:VAL:HG12	34:DN:121:VAL:CG2	2.49	0.43
36:DP:41:TRP:HZ3	36:DP:74:TYR:CE1	2.36	0.43
38:DQ:14:VAL:O	38:DQ:18:ILE:HG13	2.19	0.43
1:CA:1446:A:H62	39:DR:118:ARG:NH2	2.17	0.43
43:DT:18:TYR:HD1	43:DT:21:PHE:CE2	2.37	0.43
44:DU:67:LEU:HD11	44:DU:71:LYS:HZ1	1.84	0.43
1:AA:1264:C:H2'	1:AA:1265:G:H8	1.84	0.42
1:AA:1277:C:O2'	1:AA:1279:A:H8	1.98	0.42
1:AA:147:G:C2	1:AA:148:G:C4	3.07	0.42
1:AA:418:C:H2'	1:AA:419:C:C6	2.54	0.42
1:AA:813:U:OP2	1:AA:813:U:H6	2.02	0.42
1:AA:872:A:C2	1:AA:874:G:C6	3.07	0.42
22:AB:47:U:H2'	22:AB:48:C:O4'	2.19	0.42
2:AE:77:ALA:HB2	2:AE:211:ILE:HG21	2.01	0.42
2:AE:22:LYS:HA	2:AE:22:LYS:HZ2	1.83	0.42
4:AG:86:LYS:HD2	4:AG:86:LYS:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AH:41:VAL:HG13	5:AH:113:ALA:HB2	2.01	0.42
5:AH:74:GLY:O	5:AH:115:VAL:HA	2.18	0.42
7:AJ:38:LEU:O	7:AJ:42:ILE:HG13	2.18	0.42
12:AO:25:LYS:HE2	12:AO:61:TYR:CE1	2.54	0.42
12:AO:86:ARG:HD3	12:AO:88:LYS:N	2.34	0.42
1:AA:1305:G:C5'	21:AX:4:GLY:HA3	2.48	0.42
52:B6:13:CYS:H	52:B6:23:THR:HA	1.84	0.42
52:B6:12:GLU:HA	52:B6:23:THR:HB	2.02	0.42
25:BA:1511:A:H2'	25:BA:1512:G:O4'	2.19	0.42
25:BA:196:A:H2'	25:BA:196:A:N3	2.34	0.42
25:BA:2474:C:H3'	25:BA:2475:C:H6	1.83	0.42
25:BA:2543:G:H2'	25:BA:2544:G:C8	2.53	0.42
25:BA:2584:U:O5'	25:BA:2584:U:O2	2.37	0.42
25:BA:2741:A:H2'	25:BA:2742:C:O4'	2.19	0.42
25:BA:481:G:C2	25:BA:507:A:C4	3.07	0.42
25:BA:67:U:C4	25:BA:74:A:N1	2.87	0.42
25:BA:908:C:OP1	36:BP:22:LYS:CB	2.62	0.42
27:BD:105:ILE:HD12	27:BD:105:ILE:HA	1.74	0.42
28:BE:26:ILE:HD11	28:BE:198:VAL:HG21	2.01	0.42
28:BE:79:ARG:HA	28:BE:79:ARG:HD3	1.91	0.42
25:BA:323:G:H5'	29:BF:169:ASN:HD21	1.84	0.42
32:BK:28:ASN:C	32:BK:32:PRO:HG2	2.39	0.42
35:BO:125:VAL:HB	35:BO:144:GLU:HB3	2.00	0.42
35:BO:38:GLN:HG2	35:BO:45:LEU:HD12	2.01	0.42
39:BR:24:PRO:O	39:BR:94:ALA:HB2	2.19	0.42
44:BU:20:TYR:CZ	44:BU:42:VAL:HA	2.54	0.42
1:CA:1031:G:C6	1:CA:1032:A:N6	2.87	0.42
1:CA:1041:A:C6	1:CA:1042:G:C5	3.07	0.42
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.19	0.42
1:CA:1095:U:OP1	1:CA:1108:G:N2	2.51	0.42
1:CA:1094:G:H2'	1:CA:1095:U:OP2	2.18	0.42
1:CA:1216:G:O2'	1:CA:1217:C:H5'	2.18	0.42
1:CA:1269:A:H2	1:CA:1312:G:N3	2.17	0.42
1:CA:359:U:H2'	1:CA:360:A:H8	1.84	0.42
1:CA:38:G:N1	1:CA:397:A:C2	2.87	0.42
1:CA:612:C:O2	1:CA:629:G:N2	2.52	0.42
1:CA:686:U:O4	1:CA:703:G:H1'	2.20	0.42
22:CD:10:C:H2'	22:CD:11:C:C6	2.54	0.42
4:CG:13:ARG:C	4:CG:15:GLU:H	2.16	0.42
10:CM:54:PHE:C	10:CM:55:LYS:HD2	2.39	0.42
20:CW:97:ALA:HB3	20:CW:99:LEU:HD11	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:D1:92:ARG:NH1	40:D1:94:ASN:HD22	2.17	0.42
41:D2:69:LYS:CG	41:D2:86:GLY:HA3	2.41	0.42
52:D6:15:GLU:HB3	52:D6:16:CYS:H	1.41	0.42
25:DA:459:U:H5''	53:D7:40:TRP:CD2	2.54	0.42
25:DA:1064:C:N4	25:DA:1065:U:O4	2.52	0.42
25:DA:1210:A:H5'	25:DA:1212:G:O4'	2.18	0.42
25:DA:1388:G:H2'	25:DA:1389:G:C8	2.53	0.42
25:DA:1392:A:C6	25:DA:1393:A:C6	3.07	0.42
25:DA:1537:C:O2'	25:DA:1538:G:O4'	2.16	0.42
25:DA:2103:C:H2'	25:DA:2104:G:C8	2.55	0.42
1:AA:1000:A:H4'	25:DA:2137:C:OP1	2.19	0.42
25:DA:2516:G:C6	25:DA:2517:C:C4	3.07	0.42
25:DA:2833:G:H8	25:DA:2833:G:OP1	2.02	0.42
25:DA:320:A:H4'	25:DA:322:A:C8	2.54	0.42
25:DA:43:G:H2'	25:DA:44:A:O4'	2.19	0.42
25:DA:522:G:C6	25:DA:523:C:C4	3.08	0.42
25:DA:893:C:C4'	25:DA:894:C:OP1	2.65	0.42
26:DB:80:U:O2'	26:DB:81:G:H5''	2.19	0.42
27:DD:35:LYS:HG3	27:DD:64:ILE:HG12	1.99	0.42
28:DE:13:ARG:HA	28:DE:21:VAL:O	2.19	0.42
28:DE:39:PRO:CA	28:DE:43:GLY:HA2	2.34	0.42
31:DH:118:PRO:HB2	31:DH:119:GLU:H	1.61	0.42
31:DH:121:ILE:HG23	31:DH:133:VAL:CG1	2.49	0.42
25:DA:1996:C:OP1	34:DN:31:LYS:HE2	2.18	0.42
35:DO:147:LEU:O	35:DO:148:LEU:HD23	2.19	0.42
1:AA:1061:G:C4	1:AA:1197:G:N2	2.87	0.42
1:AA:1367:C:H5'	10:AM:60:ARG:NH2	2.34	0.42
1:AA:1490:C:O2'	1:AA:1491:G:H5'	2.19	0.42
1:AA:271:C:H2'	1:AA:272:C:H6	1.84	0.42
1:AA:544:G:C6	1:AA:545:C:C4	3.07	0.42
1:AA:827:U:C5	1:AA:872:A:N1	2.87	0.42
1:AA:81:G:C6	1:AA:88:C:N4	2.87	0.42
22:AD:61:G:H2'	22:AD:62:G:O4'	2.18	0.42
2:AE:5:ILE:HG23	2:AE:224:GLN:OE1	2.19	0.42
2:AE:81:VAL:O	2:AE:85:ALA:N	2.46	0.42
3:AF:25:GLY:O	3:AF:26:LYS:C	2.57	0.42
4:AG:127:THR:HG23	4:AG:131:ARG:O	2.19	0.42
7:AJ:5:ARG:HB3	7:AJ:7:ALA:H	1.84	0.42
1:AA:1125:U:C5	10:AM:73:ASP:OD1	2.73	0.42
12:AO:44:LYS:HE3	12:AO:44:LYS:CA	2.44	0.42
12:AO:72:HIS:CD2	12:AO:74:LEU:H	2.21	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AQ:23:ARG:HH11	14:AQ:30:ALA:HB2	1.84	0.42
17:AT:57:VAL:HG12	17:AT:76:LEU:HA	2.01	0.42
1:AA:1286:A:C5'	21:AX:26:LYS:HG2	2.49	0.42
25:BA:1045:A:H1'	25:BA:1047:G:C4	2.54	0.42
25:BA:1144:G:H2'	25:BA:1145:C:C6	2.54	0.42
25:BA:1299:G:H5'	25:BA:1301:A:O4'	2.18	0.42
25:BA:1536:A:C2'	25:BA:1537:C:OP1	2.66	0.42
25:BA:2161:C:C2'	25:BA:2162:G:H5'	2.49	0.42
25:BA:2228:G:C5	25:BA:2229:C:C4	3.07	0.42
25:BA:2270:G:H2'	25:BA:2271:G:H5'	2.01	0.42
25:BA:228:A:N3	25:BA:228:A:C2'	2.82	0.42
25:BA:2656:U:N3	25:BA:2665:A:C2	2.82	0.42
25:BA:1639:U:H4'	25:BA:2699:C:H4'	2.01	0.42
25:BA:2743:C:C2	25:BA:2762:G:N2	2.87	0.42
25:BA:2892:A:H2'	25:BA:2893:G:O4'	2.18	0.42
25:BA:350:U:H2'	25:BA:351:G:O4'	2.19	0.42
25:BA:537:C:H2'	25:BA:539:G:C8	2.54	0.42
25:BA:634:C:H2'	25:BA:635:C:H6	1.80	0.42
25:BA:656:G:H2'	25:BA:657:U:O4'	2.19	0.42
25:BA:714:U:O2'	25:BA:716:A:N7	2.41	0.42
26:BB:2:C:H2'	26:BB:3:C:H6	1.83	0.42
27:BD:131:LEU:N	27:BD:131:LEU:HD12	2.34	0.42
31:BH:84:SER:OG	31:BH:85:LYS:N	2.51	0.42
34:BN:71:ARG:HH21	34:BN:77:ILE:HG21	1.84	0.42
36:BP:21:THR:OG1	36:BP:101:ARG:HB2	2.19	0.42
44:BU:95:LYS:HE3	44:BU:99:CYS:O	2.19	0.42
1:CA:1251:A:O2'	1:CA:1252:A:H5'	2.19	0.42
1:CA:1288:A:C6	1:CA:1289:A:C6	3.07	0.42
1:CA:1350:A:C5	1:CA:1351:U:C5	3.07	0.42
1:CA:1498:U:C1'	1:CA:1499:A:OP2	2.67	0.42
1:CA:1498:U:O2'	1:CA:1499:A:OP2	2.33	0.42
1:CA:250:A:C4'	1:CA:251:G:O5'	2.65	0.42
1:CA:32:A:C2	1:CA:33:A:C4	3.07	0.42
2:CE:7:VAL:HG13	2:CE:8:LYS:CD	2.33	0.42
3:CF:72:LYS:NZ	3:CF:74:GLY:HA3	2.33	0.42
13:CP:15:VAL:HG12	13:CP:45:VAL:HG22	2.01	0.42
14:CQ:12:ARG:NH1	14:CQ:12:ARG:HB2	2.33	0.42
16:CS:55:ARG:NH2	16:CS:58:TYR:HD1	2.17	0.42
1:CA:1325:C:OP1	21:CX:15:ARG:HD2	2.18	0.42
41:D2:12:TYR:CD2	41:D2:20:LEU:HD21	2.54	0.42
25:DA:111:A:C2	25:DA:112:U:C2	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1131:G:HO2'	25:DA:1132:A:H8	1.68	0.42
25:DA:1163:G:H2'	25:DA:1164:G:H8	1.83	0.42
25:DA:1356:G:H2'	25:DA:1357:U:H6	1.84	0.42
25:DA:2170:A:H5''	25:DA:2171:A:P	2.59	0.42
25:DA:2211:G:C2'	25:DA:2211:G:N3	2.82	0.42
25:DA:2354:G:N3	25:DA:2354:G:H2'	2.33	0.42
25:DA:2439:A:C5'	25:DA:2439:A:H8	2.31	0.42
25:DA:2612:C:C5	25:DA:2613:U:H5	2.36	0.42
25:DA:2687:U:C4	25:DA:2688:U:C5	3.07	0.42
25:DA:2739:U:C5	25:DA:2763:G:C5	3.07	0.42
25:DA:55:G:C2	25:DA:116:C:C2	3.07	0.42
25:DA:725:G:C6	25:DA:726:G:N1	2.88	0.42
25:DA:775:G:C4	25:DA:794:G:C8	3.07	0.42
28:DE:105:THR:CG2	28:DE:164:ARG:HE	2.33	0.42
30:DG:161:THR:HG22	30:DG:163:ALA:N	2.25	0.42
30:DG:178:PHE:HB3	30:DG:180:PHE:CE1	2.48	0.42
31:DH:6:ARG:HB2	31:DH:66:GLY:HA2	2.01	0.42
33:DM:131:GLN:NE2	33:DM:132:ALA:H	2.18	0.42
33:DM:35:ARG:HB3	33:DM:42:TRP:CZ3	2.54	0.42
34:DN:68:GLU:OE2	34:DN:78:ARG:NH1	2.52	0.42
25:DA:2876:G:O5'	39:DR:3:ARG:HA	2.18	0.42
39:DR:82:LEU:N	39:DR:82:LEU:HD12	2.34	0.42
48:DW:63:VAL:O	48:DW:67:LYS:HG2	2.19	0.42
47:DZ:67:ILE:N	47:DZ:68:PRO:CD	2.78	0.42
47:DZ:87:PRO:O	47:DZ:88:LYS:C	2.57	0.42
1:AA:1022:G:C2	1:AA:1023:G:C4	3.06	0.42
1:AA:113:G:H2'	1:AA:114:U:C6	2.54	0.42
1:AA:1157:A:N3	1:AA:1157:A:H3'	2.33	0.42
1:AA:1302:U:H3'	1:AA:1303:C:C5'	2.48	0.42
1:AA:1316:G:H22	1:AA:1319:A:P	2.42	0.42
1:AA:1410:G:H2'	1:AA:1411:C:C6	2.53	0.42
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.18	0.42
1:AA:177:C:OP2	20:AW:65:LYS:HE2	2.19	0.42
1:AA:453:A:C5	1:AA:454:C:C4	3.07	0.42
1:AA:526:C:OP2	12:AO:88:LYS:HE3	2.19	0.42
1:AA:543:C:C2'	1:AA:544:G:H5'	2.49	0.42
1:AA:600:C:H2'	1:AA:600:C:O2	2.19	0.42
1:AA:615:C:C2	1:AA:616:G:C8	3.08	0.42
2:AE:200:ILE:N	2:AE:200:ILE:HD12	2.32	0.42
2:AE:55:PHE:CZ	2:AE:218:ALA:HA	2.54	0.42
2:AE:22:LYS:C	2:AE:24:TRP:N	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AE:229:VAL:CG1	2:AE:230:VAL:N	2.83	0.42
2:AE:77:ALA:CB	2:AE:211:ILE:HG21	2.49	0.42
3:AF:33:LEU:O	3:AF:37:GLN:HG2	2.19	0.42
4:AG:187:ARG:HH21	4:AG:190:ASP:CG	2.22	0.42
11:AN:72:ALA:C	11:AN:74:ALA:H	2.22	0.42
12:AO:58:THR:C	12:AO:60:GLY:H	2.22	0.42
15:AR:7:GLU:O	15:AR:11:VAL:HG23	2.18	0.42
25:BA:1009:A:H5''	40:B1:63:VAL:CG2	2.48	0.42
46:B3:68:GLU:HG3	46:B3:80:HIS:HB2	2.01	0.42
51:B5:20:ARG:O	51:B5:22:HIS:N	2.53	0.42
25:BA:1130:U:C2'	25:BA:1131:G:OP1	2.67	0.42
25:BA:1705:G:O2'	25:BA:1706:U:H5'	2.19	0.42
23:AC:13:C:O2'	25:BA:1924:C:H4'	2.19	0.42
25:BA:2104:G:C2	25:BA:2186:G:C2	3.07	0.42
25:BA:2139:C:C2'	25:BA:2140:C:H5'	2.48	0.42
25:BA:2144:U:O2'	25:BA:2145:C:C5	2.71	0.42
25:BA:2600:A:H2'	25:BA:2601:C:C6	2.54	0.42
25:BA:270(X):G:C6	25:BA:270(Y):G:N1	2.86	0.42
25:BA:733:G:C8	25:BA:761:A:N6	2.88	0.42
25:BA:751:A:C6	25:BA:789:A:C5	3.07	0.42
25:BA:945:A:H4'	25:BA:946:G:OP2	2.19	0.42
25:BA:990:A:OP2	25:BA:991:C:OP2	2.38	0.42
28:BE:16:ARG:HG3	28:BE:16:ARG:O	2.19	0.42
31:BH:151:ILE:O	31:BH:153:LYS:HD2	2.20	0.42
36:BP:54:MET:HE1	36:BP:64:ILE:CG2	2.49	0.42
39:BR:94:ALA:O	39:BR:95:ARG:HB3	2.19	0.42
43:BT:50:LYS:H	43:BT:87:GLN:NE2	2.17	0.42
45:BV:6:LYS:N	45:BV:59:LEU:O	2.52	0.42
47:BZ:87:PRO:O	47:BZ:88:LYS:C	2.57	0.42
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.54	0.42
1:CA:1073:U:H2'	1:CA:1074:G:C8	2.54	0.42
1:CA:1127:G:N1	1:CA:1145:C:N3	2.68	0.42
1:CA:1157:A:N1	1:CA:1180:A:C4	2.87	0.42
1:CA:151:A:H2'	1:CA:152:A:O4'	2.19	0.42
1:CA:198:G:H2'	1:CA:199:G:C8	2.54	0.42
1:CA:197:A:H1'	1:CA:198:G:P	2.60	0.42
1:CA:745:C:OP1	1:CA:851:G:O2'	2.37	0.42
1:CA:949:A:C2	1:CA:1233:G:N3	2.87	0.42
1:CA:967:C:H5''	1:CA:968:A:OP2	2.19	0.42
2:CE:131:PRO:C	2:CE:133:LYS:H	2.23	0.42
4:CG:138:TYR:C	4:CG:138:TYR:CD2	2.92	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CI:3:ARG:HB2	6:CI:93:SER:HB3	2.02	0.42
7:CJ:16:LEU:HD12	9:CL:42:ARG:HA	2.01	0.42
9:CL:79:LEU:CD1	9:CL:83:ARG:HH12	2.31	0.42
1:CA:526:C:P	12:CO:88:LYS:NZ	2.92	0.42
25:DA:1013:C:H2'	25:DA:1014:U:C6	2.55	0.42
25:DA:1327:C:H2'	25:DA:1328:G:O4'	2.19	0.42
25:DA:1401:G:H2'	25:DA:1402:C:O4'	2.19	0.42
25:DA:1444:G:C2	25:DA:1548:C:N3	2.87	0.42
25:DA:1591:G:O2'	25:DA:1592:C:H5'	2.18	0.42
25:DA:1710:C:O2'	25:DA:1711:C:H5'	2.19	0.42
25:DA:2275:C:H5'	25:DA:2275:C:H6	1.84	0.42
25:DA:2371:G:C2	25:DA:2372:G:C8	3.07	0.42
25:DA:2762:G:C2'	25:DA:2763:G:H5''	2.49	0.42
25:DA:2774:C:H2'	25:DA:2775:A:O4'	2.18	0.42
25:DA:494:G:H21	42:DS:57:ASN:HD21	1.66	0.42
25:DA:55:G:H2'	25:DA:56:A:C8	2.54	0.42
25:DA:657:U:H2'	25:DA:658:C:C6	2.54	0.42
25:DA:912:C:N3	25:DA:913:U:C5	2.87	0.42
25:DA:942:G:H4'	25:DA:1190:G:H5'	2.00	0.42
26:DB:89:G:OP2	26:DB:89:G:C8	2.72	0.42
28:DE:93:VAL:O	28:DE:95:ILE:N	2.52	0.42
29:DF:132:VAL:C	29:DF:134:GLY:N	2.72	0.42
29:DF:170:LEU:HA	29:DF:171:PRO:HD3	1.85	0.42
30:DG:130:ASN:OD1	30:DG:160:VAL:HA	2.18	0.42
30:DG:44:GLY:HA2	30:DG:88:ILE:CD1	2.47	0.42
32:DK:75:LEU:HD22	32:DK:77:LEU:HB2	2.00	0.42
33:DM:41:ASP:O	33:DM:42:TRP:C	2.58	0.42
35:DO:46:LYS:CG	35:DO:51:PHE:CG	3.02	0.42
25:DA:2875:C:HO2'	39:DR:3:ARG:HG3	1.81	0.42
43:DT:57:LEU:HD21	43:DT:78:LYS:HG2	2.00	0.42
44:DU:53:PRO:HB2	44:DU:54:LYS:H	1.71	0.42
1:AA:1347:G:O2'	1:AA:1348:U:P	2.78	0.42
1:AA:368:U:P	32:DK:91:SER:OG	2.78	0.42
22:AD:17:G:N1	22:AD:67:A:C6	2.87	0.42
22:AD:16:C:H3'	22:AD:69:U:O2	2.19	0.42
3:AF:173:VAL:N	3:AF:174:PRO:HD3	2.34	0.42
3:AF:19:GLU:O	3:AF:40:ARG:NH2	2.52	0.42
11:AN:115:PRO:C	11:AN:117:ASN:H	2.22	0.42
16:AS:39:TYR:CD1	16:AS:40:ASP:N	2.87	0.42
17:AT:45:HIS:CD2	17:AT:47:PRO:HD3	2.54	0.42
40:B1:74:LEU:N	40:B1:74:LEU:HD12	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B5:33:CYS:HB2	51:B5:40:LYS:CD	2.35	0.42
52:B6:51:GLU:HG2	52:B6:52:VAL:N	2.33	0.42
54:B8:23:VAL:HG13	54:B8:46:ARG:HB3	2.01	0.42
25:BA:1021:A:OP2	33:BM:65:LYS:NZ	2.41	0.42
25:BA:1105:U:H2'	25:BA:1106:G:H8	1.81	0.42
25:BA:1577:C:H2'	25:BA:1578:U:C1'	2.50	0.42
25:BA:1592:C:H2'	25:BA:1593:G:C8	2.55	0.42
25:BA:2746:U:O4	25:BA:2755:C:H4'	2.19	0.42
25:BA:39:C:H2'	25:BA:40:C:C6	2.54	0.42
25:BA:751:A:C5'	42:BS:90:ARG:HA	2.48	0.42
25:BA:78:A:H2'	25:BA:79:G:H8	1.85	0.42
26:BB:15:A:H1'	26:BB:109:G:N9	2.35	0.42
27:BD:31:LYS:HE3	27:BD:102:LYS:HD2	2.01	0.42
27:BD:168:ARG:HA	27:BD:173:VAL:HA	2.01	0.42
28:BE:111:ARG:H	28:BE:111:ARG:HG2	1.73	0.42
32:BK:73:GLU:CG	32:BK:136:VAL:HG23	2.44	0.42
45:BV:161:VAL:HB	45:BV:162:GLU:H	1.55	0.42
48:BW:9:GLN:HB3	48:BW:9:GLN:HE21	1.64	0.42
47:BZ:92:LYS:HE2	47:BZ:92:LYS:HB3	1.85	0.42
1:CA:11:G:C6	1:CA:12:U:C4	3.07	0.42
1:CA:1238:A:C8	1:CA:1303:C:H1'	2.55	0.42
1:CA:413:G:O2'	1:CA:428:G:N2	2.53	0.42
1:CA:539:A:H2'	1:CA:540:G:C8	2.54	0.42
1:CA:555:C:H2'	1:CA:556:C:C6	2.54	0.42
22:CB:55:U:O2	22:CB:55:U:O4'	2.36	0.42
23:CC:48:U:C2'	23:CC:49:C:OP2	2.66	0.42
3:CF:62:ASP:O	3:CF:97:LYS:HB2	2.19	0.42
3:CF:70:VAL:HG12	3:CF:71:ALA:N	2.35	0.42
4:CG:168:ARG:HA	4:CG:168:ARG:HD3	1.80	0.42
7:CJ:114:ARG:H	7:CJ:114:ARG:HG2	1.61	0.42
17:CT:17:LYS:NZ	17:CT:47:PRO:O	2.52	0.42
50:D4:48:ARG:HH12	50:D4:51:ASP:HA	1.84	0.42
25:DA:1000:A:N1	25:DA:1155:A:C4	2.87	0.42
25:DA:1062:G:C8	25:DA:1088:A:H2'	2.55	0.42
25:DA:1992:G:C1'	25:DA:1993:U:OP2	2.67	0.42
25:DA:2111:C:H41	25:DA:2147:G:N2	2.18	0.42
25:DA:2274:A:C2	25:DA:2276:G:H1'	2.54	0.42
25:DA:2516:G:C5	25:DA:2517:C:C4	3.07	0.42
25:DA:2540:C:N4	25:DA:2541:A:C6	2.87	0.42
25:DA:2787:C:H2'	25:DA:2787:C:O2	2.18	0.42
25:DA:425:G:N2	25:DA:426:C:C2	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DB:54:G:C2	26:DB:55:U:C6	3.07	0.42
27:DD:158:ALA:O	27:DD:159:ALA:C	2.58	0.42
28:DE:120:TRP:CD2	28:DE:155:LYS:HD3	2.54	0.42
28:DE:61:ARG:HB3	28:DE:62:PRO:CD	2.49	0.42
29:DF:107:LYS:C	29:DF:109:GLY:H	2.22	0.42
33:DM:131:GLN:HB3	33:DM:131:GLN:HE21	1.49	0.42
33:DM:1:MET:HE1	40:D1:97:ASP:HB2	2.00	0.42
33:DM:72:TYR:HE1	33:DM:101:HIS:HD2	1.67	0.42
35:DO:114:ILE:CG2	35:DO:130:PHE:CD1	3.02	0.42
36:DP:41:TRP:HZ3	36:DP:74:TYR:HE1	1.66	0.42
42:DS:20:VAL:CG2	42:DS:47:VAL:HG21	2.49	0.42
44:DU:81:LYS:HB3	44:DU:97:ARG:HD2	2.02	0.42
45:DV:145:GLU:HA	45:DV:174:VAL:HG12	2.01	0.42
49:DX:11:SER:HA	49:DX:12:PRO:HD3	1.76	0.42
24:A1:11:U:O2'	24:A1:12:A:C4	2.67	0.42
1:AA:1170:A:O5'	1:AA:1170:A:H8	2.02	0.42
1:AA:1202:G:C2	14:AQ:42:ILE:HG21	2.54	0.42
1:AA:1527:C:C4	1:AA:1528:U:O4	2.72	0.42
1:AA:942:G:H21	9:AL:124:GLN:NE2	2.16	0.42
1:AA:99:C:H2'	1:AA:101:A:O4'	2.19	0.42
22:AB:5:G:N1	22:AB:78:C:N4	2.65	0.42
22:AB:66:G:C2'	22:AB:67:A:H5'	2.49	0.42
2:AE:97:TRP:HZ2	2:AE:102:LEU:HD13	1.84	0.42
2:AE:174:VAL:O	2:AE:178:ARG:HB2	2.20	0.42
3:AF:95:THR:HG23	3:AF:97:LYS:HE2	2.01	0.42
4:AG:154:ASN:O	4:AG:155:LEU:O	2.37	0.42
9:AL:32:ASP:O	9:AL:33:PHE:C	2.57	0.42
10:AM:55:LYS:O	10:AM:56:HIS:CG	2.72	0.42
21:AX:25:LYS:HD2	21:AX:25:LYS:HA	1.71	0.42
37:B0:18:LEU:HD11	37:B0:22:ARG:NH1	2.34	0.42
25:BA:2331:G:H4'	46:B3:43:THR:H	1.85	0.42
50:B4:43:TYR:O	50:B4:44:THR:C	2.56	0.42
51:B5:4:HIS:CD2	51:B5:5:PRO:HD3	2.50	0.42
25:BA:1012:U:O4	33:BM:25:ARG:HA	2.19	0.42
25:BA:1264:G:H2'	25:BA:1265:A:OP1	2.18	0.42
25:BA:1493:C:N3	25:BA:2210:G:H1'	2.34	0.42
25:BA:150:C:H2'	25:BA:151:C:H6	1.83	0.42
25:BA:528:A:H2	25:BA:2043:C:H5'	1.84	0.42
25:BA:2154:G:H2'	25:BA:2155:G:H8	1.84	0.42
25:BA:2186:G:O2'	25:BA:2187:G:H5'	2.19	0.42
25:BA:2334:G:H4'	25:BA:2335:A:OP2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2543:G:H2'	25:BA:2544:G:O4'	2.19	0.42
25:BA:2648:C:H2'	25:BA:2649:U:H6	1.85	0.42
25:BA:493:G:H2'	25:BA:494:G:O4'	2.19	0.42
25:BA:511:U:O4	25:BA:512:G:C6	2.72	0.42
25:BA:699:A:H2'	25:BA:700:G:O4'	2.19	0.42
26:BB:29:A:C2	26:BB:30:C:C2	3.07	0.42
25:BA:2086:U:OP1	27:BD:262:ARG:NH1	2.53	0.42
25:BA:443:A:N7	29:BF:45:ARG:HG3	2.34	0.42
30:BG:5:VAL:HG11	30:BG:100:TRP:HB3	2.01	0.42
30:BG:109:VAL:O	30:BG:113:ARG:HG3	2.19	0.42
31:BH:152:ARG:NH2	31:BH:153:LYS:HZ1	2.07	0.42
34:BN:1:MET:HE2	34:BN:67:LYS:HE2	2.02	0.42
25:BA:622:G:OP2	35:BO:108:LYS:HD2	2.19	0.42
35:BO:130:PHE:CZ	35:BO:144:GLU:HB2	2.54	0.42
25:BA:2378:A:H4'	38:BQ:23:ARG:NH1	2.34	0.42
25:BA:2318:G:N2	38:BQ:2:ALA:N	2.65	0.42
39:BR:27:THR:CG2	39:BR:90:GLN:HB3	2.47	0.42
42:BS:95:ILE:O	42:BS:95:ILE:HG13	2.19	0.42
43:BT:34:ALA:HA	43:BT:38:GLU:OE1	2.19	0.42
44:BU:20:TYR:N	44:BU:20:TYR:CD1	2.87	0.42
43:BT:5:TYR:CE2	48:BW:30:ARG:HG3	2.54	0.42
24:C1:12:A:C1'	24:C1:13:A:OP1	2.61	0.42
1:CA:983:A:H1'	1:CA:1049:U:O2	2.20	0.42
1:CA:129(A):G:N2	1:CA:188:U:O2'	2.53	0.42
1:CA:353:A:C2'	1:CA:354:G:OP2	2.66	0.42
1:CA:411:A:N7	1:CA:413:G:N3	2.68	0.42
1:CA:741:G:H2'	1:CA:742:G:O4'	2.20	0.42
22:CB:62:G:H4'	36:DP:56:ARG:CZ	2.50	0.42
4:CG:189:PRO:HB2	4:CG:194:LEU:HD21	2.00	0.42
6:CI:97:PHE:O	18:CU:31:LEU:HD23	2.19	0.42
1:CA:1151:A:C1'	10:CM:39:PRO:HB2	2.48	0.42
40:D1:98:LEU:HA	40:D1:100:VAL:O	2.20	0.42
50:D4:35:VAL:O	50:D4:35:VAL:HG12	2.19	0.42
52:D6:48:VAL:HG13	52:D6:49:HIS:N	2.34	0.42
25:DA:1071:G:H1'	25:DA:1089:G:H3'	2.02	0.42
25:DA:1055:G:O6	25:DA:1104:C:N3	2.53	0.42
25:DA:1607:C:H4'	25:DA:1608:A:O5'	2.19	0.42
25:DA:2136:C:C4	25:DA:2155:G:N1	2.81	0.42
25:DA:2191:G:C4	25:DA:2192:G:C8	3.06	0.42
25:DA:2409:G:H2'	25:DA:2410:G:O4'	2.20	0.42
25:DA:2748:A:N7	25:DA:2754:U:C4	2.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:654(S):G:H1'	25:DA:654(T):A:N7	2.34	0.42
25:DA:810:U:O5'	25:DA:810:U:H6	2.02	0.42
25:DA:85:G:C5	25:DA:98:G:C2	3.08	0.42
29:DF:185:ASP:CG	29:DF:188:ARG:HH21	2.22	0.42
31:DH:122:THR:C	31:DH:123:PHE:CG	2.93	0.42
31:DH:12:PRO:O	31:DH:15:VAL:HG22	2.20	0.42
31:DH:30:LYS:HB3	31:DH:79:VAL:HA	2.01	0.42
32:DK:92:VAL:HB	32:DK:120:ILE:HB	2.00	0.42
1:CA:1423:G:C5'	34:DN:49:ARG:HH22	2.31	0.42
45:DV:14:LYS:HE2	45:DV:14:LYS:H	1.85	0.42
1:AA:1157:A:O4'	1:AA:1157:A:OP1	2.37	0.42
1:AA:189:U:C2	17:AT:72:ARG:NH1	2.88	0.42
1:AA:414:A:OP2	1:AA:428:G:N2	2.35	0.42
1:AA:658:G:C2	1:AA:749:C:N3	2.87	0.42
1:AA:765:G:C6	1:AA:812:C:C2	3.08	0.42
22:AD:46:G:C4	22:AD:55:U:O4	2.73	0.42
9:AL:59:PHE:HZ	9:AL:88:TYR:CD1	2.37	0.42
16:AS:23:ASP:OD1	16:AS:25:ARG:HG3	2.19	0.42
1:AA:390:C:H4'	16:AS:28:ARG:HH21	1.84	0.42
18:AU:56:THR:O	18:AU:58:LEU:HD12	2.19	0.42
50:B4:12:ALA:HB3	50:B4:24:THR:HB	2.01	0.42
50:B4:63:TYR:HA	50:B4:66:SER:OG	2.20	0.42
25:BA:2015:A:C2	51:B5:2:ALA:N	2.88	0.42
51:B5:46:CYS:HA	51:B5:47:PRO:HD2	1.69	0.42
54:B8:17:THR:OG1	54:B8:21:LYS:HB2	2.19	0.42
25:BA:1312:U:H4'	25:BA:1313:U:O5'	2.20	0.42
25:BA:1319:G:O2'	25:BA:1320:C:H5'	2.19	0.42
25:BA:2060:A:O2'	25:BA:2061:G:P	2.76	0.42
25:BA:2095:C:C4	25:BA:2096:U:C5	3.08	0.42
25:BA:2156:G:H5''	25:BA:2157:G:P	2.59	0.42
25:BA:2219:G:H2'	25:BA:2224:G:C5'	2.48	0.42
25:BA:2351:G:HO2'	25:BA:2352:A:H8	1.68	0.42
25:BA:2693:A:H2'	25:BA:2694:G:H8	1.84	0.42
25:BA:271(B):G:H4'	25:BA:271(C):U:H5'	2.01	0.42
25:BA:299:A:C5'	25:BA:300:A:OP2	2.68	0.42
25:BA:614:U:O2'	25:BA:614:U:O2	2.28	0.42
25:BA:826:U:H2'	25:BA:828:U:O4'	2.20	0.42
28:BE:119:ARG:HD2	28:BE:160:TYR:CD2	2.54	0.42
29:BF:23:ASP:O	29:BF:24:LEU:O	2.38	0.42
30:BG:10:LYS:O	30:BG:14:GLU:HB3	2.20	0.42
30:BG:95:ARG:O	30:BG:96:ARG:C	2.57	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BH:10:PRO:HG2	31:BH:50:VAL:O	2.19	0.42
43:BT:90:GLU:C	43:BT:92:LEU:H	2.22	0.42
44:BU:101:LYS:HB3	44:BU:101:LYS:HZ2	1.84	0.42
44:BU:42:VAL:CG1	44:BU:65:ALA:HB3	2.48	0.42
44:BU:96:ILE:HG22	44:BU:101:LYS:CE	2.47	0.42
48:BW:46:GLN:OE1	48:BW:46:GLN:HA	2.19	0.42
1:CA:1109:C:H2'	1:CA:1110:A:O4'	2.20	0.42
1:CA:1320:C:H2'	1:CA:1321:C:C6	2.55	0.42
1:CA:166:G:O2'	1:CA:167:G:H5'	2.19	0.42
1:CA:245:C:O2	1:CA:283:C:N3	2.51	0.42
1:CA:49:U:C2	1:CA:361:G:N2	2.87	0.42
1:CA:63:C:H4'	1:CA:380:G:H4'	2.02	0.42
1:CA:64:G:H1'	1:CA:65:U:OP2	2.20	0.42
2:CE:161:ALA:HB1	2:CE:185:ILE:CD1	2.50	0.42
11:CN:21:ILE:HD12	11:CN:95:ILE:HD13	2.02	0.42
14:CQ:23:ARG:O	14:CQ:25:VAL:N	2.53	0.42
14:CQ:29:ARG:O	14:CQ:30:ALA:HB2	2.19	0.42
14:CQ:53:LEU:HA	14:CQ:53:LEU:HD23	1.89	0.42
17:CT:59:ILE:HG22	17:CT:71:PHE:HD1	1.84	0.42
37:D0:70:LEU:C	37:D0:72:ASP:H	2.22	0.42
25:DA:1011:G:OP1	40:D1:75:ASN:HB3	2.20	0.42
25:DA:1070:A:C8	25:DA:1096:A:O2'	2.71	0.42
25:DA:1037:G:N2	25:DA:1119:C:C2	2.87	0.42
25:DA:1408:C:C2	25:DA:1595:G:N2	2.87	0.42
25:DA:2077:A:H2'	25:DA:2078:C:H6	1.85	0.42
25:DA:2113:U:C5	25:DA:2114:A:H1'	2.54	0.42
25:DA:2302:G:C6	25:DA:2315:G:C6	3.08	0.42
25:DA:2441:C:OP2	25:DA:2586:C:O2'	2.37	0.42
25:DA:2469:A:H5"	25:DA:2476:A:H2	1.84	0.42
25:DA:2850:A:H3'	25:DA:2851:A:H8	1.85	0.42
25:DA:893:C:HO2'	25:DA:894:C:H5	1.63	0.42
28:DE:25:VAL:HG12	28:DE:26:ILE:N	2.34	0.42
29:DF:187:VAL:HG13	35:DO:1:MET:O	2.19	0.42
29:DF:74:ARG:HG2	29:DF:74:ARG:O	2.19	0.42
31:DH:86:GLU:OE2	31:DH:165:ALA:N	2.52	0.42
32:DK:1:MET:HB3	32:DK:21:VAL:O	2.19	0.42
36:DP:38:GLU:HB2	36:DP:127:ILE:CG2	2.49	0.42
25:DA:138:G:N2	43:DT:44:GLU:OE2	2.52	0.42
1:AA:1009:G:C2	1:AA:1021:G:C2	3.07	0.42
1:AA:114:U:H2'	1:AA:115:G:C8	2.54	0.42
1:AA:913:A:H4'	1:AA:914:A:O5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AB:30:A:H2'	22:AB:30:A:N3	2.34	0.42
22:AD:38:MIA:H162	22:AD:38:MIA:H122	1.89	0.42
3:AF:138:VAL:HG13	3:AF:149:ALA:HB3	2.00	0.42
4:AG:173:TRP:CE2	4:AG:189:PRO:HG3	2.54	0.42
4:AG:12:CYS:HA	4:AG:19:LEU:HD21	1.98	0.42
5:AH:71:LEU:CD1	5:AH:114:GLY:HA3	2.48	0.42
1:AA:1298:C:P	7:AJ:114:ARG:HH22	2.41	0.42
8:AK:118:VAL:O	8:AK:119:LEU:HD23	2.19	0.42
15:AR:66:LEU:O	15:AR:69:TYR:HB3	2.20	0.42
16:AS:83:GLU:HB3	16:AS:84:ALA:H	1.68	0.42
19:AV:28:LYS:HA	19:AV:47:HIS:HE1	1.84	0.42
20:AW:35:THR:HA	20:AW:38:LYS:HD3	2.00	0.42
50:B4:1:MET:SD	50:B4:6:HIS:NE2	2.92	0.42
52:B6:24:GLU:O	54:B8:34:TRP:HD1	1.97	0.42
25:BA:2286:A:C8	52:B6:37:ARG:NH1	2.88	0.42
25:BA:1359:A:N3	25:BA:1359:A:H5'	2.35	0.42
25:BA:1582:C:HO2'	25:BA:1586:A:H8	1.56	0.42
25:BA:1872:A:H5''	25:BA:1878:G:OP2	2.19	0.42
25:BA:2114:A:C6	25:BA:2115:G:C6	3.08	0.42
25:BA:2127:G:N1	25:BA:2161:C:O2	2.45	0.42
25:BA:2211:G:H3'	25:BA:2212:A:C2	2.55	0.42
25:BA:273(D):C:H2'	25:BA:273(E):U:C6	2.54	0.42
25:BA:2807:G:C2'	25:BA:2808:U:H5''	2.49	0.42
25:BA:299:A:H5'	25:BA:300:A:OP2	2.20	0.42
25:BA:507:A:C5'	25:BA:508:G:H5'	2.50	0.42
25:BA:880:G:C2	25:BA:881:G:C8	3.07	0.42
31:BH:105:LEU:HD23	31:BH:113:VAL:O	2.20	0.42
35:BO:138:LEU:CD1	35:BO:144:GLU:HG3	2.48	0.42
29:BF:34:TRP:NE1	35:BO:8:PRO:HD3	2.35	0.42
42:BS:45:TYR:CZ	42:BS:49:LYS:HD2	2.55	0.42
44:BU:35:TYR:CD1	44:BU:69:ALA:HB3	2.54	0.42
48:BW:21:LEU:HD13	48:BW:64:LEU:HA	2.01	0.42
1:CA:1200:C:H5'	1:CA:1201:A:H5''	1.99	0.42
1:CA:152:A:N6	1:CA:170:U:C2	2.88	0.42
1:CA:828:A:H5''	1:CA:859:A:C2	2.54	0.42
22:CD:21:A:N1	22:CD:55:U:O4	2.52	0.42
3:CF:141:VAL:HG12	3:CF:141:VAL:O	2.20	0.42
9:CL:18:PHE:HB2	9:CL:62:TYR:HB3	2.01	0.42
18:CU:61:LYS:O	18:CU:65:ILE:HG13	2.20	0.42
19:CV:49:ILE:O	19:CV:60:VAL:N	2.47	0.42
25:DA:1225:C:HO2'	41:D2:85:LYS:HB2	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:D3:36:ILE:N	46:D3:36:ILE:HD13	2.35	0.42
25:DA:2286:A:C5'	52:D6:28:ARG:HH22	2.27	0.42
25:DA:1221:C:H2'	25:DA:1222:C:C6	2.54	0.42
25:DA:139:G:N3	25:DA:141:A:N1	2.68	0.42
25:DA:1268:A:C2	25:DA:2013:A:C4	3.08	0.42
25:DA:2320:A:O2'	25:DA:2321:G:C4	2.73	0.42
25:DA:2415:G:C5	25:DA:2416:C:C4	3.08	0.42
25:DA:2564:A:C2	25:DA:2647:U:H4'	2.55	0.42
25:DA:275:G:H8	25:DA:275:G:OP2	2.02	0.42
25:DA:49:A:H5''	25:DA:51:G:O4'	2.19	0.42
25:DA:608:A:H2'	25:DA:609:A:C8	2.55	0.42
25:DA:637:A:H4'	25:DA:638:G:O5'	2.19	0.42
26:DB:61:G:C6	26:DB:62:C:C4	3.07	0.42
30:DG:129:GLY:O	30:DG:161:THR:HB	2.20	0.42
31:DH:149:ARG:HG3	31:DH:162:ILE:O	2.19	0.42
31:DH:27:LYS:HD2	31:DH:28:GLY:H	1.85	0.42
32:DK:80:PRO:HB2	32:DK:146:ALA:HB3	2.02	0.42
35:DO:107:LYS:HD2	35:DO:107:LYS:HA	1.94	0.42
36:DP:132:VAL:CG2	36:DP:133:ARG:N	2.83	0.42
38:DQ:46:VAL:HG12	38:DQ:48:LEU:HD12	2.01	0.42
44:DU:95:LYS:NZ	44:DU:95:LYS:HB2	2.34	0.42
48:DW:38:GLN:HG2	48:DW:44:LEU:HB3	2.02	0.42
48:DW:47:ASN:C	48:DW:49:LYS:H	2.22	0.42
1:AA:129(A):G:N3	1:AA:190:G:H5'	2.34	0.42
1:AA:350:G:C6	1:AA:351:G:O6	2.73	0.42
1:AA:475:G:H2'	1:AA:476:G:H8	1.84	0.42
1:AA:484:G:O2'	1:AA:485:G:OP2	2.22	0.42
1:AA:486:U:H2'	1:AA:487:A:H8	1.81	0.42
1:AA:806:C:O2'	1:AA:807:A:H5'	2.20	0.42
1:AA:864:A:H2'	1:AA:865:A:C8	2.55	0.42
1:AA:926:G:C6	1:AA:1505:G:C6	3.08	0.42
1:AA:950:U:OP2	13:AP:102:ARG:HD2	2.20	0.42
22:AD:46:G:C2	22:AD:55:U:C4	3.07	0.42
2:AE:158:LEU:HD22	2:AE:182:ILE:HD11	2.02	0.42
2:AE:71:VAL:CG2	2:AE:164:VAL:HG22	2.49	0.42
4:AG:170:VAL:HG12	4:AG:171:GLY:N	2.34	0.42
4:AG:196:LEU:C	4:AG:198:VAL:H	2.23	0.42
5:AH:78:HIS:HE1	5:AH:143:ARG:H	1.68	0.42
6:AI:44:GLY:HA2	6:AI:59:TYR:CZ	2.54	0.42
6:AI:4:TYR:CD1	6:AI:92:LYS:HA	2.54	0.42
6:AI:67:MET:CE	6:AI:75:LEU:HD12	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AJ:121:ALA:O	7:AJ:125:MET:HG3	2.19	0.42
12:AO:80:VAL:HG11	12:AO:97:ILE:HD12	2.02	0.42
20:AW:57:ARG:HD3	20:AW:102:GLY:O	2.20	0.42
25:BA:128:C:H2'	25:BA:129:C:C6	2.55	0.42
25:BA:1411:C:H2'	25:BA:1412:A:O4'	2.20	0.42
25:BA:141:A:H1'	25:BA:1408:C:O4'	2.19	0.42
25:BA:143:C:H2'	25:BA:144:C:H6	1.84	0.42
25:BA:1621:U:H5''	25:BA:1622:G:OP1	2.20	0.42
25:BA:2015:A:C2	51:B5:6:VAL:HG23	2.55	0.42
25:BA:2367:G:H2'	25:BA:2368:C:C6	2.55	0.42
25:BA:945:A:N6	25:BA:2448:A:C4	2.88	0.42
25:BA:2732:G:H3'	25:BA:2733:A:O4'	2.20	0.42
25:BA:2789:C:C2'	25:BA:2790:A:H5''	2.50	0.42
25:BA:862:G:H2'	25:BA:863:A:O4'	2.20	0.42
25:BA:943:U:OP1	35:BO:34:GLY:O	2.38	0.42
25:BA:950:G:H2'	25:BA:951:C:C6	2.55	0.42
26:BB:89:G:C6	26:BB:89(A):A:C6	3.08	0.42
27:BD:33:LEU:O	27:BD:35:LYS:N	2.53	0.42
28:BE:111:ARG:HA	37:B0:1:MET:HG3	2.02	0.42
28:BE:116:VAL:HG13	28:BE:122:PHE:CD2	2.55	0.42
29:BF:170:LEU:HA	29:BF:171:PRO:HD3	1.84	0.42
30:BG:135:LEU:O	30:BG:154:GLY:HA3	2.20	0.42
30:BG:63:ILE:HD12	30:BG:141:PHE:CG	2.54	0.42
30:BG:11:TYR:HA	30:BG:15:VAL:HB	2.01	0.42
30:BG:182:LYS:HD3	30:BG:182:LYS:HA	1.79	0.42
33:BM:103:VAL:O	33:BM:106:MET:N	2.46	0.42
42:BS:29:LEU:O	42:BS:33:ARG:HG3	2.18	0.42
44:BU:65:ALA:HA	44:BU:66:PRO:HD3	1.96	0.42
45:BV:80:ARG:HD3	45:BV:82:ARG:NH1	2.34	0.42
45:BV:89:PHE:HE1	45:BV:96:VAL:HG21	1.82	0.42
48:BW:17:SER:HB2	48:BW:18:PRO:HA	2.01	0.42
1:CA:1054:C:C4	1:CA:1196:U:C4	3.07	0.42
1:CA:1352:C:O2	1:CA:1371:G:C2	2.73	0.42
1:CA:294:U:OP1	1:CA:610:G:O2'	2.24	0.42
1:CA:29:G:O2'	1:CA:30:U:H5'	2.20	0.42
1:CA:412:A:N6	4:CG:35:ARG:HG3	2.35	0.42
1:CA:427:U:H3'	1:CA:428:G:H2'	2.01	0.42
23:CC:53:G:O2'	23:CC:54:G:H5'	2.20	0.42
2:CE:169:LYS:O	2:CE:169:LYS:HD3	2.19	0.42
1:CA:1056:U:OP1	3:CF:163:ALA:N	2.53	0.42
1:CA:1151:A:HO2'	10:CM:70:ARG:NH2	2.15	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CP:83:ASP:OD2	13:CP:83:ASP:N	2.52	0.42
40:D1:58:ARG:HG2	40:D1:62:ILE:CD1	2.49	0.42
52:D6:11:LEU:HG	52:D6:53:LYS:O	2.18	0.42
25:DA:1025:G:C5	25:DA:1135:C:H1'	2.55	0.42
25:DA:1438:U:O2'	25:DA:1439:A:H5'	2.20	0.42
25:DA:1671:U:O2'	25:DA:1673:U:H5	2.01	0.42
25:DA:2032:G:H21	28:DE:146:THR:CG2	2.24	0.42
25:DA:2522:U:O2'	25:DA:2647:U:H5''	2.20	0.42
25:DA:2795:G:H1'	25:DA:2802:G:N2	2.35	0.42
25:DA:2852:G:C2	25:DA:2853:C:C2	3.08	0.42
25:DA:2854:G:N2	25:DA:2864:G:N3	2.68	0.42
25:DA:303:U:C2	25:DA:304:G:C8	3.07	0.42
25:DA:746:A:H2'	25:DA:2612:C:H5''	2.01	0.42
25:DA:817:C:O2'	25:DA:839:U:H5''	2.20	0.42
25:DA:857:C:N4	25:DA:858:U:O4	2.52	0.42
25:DA:916:G:C2'	25:DA:917:A:H5''	2.50	0.42
25:DA:85:G:C6	25:DA:98:G:C6	3.08	0.42
27:DD:35:LYS:HE2	27:DD:104:TYR:HB2	2.00	0.42
28:DE:13:ARG:HD2	28:DE:20:ALA:HB1	2.02	0.42
28:DE:199:ARG:HG2	28:DE:200:GLU:N	2.34	0.42
32:DK:110:ASP:HA	32:DK:111:PRO:HD3	1.92	0.42
32:DK:52:ARG:HA	32:DK:55:ALA:HB3	2.01	0.42
35:DO:147:LEU:CD2	35:DO:148:LEU:H	2.33	0.42
25:DA:411:G:C2	35:DO:71:VAL:CG2	3.02	0.42
25:DA:138:G:H22	43:DT:44:GLU:CD	2.23	0.42
45:DV:128:VAL:HG13	45:DV:129:SER:N	2.35	0.42
1:AA:1004:A:O4'	1:AA:1036:G:O6	2.37	0.42
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.35	0.42
1:AA:1331:G:O2'	1:AA:1332:A:C8	2.63	0.42
1:AA:118:U:C5	1:AA:288:A:C6	3.08	0.42
1:AA:746:A:C5	1:AA:747:C:C5	3.08	0.42
1:AA:812:C:H2'	1:AA:812:C:H6	1.70	0.42
1:AA:943:U:C2'	1:AA:944:G:H5'	2.50	0.42
22:AB:13:G:H2'	22:AB:14:A:H8	1.85	0.42
22:AB:51:C:H6	22:AB:51:C:OP2	2.02	0.42
23:AC:48:U:HO2'	23:AC:49:C:P	2.27	0.42
3:AF:3:ASN:N	3:AF:3:ASN:OD1	2.52	0.42
4:AG:25:ARG:NH1	4:AG:30:LYS:O	2.53	0.42
10:AM:54:PHE:CE1	10:AM:55:LYS:HE3	2.55	0.42
12:AO:57:LEU:HB2	12:AO:61:TYR:HB2	2.01	0.42
13:AP:32:GLU:OE2	13:AP:33:ALA:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AP:48:LEU:O	13:AP:49:THR:C	2.58	0.42
17:AT:29:HIS:CG	17:AT:30:PRO:HD2	2.55	0.42
18:AU:21:LYS:O	18:AU:23:LYS:N	2.50	0.42
18:AU:45:SER:HB3	18:AU:51:LEU:HD21	2.02	0.42
20:AW:98:PRO:C	20:AW:100:ILE:N	2.73	0.42
21:AX:6:ARG:C	21:AX:8:THR:H	2.22	0.42
37:B0:100:LEU:HD13	37:B0:112:ALA:HA	2.02	0.42
46:B3:41:ARG:HA	46:B3:41:ARG:HE	1.83	0.42
54:B8:48:PHE:CE2	54:B8:50:LEU:HD13	2.42	0.42
25:BA:1270:C:H5''	25:BA:1271:G:C5'	2.49	0.42
25:BA:1394:U:C4	25:BA:1395:A:C5	3.07	0.42
25:BA:1729:A:C8	25:BA:1730:U:C5	3.00	0.42
25:BA:1893:C:C5	25:BA:1894:C:C4	3.08	0.42
25:BA:196:A:OP2	35:BO:46:LYS:NZ	2.53	0.42
25:BA:2082:A:H2'	25:BA:2083:G:O4'	2.20	0.42
25:BA:2097:C:O2'	25:BA:2098:U:H5'	2.19	0.42
25:BA:2114:A:N3	25:BA:2114:A:C2'	2.80	0.42
25:BA:2167:U:H2'	25:BA:2168:G:O5'	2.20	0.42
25:BA:2168:G:N2	25:BA:2170:A:N6	2.68	0.42
25:BA:2172:U:H5'	25:BA:2173:A:P	2.59	0.42
25:BA:910:A:N1	25:BA:2277:G:H1'	2.35	0.42
25:BA:245:G:H2'	25:BA:246:C:H6	1.84	0.42
25:BA:270(K):C:O2	25:BA:270(N):G:N1	2.52	0.42
25:BA:270(U):C:H2'	25:BA:270(V):G:H8	1.85	0.42
25:BA:33:U:H4'	25:BA:34:C:OP1	2.20	0.42
25:BA:654(I):C:H2'	25:BA:654(J):A:O4'	2.20	0.42
25:BA:968:G:H2'	25:BA:969:U:C6	2.54	0.42
26:BB:66:A:C5	26:BB:108:C:C5	3.08	0.42
26:BB:55:U:H2'	26:BB:56:G:O4'	2.19	0.42
27:BD:148:GLU:CB	27:BD:151:LYS:HD2	2.45	0.42
29:BF:42:ALA:O	29:BF:45:ARG:HB2	2.20	0.42
30:BG:10:LYS:HE2	30:BG:175:LEU:O	2.20	0.42
31:BH:152:ARG:HG2	31:BH:153:LYS:H	1.85	0.42
31:BH:56:SER:OG	31:BH:57:ASP:N	2.52	0.42
35:BO:112:LEU:HD22	35:BO:113:LYS:N	2.35	0.42
45:BV:115:GLY:HA3	45:BV:174:VAL:CG1	2.50	0.42
1:CA:393:A:C2	1:CA:394:G:C8	3.08	0.42
22:CD:18:G:C8	22:CD:66:G:N2	2.87	0.42
3:CF:200:ALA:O	3:CF:201:TYR:HD2	2.02	0.42
3:CF:82:GLU:O	3:CF:86:VAL:HG22	2.20	0.42
4:CG:88:VAL:O	4:CG:92:VAL:HG23	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CI:15:ASP:C	6:CI:15:ASP:OD1	2.57	0.42
9:CL:4:TYR:CZ	9:CL:59:PHE:CE2	3.07	0.42
13:CP:116:THR:O	13:CP:118:ALA:N	2.52	0.42
37:D0:37:THR:OG1	37:D0:40:LYS:HB2	2.20	0.42
40:D1:111:GLU:C	40:D1:113:ALA:H	2.21	0.42
41:D2:44:LYS:O	41:D2:46:VAL:HG12	2.20	0.42
25:DA:116:C:H2'	25:DA:117:G:O4'	2.20	0.42
25:DA:1551:C:H2'	25:DA:1552:G:O4'	2.19	0.42
25:DA:1872:A:C5	25:DA:1878:G:H1'	2.55	0.42
25:DA:218:A:H2	25:DA:235:U:H4'	1.83	0.42
25:DA:2720:U:O4	25:DA:2721:A:N6	2.51	0.42
25:DA:2726:U:HO2'	25:DA:2727:G:H8	1.66	0.42
25:DA:2850:A:C2	25:DA:2851:A:C4	3.08	0.42
25:DA:288:C:H3'	25:DA:289:A:H8	1.84	0.42
25:DA:464:U:H4'	53:D7:5:TRP:CZ3	2.55	0.42
25:DA:654(I):C:O2	25:DA:654(I):C:O4'	2.37	0.42
25:DA:943:U:OP2	35:DO:36:LYS:CE	2.67	0.42
25:DA:999:U:C5	25:DA:1154:G:C5	3.08	0.42
28:DE:27:LEU:HD23	39:DR:7:ILE:HD11	2.01	0.42
28:DE:53:PRO:O	28:DE:54:GLN:C	2.58	0.42
30:DG:143:GLU:N	30:DG:143:GLU:OE2	2.53	0.42
33:DM:49:GLY:O	33:DM:119:ARG:NH1	2.52	0.42
36:DP:118:LEU:HD13	36:DP:131:ILE:HG23	2.01	0.42
44:DU:17:SER:HB3	44:DU:71:LYS:HD2	2.00	0.42
1:AA:109:A:C6	1:AA:326:G:C5	3.07	0.42
1:AA:160:A:N6	1:AA:347:G:H1'	2.34	0.42
1:AA:39:G:N7	1:AA:547:A:H8	2.18	0.42
1:AA:587:G:N2	1:AA:755:G:C5	2.87	0.42
1:AA:687:A:H2'	1:AA:701:C:N4	2.35	0.42
1:AA:688:G:H2'	1:AA:689:C:C6	2.46	0.42
1:AA:812:C:OP1	1:AA:903:G:H1'	2.20	0.42
22:AD:17:G:C6	22:AD:67:A:C6	3.07	0.42
3:AF:79:ARG:O	3:AF:82:GLU:HG3	2.20	0.42
3:AF:95:THR:HG22	3:AF:97:LYS:N	2.20	0.42
5:AH:6:PHE:HA	5:AH:35:GLY:O	2.18	0.42
7:AJ:17:VAL:O	7:AJ:17:VAL:HG12	2.20	0.42
13:AP:66:LEU:O	13:AP:68:GLY:N	2.52	0.42
16:AS:18:ARG:NH1	16:AS:32:TYR:OH	2.53	0.42
18:AU:53:ARG:HA	18:AU:56:THR:OG1	2.19	0.42
25:BA:1057:A:O2'	25:BA:1058:U:O4'	2.31	0.42
25:BA:1205:U:H4'	25:BA:1206:G:OP2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1388:G:H2'	25:BA:1389:G:H8	1.85	0.42
25:BA:1498:C:O4'	25:BA:1577:C:H4'	2.20	0.42
25:BA:2197:U:H1'	25:BA:2198:A:C8	2.55	0.42
25:BA:2210:G:N3	25:BA:2210:G:H2'	2.35	0.42
25:BA:2231:C:OP1	47:BZ:42:GLN:HA	2.20	0.42
25:BA:2699:C:H2'	25:BA:2700:C:O4'	2.19	0.42
25:BA:2726:U:O4'	34:BN:1:MET:HE1	2.20	0.42
25:BA:455:C:N3	25:BA:472:A:H2'	2.34	0.42
25:BA:784:A:C8	25:BA:792:G:C5	3.08	0.42
25:BA:886:C:C4	25:BA:887:A:N3	2.88	0.42
25:BA:94:G:H21	48:BW:47:ASN:HD21	1.68	0.42
31:BH:86:GLU:O	31:BH:87:LEU:CB	2.67	0.42
32:BK:139:GLN:HE21	32:BK:139:GLN:HB2	1.59	0.42
32:BK:31:LEU:HD21	32:BK:38:LEU:HG	2.02	0.42
35:BO:16:ARG:CG	35:BO:16:ARG:NH1	2.80	0.42
35:BO:61:ARG:CZ	35:BO:61:ARG:HB3	2.46	0.42
38:BQ:103:GLU:O	38:BQ:106:ARG:HD3	2.19	0.42
38:BQ:99:LYS:HE2	38:BQ:103:GLU:OE1	2.20	0.42
25:BA:142:G:C1'	43:BT:37:THR:HG21	2.49	0.42
45:BV:165:VAL:HB	45:BV:166:SER:HB2	2.02	0.42
45:BV:62:PRO:O	45:BV:63:ASP:HB2	2.19	0.42
48:BW:63:VAL:O	48:BW:67:LYS:HB2	2.20	0.42
1:CA:1028(B):C:N3	1:CA:1032(A):G:N2	2.67	0.42
1:CA:101:A:O2'	1:CA:102:G:H5'	2.20	0.42
1:CA:1377:A:H4'	1:CA:1378:C:H5	1.85	0.42
1:CA:49:U:O2	1:CA:362:G:H1'	2.20	0.42
1:CA:585:G:C6	1:CA:586:C:C4	3.07	0.42
1:CA:728:A:N1	1:CA:729:A:C6	2.88	0.42
1:CA:751:U:H1'	15:CR:23:GLY:O	2.19	0.42
1:CA:960:U:O2	1:CA:960:U:O2'	2.35	0.42
22:CB:35:G:H2'	22:CB:36:U:C6	2.54	0.42
22:CB:49:A:N3	22:CB:49:A:H2'	2.35	0.42
2:CE:17:PHE:HD1	2:CE:17:PHE:HA	1.77	0.42
8:CK:85:ARG:NH1	8:CK:87:SER:O	2.53	0.42
11:CN:18:ARG:HB3	11:CN:33:THR:OG1	2.20	0.42
19:CV:9:VAL:CG1	19:CV:10:PHE:N	2.83	0.42
25:DA:136:G:H2'	25:DA:137:C:C6	2.55	0.42
25:DA:1786:A:C4	25:DA:1938:A:C6	3.07	0.42
25:DA:2007:C:H2'	25:DA:2008:C:H6	1.85	0.42
25:DA:2094:G:OP1	32:DK:22:LYS:HD2	2.20	0.42
25:DA:2389:G:H5'	25:DA:2390:U:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2473:U:O2	25:DA:2473:U:H3'	2.19	0.42
25:DA:2639:A:C2'	25:DA:2640:G:H5'	2.50	0.42
25:DA:2754:U:C5'	25:DA:2755:C:OP2	2.68	0.42
25:DA:618:G:H2'	25:DA:618(A):C:O4'	2.20	0.42
25:DA:645:C:O2	25:DA:645:C:C2'	2.67	0.42
25:DA:803:U:O2'	25:DA:804:A:H5'	2.20	0.42
26:DB:40:U:N3	26:DB:43:C:OP2	2.53	0.42
27:DD:206:LEU:HD23	27:DD:206:LEU:HA	1.91	0.42
28:DE:116:VAL:HG11	28:DE:138:PRO:HB3	2.01	0.42
31:DH:118:PRO:HG2	31:DH:121:ILE:HG13	2.01	0.42
33:DM:19:GLU:HA	33:DM:59:LYS:O	2.19	0.42
33:DM:54:VAL:HB	33:DM:122:VAL:HG22	2.01	0.42
39:DR:94:ALA:O	39:DR:95:ARG:CB	2.68	0.42
42:DS:92:ARG:O	42:DS:93:ALA:HB2	2.20	0.42
25:DA:499:U:O3'	44:DU:44:ILE:HD11	2.19	0.42
45:DV:52:SER:C	45:DV:54:HIS:N	2.71	0.42
45:DV:33:LEU:CD2	45:DV:90:VAL:HG21	2.44	0.42
47:DZ:3:LYS:O	47:DZ:12:PRO:HD3	2.20	0.42
47:DZ:50:ARG:HD2	47:DZ:57:GLU:OE1	2.19	0.42
1:AA:1285:A:C1'	1:AA:1286:A:OP2	2.67	0.41
1:AA:437:U:C4	1:AA:438:G:C6	3.07	0.41
1:AA:627:G:O2'	1:AA:628:G:H5'	2.20	0.41
22:AB:21:A:H2	22:AB:56:U:O2	2.02	0.41
4:AG:154:ASN:HB2	4:AG:155:LEU:H	1.48	0.41
4:AG:31:CYS:C	4:AG:33:MET:N	2.73	0.41
5:AH:41:VAL:HG23	5:AH:67:VAL:CG1	2.50	0.41
5:AH:80:ILE:HG12	5:AH:81:GLU:N	2.34	0.41
10:AM:4:ILE:HB	10:AM:74:ILE:CG1	2.47	0.41
10:AM:34:VAL:HG22	10:AM:74:ILE:HA	2.02	0.41
14:AQ:24:CYS:HB2	14:AQ:40:CYS:HB3	1.61	0.41
17:AT:100:LYS:HB2	17:AT:101:ARG:NH1	2.35	0.41
19:AV:39:THR:HG22	19:AV:40:ILE:N	2.25	0.41
20:AW:18:GLN:O	20:AW:22:ARG:HG3	2.20	0.41
53:B7:15:THR:HG22	53:B7:16:HIS:CE1	2.55	0.41
25:BA:1047:G:N1	25:BA:1110:G:N7	2.68	0.41
25:BA:1089:G:H5''	25:BA:1090:U:P	2.60	0.41
25:BA:1147:C:O2'	25:BA:1148:A:H5'	2.20	0.41
25:BA:1290:C:H2'	25:BA:1291:C:C6	2.55	0.41
25:BA:1429:G:H2'	25:BA:1430:C:C6	2.55	0.41
25:BA:2164:C:H2'	25:BA:2165:G:O4'	2.20	0.41
25:BA:2286:A:OP1	52:B6:28:ARG:HG3	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2681:C:C2'	25:BA:2682:U:OP2	2.68	0.41
25:BA:2689:U:H4'	25:BA:2690:C:OP2	2.20	0.41
25:BA:27:G:C2	25:BA:512:G:N3	2.88	0.41
25:BA:881:G:C8	25:BA:882:G:C8	3.08	0.41
25:BA:971:C:H2'	25:BA:972:G:H5'	2.02	0.41
26:BB:11:C:OP2	26:BB:12:C:C5	2.73	0.41
27:BD:17:THR:CG2	27:BD:204:ILE:HA	2.50	0.41
27:BD:238:GLY:O	27:BD:239:ARG:C	2.58	0.41
27:BD:34:VAL:C	27:BD:35:LYS:O	2.57	0.41
27:BD:65:ILE:HD11	27:BD:67:PHE:CG	2.55	0.41
28:BE:59:VAL:O	28:BE:60:ASN:ND2	2.53	0.41
31:BH:58:GLU:O	31:BH:59:ARG:C	2.58	0.41
32:BK:130:TYR:HB3	32:BK:136:VAL:HG13	2.01	0.41
33:BM:57:ALA:O	33:BM:58:ASP:CB	2.68	0.41
25:BA:2675:A:H4'	34:BN:29:ASN:ND2	2.36	0.41
25:BA:943:U:OP2	35:BO:36:LYS:CE	2.68	0.41
36:BP:25:ASP:O	36:BP:26:TYR:CB	2.67	0.41
38:BQ:83:LYS:HE2	38:BQ:83:LYS:HB3	1.95	0.41
45:BV:164:ALA:O	45:BV:165:VAL:O	2.38	0.41
47:BZ:91:LYS:C	47:BZ:93:GLU:N	2.72	0.41
1:CA:1027:C:O2	1:CA:1035:A:C6	2.72	0.41
1:CA:1054:C:N4	1:CA:1196:U:O4	2.53	0.41
1:CA:1329:A:H2'	1:CA:1330:U:H5'	2.02	0.41
1:CA:29:G:C5	1:CA:30:U:C5	3.08	0.41
22:CD:38:MIA:H2'	22:CD:39:A:O4'	2.19	0.41
1:CA:426:G:P	4:CG:36:ARG:HH21	2.43	0.41
5:CH:105:VAL:HB	5:CH:106:PRO:HD3	2.02	0.41
5:CH:18:ARG:HH21	5:CH:25:ARG:CB	2.33	0.41
8:CK:44:PHE:CE2	8:CK:109:ILE:HG21	2.55	0.41
8:CK:20:TYR:HD1	8:CK:65:TYR:CD2	2.38	0.41
10:CM:75:ILE:HG13	10:CM:76:ASN:N	2.35	0.41
11:CN:120:ARG:HA	11:CN:121:PRO:HD3	1.91	0.41
15:CR:31:LEU:HD12	15:CR:31:LEU:HA	1.84	0.41
1:CA:453:A:H4'	16:CS:72:ARG:HG3	2.01	0.41
28:DE:111:ARG:HA	37:D0:2:ARG:HH12	1.85	0.41
25:DA:1278:A:OP1	37:D0:36:THR:HG22	2.20	0.41
25:DA:2020:A:OP1	40:D1:27:LEU:HD23	2.20	0.41
46:D3:46:LYS:HA	46:D3:47:PRO:HD3	1.91	0.41
25:DA:2286:A:C8	52:D6:37:ARG:NH2	2.88	0.41
25:DA:1342:A:C2	25:DA:1397:U:N1	2.87	0.41
25:DA:1342:A:H8	25:DA:1345:C:C4	2.37	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1408:C:H2'	25:DA:1409:C:C6	2.55	0.41
25:DA:1678:G:H22	25:DA:1989:G:H1	1.68	0.41
25:DA:1711:C:H2'	25:DA:1712:C:C6	2.54	0.41
25:DA:1773:A:C5	25:DA:1829:A:H1'	2.55	0.41
25:DA:1997:G:O2'	25:DA:1998:G:H5'	2.20	0.41
25:DA:214:G:N2	25:DA:216:A:N3	2.68	0.41
25:DA:2294:C:H2'	25:DA:2295:C:H6	1.84	0.41
25:DA:2521:C:H2'	25:DA:2522:U:C6	2.55	0.41
25:DA:2584:U:O2	25:DA:2584:U:O4'	2.37	0.41
25:DA:2720:U:C2	25:DA:2721:A:C8	3.07	0.41
25:DA:1664:A:H1'	25:DA:2726:U:C5	2.55	0.41
25:DA:2727:G:O2'	34:DN:70:LYS:HE2	2.20	0.41
25:DA:298:G:H1'	25:DA:340:A:H61	1.85	0.41
25:DA:493:G:H2'	25:DA:494:G:O4'	2.20	0.41
26:DB:15:A:H1'	26:DB:109:G:C5	2.55	0.41
27:DD:25:THR:C	27:DD:27:THR:N	2.56	0.41
25:DA:607:U:OP1	29:DF:102:PRO:HA	2.20	0.41
29:DF:133:ASN:HB2	29:DF:138:GLU:OE1	2.20	0.41
29:DF:140:LEU:HD13	29:DF:140:LEU:HA	1.81	0.41
29:DF:152:GLU:HG3	29:DF:191:ARG:HD2	2.02	0.41
30:DG:108:ASN:O	30:DG:109:VAL:HG22	2.20	0.41
32:DK:23:PRO:O	32:DK:27:ARG:HB2	2.19	0.41
33:DM:39:ARG:O	33:DM:41:ASP:N	2.51	0.41
33:DM:41:ASP:C	33:DM:48:MET:HE1	2.40	0.41
33:DM:98:VAL:HG23	33:DM:99:LEU:N	2.35	0.41
39:DR:19:LEU:HA	39:DR:20:PRO:HD3	1.74	0.41
25:DA:495:G:N2	42:DS:61:ASN:HD21	2.15	0.41
45:DV:73:GLN:HB3	45:DV:87:ASP:OD2	2.20	0.41
47:DZ:85:LEU:C	47:DZ:87:PRO:HD2	2.41	0.41
1:AA:1003:G:C2'	1:AA:1004:A:C5'	2.95	0.41
1:AA:1030:C:H2'	1:AA:1031:G:O4'	2.19	0.41
1:AA:1053:G:N7	1:AA:1199:U:H3'	2.35	0.41
1:AA:1271:G:H2'	1:AA:1272:G:H5'	2.01	0.41
1:AA:1322:C:HO2'	1:AA:1323:G:P	2.37	0.41
1:AA:1366:C:OP1	9:AL:117:HIS:CE1	2.67	0.41
1:AA:1378:C:O2	1:AA:1378:C:C2'	2.68	0.41
1:AA:408:A:O2'	1:AA:409:G:H5'	2.20	0.41
23:AC:63:C:O2	23:AC:64:G:C8	2.73	0.41
2:AE:229:VAL:HG12	2:AE:230:VAL:N	2.34	0.41
3:AF:7:PRO:O	3:AF:11:ARG:NH1	2.53	0.41
6:AI:65:VAL:CG2	6:AI:66:GLU:N	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AO:34:CYS:O	12:AO:76:GLU:O	2.37	0.41
13:AP:102:ARG:HE	13:AP:102:ARG:HB2	1.69	0.41
13:AP:64:TRP:N	13:AP:64:TRP:CD1	2.88	0.41
19:AV:51:VAL:HG12	19:AV:52:TYR:N	2.34	0.41
20:AW:99:LEU:O	20:AW:100:ILE:HB	2.21	0.41
37:B0:55:ALA:HA	37:B0:80:PHE:CE2	2.55	0.41
37:B0:85:PRO:C	37:B0:87:TYR:N	2.74	0.41
41:B2:38:LEU:O	41:B2:51:VAL:HG13	2.20	0.41
25:BA:466:A:OP1	53:B7:34:ARG:NH1	2.53	0.41
25:BA:1071:G:O6	25:BA:1091:G:O6	2.38	0.41
25:BA:1510:A:OP1	25:BA:1510:A:O3'	2.39	0.41
25:BA:1796:U:H2'	25:BA:1797:C:H6	1.85	0.41
25:BA:1651:G:N2	25:BA:2007:C:C2	2.88	0.41
25:BA:2163:C:C2'	25:BA:2164:C:H5'	2.50	0.41
25:BA:2167:U:O2'	25:BA:2168:G:P	2.75	0.41
25:BA:2467:C:C3'	25:BA:2468:G:H5'	2.43	0.41
25:BA:2492:U:H2'	25:BA:2493:U:H6	1.83	0.41
25:BA:2578:G:H4'	25:BA:2578:G:OP2	2.19	0.41
25:BA:270(K):C:N3	25:BA:270(N):G:O6	2.53	0.41
25:BA:270(Y):G:C2	25:BA:270(Z):U:O4	2.73	0.41
25:BA:338:G:OP1	44:BU:4:LYS:HD3	2.20	0.41
25:BA:489:G:C5	25:BA:1284:A:C2	3.09	0.41
25:BA:721:C:H2'	25:BA:722:A:C8	2.55	0.41
27:BD:35:LYS:HG2	27:BD:64:ILE:HG22	2.00	0.41
27:BD:69:ARG:C	27:BD:71:ASP:H	2.22	0.41
27:BD:75:ILE:HG13	27:BD:75:ILE:H	1.63	0.41
28:BE:37:ARG:HA	28:BE:42:ASP:OD2	2.20	0.41
32:BK:140:LEU:N	32:BK:140:LEU:HD23	2.35	0.41
32:BK:33:ARG:HB3	32:BK:35:LEU:HD21	2.00	0.41
35:BO:21:ARG:HB3	35:BO:22:GLY:H	1.59	0.41
36:BP:2:LEU:HA	36:BP:2:LEU:HD12	1.89	0.41
38:BQ:87:PHE:HZ	38:BQ:98:VAL:HG12	1.85	0.41
47:BZ:41:ARG:HG3	47:BZ:43:TYR:CZ	2.55	0.41
1:CA:1299:A:C2	1:CA:1301:U:C4	3.08	0.41
1:CA:1436:U:H2'	1:CA:1437:C:C6	2.56	0.41
1:CA:164:U:H2'	1:CA:165:C:C6	2.55	0.41
1:CA:339:C:H2'	1:CA:340:U:H6	1.85	0.41
22:CB:46:G:H2'	22:CB:46:G:N3	2.34	0.41
22:CB:79:A:C2'	22:CB:80:C:H5''	2.49	0.41
23:CC:73:A:C6	23:CC:74:A:C6	3.08	0.41
1:CA:619:U:C2	4:CG:135:LEU:HD22	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CG:32:ALA:O	4:CG:36:ARG:N	2.37	0.41
1:CA:264:U:O2'	17:CT:64:PRO:HB2	2.20	0.41
20:CW:54:LYS:HA	20:CW:57:ARG:CZ	2.50	0.41
37:D0:94:TYR:O	37:D0:117:VAL:HG12	2.19	0.41
41:D2:43:GLU:O	41:D2:44:LYS:HD3	2.20	0.41
26:DB:39:A:C2	50:D4:1:MET:SD	3.13	0.41
35:DO:49:ARG:HG2	54:D8:59:LYS:CG	2.50	0.41
25:DA:1810:A:H8	25:DA:1810:A:O5'	2.03	0.41
25:DA:2135:A:O2'	25:DA:2160:G:H4'	2.19	0.41
25:DA:2093:G:N7	25:DA:2225:A:H2'	2.35	0.41
25:DA:2336:A:H61	46:D3:43:THR:CG2	2.33	0.41
25:DA:2563:U:O2	25:DA:2565:A:C8	2.73	0.41
25:DA:2858:C:N4	25:DA:2859:G:C6	2.88	0.41
25:DA:2899:G:H2'	25:DA:2900:A:O4'	2.19	0.41
25:DA:35:G:C4	25:DA:454:A:C2	3.08	0.41
25:DA:521:G:H2'	25:DA:522:G:C8	2.55	0.41
25:DA:654(A):A:C2	25:DA:654(U):A:N3	2.88	0.41
25:DA:1568:G:H5'	27:DD:60:ARG:HA	2.03	0.41
28:DE:8:LYS:CB	28:DE:192:ASN:HA	2.49	0.41
28:DE:203:LYS:O	28:DE:204:ALA:CB	2.67	0.41
31:DH:13:LYS:HB3	31:DH:13:LYS:NZ	2.35	0.41
32:DK:31:LEU:N	32:DK:32:PRO:CD	2.83	0.41
33:DM:55:VAL:O	33:DM:56:ASN:C	2.58	0.41
35:DO:138:LEU:C	35:DO:140:ALA:H	2.24	0.41
43:DT:50:LYS:O	43:DT:51:VAL:HB	2.20	0.41
25:DA:896:A:C2	45:DV:176:PRO:HB2	2.56	0.41
49:DX:39:ASP:OD2	49:DX:44:ARG:NH2	2.41	0.41
1:AA:920:U:O4'	1:AA:1080:A:C2	2.74	0.41
1:AA:108:G:C2	1:AA:109:A:H2	2.39	0.41
1:AA:1239:A:H4'	1:AA:1240:U:H5''	2.02	0.41
1:AA:1337:G:H5''	1:AA:1338:G:OP1	2.20	0.41
1:AA:155:C:C2	1:AA:167:G:C2	3.08	0.41
1:AA:789:U:C6	1:AA:791:G:OP2	2.73	0.41
1:AA:965:A:C2	1:AA:969:A:C2	3.08	0.41
22:AB:14:A:H2'	22:AB:14:A:N3	2.35	0.41
2:AE:67:THR:HG22	2:AE:68:ILE:N	2.35	0.41
3:AF:11:ARG:HB3	3:AF:14:ILE:O	2.20	0.41
1:AA:1396:A:H2	5:AH:19:MET:HG3	1.85	0.41
5:AH:76:ILE:HB	5:AH:77:PRO:HD2	2.02	0.41
6:AI:22:GLU:O	6:AI:26:ILE:HG13	2.21	0.41
7:AJ:139:GLU:O	7:AJ:142:GLU:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AK:101:PRO:HG2	8:AK:133:LEU:HD11	2.02	0.41
8:AK:104:ARG:C	8:AK:106:GLY:H	2.24	0.41
11:AN:124:LYS:HD2	11:AN:125:PHE:CZ	2.54	0.41
15:AR:79:ARG:O	15:AR:82:ILE:HG22	2.20	0.41
16:AS:20:VAL:HG11	16:AS:32:TYR:CD1	2.56	0.41
1:AA:310:G:P	16:AS:27:LYS:NZ	2.93	0.41
17:AT:33:GLY:O	17:AT:34:LYS:C	2.58	0.41
17:AT:76:LEU:HD21	17:AT:79:SER:OG	2.21	0.41
46:B3:11:ARG:HH11	46:B3:11:ARG:HB2	1.85	0.41
51:B5:56:LYS:HE3	51:B5:56:LYS:H	1.85	0.41
54:B8:44:LYS:N	54:B8:44:LYS:HD2	2.35	0.41
25:BA:1265:A:H3'	51:B5:19:ARG:NH1	2.35	0.41
25:BA:1661:G:H2'	25:BA:1662:C:H6	1.86	0.41
25:BA:1702:G:H2'	25:BA:1703:G:O4'	2.20	0.41
25:BA:1936:A:C8	25:BA:1940:U:O2	2.73	0.41
25:BA:2149:G:C6	25:BA:2150:U:N3	2.88	0.41
25:BA:2298:A:H62	25:BA:2318:G:H8	1.65	0.41
25:BA:2667:C:H1'	31:BH:109:PHE:CD2	2.55	0.41
25:BA:2788:C:H5''	25:BA:2789:C:OP2	2.20	0.41
25:BA:2848:G:H1'	25:BA:2867:G:N2	2.35	0.41
25:BA:654(H):G:N7	25:BA:654(N):G:C2	2.87	0.41
26:BB:16:G:H1	26:BB:68:C:H42	1.68	0.41
30:BG:44:GLY:C	30:BG:46:ALA:N	2.74	0.41
25:BA:1243:G:C3'	35:BO:7:ARG:HH21	2.33	0.41
36:BP:138:ASP:O	36:BP:139:GLU:O	2.39	0.41
39:BR:50:ILE:O	39:BR:99:LEU:HD12	2.19	0.41
45:BV:48:PHE:CE2	45:BV:71:VAL:HG11	2.55	0.41
1:CA:1503:A:N6	24:C1:12:A:C4	2.88	0.41
1:CA:1037:C:H2'	1:CA:1038:C:C6	2.56	0.41
1:CA:1098:C:H2'	1:CA:1099:G:O4'	2.20	0.41
1:CA:1124:G:O2'	1:CA:1145:C:C2	2.72	0.41
1:CA:1160:G:H22	1:CA:1177:G:N2	2.16	0.41
1:CA:1206:G:C4	1:CA:1207:G:C8	3.08	0.41
1:CA:155:C:H2'	1:CA:156:G:O4'	2.20	0.41
1:CA:191:G:C6	1:CA:192:U:C4	3.09	0.41
1:CA:21:G:H2'	1:CA:22:G:C8	2.54	0.41
1:CA:197:A:C6	1:CA:221:C:H4'	2.56	0.41
1:CA:57:G:C6	1:CA:58:C:C4	3.08	0.41
22:CB:44:C:H2'	22:CB:45:C:O4'	2.20	0.41
2:CE:163:PHE:HA	2:CE:185:ILE:HG12	2.02	0.41
5:CH:34:VAL:O	5:CH:41:VAL:HA	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CK:86:ILE:HG12	8:CK:135:CYS:HA	2.01	0.41
10:CM:98:ILE:HD12	10:CM:98:ILE:N	2.35	0.41
17:CT:94:ASN:O	17:CT:98:LEU:HG	2.21	0.41
19:CV:32:LYS:HB3	19:CV:32:LYS:NZ	2.35	0.41
20:CW:54:LYS:HA	20:CW:57:ARG:NH1	2.35	0.41
25:DA:2882:A:C5'	37:D0:96:ARG:HG3	2.45	0.41
40:D1:34:LYS:HA	40:D1:34:LYS:HD3	1.75	0.41
53:D7:6:GLN:HA	53:D7:7:PRO:HD2	1.85	0.41
25:DA:1366:A:H2'	25:DA:1367:A:O4'	2.20	0.41
25:DA:1459:G:C6	25:DA:1461:G:C5	3.08	0.41
25:DA:174:C:O2	25:DA:174:C:H2'	2.19	0.41
25:DA:2157:G:H2'	25:DA:2158:A:C8	2.56	0.41
25:DA:858:U:C2	25:DA:2268:A:C2	3.09	0.41
25:DA:2321:G:N3	25:DA:2321:G:H2'	2.35	0.41
25:DA:2342:C:O2'	25:DA:2374:C:H5''	2.20	0.41
25:DA:2377:A:H2'	25:DA:2378:A:C8	2.55	0.41
25:DA:2402:C:O2'	25:DA:2403:C:P	2.79	0.41
25:DA:2636:U:H4'	28:DE:80:GLU:OE1	2.20	0.41
25:DA:270(B):A:N1	25:DA:273:G:O2'	2.46	0.41
25:DA:288:C:O2	25:DA:288:C:H2'	2.20	0.41
25:DA:491:G:H2'	25:DA:492:A:C8	2.56	0.41
25:DA:500:G:N2	25:DA:502:A:H3'	2.35	0.41
25:DA:513:A:C2	25:DA:514:A:C5	3.08	0.41
25:DA:524:U:H2'	25:DA:525:U:H6	1.83	0.41
25:DA:634:C:H2'	25:DA:635:C:C6	2.55	0.41
25:DA:638:G:C6	25:DA:639:U:C4	3.09	0.41
25:DA:744:G:H2'	25:DA:745:G:O4'	2.19	0.41
25:DA:909:A:H2'	25:DA:912:C:H5	1.86	0.41
28:DE:4:ILE:HG22	28:DE:91:VAL:CG2	2.50	0.41
25:DA:2635:C:O2'	28:DE:80:GLU:OE2	2.35	0.41
29:DF:65:TRP:CZ3	29:DF:75:HIS:HD2	2.38	0.41
31:DH:20:ALA:HB1	31:DH:21:PRO:HD2	2.02	0.41
25:DA:558:G:P	33:DM:111:PRO:HD2	2.60	0.41
34:DN:34:THR:OG1	34:DN:35:VAL:N	2.53	0.41
36:DP:17:LEU:HD22	36:DP:96:VAL:HG13	2.02	0.41
25:DA:2292:C:OP1	38:DQ:17:ARG:NH2	2.52	0.41
39:DR:103:ARG:O	39:DR:105:LEU:N	2.46	0.41
42:DS:64:MET:HB3	42:DS:64:MET:HE2	1.81	0.41
1:AA:1182:G:C8	1:AA:1182:G:OP2	2.73	0.41
1:AA:1326:C:H2'	1:AA:1327:C:C6	2.55	0.41
1:AA:33:A:H2'	1:AA:34:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:31:G:H2'	1:AA:48:C:N4	2.35	0.41
1:AA:76:G:C2	1:AA:95:G:N3	2.89	0.41
22:AD:21:A:N1	22:AD:55:U:O4	2.53	0.41
22:AD:38:MIA:H112	22:AD:39:A:N3	2.35	0.41
6:AI:72:VAL:CG2	6:AI:90:VAL:HG11	2.47	0.41
7:AJ:113:GLU:HG3	7:AJ:119:ARG:HG2	2.01	0.41
8:AK:10:LEU:CD2	8:AK:10:LEU:H	2.33	0.41
8:AK:27:PRO:O	8:AK:32:LYS:NZ	2.44	0.41
9:AL:113:LYS:HD2	9:AL:113:LYS:N	2.35	0.41
10:AM:44:VAL:CG2	10:AM:66:ARG:HH21	2.33	0.41
13:AP:108:ARG:O	13:AP:111:LYS:N	2.51	0.41
1:AA:112:G:P	16:AS:27:LYS:HD2	2.60	0.41
17:AT:10:VAL:HG13	17:AT:19:VAL:HB	2.02	0.41
17:AT:43:LEU:HD12	17:AT:68:ARG:HG2	2.02	0.41
20:AW:58:LYS:O	20:AW:61:SER:HB3	2.19	0.41
40:B1:104:GLN:CD	40:B1:104:GLN:H	2.21	0.41
40:B1:37:GLU:O	40:B1:40:PHE:HB2	2.20	0.41
50:B4:37:SER:O	50:B4:42:PHE:CD1	2.73	0.41
51:B5:40:LYS:HB2	51:B5:46:CYS:SG	2.60	0.41
25:BA:1056:G:H4'	25:BA:1086:A:C8	2.56	0.41
25:BA:1444:G:N2	25:BA:1548:C:C2	2.89	0.41
25:BA:1469:A:H2'	25:BA:1470:G:H8	1.84	0.41
25:BA:1690:A:H2'	25:BA:1691:C:O4'	2.20	0.41
25:BA:1871:A:C2'	25:BA:1872:A:O5'	2.68	0.41
25:BA:1786:A:H1'	25:BA:1938:A:H62	1.84	0.41
25:BA:2364:C:H2'	25:BA:2365:G:O4'	2.21	0.41
25:BA:307:G:N1	25:BA:310:A:OP2	2.51	0.41
25:BA:614:U:O2	25:BA:614:U:C2'	2.68	0.41
26:BB:15:A:OP1	26:BB:15:A:C4'	2.68	0.41
26:BB:24:G:C4	26:BB:56:G:C5	3.08	0.41
26:BB:61:G:C6	26:BB:62:C:C4	3.08	0.41
27:BD:70:TRP:CD1	27:BD:70:TRP:O	2.74	0.41
25:BA:2823:A:OP1	28:BE:113:PHE:HB2	2.20	0.41
28:BE:53:PRO:O	28:BE:54:GLN:O	2.39	0.41
30:BG:111:LEU:N	30:BG:112:PRO:HD2	2.35	0.41
30:BG:112:PRO:HG3	50:B4:38:LYS:HD3	2.03	0.41
31:BH:13:LYS:HD3	31:BH:13:LYS:HA	1.78	0.41
32:BK:2:LYS:HG2	32:BK:20:ASP:HB3	2.02	0.41
35:BO:147:LEU:O	35:BO:148:LEU:CB	2.68	0.41
39:BR:51:ARG:HB2	39:BR:98:LYS:HD3	2.03	0.41
48:BW:64:LEU:HD21	48:BW:68:ARG:CZ	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BX:15:TYR:CE1	49:BX:53:LEU:HD21	2.56	0.41
1:CA:1028:C:N4	1:CA:1033:G:N1	2.41	0.41
1:CA:1104:G:H4'	2:CE:111:ARG:NH2	2.34	0.41
1:CA:1219:U:O2'	19:CV:34:TRP:HB3	2.20	0.41
1:CA:1250:A:H2	1:CA:1353:G:H21	1.64	0.41
1:CA:632:A:OP1	1:CA:632:A:O4'	2.38	0.41
1:CA:804:U:H5''	1:CA:805:C:OP2	2.20	0.41
1:CA:903:G:H2'	1:CA:904:C:H6	1.86	0.41
22:CB:13:G:N2	22:CB:23:A:N1	2.67	0.41
23:CC:67:C:H2'	23:CC:68:C:O4'	2.20	0.41
3:CF:130:VAL:O	3:CF:134:ILE:HG12	2.21	0.41
4:CG:58:LEU:HD22	4:CG:62:GLN:HG2	2.03	0.41
9:CL:54:ASP:N	9:CL:54:ASP:OD1	2.53	0.41
10:CM:7:LYS:HB2	10:CM:97:GLU:HB2	2.02	0.41
11:CN:52:GLY:H	11:CN:55:LYS:HE3	1.85	0.41
12:CO:31:ARG:CG	12:CO:32:GLY:N	2.83	0.41
13:CP:22:ILE:HB	13:CP:25:ILE:HG12	2.02	0.41
37:D0:33:ARG:HG3	37:D0:115:GLU:CG	2.43	0.41
25:DA:2817:G:P	37:D0:99:LYS:HZ1	2.42	0.41
41:D2:1:MET:SD	41:D2:43:GLU:HG2	2.60	0.41
41:D2:91:TYR:HA	41:D2:91:TYR:HD1	1.76	0.41
53:D7:8:ASN:ND2	53:D7:8:ASN:C	2.73	0.41
25:DA:1112:G:O3'	31:DH:3:ARG:HA	2.20	0.41
25:DA:1000:A:N6	25:DA:1155:A:C8	2.88	0.41
25:DA:1349:A:N6	25:DA:1598:C:N4	2.68	0.41
25:DA:155:C:C2	25:DA:171:G:N2	2.89	0.41
25:DA:2111:C:C2	25:DA:2118:U:O2'	2.74	0.41
25:DA:2213:U:H6	25:DA:2213:U:H3'	1.86	0.41
25:DA:2271:G:H2'	25:DA:2272:U:C6	2.55	0.41
25:DA:2699:C:H2'	25:DA:2700:C:O4'	2.20	0.41
25:DA:2762:G:C3'	25:DA:2763:G:C5'	2.91	0.41
25:DA:281:G:O2'	25:DA:282:A:O4'	2.25	0.41
25:DA:311:A:C8	25:DA:332:A:N7	2.89	0.41
25:DA:699:A:H2'	25:DA:700:G:O4'	2.21	0.41
26:DB:44:G:C2	26:DB:48:A:C2	3.08	0.41
27:DD:153:ALA:O	27:DD:157:ARG:NH1	2.53	0.41
30:DG:67:LYS:HB3	30:DG:67:LYS:NZ	2.36	0.41
32:DK:44:LEU:O	32:DK:47:LEU:HB3	2.21	0.41
47:DZ:5:CYS:CB	47:DZ:8:SER:HG	2.33	0.41
1:AA:1026:G:N3	1:AA:1026:G:H2'	2.35	0.41
1:AA:1139:G:H1	1:AA:1144:G:N2	2.17	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1278:U:H5'	1:AA:1279:A:O4'	2.20	0.41
1:AA:1336:C:O2'	1:AA:1337:G:C4	2.69	0.41
1:AA:403:C:O2'	1:AA:404:U:H5'	2.20	0.41
1:AA:411:A:C6	1:AA:429:U:C5	3.09	0.41
1:AA:411:A:C5	1:AA:413:G:N3	2.89	0.41
1:AA:537:G:H2'	1:AA:538:G:C8	2.55	0.41
22:AD:29:C:O2'	22:AD:30:A:H5'	2.21	0.41
22:AD:77:C:H2'	22:AD:78:C:O4'	2.20	0.41
2:AE:104:ASN:O	2:AE:108:ILE:HB	2.21	0.41
3:AF:150:LYS:O	3:AF:201:TYR:N	2.50	0.41
4:AG:3:ARG:NH2	4:AG:5:ILE:HD11	2.34	0.41
6:AI:69:GLU:HG2	6:AI:70:ASP:N	2.35	0.41
16:AS:76:GLN:O	16:AS:76:GLN:HG2	2.21	0.41
20:AW:26:ASN:CB	20:AW:71:THR:HG23	2.42	0.41
41:B2:15:GLU:HG3	41:B2:16:PRO:CD	2.37	0.41
41:B2:61:VAL:HG23	41:B2:61:VAL:O	2.20	0.41
51:B5:13:LYS:HG2	51:B5:16:ARG:NH2	2.35	0.41
51:B5:40:LYS:CG	51:B5:46:CYS:HB3	2.51	0.41
54:B8:61:LEU:O	54:B8:61:LEU:HD12	2.21	0.41
25:BA:1091:G:N2	25:BA:1101:U:H1'	2.35	0.41
25:BA:1331:A:HO2'	25:BA:1332:G:H8	1.67	0.41
25:BA:1510:A:C2'	25:BA:1510:A:N3	2.78	0.41
25:BA:1551:C:C2'	25:BA:1552:G:H5'	2.51	0.41
25:BA:196:A:C4	25:BA:805:G:C6	3.09	0.41
25:BA:2111:C:C5	25:BA:2145:C:C2	3.08	0.41
25:BA:2383:G:O2'	25:BA:2384:G:H5'	2.20	0.41
25:BA:297:C:H2'	25:BA:298:G:O4'	2.20	0.41
25:BA:543:C:O2'	25:BA:544:C:H5'	2.21	0.41
25:BA:618:G:H2'	25:BA:618(A):C:O4'	2.20	0.41
25:BA:628:G:H2'	25:BA:629:G:C8	2.56	0.41
25:BA:654(I):C:C3'	25:BA:654(I):C:O2	2.67	0.41
25:BA:879:G:C6	25:BA:898:C:N4	2.75	0.41
26:BB:99:A:C6	26:BB:100:G:C5	3.09	0.41
26:BB:93:C:H2'	26:BB:94:C:H6	1.86	0.41
29:BF:123:LEU:HD21	29:BF:199:TRP:CZ3	2.56	0.41
29:BF:24:LEU:HA	29:BF:25:PRO:HD2	1.79	0.41
30:BG:101:ILE:HD11	50:B4:9:LEU:HD11	2.02	0.41
31:BH:97:ARG:NH2	31:BH:104:GLU:OE2	2.53	0.41
38:BQ:52:SER:O	38:BQ:56:LEU:HG	2.20	0.41
39:BR:129:ARG:O	39:BR:132:LYS:HG2	2.21	0.41
42:BS:107:LEU:HD12	42:BS:107:LEU:HA	1.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BV:12:GLY:O	45:BV:13:GLU:O	2.38	0.41
47:BZ:87:PRO:O	47:BZ:89:GLU:N	2.54	0.41
1:CA:1028:C:C2	1:CA:1034:G:N2	2.88	0.41
1:CA:1130:A:C2	1:CA:1146:A:C2	3.09	0.41
1:CA:191(B):G:C2	1:CA:191(C):G:C4	3.08	0.41
1:CA:282:A:C5	1:CA:283:C:C6	3.08	0.41
1:CA:64:G:H5'	1:CA:66:G:OP1	2.20	0.41
1:CA:706:A:C4'	11:CN:29:ILE:HD11	2.50	0.41
1:CA:666:G:H5'	1:CA:726:C:H1'	2.02	0.41
1:CA:655:A:C2	1:CA:754:C:N4	2.88	0.41
5:CH:47:LYS:HB2	5:CH:47:LYS:NZ	2.35	0.41
7:CJ:50:ILE:O	7:CJ:54:THR:HG23	2.21	0.41
12:CO:20:LYS:CD	12:CO:20:LYS:H	2.33	0.41
12:CO:57:LEU:HB2	12:CO:61:TYR:HB2	2.03	0.41
12:CO:29:PHE:CB	12:CO:82:ILE:O	2.65	0.41
1:CA:1357:A:O2'	14:CQ:34:TYR:HE1	2.03	0.41
41:D2:35:LEU:HG	41:D2:37:VAL:HG13	2.02	0.41
40:D1:88:ILE:CG2	41:D2:49:THR:HA	2.50	0.41
25:DA:2815:C:C5'	51:D5:29:THR:HG21	2.46	0.41
25:DA:1063:G:C2	25:DA:1064:C:O2	2.74	0.41
25:DA:1087:G:H5''	25:DA:1088:A:OP2	2.21	0.41
25:DA:1165:U:H2'	25:DA:1166:C:C6	2.55	0.41
25:DA:2129:C:C4	25:DA:2130:U:C4	3.08	0.41
25:DA:2306:C:H2'	25:DA:2307:G:N2	2.35	0.41
25:DA:2346:A:H8	52:D6:24:GLU:CG	2.33	0.41
25:DA:2542:A:OP1	25:DA:2542:A:H4'	2.19	0.41
25:DA:2702:U:O2	25:DA:2702:U:H3'	2.21	0.41
25:DA:270(P):C:H2'	25:DA:270(Q):C:C6	2.56	0.41
25:DA:2808:U:H2'	25:DA:2809:A:H5'	2.02	0.41
25:DA:2897:U:H2'	25:DA:2898:U:O4'	2.20	0.41
25:DA:454:A:H4'	25:DA:455:C:OP2	2.19	0.41
25:DA:576:U:H2'	25:DA:577:G:C8	2.56	0.41
27:DD:73:VAL:HG12	27:DD:120:GLY:CA	2.50	0.41
29:DF:117:ARG:O	29:DF:120:GLU:HG2	2.19	0.41
29:DF:123:LEU:O	29:DF:124:LEU:C	2.58	0.41
29:DF:9:ILE:HG12	29:DF:13:SER:O	2.20	0.41
33:DM:56:ASN:H	33:DM:125:GLY:CA	2.34	0.41
25:DA:6:A:O2'	33:DM:129:PRO:HB2	2.20	0.41
33:DM:22:THR:O	33:DM:23:LEU:C	2.59	0.41
25:DA:389:G:N2	35:DO:72:PRO:HG2	2.23	0.41
36:DP:8:LYS:O	36:DP:9:TYR:CD1	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DQ:83:LYS:O	38:DQ:83:LYS:HG2	2.21	0.41
38:DQ:93:LYS:HZ3	38:DQ:93:LYS:HB2	1.85	0.41
43:DT:50:LYS:HA	43:DT:50:LYS:HD2	1.79	0.41
44:DU:60:PHE:CD1	44:DU:60:PHE:O	2.74	0.41
45:DV:158:PRO:CB	45:DV:159:PRO:CD	2.83	0.41
25:DA:372:G:H5'	47:DZ:66:HIS:CE1	2.56	0.41
1:AA:1028(B):C:C4	1:AA:1032(A):G:N1	2.88	0.41
1:AA:1092:A:C6	1:AA:1093:A:C6	3.08	0.41
1:AA:1286:A:C2	21:AX:18:TYR:OH	2.74	0.41
1:AA:1347:G:O2'	1:AA:1348:U:OP2	2.39	0.41
22:AD:46:G:H2'	22:AD:47:U:H6	1.84	0.41
22:AD:57:C:C4'	22:AD:58:G:OP2	2.67	0.41
22:AD:59:A:H2'	22:AD:60:A:C8	2.56	0.41
2:AE:19:HIS:NE2	2:AE:20:GLU:OE2	2.53	0.41
2:AE:22:LYS:NZ	2:AE:22:LYS:HA	2.35	0.41
3:AF:23:TYR:CD2	3:AF:24:ALA:N	2.88	0.41
4:AG:201:GLN:NE2	4:AG:201:GLN:HA	2.23	0.41
7:AJ:111:ARG:HB3	7:AJ:112:PRO:HD2	2.01	0.41
11:AN:99:GLN:HG2	11:AN:105:VAL:CG2	2.38	0.41
13:AP:100:GLY:O	13:AP:101:GLN:HB2	2.20	0.41
13:AP:81:LEU:HD23	13:AP:81:LEU:HA	1.89	0.41
16:AS:81:ARG:HE	16:AS:81:ARG:HB2	1.74	0.41
40:B1:107:ALA:O	40:B1:111:GLU:HG2	2.20	0.41
50:B4:37:SER:O	50:B4:42:PHE:HD1	2.04	0.41
25:BA:516:C:OP1	51:B5:13:LYS:NZ	2.54	0.41
51:B5:25:LEU:HD12	51:B5:25:LEU:N	2.33	0.41
51:B5:51:TYR:O	51:B5:56:LYS:HE2	2.21	0.41
25:BA:1015:G:C2'	25:BA:1016:G:H5'	2.50	0.41
25:BA:1203:G:H5'	35:BO:3:LEU:HD12	2.02	0.41
25:BA:1535:U:C2	25:BA:1536:A:H3'	2.55	0.41
25:BA:1686:C:H2'	25:BA:1687:G:O4'	2.21	0.41
25:BA:2025:C:H2'	25:BA:2026:C:C6	2.56	0.41
25:BA:286:C:H2'	25:BA:287:C:H6	1.84	0.41
25:BA:375:C:H2'	25:BA:376:C:C6	2.56	0.41
25:BA:498:G:H21	44:BU:47:LYS:NZ	2.19	0.41
25:BA:91:A:C4	25:BA:92:G:C8	3.09	0.41
27:BD:45:ASN:OD1	27:BD:46:GLN:N	2.53	0.41
27:BD:69:ARG:C	27:BD:71:ASP:N	2.74	0.41
29:BF:63:LYS:HZ1	29:BF:67:GLN:NE2	2.19	0.41
30:BG:125:PHE:HB3	30:BG:166:ASP:OD2	2.21	0.41
30:BG:171:ALA:O	30:BG:175:LEU:HG	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BH:89:ILE:CG2	31:BH:162:ILE:HG12	2.50	0.41
31:BH:46:GLU:OE2	31:BH:51:ARG:HD2	2.20	0.41
31:BH:54:ARG:NH1	31:BH:65:HIS:ND1	2.60	0.41
35:BO:19:VAL:CB	35:BO:27:HIS:HB3	2.38	0.41
36:BP:19:GLY:CA	36:BP:98:LYS:HD3	2.51	0.41
38:BQ:106:ARG:NH2	38:BQ:107:GLU:HB2	2.36	0.41
34:BN:75:SER:HB2	39:BR:74:ARG:HH12	1.85	0.41
43:BT:91:ALA:O	43:BT:92:LEU:HD23	2.20	0.41
44:BU:27:VAL:O	44:BU:27:VAL:HG22	2.19	0.41
1:CA:1077:G:C6	1:CA:1081:G:C6	3.08	0.41
1:CA:1104:G:H2'	1:CA:1105:A:H8	1.86	0.41
1:CA:976:G:N2	1:CA:1362:C:H2'	2.35	0.41
1:CA:243:A:C2	1:CA:245:C:C2	3.08	0.41
1:CA:250:A:C1'	1:CA:251:G:OP2	2.59	0.41
1:CA:380:G:N2	1:CA:384:G:C5	2.88	0.41
1:CA:774:G:N2	1:CA:806:C:C2	2.88	0.41
1:CA:1054:C:H42	22:CB:35:G:C1'	2.33	0.41
23:CC:14:A:C4	23:CC:23:G:C2	3.08	0.41
7:CJ:85:TYR:CZ	7:CJ:154:TYR:HE1	2.39	0.41
8:CK:109:ILE:HG12	8:CK:110:ALA:N	2.33	0.41
9:CL:110:GLU:O	9:CL:111:ARG:O	2.39	0.41
10:CM:54:PHE:CE1	10:CM:55:LYS:CE	3.03	0.41
10:CM:34:VAL:HG13	10:CM:74:ILE:HG22	2.02	0.41
10:CM:78:ASN:N	10:CM:78:ASN:OD1	2.54	0.41
1:CA:1330:U:H4'	13:CP:23:TYR:CE2	2.56	0.41
15:CR:20:GLY:O	15:CR:22:THR:HG23	2.20	0.41
18:CU:36:ASN:N	18:CU:36:ASN:OD1	2.54	0.41
46:D3:81:VAL:O	46:D3:83:PRO:HD3	2.20	0.41
53:D7:1:MET:O	53:D7:3:ARG:HD3	2.21	0.41
35:DO:62:LEU:CD1	54:D8:25:MET:HB2	2.48	0.41
25:DA:1075:C:H2'	25:DA:1076:C:C5	2.55	0.41
25:DA:1111:A:H5'	31:DH:3:ARG:HH11	1.83	0.41
25:DA:1204:A:C2	25:DA:1241:A:N1	2.88	0.41
25:DA:1308:A:H2'	25:DA:1309:G:O4'	2.21	0.41
25:DA:1346:G:C5	25:DA:1347:G:N7	2.89	0.41
25:DA:1451:C:H3'	25:DA:1453:A:H5'	2.01	0.41
25:DA:1794:U:H1'	25:DA:1900:A:C2	2.55	0.41
25:DA:193:U:O3'	25:DA:803:U:H4'	2.21	0.41
25:DA:1992:G:H1'	25:DA:1993:U:OP2	2.20	0.41
25:DA:2383:G:O2'	25:DA:2384:G:H5'	2.19	0.41
25:DA:2447:G:C1'	25:DA:2448:A:OP2	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:270(A):A:N6	25:DA:270(Y):G:H1'	2.35	0.41
25:DA:2729:G:C6	25:DA:2730:C:C4	3.08	0.41
25:DA:2823:A:OP1	28:DE:159:HIS:NE2	2.46	0.41
25:DA:2872:G:C2	25:DA:2873:A:C6	3.09	0.41
25:DA:325:G:O2'	25:DA:326:G:H5'	2.21	0.41
25:DA:975:G:N2	25:DA:990:A:O4'	2.54	0.41
26:DB:29:A:OP2	38:DQ:31:SER:HB2	2.21	0.41
29:DF:27:GLU:O	29:DF:28:ILE:HG23	2.20	0.41
29:DF:51:THR:HB	29:DF:88:VAL:CG1	2.50	0.41
30:DG:41:GLN:HB3	30:DG:43:LEU:HD21	2.02	0.41
25:DA:2311:A:O4'	30:DG:82:LEU:HD11	2.20	0.41
36:DP:30:GLY:CA	36:DP:107:ALA:HB2	2.51	0.41
43:DT:31:HIS:HA	43:DT:32:PRO:HD3	1.90	0.41
44:DU:91:GLU:HG3	44:DU:92:ASN:O	2.20	0.41
45:DV:63:ASP:OD2	45:DV:65:GLN:HG3	2.21	0.41
48:DW:9:GLN:NE2	48:DW:56:GLN:HG3	2.35	0.41
1:AA:1083:U:C5	1:AA:1084:G:C5	3.09	0.41
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.73	0.41
1:AA:1401:G:C2	1:AA:1402:C:H1'	2.56	0.41
1:AA:195:A:N7	1:AA:196:A:C6	2.89	0.41
1:AA:582:U:H2'	1:AA:583:A:C8	2.55	0.41
3:AF:15:THR:HG21	3:AF:181:ASN:HA	2.01	0.41
3:AF:165:THR:CG2	3:AF:165:THR:O	2.68	0.41
4:AG:70:ILE:HG23	4:AG:75:PHE:HB2	2.02	0.41
11:AN:79:SER:HB2	11:AN:106:LYS:CD	2.36	0.41
1:AA:502:G:OP1	12:AO:115:SER:CB	2.69	0.41
13:AP:8:GLU:OE1	13:AP:67:GLU:HB2	2.21	0.41
14:AQ:24:CYS:C	14:AQ:26:ARG:N	2.73	0.41
16:AS:49:LEU:HD12	16:AS:50:LYS:N	2.36	0.41
40:B1:92:ARG:C	40:B1:94:ASN:N	2.68	0.41
51:B5:40:LYS:HZ3	51:B5:46:CYS:CB	2.32	0.41
54:B8:59:LYS:HE2	54:B8:59:LYS:HB3	1.79	0.41
25:BA:1048:A:H5'	25:BA:1049:C:OP2	2.21	0.41
25:BA:1043:C:H42	25:BA:1112:G:H1	1.68	0.41
25:BA:1410:G:H2'	25:BA:1411:C:C6	2.56	0.41
25:BA:1839:G:H2'	25:BA:1839:G:N3	2.36	0.41
25:BA:1858:G:H1'	25:BA:1884:A:N6	2.35	0.41
25:BA:1918:A:O2'	25:BA:1920:C:N4	2.54	0.41
25:BA:2143:C:N4	25:BA:2148:G:N1	2.47	0.41
25:BA:2407:G:N3	25:BA:2407:G:H2'	2.35	0.41
25:BA:2523:G:C2'	25:BA:2524:G:H5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2543:G:H21	25:BA:2646:C:H5''	1.86	0.41
25:BA:2733:A:H3'	25:BA:2734:A:H5'	2.01	0.41
25:BA:2772:C:H2'	25:BA:2773:C:H6	1.85	0.41
25:BA:714:U:O2	25:BA:716:A:C8	2.73	0.41
27:BD:186:HIS:HD2	27:BD:188:GLU:HB2	1.86	0.41
27:BD:94:LEU:HA	27:BD:94:LEU:HD23	1.83	0.41
28:BE:4:ILE:HG12	28:BE:5:LEU:N	2.36	0.41
28:BE:68:ALA:C	28:BE:70:ALA:N	2.65	0.41
29:BF:34:TRP:CZ3	35:BO:8:PRO:HB3	2.56	0.41
31:BH:109:PHE:C	31:BH:111:HIS:N	2.71	0.41
31:BH:4:ILE:HG21	31:BH:6:ARG:NH1	2.36	0.41
35:BO:26:GLY:C	35:BO:28:GLY:N	2.67	0.41
45:BV:52:SER:C	45:BV:54:HIS:N	2.73	0.41
45:BV:52:SER:O	45:BV:52:SER:OG	2.36	0.41
45:BV:29:TYR:HE2	45:BV:87:ASP:HB2	1.85	0.41
47:BZ:56:GLN:NE2	47:BZ:56:GLN:HA	2.34	0.41
1:CA:1091:U:C2	1:CA:1095:U:C4	3.09	0.41
1:CA:1139:G:N2	1:CA:1143:G:N1	2.68	0.41
1:CA:1150:U:H1'	1:CA:1280:A:N6	2.35	0.41
1:CA:1054:C:C5	1:CA:1196:U:C4	3.09	0.41
1:CA:1225:A:C8	1:CA:1225:A:OP2	2.74	0.41
1:CA:1305:G:C8	1:CA:1305:G:OP2	2.74	0.41
1:CA:1514:C:H2'	1:CA:1515:C:C6	2.55	0.41
1:CA:683:G:H2'	1:CA:684:A:O4'	2.20	0.41
1:CA:740:U:O2'	1:CA:741:G:H5'	2.21	0.41
1:CA:937:A:H1'	1:CA:1379:G:N2	2.36	0.41
22:CB:21:A:C2	22:CB:56:U:O2	2.74	0.41
22:CB:59:A:C2	22:CB:74:C:C2	3.08	0.41
22:CD:22:A:N3	22:CD:22:A:C2'	2.79	0.41
2:CE:21:ARG:HB3	2:CE:21:ARG:CZ	2.50	0.41
2:CE:36:ARG:HG2	2:CE:37:ASN:ND2	2.36	0.41
6:CI:21:LEU:HD13	6:CI:21:LEU:O	2.20	0.41
11:CN:82:VAL:CG1	11:CN:108:ILE:HG12	2.50	0.41
13:CP:25:ILE:O	13:CP:29:ARG:HB2	2.19	0.41
13:CP:54:VAL:O	13:CP:58:GLU:HG2	2.19	0.41
1:CA:189:U:O2	17:CT:63:ARG:NH2	2.53	0.41
37:D0:37:THR:HG23	37:D0:40:LYS:HD3	2.03	0.41
40:D1:92:ARG:NH1	41:D2:11:GLN:O	2.53	0.41
36:DP:85:LYS:HB3	46:D3:9:SER:HB2	2.02	0.41
51:D5:38:ALA:HB3	51:D5:48:GLU:HG3	2.02	0.41
53:D7:12:ARG:NH2	53:D7:44:PRO:HB3	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:1725:G:C2	25:DA:1741:C:O2	2.74	0.41
25:DA:1831:G:H2'	25:DA:1832:C:C6	2.56	0.41
25:DA:2265:U:C4	25:DA:2266:A:C5	3.09	0.41
25:DA:2422:A:H4'	25:DA:2422:A:OP1	2.20	0.41
25:DA:270(I):G:H1	25:DA:270(Q):C:H42	1.68	0.41
25:DA:2720:U:C4	25:DA:2873:A:C6	3.09	0.41
25:DA:596:G:C5	25:DA:597:U:C5	3.09	0.41
25:DA:705:A:C2	25:DA:706:A:C4	3.08	0.41
26:DB:40:U:HO2'	26:DB:43:C:H5	1.68	0.41
27:DD:102:LYS:C	27:DD:103:ARG:HG2	2.40	0.41
27:DD:28:GLU:HB2	27:DD:29:PRO:CD	2.49	0.41
29:DF:107:LYS:HD3	29:DF:107:LYS:HA	1.78	0.41
29:DF:25:PRO:CG	29:DF:26:ALA:H	2.29	0.41
31:DH:9:ILE:HA	31:DH:10:PRO:HD3	1.96	0.41
32:DK:77:LEU:O	32:DK:78:THR:C	2.59	0.41
36:DP:100:GLY:O	36:DP:101:ARG:C	2.59	0.41
45:DV:112:ARG:HB2	45:DV:113:ALA:H	1.54	0.41
1:AA:1159:U:O4'	1:AA:1182:G:N2	2.54	0.41
1:AA:1266:G:N2	1:AA:1269:A:OP2	2.51	0.41
1:AA:1297:C:O2'	7:AJ:114:ARG:NH1	2.40	0.41
1:AA:1347:G:H22	1:AA:1374:A:P	2.43	0.41
1:AA:109:A:C8	1:AA:326:G:H2'	2.55	0.41
1:AA:711:G:O2'	1:AA:712:A:H5'	2.21	0.41
1:AA:775:G:O2'	1:AA:776:G:H5'	2.20	0.41
23:AC:48:U:C1'	23:AC:49:C:P	3.09	0.41
22:AD:12:C:H2'	22:AD:13:G:C8	2.55	0.41
22:AD:67:A:H4'	22:AD:68:A:OP1	2.15	0.41
2:AE:121:LEU:HA	2:AE:124:SER:OG	2.20	0.41
4:AG:19:LEU:N	4:AG:19:LEU:CD2	2.82	0.41
5:AH:111:GLU:C	5:AH:113:ALA:H	2.24	0.41
7:AJ:73:MET:CG	7:AJ:90:GLU:HA	2.51	0.41
8:AK:33:GLU:O	8:AK:34:GLU:C	2.59	0.41
8:AK:4:ASP:CG	8:AK:85:ARG:HH12	2.24	0.41
13:AP:13:LYS:HE3	13:AP:21:TYR:OH	2.20	0.41
13:AP:12:ASN:O	13:AP:14:ARG:N	2.54	0.41
19:AV:65:ASN:C	19:AV:67:VAL:H	2.24	0.41
50:B4:37:SER:HA	50:B4:42:PHE:CB	2.44	0.41
51:B5:57:VAL:O	51:B5:57:VAL:HG13	2.21	0.41
25:BA:111:A:C2	25:BA:112:U:C2	3.09	0.41
25:BA:2078:C:C4	25:BA:2079:U:C4	3.08	0.41
25:BA:2078:C:H2'	25:BA:2079:U:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2772:C:H2'	25:BA:2773:C:C6	2.55	0.41
25:BA:720:C:H2'	25:BA:721:C:C6	2.55	0.41
25:BA:811:U:OP2	35:BO:29:LYS:N	2.42	0.41
25:BA:878:A:OP1	25:BA:878:A:H4'	2.20	0.41
25:BA:88:G:O2'	25:BA:89:G:H5'	2.21	0.41
25:BA:821:A:O2'	25:BA:945:A:H3'	2.21	0.41
27:BD:35:LYS:HE3	27:BD:64:ILE:N	2.36	0.41
27:BD:68:LYS:HB2	27:BD:70:TRP:CZ3	2.56	0.41
32:BK:9:LEU:N	32:BK:9:LEU:CD2	2.84	0.41
34:BN:31:LYS:HB3	34:BN:32:TYR:CE1	2.56	0.41
35:BO:19:VAL:HA	35:BO:27:HIS:HB3	2.03	0.41
25:BA:1190:G:OP1	35:BO:30:THR:HG23	2.20	0.41
36:BP:75:THR:CG2	36:BP:89:ASN:H	2.34	0.41
39:BR:110:ILE:HD11	39:BR:114:LEU:HD12	2.02	0.41
43:BT:18:TYR:C	43:BT:20:GLY:N	2.73	0.41
44:BU:46:LYS:HE3	44:BU:63:LYS:HB3	2.01	0.41
24:C1:13:A:C2'	24:C1:14:A:OP1	2.69	0.41
1:CA:1053:G:C4	1:CA:1199:U:C5	3.08	0.41
1:CA:1068:G:N7	1:CA:1094:G:C8	2.89	0.41
1:CA:1173:G:H2'	1:CA:1174:G:C8	2.56	0.41
1:CA:1346:A:C8	1:CA:1348:U:O2	2.74	0.41
1:CA:434:U:H2'	1:CA:435:C:H6	1.85	0.41
1:CA:578:C:H2'	1:CA:579:G:O5'	2.21	0.41
22:CB:12:C:C2	22:CB:25:G:C2	3.08	0.41
2:CE:231:GLU:HB3	2:CE:232:PRO:HD2	2.03	0.41
2:CE:81:VAL:HG12	2:CE:81:VAL:O	2.21	0.41
1:CA:1374:A:O2'	7:CJ:28:ASN:HB3	2.21	0.41
8:CK:1:MET:H3	8:CK:1:MET:CE	2.33	0.41
11:CN:86:GLY:O	11:CN:91:ARG:HD3	2.21	0.41
12:CO:14:LYS:HA	12:CO:14:LYS:HD2	1.95	0.41
20:CW:20:LEU:O	20:CW:24:LEU:HD23	2.21	0.41
1:CA:1453:G:C6	20:CW:55:ILE:HD11	2.56	0.41
50:D4:49:PHE:CD2	50:D4:50:VAL:N	2.89	0.41
51:D5:58:LEU:HD23	51:D5:58:LEU:HA	1.93	0.41
25:DA:1087:G:H2'	25:DA:1089:G:C4'	2.50	0.41
25:DA:1091:G:C5	25:DA:1092:C:N4	2.89	0.41
25:DA:1069:A:H2	25:DA:1094:U:N3	2.19	0.41
25:DA:1121:C:H2'	25:DA:1122:G:O4'	2.21	0.41
25:DA:1773:A:N7	25:DA:1829:A:H1'	2.35	0.41
25:DA:1851:U:H2'	25:DA:1852:C:O4'	2.21	0.41
25:DA:2124:G:H2'	25:DA:2125:G:H5'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:2162:G:H2'	25:DA:2163:C:O4'	2.21	0.41
25:DA:2180:U:C4	25:DA:2181:G:C5	3.09	0.41
25:DA:2276:G:H2'	25:DA:2276:G:N3	2.36	0.41
25:DA:2364:C:H4'	46:D3:56:ASP:OD2	2.21	0.41
25:DA:1786:A:N1	25:DA:2606:C:H1'	2.36	0.41
25:DA:2630:G:H2'	25:DA:2630:G:N3	2.36	0.41
25:DA:2696:U:H2'	25:DA:2697:G:C8	2.56	0.41
25:DA:2724:C:H2'	25:DA:2725:A:C8	2.56	0.41
25:DA:2836:U:H2'	25:DA:2837:G:C8	2.56	0.41
25:DA:2789:C:H1'	25:DA:2892:A:H2	1.86	0.41
25:DA:329:G:C4'	25:DA:330:A:OP2	2.64	0.41
25:DA:511:U:C5	25:DA:512:G:C5	3.08	0.41
25:DA:888:C:H4'	25:DA:889:C:OP2	2.20	0.41
25:DA:898:C:N4	25:DA:899:A:C2	2.89	0.41
28:DE:55:ASN:C	28:DE:57:LYS:H	2.22	0.41
29:DF:65:TRP:CZ3	29:DF:72:ARG:HB3	2.56	0.41
31:DH:6:ARG:HH21	31:DH:54:ARG:HH22	1.69	0.41
25:DA:1139:G:O3'	33:DM:24:GLY:HA3	2.20	0.41
33:DM:30:ILE:HG22	33:DM:34:LEU:CD2	2.50	0.41
34:DN:43:VAL:HG21	34:DN:52:VAL:HG11	2.02	0.41
36:DP:135:ASP:O	36:DP:137:TYR:HD2	2.04	0.41
36:DP:29:PHE:HB3	36:DP:65:PHE:CE2	2.55	0.41
44:DU:63:LYS:HZ2	44:DU:63:LYS:HA	1.83	0.41
45:DV:105:VAL:HG13	45:DV:106:GLY:N	2.35	0.41
45:DV:37:VAL:O	45:DV:38:TYR:HB3	2.21	0.41
1:AA:1346:A:O4'	1:AA:1348:U:C6	2.74	0.41
1:AA:233:C:H2'	1:AA:234:C:H6	1.85	0.41
1:AA:498:A:C4'	1:AA:500:G:OP1	2.63	0.41
1:AA:5:U:H2'	1:AA:6:G:OP2	2.20	0.41
1:AA:854:G:H3'	1:AA:871:U:O4	2.20	0.41
22:AB:17:G:H21	22:AB:66:G:H2'	1.86	0.41
2:AE:156:LYS:HZ3	2:AE:156:LYS:CB	2.33	0.41
7:AJ:109:ASN:OD1	7:AJ:119:ARG:NH2	2.53	0.41
8:AK:86:ILE:HG12	8:AK:135:CYS:HA	2.03	0.41
11:AN:66:LEU:CD2	11:AN:97:ALA:HB1	2.50	0.41
51:B5:3:LYS:CA	51:B5:3:LYS:HZ2	2.26	0.41
51:B5:51:TYR:HB3	51:B5:52:TYR:H	1.56	0.41
25:BA:1420:U:H2'	25:BA:1421:G:O5'	2.21	0.41
25:BA:172:C:H2'	25:BA:173:G:O4'	2.20	0.41
25:BA:1916:A:H2'	25:BA:1917:U:O4'	2.21	0.41
25:BA:2109:U:O2	25:BA:2181:G:C2	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:2199:A:C5'	25:BA:2205:C:OP2	2.69	0.41
25:BA:2259:G:C2	25:BA:2282:G:C6	3.08	0.41
25:BA:2439:A:H4'	25:BA:2440:C:O5'	2.21	0.41
25:BA:957:A:N1	25:BA:2458:G:H4'	2.36	0.41
25:BA:2749:A:C6	25:BA:2750:A:C6	3.09	0.41
25:BA:43:G:H2'	25:BA:44:A:O4'	2.21	0.41
25:BA:475:U:N3	25:BA:481:G:O6	2.53	0.41
25:BA:49:A:C8	25:BA:51:G:C2	3.09	0.41
25:BA:71:A:OP2	25:BA:113:G:H5'	2.21	0.41
25:BA:738:G:H2'	25:BA:738:G:N3	2.35	0.41
27:BD:119:ALA:HA	27:BD:130:ALA:O	2.21	0.41
30:BG:83:ARG:O	30:BG:85:GLY:N	2.54	0.41
33:BM:96:GLU:CG	33:BM:97:ARG:N	2.84	0.41
35:BO:106:LEU:O	35:BO:107:LYS:HB2	2.21	0.41
36:BP:109:VAL:HG13	36:BP:110:THR:N	2.36	0.41
36:BP:111:GLU:C	36:BP:113:GLN:H	2.24	0.41
44:BU:57:GLN:HB2	44:BU:57:GLN:HE21	1.61	0.41
45:BV:172:ALA:O	45:BV:173:ALA:HB2	2.21	0.41
49:BX:10:LYS:HD3	49:BX:53:LEU:HD23	2.03	0.41
49:BX:11:SER:HA	49:BX:12:PRO:HD3	1.74	0.41
1:CA:1005:A:H3'	1:CA:1006:C:H5'	2.03	0.41
1:CA:1291:G:C5	1:CA:1292:U:C5	3.08	0.41
1:CA:182:U:H5	1:CA:183:G:C4	2.39	0.41
1:CA:262:A:N6	1:CA:263:A:N6	2.69	0.41
1:CA:426:G:P	4:CG:36:ARG:NH2	2.94	0.41
1:CA:528:C:H4'	1:CA:535:A:C5	2.56	0.41
1:CA:683:G:N2	1:CA:708:C:C2	2.89	0.41
1:CA:854:G:H3'	1:CA:855:G:H5''	2.02	0.41
22:CB:13:G:H5'	22:CB:14:A:OP1	2.21	0.41
22:CB:38:MIA:C11	22:CB:39:A:H1'	2.51	0.41
3:CF:101:LEU:C	3:CF:101:LEU:HD23	2.41	0.41
3:CF:64:VAL:HG12	3:CF:65:ALA:N	2.36	0.41
4:CG:119:GLN:CG	4:CG:123:HIS:CD2	3.04	0.41
4:CG:23:GLY:HA3	4:CG:112:VAL:CG2	2.51	0.41
6:CI:24:GLU:OE2	6:CI:28:ARG:NH1	2.49	0.41
7:CJ:77:SER:HA	7:CJ:86:GLN:HA	2.03	0.41
9:CL:5:TYR:HE2	9:CL:16:ARG:CG	2.33	0.41
9:CL:14:VAL:HB	9:CL:66:ARG:O	2.21	0.41
11:CN:34:ASP:OD1	11:CN:38:ASN:HB2	2.21	0.41
12:CO:86:ARG:O	12:CO:96:HIS:HE1	2.03	0.41
20:CW:56:MET:O	20:CW:59:ALA:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:D0:65:LEU:HD12	37:D0:65:LEU:HA	1.72	0.41
25:DA:581:C:OP1	40:D1:33:ARG:HG3	2.21	0.41
41:D2:6:LYS:H	41:D2:37:VAL:CG1	2.30	0.41
51:D5:4:HIS:CB	51:D5:5:PRO:CD	2.85	0.41
52:D6:30:THR:HA	52:D6:31:PRO:C	2.41	0.41
53:D7:15:THR:HG22	53:D7:16:HIS:CE1	2.55	0.41
25:DA:1064:C:C4	25:DA:1065:U:O4	2.74	0.41
25:DA:1204:A:N1	25:DA:1241:A:C2	2.89	0.41
25:DA:1196:C:O4'	25:DA:1227:A:C2	2.74	0.41
25:DA:2111:C:C6	25:DA:2118:U:H4'	2.56	0.41
25:DA:2531:A:H4'	31:DH:157:TYR:CE2	2.55	0.41
25:DA:2861:G:C4	25:DA:2862:G:C8	3.08	0.41
25:DA:337:C:H2'	25:DA:338:G:O5'	2.20	0.41
25:DA:414:C:H1'	25:DA:1864:U:O2'	2.20	0.41
25:DA:651:G:H4'	54:D8:18:ALA:HB3	2.02	0.41
25:DA:857:C:OP1	46:D3:77:ARG:NH2	2.50	0.41
25:DA:2810:A:O3'	28:DE:61:ARG:HG3	2.21	0.41
28:DE:65:GLY:O	28:DE:66:HIS:C	2.59	0.41
29:DF:36:VAL:O	29:DF:40:GLN:HB2	2.20	0.41
29:DF:59:TYR:CD1	29:DF:78:ILE:HD12	2.56	0.41
32:DK:64:GLU:OE1	32:DK:67:ARG:NH1	2.53	0.41
33:DM:90:MET:CE	33:DM:90:MET:HA	2.50	0.41
35:DO:114:ILE:HG21	35:DO:130:PHE:CE1	2.56	0.41
35:DO:61:ARG:NH2	35:DO:61:ARG:HB3	2.24	0.41
36:DP:43:THR:OG1	36:DP:45:GLN:HG2	2.20	0.41
25:DA:748:G:C8	42:DS:89:ALA:HB1	2.56	0.41
42:DS:95:ILE:HD13	42:DS:95:ILE:N	2.35	0.41
43:DT:36:LYS:HG3	43:DT:56:THR:HG23	2.03	0.41
48:DW:16:LEU:O	48:DW:20:GLU:HB2	2.20	0.41
1:AA:1004:A:O2'	1:AA:1037:C:O2	2.39	0.41
1:AA:1193:G:C2'	1:AA:1194:U:H5'	2.51	0.41
1:AA:232:G:C5	1:AA:233:C:C5	3.08	0.41
1:AA:540:G:H2'	1:AA:541:G:O4'	2.20	0.41
1:AA:58:C:O2'	1:AA:59:A:H5'	2.21	0.41
1:AA:874:G:C6	1:AA:875:C:C4	3.09	0.41
1:AA:87:A:O2'	1:AA:88:C:H5'	2.21	0.41
1:AA:95:G:H3'	1:AA:96:G:C8	2.56	0.41
22:AB:21:A:H8	22:AB:46:G:N7	2.15	0.41
22:AB:42:U:H3'	22:AB:43:G:C8	2.56	0.41
23:AC:2:G:H2'	23:AC:3:C:C6	2.55	0.41
23:AC:19:G:C2	23:AC:59:A:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AD:17:G:C4'	22:AD:18:G:OP1	2.67	0.41
22:AD:21:A:H4'	22:AD:22:A:OP1	2.18	0.41
2:AE:178:ARG:CG	2:AE:178:ARG:HH11	2.33	0.41
2:AE:75:LYS:HE3	2:AE:75:LYS:C	2.41	0.41
5:AH:43:LEU:HD12	5:AH:43:LEU:HA	1.93	0.41
5:AH:69:VAL:HG12	5:AH:71:LEU:HD23	2.01	0.41
6:AI:19:LEU:O	6:AI:23:LYS:HB2	2.21	0.41
9:AL:79:LEU:O	9:AL:83:ARG:HG3	2.21	0.41
9:AL:82:ALA:O	9:AL:86:VAL:HG23	2.21	0.41
1:AA:1199:U:H5'	10:AM:54:PHE:CE2	2.55	0.41
21:AX:9:ARG:O	21:AX:13:ILE:HG13	2.20	0.41
37:B0:70:LEU:C	37:B0:72:ASP:H	2.24	0.41
13:AP:65:LYS:HB3	50:B4:50:VAL:HG11	2.03	0.41
35:BO:61:ARG:HG2	54:B8:27:THR:CG2	2.50	0.41
25:BA:1188:U:H2'	25:BA:1189:A:H5'	2.02	0.41
25:BA:1291:C:C5'	25:BA:1536:A:H5'	2.51	0.41
25:BA:1538:G:N2	25:BA:1539:G:H1'	2.36	0.41
25:BA:1588:C:H2'	25:BA:1589:C:C6	2.47	0.41
25:BA:1675:C:O5'	25:BA:1675:C:H6	2.04	0.41
25:BA:1812:A:H2'	25:BA:1813:G:C8	2.56	0.41
25:BA:2273:A:H2'	25:BA:2274:A:C8	2.56	0.41
25:BA:270(E):G:C6	25:BA:270(F):U:C4	3.09	0.41
25:BA:459:U:H2'	25:BA:460:A:C8	2.56	0.41
25:BA:496:G:H1'	42:BS:61:ASN:OD1	2.21	0.41
25:BA:889:C:H5''	25:BA:890:A:O5'	2.21	0.41
26:BB:6:C:C3'	26:BB:7:G:H5''	2.51	0.41
29:BF:125:LEU:HA	29:BF:194:MET:O	2.21	0.41
29:BF:132:VAL:HG23	29:BF:133:ASN:N	2.36	0.41
30:BG:38:VAL:HG22	30:BG:93:THR:HG23	2.02	0.41
31:BH:96:ALA:N	31:BH:128:PRO:O	2.54	0.41
31:BH:152:ARG:HE	31:BH:153:LYS:NZ	2.17	0.41
31:BH:27:LYS:HD2	31:BH:28:GLY:N	2.36	0.41
36:BP:66:ILE:O	36:BP:67:ARG:HB2	2.21	0.41
25:BA:482:A:H4'	44:BU:47:LYS:HD2	2.03	0.41
45:BV:102:LEU:HD22	45:BV:139:VAL:HG21	2.03	0.41
45:BV:105:VAL:O	45:BV:140:ASP:HA	2.21	0.41
45:BV:53:ILE:CA	45:BV:71:VAL:HG13	2.51	0.41
45:BV:96:VAL:CG2	45:BV:97:GLU:N	2.83	0.41
1:CA:1125:U:OP2	1:CA:1125:U:H4'	2.20	0.41
1:CA:1151:A:C2'	1:CA:1152:A:O5'	2.69	0.41
1:CA:1162:C:C2	1:CA:1175:G:N2	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1176:A:N6	1:CA:1177:G:C4	2.89	0.41
1:CA:1255:G:C6	1:CA:1279:A:C8	3.08	0.41
1:CA:449:C:O4'	1:CA:449:C:O2	2.39	0.41
1:CA:545:C:H5'	4:CG:72:GLU:HB2	2.03	0.41
1:CA:688:G:OP2	1:CA:688:G:O4'	2.39	0.41
1:CA:838:G:C2	1:CA:842:C:H1'	2.56	0.41
2:CE:12:GLU:HB2	2:CE:16:HIS:HB2	2.03	0.41
2:CE:239:VAL:HG12	2:CE:240:GLN:N	2.36	0.41
2:CE:41:ILE:HG22	2:CE:41:ILE:O	2.21	0.41
3:CF:17:ASP:O	3:CF:18:TRP:C	2.59	0.41
1:CA:1080:A:H4'	5:CH:16:THR:HB	2.03	0.41
6:CI:43:LEU:HD12	6:CI:43:LEU:H	1.86	0.41
8:CK:11:THR:HA	8:CK:14:ARG:NH1	2.36	0.41
19:CV:60:VAL:O	19:CV:62:ILE:HD12	2.21	0.41
37:D0:14:SER:HA	37:D0:17:ARG:HH12	1.86	0.41
52:D6:24:GLU:OE1	52:D6:24:GLU:HA	2.21	0.41
54:D8:24:ALA:O	54:D8:47:LYS:HA	2.21	0.41
25:DA:1019:U:O2'	25:DA:1021:A:H2	2.00	0.41
25:DA:1070:A:N7	25:DA:1096:A:O2'	2.54	0.41
25:DA:1328:G:H2'	25:DA:1330:C:C4	2.55	0.41
25:DA:1344:G:H4'	25:DA:1384:A:C5	2.56	0.41
25:DA:141(A):C:H2'	25:DA:142:G:O4'	2.21	0.41
25:DA:1460:A:O2'	25:DA:1461:G:P	2.79	0.41
25:DA:1556:C:H2'	25:DA:1557:C:C6	2.56	0.41
25:DA:155:C:N3	25:DA:171:G:C2	2.88	0.41
25:DA:1899:G:O2'	25:DA:1900:A:OP2	2.36	0.41
25:DA:1950:G:C2	25:DA:1951:U:C5	3.08	0.41
25:DA:273(F):C:N3	25:DA:363:G:O6	2.54	0.41
25:DA:439:G:H2'	25:DA:440:G:C8	2.56	0.41
25:DA:637:A:H2'	35:DO:117:GLU:OE2	2.21	0.41
25:DA:71:A:C4'	25:DA:72:U:OP2	2.69	0.41
26:DB:27:C:C4	26:DB:28:C:C4	3.08	0.41
27:DD:133:LEU:HD13	27:DD:173:VAL:CG2	2.51	0.41
27:DD:61:LEU:HD13	27:DD:61:LEU:HA	1.90	0.41
28:DE:73:GLU:HA	28:DE:74:PRO:HD2	1.81	0.41
28:DE:77:ILE:HA	28:DE:78:LEU:HD23	2.03	0.41
29:DF:107:LYS:C	29:DF:109:GLY:N	2.73	0.41
30:DG:23:PHE:HB2	30:DG:25:TYR:CZ	2.56	0.41
30:DG:94:LEU:HD23	30:DG:94:LEU:H	1.86	0.41
32:DK:120:ILE:HG22	32:DK:122:GLU:H	1.86	0.41
39:DR:20:PRO:HD2	39:DR:86:ILE:HG23	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DS:110:LYS:HD2	42:DS:110:LYS:HA	1.71	0.41
43:DT:41:ASN:N	43:DT:41:ASN:ND2	2.68	0.41
45:DV:152:ALA:HA	45:DV:171:ILE:HG13	2.03	0.41
45:DV:61:LEU:HB3	45:DV:62:PRO:HD2	2.03	0.41
47:DZ:95:LEU:O	47:DZ:96:LYS:HG2	2.21	0.41
1:AA:1059:C:H2'	1:AA:1060:C:C6	2.56	0.41
1:AA:113:G:H2'	1:AA:114:U:H6	1.86	0.41
1:AA:195:A:C5	1:AA:196:A:N1	2.89	0.41
1:AA:266:G:H4'	1:AA:267:C:O5'	2.21	0.41
1:AA:309:G:O2'	1:AA:607:A:N1	2.53	0.41
1:AA:376:G:O2'	1:AA:377:G:H5'	2.21	0.41
1:AA:828:A:H2'	1:AA:829:G:O4'	2.21	0.41
1:AA:872:A:H4'	1:AA:873:A:OP1	2.21	0.41
2:AE:162:ILE:HD13	2:AE:162:ILE:N	2.36	0.41
2:AE:220:ASP:O	2:AE:223:ILE:N	2.54	0.41
2:AE:45:GLN:O	2:AE:49:GLU:HG3	2.21	0.41
3:AF:3:ASN:HB2	3:AF:4:LYS:H	1.73	0.41
4:AG:8:VAL:HG11	4:AG:21:LEU:HB2	2.01	0.41
4:AG:8:VAL:HG13	4:AG:21:LEU:HB2	2.03	0.41
6:AI:42:GLU:C	6:AI:44:GLY:H	2.23	0.41
9:AL:9:ARG:HB3	9:AL:14:VAL:HG22	2.02	0.41
10:AM:75:ILE:HG13	10:AM:76:ASN:N	2.36	0.41
13:AP:3:ARG:HB3	13:AP:9:ILE:HG12	2.02	0.41
18:AU:40:LEU:C	18:AU:42:ARG:N	2.75	0.41
54:B8:8:LYS:HA	54:B8:8:LYS:HD2	1.82	0.41
25:BA:1071:G:O6	25:BA:1072:C:N4	2.53	0.41
22:AD:18:G:O2'	25:BA:2112:G:N9	2.53	0.41
25:BA:2156:G:C4	25:BA:2157:G:N2	2.89	0.41
25:BA:2266:A:H4'	25:BA:2267:A:N3	2.36	0.41
25:BA:2278:A:OP1	36:BP:11:LYS:HD2	2.21	0.41
25:BA:2347:C:O5'	52:B6:39:TYR:OH	2.28	0.41
25:BA:2430:A:C8	25:BA:2431:U:C5	3.09	0.41
25:BA:307:G:H21	25:BA:330:A:H62	1.69	0.41
25:BA:529:A:N3	25:BA:529:A:C2'	2.84	0.41
25:BA:654(C):G:C6	25:BA:654(S):G:N1	2.89	0.41
25:BA:743:G:H2'	25:BA:744:G:H5'	2.03	0.41
27:BD:149:PRO:O	27:BD:150:LYS:HB2	2.21	0.41
27:BD:44:ASN:N	27:BD:44:ASN:ND2	2.68	0.41
27:BD:61:LEU:O	27:BD:63:ARG:NH1	2.52	0.41
29:BF:170:LEU:HD12	29:BF:170:LEU:HA	1.85	0.41
30:BG:57:ALA:HA	30:BG:90:LEU:HD21	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:66:GLN:HG3	30:BG:98:ARG:HD2	2.03	0.41
31:BH:16:SER:O	31:BH:17:VAL:HG23	2.21	0.41
33:BM:130:HIS:O	33:BM:131:GLN:C	2.59	0.41
33:BM:32:THR:HG22	33:BM:37:LYS:HB2	2.03	0.41
38:BQ:30:ARG:HG3	38:BQ:30:ARG:HH11	1.85	0.41
39:BR:56:GLY:C	39:BR:57:PHE:O	2.58	0.41
25:BA:329:G:OP2	44:BU:71:LYS:HE3	2.21	0.41
45:BV:25:PRO:O	45:BV:85:HIS:HA	2.21	0.41
1:CA:1055:A:H2'	1:CA:1056:U:O5'	2.21	0.41
1:CA:1106:G:C6	1:CA:1107:C:C4	3.09	0.41
1:CA:1245:A:C6	1:CA:1293:G:C6	3.09	0.41
1:CA:1300:G:C2'	1:CA:1301:U:OP2	2.69	0.41
1:CA:1374:A:H2'	1:CA:1375:A:C5'	2.48	0.41
1:CA:157:G:H2'	1:CA:158:G:C8	2.56	0.41
1:CA:338:A:H2'	1:CA:339:C:O4'	2.21	0.41
1:CA:524:G:H2'	1:CA:525:C:C6	2.55	0.41
1:CA:604:G:H2'	1:CA:605:U:O4'	2.21	0.41
1:CA:792:A:H4'	1:CA:793:U:O5'	2.21	0.41
2:CE:132:LYS:O	2:CE:136:VAL:HG23	2.20	0.41
4:CG:57:ARG:NE	4:CG:205:GLU:OE2	2.54	0.41
5:CH:143:ARG:HB3	5:CH:147:ASP:HB2	2.03	0.41
4:AG:27:TYR:OH	6:CI:15:ASP:OD2	2.28	0.41
9:CL:95:LYS:NZ	9:CL:96:LEU:HD13	2.34	0.41
10:CM:12:ASP:OD1	10:CM:15:THR:HG23	2.21	0.41
25:DA:2820:A:C6	37:D0:4:LEU:HD11	2.55	0.41
40:D1:98:LEU:H	40:D1:98:LEU:HG	1.73	0.41
41:D2:77:ALA:O	41:D2:79:VAL:HG22	2.21	0.41
50:D4:56:VAL:HA	50:D4:60:GLN:NE2	2.36	0.41
25:DA:2346:A:C8	52:D6:24:GLU:HG2	2.56	0.41
25:DA:2371:G:C4'	52:D6:45:LYS:HG3	2.50	0.41
25:DA:2393:A:P	54:D8:30:ARG:HB3	2.60	0.41
25:DA:1022:G:H22	25:DA:1142(A):A:H2	1.61	0.41
25:DA:1356:G:C5	25:DA:1357:U:C5	3.09	0.41
25:DA:1478:G:N2	25:DA:1516:U:C2	2.89	0.41
25:DA:1728:G:H8	25:DA:1732:A:H62	1.69	0.41
25:DA:17:G:H2'	25:DA:18:C:H6	1.86	0.41
25:DA:2308:G:O6	25:DA:2311:A:N1	2.54	0.41
25:DA:2318:G:H5'	25:DA:2319:G:P	2.61	0.41
25:DA:2533:A:H4'	25:DA:2664:G:H4'	2.03	0.41
25:DA:1050:A:C5	25:DA:2751:G:C6	3.09	0.41
25:DA:779:U:OP1	27:DD:49:ILE:CG2	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DB:90:C:P	36:DP:16:ARG:HH21	2.44	0.41
29:DF:9:ILE:CG1	29:DF:15:SER:H	2.34	0.41
30:DG:33:ARG:H	30:DG:162:THR:HG23	1.85	0.41
35:DO:147:LEU:HD23	35:DO:148:LEU:H	1.86	0.41
35:DO:84:ASN:CG	35:DO:117:GLU:HB3	2.41	0.41
38:DQ:4:LEU:HA	38:DQ:8:GLU:OE2	2.21	0.41
42:DS:4:LYS:CB	42:DS:106:ILE:HG22	2.51	0.41
43:DT:26:TYR:HB3	43:DT:92:LEU:CD1	2.51	0.41
45:DV:111:VAL:HG13	45:DV:111:VAL:O	2.21	0.41
49:DX:9:VAL:HG22	49:DX:53:LEU:O	2.20	0.41
47:DZ:82:LEU:CD2	47:DZ:82:LEU:N	2.79	0.41
1:AA:1004:A:C2	1:AA:1005:A:C2	3.09	0.40
1:AA:149:A:C2	1:AA:150:C:C2	3.09	0.40
1:AA:622:A:C8	1:AA:623:C:C6	3.09	0.40
1:AA:836:G:OP1	18:AU:61:LYS:NZ	2.37	0.40
1:AA:957:U:H2'	1:AA:959:A:OP2	2.21	0.40
22:AD:44:C:C2'	22:AD:45:C:H5'	2.51	0.40
2:AE:63:MET:HB3	2:AE:225:ALA:HB1	2.03	0.40
1:AA:1057:G:O3'	3:AF:197:GLY:HA3	2.21	0.40
3:AF:52:LEU:H	3:AF:52:LEU:CD2	2.35	0.40
4:AG:110:PHE:HD1	4:AG:110:PHE:H	1.68	0.40
6:AI:42:GLU:C	6:AI:44:GLY:N	2.75	0.40
6:AI:4:TYR:HD1	6:AI:92:LYS:HA	1.84	0.40
7:AJ:30:ILE:HD13	7:AJ:120:ILE:HD13	2.03	0.40
11:AN:73:MET:HG2	11:AN:77:MET:O	2.20	0.40
12:AO:42:PRO:HD3	12:AO:48:ALA:O	2.21	0.40
16:AS:43:LYS:HE3	16:AS:48:TRP:CZ3	2.56	0.40
37:B0:107:ASP:C	37:B0:107:ASP:OD2	2.59	0.40
37:B0:12:ARG:O	37:B0:17:ARG:NH2	2.55	0.40
50:B4:37:SER:OG	50:B4:42:PHE:CE2	2.71	0.40
50:B4:61:ARG:HE	50:B4:61:ARG:HA	1.85	0.40
25:BA:1026:U:C1'	25:BA:1027:A:P	3.09	0.40
25:BA:1171:G:N2	25:BA:1178:C:N3	2.66	0.40
25:BA:1313:U:H4'	25:BA:1332:G:H4'	2.02	0.40
25:BA:1499:C:O2'	25:BA:1500:G:H5'	2.21	0.40
25:BA:1505:C:H2'	25:BA:1506:C:H6	1.85	0.40
25:BA:2169:A:N6	25:BA:2170:A:C6	2.89	0.40
25:BA:2684:U:C4	25:BA:2685:G:N7	2.89	0.40
25:BA:828:U:O2'	25:BA:829:A:O5'	2.36	0.40
26:BB:109:G:C4	26:BB:110:G:C8	3.09	0.40
27:BD:182:LEU:N	27:BD:272:ALA:HB3	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:167:ALA:HB1	29:BF:173:VAL:HG11	2.03	0.40
25:BA:673:C:H5''	29:BF:81:PRO:HD2	2.03	0.40
32:BK:125:GLU:OE1	32:BK:141:LYS:HA	2.22	0.40
39:BR:78:LEU:O	39:BR:78:LEU:HD23	2.22	0.40
44:BU:33:LYS:HG3	44:BU:33:LYS:H	1.46	0.40
45:BV:53:ILE:HG22	45:BV:71:VAL:HG13	2.03	0.40
1:CA:1125:U:C5	10:CM:5:ARG:NH1	2.89	0.40
1:CA:1129:C:H5	1:CA:1141:C:H42	1.69	0.40
1:CA:1206:G:C5	1:CA:1207:G:N7	2.89	0.40
1:CA:1315:U:H2'	1:CA:1316:G:O4'	2.21	0.40
1:CA:1321:C:C5	1:CA:1322:C:C5	3.09	0.40
1:CA:398:C:H2'	1:CA:399:G:C8	2.55	0.40
1:CA:512:U:O4'	4:CG:43:HIS:HE1	2.04	0.40
22:CD:64:U:C4	22:CD:66:G:OP2	2.74	0.40
3:CF:86:VAL:O	3:CF:90:GLU:HG2	2.21	0.40
4:CG:108:LEU:HD12	4:CG:108:LEU:HA	1.74	0.40
5:CH:34:VAL:O	5:CH:34:VAL:HG12	2.20	0.40
9:CL:114:TYR:CD2	9:CL:114:TYR:N	2.86	0.40
1:CA:963:G:N2	10:CM:55:LYS:HG2	2.36	0.40
13:CP:27:LYS:HE3	13:CP:31:LYS:HE3	2.03	0.40
16:CS:47:ASP:CG	16:CS:47:ASP:O	2.60	0.40
16:CS:74:LEU:HD13	16:CS:79:VAL:HG21	2.01	0.40
17:CT:45:HIS:HB2	17:CT:65:ILE:CD1	2.50	0.40
18:CU:30:ASP:O	18:CU:32:ARG:N	2.54	0.40
11:CN:109:VAL:HG13	18:CU:86:VAL:HG13	2.03	0.40
37:D0:118:GLU:HA	37:D0:118:GLU:OE1	2.21	0.40
41:D2:7:THR:HG23	41:D2:22:VAL:HG21	2.03	0.40
50:D4:10:VAL:HA	50:D4:11:PRO:HD2	1.95	0.40
50:D4:53:GLU:OE2	50:D4:58:ARG:HB2	2.20	0.40
25:DA:1029:A:H2'	25:DA:1030:G:O4'	2.21	0.40
25:DA:1324:G:C5	25:DA:1328:G:O6	2.73	0.40
25:DA:1416:G:C2'	25:DA:1417:C:C6	3.04	0.40
25:DA:1503:U:H2'	25:DA:1504:C:C6	2.56	0.40
25:DA:150:C:H2'	25:DA:151:C:H6	1.86	0.40
25:DA:2128:C:C4	25:DA:2129:C:C4	3.09	0.40
25:DA:2469:A:OP2	25:DA:2476:A:C2	2.74	0.40
25:DA:2710:C:OP1	37:D0:15:SER:OG	2.35	0.40
25:DA:2765:A:C2	25:DA:2766:G:O4'	2.70	0.40
25:DA:2632:A:H61	25:DA:2786:U:H3	1.69	0.40
25:DA:458:G:C8	53:D7:37:LYS:HG2	2.56	0.40
25:DA:920:G:C4	25:DA:921:G:C8	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:959:A:C6	25:DA:960:A:N1	2.89	0.40
28:DE:120:TRP:CG	28:DE:155:LYS:HB3	2.55	0.40
28:DE:17:ASP:O	28:DE:18:ASP:HB2	2.21	0.40
29:DF:119:ARG:NH1	29:DF:119:ARG:CG	2.84	0.40
29:DF:9:ILE:HG22	29:DF:11:VAL:O	2.20	0.40
30:DG:106:LEU:O	30:DG:110:ALA:HB3	2.20	0.40
30:DG:114:ILE:HD13	30:DG:140:ILE:HG21	2.02	0.40
31:DH:166:GLY:O	31:DH:167:GLU:O	2.38	0.40
32:DK:98:ALA:O	32:DK:101:LEU:HD23	2.21	0.40
33:DM:14:VAL:HG13	33:DM:137:LYS:HG2	2.03	0.40
34:DN:113:LYS:O	34:DN:117:LEU:HD13	2.21	0.40
35:DO:45:LEU:HD12	35:DO:45:LEU:HA	1.84	0.40
35:DO:56:SER:O	35:DO:57:THR:C	2.60	0.40
39:DR:36:GLU:OE2	39:DR:41:ARG:HD3	2.21	0.40
39:DR:80:SER:HB3	39:DR:83:ILE:CG1	2.45	0.40
44:DU:30:VAL:C	44:DU:31:LEU:HG	2.42	0.40
45:DV:124:ILE:HD12	45:DV:124:ILE:HA	1.96	0.40
1:AA:1047:G:H2'	1:AA:1048:G:H5'	2.03	0.40
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.56	0.40
22:AB:7:G:N2	22:AB:76:C:O2	2.54	0.40
22:AD:19:C:OP1	22:AD:19:C:O4'	2.40	0.40
22:AD:49:A:H2'	22:AD:50:U:O5'	2.22	0.40
3:AF:36:ASP:O	3:AF:40:ARG:HG3	2.21	0.40
6:AI:39:LYS:HB3	6:AI:40:VAL:H	1.67	0.40
8:AK:121:ASP:O	8:AK:125:ARG:HB2	2.22	0.40
11:AN:120:ARG:HA	11:AN:121:PRO:HD3	1.85	0.40
11:AN:12:ARG:HG2	11:AN:13:GLN:N	2.36	0.40
21:AX:9:ARG:HD3	21:AX:22:ARG:HG3	2.02	0.40
25:BA:1161:C:H4'	41:B2:8:GLY:HA2	2.03	0.40
46:B3:36:ILE:HD13	46:B3:36:ILE:C	2.39	0.40
25:BA:1005:C:O2'	33:BM:28:THR:HG21	2.20	0.40
25:BA:1212:G:H1'	25:BA:1237:A:N6	2.36	0.40
25:BA:1353:A:O4'	25:BA:1569:A:H2	2.03	0.40
25:BA:1528:A:C2	25:BA:1543:A:N1	2.88	0.40
25:BA:1729:A:N6	25:BA:1731:G:C2	2.90	0.40
25:BA:2088:G:C6	25:BA:2089:U:C4	3.09	0.40
25:BA:2075:U:C4	25:BA:2238:G:C6	3.09	0.40
25:BA:195:A:H4'	25:BA:251:A:O2'	2.21	0.40
25:BA:2612:C:C2'	25:BA:2613:U:O5'	2.70	0.40
25:BA:524:U:H2'	25:BA:525:U:H6	1.84	0.40
25:BA:76:C:O3'	48:BW:59:ARG:HD3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BB:83:G:C6	26:BB:84:C:C5	3.09	0.40
28:BE:101:ARG:C	28:BE:201:THR:OG1	2.60	0.40
29:BF:63:LYS:HZ1	29:BF:67:GLN:HE21	1.68	0.40
30:BG:146:TYR:O	30:BG:148:MET:N	2.46	0.40
31:BH:127:GLU:OE2	31:BH:130:ARG:NH2	2.55	0.40
32:BK:44:LEU:HD12	32:BK:44:LEU:HA	1.87	0.40
33:BM:137:LYS:HD2	33:BM:137:LYS:HA	1.77	0.40
38:BQ:27:SER:HA	38:BQ:88:ASP:HB3	2.02	0.40
39:BR:51:ARG:HB2	39:BR:98:LYS:HD2	2.02	0.40
28:BE:181:LEU:HD11	39:BR:7:ILE:HG21	2.03	0.40
44:BU:89:PHE:C	44:BU:90:LEU:HD12	2.42	0.40
1:CA:1028(A):C:N3	1:CA:1032(B):G:C6	2.88	0.40
1:CA:1120:G:H2'	1:CA:1121:U:H6	1.85	0.40
1:CA:1278:U:C3'	1:CA:1278:U:O2	2.69	0.40
1:CA:1330:U:O3'	13:CP:23:TYR:CE2	2.73	0.40
1:CA:336:C:H2'	1:CA:337:C:H6	1.86	0.40
1:CA:516:U:C4	1:CA:517:G:C6	3.09	0.40
1:CA:600:C:H2'	1:CA:601:C:C6	2.56	0.40
1:CA:965:A:C2	1:CA:969:A:C2	3.09	0.40
1:CA:977:A:N3	1:CA:977:A:H3'	2.35	0.40
23:CC:64:G:H2'	23:CC:65:G:H8	1.86	0.40
22:CD:14:A:H1'	22:CD:23:A:C2	2.56	0.40
2:CE:168:THR:HG21	2:CE:191:ASP:O	2.22	0.40
3:CF:85:ARG:O	3:CF:88:ARG:N	2.53	0.40
5:CH:18:ARG:HG2	5:CH:19:MET:N	2.37	0.40
12:CO:74:LEU:HD21	12:CO:104:ALA:HB2	2.03	0.40
13:CP:57:ARG:NH2	50:D4:34:GLU:HB2	2.36	0.40
37:D0:18:LEU:HA	37:D0:18:LEU:HD23	1.77	0.40
41:D2:64:HIS:CD2	41:D2:92:THR:HG1	2.39	0.40
25:DA:1342:A:C5	25:DA:1397:U:C5	3.08	0.40
25:DA:1693:U:O2'	27:DD:14:ARG:NH2	2.54	0.40
25:DA:1790:C:H2'	25:DA:1791:A:C5	2.56	0.40
25:DA:2210:G:H1'	25:DA:2211:G:P	2.61	0.40
25:DA:2302:G:N1	25:DA:2315:G:C6	2.89	0.40
25:DA:2392:A:N1	25:DA:2424:C:N3	2.69	0.40
25:DA:2505:G:O2'	25:DA:2506:U:C6	2.72	0.40
25:DA:2749:A:C6	25:DA:2750:A:N6	2.89	0.40
25:DA:296:C:O2'	25:DA:297:C:H5'	2.21	0.40
25:DA:26:G:H1'	25:DA:515:A:N6	2.36	0.40
27:DD:12:SER:HB2	27:DD:208:LYS:HB3	2.04	0.40
27:DD:210:GLY:O	27:DD:213:ARG:HB2	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DE:93:VAL:C	28:DE:95:ILE:H	2.24	0.40
29:DF:139:PHE:C	29:DF:139:PHE:CD2	2.94	0.40
25:DA:1138:G:O2'	33:DM:102:ALA:O	2.31	0.40
35:DO:126:VAL:HG22	35:DO:145:PRO:HD2	2.03	0.40
39:DR:125:ARG:O	39:DR:129:ARG:HB2	2.22	0.40
42:DS:2:GLU:HA	42:DS:107:LEU:O	2.22	0.40
45:DV:30:ASN:O	45:DV:31:ARG:C	2.59	0.40
48:DW:15:LYS:HA	48:DW:67:LYS:HZ1	1.86	0.40
47:DZ:86:SER:O	47:DZ:87:PRO:C	2.60	0.40
1:AA:1054:C:C4	22:AB:35:G:H1'	2.55	0.40
1:AA:1129:C:H4'	1:AA:1130:A:C5'	2.51	0.40
1:AA:1411:C:H2'	1:AA:1412:C:H6	1.87	0.40
1:AA:1450:U:O2'	1:AA:1451:A:H8	2.02	0.40
1:AA:261:U:H2'	1:AA:263:A:OP2	2.22	0.40
1:AA:408:A:C2	1:AA:409:G:C4	3.09	0.40
1:AA:465:A:N7	1:AA:467:G:N7	2.70	0.40
1:AA:781:A:C3'	1:AA:782:A:H5'	2.52	0.40
1:AA:792:A:N3	1:AA:792:A:H2'	2.35	0.40
1:AA:797:C:OP1	11:AN:124:LYS:HE2	2.21	0.40
1:AA:859:A:H2'	1:AA:860:A:O4'	2.21	0.40
1:AA:872:A:C8	1:AA:874:G:C8	3.08	0.40
1:AA:949:A:C6	1:AA:950:U:C4	3.10	0.40
1:AA:977:A:C8	1:AA:1223:C:C4	3.09	0.40
22:AB:20:C:H5''	22:AB:22:A:H5'	2.03	0.40
22:AB:38:MIA:H163	22:AB:38:MIA:H122	1.80	0.40
23:AC:56:U:O2	23:AC:58:A:C8	2.74	0.40
22:AD:44:C:H2'	22:AD:45:C:O4'	2.22	0.40
22:AD:17:G:C2'	22:AD:66:G:H22	2.28	0.40
5:AH:33:VAL:HB	5:AH:112:LEU:HD12	2.02	0.40
6:AI:67:MET:SD	6:AI:75:LEU:HD12	2.61	0.40
7:AJ:89:MET:CE	7:AJ:89:MET:HA	2.51	0.40
8:AK:25:ASP:OD2	8:AK:60:ARG:HG3	2.22	0.40
16:AS:9:PHE:HB2	16:AS:16:HIS:O	2.20	0.40
17:AT:67:LYS:CA	17:AT:70:ARG:HH12	2.22	0.40
17:AT:86:GLU:O	17:AT:90:ILE:HG12	2.21	0.40
20:AW:30:LYS:CE	20:AW:80:ARG:HH12	2.34	0.40
37:B0:28:LEU:C	37:B0:30:THR:N	2.73	0.40
37:B0:32:GLY:O	37:B0:115:GLU:HA	2.22	0.40
50:B4:52:THR:O	50:B4:53:GLU:CB	2.65	0.40
52:B6:16:CYS:O	52:B6:17:LYS:HE2	2.20	0.40
54:B8:26:LYS:HE2	54:B8:47:LYS:HG2	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:51:G:N3	25:BA:119:A:C2	2.90	0.40
25:BA:1533:C:C3'	25:BA:1534:G:C5'	2.88	0.40
25:BA:1590:U:H2'	25:BA:1591:G:H8	1.86	0.40
25:BA:1816:G:P	27:BD:39:LYS:HE3	2.61	0.40
25:BA:2062:A:C2'	25:BA:2062:A:N3	2.77	0.40
25:BA:2119:A:C2	25:BA:2171:A:H1'	2.56	0.40
25:BA:2164:C:C2'	25:BA:2165:G:H5'	2.52	0.40
25:BA:229:A:O4'	25:BA:230:U:OP2	2.39	0.40
25:BA:2346:A:H5''	25:BA:2383:G:C1'	2.51	0.40
25:BA:2690:C:OP2	25:BA:2690:C:C6	2.70	0.40
25:BA:2815:C:H2'	25:BA:2816:C:O4'	2.21	0.40
25:BA:515:A:C8	25:BA:516:C:C5	3.09	0.40
25:BA:1693:U:O2'	27:BD:14:ARG:NH2	2.54	0.40
28:BE:117:MET:CE	28:BE:124:GLY:HA3	2.50	0.40
29:BF:9:ILE:CD1	29:BF:125:LEU:HG	2.49	0.40
30:BG:16:ARG:N	30:BG:17:PRO:CD	2.85	0.40
31:BH:54:ARG:HA	31:BH:55:PRO:HD3	1.96	0.40
35:BO:6:LEU:O	35:BO:7:ARG:O	2.40	0.40
36:BP:54:MET:HE1	36:BP:64:ILE:HG23	2.02	0.40
38:BQ:5:THR:HG23	38:BQ:8:GLU:OE2	2.21	0.40
39:BR:89:VAL:O	39:BR:89:VAL:HG22	2.22	0.40
43:BT:29:TRP:CE3	43:BT:78:LYS:HB3	2.56	0.40
45:BV:133:ILE:HA	45:BV:134:PRO:HD2	1.89	0.40
1:CA:1256:A:N6	1:CA:1277:C:H3'	2.37	0.40
1:CA:373:A:C2	1:CA:374:A:C8	3.10	0.40
1:CA:501:C:H2'	1:CA:502:G:C8	2.56	0.40
2:CE:146:GLN:C	2:CE:148:TYR:H	2.25	0.40
3:CF:119:ARG:O	3:CF:123:GLN:HB2	2.21	0.40
4:CG:170:VAL:CG1	4:CG:174:LEU:HB2	2.52	0.40
8:CK:11:THR:HG22	8:CK:15:ASN:ND2	2.36	0.40
11:CN:105:VAL:O	11:CN:105:VAL:HG23	2.21	0.40
20:CW:33:ILE:HD13	20:CW:63:ILE:HA	2.03	0.40
20:CW:45:GLN:HG2	20:CW:91:LEU:HD22	2.02	0.40
37:D0:116:LEU:HA	37:D0:116:LEU:HD23	1.82	0.40
50:D4:14:ILE:HG22	50:D4:21:VAL:O	2.21	0.40
25:DA:1140:C:O4'	25:DA:1143:A:C2	2.74	0.40
25:DA:1225:C:H4'	41:D2:85:LYS:CD	2.47	0.40
25:DA:1385:G:C6	25:DA:1403:C:N3	2.89	0.40
25:DA:1607:C:C4'	25:DA:1608:A:H5'	2.50	0.40
25:DA:1621:U:H5''	25:DA:1622:G:OP1	2.21	0.40
25:DA:1783:A:C2	25:DA:2587:A:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DA:532:A:C8	25:DA:2021:C:C5	3.09	0.40
25:DA:536:A:H2'	25:DA:537:C:C6	2.56	0.40
25:DA:628:G:C5	25:DA:636:G:N2	2.90	0.40
25:DA:814:C:H5''	41:D2:84:LYS:HB2	2.03	0.40
25:DA:816:C:N3	25:DA:1192:G:C2	2.89	0.40
25:DA:844:C:C5	25:DA:845:G:C6	3.09	0.40
26:DB:3:C:C2	26:DB:118:G:C2	3.09	0.40
28:DE:31:CYS:O	28:DE:91:VAL:HG13	2.22	0.40
28:DE:61:ARG:CB	28:DE:62:PRO:CD	2.99	0.40
29:DF:102:PRO:HB2	29:DF:105:VAL:HG23	2.02	0.40
29:DF:161:GLU:HG2	29:DF:164:ARG:HH22	1.86	0.40
29:DF:82:ILE:HD13	29:DF:82:ILE:N	2.36	0.40
31:DH:61:HIS:C	31:DH:63:SER:N	2.75	0.40
32:DK:70:GLU:C	32:DK:72:LEU:H	2.23	0.40
32:DK:74:ASN:OD1	32:DK:75:LEU:N	2.42	0.40
35:DO:46:LYS:HB2	35:DO:51:PHE:CD2	2.57	0.40
35:DO:5:ASP:O	35:DO:6:LEU:O	2.40	0.40
35:DO:97:PRO:O	35:DO:98:GLU:CB	2.69	0.40
36:DP:132:VAL:HG21	45:DV:81:ARG:NH2	2.36	0.40
1:AA:1143:G:N1	1:AA:1144:G:N2	2.69	0.40
1:AA:22:G:H2'	1:AA:23:C:C6	2.57	0.40
1:AA:250:A:H4'	1:AA:251:G:H5''	2.03	0.40
1:AA:266:G:H2'	1:AA:266:G:H8	1.75	0.40
1:AA:273:A:C6	1:AA:274:A:C6	3.09	0.40
1:AA:439:A:H2'	1:AA:440:A:C5'	2.51	0.40
1:AA:452:A:O2'	16:AS:72:ARG:HD2	2.21	0.40
1:AA:502:G:C6	1:AA:503:C:C4	3.09	0.40
1:AA:516:U:C4	1:AA:517:G:C6	3.10	0.40
1:AA:69:G:H2'	1:AA:69:G:N3	2.36	0.40
1:AA:872:A:C5	1:AA:874:G:C8	3.10	0.40
1:AA:977:A:C8	1:AA:1223:C:N3	2.89	0.40
2:AE:80:ILE:O	2:AE:80:ILE:HG22	2.22	0.40
4:AG:135:LEU:HA	4:AG:136:PRO:HD2	1.88	0.40
5:AH:60:TYR:CZ	5:AH:64:ARG:CZ	3.04	0.40
9:AL:89:ASN:C	9:AL:91:ASP:H	2.25	0.40
15:AR:82:ILE:O	15:AR:86:GLY:N	2.53	0.40
41:B2:6:LYS:HD3	41:B2:11:GLN:HG2	2.04	0.40
46:B3:50:ASN:HB3	46:B3:63:VAL:HG22	2.03	0.40
50:B4:47:GLN:HB3	50:B4:47:GLN:HE21	1.67	0.40
50:B4:55:ARG:HG2	50:B4:56:VAL:HG23	2.02	0.40
25:BA:1057:A:H8	25:BA:1086:A:H2'	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BA:1139:G:O3'	33:BM:24:GLY:HA3	2.21	0.40
25:BA:1171:G:N2	25:BA:1179:C:C2	2.90	0.40
25:BA:1252:G:O4'	40:B1:33:ARG:HD3	2.22	0.40
25:BA:1313:U:OP2	25:BA:1314:C:C5	2.74	0.40
25:BA:1657:C:H2'	25:BA:1658:C:H6	1.86	0.40
25:BA:1899:G:O2'	25:BA:1900:A:P	2.78	0.40
25:BA:1651:G:C2	25:BA:2007:C:N3	2.89	0.40
25:BA:2017:U:H5''	25:BA:2018:G:P	2.61	0.40
25:BA:2119:A:H62	25:BA:2168:G:H22	1.70	0.40
25:BA:2773:C:OP1	28:BE:164:ARG:HD3	2.21	0.40
25:BA:347:A:H2'	25:BA:348:G:H8	1.86	0.40
25:BA:413:C:O5'	25:BA:413:C:H6	2.04	0.40
25:BA:498:G:O2'	25:BA:499:U:H5'	2.22	0.40
25:BA:627:A:N6	35:BO:115:LEU:HD13	2.36	0.40
25:BA:654(H):G:C2'	25:BA:654(H):G:N3	2.81	0.40
25:BA:696:G:O2'	25:BA:697:C:H5'	2.20	0.40
26:BB:59:A:H2'	26:BB:60:C:O4'	2.21	0.40
29:BF:7:TYR:O	29:BF:21:ALA:HA	2.21	0.40
30:BG:131:TYR:HB3	30:BG:159:VAL:CG2	2.51	0.40
31:BH:10:PRO:HB2	31:BH:11:VAL:H	1.62	0.40
31:BH:169:VAL:HG13	31:BH:170:ARG:N	2.36	0.40
32:BK:11:ASN:O	32:BK:12:LEU:CB	2.60	0.40
35:BO:65:ARG:HH22	54:B8:46:ARG:CZ	2.34	0.40
36:BP:58:PHE:CD1	36:BP:58:PHE:O	2.74	0.40
25:BA:2682:U:O2'	39:BR:58:ASN:ND2	2.54	0.40
43:BT:24:GLY:O	43:BT:83:VAL:HG22	2.22	0.40
45:BV:122:ARG:HG3	45:BV:122:ARG:H	1.54	0.40
49:BX:11:SER:OG	49:BX:13:ILE:HG12	2.21	0.40
47:BZ:91:LYS:HG3	47:BZ:92:LYS:H	1.87	0.40
1:CA:1008:C:O2	1:CA:1021:G:N1	2.47	0.40
1:CA:209:U:O2	1:CA:209:U:H2'	2.20	0.40
1:CA:324:G:N1	1:CA:327:A:OP2	2.55	0.40
1:CA:51:A:N7	1:CA:114:U:O2'	2.49	0.40
1:CA:559:A:C5'	1:CA:560:U:H3'	2.52	0.40
22:CB:21:A:H2'	22:CB:46:G:O6	2.21	0.40
22:CD:18:G:C5	22:CD:66:G:C2	3.10	0.40
2:CE:55:PHE:HD1	2:CE:55:PHE:HA	1.76	0.40
4:CG:169:LYS:HB3	4:CG:169:LYS:HE2	1.84	0.40
6:CI:55:ASP:HA	6:CI:56:PRO:HD3	1.82	0.40
9:CL:43:ALA:C	9:CL:45:ALA:H	2.24	0.40
12:CO:54:LYS:HE2	12:CO:64:THR:HG22	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:D1:91:ASP:O	40:D1:92:ARG:C	2.60	0.40
41:D2:62:LEU:HD22	41:D2:95:LEU:HB2	2.03	0.40
41:D2:69:LYS:HG3	41:D2:86:GLY:CA	2.40	0.40
54:D8:60:LEU:HD23	54:D8:60:LEU:HA	1.91	0.40
25:DA:1178:C:C4	25:DA:1179:C:C4	3.09	0.40
25:DA:150:C:H2'	25:DA:151:C:C6	2.56	0.40
25:DA:1899:G:H2'	25:DA:1900:A:OP2	2.18	0.40
25:DA:2055:C:H5'	25:DA:2056:G:O5'	2.22	0.40
25:DA:2101:G:H2'	25:DA:2102:U:O4'	2.21	0.40
25:DA:2138:C:N3	25:DA:2153:G:N2	2.61	0.40
25:DA:2271:G:C6	25:DA:2272:U:C4	3.10	0.40
25:DA:826:U:OP1	25:DA:2428:G:H3'	2.22	0.40
25:DA:2540:C:H2'	25:DA:2541:A:O4'	2.21	0.40
25:DA:2692:C:O2'	25:DA:2693:A:H5'	2.21	0.40
25:DA:506:G:H5''	25:DA:509:C:H1'	2.04	0.40
25:DA:977:G:C6	25:DA:987:G:C6	3.10	0.40
27:DD:136:ILE:HA	27:DD:137:PRO:HD3	1.91	0.40
28:DE:6:GLY:O	28:DE:195:LEU:HD12	2.22	0.40
33:DM:29:LYS:HG2	33:DM:29:LYS:H	1.62	0.40
38:DQ:106:ARG:HD2	38:DQ:106:ARG:C	2.41	0.40
38:DQ:30:ARG:HG3	38:DQ:35:ILE:HD12	2.03	0.40
39:DR:91:ARG:NH1	39:DR:124:ASP:CG	2.75	0.40
45:DV:113:ALA:O	45:DV:116:VAL:N	2.48	0.40
45:DV:58:VAL:O	45:DV:59:LEU:HB2	2.21	0.40
1:AA:1176:A:C2'	1:AA:1177:G:H5''	2.51	0.40
1:AA:1250:A:H4'	9:AL:68:GLY:N	2.36	0.40
1:AA:1322:C:C2'	1:AA:1322:C:O2	2.69	0.40
1:AA:142:G:N3	1:AA:143:A:C8	2.90	0.40
1:AA:1527:C:N3	1:AA:1528:U:C4	2.89	0.40
1:AA:222:U:N3	1:AA:223:U:C4	2.90	0.40
1:AA:270:A:C5	1:AA:271:C:C4	3.09	0.40
1:AA:422:C:H1'	1:AA:423:G:N1	2.37	0.40
1:AA:428:G:C5	1:AA:430:A:C6	3.09	0.40
1:AA:502:G:H2'	1:AA:503:C:H6	1.86	0.40
1:AA:581:G:N2	1:AA:582:U:C4	2.89	0.40
1:AA:601:C:H2'	1:AA:602:A:C8	2.57	0.40
1:AA:604:G:C6	1:AA:635:G:C6	3.09	0.40
1:AA:64:G:C4'	1:AA:65:U:H5'	2.51	0.40
1:AA:803:G:C6	1:AA:804:U:N3	2.90	0.40
22:AB:2:G:N2	22:AB:81:C:H1'	2.37	0.40
3:AF:18:TRP:CH2	14:AQ:55:GLY:HA2	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AH:13:ILE:HD13	5:AH:13:ILE:HA	1.92	0.40
8:AK:86:ILE:O	8:AK:88:LYS:HG3	2.22	0.40
11:AN:48:ILE:HG13	11:AN:63:LEU:CB	2.41	0.40
13:AP:4:ILE:CG2	13:AP:5:ALA:N	2.83	0.40
40:B1:47:TYR:HA	40:B1:50:ARG:NH1	2.35	0.40
25:BA:592:G:N3	54:B8:4:MET:CE	2.85	0.40
25:BA:1206:G:C6	25:BA:1207:C:C4	3.09	0.40
25:BA:1286:A:N6	25:BA:1329:U:C2	2.89	0.40
25:BA:1363:C:O2'	25:BA:1364:G:H5'	2.22	0.40
25:BA:1550:C:H2'	25:BA:1551:C:H6	1.85	0.40
25:BA:1668:A:H4'	25:BA:1669:A:O5'	2.21	0.40
25:BA:1831:G:H2'	25:BA:1832:C:C6	2.57	0.40
25:BA:2116:G:OP1	25:BA:2165:G:N2	2.54	0.40
25:BA:2115:G:O6	25:BA:2118:U:OP2	2.39	0.40
25:BA:2152:G:H2'	25:BA:2153:G:C8	2.56	0.40
25:BA:2205:C:H2'	25:BA:2205:C:O2	2.21	0.40
25:BA:2474:C:H3'	25:BA:2475:C:C6	2.57	0.40
25:BA:273(F):C:O2	25:BA:273(F):C:H2'	2.21	0.40
25:BA:2820:A:H1'	37:B0:3:HIS:CD2	2.57	0.40
25:BA:299:A:C6	25:BA:300:A:N1	2.90	0.40
25:BA:181:A:C2	25:BA:435:C:C5	3.09	0.40
26:BB:30:C:OP2	38:BQ:32:LEU:HD11	2.21	0.40
28:BE:119:ARG:CD	28:BE:160:TYR:HB2	2.51	0.40
28:BE:96:PHE:O	28:BE:175:VAL:HG11	2.21	0.40
30:BG:57:ALA:CA	30:BG:90:LEU:HD21	2.52	0.40
34:BN:2:ILE:HD12	34:BN:6:THR:HG21	2.03	0.40
35:BO:97:PRO:O	35:BO:106:LEU:HD12	2.21	0.40
39:BR:108:ARG:O	39:BR:112:ARG:HG2	2.22	0.40
39:BR:74:ARG:HD3	39:BR:76:PHE:CE2	2.56	0.40
42:BS:37:ARG:HD2	42:BS:38:TYR:CE2	2.56	0.40
25:BA:327:G:N2	44:BU:70:SER:OG	2.54	0.40
45:BV:117:LEU:HD22	45:BV:119:GLU:HG3	2.04	0.40
1:CA:1106:G:H5''	3:CF:172:ARG:HG2	2.03	0.40
1:CA:1321:C:H3'	1:CA:1322:C:H5''	2.03	0.40
1:CA:1348:U:H5	1:CA:1373:G:C2	2.40	0.40
1:CA:62:U:O2'	1:CA:379:C:H1'	2.21	0.40
1:CA:96:G:H2'	1:CA:97:U:O4'	2.21	0.40
22:CB:9:U:H5'	22:CB:11:C:OP2	2.22	0.40
1:CA:1054:C:N4	22:CB:35:G:C1'	2.85	0.40
2:CE:102:LEU:N	2:CE:102:LEU:HD12	2.36	0.40
2:CE:10:LEU:O	2:CE:13:ALA:HB3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CE:16:HIS:HE2	2:CE:209:ARG:HG2	1.86	0.40
5:CH:60:TYR:HA	5:CH:63:ARG:CG	2.45	0.40
6:CI:97:PHE:HD2	18:CU:31:LEU:HD21	1.84	0.40
13:CP:16:ASP:OD2	13:CP:17:VAL:N	2.54	0.40
13:CP:65:LYS:HB3	13:CP:69:GLU:OE2	2.22	0.40
13:CP:86:CYS:O	13:CP:87:TYR:C	2.60	0.40
16:CS:49:LEU:HD12	16:CS:50:LYS:N	2.36	0.40
18:CU:35:ARG:O	18:CU:37:VAL:N	2.54	0.40
20:CW:99:LEU:O	20:CW:100:ILE:C	2.60	0.40
21:CX:6:ARG:O	21:CX:12:LYS:HE2	2.22	0.40
46:D3:31:VAL:CG1	46:D3:35:ASN:HB2	2.43	0.40
53:D7:10:ARG:O	53:D7:14:LYS:HB2	2.22	0.40
25:DA:2420:C:OP2	54:D8:33:ASN:HA	2.21	0.40
25:DA:1431:U:H2'	25:DA:1432:C:C6	2.56	0.40
25:DA:151:C:C2	25:DA:176:G:N2	2.89	0.40
25:DA:2277:G:C3'	25:DA:2278:A:H5''	2.52	0.40
25:DA:2346:A:H5''	25:DA:2383:G:C1'	2.52	0.40
25:DA:2402:C:H2'	25:DA:2403:C:C5'	2.51	0.40
25:DA:522:G:C6	25:DA:523:C:N4	2.89	0.40
25:DA:797:C:H2'	25:DA:798:G:O4'	2.22	0.40
25:DA:850:C:O3'	49:DX:49:LYS:HE2	2.22	0.40
25:DA:908:C:OP2	36:DP:22:LYS:HD3	2.22	0.40
25:DA:957:A:H4'	36:DP:74:TYR:OH	2.21	0.40
27:DD:132:PRO:HG3	27:DD:190:TYR:CE1	2.57	0.40
27:DD:267:SER:C	27:DD:269:PHE:N	2.72	0.40
28:DE:64:LYS:HD2	28:DE:66:HIS:CD2	2.57	0.40
32:DK:133:HIS:C	32:DK:133:HIS:CD2	2.94	0.40
38:DQ:59:LYS:HD3	38:DQ:60:GLY:N	2.37	0.40
39:DR:86:ILE:HG12	39:DR:86:ILE:O	2.21	0.40
48:DW:25:VAL:HG13	48:DW:60:LEU:HB3	2.04	0.40

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

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:85:U:O2'	31:DH:100:GLY:O[3_555]	1.97	0.23
1:CA:86:U:O2'	25:DA:276:A:OP2[3_545]	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%)	44 (19%)	21 (9%)	1	4
2	CE	235/256 (92%)	161 (68%)	48 (20%)	26 (11%)	0	2
3	AF	203/239 (85%)	157 (77%)	36 (18%)	10 (5%)	2	15
3	CF	204/239 (85%)	151 (74%)	40 (20%)	13 (6%)	1	8
4	AG	206/208 (99%)	169 (82%)	29 (14%)	8 (4%)	3	20
4	CG	206/208 (99%)	167 (81%)	24 (12%)	15 (7%)	1	6
5	AH	149/162 (92%)	128 (86%)	16 (11%)	5 (3%)	4	24
5	CH	149/162 (92%)	129 (87%)	18 (12%)	2 (1%)	14	51
6	AI	99/101 (98%)	88 (89%)	8 (8%)	3 (3%)	5	27
6	CI	99/101 (98%)	92 (93%)	7 (7%)	0	100	100
7	AJ	153/156 (98%)	127 (83%)	21 (14%)	5 (3%)	4	25
7	CJ	153/156 (98%)	131 (86%)	16 (10%)	6 (4%)	3	20
8	AK	136/138 (99%)	113 (83%)	15 (11%)	8 (6%)	2	11
8	CK	136/138 (99%)	116 (85%)	17 (12%)	3 (2%)	8	36
9	AL	125/128 (98%)	90 (72%)	26 (21%)	9 (7%)	1	6
9	CL	125/128 (98%)	86 (69%)	30 (24%)	9 (7%)	1	6
10	AM	97/105 (92%)	77 (79%)	17 (18%)	3 (3%)	5	26
10	CM	97/105 (92%)	79 (81%)	13 (13%)	5 (5%)	2	14
11	AN	117/129 (91%)	101 (86%)	11 (9%)	5 (4%)	3	18
11	CN	117/129 (91%)	97 (83%)	16 (14%)	4 (3%)	4	24
12	AO	123/132 (93%)	104 (85%)	7 (6%)	12 (10%)	1	3
12	CO	123/132 (93%)	96 (78%)	21 (17%)	6 (5%)	2	15
13	AP	114/126 (90%)	76 (67%)	26 (23%)	12 (10%)	0	2
13	CP	115/126 (91%)	83 (72%)	18 (16%)	14 (12%)	0	1
14	AQ	56/61 (92%)	37 (66%)	7 (12%)	12 (21%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	CQ	56/61 (92%)	39 (70%)	9 (16%)	8 (14%)	0	1
15	AR	86/89 (97%)	68 (79%)	14 (16%)	4 (5%)	3	16
15	CR	86/89 (97%)	82 (95%)	2 (2%)	2 (2%)	7	35
16	AS	82/88 (93%)	64 (78%)	13 (16%)	5 (6%)	2	10
16	CS	82/88 (93%)	72 (88%)	10 (12%)	0	100	100
17	AT	98/105 (93%)	83 (85%)	9 (9%)	6 (6%)	2	10
17	CT	98/105 (93%)	85 (87%)	10 (10%)	3 (3%)	5	26
18	AU	70/88 (80%)	53 (76%)	13 (19%)	4 (6%)	2	12
18	CU	70/88 (80%)	60 (86%)	7 (10%)	3 (4%)	3	18
19	AV	76/93 (82%)	56 (74%)	12 (16%)	8 (10%)	0	2
19	CV	76/93 (82%)	53 (70%)	16 (21%)	7 (9%)	1	4
20	AW	97/106 (92%)	75 (77%)	14 (14%)	8 (8%)	1	5
20	CW	97/106 (92%)	72 (74%)	16 (16%)	9 (9%)	1	4
21	AX	23/27 (85%)	19 (83%)	2 (9%)	2 (9%)	1	4
21	CX	23/27 (85%)	18 (78%)	2 (9%)	3 (13%)	0	1
27	BD	270/276 (98%)	227 (84%)	30 (11%)	13 (5%)	2	16
27	DD	270/276 (98%)	226 (84%)	32 (12%)	12 (4%)	3	17
28	BE	203/206 (98%)	146 (72%)	34 (17%)	23 (11%)	0	2
28	DE	203/206 (98%)	134 (66%)	40 (20%)	29 (14%)	0	1
29	BF	200/210 (95%)	177 (88%)	14 (7%)	9 (4%)	3	17
29	DF	206/210 (98%)	153 (74%)	30 (15%)	23 (11%)	0	2
30	BG	179/182 (98%)	139 (78%)	27 (15%)	13 (7%)	1	6
30	DG	179/182 (98%)	140 (78%)	28 (16%)	11 (6%)	2	10
31	BH	168/180 (93%)	113 (67%)	20 (12%)	35 (21%)	0	0
31	DH	168/180 (93%)	108 (64%)	36 (21%)	24 (14%)	0	1
32	BK	144/148 (97%)	90 (62%)	39 (27%)	15 (10%)	0	3
32	DK	144/148 (97%)	98 (68%)	36 (25%)	10 (7%)	1	7
33	BM	136/140 (97%)	107 (79%)	21 (15%)	8 (6%)	2	11
33	DM	136/140 (97%)	106 (78%)	16 (12%)	14 (10%)	0	3
34	BN	120/122 (98%)	114 (95%)	4 (3%)	2 (2%)	11	44
34	DN	120/122 (98%)	106 (88%)	10 (8%)	4 (3%)	4	25

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
35	BO	148/150 (99%)	99 (67%)	29 (20%)	20 (14%)	0	1
35	DO	148/150 (99%)	92 (62%)	25 (17%)	31 (21%)	0	0
36	BP	139/141 (99%)	102 (73%)	19 (14%)	18 (13%)	0	1
36	DP	139/141 (99%)	92 (66%)	31 (22%)	16 (12%)	0	2
37	B0	116/118 (98%)	97 (84%)	11 (10%)	8 (7%)	1	7
37	D0	115/118 (98%)	95 (83%)	15 (13%)	5 (4%)	3	18
38	BQ	109/112 (97%)	85 (78%)	17 (16%)	7 (6%)	1	8
38	DQ	109/112 (97%)	73 (67%)	26 (24%)	10 (9%)	1	4
39	BR	135/146 (92%)	105 (78%)	21 (16%)	9 (7%)	1	7
39	DR	135/146 (92%)	108 (80%)	18 (13%)	9 (7%)	1	7
40	B1	115/118 (98%)	102 (89%)	8 (7%)	5 (4%)	3	18
40	D1	115/118 (98%)	91 (79%)	18 (16%)	6 (5%)	2	14
41	B2	99/101 (98%)	81 (82%)	12 (12%)	6 (6%)	2	10
41	D2	99/101 (98%)	68 (69%)	17 (17%)	14 (14%)	0	1
42	BS	111/113 (98%)	92 (83%)	13 (12%)	6 (5%)	2	13
42	DS	111/113 (98%)	92 (83%)	15 (14%)	4 (4%)	4	22
43	BT	90/96 (94%)	81 (90%)	5 (6%)	4 (4%)	3	17
43	DT	90/96 (94%)	72 (80%)	13 (14%)	5 (6%)	2	12
44	BU	100/110 (91%)	65 (65%)	21 (21%)	14 (14%)	0	1
44	DU	100/110 (91%)	62 (62%)	19 (19%)	19 (19%)	0	0
45	BV	173/206 (84%)	112 (65%)	32 (18%)	29 (17%)	0	1
45	DV	177/206 (86%)	109 (62%)	39 (22%)	29 (16%)	0	1
46	B3	74/85 (87%)	65 (88%)	6 (8%)	3 (4%)	3	19
46	D3	75/85 (88%)	64 (85%)	8 (11%)	3 (4%)	3	20
47	BZ	95/98 (97%)	79 (83%)	12 (13%)	4 (4%)	3	18
47	DZ	95/98 (97%)	76 (80%)	11 (12%)	8 (8%)	1	4
48	BW	64/72 (89%)	53 (83%)	6 (9%)	5 (8%)	1	5
48	DW	64/72 (89%)	54 (84%)	6 (9%)	4 (6%)	1	9
49	BX	57/60 (95%)	51 (90%)	5 (9%)	1 (2%)	10	43
49	DX	57/60 (95%)	49 (86%)	5 (9%)	3 (5%)	2	13
50	B4	64/71 (90%)	36 (56%)	12 (19%)	16 (25%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
50	D4	61/71 (86%)	22 (36%)	22 (36%)	17 (28%)	0	0
51	B5	57/60 (95%)	44 (77%)	6 (10%)	7 (12%)	0	1
51	D5	57/60 (95%)	46 (81%)	8 (14%)	3 (5%)	2	13
52	B6	43/54 (80%)	24 (56%)	12 (28%)	7 (16%)	0	1
52	D6	43/54 (80%)	26 (60%)	8 (19%)	9 (21%)	0	0
53	B7	43/49 (88%)	42 (98%)	1 (2%)	0	100	100
53	D7	43/49 (88%)	42 (98%)	1 (2%)	0	100	100
54	B8	58/65 (89%)	42 (72%)	8 (14%)	8 (14%)	0	1
54	D8	58/65 (89%)	37 (64%)	13 (22%)	8 (14%)	0	1
All	All	11319/12052 (94%)	8735 (77%)	1671 (15%)	913 (8%)	1	5

All (913) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AE	195	ASP
2	AE	236	TYR
2	AE	237	ALA
3	AF	4	LYS
3	AF	12	LEU
4	AG	26	CYS
4	AG	151	LYS
4	AG	154	ASN
4	AG	155	LEU
4	AG	191	ARG
5	AH	153	LYS
6	AI	40	VAL
6	AI	42	GLU
6	AI	70	ASP
7	AJ	7	ALA
9	AL	40	LEU
9	AL	56	LEU
9	AL	111	ARG
10	AM	59	SER
11	AN	127	LYS
12	AO	43	LYS
12	AO	44	LYS
12	AO	46	ASN
12	AO	59	SER
12	AO	61	TYR

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Mol	Chain	Res	Type
12	AO	62	GLU
12	AO	112	LYS
13	AP	27	LYS
13	AP	67	GLU
13	AP	83	ASP
13	AP	95	GLY
14	AQ	24	CYS
14	AQ	29	ARG
14	AQ	52	GLN
14	AQ	60	SER
17	AT	99	SER
19	AV	67	VAL
20	AW	96	GLY
21	AX	3	LYS
27	BD	28	GLU
27	BD	122	ASP
27	BD	125	ILE
27	BD	271	ILE
28	BE	22	PRO
28	BE	54	GLN
28	BE	61	ARG
28	BE	68	ALA
28	BE	69	LYS
28	BE	71	GLY
28	BE	78	LEU
28	BE	88	GLY
28	BE	118	LYS
28	BE	132	HIS
29	BF	134	GLY
30	BG	36	LYS
30	BG	96	ARG
31	BH	3	ARG
31	BH	12	PRO
31	BH	17	VAL
31	BH	84	SER
31	BH	86	GLU
31	BH	98	LEU
31	BH	137	ASP
31	BH	138	LYS
31	BH	151	ILE
31	BH	153	LYS
31	BH	154	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	BH	155	SER
31	BH	159	GLU
31	BH	167	GLU
31	BH	169	VAL
32	BK	87	LYS
32	BK	105	HIS
32	BK	115	ALA
32	BK	117	GLU
32	BK	134	PRO
32	BK	145	VAL
33	BM	22	THR
33	BM	23	LEU
33	BM	58	ASP
33	BM	131	GLN
35	BO	6	LEU
35	BO	16	ARG
35	BO	27	HIS
35	BO	42	SER
35	BO	47	ASP
35	BO	65	ARG
35	BO	67	MET
35	BO	141	ALA
35	BO	148	LEU
36	BP	2	LEU
36	BP	25	ASP
36	BP	26	TYR
36	BP	27	VAL
36	BP	89	ASN
36	BP	134	ARG
36	BP	139	GLU
37	B0	2	ARG
37	B0	4	LEU
37	B0	107	ASP
38	BQ	4	LEU
38	BQ	88	ASP
39	BR	58	ASN
39	BR	106	SER
40	B1	90	VAL
40	B1	91	ASP
40	B1	93	LYS
41	B2	36	PRO
41	B2	45	THR

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Mol	Chain	Res	Type
41	B2	48	GLY
41	B2	49	THR
42	BS	66	GLU
42	BS	111	HIS
43	BT	19	ALA
44	BU	6	HIS
44	BU	11	ASP
44	BU	42	VAL
44	BU	50	ARG
44	BU	57	GLN
44	BU	77	PRO
44	BU	78	ALA
45	BV	6	LYS
45	BV	51	ALA
45	BV	53	ILE
45	BV	118	GLN
45	BV	135	GLU
45	BV	161	VAL
45	BV	165	VAL
47	BZ	92	LYS
48	BW	16	LEU
48	BW	43	GLN
48	BW	47	ASN
48	BW	48	HIS
50	B4	28	LYS
50	B4	40	HIS
50	B4	41	PRO
50	B4	42	PHE
50	B4	43	TYR
50	B4	44	THR
50	B4	46	GLN
50	B4	53	GLU
51	B5	3	LYS
51	B5	4	HIS
51	B5	55	ARG
52	B6	33	LYS
52	B6	46	HIS
54	B8	31	HIS
54	B8	35	GLN
54	B8	36	LYS
54	B8	52	LYS
2	CE	7	VAL

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Mol	Chain	Res	Type
2	CE	74	LYS
2	CE	75	LYS
2	CE	154	LEU
2	CE	191	ASP
2	CE	238	LEU
3	CF	15	THR
3	CF	47	LEU
4	CG	14	ARG
4	CG	26	CYS
4	CG	149	ALA
4	CG	150	GLU
4	CG	151	LYS
7	CJ	33	ASP
8	CK	103	VAL
9	CL	111	ARG
9	CL	118	LYS
11	CN	100	ALA
11	CN	101	SER
12	CO	23	ALA
12	CO	44	LYS
12	CO	93	VAL
13	CP	4	ILE
13	CP	7	VAL
13	CP	84	ILE
13	CP	95	GLY
13	CP	117	VAL
14	CQ	24	CYS
14	CQ	25	VAL
14	CQ	26	ARG
14	CQ	30	ALA
18	CU	59	SER
19	CV	9	VAL
19	CV	11	VAL
20	CW	95	ALA
21	CX	3	LYS
27	DD	26	LYS
27	DD	237	GLU
27	DD	268	ARG
27	DD	271	ILE
28	DE	9	VAL
28	DE	25	VAL
28	DE	37	ARG

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Mol	Chain	Res	Type
28	DE	59	VAL
28	DE	61	ARG
28	DE	78	LEU
28	DE	88	GLY
29	DF	3	GLU
29	DF	17	ARG
29	DF	21	ALA
29	DF	22	ALA
29	DF	23	ASP
29	DF	25	PRO
29	DF	28	ILE
29	DF	62	ARG
29	DF	146	ALA
29	DF	206	ILE
30	DG	14	GLU
30	DG	84	LYS
31	DH	3	ARG
31	DH	8	PRO
31	DH	92	ILE
31	DH	167	GLU
31	DH	168	PRO
32	DK	78	THR
32	DK	107	VAL
32	DK	111	PRO
32	DK	113	ARG
32	DK	117	GLU
32	DK	144	VAL
33	DM	23	LEU
33	DM	131	GLN
34	DN	5	GLN
35	DO	6	LEU
35	DO	10	PRO
35	DO	16	ARG
35	DO	49	ARG
35	DO	51	PHE
35	DO	57	THR
35	DO	58	THR
35	DO	64	LYS
35	DO	65	ARG
35	DO	71	VAL
35	DO	72	PRO
35	DO	98	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
35	DO	105	LEU
35	DO	141	ALA
35	DO	147	LEU
36	DP	25	ASP
36	DP	79	LEU
36	DP	89	ASN
36	DP	134	ARG
36	DP	136	ALA
37	D0	3	HIS
37	D0	82	GLU
37	D0	93	GLY
38	DQ	87	PHE
38	DQ	88	ASP
38	DQ	89	ARG
38	DQ	110	LEU
39	DR	84	GLN
39	DR	86	ILE
39	DR	107	ASP
40	D1	90	VAL
40	D1	91	ASP
40	D1	98	LEU
41	D2	71	LEU
41	D2	72	VAL
41	D2	79	VAL
41	D2	80	GLN
41	D2	84	LYS
41	D2	85	LYS
41	D2	99	ILE
42	DS	93	ALA
43	DT	68	ARG
44	DU	3	VAL
44	DU	17	SER
44	DU	47	LYS
44	DU	63	LYS
44	DU	77	PRO
44	DU	90	LEU
45	DV	6	LYS
45	DV	31	ARG
45	DV	53	ILE
45	DV	105	VAL
45	DV	148	ASP
45	DV	159	PRO

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Mol	Chain	Res	Type
45	DV	161	VAL
47	DZ	79	GLY
47	DZ	93	GLU
48	DW	16	LEU
48	DW	48	HIS
50	D4	5	ILE
50	D4	35	VAL
50	D4	52	THR
51	D5	4	HIS
52	D6	15	GLU
52	D6	44	ARG
54	D8	30	ARG
54	D8	32	LEU
54	D8	48	PHE
54	D8	49	VAL
54	D8	51	ALA
2	AE	13	ALA
2	AE	22	LYS
2	AE	26	PRO
2	AE	96	ARG
2	AE	194	PRO
2	AE	239	VAL
3	AF	66	VAL
4	AG	30	LYS
4	AG	89	THR
4	AG	164	ALA
8	AK	2	LEU
8	AK	87	SER
9	AL	44	VAL
9	AL	54	ASP
11	AN	82	VAL
12	AO	45	PRO
12	AO	60	GLY
12	AO	88	LYS
13	AP	4	ILE
13	AP	6	GLY
13	AP	106	ASN
14	AQ	14	PRO
14	AQ	16	PHE
14	AQ	25	VAL
14	AQ	30	ALA
14	AQ	41	ARG

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Mol	Chain	Res	Type
16	AS	48	TRP
16	AS	83	GLU
17	AT	49	GLU
17	AT	78	GLU
18	AU	27	GLY
18	AU	41	LYS
19	AV	41	VAL
20	AW	49	ALA
20	AW	95	ALA
20	AW	99	LEU
20	AW	100	ILE
20	AW	102	GLY
27	BD	33	LEU
27	BD	123	ALA
27	BD	237	GLU
28	BE	2	LYS
28	BE	50	GLY
28	BE	72	VAL
28	BE	187	ALA
29	BF	24	LEU
29	BF	67	GLN
29	BF	73	ALA
29	BF	128	ALA
30	BG	14	GLU
30	BG	24	GLY
30	BG	84	LYS
31	BH	5	GLY
31	BH	10	PRO
31	BH	55	PRO
31	BH	59	ARG
31	BH	81	GLU
31	BH	85	LYS
31	BH	87	LEU
31	BH	152	ARG
31	BH	168	PRO
32	BK	11	ASN
32	BK	13	GLY
32	BK	116	LEU
34	BN	5	GLN
35	BO	10	PRO
35	BO	12	ALA
35	BO	95	VAL

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Mol	Chain	Res	Type
35	BO	106	LEU
35	BO	116	GLY
36	BP	6	ARG
36	BP	59	ARG
36	BP	60	ARG
36	BP	78	PRO
36	BP	80	GLU
36	BP	88	GLY
37	B0	3	HIS
37	B0	29	LEU
37	B0	45	ARG
37	B0	86	ARG
38	BQ	61	ASN
38	BQ	96	GLY
39	BR	2	ASN
39	BR	37	GLY
43	BT	40	LYS
43	BT	67	GLY
45	BV	13	GLU
45	BV	63	ASP
45	BV	81	ARG
45	BV	171	ILE
46	B3	83	PRO
46	B3	84	LEU
47	BZ	79	GLY
47	BZ	91	LYS
50	B4	14	ILE
50	B4	34	GLU
50	B4	39	CYS
51	B5	21	SER
51	B5	45	VAL
52	B6	44	ARG
54	B8	37	SER
54	B8	51	ALA
2	CE	6	THR
2	CE	8	LYS
2	CE	20	GLU
2	CE	21	ARG
2	CE	36	ARG
2	CE	39	ILE
2	CE	77	ALA
2	CE	96	ARG

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Mol	Chain	Res	Type
2	CE	190	THR
3	CF	26	LYS
3	CF	80	GLY
3	CF	100	ALA
3	CF	101	LEU
4	CG	9	CYS
4	CG	10	ARG
4	CG	17	VAL
4	CG	27	TYR
4	CG	35	ARG
5	CH	59	GLY
7	CJ	7	ALA
7	CJ	86	GLN
9	CL	44	VAL
9	CL	109	VAL
9	CL	119	ALA
9	CL	120	ARG
10	CM	17	ASP
10	CM	59	SER
12	CO	58	THR
12	CO	60	GLY
13	CP	3	ARG
13	CP	5	ALA
13	CP	12	ASN
13	CP	85	GLY
14	CQ	15	LYS
14	CQ	23	ARG
14	CQ	28	GLY
17	CT	49	GLU
20	CW	70	SER
20	CW	72	LEU
21	CX	25	LYS
27	DD	33	LEU
27	DD	272	ALA
28	DE	2	LYS
28	DE	51	PHE
28	DE	57	LYS
28	DE	71	GLY
28	DE	77	ILE
28	DE	117	MET
28	DE	132	HIS
28	DE	187	ALA

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Mol	Chain	Res	Type
28	DE	204	ALA
29	DF	11	VAL
29	DF	24	LEU
29	DF	27	GLU
29	DF	61	GLY
29	DF	129	PHE
29	DF	133	ASN
30	DG	5	VAL
30	DG	96	ARG
31	DH	6	ARG
31	DH	59	ARG
31	DH	118	PRO
31	DH	160	LYS
31	DH	169	VAL
32	DK	71	ILE
32	DK	145	VAL
33	DM	56	ASN
33	DM	66	LYS
34	DN	48	PRO
35	DO	56	SER
35	DO	66	GLY
35	DO	67	MET
35	DO	106	LEU
36	DP	4	PRO
36	DP	27	VAL
36	DP	60	ARG
36	DP	88	GLY
36	DP	110	THR
36	DP	135	ASP
37	D0	42	LYS
38	DQ	57	LYS
38	DQ	108	GLY
38	DQ	111	GLU
39	DR	2	ASN
39	DR	106	SER
40	D1	93	LYS
40	D1	100	VAL
41	D2	38	LEU
41	D2	44	LYS
42	DS	63	ASP
42	DS	92	ARG
44	DU	19	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
44	DU	43	ASN
44	DU	53	PRO
44	DU	78	ALA
44	DU	85	VAL
44	DU	99	CYS
44	DU	102	CYS
45	DV	60	GLU
45	DV	63	ASP
45	DV	65	GLN
45	DV	108	PRO
45	DV	114	GLY
45	DV	141	VAL
45	DV	145	GLU
45	DV	158	PRO
45	DV	171	ILE
46	D3	15	ASP
47	DZ	28	GLY
47	DZ	55	GLY
47	DZ	84	GLY
48	DW	41	ILE
50	D4	10	VAL
50	D4	22	ILE
50	D4	31	ILE
50	D4	33	VAL
51	D5	57	VAL
52	D6	24	GLU
52	D6	35	GLU
52	D6	42	TRP
54	D8	34	TRP
2	AE	23	ARG
2	AE	150	SER
3	AF	127	ARG
5	AH	70	PRO
5	AH	115	VAL
7	AJ	58	PRO
7	AJ	81	GLY
7	AJ	148	ASN
9	AL	105	ASP
10	AM	86	MET
11	AN	87	THR
12	AO	16	ARG
13	AP	12	ASN

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Mol	Chain	Res	Type
13	AP	13	LYS
13	AP	68	GLY
14	AQ	36	PHE
15	AR	23	GLY
16	AS	44	THR
16	AS	76	GLN
16	AS	77	ALA
18	AU	87	ARG
19	AV	14	HIS
19	AV	30	LEU
20	AW	98	PRO
27	BD	3	VAL
28	BE	56	PRO
28	BE	62	PRO
28	BE	90	THR
29	BF	130	ALA
30	BG	5	VAL
30	BG	79	ASN
30	BG	110	ALA
30	BG	146	TYR
30	BG	148	MET
31	BH	6	ARG
31	BH	27	LYS
31	BH	40	GLU
31	BH	41	MET
32	BK	104	GLN
32	BK	133	HIS
34	BN	97	ARG
35	BO	7	ARG
35	BO	25	SER
35	BO	62	LEU
35	BO	66	GLY
36	BP	66	ILE
36	BP	104	PHE
38	BQ	110	LEU
39	BR	39	ARG
39	BR	136	GLN
41	B2	44	LYS
41	B2	50	PRO
44	BU	5	MET
45	BV	151	HIS
45	BV	159	PRO

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Mol	Chain	Res	Type
45	BV	168	GLU
46	B3	73	GLY
50	B4	58	ARG
51	B5	5	PRO
51	B5	47	PRO
54	B8	3	LYS
54	B8	34	TRP
2	CE	27	LYS
2	CE	37	ASN
2	CE	45	GLN
4	CG	25	ARG
4	CG	171	GLY
7	CJ	69	VAL
7	CJ	131	LYS
8	CK	2	LEU
8	CK	100	ILE
9	CL	55	ALA
10	CM	36	GLY
10	CM	79	ARG
12	CO	76	GLU
14	CQ	16	PHE
18	CU	31	LEU
18	CU	36	ASN
19	CV	66	MET
19	CV	79	THR
20	CW	10	LEU
21	CX	24	ARG
27	DD	46	GLN
28	DE	45	THR
28	DE	74	PRO
28	DE	75	VAL
29	DF	16	GLY
30	DG	110	ALA
31	DH	83	TYR
33	DM	18	ALA
33	DM	128	HIS
34	DN	29	ASN
35	DO	12	ALA
35	DO	136	GLU
36	DP	7	MET
37	D0	45	ARG
38	DQ	4	LEU

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Mol	Chain	Res	Type
38	DQ	86	ALA
39	DR	104	ASN
42	DS	58	ALA
43	DT	19	ALA
43	DT	46	ALA
44	DU	29	GLU
44	DU	50	ARG
44	DU	57	GLN
45	DV	59	LEU
45	DV	62	PRO
45	DV	93	ASP
45	DV	175	VAL
46	D3	55	ARG
46	D3	84	LEU
47	DZ	81	LYS
47	DZ	91	LYS
50	D4	20	ASN
50	D4	23	GLU
50	D4	29	PRO
50	D4	37	SER
50	D4	41	PRO
50	D4	42	PHE
50	D4	50	VAL
50	D4	51	ASP
50	D4	54	GLY
52	D6	45	LYS
52	D6	46	HIS
54	D8	50	LEU
54	D8	53	PRO
2	AE	117	GLU
2	AE	207	ALA
3	AF	181	ASN
11	AN	96	ARG
12	AO	13	GLU
13	AP	7	VAL
13	AP	21	TYR
14	AQ	5	ALA
15	AR	88	ARG
18	AU	20	ALA
19	AV	24	ALA
19	AV	28	LYS
20	AW	97	ALA

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Mol	Chain	Res	Type
27	BD	239	ARG
28	BE	55	ASN
28	BE	79	ARG
28	BE	82	ARG
29	BF	23	ASP
29	BF	129	PHE
29	BF	168	ARG
31	BH	56	SER
32	BK	118	LYS
33	BM	64	GLY
35	BO	117	GLU
36	BP	11	LYS
39	BR	86	ILE
42	BS	65	LEU
44	BU	53	PRO
44	BU	56	PRO
44	BU	90	LEU
45	BV	60	GLU
45	BV	61	LEU
45	BV	110	GLY
45	BV	112	ARG
45	BV	136	PHE
45	BV	152	ALA
49	BX	13	ILE
50	B4	23	GLU
52	B6	16	CYS
52	B6	21	TYR
2	CE	46	LYS
2	CE	216	SER
2	CE	217	ARG
3	CF	20	SER
3	CF	43	LEU
3	CF	146	ALA
4	CG	28	SER
4	CG	32	ALA
5	CH	70	PRO
11	CN	49	GLY
11	CN	64	ALA
13	CP	104	ARG
17	CT	99	SER
20	CW	74	LYS
20	CW	100	ILE

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Mol	Chain	Res	Type
27	DD	3	VAL
27	DD	156	ALA
28	DE	54	GLN
28	DE	69	LYS
28	DE	94	GLU
29	DF	10	PRO
30	DG	35	GLU
30	DG	109	VAL
31	DH	5	GLY
31	DH	41	MET
31	DH	126	PRO
31	DH	130	ARG
31	DH	138	LYS
32	DK	101	LEU
33	DM	2	LYS
33	DM	42	TRP
33	DM	125	GLY
33	DM	130	HIS
34	DN	89	ASN
35	DO	46	LYS
35	DO	47	ASP
35	DO	104	GLY
35	DO	107	LYS
38	DQ	74	ALA
39	DR	131	ALA
41	D2	36	PRO
41	D2	37	VAL
41	D2	45	THR
44	DU	55	TYR
45	DV	66	SER
45	DV	116	VAL
45	DV	162	GLU
47	DZ	96	LYS
49	DX	13	ILE
49	DX	51	ALA
50	D4	25	TYR
2	AE	83	MET
2	AE	85	ALA
2	AE	235	SER
3	AF	26	LYS
3	AF	51	GLY
3	AF	61	ALA

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Mol	Chain	Res	Type
3	AF	84	ILE
3	AF	144	SER
5	AH	12	LEU
5	AH	21	ALA
8	AK	50	ARG
8	AK	129	VAL
8	AK	133	LEU
10	AM	30	SER
11	AN	117	ASN
14	AQ	12	ARG
17	AT	34	LYS
17	AT	68	ARG
19	AV	9	VAL
21	AX	7	ARG
27	BD	35	LYS
27	BD	58	HIS
27	BD	127	VAL
28	BE	21	VAL
28	BE	52	LEU
28	BE	117	MET
30	BG	74	LYS
30	BG	97	ASP
31	BH	13	LYS
31	BH	83	TYR
31	BH	110	SER
33	BM	42	TRP
35	BO	35	HIS
36	BP	90	VAL
36	BP	105	GLU
37	B0	71	GLN
38	BQ	35	ILE
39	BR	94	ALA
40	B1	116	ALA
42	BS	63	ASP
42	BS	112	GLY
43	BT	91	ALA
44	BU	3	VAL
44	BU	58	GLY
45	BV	108	PRO
45	BV	124	ILE
45	BV	141	VAL
45	BV	170	THR

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Mol	Chain	Res	Type
50	B4	24	THR
50	B4	50	VAL
52	B6	22	ALA
2	CE	125	PRO
2	CE	130	ARG
3	CF	51	GLY
4	CG	153	ARG
7	CJ	17	VAL
9	CL	40	LEU
13	CP	21	TYR
19	CV	28	LYS
20	CW	71	THR
27	DD	35	LYS
27	DD	162	SER
28	DE	8	LYS
28	DE	55	ASN
28	DE	82	ARG
28	DE	131	ALA
29	DF	9	ILE
29	DF	132	VAL
30	DG	36	LYS
30	DG	117	PHE
30	DG	153	ARG
31	DH	153	LYS
35	DO	11	GLY
35	DO	35	HIS
35	DO	137	LYS
35	DO	139	LYS
36	DP	57	HIS
36	DP	90	VAL
39	DR	135	ALA
41	D2	49	THR
41	D2	87	HIS
43	DT	40	LYS
43	DT	51	VAL
44	DU	61	ILE
45	DV	61	LEU
45	DV	152	ALA
48	DW	47	ASN
49	DX	16	PRO
51	D5	49	CYS
52	D6	49	HIS

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Mol	Chain	Res	Type
8	AK	83	ILE
9	AL	88	TYR
9	AL	107	ARG
19	AV	8	GLY
30	BG	147	ASP
31	BH	57	ASP
33	BM	128	HIS
39	BR	12	SER
40	B1	88	ILE
42	BS	14	PRO
45	BV	134	PRO
45	BV	156	LYS
2	CE	26	PRO
2	CE	233	SER
3	CF	82	GLU
3	CF	107	GLN
9	CL	67	GLY
10	CM	93	GLY
13	CP	57	ARG
15	CR	86	GLY
15	CR	88	ARG
17	CT	33	GLY
19	CV	67	VAL
20	CW	101	GLY
28	DE	90	THR
29	DF	59	TYR
31	DH	26	VAL
31	DH	55	PRO
33	DM	127	ASP
35	DO	97	PRO
36	DP	19	GLY
36	DP	77	LYS
8	AK	86	ILE
32	BK	7	GLU
32	BK	71	ILE
33	BM	9	VAL
44	BU	98	VAL
45	BV	115	GLY
52	B6	48	VAL
13	CP	38	GLY
27	DD	127	VAL
33	DM	108	PRO

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Mol	Chain	Res	Type
2	AE	15	VAL
2	AE	18	GLY
2	AE	234	PRO
27	BD	34	VAL
50	B4	35	VAL
3	CF	14	ILE
13	CP	6	GLY
32	DK	119	PRO
33	DM	40	PRO
33	DM	134	ARG
35	DO	62	LEU
44	DU	31	LEU
45	DV	157	LEU
2	AE	5	ILE
7	AJ	80	VAL
15	AR	20	GLY
31	BH	7	LEU
31	BH	92	ILE
38	BQ	108	GLY
47	BZ	84	GLY
48	BW	17	SER
19	CV	42	PRO
20	CW	47	GLY
28	DE	52	LEU
29	DF	13	SER
29	DF	193	VAL
30	DG	24	GLY
31	DH	4	ILE
31	DH	12	PRO
31	DH	21	PRO
31	DH	136	ILE
45	DV	128	VAL
45	DV	165	VAL
2	AE	227	GLY
8	AK	51	VAL
9	AL	109	VAL
17	AT	77	VAL
32	BK	131	LYS
45	BV	158	PRO
28	DE	86	PRO
31	DH	7	LEU
39	DR	24	PRO

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Mol	Chain	Res	Type
40	D1	73	GLY
15	AR	19	PRO
45	BV	12	GLY
2	CE	65	GLY
52	D6	52	VAL
45	DV	176	PRO

### 5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AE	205/220 (93%)	165 (80%)	40 (20%)	1	8
2	CE	205/220 (93%)	180 (88%)	25 (12%)	6	24
3	AF	159/188 (85%)	141 (89%)	18 (11%)	7	27
3	CF	160/188 (85%)	143 (89%)	17 (11%)	8	30
4	AG	180/180 (100%)	160 (89%)	20 (11%)	7	28
4	CG	180/180 (100%)	160 (89%)	20 (11%)	7	28
5	AH	116/123 (94%)	97 (84%)	19 (16%)	2	13
5	CH	116/123 (94%)	102 (88%)	14 (12%)	6	24
6	AI	90/90 (100%)	80 (89%)	10 (11%)	7	28
6	CI	90/90 (100%)	81 (90%)	9 (10%)	9	33
7	AJ	126/127 (99%)	106 (84%)	20 (16%)	3	14
7	CJ	126/127 (99%)	105 (83%)	21 (17%)	2	13
8	AK	119/119 (100%)	106 (89%)	13 (11%)	7	29
8	CK	119/119 (100%)	111 (93%)	8 (7%)	19	54
9	AL	98/99 (99%)	86 (88%)	12 (12%)	6	24
9	CL	98/99 (99%)	81 (83%)	17 (17%)	2	12
10	AM	89/92 (97%)	79 (89%)	10 (11%)	7	28
10	CM	89/92 (97%)	78 (88%)	11 (12%)	5	23
11	AN	90/99 (91%)	79 (88%)	11 (12%)	6	24

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
11	CN	90/99 (91%)	85 (94%)	5 (6%)	25	62
12	AO	104/109 (95%)	95 (91%)	9 (9%)	12	41
12	CO	104/109 (95%)	94 (90%)	10 (10%)	10	36
13	AP	94/101 (93%)	87 (93%)	7 (7%)	16	49
13	CP	94/101 (93%)	83 (88%)	11 (12%)	6	25
14	AQ	48/50 (96%)	42 (88%)	6 (12%)	5	23
14	CQ	48/50 (96%)	44 (92%)	4 (8%)	13	44
15	AR	79/80 (99%)	73 (92%)	6 (8%)	15	48
15	CR	79/80 (99%)	67 (85%)	12 (15%)	3	16
16	AS	72/74 (97%)	68 (94%)	4 (6%)	25	62
16	CS	72/74 (97%)	64 (89%)	8 (11%)	7	28
17	AT	95/97 (98%)	85 (90%)	10 (10%)	8	30
17	CT	95/97 (98%)	92 (97%)	3 (3%)	44	79
18	AU	63/77 (82%)	57 (90%)	6 (10%)	10	36
18	CU	63/77 (82%)	51 (81%)	12 (19%)	2	9
19	AV	67/80 (84%)	55 (82%)	12 (18%)	2	11
19	CV	67/80 (84%)	58 (87%)	9 (13%)	4	20
20	AW	76/82 (93%)	68 (90%)	8 (10%)	8	30
20	CW	76/82 (93%)	66 (87%)	10 (13%)	5	20
21	AX	20/22 (91%)	20 (100%)	0	100	100
21	CX	20/22 (91%)	20 (100%)	0	100	100
27	BD	214/218 (98%)	178 (83%)	36 (17%)	2	12
27	DD	214/218 (98%)	181 (85%)	33 (15%)	3	15
28	BE	165/166 (99%)	135 (82%)	30 (18%)	2	10
28	DE	165/166 (99%)	139 (84%)	26 (16%)	3	14
29	BF	161/166 (97%)	141 (88%)	20 (12%)	5	23
29	DF	165/166 (99%)	140 (85%)	25 (15%)	3	16
30	BG	155/156 (99%)	135 (87%)	20 (13%)	5	22
30	DG	155/156 (99%)	139 (90%)	16 (10%)	8	31
31	BH	142/148 (96%)	122 (86%)	20 (14%)	4	18
31	DH	142/148 (96%)	124 (87%)	18 (13%)	5	22

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
32	BK	122/124 (98%)	101 (83%)	21 (17%)	2	12
32	DK	122/124 (98%)	106 (87%)	16 (13%)	5	21
33	BM	117/119 (98%)	98 (84%)	19 (16%)	3	14
33	DM	117/119 (98%)	97 (83%)	20 (17%)	2	12
34	BN	100/100 (100%)	92 (92%)	8 (8%)	14	45
34	DN	100/100 (100%)	87 (87%)	13 (13%)	5	21
35	BO	116/116 (100%)	84 (72%)	32 (28%)	0	2
35	DO	116/116 (100%)	80 (69%)	36 (31%)	0	1
36	BP	111/111 (100%)	94 (85%)	17 (15%)	3	15
36	DP	111/111 (100%)	89 (80%)	22 (20%)	1	8
37	B0	101/101 (100%)	85 (84%)	16 (16%)	3	14
37	D0	100/101 (99%)	82 (82%)	18 (18%)	2	10
38	BQ	87/88 (99%)	73 (84%)	14 (16%)	3	14
38	DQ	87/88 (99%)	79 (91%)	8 (9%)	11	38
39	BR	120/127 (94%)	99 (82%)	21 (18%)	2	11
39	DR	120/127 (94%)	102 (85%)	18 (15%)	3	16
40	B1	93/94 (99%)	85 (91%)	8 (9%)	12	42
40	D1	93/94 (99%)	82 (88%)	11 (12%)	6	25
41	B2	82/82 (100%)	70 (85%)	12 (15%)	3	17
41	D2	82/82 (100%)	69 (84%)	13 (16%)	3	14
42	BS	92/92 (100%)	79 (86%)	13 (14%)	4	18
42	DS	92/92 (100%)	76 (83%)	16 (17%)	2	11
43	BT	74/78 (95%)	65 (88%)	9 (12%)	6	24
43	DT	74/78 (95%)	63 (85%)	11 (15%)	3	16
44	BU	85/91 (93%)	72 (85%)	13 (15%)	3	15
44	DU	85/91 (93%)	67 (79%)	18 (21%)	1	6
45	BV	154/179 (86%)	126 (82%)	28 (18%)	2	10
45	DV	158/179 (88%)	138 (87%)	20 (13%)	5	22
46	B3	61/67 (91%)	57 (93%)	4 (7%)	19	55
46	D3	62/67 (92%)	55 (89%)	7 (11%)	7	27
47	BZ	82/83 (99%)	69 (84%)	13 (16%)	3	14

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
47	DZ	82/83 (99%)	68 (83%)	14 (17%)	2	12
48	BW	62/67 (92%)	51 (82%)	11 (18%)	2	11
48	DW	62/67 (92%)	51 (82%)	11 (18%)	2	11
49	BX	51/52 (98%)	46 (90%)	5 (10%)	9	34
49	DX	51/52 (98%)	48 (94%)	3 (6%)	23	60
50	B4	59/63 (94%)	49 (83%)	10 (17%)	2	12
50	D4	57/63 (90%)	46 (81%)	11 (19%)	1	9
51	B5	51/52 (98%)	42 (82%)	9 (18%)	2	11
51	D5	51/52 (98%)	41 (80%)	10 (20%)	1	8
52	B6	44/52 (85%)	34 (77%)	10 (23%)	1	5
52	D6	44/52 (85%)	40 (91%)	4 (9%)	11	39
53	B7	38/42 (90%)	33 (87%)	5 (13%)	5	20
53	D7	38/42 (90%)	33 (87%)	5 (13%)	5	20
54	B8	50/55 (91%)	37 (74%)	13 (26%)	0	3
54	D8	50/55 (91%)	41 (82%)	9 (18%)	2	10
All	All	9565/9996 (96%)	8229 (86%)	1336 (14%)	4	18

All (1336) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AE	7	VAL
2	AE	8	LYS
2	AE	9	GLU
2	AE	16	HIS
2	AE	17	PHE
2	AE	24	TRP
2	AE	37	ASN
2	AE	45	GLN
2	AE	55	PHE
2	AE	69	LEU
2	AE	71	VAL
2	AE	74	LYS
2	AE	75	LYS
2	AE	76	GLN
2	AE	79	ASP
2	AE	87	ARG
2	AE	94	ASN

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Mol	Chain	Res	Type
2	AE	96	ARG
2	AE	107	THR
2	AE	108	ILE
2	AE	111	ARG
2	AE	122	PHE
2	AE	145	LEU
2	AE	154	LEU
2	AE	156	LYS
2	AE	158	LEU
2	AE	162	ILE
2	AE	178	ARG
2	AE	187	LEU
2	AE	189	ASP
2	AE	195	ASP
2	AE	197	VAL
2	AE	200	ILE
2	AE	204	ASN
2	AE	206	ASP
2	AE	212	GLN
2	AE	213	LEU
2	AE	215	LEU
2	AE	216	SER
2	AE	226	ARG
3	AF	5	ILE
3	AF	14	ILE
3	AF	15	THR
3	AF	16	ARG
3	AF	17	ASP
3	AF	21	ARG
3	AF	29	TYR
3	AF	34	LEU
3	AF	52	LEU
3	AF	54	ARG
3	AF	58	GLU
3	AF	79	ARG
3	AF	94	LEU
3	AF	107	GLN
3	AF	128	PHE
3	AF	161	GLU
3	AF	162	GLN
3	AF	191	THR
4	AG	3	ARG

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Mol	Chain	Res	Type
4	AG	5	ILE
4	AG	10	ARG
4	AG	12	CYS
4	AG	19	LEU
4	AG	26	CYS
4	AG	45	GLN
4	AG	58	LEU
4	AG	66	ARG
4	AG	86	LYS
4	AG	96	LEU
4	AG	122	ARG
4	AG	126	ILE
4	AG	131	ARG
4	AG	135	LEU
4	AG	138	TYR
4	AG	153	ARG
4	AG	154	ASN
4	AG	187	ARG
4	AG	201	GLN
5	AH	5	ASP
5	AH	12	LEU
5	AH	20	GLN
5	AH	25	ARG
5	AH	26	PHE
5	AH	31	LEU
5	AH	37	ARG
5	AH	41	VAL
5	AH	47	LYS
5	AH	53	LEU
5	AH	71	LEU
5	AH	79	GLU
5	AH	81	GLU
5	AH	101	ILE
5	AH	116	THR
5	AH	121	LYS
5	AH	131	ILE
5	AH	147	ASP
5	AH	153	LYS
6	AI	16	GLN
6	AI	19	LEU
6	AI	21	LEU
6	AI	30	LEU

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Mol	Chain	Res	Type
6	AI	36	ARG
6	AI	47	ARG
6	AI	64	GLN
6	AI	65	VAL
6	AI	75	LEU
6	AI	83	ASP
7	AJ	6	ARG
7	AJ	8	GLU
7	AJ	21	VAL
7	AJ	36	LYS
7	AJ	45	ASP
7	AJ	54	THR
7	AJ	56	GLN
7	AJ	57	GLU
7	AJ	78	ARG
7	AJ	80	VAL
7	AJ	86	GLN
7	AJ	90	GLU
7	AJ	91	VAL
7	AJ	94	ARG
7	AJ	104	LEU
7	AJ	113	GLU
7	AJ	124	LEU
7	AJ	146	GLU
7	AJ	155	ARG
7	AJ	156	TRP
8	AK	3	THR
8	AK	10	LEU
8	AK	19	VAL
8	AK	26	VAL
8	AK	52	ASP
8	AK	63	LEU
8	AK	68	ARG
8	AK	75	ARG
8	AK	85	ARG
8	AK	102	ARG
8	AK	105	ARG
8	AK	112	LEU
8	AK	122	ARG
9	AL	2	GLU
9	AL	7	THR
9	AL	9	ARG

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Mol	Chain	Res	Type
9	AL	10	ARG
9	AL	20	ARG
9	AL	29	ASN
9	AL	42	ARG
9	AL	47	LEU
9	AL	65	VAL
9	AL	99	LEU
9	AL	114	TYR
9	AL	121	ARG
10	AM	13	HIS
10	AM	16	LEU
10	AM	17	ASP
10	AM	38	ILE
10	AM	49	VAL
10	AM	54	PHE
10	AM	60	ARG
10	AM	62	HIS
10	AM	70	ARG
10	AM	96	ILE
11	AN	48	ILE
11	AN	51	LYS
11	AN	81	ASP
11	AN	92	GLU
11	AN	93	GLN
11	AN	104	GLN
11	AN	106	LYS
11	AN	109	VAL
11	AN	114	VAL
11	AN	117	ASN
11	AN	127	LYS
12	AO	30	ARG
12	AO	41	THR
12	AO	44	LYS
12	AO	47	SER
12	AO	56	ARG
12	AO	59	SER
12	AO	82	ILE
12	AO	86	ARG
12	AO	93	VAL
13	AP	56	LEU
13	AP	64	TRP
13	AP	86	CYS

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Mol	Chain	Res	Type
13	AP	88	ARG
13	AP	101	GLN
13	AP	106	ASN
13	AP	108	ARG
14	AQ	23	ARG
14	AQ	27	CYS
14	AQ	33	VAL
14	AQ	46	GLU
14	AQ	52	GLN
14	AQ	53	LEU
15	AR	6	GLU
15	AR	17	ARG
15	AR	24	SER
15	AR	35	ARG
15	AR	39	LEU
15	AR	76	GLU
16	AS	20	VAL
16	AS	52	ASP
16	AS	53	VAL
16	AS	83	GLU
17	AT	9	VAL
17	AT	35	VAL
17	AT	38	ARG
17	AT	52	LYS
17	AT	60	ILE
17	AT	68	ARG
17	AT	89	LEU
17	AT	92	ARG
17	AT	96	GLU
17	AT	101	ARG
18	AU	23	LYS
18	AU	26	LEU
18	AU	31	LEU
18	AU	32	ARG
18	AU	44	LEU
18	AU	76	LEU
19	AV	7	LYS
19	AV	13	ASP
19	AV	27	GLU
19	AV	29	ARG
19	AV	30	LEU
19	AV	31	ILE

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Mol	Chain	Res	Type
19	AV	33	THR
19	AV	37	ARG
19	AV	43	GLU
19	AV	47	HIS
19	AV	65	ASN
19	AV	83	HIS
20	AW	9	ASN
20	AW	10	LEU
20	AW	26	ASN
20	AW	36	LEU
20	AW	54	LYS
20	AW	73	HIS
20	AW	75	ASN
20	AW	99	LEU
27	BD	10	THR
27	BD	17	THR
27	BD	25	THR
27	BD	28	GLU
27	BD	33	LEU
27	BD	35	LYS
27	BD	43	ARG
27	BD	44	ASN
27	BD	46	GLN
27	BD	61	LEU
27	BD	64	ILE
27	BD	65	ILE
27	BD	73	VAL
27	BD	94	LEU
27	BD	103	ARG
27	BD	105	ILE
27	BD	106	ILE
27	BD	112	GLN
27	BD	113	VAL
27	BD	116	GLN
27	BD	136	ILE
27	BD	141	VAL
27	BD	142	VAL
27	BD	164	GLN
27	BD	169	GLU
27	BD	192	THR
27	BD	211	ARG
27	BD	218	ARG

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Mol	Chain	Res	Type
27	BD	221	VAL
27	BD	229	VAL
27	BD	242	ARG
27	BD	257	LEU
27	BD	259	THR
27	BD	262	ARG
27	BD	268	ARG
27	BD	271	ILE
28	BE	2	LYS
28	BE	13	ARG
28	BE	14	ILE
28	BE	16	ARG
28	BE	25	VAL
28	BE	33	VAL
28	BE	41	LYS
28	BE	45	THR
28	BE	48	GLN
28	BE	54	GLN
28	BE	63	LEU
28	BE	66	HIS
28	BE	67	PHE
28	BE	91	VAL
28	BE	111	ARG
28	BE	113	PHE
28	BE	140	SER
28	BE	144	ARG
28	BE	146	THR
28	BE	154	LYS
28	BE	167	VAL
28	BE	171	GLU
28	BE	175	VAL
28	BE	179	GLU
28	BE	181	LEU
28	BE	188	VAL
28	BE	197	ILE
28	BE	200	GLU
28	BE	202	LYS
28	BE	203	LYS
29	BF	8	GLN
29	BF	33	LEU
29	BF	45	ARG
29	BF	46	ARG

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Mol	Chain	Res	Type
29	BF	50	SER
29	BF	57	VAL
29	BF	64	ILE
29	BF	65	TRP
29	BF	67	GLN
29	BF	70	THR
29	BF	106	ARG
29	BF	127	GLU
29	BF	145	GLU
29	BF	161	GLU
29	BF	170	LEU
29	BF	174	VAL
29	BF	181	LEU
29	BF	201	VAL
29	BF	203	GLN
29	BF	206	ILE
30	BG	3	LEU
30	BG	10	LYS
30	BG	21	ARG
30	BG	26	GLN
30	BG	28	VAL
30	BG	31	VAL
30	BG	33	ARG
30	BG	45	GLU
30	BG	48	GLU
30	BG	63	ILE
30	BG	67	LYS
30	BG	80	PHE
30	BG	82	LEU
30	BG	94	LEU
30	BG	101	ILE
30	BG	118	ARG
30	BG	121	ASN
30	BG	130	ASN
30	BG	133	LEU
30	BG	165	THR
31	BH	3	ARG
31	BH	4	ILE
31	BH	7	LEU
31	BH	11	VAL
31	BH	17	VAL
31	BH	24	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	BH	32	GLU
31	BH	57	ASP
31	BH	58	GLU
31	BH	71	LEU
31	BH	88	LEU
31	BH	89	ILE
31	BH	95	ARG
31	BH	104	GLU
31	BH	122	THR
31	BH	139	GLN
31	BH	149	ARG
31	BH	153	LYS
31	BH	158	HIS
31	BH	169	VAL
32	BK	9	LEU
32	BK	11	ASN
32	BK	14	ASP
32	BK	33	ARG
32	BK	35	LEU
32	BK	41	GLU
32	BK	44	LEU
32	BK	57	ARG
32	BK	64	GLU
32	BK	67	ARG
32	BK	71	ILE
32	BK	74	ASN
32	BK	77	LEU
32	BK	85	GLU
32	BK	92	VAL
32	BK	95	LYS
32	BK	99	GLU
32	BK	110	ASP
32	BK	135	GLU
32	BK	136	VAL
32	BK	139	GLN
33	BM	7	LYS
33	BM	15	LEU
33	BM	32	THR
33	BM	33	LEU
33	BM	34	LEU
33	BM	43	THR
33	BM	45	ASN

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Mol	Chain	Res	Type
33	BM	48	MET
33	BM	60	ILE
33	BM	67	LEU
33	BM	87	LEU
33	BM	96	GLU
33	BM	97	ARG
33	BM	99	LEU
33	BM	106	MET
33	BM	120	LEU
33	BM	131	GLN
33	BM	133	GLN
33	BM	134	ARG
34	BN	1	MET
34	BN	8	LEU
34	BN	20	MET
34	BN	22	ILE
34	BN	24	VAL
34	BN	66	LYS
34	BN	92	GLU
34	BN	94	ARG
35	BO	7	ARG
35	BO	14	LYS
35	BO	15	ARG
35	BO	16	ARG
35	BO	21	ARG
35	BO	27	HIS
35	BO	30	THR
35	BO	32	THR
35	BO	36	LYS
35	BO	41	ARG
35	BO	45	LEU
35	BO	46	LYS
35	BO	49	ARG
35	BO	58	THR
35	BO	59	LEU
35	BO	61	ARG
35	BO	62	LEU
35	BO	64	LYS
35	BO	67	MET
35	BO	68	GLN
35	BO	75	ILE
35	BO	76	LYS

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Mol	Chain	Res	Type
35	BO	88	LEU
35	BO	90	ARG
35	BO	100	LEU
35	BO	105	LEU
35	BO	106	LEU
35	BO	112	LEU
35	BO	135	LEU
35	BO	138	LEU
35	BO	144	GLU
35	BO	147	LEU
36	BP	1	MET
36	BP	3	MET
36	BP	5	ARG
36	BP	10	ARG
36	BP	18	LYS
36	BP	21	THR
36	BP	25	ASP
36	BP	26	TYR
36	BP	45	GLN
36	BP	58	PHE
36	BP	82	ARG
36	BP	83	MET
36	BP	87	LYS
36	BP	90	VAL
36	BP	106	VAL
36	BP	110	THR
36	BP	138	ASP
37	B0	1	MET
37	B0	9	LYS
37	B0	28	LEU
37	B0	29	LEU
37	B0	34	ILE
37	B0	36	THR
37	B0	44	LEU
37	B0	48	VAL
37	B0	65	LEU
37	B0	67	LEU
37	B0	79	LEU
37	B0	105	ARG
37	B0	107	ASP
37	B0	113	LEU
37	B0	117	VAL

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Mol	Chain	Res	Type
37	B0	118	GLU
38	BQ	15	ARG
38	BQ	20	ARG
38	BQ	24	LEU
38	BQ	29	PHE
38	BQ	36	TYR
38	BQ	42	ASP
38	BQ	43	GLU
38	BQ	58	LEU
38	BQ	80	LEU
38	BQ	83	LYS
38	BQ	89	ARG
38	BQ	101	LEU
38	BQ	106	ARG
38	BQ	111	GLU
39	BR	9	LEU
39	BR	11	GLU
39	BR	15	VAL
39	BR	17	THR
39	BR	27	THR
39	BR	30	VAL
39	BR	41	ARG
39	BR	53	ARG
39	BR	59	THR
39	BR	74	ARG
39	BR	78	LEU
39	BR	86	ILE
39	BR	87	ASP
39	BR	88	ILE
39	BR	99	LEU
39	BR	105	LEU
39	BR	108	ARG
39	BR	110	ILE
39	BR	111	ARG
39	BR	118	ARG
39	BR	128	GLU
40	B1	5	LYS
40	B1	8	VAL
40	B1	31	SER
40	B1	34	LYS
40	B1	66	ASN
40	B1	74	LEU

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Mol	Chain	Res	Type
40	B1	104	GLN
40	B1	108	GLU
41	B2	18	LEU
41	B2	19	LYS
41	B2	24	LYS
41	B2	32	THR
41	B2	35	LEU
41	B2	40	LEU
41	B2	45	THR
41	B2	52	VAL
41	B2	64	HIS
41	B2	70	ILE
41	B2	73	SER
41	B2	99	ILE
42	BS	1	MET
42	BS	11	ARG
42	BS	37	ARG
42	BS	51	LEU
42	BS	60	ASN
42	BS	65	LEU
42	BS	66	GLU
42	BS	69	LEU
42	BS	76	VAL
42	BS	88	ARG
42	BS	96	ILE
42	BS	100	THR
42	BS	107	LEU
43	BT	3	THR
43	BT	12	VAL
43	BT	41	ASN
43	BT	60	ARG
43	BT	70	LEU
43	BT	80	ILE
43	BT	81	VAL
43	BT	88	LYS
43	BT	92	LEU
44	BU	6	HIS
44	BU	14	LEU
44	BU	27	VAL
44	BU	33	LYS
44	BU	45	VAL
44	BU	57	GLN

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Mol	Chain	Res	Type
44	BU	61	ILE
44	BU	64	GLU
44	BU	67	LEU
44	BU	76	CYS
44	BU	89	PHE
44	BU	90	LEU
44	BU	97	ARG
45	BV	1	MET
45	BV	2	GLU
45	BV	4	ARG
45	BV	5	LEU
45	BV	16	SER
45	BV	19	ARG
45	BV	20	ARG
45	BV	30	ASN
45	BV	37	VAL
45	BV	41	LEU
45	BV	61	LEU
45	BV	71	VAL
45	BV	72	ARG
45	BV	73	GLN
45	BV	86	VAL
45	BV	87	ASP
45	BV	117	LEU
45	BV	119	GLU
45	BV	122	ARG
45	BV	123	ASP
45	BV	132	ASN
45	BV	135	GLU
45	BV	154	ASP
45	BV	161	VAL
45	BV	163	LEU
45	BV	169	GLU
45	BV	171	ILE
45	BV	175	VAL
46	B3	35	ASN
46	B3	36	ILE
46	B3	41	ARG
46	B3	46	LYS
47	BZ	19	GLN
47	BZ	25	LYS
47	BZ	26	ARG

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Mol	Chain	Res	Type
47	BZ	30	VAL
47	BZ	38	SER
47	BZ	41	ARG
47	BZ	46	LEU
47	BZ	62	VAL
47	BZ	65	SER
47	BZ	76	ARG
47	BZ	78	LYS
47	BZ	81	LYS
47	BZ	91	LYS
48	BW	5	GLU
48	BW	9	GLN
48	BW	15	LYS
48	BW	32	LEU
48	BW	34	GLU
48	BW	41	ILE
48	BW	48	HIS
48	BW	50	ILE
48	BW	51	ARG
48	BW	53	LEU
48	BW	62	THR
49	BX	30	ARG
49	BX	32	GLN
49	BX	38	GLU
49	BX	40	THR
49	BX	44	ARG
50	B4	6	HIS
50	B4	16	CYS
50	B4	18	CYS
50	B4	39	CYS
50	B4	42	PHE
50	B4	44	THR
50	B4	50	VAL
50	B4	55	ARG
50	B4	61	ARG
50	B4	63	TYR
51	B5	3	LYS
51	B5	4	HIS
51	B5	6	VAL
51	B5	11	THR
51	B5	16	ARG
51	B5	25	LEU

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Mol	Chain	Res	Type
51	B5	40	LYS
51	B5	52	TYR
51	B5	56	LYS
52	B6	10	LEU
52	B6	12	GLU
52	B6	17	LYS
52	B6	25	LYS
52	B6	27	LYS
52	B6	33	LYS
52	B6	36	LEU
52	B6	39	TYR
52	B6	42	TRP
52	B6	44	ARG
53	B7	1	MET
53	B7	8	ASN
53	B7	9	ARG
53	B7	14	LYS
53	B7	24	THR
54	B8	15	LYS
54	B8	29	LYS
54	B8	31	HIS
54	B8	33	ASN
54	B8	34	TRP
54	B8	35	GLN
54	B8	41	ILE
54	B8	44	LYS
54	B8	47	LYS
54	B8	52	LYS
54	B8	56	GLU
54	B8	58	ILE
54	B8	61	LEU
2	CE	5	ILE
2	CE	12	GLU
2	CE	19	HIS
2	CE	23	ARG
2	CE	24	TRP
2	CE	42	ILE
2	CE	44	LEU
2	CE	51	LEU
2	CE	67	THR
2	CE	90	MET
2	CE	92	TYR

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Mol	Chain	Res	Type
2	CE	96	ARG
2	CE	107	THR
2	CE	121	LEU
2	CE	137	ARG
2	CE	145	LEU
2	CE	153	ARG
2	CE	155	LEU
2	CE	170	GLU
2	CE	178	ARG
2	CE	185	ILE
2	CE	187	LEU
2	CE	196	LEU
2	CE	198	ASP
2	CE	204	ASN
3	CF	5	ILE
3	CF	6	HIS
3	CF	21	ARG
3	CF	23	TYR
3	CF	26	LYS
3	CF	29	TYR
3	CF	38	ARG
3	CF	43	LEU
3	CF	52	LEU
3	CF	54	ARG
3	CF	89	GLU
3	CF	131	ARG
3	CF	139	GLN
3	CF	140	ARG
3	CF	161	GLU
3	CF	166	GLU
3	CF	167	TRP
4	CG	5	ILE
4	CG	9	CYS
4	CG	10	ARG
4	CG	12	CYS
4	CG	13	ARG
4	CG	19	LEU
4	CG	24	GLU
4	CG	30	LYS
4	CG	36	ARG
4	CG	49	ARG
4	CG	58	LEU

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Mol	Chain	Res	Type
4	CG	112	VAL
4	CG	122	ARG
4	CG	127	THR
4	CG	135	LEU
4	CG	139	ARG
4	CG	151	LYS
4	CG	191	ARG
4	CG	199	ASN
4	CG	200	GLU
5	CH	12	LEU
5	CH	13	ILE
5	CH	41	VAL
5	CH	47	LYS
5	CH	53	LEU
5	CH	61	TYR
5	CH	72	GLN
5	CH	75	THR
5	CH	78	HIS
5	CH	79	GLU
5	CH	91	LEU
5	CH	101	ILE
5	CH	116	THR
5	CH	141	GLN
6	CI	3	ARG
6	CI	14	LEU
6	CI	16	GLN
6	CI	21	LEU
6	CI	24	GLU
6	CI	28	ARG
6	CI	45	LEU
6	CI	65	VAL
6	CI	74	ASP
7	CJ	4	ARG
7	CJ	6	ARG
7	CJ	8	GLU
7	CJ	23	VAL
7	CJ	32	ARG
7	CJ	54	THR
7	CJ	57	GLU
7	CJ	60	LYS
7	CJ	63	LYS
7	CJ	75	VAL

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Mol	Chain	Res	Type
7	CJ	78	ARG
7	CJ	84	ASN
7	CJ	87	VAL
7	CJ	89	MET
7	CJ	114	ARG
7	CJ	135	VAL
7	CJ	137	LYS
7	CJ	140	ASP
7	CJ	149	ARG
7	CJ	153	HIS
7	CJ	155	ARG
8	CK	1	MET
8	CK	24	THR
8	CK	25	ASP
8	CK	26	VAL
8	CK	91	ARG
8	CK	92	ARG
8	CK	109	ILE
8	CK	119	LEU
9	CL	4	TYR
9	CL	10	ARG
9	CL	23	ASN
9	CL	33	PHE
9	CL	34	ASN
9	CL	54	ASP
9	CL	58	HIS
9	CL	75	ASP
9	CL	79	LEU
9	CL	95	LYS
9	CL	97	LYS
9	CL	99	LEU
9	CL	104	ARG
9	CL	113	LYS
9	CL	114	TYR
9	CL	117	HIS
9	CL	128	ARG
10	CM	13	HIS
10	CM	17	ASP
10	CM	22	LYS
10	CM	38	ILE
10	CM	47	PHE
10	CM	62	HIS

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Mol	Chain	Res	Type
10	CM	70	ARG
10	CM	79	ARG
10	CM	80	LYS
10	CM	98	ILE
10	CM	100	THR
11	CN	54	ARG
11	CN	66	LEU
11	CN	93	GLN
11	CN	109	VAL
11	CN	114	VAL
12	CO	20	LYS
12	CO	29	PHE
12	CO	30	ARG
12	CO	34	CYS
12	CO	38	ARG
12	CO	39	THR
12	CO	51	LYS
12	CO	54	LYS
12	CO	61	TYR
12	CO	80	VAL
13	CP	7	VAL
13	CP	32	GLU
13	CP	46	LYS
13	CP	64	TRP
13	CP	66	LEU
13	CP	82	MET
13	CP	83	ASP
13	CP	92	HIS
13	CP	94	ARG
13	CP	101	GLN
13	CP	108	ARG
14	CQ	7	ILE
14	CQ	8	GLU
14	CQ	12	ARG
14	CQ	44	LEU
15	CR	3	ILE
15	CR	4	THR
15	CR	6	GLU
15	CR	26	GLU
15	CR	31	LEU
15	CR	38	ARG
15	CR	39	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	CR	51	HIS
15	CR	66	LEU
15	CR	82	ILE
15	CR	83	GLU
15	CR	88	ARG
16	CS	2	VAL
16	CS	5	ARG
16	CS	15	PRO
16	CS	16	HIS
16	CS	21	VAL
16	CS	43	LYS
16	CS	67	THR
16	CS	74	LEU
17	CT	25	ARG
17	CT	49	GLU
17	CT	60	ILE
18	CU	21	LYS
18	CU	23	LYS
18	CU	26	LEU
18	CU	29	PHE
18	CU	42	ARG
18	CU	44	LEU
18	CU	46	GLU
18	CU	54	ARG
18	CU	58	LEU
18	CU	82	THR
18	CU	86	VAL
18	CU	87	ARG
19	CV	7	LYS
19	CV	22	LEU
19	CV	23	ASN
19	CV	63	THR
19	CV	64	GLU
19	CV	66	MET
19	CV	78	ARG
19	CV	81	ARG
19	CV	83	HIS
20	CW	8	ARG
20	CW	9	ASN
20	CW	26	ASN
20	CW	27	LYS
20	CW	36	LEU

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Mol	Chain	Res	Type
20	CW	41	ILE
20	CW	73	HIS
20	CW	75	ASN
20	CW	87	LYS
20	CW	93	GLU
27	DD	18	VAL
27	DD	26	LYS
27	DD	27	THR
27	DD	31	LYS
27	DD	35	LYS
27	DD	43	ARG
27	DD	44	ASN
27	DD	46	GLN
27	DD	49	ILE
27	DD	61	LEU
27	DD	65	ILE
27	DD	73	VAL
27	DD	94	LEU
27	DD	103	ARG
27	DD	105	ILE
27	DD	111	LEU
27	DD	116	GLN
27	DD	138	VAL
27	DD	141	VAL
27	DD	147	LEU
27	DD	157	ARG
27	DD	166	GLN
27	DD	192	THR
27	DD	200	ASP
27	DD	211	ARG
27	DD	237	GLU
27	DD	242	ARG
27	DD	244	ARG
27	DD	255	LYS
27	DD	257	LEU
27	DD	266	SER
27	DD	268	ARG
27	DD	271	ILE
28	DE	12	THR
28	DE	33	VAL
28	DE	42	ASP
28	DE	54	GLN

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Mol	Chain	Res	Type
28	DE	60	ASN
28	DE	66	HIS
28	DE	67	PHE
28	DE	76	ARG
28	DE	78	LEU
28	DE	82	ARG
28	DE	90	THR
28	DE	91	VAL
28	DE	113	PHE
28	DE	116	VAL
28	DE	119	ARG
28	DE	128	SER
28	DE	144	ARG
28	DE	146	THR
28	DE	154	LYS
28	DE	169	ASN
28	DE	170	LEU
28	DE	181	LEU
28	DE	188	VAL
28	DE	197	ILE
28	DE	200	GLU
28	DE	203	LYS
29	DF	7	TYR
29	DF	17	ARG
29	DF	18	ARG
29	DF	20	LEU
29	DF	24	LEU
29	DF	33	LEU
29	DF	38	ARG
29	DF	53	THR
29	DF	67	GLN
29	DF	74	ARG
29	DF	82	ILE
29	DF	83	PHE
29	DF	88	VAL
29	DF	107	LYS
29	DF	110	LEU
29	DF	125	LEU
29	DF	140	LEU
29	DF	154	VAL
29	DF	158	THR
29	DF	165	ARG

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Mol	Chain	Res	Type
29	DF	181	LEU
29	DF	183	VAL
29	DF	196	LEU
29	DF	203	GLN
29	DF	205	ARG
30	DG	28	VAL
30	DG	33	ARG
30	DG	35	GLU
30	DG	43	LEU
30	DG	52	ILE
30	DG	53	LEU
30	DG	58	GLN
30	DG	67	LYS
30	DG	91	ARG
30	DG	94	LEU
30	DG	128	ARG
30	DG	137	GLU
30	DG	138	GLN
30	DG	162	THR
30	DG	167	GLU
30	DG	173	LEU
31	DH	6	ARG
31	DH	32	GLU
31	DH	41	MET
31	DH	42	ARG
31	DH	53	GLU
31	DH	83	TYR
31	DH	85	LYS
31	DH	89	ILE
31	DH	101	ARG
31	DH	103	LEU
31	DH	107	VAL
31	DH	116	GLU
31	DH	123	PHE
31	DH	124	GLU
31	DH	143	GLN
31	DH	147	ASN
31	DH	157	TYR
31	DH	158	HIS
32	DK	1	MET
32	DK	6	LEU
32	DK	9	LEU

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Mol	Chain	Res	Type
32	DK	11	ASN
32	DK	37	VAL
32	DK	52	ARG
32	DK	54	GLN
32	DK	56	LYS
32	DK	67	ARG
32	DK	75	LEU
32	DK	77	LEU
32	DK	102	SER
32	DK	104	GLN
32	DK	109	ILE
32	DK	110	ASP
32	DK	117	GLU
33	DM	1	MET
33	DM	29	LYS
33	DM	34	LEU
33	DM	38	HIS
33	DM	39	ARG
33	DM	41	ASP
33	DM	45	ASN
33	DM	48	MET
33	DM	59	LYS
33	DM	60	ILE
33	DM	69	GLN
33	DM	85	ILE
33	DM	87	LEU
33	DM	93	THR
33	DM	94	HIS
33	DM	96	GLU
33	DM	99	LEU
33	DM	130	HIS
33	DM	131	GLN
33	DM	134	ARG
34	DN	1	MET
34	DN	5	GLN
34	DN	10	VAL
34	DN	49	ARG
34	DN	53	LYS
34	DN	69	ILE
34	DN	78	ARG
34	DN	87	ILE
34	DN	94	ARG

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Mol	Chain	Res	Type
34	DN	98	VAL
34	DN	113	LYS
34	DN	115	VAL
34	DN	117	LEU
35	DO	6	LEU
35	DO	14	LYS
35	DO	15	ARG
35	DO	16	ARG
35	DO	21	ARG
35	DO	36	LYS
35	DO	41	ARG
35	DO	45	LEU
35	DO	46	LYS
35	DO	47	ASP
35	DO	49	ARG
35	DO	50	ARG
35	DO	55	ARG
35	DO	56	SER
35	DO	61	ARG
35	DO	62	LEU
35	DO	65	ARG
35	DO	67	MET
35	DO	68	GLN
35	DO	70	GLN
35	DO	71	VAL
35	DO	74	GLU
35	DO	85	LEU
35	DO	91	PHE
35	DO	102	ARG
35	DO	105	LEU
35	DO	106	LEU
35	DO	107	LYS
35	DO	111	ARG
35	DO	112	LEU
35	DO	114	ILE
35	DO	121	LYS
35	DO	138	LEU
35	DO	144	GLU
35	DO	147	LEU
35	DO	148	LEU
36	DP	14	ARG
36	DP	17	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	DP	18	LYS
36	DP	21	THR
36	DP	25	ASP
36	DP	26	TYR
36	DP	45	GLN
36	DP	56	ARG
36	DP	60	ARG
36	DP	76	LYS
36	DP	79	LEU
36	DP	80	GLU
36	DP	82	ARG
36	DP	83	MET
36	DP	87	LYS
36	DP	90	VAL
36	DP	103	MET
36	DP	106	VAL
36	DP	110	THR
36	DP	112	GLU
36	DP	133	ARG
36	DP	141	GLN
37	D0	3	HIS
37	D0	9	LYS
37	D0	16	HIS
37	D0	18	LEU
37	D0	28	LEU
37	D0	29	LEU
37	D0	42	LYS
37	D0	44	LEU
37	D0	57	ARG
37	D0	63	ARG
37	D0	65	LEU
37	D0	71	GLN
37	D0	75	LEU
37	D0	76	VAL
37	D0	79	LEU
37	D0	81	ASP
37	D0	91	GLN
37	D0	105	ARG
38	DQ	27	SER
38	DQ	29	PHE
38	DQ	80	LEU
38	DQ	93	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
38	DQ	101	LEU
38	DQ	106	ARG
38	DQ	107	GLU
38	DQ	110	LEU
39	DR	2	ASN
39	DR	6	LEU
39	DR	8	LYS
39	DR	9	LEU
39	DR	17	THR
39	DR	23	ARG
39	DR	27	THR
39	DR	29	ARG
39	DR	30	VAL
39	DR	50	ILE
39	DR	61	PHE
39	DR	64	ARG
39	DR	74	ARG
39	DR	88	ILE
39	DR	93	ARG
39	DR	96	ARG
39	DR	121	ILE
39	DR	136	GLN
40	D1	5	LYS
40	D1	25	TRP
40	D1	57	PHE
40	D1	64	ARG
40	D1	74	LEU
40	D1	80	ILE
40	D1	92	ARG
40	D1	95	LEU
40	D1	97	ASP
40	D1	98	LEU
40	D1	100	VAL
41	D2	19	LYS
41	D2	38	LEU
41	D2	40	LEU
41	D2	44	LYS
41	D2	66	ARG
41	D2	71	LEU
41	D2	76	LYS
41	D2	79	VAL
41	D2	80	GLN

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Mol	Chain	Res	Type
41	D2	81	TYR
41	D2	89	GLN
41	D2	91	TYR
41	D2	95	LEU
42	DS	11	ARG
42	DS	20	VAL
42	DS	37	ARG
42	DS	39	THR
42	DS	40	ASN
42	DS	51	LEU
42	DS	63	ASP
42	DS	65	LEU
42	DS	72	LYS
42	DS	88	ARG
42	DS	95	ILE
42	DS	96	ILE
42	DS	97	LYS
42	DS	100	THR
42	DS	107	LEU
42	DS	111	HIS
43	DT	12	VAL
43	DT	27	THR
43	DT	28	PHE
43	DT	48	LYS
43	DT	53	LYS
43	DT	55	ASN
43	DT	63	LYS
43	DT	66	LEU
43	DT	72	LYS
43	DT	78	LYS
43	DT	80	ILE
44	DU	2	ARG
44	DU	23	ARG
44	DU	29	GLU
44	DU	30	VAL
44	DU	43	ASN
44	DU	45	VAL
44	DU	55	TYR
44	DU	57	GLN
44	DU	62	GLU
44	DU	63	LYS
44	DU	64	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
44	DU	75	ILE
44	DU	76	CYS
44	DU	79	CYS
44	DU	95	LYS
44	DU	96	ILE
44	DU	97	ARG
44	DU	101	LYS
45	DV	5	LEU
45	DV	14	LYS
45	DV	24	LEU
45	DV	30	ASN
45	DV	32	HIS
45	DV	41	LEU
45	DV	56	VAL
45	DV	63	ASP
45	DV	74	VAL
45	DV	76	LEU
45	DV	82	ARG
45	DV	119	GLU
45	DV	120	ILE
45	DV	121	HIS
45	DV	123	ASP
45	DV	136	PHE
45	DV	140	ASP
45	DV	144	LEU
45	DV	154	ASP
45	DV	170	THR
46	D3	12	ASN
46	D3	17	GLN
46	D3	20	ARG
46	D3	31	VAL
46	D3	36	ILE
46	D3	67	VAL
46	D3	70	GLN
47	DZ	4	VAL
47	DZ	19	GLN
47	DZ	40	ARG
47	DZ	56	GLN
47	DZ	74	VAL
47	DZ	76	ARG
47	DZ	78	LYS
47	DZ	80	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
47	DZ	81	LYS
47	DZ	82	LEU
47	DZ	83	GLU
47	DZ	90	ILE
47	DZ	91	LYS
47	DZ	92	LYS
48	DW	9	GLN
48	DW	15	LYS
48	DW	19	VAL
48	DW	24	LEU
48	DW	25	VAL
48	DW	26	ARG
48	DW	47	ASN
48	DW	49	LYS
48	DW	60	LEU
48	DW	64	LEU
48	DW	68	ARG
49	DX	8	LEU
49	DX	18	ASP
49	DX	24	LYS
50	D4	1	MET
50	D4	18	CYS
50	D4	20	ASN
50	D4	21	VAL
50	D4	22	ILE
50	D4	24	THR
50	D4	30	GLU
50	D4	32	TYR
50	D4	46	GLN
50	D4	49	PHE
50	D4	60	GLN
51	D5	3	LYS
51	D5	4	HIS
51	D5	16	ARG
51	D5	25	LEU
51	D5	26	THR
51	D5	29	THR
51	D5	35	GLU
51	D5	48	GLU
51	D5	51	TYR
51	D5	58	LEU
52	D6	27	LYS

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Mol	Chain	Res	Type
52	D6	30	THR
52	D6	37	ARG
52	D6	53	LYS
53	D7	1	MET
53	D7	3	ARG
53	D7	4	THR
53	D7	8	ASN
53	D7	36	GLN
54	D8	14	VAL
54	D8	30	ARG
54	D8	32	LEU
54	D8	33	ASN
54	D8	34	TRP
54	D8	40	GLU
54	D8	41	ILE
54	D8	56	GLU
54	D8	61	LEU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (282) such sidechains are listed below:

Mol	Chain	Res	Type
2	AE	40	HIS
2	AE	45	GLN
2	AE	76	GLN
2	AE	78	GLN
2	AE	94	ASN
2	AE	204	ASN
3	AF	28	GLN
3	AF	31	HIS
3	AF	37	GLN
3	AF	107	GLN
3	AF	136	GLN
3	AF	162	GLN
3	AF	170	GLN
3	AF	181	ASN
4	AG	42	GLN
4	AG	43	HIS
4	AG	123	HIS
4	AG	160	GLN
4	AG	201	GLN
5	AH	20	GLN
5	AH	56	GLN

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Mol	Chain	Res	Type
5	AH	78	HIS
6	AI	18	GLN
6	AI	27	GLN
6	AI	57	GLN
6	AI	100	ASN
7	AJ	37	ASN
7	AJ	56	GLN
7	AJ	106	GLN
9	AL	23	ASN
9	AL	117	HIS
9	AL	124	GLN
10	AM	13	HIS
10	AM	33	GLN
10	AM	56	HIS
10	AM	62	HIS
10	AM	84	GLN
11	AN	26	ASN
11	AN	38	ASN
11	AN	93	GLN
12	AO	6	GLN
12	AO	46	ASN
12	AO	72	HIS
13	AP	62	ASN
13	AP	101	GLN
14	AQ	52	GLN
15	AR	37	ASN
15	AR	46	HIS
16	AS	76	GLN
16	AS	82	GLN
17	AT	16	GLN
17	AT	94	ASN
19	AV	23	ASN
19	AV	47	HIS
19	AV	65	ASN
20	AW	9	ASN
20	AW	26	ASN
27	BD	58	HIS
27	BD	96	HIS
27	BD	116	GLN
27	BD	143	HIS
27	BD	166	GLN
27	BD	186	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	BD	198	ASN
28	BE	48	GLN
28	BE	54	GLN
28	BE	192	ASN
29	BF	67	GLN
29	BF	69	HIS
29	BF	169	ASN
29	BF	203	GLN
30	BG	40	ASN
30	BG	41	GLN
30	BG	121	ASN
31	BH	143	GLN
31	BH	147	ASN
32	BK	11	ASN
32	BK	43	ASN
32	BK	54	GLN
32	BK	105	HIS
32	BK	139	GLN
33	BM	38	HIS
33	BM	45	ASN
33	BM	56	ASN
33	BM	131	GLN
33	BM	133	GLN
34	BN	82	ASN
35	BO	9	ASN
35	BO	68	GLN
35	BO	81	GLN
35	BO	84	ASN
35	BO	128	HIS
36	BP	12	GLN
37	B0	3	HIS
37	B0	13	HIS
37	B0	16	HIS
37	B0	24	GLN
37	B0	61	HIS
37	B0	71	GLN
38	BQ	68	GLN
39	BR	38	ASN
39	BR	43	GLN
39	BR	58	ASN
39	BR	136	GLN
40	B1	44	ASN

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Mol	Chain	Res	Type
40	B1	49	HIS
40	B1	71	GLN
40	B1	81	HIS
41	B2	11	GLN
41	B2	89	GLN
42	BS	34	ASN
42	BS	57	ASN
42	BS	62	HIS
42	BS	102	HIS
43	BT	31	HIS
43	BT	41	ASN
43	BT	55	ASN
43	BT	87	GLN
44	BU	57	GLN
45	BV	30	ASN
45	BV	32	HIS
45	BV	54	HIS
45	BV	75	ASN
45	BV	132	ASN
46	B3	35	ASN
46	B3	70	GLN
47	BZ	19	GLN
47	BZ	56	GLN
47	BZ	66	HIS
48	BW	9	GLN
48	BW	47	ASN
49	BX	19	GLN
49	BX	32	GLN
49	BX	46	ASN
49	BX	52	HIS
50	B4	20	ASN
50	B4	47	GLN
51	B5	4	HIS
51	B5	22	HIS
51	B5	43	HIS
52	B6	26	ASN
53	B7	8	ASN
53	B7	36	GLN
54	B8	31	HIS
2	CE	37	ASN
2	CE	45	GLN
2	CE	135	GLN

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Mol	Chain	Res	Type
3	CF	28	GLN
3	CF	69	HIS
3	CF	98	ASN
3	CF	123	GLN
3	CF	139	GLN
3	CF	162	GLN
4	CG	42	GLN
4	CG	62	GLN
4	CG	123	HIS
4	CG	199	ASN
5	CH	141	GLN
6	CI	16	GLN
6	CI	32	ASN
6	CI	57	GLN
6	CI	100	ASN
7	CJ	13	GLN
7	CJ	97	GLN
7	CJ	106	GLN
9	CL	3	GLN
9	CL	23	ASN
9	CL	89	ASN
9	CL	117	HIS
9	CL	124	GLN
10	CM	13	HIS
10	CM	21	GLN
10	CM	56	HIS
11	CN	26	ASN
11	CN	93	GLN
11	CN	117	ASN
12	CO	5	ASN
12	CO	46	ASN
12	CO	72	HIS
13	CP	62	ASN
13	CP	77	ASN
13	CP	92	HIS
13	CP	101	GLN
13	CP	106	ASN
15	CR	37	ASN
15	CR	46	HIS
16	CS	65	GLN
16	CS	82	GLN
19	CV	14	HIS

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Mol	Chain	Res	Type
20	CW	9	ASN
20	CW	26	ASN
20	CW	42	GLN
27	DD	44	ASN
27	DD	58	HIS
27	DD	96	HIS
27	DD	166	GLN
27	DD	186	HIS
27	DD	198	ASN
28	DE	48	GLN
28	DE	66	HIS
28	DE	143	ASN
28	DE	192	ASN
29	DF	40	GLN
29	DF	75	HIS
29	DF	169	ASN
29	DF	203	GLN
30	DG	40	ASN
30	DG	41	GLN
30	DG	79	ASN
30	DG	138	GLN
31	DH	74	ASN
32	DK	54	GLN
32	DK	104	GLN
32	DK	105	HIS
32	DK	133	HIS
33	DM	45	ASN
33	DM	94	HIS
33	DM	101	HIS
33	DM	131	GLN
34	DN	3	GLN
34	DN	82	ASN
34	DN	89	ASN
35	DO	38	GLN
35	DO	81	GLN
35	DO	84	ASN
35	DO	128	HIS
36	DP	12	GLN
36	DP	45	GLN
36	DP	123	HIS
36	DP	141	GLN
37	D0	3	HIS

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Mol	Chain	Res	Type
37	D0	11	ASN
37	D0	23	ASN
37	D0	24	GLN
37	D0	53	HIS
37	D0	61	HIS
38	DQ	68	GLN
38	DQ	84	GLN
39	DR	43	GLN
39	DR	58	ASN
39	DR	136	GLN
40	D1	49	HIS
40	D1	72	HIS
40	D1	81	HIS
40	D1	94	ASN
40	D1	117	GLN
41	D2	11	GLN
41	D2	80	GLN
41	D2	87	HIS
41	D2	89	GLN
42	DS	57	ASN
42	DS	61	ASN
42	DS	102	HIS
43	DT	31	HIS
43	DT	41	ASN
43	DT	55	ASN
44	DU	43	ASN
44	DU	57	GLN
45	DV	34	ASN
45	DV	65	GLN
45	DV	75	ASN
47	DZ	16	ASN
47	DZ	56	GLN
47	DZ	66	HIS
48	DW	9	GLN
48	DW	47	ASN
48	DW	56	GLN
48	DW	65	ASN
49	DX	19	GLN
49	DX	46	ASN
49	DX	52	HIS
50	D4	6	HIS
50	D4	20	ASN

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Mol	Chain	Res	Type
50	D4	40	HIS
50	D4	46	GLN
50	D4	47	GLN
51	D5	4	HIS
51	D5	43	HIS
52	D6	32	ASN
52	D6	46	HIS
53	D7	6	GLN
53	D7	8	ASN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1501/1506 (99%)	295 (19%)	43 (2%)
1	CA	1501/1506 (99%)	296 (19%)	49 (3%)
22	AB	83/85 (97%)	38 (45%)	8 (9%)
22	AD	83/85 (97%)	26 (31%)	5 (6%)
22	CB	83/85 (97%)	38 (45%)	9 (10%)
22	CD	83/85 (97%)	25 (30%)	4 (4%)
23	AC	76/77 (98%)	11 (14%)	1 (1%)
23	CC	76/77 (98%)	13 (17%)	3 (3%)
24	A1	15/16 (93%)	6 (40%)	2 (13%)
24	C1	15/16 (93%)	6 (40%)	3 (20%)
25	BA	2911/2912 (99%)	542 (18%)	51 (1%)
25	DA	2905/2912 (99%)	569 (19%)	53 (1%)
26	BB	121/122 (99%)	17 (14%)	0
26	DB	121/122 (99%)	27 (22%)	1 (0%)
All	All	9574/9606 (99%)	1909 (19%)	232 (2%)

All (1909) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	7	G
1	AA	8	A
1	AA	9	G
1	AA	13	U
1	AA	32	A
1	AA	39	G
1	AA	48	C
1	AA	49	U
1	AA	50	A

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Mol	Chain	Res	Type
1	AA	51	A
1	AA	61	G
1	AA	65	U
1	AA	66	G
1	AA	73	G
1	AA	77	C
1	AA	78	G
1	AA	80	G
1	AA	81	G
1	AA	84	U
1	AA	85	U
1	AA	86	U
1	AA	87	A
1	AA	89	U
1	AA	90	C
1	AA	91	C
1	AA	95	G
1	AA	99	C
1	AA	101	A
1	AA	108	G
1	AA	116	A
1	AA	120	A
1	AA	121	C
1	AA	131	C
1	AA	144	G
1	AA	161	A
1	AA	163	C
1	AA	171	A
1	AA	172	A
1	AA	173	U
1	AA	174	C
1	AA	182	U
1	AA	189	U
1	AA	190	G
1	AA	195	A
1	AA	197	A
1	AA	201	C
1	AA	208	U
1	AA	209	U
1	AA	210	U
1	AA	216	G
1	AA	217	C

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Mol	Chain	Res	Type
1	AA	222	U
1	AA	245	C
1	AA	247	G
1	AA	251	G
1	AA	262	A
1	AA	266	G
1	AA	267	C
1	AA	281	G
1	AA	289	G
1	AA	321	A
1	AA	328	C
1	AA	332	G
1	AA	344	A
1	AA	345	C
1	AA	346	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	367	U
1	AA	372	C
1	AA	384	G
1	AA	390	C
1	AA	397	A
1	AA	398	C
1	AA	406	G
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	419	C
1	AA	422	C
1	AA	423	G
1	AA	424	G
1	AA	429	U
1	AA	430	A
1	AA	439	A
1	AA	440	A
1	AA	465	A
1	AA	466	C
1	AA	467	G
1	AA	485	G
1	AA	496	A
1	AA	497	U

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Mol	Chain	Res	Type
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	518	C
1	AA	521	G
1	AA	527	G
1	AA	531	U
1	AA	533	A
1	AA	545	C
1	AA	547	A
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	564	C
1	AA	572	A
1	AA	573	A
1	AA	576	G
1	AA	577	G
1	AA	596	C
1	AA	618	C
1	AA	623	C
1	AA	630	G
1	AA	631	G
1	AA	632	A
1	AA	653	A
1	AA	662	G
1	AA	665	A
1	AA	687	A
1	AA	688	G
1	AA	701	C
1	AA	702	A
1	AA	704	A
1	AA	723	U
1	AA	749	C
1	AA	755	G
1	AA	774	G
1	AA	777	A
1	AA	791	G
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	813	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	AA	817	C
1	AA	820	U
1	AA	821	G
1	AA	827	U
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	872	A
1	AA	873	A
1	AA	874	G
1	AA	876	G
1	AA	902	G
1	AA	914	A
1	AA	916	G
1	AA	925	G
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	972	C
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	983	A
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	1004	A
1	AA	1006	C
1	AA	1008	C
1	AA	1009	G
1	AA	1017	G
1	AA	1021	G
1	AA	1024	G

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Mol	Chain	Res	Type
1	AA	1025	U
1	AA	1026	G
1	AA	1028	C
1	AA	1029	G
1	AA	1032(A)	G
1	AA	1033	G
1	AA	1036	G
1	AA	1040	U
1	AA	1042	G
1	AA	1053	G
1	AA	1054	C
1	AA	1055	A
1	AA	1056	U
1	AA	1066	C
1	AA	1081	G
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1117	G
1	AA	1124	G
1	AA	1125	U
1	AA	1126	U
1	AA	1127	G
1	AA	1129	C
1	AA	1130	A
1	AA	1131	G
1	AA	1133	G
1	AA	1134	G
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1146	A
1	AA	1154	G
1	AA	1157	A
1	AA	1158	C
1	AA	1159	U
1	AA	1160	G
1	AA	1177	G
1	AA	1178	G
1	AA	1179	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	AA	1181	G
1	AA	1182	G
1	AA	1183	A
1	AA	1187	G
1	AA	1188	A
1	AA	1195	C
1	AA	1196	U
1	AA	1197	G
1	AA	1201	A
1	AA	1212	U
1	AA	1218	C
1	AA	1225	A
1	AA	1227	A
1	AA	1238	A
1	AA	1240	U
1	AA	1241	G
1	AA	1253	G
1	AA	1256	A
1	AA	1257	U
1	AA	1258	G
1	AA	1272	G
1	AA	1278	U
1	AA	1279	A
1	AA	1280	A
1	AA	1281	U
1	AA	1286	A
1	AA	1287	A
1	AA	1288	A
1	AA	1290	G
1	AA	1291	G
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1303	C
1	AA	1305	G
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1326	C
1	AA	1331	G
1	AA	1332	A
1	AA	1335	C

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Mol	Chain	Res	Type
1	AA	1336	C
1	AA	1338	G
1	AA	1340	A
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	1377	A
1	AA	1401	G
1	AA	1419	G
1	AA	1442	G
1	AA	1443	G
1	AA	1446	A
1	AA	1447	G
1	AA	1451	A
1	AA	1452	C
1	AA	1453	G
1	AA	1487	G
1	AA	1492	A
1	AA	1494	G
1	AA	1497	G
1	AA	1499	A
1	AA	1502	A
1	AA	1503	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1507	A
1	AA	1517	G
1	AA	1519	A
1	AA	1520	G
1	AA	1529	G
22	AB	4	G
22	AB	7	G
22	AB	8	U
22	AB	9	U
22	AB	13	G
22	AB	14	A
22	AB	16	C
22	AB	17	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	AB	18	G
22	AB	19	C
22	AB	20	C
22	AB	21	A
22	AB	23	A
22	AB	27	A
22	AB	30	A
22	AB	35	G
22	AB	42	U
22	AB	46	G
22	AB	47	U
22	AB	48	C
22	AB	50	U
22	AB	51	C
22	AB	55	U
22	AB	56	U
22	AB	57	C
22	AB	58	G
22	AB	68	A
22	AB	69	U
22	AB	70	C
22	AB	72	U
22	AB	73	U
22	AB	75	C
22	AB	76	C
22	AB	78	C
22	AB	79	A
22	AB	80	C
22	AB	82	A
22	AB	83	C
23	AC	9	G
23	AC	16	C
23	AC	18	C
23	AC	21	U
23	AC	23	G
23	AC	32	G
23	AC	48	U
23	AC	49	C
23	AC	53	G
23	AC	68	C
23	AC	77	A
22	AD	6	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	AD	9	U
22	AD	10	C
22	AD	11	C
22	AD	14	A
22	AD	15	G
22	AD	17	G
22	AD	18	G
22	AD	19	C
22	AD	20	C
22	AD	21	A
22	AD	22	A
22	AD	29	C
22	AD	34	U
22	AD	44	C
22	AD	45	C
22	AD	46	G
22	AD	51	C
22	AD	52	G
22	AD	56	U
22	AD	58	G
22	AD	64	U
22	AD	67	A
22	AD	68	A
22	AD	70	C
22	AD	85	A
24	A1	11	U
24	A1	12	A
24	A1	13	A
24	A1	14	A
24	A1	23	A
24	A1	25	A
25	BA	34	C
25	BA	35	G
25	BA	46	C
25	BA	51	G
25	BA	61	G
25	BA	71	A
25	BA	74	A
25	BA	75	G
25	BA	85	G
25	BA	92	G
25	BA	95	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	BA	99	U
25	BA	118	A
25	BA	119	A
25	BA	120	U
25	BA	155	C
25	BA	163	U
25	BA	173	G
25	BA	181	A
25	BA	196	A
25	BA	199	A
25	BA	213	A
25	BA	214	G
25	BA	216	A
25	BA	222	A
25	BA	223	A
25	BA	227	A
25	BA	228	A
25	BA	229	A
25	BA	230	U
25	BA	232	G
25	BA	233	A
25	BA	248	G
25	BA	249	C
25	BA	250	G
25	BA	252	G
25	BA	269	U
25	BA	270(K)	C
25	BA	270(L)	U
25	BA	270(M)	U
25	BA	270(O)	U
25	BA	270(P)	C
25	BA	271(C)	U
25	BA	271	G
25	BA	274	G
25	BA	275	G
25	BA	278	A
25	BA	279	C
25	BA	299	A
25	BA	311	A
25	BA	323	G
25	BA	324	A
25	BA	329	G

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Mol	Chain	Res	Type
25	BA	330	A
25	BA	352	G
25	BA	356	G
25	BA	362	U
25	BA	363	G
25	BA	364	C
25	BA	372	G
25	BA	386	G
25	BA	404	C
25	BA	405	U
25	BA	411	G
25	BA	412	A
25	BA	428	A
25	BA	443	A
25	BA	444	C
25	BA	448	U
25	BA	457	A
25	BA	470	A
25	BA	471	A
25	BA	479	A
25	BA	481	G
25	BA	482	A
25	BA	505	A
25	BA	508	G
25	BA	509	C
25	BA	529	A
25	BA	530	G
25	BA	531	C
25	BA	532	A
25	BA	533	G
25	BA	540	G
25	BA	546	C
25	BA	556	G
25	BA	563	G
25	BA	573	G
25	BA	575	A
25	BA	583	G
25	BA	586	A
25	BA	588	U
25	BA	603	A
25	BA	607	U
25	BA	613	U

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Mol	Chain	Res	Type
25	BA	614	U
25	BA	615	G
25	BA	617	G
25	BA	622	G
25	BA	627	A
25	BA	637	A
25	BA	646	A
25	BA	654(A)	A
25	BA	654(G)	C
25	BA	654(I)	C
25	BA	654(K)	C
25	BA	654(M)	C
25	BA	654(N)	G
25	BA	686	G
25	BA	717	G
25	BA	730	C
25	BA	740	U
25	BA	753	C
25	BA	764	A
25	BA	765	G
25	BA	776	G
25	BA	782	A
25	BA	783	A
25	BA	784	A
25	BA	785	G
25	BA	787	U
25	BA	790	C
25	BA	792	G
25	BA	805	G
25	BA	812	C
25	BA	819	A
25	BA	827	U
25	BA	828	U
25	BA	829	A
25	BA	831	G
25	BA	859	G
25	BA	861	A
25	BA	866	A
25	BA	879	G
25	BA	880	G
25	BA	881	G
25	BA	882	G

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Mol	Chain	Res	Type
25	BA	883	G
25	BA	884	C
25	BA	885	C
25	BA	886	C
25	BA	887	A
25	BA	888	C
25	BA	890	A
25	BA	893	C
25	BA	894	C
25	BA	895	U
25	BA	897	C
25	BA	898	C
25	BA	899	A
25	BA	900	A
25	BA	901	A
25	BA	902	C
25	BA	910	A
25	BA	915	C
25	BA	917	A
25	BA	918	A
25	BA	925	C
25	BA	932	G
25	BA	938	G
25	BA	941	A
25	BA	945	A
25	BA	946	G
25	BA	959	A
25	BA	961	C
25	BA	974	G
25	BA	974(A)	C
25	BA	975	G
25	BA	983	A
25	BA	990	A
25	BA	996	A
25	BA	1003	G
25	BA	1005	C
25	BA	1011	G
25	BA	1012	U
25	BA	1013	C
25	BA	1015	G
25	BA	1016	G
25	BA	1022	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	BA	1023	U
25	BA	1025	G
25	BA	1026	U
25	BA	1027	A
25	BA	1033	U
25	BA	1034	G
25	BA	1044	G
25	BA	1045	A
25	BA	1046	A
25	BA	1047	G
25	BA	1048	A
25	BA	1050	A
25	BA	1060	U
25	BA	1061	U
25	BA	1062	G
25	BA	1065	U
25	BA	1066	U
25	BA	1067	A
25	BA	1068	G
25	BA	1070	A
25	BA	1071	G
25	BA	1076	C
25	BA	1077	A
25	BA	1078	U
25	BA	1079	C
25	BA	1081	U
25	BA	1082	U
25	BA	1084	A
25	BA	1085	A
25	BA	1086	A
25	BA	1087	G
25	BA	1088	A
25	BA	1089	G
25	BA	1090	U
25	BA	1092	C
25	BA	1093	G
25	BA	1095	A
25	BA	1096	A
25	BA	1097	U
25	BA	1110	G
25	BA	1112	G
25	BA	1122	G

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Mol	Chain	Res	Type
25	BA	1127	A
25	BA	1129	A
25	BA	1131	G
25	BA	1135	C
25	BA	1136	G
25	BA	1139	G
25	BA	1142	U
25	BA	1142(A)	A
25	BA	1151	G
25	BA	1175	U
25	BA	1176	G
25	BA	1178	C
25	BA	1179	C
25	BA	1195	G
25	BA	1204	A
25	BA	1205	U
25	BA	1211	U
25	BA	1220	A
25	BA	1241	A
25	BA	1242	A
25	BA	1244	G
25	BA	1253	A
25	BA	1256	G
25	BA	1265	A
25	BA	1269	A
25	BA	1271	G
25	BA	1272	A
25	BA	1273	U
25	BA	1298	C
25	BA	1300	U
25	BA	1301	A
25	BA	1303	G
25	BA	1313	U
25	BA	1314	C
25	BA	1332	G
25	BA	1349	A
25	BA	1352	U
25	BA	1359	A
25	BA	1360	A
25	BA	1365	A
25	BA	1368	G
25	BA	1370	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	BA	1380	G
25	BA	1384	A
25	BA	1385	G
25	BA	1386	C
25	BA	1416	G
25	BA	1417	C
25	BA	1420	U
25	BA	1421	G
25	BA	1428	C
25	BA	1444(A)	A
25	BA	1449	A
25	BA	1449(A)	G
25	BA	1458	C
25	BA	1459	G
25	BA	1460	A
25	BA	1461	G
25	BA	1467	C
25	BA	1471	A
25	BA	1483	G
25	BA	1493	C
25	BA	1497	U
25	BA	1507	A
25	BA	1508	A
25	BA	1509	C
25	BA	1510	A
25	BA	1511	A
25	BA	1522	G
25	BA	1526	G
25	BA	1534	G
25	BA	1535	U
25	BA	1536	A
25	BA	1537	C
25	BA	1538	G
25	BA	1543	A
25	BA	1545	A
25	BA	1548	C
25	BA	1558	A
25	BA	1559	G
25	BA	1560	G
25	BA	1566	A
25	BA	1569	A
25	BA	1578	U

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Mol	Chain	Res	Type
25	BA	1579	A
25	BA	1586	A
25	BA	1608	A
25	BA	1609	A
25	BA	1610	A
25	BA	1617	C
25	BA	1618	A
25	BA	1639	U
25	BA	1648	C
25	BA	1654	A
25	BA	1674	G
25	BA	1675	C
25	BA	1678	G
25	BA	1695	G
25	BA	1728	G
25	BA	1729	A
25	BA	1731	G
25	BA	1733	G
25	BA	1743	G
25	BA	1756	G
25	BA	1762	A
25	BA	1763	G
25	BA	1764	G
25	BA	1773	A
25	BA	1780	A
25	BA	1781	C
25	BA	1791	A
25	BA	1799	G
25	BA	1800	C
25	BA	1801	G
25	BA	1816	G
25	BA	1829	A
25	BA	1835	G
25	BA	1839	G
25	BA	1847	A
25	BA	1858	G
25	BA	1869	G
25	BA	1872	A
25	BA	1878	G
25	BA	1888	G
25	BA	1900	A
25	BA	1906	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	BA	1914	C
25	BA	1929	G
25	BA	1930	G
25	BA	1936	A
25	BA	1938	A
25	BA	1955	U
25	BA	1956	U
25	BA	1963	U
25	BA	1967	C
25	BA	1969	A
25	BA	1970	A
25	BA	1971	A
25	BA	1972	A
25	BA	1981	A
25	BA	1982	C
25	BA	1992	G
25	BA	1993	U
25	BA	2020	A
25	BA	2023	G
25	BA	2031	A
25	BA	2032	G
25	BA	2033	A
25	BA	2043	C
25	BA	2051	A
25	BA	2055	C
25	BA	2056	G
25	BA	2060	A
25	BA	2061	G
25	BA	2063	C
25	BA	2069	G
25	BA	2070	G
25	BA	2100	G
25	BA	2110	G
25	BA	2111	C
25	BA	2112	G
25	BA	2113	U
25	BA	2114	A
25	BA	2115	G
25	BA	2123	G
25	BA	2126	A
25	BA	2127	G
25	BA	2128	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	BA	2132	U
25	BA	2133	G
25	BA	2135	A
25	BA	2136	C
25	BA	2139	C
25	BA	2146	C
25	BA	2147	G
25	BA	2148	G
25	BA	2157	G
25	BA	2158	A
25	BA	2164	C
25	BA	2166	G
25	BA	2167	U
25	BA	2168	G
25	BA	2171	A
25	BA	2173	A
25	BA	2181	G
25	BA	2190	G
25	BA	2198	A
25	BA	2199	A
25	BA	2205	C
25	BA	2206	C
25	BA	2210	G
25	BA	2211	G
25	BA	2212	A
25	BA	2215	G
25	BA	2225	A
25	BA	2226	C
25	BA	2238	G
25	BA	2239	G
25	BA	2263	C
25	BA	2271	G
25	BA	2272	U
25	BA	2273	A
25	BA	2275	C
25	BA	2278	A
25	BA	2280	G
25	BA	2283	C
25	BA	2287	A
25	BA	2304	G
25	BA	2305	A
25	BA	2307	G

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Mol	Chain	Res	Type
25	BA	2308	G
25	BA	2309	A
25	BA	2310	A
25	BA	2314	C
25	BA	2319	G
25	BA	2320	A
25	BA	2321	G
25	BA	2325	G
25	BA	2336	A
25	BA	2341	G
25	BA	2342	C
25	BA	2346	A
25	BA	2347	C
25	BA	2350	C
25	BA	2383	G
25	BA	2385	C
25	BA	2392	A
25	BA	2396	G
25	BA	2402	C
25	BA	2403	C
25	BA	2406	U
25	BA	2410	G
25	BA	2424	C
25	BA	2425	A
25	BA	2428	G
25	BA	2429	G
25	BA	2430	A
25	BA	2434	A
25	BA	2435	A
25	BA	2439	A
25	BA	2440	C
25	BA	2441	C
25	BA	2448	A
25	BA	2468	G
25	BA	2469	A
25	BA	2474	C
25	BA	2475	C
25	BA	2476	A
25	BA	2478	A
25	BA	2482	G
25	BA	2484	G
25	BA	2498	C

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Mol	Chain	Res	Type
25	BA	2502	G
25	BA	2504	U
25	BA	2505	G
25	BA	2507	C
25	BA	2518	A
25	BA	2525	G
25	BA	2529	G
25	BA	2543	G
25	BA	2554	U
25	BA	2566	A
25	BA	2567	G
25	BA	2569	G
25	BA	2578	G
25	BA	2602	A
25	BA	2609	U
25	BA	2611	U
25	BA	2612	C
25	BA	2613	U
25	BA	2614	A
25	BA	2629	A
25	BA	2636	U
25	BA	2641	G
25	BA	2661	G
25	BA	2665	A
25	BA	2673	G
25	BA	2682	U
25	BA	2683	C
25	BA	2689	U
25	BA	2690	C
25	BA	2691	C
25	BA	2702	U
25	BA	2707	G
25	BA	2712	U
25	BA	2712(A)	A
25	BA	2713	A
25	BA	2714	G
25	BA	2726	U
25	BA	2733	A
25	BA	2734	A
25	BA	2735	G
25	BA	2757	A
25	BA	2758	A

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Mol	Chain	Res	Type
25	BA	2765	A
25	BA	2778	A
25	BA	2779	U
25	BA	2789	C
25	BA	2791	C
25	BA	2794	C
25	BA	2797	U
25	BA	2798	C
25	BA	2799	A
25	BA	2801	A
25	BA	2807	G
25	BA	2808	U
25	BA	2813	A
25	BA	2818	G
25	BA	2820	A
25	BA	2821	A
25	BA	2823	A
25	BA	2830	G
25	BA	2833	G
25	BA	2834	G
25	BA	2835	A
25	BA	2847	U
25	BA	2848	G
25	BA	2872	G
25	BA	2892	A
25	BA	2894	G
25	BA	2902	C
26	BB	1	U
26	BB	7	G
26	BB	12	C
26	BB	13	A
26	BB	15	A
26	BB	27	C
26	BB	40	U
26	BB	45	A
26	BB	56	G
26	BB	58	A
26	BB	67	G
26	BB	73	A
26	BB	74	U
26	BB	75	G
26	BB	81	G

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Mol	Chain	Res	Type
26	BB	96	G
26	BB	109	G
1	CA	9	G
1	CA	22	G
1	CA	32	A
1	CA	39	G
1	CA	41	G
1	CA	47	C
1	CA	48	C
1	CA	50	A
1	CA	51	A
1	CA	65	U
1	CA	76	G
1	CA	78	G
1	CA	81	G
1	CA	84	U
1	CA	86	U
1	CA	87	A
1	CA	90	C
1	CA	91	C
1	CA	95	G
1	CA	116	A
1	CA	118	U
1	CA	121	C
1	CA	131	C
1	CA	146	G
1	CA	163	C
1	CA	174	C
1	CA	182	U
1	CA	188	U
1	CA	189	U
1	CA	191(D)	U
1	CA	195	A
1	CA	197	A
1	CA	198	G
1	CA	208	U
1	CA	209	U
1	CA	210	U
1	CA	216	G
1	CA	231	G
1	CA	244	U
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	281	G
1	CA	289	G
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	330	C
1	CA	332	G
1	CA	345	C
1	CA	346	G
1	CA	347	G
1	CA	350	G
1	CA	351	G
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	365	U
1	CA	367	U
1	CA	372	C
1	CA	373	A
1	CA	384	G
1	CA	397	A
1	CA	398	C
1	CA	406	G
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	421	U
1	CA	422	C
1	CA	423	G
1	CA	424	G
1	CA	429	U
1	CA	430	A
1	CA	439	A
1	CA	442	C
1	CA	453	A
1	CA	466	C
1	CA	467	G
1	CA	478	A
1	CA	484	G

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Mol	Chain	Res	Type
1	CA	485	G
1	CA	486	U
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	519	C
1	CA	527	G
1	CA	530	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	547	A
1	CA	559	A
1	CA	561	U
1	CA	562	C
1	CA	572	A
1	CA	573	A
1	CA	575	G
1	CA	576	G
1	CA	577	G
1	CA	579	G
1	CA	618	C
1	CA	630	G
1	CA	632	A
1	CA	633	G
1	CA	653	A
1	CA	665	A
1	CA	666	G
1	CA	687	A
1	CA	688	G
1	CA	702	A
1	CA	704	A
1	CA	723	U
1	CA	724	G
1	CA	731	G
1	CA	749	C
1	CA	755	G
1	CA	777	A

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Mol	Chain	Res	Type
1	CA	782	A
1	CA	792	A
1	CA	794	A
1	CA	813	U
1	CA	817	C
1	CA	818	G
1	CA	819	A
1	CA	827	U
1	CA	828	A
1	CA	841	U
1	CA	842	C
1	CA	843	U
1	CA	848	C
1	CA	854	G
1	CA	855	G
1	CA	859	A
1	CA	871	U
1	CA	874	G
1	CA	885	G
1	CA	913	A
1	CA	914	A
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	958	A
1	CA	960	U
1	CA	961	U
1	CA	963	G
1	CA	966	G
1	CA	968	A
1	CA	969	A
1	CA	974	A
1	CA	976	G
1	CA	977	A
1	CA	978	A
1	CA	980	C
1	CA	982	U
1	CA	983	A
1	CA	991	U
1	CA	992	U
1	CA	993	G

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Mol	Chain	Res	Type
1	CA	1004	A
1	CA	1006	C
1	CA	1009	G
1	CA	1016	A
1	CA	1021	G
1	CA	1023	G
1	CA	1024	G
1	CA	1025	U
1	CA	1026	G
1	CA	1027	C
1	CA	1028	C
1	CA	1029	G
1	CA	1030	C
1	CA	1032(A)	G
1	CA	1033	G
1	CA	1036	G
1	CA	1037	C
1	CA	1040	U
1	CA	1045	C
1	CA	1050	G
1	CA	1053	G
1	CA	1054	C
1	CA	1055	A
1	CA	1056	U
1	CA	1066	C
1	CA	1067	A
1	CA	1081	G
1	CA	1086	U
1	CA	1092	A
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1117	G
1	CA	1124	G
1	CA	1125	U
1	CA	1127	G
1	CA	1129	C
1	CA	1130	A
1	CA	1131	G
1	CA	1134	G
1	CA	1136	U
1	CA	1137	C

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Mol	Chain	Res	Type
1	CA	1138	G
1	CA	1139	G
1	CA	1146	A
1	CA	1157	A
1	CA	1158	C
1	CA	1159	U
1	CA	1160	G
1	CA	1161	C
1	CA	1176	A
1	CA	1177	G
1	CA	1178	G
1	CA	1181	G
1	CA	1182	G
1	CA	1183	A
1	CA	1184	G
1	CA	1187	G
1	CA	1190	G
1	CA	1191	A
1	CA	1196	U
1	CA	1197	G
1	CA	1200	C
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	1238	A
1	CA	1240	U
1	CA	1241	G
1	CA	1256	A
1	CA	1257	U
1	CA	1258	G
1	CA	1270	C
1	CA	1278	U
1	CA	1279	A
1	CA	1280	A
1	CA	1286	A
1	CA	1287	A
1	CA	1288	A
1	CA	1297	C

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Mol	Chain	Res	Type
1	CA	1298	C
1	CA	1299	A
1	CA	1300	G
1	CA	1301	U
1	CA	1302	U
1	CA	1303	C
1	CA	1305	G
1	CA	1317	C
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1331	G
1	CA	1335	C
1	CA	1336	C
1	CA	1338	G
1	CA	1346	A
1	CA	1347	G
1	CA	1353	G
1	CA	1363	A
1	CA	1364	U
1	CA	1368	G
1	CA	1370	G
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	1447	G
1	CA	1450	U
1	CA	1451	A
1	CA	1452	C
1	CA	1453	G
1	CA	1454	G
1	CA	1487	G
1	CA	1492	A
1	CA	1494	G
1	CA	1497	G
1	CA	1499	A
1	CA	1503	A
1	CA	1504	G
1	CA	1506	U

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Mol	Chain	Res	Type
1	CA	1517	G
1	CA	1519	A
1	CA	1520	G
1	CA	1529	G
22	CB	2	G
22	CB	4	G
22	CB	7	G
22	CB	8	U
22	CB	9	U
22	CB	14	A
22	CB	16	C
22	CB	17	G
22	CB	18	G
22	CB	19	C
22	CB	20	C
22	CB	21	A
22	CB	22	A
22	CB	23	A
22	CB	26	G
22	CB	27	A
22	CB	34	U
22	CB	42	U
22	CB	43	G
22	CB	46	G
22	CB	47	U
22	CB	48	C
22	CB	50	U
22	CB	51	C
22	CB	52	G
22	CB	53	A
22	CB	54	C
22	CB	57	C
22	CB	58	G
22	CB	68	A
22	CB	70	C
22	CB	75	C
22	CB	76	C
22	CB	78	C
22	CB	79	A
22	CB	80	C
22	CB	83	C
22	CB	84	C

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Mol	Chain	Res	Type
23	CC	9	G
23	CC	16	C
23	CC	18	C
23	CC	19	G
23	CC	20	G
23	CC	21	U
23	CC	22	A
23	CC	23	G
23	CC	32	G
23	CC	47	G
23	CC	48	U
23	CC	49	C
23	CC	50	G
22	CD	6	G
22	CD	8	U
22	CD	9	U
22	CD	10	C
22	CD	13	G
22	CD	15	G
22	CD	17	G
22	CD	18	G
22	CD	19	C
22	CD	20	C
22	CD	21	A
22	CD	22	A
22	CD	23	A
22	CD	44	C
22	CD	46	G
22	CD	49	A
22	CD	50	U
22	CD	51	C
22	CD	52	G
22	CD	55	U
22	CD	56	U
22	CD	58	G
22	CD	67	A
22	CD	82	A
22	CD	85	A
24	C1	11	U
24	C1	12	A
24	C1	13	A
24	C1	14	A

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Mol	Chain	Res	Type
24	C1	23	A
24	C1	25	A
25	DA	5	A
25	DA	10	G
25	DA	34	C
25	DA	46	C
25	DA	50	U
25	DA	60	G
25	DA	71	A
25	DA	72	U
25	DA	74	A
25	DA	75	G
25	DA	83	G
25	DA	90	U
25	DA	91	A
25	DA	92	G
25	DA	95	G
25	DA	99	U
25	DA	101	G
25	DA	102	G
25	DA	118	A
25	DA	119	A
25	DA	120	U
25	DA	121	G
25	DA	129	C
25	DA	138	G
25	DA	140	A
25	DA	154	G
25	DA	155	C
25	DA	172	C
25	DA	173	G
25	DA	174	C
25	DA	175	G
25	DA	182	A
25	DA	196	A
25	DA	199	A
25	DA	205	G
25	DA	206	U
25	DA	214	G
25	DA	215	G
25	DA	216	A
25	DA	221	A

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Mol	Chain	Res	Type
25	DA	222	A
25	DA	225	A
25	DA	228	A
25	DA	229	A
25	DA	233	A
25	DA	248	G
25	DA	249	C
25	DA	252	G
25	DA	270(K)	C
25	DA	270(L)	U
25	DA	270(M)	U
25	DA	270(O)	U
25	DA	271(B)	G
25	DA	271(C)	U
25	DA	271	G
25	DA	273(D)	C
25	DA	274	G
25	DA	275	G
25	DA	276	A
25	DA	278	A
25	DA	279	C
25	DA	283	A
25	DA	289	A
25	DA	311	A
25	DA	312	G
25	DA	327	G
25	DA	329	G
25	DA	330	A
25	DA	338	G
25	DA	342	G
25	DA	352	G
25	DA	355	G
25	DA	356	G
25	DA	357	A
25	DA	363	G
25	DA	363(E)	U
25	DA	363(F)	A
25	DA	364	C
25	DA	372	G
25	DA	386	G
25	DA	391	G
25	DA	394	A

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Mol	Chain	Res	Type
25	DA	395	U
25	DA	405	U
25	DA	406	G
25	DA	411	G
25	DA	428	A
25	DA	443	A
25	DA	444	C
25	DA	448	U
25	DA	454	A
25	DA	455	C
25	DA	457	A
25	DA	470	A
25	DA	481	G
25	DA	504	U
25	DA	505	A
25	DA	509	C
25	DA	512	G
25	DA	529	A
25	DA	530	G
25	DA	531	C
25	DA	532	A
25	DA	533	G
25	DA	543	C
25	DA	547	A
25	DA	548	A
25	DA	549	G
25	DA	556	G
25	DA	563	G
25	DA	573	G
25	DA	575	A
25	DA	603	A
25	DA	607	U
25	DA	609(A)	G
25	DA	614	U
25	DA	615	G
25	DA	617	G
25	DA	619	G
25	DA	621	A
25	DA	622	G
25	DA	626	U
25	DA	627	A
25	DA	637	A

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Mol	Chain	Res	Type
25	DA	645	C
25	DA	646	A
25	DA	650	C
25	DA	651	G
25	DA	654	A
25	DA	654(G)	C
25	DA	654(H)	G
25	DA	654(I)	C
25	DA	654(K)	C
25	DA	654(N)	G
25	DA	654(T)	A
25	DA	669	G
25	DA	670	A
25	DA	682	G
25	DA	686	G
25	DA	717	G
25	DA	720	C
25	DA	721	C
25	DA	722	A
25	DA	730	C
25	DA	753	C
25	DA	758	C
25	DA	762	U
25	DA	764	A
25	DA	776	G
25	DA	779	U
25	DA	782	A
25	DA	784	A
25	DA	785	G
25	DA	789	A
25	DA	791	C
25	DA	792	G
25	DA	793	A
25	DA	805	G
25	DA	812	C
25	DA	819	A
25	DA	827	U
25	DA	828	U
25	DA	832	G
25	DA	846	C
25	DA	859	G
25	DA	866	A

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Mol	Chain	Res	Type
25	DA	878	A
25	DA	880	G
25	DA	882	G
25	DA	885	C
25	DA	887	A
25	DA	888	C
25	DA	889	C
25	DA	890	A
25	DA	892	G
25	DA	894	C
25	DA	896	A
25	DA	897	C
25	DA	899	A
25	DA	900	A
25	DA	901	A
25	DA	902	C
25	DA	903	C
25	DA	910	A
25	DA	915	C
25	DA	916	G
25	DA	917	A
25	DA	924	C
25	DA	926	A
25	DA	932	G
25	DA	933	A
25	DA	934	G
25	DA	938	G
25	DA	941	A
25	DA	945	A
25	DA	946	G
25	DA	958	U
25	DA	959	A
25	DA	961	C
25	DA	974	G
25	DA	980	A
25	DA	983	A
25	DA	990	A
25	DA	991	C
25	DA	996	A
25	DA	1012	U
25	DA	1013	C
25	DA	1015	G

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Mol	Chain	Res	Type
25	DA	1016	G
25	DA	1022	G
25	DA	1023	U
25	DA	1025	G
25	DA	1026	U
25	DA	1028	A
25	DA	1044	G
25	DA	1045	A
25	DA	1047	G
25	DA	1048	A
25	DA	1054	A
25	DA	1057	A
25	DA	1067	A
25	DA	1070	A
25	DA	1071	G
25	DA	1076	C
25	DA	1085	A
25	DA	1086	A
25	DA	1087	G
25	DA	1088	A
25	DA	1089	G
25	DA	1090	U
25	DA	1095	A
25	DA	1096	A
25	DA	1111	A
25	DA	1112	G
25	DA	1122	G
25	DA	1128	A
25	DA	1129	A
25	DA	1130	U
25	DA	1135	C
25	DA	1136	G
25	DA	1139	G
25	DA	1142	U
25	DA	1142(A)	A
25	DA	1143	A
25	DA	1170	G
25	DA	1171	G
25	DA	1173	G
25	DA	1174	A
25	DA	1175	U
25	DA	1176	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	DA	1177	A
25	DA	1178	C
25	DA	1204	A
25	DA	1205	U
25	DA	1211	U
25	DA	1220	A
25	DA	1248	G
25	DA	1250	G
25	DA	1253	A
25	DA	1255	U
25	DA	1256	G
25	DA	1271	G
25	DA	1272	A
25	DA	1273	U
25	DA	1298	C
25	DA	1300	U
25	DA	1301	A
25	DA	1314	C
25	DA	1319	G
25	DA	1325	G
25	DA	1329	U
25	DA	1332	G
25	DA	1338	G
25	DA	1345	C
25	DA	1349	A
25	DA	1352	U
25	DA	1359	A
25	DA	1360	A
25	DA	1365	A
25	DA	1368	G
25	DA	1370	C
25	DA	1380	G
25	DA	1384	A
25	DA	1385	G
25	DA	1386	C
25	DA	1398	C
25	DA	1407	C
25	DA	1416	G
25	DA	1417	C
25	DA	1419	A
25	DA	1420	U
25	DA	1421	G

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Mol	Chain	Res	Type
25	DA	1427	A
25	DA	1428	C
25	DA	1437	C
25	DA	1443	G
25	DA	1444(A)	A
25	DA	1445	C
25	DA	1449	A
25	DA	1449(A)	G
25	DA	1455	G
25	DA	1458	C
25	DA	1459	G
25	DA	1460	A
25	DA	1461	G
25	DA	1467	C
25	DA	1471	A
25	DA	1475	G
25	DA	1478	G
25	DA	1482	U
25	DA	1483	G
25	DA	1490	A
25	DA	1493	C
25	DA	1494	A
25	DA	1496	A
25	DA	1508	A
25	DA	1509	C
25	DA	1510	A
25	DA	1522	G
25	DA	1534	G
25	DA	1535	U
25	DA	1539	G
25	DA	1543	A
25	DA	1558	A
25	DA	1559	G
25	DA	1560	G
25	DA	1569	A
25	DA	1578	U
25	DA	1586	A
25	DA	1588	C
25	DA	1608	A
25	DA	1609	A
25	DA	1618	A
25	DA	1622	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	DA	1625	C
25	DA	1635	G
25	DA	1639	U
25	DA	1640	C
25	DA	1648	C
25	DA	1651	G
25	DA	1654	A
25	DA	1674	G
25	DA	1675	C
25	DA	1678	G
25	DA	1696	G
25	DA	1700	A
25	DA	1701	A
25	DA	1725	G
25	DA	1728	G
25	DA	1731	G
25	DA	1756	G
25	DA	1758	G
25	DA	1761	C
25	DA	1762	A
25	DA	1763	G
25	DA	1764	G
25	DA	1773	A
25	DA	1780	A
25	DA	1791	A
25	DA	1800	C
25	DA	1801	G
25	DA	1802	A
25	DA	1816	G
25	DA	1820	U
25	DA	1829	A
25	DA	1839	G
25	DA	1847	A
25	DA	1848	A
25	DA	1858	G
25	DA	1872	A
25	DA	1878	G
25	DA	1884	A
25	DA	1888	G
25	DA	1890	A
25	DA	1900	A
25	DA	1906	G

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Mol	Chain	Res	Type
25	DA	1929	G
25	DA	1930	G
25	DA	1936	A
25	DA	1938	A
25	DA	1955	U
25	DA	1956	U
25	DA	1963	U
25	DA	1967	C
25	DA	1970	A
25	DA	1971	A
25	DA	1972	A
25	DA	1993	U
25	DA	2020	A
25	DA	2023	G
25	DA	2031	A
25	DA	2032	G
25	DA	2033	A
25	DA	2043	C
25	DA	2049	G
25	DA	2055	C
25	DA	2056	G
25	DA	2059	A
25	DA	2060	A
25	DA	2061	G
25	DA	2062	A
25	DA	2069	G
25	DA	2071	A
25	DA	2082	A
25	DA	2100	G
25	DA	2101	G
25	DA	2108	C
25	DA	2111	C
25	DA	2112	G
25	DA	2113	U
25	DA	2114	A
25	DA	2117	A
25	DA	2120	G
25	DA	2126	A
25	DA	2127	G
25	DA	2128	C
25	DA	2130	U
25	DA	2131	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	DA	2132	U
25	DA	2133	G
25	DA	2136	C
25	DA	2145	C
25	DA	2146	C
25	DA	2147	G
25	DA	2148	G
25	DA	2153	G
25	DA	2159	G
25	DA	2164	C
25	DA	2166	G
25	DA	2167	U
25	DA	2171	A
25	DA	2172	U
25	DA	2173	A
25	DA	2174	C
25	DA	2191	G
25	DA	2192	G
25	DA	2198	A
25	DA	2210	G
25	DA	2211	G
25	DA	2212	A
25	DA	2213	U
25	DA	2215	G
25	DA	2225	A
25	DA	2226	C
25	DA	2238	G
25	DA	2239	G
25	DA	2268	A
25	DA	2273	A
25	DA	2275	C
25	DA	2276	G
25	DA	2278	A
25	DA	2280	G
25	DA	2283	C
25	DA	2287	A
25	DA	2302	G
25	DA	2303	G
25	DA	2307	G
25	DA	2308	G
25	DA	2309	A
25	DA	2319	G

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Mol	Chain	Res	Type
25	DA	2320	A
25	DA	2321	G
25	DA	2325	G
25	DA	2335	A
25	DA	2336	A
25	DA	2346	A
25	DA	2347	C
25	DA	2350	C
25	DA	2383	G
25	DA	2385	C
25	DA	2387	U
25	DA	2388	A
25	DA	2389	G
25	DA	2390	U
25	DA	2392	A
25	DA	2394	C
25	DA	2402	C
25	DA	2403	C
25	DA	2406	U
25	DA	2411	A
25	DA	2414	G
25	DA	2422	A
25	DA	2423	U
25	DA	2425	A
25	DA	2428	G
25	DA	2429	G
25	DA	2430	A
25	DA	2434	A
25	DA	2435	A
25	DA	2439	A
25	DA	2440	C
25	DA	2441	C
25	DA	2448	A
25	DA	2468	G
25	DA	2469	A
25	DA	2470	G
25	DA	2475	C
25	DA	2476	A
25	DA	2482	G
25	DA	2483	C
25	DA	2484	G
25	DA	2496	C

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Mol	Chain	Res	Type
25	DA	2502	G
25	DA	2505	G
25	DA	2506	U
25	DA	2518	A
25	DA	2523	G
25	DA	2525	G
25	DA	2542	A
25	DA	2543	G
25	DA	2554	U
25	DA	2566	A
25	DA	2567	G
25	DA	2569	G
25	DA	2585	U
25	DA	2602	A
25	DA	2603	G
25	DA	2609	U
25	DA	2611	U
25	DA	2612	C
25	DA	2630	G
25	DA	2636	U
25	DA	2646	C
25	DA	2654	A
25	DA	2665	A
25	DA	2673	G
25	DA	2689	U
25	DA	2690	C
25	DA	2702	U
25	DA	2703	C
25	DA	2712(A)	A
25	DA	2713	A
25	DA	2714	G
25	DA	2726	U
25	DA	2732	G
25	DA	2733	A
25	DA	2750	A
25	DA	2751	G
25	DA	2752	C
25	DA	2757	A
25	DA	2758	A
25	DA	2761	G
25	DA	2762	G
25	DA	2763	G

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Mol	Chain	Res	Type
25	DA	2764	A
25	DA	2765	A
25	DA	2766	G
25	DA	2777	G
25	DA	2778	A
25	DA	2779	U
25	DA	2789	C
25	DA	2791	C
25	DA	2797	U
25	DA	2798	C
25	DA	2808	U
25	DA	2818	G
25	DA	2820	A
25	DA	2821	A
25	DA	2833	G
25	DA	2834	G
25	DA	2835	A
25	DA	2844	G
25	DA	2860	A
25	DA	2872	G
25	DA	2873	A
25	DA	2892	A
25	DA	2893	G
25	DA	2894	G
25	DA	2896	C
26	DB	0	A
26	DB	8	U
26	DB	13	A
26	DB	15	A
26	DB	16	G
26	DB	24	G
26	DB	25	A
26	DB	26	A
26	DB	31	C
26	DB	32	C
26	DB	40	U
26	DB	41	U
26	DB	42	C
26	DB	44	G
26	DB	45	A
26	DB	51	G
26	DB	52	A

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Mol	Chain	Res	Type
26	DB	53	A
26	DB	73	A
26	DB	75	G
26	DB	81	G
26	DB	88	C
26	DB	89	G
26	DB	89(A)	A
26	DB	105	G
26	DB	108	C
26	DB	109	G

All (232) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	31	G
1	AA	49	U
1	AA	50	A
1	AA	79	G
1	AA	115	G
1	AA	119	A
1	AA	173	U
1	AA	181	G
1	AA	210	U
1	AA	244	U
1	AA	266	G
1	AA	353	A
1	AA	412	A
1	AA	413	G
1	AA	428	G
1	AA	429	U
1	AA	484	G
1	AA	509	A
1	AA	530	G
1	AA	560	U
1	AA	687	A
1	AA	703	G
1	AA	748	C
1	AA	792	A
1	AA	793	U
1	AA	812	C
1	AA	871	U
1	AA	913	A

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Mol	Chain	Res	Type
1	AA	992	U
1	AA	1025	U
1	AA	1027	C
1	AA	1065	U
1	AA	1126	U
1	AA	1128	C
1	AA	1157	A
1	AA	1178	G
1	AA	1211	U
1	AA	1285	A
1	AA	1322	C
1	AA	1331	G
1	AA	1452	C
1	AA	1498	U
1	AA	1504	G
22	AB	3	U
22	AB	6	G
22	AB	18	G
22	AB	19	C
22	AB	46	G
22	AB	57	C
22	AB	75	C
22	AB	78	C
23	AC	48	U
22	AD	17	G
22	AD	18	G
22	AD	21	A
22	AD	57	C
22	AD	67	A
24	A1	12	A
24	A1	13	A
25	BA	222	A
25	BA	229	A
25	BA	271(B)	G
25	BA	404	C
25	BA	481	G
25	BA	587	C
25	BA	752	A
25	BA	880	G
25	BA	945	A
25	BA	974(A)	C
25	BA	1022	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	BA	1026	U
25	BA	1060	U
25	BA	1069	A
25	BA	1081	U
25	BA	1085	A
25	BA	1130	U
25	BA	1177	A
25	BA	1178	C
25	BA	1210	A
25	BA	1312	U
25	BA	1379	A
25	BA	1416	G
25	BA	1420	U
25	BA	1427	A
25	BA	1536	A
25	BA	1558	A
25	BA	1608	A
25	BA	1653	G
25	BA	1694	C
25	BA	1799	G
25	BA	1955	U
25	BA	1992	G
25	BA	2060	A
25	BA	2110	G
25	BA	2135	A
25	BA	2157	G
25	BA	2167	U
25	BA	2172	U
25	BA	2211	G
25	BA	2309	A
25	BA	2346	A
25	BA	2402	C
25	BA	2439	A
25	BA	2481	G
25	BA	2566	A
25	BA	2610	C
25	BA	2613	U
25	BA	2681	C
25	BA	2689	U
25	BA	2756	U
1	CA	31	G
1	CA	64	G

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Mol	Chain	Res	Type
1	CA	85	U
1	CA	86	U
1	CA	89	U
1	CA	115	G
1	CA	197	A
1	CA	201	C
1	CA	209	U
1	CA	243	A
1	CA	250	A
1	CA	266	G
1	CA	328	C
1	CA	345	C
1	CA	412	A
1	CA	421	U
1	CA	429	U
1	CA	452	A
1	CA	485	G
1	CA	509	A
1	CA	510	A
1	CA	560	U
1	CA	632	A
1	CA	687	A
1	CA	723	U
1	CA	748	C
1	CA	812	C
1	CA	873	A
1	CA	913	A
1	CA	991	U
1	CA	992	U
1	CA	1025	U
1	CA	1049	U
1	CA	1053	G
1	CA	1054	C
1	CA	1126	U
1	CA	1128	C
1	CA	1157	A
1	CA	1196	U
1	CA	1285	A
1	CA	1297	C
1	CA	1300	G
1	CA	1301	U
1	CA	1335	C

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Mol	Chain	Res	Type
1	CA	1346	A
1	CA	1442	G
1	CA	1449	C
1	CA	1453	G
1	CA	1498	U
22	CB	3	U
22	CB	6	G
22	CB	18	G
22	CB	19	C
22	CB	21	A
22	CB	46	G
22	CB	57	C
22	CB	75	C
22	CB	78	C
23	CC	19	G
23	CC	47	G
23	CC	48	U
22	CD	17	G
22	CD	18	G
22	CD	21	A
22	CD	57	C
24	C1	11	U
24	C1	12	A
24	C1	13	A
25	DA	49	A
25	DA	71	A
25	DA	128	C
25	DA	196	A
25	DA	204	A
25	DA	205	G
25	DA	278	A
25	DA	653	A
25	DA	654(S)	G
25	DA	669	G
25	DA	752	A
25	DA	790	C
25	DA	877	U
25	DA	888	C
25	DA	893	C
25	DA	958	U
25	DA	1022	G
25	DA	1085	A

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Mol	Chain	Res	Type
25	DA	1089	G
25	DA	1171	G
25	DA	1210	A
25	DA	1379	A
25	DA	1397	U
25	DA	1416	G
25	DA	1420	U
25	DA	1427	A
25	DA	1460	A
25	DA	1558	A
25	DA	1653	G
25	DA	1819	A
25	DA	1955	U
25	DA	1992	G
25	DA	2135	A
25	DA	2170	A
25	DA	2191	G
25	DA	2210	G
25	DA	2211	G
25	DA	2225	A
25	DA	2238	G
25	DA	2275	C
25	DA	2308	G
25	DA	2402	C
25	DA	2439	A
25	DA	2447	G
25	DA	2602	A
25	DA	2610	C
25	DA	2629	A
25	DA	2689	U
25	DA	2756	U
25	DA	2776	A
25	DA	2790	A
25	DA	2859	G
25	DA	2893	G
26	DB	88	C

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

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

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
22	MIA	AB	38	22	23,31,32	0.56	0	25,44,47	1.86	6 (24%)
22	MIA	AD	38	22	23,31,32	0.68	0	25,44,47	2.48	7 (28%)
22	MIA	CB	38	22	23,31,32	0.57	0	25,44,47	2.13	7 (28%)
22	MIA	CD	38	22	23,31,32	0.69	0	25,44,47	2.55	7 (28%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
22	MIA	AB	38	22	-	0/11/33/34	0/3/3/3
22	MIA	AD	38	22	-	0/11/33/34	0/3/3/3
22	MIA	CB	38	22	-	2/11/33/34	0/3/3/3
22	MIA	CD	38	22	-	0/11/33/34	0/3/3/3

There are no bond length outliers.

All (27) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	AD	38	MIA	C12-N6-C6	-4.57	117.36	123.26
22	CD	38	MIA	C12-N6-C6	-4.08	117.99	123.26
22	AB	38	MIA	C12-N6-C6	-3.74	118.44	123.26
22	CB	38	MIA	C4-C5-N7	-3.67	105.87	109.41
22	AB	38	MIA	C4-C5-N7	-2.91	106.60	109.41
22	AD	38	MIA	N3-C2-N1	-2.89	121.67	126.85
22	CB	38	MIA	C12-N6-C6	-2.84	119.60	123.26
22	CB	38	MIA	C5-C6-N1	-2.82	117.82	120.64
22	CD	38	MIA	N3-C2-N1	-2.79	121.85	126.85
22	CD	38	MIA	C4-C5-N7	-2.72	106.78	109.41
22	AB	38	MIA	N3-C2-N1	-2.59	122.21	126.85
22	CD	38	MIA	C5-C6-N1	-2.54	118.10	120.64
22	CB	38	MIA	N3-C2-N1	-2.54	122.30	126.85
22	AD	38	MIA	C4-C5-N7	-2.53	106.97	109.41
22	AB	38	MIA	C5-C6-N1	-2.30	118.35	120.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	AD	38	MIA	C5-C6-N1	-2.22	118.42	120.64
22	AD	38	MIA	C13-C12-N6	2.16	118.53	111.82
22	CD	38	MIA	C13-C12-N6	2.19	118.62	111.82
22	CB	38	MIA	C13-C12-N6	2.38	119.23	111.82
22	AB	38	MIA	C2-N1-C6	2.49	120.81	113.47
22	CB	38	MIA	C2-N1-C6	2.55	120.99	113.47
22	CD	38	MIA	C2-N1-C6	2.57	121.05	113.47
22	AD	38	MIA	C2-N1-C6	2.59	121.09	113.47
22	AB	38	MIA	C11-S10-C2	6.00	106.72	102.29
22	CB	38	MIA	C11-S10-C2	7.62	107.92	102.29
22	AD	38	MIA	C11-S10-C2	9.77	109.51	102.29
22	CD	38	MIA	C11-S10-C2	10.27	109.88	102.29

There are no chirality outliers.

All (2) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
22	CB	38	MIA	N1-C2-S10-C11
22	CB	38	MIA	N3-C2-S10-C11

There are no ring outliers.

4 monomers are involved in 11 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
22	AB	38	MIA	1	0
22	AD	38	MIA	3	0
22	CB	38	MIA	3	0
22	CD	38	MIA	4	0

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 1608 ligands modelled in this entry, 1608 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

## 5.7 Other polymers [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, 95<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	AA	1502/1506 (99%)	-0.36	5 (0%) 93 82	54, 99, 183, 246	0
1	CA	1502/1506 (99%)	-0.28	13 (0%) 84 61	59, 100, 182, 245	0
2	AE	237/256 (92%)	0.24	11 (4%) 33 13	98, 139, 177, 190	0
2	CE	237/256 (92%)	0.57	15 (6%) 21 7	106, 152, 189, 209	0
3	AF	205/239 (85%)	0.29	7 (3%) 46 20	88, 113, 149, 158	0
3	CF	206/239 (86%)	1.03	33 (16%) 2 1	101, 135, 165, 180	0
4	AG	208/208 (100%)	-0.32	1 (0%) 90 74	81, 107, 131, 143	0
4	CG	208/208 (100%)	0.24	3 (1%) 75 49	75, 95, 123, 135	0
5	AH	151/162 (93%)	0.01	2 (1%) 77 51	78, 99, 125, 164	0
5	CH	151/162 (93%)	0.19	2 (1%) 77 51	84, 106, 131, 167	0
6	AI	101/101 (100%)	0.44	5 (4%) 30 12	67, 99, 115, 141	0
6	CI	101/101 (100%)	-0.07	0 100 100	76, 96, 115, 153	0
7	AJ	155/156 (99%)	0.40	12 (7%) 14 5	96, 114, 143, 161	0
7	CJ	155/156 (99%)	0.05	6 (3%) 40 16	100, 119, 147, 158	0
8	AK	138/138 (100%)	-0.28	0 100 100	81, 103, 117, 132	0
8	CK	138/138 (100%)	0.02	1 (0%) 87 67	81, 109, 125, 136	0
9	AL	127/128 (99%)	0.51	13 (10%) 7 3	83, 138, 159, 166	0
9	CL	127/128 (99%)	0.09	6 (4%) 32 13	95, 147, 165, 171	0
10	AM	99/105 (94%)	0.77	14 (14%) 3 1	81, 140, 167, 178	0
10	CM	99/105 (94%)	0.83	12 (12%) 5 2	103, 154, 174, 180	0
11	AN	119/129 (92%)	0.77	13 (10%) 6 2	62, 95, 130, 161	0
11	CN	119/129 (92%)	0.21	2 (1%) 70 42	74, 99, 133, 164	0
12	AO	125/132 (94%)	-0.22	1 (0%) 86 64	59, 75, 107, 162	0
12	CO	125/132 (94%)	0.62	14 (11%) 6 2	63, 91, 126, 166	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	AP	116/126 (92%)	0.23	6 (5%) 28 11	75, 124, 143, 155	0
13	CP	117/126 (92%)	0.19	6 (5%) 29 12	91, 145, 161, 169	0
14	AQ	58/61 (95%)	-0.15	0 100 100	87, 103, 120, 127	0
14	CQ	58/61 (95%)	1.17	9 (15%) 2 1	108, 125, 150, 154	0
15	AR	88/89 (98%)	-0.14	0 100 100	70, 94, 116, 120	0
15	CR	88/89 (98%)	-0.07	0 100 100	67, 96, 124, 136	0
16	AS	84/88 (95%)	-0.36	0 100 100	87, 109, 134, 174	0
16	CS	84/88 (95%)	0.32	2 (2%) 59 30	76, 91, 118, 157	0
17	AT	100/105 (95%)	-0.35	2 (2%) 65 36	80, 102, 118, 129	0
17	CT	100/105 (95%)	0.03	2 (2%) 65 36	75, 100, 126, 144	0
18	AU	72/88 (81%)	0.56	5 (6%) 18 6	77, 97, 135, 164	0
18	CU	72/88 (81%)	0.17	2 (2%) 53 25	85, 103, 149, 172	0
19	AV	78/93 (83%)	0.12	1 (1%) 77 51	97, 120, 145, 156	0
19	CV	78/93 (83%)	0.55	5 (6%) 20 7	128, 152, 178, 186	0
20	AW	99/106 (93%)	-0.17	0 100 100	97, 121, 148, 153	0
20	CW	99/106 (93%)	0.21	2 (2%) 65 36	86, 106, 141, 153	0
21	AX	25/27 (92%)	0.21	1 (4%) 39 16	97, 107, 121, 153	0
21	CX	25/27 (92%)	0.77	2 (8%) 13 5	101, 129, 150, 171	0
22	AB	84/85 (98%)	0.73	13 (15%) 2 1	76, 148, 167, 178	0
22	AD	84/85 (98%)	0.30	11 (13%) 4 1	70, 147, 206, 218	0
22	CB	84/85 (98%)	1.59	30 (35%) 0 0	92, 155, 171, 179	0
22	CD	84/85 (98%)	-0.64	0 100 100	74, 147, 207, 212	0
23	AC	77/77 (100%)	-0.42	0 100 100	66, 91, 135, 155	0
23	CC	77/77 (100%)	-0.60	0 100 100	79, 104, 143, 165	0
24	A1	16/16 (100%)	-0.22	0 100 100	66, 97, 168, 177	0
24	C1	16/16 (100%)	-0.18	0 100 100	75, 107, 176, 183	0
25	BA	2912/2912 (100%)	-0.04	42 (1%) 75 49	39, 68, 206, 243	0
25	DA	2907/2912 (99%)	-0.18	66 (2%) 61 31	49, 82, 226, 247	0
26	BB	122/122 (100%)	-0.28	1 (0%) 86 64	65, 92, 113, 183	0
26	DB	122/122 (100%)	-0.46	2 (1%) 72 44	78, 110, 139, 198	0
27	BD	272/276 (98%)	0.02	0 100 100	39, 59, 82, 104	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
27	DD	272/276 (98%)	-0.08	1 (0%) 92 77	45, 67, 87, 120	0
28	BE	205/206 (99%)	0.11	5 (2%) 59 30	44, 77, 125, 150	0
28	DE	205/206 (99%)	0.07	9 (4%) 35 14	56, 93, 144, 157	0
29	BF	202/210 (96%)	0.08	2 (0%) 82 58	42, 75, 110, 127	0
29	DF	208/210 (99%)	0.84	22 (10%) 7 3	53, 93, 155, 185	0
30	BG	181/182 (99%)	0.94	34 (18%) 1 1	79, 105, 136, 146	0
30	DG	181/182 (99%)	0.37	8 (4%) 35 14	96, 128, 157, 168	0
31	BH	170/180 (94%)	0.13	4 (2%) 59 30	71, 105, 126, 151	0
31	DH	170/180 (94%)	1.56	56 (32%) 0 0	143, 193, 217, 231	0
32	BK	146/148 (98%)	0.46	8 (5%) 26 10	72, 120, 141, 153	0
32	DK	146/148 (98%)	-0.20	1 (0%) 87 67	73, 120, 147, 151	0
33	BM	138/140 (98%)	0.08	2 (1%) 75 49	58, 79, 115, 136	0
33	DM	138/140 (98%)	0.12	2 (1%) 75 49	72, 104, 137, 147	0
34	BN	122/122 (100%)	-0.07	0 100 100	55, 71, 87, 93	0
34	DN	122/122 (100%)	0.04	0 100 100	66, 85, 103, 110	0
35	BO	150/150 (100%)	0.31	7 (4%) 32 13	45, 82, 109, 167	0
35	DO	150/150 (100%)	0.85	22 (14%) 3 1	45, 93, 136, 174	0
36	BP	141/141 (100%)	0.17	5 (3%) 44 19	55, 77, 105, 140	0
36	DP	141/141 (100%)	0.43	14 (9%) 8 3	58, 100, 130, 154	0
37	B0	118/118 (100%)	0.00	0 100 100	53, 74, 96, 106	0
37	D0	117/118 (99%)	0.03	1 (0%) 84 61	62, 81, 100, 117	0
38	BQ	111/112 (99%)	0.73	10 (9%) 10 4	71, 91, 116, 130	0
38	DQ	111/112 (99%)	0.24	6 (5%) 26 11	73, 109, 135, 157	0
39	BR	137/146 (93%)	0.14	4 (2%) 52 24	66, 85, 135, 167	0
39	DR	137/146 (93%)	0.07	3 (2%) 62 33	73, 94, 154, 184	0
40	B1	117/118 (99%)	0.00	2 (1%) 70 42	50, 70, 98, 140	0
40	D1	117/118 (99%)	0.49	9 (7%) 14 5	60, 99, 137, 155	0
41	B2	101/101 (100%)	0.08	3 (2%) 51 23	46, 91, 116, 128	0
41	D2	101/101 (100%)	0.97	14 (13%) 3 1	63, 122, 139, 150	0
42	BS	113/113 (100%)	-0.05	1 (0%) 84 61	44, 67, 99, 152	0
42	DS	113/113 (100%)	0.16	2 (1%) 69 40	61, 75, 109, 161	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
43	BT	92/96 (95%)	0.34	3 (3%) 47 21	54, 69, 95, 112	0
43	DT	92/96 (95%)	0.22	3 (3%) 47 21	65, 81, 109, 122	0
44	BU	102/110 (92%)	0.48	5 (4%) 30 12	70, 94, 144, 165	0
44	DU	102/110 (92%)	1.47	27 (26%) 1 0	78, 111, 162, 172	0
45	BV	175/206 (84%)	1.29	37 (21%) 1 1	79, 120, 189, 194	0
45	DV	179/206 (86%)	1.88	65 (36%) 0 0	111, 152, 207, 219	0
46	B3	76/85 (89%)	0.16	2 (2%) 56 27	51, 72, 92, 125	0
46	D3	77/85 (90%)	-0.04	1 (1%) 77 51	64, 87, 110, 151	0
47	BZ	97/98 (98%)	0.44	8 (8%) 12 5	48, 71, 115, 155	0
47	DZ	97/98 (98%)	-0.07	2 (2%) 64 34	54, 74, 126, 152	0
48	BW	66/72 (91%)	0.35	2 (3%) 51 23	59, 79, 95, 127	0
48	DW	66/72 (91%)	0.40	2 (3%) 51 23	75, 99, 121, 134	0
49	BX	59/60 (98%)	-0.03	0 100 100	61, 77, 112, 131	0
49	DX	59/60 (98%)	0.58	4 (6%) 18 7	76, 103, 136, 159	0
50	B4	66/71 (92%)	2.42	38 (57%) 0 0	112, 153, 176, 181	0
50	D4	63/71 (88%)	1.98	30 (47%) 0 0	141, 181, 191, 201	0
51	B5	59/60 (98%)	0.38	6 (10%) 7 3	43, 81, 156, 165	0
51	D5	59/60 (98%)	0.82	8 (13%) 3 1	61, 84, 169, 188	0
52	B6	45/54 (83%)	5.94	44 (97%) 0 0	117, 148, 164, 173	0
52	D6	45/54 (83%)	2.59	24 (53%) 0 0	131, 164, 181, 185	0
53	B7	45/49 (91%)	-0.03	0 100 100	38, 48, 68, 85	0
53	D7	45/49 (91%)	-0.00	0 100 100	52, 59, 74, 94	0
54	B8	60/65 (92%)	0.34	2 (3%) 47 21	51, 68, 88, 115	0
54	D8	60/65 (92%)	0.34	3 (5%) 30 12	64, 80, 106, 132	0
All	All	21100/21658 (97%)	0.12	974 (4%) 33 13	38, 95, 177, 247	0

All (974) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
25	DA	654(J)	A	19.6
29	DF	1	MET	18.4
25	DA	654(L)	G	15.8
25	BA	654(J)	A	14.8
25	DA	654(K)	C	14.1

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Mol	Chain	Res	Type	RSRZ
25	BA	654(K)	C	13.5
25	DA	654(I)	C	13.4
45	BV	106	GLY	12.5
25	DA	654(F)	C	12.5
25	DA	654(M)	C	12.2
50	B4	40	HIS	11.2
45	DV	107	THR	11.1
52	B6	18	ARG	11.0
52	B6	22	ALA	10.8
44	DU	50	ARG	10.5
52	B6	23	THR	10.3
25	BA	1536	A	10.0
52	B6	13	CYS	10.0
29	DF	208	GLY	10.0
51	D5	59	GLU	9.9
25	BA	654(L)	G	9.9
52	B6	49	HIS	9.7
25	DA	654(O)	G	9.7
29	DF	14	PRO	9.5
52	B6	20	ASN	9.5
45	DV	146	ILE	9.2
25	DA	654(G)	C	9.0
44	DU	49	VAL	9.0
52	B6	42	TRP	9.0
46	B3	85	ALA	8.9
45	BV	146	ILE	8.8
52	B6	53	LYS	8.7
48	BW	43	GLN	8.6
50	B4	5	ILE	8.5
12	CO	126	ALA	8.4
22	CB	52	G	8.3
45	BV	145	GLU	8.2
50	B4	32	TYR	8.2
45	DV	179	ASP	8.2
52	B6	40	CYS	8.2
25	BA	2901	C	8.1
52	D6	13	CYS	8.0
52	B6	34	LEU	7.8
52	B6	14	THR	7.7
12	CO	125	ALA	7.5
1	CA	1032(A)	G	7.5
52	B6	29	ASN	7.4

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Mol	Chain	Res	Type	RSRZ
51	D5	53	ALA	7.4
50	D4	63	TYR	7.3
50	B4	31	ILE	7.3
45	DV	111	VAL	7.3
45	DV	178	GLU	7.3
52	B6	43	CYS	7.3
22	CB	53	A	7.3
52	B6	50	ARG	7.2
51	D5	60	VAL	7.2
48	DW	43	GLN	7.1
52	D6	12	GLU	7.1
25	DA	654(H)	G	7.1
25	DA	2797	U	7.1
1	CA	1032	A	7.0
45	BV	171	ILE	7.0
45	DV	117	LEU	7.0
44	DU	46	LYS	6.9
45	DV	176	PRO	6.9
52	B6	21	TYR	6.9
52	D6	42	TRP	6.9
51	B5	59	GLU	6.9
45	DV	148	ASP	6.8
52	B6	19	ARG	6.8
52	B6	12	GLU	6.8
45	DV	112	ARG	6.7
45	DV	172	ALA	6.7
47	BZ	96	LYS	6.6
52	D6	23	THR	6.5
52	B6	24	GLU	6.5
29	DF	12	LEU	6.5
35	DO	150	ALA	6.4
1	AA	86	U	6.4
25	DA	654(N)	G	6.3
11	AN	129	SER	6.3
51	D5	2	ALA	6.3
45	DV	144	LEU	6.3
25	DA	2901	C	6.3
52	B6	52	VAL	6.3
25	BA	2799	A	6.2
31	DH	128	PRO	6.2
30	DG	2	PRO	6.2
35	BO	149	GLU	6.2

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Mol	Chain	Res	Type	RSRZ
29	DF	10	PRO	6.1
31	DH	99	VAL	6.1
52	B6	26	ASN	6.1
45	DV	149	SER	6.1
2	CE	5	ILE	6.1
35	DO	106	LEU	6.1
38	DQ	108	GLY	6.0
52	D6	50	ARG	6.0
45	DV	106	GLY	6.0
12	AO	126	ALA	6.0
25	BA	2798	C	6.0
30	BG	2	PRO	6.0
52	B6	25	LYS	5.9
50	B4	30	GLU	5.9
44	DU	59	GLY	5.9
50	D4	31	ILE	5.9
31	DH	46	GLU	5.9
30	BG	137	GLU	5.8
52	B6	47	THR	5.8
1	CA	1033	G	5.8
41	B2	45	THR	5.8
38	BQ	111	GLU	5.8
25	BA	654(I)	C	5.8
25	DA	2799	A	5.8
25	DA	654(P)	G	5.7
42	DS	112	GLY	5.7
25	DA	2900	A	5.7
50	B4	3	GLU	5.7
5	CH	155	GLU	5.7
11	AN	11	LYS	5.7
47	BZ	98	LEU	5.7
25	DA	1093	G	5.7
45	DV	138	GLU	5.6
52	B6	41	PRO	5.6
31	DH	47	GLU	5.6
29	DF	2	LYS	5.6
45	DV	121	HIS	5.6
14	CQ	39	LEU	5.6
41	D2	91	TYR	5.6
52	B6	33	LYS	5.6
41	B2	36	PRO	5.5
51	B5	60	VAL	5.5

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Mol	Chain	Res	Type	RSRZ
51	B5	2	ALA	5.5
25	DA	2798	C	5.5
40	B1	118	GLY	5.5
44	DU	58	GLY	5.5
31	DH	98	LEU	5.5
25	DA	654(E)	C	5.4
52	D6	43	CYS	5.4
52	D6	25	LYS	5.4
52	B6	31	PRO	5.4
2	CE	4	GLU	5.3
11	AN	12	ARG	5.3
52	B6	45	LYS	5.3
52	B6	51	GLU	5.2
11	CN	129	SER	5.2
45	BV	1	MET	5.2
22	CB	80	C	5.2
50	D4	35	VAL	5.1
50	D4	32	TYR	5.1
41	D2	36	PRO	5.1
22	CB	54	C	5.1
52	B6	39	TYR	5.1
45	DV	143	GLY	5.1
45	DV	145	GLU	5.0
25	BA	2797	U	5.0
44	DU	47	LYS	5.0
28	DE	69	LYS	5.0
52	B6	30	THR	5.0
30	BG	182	LYS	5.0
44	DU	79	CYS	5.0
31	DH	155	SER	5.0
40	B1	117	GLN	5.0
45	DV	28	MET	4.9
22	CB	65	C	4.9
52	B6	15	GLU	4.9
25	DA	1177	A	4.9
29	DF	11	VAL	4.9
10	AM	24	VAL	4.8
50	B4	39	CYS	4.8
52	B6	37	ARG	4.8
25	BA	277	C	4.8
45	DV	147	GLY	4.8
41	D2	45	THR	4.8

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Mol	Chain	Res	Type	RSRZ
31	DH	24	VAL	4.7
45	BV	105	VAL	4.7
25	BA	1534	G	4.7
36	DP	33	GLY	4.7
28	DE	205	ALA	4.7
44	BU	50	ARG	4.6
52	B6	28	ARG	4.6
35	DO	149	GLU	4.6
52	B6	46	HIS	4.6
29	BF	134	GLY	4.6
45	BV	144	LEU	4.6
35	DO	91	PHE	4.6
38	BQ	2	ALA	4.6
28	BE	205	ALA	4.6
28	BE	204	ALA	4.6
44	DU	48	ALA	4.6
22	CB	16	C	4.5
25	BA	3	U	4.5
1	CA	1031	G	4.5
42	DS	113	LYS	4.5
13	CP	8	GLU	4.5
45	DV	96	VAL	4.5
22	AB	16	C	4.5
45	BV	173	ALA	4.5
1	CA	1032(B)	G	4.5
25	DA	2899	G	4.5
50	B4	13	ARG	4.5
22	CB	51	C	4.5
25	BA	4	C	4.5
29	DF	20	LEU	4.4
41	D2	93	GLU	4.4
52	D6	49	HIS	4.4
30	DG	139	LEU	4.4
52	D6	14	THR	4.4
2	AE	232	PRO	4.4
45	BV	113	ALA	4.4
25	BA	163	U	4.3
44	DU	92	ASN	4.3
31	DH	33	LEU	4.3
40	D1	118	GLY	4.3
25	BA	654(F)	C	4.3
45	DV	55	HIS	4.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
22	CB	66	G	4.3
28	DE	204	ALA	4.3
18	CU	88	LYS	4.2
35	DO	108	LYS	4.2
25	DA	654	A	4.2
25	BA	2902	C	4.2
51	D5	58	LEU	4.2
44	DU	44	ILE	4.2
45	DV	141	VAL	4.2
51	B5	54	GLY	4.2
7	AJ	78	ARG	4.2
25	DA	1057	A	4.2
1	CA	1027	C	4.2
2	CE	14	GLY	4.2
31	BH	155	SER	4.2
41	D2	94	LEU	4.2
50	D4	24	THR	4.2
3	CF	76	VAL	4.2
25	BA	2	G	4.2
2	AE	15	VAL	4.1
29	DF	23	ASP	4.1
50	D4	58	ARG	4.1
51	D5	54	GLY	4.1
22	AB	82	A	4.1
25	DA	1536	A	4.1
25	DA	1094	U	4.1
39	DR	1	MET	4.1
13	CP	7	VAL	4.1
25	BA	654(O)	G	4.1
31	DH	25	LYS	4.1
29	DF	21	ALA	4.1
25	BA	1	G	4.1
17	CT	101	ARG	4.0
10	CM	101	VAL	4.0
31	DH	96	ALA	4.0
31	DH	94	TYR	4.0
2	CE	165	VAL	4.0
31	DH	48	GLY	4.0
22	AD	55	U	4.0
26	BB	1(M)	A	4.0
50	B4	34	GLU	4.0
13	AP	8	GLU	4.0

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Mol	Chain	Res	Type	RSRZ
52	D6	41	PRO	4.0
25	DA	654(S)	G	4.0
52	B6	35	GLU	4.0
30	DG	155	MET	4.0
1	CA	84	U	4.0
31	DH	153	LYS	3.9
44	DU	86	ARG	3.9
31	DH	125	VAL	3.9
25	DA	1068	G	3.9
1	CA	85	U	3.9
45	DV	177	PRO	3.9
10	CM	47	PHE	3.9
18	AU	19	LYS	3.9
30	BG	26	GLN	3.9
3	CF	19	GLU	3.9
18	AU	88	LYS	3.9
25	DA	1067	A	3.9
31	DH	44	VAL	3.9
52	D6	39	TYR	3.9
21	CX	23	PRO	3.9
22	AD	53	A	3.9
22	CB	24	G	3.9
25	BA	654(P)	G	3.9
25	BA	2795	G	3.8
31	DH	21	PRO	3.8
47	DZ	98	LEU	3.8
50	B4	6	HIS	3.8
9	AL	8	GLY	3.8
31	DH	81	GLU	3.8
31	DH	105	LEU	3.8
47	BZ	94	LEU	3.8
31	DH	70	THR	3.8
29	DF	207	GLY	3.8
50	D4	29	PRO	3.8
50	D4	10	VAL	3.8
29	DF	133	ASN	3.7
50	B4	29	PRO	3.7
22	AD	49	A	3.7
31	DH	97	ARG	3.7
25	DA	3	U	3.7
50	B4	64	GLY	3.7
13	CP	2	ALA	3.7

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Mol	Chain	Res	Type	RSRZ
50	B4	28	LYS	3.7
31	DH	49	VAL	3.7
7	AJ	154	TYR	3.7
30	BG	88	ILE	3.7
39	BR	1	MET	3.7
31	DH	53	GLU	3.7
45	DV	110	GLY	3.7
29	DF	199	TRP	3.7
45	DV	173	ALA	3.7
45	BV	141	VAL	3.7
25	BA	654(G)	C	3.7
25	BA	2900	A	3.7
38	BQ	108	GLY	3.6
31	DH	41	MET	3.6
30	BG	136	ARG	3.6
9	AL	19	LEU	3.6
31	DH	17	VAL	3.6
44	BU	53	PRO	3.6
50	D4	14	ILE	3.6
38	BQ	110	LEU	3.6
10	AM	99	LYS	3.6
33	DM	1	MET	3.6
52	D6	40	CYS	3.6
25	BA	1537	C	3.6
9	AL	102	LEU	3.6
22	AD	54	C	3.6
22	CB	18	G	3.6
45	BV	148	ASP	3.6
50	B4	26	SER	3.6
30	DG	39	ILE	3.6
7	CJ	81	GLY	3.6
36	BP	141	GLN	3.6
54	D8	40	GLU	3.6
45	DV	72	ARG	3.6
31	DH	26	VAL	3.6
40	D1	90	VAL	3.6
22	CB	17	G	3.6
42	BS	113	LYS	3.5
10	CM	10	GLY	3.5
52	B6	16	CYS	3.5
35	BO	150	ALA	3.5
52	D6	26	ASN	3.5

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Mol	Chain	Res	Type	RSRZ
3	CF	64	VAL	3.5
7	AJ	84	ASN	3.5
25	DA	654(Q)	C	3.5
45	DV	142	SER	3.5
9	AL	2	GLU	3.5
10	AM	75	ILE	3.5
45	BV	107	THR	3.5
1	AA	84	U	3.5
44	DU	88	LYS	3.5
2	AE	96	ARG	3.5
13	CP	6	GLY	3.5
52	B6	44	ARG	3.5
32	BK	74	ASN	3.5
25	DA	1535	U	3.5
47	BZ	92	LYS	3.5
35	DO	92	GLU	3.5
45	BV	153	SER	3.5
50	D4	8	LYS	3.5
25	DA	1072	C	3.4
45	DV	152	ALA	3.5
30	BG	139	LEU	3.4
30	DG	142	PRO	3.4
25	DA	1046	A	3.4
50	B4	38	LYS	3.4
3	CF	184	TYR	3.4
45	DV	63	ASP	3.4
31	DH	51	ARG	3.4
22	CB	79	A	3.4
32	BK	146	ALA	3.4
45	DV	170	THR	3.4
52	D6	22	ALA	3.4
50	D4	30	GLU	3.4
3	CF	56	ASP	3.4
40	D1	91	ASP	3.4
31	BH	34	GLU	3.4
30	BG	135	LEU	3.4
1	CA	1026	G	3.4
45	BV	172	ALA	3.4
9	AL	4	TYR	3.4
12	CO	25	LYS	3.4
25	DA	1078	U	3.4
36	DP	102	VAL	3.4

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Mol	Chain	Res	Type	RSRZ
3	CF	44	GLU	3.4
28	DE	54	GLN	3.4
45	DV	153	SER	3.4
52	B6	11	LEU	3.3
45	BV	99	TYR	3.3
31	DH	43	VAL	3.3
45	DV	108	PRO	3.3
44	DU	91	GLU	3.3
25	BA	2899	G	3.3
22	AB	85	A	3.3
31	DH	45	VAL	3.3
45	DV	86	VAL	3.3
50	B4	49	PHE	3.3
44	DU	45	VAL	3.3
14	CQ	13	THR	3.3
52	D6	51	GLU	3.3
45	DV	53	ILE	3.3
14	CQ	11	LYS	3.3
25	DA	1060	U	3.3
22	CB	85	A	3.3
10	AM	5	ARG	3.3
10	AM	21	GLN	3.3
35	DO	61	ARG	3.3
45	BV	142	SER	3.3
25	DA	4	C	3.3
31	DH	4	ILE	3.3
3	CF	87	LEU	3.3
47	BZ	97	LEU	3.3
22	CB	83	C	3.2
25	DA	1176	G	3.2
1	AA	1032	A	3.2
50	B4	12	ALA	3.2
38	BQ	109	GLY	3.2
9	AL	18	PHE	3.2
25	BA	5	A	3.2
45	DV	171	ILE	3.2
31	DH	52	VAL	3.2
52	D6	20	ASN	3.2
10	CM	85	LEU	3.2
31	DH	168	PRO	3.2
41	D2	12	TYR	3.2
44	DU	102	CYS	3.2

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Mol	Chain	Res	Type	RSRZ
22	AD	48	C	3.2
52	B6	48	VAL	3.2
29	DF	27	GLU	3.2
50	B4	66	SER	3.2
29	DF	26	ALA	3.2
45	BV	164	ALA	3.2
50	D4	28	LYS	3.2
50	D4	33	VAL	3.2
25	BA	654(E)	C	3.2
25	DA	1088	A	3.2
10	AM	3	LYS	3.2
28	DE	59	VAL	3.2
45	DV	25	PRO	3.2
1	CA	1029	G	3.2
19	CV	78	ARG	3.2
50	D4	55	ARG	3.2
50	D4	40	HIS	3.2
25	DA	1081	U	3.1
31	DH	150	ALA	3.1
1	AA	85	U	3.1
6	AI	101	ALA	3.1
52	B6	10	LEU	3.1
25	DA	1095	A	3.1
47	DZ	97	LEU	3.1
49	DX	2	PRO	3.1
14	CQ	58	LYS	3.1
2	CE	9	GLU	3.1
31	DH	32	GLU	3.1
41	D2	34	GLU	3.1
31	BH	3	ARG	3.1
36	DP	63	LYS	3.1
39	BR	21	GLU	3.1
50	B4	11	PRO	3.1
45	DV	70	LEU	3.1
45	DV	116	VAL	3.1
50	D4	57	GLU	3.1
25	BA	654(Q)	C	3.1
54	B8	34	TRP	3.1
31	DH	95	ARG	3.1
45	DV	69	THR	3.1
45	BV	2	GLU	3.1
3	CF	60	ALA	3.1

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Mol	Chain	Res	Type	RSRZ
45	DV	59	LEU	3.1
28	DE	76	ARG	3.0
26	DB	1(M)	A	3.0
35	DO	90	ARG	3.0
2	AE	107	THR	3.0
45	DV	4	ARG	3.0
22	CB	78	C	3.0
45	DV	150	LEU	3.0
44	BU	2	ARG	3.0
22	AD	51	C	3.0
25	BA	1535	U	3.0
47	BZ	93	GLU	3.0
19	AV	41	VAL	3.0
45	DV	57	ILE	3.0
25	BA	654(S)	G	3.0
45	DV	151	HIS	3.0
2	CE	232	PRO	3.0
44	DU	53	PRO	3.0
13	AP	2	ALA	3.0
22	AB	74	C	3.0
11	AN	36	ASP	3.0
50	D4	56	VAL	3.0
45	BV	147	GLY	2.9
19	CV	71	LEU	2.9
36	DP	37	LEU	2.9
46	D3	85	ALA	2.9
25	BA	2131	G	2.9
44	DU	103	GLY	2.9
3	CF	104	GLN	2.9
9	AL	17	VAL	2.9
50	D4	7	PRO	2.9
22	CB	74	C	2.9
31	DH	170	ARG	2.9
36	DP	60	ARG	2.9
40	D1	69	CYS	2.9
35	BO	106	LEU	2.9
3	CF	201	TYR	2.9
30	BG	144	ILE	2.9
22	CB	50	U	2.9
45	DV	56	VAL	2.9
22	CB	19	C	2.9
35	DO	79	ARG	2.9

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Mol	Chain	Res	Type	RSRZ
45	BV	87	ASP	2.9
12	CO	66	TYR	2.9
51	D5	51	TYR	2.9
25	DA	1064	C	2.9
44	DU	89	PHE	2.9
45	DV	168	GLU	2.9
41	D2	5	VAL	2.9
39	DR	2	ASN	2.9
31	DH	67	LEU	2.9
32	BK	139	GLN	2.9
3	AF	72	LYS	2.9
35	DO	107	LYS	2.9
41	B2	101	GLY	2.9
25	DA	893	C	2.9
10	CM	66	ARG	2.9
14	CQ	57	ARG	2.9
45	BV	121	HIS	2.9
25	DA	2138	C	2.8
30	BG	164	GLU	2.8
22	CB	23	A	2.8
22	AB	19	C	2.8
21	CX	2	GLY	2.8
41	D2	38	LEU	2.8
50	B4	33	VAL	2.8
50	D4	13	ARG	2.8
52	D6	31	PRO	2.8
29	DF	175	THR	2.8
33	BM	130	HIS	2.8
30	BG	152	LEU	2.8
44	DU	2	ARG	2.8
25	DA	1058	U	2.8
22	AB	80	C	2.8
25	DA	1079	C	2.8
9	CL	115	GLY	2.8
14	CQ	6	LEU	2.8
50	B4	14	ILE	2.8
50	B4	55	ARG	2.8
10	AM	85	LEU	2.8
11	AN	82	VAL	2.8
22	CB	4	G	2.8
50	B4	52	THR	2.8
49	DX	26	LEU	2.8

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Mol	Chain	Res	Type	RSRZ
30	BG	141	PHE	2.8
30	BG	60	LEU	2.8
3	AF	184	TYR	2.8
27	DD	26	LYS	2.8
30	BG	178	PHE	2.8
52	B6	38	LYS	2.8
30	BG	143	GLU	2.7
30	DG	137	GLU	2.7
22	AD	52	G	2.7
25	DA	1087	G	2.7
47	BZ	80	LEU	2.7
9	CL	36	TYR	2.7
30	DG	146	TYR	2.7
51	D5	56	LYS	2.7
52	B6	36	LEU	2.7
25	BA	2801	A	2.7
41	D2	92	THR	2.7
45	DV	50	GLN	2.7
7	CJ	82	GLY	2.7
22	CB	3	U	2.7
41	D2	35	LEU	2.7
38	DQ	2	ALA	2.7
50	D4	11	PRO	2.7
43	DT	92	LEU	2.7
13	AP	5	ALA	2.7
25	DA	2	G	2.7
45	DV	137	ILE	2.7
45	BV	70	LEU	2.7
7	AJ	82	GLY	2.7
30	BG	93	THR	2.7
22	CB	15	G	2.7
3	CF	7	PRO	2.7
50	B4	37	SER	2.7
7	CJ	32	ARG	2.7
3	CF	103	VAL	2.7
29	DF	18	ARG	2.7
45	BV	72	ARG	2.7
45	DV	51	ALA	2.7
30	BG	75	LYS	2.7
44	DU	60	PHE	2.7
31	DH	124	GLU	2.7
52	B6	32	ASN	2.7

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Mol	Chain	Res	Type	RSRZ
3	CF	101	LEU	2.7
25	DA	1089	G	2.7
12	CO	124	GLU	2.7
38	BQ	7	TYR	2.7
50	D4	12	ALA	2.7
54	D8	35	GLN	2.7
45	DV	27	VAL	2.6
22	AB	20	C	2.6
50	B4	2	LYS	2.6
3	AF	87	LEU	2.6
50	B4	48	ARG	2.6
50	B4	20	ASN	2.6
12	CO	65	ALA	2.6
30	BG	146	TYR	2.6
50	B4	22	ILE	2.6
3	CF	206	GLU	2.6
31	DH	50	VAL	2.6
33	DM	133	GLN	2.6
9	CL	102	LEU	2.6
22	AB	23	A	2.6
49	DX	30	ARG	2.6
28	BE	187	ALA	2.6
7	AJ	81	GLY	2.6
50	D4	34	GLU	2.6
54	D8	34	TRP	2.6
36	DP	1	MET	2.6
3	CF	10	PHE	2.6
30	BG	106	LEU	2.6
25	DA	1066	U	2.6
35	BO	105	LEU	2.6
36	DP	140	ALA	2.6
45	DV	9	TYR	2.6
4	CG	179	GLU	2.6
45	DV	128	VAL	2.6
52	D6	46	HIS	2.6
11	AN	83	ILE	2.6
7	AJ	85	TYR	2.6
13	CP	85	GLY	2.6
39	BR	2	ASN	2.6
30	DG	133	LEU	2.6
41	D2	40	LEU	2.6
36	DP	141	GLN	2.6

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Mol	Chain	Res	Type	RSRZ
38	DQ	37	ALA	2.6
3	CF	62	ASP	2.6
14	CQ	38	GLY	2.6
45	DV	83	PRO	2.6
38	DQ	73	LEU	2.6
45	BV	136	PHE	2.6
45	DV	3	TYR	2.6
3	AF	56	ASP	2.6
3	CF	53	ALA	2.5
10	CM	34	VAL	2.5
10	CM	17	ASP	2.5
11	AN	21	ILE	2.5
30	BG	80	PHE	2.5
50	D4	27	THR	2.5
7	AJ	83	ALA	2.5
29	BF	6	VAL	2.5
3	CF	52	LEU	2.5
19	CV	31	ILE	2.5
30	BG	39	ILE	2.5
3	CF	63	ASN	2.5
10	AM	20	ALA	2.5
30	BG	35	GLU	2.5
43	BT	92	LEU	2.5
25	BA	2167	U	2.5
29	DF	167	ALA	2.5
40	D1	117	GLN	2.5
2	AE	222	ILE	2.5
44	DU	63	LYS	2.5
5	AH	155	GLU	2.5
7	AJ	56	GLN	2.5
2	CE	163	PHE	2.5
14	CQ	49	HIS	2.5
31	DH	35	VAL	2.5
2	CE	156	LYS	2.5
22	AB	54	C	2.5
25	BA	278	A	2.5
25	DA	229	A	2.5
9	CL	79	LEU	2.5
50	B4	8	LYS	2.5
6	AI	57	GLN	2.5
28	DE	77	ILE	2.5
10	CM	86	MET	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
35	DO	99	LEU	2.4
52	B6	9	LEU	2.4
22	CB	72	U	2.4
50	B4	25	TYR	2.4
7	AJ	16	LEU	2.4
22	AB	1	G	2.4
30	BG	37	VAL	2.4
13	CP	4	ILE	2.4
11	AN	81	ASP	2.4
2	AE	14	GLY	2.4
32	BK	75	LEU	2.4
30	BG	118	ARG	2.4
36	DP	65	PHE	2.4
6	AI	7	ASN	2.4
25	DA	1537	C	2.4
31	DH	34	GLU	2.4
16	CS	73	LEU	2.4
35	BO	1	MET	2.4
32	BK	107	VAL	2.4
4	CG	168	ARG	2.4
35	DO	118	GLY	2.4
18	AU	23	LYS	2.4
1	CA	1030	C	2.4
25	DA	2795	G	2.4
9	CL	4	TYR	2.4
52	D6	24	GLU	2.4
51	B5	3	LYS	2.4
10	AM	98	ILE	2.4
2	AE	165	VAL	2.4
50	D4	44	THR	2.4
7	CJ	153	HIS	2.4
30	BG	76	SER	2.4
1	CA	1035	A	2.4
2	CE	240	GLN	2.4
25	DA	654(A)	A	2.4
31	DH	115	VAL	2.4
3	CF	186	PHE	2.4
45	DV	88	PHE	2.4
45	DV	95	PRO	2.4
29	DF	176	LEU	2.4
50	B4	53	GLU	2.4
52	B6	17	LYS	2.4

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Mol	Chain	Res	Type	RSRZ
45	DV	105	VAL	2.4
36	DP	104	PHE	2.4
13	AP	3	ARG	2.4
32	BK	113	ARG	2.4
2	AE	133	LYS	2.4
11	AN	89	ALA	2.4
29	DF	7	TYR	2.4
3	CF	39	ILE	2.4
50	B4	24	THR	2.4
50	B4	27	THR	2.4
25	DA	654(D)	G	2.4
47	BZ	95	LEU	2.4
50	B4	44	THR	2.4
31	DH	22	GLY	2.3
31	BH	83	TYR	2.3
36	BP	140	ALA	2.3
29	DF	114	VAL	2.3
51	B5	57	VAL	2.3
40	D1	71	GLN	2.3
44	BU	52	SER	2.3
9	AL	98	PRO	2.3
22	AD	47	U	2.3
10	AM	8	LEU	2.3
44	DU	85	VAL	2.3
45	BV	156	LYS	2.3
3	CF	178	LEU	2.3
4	CG	5	ILE	2.3
25	DA	654(R)	C	2.3
30	BG	108	ASN	2.3
44	DU	5	MET	2.3
31	DH	101	ARG	2.3
9	AL	52	ALA	2.3
35	DO	88	LEU	2.3
43	DT	89	ILE	2.3
2	CE	152	PHE	2.3
3	CF	80	GLY	2.3
30	BG	181	ARG	2.3
35	BO	108	LYS	2.3
45	DV	24	LEU	2.3
14	CQ	37	PHE	2.3
29	DF	163	VAL	2.3
32	BK	141	LYS	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
25	BA	654(D)	G	2.3
2	AE	31	TYR	2.3
3	CF	55	VAL	2.3
36	BP	1	MET	2.3
3	CF	179	ARG	2.3
10	AM	28	ARG	2.3
13	AP	6	GLY	2.3
18	AU	18	ARG	2.3
31	DH	126	PRO	2.3
45	BV	117	LEU	2.3
1	AA	1129	C	2.3
40	D1	89	GLU	2.3
3	AF	101	LEU	2.3
11	AN	98	LEU	2.3
9	AL	93	ARG	2.3
25	BA	654(H)	G	2.3
3	CF	72	LYS	2.3
6	AI	6	VAL	2.3
50	D4	6	HIS	2.3
50	D4	47	GLN	2.3
50	D4	59	PHE	2.3
50	B4	4	GLY	2.3
25	DA	1092	C	2.3
2	AE	234	PRO	2.3
28	BE	26	ILE	2.3
36	DP	64	ILE	2.3
9	CL	87	GLN	2.3
17	CT	100	LYS	2.3
30	BG	74	LYS	2.3
44	DU	87	LYS	2.3
25	BA	2135	A	2.3
45	DV	29	TYR	2.3
22	CB	62	G	2.2
3	CF	21	ARG	2.2
35	DO	148	LEU	2.2
25	BA	654(R)	C	2.2
45	BV	143	GLY	2.2
25	DA	1077	A	2.2
45	BV	140	ASP	2.2
11	CN	13	GLN	2.2
25	BA	2146	C	2.2
52	D6	21	TYR	2.2

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Mol	Chain	Res	Type	RSRZ
18	CU	87	ARG	2.2
39	DR	129	ARG	2.2
28	BE	69	LYS	2.2
45	DV	155	LEU	2.2
11	AN	29	ILE	2.2
25	DA	887	A	2.2
22	AB	52	G	2.2
31	DH	69	ARG	2.2
50	B4	63	TYR	2.2
36	BP	85	LYS	2.2
48	BW	40	SER	2.2
13	AP	4	ILE	2.2
50	B4	21	VAL	2.2
3	AF	79	ARG	2.2
12	CO	53	ALA	2.2
25	DA	1098	A	2.2
25	BA	162	U	2.2
25	DA	1063	G	2.2
44	DU	29	GLU	2.2
2	CE	6	THR	2.2
44	DU	56	PRO	2.2
54	B8	35	GLN	2.2
20	CW	86	ARG	2.2
3	AF	185	GLY	2.2
19	CV	80	TYR	2.2
36	BP	86	GLY	2.2
2	AE	68	ILE	2.2
25	DA	2167	U	2.2
31	DH	140	LYS	2.2
36	DP	103	MET	2.2
46	B3	57	PHE	2.2
50	D4	42	PHE	2.2
40	D1	88	ILE	2.2
9	AL	100	GLY	2.2
28	DE	73	GLU	2.2
36	DP	23	GLY	2.2
7	CJ	83	ALA	2.2
22	CB	81	C	2.2
30	BG	82	LEU	2.2
31	DH	29	PRO	2.2
52	D6	9	LEU	2.2
45	BV	98	MET	2.2

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Mol	Chain	Res	Type	RSRZ
31	DH	40	GLU	2.2
2	CE	150	SER	2.2
10	AM	35	SER	2.2
50	D4	39	CYS	2.2
3	CF	188	LEU	2.2
33	BM	131	GLN	2.2
38	BQ	59	LYS	2.2
45	BV	63	ASP	2.2
22	CB	61	G	2.2
38	DQ	60	GLY	2.2
20	CW	104	LEU	2.2
32	BK	65	ALA	2.2
22	CB	67	A	2.2
11	AN	14	VAL	2.2
17	AT	101	ARG	2.2
35	DO	100	LEU	2.2
8	CK	70	GLN	2.2
25	DA	1059	G	2.2
31	DH	154	PRO	2.2
35	DO	1	MET	2.2
38	DQ	49	VAL	2.2
31	DH	103	LEU	2.1
35	BO	110	TYR	2.1
35	DO	147	LEU	2.1
25	DA	888	C	2.1
22	AD	50	U	2.1
45	BV	118	GLN	2.1
5	AH	154	GLY	2.1
35	DO	121	LYS	2.1
22	AB	17	G	2.1
17	AT	36	ILE	2.1
36	DP	22	LYS	2.1
45	DV	2	GLU	2.1
31	DH	82	GLY	2.1
37	D0	69	ASP	2.1
10	CM	63	PHE	2.1
16	CS	59	TRP	2.1
40	D1	106	PHE	2.1
25	BA	896	A	2.1
25	DA	654(U)	A	2.1
7	CJ	80	VAL	2.1
30	BG	94	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
41	D2	64	HIS	2.1
3	CF	67	THR	2.1
21	AX	26	LYS	2.1
28	DE	58	ARG	2.1
44	BU	91	GLU	2.1
4	AG	21	LEU	2.1
6	AI	56	PRO	2.1
45	DV	115	GLY	2.1
3	CF	183	ASP	2.1
10	CM	64	GLU	2.1
31	DH	18	GLU	2.1
52	D6	30	THR	2.1
52	D6	47	THR	2.1
45	BV	88	PHE	2.1
22	CB	48	C	2.1
30	BG	5	VAL	2.1
45	BV	162	GLU	2.1
32	DK	78	THR	2.1
38	BQ	35	ILE	2.1
10	AM	72	VAL	2.1
45	BV	165	VAL	2.1
1	CA	208	U	2.1
48	DW	41	ILE	2.1
2	CE	115	LEU	2.1
22	CB	84	C	2.1
25	DA	654(B)	C	2.1
31	DH	87	LEU	2.1
35	DO	138	LEU	2.1
3	CF	109	PRO	2.1
3	CF	58	GLU	2.1
9	AL	15	ALA	2.1
12	CO	61	TYR	2.1
45	BV	116	VAL	2.1
25	DA	1096	A	2.1
43	BT	89	ILE	2.1
18	AU	79	LEU	2.1
22	CB	69	U	2.1
31	DH	68	THR	2.1
45	DV	34	ASN	2.1
2	CE	237	ALA	2.1
10	AM	7	LYS	2.1
43	BT	26	TYR	2.1

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Mol	Chain	Res	Type	RSRZ
52	D6	48	VAL	2.1
22	AD	15	G	2.1
12	CO	44	LYS	2.1
50	B4	7	PRO	2.1
30	BG	53	LEU	2.1
7	AJ	11	GLN	2.0
45	BV	54	HIS	2.1
10	CM	9	ARG	2.0
19	CV	25	LYS	2.0
31	DH	55	PRO	2.0
12	CO	29	PHE	2.0
31	DH	134	SER	2.0
35	DO	87	ASP	2.0
49	DX	29	ARG	2.0
45	BV	41	LEU	2.0
25	BA	654(N)	G	2.0
30	BG	89	GLY	2.0
44	DU	34	LYS	2.0
2	CE	48	MET	2.0
35	DO	102	ARG	2.0
3	CF	6	HIS	2.0
38	BQ	107	GLU	2.0
12	CO	82	ILE	2.0
22	AB	77	C	2.0
26	DB	88	C	2.0
30	BG	103	LEU	2.0
35	DO	105	LEU	2.0
10	CM	89	ASP	2.0
25	DA	2156	G	2.0
43	DT	69	TYR	2.0
9	AL	101	PHE	2.0
45	DV	68	PRO	2.0
11	AN	110	ASP	2.0
12	CO	52	VAL	2.0
38	BQ	36	TYR	2.0
45	DV	87	ASP	2.0
50	D4	9	LEU	2.0
22	AD	46	G	2.0
39	BR	22	PHE	2.0
5	CH	130	ASN	2.0
7	AJ	86	GLN	2.0
7	AJ	79	ARG	2.0

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Mol	Chain	Res	Type	RSRZ
12	CO	36	VAL	2.0
12	CO	37	VAL	2.0
41	D2	14	VAL	2.0

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

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
22	MIA	CB	38	29/30	0.94	0.19	-	63,95,112,126	0
22	MIA	AB	38	29/30	0.96	0.18	-	65,78,90,93	0
22	MIA	AD	38	29/30	0.92	0.18	-	98,122,141,145	0
22	MIA	CD	38	29/30	0.94	0.21	-	101,121,146,154	0

## 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, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
55	MG	BA	3492	1/1	0.97	0.39	37.87	54,54,54,54	0
55	MG	BA	3300	1/1	0.78	0.43	36.77	80,80,80,80	0
55	MG	AA	1683	1/1	0.78	0.41	35.48	87,87,87,87	0
55	MG	AA	1740	1/1	0.91	0.45	35.39	76,76,76,76	0
55	MG	BA	3540	1/1	0.74	0.43	35.31	83,83,83,83	0
55	MG	AA	1681	1/1	0.89	0.39	34.94	72,72,72,72	0
55	MG	AA	1698	1/1	0.97	0.48	31.98	76,76,76,76	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	CA	1742	1/1	0.47	0.92	29.22	108,108,108,108	0
55	MG	BA	3184	1/1	0.91	0.46	29.10	46,46,46,46	0
55	MG	BA	3522	1/1	0.92	0.42	28.63	45,45,45,45	0
55	MG	BA	3546	1/1	0.64	0.47	28.56	101,101,101,101	0
55	MG	BA	3144	1/1	0.97	0.42	28.19	39,39,39,39	0
55	MG	AA	1652	1/1	0.95	0.43	27.94	72,72,72,72	0
55	MG	DA	3318	1/1	0.81	0.28	27.54	77,77,77,77	0
55	MG	BA	3182	1/1	0.96	0.50	27.23	45,45,45,45	0
55	MG	BA	3499	1/1	0.96	0.48	26.35	38,38,38,38	0
55	MG	CA	1720	1/1	0.90	0.35	26.25	68,68,68,68	0
55	MG	BA	3454	1/1	0.90	0.54	26.24	80,80,80,80	0
55	MG	DA	3123	1/1	0.93	0.42	23.66	50,50,50,50	0
55	MG	BA	3346	1/1	0.84	0.53	23.44	69,69,69,69	0
55	MG	DA	3089	1/1	0.85	0.43	22.52	60,60,60,60	0
55	MG	DA	3362	1/1	0.85	0.31	22.35	150,150,150,150	0
55	MG	BA	3116	1/1	0.94	0.47	22.28	50,50,50,50	0
55	MG	BA	3161	1/1	0.99	0.44	21.78	45,45,45,45	0
55	MG	BA	3010	1/1	0.93	0.38	21.68	45,45,45,45	0
55	MG	CA	1639	1/1	0.94	0.38	21.12	59,59,59,59	0
55	MG	CA	1638	1/1	0.78	0.33	20.84	68,68,68,68	0
55	MG	BA	3083	1/1	0.89	0.50	20.64	47,47,47,47	0
55	MG	BA	3172	1/1	0.84	0.44	20.38	74,74,74,74	0
55	MG	BA	3157	1/1	0.96	0.50	20.37	50,50,50,50	0
55	MG	DA	3430	1/1	0.96	0.42	19.33	52,52,52,52	0
55	MG	BA	3389	1/1	0.96	0.31	19.26	56,56,56,56	0
55	MG	BA	3150	1/1	0.93	0.49	19.14	49,49,49,49	0
55	MG	DA	3059	1/1	0.98	0.30	19.12	61,61,61,61	0
55	MG	BA	3006	1/1	0.97	0.44	18.78	58,58,58,58	0
55	MG	DA	3453	1/1	0.93	0.41	18.49	65,65,65,65	0
55	MG	DA	3115	1/1	0.92	0.45	18.44	64,64,64,64	0
55	MG	DA	3307	1/1	0.80	0.32	18.43	99,99,99,99	0
55	MG	BA	3167	1/1	0.95	0.39	18.30	45,45,45,45	0
55	MG	BA	3055	1/1	0.95	0.34	18.04	78,78,78,78	0
55	MG	BA	3549	1/1	0.96	0.45	17.86	55,55,55,55	0
55	MG	BA	3088	1/1	0.97	0.43	17.67	57,57,57,57	0
55	MG	BA	3127	1/1	0.83	0.42	17.58	73,73,73,73	0
55	MG	BA	3059	1/1	0.98	0.32	17.18	63,63,63,63	0
55	MG	BA	3352	1/1	0.74	0.39	17.16	75,75,75,75	0
55	MG	DA	3071	1/1	0.89	0.39	17.14	57,57,57,57	0
55	MG	BA	3004	1/1	0.98	0.36	16.42	36,36,36,36	0
55	MG	BA	3337	1/1	0.92	0.45	16.32	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3490	1/1	0.98	0.37	16.29	36,36,36,36	0
55	MG	BA	3124	1/1	0.95	0.34	16.27	66,66,66,66	0
55	MG	DA	3056	1/1	0.95	0.44	16.23	52,52,52,52	0
55	MG	DA	3107	1/1	0.95	0.38	16.19	55,55,55,55	0
55	MG	BA	3223	1/1	0.96	0.48	16.12	56,56,56,56	0
55	MG	DA	3470	1/1	0.98	0.33	16.10	54,54,54,54	0
55	MG	DA	3174	1/1	0.95	0.38	15.83	63,63,63,63	0
55	MG	CA	1744	1/1	0.84	0.28	15.74	73,73,73,73	0
55	MG	AA	1659	1/1	0.97	0.40	15.54	46,46,46,46	0
55	MG	BA	3129	1/1	0.92	0.41	15.24	50,50,50,50	0
55	MG	CA	1776	1/1	0.69	0.31	14.75	118,118,118,118	0
55	MG	BA	3518	1/1	0.97	0.49	14.72	36,36,36,36	0
55	MG	DA	3202	1/1	0.89	0.34	14.59	67,67,67,67	0
55	MG	BA	3435	1/1	0.99	0.46	14.31	49,49,49,49	0
55	MG	BA	3131	1/1	0.94	0.38	14.16	41,41,41,41	0
55	MG	BA	3087	1/1	0.95	0.35	14.13	38,38,38,38	0
55	MG	DA	3045	1/1	0.98	0.43	14.02	71,71,71,71	0
55	MG	AA	1788	1/1	0.27	0.27	13.88	98,98,98,98	0
55	MG	AA	1811	1/1	0.94	0.47	13.65	65,65,65,65	0
55	MG	BA	3016	1/1	0.98	0.36	13.56	48,48,48,48	0
55	MG	BA	3202	1/1	0.08	0.33	13.39	97,97,97,97	0
55	MG	DA	3144	1/1	0.97	0.47	13.21	66,66,66,66	0
55	MG	BA	3528	1/1	0.89	0.38	13.11	32,32,32,32	0
55	MG	DA	3433	1/1	0.96	0.37	13.10	50,50,50,50	0
55	MG	DA	3098	1/1	0.96	0.32	13.03	48,48,48,48	0
55	MG	DA	3119	1/1	0.90	0.38	12.89	65,65,65,65	0
55	MG	BA	3460	1/1	0.87	0.36	12.77	97,97,97,97	0
55	MG	BA	3524	1/1	0.90	0.34	12.74	43,43,43,43	0
55	MG	BA	3392	1/1	0.89	0.32	12.72	78,78,78,78	0
55	MG	CA	1657	1/1	0.91	0.34	12.68	68,68,68,68	0
55	MG	CA	1806	1/1	0.47	0.27	12.58	103,103,103,103	0
55	MG	DA	3370	1/1	0.65	0.31	12.58	81,81,81,81	0
55	MG	AA	1646	1/1	0.98	0.42	12.55	60,60,60,60	0
55	MG	AA	1739	1/1	0.86	0.36	12.54	82,82,82,82	0
55	MG	BA	3012	1/1	0.97	0.39	12.47	45,45,45,45	0
55	MG	BA	3498	1/1	0.84	0.27	12.41	40,40,40,40	0
55	MG	CA	1634	1/1	0.98	0.45	12.32	58,58,58,58	0
55	MG	AC	107	1/1	0.20	0.43	12.23	124,124,124,124	0
55	MG	DA	3131	1/1	0.96	0.34	12.14	48,48,48,48	0
55	MG	DA	3084	1/1	0.89	0.37	12.14	57,57,57,57	0
55	MG	AA	1628	1/1	0.97	0.46	12.09	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3486	1/1	0.87	0.28	12.07	42,42,42,42	0
55	MG	CA	1603	1/1	0.97	0.30	11.90	60,60,60,60	0
55	MG	DA	3439	1/1	0.58	0.36	11.87	107,107,107,107	0
55	MG	BA	3021	1/1	0.96	0.28	11.86	42,42,42,42	0
55	MG	BA	3169	1/1	0.97	0.37	11.75	45,45,45,45	0
55	MG	CA	1602	1/1	0.94	0.35	11.71	64,64,64,64	0
55	MG	DA	3006	1/1	0.97	0.29	11.56	50,50,50,50	0
55	MG	DA	3289	1/1	0.91	0.39	11.37	62,62,62,62	0
55	MG	DA	3061	1/1	0.97	0.34	11.37	53,53,53,53	0
55	MG	BA	3262	1/1	0.62	0.40	11.32	87,87,87,87	0
55	MG	AA	1709	1/1	0.88	0.24	11.16	56,56,56,56	0
55	MG	BA	3110	1/1	0.87	0.30	11.15	69,69,69,69	0
55	MG	AA	1625	1/1	0.78	0.28	11.14	68,68,68,68	0
55	MG	CA	1656	1/1	0.88	0.32	11.10	72,72,72,72	0
55	MG	BA	3109	1/1	0.97	0.36	11.10	81,81,81,81	0
55	MG	BA	3332	1/1	0.87	0.37	11.08	76,76,76,76	0
55	MG	DB	212	1/1	0.57	0.33	11.00	120,120,120,120	0
55	MG	DA	3009	1/1	0.97	0.34	10.96	53,53,53,53	0
55	MG	DA	3450	1/1	0.96	0.32	10.90	54,54,54,54	0
55	MG	DA	3387	1/1	0.78	0.26	10.87	102,102,102,102	0
55	MG	BA	3044	1/1	0.95	0.26	10.73	68,68,68,68	0
55	MG	BA	3117	1/1	0.95	0.40	10.73	52,52,52,52	0
55	MG	DD	301	1/1	0.97	0.38	10.65	51,51,51,51	0
55	MG	CA	1676	1/1	0.96	0.36	10.64	76,76,76,76	0
55	MG	BA	3160	1/1	0.97	0.31	10.60	44,44,44,44	0
55	MG	DA	3270	1/1	0.75	0.36	10.55	76,76,76,76	0
55	MG	BA	3264	1/1	0.98	0.41	10.41	61,61,61,61	0
55	MG	BA	3241	1/1	0.95	0.31	10.38	62,62,62,62	0
55	MG	DA	3241	1/1	0.92	0.32	10.36	75,75,75,75	0
55	MG	DA	3055	1/1	0.98	0.41	10.36	52,52,52,52	0
55	MG	AA	1610	1/1	0.95	0.34	10.31	58,58,58,58	0
55	MG	DA	3220	1/1	0.93	0.31	10.21	64,64,64,64	0
55	MG	BA	3070	1/1	0.94	0.28	10.21	68,68,68,68	0
55	MG	DA	3432	1/1	0.93	0.29	10.15	64,64,64,64	0
55	MG	BA	3002	1/1	0.95	0.38	10.09	40,40,40,40	0
55	MG	CA	1651	1/1	0.92	0.35	10.07	77,77,77,77	0
55	MG	BA	3497	1/1	0.95	0.28	10.01	30,30,30,30	0
55	MG	DA	3456	1/1	0.97	0.29	9.95	57,57,57,57	0
55	MG	DA	3247	1/1	0.96	0.34	9.89	58,58,58,58	0
55	MG	DA	3044	1/1	0.97	0.34	9.85	66,66,66,66	0
55	MG	BA	3493	1/1	0.93	0.35	9.78	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3287	1/1	0.83	0.28	9.78	60,60,60,60	0
55	MG	DA	3212	1/1	0.83	0.31	9.67	121,121,121,121	0
55	MG	BA	3084	1/1	0.97	0.37	9.67	37,37,37,37	0
55	MG	BA	3001	1/1	0.98	0.50	9.66	55,55,55,55	0
55	MG	BA	3495	1/1	0.94	0.39	9.64	75,75,75,75	0
55	MG	BA	3130	1/1	0.98	0.43	9.59	50,50,50,50	0
55	MG	DA	3187	1/1	0.75	0.30	9.47	101,101,101,101	0
55	MG	BA	3014	1/1	0.98	0.41	9.24	43,43,43,43	0
55	MG	AA	1669	1/1	0.77	0.27	9.22	77,77,77,77	0
55	MG	AA	1620	1/1	0.92	0.28	9.01	69,69,69,69	0
55	MG	BA	3299	1/1	0.83	0.26	8.96	66,66,66,66	0
55	MG	CC	101	1/1	0.90	0.33	8.94	77,77,77,77	0
55	MG	DA	3124	1/1	0.98	0.29	8.91	47,47,47,47	0
55	MG	CA	1616	1/1	0.96	0.23	8.90	87,87,87,87	0
55	MG	BA	3024	1/1	0.98	0.39	8.83	44,44,44,44	0
55	MG	AA	1639	1/1	0.87	0.28	8.74	84,84,84,84	0
55	MG	AA	1790	1/1	0.90	0.27	8.70	79,79,79,79	0
55	MG	AA	1648	1/1	0.25	0.36	8.69	115,115,115,115	0
55	MG	BA	3286	1/1	0.97	0.51	8.66	46,46,46,46	0
55	MG	BA	3283	1/1	0.93	0.25	8.60	56,56,56,56	0
55	MG	BA	3534	1/1	0.93	0.24	8.58	69,69,69,69	0
55	MG	DA	3129	1/1	0.96	0.38	8.52	65,65,65,65	0
55	MG	BA	3134	1/1	0.90	0.33	8.51	59,59,59,59	0
55	MG	BA	3027	1/1	0.97	0.24	8.49	41,41,41,41	0
55	MG	CA	1814	1/1	0.80	0.19	8.37	83,83,83,83	0
55	MG	BA	3042	1/1	0.96	0.38	8.36	75,75,75,75	0
55	MG	DA	3043	1/1	0.97	0.28	8.29	69,69,69,69	0
55	MG	CC	109	1/1	0.80	0.29	8.24	114,114,114,114	0
55	MG	DE	301	1/1	0.95	0.28	8.04	59,59,59,59	0
55	MG	DA	3057	1/1	0.93	0.31	8.03	56,56,56,56	0
55	MG	BA	3076	1/1	0.93	0.39	7.98	81,81,81,81	0
55	MG	DA	3474	1/1	0.97	0.28	7.92	60,60,60,60	0
55	MG	BA	3018	1/1	0.94	0.41	7.90	44,44,44,44	0
55	MG	DA	3018	1/1	0.91	0.25	7.89	46,46,46,46	0
55	MG	BB	210	1/1	0.74	0.30	7.80	81,81,81,81	0
55	MG	AA	1601	1/1	0.95	0.30	7.77	60,60,60,60	0
55	MG	DA	3010	1/1	0.97	0.31	7.73	53,53,53,53	0
55	MG	DA	3068	1/1	0.94	0.31	7.62	54,54,54,54	0
55	MG	CA	1617	1/1	0.94	0.37	7.54	83,83,83,83	0
55	MG	CA	1695	1/1	0.94	0.30	7.48	69,69,69,69	0
55	MG	BA	3368	1/1	0.85	0.29	7.46	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3507	1/1	0.92	0.29	7.44	79,79,79,79	0
55	MG	DA	3428	1/1	0.95	0.33	7.43	59,59,59,59	0
55	MG	DA	3075	1/1	0.89	0.31	7.39	57,57,57,57	0
55	MG	BA	3140	1/1	0.97	0.28	7.34	67,67,67,67	0
55	MG	BA	3488	1/1	0.89	0.30	7.32	137,137,137,137	0
55	MG	BA	3020	1/1	0.96	0.30	7.29	29,29,29,29	0
55	MG	DA	3058	1/1	0.92	0.34	7.29	53,53,53,53	0
55	MG	DA	3207	1/1	0.80	0.44	7.23	83,83,83,83	0
55	MG	BA	3101	1/1	0.98	0.33	7.23	66,66,66,66	0
55	MG	BA	3415	1/1	0.87	0.21	7.14	65,65,65,65	0
55	MG	DA	3282	1/1	0.82	0.30	7.14	64,64,64,64	0
55	MG	BA	3056	1/1	0.93	0.30	7.06	57,57,57,57	0
55	MG	DA	3173	1/1	0.88	0.27	7.05	90,90,90,90	0
55	MG	DA	3008	1/1	0.94	0.32	7.05	57,57,57,57	0
55	MG	BA	3048	1/1	0.91	0.24	7.03	60,60,60,60	0
55	MG	BA	3039	1/1	0.96	0.28	6.95	55,55,55,55	0
55	MG	AA	1710	1/1	0.97	0.22	6.84	56,56,56,56	0
55	MG	DA	3002	1/1	0.96	0.36	6.73	48,48,48,48	0
55	MG	BA	3147	1/1	0.84	0.32	6.70	47,47,47,47	0
55	MG	AA	1636	1/1	0.94	0.27	6.65	95,95,95,95	0
55	MG	CA	1811	1/1	0.90	0.35	6.60	69,69,69,69	0
55	MG	DA	3159	1/1	0.70	0.31	6.53	68,68,68,68	0
55	MG	DA	3106	1/1	0.93	0.33	6.45	57,57,57,57	0
55	MG	DA	3116	1/1	0.95	0.35	6.38	61,61,61,61	0
55	MG	BA	3086	1/1	0.90	0.32	6.37	56,56,56,56	0
55	MG	CA	1813	1/1	0.52	0.24	6.21	108,108,108,108	0
55	MG	BA	3080	1/1	0.89	0.29	6.18	64,64,64,64	0
55	MG	CA	1793	1/1	0.34	0.23	6.18	110,110,110,110	0
55	MG	AA	1608	1/1	0.89	0.29	6.18	65,65,65,65	0
55	MG	AC	101	1/1	0.95	0.30	6.13	55,55,55,55	0
55	MG	DA	3250	1/1	0.71	0.24	6.12	62,62,62,62	0
55	MG	DA	3028	1/1	0.94	0.30	6.08	73,73,73,73	0
55	MG	DA	3236	1/1	0.91	0.39	6.08	62,62,62,62	0
55	MG	DA	3408	1/1	0.98	0.23	6.06	66,66,66,66	0
55	MG	CA	1601	1/1	0.96	0.26	5.98	67,67,67,67	0
55	MG	BA	3240	1/1	0.88	0.30	5.86	73,73,73,73	0
55	MG	DA	3015	1/1	0.96	0.33	5.85	64,64,64,64	0
55	MG	BA	3145	1/1	0.81	0.27	5.78	54,54,54,54	0
55	MG	DB	208	1/1	0.61	0.30	5.77	99,99,99,99	0
55	MG	AA	1605	1/1	0.89	0.26	5.70	75,75,75,75	0
55	MG	CA	1615	1/1	0.76	0.27	5.68	106,106,106,106	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	CA	1767	1/1	0.66	0.19	5.66	87,87,87,87	0
55	MG	DA	3341	1/1	0.96	0.33	5.66	56,56,56,56	0
55	MG	B1	201	1/1	0.86	0.27	5.65	71,71,71,71	0
55	MG	DA	3162	1/1	0.96	0.34	5.59	58,58,58,58	0
55	MG	CC	108	1/1	0.82	0.22	5.53	95,95,95,95	0
55	MG	BA	3290	1/1	0.67	0.24	5.46	75,75,75,75	0
55	MG	AA	1602	1/1	0.95	0.28	5.35	71,71,71,71	0
55	MG	DA	3458	1/1	0.81	0.34	5.35	75,75,75,75	0
55	MG	BA	3174	1/1	0.93	0.38	5.34	46,46,46,46	0
55	MG	DA	3240	1/1	0.90	0.18	5.33	55,55,55,55	0
55	MG	CA	1613	1/1	0.93	0.25	5.24	84,84,84,84	0
55	MG	BA	3553	1/1	0.92	0.27	5.16	49,49,49,49	0
55	MG	CA	1631	1/1	0.93	0.27	5.12	65,65,65,65	0
55	MG	AA	1662	1/1	0.95	0.23	5.04	41,41,41,41	0
55	MG	BA	3328	1/1	0.83	0.22	4.98	52,52,52,52	0
55	MG	BA	3356	1/1	0.91	0.32	4.98	60,60,60,60	0
55	MG	BA	3090	1/1	0.87	0.26	4.86	40,40,40,40	0
55	MG	AA	1619	1/1	0.95	0.38	4.73	58,58,58,58	0
55	MG	BA	3215	1/1	0.95	0.24	4.72	44,44,44,44	0
55	MG	BA	3334	1/1	0.69	0.28	4.68	67,67,67,67	0
55	MG	DA	3094	1/1	0.92	0.26	4.65	48,48,48,48	0
55	MG	BA	3272	1/1	0.92	0.22	4.63	59,59,59,59	0
55	MG	BA	3407	1/1	0.94	0.26	4.59	73,73,73,73	0
55	MG	BA	3054	1/1	0.94	0.30	4.58	52,52,52,52	0
55	MG	DA	3197	1/1	0.87	0.27	4.47	48,48,48,48	0
55	MG	BA	3231	1/1	0.81	0.35	4.40	46,46,46,46	0
55	MG	AA	1632	1/1	0.94	0.23	4.37	55,55,55,55	0
55	MG	DA	3235	1/1	0.88	0.33	4.37	69,69,69,69	0
55	MG	DA	3030	1/1	0.81	0.20	4.22	85,85,85,85	0
55	MG	DA	3200	1/1	0.95	0.37	4.18	55,55,55,55	0
55	MG	BA	3496	1/1	0.98	0.28	4.18	45,45,45,45	0
55	MG	DA	3190	1/1	0.84	0.32	3.95	66,66,66,66	0
55	MG	BA	3248	1/1	0.95	0.21	3.92	34,34,34,34	0
55	MG	DA	3463	1/1	0.97	0.22	3.86	84,84,84,84	0
55	MG	BA	3469	1/1	0.90	0.36	3.86	124,124,124,124	0
55	MG	CA	1645	1/1	0.94	0.25	3.81	84,84,84,84	0
55	MG	BA	3330	1/1	0.84	0.24	3.79	61,61,61,61	0
55	MG	AD	103	1/1	0.53	0.23	3.79	89,89,89,89	0
55	MG	DA	3222	1/1	0.74	0.16	3.78	75,75,75,75	0
55	MG	BA	3555	1/1	0.98	0.24	3.76	47,47,47,47	0
55	MG	BA	3186	1/1	0.97	0.29	3.69	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3448	1/1	0.44	0.24	3.66	104,104,104,104	0
55	MG	DA	3070	1/1	0.97	0.33	3.63	49,49,49,49	0
55	MG	BA	3313	1/1	0.91	0.23	3.56	74,74,74,74	0
55	MG	DA	3383	1/1	0.59	0.20	3.54	107,107,107,107	0
55	MG	DA	3196	1/1	0.95	0.22	3.52	45,45,45,45	0
55	MG	BA	3539	1/1	0.96	0.25	3.33	35,35,35,35	0
55	MG	BA	3538	1/1	0.94	0.23	3.29	79,79,79,79	0
55	MG	DA	3020	1/1	0.94	0.21	3.22	45,45,45,45	0
55	MG	BA	3026	1/1	0.90	0.31	3.09	43,43,43,43	0
55	MG	BB	215	1/1	0.82	0.23	3.08	91,91,91,91	0
55	MG	DA	3435	1/1	0.91	0.20	3.01	51,51,51,51	0
55	MG	BA	3521	1/1	0.95	0.24	2.98	45,45,45,45	0
55	MG	BA	3047	1/1	0.93	0.20	2.91	46,46,46,46	0
55	MG	DA	3471	1/1	0.97	0.22	2.90	60,60,60,60	0
55	MG	BA	3057	1/1	0.93	0.21	2.87	46,46,46,46	0
55	MG	BA	3074	1/1	0.90	0.17	2.81	91,91,91,91	0
55	MG	DA	3233	1/1	0.85	0.32	2.67	90,90,90,90	0
55	MG	BA	3475	1/1	0.67	0.32	2.66	212,212,212,212	0
55	MG	BA	3095	1/1	0.91	0.26	2.54	79,79,79,79	0
55	MG	DA	3321	1/1	0.60	0.16	2.52	112,112,112,112	0
55	MG	AA	1706	1/1	0.54	0.21	2.43	91,91,91,91	0
55	MG	B1	202	1/1	0.70	0.33	2.42	86,86,86,86	0
55	MG	BB	202	1/1	0.90	0.22	2.36	74,74,74,74	0
55	MG	AG	301	1/1	0.85	0.23	2.32	98,98,98,98	0
55	MG	BA	3232	1/1	0.85	0.22	2.31	57,57,57,57	0
55	MG	BA	3520	1/1	0.96	0.38	2.29	40,40,40,40	0
55	MG	DA	3137	1/1	0.95	0.23	2.25	53,53,53,53	0
55	MG	DA	3017	1/1	0.90	0.26	2.23	90,90,90,90	0
55	MG	BA	3505	1/1	0.82	0.23	2.23	61,61,61,61	0
55	MG	DB	213	1/1	0.88	0.15	2.21	99,99,99,99	0
55	MG	DA	3063	1/1	0.97	0.25	2.21	45,45,45,45	0
55	MG	DA	3390	1/1	0.67	0.21	2.14	92,92,92,92	0
55	MG	BA	3506	1/1	0.90	0.24	1.97	73,73,73,73	0
55	MG	BA	3060	1/1	0.96	0.22	1.93	51,51,51,51	0
55	MG	DA	3156	1/1	0.90	0.27	1.90	78,78,78,78	0
55	MG	AC	108	1/1	0.90	0.15	1.83	82,82,82,82	0
55	MG	B0	201	1/1	0.98	0.32	1.77	46,46,46,46	0
55	MG	AA	1795	1/1	0.65	0.37	1.76	113,113,113,113	0
55	MG	CA	1653	1/1	0.74	0.26	1.64	97,97,97,97	0
55	MG	AA	1664	1/1	0.92	0.21	1.56	53,53,53,53	0
55	MG	BA	3128	1/1	0.72	0.23	1.55	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	AA	1686	1/1	0.70	0.18	1.54	91,91,91,91	0
55	MG	CA	1605	1/1	0.91	0.18	1.49	90,90,90,90	0
56	ZN	AG	303	1/1	0.97	0.35	1.46	100,100,100,100	0
55	MG	BA	3398	1/1	0.91	0.17	1.32	57,57,57,57	0
55	MG	DA	3434	1/1	0.86	0.18	1.30	73,73,73,73	0
55	MG	BA	3541	1/1	0.94	0.21	1.27	66,66,66,66	0
55	MG	BA	3097	1/1	0.81	0.20	1.25	59,59,59,59	0
55	MG	DA	3437	1/1	0.74	0.18	1.19	66,66,66,66	0
55	MG	DA	3357	1/1	0.87	0.16	1.00	87,87,87,87	0
55	MG	CA	1705	1/1	0.91	0.20	0.89	101,101,101,101	0
55	MG	BA	3531	1/1	0.97	0.20	0.87	31,31,31,31	0
55	MG	AA	1718	1/1	0.79	0.18	0.80	82,82,82,82	0
55	MG	BA	3348	1/1	0.82	0.18	0.76	96,96,96,96	0
55	MG	DA	3126	1/1	0.84	0.17	0.72	63,63,63,63	0
55	MG	BA	3166	1/1	0.94	0.23	0.71	28,28,28,28	0
55	MG	AA	1817	1/1	0.76	0.17	0.59	61,61,61,61	0
55	MG	BA	3143	1/1	0.97	0.19	0.41	43,43,43,43	0
55	MG	BA	3226	1/1	0.94	0.18	0.37	69,69,69,69	0
55	MG	AA	1712	1/1	0.94	0.17	0.29	73,73,73,73	0
55	MG	CA	1632	1/1	0.91	0.17	0.27	53,53,53,53	0
55	MG	DA	3031	1/1	0.87	0.17	0.21	70,70,70,70	0
55	MG	CA	1789	1/1	0.87	0.14	0.12	71,71,71,71	0
55	MG	D0	201	1/1	0.93	0.21	0.02	63,63,63,63	0
55	MG	AA	1682	1/1	0.80	0.22	-0.06	93,93,93,93	0
55	MG	BA	3361	1/1	0.95	0.17	-0.14	70,70,70,70	0
55	MG	CA	1630	1/1	0.23	0.18	-0.14	149,149,149,149	0
55	MG	DA	3364	1/1	0.85	0.12	-0.15	93,93,93,93	0
56	ZN	CG	303	1/1	0.98	0.30	-0.21	109,109,109,109	0
55	MG	CA	1650	1/1	0.84	0.17	-0.22	78,78,78,78	0
55	MG	CA	1618	1/1	0.86	0.18	-0.41	95,95,95,95	0
55	MG	CA	1783	1/1	0.84	0.13	-0.59	87,87,87,87	0
55	MG	DA	3199	1/1	0.61	0.16	-0.69	85,85,85,85	0
55	MG	B6	101	1/1	0.51	0.32	-0.70	102,102,102,102	0
55	MG	DD	303	1/1	0.20	0.16	-0.74	69,69,69,69	0
56	ZN	CQ	101	1/1	0.97	0.17	-0.75	118,118,118,118	0
55	MG	AA	1711	1/1	0.85	0.17	-0.77	97,97,97,97	0
55	MG	D8	101	1/1	0.72	0.16	-0.81	88,88,88,88	0
56	ZN	AQ	101	1/1	0.98	0.14	-0.83	142,142,142,142	0
55	MG	CA	1666	1/1	0.78	0.16	-0.83	90,90,90,90	0
55	MG	CA	1624	1/1	0.92	0.17	-0.90	93,93,93,93	0
55	MG	CA	1641	1/1	0.94	0.15	-0.91	64,64,64,64	0
55	MG	CA	1607	1/1	0.94	0.13	-0.94	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	CA	1718	1/1	0.98	0.13	-1.07	64,64,64,64	0
55	MG	BA	3308	1/1	0.93	0.12	-1.20	63,63,63,63	0
55	MG	DA	3062	1/1	0.94	0.17	-1.44	39,39,39,39	0
55	MG	DA	3181	1/1	0.92	0.16	-1.44	50,50,50,50	0
55	MG	DA	3037	1/1	0.92	0.12	-1.67	71,71,71,71	0
55	MG	DA	3276	1/1	0.93	0.13	-1.74	81,81,81,81	0
55	MG	BF	301	1/1	0.95	0.14	-1.76	79,79,79,79	0
55	MG	AA	1645	1/1	0.93	0.13	-1.85	65,65,65,65	0
55	MG	DA	3232	1/1	0.87	0.13	-1.88	56,56,56,56	0
55	MG	BA	3185	1/1	0.88	0.17	-1.89	46,46,46,46	0
55	MG	DA	3401	1/1	0.79	0.12	-2.06	75,75,75,75	0
55	MG	DA	3242	1/1	0.58	0.11	-2.09	81,81,81,81	0
55	MG	CG	302	1/1	0.83	0.12	-2.09	89,89,89,89	0
55	MG	DA	3025	1/1	0.91	0.13	-2.10	70,70,70,70	0
55	MG	DB	202	1/1	0.95	0.14	-2.21	91,91,91,91	0
55	MG	BA	3204	1/1	0.91	0.16	-2.42	56,56,56,56	0
55	MG	AN	201	1/1	0.96	0.07	-2.46	67,67,67,67	0
55	MG	DA	3258	1/1	0.81	0.13	-2.55	87,87,87,87	0
55	MG	DA	3347	1/1	0.95	0.12	-2.60	91,91,91,91	0
55	MG	DA	3204	1/1	0.96	0.13	-2.70	48,48,48,48	0
55	MG	DB	203	1/1	0.86	0.09	-2.72	111,111,111,111	0
55	MG	BE	301	1/1	0.84	0.12	-3.02	57,57,57,57	0
55	MG	BA	3193	1/1	0.93	0.13	-3.18	46,46,46,46	0
55	MG	DA	3023	1/1	0.96	0.10	-3.49	47,47,47,47	0
55	MG	CA	1637	1/1	0.96	0.10	-3.74	70,70,70,70	0
55	MG	DA	3335	1/1	0.89	0.11	-4.01	80,80,80,80	0
55	MG	DA	3304	1/1	0.88	0.12	-4.34	77,77,77,77	0
55	MG	AA	1731	1/1	0.79	0.11	-5.68	90,90,90,90	0
55	MG	BA	3527	1/1	0.96	0.12	-5.82	40,40,40,40	0
55	MG	AA	1820	1/1	0.89	0.12	-6.37	82,82,82,82	0
55	MG	CA	1794	1/1	0.90	0.10	-9.62	67,67,67,67	0
55	MG	AA	1606	1/1	0.96	0.07	-11.36	77,77,77,77	0
55	MG	CA	1775	1/1	0.83	0.45	-	69,69,69,69	0
55	MG	DA	3306	1/1	0.81	0.34	-	96,96,96,96	0
55	MG	BA	3386	1/1	0.23	0.42	-	115,115,115,115	0
55	MG	AC	102	1/1	0.64	0.37	-	106,106,106,106	0
55	MG	BA	3175	1/1	0.90	0.30	-	62,62,62,62	0
55	MG	BA	3307	1/1	0.85	0.47	-	79,79,79,79	0
55	MG	BA	3075	1/1	0.77	0.40	-	75,75,75,75	0
55	MG	BA	3529	1/1	0.99	0.49	-	42,42,42,42	0
55	MG	BA	3103	1/1	0.95	0.49	-	76,76,76,76	0
55	MG	BA	3366	1/1	0.91	0.20	-	91,91,91,91	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	CC	103	1/1	0.49	0.23	-	114,114,114,114	0
55	MG	AA	1713	1/1	0.68	0.35	-	98,98,98,98	0
55	MG	CA	1633	1/1	0.96	0.37	-	61,61,61,61	0
55	MG	DA	3478	1/1	0.90	0.15	-	89,89,89,89	0
55	MG	BA	3406	1/1	0.41	1.36	-	182,182,182,182	0
55	MG	DA	3170	1/1	0.98	0.39	-	59,59,59,59	0
55	MG	DA	3443	1/1	0.58	0.26	-	94,94,94,94	0
55	MG	BA	3322	1/1	0.81	0.38	-	81,81,81,81	0
55	MG	DA	3353	1/1	0.61	0.24	-	102,102,102,102	0
55	MG	BA	3100	1/1	0.53	0.41	-	93,93,93,93	0
55	MG	CA	1625	1/1	0.85	0.23	-	104,104,104,104	0
55	MG	DA	3351	1/1	0.28	0.22	-	151,151,151,151	0
55	MG	DA	3257	1/1	0.82	0.41	-	77,77,77,77	0
55	MG	BA	3421	1/1	0.79	0.89	-	97,97,97,97	0
55	MG	BA	3369	1/1	0.65	0.19	-	92,92,92,92	0
55	MG	AA	1752	1/1	0.92	0.37	-	67,67,67,67	0
55	MG	DA	3169	1/1	0.92	0.26	-	92,92,92,92	0
55	MG	BA	3171	1/1	0.48	0.46	-	96,96,96,96	0
55	MG	CA	1658	1/1	0.72	0.33	-	90,90,90,90	0
55	MG	DA	3467	1/1	0.72	0.13	-	103,103,103,103	0
55	MG	BA	3197	1/1	0.95	0.40	-	57,57,57,57	0
55	MG	CA	1665	1/1	0.93	0.32	-	70,70,70,70	0
55	MG	BA	3470	1/1	0.94	0.48	-	83,83,83,83	0
55	MG	DA	3033	1/1	0.87	0.26	-	83,83,83,83	0
55	MG	BA	3304	1/1	0.90	0.36	-	80,80,80,80	0
55	MG	BA	3125	1/1	0.35	0.32	-	107,107,107,107	0
55	MG	BA	3146	1/1	0.95	0.36	-	62,62,62,62	0
55	MG	DA	3147	1/1	0.86	0.22	-	87,87,87,87	0
55	MG	AA	1759	1/1	0.77	0.14	-	66,66,66,66	0
55	MG	DA	3163	1/1	0.61	0.37	-	75,75,75,75	0
55	MG	AA	1722	1/1	-	-	-	62,62,62,62	1
55	MG	AA	1638	1/1	0.86	0.36	-	105,105,105,105	0
55	MG	DA	3120	1/1	0.77	0.43	-	73,73,73,73	0
55	MG	DA	3323	1/1	0.88	0.92	-	104,104,104,104	0
55	MG	BA	3207	1/1	0.90	0.55	-	70,70,70,70	0
55	MG	DA	3029	1/1	0.92	0.32	-	82,82,82,82	0
55	MG	DA	3185	1/1	0.75	0.15	-	78,78,78,78	0
55	MG	DA	3122	1/1	0.91	0.41	-	69,69,69,69	0
55	MG	CA	1604	1/1	0.94	0.20	-	60,60,60,60	0
55	MG	DA	3457	1/1	0.97	0.28	-	48,48,48,48	0
55	MG	CA	1769	1/1	0.95	0.30	-	67,67,67,67	0
55	MG	DA	3374	1/1	0.79	0.19	-	92,92,92,92	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3245	1/1	0.74	0.46	-	107,107,107,107	0
55	MG	AA	1675	1/1	0.80	0.20	-	81,81,81,81	0
55	MG	CA	1627	1/1	0.82	0.17	-	140,140,140,140	0
55	MG	AA	1708	1/1	0.64	0.14	-	77,77,77,77	0
55	MG	DA	3081	1/1	0.78	0.32	-	84,84,84,84	0
55	MG	BA	3011	1/1	0.96	0.41	-	40,40,40,40	0
55	MG	AA	1617	1/1	0.68	0.35	-	76,76,76,76	0
55	MG	AA	1655	1/1	0.94	0.41	-	78,78,78,78	0
55	MG	CA	1737	1/1	0.43	0.23	-	122,122,122,122	0
55	MG	DA	3422	1/1	0.78	0.20	-	75,75,75,75	0
55	MG	DA	3109	1/1	0.96	0.36	-	55,55,55,55	0
55	MG	DA	3261	1/1	0.61	0.22	-	78,78,78,78	0
55	MG	DA	3464	1/1	0.86	0.31	-	90,90,90,90	0
55	MG	CA	1655	1/1	0.80	0.11	-	85,85,85,85	0
55	MG	DA	3110	1/1	0.94	0.14	-	61,61,61,61	0
55	MG	BA	3164	1/1	0.96	0.40	-	47,47,47,47	0
55	MG	BA	3563	1/1	0.77	0.24	-	100,100,100,100	0
55	MG	AA	1819	1/1	0.53	0.32	-	126,126,126,126	0
55	MG	AA	1719	1/1	0.96	0.23	-	80,80,80,80	0
55	MG	DA	3226	1/1	0.93	0.28	-	85,85,85,85	0
55	MG	AA	1755	1/1	0.64	0.30	-	88,88,88,88	0
55	MG	CA	1764	1/1	0.57	0.22	-	117,117,117,117	0
55	MG	AA	1742	1/1	0.90	0.27	-	88,88,88,88	0
55	MG	DA	3245	1/1	0.79	0.16	-	91,91,91,91	0
55	MG	BA	3325	1/1	0.85	0.22	-	81,81,81,81	0
55	MG	AA	1793	1/1	0.93	0.20	-	87,87,87,87	0
55	MG	CA	1660	1/1	0.80	0.13	-	85,85,85,85	0
55	MG	DA	3049	1/1	0.95	0.41	-	55,55,55,55	0
55	MG	AA	1730	1/1	0.39	0.29	-	113,113,113,113	0
55	MG	DA	3011	1/1	0.97	0.34	-	50,50,50,50	0
55	MG	DA	3108	1/1	0.96	0.41	-	54,54,54,54	0
55	MG	CA	1735	1/1	0.88	0.41	-	119,119,119,119	0
55	MG	DA	3278	1/1	0.79	0.25	-	100,100,100,100	0
55	MG	BA	3219	1/1	0.86	0.33	-	68,68,68,68	0
55	MG	DA	3314	1/1	0.75	0.15	-	95,95,95,95	0
55	MG	DA	3193	1/1	0.97	0.50	-	48,48,48,48	0
55	MG	AA	1654	1/1	0.82	0.28	-	77,77,77,77	0
55	MG	CA	1782	1/1	0.90	0.14	-	113,113,113,113	0
55	MG	BA	3151	1/1	0.82	0.57	-	97,97,97,97	0
55	MG	BA	3062	1/1	0.56	0.36	-	79,79,79,79	0
55	MG	CA	1784	1/1	0.86	0.11	-	92,92,92,92	0
55	MG	BA	3423	1/1	0.94	0.38	-	90,90,90,90	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	CA	1734	1/1	0.77	0.13	-	80,80,80,80	0
55	MG	CA	1717	1/1	0.90	0.39	-	73,73,73,73	0
55	MG	BA	3073	1/1	0.94	0.29	-	65,65,65,65	0
55	MG	DA	3466	1/1	0.85	0.17	-	81,81,81,81	0
55	MG	AA	1785	1/1	0.27	2.26	-	125,125,125,125	0
55	MG	DA	3384	1/1	0.77	0.38	-	97,97,97,97	0
55	MG	DA	3431	1/1	0.92	0.24	-	69,69,69,69	0
55	MG	BA	3188	1/1	0.97	0.35	-	64,64,64,64	0
55	MG	DA	3326	1/1	0.79	0.33	-	109,109,109,109	0
55	MG	AA	1687	1/1	0.71	0.26	-	108,108,108,108	0
55	MG	BA	3261	1/1	0.98	0.47	-	57,57,57,57	0
55	MG	AA	1672	1/1	0.96	0.52	-	67,67,67,67	0
55	MG	AA	1685	1/1	0.82	0.34	-	85,85,85,85	0
55	MG	AA	1692	1/1	0.84	0.24	-	73,73,73,73	0
55	MG	BA	3051	1/1	0.66	0.32	-	103,103,103,103	0
55	MG	BA	3072	1/1	0.96	0.35	-	67,67,67,67	0
55	MG	DA	3112	1/1	0.96	0.28	-	63,63,63,63	0
55	MG	AA	1697	1/1	0.62	0.29	-	101,101,101,101	0
55	MG	BA	3149	1/1	0.97	0.36	-	41,41,41,41	0
55	MG	DA	3273	1/1	0.81	0.10	-	77,77,77,77	0
55	MG	DA	3296	1/1	0.68	0.17	-	93,93,93,93	0
55	MG	AA	1766	1/1	0.75	0.32	-	98,98,98,98	0
55	MG	BA	3251	1/1	0.85	0.43	-	80,80,80,80	0
55	MG	DA	3067	1/1	0.98	0.17	-	50,50,50,50	0
55	MG	BA	3437	1/1	0.84	0.32	-	97,97,97,97	0
55	MG	DA	3182	1/1	0.94	0.26	-	47,47,47,47	0
55	MG	DA	3284	1/1	0.90	0.19	-	90,90,90,90	0
55	MG	BA	3067	1/1	0.93	0.27	-	79,79,79,79	0
55	MG	AA	1737	1/1	0.86	0.26	-	81,81,81,81	0
55	MG	CA	1809	1/1	0.44	0.35	-	93,93,93,93	0
55	MG	DA	3050	1/1	0.35	0.27	-	90,90,90,90	0
55	MG	DA	3042	1/1	0.97	0.38	-	51,51,51,51	0
55	MG	AA	1736	1/1	0.65	0.56	-	108,108,108,108	0
55	MG	BA	3210	1/1	0.76	0.25	-	99,99,99,99	0
55	MG	BA	3121	1/1	0.84	0.33	-	72,72,72,72	0
55	MG	BA	3244	1/1	0.95	0.16	-	34,34,34,34	0
55	MG	CA	1622	1/1	0.80	0.65	-	110,110,110,110	0
55	MG	B3	101	1/1	0.86	0.42	-	81,81,81,81	0
55	MG	AA	1607	1/1	0.95	0.20	-	86,86,86,86	0
55	MG	BA	3227	1/1	0.91	0.43	-	64,64,64,64	0
55	MG	DA	3134	1/1	0.76	0.19	-	93,93,93,93	0
55	MG	BA	3526	1/1	0.97	0.39	-	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	AA	1791	1/1	0.64	0.47	-	90,90,90,90	0
55	MG	BA	3052	1/1	0.91	0.24	-	66,66,66,66	0
55	MG	DA	3149	1/1	0.84	0.22	-	93,93,93,93	0
55	MG	BB	204	1/1	0.67	0.32	-	91,91,91,91	0
55	MG	BA	3388	1/1	0.87	0.39	-	76,76,76,76	0
55	MG	CA	1748	1/1	0.67	0.31	-	76,76,76,76	0
55	MG	BA	3324	1/1	0.73	0.43	-	105,105,105,105	0
55	MG	BA	3119	1/1	0.96	0.39	-	61,61,61,61	0
55	MG	BA	3284	1/1	0.91	0.43	-	75,75,75,75	0
55	MG	CA	1749	1/1	0.67	0.25	-	117,117,117,117	0
55	MG	BA	3266	1/1	0.70	0.41	-	71,71,71,71	0
55	MG	DA	3014	1/1	0.93	0.35	-	76,76,76,76	0
55	MG	DA	3287	1/1	0.87	0.46	-	120,120,120,120	0
55	MG	DA	3076	1/1	0.34	0.33	-	107,107,107,107	0
55	MG	DA	3026	1/1	0.93	0.28	-	73,73,73,73	0
55	MG	DA	3080	1/1	0.95	0.27	-	73,73,73,73	0
55	MG	DA	3074	1/1	0.90	0.35	-	65,65,65,65	0
55	MG	BA	3481	1/1	0.91	0.21	-	97,97,97,97	0
55	MG	DA	3345	1/1	0.88	0.24	-	85,85,85,85	0
55	MG	BE	303	1/1	0.80	0.39	-	105,105,105,105	0
55	MG	BA	3568	1/1	0.67	0.20	-	106,106,106,106	0
55	MG	DA	3160	1/1	0.94	0.34	-	59,59,59,59	0
55	MG	DA	3329	1/1	0.86	0.26	-	71,71,71,71	0
55	MG	BA	3229	1/1	0.83	0.38	-	65,65,65,65	0
55	MG	DB	220	1/1	0.84	0.13	-	121,121,121,121	0
55	MG	BA	3139	1/1	0.98	0.47	-	43,43,43,43	0
55	MG	CC	107	1/1	0.81	0.22	-	123,123,123,123	0
55	MG	BA	3478	1/1	0.92	0.33	-	61,61,61,61	0
55	MG	DA	3365	1/1	0.50	0.48	-	112,112,112,112	0
55	MG	BB	217	1/1	0.72	0.31	-	104,104,104,104	0
55	MG	DB	204	1/1	0.66	0.37	-	94,94,94,94	0
55	MG	BA	3427	1/1	0.83	0.45	-	97,97,97,97	0
55	MG	AA	1613	1/1	0.04	0.48	-	116,116,116,116	0
55	MG	BA	3362	1/1	0.90	0.21	-	84,84,84,84	0
55	MG	BA	3173	1/1	0.99	0.40	-	58,58,58,58	0
55	MG	BA	3472	1/1	0.58	0.62	-	133,133,133,133	0
55	MG	DA	3298	1/1	0.84	0.28	-	80,80,80,80	0
55	MG	CA	1755	1/1	0.83	0.34	-	104,104,104,104	0
55	MG	DA	3363	1/1	0.83	0.21	-	78,78,78,78	0
55	MG	DA	3228	1/1	0.66	0.54	-	103,103,103,103	0
55	MG	CA	1729	1/1	0.48	0.38	-	102,102,102,102	0
55	MG	BA	3402	1/1	0.89	0.25	-	76,76,76,76	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	AA	1702	1/1	0.71	0.36	-	89,89,89,89	0
55	MG	DA	3376	1/1	0.75	0.25	-	107,107,107,107	0
55	MG	BA	3316	1/1	0.67	0.39	-	87,87,87,87	0
55	MG	DA	3297	1/1	0.90	0.42	-	82,82,82,82	0
55	MG	DA	3412	1/1	0.83	0.28	-	92,92,92,92	0
55	MG	BA	3480	1/1	0.76	0.34	-	76,76,76,76	0
55	MG	AB	103	1/1	0.85	0.34	-	104,104,104,104	0
55	MG	AA	1784	1/1	0.61	0.22	-	112,112,112,112	0
55	MG	DA	3481	1/1	0.74	0.14	-	79,79,79,79	0
55	MG	BA	3461	1/1	0.79	0.34	-	98,98,98,98	0
55	MG	CA	1725	1/1	0.91	0.35	-	86,86,86,86	0
55	MG	BA	3112	1/1	0.86	0.48	-	73,73,73,73	0
55	MG	DB	215	1/1	0.16	0.29	-	129,129,129,129	0
55	MG	DA	3482	1/1	0.73	0.37	-	83,83,83,83	0
55	MG	BA	3459	1/1	0.82	0.35	-	81,81,81,81	0
55	MG	DA	3366	1/1	0.05	0.35	-	105,105,105,105	0
55	MG	DA	3183	1/1	0.97	0.29	-	75,75,75,75	0
55	MG	BA	3378	1/1	0.52	0.25	-	140,140,140,140	0
55	MG	CA	1745	1/1	0.46	0.30	-	159,159,159,159	0
55	MG	AA	1647	1/1	0.85	0.31	-	81,81,81,81	0
55	MG	BA	3178	1/1	0.36	0.38	-	96,96,96,96	0
55	MG	DA	3224	1/1	0.86	0.20	-	75,75,75,75	0
55	MG	AA	1748	1/1	0.37	0.29	-	116,116,116,116	0
55	MG	DA	3302	1/1	0.88	0.31	-	69,69,69,69	0
55	MG	BA	3049	1/1	0.90	0.23	-	75,75,75,75	0
55	MG	DA	3382	1/1	0.62	0.48	-	121,121,121,121	0
55	MG	DA	3331	1/1	0.89	0.31	-	91,91,91,91	0
55	MG	BA	3447	1/1	0.86	0.42	-	72,72,72,72	0
55	MG	CA	1620	1/1	0.94	0.14	-	64,64,64,64	0
55	MG	DA	3090	1/1	0.91	0.27	-	71,71,71,71	0
55	MG	AA	1627	1/1	0.96	0.34	-	62,62,62,62	0
55	MG	CA	1781	1/1	0.30	0.21	-	172,172,172,172	0
55	MG	BA	3114	1/1	0.97	0.23	-	37,37,37,37	0
55	MG	BA	3474	1/1	0.78	0.37	-	72,72,72,72	0
55	MG	DA	3426	1/1	0.61	0.32	-	103,103,103,103	0
55	MG	BA	3523	1/1	0.97	0.41	-	36,36,36,36	0
55	MG	BA	3484	1/1	0.64	0.36	-	87,87,87,87	0
55	MG	DA	3024	1/1	0.53	0.34	-	104,104,104,104	0
55	MG	CA	1712	1/1	0.88	0.42	-	76,76,76,76	0
55	MG	BB	207	1/1	0.84	0.19	-	109,109,109,109	0
55	MG	BA	3104	1/1	0.90	0.31	-	82,82,82,82	0
55	MG	CA	1768	1/1	-0.04	0.43	-	138,138,138,138	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	DA	3371	1/1	0.83	0.22	-	122,122,122,122	0
55	MG	BA	3414	1/1	0.82	0.36	-	100,100,100,100	0
55	MG	AA	1814	1/1	0.47	0.33	-	107,107,107,107	0
55	MG	DA	3445	1/1	0.73	0.15	-	118,118,118,118	0
55	MG	DA	3334	1/1	0.72	0.31	-	87,87,87,87	0
55	MG	DA	3424	1/1	0.91	0.24	-	83,83,83,83	0
55	MG	BA	3405	1/1	0.88	0.21	-	82,82,82,82	0
55	MG	BA	3093	1/1	0.91	0.35	-	57,57,57,57	0
55	MG	DA	3400	1/1	0.76	0.14	-	115,115,115,115	0
55	MG	CA	1686	1/1	0.85	0.24	-	77,77,77,77	0
55	MG	BA	3445	1/1	0.63	0.27	-	82,82,82,82	0
55	MG	DA	3372	1/1	0.05	0.68	-	125,125,125,125	0
55	MG	DA	3194	1/1	0.52	0.33	-	104,104,104,104	0
55	MG	CA	1647	1/1	0.53	0.40	-	96,96,96,96	0
55	MG	DA	3066	1/1	0.79	0.30	-	76,76,76,76	0
55	MG	BA	3277	1/1	0.79	0.34	-	79,79,79,79	0
55	MG	BA	3288	1/1	0.67	0.26	-	75,75,75,75	0
55	MG	BA	3257	1/1	0.91	0.29	-	87,87,87,87	0
55	MG	BA	3270	1/1	0.78	0.36	-	96,96,96,96	0
55	MG	AA	1728	1/1	0.73	0.46	-	99,99,99,99	0
55	MG	BA	3238	1/1	0.78	0.32	-	75,75,75,75	0
55	MG	CA	1714	1/1	0.94	0.24	-	87,87,87,87	0
55	MG	BA	3017	1/1	0.97	0.41	-	58,58,58,58	0
55	MG	CA	1700	1/1	0.61	0.33	-	96,96,96,96	0
55	MG	DA	3310	1/1	0.72	0.29	-	105,105,105,105	0
55	MG	BA	3122	1/1	0.50	0.53	-	106,106,106,106	0
55	MG	DB	218	1/1	0.72	0.13	-	107,107,107,107	0
55	MG	AA	1744	1/1	0.81	0.38	-	79,79,79,79	0
55	MG	CA	1728	1/1	0.97	0.45	-	58,58,58,58	0
55	MG	BA	3221	1/1	0.98	0.39	-	59,59,59,59	0
55	MG	DA	3385	1/1	0.94	0.17	-	86,86,86,86	0
55	MG	DA	3103	1/1	0.93	0.36	-	60,60,60,60	0
55	MG	DA	3369	1/1	0.74	0.35	-	108,108,108,108	0
55	MG	CB	102	1/1	0.51	0.19	-	102,102,102,102	0
55	MG	DA	3411	1/1	0.41	0.37	-	144,144,144,144	0
55	MG	BA	3007	1/1	0.93	0.31	-	36,36,36,36	0
55	MG	DA	3192	1/1	0.45	0.17	-	90,90,90,90	0
55	MG	DA	3354	1/1	0.77	0.24	-	83,83,83,83	0
55	MG	DA	3395	1/1	0.48	0.28	-	87,87,87,87	0
55	MG	DA	3060	1/1	0.90	0.33	-	67,67,67,67	0
55	MG	DA	3128	1/1	0.91	0.30	-	47,47,47,47	0
55	MG	BA	3292	1/1	0.95	0.27	-	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	DA	3065	1/1	0.96	0.38	-	75,75,75,75	0
55	MG	AA	1703	1/1	0.33	0.31	-	106,106,106,106	0
55	MG	BA	3404	1/1	0.63	0.35	-	100,100,100,100	0
55	MG	AA	1624	1/1	0.80	0.21	-	94,94,94,94	0
55	MG	AA	1794	1/1	0.84	0.49	-	112,112,112,112	0
55	MG	DA	3392	1/1	0.77	0.22	-	126,126,126,126	0
55	MG	BA	3281	1/1	0.58	0.28	-	78,78,78,78	0
55	MG	BB	216	1/1	0.90	0.41	-	63,63,63,63	0
55	MG	DA	3239	1/1	0.89	0.33	-	92,92,92,92	0
55	MG	BA	3053	1/1	0.82	0.10	-	106,106,106,106	0
55	MG	AA	1792	1/1	0.80	0.29	-	97,97,97,97	0
55	MG	DA	3285	1/1	0.89	0.37	-	79,79,79,79	0
55	MG	CA	1772	1/1	0.95	0.17	-	107,107,107,107	0
55	MG	BA	3372	1/1	0.71	0.46	-	76,76,76,76	0
55	MG	BA	3410	1/1	0.80	0.23	-	84,84,84,84	0
55	MG	DA	3032	1/1	0.95	0.29	-	77,77,77,77	0
55	MG	BA	3396	1/1	0.58	0.55	-	87,87,87,87	0
55	MG	BA	3411	1/1	0.64	0.30	-	102,102,102,102	0
55	MG	CA	1754	1/1	0.91	0.37	-	92,92,92,92	0
55	MG	DA	3230	1/1	0.91	0.32	-	74,74,74,74	0
55	MG	CA	1708	1/1	0.70	0.18	-	124,124,124,124	0
55	MG	CA	1701	1/1	0.55	1.26	-	108,108,108,108	0
55	MG	BA	3105	1/1	0.92	0.18	-	71,71,71,71	0
55	MG	BA	3487	1/1	0.78	0.49	-	100,100,100,100	0
55	MG	BA	3390	1/1	0.88	0.38	-	98,98,98,98	0
55	MG	BA	3294	1/1	0.79	0.34	-	61,61,61,61	0
55	MG	DA	3348	1/1	0.94	0.19	-	56,56,56,56	0
55	MG	BA	3557	1/1	0.58	0.33	-	94,94,94,94	0
55	MG	AR	101	1/1	0.63	0.19	-	114,114,114,114	0
55	MG	BA	3263	1/1	0.73	0.45	-	80,80,80,80	0
55	MG	BA	3329	1/1	0.87	0.63	-	67,67,67,67	0
55	MG	BA	3385	1/1	0.76	0.18	-	86,86,86,86	0
55	MG	BA	3156	1/1	0.95	0.35	-	61,61,61,61	0
55	MG	DA	3338	1/1	0.87	0.33	-	69,69,69,69	0
55	MG	BA	3383	1/1	0.76	0.18	-	94,94,94,94	0
55	MG	BA	3363	1/1	0.96	0.37	-	57,57,57,57	0
55	MG	DA	3367	1/1	0.89	0.32	-	82,82,82,82	0
55	MG	BA	3102	1/1	0.84	0.26	-	68,68,68,68	0
55	MG	BA	3298	1/1	0.93	0.39	-	66,66,66,66	0
55	MG	DA	3139	1/1	0.82	0.28	-	53,53,53,53	0
55	MG	BA	3426	1/1	0.71	0.47	-	86,86,86,86	0
55	MG	AA	1816	1/1	0.75	0.25	-	95,95,95,95	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	DA	3064	1/1	0.91	0.32	-	70,70,70,70	0
55	MG	BW	101	1/1	0.97	0.21	-	64,64,64,64	0
55	MG	AA	1772	1/1	0.79	0.58	-	131,131,131,131	0
55	MG	DA	3154	1/1	0.96	0.22	-	77,77,77,77	0
55	MG	CC	106	1/1	0.71	0.35	-	94,94,94,94	0
55	MG	CA	1736	1/1	0.80	1.03	-	143,143,143,143	0
55	MG	BA	3351	1/1	0.89	0.25	-	88,88,88,88	0
55	MG	BA	3556	1/1	0.88	0.23	-	98,98,98,98	0
55	MG	AA	1665	1/1	0.96	0.17	-	52,52,52,52	0
55	MG	BA	3500	1/1	0.93	0.49	-	64,64,64,64	0
55	MG	B3	102	1/1	0.63	0.35	-	107,107,107,107	0
55	MG	BA	3420	1/1	-0.24	0.26	-	114,114,114,114	0
55	MG	DA	3465	1/1	0.90	0.20	-	112,112,112,112	0
55	MG	BA	3217	1/1	0.82	0.34	-	40,40,40,40	0
55	MG	DA	3145	1/1	0.94	0.29	-	54,54,54,54	0
55	MG	BA	3417	1/1	0.91	0.58	-	86,86,86,86	0
55	MG	BA	3489	1/1	0.81	0.41	-	95,95,95,95	0
55	MG	CA	1681	1/1	0.92	0.35	-	89,89,89,89	0
55	MG	BA	3256	1/1	0.84	0.44	-	80,80,80,80	0
55	MG	CA	1685	1/1	0.87	0.36	-	91,91,91,91	0
55	MG	CA	1808	1/1	-0.23	0.55	-	153,153,153,153	0
55	MG	BA	3535	1/1	0.87	0.32	-	82,82,82,82	0
55	MG	DA	3180	1/1	0.96	0.25	-	48,48,48,48	0
55	MG	BA	3275	1/1	0.76	0.35	-	60,60,60,60	0
55	MG	CA	1785	1/1	0.87	0.40	-	155,155,155,155	0
55	MG	BA	3170	1/1	0.95	0.30	-	54,54,54,54	0
55	MG	AA	1762	1/1	0.67	0.18	-	121,121,121,121	0
55	MG	BA	3550	1/1	0.41	1.21	-	131,131,131,131	0
55	MG	DA	3472	1/1	0.97	0.24	-	53,53,53,53	0
55	MG	DA	3454	1/1	0.99	0.35	-	52,52,52,52	0
55	MG	DA	3237	1/1	0.95	0.26	-	79,79,79,79	0
55	MG	DA	3319	1/1	0.70	0.21	-	95,95,95,95	0
55	MG	DA	3420	1/1	0.75	0.14	-	108,108,108,108	0
55	MG	DA	3484	1/1	0.63	0.22	-	84,84,84,84	0
55	MG	BA	3022	1/1	0.95	0.31	-	46,46,46,46	0
55	MG	BA	3098	1/1	0.88	0.38	-	88,88,88,88	0
55	MG	BA	3357	1/1	0.85	0.41	-	78,78,78,78	0
55	MG	DA	3046	1/1	0.95	0.10	-	100,100,100,100	0
55	MG	CA	1752	1/1	0.97	0.44	-	80,80,80,80	0
55	MG	DA	3083	1/1	0.94	0.10	-	65,65,65,65	0
55	MG	CA	1773	1/1	0.19	0.62	-	139,139,139,139	0
55	MG	DA	3117	1/1	0.90	0.25	-	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	AA	1668	1/1	0.92	0.43	-	68,68,68,68	0
55	MG	DA	3175	1/1	0.95	0.38	-	60,60,60,60	0
55	MG	AA	1699	1/1	0.83	0.16	-	99,99,99,99	0
55	MG	DB	217	1/1	0.66	0.28	-	97,97,97,97	0
55	MG	AA	1733	1/1	0.77	0.31	-	101,101,101,101	0
55	MG	DA	3203	1/1	0.91	0.30	-	74,74,74,74	0
55	MG	BF	302	1/1	0.81	0.53	-	88,88,88,88	0
55	MG	BA	3412	1/1	0.67	0.38	-	89,89,89,89	0
55	MG	CA	1747	1/1	0.26	0.34	-	109,109,109,109	0
55	MG	D3	101	1/1	0.81	0.13	-	91,91,91,91	0
55	MG	DA	3078	1/1	0.96	0.35	-	76,76,76,76	0
55	MG	BA	3565	1/1	0.62	0.38	-	105,105,105,105	0
55	MG	AA	1637	1/1	0.62	0.23	-	112,112,112,112	0
55	MG	BA	3444	1/1	0.66	0.21	-	87,87,87,87	0
55	MG	BA	3148	1/1	0.94	0.13	-	56,56,56,56	0
55	MG	CA	1703	1/1	0.98	0.43	-	72,72,72,72	0
55	MG	BA	3029	1/1	0.93	0.22	-	57,57,57,57	0
55	MG	DA	3205	1/1	0.82	0.26	-	110,110,110,110	0
55	MG	BA	3176	1/1	0.69	0.27	-	78,78,78,78	0
55	MG	BD	301	1/1	0.59	0.21	-	80,80,80,80	0
55	MG	DA	3034	1/1	0.93	0.28	-	76,76,76,76	0
55	MG	CA	1699	1/1	0.79	0.33	-	87,87,87,87	0
55	MG	DA	3039	1/1	0.51	0.23	-	101,101,101,101	0
55	MG	DA	3359	1/1	0.54	0.14	-	111,111,111,111	0
55	MG	BA	3365	1/1	0.73	0.22	-	81,81,81,81	0
55	MG	AA	1640	1/1	0.86	0.34	-	71,71,71,71	0
55	MG	DA	3153	1/1	0.76	0.09	-	88,88,88,88	0
55	MG	DA	3448	1/1	0.71	0.19	-	129,129,129,129	0
55	MG	CA	1758	1/1	0.93	0.24	-	107,107,107,107	0
55	MG	AA	1693	1/1	0.84	0.31	-	72,72,72,72	0
55	MG	BA	3077	1/1	0.95	0.27	-	83,83,83,83	0
55	MG	AA	1810	1/1	0.26	0.28	-	148,148,148,148	0
55	MG	BA	3532	1/1	0.94	0.40	-	54,54,54,54	0
55	MG	CA	1690	1/1	0.89	0.16	-	90,90,90,90	0
55	MG	BA	3162	1/1	0.80	0.28	-	67,67,67,67	0
55	MG	BA	3511	1/1	0.87	0.14	-	83,83,83,83	0
55	MG	AA	1609	1/1	0.90	0.39	-	88,88,88,88	0
55	MG	DA	3104	1/1	0.86	0.34	-	62,62,62,62	0
55	MG	BA	3198	1/1	0.84	0.18	-	74,74,74,74	0
55	MG	BA	3453	1/1	0.55	0.20	-	75,75,75,75	0
55	MG	BA	3155	1/1	0.65	0.98	-	114,114,114,114	0
55	MG	DA	3151	1/1	0.94	0.33	-	78,78,78,78	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	DA	3214	1/1	0.91	0.30	-	76,76,76,76	0
55	MG	DA	3253	1/1	0.95	0.28	-	77,77,77,77	0
55	MG	BA	3327	1/1	0.96	0.30	-	69,69,69,69	0
55	MG	DA	3004	1/1	0.98	0.23	-	39,39,39,39	0
55	MG	BA	3243	1/1	0.68	0.26	-	79,79,79,79	0
55	MG	DB	205	1/1	0.87	0.33	-	73,73,73,73	0
55	MG	BA	3483	1/1	0.60	0.35	-	120,120,120,120	0
55	MG	AA	1779	1/1	0.05	0.26	-	119,119,119,119	0
55	MG	DA	3475	1/1	0.89	0.27	-	62,62,62,62	0
55	MG	DA	3003	1/1	0.96	0.24	-	58,58,58,58	0
55	MG	DA	3051	1/1	0.83	0.13	-	87,87,87,87	0
55	MG	DA	3087	1/1	0.89	0.26	-	85,85,85,85	0
55	MG	CA	1746	1/1	0.77	0.20	-	87,87,87,87	0
55	MG	DA	3333	1/1	0.85	0.30	-	95,95,95,95	0
55	MG	AA	1801	1/1	0.64	0.19	-	130,130,130,130	0
55	MG	DA	3255	1/1	0.69	0.15	-	82,82,82,82	0
55	MG	DB	210	1/1	0.33	0.80	-	128,128,128,128	0
55	MG	AA	1679	1/1	0.93	0.42	-	83,83,83,83	0
55	MG	DA	3218	1/1	0.52	0.27	-	86,86,86,86	0
55	MG	CA	1649	1/1	0.87	0.42	-	77,77,77,77	0
55	MG	BA	3220	1/1	0.88	0.28	-	70,70,70,70	0
55	MG	DA	3249	1/1	0.95	0.07	-	81,81,81,81	0
55	MG	AB	104	1/1	0.80	0.43	-	97,97,97,97	0
55	MG	CA	1762	1/1	0.72	0.45	-	108,108,108,108	0
55	MG	CA	1635	1/1	0.92	0.29	-	72,72,72,72	0
55	MG	DA	3105	1/1	0.95	0.34	-	37,37,37,37	0
55	MG	AA	1616	1/1	0.93	0.10	-	110,110,110,110	0
55	MG	CA	1730	1/1	0.86	0.15	-	79,79,79,79	0
55	MG	CA	1765	1/1	0.90	0.22	-	115,115,115,115	0
55	MG	BA	3339	1/1	0.94	0.37	-	74,74,74,74	0
55	MG	CA	1818	1/1	0.84	0.40	-	81,81,81,81	0
55	MG	DA	3164	1/1	0.94	0.26	-	67,67,67,67	0
55	MG	CA	1796	1/1	0.60	0.18	-	146,146,146,146	0
55	MG	CA	1687	1/1	0.64	0.29	-	99,99,99,99	0
55	MG	DA	3259	1/1	0.79	0.29	-	92,92,92,92	0
55	MG	DA	3095	1/1	0.87	0.27	-	89,89,89,89	0
55	MG	DA	3308	1/1	0.59	0.30	-	99,99,99,99	0
55	MG	DA	3243	1/1	0.79	0.25	-	97,97,97,97	0
55	MG	DA	3127	1/1	0.83	0.36	-	73,73,73,73	0
55	MG	DA	3096	1/1	0.93	0.44	-	47,47,47,47	0
55	MG	AA	1813	1/1	0.82	0.36	-	85,85,85,85	0
55	MG	BA	3211	1/1	0.97	0.37	-	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	DA	3488	1/1	0.79	0.23	-	100,100,100,100	0
55	MG	AA	1745	1/1	0.89	0.28	-	83,83,83,83	0
55	MG	DA	3339	1/1	0.86	0.43	-	104,104,104,104	0
55	MG	BA	3246	1/1	0.87	0.23	-	89,89,89,89	0
55	MG	AA	1815	1/1	0.40	0.41	-	114,114,114,114	0
55	MG	CA	1771	1/1	0.78	0.19	-	117,117,117,117	0
55	MG	BA	3543	1/1	0.60	0.39	-	101,101,101,101	0
55	MG	BA	3045	1/1	0.85	0.35	-	105,105,105,105	0
55	MG	DA	3143	1/1	0.90	0.31	-	74,74,74,74	0
55	MG	DA	3485	1/1	0.90	0.34	-	84,84,84,84	0
55	MG	BA	3373	1/1	0.40	0.48	-	92,92,92,92	0
55	MG	BB	212	1/1	0.90	0.45	-	74,74,74,74	0
55	MG	CA	1691	1/1	0.87	0.19	-	90,90,90,90	0
55	MG	AA	1809	1/1	-0.06	0.49	-	204,204,204,204	0
55	MG	CA	1646	1/1	0.78	0.25	-	88,88,88,88	0
55	MG	DA	3332	1/1	0.76	0.17	-	84,84,84,84	0
55	MG	BA	3418	1/1	0.85	0.28	-	82,82,82,82	0
55	MG	DA	3021	1/1	0.91	0.20	-	77,77,77,77	0
55	MG	BA	3037	1/1	0.57	0.34	-	105,105,105,105	0
55	MG	BA	3295	1/1	0.80	0.19	-	92,92,92,92	0
55	MG	DA	3001	1/1	0.96	0.30	-	46,46,46,46	0
55	MG	DA	3179	1/1	0.72	0.33	-	88,88,88,88	0
55	MG	AA	1778	1/1	0.80	0.10	-	143,143,143,143	0
55	MG	AA	1635	1/1	0.78	0.18	-	81,81,81,81	0
55	MG	BA	3456	1/1	-0.34	0.48	-	168,168,168,168	0
55	MG	DA	3227	1/1	0.13	2.16	-	118,118,118,118	0
55	MG	BA	3142	1/1	0.98	0.13	-	49,49,49,49	0
55	MG	BA	3058	1/1	0.67	0.30	-	88,88,88,88	0
55	MG	CA	1766	1/1	0.90	0.17	-	114,114,114,114	0
55	MG	DB	219	1/1	0.74	0.12	-	94,94,94,94	0
55	MG	CA	1731	1/1	0.96	0.36	-	97,97,97,97	0
55	MG	BB	213	1/1	0.92	0.24	-	101,101,101,101	0
55	MG	CA	1795	1/1	0.94	0.41	-	73,73,73,73	0
55	MG	CA	1740	1/1	0.31	0.56	-	122,122,122,122	0
55	MG	DA	3215	1/1	0.84	0.31	-	83,83,83,83	0
55	MG	BA	3137	1/1	0.60	0.44	-	88,88,88,88	0
55	MG	DA	3136	1/1	0.98	0.39	-	73,73,73,73	0
55	MG	AA	1799	1/1	0.73	0.21	-	101,101,101,101	0
55	MG	BA	3111	1/1	0.94	0.21	-	55,55,55,55	0
55	MG	AA	1641	1/1	0.96	0.31	-	56,56,56,56	0
55	MG	BA	3440	1/1	0.63	0.56	-	96,96,96,96	0
55	MG	BA	3108	1/1	0.94	0.38	-	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BB	211	1/1	0.77	0.22	-	109,109,109,109	0
55	MG	BA	3152	1/1	0.98	0.42	-	58,58,58,58	0
55	MG	B3	103	1/1	0.70	0.32	-	83,83,83,83	0
55	MG	AA	1621	1/1	0.41	0.28	-	102,102,102,102	0
55	MG	BE	302	1/1	0.99	0.42	-	40,40,40,40	0
55	MG	D5	102	1/1	0.65	0.24	-	104,104,104,104	0
55	MG	BA	3305	1/1	0.93	0.50	-	94,94,94,94	0
55	MG	DB	209	1/1	0.47	0.33	-	130,130,130,130	0
55	MG	BA	3136	1/1	0.95	0.15	-	53,53,53,53	0
55	MG	AA	1780	1/1	0.56	0.23	-	103,103,103,103	0
55	MG	AA	1673	1/1	0.82	0.31	-	75,75,75,75	0
55	MG	BA	3477	1/1	0.74	0.57	-	77,77,77,77	0
55	MG	DA	3244	1/1	0.92	0.38	-	80,80,80,80	0
55	MG	AA	1729	1/1	0.65	0.29	-	84,84,84,84	0
55	MG	BB	205	1/1	0.93	0.29	-	71,71,71,71	0
55	MG	DA	3399	1/1	0.72	0.59	-	117,117,117,117	0
55	MG	BA	3343	1/1	0.35	0.32	-	114,114,114,114	0
55	MG	DA	3208	1/1	0.76	0.29	-	91,91,91,91	0
55	MG	DA	3135	1/1	0.78	0.17	-	87,87,87,87	0
55	MG	AA	1734	1/1	0.91	0.44	-	93,93,93,93	0
55	MG	BA	3138	1/1	0.81	0.46	-	86,86,86,86	0
55	MG	DA	3271	1/1	0.82	0.20	-	71,71,71,71	0
55	MG	BA	3364	1/1	0.80	0.32	-	72,72,72,72	0
55	MG	DA	3414	1/1	0.64	0.30	-	111,111,111,111	0
55	MG	DA	3425	1/1	0.69	0.42	-	88,88,88,88	0
55	MG	CC	102	1/1	0.91	0.31	-	85,85,85,85	0
55	MG	DA	3409	1/1	0.65	0.51	-	124,124,124,124	0
55	MG	DA	3479	1/1	0.61	0.17	-	97,97,97,97	0
55	MG	BA	3310	1/1	0.85	0.29	-	76,76,76,76	0
55	MG	DA	3317	1/1	0.90	0.32	-	58,58,58,58	0
55	MG	AA	1623	1/1	0.81	0.34	-	63,63,63,63	0
55	MG	BA	3393	1/1	-0.01	0.34	-	118,118,118,118	0
55	MG	BA	3242	1/1	0.79	0.26	-	116,116,116,116	0
55	MG	DA	3277	1/1	0.74	0.16	-	78,78,78,78	0
55	MG	BA	3233	1/1	0.81	0.36	-	66,66,66,66	0
55	MG	CA	1608	1/1	0.96	0.23	-	74,74,74,74	0
55	MG	B7	101	1/1	0.76	0.32	-	72,72,72,72	0
55	MG	BA	3554	1/1	0.89	0.27	-	48,48,48,48	0
55	MG	DA	3418	1/1	0.83	0.17	-	85,85,85,85	0
55	MG	CA	1679	1/1	0.95	0.23	-	80,80,80,80	0
55	MG	DA	3216	1/1	0.91	0.33	-	90,90,90,90	0
55	MG	BA	3191	1/1	0.81	0.39	-	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	DA	3447	1/1	0.92	0.27	-	92,92,92,92	0
55	MG	DA	3388	1/1	0.26	0.21	-	138,138,138,138	0
55	MG	CA	1671	1/1	0.64	0.21	-	100,100,100,100	0
55	MG	BA	3312	1/1	-	-	-	62,62,62,62	1
55	MG	CA	1788	1/1	0.69	0.24	-	132,132,132,132	0
55	MG	DA	3355	1/1	0.88	0.38	-	83,83,83,83	0
55	MG	AA	1727	1/1	0.67	0.22	-	95,95,95,95	0
55	MG	CA	1661	1/1	0.88	0.23	-	92,92,92,92	0
55	MG	CB	101	1/1	0.72	0.18	-	106,106,106,106	0
55	MG	BA	3078	1/1	0.28	0.52	-	101,101,101,101	0
55	MG	BA	3379	1/1	0.80	0.45	-	78,78,78,78	0
55	MG	CA	1810	1/1	0.65	0.27	-	101,101,101,101	0
55	MG	DA	3209	1/1	0.77	0.35	-	96,96,96,96	0
55	MG	AA	1649	1/1	0.80	0.21	-	95,95,95,95	0
55	MG	BA	3107	1/1	0.82	0.19	-	81,81,81,81	0
55	MG	DA	3252	1/1	0.73	0.17	-	99,99,99,99	0
55	MG	BA	3274	1/1	0.65	0.47	-	108,108,108,108	0
55	MG	DA	3288	1/1	0.92	0.09	-	101,101,101,101	0
55	MG	BA	3354	1/1	0.96	0.43	-	73,73,73,73	0
55	MG	CA	1719	1/1	0.91	0.26	-	91,91,91,91	0
55	MG	BA	3205	1/1	0.90	0.18	-	59,59,59,59	0
55	MG	DA	3380	1/1	0.82	0.19	-	80,80,80,80	0
55	MG	BA	3501	1/1	0.71	0.35	-	86,86,86,86	0
55	MG	BA	3259	1/1	0.75	0.24	-	109,109,109,109	0
55	MG	AA	1812	1/1	0.97	0.46	-	69,69,69,69	0
55	MG	DA	3415	1/1	0.85	0.34	-	85,85,85,85	0
55	MG	DA	3427	1/1	0.99	0.29	-	56,56,56,56	0
55	MG	CA	1800	1/1	0.84	0.28	-	99,99,99,99	0
55	MG	AB	101	1/1	0.88	0.18	-	92,92,92,92	0
55	MG	DB	207	1/1	0.89	0.33	-	69,69,69,69	0
55	MG	DA	3210	1/1	0.74	0.38	-	77,77,77,77	0
55	MG	DA	3150	1/1	0.86	0.49	-	77,77,77,77	0
55	MG	BA	3126	1/1	0.88	0.63	-	95,95,95,95	0
55	MG	BA	3545	1/1	0.82	0.23	-	82,82,82,82	0
55	MG	BA	3282	1/1	0.89	0.44	-	103,103,103,103	0
55	MG	BA	3432	1/1	0.75	0.24	-	106,106,106,106	0
55	MG	BA	3567	1/1	0.88	0.21	-	99,99,99,99	0
55	MG	DA	3268	1/1	0.89	0.26	-	77,77,77,77	0
55	MG	BA	3302	1/1	0.85	0.23	-	83,83,83,83	0
55	MG	DA	3140	1/1	0.81	0.30	-	76,76,76,76	0
55	MG	DA	3404	1/1	0.74	0.26	-	119,119,119,119	0
55	MG	B5	101	1/1	0.81	0.18	-	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3429	1/1	0.24	0.55	-	146,146,146,146	0
55	MG	DA	3446	1/1	0.60	0.43	-	166,166,166,166	0
55	MG	BA	3015	1/1	0.97	0.39	-	35,35,35,35	0
55	MG	BA	3387	1/1	0.96	0.10	-	88,88,88,88	0
55	MG	DA	3352	1/1	0.86	0.27	-	122,122,122,122	0
55	MG	BA	3032	1/1	0.98	0.31	-	41,41,41,41	0
55	MG	BA	3403	1/1	0.90	0.39	-	71,71,71,71	0
55	MG	BA	3455	1/1	0.69	0.78	-	89,89,89,89	0
55	MG	BA	3512	1/1	0.79	0.32	-	90,90,90,90	0
55	MG	BA	3265	1/1	0.85	0.14	-	89,89,89,89	0
55	MG	CA	1815	1/1	0.65	0.20	-	95,95,95,95	0
55	MG	BA	3120	1/1	0.97	0.37	-	42,42,42,42	0
55	MG	DA	3281	1/1	0.62	0.23	-	90,90,90,90	0
55	MG	DA	3048	1/1	0.93	0.36	-	76,76,76,76	0
55	MG	BA	3276	1/1	0.84	0.22	-	92,92,92,92	0
55	MG	DA	3138	1/1	0.91	0.35	-	54,54,54,54	0
55	MG	CA	1672	1/1	0.53	0.17	-	119,119,119,119	0
55	MG	BA	3562	1/1	0.91	0.42	-	91,91,91,91	0
55	MG	BA	3408	1/1	0.90	0.14	-	82,82,82,82	0
55	MG	BA	3419	1/1	0.85	0.49	-	80,80,80,80	0
55	MG	BA	3247	1/1	0.84	0.32	-	97,97,97,97	0
55	MG	BA	3422	1/1	0.26	0.70	-	110,110,110,110	0
55	MG	AA	1770	1/1	0.75	0.25	-	80,80,80,80	0
55	MG	BA	3267	1/1	0.81	0.36	-	62,62,62,62	0
55	MG	BA	3333	1/1	0.67	0.52	-	80,80,80,80	0
55	MG	CA	1779	1/1	0.85	0.27	-	109,109,109,109	0
55	MG	CA	1694	1/1	0.73	0.16	-	80,80,80,80	0
55	MG	DD	302	1/1	0.83	0.27	-	82,82,82,82	0
55	MG	DA	3166	1/1	0.81	0.25	-	90,90,90,90	0
55	MG	CA	1702	1/1	0.06	0.29	-	106,106,106,106	0
55	MG	DA	3299	1/1	0.63	0.19	-	84,84,84,84	0
55	MG	CA	1673	1/1	-0.10	0.64	-	136,136,136,136	0
55	MG	DA	3394	1/1	0.88	0.29	-	101,101,101,101	0
55	MG	AA	1747	1/1	0.76	0.20	-	98,98,98,98	0
55	MG	DB	214	1/1	0.91	0.10	-	95,95,95,95	0
55	MG	BA	3213	1/1	0.96	0.41	-	41,41,41,41	0
55	MG	CA	1799	1/1	0.72	0.18	-	81,81,81,81	0
55	MG	AC	106	1/1	0.80	0.39	-	102,102,102,102	0
55	MG	DA	3102	1/1	0.90	0.35	-	72,72,72,72	0
55	MG	CA	1732	1/1	0.89	0.36	-	105,105,105,105	0
55	MG	AA	1633	1/1	0.81	0.39	-	102,102,102,102	0
55	MG	CA	1662	1/1	0.90	0.42	-	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3301	1/1	0.66	0.26	-	84,84,84,84	0
55	MG	AS	101	1/1	0.86	0.23	-	96,96,96,96	0
55	MG	DA	3305	1/1	0.84	0.15	-	93,93,93,93	0
55	MG	CA	1760	1/1	0.84	0.24	-	105,105,105,105	0
55	MG	DA	3141	1/1	0.90	0.29	-	101,101,101,101	0
55	MG	BA	3424	1/1	0.80	0.47	-	84,84,84,84	0
55	MG	BA	3552	1/1	0.98	0.38	-	45,45,45,45	0
55	MG	AA	1761	1/1	0.89	0.32	-	77,77,77,77	0
55	MG	BA	3165	1/1	0.96	0.32	-	60,60,60,60	0
55	MG	CA	1707	1/1	0.68	0.31	-	109,109,109,109	0
55	MG	DA	3167	1/1	0.46	0.17	-	95,95,95,95	0
55	MG	DA	3148	1/1	0.92	0.14	-	111,111,111,111	0
55	MG	BA	3451	1/1	0.28	0.50	-	101,101,101,101	0
55	MG	CA	1805	1/1	0.52	0.18	-	102,102,102,102	0
55	MG	BA	3434	1/1	0.89	0.39	-	69,69,69,69	0
55	MG	CA	1750	1/1	0.81	0.26	-	86,86,86,86	0
55	MG	DA	3468	1/1	0.77	0.15	-	101,101,101,101	0
55	MG	CA	1659	1/1	0.94	0.41	-	75,75,75,75	0
55	MG	DA	3052	1/1	0.90	0.16	-	78,78,78,78	0
55	MG	DA	3142	1/1	0.77	0.37	-	81,81,81,81	0
55	MG	BA	3458	1/1	0.90	0.32	-	91,91,91,91	0
55	MG	CA	1684	1/1	0.74	0.26	-	101,101,101,101	0
55	MG	BA	3374	1/1	0.79	0.26	-	93,93,93,93	0
55	MG	DA	3327	1/1	0.77	0.23	-	93,93,93,93	0
55	MG	DA	3286	1/1	0.80	0.33	-	78,78,78,78	0
55	MG	BA	3433	1/1	0.60	0.42	-	99,99,99,99	0
55	MG	DA	3100	1/1	0.33	0.44	-	116,116,116,116	0
55	MG	BA	3441	1/1	0.93	0.29	-	84,84,84,84	0
55	MG	DA	3451	1/1	0.66	0.23	-	92,92,92,92	0
55	MG	BA	3159	1/1	0.96	0.36	-	57,57,57,57	0
55	MG	BA	3353	1/1	0.62	0.45	-	77,77,77,77	0
55	MG	AA	1604	1/1	0.97	0.35	-	52,52,52,52	0
55	MG	DA	3221	1/1	0.56	1.31	-	154,154,154,154	0
55	MG	DA	3274	1/1	0.51	0.25	-	85,85,85,85	0
55	MG	CA	1693	1/1	0.68	0.26	-	103,103,103,103	0
55	MG	AA	1760	1/1	0.88	0.35	-	77,77,77,77	0
55	MG	BA	3236	1/1	0.91	0.38	-	67,67,67,67	0
55	MG	DA	3188	1/1	0.25	0.26	-	113,113,113,113	0
55	MG	BA	3189	1/1	-0.07	0.67	-	108,108,108,108	0
55	MG	CA	1626	1/1	0.93	0.31	-	69,69,69,69	0
55	MG	DA	3035	1/1	0.28	0.32	-	124,124,124,124	0
55	MG	CA	1621	1/1	0.45	0.19	-	97,97,97,97	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	DA	3219	1/1	0.71	0.26	-	128,128,128,128	0
55	MG	DA	3155	1/1	0.93	0.14	-	90,90,90,90	0
55	MG	CA	1709	1/1	0.67	0.34	-	110,110,110,110	0
55	MG	BA	3559	1/1	0.88	0.26	-	86,86,86,86	0
55	MG	DA	3449	1/1	0.94	0.27	-	66,66,66,66	0
55	MG	DA	3054	1/1	0.64	0.41	-	108,108,108,108	0
55	MG	DA	3213	1/1	0.86	0.18	-	103,103,103,103	0
55	MG	DA	3291	1/1	0.17	0.48	-	149,149,149,149	0
55	MG	DA	3092	1/1	0.67	0.17	-	87,87,87,87	0
55	MG	AA	1660	1/1	0.92	0.42	-	77,77,77,77	0
55	MG	BA	3089	1/1	0.97	0.35	-	61,61,61,61	0
55	MG	AA	1700	1/1	0.85	0.17	-	136,136,136,136	0
55	MG	AA	1691	1/1	0.75	0.27	-	88,88,88,88	0
55	MG	BA	3335	1/1	0.57	0.34	-	102,102,102,102	0
55	MG	BA	3260	1/1	0.97	0.43	-	65,65,65,65	0
55	MG	DA	3072	1/1	0.93	0.39	-	65,65,65,65	0
55	MG	AA	1769	1/1	0.92	0.18	-	95,95,95,95	0
55	MG	CK	201	1/1	0.72	1.47	-	124,124,124,124	0
55	MG	AA	1746	1/1	0.73	0.32	-	93,93,93,93	0
55	MG	CA	1726	1/1	0.85	0.10	-	73,73,73,73	0
55	MG	CA	1812	1/1	0.78	1.05	-	176,176,176,176	0
55	MG	BA	3183	1/1	0.86	0.45	-	84,84,84,84	0
55	MG	CA	1819	1/1	0.63	0.45	-	134,134,134,134	0
55	MG	DA	3416	1/1	0.83	0.49	-	77,77,77,77	0
55	MG	DA	3269	1/1	0.82	0.30	-	78,78,78,78	0
55	MG	AA	1782	1/1	0.85	0.12	-	118,118,118,118	0
55	MG	AA	1680	1/1	0.82	0.49	-	97,97,97,97	0
55	MG	DA	3342	1/1	0.57	0.93	-	122,122,122,122	0
55	MG	BA	3208	1/1	0.96	0.55	-	55,55,55,55	0
55	MG	CA	1696	1/1	0.62	0.20	-	104,104,104,104	0
55	MG	DA	3290	1/1	0.62	0.17	-	99,99,99,99	0
55	MG	DA	3077	1/1	0.89	0.38	-	72,72,72,72	0
55	MG	BA	3081	1/1	0.93	0.49	-	91,91,91,91	0
55	MG	DA	3452	1/1	0.91	0.29	-	52,52,52,52	0
55	MG	CA	1780	1/1	0.72	0.21	-	88,88,88,88	0
55	MG	CA	1751	1/1	0.82	0.24	-	90,90,90,90	0
55	MG	BO	202	1/1	0.73	0.20	-	98,98,98,98	0
55	MG	CC	105	1/1	0.57	0.13	-	94,94,94,94	0
55	MG	BA	3446	1/1	0.15	0.41	-	121,121,121,121	0
55	MG	DA	3356	1/1	0.88	0.36	-	76,76,76,76	0
55	MG	AA	1674	1/1	0.96	0.32	-	56,56,56,56	0
55	MG	BA	3431	1/1	0.88	0.18	-	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	DA	3487	1/1	0.92	0.21	-	85,85,85,85	0
55	MG	CA	1753	1/1	0.45	0.24	-	103,103,103,103	0
55	MG	AD	102	1/1	0.52	0.23	-	125,125,125,125	0
55	MG	BA	3513	1/1	0.72	0.29	-	92,92,92,92	0
55	MG	B2	201	1/1	0.71	0.36	-	91,91,91,91	0
55	MG	BA	3467	1/1	0.55	0.25	-	69,69,69,69	0
55	MG	BA	3533	1/1	0.90	0.33	-	91,91,91,91	0
55	MG	BA	3135	1/1	0.87	0.41	-	69,69,69,69	0
55	MG	AA	1667	1/1	0.82	0.56	-	78,78,78,78	0
55	MG	AA	1753	1/1	0.77	0.19	-	97,97,97,97	0
55	MG	BA	3465	1/1	0.95	0.51	-	61,61,61,61	0
55	MG	AA	1789	1/1	0.92	0.34	-	63,63,63,63	0
55	MG	DA	3337	1/1	0.91	0.28	-	86,86,86,86	0
55	MG	AA	1806	1/1	0.72	0.40	-	85,85,85,85	0
55	MG	BA	3222	1/1	0.78	0.47	-	68,68,68,68	0
55	MG	CA	1698	1/1	0.96	0.23	-	79,79,79,79	0
55	MG	CA	1614	1/1	0.94	0.29	-	79,79,79,79	0
55	MG	CA	1678	1/1	0.78	0.50	-	83,83,83,83	0
55	MG	BA	3038	1/1	0.97	0.23	-	33,33,33,33	0
55	MG	DB	216	1/1	0.69	0.16	-	100,100,100,100	0
55	MG	BA	3153	1/1	0.94	0.47	-	78,78,78,78	0
55	MG	AA	1818	1/1	0.61	0.47	-	124,124,124,124	0
55	MG	BB	208	1/1	0.66	0.42	-	117,117,117,117	0
55	MG	DA	3013	1/1	0.94	0.25	-	51,51,51,51	0
55	MG	DA	3279	1/1	-0.02	0.53	-	135,135,135,135	0
55	MG	BA	3494	1/1	0.95	0.36	-	76,76,76,76	0
55	MG	BA	3218	1/1	0.91	0.26	-	64,64,64,64	0
55	MG	BA	3345	1/1	0.92	0.26	-	46,46,46,46	0
55	MG	AA	1614	1/1	0.93	0.29	-	92,92,92,92	0
55	MG	BA	3194	1/1	0.81	0.27	-	74,74,74,74	0
55	MG	DA	3223	1/1	0.91	0.16	-	81,81,81,81	0
55	MG	AA	1650	1/1	0.89	0.30	-	80,80,80,80	0
55	MG	BA	3065	1/1	0.77	0.31	-	82,82,82,82	0
55	MG	BA	3239	1/1	0.82	0.20	-	69,69,69,69	0
55	MG	BA	3311	1/1	0.96	0.38	-	68,68,68,68	0
55	MG	CA	1817	1/1	0.56	0.44	-	106,106,106,106	0
55	MG	DA	3114	1/1	0.74	0.38	-	91,91,91,91	0
55	MG	CA	1692	1/1	0.71	0.10	-	157,157,157,157	0
55	MG	BA	3508	1/1	0.87	0.33	-	77,77,77,77	0
55	MG	BA	3115	1/1	0.97	0.44	-	41,41,41,41	0
55	MG	BA	3179	1/1	0.89	0.40	-	72,72,72,72	0
55	MG	DA	3460	1/1	0.93	0.26	-	116,116,116,116	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	AA	1808	1/1	0.82	0.31	-	88,88,88,88	0
55	MG	CA	1654	1/1	0.85	0.25	-	78,78,78,78	0
55	MG	BA	3525	1/1	0.94	0.31	-	51,51,51,51	0
55	MG	DA	3328	1/1	0.61	0.27	-	84,84,84,84	0
55	MG	BA	3028	1/1	0.93	0.33	-	52,52,52,52	0
55	MG	BA	3350	1/1	0.88	0.48	-	92,92,92,92	0
55	MG	CA	1680	1/1	0.40	0.20	-	99,99,99,99	0
55	MG	AA	1626	1/1	0.65	0.32	-	91,91,91,91	0
55	MG	DA	3121	1/1	0.69	0.20	-	104,104,104,104	0
55	MG	CA	1774	1/1	0.84	0.22	-	75,75,75,75	0
55	MG	BA	3192	1/1	0.53	0.47	-	92,92,92,92	0
55	MG	DA	3022	1/1	0.93	0.27	-	74,74,74,74	0
55	MG	BA	3154	1/1	0.86	0.50	-	87,87,87,87	0
55	MG	AA	1631	1/1	0.65	0.24	-	84,84,84,84	0
55	MG	DA	3469	1/1	0.42	0.31	-	109,109,109,109	0
55	MG	DA	3101	1/1	0.98	0.33	-	76,76,76,76	0
55	MG	BA	3273	1/1	0.97	0.34	-	73,73,73,73	0
55	MG	D7	101	1/1	0.55	0.34	-	86,86,86,86	0
55	MG	AA	1656	1/1	0.96	0.41	-	87,87,87,87	0
55	MG	BA	3285	1/1	0.89	0.41	-	102,102,102,102	0
55	MG	DA	3231	1/1	0.74	0.27	-	101,101,101,101	0
55	MG	BA	3443	1/1	0.85	0.23	-	125,125,125,125	0
55	MG	BB	214	1/1	0.85	0.31	-	76,76,76,76	0
55	MG	DA	3480	1/1	0.77	0.20	-	109,109,109,109	0
55	MG	BA	3036	1/1	0.96	0.35	-	58,58,58,58	0
55	MG	DA	3292	1/1	0.87	0.39	-	98,98,98,98	0
55	MG	BA	3355	1/1	0.84	0.25	-	95,95,95,95	0
55	MG	BA	3491	1/1	0.99	0.35	-	41,41,41,41	0
55	MG	BA	3094	1/1	0.94	0.37	-	68,68,68,68	0
55	MG	CA	1675	1/1	0.43	0.39	-	111,111,111,111	0
55	MG	AA	1749	1/1	0.81	0.44	-	110,110,110,110	0
55	MG	DA	3377	1/1	0.78	0.28	-	87,87,87,87	0
55	MG	BA	3023	1/1	0.91	0.48	-	64,64,64,64	0
55	MG	AA	1642	1/1	0.93	0.38	-	70,70,70,70	0
55	MG	DA	3047	1/1	0.95	0.34	-	67,67,67,67	0
55	MG	BA	3003	1/1	0.97	0.34	-	50,50,50,50	0
55	MG	BA	3409	1/1	0.87	0.38	-	98,98,98,98	0
55	MG	BA	3252	1/1	0.81	0.42	-	107,107,107,107	0
55	MG	DA	3088	1/1	0.74	0.26	-	62,62,62,62	0
55	MG	DA	3177	1/1	0.76	0.12	-	129,129,129,129	0
55	MG	DA	3260	1/1	0.93	0.34	-	73,73,73,73	0
55	MG	BA	3237	1/1	0.61	0.36	-	102,102,102,102	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	DA	3238	1/1	0.49	0.40	-	105,105,105,105	0
55	MG	DA	3361	1/1	0.92	0.10	-	89,89,89,89	0
55	MG	CA	1763	1/1	0.46	0.16	-	100,100,100,100	0
55	MG	DA	3350	1/1	0.70	0.33	-	120,120,120,120	0
55	MG	BA	3249	1/1	0.85	0.17	-	82,82,82,82	0
55	MG	BA	3370	1/1	0.92	0.26	-	78,78,78,78	0
55	MG	AA	1677	1/1	0.90	0.42	-	73,73,73,73	0
55	MG	AA	1723	1/1	0.82	0.20	-	93,93,93,93	0
55	MG	CA	1611	1/1	0.83	0.35	-	82,82,82,82	0
55	MG	DA	3251	1/1	0.88	0.34	-	79,79,79,79	0
55	MG	DA	3375	1/1	0.86	0.13	-	86,86,86,86	0
55	MG	DA	3016	1/1	0.89	0.28	-	78,78,78,78	0
55	MG	CA	1802	1/1	0.93	0.24	-	73,73,73,73	0
55	MG	DA	3069	1/1	0.94	0.42	-	76,76,76,76	0
55	MG	BA	3255	1/1	0.94	0.41	-	50,50,50,50	0
55	MG	AA	1721	1/1	0.82	0.29	-	60,60,60,60	0
55	MG	DA	3358	1/1	0.76	0.45	-	90,90,90,90	0
55	MG	DA	3012	1/1	0.97	0.34	-	50,50,50,50	0
55	MG	AA	1803	1/1	0.76	0.28	-	89,89,89,89	0
55	MG	AC	105	1/1	0.51	0.36	-	102,102,102,102	0
55	MG	DA	3398	1/1	-0.01	0.34	-	101,101,101,101	0
55	MG	DA	3444	1/1	0.59	0.23	-	109,109,109,109	0
55	MG	BF	303	1/1	0.89	0.45	-	78,78,78,78	0
55	MG	AA	1630	1/1	0.80	0.34	-	112,112,112,112	0
55	MG	BA	3450	1/1	0.80	0.30	-	82,82,82,82	0
55	MG	BA	3360	1/1	0.88	0.37	-	81,81,81,81	0
55	MG	DA	3442	1/1	0.76	0.30	-	98,98,98,98	0
55	MG	BA	3509	1/1	0.58	0.46	-	97,97,97,97	0
55	MG	CA	1724	1/1	0.94	0.18	-	87,87,87,87	0
55	MG	AA	1798	1/1	0.82	0.31	-	84,84,84,84	0
55	MG	DB	211	1/1	0.55	0.22	-	111,111,111,111	0
55	MG	AA	1763	1/1	0.65	0.21	-	92,92,92,92	0
55	MG	BA	3397	1/1	0.05	0.34	-	131,131,131,131	0
55	MG	BA	3123	1/1	0.86	0.33	-	81,81,81,81	0
55	MG	DA	3393	1/1	0.25	0.20	-	116,116,116,116	0
55	MG	DA	3111	1/1	0.95	0.23	-	45,45,45,45	0
55	MG	BA	3457	1/1	0.80	0.17	-	85,85,85,85	0
55	MG	AA	1743	1/1	0.56	0.25	-	107,107,107,107	0
55	MG	DA	3391	1/1	0.12	0.35	-	102,102,102,102	0
55	MG	AA	1750	1/1	0.69	0.45	-	134,134,134,134	0
55	MG	CA	1801	1/1	0.88	0.23	-	81,81,81,81	0
55	MG	BA	3542	1/1	0.91	0.36	-	85,85,85,85	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BB	201	1/1	0.64	0.28	-	97,97,97,97	0
55	MG	BA	3471	1/1	0.63	0.38	-	126,126,126,126	0
55	MG	CA	1648	1/1	0.74	0.28	-	113,113,113,113	0
55	MG	BA	3019	1/1	0.95	0.31	-	45,45,45,45	0
55	MG	AA	1773	1/1	0.71	0.35	-	130,130,130,130	0
55	MG	BA	3008	1/1	0.97	0.38	-	44,44,44,44	0
55	MG	BA	3514	1/1	0.83	0.35	-	113,113,113,113	0
55	MG	DA	3403	1/1	0.85	0.32	-	107,107,107,107	0
55	MG	BA	3375	1/1	0.88	0.23	-	87,87,87,87	0
55	MG	BA	3297	1/1	0.85	0.21	-	86,86,86,86	0
55	MG	BA	3479	1/1	0.58	0.55	-	146,146,146,146	0
55	MG	AA	1676	1/1	0.92	0.35	-	89,89,89,89	0
55	MG	BA	3309	1/1	0.75	0.45	-	77,77,77,77	0
55	MG	CA	1704	1/1	0.71	0.37	-	88,88,88,88	0
55	MG	DA	3486	1/1	0.61	0.20	-	101,101,101,101	0
55	MG	CA	1757	1/1	0.66	0.28	-	95,95,95,95	0
55	MG	BA	3395	1/1	0.76	0.29	-	90,90,90,90	0
55	MG	AA	1612	1/1	0.78	0.26	-	88,88,88,88	0
55	MG	BA	3280	1/1	0.91	0.40	-	80,80,80,80	0
55	MG	DA	3256	1/1	0.77	0.19	-	91,91,91,91	0
55	MG	DA	3027	1/1	0.95	0.13	-	47,47,47,47	0
55	MG	BA	3206	1/1	0.83	0.26	-	68,68,68,68	0
55	MG	CA	1606	1/1	0.94	0.19	-	65,65,65,65	0
55	MG	BA	3201	1/1	0.89	0.41	-	64,64,64,64	0
55	MG	CB	104	1/1	-0.32	0.35	-	147,147,147,147	0
55	MG	DA	3079	1/1	0.64	0.25	-	103,103,103,103	0
55	MG	CA	1716	1/1	0.39	0.31	-	103,103,103,103	0
55	MG	DA	3217	1/1	0.90	0.15	-	125,125,125,125	0
55	MG	AA	1768	1/1	0.79	0.48	-	71,71,71,71	0
55	MG	BA	3228	1/1	0.92	0.54	-	82,82,82,82	0
55	MG	DA	3406	1/1	0.71	0.34	-	129,129,129,129	0
55	MG	AA	1724	1/1	0.27	0.20	-	78,78,78,78	0
55	MG	DA	3191	1/1	0.96	0.46	-	55,55,55,55	0
55	MG	DA	3005	1/1	0.94	0.28	-	48,48,48,48	0
55	MG	DA	3113	1/1	0.95	0.23	-	80,80,80,80	0
55	MG	BA	3516	1/1	0.82	0.37	-	88,88,88,88	0
55	MG	BA	3377	1/1	0.97	0.41	-	64,64,64,64	0
55	MG	BA	3033	1/1	0.91	0.37	-	77,77,77,77	0
55	MG	BA	3214	1/1	0.92	0.42	-	58,58,58,58	0
55	MG	DA	3440	1/1	0.89	0.09	-	81,81,81,81	0
55	MG	CA	1628	1/1	0.86	0.21	-	123,123,123,123	0
55	MG	DA	3132	1/1	0.83	0.20	-	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	CA	1787	1/1	0.86	0.45	-	84,84,84,84	0
55	MG	AA	1800	1/1	0.78	0.43	-	131,131,131,131	0
55	MG	CA	1798	1/1	0.79	0.39	-	74,74,74,74	0
55	MG	BA	3141	1/1	0.91	0.29	-	78,78,78,78	0
55	MG	DA	3423	1/1	0.66	0.87	-	118,118,118,118	0
55	MG	CA	1778	1/1	0.64	0.24	-	133,133,133,133	0
55	MG	AA	1696	1/1	0.60	0.39	-	112,112,112,112	0
55	MG	DA	3322	1/1	0.77	0.32	-	99,99,99,99	0
55	MG	BA	3106	1/1	0.78	0.22	-	89,89,89,89	0
55	MG	AA	1690	1/1	0.75	0.18	-	98,98,98,98	0
55	MG	DA	3082	1/1	0.51	0.21	-	91,91,91,91	0
55	MG	BA	3041	1/1	0.57	0.48	-	80,80,80,80	0
55	MG	DA	3086	1/1	0.87	0.47	-	75,75,75,75	0
55	MG	DA	3130	1/1	0.98	0.24	-	49,49,49,49	0
55	MG	BA	3400	1/1	0.83	0.53	-	108,108,108,108	0
55	MG	BA	3113	1/1	0.91	0.31	-	47,47,47,47	0
55	MG	DA	3477	1/1	0.75	0.34	-	88,88,88,88	0
55	MG	BA	3278	1/1	0.88	0.69	-	92,92,92,92	0
55	MG	CG	301	1/1	0.80	0.40	-	107,107,107,107	0
55	MG	CA	1682	1/1	0.67	0.13	-	100,100,100,100	0
55	MG	AA	1717	1/1	0.86	0.42	-	73,73,73,73	0
55	MG	BA	3452	1/1	0.58	0.35	-	103,103,103,103	0
55	MG	DA	3441	1/1	0.77	0.17	-	89,89,89,89	0
55	MG	CA	1677	1/1	0.81	0.19	-	107,107,107,107	0
55	MG	BA	3225	1/1	0.89	0.37	-	68,68,68,68	0
55	MG	BA	3336	1/1	0.87	0.20	-	78,78,78,78	0
55	MG	AA	1732	1/1	0.88	0.32	-	95,95,95,95	0
55	MG	BA	3384	1/1	0.95	0.65	-	85,85,85,85	0
55	MG	BA	3177	1/1	0.88	0.22	-	34,34,34,34	0
55	MG	AB	102	1/1	0.46	0.29	-	96,96,96,96	0
55	MG	DA	3041	1/1	0.97	0.41	-	47,47,47,47	0
55	MG	DA	3099	1/1	0.77	0.51	-	83,83,83,83	0
55	MG	DA	3340	1/1	0.84	0.27	-	75,75,75,75	0
55	MG	AA	1765	1/1	0.60	0.28	-	149,149,149,149	0
55	MG	BA	3547	1/1	0.74	0.29	-	77,77,77,77	0
55	MG	CA	1711	1/1	0.79	0.18	-	101,101,101,101	0
55	MG	AA	1670	1/1	0.95	0.38	-	75,75,75,75	0
55	MG	BA	3381	1/1	0.83	0.52	-	87,87,87,87	0
55	MG	BA	3394	1/1	0.85	0.43	-	80,80,80,80	0
55	MG	DA	3320	1/1	0.73	0.29	-	87,87,87,87	0
55	MG	DA	3413	1/1	0.71	0.37	-	86,86,86,86	0
55	MG	DA	3172	1/1	0.44	0.42	-	122,122,122,122	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	DA	3360	1/1	0.59	0.15	-	97,97,97,97	0
55	MG	AA	1603	1/1	0.94	0.25	-	65,65,65,65	0
55	MG	BA	3254	1/1	0.81	0.44	-	89,89,89,89	0
55	MG	DA	3178	1/1	0.89	0.25	-	88,88,88,88	0
55	MG	DA	3316	1/1	0.74	0.17	-	102,102,102,102	0
55	MG	BA	3566	1/1	0.60	0.33	-	83,83,83,83	0
55	MG	DA	3264	1/1	0.88	0.40	-	88,88,88,88	0
55	MG	BA	3235	1/1	0.94	0.38	-	39,39,39,39	0
55	MG	BB	206	1/1	0.87	0.19	-	79,79,79,79	0
55	MG	BA	3216	1/1	0.89	0.26	-	53,53,53,53	0
55	MG	DA	3461	1/1	0.75	0.24	-	97,97,97,97	0
55	MG	AA	1705	1/1	0.93	0.31	-	81,81,81,81	0
55	MG	DA	3459	1/1	0.65	0.28	-	76,76,76,76	0
55	MG	BA	3537	1/1	0.60	0.47	-	73,73,73,73	0
55	MG	DA	3085	1/1	0.78	0.44	-	81,81,81,81	0
55	MG	DA	3038	1/1	0.84	0.21	-	73,73,73,73	0
55	MG	DA	3007	1/1	0.95	0.24	-	55,55,55,55	0
55	MG	BA	3391	1/1	0.13	0.52	-	112,112,112,112	0
55	MG	AA	1774	1/1	0.91	0.52	-	69,69,69,69	0
55	MG	BA	3199	1/1	0.87	0.27	-	65,65,65,65	0
55	MG	BA	3323	1/1	0.74	0.59	-	73,73,73,73	0
55	MG	BA	3279	1/1	0.72	0.40	-	75,75,75,75	0
55	MG	AA	1787	1/1	0.90	0.33	-	101,101,101,101	0
55	MG	BA	3061	1/1	0.91	0.33	-	73,73,73,73	0
55	MG	CA	1668	1/1	0.88	0.42	-	72,72,72,72	0
55	MG	AA	1629	1/1	0.83	0.12	-	95,95,95,95	0
55	MG	DA	3386	1/1	0.72	0.23	-	130,130,130,130	0
55	MG	BA	3082	1/1	0.51	0.36	-	100,100,100,100	0
55	MG	DA	3152	1/1	0.94	0.28	-	63,63,63,63	0
55	MG	DA	3378	1/1	0.77	0.28	-	88,88,88,88	0
55	MG	DA	3309	1/1	0.81	0.46	-	116,116,116,116	0
55	MG	BA	3399	1/1	0.64	0.32	-	99,99,99,99	0
55	MG	DA	3146	1/1	0.84	0.10	-	89,89,89,89	0
55	MG	BA	3195	1/1	0.13	0.64	-	97,97,97,97	0
55	MG	DA	3195	1/1	0.93	0.28	-	82,82,82,82	0
55	MG	AA	1757	1/1	0.49	0.40	-	101,101,101,101	0
55	MG	BA	3321	1/1	0.90	0.46	-	88,88,88,88	0
55	MG	D5	101	1/1	0.95	0.27	-	58,58,58,58	0
55	MG	BA	3043	1/1	0.95	0.39	-	78,78,78,78	0
55	MG	DA	3091	1/1	0.82	0.15	-	74,74,74,74	0
55	MG	BA	3158	1/1	0.95	0.40	-	66,66,66,66	0
55	MG	AA	1741	1/1	0.60	0.22	-	98,98,98,98	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
55	MG	CA	1761	1/1	0.25	0.55	-	143,143,143,143	0
55	MG	BA	3342	1/1	0.87	0.24	-	66,66,66,66	0
55	MG	BA	3200	1/1	0.84	0.24	-	81,81,81,81	0
55	MG	BA	3464	1/1	0.81	0.15	-	91,91,91,91	0
55	MG	BB	218	1/1	0.87	0.21	-	98,98,98,98	0
55	MG	BA	3551	1/1	0.97	0.30	-	64,64,64,64	0
55	MG	AA	1738	1/1	0.58	0.26	-	91,91,91,91	0
55	MG	CA	1792	1/1	0.38	0.18	-	104,104,104,104	0
55	MG	AA	1653	1/1	0.74	0.30	-	95,95,95,95	0
55	MG	DA	3396	1/1	0.87	0.28	-	76,76,76,76	0
55	MG	AA	1764	1/1	-0.01	0.33	-	146,146,146,146	0
55	MG	AA	1644	1/1	0.87	0.35	-	94,94,94,94	0
55	MG	DA	3429	1/1	0.93	0.31	-	54,54,54,54	0
55	MG	BA	3449	1/1	0.83	0.39	-	100,100,100,100	0
55	MG	BA	3473	1/1	0.73	0.29	-	92,92,92,92	0
55	MG	BA	3359	1/1	0.84	0.49	-	78,78,78,78	0
55	MG	CA	1610	1/1	0.31	0.24	-	118,118,118,118	0
55	MG	DA	3419	1/1	0.83	0.22	-	87,87,87,87	0
55	MG	DA	3325	1/1	0.77	0.17	-	97,97,97,97	0
55	MG	AA	1775	1/1	0.74	0.45	-	129,129,129,129	0
55	MG	DA	3225	1/1	0.76	0.45	-	102,102,102,102	0
55	MG	CB	103	1/1	0.48	1.49	-	147,147,147,147	0
55	MG	BA	3091	1/1	0.83	0.43	-	73,73,73,73	0
55	MG	DA	3283	1/1	0.73	0.25	-	88,88,88,88	0
55	MG	CA	1790	1/1	0.70	0.51	-	142,142,142,142	0
55	MG	BA	3341	1/1	0.86	0.42	-	89,89,89,89	0
55	MG	CA	1710	1/1	0.53	0.17	-	118,118,118,118	0
55	MG	DA	3455	1/1	0.97	0.13	-	44,44,44,44	0
55	MG	AA	1776	1/1	0.96	0.31	-	67,67,67,67	0
55	MG	BA	3253	1/1	0.81	0.47	-	92,92,92,92	0
55	MG	BA	3376	1/1	0.67	0.27	-	83,83,83,83	0
55	MG	DA	3211	1/1	0.86	0.35	-	79,79,79,79	0
55	MG	CA	1770	1/1	0.90	0.38	-	82,82,82,82	0
55	MG	CA	1741	1/1	0.93	0.21	-	85,85,85,85	0
55	MG	A1	101	1/1	0.35	0.20	-	102,102,102,102	0
55	MG	BA	3536	1/1	0.89	0.12	-	37,37,37,37	0
55	MG	AA	1704	1/1	0.77	0.24	-	110,110,110,110	0
55	MG	DA	3040	1/1	0.74	0.23	-	118,118,118,118	0
55	MG	DA	3336	1/1	0.15	0.60	-	115,115,115,115	0
55	MG	DA	3402	1/1	0.50	0.20	-	124,124,124,124	0
55	MG	DA	3266	1/1	0.93	0.44	-	82,82,82,82	0
55	MG	BA	3085	1/1	0.98	0.42	-	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	DA	3201	1/1	0.88	0.32	-	76,76,76,76	0
55	MG	AA	1695	1/1	0.75	0.20	-	128,128,128,128	0
55	MG	DA	3315	1/1	0.79	0.14	-	91,91,91,91	0
55	MG	CA	1629	1/1	0.89	0.21	-	115,115,115,115	0
55	MG	CA	1721	1/1	0.91	0.19	-	82,82,82,82	0
55	MG	DA	3346	1/1	0.72	0.22	-	102,102,102,102	0
55	MG	DA	3473	1/1	0.89	0.14	-	56,56,56,56	0
55	MG	CA	1807	1/1	0.97	0.34	-	95,95,95,95	0
55	MG	CC	104	1/1	0.70	0.21	-	98,98,98,98	0
55	MG	CA	1667	1/1	0.69	0.21	-	98,98,98,98	0
55	MG	DB	201	1/1	0.92	0.18	-	92,92,92,92	0
55	MG	CD	101	1/1	0.86	0.13	-	145,145,145,145	0
55	MG	DA	3165	1/1	0.88	0.45	-	73,73,73,73	0
55	MG	CA	1797	1/1	0.72	0.36	-	85,85,85,85	0
55	MG	BA	3442	1/1	0.79	0.30	-	90,90,90,90	0
55	MG	DA	3368	1/1	0.73	0.20	-	97,97,97,97	0
55	MG	DA	3263	1/1	0.43	0.29	-	96,96,96,96	0
55	MG	BA	3502	1/1	0.82	0.30	-	78,78,78,78	0
55	MG	DA	3300	1/1	0.70	0.34	-	75,75,75,75	0
55	MG	BA	3196	1/1	0.93	0.22	-	103,103,103,103	0
55	MG	CA	1642	1/1	0.91	0.20	-	83,83,83,83	0
55	MG	DA	3118	1/1	0.98	0.36	-	55,55,55,55	0
55	MG	BA	3034	1/1	0.97	0.29	-	40,40,40,40	0
55	MG	DA	3436	1/1	0.88	0.16	-	66,66,66,66	0
55	MG	DA	3421	1/1	0.63	0.32	-	84,84,84,84	0
55	MG	BA	3315	1/1	0.82	0.44	-	93,93,93,93	0
55	MG	DA	3293	1/1	0.97	0.48	-	89,89,89,89	0
55	MG	BA	3517	1/1	0.88	0.37	-	69,69,69,69	0
55	MG	DA	3248	1/1	0.75	0.19	-	95,95,95,95	0
55	MG	BA	3468	1/1	0.90	0.38	-	78,78,78,78	0
55	MG	BA	3069	1/1	0.77	0.42	-	93,93,93,93	0
55	MG	CA	1738	1/1	0.90	0.40	-	113,113,113,113	0
55	MG	BA	3344	1/1	0.70	0.68	-	84,84,84,84	0
55	MG	BA	3269	1/1	0.74	0.29	-	79,79,79,79	0
55	MG	DA	3313	1/1	0.94	0.24	-	84,84,84,84	0
55	MG	BA	3510	1/1	0.66	0.48	-	108,108,108,108	0
55	MG	DA	3133	1/1	0.77	0.17	-	91,91,91,91	0
55	MG	AA	1678	1/1	0.73	0.37	-	115,115,115,115	0
55	MG	DA	3280	1/1	0.81	0.41	-	91,91,91,91	0
55	MG	BA	3071	1/1	0.87	0.26	-	63,63,63,63	0
55	MG	DB	206	1/1	0.58	0.31	-	89,89,89,89	0
55	MG	DA	3389	1/1	0.68	0.28	-	97,97,97,97	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3291	1/1	-	-	-	56,56,56,56	1
55	MG	AA	1797	1/1	0.76	0.27	-	79,79,79,79	0
55	MG	BA	3133	1/1	0.92	0.26	-	42,42,42,42	0
55	MG	BA	3319	1/1	0.93	0.54	-	64,64,64,64	0
55	MG	AA	1622	1/1	0.95	0.22	-	87,87,87,87	0
55	MG	AA	1715	1/1	0.68	0.37	-	101,101,101,101	0
55	MG	BA	3463	1/1	0.67	0.81	-	101,101,101,101	0
55	MG	AA	1796	1/1	0.91	0.42	-	102,102,102,102	0
55	MG	BA	3064	1/1	0.85	0.31	-	87,87,87,87	0
55	MG	AG	302	1/1	0.83	0.34	-	109,109,109,109	0
55	MG	CA	1715	1/1	0.90	0.30	-	89,89,89,89	0
55	MG	DA	3093	1/1	0.96	0.32	-	52,52,52,52	0
55	MG	BA	3230	1/1	0.97	0.43	-	48,48,48,48	0
55	MG	BA	3326	1/1	0.89	0.32	-	67,67,67,67	0
55	MG	AA	1701	1/1	0.85	0.57	-	87,87,87,87	0
55	MG	BA	3063	1/1	0.89	0.19	-	80,80,80,80	0
55	MG	BA	3031	1/1	0.88	0.39	-	54,54,54,54	0
55	MG	AA	1611	1/1	0.71	0.27	-	94,94,94,94	0
55	MG	BA	3485	1/1	0.81	0.27	-	98,98,98,98	0
55	MG	CA	1683	1/1	0.63	0.30	-	121,121,121,121	0
55	MG	BA	3544	1/1	0.65	0.33	-	82,82,82,82	0
55	MG	BA	3118	1/1	0.94	0.41	-	49,49,49,49	0
55	MG	DA	3275	1/1	0.73	0.21	-	85,85,85,85	0
55	MG	CA	1816	1/1	0.44	0.30	-	102,102,102,102	0
55	MG	DA	3036	1/1	0.49	0.20	-	100,100,100,100	0
55	MG	DA	3189	1/1	0.54	0.18	-	86,86,86,86	0
55	MG	BA	3212	1/1	0.91	0.34	-	68,68,68,68	0
55	MG	CA	1743	1/1	0.79	0.28	-	106,106,106,106	0
55	MG	DA	3125	1/1	0.69	0.40	-	74,74,74,74	0
55	MG	AC	104	1/1	0.88	0.38	-	64,64,64,64	0
55	MG	AA	1618	1/1	0.64	0.22	-	91,91,91,91	0
55	MG	BA	3068	1/1	0.98	0.41	-	56,56,56,56	0
55	MG	AA	1751	1/1	0.79	0.29	-	105,105,105,105	0
55	MG	BA	3203	1/1	0.79	0.23	-	106,106,106,106	0
55	MG	AA	1735	1/1	0.49	0.20	-	102,102,102,102	0
55	MG	BA	3096	1/1	0.93	0.43	-	63,63,63,63	0
55	MG	AA	1663	1/1	0.92	0.36	-	72,72,72,72	0
55	MG	BA	3317	1/1	0.84	0.42	-	70,70,70,70	0
55	MG	BA	3558	1/1	0.79	0.34	-	85,85,85,85	0
55	MG	CA	1640	1/1	0.85	0.31	-	89,89,89,89	0
55	MG	AA	1643	1/1	0.42	0.53	-	127,127,127,127	0
55	MG	DA	3158	1/1	0.90	0.38	-	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	DO	201	1/1	0.71	0.15	-	98,98,98,98	0
55	MG	DA	3272	1/1	0.94	0.45	-	68,68,68,68	0
55	MG	BA	3168	1/1	0.89	0.36	-	47,47,47,47	0
55	MG	BA	3320	1/1	0.81	0.42	-	85,85,85,85	0
55	MG	BA	3416	1/1	0.60	0.30	-	98,98,98,98	0
55	MG	DA	3186	1/1	0.90	0.27	-	60,60,60,60	0
55	MG	CA	1643	1/1	0.94	0.37	-	80,80,80,80	0
55	MG	BA	3548	1/1	0.87	0.34	-	95,95,95,95	0
55	MG	AA	1758	1/1	-0.20	0.45	-	165,165,165,165	0
55	MG	CA	1644	1/1	0.57	0.17	-	101,101,101,101	0
55	MG	BA	3306	1/1	0.86	0.30	-	84,84,84,84	0
55	MG	DA	3438	1/1	0.90	0.34	-	79,79,79,79	0
55	MG	DA	3373	1/1	0.87	0.45	-	88,88,88,88	0
55	MG	BA	3347	1/1	0.83	0.60	-	79,79,79,79	0
55	MG	CA	1739	1/1	0.88	0.23	-	80,80,80,80	0
55	MG	CA	1652	1/1	0.86	0.13	-	94,94,94,94	0
55	MG	BA	3503	1/1	0.48	0.46	-	111,111,111,111	0
55	MG	BA	3438	1/1	0.77	0.51	-	84,84,84,84	0
55	MG	DA	3303	1/1	0.90	0.19	-	76,76,76,76	0
55	MG	DA	3312	1/1	0.89	0.33	-	75,75,75,75	0
55	MG	BA	3476	1/1	0.95	0.40	-	47,47,47,47	0
55	MG	DA	3379	1/1	0.83	0.25	-	87,87,87,87	0
55	MG	DA	3019	1/1	0.94	0.25	-	79,79,79,79	0
55	MG	DA	3206	1/1	0.61	0.29	-	109,109,109,109	0
55	MG	BA	3296	1/1	0.85	0.36	-	60,60,60,60	0
55	MG	DA	3311	1/1	0.88	0.20	-	109,109,109,109	0
55	MG	BA	3358	1/1	0.68	0.33	-	98,98,98,98	0
55	MG	BA	3504	1/1	0.75	0.51	-	88,88,88,88	0
55	MG	AA	1666	1/1	0.47	0.43	-	103,103,103,103	0
55	MG	BA	3564	1/1	0.91	0.23	-	112,112,112,112	0
55	MG	CA	1609	1/1	0.90	0.34	-	71,71,71,71	0
55	MG	AA	1777	1/1	0.73	0.27	-	115,115,115,115	0
55	MG	BA	3413	1/1	0.64	0.44	-	83,83,83,83	0
55	MG	AA	1714	1/1	0.92	0.23	-	89,89,89,89	0
55	MG	AA	1807	1/1	0.91	0.24	-	88,88,88,88	0
55	MG	BA	3224	1/1	0.69	0.32	-	78,78,78,78	0
55	MG	BA	3462	1/1	0.61	0.21	-	116,116,116,116	0
55	MG	BA	3303	1/1	0.92	0.38	-	73,73,73,73	0
55	MG	CA	1688	1/1	0.80	0.21	-	95,95,95,95	0
55	MG	AA	1720	1/1	0.96	0.35	-	83,83,83,83	0
55	MG	DA	3198	1/1	0.95	0.35	-	48,48,48,48	0
55	MG	AA	1756	1/1	0.85	0.26	-	85,85,85,85	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3318	1/1	0.81	0.37	-	102,102,102,102	0
55	MG	AA	1657	1/1	0.83	0.35	-	76,76,76,76	0
55	MG	CA	1674	1/1	0.83	0.35	-	88,88,88,88	0
55	MG	CA	1669	1/1	0.72	0.28	-	85,85,85,85	0
55	MG	BA	3258	1/1	0.81	0.47	-	76,76,76,76	0
55	MG	DA	3246	1/1	0.77	0.28	-	89,89,89,89	0
55	MG	BA	3040	1/1	0.86	0.37	-	74,74,74,74	0
55	MG	CA	1756	1/1	0.83	0.29	-	83,83,83,83	0
55	MG	BA	3530	1/1	0.90	0.31	-	71,71,71,71	0
55	MG	BA	3092	1/1	0.85	0.31	-	67,67,67,67	0
55	MG	DA	3397	1/1	0.36	0.19	-	105,105,105,105	0
55	MG	BA	3436	1/1	0.53	0.18	-	107,107,107,107	0
55	MG	BA	3025	1/1	0.96	0.46	-	46,46,46,46	0
55	MG	CA	1619	1/1	0.93	0.12	-	68,68,68,68	0
55	MG	CA	1623	1/1	0.93	0.35	-	75,75,75,75	0
55	MG	BA	3560	1/1	0.94	0.38	-	69,69,69,69	0
55	MG	DA	3234	1/1	0.90	0.44	-	73,73,73,73	0
55	MG	DA	3407	1/1	-0.01	0.23	-	103,103,103,103	0
55	MG	DA	3343	1/1	0.76	0.34	-	91,91,91,91	0
55	MG	DA	3267	1/1	0.83	0.47	-	80,80,80,80	0
55	MG	BA	3035	1/1	0.94	0.42	-	61,61,61,61	0
55	MG	DA	3405	1/1	0.52	0.29	-	135,135,135,135	0
55	MG	AA	1754	1/1	0.73	0.38	-	95,95,95,95	0
55	MG	CA	1663	1/1	0.95	0.44	-	80,80,80,80	0
55	MG	BA	3250	1/1	0.77	0.23	-	90,90,90,90	0
55	MG	AA	1671	1/1	0.80	0.20	-	95,95,95,95	0
55	MG	BA	3271	1/1	0.74	0.20	-	92,92,92,92	0
55	MG	BB	209	1/1	0.86	0.18	-	96,96,96,96	0
55	MG	AA	1767	1/1	0.63	0.22	-	116,116,116,116	0
55	MG	AA	1694	1/1	0.83	0.20	-	142,142,142,142	0
55	MG	CA	1727	1/1	0.71	0.12	-	84,84,84,84	0
55	MG	AA	1802	1/1	0.71	0.21	-	75,75,75,75	0
55	MG	D1	201	1/1	0.31	0.26	-	89,89,89,89	0
55	MG	BA	3401	1/1	0.56	0.29	-	86,86,86,86	0
55	MG	BA	3314	1/1	0.61	0.23	-	83,83,83,83	0
55	MG	DA	3229	1/1	-0.26	0.38	-	118,118,118,118	0
55	MG	BA	3132	1/1	0.79	0.21	-	76,76,76,76	0
55	MG	AA	1661	1/1	0.89	0.35	-	56,56,56,56	0
55	MG	BA	3430	1/1	0.78	0.27	-	105,105,105,105	0
55	MG	DA	3053	1/1	0.95	0.28	-	72,72,72,72	0
55	MG	BA	3382	1/1	0.67	0.52	-	93,93,93,93	0
55	MG	BA	3079	1/1	0.59	0.27	-	103,103,103,103	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	AA	1786	1/1	0.84	0.28	-	89,89,89,89	0
55	MG	AA	1689	1/1	0.51	0.32	-	107,107,107,107	0
55	MG	BA	3371	1/1	0.91	0.20	-	83,83,83,83	0
55	MG	BA	3293	1/1	0.79	0.35	-	96,96,96,96	0
55	MG	BA	3013	1/1	0.92	0.30	-	52,52,52,52	0
55	MG	BA	3234	1/1	0.60	0.26	-	107,107,107,107	0
55	MG	CA	1733	1/1	0.52	0.37	-	103,103,103,103	0
55	MG	BA	3425	1/1	0.77	0.24	-	87,87,87,87	0
55	MG	DA	3184	1/1	0.85	0.36	-	78,78,78,78	0
55	MG	AC	103	1/1	0.91	0.35	-	66,66,66,66	0
55	MG	AA	1804	1/1	0.46	0.43	-	113,113,113,113	0
55	MG	CA	1636	1/1	0.92	0.31	-	53,53,53,53	0
55	MG	CA	1803	1/1	0.19	0.24	-	103,103,103,103	0
55	MG	DA	3476	1/1	0.73	0.23	-	104,104,104,104	0
55	MG	AA	1726	1/1	0.71	0.45	-	94,94,94,94	0
55	MG	DA	3410	1/1	0.61	0.31	-	103,103,103,103	0
55	MG	DA	3262	1/1	0.79	0.68	-	99,99,99,99	0
55	MG	BA	3349	1/1	0.77	0.34	-	80,80,80,80	0
55	MG	AA	1615	1/1	0.84	0.30	-	90,90,90,90	0
55	MG	CA	1612	1/1	0.84	0.27	-	75,75,75,75	0
55	MG	BA	3340	1/1	0.88	0.37	-	69,69,69,69	0
55	MG	BA	3519	1/1	0.98	0.38	-	24,24,24,24	0
55	MG	DA	3254	1/1	0.87	0.15	-	80,80,80,80	0
55	MG	CR	101	1/1	0.76	0.69	-	135,135,135,135	0
55	MG	AA	1771	1/1	0.89	0.47	-	108,108,108,108	0
55	MG	DA	3171	1/1	0.84	0.16	-	73,73,73,73	0
55	MG	BA	3066	1/1	0.78	0.20	-	99,99,99,99	0
55	MG	BA	3050	1/1	0.96	0.31	-	65,65,65,65	0
55	MG	AA	1725	1/1	0.88	0.31	-	100,100,100,100	0
55	MG	BA	3466	1/1	0.85	0.61	-	92,92,92,92	0
55	MG	BA	3187	1/1	0.95	0.51	-	73,73,73,73	0
55	MG	AA	1651	1/1	0.91	0.47	-	79,79,79,79	0
55	MG	DA	3483	1/1	0.86	0.41	-	82,82,82,82	0
55	MG	BA	3181	1/1	0.91	0.31	-	69,69,69,69	0
55	MG	AA	1688	1/1	0.67	0.15	-	93,93,93,93	0
55	MG	BA	3380	1/1	0.12	0.42	-	98,98,98,98	0
55	MG	BA	3338	1/1	0.50	0.28	-	91,91,91,91	0
55	MG	BA	3005	1/1	0.99	0.40	-	40,40,40,40	0
55	MG	CA	1791	1/1	0.71	0.20	-	80,80,80,80	0
55	MG	BA	3331	1/1	0.57	0.30	-	106,106,106,106	0
55	MG	DA	3330	1/1	0.45	0.66	-	100,100,100,100	0
55	MG	AA	1658	1/1	0.99	0.35	-	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	CA	1664	1/1	0.97	0.30	-	64,64,64,64	0
55	MG	AA	1805	1/1	0.56	0.73	-	152,152,152,152	0
55	MG	CA	1670	1/1	0.89	0.40	-	67,67,67,67	0
55	MG	BA	3515	1/1	0.94	0.20	-	81,81,81,81	0
55	MG	BA	3367	1/1	0.98	0.54	-	72,72,72,72	0
55	MG	DA	3417	1/1	0.49	0.34	-	135,135,135,135	0
55	MG	DA	3265	1/1	0.87	0.36	-	76,76,76,76	0
55	MG	DA	3381	1/1	0.89	0.24	-	90,90,90,90	0
55	MG	CA	1759	1/1	0.75	0.51	-	99,99,99,99	0
55	MG	BA	3268	1/1	0.56	0.25	-	90,90,90,90	0
55	MG	BA	3009	1/1	0.83	0.32	-	58,58,58,58	0
55	MG	BA	3428	1/1	0.74	0.40	-	91,91,91,91	0
55	MG	BA	3046	1/1	0.93	0.38	-	56,56,56,56	0
55	MG	CA	1706	1/1	0.97	0.43	-	79,79,79,79	0
55	MG	BA	3099	1/1	0.93	0.23	-	75,75,75,75	0
55	MG	BA	3030	1/1	0.96	0.35	-	41,41,41,41	0
55	MG	BA	3561	1/1	0.80	0.29	-	84,84,84,84	0
55	MG	AD	101	1/1	0.09	0.32	-	154,154,154,154	0
55	MG	BA	3482	1/1	0.75	0.17	-	82,82,82,82	0
55	MG	AA	1684	1/1	0.89	0.32	-	83,83,83,83	0
55	MG	CA	1804	1/1	0.62	0.40	-	108,108,108,108	0
55	MG	CA	1713	1/1	0.82	0.22	-	82,82,82,82	0
55	MG	DA	3344	1/1	0.59	0.26	-	89,89,89,89	0
55	MG	DA	3294	1/1	0.76	0.38	-	91,91,91,91	0
55	MG	DA	3168	1/1	0.89	0.40	-	87,87,87,87	0
55	MG	DA	3161	1/1	0.98	0.25	-	55,55,55,55	0
55	MG	CA	1777	1/1	0.81	0.13	-	112,112,112,112	0
55	MG	DA	3324	1/1	0.87	0.19	-	91,91,91,91	0
55	MG	DA	3462	1/1	0.56	0.23	-	98,98,98,98	0
55	MG	CA	1786	1/1	0.07	0.27	-	111,111,111,111	0
55	MG	BO	201	1/1	0.89	0.12	-	78,78,78,78	0
55	MG	AA	1783	1/1	0.51	0.36	-	167,167,167,167	0
55	MG	CA	1722	1/1	0.76	0.61	-	106,106,106,106	0
55	MG	BA	3180	1/1	0.84	0.22	-	91,91,91,91	0
55	MG	CA	1723	1/1	0.92	0.20	-	90,90,90,90	0
55	MG	AA	1634	1/1	0.95	0.34	-	67,67,67,67	0
55	MG	CA	1689	1/1	0.92	0.32	-	73,73,73,73	0
55	MG	DA	3157	1/1	0.97	0.28	-	51,51,51,51	0
55	MG	BB	203	1/1	0.77	0.43	-	71,71,71,71	0
55	MG	DA	3176	1/1	0.31	0.54	-	105,105,105,105	0
55	MG	CA	1697	1/1	0.51	0.16	-	84,84,84,84	0
55	MG	BA	3190	1/1	0.95	0.36	-	86,86,86,86	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	DA	3349	1/1	0.87	0.24	-	78,78,78,78	0
55	MG	BA	3439	1/1	0.34	0.38	-	115,115,115,115	0
55	MG	BA	3289	1/1	0.70	0.34	-	95,95,95,95	0
55	MG	BA	3163	1/1	0.32	0.34	-	86,86,86,86	0
55	MG	BA	3209	1/1	0.67	0.48	-	78,78,78,78	0
55	MG	DA	3097	1/1	0.98	0.33	-	53,53,53,53	0
55	MG	DA	3295	1/1	0.84	0.34	-	76,76,76,76	0
55	MG	AA	1781	1/1	0.61	0.37	-	87,87,87,87	0
55	MG	AA	1716	1/1	0.93	0.25	-	82,82,82,82	0
55	MG	DA	3073	1/1	0.90	0.30	-	84,84,84,84	0
55	MG	DA	3301	1/1	0.90	0.31	-	90,90,90,90	0
55	MG	AA	1707	1/1	0.91	0.18	-	81,81,81,81	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.