



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 10:23 PM GMT

PDB ID : 4V7K  
Title : Structure of RelE nuclease bound to the 70S ribosome (postcleavage state)  
Authors : Neubauer, C.; Gao, Y.-G.; Andersen, K.R.; Dunham, C.M.; Kelley, A.C.;  
Hentschel, J.; Gerdes, K.; Ramakrishnan, V.; Brodersen, D.E.  
Deposited on : 2009-11-02  
Resolution : 3.60 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 (RC4), CSD as536be (2015)  
Xtriage (Phenix) : 1.9-1692  
EDS : rb-20026688  
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)  
Refmac : 5.8.0135  
CCP4 : 6.5.0  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : trunk26865

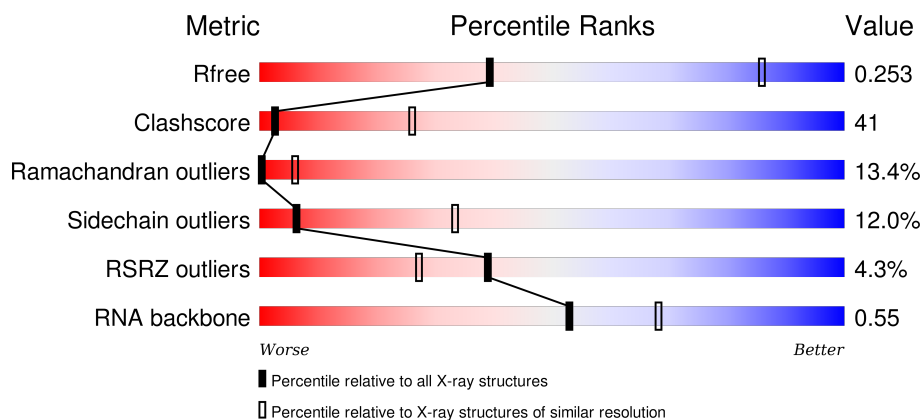
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

## *X-RAY DIFFRACTION*

The reported resolution of this entry is 3.60 Å.

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




























Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	91344	1408 (3.80-3.40)
Clashscore	102246	1010 (3.74-3.46)
Ramachandran outliers	100387	1007 (3.76-3.44)
Sidechain outliers	100360	1007 (3.76-3.44)
RSRZ outliers	91569	1003 (3.78-3.42)
RNA backbone	2183	1058 (4.40-2.80)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments 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	Ab	256	<div> <div>3%</div> <div>70% 20% 9%</div> </div>
1	Bb	256	<div> <div>3%</div> <div>71% 19% 9%</div> </div>
2	Ac	239	<div> <div>5%</div> <div>69% 16% 14%</div> </div>
2	Bc	239	<div> <div>3%</div> <div>69% 16% 14%</div> </div>

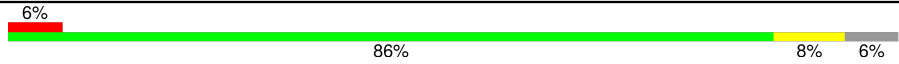
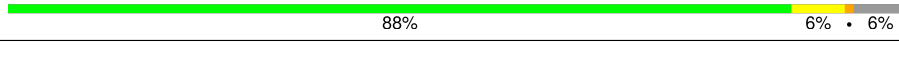
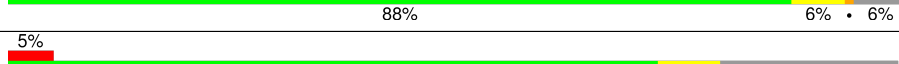
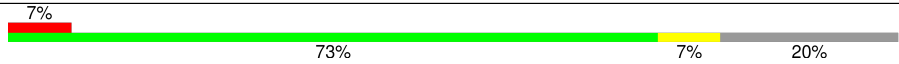


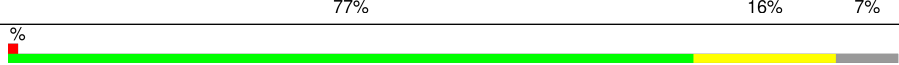


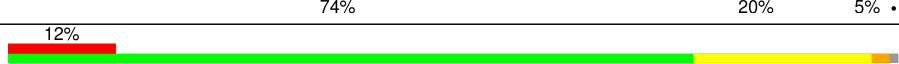
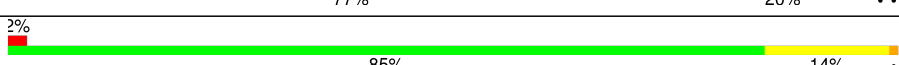

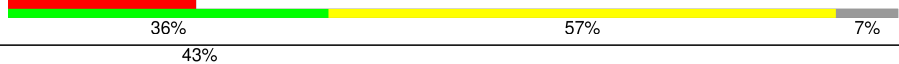



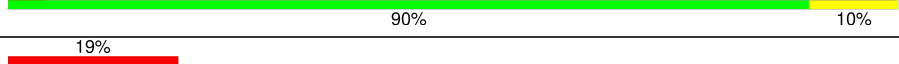
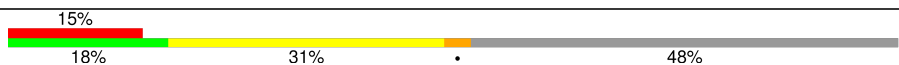
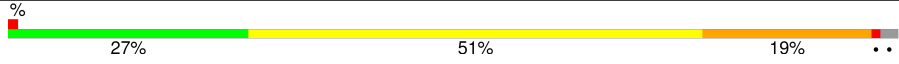
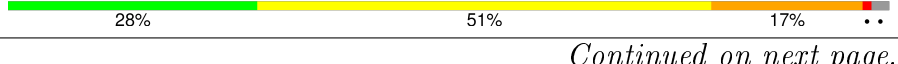



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Mol	Chain	Length	Quality of chain
3	Ad	209	
3	Bd	209	
4	Ae	162	
4	Be	162	
5	Af	101	
5	Bf	101	
6	Ag	156	
6	Bg	156	
7	Ah	138	
7	Bh	138	
8	Ai	128	
8	Bi	128	
9	Aj	105	
9	Bj	105	
10	Ak	129	
10	Bk	129	
11	Al	132	
11	Bl	132	
12	Am	126	
12	Bm	126	
13	An	61	
13	Bn	61	
14	Ao	89	
14	Bo	89	
15	Ap	88	

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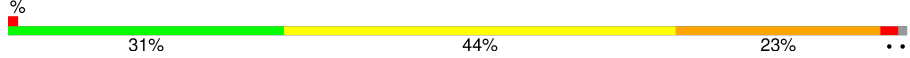
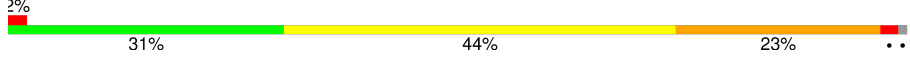
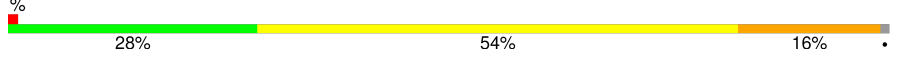

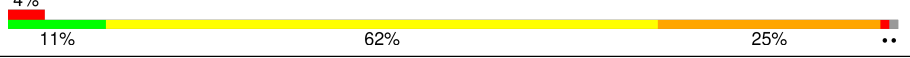
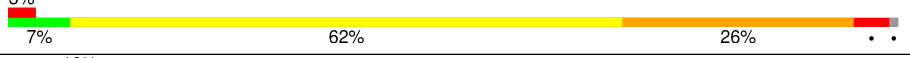
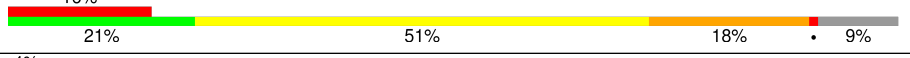
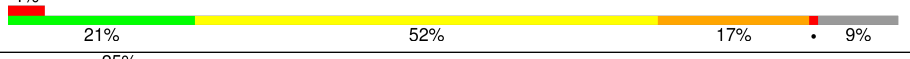
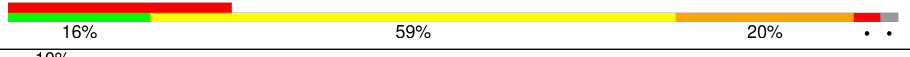
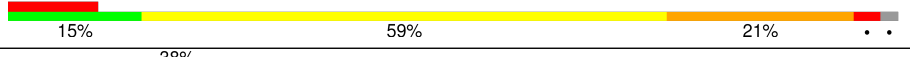
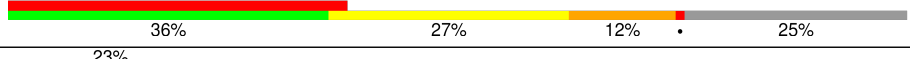
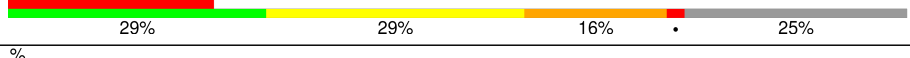
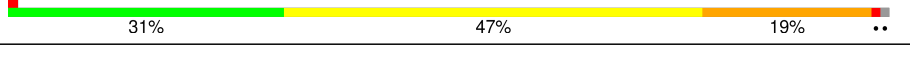
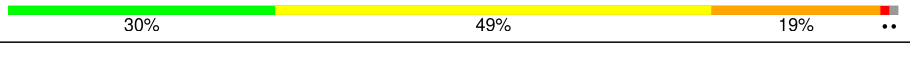
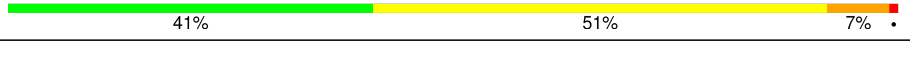
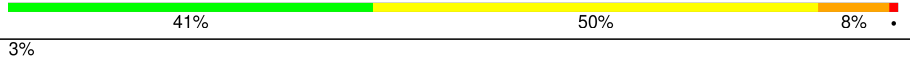
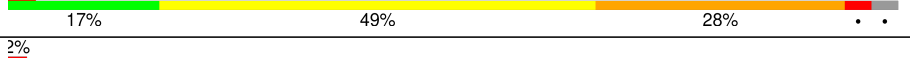
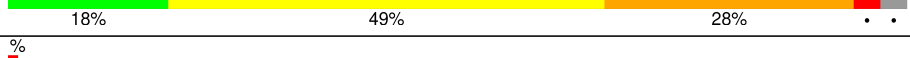


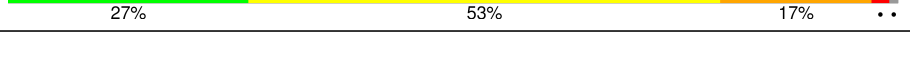
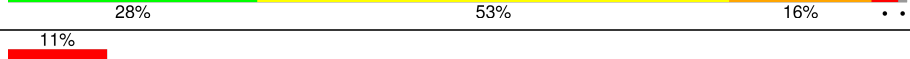

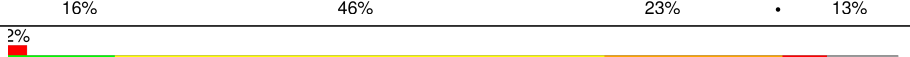

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Mol	Chain	Length	Quality of chain
15	Bp	88	
16	Aq	105	
16	Bq	105	
17	Ar	88	
17	Br	88	
18	As	93	
18	Bs	93	
19	At	106	
19	Bt	106	
20	Au	27	
20	Bu	27	
21	Ay	95	
21	By	95	
22	Aa	1504	
22	Ba	1504	
23	Ax	14	
23	Bx	14	
24	Av	77	
24	Bv	77	
25	Aw	77	
25	Bw	77	
26	AC	229	
26	BC	229	
27	AD	276	
27	BD	276	

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Mol	Chain	Length	Quality of chain
28	AE	206	
28	BE	206	
29	AF	210	
29	BF	210	
30	AG	182	
30	BG	182	
31	AH	180	
31	BH	180	
32	AI	148	
32	BI	148	
33	AJ	173	
33	BJ	173	
34	AN	140	
34	BN	140	
35	AO	122	
35	BO	122	
36	AP	150	
36	BP	150	
37	AQ	141	
37	BQ	141	
38	AR	118	
38	BR	118	
39	AS	112	
39	BS	112	
40	AT	146	

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Mol	Chain	Length	Quality of chain
40	BT	146	
41	AU	118	
41	BU	118	
42	AV	101	
42	BV	101	
43	AW	113	
43	BW	113	
44	AX	96	
44	BX	96	
45	AY	110	
45	BY	110	
46	AZ	206	
46	BZ	206	
47	A0	85	
47	B0	85	
48	A1	98	
48	B1	98	
49	A2	72	
49	B2	72	
50	A3	60	
50	B3	60	
51	A4	71	
51	B4	71	
52	A5	60	
52	B5	60	

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Mol	Chain	Length	Quality of chain
53	A6	54	
53	B6	54	
54	A7	49	
54	B7	49	
55	A8	65	
55	B8	65	
56	A9	37	
56	B9	37	
57	AA	2848	
57	BA	2848	
58	AB	119	
58	BB	119	

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
60	MG	A7	101	-	-	-	X
60	MG	AA	2906	-	-	-	X
60	MG	AA	2907	-	-	-	X
60	MG	AA	2909	-	-	-	X
60	MG	AA	2913	-	-	-	X
60	MG	AA	2914	-	-	-	X
60	MG	AA	2915	-	-	-	X
60	MG	AA	2918	-	-	-	X
60	MG	AA	2919	-	-	-	X
60	MG	AA	2920	-	-	-	X
60	MG	AA	2921	-	-	-	X
60	MG	AA	2925	-	-	-	X
60	MG	AA	2928	-	-	-	X
60	MG	AA	2929	-	-	-	X
60	MG	AA	2931	-	-	-	X
60	MG	AA	2932	-	-	-	X
60	MG	AA	2943	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
60	MG	AA	2949	-	-	-	X
60	MG	AA	2951	-	-	-	X
60	MG	AA	2953	-	-	-	X
60	MG	AA	2960	-	-	-	X
60	MG	AA	2964	-	-	-	X
60	MG	AA	2965	-	-	-	X
60	MG	AA	2968	-	-	-	X
60	MG	AA	2969	-	-	-	X
60	MG	AA	2976	-	-	-	X
60	MG	AA	2980	-	-	-	X
60	MG	AA	2981	-	-	-	X
60	MG	AA	2985	-	-	-	X
60	MG	AA	2987	-	-	-	X
60	MG	AA	2988	-	-	-	X
60	MG	AA	2991	-	-	-	X
60	MG	AA	2996	-	-	-	X
60	MG	AA	2997	-	-	-	X
60	MG	AA	3011	-	-	-	X
60	MG	AA	3012	-	-	-	X
60	MG	AA	3019	-	-	-	X
60	MG	AA	3023	-	-	-	X
60	MG	AA	3025	-	-	-	X
60	MG	AA	3028	-	-	-	X
60	MG	AA	3029	-	-	-	X
60	MG	AA	3035	-	-	-	X
60	MG	AA	3038	-	-	-	X
60	MG	AA	3039	-	-	-	X
60	MG	AA	3044	-	-	-	X
60	MG	AA	3046	-	-	-	X
60	MG	AA	3051	-	-	-	X
60	MG	AA	3054	-	-	-	X
60	MG	AA	3056	-	-	-	X
60	MG	AA	3061	-	-	-	X
60	MG	AA	3069	-	-	-	X
60	MG	AA	3070	-	-	-	X
60	MG	AA	3072	-	-	-	X
60	MG	AA	3083	-	-	-	X
60	MG	AA	3088	-	-	-	X
60	MG	AA	3095	-	-	-	X
60	MG	AA	3096	-	-	-	X
60	MG	AA	3097	-	-	-	X
60	MG	AA	3099	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
60	MG	AA	3101	-	-	-	X
60	MG	AA	3102	-	-	-	X
60	MG	AA	3121	-	-	-	X
60	MG	AA	3124	-	-	-	X
60	MG	AA	3126	-	-	-	X
60	MG	AA	3128	-	-	-	X
60	MG	AA	3133	-	-	-	X
60	MG	AA	3134	-	-	-	X
60	MG	AA	3138	-	-	-	X
60	MG	AA	3147	-	-	-	X
60	MG	AA	3150	-	-	-	X
60	MG	AA	3158	-	-	-	X
60	MG	AA	3163	-	-	-	X
60	MG	AA	3172	-	-	-	X
60	MG	AA	3175	-	-	-	X
60	MG	AA	3177	-	-	-	X
60	MG	AA	3179	-	-	-	X
60	MG	AA	3190	-	-	-	X
60	MG	AA	3194	-	-	-	X
60	MG	AA	3195	-	-	-	X
60	MG	AA	3197	-	-	-	X
60	MG	AA	3205	-	-	-	X
60	MG	AA	3219	-	-	-	X
60	MG	AA	3221	-	-	-	X
60	MG	AA	3231	-	-	-	X
60	MG	AA	3233	-	-	-	X
60	MG	AA	3236	-	-	-	X
60	MG	AA	3243	-	-	-	X
60	MG	AA	3245	-	-	-	X
60	MG	AA	3247	-	-	-	X
60	MG	AA	3256	-	-	-	X
60	MG	AA	3259	-	-	-	X
60	MG	AA	3261	-	-	-	X
60	MG	AA	3265	-	-	-	X
60	MG	Aa	1611	-	-	-	X
60	MG	Aa	1613	-	-	-	X
60	MG	Aa	1622	-	-	-	X
60	MG	Aa	1624	-	-	-	X
60	MG	Aa	1628	-	-	-	X
60	MG	Aa	1631	-	-	-	X
60	MG	Aa	1633	-	-	-	X
60	MG	Aa	1635	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
60	MG	Aa	1642	-	-	-	X
60	MG	Aa	1645	-	-	-	X
60	MG	Aa	1662	-	-	-	X
60	MG	Aa	1666	-	-	-	X
60	MG	Aa	1670	-	-	-	X
60	MG	Aa	1674	-	-	-	X
60	MG	Aa	1678	-	-	-	X
60	MG	Aa	1679	-	-	-	X
60	MG	Aa	1685	-	-	-	X
60	MG	Aa	1686	-	-	-	X
60	MG	Aa	1725	-	-	-	X
60	MG	Aa	1727	-	-	-	X
60	MG	Aa	1729	-	-	-	X
60	MG	Aa	1735	-	-	-	X
60	MG	Aa	1738	-	-	-	X
60	MG	Aa	1744	-	-	-	X
60	MG	Ae	202	-	-	-	X
60	MG	Av	102	-	-	-	X
60	MG	B0	101	-	-	-	X
60	MG	B7	101	-	-	-	X
60	MG	BA	2905	-	-	-	X
60	MG	BA	2908	-	-	-	X
60	MG	BA	2912	-	-	-	X
60	MG	BA	2913	-	-	-	X
60	MG	BA	2914	-	-	-	X
60	MG	BA	2917	-	-	-	X
60	MG	BA	2920	-	-	-	X
60	MG	BA	2927	-	-	-	X
60	MG	BA	2928	-	-	-	X
60	MG	BA	2930	-	-	-	X
60	MG	BA	2931	-	-	-	X
60	MG	BA	2951	-	-	-	X
60	MG	BA	2957	-	-	-	X
60	MG	BA	2962	-	-	-	X
60	MG	BA	2965	-	-	-	X
60	MG	BA	2966	-	-	-	X
60	MG	BA	2967	-	-	-	X
60	MG	BA	2968	-	-	-	X
60	MG	BA	2979	-	-	-	X
60	MG	BA	2980	-	-	-	X
60	MG	BA	2982	-	-	-	X
60	MG	BA	2984	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
60	MG	BA	2987	-	-	-	X
60	MG	BA	2990	-	-	-	X
60	MG	BA	2995	-	-	-	X
60	MG	BA	2996	-	-	-	X
60	MG	BA	3010	-	-	-	X
60	MG	BA	3011	-	-	-	X
60	MG	BA	3013	-	-	-	X
60	MG	BA	3018	-	-	-	X
60	MG	BA	3022	-	-	-	X
60	MG	BA	3024	-	-	-	X
60	MG	BA	3027	-	-	-	X
60	MG	BA	3028	-	-	-	X
60	MG	BA	3029	-	-	-	X
60	MG	BA	3034	-	-	-	X
60	MG	BA	3035	-	-	-	X
60	MG	BA	3037	-	-	-	X
60	MG	BA	3038	-	-	-	X
60	MG	BA	3043	-	-	-	X
60	MG	BA	3045	-	-	-	X
60	MG	BA	3052	-	-	-	X
60	MG	BA	3053	-	-	-	X
60	MG	BA	3055	-	-	-	X
60	MG	BA	3060	-	-	-	X
60	MG	BA	3069	-	-	-	X
60	MG	BA	3070	-	-	-	X
60	MG	BA	3084	-	-	-	X
60	MG	BA	3088	-	-	-	X
60	MG	BA	3091	-	-	-	X
60	MG	BA	3093	-	-	-	X
60	MG	BA	3094	-	-	-	X
60	MG	BA	3095	-	-	-	X
60	MG	BA	3097	-	-	-	X
60	MG	BA	3100	-	-	-	X
60	MG	BA	3101	-	-	-	X
60	MG	BA	3102	-	-	-	X
60	MG	BA	3105	-	-	-	X
60	MG	BA	3120	-	-	-	X
60	MG	BA	3123	-	-	-	X
60	MG	BA	3127	-	-	-	X
60	MG	BA	3131	-	-	-	X
60	MG	BA	3133	-	-	-	X
60	MG	BA	3134	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
60	MG	BA	3138	-	-	-	X
60	MG	BA	3147	-	-	-	X
60	MG	BA	3150	-	-	-	X
60	MG	BA	3156	-	-	-	X
60	MG	BA	3160	-	-	-	X
60	MG	BA	3165	-	-	-	X
60	MG	BA	3171	-	-	-	X
60	MG	BA	3172	-	-	-	X
60	MG	BA	3176	-	-	-	X
60	MG	BA	3183	-	-	-	X
60	MG	BA	3187	-	-	-	X
60	MG	BA	3191	-	-	-	X
60	MG	BA	3194	-	-	-	X
60	MG	BA	3211	-	-	-	X
60	MG	BA	3217	-	-	-	X
60	MG	BA	3231	-	-	-	X
60	MG	BA	3234	-	-	-	X
60	MG	BA	3236	-	-	-	X
60	MG	BA	3241	-	-	-	X
60	MG	BA	3254	-	-	-	X
60	MG	BA	3257	-	-	-	X
60	MG	BD	301	-	-	-	X
60	MG	Ba	1608	-	-	-	X
60	MG	Ba	1609	-	-	-	X
60	MG	Ba	1621	-	-	-	X
60	MG	Ba	1630	-	-	-	X
60	MG	Ba	1634	-	-	-	X
60	MG	Ba	1644	-	-	-	X
60	MG	Ba	1654	-	-	-	X
60	MG	Ba	1668	-	-	-	X
60	MG	Ba	1671	-	-	-	X
60	MG	Ba	1684	-	-	-	X
60	MG	Ba	1685	-	-	-	X
60	MG	Ba	1691	-	-	-	X
60	MG	Ba	1695	-	-	-	X
60	MG	Ba	1724	-	-	-	X
60	MG	Ba	1726	-	-	-	X
60	MG	Ba	1728	-	-	-	X
60	MG	Ba	1731	-	-	-	X
60	MG	Ba	1739	-	-	-	X
60	MG	Ba	1742	-	-	-	X
60	MG	Bv	105	-	-	-	X



## 2 Entry composition

There are 60 unique types of molecules in this entry. The entry contains 297230 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 protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	Ab	234	Total	C	N	O	S	0	0	0
			1900	1213	341	341	5			
1	Bb	234	Total	C	N	O	S	0	0	0
			1900	1213	341	341	5			

- Molecule 2 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	Ac	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			
2	Bc	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			

- Molecule 3 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	Ad	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			
3	Bd	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

- Molecule 4 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	Ae	150	Total	C	N	O	S	0	0	0
			1146	724	217	201	4			
4	Be	150	Total	C	N	O	S	0	0	0
			1146	724	217	201	4			

- Molecule 5 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	Af	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			
5	Bf	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 6 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	Ag	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			
6	Bg	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

- Molecule 7 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	Ah	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			
7	Bh	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 8 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
8	Ai	127	Total	C	N	O	0	0	0
			1010	639	197	174			
8	Bi	127	Total	C	N	O	0	0	0
			1010	639	197	174			

- Molecule 9 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	Aj	98	Total	C	N	O	S	0	0	0
			794	499	156	138	1			
9	Bj	98	Total	C	N	O	S	0	0	0
			794	499	156	138	1			

- Molecule 10 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	Ak	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	Bk	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			

- Molecule 11 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	Al	124	Total	C	N	O	S	0	0	0
			970	611	195	163	1			
11	Bl	124	Total	C	N	O	S	0	0	0
			970	611	195	163	1			

- Molecule 12 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	Am	118	Total	C	N	O	S	0	0	0
			937	579	193	163	2			
12	Bm	118	Total	C	N	O	S	0	0	0
			937	579	193	163	2			

- Molecule 13 is a protein called 30S ribosomal protein S14 type Z.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	An	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			
13	Bn	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			

- Molecule 14 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	Ao	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			
14	Bo	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			

- Molecule 15 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	Ap	83	Total	C	N	O	S	0	0	0
			700	443	139	117	1			
15	Bp	83	Total	C	N	O	S	0	0	0
			700	443	139	117	1			

- Molecule 16 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	Aq	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			
16	Bq	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			

- Molecule 17 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	Ar	70	Total	C	N	O	S	0	0	0
			574	367	112	95				
17	Br	70	Total	C	N	O	S	0	0	0
			574	367	112	95				

- Molecule 18 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	As	78	Total	C	N	O	S	0	0	0
			629	403	114	110	2			
18	Bs	78	Total	C	N	O	S	0	0	0
			629	403	114	110	2			

- Molecule 19 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	At	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			
19	Bt	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			

- Molecule 20 is a protein called 30S ribosomal protein Thx.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
20	Au	24	Total	C	N	O	0	0	0
			208	128	50	30			
20	Bu	24	Total	C	N	O	0	0	0
			208	128	50	30			

- Molecule 21 is a protein called Toxin relE.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	Ay	94	Total	C	N	O	S	0	0	0
			782	502	139	139	2			
21	By	94	Total	C	N	O	S	0	0	0
			782	502	139	139	2			

- Molecule 22 is a RNA chain called RNA (1504-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	Aa	1504	Total	C	N	O	P	0	0	0
			32329	14390	5992	10444	1503			
22	Ba	1504	Total	C	N	O	P	0	0	0
			32329	14390	5992	10444	1503			

- Molecule 23 is a RNA chain called RNA (5'-R(\*A\*AP\*GP\*UP\*AP\*AP\*AP\*AP\*AP\*UP\*GP\*UP\*A\*(CCC))-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	Ax	13	Total	C	N	O	P	0	0	0
			260	117	51	80	12			
23	Bx	13	Total	C	N	O	P	0	0	0
			260	117	51	80	12			

- Molecule 24 is a RNA chain called RNA (77-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	Av	77	Total	C	N	O	P	0	0	0
			1641	733	297	535	76			
24	Bv	77	Total	C	N	O	P	0	0	0
			1641	733	297	535	76			

- Molecule 25 is a RNA chain called RNA (77-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	Aw	77	Total	C	N	O	P	0	0	0
			1640	732	297	535	76			
25	Bw	77	Total	C	N	O	P	0	0	0
			1640	732	297	535	76			

- Molecule 26 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	AC	120	Total	C	N	O	S	0	0	0
			937	590	174	172	1			
26	BC	120	Total	C	N	O	S	0	0	0
			937	590	174	172	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	AD	271	Total	C	N	O	S	0	0	0
			2104	1329	416	356	3			
27	BD	271	Total	C	N	O	S	0	0	0
			2104	1329	416	356	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	AE	204	Total	C	N	O	S	0	0	0
			1563	988	299	270	6			
28	BE	204	Total	C	N	O	S	0	0	0
			1563	988	299	270	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	AF	207	Total	C	N	O	S	0	0	0
			1623	1035	303	282	3			
29	BF	207	Total	C	N	O	S	0	0	0
			1623	1035	303	282	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	AG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			
30	BG	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	AH	164	Total	C	N	O	S	0	0	0
			1259	800	233	225	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	BH	164	Total	C	N	O	S	0	0	0
			1259	800	233	225	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	AI	145	Total	C	N	O	S	0	0	0
			1131	723	200	207	1			
32	BI	145	Total	C	N	O	S	0	0	0
			1131	723	200	207	1			

- Molecule 33 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	AJ	130	Total	C	N	O	S	0	0	0
			641	381	130	130				
33	BJ	130	Total	C	N	O	S	0	0	0
			641	381	130	130				

- Molecule 34 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	AN	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			
34	BN	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			

- Molecule 35 is a protein called 50S ribosomal protein L14.

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

- Molecule 36 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	AP	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			
36	BP	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			

- Molecule 37 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	AQ	140	Total	C	N	O	S	0	0	0
			1112	710	210	185	7			
37	BQ	140	Total	C	N	O	S	0	0	0
			1112	710	210	185	7			

- Molecule 38 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
38	AR	117	Total	C	N	O	0	0	0
			960	599	202	159			
38	BR	117	Total	C	N	O	0	0	0
			960	599	202	159			

- Molecule 39 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
39	AS	98	Total	C	N	O	0	0	0
			770	486	154	130			
39	BS	98	Total	C	N	O	0	0	0
			770	486	154	130			

- Molecule 40 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	AT	135	Total	C	N	O	S	0	0	0
			1123	699	230	193	1			
40	BT	135	Total	C	N	O	S	0	0	0
			1123	699	230	193	1			

- Molecule 41 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	AU	117	Total	C	N	O	S	0	0	0
			958	604	202	151	1			
41	BU	117	Total	C	N	O	S	0	0	0
			958	604	202	151	1			

- Molecule 42 is a protein called 50S ribosomal protein L21.



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	AV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			
42	BV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 43 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	AW	113	Total	C	N	O	S	0	0	0
			896	563	176	155	2			
43	BW	113	Total	C	N	O	S	0	0	0
			896	563	176	155	2			

- Molecule 44 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	AX	92	Total	C	N	O		0	0	0
			725	471	131	123				
44	BX	92	Total	C	N	O		0	0	0
			725	471	131	123				

- Molecule 45 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	AY	100	Total	C	N	O	S	0	0	0
			775	500	148	123	4			
45	BY	100	Total	C	N	O	S	0	0	0
			775	500	148	123	4			

- Molecule 46 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	AZ	184	Total	C	N	O	S	0	0	0
			1467	936	261	268	2			
46	BZ	184	Total	C	N	O	S	0	0	0
			1467	936	261	268	2			

- Molecule 47 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	A0	84	Total	C	N	O	S	0	0	0
			662	410	140	111	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	B0	84	Total	C	N	O	S	0	0	0
			662	410	140	111	1			

- Molecule 48 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	A1	93	Total	C	N	O	S	0	0	0
			731	460	145	125	1			
48	B1	93	Total	C	N	O	S	0	0	0
			731	460	145	125	1			

- Molecule 49 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	A2	71	Total	C	N	O	S	0	0	0
			598	370	121	106	1			
49	B2	71	Total	C	N	O	S	0	0	0
			598	370	121	106	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	A3	59	Total	C	N	O	S	0	0	0
			467	298	90	78	1			
50	B3	59	Total	C	N	O	S	0	0	0
			467	298	90	78	1			

- Molecule 51 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	A4	57	Total	C	N	O	S	0	0	0
			450	285	77	83	5			
51	B4	57	Total	C	N	O	S	0	0	0
			450	285	77	83	5			

- Molecule 52 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	A5	55	Total	C	N	O	S	0	0	0
			427	267	86	69	5			
52	B5	55	Total	C	N	O	S	0	0	0
			427	267	86	69	5			

- Molecule 53 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	A6	50	Total	C	N	O	S	0	0	0
			433	270	88	71	4			
53	B6	50	Total	C	N	O	S	0	0	0
			433	270	88	71	4			

- Molecule 54 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	A7	47	Total	C	N	O	S	0	0	0
			409	251	102	54	2			
54	B7	47	Total	C	N	O	S	0	0	0
			409	251	102	54	2			

- Molecule 55 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	A8	63	Total	C	N	O	S	0	0	0
			507	326	101	78	2			
55	B8	63	Total	C	N	O	S	0	0	0
			507	326	101	78	2			

- Molecule 56 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	A9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			
56	B9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

- Molecule 57 is a RNA chain called RNA (2848-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	AA	2848	Total	C	N	O	P	0	0	0
			61341	27300	11478	19716	2847			
57	BA	2848	Total	C	N	O	P	0	0	0
			61341	27300	11478	19716	2847			

- Molecule 58 is a RNA chain called RNA (119-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
58	AB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			
58	BB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			

- Molecule 59 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	B4	1	Total	Zn	0	0
			1	1		
59	Ad	1	Total	Zn	0	0
			1	1		
59	Bn	1	Total	Zn	0	0
			1	1		
59	B9	1	Total	Zn	0	0
			1	1		
59	Bd	1	Total	Zn	0	0
			1	1		
59	A4	1	Total	Zn	0	0
			1	1		
59	An	1	Total	Zn	0	0
			1	1		
59	A9	1	Total	Zn	0	0
			1	1		

- Molecule 60 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

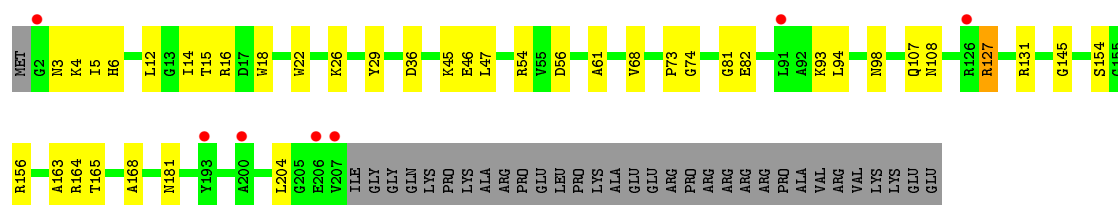
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
60	BA	365	Total	Mg	0	0
			365	365		
60	AB	3	Total	Mg	0	0
			3	3		
60	Bd	1	Total	Mg	0	0
			1	1		
60	AX	1	Total	Mg	0	0
			1	1		
60	Bw	1	Total	Mg	0	0
			1	1		
60	B5	2	Total	Mg	0	0
			2	2		
60	BB	3	Total	Mg	0	0
			3	3		
60	Ba	143	Total	Mg	0	0
			143	143		

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
60	Bl	1	Total 1	Mg 1	0	0
60	BF	1	Total 1	Mg 1	0	0
60	BX	1	Total 1	Mg 1	0	0
60	Aw	1	Total 1	Mg 1	0	0
60	AA	367	Total 367	Mg 367	0	0
60	A5	1	Total 1	Mg 1	0	0
60	A1	2	Total 2	Mg 2	0	0
60	AD	2	Total 2	Mg 2	0	0
60	Ae	2	Total 2	Mg 2	0	0
60	Bm	1	Total 1	Mg 1	0	0
60	Av	5	Total 5	Mg 5	0	0
60	Bx	1	Total 1	Mg 1	0	0
60	Aa	145	Total 145	Mg 145	0	0
60	B7	2	Total 2	Mg 2	0	0
60	BO	1	Total 1	Mg 1	0	0
60	AQ	1	Total 1	Mg 1	0	0
60	A7	1	Total 1	Mg 1	0	0
60	BD	2	Total 2	Mg 2	0	0
60	B0	2	Total 2	Mg 2	0	0
60	Bv	5	Total 5	Mg 5	0	0
60	AF	1	Total 1	Mg 1	0	0





- Molecule 3: 30S ribosomal protein S4

Chain Ad: 78% 20%



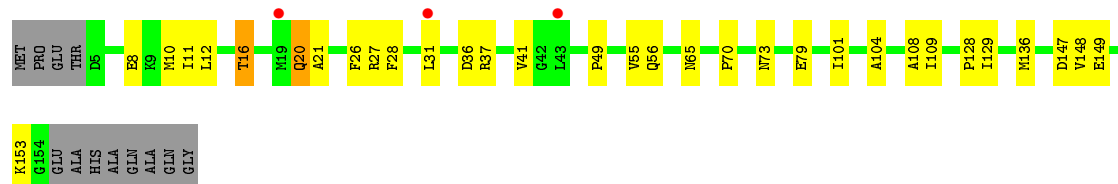
- Molecule 3: 30S ribosomal protein S4

Chain Bd: 78% 21%



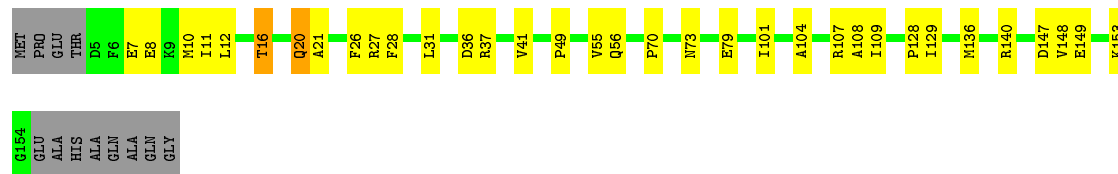
- Molecule 4: 30S ribosomal protein S5

Chain Ae: 73% 19% 7%



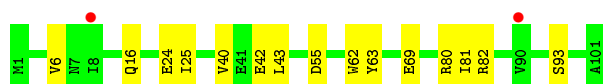
- Molecule 4: 30S ribosomal protein S5

Chain Be: 72% 20% 7%



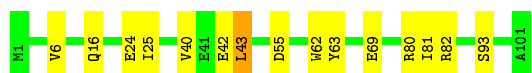
- Molecule 5: 30S ribosomal protein S6

Chain Af: 85% 15% 2%



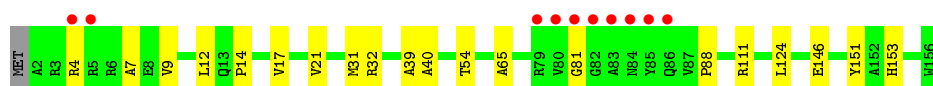
- Molecule 5: 30S ribosomal protein S6

Chain Bf: 85% 14%



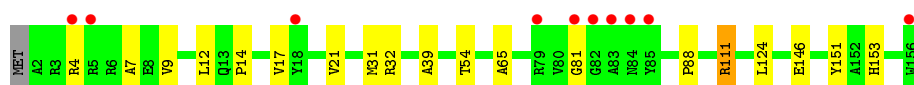
- Molecule 6: 30S ribosomal protein S7

Chain Ag: 6% 87% 13%



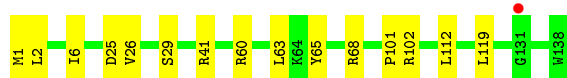
- Molecule 6: 30S ribosomal protein S7

Chain Bg: 6% 87% 12%



- Molecule 7: 30S ribosomal protein S8

Chain Ah: 89% 11%



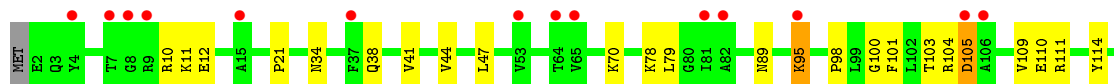
- Molecule 7: 30S ribosomal protein S8

Chain Bh: 89% 11%



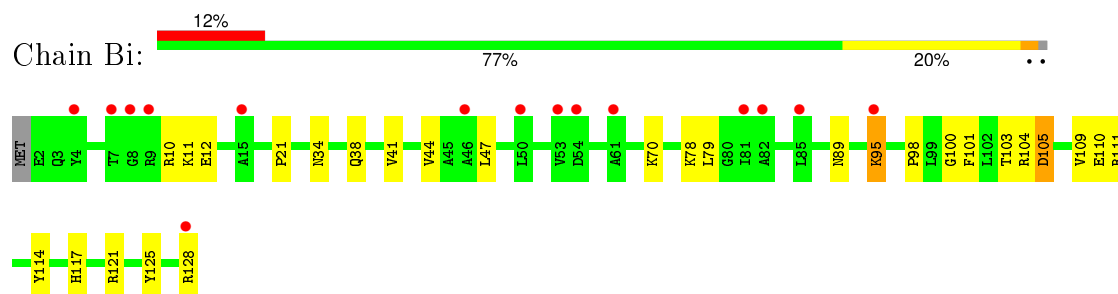
- Molecule 8: 30S ribosomal protein S9

Chain Ai: 12% 77% 20%

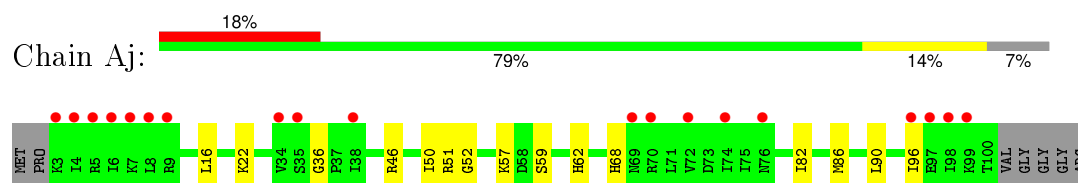




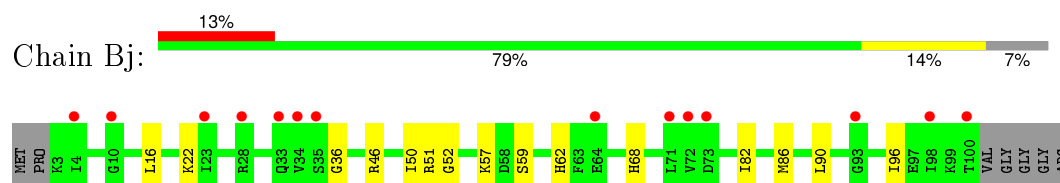
- Molecule 8: 30S ribosomal protein S9



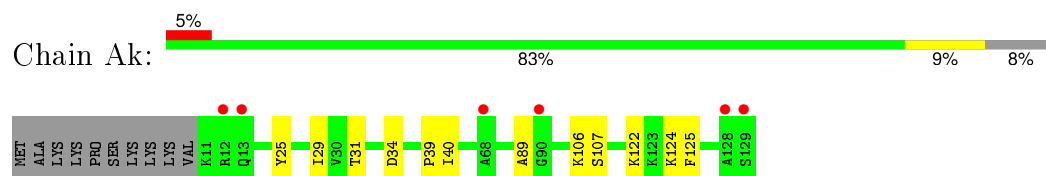
- Molecule 9: 30S ribosomal protein S10



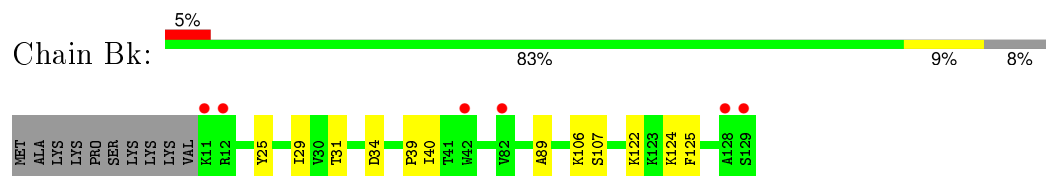
- Molecule 9: 30S ribosomal protein S10



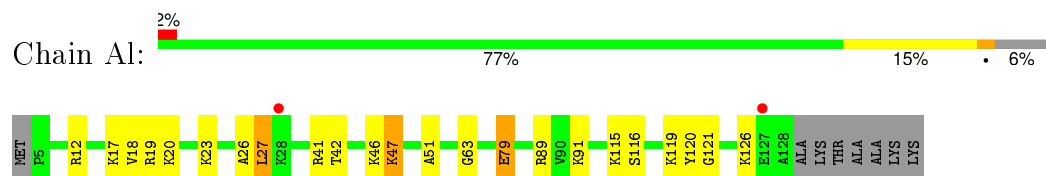
- Molecule 10: 30S ribosomal protein S11



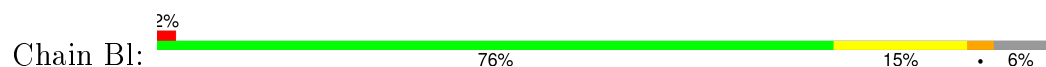
- Molecule 10: 30S ribosomal protein S11

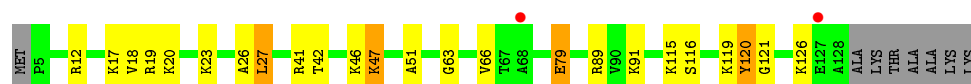


- Molecule 11: 30S ribosomal protein S12

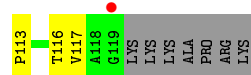
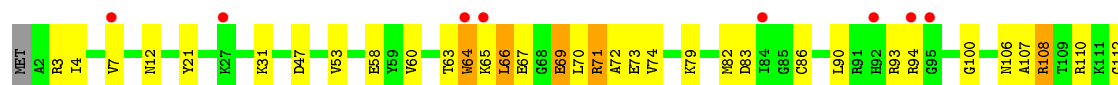


- Molecule 11: 30S ribosomal protein S12

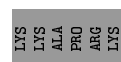




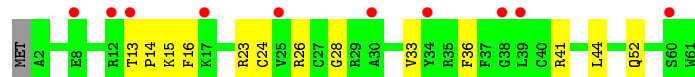
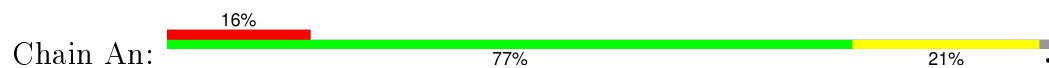
- Molecule 12: 30S ribosomal protein S13



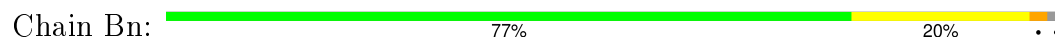
- Molecule 12: 30S ribosomal protein S13



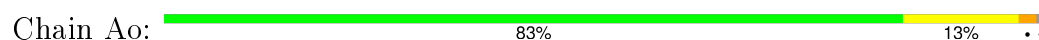
- Molecule 13: 30S ribosomal protein S14 type Z



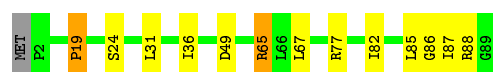
- Molecule 13: 30S ribosomal protein S14 type Z



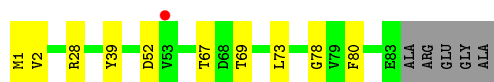
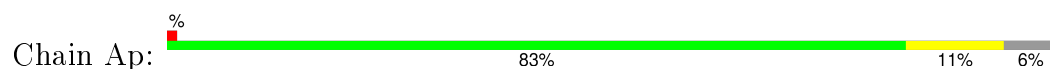
- Molecule 14: 30S ribosomal protein S15



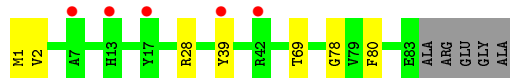
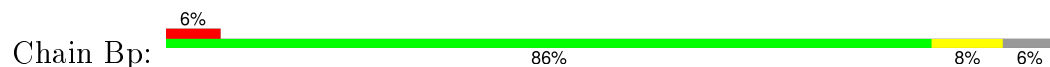
- Molecule 14: 30S ribosomal protein S15



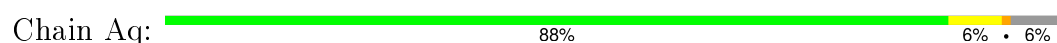
- Molecule 15: 30S ribosomal protein S16



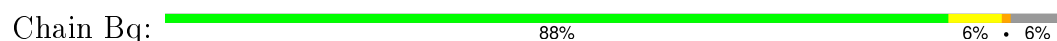
- Molecule 15: 30S ribosomal protein S16



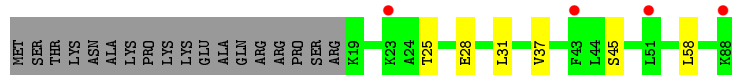
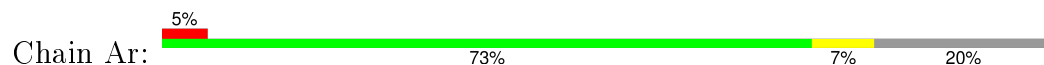
- Molecule 16: 30S ribosomal protein S17



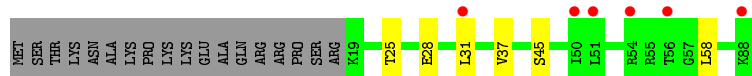
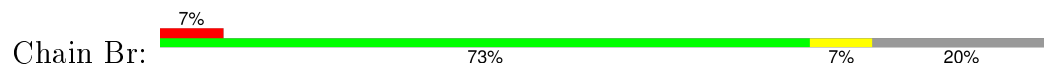
- Molecule 16: 30S ribosomal protein S17



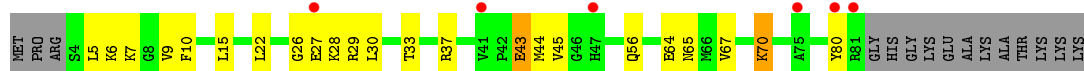
- Molecule 17: 30S ribosomal protein S18



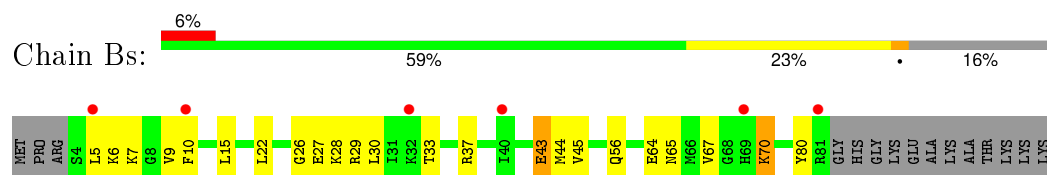
- Molecule 17: 30S ribosomal protein S18



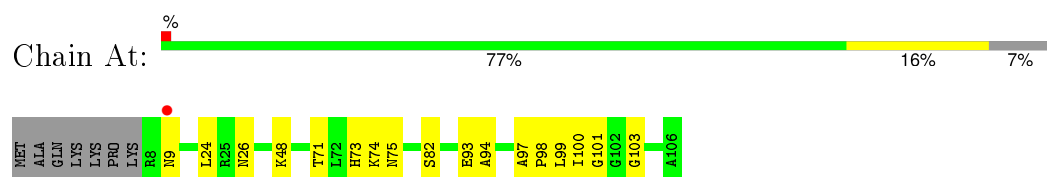
- Molecule 18: 30S ribosomal protein S19



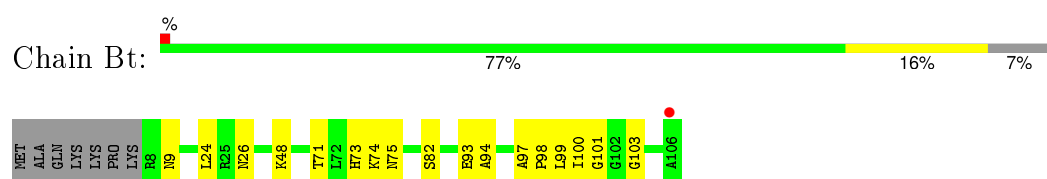
- Molecule 18: 30S ribosomal protein S19



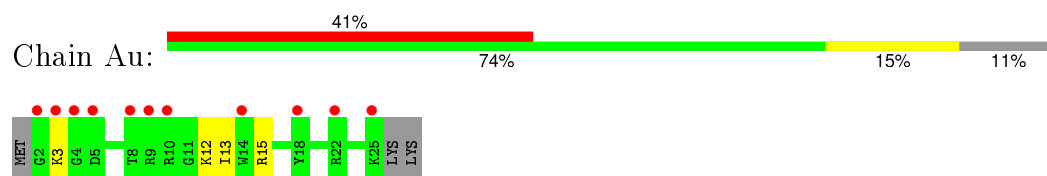
- Molecule 19: 30S ribosomal protein S20



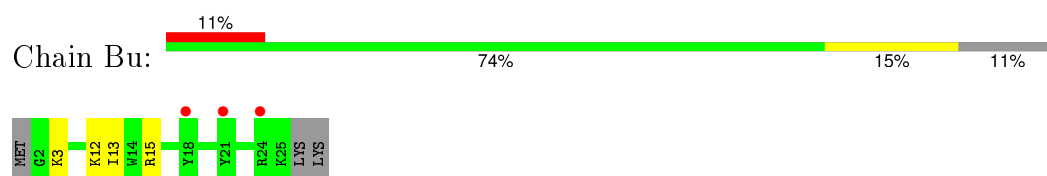
- Molecule 19: 30S ribosomal protein S20



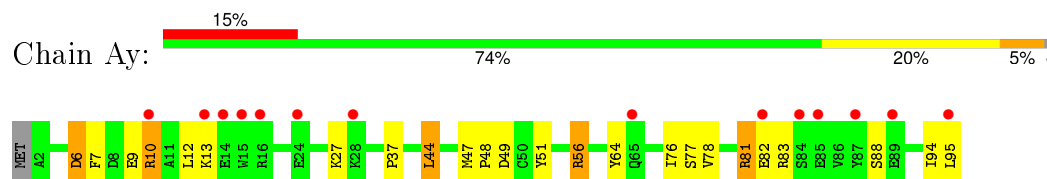
- Molecule 20: 30S ribosomal protein Thx



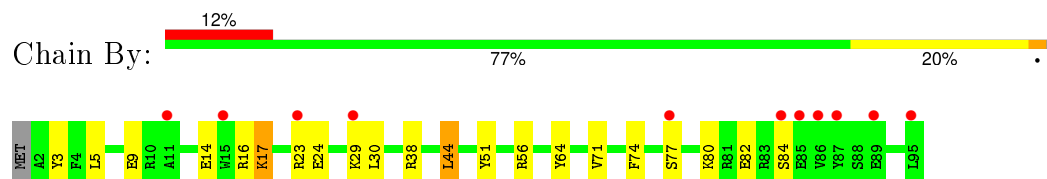
- Molecule 20: 30S ribosomal protein Thx



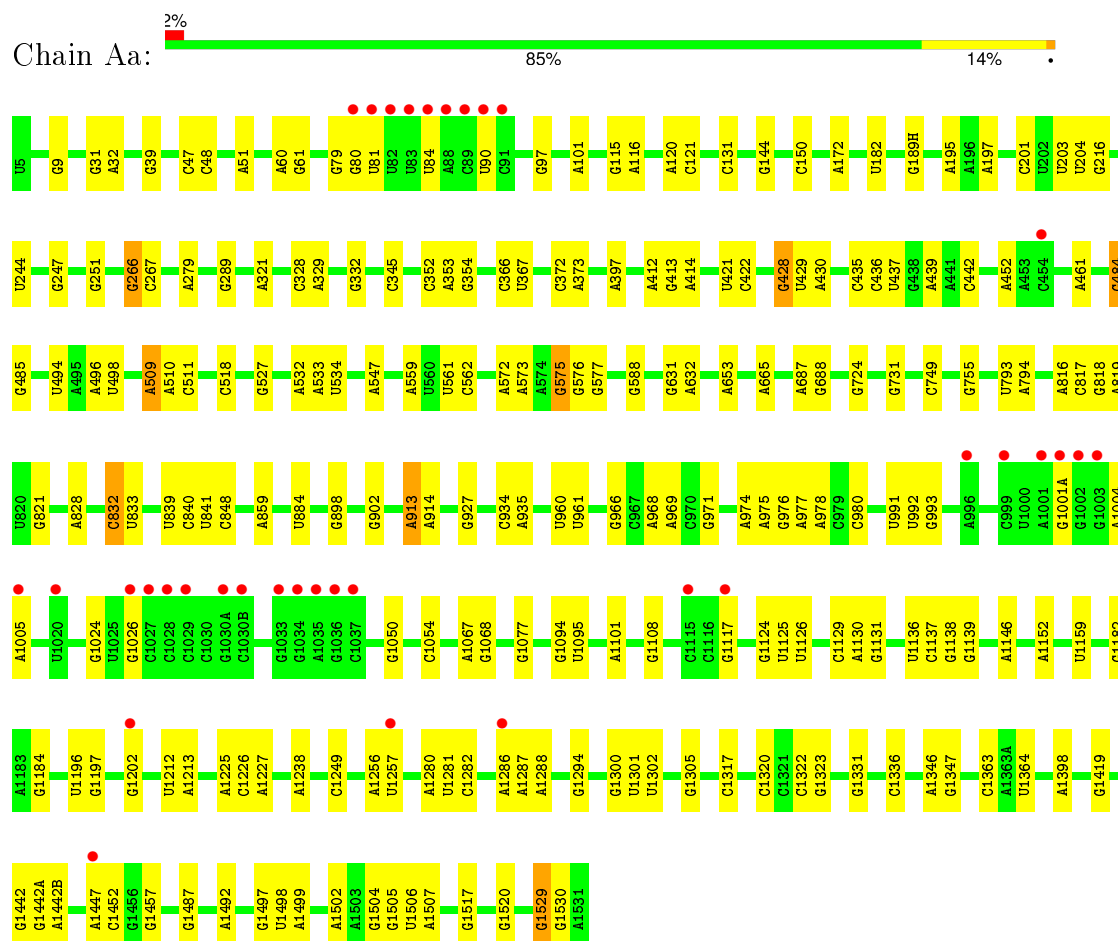
- Molecule 21: Toxin relE



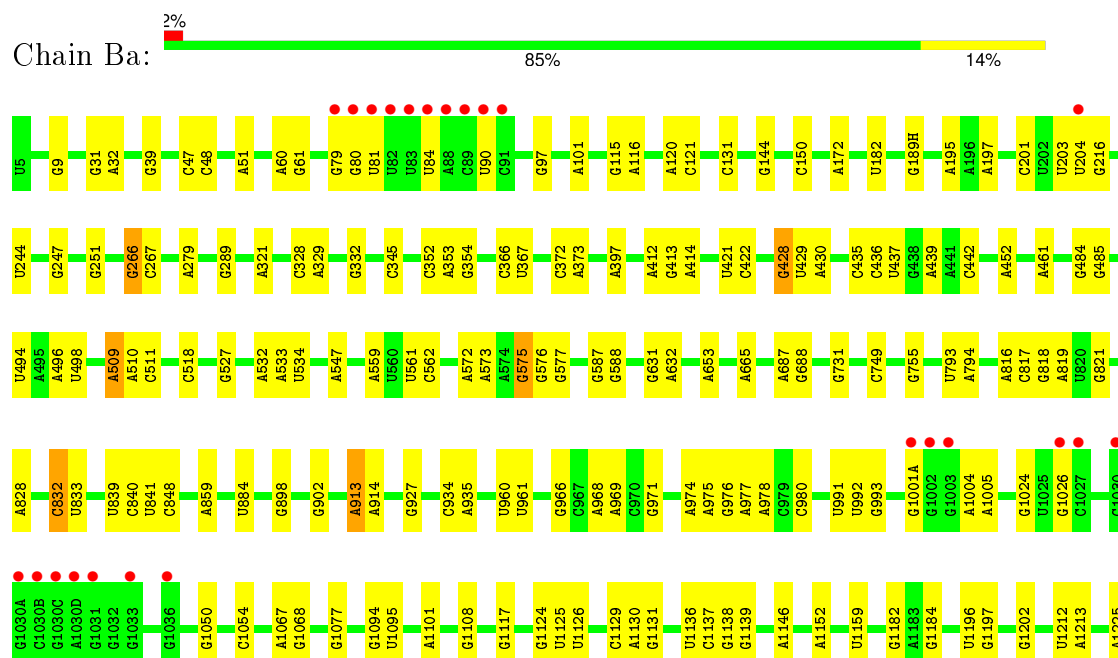
- Molecule 21: Toxin relE

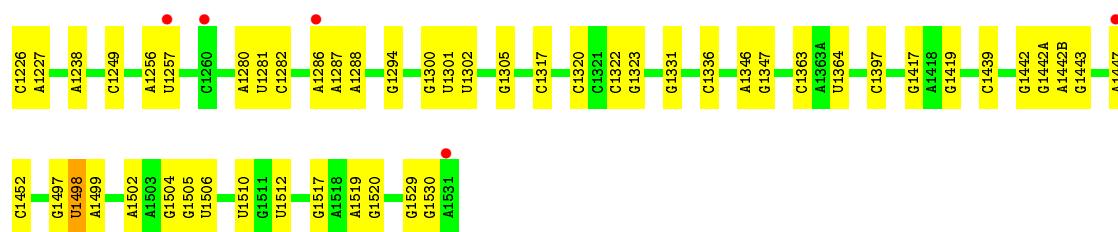


• Molecule 22: RNA (1504-MER)

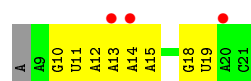


• Molecule 22: RNA (1504-MER)

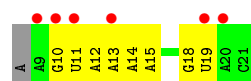




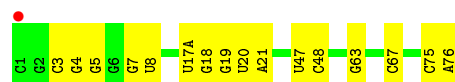
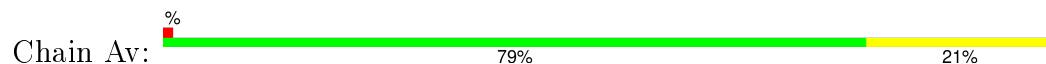
- Molecule 23: RNA (5'-R(\*A\*AP\*GP\*UP\*AP\*AP\*AP\*AP\*AP\*UP\*GP\*UP\*A\*(CCC))-3')



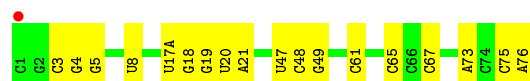
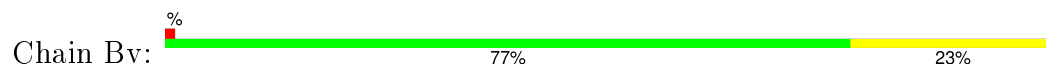
- Molecule 23: RNA (5'-R(\*A\*AP\*GP\*UP\*AP\*AP\*AP\*AP\*AP\*UP\*GP\*UP\*A\*(CCC))-3')



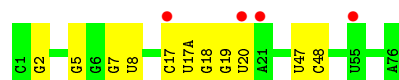
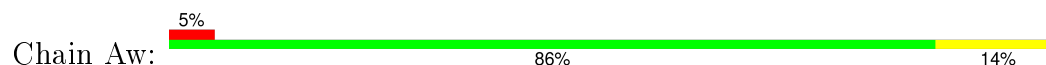
- Molecule 24: RNA (77-MER)



- Molecule 24: RNA (77-MER)

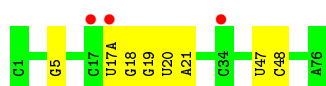


- Molecule 25: RNA (77-MER)

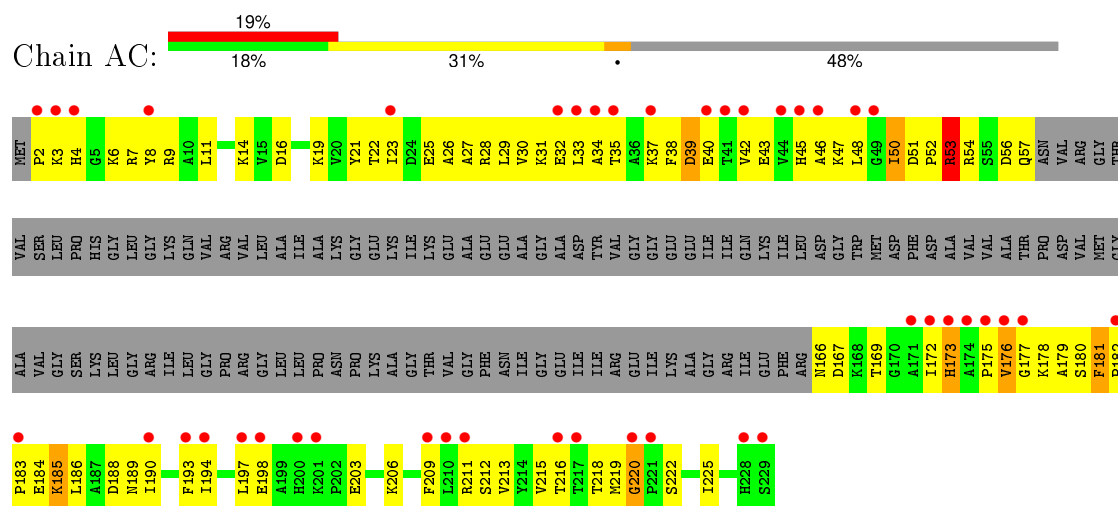


- Molecule 25: RNA (77-MER)

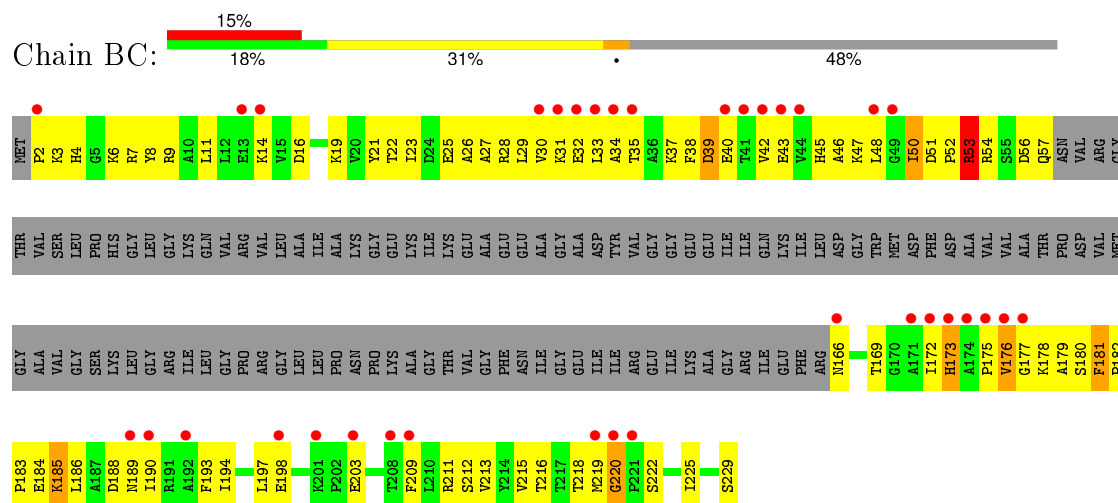




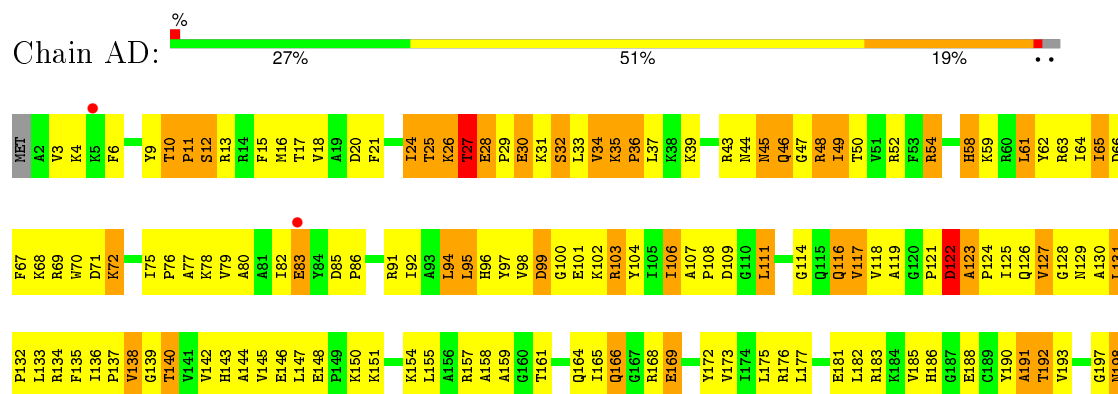
- Molecule 26: 50S ribosomal protein L1

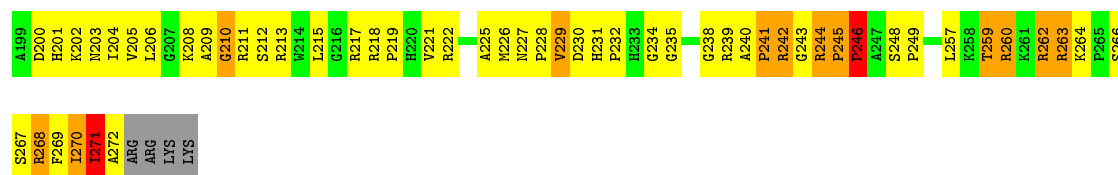


- Molecule 26: 50S ribosomal protein L1



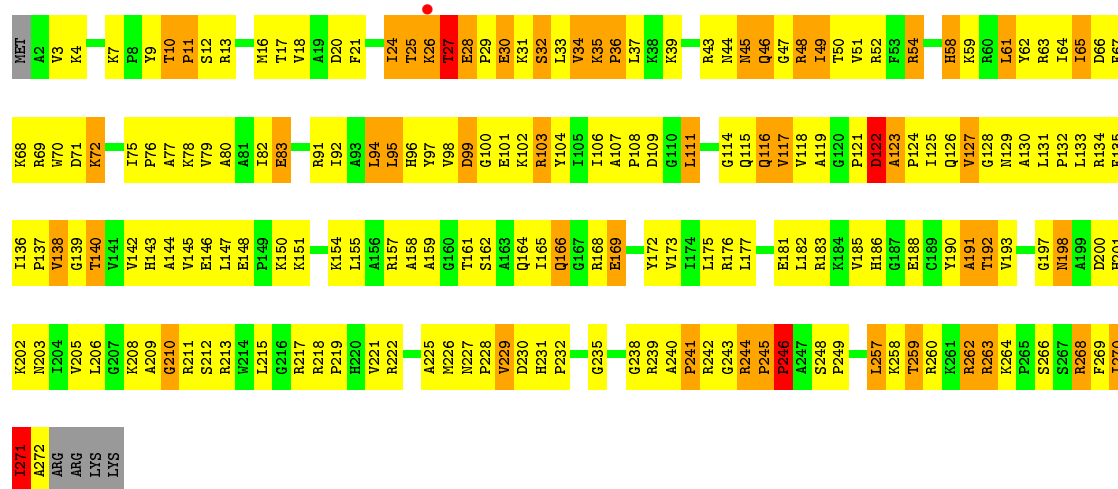
- Molecule 27: 50S ribosomal protein L2





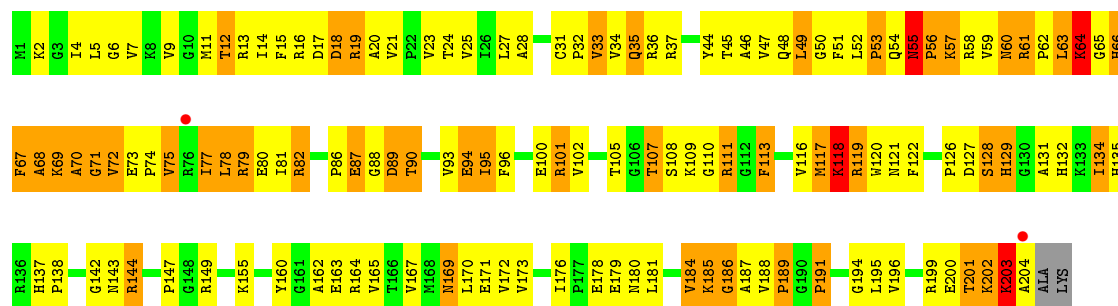
• Molecule 27: 50S ribosomal protein L2

Chain BD: 28% 51% 17%



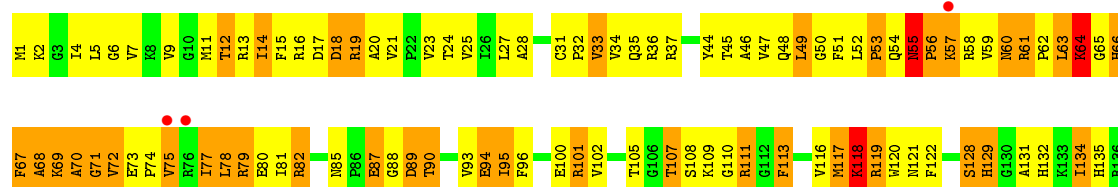
• Molecule 28: 50S ribosomal protein L3

Chain AE: 31% 44% 23%



• Molecule 28: 50S ribosomal protein L3

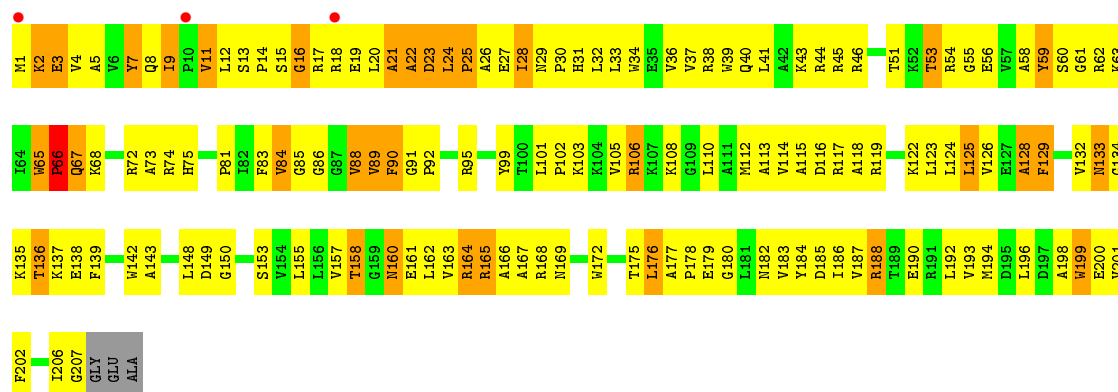
Chain BE: 31% 44% 23%



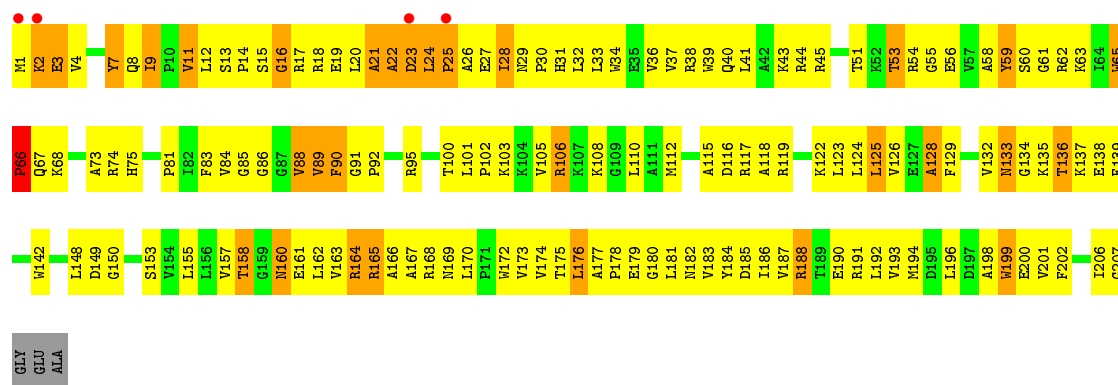




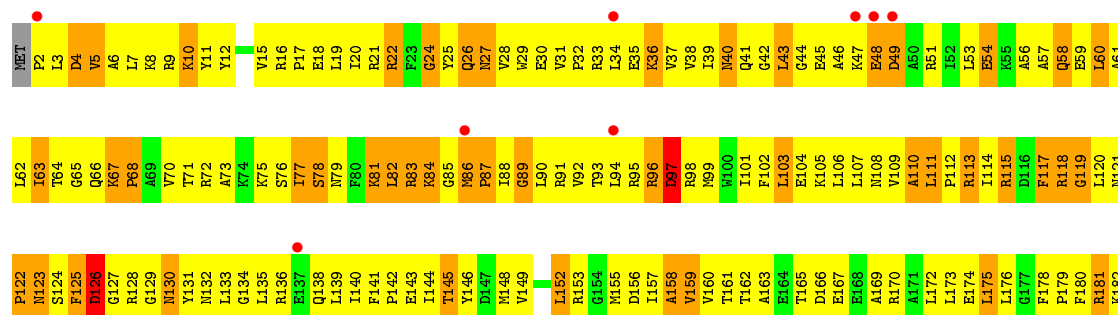
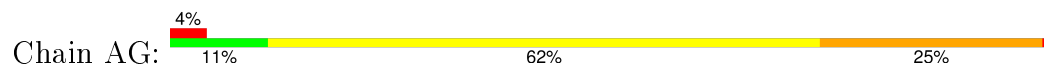
• Molecule 29: 50S ribosomal protein L4



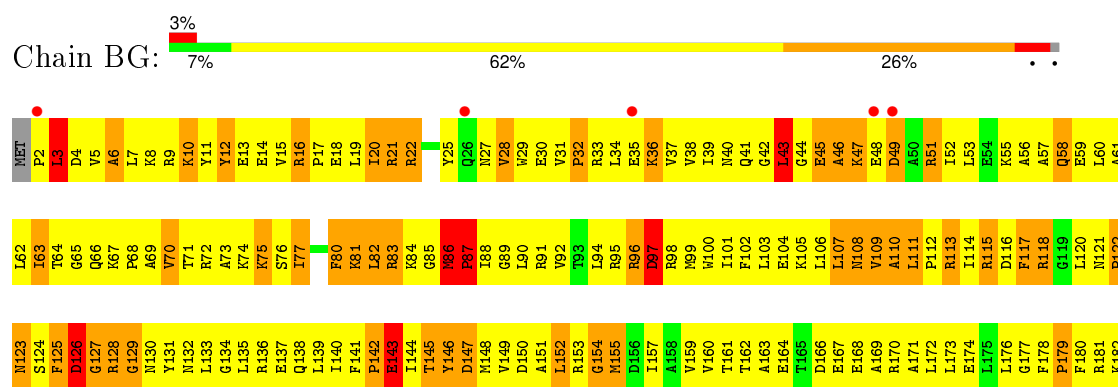
• Molecule 29: 50S ribosomal protein L4



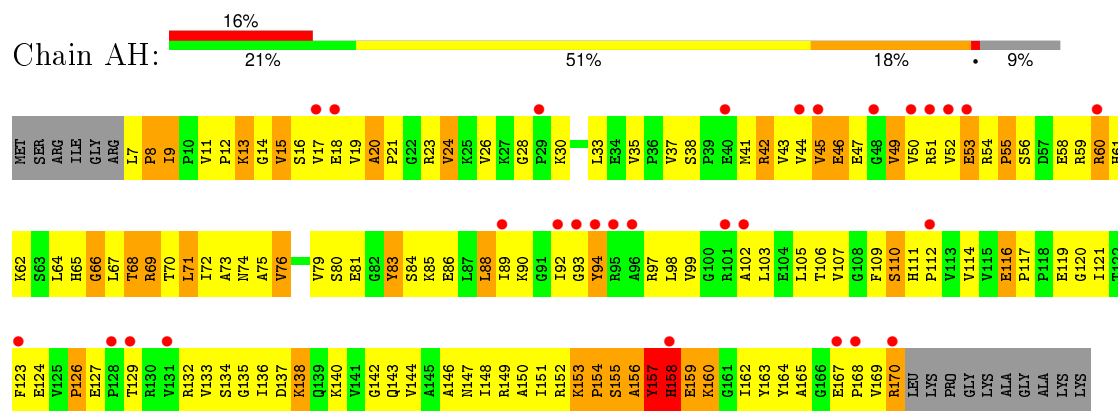
• Molecule 30: 50S ribosomal protein L5



• Molecule 30: 50S ribosomal protein L5

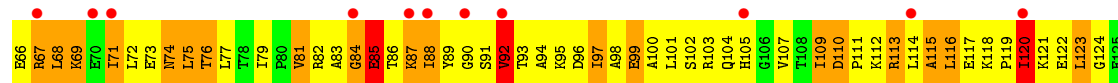
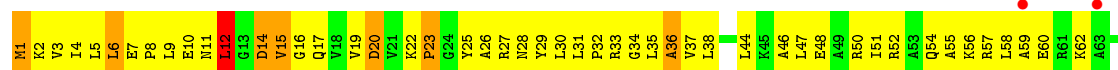
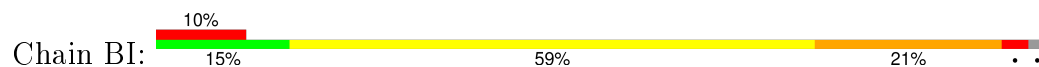


• Molecule 31: 50S ribosomal protein L6

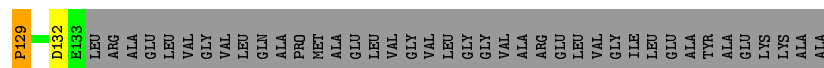
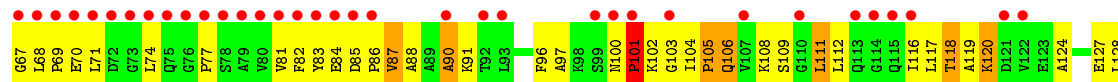
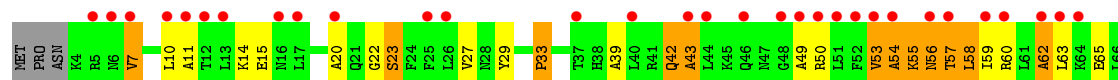




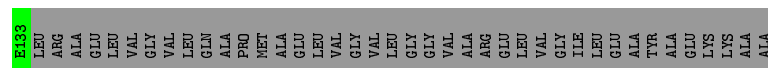
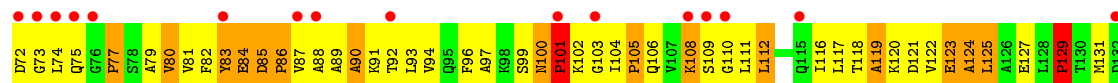
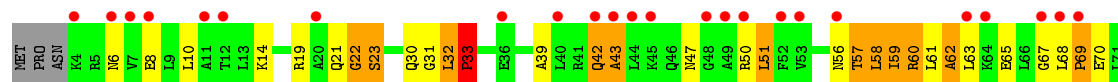
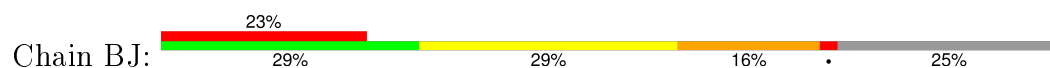
• Molecule 32: 50S ribosomal protein L9



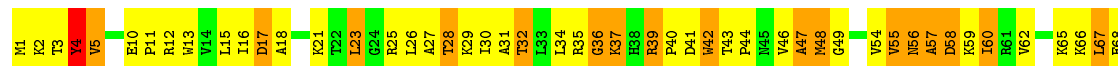
• Molecule 33: 50S ribosomal protein L10

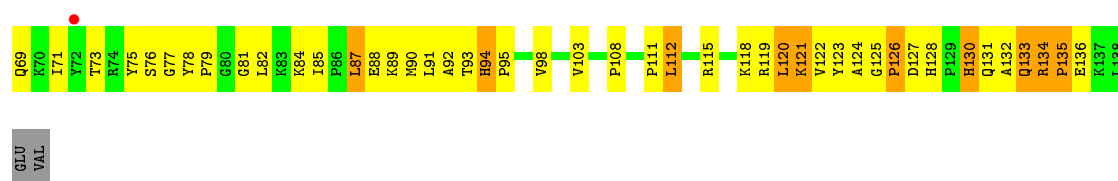


• Molecule 33: 50S ribosomal protein L10



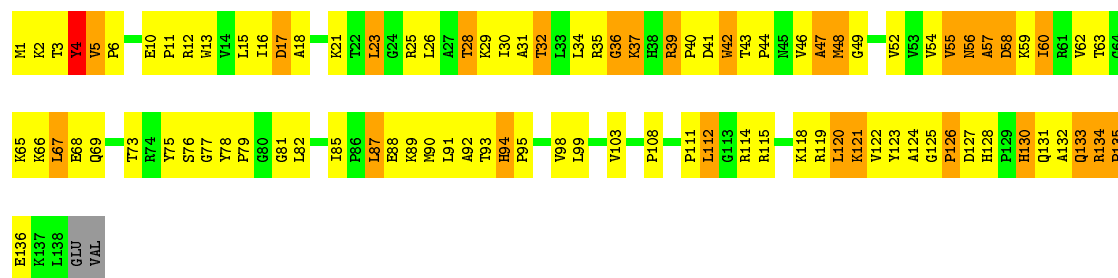
• Molecule 34: 50S ribosomal protein L13





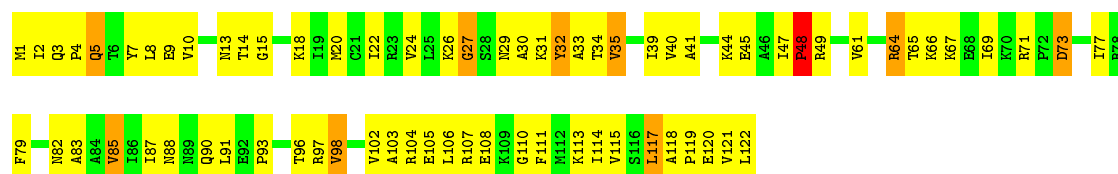
• Molecule 34: 50S ribosomal protein L13

Chain BN: 30% 49% 19% ..



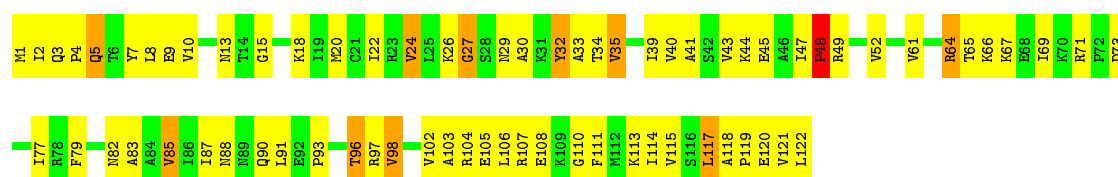
• Molecule 35: 50S ribosomal protein L14

Chain AO: 41% 51% 7% .



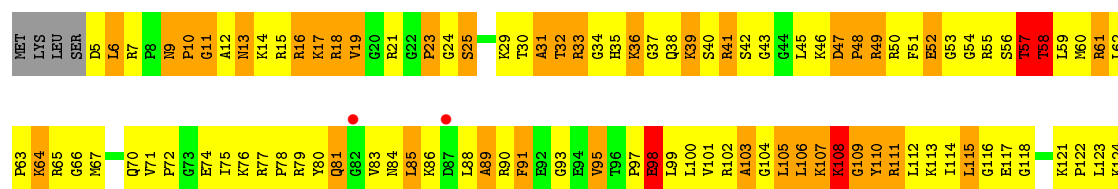
• Molecule 35: 50S ribosomal protein L14

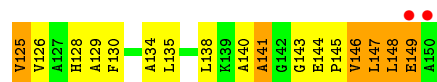
Chain BO: 41% 50% 8% .



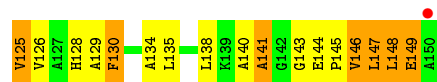
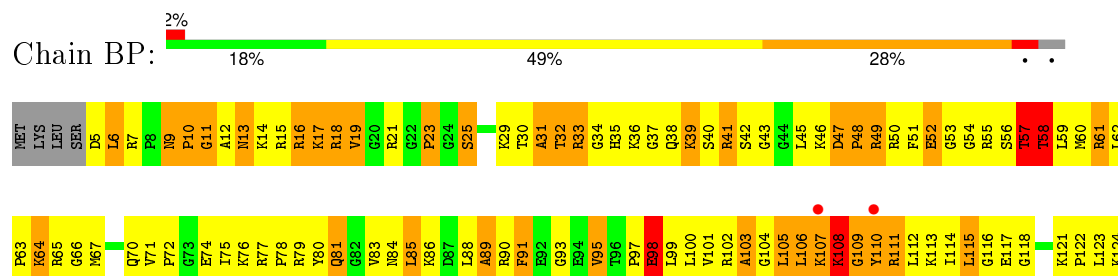
• Molecule 36: 50S ribosomal protein L15

Chain AP: 3% 17% 49% 28% . .

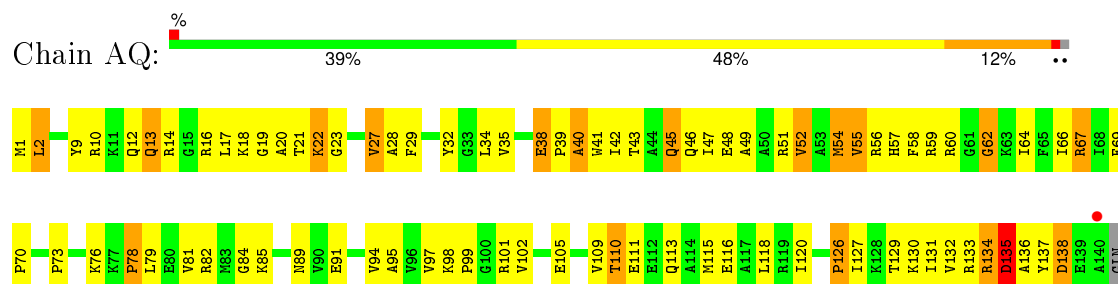




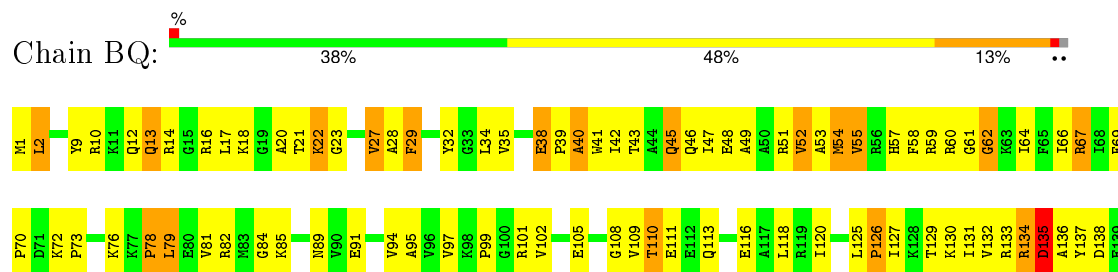
- Molecule 36: 50S ribosomal protein L15



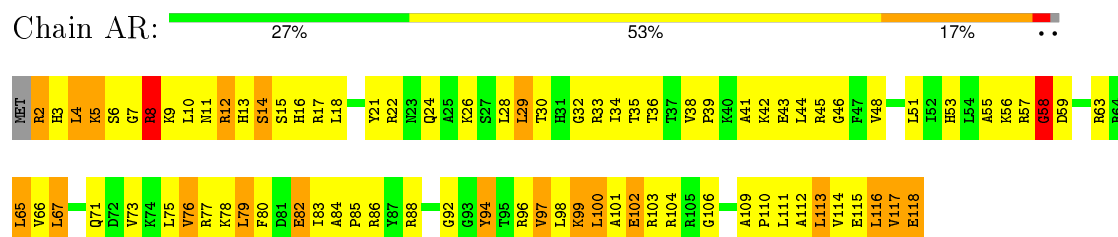
- Molecule 37: 50S ribosomal protein L16



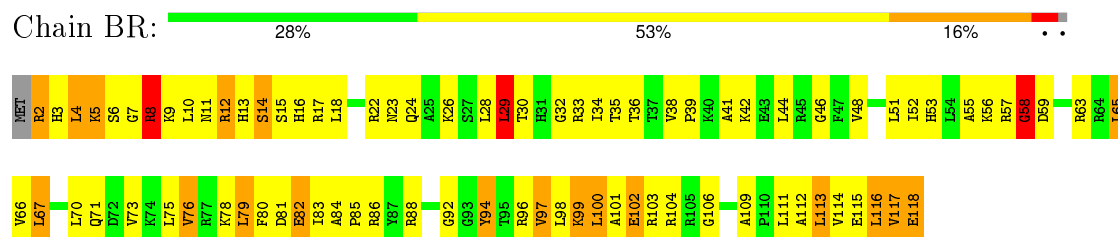
- Molecule 37: 50S ribosomal protein L16



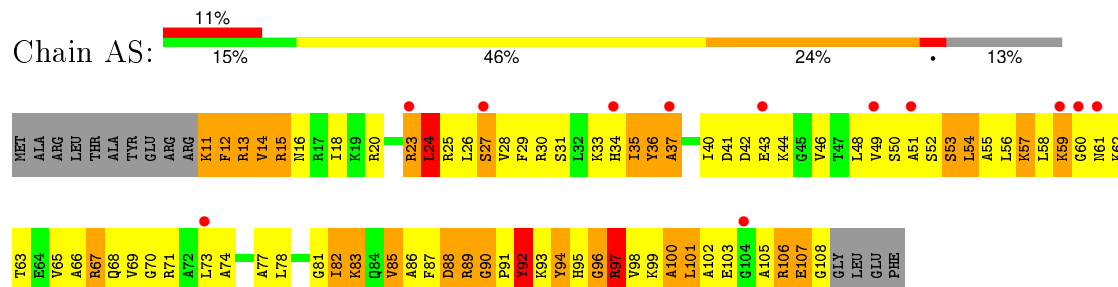
- Molecule 38: 50S ribosomal protein L17



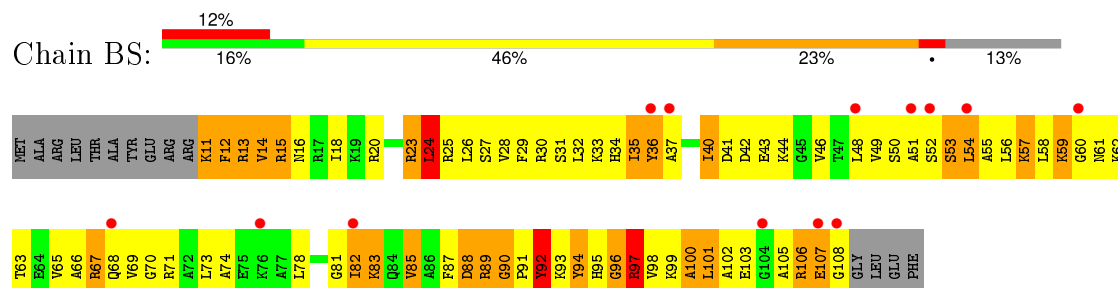
- Molecule 38: 50S ribosomal protein L17



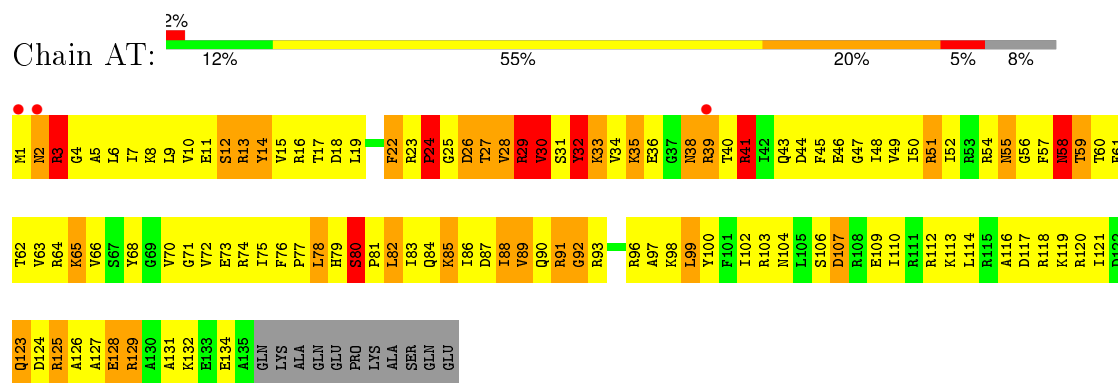
- Molecule 39: 50S ribosomal protein L18



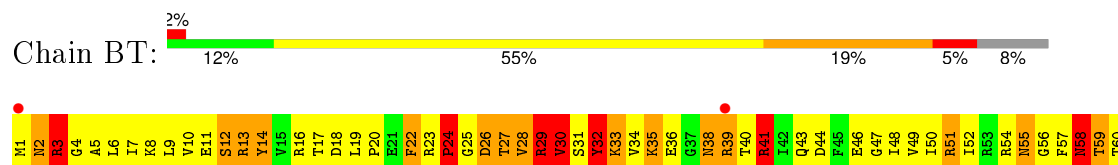
- Molecule 39: 50S ribosomal protein L18

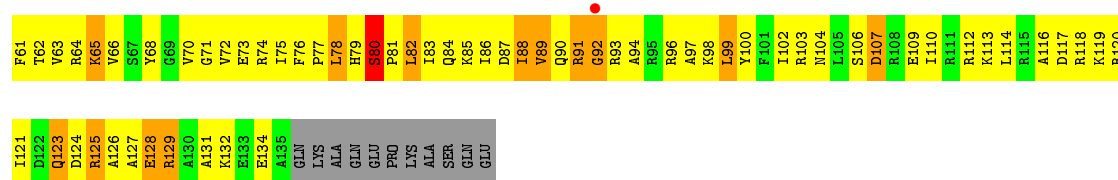


- Molecule 40: 50S ribosomal protein L19

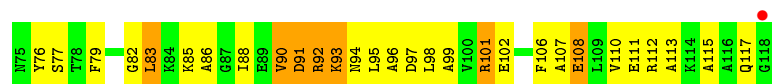


- Molecule 40: 50S ribosomal protein L19

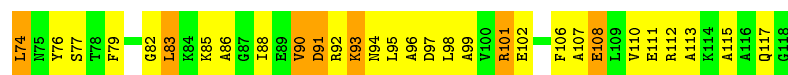
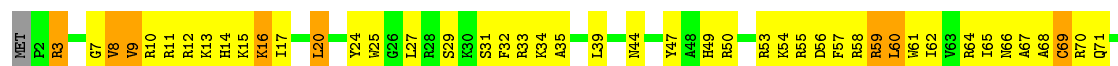




- Molecule 41: 50S ribosomal protein L20



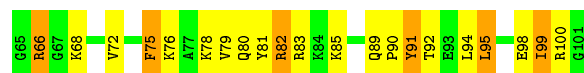
- Molecule 41: 50S ribosomal protein L20



- Molecule 42: 50S ribosomal protein L21

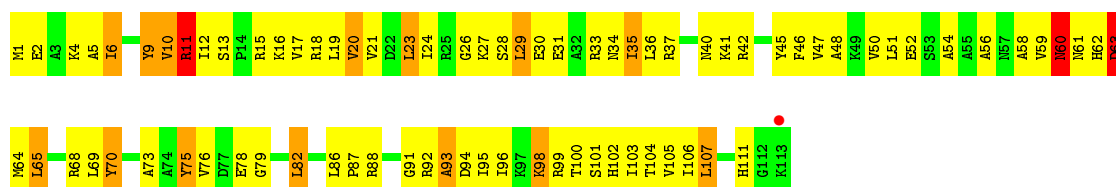


- Molecule 42: 50S ribosomal protein L21

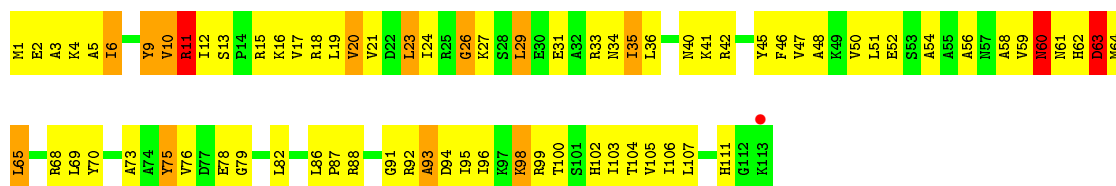


- Molecule 43: 50S ribosomal protein L22





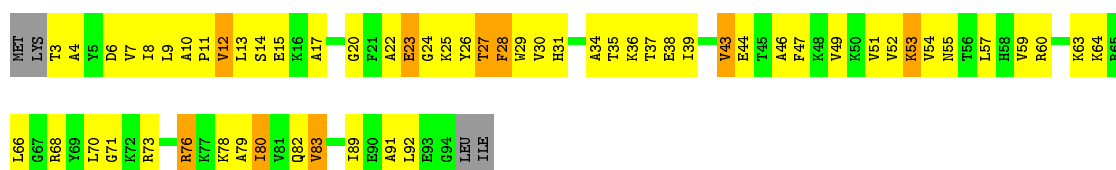
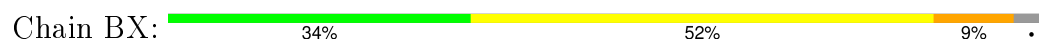
• Molecule 43: 50S ribosomal protein L22



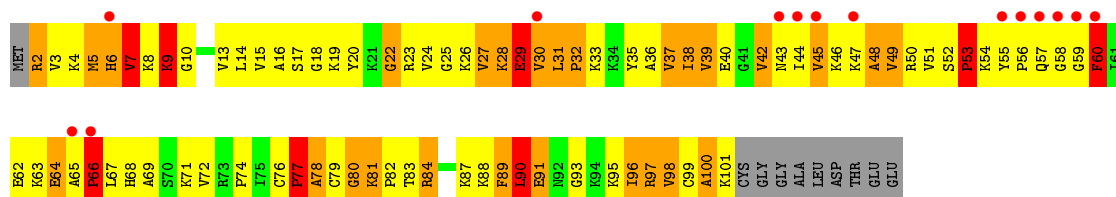
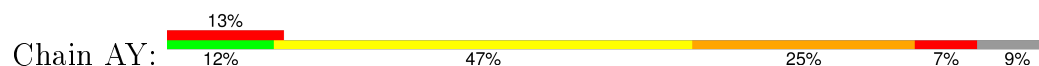
• Molecule 44: 50S ribosomal protein L23



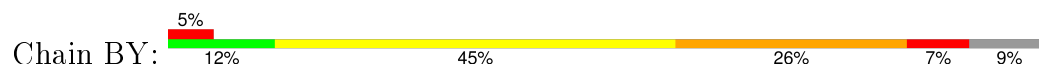
• Molecule 44: 50S ribosomal protein L23



• Molecule 45: 50S ribosomal protein L24

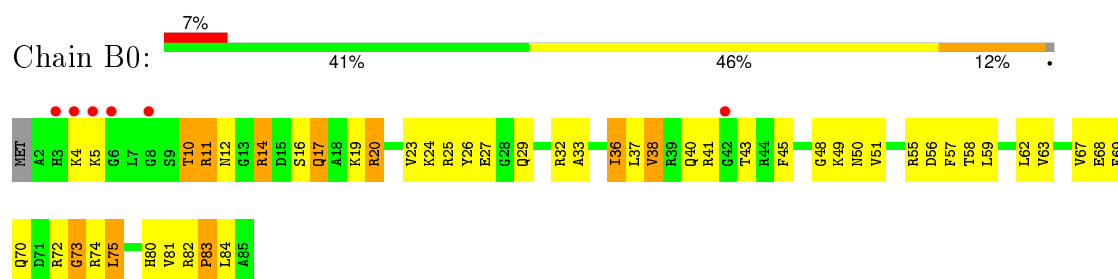


• Molecule 45: 50S ribosomal protein L24

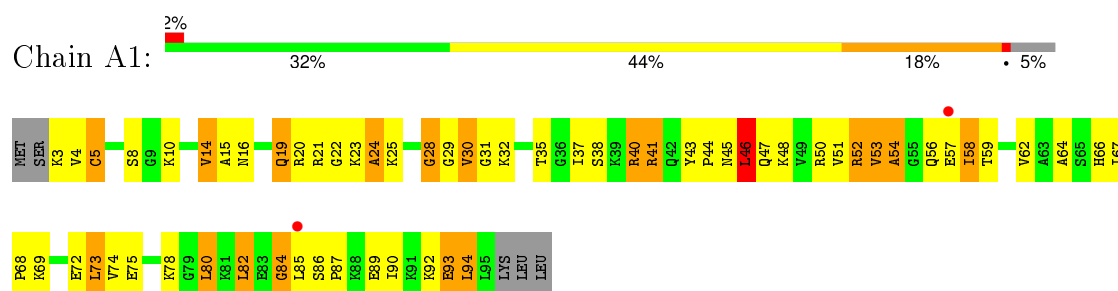




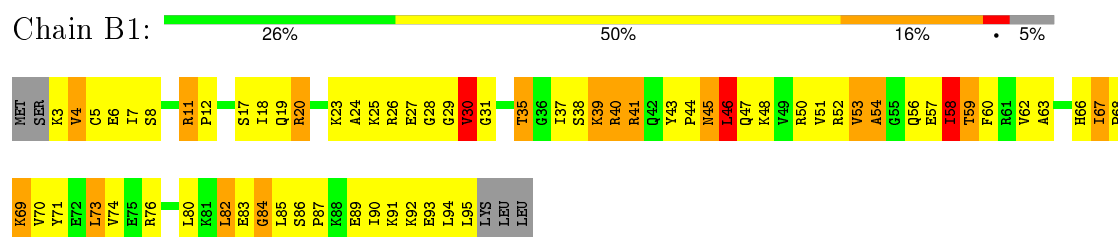




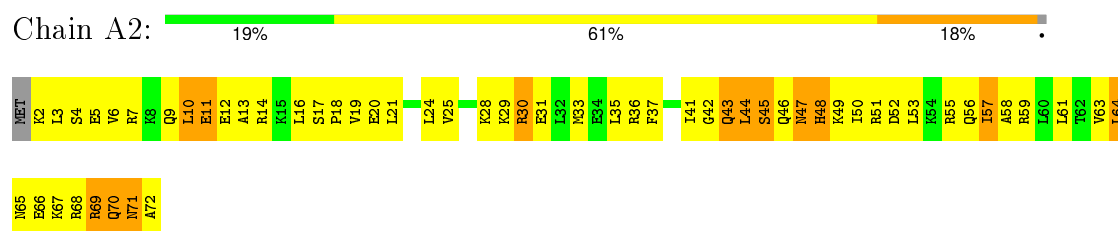
- Molecule 48: 50S ribosomal protein L28



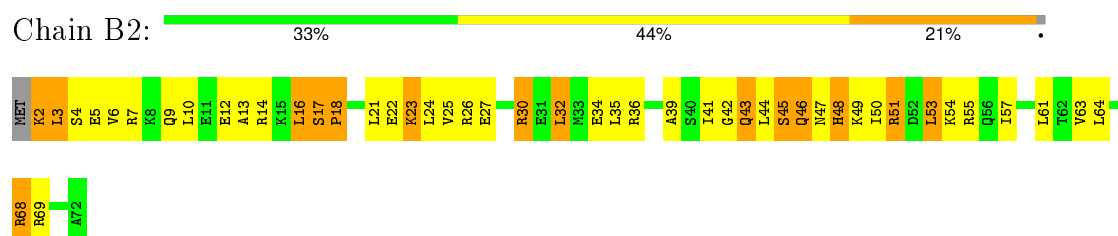
- Molecule 48: 50S ribosomal protein L28



- Molecule 49: 50S ribosomal protein L29



- Molecule 49: 50S ribosomal protein L29



- Molecule 50: 50S ribosomal protein L30

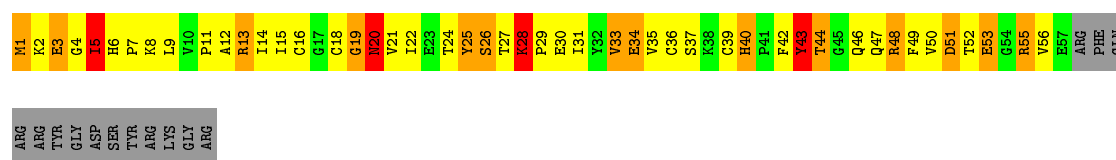




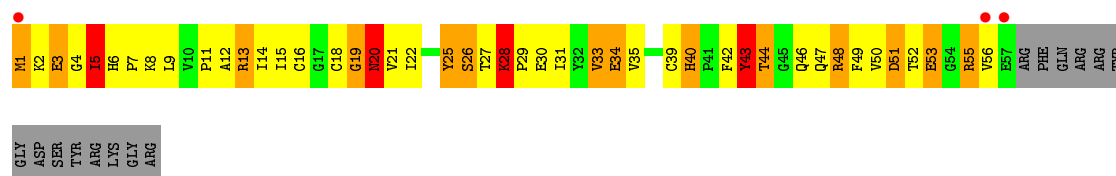
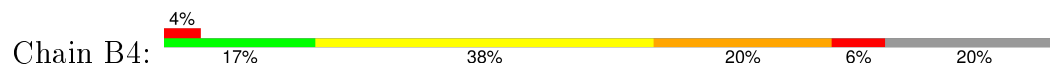
- Molecule 50: 50S ribosomal protein L30



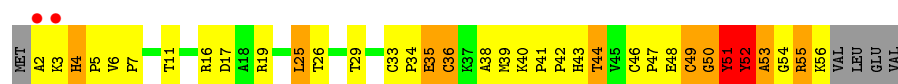
- Molecule 51: 50S ribosomal protein L31



- Molecule 51: 50S ribosomal protein L31



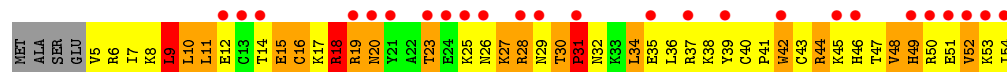
- Molecule 52: 50S ribosomal protein L32



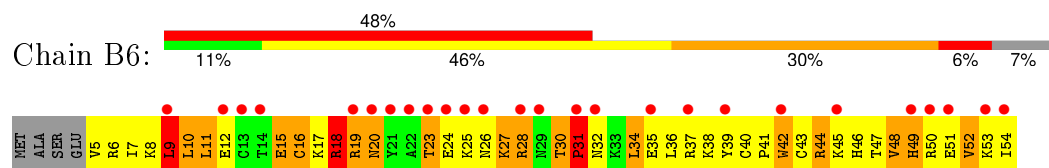
- Molecule 52: 50S ribosomal protein L32



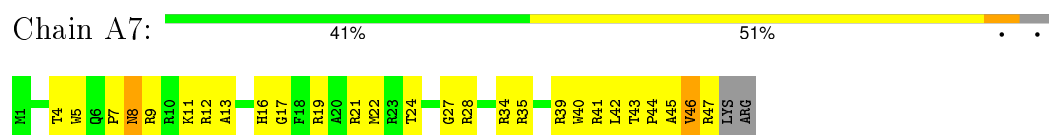
- Molecule 53: 50S ribosomal protein L33



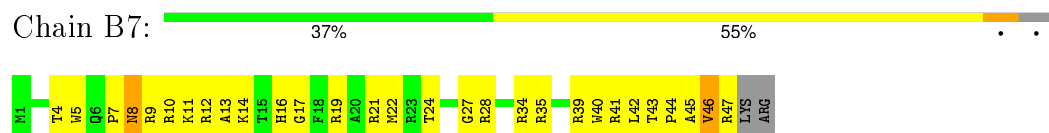
- Molecule 53: 50S ribosomal protein L33



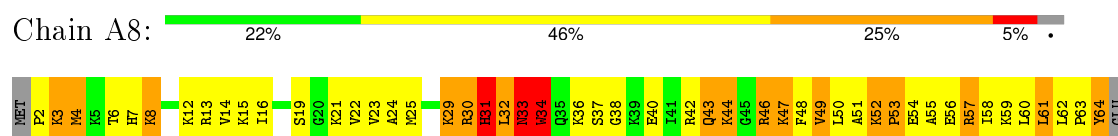
- Molecule 54: 50S ribosomal protein L34



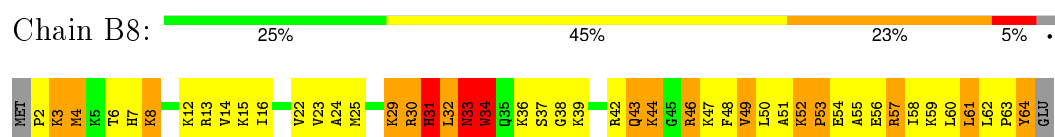
- Molecule 54: 50S ribosomal protein L34



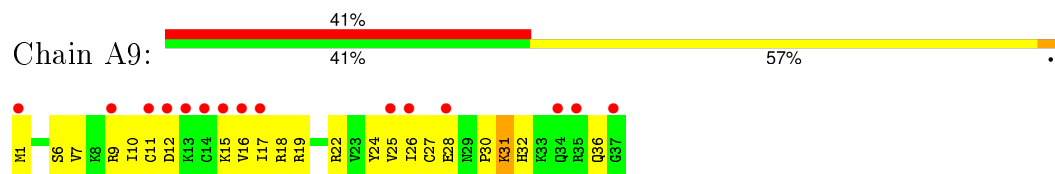
- Molecule 55: 50S ribosomal protein L35



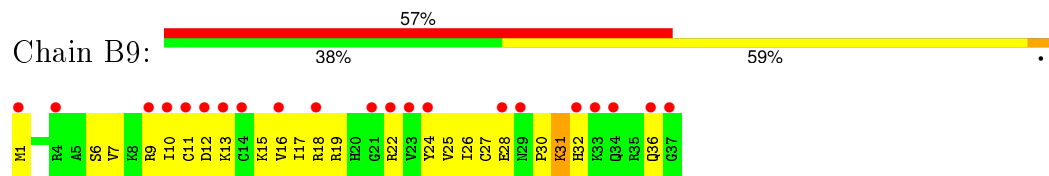
- Molecule 55: 50S ribosomal protein L35



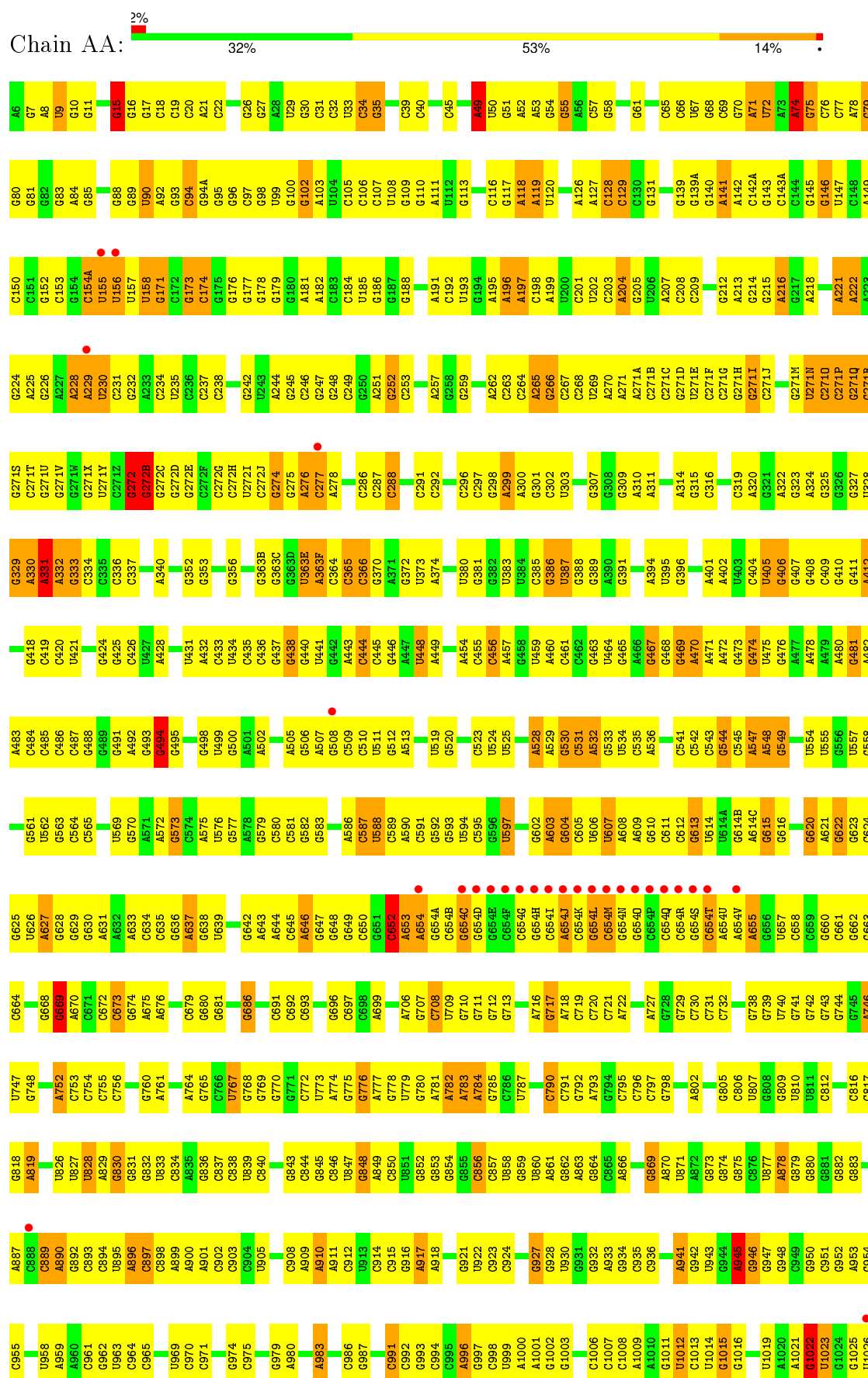
- Molecule 56: 50S ribosomal protein L36



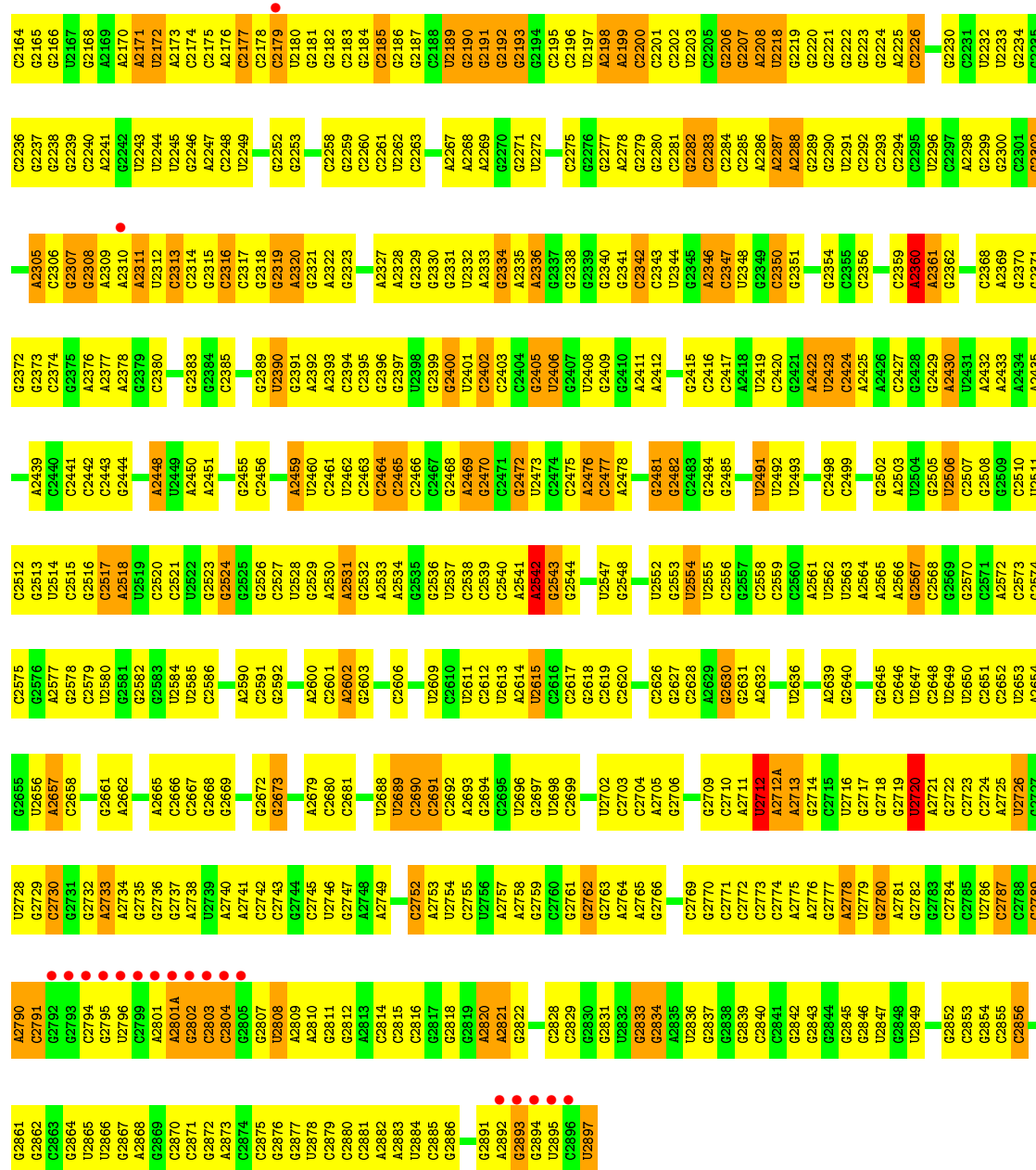
- Molecule 56: 50S ribosomal protein L36



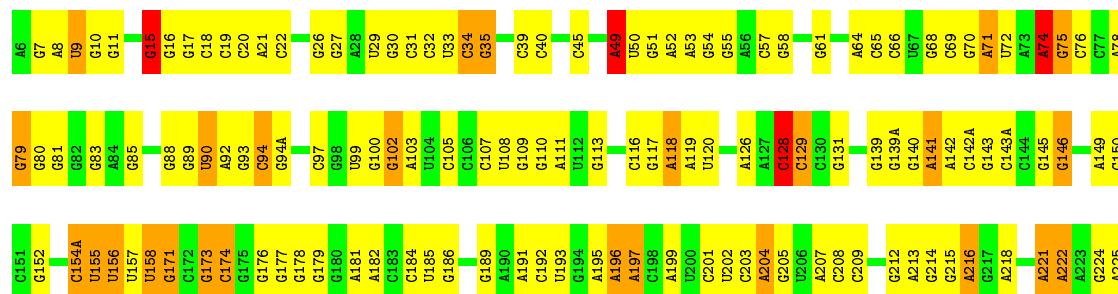
- Molecule 57: RNA (2848-MER)



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U2102	U2034	G1964	A1890	G1811	U1720	G1650	G1573	C1501	A1434	G1364	C1293	C1221	G1151	A1028
C2103	G2035	G1965	G1891	A1812	G1721	G1651	C1574	C1502	G1435	A1365	U1294	C1221	C1152	U1033
G2104	C2036	A1966	C1892	G1813	A1722	A1652	C1577	U1503	G1436	G1366	C1297	C1222	C1153	G1037
G2105	C2039	G1968	C1893	G1814	U1739	G1653	U1578	C1504	C1437	A1367	U1300	G1227	A1155	C1038
C2107	C2040	A1969	C1894	G1815	G1740	A1654	A1579	C1505	A1439	G1368	A1301	G1228	A1156	C1039
C2108	U2041	A1970	U1899	G1816	A1741	C1657	A1580	G1506	G1440	G1369	A1301	G1228	G1157	C1040
U2109	A2042	A1971	A1900	G1817	G1742	C1658	G1581	C1509	G1441	A1373	C1305	G1231	G1158	C1041
G2110	C2043	A1972	A1901	U1818	C1743	C1658	G1581	C1509	G1442	G1374	C1306	G1232	U1159	
G2111		G1973	G1902	A1819	G1747A	C1662	A1582	C1509	G1443	G1374	A1307	G1233	U1159	
G2112	G2046	C1979	G1903	G1820	G1748	C1663	A1583	C1509	G1444	A1378	A1308	G1234	G1160	A1045
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G2115	G2063	G1982	G1906	G1824	C1751	G1666	A1588	C1516	C1446	A1379	G1310	U1240	G1163	A1048
G2116	A2064	A1983	G1907	G1825	C1751	G1667	C1589	C1517	G1447	A1379	G1311	A1241	U1165	A1049
A2117	C2055	G1984	C1908	G1826	C1754	G1668	U1590	U1517	A1448	G1385	U1312	A1242	C1166	A1050
G2118	G2056	G1985	C1909	G1827	A1755	A1669	G1591	U1518	A1449	G1386	U1313	G1243	U1167	G1051
A2119		G1986	G1910	G1828	G1756	C1670	C1592	G1519	A1450	C1387	C1314	G1244	G1168	C1052
G2120	A2059	A1987	U1911	A1829	U1757	C1670	G1593	G1520	C1450A	G1388	C1315	G1245	G1169	C1053
G2121	A2060	G1987	A1912	C1830	U1758	U1673	G1594	U1523	C1451	G1389	U1316	A1246	G1170	A1106
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G2130	G2069	C1996	U1923	G1845	G1772	G1682	C1604	G1534	G1465	G1400	U1329		C1180	G1115
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G2133	G2072	C1999	U1926	A1847	U1775	C1685	C1607	C1536	C1468	C1403	G1332	C1261	U1189	G1118
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A2135	U2074	A2001	G1929	G1848	U1777	G1687	A1609	G1538	G1470	C1404	C1336	G1265	U1175	G1120
G2136	U2075	G2002	G1930	A1853	U1778	U1688	A1610	G1539	A1471	U1405	A1336	A1265	G1190	G1123
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A2077	A2077	A1932	A1932	G1855	A1780	A1690	G1613	G1541	G1473	C1407	G1338	U1267	G1192	G1125
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	G2091	G2023	G1950	A1877	U1798	G1705	A1637	G1559	G1487	G1422	A1353	U1281	C1207	G1140
U2092	U2092	G2024	U1951	G1878	G1799	U1706	C1638	G1559	G1488	G1423	A1354	U1282	C1208	U1141
G2155	G2093	C2025	A1952	C1881	C1800	U1709	U1639	G1563	U1489	G1424	G1356	U1284	C1209	G1142
G2156	C2094	C2026	G1955	A1882	G1801	G1710	C1640	C1564	A1490	G1425	G1356	A1284	A1210	A1142A
G2157	G2095	G2027	U1956	G1883	A1802	C1711	A1641	C1564	G1491	A1427	U1357	G1285	A1211	G1143
A2158	U2096	U1957	U1957	A1884	A1803	C1712	G1642	G1493	G1493	C1428	G1358	G1286	G1212	A1144
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U2098	U2098	A2030	C1958	C1886	U1808	U1714	G1647	A1569	C1493	U1430	A1360	U1288	G1216	C1146
G2162	U2099	A2031	C1958	C1887	U1808	G1714	G1647	A1570	A1495	U1431	G1361	U1288	G1216	C1147
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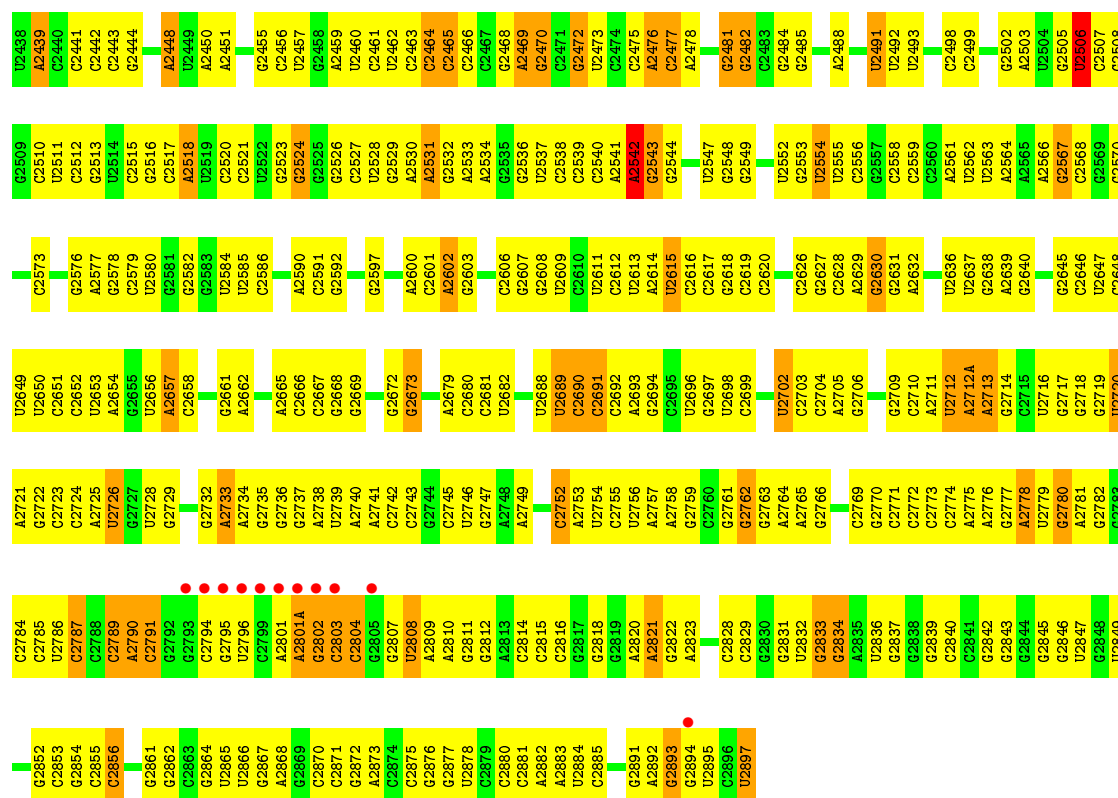
● Molecule 57: RNA (2848-MER)



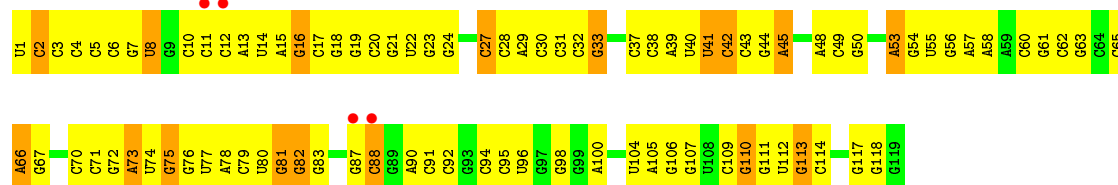
A1286	G1212	G1144	A1020	C949	A878	C816	U747	G666	A627	G561	A483	G418	A330	G271U	G226
A1287	G1215	C1145	A1021	G950	G879	C817	G743	U667	U628	U562	C494	C419	A331	G271V	A227
U1288	G1216	C1146	U1022	G951	G880	G819	A751	G668	G629	G563	C485	C420	A332	G271W	A228
G1291	G1217	C1147	U1023	G952	G881	A819	A752	G669	G630	C486	C486	C564	G333	G271X	A229
U1292	C1218	G1150	G1025	G954	G882	A820	G753	A670	A631	C487	C488	U421	C334	U271Y	U230
C1293	G1219	G1151	G1026	C955	G883	A821	C754	C672	A632	U569	C489	G424	C335	G271Z	C231
U1294	C1221	G1152	A1027	U958	A887	U822	C755	C673	A633	G570	C491	G425	C336	G272	G232
C1297	C1222	G1153	A1028	A894	C888	G823	C756	C674	C634	A571	A492	G426	C337	G272B	A233
U1300	G1227	A1155	G1037	A960	A890	C825	G760	A675	A636	A572	C493	U427	A340	G272C	C234
A1301	G1231	G1156	U1038	C961	G892	U827	A761	A676	A637	G573	C494	U428	G352	G272D	U235
C1305	G1232	G1157	G1039	G962	C893	C826	C765	G677	U638	C574	C498	U431	G353	G272E	C237
A1307	C1233	G1158	C1040	U963	C894	U828	G766	G680	U639	U576	U499	A432	G356	G272F	C238
A1308	U1234	A1159	C1041	C965	U895	A829	U767	G681	G642	A578	G500	C433	G357	G272G	G242
G1309	G1240	G1160	A1045	U969	C897	G830	G768	G686	A643	A579	A505	U434	G363A	G272H	U243
G1310	A1241	G1161	G1046	C970	A899	G832	G769	A644	A645	C580	C506	C435	G363B	G274	A244
G1311	G1242	U1164	A1048	C971	A900	U833	G770	G691	A646	C581	A507	C436	G363C	G275	G245
U1312	G1243	G1165	G1049	A901	A895	G834	G771	C692	G647	G582	G508	G437	G363D	A276	C246
G1313	G1244	U1167	A1050	C974	C902	C837	C772	C693	U648	G583	C509	G438	G363E	G277	G247
U1314	G1245	G1168	G1051	C975	C903	C838	A774	G696	G649	U511	C510	U441	A363F	G278	C248
C1315	G1246	G1169	G1052	G979	C904	U839	G775	A699	G651	A586	G512	G442	C364	G279	C249
U1316	A1247	G1170	G1053	A980	U905	C840	G776	A699	G652	C587	C588	A443	C365	A251	A251
A1317	G1248	G1171	A1106	A983	C908	G843	A777	A706	A653	U588	C589	A444	C366	G280	G252
C1318	U1249	G1172	G1107	A983	A909	C844	G778	G707	A654	C590	C591	G446	A371	G281	A257
G1319	G1250	A1174	U1108	A983	C909	G845	U779	G708	G654A	A591	G520	U447	G372	G282	G258
C1320	C1251	U1175	G1109	C986	A910	G846	A781	U709	G654B	C592	C593	U448	A373	U293	G259
A1321	G1252	G1176	G1110	G987	C912	U847	A782	G710	G654C	C593	C594	A449	A374	G296	C296
A1322	U1253	G1177	G1111	C987	U913	G848	A783	G711	G654D	C595	C596	G450	G370	C297	A262
U1323	G1256	A1178	G1112	C991	C914	A849	A784	G712	G654E	U596	G597	A454	G381	G298	C263
C1326	G1257	G1179	G1113	C992	C915	C850	G785	G713	G654F	U597	A528	C455	G382	G299	C263
G1327	U1258	C1180	G1114	G993	G916	U851	U786	G713	G654H	A529	A530	C456	U383	A300	C264
G1328	C1261	G1183	G1115	C994	A917	G852	U787	A716	G654I	G602	G530	A457	U384	G301	A265
A1331	A1262	G1187	G1116	A996	G921	G853	A788	G717	C654J	A603	C531	G458	C365	A457	G267
G1332	U1263	U1188	C1118	A996	U922	G854	A789	A718	C654K	G604	A532	U459	C386	G302	C268
C1333	G1264	G1189	G1119	C997	C923	G855	C790	C719	G654L	G605	G533	A460	U387	U303	U269
U1336	A1265	A1189	G1120	C998	C924	C856	C791	C720	G654M	U606	U534	C461	G388	A270	A271
A1337	G1266	G1190	G1121	U999	C924	C857	G792	C721	G654N	U607	C535	C462	G389	G307	G271A
G1337	U1267	G1191	C1123	A1000	G927	U858	A793	A722	G654O	A608	A536	G463	A390	G309	C271B
A1338	A1268	G1192	G1124	A1001	G928	U859	G794	A727	C654P	A609	U464	U464	G391	A310	C271C
G1339	C1269	G1193	G1125	G1002	G928	U860	C795	G728	G654Q	G610	C466	G465	A394	A311	G271D
U1341	G1270	A1194	A1129	C1003	U930	A861	C796	G729	G654R	C611	C541	G474	U395	A314	U271E
U1342	A1271	G1195	U1130	C1004	G931	G862	C797	C730	G654S	C612	C542	U475	G396	G315	C271F
G1344	U1273	U1199	U1131	C1005	G932	G863	G798	C731	G654T	G613	C543	G469	G316	G316	C271G
C1345	A1274	G1200	G1132	C1006	A933	G864	A802	C732	A654U	U614	C544	A470	A401	G317	G271H
G1346	G1275	C1201	U1133	C1007	G934	C865	U803	G733	G654V	U614A	C545	A471	A402	G318	G271I
A1347	A1278	A1204	G1136	A1009	C936	A866	A804	G738	G655	G614B	A547	A472	U403	C319	G271J
G1348	G1279	U1205	G1137	A1010	A941	G869	G805	G739	U657	G615	C548	G473	G320	G320	G271K
A1349	C1280	G1206	U1012	U1011	G942	U871	C806	G740	C658	G620	U554	G474	U405	A322	U271L
G1352	G1281	G1207	C1013	U1012	U943	U872	U807	U740	C659	A621	U555	U475	G406	G323	C271M
U1353	U1282	C1208	U1014	G1015	G944	G873	G809	G742	G660	G622	G556	A478	G407	A324	C271N
A1354	G1283	G1209	U1141	G1016	A945	G874	U810	G743	G662	G623	U557	A479	G408	G325	C271O
G1355	A1284	A1210	U1142	G1016	G946	G875	U811	G744	G663	G624	G558	A480	G409	G327	G271P
	G1285	U1211	A1143	U1019	G948	U877	C812	A746	C664	C625	G559	G481	G410	U328	G271Q
															G271R
															G271T



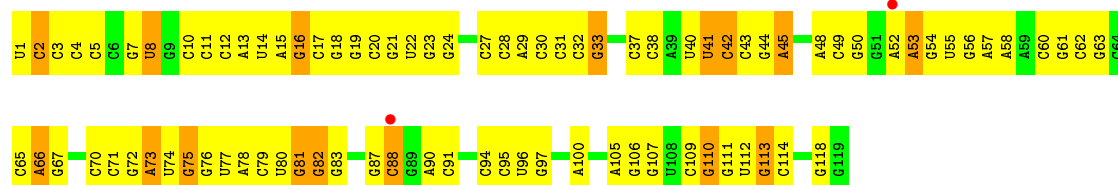




• Molecule 58: RNA (119-MER)



• Molecule 58: RNA (119-MER)



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	211.23Å 451.43Å 623.34Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.63 – 3.60 49.63 – 3.60	Depositor EDS
% Data completeness (in resolution range)	100.0 (49.63-3.60) 99.8 (49.63-3.60)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	0.23	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.28 (at 3.57Å)	Xtriage
Refinement program	CNS1.2	Depositor
R, $R_{free}$	0.215 , 0.245 0.221 , 0.253	Depositor DCC
$R_{free}$ test set	30861 reflections (4.75%)	DCC
Wilson B-factor (Å <sup>2</sup> )	103.4	Xtriage
Anisotropy	0.072	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.27 , 102.7	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.43$ , $\langle L^2 \rangle = 0.25$	Xtriage
Outliers	0 of 680802 reflections	Xtriage
$F_o, F_c$ correlation	0.92	EDS
Total number of atoms	297230	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	109.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.48% 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, 0.375 respectively for untwinned datasets, and 0.333, 0.2 for perfectly twinned datasets.

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: 5MU, ZN, MG, CCC

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	Ab	0.33	0/1935	0.61	0/2609
1	Bb	0.33	0/1935	0.62	0/2609
2	Ac	0.31	0/1636	0.58	0/2205
2	Bc	0.32	0/1636	0.58	0/2205
3	Ad	0.37	0/1733	0.65	1/2318 (0.0%)
3	Bd	0.36	0/1733	0.64	1/2318 (0.0%)
4	Ae	0.35	0/1162	0.64	0/1564
4	Be	0.37	0/1162	0.65	0/1564
5	Af	0.34	0/856	0.64	0/1154
5	Bf	0.37	0/856	0.65	0/1154
6	Ag	0.32	0/1276	0.57	0/1709
6	Bg	0.32	0/1276	0.57	0/1709
7	Ah	0.35	0/1136	0.64	0/1527
7	Bh	0.35	0/1136	0.64	0/1527
8	Ai	0.33	0/1029	0.57	0/1379
8	Bi	0.33	0/1029	0.57	0/1379
9	Aj	0.33	0/807	0.62	0/1085
9	Bj	0.33	0/807	0.62	0/1085
10	Ak	0.36	0/900	0.64	0/1213
10	Bk	0.36	0/900	0.64	0/1213
11	Al	0.40	0/986	0.72	1/1320 (0.1%)
11	Bl	0.41	0/986	0.72	1/1320 (0.1%)
12	Am	0.30	0/947	0.56	0/1270
12	Bm	0.30	0/947	0.61	0/1270
13	An	0.35	0/501	0.56	0/664
13	Bn	0.36	0/501	0.57	0/664
14	Ao	0.33	0/745	0.59	0/992
14	Bo	0.35	0/745	0.60	0/992
15	Ap	0.34	0/716	0.62	0/963
15	Bp	0.32	0/716	0.62	0/963
16	Aq	0.38	0/836	0.67	0/1117
16	Bq	0.36	0/836	0.66	0/1117

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	Ar	0.36	0/579	0.66	0/768
17	Br	0.36	0/579	0.67	0/768
18	As	0.36	0/642	0.63	0/865
18	Bs	0.35	0/642	0.64	0/865
19	At	0.34	0/765	0.63	0/1007
19	Bt	0.34	0/765	0.63	0/1007
20	Au	0.42	0/212	0.59	0/277
20	Bu	0.40	0/212	0.59	0/277
21	Ay	0.35	0/793	0.59	0/1059
21	By	0.35	0/793	0.68	0/1059
22	Aa	0.41	0/36190	0.69	13/56486 (0.0%)
22	Ba	0.42	0/36190	0.70	11/56486 (0.0%)
23	Ax	0.43	0/289	0.73	0/449
23	Bx	0.43	0/289	0.73	0/449
24	Av	0.43	0/1810	0.70	0/2821
24	Bv	0.46	0/1810	0.72	0/2821
25	Aw	0.36	0/1832	0.70	0/2855
25	Bw	0.36	0/1832	0.71	0/2855
26	AC	0.32	0/956	0.56	0/1288
26	BC	0.30	0/956	0.56	0/1288
27	AD	0.46	0/2154	0.81	1/2905 (0.0%)
27	BD	0.48	0/2154	0.82	1/2905 (0.0%)
28	AE	0.45	0/1596	0.80	1/2153 (0.0%)
28	BE	0.47	0/1596	0.79	1/2153 (0.0%)
29	AF	0.41	0/1658	0.72	0/2244
29	BF	0.43	0/1658	0.73	0/2244
30	AG	0.37	0/1499	0.73	1/2016 (0.0%)
30	BG	0.39	0/1499	0.73	0/2016
31	AH	0.39	0/1284	0.75	1/1739 (0.1%)
31	BH	0.44	0/1284	0.78	1/1739 (0.1%)
32	AI	0.40	0/1146	0.92	4/1551 (0.3%)
32	BI	0.39	0/1146	0.91	4/1551 (0.3%)
33	AJ	0.36	0/640	0.77	7/889 (0.8%)
33	BJ	0.39	0/640	0.88	6/889 (0.7%)
34	AN	0.39	0/1131	0.74	1/1525 (0.1%)
34	BN	0.43	0/1131	0.75	1/1525 (0.1%)
35	AO	0.45	0/943	0.71	0/1269
35	BO	0.45	0/943	0.71	0/1269
36	AP	0.46	0/1131	1.00	6/1504 (0.4%)
36	BP	0.52	0/1131	1.03	6/1504 (0.4%)
37	AQ	0.40	0/1133	0.65	0/1515
37	BQ	0.40	0/1133	0.66	0/1515
38	AR	0.43	0/974	0.79	1/1302 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
38	BR	0.46	0/974	0.79	1/1302 (0.1%)
39	AS	0.37	0/778	0.71	0/1036
39	BS	0.39	0/778	0.72	0/1036
40	AT	0.47	0/1137	0.89	4/1519 (0.3%)
40	BT	0.47	0/1137	0.89	4/1519 (0.3%)
41	AU	0.45	1/975 (0.1%)	0.71	0/1297
41	BU	0.49	0/975	0.73	0/1297
42	AV	0.40	0/790	0.77	0/1057
42	BV	0.42	0/790	0.78	0/1057
43	AW	0.45	0/907	0.75	1/1216 (0.1%)
43	BW	0.47	0/907	0.76	1/1216 (0.1%)
44	AX	0.43	0/739	0.69	0/993
44	BX	0.47	0/739	0.72	0/993
45	AY	0.43	0/788	0.76	1/1051 (0.1%)
45	BY	0.48	0/788	0.78	1/1051 (0.1%)
46	AZ	0.36	0/1499	0.68	0/2035
46	BZ	0.37	0/1499	0.72	0/2035
47	A0	0.39	0/671	0.65	0/892
47	B0	0.42	0/671	0.67	0/892
48	A1	0.39	0/738	0.76	1/981 (0.1%)
48	B1	0.46	0/738	0.80	1/981 (0.1%)
49	A2	0.34	0/600	0.63	0/793
49	B2	0.44	0/600	0.75	0/793
50	A3	0.36	0/472	0.66	0/634
50	B3	0.41	0/472	0.67	0/634
51	A4	0.36	0/460	0.70	1/621 (0.2%)
51	B4	0.40	0/460	0.70	1/621 (0.2%)
52	A5	0.48	0/441	0.81	0/596
52	B5	0.50	0/441	0.83	0/596
53	A6	0.43	0/440	0.81	0/586
53	B6	0.46	0/440	0.81	0/586
54	A7	0.41	0/417	0.65	0/550
54	B7	0.46	0/417	0.68	0/550
55	A8	0.52	0/515	0.90	0/679
55	B8	0.53	0/515	0.92	0/679
56	A9	0.34	0/310	0.60	0/407
56	B9	0.38	0/310	0.62	0/407
57	AA	0.50	1/68704 (0.0%)	0.74	40/107260 (0.0%)
57	BA	0.55	2/68704 (0.0%)	0.74	48/107260 (0.0%)
58	AB	0.41	0/2853	0.70	0/4451
58	BB	0.44	0/2853	0.71	0/4451
All	All	0.46	4/321584 (0.0%)	0.72	176/480460 (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
21	Ay	0	1
22	Aa	0	8
22	Ba	1	11
24	Av	0	1
24	Bv	0	1
34	AN	0	1
34	BN	0	1
43	AW	0	1
43	BW	0	1
52	A5	0	1
52	B5	0	1
57	AA	3	48
57	BA	3	49
All	All	7	125

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BA	2506	U	N1-C2	5.94	1.43	1.38
57	BA	783	A	C5-C6	-5.52	1.36	1.41
41	AU	58	ARG	CG-CD	5.12	1.64	1.51
57	AA	783	A	C5-C6	-5.07	1.36	1.41

All (176) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	AI	50	ARG	NE-CZ-NH1	-13.91	113.34	120.30
32	BI	50	ARG	NE-CZ-NH1	13.44	127.02	120.30
32	BI	50	ARG	NE-CZ-NH2	-13.41	113.60	120.30
32	AI	50	ARG	NE-CZ-NH2	13.03	126.81	120.30
57	BA	790	C	C2'-C3'-O3'	10.57	132.76	109.50
22	Ba	1498	U	C2'-C3'-O3'	10.51	132.61	109.50
57	AA	790	C	C2'-C3'-O3'	9.99	131.47	109.50
57	AA	1992	G	C2'-C3'-O3'	9.95	131.40	109.50
57	BA	1992	G	C2'-C3'-O3'	9.88	131.24	109.50
57	AA	2360	A	N9-C1'-C2'	-9.75	101.27	112.00
36	AP	52	GLU	N-CA-C	9.61	136.94	111.00
36	BP	52	GLU	N-CA-C	9.55	136.80	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BA	1799	G	C2'-C3'-O3'	9.26	129.87	109.50
57	BA	2360	A	N9-C1'-C2'	-9.26	101.82	112.00
57	BA	1820	U	C2'-C3'-O3'	8.97	129.24	109.50
57	AA	1799	G	C2'-C3'-O3'	8.95	129.20	109.50
57	BA	1819	A	C2'-C3'-O3'	8.94	129.16	109.50
57	BA	1653	G	C2'-C3'-O3'	8.78	128.81	109.50
57	AA	1820	U	C2'-C3'-O3'	8.77	128.79	109.50
57	BA	331	A	C2'-C3'-O3'	8.76	128.76	109.50
57	BA	1022	G	C2'-C3'-O3'	8.64	128.52	109.50
57	AA	331	A	C2'-C3'-O3'	8.60	128.42	109.50
57	AA	1819	A	C2'-C3'-O3'	8.53	128.25	109.50
22	Aa	575	G	C2'-C3'-O3'	8.47	128.13	109.50
57	AA	1653	G	C2'-C3'-O3'	8.46	128.11	109.50
22	Ba	575	G	C2'-C3'-O3'	8.41	128.01	109.50
22	Aa	115	G	C2'-C3'-O3'	8.40	127.98	109.50
57	AA	49	A	C2'-C3'-O3'	8.31	127.79	109.50
57	AA	1022	G	C2'-C3'-O3'	8.24	127.64	109.50
57	BA	49	A	C2'-C3'-O3'	8.20	127.55	109.50
57	BA	752	A	C2'-C3'-O3'	8.19	127.51	109.50
57	BA	1786	A	N9-C1'-C2'	8.19	124.64	114.00
22	Ba	115	G	C2'-C3'-O3'	8.15	127.42	109.50
57	AA	752	A	C2'-C3'-O3'	8.07	127.25	109.50
22	Aa	366	C	C2'-C3'-O3'	8.03	127.17	109.50
22	Ba	366	C	C2'-C3'-O3'	7.96	127.00	109.50
57	AA	1652	A	C2'-C3'-O3'	7.86	126.79	109.50
57	AA	1786	A	N9-C1'-C2'	7.84	124.20	114.00
57	BA	1652	A	C2'-C3'-O3'	7.78	126.60	109.50
27	AD	210	GLY	N-CA-C	-7.50	94.34	113.10
27	BD	210	GLY	N-CA-C	-7.40	94.61	113.10
36	BP	58	THR	N-CA-C	-7.24	91.45	111.00
32	AI	50	ARG	CD-NE-CZ	7.17	133.64	123.60
36	AP	58	THR	N-CA-C	-7.17	91.64	111.00
57	BA	945	A	N9-C1'-C2'	7.10	123.22	114.00
57	AA	74	A	C2'-C3'-O3'	7.04	124.98	109.50
32	BI	50	ARG	CD-NE-CZ	7.03	133.44	123.60
22	Ba	60	A	C2'-C3'-O3'	7.01	124.93	109.50
22	Aa	60	A	C2'-C3'-O3'	7.00	124.91	109.50
31	AH	158	HIS	N-CA-C	6.90	129.64	111.00
57	AA	945	A	N9-C1'-C2'	6.89	122.96	114.00
36	BP	41	ARG	N-CA-C	-6.89	92.39	111.00
31	BH	158	HIS	N-CA-C	6.86	129.53	111.00
36	AP	41	ARG	N-CA-C	-6.69	92.94	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	AA	652	C	N1-C1'-C2'	-6.68	104.65	112.00
33	BJ	33	PRO	N-CA-CB	6.62	111.25	103.30
22	Aa	1498	U	N1-C1'-C2'	6.54	122.50	114.00
57	AA	1970	A	C5'-C4'-O4'	6.52	116.92	109.10
57	BA	1495	A	N9-C1'-C2'	6.48	122.43	114.00
57	BA	74	A	C2'-C3'-O3'	6.47	124.05	113.70
30	AG	54	GLU	N-CA-C	-6.45	93.58	111.00
57	BA	1493	C	N1-C1'-C2'	6.44	122.37	114.00
40	AT	59	THR	N-CA-C	-6.39	93.74	111.00
57	BA	652	C	N1-C1'-C2'	-6.39	104.97	112.00
38	BR	58	GLY	N-CA-C	6.34	128.95	113.10
36	BP	53	GLY	N-CA-C	-6.26	97.45	113.10
40	BT	59	THR	N-CA-C	-6.22	94.20	111.00
57	AA	1495	A	N9-C1'-C2'	6.19	122.05	114.00
38	AR	58	GLY	N-CA-C	6.18	128.55	113.10
36	AP	53	GLY	N-CA-C	-6.17	97.67	113.10
57	BA	1970	A	C5'-C4'-O4'	6.15	116.48	109.10
36	BP	54	GLY	N-CA-C	-6.13	97.78	113.10
22	Aa	913	A	C2'-C3'-O3'	6.09	123.44	113.70
36	AP	54	GLY	N-CA-C	-6.07	97.92	113.10
22	Ba	913	A	C2'-C3'-O3'	6.07	123.42	113.70
57	AA	1493	C	N1-C1'-C2'	6.07	121.89	114.00
22	Aa	1529	G	N9-C1'-C2'	6.07	121.89	114.00
57	AA	1970	A	C5'-C4'-C3'	5.99	125.59	116.00
57	BA	1970	A	C5'-C4'-C3'	5.96	125.54	116.00
48	A1	46	LEU	CA-CB-CG	5.89	128.85	115.30
40	BT	80	SER	N-CA-C	5.89	126.90	111.00
22	Ba	832	C	N1-C1'-C2'	-5.84	105.58	112.00
22	Aa	832	C	N1-C1'-C2'	-5.83	105.58	112.00
33	BJ	105	PRO	N-CA-CB	5.83	110.29	103.30
57	AA	1053	C	N1-C1'-C2'	5.81	121.56	114.00
57	BA	272(B)	G	C5'-C4'-C3'	5.79	125.26	116.00
40	AT	80	SER	N-CA-C	5.77	126.58	111.00
22	Aa	266	G	C2'-C3'-O3'	5.71	122.83	113.70
57	AA	272(B)	G	C5'-C4'-C3'	5.71	125.14	116.00
57	AA	272	G	C2'-C3'-O3'	5.71	122.83	113.70
48	B1	46	LEU	CA-CB-CG	5.69	128.39	115.30
57	BA	1053	C	N1-C1'-C2'	5.69	121.40	114.00
33	AJ	77	PRO	N-CA-CB	5.69	110.12	103.30
22	Ba	266	G	C2'-C3'-O3'	5.61	122.68	113.70
57	AA	15	G	N9-C1'-C2'	-5.61	105.83	112.00
22	Aa	1067	A	C2'-C3'-O3'	5.61	122.67	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BA	2346	A	O4'-C1'-N9	5.58	112.66	108.20
57	AA	2191	G	C2'-C3'-O3'	5.57	122.61	113.70
22	Aa	428	G	C2'-C3'-O3'	5.56	122.60	113.70
40	AT	30	VAL	N-CA-C	5.55	125.98	111.00
57	BA	272	G	C2'-C3'-O3'	5.54	122.57	113.70
33	BJ	77	PRO	N-CA-CB	5.54	109.94	103.30
57	BA	803	U	OP1-P-O3'	5.52	117.35	105.20
22	Ba	1067	A	C2'-C3'-O3'	5.51	122.52	113.70
22	Ba	428	G	C2'-C3'-O3'	5.50	122.50	113.70
33	AJ	105	PRO	N-CA-CB	5.50	109.90	103.30
33	AJ	69	PRO	N-CA-CB	5.48	109.88	103.30
33	AJ	86	PRO	N-CA-CB	5.47	109.87	103.30
57	AA	669	G	N9-C1'-C2'	5.46	121.10	114.00
57	AA	494	G	C5'-C4'-C3'	-5.46	107.27	116.00
33	AJ	129	PRO	N-CA-CB	5.44	109.83	103.30
57	AA	1653	G	C5'-C4'-O4'	5.44	115.63	109.10
22	Ba	509	A	C2'-C3'-O3'	5.44	122.41	113.70
57	BA	272(B)	G	N9-C1'-C2'	-5.42	106.03	112.00
57	BA	2191	G	C2'-C3'-O3'	5.42	122.37	113.70
40	BT	30	VAL	N-CA-C	5.42	125.62	111.00
32	BI	67	ARG	N-CA-C	-5.41	96.40	111.00
43	AW	98	LYS	N-CA-C	-5.39	96.45	111.00
32	AI	67	ARG	N-CA-C	-5.38	96.47	111.00
57	AA	1819	A	C4'-C3'-O3'	5.37	123.75	113.00
57	BA	265	A	N9-C1'-C2'	5.37	120.98	114.00
57	BA	1294	U	C5'-C4'-C3'	-5.37	107.41	116.00
57	AA	1365	A	C5'-C4'-C3'	5.37	124.59	116.00
57	BA	587	C	OP2-P-O3'	5.37	117.01	105.20
57	AA	2346	A	O4'-C1'-N9	5.35	112.48	108.20
57	BA	1987	G	C5'-C4'-C3'	-5.33	107.48	116.00
33	AJ	101	PRO	N-CA-CB	5.32	109.69	103.30
57	BA	310	A	C5'-C4'-C3'	-5.32	107.49	116.00
57	BA	1427	A	C2'-C3'-O3'	5.32	122.21	113.70
40	BT	29	ARG	N-CA-C	5.31	125.34	111.00
11	Al	119	LYS	N-CA-C	-5.31	96.67	111.00
57	AA	265	A	N9-C1'-C2'	5.29	120.88	114.00
3	Bd	109	GLY	N-CA-C	5.29	126.32	113.10
33	BJ	69	PRO	N-CA-CB	5.29	109.64	103.30
57	BA	676	A	O4'-C1'-N9	5.29	112.43	108.20
33	BJ	101	PRO	N-CA-CB	5.28	109.64	103.30
57	BA	783	A	N9-C1'-C2'	-5.28	106.19	112.00
57	BA	1365	A	C5'-C4'-C3'	5.27	124.44	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	AA	1294	U	C5'-C4'-C3'	-5.26	107.58	116.00
57	BA	494	G	C5'-C4'-C3'	-5.25	107.60	116.00
22	Aa	115	G	C4'-C3'-C2'	5.25	107.85	102.60
57	AA	1443	G	C5'-C4'-C3'	-5.25	107.61	116.00
43	BW	98	LYS	N-CA-C	-5.24	96.86	111.00
40	AT	29	ARG	N-CA-C	5.20	125.04	111.00
57	AA	272(B)	G	N9-C1'-C2'	-5.20	106.28	112.00
51	A4	43	TYR	N-CA-C	5.18	125.00	111.00
57	BA	748	G	N9-C1'-C2'	5.18	120.74	114.00
45	BY	7	VAL	N-CA-C	5.17	124.96	111.00
28	AE	118	LYS	N-CA-C	-5.17	97.05	111.00
57	BA	1819	A	C4'-C3'-O3'	5.16	123.32	113.00
33	AJ	33	PRO	N-CA-CB	5.15	109.48	103.30
3	Ad	109	GLY	N-CA-C	5.14	125.94	113.10
34	AN	67	LEU	N-CA-C	-5.13	97.14	111.00
57	AA	1155	A	C5'-C4'-O4'	-5.13	102.95	109.10
11	Bl	119	LYS	N-CA-C	-5.12	97.18	111.00
33	BJ	129	PRO	N-CA-CB	5.11	109.43	103.30
57	AA	2346	A	N9-C1'-C2'	5.10	120.63	114.00
57	BA	15	G	N9-C1'-C2'	-5.09	106.40	112.00
22	Aa	509	A	C2'-C3'-O3'	5.08	121.83	113.70
36	AP	24	GLY	N-CA-C	-5.08	100.41	113.10
57	AA	1698	A	N9-C1'-C2'	5.08	120.60	114.00
57	BA	2278	A	C5'-C4'-C3'	5.08	124.12	116.00
57	BA	1698	A	N9-C1'-C2'	5.08	120.60	114.00
51	B4	43	TYR	N-CA-C	5.07	124.70	111.00
57	AA	1427	A	C2'-C3'-O3'	5.07	121.81	113.70
34	BN	67	LEU	N-CA-C	-5.07	97.31	111.00
36	BP	52	GLU	CA-C-N	-5.07	106.06	116.20
57	BA	669	G	N9-C1'-C2'	5.05	120.57	114.00
57	AA	748	G	N9-C1'-C2'	5.04	120.55	114.00
57	BA	128	C	C2'-C3'-O3'	5.04	121.77	113.70
57	BA	1155	A	C5'-C4'-O4'	-5.03	103.06	109.10
57	BA	1443	G	C5'-C4'-C3'	-5.03	107.95	116.00
28	BE	118	LYS	N-CA-C	-5.02	97.45	111.00
57	BA	2422	A	C2'-C3'-O3'	5.01	121.71	113.70
45	AY	7	VAL	N-CA-C	5.00	124.51	111.00
57	BA	1598	C	C5'-C4'-C3'	-5.00	108.00	116.00

All (7) chirality outliers are listed below:

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Mol	Chain	Res	Type	Atom
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Mol	Chain	Res	Type	Atom
57	AA	1799	G	C3'
57	AA	1819	A	C3'
57	AA	1820	U	C3'
22	Ba	1498	U	C3'
57	BA	1799	G	C3'
57	BA	1819	A	C3'
57	BA	1820	U	C3'

All (125) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
52	A5	51	TYR	Sidechain
57	AA	1040	C	Sidechain
57	AA	1112	G	Sidechain
57	AA	1288	U	Sidechain
57	AA	1332	G	Sidechain
57	AA	1378	A	Sidechain
57	AA	1393	A	Sidechain
57	AA	1396	U	Sidechain
57	AA	1416	G	Sidechain
57	AA	1491	G	Sidechain
57	AA	15	G	Sidechain
57	AA	1518	U	Sidechain
57	AA	1613	G	Sidechain
57	AA	1627	G	Sidechain
57	AA	1647	G	Sidechain
57	AA	1673	U	Sidechain
57	AA	1772	G	Sidechain
57	AA	1779	U	Sidechain
57	AA	1802	A	Sidechain
57	AA	1940	U	Sidechain
57	AA	1955	U	Sidechain
57	AA	2009	G	Sidechain
57	AA	2059	A	Sidechain
57	AA	2079	U	Sidechain
57	AA	2086	U	Sidechain
57	AA	2360	A	Sidechain
57	AA	2390	U	Sidechain
57	AA	2464	C	Sidechain
57	AA	249	C	Sidechain
57	AA	2506	U	Sidechain

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
57	AA	2517	C	Sidechain
57	AA	2542	A	Sidechain
57	AA	2665	A	Sidechain
57	AA	271(Q)	G	Sidechain
57	AA	2712	U	Sidechain
57	AA	272(B)	G	Sidechain
57	AA	2720	U	Sidechain
57	AA	2730	C	Sidechain
57	AA	2856	C	Sidechain
57	AA	387	U	Sidechain
57	AA	463	G	Sidechain
57	AA	467	G	Sidechain
57	AA	469	G	Sidechain
57	AA	562	U	Sidechain
57	AA	597	U	Sidechain
57	AA	642	G	Sidechain
57	AA	652	C	Sidechain
57	AA	746	A	Sidechain
57	AA	767	U	Sidechain
34	AN	4	TYR	Sidechain
43	AW	9	TYR	Sidechain
22	Aa	1077	G	Sidechain
22	Aa	1502	A	Sidechain
22	Aa	436	C	Sidechain
22	Aa	484	G	Sidechain
22	Aa	494	U	Sidechain
22	Aa	832	C	Sidechain
22	Aa	884	U	Sidechain
22	Aa	898	G	Sidechain
24	Av	4	G	Sidechain
21	Ay	56	ARG	Sidechain
52	B5	51	TYR	Sidechain
57	BA	1040	C	Sidechain
57	BA	1112	G	Sidechain
57	BA	1133	U	Sidechain
57	BA	1288	U	Sidechain
57	BA	1332	G	Sidechain
57	BA	1378	A	Sidechain
57	BA	1396	U	Sidechain
57	BA	1416	G	Sidechain
57	BA	1491	G	Sidechain
57	BA	15	G	Sidechain

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Mol	Chain	Res	Type	Group
57	BA	1518	U	Sidechain
57	BA	1613	G	Sidechain
57	BA	1623	G	Sidechain
57	BA	1647	G	Sidechain
57	BA	1673	U	Sidechain
57	BA	1772	G	Sidechain
57	BA	1802	A	Sidechain
57	BA	1829	A	Sidechain
57	BA	1940	U	Sidechain
57	BA	1955	U	Sidechain
57	BA	2000	G	Sidechain
57	BA	2009	G	Sidechain
57	BA	2086	U	Sidechain
57	BA	2320	A	Sidechain
57	BA	2360	A	Sidechain
57	BA	2457	U	Sidechain
57	BA	2464	C	Sidechain
57	BA	249	C	Sidechain
57	BA	2506	U	Sidechain
57	BA	2542	A	Sidechain
57	BA	2597	G	Sidechain
57	BA	2665	A	Sidechain
57	BA	271(Q)	G	Sidechain
57	BA	272(B)	G	Sidechain
57	BA	2739	U	Sidechain
57	BA	2856	C	Sidechain
57	BA	387	U	Sidechain
57	BA	463	G	Sidechain
57	BA	465	G	Sidechain
57	BA	467	G	Sidechain
57	BA	469	G	Sidechain
57	BA	597	U	Sidechain
57	BA	642	G	Sidechain
57	BA	652	C	Sidechain
57	BA	670	A	Sidechain
57	BA	746	A	Sidechain
57	BA	767	U	Sidechain
57	BA	779	U	Sidechain
57	BA	831	G	Sidechain
34	BN	4	TYR	Sidechain
43	BW	9	TYR	Sidechain
22	Ba	1077	G	Sidechain

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Mol	Chain	Res	Type	Group
22	Ba	1417	G	Sidechain
22	Ba	1498	U	Sidechain
22	Ba	1510	U	Sidechain
22	Ba	1512	U	Sidechain
22	Ba	436	C	Sidechain
22	Ba	494	U	Sidechain
22	Ba	587	G	Sidechain
22	Ba	832	C	Sidechain
22	Ba	884	U	Sidechain
22	Ba	898	G	Sidechain
24	Bv	4	G	Sidechain

## 5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	Ab	1900	0	1951	0	0
1	Bb	1900	0	1951	0	0
2	Ac	1612	0	1677	0	0
2	Bc	1612	0	1677	0	0
3	Ad	1703	0	1763	0	0
3	Bd	1703	0	1764	0	0
4	Ae	1146	0	1207	0	0
4	Be	1146	0	1207	0	0
5	Af	843	0	857	0	0
5	Bf	843	0	857	0	0
6	Ag	1257	0	1296	0	0
6	Bg	1257	0	1296	0	0
7	Ah	1116	0	1177	0	0
7	Bh	1116	0	1177	0	0
8	Ai	1010	0	1037	0	0
8	Bi	1010	0	1037	0	0
9	Aj	794	0	840	0	0
9	Bj	794	0	840	0	0
10	Ak	885	0	904	0	0
10	Bk	885	0	904	0	0
11	Al	970	0	1057	0	0
11	Bl	970	0	1057	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
12	Am	937	0	992	0	0
12	Bm	937	0	990	0	0
13	An	492	0	530	0	0
13	Bn	492	0	530	0	0
14	Ao	734	0	771	0	0
14	Bo	734	0	771	0	0
15	Ap	700	0	720	0	0
15	Bp	700	0	720	0	0
16	Aq	823	0	891	0	0
16	Bq	823	0	891	0	0
17	Ar	574	0	644	0	0
17	Br	574	0	644	0	0
18	As	629	0	652	0	0
18	Bs	629	0	652	0	0
19	At	763	0	861	0	0
19	Bt	763	0	861	0	0
20	Au	208	0	221	0	0
20	Bu	208	0	221	0	0
21	Ay	782	0	827	0	0
21	By	782	0	827	0	0
22	Aa	32329	0	16316	0	0
22	Ba	32329	0	16317	0	0
23	Ax	260	0	129	0	0
23	Bx	260	0	129	0	0
24	Av	1641	0	839	0	0
24	Bv	1641	0	839	0	0
25	Aw	1640	0	837	0	0
25	Bw	1640	0	837	0	0
26	AC	937	0	957	112	0
26	BC	937	0	957	116	0
27	AD	2104	0	2182	327	0
27	BD	2104	0	2182	329	0
28	AE	1563	0	1629	259	0
28	BE	1563	0	1629	252	0
29	AF	1623	0	1677	223	0
29	BF	1623	0	1677	216	0
30	AG	1474	0	1533	341	0
30	BG	1474	0	1532	319	0
31	AH	1259	0	1326	192	0
31	BH	1259	0	1326	187	0
32	AI	1131	0	1218	246	0
32	BI	1131	0	1218	264	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
33	AJ	641	0	309	34	0
33	BJ	641	0	309	47	0
34	AN	1104	0	1180	146	0
34	BN	1104	0	1180	151	0
35	AO	933	0	996	98	0
35	BO	933	0	996	99	0
36	AP	1114	0	1187	304	0
36	BP	1114	0	1187	302	0
37	AQ	1112	0	1171	122	0
37	BQ	1112	0	1171	124	0
38	AR	960	0	1021	128	0
38	BR	960	0	1021	126	0
39	AS	770	0	832	139	0
39	BS	770	0	832	137	0
40	AT	1123	0	1181	229	0
40	BT	1123	0	1181	234	0
41	AU	958	0	1015	148	0
41	BU	958	0	1015	145	0
42	AV	779	0	852	151	0
42	BV	779	0	852	153	0
43	AW	896	0	953	94	0
43	BW	896	0	953	89	0
44	AX	725	0	778	88	0
44	BX	725	0	778	91	0
45	AY	775	0	870	189	0
45	BY	775	0	870	197	0
46	AZ	1467	0	1492	238	0
46	BZ	1467	0	1492	238	0
47	A0	662	0	688	79	0
47	B0	662	0	688	77	0
48	A1	731	0	808	98	0
48	B1	731	0	808	89	0
49	A2	598	0	653	96	0
49	B2	598	0	653	57	0
50	A3	467	0	523	40	0
50	B3	467	0	523	38	0
51	A4	450	0	449	91	0
51	B4	450	0	449	80	0
52	A5	427	0	445	83	0
52	B5	427	0	445	90	0
53	A6	433	0	461	115	0
53	B6	433	0	461	117	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
54	A7	409	0	454	38	0
54	B7	409	0	454	38	0
55	A8	507	0	576	112	0
55	B8	507	0	576	120	0
56	A9	307	0	336	19	0
56	B9	307	0	336	25	0
57	AA	61341	0	30925	2266	0
57	BA	61341	0	30926	2267	0
58	AB	2551	0	1295	140	0
58	BB	2551	0	1295	115	0
59	A4	1	0	0	0	0
59	A9	1	0	0	0	0
59	Ad	1	0	0	0	0
59	An	1	0	0	0	0
59	B4	1	0	0	0	0
59	B9	1	0	0	0	0
59	Bd	1	0	0	0	0
59	Bn	1	0	0	0	0
60	A1	2	0	0	0	0
60	A5	1	0	0	0	0
60	A7	1	0	0	0	0
60	AA	367	0	0	0	0
60	AB	3	0	0	0	0
60	AD	2	0	0	0	0
60	AF	1	0	0	0	0
60	AQ	1	0	0	0	0
60	AX	1	0	0	0	0
60	Aa	145	0	0	0	0
60	Ae	2	0	0	0	0
60	Av	5	0	0	0	0
60	Aw	1	0	0	0	0
60	B0	2	0	0	0	0
60	B5	2	0	0	0	0
60	B7	2	0	0	0	0
60	BA	365	0	0	0	0
60	BB	3	0	0	0	0
60	BD	2	0	0	0	0
60	BF	1	0	0	0	0
60	BO	1	0	0	0	0
60	BX	1	0	0	0	0
60	Ba	143	0	0	0	0
60	Bd	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
60	Bl	1	0	0	0	0
60	Bm	1	0	0	0	0
60	Bv	5	0	0	0	0
60	Bw	1	0	0	0	0
60	Bx	1	0	0	0	0
All	All	297230	0	201936	12630	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 41.

All (12630) 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)
30:AG:106:LEU:O	30:AG:110:ALA:HB3	1.29	1.28
27:AD:242:ARG:HH21	57:AA:1826:G:H4'	1.06	1.17
32:AI:118:LYS:HG2	32:AI:119:PRO:HD2	1.24	1.17
40:BT:28:VAL:HG13	40:BT:46:GLU:HA	1.28	1.16
57:BA:1884:A:H2'	57:BA:1885:A:H5''	1.18	1.16
57:AA:1884:A:H2'	57:AA:1885:A:H5''	1.20	1.15
57:BA:1747(A):G:H2'	57:BA:1748:G:H5''	1.25	1.15
30:AG:161:THR:HG22	30:AG:163:ALA:H	1.12	1.14
57:BA:612:C:H2'	57:BA:613:G:H5''	1.27	1.14
42:AV:72:VAL:HG23	42:AV:85:LYS:HB3	1.26	1.14
58:AB:7:G:H3'	58:AB:8:U:H5''	1.26	1.14
57:BA:1484:G:H2'	57:BA:1485:G:H5''	1.22	1.14
57:BA:1590:U:H2'	57:BA:1591:G:H5''	1.29	1.13
58:BB:7:G:H3'	58:BB:8:U:H5''	1.27	1.13
58:AB:20:C:H2'	58:AB:21:G:H5''	1.27	1.13
58:BB:20:C:H2'	58:BB:21:G:H5''	1.28	1.13
36:BP:126:VAL:HA	36:BP:145:PRO:HB2	1.30	1.13
57:AA:2491:U:H5'	57:AA:2570:G:H5''	1.25	1.13
32:BI:118:LYS:HG2	32:BI:119:PRO:HD2	1.18	1.12
30:AG:46:ALA:HB3	30:AG:82:LEU:HD11	1.15	1.12
45:BY:76:CYS:SG	45:BY:77:PRO:HD2	1.87	1.12
33:AJ:11:ALA:HB2	57:AA:1046:A:H5''	1.22	1.12
35:BO:49:ARG:NH2	57:BA:1423:G:H5'	98.45	1.12
47:A0:14:ARG:HH11	47:A0:14:ARG:HB2	1.14	1.12
26:BC:40:GLU:HB2	26:BC:179:ALA:HB2	1.32	1.12
57:AA:1484:G:H2'	57:AA:1485:G:H5''	1.22	1.11
30:BG:46:ALA:HB2	30:BG:88:ILE:HD11	1.29	1.11
57:AA:1845:G:H2'	57:AA:1846:G:H5''	1.12	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2491:U:H5'	57:BA:2570:G:H5''	1.26	1.11
57:BA:1899:G:N2	57:BA:1902:C:H41	1.47	1.11
57:AA:1899:G:N2	57:AA:1902:C:H41	1.48	1.10
36:AP:59:LEU:HA	36:AP:61:ARG:NH1	1.67	1.10
36:AP:55:ARG:HG2	36:AP:56:SER:H	1.14	1.10
45:AY:76:CYS:SG	45:AY:77:PRO:HD2	1.92	1.09
42:AV:19:LYS:HG2	42:AV:94:LEU:HB2	1.34	1.09
40:AT:28:VAL:HG13	40:AT:46:GLU:HA	1.28	1.09
26:AC:40:GLU:HB2	26:AC:179:ALA:HB2	1.32	1.09
36:BP:59:LEU:HA	36:BP:61:ARG:NH1	1.67	1.09
27:BD:242:ARG:HH21	57:BA:1826:G:H4'	1.03	1.09
57:AA:612:C:H2'	57:AA:613:G:H5''	1.27	1.09
57:AA:1590:U:H2'	57:AA:1591:G:H5''	1.30	1.09
38:BR:2:ARG:N	38:BR:2:ARG:HH11	1.50	1.09
36:BP:55:ARG:HG2	36:BP:56:SER:H	1.17	1.08
42:BV:72:VAL:HG23	42:BV:85:LYS:HB3	1.23	1.08
38:AR:2:ARG:N	38:AR:2:ARG:HH11	1.50	1.08
32:AI:88:ILE:HD12	32:AI:120:ILE:HG21	1.32	1.08
57:AA:1747(A):G:H2'	57:AA:1748:G:H5''	1.25	1.08
57:BA:1494:A:H2'	57:BA:1495:A:H5''	1.36	1.08
36:BP:23:PRO:HD2	36:BP:33:ARG:CZ	1.84	1.07
49:B2:13:ALA:HA	49:B2:16:LEU:HD12	1.35	1.07
32:BI:115:ALA:HB3	32:BI:128:LEU:HB3	1.36	1.07
30:AG:106:LEU:HA	30:AG:110:ALA:HB2	1.37	1.06
36:AP:126:VAL:HA	36:AP:145:PRO:HB2	1.30	1.06
36:BP:16:ARG:HD3	36:BP:18:ARG:H	1.20	1.06
52:B5:4:HIS:HB3	52:B5:5:PRO:HD3	1.35	1.06
36:AP:101:VAL:HB	36:AP:107:LYS:HA	1.37	1.06
29:BF:24:LEU:HB3	29:BF:25:PRO:HD2	1.37	1.06
30:BG:111:LEU:HA	30:BG:114:ILE:CD1	1.84	1.06
29:AF:24:LEU:HB3	29:AF:25:PRO:HD2	1.35	1.06
36:AP:23:PRO:HD2	36:AP:33:ARG:CZ	1.85	1.06
47:B0:14:ARG:HH11	47:B0:14:ARG:HB2	1.16	1.06
52:A5:4:HIS:HB3	52:A5:5:PRO:HD3	1.36	1.06
40:AT:28:VAL:HG22	40:AT:47:GLY:N	1.71	1.06
30:BG:111:LEU:CA	30:BG:114:ILE:HD12	1.86	1.06
37:AQ:132:VAL:HG11	46:AZ:81:ARG:HH21	1.22	1.05
42:BV:19:LYS:HG2	42:BV:94:LEU:HB2	1.35	1.05
47:A0:48:GLY:HA3	47:A0:80:HIS:HD1	1.20	1.05
55:A8:62:LEU:HD13	57:AA:242:G:H5''	1.10	1.05
55:B8:62:LEU:HD13	57:BA:242:G:H5''	1.11	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1494:A:H2'	57:AA:1495:A:H5''	1.37	1.04
40:BT:28:VAL:HG22	40:BT:47:GLY:N	1.70	1.04
46:AZ:165:VAL:HG12	46:AZ:166:SER:H	1.21	1.04
36:AP:16:ARG:HD3	36:AP:18:ARG:H	1.20	1.04
57:BA:1845:G:H2'	57:BA:1846:G:H5''	1.13	1.04
39:AS:55:ALA:HB1	58:AB:117:G:H5'	1.37	1.04
48:A1:23:LYS:HD2	48:A1:28:GLY:HA3	1.41	1.03
31:AH:153:LYS:HD3	31:AH:153:LYS:H	1.20	1.03
46:BZ:57:ILE:HG22	46:BZ:58:VAL:H	1.21	1.03
40:BT:5:ALA:HB2	57:BA:2875:C:H4'	1.37	1.03
36:BP:101:VAL:HB	36:BP:107:LYS:HA	1.40	1.03
42:AV:21:ARG:HG2	42:AV:91:TYR:CD2	1.93	1.03
30:AG:67:LYS:N	30:AG:67:LYS:HE3	1.72	1.03
45:AY:51:VAL:HG12	45:AY:53:PRO:HD2	1.39	1.03
57:BA:548:A:H2'	57:BA:549:G:H5'	1.41	1.03
28:BE:36:ARG:NH2	28:BE:88:GLY:HA2	1.73	1.03
57:BA:1845:G:C2'	57:BA:1846:G:H5''	1.89	1.02
31:BH:153:LYS:H	31:BH:153:LYS:HD3	1.19	1.02
30:AG:4:ASP:HA	30:AG:8:LYS:HD3	1.41	1.02
31:AH:43:VAL:HG11	31:AH:52:VAL:HG22	1.40	1.02
57:AA:548:A:H2'	57:AA:549:G:H5'	1.40	1.02
28:AE:36:ARG:NH2	28:AE:88:GLY:HA2	1.72	1.02
32:BI:88:ILE:HD12	32:BI:120:ILE:HG21	1.36	1.02
57:AA:1845:G:C2'	57:AA:1846:G:H5''	1.88	1.02
57:BA:1884:A:C2'	57:BA:1885:A:H5''	1.89	1.02
31:BH:43:VAL:HG11	31:BH:52:VAL:HG22	1.39	1.02
46:AZ:151:HIS:HA	46:AZ:171:ILE:HG13	1.37	1.02
30:BG:51:ARG:NE	30:BG:51:ARG:HA	1.75	1.02
55:B8:33:ASN:H	55:B8:33:ASN:HD22	1.06	1.02
57:BA:612:C:C2'	57:BA:613:G:H5''	1.90	1.02
57:AA:612:C:C2'	57:AA:613:G:H5''	1.89	1.01
30:AG:109:VAL:O	30:AG:113:ARG:HB2	1.59	1.01
36:AP:64:LYS:HB3	55:A8:25:MET:HG3	1.41	1.01
40:AT:5:ALA:HB2	57:AA:2875:C:H4'	1.37	1.01
42:BV:21:ARG:HG2	42:BV:91:TYR:CD2	1.94	1.01
40:BT:13:ARG:HA	40:BT:13:ARG:CZ	1.91	1.01
40:AT:13:ARG:CZ	40:AT:13:ARG:HA	1.91	1.01
45:AY:28:LYS:HB3	45:AY:37:VAL:HB	1.43	1.01
45:BY:28:LYS:HB3	45:BY:37:VAL:HB	1.42	1.01
57:BA:2801(A):A:H4'	57:BA:2802:G:H5'	1.39	1.01
57:AA:2801(A):A:H4'	57:AA:2802:G:H5'	1.40	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2523:G:H2'	57:BA:2524:G:H5''	1.41	1.01
32:BI:74:ASN:HD22	32:BI:74:ASN:H	1.01	1.01
32:AI:92:VAL:HG11	32:AI:120:ILE:HD13	1.42	1.01
38:BR:63:ARG:HE	57:BA:1453:U:H5'	1.26	1.01
36:AP:30:THR:HG22	36:AP:31:ALA:H	1.23	1.01
45:BY:51:VAL:HG12	45:BY:53:PRO:HD2	1.39	1.01
46:BZ:7:ALA:HB2	46:BZ:59:LEU:HD22	1.42	1.00
47:B0:48:GLY:HA3	47:B0:80:HIS:HD1	1.26	1.00
57:BA:2645:G:H3'	57:BA:2646:C:H5'	1.43	1.00
37:AQ:43:THR:HB	37:AQ:45:GLN:HE21	1.26	1.00
32:BI:79:ILE:HG22	32:BI:81:VAL:HG12	1.43	1.00
27:BD:242:ARG:NH2	57:BA:1826:G:H4'	1.76	1.00
30:AG:152:LEU:H	30:AG:152:LEU:HD23	1.24	1.00
32:BI:92:VAL:HB	32:BI:120:ILE:HB	1.41	1.00
57:AA:2523:G:H2'	57:AA:2524:G:H5''	1.44	1.00
46:AZ:128:VAL:HG21	46:AZ:132:ASN:HB2	1.44	1.00
36:AP:59:LEU:HA	36:AP:61:ARG:CZ	1.91	0.99
57:BA:1116:C:H2'	57:BA:1117:G:H5''	3.58	0.99
28:BE:134:ILE:HG13	28:BE:134:ILE:O	1.61	0.99
36:BP:30:THR:HG22	36:BP:31:ALA:H	1.25	0.99
57:BA:2206:G:H21	57:BA:2207:G:H5'	1.24	0.99
57:AA:2645:G:H3'	57:AA:2646:C:H5'	1.44	0.99
32:AI:115:ALA:HB3	32:AI:128:LEU:HB3	1.39	0.99
32:AI:127:VAL:HG13	32:AI:139:GLN:HA	1.44	0.99
30:BG:72:ARG:HB3	30:BG:86:MET:HA	1.45	0.99
48:A1:51:VAL:HG21	48:A1:74:VAL:HG21	1.40	0.99
32:AI:92:VAL:HB	32:AI:120:ILE:HB	1.41	0.99
57:AA:1884:A:C2'	57:AA:1885:A:H5''	1.92	0.99
57:AA:1747(A):G:C2'	57:AA:1748:G:H5''	1.92	0.98
39:BS:67:ARG:HH11	39:BS:67:ARG:HB3	1.28	0.98
57:AA:2681:C:H5	57:AA:2725:A:H62	1.03	0.98
32:BI:127:VAL:HG13	32:BI:139:GLN:HA	1.44	0.98
57:AA:1116:C:H2'	57:AA:1117:G:H5''	3.59	0.97
36:BP:59:LEU:HA	36:BP:61:ARG:CZ	1.93	0.97
54:B7:12:ARG:HD3	54:B7:46:VAL:HG21	1.45	0.97
27:BD:35:LYS:O	27:BD:37:LEU:N	1.97	0.97
30:BG:161:THR:HG22	30:BG:163:ALA:H	1.25	0.97
30:AG:136:ARG:HH22	57:AA:2306:C:H4'	1.22	0.97
57:AA:2206:G:H21	57:AA:2207:G:H5'	1.26	0.97
30:AG:111:LEU:HD22	30:AG:120:LEU:HD21	1.44	0.97
28:BE:77:ILE:HG22	28:BE:78:LEU:H	1.29	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:AY:57:GLN:HG2	45:AY:58:GLY:H	1.29	0.97
57:BA:2206:G:N2	57:BA:2207:G:H5'	1.79	0.97
57:BA:1747(A):G:C2'	57:BA:1748:G:H5''	1.93	0.97
50:B3:8:LEU:HD13	50:B3:31:LEU:HD23	1.46	0.97
36:BP:64:LYS:HB3	55:B8:25:MET:HG3	1.43	0.97
31:BH:97:ARG:HG2	31:BH:98:LEU:H	1.29	0.97
37:BQ:43:THR:HB	37:BQ:45:GLN:HE21	1.28	0.97
55:A8:33:ASN:HD22	55:A8:33:ASN:H	1.04	0.97
27:AD:242:ARG:NH2	57:AA:1826:G:H4'	1.78	0.97
28:AE:77:ILE:HG22	28:AE:78:LEU:H	1.30	0.96
32:BI:109:ILE:HG22	32:BI:110:ASP:H	1.30	0.96
32:BI:91:SER:HB2	32:BI:119:PRO:HB2	1.45	0.96
46:AZ:102:LEU:HD21	46:AZ:124:ILE:HG12	1.47	0.96
32:AI:74:ASN:HD22	32:AI:74:ASN:H	0.97	0.96
46:BZ:117:LEU:HA	46:BZ:174:VAL:HG22	1.47	0.96
55:A8:50:LEU:HD12	55:A8:51:ALA:H	1.30	0.96
57:AA:2206:G:N2	57:AA:2207:G:H5'	1.79	0.96
45:BY:76:CYS:HB3	45:BY:96:ILE:HD11	1.44	0.96
31:AH:124:GLU:HB2	31:AH:132:ARG:HG2	1.47	0.96
34:AN:125:GLY:HA3	34:AN:126:PRO:O	1.64	0.96
57:AA:1210:A:H8	57:AA:1210:A:H5'	1.30	0.96
55:B8:59:LYS:HB2	55:B8:59:LYS:NZ	1.81	0.96
49:B2:47:ASN:HD22	57:BA:94(A):G:H21	1.07	0.96
41:BU:27:LEU:HD22	41:BU:31:SER:HB2	1.48	0.96
38:AR:63:ARG:HE	57:AA:1453:U:H5'	1.26	0.96
32:AI:2:LYS:HD3	32:AI:20:ASP:HB3	1.47	0.96
34:BN:125:GLY:HA3	34:BN:126:PRO:O	1.63	0.96
36:BP:23:PRO:HB2	36:BP:33:ARG:HD2	1.46	0.96
45:AY:42:VAL:HG12	45:AY:65:ALA:HB3	1.47	0.96
46:BZ:81:ARG:NH1	46:BZ:81:ARG:HB3	1.80	0.95
57:AA:676:A:H8	57:AA:2069:G:H21	1.14	0.95
28:AE:116:VAL:O	28:AE:117:MET:HB3	1.66	0.95
27:BD:44:ASN:HB3	27:BD:49:ILE:HA	1.47	0.95
28:BE:116:VAL:O	28:BE:117:MET:HB3	1.61	0.95
54:A7:12:ARG:HD3	54:A7:46:VAL:HG21	1.46	0.95
32:BI:92:VAL:HG11	32:BI:120:ILE:HD13	1.46	0.95
45:BY:42:VAL:HG12	45:BY:65:ALA:HB3	1.48	0.95
57:BA:145:G:H2'	57:BA:146:G:H5''	1.48	0.95
27:AD:44:ASN:HB3	27:AD:49:ILE:HA	1.46	0.95
30:AG:119:GLY:HA2	30:AG:179:PRO:HB2	1.47	0.95
51:A4:12:ALA:HB1	51:A4:29:PRO:HA	1.49	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BZ:108:PRO:HB3	46:BZ:144:LEU:HD23	1.47	0.95
36:BP:32:THR:HG21	36:BP:37:GLY:HA2	1.49	0.95
57:AA:145:G:H2'	57:AA:146:G:H5''	1.48	0.95
57:BA:2681:C:H5	57:BA:2725:A:H62	1.07	0.95
27:BD:129:ASN:HD22	27:BD:129:ASN:H	3.32	0.95
32:BI:2:LYS:HD3	32:BI:20:ASP:HB3	1.45	0.95
55:A8:62:LEU:CD1	57:AA:242:G:H5''	1.96	0.95
53:B6:15:GLU:HG3	53:B6:47:THR:HG21	1.48	0.95
30:BG:19:LEU:HA	30:BG:22:ARG:HB2	1.47	0.95
57:BA:1590:U:C2'	57:BA:1591:G:H5''	1.96	0.95
57:AA:404:C:H4'	57:AA:405:U:H5'	1.48	0.95
46:BZ:126:VAL:HG12	46:BZ:163:LEU:HA	1.48	0.95
39:AS:67:ARG:HH11	39:AS:67:ARG:HB3	1.31	0.95
57:BA:1484:G:C2'	57:BA:1485:G:H5''	1.97	0.95
30:BG:12:TYR:HA	30:BG:16:ARG:HB2	1.49	0.95
38:AR:100:LEU:H	38:AR:100:LEU:HD22	1.32	0.95
57:BA:2068:U:H3	57:BA:2430:A:H2	0.95	0.95
57:BA:1779:U:H5	57:BA:1784:A:N7	1.64	0.95
45:AY:76:CYS:HB3	45:AY:96:ILE:HD11	1.46	0.94
32:AI:91:SER:HB2	32:AI:119:PRO:HB2	1.48	0.94
55:B8:50:LEU:HD12	55:B8:51:ALA:H	1.31	0.94
53:A6:15:GLU:HG3	53:A6:47:THR:HG21	1.47	0.94
57:AA:1948:G:H8	57:AA:1948:G:H5'	1.32	0.94
28:AE:134:ILE:HG13	28:AE:134:ILE:O	1.65	0.94
31:AH:97:ARG:HG2	31:AH:98:LEU:H	1.31	0.94
57:BA:404:C:H4'	57:BA:405:U:H5'	1.48	0.94
27:BD:259:THR:CG2	57:BA:1803:A:H4'	1.97	0.94
45:BY:57:GLN:HG2	45:BY:58:GLY:H	1.29	0.94
57:AA:1590:U:C2'	57:AA:1591:G:H5''	1.97	0.94
55:A8:33:ASN:ND2	55:A8:33:ASN:H	1.62	0.94
27:AD:129:ASN:H	27:AD:129:ASN:HD22	3.25	0.94
29:AF:51:THR:HB	29:AF:88:VAL:HG11	1.50	0.94
32:AI:79:ILE:HG22	32:AI:81:VAL:HG12	1.47	0.94
46:BZ:163:LEU:HD23	46:BZ:163:LEU:H	1.32	0.94
27:AD:259:THR:CG2	57:AA:1803:A:H4'	1.98	0.94
27:BD:181:GLU:HA	27:BD:272:ALA:HB3	1.49	0.94
57:AA:1484:G:C2'	57:AA:1485:G:H5''	1.97	0.93
32:AI:113:ARG:HB3	32:AI:113:ARG:HH11	1.33	0.93
55:B8:62:LEU:CD1	57:BA:242:G:H5''	1.98	0.93
27:BD:34:VAL:HG23	27:BD:35:LYS:H	1.33	0.93
57:AA:1779:U:H5	57:AA:1784:A:N7	1.65	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2068:U:H3	57:AA:2430:A:H2	0.97	0.93
38:BR:100:LEU:HD22	38:BR:100:LEU:H	1.30	0.93
57:AA:528:A:O2'	57:AA:529:A:H5'	1.68	0.93
27:AD:28:GLU:H	27:AD:29:PRO:HD2	1.33	0.93
36:AP:48:PRO:HG2	36:AP:49:ARG:H	1.32	0.93
30:BG:56:ALA:HB2	30:BG:153:ARG:HH11	1.31	0.93
27:AD:129:ASN:N	27:AD:129:ASN:HD22	3.55	0.93
30:AG:67:LYS:H	30:AG:67:LYS:HE3	1.30	0.93
32:BI:47:LEU:HD12	32:BI:47:LEU:N	4.26	0.93
49:B2:16:LEU:O	49:B2:17:SER:HB3	1.68	0.93
30:BG:40:ASN:HD22	30:BG:91:ARG:HB2	1.33	0.93
50:A3:8:LEU:HD13	50:A3:31:LEU:HD23	1.49	0.93
57:BA:1210:A:H8	57:BA:1210:A:H5'	1.32	0.93
57:AA:528:A:C2	57:AA:2043:C:H4'	2.03	0.93
57:BA:1948:G:H8	57:BA:1948:G:H5'	1.33	0.93
36:AP:23:PRO:HB2	36:AP:33:ARG:HD2	1.51	0.93
57:AA:1494:A:C2'	57:AA:1495:A:H5''	1.98	0.93
51:B4:12:ALA:HB1	51:B4:29:PRO:HA	1.46	0.93
40:BT:80:SER:HB3	40:BT:81:PRO:HD3	1.49	0.93
48:A1:19:GLN:HA	48:A1:19:GLN:HE21	1.31	0.93
29:BF:51:THR:HB	29:BF:88:VAL:HG11	1.48	0.93
27:AD:35:LYS:O	27:AD:37:LEU:N	2.00	0.92
57:BA:1494:A:C2'	57:BA:1495:A:H5''	1.99	0.92
37:BQ:62:GLY:HA2	46:BZ:116:VAL:HG21	1.50	0.92
57:BA:528:A:O2'	57:BA:529:A:H5'	1.69	0.92
32:AI:109:ILE:HG22	32:AI:110:ASP:H	1.35	0.92
53:B6:5:VAL:HG22	53:B6:6:ARG:H	1.33	0.92
53:A6:5:VAL:HG22	53:A6:6:ARG:H	1.34	0.92
45:BY:47:LYS:HG2	57:BA:482:A:H4'	1.51	0.92
57:BA:997:G:O2'	57:BA:998:C:H5'	1.69	0.92
27:BD:79:VAL:HG21	27:BD:111:LEU:HD11	1.50	0.92
46:AZ:151:HIS:HB3	46:AZ:170:THR:HA	1.52	0.92
27:AD:24:ILE:HD13	27:AD:25:THR:H	1.34	0.92
57:BA:1022:G:H22	57:BA:1142(A):A:H2	1.13	0.92
58:AB:20:C:C2'	58:AB:21:G:H5''	1.99	0.92
45:BY:44:ILE:O	45:BY:62:GLU:HG3	1.69	0.92
57:BA:1899:G:H22	57:BA:1902:C:H41	1.13	0.92
37:AQ:12:GLN:HG2	37:AQ:73:PRO:HD2	1.52	0.92
27:BD:28:GLU:H	27:BD:29:PRO:HD2	1.34	0.92
30:BG:51:ARG:HA	30:BG:51:ARG:HE	1.27	0.92
40:BT:91:ARG:HB3	40:BT:116:ALA:HA	1.52	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2158:A:H4'	57:BA:2159:G:H5'	1.51	0.92
55:A8:59:LYS:HZ2	55:A8:59:LYS:HB2	1.32	0.92
32:AI:88:ILE:HD11	32:AI:142:VAL:HG13	1.52	0.92
43:AW:10:VAL:O	43:AW:11:ARG:HB2	1.69	0.92
57:BA:528:A:C2	57:BA:2043:C:H4'	2.04	0.92
52:B5:40:LYS:CE	52:B5:46:CYS:HB3	2.00	0.92
46:AZ:67:LEU:HD23	46:AZ:90:VAL:HG11	1.49	0.92
31:BH:124:GLU:HB2	31:BH:132:ARG:HG2	1.49	0.92
36:BP:48:PRO:HG2	36:BP:49:ARG:H	1.34	0.92
27:AD:35:LYS:HZ2	27:AD:35:LYS:HB3	1.33	0.91
31:AH:19:VAL:HG21	31:AH:44:VAL:HA	1.51	0.91
40:AT:125:ARG:O	40:AT:128:GLU:HG3	1.69	0.91
57:AA:1022:G:H22	57:AA:1142(A):A:H2	1.15	0.91
57:BA:271(M):G:H2'	57:BA:271(N):U:H5''	1.52	0.91
45:BY:28:LYS:NZ	45:BY:28:LYS:H	1.67	0.91
33:AJ:39:ALA:HA	33:AJ:43:ALA:HB3	1.49	0.91
40:AT:80:SER:HB3	40:AT:81:PRO:HD3	1.48	0.91
49:A2:51:ARG:HD3	49:A2:55:ARG:HH22	1.32	0.91
57:AA:2103:C:H3'	57:AA:2104:G:H5''	1.53	0.91
39:BS:43:GLU:HG2	39:BS:43:GLU:O	4.55	0.91
57:BA:1021:A:H62	57:BA:1141:U:H3	1.14	0.91
42:BV:51:VAL:HG12	42:BV:52:VAL:H	1.35	0.91
29:BF:178:PRO:HB2	29:BF:201:VAL:HG11	1.51	0.91
57:AA:2158:A:H4'	57:AA:2159:G:H5'	1.51	0.91
39:AS:43:GLU:O	39:AS:43:GLU:HG2	4.54	0.91
55:A8:59:LYS:HB2	55:A8:59:LYS:NZ	1.82	0.91
53:B6:10:LEU:H	53:B6:10:LEU:HD23	1.36	0.91
57:AA:1021:A:H62	57:AA:1141:U:H3	1.17	0.91
27:AD:34:VAL:HG23	27:AD:35:LYS:H	1.33	0.91
36:AP:18:ARG:NH1	36:AP:18:ARG:HB3	1.86	0.91
41:AU:27:LEU:HD22	41:AU:31:SER:HB2	1.51	0.91
57:BA:2833:G:H3'	57:BA:2834:G:C5'	2.00	0.91
32:AI:113:ARG:HB3	32:AI:113:ARG:NH1	1.85	0.91
44:AX:36:LYS:HB2	57:AA:1598:C:H5'	1.50	0.91
51:A4:53:GLU:OE1	51:A4:55:ARG:HG3	1.70	0.91
36:AP:32:THR:HG21	36:AP:37:GLY:HA2	1.50	0.91
30:AG:106:LEU:O	30:AG:110:ALA:CB	2.17	0.90
30:AG:63:ILE:HA	30:AG:143:GLU:HG3	1.51	0.90
47:B0:23:VAL:HA	47:B0:38:VAL:HG22	1.52	0.90
31:BH:30:LYS:HE3	31:BH:81:GLU:H	1.35	0.90
45:AY:7:VAL:HB	45:AY:8:LYS:HD2	1.52	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BI:88:ILE:HD11	32:BI:142:VAL:HG13	1.51	0.90
45:BY:28:LYS:HZ2	45:BY:28:LYS:H	0.93	0.90
52:B5:53:ALA:HB3	52:B5:55:ARG:NH2	1.84	0.90
57:AA:997:G:O2'	57:AA:998:C:H5'	1.70	0.90
57:AA:2833:G:H3'	57:AA:2834:G:C5'	2.02	0.90
38:AR:10:LEU:HB3	38:AR:17:ARG:NE	1.87	0.90
31:AH:30:LYS:HE3	31:AH:81:GLU:H	1.34	0.90
36:AP:45:LEU:HD23	36:AP:46:LYS:H	1.37	0.90
28:AE:24:THR:HG23	28:AE:184:VAL:HG23	1.53	0.90
57:AA:203:C:H3'	57:AA:204:A:H5''	1.54	0.90
48:A1:89:GLU:HA	48:A1:92:LYS:HB3	1.52	0.90
58:BB:20:C:C2'	58:BB:21:G:H5''	2.00	0.90
40:BT:102:ILE:O	40:BT:106:SER:HB3	1.72	0.90
27:AD:24:ILE:CD1	27:AD:25:THR:H	1.85	0.90
46:BZ:68:PRO:HB2	46:BZ:91:LEU:HB2	1.54	0.90
27:BD:24:ILE:HD13	27:BD:25:THR:H	1.35	0.90
36:BP:33:ARG:CZ	57:BA:587:C:H2'	2.02	0.90
46:AZ:61:LEU:H	46:AZ:61:LEU:HD23	1.35	0.90
51:B4:53:GLU:OE1	51:B4:55:ARG:HG3	1.70	0.90
27:AD:79:VAL:HG21	27:AD:111:LEU:HD11	1.53	0.89
27:BD:35:LYS:HZ2	27:BD:35:LYS:HB3	1.34	0.89
36:BP:38:GLN:HG3	36:BP:39:LYS:H	1.36	0.89
37:BQ:12:GLN:HG2	37:BQ:73:PRO:HD2	1.54	0.89
40:BT:125:ARG:O	40:BT:128:GLU:HG3	1.72	0.89
55:A8:33:ASN:N	55:A8:33:ASN:HD22	1.66	0.89
52:A5:40:LYS:CE	52:A5:46:CYS:HB3	2.00	0.89
57:BA:2103:C:H3'	57:BA:2104:G:H5''	1.52	0.89
57:AA:296:C:O2'	57:AA:297:C:H5'	1.71	0.89
32:BI:74:ASN:HD22	32:BI:74:ASN:N	1.71	0.89
57:BA:1899:G:N2	57:BA:1902:C:N4	2.21	0.89
49:A2:46:GLN:H	49:A2:49:LYS:HD2	1.38	0.89
39:AS:89:ARG:O	39:AS:92:TYR:HB3	1.71	0.89
45:AY:28:LYS:H	45:AY:28:LYS:NZ	1.68	0.89
57:BA:296:C:O2'	57:BA:297:C:H5'	1.72	0.89
45:AY:28:LYS:HZ2	45:AY:28:LYS:N	1.71	0.89
43:BW:10:VAL:O	43:BW:11:ARG:HB2	1.69	0.89
28:AE:61:ARG:H	28:AE:62:PRO:HD2	1.38	0.89
32:AI:74:ASN:N	32:AI:74:ASN:HD22	1.68	0.89
44:BX:36:LYS:HB2	57:BA:1598:C:H5'	1.55	0.89
48:A1:45:ASN:ND2	48:A1:47:GLN:NE2	2.20	0.89
32:AI:74:ASN:ND2	32:AI:74:ASN:H	1.70	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AN:57:ALA:H	34:AN:124:ALA:HA	1.36	0.89
53:B6:27:LYS:HD2	53:B6:30:THR:HB	1.54	0.89
55:B8:33:ASN:H	55:B8:33:ASN:ND2	1.64	0.89
39:BS:97:ARG:HH21	39:BS:98:VAL:HA	1.38	0.89
57:AA:208:C:H2'	57:AA:209:C:H6	1.38	0.89
38:AR:63:ARG:NE	57:AA:1453:U:H5'	1.87	0.89
27:AD:181:GLU:HA	27:AD:272:ALA:HB3	1.54	0.89
31:AH:9:ILE:HD12	31:AH:50:VAL:HB	1.55	0.89
34:BN:57:ALA:H	34:BN:124:ALA:HA	1.35	0.89
45:BY:49:VAL:HG22	57:BA:483:A:H5''	1.53	0.89
45:AY:49:VAL:HG22	57:AA:483:A:H5''	1.54	0.88
30:BG:68:PRO:HA	30:BG:92:VAL:HB	1.55	0.88
38:BR:10:LEU:HB3	38:BR:17:ARG:NE	1.88	0.88
39:AS:52:SER:HB2	39:AS:55:ALA:HB3	1.55	0.88
42:BV:24:LYS:HE2	42:BV:90:PRO:HB2	1.55	0.88
34:AN:2:LYS:NZ	41:AU:95:LEU:HD21	1.88	0.88
30:AG:136:ARG:NH2	57:AA:2306:C:H4'	1.89	0.88
53:A6:45:LYS:HG2	57:AA:2371:G:H4'	1.56	0.88
47:B0:11:ARG:HB2	47:B0:11:ARG:HH11	1.37	0.88
55:A8:62:LEU:HD13	57:AA:242:G:C5'	2.01	0.88
40:AT:91:ARG:HB3	40:AT:116:ALA:HA	1.52	0.88
28:BE:202:LYS:O	28:BE:203:LYS:HB3	1.73	0.88
30:AG:64:THR:HG23	30:AG:66:GLN:H	1.38	0.88
34:AN:133:GLN:HG2	34:AN:134:ARG:H	1.36	0.88
57:BA:2359:C:H2'	57:BA:2360:A:H5'	1.56	0.88
26:BC:215:VAL:HG23	26:BC:225:ILE:HD11	1.54	0.88
32:BI:8:PRO:HB3	32:BI:14:ASP:H	1.39	0.88
31:AH:70:THR:HG22	31:AH:74:ASN:HD21	1.38	0.88
30:BG:34:LEU:HB3	30:BG:99:MET:HE1	1.55	0.88
52:A5:53:ALA:HB3	52:A5:55:ARG:NH2	1.88	0.88
55:A8:61:LEU:CD1	55:A8:62:LEU:H	1.87	0.88
29:AF:28:ILE:HG21	29:AF:116:ASP:HB2	1.56	0.88
32:AI:8:PRO:HB3	32:AI:14:ASP:H	1.39	0.88
57:AA:1899:G:N2	57:AA:1902:C:N4	2.21	0.88
34:BN:133:GLN:HG2	34:BN:134:ARG:H	1.36	0.88
55:A8:61:LEU:HD13	55:A8:62:LEU:H	1.39	0.88
57:AA:2359:C:H2'	57:AA:2360:A:H5'	1.55	0.88
44:AX:64:LYS:HZ3	44:AX:73:ARG:HE	1.21	0.88
36:BP:18:ARG:HB3	36:BP:18:ARG:NH1	1.87	0.88
31:BH:19:VAL:HG21	31:BH:44:VAL:HA	1.56	0.88
46:AZ:116:VAL:HB	46:AZ:175:VAL:HG22	1.54	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:AS:30:ARG:HH22	39:AS:62:LYS:HD2	1.37	0.88
45:AY:44:ILE:O	45:AY:62:GLU:HG3	1.73	0.88
57:BA:1019:U:HO2'	57:BA:1021:A:H2	0.92	0.88
57:BA:1022:G:N2	57:BA:1142(A):A:H2	1.72	0.88
57:AA:673:C:H6	57:AA:673:C:H5'	1.37	0.88
39:AS:29:PHE:HE1	58:AB:6:C:HO2'	0.88	0.88
27:BD:24:ILE:CD1	27:BD:25:THR:H	1.86	0.88
29:BF:103:LYS:HA	29:BF:106:ARG:HG3	1.56	0.88
30:BG:139:LEU:HA	30:BG:144:ILE:HG21	1.56	0.88
32:BI:113:ARG:NH1	32:BI:113:ARG:HB3	1.89	0.88
39:BS:30:ARG:HH22	39:BS:62:LYS:HD2	1.37	0.88
45:BY:79:CYS:SG	45:BY:80:GLY:N	2.45	0.88
27:AD:44:ASN:CB	27:AD:49:ILE:HA	2.03	0.87
28:AE:202:LYS:O	28:AE:203:LYS:HB3	1.72	0.87
52:B5:51:TYR:HH	52:B5:52:TYR:HD2	0.89	0.87
57:AA:271(M):G:H2'	57:AA:271(N):U:H5''	1.54	0.87
36:BP:7:ARG:HA	36:BP:7:ARG:HH11	1.39	0.87
42:AV:24:LYS:HE2	42:AV:90:PRO:HB2	1.56	0.87
57:AA:2134:A:H61	57:AA:2157:G:H1'	1.38	0.87
33:AJ:67:GLY:HA2	33:AJ:71:LEU:O	1.73	0.87
34:AN:18:ALA:HB1	34:AN:21:LYS:HB2	1.56	0.87
29:AF:178:PRO:HB2	29:AF:201:VAL:HG11	1.54	0.87
57:BA:1689:A:H62	57:BA:1698:A:H2	1.20	0.87
47:A0:23:VAL:HA	47:A0:38:VAL:HG22	1.56	0.87
58:BB:7:G:C3'	58:BB:8:U:H5''	2.04	0.87
41:AU:59:ARG:HD3	57:AA:1009:A:H5'	1.55	0.87
57:BA:2317:C:C2'	57:BA:2318:G:H5'	2.04	0.87
27:BD:129:ASN:HD22	27:BD:129:ASN:N	3.60	0.87
32:BI:82:ARG:HG2	32:BI:145:VAL:HG11	1.56	0.87
36:BP:45:LEU:HD23	36:BP:46:LYS:H	1.37	0.87
40:BT:28:VAL:HB	40:BT:88:ILE:HG12	1.57	0.87
57:AA:1899:G:H22	57:AA:1902:C:H41	1.18	0.87
26:AC:3:LYS:HE3	57:AA:2107:C:H5'	1.57	0.87
41:BU:101:ARG:HH11	41:BU:101:ARG:HB2	1.38	0.87
57:BA:2134:A:H61	57:BA:2157:G:H1'	1.38	0.87
30:AG:39:ILE:HD11	30:AG:92:VAL:HG12	1.57	0.87
36:AP:7:ARG:HH11	36:AP:7:ARG:HA	1.39	0.87
36:BP:146:VAL:HG22	36:BP:147:LEU:H	1.38	0.87
36:BP:6:LEU:H	36:BP:6:LEU:HD23	1.40	0.87
57:BA:2068:U:N3	57:BA:2430:A:H2	1.71	0.87
53:A6:10:LEU:HD23	53:A6:10:LEU:H	1.36	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1536:C:H2'	57:AA:1537:G:O4'	1.75	0.87
35:BO:49:ARG:HH22	57:BA:1423:G:H5'	97.80	0.87
34:BN:18:ALA:HB1	34:BN:21:LYS:HB2	1.57	0.87
38:AR:10:LEU:HD22	38:AR:17:ARG:HD3	1.57	0.87
31:AH:158:HIS:NE2	31:AH:170:ARG:HA	1.90	0.87
57:AA:1689:A:H62	57:AA:1698:A:H2	1.18	0.87
57:AA:2893:G:H5'	57:AA:2894:G:H5'	1.55	0.87
31:BH:158:HIS:NE2	31:BH:170:ARG:HA	1.89	0.87
41:AU:101:ARG:HH11	41:AU:101:ARG:HB2	1.37	0.87
49:B2:32:LEU:HD22	49:B2:53:LEU:HD13	1.54	0.87
35:AO:49:ARG:NH2	57:AA:1423:G:H5'	98.49	0.87
57:AA:2317:C:C2'	57:AA:2318:G:H5'	2.04	0.87
32:BI:47:LEU:CD1	32:BI:47:LEU:N	4.55	0.87
36:AP:45:LEU:HD23	36:AP:46:LYS:N	1.90	0.86
40:AT:102:ILE:O	40:AT:106:SER:HB3	1.74	0.86
57:BA:2317:C:H2'	57:BA:2318:G:H5'	1.57	0.86
47:A0:11:ARG:HH11	47:A0:11:ARG:HB2	1.40	0.86
53:B6:45:LYS:HG2	57:BA:2371:G:H4'	1.55	0.86
45:AY:2:ARG:HD3	45:AY:3:VAL:HG23	1.57	0.86
28:BE:24:THR:HG23	28:BE:184:VAL:HG23	1.55	0.86
42:BV:46:VAL:HG22	42:BV:47:VAL:H	1.40	0.86
46:BZ:23:LYS:HD3	46:BZ:38:TYR:HE1	1.38	0.86
37:AQ:134:ARG:CZ	46:AZ:122:ARG:HE	1.88	0.86
57:AA:2068:U:N3	57:AA:2430:A:H2	1.72	0.86
57:BA:1536:C:H2'	57:BA:1537:G:O4'	1.75	0.86
34:BN:2:LYS:NZ	41:BU:95:LEU:HD21	1.91	0.86
53:A6:27:LYS:HD2	53:A6:30:THR:HB	1.55	0.86
58:AB:7:G:C3'	58:AB:8:U:H5''	2.04	0.86
34:AN:13:TRP:O	34:AN:135:PRO:HD2	1.74	0.86
28:BE:61:ARG:H	28:BE:62:PRO:HD2	1.40	0.86
32:BI:113:ARG:HH11	32:BI:113:ARG:HB3	1.39	0.86
45:BY:7:VAL:HB	45:BY:8:LYS:HD2	1.57	0.86
57:BA:676:A:H8	57:BA:2069:G:H21	1.18	0.86
46:AZ:17:ALA:HA	46:AZ:20:ARG:HB2	1.55	0.86
57:AA:2728:U:O2'	57:AA:2729:G:H5'	1.74	0.86
26:AC:215:VAL:HG23	26:AC:225:ILE:HD11	1.56	0.86
29:BF:169:ASN:ND2	57:BA:322:A:H3'	1.91	0.86
38:BR:10:LEU:HD22	38:BR:17:ARG:HD3	1.57	0.86
43:AW:96:ILE:HD11	57:AA:2012:G:H4'	1.57	0.86
27:BD:44:ASN:CB	27:BD:49:ILE:HA	2.04	0.86
29:BF:3:GLU:O	29:BF:19:GLU:HB2	1.76	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B3:8:LEU:CD1	50:B3:31:LEU:HD23	2.04	0.86
50:A3:8:LEU:CD1	50:A3:31:LEU:HD23	2.05	0.86
39:AS:97:ARG:HH21	39:AS:98:VAL:HA	1.39	0.86
29:BF:84:VAL:HG12	29:BF:85:GLY:N	1.88	0.86
38:BR:2:ARG:HD3	38:BR:5:LYS:HE2	1.57	0.86
57:AA:2801(A):A:H5'	57:AA:2802:G:H8	1.41	0.86
38:BR:63:ARG:NE	57:BA:1453:U:H5'	1.88	0.86
58:AB:80:U:H2'	58:AB:81:G:H21	1.41	0.86
36:AP:146:VAL:HG22	36:AP:147:LEU:H	1.38	0.86
38:AR:2:ARG:HD3	38:AR:5:LYS:HE2	1.58	0.86
38:AR:99:LYS:HD3	38:AR:99:LYS:H	1.39	0.86
36:AP:33:ARG:CZ	57:AA:587:C:H2'	2.05	0.86
55:B8:62:LEU:HD13	57:BA:242:G:C5'	2.02	0.86
57:BA:1021:A:H8	57:BA:1021:A:H3'	1.39	0.86
57:BA:2893:G:H5'	57:BA:2894:G:H5'	1.55	0.86
34:AN:40:PRO:HB3	41:AU:68:ALA:HB2	1.58	0.85
42:AV:18:LEU:HD22	42:AV:19:LYS:H	1.40	0.85
42:AV:51:VAL:HG12	42:AV:52:VAL:H	1.37	0.85
36:BP:64:LYS:CB	55:B8:25:MET:HG3	2.04	0.85
57:BA:208:C:H2'	57:BA:209:C:H6	1.39	0.85
36:BP:124:LYS:HD3	36:BP:143:GLY:HA3	1.56	0.85
40:AT:85:LYS:NZ	40:AT:85:LYS:HB3	1.91	0.85
45:AY:81:LYS:HD3	45:AY:97:ARG:O	1.75	0.85
55:B8:61:LEU:CD1	55:B8:62:LEU:H	1.88	0.85
36:BP:17:LYS:HG2	36:BP:17:LYS:O	1.76	0.85
41:BU:91:ASP:OD1	41:BU:96:ALA:HB2	1.77	0.85
55:A8:48:PHE:O	55:A8:49:VAL:HG22	1.75	0.85
28:BE:134:ILE:HG21	57:BA:2579:C:H4'	1.57	0.85
43:BW:5:ALA:HB2	43:BW:54:ALA:HB2	1.57	0.85
42:BV:18:LEU:HD22	42:BV:19:LYS:H	1.39	0.85
36:AP:85:LEU:HD23	36:AP:85:LEU:H	1.39	0.85
44:AX:80:ILE:HD13	44:AX:80:ILE:O	1.77	0.85
34:BN:66:LYS:NZ	57:BA:1140:C:H5''	1.91	0.85
36:BP:45:LEU:HD23	36:BP:46:LYS:N	1.90	0.85
45:BY:2:ARG:HD3	45:BY:3:VAL:HG23	1.58	0.85
57:AA:2523:G:C2'	57:AA:2524:G:H5''	2.07	0.85
37:AQ:62:GLY:O	46:AZ:178:GLU:HB2	1.76	0.85
57:BA:405:U:H3'	57:BA:406:G:H5'	2.04	0.85
37:AQ:134:ARG:NH2	46:AZ:122:ARG:HE	1.74	0.85
31:BH:9:ILE:HD12	31:BH:50:VAL:HB	1.56	0.85
57:AA:1537:G:H2'	57:AA:1538:G:H8	1.41	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:AO:49:ARG:NH1	57:AA:1422:G:H4'	102.15	0.85
38:AR:33:ARG:HG3	38:AR:115:GLU:HG3	1.59	0.85
57:BA:1899:G:H22	57:BA:1902:C:N4	1.73	0.85
57:BA:1537:G:H2'	57:BA:1538:G:H8	1.41	0.85
41:BU:59:ARG:HD3	57:BA:1009:A:H5'	1.57	0.85
57:AA:364:C:H2'	57:AA:365:C:H5''	1.59	0.85
32:AI:101:LEU:HD23	32:AI:109:ILE:HG12	1.56	0.85
36:AP:64:LYS:CB	55:A8:25:MET:HG3	2.06	0.85
30:BG:32:PRO:HB2	30:BG:172:LEU:HD12	1.56	0.85
48:A1:52:ARG:HH12	57:AA:2218:U:H1'	1.42	0.85
37:BQ:134:ARG:CZ	46:BZ:122:ARG:HE	1.89	0.85
57:AA:1540:U:H3'	57:AA:1541:G:H3'	1.58	0.85
40:BT:85:LYS:NZ	40:BT:85:LYS:HB3	1.92	0.85
57:AA:1019:U:HO2'	57:AA:1021:A:H2	0.92	0.85
29:AF:103:LYS:HA	29:AF:106:ARG:HG3	1.58	0.85
30:BG:67:LYS:NZ	51:B4:5:ILE:HD11	1.90	0.85
30:BG:132:ASN:ND2	57:BA:2303:G:H1'	1.92	0.85
57:BA:1540:U:H3'	57:BA:1541:G:H3'	1.58	0.85
30:AG:46:ALA:HB3	30:AG:82:LEU:CD1	2.04	0.85
37:AQ:10:ARG:HB2	37:AQ:10:ARG:HH11	1.41	0.85
44:BX:80:ILE:O	44:BX:80:ILE:HD13	1.75	0.85
57:AA:1899:G:H22	57:AA:1902:C:N4	1.74	0.84
57:BA:2801(A):A:H5'	57:BA:2802:G:H8	1.41	0.84
57:BA:2523:G:C2'	57:BA:2524:G:H5''	2.06	0.84
52:B5:48:GLU:O	52:B5:49:CYS:SG	2.35	0.84
36:BP:85:LEU:HD23	36:BP:85:LEU:H	1.41	0.84
45:AY:47:LYS:HD3	57:AA:481:G:OP2	1.78	0.84
30:AG:152:LEU:H	30:AG:152:LEU:CD2	1.90	0.84
30:BG:72:ARG:HB3	30:BG:86:MET:CA	2.07	0.84
57:BA:2134:A:N6	57:BA:2157:G:H1'	1.92	0.84
43:BW:96:ILE:HD11	57:BA:2012:G:H4'	1.58	0.84
45:AY:47:LYS:HG2	57:AA:482:A:H4'	1.58	0.84
57:BA:434:U:H2'	57:BA:435:C:C6	6.27	0.84
45:BY:13:VAL:HG22	45:BY:14:LEU:H	1.42	0.84
48:B1:56:GLN:NE2	48:B1:85:LEU:HD23	1.92	0.84
57:AA:434:U:H2'	57:AA:435:C:C6	6.30	0.84
30:AG:106:LEU:C	30:AG:110:ALA:HB3	1.97	0.84
46:BZ:175:VAL:HB	46:BZ:176:PRO:HD2	1.58	0.84
57:AA:1022:G:N2	57:AA:1142(A):A:H2	1.73	0.84
52:A5:51:TYR:OH	52:A5:52:TYR:HD2	1.60	0.84
32:AI:98:ALA:O	32:AI:109:ILE:HD13	1.78	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1175:U:H4'	57:BA:1176:G:H5'	1.59	0.84
36:BP:9:ASN:H	36:BP:10:PRO:HD2	1.42	0.84
57:AA:1858:G:H2'	57:AA:1883:G:H22	1.43	0.84
32:AI:124:GLY:O	32:AI:142:VAL:HB	1.78	0.84
40:AT:28:VAL:HB	40:AT:88:ILE:HG12	1.56	0.84
42:BV:72:VAL:CG2	42:BV:85:LYS:HB3	2.08	0.84
31:BH:70:THR:HG22	31:BH:74:ASN:HD21	1.42	0.84
46:AZ:149:SER:HB2	46:AZ:172:ALA:O	1.78	0.84
47:A0:10:THR:HG22	47:A0:11:ARG:H	1.42	0.84
53:A6:54:ILE:HD13	57:AA:2420:C:H5'	1.60	0.84
28:AE:134:ILE:HG21	57:AA:2579:C:H4'	1.60	0.84
57:BA:1116:C:C2'	57:BA:1117:G:H5''	3.98	0.84
37:BQ:43:THR:OG1	37:BQ:46:GLN:HG3	1.78	0.84
39:BS:67:ARG:NH1	39:BS:67:ARG:HB3	1.92	0.84
57:AA:2134:A:N6	57:AA:2157:G:H1'	1.92	0.84
29:AF:3:GLU:O	29:AF:19:GLU:HB2	1.76	0.84
30:AG:106:LEU:HA	30:AG:110:ALA:CB	2.06	0.84
32:AI:82:ARG:HG2	32:AI:145:VAL:HG11	1.58	0.84
39:BS:107:GLU:HG3	57:BA:2377:A:H4'	1.57	0.84
57:AA:2287:A:H62	57:AA:2344:U:H3	1.25	0.84
52:B5:36:CYS:SG	52:B5:38:ALA:HB3	2.18	0.84
46:BZ:31:ARG:NH1	46:BZ:31:ARG:HB2	1.92	0.84
36:AP:55:ARG:HG2	36:AP:56:SER:N	1.92	0.84
41:AU:112:ARG:HH12	42:AV:46:VAL:HG11	1.41	0.84
26:BC:3:LYS:HE3	57:BA:2107:C:H5'	1.57	0.84
31:BH:97:ARG:HG2	31:BH:98:LEU:N	1.93	0.84
45:BY:47:LYS:HD3	57:BA:481:G:OP2	1.78	0.84
50:B3:6:VAL:HB	50:B3:54:VAL:HG11	1.60	0.84
29:BF:28:ILE:HG21	29:BF:116:ASP:HB2	1.58	0.83
27:BD:242:ARG:HH21	57:BA:1826:G:C4'	1.89	0.83
36:AP:18:ARG:HD2	57:AA:662:G:OP1	1.76	0.83
36:AP:6:LEU:HD23	36:AP:6:LEU:H	1.42	0.83
28:BE:61:ARG:HD3	57:BA:2787:C:H1'	1.60	0.83
38:AR:117:VAL:O	38:AR:118:GLU:HB2	1.78	0.83
57:BA:654(H):G:H22	57:BA:654(J):A:H8	1.25	0.83
57:AA:1175:U:H4'	57:AA:1176:G:H5'	1.59	0.83
39:AS:107:GLU:HG3	57:AA:2377:A:H4'	1.57	0.83
29:AF:84:VAL:HG12	29:AF:85:GLY:N	1.92	0.83
30:AG:170:ARG:NH2	30:AG:182:LYS:HE2	1.92	0.83
55:B8:51:ALA:N	55:B8:53:PRO:HD2	1.94	0.83
57:BA:2206:G:H21	57:BA:2207:G:C5'	1.90	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:70:TRP:CH2	27:BD:150:LYS:HA	2.13	0.83
57:AA:2317:C:H2'	57:AA:2318:G:H5'	1.58	0.83
36:AP:39:LYS:HD2	57:AA:806:C:OP2	1.78	0.83
55:B8:14:VAL:HG21	55:B8:22:VAL:HG12	1.61	0.83
45:BY:81:LYS:HD3	45:BY:97:ARG:O	1.77	0.83
34:BN:13:TRP:O	34:BN:135:PRO:HD2	1.78	0.83
43:AW:5:ALA:HB2	43:AW:54:ALA:HB2	1.59	0.83
45:AY:79:CYS:SG	45:AY:80:GLY:N	2.45	0.83
55:B8:33:ASN:N	55:B8:33:ASN:HD22	1.68	0.83
55:B8:48:PHE:O	55:B8:49:VAL:HG22	1.77	0.83
57:BA:2287:A:H62	57:BA:2344:U:H3	1.25	0.83
57:BA:673:C:H6	57:BA:673:C:H5'	1.44	0.83
28:BE:132:HIS:ND1	57:BA:1658:C:OP1	2.11	0.83
30:BG:111:LEU:HA	30:BG:114:ILE:HD12	0.91	0.83
57:AA:1021:A:H3'	57:AA:1021:A:H8	1.42	0.83
26:AC:6:LYS:HB2	57:AA:2132:U:H3	1.43	0.83
57:BA:1021:A:H3'	57:BA:1021:A:C8	2.14	0.83
39:BS:89:ARG:O	39:BS:92:TYR:HB3	1.77	0.83
27:AD:70:TRP:CH2	27:AD:150:LYS:HA	2.13	0.83
46:AZ:70:LEU:HD11	46:AZ:98:MET:SD	2.19	0.83
46:BZ:183:LEU:HD23	46:BZ:184:ALA:N	1.94	0.83
28:AE:61:ARG:HD3	57:AA:2787:C:H1'	1.59	0.83
45:AY:59:GLY:O	45:AY:60:PHE:HB2	1.79	0.83
32:BI:74:ASN:H	32:BI:74:ASN:ND2	1.74	0.83
57:BA:364:C:H2'	57:BA:365:C:H5''	1.58	0.83
44:AX:64:LYS:HZ2	44:AX:73:ARG:HH21	1.27	0.83
55:B8:61:LEU:HD13	55:B8:62:LEU:H	1.40	0.83
46:BZ:103:ARG:HD2	46:BZ:136:PHE:HB2	1.60	0.83
57:AA:1019:U:H3	57:AA:1142(A):A:H62	1.26	0.83
57:AA:2245:U:H5'	57:AA:2246:G:H5'	1.61	0.83
26:BC:11:LEU:HD22	26:BC:33:LEU:HA	1.59	0.83
47:B0:10:THR:HG22	47:B0:11:ARG:H	1.44	0.83
49:B2:53:LEU:HD22	49:B2:57:ILE:HD11	1.61	0.83
57:BA:2036:C:H5'	57:BA:2036:C:H6	1.44	0.83
37:BQ:27:VAL:HG12	37:BQ:28:ALA:N	1.93	0.83
26:AC:11:LEU:HD22	26:AC:33:LEU:HA	1.59	0.82
57:BA:2728:U:O2'	57:BA:2729:G:H5'	1.78	0.82
29:BF:169:ASN:HD21	57:BA:322:A:H3'	1.44	0.82
46:BZ:110:GLY:HA3	46:BZ:146:ILE:HG23	1.61	0.82
57:AA:654(V):A:H3'	57:AA:655:A:H2'	1.61	0.82
57:AA:2206:G:H21	57:AA:2207:G:C5'	1.92	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:AY:28:LYS:HZ2	45:AY:28:LYS:H	0.86	0.82
30:BG:116:ASP:O	30:BG:117:PHE:HB2	1.79	0.82
34:BN:3:THR:O	34:BN:5:VAL:N	2.12	0.82
34:AN:66:LYS:NZ	57:AA:1140:C:H5''	1.93	0.82
43:AW:9:TYR:H	43:AW:102:HIS:CD2	1.97	0.82
32:BI:118:LYS:HG2	32:BI:119:PRO:CD	2.05	0.82
57:AA:1697:G:H3'	57:AA:1698:A:H5''	1.61	0.82
57:AA:654(H):G:H22	57:AA:654(J):A:H8	1.25	0.82
37:AQ:16:ARG:HH22	57:AA:952:G:P	2.00	0.82
30:BG:67:LYS:HD3	51:B4:5:ILE:HG12	1.60	0.82
30:BG:67:LYS:HE3	58:BB:42:C:H5''	1.58	0.82
36:BP:18:ARG:HD2	57:BA:662:G:OP1	1.79	0.82
36:BP:63:PRO:HB3	55:B8:13:ARG:HB3	1.60	0.82
38:BR:99:LYS:HD3	38:BR:99:LYS:H	1.42	0.82
29:AF:169:ASN:ND2	57:AA:322:A:H3'	1.94	0.82
28:AE:36:ARG:HH21	28:AE:88:GLY:HA2	1.42	0.82
36:AP:17:LYS:HG2	36:AP:17:LYS:O	1.78	0.82
30:BG:130:ASN:ND2	30:BG:160:VAL:HG13	1.93	0.82
40:BT:89:VAL:HG11	40:BT:91:ARG:HE	1.44	0.82
50:A3:19:GLN:HE22	50:A3:52:HIS:HE1	1.26	0.82
57:AA:545:C:H3'	57:AA:547:A:H5''	1.61	0.82
32:BI:101:LEU:HD23	32:BI:109:ILE:HG12	1.61	0.82
45:BY:28:LYS:N	45:BY:28:LYS:HZ2	1.75	0.82
42:BV:19:LYS:NZ	42:BV:20:LEU:H	1.77	0.82
48:A1:52:ARG:NH1	57:AA:2218:U:H1'	1.95	0.82
57:AA:271(D):G:H1	57:AA:271(T):C:H42	1.27	0.82
41:BU:112:ARG:HH12	42:BV:46:VAL:HG11	1.45	0.82
50:A3:6:VAL:HB	50:A3:54:VAL:HG11	1.59	0.82
49:A2:13:ALA:HA	49:A2:16:LEU:HG	1.62	0.82
37:AQ:27:VAL:HG12	37:AQ:28:ALA:N	1.93	0.82
36:AP:9:ASN:H	36:AP:10:PRO:HD2	1.44	0.82
57:BA:1015:G:H8	57:BA:1015:G:H5'	1.44	0.82
57:BA:545:C:H3'	57:BA:547:A:H5''	1.62	0.82
57:BA:259:G:H21	57:BA:621:A:H8	1.28	0.82
46:AZ:56:VAL:HG13	46:AZ:69:THR:O	1.79	0.82
57:BA:203:C:H3'	57:BA:204:A:H5''	1.58	0.82
30:BG:32:PRO:HB2	30:BG:172:LEU:CD1	2.10	0.82
34:BN:66:LYS:HZ3	57:BA:1140:C:H5''	1.44	0.82
39:BS:52:SER:HB2	39:BS:55:ALA:HB3	1.60	0.82
43:BW:9:TYR:H	43:BW:102:HIS:CD2	1.98	0.82
52:B5:51:TYR:OH	52:B5:52:TYR:HD2	1.63	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2327:A:H2'	57:BA:2328:A:C8	2.13	0.82
36:BP:71:VAL:HG12	36:BP:72:PRO:HD3	1.62	0.81
57:BA:2777:G:H4'	57:BA:2778:A:H5'	1.62	0.81
57:AA:330:A:H2	57:AA:1210:A:H2'	1.44	0.81
57:AA:1348:G:H2'	57:AA:1349:A:H5''	1.62	0.81
28:AE:4:ILE:HD13	28:AE:28:ALA:HB1	1.61	0.81
42:AV:19:LYS:NZ	42:AV:20:LEU:H	1.78	0.81
26:BC:26:ALA:O	26:BC:30:VAL:HG23	1.80	0.81
29:BF:8:GLN:HB3	29:BF:126:VAL:HA	1.62	0.81
34:BN:40:PRO:HB3	41:BU:68:ALA:HB2	1.62	0.81
57:BA:145:G:C2'	57:BA:146:G:H5''	2.10	0.81
41:BU:47:TYR:HA	41:BU:50:ARG:NH2	1.95	0.81
57:AA:624:C:H2'	57:AA:625:G:H8	3.00	0.81
30:AG:109:VAL:CG1	30:AG:113:ARG:HD3	2.10	0.81
26:BC:6:LYS:HB2	57:BA:2132:U:H3	1.43	0.81
45:BY:59:GLY:O	45:BY:60:PHE:HB2	1.79	0.81
48:A1:51:VAL:HG21	48:A1:74:VAL:CG2	2.10	0.81
34:BN:15:LEU:HD12	34:BN:136:GLU:HG3	1.62	0.81
41:AU:47:TYR:HA	41:AU:50:ARG:NH2	1.95	0.81
35:AO:105:GLU:HA	35:AO:108:GLU:OE1	1.80	0.81
57:BA:2189:U:C3'	57:BA:2190:G:H5''	2.10	0.81
57:AA:621:A:H2'	57:AA:622:G:H5'	1.62	0.81
26:AC:26:ALA:O	26:AC:30:VAL:HG23	1.81	0.81
42:AV:62:LEU:HD21	42:AV:95:LEU:HB2	1.63	0.81
39:AS:67:ARG:NH1	39:AS:67:ARG:HB3	1.95	0.81
57:AA:528:A:H2	57:AA:2043:C:H4'	1.45	0.81
57:BA:2308:G:O6	57:BA:2310:A:H2'	1.80	0.81
26:AC:6:LYS:HB2	57:AA:2132:U:N3	1.96	0.81
29:AF:22:ALA:HB1	29:AF:26:ALA:HB2	1.62	0.81
57:BA:2121:G:H1	57:BA:2177:C:H42	1.28	0.81
57:BA:1348:G:H2'	57:BA:1349:A:H5''	1.62	0.81
57:BA:818:G:O2'	57:BA:819:A:H5''	3.04	0.81
26:BC:53:ARG:HD3	26:BC:53:ARG:H	1.46	0.81
29:AF:123:LEU:HD12	29:AF:124:LEU:H	1.45	0.81
55:A8:51:ALA:N	55:A8:53:PRO:HD2	1.95	0.81
57:BA:1047:G:H2'	57:BA:1110:G:N2	1.96	0.81
27:BD:35:LYS:HZ3	27:BD:36:PRO:HD3	1.45	0.81
57:AA:2777:G:H4'	57:AA:2778:A:H5'	1.62	0.81
28:AE:24:THR:CG2	28:AE:184:VAL:HG23	2.11	0.81
33:AJ:29:TYR:H	33:AJ:83:TYR:CB	1.94	0.81
58:BB:80:U:H2'	58:BB:81:G:H21	1.46	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:10:ARG:HH11	37:BQ:10:ARG:HB2	1.43	0.81
38:BR:33:ARG:HG3	38:BR:115:GLU:HG3	1.62	0.81
57:BA:1858:G:H2'	57:BA:1883:G:H22	1.43	0.81
57:AA:155:U:H2'	57:AA:156:U:H5''	1.62	0.81
33:AJ:11:ALA:CB	57:AA:1046:A:H5''	2.09	0.81
30:AG:45:GLU:N	30:AG:88:ILE:HG13	1.96	0.81
33:AJ:11:ALA:HB2	57:AA:1046:A:C5'	2.06	0.81
55:B8:30:ARG:HA	55:B8:30:ARG:HE	1.46	0.81
35:BO:105:GLU:HA	35:BO:108:GLU:OE1	1.79	0.81
57:BA:1639:U:O2'	57:BA:1640:C:H5''	1.81	0.81
28:AE:179:GLU:HB3	28:AE:181:LEU:CD2	2.11	0.81
40:AT:65:LYS:HZ1	40:AT:66:VAL:H	1.28	0.81
53:A6:48:VAL:HG23	53:A6:49:HIS:H	1.46	0.81
57:AA:2189:U:C3'	57:AA:2190:G:H5''	2.11	0.81
57:BA:152:G:H1	57:BA:174:C:H42	1.28	0.81
57:BA:155:U:H2'	57:BA:156:U:H5''	1.61	0.81
57:AA:1116:C:C2'	57:AA:1117:G:H5''	3.98	0.80
30:AG:105:LYS:HD3	30:AG:143:GLU:OE1	1.80	0.80
40:AT:89:VAL:HG11	40:AT:91:ARG:HE	1.46	0.80
53:B6:48:VAL:HG23	53:B6:49:HIS:H	1.46	0.80
29:BF:68:LYS:HE2	57:BA:2444:G:OP2	1.81	0.80
49:A2:67:LYS:O	49:A2:70:GLN:HG2	1.81	0.80
57:AA:2308:G:O6	57:AA:2310:A:H2'	1.81	0.80
57:BA:1038:C:H42	57:BA:1117:G:H1	1.29	0.80
57:BA:184:C:H2'	57:BA:185:U:C6	2.17	0.80
28:BE:36:ARG:HH21	28:BE:88:GLY:HA2	1.45	0.80
39:BS:62:LYS:HB2	58:BB:50:G:OP1	1.81	0.80
47:A0:48:GLY:HA3	47:A0:80:HIS:ND1	1.94	0.80
57:AA:603:A:H4'	57:AA:604:G:O5'	1.82	0.80
51:B4:33:VAL:HG12	51:B4:34:GLU:H	1.46	0.80
37:BQ:16:ARG:HH22	57:BA:952:G:P	2.03	0.80
31:BH:105:LEU:HD23	31:BH:105:LEU:H	1.45	0.80
41:BU:25:TRP:CZ3	57:BA:17:G:H4'	2.15	0.80
48:A1:45:ASN:HD21	57:AA:2090:G:H21	1.24	0.80
36:AP:63:PRO:HB3	55:A8:13:ARG:HB3	1.61	0.80
40:AT:60:THR:HG22	40:AT:77:PRO:HA	1.63	0.80
27:BD:77:ALA:HB2	27:BD:97:TYR:HA	1.63	0.80
31:BH:83:TYR:HB3	31:BH:134:SER:HA	1.62	0.80
32:BI:111:PRO:HG2	32:BI:112:LYS:HD2	1.63	0.80
57:BA:1403:C:H5''	57:BA:1471:A:H1'	1.62	0.80
57:BA:271(D):G:H1	57:BA:271(T):C:H42	1.27	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:AG:105:LYS:HB3	30:AG:142:PRO:HG3	1.63	0.80
31:AH:105:LEU:H	31:AH:105:LEU:HD23	1.47	0.80
42:AV:46:VAL:HG22	42:AV:47:VAL:H	1.47	0.80
29:BF:22:ALA:HB1	29:BF:26:ALA:HB2	1.64	0.80
47:A0:48:GLY:CA	47:A0:80:HIS:HD1	1.95	0.80
57:AA:1948:G:H5'	57:AA:1948:G:C8	2.17	0.80
57:BA:2245:U:H5'	57:BA:2246:G:H5'	1.61	0.80
41:AU:44:ASN:ND2	42:AV:75:PHE:HB3	1.97	0.80
27:AD:24:ILE:O	27:AD:25:THR:O	1.98	0.80
26:BC:6:LYS:HB2	57:BA:2132:U:N3	1.95	0.80
27:BD:35:LYS:HD2	27:BD:35:LYS:C	2.01	0.80
41:BU:34:LYS:HE2	41:BU:34:LYS:HA	1.62	0.80
57:AA:2537:U:H2'	57:AA:2538:C:C6	2.17	0.80
36:AP:41:ARG:HH12	36:AP:45:LEU:HD12	1.47	0.80
39:AS:13:ARG:HG3	39:AS:14:VAL:H	1.46	0.80
46:BZ:81:ARG:HH11	46:BZ:81:ARG:HB3	1.42	0.80
57:AA:1887:C:H2'	57:AA:1888:G:H5''	1.63	0.80
57:AA:2327:A:H2'	57:AA:2328:A:C8	2.17	0.80
34:AN:3:THR:O	34:AN:5:VAL:N	2.14	0.80
36:BP:41:ARG:HH12	36:BP:45:LEU:HD12	1.44	0.80
37:AQ:132:VAL:HG11	46:AZ:81:ARG:NH2	1.97	0.80
52:A5:36:CYS:SG	52:A5:38:ALA:HB3	2.22	0.80
36:AP:124:LYS:HD3	36:AP:143:GLY:HA3	1.63	0.80
40:AT:6:LEU:HA	40:AT:9:LEU:HD12	1.64	0.80
49:A2:2:LYS:CB	57:AA:97:C:H5''	2.12	0.80
49:A2:2:LYS:HD2	49:A2:5:GLU:OE1	1.82	0.80
31:AH:30:LYS:HE3	31:AH:81:GLU:N	1.96	0.80
34:AN:2:LYS:HZ3	41:AU:95:LEU:HD21	1.44	0.80
50:B3:19:GLN:HE22	50:B3:52:HIS:HE1	1.29	0.80
53:B6:54:ILE:HD13	57:BA:2420:C:H5'	1.63	0.80
30:BG:58:GLN:O	30:BG:62:LEU:HD13	1.82	0.80
32:BI:79:ILE:CG2	32:BI:81:VAL:HG12	2.10	0.80
36:BP:66:GLY:HA3	57:BA:2415:G:O3'	1.81	0.80
57:BA:2543:G:H2'	57:BA:2544:G:C8	2.17	0.80
32:BI:142:VAL:O	32:BI:142:VAL:HG12	1.81	0.80
46:AZ:155:LEU:O	46:AZ:157:LEU:HD23	1.82	0.80
57:AA:145:G:C2'	57:AA:146:G:H5''	2.11	0.80
30:AG:180:PHE:O	30:AG:182:LYS:HG3	1.82	0.79
30:AG:27:ASN:HD21	58:AB:55:U:H4'	1.47	0.79
41:AU:91:ASP:OD1	41:AU:96:ALA:HB2	1.81	0.79
46:BZ:150:LEU:N	46:BZ:150:LEU:HD23	1.97	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1270:C:H5''	57:BA:1271:G:H5'	1.64	0.79
57:AA:2036:C:H6	57:AA:2036:C:H5'	1.46	0.79
29:AF:139:PHE:HB2	29:AF:166:ALA:HB1	1.62	0.79
57:AA:1047:G:H2'	57:AA:1110:G:N2	1.98	0.79
57:AA:259:G:H21	57:AA:621:A:H8	1.28	0.79
26:AC:53:ARG:HD3	26:AC:53:ARG:H	1.45	0.79
27:AD:35:LYS:HD2	27:AD:35:LYS:C	2.02	0.79
29:AF:8:GLN:HB3	29:AF:126:VAL:HA	1.62	0.79
30:AG:118:ARG:O	30:AG:181:ARG:HB2	1.82	0.79
30:AG:76:SER:OG	30:AG:83:ARG:HB3	1.81	0.79
57:BA:330:A:H2	57:BA:1210:A:H2'	1.46	0.79
29:BF:24:LEU:HB3	29:BF:25:PRO:CD	2.13	0.79
41:BU:90:VAL:O	41:BU:92:ARG:N	2.15	0.79
52:A5:4:HIS:HB3	52:A5:5:PRO:CD	2.11	0.79
30:AG:46:ALA:HB2	30:AG:88:ILE:HD11	1.64	0.79
34:AN:15:LEU:HD12	34:AN:136:GLU:HG3	1.64	0.79
40:AT:64:ARG:HD2	40:AT:73:GLU:HG2	1.64	0.79
28:BE:101:ARG:HH11	28:BE:171:GLU:HB2	1.46	0.79
32:BI:124:GLY:O	32:BI:142:VAL:HB	1.83	0.79
45:BY:90:LEU:HG	45:BY:91:GLU:H	1.47	0.79
47:A0:14:ARG:HH11	47:A0:14:ARG:CB	1.95	0.79
57:AA:405:U:H3'	57:AA:406:G:H5'	2.06	0.79
48:B1:44:PRO:O	48:B1:46:LEU:HD13	1.83	0.79
48:B1:20:ARG:HG2	48:B1:20:ARG:HH11	1.46	0.79
57:AA:1434:A:H61	57:AA:1558:A:H62	1.27	0.79
38:BR:117:VAL:O	38:BR:118:GLU:HB2	1.79	0.79
55:A8:30:ARG:HA	55:A8:30:ARG:HE	1.47	0.79
34:AN:1:MET:O	34:AN:2:LYS:HG3	1.81	0.79
36:AP:62:LEU:HB2	57:AA:2393:A:H5'	1.65	0.79
28:BE:4:ILE:HD13	28:BE:28:ALA:HB1	1.64	0.79
30:BG:108:ASN:O	30:BG:109:VAL:CG2	2.30	0.79
30:BG:72:ARG:HD3	30:BG:86:MET:HA	1.65	0.79
39:BS:62:LYS:HB2	58:BB:50:G:P	2.23	0.79
29:BF:123:LEU:HD12	29:BF:124:LEU:H	1.46	0.79
57:AA:1038:C:C3'	57:AA:1039:G:H5''	2.13	0.79
29:AF:74:ARG:HD3	57:AA:674:G:O2'	1.82	0.79
41:AU:92:ARG:O	41:AU:94:ASN:N	2.14	0.79
27:BD:35:LYS:NZ	27:BD:36:PRO:HD3	1.98	0.79
27:BD:43:ARG:HB3	27:BD:54:ARG:HB2	1.64	0.79
32:BI:77:LEU:HD21	32:BI:79:ILE:HB	1.64	0.79
36:BP:55:ARG:HG2	36:BP:56:SER:N	1.94	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:A7:34:ARG:NH1	54:A7:39:ARG:HG3	1.98	0.79
53:A6:27:LYS:HB3	53:A6:30:THR:HG22	1.64	0.79
57:AA:1021:A:C8	57:AA:1021:A:H3'	2.17	0.79
31:AH:97:ARG:HG2	31:AH:98:LEU:N	1.96	0.79
35:AO:49:ARG:HH12	57:AA:1422:G:H4'	101.49	0.79
28:AE:101:ARG:HH11	28:AE:171:GLU:HB2	1.45	0.79
45:AY:13:VAL:HG22	45:AY:14:LEU:H	1.45	0.79
57:BA:621:A:H2'	57:BA:622:G:H5'	1.63	0.79
28:BE:179:GLU:HB3	28:BE:181:LEU:CD2	2.12	0.79
31:BH:20:ALA:HB1	31:BH:21:PRO:CD	2.13	0.79
57:AA:914:C:H2'	57:AA:915:C:H5'	1.64	0.79
27:AD:32:SER:O	27:AD:36:PRO:HG3	1.82	0.79
31:AH:83:TYR:HB3	31:AH:134:SER:HA	1.65	0.79
57:BA:1038:C:C3'	57:BA:1039:G:H5''	2.12	0.79
42:AV:72:VAL:CG2	42:AV:85:LYS:HB3	2.11	0.79
57:AA:2866:U:C6	57:AA:2868:A:H1'	2.18	0.79
27:AD:129:ASN:H	27:AD:129:ASN:ND2	3.47	0.79
28:AE:179:GLU:HB3	28:AE:181:LEU:HD23	1.65	0.79
28:BE:131:ALA:HB2	57:BA:2580:U:H5'	1.63	0.79
30:BG:34:LEU:HD23	30:BG:99:MET:HE3	1.64	0.79
45:BY:25:GLY:HA3	45:BY:39:VAL:HG13	1.65	0.79
46:AZ:81:ARG:HB3	46:AZ:81:ARG:NH1	1.98	0.79
57:BA:336:C:H2'	57:BA:337:C:H6	1.78	0.79
53:A6:19:ARG:HG2	57:AA:2400:G:H4'	1.64	0.79
57:BA:1434:A:H61	57:BA:1558:A:H62	1.29	0.79
57:AA:1015:G:H8	57:AA:1015:G:H5'	1.47	0.79
57:AA:271(P):C:O2'	57:AA:271(Q):G:H5'	1.83	0.79
37:AQ:43:THR:OG1	37:AQ:46:GLN:HG3	1.83	0.79
27:BD:75:ILE:O	27:BD:118:VAL:HG23	1.82	0.79
30:BG:67:LYS:HZ2	51:B4:5:ILE:HD11	1.47	0.79
36:BP:18:ARG:HH11	36:BP:18:ARG:HB3	1.47	0.79
36:BP:50:ARG:HG2	36:BP:50:ARG:HH21	1.48	0.79
47:B0:14:ARG:HH11	47:B0:14:ARG:CB	1.95	0.79
31:BH:41:MET:CG	31:BH:43:VAL:HG13	2.13	0.79
47:B0:48:GLY:HA3	47:B0:80:HIS:ND1	1.97	0.79
57:AA:365:C:H5'	57:AA:365:C:H6	1.48	0.79
57:AA:336:C:H2'	57:AA:337:C:H6	1.75	0.79
57:BA:654(V):A:H3'	57:BA:655:A:H2'	1.63	0.79
30:AG:45:GLU:H	30:AG:88:ILE:HG21	1.48	0.78
36:AP:38:GLN:HG3	36:AP:39:LYS:H	1.46	0.78
41:AU:25:TRP:CZ3	57:AA:17:G:H4'	2.17	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:7:ARG:HH11	36:BP:7:ARG:CA	1.96	0.78
44:BX:64:LYS:HZ3	44:BX:73:ARG:HE	1.30	0.78
45:BY:8:LYS:HD2	45:BY:8:LYS:N	1.97	0.78
46:AZ:150:LEU:HD21	46:AZ:172:ALA:HB3	1.64	0.78
38:BR:10:LEU:HD22	38:BR:17:ARG:CD	2.12	0.78
41:BU:44:ASN:ND2	42:BV:75:PHE:HB3	1.98	0.78
57:AA:2121:G:H1	57:AA:2177:C:H42	1.30	0.78
52:B5:4:HIS:HB3	52:B5:5:PRO:CD	2.10	0.78
57:AA:184:C:H2'	57:AA:185:U:C6	2.18	0.78
31:AH:20:ALA:HB1	31:AH:21:PRO:CD	2.13	0.78
31:AH:41:MET:CG	31:AH:43:VAL:HG13	2.13	0.78
37:AQ:39:PRO:HD3	37:AQ:99:PRO:HG3	1.63	0.78
41:AU:34:LYS:HE2	41:AU:34:LYS:HA	1.63	0.78
36:BP:41:ARG:NH1	36:BP:45:LEU:HD12	1.97	0.78
38:AR:10:LEU:HD22	38:AR:17:ARG:CD	2.12	0.78
57:AA:1403:C:H5''	57:AA:1471:A:H1'	1.64	0.78
54:A7:34:ARG:HH11	54:A7:39:ARG:HG3	1.48	0.78
57:BA:2111:C:H1'	57:BA:2118:U:O4'	1.84	0.78
58:AB:3:C:H42	58:AB:118:G:H1	1.31	0.78
30:AG:46:ALA:CB	30:AG:82:LEU:HD11	2.06	0.78
36:AP:41:ARG:NH1	36:AP:45:LEU:HD12	1.99	0.78
30:BG:71:THR:HG21	57:BA:2312:U:H4'	1.64	0.78
57:BA:624:C:H2'	57:BA:625:G:H8	3.02	0.78
30:BG:111:LEU:HD13	30:BG:179:PRO:CG	2.14	0.78
32:BI:88:ILE:CD1	32:BI:142:VAL:HG13	2.14	0.78
39:BS:13:ARG:HG3	39:BS:14:VAL:H	1.48	0.78
46:AZ:119:GLU:HG3	46:AZ:122:ARG:HH11	1.48	0.78
42:BV:62:LEU:HD21	42:BV:95:LEU:HB2	1.63	0.78
57:AA:2543:G:H2'	57:AA:2544:G:C8	2.18	0.78
41:AU:83:LEU:HD22	41:AU:83:LEU:H	1.47	0.78
30:BG:41:GLN:HB2	30:BG:90:LEU:HB3	1.66	0.78
44:BX:64:LYS:HZ3	44:BX:73:ARG:NE	1.81	0.78
46:BZ:19:ARG:HH11	46:BZ:19:ARG:HG2	1.46	0.78
57:BA:1948:G:C8	57:BA:1948:G:H5'	2.18	0.78
57:BA:1887:C:H2'	57:BA:1888:G:H5''	1.63	0.78
28:BE:132:HIS:HB3	57:BA:744:G:OP1	1.84	0.78
31:BH:30:LYS:HE3	31:BH:81:GLU:N	1.97	0.78
57:BA:2524:G:H5'	57:BA:2524:G:H8	1.47	0.78
48:A1:45:ASN:ND2	48:A1:47:GLN:HE22	1.82	0.78
31:BH:170:ARG:H	31:BH:170:ARG:HD2	1.47	0.78
30:AG:145:THR:CG2	30:AG:148:MET:HB3	2.13	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:25:LYS:HD2	57:BA:2285:C:H41	1.48	0.78
46:BZ:61:LEU:HD23	46:BZ:61:LEU:H	1.48	0.78
57:BA:2537:U:H2'	57:BA:2538:C:C6	2.18	0.78
28:AE:131:ALA:HB2	57:AA:2580:U:H5'	1.65	0.78
57:AA:298:G:H5'	57:AA:299:A:OP1	1.84	0.78
30:AG:45:GLU:H	30:AG:88:ILE:HG13	1.49	0.78
39:AS:29:PHE:HE1	58:AB:6:C:O2'	1.67	0.78
39:BS:32:LEU:HD13	58:BB:31:C:H41	1.47	0.78
40:BT:64:ARG:HD2	40:BT:73:GLU:HG2	1.65	0.78
43:BW:6:ILE:HG13	43:BW:104:THR:HG23	1.66	0.78
46:AZ:43:GLU:O	46:AZ:47:VAL:HG23	1.82	0.78
57:AA:2111:C:H1'	57:AA:2118:U:O4'	1.83	0.78
57:AA:152:G:H1	57:AA:174:C:H42	1.29	0.78
57:AA:141:A:H8	57:AA:1408:C:HO2'	1.28	0.78
40:AT:65:LYS:HA	40:AT:65:LYS:HZ2	1.49	0.78
45:AY:8:LYS:HD2	45:AY:8:LYS:N	1.98	0.78
53:B6:27:LYS:HB3	53:B6:30:THR:HG22	1.64	0.78
27:BD:24:ILE:O	27:BD:25:THR:O	2.01	0.78
42:BV:18:LEU:HD22	42:BV:19:LYS:N	1.98	0.78
46:AZ:102:LEU:HD11	46:AZ:124:ILE:HG23	1.64	0.78
57:BA:365:C:H5'	57:BA:365:C:H6	1.47	0.78
55:A8:50:LEU:CD1	55:A8:51:ALA:H	1.95	0.78
57:BA:1014:U:C2'	57:BA:1015:G:H5''	2.14	0.78
57:BA:1019:U:H3	57:BA:1142(A):A:H62	1.32	0.78
30:BG:98:ARG:HG3	51:B4:1:MET:SD	2.24	0.78
40:BT:65:LYS:HZ2	40:BT:66:VAL:H	1.29	0.78
31:AH:170:ARG:H	31:AH:170:ARG:HD2	1.49	0.78
54:B7:34:ARG:NH1	54:B7:39:ARG:HG3	1.98	0.78
57:BA:902:C:H2'	57:BA:903:C:H6	1.49	0.78
36:AP:50:ARG:HH21	36:AP:50:ARG:HG2	1.48	0.77
57:BA:622:G:O2'	57:BA:623:G:H5'	1.84	0.77
30:BG:130:ASN:ND2	30:BG:161:THR:H	1.82	0.77
40:BT:28:VAL:HG22	40:BT:47:GLY:H	1.47	0.77
30:AG:122:PRO:HB3	30:AG:182:LYS:HA	1.64	0.77
42:AV:45:THR:O	42:AV:46:VAL:HG12	1.83	0.77
28:BE:69:LYS:HZ1	28:BE:90:THR:H	1.31	0.77
34:BN:1:MET:O	34:BN:2:LYS:HG3	1.84	0.77
39:BS:30:ARG:HH11	39:BS:35:ILE:HB	1.49	0.77
46:BZ:23:LYS:HD3	46:BZ:38:TYR:CE1	2.19	0.77
57:AA:544:G:H21	57:AA:547:A:H2'	1.49	0.77
32:AI:110:ASP:CG	32:AI:113:ARG:HB2	2.05	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:AS:29:PHE:CD1	58:AB:7:G:H4'	2.19	0.77
52:B5:3:LYS:HE3	52:B5:5:PRO:O	1.83	0.77
57:AA:2681:C:H5	57:AA:2725:A:N6	1.81	0.77
57:AA:1270:C:H5''	57:AA:1271:G:C5'	2.14	0.77
27:AD:172:TYR:HD1	27:AD:186:HIS:HA	1.50	0.77
27:AD:268:ARG:NH1	27:AD:268:ARG:HB3	1.99	0.77
45:AY:25:GLY:HA3	45:AY:39:VAL:HG13	1.67	0.77
42:BV:21:ARG:HG2	42:BV:91:TYR:HD2	1.48	0.77
57:BA:1697:G:H3'	57:BA:1698:A:H5''	1.65	0.77
46:BZ:53:ILE:HG22	46:BZ:71:VAL:HG23	1.67	0.77
55:A8:14:VAL:HG21	55:A8:22:VAL:HG12	1.66	0.77
41:AU:90:VAL:O	41:AU:92:ARG:N	2.17	0.77
57:BA:271(P):C:O2'	57:BA:271(Q):G:H5'	1.83	0.77
29:BF:40:GLN:NE2	29:BF:184:TYR:HB2	1.99	0.77
30:BG:124:SER:O	57:BA:2303:G:H4'	1.85	0.77
42:BV:45:THR:O	42:BV:46:VAL:HG12	1.85	0.77
51:B4:22:ILE:H	51:B4:22:ILE:HD12	1.49	0.77
57:AA:1639:U:O2'	57:AA:1640:C:H5''	1.84	0.77
29:AF:133:ASN:HA	29:AF:162:LEU:HD23	1.65	0.77
53:A6:35:GLU:HB3	53:A6:51:GLU:HB2	1.66	0.77
41:AU:93:LYS:HD3	57:AA:997:G:OP1	1.85	0.77
36:BP:16:ARG:CD	36:BP:18:ARG:H	1.94	0.77
41:BU:83:LEU:H	41:BU:83:LEU:HD22	1.48	0.77
41:BU:92:ARG:O	41:BU:94:ASN:N	2.18	0.77
48:A1:3:LYS:HE2	57:AA:1364:G:C8	2.19	0.77
51:A4:15:ILE:HA	51:A4:21:VAL:HG22	1.66	0.77
57:AA:1270:C:H5''	57:AA:1271:G:H5'	1.65	0.77
26:AC:50:ILE:HG22	26:AC:57:GLN:HE21	1.49	0.77
30:AG:111:LEU:HD13	30:AG:179:PRO:HG3	1.66	0.77
36:AP:7:ARG:CA	36:AP:7:ARG:HH11	1.97	0.77
37:AQ:10:ARG:NH1	37:AQ:10:ARG:HB2	2.00	0.77
42:AV:18:LEU:HD22	42:AV:19:LYS:N	1.99	0.77
57:BA:880:G:H1	57:BA:897:C:H42	1.30	0.77
42:BV:51:VAL:HG12	42:BV:52:VAL:N	1.99	0.77
27:AD:242:ARG:HH21	57:AA:1826:G:C4'	1.92	0.77
57:BA:603:A:H4'	57:BA:604:G:O5'	1.85	0.77
30:AG:109:VAL:HG12	30:AG:113:ARG:HD3	1.66	0.77
32:AI:126:TYR:O	32:AI:140:LEU:HB3	1.85	0.77
28:BE:24:THR:CG2	28:BE:184:VAL:HG23	2.14	0.77
28:BE:5:LEU:HB2	28:BE:51:PHE:HD2	1.50	0.77
32:BI:82:ARG:O	32:BI:89:TYR:HB2	1.85	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BT:34:VAL:O	40:BT:35:LYS:HB3	1.84	0.77
46:AZ:134:PRO:O	46:AZ:135:GLU:HG3	1.84	0.77
29:BF:133:ASN:HA	29:BF:162:LEU:HD23	1.67	0.77
51:A4:33:VAL:HG12	51:A4:34:GLU:H	1.47	0.77
36:AP:55:ARG:CG	36:AP:56:SER:H	1.96	0.77
45:AY:46:LYS:H	45:AY:62:GLU:HB2	1.49	0.77
36:BP:67:MET:N	57:BA:2415:G:H4'	2.00	0.77
28:BE:60:ASN:HB2	57:BA:2811:G:OP1	1.85	0.77
27:BD:32:SER:O	27:BD:36:PRO:HG3	1.84	0.77
32:BI:109:ILE:CG2	32:BI:114:LEU:HD11	2.15	0.77
45:BY:46:LYS:H	45:BY:62:GLU:HB2	1.49	0.77
57:BA:2298:A:H2'	57:BA:2299:G:O4'	1.85	0.77
57:AA:271(F):C:H2'	57:AA:271(G):C:H6	1.50	0.77
27:AD:43:ARG:HB3	27:AD:54:ARG:HB2	1.67	0.77
36:AP:16:ARG:CD	36:AP:18:ARG:H	1.95	0.77
51:B4:15:ILE:HA	51:B4:21:VAL:HG22	1.67	0.77
30:BG:96:ARG:HH21	30:BG:97:ASP:HB2	1.49	0.77
57:BA:2801(A):A:C4'	57:BA:2802:G:H5'	2.15	0.77
57:BA:1270:C:H5''	57:BA:1271:G:C5'	2.14	0.77
53:A6:54:ILE:O	53:A6:54:ILE:HD12	1.85	0.76
57:AA:1038:C:H3'	57:AA:1039:G:H5''	1.67	0.76
29:AF:169:ASN:HD21	57:AA:322:A:H3'	1.48	0.76
27:AD:35:LYS:NZ	27:AD:36:PRO:HD3	2.00	0.76
53:B6:35:GLU:HB3	53:B6:51:GLU:HB2	1.67	0.76
27:BD:121:PRO:HB3	27:BD:135:PHE:HE1	1.48	0.76
49:A2:63:VAL:HA	49:A2:66:GLU:HG2	1.67	0.76
27:AD:77:ALA:HB2	27:AD:97:TYR:HA	1.65	0.76
43:AW:6:ILE:HG13	43:AW:104:THR:HG23	1.65	0.76
30:BG:71:THR:CG2	57:BA:2312:U:H4'	2.15	0.76
57:BA:2866:U:C6	57:BA:2868:A:H1'	2.21	0.76
38:AR:3:HIS:HB2	57:AA:1654:A:P	2.25	0.76
57:AA:1657:C:H2'	57:AA:1658:C:H6	1.50	0.76
34:AN:66:LYS:HZ3	57:AA:1140:C:H5''	1.51	0.76
40:AT:88:ILE:HG22	40:AT:89:VAL:HG22	1.66	0.76
45:AY:28:LYS:HA	45:AY:38:ILE:HG22	1.67	0.76
45:AY:90:LEU:HG	45:AY:91:GLU:H	1.50	0.76
53:B6:54:ILE:O	53:B6:54:ILE:HD12	1.84	0.76
46:AZ:153:SER:HB2	46:AZ:163:LEU:HD13	1.67	0.76
57:AA:818:G:O2'	57:AA:819:A:H5''	3.14	0.76
37:AQ:32:TYR:HE1	37:AQ:111:GLU:HA	1.50	0.76
53:B6:19:ARG:HG2	57:BA:2400:G:H4'	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:A4:14:ILE:HA	51:A4:31:ILE:HB	1.66	0.76
57:AA:1014:U:C2'	57:AA:1015:G:H5''	2.15	0.76
57:AA:2120:G:H2'	57:AA:2121:G:H8	1.50	0.76
28:AE:61:ARG:H	28:AE:62:PRO:CD	1.98	0.76
30:AG:64:THR:OG1	30:AG:94:LEU:HD21	1.86	0.76
30:BG:132:ASN:HD22	57:BA:2303:G:H1'	1.50	0.76
36:BP:83:VAL:HG11	36:BP:112:LEU:HD21	1.67	0.76
57:AA:2298:A:H2'	57:AA:2299:G:O4'	1.86	0.76
51:A4:14:ILE:HG23	51:A4:31:ILE:HG21	1.66	0.76
29:AF:22:ALA:HB1	29:AF:26:ALA:CB	2.15	0.76
36:AP:18:ARG:HH11	36:AP:18:ARG:HB3	1.47	0.76
36:AP:71:VAL:HG12	36:AP:72:PRO:HD3	1.66	0.76
39:BS:97:ARG:NH2	39:BS:98:VAL:HA	2.00	0.76
45:BY:96:ILE:O	45:BY:97:ARG:HB2	1.84	0.76
57:BA:1542:A:H8	57:BA:1542:A:H3'	1.51	0.76
29:BF:139:PHE:HB2	29:BF:166:ALA:HB1	1.65	0.76
46:AZ:53:ILE:HG22	46:AZ:71:VAL:O	1.85	0.76
47:A0:43:THR:HG22	57:AA:2331:G:O2'	1.84	0.76
29:AF:24:LEU:HB3	29:AF:25:PRO:CD	2.10	0.76
30:AG:71:THR:HG22	30:AG:89:GLY:O	1.85	0.76
36:AP:16:ARG:HD3	36:AP:18:ARG:N	1.98	0.76
53:B6:16:CYS:SG	53:B6:48:VAL:HG21	2.25	0.76
27:BD:181:GLU:HA	27:BD:272:ALA:CB	2.16	0.76
32:BI:98:ALA:O	32:BI:109:ILE:HD13	1.85	0.76
52:B5:40:LYS:NZ	52:B5:46:CYS:HB3	2.00	0.76
28:AE:132:HIS:ND1	57:AA:1658:C:OP1	2.18	0.76
30:AG:71:THR:HG21	57:AA:2312:U:O2'	1.86	0.76
32:AI:79:ILE:CG2	32:AI:81:VAL:HG12	2.15	0.76
36:BP:30:THR:HG22	36:BP:31:ALA:N	2.00	0.76
57:AA:1639:U:C2'	57:AA:1640:C:H5''	2.15	0.76
36:AP:66:GLY:HA3	57:AA:2415:G:O3'	1.85	0.76
29:AF:68:LYS:HE2	57:AA:2444:G:OP2	1.84	0.76
32:AI:98:ALA:HA	32:AI:101:LEU:HD22	1.68	0.76
32:AI:82:ARG:O	32:AI:89:TYR:HB2	1.86	0.76
49:B2:13:ALA:O	49:B2:16:LEU:HB2	1.85	0.76
29:BF:157:VAL:CG2	29:BF:194:MET:HG2	2.15	0.76
40:BT:6:LEU:HA	40:BT:9:LEU:HD12	1.68	0.76
49:B2:55:ARG:NH1	57:BA:75:G:H4'	2.00	0.76
51:A4:22:ILE:HD12	51:A4:22:ILE:H	1.49	0.76
35:AO:120:GLU:OE2	35:AO:122:LEU:HD21	1.86	0.76
26:AC:48:LEU:HD11	26:AC:172:ILE:HG22	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AI:111:PRO:HG2	32:AI:112:LYS:HD2	1.66	0.76
36:AP:30:THR:HG22	36:AP:31:ALA:N	1.98	0.76
39:AS:74:ALA:HB1	39:AS:103:GLU:HB3	1.68	0.76
41:AU:90:VAL:HG22	42:AV:39:LEU:HG	1.68	0.76
46:BZ:81:ARG:HH11	46:BZ:81:ARG:CB	1.97	0.76
57:BA:1639:U:C2'	57:BA:1640:C:H5''	2.16	0.76
49:B2:55:ARG:HH11	57:BA:75:G:H4'	1.48	0.76
57:BA:914:C:H2'	57:BA:915:C:H5'	1.66	0.76
49:A2:46:GLN:CB	49:A2:49:LYS:HE3	2.16	0.76
49:A2:46:GLN:HB2	49:A2:49:LYS:HE3	1.66	0.76
53:A6:23:THR:HG21	57:AA:2419:U:H5'	1.68	0.76
28:AE:60:ASN:HB2	57:AA:2811:G:OP1	1.85	0.76
36:AP:83:VAL:HG11	36:AP:112:LEU:HD21	1.67	0.76
55:B8:50:LEU:CD1	55:B8:51:ALA:H	1.97	0.76
37:BQ:39:PRO:HD3	37:BQ:99:PRO:HG3	1.68	0.76
46:AZ:156:LYS:O	46:AZ:158:PRO:HD3	1.84	0.76
27:AD:35:LYS:HD2	27:AD:36:PRO:N	2.01	0.75
39:AS:25:ARG:HG3	39:AS:88:ASP:HB2	1.68	0.75
51:B4:14:ILE:HA	51:B4:31:ILE:HB	1.68	0.75
45:BY:10:GLY:HA2	45:BY:27:VAL:HG13	1.68	0.75
49:B2:2:LYS:HB3	57:BA:97:C:H5''	1.66	0.75
34:BN:73:THR:HG23	34:BN:82:LEU:HD11	1.66	0.75
27:AD:35:LYS:HZ3	27:AD:36:PRO:HD3	1.49	0.75
39:AS:52:SER:CB	39:AS:55:ALA:HB3	2.16	0.75
45:AY:7:VAL:HB	45:AY:8:LYS:CD	2.15	0.75
53:B6:23:THR:HG21	57:BA:2419:U:H5'	1.68	0.75
35:BO:49:ARG:HH21	57:BA:1423:G:H5'	98.72	0.75
26:BC:50:ILE:HG22	26:BC:57:GLN:HE21	1.51	0.75
42:BV:35:LEU:HB2	42:BV:57:VAL:HG13	1.66	0.75
46:AZ:119:GLU:HG3	46:AZ:122:ARG:NH1	2.01	0.75
57:BA:528:A:H2	57:BA:2043:C:H4'	1.49	0.75
48:B1:11:ARG:HB3	48:B1:11:ARG:HH11	1.51	0.75
57:BA:1678:G:N2	57:BA:1989:G:H22	1.83	0.75
29:AF:164:ARG:HG2	29:AF:164:ARG:HH11	1.51	0.75
37:AQ:13:GLN:HG3	57:AA:910:A:C5	2.22	0.75
27:AD:75:ILE:O	27:AD:118:VAL:HG23	1.86	0.75
43:AW:29:LEU:HD21	43:AW:33:ARG:HH21	1.52	0.75
45:AY:31:LEU:HB2	45:AY:32:PRO:HA	1.67	0.75
40:BT:88:ILE:HG22	40:BT:89:VAL:HG22	1.68	0.75
57:BA:2645:G:H3'	57:BA:2646:C:C5'	2.17	0.75
57:AA:212:G:O2'	57:AA:213:A:H5'	1.85	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BU:108:GLU:HG3	42:BV:44:LYS:HD3	1.68	0.75
48:A1:23:LYS:CD	48:A1:28:GLY:HA3	2.15	0.75
28:AE:203:LYS:HD2	28:AE:203:LYS:O	1.87	0.75
29:AF:40:GLN:NE2	29:AF:184:TYR:HB2	2.01	0.75
30:AG:43:LEU:HD21	30:AG:153:ARG:HD3	1.68	0.75
32:AI:142:VAL:HG12	32:AI:142:VAL:O	1.86	0.75
32:AI:88:ILE:CD1	32:AI:142:VAL:HG13	2.15	0.75
36:AP:105:LEU:HD12	36:AP:105:LEU:H	1.50	0.75
57:BA:1210:A:C8	57:BA:1210:A:H5'	2.21	0.75
35:BO:49:ARG:HH12	57:BA:1422:G:H4'	101.46	0.75
29:BF:22:ALA:HB1	29:BF:26:ALA:CB	2.15	0.75
36:BP:105:LEU:H	36:BP:105:LEU:HD12	1.50	0.75
52:A5:3:LYS:HE3	52:A5:5:PRO:O	1.85	0.75
46:AZ:165:VAL:HG12	46:AZ:166:SER:N	2.00	0.75
57:AA:2801(A):A:C4'	57:AA:2802:G:H5'	2.17	0.75
57:AA:1991:U:H2'	57:AA:1992:G:H5''	1.68	0.75
57:AA:880:G:H1	57:AA:897:C:H42	1.31	0.75
36:AP:58:THR:O	36:AP:61:ARG:NE	2.20	0.75
39:AS:30:ARG:HH11	39:AS:35:ILE:HB	1.52	0.75
42:AV:19:LYS:HZ3	42:AV:20:LEU:H	1.34	0.75
55:B8:59:LYS:HB2	55:B8:59:LYS:HZ2	1.49	0.75
57:BA:1038:C:H3'	57:BA:1039:G:H5''	1.67	0.75
47:B0:48:GLY:CA	47:B0:80:HIS:HD1	1.97	0.75
46:BZ:131:ARG:HG3	46:BZ:132:ASN:N	2.00	0.75
53:A6:5:VAL:HG13	53:A6:7:ILE:H	1.52	0.75
57:AA:1210:A:C8	57:AA:1210:A:H5'	2.19	0.75
27:AD:48:ARG:HG3	27:AD:48:ARG:HH11	1.52	0.75
30:AG:70:VAL:HG22	30:AG:90:LEU:HD12	1.67	0.75
35:AO:24:VAL:CG2	35:AO:33:ALA:HB2	2.17	0.75
36:AP:61:ARG:NH1	55:A8:13:ARG:HD2	2.01	0.75
44:AX:64:LYS:HZ3	44:AX:73:ARG:NE	1.83	0.75
57:BA:2120:G:H2'	57:BA:2121:G:H8	1.51	0.75
37:BQ:13:GLN:HG3	57:BA:910:A:C5	2.21	0.75
41:BU:90:VAL:HG12	41:BU:91:ASP:H	1.51	0.75
34:BN:2:LYS:HZ3	41:BU:95:LEU:HD21	1.51	0.75
42:AV:21:ARG:HG2	42:AV:91:TYR:HD2	1.46	0.75
46:BZ:94:GLU:HB3	46:BZ:95:PRO:HD2	1.67	0.75
27:BD:268:ARG:HB3	27:BD:268:ARG:NH1	2.02	0.75
55:A8:51:ALA:C	55:A8:53:PRO:HD2	2.07	0.75
30:AG:5:VAL:H	30:AG:8:LYS:HB3	1.50	0.75
36:BP:39:LYS:HD2	57:BA:806:C:OP2	1.85	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BI:126:TYR:O	32:BI:140:LEU:HB3	1.87	0.75
34:BN:39:ARG:HD3	34:BN:41:ASP:HB2	1.68	0.75
45:BY:39:VAL:HG12	45:BY:40:GLU:N	2.02	0.75
29:BF:74:ARG:HD3	57:BA:674:G:O2'	1.86	0.75
28:BE:179:GLU:HB3	28:BE:181:LEU:HD23	1.67	0.75
40:BT:65:LYS:HZ2	40:BT:66:VAL:N	1.85	0.75
45:BY:76:CYS:HB3	45:BY:96:ILE:CD1	2.16	0.75
52:B5:36:CYS:SG	52:B5:49:CYS:HB3	2.27	0.75
29:AF:192:LEU:CD2	29:AF:194:MET:HG3	2.17	0.75
55:A8:50:LEU:HD12	55:A8:51:ALA:N	2.02	0.75
30:AG:111:LEU:HD13	30:AG:179:PRO:CG	2.16	0.75
36:AP:63:PRO:HD2	57:AA:2394:C:OP1	1.86	0.75
57:BA:544:G:H21	57:BA:547:A:H2'	1.51	0.75
30:BG:108:ASN:O	30:BG:109:VAL:HG22	1.87	0.75
31:BH:90:LYS:HB3	31:BH:159:GLU:OE2	1.87	0.75
57:BA:654(Q):C:O2'	57:BA:654(R):C:H5'	1.87	0.75
57:AA:1014:U:H2'	57:AA:1015:G:H5''	1.69	0.74
57:AA:1038:C:H42	57:AA:1117:G:H1	1.30	0.74
27:AD:121:PRO:HB3	27:AD:135:PHE:HE1	1.52	0.74
39:AS:97:ARG:NH2	39:AS:98:VAL:HA	2.01	0.74
28:BE:69:LYS:NZ	28:BE:89:ASP:HA	2.02	0.74
54:B7:34:ARG:HH11	54:B7:39:ARG:HG3	1.51	0.74
57:BA:2464:C:HO2'	57:BA:2465:C:H6	1.31	0.74
32:AI:118:LYS:HG2	32:AI:119:PRO:CD	2.12	0.74
33:AJ:56:ASN:CB	33:AJ:83:TYR:HA	2.17	0.74
40:AT:34:VAL:O	40:AT:35:LYS:HB3	1.85	0.74
45:AY:95:LYS:HG2	45:AY:101:LYS:H	1.51	0.74
43:AW:91:GLY:HA2	57:AA:1614:A:N1	2.02	0.74
57:AA:2855:C:H2'	57:AA:2856:C:H6	1.52	0.74
57:AA:654(Q):C:O2'	57:AA:654(R):C:H5'	1.87	0.74
57:AA:1678:G:N2	57:AA:1989:G:H22	1.85	0.74
45:AY:19:LYS:HE3	57:AA:329:G:H1	1.52	0.74
28:BE:34:VAL:HG13	28:BE:48:GLN:HG2	1.69	0.74
41:BU:13:LYS:HE2	41:BU:13:LYS:N	2.02	0.74
36:BP:88:LEU:C	36:BP:90:ARG:H	1.87	0.74
49:A2:46:GLN:H	49:A2:49:LYS:CD	2.00	0.74
28:AE:69:LYS:HZ1	28:AE:90:THR:H	1.35	0.74
40:AT:28:VAL:CG1	40:AT:46:GLU:HA	2.14	0.74
44:AX:12:VAL:HG21	44:AX:17:ALA:HB1	1.69	0.74
55:B8:59:LYS:CB	55:B8:59:LYS:NZ	2.50	0.74
27:BD:172:TYR:CD1	27:BD:186:HIS:HA	2.23	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:135:LEU:HD11	30:BG:157:ILE:HD12	1.70	0.74
39:BS:12:PHE:O	39:BS:14:VAL:HG23	1.87	0.74
40:BT:100:TYR:HD2	40:BT:103:ARG:HH21	1.33	0.74
41:BU:90:VAL:HG12	41:BU:91:ASP:N	2.02	0.74
29:BF:39:TRP:O	29:BF:43:LYS:HG2	1.87	0.74
53:B6:10:LEU:CD2	53:B6:10:LEU:H	2.00	0.74
57:AA:1542:A:H3'	57:AA:1542:A:H8	1.50	0.74
57:BA:1991:U:H2'	57:BA:1992:G:H5''	1.70	0.74
49:B2:23:LYS:O	49:B2:27:GLU:HG3	1.88	0.74
41:AU:90:VAL:HG21	42:AV:47:VAL:HG21	1.69	0.74
57:BA:8:A:H2'	57:BA:9:U:C5	2.22	0.74
27:BD:35:LYS:HD2	27:BD:36:PRO:N	2.01	0.74
36:BP:55:ARG:CG	36:BP:56:SER:H	1.99	0.74
39:BS:74:ALA:HB1	39:BS:103:GLU:HB3	1.69	0.74
45:BY:31:LEU:HB2	45:BY:32:PRO:HA	1.70	0.74
57:BA:271(F):C:H2'	57:BA:271(G):C:H6	1.52	0.74
57:AA:2240:C:O2'	57:AA:2241:A:H5'	1.87	0.74
46:BZ:157:LEU:H	46:BZ:157:LEU:HD23	1.51	0.74
57:AA:902:C:H2'	57:AA:903:C:H6	1.52	0.74
37:BQ:32:TYR:HE1	37:BQ:111:GLU:HA	1.51	0.74
48:A1:3:LYS:HE2	57:AA:1364:G:N7	2.03	0.74
30:BG:40:ASN:ND2	30:BG:91:ARG:HB2	2.01	0.74
49:A2:51:ARG:HB2	49:A2:55:ARG:NH2	2.02	0.74
36:AP:88:LEU:C	36:AP:90:ARG:H	1.89	0.74
49:A2:47:ASN:HD22	57:AA:95:G:H1'	1.53	0.74
41:AU:92:ARG:NE	57:AA:996:A:H4'	2.03	0.74
57:BA:1014:U:H2'	57:BA:1015:G:H5''	1.68	0.74
27:BD:176:ARG:HG2	27:BD:176:ARG:HH11	1.52	0.74
36:BP:16:ARG:HD3	36:BP:18:ARG:N	1.98	0.74
40:BT:89:VAL:HG11	40:BT:91:ARG:NE	2.02	0.74
45:BY:28:LYS:HA	45:BY:38:ILE:HG22	1.68	0.74
30:AG:161:THR:HG22	30:AG:163:ALA:N	1.97	0.74
57:BA:2681:C:H5	57:BA:2725:A:N6	1.83	0.74
30:AG:91:ARG:C	30:AG:91:ARG:HD2	2.08	0.74
31:AH:83:TYR:HA	31:AH:135:GLY:H	1.53	0.74
36:AP:35:HIS:H	57:AA:1190:G:H5'	1.53	0.74
39:AS:35:ILE:HD11	39:AS:99:LYS:HE2	1.69	0.74
41:AU:90:VAL:HG12	41:AU:91:ASP:H	1.53	0.74
42:BV:81:TYR:CE2	57:BA:1187:G:H5''	2.23	0.74
57:BA:657:U:H2'	57:BA:658:C:C6	2.23	0.74
41:BU:90:VAL:HG22	42:BV:39:LEU:HG	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BV:18:LEU:CD2	42:BV:19:LYS:H	2.01	0.74
57:AA:1318:C:H3'	57:AA:1319:G:H5''	1.69	0.74
36:AP:25:SER:O	36:AP:30:THR:HG23	1.88	0.74
30:BG:18:GLU:HG3	30:BG:22:ARG:HG3	1.67	0.74
36:BP:144:GLU:N	36:BP:145:PRO:HD3	2.03	0.74
57:BA:2795:G:H22	57:BA:2802:G:H21	1.35	0.74
52:A5:40:LYS:NZ	52:A5:46:CYS:HB3	2.01	0.74
32:AI:134:PRO:O	32:AI:135:GLU:HG2	1.88	0.74
57:BA:848:G:H8	57:BA:848:G:H5'	1.51	0.74
57:BA:2294:C:H42	57:BA:2338:G:H1	1.36	0.74
57:AA:1396:U:H2'	57:AA:1396:U:O2	1.87	0.74
57:AA:622:G:O2'	57:AA:623:G:H5'	1.87	0.74
49:A2:46:GLN:HB3	57:AA:95:G:H4'	1.70	0.74
29:AF:74:ARG:CD	57:AA:674:G:H1'	2.18	0.74
31:AH:8:PRO:O	31:AH:9:ILE:HG22	1.88	0.74
44:AX:12:VAL:HG22	44:AX:27:THR:O	1.88	0.74
28:BE:203:LYS:O	28:BE:203:LYS:HD2	1.88	0.74
30:BG:95:ARG:O	30:BG:96:ARG:O	2.06	0.74
45:BY:95:LYS:HG2	45:BY:101:LYS:N	2.03	0.74
57:AA:2491:U:H4'	57:AA:2570:G:OP1	1.88	0.74
54:B7:45:ALA:O	54:B7:46:VAL:HG23	1.88	0.74
29:AF:157:VAL:CG2	29:AF:194:MET:HG2	2.17	0.74
53:A6:10:LEU:H	53:A6:10:LEU:CD2	2.01	0.74
35:BO:120:GLU:OE2	35:BO:122:LEU:HD21	1.87	0.74
57:AA:848:G:H5'	57:AA:848:G:H8	1.52	0.73
40:AT:28:VAL:HG22	40:AT:47:GLY:H	1.49	0.73
55:B8:51:ALA:C	55:B8:53:PRO:HD2	2.08	0.73
39:BS:52:SER:CB	39:BS:55:ALA:HB3	2.18	0.73
40:BT:91:ARG:HA	40:BT:117:ASP:H	1.52	0.73
46:AZ:42:VAL:HG13	46:AZ:43:GLU:H	1.53	0.73
38:AR:92:GLY:O	57:AA:2880:C:H1'	1.88	0.73
27:AD:176:ARG:HG2	27:AD:176:ARG:HH11	1.53	0.73
28:AE:46:ALA:CB	28:AE:82:ARG:HA	2.18	0.73
45:AY:39:VAL:HG12	45:AY:40:GLU:N	2.03	0.73
51:B4:14:ILE:HG23	51:B4:31:ILE:HG21	1.68	0.73
57:BA:2313:C:H2'	57:BA:2314:C:C6	2.21	0.73
28:BE:61:ARG:H	28:BE:62:PRO:CD	1.99	0.73
32:BI:134:PRO:O	32:BI:135:GLU:HG2	1.88	0.73
37:BQ:10:ARG:NH1	37:BQ:10:ARG:HB2	2.02	0.73
47:B0:43:THR:HG22	57:BA:2331:G:O2'	1.88	0.73
57:AA:8:A:H2'	57:AA:9:U:C5	2.22	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:AT:85:LYS:HB3	40:AT:85:LYS:HZ2	1.52	0.73
57:BA:782:A:H5'	57:BA:783:A:C2	2.23	0.73
39:BS:36:TYR:HD1	39:BS:36:TYR:H	1.35	0.73
41:BU:90:VAL:HG21	42:BV:47:VAL:HG21	1.69	0.73
57:AA:315:G:H2'	57:AA:316:C:C6	2.24	0.73
30:AG:77:ILE:HG23	30:AG:77:ILE:O	1.88	0.73
42:AV:51:VAL:HG12	42:AV:52:VAL:N	2.02	0.73
26:BC:48:LEU:HD11	26:BC:172:ILE:HG22	1.69	0.73
27:BD:172:TYR:HD1	27:BD:186:HIS:HA	1.51	0.73
30:BG:141:PHE:O	30:BG:144:ILE:HG22	1.87	0.73
44:BX:12:VAL:HG21	44:BX:17:ALA:HB1	1.69	0.73
42:BV:18:LEU:HD13	42:BV:19:LYS:H	1.54	0.73
57:BA:1846:G:H5'	57:BA:1846:G:H8	1.53	0.73
55:A8:56:GLU:O	55:A8:59:LYS:N	2.19	0.73
55:A8:16:ILE:HD12	55:A8:57:ARG:HG2	1.70	0.73
57:AA:672:C:C2'	57:AA:673:C:H5''	2.18	0.73
57:AA:782:A:H5'	57:AA:783:A:C2	2.23	0.73
27:AD:79:VAL:HG21	27:AD:111:LEU:CD1	2.18	0.73
32:AI:92:VAL:O	32:AI:119:PRO:HA	1.87	0.73
57:BA:1003:G:N2	57:BA:1038:C:H42	42.30	0.73
30:BG:6:ALA:HB1	30:BG:10:LYS:HD2	1.71	0.73
31:BH:83:TYR:HA	31:BH:135:GLY:H	1.52	0.73
45:BY:95:LYS:HG2	45:BY:101:LYS:H	1.52	0.73
46:AZ:81:ARG:HH11	46:AZ:81:ARG:CB	2.01	0.73
36:AP:64:LYS:HE2	57:AA:631:A:OP1	1.88	0.73
27:AD:172:TYR:CD1	27:AD:186:HIS:HA	2.22	0.73
30:AG:140:ILE:HD12	30:AG:141:PHE:N	2.03	0.73
39:AS:11:LYS:HD2	39:AS:11:LYS:N	2.03	0.73
38:BR:3:HIS:HB2	57:BA:1654:A:P	2.28	0.73
40:BT:38:ASN:HD22	40:BT:40:THR:HG23	1.53	0.73
40:BT:54:ARG:HA	40:BT:59:THR:HB	1.70	0.73
45:BY:39:VAL:HG12	45:BY:40:GLU:H	1.53	0.73
27:AD:259:THR:HG22	57:AA:1798:U:C5'	2.19	0.73
27:AD:259:THR:HG21	57:AA:1803:A:O2'	1.89	0.73
52:B5:46:CYS:SG	52:B5:47:PRO:HD2	2.28	0.73
57:BA:272(J):C:O2'	57:BA:274:G:H5'	1.87	0.73
57:BA:654(S):G:O5'	57:BA:654(T):C:H5''	1.88	0.73
44:AX:12:VAL:CG2	44:AX:17:ALA:HB1	2.19	0.73
57:BA:672:C:O2'	57:BA:673:C:H5''	1.89	0.73
27:BD:46:GLN:OE1	27:BD:46:GLN:N	2.22	0.73
32:BI:123:LEU:HD11	32:BI:144:VAL:HG22	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B5:54:GLY:C	52:B5:55:ARG:HE	1.91	0.73
57:AA:2219:G:O2'	57:AA:2220:G:H5'	1.89	0.73
27:AD:71:ASP:CB	27:AD:103:ARG:HH22	2.02	0.73
27:AD:70:TRP:HZ3	27:AD:146:GLU:CD	1.91	0.73
27:AD:46:GLN:OE1	27:AD:46:GLN:N	2.22	0.73
40:AT:35:LYS:O	40:AT:36:GLU:HB3	1.89	0.73
40:AT:54:ARG:HA	40:AT:59:THR:HB	1.69	0.73
36:BP:63:PRO:HD2	57:BA:2394:C:OP1	1.88	0.73
58:BB:3:C:H42	58:BB:118:G:H1	1.34	0.73
26:BC:34:ALA:HB1	26:BC:40:GLU:HG3	1.70	0.73
40:BT:28:VAL:CG1	40:BT:46:GLU:HA	2.14	0.73
46:BZ:15:PRO:O	46:BZ:19:ARG:HG3	1.89	0.73
57:AA:1846:G:H8	57:AA:1846:G:H5'	1.53	0.73
31:BH:50:VAL:HG12	31:BH:51:ARG:N	2.02	0.73
46:BZ:53:ILE:HG22	46:BZ:71:VAL:O	1.89	0.73
32:AI:66:GLU:OE2	32:AI:134:PRO:HD2	1.88	0.73
48:A1:5:CYS:SG	48:A1:62:VAL:HG23	2.29	0.73
57:AA:330:A:C2	57:AA:1210:A:H2'	2.24	0.73
29:AF:20:LEU:HD12	29:AF:199:TRP:HZ3	1.53	0.73
36:AP:67:MET:N	57:AA:2415:G:H4'	2.02	0.73
40:AT:70:VAL:HG12	40:AT:71:GLY:N	2.04	0.73
42:AV:18:LEU:CD2	42:AV:19:LYS:H	2.01	0.73
45:BY:19:LYS:HE3	57:BA:329:G:H1	1.53	0.73
30:BG:169:ALA:O	30:BG:173:LEU:HG	1.89	0.73
38:BR:92:GLY:O	57:BA:2880:C:H1'	1.89	0.73
43:BW:34:ASN:ND2	52:B5:39:MET:HB2	2.04	0.73
57:AA:272(J):C:O2'	57:AA:274:G:H5'	1.88	0.73
28:AE:132:HIS:HB3	57:AA:744:G:OP1	1.88	0.73
51:A4:3:GLU:HG2	58:AB:43:C:OP1	1.89	0.73
29:AF:4:VAL:HG22	29:AF:19:GLU:OE1	1.89	0.73
34:AN:48:MET:HE3	34:AN:48:MET:H	1.54	0.73
35:AO:88:ASN:HD21	35:AO:90:GLN:HB2	1.53	0.73
36:AP:144:GLU:N	36:AP:145:PRO:HD3	2.03	0.73
42:AV:35:LEU:HB2	42:AV:57:VAL:HG13	1.70	0.73
45:AY:76:CYS:HB3	45:AY:96:ILE:CD1	2.19	0.73
55:B8:16:ILE:HD12	55:B8:57:ARG:HG2	1.71	0.73
55:B8:50:LEU:HD12	55:B8:51:ALA:N	2.04	0.73
57:BA:672:C:H2'	57:BA:673:C:H5'	1.71	0.73
35:BO:49:ARG:NH2	57:BA:1423:G:C5'	97.65	0.73
57:AA:2524:G:H5'	57:AA:2524:G:H8	1.52	0.73
57:AA:2397:G:N2	57:AA:2420:C:H1'	2.04	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:AS:55:ALA:CB	58:AB:117:G:H5'	2.17	0.72
57:BA:1657:C:H2'	57:BA:1658:C:H6	1.52	0.72
36:BP:32:THR:HG21	36:BP:37:GLY:CA	2.19	0.72
36:BP:58:THR:O	36:BP:61:ARG:NE	2.21	0.72
36:BP:62:LEU:HB2	57:BA:2393:A:H5'	1.71	0.72
45:BY:25:GLY:HA3	45:BY:39:VAL:CG1	2.19	0.72
29:BF:122:LYS:HA	29:BF:122:LYS:HE2	1.69	0.72
34:AN:73:THR:HG23	34:AN:82:LEU:HD11	1.69	0.72
53:A6:25:LYS:HD2	57:AA:2285:C:H41	1.52	0.72
30:AG:128:ARG:NH1	57:AA:2315:G:H21	1.86	0.72
32:AI:77:LEU:HD21	32:AI:79:ILE:HB	1.69	0.72
34:AN:58:ASP:OD1	34:AN:124:ALA:HB1	1.89	0.72
39:AS:12:PHE:O	39:AS:14:VAL:HG23	1.89	0.72
32:BI:109:ILE:HG21	32:BI:114:LEU:HD11	1.71	0.72
40:BT:60:THR:HG22	40:BT:77:PRO:HA	1.71	0.72
40:BT:91:ARG:CB	40:BT:116:ALA:HA	2.17	0.72
41:BU:92:ARG:HB3	42:BV:11:GLN:NE2	2.04	0.72
57:AA:2645:G:H3'	57:AA:2646:C:C5'	2.18	0.72
57:BA:2158:A:H4'	57:BA:2159:G:C5'	2.17	0.72
57:AA:2158:A:H4'	57:AA:2159:G:C5'	2.17	0.72
57:BA:1396:U:H2'	57:BA:1396:U:O2	1.87	0.72
57:AA:2712:U:H1'	57:AA:2712(A):A:C8	2.24	0.72
48:A1:44:PRO:HB2	48:A1:46:LEU:HD12	1.71	0.72
57:BA:2219:G:O2'	57:BA:2220:G:H5'	1.89	0.72
55:A8:59:LYS:NZ	55:A8:59:LYS:CB	2.51	0.72
34:AN:39:ARG:HD3	34:AN:41:ASP:HB2	1.69	0.72
36:AP:101:VAL:HG13	36:AP:106:LEU:HD23	1.71	0.72
36:AP:99:LEU:HA	36:AP:102:ARG:HH22	1.54	0.72
57:BA:141:A:H8	57:BA:1408:C:HO2'	1.37	0.72
29:BF:22:ALA:O	29:BF:26:ALA:HB2	1.89	0.72
39:BS:25:ARG:HG3	39:BS:88:ASP:HB2	1.71	0.72
38:AR:10:LEU:HB3	38:AR:17:ARG:CD	2.19	0.72
41:AU:108:GLU:HG3	42:AV:44:LYS:HD3	1.70	0.72
57:AA:1997:G:O2'	57:AA:1998:G:H5'	1.89	0.72
57:BA:271(X):G:C2'	57:BA:271(Y):U:H5''	2.19	0.72
57:BA:2855:C:H2'	57:BA:2856:C:H6	1.54	0.72
28:AE:34:VAL:HG13	28:AE:48:GLN:HG2	1.71	0.72
30:AG:131:TYR:H	30:AG:159:VAL:HG13	1.54	0.72
53:B6:15:GLU:HG2	53:B6:16:CYS:O	1.90	0.72
57:BA:2397:G:N2	57:BA:2420:C:H1'	2.05	0.72
30:BG:137:GLU:HA	30:BG:152:LEU:HD12	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:25:SER:O	36:BP:30:THR:HG23	1.88	0.72
40:BT:70:VAL:HG12	40:BT:71:GLY:N	2.04	0.72
44:BX:12:VAL:CG2	44:BX:17:ALA:HB1	2.18	0.72
46:BZ:22:GLY:O	46:BZ:41:LEU:HB2	1.89	0.72
46:BZ:152:ALA:HA	46:BZ:167:PRO:HB2	1.70	0.72
36:BP:85:LEU:HD21	36:BP:116:GLY:O	1.90	0.72
37:BQ:60:ARG:HG2	46:BZ:179:ASP:OD1	1.88	0.72
38:BR:11:ASN:O	38:BR:12:ARG:HG3	1.88	0.72
31:AH:90:LYS:HB3	31:AH:159:GLU:OE2	1.88	0.72
30:AG:51:ARG:HA	30:AG:51:ARG:NE	2.04	0.72
36:AP:32:THR:HG21	36:AP:37:GLY:CA	2.19	0.72
40:AT:91:ARG:CB	40:AT:116:ALA:HA	2.19	0.72
40:AT:22:PHE:HD2	40:AT:22:PHE:H	1.37	0.72
41:AU:90:VAL:HG12	41:AU:91:ASP:N	2.04	0.72
27:BD:77:ALA:CB	27:BD:97:TYR:HA	2.19	0.72
36:BP:97:PRO:HD3	36:BP:126:VAL:O	1.88	0.72
57:BA:1884:A:H2'	57:BA:1885:A:C5'	2.09	0.72
51:A4:34:GLU:O	51:A4:35:VAL:HG23	1.90	0.72
55:A8:14:VAL:HG23	55:A8:24:ALA:HB2	1.71	0.72
27:AD:48:ARG:HG3	27:AD:48:ARG:NH1	2.05	0.72
28:AE:5:LEU:HB2	28:AE:51:PHE:HD2	1.53	0.72
30:AG:145:THR:HG21	30:AG:148:MET:HB3	1.72	0.72
32:AI:92:VAL:HA	32:AI:96:ASP:HB2	1.71	0.72
42:AV:81:TYR:CE2	57:AA:1187:G:H5''	2.24	0.72
43:AW:59:VAL:HG12	43:AW:60:ASN:N	2.03	0.72
39:BS:11:LYS:N	39:BS:11:LYS:HD2	2.04	0.72
40:BT:27:THR:HG23	40:BT:28:VAL:H	1.54	0.72
40:BT:3:ARG:HE	57:BA:2876:G:H4'	1.54	0.72
41:BU:93:LYS:HD3	57:BA:997:G:OP1	1.88	0.72
57:BA:2590:A:O2'	57:BA:2591:C:H5'	1.89	0.72
57:AA:676:A:H2	57:AA:802:A:H61	1.37	0.72
35:AO:49:ARG:HH22	57:AA:1423:G:H5'	97.83	0.72
46:AZ:110:GLY:HA2	46:AZ:146:ILE:HG23	1.70	0.72
57:AA:654(S):G:O5'	57:AA:654(T):C:H5''	1.89	0.72
30:AG:173:LEU:HD22	30:AG:178:PHE:CE1	2.25	0.72
55:B8:6:THR:CG2	55:B8:63:PRO:HD3	2.20	0.72
36:BP:33:ARG:O	36:BP:35:HIS:O	2.08	0.72
41:BU:102:GLU:HG3	42:BV:2:PHE:CZ	2.25	0.72
43:BW:29:LEU:HD21	43:BW:33:ARG:HH21	1.54	0.72
46:AZ:69:THR:HG22	46:AZ:90:VAL:HG22	1.70	0.72
57:BA:212:G:O2'	57:BA:213:A:H5'	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2761:G:C3'	57:BA:2762:G:H5''	2.20	0.72
57:AA:330:A:HO2'	57:AA:331:A:H8	1.36	0.72
28:AE:59:VAL:HG21	28:AE:63:LEU:HA	1.71	0.72
55:B8:61:LEU:HD12	55:B8:61:LEU:N	2.04	0.72
27:BD:24:ILE:HG12	27:BD:25:THR:N	2.05	0.72
28:BE:51:PHE:HD1	28:BE:52:LEU:N	1.87	0.72
29:BF:28:ILE:HD13	29:BF:28:ILE:H	1.54	0.72
29:BF:4:VAL:HG22	29:BF:19:GLU:OE1	1.90	0.72
36:BP:146:VAL:HG22	36:BP:147:LEU:N	2.05	0.72
30:AG:160:VAL:HG12	30:AG:161:THR:N	2.03	0.72
31:BH:43:VAL:CG1	31:BH:52:VAL:HG22	2.18	0.72
48:A1:45:ASN:HD21	48:A1:47:GLN:NE2	1.86	0.72
57:BA:2310:A:O2'	57:BA:2311:A:H5'	1.89	0.72
57:AA:2761:G:C3'	57:AA:2762:G:H5''	2.19	0.72
57:AA:1039:G:H2'	57:AA:1040:C:C6	2.25	0.72
36:AP:78:PRO:HA	36:AP:110:TYR:CE2	2.25	0.72
40:AT:16:ARG:HH12	40:AT:19:LEU:HD21	1.54	0.72
53:B6:5:VAL:HG13	53:B6:7:ILE:H	1.54	0.72
55:B8:56:GLU:O	55:B8:59:LYS:N	2.22	0.72
30:BG:96:ARG:HH21	30:BG:97:ASP:CB	2.02	0.72
35:BO:90:GLN:O	35:BO:91:LEU:HB2	1.90	0.72
45:BY:87:LYS:O	45:BY:88:LYS:HB2	1.88	0.72
45:BY:88:LYS:NZ	45:BY:93:GLY:HA3	2.04	0.72
53:A6:15:GLU:CD	53:A6:44:ARG:HH12	1.93	0.72
49:A2:63:VAL:O	49:A2:66:GLU:HG2	1.89	0.72
55:A8:29:LYS:HD3	55:A8:44:LYS:HG2	1.72	0.72
55:B8:29:LYS:HD3	55:B8:44:LYS:HG2	1.71	0.72
49:A2:46:GLN:O	49:A2:49:LYS:HG3	1.90	0.72
27:AD:35:LYS:N	27:AD:36:PRO:HD2	2.05	0.72
31:AH:66:GLY:HA2	31:AH:69:ARG:HB3	1.71	0.72
30:BG:111:LEU:HB2	30:BG:112:PRO:HD3	1.71	0.72
57:BA:2240:C:O2'	57:BA:2241:A:H5'	1.90	0.72
29:BF:164:ARG:HH11	29:BF:164:ARG:HG2	1.55	0.72
30:AG:47:LYS:H	30:AG:51:ARG:HG3	1.55	0.71
31:AH:9:ILE:HG23	31:AH:9:ILE:O	1.90	0.71
42:AV:29:PRO:O	42:AV:61:VAL:HG22	1.90	0.71
45:AY:95:LYS:HG2	45:AY:101:LYS:N	2.04	0.71
45:AY:10:GLY:HA2	45:AY:27:VAL:HG13	1.70	0.71
45:AY:39:VAL:HG12	45:AY:40:GLU:H	1.54	0.71
53:B6:15:GLU:CD	53:B6:44:ARG:HH12	1.93	0.71
57:BA:1421:G:O2'	57:BA:1422:G:H5'	2.41	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:121:PRO:HB3	27:BD:135:PHE:CE1	2.24	0.71
34:BN:58:ASP:OD1	34:BN:124:ALA:HB1	1.89	0.71
52:B5:54:GLY:CA	52:B5:55:ARG:HE	2.03	0.71
57:AA:208:C:H2'	57:AA:209:C:C6	2.25	0.71
57:AA:1542:A:C8	57:AA:1542:A:H3'	2.25	0.71
57:AA:1402:C:H2'	57:AA:1403:C:O4'	2.89	0.71
41:AU:25:TRP:CH2	57:AA:17:G:H4'	2.25	0.71
46:AZ:31:ARG:HG2	58:AB:106:G:H5''	1.70	0.71
37:AQ:1:MET:O	37:AQ:2:LEU:HB2	1.88	0.71
45:AY:25:GLY:HA3	45:AY:39:VAL:CG1	2.21	0.71
36:BP:23:PRO:HB2	36:BP:33:ARG:CD	2.20	0.71
39:BS:35:ILE:HD11	39:BS:99:LYS:HE2	1.71	0.71
40:BT:65:LYS:NZ	40:BT:66:VAL:H	1.87	0.71
45:BY:7:VAL:HB	45:BY:8:LYS:CD	2.19	0.71
45:BY:7:VAL:HB	45:BY:8:LYS:CE	2.20	0.71
31:BH:66:GLY:HA2	31:BH:69:ARG:HB3	1.72	0.71
46:BZ:163:LEU:H	46:BZ:163:LEU:CD2	2.02	0.71
29:BF:192:LEU:CD2	29:BF:194:MET:HG3	2.19	0.71
57:BA:1997:G:O2'	57:BA:1998:G:H5'	1.89	0.71
30:AG:152:LEU:HD23	30:AG:152:LEU:N	2.04	0.71
31:AH:7:LEU:HD22	31:AH:65:HIS:CE1	2.25	0.71
35:AO:4:PRO:O	35:AO:5:GLN:HB2	1.90	0.71
36:AP:101:VAL:HA	36:AP:107:LYS:H	1.55	0.71
41:AU:92:ARG:HB3	42:AV:11:GLN:NE2	2.05	0.71
47:B0:25:ARG:HD2	47:B0:29:GLN:NE2	2.05	0.71
27:BD:145:VAL:HG12	27:BD:146:GLU:O	1.89	0.71
36:BP:101:VAL:HG13	36:BP:106:LEU:HD23	1.71	0.71
37:BQ:1:MET:O	37:BQ:2:LEU:HB2	1.91	0.71
40:BT:28:VAL:HG13	40:BT:46:GLU:CA	2.16	0.71
31:BH:7:LEU:HD21	31:BH:69:ARG:HD2	1.71	0.71
36:BP:88:LEU:O	36:BP:90:ARG:N	2.23	0.71
27:AD:24:ILE:HG12	27:AD:25:THR:N	2.03	0.71
34:AN:62:VAL:HG11	34:AN:67:LEU:HD21	1.71	0.71
36:AP:48:PRO:HG2	36:AP:49:ARG:N	2.05	0.71
40:AT:16:ARG:NH1	40:AT:19:LEU:HD21	2.04	0.71
45:AY:7:VAL:HB	45:AY:8:LYS:CE	2.19	0.71
29:BF:108:LYS:HD2	29:BF:112:MET:HE2	1.70	0.71
29:BF:66:PRO:O	29:BF:67:GLN:HB3	1.90	0.71
29:BF:9:ILE:HG22	29:BF:11:VAL:O	1.90	0.71
32:BI:110:ASP:CG	32:BI:113:ARG:HB2	2.10	0.71
52:A5:48:GLU:O	52:A5:49:CYS:SG	2.48	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:A6:15:GLU:HG2	53:A6:16:CYS:O	1.89	0.71
38:BR:10:LEU:HB3	38:BR:17:ARG:CD	2.19	0.71
43:AW:96:ILE:CD1	57:AA:2012:G:H4'	2.19	0.71
26:AC:34:ALA:HB1	26:AC:40:GLU:HG3	1.72	0.71
28:AE:111:ARG:HD2	28:AE:160:TYR:CE1	2.25	0.71
39:AS:23:ARG:HB3	39:AS:24:LEU:HD22	1.71	0.71
40:BT:5:ALA:HB3	57:BA:2875:C:O2'	1.90	0.71
36:BP:101:VAL:HA	36:BP:107:LYS:H	1.55	0.71
45:BY:95:LYS:HE2	45:BY:101:LYS:H	1.53	0.71
57:AA:2795:G:H22	57:AA:2802:G:H21	1.35	0.71
54:B7:5:TRP:CD1	54:B7:7:PRO:HD3	2.25	0.71
46:BZ:125:LEU:HG	46:BZ:164:ALA:HB3	1.71	0.71
37:AQ:27:VAL:HG12	37:AQ:28:ALA:H	1.55	0.71
35:AO:93:PRO:HD3	35:AO:114:ILE:HD11	1.73	0.71
54:A7:5:TRP:CD1	54:A7:7:PRO:HD3	2.26	0.71
47:A0:25:ARG:HD2	47:A0:29:GLN:NE2	2.06	0.71
57:AA:1003:G:N2	57:AA:1038:C:H42	42.32	0.71
57:AA:2313:C:H2'	57:AA:2314:C:C6	2.26	0.71
57:AA:545:C:H2'	57:AA:547:A:H4'	1.72	0.71
27:AD:77:ALA:CB	27:AD:97:TYR:HA	2.20	0.71
28:AE:51:PHE:HD1	28:AE:52:LEU:N	1.89	0.71
32:AI:88:ILE:HD11	32:AI:142:VAL:HG22	1.72	0.71
34:AN:17:ASP:OD1	34:AN:56:ASN:HB3	1.90	0.71
57:BA:2359:C:H2'	57:BA:2360:A:H8	1.56	0.71
27:BD:48:ARG:HH11	27:BD:48:ARG:HG3	1.56	0.71
27:BD:43:ARG:CB	27:BD:54:ARG:HB2	2.21	0.71
57:BA:2491:U:H4'	57:BA:2570:G:OP1	1.90	0.71
46:BZ:108:PRO:HB3	46:BZ:144:LEU:CD2	2.20	0.71
29:AF:132:VAL:HG22	29:AF:133:ASN:H	1.55	0.71
34:BN:73:THR:CG2	34:BN:82:LEU:HD11	2.20	0.71
52:B5:16:ARG:NH1	52:B5:17:ASP:OD1	2.24	0.71
57:AA:271(X):G:C2'	57:AA:271(Y):U:H5''	2.19	0.71
57:AA:927:G:H5'	57:AA:928:G:OP2	1.90	0.71
41:AU:102:GLU:HG3	42:AV:2:PHE:CZ	2.26	0.71
45:AY:88:LYS:NZ	45:AY:93:GLY:HA3	2.05	0.71
45:AY:96:ILE:O	45:AY:97:ARG:HB2	1.90	0.71
57:BA:184:C:H2'	57:BA:185:U:H6	1.54	0.71
57:BA:2313:C:H2'	57:BA:2314:C:H6	1.55	0.71
27:BD:79:VAL:HG21	27:BD:111:LEU:CD1	2.19	0.71
35:BO:113:LYS:O	35:BO:117:LEU:HB2	1.91	0.71
40:BT:35:LYS:O	40:BT:36:GLU:HB3	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BH:7:LEU:HD22	31:BH:65:HIS:CE1	2.26	0.71
46:AZ:103:ARG:O	46:AZ:138:GLU:HA	1.89	0.71
57:BA:1542:A:C8	57:BA:1542:A:H3'	2.25	0.71
38:AR:11:ASN:O	38:AR:12:ARG:HG3	1.91	0.71
49:A2:25:VAL:O	49:A2:29:LYS:HG2	1.89	0.71
28:AE:4:ILE:HG12	28:AE:5:LEU:N	2.05	0.71
41:AU:13:LYS:N	41:AU:13:LYS:HE2	2.06	0.71
28:BE:111:ARG:HD2	28:BE:160:TYR:CE1	2.26	0.71
28:BE:59:VAL:HG21	28:BE:63:LEU:HA	1.72	0.71
30:BG:145:THR:HG21	30:BG:148:MET:HB3	1.73	0.71
53:A6:16:CYS:SG	53:A6:48:VAL:HG21	2.30	0.71
57:BA:2103:C:C3'	57:BA:2104:G:H5''	2.20	0.71
38:AR:99:LYS:CD	38:AR:99:LYS:H	2.04	0.71
29:AF:122:LYS:HA	29:AF:122:LYS:HE2	1.70	0.71
40:AT:5:ALA:HB3	57:AA:2875:C:O2'	1.90	0.71
57:AA:433:C:H2'	57:AA:434:U:H6	2.28	0.71
29:AF:28:ILE:H	29:AF:28:ILE:HD13	1.56	0.71
34:AN:3:THR:C	34:AN:5:VAL:H	1.94	0.71
36:AP:146:VAL:HG22	36:AP:147:LEU:N	2.06	0.71
49:B2:48:HIS:HA	49:B2:51:ARG:HG3	1.73	0.71
57:BA:298:G:H5'	57:BA:299:A:OP1	1.91	0.71
57:BA:94:C:H5'	57:BA:94(A):G:OP2	1.89	0.71
36:BP:35:HIS:H	57:BA:1190:G:H5'	1.55	0.71
31:AH:153:LYS:CD	31:AH:153:LYS:H	1.99	0.71
46:BZ:3:TYR:HB2	46:BZ:57:ILE:HA	1.73	0.71
57:AA:2189:U:H3'	57:AA:2190:G:H5''	1.72	0.71
57:BA:927:G:H5'	57:BA:928:G:OP2	1.91	0.71
57:BA:2698:U:H2'	57:BA:2699:C:C6	2.26	0.71
57:AA:2126:A:H61	57:AA:2163:C:H4'	1.56	0.71
40:AT:3:ARG:HE	57:AA:2876:G:H4'	1.55	0.71
32:AI:62:LYS:HD2	32:AI:133:HIS:HD2	1.56	0.71
53:B6:26:ASN:O	53:B6:27:LYS:HB2	1.91	0.71
53:B6:30:THR:O	53:B6:32:ASN:N	2.24	0.71
57:BA:1405:U:H2'	57:BA:1406:U:C6	2.26	0.71
57:BA:433:C:H2'	57:BA:434:U:H6	2.25	0.71
29:BF:20:LEU:HD12	29:BF:199:TRP:HZ3	1.54	0.71
30:BG:68:PRO:HB2	30:BG:90:LEU:CD1	2.21	0.71
57:BA:364:C:C2'	57:BA:365:C:H5''	2.21	0.71
48:A1:90:ILE:O	48:A1:94:LEU:HD23	1.91	0.71
57:AA:27:G:N2	57:AA:512:G:H2'	2.06	0.70
29:AF:108:LYS:HD2	29:AF:112:MET:HE2	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AN:58:ASP:O	34:AN:60:ILE:N	2.23	0.70
51:B4:34:GLU:O	51:B4:35:VAL:HG23	1.91	0.70
39:BS:95:HIS:CG	39:BS:96:GLY:H	2.09	0.70
43:BW:40:ASN:O	43:BW:41:LYS:HG2	1.90	0.70
46:AZ:151:HIS:HA	46:AZ:171:ILE:CG1	2.19	0.70
54:A7:45:ALA:O	54:A7:46:VAL:HG23	1.90	0.70
29:BF:132:VAL:HG22	29:BF:133:ASN:H	1.55	0.70
57:BA:394:A:O2'	57:BA:395:U:H5'	1.91	0.70
35:AO:114:ILE:HD12	35:AO:114:ILE:H	1.54	0.70
36:AP:89:ALA:HA	36:AP:121:LYS:HD3	1.72	0.70
36:BP:89:ALA:HA	36:BP:121:LYS:HD3	1.71	0.70
30:AG:131:TYR:HE2	30:AG:133:LEU:HD23	1.56	0.70
42:AV:18:LEU:HD13	42:AV:19:LYS:H	1.56	0.70
45:AY:13:VAL:HB	45:AY:28:LYS:HD3	1.73	0.70
26:BC:181:PHE:HD1	26:BC:181:PHE:H	1.39	0.70
36:BP:17:LYS:HG3	36:BP:19:VAL:CG2	2.21	0.70
36:BP:64:LYS:HE2	57:BA:631:A:OP1	1.90	0.70
46:AZ:17:ALA:HA	46:AZ:20:ARG:CB	2.21	0.70
46:AZ:110:GLY:O	46:AZ:113:ALA:HB3	1.91	0.70
57:AA:2761:G:H3'	57:AA:2762:G:H5''	1.73	0.70
50:A3:27:GLY:HA3	50:A3:35:ARG:NH1	2.06	0.70
57:AA:32:C:O2'	57:AA:33:U:H5'	1.91	0.70
57:AA:2114:A:H2'	57:AA:2115:G:O4'	1.91	0.70
30:AG:124:SER:HB2	30:AG:131:TYR:CE1	2.26	0.70
30:AG:72:ARG:CG	30:AG:87:PRO:HD2	2.21	0.70
32:AI:123:LEU:HD11	32:AI:144:VAL:HG22	1.72	0.70
33:AJ:58:LEU:CB	57:AA:1107:G:H5'	2.21	0.70
36:BP:33:ARG:NH1	57:BA:587:C:H3'	2.06	0.70
27:BD:129:ASN:ND2	27:BD:129:ASN:N	3.62	0.70
34:BN:58:ASP:O	34:BN:60:ILE:N	2.23	0.70
36:BP:99:LEU:HA	36:BP:102:ARG:HH22	1.56	0.70
39:BS:95:HIS:CG	39:BS:96:GLY:N	2.59	0.70
46:BZ:57:ILE:HG22	46:BZ:58:VAL:N	2.00	0.70
50:A3:5:LYS:HB2	50:A3:36:VAL:HG12	1.72	0.70
29:AF:3:GLU:CA	29:AF:24:LEU:HG	2.20	0.70
30:AG:73:ALA:H	30:AG:87:PRO:HG3	1.56	0.70
55:B8:14:VAL:HG21	55:B8:22:VAL:CG1	2.21	0.70
27:BD:71:ASP:CB	27:BD:103:ARG:HH22	2.03	0.70
36:BP:98:GLU:O	36:BP:101:VAL:HG22	1.92	0.70
40:BT:16:ARG:HD2	40:BT:18:ASP:OD1	1.91	0.70
45:BY:84:ARG:HD2	45:BY:97:ARG:NE	2.07	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2103:C:C3'	57:AA:2104:G:H5''	2.21	0.70
31:BH:156:ALA:O	31:BH:157:TYR:C	2.30	0.70
57:AA:2294:C:H42	57:AA:2338:G:H1	1.37	0.70
57:BA:1318:C:H3'	57:BA:1319:G:H5''	1.72	0.70
32:BI:87:LYS:HE3	32:BI:121:LYS:HG3	1.74	0.70
43:BW:59:VAL:HG12	43:BW:60:ASN:N	2.06	0.70
57:AA:158:U:H2'	57:AA:171:G:O4'	1.92	0.70
50:B3:43:ILE:O	50:B3:47:VAL:HG23	1.91	0.70
57:AA:94:C:H5'	57:AA:94(A):G:OP2	1.91	0.70
30:AG:18:GLU:O	30:AG:22:ARG:HB2	1.91	0.70
30:AG:97:ASP:O	30:AG:101:ILE:HG13	1.91	0.70
40:AT:65:LYS:NZ	40:AT:66:VAL:H	1.89	0.70
41:BU:25:TRP:CH2	57:BA:17:G:H4'	2.26	0.70
26:BC:178:LYS:HB2	26:BC:181:PHE:CD1	2.27	0.70
34:BN:47:ALA:HB2	34:BN:112:LEU:HD11	1.72	0.70
39:BS:51:ALA:HB3	39:BS:73:LEU:HB2	1.72	0.70
52:A5:54:GLY:C	52:A5:55:ARG:HE	1.94	0.70
57:BA:2833:G:H3'	57:BA:2834:G:H5'	1.72	0.70
43:BW:96:ILE:CD1	57:BA:2012:G:H4'	2.20	0.70
57:AA:654(H):G:N2	57:AA:654(J):A:H8	1.90	0.70
29:BF:160:ASN:ND2	29:BF:162:LEU:H	1.89	0.70
46:BZ:131:ARG:HG3	46:BZ:132:ASN:H	1.57	0.70
57:BA:2564:A:C2	57:BA:2647:U:H4'	2.26	0.70
28:AE:61:ARG:CD	57:AA:2787:C:H1'	2.22	0.70
35:AO:24:VAL:HG23	35:AO:33:ALA:HB2	1.72	0.70
35:AO:97:ARG:HA	35:AO:117:LEU:HD22	1.71	0.70
55:B8:4:MET:HG3	55:B8:61:LEU:HD22	1.74	0.70
57:BA:1047:G:H2'	57:BA:1110:G:H22	1.55	0.70
29:BF:24:LEU:O	29:BF:26:ALA:N	2.25	0.70
30:BG:134:GLY:C	30:BG:135:LEU:HD12	2.12	0.70
32:BI:92:VAL:HA	32:BI:96:ASP:HB2	1.74	0.70
36:BP:106:LEU:HD13	36:BP:112:LEU:HD23	1.73	0.70
36:BP:61:ARG:NH1	55:B8:13:ARG:HD2	2.06	0.70
36:BP:71:VAL:CG1	36:BP:72:PRO:HD3	2.20	0.70
31:BH:9:ILE:HG23	31:BH:9:ILE:O	1.91	0.70
47:B0:81:VAL:O	47:B0:83:PRO:HD3	1.91	0.70
57:AA:1779:U:C5	57:AA:1784:A:N7	2.55	0.70
29:AF:192:LEU:HD21	29:AF:194:MET:HG3	1.74	0.70
57:AA:2168:G:N2	57:AA:2170:A:H3'	2.07	0.70
57:AA:657:U:H2'	57:AA:658:C:C6	2.25	0.70
30:AG:36:LYS:HG2	30:AG:37:VAL:N	2.07	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AI:120:ILE:HG22	32:AI:121:LYS:N	2.07	0.70
57:BA:1280:G:C3'	57:BA:1281:G:H5''	2.22	0.70
49:B2:47:ASN:ND2	57:BA:94(A):G:H21	1.85	0.70
27:BD:35:LYS:N	27:BD:36:PRO:HD2	2.06	0.70
39:BS:70:GLY:C	39:BS:101:LEU:HD23	2.12	0.70
52:A5:36:CYS:SG	52:A5:49:CYS:HB3	2.32	0.70
36:AP:85:LEU:HD21	36:AP:116:GLY:O	1.92	0.70
57:AA:1887:C:C2'	57:AA:1888:G:H5''	2.21	0.70
57:BA:2761:G:H3'	57:BA:2762:G:H5''	1.74	0.70
57:BA:2114:A:H2'	57:BA:2115:G:O4'	1.92	0.70
56:A9:27:CYS:SG	56:A9:28:GLU:N	2.64	0.70
57:AA:247:G:H4'	57:AA:386:G:C5	2.26	0.70
43:AW:34:ASN:ND2	52:A5:39:MET:HB2	2.06	0.70
57:AA:2310:A:O2'	57:AA:2311:A:H5'	1.91	0.70
26:AC:175:PRO:HG3	57:AA:2124:G:H5''	1.73	0.70
28:AE:101:ARG:HB3	28:AE:169:ASN:ND2	2.06	0.70
28:AE:72:VAL:HG12	28:AE:72:VAL:O	1.92	0.70
28:AE:78:LEU:C	28:AE:79:ARG:HD2	2.12	0.70
29:AF:9:ILE:HG22	29:AF:11:VAL:O	1.91	0.70
32:AI:109:ILE:CG2	32:AI:114:LEU:HD11	2.22	0.70
45:AY:76:CYS:HG	45:AY:77:PRO:HD2	1.55	0.70
57:BA:545:C:H2'	57:BA:547:A:H4'	1.74	0.70
29:BF:3:GLU:CA	29:BF:24:LEU:HG	2.21	0.70
29:BF:74:ARG:CD	57:BA:674:G:H1'	2.22	0.70
47:A0:81:VAL:O	47:A0:83:PRO:HD3	1.92	0.70
46:BZ:144:LEU:HD22	46:BZ:144:LEU:H	1.56	0.70
37:BQ:27:VAL:HG13	37:BQ:105:GLU:OE2	1.92	0.70
55:A8:61:LEU:HD12	55:A8:61:LEU:N	2.06	0.70
28:AE:69:LYS:NZ	28:AE:89:ASP:HA	2.06	0.70
30:AG:111:LEU:HB3	30:AG:117:PHE:CZ	2.27	0.70
53:B6:5:VAL:HG12	53:B6:8:LYS:HB2	1.73	0.70
57:BA:924:C:H5'	57:BA:1399:C:OP2	141.71	0.70
27:BD:70:TRP:HZ3	27:BD:146:GLU:CD	1.94	0.70
28:BE:46:ALA:CB	28:BE:82:ARG:HA	2.22	0.70
32:BI:98:ALA:HA	32:BI:101:LEU:HD22	1.74	0.70
44:BX:12:VAL:HG22	44:BX:27:THR:O	1.90	0.70
57:BA:116:C:O2'	57:BA:117:G:H5'	1.92	0.70
50:B3:1:MET:HE2	50:B3:39:ASP:HB3	1.74	0.70
57:AA:1709:U:H2'	57:AA:1710:C:C6	2.27	0.70
57:AA:1547:C:O2'	57:AA:1548:C:H5'	1.92	0.70
53:A6:5:VAL:HG11	53:A6:7:ILE:HG22	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2120:G:H2'	57:AA:2121:G:C8	2.27	0.69
27:AD:118:VAL:HG22	27:AD:119:ALA:N	2.07	0.69
30:AG:142:PRO:HG2	30:AG:143:GLU:H	1.55	0.69
32:AI:77:LEU:HD22	32:AI:140:LEU:HA	1.74	0.69
39:AS:95:HIS:CG	39:AS:96:GLY:H	2.10	0.69
42:AV:39:LEU:HD12	42:AV:47:VAL:HG11	1.73	0.69
28:BE:51:PHE:CD1	28:BE:52:LEU:N	2.60	0.69
35:BO:24:VAL:CG2	35:BO:33:ALA:HB2	2.22	0.69
36:BP:126:VAL:CA	36:BP:145:PRO:HB2	2.18	0.69
50:A3:43:ILE:O	50:A3:47:VAL:HG23	1.92	0.69
57:AA:2564:A:C2	57:AA:2647:U:H4'	2.26	0.69
57:AA:755:C:H2'	57:AA:756:C:H6	1.56	0.69
51:A4:2:LYS:NZ	58:AB:44:G:N7	2.40	0.69
34:AN:57:ALA:N	34:AN:124:ALA:HA	2.05	0.69
40:AT:91:ARG:HA	40:AT:117:ASP:H	1.55	0.69
45:AY:95:LYS:HE2	45:AY:101:LYS:H	1.57	0.69
57:BA:1019:U:O2'	57:BA:1021:A:H2	1.69	0.69
46:AZ:94:GLU:HB2	46:AZ:95:PRO:HD2	1.74	0.69
35:BO:93:PRO:HD3	35:BO:114:ILE:HD11	1.73	0.69
27:AD:43:ARG:CB	27:AD:54:ARG:HB2	2.22	0.69
29:AF:24:LEU:O	29:AF:26:ALA:N	2.25	0.69
29:AF:74:ARG:HD2	57:AA:674:G:H1'	1.73	0.69
30:AG:72:ARG:CB	30:AG:87:PRO:HD2	2.22	0.69
31:AH:11:VAL:HG21	31:AH:50:VAL:HG23	1.73	0.69
32:AI:120:ILE:CG2	32:AI:121:LYS:N	2.56	0.69
39:AS:36:TYR:H	39:AS:36:TYR:HD1	1.39	0.69
40:AT:10:VAL:O	40:AT:13:ARG:HG2	1.92	0.69
40:AT:31:SER:HG	40:AT:43:GLN:H	1.40	0.69
42:AV:38:LEU:C	42:AV:39:LEU:HD13	2.13	0.69
45:AY:2:ARG:CD	45:AY:3:VAL:HG23	2.22	0.69
30:BG:66:GLN:HG2	51:B4:1:MET:HG3	1.74	0.69
57:BA:330:A:C2	57:BA:1210:A:H2'	2.26	0.69
27:BD:49:ILE:HG22	57:BA:779:U:OP1	1.93	0.69
58:BB:32:C:H2'	58:BB:33:G:C8	2.28	0.69
36:BP:78:PRO:HA	36:BP:110:TYR:CE2	2.27	0.69
57:AA:2833:G:H3'	57:AA:2834:G:H5'	1.73	0.69
57:AA:176:G:O2'	57:AA:177:G:H5'	1.93	0.69
57:AA:2584:U:H2'	57:AA:2585:U:H5'	1.75	0.69
57:AA:1280:G:C3'	57:AA:1281:G:H5''	2.22	0.69
27:AD:121:PRO:HB3	27:AD:135:PHE:CE1	2.27	0.69
29:AF:24:LEU:CB	29:AF:25:PRO:HD2	2.20	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:AG:117:PHE:O	30:AG:118:ARG:HB2	1.89	0.69
51:B4:46:GLN:NE2	51:B4:47:GLN:H	1.91	0.69
30:BG:97:ASP:O	30:BG:101:ILE:HG13	1.92	0.69
32:BI:88:ILE:HD11	32:BI:142:VAL:HG22	1.73	0.69
36:BP:30:THR:CG2	36:BP:31:ALA:H	2.04	0.69
57:AA:2590:A:O2'	57:AA:2591:C:H5'	1.92	0.69
52:A5:3:LYS:NZ	57:AA:2614:A:H5'	2.08	0.69
31:AH:158:HIS:CD2	31:AH:170:ARG:HA	2.28	0.69
43:BW:91:GLY:HA2	57:BA:1614:A:N1	2.07	0.69
30:AG:65:GLY:O	51:A4:7:PRO:HD2	1.92	0.69
57:AA:1348:G:C2'	57:AA:1349:A:H5''	2.23	0.69
30:AG:106:LEU:HD12	30:AG:110:ALA:CB	2.22	0.69
30:AG:42:GLY:HA2	30:AG:89:GLY:HA2	1.74	0.69
36:AP:30:THR:CG2	36:AP:31:ALA:H	2.03	0.69
38:AR:2:ARG:HD3	38:AR:5:LYS:CE	2.22	0.69
47:B0:23:VAL:HG21	57:BA:857:C:H4'	1.75	0.69
28:BE:61:ARG:CD	57:BA:2787:C:H1'	2.22	0.69
32:BI:91:SER:HB3	32:BI:121:LYS:HZ3	1.56	0.69
34:BN:17:ASP:OD1	34:BN:56:ASN:HB3	1.91	0.69
34:BN:3:THR:C	34:BN:5:VAL:H	1.94	0.69
41:BU:49:HIS:HD2	57:BA:534:U:O2'	1.76	0.69
44:BX:12:VAL:HG23	44:BX:13:LEU:H	1.57	0.69
55:A8:43:GLN:C	55:A8:44:LYS:HD2	2.13	0.69
28:BE:167:VAL:HG22	28:BE:170:LEU:HD11	1.74	0.69
57:BA:2168:G:N2	57:BA:2170:A:H3'	2.06	0.69
57:AA:2698:U:H2'	57:AA:2699:C:C6	2.28	0.69
57:BA:2808:U:O2'	57:BA:2809:A:H5'	1.92	0.69
56:A9:18:ARG:HH22	57:AA:1123:C:H1'	1.57	0.69
27:AD:49:ILE:HG22	57:AA:779:U:OP1	1.92	0.69
26:BC:175:PRO:HG3	57:BA:2124:G:H5''	1.75	0.69
53:B6:8:LYS:HZ1	57:BA:2285:C:H5	1.41	0.69
30:BG:16:ARG:HD3	30:BG:31:VAL:HG21	1.72	0.69
39:BS:23:ARG:HB3	39:BS:24:LEU:HD22	1.74	0.69
41:BU:83:LEU:HD12	41:BU:88:ILE:HD12	1.74	0.69
41:BU:90:VAL:CG2	42:BV:47:VAL:HG21	2.22	0.69
45:BY:31:LEU:HD22	45:BY:31:LEU:N	2.08	0.69
46:BZ:120:ILE:HB	46:BZ:172:ALA:HA	1.74	0.69
57:AA:2808:U:O2'	57:AA:2809:A:H5'	1.93	0.69
30:BG:2:PRO:O	30:BG:3:LEU:HD12	1.93	0.69
50:A3:19:GLN:HE22	50:A3:52:HIS:CE1	2.11	0.69
57:AA:141:A:H8	57:AA:1408:C:O2'	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:184:C:H2'	57:AA:185:U:H6	1.56	0.69
27:AD:24:ILE:CG1	27:AD:25:THR:N	2.55	0.69
31:AH:43:VAL:CG1	31:AH:52:VAL:HG22	2.21	0.69
34:AN:120:LEU:HD22	34:AN:122:VAL:HG23	1.75	0.69
45:AY:87:LYS:O	45:AY:88:LYS:HB2	1.92	0.69
57:BA:1348:G:C2'	57:BA:1349:A:H5''	2.23	0.69
57:BA:1488:G:H5'	57:BA:1489:U:OP2	1.91	0.69
36:BP:46:LYS:HE2	57:BA:195:A:OP1	1.92	0.69
57:BA:301:G:H1'	57:BA:302:C:C6	2.28	0.69
30:BG:77:ILE:O	30:BG:77:ILE:HG22	1.93	0.69
45:BY:95:LYS:CE	45:BY:100:ALA:HB1	2.22	0.69
27:BD:259:THR:HG22	57:BA:1798:U:C5'	2.22	0.69
57:BA:208:C:H2'	57:BA:209:C:C6	2.26	0.69
57:AA:1688:U:H1'	57:AA:1701:A:C6	2.28	0.69
57:BA:315:G:H2'	57:BA:316:C:C6	2.27	0.69
28:AE:14:ILE:HG12	28:AE:21:VAL:HG23	1.74	0.69
30:AG:125:PHE:HB3	30:AG:130:ASN:O	1.93	0.69
47:B0:24:LYS:O	47:B0:25:ARG:HD3	1.93	0.69
51:B4:33:VAL:HG12	51:B4:34:GLU:N	2.08	0.69
53:B6:52:VAL:HG22	53:B6:53:LYS:N	2.08	0.69
57:BA:1384:A:N3	57:BA:1405:U:H1'	2.07	0.69
28:BE:14:ILE:HG12	28:BE:21:VAL:HG23	1.73	0.69
35:BO:64:ARG:HB2	35:BO:83:ALA:HB3	1.74	0.69
45:BY:2:ARG:CD	45:BY:3:VAL:HG23	2.23	0.69
57:AA:1116:C:H2'	57:AA:1117:G:C5'	2.83	0.69
30:AG:73:ALA:HA	57:AA:2312:U:OP1	1.92	0.69
57:AA:672:C:H2'	57:AA:673:C:H5'	1.75	0.69
57:AA:672:C:H2'	57:AA:673:C:C5'	2.22	0.69
58:AB:80:U:H2'	58:AB:81:G:N2	2.07	0.69
31:AH:102:ALA:HA	31:AH:117:PRO:HD3	1.74	0.69
35:AO:64:ARG:HB2	35:AO:83:ALA:HB3	1.73	0.69
40:AT:16:ARG:HD2	40:AT:18:ASP:OD1	1.92	0.69
57:BA:621:A:H2'	57:BA:622:G:C5'	2.23	0.69
30:BG:135:LEU:HD23	30:BG:140:ILE:HD11	1.75	0.69
32:BI:62:LYS:HD2	32:BI:133:HIS:HD2	1.56	0.69
39:BS:20:ARG:HA	39:BS:20:ARG:NE	2.07	0.69
42:BV:38:LEU:C	42:BV:39:LEU:HD13	2.12	0.69
57:AA:1884:A:H2'	57:AA:1885:A:C5'	2.12	0.69
27:BD:244:ARG:HB2	57:BA:1902:C:O2'	1.93	0.69
47:B0:14:ARG:NH1	47:B0:14:ARG:HB2	2.01	0.69
46:BZ:56:VAL:HG22	46:BZ:70:LEU:HG	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:AV:64:HIS:ND1	42:AV:92:THR:HG22	2.08	0.69
46:BZ:141:VAL:HA	46:BZ:144:LEU:HD21	1.74	0.69
57:BA:2189:U:H3'	57:BA:2190:G:H5''	1.73	0.69
57:BA:158:U:H2'	57:BA:171:G:O4'	1.92	0.69
42:BV:29:PRO:O	42:BV:61:VAL:HG22	1.91	0.69
46:BZ:180:VAL:C	46:BZ:182:LYS:H	1.96	0.69
57:AA:89:G:H3'	57:AA:90:U:C5'	2.23	0.69
57:AA:2747:G:O6	57:AA:2755:C:H5''	1.93	0.69
58:AB:32:C:H2'	58:AB:33:G:C8	2.28	0.69
27:AD:24:ILE:CG1	27:AD:25:THR:H	2.06	0.69
30:AG:31:VAL:H	30:AG:33:ARG:NH1	1.91	0.69
36:AP:17:LYS:HG3	36:AP:19:VAL:CG2	2.23	0.69
40:AT:38:ASN:HD22	40:AT:40:THR:HG23	1.57	0.69
41:AU:90:VAL:CG2	42:AV:47:VAL:HG21	2.23	0.69
44:AX:12:VAL:HG23	44:AX:13:LEU:H	1.56	0.69
51:B4:5:ILE:N	51:B4:5:ILE:HD13	2.08	0.69
35:BO:49:ARG:NH1	57:BA:1422:G:H4'	102.12	0.69
58:BB:112:U:H2'	58:BB:113:G:H8	1.58	0.69
27:BD:142:VAL:HG23	27:BD:192:THR:O	1.93	0.69
30:BG:125:PHE:HD1	30:BG:126:ASP:H	1.38	0.69
30:BG:51:ARG:CA	30:BG:51:ARG:HE	2.05	0.69
32:BI:4:ILE:HD11	32:BI:44:LEU:HD12	1.75	0.69
36:BP:48:PRO:HG2	36:BP:49:ARG:N	2.06	0.69
40:BT:16:ARG:HH12	40:BT:19:LEU:HD21	1.56	0.69
57:AA:1845:G:H2'	57:AA:1846:G:C5'	2.07	0.69
31:BH:41:MET:CG	31:BH:42:ARG:H	2.06	0.69
37:BQ:134:ARG:HA	37:BQ:137:TYR:CD1	2.28	0.69
36:AP:85:LEU:HB3	36:AP:114:ILE:HD11	1.75	0.69
50:B3:5:LYS:HB2	50:B3:36:VAL:HG12	1.74	0.69
57:BA:2712:U:H1'	57:BA:2712(A):A:C8	2.28	0.69
51:A4:33:VAL:HG12	51:A4:34:GLU:N	2.08	0.69
53:A6:26:ASN:O	53:A6:27:LYS:HB2	1.93	0.69
49:A2:48:HIS:CD2	57:AA:96:G:H4'	2.28	0.69
26:AC:181:PHE:H	26:AC:181:PHE:HD1	1.39	0.69
32:AI:115:ALA:CB	32:AI:128:LEU:HB3	2.20	0.69
32:AI:86:THR:O	32:AI:87:LYS:HB2	1.93	0.69
33:AJ:49:ALA:HB3	33:AJ:90:ALA:HB1	1.75	0.69
36:AP:33:ARG:O	36:AP:35:HIS:O	2.10	0.69
39:AS:13:ARG:CG	39:AS:14:VAL:H	2.05	0.69
40:AT:100:TYR:HD2	40:AT:103:ARG:HH21	1.41	0.69
41:AU:112:ARG:NH1	42:AV:46:VAL:HG11	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:AX:35:THR:O	44:AX:39:ILE:HG12	1.93	0.69
53:B6:5:VAL:HG11	53:B6:7:ILE:HG22	1.74	0.69
30:BG:71:THR:HG21	57:BA:2312:U:O3'	1.92	0.69
27:BD:227:ASN:ND2	57:BA:784:A:H5''	2.08	0.69
27:BD:210:GLY:O	27:BD:211:ARG:HB3	1.93	0.69
28:BE:78:LEU:C	28:BE:79:ARG:HD2	2.12	0.69
32:BI:92:VAL:O	32:BI:119:PRO:HA	1.93	0.69
35:BO:65:THR:OG1	35:BO:69:ILE:HD11	1.93	0.69
36:BP:23:PRO:HD2	36:BP:33:ARG:NH2	2.08	0.69
36:BP:58:THR:O	36:BP:58:THR:HG22	1.93	0.69
40:BT:16:ARG:NH1	40:BT:19:LEU:HD21	2.07	0.69
27:BD:259:THR:HG21	57:BA:1803:A:H4'	1.73	0.69
57:AA:364:C:C2'	57:AA:365:C:H5''	2.22	0.69
35:BO:114:ILE:HD12	35:BO:114:ILE:H	1.58	0.69
52:A5:7:PRO:HA	57:AA:2615:U:C2	2.28	0.69
53:A6:30:THR:O	53:A6:32:ASN:N	2.25	0.68
53:A6:52:VAL:HG22	53:A6:53:LYS:N	2.08	0.68
55:A8:4:MET:HG3	55:A8:61:LEU:HD22	1.75	0.68
27:AD:30:GLU:HG3	27:AD:63:ARG:CZ	2.23	0.68
27:AD:34:VAL:C	27:AD:36:PRO:HD2	2.13	0.68
29:AF:66:PRO:O	29:AF:67:GLN:HB3	1.93	0.68
33:AJ:7:VAL:CB	33:AJ:11:ALA:HB3	2.22	0.68
35:AO:65:THR:OG1	35:AO:69:ILE:HD11	1.93	0.68
45:AY:57:GLN:HG2	45:AY:58:GLY:N	2.08	0.68
28:BE:77:ILE:CG2	28:BE:78:LEU:H	2.00	0.68
30:BG:68:PRO:HB2	30:BG:90:LEU:HD11	1.74	0.68
52:B5:3:LYS:NZ	57:BA:2614:A:H5'	2.07	0.68
31:BH:8:PRO:O	31:BH:9:ILE:HG22	1.93	0.68
29:AF:39:TRP:O	29:AF:43:LYS:HG2	1.93	0.68
31:BH:158:HIS:CD2	31:BH:170:ARG:HA	2.27	0.68
57:AA:1488:G:H5'	57:AA:1489:U:OP2	1.92	0.68
30:AG:142:PRO:HG2	30:AG:143:GLU:HG2	1.74	0.68
30:AG:44:GLY:HA2	30:AG:88:ILE:HB	1.74	0.68
32:AI:127:VAL:HG22	32:AI:139:GLN:HB3	1.75	0.68
35:AO:113:LYS:O	35:AO:117:LEU:HB2	1.94	0.68
56:B9:18:ARG:HH22	57:BA:1123:C:H1'	1.56	0.68
34:BN:62:VAL:CG2	34:BN:66:LYS:HB2	2.24	0.68
35:BO:97:ARG:HA	35:BO:117:LEU:HD22	1.75	0.68
40:BT:57:PHE:CD2	40:BT:58:ASN:N	2.60	0.68
37:AQ:134:ARG:HA	37:AQ:137:TYR:CD1	2.28	0.68
28:AE:167:VAL:HG22	28:AE:170:LEU:HD11	1.72	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:530:G:H2'	57:AA:530:G:N3	4.53	0.68
49:A2:2:LYS:HB2	57:AA:97:C:H5''	1.74	0.68
29:AF:22:ALA:O	29:AF:26:ALA:HB2	1.93	0.68
36:AP:16:ARG:C	36:AP:16:ARG:HH11	1.96	0.68
40:AT:27:THR:HG23	40:AT:28:VAL:H	1.58	0.68
40:AT:5:ALA:HB2	57:AA:2875:C:C4'	2.20	0.68
58:BB:11:C:OP2	58:BB:12:C:H5	1.76	0.68
28:BE:60:ASN:OD1	28:BE:61:ARG:N	2.26	0.68
36:BP:16:ARG:HD3	36:BP:16:ARG:C	2.13	0.68
57:BA:1887:C:C2'	57:BA:1888:G:H5''	2.22	0.68
34:AN:73:THR:CG2	34:AN:82:LEU:HD11	2.23	0.68
57:AA:1384:A:N3	57:AA:1405:U:H1'	2.08	0.68
57:AA:1405:U:H2'	57:AA:1406:U:C6	2.28	0.68
29:AF:32:LEU:HD11	29:AF:105:VAL:HG13	1.76	0.68
35:AO:98:VAL:HG13	35:AO:117:LEU:HB3	1.76	0.68
45:AY:95:LYS:CE	45:AY:100:ALA:HB1	2.23	0.68
27:BD:24:ILE:CG1	27:BD:25:THR:N	2.56	0.68
28:BE:101:ARG:HB3	28:BE:169:ASN:ND2	2.08	0.68
38:AR:98:LEU:HB2	38:AR:113:LEU:HD21	1.75	0.68
57:BA:1779:U:C5	57:BA:1784:A:N7	2.54	0.68
29:BF:192:LEU:HD21	29:BF:194:MET:HG3	1.74	0.68
38:AR:9:LYS:O	38:AR:10:LEU:HD23	1.94	0.68
37:BQ:27:VAL:HG12	37:BQ:28:ALA:H	1.56	0.68
57:BA:2584:U:H2'	57:BA:2585:U:H5'	1.74	0.68
57:AA:1506:C:O2	57:AA:1506:C:H2'	1.93	0.68
57:AA:2313:C:H2'	57:AA:2314:C:H6	1.59	0.68
30:AG:170:ARG:HH22	30:AG:182:LYS:HE2	1.57	0.68
32:AI:92:VAL:CG1	32:AI:120:ILE:HD13	2.22	0.68
35:AO:90:GLN:O	35:AO:91:LEU:HB2	1.93	0.68
40:AT:89:VAL:HG11	40:AT:91:ARG:NE	2.07	0.68
53:B6:52:VAL:HG22	53:B6:53:LYS:H	1.58	0.68
39:BS:95:HIS:HD2	58:BB:48:A:H4'	1.59	0.68
29:BF:40:GLN:NE2	29:BF:184:TYR:CB	2.57	0.68
30:BG:114:ILE:HD11	30:BG:140:ILE:HD12	1.76	0.68
46:AZ:135:GLU:O	46:AZ:137:ILE:N	2.26	0.68
46:BZ:163:LEU:HD23	46:BZ:163:LEU:N	2.08	0.68
57:BA:654(H):G:N2	57:BA:654(J):A:H8	1.91	0.68
49:B2:3:LEU:O	49:B2:7:ARG:HG3	1.94	0.68
46:AZ:24:LEU:HD23	46:AZ:25:PRO:N	2.08	0.68
27:AD:145:VAL:HG12	27:AD:146:GLU:O	1.93	0.68
28:AE:132:HIS:HA	28:AE:135:HIS:CE1	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:AE:59:VAL:HG11	28:AE:63:LEU:HG	1.76	0.68
28:AE:60:ASN:OD1	28:AE:61:ARG:N	2.27	0.68
30:AG:72:ARG:HA	30:AG:87:PRO:HG2	1.76	0.68
31:AH:41:MET:CG	31:AH:42:ARG:H	2.06	0.68
35:AO:26:LYS:O	35:AO:27:GLY:O	2.12	0.68
36:AP:58:THR:O	36:AP:58:THR:HG22	1.92	0.68
40:AT:48:ILE:HD12	40:AT:48:ILE:N	2.08	0.68
41:AU:9:VAL:O	41:AU:13:LYS:HG2	1.93	0.68
28:BE:132:HIS:HA	28:BE:135:HIS:CE1	2.29	0.68
28:BE:4:ILE:HG12	28:BE:5:LEU:N	2.07	0.68
38:BR:99:LYS:CD	38:BR:99:LYS:H	2.05	0.68
47:B0:51:VAL:N	47:B0:62:LEU:HD12	2.08	0.68
57:BA:1947:C:C2'	57:BA:1948:G:H5''	2.24	0.68
41:AU:47:TYR:HA	41:AU:50:ARG:HH22	1.58	0.68
50:A3:1:MET:HE2	50:A3:39:ASP:HB3	1.75	0.68
57:AA:2477:C:H6	57:AA:2477:C:H5'	1.57	0.68
57:BA:1709:U:H2'	57:BA:1710:C:C6	2.28	0.68
57:BA:2477:C:H6	57:BA:2477:C:H5'	1.58	0.68
53:A6:8:LYS:HZ1	57:AA:2285:C:H5	1.41	0.68
58:AB:112:U:H2'	58:AB:113:G:H8	1.58	0.68
36:AP:16:ARG:C	36:AP:16:ARG:HD3	2.14	0.68
57:BA:1352:U:O2'	57:BA:1353:A:H5'	1.93	0.68
57:BA:1506:C:O2	57:BA:1506:C:H2'	1.93	0.68
57:BA:2287:A:N6	57:BA:2344:U:H3	1.91	0.68
27:BD:129:ASN:ND2	27:BD:129:ASN:H	3.55	0.68
27:BD:142:VAL:HG23	27:BD:192:THR:C	2.14	0.68
28:BE:102:VAL:HG12	28:BE:200:GLU:HA	1.75	0.68
34:BN:67:LEU:HD23	34:BN:87:LEU:HD13	1.76	0.68
47:B0:51:VAL:HG22	47:B0:81:VAL:HG23	1.74	0.68
41:AU:49:HIS:HD2	57:AA:534:U:O2'	1.76	0.68
57:AA:2450:A:O2'	57:AA:2451:A:H5'	1.94	0.68
47:A0:24:LYS:O	47:A0:25:ARG:HD3	1.94	0.68
57:AA:1047:G:H2'	57:AA:1110:G:H22	1.56	0.68
58:AB:112:U:H2'	58:AB:113:G:C8	2.29	0.68
28:AE:61:ARG:C	28:AE:63:LEU:H	1.96	0.68
31:AH:28:GLY:HA3	31:AH:79:VAL:HB	1.75	0.68
39:AS:12:PHE:HD2	39:AS:12:PHE:H	1.42	0.68
45:AY:68:HIS:CD2	57:AA:328:U:H4'	2.29	0.68
30:BG:138:GLN:OE1	30:BG:152:LEU:HA	1.94	0.68
30:BG:51:ARG:CA	30:BG:51:ARG:NE	2.56	0.68
36:BP:33:ARG:O	36:BP:34:GLY:C	2.32	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BT:10:VAL:O	40:BT:13:ARG:HG2	1.94	0.68
57:BA:581:C:H2'	57:BA:582:G:C8	2.29	0.68
41:AU:59:ARG:HD3	57:AA:1009:A:C5'	2.23	0.68
57:BA:676:A:H2	57:BA:802:A:H61	1.39	0.68
57:BA:755:C:H2'	57:BA:756:C:H6	1.58	0.68
29:AF:34:TRP:CZ2	36:AP:12:ALA:HB2	2.29	0.68
31:AH:11:VAL:CG2	31:AH:50:VAL:HG23	2.24	0.68
36:AP:97:PRO:HD3	36:AP:126:VAL:O	1.94	0.68
36:AP:126:VAL:CA	36:AP:145:PRO:HB2	2.17	0.68
39:AS:20:ARG:NE	39:AS:20:ARG:HA	2.09	0.68
39:AS:30:ARG:NH1	39:AS:35:ILE:HB	2.09	0.68
42:AV:38:LEU:O	42:AV:52:VAL:HG12	1.94	0.68
26:BC:51:ASP:O	26:BC:54:ARG:HB2	1.94	0.68
29:BF:101:LEU:HD12	29:BF:102:PRO:HD2	1.75	0.68
31:BH:102:ALA:HA	31:BH:117:PRO:HD3	1.76	0.68
36:BP:67:MET:H	57:BA:2415:G:H4'	1.58	0.68
39:BS:12:PHE:H	39:BS:12:PHE:HD2	1.42	0.68
57:AA:2801(A):A:H4'	57:AA:2802:G:C5'	2.21	0.68
39:BS:67:ARG:CB	39:BS:67:ARG:HH11	2.03	0.68
52:A5:46:CYS:SG	52:A5:47:PRO:HD2	2.32	0.68
36:AP:88:LEU:O	36:AP:90:ARG:N	2.25	0.68
57:AA:1434:A:H61	57:AA:1558:A:N6	1.91	0.68
43:AW:93:ALA:HB2	57:AA:1614:A:H62	1.58	0.68
57:BA:991:C:H6	57:BA:991:C:H5'	1.59	0.68
57:BA:2734:A:H5'	57:BA:2735:G:OP2	1.93	0.68
57:AA:2315:G:H2'	57:AA:2316:C:C6	2.29	0.68
57:AA:2359:C:C2'	57:AA:2360:A:H5'	2.23	0.68
55:B8:48:PHE:O	55:B8:49:VAL:HG13	1.94	0.68
55:B8:4:MET:HE1	57:BA:593:G:H1'	1.76	0.68
27:BD:48:ARG:NH1	27:BD:48:ARG:HG3	2.08	0.68
36:BP:16:ARG:HH11	36:BP:16:ARG:C	1.97	0.68
40:BT:22:PHE:HD2	40:BT:22:PHE:H	1.40	0.68
40:BT:28:VAL:O	40:BT:29:ARG:HD3	1.94	0.68
42:BV:64:HIS:ND1	42:BV:92:THR:HG22	2.09	0.68
57:AA:1887:C:C3'	57:AA:1888:G:H5''	2.23	0.68
57:BA:2864:G:H2'	57:BA:2865:U:H6	1.59	0.68
35:BO:4:PRO:O	35:BO:5:GLN:HB2	1.93	0.68
52:A5:16:ARG:NH1	52:A5:17:ASP:OD1	2.26	0.68
57:BA:473:G:H2'	57:BA:474:G:H8	3.09	0.68
53:A6:11:LEU:HA	53:A6:54:ILE:OXT	1.94	0.67
57:AA:141:A:C8	57:AA:1408:C:O2'	2.46	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:AB:11:C:OP2	58:AB:12:C:H5	1.76	0.67
58:AB:40:U:C2	58:AB:43:C:H5'	2.29	0.67
26:AC:30:VAL:HG11	26:AC:42:VAL:HG22	1.76	0.67
27:AD:181:GLU:HA	27:AD:272:ALA:CB	2.23	0.67
31:AH:50:VAL:HG12	31:AH:51:ARG:N	2.09	0.67
31:AH:70:THR:HG22	31:AH:74:ASN:ND2	2.07	0.67
32:AI:4:ILE:HD11	32:AI:44:LEU:HD12	1.76	0.67
36:AP:23:PRO:HD2	36:AP:33:ARG:NH2	2.09	0.67
57:BA:860:U:H5	57:BA:917:A:N7	1.91	0.67
26:BC:30:VAL:HG11	26:BC:42:VAL:HG22	1.76	0.67
32:BI:120:ILE:CG2	32:BI:121:LYS:N	2.57	0.67
34:BN:31:ALA:HA	34:BN:34:LEU:HD23	1.75	0.67
39:BS:59:LYS:HG2	39:BS:60:GLY:H	1.59	0.67
47:A0:51:VAL:N	47:A0:62:LEU:HD12	2.09	0.67
57:BA:579:G:H2'	57:BA:580:C:C6	2.29	0.67
49:A2:33:MET:HG2	49:A2:37:PHE:HE1	1.59	0.67
43:AW:19:LEU:HB3	52:A5:25:LEU:HD12	1.76	0.67
53:A6:5:VAL:HG12	53:A6:8:LYS:HB2	1.75	0.67
28:AE:102:VAL:HG12	28:AE:200:GLU:HA	1.76	0.67
45:AY:4:LYS:HD2	45:AY:32:PRO:CG	2.24	0.67
50:B3:19:GLN:HE22	50:B3:52:HIS:CE1	2.12	0.67
57:BA:1495:A:N3	57:BA:1496:A:C2	2.62	0.67
58:BB:112:U:H2'	58:BB:113:G:C8	2.28	0.67
27:BD:35:LYS:NZ	27:BD:35:LYS:HB3	2.09	0.67
30:BG:130:ASN:HD21	30:BG:160:VAL:HG13	1.58	0.67
32:BI:58:LEU:C	32:BI:60:GLU:H	1.97	0.67
34:BN:57:ALA:N	34:BN:124:ALA:HA	2.05	0.67
35:BO:47:ILE:CG1	35:BO:48:PRO:HD2	2.23	0.67
45:BY:76:CYS:SG	45:BY:77:PRO:CD	2.77	0.67
26:AC:178:LYS:HB2	26:AC:181:PHE:CD1	2.29	0.67
31:AH:41:MET:CE	31:AH:42:ARG:H	2.08	0.67
32:AI:101:LEU:HB3	32:AI:109:ILE:HD11	1.77	0.67
40:AT:23:ARG:HG2	40:AT:120:ARG:HH12	1.60	0.67
45:AY:2:ARG:N	45:AY:4:LYS:HE2	2.10	0.67
57:BA:2122:U:H2'	57:BA:2123:G:H8	1.59	0.67
27:BD:30:GLU:HG3	27:BD:63:ARG:CZ	2.24	0.67
30:BG:137:GLU:OE2	30:BG:152:LEU:HD13	1.94	0.67
30:BG:161:THR:HG22	30:BG:163:ALA:N	2.05	0.67
31:BH:136:ILE:HD12	31:BH:136:ILE:N	2.09	0.67
46:AZ:170:THR:HG21	57:AA:874:G:O2'	1.95	0.67
57:BA:1434:A:H61	57:BA:1558:A:N6	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AP:46:LYS:HE2	57:AA:195:A:OP1	1.93	0.67
58:AB:7:G:H3'	58:AB:8:U:C5'	2.16	0.67
31:AH:136:ILE:HD12	31:AH:136:ILE:N	2.08	0.67
36:AP:71:VAL:CG1	36:AP:72:PRO:HD3	2.25	0.67
57:BA:2126:A:H61	57:BA:2163:C:H4'	1.58	0.67
29:BF:24:LEU:CB	29:BF:25:PRO:HD2	2.21	0.67
30:BG:173:LEU:O	30:BG:178:PHE:HD1	1.78	0.67
28:BE:111:ARG:HG3	38:BR:2:ARG:CZ	2.25	0.67
42:BV:18:LEU:HD13	42:BV:19:LYS:N	2.09	0.67
31:BH:7:LEU:CD2	31:BH:69:ARG:HD2	2.24	0.67
57:AA:1542:A:N7	57:AA:1544:A:H5''	2.10	0.67
36:BP:85:LEU:HB3	36:BP:114:ILE:HD11	1.76	0.67
57:BA:271(E):U:H2'	57:BA:271(F):C:C6	2.30	0.67
29:AF:132:VAL:HG22	29:AF:133:ASN:N	2.09	0.67
57:BA:2472:G:H3'	57:BA:2475:C:N4	2.10	0.67
57:BA:492:A:H2'	57:BA:493:G:O4'	1.94	0.67
29:BF:34:TRP:CZ2	36:BP:12:ALA:HB2	2.29	0.67
30:AG:29:TRP:O	58:AB:57:A:H1'	1.93	0.67
32:AI:23:PRO:HB3	32:AI:27:ARG:NH2	2.09	0.67
34:AN:68:GLU:H	34:AN:88:GLU:HG3	1.58	0.67
39:AS:59:LYS:HG2	39:AS:60:GLY:N	2.09	0.67
57:BA:1116:C:H2'	57:BA:1117:G:C5'	2.82	0.67
57:BA:266:G:H5''	57:BA:268:C:H41	12.11	0.67
57:BA:27:G:N2	57:BA:512:G:H2'	2.09	0.67
57:BA:530:G:H2'	57:BA:530:G:N3	4.52	0.67
57:BA:672:C:C2'	57:BA:673:C:H5''	2.24	0.67
32:BI:115:ALA:CB	32:BI:128:LEU:HB3	2.17	0.67
34:BN:68:GLU:H	34:BN:88:GLU:HG3	1.59	0.67
39:BS:59:LYS:HG2	39:BS:60:GLY:N	2.10	0.67
45:BY:81:LYS:HD3	45:BY:97:ARG:HB3	1.77	0.67
46:BZ:53:ILE:HD12	46:BZ:53:ILE:O	1.94	0.67
29:AF:165:ARG:HH11	29:AF:165:ARG:CB	2.07	0.67
29:BF:132:VAL:HG22	29:BF:133:ASN:N	2.09	0.67
57:AA:301:G:H1'	57:AA:302:C:C6	2.30	0.67
36:AP:33:ARG:NH1	57:AA:587:C:H3'	2.08	0.67
57:AA:860:U:H5	57:AA:917:A:N7	1.91	0.67
45:AY:31:LEU:HD22	45:AY:31:LEU:N	2.10	0.67
52:A5:50:GLY:O	52:A5:51:TYR:HB2	1.95	0.67
27:AD:259:THR:HG23	57:AA:1803:A:H4'	1.77	0.67
57:AA:2199:A:H3'	57:AA:2200:C:H6	1.60	0.67
57:AA:991:C:H6	57:AA:991:C:H5'	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A1:80:LEU:O	48:A1:82:LEU:HD22	1.93	0.67
27:BD:231:HIS:ND1	27:BD:232:PRO:HD2	2.08	0.67
56:B9:27:CYS:SG	56:B9:28:GLU:N	2.67	0.67
51:A4:14:ILE:HG23	51:A4:31:ILE:CG2	2.24	0.67
28:AE:13:ARG:HD2	28:AE:20:ALA:HB1	1.77	0.67
29:AF:63:LYS:NZ	29:AF:67:GLN:HB2	2.10	0.67
32:AI:91:SER:HB3	32:AI:121:LYS:HZ3	1.60	0.67
53:B6:5:VAL:HG12	53:B6:8:LYS:CB	2.25	0.67
57:BA:2359:C:C2'	57:BA:2360:A:H5'	2.23	0.67
57:BA:836:G:H2'	57:BA:837:C:C6	2.30	0.67
40:BT:30:VAL:HA	40:BT:44:ASP:HA	1.77	0.67
46:BZ:146:ILE:HG22	46:BZ:174:VAL:HG12	1.76	0.67
52:B5:54:GLY:C	52:B5:55:ARG:NE	2.48	0.67
38:BR:10:LEU:CD2	38:BR:17:ARG:HD3	2.24	0.67
57:AA:2023:G:H5'	57:AA:2617:C:H4'	1.77	0.67
27:AD:28:GLU:H	27:AD:29:PRO:CD	2.05	0.67
28:AE:69:LYS:NZ	28:AE:90:THR:H	1.93	0.67
28:AE:77:ILE:CG2	28:AE:78:LEU:H	2.01	0.67
30:AG:31:VAL:O	30:AG:33:ARG:HD3	1.95	0.67
36:AP:39:LYS:HG3	57:AA:807:U:OP2	1.95	0.67
39:AS:51:ALA:HB3	39:AS:73:LEU:HB2	1.75	0.67
40:AT:35:LYS:NZ	40:AT:41:ARG:HH21	1.92	0.67
45:AY:42:VAL:HG12	45:AY:65:ALA:CB	2.24	0.67
45:AY:81:LYS:HD3	45:AY:97:ARG:HB3	1.77	0.67
53:B6:5:VAL:HG22	53:B6:6:ARG:N	2.10	0.67
57:BA:2315:G:H2'	57:BA:2316:C:C6	2.30	0.67
57:BA:923:C:H2'	57:BA:924:C:H6	1.60	0.67
30:BG:114:ILE:O	30:BG:115:ARG:C	2.33	0.67
31:BH:107:VAL:O	31:BH:107:VAL:HG23	1.94	0.67
32:BI:109:ILE:N	32:BI:109:ILE:HD12	2.10	0.67
33:BJ:22:GLY:O	33:BJ:119:ALA:HA	1.95	0.67
34:BN:1:MET:HG2	34:BN:2:LYS:N	2.10	0.67
40:BT:23:ARG:O	40:BT:25:GLY:N	2.28	0.67
57:AA:2287:A:N6	57:AA:2344:U:H3	1.91	0.67
57:BA:2833:G:H3'	57:BA:2834:G:H5''	1.77	0.67
48:B1:3:LYS:HG3	48:B1:4:VAL:H	1.60	0.67
55:B8:43:GLN:C	55:B8:44:LYS:HD2	2.15	0.67
57:AA:394:A:O2'	57:AA:395:U:H5'	1.93	0.67
48:A1:20:ARG:O	48:A1:21:ARG:HG3	1.95	0.67
57:BA:89:G:H3'	57:BA:90:U:C5'	2.23	0.67
57:AA:443:A:H1'	57:AA:1201:C:O4'	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:AG:111:LEU:HD22	30:AG:120:LEU:CD2	2.21	0.67
30:AG:39:ILE:HD11	30:AG:92:VAL:CG1	2.25	0.67
34:AN:31:ALA:HA	34:AN:34:LEU:HD23	1.76	0.67
40:AT:70:VAL:HG12	40:AT:71:GLY:H	1.58	0.67
36:BP:50:ARG:HD3	55:B8:7:HIS:CD2	2.30	0.67
57:BA:330:A:O2'	57:BA:331:A:H8	1.78	0.67
57:BA:953:A:O2'	57:BA:954:G:H5'	1.95	0.67
37:AQ:132:VAL:CG1	46:AZ:81:ARG:HH21	2.03	0.67
57:AA:2645:G:C3'	57:AA:2646:C:H5'	2.23	0.67
52:A5:54:GLY:CA	52:A5:55:ARG:HE	2.08	0.67
39:AS:67:ARG:HH11	39:AS:67:ARG:CB	2.06	0.67
38:BR:9:LYS:O	38:BR:10:LEU:HD23	1.95	0.67
57:AA:2864:G:H2'	57:AA:2865:U:H6	1.59	0.67
49:B2:21:LEU:O	49:B2:24:LEU:HB3	1.95	0.67
57:BA:654(S):G:H3'	57:BA:654(T):C:C5'	2.25	0.67
53:A6:5:VAL:CG1	53:A6:7:ILE:HG22	2.25	0.67
57:AA:438:G:O2'	57:AA:440:G:H5'	1.94	0.67
30:AG:68:PRO:HA	30:AG:92:VAL:HB	1.76	0.67
32:AI:123:LEU:HD11	32:AI:144:VAL:CG2	2.25	0.67
34:AN:47:ALA:HB2	34:AN:112:LEU:HD11	1.75	0.67
34:AN:120:LEU:CD2	34:AN:122:VAL:HG23	2.25	0.67
46:AZ:31:ARG:HG2	58:AB:106:G:C5'	2.25	0.67
57:BA:141:A:H8	57:BA:1408:C:O2'	1.77	0.67
26:BC:182:PRO:HB2	26:BC:185:LYS:HD2	1.77	0.67
28:BE:143:ASN:O	57:BA:2052:G:H4'	1.94	0.67
29:BF:53:THR:HG23	29:BF:56:GLU:OE1	1.95	0.67
31:BH:149:ARG:HA	31:BH:162:ILE:HG13	1.76	0.67
32:BI:123:LEU:HD11	32:BI:144:VAL:CG2	2.24	0.67
39:BS:30:ARG:NH1	39:BS:35:ILE:HB	2.08	0.67
43:BW:29:LEU:O	43:BW:33:ARG:HG3	1.95	0.67
44:BX:64:LYS:NZ	44:BX:73:ARG:HH21	1.93	0.67
46:AZ:134:PRO:HB2	46:AZ:137:ILE:HD11	1.76	0.67
47:B0:11:ARG:CB	47:B0:11:ARG:HH11	2.07	0.67
57:BA:2584:U:C2'	57:BA:2585:U:H5'	2.25	0.67
57:BA:176:G:O2'	57:BA:177:G:H5'	1.94	0.67
57:AA:102:G:OP1	57:AA:102:G:H4'	1.94	0.66
27:AD:133:LEU:HB3	27:AD:173:VAL:HG11	1.77	0.66
30:AG:51:ARG:HA	30:AG:51:ARG:HE	1.57	0.66
39:AS:70:GLY:C	39:AS:101:LEU:HD23	2.15	0.66
40:AT:54:ARG:HG2	40:AT:54:ARG:HH11	1.59	0.66
55:B8:14:VAL:HG23	55:B8:24:ALA:HB2	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1278:A:O2'	57:BA:1279:G:H5'	1.95	0.66
30:BG:51:ARG:HD3	30:BG:53:LEU:HD23	1.77	0.66
32:BI:129:THR:HG23	32:BI:136:VAL:O	1.95	0.66
35:BO:98:VAL:HG13	35:BO:117:LEU:HB3	1.77	0.66
41:BU:92:ARG:NE	57:BA:996:A:H4'	2.10	0.66
42:BV:81:TYR:C	42:BV:82:ARG:HD2	2.16	0.66
57:BA:2801(A):A:O4'	57:BA:2802:G:H2'	1.95	0.66
55:A8:32:LEU:HD12	57:AA:2391:G:OP1	1.94	0.66
57:AA:1947:C:C2'	57:AA:1948:G:H5''	2.25	0.66
29:BF:176:LEU:HD12	29:BF:177:ALA:N	2.10	0.66
57:AA:1697:G:H3'	57:AA:1698:A:C5'	2.25	0.66
37:AQ:27:VAL:HG13	37:AQ:105:GLU:OE2	1.95	0.66
57:BA:633:A:H2'	57:BA:634:C:H5'	1.77	0.66
53:A6:52:VAL:HG22	53:A6:53:LYS:H	1.58	0.66
57:AA:492:A:H2'	57:AA:493:G:O4'	1.96	0.66
28:AE:46:ALA:HB2	28:AE:82:ARG:HA	1.75	0.66
28:AE:59:VAL:HG13	28:AE:60:ASN:H	1.60	0.66
30:AG:113:ARG:CG	30:AG:113:ARG:NH2	2.42	0.66
32:AI:8:PRO:CB	32:AI:14:ASP:H	2.08	0.66
34:AN:30:ILE:O	34:AN:34:LEU:HD22	1.95	0.66
30:BG:91:ARG:HG3	57:BA:2313:C:H4'	1.77	0.66
44:BX:12:VAL:HG21	44:BX:27:THR:HG23	1.77	0.66
45:BY:4:LYS:HD2	45:BY:32:PRO:CG	2.24	0.66
45:BY:4:LYS:HD2	45:BY:32:PRO:HG3	1.77	0.66
47:A0:14:ARG:NH1	47:A0:14:ARG:HB2	1.99	0.66
27:AD:244:ARG:HB2	57:AA:1902:C:O2'	1.95	0.66
41:BU:47:TYR:HA	41:BU:50:ARG:HH22	1.60	0.66
57:BA:768:G:O2'	57:BA:1379:A:N6	2.27	0.66
30:BG:164:GLU:OE1	30:BG:164:GLU:N	2.28	0.66
46:AZ:182:LYS:O	46:AZ:183:LEU:HD23	1.95	0.66
56:A9:22:ARG:HH12	57:AA:2741:A:H5''	1.60	0.66
44:BX:60:ARG:HH21	54:B7:47:ARG:HD2	1.60	0.66
34:BN:120:LEU:HD22	34:BN:122:VAL:HG23	1.75	0.66
48:A1:29:GLY:O	48:A1:31:GLY:N	2.29	0.66
55:A8:48:PHE:O	55:A8:49:VAL:HG13	1.95	0.66
57:AA:300:A:H2'	57:AA:334:C:H1'	1.77	0.66
57:AA:768:G:O2'	57:AA:1379:A:N6	2.27	0.66
26:AC:51:ASP:O	26:AC:54:ARG:HB2	1.95	0.66
28:AE:101:ARG:HB3	28:AE:169:ASN:HD22	1.61	0.66
30:AG:159:VAL:O	30:AG:159:VAL:HG13	1.95	0.66
45:AY:4:LYS:HD2	45:AY:32:PRO:HG3	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:AY:8:LYS:HE2	45:AY:72:VAL:HG23	1.78	0.66
53:B6:11:LEU:HA	53:B6:54:ILE:OXT	1.94	0.66
57:BA:2106:G:H2'	57:BA:2107:C:O4'	1.96	0.66
57:BA:2120:G:H2'	57:BA:2121:G:C8	2.28	0.66
57:BA:2312:U:H2'	57:BA:2313:C:H5''	1.77	0.66
57:BA:672:C:H2'	57:BA:673:C:C5'	2.25	0.66
27:BD:24:ILE:CG1	27:BD:25:THR:H	2.08	0.66
27:BD:28:GLU:H	27:BD:29:PRO:CD	2.07	0.66
27:BD:34:VAL:C	27:BD:36:PRO:HD2	2.14	0.66
28:BE:61:ARG:C	28:BE:63:LEU:H	1.96	0.66
30:BG:172:LEU:HD23	30:BG:172:LEU:O	1.95	0.66
32:BI:86:THR:O	32:BI:87:LYS:HB2	1.95	0.66
35:BO:26:LYS:O	35:BO:27:GLY:O	2.12	0.66
28:BE:111:ARG:HG3	38:BR:2:ARG:NH2	2.10	0.66
38:BR:3:HIS:HB2	57:BA:1654:A:OP2	1.96	0.66
39:BS:13:ARG:CG	39:BS:14:VAL:H	2.08	0.66
57:BA:2864:G:H2'	57:BA:2865:U:C6	2.29	0.66
46:AZ:71:VAL:HA	46:AZ:87:ASP:O	1.96	0.66
51:A4:46:GLN:NE2	51:A4:47:GLN:H	1.93	0.66
57:AA:836:G:H2'	57:AA:837:C:C6	2.30	0.66
28:AE:51:PHE:CD1	28:AE:52:LEU:N	2.63	0.66
34:AN:15:LEU:HB2	34:AN:134:ARG:HB2	1.78	0.66
41:AU:70:ARG:HA	41:AU:74:LEU:O	1.93	0.66
32:BI:58:LEU:O	32:BI:58:LEU:HD23	1.95	0.66
38:BR:2:ARG:HD3	38:BR:5:LYS:CE	2.24	0.66
42:BV:39:LEU:HD12	42:BV:47:VAL:HG11	1.76	0.66
29:AF:178:PRO:HG2	29:AF:179:GLU:OE2	1.95	0.66
31:AH:156:ALA:O	31:AH:157:TYR:C	2.33	0.66
57:AA:271(E):U:H2'	57:AA:271(F):C:C6	2.30	0.66
57:AA:654(S):G:H3'	57:AA:654(T):C:C5'	2.26	0.66
57:AA:2734:A:H5'	57:AA:2735:G:OP2	1.94	0.66
27:AD:231:HIS:ND1	27:AD:232:PRO:HD2	2.10	0.66
57:BA:1720:U:H2'	57:BA:1721:G:O4'	1.96	0.66
55:A8:6:THR:CG2	55:A8:63:PRO:HD3	2.25	0.66
57:AA:1485:G:H1'	57:AA:1505:C:H42	1.61	0.66
57:AA:579:G:H2'	57:AA:580:C:C6	2.30	0.66
57:AA:768:G:H2'	57:AA:769:G:H8	1.59	0.66
57:AA:953:A:O2'	57:AA:954:G:H5'	1.95	0.66
27:AD:210:GLY:O	27:AD:211:ARG:HB3	1.94	0.66
31:AH:124:GLU:HB2	31:AH:132:ARG:CG	2.25	0.66
32:AI:110:ASP:CB	32:AI:113:ARG:HB2	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:5:VAL:CG1	53:B6:7:ILE:HG22	2.25	0.66
58:BB:40:U:C2	58:BB:43:C:H5''	2.30	0.66
29:BF:25:PRO:HB3	29:BF:119:ARG:HD3	1.77	0.66
32:BI:120:ILE:HG22	32:BI:121:LYS:N	2.09	0.66
32:BI:77:LEU:HD22	32:BI:140:LEU:HA	1.76	0.66
32:BI:46:ALA:C	32:BI:47:LEU:HD12	5.08	0.66
34:BN:67:LEU:CD2	34:BN:87:LEU:HD13	2.26	0.66
45:BY:13:VAL:HB	45:BY:28:LYS:HD3	1.76	0.66
45:BY:57:GLN:HG2	45:BY:58:GLY:N	2.08	0.66
42:BV:19:LYS:HG3	42:BV:20:LEU:N	2.10	0.66
57:BA:2134:A:C2	57:BA:2159:G:H1'	2.30	0.66
57:BA:2179:C:H4'	57:BA:2179:C:OP1	1.95	0.66
46:BZ:54:HIS:HB3	46:BZ:101:PRO:HD3	1.77	0.66
57:AA:1657:C:H2'	57:AA:1658:C:C6	2.31	0.66
57:AA:672:C:O2'	57:AA:673:C:H5''	1.94	0.66
34:AN:67:LEU:HD23	34:AN:87:LEU:HD13	1.78	0.66
36:AP:33:ARG:O	36:AP:34:GLY:C	2.34	0.66
39:AS:95:HIS:CG	39:AS:96:GLY:N	2.62	0.66
49:B2:47:ASN:HD22	57:BA:94(A):G:N2	1.88	0.66
30:BG:43:LEU:HB2	30:BG:88:ILE:HG21	1.76	0.66
33:BJ:67:GLY:HA2	33:BJ:72:ASP:HA	1.78	0.66
36:BP:39:LYS:HG3	57:BA:807:U:OP2	1.95	0.66
31:BH:44:VAL:O	31:BH:46:GLU:N	2.28	0.66
31:BH:70:THR:HG22	31:BH:74:ASN:ND2	2.11	0.66
52:B5:54:GLY:N	52:B5:55:ARG:HE	1.93	0.66
36:AP:85:LEU:CD2	36:AP:85:LEU:H	2.09	0.66
57:AA:2584:U:C2'	57:AA:2585:U:H5'	2.25	0.66
57:AA:581:C:H2'	57:AA:582:G:C8	2.31	0.66
27:AD:35:LYS:NZ	27:AD:35:LYS:HB3	2.07	0.66
30:AG:70:VAL:HG22	30:AG:90:LEU:CD1	2.25	0.66
32:AI:87:LYS:HE3	32:AI:121:LYS:HG3	1.77	0.66
39:AS:59:LYS:HG2	39:AS:60:GLY:H	1.59	0.66
57:BA:833:U:H2'	57:BA:834:C:C6	2.53	0.66
36:BP:80:TYR:CZ	36:BP:111:ARG:HD3	2.30	0.66
40:BT:5:ALA:HB2	57:BA:2875:C:C4'	2.21	0.66
31:BH:46:GLU:O	31:BH:49:VAL:O	2.14	0.66
31:BH:7:LEU:HD23	31:BH:69:ARG:HG3	1.76	0.66
38:BR:98:LEU:HB2	38:BR:113:LEU:HD21	1.77	0.66
49:A2:64:LEU:HD22	49:A2:68:ARG:HH11	1.61	0.66
57:AA:2864:G:H2'	57:AA:2865:U:C6	2.30	0.66
44:AX:29:TRP:CZ3	44:AX:78:LYS:HB3	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1720:U:H2'	57:AA:1721:G:O4'	1.94	0.66
57:AA:1188:U:O2'	57:AA:1189:A:H5'	1.96	0.66
57:AA:1278:A:O2'	57:AA:1279:G:H5'	1.95	0.66
30:AG:71:THR:HG23	57:AA:2312:U:H4'	1.77	0.66
57:AA:2359:C:H2'	57:AA:2360:A:H8	1.61	0.66
57:AA:621:A:H2'	57:AA:622:G:C5'	2.24	0.66
28:AE:9:VAL:HG22	28:AE:25:VAL:HB	1.78	0.66
29:AF:25:PRO:HB3	29:AF:119:ARG:HD3	1.76	0.66
36:AP:16:ARG:HG2	57:AA:1245:G:OP1	1.95	0.66
40:AT:13:ARG:HA	40:AT:13:ARG:NH1	2.11	0.66
40:AT:23:ARG:O	40:AT:25:GLY:N	2.29	0.66
40:AT:83:ILE:HG13	40:AT:84:GLN:N	2.11	0.66
57:BA:300:A:H2'	57:BA:334:C:H1'	1.77	0.66
29:BF:183:VAL:O	29:BF:187:VAL:HG23	1.96	0.66
32:BI:113:ARG:O	32:BI:114:LEU:HD23	1.95	0.66
45:BY:87:LYS:HG3	45:BY:88:LYS:H	1.60	0.66
57:AA:2795:G:N3	57:AA:2795:G:H2'	2.11	0.66
52:A5:51:TYR:HH	52:A5:52:TYR:HD2	0.78	0.66
46:BZ:116:VAL:C	46:BZ:174:VAL:HG13	2.15	0.66
57:AA:818:G:C2'	57:AA:819:A:H5''	3.18	0.66
34:BN:120:LEU:CD2	34:BN:122:VAL:HG23	2.25	0.66
33:AJ:124:ALA:H	33:AJ:127:GLU:CB	2.09	0.66
57:BA:1963:U:H2'	57:BA:1963:U:O2	1.96	0.66
57:AA:2392:A:H2	57:AA:2424:C:H42	1.41	0.66
26:AC:6:LYS:HD3	57:AA:2132:U:H3	1.61	0.66
57:AA:266:G:H5''	57:AA:268:C:H41	12.06	0.66
31:AH:86:GLU:HA	31:AH:132:ARG:HA	1.78	0.66
32:AI:82:ARG:HA	32:AI:145:VAL:HG13	1.77	0.66
36:AP:98:GLU:O	36:AP:101:VAL:HG22	1.95	0.66
35:AO:104:ARG:NE	40:AT:33:LYS:HD2	2.11	0.66
58:BB:109:C:H5'	58:BB:110:G:O5'	1.94	0.66
26:BC:6:LYS:HA	26:BC:9:ARG:HB2	1.78	0.66
28:BE:13:ARG:HD2	28:BE:20:ALA:HB1	1.76	0.66
29:BF:84:VAL:CG1	29:BF:85:GLY:N	2.57	0.66
33:BJ:51:LEU:O	33:BJ:88:ALA:HB3	1.96	0.66
41:BU:112:ARG:NH1	42:BV:46:VAL:HG11	2.10	0.66
38:AR:10:LEU:HD13	38:AR:17:ARG:NH1	2.09	0.66
50:B3:27:GLY:HA3	50:B3:35:ARG:NH1	2.10	0.66
57:AA:271(A):A:H5'	57:AA:271(B):C:OP2	1.96	0.66
57:AA:2176:A:H2'	57:AA:2177:C:C6	2.31	0.66
30:AG:92:VAL:HG23	58:AB:42:C:H1'	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AN:46:VAL:O	34:AN:47:ALA:HB3	1.95	0.66
36:AP:23:PRO:HB2	36:AP:33:ARG:CD	2.25	0.66
36:AP:48:PRO:CG	36:AP:49:ARG:H	2.06	0.66
53:B6:12:GLU:HA	53:B6:23:THR:HA	1.78	0.66
57:BA:443:A:H1'	57:BA:1201:C:O4'	1.96	0.66
32:BI:120:ILE:HD11	32:BI:126:TYR:HD1	1.61	0.66
32:BI:68:LEU:HD11	32:BI:130:TYR:CE2	2.31	0.66
42:BV:15:GLU:HB3	42:BV:16:PRO:HD2	1.78	0.66
42:BV:5:VAL:HG21	42:BV:35:LEU:HG	1.78	0.66
38:AR:10:LEU:CD2	38:AR:17:ARG:HD3	2.25	0.66
36:BP:75:ILE:N	36:BP:75:ILE:HD12	2.11	0.66
57:BA:1833:U:H2'	57:BA:1834:U:H6	1.59	0.66
29:AF:2:LYS:HG3	29:AF:25:PRO:HG2	1.78	0.65
30:AG:5:VAL:HG12	51:A4:24:THR:HG22	1.76	0.65
30:AG:98:ARG:HG3	51:A4:1:MET:HG2	1.78	0.65
34:AN:62:VAL:CG2	34:AN:66:LYS:HB2	2.26	0.65
34:AN:67:LEU:CD2	34:AN:87:LEU:HD13	2.26	0.65
42:AV:52:VAL:HG13	42:AV:52:VAL:O	1.96	0.65
44:AX:13:LEU:HD11	49:A2:41:ILE:HG22	1.77	0.65
29:BF:74:ARG:HD2	57:BA:674:G:H1'	1.78	0.65
57:BA:70:G:H2'	57:BA:113:G:O2'	1.96	0.65
57:BA:818:G:C2'	57:BA:819:A:H5''	3.09	0.65
39:BS:32:LEU:HD13	58:BB:31:C:N4	2.11	0.65
26:BC:26:ALA:HB2	26:BC:225:ILE:HG21	1.78	0.65
28:BE:61:ARG:HH21	57:BA:2811:G:H4'	1.61	0.65
34:BN:62:VAL:HG13	34:BN:62:VAL:O	1.96	0.65
37:BQ:35:VAL:HG11	37:BQ:130:LYS:HE2	1.76	0.65
41:BU:70:ARG:HA	41:BU:74:LEU:O	1.97	0.65
57:AA:2801(A):A:O4'	57:AA:2802:G:H2'	1.95	0.65
37:BQ:133:ARG:O	37:BQ:134:ARG:HG2	1.96	0.65
57:AA:2833:G:H3'	57:AA:2834:G:H5''	1.79	0.65
57:AA:1528(A):A:H62	57:AA:1541:G:N2	1.93	0.65
57:BA:1528(A):A:H62	57:BA:1541:G:N2	1.93	0.65
41:BU:59:ARG:HD3	57:BA:1009:A:C5'	2.26	0.65
55:A8:52:LYS:N	55:A8:53:PRO:CD	2.59	0.65
57:AA:2122:U:H2'	57:AA:2123:G:H8	1.60	0.65
57:AA:27:G:H22	57:AA:512:G:H2'	1.61	0.65
28:AE:59:VAL:HG13	28:AE:60:ASN:N	2.12	0.65
30:AG:39:ILE:CD1	30:AG:60:LEU:HD21	2.26	0.65
32:AI:92:VAL:HG22	32:AI:97:ILE:CG1	2.27	0.65
35:AO:64:ARG:HG2	35:AO:79:PHE:CG	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AP:95:VAL:HG22	36:AP:125:VAL:HA	1.78	0.65
40:AT:28:VAL:O	40:AT:29:ARG:HD3	1.96	0.65
34:AN:2:LYS:HZ1	42:AV:12:TYR:HA	1.59	0.65
55:B8:32:LEU:HD12	57:BA:2391:G:OP1	1.95	0.65
28:BE:72:VAL:O	28:BE:72:VAL:HG12	1.96	0.65
31:BH:86:GLU:HB3	31:BH:132:ARG:CB	2.26	0.65
40:BT:100:TYR:HD2	40:BT:103:ARG:NH2	1.93	0.65
47:A0:51:VAL:HG22	47:A0:81:VAL:HG23	1.76	0.65
52:B5:50:GLY:O	52:B5:51:TYR:HB2	1.94	0.65
46:AZ:59:LEU:HG	46:AZ:69:THR:HG21	1.77	0.65
57:AA:2134:A:C2	57:AA:2159:G:H1'	2.31	0.65
37:BQ:28:ALA:O	37:BQ:29:PHE:CD1	2.48	0.65
57:AA:116:C:O2'	57:AA:117:G:H5'	1.96	0.65
40:BT:113:LYS:O	40:BT:114:LEU:HD23	1.96	0.65
40:BT:82:LEU:N	40:BT:82:LEU:HD12	2.10	0.65
55:A8:14:VAL:HG21	55:A8:22:VAL:CG1	2.25	0.65
30:AG:4:ASP:HA	30:AG:8:LYS:CD	2.23	0.65
34:AN:1:MET:HG2	34:AN:2:LYS:N	2.11	0.65
38:AR:57:ARG:O	38:AR:59:ASP:N	2.30	0.65
40:AT:30:VAL:HA	40:AT:44:ASP:HA	1.77	0.65
45:AY:68:HIS:HB3	45:AY:71:LYS:HG2	1.78	0.65
40:BT:13:ARG:NH1	40:BT:13:ARG:HA	2.10	0.65
34:BN:2:LYS:HZ1	42:BV:12:TYR:HA	1.61	0.65
31:BH:28:GLY:HA3	31:BH:79:VAL:HB	1.77	0.65
27:AD:259:THR:HG22	57:AA:1798:U:H5''	1.76	0.65
57:BA:1541:G:H1'	57:BA:1542:A:C5	2.31	0.65
49:A2:59:ARG:HD3	57:AA:77:C:OP1	1.97	0.65
29:AF:183:VAL:O	29:AF:187:VAL:HG23	1.96	0.65
48:B1:48:LYS:HD2	48:B1:48:LYS:N	2.11	0.65
57:AA:473:G:H2'	57:AA:474:G:H8	3.14	0.65
57:AA:1270:C:H5''	57:AA:1271:G:O5'	1.96	0.65
30:AG:3:LEU:O	30:AG:4:ASP:HB3	1.96	0.65
31:AH:7:LEU:HD21	31:AH:69:ARG:HD2	1.79	0.65
42:AV:81:TYR:C	42:AV:82:ARG:HD2	2.16	0.65
45:AY:87:LYS:HG3	45:AY:88:LYS:H	1.61	0.65
51:B4:14:ILE:HG23	51:B4:31:ILE:CG2	2.26	0.65
30:BG:111:LEU:HD13	30:BG:179:PRO:HG3	1.77	0.65
32:BI:127:VAL:HG22	32:BI:139:GLN:HB3	1.79	0.65
32:BI:8:PRO:CB	32:BI:14:ASP:H	2.08	0.65
32:BI:23:PRO:HB3	32:BI:27:ARG:NH2	2.11	0.65
35:BO:24:VAL:HG23	35:BO:33:ALA:HB2	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:126:VAL:HG12	36:BP:148:LEU:HD11	1.78	0.65
31:BH:41:MET:CE	31:BH:42:ARG:H	2.09	0.65
27:BD:259:THR:HG23	57:BA:1803:A:H4'	1.79	0.65
31:AH:158:HIS:CE1	31:AH:168:PRO:HB2	2.32	0.65
57:BA:654(G):C:H2'	57:BA:654(H):G:C8	2.31	0.65
57:AA:2567:G:H2'	57:AA:2568:C:C6	2.32	0.65
56:B9:22:ARG:HH12	57:BA:2741:A:H5''	1.61	0.65
57:BA:2401:U:C2'	57:BA:2402:C:H5''	2.26	0.65
57:BA:2877:G:O2'	57:BA:2878:U:H5'	1.95	0.65
57:AA:1503:U:H2'	57:AA:1504:C:C6	2.32	0.65
57:AA:2106:G:H2'	57:AA:2107:C:O4'	1.95	0.65
57:AA:2312:U:H2'	57:AA:2313:C:H5''	1.76	0.65
29:AF:53:THR:HG23	29:AF:56:GLU:OE1	1.96	0.65
30:AG:77:ILE:C	30:AG:79:ASN:H	1.98	0.65
31:AH:149:ARG:HA	31:AH:162:ILE:HG13	1.77	0.65
32:AI:68:LEU:HD11	32:AI:130:TYR:CE2	2.32	0.65
36:AP:80:TYR:CZ	36:AP:111:ARG:HD3	2.32	0.65
42:AV:18:LEU:HD13	42:AV:19:LYS:N	2.12	0.65
57:BA:141:A:C8	57:BA:1408:C:O2'	2.49	0.65
34:BN:18:ALA:CB	34:BN:21:LYS:HB2	2.26	0.65
34:BN:17:ASP:HB2	34:BN:55:VAL:HG12	1.79	0.65
35:BO:88:ASN:HD21	35:BO:90:GLN:HB2	1.60	0.65
40:BT:54:ARG:HH11	40:BT:54:ARG:HG2	1.61	0.65
31:BH:43:VAL:HG12	31:BH:52:VAL:HA	1.79	0.65
47:A0:11:ARG:HH11	47:A0:11:ARG:CB	2.09	0.65
57:BA:1887:C:C3'	57:BA:1888:G:H5''	2.25	0.65
57:AA:1963:U:O2	57:AA:1963:U:H2'	1.95	0.65
48:B1:86:SER:HB2	48:B1:89:GLU:HB2	1.79	0.65
54:A7:8:ASN:HD22	54:A7:8:ASN:C	1.98	0.65
35:AO:18:LYS:HB2	35:AO:45:GLU:HG2	1.78	0.65
53:A6:5:VAL:HG12	53:A6:8:LYS:CB	2.27	0.65
32:AI:110:ASP:OD2	32:AI:113:ARG:HB2	1.97	0.65
32:AI:31:LEU:HD12	32:AI:31:LEU:H	1.62	0.65
36:AP:126:VAL:HG12	36:AP:148:LEU:HD11	1.77	0.65
36:BP:16:ARG:HG2	57:BA:1245:G:OP1	1.96	0.65
30:BG:46:ALA:HB3	30:BG:82:LEU:HD13	1.78	0.65
32:BI:88:ILE:HD11	32:BI:142:VAL:CG1	2.24	0.65
40:BT:83:ILE:HG13	40:BT:84:GLN:N	2.12	0.65
43:BW:2:GLU:HA	43:BW:64:MET:HE1	1.79	0.65
57:BA:2795:G:H2'	57:BA:2795:G:N3	2.11	0.65
27:AD:259:THR:HG21	57:AA:1803:A:H4'	1.76	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:768:G:H2'	57:BA:769:G:H8	1.61	0.65
34:AN:76:SER:O	34:AN:78:TYR:N	2.30	0.65
35:AO:47:ILE:CG1	35:AO:48:PRO:HD2	2.26	0.65
30:BG:136:ARG:HH22	57:BA:2306:C:H4'	1.60	0.65
57:AA:923:C:H2'	57:AA:924:C:H6	1.60	0.65
26:AC:6:LYS:HA	26:AC:9:ARG:HB2	1.78	0.65
30:AG:106:LEU:HD12	30:AG:110:ALA:HB1	1.78	0.65
41:AU:83:LEU:HD12	41:AU:88:ILE:HD12	1.78	0.65
42:AV:19:LYS:HG3	42:AV:20:LEU:N	2.10	0.65
44:AX:12:VAL:HG21	44:AX:27:THR:HG23	1.78	0.65
45:AY:8:LYS:HE3	45:AY:74:PRO:HD3	1.78	0.65
57:BA:330:A:HO2'	57:BA:331:A:H8	1.40	0.65
57:BA:80:G:O2'	57:BA:81:G:H5'	1.97	0.65
27:BD:118:VAL:HG22	27:BD:119:ALA:N	2.12	0.65
34:BN:30:ILE:O	34:BN:34:LEU:HD22	1.97	0.65
35:BO:104:ARG:NE	40:BT:33:LYS:HD2	2.12	0.65
36:BP:50:ARG:NH2	36:BP:50:ARG:HG2	2.09	0.65
40:BT:23:ARG:HG2	40:BT:120:ARG:HH12	1.62	0.65
31:BH:41:MET:HG3	31:BH:43:VAL:H	1.62	0.65
57:AA:2801(A):A:H5'	57:AA:2802:G:C8	2.28	0.65
48:A1:89:GLU:CA	48:A1:92:LYS:HB3	2.25	0.65
57:AA:2807:G:H3'	57:AA:2808:U:H5''	1.79	0.65
57:BA:1542:A:N7	57:BA:1544:A:H5''	2.12	0.65
55:B8:29:LYS:HG3	55:B8:29:LYS:O	1.96	0.65
44:AX:60:ARG:HH21	54:A7:47:ARG:HD2	1.60	0.65
57:AA:2292:C:O2'	57:AA:2293:C:H5'	1.96	0.65
30:AG:114:ILE:O	30:AG:115:ARG:C	2.35	0.65
57:AA:2781:A:H5''	57:AA:2782:G:H5'	1.79	0.65
53:A6:12:GLU:HA	53:A6:23:THR:HA	1.79	0.65
38:AR:3:HIS:HB2	57:AA:1654:A:OP2	1.97	0.65
43:AW:29:LEU:O	43:AW:33:ARG:HG3	1.95	0.65
57:BA:1503:U:H2'	57:BA:1504:C:C6	2.32	0.65
29:BF:40:GLN:HE22	29:BF:184:TYR:CB	2.10	0.65
33:BJ:59:ILE:O	33:BJ:61:LEU:N	2.30	0.65
48:A1:45:ASN:ND2	57:AA:2090:G:H21	1.94	0.65
31:BH:158:HIS:CE1	31:BH:168:PRO:HB2	2.32	0.65
57:AA:2329:G:H2'	57:AA:2330:G:C8	2.32	0.65
57:BA:1438:U:O2'	57:BA:1439:A:H5'	1.97	0.65
43:BW:93:ALA:HB2	57:BA:1614:A:H62	1.61	0.65
57:BA:2807:G:H3'	57:BA:2808:U:H5''	1.79	0.65
57:BA:1509(B):A:H2'	57:BA:1510:G:C8	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:202:PHE:O	29:BF:206:ILE:HG12	1.97	0.65
36:AP:67:MET:H	57:AA:2415:G:H4'	1.60	0.65
30:AG:173:LEU:O	30:AG:178:PHE:HB2	1.97	0.65
32:AI:58:LEU:C	32:AI:60:GLU:H	1.99	0.65
28:BE:96:PHE:HA	28:BE:100:GLU:OE1	1.97	0.65
29:BF:21:ALA:C	29:BF:23:ASP:H	1.99	0.65
36:BP:6:LEU:N	36:BP:6:LEU:HD23	2.12	0.65
45:BY:76:CYS:CB	45:BY:96:ILE:HD11	2.24	0.65
46:BZ:116:VAL:O	46:BZ:174:VAL:HG13	1.97	0.65
49:A2:3:LEU:O	49:A2:3:LEU:HD23	1.97	0.65
57:AA:1352:U:O2'	57:AA:1353:A:H5'	1.96	0.65
57:AA:860:U:O2'	57:AA:861:A:H5'	1.96	0.65
26:AC:182:PRO:HB2	26:AC:185:LYS:HD2	1.78	0.65
26:AC:190:ILE:O	26:AC:194:ILE:HG12	1.97	0.65
30:AG:9:ARG:C	30:AG:11:TYR:H	1.99	0.65
28:AE:111:ARG:HG3	38:AR:2:ARG:NH2	2.12	0.65
40:AT:33:LYS:HZ2	40:AT:74:ARG:NH2	1.94	0.65
44:AX:64:LYS:NZ	44:AX:73:ARG:HH21	1.93	0.65
45:AY:84:ARG:HD2	45:AY:97:ARG:NE	2.10	0.65
55:B8:49:VAL:HG23	55:B8:53:PRO:HB3	1.79	0.65
30:BG:132:ASN:HB2	57:BA:2303:G:O2'	1.96	0.65
58:BB:40:U:H3'	58:BB:41:U:C5'	2.27	0.65
30:BG:108:ASN:C	30:BG:109:VAL:HG23	2.18	0.65
30:BG:73:ALA:O	30:BG:85:GLY:HA2	1.97	0.65
32:BI:98:ALA:HB1	32:BI:109:ILE:HB	1.79	0.65
37:AQ:133:ARG:O	37:AQ:134:ARG:HG2	1.96	0.65
57:BA:2645:G:C3'	57:BA:2646:C:H5'	2.22	0.65
52:B5:51:TYR:CG	52:B5:52:TYR:N	2.65	0.65
38:BR:10:LEU:HD13	38:BR:17:ARG:NH1	2.12	0.65
36:BP:85:LEU:CD2	36:BP:85:LEU:H	2.10	0.65
46:AZ:110:GLY:HA3	46:AZ:174:VAL:HG11	1.79	0.65
35:BO:18:LYS:HB2	35:BO:45:GLU:HG2	1.77	0.65
50:A3:1:MET:CE	50:A3:39:ASP:HB3	2.27	0.65
57:AA:1532:C:H2'	57:AA:1533:G:O4'	1.97	0.65
57:AA:2223:G:C2'	57:AA:2224:G:H5'	2.27	0.65
36:AP:50:ARG:HD3	55:A8:7:HIS:CD2	2.32	0.64
28:AE:37:ARG:NH1	57:AA:2784:C:H1'	2.12	0.64
57:AA:625:G:H2'	57:AA:626:U:C6	2.72	0.64
58:AB:109:C:H5'	58:AB:110:G:O5'	1.96	0.64
30:AG:85:GLY:C	30:AG:87:PRO:HD3	2.17	0.64
41:AU:92:ARG:HE	57:AA:996:A:H4'	1.61	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:AW:4:LYS:HA	43:AW:106:ILE:HG22	1.78	0.64
43:AW:9:TYR:H	43:AW:102:HIS:HD2	1.45	0.64
57:BA:1021:A:C3'	57:BA:1021:A:C8	2.78	0.64
27:BD:108:PRO:HB3	27:BD:143:HIS:CE1	2.33	0.64
29:BF:89:VAL:O	29:BF:91:GLY:N	2.28	0.64
32:BI:83:ALA:HB2	32:BI:88:ILE:HG23	1.79	0.64
36:BP:64:LYS:HB3	55:B8:25:MET:CG	2.24	0.64
41:BU:92:ARG:HB3	42:BV:11:GLN:HE22	1.62	0.64
57:BA:2801(A):A:C4'	57:BA:2802:G:H2'	2.27	0.64
38:AR:98:LEU:HB2	38:AR:113:LEU:CD2	2.27	0.64
29:BF:165:ARG:CB	29:BF:165:ARG:HH11	2.10	0.64
48:B1:57:GLU:O	48:B1:58:ILE:HG12	1.97	0.64
57:BA:197:A:C8	57:BA:197:A:H5'	2.31	0.64
46:BZ:43:GLU:O	46:BZ:47:VAL:HG23	1.97	0.64
57:AA:1116:C:C3'	57:AA:1117:G:H5''	3.96	0.64
30:AG:53:LEU:HD22	30:AG:53:LEU:H	1.63	0.64
32:AI:109:ILE:HG21	32:AI:114:LEU:HD11	1.78	0.64
32:AI:58:LEU:HD23	32:AI:58:LEU:O	1.97	0.64
39:AS:90:GLY:C	39:AS:92:TYR:H	2.00	0.64
55:B8:61:LEU:HD12	55:B8:63:PRO:HD2	1.79	0.64
57:BA:1485:G:H1'	57:BA:1505:C:H42	1.63	0.64
57:BA:270:A:O2'	57:BA:271:A:H5'	1.97	0.64
30:BG:56:ALA:HB1	30:BG:153:ARG:HD2	1.79	0.64
30:BG:96:ARG:NH2	30:BG:97:ASP:HB2	2.12	0.64
34:BN:62:VAL:HG22	34:BN:66:LYS:HB2	1.79	0.64
57:AA:2801(A):A:C4'	57:AA:2802:G:H2'	2.27	0.64
31:BH:158:HIS:NE2	31:BH:170:ARG:CA	2.60	0.64
57:AA:271(G):C:O2'	57:AA:271(H):G:H5'	1.97	0.64
57:AA:2199:A:H5'	57:AA:2200:C:OP2	1.96	0.64
57:AA:1188:U:C2'	57:AA:1189:A:H5'	2.26	0.64
40:AT:113:LYS:O	40:AT:114:LEU:HD23	1.97	0.64
57:BA:271(A):A:H5'	57:BA:271(B):C:OP2	1.97	0.64
57:BA:32:C:O2'	57:BA:33:U:H5'	1.97	0.64
57:AA:1495:A:N3	57:AA:1496:A:C2	2.65	0.64
28:AE:101:ARG:NH1	28:AE:171:GLU:HB2	2.12	0.64
31:AH:86:GLU:HB3	31:AH:132:ARG:CB	2.28	0.64
31:AH:41:MET:HE2	31:AH:43:VAL:N	2.13	0.64
34:AN:34:LEU:O	34:AN:49:GLY:HA3	1.98	0.64
36:AP:64:LYS:HB3	55:A8:25:MET:CG	2.24	0.64
38:AR:84:ALA:HB3	38:AR:85:PRO:HD3	1.80	0.64
40:AT:28:VAL:HG13	40:AT:46:GLU:CA	2.16	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:AV:18:LEU:CG	42:AV:19:LYS:H	2.10	0.64
47:B0:26:TYR:O	47:B0:67:VAL:HB	1.97	0.64
55:B8:52:LYS:N	55:B8:53:PRO:CD	2.59	0.64
57:BA:1310:G:O2'	57:BA:1311:G:H5'	2.46	0.64
57:BA:674:G:H2'	57:BA:675:A:H8	4.84	0.64
36:BP:7:ARG:HB3	36:BP:7:ARG:NH1	2.11	0.64
39:BS:88:ASP:OD2	39:BS:89:ARG:N	2.31	0.64
40:BT:35:LYS:NZ	40:BT:41:ARG:HH21	1.95	0.64
46:BZ:26:GLY:HA2	46:BZ:85:HIS:CD2	2.33	0.64
57:BA:613:G:H5'	57:BA:613:G:C8	2.33	0.64
57:AA:1542:A:H5'	57:AA:1543:C:OP2	1.97	0.64
57:AA:2789:C:H1'	57:AA:2892:A:H2	1.63	0.64
44:BX:60:ARG:HH21	54:B7:47:ARG:HH11	1.45	0.64
34:BN:76:SER:O	34:BN:78:TYR:N	2.30	0.64
57:BA:1547:C:O2'	57:BA:1548:C:H5'	1.95	0.64
37:BQ:110:THR:HG23	37:BQ:113:GLN:HB2	1.77	0.64
49:A2:47:ASN:ND2	57:AA:94(A):G:N3	2.45	0.64
26:AC:26:ALA:HB2	26:AC:225:ILE:HG21	1.78	0.64
30:AG:109:VAL:O	30:AG:113:ARG:CB	2.42	0.64
30:AG:158:ALA:O	30:AG:159:VAL:HB	1.97	0.64
32:AI:127:VAL:HG13	32:AI:138:ILE:O	1.98	0.64
46:AZ:79:ARG:O	46:AZ:80:ARG:HB2	1.96	0.64
57:BA:1116:C:C3'	57:BA:1117:G:H5''	3.97	0.64
57:BA:271(M):G:O2'	57:BA:271(O):C:H5'	1.97	0.64
40:BT:3:ARG:NE	57:BA:2876:G:H4'	2.12	0.64
27:BD:133:LEU:HB3	27:BD:173:VAL:HG11	1.79	0.64
28:BE:37:ARG:NH1	57:BA:2784:C:H1'	2.12	0.64
29:BF:32:LEU:O	29:BF:36:VAL:HG23	1.98	0.64
57:BA:2801(A):A:H4'	57:BA:2802:G:C5'	2.20	0.64
57:BA:2801(A):A:H5'	57:BA:2802:G:C8	2.28	0.64
57:AA:2712:U:O2'	57:AA:2713:A:H5'	1.97	0.64
28:BE:165:VAL:HG11	57:BA:2679:A:H5'	1.78	0.64
57:AA:2179:C:H4'	57:AA:2179:C:OP1	1.97	0.64
57:AA:612:C:C3'	57:AA:613:G:H5''	2.27	0.64
57:AA:613:G:H5'	57:AA:613:G:C8	2.32	0.64
27:AD:118:VAL:HG22	27:AD:119:ALA:H	1.62	0.64
27:AD:155:LEU:HD23	27:AD:177:LEU:HD22	1.78	0.64
27:AD:45:ASN:HD22	27:AD:50:THR:HG21	1.63	0.64
29:AF:7:TYR:HD2	29:AF:16:GLY:H	1.46	0.64
36:AP:146:VAL:HG13	36:AP:147:LEU:N	2.13	0.64
27:BD:45:ASN:HD22	27:BD:50:THR:HG21	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:77:ILE:HG22	28:BE:78:LEU:N	2.07	0.64
34:BN:62:VAL:HG11	34:BN:67:LEU:HD21	1.78	0.64
36:BP:48:PRO:CG	36:BP:49:ARG:H	2.08	0.64
40:BT:102:ILE:HB	40:BT:110:ILE:CD1	2.27	0.64
46:BZ:151:HIS:HB3	46:BZ:170:THR:HA	1.78	0.64
29:BF:157:VAL:HG22	29:BF:194:MET:HG2	1.77	0.64
29:AF:160:ASN:ND2	29:AF:162:LEU:H	1.95	0.64
49:B2:2:LYS:CB	57:BA:97:C:H5''	2.28	0.64
42:AV:79:VAL:HG22	57:AA:1188:U:H4'	1.80	0.64
57:BA:2199:A:H3'	57:BA:2200:C:H6	1.61	0.64
57:AA:2193:G:H8	57:AA:2193:G:H5'	1.61	0.64
42:BV:79:VAL:HG22	57:BA:1188:U:H4'	1.80	0.64
57:BA:2781:A:H5''	57:BA:2782:G:H5'	1.80	0.64
57:AA:624:C:H2'	57:AA:625:G:C8	3.62	0.64
36:AP:106:LEU:HD13	36:AP:112:LEU:HD23	1.79	0.64
51:B4:14:ILE:N	51:B4:14:ILE:HD12	2.12	0.64
57:BA:777:A:H2'	57:BA:778:G:H8	2.31	0.64
26:BC:6:LYS:HD3	57:BA:2132:U:H3	1.61	0.64
28:BE:101:ARG:NH1	28:BE:171:GLU:HB2	2.12	0.64
28:BE:46:ALA:HB2	28:BE:82:ARG:HA	1.79	0.64
28:BE:69:LYS:NZ	28:BE:90:THR:H	1.94	0.64
29:BF:40:GLN:HE22	29:BF:184:TYR:H	1.44	0.64
40:BT:38:ASN:ND2	40:BT:40:THR:OG1	2.30	0.64
43:BW:64:MET:O	43:BW:65:LEU:HB3	1.97	0.64
45:BY:8:LYS:HE3	45:BY:74:PRO:HD3	1.78	0.64
57:BA:1899:G:O2'	57:BA:1900:A:H5''	1.97	0.64
42:AV:21:ARG:N	42:AV:21:ARG:HD3	2.13	0.64
46:BZ:141:VAL:CA	46:BZ:144:LEU:HD21	2.27	0.64
37:AQ:59:ARG:HA	46:AZ:180:VAL:HG23	1.80	0.64
51:A4:5:ILE:N	51:A4:5:ILE:HD13	2.13	0.64
57:AA:1809:A:H2'	57:AA:1810:A:C8	2.32	0.64
57:AA:2401:U:C2'	57:AA:2402:C:H5''	2.26	0.64
44:BX:24:GLY:HA3	44:BX:83:VAL:HG23	1.79	0.64
28:AE:61:ARG:HH21	57:AA:2811:G:H4'	1.62	0.64
27:AD:227:ASN:HA	27:AD:235:GLY:H	1.63	0.64
36:AP:84:ASN:HA	36:AP:115:LEU:O	1.97	0.64
51:B4:3:GLU:HG2	58:BB:43:C:OP1	1.98	0.64
36:BP:115:LEU:HA	36:BP:134:ALA:HB2	1.80	0.64
38:BR:2:ARG:N	38:BR:2:ARG:NH1	2.36	0.64
31:BH:11:VAL:HG21	31:BH:50:VAL:HG23	1.79	0.64
29:BF:178:PRO:HG2	29:BF:179:GLU:OE2	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1270:C:H5''	57:BA:1271:G:O5'	1.98	0.64
57:AA:1541:G:H1'	57:AA:1542:A:C5	2.33	0.64
57:AA:2472:G:H3'	57:AA:2475:C:N4	2.12	0.64
57:AA:1438:U:O2'	57:AA:1439:A:H5'	1.98	0.64
54:B7:8:ASN:HD22	54:B7:8:ASN:C	1.98	0.64
30:AG:67:LYS:HE2	51:A4:6:HIS:CE1	2.33	0.64
37:AQ:46:GLN:HE21	57:AA:2485:G:H5''	1.61	0.64
28:AE:61:ARG:HD2	57:AA:2632:A:H2	1.63	0.64
28:AE:95:ILE:N	28:AE:95:ILE:HD13	2.13	0.64
31:AH:44:VAL:HG12	31:AH:45:VAL:H	1.62	0.64
28:AE:111:ARG:HG3	38:AR:2:ARG:CZ	2.27	0.64
43:AW:10:VAL:HG12	43:AW:11:ARG:N	2.13	0.64
43:AW:40:ASN:O	43:AW:41:LYS:HG2	1.98	0.64
53:B6:48:VAL:O	53:B6:49:HIS:HB2	1.98	0.64
57:BA:1657:C:H2'	57:BA:1658:C:C6	2.33	0.64
57:BA:2023:G:H5'	57:BA:2617:C:H4'	1.79	0.64
57:BA:2450:A:O2'	57:BA:2451:A:H5'	1.97	0.64
27:BD:129:ASN:O	27:BD:193:VAL:HG12	1.98	0.64
27:BD:4:LYS:HE3	27:BD:20:ASP:HA	1.79	0.64
30:BG:130:ASN:HD22	30:BG:160:VAL:HG22	1.63	0.64
35:BO:64:ARG:HG2	35:BO:79:PHE:CG	2.32	0.64
38:BR:38:VAL:HB	38:BR:39:PRO:HD3	1.80	0.64
40:BT:23:ARG:HG2	40:BT:120:ARG:NH1	2.13	0.64
31:BH:41:MET:CG	31:BH:42:ARG:N	2.61	0.64
31:BH:41:MET:HG3	31:BH:42:ARG:N	2.13	0.64
46:BZ:69:THR:HA	46:BZ:89:PHE:O	1.98	0.64
46:BZ:175:VAL:CB	46:BZ:176:PRO:HD2	2.27	0.64
46:BZ:128:VAL:HG22	46:BZ:132:ASN:O	1.97	0.64
46:AZ:112:ARG:HD3	46:AZ:112:ARG:O	1.97	0.64
57:BA:2146:C:H4'	57:BA:2147:G:C8	2.33	0.64
40:AT:82:LEU:HD12	40:AT:82:LEU:N	2.13	0.64
46:BZ:114:GLY:O	46:BZ:177:PRO:HG3	1.96	0.64
57:BA:2292:C:O2'	57:BA:2293:C:H5'	1.97	0.64
57:BA:247:G:H4'	57:BA:386:G:C5	2.32	0.64
55:A8:4:MET:HE1	57:AA:593:G:H1'	1.79	0.64
29:AF:101:LEU:HD12	29:AF:102:PRO:HD2	1.80	0.64
32:AI:120:ILE:HD11	32:AI:126:TYR:HD1	1.63	0.64
32:AI:62:LYS:NZ	32:AI:133:HIS:HB2	2.13	0.64
35:AO:20:MET:O	35:AO:41:ALA:HB1	1.98	0.64
57:BA:1210:A:H5''	57:BA:1212:G:O4'	1.97	0.64
57:BA:624:C:H2'	57:BA:625:G:C8	3.64	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BB:38:C:O2	58:BB:48:A:H1'	1.97	0.64
58:BB:80:U:H2'	58:BB:81:G:N2	2.11	0.64
40:BT:38:ASN:HD22	40:BT:40:THR:CG2	2.11	0.64
45:BY:88:LYS:HZ3	45:BY:93:GLY:HA3	1.62	0.64
31:BH:41:MET:HE2	31:BH:43:VAL:N	2.12	0.64
46:AZ:157:LEU:H	46:AZ:157:LEU:HD23	1.62	0.64
57:BA:1403:C:H5''	57:BA:1471:A:C1'	2.26	0.64
46:BZ:31:ARG:HH11	46:BZ:31:ARG:HB2	1.62	0.64
57:AA:633:A:H2'	57:AA:634:C:H5'	1.80	0.64
57:AA:1681:G:H8	57:AA:1681:G:OP2	1.79	0.64
57:BA:2193:G:H8	57:BA:2193:G:H5'	1.62	0.64
29:AF:89:VAL:HG21	57:AA:586:A:H5'	1.80	0.64
58:AB:40:U:H3'	58:AB:41:U:C5'	2.27	0.64
31:AH:107:VAL:HG23	31:AH:107:VAL:O	1.97	0.64
31:AH:41:MET:HG3	31:AH:43:VAL:H	1.62	0.64
32:AI:83:ALA:HB2	32:AI:88:ILE:HG23	1.79	0.64
34:AN:18:ALA:CB	34:AN:21:LYS:HB2	2.27	0.64
34:AN:57:ALA:O	34:AN:58:ASP:O	2.16	0.64
40:AT:65:LYS:HZ1	40:AT:66:VAL:N	1.96	0.64
55:B8:59:LYS:CB	55:B8:59:LYS:HZ3	2.11	0.64
55:B8:6:THR:HG22	55:B8:63:PRO:HD3	1.79	0.64
26:BC:190:ILE:O	26:BC:194:ILE:HG12	1.98	0.64
29:BF:2:LYS:HG3	29:BF:25:PRO:HG2	1.80	0.64
30:BG:12:TYR:HA	30:BG:16:ARG:CB	2.27	0.64
34:BN:48:MET:H	34:BN:48:MET:HE3	1.63	0.64
57:AA:1899:G:O2'	57:AA:1900:A:H5''	1.97	0.64
57:AA:1464:C:O2'	57:AA:1528:A:C8	2.49	0.64
57:BA:197:A:H5'	57:BA:197:A:H8	1.63	0.64
48:B1:29:GLY:C	48:B1:31:GLY:H	2.01	0.64
57:AA:1177:A:H5'	57:AA:1178:C:C6	2.33	0.63
57:AA:1210:A:H5''	57:AA:1212:G:O4'	1.98	0.63
57:AA:1280:G:H2'	57:AA:1281:G:H5''	1.78	0.63
57:AA:833:U:H2'	57:AA:834:C:C6	2.55	0.63
58:AB:38:C:O2	58:AB:48:A:H1'	1.99	0.63
27:AD:208:LYS:HB2	57:AA:729:G:C5	2.32	0.63
30:AG:106:LEU:CA	30:AG:110:ALA:CB	2.75	0.63
34:AN:17:ASP:HB2	34:AN:55:VAL:HG12	1.80	0.63
40:AT:27:THR:OG1	40:AT:28:VAL:N	2.30	0.63
43:AW:6:ILE:HA	43:AW:103:ILE:O	1.98	0.63
46:AZ:72:ARG:HD3	46:AZ:72:ARG:O	1.97	0.63
57:BA:2201:C:O2'	57:BA:2202:C:H5'	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:625:G:H2'	57:BA:626:U:C6	2.73	0.63
33:BJ:73:GLY:O	33:BJ:75:GLN:N	2.30	0.63
45:BY:8:LYS:HE2	45:BY:72:VAL:HG23	1.79	0.63
52:A5:51:TYR:CG	52:A5:52:TYR:N	2.65	0.63
52:A5:54:GLY:C	52:A5:55:ARG:NE	2.52	0.63
31:AH:158:HIS:NE2	31:AH:170:ARG:CA	2.61	0.63
57:BA:271(G):C:O2'	57:BA:271(H):G:H5'	1.98	0.63
57:AA:1833:U:H2'	57:AA:1834:U:H6	1.62	0.63
57:AA:2146:C:H4'	57:AA:2147:G:C8	2.33	0.63
49:A2:47:ASN:O	49:A2:49:LYS:N	2.31	0.63
55:A8:49:VAL:HG23	55:A8:53:PRO:HB3	1.81	0.63
57:AA:1310:G:O2'	57:AA:1311:G:H5'	2.42	0.63
47:A0:23:VAL:HG21	57:AA:857:C:H4'	1.79	0.63
29:AF:40:GLN:NE2	29:AF:184:TYR:CB	2.61	0.63
30:AG:103:LEU:O	30:AG:107:LEU:HG	1.98	0.63
34:AN:128:HIS:HE1	34:AN:134:ARG:NH1	1.96	0.63
55:B8:33:ASN:ND2	55:B8:33:ASN:N	2.35	0.63
40:BT:70:VAL:HG12	40:BT:71:GLY:H	1.62	0.63
42:BV:18:LEU:CD1	42:BV:19:LYS:H	2.11	0.63
42:BV:18:LEU:CG	42:BV:19:LYS:H	2.10	0.63
46:BZ:119:GLU:O	46:BZ:121:HIS:N	2.30	0.63
57:BA:528:A:H2	57:BA:2043:C:C4'	2.11	0.63
29:BF:157:VAL:HG21	29:BF:194:MET:HG2	1.80	0.63
57:BA:2329:G:H2'	57:BA:2330:G:C8	2.34	0.63
57:BA:1991:U:C2'	57:BA:1992:G:H5''	2.28	0.63
46:AZ:108:PRO:HG2	46:AZ:111:VAL:HG23	1.79	0.63
57:BA:1722:A:H2	57:BA:1740:G:H2'	1.64	0.63
48:B1:48:LYS:HD2	48:B1:48:LYS:H	1.64	0.63
49:A2:42:GLY:O	49:A2:43:GLN:O	2.15	0.63
52:B5:7:PRO:HA	57:BA:2615:U:C2	2.33	0.63
55:A8:8:LYS:O	55:A8:12:LYS:HG3	1.99	0.63
29:AF:101:LEU:O	29:AF:106:ARG:NH1	2.30	0.63
29:AF:20:LEU:HD12	29:AF:199:TRP:CZ3	2.34	0.63
30:AG:111:LEU:CD2	30:AG:120:LEU:HD21	2.26	0.63
30:AG:12:TYR:O	30:AG:16:ARG:HB2	1.98	0.63
31:AH:44:VAL:O	31:AH:46:GLU:N	2.31	0.63
45:AY:4:LYS:HG3	45:AY:5:MET:H	1.64	0.63
30:BG:67:LYS:HE2	51:B4:6:HIS:NE2	2.13	0.63
53:B6:16:CYS:O	53:B6:17:LYS:HB2	1.98	0.63
57:BA:1280:G:H2'	57:BA:1281:G:H5''	1.79	0.63
57:BA:2176:A:H2'	57:BA:2177:C:C6	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:139:GLY:H	27:BD:165:ILE:HB	1.63	0.63
45:BY:51:VAL:HG12	45:BY:53:PRO:CD	2.21	0.63
38:AR:100:LEU:N	38:AR:100:LEU:HD22	2.08	0.63
57:BA:528:A:HO2'	57:BA:529:A:H5'	1.62	0.63
57:AA:654(G):C:H2'	57:AA:654(H):G:C8	2.33	0.63
57:AA:1403:C:H5''	57:AA:1471:A:C1'	2.27	0.63
58:AB:87:G:C3'	58:AB:88:C:H5''	2.28	0.63
30:AG:109:VAL:HG13	51:A4:33:VAL:HG13	1.80	0.63
36:AP:50:ARG:HG2	36:AP:50:ARG:NH2	2.07	0.63
27:BD:208:LYS:HB2	57:BA:729:G:C5	2.32	0.63
28:BE:120:TRP:CE3	28:BE:155:LYS:HD3	2.33	0.63
28:BE:59:VAL:HG11	28:BE:63:LEU:HG	1.79	0.63
30:BG:111:LEU:HD13	30:BG:179:PRO:HG2	1.79	0.63
31:BH:86:GLU:HA	31:BH:132:ARG:HA	1.79	0.63
32:BI:92:VAL:CB	32:BI:120:ILE:HB	2.23	0.63
32:BI:82:ARG:HA	32:BI:145:VAL:HG13	1.79	0.63
32:BI:31:LEU:H	32:BI:31:LEU:HD12	1.63	0.63
32:BI:84:GLY:HA3	32:BI:89:TYR:CZ	2.34	0.63
42:BV:38:LEU:O	42:BV:52:VAL:HG12	1.98	0.63
43:BW:4:LYS:HA	43:BW:106:ILE:HG22	1.80	0.63
45:BY:2:ARG:N	45:BY:4:LYS:HE2	2.13	0.63
46:AZ:152:ALA:HB2	46:AZ:168:GLU:HA	1.81	0.63
38:BR:10:LEU:HB3	38:BR:17:ARG:HD3	1.80	0.63
37:BQ:60:ARG:HG2	46:BZ:179:ASP:CG	2.19	0.63
36:AP:75:ILE:HD12	36:AP:75:ILE:N	2.12	0.63
57:BA:1532:C:H2'	57:BA:1533:G:O4'	1.98	0.63
48:A1:30:VAL:HG23	48:A1:31:GLY:N	2.14	0.63
51:A4:11:PRO:HA	51:A4:25:TYR:HA	1.81	0.63
57:AA:481:G:H1'	57:AA:506:G:N2	2.13	0.63
27:AD:142:VAL:HG23	27:AD:192:THR:O	1.98	0.63
39:AS:88:ASP:OD2	39:AS:89:ARG:N	2.32	0.63
40:AT:23:ARG:HG2	40:AT:120:ARG:NH1	2.12	0.63
44:AX:37:THR:HG21	57:AA:143:G:H1'	1.80	0.63
57:BA:1131:G:HO2'	57:BA:1132:A:H8	1.45	0.63
57:BA:1485:G:H2'	57:BA:1486:A:C8	2.32	0.63
36:BP:80:TYR:CE1	36:BP:111:ARG:HD3	2.33	0.63
40:BT:27:THR:CG2	40:BT:28:VAL:H	2.10	0.63
40:BT:35:LYS:HZ3	40:BT:41:ARG:HH21	1.44	0.63
45:BY:4:LYS:HG3	45:BY:5:MET:H	1.64	0.63
46:BZ:56:VAL:HG13	46:BZ:69:THR:O	1.98	0.63
37:BQ:134:ARG:NH2	46:BZ:122:ARG:HE	1.95	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AF:157:VAL:HG22	29:AF:194:MET:HG2	1.81	0.63
57:BA:336:C:H2'	57:BA:337:C:C6	2.65	0.63
57:AA:535:C:O2'	57:AA:536:A:H5'	1.99	0.63
57:BA:2233:U:H2'	57:BA:2234:G:C8	2.34	0.63
40:BT:109:GLU:HG2	40:BT:112:ARG:NH2	2.13	0.63
27:AD:263:ARG:NH1	27:AD:263:ARG:HB2	2.14	0.63
57:AA:1173:G:H3'	57:AA:1174:A:H5'	1.81	0.63
57:AA:229:A:C5'	57:AA:230:U:H5'	2.29	0.63
57:AA:330:A:O2'	57:AA:331:A:H8	1.79	0.63
57:AA:613:G:H8	57:AA:613:G:H5'	1.63	0.63
30:AG:39:ILE:HD12	30:AG:60:LEU:HD21	1.80	0.63
31:AH:41:MET:CG	31:AH:42:ARG:N	2.62	0.63
36:AP:47:ASP:HB3	36:AP:48:PRO:CA	2.29	0.63
42:AV:5:VAL:HG21	42:AV:35:LEU:HG	1.81	0.63
43:AW:64:MET:O	43:AW:65:LEU:HB3	1.98	0.63
53:B6:15:GLU:OE2	53:B6:44:ARG:NH2	2.32	0.63
38:BR:36:THR:HG22	57:BA:1278:A:H5''	1.81	0.63
57:BA:626:U:H5'	57:BA:627:A:H5'	1.79	0.63
27:BD:155:LEU:HD23	27:BD:177:LEU:HD22	1.80	0.63
30:BG:71:THR:HB	30:BG:89:GLY:C	2.19	0.63
32:BI:69:LYS:HA	32:BI:136:VAL:HG11	1.81	0.63
29:AF:157:VAL:HG21	29:AF:194:MET:HG2	1.81	0.63
46:BZ:128:VAL:HB	46:BZ:161:VAL:HG13	1.81	0.63
47:B0:73:GLY:O	47:B0:75:LEU:N	2.31	0.63
57:AA:70:G:H2'	57:AA:113:G:O2'	1.99	0.63
57:AA:581:C:H2'	57:AA:582:G:H8	1.64	0.63
28:AE:96:PHE:HA	28:AE:100:GLU:OE1	1.98	0.63
29:AF:21:ALA:C	29:AF:23:ASP:H	2.01	0.63
30:AG:128:ARG:NE	57:AA:2302:G:H1'	2.14	0.63
30:AG:9:ARG:O	30:AG:11:TYR:N	2.30	0.63
32:AI:140:LEU:HD21	32:AI:142:VAL:HG23	1.80	0.63
36:AP:105:LEU:HD12	36:AP:105:LEU:N	2.13	0.63
43:AW:58:ALA:HB3	43:AW:69:LEU:HD11	1.81	0.63
57:BA:535:C:O2'	57:BA:536:A:H5'	1.98	0.63
58:BB:55:U:O2'	58:BB:56:G:H5'	1.99	0.63
27:BD:61:LEU:O	27:BD:63:ARG:NH1	2.32	0.63
32:BI:107:VAL:O	32:BI:109:ILE:HD11	1.99	0.63
32:BI:110:ASP:CB	32:BI:113:ARG:HB2	2.28	0.63
36:BP:62:LEU:HD23	36:BP:63:PRO:N	2.13	0.63
40:BT:62:THR:HG22	40:BT:75:ILE:HG12	1.81	0.63
43:BW:73:ALA:HB3	43:BW:106:ILE:HD11	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BY:88:LYS:O	45:BY:90:LEU:HD23	1.99	0.63
48:A1:45:ASN:HD21	48:A1:47:GLN:HE22	1.43	0.63
34:BN:15:LEU:HB2	34:BN:134:ARG:HB2	1.80	0.63
57:BA:1542:A:H5'	57:BA:1543:C:OP2	1.98	0.63
46:BZ:157:LEU:HD23	46:BZ:157:LEU:N	2.14	0.63
28:AE:165:VAL:HG11	57:AA:2679:A:H5'	1.79	0.63
37:AQ:110:THR:HG23	37:AQ:113:GLN:HB2	1.79	0.63
57:AA:1115:G:H2'	57:AA:1116:C:C6	2.33	0.63
41:AU:13:LYS:HD3	57:AA:1227:G:OP1	1.99	0.63
57:AA:481:G:H1'	57:AA:506:G:H21	1.63	0.63
27:AD:139:GLY:H	27:AD:165:ILE:HB	1.63	0.63
27:AD:58:HIS:HD2	27:AD:59:LYS:O	1.82	0.63
40:AT:22:PHE:N	40:AT:22:PHE:CD2	2.67	0.63
55:B8:50:LEU:HA	55:B8:53:PRO:HG3	1.81	0.63
57:BA:1174:A:OP1	57:BA:1175:U:H5''	1.99	0.63
28:BE:132:HIS:O	57:BA:1658:C:OP1	2.15	0.63
46:BZ:85:HIS:CE1	58:BB:75:G:H21	2.16	0.63
28:BE:9:VAL:HG22	28:BE:25:VAL:HB	1.80	0.63
29:BF:84:VAL:HG12	29:BF:85:GLY:H	1.62	0.63
57:AA:1747(A):G:H2'	57:AA:1748:G:C5'	2.17	0.63
42:BV:21:ARG:HD3	42:BV:21:ARG:N	2.13	0.63
46:BZ:135:GLU:O	46:BZ:137:ILE:N	2.31	0.63
53:A6:16:CYS:O	53:A6:17:LYS:HB2	1.99	0.63
46:AZ:108:PRO:CB	46:AZ:144:LEU:HB2	2.28	0.63
57:BA:1681:G:H8	57:BA:1681:G:OP2	1.80	0.63
57:AA:1876:A:H2'	57:AA:1877:A:C8	2.34	0.63
57:AA:2233:U:H2'	57:AA:2234:G:C8	2.33	0.63
53:A6:5:VAL:HG22	53:A6:6:ARG:N	2.11	0.63
47:A0:27:GLU:OE2	57:AA:856:C:H4'	1.99	0.63
27:AD:142:VAL:HG23	27:AD:192:THR:C	2.19	0.63
28:AE:27:LEU:HD22	40:AT:1:MET:CE	2.29	0.63
31:AH:70:THR:CG2	31:AH:74:ASN:HD21	2.09	0.63
40:AT:100:TYR:HD2	40:AT:103:ARG:NH2	1.97	0.63
30:BG:67:LYS:HZ1	51:B4:3:GLU:HG3	1.64	0.63
57:BA:1173:G:H3'	57:BA:1174:A:C5'	2.29	0.63
28:BE:101:ARG:HB3	28:BE:169:ASN:HD22	1.63	0.63
30:BG:107:LEU:HD13	30:BG:177:GLY:O	1.99	0.63
34:BN:34:LEU:O	34:BN:49:GLY:HA3	1.98	0.63
42:BV:52:VAL:O	42:BV:52:VAL:HG13	1.97	0.63
46:BZ:57:ILE:CG2	46:BZ:58:VAL:H	2.02	0.63
57:BA:581:C:H2'	57:BA:582:G:H8	1.61	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BZ:169:GLU:O	46:BZ:171:ILE:N	2.32	0.63
38:BR:97:VAL:O	38:BR:98:LEU:HD23	1.99	0.63
57:AA:1722:A:H2	57:AA:1740:G:H2'	1.64	0.63
57:AA:1847:A:H3'	57:AA:1848:A:H5'	1.81	0.63
36:AP:70:GLN:HB3	57:AA:2406:U:O4	1.98	0.62
27:AD:228:PRO:HD3	27:AD:235:GLY:CA	2.29	0.62
32:AI:120:ILE:HG22	32:AI:121:LYS:H	1.63	0.62
32:AI:130:TYR:HD1	32:AI:131:LYS:H	1.46	0.62
36:AP:113:LYS:O	36:AP:115:LEU:HD22	1.99	0.62
44:AX:55:ASN:HB2	44:AX:80:ILE:HD12	1.79	0.62
57:BA:139:G:C6	57:BA:140:G:H2'	2.34	0.62
57:BA:2443:C:O2'	57:BA:2444:G:H5'	1.99	0.62
45:BY:68:HIS:CD2	57:BA:328:U:H4'	2.34	0.62
29:BF:63:LYS:HE2	57:BA:675:A:OP1	1.99	0.62
57:BA:997:G:HO2'	57:BA:998:C:H5'	1.63	0.62
28:BE:69:LYS:C	28:BE:71:GLY:H	2.03	0.62
30:BG:9:ARG:O	30:BG:13:GLU:HG2	1.98	0.62
30:BG:88:ILE:HG22	30:BG:89:GLY:N	2.14	0.62
40:BT:27:THR:HG23	40:BT:28:VAL:N	2.13	0.62
40:BT:48:ILE:HD12	40:BT:48:ILE:N	2.14	0.62
27:BD:259:THR:HG21	57:BA:1803:A:O2'	1.99	0.62
57:BA:1464:C:O2'	57:BA:1528:A:C8	2.50	0.62
46:BZ:162:GLU:N	46:BZ:162:GLU:OE1	2.32	0.62
57:BA:2790:A:H2'	57:BA:2790:A:N3	2.14	0.62
57:AA:287:C:H2'	57:AA:288:C:C6	2.34	0.62
40:AT:109:GLU:HG2	40:AT:112:ARG:NH2	2.14	0.62
55:A8:6:THR:HG22	55:A8:63:PRO:HD3	1.81	0.62
28:AE:77:ILE:HG22	28:AE:78:LEU:HG	1.81	0.62
30:AG:32:PRO:HB2	30:AG:172:LEU:CD1	2.29	0.62
36:AP:16:ARG:HH11	36:AP:16:ARG:CA	2.12	0.62
36:AP:80:TYR:CE1	36:AP:111:ARG:HD3	2.34	0.62
58:BB:71:C:H2'	58:BB:72:G:H8	1.64	0.62
30:BG:42:GLY:O	30:BG:44:GLY:N	2.32	0.62
37:BQ:43:THR:HG1	37:BQ:46:GLN:HG3	1.61	0.62
57:BA:654(S):G:H3'	57:BA:654(T):C:H5''	1.81	0.62
43:BW:82:LEU:HB3	43:BW:98:LYS:HB2	1.81	0.62
33:AJ:118:THR:C	33:AJ:120:LYS:H	2.01	0.62
57:AA:229:A:H5'	57:AA:230:U:H5'	1.81	0.62
31:AH:88:LEU:H	31:AH:88:LEU:HD22	1.64	0.62
36:BP:65:ARG:NH1	55:B8:15:LYS:HB2	2.14	0.62
57:BA:271(M):G:C2'	57:BA:271(N):U:H5''	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BB:87:G:C3'	58:BB:88:C:H5''	2.29	0.62
26:BC:185:LYS:HE3	26:BC:185:LYS:N	2.15	0.62
30:BG:77:ILE:HG23	30:BG:80:PHE:H	1.63	0.62
40:BT:116:ALA:HB1	40:BT:121:ILE:HD11	1.82	0.62
41:BU:88:ILE:C	41:BU:90:VAL:H	2.03	0.62
52:B5:2:ALA:N	57:BA:2014:A:HO2'	1.97	0.62
52:A5:2:ALA:N	57:AA:2014:A:HO2'	1.97	0.62
52:B5:46:CYS:SG	52:B5:47:PRO:CD	2.87	0.62
57:AA:1464:C:H2'	57:AA:1465:G:H8	1.65	0.62
57:BA:2544:G:O5'	57:BA:2544:G:H8	1.82	0.62
50:B3:1:MET:CE	50:B3:39:ASP:HB3	2.28	0.62
57:BA:2477:C:C6	57:BA:2477:C:H5'	2.34	0.62
44:BX:29:TRP:CZ3	44:BX:78:LYS:HB3	2.34	0.62
35:AO:22:ILE:HD12	57:AA:1952:A:C5	2.33	0.62
51:A4:14:ILE:HD12	51:A4:14:ILE:N	2.14	0.62
28:AE:48:GLN:NE2	28:AE:78:LEU:HD22	2.14	0.62
29:AF:8:GLN:CB	29:AF:126:VAL:HA	2.30	0.62
45:AY:100:ALA:O	45:AY:101:LYS:HB2	2.00	0.62
37:BQ:46:GLN:HE21	57:BA:2485:G:H5''	1.64	0.62
26:BC:216:THR:HB	26:BC:222:SER:HA	1.79	0.62
34:BN:46:VAL:O	34:BN:47:ALA:HB3	1.98	0.62
40:BT:106:SER:O	40:BT:107:ASP:CG	2.38	0.62
40:BT:85:LYS:HB3	40:BT:85:LYS:HZ2	1.64	0.62
43:BW:5:ALA:O	43:BW:6:ILE:HB	1.99	0.62
57:AA:1590:U:C3'	57:AA:1591:G:H5''	2.29	0.62
46:AZ:150:LEU:HG	46:AZ:171:ILE:HD11	1.82	0.62
38:AR:10:LEU:HB3	38:AR:17:ARG:HD3	1.80	0.62
48:B1:45:ASN:HD21	48:B1:47:GLN:NE2	1.98	0.62
57:AA:1957:C:H2'	57:AA:1958:C:H6	1.63	0.62
57:BA:1688:U:H1'	57:BA:1701:A:C6	2.35	0.62
57:AA:1484:G:N2	57:AA:1505:C:H42	1.97	0.62
57:AA:2443:C:O2'	57:AA:2444:G:H5'	2.00	0.62
57:AA:270:A:O2'	57:AA:271:A:H5'	1.99	0.62
26:AC:185:LYS:HE3	26:AC:185:LYS:N	2.15	0.62
28:AE:77:ILE:HG22	28:AE:78:LEU:N	2.09	0.62
29:AF:84:VAL:CG1	29:AF:85:GLY:N	2.61	0.62
36:AP:62:LEU:HD23	36:AP:63:PRO:N	2.14	0.62
40:AT:3:ARG:NE	57:AA:2876:G:H4'	2.14	0.62
29:BF:1:MET:O	29:BF:3:GLU:HG2	2.00	0.62
34:BN:57:ALA:O	34:BN:58:ASP:O	2.18	0.62
36:BP:146:VAL:HG13	36:BP:147:LEU:N	2.13	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BS:74:ALA:HB1	39:BS:103:GLU:CB	2.29	0.62
42:BV:19:LYS:HE2	42:BV:19:LYS:HA	1.82	0.62
49:B2:53:LEU:O	49:B2:57:ILE:HG12	1.99	0.62
29:AF:132:VAL:HG22	29:AF:133:ASN:ND2	2.14	0.62
57:AA:1991:U:C2'	57:AA:1992:G:H5''	2.29	0.62
57:AA:902:C:H2'	57:AA:903:C:C6	2.34	0.62
57:BA:287:C:H2'	57:BA:288:C:C6	2.34	0.62
57:AA:197:A:H5'	57:AA:197:A:C8	2.34	0.62
57:AA:1509(B):A:H2'	57:AA:1510:G:C8	2.34	0.62
28:AE:64:LYS:HB2	57:AA:2786:U:H4'	1.82	0.62
27:AD:129:ASN:O	27:AD:193:VAL:HG12	1.99	0.62
29:AF:40:GLN:HE22	29:AF:184:TYR:H	1.47	0.62
31:AH:46:GLU:O	31:AH:49:VAL:O	2.18	0.62
39:AS:74:ALA:HB1	39:AS:103:GLU:CB	2.28	0.62
26:BC:54:ARG:HG3	26:BC:57:GLN:OE1	2.00	0.62
36:BP:70:GLN:HB3	57:BA:2406:U:O4	1.99	0.62
40:BT:3:ARG:C	40:BT:5:ALA:N	2.52	0.62
45:BY:42:VAL:HG12	45:BY:65:ALA:CB	2.27	0.62
45:BY:68:HIS:HB3	45:BY:71:LYS:HG2	1.82	0.62
27:AD:244:ARG:HA	57:AA:1902:C:H4'	1.81	0.62
57:BA:364:C:H2'	57:BA:365:C:C5'	2.28	0.62
37:AQ:28:ALA:O	37:AQ:29:PHE:CD1	2.52	0.62
57:BA:1188:U:C2'	57:BA:1189:A:H5'	2.30	0.62
44:BX:8:ILE:HD12	44:BX:8:ILE:N	2.13	0.62
44:BX:44:GLU:CG	44:BX:51:VAL:HG23	2.30	0.62
29:AF:202:PHE:O	29:AF:206:ILE:HG12	1.99	0.62
57:AA:1019:U:O2'	57:AA:1021:A:H2	1.73	0.62
57:AA:1286:A:C2'	57:AA:1288:U:OP2	2.47	0.62
57:AA:234:C:H2'	57:AA:235:U:H6	1.63	0.62
57:AA:587:C:O2'	57:AA:588:U:OP2	2.17	0.62
57:AA:863:A:O2'	57:AA:864:G:H5'	2.00	0.62
26:AC:7:ARG:HD2	26:AC:35:THR:O	2.00	0.62
28:AE:68:ALA:O	28:AE:70:ALA:N	2.27	0.62
29:AF:3:GLU:C	29:AF:24:LEU:HG	2.20	0.62
30:AG:131:TYR:H	30:AG:159:VAL:CG1	2.11	0.62
32:AI:107:VAL:O	32:AI:109:ILE:HD11	2.00	0.62
36:AP:115:LEU:HA	36:AP:134:ALA:HB2	1.80	0.62
57:BA:1015:G:O2'	57:BA:1016:G:H5'	2.00	0.62
57:BA:1173:G:H3'	57:BA:1174:A:H5'	1.81	0.62
57:BA:1177:A:H5'	57:BA:1178:C:C6	2.35	0.62
32:BI:94:ALA:CB	32:BI:111:PRO:HA	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BI:27:ARG:HG3	32:BI:27:ARG:HH11	1.65	0.62
32:BI:84:GLY:HA3	32:BI:89:TYR:OH	2.00	0.62
34:BN:35:ARG:C	34:BN:37:LYS:H	2.03	0.62
46:BZ:25:PRO:O	46:BZ:85:HIS:HA	2.00	0.62
38:BR:98:LEU:HB2	38:BR:113:LEU:CD2	2.29	0.62
50:A3:8:LEU:CD1	50:A3:31:LEU:HA	2.29	0.62
52:B5:54:GLY:H	52:B5:55:ARG:HH21	1.45	0.62
57:BA:1847:A:H3'	57:BA:1848:A:C5'	2.30	0.62
57:BA:1957:C:H2'	57:BA:1958:C:H6	1.63	0.62
54:A7:22:MET:O	54:A7:28:ARG:NH1	2.30	0.62
34:BN:75:TYR:HA	34:BN:81:GLY:O	2.00	0.62
57:AA:1358:G:O2'	57:AA:1359:A:H5''	1.99	0.62
57:AA:271(M):G:O2'	57:AA:271(O):C:H5'	2.00	0.62
57:AA:626:U:H5'	57:AA:627:A:H5'	1.81	0.62
28:AE:31:CYS:HB3	28:AE:49:LEU:HB2	1.81	0.62
29:AF:108:LYS:HD2	29:AF:112:MET:CE	2.29	0.62
31:AH:41:MET:HG3	31:AH:42:ARG:N	2.15	0.62
42:AV:49:THR:HB	42:AV:50:PRO:CD	2.30	0.62
57:BA:438:G:O2'	57:BA:440:G:H5'	1.99	0.62
57:BA:777:A:H2'	57:BA:778:G:C8	2.95	0.62
26:BC:7:ARG:HD2	26:BC:35:THR:O	1.99	0.62
29:BF:21:ALA:HB3	29:BF:23:ASP:OD1	2.00	0.62
30:BG:41:GLN:OE1	30:BG:153:ARG:HG3	2.00	0.62
30:BG:154:GLY:O	30:BG:155:MET:HB3	1.98	0.62
32:BI:118:LYS:NZ	32:BI:119:PRO:O	2.32	0.62
46:BZ:23:LYS:HB3	46:BZ:38:TYR:CD1	2.34	0.62
53:A6:48:VAL:O	53:A6:49:HIS:HB2	1.98	0.62
29:AF:176:LEU:HD12	29:AF:177:ALA:N	2.14	0.62
57:BA:2317:C:O2'	57:BA:2318:G:H5'	2.00	0.62
48:B1:46:LEU:HB3	48:B1:63:ALA:HA	1.82	0.62
57:AA:2521:C:H42	57:AA:2544:G:H1	1.47	0.62
57:BA:2537:U:H2'	57:BA:2538:C:H6	1.64	0.62
27:BD:183:ARG:HG2	27:BD:183:ARG:HH11	1.64	0.62
40:AT:132:LYS:C	40:AT:134:GLU:H	2.03	0.62
57:AA:39:C:O2'	57:AA:40:C:H5'	1.99	0.62
42:AV:15:GLU:HB3	42:AV:16:PRO:HD2	1.80	0.62
47:A0:26:TYR:O	47:A0:67:VAL:HB	2.00	0.62
57:AA:1146:C:O2'	57:AA:1147:C:H5'	1.99	0.62
57:AA:1174:A:OP1	57:AA:1175:U:H5''	1.99	0.62
57:AA:1316:U:H2'	57:AA:1317:A:H8	1.64	0.62
26:AC:47:LYS:HD3	57:AA:2178:C:H4'	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AC:216:THR:HB	26:AC:222:SER:HA	1.81	0.62
26:AC:54:ARG:HG3	26:AC:57:GLN:OE1	1.99	0.62
28:AE:132:HIS:O	57:AA:1658:C:OP1	2.18	0.62
30:AG:138:GLN:OE1	30:AG:153:ARG:HG2	1.99	0.62
34:AN:62:VAL:HG22	34:AN:66:LYS:HB2	1.80	0.62
36:AP:18:ARG:HH11	36:AP:18:ARG:CB	2.12	0.62
40:AT:116:ALA:HB1	40:AT:121:ILE:HD11	1.80	0.62
57:BA:234:C:H2'	57:BA:235:U:H6	1.64	0.62
45:BY:49:VAL:HA	57:BA:483:A:H4'	1.82	0.62
57:BA:860:U:O2'	57:BA:861:A:H5'	1.99	0.62
27:BD:106:ILE:O	27:BD:106:ILE:HG23	2.00	0.62
28:BE:36:ARG:HH22	28:BE:88:GLY:HA2	1.64	0.62
36:BP:105:LEU:HD12	36:BP:105:LEU:N	2.14	0.62
40:BT:26:ASP:OD2	40:BT:26:ASP:C	2.39	0.62
40:BT:27:THR:O	40:BT:28:VAL:HB	1.99	0.62
46:BZ:19:ARG:NH1	46:BZ:19:ARG:HG2	2.15	0.62
49:A2:51:ARG:HD3	49:A2:55:ARG:NH2	2.12	0.62
57:BA:2789:C:H1'	57:BA:2892:A:H2	1.65	0.62
57:AA:336:C:H2'	57:AA:337:C:C6	2.62	0.62
57:AA:271(X):G:H2'	57:AA:271(Y):U:H5"	1.82	0.62
34:AN:89:LYS:HA	34:AN:92:ALA:HB3	1.82	0.62
57:AA:1015:G:O2'	57:AA:1016:G:H5'	2.00	0.62
57:AA:1173:G:H3'	57:AA:1174:A:C5'	2.29	0.62
38:AR:36:THR:HG22	57:AA:1278:A:H5"	1.81	0.62
55:A8:30:ARG:CZ	57:AA:2419:U:O4	2.48	0.62
57:AA:777:A:H2'	57:AA:778:G:H8	2.31	0.62
32:AI:129:THR:HG23	32:AI:136:VAL:O	2.00	0.62
42:AV:18:LEU:CD1	42:AV:19:LYS:H	2.13	0.62
43:AW:6:ILE:CG1	43:AW:104:THR:HG23	2.30	0.62
53:B6:15:GLU:CD	53:B6:44:ARG:HH22	2.04	0.62
57:BA:1358:G:O2'	57:BA:1359:A:H5"	2.00	0.62
28:BE:95:ILE:HD13	28:BE:95:ILE:N	2.14	0.62
29:BF:108:LYS:HD2	29:BF:112:MET:CE	2.29	0.62
29:BF:7:TYR:HD2	29:BF:16:GLY:H	1.47	0.62
31:BH:88:LEU:HD22	31:BH:88:LEU:H	1.64	0.62
32:BI:48:GLU:OE1	32:BI:52:ARG:HD3	2.00	0.62
35:BO:47:ILE:HG12	35:BO:48:PRO:HD2	1.81	0.62
36:BP:95:VAL:HG22	36:BP:125:VAL:HA	1.81	0.62
39:BS:30:ARG:HH22	39:BS:62:LYS:CD	2.12	0.62
39:BS:90:GLY:C	39:BS:92:TYR:H	2.02	0.62
45:BY:37:VAL:O	45:BY:38:ILE:HB	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:612:C:C3'	57:BA:613:G:H5''	2.29	0.62
42:BV:19:LYS:HZ3	42:BV:20:LEU:H	1.48	0.62
31:BH:44:VAL:HG12	31:BH:45:VAL:H	1.64	0.62
34:BN:128:HIS:HE1	34:BN:134:ARG:NH1	1.96	0.62
57:AA:2537:U:H2'	57:AA:2538:C:H6	1.62	0.62
57:BA:902:C:H2'	57:BA:903:C:C6	2.33	0.62
57:BA:271(X):G:H2'	57:BA:271(Y):U:H5''	1.80	0.62
57:BA:286:C:H2'	57:BA:287:C:H6	1.65	0.62
28:AE:195:LEU:HD12	28:AE:196:VAL:N	2.15	0.62
57:AA:1485:G:H2'	57:AA:1486:A:C8	2.34	0.61
57:AA:2201:C:O2'	57:AA:2202:C:H5'	2.00	0.61
57:AA:80:G:O2'	57:AA:81:G:H5'	2.00	0.61
28:AE:120:TRP:CE3	28:AE:155:LYS:HD3	2.35	0.61
29:AF:89:VAL:O	29:AF:91:GLY:N	2.30	0.61
30:AG:126:ASP:O	30:AG:128:ARG:N	2.27	0.61
30:AG:95:ARG:NE	58:AB:45:A:C8	2.67	0.61
31:AH:43:VAL:HG12	31:AH:52:VAL:HA	1.80	0.61
36:AP:101:VAL:HG12	36:AP:106:LEU:HB3	1.81	0.61
36:AP:107:LYS:C	36:AP:109:GLY:H	2.03	0.61
37:AQ:47:ILE:HG22	37:AQ:48:GLU:N	2.14	0.61
37:AQ:12:GLN:CG	37:AQ:73:PRO:HD2	2.28	0.61
40:AT:31:SER:HG	40:AT:43:GLN:N	1.97	0.61
28:BE:61:ARG:HD2	57:BA:2632:A:H2	1.65	0.61
27:BD:35:LYS:NZ	27:BD:36:PRO:CD	2.63	0.61
28:BE:52:LEU:O	28:BE:74:PRO:HA	2.00	0.61
29:BF:63:LYS:NZ	29:BF:67:GLN:HB2	2.14	0.61
29:BF:89:VAL:HG21	57:BA:586:A:H5'	1.82	0.61
32:BI:82:ARG:HG2	32:BI:145:VAL:CG1	2.29	0.61
33:BJ:32:LEU:O	33:BJ:33:PRO:CB	2.48	0.61
31:BH:68:THR:C	31:BH:70:THR:N	2.52	0.61
57:AA:528:A:H2	57:AA:2043:C:C4'	2.10	0.61
57:AA:203:C:C3'	57:AA:204:A:H5''	2.29	0.61
46:AZ:104:PHE:HB3	46:AZ:141:VAL:CG2	2.29	0.61
57:BA:2199:A:H5'	57:BA:2200:C:OP2	2.00	0.61
50:A3:38:GLU:OE2	50:A3:38:GLU:HA	2.00	0.61
57:BA:792:G:H5''	57:BA:793:A:H5'	1.80	0.61
40:BT:132:LYS:C	40:BT:134:GLU:H	2.04	0.61
57:BA:39:C:O2'	57:BA:40:C:H5'	1.99	0.61
55:A8:30:ARG:HA	55:A8:30:ARG:NE	2.16	0.61
27:AD:35:LYS:HZ2	27:AD:35:LYS:CB	2.09	0.61
30:AG:86:MET:N	30:AG:87:PRO:CD	2.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:AH:13:LYS:O	31:AH:15:VAL:N	2.32	0.61
32:AI:98:ALA:HB1	32:AI:109:ILE:HB	1.82	0.61
36:AP:7:ARG:NH1	36:AP:7:ARG:HB3	2.15	0.61
29:AF:188:ARG:HA	36:AP:7:ARG:HD3	1.82	0.61
40:AT:27:THR:O	40:AT:28:VAL:HB	1.99	0.61
55:B8:30:ARG:CZ	57:BA:2419:U:O4	2.48	0.61
57:BA:1280:G:C2'	57:BA:1281:G:H5''	2.31	0.61
28:BE:37:ARG:O	28:BE:45:THR:HA	2.00	0.61
29:BF:8:GLN:CB	29:BF:126:VAL:HA	2.30	0.61
32:BI:74:ASN:C	32:BI:76:THR:H	2.03	0.61
32:BI:93:THR:O	32:BI:97:ILE:N	2.32	0.61
36:BP:83:VAL:HG23	36:BP:105:LEU:HD13	1.81	0.61
40:BT:125:ARG:HH11	40:BT:125:ARG:HA	1.64	0.61
27:BD:240:ALA:HA	57:BA:1971:A:C2	2.35	0.61
52:A5:3:LYS:HB3	57:AA:747:U:C5	2.35	0.61
52:A5:54:GLY:H	52:A5:55:ARG:HH21	1.48	0.61
57:BA:1541:G:H5''	57:BA:1542:A:O5'	2.00	0.61
57:AA:364:C:H2'	57:AA:365:C:C5'	2.29	0.61
57:BA:157:U:H5'	57:BA:158:U:OP2	2.00	0.61
57:AA:1639:U:H2'	57:AA:1640:C:H5''	1.81	0.61
57:BA:1711:C:O2'	57:BA:1712:C:H5'	2.00	0.61
57:AA:139:G:C6	57:AA:140:G:H2'	2.35	0.61
57:AA:307:G:H21	57:AA:330:A:H62	1.48	0.61
36:AP:148:LEU:O	36:AP:149:GLU:HB2	2.01	0.61
36:AP:46:LYS:HG2	36:AP:52:GLU:OE2	2.00	0.61
37:AQ:35:VAL:HG11	37:AQ:130:LYS:HE2	1.80	0.61
27:BD:118:VAL:HG22	27:BD:119:ALA:H	1.65	0.61
28:BE:77:ILE:HG22	28:BE:78:LEU:HG	1.81	0.61
28:BE:28:ALA:HB3	28:BE:93:VAL:HG22	1.83	0.61
29:BF:65:TRP:CH2	29:BF:75:HIS:HD2	2.18	0.61
31:BH:124:GLU:HB2	31:BH:132:ARG:CG	2.26	0.61
32:BI:92:VAL:HG22	32:BI:97:ILE:HG12	1.83	0.61
36:BP:23:PRO:CD	36:BP:33:ARG:CZ	2.70	0.61
57:BA:1590:U:C3'	57:BA:1591:G:H5''	2.30	0.61
52:A5:40:LYS:HE2	52:A5:46:CYS:HB3	1.83	0.61
57:BA:523:C:C2'	57:BA:524:U:H5'	2.31	0.61
52:B5:36:CYS:SG	52:B5:49:CYS:CB	2.88	0.61
57:AA:2777:G:C4'	57:AA:2778:A:H5'	2.29	0.61
55:A8:29:LYS:O	55:A8:29:LYS:HG3	1.99	0.61
57:AA:1847:A:H3'	57:AA:1848:A:C5'	2.29	0.61
46:BZ:24:LEU:CD2	46:BZ:86:VAL:HG23	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A1:40:ARG:HD3	48:A1:40:ARG:C	2.21	0.61
27:BD:263:ARG:NH1	27:BD:263:ARG:HB2	2.15	0.61
46:AZ:51:ALA:HB1	46:AZ:57:ILE:HD11	1.82	0.61
55:A8:61:LEU:HD12	55:A8:63:PRO:HD2	1.82	0.61
57:AA:1021:A:C8	57:AA:1021:A:C3'	2.80	0.61
57:AA:1280:G:C2'	57:AA:1281:G:H5''	2.31	0.61
47:B0:23:VAL:HA	47:B0:38:VAL:CG2	2.28	0.61
53:B6:41:PRO:C	53:B6:43:CYS:H	2.04	0.61
57:BA:102:G:OP1	57:BA:102:G:H4'	1.98	0.61
29:BF:8:GLN:HG2	29:BF:126:VAL:HB	1.82	0.61
34:BN:1:MET:HG2	34:BN:2:LYS:H	1.64	0.61
36:BP:100:LEU:HD22	36:BP:100:LEU:N	2.16	0.61
36:BP:84:ASN:HA	36:BP:115:LEU:O	2.00	0.61
57:BA:1858:G:H2'	57:BA:1883:G:N2	2.14	0.61
46:BZ:170:THR:HG21	57:BA:875:G:H4'	1.83	0.61
57:AA:2789:C:H1'	57:AA:2892:A:C2	2.35	0.61
49:A2:59:ARG:O	49:A2:63:VAL:HG23	2.00	0.61
57:AA:2693:A:H2'	57:AA:2694:G:H8	1.65	0.61
53:A6:23:THR:HG21	57:AA:2419:U:C5'	2.30	0.61
55:A8:52:LYS:N	55:A8:53:PRO:HD2	2.16	0.61
30:AG:96:ARG:H	30:AG:99:MET:HE1	1.66	0.61
37:AQ:43:THR:HA	37:AQ:94:VAL:HG12	1.82	0.61
57:BA:481:G:H1'	57:BA:506:G:H21	1.66	0.61
27:BD:44:ASN:HB2	27:BD:48:ARG:O	2.01	0.61
28:BE:33:VAL:HG22	28:BE:33:VAL:O	1.99	0.61
29:BF:32:LEU:HD11	29:BF:105:VAL:HG13	1.82	0.61
32:BI:9:LEU:HD12	32:BI:9:LEU:N	2.16	0.61
40:BT:27:THR:OG1	40:BT:28:VAL:N	2.34	0.61
45:BY:100:ALA:O	45:BY:101:LYS:HB2	1.99	0.61
27:BD:244:ARG:HA	57:BA:1902:C:H4'	1.82	0.61
31:BH:13:LYS:O	31:BH:15:VAL:N	2.33	0.61
46:BZ:151:HIS:HA	46:BZ:171:ILE:HG22	1.83	0.61
57:BA:1537:G:H2'	57:BA:1538:G:C8	2.30	0.61
29:AF:123:LEU:HD12	29:AF:124:LEU:N	2.14	0.61
29:BF:132:VAL:HG22	29:BF:133:ASN:ND2	2.14	0.61
38:AR:12:ARG:HD3	38:AR:16:HIS:CD2	2.35	0.61
57:AA:2477:C:H5'	57:AA:2477:C:C6	2.34	0.61
57:BA:2392:A:H2	57:BA:2424:C:H42	1.47	0.61
57:AA:52:A:O2'	57:AA:53:A:H5'	2.00	0.61
57:BA:52:A:O2'	57:BA:53:A:H5'	2.01	0.61
48:A1:25:LYS:HG3	48:A1:31:GLY:HA2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AP:65:ARG:NH1	55:A8:15:LYS:HB2	2.16	0.61
28:AE:28:ALA:HB3	28:AE:93:VAL:HG22	1.82	0.61
32:AI:92:VAL:CB	32:AI:120:ILE:HB	2.23	0.61
32:AI:62:LYS:HD2	32:AI:133:HIS:CD2	2.35	0.61
32:AI:97:ILE:O	32:AI:101:LEU:HD13	2.00	0.61
38:AR:78:LYS:O	38:AR:83:ILE:HG12	2.00	0.61
57:BA:1291:C:H2'	57:BA:1292:U:C6	2.35	0.61
27:BD:144:ALA:HB3	27:BD:192:THR:CG2	2.30	0.61
27:BD:227:ASN:HA	27:BD:235:GLY:H	1.64	0.61
29:BF:119:ARG:HH11	29:BF:119:ARG:HG2	1.64	0.61
44:BX:35:THR:HG22	44:BX:36:LYS:N	2.16	0.61
46:BZ:23:LYS:HZ3	46:BZ:40:ASP:HA	1.65	0.61
57:AA:1858:G:H2'	57:AA:1883:G:N2	2.15	0.61
48:A1:89:GLU:HA	48:A1:92:LYS:CB	2.27	0.61
57:BA:1697:G:H3'	57:BA:1698:A:C5'	2.29	0.61
57:BA:1539:G:C2	57:BA:1540:U:H1'	2.36	0.61
53:A6:19:ARG:HG3	57:AA:2399:G:O2'	2.01	0.61
57:BA:2881:C:H2'	57:BA:2882:A:H8	1.65	0.61
57:BA:65:C:O2'	57:BA:66:C:H5'	1.99	0.61
44:AX:44:GLU:CG	44:AX:51:VAL:HG23	2.31	0.61
57:AA:1319:G:O2'	57:AA:1320:C:H5'	2.00	0.61
57:AA:545:C:C3'	57:AA:547:A:H5''	2.30	0.61
57:AA:783:A:H8	57:AA:784:A:H4'	1.66	0.61
57:AA:954:G:N2	57:AA:964:C:H1'	2.16	0.61
26:AC:25:GLU:O	26:AC:29:LEU:HB2	2.01	0.61
28:AE:69:LYS:C	28:AE:71:GLY:H	2.04	0.61
40:AT:54:ARG:NH1	40:AT:54:ARG:HG2	2.15	0.61
53:B6:9:LEU:O	53:B6:9:LEU:HD13	2.01	0.61
55:B8:33:ASN:N	55:B8:36:LYS:HD2	2.15	0.61
55:B8:52:LYS:N	55:B8:53:PRO:HD2	2.16	0.61
57:BA:2267:A:H5''	57:BA:2268:A:H5'	1.82	0.61
27:BD:227:ASN:HD21	57:BA:784:A:H5''	1.64	0.61
27:BD:35:LYS:CB	27:BD:35:LYS:HZ2	2.09	0.61
28:BE:59:VAL:HG13	28:BE:60:ASN:H	1.64	0.61
32:BI:66:GLU:OE2	32:BI:134:PRO:HD2	2.00	0.61
47:B0:50:ASN:C	47:B0:62:LEU:HD12	2.20	0.61
53:A6:41:PRO:C	53:A6:43:CYS:H	2.04	0.61
57:AA:2147:G:H2'	57:AA:2148:G:O4'	2.00	0.61
42:BV:99:ILE:N	42:BV:99:ILE:HD13	2.16	0.61
27:AD:166:GLN:HE21	27:AD:166:GLN:CA	2.14	0.61
57:BA:719:C:O2'	57:BA:720:C:H5'	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1007:C:H2'	57:AA:1008:C:C6	3.38	0.61
57:BA:1925:C:O2'	57:BA:1926:U:H5'	2.01	0.61
44:BX:89:ILE:HG22	44:BX:91:ALA:HB3	1.83	0.61
57:AA:1336:A:H2'	57:AA:1337:G:C8	2.35	0.61
36:AP:105:LEU:HG	57:AA:626:U:O2	2.01	0.61
51:A4:1:MET:H2	58:AB:43:C:H5'	1.65	0.61
27:AD:44:ASN:HB2	27:AD:48:ARG:O	2.00	0.61
51:B4:11:PRO:HA	51:B4:25:TYR:HA	1.82	0.61
57:BA:229:A:H5'	57:BA:230:U:H5'	1.82	0.61
57:BA:2359:C:H2'	57:BA:2360:A:C8	2.36	0.61
28:BE:119:ARG:HG2	28:BE:160:TYR:HB2	1.83	0.61
30:BG:170:ARG:HG3	30:BG:180:PHE:HE1	1.66	0.61
31:BH:94:TYR:CZ	31:BH:160:LYS:HD3	2.35	0.61
36:BP:105:LEU:HG	57:BA:626:U:O2	2.01	0.61
45:BY:4:LYS:HB2	45:BY:32:PRO:HG3	1.82	0.61
42:AV:21:ARG:HB3	42:AV:91:TYR:HB2	1.81	0.61
54:A7:12:ARG:CD	54:A7:46:VAL:HG21	2.26	0.61
51:B4:53:GLU:O	51:B4:56:VAL:HG23	2.01	0.61
57:AA:1541:G:H5''	57:AA:1542:A:O5'	2.01	0.61
27:BD:270:ILE:O	27:BD:271:ILE:HG23	2.01	0.61
35:AO:47:ILE:HG12	35:AO:48:PRO:HD2	1.82	0.61
27:AD:4:LYS:HE3	27:AD:20:ASP:HA	1.81	0.61
57:AA:2464:C:HO2'	57:AA:2465:C:H6	1.48	0.61
43:AW:82:LEU:HB3	43:AW:98:LYS:HB2	1.81	0.61
57:BA:2747:G:O6	57:BA:2755:C:H5''	2.01	0.61
57:AA:1173:G:H2'	57:AA:1175:U:C5	2.36	0.61
57:AA:1292:U:H2'	57:AA:1293:C:C6	2.36	0.61
57:AA:433:C:H2'	57:AA:434:U:C6	2.53	0.61
57:AA:674:G:H2'	57:AA:675:A:H8	4.91	0.61
26:AC:176:VAL:HB	26:AC:189:ASN:HB3	1.83	0.61
27:AD:129:ASN:N	27:AD:129:ASN:ND2	3.56	0.61
27:AD:227:ASN:ND2	57:AA:784:A:H5''	2.16	0.61
27:AD:61:LEU:O	27:AD:63:ARG:NH1	2.32	0.61
28:AE:55:ASN:O	28:AE:57:LYS:N	2.34	0.61
28:AE:59:VAL:O	28:AE:62:PRO:HD2	2.00	0.61
29:AF:21:ALA:HB3	29:AF:23:ASP:OD1	2.01	0.61
32:AI:88:ILE:HD11	32:AI:142:VAL:CG1	2.26	0.61
34:AN:17:ASP:CB	34:AN:55:VAL:HG12	2.31	0.61
40:AT:106:SER:O	40:AT:107:ASP:CG	2.39	0.61
26:BC:184:GLU:C	26:BC:185:LYS:HE3	2.20	0.61
27:BD:30:GLU:CD	27:BD:63:ARG:HE	2.04	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:31:CYS:HB3	28:BE:49:LEU:HB2	1.82	0.61
29:BF:101:LEU:O	29:BF:106:ARG:NH1	2.34	0.61
42:BV:49:THR:HB	42:BV:50:PRO:CD	2.30	0.61
43:BW:19:LEU:HB3	52:B5:25:LEU:HD12	1.83	0.61
44:BX:35:THR:O	44:BX:39:ILE:HG12	2.00	0.61
31:BH:7:LEU:HD23	31:BH:69:ARG:CG	2.30	0.61
54:B7:11:LYS:HE2	57:BA:686:G:H5''	1.82	0.61
57:AA:2317:C:O2'	57:AA:2318:G:H5'	2.01	0.61
51:A4:22:ILE:HD12	51:A4:22:ILE:N	2.16	0.61
57:AA:654(S):G:H3'	57:AA:654(T):C:H5''	1.83	0.61
57:BA:2712:U:O2'	57:BA:2713:A:H5'	2.01	0.61
57:BA:992:C:O2'	57:BA:993:G:H5'	2.01	0.61
57:BA:2147:G:H2'	57:BA:2148:G:O4'	2.01	0.61
44:BX:8:ILE:H	44:BX:8:ILE:HD12	1.66	0.61
57:BA:2577:A:H5''	57:BA:2578:G:H5'	1.82	0.61
28:BE:195:LEU:HD12	28:BE:196:VAL:N	2.15	0.61
55:A8:50:LEU:O	55:A8:51:ALA:HB3	2.01	0.61
57:AA:2360:A:O2'	57:AA:2361:A:O4'	2.17	0.61
28:AE:33:VAL:O	28:AE:33:VAL:HG22	2.01	0.61
32:AI:9:LEU:HD12	32:AI:9:LEU:N	2.15	0.61
36:AP:32:THR:O	36:AP:33:ARG:HB3	2.01	0.61
40:AT:28:VAL:HG22	40:AT:46:GLU:C	2.21	0.61
57:BA:1484:G:N2	57:BA:1505:C:H42	1.99	0.61
57:BA:229:A:C5'	57:BA:230:U:H5'	2.30	0.61
28:BE:14:ILE:HG12	28:BE:21:VAL:CG2	2.30	0.61
34:BN:2:LYS:HZ2	41:BU:95:LEU:HD21	1.63	0.61
45:BY:35:TYR:CE2	45:BY:69:ALA:HB3	2.36	0.61
57:BA:613:G:H5'	57:BA:613:G:H8	1.64	0.61
53:A6:15:GLU:OE2	53:A6:44:ARG:NH2	2.34	0.61
52:B5:53:ALA:HB3	52:B5:55:ARG:HH21	1.65	0.61
57:AA:1464:C:H2'	57:AA:1465:G:C8	2.36	0.61
44:BX:26:TYR:HD2	44:BX:92:LEU:HD12	1.66	0.61
57:AA:2753:A:O2'	57:AA:2754:U:H5'	2.00	0.61
57:AA:1925:C:O2'	57:AA:1926:U:H5'	2.01	0.61
47:A0:45:PHE:HE2	47:A0:69:PHE:CE2	2.18	0.60
55:A8:4:MET:HE3	55:A8:61:LEU:HD23	1.83	0.60
58:AB:55:U:O2'	58:AB:56:G:H5'	2.01	0.60
27:AD:268:ARG:HH11	27:AD:268:ARG:HB3	1.65	0.60
28:AE:87:GLU:OE1	28:AE:89:ASP:N	2.30	0.60
29:AF:8:GLN:HG2	29:AF:126:VAL:HB	1.81	0.60
41:AU:88:ILE:C	41:AU:90:VAL:H	2.04	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:25:THR:HG22	27:BD:26:LYS:CD	2.31	0.60
27:BD:58:HIS:HD2	27:BD:59:LYS:O	1.84	0.60
30:BG:111:LEU:HB3	30:BG:117:PHE:CE2	2.36	0.60
32:BI:120:ILE:HG22	32:BI:121:LYS:H	1.65	0.60
33:BJ:23:SER:HA	33:BJ:117:LEU:O	2.01	0.60
43:BW:58:ALA:HB3	43:BW:69:LEU:HD11	1.82	0.60
52:B5:3:LYS:HB3	57:BA:747:U:C5	2.36	0.60
54:A7:11:LYS:HE2	57:AA:686:G:H5'	1.83	0.60
49:A2:13:ALA:HA	49:A2:16:LEU:CG	2.31	0.60
48:B1:5:CYS:SG	48:B1:62:VAL:HG23	2.41	0.60
48:B1:29:GLY:O	48:B1:31:GLY:N	2.33	0.60
54:A7:24:THR:HG23	54:A7:27:GLY:H	1.66	0.60
57:AA:2742:C:O2'	57:AA:2743:C:H5'	2.00	0.60
57:AA:271(U):G:O2'	57:AA:271(V):G:H5'	2.00	0.60
47:A0:36:ILE:HG23	57:AA:2354:G:O2'	2.01	0.60
57:AA:1177:A:H5'	57:AA:1178:C:C5	2.36	0.60
30:AG:148:MET:HG2	30:AG:148:MET:O	2.00	0.60
31:AH:41:MET:HE2	31:AH:43:VAL:HG13	1.83	0.60
35:AO:97:ARG:HA	35:AO:117:LEU:CD2	2.30	0.60
39:AS:30:ARG:HH22	39:AS:62:LYS:CD	2.12	0.60
32:BI:27:ARG:HG3	48:B1:71:TYR:CE1	2.36	0.60
53:B6:23:THR:HG21	57:BA:2419:U:C5'	2.30	0.60
55:B8:30:ARG:HA	55:B8:30:ARG:NE	2.14	0.60
47:B0:36:ILE:HG23	57:BA:2354:G:O2'	2.00	0.60
57:BA:893:C:H2'	57:BA:894:C:C6	2.36	0.60
58:BB:30:C:H2'	58:BB:31:C:O4'	2.01	0.60
28:BE:116:VAL:O	28:BE:117:MET:CB	2.43	0.60
30:BG:91:ARG:HD2	30:BG:92:VAL:N	2.17	0.60
32:BI:92:VAL:HG22	32:BI:97:ILE:CG1	2.30	0.60
37:BQ:43:THR:HA	37:BQ:94:VAL:HG12	1.83	0.60
48:A1:45:ASN:CB	57:AA:2230:G:H1'	2.32	0.60
57:BA:1652:A:O2'	57:BA:1653:G:H5'	2.01	0.60
57:BA:2894:G:H2'	57:BA:2894:G:N3	2.16	0.60
41:BU:57:PHE:C	41:BU:59:ARG:N	2.54	0.60
49:A2:16:LEU:O	49:A2:20:GLU:HB3	2.01	0.60
28:AE:108:SER:O	28:AE:162:ALA:HA	2.01	0.60
57:BA:1847:A:H3'	57:BA:1848:A:H5'	1.81	0.60
44:AX:8:ILE:HD12	44:AX:8:ILE:N	2.15	0.60
47:A0:5:LYS:HB3	47:A0:5:LYS:NZ	2.16	0.60
57:AA:2877:G:O2'	57:AA:2878:U:H5'	2.01	0.60
57:AA:996:A:H2'	57:AA:997:G:H8	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:AY:13:VAL:HG21	45:AY:72:VAL:HB	1.84	0.60
29:BF:20:LEU:HD12	29:BF:199:TRP:CZ3	2.35	0.60
30:BG:161:THR:HG22	30:BG:162:THR:N	2.16	0.60
33:BJ:79:ALA:O	33:BJ:80:VAL:CB	2.49	0.60
36:BP:18:ARG:HH11	36:BP:18:ARG:CB	2.13	0.60
52:A5:41:PRO:O	52:A5:44:THR:OG1	2.15	0.60
57:AA:594:U:H2'	57:AA:595:C:C6	2.36	0.60
46:AZ:38:TYR:O	46:AZ:38:TYR:CD1	2.54	0.60
39:AS:29:PHE:CE1	58:AB:7:G:H4'	2.37	0.60
29:AF:40:GLN:OE1	29:AF:182:ASN:HB2	2.00	0.60
29:AF:40:GLN:HE22	29:AF:184:TYR:CB	2.13	0.60
30:AG:113:ARG:O	30:AG:140:ILE:HG22	2.01	0.60
40:AT:125:ARG:HH11	40:AT:125:ARG:HA	1.66	0.60
47:B0:27:GLU:OE1	47:B0:27:GLU:N	2.35	0.60
57:BA:27:G:H22	57:BA:512:G:H2'	1.66	0.60
57:BA:869:G:O2'	57:BA:870:A:H5'	2.00	0.60
27:BD:94:LEU:HB2	27:BD:104:TYR:HE2	1.63	0.60
27:BD:94:LEU:HB2	27:BD:104:TYR:CE2	2.37	0.60
28:BE:128:SER:OG	28:BE:129:HIS:N	2.32	0.60
28:BE:201:THR:OG1	28:BE:202:LYS:N	2.35	0.60
28:BE:9:VAL:HG13	28:BE:25:VAL:O	2.01	0.60
40:BT:28:VAL:HG22	40:BT:46:GLU:C	2.21	0.60
37:AQ:135:ASP:HB3	46:AZ:49:ARG:NH1	2.17	0.60
42:BV:21:ARG:HB3	42:BV:91:TYR:HB2	1.83	0.60
34:BN:15:LEU:HD13	34:BN:16:ILE:N	2.15	0.60
49:A2:53:LEU:O	49:A2:53:LEU:HD23	2.01	0.60
57:BA:1853:A:H2'	57:BA:1854:A:C8	2.37	0.60
57:AA:2259:G:H1'	57:AA:2427:C:C2	2.35	0.60
48:B1:66:HIS:C	48:B1:68:PRO:HD2	2.21	0.60
57:AA:2790:A:N3	57:AA:2790:A:H2'	2.15	0.60
47:B0:5:LYS:HB3	47:B0:5:LYS:NZ	2.16	0.60
57:AA:2469:A:H2	57:AA:2481:G:H21	1.49	0.60
57:BA:1876:A:H2'	57:BA:1877:A:C8	2.36	0.60
57:BA:2223:G:C2'	57:BA:2224:G:H5'	2.31	0.60
48:A1:29:GLY:O	48:A1:30:VAL:HG22	2.01	0.60
51:A4:9:LEU:HA	51:A4:26:SER:O	2.01	0.60
57:AA:1502:C:O2	57:AA:1502:C:H2'	2.01	0.60
57:AA:1603:A:H5'	57:AA:1603:A:H8	1.65	0.60
57:AA:673:C:O2'	57:AA:674:G:H5'	2.00	0.60
27:AD:108:PRO:HB3	27:AD:143:HIS:CE1	2.36	0.60
27:AD:94:LEU:HB2	27:AD:104:TYR:HE2	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:AG:103:LEU:O	30:AG:106:LEU:HB3	2.02	0.60
30:AG:51:ARG:CZ	30:AG:53:LEU:HD21	2.31	0.60
30:AG:77:ILE:O	30:AG:79:ASN:N	2.34	0.60
32:AI:113:ARG:O	32:AI:114:LEU:HD23	2.01	0.60
57:BA:1021:A:N6	57:BA:1141:U:H3	1.92	0.60
57:BA:672:C:C2'	57:BA:673:C:C5'	2.79	0.60
57:BA:996:A:H2'	57:BA:997:G:H8	1.67	0.60
30:BG:41:GLN:NE2	30:BG:155:MET:HB3	2.16	0.60
36:BP:148:LEU:O	36:BP:149:GLU:HB2	2.01	0.60
45:BY:7:VAL:HB	45:BY:8:LYS:NZ	2.17	0.60
31:BH:153:LYS:H	31:BH:153:LYS:CD	1.98	0.60
50:B3:8:LEU:CD1	50:B3:31:LEU:HA	2.31	0.60
27:BD:259:THR:HG22	57:BA:1798:U:H5''	1.84	0.60
57:AA:2894:G:N3	57:AA:2894:G:H2'	2.17	0.60
57:AA:157:U:H5'	57:AA:158:U:OP2	2.02	0.60
57:BA:1678:G:H22	57:BA:1989:G:H22	1.47	0.60
46:AZ:146:ILE:HA	46:AZ:174:VAL:HG12	1.83	0.60
49:A2:3:LEU:HD22	49:A2:7:ARG:NH1	2.16	0.60
57:BA:1113:U:H2'	57:BA:1114:G:C8	2.35	0.60
57:BA:852:G:O2'	57:BA:853:G:H5'	2.02	0.60
31:BH:67:LEU:HD21	57:BA:2758:A:C4	2.37	0.60
34:BN:89:LYS:HA	34:BN:92:ALA:HB3	1.82	0.60
57:AA:1494:A:C3'	57:AA:1495:A:H5''	2.31	0.60
27:AD:183:ARG:HH11	27:AD:183:ARG:HG2	1.65	0.60
28:AE:201:THR:OG1	28:AE:202:LYS:N	2.33	0.60
30:AG:34:LEU:N	30:AG:34:LEU:HD12	2.16	0.60
30:AG:67:LYS:NZ	58:AB:42:C:H4'	2.17	0.60
31:AH:7:LEU:HD22	31:AH:65:HIS:NE2	2.17	0.60
40:AT:27:THR:HG23	40:AT:28:VAL:N	2.16	0.60
42:AV:19:LYS:HA	42:AV:19:LYS:HE2	1.82	0.60
57:BA:8:A:H2'	57:BA:9:U:C6	2.37	0.60
30:BG:29:TRP:HB2	58:BB:57:A:H1'	1.83	0.60
28:BE:132:HIS:CD2	28:BE:135:HIS:NE2	2.69	0.60
28:BE:59:VAL:HG13	28:BE:60:ASN:N	2.16	0.60
30:BG:145:THR:OG1	30:BG:146:TYR:N	2.27	0.60
30:BG:57:ALA:HB2	30:BG:90:LEU:HD21	1.83	0.60
40:BT:33:LYS:HZ2	40:BT:74:ARG:NH2	1.99	0.60
44:BX:10:ALA:HB1	44:BX:11:PRO:HD2	1.84	0.60
46:AZ:103:ARG:HG3	46:AZ:103:ARG:HH11	1.67	0.60
57:AA:2392:A:H2	57:AA:2424:C:N4	1.98	0.60
57:BA:594:U:H2'	57:BA:595:C:C6	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1037:G:H1	57:AA:1118:C:H42	1.50	0.60
58:AB:30:C:H2'	58:AB:31:C:O4'	2.02	0.60
31:AH:54:ARG:HB3	31:AH:65:HIS:HB2	1.82	0.60
32:AI:8:PRO:HB3	32:AI:14:ASP:N	2.14	0.60
32:AI:74:ASN:C	32:AI:76:THR:H	2.04	0.60
34:AN:43:THR:HB	34:AN:46:VAL:HG12	1.82	0.60
40:AT:38:ASN:ND2	40:AT:40:THR:OG1	2.34	0.60
45:AY:66:PRO:O	45:AY:67:LEU:HB3	2.02	0.60
45:AY:88:LYS:O	45:AY:90:LEU:HD23	2.02	0.60
57:BA:1336:A:H2'	57:BA:1337:G:C8	2.35	0.60
57:BA:307:G:H21	57:BA:330:A:H62	1.49	0.60
28:BE:55:ASN:O	28:BE:57:LYS:N	2.34	0.60
31:BH:11:VAL:CG2	31:BH:50:VAL:HG23	2.30	0.60
31:BH:50:VAL:CG1	31:BH:51:ARG:N	2.64	0.60
46:AZ:171:ILE:O	46:AZ:172:ALA:HB2	2.00	0.60
57:BA:2789:C:H1'	57:BA:2892:A:C2	2.36	0.60
34:BN:93:THR:O	34:BN:94:HIS:HB2	2.01	0.60
35:AO:119:PRO:HB2	40:AT:68:TYR:CE2	2.37	0.60
57:AA:2077:A:H2'	57:AA:2078:C:H6	1.67	0.60
44:AX:38:GLU:OE2	57:AA:143(A):C:H4'	2.01	0.60
57:BA:1007:C:H2'	57:BA:1008:C:C6	3.42	0.60
57:AA:2881:C:H2'	57:AA:2882:A:H8	1.66	0.60
57:AA:1113:U:H2'	57:AA:1114:G:C8	2.37	0.60
57:AA:777:A:H2'	57:AA:778:G:C8	2.95	0.60
29:AF:119:ARG:HG2	29:AF:119:ARG:HH11	1.66	0.60
29:AF:32:LEU:O	29:AF:36:VAL:HG23	2.02	0.60
30:AG:40:ASN:HD22	30:AG:41:GLN:H	1.48	0.60
36:AP:50:ARG:HG3	36:AP:51:PHE:N	2.16	0.60
38:AR:38:VAL:HB	38:AR:39:PRO:HD3	1.82	0.60
39:AS:88:ASP:CG	39:AS:89:ARG:H	2.03	0.60
40:AT:102:ILE:HB	40:AT:110:ILE:CD1	2.31	0.60
45:AY:49:VAL:HA	57:AA:483:A:H4'	1.83	0.60
57:BA:221:A:H4'	57:BA:222:A:O5'	2.02	0.60
36:BP:33:ARG:HH12	57:BA:587:C:H3'	1.66	0.60
29:BF:3:GLU:C	29:BF:24:LEU:HG	2.21	0.60
32:BI:140:LEU:HD21	32:BI:142:VAL:HG23	1.81	0.60
42:BV:24:LYS:HA	42:BV:92:THR:HG23	1.84	0.60
44:BX:55:ASN:HB2	44:BX:80:ILE:HD12	1.83	0.60
26:AC:193:PHE:O	26:AC:197:LEU:HG	2.02	0.60
42:BV:19:LYS:CE	42:BV:20:LEU:H	2.15	0.60
57:AA:2328:A:H2'	57:AA:2329:G:C8	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2183:C:O2'	57:AA:2184:G:H5'	2.02	0.60
57:BA:654(B):C:H2'	57:BA:654(C):G:C8	2.36	0.60
57:BA:2693:A:H2'	57:BA:2694:G:H8	1.67	0.60
57:AA:1291:C:H2'	57:AA:1292:U:C6	2.36	0.60
57:AA:893:C:H2'	57:AA:894:C:C6	2.36	0.60
57:AA:914:C:C2'	57:AA:915:C:H5'	2.32	0.60
28:AE:78:LEU:O	28:AE:79:ARG:HD2	2.02	0.60
30:AG:47:LYS:O	30:AG:51:ARG:HG2	2.02	0.60
38:AR:2:ARG:N	38:AR:2:ARG:NH1	2.36	0.60
40:AT:57:PHE:CD2	40:AT:58:ASN:N	2.64	0.60
43:AW:2:GLU:HA	43:AW:64:MET:HE1	1.84	0.60
27:BD:228:PRO:HD3	27:BD:235:GLY:CA	2.31	0.60
27:BD:94:LEU:HD11	27:BD:96:HIS:CE1	2.37	0.60
30:BG:34:LEU:HD23	30:BG:99:MET:CE	2.31	0.60
38:BR:79:LEU:HD23	38:BR:83:ILE:HB	1.83	0.60
47:A0:50:ASN:C	47:A0:62:LEU:HD12	2.21	0.60
57:AA:523:C:C2'	57:AA:524:U:H5'	2.31	0.60
57:AA:156:U:H4'	57:AA:157:U:H5''	1.84	0.60
57:BA:2521:C:H42	57:BA:2544:G:H1	1.49	0.60
48:B1:11:ARG:HB3	48:B1:11:ARG:NH1	2.17	0.60
29:AF:34:TRP:CE2	36:AP:12:ALA:HB2	2.37	0.60
35:AO:22:ILE:HD12	57:AA:1952:A:C6	2.37	0.60
47:A0:73:GLY:C	47:A0:75:LEU:H	2.05	0.60
57:AA:1607:C:H4'	57:AA:1608:A:O5'	2.01	0.60
57:BA:1607:C:H4'	57:BA:1608:A:O5'	2.02	0.60
47:A0:27:GLU:N	47:A0:27:GLU:OE1	2.34	0.60
57:AA:672:C:C2'	57:AA:673:C:C5'	2.79	0.60
57:AA:852:G:O2'	57:AA:853:G:H5'	2.02	0.60
31:AH:7:LEU:CD2	31:AH:69:ARG:HD2	2.31	0.60
40:AT:32:TYR:CD2	40:AT:81:PRO:HB2	2.37	0.60
45:AY:88:LYS:HZ1	45:AY:93:GLY:HA3	1.66	0.60
28:BE:64:LYS:HB2	57:BA:2786:U:H4'	1.83	0.60
29:BF:40:GLN:OE1	29:BF:182:ASN:HB2	2.02	0.60
30:BG:41:GLN:HB3	30:BG:43:LEU:CD1	2.31	0.60
36:BP:107:LYS:C	36:BP:109:GLY:H	2.04	0.60
36:BP:16:ARG:HH11	36:BP:16:ARG:CA	2.15	0.60
45:BY:23:ARG:HB3	45:BY:23:ARG:NH1	3.85	0.60
52:A5:40:LYS:HZ3	52:A5:46:CYS:HB3	1.67	0.60
57:BA:2317:C:H2'	57:BA:2318:G:C5'	2.31	0.60
57:AA:1539:G:C2	57:AA:1540:U:H1'	2.37	0.60
46:AZ:10:ARG:HD2	46:AZ:36:LYS:HD3	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:654(A):G:C2'	57:BA:654(B):C:H5'	2.31	0.60
57:BA:2029:G:H2'	57:BA:2031:A:OP1	2.02	0.60
57:BA:2408:U:H2'	57:BA:2409:G:C8	2.37	0.60
40:AT:3:ARG:HD3	57:AA:2876:G:H4'	1.84	0.59
27:AD:10:THR:HG23	27:AD:13:ARG:HB3	1.83	0.59
28:AE:34:VAL:HG13	28:AE:48:GLN:HE21	1.67	0.59
30:AG:60:LEU:O	30:AG:64:THR:HG22	2.02	0.59
34:AN:1:MET:HG2	34:AN:2:LYS:H	1.66	0.59
40:AT:121:ILE:O	40:AT:124:ASP:HB2	2.02	0.59
40:AT:25:GLY:HA2	40:AT:92:GLY:HA3	1.84	0.59
41:AU:12:ARG:HA	41:AU:15:LYS:HE2	1.83	0.59
45:AY:35:TYR:CE2	45:AY:69:ALA:HB3	2.36	0.59
57:BA:1286:A:O2'	57:BA:1288:U:OP2	2.18	0.59
57:BA:2360:A:H8	57:BA:2360:A:H5'	1.67	0.59
57:BA:2259:G:H1'	57:BA:2427:C:C2	2.37	0.59
57:BA:863:A:O2'	57:BA:864:G:H5'	2.02	0.59
27:BD:30:GLU:HA	27:BD:83:GLU:OE1	2.02	0.59
28:BE:5:LEU:HB2	28:BE:51:PHE:CD2	2.35	0.59
29:BF:188:ARG:HA	36:BP:7:ARG:HD3	1.83	0.59
30:BG:142:PRO:O	30:BG:144:ILE:N	2.35	0.59
32:BI:77:LEU:HD22	32:BI:141:LYS:N	2.17	0.59
32:BI:81:VAL:HG23	32:BI:82:ARG:N	2.16	0.59
34:BN:17:ASP:CB	34:BN:55:VAL:HG12	2.32	0.59
37:BQ:47:ILE:HG22	37:BQ:48:GLU:N	2.16	0.59
37:BQ:95:ALA:O	37:BQ:97:VAL:HG23	2.02	0.59
38:BR:57:ARG:O	38:BR:59:ASP:N	2.33	0.59
39:BS:88:ASP:CG	39:BS:89:ARG:H	2.03	0.59
40:BT:46:GLU:OE2	40:BT:88:ILE:HG13	2.02	0.59
40:BT:85:LYS:HZ3	40:BT:85:LYS:HB3	1.65	0.59
41:BU:74:LEU:CD1	41:BU:74:LEU:H	2.14	0.59
44:BX:35:THR:HG22	44:BX:37:THR:H	1.67	0.59
44:BX:37:THR:HG21	57:BA:143:G:H1'	1.83	0.59
45:BY:13:VAL:HG21	45:BY:72:VAL:HB	1.84	0.59
27:AD:240:ALA:HA	57:AA:1971:A:C2	2.37	0.59
31:BH:54:ARG:HB3	31:BH:65:HIS:HB2	1.82	0.59
31:BH:153:LYS:N	31:BH:153:LYS:HD3	2.04	0.59
57:AA:2795:G:H22	57:AA:2802:G:N2	2.00	0.59
46:AZ:55:HIS:NE2	46:AZ:135:GLU:HG2	2.16	0.59
38:BR:101:ALA:O	38:BR:102:GLU:HB2	2.02	0.59
57:BA:1464:C:H2'	57:BA:1465:G:C8	2.37	0.59
51:B4:22:ILE:N	51:B4:22:ILE:HD12	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:755:C:H2'	57:AA:756:C:C6	2.37	0.59
57:BA:1188:U:O2'	57:BA:1189:A:H5'	2.01	0.59
27:BD:95:LEU:O	27:BD:95:LEU:HD12	2.02	0.59
47:A0:84:LEU:H	47:A0:84:LEU:HD12	1.67	0.59
34:AN:75:TYR:HA	34:AN:81:GLY:O	2.02	0.59
57:BA:2182:G:H2'	57:BA:2183:C:C6	2.37	0.59
57:BA:363(E):U:H5'	57:BA:363(F):A:OP2	2.01	0.59
27:BD:248:SER:HB2	27:BD:249:PRO:HD2	1.84	0.59
27:AD:229:VAL:HG21	57:AA:784:A:C5	2.37	0.59
57:AA:869:G:O2'	57:AA:870:A:H5'	2.02	0.59
26:AC:7:ARG:HH22	26:AC:219:MET:HB3	1.66	0.59
29:AF:1:MET:O	29:AF:3:GLU:HG2	2.02	0.59
30:AG:109:VAL:HG13	30:AG:113:ARG:HD3	1.84	0.59
32:AI:101:LEU:CD2	32:AI:109:ILE:HG12	2.28	0.59
32:AI:93:THR:O	32:AI:97:ILE:N	2.35	0.59
36:AP:100:LEU:N	36:AP:100:LEU:HD22	2.17	0.59
38:AR:79:LEU:HD23	38:AR:83:ILE:HB	1.84	0.59
42:AV:19:LYS:CE	42:AV:20:LEU:H	2.15	0.59
43:AW:5:ALA:O	43:AW:6:ILE:HB	2.02	0.59
47:B0:27:GLU:OE2	57:BA:856:C:H4'	2.01	0.59
26:BC:38:PHE:CD1	57:BA:2127:G:H4'	2.37	0.59
26:BC:47:LYS:HD3	57:BA:2178:C:H4'	1.84	0.59
27:BD:154:LYS:C	27:BD:155:LEU:HD12	2.22	0.59
30:BG:35:GLU:HB3	30:BG:160:VAL:HG12	1.84	0.59
32:BI:62:LYS:HD2	32:BI:133:HIS:CD2	2.36	0.59
31:BH:68:THR:C	31:BH:70:THR:H	2.06	0.59
57:BA:1446:C:H2'	57:BA:1447:G:H8	1.67	0.59
46:AZ:111:VAL:HG12	46:AZ:112:ARG:H	1.66	0.59
48:B1:67:ILE:N	48:B1:68:PRO:HD2	2.17	0.59
57:AA:792:G:H5''	57:AA:793:A:H5'	1.83	0.59
57:BA:1839:G:H5'	57:BA:1839:G:H8	1.66	0.59
57:AA:608:A:H2'	57:AA:609:A:C8	2.37	0.59
57:AA:363(E):U:H5'	57:AA:363(F):A:OP2	2.03	0.59
35:BO:22:ILE:HG23	57:BA:1952:A:C2	2.37	0.59
28:AE:143:ASN:O	57:AA:2052:G:H4'	2.03	0.59
57:AA:545:C:H2'	57:AA:547:A:C4'	2.33	0.59
27:AD:43:ARG:HH11	27:AD:44:ASN:ND2	2.00	0.59
27:AD:78:LYS:HG3	27:AD:114:GLY:O	2.02	0.59
28:AE:9:VAL:HG13	28:AE:25:VAL:O	2.02	0.59
31:AH:97:ARG:O	31:AH:103:LEU:HD12	2.02	0.59
41:AU:112:ARG:HH12	42:AV:46:VAL:CG1	2.14	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:AY:4:LYS:O	45:AY:5:MET:O	2.20	0.59
57:BA:1021:A:H2'	57:BA:1023:U:H5'	1.85	0.59
57:BA:1022:G:N2	57:BA:1142(A):A:C2	2.63	0.59
57:BA:1207:C:H2'	57:BA:1208:C:H6	1.66	0.59
57:BA:740:U:H2'	57:BA:741:G:C8	2.37	0.59
27:BD:34:VAL:HG23	27:BD:35:LYS:N	2.11	0.59
29:BF:125:LEU:H	29:BF:125:LEU:HD23	1.67	0.59
31:BH:109:PHE:C	31:BH:111:HIS:H	2.04	0.59
32:BI:73:GLU:HG3	32:BI:74:ASN:N	2.18	0.59
40:BT:30:VAL:HG11	40:BT:84:GLN:HG2	1.84	0.59
41:BU:12:ARG:HA	41:BU:15:LYS:HE2	1.84	0.59
43:BW:6:ILE:HA	43:BW:103:ILE:O	2.03	0.59
46:BZ:10:ARG:HH21	46:BZ:26:GLY:H	1.49	0.59
57:AA:1885:A:H8	57:AA:1885:A:H5'	1.67	0.59
31:BH:7:LEU:HD22	31:BH:65:HIS:NE2	2.17	0.59
34:BN:133:GLN:HG2	34:BN:135:PRO:HD3	1.84	0.59
29:AF:157:VAL:HG22	29:AF:194:MET:HA	1.84	0.59
27:BD:268:ARG:HB3	27:BD:268:ARG:HH11	1.66	0.59
50:B3:38:GLU:OE2	50:B3:38:GLU:HA	2.00	0.59
29:BF:34:TRP:CE2	36:BP:12:ALA:HB2	2.36	0.59
54:A7:8:ASN:ND2	54:A7:8:ASN:C	2.55	0.59
47:B0:73:GLY:C	47:B0:75:LEU:H	2.04	0.59
57:BA:845:G:H8	57:BA:845:G:OP2	1.85	0.59
44:AX:24:GLY:HA3	44:AX:83:VAL:HG23	1.84	0.59
31:AH:67:LEU:HD21	57:AA:2758:A:C4	2.37	0.59
57:AA:2126:A:H4'	57:AA:2127:G:O5'	2.02	0.59
57:AA:848:G:H2'	57:AA:849:A:C8	2.38	0.59
28:AE:24:THR:HG23	28:AE:184:VAL:CG2	2.30	0.59
28:AE:52:LEU:O	28:AE:74:PRO:HA	2.01	0.59
29:AF:65:TRP:CH2	29:AF:75:HIS:HD2	2.19	0.59
32:AI:109:ILE:N	32:AI:109:ILE:HD12	2.17	0.59
32:AI:94:ALA:CB	32:AI:111:PRO:HA	2.33	0.59
32:AI:127:VAL:HG22	32:AI:139:GLN:CB	2.32	0.59
36:AP:101:VAL:HB	36:AP:107:LYS:CA	2.22	0.59
36:AP:17:LYS:CG	36:AP:17:LYS:O	2.51	0.59
45:AY:57:GLN:CG	45:AY:58:GLY:H	2.11	0.59
57:BA:1049:C:N4	57:BA:1111:A:C2	2.70	0.59
57:BA:1173:G:H2'	57:BA:1175:U:C5	2.36	0.59
41:BU:13:LYS:HD3	57:BA:1227:G:OP1	2.01	0.59
57:BA:783:A:H8	57:BA:784:A:H4'	1.67	0.59
58:BB:70:C:H2'	58:BB:71:C:H6	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BC:176:VAL:HB	26:BC:189:ASN:HB3	1.85	0.59
30:BG:71:THR:HG21	57:BA:2312:U:C4'	2.32	0.59
30:BG:44:GLY:H	30:BG:88:ILE:HG21	1.66	0.59
32:BI:3:VAL:HG12	32:BI:36:ALA:HB1	1.84	0.59
40:BT:91:ARG:O	40:BT:117:ASP:HB2	2.03	0.59
40:BT:54:ARG:HG2	40:BT:54:ARG:NH1	2.17	0.59
31:BH:9:ILE:HD13	31:BH:9:ILE:C	2.22	0.59
52:B5:40:LYS:HZ3	52:B5:46:CYS:HB3	1.65	0.59
46:AZ:59:LEU:CD1	46:AZ:69:THR:HG21	2.32	0.59
35:BO:111:PHE:HB3	35:BO:114:ILE:HD13	1.84	0.59
57:AA:719:C:O2'	57:AA:720:C:H5'	2.02	0.59
57:BA:2071:A:H2'	57:BA:2072:G:H8	1.66	0.59
57:BA:271(U):G:O2'	57:BA:271(V):G:H5'	2.03	0.59
47:A0:56:ASP:O	47:A0:57:PHE:HB2	2.02	0.59
53:A6:9:LEU:HD13	53:A6:9:LEU:O	2.00	0.59
57:AA:407:G:H2'	57:AA:408:G:H8	1.68	0.59
57:AA:833:U:H2'	57:AA:834:C:H6	1.87	0.59
27:AD:155:LEU:HD23	27:AD:177:LEU:CD2	2.32	0.59
28:AE:120:TRP:CD2	28:AE:155:LYS:HD3	2.37	0.59
31:AH:7:LEU:HD23	31:AH:69:ARG:HG3	1.83	0.59
40:AT:62:THR:HG22	40:AT:75:ILE:HG12	1.82	0.59
55:B8:8:LYS:O	55:B8:12:LYS:HG3	2.02	0.59
57:BA:1106:A:H2'	57:BA:1107:G:C8	2.38	0.59
57:BA:407:G:H2'	57:BA:408:G:H8	1.67	0.59
57:BA:481:G:H1'	57:BA:506:G:N2	2.18	0.59
27:BD:181:GLU:CA	27:BD:272:ALA:HB3	2.29	0.59
32:BI:92:VAL:CG1	32:BI:97:ILE:HD11	2.32	0.59
36:BP:101:VAL:HB	36:BP:107:LYS:CA	2.26	0.59
36:BP:33:ARG:NH2	57:BA:587:C:H2'	2.17	0.59
41:BU:9:VAL:O	41:BU:13:LYS:HG2	2.02	0.59
42:BV:46:VAL:HG13	42:BV:47:VAL:N	2.16	0.59
42:BV:51:VAL:CG1	42:BV:52:VAL:H	2.12	0.59
46:AZ:102:LEU:HD21	46:AZ:124:ILE:CG1	2.29	0.59
46:AZ:163:LEU:HD23	46:AZ:163:LEU:H	1.67	0.59
38:AR:113:LEU:O	38:AR:113:LEU:HD23	2.03	0.59
27:BD:259:THR:HG22	57:BA:1798:U:H5'	1.84	0.59
49:A2:16:LEU:O	49:A2:17:SER:HB3	2.03	0.59
57:BA:2328:A:H2'	57:BA:2329:G:C8	2.37	0.59
49:B2:2:LYS:O	49:B2:6:VAL:HG23	2.01	0.59
48:B1:51:VAL:HG21	48:B1:74:VAL:HG22	1.85	0.59
57:AA:286:C:H2'	57:AA:287:C:H6	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:AO:22:ILE:HG23	57:AA:1952:A:C2	2.37	0.59
44:AX:8:ILE:H	44:AX:8:ILE:HD12	1.68	0.59
57:AA:266:G:H5'	57:AA:266:G:C8	4.46	0.59
36:AP:18:ARG:HD2	57:AA:662:G:P	2.43	0.59
28:AE:132:HIS:CD2	28:AE:135:HIS:NE2	2.71	0.59
31:AH:86:GLU:HB3	31:AH:132:ARG:HB3	1.84	0.59
32:AI:92:VAL:CG1	32:AI:97:ILE:HD11	2.33	0.59
34:AN:36:GLY:O	34:AN:39:ARG:HG3	2.03	0.59
34:AN:62:VAL:O	34:AN:62:VAL:HG13	2.02	0.59
36:AP:83:VAL:HG23	36:AP:105:LEU:HD13	1.83	0.59
57:BA:330:A:O2'	57:BA:331:A:C8	2.55	0.59
58:BB:74:U:H2'	58:BB:75:G:O4'	2.02	0.59
30:BG:55:LYS:HG2	30:BG:59:GLU:OE2	2.02	0.59
36:BP:113:LYS:O	36:BP:115:LEU:HD22	2.03	0.59
40:BT:28:VAL:HG12	40:BT:29:ARG:HD3	1.84	0.59
40:BT:3:ARG:HD3	57:BA:2876:G:H4'	1.84	0.59
45:BY:4:LYS:O	45:BY:5:MET:O	2.20	0.59
45:BY:81:LYS:HD2	45:BY:96:ILE:HG22	1.84	0.59
27:AD:246:PRO:HD3	57:AA:1902:C:H5''	1.84	0.59
57:AA:2116:G:N7	57:AA:2117:A:C2	2.70	0.59
44:AX:60:ARG:HH21	54:A7:47:ARG:HH11	1.48	0.59
29:AF:117:ARG:HH21	29:AF:187:VAL:HA	1.68	0.59
57:BA:1766:U:O2'	57:BA:1767:C:H5'	2.02	0.59
57:BA:1582:C:H2'	57:BA:1583:A:C8	2.38	0.59
38:BR:18:LEU:HD21	38:BR:22:ARG:CZ	2.33	0.59
44:AX:89:ILE:HG22	44:AX:91:ALA:HB3	1.83	0.59
57:AA:1493:C:H4'	57:AA:1494:A:OP1	2.01	0.59
57:AA:221:A:H4'	57:AA:222:A:O5'	2.03	0.59
57:AA:917:A:N1	58:AB:80:U:H4'	2.18	0.59
58:AB:71:C:H2'	58:AB:72:G:H8	1.66	0.59
28:AE:116:VAL:HG21	28:AE:122:PHE:CD2	2.37	0.59
28:AE:23:VAL:HG12	28:AE:173:VAL:HG21	1.83	0.59
30:AG:118:ARG:HH11	30:AG:118:ARG:HG3	1.68	0.59
30:AG:105:LYS:CB	30:AG:142:PRO:HG3	2.32	0.59
30:AG:39:ILE:HD11	30:AG:60:LEU:HD11	1.85	0.59
40:AT:30:VAL:HG21	40:AT:84:GLN:H	1.66	0.59
28:BE:187:ALA:HB3	57:BA:2729:G:H1'	1.84	0.59
58:BB:111:G:H2'	58:BB:112:U:O4'	2.02	0.59
58:BB:7:G:H3'	58:BB:8:U:C5'	2.16	0.59
28:BE:120:TRP:CD2	28:BE:155:LYS:HD3	2.37	0.59
30:BG:108:ASN:C	30:BG:109:VAL:CG2	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:17:PRO:O	30:BG:20:ILE:HG13	2.02	0.59
30:BG:56:ALA:HB2	30:BG:153:ARG:NH1	2.12	0.59
30:BG:77:ILE:CG2	30:BG:80:PHE:H	2.15	0.59
32:BI:116:LEU:O	32:BI:117:GLU:HG3	2.02	0.59
32:BI:91:SER:CB	32:BI:121:LYS:HD3	2.32	0.59
35:AO:114:ILE:N	35:AO:114:ILE:HD12	2.18	0.59
57:AA:107:C:H2'	57:AA:108:U:H6	1.68	0.59
31:AH:109:PHE:C	31:AH:111:HIS:H	2.04	0.59
41:AU:74:LEU:H	41:AU:74:LEU:CD1	2.15	0.59
47:B0:45:PHE:HE2	47:B0:69:PHE:CE2	2.20	0.59
49:B2:43:GLN:O	49:B2:44:LEU:HB2	2.03	0.59
51:B4:11:PRO:HB3	51:B4:25:TYR:CD2	2.37	0.59
57:BA:1040:C:N4	57:BA:1115:G:H1	2.01	0.59
57:BA:1146:C:O2'	57:BA:1147:C:H5'	2.03	0.59
57:BA:1286:A:C2'	57:BA:1288:U:OP2	2.51	0.59
57:BA:1603:A:H5'	57:BA:1603:A:H8	1.66	0.59
57:BA:61:G:H1	57:BA:94:C:H42	1.50	0.59
28:BE:87:GLU:OE1	28:BE:89:ASP:N	2.32	0.59
29:BF:65:TRP:HZ3	29:BF:73:ALA:O	1.86	0.59
32:BI:132:PRO:HG2	32:BI:133:HIS:ND1	2.18	0.59
32:BI:68:LEU:HG	32:BI:72:LEU:HD11	1.85	0.59
35:BO:64:ARG:O	35:BO:82:ASN:HA	2.03	0.59
38:BR:2:ARG:O	38:BR:3:HIS:C	2.39	0.59
31:BH:68:THR:O	31:BH:70:THR:N	2.36	0.59
43:BW:10:VAL:HG12	43:BW:11:ARG:N	2.17	0.59
57:AA:1541:G:H4'	57:AA:1542:A:O4'	2.03	0.59
57:AA:1007:C:H2'	57:AA:1008:C:H6	2.75	0.59
47:B0:84:LEU:H	47:B0:84:LEU:HD12	1.67	0.59
57:AA:1286:A:O2'	57:AA:1288:U:OP2	2.18	0.59
29:AF:4:VAL:HG11	29:AF:17:ARG:HD3	1.85	0.59
30:AG:98:ARG:HA	30:AG:101:ILE:HD12	1.85	0.59
32:AI:69:LYS:HA	32:AI:136:VAL:HG11	1.84	0.59
34:AN:35:ARG:C	34:AN:37:LYS:H	2.05	0.59
39:AS:48:LEU:HD23	39:AS:82:ILE:HD11	1.85	0.59
40:AT:38:ASN:HD22	40:AT:40:THR:CG2	2.15	0.59
57:BA:1494:A:C3'	57:BA:1495:A:H5''	2.32	0.59
57:BA:833:U:H2'	57:BA:834:C:H6	1.84	0.59
27:BD:229:VAL:HG21	57:BA:784:A:C5	2.37	0.59
28:BE:48:GLN:NE2	28:BE:78:LEU:HD22	2.18	0.59
30:BG:120:LEU:N	30:BG:179:PRO:O	2.34	0.59
32:BI:68:LEU:HD11	32:BI:130:TYR:HE2	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:101:VAL:CG1	36:BP:106:LEU:HD23	2.33	0.59
39:BS:78:LEU:HD12	39:BS:103:GLU:OE1	2.03	0.59
41:BU:92:ARG:CZ	42:BV:11:GLN:H	2.16	0.59
42:BV:40:LEU:N	42:BV:40:LEU:CD2	2.66	0.59
31:BH:41:MET:HG2	31:BH:43:VAL:HG13	1.85	0.59
46:AZ:153:SER:C	46:AZ:155:LEU:HD23	2.24	0.59
41:AU:44:ASN:HD21	42:AV:75:PHE:HB3	1.67	0.59
46:AZ:108:PRO:HB2	46:AZ:144:LEU:HB2	1.84	0.59
57:BA:2807:G:C3'	57:BA:2808:U:H5''	2.33	0.59
57:BA:2373:G:H2'	57:BA:2374:C:C6	2.38	0.59
51:A4:42:PHE:HB2	51:A4:43:TYR:HD1	1.68	0.59
44:BX:34:ALA:HA	44:BX:38:GLU:OE1	2.02	0.59
27:AD:30:GLU:CD	27:AD:63:ARG:HE	2.06	0.59
29:AF:84:VAL:HG12	29:AF:85:GLY:H	1.68	0.59
30:AG:2:PRO:HA	51:A4:25:TYR:CE2	2.38	0.59
30:AG:40:ASN:ND2	30:AG:41:GLN:H	2.01	0.59
30:AG:83:ARG:CZ	30:AG:84:LYS:NZ	2.66	0.59
34:AN:128:HIS:CE1	34:AN:134:ARG:HD3	2.38	0.59
38:AR:2:ARG:O	38:AR:3:HIS:C	2.41	0.59
40:AT:50:ILE:O	40:AT:99:LEU:HD12	2.03	0.59
45:AY:51:VAL:HG12	45:AY:53:PRO:CD	2.22	0.59
57:BA:1177:A:H5'	57:BA:1178:C:C5	2.38	0.59
57:BA:1244:G:O2'	57:BA:1245:G:H5'	2.03	0.59
57:BA:2360:A:O2'	57:BA:2361:A:O4'	2.20	0.59
32:BI:130:TYR:HD1	32:BI:131:LYS:H	1.48	0.59
37:BQ:69:PHE:CE2	57:BA:871:U:H4'	2.37	0.59
38:BR:84:ALA:HB3	38:BR:85:PRO:HD3	1.84	0.59
40:BT:121:ILE:O	40:BT:124:ASP:HB2	2.03	0.59
46:AZ:150:LEU:CD2	46:AZ:172:ALA:HB3	2.30	0.59
54:B7:12:ARG:CD	54:B7:46:VAL:HG21	2.26	0.59
51:A4:53:GLU:O	51:A4:56:VAL:HG23	2.03	0.59
57:AA:1446:C:H2'	57:AA:1447:G:H8	1.68	0.59
57:BA:155:U:C2'	57:BA:156:U:H5''	2.33	0.59
28:BE:108:SER:O	28:BE:162:ALA:HA	2.03	0.59
42:AV:99:ILE:N	42:AV:99:ILE:HD13	2.18	0.59
49:B2:54:LYS:HB3	49:B2:54:LYS:NZ	2.18	0.59
58:AB:60:C:H2'	58:AB:61:G:H8	1.68	0.59
50:A3:19:GLN:NE2	50:A3:52:HIS:HE1	1.98	0.58
26:BC:7:ARG:HH22	26:BC:219:MET:HB3	1.68	0.58
27:BD:43:ARG:HH11	27:BD:44:ASN:ND2	2.01	0.58
28:BE:68:ALA:O	28:BE:70:ALA:N	2.29	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BI:92:VAL:HG13	32:BI:97:ILE:HD11	1.84	0.58
36:BP:101:VAL:HG12	36:BP:106:LEU:HB3	1.84	0.58
36:BP:47:ASP:HB3	36:BP:48:PRO:CA	2.33	0.58
39:BS:36:TYR:N	39:BS:36:TYR:CD1	2.70	0.58
31:BH:70:THR:CG2	31:BH:74:ASN:HD21	2.12	0.58
57:BA:2795:G:H22	57:BA:2802:G:N2	2.00	0.58
52:A5:54:GLY:N	52:A5:55:ARG:HE	2.00	0.58
55:A8:33:ASN:N	55:A8:36:LYS:HD2	2.17	0.58
38:AR:97:VAL:O	38:AR:98:LEU:HD23	2.02	0.58
57:AA:2807:G:C3'	57:AA:2808:U:H5''	2.33	0.58
46:AZ:17:ALA:CA	46:AZ:20:ARG:HB2	2.29	0.58
57:BA:769:G:O2'	57:BA:770:G:H5'	2.03	0.58
57:AA:654(A):G:C2'	57:AA:654(B):C:H5'	2.33	0.58
57:AA:1766:U:O2'	57:AA:1767:C:H5'	2.03	0.58
57:AA:2267:A:H5''	57:AA:2268:A:H5'	1.83	0.58
26:AC:184:GLU:C	26:AC:185:LYS:HE3	2.23	0.58
40:AT:117:ASP:OD2	40:AT:120:ARG:HG3	2.04	0.58
40:AT:26:ASP:OD2	40:AT:26:ASP:C	2.40	0.58
41:AU:92:ARG:HB3	42:AV:11:GLN:HE22	1.67	0.58
45:AY:37:VAL:O	45:AY:38:ILE:HB	2.01	0.58
45:AY:7:VAL:HB	45:AY:8:LYS:NZ	2.17	0.58
55:B8:50:LEU:O	55:B8:51:ALA:HB3	2.03	0.58
57:BA:2126:A:H4'	57:BA:2127:G:O5'	2.03	0.58
27:BD:78:LYS:HG3	27:BD:114:GLY:O	2.03	0.58
30:BG:16:ARG:N	30:BG:17:PRO:HD2	2.18	0.58
35:BO:64:ARG:HG2	35:BO:79:PHE:CD1	2.38	0.58
36:BP:108:LYS:C	36:BP:110:TYR:H	2.07	0.58
45:BY:45:VAL:HG12	45:BY:60:PHE:CE2	2.38	0.58
27:BD:239:ARG:O	57:BA:1971:A:H2	1.86	0.58
34:BN:128:HIS:CE1	34:BN:134:ARG:HD3	2.38	0.58
57:BA:156:U:H4'	57:BA:157:U:H5''	1.84	0.58
49:A2:14:ARG:HG3	49:A2:14:ARG:HH11	1.67	0.58
48:A1:82:LEU:N	48:A1:82:LEU:CD2	2.65	0.58
28:AE:108:SER:HB3	28:AE:165:VAL:HG21	1.84	0.58
34:AN:93:THR:O	34:AN:94:HIS:HB2	2.01	0.58
57:AA:2463:C:O2'	57:AA:2464:C:H5'	2.03	0.58
27:AD:248:SER:HB2	27:AD:249:PRO:HD2	1.85	0.58
46:BZ:6:LYS:HD3	46:BZ:60:GLU:O	2.03	0.58
57:AA:839:U:H2'	57:AA:840:C:C6	2.38	0.58
58:AB:74:U:H2'	58:AB:75:G:O4'	2.03	0.58
27:AD:39:LYS:HB2	27:AD:62:TYR:HB2	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:AE:14:ILE:HG12	28:AE:21:VAL:CG2	2.32	0.58
30:AG:5:VAL:HG13	51:A4:25:TYR:CE1	2.39	0.58
31:AH:124:GLU:CB	31:AH:132:ARG:HG2	2.29	0.58
38:AR:2:ARG:NH2	57:AA:2724:C:P	2.76	0.58
29:BF:95:ARG:NH2	57:BA:1247:A:OP1	2.36	0.58
57:BA:1292:U:H2'	57:BA:1293:C:C6	2.38	0.58
57:BA:1493:C:H4'	57:BA:1494:A:OP1	2.03	0.58
57:BA:2419:U:H2'	57:BA:2420:C:C6	2.38	0.58
57:BA:545:C:C3'	57:BA:547:A:H5''	2.31	0.58
28:BE:78:LEU:O	28:BE:79:ARG:HD2	2.03	0.58
30:BG:131:TYR:O	30:BG:159:VAL:HG12	2.03	0.58
30:BG:67:LYS:HB2	58:BB:42:C:H4'	1.84	0.58
32:BI:112:LYS:HA	32:BI:116:LEU:HD22	1.85	0.58
32:BI:77:LEU:HD23	32:BI:141:LYS:HG2	1.85	0.58
36:BP:59:LEU:HD23	36:BP:59:LEU:O	2.02	0.58
40:BT:30:VAL:HG21	40:BT:84:GLN:H	1.66	0.58
46:AZ:67:LEU:HB3	46:AZ:90:VAL:HG13	1.85	0.58
41:AU:59:ARG:HD3	57:AA:1009:A:C4'	2.32	0.58
57:BA:1639:U:H2'	57:BA:1640:C:H5''	1.85	0.58
48:B1:57:GLU:C	48:B1:58:ILE:HG23	2.22	0.58
35:BO:22:ILE:HD12	57:BA:1952:A:C5	2.37	0.58
57:AA:2702:U:H4'	57:AA:2703:C:OP1	2.04	0.58
27:AD:218:ARG:HB3	27:AD:219:PRO:HD2	1.84	0.58
34:BN:91:LEU:HD23	34:BN:98:VAL:HG21	1.84	0.58
55:A8:51:ALA:HA	55:A8:54:GLU:OE2	2.04	0.58
57:AA:1485:G:H1'	57:AA:1505:C:N4	2.18	0.58
57:AA:1523:U:H2'	57:AA:1524:G:C8	2.39	0.58
26:AC:6:LYS:CB	57:AA:2132:U:H3	2.14	0.58
27:AD:106:ILE:O	27:AD:106:ILE:HG23	2.02	0.58
27:AD:94:LEU:HD11	27:AD:96:HIS:CE1	2.38	0.58
28:AE:37:ARG:O	28:AE:45:THR:HA	2.02	0.58
28:AE:34:VAL:CG1	28:AE:48:GLN:HG2	2.33	0.58
30:AG:20:ILE:O	30:AG:24:GLY:HA2	2.03	0.58
32:AI:73:GLU:HG3	32:AI:74:ASN:N	2.18	0.58
34:AN:48:MET:H	34:AN:48:MET:CE	2.15	0.58
36:AP:112:LEU:H	36:AP:128:HIS:HD2	1.52	0.58
42:AV:28:GLU:OE1	42:AV:29:PRO:HD2	2.04	0.58
45:AY:4:LYS:HB2	45:AY:32:PRO:HG3	1.84	0.58
57:BA:433:C:H2'	57:BA:434:U:C6	2.51	0.58
27:BD:24:ILE:HG22	27:BD:91:ARG:HD2	1.85	0.58
28:BE:34:VAL:CG1	28:BE:48:GLN:HG2	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:172:LEU:O	30:BG:176:LEU:HG	2.03	0.58
33:BJ:39:ALA:O	33:BJ:43:ALA:HB3	2.03	0.58
40:BT:83:ILE:HG13	40:BT:84:GLN:H	1.67	0.58
42:BV:39:LEU:O	42:BV:40:LEU:HB2	2.03	0.58
46:AZ:118:GLN:HE22	57:AA:874:G:H5'	1.68	0.58
57:AA:2801:A:H2'	57:AA:2801:A:N3	2.18	0.58
46:BZ:144:LEU:HD12	46:BZ:150:LEU:CD2	2.33	0.58
57:AA:2189:U:C2'	57:AA:2190:G:H5'	2.33	0.58
49:A2:63:VAL:CA	49:A2:66:GLU:HG2	2.33	0.58
57:AA:648:G:O4'	57:AA:2351:G:H5'	2.02	0.58
46:AZ:139:VAL:O	46:AZ:141:VAL:N	2.36	0.58
35:BO:20:MET:O	35:BO:41:ALA:HB1	2.03	0.58
57:AA:1711:C:O2'	57:AA:1712:C:H5'	2.04	0.58
30:BG:136:ARG:NH2	57:BA:2306:C:H4'	2.18	0.58
44:BX:38:GLU:OE2	57:BA:143(A):C:H4'	2.03	0.58
57:BA:2691:C:H5'	57:BA:2691:C:H6	1.67	0.58
57:BA:2567:G:H2'	57:BA:2568:C:C6	2.39	0.58
57:AA:2136:C:H2'	57:AA:2137:C:C6	2.38	0.58
43:AW:15:ARG:NH2	57:AA:1266:G:O5'	2.36	0.58
27:AD:94:LEU:HB2	27:AD:104:TYR:CE2	2.38	0.58
30:AG:129:GLY:O	30:AG:130:ASN:CG	2.42	0.58
36:AP:23:PRO:CD	36:AP:33:ARG:CZ	2.71	0.58
40:AT:27:THR:CG2	40:AT:28:VAL:H	2.11	0.58
40:AT:46:GLU:OE2	40:AT:88:ILE:HG13	2.03	0.58
45:AY:43:ASN:HB3	45:AY:62:GLU:OE1	2.04	0.58
47:B0:27:GLU:HA	47:B0:67:VAL:O	2.04	0.58
57:BA:1040:C:H42	57:BA:1115:G:H1	1.51	0.58
57:BA:1221:C:H2'	57:BA:1221(A):C:H6	1.68	0.58
26:BC:6:LYS:CB	57:BA:2132:U:H3	2.14	0.58
38:BR:2:ARG:NH2	57:BA:2724:C:P	2.76	0.58
40:BT:63:VAL:O	40:BT:73:GLU:HA	2.04	0.58
30:AG:160:VAL:HG12	30:AG:161:THR:H	1.66	0.58
46:AZ:132:ASN:O	46:AZ:133:ILE:HD13	2.03	0.58
57:BA:1541:G:H4'	57:BA:1542:A:C5'	2.34	0.58
48:B1:56:GLN:HE22	48:B1:85:LEU:HD23	1.64	0.58
48:A1:93:GLU:O	48:A1:94:LEU:C	2.41	0.58
49:A2:4:SER:HA	49:A2:7:ARG:HH11	1.67	0.58
54:B7:8:ASN:C	54:B7:8:ASN:ND2	2.56	0.58
57:AA:845:G:OP2	57:AA:845:G:H8	1.85	0.58
49:A2:2:LYS:O	49:A2:6:VAL:HG23	2.04	0.58
53:A6:27:LYS:HB3	53:A6:30:THR:CG2	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2732:G:H3'	57:AA:2733:A:C5'	2.33	0.58
57:AA:544:G:C2	57:AA:547:A:H5'	2.39	0.58
26:AC:38:PHE:CD1	57:AA:2127:G:H4'	2.38	0.58
29:AF:4:VAL:HA	29:AF:19:GLU:HB3	1.85	0.58
30:AG:117:PHE:CG	30:AG:118:ARG:N	2.68	0.58
31:AH:44:VAL:HG12	31:AH:45:VAL:N	2.18	0.58
32:AI:91:SER:CB	32:AI:121:LYS:HD3	2.33	0.58
34:AN:23:LEU:HB2	34:AN:60:ILE:HG21	1.86	0.58
36:AP:108:LYS:C	36:AP:110:TYR:H	2.05	0.58
37:AQ:69:PHE:CE2	57:AA:871:U:H4'	2.39	0.58
40:AT:129:ARG:NH2	40:AT:131:ALA:HB2	2.19	0.58
41:AU:112:ARG:HH22	42:AV:46:VAL:HG11	1.68	0.58
44:AX:10:ALA:HB1	44:AX:11:PRO:HD2	1.84	0.58
53:B6:27:LYS:HB3	53:B6:30:THR:CG2	2.32	0.58
57:BA:673:C:O2'	57:BA:674:G:H5'	2.04	0.58
26:BC:16:ASP:HB3	26:BC:19:LYS:HB3	1.85	0.58
26:BC:38:PHE:CD2	57:BA:2126:A:H5'	2.39	0.58
28:BE:4:ILE:CD1	28:BE:28:ALA:HB1	2.33	0.58
30:BG:172:LEU:HD23	30:BG:172:LEU:C	2.23	0.58
31:BH:148:ILE:O	31:BH:162:ILE:HD11	2.04	0.58
31:BH:89:ILE:HG13	31:BH:129:THR:HA	1.84	0.58
32:BI:8:PRO:HB3	32:BI:14:ASP:N	2.14	0.58
34:BN:36:GLY:O	34:BN:39:ARG:HG3	2.03	0.58
39:BS:48:LEU:HD23	39:BS:82:ILE:HD11	1.85	0.58
41:BU:112:ARG:HH22	42:BV:46:VAL:HG11	1.68	0.58
44:BX:64:LYS:HZ3	44:BX:73:ARG:CZ	2.16	0.58
31:BH:155:SER:O	31:BH:157:TYR:N	2.36	0.58
57:BA:1541:G:H1'	57:BA:1542:A:C6	2.38	0.58
57:BA:2189:U:C2'	57:BA:2190:G:H5''	2.32	0.58
29:AF:165:ARG:HH11	29:AF:165:ARG:HB2	1.68	0.58
37:BQ:32:TYR:OH	37:BQ:111:GLU:HG3	2.04	0.58
43:BW:34:ASN:HD21	52:B5:39:MET:HB2	1.69	0.58
44:AX:60:ARG:NH2	54:A7:47:ARG:HD2	2.18	0.58
57:BA:2401:U:O2'	57:BA:2402:C:H5''	2.04	0.58
57:AA:654(B):C:H2'	57:AA:654(C):G:C8	2.39	0.58
51:B4:28:LYS:HE3	51:B4:28:LYS:HA	1.85	0.58
57:BA:2753:A:O2'	57:BA:2754:U:H5'	2.02	0.58
47:A0:27:GLU:HG3	47:A0:68:GLU:HA	1.86	0.58
57:AA:8:A:H2'	57:AA:9:U:C6	2.37	0.58
27:AD:127:VAL:HA	27:AD:193:VAL:HG13	1.86	0.58
27:AD:25:THR:HG22	27:AD:26:LYS:CD	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AD:35:LYS:NZ	27:AD:36:PRO:CD	2.65	0.58
30:AG:53:LEU:HD22	30:AG:53:LEU:N	2.18	0.58
32:AI:47:LEU:N	32:AI:47:LEU:HD12	4.24	0.58
39:AS:99:LYS:O	39:AS:101:LEU:N	2.30	0.58
45:AY:81:LYS:HD2	45:AY:96:ILE:HG22	1.85	0.58
57:BA:1049:C:H41	57:BA:1111:A:H2	1.51	0.58
57:BA:2376:A:H2'	57:BA:2377:A:O4'	2.03	0.58
27:BD:25:THR:HG22	27:BD:26:LYS:HD2	1.86	0.58
28:BE:27:LEU:HD22	40:BT:1:MET:CE	2.33	0.58
40:BT:88:ILE:HG22	40:BT:89:VAL:CG2	2.34	0.58
46:AZ:67:LEU:HB3	46:AZ:90:VAL:CG1	2.33	0.58
51:B4:42:PHE:HB2	51:B4:43:TYR:HD1	1.68	0.58
57:BA:1983:C:O2'	57:BA:1984:G:H5'	2.03	0.58
54:B7:22:MET:O	54:B7:28:ARG:NH1	2.34	0.58
57:AA:1038:C:C2'	57:AA:1039:G:H5''	2.34	0.58
27:AD:100:GLY:HA2	57:AA:1501:C:H1'	1.84	0.58
57:AA:2359:C:H2'	57:AA:2360:A:C8	2.39	0.58
57:AA:409:C:H2'	57:AA:410:G:H8	1.69	0.58
57:AA:612:C:H2'	57:AA:613:G:C5'	2.18	0.58
58:AB:78:A:C2	58:AB:100:A:C4	2.92	0.58
27:AD:26:LYS:O	27:AD:27:THR:HB	2.04	0.58
28:AE:187:ALA:HB3	57:AA:2729:G:H1'	1.86	0.58
30:AG:130:ASN:HB3	30:AG:159:VAL:O	2.03	0.58
30:AG:131:TYR:O	30:AG:159:VAL:HG12	2.04	0.58
36:AP:33:ARG:NH2	57:AA:587:C:H2'	2.17	0.58
40:AT:117:ASP:O	40:AT:121:ILE:HG13	2.03	0.58
42:AV:38:LEU:C	42:AV:38:LEU:HD23	2.24	0.58
43:AW:59:VAL:CG1	43:AW:60:ASN:N	2.66	0.58
36:BP:65:ARG:HH12	55:B8:15:LYS:HB2	1.68	0.58
58:BB:105:A:H2'	58:BB:106:G:O4'	2.04	0.58
58:BB:78:A:C2	58:BB:100:A:C4	2.91	0.58
30:BG:143:GLU:OE1	30:BG:143:GLU:N	2.35	0.58
30:BG:82:LEU:C	30:BG:83:ARG:HG3	2.23	0.58
31:BH:110:SER:HB2	57:BA:2653:U:O2'	2.04	0.58
31:BH:124:GLU:CB	31:BH:132:ARG:HG2	2.30	0.58
32:BI:37:VAL:HG12	32:BI:38:LEU:N	2.18	0.58
36:BP:18:ARG:HD2	57:BA:662:G:P	2.43	0.58
38:BR:2:ARG:N	38:BR:2:ARG:HD2	2.18	0.58
42:AV:24:LYS:HA	42:AV:92:THR:HG23	1.85	0.58
53:A6:15:GLU:CD	53:A6:44:ARG:HH22	2.07	0.58
46:AZ:29:TYR:HD2	46:AZ:29:TYR:H	1.52	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1541:G:H4'	57:BA:1542:A:O4'	2.04	0.58
46:AZ:39:VAL:HG21	46:AZ:44:PHE:CD2	2.39	0.58
57:BA:755:C:H2'	57:BA:756:C:C6	2.39	0.58
57:BA:2232:U:O2'	57:BA:2233:U:H5'	2.04	0.58
57:BA:1680:U:O2	57:BA:1763:G:H3'	2.04	0.58
57:AA:2182:G:H2'	57:AA:2183:C:C6	2.38	0.58
44:AX:26:TYR:HD2	44:AX:92:LEU:HD12	1.67	0.58
57:BA:2261:C:O2'	57:BA:2262:U:H5'	2.04	0.58
57:BA:608:A:H2'	57:BA:609:A:C8	2.39	0.58
57:AA:2577:A:H5''	57:AA:2578:G:H5'	1.86	0.58
57:AA:1038:C:H3'	57:AA:1039:G:C5'	2.34	0.58
32:AI:92:VAL:HG13	32:AI:97:ILE:HD11	1.86	0.58
32:AI:92:VAL:HG22	32:AI:97:ILE:HG12	1.86	0.58
36:AP:6:LEU:HD23	36:AP:6:LEU:N	2.16	0.58
27:BD:97:TYR:HB2	27:BD:101:GLU:O	2.03	0.58
29:BF:25:PRO:HB3	29:BF:119:ARG:HB2	1.85	0.58
36:BP:7:ARG:O	36:BP:10:PRO:HD2	2.04	0.58
36:BP:58:THR:O	36:BP:61:ARG:CZ	2.52	0.58
40:BT:25:GLY:HA2	40:BT:92:GLY:HA3	1.85	0.58
40:BT:32:TYR:CD2	40:BT:81:PRO:HB2	2.38	0.58
41:BU:90:VAL:CG1	41:BU:91:ASP:H	2.11	0.58
43:BW:6:ILE:CG1	43:BW:104:THR:HG23	2.33	0.58
45:BY:2:ARG:O	45:BY:4:LYS:N	2.35	0.58
52:A5:51:TYR:CE2	52:A5:52:TYR:HB2	2.38	0.58
52:A5:53:ALA:HB3	52:A5:55:ARG:HH21	1.66	0.58
53:A6:48:VAL:HG23	53:A6:49:HIS:N	2.18	0.58
57:BA:648:G:O4'	57:BA:2351:G:H5''	2.04	0.58
54:B7:8:ASN:HD22	54:B7:9:ARG:N	2.02	0.58
36:BP:122:PRO:HA	36:BP:141:ALA:O	2.02	0.58
57:BA:532:A:O4'	57:BA:532:A:OP2	5.15	0.58
27:BD:166:GLN:CA	27:BD:166:GLN:HE21	2.15	0.58
57:AA:2408:U:H2'	57:AA:2409:G:C8	2.39	0.58
57:AA:970:C:H2'	57:AA:971:C:H6	1.69	0.58
27:AD:228:PRO:HD3	27:AD:235:GLY:HA2	1.86	0.58
31:AH:53:GLU:HA	31:AH:65:HIS:CE1	2.39	0.58
36:AP:46:LYS:HG2	36:AP:52:GLU:CD	2.24	0.58
36:AP:58:THR:O	36:AP:61:ARG:CZ	2.51	0.58
39:AS:36:TYR:N	39:AS:36:TYR:CD1	2.72	0.58
41:AU:92:ARG:HH21	42:AV:10:LYS:HG2	1.69	0.58
28:BE:23:VAL:HG12	28:BE:173:VAL:HG21	1.86	0.58
28:BE:59:VAL:O	28:BE:60:ASN:ND2	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BI:77:LEU:CD2	32:BI:141:LYS:HG2	2.34	0.58
36:BP:50:ARG:HG3	36:BP:51:PHE:N	2.18	0.58
43:BW:9:TYR:H	43:BW:102:HIS:HD2	1.45	0.58
46:BZ:26:GLY:HA2	46:BZ:85:HIS:NE2	2.19	0.58
46:BZ:68:PRO:HG2	46:BZ:91:LEU:H	1.68	0.58
57:AA:1537:G:H2'	57:AA:1538:G:C8	2.31	0.58
57:BA:1464:C:HO2'	57:BA:1528:A:H8	1.49	0.58
57:AA:1719:G:O2'	57:AA:1720:U:H5'	2.04	0.58
57:BA:1007:C:H2'	57:BA:1008:C:H6	2.79	0.58
57:BA:1904:G:O2'	57:BA:1905:C:H5'	2.04	0.58
48:A1:30:VAL:HG23	48:A1:31:GLY:H	1.68	0.57
51:A4:28:LYS:HA	51:A4:28:LYS:HE3	1.85	0.57
36:AP:65:ARG:HH12	55:A8:15:LYS:HB2	1.69	0.57
55:A8:50:LEU:HA	55:A8:53:PRO:HG3	1.84	0.57
57:AA:1106:A:H2'	57:AA:1107:G:C8	2.39	0.57
57:AA:1040:C:N4	57:AA:1115:G:H1	2.02	0.57
57:AA:2419:U:H2'	57:AA:2420:C:C6	2.39	0.57
57:AA:922:U:H2'	57:AA:923:C:C6	2.39	0.57
26:AC:166:ASN:HB3	26:AC:172:ILE:HB	1.86	0.57
26:AC:27:ALA:HB1	26:AC:186:LEU:HB2	1.86	0.57
30:AG:111:LEU:CD1	30:AG:179:PRO:HG3	2.33	0.57
30:AG:111:LEU:HB2	30:AG:112:PRO:HD3	1.86	0.57
30:AG:28:VAL:O	30:AG:31:VAL:HG12	2.04	0.57
30:AG:62:LEU:O	30:AG:64:THR:N	2.37	0.57
30:AG:45:GLU:N	30:AG:88:ILE:HG21	2.19	0.57
31:AH:148:ILE:O	31:AH:162:ILE:HD11	2.03	0.57
32:AI:48:GLU:OE1	32:AI:52:ARG:HD3	2.04	0.57
34:AN:2:LYS:HZ2	41:AU:95:LEU:HD21	1.65	0.57
28:BE:59:VAL:O	28:BE:62:PRO:HD2	2.03	0.57
30:BG:67:LYS:HZ3	51:B4:5:ILE:HD11	1.66	0.57
32:BI:92:VAL:CG1	32:BI:120:ILE:HD13	2.27	0.57
32:BI:62:LYS:NZ	32:BI:133:HIS:HB2	2.18	0.57
36:BP:112:LEU:H	36:BP:128:HIS:CD2	2.22	0.57
57:BA:1885:A:H2'	57:BA:1886:C:O4'	2.03	0.57
57:AA:1589:C:H2'	57:AA:1590:U:C6	2.38	0.57
57:BA:2777:G:C4'	57:BA:2778:A:H5'	2.31	0.57
48:B1:45:ASN:HB2	57:BA:2230:G:H1'	1.86	0.57
37:AQ:32:TYR:CE1	37:AQ:111:GLU:HA	2.37	0.57
57:AA:197:A:H5'	57:AA:197:A:H8	1.67	0.57
28:AE:195:LEU:HD12	28:AE:196:VAL:H	1.69	0.57
46:AZ:57:ILE:HG22	46:AZ:58:VAL:N	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2691:C:H6	57:AA:2691:C:H5'	1.69	0.57
35:BO:102:VAL:CG2	35:BO:121:VAL:HG22	2.34	0.57
51:A4:11:PRO:HB3	51:A4:25:TYR:CD2	2.39	0.57
57:AA:61:G:H1	57:AA:94:C:H42	1.52	0.57
58:AB:111:G:H2'	58:AB:112:U:O4'	2.03	0.57
30:AG:62:LEU:C	30:AG:64:THR:H	2.07	0.57
31:AH:110:SER:HB2	57:AA:2653:U:O2'	2.03	0.57
31:AH:68:THR:C	31:AH:70:THR:N	2.55	0.57
32:AI:5:LEU:HD11	32:AI:19:VAL:HG11	1.86	0.57
34:AN:15:LEU:HD13	34:AN:16:ILE:N	2.19	0.57
34:AN:18:ALA:O	34:AN:21:LYS:N	2.35	0.57
34:AN:28:THR:CG2	34:AN:29:LYS:N	2.68	0.57
36:AP:102:ARG:CB	36:AP:102:ARG:HH21	2.17	0.57
36:AP:18:ARG:HH11	36:AP:18:ARG:C	2.07	0.57
46:AZ:77:ASP:O	46:AZ:79:ARG:N	2.37	0.57
55:B8:6:THR:HG21	55:B8:63:PRO:HD3	1.85	0.57
57:BA:332:A:H4'	57:BA:333:G:OP1	2.04	0.57
26:BC:184:GLU:HB2	26:BC:185:LYS:NZ	2.20	0.57
26:BC:25:GLU:O	26:BC:29:LEU:HB2	2.03	0.57
27:BD:68:LYS:HG3	27:BD:68:LYS:O	2.02	0.57
33:BJ:118:THR:O	33:BJ:119:ALA:HB3	2.04	0.57
33:BJ:39:ALA:C	33:BJ:43:ALA:HB3	2.24	0.57
46:BZ:10:ARG:HH21	46:BZ:26:GLY:N	2.01	0.57
57:BA:1885:A:H8	57:BA:1885:A:H5'	1.69	0.57
57:BA:582:G:H2'	57:BA:583:G:C8	2.39	0.57
27:AD:259:THR:HG22	57:AA:1798:U:H5'	1.84	0.57
48:B1:56:GLN:HG3	48:B1:87:PRO:HD3	1.86	0.57
57:BA:1547:C:H2'	57:BA:1548:C:H6	1.69	0.57
44:BX:24:GLY:CA	44:BX:83:VAL:HG23	2.34	0.57
57:AA:1853:A:N1	57:AA:2087:G:H1'	2.19	0.57
44:AX:24:GLY:CA	44:AX:83:VAL:HG23	2.34	0.57
57:BA:2870:C:H2'	57:BA:2871:C:O4'	2.04	0.57
55:A8:34:TRP:HB2	57:AA:2420:C:OP1	2.05	0.57
28:AE:119:ARG:HG2	28:AE:160:TYR:HB2	1.86	0.57
30:AG:57:ALA:HA	30:AG:90:LEU:HD23	1.86	0.57
30:AG:39:ILE:CD1	30:AG:92:VAL:HG12	2.33	0.57
32:AI:116:LEU:O	32:AI:117:GLU:HG3	2.05	0.57
32:AI:81:VAL:HG23	32:AI:82:ARG:N	2.18	0.57
34:AN:133:GLN:HG2	34:AN:135:PRO:HD3	1.84	0.57
36:AP:112:LEU:H	36:AP:128:HIS:CD2	2.22	0.57
40:AT:83:ILE:HG13	40:AT:84:GLN:H	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:AT:30:VAL:HG11	40:AT:84:GLN:HG2	1.86	0.57
44:AX:35:THR:HG22	44:AX:36:LYS:N	2.18	0.57
28:BE:142:GLY:HA3	57:BA:2052:G:O4'	2.04	0.57
28:BE:129:HIS:HA	57:BA:1675:C:O2	2.04	0.57
28:BE:111:ARG:HD2	28:BE:160:TYR:CD1	2.38	0.57
30:BG:5:VAL:HG12	30:BG:104:GLU:OE2	2.05	0.57
30:BG:85:GLY:O	30:BG:86:MET:HB3	2.03	0.57
57:BA:1882:C:H5'	57:BA:1883:G:OP2	2.04	0.57
57:AA:1948:G:O2'	57:AA:1949:G:H5'	2.03	0.57
46:BZ:48:PHE:HA	46:BZ:51:ALA:HB3	1.87	0.57
29:BF:122:LYS:CA	29:BF:122:LYS:HE2	2.33	0.57
57:BA:935:C:H2'	57:BA:936:C:H6	1.69	0.57
47:A0:73:GLY:O	47:A0:75:LEU:N	2.36	0.57
58:BB:60:C:H2'	58:BB:61:G:H8	1.69	0.57
57:BA:2469:A:H2	57:BA:2481:G:H21	1.50	0.57
55:A8:61:LEU:CD1	55:A8:62:LEU:N	2.65	0.57
57:AA:1040:C:H42	57:AA:1115:G:H1	1.52	0.57
26:AC:184:GLU:HB2	26:AC:185:LYS:NZ	2.20	0.57
30:AG:60:LEU:HD12	30:AG:68:PRO:HG3	1.86	0.57
31:AH:94:TYR:CZ	31:AH:160:LYS:HD3	2.40	0.57
32:AI:68:LEU:HG	32:AI:72:LEU:HD11	1.86	0.57
44:AX:35:THR:HG22	44:AX:37:THR:H	1.69	0.57
57:BA:588:U:H2'	57:BA:589:C:C6	2.38	0.57
57:BA:712:G:O2'	57:BA:713:G:H5'	2.03	0.57
26:BC:27:ALA:HB1	26:BC:186:LEU:HB2	1.85	0.57
27:BD:155:LEU:HD23	27:BD:177:LEU:CD2	2.35	0.57
28:BE:44:TYR:O	28:BE:45:THR:HB	2.03	0.57
28:BE:60:ASN:OD1	28:BE:61:ARG:HB3	2.05	0.57
36:BP:101:VAL:CG2	36:BP:102:ARG:N	2.67	0.57
36:BP:46:LYS:HG2	36:BP:52:GLU:OE2	2.04	0.57
40:BT:22:PHE:CD2	40:BT:22:PHE:N	2.67	0.57
41:BU:102:GLU:HG3	42:BV:2:PHE:CE1	2.39	0.57
49:A2:51:ARG:HB2	49:A2:55:ARG:HH21	1.70	0.57
57:AA:1464:C:O2'	57:AA:1528:A:H8	1.85	0.57
57:AA:1678:G:H22	57:AA:1989:G:H22	1.49	0.57
44:BX:60:ARG:HE	54:B7:47:ARG:NH1	2.01	0.57
37:BQ:109:VAL:HG12	37:BQ:113:GLN:CB	2.34	0.57
57:AA:1680:U:O2	57:AA:1763:G:H3'	2.04	0.57
57:AA:2086:U:H2'	57:AA:2087:G:C8	2.39	0.57
26:BC:193:PHE:O	26:BC:197:LEU:HG	2.03	0.57
57:AA:2373:G:H2'	57:AA:2374:C:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:AH:62:LYS:HB3	57:AA:2749:A:H4'	1.86	0.57
57:AA:1904:G:O2'	57:AA:1905:C:H5'	2.04	0.57
54:B7:24:THR:HG23	54:B7:27:GLY:H	1.70	0.57
57:BA:2742:C:O2'	57:BA:2743:C:H5'	2.04	0.57
57:BA:2650:U:O2'	57:BA:2651:C:H5'	2.05	0.57
34:AN:91:LEU:HD23	34:AN:98:VAL:HG21	1.86	0.57
57:AA:1207:C:H2'	57:AA:1208:C:H6	1.69	0.57
57:AA:27:G:N2	57:AA:512:G:C2'	2.68	0.57
57:AA:99:U:H4'	57:AA:102:G:H1'	1.87	0.57
58:AB:105:A:H2'	58:AB:106:G:O4'	2.04	0.57
26:AC:16:ASP:HB3	26:AC:19:LYS:HB3	1.86	0.57
27:AD:144:ALA:HB3	27:AD:192:THR:CG2	2.35	0.57
32:AI:126:TYR:H	32:AI:140:LEU:HD22	1.70	0.57
32:AI:47:LEU:N	32:AI:47:LEU:CD1	4.53	0.57
36:AP:101:VAL:CB	36:AP:107:LYS:HA	2.24	0.57
57:BA:2289:G:H2'	57:BA:2290:G:H8	1.69	0.57
29:BF:4:VAL:HA	29:BF:19:GLU:HB3	1.86	0.57
30:BG:12:TYR:HB3	30:BG:16:ARG:HG3	1.86	0.57
32:BI:101:LEU:CD2	32:BI:109:ILE:HG12	2.32	0.57
33:BJ:84:GLU:C	33:BJ:86:PRO:N	2.57	0.57
34:BN:35:ARG:O	34:BN:37:LYS:N	2.37	0.57
34:BN:48:MET:H	34:BN:48:MET:CE	2.17	0.57
39:BS:105:ALA:C	39:BS:107:GLU:H	2.07	0.57
57:BA:612:C:H2'	57:BA:613:G:C5'	2.18	0.57
31:BH:44:VAL:HG12	31:BH:45:VAL:N	2.19	0.57
41:BU:27:LEU:CD2	41:BU:31:SER:HB2	2.29	0.57
46:BZ:67:LEU:HD12	46:BZ:68:PRO:HD2	1.85	0.57
34:BN:133:GLN:HG2	34:BN:134:ARG:N	2.15	0.57
57:AA:2317:C:H2'	57:AA:2318:G:C5'	2.32	0.57
57:AA:2544:G:O5'	57:AA:2544:G:H8	1.88	0.57
46:AZ:111:VAL:HG12	46:AZ:112:ARG:N	2.19	0.57
57:BA:2116:G:N7	57:BA:2117:A:C2	2.72	0.57
44:BX:60:ARG:NH2	54:B7:47:ARG:HD2	2.18	0.57
57:BA:2086:U:H2'	57:BA:2087:G:C8	2.40	0.57
29:AF:206:ILE:HG22	29:AF:207:GLY:N	2.20	0.57
57:AA:1839:G:H5'	57:AA:1839:G:H8	1.69	0.57
57:BA:2101:G:H2'	57:BA:2102:U:O4'	2.04	0.57
57:BA:2136:C:H2'	57:BA:2137:C:C6	2.39	0.57
53:A6:27:LYS:HD2	53:A6:30:THR:CB	2.32	0.57
57:AA:1204:A:N1	57:AA:1241:A:H2	2.03	0.57
26:AC:213:VAL:O	26:AC:225:ILE:HD12	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AD:210:GLY:O	27:AD:211:ARG:CB	2.52	0.57
30:AG:108:ASN:O	51:A4:36:CYS:HA	2.04	0.57
32:AI:116:LEU:HG	32:AI:117:GLU:N	2.19	0.57
32:AI:27:ARG:HG3	32:AI:27:ARG:HH11	1.70	0.57
36:AP:102:ARG:HB2	36:AP:102:ARG:HH21	1.70	0.57
36:AP:10:PRO:O	36:AP:11:GLY:C	2.42	0.57
39:AS:92:TYR:O	39:AS:93:LYS:HB3	2.05	0.57
39:AS:93:LYS:HG3	39:AS:93:LYS:O	2.05	0.57
45:AY:96:ILE:CG2	45:AY:99:CYS:HB3	2.35	0.57
57:BA:1019:U:O2'	57:BA:1021:A:C2	2.51	0.57
57:BA:839:U:H2'	57:BA:840:C:C6	2.40	0.57
58:BB:11:C:OP2	58:BB:12:C:C5	2.58	0.57
30:BG:178:PHE:O	30:BG:180:PHE:N	2.37	0.57
30:BG:27:ASN:C	30:BG:29:TRP:H	2.08	0.57
30:BG:71:THR:HG22	30:BG:72:ARG:N	2.20	0.57
32:BI:100:ALA:O	32:BI:103:ARG:N	2.37	0.57
34:BN:30:ILE:HG22	34:BN:34:LEU:HD21	1.86	0.57
40:BT:8:LYS:HA	40:BT:11:GLU:OE1	2.05	0.57
57:BA:613:G:H8	57:BA:613:G:C5'	2.17	0.57
37:AQ:134:ARG:HD3	46:AZ:122:ARG:HH21	1.69	0.57
31:BH:70:THR:O	31:BH:72:ILE:N	2.36	0.57
52:B5:51:TYR:C	52:B5:53:ALA:H	2.08	0.57
57:BA:1464:C:H2'	57:BA:1465:G:H8	1.68	0.57
53:B6:19:ARG:HG3	57:BA:2399:G:O2'	2.04	0.57
57:BA:1999:C:H5''	57:BA:2723:C:O2'	2.04	0.57
57:AA:1362:C:O2'	57:AA:1363:C:H5'	2.05	0.57
36:AP:86:LYS:HB2	36:AP:117:GLU:O	2.04	0.57
51:B4:9:LEU:HA	51:B4:26:SER:O	2.04	0.57
57:AA:2071:A:H2'	57:AA:2072:G:H8	1.69	0.57
57:BA:2771:C:O2	57:BA:2771:C:H2'	2.05	0.57
47:A0:45:PHE:HE2	47:A0:69:PHE:HE2	1.53	0.57
55:A8:56:GLU:O	55:A8:58:ILE:N	2.37	0.57
57:AA:1503:U:O2'	57:AA:1504:C:H5'	2.05	0.57
57:AA:2415:G:H2'	57:AA:2416:C:C6	2.40	0.57
57:AA:626:U:H5'	57:AA:627:A:C5'	2.34	0.57
27:AD:165:ILE:HD13	27:AD:175:LEU:CD2	2.34	0.57
28:AE:63:LEU:O	28:AE:65:GLY:N	2.38	0.57
30:AG:6:ALA:HB3	30:AG:104:GLU:OE1	2.05	0.57
30:AG:180:PHE:O	30:AG:182:LYS:N	2.36	0.57
30:AG:28:VAL:C	30:AG:30:GLU:H	2.07	0.57
35:AO:64:ARG:O	35:AO:82:ASN:HA	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AQ:66:ILE:O	37:AQ:66:ILE:HG13	2.03	0.57
40:AT:28:VAL:HG12	40:AT:29:ARG:HD3	1.85	0.57
43:AW:50:VAL:HG13	43:AW:105:VAL:HG21	1.86	0.57
47:B0:25:ARG:HA	47:B0:29:GLN:HE22	1.68	0.57
47:B0:27:GLU:HG3	47:B0:68:GLU:HA	1.86	0.57
57:BA:1003:G:H22	57:BA:1038:C:H42	42.52	0.57
30:BG:109:VAL:O	30:BG:113:ARG:N	2.38	0.57
30:BG:46:ALA:HB3	30:BG:82:LEU:CD1	2.35	0.57
30:BG:81:LYS:O	30:BG:82:LEU:O	2.23	0.57
32:BI:127:VAL:HG13	32:BI:138:ILE:O	2.05	0.57
36:BP:125:VAL:O	36:BP:145:PRO:HD2	2.04	0.57
38:BR:58:GLY:HA2	38:BR:80:PHE:HE1	1.69	0.57
31:BH:53:GLU:HA	31:BH:65:HIS:CE1	2.40	0.57
57:BA:1528:A:H2'	57:BA:1528:A:N3	2.20	0.57
34:BN:10:GLU:OE2	34:BN:11:PRO:HD2	2.04	0.57
57:BA:2702:U:H4'	57:BA:2703:C:OP1	2.04	0.57
57:BA:1796:U:H2'	57:BA:1797:C:C6	2.39	0.57
57:AA:2101:G:H2'	57:AA:2102:U:O4'	2.05	0.57
57:BA:1809:A:H2'	57:BA:1810:A:C8	2.39	0.57
57:AA:2025:C:H2'	57:AA:2026:C:C6	2.38	0.57
38:AR:7:GLY:C	38:AR:8:ARG:NE	2.58	0.57
57:AA:2688:U:H1'	57:AA:2721:A:N6	2.20	0.57
28:AE:128:SER:OG	28:AE:129:HIS:N	2.32	0.57
47:A0:27:GLU:HA	47:A0:67:VAL:O	2.04	0.57
26:AC:219:MET:O	57:AA:2175:C:H4'	2.04	0.57
27:AD:97:TYR:HB2	27:AD:101:GLU:O	2.05	0.57
31:AH:136:ILE:HD12	31:AH:136:ILE:H	1.68	0.57
40:AT:97:ALA:O	40:AT:99:LEU:HG	3.84	0.57
50:B3:19:GLN:NE2	50:B3:52:HIS:HE1	2.01	0.57
57:BA:409:C:H2'	57:BA:410:G:H8	1.68	0.57
57:BA:545:C:H2'	57:BA:547:A:C4'	2.34	0.57
57:BA:954:G:N2	57:BA:964:C:H1'	2.20	0.57
41:BU:68:ALA:O	41:BU:71:GLN:HB3	2.05	0.57
41:BU:74:LEU:HD13	41:BU:74:LEU:H	1.69	0.57
42:BV:38:LEU:O	42:BV:39:LEU:HD13	2.04	0.57
43:BW:1:MET:CE	43:BW:2:GLU:H	2.18	0.57
53:A6:38:LYS:HD3	57:AA:2344:U:OP1	2.05	0.57
57:BA:1947:C:H2'	57:BA:1948:G:H5''	1.87	0.57
39:AS:42:ASP:O	39:AS:43:GLU:HB2	2.05	0.57
48:B1:12:PRO:HB3	48:B1:43:TYR:HD2	1.70	0.57
48:B1:45:ASN:CB	57:BA:2230:G:H1'	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BV:28:GLU:OE1	42:BV:29:PRO:HD2	2.05	0.57
46:BZ:53:ILE:CD1	46:BZ:99:TYR:HB2	2.35	0.57
57:AA:2476:A:C2'	57:AA:2477:C:H5''	2.35	0.57
57:BA:2476:A:C2'	57:BA:2477:C:H5''	2.34	0.57
44:BX:53:LYS:H	44:BX:82:GLN:HB3	1.70	0.57
57:AA:2709:G:O2'	57:AA:2710:C:H5'	2.05	0.57
57:BA:2648:C:H2'	57:BA:2649:U:C6	2.40	0.57
57:AA:1244:G:O2'	57:AA:1245:G:H5'	2.05	0.57
57:AA:1271:G:H5'	57:AA:1314:C:H5''	27.85	0.57
57:AA:582:G:H2'	57:AA:583:G:C8	2.39	0.57
58:AB:16:G:O2'	58:AB:17:C:H5'	2.03	0.57
28:AE:34:VAL:HG11	28:AE:78:LEU:CD2	2.34	0.57
28:AE:4:ILE:CD1	28:AE:28:ALA:HB1	2.33	0.57
32:AI:82:ARG:HG2	32:AI:145:VAL:CG1	2.32	0.57
32:AI:92:VAL:HG22	32:AI:97:ILE:HG13	1.87	0.57
35:AO:64:ARG:HG3	35:AO:64:ARG:HH11	4.48	0.57
39:AS:105:ALA:C	39:AS:107:GLU:H	2.07	0.57
39:AS:88:ASP:CG	39:AS:89:ARG:N	2.59	0.57
42:AV:39:LEU:HB3	42:AV:47:VAL:HG11	1.87	0.57
45:AY:76:CYS:CB	45:AY:96:ILE:HD11	2.28	0.57
57:BA:1014:U:H2'	57:BA:1015:G:C5'	2.34	0.57
57:BA:1502:C:O2	57:BA:1502:C:H2'	2.03	0.57
28:BE:63:LEU:O	28:BE:65:GLY:N	2.38	0.57
32:BI:101:LEU:HB3	32:BI:109:ILE:HD11	1.85	0.57
37:BQ:12:GLN:CG	37:BQ:73:PRO:HD2	2.30	0.57
39:BS:99:LYS:O	39:BS:101:LEU:N	2.30	0.57
57:BA:1853:A:N1	57:BA:2087:G:H1'	2.19	0.57
57:AA:1853:A:H2'	57:AA:1854:A:C8	2.40	0.57
57:BA:2392:A:H2	57:BA:2424:C:N4	2.02	0.57
57:BA:2688:U:H1'	57:BA:2721:A:N6	2.20	0.57
57:BA:420:C:H2'	57:BA:421:U:C6	2.40	0.57
57:BA:2709:G:O2'	57:BA:2710:C:H5'	2.05	0.57
34:AN:10:GLU:OE2	34:AN:11:PRO:HD2	2.05	0.57
38:AR:18:LEU:HD21	38:AR:22:ARG:CZ	2.34	0.57
57:AA:1582:C:H2'	57:AA:1583:A:C8	2.39	0.57
30:AG:2:PRO:HG3	51:A4:11:PRO:HD3	1.86	0.57
57:AA:709:U:H2'	57:AA:710:G:C8	2.39	0.57
27:AD:270:ILE:O	27:AD:271:ILE:HG23	2.05	0.57
27:AD:68:LYS:O	27:AD:68:LYS:HG3	2.05	0.57
28:AE:59:VAL:O	28:AE:60:ASN:ND2	2.38	0.57
31:AH:106:THR:HG22	31:AH:112:PRO:HB3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AN:30:ILE:HG22	34:AN:34:LEU:HD21	1.86	0.57
36:AP:111:ARG:HG3	36:AP:111:ARG:HH21	1.68	0.57
55:B8:30:ARG:NH1	57:BA:2419:U:O4	2.37	0.57
57:BA:1410:G:C4	57:BA:1491:G:N2	42.01	0.57
57:BA:710:G:H2'	57:BA:711:G:H8	2.12	0.57
26:BC:39:ASP:OD1	26:BC:178:LYS:HB3	2.03	0.57
26:BC:219:MET:HE1	57:BA:2174:C:H1'	1.86	0.57
26:BC:213:VAL:O	26:BC:225:ILE:HD12	2.05	0.57
31:BH:86:GLU:HB3	31:BH:132:ARG:HB3	1.85	0.57
36:BP:101:VAL:HG23	36:BP:102:ARG:N	2.19	0.57
37:BQ:35:VAL:CG1	37:BQ:130:LYS:HE2	2.35	0.57
37:BQ:66:ILE:HG13	37:BQ:66:ILE:O	2.03	0.57
41:BU:112:ARG:HH12	42:BV:46:VAL:CG1	2.18	0.57
57:BA:2801:A:N3	57:BA:2801:A:H2'	2.19	0.57
57:AA:528:A:C2	57:AA:2043:C:C4'	2.83	0.57
57:BA:272(E):G:C2	57:BA:364:C:N3	2.73	0.57
48:B1:3:LYS:HG3	48:B1:4:VAL:N	2.20	0.57
57:AA:1547:C:H2'	57:AA:1548:C:H6	1.70	0.57
35:BO:119:PRO:HB2	40:BT:68:TYR:CE2	2.40	0.57
57:BA:1916:A:H5'	57:BA:1917:U:OP2	2.05	0.57
38:BR:7:GLY:C	38:BR:8:ARG:NE	2.58	0.57
27:AD:25:THR:HG22	27:AD:26:LYS:HD2	1.87	0.56
28:AE:111:ARG:HD2	28:AE:160:TYR:CD1	2.39	0.56
31:AH:20:ALA:HB1	31:AH:21:PRO:HD3	1.87	0.56
32:AI:68:LEU:HD11	32:AI:130:TYR:HE2	1.70	0.56
32:AI:88:ILE:HG22	32:AI:89:TYR:N	2.20	0.56
34:AN:133:GLN:HG2	34:AN:134:ARG:N	2.14	0.56
35:AO:4:PRO:O	35:AO:5:GLN:CB	2.52	0.56
36:AP:59:LEU:CA	36:AP:61:ARG:NH1	2.56	0.56
40:AT:34:VAL:HG12	40:AT:35:LYS:N	2.19	0.56
41:AU:92:ARG:CZ	42:AV:11:GLN:H	2.18	0.56
42:AV:19:LYS:HB3	42:AV:94:LEU:O	2.05	0.56
57:BA:2206:G:N3	57:BA:2206:G:H3'	2.20	0.56
57:BA:332:A:O2'	57:BA:334:C:OP2	2.18	0.56
27:BD:10:THR:HG23	27:BD:13:ARG:HB3	1.86	0.56
27:BD:186:HIS:CD2	27:BD:188:GLU:H	2.23	0.56
28:BE:101:ARG:O	28:BE:201:THR:HG22	2.05	0.56
28:BE:61:ARG:HG3	57:BA:2787:C:H1'	1.86	0.56
29:BF:83:PHE:O	29:BF:85:GLY:N	2.38	0.56
30:BG:86:MET:HB3	30:BG:87:PRO:HD3	1.86	0.56
34:BN:28:THR:CG2	34:BN:29:LYS:N	2.67	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BT:65:LYS:HZ2	40:BT:65:LYS:HA	1.69	0.56
45:BY:87:LYS:HG3	45:BY:88:LYS:N	2.19	0.56
45:BY:95:LYS:NZ	45:BY:100:ALA:HB1	2.20	0.56
27:AD:222:ARG:HD3	57:AA:1828:G:O6	2.04	0.56
46:BZ:59:LEU:HG	46:BZ:69:THR:HG21	1.86	0.56
48:A1:51:VAL:HG22	48:A1:52:ARG:N	2.20	0.56
38:BR:100:LEU:N	38:BR:100:LEU:HD22	2.08	0.56
57:BA:528:A:C2	57:BA:2043:C:C4'	2.84	0.56
47:A0:43:THR:HG23	47:A0:43:THR:O	2.05	0.56
57:BA:648:G:O2'	57:BA:649:G:H5'	2.04	0.56
48:B1:89:GLU:HA	48:B1:92:LYS:HB3	1.85	0.56
57:AA:2232:U:O2'	57:AA:2233:U:H5'	2.05	0.56
28:BE:195:LEU:HD12	28:BE:196:VAL:H	1.70	0.56
57:BA:2077:A:H2'	57:BA:2078:C:H6	1.70	0.56
55:A8:50:LEU:CD1	55:A8:51:ALA:N	2.67	0.56
57:AA:2360:A:H5'	57:AA:2360:A:H8	1.69	0.56
57:AA:769:G:O2'	57:AA:770:G:H5'	2.05	0.56
26:AC:39:ASP:OD1	26:AC:178:LYS:HB3	2.04	0.56
28:AE:69:LYS:NZ	28:AE:90:THR:N	2.53	0.56
29:AF:25:PRO:HB3	29:AF:119:ARG:HB2	1.87	0.56
29:AF:74:ARG:HD3	57:AA:674:G:H1'	1.86	0.56
30:AG:72:ARG:HG3	30:AG:87:PRO:HD2	1.87	0.56
32:AI:77:LEU:HD23	32:AI:141:LYS:HG2	1.87	0.56
36:AP:101:VAL:HG23	36:AP:102:ARG:N	2.20	0.56
36:AP:7:ARG:O	36:AP:10:PRO:HD2	2.05	0.56
40:AT:106:SER:HA	40:AT:110:ILE:HG12	1.87	0.56
45:AY:27:VAL:HG12	45:AY:29:GLU:OE1	2.05	0.56
53:B6:48:VAL:HG23	53:B6:49:HIS:N	2.18	0.56
57:BA:1169:G:H1	57:BA:1180:C:H42	1.53	0.56
57:BA:1419:A:O2'	57:BA:1420:U:H5''	2.05	0.56
57:BA:544:G:C2	57:BA:547:A:H5'	2.40	0.56
28:BE:59:VAL:O	28:BE:60:ASN:CG	2.43	0.56
32:BI:109:ILE:HG22	32:BI:110:ASP:N	2.10	0.56
45:BY:4:LYS:HG3	45:BY:5:MET:N	2.19	0.56
31:BH:41:MET:HE2	31:BH:43:VAL:HG13	1.86	0.56
46:AZ:169:GLU:O	46:AZ:170:THR:C	2.42	0.56
31:AH:153:LYS:HD3	31:AH:153:LYS:N	2.04	0.56
57:AA:1541:G:H4'	57:AA:1542:A:C5'	2.34	0.56
57:AA:1541:G:H1'	57:AA:1542:A:C6	2.40	0.56
31:AH:155:SER:O	31:AH:157:TYR:N	2.38	0.56
29:BF:123:LEU:HD12	29:BF:124:LEU:N	2.16	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:AZ:40:ASP:OD1	46:AZ:42:VAL:HG12	2.04	0.56
57:AA:654(D):G:O6	57:AA:654(R):C:H1'	2.05	0.56
54:A7:8:ASN:HD22	54:A7:9:ARG:N	2.04	0.56
29:BF:161:GLU:O	29:BF:165:ARG:HG3	2.05	0.56
48:B1:50:ARG:NH2	57:BA:2200:C:OP2	2.37	0.56
28:AE:129:HIS:HA	57:AA:1675:C:O2	2.05	0.56
57:AA:2704:C:H2'	57:AA:2705:A:O4'	2.04	0.56
57:BA:2704:C:H2'	57:BA:2705:A:O4'	2.05	0.56
49:B2:64:LEU:HD11	49:B2:68:ARG:HH12	1.69	0.56
47:A0:23:VAL:HA	47:A0:38:VAL:CG2	2.32	0.56
57:AA:16:G:O2'	57:AA:17:G:H5'	2.05	0.56
57:AA:2052:G:H2'	57:AA:2053:G:H8	1.71	0.56
28:AE:101:ARG:O	28:AE:201:THR:HG22	2.04	0.56
28:AE:60:ASN:OD1	28:AE:61:ARG:HB3	2.05	0.56
29:AF:83:PHE:O	29:AF:85:GLY:N	2.38	0.56
29:AF:95:ARG:NH2	57:AA:1247:A:OP1	2.38	0.56
37:AQ:39:PRO:CD	37:AQ:99:PRO:HG3	2.32	0.56
39:AS:78:LEU:HD12	39:AS:103:GLU:OE1	2.05	0.56
57:BA:1049:C:H2'	57:BA:1050:A:H8	1.70	0.56
57:BA:1430:C:H2'	57:BA:1431:U:C6	2.40	0.56
57:BA:1485:G:H1'	57:BA:1505:C:N4	2.20	0.56
57:BA:607:U:H3	57:BA:621:A:H2	1.51	0.56
26:BC:11:LEU:HB3	26:BC:33:LEU:HD22	1.87	0.56
34:BN:39:ARG:CD	34:BN:41:ASP:HB2	2.35	0.56
38:BR:78:LYS:O	38:BR:83:ILE:HG12	2.05	0.56
43:BW:59:VAL:CG1	43:BW:60:ASN:N	2.68	0.56
45:BY:17:SER:OG	45:BY:71:LYS:HD2	2.04	0.56
47:A0:25:ARG:HA	47:A0:29:GLN:HE22	1.70	0.56
27:AD:30:GLU:HA	27:AD:83:GLU:OE1	2.04	0.56
28:AE:65:GLY:HA2	28:AE:70:ALA:CB	2.36	0.56
32:AI:88:ILE:CD1	32:AI:120:ILE:HG21	2.22	0.56
34:AN:58:ASP:O	34:AN:60:ILE:HG13	2.05	0.56
35:AO:98:VAL:HG22	35:AO:118:ALA:HA	1.87	0.56
36:AP:97:PRO:HA	36:AP:100:LEU:HD23	1.88	0.56
38:AR:58:GLY:HA2	38:AR:80:PHE:HE1	1.70	0.56
40:AT:2:ASN:O	40:AT:4:GLY:N	2.39	0.56
40:AT:3:ARG:C	40:AT:5:ALA:N	2.54	0.56
43:AW:29:LEU:HD21	43:AW:33:ARG:NH2	2.19	0.56
45:AY:17:SER:O	57:AA:310:A:OP1	2.22	0.56
45:AY:87:LYS:HG3	45:AY:88:LYS:N	2.20	0.56
51:B4:46:GLN:O	51:B4:47:GLN:HG2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:266:G:C8	57:BA:266:G:H5'	4.46	0.56
57:BA:626:U:H5'	57:BA:627:A:C5'	2.34	0.56
57:BA:970:C:H2'	57:BA:971:C:H6	1.70	0.56
58:BB:16:G:O2'	58:BB:17:C:H5'	2.06	0.56
30:BG:129:GLY:O	30:BG:130:ASN:HB2	2.05	0.56
30:BG:16:ARG:O	30:BG:20:ILE:HG12	2.05	0.56
32:BI:126:TYR:H	32:BI:140:LEU:HD22	1.69	0.56
34:BN:23:LEU:HB2	34:BN:60:ILE:HG21	1.88	0.56
36:BP:10:PRO:O	36:BP:11:GLY:C	2.43	0.56
36:BP:18:ARG:HH11	36:BP:18:ARG:C	2.07	0.56
38:BR:3:HIS:O	38:BR:4:LEU:HB3	2.06	0.56
39:BS:66:ALA:HA	39:BS:69:VAL:HG12	1.86	0.56
40:BT:65:LYS:HZ2	40:BT:65:LYS:CA	2.18	0.56
47:A0:48:GLY:H	47:A0:51:VAL:HB	1.69	0.56
47:B0:70:GLN:NE2	47:B0:80:HIS:NE2	2.53	0.56
52:A5:51:TYR:CZ	52:A5:52:TYR:HB2	2.39	0.56
37:BQ:108:GLY:HA3	46:BZ:116:VAL:HG11	1.86	0.56
46:BZ:155:LEU:N	46:BZ:155:LEU:HD23	2.19	0.56
57:AA:1947:C:H2'	57:AA:1948:G:H5''	1.87	0.56
38:BR:113:LEU:O	38:BR:113:LEU:HD23	2.04	0.56
29:BF:157:VAL:HA	29:BF:176:LEU:O	2.05	0.56
29:AF:157:VAL:HA	29:AF:176:LEU:O	2.05	0.56
26:AC:206:LYS:HB2	57:AA:1860:G:O3'	2.06	0.56
36:AP:88:LEU:C	36:AP:90:ARG:N	2.59	0.56
36:BP:85:LEU:N	36:BP:85:LEU:HD23	2.18	0.56
57:BA:2307:G:H5''	57:BA:2307:G:N3	2.20	0.56
57:BA:1887:C:H3'	57:BA:1888:G:H5''	1.87	0.56
29:BF:160:ASN:HD22	29:BF:160:ASN:C	2.07	0.56
57:BA:914:C:C2'	57:BA:915:C:H5'	2.33	0.56
57:BA:1678:G:N2	57:BA:1989:G:N2	2.53	0.56
29:AF:164:ARG:NH1	29:AF:164:ARG:HG2	2.20	0.56
57:BA:654(D):G:O6	57:BA:654(R):C:H1'	2.05	0.56
49:B2:27:GLU:O	49:B2:30:ARG:HG2	2.06	0.56
57:BA:848:G:H2'	57:BA:849:A:C8	2.39	0.56
57:AA:2199:A:H3'	57:AA:2200:C:C6	2.40	0.56
51:A4:46:GLN:O	51:A4:47:GLN:HG2	2.05	0.56
57:BA:1722:A:O2'	57:BA:1739:U:H5'	2.06	0.56
57:AA:1532:C:C2'	57:AA:1533:G:H5'	2.35	0.56
57:AA:2223:G:H2'	57:AA:2224:G:H5'	1.86	0.56
28:BE:108:SER:HB3	28:BE:165:VAL:HG21	1.87	0.56
57:AA:2025:C:H2'	57:AA:2026:C:H6	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2661:G:H2'	57:AA:2662:A:C8	2.40	0.56
57:BA:1264:G:H3'	57:BA:1265:A:H5''	1.86	0.56
36:AP:122:PRO:HA	36:AP:141:ALA:O	2.05	0.56
51:A4:12:ALA:HA	51:A4:29:PRO:HG3	1.87	0.56
57:AA:1038:C:H2'	57:AA:1039:G:H5''	1.87	0.56
57:AA:621:A:C2'	57:AA:622:G:H5'	2.35	0.56
44:AX:31:HIS:HE1	57:AA:71:A:H2	1.54	0.56
57:AA:740:U:H2'	57:AA:741:G:C8	2.40	0.56
27:AD:186:HIS:CD2	27:AD:188:GLU:H	2.24	0.56
29:AF:65:TRP:HZ3	29:AF:73:ALA:O	1.87	0.56
29:AF:67:GLN:HG3	29:AF:67:GLN:O	2.04	0.56
32:AI:118:LYS:NZ	32:AI:119:PRO:O	2.39	0.56
36:AP:101:VAL:CG2	36:AP:102:ARG:N	2.68	0.56
37:AQ:43:THR:HG1	37:AQ:46:GLN:HG3	1.70	0.56
39:AS:25:ARG:CG	39:AS:88:ASP:HB2	2.35	0.56
41:AU:95:LEU:HD13	42:AV:4:ILE:HG23	1.85	0.56
44:AX:27:THR:HB	44:AX:80:ILE:HB	1.86	0.56
45:AY:4:LYS:HG3	45:AY:5:MET:N	2.19	0.56
53:B6:12:GLU:HG2	53:B6:23:THR:HG22	1.88	0.56
57:BA:2732:G:H3'	57:BA:2733:A:C5'	2.36	0.56
57:BA:709:U:H2'	57:BA:710:G:C8	2.39	0.56
58:BB:81:G:H2'	58:BB:82:G:H5'	1.87	0.56
26:BC:194:ILE:O	26:BC:198:GLU:HG3	2.05	0.56
27:BD:165:ILE:HD13	27:BD:175:LEU:CD2	2.35	0.56
28:BE:199:ARG:NH1	28:BE:199:ARG:HB2	2.20	0.56
28:BE:87:GLU:OE1	28:BE:88:GLY:N	2.39	0.56
34:BN:43:THR:HB	34:BN:46:VAL:HG12	1.86	0.56
36:BP:32:THR:O	36:BP:33:ARG:HB3	2.04	0.56
27:AD:239:ARG:O	57:AA:1971:A:H2	1.88	0.56
57:AA:1885:A:H2'	57:AA:1886:C:O4'	2.05	0.56
52:A5:3:LYS:HZ1	57:AA:2614:A:H5'	1.70	0.56
31:BH:20:ALA:HB1	31:BH:21:PRO:HD3	1.87	0.56
47:B0:48:GLY:H	47:B0:51:VAL:HB	1.71	0.56
38:AR:101:ALA:O	38:AR:102:GLU:HB2	2.04	0.56
57:BA:1464:C:O2'	57:BA:1528:A:H8	1.86	0.56
50:A3:40:THR:HG23	50:A3:43:ILE:HB	1.87	0.56
46:AZ:19:ARG:HH12	46:AZ:84:GLU:HA	1.70	0.56
35:BO:22:ILE:HD12	57:BA:1952:A:C6	2.40	0.56
57:BA:1582:C:H2'	57:BA:1583:A:H8	1.69	0.56
49:B2:36:ARG:HG3	49:B2:36:ARG:HH11	1.71	0.56
31:BH:62:LYS:HB3	57:BA:2749:A:H4'	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:65:C:O2'	57:AA:66:C:H5'	2.05	0.56
57:AA:1015:G:H5'	57:AA:1015:G:C8	2.36	0.56
57:AA:1022:G:N2	57:AA:1142(A):A:C2	2.64	0.56
58:AB:70:C:H2'	58:AB:71:C:H6	1.70	0.56
46:AZ:79:ARG:HH22	58:AB:92:C:H5''	1.71	0.56
26:AC:21:TYR:HB2	26:AC:225:ILE:HG23	1.88	0.56
27:AD:34:VAL:HG23	27:AD:35:LYS:N	2.10	0.56
30:AG:63:ILE:HG21	30:AG:141:PHE:HB3	1.87	0.56
32:AI:62:LYS:HE3	32:AI:133:HIS:O	2.05	0.56
37:AQ:39:PRO:HD3	37:AQ:99:PRO:CG	2.33	0.56
38:AR:2:ARG:N	38:AR:2:ARG:HD2	2.20	0.56
40:AT:28:VAL:O	40:AT:29:ARG:CB	2.53	0.56
41:AU:102:GLU:HG3	42:AV:2:PHE:CE1	2.39	0.56
57:BA:1205:U:H4'	57:BA:1206:G:OP2	2.06	0.56
27:BD:165:ILE:HD13	27:BD:175:LEU:HD21	1.87	0.56
27:BD:211:ARG:O	27:BD:215:LEU:HG	2.05	0.56
30:BG:20:ILE:HG22	30:BG:25:TYR:HB2	1.87	0.56
36:BP:23:PRO:HG2	36:BP:33:ARG:NE	2.21	0.56
39:BS:89:ARG:CG	39:BS:92:TYR:HA	2.35	0.56
40:BT:129:ARG:NH2	40:BT:131:ALA:HB2	2.21	0.56
41:BU:53:ARG:NH1	57:BA:535:C:O3'	2.37	0.56
41:BU:92:ARG:HH21	42:BV:10:LYS:HG2	1.71	0.56
45:BY:42:VAL:CG1	45:BY:65:ALA:HB3	2.30	0.56
57:BA:2492:U:O2'	57:BA:2493:U:H5'	2.06	0.56
27:AD:245:PRO:O	27:AD:246:PRO:C	2.44	0.56
46:AZ:99:TYR:HA	46:AZ:124:ILE:O	2.05	0.56
52:A5:55:ARG:O	52:A5:56:LYS:HB2	2.05	0.56
46:BZ:151:HIS:CD2	46:BZ:151:HIS:N	2.74	0.56
57:BA:2681:C:C5	57:BA:2725:A:N6	2.65	0.56
52:B5:51:TYR:CE2	52:B5:52:TYR:HB2	2.41	0.56
29:BF:157:VAL:HG22	29:BF:194:MET:HA	1.87	0.56
29:BF:176:LEU:HD12	29:BF:177:ALA:H	1.69	0.56
57:AA:1542:A:C8	57:AA:1542:A:C3'	2.88	0.56
57:BA:1542:A:C3'	57:BA:1542:A:C8	2.89	0.56
57:AA:2189:U:H2'	57:AA:2190:G:H5''	1.87	0.56
57:BA:158:U:H3'	57:BA:158:U:O2	2.06	0.56
37:AQ:58:PHE:O	37:AQ:58:PHE:HD1	1.88	0.56
35:BO:4:PRO:O	35:BO:5:GLN:CB	2.54	0.56
57:AA:992:C:O2'	57:AA:993:G:H5'	2.06	0.56
34:BN:76:SER:C	34:BN:78:TYR:H	2.08	0.56
37:AQ:109:VAL:HG12	37:AQ:113:GLN:CB	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2555:U:H2'	57:AA:2556:C:H5'	1.85	0.56
53:A6:12:GLU:HG2	53:A6:23:THR:HG22	1.88	0.56
55:A8:30:ARG:NH1	57:AA:2419:U:O4	2.38	0.56
26:AC:7:ARG:HD3	57:AA:2128:C:H5'	1.88	0.56
57:AA:613:G:H8	57:AA:613:G:C5'	2.17	0.56
57:AA:712:G:O2'	57:AA:713:G:H5'	2.05	0.56
30:AG:67:LYS:HZ2	58:AB:42:C:H4'	1.71	0.56
28:AE:199:ARG:HB2	28:AE:199:ARG:NH1	2.21	0.56
28:AE:5:LEU:HB2	28:AE:51:PHE:CD2	2.36	0.56
28:AE:59:VAL:O	28:AE:60:ASN:CG	2.44	0.56
30:AG:45:GLU:H	30:AG:88:ILE:CG2	2.16	0.56
32:AI:69:LYS:HG2	32:AI:73:GLU:OE2	2.05	0.56
35:AO:64:ARG:HG2	35:AO:79:PHE:CD1	2.40	0.56
36:AP:100:LEU:HD22	36:AP:100:LEU:H	1.71	0.56
40:AT:63:VAL:O	40:AT:73:GLU:HA	2.05	0.56
27:BD:100:GLY:HA2	57:BA:1501:C:H1'	1.87	0.56
26:BC:6:LYS:HB2	57:BA:2132:U:C4	2.40	0.56
57:BA:2415:G:H2'	57:BA:2416:C:C6	2.40	0.56
27:BD:109:ASP:HB2	27:BD:197:GLY:HA2	1.88	0.56
27:BD:210:GLY:O	27:BD:211:ARG:CB	2.51	0.56
27:BD:39:LYS:HB2	27:BD:62:TYR:HB2	1.87	0.56
30:BG:109:VAL:O	30:BG:110:ALA:C	2.44	0.56
32:BI:68:LEU:CG	32:BI:72:LEU:HD11	2.35	0.56
36:BP:21:ARG:O	36:BP:23:PRO:HD3	2.05	0.56
36:BP:59:LEU:CA	36:BP:61:ARG:NH1	2.56	0.56
42:BV:39:LEU:HD12	42:BV:51:VAL:HA	1.87	0.56
46:BZ:23:LYS:NZ	46:BZ:40:ASP:HA	2.21	0.56
57:AA:1882:C:H5'	57:AA:1883:G:OP2	2.06	0.56
46:BZ:103:ARG:NH1	46:BZ:136:PHE:HB3	2.20	0.56
46:BZ:169:GLU:O	46:BZ:170:THR:C	2.44	0.56
38:AR:118:GLU:OE1	38:AR:118:GLU:HA	2.06	0.56
34:AN:76:SER:C	34:AN:78:TYR:H	2.09	0.56
57:BA:2183:C:O2'	57:BA:2184:G:H5'	2.05	0.56
31:BH:24:VAL:HG13	31:BH:35:VAL:HB	1.87	0.56
51:A4:39:CYS:O	51:A4:40:HIS:CD2	2.58	0.56
57:AA:1796:U:H2'	57:AA:1797:C:C6	2.41	0.56
57:AA:2648:C:H2'	57:AA:2649:U:C6	2.40	0.56
57:AA:2455:G:H2'	57:AA:2456:C:C6	2.41	0.56
57:AA:1523:U:H2'	57:AA:1524:G:H8	1.71	0.56
30:AG:45:GLU:H	30:AG:88:ILE:CG1	2.18	0.56
31:AH:41:MET:HE2	31:AH:43:VAL:CG1	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:AS:89:ARG:CG	39:AS:92:TYR:HA	2.36	0.56
41:AU:90:VAL:CG1	41:AU:91:ASP:H	2.13	0.56
42:AV:38:LEU:O	42:AV:39:LEU:HD13	2.05	0.56
43:AW:73:ALA:HB3	43:AW:106:ILE:HD11	1.88	0.56
45:AY:31:LEU:HB2	45:AY:32:PRO:CA	2.36	0.56
51:B4:12:ALA:HA	51:B4:29:PRO:HG3	1.87	0.56
57:BA:2394:C:H2'	57:BA:2395:C:H6	1.70	0.56
57:BA:2845:G:O2'	57:BA:2846:G:H5'	2.06	0.56
41:BU:92:ARG:HE	57:BA:996:A:H4'	1.68	0.56
58:BB:95:C:O2'	58:BB:96:U:H5'	2.05	0.56
28:BE:116:VAL:HG21	28:BE:122:PHE:CD2	2.41	0.56
36:BP:146:VAL:O	36:BP:148:LEU:HG	2.06	0.56
36:BP:46:LYS:HG2	36:BP:52:GLU:CD	2.26	0.56
39:BS:58:LEU:HD12	39:BS:59:LYS:H	1.71	0.56
43:BW:75:TYR:CE2	43:BW:104:THR:HB	2.41	0.56
45:BY:76:CYS:HG	45:BY:77:PRO:HD2	1.68	0.56
52:A5:46:CYS:SG	52:A5:47:PRO:CD	2.94	0.56
57:AA:523:C:O2'	57:AA:524:U:H5'	2.06	0.56
39:BS:42:ASP:O	39:BS:43:GLU:HB2	2.04	0.56
57:BA:2189:U:H2'	57:BA:2190:G:H5''	1.88	0.56
38:BR:118:GLU:HA	38:BR:118:GLU:OE1	2.06	0.56
35:AO:111:PHE:HB3	35:AO:114:ILE:HD13	1.88	0.56
46:AZ:74:VAL:HG12	46:AZ:86:VAL:HG12	1.87	0.56
27:AD:264:LYS:HG2	27:AD:266:SER:H	1.70	0.56
29:AF:150:GLY:HA2	29:AF:172:TRP:CD2	2.40	0.56
57:AA:1021:A:N6	57:AA:1141:U:H3	1.95	0.56
57:AA:1485:G:H8	57:AA:1485:G:H5'	1.71	0.56
57:AA:2307:G:H5''	57:AA:2307:G:N3	2.21	0.56
57:AA:2376:A:H2'	57:AA:2377:A:O4'	2.05	0.56
57:AA:588:U:H2'	57:AA:589:C:C6	2.40	0.56
57:AA:710:G:H2'	57:AA:711:G:H8	2.09	0.56
28:AE:118:LYS:H	28:AE:121:ASN:H	1.54	0.56
28:AE:59:VAL:HG23	28:AE:62:PRO:HG2	1.88	0.56
31:AH:70:THR:O	31:AH:72:ILE:N	2.39	0.56
32:AI:77:LEU:CD2	32:AI:141:LYS:HG2	2.36	0.56
34:AN:39:ARG:HH11	34:AN:39:ARG:HG2	1.71	0.56
40:AT:35:LYS:HZ3	40:AT:41:ARG:HH21	1.53	0.56
42:AV:39:LEU:O	42:AV:40:LEU:HB2	2.05	0.56
53:B6:8:LYS:HA	53:B6:27:LYS:HA	1.88	0.56
57:BA:1038:C:H3'	57:BA:1039:G:C5'	2.35	0.56
28:BE:69:LYS:HZ2	28:BE:89:ASP:HA	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:40:GLN:HE21	29:BF:184:TYR:HB2	1.68	0.56
35:BO:97:ARG:HA	35:BO:117:LEU:CD2	2.34	0.56
36:BP:102:ARG:HH21	36:BP:102:ARG:CB	2.19	0.56
36:BP:111:ARG:HH21	36:BP:111:ARG:HG3	1.69	0.56
36:BP:64:LYS:O	36:BP:66:GLY:N	2.37	0.56
44:BX:64:LYS:HZ2	44:BX:73:ARG:HH21	1.53	0.56
45:BY:36:ALA:HB1	45:BY:67:LEU:O	2.06	0.56
57:BA:1589:C:H2'	57:BA:1590:U:C6	2.41	0.56
57:AA:1528:A:N3	57:AA:1528:A:H2'	2.21	0.56
41:BU:44:ASN:HD21	42:BV:75:PHE:HB3	1.68	0.56
46:BZ:138:GLU:HA	46:BZ:138:GLU:OE2	2.05	0.56
57:AA:1169:G:H1	57:AA:1180:C:H42	1.52	0.56
57:AA:1354:A:H2'	57:AA:1355:G:O4'	2.06	0.56
57:AA:1494:A:N3	57:AA:1494:A:H3'	2.21	0.56
36:AP:15:ARG:HH11	57:AA:597:U:H4'	1.71	0.56
58:AB:11:C:OP2	58:AB:12:C:C5	2.58	0.56
58:AB:88:C:O2	58:AB:88:C:H2'	2.06	0.56
28:AE:44:TYR:O	28:AE:45:THR:HB	2.04	0.56
38:AR:63:ARG:O	38:AR:67:LEU:HB2	2.06	0.56
40:AT:91:ARG:O	40:AT:117:ASP:HB2	2.06	0.56
45:AY:42:VAL:CG1	45:AY:65:ALA:HB3	2.29	0.56
57:BA:1221:C:H2'	57:BA:1221(A):C:C6	2.41	0.56
26:BC:219:MET:O	57:BA:2175:C:H4'	2.05	0.56
26:BC:21:TYR:HB2	26:BC:225:ILE:HG23	1.87	0.56
27:BD:17:THR:HG23	27:BD:205:VAL:HB	1.88	0.56
27:BD:24:ILE:HD13	27:BD:25:THR:N	2.14	0.56
29:BF:28:ILE:CD1	29:BF:28:ILE:H	2.19	0.56
37:BQ:16:ARG:HG2	37:BQ:17:LEU:H	1.71	0.56
45:BY:43:ASN:HB3	45:BY:62:GLU:OE1	2.06	0.56
31:BH:19:VAL:HG21	31:BH:43:VAL:O	2.06	0.56
42:BV:21:ARG:NH1	42:BV:91:TYR:CE2	2.73	0.56
52:B5:40:LYS:HE2	52:B5:46:CYS:HB3	1.83	0.56
57:BA:2777:G:H5''	57:BA:2778:A:H5''	1.88	0.56
57:AA:817:C:H1'	57:AA:819:A:H5'	11.51	0.56
57:BA:2464:C:O2'	57:BA:2465:C:H6	1.88	0.56
57:BA:635:C:O2'	57:BA:639:U:OP1	2.24	0.56
44:AX:60:ARG:HE	54:A7:47:ARG:NH1	2.03	0.56
57:AA:2464:C:O2'	57:AA:2465:C:H6	1.89	0.56
57:AA:2074:U:H2'	57:AA:2075:U:C6	2.41	0.56
57:AA:1972:A:H2'	57:AA:1973:G:C8	2.41	0.56
27:AD:95:LEU:O	27:AD:95:LEU:HD12	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2657:A:H2'	57:AA:2658:C:H5'	1.87	0.56
32:AI:54:GLN:HA	32:AI:57:ARG:HB3	1.88	0.56
57:AA:2062:A:C4	57:AA:2062:A:H5''	2.41	0.56
49:B2:10:LEU:HB3	49:B2:14:ARG:NH1	2.21	0.56
26:AC:6:LYS:HB2	57:AA:2132:U:C4	2.40	0.56
57:AA:2206:G:H3'	57:AA:2206:G:N3	2.21	0.56
36:AP:33:ARG:HH12	57:AA:587:C:H3'	1.70	0.56
27:AD:154:LYS:C	27:AD:155:LEU:HD12	2.27	0.56
29:AF:28:ILE:CG2	29:AF:116:ASP:HB2	2.32	0.56
31:AH:41:MET:HG3	31:AH:42:ARG:H	1.69	0.56
31:AH:68:THR:C	31:AH:70:THR:H	2.09	0.56
33:AJ:62:ALA:HA	33:AJ:65:GLU:CB	2.35	0.56
35:AO:104:ARG:HB3	35:AO:104:ARG:CZ	2.36	0.56
36:AP:101:VAL:CG1	36:AP:106:LEU:HD23	2.34	0.56
36:AP:38:GLN:CD	57:AA:943:U:OP2	2.45	0.56
39:AS:58:LEU:HD12	39:AS:59:LYS:H	1.71	0.56
40:AT:28:VAL:HG11	40:AT:46:GLU:CD	2.25	0.56
45:AY:49:VAL:HG12	45:AY:50:ARG:N	2.20	0.56
47:B0:27:GLU:OE1	57:BA:856:C:O2'	2.22	0.56
53:B6:15:GLU:CD	53:B6:44:ARG:NH1	2.58	0.56
57:BA:107:C:H2'	57:BA:108:U:H6	1.70	0.56
57:BA:922:U:H2'	57:BA:923:C:C6	2.40	0.56
28:BE:110:GLY:O	38:BR:2:ARG:HG2	2.06	0.56
28:BE:65:GLY:HA2	28:BE:70:ALA:CB	2.36	0.56
28:BE:69:LYS:NZ	28:BE:90:THR:N	2.54	0.56
29:BF:4:VAL:HG11	29:BF:17:ARG:HD3	1.88	0.56
30:BG:173:LEU:O	30:BG:178:PHE:CD1	2.59	0.56
39:BS:93:LYS:O	39:BS:93:LYS:HG3	2.05	0.56
27:BD:246:PRO:HD3	57:BA:1902:C:H5''	1.87	0.56
48:A1:58:ILE:HG13	48:A1:58:ILE:O	2.04	0.56
57:BA:1271:G:H5'	57:BA:1314:C:H5''	27.84	0.56
46:AZ:42:VAL:HG13	46:AZ:43:GLU:OE1	2.04	0.56
57:AA:654(S):G:H2'	57:AA:654(S):G:N3	2.21	0.56
54:A7:35:ARG:HD3	57:AA:54:G:O2'	2.06	0.56
57:AA:532:A:OP2	57:AA:532:A:O4'	5.20	0.56
57:AA:2771:C:H2'	57:AA:2771:C:O2	2.06	0.56
57:AA:1264:G:H3'	57:AA:1265:A:H5''	1.86	0.56
41:AU:16:LYS:O	41:AU:20:LEU:HD23	2.05	0.56
57:AA:2029:G:H2'	57:AA:2031:A:OP1	2.05	0.56
26:AC:38:PHE:CD2	57:AA:2126:A:H5'	2.40	0.55
31:AH:144:VAL:O	31:AH:148:ILE:HG12	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AN:120:LEU:HD23	34:AN:121:LYS:N	2.21	0.55
34:AN:1:MET:C	34:AN:2:LYS:HG3	2.26	0.55
36:AP:23:PRO:HD2	36:AP:33:ARG:NH1	2.21	0.55
37:AQ:21:THR:O	37:AQ:21:THR:HG22	2.06	0.55
43:AW:75:TYR:CE2	43:AW:104:THR:HB	2.41	0.55
57:BA:1319:G:O2'	57:BA:1320:C:H5'	2.05	0.55
40:BT:54:ARG:HB2	57:BA:2846:G:OP2	2.06	0.55
41:BU:49:HIS:CD2	57:BA:534:U:O2'	2.59	0.55
26:BC:7:ARG:HD3	57:BA:2128:C:H5'	1.86	0.55
28:BE:132:HIS:CE1	57:BA:1658:C:OP1	2.59	0.55
30:BG:122:PRO:O	30:BG:124:SER:N	2.39	0.55
32:BI:91:SER:OG	32:BI:92:VAL:N	2.38	0.55
40:BT:106:SER:HA	40:BT:110:ILE:HG12	1.87	0.55
40:BT:3:ARG:CD	57:BA:2876:G:H4'	2.36	0.55
42:BV:38:LEU:C	42:BV:38:LEU:HD23	2.26	0.55
44:BX:27:THR:HB	44:BX:80:ILE:HB	1.87	0.55
30:AG:160:VAL:CG1	30:AG:161:THR:N	2.68	0.55
46:BZ:169:GLU:O	46:BZ:169:GLU:HG3	2.06	0.55
34:BN:15:LEU:O	34:BN:136:GLU:HA	2.06	0.55
46:BZ:175:VAL:HB	46:BZ:176:PRO:CD	2.31	0.55
29:BF:124:LEU:O	29:BF:193:VAL:HA	2.06	0.55
54:A7:34:ARG:NH1	54:A7:39:ARG:CG	2.69	0.55
35:AO:120:GLU:HG2	35:AO:122:LEU:HD21	1.86	0.55
57:BA:1667:G:H22	57:BA:1992:G:H5'	1.71	0.55
57:BA:847:U:H2'	57:BA:848:G:H5''	1.87	0.55
57:BA:848:G:H5'	57:BA:848:G:C8	2.38	0.55
57:BA:654(S):G:H2'	57:BA:654(S):G:N3	2.21	0.55
46:AZ:24:LEU:HD23	46:AZ:25:PRO:O	2.05	0.55
57:BA:2199:A:H3'	57:BA:2200:C:C6	2.40	0.55
57:BA:421:U:H2'	57:BA:421:U:O2	3.74	0.55
57:AA:1935:G:H1'	57:AA:1964:G:N2	2.21	0.55
57:AA:2320:A:H2'	57:AA:2320:A:N3	2.21	0.55
27:BD:218:ARG:HB3	27:BD:219:PRO:HD2	1.88	0.55
47:B0:56:ASP:O	47:B0:57:PHE:HB2	2.05	0.55
57:AA:1049:C:N4	57:AA:1111:A:C2	2.74	0.55
57:AA:1205:U:H4'	57:AA:1206:G:OP2	2.06	0.55
57:AA:847:U:H2'	57:AA:848:G:H5''	1.87	0.55
57:AA:935:C:H2'	57:AA:936:C:H6	1.70	0.55
58:AB:40:U:H3'	58:AB:41:U:H5''	1.87	0.55
28:AE:142:GLY:HA3	57:AA:2052:G:O4'	2.06	0.55
28:AE:87:GLU:OE1	28:AE:88:GLY:N	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AF:89:VAL:HG12	29:AF:90:PHE:N	2.22	0.55
31:AH:137:ASP:O	31:AH:138:LYS:HB2	2.06	0.55
31:AH:9:ILE:C	31:AH:9:ILE:HD13	2.26	0.55
36:AP:102:ARG:NH2	36:AP:102:ARG:HB3	2.21	0.55
37:AQ:35:VAL:HG11	37:AQ:130:LYS:CE	2.36	0.55
45:AY:2:ARG:O	45:AY:4:LYS:N	2.34	0.55
53:B6:15:GLU:OE1	53:B6:44:ARG:NH1	2.35	0.55
53:B6:38:LYS:HD3	57:BA:2344:U:OP1	2.06	0.55
57:BA:2052:G:H2'	57:BA:2053:G:H8	1.71	0.55
38:BR:5:LYS:HB2	57:BA:2722:G:O2'	2.05	0.55
58:BB:40:U:H3'	58:BB:41:U:H5''	1.87	0.55
27:BD:106:ILE:CG2	27:BD:106:ILE:O	2.54	0.55
29:BF:89:VAL:HG12	29:BF:90:PHE:N	2.21	0.55
31:BH:137:ASP:O	31:BH:138:LYS:HB2	2.05	0.55
32:BI:88:ILE:CG1	32:BI:142:VAL:HG13	2.37	0.55
35:BO:98:VAL:HG22	35:BO:118:ALA:HA	1.87	0.55
39:BS:88:ASP:CG	39:BS:89:ARG:N	2.58	0.55
45:BY:96:ILE:CG2	45:BY:99:CYS:HB3	2.36	0.55
46:BZ:23:LYS:HB3	46:BZ:38:TYR:HD1	1.71	0.55
46:AZ:150:LEU:HG	46:AZ:171:ILE:CD1	2.36	0.55
48:A1:51:VAL:O	48:A1:57:GLU:O	2.24	0.55
54:A7:12:ARG:NH2	54:A7:44:PRO:HB3	2.22	0.55
50:A3:8:LEU:HD12	50:A3:30:ARG:O	2.07	0.55
47:A0:12:ASN:HD22	47:A0:12:ASN:N	2.04	0.55
57:AA:1887:C:H3'	57:AA:1888:G:H5''	1.86	0.55
57:AA:2697:G:H2'	57:AA:2698:U:O4'	2.06	0.55
41:AU:49:HIS:CD2	57:AA:534:U:O2'	2.59	0.55
57:AA:1722:A:O2'	57:AA:1739:U:H5'	2.06	0.55
57:BA:2881:C:H2'	57:BA:2882:A:C8	2.41	0.55
46:BZ:138:GLU:HB2	46:BZ:156:LYS:HB3	1.88	0.55
57:BA:2322:A:H2'	57:BA:2323:G:O4'	2.06	0.55
47:B0:19:LYS:HD3	47:B0:41:ARG:NH2	2.21	0.55
27:BD:264:LYS:HG2	27:BD:266:SER:H	1.71	0.55
53:A6:8:LYS:HA	53:A6:27:LYS:HA	1.88	0.55
57:AA:1001:A:H2'	57:AA:1002:G:O4'	2.07	0.55
57:AA:673:C:H5'	57:AA:673:C:C6	2.29	0.55
58:AB:95:C:O2'	58:AB:96:U:H5'	2.07	0.55
28:AE:185:LYS:O	28:AE:186:GLY:O	2.24	0.55
32:AI:74:ASN:N	32:AI:74:ASN:ND2	2.41	0.55
39:AS:49:VAL:HG12	39:AS:50:SER:N	2.21	0.55
45:AY:95:LYS:NZ	45:AY:100:ALA:HB1	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:AY:3:VAL:H	45:AY:5:MET:HE2	1.70	0.55
49:B2:45:SER:H	49:B2:46:GLN:NE2	2.05	0.55
55:B8:56:GLU:O	55:B8:58:ILE:N	2.39	0.55
36:BP:50:ARG:HD3	55:B8:7:HIS:HD2	1.71	0.55
57:BA:99:U:H4'	57:BA:102:G:H1'	1.87	0.55
57:BA:1204:A:N1	57:BA:1241:A:H2	2.04	0.55
57:BA:1503:U:O2'	57:BA:1504:C:H5'	2.07	0.55
55:B8:30:ARG:O	57:BA:2420:C:N4	2.39	0.55
55:B8:34:TRP:HB2	57:BA:2420:C:OP1	2.06	0.55
57:BA:908:C:O2'	57:BA:909:A:H5'	2.06	0.55
27:BD:35:LYS:HA	27:BD:64:ILE:HG22	1.88	0.55
27:BD:80:ALA:HB3	27:BD:94:LEU:HD13	1.87	0.55
35:BO:104:ARG:HB3	35:BO:104:ARG:CZ	2.37	0.55
36:BP:7:ARG:CB	36:BP:7:ARG:NH1	2.69	0.55
40:BT:97:ALA:O	40:BT:99:LEU:HG	3.85	0.55
53:A6:43:CYS:O	53:A6:44:ARG:HB2	2.06	0.55
46:AZ:56:VAL:HG22	46:AZ:70:LEU:HG	1.88	0.55
47:B0:12:ASN:N	47:B0:12:ASN:HD22	2.03	0.55
36:BP:88:LEU:C	36:BP:90:ARG:N	2.57	0.55
48:B1:45:ASN:HD21	48:B1:47:GLN:HE21	1.55	0.55
37:BQ:60:ARG:HA	46:BZ:178:GLU:O	2.06	0.55
37:BQ:60:ARG:HH11	37:BQ:60:ARG:HB2	1.70	0.55
56:B9:6:SER:HB2	57:BA:2466:C:H5''	1.88	0.55
56:B9:19:ARG:HA	57:BA:2757:A:OP1	2.06	0.55
57:AA:2469:A:C5	57:AA:2470:G:H1'	2.42	0.55
57:AA:947:G:H2'	57:AA:948:G:C8	2.41	0.55
57:BA:2657:A:H2'	57:BA:2658:C:H5'	1.88	0.55
57:BA:2025:C:H2'	57:BA:2026:C:C6	2.41	0.55
57:AA:1316:U:H2'	57:AA:1317:A:C8	2.41	0.55
57:AA:251:A:C5	57:AA:252:G:H1'	2.42	0.55
31:AH:24:VAL:HG13	31:AH:35:VAL:HB	1.86	0.55
31:AH:41:MET:HG2	31:AH:43:VAL:HG13	1.87	0.55
32:AI:132:PRO:HG2	32:AI:133:HIS:ND1	2.22	0.55
39:AS:89:ARG:O	39:AS:90:GLY:O	2.24	0.55
43:AW:1:MET:CE	43:AW:2:GLU:H	2.19	0.55
53:B6:25:LYS:HE3	57:BA:2284:C:H41	1.71	0.55
57:BA:1038:C:C2'	57:BA:1039:G:H5''	2.36	0.55
28:BE:77:ILE:HG22	28:BE:78:LEU:CD1	2.37	0.55
29:BF:65:TRP:CZ3	29:BF:75:HIS:HD2	2.24	0.55
32:BI:76:THR:OG1	32:BI:77:LEU:N	2.39	0.55
38:BR:63:ARG:O	38:BR:67:LEU:HB2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BS:25:ARG:CG	39:BS:88:ASP:HB2	2.37	0.55
40:BT:28:VAL:HG11	40:BT:46:GLU:CD	2.26	0.55
31:BH:80:SER:O	31:BH:81:GLU:HB2	2.07	0.55
42:AV:25:LEU:H	42:AV:92:THR:HG21	1.71	0.55
50:A3:6:VAL:HG12	50:A3:56:VAL:HG22	1.88	0.55
57:BA:203:C:C3'	57:BA:204:A:H5''	2.33	0.55
57:AA:2777:G:H5''	57:AA:2778:A:H5''	1.89	0.55
57:AA:2866:U:H2'	57:AA:2866:U:O2	2.05	0.55
57:BA:2463:C:O2'	57:BA:2464:C:H5'	2.07	0.55
57:AA:648:G:O2'	57:AA:649:G:H5'	2.06	0.55
57:AA:1713:U:O2'	57:AA:1714:G:H5'	2.06	0.55
48:A1:14:VAL:O	48:A1:15:ALA:HB2	2.06	0.55
57:AA:1750:G:O2'	57:AA:1751:C:H5'	2.06	0.55
57:AA:2322:A:H2'	57:AA:2323:G:O4'	2.06	0.55
51:A4:2:LYS:HB2	58:AB:40:U:O4	2.06	0.55
57:AA:1014:U:H2'	57:AA:1015:G:C5'	2.36	0.55
57:AA:2314:C:O2'	57:AA:2315:G:H5'	2.06	0.55
57:AA:330:A:O2'	57:AA:331:A:C8	2.56	0.55
57:AA:487:C:H2'	57:AA:488:G:H8	1.72	0.55
30:AG:27:ASN:HD21	58:AB:55:U:C4'	2.19	0.55
32:AI:109:ILE:HG22	32:AI:110:ASP:N	2.15	0.55
32:AI:34:GLY:O	32:AI:35:LEU:HD23	2.07	0.55
32:AI:84:GLY:HA3	32:AI:89:TYR:CZ	2.41	0.55
34:AN:39:ARG:CD	34:AN:41:ASP:HB2	2.36	0.55
57:BA:625:G:H2'	57:BA:626:U:H6	1.96	0.55
57:BA:817:C:H1'	57:BA:819:A:H5'	11.45	0.55
57:BA:860:U:C5	57:BA:917:A:N7	2.74	0.55
26:BC:166:ASN:HB3	26:BC:172:ILE:HB	1.87	0.55
27:BD:182:LEU:H	27:BD:272:ALA:HB3	1.70	0.55
28:BE:120:TRP:O	28:BE:121:ASN:HB2	2.05	0.55
28:BE:75:VAL:C	28:BE:77:ILE:H	2.10	0.55
33:BJ:80:VAL:C	33:BJ:82:PHE:H	2.10	0.55
36:BP:146:VAL:CG2	36:BP:147:LEU:H	2.08	0.55
39:BS:49:VAL:HG12	39:BS:50:SER:N	2.22	0.55
40:BT:50:ILE:O	40:BT:99:LEU:HD12	2.06	0.55
42:BV:25:LEU:H	42:BV:92:THR:HG21	1.70	0.55
37:AQ:135:ASP:HB3	46:AZ:49:ARG:HH11	1.71	0.55
46:BZ:59:LEU:O	46:BZ:61:LEU:HD23	2.07	0.55
57:BA:1472:A:O2'	57:BA:1473:G:H5'	2.05	0.55
27:BD:262:ARG:NH1	57:BA:2085:C:O2'	2.40	0.55
57:BA:2498:C:O2'	57:BA:2499:C:H5'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BH:24:VAL:CG1	31:BH:35:VAL:HB	2.36	0.55
51:B4:39:CYS:O	51:B4:40:HIS:CD2	2.59	0.55
57:AA:1021:A:H2'	57:AA:1023:U:H5'	1.87	0.55
57:AA:107:C:H2'	57:AA:108:U:C6	2.41	0.55
57:AA:738:G:O2'	57:AA:739:G:H5'	2.07	0.55
27:AD:27:THR:HG23	27:AD:83:GLU:HB3	1.89	0.55
28:AE:36:ARG:HH22	28:AE:88:GLY:HA2	1.66	0.55
36:AP:47:ASP:HB3	36:AP:48:PRO:HA	1.89	0.55
37:AQ:35:VAL:HG23	37:AQ:101:ARG:O	2.06	0.55
53:B6:43:CYS:O	53:B6:44:ARG:HB2	2.06	0.55
36:BP:15:ARG:HH11	57:BA:597:U:H4'	1.70	0.55
26:BC:43:GLU:HG2	26:BC:216:THR:O	2.06	0.55
40:BT:46:GLU:HG2	40:BT:46:GLU:O	3.48	0.55
45:BY:53:PRO:O	45:BY:54:LYS:HG3	2.07	0.55
45:BY:95:LYS:HD3	45:BY:100:ALA:HB1	1.89	0.55
46:BZ:40:ASP:OD2	46:BZ:42:VAL:HG12	2.06	0.55
47:A0:70:GLN:NE2	47:A0:80:HIS:NE2	2.54	0.55
53:A6:47:THR:HG23	53:A6:49:HIS:CE1	2.41	0.55
41:AU:57:PHE:C	41:AU:59:ARG:N	2.58	0.55
37:AQ:32:TYR:OH	37:AQ:111:GLU:HG3	2.06	0.55
47:B0:43:THR:O	47:B0:43:THR:HG23	2.06	0.55
29:BF:31:HIS:O	29:BF:34:TRP:HB3	2.07	0.55
57:AA:2401:U:O2'	57:AA:2402:C:H5''	2.06	0.55
57:BA:1532:C:C2'	57:BA:1533:G:H5'	2.36	0.55
57:AA:2881:C:H2'	57:AA:2882:A:C8	2.41	0.55
57:BA:2062:A:C4	57:BA:2062:A:H5''	2.41	0.55
57:AA:2650:U:O2'	57:AA:2651:C:H5'	2.07	0.55
29:AF:38:ARG:NH2	57:AA:660:G:O3'	2.40	0.55
26:AC:194:ILE:O	26:AC:198:GLU:HG3	2.06	0.55
27:AD:165:ILE:HD13	27:AD:175:LEU:HD21	1.88	0.55
30:AG:72:ARG:HB3	30:AG:87:PRO:HD2	1.87	0.55
31:AH:24:VAL:CG1	31:AH:35:VAL:HB	2.37	0.55
32:AI:3:VAL:HG12	32:AI:36:ALA:HB1	1.87	0.55
36:AP:102:ARG:NH2	36:AP:102:ARG:CB	2.70	0.55
42:AV:39:LEU:HD12	42:AV:51:VAL:HA	1.89	0.55
47:B0:27:GLU:OE2	47:B0:69:PHE:HB2	2.05	0.55
53:B6:15:GLU:OE1	53:B6:41:PRO:HG3	2.06	0.55
57:BA:1015:G:H5'	57:BA:1015:G:C8	2.34	0.55
57:BA:1291:C:H2'	57:BA:1292:U:H6	1.71	0.55
27:BD:119:ALA:CB	27:BD:130:ALA:HB3	2.36	0.55
29:BF:117:ARG:HH21	29:BF:187:VAL:HA	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:89:VAL:HG12	29:BF:90:PHE:H	1.71	0.55
32:BI:56:LYS:HA	32:BI:59:ALA:HB3	1.89	0.55
34:BN:58:ASP:C	34:BN:60:ILE:H	2.09	0.55
37:BQ:35:VAL:HG11	37:BQ:130:LYS:CE	2.36	0.55
43:BW:1:MET:HE2	43:BW:2:GLU:H	1.71	0.55
57:BA:1748:G:H8	57:BA:1748:G:H5'	1.72	0.55
42:BV:19:LYS:HG2	42:BV:94:LEU:CB	2.24	0.55
53:A6:37:ARG:NH2	57:AA:2286:A:H62	2.05	0.55
57:BA:2298:A:H62	57:BA:2318:G:H8	1.52	0.55
57:BA:274:G:H3'	57:BA:274:G:N3	2.22	0.55
37:BQ:58:PHE:HD1	37:BQ:58:PHE:O	1.89	0.55
46:AZ:24:LEU:C	46:AZ:24:LEU:HD23	2.26	0.55
57:BA:2074:U:H2'	57:BA:2075:U:C6	2.41	0.55
29:BF:150:GLY:HA2	29:BF:172:TRP:CD2	2.42	0.55
57:BA:1966:A:H4'	57:BA:1967:C:OP1	2.06	0.55
57:AA:110:G:O2'	57:AA:111:A:H5'	2.06	0.55
48:A1:25:LYS:HA	48:A1:29:GLY:HA2	1.87	0.55
57:AA:309:G:N3	57:AA:329:G:O2'	2.39	0.55
27:AD:182:LEU:H	27:AD:272:ALA:HB3	1.71	0.55
30:AG:42:GLY:O	30:AG:44:GLY:N	2.39	0.55
31:AH:19:VAL:HG21	31:AH:43:VAL:O	2.07	0.55
36:AP:64:LYS:O	36:AP:66:GLY:N	2.39	0.55
51:B4:12:ALA:HB1	51:B4:29:PRO:CA	2.31	0.55
57:BA:2122:U:H2'	57:BA:2123:G:C8	2.42	0.55
53:B6:25:LYS:CD	57:BA:2285:C:H41	2.20	0.55
57:BA:251:A:C5	57:BA:252:G:H1'	2.42	0.55
57:BA:26:G:C6	57:BA:27:G:N1	2.75	0.55
30:BG:28:VAL:HG12	30:BG:28:VAL:O	2.07	0.55
30:BG:40:ASN:HD22	30:BG:91:ARG:CB	2.12	0.55
36:BP:100:LEU:H	36:BP:100:LEU:HD22	1.69	0.55
41:BU:16:LYS:O	41:BU:20:LEU:HD23	2.07	0.55
45:BY:2:ARG:CZ	45:BY:3:VAL:HG23	2.36	0.55
45:BY:49:VAL:HG12	45:BY:50:ARG:N	2.22	0.55
31:BH:20:ALA:CB	31:BH:21:PRO:CD	2.85	0.55
52:B5:51:TYR:CZ	52:B5:52:TYR:HB2	2.41	0.55
34:BN:133:GLN:O	34:BN:134:ARG:HB3	2.07	0.55
37:AQ:56:ARG:HA	46:AZ:180:VAL:HG22	1.88	0.55
37:BQ:34:LEU:HD11	37:BQ:129:THR:HB	1.88	0.55
57:AA:1315:C:H2'	57:AA:1316:U:H6	1.72	0.55
32:AI:46:ALA:HB2	57:AA:271(P):C:C5'	2.37	0.55
40:AT:3:ARG:CD	57:AA:2876:G:H4'	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AD:17:THR:HG23	27:AD:205:VAL:HB	1.87	0.55
29:AF:63:LYS:HE2	57:AA:675:A:OP1	2.06	0.55
32:AI:77:LEU:HD22	32:AI:141:LYS:N	2.21	0.55
39:AS:48:LEU:HD12	39:AS:48:LEU:N	2.22	0.55
40:AT:28:VAL:O	40:AT:29:ARG:HB2	2.07	0.55
42:AV:19:LYS:HZ3	42:AV:20:LEU:HB2	1.71	0.55
44:AX:64:LYS:HZ2	44:AX:73:ARG:NH2	1.99	0.55
47:B0:37:LEU:O	47:B0:38:VAL:HG23	2.07	0.55
57:BA:1485:G:H5'	57:BA:1485:G:H8	1.72	0.55
44:BX:31:HIS:HE1	57:BA:71:A:H2	1.53	0.55
31:BH:106:THR:HG22	31:BH:112:PRO:HB3	1.88	0.55
41:BU:95:LEU:HD12	42:BV:11:GLN:HE21	1.72	0.55
46:BZ:125:LEU:O	46:BZ:126:VAL:HG13	2.07	0.55
52:B5:55:ARG:O	52:B5:56:LYS:HB2	2.06	0.55
46:AZ:35:ARG:HH11	46:AZ:35:ARG:HG3	1.72	0.55
29:AF:176:LEU:HD12	29:AF:177:ALA:H	1.72	0.55
49:A2:64:LEU:O	49:A2:68:ARG:HG2	2.07	0.55
54:A7:16:HIS:HA	54:A7:21:ARG:NH1	2.22	0.55
37:BQ:110:THR:HG23	37:BQ:113:GLN:CG	2.36	0.55
38:BR:7:GLY:O	38:BR:8:ARG:NE	2.38	0.55
49:B2:10:LEU:HD22	49:B2:14:ARG:HH12	1.72	0.55
46:AZ:145:GLU:O	46:AZ:147:GLY:N	2.40	0.55
57:BA:2506:U:H4'	57:BA:2507:C:OP1	2.07	0.55
57:AA:809:G:O2'	57:AA:810:U:H5'	2.06	0.55
57:BA:2836:U:H2'	57:BA:2837:G:C8	2.42	0.55
57:BA:654(N):G:H2'	57:BA:654(O):G:O4'	2.07	0.55
57:AA:1292:U:O2'	57:AA:1293:C:H5'	2.06	0.55
57:AA:1345:C:O2'	57:AA:1346:G:H5'	2.07	0.55
26:AC:2:PRO:HG2	26:AC:3:LYS:H	1.72	0.55
27:AD:80:ALA:HB3	27:AD:94:LEU:HD13	1.89	0.55
30:AG:29:TRP:HB3	58:AB:57:A:C4	2.42	0.55
32:AI:112:LYS:HA	32:AI:116:LEU:HD22	1.89	0.55
33:AJ:54:ALA:HA	33:AJ:84:GLU:CB	2.36	0.55
36:AP:16:ARG:O	36:AP:16:ARG:NH1	2.37	0.55
37:AQ:101:ARG:HG3	37:AQ:102:VAL:N	2.23	0.55
38:AR:38:VAL:O	38:AR:42:LYS:HG3	2.07	0.55
42:AV:46:VAL:HG13	42:AV:47:VAL:N	2.21	0.55
53:B6:41:PRO:HG2	53:B6:43:CYS:O	2.06	0.55
55:B8:59:LYS:HB2	55:B8:59:LYS:HZ3	1.67	0.55
27:BD:131:LEU:N	27:BD:131:LEU:HD12	2.22	0.55
27:BD:144:ALA:HB3	27:BD:192:THR:HG22	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:127:VAL:HA	27:BD:193:VAL:HG13	1.88	0.55
28:BE:37:ARG:HH12	57:BA:2784:C:H1'	1.72	0.55
29:BF:41:LEU:O	29:BF:44:ARG:HG2	2.07	0.55
30:BG:72:ARG:CB	30:BG:86:MET:HA	2.29	0.55
32:BI:127:VAL:HG22	32:BI:139:GLN:CB	2.36	0.55
34:BN:39:ARG:HH11	34:BN:39:ARG:HG2	1.71	0.55
40:BT:31:SER:C	40:BT:32:TYR:CD2	2.80	0.55
27:AD:244:ARG:HG3	57:AA:1902:C:H1'	1.89	0.55
52:A5:4:HIS:O	57:AA:2056:G:N2	2.40	0.55
42:BV:19:LYS:HB3	42:BV:94:LEU:O	2.07	0.55
53:A6:15:GLU:CD	53:A6:44:ARG:NH1	2.60	0.55
57:AA:2298:A:H62	57:AA:2318:G:H8	1.55	0.55
29:AF:161:GLU:O	29:AF:165:ARG:HG3	2.07	0.55
57:AA:274:G:H3'	57:AA:274:G:N3	2.21	0.55
48:A1:56:GLN:HB3	48:A1:87:PRO:HB3	1.87	0.55
57:BA:935:C:H2'	57:BA:936:C:C6	2.42	0.55
38:AR:7:GLY:C	38:AR:8:ARG:HE	2.10	0.55
57:AA:1582:C:H2'	57:AA:1583:A:H8	1.72	0.55
53:B6:42:TRP:CE3	53:B6:42:TRP:HA	2.42	0.55
57:AA:1966:A:H4'	57:AA:1967:C:OP1	2.07	0.55
48:B1:80:LEU:HB2	48:B1:82:LEU:HD21	1.89	0.55
57:BA:1713:U:O2'	57:BA:1714:G:H5'	2.07	0.55
43:AW:78:GLU:OE2	43:AW:99:ARG:HD2	2.06	0.55
57:BA:2853:C:H2'	57:BA:2854:G:C8	2.42	0.55
47:A0:26:TYR:HE2	57:AA:857:C:H1'	1.72	0.54
53:A6:9:LEU:C	53:A6:9:LEU:HD22	2.27	0.54
55:A8:30:ARG:O	57:AA:2420:C:N4	2.40	0.54
57:AA:781:A:H2'	57:AA:782:A:H5'	6.07	0.54
29:AF:40:GLN:HE21	29:AF:184:TYR:HB2	1.72	0.54
30:AG:6:ALA:O	30:AG:10:LYS:HG3	2.07	0.54
36:AP:144:GLU:N	36:AP:145:PRO:CD	2.70	0.54
39:AS:14:VAL:O	39:AS:14:VAL:HG12	2.07	0.54
39:AS:66:ALA:HA	39:AS:69:VAL:HG12	1.89	0.54
44:AX:64:LYS:NZ	44:AX:73:ARG:NH2	2.56	0.54
53:B6:47:THR:HG23	53:B6:49:HIS:CE1	2.42	0.54
55:B8:4:MET:CE	55:B8:61:LEU:HD23	2.37	0.54
57:BA:781:A:H2'	57:BA:782:A:H5'	6.10	0.54
27:BD:26:LYS:O	27:BD:27:THR:HB	2.07	0.54
27:BD:80:ALA:HB3	27:BD:94:LEU:CD1	2.36	0.54
28:BE:59:VAL:HG23	28:BE:62:PRO:HG2	1.88	0.54
42:BV:4:ILE:O	42:BV:4:ILE:HG22	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BW:78:GLU:OE2	43:BW:99:ARG:HD2	2.06	0.54
46:AZ:165:VAL:HG11	46:AZ:169:GLU:HB2	1.88	0.54
27:AD:262:ARG:NH1	57:AA:2085:C:O2'	2.40	0.54
44:AX:3:THR:O	44:AX:4:ALA:HB3	2.07	0.54
56:A9:19:ARG:HA	57:AA:2757:A:OP1	2.08	0.54
46:AZ:68:PRO:O	46:AZ:91:LEU:HD12	2.06	0.54
57:AA:1603:A:H5'	57:AA:1603:A:C8	2.41	0.54
28:AE:37:ARG:HH12	57:AA:2784:C:H1'	1.72	0.54
57:AA:2845:G:O2'	57:AA:2846:G:H5'	2.06	0.54
57:AA:935:C:H2'	57:AA:936:C:C6	2.42	0.54
30:AG:134:GLY:C	30:AG:135:LEU:HD12	2.27	0.54
37:AQ:35:VAL:CG1	37:AQ:130:LYS:HE2	2.36	0.54
39:AS:106:ARG:O	39:AS:106:ARG:HD2	2.07	0.54
40:AT:88:ILE:HG22	40:AT:89:VAL:CG2	2.34	0.54
45:AY:9:LYS:HA	57:AA:85:G:OP1	2.07	0.54
57:BA:1494:A:N3	57:BA:1494:A:H3'	2.22	0.54
57:BA:1603:A:H5'	57:BA:1603:A:C8	2.42	0.54
57:BA:1517:G:H1'	57:BA:1919:A:O3'	103.08	0.54
28:BE:24:THR:HG23	28:BE:184:VAL:CG2	2.33	0.54
30:BG:108:ASN:O	30:BG:109:VAL:HG23	2.04	0.54
30:BG:15:VAL:HG21	30:BG:176:LEU:HD23	1.90	0.54
32:BI:77:LEU:HD21	32:BI:79:ILE:CB	2.36	0.54
34:BN:58:ASP:O	34:BN:60:ILE:HG13	2.07	0.54
39:BS:106:ARG:O	39:BS:106:ARG:HD2	2.08	0.54
40:BT:2:ASN:O	40:BT:4:GLY:N	2.40	0.54
40:BT:78:LEU:C	40:BT:79:HIS:ND1	2.61	0.54
44:BX:12:VAL:HG11	44:BX:27:THR:OG1	2.08	0.54
45:BY:46:LYS:N	45:BY:62:GLU:HB2	2.20	0.54
57:BA:580:C:H2'	57:BA:581:C:C6	2.42	0.54
57:BA:1446:C:H2'	57:BA:1447:G:C8	2.41	0.54
57:AA:2329:G:H2'	57:AA:2330:G:H8	1.72	0.54
57:BA:1478:G:HO2'	57:BA:1558:A:H2	1.56	0.54
46:AZ:108:PRO:C	46:AZ:110:GLY:H	2.11	0.54
37:AQ:110:THR:HG23	37:AQ:113:GLN:CG	2.38	0.54
57:AA:272(G):C:H42	57:AA:363(C):G:H1	1.55	0.54
57:AA:1291:C:H2'	57:AA:1292:U:H6	1.73	0.54
57:AA:1419:A:O2'	57:AA:1420:U:H5''	2.06	0.54
26:AC:47:LYS:NZ	26:AC:169:THR:O	2.40	0.54
26:AC:52:PRO:HG2	26:AC:53:ARG:HD3	1.90	0.54
30:AG:29:TRP:HB3	58:AB:57:A:N3	2.22	0.54
31:AH:24:VAL:HG12	31:AH:35:VAL:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AQ:95:ALA:O	37:AQ:97:VAL:HG23	2.07	0.54
57:BA:1037:G:H1	57:BA:1118:C:H42	1.53	0.54
45:BY:9:LYS:HA	57:BA:85:G:OP1	2.06	0.54
30:BG:85:GLY:O	30:BG:86:MET:CB	2.55	0.54
32:BI:62:LYS:HE3	32:BI:133:HIS:O	2.07	0.54
33:BJ:67:GLY:HA2	33:BJ:73:GLY:H	1.73	0.54
35:BO:49:ARG:HH21	57:BA:1423:G:C5'	97.92	0.54
36:BP:38:GLN:CG	36:BP:39:LYS:H	2.09	0.54
36:BP:48:PRO:CG	36:BP:49:ARG:N	2.69	0.54
57:AA:2492:U:O2'	57:AA:2493:U:H5'	2.07	0.54
57:AA:874:G:O2'	57:AA:875:G:H5'	2.08	0.54
46:AZ:152:ALA:HA	46:AZ:167:PRO:HB2	1.87	0.54
38:AR:10:LEU:HD22	38:AR:17:ARG:HD2	1.90	0.54
46:BZ:184:ALA:O	46:BZ:185:GLU:HB3	2.07	0.54
57:BA:2776:A:H4'	57:BA:2777:G:H5''	1.89	0.54
57:AA:2776:A:H4'	57:AA:2777:G:H5''	1.89	0.54
57:AA:1481:U:H5'	57:AA:1482:G:OP2	2.06	0.54
57:BA:2208:A:H1'	57:BA:2219:G:C4	2.43	0.54
35:BO:7:TYR:CZ	35:BO:44:LYS:HG3	2.42	0.54
46:AZ:24:LEU:HD21	46:AZ:86:VAL:HG22	1.89	0.54
38:BR:18:LEU:HD21	38:BR:22:ARG:NE	2.23	0.54
57:BA:654(M):C:H2'	57:BA:654(N):G:N7	2.23	0.54
48:A1:16:ASN:HA	48:A1:38:SER:O	2.06	0.54
36:AP:62:LEU:HG	57:AA:2394:C:P	2.47	0.54
28:AE:131:ALA:HB2	57:AA:2579:C:O3'	2.06	0.54
49:A2:47:ASN:ND2	57:AA:94(A):G:H21	2.06	0.54
27:AD:138:VAL:HG13	27:AD:138:VAL:O	2.07	0.54
27:AD:209:ALA:C	27:AD:210:GLY:O	2.45	0.54
27:AD:210:GLY:C	27:AD:212:SER:H	2.10	0.54
28:AE:77:ILE:HG22	28:AE:78:LEU:CD1	2.36	0.54
32:AI:100:ALA:O	32:AI:103:ARG:N	2.41	0.54
33:AJ:57:THR:O	33:AJ:58:LEU:CB	2.54	0.54
36:AP:9:ASN:N	36:AP:10:PRO:HD2	2.14	0.54
40:AT:78:LEU:C	40:AT:79:HIS:ND1	2.61	0.54
42:AV:40:LEU:CD2	42:AV:40:LEU:N	2.71	0.54
57:BA:1038:C:H2'	57:BA:1039:G:H5''	1.90	0.54
57:BA:1412:A:H2'	57:BA:1413:G:C8	2.43	0.54
57:BA:2314:C:O2'	57:BA:2315:G:H5'	2.08	0.54
58:BB:106:G:O2'	58:BB:107:G:H5'	2.08	0.54
27:BD:63:ARG:HH22	57:BA:1568:G:P	2.31	0.54
32:BI:69:LYS:HA	32:BI:136:VAL:CG1	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BS:33:LYS:HG3	58:BB:52:A:H62	1.73	0.54
39:BS:92:TYR:CG	39:BS:93:LYS:N	2.75	0.54
40:BT:19:LEU:HD22	40:BT:85:LYS:HG3	1.90	0.54
40:BT:34:VAL:HG12	40:BT:35:LYS:N	2.22	0.54
41:BU:92:ARG:HD2	42:BV:11:GLN:HB2	1.89	0.54
43:BW:5:ALA:HB1	43:BW:50:VAL:HG22	1.90	0.54
52:B5:2:ALA:HB3	57:BA:747:U:C1'	2.38	0.54
47:B0:10:THR:HG21	57:BA:2277:G:OP2	2.07	0.54
40:AT:6:LEU:HD23	40:AT:6:LEU:O	2.07	0.54
57:BA:2472:G:H5'	57:BA:2473:U:H5''	1.89	0.54
40:AT:113:LYS:HE3	57:AA:1754:C:OP2	2.07	0.54
38:BR:7:GLY:C	38:BR:8:ARG:HE	2.11	0.54
49:A2:44:LEU:O	49:A2:45:SER:CB	2.55	0.54
43:AW:95:ILE:HG13	43:AW:95:ILE:O	2.07	0.54
47:A0:19:LYS:HD3	47:A0:41:ARG:NH2	2.21	0.54
57:AA:478:A:N1	57:AA:500:G:H4'	2.23	0.54
57:BA:1260:G:O2'	57:BA:1261:C:H5'	2.06	0.54
57:AA:1003:G:H22	57:AA:1038:C:H42	42.54	0.54
57:AA:1799:G:H5'	57:AA:1819:A:N6	2.23	0.54
57:AA:2378:A:O5'	57:AA:2378:A:H8	1.91	0.54
57:AA:2394:C:H2'	57:AA:2395:C:H6	1.72	0.54
37:AQ:12:GLN:HA	57:AA:910:A:H62	1.71	0.54
30:AG:57:ALA:HA	30:AG:90:LEU:CD2	2.36	0.54
40:AT:8:LYS:HA	40:AT:11:GLU:OE1	2.06	0.54
57:BA:1354:A:H2'	57:BA:1355:G:O4'	2.08	0.54
57:BA:1485:G:H2'	57:BA:1486:A:H8	1.71	0.54
30:BG:173:LEU:C	30:BG:178:PHE:HD1	2.11	0.54
40:BT:28:VAL:O	40:BT:29:ARG:CB	2.55	0.54
41:BU:90:VAL:CG1	41:BU:91:ASP:N	2.67	0.54
42:AV:21:ARG:NH1	42:AV:91:TYR:CE2	2.75	0.54
52:A5:51:TYR:C	52:A5:53:ALA:H	2.10	0.54
54:A7:12:ARG:HG3	57:AA:686:G:O6	2.07	0.54
57:AA:1784:A:H4'	57:AA:1785:A:O5'	2.07	0.54
57:AA:1534:U:H2'	57:AA:1535:A:O4'	2.08	0.54
37:AQ:60:ARG:HH11	37:AQ:60:ARG:HB2	1.71	0.54
37:BQ:60:ARG:HA	46:BZ:179:ASP:HA	1.89	0.54
38:BR:12:ARG:HD3	38:BR:16:HIS:CD2	2.42	0.54
57:BA:1719:G:O2'	57:BA:1720:U:H5'	2.06	0.54
27:BD:166:GLN:N	27:BD:166:GLN:HE21	2.06	0.54
57:BA:2243:U:H2'	57:BA:2244:U:C6	2.41	0.54
57:BA:1972:A:H2'	57:BA:1973:G:C8	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2455:G:H2'	57:BA:2456:C:C6	2.42	0.54
57:BA:2195:C:O2'	57:BA:2196:C:H5'	2.07	0.54
49:A2:46:GLN:HG2	49:A2:49:LYS:HE3	1.90	0.54
57:AA:625:G:H2'	57:AA:626:U:H6	1.95	0.54
58:AB:54:G:O2'	58:AB:55:U:H5'	2.07	0.54
26:AC:43:GLU:HG2	26:AC:216:THR:O	2.07	0.54
28:AE:61:ARG:HG3	57:AA:2787:C:H1'	1.88	0.54
31:AH:50:VAL:CG1	31:AH:51:ARG:N	2.70	0.54
40:AT:106:SER:CB	40:AT:110:ILE:HD11	2.38	0.54
55:B8:50:LEU:C	55:B8:53:PRO:HD2	2.28	0.54
55:B8:63:PRO:O	55:B8:64:TYR:O	2.26	0.54
27:BD:176:ARG:CG	27:BD:176:ARG:HH11	2.21	0.54
28:BE:34:VAL:HG11	28:BE:78:LEU:CD2	2.38	0.54
30:BG:125:PHE:HD2	30:BG:131:TYR:HB2	1.73	0.54
33:BJ:56:ASN:O	33:BJ:58:LEU:N	2.41	0.54
35:BO:64:ARG:HG3	35:BO:64:ARG:HH11	4.46	0.54
37:BQ:67:ARG:HH11	37:BQ:67:ARG:HG2	1.73	0.54
39:BS:46:VAL:HG13	58:BB:114:C:O2'	2.08	0.54
40:BT:106:SER:CB	40:BT:110:ILE:HD11	2.37	0.54
45:BY:14:LEU:HD11	45:BY:22:GLY:HA2	1.88	0.54
27:BD:226:MET:HB3	27:BD:230:ASP:HB2	1.88	0.54
47:B0:51:VAL:CG2	47:B0:81:VAL:HG23	2.37	0.54
46:BZ:153:SER:HB2	46:BZ:163:LEU:HD11	1.88	0.54
34:BN:133:GLN:O	34:BN:134:ARG:CB	2.56	0.54
29:AF:176:LEU:HD11	29:AF:180:GLY:HA3	1.90	0.54
29:AF:160:ASN:C	29:AF:160:ASN:HD22	2.08	0.54
46:AZ:52:SER:OG	46:AZ:53:ILE:N	2.39	0.54
43:BW:34:ASN:ND2	52:B5:39:MET:CB	2.71	0.54
38:BR:13:HIS:CE1	38:BR:16:HIS:H	2.25	0.54
48:A1:94:LEU:CD2	48:A1:94:LEU:H	2.20	0.54
36:BP:75:ILE:H	36:BP:75:ILE:HD12	1.72	0.54
44:BX:24:GLY:O	44:BX:82:GLN:HA	2.07	0.54
57:AA:1412:A:H2'	57:AA:1413:G:C8	2.43	0.54
57:AA:2498:C:O2'	57:AA:2499:C:H5'	2.07	0.54
57:AA:1993:U:H2'	57:AA:1994:C:O4'	2.08	0.54
29:BF:155:LEU:HD22	29:BF:186:ILE:HA	1.89	0.54
57:AA:2732:G:C3'	57:AA:2733:A:H5'	2.38	0.54
57:AA:628:G:O2'	57:AA:629:G:H5'	4.93	0.54
27:AD:71:ASP:HB2	27:AD:103:ARG:NH2	2.22	0.54
27:AD:45:ASN:ND2	27:AD:50:THR:HG21	2.22	0.54
28:AE:176:ILE:HB	28:AE:181:LEU:HB2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AF:28:ILE:CD1	29:AF:28:ILE:H	2.21	0.54
33:AJ:54:ALA:C	33:AJ:56:ASN:H	2.09	0.54
37:AQ:14:ARG:HH11	37:AQ:14:ARG:HG2	1.71	0.54
40:AT:118:ARG:HA	40:AT:121:ILE:HD12	1.90	0.54
43:AW:5:ALA:HB1	43:AW:50:VAL:HG22	1.90	0.54
45:AY:2:ARG:CZ	45:AY:3:VAL:HG23	2.37	0.54
57:BA:1406:U:H2'	57:BA:1407:C:C6	2.51	0.54
53:B6:37:ARG:NH2	57:BA:2286:A:H62	2.05	0.54
57:BA:738:G:O2'	57:BA:739:G:H5'	2.08	0.54
57:BA:772:C:O2'	57:BA:773:U:H5'	2.07	0.54
27:BD:31:LYS:O	27:BD:33:LEU:N	2.40	0.54
27:BD:46:GLN:CD	27:BD:46:GLN:H	2.11	0.54
30:BG:96:ARG:HH21	30:BG:97:ASP:CG	2.11	0.54
32:BI:112:LYS:HD2	32:BI:112:LYS:N	2.23	0.54
32:BI:116:LEU:HG	32:BI:117:GLU:N	2.22	0.54
32:BI:126:TYR:H	32:BI:140:LEU:CD2	2.21	0.54
34:BN:1:MET:C	34:BN:2:LYS:HG3	2.27	0.54
37:BQ:12:GLN:HE21	37:BQ:73:PRO:CD	2.20	0.54
38:BR:28:LEU:HD12	38:BR:48:VAL:HG21	1.88	0.54
39:BS:48:LEU:N	39:BS:48:LEU:HD12	2.23	0.54
42:BV:39:LEU:HB3	42:BV:47:VAL:HG11	1.88	0.54
45:BY:27:VAL:HG12	45:BY:29:GLU:OE1	2.08	0.54
57:BA:874:G:O2'	57:BA:875:G:H5'	2.06	0.54
46:AZ:176:PRO:HB2	46:AZ:177:PRO:HD2	1.89	0.54
57:BA:1534:U:H2'	57:BA:1535:A:O4'	2.08	0.54
41:BU:59:ARG:HD3	57:BA:1009:A:C4'	2.38	0.54
57:AA:272(E):G:C2	57:AA:364:C:N3	2.75	0.54
35:AO:35:VAL:HG11	35:AO:103:ALA:HB3	1.89	0.54
49:A2:63:VAL:HA	49:A2:66:GLU:CG	2.37	0.54
57:BA:2866:U:O2	57:BA:2866:U:H2'	2.07	0.54
49:A2:25:VAL:HG13	49:A2:57:ILE:HG23	1.89	0.54
44:AX:44:GLU:HG2	44:AX:51:VAL:HG23	1.90	0.54
27:AD:166:GLN:HE21	27:AD:166:GLN:N	2.06	0.54
56:A9:6:SER:HB2	57:AA:2466:C:H5''	1.89	0.54
48:A1:75:GLU:O	48:A1:78:LYS:HB2	2.07	0.54
57:BA:2842:G:O2'	57:BA:2843:G:H5'	2.07	0.54
57:AA:654(N):G:H2'	57:AA:654(O):G:O4'	2.06	0.54
32:BI:54:GLN:HA	32:BI:57:ARG:HB3	1.88	0.54
57:AA:2443:C:H2'	57:AA:2444:G:H8	1.73	0.54
26:AC:31:LYS:HZ1	26:AC:183:PRO:HD3	1.73	0.54
30:AG:67:LYS:O	30:AG:67:LYS:HD2	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:AH:20:ALA:CB	31:AH:21:PRO:CD	2.85	0.54
32:AI:77:LEU:C	32:AI:77:LEU:HD23	2.28	0.54
28:AE:110:GLY:O	38:AR:2:ARG:HG2	2.08	0.54
45:AY:7:VAL:HG21	45:AY:8:LYS:NZ	2.23	0.54
57:BA:107:C:H2'	57:BA:108:U:C6	2.42	0.54
57:BA:1315:C:H2'	57:BA:1316:U:H6	1.72	0.54
57:BA:1518:U:H2'	57:BA:1519:G:O4'	2.08	0.54
57:BA:2419:U:H2'	57:BA:2420:C:H6	1.73	0.54
57:BA:409:C:H2'	57:BA:410:G:C8	2.42	0.54
36:BP:38:GLN:CD	57:BA:943:U:OP2	2.47	0.54
26:BC:30:VAL:HG11	26:BC:42:VAL:CG2	2.37	0.54
28:BE:118:LYS:H	28:BE:121:ASN:H	1.54	0.54
29:BF:74:ARG:HD3	57:BA:674:G:H1'	1.89	0.54
30:BG:42:GLY:HA2	57:BA:2312:U:H1'	1.90	0.54
30:BG:91:ARG:C	30:BG:91:ARG:HD2	2.29	0.54
32:BI:97:ILE:O	32:BI:101:LEU:HD13	2.08	0.54
36:BP:7:ARG:HB3	36:BP:7:ARG:CZ	2.38	0.54
37:BQ:51:ARG:O	37:BQ:52:VAL:C	2.45	0.54
45:BY:17:SER:O	57:BA:310:A:OP1	2.26	0.54
27:BD:239:ARG:HG2	57:BA:2591:C:P	2.48	0.54
57:AA:1590:U:H2'	57:AA:1591:G:C5'	2.20	0.54
46:AZ:81:ARG:NH1	46:AZ:81:ARG:CB	2.62	0.54
57:BA:1845:G:H2'	57:BA:1846:G:C5'	2.09	0.54
57:BA:2524:G:C8	57:BA:2524:G:H5'	2.36	0.54
57:AA:1652:A:O2'	57:AA:1653:G:H5'	2.07	0.54
35:AO:103:ALA:HB1	35:AO:105:GLU:OE1	2.08	0.54
57:AA:1472:A:O2'	57:AA:1473:G:H5'	2.07	0.54
46:BZ:71:VAL:HA	46:BZ:87:ASP:O	2.08	0.54
57:AA:1667:G:H22	57:AA:1992:G:H5'	1.72	0.54
46:AZ:104:PHE:HB3	46:AZ:141:VAL:HG21	1.90	0.54
54:A7:16:HIS:ND1	57:AA:465:G:H4'	2.23	0.54
49:A2:53:LEU:O	49:A2:57:ILE:HG12	2.08	0.54
57:AA:30:G:O2'	57:AA:31:C:H5'	2.07	0.54
41:AU:53:ARG:NH1	57:AA:535:C:O3'	2.40	0.54
44:AX:24:GLY:O	44:AX:82:GLN:HA	2.08	0.54
57:BA:498:G:O2'	57:BA:499:U:H5'	2.07	0.54
54:B7:19:ARG:HH11	54:B7:19:ARG:HG2	1.73	0.54
57:BA:2320:A:H2'	57:BA:2320:A:N3	2.22	0.54
57:BA:2661:G:H2'	57:BA:2662:A:C8	2.42	0.54
33:AJ:10:LEU:CB	57:AA:1046:A:H1'	2.38	0.54
57:AA:1119:C:H2'	57:AA:1120:G:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1337:G:H2'	57:AA:1338:G:H8	1.73	0.54
57:AA:1486:A:H61	57:AA:1504:C:H42	1.56	0.54
57:AA:741:G:O2'	57:AA:742:G:H5'	2.08	0.54
58:AB:40:U:O2	58:AB:43:C:H5''	2.07	0.54
27:AD:101:GLU:HB2	57:AA:1491:G:O2'	2.08	0.54
28:AE:120:TRP:O	28:AE:121:ASN:HB2	2.08	0.54
28:AE:131:ALA:HB3	57:AA:2579:C:O2'	2.08	0.54
28:AE:47:VAL:HG22	28:AE:49:LEU:HD23	1.90	0.54
28:AE:61:ARG:C	28:AE:63:LEU:N	2.61	0.54
31:AH:7:LEU:HD23	31:AH:69:ARG:CG	2.37	0.54
32:AI:68:LEU:CG	32:AI:72:LEU:HD11	2.38	0.54
35:AO:64:ARG:NH1	40:AT:70:VAL:CG2	2.71	0.54
40:AT:62:THR:HA	40:AT:74:ARG:O	2.08	0.54
41:AU:74:LEU:H	41:AU:74:LEU:HD13	1.73	0.54
45:AY:2:ARG:NE	45:AY:3:VAL:HG23	2.23	0.54
45:AY:46:LYS:N	45:AY:62:GLU:HB2	2.20	0.54
55:B8:4:MET:HE3	55:B8:61:LEU:HD23	1.89	0.54
55:B8:62:LEU:N	55:B8:63:PRO:HD2	2.23	0.54
57:BA:2443:C:H2'	57:BA:2444:G:H8	1.73	0.54
36:BP:71:VAL:HG12	57:BA:389:G:H1	1.73	0.54
58:BB:88:C:O2	58:BB:88:C:H2'	2.08	0.54
27:BD:71:ASP:HB2	27:BD:103:ARG:HH22	1.71	0.54
28:BE:131:ALA:HB2	57:BA:2579:C:O3'	2.08	0.54
28:BE:34:VAL:HG13	28:BE:48:GLN:HE21	1.73	0.54
29:BF:128:ALA:O	29:BF:142:TRP:NE1	2.36	0.54
30:BG:48:GLU:O	30:BG:49:ASP:HB2	2.08	0.54
31:BH:144:VAL:O	31:BH:148:ILE:HG12	2.07	0.54
35:BO:47:ILE:HG13	35:BO:48:PRO:HD2	1.90	0.54
36:BP:97:PRO:HA	36:BP:100:LEU:HD23	1.89	0.54
36:BP:112:LEU:H	36:BP:128:HIS:HD2	1.54	0.54
37:BQ:14:ARG:HH11	37:BQ:14:ARG:HG2	1.73	0.54
41:BU:92:ARG:NH1	42:BV:11:GLN:O	2.41	0.54
45:BY:13:VAL:HG13	45:BY:14:LEU:N	2.22	0.54
45:BY:20:TYR:CD1	45:BY:20:TYR:N	2.76	0.54
42:AV:91:TYR:H	42:AV:91:TYR:HD1	1.56	0.54
42:BV:21:ARG:NH1	42:BV:91:TYR:HE2	2.06	0.54
47:B0:63:VAL:HG21	47:B0:83:PRO:HG3	1.90	0.54
53:A6:15:GLU:OE1	53:A6:44:ARG:NH1	2.40	0.54
57:AA:1652:A:H3'	57:AA:1653:G:C8	2.43	0.54
57:AA:1478:G:HO2'	57:AA:1558:A:H2	1.56	0.54
49:A2:28:LYS:O	49:A2:53:LEU:HD21	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AF:122:LYS:CA	29:AF:122:LYS:HE2	2.36	0.54
29:BF:165:ARG:HB2	29:BF:165:ARG:HH11	1.73	0.54
37:BQ:109:VAL:CG1	37:BQ:113:GLN:HB3	2.37	0.54
57:AA:2528:U:H2'	57:AA:2530:A:O5'	2.08	0.54
30:AG:48:GLU:O	30:AG:49:ASP:CB	2.56	0.54
57:AA:1049:C:H41	57:AA:1111:A:H2	1.55	0.54
57:AA:710:G:H2'	57:AA:711:G:C8	2.80	0.54
30:AG:141:PHE:HD1	30:AG:142:PRO:HD2	1.73	0.54
31:AH:89:ILE:HG13	31:AH:129:THR:HA	1.89	0.54
31:AH:19:VAL:CG2	31:AH:44:VAL:HA	2.33	0.54
32:AI:92:VAL:HG13	32:AI:97:ILE:CD1	2.38	0.54
34:AN:58:ASP:C	34:AN:60:ILE:H	2.09	0.54
34:AN:62:VAL:HG11	34:AN:67:LEU:CD2	2.38	0.54
36:AP:107:LYS:O	36:AP:109:GLY:N	2.41	0.54
36:AP:21:ARG:O	36:AP:23:PRO:HD3	2.07	0.54
38:AR:3:HIS:O	38:AR:4:LEU:HB3	2.07	0.54
38:AR:44:LEU:HD13	38:AR:44:LEU:O	2.07	0.54
41:AU:96:ALA:C	41:AU:98:LEU:H	2.11	0.54
45:AY:20:TYR:N	45:AY:20:TYR:CD1	2.76	0.54
47:B0:36:ILE:HD12	47:B0:38:VAL:N	2.23	0.54
53:B6:9:LEU:HD12	53:B6:28:ARG:CG	2.38	0.54
53:B6:9:LEU:HD12	53:B6:28:ARG:HG3	1.90	0.54
57:BA:1119:C:H2'	57:BA:1120:G:C8	2.42	0.54
46:BZ:29:TYR:HE1	58:BB:105:A:O4'	1.91	0.54
32:BI:88:ILE:HG22	32:BI:89:TYR:N	2.22	0.54
36:BP:38:GLN:HG3	36:BP:39:LYS:N	2.17	0.54
38:BR:44:LEU:O	38:BR:44:LEU:HD13	2.08	0.54
46:BZ:18:LEU:O	46:BZ:21:ALA:HB3	2.07	0.54
54:B7:16:HIS:HA	54:B7:21:ARG:NH1	2.22	0.54
52:A5:36:CYS:SG	52:A5:49:CYS:CB	2.96	0.54
57:BA:1948:G:O2'	57:BA:1949:G:H5'	2.08	0.54
29:AF:124:LEU:O	29:AF:193:VAL:HA	2.07	0.54
37:BQ:59:ARG:HA	46:BZ:180:VAL:HG23	1.90	0.54
27:BD:270:ILE:C	27:BD:271:ILE:HG12	2.28	0.54
57:BA:472:A:H2'	57:BA:473:G:O4'	4.64	0.54
57:AA:1429:G:H2'	57:AA:1430:C:C6	2.43	0.54
44:BX:59:VAL:O	44:BX:60:ARG:C	2.46	0.54
57:AA:2842:G:O2'	57:AA:2843:G:H5'	2.08	0.54
57:AA:2039:C:H2'	57:AA:2040:C:H6	1.73	0.54
53:A6:42:TRP:CE3	53:A6:42:TRP:HA	2.43	0.53
57:AA:1049:C:H2'	57:AA:1050:A:H8	1.71	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AD:106:ILE:O	27:AD:106:ILE:CG2	2.56	0.53
27:AD:24:ILE:HG22	27:AD:91:ARG:HD2	1.90	0.53
27:AD:31:LYS:HB3	27:AD:34:VAL:HG22	1.90	0.53
27:AD:49:ILE:HD11	27:AD:52:ARG:HA	1.90	0.53
27:AD:35:LYS:HA	27:AD:64:ILE:HG22	1.90	0.53
29:AF:9:ILE:HG12	29:AF:13:SER:O	2.07	0.53
30:AG:172:LEU:C	30:AG:172:LEU:HD23	2.29	0.53
30:AG:173:LEU:HD22	30:AG:178:PHE:CZ	2.43	0.53
30:AG:51:ARG:CA	30:AG:51:ARG:HE	2.21	0.53
32:AI:123:LEU:HA	32:AI:142:VAL:HG11	1.90	0.53
32:AI:94:ALA:O	32:AI:99:GLU:N	2.41	0.53
57:BA:1292:U:O2'	57:BA:1293:C:H5'	2.08	0.53
57:BA:628:G:O2'	57:BA:629:G:H5'	4.94	0.53
37:BQ:12:GLN:HA	57:BA:910:A:H62	1.73	0.53
26:BC:52:PRO:HG2	26:BC:53:ARG:HD3	1.90	0.53
38:BR:26:LYS:HE2	38:BR:71:GLN:H	1.72	0.53
41:BU:96:ALA:C	41:BU:98:LEU:H	2.11	0.53
46:AZ:167:PRO:O	46:AZ:168:GLU:CB	2.56	0.53
46:BZ:57:ILE:N	46:BZ:57:ILE:HD12	2.23	0.53
54:B7:12:ARG:HG3	57:BA:686:G:O6	2.09	0.53
52:A5:50:GLY:O	52:A5:51:TYR:CB	2.56	0.53
53:A6:15:GLU:OE1	53:A6:41:PRO:HG3	2.08	0.53
57:AA:1777:U:O2'	57:AA:1778:U:H5'	2.07	0.53
57:BA:528:A:C2	57:BA:2043:C:C5'	2.91	0.53
38:BR:10:LEU:HD22	38:BR:17:ARG:HD2	1.90	0.53
57:AA:1446:C:H2'	57:AA:1447:G:C8	2.42	0.53
57:AA:158:U:H3'	57:AA:158:U:O2	2.07	0.53
57:BA:156:U:O2	57:BA:156:U:H2'	2.07	0.53
42:BV:75:PHE:C	42:BV:75:PHE:CD1	2.81	0.53
57:AA:2735:G:H2'	57:AA:2736:G:H8	1.74	0.53
28:BE:189:PRO:HA	57:BA:2680:C:H5'	1.89	0.53
57:BA:2626:C:O2'	57:BA:2627:G:H5'	2.08	0.53
57:AA:1854:A:H2'	57:AA:1855:G:O4'	2.09	0.53
57:BA:2071:A:H2'	57:BA:2072:G:C8	2.43	0.53
49:B2:54:LYS:HB3	49:B2:54:LYS:HZ3	1.72	0.53
57:AA:128:C:H2'	57:AA:129:C:H6	1.73	0.53
57:AA:1916:A:H5'	57:AA:1917:U:OP2	2.08	0.53
53:A6:5:VAL:CG2	53:A6:6:ARG:H	2.16	0.53
57:AA:142:A:H5"	57:AA:142(A):C:H5	1.73	0.53
57:AA:1999:C:O2'	57:AA:2000:G:H5'	2.09	0.53
57:AA:271(M):G:C2'	57:AA:271(N):U:H5"	2.31	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AD:161:THR:HG21	57:AA:1819:A:H5''	1.91	0.53
30:AG:7:LEU:HG	30:AG:104:GLU:OE1	2.08	0.53
30:AG:36:LYS:HB2	30:AG:95:ARG:HG2	1.90	0.53
32:AI:76:THR:OG1	32:AI:77:LEU:N	2.41	0.53
37:AQ:16:ARG:HG2	37:AQ:17:LEU:H	1.73	0.53
39:AS:15:ARG:HH11	39:AS:15:ARG:CB	2.20	0.53
40:AT:22:PHE:N	40:AT:22:PHE:HD2	2.05	0.53
42:AV:39:LEU:CB	42:AV:47:VAL:HG11	2.38	0.53
53:B6:9:LEU:C	53:B6:9:LEU:HD22	2.27	0.53
57:BA:218:A:C2	57:BA:235:U:H4'	2.44	0.53
57:BA:408:G:O2'	57:BA:409:C:H5'	2.09	0.53
26:BC:178:LYS:HB2	26:BC:181:PHE:CE1	2.43	0.53
27:BD:228:PRO:HD3	27:BD:235:GLY:HA2	1.90	0.53
27:BD:49:ILE:HG22	57:BA:779:U:P	2.49	0.53
27:BD:68:LYS:HB2	27:BD:70:TRP:CZ2	2.44	0.53
29:BF:28:ILE:HD13	29:BF:28:ILE:N	2.22	0.53
32:BI:110:ASP:OD2	32:BI:113:ARG:HB2	2.08	0.53
36:BP:102:ARG:NH2	36:BP:102:ARG:CB	2.72	0.53
36:BP:102:ARG:NH2	36:BP:102:ARG:HB3	2.22	0.53
38:BR:4:LEU:HD23	57:BA:2822:G:O6	2.07	0.53
38:BR:4:LEU:O	38:BR:5:LYS:HD3	2.09	0.53
40:BT:106:SER:O	40:BT:107:ASP:CB	2.55	0.53
40:BT:70:VAL:HG12	40:BT:71:GLY:O	2.08	0.53
41:BU:106:PHE:O	41:BU:110:VAL:HG23	2.08	0.53
47:A0:63:VAL:HG21	47:A0:83:PRO:HG3	1.90	0.53
46:BZ:152:ALA:CA	46:BZ:167:PRO:HB2	2.36	0.53
52:B5:41:PRO:O	52:B5:44:THR:OG1	2.20	0.53
46:BZ:66:SER:C	46:BZ:67:LEU:HD22	2.28	0.53
57:BA:1652:A:C2'	57:BA:1653:G:H5'	2.37	0.53
29:BF:164:ARG:HG3	29:BF:175:THR:OG1	2.07	0.53
48:A1:53:VAL:HG11	48:A1:90:ILE:HG21	1.91	0.53
57:AA:1333:C:O5'	57:AA:1333:C:H6	1.91	0.53
57:BA:1472:A:C2'	57:BA:1473:G:H5'	2.38	0.53
57:AA:2073:C:O2'	57:AA:2074:U:H5'	2.08	0.53
57:AA:1972:A:H2'	57:AA:1973:G:H8	1.71	0.53
57:AA:882:G:H2'	57:AA:883:G:H8	1.73	0.53
35:AO:102:VAL:CG2	35:AO:121:VAL:HG22	2.39	0.53
57:AA:421:U:H2'	57:AA:421:U:O2	3.72	0.53
57:BA:2555:U:H2'	57:BA:2556:C:H5'	1.91	0.53
38:AR:104:ARG:HD2	38:AR:109:ALA:HB3	1.88	0.53
57:AA:2870:C:H2'	57:AA:2871:C:O4'	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BR:104:ARG:HD2	38:BR:109:ALA:HB3	1.91	0.53
43:AW:34:ASN:HD21	52:A5:39:MET:HB2	1.72	0.53
55:A8:63:PRO:O	55:A8:64:TYR:O	2.26	0.53
57:AA:1215:G:O2'	57:AA:1216:G:H5'	2.08	0.53
58:AB:106:G:O2'	58:AB:107:G:H5'	2.09	0.53
58:AB:81:G:H2'	58:AB:82:G:H5'	1.89	0.53
26:AC:219:MET:HE1	57:AA:2174:C:H1'	1.89	0.53
30:AG:125:PHE:N	30:AG:125:PHE:CD1	2.76	0.53
30:AG:83:ARG:NH1	30:AG:84:LYS:HZ1	2.06	0.53
31:AH:68:THR:O	31:AH:70:THR:N	2.41	0.53
36:AP:33:ARG:HD3	57:AA:587:C:C4	2.44	0.53
40:AT:31:SER:C	40:AT:32:TYR:CD2	2.82	0.53
40:AT:62:THR:HG22	40:AT:75:ILE:HG23	1.89	0.53
41:AU:96:ALA:C	41:AU:98:LEU:N	2.61	0.53
45:AY:17:SER:OG	45:AY:71:LYS:HD2	2.07	0.53
27:BD:71:ASP:HB2	27:BD:103:ARG:NH2	2.23	0.53
29:BF:53:THR:N	29:BF:56:GLU:HG3	2.23	0.53
34:BN:18:ALA:O	34:BN:21:LYS:N	2.35	0.53
36:BP:115:LEU:HA	36:BP:134:ALA:CB	2.38	0.53
38:BR:24:GLN:HE22	38:BR:36:THR:HG21	1.74	0.53
39:BS:14:VAL:O	39:BS:14:VAL:HG12	2.08	0.53
35:BO:77:ILE:HD13	40:BT:74:ARG:HD3	1.91	0.53
46:BZ:7:ALA:C	46:BZ:8:TYR:CD1	2.81	0.53
57:BA:1652:A:H3'	57:BA:1653:G:C8	2.44	0.53
29:BF:163:VAL:O	29:BF:166:ALA:HB3	2.08	0.53
48:A1:44:PRO:O	48:A1:46:LEU:HD13	2.09	0.53
43:AW:82:LEU:CB	43:AW:98:LYS:HB2	2.38	0.53
57:BA:947:G:H2'	57:BA:948:G:C8	2.43	0.53
57:BA:2720:U:H2'	57:BA:2720:U:O2	2.07	0.53
31:BH:24:VAL:HG12	31:BH:35:VAL:O	2.07	0.53
57:AA:409:C:H2'	57:AA:410:G:C8	2.43	0.53
57:AA:860:U:C5	57:AA:917:A:N7	2.75	0.53
36:AP:113:LYS:HA	36:AP:129:ALA:O	2.08	0.53
42:AV:62:LEU:N	42:AV:62:LEU:HD22	2.22	0.53
45:AY:45:VAL:HG12	45:AY:60:PHE:CE2	2.42	0.53
45:AY:53:PRO:O	45:AY:54:LYS:HG3	2.08	0.53
45:AY:7:VAL:CB	45:AY:8:LYS:NZ	2.72	0.53
53:B6:5:VAL:CG2	53:B6:6:ARG:H	2.15	0.53
28:BE:61:ARG:CG	57:BA:2787:C:H1'	2.38	0.53
47:B0:26:TYR:HE2	57:BA:857:C:H1'	1.73	0.53
27:BD:76:PRO:HG2	27:BD:98:VAL:CG2	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:14:ILE:HG13	28:BE:15:PHE:N	2.23	0.53
30:BG:131:TYR:HE2	30:BG:133:LEU:HB3	1.73	0.53
36:BP:113:LYS:HA	36:BP:129:ALA:O	2.08	0.53
37:BQ:76:LYS:HB3	37:BQ:91:GLU:HG3	1.90	0.53
39:BS:15:ARG:HH11	39:BS:15:ARG:CB	2.22	0.53
45:BY:95:LYS:CG	45:BY:101:LYS:H	2.22	0.53
57:BA:154(A):C:H3'	57:BA:155:U:C5'	2.39	0.53
54:B7:34:ARG:NH1	54:B7:39:ARG:CG	2.70	0.53
57:AA:276:A:H5'	57:AA:277:C:H6	1.73	0.53
48:A1:53:VAL:O	48:A1:54:ALA:C	2.46	0.53
57:BA:635:C:H2'	57:BA:636:G:C8	2.43	0.53
36:BP:86:LYS:HB2	36:BP:117:GLU:O	2.09	0.53
34:BN:120:LEU:HD23	34:BN:121:LYS:N	2.23	0.53
52:B5:6:VAL:HG13	52:B5:7:PRO:HD2	1.90	0.53
57:BA:2469:A:C5	57:BA:2470:G:H1'	2.43	0.53
57:BA:1662:C:O2'	57:BA:1663:C:H5'	2.08	0.53
37:BQ:84:GLY:O	37:BQ:85:LYS:HB2	2.09	0.53
57:BA:2098:U:H2'	57:BA:2099:U:O4'	2.08	0.53
57:AA:2853:C:H2'	57:AA:2854:G:C8	2.43	0.53
57:AA:921:G:H4'	57:AA:2269:A:C5	2.43	0.53
57:AA:1838:C:N4	57:AA:1898:U:H2'	2.24	0.53
37:AQ:78:PRO:HB2	37:AQ:81:VAL:HG11	1.90	0.53
57:AA:2600:A:H2'	57:AA:2601:C:C6	2.43	0.53
57:AA:108:U:H2'	57:AA:109:G:H8	1.72	0.53
27:AD:71:ASP:HB2	27:AD:103:ARG:HH22	1.69	0.53
28:AE:5:LEU:HD12	28:AE:51:PHE:HB2	1.91	0.53
30:AG:73:ALA:H	30:AG:87:PRO:CG	2.21	0.53
31:AH:60:ARG:O	31:AH:64:LEU:HG	2.08	0.53
36:AP:115:LEU:HA	36:AP:134:ALA:CB	2.39	0.53
36:AP:146:VAL:O	36:AP:148:LEU:HG	2.08	0.53
36:AP:40:SER:C	36:AP:41:ARG:HE	2.11	0.53
45:AY:3:VAL:N	45:AY:5:MET:HE2	2.23	0.53
57:BA:1038:C:O5'	57:BA:1038:C:H6	3.58	0.53
57:BA:1362:C:O2'	57:BA:1363:C:H5'	2.08	0.53
41:BU:7:GLY:O	57:BA:29:U:H4'	2.09	0.53
57:BA:780:G:H21	57:BA:783:A:H62	1.56	0.53
58:BB:40:U:O2	58:BB:43:C:H5"	2.09	0.53
30:BG:161:THR:CG2	30:BG:162:THR:N	2.71	0.53
38:BR:38:VAL:O	38:BR:42:LYS:HG3	2.08	0.53
43:BW:18:ARG:NH1	43:BW:76:VAL:O	2.41	0.53
45:BY:31:LEU:HB2	45:BY:32:PRO:CA	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:AZ:152:ALA:HA	46:AZ:168:GLU:H	1.74	0.53
50:A3:8:LEU:HD13	50:A3:31:LEU:HA	1.89	0.53
57:BA:644:A:C2	57:BA:2369:A:H1'	2.43	0.53
57:AA:2011:U:C2'	57:AA:2012:G:H5'	2.38	0.53
37:BQ:32:TYR:CE1	37:BQ:111:GLU:HA	2.38	0.53
48:B1:59:THR:O	48:B1:91:LYS:NZ	2.41	0.53
57:BA:1481:U:H5'	57:BA:1482:G:OP2	2.09	0.53
57:AA:2631:G:N3	57:AA:2810:A:H2	2.07	0.53
58:AB:1:U:O2	58:AB:1:U:H2'	2.09	0.53
44:BX:3:THR:O	44:BX:4:ALA:HB3	2.08	0.53
57:BA:921:G:H4'	57:BA:2269:A:C5	2.43	0.53
47:A0:27:GLU:OE2	47:A0:69:PHE:HB2	2.09	0.53
55:A8:62:LEU:N	55:A8:63:PRO:HD2	2.24	0.53
57:AA:1509(A):A:H2'	57:AA:1509(B):A:H8	1.74	0.53
57:AA:679:C:H2'	57:AA:680:G:C8	2.44	0.53
58:AB:81:G:H5'	58:AB:81:G:N3	2.24	0.53
26:AC:53:ARG:H	26:AC:53:ARG:CD	2.18	0.53
27:AD:46:GLN:CD	27:AD:46:GLN:H	2.11	0.53
28:AE:12:THR:O	28:AE:23:VAL:HG22	2.09	0.53
32:AI:56:LYS:HA	32:AI:59:ALA:HB3	1.90	0.53
53:B6:37:ARG:NH1	53:B6:39:TYR:HE1	2.06	0.53
57:BA:1799:G:H5'	57:BA:1819:A:N6	2.23	0.53
29:BF:62:ARG:HG2	29:BF:63:LYS:N	2.23	0.53
30:BG:71:THR:N	30:BG:89:GLY:O	2.34	0.53
32:BI:123:LEU:HA	32:BI:142:VAL:HG11	1.91	0.53
32:BI:73:GLU:HB2	32:BI:137:PRO:O	2.07	0.53
36:BP:29:LYS:HD2	36:BP:29:LYS:N	2.22	0.53
41:BU:79:PHE:CE2	41:BU:83:LEU:HD21	2.44	0.53
42:BV:82:ARG:HG2	42:BV:82:ARG:HH11	1.73	0.53
45:BY:13:VAL:HG22	45:BY:14:LEU:N	2.20	0.53
46:AZ:67:LEU:CD2	46:AZ:90:VAL:HG11	2.31	0.53
57:AA:1518:U:H2'	57:AA:1519:G:O4'	2.08	0.53
57:AA:155:U:C2'	57:AA:156:U:H5''	2.34	0.53
57:AA:519:U:H2'	57:AA:520:G:C8	2.43	0.53
57:BA:2870:C:O2'	57:BA:2871:C:H5'	2.09	0.53
43:AW:18:ARG:NH1	43:AW:76:VAL:O	2.42	0.53
57:AA:262:A:H2'	57:AA:263:C:O4'	2.09	0.53
57:BA:1523:U:H2'	57:BA:1524:G:C8	2.43	0.53
38:BR:29:LEU:HD12	38:BR:116:LEU:HD11	1.90	0.53
30:AG:2:PRO:HG3	51:A4:25:TYR:CD2	2.44	0.53
57:AA:424:G:H2'	57:AA:425:G:H8	2.33	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AC:30:VAL:HG11	26:AC:42:VAL:CG2	2.37	0.53
27:AD:68:LYS:HB2	27:AD:70:TRP:CZ2	2.43	0.53
30:AG:158:ALA:O	30:AG:159:VAL:CB	2.55	0.53
39:AS:58:LEU:O	39:AS:59:LYS:O	2.26	0.53
41:AU:31:SER:HB3	41:AU:34:LYS:HB2	1.90	0.53
42:AV:51:VAL:CG1	42:AV:52:VAL:H	2.14	0.53
57:BA:1216:G:O2'	57:BA:1217:C:H5'	2.48	0.53
27:BD:101:GLU:HB2	57:BA:1491:G:O2'	2.09	0.53
57:BA:424:G:O2'	57:BA:425:G:H5'	2.54	0.53
27:BD:92:ILE:HA	27:BD:107:ALA:H	1.73	0.53
28:BE:34:VAL:O	28:BE:34:VAL:HG22	2.07	0.53
30:BG:60:LEU:O	30:BG:64:THR:HG22	2.09	0.53
32:BI:86:THR:HG23	32:BI:86:THR:O	2.08	0.53
32:BI:92:VAL:HG13	32:BI:97:ILE:CD1	2.38	0.53
40:BT:62:THR:HA	40:BT:74:ARG:O	2.08	0.53
27:AD:226:MET:HB3	27:AD:230:ASP:HB2	1.90	0.53
46:AZ:150:LEU:HD23	46:AZ:150:LEU:O	2.08	0.53
57:BA:1846:G:H5'	57:BA:1846:G:C8	2.40	0.53
54:B7:12:ARG:NH2	54:B7:44:PRO:HB3	2.24	0.53
57:AA:57:C:O2'	57:AA:58:G:H5'	2.08	0.53
46:AZ:108:PRO:C	46:AZ:110:GLY:N	2.62	0.53
57:BA:635:C:H2'	57:BA:636:G:H8	1.74	0.53
57:BA:637:A:H4'	57:BA:638:G:O5'	2.09	0.53
57:AA:635:C:O2'	57:AA:639:U:OP1	2.26	0.53
57:AA:654(M):C:H2'	57:AA:654(N):G:N7	2.23	0.53
28:AE:189:PRO:HA	57:AA:2680:C:H5'	1.91	0.53
57:BA:2600:A:H2'	57:BA:2601:C:C6	2.44	0.53
43:BW:86:LEU:HD12	43:BW:87:PRO:HD2	1.91	0.53
57:AA:2033:A:H4'	57:AA:2034:U:OP1	2.09	0.53
57:AA:498:G:O2'	57:AA:499:U:H5'	2.08	0.53
43:AW:41:LYS:HE3	52:A5:25:LEU:HD11	1.90	0.53
57:AA:448:U:O4	57:AA:583:G:H1'	2.09	0.53
26:AC:23:ILE:HG22	26:AC:23:ILE:O	2.09	0.53
34:AN:15:LEU:O	34:AN:136:GLU:HA	2.08	0.53
35:AO:13:ASN:ND2	35:AO:97:ARG:HB2	2.23	0.53
38:AR:58:GLY:HA2	38:AR:80:PHE:CE1	2.44	0.53
40:AT:46:GLU:O	40:AT:46:GLU:HG2	3.48	0.53
45:AY:14:LEU:HD11	45:AY:22:GLY:HA2	1.91	0.53
51:B4:48:ARG:HG3	51:B4:49:PHE:HD1	1.74	0.53
55:B8:51:ALA:HA	55:B8:54:GLU:OE2	2.08	0.53
26:BC:53:ARG:CD	26:BC:53:ARG:H	2.18	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:45:ASN:OD1	27:BD:46:GLN:N	2.42	0.53
28:BE:185:LYS:O	28:BE:186:GLY:O	2.27	0.53
31:BH:99:VAL:O	31:BH:102:ALA:HB3	2.08	0.53
31:BH:105:LEU:CD2	31:BH:105:LEU:H	2.19	0.53
32:BI:29:TYR:CE1	32:BI:33:ARG:NE	2.73	0.53
36:BP:35:HIS:O	36:BP:36:LYS:HB2	2.09	0.53
36:BP:83:VAL:HG11	36:BP:112:LEU:CD2	2.39	0.53
38:BR:99:LYS:CD	38:BR:99:LYS:N	2.71	0.53
40:BT:27:THR:O	40:BT:28:VAL:CB	2.56	0.53
27:BD:244:ARG:HG2	27:BD:245:PRO:HB3	1.90	0.53
46:BZ:151:HIS:CB	46:BZ:170:THR:HA	2.39	0.53
57:AA:404:C:C4'	57:AA:405:U:H5'	2.31	0.53
57:BA:529:A:H62	57:BA:2041:U:H3	1.55	0.53
29:AF:132:VAL:CG2	29:AF:133:ASN:H	2.22	0.53
57:BA:276:A:H5'	57:BA:277:C:H6	1.74	0.53
57:AA:2208:A:H1'	57:AA:2219:G:C4	2.44	0.53
57:AA:2472:G:H5'	57:AA:2473:U:H5''	1.89	0.53
57:BA:2736:G:O2'	57:BA:2737:G:H5'	2.08	0.53
57:AA:472:A:H2'	57:AA:473:G:O4'	4.62	0.53
57:BA:286:C:H2'	57:BA:287:C:C6	2.44	0.53
27:BD:262:ARG:HD3	57:BA:2085:C:O3'	2.09	0.53
27:AD:166:GLN:CA	27:AD:166:GLN:NE2	2.72	0.53
57:BA:2099:U:O2	57:BA:2099:U:H2'	2.09	0.53
38:BR:75:LEU:O	38:BR:75:LEU:HD13	2.09	0.53
37:AQ:34:LEU:HD11	37:AQ:129:THR:HB	1.91	0.53
57:BA:1750:G:O2'	57:BA:1751:C:H5'	2.08	0.53
51:A4:26:SER:OG	51:A4:27:THR:N	2.40	0.53
55:A8:50:LEU:CG	55:A8:51:ALA:N	2.72	0.53
57:AA:1038:C:O5'	57:AA:1038:C:H6	3.62	0.53
57:AA:1049:C:H2'	57:AA:1050:A:C8	2.44	0.53
26:AC:178:LYS:HB2	26:AC:181:PHE:CE1	2.44	0.53
27:AD:139:GLY:O	27:AD:164:GLN:HG3	2.09	0.53
27:AD:24:ILE:HD13	27:AD:25:THR:N	2.14	0.53
28:AE:34:VAL:O	28:AE:35:GLN:HB2	2.09	0.53
29:AF:53:THR:N	29:AF:56:GLU:HG3	2.24	0.53
30:AG:43:LEU:CD2	30:AG:153:ARG:HD3	2.36	0.53
30:AG:95:ARG:NE	58:AB:45:A:H8	2.06	0.53
32:AI:83:ALA:HB1	32:AI:88:ILE:HA	1.90	0.53
37:AQ:12:GLN:HE21	37:AQ:73:PRO:CD	2.22	0.53
40:AT:123:GLN:O	40:AT:127:ALA:HB2	2.09	0.53
40:AT:80:SER:HB3	40:AT:81:PRO:CD	2.31	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:AV:52:VAL:HG13	42:AV:55:ALA:HB3	1.91	0.53
45:AY:88:LYS:HD3	45:AY:93:GLY:H	1.74	0.53
53:B6:41:PRO:HG3	53:B6:44:ARG:HH12	1.73	0.53
57:BA:1429:G:H2'	57:BA:1430:C:C6	2.43	0.53
57:BA:1799:G:H5'	57:BA:1819:A:H61	1.74	0.53
57:BA:2312:U:H2'	57:BA:2313:C:C5'	2.39	0.53
35:BO:67:LYS:NZ	57:BA:2726:U:H6	2.07	0.53
57:BA:259:G:N2	57:BA:621:A:H8	2.03	0.53
57:BA:673:C:C2'	57:BA:674:G:H5'	2.39	0.53
26:BC:21:TYR:HB2	26:BC:225:ILE:CG2	2.38	0.53
26:BC:23:ILE:O	26:BC:23:ILE:HG22	2.09	0.53
27:BD:45:ASN:ND2	27:BD:50:THR:HG21	2.24	0.53
30:BG:63:ILE:HD12	30:BG:141:PHE:CG	2.44	0.53
32:BI:28:ASN:C	32:BI:32:PRO:HG2	2.29	0.53
32:BI:5:LEU:HD11	32:BI:19:VAL:HG11	1.89	0.53
37:BQ:39:PRO:CD	37:BQ:99:PRO:HG3	2.36	0.53
39:BS:12:PHE:N	39:BS:12:PHE:CD2	2.76	0.53
42:BV:24:LYS:HE2	42:BV:90:PRO:CB	2.35	0.53
57:AA:1748:G:H8	57:AA:1748:G:H5'	1.73	0.53
52:B5:3:LYS:HZ3	57:BA:2614:A:H5'	1.73	0.53
31:BH:136:ILE:HD12	31:BH:136:ILE:H	1.72	0.53
57:BA:2801(A):A:H4'	57:BA:2802:G:H2'	1.91	0.53
48:B1:53:VAL:O	48:B1:54:ALA:HB3	2.09	0.53
48:B1:45:ASN:HD22	48:B1:45:ASN:C	2.12	0.53
46:BZ:128:VAL:CG2	46:BZ:161:VAL:HG22	2.39	0.53
46:AZ:146:ILE:HD12	57:AA:896:A:N3	2.24	0.53
57:AA:519:U:H2'	57:AA:520:G:H8	1.74	0.53
49:A2:33:MET:HG2	49:A2:37:PHE:CE1	2.42	0.53
46:BZ:112:ARG:O	46:BZ:114:GLY:N	2.41	0.53
27:AD:262:ARG:HD3	57:AA:2085:C:O3'	2.09	0.53
35:AO:40:VAL:HG11	57:AA:2561:A:H4'	1.91	0.53
44:BX:66:LEU:HD23	44:BX:66:LEU:O	2.09	0.53
44:AX:34:ALA:HA	44:AX:38:GLU:OE1	2.09	0.53
57:BA:2030:A:H4'	57:BA:2031:A:H8	1.74	0.53
57:AA:2720:U:H2'	57:AA:2720:U:O2	2.09	0.53
57:BA:1972:A:H2'	57:BA:1973:G:H8	1.73	0.53
57:AA:2716:U:O2'	57:AA:2717:G:H5'	2.09	0.53
31:AH:142:GLY:O	57:AA:2745:C:H4'	2.09	0.53
57:AA:2098:U:H2'	57:AA:2099:U:O4'	2.09	0.53
49:A2:2:LYS:HB3	57:AA:97:C:H5''	1.90	0.53
31:AH:43:VAL:O	31:AH:43:VAL:HG23	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:AO:7:TYR:CZ	35:AO:44:LYS:HG3	2.43	0.53
39:AS:35:ILE:HD11	39:AS:99:LYS:CE	2.39	0.53
45:AY:6:HIS:CD2	45:AY:6:HIS:N	2.76	0.53
45:AY:88:LYS:NZ	45:AY:93:GLY:CA	2.72	0.53
57:BA:1504:C:O2'	57:BA:1505:C:C5'	2.57	0.53
57:BA:2128:C:C2'	57:BA:2129:C:H5'	2.39	0.53
36:BP:38:GLN:HB3	57:BA:943:U:OP1	2.09	0.53
40:BT:55:ASN:C	40:BT:59:THR:HG22	2.29	0.53
45:BY:66:PRO:O	45:BY:67:LEU:HB3	2.08	0.53
45:BY:7:VAL:HG21	45:BY:8:LYS:NZ	2.24	0.53
31:BH:60:ARG:O	31:BH:64:LEU:HG	2.08	0.53
46:AZ:101:PRO:O	46:AZ:102:LEU:HD23	2.09	0.53
46:AZ:59:LEU:CG	46:AZ:69:THR:HG21	2.39	0.53
39:BS:41:ASP:OD2	39:BS:44:LYS:HG3	2.09	0.53
57:AA:1719:G:C2'	57:AA:1720:U:H5'	2.39	0.53
57:AA:2147:G:H2'	57:AA:2148:G:C4'	2.39	0.53
34:AN:94:HIS:N	34:AN:95:PRO:CD	2.72	0.53
57:BA:2720:U:H3'	57:BA:2721:A:H8	1.74	0.53
57:AA:2261:C:O2'	57:AA:2262:U:H5'	2.08	0.53
57:BA:809:G:O2'	57:BA:810:U:H5'	2.09	0.53
41:AU:24:TYR:HB2	41:AU:29:SER:HB3	1.91	0.53
57:AA:1153:C:H2'	57:AA:1154:G:O4'	2.09	0.52
57:AA:1283:G:N2	57:AA:1285:G:H3'	2.24	0.52
57:AA:1602:U:H3'	57:AA:1603:A:C5'	2.39	0.52
57:AA:2128:C:C2'	57:AA:2129:C:H5'	2.39	0.52
57:AA:1999:C:H5''	57:AA:2723:C:O2'	2.09	0.52
27:AD:92:ILE:HA	27:AD:107:ALA:H	1.74	0.52
28:AE:75:VAL:C	28:AE:77:ILE:H	2.11	0.52
30:AG:156:ASP:OD1	57:AA:2305:A:H5''	2.09	0.52
30:AG:83:ARG:CZ	30:AG:84:LYS:HZ2	2.21	0.52
30:AG:73:ALA:N	30:AG:87:PRO:HG3	2.23	0.52
30:AG:38:VAL:HG13	30:AG:93:THR:HA	1.91	0.52
32:AI:140:LEU:O	32:AI:141:LYS:HD3	2.09	0.52
32:AI:46:ALA:HB2	57:AA:271(P):C:H5'	1.90	0.52
34:AN:46:VAL:O	34:AN:47:ALA:CB	2.57	0.52
29:AF:116:ASP:OD2	36:AP:5:ASP:N	2.42	0.52
40:AT:27:THR:O	40:AT:28:VAL:CB	2.56	0.52
47:B0:45:PHE:HE2	47:B0:69:PHE:HE2	1.54	0.52
51:B4:13:ARG:HD3	51:B4:29:PRO:O	2.09	0.52
57:BA:1153:C:H2'	57:BA:1154:G:O4'	2.08	0.52
57:BA:1345:C:O2'	57:BA:1346:G:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1349:A:N6	57:BA:1598:C:N4	2.57	0.52
57:BA:16:G:O2'	57:BA:17:G:H5'	2.09	0.52
57:BA:191:A:H2'	57:BA:192:C:C6	2.44	0.52
58:BB:54:G:O2'	58:BB:55:U:H5'	2.08	0.52
28:BE:11:MET:HE2	28:BE:24:THR:HB	1.90	0.52
29:BF:9:ILE:HG12	29:BF:13:SER:O	2.08	0.52
30:BG:77:ILE:HG22	30:BG:80:PHE:O	2.08	0.52
32:BI:94:ALA:O	32:BI:99:GLU:N	2.40	0.52
36:BP:102:ARG:HH21	36:BP:102:ARG:HB2	1.72	0.52
36:BP:125:VAL:CG1	36:BP:138:LEU:HD21	2.39	0.52
37:BQ:21:THR:O	37:BQ:21:THR:HG22	2.08	0.52
38:BR:58:GLY:HA2	38:BR:80:PHE:CE1	2.44	0.52
40:BT:65:LYS:HG3	40:BT:66:VAL:N	2.23	0.52
40:BT:90:GLN:O	40:BT:91:ARG:C	2.47	0.52
45:BY:95:LYS:HD3	45:BY:100:ALA:CB	2.39	0.52
57:BA:1590:U:H2'	57:BA:1591:G:C5'	2.19	0.52
37:AQ:134:ARG:CZ	46:AZ:122:ARG:NE	2.67	0.52
46:AZ:67:LEU:HD12	46:AZ:67:LEU:N	2.24	0.52
51:A4:50:VAL:O	51:A4:52:THR:N	2.41	0.52
50:B3:54:VAL:HG12	50:B3:55:ARG:N	2.23	0.52
57:AA:2779:U:H4'	57:AA:2780:G:H5'	1.91	0.52
29:BF:164:ARG:HG2	29:BF:164:ARG:NH1	2.23	0.52
29:BF:206:ILE:HG22	29:BF:207:GLY:N	2.24	0.52
36:BP:13:ASN:HD22	36:BP:13:ASN:C	2.12	0.52
57:BA:2552:U:O2	57:BA:2554:U:H5'	2.09	0.52
57:AA:1208:C:H2'	57:AA:1208:C:O2	2.09	0.52
38:AR:3:HIS:HB2	57:AA:1654:A:OP1	2.10	0.52
57:AA:673:C:C2'	57:AA:674:G:H5'	2.38	0.52
58:AB:87:G:H2'	58:AB:88:C:H5''	1.92	0.52
26:AC:11:LEU:HB3	26:AC:33:LEU:HD22	1.89	0.52
30:AG:170:ARG:HH22	30:AG:182:LYS:CE	2.20	0.52
30:AG:32:PRO:HB2	30:AG:172:LEU:HD13	1.91	0.52
36:AP:102:ARG:O	36:AP:103:ALA:HB2	2.09	0.52
38:AR:38:VAL:O	38:AR:41:ALA:HB3	2.09	0.52
30:BG:67:LYS:CE	51:B4:6:HIS:NE2	2.72	0.52
55:B8:53:PRO:HG2	55:B8:54:GLU:N	2.24	0.52
57:BA:1111:A:O2'	57:BA:1112:G:H4'	2.09	0.52
57:BA:587:C:O2'	57:BA:588:U:OP2	2.22	0.52
57:BA:70:G:H1	57:BA:99:U:H3	37.54	0.52
26:BC:21:TYR:C	26:BC:225:ILE:HG22	2.30	0.52
28:BE:61:ARG:C	28:BE:63:LEU:N	2.62	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:78:LEU:O	28:BE:78:LEU:HD12	2.09	0.52
30:BG:160:VAL:CG1	30:BG:161:THR:N	2.72	0.52
30:BG:31:VAL:HG13	30:BG:31:VAL:O	2.09	0.52
32:BI:91:SER:CB	32:BI:119:PRO:HB2	2.31	0.52
32:BI:77:LEU:HD13	32:BI:140:LEU:HA	1.91	0.52
32:BI:77:LEU:HD23	32:BI:77:LEU:C	2.30	0.52
35:BO:13:ASN:ND2	35:BO:97:ARG:HB2	2.24	0.52
36:BP:102:ARG:O	36:BP:103:ALA:HB2	2.09	0.52
39:BS:24:LEU:HB3	39:BS:85:VAL:CG1	2.39	0.52
39:BS:49:VAL:HG11	39:BS:73:LEU:HD23	1.91	0.52
40:BT:125:ARG:HH11	40:BT:125:ARG:CA	2.22	0.52
45:BY:2:ARG:NE	45:BY:3:VAL:HG23	2.24	0.52
31:BH:55:PRO:HG2	31:BH:61:HIS:CE1	2.44	0.52
46:AZ:96:VAL:HG12	46:AZ:128:VAL:O	2.09	0.52
57:BA:1777:U:O2'	57:BA:1778:U:H5'	2.09	0.52
31:BH:156:ALA:O	31:BH:158:HIS:N	2.42	0.52
57:AA:1459:G:C8	57:AA:1461:G:H1'	2.44	0.52
42:BV:62:LEU:HD22	42:BV:62:LEU:N	2.24	0.52
46:BZ:51:ALA:O	46:BZ:52:SER:HB3	2.09	0.52
57:BA:2294:C:N4	57:BA:2338:G:H1	2.06	0.52
29:AF:31:HIS:O	29:AF:34:TRP:HB3	2.08	0.52
44:BX:44:GLU:HG3	44:BX:51:VAL:HG23	1.90	0.52
35:BO:40:VAL:HG11	57:BA:2561:A:H4'	1.90	0.52
33:BJ:101:PRO:C	33:BJ:103:GLY:H	2.12	0.52
33:BJ:108:LYS:O	33:BJ:110:GLY:N	2.42	0.52
58:BB:1:U:O2	58:BB:1:U:H2'	2.08	0.52
57:AA:1742:G:N7	57:AA:1743:C:C4	2.77	0.52
57:AA:2312:U:H2'	57:AA:2313:C:C5'	2.39	0.52
57:AA:2419:U:H2'	57:AA:2420:C:H6	1.74	0.52
57:AA:300:A:H2'	57:AA:301:G:O4'	5.62	0.52
27:AD:65:ILE:HD11	27:AD:67:PHE:CD1	2.45	0.52
30:AG:67:LYS:CE	30:AG:67:LYS:H	2.11	0.52
40:AT:90:GLN:O	40:AT:91:ARG:C	2.47	0.52
57:BA:1283:G:N2	57:BA:1285:G:H3'	2.25	0.52
57:BA:2378:A:H8	57:BA:2378:A:O5'	1.93	0.52
57:BA:404:C:C4'	57:BA:405:U:H5'	2.31	0.52
26:BC:182:PRO:CB	26:BC:185:LYS:HD2	2.40	0.52
26:BC:16:ASP:OD2	26:BC:19:LYS:HB2	2.09	0.52
27:BD:79:VAL:HG11	27:BD:111:LEU:HD12	1.92	0.52
27:BD:27:THR:HG23	27:BD:83:GLU:HB3	1.90	0.52
28:BE:33:VAL:HG12	28:BE:69:LYS:HZ1	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:51:THR:HB	29:BF:88:VAL:CG1	2.32	0.52
31:BH:97:ARG:O	31:BH:103:LEU:HD12	2.08	0.52
32:BI:46:ALA:HB2	57:BA:271(P):C:C5'	2.40	0.52
32:BI:69:LYS:HG2	32:BI:73:GLU:OE2	2.09	0.52
34:BN:3:THR:O	34:BN:3:THR:HG22	2.10	0.52
36:BP:108:LYS:N	36:BP:108:LYS:HD2	2.24	0.52
40:BT:62:THR:HG22	40:BT:75:ILE:HG23	1.90	0.52
57:AA:2591:C:H2'	57:AA:2592:G:C8	2.44	0.52
31:BH:72:ILE:O	31:BH:75:ALA:N	2.43	0.52
42:AV:24:LYS:HE2	42:AV:90:PRO:CB	2.36	0.52
53:A6:37:ARG:NH1	53:A6:39:TYR:HE1	2.07	0.52
38:AR:99:LYS:N	38:AR:99:LYS:CD	2.70	0.52
46:BZ:52:SER:OG	46:BZ:53:ILE:N	2.41	0.52
57:AA:34:C:H2'	57:AA:35:G:C8	6.37	0.52
57:BA:2476:A:H2'	57:BA:2477:C:H5''	1.91	0.52
34:BN:103:VAL:HG11	34:BN:120:LEU:HD12	1.91	0.52
57:BA:882:G:H2'	57:BA:883:G:H8	1.73	0.52
57:AA:1983:C:O2'	57:AA:1984:G:H5'	2.09	0.52
29:AF:155:LEU:HD22	29:AF:186:ILE:HA	1.91	0.52
57:BA:2039:C:H2'	57:BA:2040:C:H6	1.75	0.52
57:AA:192:C:H2'	57:AA:193:U:H5'	1.91	0.52
28:AE:34:VAL:O	28:AE:34:VAL:HG22	2.09	0.52
32:AI:84:GLY:HA2	32:AI:144:VAL:HG13	1.91	0.52
37:AQ:39:PRO:HB3	37:AQ:99:PRO:HD3	1.91	0.52
40:AT:89:VAL:HB	40:AT:91:ARG:HG3	1.91	0.52
41:AU:8:VAL:CG2	41:AU:12:ARG:HG2	2.40	0.52
53:B6:6:ARG:HD2	53:B6:6:ARG:N	2.24	0.52
41:BU:10:ARG:HG3	57:BA:1251:C:OP1	2.10	0.52
57:BA:1406:U:H2'	57:BA:1407:C:H6	2.13	0.52
57:BA:2206:G:C2	57:BA:2207:G:H5'	2.43	0.52
57:BA:27:G:N2	57:BA:512:G:C2'	2.71	0.52
58:BB:70:C:H2'	58:BB:71:C:C6	2.44	0.52
58:BB:81:G:N3	58:BB:81:G:H5'	2.23	0.52
27:BD:132:PRO:HD3	27:BD:190:TYR:CE2	2.44	0.52
30:BG:125:PHE:CD2	30:BG:131:TYR:HD1	2.27	0.52
32:BI:129:THR:CG2	32:BI:130:TYR:N	2.72	0.52
32:BI:91:SER:O	32:BI:92:VAL:HB	2.09	0.52
33:BJ:60:ARG:C	33:BJ:62:ALA:H	2.11	0.52
35:BO:24:VAL:HA	35:BO:39:ILE:HG22	1.91	0.52
36:BP:107:LYS:O	36:BP:109:GLY:N	2.42	0.52
39:BS:58:LEU:O	39:BS:59:LYS:O	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BO:64:ARG:NH1	40:BT:70:VAL:CG2	2.71	0.52
41:BU:79:PHE:O	41:BU:83:LEU:HD22	2.10	0.52
45:BY:80:GLY:O	45:BY:81:LYS:HB3	2.09	0.52
46:BZ:37:VAL:HG23	46:BZ:38:TYR:N	2.24	0.52
31:BH:41:MET:HG3	31:BH:42:ARG:H	1.68	0.52
31:BH:30:LYS:HB2	31:BH:79:VAL:HA	1.92	0.52
42:BV:91:TYR:H	42:BV:91:TYR:HD1	1.57	0.52
52:A5:40:LYS:CD	52:A5:46:CYS:HB3	2.39	0.52
57:BA:2329:G:H2'	57:BA:2330:G:H8	1.74	0.52
51:A4:48:ARG:HG3	51:A4:49:PHE:HD1	1.74	0.52
57:BA:1719:G:C2'	57:BA:1720:U:H5'	2.38	0.52
57:AA:635:C:H2'	57:AA:636:G:H8	1.74	0.52
57:AA:1924:C:O2'	57:AA:1925:C:H5'	2.10	0.52
57:AA:2243:U:H2'	57:AA:2244:U:C6	2.44	0.52
57:AA:2815:C:H2'	57:AA:2816:C:H6	1.74	0.52
43:AW:86:LEU:HD12	43:AW:87:PRO:HD2	1.90	0.52
53:A6:25:LYS:HE3	57:AA:2284:C:H41	1.73	0.52
57:AA:424:G:O2'	57:AA:425:G:H5'	2.55	0.52
57:AA:780:G:H21	57:AA:783:A:H62	1.57	0.52
58:AB:20:C:C3'	58:AB:21:G:H5''	2.39	0.52
27:AD:18:VAL:HG22	27:AD:211:ARG:NH2	2.25	0.52
27:AD:45:ASN:ND2	27:AD:50:THR:CG2	2.73	0.52
29:AF:89:VAL:HG12	29:AF:90:PHE:H	1.74	0.52
32:AI:107:VAL:O	32:AI:109:ILE:CD1	2.58	0.52
32:AI:84:GLY:HA3	32:AI:89:TYR:OH	2.09	0.52
39:AS:62:LYS:O	39:AS:65:VAL:N	2.42	0.52
39:AS:81:GLY:O	39:AS:83:LYS:N	2.42	0.52
40:AT:34:VAL:O	40:AT:35:LYS:CB	2.58	0.52
44:AX:55:ASN:HB2	44:AX:80:ILE:CD1	2.39	0.52
57:BA:234:C:H2'	57:BA:235:U:C6	2.44	0.52
28:BE:131:ALA:HB3	57:BA:2579:C:O2'	2.08	0.52
57:BA:424:G:H2'	57:BA:425:G:H8	2.33	0.52
28:BE:176:ILE:HB	28:BE:181:LEU:HB2	1.91	0.52
28:BE:61:ARG:HD3	57:BA:2787:C:C1'	2.36	0.52
28:BE:50:GLY:HA2	28:BE:78:LEU:HB3	1.92	0.52
30:BG:105:LYS:HG2	30:BG:142:PRO:HG3	1.90	0.52
30:BG:72:ARG:CD	30:BG:86:MET:HA	2.38	0.52
32:BI:88:ILE:HD11	32:BI:142:VAL:CG2	2.38	0.52
32:BI:1:MET:HG3	32:BI:23:PRO:HG3	1.91	0.52
41:BU:8:VAL:CG2	41:BU:12:ARG:HG2	2.40	0.52
45:BY:26:LYS:O	45:BY:27:VAL:C	2.48	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BY:7:VAL:CB	45:BY:8:LYS:NZ	2.73	0.52
46:BZ:40:ASP:OD2	46:BZ:41:LEU:N	2.43	0.52
52:B5:3:LYS:HB3	57:BA:747:U:C4	2.45	0.52
31:BH:41:MET:HE2	31:BH:43:VAL:CG1	2.39	0.52
46:BZ:153:SER:HB2	46:BZ:163:LEU:CD1	2.40	0.52
57:AA:2289:G:H2'	57:AA:2290:G:H8	1.72	0.52
57:AA:1158:C:H2'	57:AA:1158:C:O2	2.93	0.52
52:B5:50:GLY:O	52:B5:51:TYR:CB	2.57	0.52
46:BZ:91:LEU:HD22	46:BZ:96:VAL:HG11	1.91	0.52
57:AA:644:A:C2	57:AA:2369:A:H1'	2.44	0.52
46:AZ:20:ARG:HA	46:AZ:20:ARG:HH11	1.74	0.52
35:BO:120:GLU:HG2	35:BO:122:LEU:HD21	1.92	0.52
57:AA:1721:G:H5'	57:AA:1722:A:OP2	2.09	0.52
57:AA:635:C:H2'	57:AA:636:G:C8	2.44	0.52
57:AA:2030:A:H4'	57:AA:2031:A:H8	1.74	0.52
57:BA:478:A:N1	57:BA:500:G:H4'	2.24	0.52
27:BD:201:HIS:O	27:BD:203:ASN:N	2.42	0.52
57:BA:610:G:H2'	57:BA:611:C:C6	2.44	0.52
57:BA:2803:C:H2'	57:BA:2804:C:C6	2.45	0.52
47:A0:36:ILE:HD12	47:A0:38:VAL:N	2.24	0.52
57:AA:1396:U:O2	57:AA:1396:U:C2'	2.57	0.52
26:AC:6:LYS:CD	57:AA:2132:U:H3	2.22	0.52
57:AA:332:A:H4'	57:AA:333:G:OP1	2.07	0.52
57:AA:589:C:O2'	57:AA:590:A:H5'	2.10	0.52
57:AA:941:A:H2'	57:AA:942:G:C8	2.45	0.52
26:AC:21:TYR:HB2	26:AC:225:ILE:CG2	2.39	0.52
26:AC:21:TYR:C	26:AC:225:ILE:HG22	2.30	0.52
27:AD:176:ARG:HH11	27:AD:176:ARG:CG	2.20	0.52
27:AD:181:GLU:CA	27:AD:272:ALA:HB3	2.35	0.52
27:AD:65:ILE:HD11	27:AD:67:PHE:CG	2.45	0.52
41:AU:95:LEU:HD12	42:AV:11:GLN:HE21	1.74	0.52
57:BA:1049:C:H2'	57:BA:1050:A:C8	2.44	0.52
57:BA:1221(A):C:O2'	57:BA:1222:C:H5'	2.09	0.52
57:BA:1327:C:H2'	57:BA:1328:G:O4'	2.10	0.52
27:BD:161:THR:HG21	57:BA:1819:A:H5''	1.92	0.52
43:BW:42:ARG:HB2	57:BA:2010:G:H5''	1.92	0.52
57:BA:296:C:C2'	57:BA:297:C:H5'	2.39	0.52
57:BA:710:G:H2'	57:BA:711:G:C8	2.82	0.52
27:BD:209:ALA:C	27:BD:210:GLY:O	2.45	0.52
27:BD:31:LYS:HB3	27:BD:34:VAL:HG22	1.91	0.52
29:BF:9:ILE:HG23	29:BF:12:LEU:C	2.30	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:113:ARG:HD3	30:BG:113:ARG:O	2.09	0.52
30:BG:181:ARG:O	30:BG:182:LYS:C	2.48	0.52
30:BG:51:ARG:HD3	30:BG:53:LEU:CD2	2.39	0.52
32:BI:34:GLY:O	32:BI:35:LEU:HD23	2.09	0.52
36:BP:35:HIS:HB3	57:BA:942:G:OP1	2.09	0.52
52:B5:3:LYS:HZ1	57:BA:2614:A:H5'	1.72	0.52
46:BZ:3:TYR:CB	46:BZ:57:ILE:HA	2.40	0.52
46:BZ:7:ALA:O	46:BZ:62:PRO:HD3	2.09	0.52
54:B7:5:TRP:CZ3	57:BA:464:U:H4'	2.44	0.52
50:B3:8:LEU:HD12	50:B3:30:ARG:O	2.09	0.52
57:BA:1158:C:H2'	57:BA:1158:C:O2	2.93	0.52
46:AZ:61:LEU:N	46:AZ:61:LEU:HD23	2.16	0.52
46:AZ:70:LEU:CD1	46:AZ:98:MET:SD	2.94	0.52
29:BF:198:ALA:O	29:BF:201:VAL:HG12	2.09	0.52
31:BH:154:PRO:HB3	31:BH:163:TYR:CZ	2.45	0.52
41:AU:101:ARG:HH11	41:AU:101:ARG:CB	2.15	0.52
53:B6:45:LYS:HE3	57:BA:2371:G:H5''	1.92	0.52
57:BA:1448:G:H1'	57:BA:1528:A:N6	2.24	0.52
57:BA:2777:G:H5''	57:BA:2778:A:C5'	2.40	0.52
41:BU:47:TYR:HD1	41:BU:50:ARG:HH22	1.56	0.52
35:BO:35:VAL:HG11	35:BO:103:ALA:HB3	1.91	0.52
57:BA:271(H):G:O2'	57:BA:271(I):G:H8	1.92	0.52
41:AU:108:GLU:HG3	42:AV:44:LYS:CD	2.40	0.52
46:AZ:19:ARG:HH12	46:AZ:84:GLU:CA	2.22	0.52
43:BW:82:LEU:CB	43:BW:98:LYS:HB2	2.39	0.52
27:BD:166:GLN:CA	27:BD:166:GLN:NE2	2.73	0.52
57:BA:2025:C:H2'	57:BA:2026:C:H6	1.75	0.52
57:AA:1794:U:O2'	57:AA:1795:C:H5'	2.10	0.52
43:BW:95:ILE:O	43:BW:95:ILE:HG13	2.10	0.52
57:BA:1838:C:N4	57:BA:1898:U:H2'	2.25	0.52
30:AG:98:ARG:NE	51:A4:1:MET:HG2	2.25	0.52
30:AG:98:ARG:NH1	51:A4:9:LEU:HB2	2.25	0.52
53:A6:9:LEU:HD12	53:A6:28:ARG:CG	2.39	0.52
55:A8:4:MET:CE	55:A8:61:LEU:HD23	2.38	0.52
41:AU:92:ARG:HE	57:AA:996:A:C4'	2.22	0.52
27:AD:31:LYS:O	27:AD:33:LEU:N	2.43	0.52
30:AG:63:ILE:HG21	30:AG:141:PHE:CB	2.40	0.52
36:AP:35:HIS:O	36:AP:36:LYS:HB2	2.10	0.52
36:AP:7:ARG:NH1	36:AP:7:ARG:CB	2.72	0.52
39:AS:90:GLY:O	39:AS:92:TYR:N	2.43	0.52
55:B8:3:LYS:HE3	57:BA:242:G:O5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BW:15:ARG:NH2	57:BA:1266:G:O5'	2.37	0.52
57:BA:1337:G:H2'	57:BA:1338:G:H8	1.75	0.52
57:BA:547:A:H1'	57:BA:548:A:N7	2.25	0.52
28:BE:11:MET:HB3	28:BE:24:THR:HA	1.92	0.52
28:BE:203:LYS:HE3	28:BE:204:ALA:HB2	1.92	0.52
29:BF:66:PRO:O	29:BF:67:GLN:CB	2.58	0.52
36:BP:105:LEU:HG	57:BA:626:U:C2	2.45	0.52
36:BP:97:PRO:O	36:BP:98:GLU:CB	2.58	0.52
38:BR:99:LYS:HA	38:BR:112:ALA:HA	1.92	0.52
45:BY:90:LEU:HG	45:BY:91:GLU:N	2.23	0.52
45:BY:88:LYS:NZ	45:BY:93:GLY:CA	2.72	0.52
31:BH:33:LEU:HD12	31:BH:75:ALA:HA	1.91	0.52
46:BZ:5:LEU:O	46:BZ:59:LEU:HD23	2.10	0.52
52:B5:40:LYS:HZ2	52:B5:46:CYS:H	1.58	0.52
40:BT:6:LEU:O	40:BT:6:LEU:HD23	2.09	0.52
35:BO:114:ILE:HD12	35:BO:114:ILE:N	2.23	0.52
49:A2:33:MET:O	49:A2:37:PHE:HD1	1.92	0.52
57:BA:2199:A:H5''	57:BA:2200:C:H5	1.74	0.52
52:B5:6:VAL:CG1	57:BA:2016:U:H1'	2.40	0.52
44:BX:44:GLU:HG2	44:BX:51:VAL:HG23	1.92	0.52
57:AA:420:C:H2'	57:AA:421:U:C6	2.44	0.52
36:AP:13:ASN:HD22	36:AP:13:ASN:C	2.11	0.52
57:BA:2280:G:O2'	57:BA:2281:C:H5'	2.09	0.52
57:AA:1907:G:O2'	57:AA:1908:C:H5'	2.10	0.52
46:AZ:4:ARG:O	46:AZ:5:LEU:HB2	2.10	0.52
57:AA:1932:A:H2'	57:AA:1933:G:O4'	2.09	0.52
57:AA:1221:C:H2'	57:AA:1221(A):C:C6	2.45	0.52
57:AA:191:A:H2'	57:AA:192:C:C6	2.44	0.52
28:AE:61:ARG:CG	57:AA:2787:C:H1'	2.39	0.52
57:AA:836:G:H2'	57:AA:837:C:H6	1.74	0.52
27:AD:117:VAL:HG21	27:AD:128:GLY:C	2.29	0.52
27:AD:119:ALA:CB	27:AD:130:ALA:HB3	2.40	0.52
28:AE:59:VAL:CG1	28:AE:63:LEU:HG	2.40	0.52
29:AF:25:PRO:CB	29:AF:119:ARG:HD3	2.40	0.52
30:AG:144:ILE:HD12	30:AG:145:THR:H	1.74	0.52
30:AG:60:LEU:C	30:AG:60:LEU:HD13	2.29	0.52
32:AI:6:LEU:O	32:AI:7:GLU:C	2.49	0.52
40:AT:2:ASN:O	40:AT:3:ARG:C	2.47	0.52
41:AU:68:ALA:O	41:AU:71:GLN:HB3	2.09	0.52
45:AY:13:VAL:HG13	45:AY:14:LEU:N	2.24	0.52
45:AY:26:LYS:O	45:AY:27:VAL:C	2.47	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:AY:49:VAL:HG22	57:AA:483:A:C5'	2.34	0.52
51:B4:16:CYS:HA	51:B4:33:VAL:HB	1.92	0.52
26:BC:6:LYS:CD	57:BA:2132:U:H3	2.22	0.52
57:BA:2787:C:O2	57:BA:2787:C:H2'	2.09	0.52
27:BD:13:ARG:NH1	27:BD:16:MET:SD	2.82	0.52
27:BD:49:ILE:HD11	27:BD:52:ARG:HA	1.90	0.52
29:BF:25:PRO:CB	29:BF:119:ARG:HD3	2.40	0.52
36:BP:23:PRO:HD2	36:BP:33:ARG:NH1	2.22	0.52
44:BX:64:LYS:NZ	44:BX:73:ARG:NH2	2.57	0.52
46:AZ:168:GLU:O	46:AZ:170:THR:N	2.43	0.52
46:AZ:59:LEU:HG	46:AZ:69:THR:CG2	2.40	0.52
50:A3:54:VAL:HG12	50:A3:55:ARG:N	2.24	0.52
57:AA:2036:C:H5'	57:AA:2036:C:C6	2.37	0.52
57:AA:2476:A:H2'	57:AA:2477:C:H5''	1.92	0.52
57:BA:1721:G:H5'	57:BA:1722:A:OP2	2.10	0.52
57:AA:554:U:O2'	57:AA:555:U:H5'	2.09	0.52
57:BA:2533:A:H2'	57:BA:2534:A:H5'	1.91	0.52
43:BW:92:ARG:HH11	43:BW:92:ARG:HG2	1.74	0.52
48:B1:60:PHE:HZ	48:B1:94:LEU:HD22	1.75	0.52
53:A6:6:ARG:N	53:A6:6:ARG:HD2	2.25	0.52
30:AG:106:LEU:CA	30:AG:110:ALA:HB3	2.40	0.52
32:AI:11:ASN:C	32:AI:12:LEU:HD23	2.30	0.52
32:AI:37:VAL:HG12	32:AI:38:LEU:N	2.24	0.52
36:AP:125:VAL:O	36:AP:145:PRO:HD2	2.09	0.52
37:AQ:67:ARG:HG2	37:AQ:67:ARG:HH11	1.73	0.52
38:AR:26:LYS:HE2	38:AR:71:GLN:H	1.74	0.52
57:BA:1001:A:H2'	57:BA:1002:G:O4'	2.10	0.52
57:BA:142:A:H5''	57:BA:142(A):C:H5	1.75	0.52
58:BB:71:C:H2'	58:BB:72:G:C8	2.44	0.52
27:BD:139:GLY:O	27:BD:164:GLN:HG3	2.10	0.52
27:BD:227:ASN:HB3	27:BD:228:PRO:HD2	1.92	0.52
32:BI:72:LEU:O	32:BI:138:ILE:HD12	2.10	0.52
32:BI:83:ALA:HB1	32:BI:88:ILE:HA	1.92	0.52
42:BV:46:VAL:HG22	42:BV:47:VAL:N	2.18	0.52
57:BA:2591:C:H2'	57:BA:2592:G:C8	2.45	0.52
27:BD:222:ARG:HD3	57:BA:1828:G:O6	2.09	0.52
47:A0:51:VAL:CG2	47:A0:81:VAL:HG23	2.38	0.52
57:BA:2134:A:H1'	57:BA:2159:G:N2	2.25	0.52
57:BA:2368:C:H2'	57:BA:2369:A:H8	1.73	0.52
57:AA:2777:G:H5''	57:AA:2778:A:C5'	2.40	0.52
57:AA:154(A):C:H3'	57:AA:155:U:C5'	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:156:U:H2'	57:AA:156:U:O2	2.08	0.52
49:A2:10:LEU:O	49:A2:11:GLU:C	2.48	0.52
57:BA:633:A:C2'	57:BA:634:C:H5'	2.39	0.52
46:AZ:19:ARG:HH12	46:AZ:84:GLU:C	2.13	0.52
37:AQ:109:VAL:CG1	37:AQ:113:GLN:HB3	2.39	0.52
44:AX:53:LYS:H	44:AX:82:GLN:HB3	1.74	0.52
43:AW:34:ASN:ND2	52:A5:39:MET:CB	2.71	0.52
55:A8:6:THR:HG21	55:A8:63:PRO:HD3	1.92	0.52
57:AA:1280:G:H3'	57:AA:1281:G:H5''	1.92	0.52
57:AA:531:C:OP1	57:AA:561:G:N1	2.43	0.52
58:AB:44:G:C2	58:AB:48:A:C2	2.98	0.52
27:AD:109:ASP:HB2	27:AD:197:GLY:HA2	1.90	0.52
31:AH:30:LYS:HB2	31:AH:79:VAL:HA	1.92	0.52
32:AI:126:TYR:H	32:AI:140:LEU:CD2	2.23	0.52
35:AO:24:VAL:HA	35:AO:39:ILE:HG22	1.90	0.52
36:AP:83:VAL:HG11	36:AP:112:LEU:CD2	2.38	0.52
40:AT:47:GLY:HA3	40:AT:63:VAL:CG1	2.40	0.52
40:AT:57:PHE:CG	40:AT:58:ASN:N	2.78	0.52
45:AY:15:VAL:HG12	45:AY:16:ALA:N	2.25	0.52
45:AY:36:ALA:HB1	45:AY:67:LEU:O	2.10	0.52
53:B6:8:LYS:NZ	57:BA:2285:C:H5	2.07	0.52
58:BB:44:G:C2	58:BB:48:A:C2	2.98	0.52
26:BC:2:PRO:HG2	26:BC:3:LYS:H	1.74	0.52
28:BE:120:TRP:CD1	28:BE:155:LYS:HB3	2.45	0.52
29:BF:116:ASP:OD2	36:BP:5:ASP:N	2.43	0.52
30:BG:41:GLN:HB3	30:BG:43:LEU:HD13	1.91	0.52
32:BI:79:ILE:HG22	32:BI:81:VAL:CG1	2.30	0.52
42:BV:47:VAL:HB	42:BV:49:THR:O	2.09	0.52
41:BU:31:SER:O	41:BU:33:ARG:N	2.43	0.52
57:BA:523:C:O2'	57:BA:524:U:H5'	2.09	0.52
52:B5:40:LYS:CD	52:B5:46:CYS:HB3	2.40	0.52
52:B5:49:CYS:O	52:B5:51:TYR:N	2.43	0.52
51:A4:51:ASP:OD2	51:A4:52:THR:N	2.43	0.52
49:A2:12:GLU:O	49:A2:16:LEU:HG	2.10	0.52
42:AV:75:PHE:CD1	42:AV:75:PHE:C	2.82	0.52
57:AA:2538:C:O2'	57:AA:2539:C:H5'	2.09	0.52
57:AA:795:C:H2'	57:AA:796:C:C6	2.45	0.52
29:BF:132:VAL:CG2	29:BF:133:ASN:H	2.22	0.52
57:BA:2223:G:H2'	57:BA:2224:G:H5'	1.91	0.52
28:BE:105:THR:HG21	28:BE:164:ARG:NH1	2.24	0.52
48:B1:18:ILE:HG12	48:B1:37:ILE:HG12	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:AE:105:THR:HG21	28:AE:164:ARG:NH1	2.24	0.52
57:AA:1327:C:H2'	57:AA:1328:G:O4'	2.10	0.51
35:AO:67:LYS:HZ3	57:AA:2726:U:H6	1.57	0.51
36:AP:71:VAL:HG12	57:AA:389:G:H1	1.74	0.51
57:AA:70:G:H1	57:AA:99:U:H3	37.58	0.51
27:AD:11:PRO:C	27:AD:13:ARG:H	2.14	0.51
27:AD:13:ARG:NH1	27:AD:16:MET:SD	2.82	0.51
31:AH:105:LEU:H	31:AH:105:LEU:CD2	2.20	0.51
32:AI:91:SER:OG	32:AI:92:VAL:N	2.43	0.51
36:AP:59:LEU:O	36:AP:59:LEU:HD23	2.10	0.51
44:AX:12:VAL:HG11	44:AX:27:THR:OG1	2.10	0.51
45:AY:28:LYS:O	45:AY:29:GLU:C	2.48	0.51
45:AY:80:GLY:O	45:AY:81:LYS:HB3	2.09	0.51
51:B4:2:LYS:CG	58:BB:40:U:O4	2.58	0.51
37:BQ:21:THR:O	37:BQ:23:GLY:N	2.43	0.51
39:BS:81:GLY:O	39:BS:83:LYS:N	2.43	0.51
41:BU:91:ASP:O	41:BU:92:ARG:HB3	2.09	0.51
41:BU:95:LEU:HD13	42:BV:4:ILE:HG23	1.92	0.51
43:BW:50:VAL:HG13	43:BW:105:VAL:HG21	1.91	0.51
45:BY:28:LYS:O	45:BY:29:GLU:C	2.48	0.51
31:BH:43:VAL:O	31:BH:43:VAL:HG23	2.09	0.51
46:AZ:34:ASN:C	46:AZ:34:ASN:HD22	2.11	0.51
35:BO:103:ALA:HB1	35:BO:105:GLU:OE1	2.10	0.51
57:BA:797:C:O2'	57:BA:798:G:H5'	2.31	0.51
57:BA:2865:U:H3'	57:BA:2866:U:O2	2.10	0.51
57:AA:2762:G:H2'	57:AA:2763:G:H5'	1.92	0.51
57:AA:1917:U:O2'	57:AA:1918:A:H5'	2.10	0.51
57:AA:2803:C:H2'	57:AA:2804:C:C6	2.46	0.51
43:AW:92:ARG:HH11	43:AW:92:ARG:HG2	1.76	0.51
31:BH:152:ARG:HG3	31:BH:152:ARG:O	2.10	0.51
55:A8:23:VAL:CG1	55:A8:46:ARG:HB3	2.40	0.51
37:AQ:84:GLY:O	37:AQ:85:LYS:HB2	2.10	0.51
57:AA:2506:U:H4'	57:AA:2507:C:OP1	2.11	0.51
57:AA:2022:U:O2'	57:AA:2617:C:H5'	2.11	0.51
57:AA:2512:C:H2'	57:AA:2513:G:O4'	2.09	0.51
57:AA:445:C:O2'	57:AA:446:G:H5'	2.11	0.51
58:AB:71:C:H2'	58:AB:72:G:C8	2.45	0.51
27:AD:63:ARG:HH22	57:AA:1568:G:P	2.33	0.51
28:AE:120:TRP:CD1	28:AE:155:LYS:HB3	2.45	0.51
28:AE:33:VAL:HG12	28:AE:69:LYS:HZ1	1.74	0.51
29:AF:9:ILE:HG23	29:AF:12:LEU:C	2.31	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AI:75:LEU:O	32:AI:76:THR:O	2.29	0.51
34:AN:35:ARG:O	34:AN:37:LYS:N	2.43	0.51
34:AN:23:LEU:HB2	34:AN:60:ILE:CG2	2.40	0.51
39:AS:92:TYR:CG	39:AS:93:LYS:N	2.75	0.51
55:B8:32:LEU:HB3	55:B8:36:LYS:NZ	2.24	0.51
57:BA:1316:U:H2'	57:BA:1317:A:C8	2.46	0.51
35:BO:67:LYS:HZ3	57:BA:2726:U:H6	1.55	0.51
57:BA:300:A:H2'	57:BA:301:G:O4'	5.65	0.51
27:BD:117:VAL:HG21	27:BD:128:GLY:C	2.31	0.51
29:BF:28:ILE:CG2	29:BF:116:ASP:HB2	2.34	0.51
32:BI:72:LEU:O	32:BI:138:ILE:CD1	2.59	0.51
36:BP:47:ASP:HB3	36:BP:48:PRO:HA	1.92	0.51
39:BS:89:ARG:O	39:BS:90:GLY:O	2.27	0.51
40:BT:57:PHE:O	40:BT:59:THR:N	2.44	0.51
41:BU:91:ASP:CG	41:BU:96:ALA:HB2	2.31	0.51
57:BA:1784:A:H4'	57:BA:1785:A:O5'	2.10	0.51
57:AA:528:A:C2	57:AA:2043:C:C5'	2.93	0.51
57:AA:272(D):G:H1	57:AA:364:C:N4	2.08	0.51
57:AA:2567:G:H2'	57:AA:2568:C:H6	1.74	0.51
57:BA:469:G:C2'	57:BA:470:A:H5''	2.40	0.51
34:BN:94:HIS:N	34:BN:95:PRO:CD	2.72	0.51
57:AA:2071:A:H2'	57:AA:2072:G:C8	2.45	0.51
36:AP:140:ALA:O	36:AP:141:ALA:HB3	2.10	0.51
44:AX:66:LEU:O	44:AX:66:LEU:HD23	2.11	0.51
57:BA:1993:U:H2'	57:BA:1994:C:O4'	2.10	0.51
33:AJ:102:LYS:HA	33:AJ:106:GLN:CB	2.39	0.51
51:A4:13:ARG:HD3	51:A4:29:PRO:O	2.11	0.51
55:A8:4:MET:HG2	57:AA:592:G:O2'	2.11	0.51
57:AA:1216:G:O2'	57:AA:1217:C:H5'	2.48	0.51
57:AA:1221(A):C:O2'	57:AA:1222:C:H5'	2.10	0.51
57:AA:547:A:H1'	57:AA:548:A:N7	2.26	0.51
27:AD:70:TRP:CZ3	27:AD:146:GLU:OE2	2.63	0.51
27:AD:227:ASN:HB3	27:AD:228:PRO:HD2	1.92	0.51
28:AE:61:ARG:HD3	57:AA:2787:C:C1'	2.36	0.51
29:AF:125:LEU:HD23	29:AF:125:LEU:H	1.75	0.51
30:AG:86:MET:HG2	30:AG:86:MET:O	2.11	0.51
30:AG:57:ALA:HB2	30:AG:90:LEU:HD21	1.91	0.51
31:AH:88:LEU:N	31:AH:88:LEU:HD22	2.25	0.51
32:AI:91:SER:O	32:AI:92:VAL:HB	2.09	0.51
57:BA:1602:U:H3'	57:BA:1603:A:C5'	2.40	0.51
57:BA:1493:C:C4	57:BA:2206:G:O2'	2.63	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:62:LEU:HG	57:BA:2394:C:P	2.49	0.51
27:BD:34:VAL:CG2	27:BD:35:LYS:H	2.14	0.51
28:BE:179:GLU:O	28:BE:180:ASN:HB2	2.09	0.51
36:BP:101:VAL:CB	36:BP:107:LYS:HA	2.27	0.51
44:BX:64:LYS:HZ3	44:BX:73:ARG:NH2	2.08	0.51
54:B7:16:HIS:HA	54:B7:21:ARG:HH12	1.75	0.51
39:AS:41:ASP:OD2	39:AS:44:LYS:HG3	2.10	0.51
46:AZ:16:SER:O	46:AZ:20:ARG:HB2	2.11	0.51
57:AA:2011:U:H2'	57:AA:2012:G:H5'	1.92	0.51
48:B1:45:ASN:HD22	48:B1:46:LEU:N	2.08	0.51
48:B1:20:ARG:HG2	48:B1:20:ARG:NH1	2.16	0.51
29:BF:160:ASN:HD21	29:BF:162:LEU:HB2	1.74	0.51
46:BZ:180:VAL:O	46:BZ:182:LYS:N	2.43	0.51
41:AU:108:GLU:CG	42:AV:44:LYS:HD3	2.41	0.51
57:BA:2697:G:H2'	57:BA:2698:U:O4'	2.10	0.51
57:AA:637:A:H4'	57:AA:638:G:O5'	2.11	0.51
57:BA:1889:A:O2'	57:BA:2087:G:H5'	2.11	0.51
35:BO:22:ILE:HB	35:BO:40:VAL:HG12	1.92	0.51
57:AA:2720:U:H3'	57:AA:2721:A:H8	1.75	0.51
45:BY:98:VAL:O	45:BY:98:VAL:HG12	2.11	0.51
57:AA:2195:C:O2'	57:AA:2196:C:H5'	2.10	0.51
48:A1:3:LYS:CG	48:A1:4:VAL:H	2.24	0.51
53:A6:26:ASN:OD1	53:A6:27:LYS:N	2.44	0.51
57:AA:1504:C:O2'	57:AA:1505:C:C5'	2.58	0.51
57:AA:228:A:H2'	57:AA:230:U:O4'	2.10	0.51
26:AC:48:LEU:HD12	26:AC:48:LEU:N	2.26	0.51
27:AD:130:ALA:C	27:AD:131:LEU:HD12	2.31	0.51
27:AD:132:PRO:HD3	27:AD:190:TYR:CE2	2.44	0.51
27:AD:168:ARG:O	27:AD:169:GLU:HB2	2.10	0.51
28:AE:51:PHE:C	28:AE:74:PRO:HB3	2.31	0.51
30:AG:101:ILE:HG22	30:AG:105:LYS:NZ	2.26	0.51
31:AH:102:ALA:HA	31:AH:117:PRO:CD	2.41	0.51
31:AH:80:SER:O	31:AH:81:GLU:HB2	2.10	0.51
31:AH:94:TYR:CD2	31:AH:107:VAL:HB	2.46	0.51
32:AI:35:LEU:O	32:AI:36:ALA:HB2	2.10	0.51
40:AT:70:VAL:CG1	40:AT:71:GLY:N	2.72	0.51
42:AV:2:PHE:HB2	42:AV:42:GLY:HA2	1.92	0.51
55:B8:6:THR:HG22	55:B8:61:LEU:CD1	2.40	0.51
57:BA:1421:G:C2'	57:BA:1422:G:H5'	2.99	0.51
58:BB:20:C:C3'	58:BB:21:G:H5''	2.40	0.51
58:BB:77:U:C2'	58:BB:78:A:H5'	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:61:ARG:NH2	57:BA:2811:G:H4'	2.25	0.51
30:BG:71:THR:CG2	30:BG:72:ARG:N	2.73	0.51
32:BI:107:VAL:O	32:BI:109:ILE:CD1	2.58	0.51
33:BJ:83:TYR:O	33:BJ:84:GLU:CB	2.58	0.51
34:BN:30:ILE:HG22	34:BN:34:LEU:CD2	2.40	0.51
36:BP:16:ARG:O	36:BP:16:ARG:NH1	2.35	0.51
36:BP:7:ARG:NH1	36:BP:7:ARG:CA	2.70	0.51
38:BR:38:VAL:O	38:BR:41:ALA:HB3	2.11	0.51
40:BT:117:ASP:O	40:BT:121:ILE:HG13	2.10	0.51
40:BT:12:SER:O	40:BT:13:ARG:NH2	2.43	0.51
57:BA:1826:G:H2'	57:BA:1827:C:H6	1.75	0.51
57:AA:2801(A):A:H4'	57:AA:2802:G:H2'	1.91	0.51
50:B3:8:LEU:HD13	50:B3:31:LEU:HA	1.92	0.51
37:BQ:137:TYR:HE2	46:BZ:81:ARG:NH1	2.09	0.51
57:BA:145:G:C3'	57:BA:146:G:H5''	2.39	0.51
52:B5:41:PRO:HG2	52:B5:44:THR:OG1	2.10	0.51
57:BA:528:A:H2	57:BA:2043:C:C5'	2.23	0.51
51:B4:51:ASP:OD2	51:B4:52:THR:N	2.43	0.51
53:B6:10:LEU:N	53:B6:10:LEU:HD23	2.17	0.51
57:AA:2368:C:H2'	57:AA:2369:A:H8	1.75	0.51
48:A1:41:ARG:HD3	48:A1:43:TYR:CZ	2.46	0.51
57:BA:1999:C:O2'	57:BA:2000:G:H5'	2.11	0.51
49:A2:25:VAL:HG11	49:A2:61:LEU:HD21	1.91	0.51
40:BT:113:LYS:HE3	57:BA:1754:C:OP2	2.10	0.51
48:B1:86:SER:O	48:B1:89:GLU:N	2.40	0.51
57:BA:2147:G:H2'	57:BA:2148:G:C4'	2.40	0.51
33:BJ:111:LEU:O	33:BJ:112:LEU:O	2.27	0.51
57:AA:1260:G:O2'	57:AA:1261:C:H5'	2.10	0.51
47:A0:25:ARG:HH11	47:A0:25:ARG:HG2	1.76	0.51
57:AA:102:G:OP1	57:AA:102:G:C4'	2.58	0.51
27:AD:10:THR:HG23	27:AD:13:ARG:CB	2.41	0.51
28:AE:14:ILE:HG13	28:AE:15:PHE:N	2.26	0.51
34:AN:103:VAL:HG11	34:AN:120:LEU:HD12	1.92	0.51
36:AP:39:LYS:HD3	36:AP:40:SER:H	1.75	0.51
36:AP:47:ASP:OD1	36:AP:49:ARG:HB2	2.11	0.51
36:AP:50:ARG:HD3	55:A8:7:HIS:HD2	1.74	0.51
38:AR:38:VAL:CG1	38:AR:42:LYS:HD2	2.41	0.51
39:AS:87:PHE:HB2	39:AS:106:ARG:HD3	1.92	0.51
39:AS:24:LEU:HB3	39:AS:85:VAL:CG1	2.41	0.51
40:AT:106:SER:O	40:AT:107:ASP:CB	2.58	0.51
41:AU:17:ILE:HG23	41:AU:39:LEU:HD12	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:AU:92:ARG:CB	42:AV:11:GLN:NE2	2.73	0.51
42:AV:76:LYS:HB2	42:AV:81:TYR:HB3	1.92	0.51
44:AX:10:ALA:O	44:AX:28:PHE:HB3	2.10	0.51
53:B6:43:CYS:O	53:B6:44:ARG:CB	2.59	0.51
55:B8:50:LEU:CG	55:B8:51:ALA:N	2.73	0.51
57:BA:1316:U:H2'	57:BA:1317:A:H8	1.73	0.51
29:BF:68:LYS:O	57:BA:2060:A:OP1	2.28	0.51
57:BA:2512:C:H2'	57:BA:2513:G:O4'	2.10	0.51
26:BC:31:LYS:HZ1	26:BC:183:PRO:HD3	1.75	0.51
27:BD:58:HIS:CD2	27:BD:59:LYS:N	2.78	0.51
27:BD:30:GLU:CD	27:BD:63:ARG:NE	2.64	0.51
28:BE:95:ILE:HD13	28:BE:95:ILE:H	1.76	0.51
32:BI:68:LEU:C	32:BI:68:LEU:HD23	2.31	0.51
39:BS:87:PHE:HB2	39:BS:106:ARG:HD3	1.93	0.51
41:BU:101:ARG:HH11	41:BU:101:ARG:CB	2.16	0.51
45:BY:6:HIS:N	45:BY:6:HIS:CD2	2.76	0.51
30:AG:160:VAL:CG1	30:AG:161:THR:H	2.23	0.51
31:BH:20:ALA:HB1	31:BH:21:PRO:HD2	1.91	0.51
47:B0:49:LYS:H	47:B0:80:HIS:HD1	1.58	0.51
57:AA:676:A:H8	57:AA:2069:G:N2	1.96	0.51
53:A6:41:PRO:HG2	53:A6:43:CYS:O	2.09	0.51
57:AA:528:A:HO2'	57:AA:529:A:H5'	1.71	0.51
29:BF:178:PRO:HB2	29:BF:201:VAL:CG1	2.32	0.51
57:AA:2134:A:H1'	57:AA:2159:G:N2	2.26	0.51
57:BA:1313:U:H2'	57:BA:1610:A:C2	2.45	0.51
53:A6:45:LYS:HE3	57:AA:2371:G:H5''	1.91	0.51
53:B6:45:LYS:HG2	57:BA:2371:G:C4'	2.36	0.51
57:BA:2789:C:N3	57:BA:2894:G:O6	2.43	0.51
49:B2:55:ARG:HH21	49:B2:55:ARG:HG3	1.75	0.51
48:A1:44:PRO:HB2	48:A1:46:LEU:CD1	2.41	0.51
54:A7:16:HIS:HA	54:A7:21:ARG:HH12	1.74	0.51
48:A1:94:LEU:HD22	48:A1:94:LEU:H	1.75	0.51
50:A3:1:MET:O	50:A3:3:ARG:N	2.40	0.51
57:BA:1854:A:H2'	57:BA:1855:G:O4'	2.10	0.51
57:BA:2061:G:H5''	57:BA:2503:A:C2	2.45	0.51
57:AA:2533:A:H2'	57:AA:2534:A:H5'	1.93	0.51
57:AA:2321:G:N3	57:AA:2321:G:H2'	2.25	0.51
41:AU:111:GLU:HA	41:AU:111:GLU:OE2	2.10	0.51
51:A4:16:CYS:HA	51:A4:33:VAL:HB	1.91	0.51
55:A8:50:LEU:HG	55:A8:51:ALA:N	2.26	0.51
57:AA:1111:A:O2'	57:AA:1112:G:H4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2122:U:H2'	57:AA:2123:G:C8	2.43	0.51
57:AA:252:G:O2'	57:AA:253:C:H5'	2.11	0.51
36:AP:105:LEU:HG	57:AA:626:U:C2	2.45	0.51
51:A4:2:LYS:CG	58:AB:40:U:O4	2.59	0.51
26:AC:219:MET:O	26:AC:220:GLY:O	2.28	0.51
28:AE:11:MET:CB	28:AE:24:THR:HA	2.41	0.51
29:AF:62:ARG:HG2	29:AF:63:LYS:N	2.25	0.51
30:AG:31:VAL:H	30:AG:33:ARG:HH11	1.58	0.51
31:AH:121:ILE:HD12	31:AH:144:VAL:HG21	1.92	0.51
32:AI:91:SER:HB3	32:AI:121:LYS:HD3	1.92	0.51
39:AS:89:ARG:HG2	39:AS:92:TYR:HA	1.91	0.51
42:AV:47:VAL:HB	42:AV:49:THR:O	2.11	0.51
43:AW:75:TYR:O	43:AW:75:TYR:HD2	1.94	0.51
45:AY:96:ILE:HG22	45:AY:97:ARG:N	2.25	0.51
53:B6:48:VAL:O	53:B6:49:HIS:CB	2.59	0.51
57:BA:1040:C:HO2'	57:BA:1041:C:P	2.33	0.51
57:BA:1340:U:H4'	57:BA:1341:U:OP2	2.11	0.51
57:BA:192:C:H2'	57:BA:193:U:H5'	1.93	0.51
57:BA:228:A:H2'	57:BA:230:U:O4'	2.11	0.51
57:BA:519:U:H2'	57:BA:520:G:C8	2.45	0.51
47:B0:27:GLU:OE1	57:BA:856:C:H1'	2.10	0.51
28:BE:12:THR:O	28:BE:23:VAL:HG22	2.10	0.51
30:BG:43:LEU:HB2	30:BG:88:ILE:CG2	2.40	0.51
30:BG:5:VAL:O	30:BG:6:ALA:C	2.49	0.51
30:BG:36:LYS:HB2	30:BG:95:ARG:HG2	1.93	0.51
32:BI:75:LEU:O	32:BI:76:THR:O	2.29	0.51
40:BT:2:ASN:O	40:BT:3:ARG:C	2.49	0.51
44:BX:31:HIS:HE1	57:BA:71:A:C2	2.28	0.51
45:BY:49:VAL:HG22	57:BA:483:A:C5'	2.33	0.51
52:A5:3:LYS:HB3	57:AA:747:U:C4	2.45	0.51
37:AQ:134:ARG:CD	46:AZ:122:ARG:HH21	2.23	0.51
46:AZ:128:VAL:CG2	46:AZ:132:ASN:HB2	2.28	0.51
46:BZ:165:VAL:HG12	46:BZ:166:SER:N	2.24	0.51
57:BA:1947:C:H2'	57:BA:1948:G:C5'	2.40	0.51
57:AA:1464:C:HO2'	57:AA:1528:A:H8	1.48	0.51
31:AH:154:PRO:HB3	31:AH:163:TYR:CZ	2.46	0.51
57:AA:2400:G:N2	57:AA:2417:C:C2	2.78	0.51
57:BA:1333:C:H6	57:BA:1333:C:O5'	1.93	0.51
51:A4:47:GLN:O	51:A4:48:ARG:HB3	2.11	0.51
44:BX:3:THR:HA	44:BX:6:ASP:OD2	2.11	0.51
29:AF:135:LYS:O	29:AF:137:LYS:N	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:A6:42:TRP:HA	53:A6:42:TRP:HE3	1.75	0.51
57:AA:2312:U:C2'	57:AA:2313:C:H5''	2.41	0.51
26:AC:22:THR:OG1	26:AC:25:GLU:HG2	2.09	0.51
27:AD:211:ARG:O	27:AD:215:LEU:HG	2.11	0.51
30:AG:129:GLY:O	30:AG:130:ASN:CB	2.58	0.51
30:AG:32:PRO:HB2	30:AG:172:LEU:HD12	1.92	0.51
32:AI:73:GLU:HB2	32:AI:137:PRO:O	2.11	0.51
41:AU:79:PHE:CE2	41:AU:83:LEU:HD21	2.45	0.51
41:AU:79:PHE:O	41:AU:83:LEU:HD22	2.11	0.51
44:AX:31:HIS:HE1	57:AA:71:A:C2	2.29	0.51
55:B8:48:PHE:O	55:B8:49:VAL:CG2	2.55	0.51
57:BA:1021:A:O2'	57:BA:1123:C:H5''	2.10	0.51
29:BF:3:GLU:HA	29:BF:24:LEU:HG	1.92	0.51
30:BG:88:ILE:HG22	30:BG:89:GLY:H	1.75	0.51
31:BH:94:TYR:CD2	31:BH:107:VAL:HB	2.46	0.51
32:BI:81:VAL:HG13	32:BI:143:SER:H	1.75	0.51
40:BT:117:ASP:OD2	40:BT:120:ARG:HG3	2.11	0.51
40:BT:28:VAL:O	40:BT:29:ARG:HB2	2.09	0.51
43:BW:75:TYR:O	43:BW:75:TYR:HD2	1.94	0.51
46:BZ:38:TYR:CG	46:BZ:38:TYR:O	2.63	0.51
57:BA:613:G:C5'	57:BA:613:G:C8	2.94	0.51
31:BH:41:MET:SD	31:BH:52:VAL:HG13	2.50	0.51
42:AV:21:ARG:NH1	42:AV:91:TYR:HE2	2.09	0.51
46:BZ:149:SER:OG	46:BZ:172:ALA:O	2.28	0.51
53:A6:48:VAL:O	53:A6:49:HIS:CB	2.59	0.51
31:AH:158:HIS:NE2	31:AH:170:ARG:N	2.59	0.51
31:BH:158:HIS:NE2	31:BH:170:ARG:N	2.59	0.51
38:AR:99:LYS:HA	38:AR:112:ALA:HA	1.92	0.51
38:AR:99:LYS:HD3	38:AR:99:LYS:N	2.19	0.51
29:BF:160:ASN:HD22	29:BF:162:LEU:H	1.58	0.51
57:BA:2464:C:O2'	57:BA:2465:C:P	2.69	0.51
49:A2:24:LEU:HD11	49:A2:28:LYS:HE2	1.91	0.51
57:AA:1963:U:C2'	57:AA:1963:U:O2	2.58	0.51
57:BA:2062:A:H2'	57:BA:2063:C:H5'	1.93	0.51
57:AA:1039:G:H1	57:AA:1116:C:H42	1.57	0.51
44:AX:36:LYS:CB	57:AA:1598:C:H5'	2.33	0.51
57:AA:1493:C:C4	57:AA:2206:G:O2'	2.64	0.51
57:AA:264:C:HO2'	57:AA:265:A:H2'	1.76	0.51
57:AA:2666:C:H5''	57:AA:2667:C:H5	1.76	0.51
27:AD:268:ARG:HH11	27:AD:268:ARG:CB	2.23	0.51
27:AD:31:LYS:HB3	27:AD:34:VAL:CG2	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AD:70:TRP:HZ3	27:AD:146:GLU:OE2	1.94	0.51
28:AE:134:ILE:HA	28:AE:137:HIS:CD2	2.46	0.51
30:AG:132:ASN:HA	30:AG:157:ILE:O	2.11	0.51
33:AJ:53:VAL:O	33:AJ:54:ALA:HB2	2.11	0.51
34:AN:30:ILE:HG22	34:AN:34:LEU:CD2	2.41	0.51
36:AP:108:LYS:N	36:AP:108:LYS:HD2	2.25	0.51
36:AP:7:ARG:NH1	36:AP:7:ARG:CA	2.72	0.51
39:AS:57:LYS:O	39:AS:58:LEU:HB2	2.10	0.51
40:AT:23:ARG:HB2	40:AT:24:PRO:HD2	1.92	0.51
45:AY:88:LYS:CE	45:AY:93:GLY:HA3	2.41	0.51
47:B0:25:ARG:HG2	47:B0:25:ARG:HH11	1.75	0.51
57:BA:1491:G:N2	57:BA:1913:A:N6	105.93	0.51
57:BA:621:A:C2'	57:BA:622:G:H5'	2.36	0.51
57:BA:679:C:H2'	57:BA:680:G:C8	2.46	0.51
27:BD:138:VAL:O	27:BD:138:VAL:HG13	2.10	0.51
29:BF:63:LYS:HE3	29:BF:67:GLN:HB2	1.93	0.51
30:BG:98:ARG:HA	30:BG:101:ILE:HD12	1.93	0.51
31:BH:88:LEU:HD22	31:BH:88:LEU:N	2.26	0.51
36:BP:39:LYS:HD3	36:BP:40:SER:H	1.76	0.51
37:BQ:39:PRO:HB3	37:BQ:99:PRO:HD3	1.93	0.51
35:BO:107:ARG:NH2	40:BT:35:LYS:HD2	2.26	0.51
40:BT:89:VAL:CG1	40:BT:91:ARG:HG3	2.40	0.51
45:BY:3:VAL:H	45:BY:5:MET:HE2	1.76	0.51
31:BH:44:VAL:N	31:BH:46:GLU:OE2	2.43	0.51
29:AF:198:ALA:O	29:AF:201:VAL:HG12	2.11	0.51
31:AH:158:HIS:NE2	31:AH:169:VAL:C	2.64	0.51
57:AA:1472:A:C2'	57:AA:1473:G:H5'	2.41	0.51
57:AA:271(H):G:O2'	57:AA:271(I):G:H8	1.93	0.51
54:B7:28:ARG:HG3	54:B7:28:ARG:NH1	2.26	0.51
57:AA:1649:G:O2'	57:AA:1650:G:H5'	2.10	0.51
57:BA:1742:G:N7	57:BA:1743:C:C4	2.79	0.51
55:A8:50:LEU:C	55:A8:53:PRO:HD2	2.30	0.51
41:AU:7:GLY:O	57:AA:29:U:H4'	2.11	0.51
27:AD:208:LYS:HB2	57:AA:729:G:N7	2.26	0.51
28:AE:77:ILE:HG22	28:AE:78:LEU:CG	2.41	0.51
28:AE:95:ILE:H	28:AE:95:ILE:HD13	1.76	0.51
32:AI:31:LEU:HD21	32:AI:38:LEU:HG	1.93	0.51
32:AI:86:THR:O	32:AI:86:THR:HG23	2.10	0.51
36:AP:97:PRO:O	36:AP:98:GLU:CB	2.58	0.51
40:AT:19:LEU:HD22	40:AT:85:LYS:HG3	1.93	0.51
41:AU:61:TRP:CD2	41:AU:94:ASN:HA	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:AY:68:HIS:HB3	45:AY:71:LYS:CG	2.41	0.51
57:BA:816:C:O2'	57:BA:817:C:H5'	2.11	0.51
58:BB:87:G:H2'	58:BB:88:C:H5''	1.93	0.51
26:BC:47:LYS:NZ	26:BC:169:THR:O	2.41	0.51
26:BC:48:LEU:HD12	26:BC:48:LEU:N	2.26	0.51
28:BE:47:VAL:HG22	28:BE:49:LEU:HD23	1.91	0.51
28:BE:55:ASN:HD21	28:BE:75:VAL:HG22	1.75	0.51
30:BG:126:ASP:O	30:BG:128:ARG:N	2.44	0.51
36:BP:81:GLN:HB3	36:BP:106:LEU:HD12	1.93	0.51
40:BT:80:SER:HB3	40:BT:81:PRO:CD	2.31	0.51
34:BN:2:LYS:HZ3	42:BV:13:ARG:H	1.58	0.51
27:AD:244:ARG:HG2	27:AD:245:PRO:HB3	1.92	0.51
46:BZ:89:PHE:HD2	46:BZ:90:VAL:N	2.09	0.51
46:BZ:81:ARG:NH1	46:BZ:81:ARG:CB	2.58	0.51
57:BA:1528(A):A:C8	57:BA:1529:G:C8	2.99	0.51
37:BQ:27:VAL:CG1	37:BQ:28:ALA:N	2.66	0.51
57:BA:1396:U:O2	57:BA:1396:U:C2'	2.57	0.51
57:AA:2712:U:O2'	57:AA:2712(A):A:P	2.68	0.51
50:B3:1:MET:O	50:B3:3:ARG:N	2.38	0.51
52:A5:6:VAL:HG13	52:A5:7:PRO:HD2	1.92	0.51
57:BA:1721:G:C2	57:BA:1739:U:OP2	2.64	0.51
57:AA:1889:A:O2'	57:AA:2087:G:H5'	2.11	0.51
48:A1:40:ARG:HD3	48:A1:40:ARG:O	2.11	0.51
53:B6:42:TRP:HA	53:B6:42:TRP:HE3	1.74	0.51
57:AA:2099:U:O2	57:AA:2099:U:H2'	2.11	0.51
57:BA:2552:U:H2'	57:BA:2554:U:OP2	2.11	0.51
57:AA:2552:U:H2'	57:AA:2554:U:OP2	2.10	0.51
54:A7:19:ARG:HH11	54:A7:19:ARG:HG2	1.76	0.51
31:AH:152:ARG:O	31:AH:152:ARG:HG3	2.10	0.51
57:AA:2831:G:O2'	57:AA:2883:A:H2'	2.11	0.51
57:BA:2831:G:O2'	57:BA:2883:A:H2'	2.11	0.51
53:A6:9:LEU:HD12	53:A6:28:ARG:HG3	1.92	0.51
57:AA:1150:C:O2'	57:AA:1151:G:H5'	2.11	0.51
57:AA:1171:G:N3	57:AA:1171:G:H2'	2.26	0.51
57:AA:1485:G:H2'	57:AA:1486:A:H8	1.74	0.51
35:AO:67:LYS:NZ	57:AA:2726:U:H6	2.09	0.51
57:AA:2787:C:O2	57:AA:2787:C:H2'	2.10	0.51
30:AG:11:TYR:HA	30:AG:15:VAL:HG23	1.93	0.51
32:AI:88:ILE:HD11	32:AI:142:VAL:CG2	2.40	0.51
34:AN:32:THR:O	34:AN:35:ARG:O	2.29	0.51
34:AN:3:THR:HG22	34:AN:3:THR:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AP:18:ARG:NH1	36:AP:18:ARG:O	2.43	0.51
36:AP:23:PRO:HG2	36:AP:33:ARG:NE	2.26	0.51
36:AP:38:GLN:OE1	36:AP:41:ARG:HD2	2.11	0.51
41:AU:31:SER:C	41:AU:33:ARG:H	2.14	0.51
41:AU:112:ARG:NH2	42:AV:46:VAL:HG11	2.26	0.51
45:AY:95:LYS:CG	45:AY:101:LYS:H	2.22	0.51
55:B8:4:MET:HG3	55:B8:61:LEU:CD2	2.40	0.51
57:BA:102:G:OP1	57:BA:102:G:C4'	2.59	0.51
57:BA:309:G:N3	57:BA:329:G:O2'	2.44	0.51
28:BE:34:VAL:O	28:BE:35:GLN:HB2	2.11	0.51
32:BI:47:LEU:CD1	32:BI:47:LEU:H	4.79	0.51
36:BP:126:VAL:CG1	36:BP:148:LEU:HD11	2.41	0.51
37:BQ:78:PRO:HB2	37:BQ:81:VAL:HG11	1.93	0.51
42:BV:52:VAL:HG13	42:BV:55:ALA:HB3	1.93	0.51
42:BV:19:LYS:HZ3	42:BV:20:LEU:HB2	1.76	0.51
48:A1:89:GLU:C	48:A1:92:LYS:HB3	2.31	0.51
57:AA:1448:G:H1'	57:AA:1528:A:N6	2.26	0.51
57:BA:271(F):C:H2'	57:BA:271(G):C:C6	2.40	0.51
57:AA:1678:G:N2	57:AA:1989:G:N2	2.55	0.51
48:A1:53:VAL:CG1	48:A1:54:ALA:N	2.74	0.51
38:AR:18:LEU:HD21	38:AR:22:ARG:NE	2.27	0.51
52:A5:42:PRO:HB2	52:A5:43:HIS:HD2	1.76	0.51
57:BA:2533:A:C2'	57:BA:2534:A:H5'	2.41	0.51
57:AA:2639:A:H2'	57:AA:2640:G:H5'	1.93	0.51
57:BA:2305:A:H4'	57:BA:2305:A:OP1	2.11	0.51
57:AA:1047:G:C2	57:AA:1111:A:N6	2.79	0.50
57:AA:108:U:H2'	57:AA:109:G:C8	2.47	0.50
57:AA:1346:G:H2'	57:AA:1347:G:H8	1.76	0.50
57:AA:1799:G:H5'	57:AA:1819:A:H61	1.76	0.50
57:AA:221:A:H61	57:AA:265:A:H8	1.57	0.50
40:AT:54:ARG:HB2	57:AA:2846:G:OP2	2.12	0.50
57:AA:557:U:H2'	57:AA:558:G:H8	1.76	0.50
57:AA:607:U:H3	57:AA:621:A:H2	1.53	0.50
27:AD:227:ASN:HD21	57:AA:784:A:H5''	1.74	0.50
58:AB:77:U:C2'	58:AB:78:A:H5'	2.41	0.50
26:AC:6:LYS:C	26:AC:8:TYR:N	2.63	0.50
27:AD:131:LEU:HD12	27:AD:131:LEU:N	2.25	0.50
27:AD:270:ILE:C	27:AD:271:ILE:HG12	2.30	0.50
29:AF:102:PRO:HA	57:AA:607:U:OP1	2.11	0.50
30:AG:29:TRP:HE3	30:AG:33:ARG:NH2	2.09	0.50
36:AP:126:VAL:CG1	36:AP:148:LEU:HD11	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AQ:76:LYS:HB3	37:AQ:91:GLU:HG3	1.93	0.50
40:AT:55:ASN:C	40:AT:59:THR:HG22	2.31	0.50
45:AY:20:TYR:CE2	45:AY:42:VAL:N	2.77	0.50
57:BA:1346:G:H2'	57:BA:1347:G:H8	1.76	0.50
57:BA:2206:G:H21	57:BA:2207:G:C4'	2.24	0.50
26:BC:219:MET:O	26:BC:220:GLY:O	2.29	0.50
28:BE:11:MET:CB	28:BE:24:THR:HA	2.40	0.50
28:BE:52:LEU:O	28:BE:74:PRO:CA	2.59	0.50
32:BI:127:VAL:C	32:BI:128:LEU:HD22	2.31	0.50
36:BP:17:LYS:C	36:BP:19:VAL:N	2.65	0.50
36:BP:59:LEU:HA	36:BP:61:ARG:HH11	1.66	0.50
39:BS:57:LYS:O	39:BS:58:LEU:HB2	2.11	0.50
40:BT:118:ARG:HA	40:BT:121:ILE:HD12	1.92	0.50
43:BW:29:LEU:HD21	43:BW:33:ARG:NH2	2.23	0.50
46:BZ:168:GLU:O	46:BZ:170:THR:N	2.32	0.50
52:A5:41:PRO:HG2	52:A5:44:THR:OG1	2.11	0.50
57:AA:2041:U:H2'	57:AA:2042:A:C8	2.46	0.50
57:AA:529:A:H62	57:AA:2041:U:H3	1.58	0.50
57:AA:1652:A:C2'	57:AA:1653:G:H5'	2.41	0.50
36:AP:85:LEU:HA	36:AP:88:LEU:HD13	1.93	0.50
46:AZ:179:ASP:OD2	46:AZ:181:GLU:HB2	2.11	0.50
49:A2:13:ALA:CA	49:A2:16:LEU:HG	2.38	0.50
57:AA:1467:C:O2'	57:AA:1468:C:H5'	2.11	0.50
57:BA:2538:C:O2'	57:BA:2539:C:H5'	2.10	0.50
46:AZ:139:VAL:C	46:AZ:141:VAL:H	2.14	0.50
54:A7:5:TRP:CZ3	57:AA:464:U:H4'	2.46	0.50
57:AA:2199:A:H5''	57:AA:2200:C:H5	1.77	0.50
57:AA:1301:A:H2	57:AA:1626:G:N3	2.08	0.50
57:BA:775:G:O2'	57:BA:776:G:H5'	6.95	0.50
57:AA:610:G:H2'	57:AA:611:C:C6	2.45	0.50
57:BA:2631:G:N3	57:BA:2810:A:H2	2.08	0.50
57:AA:2836:U:H2'	57:AA:2837:G:C8	2.46	0.50
48:B1:83:GLU:O	48:B1:84:GLY:C	2.49	0.50
57:BA:49:A:H5''	57:BA:51:G:O4'	2.12	0.50
55:A8:53:PRO:HG2	55:A8:54:GLU:N	2.25	0.50
57:AA:1665:A:O2'	57:AA:1666:G:H5'	2.12	0.50
57:AA:408:G:O2'	57:AA:409:C:H5'	2.12	0.50
27:AD:58:HIS:CD2	27:AD:59:LYS:N	2.79	0.50
28:AE:16:ARG:O	28:AE:18:ASP:N	2.43	0.50
28:AE:69:LYS:HZ2	28:AE:89:ASP:HA	1.74	0.50
29:AF:65:TRP:CZ3	29:AF:75:HIS:HD2	2.29	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:AG:125:PHE:HB2	30:AG:166:ASP:HB2	1.92	0.50
31:AH:17:VAL:O	31:AH:45:VAL:HG22	2.12	0.50
31:AH:18:GLU:O	31:AH:24:VAL:HG23	2.10	0.50
41:AU:91:ASP:O	41:AU:92:ARG:HB3	2.12	0.50
45:AY:26:LYS:HG2	45:AY:27:VAL:H	1.76	0.50
55:B8:61:LEU:CD1	55:B8:62:LEU:N	2.66	0.50
57:BA:1496:A:H8	57:BA:1577:C:HO2'	1.53	0.50
28:BE:187:ALA:CB	57:BA:2729:G:H1'	2.41	0.50
49:B2:47:ASN:ND2	57:BA:94(A):G:N3	2.59	0.50
30:BG:105:LYS:HE2	51:B4:25:TYR:O	2.10	0.50
32:BI:91:SER:HB3	32:BI:121:LYS:HD3	1.93	0.50
32:BI:35:LEU:O	32:BI:36:ALA:HB2	2.09	0.50
41:BU:92:ARG:CB	42:BV:11:GLN:NE2	2.72	0.50
41:BU:92:ARG:HD2	42:BV:11:GLN:NE2	2.26	0.50
45:BY:15:VAL:HG12	45:BY:16:ALA:N	2.26	0.50
52:A5:3:LYS:HZ3	57:AA:2614:A:H5'	1.74	0.50
46:AZ:166:SER:N	46:AZ:167:PRO:HA	2.27	0.50
41:BU:31:SER:C	41:BU:33:ARG:H	2.14	0.50
53:A6:10:LEU:HD23	53:A6:10:LEU:N	2.17	0.50
31:BH:158:HIS:NE2	31:BH:169:VAL:C	2.65	0.50
36:AP:85:LEU:HD23	36:AP:85:LEU:N	2.16	0.50
46:AZ:178:GLU:O	46:AZ:179:ASP:O	2.28	0.50
37:BQ:59:ARG:HG3	37:BQ:59:ARG:O	2.11	0.50
57:BA:2735:G:H2'	57:BA:2736:G:H8	1.75	0.50
57:AA:2291:U:OP1	57:AA:2380:C:O2'	2.29	0.50
57:AA:2626:C:O2'	57:AA:2627:G:H5'	2.10	0.50
57:BA:11:G:H22	57:BA:2628:C:P	2.34	0.50
57:AA:469:G:C2'	57:AA:470:A:H5''	2.41	0.50
46:AZ:38:TYR:O	46:AZ:38:TYR:CG	2.64	0.50
57:BA:1917:U:O2'	57:BA:1918:A:H5'	2.11	0.50
57:BA:1523:U:H2'	57:BA:1524:G:H8	1.77	0.50
57:AA:775:G:O2'	57:AA:776:G:H5'	6.99	0.50
45:AY:98:VAL:O	45:AY:98:VAL:HG12	2.11	0.50
52:B5:42:PRO:HB2	52:B5:43:HIS:HD2	1.76	0.50
31:BH:142:GLY:O	57:BA:2745:C:H4'	2.10	0.50
54:B7:35:ARG:HD3	57:BA:54:G:O2'	2.11	0.50
57:BA:2716:U:O2'	57:BA:2717:G:H5'	2.11	0.50
57:BA:1932:A:H2'	57:BA:1933:G:O4'	2.11	0.50
49:A2:46:GLN:CG	49:A2:49:LYS:HE3	2.41	0.50
57:AA:1047:G:N2	57:AA:1111:A:H62	2.09	0.50
57:AA:142:A:C8	57:AA:1408:C:H1'	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2128:C:O2'	57:AA:2129:C:H5'	2.12	0.50
57:AA:580:C:H2'	57:AA:581:C:C6	2.47	0.50
27:AD:80:ALA:HB3	27:AD:94:LEU:CD1	2.41	0.50
29:AF:65:TRP:CZ3	29:AF:73:ALA:O	2.64	0.50
30:AG:58:GLN:HG3	30:AG:59:GLU:H	1.76	0.50
36:AP:7:ARG:CZ	36:AP:7:ARG:HB3	2.41	0.50
41:AU:106:PHE:O	41:AU:110:VAL:HG23	2.10	0.50
53:B6:26:ASN:OD1	53:B6:27:LYS:N	2.45	0.50
57:BA:2162:G:O2'	57:BA:2163:C:H5'	2.11	0.50
57:BA:2732:G:C3'	57:BA:2733:A:H5'	2.41	0.50
27:BD:109:ASP:HB2	27:BD:197:GLY:CA	2.41	0.50
27:BD:210:GLY:C	27:BD:212:SER:H	2.15	0.50
27:BD:45:ASN:ND2	27:BD:50:THR:CG2	2.75	0.50
28:BE:5:LEU:HD12	28:BE:51:PHE:HB2	1.92	0.50
28:BE:77:ILE:CG2	28:BE:78:LEU:N	2.72	0.50
29:BF:58:ALA:O	29:BF:59:TYR:O	2.29	0.50
30:BG:130:ASN:HB3	30:BG:160:VAL:HA	1.92	0.50
31:BH:94:TYR:OH	31:BH:160:LYS:HD3	2.11	0.50
40:BT:66:VAL:HA	40:BT:71:GLY:HA2	1.94	0.50
42:BV:39:LEU:CB	42:BV:47:VAL:HG11	2.40	0.50
42:BV:76:LYS:HB2	42:BV:81:TYR:HB3	1.92	0.50
45:BY:95:LYS:CE	45:BY:101:LYS:H	2.22	0.50
27:AD:239:ARG:HG2	57:AA:2591:C:P	2.51	0.50
46:AZ:120:ILE:HG22	46:AZ:120:ILE:O	2.11	0.50
52:A5:33:CYS:C	52:A5:35:GLU:H	2.14	0.50
46:BZ:144:LEU:HD12	46:BZ:150:LEU:HD22	1.94	0.50
46:BZ:150:LEU:O	46:BZ:171:ILE:HG23	2.12	0.50
46:BZ:171:ILE:HG13	46:BZ:172:ALA:N	2.26	0.50
49:A2:64:LEU:CD2	49:A2:68:ARG:HH11	2.23	0.50
37:BQ:55:VAL:HG12	37:BQ:64:ILE:HD12	1.93	0.50
57:AA:394:A:C2'	57:AA:395:U:H5'	2.41	0.50
57:AA:1430:C:H2'	57:AA:1431:U:C6	2.46	0.50
49:A2:3:LEU:HD22	49:A2:7:ARG:HH12	1.75	0.50
36:AP:75:ILE:HD12	36:AP:75:ILE:H	1.76	0.50
57:BA:2092:U:C5	57:BA:2226:C:OP2	2.64	0.50
57:AA:2758:A:H2'	57:AA:2759:G:O4'	2.11	0.50
57:BA:110:G:O2'	57:BA:111:A:H5'	2.11	0.50
57:BA:1669:A:H2'	57:BA:1670:C:H5'	1.94	0.50
46:BZ:72:ARG:HB3	46:BZ:72:ARG:HH11	1.76	0.50
57:BA:2639:A:C2'	57:BA:2640:G:H5'	2.42	0.50
57:AA:2672:G:C3'	57:AA:2673:G:H5''	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:272(G):C:H42	57:BA:363(C):G:H1	1.57	0.50
57:AA:1669:A:H2'	57:AA:1670:C:H5'	1.94	0.50
57:AA:1349:A:N6	57:AA:1598:C:N4	2.59	0.50
39:AS:46:VAL:HG13	58:AB:114:C:H4'	1.92	0.50
28:AE:50:GLY:HA2	28:AE:78:LEU:HB3	1.91	0.50
32:AI:110:ASP:HB2	32:AI:113:ARG:HB2	1.94	0.50
32:AI:69:LYS:HA	32:AI:136:VAL:CG1	2.41	0.50
32:AI:94:ALA:O	32:AI:98:ALA:HB3	2.11	0.50
34:AN:133:GLN:O	34:AN:134:ARG:HB3	2.11	0.50
35:AO:69:ILE:N	35:AO:69:ILE:HD12	2.27	0.50
37:AQ:55:VAL:HG12	37:AQ:64:ILE:HD12	1.93	0.50
40:AT:125:ARG:HH11	40:AT:125:ARG:CA	2.24	0.50
40:AT:35:LYS:HE2	40:AT:41:ARG:HE	1.75	0.50
51:B4:5:ILE:H	51:B4:5:ILE:HD13	1.73	0.50
53:B6:11:LEU:HD13	53:B6:11:LEU:N	2.26	0.50
58:BB:4:C:H2'	58:BB:5:C:C6	2.46	0.50
27:BD:130:ALA:C	27:BD:131:LEU:HD12	2.32	0.50
28:BE:24:THR:HG21	28:BE:188:VAL:HG12	1.92	0.50
30:BG:91:ARG:C	30:BG:91:ARG:CD	2.80	0.50
33:BJ:117:LEU:HA	33:BJ:121:ASP:O	2.12	0.50
34:BN:62:VAL:CG2	34:BN:66:LYS:HD2	2.42	0.50
38:BR:103:ARG:CD	43:BW:40:ASN:ND2	2.75	0.50
38:BR:2:ARG:N	38:BR:2:ARG:CD	2.74	0.50
39:BS:92:TYR:O	39:BS:93:LYS:HB3	2.10	0.50
40:BT:54:ARG:O	40:BT:55:ASN:HB2	2.12	0.50
40:BT:80:SER:CB	40:BT:81:PRO:HD3	2.32	0.50
27:BD:244:ARG:HG3	57:BA:1902:C:H1'	1.93	0.50
46:AZ:81:ARG:HH11	46:AZ:81:ARG:HB2	1.76	0.50
57:AA:145:G:C3'	57:AA:146:G:H5''	2.41	0.50
36:BP:85:LEU:HA	36:BP:88:LEU:HD13	1.93	0.50
41:BU:108:GLU:CG	42:BV:44:LYS:HD3	2.40	0.50
57:AA:315:G:H2'	57:AA:316:C:H6	1.72	0.50
44:AX:29:TRP:CE3	44:AX:78:LYS:HB3	2.47	0.50
57:AA:633:A:C2'	57:AA:634:C:H5'	2.41	0.50
57:AA:363(E):U:H3'	57:AA:363(F):A:O4'	2.11	0.50
57:BA:2815:C:H2'	57:BA:2816:C:H6	1.75	0.50
57:BA:128:C:H2'	57:BA:129:C:H6	1.76	0.50
57:AA:2093:G:H2'	57:AA:2094:G:H8	1.77	0.50
57:AA:2305:A:H4'	57:AA:2305:A:OP1	2.12	0.50
57:AA:26:G:C6	57:AA:27:G:N1	2.79	0.50
57:AA:588:U:O5'	57:AA:588:U:H6	1.95	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AF:7:TYR:HB3	29:AF:16:GLY:N	2.25	0.50
34:AN:133:GLN:O	34:AN:134:ARG:CB	2.59	0.50
36:AP:29:LYS:HD2	36:AP:29:LYS:N	2.27	0.50
38:AR:28:LEU:HA	38:AR:34:ILE:HG12	1.92	0.50
38:AR:51:LEU:HG	38:AR:66:VAL:HG13	1.92	0.50
40:AT:128:GLU:O	40:AT:129:ARG:C	2.50	0.50
45:AY:44:ILE:C	45:AY:62:GLU:HG3	2.32	0.50
50:B3:52:HIS:CD2	50:B3:52:HIS:H	2.29	0.50
51:B4:14:ILE:O	51:B4:21:VAL:HA	2.12	0.50
57:BA:1047:G:C2	57:BA:1111:A:N6	2.79	0.50
27:BD:96:HIS:ND1	27:BD:102:LYS:HD3	2.26	0.50
27:BD:208:LYS:HB2	57:BA:729:G:N7	2.26	0.50
28:BE:16:ARG:O	28:BE:18:ASP:N	2.45	0.50
40:BT:100:TYR:CD2	40:BT:103:ARG:NH2	2.77	0.50
40:BT:31:SER:N	40:BT:43:GLN:O	2.45	0.50
45:BY:26:LYS:HG2	45:BY:27:VAL:H	1.77	0.50
52:A5:35:GLU:O	52:A5:49:CYS:CB	2.59	0.50
53:A6:43:CYS:O	53:A6:44:ARG:CB	2.59	0.50
51:B4:50:VAL:O	51:B4:52:THR:N	2.42	0.50
46:BZ:31:ARG:CZ	46:BZ:31:ARG:HB2	2.42	0.50
57:BA:2248:C:C2'	57:BA:2249:U:H5'	2.42	0.50
46:AZ:146:ILE:O	57:AA:896:A:H5''	2.11	0.50
52:A5:7:PRO:HA	57:AA:2615:U:N1	2.26	0.50
57:AA:2092:U:C5	57:AA:2226:C:OP2	2.65	0.50
48:B1:29:GLY:HA3	57:BA:2396:G:O2'	2.10	0.50
57:AA:118:A:H1'	57:AA:178:G:O4'	2.11	0.50
57:BA:2196:C:O2'	57:BA:2197:U:H5'	2.11	0.50
57:BA:1459:G:C8	57:BA:1461:G:H1'	2.47	0.50
57:AA:128:C:H6	57:AA:128:C:H5''	1.76	0.50
57:BA:128:C:H5''	57:BA:128:C:H6	1.76	0.50
47:A0:27:GLU:OE1	57:AA:856:C:O2'	2.23	0.50
57:AA:2206:G:H21	57:AA:2207:G:C4'	2.24	0.50
28:AE:61:ARG:NH1	57:AA:2632:A:N3	2.59	0.50
57:AA:772:C:O2'	57:AA:773:U:H5'	2.11	0.50
57:AA:848:G:C8	57:AA:848:G:H5'	2.40	0.50
28:AE:6:GLY:HA2	28:AE:51:PHE:CE2	2.46	0.50
28:AE:68:ALA:C	28:AE:70:ALA:H	2.14	0.50
28:AE:95:ILE:CD1	28:AE:95:ILE:H	2.25	0.50
29:AF:51:THR:HG21	29:AF:92:PRO:HD2	1.93	0.50
30:AG:119:GLY:CA	30:AG:179:PRO:HB2	2.33	0.50
31:AH:33:LEU:HD12	31:AH:75:ALA:HA	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AI:124:GLY:H	32:AI:142:VAL:HG11	1.76	0.50
40:AT:70:VAL:HG12	40:AT:71:GLY:O	2.12	0.50
43:AW:42:ARG:HB2	57:AA:2010:G:H5'	1.94	0.50
45:AY:47:LYS:HD2	45:AY:60:PHE:CE2	2.46	0.50
49:B2:46:GLN:O	49:B2:48:HIS:ND1	2.44	0.50
51:B4:6:HIS:HB3	51:B4:7:PRO:CD	2.41	0.50
26:BC:31:LYS:HE2	26:BC:180:SER:O	2.12	0.50
27:BD:35:LYS:HZ2	27:BD:36:PRO:CD	2.24	0.50
39:BS:62:LYS:O	39:BS:65:VAL:N	2.45	0.50
39:BS:90:GLY:O	39:BS:92:TYR:N	2.44	0.50
40:BT:47:GLY:HA3	40:BT:63:VAL:CG1	2.42	0.50
41:BU:74:LEU:N	41:BU:74:LEU:CD1	2.75	0.50
57:AA:1846:G:H5'	57:AA:1846:G:C8	2.40	0.50
42:BV:19:LYS:HG3	42:BV:20:LEU:O	2.12	0.50
41:BU:33:ARG:HG3	57:BA:581:C:OP1	2.12	0.50
57:AA:2041:U:O2'	57:AA:2042:A:H5'	2.12	0.50
57:AA:1448:G:N3	57:AA:1528(A):A:H2	2.10	0.50
36:BP:124:LYS:HE2	36:BP:143:GLY:HA2	1.92	0.50
49:B2:22:GLU:O	49:B2:25:VAL:N	2.44	0.50
50:B3:40:THR:HG23	50:B3:43:ILE:HB	1.93	0.50
57:BA:487:C:H2'	57:BA:488:G:H8	1.76	0.50
35:AO:22:ILE:HB	35:AO:40:VAL:HG12	1.94	0.50
57:BA:2031:A:C6	57:BA:2498:C:H1'	2.47	0.50
38:AR:7:GLY:O	38:AR:8:ARG:NE	2.38	0.50
41:BU:111:GLU:OE2	41:BU:111:GLU:HA	2.10	0.50
57:BA:1935:G:H1'	57:BA:1964:G:N2	2.27	0.50
41:BU:24:TYR:HB2	41:BU:29:SER:HB3	1.93	0.50
47:A0:37:LEU:O	47:A0:38:VAL:HG23	2.12	0.50
51:A4:11:PRO:HB3	51:A4:25:TYR:HD2	1.76	0.50
57:AA:1484:G:N2	57:AA:1505:C:N4	2.59	0.50
57:AA:1496:A:H8	57:AA:1577:C:HO2'	1.56	0.50
57:AA:296:C:C2'	57:AA:297:C:H5'	2.41	0.50
57:AA:80:G:C2'	57:AA:81:G:H5'	2.42	0.50
47:A0:27:GLU:OE1	57:AA:856:C:H1'	2.12	0.50
27:AD:11:PRO:C	27:AD:13:ARG:N	2.64	0.50
29:AF:60:SER:OG	29:AF:61:GLY:N	2.45	0.50
29:AF:63:LYS:CE	29:AF:67:GLN:HB2	2.42	0.50
33:AJ:49:ALA:HB3	33:AJ:90:ALA:CB	2.40	0.50
41:AU:31:SER:O	41:AU:33:ARG:N	2.45	0.50
45:AY:7:VAL:HG11	45:AY:8:LYS:HZ1	1.75	0.50
53:B6:34:LEU:HD23	53:B6:51:GLU:HB3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1051:G:C2	57:BA:1052:C:N4	2.80	0.50
57:BA:2022:U:O2'	57:BA:2617:C:H5'	2.11	0.50
57:BA:743:G:O2'	57:BA:744:G:H5'	2.12	0.50
28:BE:102:VAL:HB	28:BE:199:ARG:O	2.12	0.50
29:BF:38:ARG:NH2	57:BA:660:G:O3'	2.44	0.50
29:BF:60:SER:OG	29:BF:61:GLY:N	2.45	0.50
30:BG:109:VAL:O	30:BG:110:ALA:O	2.30	0.50
32:BI:83:ALA:O	32:BI:145:VAL:HG22	2.11	0.50
36:BP:7:ARG:HH11	36:BP:7:ARG:CB	2.25	0.50
36:BP:99:LEU:HA	36:BP:102:ARG:NH2	2.27	0.50
37:BQ:101:ARG:HG3	37:BQ:102:VAL:N	2.25	0.50
37:BQ:39:PRO:HD3	37:BQ:99:PRO:CG	2.40	0.50
41:BU:61:TRP:CD2	41:BU:94:ASN:HA	2.47	0.50
48:A1:57:GLU:O	48:A1:58:ILE:O	2.30	0.50
54:B7:16:HIS:ND1	57:BA:465:G:H4'	2.27	0.50
55:A8:32:LEU:HB3	55:A8:36:LYS:NZ	2.26	0.50
50:A3:8:LEU:HD11	50:A3:31:LEU:HD23	1.89	0.50
38:AR:9:LYS:HD3	57:AA:1652:A:OP1	2.11	0.50
29:AF:178:PRO:HB2	29:AF:201:VAL:CG1	2.35	0.50
49:A2:67:LYS:O	49:A2:70:GLN:CG	2.57	0.50
57:AA:1163:G:O2'	57:AA:1164:G:H5'	2.11	0.50
48:A1:37:ILE:O	48:A1:37:ILE:HG23	2.10	0.50
57:AA:2360:A:O2'	57:AA:2361:A:P	2.70	0.50
58:AB:4:C:H2'	58:AB:5:C:C6	2.47	0.50
26:AC:16:ASP:OD2	26:AC:19:LYS:HB2	2.11	0.50
27:AD:148:GLU:HB3	27:AD:151:LYS:HD2	1.93	0.50
28:AE:11:MET:HB3	28:AE:24:THR:HA	1.93	0.50
29:AF:3:GLU:HA	29:AF:24:LEU:HG	1.92	0.50
29:AF:63:LYS:HZ1	29:AF:67:GLN:HB2	1.75	0.50
30:AG:26:GLN:O	30:AG:27:ASN:HB2	2.12	0.50
30:AG:31:VAL:O	30:AG:33:ARG:NH1	2.45	0.50
30:AG:82:LEU:C	30:AG:83:ARG:HG3	2.31	0.50
32:AI:28:ASN:C	32:AI:32:PRO:HG2	2.33	0.50
36:AP:46:LYS:HD3	57:AA:196:A:C8	2.46	0.50
41:AU:10:ARG:HG3	57:AA:1251:C:OP1	2.12	0.50
45:AY:54:LYS:C	45:AY:56:PRO:HD2	2.32	0.50
57:BA:1047:G:N2	57:BA:1111:A:H62	2.09	0.50
57:BA:1039:G:H1	57:BA:1116:C:H42	1.58	0.50
57:BA:1240:U:O2'	57:BA:1241:A:H5'	2.11	0.50
57:BA:2128:C:O2'	57:BA:2129:C:H5'	2.11	0.50
28:BE:61:ARG:NH1	57:BA:2632:A:N3	2.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BI:46:ALA:HB2	57:BA:271(P):C:H5'	1.94	0.50
28:BE:77:ILE:HG22	28:BE:78:LEU:CG	2.40	0.50
29:BF:67:GLN:HG3	29:BF:67:GLN:O	2.11	0.50
29:BF:65:TRP:CZ3	29:BF:73:ALA:O	2.65	0.50
30:BG:125:PHE:CD2	30:BG:131:TYR:HB2	2.47	0.50
30:BG:13:GLU:HG3	30:BG:14:GLU:HG3	1.94	0.50
30:BG:32:PRO:HB2	30:BG:172:LEU:HD13	1.92	0.50
37:BQ:76:LYS:CB	37:BQ:91:GLU:HG3	2.42	0.50
42:BV:2:PHE:HB2	42:BV:42:GLY:HA2	1.94	0.50
46:BZ:29:TYR:HB3	46:BZ:34:ASN:HA	1.94	0.50
31:BH:56:SER:HB2	31:BH:58:GLU:HG3	1.94	0.50
57:AA:528:A:H2	57:AA:2043:C:C5'	2.25	0.50
46:AZ:61:LEU:CD2	46:AZ:61:LEU:H	2.15	0.50
57:BA:272(D):G:H1	57:BA:364:C:N4	2.09	0.50
57:AA:1962:C:O2'	57:AA:1964:G:OP2	2.30	0.50
57:AA:1910:G:O2'	57:AA:1911:U:H5'	2.12	0.50
57:BA:2108:C:O2'	57:BA:2109:U:H5'	2.12	0.50
57:BA:2672:G:C3'	57:BA:2673:G:H5''	2.42	0.50
53:A6:11:LEU:CD1	53:A6:26:ASN:HB2	2.42	0.50
55:A8:4:MET:HG3	55:A8:61:LEU:CD2	2.41	0.50
44:AX:73:ARG:HH22	57:AA:1337:G:P	2.34	0.50
57:AA:218:A:C2	57:AA:235:U:H4'	2.46	0.50
28:AE:203:LYS:HE3	28:AE:204:ALA:HB2	1.93	0.50
28:AE:55:ASN:HD21	28:AE:75:VAL:HG22	1.77	0.50
29:AF:4:VAL:CG1	29:AF:17:ARG:HD3	2.41	0.50
31:AH:99:VAL:O	31:AH:102:ALA:HB3	2.12	0.50
32:AI:112:LYS:N	32:AI:112:LYS:HD2	2.26	0.50
32:AI:88:ILE:CG1	32:AI:142:VAL:HG13	2.41	0.50
40:AT:35:LYS:NZ	40:AT:41:ARG:NH2	2.58	0.50
45:AY:95:LYS:HD3	45:AY:100:ALA:HB1	1.92	0.50
55:B8:50:LEU:CD1	55:B8:51:ALA:N	2.69	0.50
57:BA:80:G:C2'	57:BA:81:G:H5'	2.42	0.50
27:BD:18:VAL:HG22	27:BD:211:ARG:HH21	1.77	0.50
28:BE:51:PHE:C	28:BE:74:PRO:HB3	2.32	0.50
28:BE:80:GLU:CD	57:BA:2636:U:H4'	2.32	0.50
29:BF:28:ILE:HD12	29:BF:119:ARG:HH21	1.77	0.50
30:BG:8:LYS:O	30:BG:12:TYR:CE1	2.65	0.50
30:BG:83:ARG:NH1	30:BG:84:LYS:HE3	2.27	0.50
33:BJ:8:GLU:C	33:BJ:10:LEU:H	2.15	0.50
35:BO:107:ARG:HH22	40:BT:35:LYS:HD2	1.77	0.50
39:BS:48:LEU:CD2	39:BS:82:ILE:HD11	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BT:107:ASP:H	40:BT:110:ILE:HG12	1.76	0.50
44:BX:10:ALA:O	44:BX:28:PHE:HB3	2.12	0.50
44:BX:30:VAL:HG21	44:BX:39:ILE:HD11	1.94	0.50
45:BY:57:GLN:CG	45:BY:58:GLY:H	2.11	0.50
45:BY:84:ARG:HD2	45:BY:97:ARG:HE	1.76	0.50
46:BZ:44:PHE:C	46:BZ:44:PHE:CD1	2.85	0.50
46:AZ:103:ARG:HB3	46:AZ:136:PHE:HB2	1.94	0.50
57:BA:214:G:H1'	57:BA:216:A:O2'	2.12	0.50
57:BA:277:C:O2'	57:BA:278:A:H5'	2.12	0.50
57:AA:286:C:H2'	57:AA:287:C:C6	2.46	0.50
44:AX:44:GLU:HG3	44:AX:51:VAL:HG23	1.94	0.50
57:BA:2648:C:H2'	57:BA:2649:U:H6	1.76	0.50
57:BA:2853:C:H2'	57:BA:2854:G:H8	1.75	0.50
50:A3:44:ARG:O	50:A3:48:GLU:HG2	2.12	0.50
57:BA:614:U:O4'	57:BA:614:U:O2	2.30	0.50
57:BA:262:A:H2'	57:BA:263:C:O4'	2.11	0.50
57:AA:2774:C:H2'	57:AA:2775:A:O4'	2.12	0.50
36:BP:123:LEU:HD12	36:BP:123:LEU:C	2.31	0.50
27:BD:168:ARG:O	27:BD:169:GLU:HB2	2.11	0.50
55:A8:48:PHE:O	55:A8:49:VAL:CG2	2.53	0.49
57:AA:970:C:H2'	57:AA:971:C:C6	2.47	0.49
58:AB:70:C:H2'	58:AB:71:C:C6	2.46	0.49
26:AC:182:PRO:CB	26:AC:185:LYS:HD2	2.41	0.49
27:AD:35:LYS:HZ2	27:AD:36:PRO:CD	2.24	0.49
30:AG:109:VAL:O	30:AG:110:ALA:O	2.30	0.49
30:AG:181:ARG:O	30:AG:181:ARG:HD2	2.11	0.49
30:AG:37:VAL:HG22	30:AG:159:VAL:HG23	1.94	0.49
30:AG:60:LEU:O	30:AG:60:LEU:HD22	2.12	0.49
36:AP:123:LEU:C	36:AP:123:LEU:HD12	2.32	0.49
36:AP:61:ARG:H	36:AP:61:ARG:HD2	1.77	0.49
40:AT:55:ASN:HD22	40:AT:58:ASN:ND2	2.10	0.49
57:BA:83:G:N2	57:BA:103:A:OP2	2.42	0.49
57:BA:1168:G:O2'	57:BA:1169:G:H5'	2.13	0.49
57:BA:1406:U:O2'	57:BA:1407:C:H5'	6.04	0.49
57:BA:1486:A:H61	57:BA:1504:C:H42	1.58	0.49
57:BA:7:G:H2'	57:BA:8:A:C8	2.47	0.49
58:BB:40:U:N3	58:BB:43:C:H5"	2.27	0.49
27:BD:18:VAL:HG22	27:BD:211:ARG:NH2	2.27	0.49
27:BD:65:ILE:HD11	27:BD:67:PHE:CG	2.47	0.49
27:BD:66:ASP:OD2	27:BD:69:ARG:HG2	2.12	0.49
29:BF:7:TYR:HB3	29:BF:16:GLY:N	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:5:VAL:HG12	30:BG:6:ALA:N	2.27	0.49
31:BH:121:ILE:HD12	31:BH:144:VAL:HG21	1.92	0.49
31:BH:146:ALA:HB2	31:BH:164:TYR:OH	2.11	0.49
36:BP:108:LYS:O	36:BP:110:TYR:N	2.45	0.49
37:BQ:54:MET:SD	37:BQ:118:LEU:HD23	2.52	0.49
39:BS:12:PHE:N	39:BS:12:PHE:HD2	2.08	0.49
41:BU:96:ALA:C	41:BU:98:LEU:N	2.63	0.49
57:AA:1826:G:H2'	57:AA:1827:C:H6	1.77	0.49
38:BR:101:ALA:HA	52:B5:44:THR:HG21	1.93	0.49
57:AA:1528(A):A:C8	57:AA:1529:G:C8	3.00	0.49
57:AA:2789:C:N3	57:AA:2894:G:O6	2.44	0.49
48:B1:52:ARG:NH1	57:BA:2218:U:H1'	2.27	0.49
57:AA:2865:U:H3'	57:AA:2866:U:O2	2.12	0.49
57:AA:575:A:O2'	57:AA:576:U:H5'	2.12	0.49
50:B3:1:MET:O	50:B3:3:ARG:HG3	2.12	0.49
57:BA:2291:U:OP1	57:BA:2380:C:O2'	2.28	0.49
57:BA:2758:A:H2'	57:BA:2759:G:O4'	2.12	0.49
27:BD:248:SER:CB	27:BD:249:PRO:HD2	2.41	0.49
47:B0:16:SER:OG	57:BA:2261:C:H3'	2.12	0.49
49:B2:10:LEU:O	49:B2:14:ARG:HG3	2.12	0.49
57:BA:118:A:H1'	57:BA:178:G:O4'	2.12	0.49
57:BA:1756:G:H4'	57:BA:1758:G:O4'	2.12	0.49
57:BA:1649:G:O2'	57:BA:1650:G:H5'	2.12	0.49
53:A6:52:VAL:CG2	53:A6:53:LYS:H	2.24	0.49
57:AA:1209:G:H21	57:AA:1210:A:H62	1.60	0.49
57:AA:1221:C:H2'	57:AA:1221(A):C:H6	1.76	0.49
57:AA:1286:A:H2'	57:AA:1288:U:OP2	2.11	0.49
57:AA:1336:A:H2'	57:AA:1337:G:H8	1.76	0.49
57:AA:1341:U:OP1	57:AA:1397:U:N3	2.41	0.49
29:AF:28:ILE:N	29:AF:28:ILE:HD13	2.23	0.49
29:AF:8:GLN:HG2	29:AF:126:VAL:CB	2.42	0.49
30:AG:140:ILE:HD12	30:AG:140:ILE:C	2.32	0.49
30:AG:15:VAL:HG13	30:AG:175:LEU:CB	2.42	0.49
30:AG:40:ASN:OD1	57:AA:2313:C:O4'	2.29	0.49
34:AN:3:THR:C	34:AN:4:TYR:CD1	2.86	0.49
36:AP:17:LYS:C	36:AP:19:VAL:N	2.66	0.49
39:AS:48:LEU:CD2	39:AS:82:ILE:HD11	2.42	0.49
45:AY:4:LYS:CG	45:AY:5:MET:H	2.25	0.49
57:BA:1119:C:H2'	57:BA:1120:G:H8	1.77	0.49
57:BA:531:C:OP1	57:BA:561:G:N1	2.45	0.49
57:BA:877:U:O2'	57:BA:878:A:H5''	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:95:ILE:CD1	28:BE:95:ILE:H	2.25	0.49
40:BT:19:LEU:HD22	40:BT:85:LYS:CD	2.43	0.49
41:BU:74:LEU:CD2	41:BU:79:PHE:HB2	2.42	0.49
41:BU:91:ASP:O	41:BU:95:LEU:HB2	2.12	0.49
45:BY:28:LYS:CA	45:BY:38:ILE:HG22	2.40	0.49
45:BY:4:LYS:HD2	45:BY:32:PRO:CD	2.42	0.49
27:BD:245:PRO:O	27:BD:246:PRO:C	2.50	0.49
31:BH:41:MET:CE	31:BH:53:GLU:H	2.25	0.49
52:B5:33:CYS:C	52:B5:35:GLU:H	2.15	0.49
41:AU:55:ARG:HD2	57:AA:1155:A:OP1	2.12	0.49
31:AH:156:ALA:O	31:AH:158:HIS:N	2.44	0.49
57:BA:207:A:H2'	57:BA:208:C:O4'	2.11	0.49
41:AU:47:TYR:HD1	41:AU:50:ARG:HH22	1.60	0.49
57:AA:276:A:H5'	57:AA:277:C:C6	2.47	0.49
48:A1:53:VAL:HG12	48:A1:54:ALA:N	2.27	0.49
57:BA:1163:G:O2'	57:BA:1164:G:H5'	2.12	0.49
57:BA:1963:U:C2'	57:BA:1963:U:O2	2.59	0.49
57:BA:1833:U:H2'	57:BA:1834:U:C6	2.44	0.49
57:BA:34:C:H2'	57:BA:35:G:C8	6.36	0.49
57:AA:2648:C:H2'	57:AA:2649:U:H6	1.76	0.49
57:BA:1301:A:H2	57:BA:1626:G:N3	2.10	0.49
57:AA:2461:C:H2'	57:AA:2462:U:C6	2.46	0.49
37:AQ:38:GLU:HG3	37:AQ:127:ILE:HB	1.92	0.49
57:AA:2271:G:H2'	57:AA:2272:U:C6	2.47	0.49
57:AA:1019:U:O2'	57:AA:1021:A:C2	2.55	0.49
57:AA:1268:A:H2'	57:AA:1269:A:C8	2.98	0.49
26:AC:45:HIS:HB3	57:AA:2177:C:H1'	1.94	0.49
57:AA:7:G:H2'	57:AA:8:A:C8	2.47	0.49
58:AB:2:C:H2'	58:AB:3:C:C6	2.47	0.49
28:AE:52:LEU:O	28:AE:74:PRO:CA	2.59	0.49
29:AF:41:LEU:O	29:AF:44:ARG:HG2	2.11	0.49
32:AI:94:ALA:CA	32:AI:98:ALA:HB3	2.41	0.49
34:AN:57:ALA:C	34:AN:58:ASP:O	2.51	0.49
35:AO:2:ILE:HD11	35:AO:82:ASN:HB3	1.94	0.49
36:AP:32:THR:O	36:AP:33:ARG:CB	2.59	0.49
38:AR:2:ARG:HH22	57:AA:2724:C:P	2.34	0.49
39:AS:53:SER:C	39:AS:55:ALA:H	2.15	0.49
35:AO:64:ARG:NH1	40:AT:70:VAL:HG21	2.27	0.49
43:AW:9:TYR:N	43:AW:102:HIS:HD2	2.10	0.49
51:B4:11:PRO:HB3	51:B4:25:TYR:HD2	1.75	0.49
53:B6:36:LEU:HD12	53:B6:49:HIS:O	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:B8:4:MET:HG2	57:BA:592:G:O2'	2.12	0.49
36:BP:74:GLU:HG2	57:BA:244:A:H4'	1.95	0.49
57:BA:519:U:H2'	57:BA:520:G:H8	1.77	0.49
27:BD:11:PRO:C	27:BD:13:ARG:H	2.15	0.49
27:BD:10:THR:HG23	27:BD:13:ARG:CB	2.42	0.49
27:BD:206:LEU:HD23	27:BD:211:ARG:NH1	2.27	0.49
28:BE:62:PRO:C	28:BE:64:LYS:N	2.65	0.49
29:BF:21:ALA:C	29:BF:23:ASP:N	2.66	0.49
30:BG:121:ASN:ND2	30:BG:122:PRO:HD2	2.27	0.49
30:BG:56:ALA:CB	30:BG:153:ARG:HD2	2.41	0.49
32:BI:11:ASN:C	32:BI:12:LEU:HD23	2.33	0.49
36:BP:46:LYS:HD3	57:BA:196:A:C8	2.47	0.49
39:BS:89:ARG:HG2	39:BS:92:TYR:HA	1.93	0.49
40:BT:70:VAL:CG1	40:BT:71:GLY:N	2.73	0.49
41:BU:16:LYS:O	41:BU:16:LYS:HG2	2.12	0.49
45:BY:88:LYS:HD3	45:BY:93:GLY:H	1.77	0.49
54:B7:43:THR:HG23	54:B7:44:PRO:HD2	1.93	0.49
57:BA:523:C:H2'	57:BA:524:U:H5'	1.94	0.49
57:AA:1477:A:H5'	57:AA:1478:G:OP2	2.12	0.49
55:A8:43:GLN:O	55:A8:44:LYS:HD2	2.12	0.49
57:BA:2000:G:O2'	57:BA:2001:A:H5'	2.12	0.49
57:BA:1722:A:O2'	57:BA:1739:U:C5'	2.61	0.49
37:BQ:109:VAL:HG12	37:BQ:113:GLN:HB3	1.95	0.49
46:AZ:51:ALA:CB	46:AZ:57:ILE:HD11	2.41	0.49
46:AZ:57:ILE:CG2	46:AZ:58:VAL:N	2.75	0.49
57:AA:2688:U:H1'	57:AA:2721:A:H61	1.78	0.49
57:BA:2657:A:H3'	57:BA:2658:C:H6	1.77	0.49
57:AA:2552:U:O2	57:AA:2554:U:H5'	2.13	0.49
28:BE:81:ILE:O	28:BE:81:ILE:HG22	2.12	0.49
57:BA:2321:G:H2'	57:BA:2321:G:N3	2.27	0.49
53:A6:40:CYS:HB2	53:A6:46:HIS:ND1	2.28	0.49
57:AA:1119:C:H2'	57:AA:1120:G:H8	1.76	0.49
57:AA:2405:G:O2'	57:AA:2406:U:P	2.70	0.49
28:AE:61:ARG:NH2	57:AA:2632:A:O2'	2.45	0.49
26:AC:7:ARG:NH2	26:AC:219:MET:HB3	2.27	0.49
27:AD:11:PRO:O	27:AD:13:ARG:N	2.46	0.49
27:AD:144:ALA:HB3	27:AD:192:THR:HG22	1.95	0.49
27:AD:72:LYS:HB3	27:AD:75:ILE:HD12	1.94	0.49
28:AE:64:LYS:C	28:AE:66:HIS:H	2.14	0.49
29:AF:58:ALA:O	29:AF:59:TYR:O	2.29	0.49
32:AI:31:LEU:HB2	32:AI:32:PRO:HD3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AP:108:LYS:O	36:AP:110:TYR:N	2.43	0.49
36:AP:47:ASP:HB3	36:AP:48:PRO:O	2.12	0.49
38:AR:29:LEU:HD12	38:AR:116:LEU:HD11	1.93	0.49
38:AR:4:LEU:O	38:AR:5:LYS:HD3	2.12	0.49
42:AV:47:VAL:O	42:AV:49:THR:O	2.31	0.49
44:AX:14:SER:O	44:AX:17:ALA:N	2.43	0.49
53:B6:41:PRO:C	53:B6:43:CYS:N	2.65	0.49
57:BA:1216:G:N2	57:BA:1234:U:H1'	2.27	0.49
29:BF:92:PRO:HB3	57:BA:1248:G:OP2	2.12	0.49
57:BA:741:G:O2'	57:BA:742:G:H5'	2.12	0.49
58:BB:2:C:H2'	58:BB:3:C:C6	2.47	0.49
58:BB:71:C:C2	58:BB:72:G:C8	3.00	0.49
27:BD:11:PRO:C	27:BD:13:ARG:N	2.65	0.49
27:BD:119:ALA:HB1	27:BD:130:ALA:HB3	1.94	0.49
27:BD:25:THR:HG22	27:BD:26:LYS:HD3	1.94	0.49
28:BE:132:HIS:CG	28:BE:135:HIS:NE2	2.80	0.49
32:BI:6:LEU:O	32:BI:7:GLU:C	2.50	0.49
37:BQ:39:PRO:O	37:BQ:40:ALA:HB2	2.12	0.49
38:BR:2:ARG:HH22	57:BA:2724:C:P	2.35	0.49
39:BS:34:HIS:CE1	39:BS:54:LEU:HB3	2.48	0.49
30:AG:35:GLU:HB3	30:AG:160:VAL:HB	1.94	0.49
46:AZ:125:LEU:HG	46:AZ:164:ALA:HB3	1.92	0.49
46:AZ:152:ALA:CA	46:AZ:167:PRO:HB2	2.43	0.49
57:AA:2134:A:H61	57:AA:2157:G:C1'	2.17	0.49
34:BN:15:LEU:C	34:BN:15:LEU:HD13	2.33	0.49
57:AA:795:C:H2'	57:AA:796:C:H6	1.77	0.49
57:BA:1477:A:H5'	57:BA:1478:G:OP2	2.12	0.49
42:BV:89:GLN:HG3	57:BA:993:G:O2'	2.12	0.49
44:AX:59:VAL:O	44:AX:60:ARG:C	2.50	0.49
57:BA:1509(A):A:H2'	57:BA:1509(B):A:H8	1.77	0.49
46:AZ:57:ILE:HD12	46:AZ:57:ILE:N	2.28	0.49
50:A3:52:HIS:CD2	58:AB:83:G:H4'	2.47	0.49
55:A8:6:THR:HG22	55:A8:61:LEU:CD1	2.42	0.49
57:AA:1385:G:O2'	57:AA:1396:U:C6	2.64	0.49
55:A8:3:LYS:HE3	57:AA:242:G:O5'	2.13	0.49
58:AB:3:C:H2'	58:AB:4:C:C6	2.47	0.49
26:AC:14:LYS:O	26:AC:29:LEU:HD21	2.13	0.49
27:AD:145:VAL:HG22	27:AD:191:ALA:HB1	1.95	0.49
27:AD:183:ARG:HG3	27:AD:269:PHE:O	2.12	0.49
29:AF:102:PRO:HB2	29:AF:105:VAL:HG23	1.94	0.49
30:AG:121:ASN:CG	30:AG:122:PRO:HD2	2.33	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:AH:89:ILE:HG22	31:AH:162:ILE:HG22	1.95	0.49
32:AI:72:LEU:O	32:AI:138:ILE:HD12	2.13	0.49
36:AP:35:HIS:HB3	57:AA:942:G:OP1	2.12	0.49
37:AQ:21:THR:O	37:AQ:23:GLY:N	2.45	0.49
39:AS:28:VAL:HG12	39:AS:29:PHE:N	2.27	0.49
40:AT:64:ARG:HD2	40:AT:73:GLU:CG	2.40	0.49
40:AT:73:GLU:O	40:AT:74:ARG:HG2	2.12	0.49
41:AU:61:TRP:CE2	41:AU:94:ASN:HA	2.48	0.49
42:AV:46:VAL:HG22	42:AV:47:VAL:N	2.24	0.49
57:BA:987:G:O2'	57:BA:1000:A:N3	2.43	0.49
44:BX:73:ARG:HH22	57:BA:1337:G:P	2.35	0.49
57:BA:1496:A:C8	57:BA:1577:C:O2'	2.64	0.49
57:BA:2312:U:C2'	57:BA:2313:C:H5''	2.41	0.49
57:BA:484:C:H2'	57:BA:485:C:C6	2.48	0.49
26:BC:22:THR:OG1	26:BC:25:GLU:HG2	2.12	0.49
32:BI:91:SER:H	32:BI:121:LYS:HZ2	1.61	0.49
34:BN:58:ASP:O	34:BN:59:LYS:HB2	2.13	0.49
36:BP:16:ARG:HG3	36:BP:17:LYS:N	2.27	0.49
38:BR:32:GLY:C	38:BR:33:ARG:HD2	2.33	0.49
45:BY:10:GLY:O	45:BY:27:VAL:HG22	2.12	0.49
45:BY:4:LYS:CG	45:BY:5:MET:H	2.25	0.49
45:BY:44:ILE:N	45:BY:62:GLU:OE1	2.45	0.49
45:BY:35:TYR:CD2	45:BY:69:ALA:HB3	2.48	0.49
57:BA:2134:A:N3	57:BA:2159:G:H1'	2.27	0.49
47:A0:10:THR:HG21	57:AA:2277:G:OP2	2.12	0.49
57:BA:1387:C:H5'	57:BA:1469:A:H4'	1.95	0.49
57:AA:1460:A:H2'	57:AA:1461:G:O4'	5.67	0.49
48:B1:45:ASN:C	48:B1:45:ASN:ND2	2.64	0.49
49:A2:11:GLU:O	49:A2:14:ARG:HB2	2.12	0.49
29:AF:164:ARG:HG3	29:AF:175:THR:OG1	2.13	0.49
57:AA:1701:A:H5'	57:AA:1702:G:OP2	2.13	0.49
37:BQ:110:THR:HG23	37:BQ:113:GLN:CB	2.42	0.49
52:B5:7:PRO:HA	57:BA:2615:U:N1	2.28	0.49
57:BA:2481:G:O2'	57:BA:2482:G:P	2.70	0.49
47:A0:16:SER:OG	57:AA:2261:C:H3'	2.12	0.49
57:BA:2639:A:H2'	57:BA:2640:G:H5'	1.93	0.49
41:BU:60:LEU:HD22	41:BU:60:LEU:O	2.12	0.49
34:AN:131:GLN:HA	34:AN:131:GLN:OE1	2.12	0.49
50:A3:16:PRO:HB2	50:A3:18:ASP:OD1	2.13	0.49
55:B8:23:VAL:CG1	55:B8:46:ARG:HB3	2.43	0.49
57:BA:2779:U:H4'	57:BA:2780:G:H5'	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:A4:14:ILE:O	51:A4:21:VAL:HA	2.12	0.49
57:AA:323:G:HO2'	57:AA:1205:U:H3	1.60	0.49
57:AA:1317:A:H2'	57:AA:1318:C:C6	2.47	0.49
57:AA:391:G:O2'	57:AA:410:G:OP1	2.27	0.49
27:AD:76:PRO:HG2	27:AD:98:VAL:CG2	2.42	0.49
28:AE:111:ARG:HB2	28:AE:160:TYR:O	2.13	0.49
28:AE:11:MET:HE2	28:AE:24:THR:HB	1.93	0.49
28:AE:57:LYS:C	28:AE:59:VAL:H	2.15	0.49
28:AE:78:LEU:O	28:AE:78:LEU:HD12	2.12	0.49
29:AF:22:ALA:C	29:AF:24:LEU:H	2.15	0.49
30:AG:111:LEU:CB	30:AG:112:PRO:HD3	2.41	0.49
30:AG:63:ILE:CG2	30:AG:141:PHE:HB3	2.41	0.49
32:AI:10:GLU:OE1	32:AI:11:ASN:HB2	2.12	0.49
32:AI:129:THR:CG2	32:AI:130:TYR:N	2.75	0.49
32:AI:98:ALA:O	32:AI:101:LEU:HB2	2.12	0.49
36:AP:48:PRO:CG	36:AP:49:ARG:N	2.67	0.49
36:AP:99:LEU:HA	36:AP:102:ARG:NH2	2.25	0.49
38:AR:55:ALA:HA	38:AR:80:PHE:CE1	2.47	0.49
38:AR:5:LYS:HB2	57:AA:2722:G:O2'	2.12	0.49
39:AS:105:ALA:C	39:AS:107:GLU:N	2.66	0.49
41:AU:107:ALA:O	41:AU:110:VAL:HB	2.11	0.49
47:B0:23:VAL:HG12	47:B0:25:ARG:O	2.13	0.49
51:B4:31:ILE:HD12	51:B4:31:ILE:N	2.28	0.49
30:BG:67:LYS:NZ	51:B4:3:GLU:HG3	2.26	0.49
53:B6:11:LEU:HD13	53:B6:11:LEU:H	1.77	0.49
55:B8:50:LEU:C	55:B8:53:PRO:CD	2.81	0.49
57:BA:1002:G:H3'	57:BA:1003:G:C8	4.70	0.49
57:BA:18:C:H2'	57:BA:19:C:H6	1.98	0.49
45:BY:50:ARG:NE	57:BA:484:C:OP1	2.45	0.49
57:BA:836:G:H2'	57:BA:837:C:H6	1.77	0.49
58:BB:81:G:H2'	58:BB:82:G:C5'	2.43	0.49
27:BD:108:PRO:HG2	27:BD:111:LEU:HD23	1.94	0.49
30:BG:137:GLU:HA	30:BG:152:LEU:CD1	2.40	0.49
35:BO:2:ILE:HD11	35:BO:82:ASN:HB3	1.93	0.49
40:BT:123:GLN:O	40:BT:127:ALA:HB2	2.12	0.49
57:BA:1794:U:O2'	57:BA:1795:C:H5'	2.13	0.49
46:AZ:103:ARG:NH1	46:AZ:103:ARG:HG3	2.26	0.49
52:A5:54:GLY:N	52:A5:55:ARG:HH21	2.10	0.49
48:A1:19:GLN:HA	48:A1:19:GLN:NE2	2.13	0.49
46:AZ:56:VAL:CG2	46:AZ:70:LEU:HG	2.43	0.49
57:BA:828:U:C5	57:BA:829:A:N6	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BZ:93:ASP:O	46:BZ:130:PRO:HD2	2.13	0.49
57:BA:394:A:C2'	57:BA:395:U:H5'	2.41	0.49
28:AE:163:GLU:O	28:AE:165:VAL:HG23	2.12	0.49
48:B1:68:PRO:HG2	48:B1:69:LYS:H	1.78	0.49
57:BA:554:U:O2'	57:BA:555:U:H5'	2.13	0.49
57:BA:2302:G:H4'	57:BA:2302:G:OP1	2.13	0.49
56:A9:10:ILE:HD12	56:A9:32:HIS:CB	2.42	0.49
56:A9:17:ILE:HG13	56:A9:26:ILE:HD12	1.94	0.49
57:BA:1821:A:H2'	57:BA:1822:G:C8	2.48	0.49
57:AA:1179:C:H2'	57:AA:1180:C:C6	2.48	0.49
57:AA:1665:A:C2'	57:AA:1666:G:H5'	2.43	0.49
27:AD:49:ILE:HG22	57:AA:779:U:P	2.52	0.49
27:AD:122:ASP:O	27:AD:123:ALA:O	2.31	0.49
27:AD:137:PRO:HB2	27:AD:140:THR:HG23	1.95	0.49
28:AE:131:ALA:CB	57:AA:2579:C:O2'	2.61	0.49
29:AF:20:LEU:O	29:AF:21:ALA:O	2.30	0.49
30:AG:16:ARG:CZ	30:AG:28:VAL:HG11	2.43	0.49
32:AI:2:LYS:HA	32:AI:20:ASP:HA	1.94	0.49
34:AN:43:THR:HB	34:AN:46:VAL:CG1	2.43	0.49
37:AQ:39:PRO:O	37:AQ:40:ALA:HB2	2.12	0.49
37:AQ:54:MET:SD	37:AQ:118:LEU:HD23	2.53	0.49
41:AU:91:ASP:O	41:AU:95:LEU:HB2	2.12	0.49
53:B6:17:LYS:O	53:B6:18:ARG:O	2.30	0.49
57:BA:1484:G:N2	57:BA:1505:C:N4	2.61	0.49
57:BA:221:A:H61	57:BA:265:A:H8	1.60	0.49
29:BF:40:GLN:HG2	57:BA:615:G:OP2	2.13	0.49
34:BN:111:PRO:HD2	57:BA:558:G:OP1	2.12	0.49
36:BP:95:VAL:CG2	36:BP:125:VAL:HG23	2.43	0.49
42:BV:15:GLU:CB	42:BV:16:PRO:HD2	2.43	0.49
52:A5:35:GLU:O	52:A5:49:CYS:HB2	2.12	0.49
57:BA:795:C:H2'	57:BA:796:C:C6	2.47	0.49
57:BA:2248:C:H2'	57:BA:2249:U:H5'	1.95	0.49
37:BQ:55:VAL:HB	46:BZ:178:GLU:HG3	1.94	0.49
27:BD:268:ARG:HH11	27:BD:268:ARG:CB	2.25	0.49
57:AA:2855:C:H2'	57:AA:2856:C:C6	2.40	0.49
46:AZ:146:ILE:HD12	57:AA:896:A:C4	2.47	0.49
57:AA:2294:C:N4	57:AA:2338:G:H1	2.07	0.49
46:AZ:19:ARG:NH1	46:AZ:84:GLU:HA	2.28	0.49
57:AA:2736:G:O2'	57:AA:2737:G:H5'	2.12	0.49
57:AA:11:G:H22	57:AA:2628:C:P	2.36	0.49
46:BZ:24:LEU:HD22	46:BZ:86:VAL:HG23	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BX:9:LEU:O	49:B2:36:ARG:HD2	2.13	0.49
57:AA:1786:A:C2	57:AA:2606:C:H1'	2.48	0.49
34:BN:65:LYS:HG3	34:BN:69:GLN:HG3	1.95	0.49
57:AA:1167:U:C2	57:AA:1183:G:N2	2.80	0.49
50:A3:19:GLN:NE2	50:A3:52:HIS:CE1	2.77	0.49
51:A4:27:THR:HG23	51:A4:27:THR:O	2.13	0.49
53:A6:26:ASN:ND2	53:A6:51:GLU:OE1	2.45	0.49
55:A8:56:GLU:C	55:A8:58:ILE:N	2.65	0.49
57:AA:1021:A:O2'	57:AA:1123:C:H5''	2.13	0.49
57:AA:1509(A):A:H2'	57:AA:1509(B):A:C8	2.48	0.49
57:AA:234:C:H2'	57:AA:235:U:C6	2.44	0.49
27:AD:21:PHE:HB3	27:AD:24:ILE:HD12	1.94	0.49
27:AD:43:ARG:NH1	27:AD:44:ASN:ND2	2.61	0.49
30:AG:29:TRP:CE3	30:AG:29:TRP:HA	2.47	0.49
31:AH:94:TYR:N	31:AH:94:TYR:CD1	2.80	0.49
36:AP:97:PRO:O	36:AP:98:GLU:HB3	2.12	0.49
40:AT:29:ARG:HB3	40:AT:85:LYS:HA	1.94	0.49
36:BP:64:LYS:HB2	55:B8:25:MET:HG3	1.91	0.49
57:BA:1049:C:N4	57:BA:1111:A:H2	2.09	0.49
57:BA:225:A:H2'	57:BA:226:G:H5'	1.95	0.49
58:BB:3:C:H2'	58:BB:4:C:C6	2.48	0.49
29:BF:101:LEU:HD12	29:BF:102:PRO:CD	2.41	0.49
29:BF:8:GLN:HG2	29:BF:126:VAL:CB	2.43	0.49
29:BF:63:LYS:CE	29:BF:67:GLN:HB2	2.43	0.49
34:BN:57:ALA:C	34:BN:58:ASP:O	2.51	0.49
36:BP:144:GLU:N	36:BP:145:PRO:CD	2.70	0.49
36:BP:33:ARG:CZ	57:BA:587:C:C2'	2.84	0.49
37:BQ:42:ILE:HG22	37:BQ:47:ILE:HG13	1.93	0.49
40:BT:57:PHE:CG	40:BT:58:ASN:N	2.80	0.49
41:BU:13:LYS:HE2	41:BU:13:LYS:CA	2.43	0.49
45:BY:28:LYS:N	45:BY:28:LYS:CE	2.76	0.49
45:BY:39:VAL:CG1	45:BY:40:GLU:N	2.69	0.49
45:BY:88:LYS:CE	45:BY:93:GLY:HA3	2.42	0.49
54:B7:5:TRP:NE1	54:B7:7:PRO:HD3	2.28	0.49
46:AZ:56:VAL:HG22	46:AZ:69:THR:O	2.13	0.49
51:B4:51:ASP:OD2	51:B4:52:THR:HG23	2.12	0.49
57:AA:2134:A:N3	57:AA:2159:G:H1'	2.28	0.49
49:A2:64:LEU:CD2	49:A2:68:ARG:HD3	2.43	0.49
57:AA:818:G:C3'	57:AA:819:A:H5''	3.40	0.49
54:A7:5:TRP:NE1	54:A7:7:PRO:HD3	2.28	0.49
56:B9:30:PRO:HB2	57:BA:2527:C:H4'	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:30:G:O2'	57:BA:31:C:H5'	2.13	0.49
46:BZ:24:LEU:C	46:BZ:24:LEU:HD23	2.33	0.49
57:BA:1924:C:O2'	57:BA:1925:C:H5'	2.12	0.49
57:AA:946:G:O2'	57:AA:947:G:H5'	2.13	0.49
57:BA:2143:C:O2'	57:BA:2144:U:H5'	2.12	0.49
57:AA:731:C:H2'	57:AA:732:C:H6	1.78	0.49
57:AA:1002:G:H3'	57:AA:1003:G:C8	4.66	0.49
36:AP:74:GLU:HG2	57:AA:244:A:H4'	1.93	0.49
57:AA:830:G:H4'	57:AA:831:G:OP2	2.12	0.49
36:AP:38:GLN:HB3	57:AA:943:U:OP1	2.12	0.49
39:AS:29:PHE:CE1	58:AB:7:G:O5'	2.66	0.49
26:AC:31:LYS:HE2	26:AC:180:SER:O	2.13	0.49
27:AD:117:VAL:HG22	27:AD:129:ASN:OD1	2.13	0.49
28:AE:179:GLU:O	28:AE:180:ASN:HB2	2.11	0.49
28:AE:7:VAL:CG1	28:AE:27:LEU:HB3	2.43	0.49
30:AG:145:THR:OG1	30:AG:146:TYR:N	2.44	0.49
36:AP:79:ARG:HG3	36:AP:110:TYR:CB	2.43	0.49
38:AR:103:ARG:CD	43:AW:40:ASN:ND2	2.75	0.49
38:AR:4:LEU:HD23	57:AA:2822:G:O6	2.13	0.49
40:AT:65:LYS:HG3	40:AT:66:VAL:N	2.28	0.49
40:AT:7:ILE:O	40:AT:10:VAL:HB	2.13	0.49
32:BI:118:LYS:NZ	57:BA:1349:A:P	102.26	0.49
57:BA:142:A:H8	57:BA:1595:G:H21	1.60	0.49
57:BA:1339:G:N2	57:BA:1603:A:H1'	2.27	0.49
57:BA:185:U:H2'	57:BA:186:G:C8	2.48	0.49
26:BC:45:HIS:HB3	57:BA:2177:C:H1'	1.94	0.49
57:BA:225:A:C2'	57:BA:226:G:H5'	2.42	0.49
57:BA:2300:G:H1	57:BA:2316:C:H42	1.60	0.49
29:BF:125:LEU:HD13	29:BF:199:TRP:CG	2.48	0.49
29:BF:20:LEU:O	29:BF:21:ALA:O	2.30	0.49
32:BI:73:GLU:OE1	32:BI:137:PRO:HD2	2.12	0.49
32:BI:140:LEU:O	32:BI:141:LYS:HD3	2.12	0.49
34:BN:3:THR:C	34:BN:4:TYR:CG	2.85	0.49
34:BN:46:VAL:O	34:BN:47:ALA:CB	2.61	0.49
34:BN:3:THR:C	34:BN:4:TYR:CD1	2.86	0.49
34:BN:59:LYS:O	34:BN:60:ILE:C	2.51	0.49
36:BP:97:PRO:O	36:BP:98:GLU:HB3	2.12	0.49
40:BT:23:ARG:HB2	40:BT:24:PRO:HD2	1.95	0.49
40:BT:3:ARG:HE	57:BA:2876:G:C4'	2.25	0.49
40:BT:35:LYS:HE2	40:BT:41:ARG:HE	1.77	0.49
43:BW:9:TYR:N	43:BW:102:HIS:HD2	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BX:23:GLU:O	44:BX:25:LYS:N	2.42	0.49
45:BY:31:LEU:CD2	45:BY:31:LEU:N	2.74	0.49
31:BH:17:VAL:O	31:BH:45:VAL:HG22	2.12	0.49
57:AA:1947:C:C3'	57:AA:1948:G:H5''	2.42	0.49
39:AS:42:ASP:C	39:AS:44:LYS:H	2.16	0.49
48:B1:47:GLN:HG3	57:BA:2091:U:O2'	2.12	0.49
42:BV:29:PRO:O	42:BV:61:VAL:O	2.30	0.49
57:AA:149:A:O2'	57:AA:150:C:C6	4.76	0.49
57:BA:57:C:O2'	57:BA:58:G:H5'	2.12	0.49
44:BX:29:TRP:CE3	44:BX:78:LYS:HB3	2.48	0.49
56:B9:22:ARG:HB2	56:B9:24:TYR:HE1	1.78	0.49
48:B1:68:PRO:O	48:B1:70:VAL:N	2.45	0.49
47:B0:19:LYS:HD3	47:B0:41:ARG:HH22	1.78	0.49
27:AD:201:HIS:O	27:AD:203:ASN:N	2.46	0.49
46:BZ:13:GLU:OE1	46:BZ:13:GLU:N	2.46	0.49
57:BA:2518:A:C8	57:BA:2518:A:H5'	2.47	0.49
57:AA:2162:G:O2'	57:AA:2163:C:H5'	2.12	0.49
53:A6:8:LYS:NZ	57:AA:2285:C:H5	2.10	0.49
57:AA:743:G:O2'	57:AA:744:G:H5'	2.13	0.49
58:AB:87:G:C2'	58:AB:88:C:H5''	2.43	0.49
28:AE:117:MET:O	28:AE:118:LYS:CB	2.61	0.49
28:AE:52:LEU:N	28:AE:74:PRO:HB3	2.28	0.49
42:AV:29:PRO:O	42:AV:61:VAL:O	2.31	0.49
53:B6:52:VAL:CG2	53:B6:53:LYS:H	2.25	0.49
53:B6:5:VAL:HG11	57:BA:2284:C:OP1	2.13	0.49
57:BA:2123:G:H2'	57:BA:2124:G:H8	1.78	0.49
26:BC:6:LYS:HD3	57:BA:2132:U:N3	2.27	0.49
28:BE:61:ARG:NH2	57:BA:2632:A:O2'	2.46	0.49
58:BB:8:U:H3	58:BB:113:G:H1	1.61	0.49
27:BD:31:LYS:C	27:BD:33:LEU:H	2.16	0.49
27:BD:31:LYS:HB3	27:BD:34:VAL:CG2	2.42	0.49
28:BE:57:LYS:C	28:BE:59:VAL:H	2.16	0.49
29:BF:102:PRO:HB2	29:BF:105:VAL:HG23	1.95	0.49
36:BP:79:ARG:HG3	36:BP:110:TYR:CB	2.43	0.49
39:BS:99:LYS:O	39:BS:101:LEU:HD12	2.13	0.49
42:BV:39:LEU:C	42:BV:40:LEU:HD23	2.33	0.49
45:BY:54:LYS:C	45:BY:56:PRO:HD2	2.34	0.49
45:BY:77:PRO:O	45:BY:78:ALA:HB2	2.13	0.49
46:BZ:34:ASN:HD21	58:BB:74:U:H1'	1.78	0.49
31:BH:50:VAL:CG1	31:BH:51:ARG:H	2.25	0.49
31:BH:7:LEU:CD2	31:BH:69:ARG:CD	2.90	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:A6:41:PRO:HG3	53:A6:44:ARG:HH12	1.77	0.49
31:BH:170:ARG:H	31:BH:170:ARG:CD	2.20	0.49
57:BA:2696:U:H2'	57:BA:2697:G:C8	2.48	0.49
57:AA:89:G:H3'	57:AA:90:U:H5'	1.95	0.49
48:B1:89:GLU:HA	48:B1:92:LYS:CB	2.43	0.49
54:B7:28:ARG:HG3	54:B7:28:ARG:HH11	1.77	0.49
48:A1:67:ILE:N	48:A1:68:PRO:HD2	2.28	0.49
57:AA:2518:A:H5'	57:AA:2518:A:C8	2.48	0.49
38:AR:36:THR:HG22	57:AA:1278:A:C5'	2.42	0.48
57:AA:1339:G:N2	57:AA:1603:A:H1'	2.27	0.48
57:AA:1579:A:H2'	57:AA:1580:A:O4'	2.12	0.48
57:AA:1339:G:H21	57:AA:1603:A:H1'	1.77	0.48
57:AA:2247:A:O2'	57:AA:2248:C:H5'	2.13	0.48
57:AA:2728:U:C2'	57:AA:2729:G:H5'	2.42	0.48
57:AA:908:C:O2'	57:AA:909:A:H5'	2.13	0.48
58:AB:3:C:N3	58:AB:118:G:N2	2.61	0.48
58:AB:71:C:C2	58:AB:72:G:C8	3.01	0.48
27:AD:268:ARG:H	27:AD:270:ILE:HD11	1.76	0.48
28:AE:34:VAL:HG11	28:AE:78:LEU:HD22	1.95	0.48
29:AF:21:ALA:C	29:AF:23:ASP:N	2.66	0.48
34:AN:132:ALA:O	34:AN:133:GLN:HB3	2.13	0.48
34:AN:23:LEU:HD23	57:AA:1140:C:OP1	2.13	0.48
36:AP:59:LEU:HA	36:AP:61:ARG:HH11	1.67	0.48
39:AS:34:HIS:CE1	39:AS:54:LEU:HB3	2.48	0.48
49:B2:44:LEU:O	49:B2:45:SER:CB	2.60	0.48
49:B2:47:ASN:O	49:B2:49:LYS:N	2.46	0.48
53:B6:30:THR:HG22	53:B6:32:ASN:HD22	1.78	0.48
55:B8:50:LEU:HG	55:B8:51:ALA:N	2.27	0.48
57:BA:1209:G:H21	57:BA:1210:A:H62	1.61	0.48
57:BA:1280:G:H3'	57:BA:1281:G:H5''	1.93	0.48
57:BA:1578:U:H2'	57:BA:1579:A:H5'	1.95	0.48
57:BA:893:C:H2'	57:BA:894:C:H6	1.77	0.48
57:BA:970:C:H2'	57:BA:971:C:C6	2.48	0.48
30:BG:107:LEU:HD21	30:BG:178:PHE:CE2	2.48	0.48
34:BN:23:LEU:HB2	34:BN:60:ILE:CG2	2.42	0.48
38:BR:30:THR:HA	38:BR:78:LYS:NZ	2.28	0.48
40:BT:28:VAL:CB	40:BT:88:ILE:HG12	2.36	0.48
45:BY:13:VAL:HG22	45:BY:73:ARG:O	2.13	0.48
45:BY:95:LYS:CD	45:BY:100:ALA:HB1	2.42	0.48
37:AQ:134:ARG:NE	46:AZ:122:ARG:HH21	2.11	0.48
52:A5:51:TYR:HB3	52:A5:55:ARG:HD3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:A7:43:THR:HG23	54:A7:44:PRO:HD2	1.95	0.48
53:A6:41:PRO:C	53:A6:43:CYS:N	2.65	0.48
49:A2:50:ILE:HG22	49:A2:51:ARG:N	2.27	0.48
29:BF:176:LEU:HD11	29:BF:180:GLY:HA3	1.95	0.48
57:BA:2833:G:C3'	57:BA:2834:G:C5'	2.83	0.48
38:BR:9:LYS:HD3	57:BA:1652:A:OP1	2.12	0.48
57:BA:1448:G:N3	57:BA:1528(A):A:H2	2.11	0.48
46:BZ:31:ARG:CB	46:BZ:31:ARG:CZ	2.91	0.48
57:AA:654(H):G:N2	57:AA:654(J):A:C8	2.78	0.48
28:BE:163:GLU:O	28:BE:165:VAL:HG23	2.12	0.48
42:BV:79:VAL:O	42:BV:80:GLN:HB2	2.13	0.48
57:BA:1681:G:O2'	57:BA:1762:A:H2'	2.13	0.48
57:BA:950:G:O2'	57:BA:951:C:H5'	2.13	0.48
57:AA:1582:C:O2'	57:AA:1586:A:C8	2.66	0.48
44:AX:3:THR:HA	44:AX:6:ASP:OD2	2.12	0.48
57:AA:2853:C:H2'	57:AA:2854:G:H8	1.77	0.48
57:BA:731:C:H2'	57:BA:732:C:H6	1.78	0.48
57:AA:2861:G:O2'	57:AA:2862:G:H5'	2.13	0.48
29:BF:135:LYS:O	29:BF:137:LYS:N	2.46	0.48
57:AA:2143:C:O2'	57:AA:2144:U:H5'	2.13	0.48
57:BA:2689:U:H5''	57:BA:2690:C:H5'	1.95	0.48
51:A4:15:ILE:N	51:A4:31:ILE:O	2.45	0.48
57:AA:1168:G:O2'	57:AA:1169:G:H5'	2.12	0.48
32:AI:118:LYS:NZ	57:AA:1349:A:P	102.31	0.48
57:AA:768:G:H2'	57:AA:769:G:C8	2.42	0.48
58:AB:75:G:H5'	58:AB:76:G:OP2	2.13	0.48
28:AE:62:PRO:C	28:AE:64:LYS:N	2.66	0.48
30:AG:120:LEU:HD13	30:AG:133:LEU:CD2	2.43	0.48
30:AG:125:PHE:HB2	30:AG:166:ASP:CB	2.43	0.48
30:AG:19:LEU:C	30:AG:21:ARG:N	2.66	0.48
30:AG:51:ARG:CA	30:AG:51:ARG:NE	2.74	0.48
30:AG:58:GLN:HG3	30:AG:59:GLU:N	2.28	0.48
30:AG:60:LEU:HD12	30:AG:68:PRO:CG	2.43	0.48
31:AH:20:ALA:HB1	31:AH:21:PRO:HD2	1.91	0.48
37:AQ:12:GLN:HE21	37:AQ:73:PRO:HD3	1.78	0.48
40:AT:57:PHE:O	40:AT:59:THR:N	2.45	0.48
40:AT:80:SER:CB	40:AT:81:PRO:HD3	2.31	0.48
45:AY:90:LEU:HG	45:AY:91:GLU:N	2.25	0.48
55:B8:53:PRO:C	55:B8:55:ALA:N	2.65	0.48
57:BA:1171:G:N3	57:BA:1171:G:H2'	2.27	0.48
57:BA:1336:A:H2'	57:BA:1337:G:H8	1.76	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1494:A:O2'	57:BA:1496:A:C2	2.66	0.48
57:BA:830:G:H4'	57:BA:831:G:OP2	2.13	0.48
57:BA:941:A:H2'	57:BA:942:G:C8	2.48	0.48
26:BC:46:ALA:HA	26:BC:212:SER:O	2.13	0.48
26:BC:14:LYS:O	26:BC:29:LEU:HD21	2.14	0.48
27:BD:21:PHE:HB3	27:BD:24:ILE:HD12	1.96	0.48
27:BD:44:ASN:N	27:BD:44:ASN:OD1	2.46	0.48
27:BD:65:ILE:HD11	27:BD:67:PHE:CD1	2.49	0.48
28:BE:69:LYS:C	28:BE:71:GLY:N	2.66	0.48
28:BE:69:LYS:HZ2	28:BE:89:ASP:CA	2.26	0.48
30:BG:16:ARG:NH2	30:BG:28:VAL:HG12	2.27	0.48
34:BN:40:PRO:O	41:BU:64:ARG:HG2	2.12	0.48
36:BP:10:PRO:O	36:BP:11:GLY:O	2.30	0.48
36:BP:16:ARG:HD3	36:BP:16:ARG:O	2.13	0.48
36:BP:40:SER:C	36:BP:41:ARG:HE	2.17	0.48
38:BR:28:LEU:HA	38:BR:34:ILE:HG12	1.95	0.48
39:BS:89:ARG:NH1	39:BS:92:TYR:HA	2.28	0.48
40:BT:89:VAL:HB	40:BT:91:ARG:HG3	1.95	0.48
43:BW:75:TYR:CD2	43:BW:104:THR:HB	2.48	0.48
45:BY:28:LYS:NZ	45:BY:28:LYS:N	2.47	0.48
46:BZ:153:SER:C	46:BZ:155:LEU:HD23	2.33	0.48
57:BA:1947:C:C3'	57:BA:1948:G:H5''	2.43	0.48
57:BA:2134:A:H1'	57:BA:2159:G:H21	1.77	0.48
57:BA:2134:A:H61	57:BA:2157:G:C1'	2.17	0.48
36:AP:124:LYS:HE2	36:AP:143:GLY:HA2	1.95	0.48
57:AA:2171:A:H4'	57:AA:2172:U:O5'	2.12	0.48
30:BG:136:ARG:HH12	57:BA:2306:C:H4'	1.78	0.48
57:AA:272(G):C:N4	57:AA:363(C):G:H1	2.10	0.48
47:A0:19:LYS:HD3	47:A0:41:ARG:HH22	1.79	0.48
43:BW:61:ASN:ND2	43:BW:61:ASN:N	2.61	0.48
34:BN:119:ARG:NH1	34:BN:119:ARG:HG3	2.27	0.48
37:BQ:38:GLU:HG3	37:BQ:127:ILE:HB	1.95	0.48
46:BZ:73:GLN:O	46:BZ:74:VAL:HG23	2.13	0.48
51:A4:6:HIS:HB3	51:A4:7:PRO:CD	2.44	0.48
53:A6:34:LEU:HD23	53:A6:51:GLU:HB3	1.95	0.48
57:AA:1310:G:C2'	57:AA:1311:G:H5'	2.43	0.48
57:AA:2123:G:H2'	57:AA:2124:G:H8	1.77	0.48
57:AA:962:G:O2'	57:AA:963:U:H5'	2.14	0.48
58:AB:40:U:N3	58:AB:43:C:H5''	2.29	0.48
26:AC:37:LYS:HG3	57:AA:2128:C:OP1	2.13	0.48
27:AD:30:GLU:HG3	27:AD:63:ARG:NE	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AD:98:VAL:C	27:AD:100:GLY:N	2.67	0.48
28:AE:24:THR:HG21	28:AE:188:VAL:HG12	1.95	0.48
29:AF:18:ARG:HG2	29:AF:19:GLU:N	2.27	0.48
30:AG:54:GLU:HA	30:AG:57:ALA:HB2	1.95	0.48
31:AH:7:LEU:CD2	31:AH:65:HIS:NE2	2.76	0.48
32:AI:83:ALA:O	32:AI:145:VAL:HG22	2.13	0.48
36:AP:30:THR:O	36:AP:32:THR:N	2.46	0.48
44:AX:12:VAL:HG13	44:AX:27:THR:O	2.13	0.48
44:AX:30:VAL:HG21	44:AX:39:ILE:HD11	1.94	0.48
47:B0:37:LEU:N	47:B0:59:LEU:O	2.47	0.48
57:BA:271(P):C:C2'	57:BA:271(Q):G:H5'	2.43	0.48
26:BC:6:LYS:C	26:BC:8:TYR:N	2.63	0.48
27:BD:35:LYS:CD	27:BD:36:PRO:N	2.75	0.48
29:BF:22:ALA:C	29:BF:24:LEU:H	2.17	0.48
30:BG:125:PHE:CD1	30:BG:166:ASP:HB2	2.47	0.48
30:BG:167:GLU:O	30:BG:170:ARG:HB3	2.13	0.48
32:BI:10:GLU:OE1	32:BI:11:ASN:HB2	2.13	0.48
32:BI:1:MET:CE	32:BI:23:PRO:HA	2.43	0.48
32:BI:28:ASN:HA	32:BI:32:PRO:HG2	1.95	0.48
35:BO:1:MET:HE2	35:BO:32:TYR:CG	2.49	0.48
36:BP:18:ARG:O	36:BP:18:ARG:NH1	2.45	0.48
38:BR:24:GLN:NE2	38:BR:36:THR:HG21	2.28	0.48
40:BT:128:GLU:O	40:BT:129:ARG:C	2.50	0.48
42:BV:15:GLU:O	42:BV:16:PRO:C	2.51	0.48
42:BV:2:PHE:HB2	42:BV:42:GLY:CA	2.43	0.48
38:BR:98:LEU:H	38:BR:113:LEU:HD23	1.79	0.48
29:BF:177:ALA:HB1	29:BF:178:PRO:HD2	1.94	0.48
57:AA:207:A:H2'	57:AA:208:C:O4'	2.13	0.48
57:BA:1540:U:O3'	57:BA:1542:A:OP1	2.31	0.48
57:BA:1677:A:H2'	57:BA:1678:G:C8	2.48	0.48
41:BU:108:GLU:HG3	42:BV:44:LYS:CD	2.39	0.48
57:BA:276:A:H5'	57:BA:277:C:C6	2.48	0.48
35:AO:114:ILE:H	35:AO:114:ILE:CD1	2.25	0.48
57:AA:1756:G:H4'	57:AA:1758:G:O4'	2.13	0.48
57:BA:11:G:N2	57:BA:2628:C:P	2.86	0.48
27:BD:183:ARG:HG3	27:BD:269:PHE:O	2.13	0.48
46:AZ:6:LYS:HD3	46:AZ:6:LYS:N	2.28	0.48
35:AO:119:PRO:HB2	40:AT:68:TYR:CZ	2.48	0.48
57:AA:2062:A:H2'	57:AA:2063:C:H5'	1.95	0.48
37:BQ:116:GLU:O	37:BQ:120:ILE:HG12	2.12	0.48
57:AA:2422:A:H4'	57:AA:2423:U:OP1	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:A2:46:GLN:H	49:A2:49:LYS:CE	2.25	0.48
51:A4:2:LYS:HG3	58:AB:39:A:N1	2.28	0.48
55:A8:2:PRO:HA	57:AA:591:C:O2	2.13	0.48
57:AA:225:A:H2'	57:AA:226:G:H5'	1.95	0.48
57:AA:266:G:O2'	57:AA:267:C:OP2	4.86	0.48
57:AA:1999:C:H4'	57:AA:2723:C:O2	2.14	0.48
57:AA:782:A:H4'	57:AA:783:A:O5'	2.13	0.48
57:AA:999:U:O2'	57:AA:1000:A:H5'	2.13	0.48
30:AG:27:ASN:ND2	58:AB:55:U:H4'	2.24	0.48
26:AC:50:ILE:HD12	26:AC:50:ILE:H	1.78	0.48
27:AD:44:ASN:OD1	27:AD:44:ASN:N	2.46	0.48
27:AD:45:ASN:OD1	27:AD:46:GLN:N	2.46	0.48
28:AE:102:VAL:HA	28:AE:201:THR:H	1.77	0.48
28:AE:14:ILE:HD12	40:AT:14:TYR:OH	2.12	0.48
28:AE:100:GLU:O	28:AE:172:VAL:HG23	2.13	0.48
31:AH:38:SER:CB	31:AH:64:LEU:HD13	2.43	0.48
36:AP:33:ARG:HD3	57:AA:587:C:C2	2.48	0.48
42:AV:38:LEU:HD22	42:AV:52:VAL:HG11	1.96	0.48
44:AX:28:PHE:N	44:AX:28:PHE:CD1	2.81	0.48
45:AY:95:LYS:HD3	45:AY:100:ALA:CB	2.43	0.48
51:B4:5:ILE:CD1	51:B4:5:ILE:N	2.75	0.48
55:B8:14:VAL:CG2	55:B8:22:VAL:HG12	2.39	0.48
57:BA:1317:A:H2'	57:BA:1318:C:C6	2.48	0.48
57:BA:2285:C:H5'	57:BA:2288:A:N6	2.28	0.48
57:BA:2811:G:O2'	57:BA:2812:G:H5'	2.13	0.48
57:BA:819:A:OP2	57:BA:1187:G:N2	2.41	0.48
57:BA:916:G:C2'	57:BA:917:A:H5''	2.43	0.48
29:BF:4:VAL:CG1	29:BF:17:ARG:HD3	2.43	0.48
39:BS:28:VAL:HG12	39:BS:29:PHE:N	2.28	0.48
39:BS:89:ARG:HG3	39:BS:92:TYR:HA	1.95	0.48
40:BT:73:GLU:O	40:BT:74:ARG:HG2	2.14	0.48
45:BY:4:LYS:HB2	45:BY:32:PRO:CG	2.44	0.48
45:BY:52:SER:O	45:BY:56:PRO:HD3	2.13	0.48
46:BZ:18:LEU:HB3	46:BZ:23:LYS:HB2	1.95	0.48
52:A5:2:ALA:HB3	57:AA:747:U:C1'	2.43	0.48
51:A4:50:VAL:C	51:A4:52:THR:H	2.16	0.48
35:BO:34:THR:OG1	35:BO:35:VAL:N	2.45	0.48
57:AA:271(F):C:H2'	57:AA:271(G):C:C6	2.38	0.48
57:AA:277:C:O2'	57:AA:278:A:H5'	2.13	0.48
46:AZ:141:VAL:HG13	46:AZ:144:LEU:CD2	2.43	0.48
57:BA:2737:G:O2'	57:BA:2738:A:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:445:C:O2'	57:BA:446:G:H5'	2.13	0.48
57:BA:1509(B):A:H2'	57:BA:1510:G:H8	1.74	0.48
57:AA:2222:G:O2'	57:AA:2223:G:H5'	2.13	0.48
57:BA:1701:A:H5'	57:BA:1702:G:OP2	2.13	0.48
57:AA:2155:G:H2'	57:AA:2156:G:O4'	2.13	0.48
57:AA:2533:A:C2'	57:AA:2534:A:H5'	2.43	0.48
29:AF:135:LYS:O	29:AF:136:THR:C	2.51	0.48
57:BA:2672:G:H3'	57:BA:2673:G:H5''	1.95	0.48
29:BF:135:LYS:O	29:BF:136:THR:C	2.51	0.48
57:AA:2332:U:H5'	57:AA:2336:A:N6	2.29	0.48
47:A0:55:ARG:HE	47:A0:55:ARG:HB3	1.48	0.48
57:AA:2206:G:C2	57:AA:2207:G:H5'	2.44	0.48
30:AG:128:ARG:HE	57:AA:2302:G:H1'	1.79	0.48
57:AA:407:G:H2'	57:AA:408:G:C8	2.48	0.48
57:AA:918:A:H5''	58:AB:98:G:O2'	2.13	0.48
26:AC:46:ALA:HA	26:AC:212:SER:O	2.13	0.48
27:AD:30:GLU:CD	27:AD:63:ARG:NE	2.66	0.48
28:AE:134:ILE:HG21	57:AA:2579:C:C4'	2.37	0.48
31:AH:43:VAL:HG12	31:AH:51:ARG:O	2.13	0.48
34:AN:59:LYS:O	34:AN:60:ILE:C	2.52	0.48
36:AP:101:VAL:HG12	36:AP:107:LYS:N	2.28	0.48
36:AP:10:PRO:O	36:AP:11:GLY:O	2.31	0.48
36:AP:9:ASN:O	36:AP:11:GLY:N	2.45	0.48
38:AR:2:ARG:N	38:AR:2:ARG:CD	2.76	0.48
41:AU:90:VAL:CG2	42:AV:39:LEU:HG	2.40	0.48
43:AW:20:VAL:O	43:AW:23:LEU:HB2	2.14	0.48
45:AY:74:PRO:O	45:AY:80:GLY:HA2	2.13	0.48
53:B6:27:LYS:HD2	53:B6:30:THR:CB	2.33	0.48
53:B6:48:VAL:CG2	53:B6:49:HIS:H	2.14	0.48
57:BA:1150:C:O2'	57:BA:1151:G:H5'	2.13	0.48
57:BA:564:C:O2'	57:BA:565:C:H5'	2.13	0.48
39:BS:62:LYS:HB2	58:BB:50:G:OP2	2.13	0.48
28:BE:68:ALA:C	28:BE:70:ALA:H	2.14	0.48
31:BH:102:ALA:HA	31:BH:117:PRO:CD	2.44	0.48
32:BI:31:LEU:HD21	32:BI:38:LEU:HG	1.94	0.48
32:BI:71:ILE:O	32:BI:75:LEU:HD13	2.14	0.48
34:BN:32:THR:O	34:BN:35:ARG:O	2.31	0.48
40:BT:30:VAL:HG11	40:BT:84:GLN:CG	2.43	0.48
41:BU:8:VAL:O	41:BU:9:VAL:C	2.52	0.48
45:BY:44:ILE:C	45:BY:62:GLU:HG3	2.31	0.48
46:AZ:165:VAL:CG1	46:AZ:166:SER:H	2.04	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:580:C:H2'	57:BA:581:C:H6	1.78	0.48
46:BZ:122:ARG:HH11	46:BZ:122:ARG:HG2	1.75	0.48
46:BZ:168:GLU:C	46:BZ:170:THR:H	2.15	0.48
39:BS:42:ASP:C	39:BS:44:LYS:H	2.15	0.48
57:BA:2400:G:N2	57:BA:2417:C:C2	2.81	0.48
46:AZ:107:THR:HG23	46:AZ:111:VAL:HB	1.94	0.48
57:AA:606:U:H4'	57:AA:658:C:H4'	1.95	0.48
57:BA:2171:A:H4'	57:BA:2172:U:O5'	2.13	0.48
57:AA:2223:G:O2'	57:AA:2224:G:H5'	2.12	0.48
57:BA:1274:A:N3	57:BA:1297:C:H1'	2.29	0.48
57:BA:363(E):U:H3'	57:BA:363(F):A:O4'	2.13	0.48
56:B9:15:LYS:HZ3	57:BA:2753:A:H1'	1.78	0.48
30:AG:165:THR:C	30:AG:167:GLU:H	2.16	0.48
57:BA:237:C:O2'	57:BA:238:C:H5'	2.13	0.48
57:BA:2389:G:H5''	57:BA:2390:U:H5'	1.95	0.48
49:A2:47:ASN:O	49:A2:48:HIS:C	2.52	0.48
57:AA:828:U:C5	57:AA:829:A:N6	2.81	0.48
58:AB:94:C:O2'	58:AB:95:C:H5'	2.13	0.48
26:AC:175:PRO:HD3	57:AA:2124:G:H5'	1.94	0.48
29:AF:128:ALA:O	29:AF:142:TRP:NE1	2.37	0.48
29:AF:40:GLN:HG2	57:AA:615:G:OP2	2.13	0.48
29:AF:53:THR:C	29:AF:55:GLY:H	2.17	0.48
30:AG:129:GLY:C	30:AG:130:ASN:CG	2.72	0.48
32:AI:91:SER:CB	32:AI:119:PRO:HB2	2.33	0.48
34:AN:26:LEU:O	34:AN:30:ILE:HG13	2.14	0.48
36:AP:81:GLN:HB3	36:AP:106:LEU:HD12	1.95	0.48
39:AS:49:VAL:HG11	39:AS:73:LEU:HD23	1.95	0.48
40:AT:31:SER:N	40:AT:43:GLN:O	2.46	0.48
40:AT:66:VAL:HA	40:AT:71:GLY:HA2	1.95	0.48
40:AT:89:VAL:HB	40:AT:91:ARG:CD	2.44	0.48
42:AV:82:ARG:HH11	42:AV:82:ARG:HG2	1.79	0.48
45:AY:13:VAL:CG2	45:AY:72:VAL:HB	2.42	0.48
45:AY:35:TYR:CD2	45:AY:69:ALA:HB3	2.49	0.48
55:B8:56:GLU:C	55:B8:58:ILE:N	2.67	0.48
34:BN:23:LEU:HD23	57:BA:1140:C:OP1	2.13	0.48
57:BA:1339:G:H21	57:BA:1603:A:H1'	1.78	0.48
57:BA:2258:C:H4'	57:BA:2259:G:OP2	2.14	0.48
57:BA:2666:C:H5''	57:BA:2667:C:H5	1.78	0.48
57:BA:889:C:O2'	57:BA:890:A:O5'	2.30	0.48
26:BC:29:LEU:HD22	26:BC:33:LEU:HD11	1.96	0.48
27:BD:76:PRO:HG2	27:BD:98:VAL:HG21	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:80:GLU:OE2	57:BA:2636:U:H4'	2.13	0.48
29:BF:51:THR:HG21	29:BF:92:PRO:HD2	1.95	0.48
30:BG:129:GLY:O	30:BG:130:ASN:CB	2.61	0.48
32:BI:118:LYS:HZ2	32:BI:119:PRO:CD	2.26	0.48
32:BI:77:LEU:HD12	32:BI:101:LEU:HD11	1.95	0.48
34:BN:55:VAL:HG22	34:BN:126:PRO:HA	1.96	0.48
36:BP:148:LEU:O	36:BP:149:GLU:CB	2.61	0.48
40:BT:123:GLN:HB3	40:BT:123:GLN:HE21	1.54	0.48
45:BY:95:LYS:HE2	45:BY:101:LYS:N	2.24	0.48
45:BY:96:ILE:HG22	45:BY:97:ARG:N	2.28	0.48
46:AZ:150:LEU:O	46:AZ:171:ILE:HD12	2.13	0.48
46:AZ:126:VAL:HG12	46:AZ:163:LEU:HA	1.95	0.48
53:A6:48:VAL:CG2	53:A6:49:HIS:H	2.15	0.48
57:AA:1802:A:H2'	57:AA:1803:A:C8	2.48	0.48
57:BA:2041:U:H2'	57:BA:2042:A:C8	2.48	0.48
48:A1:45:ASN:ND2	48:A1:47:GLN:HE21	2.09	0.48
41:AU:44:ASN:HD21	42:AV:75:PHE:N	2.10	0.48
57:BA:2855:C:H2'	57:BA:2856:C:C6	2.42	0.48
57:AA:1681:G:O2'	57:AA:1762:A:H2'	2.14	0.48
57:AA:2693:A:H2'	57:AA:2694:G:C8	2.47	0.48
57:AA:1790:C:H5''	57:AA:1791:A:OP1	2.14	0.48
48:A1:29:GLY:O	48:A1:30:VAL:CG2	2.62	0.48
53:A6:25:LYS:CD	57:AA:2285:C:H41	2.24	0.48
57:AA:914:C:H2'	57:AA:915:C:C5'	2.40	0.48
27:AD:79:VAL:HG11	27:AD:111:LEU:HD12	1.95	0.48
27:AD:175:LEU:HD12	27:AD:185:VAL:HG21	1.94	0.48
28:AE:102:VAL:HB	28:AE:199:ARG:O	2.14	0.48
29:AF:68:LYS:O	57:AA:2060:A:OP1	2.31	0.48
31:AH:41:MET:SD	31:AH:52:VAL:HG13	2.54	0.48
31:AH:94:TYR:HD1	31:AH:94:TYR:N	2.11	0.48
35:AO:13:ASN:C	35:AO:15:GLY:H	2.17	0.48
36:AP:125:VAL:CG1	36:AP:138:LEU:HD21	2.44	0.48
36:AP:148:LEU:O	36:AP:149:GLU:CB	2.61	0.48
39:AS:98:VAL:HG12	39:AS:100:ALA:H	1.79	0.48
40:AT:28:VAL:CB	40:AT:88:ILE:HG12	2.36	0.48
40:AT:89:VAL:CG1	40:AT:91:ARG:HG3	2.44	0.48
42:AV:2:PHE:HB2	42:AV:42:GLY:CA	2.43	0.48
45:AY:77:PRO:O	45:AY:78:ALA:HB2	2.13	0.48
57:BA:1179:C:H2'	57:BA:1180:C:C6	2.49	0.48
57:BA:589:C:O2'	57:BA:590:A:H5'	2.13	0.48
57:BA:708:C:H5'	57:BA:709:U:OP2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:137:PRO:HB2	27:BD:140:THR:HG23	1.95	0.48
30:BG:43:LEU:HB3	30:BG:45:GLU:HG2	1.95	0.48
34:BN:58:ASP:C	34:BN:60:ILE:N	2.67	0.48
35:BO:64:ARG:NH1	40:BT:70:VAL:HG21	2.28	0.48
36:BP:33:ARG:HD3	57:BA:587:C:C4	2.49	0.48
37:BQ:18:LYS:N	37:BQ:18:LYS:HD2	2.29	0.48
39:BS:89:ARG:HH11	39:BS:92:TYR:HA	1.78	0.48
42:BV:39:LEU:CB	42:BV:40:LEU:HD23	2.43	0.48
46:BZ:108:PRO:HG2	46:BZ:111:VAL:HG23	1.96	0.48
57:AA:2369:A:O2'	57:AA:2370:G:H5'	2.14	0.48
57:BA:1467:C:O2'	57:BA:1468:C:H5'	2.13	0.48
57:BA:2630:G:H1'	57:BA:2894:G:C4	2.49	0.48
57:AA:818:G:C3'	57:AA:819:A:C5'	3.94	0.48
57:BA:2762:G:H2'	57:BA:2763:G:H5'	1.95	0.48
27:BD:231:HIS:CG	27:BD:232:PRO:HD2	2.48	0.48
57:AA:634:C:H2'	57:AA:635:C:C6	2.49	0.48
43:BW:82:LEU:HD12	43:BW:82:LEU:HA	1.75	0.48
46:BZ:24:LEU:HD21	46:BZ:86:VAL:HG23	1.96	0.48
57:BA:594:U:H2'	57:BA:595:C:H6	1.78	0.48
57:BA:2341:G:H2'	57:BA:2342:C:C6	2.49	0.48
56:B9:10:ILE:HD12	56:B9:32:HIS:CB	2.44	0.48
57:AA:78:A:H2'	57:AA:79:G:H8	1.79	0.48
53:A6:5:VAL:HG13	53:A6:7:ILE:N	2.26	0.48
36:AP:62:LEU:CD1	55:A8:30:ARG:HG2	2.43	0.48
28:AE:61:ARG:NH2	57:AA:2811:G:H4'	2.26	0.48
27:AD:35:LYS:CD	27:AD:35:LYS:C	2.74	0.48
27:AD:35:LYS:CD	27:AD:36:PRO:N	2.76	0.48
28:AE:7:VAL:HA	28:AE:194:GLY:O	2.14	0.48
31:AH:55:PRO:HG2	31:AH:61:HIS:CE1	2.49	0.48
36:AP:146:VAL:CG2	36:AP:147:LEU:H	2.09	0.48
41:AU:74:LEU:CD1	41:AU:74:LEU:N	2.77	0.48
51:B4:33:VAL:CG1	51:B4:34:GLU:H	2.22	0.48
51:B4:47:GLN:O	51:B4:48:ARG:HB3	2.13	0.48
53:B6:47:THR:OG1	53:B6:48:VAL:N	2.47	0.48
57:BA:1331:A:HO2'	57:BA:1332:G:H8	1.61	0.48
57:BA:391:G:O2'	57:BA:410:G:OP1	2.28	0.48
57:BA:869:G:H1	57:BA:908:C:H42	1.60	0.48
58:BB:56:G:H4'	58:BB:57:A:H8	1.79	0.48
58:BB:73:A:H2'	58:BB:74:U:H5'	1.96	0.48
29:BF:184:TYR:O	29:BF:188:ARG:HG2	2.14	0.48
30:BG:63:ILE:HD12	30:BG:141:PHE:CD2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BH:144:VAL:HA	31:BH:147:ASN:HB2	1.95	0.48
32:BI:77:LEU:O	32:BI:141:LYS:HG2	2.14	0.48
32:BI:1:MET:HE3	32:BI:23:PRO:HA	1.95	0.48
33:BJ:57:THR:O	33:BJ:59:ILE:O	2.32	0.48
34:BN:55:VAL:HG13	34:BN:56:ASN:N	2.28	0.48
40:BT:89:VAL:HG12	40:BT:91:ARG:HG3	1.96	0.48
41:BU:61:TRP:CE2	41:BU:94:ASN:HA	2.49	0.48
57:AA:2523:G:H2'	57:AA:2524:G:C5'	2.29	0.48
46:BZ:166:SER:OG	46:BZ:167:PRO:HA	2.14	0.48
46:BZ:171:ILE:HG23	46:BZ:172:ALA:H	1.77	0.48
46:BZ:67:LEU:HB3	46:BZ:68:PRO:HD2	1.96	0.48
57:AA:1528:A:C2	57:AA:1542:A:H2	2.31	0.48
41:BU:55:ARG:HD2	57:BA:1155:A:OP1	2.14	0.48
57:AA:1387:C:H5'	57:AA:1469:A:H4'	1.95	0.48
57:AA:696:G:C2	57:AA:767:U:O2	2.67	0.48
57:BA:760:G:H2'	57:BA:761:A:O4'	2.13	0.48
55:A8:42:ARG:O	55:A8:44:LYS:N	2.40	0.48
57:BA:2472:G:H3'	57:BA:2475:C:H41	1.78	0.48
51:A4:5:ILE:HD13	51:A4:5:ILE:H	1.79	0.48
57:BA:2182:G:H2'	57:BA:2183:C:H6	1.78	0.48
57:AA:718:A:H2'	57:AA:719:C:H5'	1.96	0.48
49:B2:10:LEU:HD22	49:B2:14:ARG:NH1	2.28	0.48
57:AA:2672:G:H3'	57:AA:2673:G:H5''	1.95	0.48
57:BA:2528:U:H2'	57:BA:2530:A:O5'	2.14	0.48
55:A8:50:LEU:C	55:A8:53:PRO:CD	2.82	0.48
57:AA:1486:A:N6	57:AA:1504:C:H42	2.12	0.48
57:AA:18:C:H2'	57:AA:19:C:H6	1.97	0.48
57:AA:484:C:H2'	57:AA:485:C:C6	2.49	0.48
57:AA:259:G:N2	57:AA:621:A:H8	2.03	0.48
57:AA:878:A:H2'	57:AA:879:G:O4'	2.13	0.48
27:AD:147:LEU:HD12	27:AD:155:LEU:HD11	1.95	0.48
28:AE:116:VAL:O	28:AE:117:MET:CB	2.45	0.48
30:AG:133:LEU:C	30:AG:133:LEU:HD12	2.34	0.48
32:AI:29:TYR:CE1	32:AI:33:ARG:NE	2.76	0.48
36:AP:16:ARG:NH1	36:AP:16:ARG:CA	2.77	0.48
39:AS:13:ARG:HG3	39:AS:14:VAL:N	2.24	0.48
39:AS:30:ARG:HD2	39:AS:31:SER:H	1.79	0.48
45:AY:28:LYS:CA	45:AY:38:ILE:HG22	2.38	0.48
57:BA:1208:C:O2	57:BA:1208:C:H2'	2.14	0.48
57:BA:1484:G:C3'	57:BA:1485:G:H5''	2.44	0.48
57:BA:1579:A:H2'	57:BA:1580:A:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2361:A:C2'	57:BA:2362:G:H5'	2.44	0.48
57:BA:2405:G:O2'	57:BA:2406:U:P	2.72	0.48
27:BD:116:GLN:HG3	57:BA:407:G:O2'	83.31	0.48
57:BA:623:G:H2'	57:BA:624:C:C6	2.49	0.48
27:BD:70:TRP:CZ3	27:BD:146:GLU:OE2	2.67	0.48
28:BE:117:MET:O	28:BE:118:LYS:CB	2.62	0.48
28:BE:67:PHE:O	28:BE:70:ALA:HB2	2.14	0.48
30:BG:127:GLY:O	30:BG:129:GLY:N	2.47	0.48
32:BI:2:LYS:HD3	32:BI:20:ASP:CB	2.30	0.48
32:BI:31:LEU:HB2	32:BI:32:PRO:HD3	1.95	0.48
32:BI:74:ASN:C	32:BI:76:THR:N	2.67	0.48
36:BP:112:LEU:HD13	36:BP:113:LYS:N	2.28	0.48
37:BQ:21:THR:O	37:BQ:22:LYS:HB3	2.14	0.48
38:BR:46:GLY:HA2	57:BA:2839:G:H5'	1.96	0.48
40:BT:106:SER:C	40:BT:107:ASP:CG	2.73	0.48
41:BU:92:ARG:HG3	57:BA:996:A:O2'	2.14	0.48
53:A6:17:LYS:O	53:A6:18:ARG:O	2.32	0.48
31:AH:154:PRO:O	31:AH:156:ALA:N	2.47	0.48
37:AQ:59:ARG:HG3	37:AQ:59:ARG:O	2.13	0.48
50:A3:5:LYS:CB	50:A3:36:VAL:HG12	2.41	0.48
52:A5:6:VAL:CG1	57:AA:2016:U:H1'	2.43	0.48
56:A9:1:MET:SD	57:AA:2477:C:H2'	2.54	0.48
56:A9:22:ARG:HB2	56:A9:24:TYR:HE1	1.79	0.48
57:AA:1722:A:O2'	57:AA:1739:U:C5'	2.61	0.48
57:BA:1831:G:O2'	57:BA:1832:C:H5'	2.13	0.48
46:AZ:6:LYS:O	46:AZ:7:ALA:HB2	2.13	0.48
35:BO:102:VAL:HG22	35:BO:121:VAL:HG22	1.95	0.48
31:BH:18:GLU:O	31:BH:24:VAL:HG23	2.14	0.48
57:BA:178:G:O2'	57:BA:179:G:H5'	2.13	0.48
57:BA:2073:C:O2'	57:BA:2074:U:H5'	2.14	0.48
48:A1:64:ALA:HA	48:A1:67:ILE:HD11	1.95	0.48
57:BA:2236:C:C2'	57:BA:2237:G:H5'	2.43	0.48
51:B4:18:CYS:O	51:B4:20:ASN:N	2.46	0.48
57:BA:2155:G:H2'	57:BA:2156:G:O4'	2.14	0.48
57:BA:2008:C:H2'	57:BA:2009:G:H8	1.78	0.48
46:AZ:62:PRO:C	46:AZ:64:GLY:H	2.16	0.48
56:A9:30:PRO:HB2	57:AA:2527:C:H4'	1.95	0.48
37:AQ:116:GLU:O	37:AQ:120:ILE:HG12	2.14	0.48
57:AA:1049:C:N4	57:AA:1111:A:H2	2.12	0.48
57:AA:142:A:H1'	57:AA:1408:C:O4'	2.14	0.48
58:AB:73:A:H2'	58:AB:74:U:H5'	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AD:148:GLU:CB	27:AD:151:LYS:HD2	2.44	0.48
27:AD:96:HIS:ND1	27:AD:102:LYS:HD3	2.28	0.48
28:AE:187:ALA:CB	57:AA:2729:G:H1'	2.44	0.48
29:AF:125:LEU:HD13	29:AF:199:TRP:CG	2.48	0.48
30:AG:38:VAL:HG22	30:AG:93:THR:HG23	1.96	0.48
32:AI:73:GLU:OE1	32:AI:137:PRO:HD2	2.13	0.48
32:AI:71:ILE:O	32:AI:75:LEU:HD13	2.14	0.48
36:AP:16:ARG:HG3	36:AP:17:LYS:N	2.29	0.48
36:AP:33:ARG:CZ	57:AA:587:C:C2'	2.86	0.48
39:AS:28:VAL:HG21	39:AS:87:PHE:HE1	1.79	0.48
40:AT:107:ASP:H	40:AT:110:ILE:HG12	1.79	0.48
40:AT:12:SER:O	40:AT:13:ARG:NH2	2.47	0.48
41:AU:92:ARG:CG	57:AA:996:A:H4'	2.44	0.48
45:AY:2:ARG:HG3	57:AA:105:C:O2'	2.14	0.48
45:AY:97:ARG:C	45:AY:99:CYS:N	2.68	0.48
57:BA:1488:G:N3	57:BA:1488:G:H2'	2.28	0.48
57:BA:185:U:H2'	57:BA:186:G:H8	1.78	0.48
57:BA:2360:A:O2'	57:BA:2361:A:P	2.72	0.48
26:BC:175:PRO:HD3	57:BA:2124:G:H5'	1.96	0.48
28:BE:93:VAL:O	28:BE:95:ILE:N	2.46	0.48
29:BF:102:PRO:HA	57:BA:607:U:OP1	2.13	0.48
29:BF:62:ARG:HG2	29:BF:63:LYS:H	1.79	0.48
30:BG:16:ARG:NE	30:BG:31:VAL:HG11	2.29	0.48
30:BG:51:ARG:HH11	30:BG:53:LEU:HD21	1.78	0.48
36:BP:9:ASN:O	36:BP:11:GLY:N	2.46	0.48
37:BQ:12:GLN:HE21	37:BQ:73:PRO:HD3	1.78	0.48
37:BQ:35:VAL:HG23	37:BQ:101:ARG:O	2.14	0.48
40:BT:55:ASN:HD22	40:BT:58:ASN:ND2	2.12	0.48
41:BU:90:VAL:HG21	42:BV:47:VAL:CG2	2.41	0.48
45:BY:47:LYS:HD2	45:BY:60:PHE:CE2	2.49	0.48
52:B5:4:HIS:O	57:BA:2056:G:N2	2.46	0.48
57:AA:2681:C:C5	57:AA:2725:A:N6	2.64	0.48
57:BA:464:U:H2'	57:BA:465:G:O4'	2.14	0.48
41:BU:31:SER:HB3	41:BU:34:LYS:HB2	1.94	0.48
57:BA:1947:C:C3'	57:BA:1948:G:C5'	2.92	0.48
57:BA:1528:A:C2	57:BA:1542:A:H2	2.32	0.48
36:BP:85:LEU:HG	36:BP:118:GLY:O	2.14	0.48
57:AA:314:A:O2'	57:AA:315:G:H5'	2.13	0.48
50:A3:1:MET:HE1	50:A3:39:ASP:C	2.35	0.48
57:AA:1721:G:C2	57:AA:1739:U:OP2	2.67	0.48
35:AO:47:ILE:HG13	35:AO:48:PRO:HD2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2481:G:O2'	57:AA:2482:G:P	2.72	0.48
57:BA:2223:G:O2'	57:BA:2224:G:H5'	2.13	0.48
57:BA:2688:U:H1'	57:BA:2721:A:H61	1.78	0.48
57:BA:2552:U:C2	57:BA:2554:U:H5'	2.49	0.48
57:BA:846:C:N3	57:BA:930:U:C4	2.82	0.48
43:AW:61:ASN:ND2	43:AW:61:ASN:N	2.62	0.48
57:BA:2773:C:O2'	57:BA:2774:C:H5'	2.14	0.48
51:A4:18:CYS:O	51:A4:20:ASN:N	2.46	0.48
57:AA:1051:G:C2	57:AA:1052:C:N4	2.81	0.47
57:AA:1216:G:N2	57:AA:1234:U:H1'	2.29	0.47
57:AA:1494:A:O2'	57:AA:1496:A:C2	2.66	0.47
57:AA:2285:C:H5'	57:AA:2288:A:N6	2.29	0.47
57:AA:271(P):C:C2'	57:AA:271(Q):G:H5'	2.44	0.47
57:AA:877:U:O2'	57:AA:878:A:H5''	2.14	0.47
58:AB:13:A:O2'	58:AB:14:U:H5''	2.14	0.47
27:AD:124:PRO:O	27:AD:126:GLN:N	2.47	0.47
33:AJ:15:GLU:HA	33:AJ:65:GLU:O	2.14	0.47
36:AP:146:VAL:HG13	36:AP:147:LEU:H	1.79	0.47
37:AQ:76:LYS:CB	37:AQ:91:GLU:HG3	2.43	0.47
39:AS:59:LYS:HD2	39:AS:61:ASN:HB2	1.96	0.47
39:AS:89:ARG:HH11	39:AS:92:TYR:HA	1.79	0.47
40:AT:30:VAL:HG11	40:AT:84:GLN:NE2	2.29	0.47
43:AW:75:TYR:CD2	43:AW:104:THR:HB	2.49	0.47
45:AY:96:ILE:HD13	45:AY:99:CYS:SG	2.54	0.47
51:B4:15:ILE:N	51:B4:31:ILE:O	2.47	0.47
53:B6:52:VAL:CG2	53:B6:53:LYS:N	2.76	0.47
32:BI:118:LYS:NZ	57:BA:1349:A:OP2	102.89	0.47
57:BA:818:G:C3'	57:BA:819:A:C5'	3.90	0.47
26:BC:30:VAL:CG1	26:BC:42:VAL:HG22	2.44	0.47
28:BE:59:VAL:CG2	28:BE:62:PRO:HG2	2.44	0.47
30:BG:173:LEU:HD22	30:BG:178:PHE:CE1	2.49	0.47
31:BH:94:TYR:CD1	31:BH:94:TYR:N	2.82	0.47
39:BS:35:ILE:HD11	39:BS:99:LYS:CE	2.41	0.47
41:BU:107:ALA:O	41:BU:110:VAL:HB	2.13	0.47
43:BW:12:ILE:HB	43:BW:42:ARG:HH12	1.78	0.47
45:BY:3:VAL:N	45:BY:5:MET:HE2	2.29	0.47
30:AG:161:THR:HG22	30:AG:162:THR:N	2.29	0.47
48:B1:11:ARG:NH1	48:B1:11:ARG:CB	2.77	0.47
57:BA:274:G:C6	57:BA:276:A:N6	2.82	0.47
57:AA:1710:C:O2'	57:AA:1711:C:H5'	2.14	0.47
57:BA:2062:A:O2'	57:BA:2063:C:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:AZ:91:LEU:HD12	46:AZ:91:LEU:H	1.79	0.47
57:BA:2094:G:H1'	57:BA:2198:A:N6	2.29	0.47
36:BP:93:GLY:O	36:BP:123:LEU:HB2	2.14	0.47
57:BA:2422:A:H4'	57:BA:2423:U:OP1	2.13	0.47
57:AA:1821:A:H2'	57:AA:1822:G:C8	2.49	0.47
48:A1:22:GLY:O	48:A1:32:LYS:HE3	2.14	0.47
51:A4:31:ILE:N	51:A4:31:ILE:HD12	2.30	0.47
57:AA:1578:U:H2'	57:AA:1579:A:H5'	1.95	0.47
57:AA:623:G:H2'	57:AA:624:C:C6	2.49	0.47
57:AA:679:C:H2'	57:AA:680:G:H8	1.79	0.47
46:AZ:72:ARG:HG2	58:AB:104:U:O2'	2.13	0.47
26:AC:29:LEU:HD22	26:AC:33:LEU:HD11	1.96	0.47
29:AF:53:THR:H	29:AF:56:GLU:HG3	1.79	0.47
30:AG:68:PRO:CA	30:AG:92:VAL:HB	2.43	0.47
32:AI:77:LEU:HD13	32:AI:140:LEU:HA	1.96	0.47
39:AS:59:LYS:CD	39:AS:61:ASN:HB2	2.44	0.47
41:AU:110:VAL:O	41:AU:113:ALA:HB3	2.14	0.47
41:AU:91:ASP:CG	41:AU:96:ALA:HB2	2.34	0.47
42:AV:19:LYS:HG3	42:AV:20:LEU:O	2.13	0.47
50:B3:19:GLN:NE2	50:B3:52:HIS:CE1	2.79	0.47
38:BR:36:THR:HG22	57:BA:1278:A:C5'	2.43	0.47
57:BA:407:G:H2'	57:BA:408:G:C8	2.48	0.47
57:BA:878:A:H2'	57:BA:879:G:O4'	2.14	0.47
27:BD:229:VAL:HG21	57:BA:784:A:N7	2.29	0.47
28:BE:111:ARG:HA	38:BR:2:ARG:CG	2.44	0.47
28:BE:52:LEU:N	28:BE:74:PRO:HB3	2.29	0.47
33:BJ:51:LEU:O	33:BJ:88:ALA:CB	2.62	0.47
38:BR:55:ALA:HA	38:BR:80:PHE:CE1	2.49	0.47
40:BT:129:ARG:HH22	40:BT:131:ALA:HB2	1.80	0.47
40:BT:25:GLY:H	40:BT:49:VAL:CG1	2.27	0.47
41:BU:110:VAL:O	41:BU:113:ALA:HB3	2.15	0.47
41:BU:112:ARG:NH2	42:BV:46:VAL:HG11	2.27	0.47
42:BV:47:VAL:O	42:BV:49:THR:O	2.32	0.47
30:AG:163:ALA:CB	30:AG:169:ALA:HB2	2.44	0.47
31:BH:50:VAL:HG12	31:BH:51:ARG:H	1.78	0.47
46:AZ:54:HIS:HB3	46:AZ:101:PRO:HD3	1.95	0.47
52:A5:49:CYS:O	52:A5:51:TYR:N	2.47	0.47
50:B3:8:LEU:HD11	50:B3:31:LEU:HD23	1.90	0.47
46:BZ:150:LEU:N	46:BZ:150:LEU:CD2	2.66	0.47
52:A5:40:LYS:HZ2	52:A5:46:CYS:H	1.62	0.47
27:BD:259:THR:HG21	57:BA:1803:A:C4'	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B5:35:GLU:O	52:B5:49:CYS:HB2	2.14	0.47
46:AZ:9:TYR:CE2	46:AZ:35:ARG:NH1	2.82	0.47
51:A4:51:ASP:OD2	51:A4:52:THR:HG23	2.14	0.47
48:B1:11:ARG:HB2	48:B1:12:PRO:HD2	1.96	0.47
54:B7:34:ARG:HD3	54:B7:42:LEU:HA	1.95	0.47
27:BD:268:ARG:H	27:BD:270:ILE:HD11	1.80	0.47
50:A3:1:MET:O	50:A3:3:ARG:HG3	2.14	0.47
28:BE:107:THR:HA	28:BE:163:GLU:O	2.14	0.47
54:A7:28:ARG:HG3	54:A7:28:ARG:NH1	2.29	0.47
57:AA:2639:A:C2'	57:AA:2640:G:H5'	2.43	0.47
46:BZ:11:GLU:HB2	46:BZ:13:GLU:CD	2.34	0.47
57:AA:1313:U:H2'	57:AA:1610:A:C2	2.49	0.47
57:AA:440:G:H2'	57:AA:441:U:H6	1.79	0.47
36:AP:16:ARG:NH1	57:AA:661:C:H4'	2.29	0.47
57:AA:664:C:H4'	57:AA:941:A:OP1	2.15	0.47
27:AD:31:LYS:C	27:AD:33:LEU:H	2.18	0.47
28:AE:46:ALA:HB1	28:AE:82:ARG:HA	1.96	0.47
30:AG:37:VAL:O	30:AG:94:LEU:HB2	2.15	0.47
31:AH:56:SER:HB2	31:AH:58:GLU:HG3	1.95	0.47
36:AP:77:ARG:HB2	36:AP:78:PRO:HD2	1.97	0.47
37:AQ:10:ARG:NH1	37:AQ:10:ARG:CB	2.76	0.47
40:AT:129:ARG:HH22	40:AT:131:ALA:HB2	1.77	0.47
41:AU:65:ILE:HG12	41:AU:96:ALA:CB	2.44	0.47
42:AV:39:LEU:HB3	42:AV:47:VAL:CG1	2.45	0.47
42:AV:49:THR:HB	42:AV:50:PRO:HD2	1.96	0.47
45:AY:20:TYR:CZ	45:AY:42:VAL:HA	2.49	0.47
57:BA:1011:G:C2	57:BA:1151:G:C2	3.03	0.47
57:BA:1493:C:O2	57:BA:1493:C:H2'	2.14	0.47
57:BA:588:U:O5'	57:BA:588:U:H6	1.97	0.47
28:BE:2:LYS:NZ	28:BE:100:GLU:OE2	2.38	0.47
29:BF:18:ARG:HG2	29:BF:19:GLU:N	2.30	0.47
29:BF:3:GLU:HA	29:BF:24:LEU:CG	2.45	0.47
33:BJ:57:THR:O	33:BJ:58:LEU:C	2.52	0.47
38:BR:65:LEU:HA	38:BR:65:LEU:HD12	1.66	0.47
39:BS:13:ARG:CG	39:BS:14:VAL:N	2.78	0.47
45:BY:68:HIS:HB3	45:BY:71:LYS:CG	2.43	0.47
57:BA:1899:G:H21	57:BA:1902:C:H5	1.59	0.47
31:BH:7:LEU:CD2	31:BH:65:HIS:NE2	2.77	0.47
57:AA:2791:C:O2	57:AA:2791:C:H2'	2.14	0.47
52:A5:35:GLU:O	52:A5:36:CYS:CB	2.62	0.47
37:BQ:135:ASP:HB3	46:BZ:49:ARG:NH1	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:676:A:H2	57:AA:802:A:N6	2.08	0.47
38:AR:101:ALA:HA	52:A5:44:THR:HG21	1.95	0.47
57:AA:1947:C:H2'	57:AA:1948:G:C5'	2.45	0.47
52:B5:40:LYS:HZ3	52:B5:46:CYS:CB	2.26	0.47
52:B5:54:GLY:N	52:B5:55:ARG:HH21	2.11	0.47
48:A1:56:GLN:CB	48:A1:87:PRO:HB3	2.43	0.47
33:AJ:118:THR:O	33:AJ:119:ALA:HB3	2.15	0.47
42:AV:15:GLU:O	42:AV:16:PRO:C	2.52	0.47
57:AA:2465:C:O2'	57:AA:2466:C:H5'	2.14	0.47
57:BA:2222:G:O2'	57:BA:2223:G:H5'	2.14	0.47
57:BA:654(A):G:H2'	57:BA:654(B):C:H5'	1.95	0.47
49:A2:44:LEU:O	49:A2:45:SER:HB3	2.15	0.47
29:AF:136:THR:O	29:AF:137:LYS:C	2.53	0.47
57:AA:614:U:O2	57:AA:614:U:O4'	2.31	0.47
57:AA:2280:G:O2'	57:AA:2281:C:H5'	2.15	0.47
57:AA:2108:C:O2'	57:AA:2109:U:H5'	2.13	0.47
57:BA:1907:G:O2'	57:BA:1908:C:H5'	2.13	0.47
48:A1:23:LYS:O	48:A1:29:GLY:O	2.32	0.47
48:A1:4:VAL:HG23	48:A1:10:LYS:O	2.14	0.47
43:AW:34:ASN:ND2	52:A5:39:MET:HG3	2.30	0.47
53:A6:11:LEU:N	53:A6:11:LEU:HD13	2.30	0.47
45:AY:50:ARG:NE	57:AA:484:C:OP1	2.47	0.47
57:AA:708:C:H5'	57:AA:709:U:OP2	2.15	0.47
28:AE:116:VAL:HG21	28:AE:122:PHE:CE2	2.49	0.47
29:AF:63:LYS:HE3	29:AF:67:GLN:HB2	1.95	0.47
31:AH:98:LEU:HD12	31:AH:102:ALA:O	2.14	0.47
32:AI:62:LYS:HE3	32:AI:133:HIS:C	2.35	0.47
35:AO:77:ILE:HD13	40:AT:74:ARG:HD3	1.95	0.47
44:AX:55:ASN:O	44:AX:79:ALA:HA	2.14	0.47
55:B8:52:LYS:O	55:B8:56:GLU:OE1	2.32	0.47
58:BB:13:A:O2'	58:BB:14:U:H5''	2.14	0.47
58:BB:30:C:H4'	58:BB:58:A:C2	2.49	0.47
27:BD:30:GLU:OE1	27:BD:63:ARG:HG2	2.15	0.47
37:AQ:137:TYR:HE2	46:AZ:81:ARG:NH1	2.12	0.47
31:BH:136:ILE:N	31:BH:136:ILE:CD1	2.78	0.47
46:BZ:150:LEU:H	46:BZ:150:LEU:HD23	1.77	0.47
53:A6:36:LEU:HD12	53:A6:49:HIS:O	2.15	0.47
57:AA:2041:U:H2'	57:AA:2042:A:H8	1.79	0.47
51:B4:50:VAL:C	51:B4:52:THR:H	2.17	0.47
29:AF:177:ALA:HB1	29:AF:178:PRO:HD2	1.95	0.47
57:AA:2807:G:H2'	57:AA:2808:U:H5''	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:A2:13:ALA:HA	49:A2:16:LEU:CD1	2.44	0.47
42:AV:15:GLU:CB	42:AV:16:PRO:HD2	2.44	0.47
57:AA:2815:C:H2'	57:AA:2816:C:C6	2.49	0.47
43:BW:61:ASN:HD22	43:BW:61:ASN:N	2.11	0.47
57:BA:2774:C:H2'	57:BA:2775:A:O4'	2.14	0.47
57:AA:2008:C:H2'	57:AA:2009:G:H8	1.79	0.47
57:BA:2332:U:H5'	57:BA:2336:A:N6	2.29	0.47
57:AA:49:A:H5''	57:AA:51:G:O4'	2.14	0.47
57:BA:2138:C:H2'	57:BA:2139:C:C6	2.50	0.47
57:AA:1131:G:HO2'	57:AA:1132:A:H8	1.61	0.47
57:AA:1192:G:O2'	57:AA:1193:G:H5'	2.14	0.47
32:AI:118:LYS:NZ	57:AA:1349:A:OP2	102.93	0.47
57:AA:1406:U:H2'	57:AA:1407:C:C6	2.49	0.47
57:AA:1496:A:C8	57:AA:1577:C:O2'	2.65	0.47
57:AA:2248:C:C2'	57:AA:2249:U:H5'	2.44	0.47
57:AA:506:G:O3'	57:AA:507:A:H8	1.98	0.47
29:AF:92:PRO:HB3	57:AA:1248:G:OP2	2.14	0.47
29:AF:99:TYR:CE2	57:AA:660:G:H5'	2.49	0.47
30:AG:36:LYS:HD3	30:AG:38:VAL:CG2	2.45	0.47
32:AI:127:VAL:C	32:AI:128:LEU:HD22	2.35	0.47
32:AI:29:TYR:C	32:AI:32:PRO:HD2	2.35	0.47
34:AN:62:VAL:CG2	34:AN:66:LYS:HD2	2.45	0.47
39:AS:96:GLY:C	39:AS:98:VAL:H	2.18	0.47
41:AU:92:ARG:HD2	42:AV:11:GLN:HB2	1.94	0.47
28:BE:131:ALA:CB	57:BA:2579:C:O2'	2.62	0.47
57:BA:606:U:H4'	57:BA:658:C:H4'	1.96	0.47
37:BQ:14:ARG:HD2	57:BA:955:C:OP2	2.14	0.47
26:BC:173:HIS:CD2	26:BC:173:HIS:N	2.83	0.47
27:BD:30:GLU:OE1	27:BD:63:ARG:NE	2.46	0.47
28:BE:59:VAL:CG1	28:BE:63:LEU:HG	2.42	0.47
32:BI:83:ALA:HA	32:BI:89:TYR:H	1.78	0.47
32:BI:91:SER:N	32:BI:121:LYS:HZ2	2.13	0.47
32:BI:91:SER:N	32:BI:121:LYS:NZ	2.62	0.47
36:BP:19:VAL:HG23	36:BP:19:VAL:O	2.14	0.47
36:BP:47:ASP:OD1	36:BP:49:ARG:HB2	2.15	0.47
38:BR:79:LEU:HA	38:BR:83:ILE:CG1	2.45	0.47
40:BT:38:ASN:C	40:BT:40:THR:H	2.17	0.47
44:BX:28:PHE:N	44:BX:28:PHE:CD1	2.82	0.47
45:BY:29:GLU:N	45:BY:29:GLU:OE1	2.42	0.47
45:BY:2:ARG:HD3	45:BY:2:ARG:C	2.35	0.47
37:AQ:60:ARG:HA	46:AZ:179:ASP:HA	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B3:6:VAL:HG12	50:B3:56:VAL:HG22	1.94	0.47
57:AA:271(C):C:H2'	57:AA:271(D):G:H8	1.79	0.47
43:BW:88:ARG:NH1	43:BW:94:ASP:OD1	2.48	0.47
57:BA:2712:U:O2'	57:BA:2712(A):A:P	2.73	0.47
57:BA:634:C:H2'	57:BA:635:C:C6	2.49	0.47
42:AV:89:GLN:HG3	57:AA:993:G:O2'	2.14	0.47
57:AA:2737:G:O2'	57:AA:2738:A:H5'	2.15	0.47
27:AD:231:HIS:CG	27:AD:232:PRO:HD2	2.49	0.47
57:BA:853:G:O2'	57:BA:854:G:H5'	4.97	0.47
58:AB:23:G:H1	58:AB:60:C:H42	1.63	0.47
57:AA:950:G:O2'	57:AA:951:C:H5'	2.14	0.47
57:AA:2657:A:H3'	57:AA:2658:C:H6	1.79	0.47
57:BA:2062:A:C2'	57:BA:2063:C:H5'	2.44	0.47
57:BA:2093:G:H2'	57:BA:2094:G:H8	1.78	0.47
57:BA:272(G):C:N4	57:BA:363(C):G:H1	2.13	0.47
34:AN:119:ARG:NH1	34:AN:119:ARG:HG3	2.28	0.47
43:AW:79:GLY:O	43:AW:100:THR:HG22	2.14	0.47
54:A7:40:TRP:CZ3	57:AA:459:U:H4'	2.49	0.47
57:AA:2138:C:H2'	57:AA:2139:C:C6	2.49	0.47
47:A0:23:VAL:HG12	47:A0:25:ARG:O	2.14	0.47
53:A6:34:LEU:HD11	53:A6:50:ARG:HH21	1.78	0.47
57:AA:1037:G:H1	57:AA:1118:C:N4	2.12	0.47
57:AA:1281:G:H5'	57:AA:1281:G:C8	2.49	0.47
57:AA:613:G:C5'	57:AA:613:G:C8	2.94	0.47
30:AG:67:LYS:NZ	58:AB:42:C:O2'	2.47	0.47
27:AD:176:ARG:HA	27:AD:182:LEU:HD23	1.96	0.47
27:AD:198:ASN:O	27:AD:198:ASN:ND2	2.48	0.47
28:AE:67:PHE:O	28:AE:70:ALA:HB2	2.15	0.47
29:AF:32:LEU:HD22	29:AF:112:MET:HE3	1.97	0.47
31:AH:9:ILE:CG2	31:AH:9:ILE:O	2.62	0.47
32:AI:73:GLU:CG	32:AI:74:ASN:N	2.77	0.47
37:AQ:42:ILE:HG22	37:AQ:47:ILE:HG13	1.96	0.47
37:AQ:45:GLN:H	37:AQ:45:GLN:CD	2.16	0.47
44:AX:12:VAL:HG13	44:AX:27:THR:C	2.35	0.47
45:AY:28:LYS:CE	45:AY:28:LYS:N	2.78	0.47
51:B4:33:VAL:CG1	51:B4:34:GLU:N	2.78	0.47
53:B6:8:LYS:NZ	57:BA:2285:C:C5	2.78	0.47
57:BA:264:C:O2'	57:BA:265:A:H2'	2.14	0.47
58:BB:75:G:H5'	58:BB:76:G:OP2	2.15	0.47
27:BD:148:GLU:O	27:BD:151:LYS:HB2	2.15	0.47
27:BD:151:LYS:HG3	57:BA:2203:U:O2'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:154:LYS:HE3	57:BA:1818:U:O4	2.14	0.47
27:BD:43:ARG:NH1	27:BD:44:ASN:ND2	2.63	0.47
28:BE:186:GLY:O	28:BE:187:ALA:HB3	2.14	0.47
28:BE:203:LYS:HA	57:BA:2733:A:C2	2.50	0.47
28:BE:24:THR:HB	28:BE:186:GLY:HA2	1.97	0.47
28:BE:69:LYS:O	28:BE:71:GLY:N	2.47	0.47
32:BI:69:LYS:CA	32:BI:136:VAL:HG11	2.45	0.47
32:BI:2:LYS:HA	32:BI:20:ASP:HA	1.95	0.47
32:BI:73:GLU:CG	32:BI:74:ASN:N	2.78	0.47
35:BO:13:ASN:C	35:BO:15:GLY:N	2.68	0.47
38:BR:103:ARG:HD3	43:BW:40:ASN:ND2	2.29	0.47
38:BR:38:VAL:CG1	38:BR:42:LYS:HD2	2.45	0.47
39:BS:18:ILE:HD12	57:BA:2334:G:H21	1.79	0.47
41:BU:77:SER:HG	57:BA:1011:G:P	2.37	0.47
42:BV:35:LEU:HB2	42:BV:57:VAL:CG1	2.42	0.47
44:BX:63:LYS:O	44:BX:64:LYS:HG3	2.15	0.47
57:AA:1858:G:HO2'	57:AA:1859:A:H8	1.59	0.47
37:AQ:137:TYR:OH	46:AZ:81:ARG:CZ	2.63	0.47
37:BQ:134:ARG:NH2	46:BZ:122:ARG:NE	2.61	0.47
57:BA:1802:A:H2'	57:BA:1803:A:C8	2.50	0.47
52:B5:35:GLU:O	52:B5:49:CYS:CB	2.63	0.47
47:B0:12:ASN:ND2	47:B0:12:ASN:N	2.62	0.47
34:BN:132:ALA:O	34:BN:133:GLN:HB3	2.15	0.47
34:BN:128:HIS:NE2	34:BN:134:ARG:HD3	2.30	0.47
36:AP:85:LEU:HG	36:AP:118:GLY:O	2.15	0.47
50:A3:9:VAL:HG11	50:A3:55:ARG:NH2	2.29	0.47
57:AA:691:C:O2'	57:AA:692:C:H5'	2.15	0.47
57:AA:2399:G:H2'	57:AA:2400:G:O4'	2.15	0.47
41:BU:44:ASN:HD21	42:BV:75:PHE:N	2.13	0.47
55:B8:42:ARG:O	55:B8:44:LYS:N	2.41	0.47
57:BA:2808:U:H5'	57:BA:2891:G:O6	2.14	0.47
57:AA:1722:A:C2	57:AA:1740:G:H2'	2.49	0.47
44:BX:52:VAL:N	44:BX:82:GLN:O	2.38	0.47
43:AW:82:LEU:HD12	43:AW:82:LEU:HA	1.76	0.47
52:A5:29:THR:HG21	57:AA:2815:C:H5'	1.96	0.47
34:BN:119:ARG:HH11	34:BN:119:ARG:HG3	1.79	0.47
57:BA:455:C:H3'	57:BA:456:C:H5''	1.97	0.47
57:AA:1573:G:H2'	57:AA:1574:C:H5'	1.96	0.47
57:AA:1040:C:HO2'	57:AA:1041:C:C5'	2.27	0.47
57:AA:729:G:H2'	57:AA:1775:U:H1'	1.97	0.47
57:AA:225:A:C2'	57:AA:226:G:H5'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:AG:128:ARG:CZ	57:AA:2315:G:H21	2.27	0.47
57:AA:440:G:H2'	57:AA:441:U:C6	2.50	0.47
57:AA:543:C:H2'	57:AA:544:G:H8	3.65	0.47
34:AN:111:PRO:HD2	57:AA:558:G:OP1	2.14	0.47
57:AA:963:U:H2'	57:AA:964:C:H6	1.79	0.47
27:AD:109:ASP:HB2	27:AD:197:GLY:CA	2.44	0.47
27:AD:148:GLU:O	27:AD:151:LYS:HB2	2.14	0.47
28:AE:2:LYS:HD3	28:AE:95:ILE:HG22	1.97	0.47
30:AG:96:ARG:O	30:AG:98:ARG:N	2.47	0.47
32:AI:44:LEU:O	32:AI:47:LEU:HB3	2.14	0.47
32:AI:81:VAL:HG13	32:AI:143:SER:H	1.79	0.47
34:AN:65:LYS:HG3	34:AN:69:GLN:HG3	1.96	0.47
40:AT:30:VAL:HG11	40:AT:84:GLN:CG	2.45	0.47
47:B0:36:ILE:HG13	47:B0:36:ILE:O	2.14	0.47
53:B6:26:ASN:ND2	53:B6:51:GLU:OE1	2.47	0.47
58:BB:3:C:N3	58:BB:118:G:N2	2.63	0.47
28:BE:111:ARG:HB2	28:BE:160:TYR:O	2.14	0.47
28:BE:64:LYS:C	28:BE:66:HIS:H	2.17	0.47
29:BF:22:ALA:HB1	29:BF:26:ALA:HB1	1.94	0.47
30:BG:62:LEU:O	30:BG:143:GLU:HG3	2.14	0.47
32:BI:84:GLY:HA2	32:BI:144:VAL:HG13	1.96	0.47
38:BR:51:LEU:HG	38:BR:66:VAL:HG13	1.97	0.47
41:BU:91:ASP:O	41:BU:92:ARG:O	2.31	0.47
57:AA:1240:U:O2'	57:AA:1241:A:H5'	2.15	0.47
57:AA:1344:G:H4'	57:AA:1384:A:N7	2.29	0.47
58:AB:65:C:O2'	58:AB:66:A:H5'	2.15	0.47
28:AE:80:GLU:CD	57:AA:2636:U:H4'	2.34	0.47
31:AH:119:GLU:HG2	31:AH:120:GLY:N	2.30	0.47
31:AH:44:VAL:N	31:AH:46:GLU:OE2	2.48	0.47
37:AQ:14:ARG:HD2	57:AA:955:C:OP2	2.15	0.47
41:AU:92:ARG:HD3	41:AU:94:ASN:HB3	1.96	0.47
41:AU:92:ARG:NH1	42:AV:11:GLN:O	2.48	0.47
45:AY:18:GLY:C	45:AY:20:TYR:N	2.66	0.47
45:AY:31:LEU:CD2	45:AY:31:LEU:N	2.76	0.47
45:AY:81:LYS:HD2	45:AY:96:ILE:CG2	2.45	0.47
57:BA:1241:A:O2'	57:BA:1242:A:H5'	2.14	0.47
57:BA:1355:G:H2'	57:BA:1356:G:C8	2.84	0.47
35:BO:48:PRO:HA	57:BA:1422:G:OP1	99.03	0.47
27:BD:176:ARG:HA	27:BD:182:LEU:HD23	1.96	0.47
27:BD:30:GLU:HG3	27:BD:63:ARG:NE	2.29	0.47
32:BI:68:LEU:HG	32:BI:72:LEU:CD1	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:48:PRO:O	36:BP:51:PHE:N	2.47	0.47
40:BT:7:ILE:O	40:BT:10:VAL:HB	2.14	0.47
31:BH:38:SER:CB	31:BH:64:LEU:HD13	2.44	0.47
46:AZ:103:ARG:CB	46:AZ:136:PHE:HB2	2.44	0.47
52:A5:35:GLU:O	52:A5:36:CYS:SG	2.73	0.47
57:AA:1158:C:C2'	57:AA:1158:C:O2	3.22	0.47
46:BZ:67:LEU:CB	46:BZ:68:PRO:HD2	2.44	0.47
57:BA:1539:G:H2'	57:BA:1540:U:O4'	2.15	0.47
57:BA:654(J):A:C8	57:BA:654(L):G:H8	2.33	0.47
57:AA:654(J):A:C8	57:AA:654(L):G:H8	2.33	0.47
57:BA:796:C:O2'	57:BA:797:C:H5'	2.41	0.47
48:B1:3:LYS:CG	48:B1:4:VAL:H	2.22	0.47
57:AA:2712(A):A:H5''	57:AA:2713:A:OP2	2.14	0.47
55:A8:44:LYS:N	55:A8:44:LYS:HD2	2.29	0.47
57:BA:116:C:O2'	57:BA:126:A:N3	2.47	0.47
46:AZ:26:GLY:HA3	46:AZ:86:VAL:HG23	1.96	0.47
57:AA:1866:C:H2'	57:AA:1876:A:O4'	2.15	0.47
57:BA:2260:C:H2'	57:BA:2261:C:H6	1.80	0.47
57:AA:1839:G:C8	57:AA:1839:G:H5'	2.50	0.47
57:AA:2530:A:H2'	57:AA:2531:A:H5'	1.96	0.47
57:AA:128:C:H2'	57:AA:129:C:O4'	2.14	0.47
47:A0:16:SER:O	47:A0:17:GLN:O	2.33	0.47
57:BA:2831:G:O4'	57:BA:2883:A:C2	2.68	0.47
57:BA:1668:A:H4'	57:BA:1669:A:O5'	2.14	0.47
57:BA:1962:C:O2'	57:BA:1964:G:OP2	2.32	0.47
50:B3:44:ARG:O	50:B3:48:GLU:HG2	2.14	0.47
41:BU:115:ALA:C	41:BU:117:GLN:H	2.18	0.47
38:BR:6:SER:HB2	57:BA:2873:A:H1'	1.96	0.47
57:AA:74:A:H5''	57:AA:75:G:O4'	2.15	0.47
57:AA:2689:U:H5''	57:AA:2690:C:H5'	1.96	0.47
53:A6:11:LEU:HD12	53:A6:26:ASN:HB2	1.97	0.47
28:AE:132:HIS:CE1	57:AA:1658:C:OP1	2.67	0.47
28:AE:122:PHE:CE2	57:AA:2512:C:H4'	2.50	0.47
57:AA:544:G:N2	57:AA:547:A:H2'	2.25	0.47
58:AB:28:C:H2'	58:AB:29:A:O4'	2.15	0.47
58:AB:81:G:H2'	58:AB:82:G:C5'	2.44	0.47
27:AD:70:TRP:CD1	27:AD:70:TRP:C	2.88	0.47
28:AE:59:VAL:CG2	28:AE:62:PRO:HG2	2.45	0.47
29:AF:3:GLU:HA	29:AF:24:LEU:CG	2.45	0.47
30:AG:105:LYS:NZ	51:A4:26:SER:HB3	2.29	0.47
30:AG:111:LEU:HB3	30:AG:117:PHE:CE1	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:AG:45:GLU:O	30:AG:51:ARG:HB3	2.15	0.47
31:AH:106:THR:HG22	31:AH:112:PRO:CB	2.44	0.47
31:AH:146:ALA:HB2	31:AH:164:TYR:OH	2.14	0.47
32:AI:94:ALA:HA	32:AI:98:ALA:CB	2.45	0.47
34:AN:55:VAL:HG13	34:AN:56:ASN:N	2.30	0.47
38:AR:46:GLY:HA2	57:AA:2839:G:H5'	1.95	0.47
40:AT:19:LEU:HB3	40:AT:85:LYS:HD3	1.96	0.47
42:AV:19:LYS:HG2	42:AV:94:LEU:CB	2.24	0.47
42:AV:5:VAL:HG11	42:AV:57:VAL:HG11	1.97	0.47
45:AY:44:ILE:N	45:AY:62:GLU:OE1	2.48	0.47
45:AY:97:ARG:HG3	45:AY:97:ARG:HH11	1.78	0.47
55:B8:48:PHE:C	55:B8:49:VAL:HG13	2.35	0.47
57:BA:1373:A:H2'	57:BA:1374:G:O4'	2.15	0.47
57:BA:271(R):G:H2'	57:BA:271(S):G:H8	1.80	0.47
57:BA:557:U:H2'	57:BA:558:G:H8	1.80	0.47
57:BA:729:G:H2'	57:BA:1775:U:H1'	1.95	0.47
57:BA:890:A:H2'	57:BA:892:G:O4'	2.15	0.47
58:BB:87:G:C2'	58:BB:88:C:H5''	2.45	0.47
28:BE:5:LEU:HD11	28:BE:49:LEU:O	2.14	0.47
30:BG:77:ILE:CG2	30:BG:77:ILE:O	2.61	0.47
36:BP:17:LYS:CG	36:BP:17:LYS:O	2.49	0.47
36:BP:77:ARG:HB2	36:BP:78:PRO:HD2	1.96	0.47
40:BT:51:ARG:HG2	40:BT:52:ILE:N	2.29	0.47
44:BX:55:ASN:O	44:BX:79:ALA:HA	2.15	0.47
57:BA:1827:C:H2'	57:BA:1828:G:O4'	2.15	0.47
57:AA:2056:G:N3	57:AA:2056:G:H2'	2.30	0.47
53:A6:45:LYS:HG2	57:AA:2371:G:C4'	2.37	0.47
57:AA:2630:G:H1'	57:AA:2894:G:C4	2.49	0.47
57:BA:2036:C:H5'	57:BA:2036:C:C6	2.36	0.47
49:B2:3:LEU:HD23	49:B2:4:SER:N	2.29	0.47
46:AZ:39:VAL:HG21	46:AZ:44:PHE:HD2	1.77	0.47
57:AA:11:G:N2	57:AA:2628:C:P	2.88	0.47
57:AA:2401:U:H2'	57:AA:2402:C:H5''	1.96	0.47
57:AA:1642:G:O2'	57:AA:1643:G:H5'	2.14	0.47
27:AD:248:SER:CB	27:AD:249:PRO:HD2	2.43	0.47
34:AN:119:ARG:HG3	34:AN:119:ARG:HH11	1.80	0.47
33:BJ:123:GLU:O	33:BJ:124:ALA:O	2.33	0.47
29:AF:115:ALA:O	29:AF:118:ALA:N	2.48	0.47
57:BA:2271:G:H2'	57:BA:2272:U:C6	2.50	0.47
34:AN:66:LYS:HZ3	57:AA:1140:C:P	2.38	0.47
57:AA:1204:A:N1	57:AA:1241:A:C2	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1318:C:C3'	57:AA:1319:G:H5''	2.43	0.47
57:AA:1344:G:H4'	57:AA:1384:A:C5	2.50	0.47
57:AA:1484:G:C3'	57:AA:1485:G:H5''	2.43	0.47
57:AA:2300:G:H1	57:AA:2316:C:H42	1.62	0.47
28:AE:203:LYS:HA	57:AA:2733:A:C2	2.49	0.47
57:AA:710:G:H1	57:AA:721:C:H42	1.62	0.47
27:AD:43:ARG:NH1	27:AD:44:ASN:HD21	2.13	0.47
27:AD:44:ASN:HD22	27:AD:48:ARG:C	2.18	0.47
28:AE:34:VAL:CG1	28:AE:48:GLN:HE21	2.28	0.47
28:AE:69:LYS:O	28:AE:71:GLY:N	2.48	0.47
28:AE:80:GLU:OE2	57:AA:2636:U:H4'	2.15	0.47
29:AF:3:GLU:HB2	29:AF:20:LEU:O	2.15	0.47
30:AG:145:THR:HG21	30:AG:148:MET:CB	2.42	0.47
31:AH:41:MET:CE	31:AH:43:VAL:HG13	2.45	0.47
31:AH:94:TYR:OH	31:AH:160:LYS:HD3	2.15	0.47
39:AS:93:LYS:O	39:AS:94:TYR:C	2.54	0.47
40:AT:100:TYR:CD2	40:AT:103:ARG:NH2	2.81	0.47
40:AT:25:GLY:H	40:AT:49:VAL:CG1	2.28	0.47
43:AW:5:ALA:HB3	43:AW:105:VAL:H	1.78	0.47
45:AY:95:LYS:CD	45:AY:100:ALA:HB1	2.44	0.47
45:AY:15:VAL:HG11	45:AY:20:TYR:O	2.14	0.47
57:BA:1432:C:H2'	57:BA:1433:U:O4'	2.15	0.47
27:BD:63:ARG:NH2	57:BA:1568:G:OP2	2.47	0.47
57:BA:530:G:C5	57:BA:2022:U:H5''	2.50	0.47
57:BA:510:C:O2'	57:BA:511:U:H5'	2.15	0.47
36:BP:16:ARG:NH1	57:BA:661:C:H4'	2.29	0.47
27:BD:11:PRO:O	27:BD:13:ARG:N	2.48	0.47
27:BD:176:ARG:CG	27:BD:176:ARG:NH1	2.78	0.47
28:BE:119:ARG:HD3	28:BE:119:ARG:O	2.15	0.47
28:BE:70:ALA:O	28:BE:72:VAL:N	2.48	0.47
30:BG:57:ALA:HB1	30:BG:68:PRO:CG	2.45	0.47
34:BN:62:VAL:HG11	34:BN:67:LEU:CD2	2.43	0.47
38:BR:3:HIS:HB2	57:BA:1654:A:OP1	2.15	0.47
42:BV:47:VAL:O	42:BV:47:VAL:HG23	2.15	0.47
45:BY:81:LYS:HD2	45:BY:96:ILE:CG2	2.45	0.47
46:AZ:133:ILE:O	46:AZ:134:PRO:O	2.32	0.47
46:BZ:104:PHE:HA	46:BZ:141:VAL:HG21	1.96	0.47
57:AA:2134:A:H1'	57:AA:2159:G:H21	1.78	0.47
57:BA:1268:A:H2'	57:BA:1269:A:C8	2.99	0.47
57:AA:2833:G:C3'	57:AA:2834:G:C5'	2.85	0.47
51:B4:56:VAL:HG12	51:B4:56:VAL:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B3:6:VAL:HB	50:B3:54:VAL:CG1	2.40	0.47
35:AO:71:ARG:NE	35:AO:105:GLU:OE2	2.48	0.47
57:BA:828:U:O2	57:BA:828:U:H3'	2.15	0.47
57:AA:796:C:O2'	57:AA:797:C:H5'	2.39	0.47
29:AF:165:ARG:NH1	29:AF:165:ARG:HB2	2.29	0.47
57:BA:74:A:H5''	57:BA:75:G:O4'	2.14	0.47
57:BA:2807:G:H2'	57:BA:2808:U:H5''	1.97	0.47
57:BA:1164:G:O2'	57:BA:1165:U:H5'	2.14	0.47
57:AA:1763:G:H2'	57:AA:1764:G:H5'	1.97	0.47
48:B1:68:PRO:C	48:B1:70:VAL:H	2.17	0.47
34:AN:90:MET:HB3	34:AN:98:VAL:HG22	1.96	0.47
35:BO:119:PRO:HB2	40:BT:68:TYR:CZ	2.50	0.47
57:BA:231:C:C5	57:BA:232:G:C6	3.02	0.47
57:AA:2143:C:H2'	57:AA:2144:U:O4'	2.15	0.47
27:AD:63:ARG:NH2	57:AA:1568:G:OP2	2.47	0.47
57:AA:142:A:H8	57:AA:1595:G:H21	1.63	0.47
57:AA:2732:G:O2'	57:AA:2733:A:H5'	2.14	0.47
57:AA:890:A:H2'	57:AA:892:G:O4'	2.15	0.47
57:AA:916:G:C2'	57:AA:917:A:H5''	2.45	0.47
58:AB:30:C:H4'	58:AB:58:A:C2	2.50	0.47
27:AD:43:ARG:HD2	27:AD:44:ASN:OD1	2.15	0.47
30:AG:131:TYR:HB3	30:AG:159:VAL:HG11	1.96	0.47
35:AO:32:TYR:CD1	35:AO:32:TYR:N	2.83	0.47
39:AS:28:VAL:HG21	39:AS:87:PHE:CE1	2.50	0.47
40:AT:106:SER:C	40:AT:107:ASP:CG	2.73	0.47
40:AT:13:ARG:NE	40:AT:13:ARG:HA	2.28	0.47
42:AV:47:VAL:O	42:AV:48:GLY:C	2.53	0.47
26:BC:43:GLU:OE2	57:BA:2124:G:H1'	2.15	0.47
27:BD:185:VAL:HG12	27:BD:186:HIS:N	2.30	0.47
27:BD:24:ILE:CD1	27:BD:25:THR:N	2.68	0.47
28:BE:122:PHE:CE2	57:BA:2512:C:H4'	2.50	0.47
29:BF:22:ALA:CB	29:BF:26:ALA:HB2	2.42	0.47
30:BG:9:ARG:C	30:BG:11:TYR:H	2.19	0.47
32:BI:29:TYR:C	32:BI:32:PRO:HD2	2.35	0.47
39:BS:105:ALA:C	39:BS:107:GLU:N	2.66	0.47
39:BS:36:TYR:HA	39:BS:52:SER:HA	1.97	0.47
39:BS:59:LYS:CD	39:BS:61:ASN:HB2	2.45	0.47
39:BS:24:LEU:HB3	39:BS:85:VAL:HB	1.97	0.47
44:BX:14:SER:O	44:BX:17:ALA:HB3	2.15	0.47
45:BY:62:GLU:OE2	45:BY:63:LYS:O	2.33	0.47
45:BY:7:VAL:CB	45:BY:8:LYS:HZ1	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1747(A):G:H2'	57:BA:1748:G:C5'	2.18	0.47
57:AA:1899:G:H21	57:AA:1902:C:H5	1.63	0.47
47:A0:49:LYS:H	47:A0:80:HIS:HD1	1.62	0.47
46:BZ:122:ARG:HG2	46:BZ:122:ARG:NH1	2.31	0.47
52:B5:51:TYR:HB3	52:B5:55:ARG:HD3	1.97	0.47
52:B5:51:TYR:CZ	52:B5:52:TYR:HD2	2.32	0.47
57:BA:2369:A:O2'	57:BA:2370:G:H5'	2.14	0.47
57:BA:1469:A:H2'	57:BA:1470:G:O4'	2.14	0.47
54:A7:34:ARG:HD3	54:A7:42:LEU:HA	1.97	0.47
29:AF:132:VAL:CG2	29:AF:133:ASN:N	2.77	0.47
57:BA:149:A:O2'	57:BA:150:C:C6	4.72	0.47
55:A8:29:LYS:HD3	55:A8:44:LYS:CG	2.44	0.47
57:AA:2692:C:O2'	57:AA:2693:A:H5'	2.15	0.47
57:AA:460:A:H2'	57:AA:461:C:O4'	2.15	0.47
57:BA:1917:U:C2'	57:BA:1918:A:H5'	2.45	0.47
57:BA:2815:C:H2'	57:BA:2816:C:C6	2.50	0.47
41:BU:115:ALA:C	41:BU:117:GLN:N	2.69	0.47
57:BA:2461:C:H2'	57:BA:2462:U:C6	2.50	0.47
57:BA:2861:G:O2'	57:BA:2862:G:H5'	2.14	0.47
49:A2:47:ASN:OD1	57:AA:61:G:C4	2.69	0.46
55:A8:59:LYS:HZ3	55:A8:59:LYS:CB	2.28	0.46
57:AA:2000:G:O2'	57:AA:2001:A:H5'	2.15	0.46
57:AA:839:U:H2'	57:AA:840:C:H6	1.80	0.46
27:AD:26:LYS:O	27:AD:27:THR:CB	2.62	0.46
28:AE:24:THR:HB	28:AE:186:GLY:HA2	1.97	0.46
29:AF:4:VAL:HA	29:AF:19:GLU:CB	2.46	0.46
30:AG:85:GLY:C	30:AG:87:PRO:CD	2.83	0.46
31:AH:72:ILE:O	31:AH:75:ALA:N	2.48	0.46
38:AR:24:GLN:HE22	38:AR:36:THR:HG21	1.79	0.46
39:AS:56:LEU:O	39:AS:57:LYS:HB2	2.15	0.46
40:AT:55:ASN:H	40:AT:59:THR:CG2	2.28	0.46
41:AU:27:LEU:CD2	41:AU:31:SER:HB2	2.33	0.46
45:AY:4:LYS:HD2	45:AY:32:PRO:CD	2.44	0.46
30:BG:98:ARG:CG	51:B4:1:MET:SD	3.00	0.46
36:BP:63:PRO:HB2	55:B8:12:LYS:O	2.15	0.46
45:BY:2:ARG:HG3	57:BA:105:C:O2'	2.15	0.46
57:BA:782:A:H4'	57:BA:783:A:O5'	2.16	0.46
57:BA:818:G:C3'	57:BA:819:A:H5''	3.35	0.46
58:BB:87:G:N1	58:BB:91:C:N4	2.62	0.46
30:BG:170:ARG:NH2	30:BG:174:GLU:OE1	2.49	0.46
30:BG:5:VAL:HG12	30:BG:6:ALA:H	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:67:LYS:NZ	51:B4:6:HIS:NE2	2.63	0.46
31:BH:149:ARG:HA	31:BH:162:ILE:CG1	2.44	0.46
36:BP:33:ARG:HG3	36:BP:34:GLY:N	2.29	0.46
36:BP:9:ASN:N	36:BP:10:PRO:HD2	2.12	0.46
40:BT:35:LYS:NZ	40:BT:41:ARG:NH2	2.63	0.46
43:BW:26:GLY:O	43:BW:27:LYS:HG2	2.14	0.46
57:BA:1778:U:H2'	57:BA:1784:A:N6	2.30	0.46
57:BA:1949:G:H2'	57:BA:1950:G:C8	2.50	0.46
31:AH:158:HIS:CE1	31:AH:169:VAL:C	2.89	0.46
43:AW:96:ILE:HG12	57:AA:2012:G:O3'	2.15	0.46
57:AA:1488:G:N3	57:AA:1488:G:H2'	2.29	0.46
57:BA:2735:G:N2	57:BA:2770:G:H1'	2.30	0.46
31:BH:67:LEU:HD21	57:BA:2758:A:C5	2.50	0.46
57:BA:2692:C:O2'	57:BA:2693:A:H5'	2.15	0.46
57:AA:2031:A:C6	57:AA:2498:C:H1'	2.50	0.46
57:BA:478:A:C6	57:BA:480:A:C6	3.03	0.46
52:B5:29:THR:HG21	57:BA:2815:C:H5'	1.98	0.46
57:BA:2332:U:O2'	57:BA:2333:A:H5'	2.16	0.46
29:AF:115:ALA:O	29:AF:118:ALA:HB3	2.14	0.46
50:B3:16:PRO:HB2	50:B3:18:ASP:OD1	2.15	0.46
57:AA:237:C:O2'	57:AA:238:C:H5'	2.15	0.46
41:AU:60:LEU:HD22	41:AU:60:LEU:O	2.15	0.46
57:AA:2389:G:H5''	57:AA:2390:U:H5'	1.97	0.46
53:B6:40:CYS:HB2	53:B6:46:HIS:ND1	2.30	0.46
57:BA:1910:G:O2'	57:BA:1911:U:H5'	2.14	0.46
46:BZ:76:LEU:O	46:BZ:78:LYS:N	2.47	0.46
51:A4:33:VAL:CG1	51:A4:34:GLU:N	2.78	0.46
57:AA:1107:G:O2'	57:AA:1108:U:H5'	2.14	0.46
57:AA:1270:C:O2'	57:AA:1271:G:H5'	6.21	0.46
57:AA:1340:U:H4'	57:AA:1341:U:OP2	2.14	0.46
57:AA:969:U:H2'	57:AA:970:C:C6	2.49	0.46
41:AU:92:ARG:HG3	57:AA:996:A:O2'	2.15	0.46
58:AB:56:G:H4'	58:AB:57:A:H8	1.79	0.46
27:AD:135:PHE:N	27:AD:135:PHE:CD2	2.81	0.46
28:AE:132:HIS:CG	28:AE:135:HIS:NE2	2.83	0.46
32:AI:101:LEU:O	32:AI:107:VAL:HB	2.15	0.46
32:AI:1:MET:CE	32:AI:23:PRO:HA	2.45	0.46
34:AN:128:HIS:NE2	34:AN:134:ARG:HD3	2.29	0.46
35:AO:13:ASN:C	35:AO:15:GLY:N	2.68	0.46
36:AP:48:PRO:O	36:AP:51:PHE:N	2.48	0.46
37:AQ:18:LYS:HB2	37:AQ:98:LYS:NZ	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:AT:125:ARG:C	40:AT:127:ALA:N	2.68	0.46
40:AT:1:MET:O	40:AT:2:ASN:O	2.33	0.46
41:AU:13:LYS:CA	41:AU:13:LYS:HE2	2.45	0.46
44:AX:12:VAL:HG11	44:AX:27:THR:HG23	1.97	0.46
45:AY:10:GLY:O	45:AY:27:VAL:HG22	2.14	0.46
55:B8:62:LEU:N	55:B8:63:PRO:CD	2.79	0.46
57:BA:1331:A:O2'	57:BA:1332:G:C8	2.68	0.46
57:BA:1486:A:N6	57:BA:1504:C:H42	2.13	0.46
57:BA:543:C:H2'	57:BA:544:G:H8	3.64	0.46
27:BD:35:LYS:HD2	27:BD:36:PRO:CA	2.45	0.46
28:BE:102:VAL:HA	28:BE:201:THR:H	1.79	0.46
28:BE:116:VAL:HG21	28:BE:122:PHE:CE2	2.50	0.46
28:BE:134:ILE:HG21	57:BA:2579:C:C4'	2.37	0.46
28:BE:24:THR:HG21	28:BE:188:VAL:CG1	2.46	0.46
28:BE:34:VAL:CG2	28:BE:34:VAL:O	2.62	0.46
31:BH:98:LEU:HD12	31:BH:102:ALA:O	2.15	0.46
32:BI:28:ASN:CA	32:BI:32:PRO:HG2	2.44	0.46
35:BO:107:ARG:NH1	40:BT:35:LYS:HB2	2.30	0.46
36:BP:32:THR:O	36:BP:33:ARG:CB	2.63	0.46
38:BR:33:ARG:HD2	38:BR:33:ARG:N	2.29	0.46
41:BU:90:VAL:CG2	42:BV:39:LEU:HG	2.43	0.46
42:BV:82:ARG:NH1	42:BV:82:ARG:HG2	2.30	0.46
46:BZ:141:VAL:C	46:BZ:144:LEU:HD21	2.35	0.46
46:AZ:9:TYR:CZ	46:AZ:61:LEU:HD12	2.50	0.46
48:A1:45:ASN:HB2	57:AA:2230:G:H1'	1.97	0.46
31:AH:170:ARG:CD	31:AH:170:ARG:H	2.23	0.46
57:BA:2011:U:C2'	57:BA:2012:G:H5'	2.45	0.46
57:BA:795:C:H2'	57:BA:796:C:H6	1.79	0.46
48:B1:45:ASN:ND2	48:B1:47:GLN:HE21	2.13	0.46
46:BZ:128:VAL:CG2	46:BZ:132:ASN:HB2	2.46	0.46
57:AA:30:G:C5	57:AA:31:C:C4	3.03	0.46
57:AA:2114:A:O2'	57:AA:2115:G:H5'	2.16	0.46
57:AA:2696:U:H2'	57:AA:2697:G:C8	2.50	0.46
57:BA:1719:G:C6	57:BA:1720:U:C4	3.03	0.46
57:BA:1509(A):A:H2'	57:BA:1509(B):A:C8	2.50	0.46
57:AA:2291:U:H2'	57:AA:2292:C:C6	2.50	0.46
44:BX:71:GLY:HA3	57:BA:65:C:H5'	1.97	0.46
48:B1:67:ILE:N	48:B1:68:PRO:CD	2.78	0.46
57:BA:654(A):G:O2'	57:BA:654(B):C:H5'	2.16	0.46
57:BA:2532:G:O2'	57:BA:2657:A:N6	2.46	0.46
32:BI:57:ARG:HG2	32:BI:57:ARG:O	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B1:83:GLU:O	48:B1:84:GLY:O	2.34	0.46
57:BA:696:G:C2	57:BA:767:U:O2	2.68	0.46
41:AU:115:ALA:C	41:AU:117:GLN:H	2.19	0.46
57:AA:2083:G:H2'	57:AA:2084:C:C6	2.50	0.46
41:AU:62:ILE:HG12	41:AU:76:TYR:CE1	2.50	0.46
48:B1:17:SER:HB3	48:B1:38:SER:HB3	1.98	0.46
57:AA:1217:C:H2'	57:AA:1218:C:C6	3.37	0.46
57:AA:2302:G:H4'	57:AA:2302:G:OP1	2.15	0.46
26:AC:213:VAL:HG12	26:AC:225:ILE:CD1	2.46	0.46
27:AD:96:HIS:HA	27:AD:102:LYS:HB3	1.98	0.46
28:AE:48:GLN:C	28:AE:49:LEU:HD23	2.36	0.46
29:AF:184:TYR:O	29:AF:188:ARG:HG2	2.16	0.46
30:AG:40:ASN:O	30:AG:155:MET:HB2	2.15	0.46
30:AG:122:PRO:HD3	30:AG:181:ARG:O	2.15	0.46
30:AG:31:VAL:HG22	30:AG:32:PRO:HD2	1.97	0.46
32:AI:77:LEU:O	32:AI:141:LYS:HG2	2.15	0.46
32:AI:68:LEU:C	32:AI:68:LEU:HD23	2.35	0.46
32:AI:74:ASN:C	32:AI:76:THR:N	2.67	0.46
33:AJ:88:ALA:C	33:AJ:90:ALA:H	2.18	0.46
36:AP:19:VAL:HG23	36:AP:19:VAL:O	2.15	0.46
38:AR:75:LEU:HD13	38:AR:75:LEU:O	2.14	0.46
38:AR:30:THR:HA	38:AR:78:LYS:NZ	2.31	0.46
41:AU:90:VAL:HG21	42:AV:47:VAL:CG2	2.42	0.46
43:AW:56:ALA:O	43:AW:60:ASN:HB2	2.16	0.46
45:AY:29:GLU:N	45:AY:29:GLU:OE1	2.43	0.46
45:AY:32:PRO:O	45:AY:33:LYS:C	2.53	0.46
45:AY:7:VAL:CG2	45:AY:8:LYS:NZ	2.78	0.46
57:BA:108:U:H2'	57:BA:109:G:H8	1.80	0.46
26:BC:37:LYS:HG3	57:BA:2128:C:OP1	2.14	0.46
57:BA:807:U:O2'	57:BA:808:G:H5'	2.15	0.46
26:BC:215:VAL:CG2	26:BC:225:ILE:HD11	2.36	0.46
27:BD:46:GLN:CD	27:BD:46:GLN:N	2.68	0.46
29:BF:63:LYS:NZ	29:BF:75:HIS:O	2.36	0.46
30:BG:8:LYS:HE3	30:BG:12:TYR:OH	2.15	0.46
31:BH:94:TYR:N	31:BH:94:TYR:HD1	2.13	0.46
32:BI:10:GLU:O	32:BI:12:LEU:HD23	2.15	0.46
32:BI:123:LEU:HD23	32:BI:142:VAL:HG12	1.96	0.46
35:BO:69:ILE:HD12	35:BO:69:ILE:N	2.30	0.46
40:BT:30:VAL:HG11	40:BT:84:GLN:NE2	2.30	0.46
42:BV:49:THR:HB	42:BV:50:PRO:HD2	1.95	0.46
43:BW:73:ALA:O	43:BW:106:ILE:HG12	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BZ:19:ARG:CG	46:BZ:19:ARG:NH1	2.79	0.46
57:BA:2056:G:H2'	57:BA:2056:G:N3	2.31	0.46
31:BH:9:ILE:C	31:BH:9:ILE:CD1	2.83	0.46
57:BA:2791:C:H2'	57:BA:2791:C:O2	2.15	0.46
57:BA:1158:C:C2'	57:BA:1158:C:O2	3.20	0.46
57:AA:2808:U:H5'	57:AA:2891:G:O6	2.14	0.46
57:BA:156:U:O4'	57:BA:158:U:O4	2.34	0.46
57:BA:691:C:O2'	57:BA:692:C:H5'	2.13	0.46
29:AF:163:VAL:O	29:AF:166:ALA:HB3	2.16	0.46
29:BF:132:VAL:CG2	29:BF:133:ASN:N	2.76	0.46
57:AA:818:G:H3'	57:AA:819:A:C5'	4.22	0.46
57:AA:1677:A:H2'	57:AA:1678:G:C8	2.49	0.46
48:A1:50:ARG:CB	48:A1:59:THR:HG22	2.45	0.46
57:AA:2735:G:H2'	57:AA:2736:G:C8	2.51	0.46
57:BA:291:C:H2'	57:BA:292:C:C6	2.50	0.46
27:AD:263:ARG:HH11	27:AD:263:ARG:HB2	1.80	0.46
57:AA:2197:U:O2'	57:AA:2198:A:H2'	2.14	0.46
57:AA:1790:C:H2'	57:AA:1791:A:C5	2.50	0.46
58:BB:65:C:O2'	58:BB:66:A:H5'	2.15	0.46
30:AG:174:GLU:C	30:AG:176:LEU:H	2.18	0.46
49:A2:18:PRO:HG2	49:A2:19:VAL:H	1.80	0.46
57:AA:1331:A:HO2'	57:AA:1332:G:H8	1.63	0.46
57:AA:1357:U:H2'	57:AA:1358:G:O4'	2.15	0.46
57:AA:185:U:H4'	57:AA:218:A:H4'	1.97	0.46
57:AA:264:C:O2'	57:AA:265:A:H2'	2.15	0.46
57:AA:706:A:H2'	57:AA:707:G:O4'	2.16	0.46
27:AD:18:VAL:HG22	27:AD:211:ARG:HH21	1.79	0.46
27:AD:271:ILE:O	27:AD:272:ALA:HB2	2.16	0.46
30:AG:76:SER:CB	30:AG:83:ARG:HB3	2.45	0.46
31:AH:33:LEU:HD21	31:AH:136:ILE:HG22	1.98	0.46
31:AH:136:ILE:N	31:AH:136:ILE:CD1	2.77	0.46
31:AH:149:ARG:HA	31:AH:162:ILE:CG1	2.43	0.46
34:AN:55:VAL:HG22	34:AN:126:PRO:HA	1.97	0.46
39:AS:13:ARG:CG	39:AS:14:VAL:N	2.75	0.46
39:AS:26:LEU:HB2	39:AS:87:PHE:HA	1.97	0.46
41:AU:8:VAL:HG22	41:AU:12:ARG:HG2	1.98	0.46
45:AY:31:LEU:CB	45:AY:32:PRO:CA	2.93	0.46
53:B6:43:CYS:O	53:B6:44:ARG:NH1	2.49	0.46
53:B6:34:LEU:HD11	53:B6:50:ARG:HH21	1.80	0.46
57:BA:1244:G:C2'	57:BA:1245:G:H5'	2.46	0.46
57:BA:1293:C:H2'	57:BA:1294:U:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2425:A:H5''	57:BA:2427:C:O4'	2.16	0.46
57:BA:322:A:H5'	57:BA:340:A:H1'	1.98	0.46
27:BD:44:ASN:HD22	27:BD:48:ARG:C	2.18	0.46
28:BE:63:LEU:O	28:BE:64:LYS:C	2.54	0.46
30:BG:153:ARG:O	30:BG:154:GLY:O	2.33	0.46
33:BJ:89:ALA:O	33:BJ:90:ALA:HB2	2.16	0.46
35:BO:107:ARG:NH1	40:BT:35:LYS:HD2	2.30	0.46
39:BS:98:VAL:HG12	39:BS:100:ALA:H	1.80	0.46
43:BW:5:ALA:HB3	43:BW:105:VAL:H	1.80	0.46
45:BY:39:VAL:CG1	45:BY:40:GLU:H	2.15	0.46
46:BZ:29:TYR:HB2	46:BZ:33:LEU:O	2.15	0.46
31:AH:16:SER:O	31:AH:26:VAL:HA	2.15	0.46
57:AA:2014:A:H2'	57:AA:2015:A:C8	2.51	0.46
31:BH:28:GLY:C	31:BH:30:LYS:H	2.18	0.46
46:AZ:163:LEU:CD1	46:AZ:167:PRO:HB3	2.46	0.46
38:AR:98:LEU:H	38:AR:113:LEU:HD23	1.80	0.46
57:AA:523:C:H2'	57:AA:524:U:H5'	1.96	0.46
46:AZ:176:PRO:CB	46:AZ:177:PRO:HD2	2.43	0.46
36:AP:114:ILE:HG23	36:AP:130:PHE:CD1	2.51	0.46
48:B1:44:PRO:HA	57:BA:396:G:O3'	2.15	0.46
29:BF:160:ASN:OD1	29:BF:163:VAL:HG23	2.16	0.46
57:AA:1996:C:H4'	57:AA:1997:G:OP1	2.15	0.46
57:BA:649:G:H2'	57:BA:650:C:C6	2.50	0.46
57:BA:2769:C:H2'	57:BA:2770:G:O4'	2.15	0.46
57:AA:2179:C:O2	57:AA:2181:G:O6	2.33	0.46
57:BA:246:C:H2'	57:BA:247:G:H5'	1.96	0.46
57:AA:2656:U:H2'	57:AA:2657:A:H5''	1.97	0.46
57:AA:2062:A:O2'	57:AA:2063:C:H5'	2.14	0.46
41:AU:16:LYS:HG2	41:AU:16:LYS:O	2.14	0.46
57:AA:2600:A:C6	57:AA:2601:C:N4	2.84	0.46
36:BP:123:LEU:O	36:BP:123:LEU:HD12	2.16	0.46
57:BA:2143:C:H2'	57:BA:2144:U:O4'	2.15	0.46
57:BA:201:C:C2'	57:BA:202:U:H5'	2.45	0.46
49:B2:69:ARG:HG2	49:B2:69:ARG:HH11	1.80	0.46
34:BN:131:GLN:OE1	34:BN:131:GLN:HA	2.15	0.46
31:BH:116:GLU:CD	31:BH:116:GLU:C	2.74	0.46
57:AA:455:C:H3'	57:AA:456:C:H5''	1.97	0.46
55:A8:53:PRO:C	55:A8:55:ALA:N	2.67	0.46
41:AU:77:SER:HG	57:AA:1011:G:P	2.38	0.46
57:AA:1355:G:H2'	57:AA:1356:G:C8	2.85	0.46
40:AT:118:ARG:NH2	57:AA:1442:G:C5	54.09	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2248:C:H2'	57:AA:2249:U:H5'	1.97	0.46
57:AA:27:G:N2	57:AA:512:G:O2'	2.49	0.46
57:AA:869:G:H1	57:AA:908:C:H42	1.64	0.46
57:AA:880:G:H1	57:AA:897:C:N4	2.06	0.46
39:AS:63:THR:HG23	58:AB:50:G:OP1	2.16	0.46
26:AC:48:LEU:HA	26:AC:209:PHE:O	2.16	0.46
28:AE:2:LYS:NZ	28:AE:100:GLU:OE2	2.41	0.46
28:AE:69:LYS:C	28:AE:71:GLY:N	2.68	0.46
32:AI:102:SER:HA	32:AI:107:VAL:O	2.15	0.46
35:AO:1:MET:HE2	35:AO:32:TYR:CG	2.51	0.46
38:AR:80:PHE:O	38:AR:85:PRO:HD3	2.14	0.46
39:AS:89:ARG:NH1	39:AS:92:TYR:HA	2.29	0.46
45:AY:96:ILE:HG21	45:AY:99:CYS:HB3	1.97	0.46
57:BA:1504:C:HO2'	57:BA:1505:C:P	2.39	0.46
57:BA:1517:G:C5	57:BA:1518:U:C5	3.03	0.46
57:BA:2617:C:O2'	57:BA:2618:G:H5'	2.16	0.46
57:BA:270:A:C2'	57:BA:271:A:H5'	2.46	0.46
57:BA:558:G:O2'	57:BA:559:G:H5'	2.16	0.46
57:BA:986:C:O2'	57:BA:987:G:H5'	2.16	0.46
26:BC:7:ARG:NH2	26:BC:219:MET:HB3	2.29	0.46
27:BD:124:PRO:O	27:BD:126:GLN:N	2.48	0.46
28:BE:93:VAL:C	28:BE:95:ILE:N	2.66	0.46
29:BF:53:THR:H	29:BF:56:GLU:HG3	1.79	0.46
31:BH:88:LEU:HD13	31:BH:88:LEU:N	2.31	0.46
32:BI:87:LYS:CE	32:BI:121:LYS:HG3	2.45	0.46
32:BI:68:LEU:HD21	32:BI:72:LEU:HD11	1.97	0.46
32:BI:76:THR:HB	32:BI:139:GLN:HE22	1.81	0.46
33:BJ:94:VAL:C	33:BJ:96:PHE:N	2.66	0.46
39:BS:99:LYS:C	39:BS:101:LEU:H	2.17	0.46
39:BS:30:ARG:HD2	39:BS:31:SER:H	1.80	0.46
39:BS:26:LEU:HB2	39:BS:87:PHE:HA	1.98	0.46
40:BT:28:VAL:O	40:BT:28:VAL:HG12	2.16	0.46
40:BT:1:MET:O	40:BT:2:ASN:O	2.33	0.46
40:BT:29:ARG:HB3	40:BT:85:LYS:HA	1.97	0.46
31:BH:41:MET:SD	31:BH:53:GLU:O	2.74	0.46
53:A6:15:GLU:C	53:A6:16:CYS:O	2.53	0.46
57:BA:2041:U:O2'	57:BA:2042:A:H5'	2.15	0.46
57:BA:1313:U:H2'	57:BA:1610:A:N1	2.30	0.46
50:A3:6:VAL:HB	50:A3:54:VAL:CG1	2.38	0.46
35:BO:71:ARG:NE	35:BO:105:GLU:OE2	2.49	0.46
57:BA:826:U:H2'	57:BA:828:U:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BR:13:HIS:CE1	38:BR:15:SER:HB3	2.51	0.46
55:B8:43:GLN:O	55:B8:44:LYS:HD2	2.15	0.46
55:B8:44:LYS:N	55:B8:44:LYS:HD2	2.29	0.46
57:BA:1996:C:H4'	57:BA:1997:G:OP1	2.15	0.46
42:BV:8:GLY:O	57:BA:1161:C:H1'	2.15	0.46
37:AQ:110:THR:HG23	37:AQ:113:GLN:CB	2.44	0.46
31:AH:67:LEU:HD21	57:AA:2758:A:C5	2.51	0.46
57:AA:2852:G:O2'	57:AA:2853:C:H5'	2.15	0.46
43:AW:61:ASN:HD22	43:AW:61:ASN:N	2.12	0.46
57:AA:1662:C:O2'	57:AA:1663:C:H5'	2.16	0.46
57:BA:2033:A:H4'	57:BA:2034:U:OP1	2.14	0.46
57:AA:2360:A:O2'	57:AA:2361:A:O5'	2.33	0.46
57:AA:2617:C:O2'	57:AA:2618:G:H5'	2.15	0.46
57:AA:322:A:H5'	57:AA:340:A:H1'	1.97	0.46
57:AA:870:A:H2'	57:AA:871:U:O4'	2.15	0.46
30:AG:18:GLU:HG2	30:AG:175:LEU:HD22	1.97	0.46
31:AH:144:VAL:HA	31:AH:147:ASN:HB2	1.97	0.46
31:AH:84:SER:O	31:AH:85:LYS:HB2	2.15	0.46
33:AJ:60:ARG:H	33:AJ:63:LEU:CB	2.28	0.46
39:AS:35:ILE:O	39:AS:35:ILE:HG23	2.16	0.46
40:AT:19:LEU:HD22	40:AT:85:LYS:CD	2.45	0.46
45:AY:47:LYS:O	45:AY:48:ALA:C	2.54	0.46
57:BA:1040:C:O2'	57:BA:1041:C:P	2.74	0.46
57:BA:575:A:O2'	57:BA:576:U:H5'	2.15	0.46
57:BA:664:C:H4'	57:BA:941:A:OP1	2.16	0.46
57:BA:818:G:H3'	57:BA:819:A:C5'	4.20	0.46
27:BD:67:PHE:CE1	27:BD:157:ARG:CZ	2.98	0.46
29:BF:53:THR:C	29:BF:55:GLY:H	2.17	0.46
29:BF:95:ARG:HH12	57:BA:589:C:H5''	1.80	0.46
30:BG:40:ASN:CG	57:BA:2313:C:O4'	2.53	0.46
30:BG:43:LEU:N	30:BG:43:LEU:HD22	2.31	0.46
30:BG:57:ALA:O	30:BG:60:LEU:HB3	2.15	0.46
30:BG:86:MET:SD	30:BG:87:PRO:N	2.89	0.46
32:BI:119:PRO:O	32:BI:120:ILE:C	2.54	0.46
32:BI:129:THR:HG22	32:BI:130:TYR:N	2.29	0.46
36:BP:16:ARG:O	36:BP:18:ARG:N	2.49	0.46
39:BS:56:LEU:O	39:BS:57:LYS:HB2	2.15	0.46
39:BS:93:LYS:O	39:BS:94:TYR:C	2.54	0.46
40:BT:19:LEU:HB3	40:BT:85:LYS:HD3	1.98	0.46
40:BT:64:ARG:HG2	40:BT:64:ARG:HH11	1.81	0.46
42:BV:39:LEU:HB3	42:BV:47:VAL:CG1	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BX:14:SER:O	44:BX:17:ALA:N	2.48	0.46
45:BY:15:VAL:HG11	45:BY:20:TYR:O	2.15	0.46
45:BY:97:ARG:C	45:BY:99:CYS:N	2.69	0.46
27:AD:238:GLY:O	27:AD:239:ARG:C	2.52	0.46
27:BD:238:GLY:O	27:BD:239:ARG:C	2.54	0.46
47:A0:49:LYS:HB2	47:A0:80:HIS:HB3	1.97	0.46
31:BH:43:VAL:HG12	31:BH:51:ARG:O	2.15	0.46
57:BA:2523:G:H2'	57:BA:2524:G:C5'	2.29	0.46
52:A5:51:TYR:CZ	52:A5:52:TYR:HD2	2.32	0.46
57:BA:448:U:O4	57:BA:583:G:H1'	2.15	0.46
57:BA:2134:A:H2	57:BA:2159:G:H1'	1.77	0.46
48:B1:52:ARG:O	48:B1:53:VAL:C	2.54	0.46
57:AA:271(D):G:H1	57:AA:271(T):C:N4	2.05	0.46
49:A2:64:LEU:O	49:A2:64:LEU:HD23	2.16	0.46
49:A2:71:ASN:O	49:A2:72:ALA:OXT	2.34	0.46
57:AA:795:C:H6	57:AA:795:C:O5'	2.21	0.46
48:B1:4:VAL:HG22	48:B1:5:CYS:H	1.81	0.46
29:AF:160:ASN:HD22	29:AF:162:LEU:H	1.63	0.46
57:AA:510:C:O2'	57:AA:511:U:H5'	2.15	0.46
56:B9:30:PRO:O	56:B9:31:LYS:C	2.53	0.46
44:BX:59:VAL:O	44:BX:59:VAL:HG12	2.16	0.46
57:BA:246:C:C2'	57:BA:247:G:H5'	2.46	0.46
57:AA:2464:C:O2'	57:AA:2465:C:P	2.72	0.46
34:BN:93:THR:O	34:BN:94:HIS:CB	2.63	0.46
57:BA:1416:G:O2'	57:BA:1417:C:H5	1.98	0.46
57:BA:2552:U:H2'	57:BA:2554:U:H5''	1.98	0.46
57:BA:2530:A:H2'	57:BA:2531:A:H5'	1.98	0.46
46:AZ:41:LEU:C	46:AZ:41:LEU:HD13	2.36	0.46
46:BZ:133:ILE:O	46:BZ:133:ILE:HG22	2.16	0.46
57:AA:2236:C:C2'	57:AA:2237:G:H5'	2.46	0.46
30:AG:98:ARG:CG	51:A4:1:MET:HG2	2.45	0.46
57:AA:1331:A:O2'	57:AA:1332:G:C8	2.69	0.46
57:AA:1373:A:H2'	57:AA:1374:G:O4'	2.16	0.46
30:AG:156:ASP:OD1	57:AA:2305:A:C5'	2.63	0.46
46:AZ:85:HIS:CE1	58:AB:75:G:H21	2.34	0.46
27:AD:66:ASP:OD2	27:AD:69:ARG:HG2	2.16	0.46
28:AE:51:PHE:N	28:AE:74:PRO:HG2	2.31	0.46
30:AG:37:VAL:CG2	30:AG:159:VAL:HG23	2.45	0.46
31:AH:41:MET:HG3	31:AH:43:VAL:HG13	1.93	0.46
32:AI:111:PRO:O	32:AI:116:LEU:HD22	2.16	0.46
32:AI:68:LEU:HG	32:AI:72:LEU:CD1	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:AO:87:ILE:HD12	35:AO:91:LEU:HD13	1.98	0.46
36:AP:93:GLY:O	36:AP:123:LEU:HB2	2.15	0.46
36:AP:146:VAL:CG2	36:AP:147:LEU:N	2.73	0.46
39:AS:36:TYR:HA	39:AS:52:SER:HA	1.96	0.46
40:AT:61:PHE:CE2	40:AT:76:PHE:HB2	2.51	0.46
41:AU:8:VAL:O	41:AU:9:VAL:C	2.54	0.46
44:AX:14:SER:O	44:AX:17:ALA:HB3	2.16	0.46
45:AY:52:SER:O	45:AY:56:PRO:HD3	2.15	0.46
43:BW:41:LYS:HE3	52:B5:25:LEU:HD11	1.98	0.46
57:BA:1217:C:H2'	57:BA:1218:C:C6	3.39	0.46
57:BA:1286:A:H2'	57:BA:1288:U:OP2	2.16	0.46
57:BA:252:G:O2'	57:BA:253:C:H5'	2.16	0.46
57:BA:962:G:O2'	57:BA:963:U:H5'	2.16	0.46
57:BA:983:A:H3'	57:BA:983:A:N3	5.16	0.46
27:BD:26:LYS:O	27:BD:27:THR:CB	2.64	0.46
27:BD:80:ALA:HB2	27:BD:96:HIS:CD2	2.51	0.46
32:BI:95:LYS:O	32:BI:99:GLU:HB2	2.15	0.46
36:BP:105:LEU:O	36:BP:106:LEU:CB	2.63	0.46
40:BT:13:ARG:HA	40:BT:13:ARG:NE	2.29	0.46
41:BU:65:ILE:HG12	41:BU:96:ALA:CB	2.46	0.46
45:BY:7:VAL:HG11	45:BY:8:LYS:HZ1	1.81	0.46
27:BD:241:PRO:C	27:BD:242:ARG:HD2	2.36	0.46
57:AA:1592:C:H2'	57:AA:1593:G:H8	1.80	0.46
57:BA:747:U:O2	57:BA:2014:A:H1'	2.15	0.46
57:BA:1784:A:H4'	57:BA:1785:A:C5'	2.46	0.46
51:A4:56:VAL:O	51:A4:56:VAL:HG12	2.15	0.46
57:AA:1535:A:H5''	57:AA:1536:C:OP2	2.15	0.46
31:BH:154:PRO:O	31:BH:156:ALA:N	2.48	0.46
49:A2:70:GLN:HG3	49:A2:71:ASN:OD1	2.15	0.46
57:AA:797:C:O2'	57:AA:798:G:H5'	2.32	0.46
57:BA:2399:G:H2'	57:BA:2400:G:O4'	2.16	0.46
48:A1:41:ARG:HH11	48:A1:43:TYR:HE2	1.64	0.46
57:BA:2475:C:H2'	57:BA:2477:C:OP1	2.15	0.46
57:BA:491:G:H2'	57:BA:492:A:H8	1.80	0.46
57:AA:1164:G:O2'	57:AA:1165:U:H5'	2.15	0.46
57:BA:89:G:H3'	57:BA:90:U:H5'	1.95	0.46
57:BA:2401:U:H2'	57:BA:2402:C:H5''	1.97	0.46
57:AA:291:C:H2'	57:AA:292:C:C6	2.50	0.46
47:A0:5:LYS:HB3	47:A0:5:LYS:HZ3	1.80	0.46
57:AA:594:U:H2'	57:AA:595:C:H6	1.80	0.46
57:AA:2408:U:H2'	57:AA:2409:G:H8	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1704:G:O2'	57:BA:1705:G:H5'	2.15	0.46
57:BA:1690:A:H2'	57:BA:1691:C:O4'	2.16	0.46
55:A8:48:PHE:C	55:A8:49:VAL:HG13	2.36	0.46
55:A8:52:LYS:O	55:A8:56:GLU:OE1	2.34	0.46
57:AA:1199:U:H6	57:AA:1199:U:O5'	1.99	0.46
57:AA:1486:A:N1	57:AA:1504:C:N3	2.63	0.46
57:AA:1493:C:H2'	57:AA:1493:C:O2	2.14	0.46
57:AA:1509(B):A:H2'	57:AA:1510:G:H8	1.77	0.46
57:AA:826:U:H2'	57:AA:828:U:O4'	2.16	0.46
57:AA:923:C:H2'	57:AA:924:C:C6	2.47	0.46
26:AC:6:LYS:HD3	57:AA:2132:U:N3	2.27	0.46
27:AD:99:ASP:OD1	57:AA:1491:G:H5'	2.16	0.46
28:AE:33:VAL:HG23	28:AE:47:VAL:HG23	1.98	0.46
28:AE:64:LYS:O	28:AE:64:LYS:HG2	2.16	0.46
28:AE:70:ALA:O	28:AE:72:VAL:N	2.48	0.46
30:AG:141:PHE:CD1	30:AG:142:PRO:HD2	2.50	0.46
32:AI:88:ILE:CG2	32:AI:89:TYR:N	2.78	0.46
32:AI:95:LYS:O	32:AI:99:GLU:HB2	2.16	0.46
34:AN:58:ASP:C	34:AN:60:ILE:N	2.68	0.46
36:AP:112:LEU:HD13	36:AP:113:LYS:N	2.30	0.46
36:AP:16:ARG:C	36:AP:16:ARG:CD	2.80	0.46
36:AP:40:SER:HB3	57:AA:832:G:OP1	2.15	0.46
39:AS:99:LYS:O	39:AS:101:LEU:HD12	2.16	0.46
39:AS:95:HIS:CD2	58:AB:48:A:H4'	2.50	0.46
40:AT:70:VAL:CG1	40:AT:71:GLY:H	2.25	0.46
40:AT:77:PRO:O	40:AT:78:LEU:CB	2.64	0.46
42:AV:4:ILE:O	42:AV:4:ILE:HG22	2.15	0.46
36:BP:62:LEU:CD1	55:B8:30:ARG:HG2	2.46	0.46
57:BA:1047:G:C8	57:BA:1110:G:C6	3.04	0.46
57:BA:18:C:H2'	57:BA:19:C:C6	2.57	0.46
57:BA:576:U:H2'	57:BA:577:G:C8	2.51	0.46
27:BD:43:ARG:HD2	27:BD:44:ASN:OD1	2.15	0.46
27:BD:48:ARG:HH11	27:BD:48:ARG:CG	2.25	0.46
27:BD:70:TRP:HZ3	27:BD:146:GLU:OE2	1.98	0.46
28:BE:144:ARG:HB3	28:BE:145:LYS:H	1.49	0.46
32:BI:127:VAL:O	32:BI:128:LEU:HD13	2.15	0.46
32:BI:92:VAL:HG22	32:BI:97:ILE:HG13	1.98	0.46
36:BP:83:VAL:CG2	36:BP:105:LEU:HD13	2.45	0.46
41:BU:83:LEU:HB3	41:BU:88:ILE:HB	1.97	0.46
42:BV:35:LEU:C	42:BV:37:VAL:N	2.68	0.46
46:BZ:19:ARG:C	46:BZ:21:ALA:H	2.20	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:243:GLY:O	27:BD:244:ARG:HB3	2.15	0.46
47:B0:14:ARG:CG	47:B0:14:ARG:HH11	2.29	0.46
31:BH:16:SER:O	31:BH:26:VAL:HA	2.16	0.46
46:AZ:155:LEU:N	46:AZ:155:LEU:HD23	2.30	0.46
57:AA:2524:G:H5'	57:AA:2524:G:C8	2.41	0.46
57:AA:1947:C:C3'	57:AA:1948:G:C5'	2.94	0.46
27:BD:259:THR:CG2	57:BA:1798:U:H5'	2.45	0.46
57:AA:1784:A:H4'	57:AA:1785:A:C5'	2.46	0.46
57:BA:1535:A:H5''	57:BA:1536:C:OP2	2.16	0.46
57:BA:654(G):C:H2'	57:BA:654(H):G:H8	1.79	0.46
37:AQ:27:VAL:O	37:AQ:28:ALA:HB3	2.15	0.46
35:AO:103:ALA:O	35:AO:105:GLU:N	2.49	0.46
57:AA:156:U:O4'	57:AA:158:U:O4	2.34	0.46
48:B1:41:ARG:HD3	48:B1:43:TYR:OH	2.15	0.46
49:A2:33:MET:HA	49:A2:36:ARG:HE	1.81	0.46
48:B1:57:GLU:O	48:B1:58:ILE:HG23	2.15	0.46
57:AA:1831:G:O2'	57:AA:1832:C:H5'	2.16	0.46
28:AE:107:THR:HA	28:AE:163:GLU:O	2.15	0.46
54:A7:28:ARG:HH11	54:A7:28:ARG:HG3	1.81	0.46
57:AA:2062:A:C2'	57:AA:2063:C:H5'	2.45	0.46
47:B0:41:ARG:HD3	47:B0:41:ARG:HA	1.77	0.46
57:AA:2260:C:H2'	57:AA:2261:C:H6	1.79	0.46
29:BF:136:THR:O	29:BF:137:LYS:C	2.54	0.46
57:BA:843:G:O2'	57:BA:844:C:H5'	2.15	0.46
48:A1:3:LYS:HG3	48:A1:4:VAL:H	1.79	0.46
50:A3:52:HIS:CD2	50:A3:52:HIS:H	2.33	0.46
53:A6:5:VAL:HG11	57:AA:2284:C:OP1	2.16	0.46
57:AA:1366:A:O2'	57:AA:1367:A:H5'	2.15	0.46
57:AA:221:A:O2'	57:AA:222:A:OP2	2.31	0.46
30:AG:27:ASN:ND2	58:AB:55:U:O3'	2.49	0.46
27:AD:72:LYS:HE3	27:AD:101:GLU:OE2	2.16	0.46
28:AE:95:ILE:CD1	28:AE:95:ILE:N	2.76	0.46
29:AF:28:ILE:HD12	29:AF:119:ARG:HH21	1.81	0.46
30:AG:125:PHE:H	30:AG:125:PHE:HD1	1.63	0.46
36:AP:35:HIS:O	36:AP:36:LYS:CB	2.64	0.46
38:AR:32:GLY:C	38:AR:33:ARG:HD2	2.36	0.46
38:AR:2:ARG:CD	38:AR:5:LYS:HE2	2.38	0.46
38:AR:79:LEU:HA	38:AR:83:ILE:CG1	2.45	0.46
40:AT:3:ARG:HE	57:AA:2876:G:C4'	2.27	0.46
42:AV:35:LEU:C	42:AV:37:VAL:N	2.67	0.46
42:AV:41:GLY:HA3	42:AV:45:THR:OG1	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:AW:26:GLY:O	43:AW:27:LYS:HG2	2.16	0.46
53:B6:11:LEU:O	53:B6:24:GLU:N	2.41	0.46
53:B6:8:LYS:HE3	53:B6:25:LYS:HD3	1.97	0.46
55:B8:53:PRO:HG2	55:B8:54:GLU:H	1.80	0.46
57:BA:1106:A:C8	57:BA:1107:G:N7	2.84	0.46
57:BA:230:U:O2	57:BA:230:U:H2'	2.16	0.46
57:BA:838:C:O2'	57:BA:839:U:H5'	2.16	0.46
58:BB:55:U:H2'	58:BB:56:G:C8	2.50	0.46
27:BD:71:ASP:OD2	27:BD:103:ARG:NH2	2.49	0.46
27:BD:98:VAL:C	27:BD:100:GLY:N	2.67	0.46
30:BG:141:PHE:O	30:BG:144:ILE:CG2	2.62	0.46
31:BH:119:GLU:HG2	31:BH:120:GLY:N	2.30	0.46
36:BP:57:THR:HB	36:BP:58:THR:H	1.25	0.46
39:BS:59:LYS:HD2	39:BS:61:ASN:HB2	1.96	0.46
39:BS:95:HIS:CE1	58:BB:38:C:O4'	2.69	0.46
43:BW:47:VAL:O	43:BW:50:VAL:HG12	2.16	0.46
44:BX:12:VAL:HG13	44:BX:27:THR:O	2.15	0.46
45:BY:52:SER:O	45:BY:54:LYS:N	2.49	0.46
45:BY:97:ARG:HG3	45:BY:97:ARG:HH11	1.81	0.46
42:BV:72:VAL:O	42:BV:72:VAL:HG23	2.16	0.46
46:AZ:128:VAL:HG22	46:AZ:129:SER:N	2.31	0.46
46:AZ:95:PRO:HA	46:AZ:129:SER:HB3	1.98	0.46
46:BZ:49:ARG:HD3	46:BZ:49:ARG:HA	1.77	0.46
38:BR:100:LEU:HD22	38:BR:111:LEU:O	2.16	0.46
57:AA:1539:G:H2'	57:AA:1540:U:O4'	2.16	0.46
57:AA:272(C):G:H2'	57:AA:272(D):G:H8	1.81	0.46
57:BA:274:G:H2'	57:BA:275:G:C2	2.50	0.46
41:AU:108:GLU:OE2	42:AV:44:LYS:HD3	2.16	0.46
46:AZ:141:VAL:HA	46:AZ:144:LEU:HD21	1.97	0.46
49:A2:53:LEU:HD23	49:A2:53:LEU:C	2.37	0.46
57:BA:768:G:H2'	57:BA:769:G:C8	2.46	0.46
57:BA:2114:A:O2'	57:BA:2115:G:H5'	2.16	0.46
28:AE:170:LEU:HD12	28:AE:170:LEU:N	2.30	0.46
57:AA:535:C:C2'	57:AA:536:A:H5'	2.46	0.46
30:BG:136:ARG:NH1	57:BA:2306:C:H4'	2.31	0.46
57:BA:30:G:C5	57:BA:31:C:C4	3.04	0.46
37:AQ:109:VAL:HG12	37:AQ:113:GLN:HB3	1.96	0.46
47:B0:5:LYS:HB3	47:B0:5:LYS:HZ2	1.81	0.46
57:BA:946:G:O2'	57:BA:947:G:H5'	2.16	0.46
57:AA:2870:C:O2'	57:AA:2871:C:H5'	2.15	0.46
57:BA:1705:G:O2'	57:BA:1706:U:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1705:G:O2'	57:AA:1706:U:H5'	2.16	0.46
31:AH:114:VAL:O	31:AH:114:VAL:HG23	2.16	0.46
57:BA:1790:C:H5''	57:BA:1791:A:OP1	2.15	0.46
57:BA:1167:U:C2	57:BA:1183:G:N2	2.84	0.46
57:AA:1177:A:C5'	57:AA:1178:C:C6	2.99	0.46
57:AA:1817:G:H2'	57:AA:1818:U:H5'	1.98	0.46
57:AA:2394:C:H2'	57:AA:2395:C:C6	2.51	0.46
57:AA:84:A:N1	57:AA:98:G:O2'	2.42	0.46
27:AD:210:GLY:HA2	27:AD:213:ARG:HG2	1.97	0.46
28:AE:5:LEU:HD11	28:AE:49:LEU:O	2.16	0.46
30:AG:102:PHE:HE2	30:AG:141:PHE:CE1	2.34	0.46
32:AI:10:GLU:O	32:AI:12:LEU:HD23	2.16	0.46
32:AI:72:LEU:O	32:AI:138:ILE:CD1	2.64	0.46
32:AI:126:TYR:HB2	32:AI:140:LEU:HD22	1.97	0.46
38:AR:73:VAL:O	38:AR:76:VAL:HG12	2.16	0.46
39:AS:12:PHE:HD2	39:AS:12:PHE:N	2.08	0.46
45:AY:96:ILE:CD1	45:AY:99:CYS:SG	3.04	0.46
36:BP:50:ARG:HB3	55:B8:59:LYS:HE2	1.98	0.46
36:BP:35:HIS:N	57:BA:1190:G:H5'	2.29	0.46
57:BA:2728:U:C2'	57:BA:2729:G:H5'	2.46	0.46
28:BE:109:LYS:HE2	28:BE:191:PRO:HB3	1.98	0.46
28:BE:6:GLY:HA2	28:BE:51:PHE:CE2	2.51	0.46
30:BG:130:ASN:ND2	30:BG:161:THR:N	2.60	0.46
31:BH:159:GLU:OE1	31:BH:159:GLU:HA	2.15	0.46
32:BI:94:ALA:CA	32:BI:98:ALA:HB3	2.46	0.46
35:BO:9:GLU:O	35:BO:83:ALA:HA	2.16	0.46
36:BP:107:LYS:C	36:BP:109:GLY:N	2.69	0.46
37:BQ:118:LEU:HD12	37:BQ:131:ILE:CG2	2.46	0.46
57:AA:1158:C:N3	57:AA:1160:G:N7	7.15	0.46
41:AU:59:ARG:NH1	57:AA:1009:A:O4'	2.48	0.46
57:AA:1540:U:O3'	57:AA:1542:A:OP1	2.34	0.46
37:BQ:27:VAL:O	37:BQ:28:ALA:HB3	2.16	0.46
57:BA:2189:U:H3'	57:BA:2190:G:C5'	2.44	0.46
57:AA:2220:G:C4	57:AA:2221:G:C8	3.04	0.46
37:AQ:58:PHE:CD1	37:AQ:58:PHE:O	2.68	0.46
57:BA:2713:A:H3'	57:BA:2714:G:H5'	1.98	0.46
56:B9:1:MET:SD	57:BA:2477:C:H2'	2.56	0.46
57:AA:1681:G:O2'	57:AA:1762:A:C2'	2.64	0.46
57:BA:1839:G:C8	57:BA:1839:G:H5'	2.47	0.46
51:A4:43:TYR:O	51:A4:44:THR:O	2.34	0.46
49:B2:64:LEU:HD11	49:B2:68:ARG:NH1	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1984:G:O2'	57:AA:1985:G:H5'	2.16	0.46
48:B1:94:LEU:HD12	48:B1:94:LEU:N	2.31	0.46
57:BA:128:C:H2'	57:BA:129:C:O4'	2.16	0.46
57:BA:1609:A:C2	57:BA:1616:A:C4	3.04	0.46
57:AA:185:U:H2'	57:AA:186:G:C8	2.51	0.45
57:AA:271(Q):G:HO2'	57:AA:271(R):G:H8	1.62	0.45
57:AA:491:G:H2'	57:AA:492:A:H8	1.81	0.45
57:AA:983:A:H3'	57:AA:983:A:N3	5.15	0.45
58:AB:8:U:H3	58:AB:113:G:H1	1.63	0.45
27:AD:116:GLN:HG3	57:AA:407:G:O2'	83.31	0.45
28:AE:47:VAL:HG22	28:AE:49:LEU:CD2	2.46	0.45
28:AE:4:ILE:HG12	28:AE:5:LEU:O	2.16	0.45
29:AF:22:ALA:CB	29:AF:26:ALA:HB2	2.42	0.45
30:AG:113:ARG:O	30:AG:140:ILE:CG2	2.63	0.45
30:AG:170:ARG:HH22	30:AG:182:LYS:CD	2.28	0.45
32:AI:28:ASN:HA	32:AI:32:PRO:HG2	1.97	0.45
39:AS:90:GLY:C	39:AS:92:TYR:N	2.68	0.45
40:AT:125:ARG:O	40:AT:127:ALA:N	2.49	0.45
40:AT:11:GLU:O	40:AT:13:ARG:N	2.49	0.45
40:AT:51:ARG:HG2	40:AT:52:ILE:N	2.30	0.45
40:AT:54:ARG:O	40:AT:55:ASN:HB2	2.16	0.45
45:AY:7:VAL:CB	45:AY:8:LYS:HZ1	2.29	0.45
57:BA:2259:G:C2	57:BA:2282:G:N1	2.85	0.45
58:BB:38:C:H42	58:BB:44:G:H1	1.64	0.45
58:BB:7:G:C3'	58:BB:8:U:C5'	2.88	0.45
27:BD:176:ARG:HG2	27:BD:176:ARG:NH1	2.27	0.45
27:BD:98:VAL:C	27:BD:100:GLY:H	2.19	0.45
28:BE:134:ILE:HA	28:BE:137:HIS:CD2	2.51	0.45
32:BI:88:ILE:CD1	32:BI:120:ILE:HG21	2.26	0.45
37:BQ:45:GLN:H	37:BQ:45:GLN:CD	2.18	0.45
45:BY:23:ARG:HB3	45:BY:23:ARG:HH11	3.87	0.45
52:A5:55:ARG:O	52:A5:56:LYS:HE3	2.16	0.45
46:BZ:108:PRO:HG2	46:BZ:111:VAL:CG2	2.46	0.45
38:AR:100:LEU:HD22	38:AR:111:LEU:O	2.16	0.45
53:A6:37:ARG:HH21	57:AA:2286:A:N6	2.14	0.45
53:A6:47:THR:OG1	53:A6:48:VAL:N	2.49	0.45
52:B5:33:CYS:O	52:B5:35:GLU:N	2.43	0.45
36:AP:88:LEU:CD2	36:AP:114:ILE:HD13	2.46	0.45
38:AR:117:VAL:O	38:AR:118:GLU:CB	2.58	0.45
57:BA:654(H):G:N2	57:BA:654(J):A:C8	2.79	0.45
35:AO:34:THR:OG1	35:AO:35:VAL:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:271(D):G:H1	57:BA:271(T):C:N4	2.05	0.45
46:BZ:48:PHE:CD1	46:BZ:48:PHE:O	2.69	0.45
37:AQ:111:GLU:O	37:AQ:115:MET:HG2	2.16	0.45
46:BZ:94:GLU:O	46:BZ:130:PRO:HD3	2.16	0.45
57:AA:649:G:H2'	57:AA:650:C:C6	2.51	0.45
57:AA:274:G:C6	57:AA:276:A:N6	2.81	0.45
57:BA:2220:G:C4	57:BA:2221:G:C8	3.04	0.45
50:B3:5:LYS:CB	50:B3:36:VAL:HG12	2.42	0.45
48:A1:20:ARG:HG2	48:A1:20:ARG:HH11	1.81	0.45
48:B1:29:GLY:C	48:B1:31:GLY:N	2.69	0.45
57:AA:1889:A:N1	57:AA:2234:G:H1'	2.31	0.45
34:AN:93:THR:O	34:AN:94:HIS:CB	2.63	0.45
57:AA:654(A):G:H2'	57:AA:654(B):C:H5'	1.97	0.45
56:B9:17:ILE:HG13	56:B9:26:ILE:HD12	1.96	0.45
26:AC:43:GLU:OE2	57:AA:2124:G:H1'	2.16	0.45
57:AA:221:A:N6	57:AA:265:A:H8	2.14	0.45
41:AU:3:ARG:HB3	57:AA:445:C:H5''	1.99	0.45
57:AA:548:A:H2'	57:AA:548:A:N3	2.31	0.45
57:AA:76:C:H42	57:AA:93:G:H1	26.50	0.45
26:AC:11:LEU:HD13	26:AC:33:LEU:O	2.16	0.45
27:AD:108:PRO:HG2	27:AD:111:LEU:HD23	1.98	0.45
27:AD:119:ALA:HB1	27:AD:130:ALA:HB3	1.97	0.45
28:AE:111:ARG:HA	38:AR:2:ARG:CG	2.46	0.45
28:AE:186:GLY:O	28:AE:187:ALA:HB3	2.16	0.45
32:AI:81:VAL:CG2	32:AI:82:ARG:N	2.79	0.45
35:AO:13:ASN:O	35:AO:15:GLY:N	2.49	0.45
36:AP:107:LYS:C	36:AP:109:GLY:N	2.69	0.45
41:AU:74:LEU:CD2	41:AU:79:PHE:HB2	2.46	0.45
42:AV:47:VAL:O	42:AV:47:VAL:HG23	2.15	0.45
38:AR:103:ARG:HD3	43:AW:40:ASN:ND2	2.30	0.45
45:AY:2:ARG:C	45:AY:2:ARG:HD3	2.36	0.45
45:AY:4:LYS:HB2	45:AY:32:PRO:CG	2.45	0.45
53:B6:15:GLU:CD	53:B6:44:ARG:NH2	2.67	0.45
57:BA:70:G:C2'	57:BA:113:G:O2'	2.64	0.45
57:BA:1429:G:H2'	57:BA:1430:C:H6	1.81	0.45
26:BC:6:LYS:HA	26:BC:9:ARG:CB	2.46	0.45
27:BD:122:ASP:O	27:BD:123:ALA:O	2.33	0.45
27:BD:135:PHE:N	27:BD:135:PHE:CD2	2.81	0.45
27:BD:147:LEU:HD12	27:BD:155:LEU:HD11	1.98	0.45
27:BD:72:LYS:HB3	27:BD:75:ILE:HD12	1.98	0.45
30:BG:11:TYR:OH	30:BG:33:ARG:HA	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:125:PHE:O	30:BG:126:ASP:O	2.34	0.45
30:BG:47:LYS:HE3	30:BG:81:LYS:NZ	2.31	0.45
30:BG:5:VAL:CG1	30:BG:104:GLU:OE2	2.64	0.45
35:BO:61:VAL:HG12	35:BO:85:VAL:HG12	1.98	0.45
36:BP:61:ARG:H	36:BP:61:ARG:HD2	1.80	0.45
39:BS:96:GLY:C	39:BS:98:VAL:H	2.20	0.45
41:BU:17:ILE:HG23	41:BU:39:LEU:HD12	1.97	0.45
42:BV:47:VAL:O	42:BV:48:GLY:C	2.54	0.45
45:BY:32:PRO:O	45:BY:33:LYS:C	2.54	0.45
45:BY:47:LYS:O	45:BY:48:ALA:C	2.55	0.45
57:AA:1827:C:H2'	57:AA:1828:G:O4'	2.15	0.45
47:B0:49:LYS:HB2	47:B0:80:HIS:HB3	1.98	0.45
57:AA:1778:U:H2'	57:AA:1784:A:N6	2.32	0.45
47:B0:10:THR:HG22	47:B0:12:ASN:H	1.81	0.45
57:AA:2808:U:C2'	57:AA:2809:A:H5'	2.45	0.45
36:AP:90:ARG:HD2	36:AP:91:PHE:CD1	2.51	0.45
57:AA:1469:A:H2'	57:AA:1470:G:O4'	2.16	0.45
46:AZ:108:PRO:CG	46:AZ:111:VAL:HG23	2.46	0.45
46:AZ:108:PRO:HB3	46:AZ:144:LEU:HB2	1.98	0.45
57:BA:2735:G:H2'	57:BA:2736:G:C8	2.52	0.45
57:BA:470:A:H2'	57:BA:471:A:O4'	2.15	0.45
57:AA:178:G:O2'	57:AA:179:G:H5'	2.16	0.45
57:AA:2258:C:H4'	57:AA:2259:G:OP2	2.15	0.45
48:B1:8:SER:HB3	48:B1:66:HIS:CD2	2.51	0.45
48:B1:68:PRO:C	48:B1:70:VAL:N	2.69	0.45
57:BA:950:G:C6	57:BA:951:C:C4	3.04	0.45
51:B4:27:THR:HG23	51:B4:27:THR:O	2.15	0.45
57:AA:564:C:O2'	57:AA:565:C:H5'	2.16	0.45
57:BA:2236:C:H2'	57:BA:2237:G:H5'	1.97	0.45
57:AA:2828:C:O2'	57:AA:2829:C:H5'	2.16	0.45
57:BA:1435:G:H2'	57:BA:1436:G:O4'	2.16	0.45
49:A2:30:ARG:CG	49:A2:31:GLU:N	2.80	0.45
53:A6:30:THR:HG22	53:A6:32:ASN:HD22	1.82	0.45
57:AA:1273:U:H4'	57:AA:1275:A:OP1	2.16	0.45
57:AA:271(R):G:H2'	57:AA:271(S):G:H8	1.82	0.45
57:AA:2732:G:C3'	57:AA:2733:A:C5'	2.94	0.45
57:AA:662:G:O2'	57:AA:836:G:C5'	28.16	0.45
57:AA:672:C:H2'	57:AA:673:C:H5''	1.89	0.45
57:AA:863:A:H2'	57:AA:864:G:C8	2.51	0.45
57:AA:893:C:H2'	57:AA:894:C:H6	1.77	0.45
36:AP:35:HIS:CE1	57:AA:941:A:H4'	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AP:63:PRO:HB2	55:A8:12:LYS:O	2.16	0.45
37:AQ:51:ARG:O	37:AQ:52:VAL:C	2.53	0.45
39:AS:83:LYS:CE	39:AS:105:ALA:HB3	2.47	0.45
47:B0:36:ILE:HD12	47:B0:38:VAL:H	1.82	0.45
36:BP:61:ARG:HH11	55:B8:13:ARG:HD2	1.80	0.45
57:BA:1107:G:O2'	57:BA:1108:U:H5'	2.16	0.45
57:BA:1308:A:H2'	57:BA:1309:G:O4'	2.16	0.45
57:BA:1357:U:H2'	57:BA:1358:G:O4'	2.16	0.45
57:BA:2287:A:C2	57:BA:2289:G:C8	3.04	0.45
57:BA:2314:C:O2	57:BA:2315:G:C8	2.69	0.45
57:BA:506:G:O3'	57:BA:507:A:H8	1.98	0.45
57:BA:997:G:C2'	57:BA:998:C:H5'	2.46	0.45
26:BC:50:ILE:H	26:BC:50:ILE:HD12	1.80	0.45
27:BD:206:LEU:HD23	27:BD:206:LEU:HA	1.74	0.45
29:BF:3:GLU:CB	29:BF:24:LEU:HG	2.47	0.45
30:BG:29:TRP:O	30:BG:30:GLU:C	2.54	0.45
30:BG:71:THR:HB	30:BG:89:GLY:HA3	1.98	0.45
32:BI:83:ALA:HB3	32:BI:143:SER:O	2.17	0.45
42:BV:40:LEU:N	42:BV:40:LEU:HD22	2.31	0.45
45:BY:31:LEU:CB	45:BY:32:PRO:CA	2.95	0.45
45:BY:96:ILE:HD13	45:BY:99:CYS:SG	2.56	0.45
52:B5:3:LYS:HD3	57:BA:2613:U:H2'	1.99	0.45
37:AQ:134:ARG:HA	37:AQ:137:TYR:HD1	1.79	0.45
46:BZ:61:LEU:O	46:BZ:63:ASP:N	2.40	0.45
51:A4:51:ASP:C	51:A4:51:ASP:OD2	2.55	0.45
57:BA:1270:C:O2'	57:BA:1271:G:H5'	6.18	0.45
57:BA:154(A):C:O2	57:BA:154(A):C:H2'	2.16	0.45
57:AA:1719:G:C6	57:AA:1720:U:C4	3.04	0.45
57:AA:1188:U:H2'	57:AA:1189:A:H5'	1.98	0.45
33:AJ:118:THR:C	33:AJ:120:LYS:N	2.70	0.45
57:BA:1866:C:H2'	57:BA:1876:A:O4'	2.15	0.45
57:BA:2693:A:H2'	57:BA:2694:G:C8	2.47	0.45
57:BA:92:A:H2'	57:BA:93:G:O4'	2.17	0.45
48:B1:73:LEU:HA	48:B1:76:ARG:HG2	1.98	0.45
57:AA:2552:U:C2	57:AA:2554:U:H5'	2.51	0.45
57:BA:1786:A:C2	57:BA:2606:C:H1'	2.51	0.45
57:BA:1231:G:H2'	57:BA:1232:G:H8	1.81	0.45
57:AA:431:U:H6	57:AA:431:U:O5'	2.00	0.45
42:BV:83:ARG:HG2	42:BV:83:ARG:HH11	1.81	0.45
51:A4:33:VAL:CG1	51:A4:34:GLU:H	2.23	0.45
57:AA:2443:C:H2'	57:AA:2444:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2811:G:O2'	57:AA:2812:G:H5'	2.16	0.45
57:AA:838:C:O2'	57:AA:839:U:H5'	2.16	0.45
58:AB:82:G:H2'	58:AB:83:G:H8	1.82	0.45
26:AC:56:ASP:O	26:AC:57:GLN:HG3	2.17	0.45
27:AD:25:THR:HG22	27:AD:26:LYS:HD3	1.98	0.45
27:AD:48:ARG:HH11	27:AD:48:ARG:CG	2.21	0.45
27:AD:71:ASP:OD2	27:AD:103:ARG:NH2	2.50	0.45
28:AE:34:VAL:CG2	28:AE:34:VAL:O	2.64	0.45
30:AG:25:TYR:C	30:AG:26:GLN:OE1	2.54	0.45
30:AG:4:ASP:OD2	30:AG:9:ARG:NH2	2.48	0.45
31:AH:84:SER:O	31:AH:133:VAL:O	2.34	0.45
32:AI:55:ALA:O	32:AI:59:ALA:N	2.49	0.45
34:AN:130:HIS:HD2	57:AA:7:G:H5'	1.81	0.45
34:AN:67:LEU:O	34:AN:68:GLU:HB2	2.16	0.45
36:AP:63:PRO:C	36:AP:65:ARG:N	2.68	0.45
36:AP:7:ARG:CB	36:AP:7:ARG:HH11	2.28	0.45
39:AS:15:ARG:O	39:AS:18:ILE:HG22	2.16	0.45
39:AS:28:VAL:CG2	39:AS:87:PHE:HE1	2.30	0.45
40:AT:85:LYS:HZ3	40:AT:85:LYS:HB3	1.75	0.45
45:AY:22:GLY:O	45:AY:23:ARG:HG2	2.17	0.45
49:B2:41:ILE:CD1	49:B2:43:GLN:HB2	2.47	0.45
57:BA:1199:U:O5'	57:BA:1199:U:H6	2.00	0.45
57:BA:1431:U:O2'	57:BA:1432:C:H5'	2.17	0.45
57:BA:1602:U:H3'	57:BA:1603:A:H5''	1.99	0.45
55:B8:2:PRO:HA	57:BA:591:C:O2	2.17	0.45
57:BA:979:G:H3'	57:BA:980:A:H5''	1.99	0.45
30:BG:97:ASP:N	30:BG:100:TRP:HD1	2.14	0.45
30:BG:106:LEU:HD12	30:BG:110:ALA:CB	2.46	0.45
36:BP:17:LYS:CG	36:BP:19:VAL:CG2	2.93	0.45
40:BT:64:ARG:HD2	40:BT:73:GLU:CG	2.41	0.45
34:BN:2:LYS:NZ	42:BV:12:TYR:HA	2.30	0.45
45:BY:7:VAL:CG2	45:BY:8:LYS:NZ	2.79	0.45
31:BH:52:VAL:O	31:BH:65:HIS:HE1	1.99	0.45
39:BS:67:ARG:HH12	39:BS:71:ARG:HH22	1.65	0.45
57:BA:1158:C:N3	57:BA:1160:G:N7	7.14	0.45
52:A5:40:LYS:HB2	52:A5:41:PRO:HD2	1.97	0.45
52:A5:40:LYS:HZ3	52:A5:46:CYS:CB	2.30	0.45
53:A6:38:LYS:O	53:A6:39:TYR:CD1	2.69	0.45
38:BR:100:LEU:HD11	38:BR:113:LEU:HB3	1.99	0.45
57:BA:1948:G:C2'	57:BA:1949:G:H5'	2.47	0.45
48:B1:3:LYS:HA	48:B1:3:LYS:HD2	1.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:275:G:H3'	57:BA:275:G:N3	2.31	0.45
57:AA:652:C:HO2'	57:AA:653:A:P	2.39	0.45
57:BA:1385:G:O2'	57:BA:1396:U:C6	2.66	0.45
57:BA:271(X):G:C3'	57:BA:271(Y):U:H5''	2.47	0.45
57:BA:1999:C:H4'	57:BA:2723:C:O2	2.16	0.45
28:BE:170:LEU:N	28:BE:170:LEU:HD12	2.32	0.45
57:BA:1834:U:O3'	57:BA:1835:G:H8	1.99	0.45
57:BA:412:A:N6	57:BA:2412:A:O4'	2.49	0.45
55:A8:14:VAL:CG2	55:A8:22:VAL:HG12	2.43	0.45
57:AA:1503:U:H2'	57:AA:1504:C:H6	1.80	0.45
57:AA:191:A:H2'	57:AA:192:C:H6	1.82	0.45
57:AA:21:A:H2'	57:AA:22:C:C6	2.51	0.45
27:AD:134:ARG:HG3	27:AD:135:PHE:CD2	2.51	0.45
27:AD:154:LYS:HE3	57:AA:1818:U:O4	2.15	0.45
29:AF:32:LEU:CD1	29:AF:105:VAL:HG13	2.45	0.45
29:AF:45:ARG:HD2	57:AA:443:A:C5	2.51	0.45
30:AG:56:ALA:HB2	30:AG:153:ARG:CZ	2.47	0.45
32:AI:133:HIS:O	32:AI:133:HIS:CG	2.69	0.45
34:AN:123:TYR:OH	34:AN:130:HIS:CE1	2.70	0.45
37:AQ:43:THR:OG1	37:AQ:45:GLN:HG2	2.16	0.45
39:AS:89:ARG:HG3	39:AS:92:TYR:HA	1.98	0.45
44:AX:20:GLY:O	44:AX:25:LYS:HB2	2.17	0.45
53:B6:11:LEU:C	53:B6:11:LEU:HD22	2.36	0.45
57:BA:195:A:H5''	57:BA:196:A:OP2	2.16	0.45
57:BA:229:A:H5''	57:BA:230:U:H5'	1.99	0.45
57:BA:535:C:C2'	57:BA:536:A:H5'	2.46	0.45
57:BA:892:G:H2'	57:BA:893:C:C6	2.51	0.45
27:BD:25:THR:HG22	27:BD:26:LYS:N	2.32	0.45
27:BD:70:TRP:CD1	27:BD:70:TRP:C	2.90	0.45
30:BG:106:LEU:C	30:BG:108:ASN:H	2.20	0.45
30:BG:15:VAL:HG21	30:BG:176:LEU:CD2	2.46	0.45
30:BG:71:THR:HB	30:BG:89:GLY:O	2.16	0.45
32:BI:55:ALA:O	32:BI:59:ALA:N	2.49	0.45
33:BJ:42:GLN:O	33:BJ:43:ALA:HB2	2.16	0.45
36:BP:101:VAL:HG12	36:BP:107:LYS:N	2.31	0.45
38:BR:80:PHE:O	38:BR:85:PRO:HD3	2.17	0.45
40:BT:125:ARG:O	40:BT:127:ALA:N	2.50	0.45
40:BT:25:GLY:O	40:BT:26:ASP:HB2	2.16	0.45
40:BT:98:LYS:HB3	40:BT:100:TYR:CE1	2.52	0.45
45:BY:13:VAL:CG2	45:BY:72:VAL:HB	2.45	0.45
52:B5:3:LYS:NZ	57:BA:2613:U:O2'	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BV:17:GLY:O	42:BV:18:LEU:HB3	2.17	0.45
46:BZ:104:PHE:CB	46:BZ:141:VAL:HG21	2.47	0.45
41:AU:59:ARG:HG3	41:AU:59:ARG:NH1	2.32	0.45
36:BP:90:ARG:HD2	36:BP:91:PHE:CD1	2.51	0.45
57:AA:1517:G:C2'	57:AA:1518:U:H5'	2.47	0.45
46:AZ:43:GLU:N	46:AZ:43:GLU:OE1	2.48	0.45
49:A2:14:ARG:NH2	57:AA:77:C:O3'	2.49	0.45
49:B2:22:GLU:O	49:B2:24:LEU:N	2.49	0.45
50:B3:46:ASN:ND2	57:BA:850:C:O2'	2.47	0.45
57:AA:275:G:N3	57:AA:275:G:H3'	2.31	0.45
57:BA:2808:U:C2'	57:BA:2809:A:H5'	2.46	0.45
57:AA:1435:G:H2'	57:AA:1436:G:O4'	2.16	0.45
46:AZ:24:LEU:CD2	46:AZ:25:PRO:O	2.65	0.45
57:AA:470:A:H2'	57:AA:471:A:O4'	2.17	0.45
38:BR:8:ARG:HD3	38:BR:8:ARG:HA	1.77	0.45
30:AG:48:GLU:O	30:AG:49:ASP:HB2	2.15	0.45
35:AO:102:VAL:HB	35:AO:106:LEU:HD12	1.98	0.45
57:BA:2097:C:O2'	57:BA:2098:U:H5'	2.16	0.45
57:AA:2033:A:O2'	57:AA:2034:U:P	2.75	0.45
47:A0:20:ARG:HD3	57:AA:2356:C:O3'	2.16	0.45
57:BA:1862:G:H2'	57:BA:1863:G:H8	1.81	0.45
57:BA:1683:C:H2'	57:BA:1684:C:C6	2.51	0.45
49:A2:65:ASN:HB3	49:A2:69:ARG:HH12	1.80	0.45
54:B7:13:ALA:O	54:B7:17:GLY:HA3	2.17	0.45
57:BA:2558:C:H2'	57:BA:2559:C:O4'	2.16	0.45
57:AA:1570:A:H2'	57:AA:1571:A:C8	2.51	0.45
48:A1:30:VAL:CG2	48:A1:31:GLY:H	2.30	0.45
57:AA:1281:G:H5'	57:AA:1281:G:H8	1.81	0.45
57:AA:2314:C:O2	57:AA:2315:G:C8	2.70	0.45
57:AA:425:G:O2'	57:AA:426:C:H5'	2.17	0.45
27:AD:176:ARG:NH1	27:AD:176:ARG:CG	2.78	0.45
27:AD:70:TRP:HB3	27:AD:190:TYR:CE1	2.52	0.45
28:AE:18:ASP:O	28:AE:19:ARG:HB3	2.17	0.45
29:AF:62:ARG:HG2	29:AF:63:LYS:H	1.82	0.45
30:AG:54:GLU:O	30:AG:57:ALA:HB3	2.16	0.45
30:AG:5:VAL:HG13	51:A4:25:TYR:HE1	1.79	0.45
30:AG:67:LYS:CE	30:AG:67:LYS:N	2.63	0.45
30:AG:72:ARG:HG2	30:AG:86:MET:H	1.81	0.45
31:AH:28:GLY:C	31:AH:30:LYS:H	2.20	0.45
31:AH:11:VAL:HG23	31:AH:50:VAL:HG23	1.98	0.45
31:AH:88:LEU:HD13	31:AH:88:LEU:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AI:91:SER:N	32:AI:121:LYS:NZ	2.65	0.45
36:AP:55:ARG:CG	36:AP:56:SER:N	2.64	0.45
36:AP:59:LEU:HA	36:AP:61:ARG:NE	2.28	0.45
36:AP:7:ARG:C	36:AP:9:ASN:H	2.20	0.45
37:AQ:69:PHE:CD1	37:AQ:70:PRO:HD2	2.52	0.45
42:AV:19:LYS:HZ3	42:AV:20:LEU:N	2.06	0.45
53:B6:11:LEU:CD1	53:B6:26:ASN:HB2	2.46	0.45
53:B6:38:LYS:O	53:B6:39:TYR:CD1	2.69	0.45
57:BA:2394:C:H2'	57:BA:2395:C:C6	2.50	0.45
28:BE:7:VAL:CG1	28:BE:27:LEU:HB3	2.46	0.45
29:BF:3:GLU:HB2	29:BF:20:LEU:O	2.16	0.45
30:BG:37:VAL:HG23	30:BG:159:VAL:HA	1.99	0.45
30:BG:39:ILE:HD12	30:BG:40:ASN:N	2.31	0.45
30:BG:51:ARG:NH1	30:BG:53:LEU:CD2	2.79	0.45
36:BP:16:ARG:CD	36:BP:18:ARG:HB2	2.47	0.45
36:BP:35:HIS:O	36:BP:36:LYS:CB	2.64	0.45
39:BS:51:ALA:HB2	39:BS:73:LEU:HA	1.98	0.45
40:BT:125:ARG:C	40:BT:127:ALA:N	2.69	0.45
40:BT:56:GLY:O	40:BT:59:THR:HG23	2.16	0.45
40:BT:77:PRO:O	40:BT:78:LEU:CB	2.64	0.45
42:BV:38:LEU:HD22	42:BV:52:VAL:HG11	1.98	0.45
46:BZ:41:LEU:O	46:BZ:44:PHE:N	2.48	0.45
31:BH:19:VAL:HG12	31:BH:20:ALA:N	2.32	0.45
37:BQ:137:TYR:OH	46:BZ:81:ARG:CZ	2.65	0.45
38:BR:101:ALA:O	38:BR:102:GLU:CB	2.64	0.45
57:BA:528:A:C2	57:BA:2043:C:H5'	2.51	0.45
57:AA:214:G:H1'	57:AA:216:A:O2'	2.16	0.45
31:BH:158:HIS:CE1	31:BH:169:VAL:C	2.89	0.45
50:B3:9:VAL:HG11	50:B3:55:ARG:NH2	2.32	0.45
57:AA:654(G):C:H2'	57:AA:654(H):G:H8	1.81	0.45
57:BA:2247:A:O2'	57:BA:2248:C:H5'	2.16	0.45
57:BA:275:G:N3	57:BA:275:G:H5''	2.31	0.45
57:AA:464:U:H2'	57:AA:465:G:O4'	2.16	0.45
57:BA:314:A:O2'	57:BA:315:G:H5'	2.16	0.45
46:AZ:44:PHE:CZ	46:AZ:86:VAL:HG11	2.52	0.45
44:AX:59:VAL:HG12	44:AX:59:VAL:O	2.16	0.45
48:B1:25:LYS:NZ	57:BA:2396:G:OP1	2.43	0.45
57:BA:1763:G:H2'	57:BA:1764:G:H5'	1.99	0.45
57:BA:2033:A:O2'	57:BA:2034:U:P	2.74	0.45
57:AA:1416:G:O2'	57:AA:1417:C:H5	2.00	0.45
31:AH:116:GLU:C	31:AH:116:GLU:CD	2.76	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2558:C:H2'	57:AA:2559:C:O4'	2.16	0.45
56:B9:9:ARG:CZ	56:B9:16:VAL:HG23	2.47	0.45
57:AA:1921:G:H2'	57:AA:1922:G:H8	1.82	0.45
55:A8:22:VAL:CG2	55:A8:53:PRO:HB2	2.47	0.45
57:AA:1175:U:C4'	57:AA:1176:G:H5'	2.40	0.45
57:AA:1305:C:O2'	57:AA:1306:C:H5'	2.16	0.45
57:AA:1504:C:HO2'	57:AA:1505:C:P	2.38	0.45
57:AA:1506:C:O2	57:AA:1506:C:C2'	2.64	0.45
57:AA:545:C:N4	57:AA:547:A:C2	2.85	0.45
41:AU:93:LYS:NZ	57:AA:998:C:OP2	2.50	0.45
58:AB:45:A:N3	58:AB:45:A:H2'	2.32	0.45
27:AD:185:VAL:HG12	27:AD:186:HIS:N	2.31	0.45
27:AD:98:VAL:C	27:AD:100:GLY:H	2.18	0.45
33:AJ:14:LYS:C	33:AJ:65:GLU:CB	2.85	0.45
34:AN:126:PRO:O	34:AN:127:ASP:HB2	2.16	0.45
34:AN:15:LEU:C	34:AN:15:LEU:HD13	2.36	0.45
39:AS:95:HIS:HD2	58:AB:48:A:H4'	1.81	0.45
44:AX:54:VAL:C	44:AX:55:ASN:HD22	2.20	0.45
45:AY:28:LYS:C	45:AY:38:ILE:HG22	2.37	0.45
45:AY:95:LYS:HE2	45:AY:101:LYS:N	2.29	0.45
53:B6:51:GLU:O	53:B6:52:VAL:HB	2.17	0.45
53:B6:37:ARG:HH21	57:BA:2286:A:N6	2.14	0.45
57:BA:777:A:C2	57:BA:778:G:C4	3.05	0.45
57:BA:894:C:O2'	57:BA:895:U:H5'	2.17	0.45
57:BA:999:U:O2'	57:BA:1000:A:H5'	2.16	0.45
26:BC:56:ASP:O	26:BC:57:GLN:HG3	2.16	0.45
30:BG:114:ILE:HG12	30:BG:140:ILE:HG21	1.99	0.45
30:BG:47:LYS:HB3	30:BG:48:GLU:H	1.44	0.45
30:BG:87:PRO:C	30:BG:88:ILE:HD13	2.37	0.45
31:BH:83:TYR:HB3	31:BH:134:SER:CA	2.40	0.45
31:BH:84:SER:O	31:BH:133:VAL:O	2.34	0.45
32:BI:5:LEU:O	32:BI:6:LEU:HG	2.16	0.45
32:BI:62:LYS:HE3	32:BI:133:HIS:C	2.37	0.45
32:BI:68:LEU:CD2	32:BI:72:LEU:HD11	2.47	0.45
36:BP:38:GLN:OE1	36:BP:41:ARG:HD2	2.16	0.45
40:BT:34:VAL:O	40:BT:35:LYS:CB	2.56	0.45
44:BX:12:VAL:HG13	44:BX:27:THR:C	2.37	0.45
45:BY:3:VAL:H	45:BY:5:MET:CE	2.30	0.45
57:BA:2014:A:H2'	57:BA:2015:A:C8	2.51	0.45
31:BH:52:VAL:HG12	31:BH:53:GLU:N	2.30	0.45
31:BH:66:GLY:CA	31:BH:69:ARG:HB3	2.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1949:G:H2'	57:AA:1950:G:C8	2.51	0.45
27:AD:259:THR:CG2	57:AA:1798:U:H5'	2.46	0.45
31:AH:158:HIS:CE1	31:AH:169:VAL:O	2.70	0.45
36:BP:91:PHE:N	36:BP:91:PHE:CD1	2.85	0.45
46:BZ:48:PHE:CE2	46:BZ:71:VAL:HG21	2.52	0.45
46:BZ:92:SER:OG	46:BZ:93:ASP:N	2.49	0.45
49:B2:21:LEU:HD11	49:B2:63:VAL:HG12	1.97	0.45
38:BR:13:HIS:O	38:BR:14:SER:C	2.55	0.45
31:AH:159:GLU:HA	31:AH:159:GLU:OE1	2.15	0.45
57:BA:649:G:H2'	57:BA:650:C:O4'	2.16	0.45
57:AA:2473:U:O4'	57:AA:2473:U:O2	2.34	0.45
57:AA:1722:A:N1	57:AA:1740:G:H8	2.15	0.45
57:AA:1808:U:H2'	57:AA:1809:A:O4'	2.17	0.45
47:B0:16:SER:O	47:B0:17:GLN:O	2.34	0.45
32:AI:54:GLN:HA	32:AI:57:ARG:HD2	1.98	0.45
57:BA:2600:A:C6	57:BA:2601:C:N4	2.85	0.45
41:AU:115:ALA:C	41:AU:117:GLN:N	2.70	0.45
57:BA:78:A:H2'	57:BA:79:G:H8	1.81	0.45
31:AH:73:ALA:O	31:AH:76:VAL:HB	2.17	0.45
57:AA:1187:G:H8	57:AA:1187:G:O5'	2.00	0.45
57:AA:1317:A:H2'	57:AA:1318:C:H6	1.82	0.45
57:AA:270:A:C2'	57:AA:271:A:H5'	2.47	0.45
57:AA:324:A:H2'	57:AA:325:G:O4'	2.17	0.45
57:AA:432:A:N7	57:AA:433:C:C4	3.81	0.45
57:AA:777:A:C2	57:AA:778:G:C4	3.05	0.45
58:AB:87:G:N1	58:AB:91:C:N4	2.65	0.45
26:AC:218:THR:HG22	57:AA:2124:G:H21	1.81	0.45
26:AC:7:ARG:HH22	26:AC:219:MET:CB	2.30	0.45
29:AF:25:PRO:HB3	29:AF:119:ARG:CD	2.46	0.45
29:AF:68:LYS:HE2	57:AA:2444:G:P	2.56	0.45
30:AG:172:LEU:HD23	30:AG:173:LEU:HD23	1.98	0.45
30:AG:77:ILE:O	30:AG:77:ILE:CG2	2.59	0.45
31:AH:66:GLY:CA	31:AH:69:ARG:HB3	2.43	0.45
31:AH:83:TYR:HA	31:AH:135:GLY:N	2.28	0.45
32:AI:77:LEU:HD21	32:AI:79:ILE:CB	2.42	0.45
34:AN:3:THR:O	34:AN:4:TYR:CD1	2.70	0.45
35:AO:107:ARG:O	35:AO:110:GLY:N	2.50	0.45
36:AP:79:ARG:O	36:AP:110:TYR:HB3	2.17	0.45
36:AP:16:ARG:O	36:AP:18:ARG:N	2.49	0.45
36:AP:33:ARG:HG3	36:AP:34:GLY:N	2.32	0.45
36:AP:47:ASP:HB3	36:AP:48:PRO:C	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:AS:23:ARG:CB	39:AS:24:LEU:HD22	2.45	0.45
44:AX:10:ALA:HB1	44:AX:11:PRO:CD	2.47	0.45
51:B4:6:HIS:N	51:B4:6:HIS:CD2	2.84	0.45
57:BA:1305:C:O2'	57:BA:1306:C:H5'	2.17	0.45
57:BA:1517:G:C2'	57:BA:1518:U:H5'	2.47	0.45
30:BG:73:ALA:HA	57:BA:2312:U:OP1	2.17	0.45
57:BA:435:C:H2'	57:BA:436:C:H5'	1.99	0.45
57:BA:543:C:C2	57:BA:544:G:C8	4.42	0.45
57:BA:860:U:O4'	57:BA:860:U:O2	2.35	0.45
57:BA:870:A:H2'	57:BA:871:U:O4'	2.17	0.45
26:BC:213:VAL:HG12	26:BC:225:ILE:CD1	2.47	0.45
27:BD:71:ASP:CG	27:BD:103:ARG:HH22	2.19	0.45
28:BE:7:VAL:HA	28:BE:194:GLY:O	2.16	0.45
32:BI:111:PRO:CG	32:BI:112:LYS:HD2	2.39	0.45
32:BI:88:ILE:CG2	32:BI:89:TYR:N	2.80	0.45
34:BN:3:THR:O	34:BN:4:TYR:CD1	2.70	0.45
35:BO:107:ARG:HH12	40:BT:35:LYS:HD2	1.82	0.45
40:BT:19:LEU:HD22	40:BT:85:LYS:CG	2.46	0.45
41:BU:20:LEU:CD2	41:BU:20:LEU:N	2.79	0.45
41:BU:92:ARG:HE	57:BA:996:A:C4'	2.29	0.45
42:BV:34:GLU:O	42:BV:36:PRO:CD	2.65	0.45
42:BV:5:VAL:HG11	42:BV:57:VAL:HG11	1.98	0.45
43:BW:20:VAL:CG2	43:BW:21:VAL:N	2.78	0.45
44:BX:63:LYS:HD2	57:BA:1312:U:OP2	2.17	0.45
27:AD:243:GLY:O	27:AD:244:ARG:HB3	2.16	0.45
46:BZ:118:GLN:N	46:BZ:173:ALA:O	2.42	0.45
51:B4:51:ASP:OD2	51:B4:51:ASP:C	2.55	0.45
46:BZ:68:PRO:HG2	46:BZ:91:LEU:N	2.32	0.45
57:BA:2277:G:H2'	57:BA:2278:A:H5'	1.98	0.45
41:AU:55:ARG:HG2	41:AU:58:ARG:HD2	1.99	0.45
41:BU:55:ARG:HG2	41:BU:58:ARG:HD2	1.98	0.45
57:AA:2866:U:C5	57:AA:2868:A:H1'	2.51	0.45
57:BA:2866:U:C5	57:BA:2868:A:H1'	2.51	0.45
57:AA:2713:A:H3'	57:AA:2714:G:H5'	1.98	0.45
57:BA:991:C:C6	57:BA:991:C:H5'	2.47	0.45
57:AA:2881:C:C2	57:AA:2882:A:C8	3.05	0.45
57:AA:2061:G:H5''	57:AA:2503:A:C2	2.52	0.45
57:BA:2656:U:H2'	57:BA:2657:A:H5''	1.98	0.45
57:AA:2340:G:O2'	57:AA:2341:G:H5'	2.17	0.45
57:BA:2064:C:H2'	57:BA:2065:C:C6	2.52	0.45
57:AA:945:A:C4	57:AA:2448:A:C2	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:A8:37:SER:O	55:A8:38:GLY:C	2.54	0.45
38:AR:6:SER:HB2	57:AA:2873:A:H1'	1.98	0.45
57:BA:873:G:O5'	57:BA:873:G:H8	1.98	0.45
56:A9:7:VAL:CG1	56:A9:25:VAL:CG2	2.94	0.45
49:A2:6:VAL:HA	49:A2:9:GLN:NE2	2.31	0.45
55:A8:61:LEU:HD12	55:A8:62:LEU:H	1.76	0.45
57:AA:83:G:N2	57:AA:102:G:H2'	2.32	0.45
57:AA:1210:A:H5''	57:AA:1212:G:H5'	1.98	0.45
57:AA:1227:G:O2'	57:AA:1228:G:H5'	2.17	0.45
57:AA:1241:A:O2'	57:AA:1242:A:H5'	2.17	0.45
57:AA:1440:G:H2'	57:AA:1441:G:H8	1.82	0.45
57:AA:225:A:O2'	57:AA:257:A:H4'	2.17	0.45
57:AA:2282:G:O2'	57:AA:2283:C:OP2	2.28	0.45
57:AA:545:C:H2'	57:AA:547:A:C5'	2.47	0.45
57:AA:858:U:O2	57:AA:2268:A:H2'	2.17	0.45
26:AC:21:TYR:HB3	26:AC:25:GLU:HG3	1.99	0.45
27:AD:9:TYR:CD2	57:AA:727:A:H2	2.34	0.45
28:AE:109:LYS:HE2	28:AE:191:PRO:HB3	1.99	0.45
28:AE:69:LYS:HZ2	28:AE:89:ASP:CA	2.30	0.45
30:AG:128:ARG:CZ	57:AA:2302:G:H1'	2.47	0.45
30:AG:62:LEU:C	30:AG:64:THR:N	2.70	0.45
31:AH:41:MET:SD	31:AH:53:GLU:O	2.75	0.45
32:AI:119:PRO:O	32:AI:120:ILE:C	2.56	0.45
36:AP:126:VAL:HG22	36:AP:145:PRO:CB	2.47	0.45
36:AP:50:ARG:CG	36:AP:51:PHE:N	2.80	0.45
44:AX:14:SER:O	44:AX:15:GLU:C	2.55	0.45
44:AX:30:VAL:HG11	44:AX:39:ILE:HD12	1.99	0.45
47:B0:29:GLN:HG2	57:BA:923:C:H4'	1.98	0.45
57:BA:271(R):G:H2'	57:BA:271(S):G:C8	2.51	0.45
57:BA:953:A:C2'	57:BA:954:G:H5'	2.47	0.45
27:BD:134:ARG:HG3	27:BD:135:PHE:CD2	2.52	0.45
27:BD:43:ARG:NH1	27:BD:44:ASN:HD21	2.15	0.45
31:BH:89:ILE:HG22	31:BH:162:ILE:HG22	1.98	0.45
35:BO:13:ASN:C	35:BO:15:GLY:H	2.20	0.45
38:BR:73:VAL:O	38:BR:76:VAL:HG12	2.16	0.45
39:BS:83:LYS:CE	39:BS:105:ALA:HB3	2.46	0.45
40:BT:22:PHE:HD2	40:BT:22:PHE:N	2.07	0.45
40:BT:61:PHE:CE2	40:BT:76:PHE:HB2	2.52	0.45
45:BY:18:GLY:C	45:BY:20:TYR:N	2.68	0.45
46:BZ:10:ARG:NH2	46:BZ:26:GLY:O	2.49	0.45
57:AA:2491:U:H5'	57:AA:2570:G:C5'	2.19	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2795:G:N2	57:AA:2796:U:H2'	2.32	0.45
52:A5:33:CYS:O	52:A5:35:GLU:N	2.43	0.45
46:BZ:136:PHE:HD1	46:BZ:136:PHE:O	1.99	0.45
46:BZ:104:PHE:HB3	46:BZ:141:VAL:HG21	1.98	0.45
46:BZ:108:PRO:CB	46:BZ:144:LEU:HD23	2.34	0.45
53:A6:15:GLU:CD	53:A6:44:ARG:NH2	2.71	0.45
52:B5:34:PRO:O	52:B5:35:GLU:HG2	2.17	0.45
31:BH:158:HIS:CE1	31:BH:169:VAL:O	2.70	0.45
47:A0:12:ASN:ND2	47:A0:12:ASN:N	2.63	0.45
36:BP:114:ILE:HG23	36:BP:130:PHE:CD1	2.52	0.45
57:BA:366:C:H5'	57:BA:370:G:H5'	1.99	0.45
29:AF:160:ASN:HD21	29:AF:162:LEU:HB2	1.82	0.45
46:AZ:71:VAL:HG22	46:AZ:88:PHE:CE2	2.52	0.45
46:BZ:131:ARG:CG	46:BZ:132:ASN:H	2.28	0.45
43:AW:93:ALA:CB	57:AA:1614:A:H62	2.29	0.45
57:BA:2585:U:O4'	57:BA:2585:U:O2	2.35	0.45
36:BP:117:GLU:OE2	57:BA:637:A:H2'	2.16	0.45
57:AA:2475:C:H2'	57:AA:2477:C:OP1	2.17	0.45
56:B9:31:LYS:HD3	57:BA:2478:A:OP1	2.17	0.45
48:A1:82:LEU:N	48:A1:82:LEU:HD22	2.32	0.45
57:AA:1739:U:H2'	57:AA:1739:U:O2	2.15	0.45
57:AA:116:C:O2'	57:AA:126:A:N3	2.46	0.45
57:BA:1642:G:O2'	57:BA:1643:G:H5'	2.17	0.45
57:BA:173:G:N3	57:BA:173:G:H2'	2.31	0.45
44:BX:70:LEU:HD23	44:BX:71:GLY:N	2.32	0.45
57:AA:947:G:H2'	57:AA:948:G:H8	1.81	0.45
34:AN:79:PRO:C	34:AN:81:GLY:N	2.69	0.45
34:BN:90:MET:HB3	34:BN:98:VAL:HG22	1.99	0.45
49:B2:10:LEU:HB3	49:B2:14:ARG:HH11	1.82	0.45
57:BA:232:G:H1'	57:BA:262:A:N1	14.84	0.45
57:AA:646:A:N3	57:AA:646:A:H5'	2.32	0.45
57:AA:1587:A:H2'	57:AA:1588:C:C6	2.52	0.45
53:A6:27:LYS:NZ	57:AA:2285:C:OP1	2.50	0.45
55:A8:62:LEU:N	55:A8:63:PRO:CD	2.79	0.45
57:AA:1047:G:C8	57:AA:1110:G:C6	3.05	0.45
57:AA:2165:G:H2'	57:AA:2166:G:O4'	2.17	0.45
57:AA:2361:A:C2'	57:AA:2362:G:H5'	2.47	0.45
57:AA:481:G:HO2'	57:AA:482:A:P	2.40	0.45
57:AA:680:G:H2'	57:AA:681:G:C8	2.52	0.45
27:AD:71:ASP:CG	27:AD:103:ARG:HH22	2.21	0.45
34:AN:3:THR:C	34:AN:4:TYR:CG	2.86	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AP:16:ARG:O	36:AP:16:ARG:HD3	2.16	0.45
39:AS:12:PHE:CD2	39:AS:12:PHE:N	2.76	0.45
41:AU:10:ARG:O	41:AU:11:ARG:C	2.55	0.45
41:AU:33:ARG:HG3	57:AA:581:C:OP1	2.16	0.45
41:AU:92:ARG:HD2	42:AV:11:GLN:NE2	2.32	0.45
42:AV:39:LEU:CB	42:AV:40:LEU:HD23	2.47	0.45
45:AY:15:VAL:CG1	45:AY:16:ALA:N	2.80	0.45
56:B9:7:VAL:CG1	56:B9:25:VAL:CG2	2.95	0.45
57:BA:1177:A:C5'	57:BA:1178:C:C6	3.00	0.45
57:BA:142:A:C8	57:BA:1408:C:H1'	2.52	0.45
57:BA:858:U:O2	57:BA:2268:A:H2'	2.17	0.45
57:BA:324:A:H2'	57:BA:325:G:O4'	2.17	0.45
57:BA:863:A:H2'	57:BA:864:G:C8	2.52	0.45
51:B4:2:LYS:HG3	58:BB:40:U:O4	2.17	0.45
50:B3:52:HIS:CG	58:BB:83:G:H4'	2.52	0.45
26:BC:21:TYR:HB3	26:BC:25:GLU:HG3	1.98	0.45
28:BE:4:ILE:HG12	28:BE:5:LEU:O	2.16	0.45
30:BG:146:TYR:O	30:BG:148:MET:N	2.50	0.45
30:BG:149:VAL:HG22	30:BG:151:ALA:H	1.82	0.45
30:BG:66:GLN:OE1	30:BG:94:LEU:HD23	2.17	0.45
30:BG:71:THR:HB	30:BG:89:GLY:CA	2.46	0.45
32:BI:29:TYR:HE1	32:BI:33:ARG:HE	1.60	0.45
34:BN:26:LEU:O	34:BN:30:ILE:HG13	2.16	0.45
36:BP:47:ASP:HB3	36:BP:48:PRO:O	2.16	0.45
29:BF:188:ARG:CA	36:BP:7:ARG:HD3	2.46	0.45
37:BQ:21:THR:CG2	37:BQ:101:ARG:HB2	2.47	0.45
39:BS:18:ILE:C	39:BS:20:ARG:H	2.21	0.45
45:BY:28:LYS:HG2	45:BY:39:VAL:HG22	1.98	0.45
45:BY:74:PRO:O	45:BY:80:GLY:HA2	2.17	0.45
46:BZ:10:ARG:HG3	46:BZ:18:LEU:HD21	1.99	0.45
27:BD:240:ALA:HA	57:BA:1971:A:N3	2.32	0.45
46:AZ:125:LEU:HD12	46:AZ:126:VAL:N	2.32	0.45
52:A5:34:PRO:O	52:A5:35:GLU:HG2	2.16	0.45
50:A3:8:LEU:HB2	50:A3:28:LEU:HD13	1.98	0.45
46:AZ:29:TYR:HA	46:AZ:34:ASN:HA	1.98	0.45
57:AA:816:C:O2'	57:AA:817:C:H5'	2.16	0.45
49:B2:2:LYS:HA	49:B2:5:GLU:OE1	2.17	0.45
57:AA:649:G:H2'	57:AA:650:C:O4'	2.16	0.45
57:BA:2179:C:O2	57:BA:2181:G:O6	2.35	0.45
57:BA:1832:C:N4	57:BA:1833:U:C4	2.85	0.45
57:BA:1754:C:H2'	57:BA:1755:A:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:633:A:N3	57:AA:2403:C:H4'	2.32	0.45
57:AA:1754:C:H2'	57:AA:1755:A:O4'	2.17	0.45
57:AA:1957:C:H2'	57:AA:1958:C:C6	2.48	0.45
57:BA:2881:C:C2	57:BA:2882:A:C8	3.05	0.45
56:B9:19:ARG:NH2	57:BA:2755:C:H3'	2.32	0.45
51:B4:26:SER:OG	51:B4:27:THR:N	2.40	0.45
57:BA:2852:G:O2'	57:BA:2853:C:H5'	2.17	0.45
53:A6:46:HIS:HE2	57:AA:2372:G:H1'	1.82	0.45
57:BA:716:A:H3'	57:BA:717:G:H5''	1.99	0.45
57:AA:2082:A:H2'	57:AA:2083:G:O4'	2.17	0.45
57:BA:2517:C:C6	57:BA:2542:A:C2	3.05	0.45
57:AA:1231:G:H2'	57:AA:1232:G:H8	1.82	0.45
31:BH:114:VAL:HG23	31:BH:114:VAL:O	2.17	0.45
55:B8:37:SER:O	55:B8:38:GLY:C	2.54	0.45
57:AA:843:G:O2'	57:AA:844:C:H5'	2.17	0.45
29:AF:153:SER:OG	29:AF:190:GLU:HG3	2.17	0.45
53:A6:11:LEU:HD22	53:A6:11:LEU:C	2.38	0.44
57:AA:2415:G:C5	57:AA:2416:C:C4	3.06	0.44
57:AA:2652:C:H5'	57:AA:2653:U:OP2	2.17	0.44
29:AF:95:ARG:HH12	57:AA:589:C:H5''	1.82	0.44
27:AD:229:VAL:HG21	57:AA:784:A:N7	2.32	0.44
57:AA:892:G:H2'	57:AA:893:C:C6	2.51	0.44
49:A2:47:ASN:ND2	57:AA:94(A):G:N2	2.64	0.44
26:AC:28:ARG:HH11	26:AC:28:ARG:HG3	1.82	0.44
27:AD:118:VAL:CG2	27:AD:119:ALA:N	2.76	0.44
27:AD:158:ALA:O	27:AD:161:THR:HG23	2.16	0.44
29:AF:4:VAL:HG13	29:AF:19:GLU:OE2	2.17	0.44
31:AH:88:LEU:HD21	31:AH:164:TYR:O	2.17	0.44
32:AI:129:THR:HG22	32:AI:130:TYR:N	2.32	0.44
36:AP:57:THR:HB	36:AP:58:THR:H	1.24	0.44
39:AS:66:ALA:O	39:AS:69:VAL:HG12	2.16	0.44
40:AT:55:ASN:ND2	40:AT:58:ASN:HD21	2.15	0.44
41:AU:69:CYS:HB3	41:AU:106:PHE:HZ	1.83	0.44
41:AU:17:ILE:HG23	41:AU:39:LEU:CD1	2.47	0.44
41:AU:92:ARG:NH2	42:AV:10:LYS:HB3	2.32	0.44
43:AW:64:MET:O	43:AW:65:LEU:CB	2.65	0.44
45:AY:96:ILE:HD12	45:AY:100:ALA:O	2.17	0.44
57:BA:1204:A:N1	57:BA:1241:A:C2	2.84	0.44
57:BA:2443:C:H2'	57:BA:2444:G:C8	2.51	0.44
27:BD:148:GLU:HB3	27:BD:151:LYS:HD2	1.99	0.44
27:BD:158:ALA:O	27:BD:161:THR:HG23	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:175:LEU:HD12	27:BD:185:VAL:HG21	1.98	0.44
30:BG:125:PHE:HB3	30:BG:130:ASN:O	2.17	0.44
30:BG:16:ARG:HH11	30:BG:16:ARG:HG3	1.82	0.44
30:BG:43:LEU:HB3	30:BG:45:GLU:CG	2.47	0.44
32:BI:126:TYR:HB2	32:BI:140:LEU:HD22	1.98	0.44
32:BI:124:GLY:H	32:BI:142:VAL:HG11	1.81	0.44
32:BI:81:VAL:CG2	32:BI:82:ARG:N	2.79	0.44
36:BP:146:VAL:HG13	36:BP:147:LEU:H	1.78	0.44
37:BQ:42:ILE:CG2	37:BQ:47:ILE:HG13	2.47	0.44
39:BS:15:ARG:O	39:BS:18:ILE:HG22	2.17	0.44
40:BT:107:ASP:H	40:BT:110:ILE:CG1	2.30	0.44
44:BX:12:VAL:HG23	44:BX:13:LEU:N	2.29	0.44
45:BY:96:ILE:HG21	45:BY:99:CYS:HB3	1.98	0.44
27:BD:239:ARG:O	57:BA:1971:A:C2	2.69	0.44
31:BH:11:VAL:HG12	31:BH:15:VAL:HG23	1.99	0.44
46:BZ:98:MET:O	46:BZ:125:LEU:HD12	2.17	0.44
39:AS:67:ARG:HH12	39:AS:71:ARG:HH22	1.65	0.44
48:A1:19:GLN:O	48:A1:35:THR:HG22	2.16	0.44
57:BA:528:A:H2	57:BA:2043:C:H5'	1.81	0.44
52:B5:46:CYS:SG	52:B5:47:PRO:HG2	2.57	0.44
57:AA:1465:G:C2	57:AA:1466:G:C8	3.05	0.44
57:BA:1541:G:H4'	57:BA:1542:A:H5''	1.99	0.44
57:AA:1516:C:H2'	57:AA:1517:G:H8	1.81	0.44
57:AA:154(A):C:O2	57:AA:154(A):C:H2'	2.16	0.44
57:AA:274:G:H2'	57:AA:275:G:C2	2.52	0.44
57:AA:246:C:H2'	57:AA:247:G:H5'	1.99	0.44
57:BA:2473:U:O4'	57:BA:2473:U:O2	2.34	0.44
57:BA:1739:U:O2	57:BA:1739:U:H2'	2.16	0.44
48:B1:91:LYS:O	48:B1:92:LYS:C	2.54	0.44
57:BA:460:A:H2'	57:BA:461:C:O4'	2.17	0.44
57:BA:1865:G:H5'	57:BA:1866:C:P	2.57	0.44
57:BA:2870:C:C2'	57:BA:2871:C:H5'	2.47	0.44
57:BA:2197:U:O2'	57:BA:2198:A:H2'	2.17	0.44
57:AA:2262:U:H2'	57:AA:2263:C:C6	2.52	0.44
36:BP:13:ASN:ND2	36:BP:13:ASN:C	2.70	0.44
57:AA:774:A:H2	57:AA:787:U:HO2'	1.59	0.44
47:B0:20:ARG:HD3	57:BA:2356:C:O3'	2.18	0.44
57:AA:2252:G:H2'	57:AA:2253:G:O4'	2.18	0.44
57:AA:873:G:O5'	57:AA:873:G:H8	2.00	0.44
52:A5:26:THR:O	52:A5:26:THR:HG23	2.17	0.44
57:BA:1441:G:O2'	57:BA:1442:G:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A1:23:LYS:O	48:A1:24:ALA:O	2.35	0.44
57:AA:271(R):G:H2'	57:AA:271(S):G:C8	2.53	0.44
26:AC:30:VAL:CG1	26:AC:42:VAL:HG22	2.44	0.44
27:AD:65:ILE:HD13	27:AD:65:ILE:C	2.38	0.44
28:AE:117:MET:O	28:AE:118:LYS:HB2	2.17	0.44
29:AF:28:ILE:O	29:AF:30:PRO:HD3	2.17	0.44
30:AG:58:GLN:O	30:AG:62:LEU:HD13	2.18	0.44
30:AG:81:LYS:O	30:AG:82:LEU:O	2.35	0.44
32:AI:71:ILE:HG22	32:AI:72:LEU:N	2.31	0.44
37:AQ:18:LYS:N	37:AQ:18:LYS:HD2	2.31	0.44
43:AW:31:GLU:O	43:AW:35:ILE:HG12	2.18	0.44
44:AX:63:LYS:O	44:AX:64:LYS:HG3	2.17	0.44
45:AY:28:LYS:HG2	45:AY:39:VAL:HG22	1.99	0.44
45:AY:76:CYS:SG	45:AY:77:PRO:CD	2.84	0.44
57:BA:1490:A:H5'	57:BA:1494:A:N6	2.32	0.44
57:BA:2174:C:O2'	57:BA:2175:C:H5'	2.17	0.44
57:BA:225:A:O2'	57:BA:257:A:H4'	2.16	0.44
57:BA:271(O):C:O2'	57:BA:271(P):C:C6	2.68	0.44
57:BA:401:A:H2'	57:BA:402:A:C8	2.52	0.44
57:BA:963:U:H2'	57:BA:964:C:H6	1.81	0.44
26:BC:186:LEU:C	26:BC:188:ASP:H	2.21	0.44
27:BD:132:PRO:O	27:BD:133:LEU:C	2.55	0.44
27:BD:148:GLU:CB	27:BD:151:LYS:HD2	2.47	0.44
32:BI:111:PRO:O	32:BI:116:LEU:HD22	2.18	0.44
32:BI:119:PRO:O	32:BI:121:LYS:HB2	2.17	0.44
32:BI:71:ILE:HG22	32:BI:72:LEU:N	2.32	0.44
32:BI:93:THR:OG1	32:BI:95:LYS:HB2	2.17	0.44
40:BT:19:LEU:HA	40:BT:20:PRO:HD3	1.83	0.44
43:BW:17:VAL:O	43:BW:18:ARG:C	2.54	0.44
44:BX:10:ALA:HB1	44:BX:11:PRO:CD	2.47	0.44
44:BX:55:ASN:HB2	44:BX:80:ILE:CD1	2.47	0.44
44:BX:64:LYS:NZ	44:BX:73:ARG:HE	2.08	0.44
49:B2:9:GLN:O	49:B2:12:GLU:HB2	2.17	0.44
57:BA:579:G:H2'	57:BA:580:C:H6	1.78	0.44
49:A2:50:ILE:O	49:A2:51:ARG:C	2.54	0.44
46:BZ:67:LEU:CD1	46:BZ:68:PRO:HD2	2.47	0.44
36:AP:91:PHE:N	36:AP:91:PHE:CD1	2.86	0.44
38:AR:13:HIS:CE1	38:AR:15:SER:HB3	2.52	0.44
50:B3:1:MET:HE1	50:B3:39:ASP:C	2.37	0.44
56:A9:1:MET:SD	57:AA:2478:A:OP2	2.76	0.44
57:BA:1889:A:N1	57:BA:2234:G:H1'	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:91:LEU:CD2	34:BN:98:VAL:HG21	2.45	0.44
57:AA:2552:U:H2'	57:AA:2554:U:H5''	1.98	0.44
42:AV:66:ARG:HH11	42:AV:66:ARG:HG2	1.82	0.44
57:AA:2341:G:H2'	57:AA:2342:C:C6	2.52	0.44
58:AB:62:C:C2	58:AB:63:G:C8	3.06	0.44
57:AA:1774:C:H4'	57:AA:1979:C:O2	2.17	0.44
57:AA:1937:A:C8	57:AA:1939:U:H2'	2.51	0.44
57:AA:1210:A:H5''	57:AA:1212:G:C4'	2.47	0.44
57:AA:1602:U:H3'	57:AA:1603:A:H5''	1.97	0.44
57:AA:1817:G:C2'	57:AA:1818:U:H5'	2.46	0.44
57:AA:437:G:H2'	57:AA:438:G:C8	2.53	0.44
58:AB:28:C:H2'	58:AB:29:A:C8	2.52	0.44
29:AF:63:LYS:HE3	29:AF:67:GLN:CB	2.47	0.44
31:AH:109:PHE:C	31:AH:111:HIS:N	2.71	0.44
31:AH:149:ARG:HA	31:AH:162:ILE:CD1	2.48	0.44
34:AN:58:ASP:O	34:AN:59:LYS:HB2	2.16	0.44
36:AP:71:VAL:CG1	36:AP:72:PRO:CD	2.95	0.44
39:AS:24:LEU:HB3	39:AS:85:VAL:HB	1.99	0.44
41:AU:83:LEU:HD13	41:AU:113:ALA:HB2	1.99	0.44
41:AU:95:LEU:HD12	42:AV:11:GLN:HB2	1.99	0.44
43:AW:20:VAL:CG2	43:AW:21:VAL:N	2.81	0.44
44:AX:23:GLU:O	44:AX:25:LYS:N	2.41	0.44
57:BA:1665:A:O2'	57:BA:1666:G:H5'	2.17	0.44
57:BA:548:A:H2'	57:BA:548:A:N3	2.31	0.44
57:BA:679:C:H2'	57:BA:680:G:H8	1.82	0.44
26:BC:48:LEU:HA	26:BC:209:PHE:O	2.17	0.44
27:BD:65:ILE:HD13	27:BD:65:ILE:O	2.17	0.44
27:BD:96:HIS:HA	27:BD:102:LYS:HB3	1.99	0.44
28:BE:116:VAL:HG22	28:BE:122:PHE:CG	2.53	0.44
29:BF:83:PHE:O	29:BF:84:VAL:HB	2.16	0.44
30:BG:168:GLU:O	30:BG:169:ALA:C	2.55	0.44
30:BG:27:ASN:HB3	30:BG:29:TRP:HD1	1.82	0.44
31:BH:106:THR:HG22	31:BH:112:PRO:CB	2.47	0.44
32:BI:44:LEU:O	32:BI:47:LEU:HB3	2.17	0.44
32:BI:94:ALA:O	32:BI:98:ALA:HB3	2.17	0.44
33:BJ:94:VAL:O	33:BJ:96:PHE:N	2.51	0.44
34:BN:123:TYR:OH	34:BN:130:HIS:CE1	2.70	0.44
35:BO:90:GLN:O	35:BO:91:LEU:CB	2.62	0.44
36:BP:16:ARG:CA	36:BP:16:ARG:NH1	2.79	0.44
36:BP:71:VAL:CG1	36:BP:72:PRO:CD	2.92	0.44
36:BP:7:ARG:C	36:BP:9:ASN:H	2.19	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BV:5:VAL:HG21	42:BV:35:LEU:CG	2.47	0.44
44:BX:12:VAL:CG1	44:BX:27:THR:OG1	2.65	0.44
45:BY:20:TYR:CZ	45:BY:42:VAL:HA	2.52	0.44
57:BA:1591:G:C6	57:BA:1592:C:C4	3.06	0.44
31:BH:7:LEU:HA	31:BH:8:PRO:HD3	1.72	0.44
46:AZ:92:SER:HB2	46:AZ:94:GLU:HG2	1.99	0.44
46:BZ:108:PRO:HB3	46:BZ:144:LEU:HB2	1.98	0.44
53:A6:43:CYS:O	53:A6:44:ARG:NH1	2.50	0.44
57:AA:2287:A:C2	57:AA:2289:G:C8	3.06	0.44
57:AA:1948:G:C2'	57:AA:1949:G:H5'	2.47	0.44
48:A1:73:LEU:HD22	48:A1:73:LEU:HA	1.73	0.44
46:AZ:24:LEU:HD23	46:AZ:25:PRO:C	2.37	0.44
57:BA:1710:C:O2'	57:BA:1711:C:H5'	2.16	0.44
27:BD:262:ARG:HD3	57:BA:2086:U:OP1	2.17	0.44
57:AA:718:A:C2'	57:AA:719:C:H5'	2.48	0.44
57:BA:1582:C:O2'	57:BA:1586:A:C8	2.67	0.44
57:AA:654(A):G:O2'	57:AA:654(B):C:H5'	2.18	0.44
57:BA:2262:U:H2'	57:BA:2263:C:C6	2.51	0.44
57:BA:2526:G:H5'	57:BA:2742:C:O2'	2.18	0.44
57:AA:1917:U:C2'	57:AA:1918:A:H5'	2.46	0.44
57:AA:2097:C:O2'	57:AA:2098:U:H5'	2.17	0.44
57:AA:2332:U:O2'	57:AA:2333:A:H5'	2.17	0.44
57:BA:1570:A:H2'	57:BA:1571:A:C8	2.52	0.44
49:A2:21:LEU:HD23	49:A2:21:LEU:HA	1.87	0.44
37:BQ:125:LEU:HD23	37:BQ:125:LEU:HA	1.81	0.44
48:A1:66:HIS:HB3	48:A1:69:LYS:HB3	1.99	0.44
53:A6:51:GLU:O	53:A6:52:VAL:HB	2.16	0.44
57:AA:1028:A:N6	57:AA:1125:G:H2'	2.32	0.44
57:AA:1308:A:H2'	57:AA:1309:G:O4'	2.17	0.44
57:AA:2123:G:O2'	57:AA:2124:G:H5'	2.17	0.44
57:AA:224:G:H2'	57:AA:225:A:O4'	2.18	0.44
57:AA:781:A:C2'	57:AA:782:A:H5'	6.19	0.44
57:AA:7:G:N2	57:AA:2897:U:H3	2.15	0.44
57:AA:846:C:N3	57:AA:930:U:C4	2.86	0.44
47:A0:29:GLN:HG2	57:AA:923:C:H4'	2.00	0.44
50:A3:52:HIS:CG	58:AB:83:G:H4'	2.52	0.44
27:AD:206:LEU:HD23	27:AD:211:ARG:NH1	2.32	0.44
28:AE:23:VAL:HA	28:AE:184:VAL:O	2.18	0.44
28:AE:93:VAL:C	28:AE:95:ILE:N	2.69	0.44
32:AI:83:ALA:CB	32:AI:88:ILE:HA	2.48	0.44
39:AS:54:LEU:HD11	39:AS:57:LYS:HE3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:AT:38:ASN:C	40:AT:40:THR:H	2.20	0.44
35:AO:77:ILE:HD11	40:AT:72:VAL:CG1	2.48	0.44
42:AV:19:LYS:NZ	42:AV:20:LEU:HB2	2.31	0.44
57:BA:1215:G:O2'	57:BA:1216:G:H5'	2.18	0.44
57:BA:1344:G:H4'	57:BA:1384:A:N7	2.32	0.44
57:BA:1407:C:O2	57:BA:1407:C:H2'	2.17	0.44
57:BA:1665:A:C2'	57:BA:1666:G:H5'	2.47	0.44
57:BA:2165:G:H2'	57:BA:2166:G:O4'	2.18	0.44
57:BA:224:G:H2'	57:BA:225:A:O4'	2.17	0.44
57:BA:7:G:N2	57:BA:2897:U:H3	2.16	0.44
27:BD:70:TRP:HB3	27:BD:190:TYR:CE1	2.53	0.44
27:BD:35:LYS:HG2	27:BD:63:ARG:HA	1.99	0.44
27:BD:65:ILE:HG12	27:BD:66:ASP:N	2.32	0.44
34:BN:18:ALA:CB	34:BN:21:LYS:CB	2.96	0.44
34:BN:41:ASP:O	34:BN:42:TRP:C	2.55	0.44
38:BR:34:ILE:HG22	38:BR:35:THR:N	2.31	0.44
42:BV:9:GLY:O	42:BV:10:LYS:HG3	2.18	0.44
31:BH:41:MET:HE1	31:BH:53:GLU:H	1.82	0.44
37:BQ:134:ARG:HA	37:BQ:137:TYR:HD1	1.80	0.44
57:BA:1947:C:C2'	57:BA:1948:G:C5'	2.94	0.44
52:B5:35:GLU:O	52:B5:36:CYS:CB	2.64	0.44
52:B5:49:CYS:O	52:B5:50:GLY:C	2.55	0.44
46:AZ:29:TYR:O	46:AZ:30:ASN:HB3	2.17	0.44
46:AZ:9:TYR:CD2	46:AZ:35:ARG:NH2	2.85	0.44
46:BZ:68:PRO:HG3	46:BZ:91:LEU:O	2.18	0.44
35:AO:49:ARG:N	35:AO:49:ARG:HD3	2.32	0.44
46:AZ:42:VAL:HG13	46:AZ:43:GLU:N	2.27	0.44
57:BA:2761:G:C2'	57:BA:2762:G:H5''	2.48	0.44
57:AA:2761:G:C2'	57:AA:2762:G:H5''	2.47	0.44
57:BA:2696:U:H2'	57:BA:2697:G:H8	1.83	0.44
57:AA:1429:G:H2'	57:AA:1430:C:H6	1.82	0.44
44:AX:29:TRP:CZ2	44:AX:76:ARG:NH2	2.85	0.44
51:A4:5:ILE:N	51:A4:5:ILE:CD1	2.80	0.44
57:AA:2464:C:O2'	57:AA:2465:C:O5'	2.36	0.44
51:A4:39:CYS:O	51:A4:40:HIS:CG	2.71	0.44
57:BA:2024:G:O2'	57:BA:2025:C:H5'	2.17	0.44
37:AQ:82:ARG:HD2	47:A0:4:LYS:HE3	1.99	0.44
48:A1:67:ILE:HB	48:A1:68:PRO:CD	2.48	0.44
51:A4:19:GLY:O	51:A4:20:ASN:C	2.56	0.44
57:BA:2718:G:H2'	57:BA:2719:G:O4'	2.18	0.44
57:AA:1804:C:H6	57:AA:1804:C:O5'	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:201:C:C2'	57:AA:202:U:H5'	2.48	0.44
51:A4:12:ALA:HB1	51:A4:29:PRO:CA	2.33	0.44
57:AA:1039:G:C6	57:AA:1040:C:N4	2.86	0.44
57:AA:1131:G:O2'	57:AA:1132:A:H8	2.01	0.44
57:AA:1310:G:H2'	57:AA:1311:G:H5'	1.99	0.44
57:AA:1357:U:O2'	57:AA:1358:G:H5'	2.18	0.44
57:AA:1406:U:O2'	57:AA:1407:C:H5'	6.08	0.44
57:AA:729:G:H2'	57:AA:1775:U:O2	2.17	0.44
57:AA:2821:A:H2'	57:AA:2822:G:C8	2.52	0.44
57:AA:297:C:H2'	57:AA:298:G:O4'	2.18	0.44
57:AA:435:C:H2'	57:AA:436:C:H5'	1.98	0.44
58:AB:30:C:H4'	58:AB:58:A:H2	1.83	0.44
39:AS:29:PHE:CE1	58:AB:7:G:C4'	3.01	0.44
28:AE:119:ARG:HD3	28:AE:119:ARG:O	2.18	0.44
28:AE:93:VAL:O	28:AE:95:ILE:N	2.51	0.44
31:AH:136:ILE:O	31:AH:136:ILE:HG22	2.18	0.44
31:AH:41:MET:CE	31:AH:53:GLU:H	2.30	0.44
32:AI:127:VAL:CG1	32:AI:139:GLN:HA	2.31	0.44
34:AN:118:LYS:O	34:AN:121:LYS:HE3	2.17	0.44
35:AO:107:ARG:NH1	40:AT:35:LYS:HB2	2.32	0.44
36:AP:105:LEU:O	36:AP:106:LEU:CB	2.65	0.44
36:AP:110:TYR:CE2	36:AP:111:ARG:NH2	2.86	0.44
36:AP:17:LYS:CG	36:AP:19:VAL:CG2	2.95	0.44
40:AT:64:ARG:NH1	40:AT:103:ARG:HA	2.32	0.44
45:AY:52:SER:O	45:AY:54:LYS:N	2.49	0.44
57:BA:1048:A:N6	57:BA:1106:A:H62	2.15	0.44
53:B6:27:LYS:HG3	57:BA:2285:C:OP2	2.17	0.44
30:BG:71:THR:HG22	57:BA:2312:U:H4'	1.95	0.44
36:BP:60:MET:O	57:BA:2393:A:O4'	2.35	0.44
57:BA:302:C:O2'	57:BA:303:U:H5'	2.18	0.44
57:BA:781:A:C3'	57:BA:782:A:H5'	5.52	0.44
58:BB:28:C:H2'	58:BB:29:A:O4'	2.18	0.44
26:BC:3:LYS:O	26:BC:4:HIS:HD2	2.00	0.44
27:BD:118:VAL:CG2	27:BD:119:ALA:N	2.81	0.44
28:BE:23:VAL:HA	28:BE:184:VAL:O	2.18	0.44
28:BE:34:VAL:HG11	28:BE:78:LEU:HD22	1.99	0.44
29:BF:4:VAL:HA	29:BF:19:GLU:CB	2.47	0.44
33:BJ:57:THR:O	33:BJ:58:LEU:O	2.35	0.44
34:BN:67:LEU:O	34:BN:68:GLU:HB2	2.17	0.44
35:BO:32:TYR:N	35:BO:32:TYR:CD1	2.85	0.44
40:BT:34:VAL:HG22	40:BT:39:ARG:HA	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:240:ALA:HB1	27:BD:241:PRO:CD	2.48	0.44
57:BA:2795:G:N2	57:BA:2796:U:H2'	2.33	0.44
57:AA:2801:A:O2'	57:AA:2895:U:H5'	2.17	0.44
46:BZ:103:ARG:HD2	46:BZ:136:PHE:CB	2.39	0.44
46:BZ:121:HIS:HB3	46:BZ:171:ILE:HD12	1.98	0.44
46:BZ:151:HIS:HB2	46:BZ:152:ALA:H	1.35	0.44
46:AZ:34:ASN:C	46:AZ:34:ASN:ND2	2.71	0.44
57:AA:1542:A:C8	57:AA:1544:A:H5''	2.53	0.44
57:BA:2892:A:N7	57:BA:2893:G:H1'	2.31	0.44
27:AD:204:ILE:HG22	27:AD:204:ILE:O	4.94	0.44
57:BA:271(C):C:H2'	57:BA:271(D):G:H8	1.81	0.44
57:BA:914:C:H2'	57:BA:915:C:C5'	2.42	0.44
57:AA:271(X):G:C3'	57:AA:271(Y):U:H5''	2.47	0.44
35:BO:5:GLN:NE2	35:BO:20:MET:CE	2.81	0.44
57:AA:2769:C:H2'	57:AA:2770:G:O4'	2.17	0.44
57:AA:2628:C:H1'	57:AA:2781:A:H2'	1.99	0.44
57:AA:173:G:N3	57:AA:173:G:H2'	2.32	0.44
57:AA:1400:G:H2'	57:AA:1401:G:C8	2.53	0.44
56:A9:30:PRO:O	56:A9:31:LYS:C	2.55	0.44
57:BA:2517:C:C4	57:BA:2542:A:C6	3.05	0.44
54:B7:40:TRP:CZ3	57:BA:459:U:H4'	2.52	0.44
51:A4:2:LYS:HD3	58:AB:44:G:OP1	2.18	0.44
36:AP:35:HIS:N	57:AA:1190:G:H5'	2.27	0.44
44:AX:37:THR:CG2	57:AA:143:G:H1'	2.46	0.44
55:A8:30:ARG:NH2	57:AA:2419:U:O4	2.51	0.44
57:AA:488:G:H1'	57:AA:492:A:H62	1.83	0.44
26:AC:6:LYS:C	26:AC:8:TYR:H	2.20	0.44
29:AF:101:LEU:HD12	29:AF:102:PRO:CD	2.47	0.44
29:AF:169:ASN:HB2	57:AA:322:A:P	2.57	0.44
30:AG:109:VAL:HG13	30:AG:113:ARG:CD	2.46	0.44
30:AG:71:THR:N	30:AG:89:GLY:O	2.45	0.44
33:AJ:58:LEU:HA	33:AJ:82:PHE:CB	2.48	0.44
34:AN:132:ALA:O	34:AN:133:GLN:CB	2.65	0.44
36:AP:48:PRO:O	36:AP:50:ARG:N	2.51	0.44
37:AQ:2:LEU:CD2	37:AQ:47:ILE:HG21	2.48	0.44
38:AR:29:LEU:HB3	38:AR:75:LEU:HD11	1.99	0.44
40:AT:65:LYS:HZ2	40:AT:65:LYS:CA	2.25	0.44
40:AT:89:VAL:HG21	40:AT:91:ARG:CZ	2.48	0.44
43:AW:29:LEU:HD11	43:AW:33:ARG:HE	1.83	0.44
45:AY:4:LYS:CG	45:AY:5:MET:N	2.81	0.44
57:BA:1310:G:C2'	57:BA:1311:G:H5'	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2164:C:H2'	57:BA:2165:G:H5'	2.00	0.44
57:BA:674:G:H2'	57:BA:675:A:C8	5.17	0.44
57:BA:781:A:C2'	57:BA:782:A:H5'	6.17	0.44
26:BC:6:LYS:C	26:BC:8:TYR:H	2.20	0.44
31:BH:89:ILE:CG1	31:BH:129:THR:HA	2.46	0.44
32:BI:102:SER:HA	32:BI:107:VAL:O	2.17	0.44
34:BN:57:ALA:HB2	34:BN:123:TYR:O	2.17	0.44
34:BN:35:ARG:C	34:BN:37:LYS:N	2.70	0.44
36:BP:48:PRO:O	36:BP:50:ARG:N	2.50	0.44
39:BS:35:ILE:O	39:BS:35:ILE:HG12	2.17	0.44
40:BT:29:ARG:HG2	40:BT:86:ILE:CG2	2.48	0.44
46:BZ:57:ILE:HB	46:BZ:69:THR:OG1	2.18	0.44
52:A5:40:LYS:HD3	52:A5:46:CYS:HB3	1.99	0.44
57:BA:2041:U:H2'	57:BA:2042:A:H8	1.81	0.44
46:AZ:34:ASN:HD22	46:AZ:35:ARG:N	2.15	0.44
57:BA:2011:U:H2'	57:BA:2012:G:H5'	1.99	0.44
48:B1:3:LYS:O	48:B1:12:PRO:HD3	2.17	0.44
38:BR:117:VAL:CG1	38:BR:118:GLU:N	2.80	0.44
53:B6:19:ARG:O	53:B6:20:ASN:O	2.35	0.44
38:AR:13:HIS:CE1	38:AR:16:HIS:H	2.35	0.44
57:BA:1722:A:N1	57:BA:1740:G:H8	2.15	0.44
44:BX:52:VAL:HB	44:BX:82:GLN:HG3	1.99	0.44
57:AA:1889:A:H1'	57:AA:2087:G:O4'	2.16	0.44
57:BA:2262:U:H2'	57:BA:2263:C:H6	1.82	0.44
57:AA:2262:U:H2'	57:AA:2263:C:H6	1.82	0.44
57:BA:2553:G:H2'	57:BA:2554:U:O4'	2.17	0.44
36:AP:13:ASN:C	36:AP:13:ASN:ND2	2.69	0.44
53:B6:46:HIS:HE2	57:BA:2372:G:H1'	1.82	0.44
57:BA:475:U:C6	57:BA:509:C:N4	2.86	0.44
57:BA:1441:G:H5''	57:BA:1442:G:H5'	5.48	0.44
57:AA:1432:C:H2'	57:AA:1433:U:O4'	2.17	0.44
56:B9:11:CYS:SG	56:B9:12:ASP:N	2.91	0.44
34:AN:66:LYS:HZ1	57:AA:1140:C:H5''	1.76	0.44
27:AD:47:GLY:CA	57:AA:773:U:H4'	2.47	0.44
57:AA:894:C:O2'	57:AA:895:U:H5'	2.17	0.44
49:A2:2:LYS:N	57:AA:98:G:OP1	2.51	0.44
26:AC:34:ALA:HB1	26:AC:40:GLU:CG	2.46	0.44
27:AD:121:PRO:HA	27:AD:135:PHE:HD1	1.82	0.44
27:AD:80:ALA:HB2	27:AD:96:HIS:CD2	2.53	0.44
29:AF:89:VAL:C	29:AF:91:GLY:H	2.20	0.44
29:AF:9:ILE:HG22	29:AF:11:VAL:C	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:AH:9:ILE:C	31:AH:9:ILE:CD1	2.86	0.44
32:AI:127:VAL:O	32:AI:128:LEU:HD13	2.17	0.44
32:AI:76:THR:HB	32:AI:139:GLN:HE22	1.83	0.44
34:AN:18:ALA:CB	34:AN:21:LYS:CB	2.95	0.44
34:AN:25:ARG:HA	57:AA:1012:U:O4	2.17	0.44
35:AO:104:ARG:NH1	35:AO:104:ARG:HB3	2.33	0.44
35:AO:88:ASN:ND2	35:AO:90:GLN:HB2	2.24	0.44
35:AO:9:GLU:O	35:AO:83:ALA:HA	2.16	0.44
36:AP:83:VAL:CG2	36:AP:105:LEU:HD13	2.47	0.44
36:AP:101:VAL:CA	36:AP:107:LYS:H	2.28	0.44
38:AR:24:GLN:NE2	38:AR:36:THR:HG21	2.32	0.44
39:AS:33:LYS:HD3	58:AB:28:C:OP2	2.17	0.44
41:AU:91:ASP:O	41:AU:92:ARG:O	2.36	0.44
42:AV:17:GLY:O	42:AV:18:LEU:HB3	2.17	0.44
55:B8:61:LEU:CD1	55:B8:61:LEU:H	2.25	0.44
57:BA:2123:G:O2'	57:BA:2124:G:H5'	2.17	0.44
57:BA:440:G:H2'	57:BA:441:U:C6	2.53	0.44
57:BA:545:C:H2'	57:BA:547:A:C5'	2.48	0.44
57:BA:880:G:H1	57:BA:897:C:N4	2.05	0.44
29:BF:3:GLU:HB2	29:BF:24:LEU:HG	2.00	0.44
30:BG:142:PRO:C	30:BG:144:ILE:H	2.21	0.44
31:BH:109:PHE:C	31:BH:111:HIS:N	2.71	0.44
32:BI:101:LEU:O	32:BI:107:VAL:HB	2.17	0.44
32:BI:68:LEU:HG	32:BI:72:LEU:CG	2.47	0.44
34:BN:43:THR:HB	34:BN:46:VAL:CG1	2.47	0.44
29:BF:187:VAL:HG12	36:BP:7:ARG:HD2	1.99	0.44
38:BR:67:LEU:O	38:BR:70:LEU:O	2.35	0.44
38:BR:63:ARG:HA	38:BR:80:PHE:CE2	2.52	0.44
38:BR:85:PRO:O	38:BR:88:ARG:HB2	2.17	0.44
39:BS:90:GLY:C	39:BS:92:TYR:N	2.69	0.44
45:BY:27:VAL:CA	45:BY:28:LYS:HE3	2.48	0.44
45:BY:8:LYS:N	45:BY:8:LYS:CD	2.71	0.44
42:AV:72:VAL:O	42:AV:72:VAL:HG23	2.18	0.44
57:BA:1592:C:H2'	57:BA:1593:G:H8	1.82	0.44
52:B5:2:ALA:HB3	57:BA:747:U:N1	2.31	0.44
42:BV:19:LYS:NZ	42:BV:20:LEU:HB2	2.32	0.44
46:AZ:120:ILE:HD11	57:AA:874:G:H4'	2.00	0.44
46:AZ:168:GLU:OE2	46:AZ:168:GLU:HA	2.16	0.44
57:AA:2801(A):A:H4'	57:AA:2802:G:C2'	2.48	0.44
37:BQ:134:ARG:HA	37:BQ:137:TYR:CE1	2.53	0.44
38:BR:100:LEU:C	52:B5:44:THR:HG22	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1541:G:H4'	57:AA:1542:A:H5''	1.98	0.44
57:AA:2892:A:N7	57:AA:2893:G:H1'	2.32	0.44
47:A0:10:THR:HG22	47:A0:12:ASN:H	1.82	0.44
36:AP:88:LEU:HD22	36:AP:114:ILE:HD13	2.00	0.44
41:BU:59:ARG:NH1	57:BA:1009:A:O4'	2.51	0.44
36:BP:88:LEU:CD2	36:BP:114:ILE:HD13	2.47	0.44
57:BA:2465:C:O2'	57:BA:2466:C:H5'	2.18	0.44
57:AA:1435:G:H8	57:AA:1435:G:O5'	2.79	0.44
57:AA:1532:C:O2'	57:AA:1533:G:H5'	2.18	0.44
57:BA:2628:C:H1'	57:BA:2781:A:H2'	1.99	0.44
57:AA:1763:G:H2'	57:AA:1764:G:C5'	2.48	0.44
34:BN:79:PRO:C	34:BN:81:GLY:N	2.70	0.44
57:BA:718:A:H2'	57:BA:719:C:H5'	1.99	0.44
57:AA:1750:G:H2'	57:AA:1751:C:H6	1.83	0.44
57:BA:2340:G:O2'	57:BA:2341:G:H5'	2.18	0.44
57:BA:646:A:H2'	57:BA:647:G:O4'	2.18	0.44
49:B2:35:LEU:O	49:B2:39:ALA:N	2.42	0.44
57:BA:945:A:C4	57:BA:2448:A:C2	3.05	0.44
47:B0:82:ARG:O	47:B0:82:ARG:HG2	2.18	0.44
47:A0:36:ILE:HD13	47:A0:58:THR:HG23	1.99	0.44
51:A4:6:HIS:CD2	51:A4:6:HIS:N	2.85	0.44
55:A8:60:LEU:C	55:A8:63:PRO:HD2	2.38	0.44
57:AA:99:U:C4'	57:AA:102:G:H1'	2.48	0.44
57:AA:1490:A:H5'	57:AA:1494:A:N6	2.33	0.44
57:AA:530:G:C5	57:AA:2022:U:H5''	2.53	0.44
57:AA:229:A:H5''	57:AA:230:U:H5'	1.98	0.44
57:AA:230:U:O2	57:AA:230:U:H2'	2.17	0.44
57:AA:2732:G:C2'	57:AA:2733:A:H5'	2.48	0.44
57:AA:333:G:C4	57:AA:334:C:C5	3.06	0.44
57:AA:662:G:O2'	57:AA:836:G:H5''	28.24	0.44
27:AD:122:ASP:OD1	27:AD:123:ALA:N	2.44	0.44
28:AE:34:VAL:HG11	28:AE:78:LEU:HD23	1.98	0.44
28:AE:63:LEU:O	28:AE:64:LYS:C	2.55	0.44
28:AE:69:LYS:HZ2	28:AE:90:THR:N	2.16	0.44
31:AH:136:ILE:H	31:AH:136:ILE:CD1	2.31	0.44
33:AJ:55:LYS:O	33:AJ:56:ASN:O	2.36	0.44
34:AN:16:ILE:HG23	34:AN:54:VAL:HG22	2.00	0.44
34:AN:57:ALA:HB2	34:AN:123:TYR:O	2.18	0.44
34:AN:65:LYS:O	34:AN:69:GLN:HB2	2.18	0.44
38:AR:56:LYS:C	38:AR:58:GLY:H	2.20	0.44
35:AO:104:ARG:HE	40:AT:33:LYS:HD2	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BI:27:ARG:CG	48:B1:71:TYR:CE1	3.00	0.44
55:B8:32:LEU:HB3	55:B8:36:LYS:HZ2	1.83	0.44
55:B8:4:MET:HE1	57:BA:593:G:C1'	2.45	0.44
57:BA:1422:G:H2'	57:BA:1423:G:C8	2.80	0.44
57:BA:185:U:H4'	57:BA:218:A:H4'	2.00	0.44
58:BB:13:A:H2'	58:BB:70:C:O2'	2.18	0.44
58:BB:82:G:H2'	58:BB:83:G:H8	1.83	0.44
26:BC:26:ALA:C	26:BC:28:ARG:H	2.21	0.44
28:BE:137:HIS:HB3	28:BE:138:PRO:HD2	1.99	0.44
29:BF:183:VAL:HG23	29:BF:184:TYR:N	2.33	0.44
29:BF:68:LYS:HE2	57:BA:2444:G:P	2.56	0.44
30:BG:145:THR:OG1	30:BG:147:ASP:OD1	2.30	0.44
30:BG:69:ALA:O	30:BG:70:VAL:C	2.54	0.44
35:BO:88:ASN:ND2	35:BO:90:GLN:HB2	2.30	0.44
37:BQ:47:ILE:CD1	37:BQ:70:PRO:HD3	2.47	0.44
39:BS:28:VAL:HG21	39:BS:87:PHE:HE1	1.82	0.44
40:BT:3:ARG:O	40:BT:4:GLY:C	2.56	0.44
41:BU:83:LEU:HD13	41:BU:113:ALA:HB2	1.98	0.44
41:BU:79:PHE:CD2	41:BU:83:LEU:HD21	2.53	0.44
45:BY:20:TYR:CE2	45:BY:42:VAL:N	2.79	0.44
46:BZ:38:TYR:O	46:BZ:38:TYR:CD1	2.71	0.44
37:AQ:135:ASP:C	37:AQ:137:TYR:H	2.22	0.44
52:B5:40:LYS:NZ	52:B5:46:CYS:O	2.50	0.44
49:A2:50:ILE:O	49:A2:52:ASP:N	2.51	0.44
34:BN:16:ILE:HG23	34:BN:54:VAL:HG22	2.00	0.44
57:BA:676:A:H2	57:BA:802:A:N6	2.10	0.44
37:AQ:9:TYR:OH	57:AA:911:A:H2'	2.18	0.44
36:BP:88:LEU:HD22	36:BP:114:ILE:HD13	2.00	0.44
30:BG:74:LYS:O	30:BG:75:LYS:O	2.35	0.44
57:AA:1517:G:O2'	57:AA:1518:U:H5'	2.17	0.44
53:A6:19:ARG:O	53:A6:20:ASN:O	2.36	0.44
57:BA:1721:G:H2'	57:BA:1741:A:N6	2.33	0.44
57:BA:2192:G:C2'	57:BA:2193:G:H5''	2.48	0.44
47:B0:73:GLY:C	47:B0:75:LEU:N	2.69	0.44
57:BA:1681:G:O2'	57:BA:1762:A:C2'	2.66	0.44
56:B9:19:ARG:NH2	57:BA:2756:U:OP2	2.49	0.44
58:BB:23:G:H1	58:BB:60:C:H42	1.66	0.44
57:AA:2705:A:H2'	57:AA:2706:G:O4'	2.18	0.44
54:B7:19:ARG:NH1	54:B7:19:ARG:HG2	2.32	0.44
57:BA:76:C:H42	57:BA:93:G:H1	26.48	0.44
37:BQ:82:ARG:HD2	47:B0:4:LYS:HE3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2197:U:H1'	57:AA:2198:A:C8	2.52	0.44
57:AA:2196:C:O2'	57:AA:2197:U:H5'	2.18	0.44
57:AA:2773:C:O2'	57:AA:2774:C:H5'	2.17	0.44
34:BN:65:LYS:O	34:BN:69:GLN:HB2	2.18	0.44
46:BZ:77:ASP:O	46:BZ:78:LYS:C	2.56	0.44
41:AU:62:ILE:HG12	41:AU:76:TYR:CZ	2.52	0.44
57:AA:2574:G:O2'	57:AA:2575:C:H5'	2.18	0.44
57:AA:85:G:N3	57:AA:103:A:C2	2.86	0.44
57:AA:19:C:O2'	57:AA:20:C:H5'	2.18	0.44
57:AA:373:U:H2'	57:AA:374:A:H8	1.82	0.44
57:AA:673:C:H2'	57:AA:674:G:H5'	2.00	0.44
58:AB:55:U:H2'	58:AB:56:G:C8	2.52	0.44
26:AC:186:LEU:C	26:AC:188:ASP:H	2.22	0.44
27:AD:25:THR:HG22	27:AD:26:LYS:N	2.33	0.44
27:AD:76:PRO:HG2	27:AD:98:VAL:HG21	1.97	0.44
28:AE:59:VAL:CG1	28:AE:60:ASN:N	2.80	0.44
30:AG:45:GLU:C	30:AG:88:ILE:HG13	2.39	0.44
37:AQ:19:GLY:CA	58:AB:92:C:OP1	2.65	0.44
39:AS:18:ILE:C	39:AS:20:ARG:H	2.21	0.44
40:AT:107:ASP:H	40:AT:110:ILE:CG1	2.31	0.44
43:AW:1:MET:HE3	43:AW:2:GLU:H	1.82	0.44
45:AY:18:GLY:C	45:AY:20:TYR:H	2.18	0.44
45:AY:40:GLU:HA	45:AY:64:GLU:OE2	2.18	0.44
45:AY:84:ARG:HD2	45:AY:97:ARG:HE	1.80	0.44
55:B8:60:LEU:C	55:B8:63:PRO:HD2	2.38	0.44
56:B9:7:VAL:CG1	56:B9:25:VAL:HG21	2.47	0.44
57:BA:1273:U:H4'	57:BA:1275:A:OP1	2.18	0.44
57:BA:1368:G:C2	57:BA:1369:G:C8	3.06	0.44
57:BA:2732:G:O2'	57:BA:2733:A:H5'	2.17	0.44
57:BA:706:A:H2'	57:BA:707:G:O4'	2.17	0.44
57:BA:952:G:C6	57:BA:953:A:N7	2.85	0.44
58:BB:94:C:O2'	58:BB:95:C:H5'	2.17	0.44
26:BC:31:LYS:HZ1	26:BC:183:PRO:CD	2.31	0.44
27:BD:72:LYS:HE3	27:BD:101:GLU:OE2	2.18	0.44
27:BD:12:SER:HB2	27:BD:208:LYS:HB3	2.00	0.44
27:BD:227:ASN:HB3	27:BD:228:PRO:CD	2.47	0.44
30:BG:125:PHE:HD1	30:BG:126:ASP:N	2.12	0.44
30:BG:66:GLN:OE1	51:B4:1:MET:HE2	2.18	0.44
32:BI:110:ASP:HB2	32:BI:113:ARG:HB2	1.97	0.44
32:BI:119:PRO:O	32:BI:121:LYS:N	2.51	0.44
37:BQ:54:MET:O	37:BQ:57:HIS:HB3	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BS:28:VAL:HG21	39:BS:87:PHE:CE1	2.53	0.44
40:BT:89:VAL:HB	40:BT:91:ARG:CD	2.47	0.44
41:BU:20:LEU:N	41:BU:20:LEU:HD22	2.32	0.44
42:BV:41:GLY:HA3	42:BV:45:THR:OG1	2.18	0.44
45:BY:28:LYS:O	45:BY:30:VAL:N	2.51	0.44
46:AZ:152:ALA:HB2	46:AZ:168:GLU:CA	2.47	0.44
57:AA:1448:G:H2'	57:AA:1449:A:C8	2.53	0.44
57:AA:2277:G:H2'	57:AA:2278:A:H5'	2.00	0.44
41:BU:57:PHE:C	41:BU:59:ARG:H	2.20	0.44
57:BA:2245:U:H5'	57:BA:2246:G:C5'	2.42	0.44
57:BA:2464:C:O2'	57:BA:2465:C:O5'	2.35	0.44
44:BX:29:TRP:CZ2	44:BX:76:ARG:NH2	2.86	0.44
57:AA:2737:G:H2'	57:AA:2738:A:H8	1.81	0.44
57:AA:2192:G:C2'	57:AA:2193:G:H5''	2.48	0.44
38:AR:96:ARG:HG3	57:AA:2882:A:H5'	1.99	0.44
47:A0:84:LEU:N	47:A0:84:LEU:HD12	2.33	0.44
44:AX:52:VAL:HB	44:AX:82:GLN:HG3	2.00	0.44
57:AA:478:A:C6	57:AA:480:A:C6	3.06	0.44
57:AA:55:G:O2'	57:AA:127:A:N1	2.43	0.44
29:BF:135:LYS:HB3	29:BF:138:GLU:HG3	1.98	0.44
57:AA:1683:C:H2'	57:AA:1684:C:C6	2.52	0.44
57:AA:1690:A:H2'	57:AA:1691:C:O4'	2.18	0.44
57:AA:699:A:H4'	57:AA:1634:A:N7	2.33	0.44
31:AH:71:LEU:HA	31:AH:71:LEU:HD23	1.86	0.44
58:BB:45:A:N3	58:BB:45:A:H2'	2.33	0.44
57:AA:1892:C:O2'	57:AA:1893:C:H5'	2.17	0.44
51:A4:11:PRO:O	51:A4:29:PRO:HG3	2.18	0.43
57:AA:1385:G:H4'	57:AA:1386:C:OP1	2.18	0.43
53:A6:27:LYS:HG3	57:AA:2285:C:OP2	2.18	0.43
45:AY:50:ARG:HG3	57:AA:484:C:OP1	2.18	0.43
57:AA:629:G:H2'	57:AA:630:G:O4'	2.67	0.43
57:AA:953:A:C2'	57:AA:954:G:H5'	2.48	0.43
27:AD:10:THR:C	27:AD:11:PRO:O	2.55	0.43
28:AE:69:LYS:H	28:AE:69:LYS:HG3	1.59	0.43
28:AE:77:ILE:HG22	28:AE:78:LEU:HD12	2.00	0.43
30:AG:11:TYR:HD2	30:AG:12:TYR:CD1	2.36	0.43
30:AG:40:ASN:HD22	30:AG:41:GLN:N	2.13	0.43
30:AG:72:ARG:HA	30:AG:87:PRO:CG	2.45	0.43
32:AI:77:LEU:HD12	32:AI:101:LEU:HD11	2.00	0.43
32:AI:62:LYS:HZ2	32:AI:133:HIS:HB2	1.83	0.43
38:AR:65:LEU:HD12	38:AR:65:LEU:HA	1.68	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:AS:16:ASN:C	39:AS:18:ILE:H	2.21	0.43
40:AT:98:LYS:HB3	40:AT:100:TYR:CE1	2.53	0.43
40:AT:25:GLY:O	40:AT:26:ASP:HB2	2.18	0.43
45:AY:52:SER:HB2	45:AY:53:PRO:HD3	2.00	0.43
45:AY:7:VAL:HG21	45:AY:8:LYS:HZ2	1.82	0.43
53:B6:41:PRO:HG3	53:B6:44:ARG:NH1	2.33	0.43
57:BA:1210:A:H5''	57:BA:1212:G:C4'	2.48	0.43
57:BA:1278:A:H2'	57:BA:1279:G:H8	1.83	0.43
57:BA:1657:C:O2'	57:BA:1658:C:H5'	2.18	0.43
26:BC:184:GLU:HB2	26:BC:185:LYS:HZ2	1.82	0.43
26:BC:218:THR:HG22	57:BA:2124:G:H21	1.82	0.43
26:BC:34:ALA:HB1	26:BC:40:GLU:CG	2.44	0.43
27:BD:210:GLY:HA2	27:BD:213:ARG:HG2	2.00	0.43
34:BN:130:HIS:HD2	57:BA:7:G:H5'	1.83	0.43
38:BR:28:LEU:C	38:BR:30:THR:H	2.21	0.43
39:BS:53:SER:C	39:BS:55:ALA:H	2.19	0.43
39:BS:54:LEU:HD13	39:BS:57:LYS:HD2	2.00	0.43
39:BS:28:VAL:CG2	39:BS:87:PHE:HE1	2.31	0.43
45:BY:4:LYS:CG	45:BY:5:MET:N	2.81	0.43
46:AZ:171:ILE:O	46:AZ:172:ALA:CB	2.65	0.43
46:BZ:100:VAL:CG1	46:BZ:137:ILE:HG12	2.48	0.43
46:BZ:102:LEU:HD23	46:BZ:137:ILE:HB	2.00	0.43
52:B5:51:TYR:O	52:B5:53:ALA:N	2.50	0.43
34:BN:132:ALA:O	34:BN:133:GLN:CB	2.66	0.43
46:AZ:14:LYS:C	46:AZ:16:SER:H	2.21	0.43
36:BP:88:LEU:N	36:BP:88:LEU:HD12	2.32	0.43
57:AA:2779:U:O2	57:AA:2779:U:O4'	2.35	0.43
57:AA:760:G:H2'	57:AA:761:A:O4'	2.18	0.43
51:B4:22:ILE:CD1	51:B4:22:ILE:H	2.25	0.43
57:AA:246:C:C2'	57:AA:247:G:H5'	2.48	0.43
57:AA:2472:G:H3'	57:AA:2475:C:H41	1.81	0.43
44:BX:60:ARG:NH2	54:B7:47:ARG:HH11	2.13	0.43
57:BA:1831:G:C6	57:BA:1832:C:N4	2.86	0.43
57:BA:2199:A:N3	57:BA:2199:A:H2'	2.33	0.43
34:AN:79:PRO:C	34:AN:81:GLY:H	2.21	0.43
44:AX:71:GLY:HA3	57:AA:65:C:H5'	1.99	0.43
43:AW:17:VAL:O	43:AW:18:ARG:C	2.55	0.43
52:A5:43:HIS:CD2	57:AA:2815:C:O2'	2.71	0.43
48:A1:37:ILE:O	48:A1:37:ILE:CG2	2.66	0.43
37:BQ:116:GLU:OE2	37:BQ:120:ILE:HD11	2.18	0.43
57:AA:646:A:H2'	57:AA:647:G:O4'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2083:G:H2'	57:BA:2084:C:C6	2.53	0.43
57:AA:2540:C:H2'	57:AA:2541:A:O4'	2.18	0.43
38:AR:94:TYR:N	38:AR:94:TYR:CD2	2.85	0.43
57:BA:1953:A:H2	57:BA:2549:G:N3	2.16	0.43
48:B1:90:ILE:O	48:B1:93:GLU:HB2	2.18	0.43
57:AA:1563:G:O2'	57:AA:1564:C:H5'	2.17	0.43
57:AA:2510:C:O2'	57:AA:2511:U:H5'	2.17	0.43
53:A6:27:LYS:HD3	53:A6:27:LYS:O	2.18	0.43
57:AA:1052:C:H6	57:AA:1052:C:H3'	1.83	0.43
57:AA:271(Q):G:O2'	57:AA:271(R):G:P	2.76	0.43
57:AA:580:C:H2'	57:AA:581:C:H6	1.82	0.43
27:AD:31:LYS:C	27:AD:33:LEU:N	2.71	0.43
27:AD:35:LYS:HD2	27:AD:36:PRO:CA	2.47	0.43
27:AD:30:GLU:OE1	27:AD:63:ARG:HG2	2.17	0.43
28:AE:4:ILE:CG1	28:AE:5:LEU:N	2.78	0.43
28:AE:47:VAL:O	28:AE:80:GLU:HA	2.18	0.43
31:AH:52:VAL:O	31:AH:65:HIS:HE1	2.01	0.43
32:AI:103:ARG:O	32:AI:104:GLN:C	2.56	0.43
37:AQ:45:GLN:O	37:AQ:49:ALA:CB	2.66	0.43
40:AT:28:VAL:CG2	40:AT:47:GLY:H	2.26	0.43
40:AT:8:LYS:C	40:AT:10:VAL:N	2.70	0.43
43:AW:45:TYR:HD2	43:AW:46:PHE:CD1	2.36	0.43
57:BA:108:U:H2'	57:BA:109:G:C8	2.52	0.43
57:BA:1116:C:H3'	57:BA:1117:G:H5''	4.06	0.43
57:BA:1341:U:OP1	57:BA:1397:U:N3	2.45	0.43
57:BA:2653:U:H2'	57:BA:2654:A:C8	2.52	0.43
57:BA:2666:C:H3'	57:BA:2667:C:C6	2.53	0.43
57:BA:70:G:H21	57:BA:71:A:N6	2.16	0.43
57:BA:710:G:H1	57:BA:721:C:H42	1.66	0.43
57:BA:986:C:C2'	57:BA:987:G:H5'	2.47	0.43
26:BC:225:ILE:HD12	26:BC:225:ILE:O	2.18	0.43
27:BD:65:ILE:HD13	27:BD:65:ILE:C	2.37	0.43
28:BE:32:PRO:O	28:BE:34:VAL:N	2.51	0.43
29:BF:29:ASN:O	29:BF:30:PRO:C	2.56	0.43
30:BG:122:PRO:HG2	30:BG:123:ASN:H	1.83	0.43
30:BG:138:GLN:OE1	30:BG:152:LEU:CA	2.65	0.43
32:BI:69:LYS:HA	32:BI:136:VAL:CB	2.47	0.43
33:BJ:129:PRO:C	33:BJ:131:MET:H	2.22	0.43
33:BJ:99:SER:O	33:BJ:100:ASN:CB	2.67	0.43
36:BP:48:PRO:O	36:BP:49:ARG:C	2.56	0.43
37:BQ:45:GLN:O	37:BQ:49:ALA:CB	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:AV:85:LYS:HE2	42:AV:85:LYS:HB2	1.84	0.43
31:BH:56:SER:CB	31:BH:58:GLU:HG3	2.48	0.43
46:AZ:101:PRO:C	46:AZ:102:LEU:HD23	2.38	0.43
46:AZ:99:TYR:CE1	46:AZ:125:LEU:HB2	2.52	0.43
42:AV:21:ARG:CB	42:AV:91:TYR:HB2	2.47	0.43
46:AZ:29:TYR:CD2	46:AZ:29:TYR:N	2.86	0.43
46:AZ:59:LEU:O	46:AZ:61:LEU:HD23	2.18	0.43
57:AA:2134:A:H2	57:AA:2159:G:H1'	1.78	0.43
46:BZ:67:LEU:N	46:BZ:67:LEU:HD22	2.33	0.43
57:BA:2318:G:C2'	57:BA:2319:G:OP1	2.66	0.43
53:A6:10:LEU:N	53:A6:10:LEU:CD2	2.77	0.43
37:BQ:61:GLY:N	46:BZ:178:GLU:O	2.51	0.43
57:AA:2712:U:H5'	57:AA:2712:U:O2	2.18	0.43
57:BA:1998:G:O2'	57:BA:1999:C:H5'	2.19	0.43
27:AD:166:GLN:NE2	27:AD:166:GLN:HA	2.31	0.43
47:B0:84:LEU:N	47:B0:84:LEU:HD12	2.33	0.43
51:B4:43:TYR:O	51:B4:44:THR:O	2.35	0.43
27:BD:166:GLN:HA	27:BD:166:GLN:NE2	2.33	0.43
57:BA:1808:U:H2'	57:BA:1809:A:O4'	2.18	0.43
32:BI:22:LYS:HD2	57:BA:2094:G:OP1	2.17	0.43
57:AA:2335:A:O2'	57:AA:2336:A:H5''	2.19	0.43
57:BA:646:A:N3	57:BA:646:A:H5'	2.33	0.43
57:AA:2347:C:H2'	57:AA:2348:U:H6	1.82	0.43
57:BA:1921:G:H2'	57:BA:1922:G:H8	1.83	0.43
53:A6:52:VAL:CG2	53:A6:53:LYS:N	2.76	0.43
57:AA:1040:C:O2'	57:AA:1041:C:P	2.76	0.43
57:AA:1011:G:C2	57:AA:1151:G:C2	3.05	0.43
57:AA:1244:G:C2'	57:AA:1245:G:H5'	2.48	0.43
44:AX:63:LYS:HD2	57:AA:1312:U:OP2	2.18	0.43
57:AA:2001:A:H2'	57:AA:2002:G:C8	2.53	0.43
57:AA:2174:C:O2'	57:AA:2175:C:H5'	2.18	0.43
57:AA:2666:C:H5'	57:AA:2667:C:OP2	2.18	0.43
57:AA:332:A:O2'	57:AA:334:C:OP2	2.22	0.43
57:AA:623:G:H2'	57:AA:624:C:H6	1.83	0.43
57:AA:92:A:H2'	57:AA:93:G:O4'	2.18	0.43
26:AC:175:PRO:HG3	57:AA:2124:G:C5'	2.45	0.43
27:AD:215:LEU:HD12	27:AD:217:ARG:HH21	1.82	0.43
27:AD:65:ILE:HG12	27:AD:66:ASP:N	2.32	0.43
27:AD:9:TYR:CD2	57:AA:727:A:C2	3.06	0.43
28:AE:27:LEU:HD12	28:AE:180:ASN:O	2.19	0.43
29:AF:3:GLU:CB	29:AF:24:LEU:HG	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:AG:63:ILE:HG23	30:AG:143:GLU:HB2	1.99	0.43
30:AG:16:ARG:HH11	30:AG:16:ARG:HG3	1.83	0.43
32:AI:28:ASN:CA	32:AI:32:PRO:HG2	2.48	0.43
36:AP:32:THR:CG2	36:AP:37:GLY:HA2	2.36	0.43
36:AP:63:PRO:C	36:AP:65:ARG:H	2.20	0.43
35:AO:107:ARG:NH2	40:AT:35:LYS:HD2	2.32	0.43
40:AT:29:ARG:HG2	40:AT:86:ILE:CG2	2.48	0.43
45:AY:13:VAL:HG22	45:AY:14:LEU:N	2.23	0.43
57:BA:1047:G:C8	57:BA:1110:G:N1	2.87	0.43
57:BA:1048:A:OP2	57:BA:1110:G:N2	2.49	0.43
57:BA:1039:G:H1	57:BA:1116:C:N4	2.16	0.43
57:BA:1486:A:N1	57:BA:1504:C:N3	2.67	0.43
57:BA:2343:C:O2'	57:BA:2344:U:H5'	2.18	0.43
57:BA:271(R):G:O2'	57:BA:271(S):G:H5'	2.18	0.43
57:BA:623:G:H2'	57:BA:624:C:H6	1.83	0.43
57:BA:673:C:H2'	57:BA:674:G:H5'	1.99	0.43
57:BA:864:G:O2'	57:BA:865:C:H5'	2.18	0.43
57:BA:969:U:H2'	57:BA:970:C:C6	2.53	0.43
41:BU:92:ARG:CG	57:BA:996:A:H4'	2.47	0.43
27:BD:215:LEU:HD12	27:BD:217:ARG:HH21	1.83	0.43
27:BD:32:SER:HA	27:BD:35:LYS:HZ3	1.83	0.43
28:BE:47:VAL:O	28:BE:80:GLU:HA	2.17	0.43
30:BG:111:LEU:CB	30:BG:112:PRO:HD3	2.46	0.43
30:BG:72:ARG:HB3	30:BG:86:MET:N	2.34	0.43
36:BP:110:TYR:CE2	36:BP:111:ARG:NH2	2.85	0.43
38:BR:56:LYS:C	38:BR:58:GLY:H	2.21	0.43
40:BT:14:TYR:CD1	40:BT:14:TYR:N	2.87	0.43
42:BV:66:ARG:HH11	42:BV:66:ARG:HG2	1.83	0.43
43:BW:20:VAL:O	43:BW:23:LEU:HB2	2.18	0.43
57:BA:2801:A:O2'	57:BA:2895:U:H5'	2.18	0.43
37:BQ:135:ASP:C	37:BQ:137:TYR:H	2.22	0.43
57:BA:1538:G:H2'	57:BA:1539:G:C8	2.54	0.43
36:BP:124:LYS:CD	36:BP:143:GLY:HA3	2.39	0.43
41:BU:57:PHE:O	41:BU:58:ARG:C	2.56	0.43
57:BA:2307:G:H3'	57:BA:2307:G:N3	2.34	0.43
57:AA:1517:G:C5	57:AA:1518:U:C5	3.06	0.43
57:BA:2246:G:H2'	57:BA:2247:A:C8	2.53	0.43
35:AO:120:GLU:CG	35:AO:122:LEU:HD21	2.48	0.43
57:BA:633:A:N3	57:BA:2403:C:H4'	2.33	0.43
57:BA:491:G:H2'	57:BA:492:A:C8	2.54	0.43
42:AV:8:GLY:O	57:AA:1161:C:H1'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2199:A:N3	57:AA:2199:A:H2'	2.34	0.43
42:AV:79:VAL:CG2	57:AA:1188:U:H4'	2.45	0.43
42:BV:79:VAL:CG2	57:BA:1188:U:H4'	2.48	0.43
57:BA:383:U:H2'	57:BA:385:C:H5	1.83	0.43
57:BA:2192:G:H2'	57:BA:2193:G:C5'	2.48	0.43
57:AA:1668:A:H4'	57:AA:1669:A:O5'	2.18	0.43
57:AA:1704:G:O2'	57:AA:1705:G:H5'	2.18	0.43
56:A9:7:VAL:CG1	56:A9:25:VAL:HG21	2.48	0.43
57:BA:1587:A:H2'	57:BA:1588:C:C6	2.54	0.43
57:AA:1615:C:C5	57:AA:1617:C:C4	3.05	0.43
29:BF:115:ALA:O	29:BF:118:ALA:HB3	2.18	0.43
27:AD:260:ARG:NH1	27:AD:267:SER:OG	2.51	0.43
57:AA:18:C:H2'	57:AA:19:C:C6	2.57	0.43
57:AA:2839:G:H2'	57:AA:2840:C:C6	2.53	0.43
27:AD:13:ARG:NH1	57:AA:729:G:OP2	2.51	0.43
57:AA:781:A:C3'	57:AA:782:A:H5'	5.54	0.43
58:AB:111:G:O2'	58:AB:112:U:H5'	2.19	0.43
58:AB:48:A:H2'	58:AB:49:C:C6	2.53	0.43
26:AC:173:HIS:N	26:AC:173:HIS:CD2	2.83	0.43
26:AC:184:GLU:HB2	26:AC:185:LYS:HZ2	1.83	0.43
27:AD:210:GLY:C	27:AD:212:SER:N	2.71	0.43
27:AD:227:ASN:HB3	27:AD:228:PRO:CD	2.48	0.43
27:AD:46:GLN:CD	27:AD:46:GLN:N	2.69	0.43
28:AE:203:LYS:HD2	28:AE:203:LYS:C	2.39	0.43
29:AF:22:ALA:HB1	29:AF:26:ALA:HB1	1.95	0.43
31:AH:35:VAL:O	31:AH:37:VAL:HG23	2.18	0.43
35:AO:107:ARG:HH22	40:AT:35:LYS:HD2	1.83	0.43
36:AP:97:PRO:HG3	36:AP:112:LEU:HG	2.00	0.43
41:AU:8:VAL:O	41:AU:10:ARG:N	2.51	0.43
42:AV:39:LEU:CD1	42:AV:51:VAL:HA	2.48	0.43
43:AW:1:MET:HE2	43:AW:2:GLU:H	1.83	0.43
44:AX:12:VAL:HG11	44:AX:27:THR:CG2	2.48	0.43
47:B0:36:ILE:HD13	47:B0:58:THR:HG23	2.00	0.43
33:BJ:6:ASN:CB	57:BA:1046:A:H8	2.32	0.43
57:BA:1048:A:H4'	57:BA:1049:C:OP1	2.18	0.43
57:BA:1052:C:H3'	57:BA:1052:C:H6	1.84	0.43
53:B6:27:LYS:NZ	57:BA:2285:C:OP1	2.50	0.43
57:BA:297:C:H2'	57:BA:298:G:O4'	2.17	0.43
57:BA:662:G:O2'	57:BA:836:G:C5'	28.15	0.43
27:BD:99:ASP:OD1	57:BA:1491:G:H5'	2.18	0.43
28:BE:62:PRO:C	28:BE:64:LYS:H	2.20	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:169:ASN:HD21	57:BA:323:G:H5'	1.83	0.43
36:BP:23:PRO:CG	36:BP:33:ARG:NE	2.81	0.43
39:BS:15:ARG:HH11	39:BS:15:ARG:HB2	1.82	0.43
41:BU:93:LYS:NZ	57:BA:998:C:OP2	2.51	0.43
27:AD:246:PRO:HD3	57:AA:1902:C:C5'	2.47	0.43
31:BH:73:ALA:O	31:BH:76:VAL:HB	2.18	0.43
57:AA:2801:A:H5'	57:AA:2801(A):A:C4	2.54	0.43
37:BQ:132:VAL:HG11	46:BZ:81:ARG:HH21	1.84	0.43
57:AA:2343:C:O2'	57:AA:2344:U:H5'	2.18	0.43
29:BF:176:LEU:HG	29:BF:177:ALA:O	2.17	0.43
31:AH:155:SER:O	31:AH:156:ALA:C	2.57	0.43
31:BH:155:SER:O	31:BH:156:ALA:C	2.56	0.43
41:AU:101:ARG:HB2	41:AU:101:ARG:NH1	2.19	0.43
49:A2:14:ARG:HD3	49:A2:66:GLU:OE2	2.18	0.43
55:B8:29:LYS:HD3	55:B8:44:LYS:CG	2.43	0.43
35:AO:111:PHE:O	35:AO:115:VAL:HG23	2.18	0.43
57:AA:247:G:H4'	57:AA:386:G:C6	2.53	0.43
57:AA:2526:G:H5'	57:AA:2742:C:O2'	2.18	0.43
49:B2:50:ILE:O	49:B2:54:LYS:HG2	2.18	0.43
57:BA:420:C:H2'	57:BA:421:U:H6	1.83	0.43
57:AA:418:G:O2'	57:AA:419:C:H5'	2.18	0.43
57:BA:2853:C:O2'	57:BA:2854:G:H5'	2.17	0.43
57:BA:1451:C:N3	57:BA:1459:G:O6	2.51	0.43
57:AA:2853:C:O2'	57:AA:2854:G:H5'	2.18	0.43
43:AW:79:GLY:C	43:AW:100:THR:CG2	2.87	0.43
43:AW:79:GLY:C	43:AW:100:THR:HG22	2.39	0.43
57:BA:1435:G:O5'	57:BA:1435:G:H8	2.78	0.43
57:BA:572:A:H2'	57:BA:573:G:O4'	2.19	0.43
52:A5:19:ARG:HG3	57:AA:2046:G:H5'	1.99	0.43
57:BA:2562:U:H2'	57:BA:2563:U:H5'	2.01	0.43
57:BA:2027:G:C6	57:BA:2028:U:C4	3.06	0.43
33:AJ:101:PRO:C	33:AJ:103:GLY:H	2.21	0.43
53:A6:8:LYS:HE3	53:A6:25:LYS:HD3	2.01	0.43
57:AA:1120:G:H1	57:AA:1153:C:H42	34.88	0.43
57:AA:1144:G:C2	57:AA:1145:C:N3	3.71	0.43
39:AS:18:ILE:HD12	57:AA:2334:G:H21	1.83	0.43
36:AP:33:ARG:CZ	57:AA:587:C:H3'	2.48	0.43
27:AD:136:ILE:HA	27:AD:137:PRO:HD3	1.80	0.43
27:AD:43:ARG:HB3	27:AD:54:ARG:CB	2.44	0.43
29:AF:66:PRO:O	29:AF:67:GLN:CB	2.59	0.43
32:AI:5:LEU:O	32:AI:6:LEU:HG	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:AS:15:ARG:HB2	39:AS:15:ARG:HH11	1.81	0.43
40:AT:34:VAL:HG12	40:AT:35:LYS:H	1.82	0.43
40:AT:76:PHE:HA	40:AT:77:PRO:HD3	1.79	0.43
45:AY:81:LYS:CD	45:AY:97:ARG:O	2.59	0.43
53:B6:15:GLU:OE1	53:B6:44:ARG:NH2	2.51	0.43
55:B8:61:LEU:HD12	55:B8:62:LEU:H	1.76	0.43
57:BA:142(A):C:O2'	57:BA:143:G:H5'	2.18	0.43
57:BA:272:G:H1'	57:BA:272(B):G:O5'	2.18	0.43
36:BP:72:PRO:HD3	57:BA:389:G:H22	1.82	0.43
57:BA:432:A:N7	57:BA:433:C:C4	3.84	0.43
57:BA:783:A:C8	57:BA:784:A:H4'	2.50	0.43
36:BP:40:SER:HB3	57:BA:832:G:OP1	2.19	0.43
58:BB:30:C:H4'	58:BB:58:A:H2	1.83	0.43
58:BB:79:C:H2'	58:BB:80:U:O4'	2.18	0.43
26:BC:175:PRO:HG3	57:BA:2124:G:C5'	2.47	0.43
27:BD:31:LYS:C	27:BD:33:LEU:N	2.72	0.43
28:BE:113:PHE:HB2	57:BA:2823:A:OP1	2.18	0.43
28:BE:2:LYS:HD3	28:BE:95:ILE:HG22	2.00	0.43
29:BF:185:ASP:HA	29:BF:188:ARG:CG	2.49	0.43
29:BF:63:LYS:HE3	29:BF:67:GLN:CB	2.47	0.43
29:BF:8:GLN:O	29:BF:9:ILE:C	2.56	0.43
34:BN:28:THR:HG22	34:BN:29:LYS:N	2.33	0.43
36:BP:33:ARG:HD3	57:BA:587:C:C2	2.54	0.43
37:BQ:35:VAL:CG1	37:BQ:130:LYS:HB3	2.48	0.43
37:BQ:48:GLU:O	37:BQ:52:VAL:HG23	2.19	0.43
38:BR:28:LEU:HD21	38:BR:114:VAL:HG12	2.01	0.43
40:BT:38:ASN:O	40:BT:40:THR:N	2.48	0.43
40:BT:50:ILE:CD1	40:BT:64:ARG:HB2	2.48	0.43
31:BH:41:MET:HG3	31:BH:43:VAL:N	2.32	0.43
49:A2:35:LEU:HD13	49:A2:50:ILE:HG12	2.01	0.43
53:B6:10:LEU:CD2	53:B6:10:LEU:N	2.76	0.43
36:AP:88:LEU:N	36:AP:88:LEU:HD12	2.34	0.43
57:AA:2864:G:O2'	57:AA:2865:U:H5'	2.18	0.43
41:BU:108:GLU:OE2	42:BV:44:LYS:HD3	2.18	0.43
48:A1:41:ARG:HD3	48:A1:43:TYR:OH	2.18	0.43
49:A2:58:ALA:O	49:A2:61:LEU:N	2.52	0.43
57:BA:488:G:H1'	57:BA:492:A:H62	1.84	0.43
41:BU:3:ARG:HB3	57:BA:445:C:H5''	1.99	0.43
27:BD:231:HIS:ND1	27:BD:232:PRO:CD	2.80	0.43
57:AA:1532:C:H2'	57:AA:1533:G:C5'	2.49	0.43
48:B1:68:PRO:HG2	48:B1:69:LYS:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2224:G:H4'	57:BA:2226:C:C2	2.54	0.43
36:BP:140:ALA:O	36:BP:141:ALA:HB3	2.17	0.43
32:BI:54:GLN:HA	32:BI:57:ARG:HD2	2.00	0.43
57:BA:2515:C:O2'	57:BA:2516:G:H5'	2.18	0.43
57:BA:1440:G:H2'	57:BA:1441:G:H8	1.83	0.43
57:BA:1892:C:O2'	57:BA:1893:C:H5'	2.18	0.43
46:AZ:28:MET:HG2	46:AZ:37:VAL:HG13	2.01	0.43
57:AA:1609:A:C2	57:AA:1616:A:C4	3.06	0.43
46:BZ:27:VAL:HG23	46:BZ:35:ARG:O	2.17	0.43
47:A0:46:LYS:HA	47:A0:47:PRO:HD3	1.81	0.43
57:AA:2517:C:C6	57:AA:2542:A:C2	3.07	0.43
47:A0:37:LEU:N	47:A0:59:LEU:O	2.48	0.43
53:A6:27:LYS:HD3	53:A6:27:LYS:C	2.39	0.43
57:AA:1039:G:H1	57:AA:1116:C:N4	2.15	0.43
57:AA:1106:A:C8	57:AA:1107:G:N7	2.86	0.43
57:AA:142:A:H8	57:AA:1408:C:H1'	1.83	0.43
28:AE:113:PHE:CD1	57:AA:1654:A:C2	3.06	0.43
57:AA:188:G:H1'	57:AA:1365:A:N1	2.33	0.43
57:AA:548:A:C2'	57:AA:549:G:H5'	2.30	0.43
50:A3:46:ASN:ND2	57:AA:850:C:O2'	2.49	0.43
26:AC:166:ASN:HB3	26:AC:172:ILE:CB	2.49	0.43
26:AC:166:ASN:N	26:AC:172:ILE:HG13	2.33	0.43
26:AC:216:THR:HB	26:AC:222:SER:CA	2.48	0.43
26:AC:215:VAL:CG2	26:AC:225:ILE:HD11	2.37	0.43
27:AD:47:GLY:HA2	57:AA:773:U:C5'	2.48	0.43
28:AE:176:ILE:HG22	28:AE:179:GLU:H	1.82	0.43
28:AE:64:LYS:O	28:AE:64:LYS:CG	2.66	0.43
30:AG:120:LEU:HG	30:AG:179:PRO:HG2	2.00	0.43
30:AG:45:GLU:H	30:AG:88:ILE:CB	2.32	0.43
32:AI:91:SER:H	32:AI:121:LYS:HZ2	1.65	0.43
34:AN:40:PRO:O	41:AU:64:ARG:HG2	2.18	0.43
36:AP:50:ARG:HB3	55:A8:59:LYS:HE2	2.00	0.43
43:AW:73:ALA:O	43:AW:106:ILE:HG12	2.18	0.43
53:B6:8:LYS:O	53:B6:9:LEU:O	2.37	0.43
57:BA:484:C:H2'	57:BA:485:C:H6	1.83	0.43
58:BB:37:C:N3	58:BB:49:C:O4'	2.51	0.43
26:BC:182:PRO:HD2	26:BC:185:LYS:HB2	2.00	0.43
26:BC:185:LYS:HA	26:BC:188:ASP:OD2	2.19	0.43
27:BD:117:VAL:HG22	27:BD:129:ASN:OD1	2.19	0.43
27:BD:136:ILE:HA	27:BD:137:PRO:HD3	1.79	0.43
28:BE:18:ASP:O	28:BE:19:ARG:HB3	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:51:PHE:N	28:BE:74:PRO:HG2	2.33	0.43
30:BG:142:PRO:HB2	30:BG:143:GLU:H	1.64	0.43
34:BN:63:THR:HG21	57:BA:1141:U:P	2.58	0.43
35:BO:87:ILE:HD12	35:BO:91:LEU:HD13	2.00	0.43
40:BT:70:VAL:CG1	40:BT:71:GLY:H	2.29	0.43
41:BU:20:LEU:HB2	41:BU:39:LEU:HD11	1.99	0.43
43:BW:13:SER:O	43:BW:16:LYS:HB2	2.17	0.43
43:BW:24:ILE:HD13	43:BW:36:LEU:HD11	2.01	0.43
57:BA:2801:A:H5'	57:BA:2801(A):A:C4	2.53	0.43
57:BA:2801(A):A:H4'	57:BA:2802:G:C2'	2.48	0.43
57:BA:2832:U:H4'	57:BA:2833:G:H5''	2.01	0.43
29:AF:178:PRO:HG2	29:AF:179:GLU:CD	2.39	0.43
38:AR:117:VAL:CG1	38:AR:118:GLU:N	2.81	0.43
57:BA:829:A:N7	57:BA:2247:A:O2'	2.47	0.43
57:AA:149:A:C2	57:AA:150:C:C4	4.30	0.43
49:A2:58:ALA:HB1	57:AA:72:U:O2	2.18	0.43
43:BW:88:ARG:H	43:BW:93:ALA:H	1.67	0.43
46:AZ:19:ARG:CZ	46:AZ:25:PRO:HG3	2.48	0.43
57:AA:1164:G:H2'	57:AA:1165:U:C6	2.53	0.43
34:AN:78:TYR:N	34:AN:78:TYR:CD1	2.86	0.43
57:BA:2291:U:H2'	57:BA:2292:C:C6	2.54	0.43
57:BA:1889:A:H1'	57:BA:2087:G:O4'	2.19	0.43
57:BA:1680:U:H2'	57:BA:1681:G:O4'	2.18	0.43
57:AA:2070:G:C2	57:AA:2071:A:C4	3.06	0.43
57:AA:1638:C:H4'	57:AA:2710:C:O2	2.19	0.43
57:BA:2705:A:H2'	57:BA:2706:G:O4'	2.18	0.43
32:AI:57:ARG:HG2	32:AI:57:ARG:O	2.17	0.43
57:AA:366:C:H5'	57:AA:370:G:H5'	1.99	0.43
48:B1:6:GLU:C	48:B1:7:ILE:HD12	2.38	0.43
57:BA:2252:G:H2'	57:BA:2253:G:O4'	2.18	0.43
57:AA:2562:U:H2'	57:AA:2563:U:H5'	2.00	0.43
57:AA:2095:C:H2'	57:AA:2096:U:O4'	2.19	0.43
47:B0:32:ARG:O	47:B0:33:ALA:C	2.57	0.43
57:AA:1336:A:O2'	57:AA:1337:G:H5'	2.18	0.43
57:AA:15:G:H1	57:AA:525:U:H3	1.65	0.43
57:AA:302:C:O2'	57:AA:303:U:H5'	2.19	0.43
36:AP:70:GLN:HG3	57:AA:389:G:N1	2.34	0.43
57:AA:592:G:C2	57:AA:593:G:C8	3.55	0.43
27:AD:12:SER:HB2	27:AD:208:LYS:HB3	2.01	0.43
28:AE:24:THR:HG22	28:AE:186:GLY:HA2	2.00	0.43
28:AE:59:VAL:CG1	28:AE:60:ASN:H	2.28	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AI:83:ALA:HA	32:AI:89:TYR:H	1.84	0.43
33:AJ:23:SER:O	33:AJ:87:VAL:O	2.36	0.43
35:AO:26:LYS:HB2	35:AO:30:ALA:HB2	2.01	0.43
35:AO:7:TYR:C	35:AO:8:LEU:HD22	2.39	0.43
37:AQ:48:GLU:O	37:AQ:52:VAL:HG23	2.18	0.43
38:AR:28:LEU:HD12	38:AR:48:VAL:HG21	2.01	0.43
39:AS:35:ILE:HG23	39:AS:53:SER:HB2	2.01	0.43
40:AT:35:LYS:HZ1	40:AT:41:ARG:NH2	2.17	0.43
43:AW:75:TYR:CE2	43:AW:104:THR:CB	3.01	0.43
57:BA:1178:C:H2'	57:BA:1179:C:H6	1.83	0.43
57:BA:1316:U:O2'	57:BA:1317:A:H5'	2.19	0.43
57:BA:1311:G:N2	57:BA:1327:C:C2	32.94	0.43
44:BX:37:THR:CG2	57:BA:143:G:H1'	2.48	0.43
57:BA:2666:C:H5'	57:BA:2667:C:OP2	2.18	0.43
57:BA:267:C:H2'	57:BA:268:C:H6	2.06	0.43
57:BA:269:U:H1'	57:BA:424:G:N2	2.34	0.43
57:BA:629:G:H2'	57:BA:630:G:O4'	2.65	0.43
57:BA:660:G:O2'	57:BA:661:C:H5'	2.18	0.43
28:BE:113:PHE:CD1	57:BA:1654:A:C2	3.06	0.43
30:BG:99:MET:O	30:BG:102:PHE:HB3	2.19	0.43
32:BI:47:LEU:HD13	32:BI:47:LEU:H	4.89	0.43
32:BI:51:ILE:HG22	32:BI:52:ARG:N	2.34	0.43
34:BN:62:VAL:HG22	34:BN:66:LYS:HD2	2.01	0.43
35:BO:96:THR:O	35:BO:97:ARG:HG2	2.19	0.43
36:BP:30:THR:O	36:BP:32:THR:N	2.52	0.43
40:BT:94:ALA:HB1	40:BT:99:LEU:HD23	2.00	0.43
41:BU:85:LYS:O	41:BU:86:ALA:C	2.57	0.43
42:BV:34:GLU:O	42:BV:36:PRO:HD3	2.19	0.43
45:BY:7:VAL:C	45:BY:8:LYS:HD2	2.36	0.43
46:BZ:29:TYR:CB	46:BZ:34:ASN:HA	2.49	0.43
57:BA:2055:C:H5'	57:BA:2056:G:O5'	2.18	0.43
37:AQ:134:ARG:NH2	46:AZ:122:ARG:NE	2.56	0.43
57:AA:1465:G:O4'	57:AA:1528:A:C8	2.72	0.43
57:AA:2318:G:C2'	57:AA:2319:G:OP1	2.66	0.43
57:BA:1529:G:N1	57:BA:1541:G:N2	2.67	0.43
57:BA:272(E):G:N3	57:BA:364:C:N3	2.67	0.43
57:BA:158:U:H2'	57:BA:171:G:O5'	2.19	0.43
57:BA:795:C:H6	57:BA:795:C:O5'	2.17	0.43
43:AW:88:ARG:NH1	43:AW:94:ASP:OD1	2.52	0.43
49:B2:25:VAL:O	49:B2:26:ARG:C	2.56	0.43
57:BA:848:G:N3	57:BA:933:A:H1'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:653:A:H5'	57:AA:654:A:OP2	2.19	0.43
46:AZ:144:LEU:HD22	46:AZ:144:LEU:N	2.33	0.43
57:AA:2752:C:H5'	57:AA:2753:A:OP2	2.18	0.43
57:AA:569:U:H5'	57:AA:946:G:H1'	2.00	0.43
57:AA:718:A:H2'	57:AA:719:C:O4'	2.18	0.43
58:BB:60:C:C2	58:BB:61:G:C8	3.06	0.43
57:BA:2280:G:C2'	57:BA:2281:C:H5'	2.48	0.43
52:B5:43:HIS:CD2	57:BA:2815:C:O2'	2.72	0.43
57:BA:2779:U:O2	57:BA:2779:U:O4'	2.36	0.43
58:BB:65:C:C2'	58:BB:66:A:H5'	2.49	0.43
57:AA:2236:C:H2'	57:AA:2237:G:H5'	2.01	0.43
57:AA:2150:U:H2'	57:AA:2151:G:C8	2.54	0.43
57:AA:2884:U:H2'	57:AA:2885:C:H5'	2.00	0.43
31:BH:126:PRO:HG2	31:BH:127:GLU:H	1.83	0.43
57:AA:1341:U:P	57:AA:1397:U:H3	2.42	0.43
57:AA:2666:C:H3'	57:AA:2667:C:C6	2.53	0.43
58:AB:38:C:H42	58:AB:44:G:H1	1.65	0.43
51:A4:1:MET:N	58:AB:44:G:P	2.92	0.43
30:AG:111:LEU:O	30:AG:113:ARG:N	2.52	0.43
32:AI:76:THR:OG1	32:AI:139:GLN:NE2	2.52	0.43
36:AP:16:ARG:CD	36:AP:18:ARG:HB2	2.49	0.43
29:AF:188:ARG:CA	36:AP:7:ARG:HD3	2.45	0.43
41:AU:92:ARG:NH2	57:AA:996:A:OP2	2.51	0.43
42:AV:9:GLY:O	42:AV:10:LYS:HG3	2.19	0.43
42:AV:35:LEU:O	42:AV:36:PRO:C	2.57	0.43
42:AV:49:THR:O	42:AV:50:PRO:C	2.55	0.43
45:AY:7:VAL:C	45:AY:8:LYS:HD2	2.38	0.43
57:BA:1317:A:H2'	57:BA:1318:C:H6	1.84	0.43
40:BT:98:LYS:HZ3	57:BA:2847:U:P	2.41	0.43
57:BA:437:G:H2'	57:BA:438:G:C8	2.54	0.43
57:BA:440:G:H2'	57:BA:441:U:H6	1.83	0.43
57:BA:541:C:O2'	57:BA:542:C:H5'	2.18	0.43
58:BB:111:G:O2'	58:BB:112:U:H5'	2.18	0.43
58:BB:38:C:N4	58:BB:44:G:H1	2.16	0.43
28:BE:89:ASP:O	28:BE:90:THR:O	2.37	0.43
29:BF:9:ILE:HG22	29:BF:11:VAL:C	2.38	0.43
30:BG:36:LYS:HE2	30:BG:95:ARG:HH12	1.84	0.43
32:BI:103:ARG:O	32:BI:104:GLN:C	2.57	0.43
32:BI:142:VAL:O	32:BI:142:VAL:CG1	2.54	0.43
36:BP:18:ARG:CZ	36:BP:18:ARG:HB3	2.48	0.43
36:BP:63:PRO:C	36:BP:65:ARG:N	2.70	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BS:16:ASN:C	39:BS:18:ILE:H	2.22	0.43
35:BO:77:ILE:HD11	40:BT:72:VAL:CG1	2.49	0.43
40:BT:76:PHE:HA	40:BT:77:PRO:HD3	1.81	0.43
43:BW:45:TYR:HD2	43:BW:46:PHE:CD1	2.37	0.43
27:BD:242:ARG:HD2	27:BD:242:ARG:N	2.33	0.43
46:AZ:119:GLU:O	46:AZ:121:HIS:N	2.52	0.43
52:B5:35:GLU:O	52:B5:36:CYS:SG	2.77	0.43
49:A2:50:ILE:C	49:A2:52:ASP:N	2.71	0.43
48:A1:45:ASN:CG	57:AA:2230:G:H1'	2.39	0.43
57:BA:1403:C:O5'	57:BA:1403:C:H6	3.16	0.43
57:BA:2892:A:C8	57:BA:2893:G:H1'	2.53	0.43
35:AO:103:ALA:C	35:AO:105:GLU:N	2.70	0.43
57:AA:696:G:O2'	57:AA:697:C:H5'	2.19	0.43
29:AF:129:PHE:CE2	29:AF:163:VAL:HG11	2.53	0.43
48:A1:73:LEU:HD12	48:A1:94:LEU:HD12	1.99	0.43
57:BA:2350:C:O2'	57:BA:2351:G:H5'	2.19	0.43
35:BO:111:PHE:O	35:BO:115:VAL:HG23	2.19	0.43
57:BA:315:G:H2'	57:BA:316:C:H6	1.76	0.43
48:B1:86:SER:CB	48:B1:89:GLU:HB2	2.46	0.43
57:BA:469:G:O2'	57:BA:470:A:H5''	2.19	0.43
29:BF:165:ARG:HB2	29:BF:165:ARG:NH1	2.34	0.43
57:AA:1831:G:C6	57:AA:1832:C:N4	2.87	0.43
56:A9:15:LYS:NZ	57:AA:2753:A:H1'	2.34	0.43
57:AA:950:G:C6	57:AA:951:C:C4	3.07	0.43
57:AA:1411:C:O2'	57:AA:1412:A:H5'	2.19	0.43
52:A5:29:THR:CG2	57:AA:2814:C:O2'	2.66	0.43
56:A9:10:ILE:HD12	56:A9:32:HIS:CG	2.54	0.43
33:BJ:125:LEU:C	33:BJ:127:GLU:H	2.20	0.43
56:A9:7:VAL:HG21	56:A9:36:GLN:HB2	2.00	0.43
58:BB:62:C:C2	58:BB:63:G:C8	3.06	0.43
57:AA:669:G:N3	57:AA:669:G:H2'	2.33	0.43
44:AX:58:HIS:HD2	57:AA:1601:G:OP2	2.02	0.43
57:AA:2547:U:H2'	57:AA:2548:G:C8	2.54	0.43
57:AA:2740:A:C6	57:AA:2764:A:C8	3.07	0.43
57:BA:1814:G:H2'	57:BA:1815:A:C8	2.53	0.43
57:BA:2668:G:O2'	57:BA:2669:G:H5'	2.18	0.43
56:A9:9:ARG:CZ	56:A9:16:VAL:HG23	2.47	0.43
53:A6:11:LEU:H	53:A6:11:LEU:HD13	1.83	0.43
55:A8:50:LEU:O	55:A8:51:ALA:CB	2.65	0.43
57:AA:1176:G:O2'	57:AA:1177:A:H5'	2.19	0.43
58:AB:38:C:N4	58:AB:44:G:H1	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:918:A:H1'	58:AB:80:U:O2'	2.19	0.43
27:AD:35:LYS:HG2	27:AD:63:ARG:HA	2.00	0.43
28:AE:24:THR:HG21	28:AE:188:VAL:CG1	2.48	0.43
29:AF:185:ASP:HA	29:AF:188:ARG:CG	2.49	0.43
31:AH:83:TYR:N	31:AH:83:TYR:CD2	2.86	0.43
32:AI:87:LYS:CE	32:AI:121:LYS:HG3	2.47	0.43
32:AI:68:LEU:HG	32:AI:72:LEU:CG	2.49	0.43
34:AN:28:THR:HG22	34:AN:29:LYS:N	2.33	0.43
35:AO:5:GLN:NE2	35:AO:20:MET:CE	2.82	0.43
35:AO:7:TYR:CE1	35:AO:44:LYS:HG3	2.54	0.43
35:AO:8:LEU:HD22	35:AO:8:LEU:N	2.34	0.43
36:AP:61:ARG:N	36:AP:61:ARG:HD2	2.33	0.43
42:AV:34:GLU:O	42:AV:36:PRO:CD	2.67	0.43
43:AW:70:TYR:O	43:AW:107:LEU:HA	2.19	0.43
43:AW:12:ILE:HB	43:AW:42:ARG:HH12	1.82	0.43
45:AY:95:LYS:CE	45:AY:101:LYS:H	2.27	0.43
51:B4:47:GLN:HB3	51:B4:48:ARG:H	1.73	0.43
53:B6:15:GLU:C	53:B6:16:CYS:O	2.54	0.43
57:BA:999:U:H5'	57:BA:1154:G:O6	2.19	0.43
57:BA:1360:A:H5'	57:BA:1361:G:OP2	2.19	0.43
57:BA:2202:C:H2'	57:BA:2203:U:O4'	2.18	0.43
40:BT:119:LYS:NZ	57:BA:2867:G:OP2	2.46	0.43
57:BA:675:A:C8	57:BA:804:A:C6	3.07	0.43
26:BC:177:GLY:O	26:BC:178:LYS:HD2	2.19	0.43
26:BC:11:LEU:HD13	26:BC:33:LEU:O	2.18	0.43
27:BD:182:LEU:N	27:BD:272:ALA:HB3	2.34	0.43
27:BD:30:GLU:CG	27:BD:63:ARG:CZ	2.96	0.43
28:BE:24:THR:HG22	28:BE:186:GLY:HA2	2.00	0.43
30:BG:128:ARG:O	30:BG:129:GLY:O	2.37	0.43
30:BG:38:VAL:HG11	57:BA:2314:C:H5'	2.01	0.43
30:BG:90:LEU:HD12	30:BG:91:ARG:H	1.84	0.43
32:BI:118:LYS:HZ2	32:BI:119:PRO:N	2.17	0.43
34:BN:56:ASN:H	34:BN:126:PRO:HA	1.84	0.43
40:BT:55:ASN:ND2	40:BT:58:ASN:HD21	2.17	0.43
41:BU:53:ARG:HA	41:BU:56:ASP:OD2	2.18	0.43
43:BW:31:GLU:O	43:BW:35:ILE:HG12	2.18	0.43
45:BY:14:LEU:HG	45:BY:15:VAL:O	2.18	0.43
45:BY:50:ARG:HG3	57:BA:484:C:OP1	2.19	0.43
45:BY:52:SER:N	45:BY:53:PRO:HD2	2.33	0.43
57:BA:1858:G:O2'	57:BA:1884:A:N6	2.52	0.43
46:BZ:70:LEU:HD23	46:BZ:70:LEU:HA	1.90	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BZ:167:PRO:O	46:BZ:168:GLU:HB2	2.19	0.43
27:AD:259:THR:HG21	57:AA:1803:A:C4'	2.45	0.43
46:AZ:35:ARG:HB3	46:AZ:35:ARG:CZ	2.49	0.43
57:BA:1542:A:C8	57:BA:1544:A:H5''	2.53	0.43
57:BA:2521:C:O2	57:BA:2521:C:H2'	2.18	0.43
57:AA:1478:G:C2	57:AA:1479:G:C8	3.07	0.43
57:AA:275:G:H5''	57:AA:275:G:N3	2.32	0.43
57:BA:1385:G:H4'	57:BA:1386:C:OP1	2.19	0.43
46:AZ:140:ASP:O	46:AZ:141:VAL:C	2.57	0.43
57:BA:638:G:H2'	57:BA:639:U:C6	2.54	0.43
46:AZ:10:ARG:HH21	46:AZ:26:GLY:H	1.66	0.43
57:BA:2476:A:O2'	57:BA:2477:C:H5''	2.18	0.43
44:AX:60:ARG:NH2	54:A7:47:ARG:HH11	2.15	0.43
34:BN:78:TYR:N	34:BN:78:TYR:CD1	2.87	0.43
57:AA:2481:G:C2'	57:AA:2482:G:OP2	2.66	0.43
44:AX:70:LEU:HD23	44:AX:71:GLY:N	2.34	0.43
57:AA:2532:G:O2'	57:AA:2657:A:N6	2.48	0.43
58:BB:10:C:H6	58:BB:10:C:O5'	2.02	0.43
57:BA:2439:A:H5'	57:BA:2439:A:C8	2.54	0.43
56:A9:11:CYS:SG	56:A9:12:ASP:N	2.92	0.43
57:AA:1636:C:H2'	57:AA:1637:A:C8	2.54	0.43
57:AA:1637:A:H4'	57:AA:2711:A:O2'	2.19	0.43
54:A7:13:ALA:O	54:A7:17:GLY:HA3	2.19	0.43
57:BA:1443:G:N2	57:BA:1460:A:H1'	13.75	0.43
57:BA:1937:A:C8	57:BA:1939:U:H2'	2.54	0.43
48:A1:8:SER:HB3	48:A1:66:HIS:CE1	2.54	0.43
57:AA:1145:C:H2'	57:AA:1146:C:H6	1.84	0.43
57:AA:1269:A:C2	57:AA:1313:U:H1'	28.84	0.43
57:AA:1313:U:H2'	57:AA:1610:A:N1	2.34	0.43
57:AA:1316:U:O2'	57:AA:1317:A:H5'	2.19	0.43
57:AA:1311:G:N2	57:AA:1327:C:C2	32.96	0.43
57:AA:1360:A:H5'	57:AA:1361:G:OP2	2.19	0.43
57:AA:20:C:O2'	57:AA:21:A:H5'	2.18	0.43
57:AA:2654:A:H62	57:AA:2667:C:N4	2.17	0.43
57:AA:267:C:H2'	57:AA:268:C:H6	2.05	0.43
57:AA:26:G:O2'	57:AA:27:G:H5'	2.19	0.43
57:AA:269:U:H1'	57:AA:424:G:N2	2.34	0.43
57:AA:887:A:N3	57:AA:889:C:OP2	2.52	0.43
58:AB:13:A:H2'	58:AB:70:C:O2'	2.19	0.43
26:AC:167:ASP:OD1	26:AC:169:THR:N	2.49	0.43
28:AE:134:ILE:HD13	57:AA:2579:C:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:AG:34:LEU:CD1	30:AG:172:LEU:HD11	2.49	0.43
32:AI:1:MET:HG3	32:AI:23:PRO:HG3	2.00	0.43
32:AI:85:GLU:O	32:AI:123:LEU:HD13	2.19	0.43
36:AP:123:LEU:HD12	36:AP:123:LEU:O	2.19	0.43
37:AQ:35:VAL:CG1	37:AQ:130:LYS:HB3	2.49	0.43
39:AS:35:ILE:CG2	39:AS:53:SER:HB2	2.49	0.43
39:AS:54:LEU:HD13	39:AS:57:LYS:HD2	2.01	0.43
40:AT:10:VAL:O	40:AT:13:ARG:CG	2.66	0.43
41:AU:112:ARG:CZ	42:AV:46:VAL:HG11	2.48	0.43
43:AW:65:LEU:HD23	43:AW:68:ARG:CD	2.49	0.43
45:AY:32:PRO:O	45:AY:35:TYR:N	2.38	0.43
45:AY:62:GLU:OE2	45:AY:63:LYS:O	2.37	0.43
51:B4:11:PRO:O	51:B4:29:PRO:HG3	2.19	0.43
57:BA:1039:G:N1	57:BA:1040:C:N4	2.67	0.43
57:BA:1045:A:H5''	57:BA:1047:G:N3	2.33	0.43
57:BA:1145:C:H2'	57:BA:1146:C:H6	1.83	0.43
57:BA:1411:C:O2'	57:BA:1412:A:H5'	2.19	0.43
57:BA:191:A:H2'	57:BA:192:C:H6	1.83	0.43
57:BA:27:G:N2	57:BA:513:A:OP2	2.52	0.43
58:BB:28:C:H2'	58:BB:29:A:C8	2.54	0.43
58:BB:55:U:H2'	58:BB:56:G:H8	1.83	0.43
27:BD:119:ALA:HB2	27:BD:130:ALA:HB3	2.00	0.43
27:BD:65:ILE:HD11	27:BD:67:PHE:CD2	2.54	0.43
30:BG:100:TRP:C	30:BG:102:PHE:N	2.72	0.43
30:BG:118:ARG:HG2	30:BG:181:ARG:HG3	2.00	0.43
35:BO:49:ARG:HD3	35:BO:49:ARG:N	2.34	0.43
37:BQ:10:ARG:CB	37:BQ:10:ARG:NH1	2.78	0.43
39:BS:54:LEU:HD11	39:BS:57:LYS:HE3	2.00	0.43
39:BS:51:ALA:CB	39:BS:73:LEU:HB2	2.44	0.43
40:BT:120:ARG:HA	40:BT:123:GLN:OE1	2.18	0.43
35:BO:104:ARG:HE	40:BT:33:LYS:HD2	1.82	0.43
40:BT:65:LYS:HA	40:BT:65:LYS:NZ	2.33	0.43
43:BW:65:LEU:HD23	43:BW:68:ARG:HD2	2.00	0.43
27:AD:241:PRO:C	27:AD:242:ARG:HD2	2.39	0.43
42:BV:20:LEU:N	42:BV:20:LEU:HD12	2.34	0.43
31:BH:136:ILE:HG22	31:BH:136:ILE:O	2.18	0.43
31:BH:41:MET:HG3	31:BH:43:VAL:HG13	1.93	0.43
50:B3:8:LEU:HB2	50:B3:28:LEU:HD13	2.01	0.43
38:AR:98:LEU:O	38:AR:113:LEU:HD22	2.19	0.43
43:BW:96:ILE:HG12	57:BA:2012:G:O3'	2.19	0.43
57:AA:1472:A:H2'	57:AA:1473:G:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BO:103:ALA:C	35:BO:105:GLU:N	2.72	0.43
57:BA:848:G:O6	57:BA:928:G:H2'	2.19	0.43
57:BA:1679:U:C2'	57:BA:1680:U:H5'	2.49	0.43
57:AA:2182:G:H2'	57:AA:2183:C:H6	1.80	0.43
57:BA:569:U:H5'	57:BA:946:G:H1'	2.01	0.43
57:BA:2481:G:C2'	57:BA:2482:G:OP2	2.67	0.43
38:AR:7:GLY:O	38:AR:8:ARG:CB	2.67	0.43
57:AA:2562:U:C2'	57:AA:2563:U:H5'	2.49	0.43
57:BA:1573:G:H2'	57:BA:1574:C:H5'	2.00	0.43
57:AA:754:C:H3'	57:AA:754:C:O2	4.58	0.43
41:BU:62:ILE:HG12	41:BU:76:TYR:CE1	2.54	0.43
57:BA:1980:G:O2'	57:BA:1982:C:OP2	2.35	0.43
48:A1:25:LYS:HE3	48:A1:31:GLY:HA3	2.01	0.42
29:AF:99:TYR:CD2	57:AA:660:G:H5'	2.54	0.42
57:AA:70:G:H21	57:AA:71:A:H62	1.67	0.42
57:AA:828:U:O2	57:AA:828:U:H3'	2.18	0.42
57:AA:847:U:OP2	57:AA:928:G:O6	2.37	0.42
57:AA:889:C:O2'	57:AA:890:A:O5'	2.29	0.42
50:A3:17:LYS:HG2	57:AA:969:U:OP1	2.19	0.42
27:AD:206:LEU:HA	27:AD:206:LEU:HD23	1.75	0.42
28:AE:32:PRO:O	28:AE:34:VAL:N	2.52	0.42
28:AE:62:PRO:C	28:AE:64:LYS:H	2.22	0.42
29:AF:65:TRP:CZ3	29:AF:72:ARG:HB3	2.54	0.42
30:AG:28:VAL:C	30:AG:30:GLU:N	2.73	0.42
31:AH:148:ILE:O	31:AH:151:ILE:HG12	2.18	0.42
36:AP:125:VAL:HG22	36:AP:125:VAL:O	2.18	0.42
37:AQ:21:THR:CG2	37:AQ:21:THR:O	2.66	0.42
38:AR:33:ARG:HD2	38:AR:33:ARG:N	2.33	0.42
38:AR:67:LEU:HD13	38:AR:67:LEU:O	2.19	0.42
39:AS:108:GLY:HA3	57:AA:2376:A:O2'	2.20	0.42
39:AS:27:SER:HA	39:AS:88:ASP:HB3	2.01	0.42
41:AU:95:LEU:HD13	42:AV:4:ILE:CG2	2.49	0.42
43:AW:20:VAL:O	43:AW:23:LEU:N	2.52	0.42
43:AW:65:LEU:HD23	43:AW:68:ARG:HD2	2.01	0.42
44:AX:12:VAL:HG23	44:AX:13:LEU:N	2.29	0.42
44:AX:18:TYR:O	44:AX:21:PHE:HB2	2.19	0.42
53:B6:24:GLU:OE2	53:B6:37:ARG:NH2	2.52	0.42
57:BA:1037:G:H1	57:BA:1118:C:N4	2.16	0.42
57:BA:1048:A:N6	57:BA:1106:A:N6	2.67	0.42
57:BA:1281:G:C8	57:BA:1281:G:H5'	2.54	0.42
57:BA:1288:U:C2	57:BA:1327:C:O2	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:19:C:O2'	57:BA:20:C:H5'	2.19	0.42
37:BQ:9:TYR:OH	57:BA:911:A:H2'	2.19	0.42
28:BE:47:VAL:HG22	28:BE:49:LEU:CD2	2.49	0.42
29:BF:169:ASN:HB2	57:BA:322:A:P	2.59	0.42
29:BF:4:VAL:HG13	29:BF:19:GLU:OE2	2.19	0.42
29:BF:4:VAL:HG22	29:BF:19:GLU:CD	2.39	0.42
30:BG:130:ASN:HD22	30:BG:160:VAL:HA	1.84	0.42
32:BI:129:THR:HG23	32:BI:136:VAL:C	2.39	0.42
34:BN:126:PRO:O	34:BN:127:ASP:HB2	2.18	0.42
36:BP:17:LYS:C	36:BP:19:VAL:H	2.22	0.42
40:BT:31:SER:OG	40:BT:43:GLN:N	2.47	0.42
40:BT:55:ASN:H	40:BT:59:THR:CG2	2.31	0.42
43:BW:4:LYS:HG2	43:BW:5:ALA:N	2.34	0.42
45:BY:15:VAL:CG1	45:BY:16:ALA:N	2.82	0.42
30:AG:163:ALA:HB3	30:AG:169:ALA:HB2	2.01	0.42
46:AZ:167:PRO:O	46:AZ:168:GLU:HB2	2.19	0.42
52:A5:51:TYR:O	52:A5:53:ALA:N	2.50	0.42
52:B5:40:LYS:HD3	52:B5:46:CYS:HB3	2.00	0.42
57:AA:1536:C:O2'	57:AA:1537:G:H5'	2.19	0.42
35:AO:49:ARG:NH2	57:AA:1422:G:O3'	99.58	0.42
57:BA:2307:G:OP1	57:BA:2307:G:H4'	2.19	0.42
57:AA:158:U:H2'	57:AA:171:G:O5'	2.19	0.42
41:AU:108:GLU:HG3	42:AV:44:LYS:HZ2	1.84	0.42
57:BA:635:C:O2'	57:BA:636:G:H5'	2.19	0.42
46:AZ:44:PHE:CD1	46:AZ:44:PHE:C	2.92	0.42
44:BX:29:TRP:CZ3	44:BX:59:VAL:HG21	2.53	0.42
34:BN:115:ARG:O	34:BN:118:LYS:HB2	2.19	0.42
57:AA:635:C:O2'	57:AA:636:G:H5'	2.19	0.42
36:AP:117:GLU:OE2	57:AA:637:A:H2'	2.19	0.42
37:BQ:109:VAL:HG11	37:BQ:113:GLN:HB3	2.01	0.42
27:AD:262:ARG:HD3	57:AA:2086:U:OP1	2.19	0.42
57:BA:718:A:H2'	57:BA:719:C:O4'	2.19	0.42
57:BA:418:G:O2'	57:BA:419:C:H5'	2.19	0.42
58:AB:60:C:C2	58:AB:61:G:C8	3.07	0.42
57:AA:231:C:C5	57:AA:232:G:C6	3.07	0.42
29:AF:113:ALA:HB1	29:AF:186:ILE:HG21	2.01	0.42
52:A5:29:THR:HG21	57:AA:2814:C:O2'	2.19	0.42
57:AA:1907:G:C6	57:AA:1908:C:C4	3.07	0.42
57:AA:2553:G:H2'	57:AA:2554:U:C4'	2.49	0.42
30:AG:165:THR:C	30:AG:167:GLU:N	2.72	0.42
57:AA:1572:A:O2'	57:AA:1573:G:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2150:U:H2'	57:BA:2151:G:C8	2.53	0.42
57:BA:2619:C:O2'	57:BA:2620:C:H5'	2.18	0.42
28:AE:81:ILE:O	28:AE:81:ILE:HG22	2.19	0.42
57:BA:2682:U:H6	57:BA:2682:U:H5'	1.84	0.42
57:AA:1814:G:H2'	57:AA:1815:A:C8	2.53	0.42
48:B1:23:LYS:HD3	48:B1:28:GLY:HA3	2.01	0.42
57:AA:2602:A:H4'	57:AA:2603:G:C5'	2.48	0.42
52:B5:26:THR:O	52:B5:26:THR:HG23	2.18	0.42
47:A0:36:ILE:HG13	47:A0:36:ILE:O	2.19	0.42
57:AA:987:G:O2'	57:AA:1000:A:N3	2.44	0.42
57:AA:1107:G:H2'	57:AA:1108:U:O5'	2.19	0.42
57:AA:2164:C:H2'	57:AA:2165:G:H5'	2.01	0.42
30:AG:71:THR:CG2	57:AA:2312:U:H4'	2.47	0.42
29:AF:169:ASN:HD21	57:AA:323:G:H5'	1.84	0.42
57:AA:444:C:O2'	57:AA:445:C:H5'	2.19	0.42
57:AA:660:G:O2'	57:AA:661:C:H5'	2.18	0.42
26:AC:185:LYS:HA	26:AC:188:ASP:OD2	2.18	0.42
28:AE:73:GLU:HA	28:AE:74:PRO:HD3	1.71	0.42
30:AG:117:PHE:HZ	30:AG:120:LEU:HD23	1.84	0.42
31:AH:41:MET:HG3	31:AH:43:VAL:N	2.33	0.42
34:AN:48:MET:N	34:AN:48:MET:HE3	2.30	0.42
34:AN:56:ASN:H	34:AN:126:PRO:HA	1.85	0.42
36:AP:95:VAL:CG2	36:AP:125:VAL:HG23	2.49	0.42
36:AP:60:MET:O	57:AA:2393:A:O4'	2.36	0.42
51:B4:7:PRO:O	51:B4:8:LYS:HB3	2.18	0.42
57:BA:1217:C:H2'	57:BA:1218:C:O4'	2.63	0.42
57:BA:21:A:H2'	57:BA:22:C:C6	2.54	0.42
57:BA:511:U:C5	57:BA:512:G:C5	3.07	0.42
26:BC:216:THR:HB	26:BC:222:SER:CA	2.46	0.42
27:BD:101:GLU:HG2	27:BD:102:LYS:N	2.34	0.42
27:BD:158:ALA:HB3	27:BD:161:THR:CG2	2.49	0.42
29:BF:28:ILE:O	29:BF:30:PRO:HD3	2.19	0.42
29:BF:45:ARG:HD2	57:BA:443:A:C5	2.53	0.42
30:BG:104:GLU:C	30:BG:106:LEU:H	2.23	0.42
30:BG:111:LEU:N	30:BG:112:PRO:CD	2.83	0.42
31:BH:88:LEU:HD21	31:BH:164:TYR:O	2.19	0.42
32:BI:133:HIS:CG	32:BI:133:HIS:O	2.72	0.42
36:BP:107:LYS:C	36:BP:108:LYS:HD2	2.39	0.42
44:BX:12:VAL:O	44:BX:13:LEU:HB2	2.18	0.42
57:BA:1882:C:H3'	57:BA:1883:G:H8	1.85	0.42
54:B7:5:TRP:CH2	57:BA:686:G:N7	2.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:59:ARG:O	37:BQ:60:ARG:HB2	2.19	0.42
37:BQ:60:ARG:NH1	37:BQ:60:ARG:HB2	2.32	0.42
43:AW:88:ARG:H	43:AW:93:ALA:H	1.67	0.42
50:B3:38:GLU:HB3	50:B3:39:ASP:H	1.69	0.42
57:AA:2585:U:O4'	57:AA:2585:U:O2	2.37	0.42
41:AU:53:ARG:HA	41:AU:56:ASP:OD2	2.18	0.42
57:BA:1638:C:H4'	57:BA:2710:C:O2	2.19	0.42
27:BD:201:HIS:C	27:BD:203:ASN:N	2.72	0.42
57:AA:2831:G:O4'	57:AA:2883:A:C2	2.71	0.42
57:AA:873:G:N2	57:AA:905:U:C2	2.87	0.42
29:BF:170:LEU:HA	29:BF:170:LEU:HD12	1.89	0.42
57:BA:2547:U:H2'	57:BA:2548:G:C8	2.54	0.42
52:B5:19:ARG:HG3	57:BA:2046:G:H5'	2.02	0.42
57:AA:1045:A:H5''	57:AA:1047:G:N3	2.35	0.42
57:AA:1178:C:H2'	57:AA:1179:C:H6	1.84	0.42
57:AA:195:A:H5''	57:AA:196:A:OP2	2.20	0.42
57:AA:2377:A:H2'	57:AA:2378:A:C8	2.54	0.42
57:AA:269:U:O2	57:AA:269:U:H2'	2.18	0.42
57:AA:829:A:N7	57:AA:2247:A:O2'	2.48	0.42
57:AA:853:G:O2'	57:AA:854:G:H5'	4.96	0.42
58:AB:90:A:C8	58:AB:91:C:O4'	2.72	0.42
26:AC:26:ALA:C	26:AC:28:ARG:H	2.21	0.42
27:AD:154:LYS:HE2	57:AA:1801:G:OP2	2.19	0.42
27:AD:24:ILE:O	27:AD:82:ILE:O	2.37	0.42
27:AD:32:SER:HA	27:AD:35:LYS:HZ3	1.84	0.42
27:AD:43:ARG:HH11	27:AD:44:ASN:HD21	1.68	0.42
38:AR:29:LEU:HA	38:AR:29:LEU:HD12	1.81	0.42
40:AT:64:ARG:HG2	40:AT:64:ARG:HH11	1.84	0.42
42:AV:2:PHE:HB3	42:AV:3:ALA:H	1.71	0.42
45:AY:50:ARG:O	45:AY:50:ARG:HD2	2.19	0.42
45:AY:89:PHE:O	45:AY:90:LEU:HB3	2.20	0.42
30:BG:65:GLY:O	51:B4:7:PRO:HD2	2.19	0.42
57:BA:2163:C:H2'	57:BA:2164:C:O4'	2.19	0.42
57:BA:709:U:H2'	57:BA:710:G:H8	1.84	0.42
26:BC:166:ASN:N	26:BC:172:ILE:HG13	2.34	0.42
30:BG:137:GLU:CD	30:BG:152:LEU:HD13	2.39	0.42
33:BJ:67:GLY:CA	33:BJ:72:ASP:HA	2.48	0.42
33:BJ:96:PHE:CB	33:BJ:131:MET:O	2.68	0.42
36:BP:57:THR:HB	36:BP:59:LEU:N	2.34	0.42
39:BS:66:ALA:O	39:BS:69:VAL:HG12	2.18	0.42
43:BW:65:LEU:HD23	43:BW:68:ARG:CD	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BY:67:LEU:HD11	45:BY:71:LYS:CB	2.49	0.42
45:BY:7:VAL:CB	45:BY:8:LYS:HD2	2.41	0.42
57:AA:747:U:O2	57:AA:2014:A:H1'	2.19	0.42
46:AZ:166:SER:H	46:AZ:167:PRO:HA	1.84	0.42
41:BU:33:ARG:C	41:BU:35:ALA:N	2.73	0.42
37:BQ:134:ARG:NH2	46:BZ:122:ARG:HD2	2.35	0.42
57:AA:2287:A:C2	57:AA:2346:A:C2	3.07	0.42
57:AA:1528:A:N1	57:AA:1542:A:H2	2.17	0.42
57:AA:2318:G:H2'	57:AA:2319:G:OP1	2.18	0.42
37:AQ:59:ARG:O	37:AQ:60:ARG:HB2	2.19	0.42
57:AA:68:G:H2'	57:AA:69:C:C6	2.53	0.42
49:A2:68:ARG:O	49:A2:70:GLN:N	2.43	0.42
46:AZ:40:ASP:HB3	46:AZ:43:GLU:OE1	2.20	0.42
57:BA:2864:G:O2'	57:BA:2865:U:H5'	2.19	0.42
49:B2:2:LYS:HE3	49:B2:2:LYS:HA	2.01	0.42
38:AR:13:HIS:O	38:AR:14:SER:C	2.58	0.42
48:A1:94:LEU:CD2	48:A1:94:LEU:N	2.81	0.42
57:BA:768:G:C4	57:BA:769:G:C8	3.08	0.42
57:AA:1721:G:H2'	57:AA:1741:A:H61	1.84	0.42
48:B1:51:VAL:O	48:B1:57:GLU:O	2.36	0.42
57:AA:1833:U:H2'	57:AA:1834:U:C6	2.47	0.42
34:AN:89:LYS:O	34:AN:93:THR:HG22	2.19	0.42
38:BR:7:GLY:O	38:BR:8:ARG:CB	2.67	0.42
57:AA:1862:G:O2'	57:AA:1863:G:H5'	2.19	0.42
46:BZ:127:LYS:NZ	46:BZ:127:LYS:HB3	2.34	0.42
48:A1:84:GLY:O	48:A1:86:SER:N	2.52	0.42
57:BA:380:U:H2'	57:BA:381:G:C8	2.54	0.42
53:A6:27:LYS:CD	53:A6:27:LYS:O	2.67	0.42
57:AA:1053:C:O2	57:AA:1106:A:C2	2.72	0.42
57:AA:860:U:O4'	57:AA:860:U:O2	2.35	0.42
27:AD:142:VAL:HG22	27:AD:143:HIS:N	2.35	0.42
30:AG:76:SER:C	30:AG:78:SER:H	2.23	0.42
34:AN:27:ALA:HB1	34:AN:103:VAL:HG22	2.01	0.42
37:AQ:21:THR:CG2	37:AQ:101:ARG:HB2	2.50	0.42
37:AQ:42:ILE:CG2	37:AQ:47:ILE:HG13	2.49	0.42
38:AR:85:PRO:O	38:AR:88:ARG:HB2	2.18	0.42
39:AS:51:ALA:HB2	39:AS:73:LEU:HA	2.00	0.42
40:AT:56:GLY:O	40:AT:59:THR:HG23	2.19	0.42
40:AT:65:LYS:NZ	40:AT:66:VAL:N	2.61	0.42
42:AV:39:LEU:C	42:AV:40:LEU:HD23	2.39	0.42
42:AV:82:ARG:NH1	42:AV:82:ARG:HG2	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:AX:12:VAL:CG1	44:AX:27:THR:OG1	2.67	0.42
45:AY:3:VAL:H	45:AY:5:MET:CE	2.32	0.42
45:AY:52:SER:N	45:AY:53:PRO:HD2	2.33	0.42
45:AY:67:LEU:HD11	45:AY:71:LYS:CB	2.49	0.42
45:AY:7:VAL:CG2	45:AY:8:LYS:HZ2	2.31	0.42
57:BA:1053:C:O2	57:BA:1106:A:C2	2.73	0.42
57:BA:1344:G:H4'	57:BA:1384:A:C5	2.55	0.42
57:BA:729:G:H2'	57:BA:1775:U:O2	2.20	0.42
57:BA:1817:G:C2'	57:BA:1818:U:H5'	2.49	0.42
55:B8:49:VAL:HG12	57:BA:2360:A:OP1	2.19	0.42
57:BA:373:U:H2'	57:BA:374:A:H8	1.83	0.42
57:BA:657:U:H2'	57:BA:658:C:C5	2.53	0.42
57:BA:70:G:H21	57:BA:71:A:H62	1.66	0.42
58:BB:96:U:H2'	58:BB:97:G:C8	2.55	0.42
27:BD:76:PRO:HA	27:BD:118:VAL:HB	2.01	0.42
28:BE:147:PRO:HB2	28:BE:149:ARG:HG2	2.01	0.42
30:BG:81:LYS:O	30:BG:83:ARG:HG3	2.20	0.42
32:BI:118:LYS:HB3	32:BI:118:LYS:HE3	1.89	0.42
36:BP:23:PRO:CD	36:BP:33:ARG:NH2	2.82	0.42
37:BQ:13:GLN:HG3	57:BA:910:A:N7	2.34	0.42
37:BQ:2:LEU:CD2	37:BQ:47:ILE:HG21	2.48	0.42
37:BQ:67:ARG:HG2	37:BQ:67:ARG:NH1	2.33	0.42
38:BR:52:ILE:HD13	38:BR:79:LEU:HD21	2.02	0.42
39:BS:24:LEU:CB	39:BS:85:VAL:HB	2.49	0.42
27:BD:222:ARG:O	27:BD:226:MET:HE2	2.20	0.42
37:AQ:137:TYR:O	37:AQ:138:ASP:OD1	2.38	0.42
57:BA:2791:C:N4	57:BA:2801:A:H8	2.17	0.42
46:BZ:81:ARG:CZ	46:BZ:81:ARG:HB3	2.45	0.42
46:BZ:136:PHE:O	46:BZ:136:PHE:CD1	2.73	0.42
46:AZ:175:VAL:HG23	46:AZ:176:PRO:O	2.19	0.42
41:AU:59:ARG:HG3	41:AU:59:ARG:HH11	1.84	0.42
49:A2:67:LYS:O	49:A2:68:ARG:C	2.57	0.42
57:AA:692:C:H2'	57:AA:693:C:C6	2.55	0.42
49:B2:18:PRO:O	49:B2:21:LEU:N	2.52	0.42
29:AF:34:TRP:CH2	36:AP:12:ALA:HB2	2.55	0.42
57:BA:444:C:O2'	57:BA:445:C:H5'	2.20	0.42
44:BX:29:TRP:HZ3	44:BX:59:VAL:HG21	1.84	0.42
57:AA:2735:G:N2	57:AA:2770:G:H1'	2.33	0.42
57:BA:1721:G:H2'	57:BA:1741:A:H61	1.83	0.42
42:AV:79:VAL:O	42:AV:80:GLN:HB2	2.18	0.42
37:BQ:110:THR:HG23	37:BQ:113:GLN:OE1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2087:G:O2'	57:AA:2088:G:H5'	2.18	0.42
57:AA:1274:A:N3	57:AA:1297:C:H1'	2.34	0.42
57:AA:53:A:H2'	57:AA:54:G:O4'	2.19	0.42
34:BN:89:LYS:O	34:BN:93:THR:HG22	2.19	0.42
53:B6:42:TRP:CH2	57:BA:643:A:N7	2.88	0.42
47:B0:40:GLN:HE21	47:B0:57:PHE:HB3	1.83	0.42
57:AA:2553:G:H2'	57:AA:2554:U:O4'	2.19	0.42
57:BA:1821:A:H2'	57:BA:1822:G:H8	1.85	0.42
57:BA:1682:G:H2'	57:BA:1683:C:C6	2.55	0.42
55:B8:37:SER:OG	55:B8:39:LYS:HB3	2.20	0.42
57:BA:2740:A:C6	57:BA:2764:A:C8	3.07	0.42
57:AA:1550:C:O2'	57:AA:1551:C:H5'	2.20	0.42
53:A6:29:ASN:O	53:A6:30:THR:C	2.58	0.42
55:A8:4:MET:HG2	55:A8:4:MET:H	1.63	0.42
57:AA:484:C:H2'	57:AA:485:C:H6	1.84	0.42
57:AA:673:C:H6	57:AA:673:C:C5'	2.21	0.42
27:AD:206:LEU:HA	27:AD:211:ARG:NH1	2.34	0.42
28:AE:116:VAL:HG22	28:AE:122:PHE:CG	2.54	0.42
29:AF:9:ILE:O	29:AF:128:ALA:HB2	2.20	0.42
30:AG:16:ARG:HG3	30:AG:16:ARG:NH1	2.33	0.42
30:AG:19:LEU:C	30:AG:21:ARG:H	2.23	0.42
31:AH:150:ALA:O	31:AH:151:ILE:C	2.57	0.42
36:AP:18:ARG:HG2	57:AA:661:C:H4'	2.02	0.42
39:AS:97:ARG:C	39:AS:97:ARG:NE	2.73	0.42
40:AT:19:LEU:HD22	40:AT:85:LYS:CG	2.49	0.42
41:AU:79:PHE:CD2	41:AU:83:LEU:HD21	2.55	0.42
41:AU:83:LEU:HB3	41:AU:88:ILE:HB	2.01	0.42
43:AW:62:HIS:O	43:AW:63:ASP:C	2.57	0.42
44:AX:56:THR:HG22	44:AX:79:ALA:HB2	2.00	0.42
49:B2:48:HIS:O	49:B2:49:LYS:C	2.57	0.42
55:B8:52:LYS:CE	57:BA:834:C:H4'	2.50	0.42
57:BA:1107:G:H2'	57:BA:1108:U:O5'	2.20	0.42
57:BA:1187:G:O5'	57:BA:1187:G:H8	2.01	0.42
57:BA:2652:C:H5'	57:BA:2653:U:OP2	2.19	0.42
57:BA:544:G:N2	57:BA:547:A:H2'	2.26	0.42
57:BA:887:A:N3	57:BA:889:C:OP2	2.53	0.42
27:BD:155:LEU:N	27:BD:155:LEU:HD12	2.35	0.42
27:BD:211:ARG:HH11	27:BD:211:ARG:HG3	1.85	0.42
27:BD:35:LYS:O	27:BD:37:LEU:HB2	2.20	0.42
29:BF:119:ARG:HH11	29:BF:119:ARG:CG	2.32	0.42
30:BG:130:ASN:HD22	30:BG:160:VAL:CG2	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:141:PHE:HA	30:BG:142:PRO:HD2	1.80	0.42
30:BG:16:ARG:HE	30:BG:31:VAL:CG1	2.33	0.42
36:BP:50:ARG:CG	36:BP:51:PHE:N	2.82	0.42
40:BT:24:PRO:HA	40:BT:49:VAL:HG13	2.02	0.42
40:BT:56:GLY:O	40:BT:59:THR:CG2	2.67	0.42
40:BT:90:GLN:NE2	40:BT:124:ASP:OD2	2.53	0.42
41:BU:10:ARG:O	41:BU:11:ARG:C	2.58	0.42
43:BW:75:TYR:CE2	43:BW:104:THR:CB	3.02	0.42
45:BY:40:GLU:HA	45:BY:64:GLU:OE2	2.20	0.42
46:BZ:14:LYS:O	46:BZ:15:PRO:C	2.58	0.42
57:BA:1846:G:C5'	57:BA:1846:G:H8	2.29	0.42
55:A8:33:ASN:N	55:A8:33:ASN:ND2	2.34	0.42
46:BZ:151:HIS:CD2	46:BZ:170:THR:HG23	2.55	0.42
57:BA:1269:A:C2	57:BA:1313:U:H1'	28.84	0.42
29:AF:176:LEU:HG	29:AF:177:ALA:O	2.20	0.42
57:AA:1528:A:N6	57:AA:1544:A:C2	2.88	0.42
50:B3:46:ASN:HD22	50:B3:46:ASN:HA	1.56	0.42
27:AD:231:HIS:ND1	27:AD:232:PRO:CD	2.82	0.42
57:BA:1835:G:N3	57:BA:1835:G:H2'	2.35	0.42
57:AA:2192:G:H2'	57:AA:2193:G:C5'	2.49	0.42
57:BA:1188:U:H2'	57:BA:1189:A:H5'	2.00	0.42
46:BZ:114:GLY:O	46:BZ:177:PRO:CG	2.67	0.42
57:AA:1680:U:H2'	57:AA:1681:G:O4'	2.19	0.42
57:AA:1762:A:H8	57:AA:1762:A:O5'	2.02	0.42
57:BA:1532:C:H2'	57:BA:1533:G:H5'	2.01	0.42
48:B1:39:LYS:NZ	57:BA:189:G:OP2	2.53	0.42
48:B1:73:LEU:CD1	48:B1:94:LEU:HB3	2.49	0.42
48:A1:67:ILE:HB	48:A1:68:PRO:HD3	2.00	0.42
57:BA:873:G:N2	57:BA:905:U:C2	2.88	0.42
57:BA:2082:A:H2'	57:BA:2083:G:O4'	2.19	0.42
57:AA:1862:G:H2'	57:AA:1863:G:H8	1.83	0.42
57:BA:1774:C:H4'	57:BA:1979:C:O2	2.20	0.42
57:BA:2540:C:H2'	57:BA:2541:A:O4'	2.18	0.42
57:BA:2095:C:H2'	57:BA:2096:U:O4'	2.19	0.42
47:A0:36:ILE:HD12	47:A0:38:VAL:H	1.83	0.42
57:AA:196:A:N3	57:AA:196:A:H2'	2.35	0.42
27:AD:151:LYS:HG3	57:AA:2203:U:O2'	2.20	0.42
57:AA:491:G:H2'	57:AA:492:A:C8	2.54	0.42
57:AA:70:G:H21	57:AA:71:A:N6	2.17	0.42
36:AP:55:ARG:NH1	57:AA:833:U:O2	2.53	0.42
26:AC:45:HIS:ND1	26:AC:173:HIS:CB	2.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AC:177:GLY:O	26:AC:178:LYS:HD2	2.20	0.42
26:AC:50:ILE:HD12	26:AC:50:ILE:O	2.20	0.42
28:AE:147:PRO:HB2	28:AE:149:ARG:HG2	2.01	0.42
32:AI:123:LEU:HD23	32:AI:142:VAL:HG12	2.02	0.42
32:AI:2:LYS:HD3	32:AI:20:ASP:CB	2.32	0.42
32:AI:44:LEU:HA	32:AI:44:LEU:HD12	1.85	0.42
32:AI:74:ASN:O	32:AI:76:THR:N	2.52	0.42
33:AJ:97:ALA:HA	33:AJ:132:ASP:HA	2.01	0.42
34:AN:68:GLU:N	34:AN:88:GLU:HG3	2.32	0.42
36:AP:42:SER:HB2	36:AP:43:GLY:H	1.70	0.42
37:AQ:54:MET:O	37:AQ:57:HIS:HB3	2.20	0.42
38:AR:63:ARG:HA	38:AR:80:PHE:CE2	2.55	0.42
39:AS:96:GLY:O	39:AS:98:VAL:N	2.52	0.42
40:AT:34:VAL:HG22	40:AT:39:ARG:HA	2.01	0.42
41:AU:69:CYS:HG	41:AU:79:PHE:HD1	1.66	0.42
43:AW:26:GLY:C	43:AW:27:LYS:HG2	2.39	0.42
57:BA:1120:G:H1	57:BA:1153:C:H42	34.89	0.42
57:BA:1210:A:H5''	57:BA:1212:G:H5'	2.01	0.42
57:BA:1357:U:O2'	57:BA:1358:G:H5'	2.18	0.42
26:BC:38:PHE:CE2	57:BA:2126:A:H5'	2.55	0.42
57:BA:2360:A:O2'	57:BA:2361:A:O5'	2.38	0.42
57:BA:2732:G:C3'	57:BA:2733:A:C5'	2.97	0.42
57:BA:83:G:N2	57:BA:102:G:H2'	2.34	0.42
57:BA:979:G:H3'	57:BA:980:A:C5'	2.49	0.42
26:BC:181:PHE:CD1	26:BC:181:PHE:N	2.84	0.42
26:BC:23:ILE:HG23	26:BC:190:ILE:HG21	2.02	0.42
27:BD:158:ALA:HB3	27:BD:161:THR:HG21	2.00	0.42
28:BE:176:ILE:HG22	28:BE:179:GLU:H	1.84	0.42
28:BE:199:ARG:HB2	28:BE:199:ARG:HH11	1.85	0.42
28:BE:73:GLU:HA	28:BE:74:PRO:HD3	1.70	0.42
29:BF:32:LEU:CD1	29:BF:105:VAL:HG13	2.49	0.42
30:BG:20:ILE:CG2	30:BG:25:TYR:HB2	2.49	0.42
30:BG:29:TRP:HB3	58:BB:57:A:N3	2.34	0.42
30:BG:58:GLN:HE21	30:BG:59:GLU:HG3	1.85	0.42
30:BG:97:ASP:N	30:BG:100:TRP:CD1	2.87	0.42
32:BI:120:ILE:HD11	32:BI:126:TYR:CD1	2.47	0.42
34:BN:5:VAL:HG23	34:BN:6:PRO:HD2	2.01	0.42
35:BO:26:LYS:HB2	35:BO:30:ALA:HB2	2.01	0.42
36:BP:61:ARG:HD2	36:BP:61:ARG:N	2.35	0.42
40:BT:34:VAL:HG12	40:BT:35:LYS:H	1.84	0.42
41:BU:95:LEU:HD12	42:BV:11:GLN:HB2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BW:35:ILE:O	43:BW:36:LEU:C	2.57	0.42
45:BY:52:SER:HB2	45:BY:53:PRO:HD3	2.00	0.42
45:BY:96:ILE:CD1	45:BY:99:CYS:SG	3.08	0.42
49:B2:12:GLU:O	49:B2:13:ALA:C	2.57	0.42
37:AQ:134:ARG:CZ	46:AZ:122:ARG:HH21	2.32	0.42
42:BV:19:LYS:NZ	42:BV:20:LEU:N	2.57	0.42
31:BH:41:MET:CE	31:BH:43:VAL:HG13	2.48	0.42
57:AA:2536:G:C6	57:AA:2537:U:C4	3.07	0.42
57:AA:1480:G:C6	57:AA:1481:U:C4	3.07	0.42
49:B2:22:GLU:O	49:B2:23:LYS:C	2.56	0.42
35:BO:7:TYR:CE1	35:BO:44:LYS:HG3	2.54	0.42
57:BA:2737:G:H2'	57:BA:2738:A:H8	1.84	0.42
57:BA:1722:A:C2	57:BA:1740:G:H2'	2.49	0.42
57:AA:2224:G:H4'	57:AA:2226:C:C2	2.53	0.42
34:BN:76:SER:C	34:BN:78:TYR:N	2.71	0.42
57:BA:1390:U:O2'	57:BA:1391:U:H5'	2.93	0.42
36:AP:75:ILE:N	36:AP:75:ILE:CD1	2.82	0.42
57:BA:292:C:O2'	57:BA:293:U:H5'	2.19	0.42
27:AD:263:ARG:HH11	27:AD:263:ARG:CB	2.33	0.42
57:BA:1763:G:H2'	57:BA:1764:G:C5'	2.49	0.42
57:BA:792:G:C5'	57:BA:793:A:H5'	2.49	0.42
46:AZ:7:ALA:C	46:AZ:8:TYR:CD1	2.93	0.42
44:AX:52:VAL:HG23	44:AX:84:ALA:HA	2.01	0.42
51:B4:39:CYS:O	51:B4:40:HIS:CG	2.72	0.42
57:BA:1750:G:H2'	57:BA:1751:C:H6	1.84	0.42
52:A5:19:ARG:HA	57:AA:2046:G:O5'	2.20	0.42
57:AA:2619:C:O2'	57:AA:2620:C:H5'	2.20	0.42
55:A8:19:SER:HB2	55:A8:21:LYS:HE3	2.01	0.42
57:BA:2048:G:C6	57:BA:2049:G:C5	3.07	0.42
48:A1:30:VAL:CG2	48:A1:31:GLY:N	2.79	0.42
57:AA:1217:C:H2'	57:AA:1218:C:O4'	2.61	0.42
57:AA:1368:G:C2	57:AA:1369:G:C8	3.08	0.42
57:AA:1407:C:H2'	57:AA:1407:C:O2	2.18	0.42
29:AF:169:ASN:HB2	57:AA:322:A:OP2	2.19	0.42
57:AA:481:G:C2'	57:AA:482:A:OP2	2.66	0.42
51:A4:3:GLU:CG	58:AB:43:C:OP1	2.61	0.42
46:AZ:85:HIS:HD1	58:AB:75:G:H21	1.67	0.42
29:AF:3:GLU:HB2	29:AF:24:LEU:HG	2.01	0.42
31:AH:7:LEU:HA	31:AH:8:PRO:HD3	1.72	0.42
32:AI:3:VAL:HG21	32:AI:21:VAL:HG22	2.02	0.42
34:AN:21:LYS:HD3	34:AN:26:LEU:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:AO:66:LYS:HD3	57:AA:1666:G:OP1	2.20	0.42
40:AT:45:PHE:CE1	40:AT:74:ARG:HG3	2.55	0.42
45:AY:2:ARG:HD3	45:AY:3:VAL:CG2	2.40	0.42
49:B2:42:GLY:O	49:B2:44:LEU:N	2.52	0.42
57:BA:1366:A:O2'	57:BA:1367:A:H5'	2.19	0.42
57:BA:266:G:O2'	57:BA:267:C:OP2	4.82	0.42
57:BA:271(Q):G:O2'	57:BA:271(R):G:H8	2.03	0.42
57:BA:327:G:O2'	57:BA:328:U:H5'	2.20	0.42
36:BP:70:GLN:HG3	57:BA:389:G:N1	2.35	0.42
57:BA:15:G:H1	57:BA:525:U:H3	1.65	0.42
57:BA:530:G:C2'	57:BA:530:G:N3	4.36	0.42
36:BP:18:ARG:HD2	57:BA:661:C:O3'	2.19	0.42
58:BB:17:C:H2'	58:BB:18:G:O4'	2.20	0.42
26:BC:7:ARG:HH22	26:BC:219:MET:CB	2.32	0.42
27:BD:7:LYS:HE3	57:BA:706:A:OP1	2.19	0.42
27:BD:24:ILE:O	27:BD:82:ILE:O	2.36	0.42
28:BE:137:HIS:CB	28:BE:138:PRO:HD2	2.49	0.42
29:BF:37:VAL:HG13	29:BF:184:TYR:CD1	2.55	0.42
29:BF:9:ILE:O	29:BF:128:ALA:HB2	2.20	0.42
30:BG:6:ALA:O	30:BG:7:LEU:C	2.57	0.42
30:BG:57:ALA:CB	30:BG:90:LEU:HD21	2.50	0.42
31:BH:83:TYR:HA	31:BH:135:GLY:N	2.27	0.42
32:BI:110:ASP:HB3	32:BI:111:PRO:HD2	2.01	0.42
33:BJ:80:VAL:C	33:BJ:82:PHE:N	2.73	0.42
33:BJ:85:ASP:O	33:BJ:86:PRO:O	2.37	0.42
35:BO:13:ASN:O	35:BO:15:GLY:N	2.52	0.42
36:BP:105:LEU:HG	57:BA:626:U:H3	1.85	0.42
36:BP:112:LEU:HD13	36:BP:112:LEU:C	2.40	0.42
39:BS:35:ILE:HG23	39:BS:35:ILE:O	2.19	0.42
40:BT:3:ARG:C	40:BT:5:ALA:H	2.21	0.42
42:BV:49:THR:O	42:BV:50:PRO:C	2.56	0.42
43:BW:64:MET:O	43:BW:65:LEU:CB	2.63	0.42
44:BX:23:GLU:C	44:BX:25:LYS:H	2.22	0.42
46:BZ:23:LYS:NZ	46:BZ:23:LYS:HA	2.34	0.42
27:AD:240:ALA:HB1	27:AD:241:PRO:CD	2.50	0.42
57:AA:2491:U:O2'	57:AA:2492:U:H5'	2.20	0.42
42:BV:21:ARG:CB	42:BV:91:TYR:HB2	2.48	0.42
38:AR:100:LEU:H	38:AR:100:LEU:CD2	2.12	0.42
31:AH:167:GLU:HB3	31:AH:168:PRO:HD2	2.02	0.42
57:AA:2807:G:N1	57:AA:2893:G:N1	2.65	0.42
57:BA:57:C:H2'	57:BA:58:G:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:58:PHE:CD1	37:BQ:58:PHE:O	2.69	0.42
57:AA:31:C:O2'	57:AA:32:C:H5'	2.19	0.42
50:A3:36:VAL:O	50:A3:36:VAL:HG23	2.18	0.42
57:BA:2807:G:C2'	57:BA:2808:U:H5''	2.50	0.42
57:AA:1721:G:H2'	57:AA:1741:A:N6	2.34	0.42
57:AA:1532:C:H2'	57:AA:1533:G:H5'	2.01	0.42
37:BQ:109:VAL:HG12	37:BQ:113:GLN:HB2	2.01	0.42
57:AA:1834:U:O3'	57:AA:1835:G:H8	2.02	0.42
57:AA:1865:G:H5'	57:AA:1866:C:P	2.59	0.42
44:BX:43:VAL:O	44:BX:44:GLU:C	2.57	0.42
57:BA:853:G:H2'	57:BA:854:G:H8	2.17	0.42
46:BZ:4:ARG:HD2	46:BZ:60:GLU:OE1	2.20	0.42
56:B9:15:LYS:NZ	57:BA:2753:A:H1'	2.35	0.42
43:AW:76:VAL:CG2	43:AW:101:SER:HB3	2.50	0.42
51:B4:19:GLY:O	51:B4:20:ASN:C	2.58	0.42
57:BA:2335:A:O2'	57:BA:2336:A:H5''	2.20	0.42
57:BA:1231:G:H2'	57:BA:1232:G:C8	2.54	0.42
57:BA:412:A:N3	57:BA:412:A:H2'	2.35	0.42
57:BA:2884:U:H2'	57:BA:2885:C:H5'	2.02	0.42
55:B8:31:HIS:ND1	55:B8:31:HIS:C	2.73	0.42
57:AA:2027:G:C6	57:AA:2028:U:C4	3.08	0.42
47:A0:32:ARG:O	47:A0:33:ALA:C	2.58	0.42
48:A1:8:SER:OG	48:A1:10:LYS:HG3	2.20	0.42
51:A4:7:PRO:O	51:A4:8:LYS:HB3	2.20	0.42
57:AA:1019:U:H3	57:AA:1142(A):A:N6	2.04	0.42
57:AA:1048:A:N6	57:AA:1106:A:H62	2.17	0.42
57:AA:1278:A:H2'	57:AA:1279:G:C8	2.55	0.42
57:AA:1484:G:H21	57:AA:1505:C:N4	2.18	0.42
57:AA:1419:A:C8	57:AA:1579:A:N6	2.88	0.42
57:AA:2202:C:H2'	57:AA:2203:U:O4'	2.20	0.42
40:AT:119:LYS:NZ	57:AA:2867:G:OP2	2.44	0.42
57:AA:541:C:O2'	57:AA:542:C:H5'	2.19	0.42
29:AF:90:PHE:HB3	57:AA:588:U:H1'	2.00	0.42
57:AA:612:C:C2	57:AA:616:G:N2	2.88	0.42
58:AB:65:C:C2'	58:AB:66:A:H5'	2.50	0.42
58:AB:79:C:H2'	58:AB:80:U:O4'	2.20	0.42
27:AD:67:PHE:CE1	27:AD:157:ARG:CZ	3.03	0.42
27:AD:65:ILE:HD11	27:AD:67:PHE:CE1	2.55	0.42
27:AD:65:ILE:HD11	27:AD:67:PHE:CD2	2.54	0.42
30:AG:17:PRO:C	30:AG:19:LEU:N	2.71	0.42
30:AG:34:LEU:HD11	30:AG:172:LEU:HD21	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:AG:58:GLN:O	30:AG:61:ALA:HB3	2.19	0.42
32:AI:119:PRO:O	32:AI:121:LYS:HB2	2.19	0.42
37:AQ:67:ARG:NH1	37:AQ:67:ARG:HG2	2.34	0.42
38:AR:32:GLY:HA2	38:AR:116:LEU:HD12	2.01	0.42
40:AT:98:LYS:HZ3	57:AA:2847:U:P	2.43	0.42
42:AV:40:LEU:N	42:AV:40:LEU:HD22	2.34	0.42
42:AV:5:VAL:HG21	42:AV:35:LEU:CG	2.49	0.42
43:AW:28:SER:O	43:AW:30:GLU:N	2.53	0.42
57:BA:1144:G:C2	57:BA:1145:C:N3	3.78	0.42
57:BA:1491:G:N2	57:BA:1913:A:H61	106.00	0.42
57:BA:2784:C:O2'	57:BA:2785:C:H5'	2.20	0.42
39:BS:63:THR:HG23	58:BB:50:G:P	2.59	0.42
27:BD:145:VAL:HG22	27:BD:191:ALA:HB1	2.00	0.42
28:BE:203:LYS:C	28:BE:203:LYS:HD2	2.40	0.42
28:BE:33:VAL:HG23	28:BE:47:VAL:HG23	2.00	0.42
30:BG:61:ALA:O	30:BG:65:GLY:N	2.47	0.42
31:BH:83:TYR:HA	31:BH:135:GLY:O	2.20	0.42
32:BI:74:ASN:O	32:BI:76:THR:N	2.52	0.42
32:BI:76:THR:OG1	32:BI:139:GLN:NE2	2.53	0.42
34:BN:43:THR:HA	34:BN:44:PRO:HD2	1.77	0.42
36:BP:16:ARG:CG	36:BP:17:LYS:N	2.83	0.42
37:BQ:43:THR:OG1	37:BQ:45:GLN:HG2	2.19	0.42
39:BS:83:LYS:NZ	39:BS:105:ALA:CB	2.83	0.42
40:BT:20:PRO:HD2	40:BT:85:LYS:HB2	2.01	0.42
41:BU:8:VAL:HG22	41:BU:12:ARG:HG2	2.01	0.42
42:BV:6:LYS:O	42:BV:37:VAL:HB	2.19	0.42
45:BY:22:GLY:O	45:BY:23:ARG:HG2	2.20	0.42
57:BA:2491:U:H5'	57:BA:2570:G:C5'	2.20	0.42
52:B5:51:TYR:CD1	52:B5:52:TYR:N	2.83	0.42
57:BA:1270:C:O2'	57:BA:1314:C:H5'	26.14	0.42
57:AA:1447:G:H2'	57:AA:1448:G:H8	1.85	0.42
57:BA:473:G:H2'	57:BA:474:G:C8	3.57	0.42
34:BN:118:LYS:O	34:BN:121:LYS:HE3	2.20	0.42
34:BN:99:LEU:O	34:BN:103:VAL:HG23	2.19	0.42
57:BA:1532:C:O2'	57:BA:1533:G:H5'	2.19	0.42
27:BD:263:ARG:HB2	27:BD:263:ARG:HH11	1.82	0.42
57:AA:118:A:H5'	57:AA:119:A:H8	1.84	0.42
51:A4:39:CYS:O	51:A4:40:HIS:CB	2.67	0.42
57:BA:2553:G:H2'	57:BA:2554:U:C4'	2.50	0.42
37:AQ:116:GLU:OE2	37:AQ:120:ILE:HD11	2.19	0.42
42:BV:68:LYS:HD3	42:BV:68:LYS:HA	1.90	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2432:A:H2'	57:AA:2433:A:C8	2.55	0.42
57:BA:431:U:O5'	57:BA:431:U:H6	2.03	0.42
57:BA:2637:U:C2'	57:BA:2638:G:H5'	2.50	0.42
57:AA:2459:A:C4	57:AA:2460:U:C6	3.08	0.42
51:A4:33:VAL:HG12	51:A4:35:VAL:H	1.85	0.42
57:AA:1441:G:O2'	57:AA:1442:G:H5'	2.19	0.42
57:AA:1657:C:O2'	57:AA:1658:C:H5'	2.19	0.42
57:AA:2283:C:H2'	57:AA:2284:C:H5'	2.02	0.42
57:AA:2360:A:C8	57:AA:2360:A:H5'	2.53	0.42
58:AB:87:G:H3'	58:AB:88:C:H5'	2.02	0.42
26:AC:3:LYS:O	26:AC:4:HIS:HD2	2.02	0.42
27:AD:28:GLU:OE1	27:AD:29:PRO:HD3	2.19	0.42
27:AD:37:LEU:HD23	27:AD:37:LEU:HA	1.82	0.42
28:AE:56:PRO:O	28:AE:58:ARG:N	2.52	0.42
30:AG:118:ARG:HH11	30:AG:118:ARG:CG	2.32	0.42
30:AG:123:ASN:HB2	30:AG:126:ASP:OD2	2.20	0.42
32:AI:83:ALA:HB3	32:AI:143:SER:O	2.20	0.42
35:AO:24:VAL:HG21	35:AO:33:ALA:HB2	1.99	0.42
36:AP:105:LEU:HG	57:AA:626:U:H3	1.84	0.42
37:AQ:43:THR:HB	37:AQ:45:GLN:NE2	2.11	0.42
43:AW:35:ILE:O	43:AW:36:LEU:C	2.57	0.42
43:AW:4:LYS:HG2	43:AW:5:ALA:N	2.35	0.42
53:B6:37:ARG:O	53:B6:48:VAL:O	2.37	0.42
57:BA:1409:C:N3	57:BA:1491:G:N1	41.30	0.42
55:B8:30:ARG:NH2	57:BA:2419:U:O4	2.52	0.42
57:BA:545:C:N4	57:BA:547:A:C2	2.85	0.42
57:BA:592:G:C2	57:BA:593:G:C8	3.59	0.42
57:BA:863:A:H8	57:BA:863:A:O5'	2.02	0.42
27:BD:142:VAL:HG22	27:BD:143:HIS:N	2.35	0.42
28:BE:77:ILE:HG22	28:BE:78:LEU:HD12	2.01	0.42
29:BF:9:ILE:HA	29:BF:13:SER:O	2.20	0.42
36:BP:59:LEU:HA	36:BP:61:ARG:NE	2.30	0.42
27:BD:226:MET:HB3	27:BD:230:ASP:CB	2.50	0.42
52:A5:3:LYS:HD3	57:AA:2613:U:H2'	2.01	0.42
46:AZ:102:LEU:HD11	46:AZ:124:ILE:CG2	2.41	0.42
46:AZ:129:SER:O	46:AZ:131:ARG:N	2.53	0.42
52:A5:51:TYR:CD1	52:A5:52:TYR:N	2.83	0.42
57:AA:145:G:H2'	57:AA:146:G:O4'	2.46	0.42
57:AA:401:A:H2'	57:AA:402:A:C8	2.54	0.42
34:BN:134:ARG:H	34:BN:135:PRO:HD3	1.85	0.42
49:B2:32:LEU:CD2	49:B2:53:LEU:HD13	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:272(E):G:N3	57:AA:364:C:N3	2.68	0.42
48:B1:52:ARG:NH1	57:BA:2218:U:O2	2.53	0.42
57:AA:1390:U:O2'	57:AA:1391:U:H5'	2.97	0.42
57:AA:1473:G:H2'	57:AA:1474:C:O4'	2.20	0.42
46:BZ:94:GLU:HB3	46:BZ:95:PRO:CD	2.43	0.42
43:AW:88:ARG:HD2	43:AW:88:ARG:HA	1.78	0.42
50:B3:43:ILE:O	50:B3:47:VAL:CG2	2.65	0.42
46:AZ:24:LEU:CD2	46:AZ:86:VAL:HG22	2.50	0.42
57:AA:2476:A:O2'	57:AA:2477:C:H5''	2.20	0.42
57:AA:1165:U:O2'	57:AA:1166:C:H5'	2.19	0.42
57:BA:1473:G:H2'	57:BA:1474:C:O4'	2.20	0.42
57:BA:718:A:C2'	57:BA:719:C:H5'	2.50	0.42
57:BA:2756:U:H4'	57:BA:2757:A:OP1	2.20	0.42
44:AX:52:VAL:N	44:AX:82:GLN:O	2.41	0.42
55:A8:37:SER:O	55:A8:40:GLU:N	2.52	0.42
49:B2:61:LEU:HD23	49:B2:61:LEU:HA	1.58	0.42
42:AV:83:ARG:HH11	42:AV:83:ARG:HG2	1.85	0.42
27:AD:85:ASP:HA	27:AD:86:PRO:HD2	1.89	0.42
48:B1:19:GLN:CB	48:B1:35:THR:HG23	2.49	0.42
31:AH:126:PRO:HG2	31:AH:127:GLU:H	1.84	0.42
57:AA:898:C:C2'	57:AA:899:A:H5'	2.49	0.42
57:AA:106:C:O5'	57:AA:106:C:H6	2.03	0.42
57:AA:1138:G:H2'	57:AA:1139:G:O4'	2.19	0.42
57:AA:70:G:C2'	57:AA:113:G:O2'	2.67	0.42
57:AA:662:G:H2'	57:AA:663:G:H8	1.84	0.42
26:AC:22:THR:H	26:AC:25:GLU:CG	2.33	0.42
29:AF:29:ASN:O	29:AF:30:PRO:C	2.58	0.42
31:AH:43:VAL:CG1	31:AH:52:VAL:HA	2.49	0.42
31:AH:52:VAL:HG12	31:AH:53:GLU:N	2.35	0.42
33:AJ:27:VAL:HA	33:AJ:111:LEU:O	2.20	0.42
36:AP:72:PRO:HD3	57:AA:389:G:H22	1.85	0.42
37:AQ:21:THR:O	37:AQ:22:LYS:HB3	2.20	0.42
38:AR:28:LEU:HD21	38:AR:114:VAL:HG12	2.01	0.42
39:AS:24:LEU:CB	39:AS:85:VAL:HB	2.50	0.42
40:AT:3:ARG:O	40:AT:4:GLY:C	2.58	0.42
43:AW:47:VAL:O	43:AW:50:VAL:HG12	2.19	0.42
53:B6:11:LEU:HD12	53:B6:26:ASN:HB2	2.01	0.42
55:B8:48:PHE:O	55:B8:49:VAL:CG1	2.67	0.42
57:BA:1419:A:C8	57:BA:1579:A:N6	2.88	0.42
57:BA:2053:G:H1	57:BA:2616:C:H42	1.68	0.42
57:BA:221:A:O2'	57:BA:222:A:OP2	2.30	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2287:A:C2	57:BA:2346:A:C2	3.07	0.42
57:BA:269:U:O2	57:BA:269:U:H2'	2.20	0.42
57:BA:909:A:H2'	57:BA:912:C:H5	1.84	0.42
58:BB:105:A:H2'	58:BB:106:G:H5'	2.01	0.42
58:BB:77:U:H2'	58:BB:78:A:H5'	2.01	0.42
58:BB:90:A:C8	58:BB:91:C:O4'	2.73	0.42
27:BD:114:GLY:O	27:BD:115:GLN:C	2.58	0.42
27:BD:161:THR:O	27:BD:162:SER:HB3	2.20	0.42
28:BE:132:HIS:CD2	28:BE:135:HIS:CE1	3.08	0.42
29:BF:32:LEU:HD22	29:BF:112:MET:HE3	2.02	0.42
30:BG:34:LEU:HD21	30:BG:103:LEU:CD1	2.50	0.42
30:BG:110:ALA:HA	30:BG:140:ILE:O	2.20	0.42
30:BG:27:ASN:C	30:BG:29:TRP:N	2.71	0.42
32:BI:88:ILE:HG12	32:BI:142:VAL:HG13	2.02	0.42
32:BI:37:VAL:CG1	32:BI:38:LEU:N	2.83	0.42
36:BP:18:ARG:HG2	57:BA:661:C:H4'	2.01	0.42
40:BT:30:VAL:CG1	40:BT:84:GLN:CG	2.98	0.42
40:BT:28:VAL:CG2	40:BT:47:GLY:H	2.23	0.42
40:BT:64:ARG:NH1	40:BT:103:ARG:HA	2.34	0.42
42:BV:15:GLU:CB	42:BV:16:PRO:CD	2.97	0.42
44:BX:20:GLY:O	44:BX:25:LYS:HB2	2.20	0.42
45:BY:28:LYS:C	45:BY:38:ILE:HG22	2.40	0.42
46:AZ:150:LEU:H	46:AZ:150:LEU:CD2	2.32	0.42
46:BZ:61:LEU:HA	46:BZ:62:PRO:HD3	1.87	0.42
50:B3:31:LEU:HD12	57:BA:1157:G:O2'	2.19	0.42
46:BZ:117:LEU:HD12	46:BZ:174:VAL:HG22	2.02	0.42
37:BQ:137:TYR:CE2	46:BZ:81:ARG:NH1	2.88	0.42
46:BZ:81:ARG:O	46:BZ:82:ARG:HB2	2.20	0.42
50:A3:31:LEU:HD12	57:AA:1157:G:O2'	2.20	0.42
52:B5:40:LYS:NZ	52:B5:46:CYS:CB	2.78	0.42
46:AZ:29:TYR:HD2	46:AZ:29:TYR:N	2.17	0.42
38:AR:17:ARG:HH11	38:AR:17:ARG:HD2	1.74	0.42
57:AA:2807:G:C2'	57:AA:2808:U:H5''	2.49	0.42
57:BA:1448:G:H2'	57:BA:1449:A:C8	2.55	0.42
57:BA:1528:A:N1	57:BA:1542:A:H2	2.18	0.42
30:BG:75:LYS:HB3	30:BG:76:SER:H	1.59	0.42
57:BA:68:G:H2'	57:BA:69:C:C6	2.54	0.42
57:AA:576:U:H2'	57:AA:577:G:C8	2.55	0.42
48:A1:50:ARG:HG3	57:AA:2200:C:OP1	2.20	0.42
57:BA:1957:C:H2'	57:BA:1958:C:C6	2.49	0.42
38:BR:96:ARG:HG3	57:BA:2882:A:H5'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BX:66:LEU:HD13	57:BA:64:A:C8	2.54	0.42
57:AA:2184:G:H2'	57:AA:2185:C:C6	2.55	0.42
57:BA:2184:G:H2'	57:BA:2185:C:C6	2.55	0.42
51:B4:27:THR:O	51:B4:28:LYS:HB3	2.20	0.42
57:AA:1794:U:H2'	57:AA:1795:C:C6	2.55	0.42
27:AD:201:HIS:C	27:AD:203:ASN:N	2.74	0.42
57:BA:2150:U:H2'	57:BA:2151:G:H8	1.85	0.42
57:BA:2070:G:C2	57:BA:2442:C:C2	3.08	0.42
41:AU:54:LYS:HE3	57:AA:994:C:C6	2.55	0.42
57:AA:933:A:H2'	57:AA:934:G:O4'	2.20	0.42
57:AA:412:A:N7	57:AA:2411:A:H2	2.18	0.42
49:A2:46:GLN:HG2	49:A2:49:LYS:CE	2.49	0.41
55:A8:49:VAL:HG12	57:AA:2360:A:OP1	2.20	0.41
57:AA:83:G:N2	57:AA:103:A:OP2	2.49	0.41
57:AA:1278:A:H2'	57:AA:1279:G:H8	1.85	0.41
57:AA:1577:C:H2'	57:AA:1578:U:C1'	2.50	0.41
57:AA:271(O):C:HO2'	57:AA:271(P):C:H6	1.54	0.41
38:AR:53:HIS:CD2	57:AA:2840:C:H4'	2.55	0.41
57:AA:545:C:C3'	57:AA:547:A:C5'	2.98	0.41
57:AA:602:G:C6	57:AA:654(U):A:N7	2.88	0.41
27:AD:270:ILE:H	27:AD:270:ILE:HD12	1.84	0.41
27:AD:35:LYS:O	27:AD:37:LEU:HB2	2.20	0.41
27:AD:61:LEU:HA	27:AD:61:LEU:HD12	1.84	0.41
28:AE:46:ALA:HB1	28:AE:82:ARG:H	1.85	0.41
30:AG:138:GLN:HE21	30:AG:149:VAL:HG23	1.85	0.41
30:AG:34:LEU:CD1	30:AG:34:LEU:N	2.81	0.41
30:AG:40:ASN:ND2	30:AG:41:GLN:N	2.65	0.41
30:AG:79:ASN:CG	57:AA:2308:G:N2	2.73	0.41
31:AH:11:VAL:HG12	31:AH:15:VAL:HG23	2.02	0.41
31:AH:23:ARG:O	31:AH:24:VAL:HB	2.19	0.41
31:AH:54:ARG:HD2	31:AH:56:SER:O	2.19	0.41
32:AI:94:ALA:HA	32:AI:98:ALA:HB3	2.02	0.41
34:AN:25:ARG:HD2	57:AA:1141:U:OP1	2.21	0.41
28:AE:19:ARG:HA	35:AO:73:ASP:HA	2.02	0.41
37:AQ:41:TRP:HB3	37:AQ:94:VAL:HB	2.01	0.41
37:AQ:47:ILE:CD1	37:AQ:70:PRO:HD3	2.50	0.41
39:AS:74:ALA:O	39:AS:77:ALA:HB3	2.20	0.41
51:B4:14:ILE:N	51:B4:14:ILE:CD1	2.80	0.41
55:B8:51:ALA:CA	55:B8:53:PRO:HD2	2.50	0.41
57:BA:1019:U:H3	57:BA:1142(A):A:N6	2.09	0.41
57:BA:1336:A:O2'	57:BA:1337:G:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1399:C:C2	57:BA:1401:G:C5	7.66	0.41
57:BA:221:A:N6	57:BA:265:A:H8	2.17	0.41
57:BA:271(Q):G:O2'	57:BA:271(R):G:P	2.77	0.41
57:BA:2821:A:H2'	57:BA:2822:G:O4'	2.19	0.41
57:BA:425:G:O2'	57:BA:426:C:H5'	2.20	0.41
57:BA:435:C:H2'	57:BA:435:C:O2	3.00	0.41
27:BD:198:ASN:ND2	27:BD:198:ASN:O	2.53	0.41
27:BD:28:GLU:OE1	27:BD:29:PRO:HD3	2.19	0.41
28:BE:64:LYS:HG2	28:BE:64:LYS:O	2.20	0.41
30:BG:130:ASN:ND2	30:BG:160:VAL:HA	2.35	0.41
30:BG:42:GLY:N	30:BG:43:LEU:HD22	2.34	0.41
30:BG:88:ILE:CG2	30:BG:89:GLY:N	2.80	0.41
31:BH:124:GLU:O	31:BH:131:VAL:HA	2.20	0.41
32:BI:74:ASN:ND2	32:BI:74:ASN:N	2.44	0.41
34:BN:55:VAL:O	34:BN:56:ASN:C	2.59	0.41
35:BO:104:ARG:HB3	35:BO:104:ARG:NH1	2.35	0.41
35:BO:26:LYS:HB2	35:BO:30:ALA:CB	2.50	0.41
38:BR:81:ASP:O	38:BR:82:GLU:HG3	2.20	0.41
40:BT:50:ILE:HG13	40:BT:102:ILE:HD11	2.02	0.41
40:BT:89:VAL:HG21	40:BT:91:ARG:CZ	2.50	0.41
41:BU:92:ARG:NH2	57:BA:996:A:OP2	2.53	0.41
41:BU:92:ARG:NH2	42:BV:10:LYS:HB3	2.34	0.41
45:BY:50:ARG:O	45:BY:50:ARG:HD2	2.20	0.41
45:BY:96:ILE:HD12	45:BY:100:ALA:O	2.19	0.41
57:BA:1858:G:HO2'	57:BA:1859:A:H8	1.63	0.41
47:A0:51:VAL:HG21	47:A0:80:HIS:HA	2.02	0.41
46:AZ:151:HIS:CB	46:AZ:170:THR:HA	2.37	0.41
47:B0:49:LYS:N	47:B0:80:HIS:HD1	2.17	0.41
57:BA:2318:G:H2'	57:BA:2319:G:OP1	2.19	0.41
35:BO:103:ALA:O	35:BO:105:GLU:N	2.52	0.41
57:AA:1640:C:O2'	57:AA:1641:A:H5'	2.20	0.41
57:BA:733:G:C8	57:BA:761:A:N6	2.88	0.41
57:AA:176:G:C2'	57:AA:177:G:H5'	2.48	0.41
57:AA:1889:A:H2'	57:AA:1890:A:O4'	2.20	0.41
46:AZ:8:TYR:HB2	46:AZ:38:TYR:CE2	2.55	0.41
43:AW:13:SER:O	43:AW:16:LYS:HB2	2.20	0.41
57:BA:2197:U:H1'	57:BA:2198:A:C8	2.55	0.41
57:BA:774:A:H2	57:BA:787:U:HO2'	1.64	0.41
57:BA:128:C:C6	57:BA:128:C:H3'	2.54	0.41
46:BZ:77:ASP:OD2	46:BZ:79:ARG:O	2.38	0.41
57:AA:2718:G:H2'	57:AA:2719:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:669:G:N3	57:BA:669:G:H2'	2.35	0.41
43:BW:79:GLY:C	43:BW:100:THR:CG2	2.88	0.41
41:BU:97:ASP:C	41:BU:99:ALA:N	2.73	0.41
57:AA:1980:G:O2'	57:AA:1982:C:OP2	2.34	0.41
57:BA:1637:A:H4'	57:BA:2711:A:O2'	2.20	0.41
29:BF:148:LEU:CD2	29:BF:191:ARG:HH11	2.33	0.41
48:A1:3:LYS:HG3	48:A1:4:VAL:N	2.34	0.41
57:AA:1210:A:O2'	57:AA:1211:U:OP2	2.38	0.41
57:AA:1204:A:H2	57:AA:1241:A:N1	2.18	0.41
57:AA:2307:G:H4'	57:AA:2307:G:OP1	2.20	0.41
28:AE:134:ILE:HD13	57:AA:2579:C:C1'	2.50	0.41
57:AA:271(R):G:O2'	57:AA:271(S):G:H5'	2.19	0.41
57:AA:272:G:H1'	57:AA:272(B):G:O5'	2.19	0.41
57:AA:435:C:O2	57:AA:435:C:H2'	3.03	0.41
57:AA:952:G:C6	57:AA:953:A:N7	2.87	0.41
26:AC:225:ILE:HD12	26:AC:225:ILE:O	2.19	0.41
27:AD:158:ALA:O	27:AD:159:ALA:C	2.58	0.41
29:AF:20:LEU:CB	29:AF:23:ASP:OD2	2.69	0.41
29:AF:8:GLN:O	29:AF:9:ILE:C	2.57	0.41
30:AG:27:ASN:O	30:AG:30:GLU:HB3	2.19	0.41
32:AI:101:LEU:O	32:AI:107:VAL:CG2	2.69	0.41
32:AI:127:VAL:HG22	32:AI:139:GLN:CA	2.50	0.41
32:AI:15:VAL:O	32:AI:17:GLN:N	2.53	0.41
32:AI:1:MET:HE3	32:AI:23:PRO:HA	2.02	0.41
32:AI:91:SER:N	32:AI:121:LYS:HZ2	2.18	0.41
34:AN:35:ARG:C	34:AN:37:LYS:N	2.72	0.41
36:AP:17:LYS:C	36:AP:19:VAL:H	2.24	0.41
37:AQ:14:ARG:NH1	37:AQ:14:ARG:HG2	2.35	0.41
39:AS:33:LYS:HE2	58:AB:27:C:OP2	2.19	0.41
40:AT:13:ARG:HH22	40:AT:15:VAL:CG2	2.33	0.41
40:AT:24:PRO:HA	40:AT:49:VAL:HG13	2.02	0.41
40:AT:48:ILE:O	40:AT:63:VAL:HA	2.21	0.41
43:AW:23:LEU:HD12	43:AW:23:LEU:HA	1.87	0.41
43:AW:5:ALA:O	57:AA:494:G:O2'	2.36	0.41
45:AY:2:ARG:O	45:AY:4:LYS:HG2	2.20	0.41
51:B4:25:TYR:N	51:B4:25:TYR:CD1	2.88	0.41
55:B8:53:PRO:HA	55:B8:56:GLU:OE1	2.20	0.41
43:BW:15:ARG:NH1	57:BA:1266:G:C8	2.88	0.41
57:BA:1278:A:H2'	57:BA:1279:G:C8	2.55	0.41
57:BA:1322:A:C5	57:BA:1323:U:C4	3.08	0.41
57:BA:2283:C:H2'	57:BA:2284:C:H5'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2415:G:C5	57:BA:2416:C:C4	3.07	0.41
57:BA:680:G:H2'	57:BA:681:G:C8	2.56	0.41
39:BS:63:THR:HG23	58:BB:50:G:OP1	2.20	0.41
58:BB:79:C:O2'	58:BB:80:U:H5'	2.21	0.41
58:BB:87:G:H1	58:BB:91:C:N4	2.17	0.41
26:BC:28:ARG:HH11	26:BC:28:ARG:HG3	1.85	0.41
27:BD:121:PRO:HA	27:BD:135:PHE:HD1	1.84	0.41
27:BD:206:LEU:HA	27:BD:211:ARG:NH1	2.35	0.41
28:BE:117:MET:O	28:BE:118:LYS:HB2	2.21	0.41
28:BE:27:LEU:HD12	28:BE:27:LEU:HA	1.90	0.41
28:BE:55:ASN:ND2	28:BE:75:VAL:HG22	2.34	0.41
29:BF:21:ALA:O	29:BF:23:ASP:N	2.53	0.41
30:BG:107:LEU:HD21	30:BG:178:PHE:CD2	2.56	0.41
30:BG:32:PRO:O	30:BG:33:ARG:HG3	2.20	0.41
32:BI:15:VAL:O	32:BI:17:GLN:N	2.53	0.41
33:BJ:118:THR:O	33:BJ:119:ALA:CB	2.67	0.41
34:BN:31:ALA:O	34:BN:34:LEU:HB2	2.20	0.41
34:BN:46:VAL:HG13	34:BN:47:ALA:N	2.35	0.41
36:BP:15:ARG:HD2	57:BA:597:U:O2'	2.20	0.41
36:BP:42:SER:HB2	36:BP:43:GLY:H	1.70	0.41
37:BQ:18:LYS:HE3	57:BA:862:G:OP1	2.19	0.41
39:BS:68:GLN:C	39:BS:70:GLY:N	2.74	0.41
40:BT:38:ASN:HD22	40:BT:40:THR:CB	2.32	0.41
41:BU:8:VAL:O	41:BU:10:ARG:N	2.54	0.41
42:BV:15:GLU:HB3	42:BV:16:PRO:CD	2.46	0.41
41:BU:112:ARG:CZ	42:BV:46:VAL:HG11	2.50	0.41
45:BY:45:VAL:HA	45:BY:62:GLU:HB2	2.03	0.41
27:AD:222:ARG:O	27:AD:226:MET:HE2	2.20	0.41
48:A1:57:GLU:O	48:A1:58:ILE:HG12	2.20	0.41
38:AR:100:LEU:HD11	38:AR:113:LEU:HB3	2.02	0.41
39:AS:41:ASP:O	39:AS:44:LYS:HB2	2.20	0.41
57:BA:2327:A:H2'	57:BA:2328:A:H8	1.75	0.41
48:B1:46:LEU:O	48:B1:46:LEU:CD2	2.67	0.41
46:BZ:180:VAL:C	46:BZ:182:LYS:N	2.62	0.41
46:AZ:111:VAL:C	46:AZ:113:ALA:N	2.72	0.41
54:A7:24:THR:HG23	54:A7:27:GLY:N	2.31	0.41
57:BA:2408:U:H2'	57:BA:2409:G:H8	1.80	0.41
57:BA:2752:C:H5'	57:BA:2753:A:OP2	2.19	0.41
57:BA:128:C:C3'	57:BA:128:C:C6	3.03	0.41
57:BA:412:A:N7	57:BA:2411:A:H2	2.17	0.41
57:AA:2516:G:C5	57:AA:2517:C:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BW:79:GLY:O	43:BW:100:THR:HG22	2.20	0.41
31:BH:150:ALA:O	31:BH:151:ILE:C	2.57	0.41
26:BC:211:ARG:HG3	26:BC:211:ARG:HH11	1.85	0.41
41:AU:97:ASP:C	41:AU:99:ALA:N	2.73	0.41
57:BA:1812:A:H2'	57:BA:1813:G:H8	1.85	0.41
57:BA:821:A:H5''	57:BA:822:U:H6	1.83	0.41
49:A2:47:ASN:ND2	57:AA:94(A):G:C2	2.88	0.41
51:A4:31:ILE:HG22	51:A4:33:VAL:HG23	2.01	0.41
57:AA:1048:A:N6	57:AA:1106:A:N6	2.69	0.41
57:AA:1496:A:H8	57:AA:1577:C:O2'	2.01	0.41
57:AA:185:U:H2'	57:AA:186:G:H8	1.84	0.41
57:AA:436:C:H2'	57:AA:437:G:H8	1.85	0.41
45:AY:49:VAL:HG13	57:AA:484:C:P	2.60	0.41
27:AD:52:ARG:HD3	57:AA:1824:G:OP1	2.20	0.41
30:AG:15:VAL:HG13	30:AG:175:LEU:HB2	2.02	0.41
30:AG:36:LYS:O	30:AG:36:LYS:HG2	2.97	0.41
31:AH:50:VAL:CG1	31:AH:51:ARG:H	2.33	0.41
32:AI:139:GLN:HE21	32:AI:139:GLN:HB2	1.51	0.41
32:AI:25:TYR:O	32:AI:29:TYR:HB3	2.20	0.41
33:AJ:22:GLY:O	33:AJ:88:ALA:HA	2.20	0.41
35:AO:26:LYS:HB2	35:AO:30:ALA:CB	2.50	0.41
35:AO:31:LYS:HB3	35:AO:32:TYR:CE1	2.55	0.41
36:AP:105:LEU:H	36:AP:105:LEU:CD1	2.26	0.41
36:AP:18:ARG:HD2	57:AA:661:C:O3'	2.20	0.41
36:AP:46:LYS:HB3	36:AP:52:GLU:HG2	2.02	0.41
36:AP:63:PRO:HB3	55:A8:13:ARG:CB	2.43	0.41
39:AS:58:LEU:HD21	39:AS:68:GLN:OE1	2.20	0.41
40:AT:28:VAL:O	40:AT:28:VAL:HG12	2.20	0.41
40:AT:87:ASP:OD1	40:AT:90:GLN:HG3	2.20	0.41
44:AX:12:VAL:O	44:AX:13:LEU:HB2	2.19	0.41
53:B6:25:LYS:NZ	55:B8:34:TRP:HZ2	2.18	0.41
55:B8:22:VAL:CG2	55:B8:53:PRO:HB2	2.51	0.41
34:BN:66:LYS:HZ1	57:BA:1140:C:H5''	1.77	0.41
57:BA:333:G:C4	57:BA:334:C:C5	3.08	0.41
57:BA:622:G:C2'	57:BA:623:G:H5'	2.51	0.41
36:BP:39:LYS:CG	57:BA:807:U:OP2	2.68	0.41
26:BC:22:THR:H	26:BC:25:GLU:CG	2.33	0.41
27:BD:158:ALA:O	27:BD:159:ALA:C	2.58	0.41
27:BD:186:HIS:HD2	27:BD:188:GLU:H	1.67	0.41
30:BG:32:PRO:HB3	30:BG:163:ALA:HB2	2.02	0.41
30:BG:67:LYS:HE3	30:BG:67:LYS:HB2	1.87	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BI:111:PRO:HB2	32:BI:112:LYS:CE	2.50	0.41
32:BI:26:ALA:O	32:BI:31:LEU:HD13	2.20	0.41
33:BJ:50:ARG:O	33:BJ:51:LEU:CB	2.68	0.41
34:BN:66:LYS:HZ3	57:BA:1140:C:P	2.42	0.41
35:BO:65:THR:HA	35:BO:82:ASN:HD22	1.85	0.41
40:BT:12:SER:O	40:BT:13:ARG:CZ	2.68	0.41
41:BU:91:ASP:O	41:BU:92:ARG:C	2.59	0.41
42:BV:49:THR:CB	42:BV:50:PRO:CD	2.97	0.41
43:BW:56:ALA:O	43:BW:60:ASN:HB2	2.20	0.41
44:BX:30:VAL:HG11	44:BX:39:ILE:HD12	2.01	0.41
45:BY:89:PHE:C	45:BY:90:LEU:HD23	2.41	0.41
57:AA:2055:C:H5'	57:AA:2056:G:O5'	2.20	0.41
31:BH:41:MET:HE1	31:BH:53:GLU:N	2.35	0.41
52:A5:49:CYS:O	52:A5:50:GLY:C	2.59	0.41
52:B5:47:PRO:O	52:B5:49:CYS:N	2.53	0.41
57:AA:1529:G:N1	57:AA:1541:G:N2	2.68	0.41
57:BA:2602:A:H4'	57:BA:2603:G:C5'	2.49	0.41
34:BN:73:THR:CG2	34:BN:82:LEU:CD1	2.97	0.41
46:AZ:104:PHE:N	46:AZ:104:PHE:CD1	2.87	0.41
35:BO:8:LEU:N	35:BO:8:LEU:HD22	2.34	0.41
57:AA:991:C:H5'	57:AA:991:C:C6	2.48	0.41
44:AX:29:TRP:CZ3	44:AX:59:VAL:HG21	2.55	0.41
57:AA:1679:U:C2'	57:AA:1680:U:H5'	2.50	0.41
47:B0:72:ARG:O	47:B0:73:GLY:C	2.58	0.41
34:BN:79:PRO:C	34:BN:81:GLY:H	2.23	0.41
27:BD:263:ARG:CB	27:BD:263:ARG:HH11	2.34	0.41
57:BA:64:A:H2'	57:BA:65:C:H6	1.85	0.41
57:BA:2657:A:C2'	57:BA:2658:C:H5'	2.50	0.41
35:AO:102:VAL:HG22	35:AO:121:VAL:HG22	2.02	0.41
27:BD:201:HIS:C	27:BD:203:ASN:H	2.23	0.41
52:B5:29:THR:CG2	57:BA:2814:C:O2'	2.68	0.41
57:AA:716:A:H3'	57:AA:717:G:H5''	2.02	0.41
29:AF:114:VAL:O	29:AF:118:ALA:N	2.52	0.41
57:AA:2064:C:H2'	57:AA:2065:C:C6	2.56	0.41
29:BF:153:SER:OG	29:BF:190:GLU:HG3	2.20	0.41
57:AA:1685:C:H2'	57:AA:1686:C:H6	1.85	0.41
55:A8:31:HIS:C	55:A8:31:HIS:ND1	2.74	0.41
26:AC:211:ARG:HH11	26:AC:211:ARG:HG3	1.84	0.41
44:BX:47:PHE:O	44:BX:49:VAL:HG13	2.20	0.41
57:AA:271(Q):G:O2'	57:AA:271(R):G:H8	2.03	0.41
57:AA:979:G:H3'	57:AA:980:A:H5''	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:AB:104:U:O2'	58:AB:105:A:H5'	2.21	0.41
51:A4:2:LYS:CB	58:AB:40:U:O4	2.68	0.41
29:AF:18:ARG:CZ	29:AF:199:TRP:CE3	3.04	0.41
30:AG:11:TYR:HA	30:AG:15:VAL:CG2	2.49	0.41
30:AG:30:GLU:N	30:AG:33:ARG:HH12	2.18	0.41
31:AH:19:VAL:HG12	31:AH:20:ALA:N	2.34	0.41
32:AI:110:ASP:OD2	32:AI:113:ARG:O	2.38	0.41
32:AI:29:TYR:HE1	32:AI:33:ARG:HE	1.64	0.41
36:AP:95:VAL:HG13	36:AP:123:LEU:HD13	2.02	0.41
39:AS:85:VAL:HG23	39:AS:86:ALA:N	2.35	0.41
43:AW:24:ILE:HD13	43:AW:36:LEU:HD11	2.01	0.41
45:AY:3:VAL:O	45:AY:4:LYS:C	2.58	0.41
57:BA:1400:G:H2'	57:BA:1401:G:C8	2.56	0.41
57:BA:673:C:C6	57:BA:673:C:H5'	2.36	0.41
57:BA:923:C:H6	57:BA:923:C:O5'	2.04	0.41
41:BU:54:LYS:HE3	57:BA:994:C:C6	2.56	0.41
26:BC:54:ARG:HB3	26:BC:57:GLN:HB2	2.02	0.41
28:BE:52:LEU:HD12	28:BE:52:LEU:HA	1.84	0.41
29:BF:40:GLN:NE2	29:BF:184:TYR:HB3	2.36	0.41
30:BG:58:GLN:NE2	30:BG:59:GLU:HG3	2.35	0.41
31:BH:137:ASP:HB3	31:BH:140:LYS:HB2	2.02	0.41
31:BH:83:TYR:CD2	31:BH:83:TYR:N	2.87	0.41
32:BI:100:ALA:O	32:BI:101:LEU:C	2.58	0.41
32:BI:9:LEU:HB2	32:BI:12:LEU:O	2.21	0.41
36:BP:146:VAL:O	36:BP:148:LEU:N	2.54	0.41
36:BP:63:PRO:C	36:BP:65:ARG:H	2.22	0.41
36:BP:97:PRO:HG3	36:BP:112:LEU:HG	2.01	0.41
39:BS:54:LEU:HA	39:BS:54:LEU:HD22	1.96	0.41
41:BU:69:CYS:HG	41:BU:79:PHE:HD1	1.67	0.41
42:BV:2:PHE:HB3	42:BV:3:ALA:H	1.71	0.41
43:BW:3:ALA:HB2	43:BW:58:ALA:HA	2.01	0.41
45:BY:89:PHE:O	45:BY:90:LEU:HB3	2.20	0.41
31:BH:38:SER:HB3	31:BH:64:LEU:HD13	2.02	0.41
47:B0:51:VAL:HG21	47:B0:80:HIS:HA	2.01	0.41
46:AZ:94:GLU:HB2	46:AZ:95:PRO:CD	2.48	0.41
57:BA:1313:U:H2'	57:BA:1314:C:H6	4.40	0.41
57:AA:1538:G:H2'	57:AA:1539:G:C8	2.54	0.41
57:BA:2370:G:H2'	57:BA:2371:G:O4'	2.20	0.41
36:BP:90:ARG:HD2	36:BP:91:PHE:HD1	1.85	0.41
57:AA:657:U:H2'	57:AA:658:C:C5	2.55	0.41
57:AA:1531:C:O2'	57:AA:1532:C:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:31:C:O2'	57:BA:32:C:H5'	2.21	0.41
57:BA:2627:G:O2'	57:BA:2781:A:N1	2.49	0.41
40:AT:132:LYS:C	40:AT:134:GLU:N	2.71	0.41
57:BA:570:G:H2'	57:BA:2030:A:C6	2.56	0.41
47:A0:40:GLN:HE21	47:A0:57:PHE:HB3	1.85	0.41
57:AA:2870:C:C2'	57:AA:2871:C:H5'	2.50	0.41
57:AA:232:G:H1'	57:AA:262:A:N1	14.83	0.41
57:BA:2745:C:H2'	57:BA:2746:U:C6	2.56	0.41
47:B0:20:ARG:NH1	57:BA:2271:G:C5'	2.83	0.41
57:BA:2510:C:O2'	57:BA:2511:U:H5'	2.20	0.41
57:BA:2436:G:C6	57:BA:2437:U:C4	3.09	0.41
57:BA:898:C:C2'	57:BA:899:A:H5'	2.50	0.41
51:A4:27:THR:O	51:A4:28:LYS:HB3	2.19	0.41
30:AG:101:ILE:HD13	51:A4:9:LEU:HD11	2.03	0.41
36:AP:61:ARG:HH11	55:A8:13:ARG:HD2	1.78	0.41
57:AA:1502:C:O2	57:AA:1502:C:C2'	2.68	0.41
57:AA:1501:C:H5'	57:AA:1502:C:P	2.61	0.41
57:AA:2666:C:H3'	57:AA:2667:C:H6	1.85	0.41
57:AA:2729:G:H2'	57:AA:2730:C:C6	2.55	0.41
57:AA:2784:C:O5'	57:AA:2784:C:H6	2.03	0.41
29:AF:84:VAL:O	57:AA:449:A:OP1	2.39	0.41
57:AA:485:C:O2'	57:AA:486:C:H5'	2.21	0.41
57:AA:848:G:H2'	57:AA:849:A:H8	1.83	0.41
57:AA:909:A:H2'	57:AA:912:C:H5	1.85	0.41
26:AC:30:VAL:HG11	26:AC:42:VAL:HG13	2.02	0.41
28:AE:137:HIS:HB3	28:AE:138:PRO:HD2	2.02	0.41
29:AF:9:ILE:HA	29:AF:13:SER:O	2.20	0.41
29:AF:22:ALA:C	29:AF:24:LEU:N	2.73	0.41
30:AG:117:PHE:CE2	30:AG:119:GLY:N	2.88	0.41
31:AH:38:SER:HB3	31:AH:64:LEU:HD13	2.02	0.41
31:AH:56:SER:CB	31:AH:58:GLU:HG3	2.50	0.41
33:AJ:42:GLN:O	33:AJ:43:ALA:HB2	2.20	0.41
34:AN:120:LEU:CD2	34:AN:120:LEU:C	2.89	0.41
34:AN:3:THR:C	34:AN:5:VAL:N	2.65	0.41
35:AO:107:ARG:NH1	40:AT:35:LYS:HD2	2.36	0.41
37:AQ:46:GLN:HE22	37:AQ:126:PRO:HB3	1.86	0.41
38:AR:28:LEU:CD2	38:AR:114:VAL:HG12	2.51	0.41
38:AR:34:ILE:HG22	38:AR:35:THR:N	2.35	0.41
39:AS:59:LYS:CG	39:AS:60:GLY:N	2.82	0.41
55:B8:33:ASN:HA	55:B8:36:LYS:CD	2.50	0.41
57:BA:1176:G:O2'	57:BA:1177:A:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1817:G:H2'	57:BA:1818:U:H5'	2.03	0.41
57:BA:196:A:H2'	57:BA:196:A:N3	2.35	0.41
57:BA:436:C:H2'	57:BA:437:G:C8	2.56	0.41
57:BA:61:G:H1	57:BA:94:C:N4	2.17	0.41
26:BC:50:ILE:HD12	26:BC:50:ILE:O	2.20	0.41
27:BD:52:ARG:HD3	57:BA:1824:G:OP1	2.20	0.41
28:BE:27:LEU:HD12	28:BE:180:ASN:O	2.20	0.41
30:BG:6:ALA:HB3	30:BG:104:GLU:OE2	2.21	0.41
30:BG:38:VAL:CG1	30:BG:91:ARG:HD3	2.51	0.41
32:BI:94:ALA:HA	32:BI:98:ALA:CB	2.50	0.41
34:BN:39:ARG:NH1	34:BN:39:ARG:HG2	2.35	0.41
36:BP:100:LEU:CD2	36:BP:100:LEU:H	2.34	0.41
37:BQ:12:GLN:HE21	37:BQ:73:PRO:HD2	1.85	0.41
37:BQ:21:THR:O	37:BQ:21:THR:CG2	2.69	0.41
40:BT:28:VAL:HA	40:BT:47:GLY:H	1.85	0.41
40:BT:85:LYS:O	40:BT:86:ILE:C	2.58	0.41
42:BV:35:LEU:O	42:BV:36:PRO:C	2.58	0.41
43:BW:18:ARG:O	43:BW:19:LEU:C	2.59	0.41
43:BW:26:GLY:C	43:BW:27:LYS:HG2	2.41	0.41
43:BW:62:HIS:O	43:BW:63:ASP:C	2.59	0.41
45:BY:7:VAL:HG21	45:BY:8:LYS:HZ2	1.86	0.41
27:BD:245:PRO:O	27:BD:245:PRO:HG2	2.20	0.41
31:BH:33:LEU:HD21	31:BH:136:ILE:HG22	2.02	0.41
48:A1:52:ARG:HA	48:A1:52:ARG:HD3	1.76	0.41
46:BZ:118:GLN:C	46:BZ:120:ILE:H	2.23	0.41
46:BZ:136:PHE:O	46:BZ:137:ILE:C	2.59	0.41
52:A5:40:LYS:NZ	52:A5:46:CYS:O	2.52	0.41
53:A6:37:ARG:O	53:A6:48:VAL:O	2.39	0.41
57:AA:1528(A):A:H8	57:AA:1529:G:C8	2.39	0.41
57:AA:2892:A:C8	57:AA:2893:G:H1'	2.55	0.41
57:AA:67:U:O2'	57:AA:68:G:H5'	2.21	0.41
57:AA:2189:U:H3'	57:AA:2190:G:C5'	2.43	0.41
29:AF:160:ASN:ND2	29:AF:160:ASN:C	2.73	0.41
49:A2:63:VAL:C	49:A2:66:GLU:HG2	2.38	0.41
57:BA:149:A:C2	57:BA:150:C:C4	4.30	0.41
48:A1:87:PRO:HA	48:A1:90:ILE:CG1	2.50	0.41
57:AA:383:U:H2'	57:AA:385:C:H5	1.85	0.41
57:BA:1472:A:H2'	57:BA:1473:G:O4'	2.21	0.41
40:BT:114:LEU:HD23	40:BT:114:LEU:HA	1.82	0.41
49:A2:3:LEU:HD22	49:A2:7:ARG:CZ	2.50	0.41
57:BA:1532:C:H2'	57:BA:1533:G:C5'	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2077:A:C4	57:AA:2078:C:C5	3.08	0.41
35:BO:102:VAL:HB	35:BO:106:LEU:HD12	2.03	0.41
29:AF:135:LYS:HB3	29:AF:138:GLU:HG3	2.02	0.41
48:A1:64:ALA:O	48:A1:67:ILE:HG13	2.20	0.41
57:AA:2389:G:H5''	57:AA:2390:U:O4'	2.20	0.41
27:AD:6:PHE:N	27:AD:6:PHE:CD1	2.89	0.41
57:AA:1409:C:O2'	57:AA:1410:G:H5'	2.20	0.41
57:AA:2246:G:H2'	57:AA:2247:A:C8	2.56	0.41
58:AB:105:A:H2'	58:AB:106:G:H5'	2.02	0.41
27:AD:34:VAL:CG2	27:AD:35:LYS:H	2.14	0.41
28:AE:57:LYS:HZ3	28:AE:63:LEU:HG	1.84	0.41
29:AF:1:MET:O	29:AF:2:LYS:C	2.59	0.41
29:AF:37:VAL:HG13	29:AF:184:TYR:CD1	2.55	0.41
29:AF:40:GLN:O	29:AF:44:ARG:HB3	2.21	0.41
32:AI:101:LEU:HB3	32:AI:109:ILE:CD1	2.49	0.41
32:AI:119:PRO:O	32:AI:121:LYS:N	2.53	0.41
34:AN:31:ALA:O	34:AN:34:LEU:HB2	2.21	0.41
36:AP:23:PRO:CD	36:AP:33:ARG:NH2	2.82	0.41
36:AP:66:GLY:O	36:AP:67:MET:CB	2.68	0.41
40:AT:30:VAL:CG1	40:AT:84:GLN:CG	2.99	0.41
45:AY:55:TYR:N	45:AY:56:PRO:CD	2.84	0.41
53:B6:27:LYS:C	53:B6:27:LYS:HD3	2.41	0.41
53:B6:54:ILE:O	53:B6:54:ILE:CD1	2.63	0.41
36:BP:49:ARG:HD2	55:B8:58:ILE:HG22	2.02	0.41
57:BA:1517:G:O2'	57:BA:1518:U:H5'	2.20	0.41
35:BO:66:LYS:HD3	57:BA:1666:G:OP1	2.20	0.41
57:BA:2360:A:C2	57:BA:2361:A:H1'	2.55	0.41
28:BE:134:ILE:HD13	57:BA:2579:C:C1'	2.51	0.41
57:BA:85:G:N3	57:BA:103:A:C2	2.89	0.41
57:BA:878:A:C6	57:BA:900:A:C8	3.09	0.41
57:BA:910:A:H5'	57:BA:911:A:OP2	2.20	0.41
57:BA:99:U:C4'	57:BA:102:G:H1'	2.49	0.41
58:BB:31:C:H2'	58:BB:53:A:H61	1.85	0.41
27:BD:9:TYR:CD2	57:BA:727:A:C2	3.09	0.41
28:BE:34:VAL:CG1	28:BE:48:GLN:HE21	2.33	0.41
28:BE:56:PRO:O	28:BE:58:ARG:N	2.54	0.41
30:BG:170:ARG:HG3	30:BG:180:PHE:CE1	2.49	0.41
30:BG:51:ARG:NH1	30:BG:53:LEU:HD21	2.36	0.41
30:BG:66:GLN:OE1	51:B4:1:MET:CE	2.68	0.41
33:BJ:70:GLU:C	33:BJ:72:ASP:H	2.22	0.41
34:BN:5:VAL:HG22	34:BN:6:PRO:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BR:82:GLU:C	38:BR:85:PRO:HD2	2.41	0.41
39:BS:108:GLY:HA3	57:BA:2376:A:O2'	2.21	0.41
39:BS:89:ARG:HG3	39:BS:92:TYR:CA	2.50	0.41
40:BT:57:PHE:O	40:BT:58:ASN:C	2.59	0.41
40:BT:87:ASP:OD1	40:BT:90:GLN:HG3	2.21	0.41
42:BV:39:LEU:CD1	42:BV:51:VAL:HA	2.49	0.41
44:BX:54:VAL:C	44:BX:55:ASN:HD22	2.24	0.41
44:BX:7:VAL:CG1	44:BX:39:ILE:HD13	2.51	0.41
45:BY:7:VAL:CG2	45:BY:8:LYS:HZ2	2.33	0.41
27:AD:244:ARG:HG3	57:AA:1902:C:C1'	2.49	0.41
31:BH:15:VAL:HA	31:BH:27:LYS:O	2.20	0.41
46:AZ:97:GLU:HB3	46:AZ:125:LEU:HD11	2.02	0.41
38:BR:98:LEU:O	38:BR:113:LEU:HD22	2.20	0.41
57:AA:528:A:C2	57:AA:2043:C:H5'	2.55	0.41
52:B5:55:ARG:O	52:B5:56:LYS:HE3	2.20	0.41
57:AA:1542:A:C6	57:AA:1544:A:C8	3.08	0.41
35:AO:49:ARG:HH21	57:AA:1423:G:H5'	98.75	0.41
57:BA:1447:G:H2'	57:BA:1448:G:H8	1.86	0.41
29:BF:160:ASN:ND2	29:BF:160:ASN:C	2.72	0.41
49:A2:57:ILE:O	49:A2:58:ALA:C	2.58	0.41
50:A3:3:ARG:HB2	50:A3:59:VAL:O	2.20	0.41
57:AA:2450:A:C2'	57:AA:2451:A:H5'	2.50	0.41
57:BA:2192:G:H2'	57:BA:2193:G:H5'	2.02	0.41
48:B1:25:LYS:HB2	57:BA:388:G:OP1	2.20	0.41
48:B1:29:GLY:O	48:B1:30:VAL:HG23	2.20	0.41
27:BD:183:ARG:HG2	27:BD:183:ARG:NH1	2.34	0.41
57:BA:1641:A:H2'	57:BA:1642:G:O4'	2.20	0.41
47:A0:73:GLY:C	47:A0:75:LEU:N	2.71	0.41
34:AN:91:LEU:CD2	34:AN:98:VAL:HG21	2.49	0.41
38:AR:8:ARG:HA	38:AR:8:ARG:HD3	1.77	0.41
57:BA:1670:C:C5	57:BA:1671:U:C4	3.08	0.41
32:AI:22:LYS:HD2	57:AA:2094:G:OP1	2.20	0.41
57:AA:78:A:H2'	57:AA:79:G:C8	2.55	0.41
53:B6:46:HIS:HD2	57:BA:2372:G:H4'	1.85	0.41
57:AA:898:C:H2'	57:AA:899:A:O4'	2.20	0.41
58:AB:10:C:O5'	58:AB:10:C:H6	2.02	0.41
57:BA:1906:G:C8	57:BA:1929:G:H2'	2.55	0.41
51:A4:2:LYS:HG2	58:AB:40:U:O4	2.20	0.41
57:AA:1270:C:O2'	57:AA:1314:C:H5'	26.18	0.41
57:AA:579:G:C6	57:AA:580:C:N4	2.89	0.41
53:A6:42:TRP:CH2	57:AA:643:A:N7	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AD:208:LYS:HE2	57:AA:764:A:OP1	2.20	0.41
58:AB:37:C:N3	58:AB:49:C:O4'	2.53	0.41
58:AB:87:G:H1	58:AB:91:C:N4	2.19	0.41
27:AD:68:LYS:HD2	27:AD:70:TRP:CZ2	2.56	0.41
28:AE:116:VAL:HG23	28:AE:120:TRP:HB2	2.03	0.41
30:AG:124:SER:N	30:AG:126:ASP:OD1	2.54	0.41
30:AG:4:ASP:O	51:A4:25:TYR:OH	2.32	0.41
30:AG:83:ARG:NH2	30:AG:84:LYS:HZ2	2.17	0.41
31:AH:11:VAL:HG21	31:AH:50:VAL:CG2	2.47	0.41
31:AH:89:ILE:CG1	31:AH:129:THR:HA	2.51	0.41
32:AI:120:ILE:HD11	32:AI:126:TYR:CD1	2.50	0.41
32:AI:126:TYR:N	32:AI:140:LEU:HD22	2.35	0.41
35:AO:61:VAL:HG12	35:AO:85:VAL:HG12	2.02	0.41
36:AP:107:LYS:C	36:AP:108:LYS:HD2	2.40	0.41
36:AP:6:LEU:HG	36:AP:9:ASN:OD1	2.20	0.41
39:AS:68:GLN:C	39:AS:70:GLY:N	2.74	0.41
34:AN:2:LYS:HZ3	42:AV:13:ARG:H	1.66	0.41
45:AY:67:LEU:HD11	45:AY:71:LYS:HB2	2.03	0.41
51:B4:12:ALA:CA	51:B4:29:PRO:HG3	2.50	0.41
53:B6:30:THR:O	53:B6:31:PRO:C	2.59	0.41
57:BA:1310:G:H2'	57:BA:1311:G:H5'	2.01	0.41
57:BA:1341:U:P	57:BA:1397:U:H3	2.41	0.41
27:BD:154:LYS:HE2	57:BA:1801:G:OP2	2.20	0.41
58:BB:87:G:H3'	58:BB:88:C:H5''	2.03	0.41
28:BE:199:ARG:CB	28:BE:199:ARG:HH11	2.33	0.41
28:BE:24:THR:CG2	28:BE:186:GLY:HA2	2.51	0.41
28:BE:57:LYS:HZ3	28:BE:63:LEU:HG	1.86	0.41
29:BF:25:PRO:HB3	29:BF:119:ARG:CD	2.46	0.41
29:BF:81:PRO:HB3	29:BF:89:VAL:HG22	2.01	0.41
30:BG:39:ILE:HD13	30:BG:60:LEU:HD21	2.03	0.41
32:BI:129:THR:HG23	32:BI:137:PRO:HA	2.01	0.41
32:BI:94:ALA:HB2	32:BI:111:PRO:O	2.19	0.41
36:BP:78:PRO:HA	36:BP:110:TYR:HE2	1.82	0.41
36:BP:6:LEU:HG	36:BP:9:ASN:OD1	2.20	0.41
37:BQ:72:LYS:HA	37:BQ:73:PRO:HD3	1.87	0.41
38:BR:63:ARG:HG3	38:BR:80:PHE:CE2	2.55	0.41
39:BS:30:ARG:NH1	39:BS:34:HIS:O	2.54	0.41
40:BT:25:GLY:O	40:BT:26:ASP:CB	2.68	0.41
43:BW:47:VAL:HA	43:BW:50:VAL:HG12	2.03	0.41
57:BA:2491:U:O2'	57:BA:2492:U:H5'	2.20	0.41
46:BZ:120:ILE:HB	46:BZ:171:ILE:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B5:54:GLY:O	52:B5:55:ARG:NE	2.53	0.41
57:AA:2370:G:H2'	57:AA:2371:G:O4'	2.21	0.41
57:BA:2278:A:C2'	57:BA:2279:G:O5'	2.69	0.41
30:BG:75:LYS:HE3	57:BA:2310:A:N7	2.35	0.41
57:BA:272(J):C:N4	57:BA:363(A):A:H61	2.19	0.41
57:AA:2761:G:H2'	57:AA:2762:G:H5''	2.02	0.41
57:AA:30:G:C6	57:AA:31:C:N3	2.89	0.41
50:A3:43:ILE:HD13	50:A3:43:ILE:HA	1.88	0.41
57:BA:2168:G:H22	57:BA:2170:A:H3'	1.85	0.41
56:B9:1:MET:SD	57:BA:2478:A:OP2	2.78	0.41
57:BA:665:C:O2'	57:BA:666:G:H5'	2.20	0.41
29:AF:117:ARG:NH2	29:AF:187:VAL:HA	2.35	0.41
57:AA:1832:C:N4	57:AA:1833:U:C4	2.89	0.41
57:BA:1889:A:H2'	57:BA:1890:A:O4'	2.21	0.41
27:BD:262:ARG:HD3	57:BA:2086:U:P	2.60	0.41
57:BA:570:G:H2'	57:BA:2030:A:C5	2.55	0.41
57:AA:2062:A:N6	57:AA:2503:A:H62	2.19	0.41
43:BW:86:LEU:HD12	43:BW:87:PRO:CD	2.51	0.41
43:AW:61:ASN:OD1	57:AA:495:G:N3	2.54	0.41
57:BA:2772:C:H2'	57:BA:2773:C:C6	2.55	0.41
33:BJ:124:ALA:O	33:BJ:125:LEU:O	2.39	0.41
57:BA:2562:U:C2'	57:BA:2563:U:H5'	2.50	0.41
57:AA:2885:C:H2'	57:AA:2886:G:O5'	2.20	0.41
57:AA:1635:G:H2'	57:AA:1636:C:C6	2.56	0.41
52:B5:26:THR:HA	52:B5:27:PRO:HD3	1.97	0.41
42:BV:22:VAL:O	42:BV:23:GLU:HB2	2.20	0.41
57:BA:1685:C:H2'	57:BA:1686:C:H6	1.84	0.41
29:BF:173:VAL:HG12	29:BF:174:VAL:N	2.36	0.41
29:AF:46:ARG:NH1	29:AF:46:ARG:HG3	2.36	0.41
57:AA:1605:C:H2'	57:AA:1606:G:O4'	2.20	0.41
44:AX:47:PHE:O	44:AX:49:VAL:HG13	2.21	0.41
47:A0:36:ILE:HD12	47:A0:36:ILE:C	2.41	0.41
47:A0:45:PHE:CE2	47:A0:69:PHE:HE2	2.37	0.41
36:AP:64:LYS:HB2	55:A8:25:MET:HG3	1.96	0.41
55:A8:56:GLU:C	55:A8:58:ILE:H	2.23	0.41
57:AA:1313:U:H2'	57:AA:1314:C:H6	4.41	0.41
57:AA:1328:G:H2'	57:AA:1330:C:C4	2.56	0.41
57:AA:140:G:N3	57:AA:142:A:N1	2.68	0.41
57:AA:1510:G:O2'	57:AA:1511:C:H5'	2.20	0.41
57:AA:2360:A:C2	57:AA:2361:A:H1'	2.56	0.41
57:AA:2653:U:H2'	57:AA:2654:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:437:G:H2'	57:AA:438:G:H8	1.86	0.41
58:AB:17:C:H2'	58:AB:18:G:O4'	2.19	0.41
26:AC:182:PRO:HA	26:AC:183:PRO:HD3	1.89	0.41
27:AD:30:GLU:CG	27:AD:63:ARG:CZ	2.96	0.41
28:AE:52:LEU:HD12	28:AE:52:LEU:HA	1.86	0.41
28:AE:65:GLY:C	28:AE:67:PHE:N	2.74	0.41
29:AF:4:VAL:HG22	29:AF:19:GLU:CD	2.40	0.41
29:AF:74:ARG:HD3	57:AA:674:G:C1'	2.50	0.41
30:AG:110:ALA:O	30:AG:111:LEU:C	2.59	0.41
30:AG:111:LEU:CB	30:AG:112:PRO:CD	2.99	0.41
30:AG:170:ARG:HD2	30:AG:170:ARG:HA	1.80	0.41
31:AH:66:GLY:HA2	31:AH:69:ARG:HD3	2.03	0.41
34:AN:41:ASP:O	34:AN:42:TRP:C	2.59	0.41
36:AP:17:LYS:HG3	36:AP:19:VAL:HG22	2.02	0.41
37:AQ:118:LEU:HD12	37:AQ:131:ILE:CG2	2.51	0.41
38:AR:21:TYR:OH	38:AR:43:GLU:HG2	2.21	0.41
39:AS:36:TYR:O	39:AS:37:ALA:HB2	2.20	0.41
40:AT:56:GLY:O	40:AT:59:THR:CG2	2.69	0.41
42:AV:19:LYS:NZ	42:AV:20:LEU:N	2.58	0.41
42:AV:39:LEU:HD12	42:AV:50:PRO:O	2.20	0.41
43:AW:34:ASN:O	43:AW:37:ARG:HB3	2.21	0.41
55:B8:50:LEU:O	55:B8:51:ALA:CB	2.66	0.41
56:B9:7:VAL:HG21	56:B9:36:GLN:HB2	2.02	0.41
57:BA:1039:G:C2	57:BA:1040:C:C4	3.09	0.41
57:BA:1493:C:C2'	57:BA:1493:C:O2	2.68	0.41
57:BA:2131:G:H5''	57:BA:2132:U:C5'	2.51	0.41
39:BS:20:ARG:NH2	57:BA:2378:A:H2	2.18	0.41
57:BA:2654:A:H62	57:BA:2667:C:N4	2.19	0.41
57:BA:436:C:H2'	57:BA:437:G:H8	1.85	0.41
36:BP:33:ARG:CZ	57:BA:587:C:H3'	2.50	0.41
57:BA:869:G:H4'	57:BA:872:A:O4'	17.21	0.41
57:BA:877:U:H1'	57:BA:901:A:N6	2.36	0.41
58:BB:106:G:C2	58:BB:107:G:C8	3.08	0.41
58:BB:81:G:C6	58:BB:82:G:C5	3.09	0.41
26:BC:23:ILE:HG13	26:BC:229:SER:OXT	2.21	0.41
27:BD:51:VAL:O	27:BD:54:ARG:HG2	2.21	0.41
30:BG:71:THR:HG21	57:BA:2312:U:C3'	2.50	0.41
33:BJ:21:GLN:CB	33:BJ:90:ALA:H	2.33	0.41
35:BO:43:VAL:HG21	35:BO:52:VAL:CG1	2.51	0.41
36:BP:49:ARG:HH21	36:BP:50:ARG:HH22	1.67	0.41
37:BQ:76:LYS:HB3	37:BQ:91:GLU:CG	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BS:13:ARG:HG3	39:BS:14:VAL:N	2.26	0.41
42:BV:39:LEU:HD12	42:BV:50:PRO:O	2.21	0.41
43:BW:47:VAL:C	43:BW:50:VAL:HG12	2.41	0.41
45:BY:18:GLY:C	45:BY:20:TYR:H	2.21	0.41
45:BY:67:LEU:HD11	45:BY:71:LYS:HB2	2.01	0.41
57:AA:1858:G:O2'	57:AA:1884:A:N6	2.54	0.41
47:A0:14:ARG:HH11	47:A0:14:ARG:CG	2.33	0.41
57:BA:1794:U:H1'	57:BA:1900:A:N3	2.36	0.41
31:BH:19:VAL:CG2	31:BH:44:VAL:HA	2.38	0.41
57:AA:2791:C:N4	57:AA:2801:A:H8	2.17	0.41
46:BZ:100:VAL:HG11	46:BZ:137:ILE:HG12	2.02	0.41
57:AA:2103:C:H42	57:AA:2186:G:H1	1.67	0.41
57:BA:2103:C:C3'	57:BA:2104:G:C5'	2.96	0.41
57:BA:1541:G:C4'	57:BA:1542:A:O4'	2.69	0.41
57:AA:2011:U:H2'	57:AA:2012:G:C5'	2.50	0.41
36:BP:124:LYS:HA	36:BP:124:LYS:HD3	1.87	0.41
57:AA:2778:A:H4'	57:AA:2779:U:OP2	2.21	0.41
57:BA:848:G:C4	57:BA:933:A:H8	2.38	0.41
48:A1:41:ARG:NH1	48:A1:43:TYR:HE2	2.19	0.41
49:A2:61:LEU:HD12	57:AA:72:U:O4'	2.21	0.41
57:BA:2877:G:C2'	57:BA:2878:U:H5'	2.50	0.41
57:BA:1762:A:H8	57:BA:1762:A:O5'	2.02	0.41
57:BA:1984:G:O2'	57:BA:1985:G:H5'	2.20	0.41
57:AA:128:C:C3'	57:AA:128:C:C6	3.04	0.41
52:B5:29:THR:HG21	57:BA:2814:C:O2'	2.21	0.41
57:AA:2296:U:O2	57:AA:2333:A:N3	2.54	0.41
51:B4:20:ASN:ND2	51:B4:20:ASN:C	2.74	0.41
57:BA:2517:C:N3	57:BA:2542:A:N6	2.68	0.41
29:BF:115:ALA:O	29:BF:118:ALA:N	2.52	0.41
57:AA:2514:U:H2'	57:AA:2515:C:C6	2.56	0.41
57:AA:2150:U:H2'	57:AA:2151:G:H8	1.85	0.41
57:BA:1572:A:O2'	57:BA:1573:G:H5'	2.20	0.41
57:BA:1660:C:H2'	57:BA:1661:G:H8	1.86	0.41
57:BA:2607:G:H2'	57:BA:2608:G:O4'	2.21	0.41
42:BV:1:MET:HA	42:BV:1:MET:CE	2.51	0.41
57:AA:1906:G:C8	57:AA:1929:G:H2'	2.56	0.41
57:AA:2668:G:O2'	57:AA:2669:G:H5'	2.21	0.41
57:AA:380:U:H2'	57:AA:381:G:C8	2.55	0.41
53:A6:29:ASN:OD1	53:A6:30:THR:N	2.54	0.41
57:AA:15:G:O2'	57:AA:16:G:H5'	2.21	0.41
57:AA:192:C:C2'	57:AA:193:U:H5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2397:G:C2	57:AA:2420:C:H1'	2.55	0.41
57:AA:436:C:H2'	57:AA:437:G:C8	2.55	0.41
57:AA:579:G:H2'	57:AA:580:C:H6	1.79	0.41
57:AA:862:G:H2'	57:AA:863:A:O4'	2.21	0.41
57:AA:877:U:H1'	57:AA:901:A:N6	2.36	0.41
57:AA:878:A:C6	57:AA:900:A:C8	3.09	0.41
58:AB:31:C:H2'	58:AB:53:A:H61	1.86	0.41
26:AC:6:LYS:HA	26:AC:9:ARG:CB	2.47	0.41
27:AD:211:ARG:HH11	27:AD:211:ARG:HG3	1.86	0.41
30:AG:145:THR:HG23	30:AG:146:TYR:N	2.36	0.41
32:AI:92:VAL:HG11	32:AI:97:ILE:HD11	2.02	0.41
36:AP:38:GLN:CG	36:AP:39:LYS:H	2.16	0.41
40:AT:120:ARG:HA	40:AT:123:GLN:OE1	2.21	0.41
40:AT:90:GLN:NE2	40:AT:124:ASP:OD2	2.54	0.41
40:AT:89:VAL:HB	40:AT:91:ARG:CG	2.50	0.41
42:AV:20:LEU:N	42:AV:20:LEU:HD12	2.35	0.41
42:AV:6:LYS:O	42:AV:37:VAL:HB	2.21	0.41
42:AV:38:LEU:HD23	42:AV:39:LEU:N	2.35	0.41
43:AW:36:LEU:HD13	43:AW:48:ALA:HA	2.01	0.41
53:B6:5:VAL:HG13	53:B6:7:ILE:N	2.29	0.41
57:BA:1326:U:O2'	57:BA:1327:C:H5'	2.20	0.41
57:BA:740:U:H2'	57:BA:741:G:H8	1.84	0.41
27:BD:47:GLY:CA	57:BA:773:U:H4'	2.51	0.41
26:BC:182:PRO:HA	26:BC:183:PRO:HD3	1.88	0.41
27:BD:118:VAL:CG2	27:BD:119:ALA:H	2.34	0.41
28:BE:134:ILE:HD13	57:BA:2579:C:H1'	2.03	0.41
28:BE:4:ILE:CG1	28:BE:5:LEU:N	2.81	0.41
29:BF:89:VAL:C	29:BF:91:GLY:H	2.19	0.41
30:BG:101:ILE:HG22	30:BG:101:ILE:O	2.20	0.41
30:BG:133:LEU:HD12	30:BG:133:LEU:C	2.41	0.41
30:BG:80:PHE:O	30:BG:81:LYS:O	2.39	0.41
31:BH:117:PRO:HB3	31:BH:123:PHE:CE1	2.56	0.41
32:BI:85:GLU:HB3	32:BI:86:THR:H	1.75	0.41
36:BP:126:VAL:HG22	36:BP:145:PRO:CB	2.50	0.41
36:BP:47:ASP:HB3	36:BP:48:PRO:C	2.41	0.41
37:BQ:46:GLN:HE22	37:BQ:126:PRO:HB3	1.85	0.41
38:BR:2:ARG:CD	38:BR:5:LYS:HE2	2.38	0.41
28:BE:181:LEU:HG	40:BT:11:GLU:OE2	2.21	0.41
35:BO:77:ILE:HD11	40:BT:72:VAL:HG11	2.03	0.41
40:BT:8:LYS:C	40:BT:10:VAL:N	2.73	0.41
43:BW:5:ALA:O	57:BA:494:G:O2'	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:A4:12:ALA:CA	51:A4:29:PRO:HG3	2.51	0.41
53:A6:9:LEU:O	53:A6:9:LEU:HD22	2.21	0.41
53:A6:8:LYS:O	53:A6:9:LEU:O	2.39	0.41
55:A8:54:GLU:HG2	55:A8:57:ARG:HH21	1.86	0.41
57:AA:1293:C:H2'	57:AA:1294:U:H6	1.86	0.41
57:AA:1332:G:H21	57:AA:1610:A:H8	1.63	0.41
36:AP:39:LYS:CG	57:AA:807:U:OP2	2.68	0.41
27:AD:186:HIS:HD2	27:AD:188:GLU:H	1.68	0.41
27:AD:65:ILE:HD13	27:AD:65:ILE:O	2.21	0.41
28:AE:132:HIS:CD2	28:AE:135:HIS:CE1	3.09	0.41
28:AE:55:ASN:ND2	28:AE:75:VAL:HG22	2.35	0.41
30:AG:120:LEU:HD13	30:AG:133:LEU:HD23	2.02	0.41
30:AG:9:ARG:C	30:AG:11:TYR:N	2.68	0.41
31:AH:7:LEU:CD2	31:AH:69:ARG:CD	2.97	0.41
32:AI:68:LEU:HD21	32:AI:72:LEU:HD11	2.03	0.41
38:AR:82:GLU:C	38:AR:85:PRO:HD2	2.41	0.41
39:AS:54:LEU:CD1	39:AS:57:LYS:HE3	2.51	0.41
39:AS:81:GLY:O	39:AS:82:ILE:C	2.59	0.41
40:AT:85:LYS:O	40:AT:86:ILE:C	2.58	0.41
40:AT:89:VAL:HG12	40:AT:91:ARG:HG3	2.02	0.41
53:B6:27:LYS:O	53:B6:27:LYS:HD3	2.21	0.41
56:B9:36:GLN:HG2	57:BA:1124:C:O2'	2.21	0.41
38:BR:23:ASN:ND2	57:BA:1294:U:O2'	2.54	0.41
57:BA:1577:C:H2'	57:BA:1578:U:C1'	2.51	0.41
38:BR:53:HIS:CD2	57:BA:2840:C:H4'	2.56	0.41
57:BA:481:G:C2'	57:BA:482:A:OP2	2.69	0.41
27:BD:69:ARG:NH2	27:BD:128:GLY:O	2.42	0.41
27:BD:186:HIS:HD2	27:BD:188:GLU:HB2	1.86	0.41
27:BD:9:TYR:CD2	57:BA:727:A:H2	2.38	0.41
29:BF:40:GLN:HE22	29:BF:184:TYR:N	2.15	0.41
30:BG:168:GLU:O	30:BG:171:ALA:N	2.53	0.41
30:BG:44:GLY:H	30:BG:88:ILE:CG2	2.31	0.41
30:BG:67:LYS:HE3	58:BB:42:C:C5'	2.39	0.41
30:BG:83:ARG:C	30:BG:85:GLY:H	2.24	0.41
31:BH:149:ARG:HA	31:BH:162:ILE:CD1	2.51	0.41
32:BI:14:ASP:O	32:BI:15:VAL:O	2.39	0.41
34:BN:62:VAL:CG1	34:BN:62:VAL:O	2.67	0.41
36:BP:72:PRO:HG2	57:BA:411:G:O2'	2.20	0.41
39:BS:52:SER:HB3	39:BS:55:ALA:HB3	2.02	0.41
40:BT:78:LEU:O	40:BT:79:HIS:ND1	2.54	0.41
57:AA:1826:G:H2'	57:AA:1827:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1591:G:C6	57:AA:1592:C:C4	3.09	0.41
52:A5:3:LYS:NZ	57:AA:2613:U:O2'	2.48	0.41
37:AQ:137:TYR:CE2	46:AZ:81:ARG:NH1	2.89	0.41
31:BH:38:SER:HA	31:BH:39:PRO:HD3	1.93	0.41
31:BH:9:ILE:CG2	31:BH:9:ILE:O	2.62	0.41
31:BH:30:LYS:HG3	31:BH:79:VAL:C	2.41	0.41
42:AV:22:VAL:O	42:AV:23:GLU:HB2	2.21	0.41
55:A8:33:ASN:HA	55:A8:36:LYS:CD	2.50	0.41
37:BQ:137:TYR:OH	46:BZ:81:ARG:NE	2.54	0.41
57:AA:2067:G:O2'	57:AA:2069:G:H5'	2.20	0.41
46:BZ:104:PHE:CA	46:BZ:141:VAL:HG21	2.51	0.41
46:BZ:149:SER:OG	46:BZ:150:LEU:N	2.53	0.41
57:AA:146:G:C2'	57:AA:147:U:H5'	2.51	0.41
57:AA:2287:A:C2	57:AA:2346:A:H2	2.39	0.41
38:BR:101:ALA:N	52:B5:44:THR:HG22	2.35	0.41
57:BA:523:C:H2'	57:BA:524:U:C5'	2.50	0.41
57:BA:523:C:H4'	57:BA:540:C:O2	2.21	0.41
39:BS:42:ASP:C	39:BS:44:LYS:N	2.74	0.41
29:BF:176:LEU:HD21	29:BF:180:GLY:O	2.21	0.41
41:AU:55:ARG:HA	41:AU:58:ARG:HG3	2.03	0.41
57:AA:2278:A:C2'	57:AA:2279:G:O5'	2.69	0.41
57:BA:1465:G:O4'	57:BA:1528:A:C8	2.73	0.41
57:BA:1536:C:O2'	57:BA:1537:G:H5'	2.21	0.41
57:BA:824:A:H2'	57:BA:825:C:C6	2.56	0.41
57:AA:1888:G:H5'	57:AA:1888:G:N3	2.36	0.41
57:AA:692:C:H2'	57:AA:693:C:H6	1.84	0.41
48:B1:46:LEU:HB2	48:B1:62:VAL:C	2.41	0.41
48:B1:45:ASN:ND2	48:B1:47:GLN:NE2	2.67	0.41
57:BA:2536:G:C6	57:BA:2537:U:C4	3.08	0.41
27:BD:270:ILE:HD12	27:BD:270:ILE:H	1.85	0.41
57:AA:57:C:H2'	57:AA:58:G:O4'	2.20	0.41
57:BA:933:A:H2'	57:BA:934:G:O4'	2.21	0.41
46:AZ:142:SER:N	46:AZ:144:LEU:CD2	2.84	0.41
49:A2:53:LEU:HA	49:A2:56:GLN:NE2	2.35	0.41
35:BO:114:ILE:H	35:BO:114:ILE:CD1	2.30	0.41
57:AA:2584:U:O4'	57:AA:2584:U:O2	2.39	0.41
57:BA:1164:G:H2'	57:BA:1165:U:C6	2.56	0.41
57:BA:176:G:C2'	57:BA:177:G:H5'	2.51	0.41
44:BX:60:ARG:HH21	54:B7:47:ARG:CD	2.29	0.41
51:A4:48:ARG:HG3	51:A4:49:PHE:CD1	2.55	0.41
57:BA:1531:C:O2'	57:BA:1532:C:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AD:262:ARG:HD3	57:AA:2086:U:P	2.61	0.41
35:AO:22:ILE:CD1	57:AA:1952:A:C5	3.03	0.41
34:AN:94:HIS:H	34:AN:95:PRO:CD	2.34	0.41
27:AD:218:ARG:HH11	27:AD:218:ARG:HG3	1.86	0.41
57:AA:2136:C:N4	57:AA:2156:G:H21	2.19	0.41
31:BH:35:VAL:O	31:BH:37:VAL:HG23	2.21	0.41
41:AU:20:LEU:N	41:AU:20:LEU:CD2	2.83	0.41
57:BA:2507:C:C2	57:BA:2508:G:C8	3.09	0.41
57:AA:127:A:H5''	57:AA:128:C:C6	2.56	0.41
57:AA:2600:A:H2'	57:AA:2601:C:H6	1.86	0.41
57:BA:1480:G:C6	57:BA:1481:U:C4	3.08	0.41
57:AA:2507:C:C2	57:AA:2508:G:C8	3.09	0.41
57:AA:2772:C:H2'	57:AA:2773:C:C6	2.56	0.41
57:BA:2236:C:H2'	57:BA:2237:G:C5'	2.51	0.41
47:B0:20:ARG:HH12	57:BA:2271:G:H4'	1.86	0.41
57:BA:2460:U:C4	57:BA:2461:C:C5	3.09	0.41
57:AA:1231:G:H2'	57:AA:1232:G:C8	2.55	0.41
57:AA:1682:G:H2'	57:AA:1683:C:C6	2.56	0.41
57:AA:2515:C:O2'	57:AA:2516:G:H5'	2.20	0.41
57:AA:412:A:N6	57:AA:2412:A:O4'	2.54	0.41
47:A0:82:ARG:O	47:A0:82:ARG:HG2	2.21	0.41
53:A6:14:THR:HG23	53:A6:14:THR:O	2.21	0.41
46:BZ:64:GLY:O	46:BZ:65:GLN:C	2.59	0.41
34:AN:71:ILE:HG21	34:AN:84:LYS:HB3	2.02	0.41
57:AA:1811:G:O2'	57:AA:1812:A:H5'	2.21	0.41
48:A1:62:VAL:CG2	48:A1:66:HIS:HB2	2.49	0.41
53:A6:5:VAL:HG13	53:A6:7:ILE:HG22	2.02	0.41
57:AA:1116:C:H3'	57:AA:1117:G:H5''	4.05	0.41
57:AA:999:U:H5''	57:AA:1154:G:O6	2.21	0.41
57:AA:1204:A:H61	57:AA:1240:U:H2'	1.85	0.41
57:AA:530:G:C2'	57:AA:530:G:N3	4.38	0.41
58:AB:77:U:H2'	58:AB:78:A:H5'	2.02	0.41
26:AC:29:LEU:HD22	26:AC:33:LEU:CD1	2.51	0.41
27:AD:15:PHE:O	27:AD:17:THR:HG23	2.21	0.41
27:AD:47:GLY:HA2	57:AA:773:U:H4'	2.02	0.41
28:AE:36:ARG:NH2	28:AE:86:PRO:HG2	2.36	0.41
29:AF:45:ARG:NH2	57:AA:443:A:H3'	2.36	0.41
29:AF:83:PHE:O	29:AF:84:VAL:HB	2.20	0.41
30:AG:128:ARG:O	30:AG:129:GLY:C	2.58	0.41
30:AG:87:PRO:HB2	30:AG:88:ILE:H	1.61	0.41
32:AI:90:GLY:O	32:AI:96:ASP:OD2	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AN:39:ARG:H	34:AN:39:ARG:HG3	1.77	0.41
34:AN:43:THR:HA	34:AN:44:PRO:HD2	1.77	0.41
36:AP:48:PRO:O	36:AP:49:ARG:C	2.60	0.41
41:AU:27:LEU:HD23	41:AU:27:LEU:HA	1.86	0.41
53:B6:8:LYS:CE	53:B6:25:LYS:HD3	2.51	0.41
55:B8:50:LEU:HA	55:B8:53:PRO:CG	2.49	0.41
57:BA:1284:A:O2'	57:BA:1285:G:H5'	2.21	0.41
57:BA:1503:U:H2'	57:BA:1504:C:H6	1.80	0.41
57:BA:2415:G:H2'	57:BA:2416:C:H6	1.85	0.41
57:BA:2576:G:O2'	57:BA:2579:C:OP2	2.32	0.41
57:BA:2839:G:H2'	57:BA:2840:C:C6	2.56	0.41
57:BA:673:C:H2'	57:BA:674:G:C5'	2.51	0.41
27:BD:47:GLY:HA2	57:BA:773:U:C5'	2.51	0.41
26:BC:29:LEU:HD22	26:BC:33:LEU:CD1	2.51	0.41
28:BE:51:PHE:CD1	28:BE:51:PHE:C	2.94	0.41
30:BG:166:ASP:N	30:BG:166:ASP:OD1	2.54	0.41
32:BI:69:LYS:O	32:BI:73:GLU:HG2	2.20	0.41
33:BJ:67:GLY:HA2	33:BJ:72:ASP:CA	2.48	0.41
34:BN:111:PRO:O	34:BN:114:ARG:HB3	2.21	0.41
34:BN:30:ILE:HG23	34:BN:52:VAL:HG11	2.04	0.41
36:BP:71:VAL:HG12	57:BA:389:G:N1	2.35	0.41
39:BS:54:LEU:CD1	39:BS:57:LYS:HE3	2.51	0.41
40:BT:36:GLU:HG2	40:BT:36:GLU:O	2.21	0.41
40:BT:33:LYS:NZ	40:BT:74:ARG:NH2	2.68	0.41
41:BU:101:ARG:NH1	41:BU:101:ARG:HB2	2.20	0.41
45:BY:23:ARG:O	45:BY:24:VAL:O	2.39	0.41
45:BY:3:VAL:O	45:BY:4:LYS:C	2.59	0.41
57:BA:2491:U:C5'	57:BA:2570:G:H5''	2.20	0.41
46:AZ:99:TYR:HA	46:AZ:125:LEU:HA	2.03	0.41
38:AR:100:LEU:C	52:A5:44:THR:HG22	2.42	0.41
53:A6:15:GLU:OE2	53:A6:16:CYS:O	2.38	0.41
39:BS:41:ASP:O	39:BS:44:LYS:HB2	2.21	0.41
29:BF:178:PRO:HG2	29:BF:179:GLU:CD	2.41	0.41
51:A4:55:ARG:HG3	51:A4:55:ARG:H	1.68	0.41
57:BA:2103:C:H42	57:BA:2186:G:H1	1.68	0.41
57:BA:2317:C:C2'	57:BA:2318:G:C5'	2.90	0.41
57:AA:1541:G:C5'	57:AA:1542:A:O4'	2.69	0.41
48:B1:52:ARG:HA	48:B1:52:ARG:HD2	1.91	0.41
57:BA:271(D):G:O2'	57:BA:271(E):U:H5'	2.20	0.41
57:BA:319:C:O2'	57:BA:320:A:H5'	2.21	0.41
29:AF:160:ASN:HD22	29:AF:161:GLU:N	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2713:A:H3'	57:AA:2714:G:C5'	2.51	0.41
35:BO:7:TYR:C	35:BO:8:LEU:HD22	2.40	0.41
41:AU:53:ARG:HH11	57:AA:536:A:P	2.44	0.41
29:BF:34:TRP:CH2	36:BP:12:ALA:HB2	2.56	0.41
47:A0:72:ARG:O	47:A0:73:GLY:C	2.59	0.41
57:AA:2688:U:H5	57:AA:2720:U:OP2	2.04	0.41
38:BR:29:LEU:HA	38:BR:29:LEU:HD12	1.80	0.41
57:BA:2389:G:H5''	57:BA:2390:U:O4'	2.20	0.41
56:B9:10:ILE:HD12	56:B9:32:HIS:CG	2.56	0.41
57:AA:1821:A:H2'	57:AA:1822:G:H8	1.86	0.41
57:BA:1907:G:C6	57:BA:1908:C:C4	3.09	0.41
57:BA:1427:A:H4'	57:BA:1428:C:O5'	2.21	0.41
57:BA:380:U:H2'	57:BA:381:G:H8	1.85	0.41
57:AA:572:A:H2'	57:AA:573:G:O4'	2.20	0.41
27:BD:257:LEU:HD23	27:BD:258:LYS:N	2.36	0.41
30:AG:67:LYS:HE2	51:A4:6:HIS:CD2	2.55	0.40
53:A6:8:LYS:CE	53:A6:25:LYS:HD3	2.51	0.40
30:AG:71:THR:CG2	57:AA:2312:U:O2'	2.65	0.40
57:AA:2722:G:H2'	57:AA:2723:C:C6	2.55	0.40
57:AA:620:G:H8	57:AA:622:G:O6	2.04	0.40
57:AA:833:U:H3	57:AA:853:G:H1	39.62	0.40
57:AA:853:G:H2'	57:AA:854:G:H8	2.15	0.40
57:AA:7:G:H2'	57:AA:8:A:O4'	2.21	0.40
58:AB:65:C:N4	58:AB:109:C:H2'	2.35	0.40
28:AE:50:GLY:CA	28:AE:78:LEU:HB3	2.51	0.40
28:AE:7:VAL:HG13	28:AE:27:LEU:HB3	2.03	0.40
29:AF:21:ALA:O	29:AF:23:ASP:N	2.54	0.40
29:AF:81:PRO:HB3	29:AF:89:VAL:HG22	2.02	0.40
31:AH:137:ASP:HB3	31:AH:140:LYS:HB2	2.02	0.40
31:AH:41:MET:HE1	31:AH:53:GLU:H	1.86	0.40
32:AI:9:LEU:HB2	32:AI:12:LEU:O	2.21	0.40
38:AR:5:LYS:HD2	57:AA:2820:A:O4'	2.21	0.40
38:AR:63:ARG:NH2	38:AR:77:ARG:HG2	2.36	0.40
40:AT:28:VAL:HG23	40:AT:47:GLY:O	2.20	0.40
43:AW:24:ILE:HA	43:AW:27:LYS:HG3	2.02	0.40
45:AY:84:ARG:HD2	45:AY:97:ARG:CD	2.51	0.40
50:B3:17:LYS:HG2	57:BA:969:U:OP1	2.20	0.40
55:B8:53:PRO:CG	55:B8:54:GLU:N	2.83	0.40
57:BA:1021:A:N6	57:BA:1141:U:N3	2.64	0.40
57:BA:1028:A:N6	57:BA:1125:G:H2'	2.36	0.40
57:BA:1204:A:H2	57:BA:1241:A:N1	2.19	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1409:C:O2'	57:BA:1410:G:H5'	2.22	0.40
53:B6:37:ARG:HH21	57:BA:2286:A:H62	1.70	0.40
57:BA:2287:A:C2	57:BA:2346:A:H2	2.39	0.40
57:BA:545:C:C3'	57:BA:547:A:C5'	2.99	0.40
57:BA:548:A:H2'	57:BA:549:G:C5'	2.31	0.40
57:BA:602:G:C6	57:BA:654(U):A:N7	2.89	0.40
55:B8:52:LYS:HE2	57:BA:834:C:H4'	2.02	0.40
26:BC:45:HIS:ND1	26:BC:173:HIS:CB	2.83	0.40
28:BE:34:VAL:HG11	28:BE:78:LEU:HD23	2.02	0.40
30:BG:178:PHE:HA	30:BG:179:PRO:HD2	1.94	0.40
30:BG:64:THR:OG1	30:BG:94:LEU:HD21	2.21	0.40
32:BI:83:ALA:CB	32:BI:88:ILE:HA	2.51	0.40
34:BN:25:ARG:HA	57:BA:1012:U:O4	2.21	0.40
35:BO:107:ARG:O	35:BO:110:GLY:N	2.54	0.40
36:BP:35:HIS:CE1	57:BA:941:A:H4'	2.55	0.40
41:BU:53:ARG:HH11	57:BA:536:A:P	2.44	0.40
41:BU:74:LEU:HD21	41:BU:79:PHE:HB2	2.03	0.40
44:BX:12:VAL:HG11	44:BX:27:THR:HG23	2.03	0.40
45:BY:30:VAL:HG12	45:BY:31:LEU:N	2.36	0.40
45:BY:95:LYS:CD	45:BY:101:LYS:H	2.34	0.40
37:AQ:134:ARG:HA	37:AQ:137:TYR:CE1	2.54	0.40
50:B3:31:LEU:O	50:B3:32:GLN:HB2	2.20	0.40
48:A1:19:GLN:HB3	48:A1:35:THR:CG2	2.51	0.40
52:B5:51:TYR:C	52:B5:53:ALA:N	2.74	0.40
48:A1:92:LYS:NZ	57:AA:153:C:OP1	2.33	0.40
29:AF:176:LEU:HD21	29:AF:180:GLY:O	2.21	0.40
57:AA:1541:G:C4'	57:AA:1542:A:O4'	2.68	0.40
36:AP:90:ARG:HD2	36:AP:91:PHE:HD1	1.85	0.40
35:AO:103:ALA:C	35:AO:105:GLU:H	2.23	0.40
48:B1:4:VAL:HG22	48:B1:5:CYS:N	2.36	0.40
57:AA:1639:U:H2'	57:AA:1640:C:C5'	2.51	0.40
38:BR:11:ASN:C	38:BR:11:ASN:OD1	2.59	0.40
57:BA:2115:G:H2'	57:BA:2117:A:N6	2.37	0.40
43:BW:93:ALA:N	57:BA:1614:A:N6	2.70	0.40
44:BX:60:ARG:HH21	54:B7:47:ARG:NH1	2.17	0.40
34:BN:120:LEU:HD21	34:BN:122:VAL:HG23	2.02	0.40
40:AT:114:LEU:HD23	40:AT:114:LEU:HA	1.78	0.40
44:BX:8:ILE:H	44:BX:8:ILE:CD1	2.34	0.40
57:BA:2223:G:H2'	57:BA:2224:G:C5'	2.51	0.40
57:AA:570:G:H2'	57:AA:2030:A:C5	2.56	0.40
48:B1:82:LEU:HD22	48:B1:82:LEU:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2745:C:H2'	57:AA:2746:U:C6	2.56	0.40
47:A0:20:ARG:NH1	57:AA:2271:G:C5'	2.84	0.40
37:BQ:79:LEU:HD11	57:BA:2460:U:H4'	2.04	0.40
57:AA:2563:U:H2'	57:AA:2565:A:OP2	2.21	0.40
41:BU:62:ILE:HG12	41:BU:76:TYR:CZ	2.56	0.40
57:BA:2100:G:H2'	57:BA:2100:G:N3	2.36	0.40
57:BA:449:A:C2'	57:BA:450:G:H5'	2.51	0.40
57:AA:1022:G:O2'	57:AA:1023:U:OP2	2.33	0.40
57:AA:1047:G:C8	57:AA:1110:G:N1	2.89	0.40
57:AA:2307:G:H3'	57:AA:2308:G:C5'	2.51	0.40
57:AA:448:U:C4	57:AA:583:G:H1'	2.57	0.40
37:AQ:18:LYS:HE3	57:AA:862:G:OP1	2.22	0.40
28:AE:199:ARG:HB2	28:AE:199:ARG:HH11	1.85	0.40
30:AG:5:VAL:O	30:AG:9:ARG:N	2.47	0.40
30:AG:77:ILE:C	30:AG:79:ASN:N	2.66	0.40
31:AH:117:PRO:HB3	31:AH:123:PHE:CE1	2.56	0.40
34:AN:112:LEU:O	34:AN:112:LEU:HD12	2.22	0.40
36:AP:78:PRO:HA	36:AP:110:TYR:HE2	1.80	0.40
37:AQ:39:PRO:HA	37:AQ:97:VAL:O	2.21	0.40
40:AT:57:PHE:O	40:AT:58:ASN:C	2.60	0.40
40:AT:89:VAL:CB	40:AT:91:ARG:HG3	2.50	0.40
41:AU:27:LEU:HB2	57:AA:2020:A:OP1	2.21	0.40
42:AV:19:LYS:HZ3	42:AV:20:LEU:CB	2.33	0.40
42:AV:82:ARG:N	42:AV:82:ARG:HD2	2.35	0.40
45:AY:28:LYS:O	45:AY:30:VAL:N	2.54	0.40
57:BA:1005:C:H2'	57:BA:1006:C:C6	2.56	0.40
57:BA:140:G:N2	57:BA:1596:A:H4'	2.36	0.40
57:BA:299:A:C5	57:BA:322:A:C2	3.10	0.40
29:BF:90:PHE:HB3	57:BA:588:U:H1'	2.03	0.40
57:BA:839:U:H2'	57:BA:840:C:H6	1.83	0.40
58:BB:48:A:H2'	58:BB:49:C:C6	2.56	0.40
28:BE:145:LYS:HE2	57:BA:574:C:N3	2.36	0.40
28:BE:36:ARG:NH1	28:BE:85:ASN:OD1	2.53	0.40
29:BF:1:MET:O	29:BF:2:LYS:C	2.60	0.40
30:BG:116:ASP:O	30:BG:117:PHE:CB	2.55	0.40
30:BG:173:LEU:HB3	30:BG:178:PHE:CD1	2.56	0.40
30:BG:63:ILE:HG13	30:BG:63:ILE:O	2.20	0.40
32:BI:98:ALA:O	32:BI:101:LEU:HB2	2.20	0.40
32:BI:112:LYS:HG3	32:BI:116:LEU:CD2	2.51	0.40
32:BI:19:VAL:HG13	32:BI:19:VAL:O	2.22	0.40
32:BI:79:ILE:HD13	32:BI:79:ILE:HA	1.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BR:52:ILE:O	38:BR:55:ALA:N	2.53	0.40
39:BS:68:GLN:O	39:BS:70:GLY:N	2.54	0.40
40:BT:125:ARG:C	40:BT:127:ALA:H	2.25	0.40
41:BU:101:ARG:C	41:BU:102:GLU:HG2	2.41	0.40
41:BU:92:ARG:HD3	41:BU:94:ASN:HB3	2.02	0.40
42:BV:38:LEU:CD2	42:BV:52:VAL:HG11	2.51	0.40
42:BV:19:LYS:CG	42:BV:20:LEU:N	2.81	0.40
46:BZ:61:LEU:HD23	46:BZ:61:LEU:N	2.27	0.40
47:A0:10:THR:HG22	47:A0:11:ARG:N	2.21	0.40
57:BA:365:C:H2'	57:BA:366:C:O4'	2.21	0.40
57:AA:1389:G:H2'	57:AA:1390:U:C6	2.56	0.40
57:AA:2189:U:H5'	57:AA:2190:G:OP2	2.21	0.40
57:AA:476:G:H4'	57:AA:502:A:N1	2.36	0.40
46:BZ:157:LEU:CD2	46:BZ:157:LEU:N	2.84	0.40
57:BA:648:G:H1'	57:BA:2351:G:OP1	2.21	0.40
57:AA:605:C:O2'	57:AA:606:U:H5'	2.21	0.40
57:AA:1362:C:C2'	57:AA:1363:C:H5'	2.52	0.40
50:A3:43:ILE:O	50:A3:47:VAL:CG2	2.65	0.40
57:BA:2713:A:H3'	57:BA:2714:G:C5'	2.51	0.40
34:BN:120:LEU:C	34:BN:120:LEU:CD2	2.89	0.40
44:AX:60:ARG:HH21	54:A7:47:ARG:CD	2.29	0.40
57:AA:2223:G:H2'	57:AA:2224:G:C5'	2.49	0.40
54:A7:24:THR:HG23	54:A7:27:GLY:HA3	2.02	0.40
57:AA:2070:G:C2	57:AA:2442:C:C2	3.09	0.40
57:AA:2030:A:H4'	57:AA:2031:A:C8	2.55	0.40
47:A0:41:ARG:HD3	47:A0:41:ARG:HA	1.77	0.40
55:A8:23:VAL:HA	55:A8:47:LYS:O	2.21	0.40
57:BA:1789:A:H2'	57:BA:1790:C:O4'	2.21	0.40
57:BA:1981:A:H5''	57:BA:1982:C:OP2	2.21	0.40
57:BA:2347:C:H2'	57:BA:2348:U:H6	1.86	0.40
57:BA:1804:C:H6	57:BA:1804:C:O5'	2.04	0.40
57:BA:2364:C:O2'	57:BA:2365:G:H5'	2.21	0.40
29:AF:143:ALA:HB1	29:AF:148:LEU:HB2	2.02	0.40
53:A6:54:ILE:O	53:A6:54:ILE:CD1	2.64	0.40
57:AA:2163:C:H2'	57:AA:2164:C:O4'	2.21	0.40
36:AP:62:LEU:HG	57:AA:2394:C:OP1	2.20	0.40
57:AA:244:A:H2'	57:AA:245:G:O4'	2.21	0.40
57:AA:327:G:O2'	57:AA:328:U:H5'	2.22	0.40
57:AA:923:C:O2'	57:AA:924:C:H5'	2.21	0.40
57:AA:848:G:O6	57:AA:928:G:H2'	2.22	0.40
57:AA:986:C:O2'	57:AA:987:G:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AC:180:SER:O	26:AC:181:PHE:C	2.60	0.40
28:AE:101:ARG:CB	28:AE:169:ASN:ND2	2.82	0.40
28:AE:89:ASP:O	28:AE:90:THR:O	2.38	0.40
30:AG:101:ILE:HG22	30:AG:105:LYS:HE3	2.02	0.40
32:AI:111:PRO:CG	32:AI:112:LYS:HD2	2.43	0.40
35:AO:104:ARG:CB	35:AO:104:ARG:NH1	2.85	0.40
38:AR:103:ARG:NH1	38:AR:110:PRO:N	2.69	0.40
38:AR:28:LEU:HA	38:AR:34:ILE:CG1	2.51	0.40
38:AR:38:VAL:HG13	38:AR:42:LYS:HD2	2.02	0.40
39:AS:30:ARG:NH1	39:AS:34:HIS:O	2.55	0.40
40:AT:50:ILE:CD1	40:AT:50:ILE:N	2.85	0.40
41:AU:65:ILE:HG12	41:AU:96:ALA:HB1	2.03	0.40
45:AY:30:VAL:HG12	45:AY:31:LEU:N	2.36	0.40
47:B0:69:PHE:CE2	57:BA:857:C:H5'	2.56	0.40
57:BA:1040:C:O2'	57:BA:1041:C:O5'	2.38	0.40
57:BA:1051:G:C4	57:BA:1052:C:N4	2.90	0.40
57:BA:1138:G:H2'	57:BA:1139:G:O4'	2.22	0.40
43:BW:99:ARG:HH12	57:BA:1262:A:P	2.44	0.40
57:BA:142:A:H1'	57:BA:1408:C:O4'	2.21	0.40
57:BA:1516:C:H2'	57:BA:1517:G:H8	1.86	0.40
57:BA:2282:G:O2'	57:BA:2283:C:OP2	2.27	0.40
57:BA:2377:A:H2'	57:BA:2378:A:C8	2.56	0.40
57:BA:2397:G:C2	57:BA:2420:C:H1'	2.57	0.40
57:BA:1027:A:C2	57:BA:2488:A:H5'	2.57	0.40
57:BA:923:C:O2'	57:BA:924:C:H5'	2.21	0.40
27:BD:68:LYS:HD2	27:BD:70:TRP:CZ2	2.57	0.40
33:BJ:22:GLY:C	33:BJ:119:ALA:HA	2.40	0.40
37:BQ:41:TRP:HB3	37:BQ:94:VAL:HB	2.03	0.40
39:BS:24:LEU:CB	39:BS:85:VAL:HG12	2.51	0.40
39:BS:40:ILE:HG22	39:BS:46:VAL:O	2.21	0.40
40:BT:48:ILE:CD1	40:BT:48:ILE:N	2.83	0.40
42:BV:24:LYS:HA	42:BV:92:THR:CG2	2.49	0.40
45:BY:84:ARG:HD2	45:BY:97:ARG:CD	2.50	0.40
27:AD:240:ALA:HA	57:AA:1971:A:N3	2.35	0.40
46:AZ:54:HIS:HB3	46:AZ:101:PRO:CD	2.51	0.40
42:AV:24:LYS:HA	42:AV:92:THR:CG2	2.50	0.40
46:AZ:135:GLU:O	46:AZ:136:PHE:C	2.60	0.40
46:BZ:168:GLU:C	46:BZ:170:THR:N	2.75	0.40
46:BZ:102:LEU:CD1	46:BZ:171:ILE:HD11	2.51	0.40
50:A3:31:LEU:C	50:A3:33:GLN:H	2.24	0.40
52:B5:33:CYS:HB2	52:B5:40:LYS:HE3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BR:10:LEU:CB	38:BR:17:ARG:HD3	2.49	0.40
57:BA:1155:A:O2'	57:BA:1156:A:H2'	2.22	0.40
48:B1:52:ARG:O	48:B1:56:GLN:O	2.39	0.40
57:BA:2307:G:H3'	57:BA:2308:G:C5'	2.51	0.40
57:BA:692:C:H2'	57:BA:693:C:H6	1.86	0.40
57:BA:1888:G:N3	57:BA:1888:G:H5'	2.36	0.40
57:AA:648:G:H1'	57:AA:2351:G:OP1	2.21	0.40
48:A1:43:TYR:HA	48:A1:44:PRO:HD3	1.89	0.40
57:AA:2696:U:H2'	57:AA:2697:G:H8	1.85	0.40
44:AX:57:LEU:CD1	44:AX:78:LYS:HG2	2.51	0.40
57:AA:2627:G:N3	57:AA:2781:A:H2	2.19	0.40
28:BE:165:VAL:O	28:BE:189:PRO:HG3	2.21	0.40
29:BF:100:THR:O	29:BF:100:THR:HG22	2.21	0.40
57:BA:2291:U:O2'	57:BA:2374:C:H1'	2.20	0.40
29:AF:206:ILE:HG22	29:AF:207:GLY:H	1.87	0.40
44:BX:26:TYR:CD2	44:BX:92:LEU:HD12	2.52	0.40
57:BA:2030:A:H4'	57:BA:2031:A:C8	2.53	0.40
51:B4:39:CYS:O	51:B4:40:HIS:CB	2.69	0.40
29:BF:181:LEU:HG	29:BF:186:ILE:HD11	2.03	0.40
57:BA:809:G:C6	57:BA:810:U:C4	3.09	0.40
57:AA:1794:U:H2'	57:AA:1795:C:H6	1.87	0.40
54:A7:19:ARG:NH1	54:A7:19:ARG:HG2	2.35	0.40
57:BA:1791:A:H8	57:BA:1791:A:OP2	2.04	0.40
57:BA:1862:G:O2'	57:BA:1863:G:H5'	2.21	0.40
57:BA:1850:G:N2	57:BA:1893:C:H1'	2.37	0.40
43:BW:79:GLY:C	43:BW:100:THR:HG22	2.41	0.40
42:BV:98:GLU:OE2	42:BV:100:ARG:NH1	2.55	0.40
57:BA:754:C:H3'	57:BA:754:C:O2	4.55	0.40
48:B1:40:ARG:O	48:B1:40:ARG:HD3	2.21	0.40
38:BR:94:TYR:N	38:BR:94:TYR:CD2	2.86	0.40
54:B7:10:ARG:HE	54:B7:14:LYS:HE3	1.86	0.40
57:BA:751:A:C6	57:BA:789:A:C5	3.10	0.40
57:BA:699:A:H4'	57:BA:1634:A:N7	2.35	0.40
57:BA:1192:G:O2'	57:BA:1193:G:H5'	2.21	0.40
49:A2:46:GLN:HG2	49:A2:49:LYS:NZ	2.37	0.40
51:A4:36:CYS:SG	51:A4:37:SER:N	2.94	0.40
55:A8:53:PRO:CG	55:A8:54:GLU:N	2.84	0.40
55:A8:61:LEU:HD12	55:A8:62:LEU:N	2.35	0.40
57:AA:140:G:N2	57:AA:1596:A:H4'	2.36	0.40
57:AA:2821:A:H2'	57:AA:2822:G:O4'	2.22	0.40
51:A4:2:LYS:HZ3	58:AB:39:A:H61	1.70	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:AE:137:HIS:CB	28:AE:138:PRO:HD2	2.51	0.40
29:AF:89:VAL:CG1	29:AF:90:PHE:H	2.32	0.40
30:AG:131:TYR:CE2	30:AG:133:LEU:HD23	2.47	0.40
31:AH:148:ILE:HG22	31:AH:162:ILE:HD12	2.02	0.40
31:AH:7:LEU:CD2	31:AH:65:HIS:CE1	3.03	0.40
32:AI:14:ASP:O	32:AI:15:VAL:O	2.40	0.40
32:AI:40:THR:O	32:AI:44:LEU:HB2	2.22	0.40
34:AN:115:ARG:O	34:AN:118:LYS:HB2	2.22	0.40
34:AN:67:LEU:O	34:AN:69:GLN:N	2.49	0.40
36:AP:105:LEU:HG	57:AA:626:U:N3	2.37	0.40
36:AP:49:ARG:HH21	36:AP:50:ARG:HH22	1.69	0.40
40:AT:13:ARG:CZ	40:AT:13:ARG:CA	2.81	0.40
40:AT:50:ILE:CD1	40:AT:64:ARG:HB2	2.51	0.40
42:AV:34:GLU:O	42:AV:36:PRO:HD3	2.20	0.40
55:B8:54:GLU:HG2	55:B8:57:ARG:HH21	1.85	0.40
57:BA:1002:G:H2'	57:BA:1003:G:C8	3.86	0.40
34:BN:66:LYS:NZ	57:BA:1140:C:OP2	2.52	0.40
57:BA:2123:G:H2'	57:BA:2124:G:C8	2.57	0.40
57:BA:2126:A:HO2'	57:BA:2127:G:P	2.43	0.40
57:BA:2259:G:N2	57:BA:2282:G:C2	2.90	0.40
57:BA:2358:G:C5	57:BA:2359:C:C5	3.10	0.40
55:B8:33:ASN:O	57:BA:2420:C:P	2.79	0.40
57:BA:2732:G:C2'	57:BA:2733:A:H5'	2.52	0.40
57:BA:2821:A:H2'	57:BA:2822:G:C8	2.56	0.40
58:BB:105:A:H2'	58:BB:106:G:C5'	2.52	0.40
26:BC:30:VAL:HG11	26:BC:42:VAL:HG13	2.03	0.40
26:BC:48:LEU:HD11	26:BC:172:ILE:CG2	2.47	0.40
28:BE:1:MET:O	28:BE:2:LYS:C	2.59	0.40
28:BE:6:GLY:HA2	28:BE:27:LEU:O	2.22	0.40
29:BF:83:PHE:O	29:BF:84:VAL:CB	2.69	0.40
30:BG:12:TYR:HA	30:BG:16:ARG:CG	2.51	0.40
30:BG:130:ASN:ND2	30:BG:160:VAL:CG1	2.77	0.40
30:BG:96:ARG:HE	30:BG:97:ASP:HB2	1.85	0.40
31:BH:89:ILE:HD12	31:BH:89:ILE:C	2.42	0.40
32:BI:25:TYR:O	32:BI:29:TYR:HB3	2.21	0.40
37:BQ:69:PHE:CD1	37:BQ:70:PRO:HD2	2.57	0.40
38:BR:38:VAL:HG22	38:BR:112:ALA:HB2	2.02	0.40
38:BR:44:LEU:HD13	38:BR:44:LEU:C	2.42	0.40
39:BS:101:LEU:H	39:BS:101:LEU:HD12	1.86	0.40
41:BU:83:LEU:HA	41:BU:86:ALA:HB3	2.03	0.40
43:BW:36:LEU:HD13	43:BW:48:ALA:HA	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BX:14:SER:O	44:BX:15:GLU:C	2.59	0.40
27:AD:239:ARG:O	57:AA:1971:A:C2	2.72	0.40
57:AA:1451:C:N3	57:AA:1459:G:O6	2.54	0.40
37:AQ:27:VAL:CG1	37:AQ:28:ALA:N	2.65	0.40
54:A7:34:ARG:HH12	54:A7:39:ARG:CD	2.35	0.40
57:BA:74:A:C5'	57:BA:75:G:O4'	2.69	0.40
57:BA:272(I):U:C4	57:BA:272(J):C:C5	3.10	0.40
43:BW:34:ASN:ND2	52:B5:39:MET:HG3	2.36	0.40
57:BA:2001:A:H2'	57:BA:2002:G:C8	2.56	0.40
57:BA:491:G:C4	57:BA:492:A:C8	3.10	0.40
44:AX:7:VAL:HB	44:AX:8:ILE:HD12	2.03	0.40
57:AA:2136:C:H2'	57:AA:2137:C:C5	2.57	0.40
38:BR:29:LEU:HB3	38:BR:75:LEU:HD11	2.03	0.40
57:AA:1668:A:C8	57:AA:1674:G:C6	3.09	0.40
27:AD:201:HIS:C	27:AD:203:ASN:H	2.25	0.40
57:AA:2422:A:H8	57:AA:2422:A:H3'	1.86	0.40
57:BA:201:C:H2'	57:BA:202:U:H5'	2.02	0.40
30:BG:21:ARG:HD3	30:BG:21:ARG:C	2.41	0.40
42:AV:1:MET:CE	42:AV:1:MET:HA	2.52	0.40
28:AE:126:PRO:O	28:AE:127:ASP:C	2.60	0.40
57:BA:2828:C:O2'	57:BA:2829:C:H5'	2.20	0.40
57:BA:614(A):U:H4'	57:BA:614(B):G:H5''	2.04	0.40
57:AA:467:G:O2'	57:AA:468:G:H5'	2.21	0.40
57:BA:653:A:H5'	57:BA:654:A:OP2	2.21	0.40
51:A4:3:GLU:CD	58:AB:40:U:C5	2.95	0.40
53:A6:30:THR:O	53:A6:31:PRO:C	2.60	0.40
57:AA:1006:C:C2	57:AA:1138:G:N2	2.89	0.40
57:AA:1048:A:H4'	57:AA:1049:C:OP1	2.20	0.40
57:AA:1341:U:C5	57:AA:1395:A:H2	2.39	0.40
57:AA:142(A):C:O2'	57:AA:143:G:H5'	2.21	0.40
57:AA:1509(A):A:O2'	57:AA:1509(B):A:H5'	2.21	0.40
57:AA:2123:G:H2'	57:AA:2124:G:C8	2.56	0.40
57:AA:2307:G:H3'	57:AA:2307:G:N3	2.37	0.40
28:AE:144:ARG:HD2	57:AA:2572:A:N7	2.37	0.40
57:AA:299:A:C5	57:AA:322:A:C2	3.10	0.40
57:AA:27:G:N2	57:AA:513:A:OP2	2.55	0.40
57:AA:613:G:C2	57:AA:615:G:C5	3.09	0.40
57:AA:709:U:H2'	57:AA:710:G:H8	1.82	0.40
57:AA:889:C:O2'	57:AA:890:A:P	2.79	0.40
58:AB:106:G:C2	58:AB:107:G:C8	3.10	0.40
26:AC:16:ASP:N	26:AC:21:TYR:OH	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AD:10:THR:O	27:AD:10:THR:HG23	2.20	0.40
30:AG:132:ASN:OD1	30:AG:158:ALA:HA	2.21	0.40
31:AH:30:LYS:HG3	31:AH:79:VAL:C	2.42	0.40
34:AN:126:PRO:HB2	34:AN:127:ASP:H	1.66	0.40
36:AP:108:LYS:C	36:AP:110:TYR:N	2.72	0.40
37:AQ:45:GLN:H	37:AQ:45:GLN:NE2	2.19	0.40
38:AR:28:LEU:HD11	38:AR:116:LEU:HG	2.03	0.40
38:AR:53:HIS:CD2	57:AA:2840:C:H5'	2.57	0.40
39:AS:48:LEU:CD1	39:AS:48:LEU:N	2.84	0.40
41:AU:92:ARG:O	41:AU:93:LYS:C	2.60	0.40
45:AY:89:PHE:C	45:AY:90:LEU:HD23	2.42	0.40
49:B2:47:ASN:ND2	57:BA:94(A):G:N2	2.58	0.40
51:B4:31:ILE:HG22	51:B4:33:VAL:HG23	2.03	0.40
53:B6:15:GLU:OE1	53:B6:41:PRO:CB	2.70	0.40
57:BA:1051:G:C6	57:BA:1052:C:N4	2.89	0.40
57:BA:1341:U:C5	57:BA:1395:A:H2	2.39	0.40
57:BA:2811:G:C2'	57:BA:2812:G:H5'	2.52	0.40
26:BC:225:ILE:HD12	26:BC:225:ILE:H	1.87	0.40
27:BD:28:GLU:CD	27:BD:29:PRO:HD2	2.42	0.40
30:BG:41:GLN:HE21	30:BG:155:MET:HB3	1.87	0.40
32:BI:116:LEU:HG	32:BI:117:GLU:H	1.86	0.40
32:BI:48:GLU:HA	32:BI:51:ILE:HB	2.03	0.40
32:BI:62:LYS:HE3	32:BI:134:PRO:HD3	2.03	0.40
32:BI:86:THR:O	32:BI:87:LYS:CB	2.68	0.40
33:BJ:70:GLU:O	33:BJ:72:ASP:N	2.42	0.40
36:BP:49:ARG:NH2	36:BP:50:ARG:HH22	2.20	0.40
37:BQ:12:GLN:NE2	37:BQ:73:PRO:HD2	2.37	0.40
39:BS:81:GLY:O	39:BS:82:ILE:C	2.59	0.40
41:BU:16:LYS:O	41:BU:20:LEU:CD2	2.69	0.40
44:BX:30:VAL:HG23	44:BX:31:HIS:N	2.36	0.40
45:BY:96:ILE:O	45:BY:97:ARG:CB	2.60	0.40
46:BZ:89:PHE:CD2	46:BZ:90:VAL:N	2.89	0.40
46:BZ:150:LEU:C	46:BZ:151:HIS:HD2	2.25	0.40
57:AA:528:A:H2	57:AA:2043:C:H5'	1.85	0.40
41:AU:57:PHE:O	41:AU:58:ARG:C	2.58	0.40
57:BA:1465:G:C2	57:BA:1466:G:C8	3.09	0.40
57:BA:1469:A:H2'	57:BA:1470:G:C8	2.57	0.40
57:BA:2230:G:H2'	57:BA:2231:C:H6	1.86	0.40
57:AA:319:C:O2'	57:AA:320:A:H5'	2.22	0.40
57:AA:2521:C:H2'	57:AA:2521:C:O2	2.20	0.40
46:BZ:128:VAL:CG2	46:BZ:132:ASN:O	2.68	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:AW:93:ALA:HB2	57:AA:1614:A:N7	2.37	0.40
57:BA:272(I):U:C4	57:BA:272(J):C:H5	2.39	0.40
57:AA:2350:C:O2'	57:AA:2351:G:H5'	2.22	0.40
57:AA:2115:G:H2'	57:AA:2117:A:N6	2.35	0.40
56:B9:13:LYS:HD3	56:B9:28:GLU:OE1	2.21	0.40
57:AA:1755:A:H2'	57:AA:1756:G:H5'	2.04	0.40
41:AU:16:LYS:O	41:AU:20:LEU:CD2	2.68	0.40
41:AU:20:LEU:N	41:AU:20:LEU:HD22	2.36	0.40
57:AA:198:C:H5'	57:AA:2244:U:OP1	2.22	0.40
48:A1:67:ILE:H	48:A1:67:ILE:HG13	1.67	0.40
57:BA:2296:U:O2	57:BA:2333:A:N3	2.55	0.40
57:BA:2516:G:C5	57:BA:2517:C:C4	3.09	0.40
57:BA:2629:A:N3	57:BA:2629:A:H5'	2.37	0.40
57:AA:2100:G:H2'	57:AA:2100:G:N3	2.37	0.40
41:AU:85:LYS:O	41:AU:86:ALA:C	2.60	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	Ab	232/256 (91%)	149 (64%)	48 (21%)	35 (15%)	0	5
1	Bb	232/256 (91%)	148 (64%)	52 (22%)	32 (14%)	0	6
2	Ac	204/239 (85%)	132 (65%)	43 (21%)	29 (14%)	0	5
2	Bc	204/239 (85%)	134 (66%)	41 (20%)	29 (14%)	0	5
3	Ad	206/209 (99%)	131 (64%)	52 (25%)	23 (11%)	0	9
3	Bd	206/209 (99%)	132 (64%)	51 (25%)	23 (11%)	0	9
4	Ae	148/162 (91%)	105 (71%)	24 (16%)	19 (13%)	0	7
4	Be	148/162 (91%)	104 (70%)	23 (16%)	21 (14%)	0	5

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	Af	99/101 (98%)	67 (68%)	25 (25%)	7 (7%)	1	19
5	Bf	99/101 (98%)	66 (67%)	26 (26%)	7 (7%)	1	19
6	Ag	153/156 (98%)	108 (71%)	31 (20%)	14 (9%)	1	13
6	Bg	153/156 (98%)	106 (69%)	33 (22%)	14 (9%)	1	13
7	Ah	136/138 (99%)	97 (71%)	32 (24%)	7 (5%)	2	28
7	Bh	136/138 (99%)	97 (71%)	33 (24%)	6 (4%)	3	32
8	Ai	125/128 (98%)	83 (66%)	24 (19%)	18 (14%)	0	5
8	Bi	125/128 (98%)	82 (66%)	25 (20%)	18 (14%)	0	5
9	Aj	96/105 (91%)	76 (79%)	13 (14%)	7 (7%)	1	18
9	Bj	96/105 (91%)	76 (79%)	13 (14%)	7 (7%)	1	18
10	Ak	117/129 (91%)	88 (75%)	22 (19%)	7 (6%)	2	24
10	Bk	117/129 (91%)	87 (74%)	23 (20%)	7 (6%)	2	24
11	Al	122/132 (92%)	82 (67%)	25 (20%)	15 (12%)	0	8
11	Bl	122/132 (92%)	82 (67%)	24 (20%)	16 (13%)	0	7
12	Am	116/126 (92%)	58 (50%)	28 (24%)	30 (26%)	0	1
12	Bm	116/126 (92%)	66 (57%)	25 (22%)	25 (22%)	0	1
13	An	58/61 (95%)	38 (66%)	10 (17%)	10 (17%)	0	3
13	Bn	58/61 (95%)	37 (64%)	11 (19%)	10 (17%)	0	3
14	Ao	86/89 (97%)	52 (60%)	24 (28%)	10 (12%)	0	9
14	Bo	86/89 (97%)	52 (60%)	25 (29%)	9 (10%)	1	10
15	Ap	81/88 (92%)	55 (68%)	20 (25%)	6 (7%)	1	18
15	Bp	81/88 (92%)	55 (68%)	23 (28%)	3 (4%)	4	38
16	Aq	97/105 (92%)	74 (76%)	18 (19%)	5 (5%)	2	27
16	Bq	97/105 (92%)	73 (75%)	19 (20%)	5 (5%)	2	27
17	Ar	68/88 (77%)	43 (63%)	20 (29%)	5 (7%)	1	18
17	Br	68/88 (77%)	42 (62%)	21 (31%)	5 (7%)	1	18
18	As	76/93 (82%)	43 (57%)	20 (26%)	13 (17%)	0	3
18	Bs	76/93 (82%)	43 (57%)	20 (26%)	13 (17%)	0	3
19	At	97/106 (92%)	60 (62%)	25 (26%)	12 (12%)	0	8
19	Bt	97/106 (92%)	60 (62%)	25 (26%)	12 (12%)	0	8
20	Au	22/27 (82%)	13 (59%)	6 (27%)	3 (14%)	0	6

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
20	Bu	22/27 (82%)	12 (54%)	7 (32%)	3 (14%)	0	6
21	Ay	92/95 (97%)	51 (55%)	24 (26%)	17 (18%)	0	3
21	By	92/95 (97%)	58 (63%)	20 (22%)	14 (15%)	0	5
26	AC	116/229 (51%)	87 (75%)	25 (22%)	4 (3%)	5	41
26	BC	116/229 (51%)	86 (74%)	26 (22%)	4 (3%)	5	41
27	AD	269/276 (98%)	187 (70%)	50 (19%)	32 (12%)	0	8
27	BD	269/276 (98%)	190 (71%)	50 (19%)	29 (11%)	0	10
28	AE	202/206 (98%)	138 (68%)	35 (17%)	29 (14%)	0	5
28	BE	202/206 (98%)	140 (69%)	34 (17%)	28 (14%)	0	6
29	AF	205/210 (98%)	148 (72%)	29 (14%)	28 (14%)	0	6
29	BF	205/210 (98%)	148 (72%)	30 (15%)	27 (13%)	0	6
30	AG	179/182 (98%)	98 (55%)	47 (26%)	34 (19%)	0	2
30	BG	179/182 (98%)	99 (55%)	42 (24%)	38 (21%)	0	2
31	AH	162/180 (90%)	97 (60%)	36 (22%)	29 (18%)	0	3
31	BH	162/180 (90%)	97 (60%)	36 (22%)	29 (18%)	0	3
32	AI	143/148 (97%)	75 (52%)	44 (31%)	24 (17%)	0	4
32	BI	143/148 (97%)	76 (53%)	40 (28%)	27 (19%)	0	3
33	AJ	128/173 (74%)	46 (36%)	43 (34%)	39 (30%)	0	0
33	BJ	128/173 (74%)	40 (31%)	36 (28%)	52 (41%)	0	0
34	AN	136/140 (97%)	96 (71%)	23 (17%)	17 (12%)	0	8
34	BN	136/140 (97%)	98 (72%)	21 (15%)	17 (12%)	0	8
35	AO	120/122 (98%)	103 (86%)	11 (9%)	6 (5%)	3	29
35	BO	120/122 (98%)	103 (86%)	12 (10%)	5 (4%)	3	33
36	AP	144/150 (96%)	75 (52%)	37 (26%)	32 (22%)	0	1
36	BP	144/150 (96%)	75 (52%)	38 (26%)	31 (22%)	0	2
37	AQ	138/141 (98%)	105 (76%)	20 (14%)	13 (9%)	1	12
37	BQ	138/141 (98%)	105 (76%)	18 (13%)	15 (11%)	0	9
38	AR	115/118 (98%)	82 (71%)	21 (18%)	12 (10%)	1	11
38	BR	115/118 (98%)	83 (72%)	20 (17%)	12 (10%)	1	11
39	AS	96/112 (86%)	45 (47%)	29 (30%)	22 (23%)	0	1
39	BS	96/112 (86%)	45 (47%)	29 (30%)	22 (23%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
40	AT	133/146 (91%)	87 (65%)	19 (14%)	27 (20%)	0	2
40	BT	133/146 (91%)	87 (65%)	20 (15%)	26 (20%)	0	2
41	AU	115/118 (98%)	86 (75%)	23 (20%)	6 (5%)	2	27
41	BU	115/118 (98%)	85 (74%)	23 (20%)	7 (6%)	2	24
42	AV	99/101 (98%)	66 (67%)	22 (22%)	11 (11%)	0	9
42	BV	99/101 (98%)	67 (68%)	20 (20%)	12 (12%)	0	8
43	AW	111/113 (98%)	85 (77%)	16 (14%)	10 (9%)	1	13
43	BW	111/113 (98%)	86 (78%)	14 (13%)	11 (10%)	1	12
44	AX	90/96 (94%)	65 (72%)	22 (24%)	3 (3%)	5	41
44	BX	90/96 (94%)	64 (71%)	24 (27%)	2 (2%)	8	51
45	AY	98/110 (89%)	45 (46%)	23 (24%)	30 (31%)	0	0
45	BY	98/110 (89%)	46 (47%)	21 (21%)	31 (32%)	0	0
46	AZ	182/206 (88%)	104 (57%)	46 (25%)	32 (18%)	0	3
46	BZ	182/206 (88%)	105 (58%)	46 (25%)	31 (17%)	0	3
47	A0	82/85 (96%)	62 (76%)	15 (18%)	5 (6%)	2	24
47	B0	82/85 (96%)	61 (74%)	16 (20%)	5 (6%)	2	24
48	A1	91/98 (93%)	66 (72%)	15 (16%)	10 (11%)	0	9
48	B1	91/98 (93%)	71 (78%)	11 (12%)	9 (10%)	1	12
49	A2	69/72 (96%)	41 (59%)	18 (26%)	10 (14%)	0	5
49	B2	69/72 (96%)	47 (68%)	16 (23%)	6 (9%)	1	14
50	A3	57/60 (95%)	48 (84%)	7 (12%)	2 (4%)	4	40
50	B3	57/60 (95%)	48 (84%)	7 (12%)	2 (4%)	4	40
51	A4	55/71 (78%)	22 (40%)	20 (36%)	13 (24%)	0	1
51	B4	55/71 (78%)	23 (42%)	19 (34%)	13 (24%)	0	1
52	A5	53/60 (88%)	37 (70%)	8 (15%)	8 (15%)	0	5
52	B5	53/60 (88%)	37 (70%)	8 (15%)	8 (15%)	0	5
53	A6	48/54 (89%)	22 (46%)	13 (27%)	13 (27%)	0	0
53	B6	48/54 (89%)	22 (46%)	13 (27%)	13 (27%)	0	0
54	A7	45/49 (92%)	42 (93%)	2 (4%)	1 (2%)	8	51
54	B7	45/49 (92%)	42 (93%)	2 (4%)	1 (2%)	8	51
55	A8	61/65 (94%)	35 (57%)	15 (25%)	11 (18%)	0	3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
55	B8	61/65 (94%)	35 (57%)	15 (25%)	11 (18%)	0	3
56	A9	35/37 (95%)	25 (71%)	9 (26%)	1 (3%)	6	44
56	B9	35/37 (95%)	25 (71%)	9 (26%)	1 (3%)	6	44
All	All	12016/13122 (92%)	7873 (66%)	2533 (21%)	1610 (13%)	0	6

All (1610) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	Ab	15	VAL
1	Ab	18	GLY
1	Ab	75	LYS
1	Ab	123	ALA
1	Ab	143	GLU
1	Ab	165	VAL
1	Ab	195	ASP
1	Ab	229	VAL
1	Ab	230	VAL
1	Ab	238	LEU
1	Ab	239	VAL
2	Ac	15	THR
2	Ac	47	LEU
2	Ac	73	PRO
2	Ac	108	ASN
2	Ac	154	SER
2	Ac	156	ARG
3	Ad	30	LYS
3	Ad	40	PRO
3	Ad	47	ARG
3	Ad	129	ASN
3	Ad	179	GLU
4	Ae	21	ALA
4	Ae	37	ARG
4	Ae	70	PRO
5	Af	40	VAL
5	Af	43	LEU
5	Af	62	TRP
5	Af	81	ILE
5	Af	82	ARG
6	Ag	4	ARG
6	Ag	39	ALA
8	Ai	41	VAL

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Mol	Chain	Res	Type
8	Ai	44	VAL
8	Ai	89	ASN
8	Ai	103	THR
8	Ai	105	ASP
8	Ai	117	HIS
9	Aj	51	ARG
9	Aj	57	LYS
10	Ak	25	TYR
10	Ak	107	SER
11	Al	17	LYS
11	Al	23	LYS
11	Al	46	LYS
11	Al	47	LYS
11	Al	79	GLU
11	Al	91	LYS
11	Al	115	LYS
12	Am	4	ILE
12	Am	21	TYR
12	Am	64	TRP
12	Am	66	LEU
12	Am	69	GLU
12	Am	71	ARG
12	Am	72	ALA
12	Am	73	GLU
12	Am	83	ASP
12	Am	86	CYS
12	Am	106	ASN
12	Am	107	ALA
12	Am	108	ARG
12	Am	113	PRO
12	Am	117	VAL
13	An	15	LYS
13	An	16	PHE
13	An	26	ARG
13	An	52	GLN
16	Aq	68	ARG
16	Aq	99	SER
17	Ar	37	VAL
18	As	10	PHE
18	As	26	GLY
18	As	28	LYS
18	As	64	GLU

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Mol	Chain	Res	Type
18	As	67	VAL
19	At	9	ASN
19	At	48	LYS
19	At	101	GLY
19	At	103	GLY
20	Au	3	LYS
21	Ay	6	ASP
21	Ay	51	TYR
21	Ay	56	ARG
21	Ay	78	VAL
21	Ay	83	ARG
26	AC	220	GLY
27	AD	25	THR
27	AD	27	THR
27	AD	36	PRO
27	AD	123	ALA
27	AD	125	ILE
27	AD	127	VAL
27	AD	169	GLU
27	AD	225	ALA
27	AD	241	PRO
27	AD	245	PRO
27	AD	246	PRO
27	AD	271	ILE
28	AE	53	PRO
28	AE	54	GLN
28	AE	55	ASN
28	AE	61	ARG
28	AE	64	LYS
28	AE	68	ALA
28	AE	69	LYS
28	AE	77	ILE
28	AE	90	THR
28	AE	118	LYS
28	AE	189	PRO
28	AE	203	LYS
29	AF	21	ALA
29	AF	27	GLU
29	AF	59	TYR
29	AF	89	VAL
29	AF	133	ASN
29	AF	136	THR

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Mol	Chain	Res	Type
30	AG	4	ASP
30	AG	48	GLU
30	AG	49	ASP
30	AG	63	ILE
30	AG	78	SER
30	AG	82	LEU
30	AG	97	ASP
30	AG	110	ALA
30	AG	115	ARG
30	AG	117	PHE
30	AG	118	ARG
30	AG	122	PRO
30	AG	126	ASP
30	AG	159	VAL
31	AH	8	PRO
31	AH	12	PRO
31	AH	24	VAL
31	AH	83	TYR
31	AH	92	ILE
31	AH	138	LYS
31	AH	154	PRO
31	AH	155	SER
31	AH	156	ALA
31	AH	159	GLU
31	AH	160	LYS
31	AH	165	ALA
32	AI	12	LEU
32	AI	15	VAL
32	AI	71	ILE
32	AI	76	THR
32	AI	87	LYS
32	AI	92	VAL
32	AI	99	GLU
32	AI	105	HIS
32	AI	120	ILE
32	AI	132	PRO
33	AJ	33	PRO
33	AJ	43	ALA
33	AJ	54	ALA
33	AJ	56	ASN
33	AJ	58	LEU
33	AJ	68	LEU

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Mol	Chain	Res	Type
33	AJ	70	GLU
33	AJ	85	ASP
33	AJ	87	VAL
33	AJ	100	ASN
33	AJ	101	PRO
33	AJ	105	PRO
33	AJ	108	LYS
33	AJ	109	SER
33	AJ	112	LEU
33	AJ	117	LEU
33	AJ	120	LYS
34	AN	4	TYR
34	AN	42	TRP
34	AN	58	ASP
34	AN	60	ILE
34	AN	126	PRO
34	AN	134	ARG
35	AO	27	GLY
35	AO	29	ASN
35	AO	48	PRO
36	AP	14	LYS
36	AP	17	LYS
36	AP	19	VAL
36	AP	31	ALA
36	AP	58	THR
36	AP	89	ALA
36	AP	103	ALA
36	AP	111	ARG
37	AQ	2	LEU
37	AQ	27	VAL
37	AQ	135	ASP
38	AR	8	ARG
38	AR	12	ARG
38	AR	58	GLY
39	AS	13	ARG
39	AS	23	ARG
39	AS	24	LEU
39	AS	35	ILE
39	AS	59	LYS
39	AS	82	ILE
39	AS	90	GLY
39	AS	92	TYR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
39	AS	97	ARG
39	AS	100	ALA
39	AS	107	GLU
40	AT	2	ASN
40	AT	3	ARG
40	AT	24	PRO
40	AT	26	ASP
40	AT	28	VAL
40	AT	30	VAL
40	AT	35	LYS
40	AT	55	ASN
40	AT	58	ASN
40	AT	80	SER
40	AT	91	ARG
40	AT	107	ASP
41	AU	91	ASP
41	AU	93	LYS
42	AV	18	LEU
42	AV	46	VAL
42	AV	53	GLU
43	AW	10	VAL
43	AW	11	ARG
43	AW	60	ASN
43	AW	111	HIS
45	AY	5	MET
45	AY	7	VAL
45	AY	24	VAL
45	AY	27	VAL
45	AY	38	ILE
45	AY	45	VAL
45	AY	60	PHE
45	AY	66	PRO
45	AY	77	PRO
45	AY	78	ALA
45	AY	90	LEU
45	AY	91	GLU
45	AY	96	ILE
45	AY	97	ARG
46	AZ	5	LEU
46	AZ	31	ARG
46	AZ	42	VAL
46	AZ	134	PRO

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Mol	Chain	Res	Type
46	AZ	136	PHE
46	AZ	140	ASP
46	AZ	146	ILE
46	AZ	163	LEU
46	AZ	169	GLU
46	AZ	177	PRO
46	AZ	179	ASP
47	A0	17	GLN
47	A0	74	ARG
48	A1	53	VAL
48	A1	54	ALA
48	A1	58	ILE
48	A1	93	GLU
49	A2	43	GLN
49	A2	45	SER
49	A2	48	HIS
49	A2	70	GLN
51	A4	26	SER
51	A4	40	HIS
51	A4	43	TYR
51	A4	44	THR
52	A5	35	GLU
52	A5	36	CYS
52	A5	49	CYS
52	A5	51	TYR
52	A5	52	TYR
53	A6	9	LEU
53	A6	18	ARG
53	A6	27	LYS
53	A6	28	ARG
53	A6	31	PRO
53	A6	44	ARG
53	A6	48	VAL
55	A8	33	ASN
55	A8	34	TRP
55	A8	43	GLN
1	Bb	15	VAL
1	Bb	18	GLY
1	Bb	75	LYS
1	Bb	123	ALA
1	Bb	143	GLU
1	Bb	165	VAL

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Mol	Chain	Res	Type
1	Bb	195	ASP
1	Bb	229	VAL
1	Bb	230	VAL
1	Bb	238	LEU
1	Bb	239	VAL
2	Bc	15	THR
2	Bc	47	LEU
2	Bc	61	ALA
2	Bc	73	PRO
2	Bc	108	ASN
2	Bc	154	SER
2	Bc	156	ARG
3	Bd	30	LYS
3	Bd	40	PRO
3	Bd	47	ARG
3	Bd	129	ASN
4	Be	21	ALA
4	Be	37	ARG
4	Be	70	PRO
5	Bf	40	VAL
5	Bf	43	LEU
5	Bf	62	TRP
5	Bf	81	ILE
6	Bg	4	ARG
6	Bg	39	ALA
8	Bi	41	VAL
8	Bi	44	VAL
8	Bi	89	ASN
8	Bi	103	THR
8	Bi	105	ASP
8	Bi	117	HIS
9	Bj	51	ARG
9	Bj	57	LYS
10	Bk	25	TYR
10	Bk	107	SER
11	Bl	17	LYS
11	Bl	23	LYS
11	Bl	46	LYS
11	Bl	47	LYS
11	Bl	79	GLU
11	Bl	115	LYS
12	Bm	4	ILE

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Mol	Chain	Res	Type
12	Bm	21	TYR
12	Bm	63	THR
12	Bm	64	TRP
12	Bm	66	LEU
12	Bm	67	GLU
12	Bm	69	GLU
12	Bm	71	ARG
12	Bm	72	ALA
12	Bm	83	ASP
12	Bm	86	CYS
12	Bm	106	ASN
12	Bm	107	ALA
12	Bm	108	ARG
12	Bm	113	PRO
13	Bn	15	LYS
13	Bn	16	PHE
13	Bn	26	ARG
13	Bn	52	GLN
16	Bq	68	ARG
16	Bq	99	SER
17	Br	37	VAL
18	Bs	10	PHE
18	Bs	26	GLY
18	Bs	28	LYS
18	Bs	64	GLU
18	Bs	67	VAL
19	Bt	9	ASN
19	Bt	48	LYS
19	Bt	71	THR
19	Bt	101	GLY
19	Bt	103	GLY
20	Bu	3	LYS
21	By	9	GLU
21	By	84	SER
26	BC	220	GLY
27	BD	25	THR
27	BD	27	THR
27	BD	36	PRO
27	BD	123	ALA
27	BD	127	VAL
27	BD	169	GLU
27	BD	225	ALA

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Mol	Chain	Res	Type
27	BD	241	PRO
27	BD	245	PRO
27	BD	246	PRO
27	BD	271	ILE
28	BE	53	PRO
28	BE	54	GLN
28	BE	55	ASN
28	BE	61	ARG
28	BE	64	LYS
28	BE	68	ALA
28	BE	69	LYS
28	BE	77	ILE
28	BE	90	THR
28	BE	118	LYS
28	BE	189	PRO
28	BE	203	LYS
29	BF	21	ALA
29	BF	27	GLU
29	BF	59	TYR
29	BF	89	VAL
29	BF	133	ASN
29	BF	136	THR
30	BG	6	ALA
30	BG	43	LEU
30	BG	47	LYS
30	BG	49	ASP
30	BG	75	LYS
30	BG	81	LYS
30	BG	82	LEU
30	BG	86	MET
30	BG	87	PRO
30	BG	96	ARG
30	BG	109	VAL
30	BG	110	ALA
30	BG	115	ARG
30	BG	123	ASN
30	BG	126	ASP
30	BG	142	PRO
30	BG	143	GLU
30	BG	145	THR
31	BH	8	PRO
31	BH	12	PRO

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Mol	Chain	Res	Type
31	BH	24	VAL
31	BH	71	LEU
31	BH	83	TYR
31	BH	92	ILE
31	BH	154	PRO
31	BH	155	SER
31	BH	156	ALA
31	BH	159	GLU
31	BH	160	LYS
31	BH	165	ALA
32	BI	12	LEU
32	BI	15	VAL
32	BI	71	ILE
32	BI	76	THR
32	BI	87	LYS
32	BI	92	VAL
32	BI	99	GLU
32	BI	105	HIS
32	BI	120	ILE
32	BI	132	PRO
33	BJ	14	LYS
33	BJ	19	ARG
33	BJ	23	SER
33	BJ	30	GLN
33	BJ	32	LEU
33	BJ	33	PRO
33	BJ	43	ALA
33	BJ	47	ASN
33	BJ	51	LEU
33	BJ	57	THR
33	BJ	58	LEU
33	BJ	59	ILE
33	BJ	62	ALA
33	BJ	63	LEU
33	BJ	68	LEU
33	BJ	69	PRO
33	BJ	77	PRO
33	BJ	80	VAL
33	BJ	84	GLU
33	BJ	85	ASP
33	BJ	86	PRO
33	BJ	87	VAL

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Mol	Chain	Res	Type
33	BJ	90	ALA
33	BJ	92	THR
33	BJ	93	LEU
33	BJ	100	ASN
33	BJ	101	PRO
33	BJ	105	PRO
33	BJ	108	LYS
33	BJ	109	SER
33	BJ	112	LEU
33	BJ	120	LYS
33	BJ	122	VAL
33	BJ	123	GLU
33	BJ	124	ALA
33	BJ	125	LEU
34	BN	4	TYR
34	BN	42	TRP
34	BN	58	ASP
34	BN	60	ILE
34	BN	126	PRO
34	BN	134	ARG
35	BO	27	GLY
35	BO	29	ASN
35	BO	48	PRO
36	BP	14	LYS
36	BP	17	LYS
36	BP	19	VAL
36	BP	31	ALA
36	BP	58	THR
36	BP	89	ALA
36	BP	103	ALA
36	BP	111	ARG
37	BQ	2	LEU
37	BQ	27	VAL
37	BQ	135	ASP
38	BR	8	ARG
38	BR	12	ARG
38	BR	58	GLY
39	BS	13	ARG
39	BS	23	ARG
39	BS	24	LEU
39	BS	35	ILE
39	BS	59	LYS

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Mol	Chain	Res	Type
39	BS	82	ILE
39	BS	90	GLY
39	BS	92	TYR
39	BS	107	GLU
40	BT	2	ASN
40	BT	3	ARG
40	BT	24	PRO
40	BT	26	ASP
40	BT	28	VAL
40	BT	30	VAL
40	BT	35	LYS
40	BT	55	ASN
40	BT	58	ASN
40	BT	80	SER
40	BT	91	ARG
40	BT	107	ASP
41	BU	91	ASP
41	BU	93	LYS
42	BV	18	LEU
42	BV	46	VAL
42	BV	53	GLU
43	BW	10	VAL
43	BW	11	ARG
43	BW	93	ALA
43	BW	111	HIS
45	BY	5	MET
45	BY	7	VAL
45	BY	24	VAL
45	BY	27	VAL
45	BY	38	ILE
45	BY	45	VAL
45	BY	60	PHE
45	BY	66	PRO
45	BY	77	PRO
45	BY	78	ALA
45	BY	90	LEU
45	BY	91	GLU
45	BY	96	ILE
45	BY	97	ARG
46	BZ	65	GLN
46	BZ	120	ILE
46	BZ	136	PHE

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Mol	Chain	Res	Type
46	BZ	146	ILE
46	BZ	152	ALA
46	BZ	168	GLU
46	BZ	170	THR
46	BZ	171	ILE
47	B0	17	GLN
47	B0	74	ARG
48	B1	27	GLU
48	B1	30	VAL
48	B1	53	VAL
48	B1	84	GLY
49	B2	45	SER
49	B2	48	HIS
51	B4	26	SER
51	B4	40	HIS
51	B4	43	TYR
51	B4	44	THR
52	B5	35	GLU
52	B5	36	CYS
52	B5	49	CYS
52	B5	51	TYR
52	B5	52	TYR
53	B6	9	LEU
53	B6	18	ARG
53	B6	27	LYS
53	B6	28	ARG
53	B6	31	PRO
53	B6	44	ARG
53	B6	48	VAL
55	B8	33	ASN
55	B8	34	TRP
55	B8	43	GLN
55	B8	49	VAL
1	Ab	20	GLU
1	Ab	26	PRO
1	Ab	80	ILE
1	Ab	101	MET
1	Ab	103	THR
1	Ab	150	SER
1	Ab	171	ALA
2	Ac	26	LYS
2	Ac	45	LYS

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Mol	Chain	Res	Type
2	Ac	61	ALA
2	Ac	145	GLY
2	Ac	163	ALA
2	Ac	165	THR
3	Ad	3	ARG
3	Ad	4	TYR
3	Ad	5	ILE
3	Ad	73	ARG
3	Ad	92	VAL
3	Ad	171	GLY
3	Ad	189	PRO
4	Ae	20	GLN
4	Ae	27	ARG
4	Ae	104	ALA
4	Ae	128	PRO
4	Ae	129	ILE
4	Ae	148	VAL
4	Ae	153	LYS
5	Af	6	VAL
6	Ag	21	VAL
6	Ag	54	THR
7	Ah	2	LEU
7	Ah	41	ARG
8	Ai	12	GLU
8	Ai	100	GLY
8	Ai	101	PHE
8	Ai	111	ARG
9	Aj	36	GLY
9	Aj	52	GLY
9	Aj	59	SER
10	Ak	89	ALA
10	Ak	122	LYS
11	Al	19	ARG
11	Al	51	ALA
11	Al	121	GLY
12	Am	3	ARG
12	Am	7	VAL
12	Am	12	ASN
12	Am	58	GLU
12	Am	63	THR
12	Am	74	VAL
12	Am	90	LEU

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Mol	Chain	Res	Type
12	Am	100	GLY
12	Am	112	GLY
12	Am	116	THR
13	An	24	CYS
13	An	36	PHE
14	Ao	49	ASP
14	Ao	85	LEU
14	Ao	86	GLY
14	Ao	87	ILE
15	Ap	39	TYR
15	Ap	78	GLY
16	Aq	33	GLY
16	Aq	34	LYS
17	Ar	58	LEU
18	As	65	ASN
18	As	80	TYR
19	At	71	THR
19	At	100	ILE
21	Ay	10	ARG
21	Ay	48	PRO
21	Ay	76	ILE
21	Ay	88	SER
21	Ay	94	ILE
27	AD	30	GLU
27	AD	32	SER
27	AD	58	HIS
27	AD	122	ASP
27	AD	138	VAL
27	AD	262	ARG
28	AE	33	VAL
28	AE	57	LYS
28	AE	66	HIS
28	AE	70	ALA
28	AE	71	GLY
28	AE	72	VAL
28	AE	82	ARG
28	AE	186	GLY
28	AE	201	THR
29	AF	3	GLU
29	AF	16	GLY
29	AF	54	ARG
29	AF	86	GLY

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Mol	Chain	Res	Type
29	AF	90	PHE
29	AF	128	ALA
29	AF	134	GLY
29	AF	158	THR
29	AF	167	ALA
30	AG	10	LYS
30	AG	27	ASN
30	AG	43	LEU
30	AG	75	LYS
30	AG	96	ARG
30	AG	103	LEU
31	AH	14	GLY
31	AH	45	VAL
31	AH	59	ARG
31	AH	69	ARG
31	AH	71	LEU
31	AH	126	PRO
31	AH	157	TYR
32	AI	14	ASP
32	AI	30	LEU
32	AI	85	GLU
32	AI	116	LEU
33	AJ	7	VAL
33	AJ	20	ALA
33	AJ	57	THR
33	AJ	59	ILE
33	AJ	62	ALA
33	AJ	74	LEU
33	AJ	90	ALA
33	AJ	91	LYS
33	AJ	96	PHE
33	AJ	106	GLN
33	AJ	116	ILE
34	AN	47	ALA
34	AN	57	ALA
34	AN	77	GLY
34	AN	133	GLN
35	AO	5	GLN
36	AP	10	PRO
36	AP	11	GLY
36	AP	47	ASP
36	AP	49	ARG

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Mol	Chain	Res	Type
36	AP	98	GLU
36	AP	104	GLY
36	AP	106	LEU
36	AP	107	LYS
36	AP	108	LYS
37	AQ	20	ALA
37	AQ	62	GLY
37	AQ	136	ALA
38	AR	117	VAL
39	AS	53	SER
39	AS	94	TYR
39	AS	96	GLY
39	AS	102	ALA
40	AT	12	SER
40	AT	17	THR
40	AT	32	TYR
40	AT	39	ARG
40	AT	88	ILE
40	AT	92	GLY
40	AT	129	ARG
41	AU	9	VAL
41	AU	32	PHE
41	AU	90	VAL
42	AV	19	LYS
42	AV	31	ALA
43	AW	29	LEU
43	AW	63	ASP
43	AW	93	ALA
45	AY	22	GLY
45	AY	29	GLU
45	AY	42	VAL
45	AY	48	ALA
45	AY	80	GLY
46	AZ	30	ASN
46	AZ	81	ARG
46	AZ	120	ILE
46	AZ	141	VAL
46	AZ	168	GLU
46	AZ	181	GLU
48	A1	24	ALA
48	A1	85	LEU
48	A1	94	LEU

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Mol	Chain	Res	Type
49	A2	10	LEU
49	A2	11	GLU
49	A2	44	LEU
50	A3	3	ARG
50	A3	38	GLU
51	A4	20	ASN
51	A4	48	ARG
52	A5	50	GLY
52	A5	53	ALA
53	A6	49	HIS
53	A6	52	VAL
54	A7	46	VAL
55	A8	31	HIS
55	A8	46	ARG
55	A8	49	VAL
55	A8	57	ARG
1	Bb	20	GLU
1	Bb	26	PRO
1	Bb	80	ILE
1	Bb	101	MET
1	Bb	103	THR
1	Bb	150	SER
1	Bb	171	ALA
2	Bc	26	LYS
2	Bc	45	LYS
2	Bc	145	GLY
2	Bc	163	ALA
2	Bc	165	THR
3	Bd	3	ARG
3	Bd	4	TYR
3	Bd	5	ILE
3	Bd	44	GLY
3	Bd	73	ARG
3	Bd	92	VAL
3	Bd	179	GLU
4	Be	20	GLN
4	Be	27	ARG
4	Be	128	PRO
4	Be	129	ILE
4	Be	148	VAL
4	Be	153	LYS
5	Bf	82	ARG

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Mol	Chain	Res	Type
6	Bg	21	VAL
7	Bh	2	LEU
7	Bh	41	ARG
8	Bi	12	GLU
8	Bi	101	PHE
8	Bi	109	VAL
8	Bi	111	ARG
9	Bj	36	GLY
9	Bj	52	GLY
9	Bj	59	SER
10	Bk	89	ALA
10	Bk	122	LYS
11	Bl	19	ARG
11	Bl	51	ALA
11	Bl	91	LYS
11	Bl	121	GLY
12	Bm	3	ARG
12	Bm	7	VAL
12	Bm	12	ASN
12	Bm	58	GLU
12	Bm	100	GLY
13	Bn	24	CYS
13	Bn	36	PHE
14	Bo	49	ASP
14	Bo	77	ARG
14	Bo	85	LEU
14	Bo	86	GLY
14	Bo	87	ILE
15	Bp	28	ARG
15	Bp	39	TYR
15	Bp	78	GLY
16	Bq	33	GLY
16	Bq	34	LYS
17	Br	45	SER
17	Br	58	LEU
18	Bs	65	ASN
18	Bs	80	TYR
19	Bt	100	ILE
21	By	17	LYS
21	By	44	LEU
21	By	56	ARG
21	By	80	LYS

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Mol	Chain	Res	Type
27	BD	30	GLU
27	BD	32	SER
27	BD	58	HIS
27	BD	122	ASP
27	BD	125	ILE
27	BD	138	VAL
27	BD	262	ARG
28	BE	33	VAL
28	BE	57	LYS
28	BE	66	HIS
28	BE	70	ALA
28	BE	71	GLY
28	BE	72	VAL
28	BE	82	ARG
28	BE	186	GLY
28	BE	201	THR
29	BF	3	GLU
29	BF	16	GLY
29	BF	86	GLY
29	BF	90	PHE
29	BF	134	GLY
29	BF	158	THR
29	BF	167	ALA
30	BG	10	LYS
30	BG	46	ALA
30	BG	70	VAL
30	BG	122	PRO
30	BG	127	GLY
30	BG	128	ARG
30	BG	129	GLY
30	BG	146	TYR
30	BG	147	ASP
30	BG	154	GLY
31	BH	14	GLY
31	BH	45	VAL
31	BH	59	ARG
31	BH	69	ARG
31	BH	126	PRO
31	BH	138	LYS
31	BH	157	TYR
31	BH	158	HIS
32	BI	14	ASP

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Mol	Chain	Res	Type
32	BI	30	LEU
32	BI	85	GLU
32	BI	97	ILE
32	BI	116	LEU
33	BJ	42	GLN
33	BJ	81	VAL
33	BJ	106	GLN
33	BJ	129	PRO
34	BN	47	ALA
34	BN	57	ALA
34	BN	77	GLY
34	BN	133	GLN
35	BO	5	GLN
36	BP	10	PRO
36	BP	11	GLY
36	BP	47	ASP
36	BP	49	ARG
36	BP	98	GLU
36	BP	104	GLY
36	BP	106	LEU
36	BP	107	LYS
36	BP	108	LYS
37	BQ	20	ALA
37	BQ	62	GLY
37	BQ	136	ALA
38	BR	117	VAL
39	BS	53	SER
39	BS	94	TYR
39	BS	96	GLY
39	BS	97	ARG
39	BS	100	ALA
39	BS	102	ALA
40	BT	12	SER
40	BT	17	THR
40	BT	32	TYR
40	BT	39	ARG
40	BT	88	ILE
40	BT	92	GLY
40	BT	129	ARG
41	BU	9	VAL
41	BU	32	PHE
41	BU	90	VAL

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Mol	Chain	Res	Type
42	BV	19	LYS
42	BV	31	ALA
42	BV	78	LYS
43	BW	60	ASN
43	BW	63	ASP
44	BX	22	ALA
45	BY	22	GLY
45	BY	29	GLU
45	BY	31	LEU
45	BY	42	VAL
45	BY	48	ALA
45	BY	80	GLY
46	BZ	77	ASP
46	BZ	113	ALA
46	BZ	128	VAL
46	BZ	134	PRO
46	BZ	165	VAL
46	BZ	169	GLU
46	BZ	181	GLU
48	B1	26	ARG
48	B1	58	ILE
49	B2	43	GLN
50	B3	3	ARG
50	B3	38	GLU
51	B4	20	ASN
51	B4	48	ARG
52	B5	50	GLY
52	B5	53	ALA
53	B6	49	HIS
53	B6	52	VAL
54	B7	46	VAL
55	B8	31	HIS
55	B8	46	ARG
55	B8	57	ARG
1	Ab	19	HIS
1	Ab	95	GLN
1	Ab	130	ARG
1	Ab	131	PRO
2	Ac	4	LYS
2	Ac	12	LEU
2	Ac	46	GLU
2	Ac	54	ARG

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Mol	Chain	Res	Type
2	Ac	74	GLY
2	Ac	127	ARG
2	Ac	181	ASN
3	Ad	14	ARG
3	Ad	37	PRO
3	Ad	44	GLY
3	Ad	60	GLU
3	Ad	159	ARG
4	Ae	108	ALA
4	Ae	149	GLU
5	Af	42	GLU
6	Ag	7	ALA
6	Ag	153	HIS
7	Ah	68	ARG
8	Ai	10	ARG
8	Ai	95	LYS
10	Ak	106	LYS
11	Al	26	ALA
11	Al	27	LEU
12	Am	31	LYS
12	Am	67	GLU
12	Am	70	LEU
14	Ao	24	SER
14	Ao	77	ARG
15	Ap	28	ARG
15	Ap	67	THR
16	Aq	74	LEU
17	Ar	28	GLU
17	Ar	45	SER
18	As	27	GLU
19	At	74	LYS
19	At	82	SER
19	At	94	ALA
19	At	98	PRO
19	At	99	LEU
20	Au	15	ARG
21	Ay	37	PRO
21	Ay	44	LEU
21	Ay	77	SER
26	AC	203	GLU
27	AD	202	LYS
28	AE	94	GLU

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Mol	Chain	Res	Type
29	AF	22	ALA
29	AF	25	PRO
30	AG	68	PRO
30	AG	81	LYS
30	AG	127	GLY
30	AG	130	ASN
30	AG	158	ALA
31	AH	13	LYS
31	AH	47	GLU
31	AH	49	VAL
31	AH	110	SER
31	AH	158	HIS
32	AI	36	ALA
32	AI	75	LEU
32	AI	97	ILE
32	AI	115	ALA
32	AI	143	SER
33	AJ	23	SER
33	AJ	50	ARG
33	AJ	55	LYS
33	AJ	111	LEU
33	AJ	118	THR
33	AJ	129	PRO
34	AN	56	ASN
36	AP	9	ASN
36	AP	33	ARG
36	AP	39	LYS
36	AP	147	LEU
37	AQ	22	LYS
37	AQ	134	ARG
38	AR	14	SER
39	AS	27	SER
39	AS	37	ALA
39	AS	88	ASP
40	AT	27	THR
40	AT	33	LYS
40	AT	38	ASN
40	AT	104	ASN
42	AV	2	PHE
42	AV	3	ALA
42	AV	16	PRO
42	AV	78	LYS

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Mol	Chain	Res	Type
43	AW	6	ILE
44	AX	22	ALA
45	AY	31	LEU
45	AY	37	VAL
45	AY	100	ALA
46	AZ	7	ALA
46	AZ	78	LYS
46	AZ	170	THR
46	AZ	172	ALA
46	AZ	184	ALA
49	A2	47	ASN
49	A2	69	ARG
51	A4	3	GLU
51	A4	51	ASP
53	A6	16	CYS
53	A6	19	ARG
53	A6	20	ASN
53	A6	23	THR
55	A8	29	LYS
55	A8	53	PRO
1	Bb	95	GLN
1	Bb	130	ARG
1	Bb	131	PRO
1	Bb	217	ARG
2	Bc	4	LYS
2	Bc	12	LEU
2	Bc	46	GLU
2	Bc	54	ARG
2	Bc	74	GLY
2	Bc	127	ARG
2	Bc	181	ASN
3	Bd	14	ARG
3	Bd	60	GLU
3	Bd	159	ARG
3	Bd	171	GLY
3	Bd	189	PRO
4	Be	104	ALA
4	Be	108	ALA
4	Be	149	GLU
5	Bf	6	VAL
5	Bf	42	GLU
6	Bg	7	ALA

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Mol	Chain	Res	Type
6	Bg	14	PRO
6	Bg	54	THR
6	Bg	153	HIS
7	Bh	68	ARG
8	Bi	95	LYS
10	Bk	106	LYS
11	Bl	26	ALA
11	Bl	27	LEU
12	Bm	70	LEU
12	Bm	112	GLY
14	Bo	24	SER
16	Bq	74	LEU
17	Br	28	GLU
18	Bs	27	GLU
19	Bt	74	LYS
19	Bt	82	SER
19	Bt	98	PRO
19	Bt	99	LEU
21	By	3	TYR
27	BD	202	LYS
28	BE	94	GLU
29	BF	15	SER
29	BF	22	ALA
29	BF	25	PRO
29	BF	54	ARG
29	BF	128	ALA
30	BG	97	ASP
30	BG	117	PHE
30	BG	179	PRO
31	BH	13	LYS
31	BH	47	GLU
31	BH	110	SER
32	BI	36	ALA
32	BI	69	LYS
32	BI	143	SER
33	BJ	65	GLU
33	BJ	74	LEU
33	BJ	97	ALA
33	BJ	102	LYS
34	BN	37	LYS
34	BN	56	ASN
36	BP	9	ASN

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Mol	Chain	Res	Type
36	BP	147	LEU
37	BQ	22	LYS
38	BR	4	LEU
38	BR	14	SER
39	BS	27	SER
39	BS	37	ALA
39	BS	88	ASP
40	BT	27	THR
40	BT	33	LYS
40	BT	38	ASN
40	BT	104	ASN
42	BV	2	PHE
42	BV	3	ALA
42	BV	16	PRO
43	BW	6	ILE
43	BW	29	LEU
45	BY	37	VAL
45	BY	53	PRO
45	BY	100	ALA
46	BZ	13	GLU
46	BZ	31	ARG
46	BZ	42	VAL
46	BZ	51	ALA
46	BZ	62	PRO
46	BZ	81	ARG
46	BZ	122	ARG
46	BZ	166	SER
46	BZ	185	GLU
47	B0	73	GLY
48	B1	24	ALA
48	B1	54	ALA
48	B1	69	LYS
49	B2	17	SER
51	B4	3	GLU
51	B4	51	ASP
53	B6	19	ARG
53	B6	20	ASN
53	B6	23	THR
55	B8	29	LYS
55	B8	53	PRO
1	Ab	8	LYS
1	Ab	83	MET

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Mol	Chain	Res	Type
1	Ab	84	GLU
1	Ab	129	GLU
1	Ab	135	GLN
1	Ab	194	PRO
1	Ab	217	ARG
2	Ac	14	ILE
2	Ac	36	ASP
2	Ac	56	ASP
2	Ac	98	ASN
2	Ac	164	ARG
4	Ae	16	THR
4	Ae	136	MET
6	Ag	9	VAL
6	Ag	14	PRO
6	Ag	31	MET
6	Ag	65	ALA
6	Ag	81	GLY
7	Ah	29	SER
8	Ai	11	LYS
8	Ai	34	ASN
8	Ai	70	LYS
11	Al	12	ARG
14	Ao	65	ARG
17	Ar	25	THR
18	As	30	LEU
18	As	43	GLU
18	As	70	LYS
21	Ay	9	GLU
26	AC	53	ARG
27	AD	191	ALA
28	AE	17	ASP
28	AE	56	PRO
29	AF	7	TYR
29	AF	9	ILE
29	AF	11	VAL
29	AF	15	SER
29	AF	168	ARG
30	AG	84	LYS
30	AG	87	PRO
30	AG	145	THR
30	AG	175	LEU
31	AH	20	ALA

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
32	AI	6	LEU
32	AI	69	LYS
34	AN	17	ASP
34	AN	37	LYS
34	AN	94	HIS
36	AP	25	SER
36	AP	48	PRO
36	AP	57	THR
36	AP	76	LYS
36	AP	141	ALA
36	AP	149	GLU
37	AQ	13	GLN
37	AQ	40	ALA
38	AR	4	LEU
38	AR	5	LYS
38	AR	86	ARG
38	AR	106	GLY
40	AT	29	ARG
40	AT	126	ALA
45	AY	39	VAL
45	AY	49	VAL
45	AY	53	PRO
45	AY	81	LYS
46	AZ	45	ASP
46	AZ	130	PRO
51	A4	28	LYS
52	A5	4	HIS
55	A8	3	LYS
1	Bb	8	LYS
1	Bb	19	HIS
1	Bb	83	MET
1	Bb	84	GLU
1	Bb	129	GLU
1	Bb	135	GLN
1	Bb	194	PRO
2	Bc	56	ASP
2	Bc	164	ARG
2	Bc	204	LEU
3	Bd	37	PRO
4	Be	16	THR
4	Be	109	ILE
4	Be	136	MET

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Mol	Chain	Res	Type
6	Bg	9	VAL
6	Bg	81	GLY
7	Bh	29	SER
8	Bi	10	ARG
8	Bi	11	LYS
8	Bi	34	ASN
8	Bi	70	LYS
12	Bm	31	LYS
14	Bo	65	ARG
18	Bs	9	VAL
18	Bs	30	LEU
18	Bs	43	GLU
18	Bs	70	LYS
19	Bt	94	ALA
20	Bu	15	ARG
21	By	38	ARG
21	By	82	GLU
26	BC	53	ARG
26	BC	203	GLU
27	BD	45	ASN
27	BD	191	ALA
28	BE	17	ASP
28	BE	56	PRO
28	BE	117	MET
29	BF	9	ILE
29	BF	11	VAL
29	BF	168	ARG
30	BG	118	ARG
31	BH	20	ALA
31	BH	49	VAL
32	BI	6	LEU
32	BI	75	LEU
32	BI	115	ALA
33	BJ	31	GLY
33	BJ	60	ARG
33	BJ	83	TYR
33	BJ	91	LYS
34	BN	17	ASP
34	BN	94	HIS
36	BP	25	SER
36	BP	33	ARG
36	BP	39	LYS

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Mol	Chain	Res	Type
36	BP	48	PRO
36	BP	76	LYS
36	BP	141	ALA
36	BP	149	GLU
37	BQ	40	ALA
37	BQ	134	ARG
38	BR	5	LYS
38	BR	86	ARG
38	BR	106	GLY
40	BT	29	ARG
41	BU	67	ALA
45	BY	30	VAL
45	BY	39	VAL
45	BY	81	LYS
46	BZ	154	ASP
51	B4	28	LYS
52	B5	4	HIS
53	B6	16	CYS
55	B8	3	LYS
1	Ab	22	LYS
1	Ab	155	LEU
2	Ac	168	ALA
2	Ac	204	LEU
3	Ad	56	VAL
3	Ad	118	ARG
3	Ad	156	GLU
3	Ad	178	VAL
4	Ae	8	GLU
4	Ae	109	ILE
6	Ag	40	ALA
10	Ak	34	ASP
13	An	14	PRO
13	An	23	ARG
14	Ao	36	ILE
15	Ap	52	ASP
18	As	9	VAL
19	At	97	ALA
21	Ay	81	ARG
27	AD	3	VAL
27	AD	10	THR
27	AD	12	SER
27	AD	28	GLU

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Mol	Chain	Res	Type
27	AD	45	ASN
27	AD	140	THR
27	AD	263	ARG
28	AE	19	ARG
28	AE	117	MET
28	AE	185	LYS
29	AF	2	LYS
29	AF	14	PRO
29	AF	176	LEU
30	AG	24	GLY
30	AG	86	MET
30	AG	181	ARG
32	AI	16	GLY
33	AJ	42	GLN
33	AJ	53	VAL
33	AJ	104	ILE
35	AO	14	THR
35	AO	64	ARG
36	AP	36	LYS
36	AP	109	GLY
36	AP	148	LEU
38	AR	45	ARG
38	AR	82	GLU
38	AR	102	GLU
39	AS	91	PRO
40	AT	41	ARG
42	AV	35	LEU
43	AW	35	ILE
44	AX	87	GLN
45	AY	9	LYS
46	AZ	142	SER
46	AZ	164	ALA
46	AZ	165	VAL
47	A0	55	ARG
48	A1	30	VAL
56	A9	31	LYS
1	Bb	22	LYS
1	Bb	155	LEU
1	Bb	198	ASP
2	Bc	14	ILE
2	Bc	36	ASP
2	Bc	98	ASN

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Mol	Chain	Res	Type
2	Bc	168	ALA
4	Be	7	GLU
4	Be	8	GLU
4	Be	49	PRO
6	Bg	31	MET
6	Bg	65	ALA
10	Bk	34	ASP
11	Bl	12	ARG
12	Bm	117	VAL
13	Bn	14	PRO
17	Br	25	THR
19	Bt	97	ALA
21	By	23	ARG
21	By	51	TYR
21	By	77	SER
27	BD	3	VAL
27	BD	10	THR
27	BD	28	GLU
27	BD	140	THR
27	BD	263	ARG
28	BE	19	ARG
29	BF	2	LYS
29	BF	7	TYR
29	BF	14	PRO
29	BF	176	LEU
30	BG	32	PRO
30	BG	52	ILE
30	BG	155	MET
32	BI	16	GLY
32	BI	122	GLU
34	BN	36	GLY
35	BO	64	ARG
36	BP	57	THR
36	BP	109	GLY
36	BP	148	LEU
37	BQ	13	GLN
37	BQ	53	ALA
37	BQ	78	PRO
38	BR	82	GLU
38	BR	102	GLU
39	BS	85	VAL
39	BS	91	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
40	BT	41	ARG
40	BT	126	ALA
42	BV	35	LEU
42	BV	44	LYS
43	BW	65	LEU
44	BX	46	ALA
45	BY	49	VAL
46	BZ	45	ASP
46	BZ	80	ARG
46	BZ	82	ARG
46	BZ	119	GLU
47	B0	55	ARG
49	B2	18	PRO
49	B2	23	LYS
56	B9	31	LYS
1	Ab	13	ALA
1	Ab	154	LEU
1	Ab	198	ASP
2	Ac	6	HIS
2	Ac	81	GLY
3	Ad	9	CYS
4	Ae	49	PRO
4	Ae	65	ASN
7	Ah	6	ILE
8	Ai	21	PRO
8	Ai	98	PRO
10	Ak	39	PRO
11	Al	63	GLY
12	Am	60	VAL
14	Ao	10	LYS
15	Ap	73	LEU
21	Ay	82	GLU
27	AD	244	ARG
28	AE	35	GLN
28	AE	75	VAL
29	AF	5	ALA
29	AF	24	LEU
34	AN	5	VAL
34	AN	135	PRO
36	AP	146	VAL
37	AQ	78	PRO
39	AS	57	LYS

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Mol	Chain	Res	Type
39	AS	85	VAL
40	AT	85	LYS
42	AV	49	THR
43	AW	65	LEU
44	AX	46	ALA
46	AZ	39	VAL
46	AZ	107	THR
46	AZ	115	GLY
47	A0	73	GLY
51	A4	5	ILE
2	Bc	6	HIS
2	Bc	81	GLY
3	Bd	56	VAL
3	Bd	118	ARG
3	Bd	156	GLU
3	Bd	178	VAL
4	Be	107	ARG
4	Be	140	ARG
8	Bi	21	PRO
11	Bl	120	TYR
13	Bn	23	ARG
21	By	29	LYS
27	BD	244	ARG
28	BE	185	LYS
29	BF	24	LEU
30	BG	3	LEU
30	BG	107	LEU
33	BJ	119	ALA
34	BN	5	VAL
34	BN	135	PRO
36	BP	146	VAL
37	BQ	29	PHE
38	BR	29	LEU
39	BS	57	LYS
42	BV	49	THR
45	BY	9	LYS
47	B0	83	PRO
51	B4	4	GLY
51	B4	5	ILE
13	An	28	GLY
14	Ao	19	PRO
29	AF	66	PRO

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Mol	Chain	Res	Type
31	AH	66	GLY
32	AI	90	GLY
34	AN	36	GLY
45	AY	30	VAL
47	A0	83	PRO
48	A1	28	GLY
51	A4	4	GLY
51	A4	33	VAL
7	Bh	6	ILE
8	Bi	98	PRO
8	Bi	100	GLY
10	Bk	39	PRO
11	Bl	63	GLY
13	Bn	28	GLY
14	Bo	19	PRO
14	Bo	36	ILE
21	By	71	VAL
28	BE	75	VAL
30	BG	28	VAL
32	BI	90	GLY
33	BJ	22	GLY
33	BJ	104	ILE
37	BQ	52	VAL
43	BW	35	ILE
46	BZ	96	VAL
51	B4	33	VAL
3	Ad	7	PRO
6	Ag	17	VAL
9	Aj	82	ILE
27	AD	11	PRO
27	AD	234	GLY
31	AH	76	VAL
31	AH	93	GLY
33	AJ	128	LEU
45	AY	98	VAL
46	AZ	22	GLY
48	A1	84	GLY
6	Bg	17	VAL
9	Bj	82	ILE
12	Bm	53	VAL
18	Bs	45	VAL
20	Bu	13	ILE

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Mol	Chain	Res	Type
31	BH	66	GLY
45	BY	98	VAL
46	BZ	129	SER
51	B4	19	GLY
55	B8	52	LYS
2	Ac	13	GLY
8	Ai	109	VAL
12	Am	53	VAL
18	As	45	VAL
30	AG	119	GLY
36	AP	23	PRO
37	AQ	52	VAL
37	AQ	126	PRO
45	AY	82	PRO
46	AZ	137	ILE
51	A4	19	GLY
3	Bd	7	PRO
3	Bd	172	PRO
7	Bh	101	PRO
9	Bj	90	LEU
26	BC	176	VAL
31	BH	76	VAL
32	BI	88	ILE
36	BP	23	PRO
41	BU	82	GLY
45	BY	82	PRO
4	Ae	11	ILE
6	Ag	88	PRO
7	Ah	101	PRO
9	Aj	90	LEU
13	An	13	THR
20	Au	13	ILE
21	Ay	47	MET
26	AC	176	VAL
27	AD	106	ILE
30	AG	89	GLY
33	AJ	81	VAL
41	AU	82	GLY
49	A2	57	ILE
2	Bc	68	VAL
6	Bg	88	PRO
6	Bg	111	ARG

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Mol	Chain	Res	Type
11	Bl	18	VAL
13	Bn	13	THR
27	BD	11	PRO
27	BD	34	VAL
29	BF	66	PRO
31	BH	55	PRO
31	BH	93	GLY
32	BI	23	PRO
37	BQ	126	PRO
39	BS	14	VAL
1	Ab	183	PRO
7	Ah	26	VAL
11	Al	18	VAL
27	AD	34	VAL
31	AH	55	PRO
32	AI	84	GLY
39	AS	14	VAL
55	A8	52	LYS
4	Be	11	ILE
32	BI	84	GLY
33	BJ	116	ILE
43	BW	26	GLY
45	BY	18	GLY

### 5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	Ab	202/220 (92%)	181 (90%)	21 (10%)	9	42
1	Bb	202/220 (92%)	181 (90%)	21 (10%)	9	42
2	Ac	160/188 (85%)	148 (92%)	12 (8%)	17	57
2	Bc	160/188 (85%)	148 (92%)	12 (8%)	17	57
3	Ad	180/181 (99%)	157 (87%)	23 (13%)	5	31
3	Bd	180/181 (99%)	157 (87%)	23 (13%)	5	31

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	Ae	115/123 (94%)	100 (87%)	15 (13%)	5	30
4	Be	115/123 (94%)	100 (87%)	15 (13%)	5	30
5	Af	90/90 (100%)	82 (91%)	8 (9%)	12	50
5	Bf	90/90 (100%)	81 (90%)	9 (10%)	9	43
6	Ag	126/127 (99%)	120 (95%)	6 (5%)	31	72
6	Bg	126/127 (99%)	120 (95%)	6 (5%)	31	72
7	Ah	119/119 (100%)	111 (93%)	8 (7%)	20	62
7	Bh	119/119 (100%)	110 (92%)	9 (8%)	16	56
8	Ai	98/99 (99%)	86 (88%)	12 (12%)	6	32
8	Bi	98/99 (99%)	86 (88%)	12 (12%)	6	32
9	Aj	88/92 (96%)	80 (91%)	8 (9%)	12	48
9	Bj	88/92 (96%)	80 (91%)	8 (9%)	12	48
10	Ak	90/99 (91%)	85 (94%)	5 (6%)	26	68
10	Bk	90/99 (91%)	85 (94%)	5 (6%)	26	68
11	Al	104/109 (95%)	94 (90%)	10 (10%)	10	45
11	Bl	104/109 (95%)	93 (89%)	11 (11%)	8	40
12	Am	94/101 (93%)	82 (87%)	12 (13%)	5	31
12	Bm	94/101 (93%)	83 (88%)	11 (12%)	7	35
13	An	49/50 (98%)	46 (94%)	3 (6%)	23	65
13	Bn	49/50 (98%)	45 (92%)	4 (8%)	14	53
14	Ao	79/80 (99%)	73 (92%)	6 (8%)	16	56
14	Bo	79/80 (99%)	73 (92%)	6 (8%)	16	56
15	Ap	72/74 (97%)	68 (94%)	4 (6%)	26	68
15	Bp	72/74 (97%)	68 (94%)	4 (6%)	26	68
16	Aq	94/97 (97%)	91 (97%)	3 (3%)	46	81
16	Bq	94/97 (97%)	91 (97%)	3 (3%)	46	81
17	Ar	61/77 (79%)	60 (98%)	1 (2%)	70	90
17	Br	61/77 (79%)	60 (98%)	1 (2%)	70	90
18	As	69/80 (86%)	57 (83%)	12 (17%)	2	17
18	Bs	69/80 (86%)	57 (83%)	12 (17%)	2	17
19	At	76/82 (93%)	71 (93%)	5 (7%)	21	63

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
19	Bt	76/82 (93%)	71 (93%)	5 (7%)	21	63
20	Au	19/22 (86%)	18 (95%)	1 (5%)	28	69
20	Bu	19/22 (86%)	18 (95%)	1 (5%)	28	69
21	Ay	86/87 (99%)	75 (87%)	11 (13%)	5	31
21	By	86/87 (99%)	77 (90%)	9 (10%)	8	41
26	AC	99/181 (55%)	92 (93%)	7 (7%)	18	59
26	BC	99/181 (55%)	92 (93%)	7 (7%)	18	59
27	AD	213/218 (98%)	178 (84%)	35 (16%)	3	20
27	BD	213/218 (98%)	180 (84%)	33 (16%)	3	23
28	AE	165/166 (99%)	135 (82%)	30 (18%)	2	14
28	BE	165/166 (99%)	133 (81%)	32 (19%)	2	12
29	AF	165/166 (99%)	143 (87%)	22 (13%)	5	30
29	BF	165/166 (99%)	145 (88%)	20 (12%)	6	33
30	AG	155/156 (99%)	137 (88%)	18 (12%)	7	36
30	BG	155/156 (99%)	128 (83%)	27 (17%)	2	17
31	AH	137/148 (93%)	123 (90%)	14 (10%)	9	42
31	BH	137/148 (93%)	122 (89%)	15 (11%)	8	39
32	AI	122/124 (98%)	103 (84%)	19 (16%)	3	23
32	BI	122/124 (98%)	103 (84%)	19 (16%)	3	23
34	AN	117/119 (98%)	102 (87%)	15 (13%)	5	31
34	BN	117/119 (98%)	102 (87%)	15 (13%)	5	31
35	AO	100/100 (100%)	90 (90%)	10 (10%)	9	43
35	BO	100/100 (100%)	89 (89%)	11 (11%)	8	39
36	AP	112/116 (97%)	93 (83%)	19 (17%)	2	18
36	BP	112/116 (97%)	92 (82%)	20 (18%)	2	15
37	AQ	110/111 (99%)	100 (91%)	10 (9%)	12	48
37	BQ	110/111 (99%)	100 (91%)	10 (9%)	12	48
38	AR	100/101 (99%)	86 (86%)	14 (14%)	4	28
38	BR	100/101 (99%)	86 (86%)	14 (14%)	4	28
39	AS	77/88 (88%)	63 (82%)	14 (18%)	2	14
39	BS	77/88 (88%)	63 (82%)	14 (18%)	2	14

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
40	AT	118/127 (93%)	99 (84%)	19 (16%)	3	21
40	BT	118/127 (93%)	99 (84%)	19 (16%)	3	21
41	AU	92/94 (98%)	79 (86%)	13 (14%)	4	28
41	BU	92/94 (98%)	79 (86%)	13 (14%)	4	28
42	AV	82/82 (100%)	66 (80%)	16 (20%)	2	12
42	BV	82/82 (100%)	65 (79%)	17 (21%)	1	10
43	AW	91/92 (99%)	80 (88%)	11 (12%)	6	33
43	BW	91/92 (99%)	81 (89%)	10 (11%)	8	39
44	AX	74/78 (95%)	64 (86%)	10 (14%)	5	29
44	BX	74/78 (95%)	63 (85%)	11 (15%)	4	25
45	AY	84/91 (92%)	68 (81%)	16 (19%)	2	12
45	BY	84/91 (92%)	68 (81%)	16 (19%)	2	12
46	AZ	162/179 (90%)	141 (87%)	21 (13%)	5	30
46	BZ	162/179 (90%)	134 (83%)	28 (17%)	2	17
47	A0	66/67 (98%)	59 (89%)	7 (11%)	8	40
47	B0	66/67 (98%)	59 (89%)	7 (11%)	8	40
48	A1	78/83 (94%)	66 (85%)	12 (15%)	3	23
48	B1	78/83 (94%)	62 (80%)	16 (20%)	1	11
49	A2	66/67 (98%)	63 (96%)	3 (4%)	34	74
49	B2	66/67 (98%)	56 (85%)	10 (15%)	3	24
50	A3	51/52 (98%)	46 (90%)	5 (10%)	10	44
50	B3	51/52 (98%)	46 (90%)	5 (10%)	10	44
51	A4	51/63 (81%)	41 (80%)	10 (20%)	1	12
51	B4	51/63 (81%)	41 (80%)	10 (20%)	1	12
52	A5	47/52 (90%)	42 (89%)	5 (11%)	8	40
52	B5	47/52 (90%)	42 (89%)	5 (11%)	8	40
53	A6	49/52 (94%)	40 (82%)	9 (18%)	2	14
53	B6	49/52 (94%)	40 (82%)	9 (18%)	2	14
54	A7	40/42 (95%)	37 (92%)	3 (8%)	17	57
54	B7	40/42 (95%)	37 (92%)	3 (8%)	17	57
55	A8	53/55 (96%)	42 (79%)	11 (21%)	1	10

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
55	B8	53/55 (96%)	42 (79%)	11 (21%)	1	10
56	A9	34/34 (100%)	34 (100%)	0	100	100
56	B9	34/34 (100%)	34 (100%)	0	100	100
All	All	9962/10602 (94%)	8764 (88%)	1198 (12%)	6	33

All (1198) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	Ab	15	VAL
1	Ab	17	PHE
1	Ab	36	ARG
1	Ab	48	MET
1	Ab	63	MET
1	Ab	79	ASP
1	Ab	87	ARG
1	Ab	97	TRP
1	Ab	111	ARG
1	Ab	129	GLU
1	Ab	137	ARG
1	Ab	140	HIS
1	Ab	145	LEU
1	Ab	159	PRO
1	Ab	176	GLU
1	Ab	178	ARG
1	Ab	187	LEU
1	Ab	196	LEU
1	Ab	204	ASN
1	Ab	206	ASP
1	Ab	221	LEU
2	Ac	3	ASN
2	Ac	5	ILE
2	Ac	16	ARG
2	Ac	18	TRP
2	Ac	22	TRP
2	Ac	29	TYR
2	Ac	82	GLU
2	Ac	93	LYS
2	Ac	94	LEU
2	Ac	107	GLN
2	Ac	127	ARG
2	Ac	131	ARG

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Mol	Chain	Res	Type
3	Ad	3	ARG
3	Ad	9	CYS
3	Ad	10	ARG
3	Ad	26	CYS
3	Ad	36	ARG
3	Ad	38	TYR
3	Ad	49	ARG
3	Ad	53	ASP
3	Ad	59	ARG
3	Ad	79	PHE
3	Ad	80	GLU
3	Ad	86	LYS
3	Ad	110	PHE
3	Ad	114	ARG
3	Ad	129	ASN
3	Ad	131	ARG
3	Ad	132	ARG
3	Ad	135	LEU
3	Ad	144	ASP
3	Ad	158	ILE
3	Ad	163	GLU
3	Ad	168	ARG
3	Ad	188	LEU
4	Ae	10	MET
4	Ae	12	LEU
4	Ae	16	THR
4	Ae	20	GLN
4	Ae	26	PHE
4	Ae	28	PHE
4	Ae	31	LEU
4	Ae	36	ASP
4	Ae	41	VAL
4	Ae	55	VAL
4	Ae	56	GLN
4	Ae	73	ASN
4	Ae	79	GLU
4	Ae	101	ILE
4	Ae	147	ASP
5	Af	16	GLN
5	Af	24	GLU
5	Af	25	ILE
5	Af	55	ASP

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Mol	Chain	Res	Type
5	Af	63	TYR
5	Af	69	GLU
5	Af	80	ARG
5	Af	93	SER
6	Ag	12	LEU
6	Ag	32	ARG
6	Ag	111	ARG
6	Ag	124	LEU
6	Ag	146	GLU
6	Ag	151	TYR
7	Ah	1	MET
7	Ah	25	ASP
7	Ah	60	ARG
7	Ah	63	LEU
7	Ah	65	TYR
7	Ah	102	ARG
7	Ah	112	LEU
7	Ah	119	LEU
8	Ai	38	GLN
8	Ai	47	LEU
8	Ai	78	LYS
8	Ai	79	LEU
8	Ai	95	LYS
8	Ai	104	ARG
8	Ai	105	ASP
8	Ai	110	GLU
8	Ai	114	TYR
8	Ai	121	ARG
8	Ai	125	TYR
8	Ai	128	ARG
9	Aj	16	LEU
9	Aj	22	LYS
9	Aj	46	ARG
9	Aj	50	ILE
9	Aj	62	HIS
9	Aj	68	HIS
9	Aj	86	MET
9	Aj	96	ILE
10	Ak	29	ILE
10	Ak	31	THR
10	Ak	40	ILE
10	Ak	124	LYS

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Mol	Chain	Res	Type
10	Ak	125	PHE
11	Al	20	LYS
11	Al	27	LEU
11	Al	41	ARG
11	Al	42	THR
11	Al	47	LYS
11	Al	79	GLU
11	Al	89	ARG
11	Al	116	SER
11	Al	120	TYR
11	Al	126	LYS
12	Am	47	ASP
12	Am	64	TRP
12	Am	65	LYS
12	Am	66	LEU
12	Am	69	GLU
12	Am	71	ARG
12	Am	79	LYS
12	Am	82	MET
12	Am	93	ARG
12	Am	94	ARG
12	Am	108	ARG
12	Am	110	ARG
13	An	33	VAL
13	An	41	ARG
13	An	44	LEU
14	Ao	19	PRO
14	Ao	31	LEU
14	Ao	65	ARG
14	Ao	67	LEU
14	Ao	82	ILE
14	Ao	88	ARG
15	Ap	1	MET
15	Ap	2	VAL
15	Ap	69	THR
15	Ap	80	PHE
16	Aq	52	LYS
16	Aq	60	ILE
16	Aq	74	LEU
17	Ar	31	LEU
18	As	5	LEU
18	As	6	LYS

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Mol	Chain	Res	Type
18	As	7	LYS
18	As	15	LEU
18	As	22	LEU
18	As	29	ARG
18	As	33	THR
18	As	37	ARG
18	As	43	GLU
18	As	44	MET
18	As	56	GLN
18	As	70	LYS
19	At	24	LEU
19	At	26	ASN
19	At	73	HIS
19	At	75	ASN
19	At	93	GLU
20	Au	12	LYS
21	Ay	6	ASP
21	Ay	7	PHE
21	Ay	10	ARG
21	Ay	12	LEU
21	Ay	13	LYS
21	Ay	27	LYS
21	Ay	44	LEU
21	Ay	49	ASP
21	Ay	64	TYR
21	Ay	81	ARG
21	Ay	95	LEU
26	AC	32	GLU
26	AC	39	ASP
26	AC	50	ILE
26	AC	53	ARG
26	AC	173	HIS
26	AC	181	PHE
26	AC	185	LYS
27	AD	24	ILE
27	AD	26	LYS
27	AD	27	THR
27	AD	35	LYS
27	AD	46	GLN
27	AD	48	ARG
27	AD	49	ILE
27	AD	54	ARG

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Mol	Chain	Res	Type
27	AD	61	LEU
27	AD	65	ILE
27	AD	72	LYS
27	AD	83	GLU
27	AD	94	LEU
27	AD	95	LEU
27	AD	99	ASP
27	AD	103	ARG
27	AD	111	LEU
27	AD	116	GLN
27	AD	117	VAL
27	AD	122	ASP
27	AD	131	LEU
27	AD	166	GLN
27	AD	192	THR
27	AD	198	ASN
27	AD	200	ASP
27	AD	221	VAL
27	AD	229	VAL
27	AD	242	ARG
27	AD	246	PRO
27	AD	257	LEU
27	AD	259	THR
27	AD	260	ARG
27	AD	268	ARG
27	AD	270	ILE
27	AD	271	ILE
28	AE	12	THR
28	AE	18	ASP
28	AE	49	LEU
28	AE	53	PRO
28	AE	55	ASN
28	AE	60	ASN
28	AE	63	LEU
28	AE	64	LYS
28	AE	67	PHE
28	AE	78	LEU
28	AE	79	ARG
28	AE	87	GLU
28	AE	89	ASP
28	AE	94	GLU
28	AE	95	ILE

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Mol	Chain	Res	Type
28	AE	101	ARG
28	AE	107	THR
28	AE	111	ARG
28	AE	113	PHE
28	AE	119	ARG
28	AE	128	SER
28	AE	129	HIS
28	AE	134	ILE
28	AE	144	ARG
28	AE	169	ASN
28	AE	178	GLU
28	AE	184	VAL
28	AE	191	PRO
28	AE	202	LYS
28	AE	203	LYS
29	AF	23	ASP
29	AF	28	ILE
29	AF	33	LEU
29	AF	53	THR
29	AF	65	TRP
29	AF	66	PRO
29	AF	67	GLN
29	AF	84	VAL
29	AF	88	VAL
29	AF	106	ARG
29	AF	110	LEU
29	AF	125	LEU
29	AF	129	PHE
29	AF	149	ASP
29	AF	158	THR
29	AF	160	ASN
29	AF	164	ARG
29	AF	165	ARG
29	AF	188	ARG
29	AF	196	LEU
29	AF	199	TRP
29	AF	200	GLU
30	AG	5	VAL
30	AG	22	ARG
30	AG	26	GLN
30	AG	36	LYS
30	AG	40	ASN

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Mol	Chain	Res	Type
30	AG	58	GLN
30	AG	60	LEU
30	AG	67	LYS
30	AG	77	ILE
30	AG	83	ARG
30	AG	97	ASP
30	AG	111	LEU
30	AG	113	ARG
30	AG	123	ASN
30	AG	125	PHE
30	AG	126	ASP
30	AG	139	LEU
30	AG	152	LEU
31	AH	9	ILE
31	AH	15	VAL
31	AH	42	ARG
31	AH	46	GLU
31	AH	53	GLU
31	AH	60	ARG
31	AH	68	THR
31	AH	88	LEU
31	AH	94	TYR
31	AH	116	GLU
31	AH	143	GLN
31	AH	153	LYS
31	AH	157	TYR
31	AH	170	ARG
32	AI	1	MET
32	AI	12	LEU
32	AI	20	ASP
32	AI	67	ARG
32	AI	68	LEU
32	AI	74	ASN
32	AI	81	VAL
32	AI	85	GLU
32	AI	92	VAL
32	AI	109	ILE
32	AI	110	ASP
32	AI	113	ARG
32	AI	120	ILE
32	AI	123	LEU
32	AI	130	TYR

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Mol	Chain	Res	Type
32	AI	132	PRO
32	AI	136	VAL
32	AI	139	GLN
32	AI	140	LEU
34	AN	4	TYR
34	AN	12	ARG
34	AN	23	LEU
34	AN	28	THR
34	AN	32	THR
34	AN	39	ARG
34	AN	48	MET
34	AN	55	VAL
34	AN	85	ILE
34	AN	87	LEU
34	AN	108	PRO
34	AN	112	LEU
34	AN	120	LEU
34	AN	121	LYS
34	AN	130	HIS
35	AO	3	GLN
35	AO	10	VAL
35	AO	32	TYR
35	AO	35	VAL
35	AO	48	PRO
35	AO	73	ASP
35	AO	85	VAL
35	AO	96	THR
35	AO	98	VAL
35	AO	117	LEU
36	AP	6	LEU
36	AP	13	ASN
36	AP	16	ARG
36	AP	18	ARG
36	AP	32	THR
36	AP	57	THR
36	AP	61	ARG
36	AP	64	LYS
36	AP	81	GLN
36	AP	85	LEU
36	AP	91	PHE
36	AP	95	VAL
36	AP	98	GLU

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Mol	Chain	Res	Type
36	AP	105	LEU
36	AP	108	LYS
36	AP	110	TYR
36	AP	115	LEU
36	AP	125	VAL
36	AP	135	LEU
37	AQ	38	GLU
37	AQ	45	GLN
37	AQ	54	MET
37	AQ	55	VAL
37	AQ	67	ARG
37	AQ	79	LEU
37	AQ	89	ASN
37	AQ	110	THR
37	AQ	135	ASP
37	AQ	138	ASP
38	AR	2	ARG
38	AR	8	ARG
38	AR	29	LEU
38	AR	65	LEU
38	AR	67	LEU
38	AR	76	VAL
38	AR	79	LEU
38	AR	94	TYR
38	AR	97	VAL
38	AR	99	LYS
38	AR	100	LEU
38	AR	113	LEU
38	AR	116	LEU
38	AR	118	GLU
39	AS	11	LYS
39	AS	12	PHE
39	AS	15	ARG
39	AS	24	LEU
39	AS	36	TYR
39	AS	40	ILE
39	AS	54	LEU
39	AS	67	ARG
39	AS	83	LYS
39	AS	89	ARG
39	AS	92	TYR
39	AS	97	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
39	AS	101	LEU
39	AS	106	ARG
40	AT	3	ARG
40	AT	13	ARG
40	AT	14	TYR
40	AT	22	PHE
40	AT	24	PRO
40	AT	32	TYR
40	AT	41	ARG
40	AT	51	ARG
40	AT	58	ASN
40	AT	65	LYS
40	AT	78	LEU
40	AT	82	LEU
40	AT	89	VAL
40	AT	93	ARG
40	AT	96	ARG
40	AT	99	LEU
40	AT	123	GLN
40	AT	125	ARG
40	AT	128	GLU
41	AU	3	ARG
41	AU	8	VAL
41	AU	14	HIS
41	AU	16	LYS
41	AU	59	ARG
41	AU	60	LEU
41	AU	66	ASN
41	AU	69	CYS
41	AU	74	LEU
41	AU	83	LEU
41	AU	92	ARG
41	AU	101	ARG
41	AU	108	GLU
42	AV	1	MET
42	AV	5	VAL
42	AV	13	ARG
42	AV	16	PRO
42	AV	18	LEU
42	AV	19	LYS
42	AV	21	ARG
42	AV	39	LEU

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Mol	Chain	Res	Type
42	AV	40	LEU
42	AV	61	VAL
42	AV	66	ARG
42	AV	75	PHE
42	AV	82	ARG
42	AV	91	TYR
42	AV	95	LEU
42	AV	99	ILE
43	AW	11	ARG
43	AW	20	VAL
43	AW	23	LEU
43	AW	51	LEU
43	AW	52	GLU
43	AW	60	ASN
43	AW	63	ASP
43	AW	70	TYR
43	AW	75	TYR
43	AW	82	LEU
43	AW	107	LEU
44	AX	12	VAL
44	AX	23	GLU
44	AX	27	THR
44	AX	28	PHE
44	AX	43	VAL
44	AX	57	LEU
44	AX	68	ARG
44	AX	76	ARG
44	AX	80	ILE
44	AX	83	VAL
45	AY	2	ARG
45	AY	6	HIS
45	AY	7	VAL
45	AY	9	LYS
45	AY	28	LYS
45	AY	29	GLU
45	AY	32	PRO
45	AY	53	PRO
45	AY	60	PHE
45	AY	64	GLU
45	AY	66	PRO
45	AY	77	PRO
45	AY	83	THR

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Mol	Chain	Res	Type
45	AY	84	ARG
45	AY	89	PHE
45	AY	90	LEU
46	AZ	6	LYS
46	AZ	20	ARG
46	AZ	27	VAL
46	AZ	29	TYR
46	AZ	34	ASN
46	AZ	43	GLU
46	AZ	61	LEU
46	AZ	62	PRO
46	AZ	70	LEU
46	AZ	75	ASN
46	AZ	81	ARG
46	AZ	89	PHE
46	AZ	112	ARG
46	AZ	123	ASP
46	AZ	130	PRO
46	AZ	150	LEU
46	AZ	157	LEU
46	AZ	166	SER
46	AZ	169	GLU
46	AZ	175	VAL
46	AZ	179	ASP
47	A0	10	THR
47	A0	11	ARG
47	A0	14	ARG
47	A0	20	ARG
47	A0	36	ILE
47	A0	38	VAL
47	A0	75	LEU
48	A1	5	CYS
48	A1	14	VAL
48	A1	19	GLN
48	A1	40	ARG
48	A1	41	ARG
48	A1	46	LEU
48	A1	48	LYS
48	A1	52	ARG
48	A1	72	GLU
48	A1	73	LEU
48	A1	80	LEU

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Mol	Chain	Res	Type
48	A1	82	LEU
49	A2	30	ARG
49	A2	64	LEU
49	A2	71	ASN
50	A3	8	LEU
50	A3	9	VAL
50	A3	40	THR
50	A3	46	ASN
50	A3	58	VAL
51	A4	1	MET
51	A4	5	ILE
51	A4	13	ARG
51	A4	20	ASN
51	A4	25	TYR
51	A4	28	LYS
51	A4	30	GLU
51	A4	34	GLU
51	A4	53	GLU
51	A4	55	ARG
52	A5	11	THR
52	A5	25	LEU
52	A5	44	THR
52	A5	52	TYR
52	A5	55	ARG
53	A6	9	LEU
53	A6	10	LEU
53	A6	11	LEU
53	A6	15	GLU
53	A6	18	ARG
53	A6	30	THR
53	A6	31	PRO
53	A6	34	LEU
53	A6	42	TRP
54	A7	4	THR
54	A7	8	ASN
54	A7	41	ARG
55	A8	4	MET
55	A8	8	LYS
55	A8	30	ARG
55	A8	31	HIS
55	A8	32	LEU
55	A8	33	ASN

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Mol	Chain	Res	Type
55	A8	34	TRP
55	A8	44	LYS
55	A8	47	LYS
55	A8	61	LEU
55	A8	64	TYR
1	Bb	15	VAL
1	Bb	17	PHE
1	Bb	36	ARG
1	Bb	48	MET
1	Bb	63	MET
1	Bb	79	ASP
1	Bb	87	ARG
1	Bb	97	TRP
1	Bb	111	ARG
1	Bb	129	GLU
1	Bb	137	ARG
1	Bb	140	HIS
1	Bb	145	LEU
1	Bb	159	PRO
1	Bb	176	GLU
1	Bb	178	ARG
1	Bb	187	LEU
1	Bb	196	LEU
1	Bb	204	ASN
1	Bb	206	ASP
1	Bb	221	LEU
2	Bc	3	ASN
2	Bc	5	ILE
2	Bc	16	ARG
2	Bc	18	TRP
2	Bc	22	TRP
2	Bc	29	TYR
2	Bc	82	GLU
2	Bc	93	LYS
2	Bc	94	LEU
2	Bc	107	GLN
2	Bc	127	ARG
2	Bc	131	ARG
3	Bd	3	ARG
3	Bd	9	CYS
3	Bd	10	ARG
3	Bd	26	CYS

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Mol	Chain	Res	Type
3	Bd	36	ARG
3	Bd	38	TYR
3	Bd	49	ARG
3	Bd	53	ASP
3	Bd	59	ARG
3	Bd	79	PHE
3	Bd	80	GLU
3	Bd	86	LYS
3	Bd	110	PHE
3	Bd	114	ARG
3	Bd	129	ASN
3	Bd	131	ARG
3	Bd	132	ARG
3	Bd	135	LEU
3	Bd	144	ASP
3	Bd	158	ILE
3	Bd	163	GLU
3	Bd	168	ARG
3	Bd	188	LEU
4	Be	10	MET
4	Be	12	LEU
4	Be	16	THR
4	Be	20	GLN
4	Be	26	PHE
4	Be	28	PHE
4	Be	31	LEU
4	Be	36	ASP
4	Be	41	VAL
4	Be	55	VAL
4	Be	56	GLN
4	Be	73	ASN
4	Be	79	GLU
4	Be	101	ILE
4	Be	147	ASP
5	Bf	16	GLN
5	Bf	24	GLU
5	Bf	25	ILE
5	Bf	43	LEU
5	Bf	55	ASP
5	Bf	63	TYR
5	Bf	69	GLU
5	Bf	80	ARG

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Mol	Chain	Res	Type
5	Bf	93	SER
6	Bg	12	LEU
6	Bg	32	ARG
6	Bg	111	ARG
6	Bg	124	LEU
6	Bg	146	GLU
6	Bg	151	TYR
7	Bh	1	MET
7	Bh	25	ASP
7	Bh	60	ARG
7	Bh	63	LEU
7	Bh	65	TYR
7	Bh	85	ARG
7	Bh	102	ARG
7	Bh	112	LEU
7	Bh	119	LEU
8	Bi	38	GLN
8	Bi	47	LEU
8	Bi	78	LYS
8	Bi	79	LEU
8	Bi	95	LYS
8	Bi	104	ARG
8	Bi	105	ASP
8	Bi	110	GLU
8	Bi	114	TYR
8	Bi	121	ARG
8	Bi	125	TYR
8	Bi	128	ARG
9	Bj	16	LEU
9	Bj	22	LYS
9	Bj	46	ARG
9	Bj	50	ILE
9	Bj	62	HIS
9	Bj	68	HIS
9	Bj	86	MET
9	Bj	96	ILE
10	Bk	29	ILE
10	Bk	31	THR
10	Bk	40	ILE
10	Bk	124	LYS
10	Bk	125	PHE
11	Bl	20	LYS

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Mol	Chain	Res	Type
11	B1	27	LEU
11	B1	41	ARG
11	B1	42	THR
11	B1	47	LYS
11	B1	66	VAL
11	B1	79	GLU
11	B1	89	ARG
11	B1	116	SER
11	B1	120	TYR
11	B1	126	LYS
12	Bm	47	ASP
12	Bm	65	LYS
12	Bm	66	LEU
12	Bm	69	GLU
12	Bm	79	LYS
12	Bm	82	MET
12	Bm	92	HIS
12	Bm	93	ARG
12	Bm	108	ARG
12	Bm	110	ARG
12	Bm	111	LYS
13	Bn	16	PHE
13	Bn	33	VAL
13	Bn	41	ARG
13	Bn	44	LEU
14	Bo	19	PRO
14	Bo	31	LEU
14	Bo	65	ARG
14	Bo	67	LEU
14	Bo	82	ILE
14	Bo	88	ARG
15	Bp	1	MET
15	Bp	2	VAL
15	Bp	69	THR
15	Bp	80	PHE
16	Bq	52	LYS
16	Bq	60	ILE
16	Bq	74	LEU
17	Br	31	LEU
18	Bs	5	LEU
18	Bs	6	LYS
18	Bs	7	LYS

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Mol	Chain	Res	Type
18	Bs	15	LEU
18	Bs	22	LEU
18	Bs	29	ARG
18	Bs	33	THR
18	Bs	37	ARG
18	Bs	43	GLU
18	Bs	44	MET
18	Bs	56	GLN
18	Bs	70	LYS
19	Bt	24	LEU
19	Bt	26	ASN
19	Bt	73	HIS
19	Bt	75	ASN
19	Bt	93	GLU
20	Bu	12	LYS
21	By	5	LEU
21	By	14	GLU
21	By	16	ARG
21	By	17	LYS
21	By	24	GLU
21	By	30	LEU
21	By	44	LEU
21	By	64	TYR
21	By	74	PHE
26	BC	32	GLU
26	BC	39	ASP
26	BC	50	ILE
26	BC	53	ARG
26	BC	173	HIS
26	BC	181	PHE
26	BC	185	LYS
27	BD	24	ILE
27	BD	26	LYS
27	BD	27	THR
27	BD	35	LYS
27	BD	46	GLN
27	BD	48	ARG
27	BD	49	ILE
27	BD	54	ARG
27	BD	61	LEU
27	BD	65	ILE
27	BD	72	LYS

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Mol	Chain	Res	Type
27	BD	83	GLU
27	BD	94	LEU
27	BD	95	LEU
27	BD	99	ASP
27	BD	103	ARG
27	BD	111	LEU
27	BD	116	GLN
27	BD	117	VAL
27	BD	122	ASP
27	BD	166	GLN
27	BD	192	THR
27	BD	198	ASN
27	BD	200	ASP
27	BD	221	VAL
27	BD	229	VAL
27	BD	246	PRO
27	BD	257	LEU
27	BD	259	THR
27	BD	260	ARG
27	BD	268	ARG
27	BD	270	ILE
27	BD	271	ILE
28	BE	12	THR
28	BE	14	ILE
28	BE	18	ASP
28	BE	49	LEU
28	BE	53	PRO
28	BE	55	ASN
28	BE	60	ASN
28	BE	63	LEU
28	BE	64	LYS
28	BE	67	PHE
28	BE	78	LEU
28	BE	79	ARG
28	BE	87	GLU
28	BE	89	ASP
28	BE	94	GLU
28	BE	95	ILE
28	BE	101	ARG
28	BE	107	THR
28	BE	111	ARG
28	BE	113	PHE

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Mol	Chain	Res	Type
28	BE	119	ARG
28	BE	128	SER
28	BE	129	HIS
28	BE	134	ILE
28	BE	144	ARG
28	BE	169	ASN
28	BE	178	GLU
28	BE	184	VAL
28	BE	191	PRO
28	BE	197	ILE
28	BE	202	LYS
28	BE	203	LYS
29	BF	23	ASP
29	BF	28	ILE
29	BF	33	LEU
29	BF	53	THR
29	BF	65	TRP
29	BF	66	PRO
29	BF	88	VAL
29	BF	106	ARG
29	BF	110	LEU
29	BF	125	LEU
29	BF	129	PHE
29	BF	149	ASP
29	BF	158	THR
29	BF	160	ASN
29	BF	164	ARG
29	BF	165	ARG
29	BF	188	ARG
29	BF	196	LEU
29	BF	199	TRP
29	BF	200	GLU
30	BG	3	LEU
30	BG	4	ASP
30	BG	12	TYR
30	BG	16	ARG
30	BG	20	ILE
30	BG	21	ARG
30	BG	22	ARG
30	BG	36	LYS
30	BG	43	LEU
30	BG	45	GLU

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Mol	Chain	Res	Type
30	BG	51	ARG
30	BG	58	GLN
30	BG	63	ILE
30	BG	77	ILE
30	BG	80	PHE
30	BG	83	ARG
30	BG	86	MET
30	BG	87	PRO
30	BG	97	ASP
30	BG	108	ASN
30	BG	111	LEU
30	BG	113	ARG
30	BG	125	PHE
30	BG	126	ASP
30	BG	143	GLU
30	BG	150	ASP
30	BG	152	LEU
31	BH	9	ILE
31	BH	15	VAL
31	BH	40	GLU
31	BH	42	ARG
31	BH	46	GLU
31	BH	53	GLU
31	BH	60	ARG
31	BH	88	LEU
31	BH	94	TYR
31	BH	116	GLU
31	BH	143	GLN
31	BH	153	LYS
31	BH	157	TYR
31	BH	164	TYR
31	BH	170	ARG
32	BI	1	MET
32	BI	12	LEU
32	BI	20	ASP
32	BI	67	ARG
32	BI	68	LEU
32	BI	74	ASN
32	BI	81	VAL
32	BI	85	GLU
32	BI	92	VAL
32	BI	109	ILE

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Mol	Chain	Res	Type
32	BI	110	ASP
32	BI	113	ARG
32	BI	120	ILE
32	BI	123	LEU
32	BI	130	TYR
32	BI	132	PRO
32	BI	136	VAL
32	BI	139	GLN
32	BI	140	LEU
34	BN	4	TYR
34	BN	12	ARG
34	BN	23	LEU
34	BN	28	THR
34	BN	32	THR
34	BN	39	ARG
34	BN	48	MET
34	BN	55	VAL
34	BN	85	ILE
34	BN	87	LEU
34	BN	108	PRO
34	BN	112	LEU
34	BN	120	LEU
34	BN	121	LYS
34	BN	130	HIS
35	BO	3	GLN
35	BO	10	VAL
35	BO	24	VAL
35	BO	32	TYR
35	BO	35	VAL
35	BO	48	PRO
35	BO	73	ASP
35	BO	85	VAL
35	BO	96	THR
35	BO	98	VAL
35	BO	117	LEU
36	BP	6	LEU
36	BP	13	ASN
36	BP	16	ARG
36	BP	18	ARG
36	BP	32	THR
36	BP	57	THR
36	BP	61	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	BP	64	LYS
36	BP	81	GLN
36	BP	85	LEU
36	BP	91	PHE
36	BP	95	VAL
36	BP	98	GLU
36	BP	105	LEU
36	BP	108	LYS
36	BP	110	TYR
36	BP	115	LEU
36	BP	125	VAL
36	BP	130	PHE
36	BP	135	LEU
37	BQ	38	GLU
37	BQ	45	GLN
37	BQ	54	MET
37	BQ	55	VAL
37	BQ	67	ARG
37	BQ	79	LEU
37	BQ	89	ASN
37	BQ	110	THR
37	BQ	135	ASP
37	BQ	138	ASP
38	BR	2	ARG
38	BR	8	ARG
38	BR	29	LEU
38	BR	65	LEU
38	BR	67	LEU
38	BR	76	VAL
38	BR	79	LEU
38	BR	94	TYR
38	BR	97	VAL
38	BR	99	LYS
38	BR	100	LEU
38	BR	113	LEU
38	BR	116	LEU
38	BR	118	GLU
39	BS	11	LYS
39	BS	12	PHE
39	BS	15	ARG
39	BS	24	LEU
39	BS	36	TYR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
39	BS	40	ILE
39	BS	54	LEU
39	BS	67	ARG
39	BS	83	LYS
39	BS	89	ARG
39	BS	92	TYR
39	BS	97	ARG
39	BS	101	LEU
39	BS	106	ARG
40	BT	3	ARG
40	BT	13	ARG
40	BT	14	TYR
40	BT	22	PHE
40	BT	24	PRO
40	BT	32	TYR
40	BT	41	ARG
40	BT	51	ARG
40	BT	58	ASN
40	BT	65	LYS
40	BT	78	LEU
40	BT	82	LEU
40	BT	89	VAL
40	BT	93	ARG
40	BT	96	ARG
40	BT	99	LEU
40	BT	123	GLN
40	BT	125	ARG
40	BT	128	GLU
41	BU	3	ARG
41	BU	8	VAL
41	BU	14	HIS
41	BU	16	LYS
41	BU	20	LEU
41	BU	59	ARG
41	BU	60	LEU
41	BU	66	ASN
41	BU	69	CYS
41	BU	74	LEU
41	BU	83	LEU
41	BU	101	ARG
41	BU	108	GLU
42	BV	1	MET

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Mol	Chain	Res	Type
42	BV	5	VAL
42	BV	13	ARG
42	BV	16	PRO
42	BV	18	LEU
42	BV	19	LYS
42	BV	21	ARG
42	BV	39	LEU
42	BV	40	LEU
42	BV	46	VAL
42	BV	61	VAL
42	BV	66	ARG
42	BV	75	PHE
42	BV	82	ARG
42	BV	91	TYR
42	BV	95	LEU
42	BV	99	ILE
43	BW	11	ARG
43	BW	20	VAL
43	BW	23	LEU
43	BW	51	LEU
43	BW	52	GLU
43	BW	60	ASN
43	BW	63	ASP
43	BW	70	TYR
43	BW	75	TYR
43	BW	107	LEU
44	BX	12	VAL
44	BX	23	GLU
44	BX	27	THR
44	BX	28	PHE
44	BX	43	VAL
44	BX	53	LYS
44	BX	57	LEU
44	BX	68	ARG
44	BX	76	ARG
44	BX	80	ILE
44	BX	83	VAL
45	BY	2	ARG
45	BY	6	HIS
45	BY	7	VAL
45	BY	9	LYS
45	BY	28	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
45	BY	29	GLU
45	BY	32	PRO
45	BY	53	PRO
45	BY	60	PHE
45	BY	64	GLU
45	BY	66	PRO
45	BY	77	PRO
45	BY	83	THR
45	BY	84	ARG
45	BY	89	PHE
45	BY	90	LEU
46	BZ	13	GLU
46	BZ	23	LYS
46	BZ	31	ARG
46	BZ	38	TYR
46	BZ	40	ASP
46	BZ	41	LEU
46	BZ	44	PHE
46	BZ	61	LEU
46	BZ	70	LEU
46	BZ	72	ARG
46	BZ	81	ARG
46	BZ	87	ASP
46	BZ	89	PHE
46	BZ	103	ARG
46	BZ	112	ARG
46	BZ	127	LYS
46	BZ	144	LEU
46	BZ	148	ASP
46	BZ	150	LEU
46	BZ	151	HIS
46	BZ	155	LEU
46	BZ	157	LEU
46	BZ	163	LEU
46	BZ	167	PRO
46	BZ	171	ILE
46	BZ	175	VAL
46	BZ	177	PRO
46	BZ	179	ASP
47	B0	10	THR
47	B0	11	ARG
47	B0	14	ARG

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Mol	Chain	Res	Type
47	B0	20	ARG
47	B0	36	ILE
47	B0	38	VAL
47	B0	75	LEU
48	B1	4	VAL
48	B1	11	ARG
48	B1	20	ARG
48	B1	30	VAL
48	B1	35	THR
48	B1	39	LYS
48	B1	40	ARG
48	B1	41	ARG
48	B1	45	ASN
48	B1	46	LEU
48	B1	58	ILE
48	B1	59	THR
48	B1	67	ILE
48	B1	73	LEU
48	B1	82	LEU
48	B1	95	LEU
49	B2	2	LYS
49	B2	3	LEU
49	B2	16	LEU
49	B2	30	ARG
49	B2	32	LEU
49	B2	34	GLU
49	B2	46	GLN
49	B2	51	ARG
49	B2	53	LEU
49	B2	68	ARG
50	B3	8	LEU
50	B3	9	VAL
50	B3	40	THR
50	B3	46	ASN
50	B3	58	VAL
51	B4	1	MET
51	B4	5	ILE
51	B4	13	ARG
51	B4	20	ASN
51	B4	25	TYR
51	B4	28	LYS
51	B4	30	GLU

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Mol	Chain	Res	Type
51	B4	34	GLU
51	B4	53	GLU
51	B4	55	ARG
52	B5	11	THR
52	B5	25	LEU
52	B5	44	THR
52	B5	52	TYR
52	B5	55	ARG
53	B6	9	LEU
53	B6	10	LEU
53	B6	11	LEU
53	B6	15	GLU
53	B6	18	ARG
53	B6	30	THR
53	B6	31	PRO
53	B6	34	LEU
53	B6	42	TRP
54	B7	4	THR
54	B7	8	ASN
54	B7	41	ARG
55	B8	4	MET
55	B8	8	LYS
55	B8	30	ARG
55	B8	31	HIS
55	B8	32	LEU
55	B8	33	ASN
55	B8	34	TRP
55	B8	44	LYS
55	B8	47	LYS
55	B8	61	LEU
55	B8	64	TYR

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (327) such sidechains are listed below:

Mol	Chain	Res	Type
1	Ab	37	ASN
1	Ab	40	HIS
1	Ab	78	GLN
1	Ab	110	GLN
1	Ab	135	GLN
1	Ab	146	GLN
1	Ab	204	ASN

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Mol	Chain	Res	Type
2	Ac	6	HIS
2	Ac	69	HIS
2	Ac	107	GLN
2	Ac	123	GLN
2	Ac	136	GLN
2	Ac	170	GLN
2	Ac	181	ASN
3	Ad	42	GLN
3	Ad	62	GLN
3	Ad	77	ASN
3	Ad	129	ASN
3	Ad	161	ASN
4	Ae	72	GLN
4	Ae	73	ASN
4	Ae	78	HIS
4	Ae	141	GLN
5	Af	7	ASN
5	Af	18	GLN
5	Af	27	GLN
5	Af	32	ASN
5	Af	73	ASN
5	Af	100	ASN
6	Ag	13	GLN
6	Ag	28	ASN
6	Ag	64	GLN
6	Ag	68	ASN
6	Ag	86	GLN
6	Ag	97	GLN
6	Ag	106	GLN
6	Ag	122	HIS
6	Ag	148	ASN
8	Ai	31	GLN
8	Ai	58	HIS
8	Ai	124	GLN
9	Aj	56	HIS
9	Aj	78	ASN
10	Ak	13	GLN
10	Ak	78	GLN
10	Ak	117	ASN
11	Al	8	ASN
11	Al	9	GLN
11	Al	49	ASN

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Mol	Chain	Res	Type
11	Al	75	HIS
12	Am	40	ASN
12	Am	77	ASN
12	Am	92	HIS
12	Am	101	GLN
14	Ao	9	GLN
14	Ao	13	GLN
14	Ao	37	ASN
14	Ao	46	HIS
15	Ap	76	GLN
16	Aq	16	GLN
16	Aq	26	GLN
16	Aq	94	ASN
17	Ar	36	ASN
18	As	14	HIS
18	As	23	ASN
19	At	16	HIS
19	At	26	ASN
19	At	42	GLN
19	At	75	ASN
21	Ay	25	GLN
21	Ay	42	ASN
21	Ay	65	GLN
26	AC	57	GLN
26	AC	166	ASN
27	AD	58	HIS
27	AD	96	HIS
27	AD	126	GLN
27	AD	166	GLN
27	AD	186	HIS
27	AD	198	ASN
28	AE	48	GLN
28	AE	54	GLN
28	AE	55	ASN
28	AE	129	HIS
28	AE	143	ASN
28	AE	169	ASN
28	AE	192	ASN
29	AF	8	GLN
29	AF	40	GLN
29	AF	69	HIS
29	AF	75	HIS

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Mol	Chain	Res	Type
29	AF	133	ASN
29	AF	160	ASN
29	AF	169	ASN
30	AG	27	ASN
30	AG	40	ASN
30	AG	79	ASN
31	AH	65	HIS
31	AH	74	ASN
31	AH	139	GLN
31	AH	147	ASN
32	AI	74	ASN
32	AI	104	GLN
32	AI	139	GLN
34	AN	56	ASN
34	AN	69	GLN
34	AN	128	HIS
35	AO	5	GLN
35	AO	82	ASN
36	AP	13	ASN
36	AP	68	GLN
36	AP	84	ASN
36	AP	128	HIS
37	AQ	45	GLN
37	AQ	123	HIS
38	AR	23	ASN
38	AR	24	GLN
38	AR	53	HIS
38	AR	71	GLN
39	AS	34	HIS
40	AT	38	ASN
40	AT	43	GLN
40	AT	55	ASN
40	AT	90	GLN
40	AT	123	GLN
41	AU	44	ASN
41	AU	49	HIS
41	AU	66	ASN
41	AU	81	HIS
41	AU	117	GLN
42	AV	11	GLN
43	AW	34	ASN
43	AW	57	ASN

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Mol	Chain	Res	Type
43	AW	61	ASN
43	AW	102	HIS
44	AX	31	HIS
44	AX	41	ASN
44	AX	55	ASN
46	AZ	34	ASN
46	AZ	118	GLN
46	AZ	132	ASN
47	A0	12	ASN
47	A0	29	GLN
47	A0	35	ASN
47	A0	70	GLN
48	A1	19	GLN
48	A1	45	ASN
48	A1	47	GLN
49	A2	47	ASN
49	A2	56	GLN
49	A2	70	GLN
50	A3	19	GLN
50	A3	46	ASN
50	A3	52	HIS
51	A4	6	HIS
51	A4	20	ASN
51	A4	40	HIS
51	A4	46	GLN
52	A5	4	HIS
52	A5	43	HIS
53	A6	32	ASN
54	A7	8	ASN
55	A8	33	ASN
55	A8	43	GLN
56	A9	34	GLN
1	Bb	37	ASN
1	Bb	40	HIS
1	Bb	78	GLN
1	Bb	110	GLN
1	Bb	135	GLN
1	Bb	146	GLN
1	Bb	204	ASN
2	Bc	6	HIS
2	Bc	69	HIS
2	Bc	107	GLN

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Mol	Chain	Res	Type
2	Bc	136	GLN
2	Bc	170	GLN
2	Bc	181	ASN
3	Bd	42	GLN
3	Bd	62	GLN
3	Bd	77	ASN
3	Bd	129	ASN
3	Bd	161	ASN
4	Be	72	GLN
4	Be	73	ASN
4	Be	78	HIS
4	Be	141	GLN
5	Bf	7	ASN
5	Bf	18	GLN
5	Bf	27	GLN
5	Bf	32	ASN
5	Bf	73	ASN
5	Bf	100	ASN
6	Bg	13	GLN
6	Bg	28	ASN
6	Bg	64	GLN
6	Bg	68	ASN
6	Bg	86	GLN
6	Bg	97	GLN
6	Bg	106	GLN
6	Bg	122	HIS
6	Bg	148	ASN
7	Bh	15	ASN
8	Bi	31	GLN
8	Bi	58	HIS
8	Bi	124	GLN
9	Bj	56	HIS
9	Bj	78	ASN
10	Bk	13	GLN
10	Bk	78	GLN
10	Bk	117	ASN
11	Bl	8	ASN
11	Bl	9	GLN
11	Bl	49	ASN
11	Bl	75	HIS
12	Bm	40	ASN
12	Bm	77	ASN

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Mol	Chain	Res	Type
12	Bm	101	GLN
14	Bo	9	GLN
14	Bo	13	GLN
14	Bo	37	ASN
14	Bo	46	HIS
15	Bp	76	GLN
16	Bq	16	GLN
16	Bq	26	GLN
16	Bq	94	ASN
17	Br	36	ASN
18	Bs	14	HIS
18	Bs	23	ASN
19	Bt	16	HIS
19	Bt	26	ASN
19	Bt	42	GLN
19	Bt	75	ASN
21	By	25	GLN
21	By	65	GLN
26	BC	57	GLN
26	BC	166	ASN
27	BD	58	HIS
27	BD	96	HIS
27	BD	126	GLN
27	BD	166	GLN
27	BD	186	HIS
27	BD	198	ASN
28	BE	48	GLN
28	BE	54	GLN
28	BE	55	ASN
28	BE	129	HIS
28	BE	143	ASN
28	BE	169	ASN
28	BE	192	ASN
29	BF	8	GLN
29	BF	40	GLN
29	BF	69	HIS
29	BF	75	HIS
29	BF	133	ASN
29	BF	160	ASN
29	BF	169	ASN
29	BF	203	GLN
30	BG	40	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
30	BG	58	GLN
30	BG	130	ASN
31	BH	65	HIS
31	BH	74	ASN
31	BH	139	GLN
31	BH	147	ASN
32	BI	74	ASN
32	BI	139	GLN
34	BN	45	ASN
34	BN	56	ASN
34	BN	69	GLN
34	BN	128	HIS
35	BO	5	GLN
35	BO	82	ASN
36	BP	13	ASN
36	BP	68	GLN
36	BP	84	ASN
36	BP	128	HIS
37	BQ	45	GLN
37	BQ	123	HIS
38	BR	13	HIS
38	BR	23	ASN
38	BR	24	GLN
38	BR	53	HIS
38	BR	71	GLN
39	BS	34	HIS
39	BS	95	HIS
40	BT	38	ASN
40	BT	43	GLN
40	BT	55	ASN
40	BT	90	GLN
40	BT	123	GLN
41	BU	44	ASN
41	BU	49	HIS
41	BU	66	ASN
41	BU	81	HIS
41	BU	117	GLN
42	BV	11	GLN
43	BW	34	ASN
43	BW	57	ASN
43	BW	61	ASN
43	BW	102	HIS

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Mol	Chain	Res	Type
44	BX	31	HIS
44	BX	41	ASN
44	BX	55	ASN
46	BZ	34	ASN
46	BZ	118	GLN
46	BZ	151	HIS
47	B0	12	ASN
47	B0	29	GLN
47	B0	35	ASN
47	B0	70	GLN
48	B1	45	ASN
48	B1	56	GLN
49	B2	47	ASN
50	B3	19	GLN
50	B3	46	ASN
50	B3	52	HIS
51	B4	20	ASN
51	B4	40	HIS
51	B4	46	GLN
52	B5	4	HIS
52	B5	43	HIS
53	B6	32	ASN
54	B7	8	ASN
55	B8	33	ASN
55	B8	43	GLN
56	B9	34	GLN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
22	Aa	1503/1504 (99%)	211 (14%)	0
22	Ba	1503/1504 (99%)	210 (13%)	0
23	Ax	11/14 (78%)	8 (72%)	0
23	Bx	11/14 (78%)	8 (72%)	0
24	Av	76/77 (98%)	15 (19%)	0
24	Bv	76/77 (98%)	17 (22%)	0
25	Aw	76/77 (98%)	11 (14%)	0
25	Bw	76/77 (98%)	8 (10%)	0
57	AA	2847/2848 (99%)	521 (18%)	55 (1%)
57	BA	2847/2848 (99%)	517 (18%)	56 (1%)
58	AB	118/119 (99%)	21 (17%)	1 (0%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
58	BB	118/119 (99%)	21 (17%)	1 (0%)
All	All	9262/9278 (99%)	1568 (16%)	113 (1%)

All (1568) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
22	Aa	9	G
22	Aa	31	G
22	Aa	32	A
22	Aa	39	G
22	Aa	47	C
22	Aa	48	C
22	Aa	51	A
22	Aa	61	G
22	Aa	79	G
22	Aa	80	G
22	Aa	81	U
22	Aa	84	U
22	Aa	90	U
22	Aa	97	G
22	Aa	101	A
22	Aa	116	A
22	Aa	120	A
22	Aa	121	C
22	Aa	131	C
22	Aa	144	G
22	Aa	150	C
22	Aa	172	A
22	Aa	182	U
22	Aa	189(H)	G
22	Aa	195	A
22	Aa	197	A
22	Aa	201	C
22	Aa	203	U
22	Aa	204	U
22	Aa	216	G
22	Aa	244	U
22	Aa	247	G
22	Aa	251	G
22	Aa	266	G
22	Aa	267	C
22	Aa	279	A

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Mol	Chain	Res	Type
22	Aa	289	G
22	Aa	321	A
22	Aa	328	C
22	Aa	329	A
22	Aa	332	G
22	Aa	345	C
22	Aa	352	C
22	Aa	353	A
22	Aa	354	G
22	Aa	367	U
22	Aa	372	C
22	Aa	373	A
22	Aa	397	A
22	Aa	412	A
22	Aa	413	G
22	Aa	414	A
22	Aa	421	U
22	Aa	422	C
22	Aa	428	G
22	Aa	429	U
22	Aa	430	A
22	Aa	435	C
22	Aa	437	U
22	Aa	439	A
22	Aa	442	C
22	Aa	452	A
22	Aa	461	A
22	Aa	484	G
22	Aa	485	G
22	Aa	496	A
22	Aa	498	U
22	Aa	509	A
22	Aa	510	A
22	Aa	511	C
22	Aa	518	C
22	Aa	527	G
22	Aa	532	A
22	Aa	533	A
22	Aa	534	U
22	Aa	547	A
22	Aa	559	A
22	Aa	561	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	Aa	562	C
22	Aa	572	A
22	Aa	573	A
22	Aa	575	G
22	Aa	576	G
22	Aa	577	G
22	Aa	588	G
22	Aa	631	G
22	Aa	632	A
22	Aa	653	A
22	Aa	665	A
22	Aa	687	A
22	Aa	688	G
22	Aa	724	G
22	Aa	731	G
22	Aa	749	C
22	Aa	755	G
22	Aa	793	U
22	Aa	794	A
22	Aa	816	A
22	Aa	817	C
22	Aa	818	G
22	Aa	819	A
22	Aa	821	G
22	Aa	828	A
22	Aa	833	U
22	Aa	839	U
22	Aa	840	C
22	Aa	841	U
22	Aa	848	C
22	Aa	859	A
22	Aa	902	G
22	Aa	913	A
22	Aa	914	A
22	Aa	927	G
22	Aa	934	C
22	Aa	935	A
22	Aa	960	U
22	Aa	961	U
22	Aa	966	G
22	Aa	968	A
22	Aa	969	A

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Mol	Chain	Res	Type
22	Aa	971	G
22	Aa	974	A
22	Aa	975	A
22	Aa	976	G
22	Aa	977	A
22	Aa	978	A
22	Aa	980	C
22	Aa	991	U
22	Aa	992	U
22	Aa	993	G
22	Aa	1001(A)	G
22	Aa	1004	A
22	Aa	1005	A
22	Aa	1024	G
22	Aa	1026	G
22	Aa	1050	G
22	Aa	1054	C
22	Aa	1068	G
22	Aa	1094	G
22	Aa	1095	U
22	Aa	1101	A
22	Aa	1108	G
22	Aa	1117	G
22	Aa	1124	G
22	Aa	1125	U
22	Aa	1126	U
22	Aa	1129	C
22	Aa	1130	A
22	Aa	1131	G
22	Aa	1136	U
22	Aa	1137	C
22	Aa	1138	G
22	Aa	1139	G
22	Aa	1146	A
22	Aa	1152	A
22	Aa	1159	U
22	Aa	1182	G
22	Aa	1184	G
22	Aa	1196	U
22	Aa	1197	G
22	Aa	1202	G
22	Aa	1212	U

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Mol	Chain	Res	Type
22	Aa	1213	A
22	Aa	1225	A
22	Aa	1226	C
22	Aa	1227	A
22	Aa	1238	A
22	Aa	1249	C
22	Aa	1256	A
22	Aa	1257	U
22	Aa	1280	A
22	Aa	1281	U
22	Aa	1282	C
22	Aa	1286	A
22	Aa	1287	A
22	Aa	1288	A
22	Aa	1294	G
22	Aa	1300	G
22	Aa	1301	U
22	Aa	1302	U
22	Aa	1305	G
22	Aa	1317	C
22	Aa	1320	C
22	Aa	1322	C
22	Aa	1323	G
22	Aa	1331	G
22	Aa	1336	C
22	Aa	1346	A
22	Aa	1347	G
22	Aa	1363	C
22	Aa	1364	U
22	Aa	1398	A
22	Aa	1419	G
22	Aa	1442	G
22	Aa	1442(A)	G
22	Aa	1442(B)	A
22	Aa	1447	A
22	Aa	1452	C
22	Aa	1457	G
22	Aa	1487	G
22	Aa	1492	A
22	Aa	1497	G
22	Aa	1499	A
22	Aa	1504	G

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Mol	Chain	Res	Type
22	Aa	1505	G
22	Aa	1506	U
22	Aa	1507	A
22	Aa	1517	G
22	Aa	1520	G
22	Aa	1529	G
22	Aa	1530	G
23	Ax	10	G
23	Ax	11	U
23	Ax	12	A
23	Ax	13	A
23	Ax	14	A
23	Ax	15	A
23	Ax	18	G
23	Ax	19	U
24	Av	3	C
24	Av	5	G
24	Av	7	G
24	Av	8	U
24	Av	17(A)	U
24	Av	18	G
24	Av	19	G
24	Av	20	U
24	Av	21	A
24	Av	47	U
24	Av	48	C
24	Av	63	G
24	Av	67	C
24	Av	75	C
24	Av	76	A
25	Aw	2	G
25	Aw	5	G
25	Aw	7	G
25	Aw	8	U
25	Aw	17	C
25	Aw	17(A)	U
25	Aw	18	G
25	Aw	19	G
25	Aw	20	U
25	Aw	47	U
25	Aw	48	C
57	AA	9	U

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Mol	Chain	Res	Type
57	AA	10	G
57	AA	34	C
57	AA	35	G
57	AA	45	C
57	AA	49	A
57	AA	50	U
57	AA	55	G
57	AA	71	A
57	AA	72	U
57	AA	75	G
57	AA	88	G
57	AA	90	U
57	AA	94	C
57	AA	100	G
57	AA	102	G
57	AA	118	A
57	AA	120	U
57	AA	129	C
57	AA	131	G
57	AA	139(A)	G
57	AA	141	A
57	AA	146	G
57	AA	154(A)	C
57	AA	155	U
57	AA	156	U
57	AA	158	U
57	AA	171	G
57	AA	173	G
57	AA	174	C
57	AA	181	A
57	AA	182	A
57	AA	196	A
57	AA	197	A
57	AA	199	A
57	AA	204	A
57	AA	205	G
57	AA	215	G
57	AA	216	A
57	AA	221	A
57	AA	222	A
57	AA	228	A
57	AA	229	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	AA	230	U
57	AA	248	G
57	AA	252	G
57	AA	271(I)	G
57	AA	271(J)	C
57	AA	271(N)	U
57	AA	271(O)	C
57	AA	271(P)	C
57	AA	271(R)	G
57	AA	272	G
57	AA	272(B)	G
57	AA	272(H)	C
57	AA	272(I)	U
57	AA	274	G
57	AA	276	A
57	AA	277	C
57	AA	288	C
57	AA	299	A
57	AA	311	A
57	AA	329	G
57	AA	330	A
57	AA	332	A
57	AA	333	G
57	AA	352	G
57	AA	353	G
57	AA	356	G
57	AA	363(B)	G
57	AA	363(E)	U
57	AA	363(F)	A
57	AA	365	C
57	AA	372	G
57	AA	386	G
57	AA	388	G
57	AA	396	G
57	AA	405	U
57	AA	406	G
57	AA	411	G
57	AA	412	A
57	AA	428	A
57	AA	444	C
57	AA	448	U
57	AA	454	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	AA	456	C
57	AA	457	A
57	AA	470	A
57	AA	475	U
57	AA	481	G
57	AA	494	G
57	AA	505	A
57	AA	508	G
57	AA	509	C
57	AA	528	A
57	AA	530	G
57	AA	531	C
57	AA	532	A
57	AA	533	G
57	AA	544	G
57	AA	547	A
57	AA	548	A
57	AA	549	G
57	AA	563	G
57	AA	573	G
57	AA	588	U
57	AA	603	A
57	AA	604	G
57	AA	607	U
57	AA	613	G
57	AA	614(B)	G
57	AA	615	G
57	AA	620	G
57	AA	622	G
57	AA	627	A
57	AA	637	A
57	AA	645	C
57	AA	646	A
57	AA	653	A
57	AA	654	A
57	AA	654(C)	G
57	AA	654(I)	C
57	AA	654(J)	A
57	AA	654(K)	C
57	AA	654(L)	G
57	AA	654(M)	C
57	AA	654(T)	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	AA	655	A
57	AA	668	G
57	AA	669	G
57	AA	670	A
57	AA	673	C
57	AA	686	G
57	AA	708	C
57	AA	717	G
57	AA	722	A
57	AA	730	C
57	AA	753	C
57	AA	765	G
57	AA	776	G
57	AA	782	A
57	AA	784	A
57	AA	785	G
57	AA	790	C
57	AA	791	C
57	AA	805	G
57	AA	812	C
57	AA	819	A
57	AA	827	U
57	AA	828	U
57	AA	830	G
57	AA	848	G
57	AA	856	C
57	AA	859	G
57	AA	866	A
57	AA	869	G
57	AA	878	A
57	AA	890	A
57	AA	896	A
57	AA	897	C
57	AA	910	A
57	AA	917	A
57	AA	927	G
57	AA	932	G
57	AA	941	A
57	AA	945	A
57	AA	946	G
57	AA	958	U
57	AA	959	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	AA	961	C
57	AA	965	C
57	AA	974	G
57	AA	975	C
57	AA	983	A
57	AA	991	C
57	AA	996	A
57	AA	1012	U
57	AA	1013	C
57	AA	1015	G
57	AA	1022	G
57	AA	1023	U
57	AA	1025	G
57	AA	1026	U
57	AA	1033	U
57	AA	1038	C
57	AA	1039	G
57	AA	1041	C
57	AA	1045	A
57	AA	1046	A
57	AA	1047	G
57	AA	1049	C
57	AA	1052	C
57	AA	1053	C
57	AA	1106	A
57	AA	1110	G
57	AA	1112	G
57	AA	1113	U
57	AA	1114	G
57	AA	1116	C
57	AA	1129	A
57	AA	1130	U
57	AA	1135	C
57	AA	1136	G
57	AA	1142	U
57	AA	1155	A
57	AA	1171	G
57	AA	1173	G
57	AA	1174	A
57	AA	1175	U
57	AA	1176	G
57	AA	1178	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	AA	1180	C
57	AA	1195	G
57	AA	1205	U
57	AA	1210	A
57	AA	1211	U
57	AA	1221	C
57	AA	1247	A
57	AA	1248	G
57	AA	1250	G
57	AA	1253	A
57	AA	1256	G
57	AA	1265	A
57	AA	1271	G
57	AA	1272	A
57	AA	1273	U
57	AA	1281	G
57	AA	1300	U
57	AA	1301	A
57	AA	1314	C
57	AA	1319	G
57	AA	1321	A
57	AA	1349	A
57	AA	1359	A
57	AA	1368	G
57	AA	1379	A
57	AA	1380	G
57	AA	1384	A
57	AA	1385	G
57	AA	1386	C
57	AA	1390	U
57	AA	1395	A
57	AA	1406	U
57	AA	1407	C
57	AA	1416	G
57	AA	1417	C
57	AA	1419	A
57	AA	1420	U
57	AA	1427	A
57	AA	1428	C
57	AA	1445	A
57	AA	1449	A
57	AA	1450	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	AA	1460	A
57	AA	1461	G
57	AA	1467	C
57	AA	1471	A
57	AA	1475	G
57	AA	1478	G
57	AA	1481	U
57	AA	1482	G
57	AA	1485	G
57	AA	1488	G
57	AA	1490	A
57	AA	1491	G
57	AA	1493	C
57	AA	1494	A
57	AA	1495	A
57	AA	1497	U
57	AA	1501	C
57	AA	1502	C
57	AA	1505	C
57	AA	1509	C
57	AA	1509(A)	A
57	AA	1528(A)	A
57	AA	1534	U
57	AA	1539	G
57	AA	1541	G
57	AA	1542	A
57	AA	1543	C
57	AA	1544	A
57	AA	1547	C
57	AA	1554	A
57	AA	1558	A
57	AA	1559	G
57	AA	1569	A
57	AA	1578	U
57	AA	1579	A
57	AA	1583	A
57	AA	1584	C
57	AA	1586	A
57	AA	1588	C
57	AA	1591	G
57	AA	1598	C
57	AA	1603	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	AA	1608	A
57	AA	1609	A
57	AA	1616	A
57	AA	1617	C
57	AA	1618	A
57	AA	1640	C
57	AA	1647	G
57	AA	1648	C
57	AA	1653	G
57	AA	1654	A
57	AA	1674	G
57	AA	1686	C
57	AA	1694	C
57	AA	1696	G
57	AA	1721	G
57	AA	1722	A
57	AA	1739	U
57	AA	1740	G
57	AA	1742	G
57	AA	1748	G
57	AA	1763	G
57	AA	1764	G
57	AA	1773	A
57	AA	1780	A
57	AA	1791	A
57	AA	1799	G
57	AA	1800	C
57	AA	1801	G
57	AA	1816	G
57	AA	1820	U
57	AA	1821	A
57	AA	1829	A
57	AA	1835	G
57	AA	1838	C
57	AA	1839	G
57	AA	1846	G
57	AA	1847	A
57	AA	1848	A
57	AA	1858	G
57	AA	1865	G
57	AA	1866	C
57	AA	1878	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	AA	1881	C
57	AA	1882	C
57	AA	1885	A
57	AA	1888	G
57	AA	1889	A
57	AA	1900	A
57	AA	1903	G
57	AA	1906	G
57	AA	1912	A
57	AA	1913	A
57	AA	1929	G
57	AA	1930	G
57	AA	1938	A
57	AA	1948	G
57	AA	1955	U
57	AA	1963	U
57	AA	1966	A
57	AA	1967	C
57	AA	1969	A
57	AA	1970	A
57	AA	1971	A
57	AA	1972	A
57	AA	1982	C
57	AA	1987	G
57	AA	1991	U
57	AA	1992	G
57	AA	1993	U
57	AA	1997	G
57	AA	2023	G
57	AA	2031	A
57	AA	2032	G
57	AA	2033	A
57	AA	2034	U
57	AA	2036	C
57	AA	2043	C
57	AA	2052	G
57	AA	2055	C
57	AA	2056	G
57	AA	2060	A
57	AA	2061	G
57	AA	2062	A
57	AA	2063	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	AA	2069	G
57	AA	2093	G
57	AA	2096	U
57	AA	2100	G
57	AA	2103	C
57	AA	2104	G
57	AA	2110	G
57	AA	2112	G
57	AA	2116	G
57	AA	2118	U
57	AA	2127	G
57	AA	2131	G
57	AA	2132	U
57	AA	2133	G
57	AA	2148	G
57	AA	2159	G
57	AA	2172	U
57	AA	2173	A
57	AA	2177	C
57	AA	2179	C
57	AA	2180	U
57	AA	2185	C
57	AA	2187	G
57	AA	2189	U
57	AA	2190	G
57	AA	2192	G
57	AA	2193	G
57	AA	2198	A
57	AA	2199	A
57	AA	2200	C
57	AA	2206	G
57	AA	2207	G
57	AA	2208	A
57	AA	2218	U
57	AA	2225	A
57	AA	2226	C
57	AA	2238	G
57	AA	2239	G
57	AA	2275	C
57	AA	2283	C
57	AA	2287	A
57	AA	2288	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	AA	2302	G
57	AA	2305	A
57	AA	2307	G
57	AA	2308	G
57	AA	2309	A
57	AA	2311	A
57	AA	2313	C
57	AA	2316	C
57	AA	2319	G
57	AA	2320	A
57	AA	2334	G
57	AA	2336	A
57	AA	2342	C
57	AA	2347	C
57	AA	2350	C
57	AA	2360	A
57	AA	2361	A
57	AA	2383	G
57	AA	2385	C
57	AA	2396	G
57	AA	2400	G
57	AA	2402	C
57	AA	2406	U
57	AA	2423	U
57	AA	2424	C
57	AA	2425	A
57	AA	2429	G
57	AA	2430	A
57	AA	2435	A
57	AA	2439	A
57	AA	2441	C
57	AA	2448	A
57	AA	2459	A
57	AA	2465	C
57	AA	2468	G
57	AA	2469	A
57	AA	2470	G
57	AA	2472	G
57	AA	2476	A
57	AA	2477	C
57	AA	2482	G
57	AA	2484	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	AA	2491	U
57	AA	2502	G
57	AA	2505	G
57	AA	2518	A
57	AA	2520	C
57	AA	2524	G
57	AA	2529	G
57	AA	2531	A
57	AA	2542	A
57	AA	2543	G
57	AA	2554	U
57	AA	2566	A
57	AA	2567	G
57	AA	2573	C
57	AA	2582	G
57	AA	2586	C
57	AA	2602	A
57	AA	2609	U
57	AA	2611	U
57	AA	2612	C
57	AA	2615	U
57	AA	2630	G
57	AA	2657	A
57	AA	2673	G
57	AA	2690	C
57	AA	2691	C
57	AA	2712	U
57	AA	2712(A)	A
57	AA	2713	A
57	AA	2720	U
57	AA	2726	U
57	AA	2733	A
57	AA	2752	C
57	AA	2762	G
57	AA	2765	A
57	AA	2766	G
57	AA	2778	A
57	AA	2780	G
57	AA	2787	C
57	AA	2789	C
57	AA	2790	A
57	AA	2791	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	AA	2794	C
57	AA	2801(A)	A
57	AA	2802	G
57	AA	2803	C
57	AA	2804	C
57	AA	2808	U
57	AA	2818	G
57	AA	2820	A
57	AA	2821	A
57	AA	2833	G
57	AA	2834	G
57	AA	2849	U
57	AA	2872	G
57	AA	2879	C
57	AA	2893	G
57	AA	2897	U
58	AB	2	C
58	AB	8	U
58	AB	15	A
58	AB	16	G
58	AB	19	G
58	AB	22	U
58	AB	24	G
58	AB	27	C
58	AB	33	G
58	AB	41	U
58	AB	42	C
58	AB	45	A
58	AB	53	A
58	AB	67	G
58	AB	73	A
58	AB	75	G
58	AB	81	G
58	AB	82	G
58	AB	88	C
58	AB	110	G
58	AB	113	G
22	Ba	9	G
22	Ba	31	G
22	Ba	32	A
22	Ba	39	G
22	Ba	47	C

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Mol	Chain	Res	Type
22	Ba	48	C
22	Ba	51	A
22	Ba	61	G
22	Ba	79	G
22	Ba	80	G
22	Ba	81	U
22	Ba	84	U
22	Ba	90	U
22	Ba	97	G
22	Ba	101	A
22	Ba	116	A
22	Ba	120	A
22	Ba	121	C
22	Ba	131	C
22	Ba	144	G
22	Ba	150	C
22	Ba	172	A
22	Ba	182	U
22	Ba	189(H)	G
22	Ba	195	A
22	Ba	197	A
22	Ba	201	C
22	Ba	203	U
22	Ba	204	U
22	Ba	216	G
22	Ba	244	U
22	Ba	247	G
22	Ba	251	G
22	Ba	266	G
22	Ba	267	C
22	Ba	279	A
22	Ba	289	G
22	Ba	321	A
22	Ba	328	C
22	Ba	329	A
22	Ba	332	G
22	Ba	345	C
22	Ba	352	C
22	Ba	353	A
22	Ba	354	G
22	Ba	367	U
22	Ba	372	C

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Mol	Chain	Res	Type
22	Ba	373	A
22	Ba	397	A
22	Ba	412	A
22	Ba	413	G
22	Ba	414	A
22	Ba	421	U
22	Ba	422	C
22	Ba	428	G
22	Ba	429	U
22	Ba	430	A
22	Ba	435	C
22	Ba	437	U
22	Ba	439	A
22	Ba	442	C
22	Ba	452	A
22	Ba	461	A
22	Ba	484	G
22	Ba	485	G
22	Ba	496	A
22	Ba	498	U
22	Ba	509	A
22	Ba	510	A
22	Ba	511	C
22	Ba	518	C
22	Ba	527	G
22	Ba	532	A
22	Ba	533	A
22	Ba	534	U
22	Ba	547	A
22	Ba	559	A
22	Ba	561	U
22	Ba	562	C
22	Ba	572	A
22	Ba	573	A
22	Ba	575	G
22	Ba	576	G
22	Ba	577	G
22	Ba	588	G
22	Ba	631	G
22	Ba	632	A
22	Ba	653	A
22	Ba	665	A

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Mol	Chain	Res	Type
22	Ba	687	A
22	Ba	688	G
22	Ba	731	G
22	Ba	749	C
22	Ba	755	G
22	Ba	793	U
22	Ba	794	A
22	Ba	816	A
22	Ba	817	C
22	Ba	818	G
22	Ba	819	A
22	Ba	821	G
22	Ba	828	A
22	Ba	833	U
22	Ba	839	U
22	Ba	840	C
22	Ba	841	U
22	Ba	848	C
22	Ba	859	A
22	Ba	902	G
22	Ba	913	A
22	Ba	914	A
22	Ba	927	G
22	Ba	934	C
22	Ba	935	A
22	Ba	960	U
22	Ba	961	U
22	Ba	966	G
22	Ba	968	A
22	Ba	969	A
22	Ba	971	G
22	Ba	974	A
22	Ba	975	A
22	Ba	976	G
22	Ba	977	A
22	Ba	978	A
22	Ba	980	C
22	Ba	991	U
22	Ba	992	U
22	Ba	993	G
22	Ba	1001(A)	G
22	Ba	1004	A

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Mol	Chain	Res	Type
22	Ba	1005	A
22	Ba	1024	G
22	Ba	1026	G
22	Ba	1050	G
22	Ba	1054	C
22	Ba	1068	G
22	Ba	1094	G
22	Ba	1095	U
22	Ba	1101	A
22	Ba	1108	G
22	Ba	1117	G
22	Ba	1124	G
22	Ba	1125	U
22	Ba	1126	U
22	Ba	1129	C
22	Ba	1130	A
22	Ba	1131	G
22	Ba	1136	U
22	Ba	1137	C
22	Ba	1138	G
22	Ba	1139	G
22	Ba	1146	A
22	Ba	1152	A
22	Ba	1159	U
22	Ba	1182	G
22	Ba	1184	G
22	Ba	1196	U
22	Ba	1197	G
22	Ba	1202	G
22	Ba	1212	U
22	Ba	1213	A
22	Ba	1225	A
22	Ba	1226	C
22	Ba	1227	A
22	Ba	1238	A
22	Ba	1249	C
22	Ba	1256	A
22	Ba	1257	U
22	Ba	1280	A
22	Ba	1281	U
22	Ba	1282	C
22	Ba	1286	A

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Mol	Chain	Res	Type
22	Ba	1287	A
22	Ba	1288	A
22	Ba	1294	G
22	Ba	1300	G
22	Ba	1301	U
22	Ba	1302	U
22	Ba	1305	G
22	Ba	1317	C
22	Ba	1320	C
22	Ba	1322	C
22	Ba	1323	G
22	Ba	1331	G
22	Ba	1336	C
22	Ba	1346	A
22	Ba	1347	G
22	Ba	1363	C
22	Ba	1364	U
22	Ba	1397	C
22	Ba	1419	G
22	Ba	1439	C
22	Ba	1442	G
22	Ba	1442(A)	G
22	Ba	1442(B)	A
22	Ba	1443	G
22	Ba	1447	A
22	Ba	1452	C
22	Ba	1497	G
22	Ba	1499	A
22	Ba	1502	A
22	Ba	1504	G
22	Ba	1505	G
22	Ba	1506	U
22	Ba	1517	G
22	Ba	1519	A
22	Ba	1520	G
22	Ba	1529	G
22	Ba	1530	G
23	Bx	10	G
23	Bx	11	U
23	Bx	12	A
23	Bx	13	A
23	Bx	14	A

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Mol	Chain	Res	Type
23	Bx	15	A
23	Bx	18	G
23	Bx	19	U
24	Bv	3	C
24	Bv	5	G
24	Bv	8	U
24	Bv	17(A)	U
24	Bv	18	G
24	Bv	19	G
24	Bv	20	U
24	Bv	21	A
24	Bv	47	U
24	Bv	48	C
24	Bv	49	G
24	Bv	61	C
24	Bv	65	C
24	Bv	67	C
24	Bv	73	A
24	Bv	75	C
24	Bv	76	A
25	Bw	5	G
25	Bw	17(A)	U
25	Bw	18	G
25	Bw	19	G
25	Bw	20	U
25	Bw	21	A
25	Bw	47	U
25	Bw	48	C
57	BA	9	U
57	BA	10	G
57	BA	34	C
57	BA	35	G
57	BA	45	C
57	BA	49	A
57	BA	50	U
57	BA	55	G
57	BA	71	A
57	BA	72	U
57	BA	75	G
57	BA	88	G
57	BA	90	U
57	BA	94	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	BA	100	G
57	BA	102	G
57	BA	118	A
57	BA	120	U
57	BA	129	C
57	BA	131	G
57	BA	139(A)	G
57	BA	141	A
57	BA	146	G
57	BA	154(A)	C
57	BA	155	U
57	BA	156	U
57	BA	158	U
57	BA	171	G
57	BA	173	G
57	BA	174	C
57	BA	181	A
57	BA	182	A
57	BA	196	A
57	BA	197	A
57	BA	199	A
57	BA	204	A
57	BA	205	G
57	BA	215	G
57	BA	216	A
57	BA	221	A
57	BA	222	A
57	BA	228	A
57	BA	229	A
57	BA	230	U
57	BA	248	G
57	BA	252	G
57	BA	271(I)	G
57	BA	271(J)	C
57	BA	271(N)	U
57	BA	271(O)	C
57	BA	271(P)	C
57	BA	271(R)	G
57	BA	272	G
57	BA	272(B)	G
57	BA	272(H)	C
57	BA	272(I)	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	BA	274	G
57	BA	276	A
57	BA	277	C
57	BA	288	C
57	BA	299	A
57	BA	311	A
57	BA	329	G
57	BA	330	A
57	BA	332	A
57	BA	333	G
57	BA	352	G
57	BA	353	G
57	BA	356	G
57	BA	363(B)	G
57	BA	363(E)	U
57	BA	363(F)	A
57	BA	365	C
57	BA	372	G
57	BA	386	G
57	BA	388	G
57	BA	396	G
57	BA	405	U
57	BA	406	G
57	BA	411	G
57	BA	412	A
57	BA	428	A
57	BA	444	C
57	BA	448	U
57	BA	454	A
57	BA	456	C
57	BA	457	A
57	BA	470	A
57	BA	475	U
57	BA	481	G
57	BA	494	G
57	BA	505	A
57	BA	508	G
57	BA	509	C
57	BA	528	A
57	BA	530	G
57	BA	531	C
57	BA	532	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	BA	533	G
57	BA	544	G
57	BA	547	A
57	BA	548	A
57	BA	549	G
57	BA	563	G
57	BA	573	G
57	BA	588	U
57	BA	603	A
57	BA	604	G
57	BA	607	U
57	BA	613	G
57	BA	614(B)	G
57	BA	615	G
57	BA	620	G
57	BA	622	G
57	BA	627	A
57	BA	637	A
57	BA	645	C
57	BA	646	A
57	BA	653	A
57	BA	654	A
57	BA	654(C)	G
57	BA	654(I)	C
57	BA	654(J)	A
57	BA	654(K)	C
57	BA	654(L)	G
57	BA	654(M)	C
57	BA	654(T)	C
57	BA	655	A
57	BA	668	G
57	BA	669	G
57	BA	670	A
57	BA	673	C
57	BA	686	G
57	BA	708	C
57	BA	717	G
57	BA	722	A
57	BA	730	C
57	BA	753	C
57	BA	765	G
57	BA	776	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	BA	782	A
57	BA	784	A
57	BA	785	G
57	BA	790	C
57	BA	791	C
57	BA	805	G
57	BA	812	C
57	BA	819	A
57	BA	827	U
57	BA	828	U
57	BA	830	G
57	BA	848	G
57	BA	856	C
57	BA	859	G
57	BA	866	A
57	BA	869	G
57	BA	878	A
57	BA	890	A
57	BA	896	A
57	BA	897	C
57	BA	910	A
57	BA	917	A
57	BA	927	G
57	BA	932	G
57	BA	941	A
57	BA	945	A
57	BA	946	G
57	BA	958	U
57	BA	959	A
57	BA	961	C
57	BA	965	C
57	BA	974	G
57	BA	975	C
57	BA	983	A
57	BA	991	C
57	BA	996	A
57	BA	1012	U
57	BA	1013	C
57	BA	1015	G
57	BA	1022	G
57	BA	1023	U
57	BA	1025	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	BA	1026	U
57	BA	1039	G
57	BA	1041	C
57	BA	1045	A
57	BA	1046	A
57	BA	1047	G
57	BA	1049	C
57	BA	1052	C
57	BA	1053	C
57	BA	1106	A
57	BA	1110	G
57	BA	1112	G
57	BA	1113	U
57	BA	1114	G
57	BA	1116	C
57	BA	1129	A
57	BA	1130	U
57	BA	1135	C
57	BA	1136	G
57	BA	1142	U
57	BA	1155	A
57	BA	1171	G
57	BA	1173	G
57	BA	1174	A
57	BA	1175	U
57	BA	1176	G
57	BA	1178	C
57	BA	1180	C
57	BA	1195	G
57	BA	1205	U
57	BA	1210	A
57	BA	1211	U
57	BA	1221	C
57	BA	1247	A
57	BA	1248	G
57	BA	1250	G
57	BA	1253	A
57	BA	1256	G
57	BA	1265	A
57	BA	1271	G
57	BA	1272	A
57	BA	1273	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	BA	1281	G
57	BA	1300	U
57	BA	1301	A
57	BA	1314	C
57	BA	1319	G
57	BA	1321	A
57	BA	1349	A
57	BA	1359	A
57	BA	1368	G
57	BA	1379	A
57	BA	1380	G
57	BA	1384	A
57	BA	1385	G
57	BA	1386	C
57	BA	1390	U
57	BA	1395	A
57	BA	1406	U
57	BA	1407	C
57	BA	1416	G
57	BA	1417	C
57	BA	1419	A
57	BA	1420	U
57	BA	1427	A
57	BA	1428	C
57	BA	1445	A
57	BA	1449	A
57	BA	1450	G
57	BA	1460	A
57	BA	1461	G
57	BA	1467	C
57	BA	1471	A
57	BA	1475	G
57	BA	1478	G
57	BA	1481	U
57	BA	1482	G
57	BA	1485	G
57	BA	1488	G
57	BA	1490	A
57	BA	1491	G
57	BA	1493	C
57	BA	1494	A
57	BA	1495	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	BA	1497	U
57	BA	1501	C
57	BA	1502	C
57	BA	1505	C
57	BA	1509	C
57	BA	1509(A)	A
57	BA	1528(A)	A
57	BA	1534	U
57	BA	1539	G
57	BA	1541	G
57	BA	1542	A
57	BA	1543	C
57	BA	1544	A
57	BA	1547	C
57	BA	1554	A
57	BA	1558	A
57	BA	1559	G
57	BA	1569	A
57	BA	1578	U
57	BA	1579	A
57	BA	1583	A
57	BA	1584	C
57	BA	1586	A
57	BA	1588	C
57	BA	1591	G
57	BA	1598	C
57	BA	1603	A
57	BA	1608	A
57	BA	1609	A
57	BA	1616	A
57	BA	1617	C
57	BA	1618	A
57	BA	1640	C
57	BA	1647	G
57	BA	1648	C
57	BA	1653	G
57	BA	1654	A
57	BA	1674	G
57	BA	1686	C
57	BA	1694	C
57	BA	1696	G
57	BA	1721	G

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Mol	Chain	Res	Type
57	BA	1722	A
57	BA	1739	U
57	BA	1740	G
57	BA	1742	G
57	BA	1748	G
57	BA	1763	G
57	BA	1764	G
57	BA	1773	A
57	BA	1780	A
57	BA	1791	A
57	BA	1799	G
57	BA	1800	C
57	BA	1801	G
57	BA	1816	G
57	BA	1820	U
57	BA	1821	A
57	BA	1829	A
57	BA	1835	G
57	BA	1838	C
57	BA	1839	G
57	BA	1846	G
57	BA	1847	A
57	BA	1848	A
57	BA	1858	G
57	BA	1865	G
57	BA	1866	C
57	BA	1878	G
57	BA	1881	C
57	BA	1882	C
57	BA	1885	A
57	BA	1888	G
57	BA	1889	A
57	BA	1900	A
57	BA	1903	G
57	BA	1906	G
57	BA	1912	A
57	BA	1913	A
57	BA	1929	G
57	BA	1930	G
57	BA	1938	A
57	BA	1948	G
57	BA	1955	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	BA	1963	U
57	BA	1966	A
57	BA	1967	C
57	BA	1969	A
57	BA	1970	A
57	BA	1971	A
57	BA	1972	A
57	BA	1982	C
57	BA	1987	G
57	BA	1991	U
57	BA	1992	G
57	BA	1993	U
57	BA	1997	G
57	BA	2023	G
57	BA	2031	A
57	BA	2032	G
57	BA	2033	A
57	BA	2034	U
57	BA	2036	C
57	BA	2043	C
57	BA	2055	C
57	BA	2056	G
57	BA	2060	A
57	BA	2061	G
57	BA	2062	A
57	BA	2063	C
57	BA	2069	G
57	BA	2093	G
57	BA	2096	U
57	BA	2100	G
57	BA	2103	C
57	BA	2104	G
57	BA	2110	G
57	BA	2112	G
57	BA	2116	G
57	BA	2118	U
57	BA	2127	G
57	BA	2131	G
57	BA	2132	U
57	BA	2133	G
57	BA	2148	G
57	BA	2159	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	BA	2172	U
57	BA	2173	A
57	BA	2177	C
57	BA	2179	C
57	BA	2180	U
57	BA	2185	C
57	BA	2187	G
57	BA	2189	U
57	BA	2190	G
57	BA	2192	G
57	BA	2193	G
57	BA	2198	A
57	BA	2199	A
57	BA	2200	C
57	BA	2206	G
57	BA	2207	G
57	BA	2208	A
57	BA	2218	U
57	BA	2225	A
57	BA	2226	C
57	BA	2238	G
57	BA	2239	G
57	BA	2275	C
57	BA	2283	C
57	BA	2287	A
57	BA	2288	A
57	BA	2302	G
57	BA	2305	A
57	BA	2307	G
57	BA	2308	G
57	BA	2309	A
57	BA	2311	A
57	BA	2313	C
57	BA	2316	C
57	BA	2319	G
57	BA	2320	A
57	BA	2334	G
57	BA	2336	A
57	BA	2347	C
57	BA	2350	C
57	BA	2360	A
57	BA	2361	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	BA	2383	G
57	BA	2385	C
57	BA	2396	G
57	BA	2400	G
57	BA	2402	C
57	BA	2406	U
57	BA	2423	U
57	BA	2424	C
57	BA	2425	A
57	BA	2429	G
57	BA	2430	A
57	BA	2435	A
57	BA	2439	A
57	BA	2441	C
57	BA	2448	A
57	BA	2459	A
57	BA	2465	C
57	BA	2468	G
57	BA	2469	A
57	BA	2470	G
57	BA	2472	G
57	BA	2476	A
57	BA	2477	C
57	BA	2482	G
57	BA	2484	G
57	BA	2491	U
57	BA	2502	G
57	BA	2505	G
57	BA	2518	A
57	BA	2520	C
57	BA	2524	G
57	BA	2529	G
57	BA	2531	A
57	BA	2542	A
57	BA	2543	G
57	BA	2554	U
57	BA	2566	A
57	BA	2567	G
57	BA	2573	C
57	BA	2582	G
57	BA	2586	C
57	BA	2602	A

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Mol	Chain	Res	Type
57	BA	2609	U
57	BA	2611	U
57	BA	2612	C
57	BA	2615	U
57	BA	2630	G
57	BA	2657	A
57	BA	2673	G
57	BA	2690	C
57	BA	2691	C
57	BA	2702	U
57	BA	2712	U
57	BA	2712(A)	A
57	BA	2713	A
57	BA	2720	U
57	BA	2726	U
57	BA	2733	A
57	BA	2752	C
57	BA	2762	G
57	BA	2765	A
57	BA	2766	G
57	BA	2778	A
57	BA	2780	G
57	BA	2787	C
57	BA	2789	C
57	BA	2790	A
57	BA	2791	C
57	BA	2794	C
57	BA	2801(A)	A
57	BA	2802	G
57	BA	2803	C
57	BA	2804	C
57	BA	2808	U
57	BA	2818	G
57	BA	2820	A
57	BA	2821	A
57	BA	2833	G
57	BA	2834	G
57	BA	2849	U
57	BA	2872	G
57	BA	2893	G
57	BA	2897	U
58	BB	2	C

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Mol	Chain	Res	Type
58	BB	8	U
58	BB	15	A
58	BB	16	G
58	BB	19	G
58	BB	22	U
58	BB	24	G
58	BB	27	C
58	BB	33	G
58	BB	41	U
58	BB	42	C
58	BB	45	A
58	BB	53	A
58	BB	67	G
58	BB	73	A
58	BB	75	G
58	BB	81	G
58	BB	82	G
58	BB	88	C
58	BB	110	G
58	BB	113	G

All (113) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
57	AA	49	A
57	AA	71	A
57	AA	74	A
57	AA	79	G
57	AA	119	A
57	AA	128	C
57	AA	221	A
57	AA	266	G
57	AA	272	G
57	AA	331	A
57	AA	332	A
57	AA	366	C
57	AA	387	U
57	AA	438	G
57	AA	474	G
57	AA	587	C
57	AA	603	A
57	AA	614(C)	A

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Mol	Chain	Res	Type
57	AA	652	C
57	AA	746	A
57	AA	752	A
57	AA	790	C
57	AA	889	C
57	AA	1022	G
57	AA	1210	A
57	AA	1286	A
57	AA	1427	A
57	AA	1490	A
57	AA	1558	A
57	AA	1608	A
57	AA	1652	A
57	AA	1653	G
57	AA	1799	G
57	AA	1819	A
57	AA	1820	U
57	AA	1846	G
57	AA	1885	A
57	AA	1948	G
57	AA	1970	A
57	AA	1992	G
57	AA	2033	A
57	AA	2036	C
57	AA	2062	A
57	AA	2126	A
57	AA	2171	A
57	AA	2191	G
57	AA	2225	A
57	AA	2282	G
57	AA	2311	A
57	AA	2405	G
57	AA	2422	A
57	AA	2439	A
57	AA	2481	G
57	AA	2611	U
57	AA	2689	U
58	AB	66	A
57	BA	49	A
57	BA	71	A
57	BA	74	A
57	BA	79	G

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Mol	Chain	Res	Type
57	BA	119	A
57	BA	128	C
57	BA	221	A
57	BA	266	G
57	BA	272	G
57	BA	331	A
57	BA	332	A
57	BA	366	C
57	BA	387	U
57	BA	438	G
57	BA	474	G
57	BA	587	C
57	BA	603	A
57	BA	614(C)	A
57	BA	652	C
57	BA	746	A
57	BA	752	A
57	BA	790	C
57	BA	889	C
57	BA	1022	G
57	BA	1210	A
57	BA	1286	A
57	BA	1427	A
57	BA	1490	A
57	BA	1558	A
57	BA	1608	A
57	BA	1652	A
57	BA	1653	G
57	BA	1799	G
57	BA	1819	A
57	BA	1820	U
57	BA	1846	G
57	BA	1885	A
57	BA	1948	G
57	BA	1970	A
57	BA	1992	G
57	BA	2033	A
57	BA	2036	C
57	BA	2062	A
57	BA	2126	A
57	BA	2171	A
57	BA	2191	G

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Mol	Chain	Res	Type
57	BA	2225	A
57	BA	2282	G
57	BA	2311	A
57	BA	2346	A
57	BA	2405	G
57	BA	2422	A
57	BA	2439	A
57	BA	2481	G
57	BA	2611	U
57	BA	2689	U
58	BB	66	A

## 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$
24	5MU	Av	54	24	12,22,23	1.40	3 (25%)	14,32,35	4.54	3 (21%)
23	CCC	Ax	21	-	0,2,26	0.00	-	0,1,41	0.00	-
24	5MU	Bv	54	24	12,22,23	1.33	3 (25%)	14,32,35	4.59	2 (14%)
23	CCC	Bx	21	-	0,2,26	0.00	-	0,1,41	0.00	-

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	5MU	Av	54	24	-	0/3/25/26	0/2/2/2
23	CCC	Ax	21	-	-	0/0/0/36	0/0/0/3
24	5MU	Bv	54	24	-	0/3/25/26	0/2/2/2
23	CCC	Bx	21	-	-	0/0/0/36	0/0/0/3

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	Bv	54	5MU	C6-C5	-2.32	1.33	1.40
24	Av	54	5MU	C6-C5	-2.07	1.34	1.40
24	Bv	54	5MU	C6-N1	2.22	1.38	1.35
24	Av	54	5MU	C6-N1	2.57	1.38	1.35
24	Bv	54	5MU	C4-N3	2.90	1.38	1.33
24	Av	54	5MU	C4-N3	3.32	1.39	1.33

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	Bv	54	5MU	C5-C4-N3	-9.16	114.94	125.14
24	Av	54	5MU	C5-C4-N3	-9.09	115.02	125.14
24	Av	54	5MU	C5M-C5-C6	2.06	122.77	118.62
24	Av	54	5MU	C4-N3-C2	14.11	127.44	115.25
24	Bv	54	5MU	C4-N3-C2	14.31	127.62	115.25

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 1072 ligands modelled in this entry, 1072 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	Ab	234/256 (91%)	0.13	8 (3%) 49 35	114, 153, 181, 193	0
1	Bb	234/256 (91%)	0.15	8 (3%) 49 35	113, 152, 181, 193	0
2	Ac	206/239 (86%)	0.33	12 (5%) 26 18	123, 150, 166, 178	0
2	Bc	206/239 (86%)	0.24	7 (3%) 49 35	124, 149, 166, 179	0
3	Ad	208/209 (99%)	-0.05	0 100 100	97, 119, 144, 155	0
3	Bd	208/209 (99%)	0.06	1 (0%) 91 86	97, 119, 145, 154	0
4	Ae	150/162 (92%)	0.09	3 (2%) 68 54	88, 114, 138, 159	0
4	Be	150/162 (92%)	0.11	0 100 100	84, 112, 138, 160	0
5	Af	101/101 (100%)	-0.11	2 (1%) 68 54	91, 121, 138, 155	0
5	Bf	101/101 (100%)	-0.28	0 100 100	91, 120, 137, 155	0
6	Ag	155/156 (99%)	0.14	10 (6%) 22 14	118, 137, 171, 188	0
6	Bg	155/156 (99%)	0.27	10 (6%) 22 14	118, 138, 171, 188	0
7	Ah	138/138 (100%)	-0.03	1 (0%) 89 81	96, 117, 132, 157	0
7	Bh	138/138 (100%)	0.01	1 (0%) 89 81	95, 116, 131, 158	0
8	Ai	127/128 (99%)	0.73	15 (11%) 6 5	120, 160, 178, 186	0
8	Bi	127/128 (99%)	0.84	15 (11%) 6 5	119, 160, 178, 186	0
9	Aj	98/105 (93%)	0.90	19 (19%) 1 1	126, 164, 184, 190	0
9	Bj	98/105 (93%)	0.89	14 (14%) 4 3	124, 164, 184, 190	0
10	Ak	119/129 (92%)	0.07	6 (5%) 32 22	89, 117, 145, 171	0
10	Bk	119/129 (92%)	0.08	6 (5%) 32 22	89, 117, 145, 171	0
11	Al	124/132 (93%)	0.03	2 (1%) 74 61	75, 97, 123, 161	0
11	Bl	124/132 (93%)	0.11	2 (1%) 74 61	77, 97, 125, 162	0
12	Am	118/126 (93%)	0.29	9 (7%) 17 11	115, 143, 157, 166	0
12	Bm	118/126 (93%)	0.33	5 (4%) 40 28	115, 142, 157, 166	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	An	60/61 (98%)	0.85	10 (16%) 2 2	126, 139, 159, 162	0
13	Bn	60/61 (98%)	0.23	0 100 100	127, 138, 159, 162	0
14	Ao	88/89 (98%)	0.07	0 100 100	81, 110, 131, 138	0
14	Bo	88/89 (98%)	-0.05	0 100 100	81, 110, 132, 137	0
15	Ap	83/88 (94%)	0.29	1 (1%) 81 69	93, 110, 128, 148	0
15	Bp	83/88 (94%)	0.49	5 (6%) 25 17	94, 111, 130, 147	0
16	Aq	99/105 (94%)	-0.02	0 100 100	80, 107, 124, 132	0
16	Bq	99/105 (94%)	-0.10	0 100 100	80, 107, 123, 132	0
17	Ar	70/88 (79%)	0.36	4 (5%) 27 19	96, 122, 142, 158	0
17	Br	70/88 (79%)	0.54	6 (8%) 13 10	95, 122, 141, 157	0
18	As	78/93 (83%)	0.56	6 (7%) 16 11	131, 153, 173, 181	0
18	Bs	78/93 (83%)	0.49	6 (7%) 16 11	130, 153, 172, 181	0
19	At	99/106 (93%)	0.14	1 (1%) 84 73	86, 114, 145, 149	0
19	Bt	99/106 (93%)	0.06	1 (1%) 84 73	86, 114, 145, 149	0
20	Au	24/27 (88%)	2.27	11 (45%) 0 0	108, 138, 162, 168	0
20	Bu	24/27 (88%)	1.05	3 (12%) 5 5	106, 137, 162, 168	0
21	Ay	94/95 (98%)	0.89	14 (14%) 3 3	118, 154, 186, 189	0
21	By	94/95 (98%)	0.94	11 (11%) 6 5	110, 146, 182, 188	0
22	Aa	1504/1504 (100%)	0.14	35 (2%) 64 48	65, 119, 193, 208	0
22	Ba	1504/1504 (100%)	0.11	29 (1%) 70 56	63, 119, 193, 208	0
23	Ax	12/14 (85%)	1.64	3 (25%) 1 1	108, 191, 198, 199	0
23	Bx	12/14 (85%)	2.09	6 (50%) 0 0	108, 191, 198, 199	0
24	Av	76/77 (98%)	-0.18	1 (1%) 79 66	96, 119, 161, 163	0
24	Bv	76/77 (98%)	-0.17	1 (1%) 79 66	69, 107, 141, 167	0
25	Aw	77/77 (100%)	0.29	4 (5%) 31 22	103, 191, 201, 203	0
25	Bw	77/77 (100%)	0.18	3 (3%) 43 31	93, 188, 200, 202	0
26	AC	120/229 (52%)	1.71	43 (35%) 0 0	147, 177, 190, 193	0
26	BC	120/229 (52%)	1.64	35 (29%) 1 1	145, 177, 189, 194	0
27	AD	271/276 (98%)	-0.17	2 (0%) 89 81	48, 76, 98, 121	0
27	BD	271/276 (98%)	-0.20	1 (0%) 93 88	46, 75, 96, 122	0
28	AE	204/206 (99%)	-0.09	2 (0%) 84 73	49, 81, 127, 149	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
28	BE	204/206 (99%)	-0.02	4 (1%) 68 54	49, 80, 128, 148	0
29	AF	207/210 (98%)	-0.15	3 (1%) 78 65	48, 89, 153, 181	0
29	BF	207/210 (98%)	-0.11	4 (1%) 70 56	46, 86, 154, 180	0
30	AG	181/182 (99%)	0.21	8 (4%) 38 27	117, 142, 161, 186	0
30	BG	181/182 (99%)	0.08	5 (2%) 56 42	99, 128, 154, 175	0
31	AH	164/180 (91%)	0.91	29 (17%) 2 2	98, 127, 143, 166	0
31	BH	164/180 (91%)	0.24	7 (4%) 39 27	94, 124, 141, 164	0
32	AI	145/148 (97%)	1.31	37 (25%) 1 1	81, 154, 171, 176	0
32	BI	145/148 (97%)	0.55	15 (10%) 9 6	82, 153, 172, 176	0
33	AJ	130/173 (75%)	2.75	66 (50%) 0 0	170, 195, 202, 203	0
33	BJ	130/173 (75%)	1.45	40 (30%) 1 1	147, 180, 194, 196	0
34	AN	138/140 (98%)	0.00	1 (0%) 89 81	65, 91, 126, 138	0
34	BN	138/140 (98%)	-0.10	0 100 100	63, 88, 126, 136	0
35	AO	122/122 (100%)	-0.28	0 100 100	59, 75, 98, 122	0
35	BO	122/122 (100%)	-0.27	0 100 100	56, 74, 99, 120	0
36	AP	146/150 (97%)	0.21	4 (2%) 58 43	51, 106, 133, 169	0
36	BP	146/150 (97%)	0.20	3 (2%) 67 52	50, 104, 133, 169	0
37	AQ	140/141 (99%)	-0.03	1 (0%) 89 81	75, 96, 124, 147	0
37	BQ	140/141 (99%)	0.00	1 (0%) 89 81	74, 94, 125, 147	0
38	AR	117/118 (99%)	-0.21	0 100 100	48, 80, 108, 128	0
38	BR	117/118 (99%)	-0.14	0 100 100	47, 79, 107, 127	0
39	AS	98/112 (87%)	0.69	12 (12%) 5 5	111, 137, 154, 161	0
39	BS	98/112 (87%)	0.86	13 (13%) 4 4	110, 136, 153, 162	0
40	AT	135/146 (92%)	-0.16	3 (2%) 65 50	66, 92, 150, 183	0
40	BT	135/146 (92%)	-0.02	3 (2%) 65 50	66, 92, 150, 183	0
41	AU	117/118 (99%)	-0.21	1 (0%) 85 75	58, 81, 117, 156	0
41	BU	117/118 (99%)	-0.25	0 100 100	52, 78, 116, 158	0
42	AV	101/101 (100%)	0.08	1 (0%) 84 73	59, 106, 125, 134	0
42	BV	101/101 (100%)	-0.02	1 (0%) 84 73	54, 103, 125, 134	0
43	AW	113/113 (100%)	-0.16	1 (0%) 85 75	58, 73, 106, 183	0
43	BW	113/113 (100%)	-0.15	1 (0%) 85 75	55, 71, 105, 183	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
44	AX	92/96 (95%)	-0.18	0 100 100	63, 86, 110, 120	0
44	BX	92/96 (95%)	-0.04	0 100 100	56, 84, 110, 120	0
45	AY	100/110 (90%)	0.92	14 (14%) 4 3	78, 117, 153, 160	0
45	BY	100/110 (90%)	0.39	5 (5%) 32 22	74, 115, 152, 158	0
46	AZ	184/206 (89%)	0.18	11 (5%) 25 17	117, 141, 158, 188	0
46	BZ	184/206 (89%)	0.19	5 (2%) 58 43	87, 126, 150, 173	0
47	A0	84/85 (98%)	0.52	5 (5%) 25 17	81, 100, 148, 168	0
47	B0	84/85 (98%)	0.47	6 (7%) 19 12	78, 100, 148, 168	0
48	A1	93/98 (94%)	0.09	2 (2%) 65 50	64, 87, 127, 137	0
48	B1	93/98 (94%)	0.10	0 100 100	55, 82, 119, 133	0
49	A2	71/72 (98%)	-0.27	0 100 100	81, 116, 134, 156	0
49	B2	71/72 (98%)	-0.31	0 100 100	51, 85, 123, 159	0
50	A3	59/60 (98%)	0.55	2 (3%) 49 35	70, 94, 112, 162	0
50	B3	59/60 (98%)	0.21	2 (3%) 49 35	62, 91, 111, 162	0
51	A4	57/71 (80%)	-0.05	0 100 100	150, 164, 175, 177	0
51	B4	57/71 (80%)	0.03	3 (5%) 30 21	150, 164, 174, 177	0
52	A5	55/60 (91%)	-0.27	2 (3%) 46 33	54, 80, 113, 119	0
52	B5	55/60 (91%)	-0.28	1 (1%) 71 58	54, 78, 112, 121	0
53	A6	50/54 (92%)	1.89	25 (50%) 0 0	121, 149, 165, 175	0
53	B6	50/54 (92%)	1.92	26 (52%) 0 0	121, 149, 164, 176	0
54	A7	47/49 (95%)	-0.01	0 100 100	50, 64, 86, 133	0
54	B7	47/49 (95%)	-0.09	0 100 100	47, 60, 84, 131	0
55	A8	63/65 (96%)	0.17	0 100 100	66, 83, 117, 146	0
55	B8	63/65 (96%)	0.04	0 100 100	63, 83, 116, 145	0
56	A9	37/37 (100%)	1.67	15 (40%) 0 0	121, 134, 149, 151	0
56	B9	37/37 (100%)	2.25	21 (56%) 0 0	121, 132, 148, 152	0
57	AA	2848/2848 (100%)	-0.04	62 (2%) 65 50	47, 83, 185, 208	0
57	BA	2848/2848 (100%)	0.07	44 (1%) 76 64	44, 80, 185, 208	0
58	AB	119/119 (100%)	-0.06	4 (3%) 49 35	90, 143, 176, 196	0
58	BB	119/119 (100%)	0.05	2 (1%) 73 59	86, 142, 175, 197	0
All	All	21500/22400 (95%)	0.17	921 (4%) 39 27	44, 108, 181, 208	0



All (921) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
22	Ba	89	C	13.9
32	BI	88	ILE	11.1
57	BA	277	C	11.1
22	Aa	89	C	10.8
57	AA	654(E)	G	10.6
57	AA	654(H)	G	10.3
22	Aa	83	U	10.3
57	BA	654(E)	G	10.1
57	AA	654(I)	C	10.1
33	AJ	72	ASP	10.0
33	AJ	68	LEU	10.0
57	AA	654(D)	G	10.0
33	AJ	85	ASP	9.7
22	Aa	82	U	9.5
57	BA	654(K)	C	9.3
47	B0	3	HIS	9.3
57	AA	654(G)	C	8.8
33	AJ	12	THR	8.6
26	BC	177	GLY	8.6
57	AA	2802	G	8.3
57	AA	654(K)	C	8.1
33	AJ	78	SER	8.0
57	AA	2795	G	7.8
57	AA	654(L)	G	7.7
33	AJ	69	PRO	7.7
57	AA	654(F)	C	7.7
33	AJ	70	GLU	7.5
22	Aa	84	U	7.5
32	AI	119	PRO	7.5
33	AJ	16	ASN	7.4
22	Ba	88	A	7.4
32	AI	65	ALA	7.3
33	AJ	63	LEU	7.3
22	Aa	81	U	7.3
6	Bg	84	ASN	7.2
57	AA	2799	C	7.1
33	BJ	69	PRO	7.0
32	AI	111	PRO	7.0
53	B6	26	ASN	7.0
33	AJ	11	ALA	7.0
33	AJ	67	GLY	6.9
8	Ai	7	THR	6.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
57	BA	654(H)	G	6.8
32	AI	61	ARG	6.8
32	AI	144	VAL	6.8
22	Ba	80	G	6.7
26	BC	176	VAL	6.7
57	AA	1509	C	6.7
33	AJ	73	GLY	6.6
26	AC	176	VAL	6.6
26	AC	177	GLY	6.5
33	AJ	49	ALA	6.5
33	AJ	86	PRO	6.5
33	AJ	84	GLU	6.5
57	AA	654(S)	G	6.5
32	AI	72	LEU	6.5
26	AC	229	SER	6.4
32	AI	145	VAL	6.3
33	AJ	13	LEU	6.3
33	AJ	64	LYS	6.3
57	AA	1534	U	6.2
57	BA	2795	G	6.2
26	AC	42	VAL	6.2
57	BA	2802	G	6.1
57	AA	2796	U	6.1
26	BC	35	THR	6.0
26	AC	221	PRO	6.0
33	BJ	43	ALA	6.0
22	Ba	84	U	6.0
22	Ba	90	U	5.9
57	AA	2803	C	5.9
33	BJ	56	ASN	5.8
20	Au	5	ASP	5.8
21	By	85	GLU	5.8
22	Aa	80	G	5.7
57	AA	654(J)	A	5.7
56	A9	12	ASP	5.7
50	A3	1	MET	5.6
33	AJ	79	ALA	5.6
57	AA	2801(A)	A	5.6
26	BC	174	ALA	5.6
6	Ag	82	GLY	5.6
26	AC	175	PRO	5.6
57	BA	654(F)	C	5.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
33	BJ	52	PHE	5.5
18	Bs	81	ARG	5.5
8	Bi	7	THR	5.4
57	AA	654(N)	G	5.4
57	BA	654(G)	C	5.4
57	BA	654(D)	G	5.4
33	AJ	114	GLY	5.3
57	AA	2894	G	5.2
57	BA	1534	U	5.2
6	Ag	81	GLY	5.2
57	BA	654(J)	A	5.2
56	A9	13	LYS	5.1
56	B9	1	MET	5.1
33	AJ	113	GLN	5.1
57	BA	654(S)	G	5.1
52	A5	2	ALA	5.1
57	BA	1535	A	5.0
26	BC	2	PRO	5.0
33	AJ	7	VAL	5.0
30	AG	2	PRO	5.0
32	AI	121	LYS	5.0
22	Ba	81	U	4.9
26	BC	42	VAL	4.9
36	AP	150	ALA	4.9
6	Bg	82	GLY	4.9
26	BC	14	LYS	4.9
53	B6	49	HIS	4.9
18	As	81	ARG	4.9
57	AA	2793	G	4.9
8	Bi	4	TYR	4.8
56	B9	34	GLN	4.8
57	AA	2794	C	4.8
31	AH	95	ARG	4.8
26	BC	190	ILE	4.8
26	BC	44	VAL	4.8
33	BJ	36	GLU	4.8
26	BC	166	ASN	4.7
26	AC	33	LEU	4.7
53	A6	13	CYS	4.7
32	AI	118	LYS	4.7
20	Au	18	TYR	4.7
57	BA	2799	C	4.7

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Mol	Chain	Res	Type	RSRZ
26	BC	34	ALA	4.7
33	AJ	83	TYR	4.7
31	AH	96	ALA	4.7
22	Aa	1036	G	4.6
58	BB	88	C	4.6
33	AJ	40	LEU	4.6
1	Bb	122	PHE	4.6
33	BJ	12	THR	4.6
33	AJ	52	PHE	4.6
57	AA	229	A	4.6
33	BJ	42	GLN	4.6
8	Bi	8	GLY	4.6
22	Ba	1030	C	4.6
2	Ac	177	THR	4.5
25	Bw	17(A)	U	4.5
33	BJ	68	LEU	4.5
26	BC	32	GLU	4.5
33	BJ	64	LYS	4.5
33	BJ	109	SER	4.5
32	BI	120	ILE	4.5
31	AH	101	ARG	4.5
29	BF	1	MET	4.4
20	Au	9	ARG	4.4
26	BC	175	PRO	4.4
57	AA	2801	A	4.4
26	AC	172	ILE	4.4
33	AJ	77	PRO	4.4
33	BJ	87	VAL	4.3
57	AA	654(P)	C	4.3
57	BA	654(I)	C	4.3
33	AJ	53	VAL	4.3
57	AA	654(C)	G	4.3
30	AG	48	GLU	4.3
9	Bj	71	LEU	4.3
32	BI	130	TYR	4.3
22	Ba	82	U	4.3
33	BJ	76	GLY	4.3
20	Bu	18	TYR	4.3
26	BC	209	PHE	4.3
47	B0	5	LYS	4.3
22	Aa	1027	C	4.3
22	Ba	1030(B)	C	4.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
56	B9	32	HIS	4.3
33	AJ	74	LEU	4.2
45	AY	45	VAL	4.2
53	A6	14	THR	4.2
32	BI	90	GLY	4.2
33	AJ	62	ALA	4.2
57	AA	2804	C	4.2
21	By	86	VAL	4.2
33	AJ	48	GLY	4.2
33	AJ	115	GLN	4.2
6	Bg	83	ALA	4.2
53	A6	21	TYR	4.2
22	Aa	1030(A)	G	4.2
33	BJ	48	GLY	4.2
6	Bg	156	TRP	4.2
31	AH	129	THR	4.2
32	AI	100	ALA	4.2
57	AA	1535	A	4.2
53	B6	37	ARG	4.2
25	Aw	20	U	4.2
33	AJ	25	PHE	4.2
57	AA	2125	G	4.2
47	B0	4	LYS	4.2
31	BH	45	VAL	4.1
45	AY	44	ILE	4.1
8	Ai	8	GLY	4.1
33	AJ	10	LEU	4.1
23	Ax	20	A	4.1
33	AJ	17	LEU	4.1
26	BC	33	LEU	4.1
26	BC	171	ALA	4.0
33	AJ	56	ASN	4.0
22	Aa	1035	A	4.0
22	Ba	1030(A)	G	4.0
22	Aa	1286	A	4.0
26	BC	40	GLU	4.0
21	By	87	TYR	4.0
9	Aj	69	ASN	4.0
51	B4	57	GLU	4.0
39	BS	108	GLY	4.0
26	AC	193	PHE	4.0
26	AC	35	THR	4.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
53	A6	50	ARG	4.0
22	Ba	1257	U	4.0
57	BA	654(C)	G	3.9
53	B6	13	CYS	3.9
45	AY	57	GLN	3.9
26	AC	34	ALA	3.9
53	B6	51	GLU	3.9
10	Bk	129	SER	3.9
32	AI	91	SER	3.9
33	AJ	26	LEU	3.9
33	AJ	110	GLY	3.9
29	BF	23	ASP	3.9
57	AA	654(T)	C	3.9
53	B6	20	ASN	3.9
22	Aa	1030(B)	C	3.8
33	AJ	60	ARG	3.8
57	AA	2132	U	3.8
26	BC	208	THR	3.8
33	AJ	82	PHE	3.8
57	AA	654(V)	A	3.8
26	BC	220	GLY	3.8
20	Au	8	THR	3.8
53	A6	31	PRO	3.8
26	AC	173	HIS	3.8
53	A6	23	THR	3.8
56	A9	1	MET	3.8
32	AI	122	GLU	3.8
32	AI	112	LYS	3.8
23	Bx	20	A	3.8
33	AJ	44	LEU	3.8
32	AI	68	LEU	3.7
47	A0	3	HIS	3.7
6	Ag	86	GLN	3.7
22	Aa	1001(A)	G	3.7
26	BC	173	HIS	3.7
32	BI	92	VAL	3.7
22	Ba	1027	C	3.7
2	Ac	155	GLY	3.7
26	AC	40	GLU	3.7
40	AT	1	MET	3.7
57	BA	654(V)	A	3.7
33	BJ	4	LYS	3.7

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Mol	Chain	Res	Type	RSRZ
33	AJ	71	LEU	3.7
47	B0	42	GLY	3.7
31	AH	29	PRO	3.6
32	AI	86	THR	3.6
6	Ag	84	ASN	3.6
57	AA	2154	G	3.6
33	BJ	53	VAL	3.6
26	AC	44	VAL	3.6
26	AC	41	THR	3.6
26	AC	174	ALA	3.6
46	BZ	88	PHE	3.6
32	AI	109	ILE	3.6
33	BJ	63	LEU	3.6
53	A6	29	ASN	3.6
57	AA	888	C	3.6
31	AH	128	PRO	3.5
31	BH	42	ARG	3.5
1	Bb	132	LYS	3.5
1	Bb	96	ARG	3.5
10	Bk	12	ARG	3.5
32	BI	70	GLU	3.5
33	BJ	11	ALA	3.5
57	BA	654(N)	G	3.5
13	An	38	GLY	3.5
26	AC	210	LEU	3.5
39	BS	36	TYR	3.5
57	BA	1509	C	3.5
8	Bi	82	ALA	3.5
21	By	11	ALA	3.5
8	Ai	9	ARG	3.5
32	AI	128	LEU	3.5
33	AJ	92	THR	3.5
9	Bj	10	GLY	3.4
26	BC	48	LEU	3.4
26	AC	8	TYR	3.4
32	AI	58	LEU	3.4
57	AA	2893	G	3.4
11	Al	127	GLU	3.4
21	By	89	GLU	3.4
32	AI	85	GLU	3.4
33	AJ	99	SER	3.4
57	BA	654(Q)	C	3.4

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Mol	Chain	Res	Type	RSRZ
31	BH	167	GLU	3.4
33	AJ	80	VAL	3.4
53	B6	35	GLU	3.4
33	BJ	88	ALA	3.4
6	Ag	83	ALA	3.4
53	A6	35	GLU	3.4
23	Bx	19	U	3.4
9	Aj	34	VAL	3.4
21	Ay	13	LYS	3.3
32	AI	93	THR	3.3
39	AS	37	ALA	3.3
25	Aw	17	C	3.3
45	AY	59	GLY	3.3
2	Bc	91	LEU	3.3
57	BA	2796	U	3.3
33	AJ	59	ILE	3.3
53	A6	49	HIS	3.3
22	Aa	1033	G	3.3
57	BA	654(P)	C	3.3
22	Aa	1002	G	3.3
26	BC	172	ILE	3.3
57	BA	2125	G	3.3
33	BJ	75	GLN	3.3
30	BG	2	PRO	3.3
22	Aa	1257	U	3.3
9	Bj	100	THR	3.3
56	B9	12	ASP	3.3
56	A9	15	LYS	3.3
57	AA	2896	C	3.3
30	AG	34	LEU	3.3
33	BJ	44	LEU	3.3
22	Aa	1001	A	3.3
17	Ar	88	LYS	3.2
22	Ba	1030(C)	G	3.2
26	BC	49	GLY	3.2
12	Am	119	GLY	3.2
45	AY	58	GLY	3.2
51	B4	1	MET	3.2
33	AJ	75	GLN	3.2
20	Au	3	LYS	3.2
57	BA	654(L)	G	3.2
31	AH	53	GLU	3.2

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Mol	Chain	Res	Type	RSRZ
56	A9	16	VAL	3.2
39	BS	60	GLY	3.2
32	AI	108	THR	3.2
13	An	39	LEU	3.2
57	AA	654	A	3.2
30	BG	49	ASP	3.2
21	Ay	15	TRP	3.2
53	A6	45	LYS	3.2
20	Au	22	ARG	3.2
26	AC	182	PRO	3.2
57	AA	654(M)	C	3.2
22	Aa	88	A	3.2
57	BA	2801	A	3.2
57	BA	2793	G	3.2
31	AH	168	PRO	3.2
46	BZ	97	GLU	3.2
22	Aa	90	U	3.2
33	AJ	122	VAL	3.2
9	Aj	7	LYS	3.2
22	Ba	1002	G	3.2
31	AH	89	ILE	3.2
33	BJ	73	GLY	3.1
2	Bc	206	GLU	3.1
37	AQ	140	ALA	3.1
22	Ba	1286	A	3.1
28	BE	76	ARG	3.1
6	Bg	79	ARG	3.1
53	B6	29	ASN	3.1
8	Bi	128	ARG	3.1
26	BC	41	THR	3.1
33	BJ	40	LEU	3.1
42	BV	36	PRO	3.1
19	Bt	106	ALA	3.1
32	BI	105	HIS	3.1
6	Bg	85	TYR	3.1
8	Ai	105	ASP	3.1
57	BA	508	G	3.1
9	Aj	8	LEU	3.1
33	BJ	8	GLU	3.1
57	BA	888	C	3.1
8	Ai	15	ALA	3.1
56	B9	29	ASN	3.1

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Mol	Chain	Res	Type	RSRZ
25	Bw	17	C	3.1
53	B6	23	THR	3.1
53	A6	12	GLU	3.1
22	Aa	1026	G	3.1
57	AA	2805	G	3.1
28	BE	204	ALA	3.1
22	Ba	83	U	3.1
22	Ba	1531	A	3.1
56	B9	11	CYS	3.0
47	A0	74	ARG	3.0
56	A9	9	ARG	3.0
26	AC	198	GLU	3.0
9	Aj	98	ILE	3.0
33	BJ	108	LYS	3.0
39	BS	54	LEU	3.0
53	B6	21	TYR	3.0
57	BA	2894	G	3.0
22	Aa	1005	A	3.0
30	AG	47	LYS	3.0
33	AJ	6	ASN	3.0
46	AZ	95	PRO	3.0
45	BY	2	ARG	3.0
33	BJ	83	TYR	3.0
25	Bw	34	C	3.0
9	Bj	28	ARG	3.0
31	BH	169	VAL	3.0
1	Bb	133	LYS	3.0
8	Ai	65	VAL	3.0
33	AJ	101	PRO	3.0
33	BJ	72	ASP	3.0
32	AI	132	PRO	3.0
12	Am	95	GLY	3.0
21	Ay	85	GLU	3.0
45	BY	45	VAL	3.0
53	A6	24	GLU	3.0
22	Aa	1028	C	3.0
6	Bg	4	ARG	3.0
33	AJ	90	ALA	3.0
53	B6	28	ARG	3.0
1	Ab	214	ILE	3.0
46	AZ	97	GLU	3.0
57	AA	2155	G	2.9

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Mol	Chain	Res	Type	RSRZ
23	Bx	9	A	2.9
23	Bx	13	A	2.9
56	B9	10	ILE	2.9
57	AA	654(R)	C	2.9
21	By	84	SER	2.9
56	B9	9	ARG	2.9
32	AI	97	ILE	2.9
26	BC	31	LYS	2.9
22	Ba	1033	G	2.9
53	A6	37	ARG	2.9
27	AD	83	GLU	2.9
56	B9	33	LYS	2.9
9	Bj	33	GLN	2.9
1	Ab	163	PHE	2.9
31	AH	44	VAL	2.9
20	Au	2	GLY	2.9
32	AI	95	LYS	2.9
9	Bj	4	ILE	2.9
23	Bx	11	U	2.9
33	BJ	49	ALA	2.9
8	Bi	85	LEU	2.9
8	Bi	81	ILE	2.9
10	Ak	128	ALA	2.9
33	AJ	76	GLY	2.9
11	Al	28	LYS	2.9
33	AJ	121	ASP	2.9
45	BY	47	LYS	2.9
33	AJ	37	THR	2.9
53	A6	54	ILE	2.9
13	An	17	LYS	2.9
53	B6	42	TRP	2.9
31	AH	102	ALA	2.9
39	AS	59	LYS	2.9
32	BI	67	ARG	2.9
36	AP	149	GLU	2.9
6	Ag	85	TYR	2.9
13	An	12	ARG	2.9
9	Aj	96	ILE	2.9
26	AC	201	LYS	2.9
39	AS	34	HIS	2.8
39	BS	52	SER	2.8
30	BG	35	GLU	2.8

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Mol	Chain	Res	Type	RSRZ
40	BT	1	MET	2.8
33	BJ	115	GLN	2.8
53	A6	39	TYR	2.8
56	A9	14	CYS	2.8
56	B9	14	CYS	2.8
45	AY	66	PRO	2.8
26	BC	221	PRO	2.8
12	Bm	102	ARG	2.8
31	AH	50	VAL	2.8
30	AG	49	ASP	2.8
46	BZ	96	VAL	2.8
8	Bi	95	LYS	2.8
46	BZ	172	ALA	2.8
6	Bg	18	TYR	2.8
8	Bi	61	ALA	2.8
56	B9	28	GLU	2.8
53	B6	32	ASN	2.8
58	AB	12	C	2.8
9	Aj	70	ARG	2.8
21	By	29	LYS	2.8
26	AC	32	GLU	2.8
8	Ai	64	THR	2.8
33	BJ	92	THR	2.8
58	AB	87	G	2.8
33	AJ	100	ASN	2.7
57	BA	1420	U	2.7
57	AA	2310	A	2.7
9	Aj	4	ILE	2.7
9	Bj	93	GLY	2.7
39	BS	82	ILE	2.7
26	AC	45	HIS	2.7
8	Bi	15	ALA	2.7
22	Aa	1034	G	2.7
56	B9	13	LYS	2.7
18	Bs	69	HIS	2.7
18	Bs	5	LEU	2.7
23	Ax	13	A	2.7
23	Ax	14	A	2.7
8	Bi	46	ALA	2.7
21	Ay	65	GLN	2.7
39	BS	51	ALA	2.7
9	Aj	6	ILE	2.7

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Mol	Chain	Res	Type	RSRZ
27	AD	5	LYS	2.7
56	B9	18	ARG	2.7
26	AC	49	GLY	2.7
32	AI	96	ASP	2.7
26	AC	4	HIS	2.7
53	A6	52	VAL	2.7
22	Ba	91	C	2.7
8	Bi	53	VAL	2.7
57	AA	156	U	2.7
8	Ai	37	PHE	2.7
26	AC	228	HIS	2.7
2	Ac	103	VAL	2.7
21	Ay	10	ARG	2.7
39	BS	107	GLU	2.7
33	BJ	67	GLY	2.7
2	Bc	193	TYR	2.7
15	Bp	7	ALA	2.7
57	AA	2133	G	2.7
17	Br	31	LEU	2.7
1	Ab	228	GLY	2.7
12	Am	27	LYS	2.7
32	AI	139	GLN	2.7
39	AS	23	ARG	2.7
32	AI	79	ILE	2.6
57	BA	654(O)	G	2.7
13	An	8	GLU	2.6
21	Ay	84	SER	2.6
33	BJ	50	ARG	2.6
53	B6	50	ARG	2.6
8	Ai	82	ALA	2.6
45	AY	47	LYS	2.6
47	B0	8	GLY	2.6
6	Ag	79	ARG	2.6
9	Bj	23	ILE	2.6
26	BC	201	LYS	2.6
21	Ay	87	TYR	2.6
56	A9	25	VAL	2.6
57	AA	277	C	2.6
57	BA	654(M)	C	2.6
32	BI	143	SER	2.6
57	BA	2310	A	2.6
13	An	25	VAL	2.6

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Mol	Chain	Res	Type	RSRZ
56	B9	16	VAL	2.6
18	As	47	HIS	2.6
33	AJ	103	GLY	2.6
28	BE	75	VAL	2.6
30	AG	86	MET	2.6
33	BJ	74	LEU	2.6
31	BH	44	VAL	2.6
39	BS	76	LYS	2.6
33	AJ	93	LEU	2.6
10	Ak	12	ARG	2.6
12	Bm	119	GLY	2.6
36	AP	87	ASP	2.6
57	AA	654(O)	G	2.6
20	Au	25	LYS	2.6
31	AH	40	GLU	2.6
53	B6	24	GLU	2.6
32	AI	4	ILE	2.6
45	AY	43	ASN	2.6
46	AZ	92	SER	2.6
21	Ay	89	GLU	2.6
2	Ac	39	ILE	2.6
33	BJ	103	GLY	2.6
26	AC	2	PRO	2.6
31	AH	112	PRO	2.6
46	BZ	28	MET	2.6
10	Ak	90	GLY	2.6
26	BC	192	ALA	2.6
4	Ae	31	LEU	2.6
48	A1	85	LEU	2.6
53	B6	9	LEU	2.6
39	AS	104	GLY	2.6
57	BA	654(T)	C	2.6
39	BS	48	LEU	2.5
27	BD	26	LYS	2.5
31	BH	170	ARG	2.5
56	B9	22	ARG	2.5
9	Aj	97	GLU	2.5
12	Bm	94	ARG	2.5
22	Ba	204	U	2.5
26	AC	209	PHE	2.5
53	B6	31	PRO	2.5
22	Ba	1031	G	2.5

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Mol	Chain	Res	Type	RSRZ
9	Aj	5	ARG	2.5
9	Bj	72	VAL	2.5
10	Ak	129	SER	2.5
17	Ar	51	LEU	2.5
58	AB	11	C	2.5
9	Bj	34	VAL	2.5
31	AH	48	GLY	2.5
57	AA	2131	G	2.5
22	Aa	1447	A	2.5
45	AY	56	PRO	2.5
32	AI	143	SER	2.5
2	Bc	207	VAL	2.5
18	As	41	VAL	2.5
1	Bb	79	ASP	2.5
21	Ay	16	ARG	2.5
29	AF	1	MET	2.5
56	A9	35	ARG	2.5
56	B9	23	VAL	2.5
18	As	75	ALA	2.5
12	Am	7	VAL	2.5
26	BC	219	MET	2.5
57	BA	2801(A)	A	2.5
53	B6	53	LYS	2.5
10	Bk	42	TRP	2.5
42	AV	36	PRO	2.5
39	AS	60	GLY	2.5
40	AT	39	ARG	2.5
9	Aj	99	LYS	2.5
32	BI	63	ALA	2.5
57	BA	654(A)	G	2.5
45	AY	6	HIS	2.5
47	B0	6	GLY	2.5
45	AY	65	ALA	2.5
52	B5	2	ALA	2.5
20	Au	10	ARG	2.4
21	Ay	82	GLU	2.4
29	AF	18	ARG	2.4
39	AS	43	GLU	2.4
57	BA	2173	A	2.4
15	Bp	13	HIS	2.4
2	Ac	154	SER	2.4
22	Aa	1117	G	2.4

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Mol	Chain	Res	Type	RSRZ
21	By	15	TRP	2.4
43	BW	113	LYS	2.4
53	A6	26	ASN	2.4
11	Bl	68	ALA	2.4
32	BI	71	ILE	2.4
6	Bg	81	GLY	2.4
18	Bs	10	PHE	2.4
26	AC	220	GLY	2.4
31	AH	123	PHE	2.4
32	AI	3	VAL	2.4
2	Ac	91	LEU	2.4
33	AJ	5	ARG	2.4
53	A6	46	HIS	2.4
1	Ab	70	PHE	2.4
10	Bk	82	VAL	2.4
2	Ac	189	ALA	2.4
20	Au	14	TRP	2.4
26	BC	203	GLU	2.4
33	BJ	110	GLY	2.4
53	B6	14	THR	2.4
46	AZ	89	PHE	2.4
10	Bk	128	ALA	2.4
8	Ai	4	TYR	2.4
39	BS	68	GLN	2.4
13	An	30	ALA	2.4
53	A6	42	TRP	2.4
31	AH	170	ARG	2.4
57	AA	2792	G	2.4
57	BA	2805	G	2.4
33	BJ	6	ASN	2.4
57	AA	2895	U	2.4
26	AC	171	ALA	2.4
39	BS	37	ALA	2.4
57	BA	2803	C	2.4
33	BJ	101	PRO	2.4
46	AZ	88	PHE	2.4
2	Ac	205	GLY	2.4
9	Bj	73	ASP	2.4
56	B9	21	GLY	2.4
8	Bi	54	ASP	2.4
58	AB	88	C	2.4
6	Bg	5	ARG	2.4

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Mol	Chain	Res	Type	RSRZ
12	Am	84	ILE	2.4
57	AA	2179	C	2.3
56	A9	34	GLN	2.3
8	Ai	95	LYS	2.3
11	Bl	127	GLU	2.3
33	AJ	116	ILE	2.3
26	AC	200	HIS	2.3
39	AS	49	VAL	2.3
50	B3	1	MET	2.3
21	Ay	14	GLU	2.3
22	Ba	1036	G	2.3
57	AA	508	G	2.3
57	AA	1536	C	2.3
39	AS	73	LEU	2.3
53	A6	25	LYS	2.3
26	AC	190	ILE	2.3
6	Ag	4	ARG	2.3
56	A9	37	GLY	2.3
32	AI	104	GLN	2.3
46	AZ	96	VAL	2.3
9	Aj	74	ILE	2.3
39	AS	51	ALA	2.3
12	Bm	108	ARG	2.3
22	Ba	1026	G	2.3
57	AA	1740	G	2.3
31	AH	158	HIS	2.3
18	As	80	TYR	2.3
53	A6	20	ASN	2.3
56	B9	36	GLN	2.3
1	Bb	77	ALA	2.3
31	AH	60	ARG	2.3
22	Aa	1020	U	2.3
1	Ab	19	HIS	2.3
26	BC	30	VAL	2.3
22	Aa	996	A	2.3
34	AN	72	TYR	2.3
40	BT	39	ARG	2.3
56	B9	37	GLY	2.3
57	AA	654(Q)	C	2.3
22	Ba	1001(A)	G	2.3
33	AJ	54	ALA	2.3
29	BF	2	LYS	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
2	Bc	126	ARG	2.3
15	Bp	42	ARG	2.3
46	AZ	150	LEU	2.3
2	Ac	194	GLY	2.3
5	Af	8	ILE	2.3
21	By	23	ARG	2.3
2	Ac	147	LYS	2.3
17	Br	88	LYS	2.3
22	Ba	1447	A	2.3
26	AC	216	THR	2.3
33	AJ	50	ARG	2.3
24	Bv	1	C	2.3
6	Ag	5	ARG	2.3
21	By	95	LEU	2.3
22	Ba	1030(D)	A	2.3
9	Bj	98	ILE	2.3
31	AH	45	VAL	2.3
33	AJ	107	VAL	2.3
53	A6	53	LYS	2.3
57	BA	654	A	2.3
26	AC	211	ARG	2.3
39	BS	104	GLY	2.3
26	AC	46	ALA	2.3
32	BI	87	LYS	2.3
45	AY	55	TYR	2.3
52	A5	3	LYS	2.2
57	AA	1174	A	2.2
20	Bu	24	ARG	2.2
32	BI	84	GLY	2.2
56	B9	4	ARG	2.2
22	Ba	1260	C	2.2
1	Ab	130	ARG	2.2
8	Ai	81	ILE	2.2
9	Aj	38	ILE	2.2
29	AF	10	PRO	2.2
22	Aa	1115	C	2.2
24	Av	1	C	2.2
47	A0	85	ALA	2.2
53	B6	12	GLU	2.2
33	BJ	132	ASP	2.2
47	A0	4	LYS	2.2
53	B6	19	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
10	Ak	68	ALA	2.2
26	BC	198	GLU	2.2
17	Ar	43	PHE	2.2
22	Aa	1029	C	2.2
33	AJ	46	GLN	2.2
57	BA	2794	C	2.2
31	AH	94	TYR	2.2
18	Bs	32	LYS	2.2
22	Aa	454	C	2.2
7	Ah	131	GLY	2.2
15	Bp	17	TYR	2.2
57	AA	2892	A	2.2
17	Br	50	ILE	2.2
50	A3	2	PRO	2.2
2	Ac	146	ALA	2.2
2	Bc	2	GLY	2.2
31	AH	51	ARG	2.2
45	AY	30	VAL	2.2
18	As	27	GLU	2.2
28	AE	204	ALA	2.2
56	A9	28	GLU	2.2
26	AC	37	LYS	2.2
57	BA	1421	G	2.2
50	B3	2	PRO	2.2
8	Bi	50	LEU	2.2
36	BP	150	ALA	2.2
53	B6	22	ALA	2.2
32	AI	19	VAL	2.2
33	AJ	57	THR	2.2
9	Aj	35	SER	2.2
21	Ay	95	LEU	2.2
32	AI	120	ILE	2.2
32	AI	16	GLY	2.2
39	AS	61	ASN	2.2
40	AT	2	ASN	2.2
4	Ae	43	LEU	2.2
17	Br	51	LEU	2.2
18	Bs	40	ILE	2.2
22	Aa	91	C	2.2
53	B6	39	TYR	2.2
30	AG	137	GLU	2.2
17	Br	56	THR	2.2

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Mol	Chain	Res	Type	RSRZ
46	AZ	4	ARG	2.2
1	Ab	77	ALA	2.2
57	AA	1177	A	2.2
12	Bm	98	VAL	2.2
51	B4	56	VAL	2.2
12	Am	92	HIS	2.1
33	AJ	51	LEU	2.1
28	BE	57	LYS	2.1
31	AH	93	GLY	2.1
31	AH	131	VAL	2.1
26	BC	43	GLU	2.1
32	AI	60	GLU	2.1
45	BY	5	MET	2.1
10	Ak	13	GLN	2.1
30	BG	26	GLN	2.1
33	BJ	45	LYS	2.1
19	At	9	ASN	2.1
56	B9	24	TYR	2.1
22	Aa	1037	C	2.1
26	BC	13	GLU	2.1
1	Ab	135	GLN	2.1
26	AC	48	LEU	2.1
26	AC	194	ILE	2.1
28	AE	76	ARG	2.1
57	AA	2139	C	2.1
9	Aj	3	LYS	2.1
53	B6	45	LYS	2.1
1	Bb	80	ILE	2.1
31	AH	18	GLU	2.1
26	AC	3	LYS	2.1
39	AS	27	SER	2.1
8	Ai	125	TYR	2.1
45	AY	60	PHE	2.1
4	Ae	19	MET	2.1
30	BG	48	GLU	2.1
22	Aa	1003	G	2.1
17	Ar	23	LYS	2.1
26	AC	23	ILE	2.1
32	AI	5	LEU	2.1
8	Ai	53	VAL	2.1
47	A0	22	GLY	2.1
9	Aj	72	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
22	Aa	1202	G	2.1
29	BF	25	PRO	2.1
57	BA	2119	A	2.1
31	AH	92	ILE	2.1
6	Ag	80	VAL	2.1
2	Ac	206	GLU	2.1
22	Ba	1003	G	2.1
53	A6	19	ARG	2.1
21	Ay	28	LYS	2.1
32	AI	131	LYS	2.1
46	AZ	91	LEU	2.1
57	BA	2139	C	2.1
8	Ai	106	ALA	2.1
26	BC	189	ASN	2.1
46	AZ	164	ALA	2.1
56	A9	26	ILE	2.1
8	Bi	9	ARG	2.1
12	Am	64	TRP	2.1
31	AH	17	VAL	2.1
57	AA	2140	C	2.1
2	Bc	200	ALA	2.1
26	AC	217	THR	2.1
33	BJ	20	ALA	2.1
37	BQ	140	ALA	2.1
9	Bj	64	GLU	2.1
17	Br	54	ARG	2.1
7	Bh	25	ASP	2.1
21	By	77	SER	2.1
46	AZ	125	LEU	2.1
32	BI	59	ALA	2.1
33	AJ	43	ALA	2.1
13	An	13	THR	2.1
45	BY	60	PHE	2.1
36	BP	107	LYS	2.1
20	Au	4	GLY	2.1
26	AC	197	LEU	2.1
31	BH	158	HIS	2.1
9	Bj	35	SER	2.1
20	Bu	21	TYR	2.1
40	BT	92	GLY	2.1
9	Aj	76	ASN	2.1
53	A6	51	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
25	Aw	21	A	2.0
53	B6	54	ILE	2.0
56	A9	17	ILE	2.0
26	AC	183	PRO	2.0
21	Ay	24	GLU	2.0
31	AH	167	GLU	2.0
48	A1	57	GLU	2.0
10	Bk	11	LYS	2.0
22	Ba	79	G	2.0
53	B6	25	LYS	2.0
13	An	60	SER	2.0
41	AU	118	GLY	2.0
43	AW	113	LYS	2.0
56	A9	11	CYS	2.0
1	Bb	76	GLN	2.0
9	Aj	9	ARG	2.0
23	Bx	10	G	2.0
25	Aw	55	U	2.0
15	Bp	39	TYR	2.0
33	BJ	7	VAL	2.0
36	BP	110	TYR	2.0
58	BB	52	A	2.0
3	Bd	96	LEU	2.0
32	BI	114	LEU	2.0
5	Af	90	VAL	2.0
31	AH	52	VAL	2.0
33	AJ	81	VAL	2.0
57	AA	1026	U	2.0
13	An	34	TYR	2.0
36	AP	82	GLY	2.0
33	AJ	20	ALA	2.0
12	Am	94	ARG	2.0
30	AG	94	LEU	2.0
53	A6	28	ARG	2.0
15	Ap	53	VAL	2.0
22	Aa	999	C	2.0
57	AA	155	U	2.0
57	AA	1108	U	2.0
12	Am	65	LYS	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 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
23	CCC	Bx	21	3/24	0.95	0.61	-	20,20,20,20	0
23	CCC	Ax	21	3/24	0.88	0.57	-	20,20,20,20	0
24	5MU	Av	54	21/22	0.90	0.19	-	130,133,148,148	0
24	5MU	Bv	54	21/22	0.93	0.16	-	114,116,124,125	0

## 6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 6.4 Ligands ⓘ

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 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
60	MG	Aa	1645	1/1	0.54	1.51	134.62	79,79,79,79	0
60	MG	AA	2968	1/1	0.31	1.47	77.90	76,76,76,76	0
60	MG	AA	3243	1/1	0.93	1.21	63.51	79,79,79,79	0
60	MG	BA	3254	1/1	0.57	0.88	62.24	66,66,66,66	0
60	MG	BA	3013	1/1	0.95	0.98	50.84	50,50,50,50	0
60	MG	BA	3131	1/1	0.89	0.63	48.79	96,96,96,96	0
60	MG	Aa	1631	1/1	0.77	1.14	47.80	72,72,72,72	0
60	MG	Ba	1630	1/1	0.77	0.82	44.69	76,76,76,76	0
60	MG	Ba	1644	1/1	0.49	1.03	37.39	67,67,67,67	0
60	MG	AA	3245	1/1	0.18	0.92	37.18	97,97,97,97	0
60	MG	AA	3097	1/1	0.80	0.42	35.72	43,43,43,43	0
60	MG	AA	3261	1/1	0.54	0.84	35.57	76,76,76,76	0
60	MG	Ba	1724	1/1	0.87	0.68	35.39	68,68,68,68	0
60	MG	AA	3197	1/1	0.96	0.49	35.26	22,22,22,22	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	BA	3187	1/1	0.87	0.66	33.42	36,36,36,36	0
60	MG	Aa	1727	1/1	0.17	1.24	33.34	98,98,98,98	1
60	MG	Ba	1621	1/1	0.73	1.12	33.02	82,82,82,82	0
60	MG	AA	3011	1/1	0.95	0.61	30.54	14,14,14,14	0
60	MG	AA	3147	1/1	0.53	0.47	29.68	79,79,79,79	0
60	MG	Ba	1684	1/1	0.93	0.68	28.34	75,75,75,75	0
60	MG	BA	2905	1/1	0.93	0.53	26.77	29,29,29,29	0
60	MG	AA	3023	1/1	0.99	0.54	25.78	13,13,13,13	0
60	MG	BA	2995	1/1	0.94	0.53	25.31	14,14,14,14	0
60	MG	AA	3044	1/1	0.92	0.86	25.05	17,17,17,17	0
60	MG	Ba	1726	1/1	0.93	0.73	23.71	34,34,34,34	1
60	MG	AA	3069	1/1	0.94	0.57	22.62	68,68,68,68	0
60	MG	AA	2931	1/1	0.95	0.60	22.47	35,35,35,35	0
60	MG	Ba	1685	1/1	0.93	0.83	22.18	25,25,25,25	1
60	MG	AA	2980	1/1	0.82	0.64	22.16	69,69,69,69	0
60	MG	Aa	1725	1/1	0.72	0.63	21.85	74,74,74,74	0
60	MG	BA	3084	1/1	0.97	0.41	21.54	34,34,34,34	0
60	MG	BA	2912	1/1	0.97	0.60	21.09	37,37,37,37	0
60	MG	AA	3190	1/1	0.81	0.49	20.59	43,43,43,43	0
60	MG	BA	3010	1/1	0.85	0.50	20.10	13,13,13,13	0
60	MG	BA	3257	1/1	0.48	0.41	20.09	72,72,72,72	0
60	MG	BA	3150	1/1	0.66	0.64	19.55	76,76,76,76	0
60	MG	Ba	1739	1/1	0.93	0.51	18.96	53,53,53,53	0
60	MG	AA	2987	1/1	0.93	0.37	18.79	53,53,53,53	0
60	MG	AA	3099	1/1	0.85	0.66	18.74	57,57,57,57	0
60	MG	BA	2917	1/1	0.84	0.65	18.31	23,23,23,23	0
60	MG	BA	2913	1/1	0.96	0.43	18.24	11,11,11,11	0
60	MG	BA	3038	1/1	0.97	0.43	18.17	26,26,26,26	0
60	MG	BA	3055	1/1	0.98	0.45	17.86	7,7,7,7	0
60	MG	BA	3236	1/1	0.49	0.54	17.75	116,116,116,116	0
60	MG	BA	3231	1/1	0.90	0.66	17.63	64,64,64,64	0
60	MG	AA	3259	1/1	0.74	0.62	17.35	78,78,78,78	0
60	MG	BA	3052	1/1	0.95	0.48	17.14	10,10,10,10	0
60	MG	BA	3035	1/1	0.94	0.54	16.62	52,52,52,52	0
60	MG	BA	3241	1/1	0.87	0.52	16.53	49,49,49,49	0
60	MG	AA	3179	1/1	0.83	0.67	16.23	56,56,56,56	0
60	MG	AA	3028	1/1	0.88	0.64	16.12	60,60,60,60	0
60	MG	Aa	1633	1/1	0.95	0.68	15.92	62,62,62,62	0
60	MG	AA	3102	1/1	0.70	0.70	15.92	68,68,68,68	0
60	MG	AA	3096	1/1	0.90	0.52	15.38	73,73,73,73	0
60	MG	BA	3211	1/1	0.92	0.33	15.17	24,24,24,24	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	BA	3160	1/1	0.81	0.47	14.85	74,74,74,74	0
60	MG	BA	2967	1/1	0.96	0.51	14.63	20,20,20,20	0
60	MG	BA	2962	1/1	0.64	0.50	14.62	54,54,54,54	0
60	MG	BA	3120	1/1	0.98	0.44	14.52	16,16,16,16	0
60	MG	Ba	1654	1/1	0.80	0.37	14.44	50,50,50,50	0
60	MG	BA	2980	1/1	0.90	0.49	14.09	9,9,9,9	0
60	MG	AA	2909	1/1	0.85	0.46	14.06	41,41,41,41	0
60	MG	AA	3072	1/1	0.86	0.47	13.71	122,122,122,122	0
60	MG	Aa	1622	1/1	0.71	0.98	13.69	79,79,79,79	0
60	MG	AA	3177	1/1	0.96	0.45	13.64	57,57,57,57	0
60	MG	AA	3150	1/1	0.85	0.70	13.56	62,62,62,62	0
60	MG	AA	2964	1/1	0.28	0.49	13.55	65,65,65,65	0
60	MG	AA	2996	1/1	0.89	0.51	13.54	40,40,40,40	0
60	MG	Ba	1691	1/1	0.88	0.67	13.40	58,58,58,58	0
60	MG	AA	3056	1/1	0.91	0.45	13.05	19,19,19,19	0
60	MG	BA	3101	1/1	0.67	0.59	13.02	52,52,52,52	0
60	MG	BA	3027	1/1	0.60	0.44	12.86	43,43,43,43	0
60	MG	AA	2928	1/1	0.71	0.50	12.74	110,110,110,110	0
60	MG	BA	3123	1/1	0.97	0.51	12.71	2,2,2,2	0
60	MG	AA	3095	1/1	0.95	0.70	12.59	26,26,26,26	0
60	MG	BA	3053	1/1	0.98	0.35	12.51	12,12,12,12	0
60	MG	AA	2918	1/1	0.94	0.59	12.50	25,25,25,25	0
60	MG	AA	3247	1/1	0.92	0.29	12.50	103,103,103,103	0
60	MG	AA	3124	1/1	0.99	0.40	12.47	15,15,15,15	0
60	MG	BA	2968	1/1	0.95	0.37	12.20	69,69,69,69	0
60	MG	AA	2969	1/1	0.98	0.28	12.19	22,22,22,22	0
60	MG	AA	3126	1/1	0.44	0.55	12.09	47,47,47,47	0
60	MG	BA	3034	1/1	0.97	0.39	11.99	11,11,11,11	0
60	MG	BA	2979	1/1	0.89	0.43	11.89	55,55,55,55	0
60	MG	BA	3100	1/1	0.93	0.42	11.86	62,62,62,62	0
60	MG	BA	2930	1/1	0.98	0.40	11.72	28,28,28,28	0
60	MG	BA	3094	1/1	0.94	0.63	11.64	11,11,11,11	0
60	MG	AA	3025	1/1	0.84	0.41	11.60	26,26,26,26	0
60	MG	Aa	1662	1/1	0.70	0.48	11.34	73,73,73,73	0
60	MG	BA	3156	1/1	0.94	0.42	11.32	29,29,29,29	0
60	MG	AA	2981	1/1	0.92	0.51	11.29	13,13,13,13	0
60	MG	AA	2932	1/1	0.86	0.68	11.11	57,57,57,57	0
60	MG	BA	3024	1/1	0.78	0.43	10.88	24,24,24,24	0
60	MG	AA	2976	1/1	0.93	0.47	10.73	46,46,46,46	0
60	MG	Aa	1729	1/1	0.93	0.41	10.64	30,30,30,30	0
60	MG	BA	3043	1/1	0.95	0.52	10.61	17,17,17,17	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	Aa	1679	1/1	0.28	0.58	10.46	116,116,116,116	0
60	MG	Ba	1728	1/1	0.80	0.43	10.40	30,30,30,30	0
60	MG	Ba	1634	1/1	0.95	0.38	10.35	37,37,37,37	0
60	MG	Aa	1666	1/1	0.87	0.39	10.09	61,61,61,61	0
60	MG	AA	3221	1/1	0.79	0.44	10.02	47,47,47,47	0
60	MG	AA	2949	1/1	0.82	0.44	9.99	41,41,41,41	0
60	MG	BA	2931	1/1	0.76	0.41	9.91	62,62,62,62	0
60	MG	AA	2925	1/1	0.84	0.36	9.80	79,79,79,79	0
60	MG	AA	2906	1/1	0.94	0.53	9.79	25,25,25,25	0
60	MG	AA	3205	1/1	0.50	0.50	9.57	51,51,51,51	0
60	MG	BA	2990	1/1	0.96	0.42	9.45	10,10,10,10	0
60	MG	AA	3051	1/1	0.70	0.34	9.39	81,81,81,81	0
60	MG	BA	3171	1/1	0.76	0.49	9.35	69,69,69,69	0
60	MG	AA	3256	1/1	0.69	0.44	9.27	71,71,71,71	0
60	MG	AA	2920	1/1	0.98	0.43	9.26	22,22,22,22	0
60	MG	AA	3101	1/1	0.89	0.26	9.02	46,46,46,46	0
60	MG	Ba	1742	1/1	0.94	0.42	8.92	92,92,92,92	0
60	MG	BA	2987	1/1	0.95	0.35	8.91	9,9,9,9	0
60	MG	AA	3133	1/1	0.55	0.31	8.90	48,48,48,48	0
60	MG	A7	101	1/1	0.73	0.62	8.88	80,80,80,80	0
60	MG	BA	2996	1/1	0.96	0.42	8.74	18,18,18,18	0
60	MG	BA	2982	1/1	0.97	0.39	8.54	4,4,4,4	0
60	MG	AA	3172	1/1	0.96	0.41	8.41	38,38,38,38	0
60	MG	AA	3134	1/1	0.76	0.32	8.37	98,98,98,98	0
60	MG	AA	3088	1/1	0.53	0.33	8.30	85,85,85,85	0
60	MG	BA	3095	1/1	0.81	0.35	8.23	33,33,33,33	0
60	MG	BA	3165	1/1	0.42	0.35	8.14	67,67,67,67	0
60	MG	Aa	1686	1/1	0.82	0.30	8.12	37,37,37,37	1
60	MG	AA	3138	1/1	0.95	0.31	8.12	56,56,56,56	0
60	MG	BA	3093	1/1	0.58	0.48	8.05	61,61,61,61	0
60	MG	BA	3172	1/1	0.94	0.50	8.05	50,50,50,50	0
60	MG	AA	3054	1/1	0.97	0.40	8.04	24,24,24,24	0
60	MG	BA	2927	1/1	0.92	0.39	7.94	83,83,83,83	0
60	MG	BA	3018	1/1	0.99	0.30	7.89	2,2,2,2	0
60	MG	BA	3134	1/1	0.94	0.40	7.87	52,52,52,52	0
60	MG	Ae	202	1/1	0.57	0.96	7.85	89,89,89,89	0
60	MG	AA	3039	1/1	0.96	0.29	7.83	19,19,19,19	0
60	MG	AA	3038	1/1	0.80	0.35	7.75	64,64,64,64	0
60	MG	AA	3265	1/1	0.48	0.41	7.60	70,70,70,70	0
60	MG	BA	2984	1/1	0.96	0.41	7.55	22,22,22,22	0
60	MG	AA	2997	1/1	0.93	0.26	7.51	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	AA	2991	1/1	0.94	0.48	7.41	19,19,19,19	0
60	MG	Ba	1608	1/1	0.90	0.48	7.31	79,79,79,79	0
60	MG	AA	2921	1/1	0.96	0.31	7.25	50,50,50,50	0
60	MG	BA	2908	1/1	0.94	0.39	7.21	20,20,20,20	0
60	MG	Aa	1624	1/1	0.99	0.26	7.09	37,37,37,37	0
60	MG	AA	2913	1/1	0.92	0.50	7.07	22,22,22,22	0
60	MG	Bv	105	1/1	0.86	0.33	7.05	81,81,81,81	1
60	MG	BA	3011	1/1	0.98	0.42	7.03	11,11,11,11	0
60	MG	BA	2951	1/1	0.86	0.30	7.00	72,72,72,72	0
60	MG	Aa	1744	1/1	0.90	0.34	6.94	87,87,87,87	0
60	MG	BA	3069	1/1	0.84	0.33	6.87	35,35,35,35	0
60	MG	AA	3019	1/1	1.00	0.33	6.78	26,26,26,26	0
60	MG	Av	102	1/1	0.97	0.36	6.54	77,77,77,77	0
60	MG	AA	2915	1/1	0.94	0.34	6.31	21,21,21,21	0
60	MG	AA	2907	1/1	0.97	0.24	6.28	48,48,48,48	0
60	MG	AA	3061	1/1	0.89	0.38	6.24	42,42,42,42	0
60	MG	BA	2914	1/1	0.98	0.27	6.17	11,11,11,11	0
60	MG	BA	3176	1/1	0.75	0.40	6.11	48,48,48,48	0
60	MG	BA	2957	1/1	0.99	0.40	5.85	13,13,13,13	0
60	MG	Ba	1671	1/1	0.91	0.32	5.84	87,87,87,87	0
60	MG	AA	3236	1/1	0.88	0.37	5.83	90,90,90,90	0
60	MG	Aa	1611	1/1	0.88	0.78	5.82	60,60,60,60	0
60	MG	BA	3029	1/1	0.92	0.33	5.82	27,27,27,27	0
60	MG	BA	3194	1/1	0.94	0.37	5.79	12,12,12,12	0
60	MG	BA	3102	1/1	0.92	0.24	5.73	47,47,47,47	0
60	MG	AA	2919	1/1	0.91	0.31	5.73	36,36,36,36	0
60	MG	Aa	1635	1/1	0.92	0.29	5.71	39,39,39,39	0
60	MG	AA	3046	1/1	0.97	0.40	5.69	47,47,47,47	0
60	MG	BA	3091	1/1	0.95	0.37	5.60	32,32,32,32	0
60	MG	B7	101	1/1	0.86	0.31	5.58	36,36,36,36	0
60	MG	AA	2943	1/1	0.82	0.30	5.49	70,70,70,70	0
60	MG	AA	3163	1/1	0.76	0.32	5.46	54,54,54,54	0
60	MG	AA	3035	1/1	0.94	0.29	5.38	21,21,21,21	0
60	MG	AA	3121	1/1	0.95	0.41	5.31	31,31,31,31	0
60	MG	AA	3233	1/1	0.90	0.35	5.09	44,44,44,44	0
60	MG	BA	3022	1/1	0.98	0.29	5.01	16,16,16,16	0
60	MG	BA	3097	1/1	0.81	0.26	5.01	54,54,54,54	0
60	MG	AA	3175	1/1	0.86	0.48	4.91	40,40,40,40	0
60	MG	AA	2951	1/1	0.75	0.29	4.85	53,53,53,53	0
60	MG	Aa	1735	1/1	0.81	0.26	4.74	68,68,68,68	1
60	MG	Ba	1609	1/1	0.69	0.84	4.60	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
60	MG	Aa	1674	1/1	0.62	0.32	4.56	90,90,90,90	0
60	MG	Aa	1738	1/1	0.95	0.28	4.52	55,55,55,55	0
60	MG	BD	301	1/1	0.94	0.32	4.50	14,14,14,14	0
60	MG	BA	2965	1/1	0.79	0.30	4.50	58,58,58,58	0
60	MG	BA	2966	1/1	0.50	0.30	4.49	67,67,67,67	0
60	MG	AA	3158	1/1	0.89	0.30	4.32	46,46,46,46	0
60	MG	AA	3219	1/1	0.96	0.48	4.26	30,30,30,30	0
60	MG	Aa	1628	1/1	0.89	0.30	4.21	92,92,92,92	0
60	MG	AA	3231	1/1	0.92	0.25	4.17	51,51,51,51	0
60	MG	BA	3133	1/1	0.85	0.27	4.13	54,54,54,54	0
60	MG	BA	3183	1/1	0.84	0.23	4.10	44,44,44,44	0
60	MG	BA	3060	1/1	0.97	0.37	4.09	16,16,16,16	0
60	MG	BA	3127	1/1	0.99	0.52	4.08	20,20,20,20	0
60	MG	AA	2960	1/1	0.79	0.33	4.08	17,17,17,17	0
60	MG	BA	3088	1/1	0.62	0.39	4.07	107,107,107,107	0
60	MG	AA	2953	1/1	0.96	0.27	4.04	96,96,96,96	0
60	MG	AA	3128	1/1	0.99	0.49	3.93	23,23,23,23	0
60	MG	AA	3195	1/1	0.97	0.23	3.87	30,30,30,30	0
60	MG	BA	3138	1/1	0.78	0.23	3.85	54,54,54,54	0
60	MG	BA	3147	1/1	0.81	0.27	3.85	56,56,56,56	0
60	MG	AA	2985	1/1	0.94	0.43	3.84	31,31,31,31	0
60	MG	BA	3037	1/1	0.88	0.24	3.81	35,35,35,35	0
60	MG	AA	3083	1/1	0.95	0.26	3.76	76,76,76,76	0
60	MG	BA	3028	1/1	0.96	0.26	3.73	24,24,24,24	0
60	MG	AA	2914	1/1	0.96	0.30	3.73	15,15,15,15	0
60	MG	Ba	1695	1/1	0.33	0.36	3.56	86,86,86,86	0
60	MG	Aa	1678	1/1	0.65	0.29	3.50	93,93,93,93	0
60	MG	Aa	1685	1/1	0.88	0.24	3.48	53,53,53,53	0
60	MG	BA	3217	1/1	0.99	0.37	3.46	26,26,26,26	0
60	MG	AA	3194	1/1	0.97	0.28	3.44	26,26,26,26	0
60	MG	BA	3045	1/1	0.97	0.27	3.20	16,16,16,16	0
60	MG	BA	2920	1/1	0.97	0.24	3.20	24,24,24,24	0
60	MG	Ba	1731	1/1	0.96	0.30	3.10	20,20,20,20	0
60	MG	AA	2929	1/1	0.93	0.28	3.09	29,29,29,29	0
60	MG	Ba	1668	1/1	0.92	0.33	3.05	49,49,49,49	0
60	MG	AA	3012	1/1	0.95	0.23	3.00	22,22,22,22	0
60	MG	BA	3191	1/1	0.97	0.23	2.96	23,23,23,23	0
60	MG	Aa	1613	1/1	0.90	0.34	2.91	100,100,100,100	0
60	MG	AA	3070	1/1	0.92	0.23	2.84	54,54,54,54	0
60	MG	BA	2928	1/1	0.90	0.23	2.83	17,17,17,17	0
60	MG	AA	2965	1/1	0.92	0.24	2.71	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	Aa	1642	1/1	0.90	0.26	2.62	95,95,95,95	0
60	MG	BA	3070	1/1	0.90	0.30	2.58	83,83,83,83	0
60	MG	BA	3105	1/1	0.93	0.32	2.44	40,40,40,40	0
60	MG	Aa	1670	1/1	0.92	0.23	2.35	43,43,43,43	0
60	MG	AA	3029	1/1	0.96	0.22	2.18	37,37,37,37	0
60	MG	BA	3234	1/1	0.68	0.26	2.11	74,74,74,74	0
60	MG	AA	2988	1/1	0.97	0.28	2.00	33,33,33,33	0
60	MG	Aa	1732	1/1	0.85	0.29	1.98	49,49,49,49	0
60	MG	Ba	1718	1/1	0.84	0.31	1.94	107,107,107,107	0
60	MG	BA	3090	1/1	0.96	0.23	1.83	32,32,32,32	0
60	MG	AA	3094	1/1	0.87	0.33	1.79	67,67,67,67	0
60	MG	Aa	1654	1/1	0.90	0.17	1.77	56,56,56,56	0
60	MG	AA	3091	1/1	0.95	0.23	1.70	27,27,27,27	0
60	MG	AA	3085	1/1	0.98	0.23	1.63	47,47,47,47	0
60	MG	AA	3123	1/1	0.97	0.30	1.58	18,18,18,18	0
60	MG	Ba	1736	1/1	0.83	0.32	1.56	59,59,59,59	0
60	MG	BA	2923	1/1	0.99	0.24	1.53	29,29,29,29	0
60	MG	AA	3182	1/1	0.90	0.40	1.30	40,40,40,40	0
60	MG	BA	3179	1/1	0.68	0.37	1.24	24,24,24,24	0
60	MG	BA	2910	1/1	0.93	0.22	1.23	2,2,2,2	0
60	MG	AA	3002	1/1	0.83	0.17	1.23	58,58,58,58	0
60	MG	AA	2922	1/1	0.95	0.22	1.20	48,48,48,48	0
60	MG	Ba	1648	1/1	0.92	0.25	1.15	32,32,32,32	0
60	MG	Aa	1657	1/1	0.92	0.36	1.13	71,71,71,71	0
60	MG	BA	3169	1/1	0.94	0.22	1.10	25,25,25,25	0
60	MG	AD	301	1/1	0.96	0.33	1.06	21,21,21,21	0
60	MG	BA	3063	1/1	0.98	0.21	1.06	26,26,26,26	0
60	MG	Aa	1668	1/1	0.98	0.25	1.06	40,40,40,40	0
60	MG	BA	3020	1/1	0.96	0.21	1.04	84,84,84,84	0
60	MG	Bv	102	1/1	0.97	0.27	1.03	37,37,37,37	0
60	MG	BA	3015	1/1	0.95	0.20	0.88	18,18,18,18	0
60	MG	BA	3086	1/1	0.80	0.19	0.79	48,48,48,48	0
60	MG	Ba	1693	1/1	0.91	0.18	0.75	78,78,78,78	0
60	MG	AD	302	1/1	0.86	0.34	0.74	21,21,21,21	0
60	MG	BA	2939	1/1	0.98	0.24	0.72	71,71,71,71	0
60	MG	Aa	1740	1/1	0.94	0.24	0.71	42,42,42,42	0
60	MG	AA	3032	1/1	0.98	0.21	0.69	33,33,33,33	0
60	MG	Ba	1672	1/1	0.78	0.29	0.65	95,95,95,95	0
60	MG	AA	3184	1/1	0.94	0.19	0.61	44,44,44,44	0
60	MG	Aa	1616	1/1	0.88	0.25	0.59	64,64,64,64	0
59	ZN	Ad	301	1/1	0.99	0.29	0.57	76,76,76,76	0
60	MG	BA	2950	1/1	0.97	0.20	0.55	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	BA	2921	1/1	0.98	0.21	0.54	31,31,31,31	0
60	MG	B0	101	1/1	0.70	0.48	0.51	71,71,71,71	0
60	MG	AA	2912	1/1	0.97	0.20	0.50	26,26,26,26	0
60	MG	BA	2918	1/1	0.87	0.18	0.44	29,29,29,29	0
60	MG	BA	3230	1/1	0.83	0.21	0.44	45,45,45,45	0
60	MG	BA	2978	1/1	0.94	0.16	0.40	56,56,56,56	0
59	ZN	Bd	302	1/1	0.99	0.29	0.33	80,80,80,80	0
60	MG	Ba	1623	1/1	0.95	0.18	0.26	34,34,34,34	0
60	MG	AA	3063	1/1	0.93	0.22	0.05	53,53,53,53	0
60	MG	BA	3050	1/1	0.87	0.20	0.03	29,29,29,29	0
60	MG	BD	302	1/1	0.98	0.24	-0.04	18,18,18,18	0
60	MG	AA	3049	1/1	0.97	0.20	-0.05	54,54,54,54	0
60	MG	BA	3122	1/1	0.96	0.24	-0.06	24,24,24,24	0
60	MG	Aa	1721	1/1	0.87	0.23	-0.35	68,68,68,68	0
60	MG	BA	3001	1/1	0.93	0.15	-0.36	37,37,37,37	0
60	MG	Aa	1673	1/1	0.89	0.19	-0.36	60,60,60,60	0
60	MG	Aa	1609	1/1	0.95	0.20	-0.38	64,64,64,64	0
60	MG	Ba	1612	1/1	0.90	0.14	-0.42	82,82,82,82	0
60	MG	AF	301	1/1	0.66	0.22	-0.43	74,74,74,74	0
60	MG	Aa	1649	1/1	0.90	0.23	-0.46	32,32,32,32	0
60	MG	BA	3031	1/1	0.97	0.18	-0.49	14,14,14,14	0
60	MG	Ba	1611	1/1	0.92	0.19	-0.50	97,97,97,97	0
60	MG	AA	3062	1/1	0.97	0.21	-0.53	26,26,26,26	0
60	MG	AA	3030	1/1	0.87	0.17	-0.55	28,28,28,28	0
60	MG	Bm	201	1/1	0.75	0.28	-0.57	118,118,118,118	0
60	MG	BA	2942	1/1	0.72	0.15	-0.59	42,42,42,42	0
60	MG	AA	3050	1/1	0.98	0.17	-0.61	96,96,96,96	0
60	MG	Aa	1688	1/1	0.52	0.23	-0.70	63,63,63,63	1
60	MG	AA	3213	1/1	0.94	0.19	-0.71	33,33,33,33	0
60	MG	BA	2986	1/1	0.95	0.17	-0.74	63,63,63,63	0
60	MG	Ba	1694	1/1	0.89	0.17	-0.84	83,83,83,83	0
60	MG	Ba	1673	1/1	0.95	0.20	-0.85	39,39,39,39	0
60	MG	Ba	1674	1/1	0.84	0.15	-0.85	66,66,66,66	0
60	MG	Aa	1620	1/1	0.94	0.17	-0.86	73,73,73,73	0
60	MG	Ba	1687	1/1	0.83	0.18	-0.86	50,50,50,50	1
60	MG	BA	2988	1/1	0.98	0.18	-0.89	34,34,34,34	0
60	MG	AA	2971	1/1	0.85	0.12	-0.95	52,52,52,52	0
60	MG	Aa	1694	1/1	0.97	0.16	-0.98	89,89,89,89	0
60	MG	Aa	1614	1/1	0.74	0.11	-1.03	69,69,69,69	0
60	MG	Ba	1670	1/1	0.92	0.18	-1.08	58,58,58,58	0
60	MG	AA	3171	1/1	0.88	0.15	-1.13	57,57,57,57	0
60	MG	BA	3195	1/1	0.89	0.17	-1.23	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	AA	3232	1/1	0.92	0.19	-1.24	64,64,64,64	0
59	ZN	An	101	1/1	0.98	0.13	-1.25	153,153,153,153	0
59	ZN	Bn	101	1/1	0.97	0.14	-1.30	137,137,137,137	0
60	MG	AA	2979	1/1	0.93	0.12	-1.37	51,51,51,51	0
59	ZN	A4	101	1/1	0.83	0.08	-1.54	186,186,186,186	0
60	MG	AA	2911	1/1	0.97	0.15	-1.58	20,20,20,20	0
60	MG	BA	2911	1/1	0.99	0.16	-1.65	21,21,21,21	0
60	MG	BF	301	1/1	0.90	0.14	-1.67	40,40,40,40	0
60	MG	BA	2919	1/1	0.97	0.19	-1.68	13,13,13,13	0
60	MG	BA	3017	1/1	0.95	0.19	-1.76	38,38,38,38	0
60	MG	BA	3203	1/1	0.95	0.13	-1.79	95,95,95,95	0
60	MG	BA	3132	1/1	0.70	0.15	-1.81	43,43,43,43	0
60	MG	Ba	1680	1/1	0.93	0.12	-1.83	63,63,63,63	0
60	MG	BA	3168	1/1	0.85	0.14	-1.91	53,53,53,53	0
59	ZN	A9	101	1/1	0.97	0.07	-1.95	138,138,138,138	0
60	MG	BA	3181	1/1	0.64	0.14	-2.03	61,61,61,61	0
60	MG	BA	3096	1/1	0.94	0.12	-2.06	49,49,49,49	0
60	MG	AA	3106	1/1	0.96	0.15	-2.12	65,65,65,65	0
60	MG	AA	3103	1/1	0.90	0.09	-2.17	35,35,35,35	0
60	MG	AA	3186	1/1	0.90	0.11	-2.20	77,77,77,77	0
60	MG	Ba	1677	1/1	0.96	0.11	-2.21	138,138,138,138	0
60	MG	Ba	1606	1/1	0.98	0.16	-2.26	50,50,50,50	0
60	MG	Aa	1677	1/1	0.91	0.12	-2.29	69,69,69,69	0
60	MG	BA	2959	1/1	0.85	0.12	-2.32	37,37,37,37	0
60	MG	AA	3016	1/1	0.98	0.13	-2.41	31,31,31,31	0
60	MG	AA	2940	1/1	0.96	0.11	-2.54	34,34,34,34	0
59	ZN	B4	101	1/1	0.87	0.08	-2.64	201,201,201,201	0
60	MG	Aa	1733	1/1	0.97	0.12	-2.72	60,60,60,60	0
60	MG	BA	3192	1/1	0.96	0.14	-2.76	34,34,34,34	0
60	MG	Aa	1653	1/1	0.95	0.12	-2.79	59,59,59,59	0
60	MG	AA	3064	1/1	0.98	0.16	-3.11	29,29,29,29	0
60	MG	AA	2924	1/1	0.99	0.11	-3.30	32,32,32,32	0
60	MG	AA	2962	1/1	0.96	0.07	-3.48	19,19,19,19	0
60	MG	BA	2929	1/1	0.89	0.12	-3.61	10,10,10,10	0
60	MG	AA	3174	1/1	0.96	0.13	-3.64	72,72,72,72	0
59	ZN	B9	101	1/1	0.99	0.07	-3.93	116,116,116,116	0
60	MG	AA	2989	1/1	0.98	0.10	-3.96	33,33,33,33	0
60	MG	BA	3210	1/1	0.99	0.14	-3.99	22,22,22,22	0
60	MG	Ba	1619	1/1	0.96	0.07	-4.19	44,44,44,44	0
60	MG	BA	2969	1/1	0.87	0.10	-4.25	35,35,35,35	0
60	MG	Aa	1608	1/1	0.99	0.15	-4.38	39,39,39,39	0
60	MG	Aa	1737	1/1	0.97	0.14	-4.52	119,119,119,119	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	Ba	1633	1/1	0.98	0.09	-5.22	39,39,39,39	0
60	MG	Aa	1634	1/1	0.99	0.07	-5.43	47,47,47,47	0
60	MG	Aa	1671	1/1	0.94	0.14	-5.56	49,49,49,49	0
60	MG	Aa	1695	1/1	0.96	0.08	-6.11	78,78,78,78	0
60	MG	Aa	1681	1/1	0.97	0.08	-6.67	76,76,76,76	0
60	MG	Ba	1652	1/1	0.97	0.09	-8.86	69,69,69,69	0
60	MG	Ba	1732	1/1	0.98	0.11	-11.19	70,70,70,70	0
60	MG	BA	3056	1/1	0.92	0.21	-	92,92,92,92	0
60	MG	BA	3200	1/1	0.90	0.26	-	33,33,33,33	0
60	MG	AA	3250	1/1	0.95	0.59	-	40,40,40,40	0
60	MG	Ba	1702	1/1	0.85	1.11	-	97,97,97,97	0
60	MG	BA	2993	1/1	0.96	0.39	-	12,12,12,12	0
60	MG	AA	3013	1/1	0.72	0.96	-	78,78,78,78	0
60	MG	Ba	1717	1/1	0.79	1.16	-	71,71,71,71	0
60	MG	AA	3037	1/1	0.95	0.39	-	27,27,27,27	0
60	MG	Ba	1729	1/1	0.77	1.25	-	66,66,66,66	0
60	MG	Ba	1716	1/1	0.68	0.41	-	63,63,63,63	0
60	MG	AA	3107	1/1	0.93	0.29	-	47,47,47,47	0
60	MG	AA	2916	1/1	0.98	0.41	-	25,25,25,25	0
60	MG	Ba	1605	1/1	0.89	0.73	-	73,73,73,73	0
60	MG	Ba	1676	1/1	0.61	0.28	-	137,137,137,137	1
60	MG	Ba	1699	1/1	0.46	1.12	-	88,88,88,88	0
60	MG	Bl	201	1/1	0.80	0.66	-	5,5,5,5	1
60	MG	Aa	1698	1/1	0.91	1.04	-	98,98,98,98	1
60	MG	Ba	1666	1/1	0.89	0.80	-	73,73,73,73	0
60	MG	AA	2995	1/1	0.95	0.62	-	18,18,18,18	0
60	MG	BA	2935	1/1	0.97	0.58	-	25,25,25,25	0
60	MG	BA	3044	1/1	0.97	0.44	-	21,21,21,21	0
60	MG	AA	3251	1/1	0.89	0.71	-	84,84,84,84	0
60	MG	Aa	1709	1/1	0.92	0.12	-	148,148,148,148	0
60	MG	Ba	1629	1/1	0.97	0.14	-	36,36,36,36	0
60	MG	BA	2926	1/1	0.96	0.50	-	24,24,24,24	0
60	MG	BA	3039	1/1	0.98	0.28	-	15,15,15,15	0
60	MG	BA	3051	1/1	0.95	0.39	-	16,16,16,16	0
60	MG	Ba	1667	1/1	0.85	0.49	-	50,50,50,50	0
60	MG	AA	3206	1/1	0.47	0.34	-	115,115,115,115	0
60	MG	AA	2958	1/1	0.91	0.22	-	47,47,47,47	0
60	MG	BA	3007	1/1	0.70	0.41	-	90,90,90,90	0
60	MG	Ba	1722	1/1	0.81	0.33	-	63,63,63,63	0
60	MG	AA	3189	1/1	0.97	0.35	-	107,107,107,107	0
60	MG	AQ	201	1/1	0.78	1.97	-	94,94,94,94	0
60	MG	Aa	1615	1/1	0.76	1.01	-	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	Ba	1686	1/1	0.86	0.30	-	84,84,84,84	0
60	MG	Ba	1641	1/1	0.96	0.67	-	94,94,94,94	0
60	MG	AA	3113	1/1	0.91	0.56	-	76,76,76,76	0
60	MG	Aa	1731	1/1	0.89	0.42	-	64,64,64,64	0
60	MG	BA	3003	1/1	0.99	0.31	-	22,22,22,22	0
60	MG	Ba	1737	1/1	0.74	0.56	-	76,76,76,76	0
60	MG	Aa	1717	1/1	0.73	0.39	-	66,66,66,66	0
60	MG	BA	3216	1/1	0.75	0.56	-	117,117,117,117	0
60	MG	BA	3049	1/1	0.96	0.35	-	62,62,62,62	0
60	MG	BA	2973	1/1	0.77	0.41	-	52,52,52,52	0
60	MG	BA	3174	1/1	0.88	0.25	-	63,63,63,63	0
60	MG	BA	3110	1/1	0.93	0.36	-	23,23,23,23	0
60	MG	BO	201	1/1	0.85	0.53	-	122,122,122,122	0
60	MG	AA	3223	1/1	0.60	0.54	-	78,78,78,78	0
60	MG	AA	2986	1/1	0.87	0.74	-	46,46,46,46	0
60	MG	BA	3214	1/1	0.81	0.63	-	34,34,34,34	0
60	MG	Aa	1625	1/1	0.91	0.80	-	76,76,76,76	0
60	MG	Aa	1713	1/1	0.90	1.27	-	98,98,98,98	0
60	MG	Ba	1616	1/1	0.84	0.29	-	29,29,29,29	1
60	MG	AA	3117	1/1	0.31	0.52	-	148,148,148,148	0
60	MG	Aa	1730	1/1	0.03	1.12	-	77,77,77,77	0
60	MG	BA	3012	1/1	0.60	0.85	-	61,61,61,61	0
60	MG	Aa	1711	1/1	0.83	0.43	-	70,70,70,70	0
60	MG	AA	3191	1/1	0.96	0.19	-	74,74,74,74	0
60	MG	BA	3066	1/1	0.81	0.72	-	32,32,32,32	0
60	MG	AA	3074	1/1	0.89	0.39	-	33,33,33,33	0
60	MG	AA	3162	1/1	0.92	0.35	-	94,94,94,94	0
60	MG	AA	3067	1/1	0.88	0.59	-	34,34,34,34	0
60	MG	BA	3263	1/1	0.51	0.27	-	68,68,68,68	0
60	MG	BA	2903	1/1	0.96	0.10	-	99,99,99,99	0
60	MG	BA	3040	1/1	0.97	0.21	-	17,17,17,17	0
60	MG	BA	3225	1/1	0.88	0.57	-	38,38,38,38	0
60	MG	BA	3092	1/1	0.91	0.27	-	79,79,79,79	0
60	MG	AA	3218	1/1	0.80	0.81	-	98,98,98,98	0
60	MG	Aa	1726	1/1	0.90	0.72	-	36,36,36,36	0
60	MG	BA	3083	1/1	0.86	0.54	-	52,52,52,52	0
60	MG	BA	3113	1/1	0.96	0.43	-	24,24,24,24	1
60	MG	AA	3055	1/1	0.94	0.43	-	67,67,67,67	0
60	MG	AA	3022	1/1	0.98	0.47	-	22,22,22,22	0
60	MG	BA	3114	1/1	0.90	0.27	-	8,8,8,8	0
60	MG	AA	3203	1/1	0.79	0.23	-	66,66,66,66	0
60	MG	BA	3158	1/1	0.81	0.32	-	88,88,88,88	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	Ba	1720	1/1	0.77	0.38	-	91,91,91,91	0
60	MG	Ba	1697	1/1	0.74	1.00	-	93,93,93,93	1
60	MG	AA	3266	1/1	0.83	0.30	-	87,87,87,87	0
60	MG	Ba	1721	1/1	0.53	0.77	-	92,92,92,92	0
60	MG	BA	3235	1/1	0.75	0.64	-	51,51,51,51	0
60	MG	BA	2943	1/1	0.85	0.30	-	35,35,35,35	0
60	MG	Aa	1745	1/1	0.96	0.39	-	48,48,48,48	0
60	MG	BA	3185	1/1	0.96	0.44	-	40,40,40,40	0
60	MG	Aa	1693	1/1	0.73	0.56	-	75,75,75,75	0
60	MG	BA	2941	1/1	0.90	0.27	-	62,62,62,62	0
60	MG	BA	3157	1/1	0.99	0.12	-	85,85,85,85	0
60	MG	Ba	1647	1/1	0.80	0.60	-	117,117,117,117	0
60	MG	Ba	1624	1/1	0.75	1.05	-	76,76,76,76	0
60	MG	AA	2933	1/1	0.95	0.59	-	67,67,67,67	0
60	MG	Ba	1657	1/1	0.92	0.43	-	52,52,52,52	0
60	MG	BA	3177	1/1	0.95	0.23	-	70,70,70,70	0
60	MG	BA	2992	1/1	0.96	0.20	-	33,33,33,33	0
60	MG	AA	3090	1/1	0.97	0.46	-	59,59,59,59	0
60	MG	BA	3228	1/1	0.76	1.00	-	94,94,94,94	0
60	MG	Aa	1610	1/1	0.73	0.78	-	115,115,115,115	0
60	MG	AA	3157	1/1	0.87	0.92	-	66,66,66,66	0
60	MG	Bv	101	1/1	0.71	0.58	-	52,52,52,52	1
60	MG	Av	104	1/1	0.86	0.77	-	50,50,50,50	1
60	MG	AA	3119	1/1	0.71	0.91	-	68,68,68,68	0
60	MG	AA	3084	1/1	0.71	0.57	-	54,54,54,54	0
60	MG	AA	2904	1/1	0.95	0.29	-	131,131,131,131	0
60	MG	BA	3106	1/1	0.97	0.40	-	41,41,41,41	0
60	MG	AB	201	1/1	0.85	0.41	-	63,63,63,63	0
60	MG	Ba	1710	1/1	0.84	0.36	-	65,65,65,65	0
60	MG	BA	3116	1/1	0.83	0.45	-	91,91,91,91	0
60	MG	AA	3159	1/1	0.95	0.20	-	114,114,114,114	0
60	MG	AA	3220	1/1	0.50	0.57	-	54,54,54,54	0
60	MG	BA	2909	1/1	0.92	0.48	-	45,45,45,45	0
60	MG	AA	3183	1/1	0.92	0.38	-	69,69,69,69	0
60	MG	Ba	1683	1/1	0.67	0.54	-	65,65,65,65	0
60	MG	AA	3115	1/1	0.94	0.31	-	19,19,19,19	0
60	MG	Ba	1639	1/1	0.81	0.52	-	58,58,58,58	0
60	MG	BA	3112	1/1	0.94	0.19	-	69,69,69,69	0
60	MG	AA	2973	1/1	0.76	0.39	-	79,79,79,79	0
60	MG	Aa	1639	1/1	0.68	0.38	-	65,65,65,65	0
60	MG	AA	3066	1/1	0.96	0.48	-	27,27,27,27	0
60	MG	Ba	1679	1/1	0.65	0.73	-	92,92,92,92	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
60	MG	AA	3217	1/1	0.95	0.29	-	85,85,85,85	0
60	MG	AA	3093	1/1	0.96	0.23	-	56,56,56,56	0
60	MG	BA	2946	1/1	0.95	0.20	-	75,75,75,75	0
60	MG	AA	3075	1/1	0.42	0.90	-	84,84,84,84	0
60	MG	Ba	1741	1/1	0.88	0.25	-	73,73,73,73	0
60	MG	AA	2957	1/1	0.48	0.48	-	72,72,72,72	0
60	MG	Aa	1665	1/1	0.78	2.75	-	120,120,120,120	0
60	MG	BA	3042	1/1	0.94	0.19	-	30,30,30,30	0
60	MG	Bw	101	1/1	0.61	0.13	-	132,132,132,132	1
60	MG	AA	3036	1/1	0.96	1.26	-	100,100,100,100	0
60	MG	BA	2960	1/1	0.73	0.13	-	101,101,101,101	0
60	MG	AA	3001	1/1	0.91	0.61	-	26,26,26,26	0
60	MG	AA	3257	1/1	0.95	0.30	-	78,78,78,78	0
60	MG	BA	3206	1/1	0.53	0.52	-	71,71,71,71	0
60	MG	AA	3263	1/1	0.27	0.85	-	75,75,75,75	0
60	MG	BA	3261	1/1	0.54	0.64	-	68,68,68,68	0
60	MG	BA	3207	1/1	0.81	0.36	-	118,118,118,118	0
60	MG	BA	3077	1/1	0.92	0.28	-	46,46,46,46	0
60	MG	Ba	1692	1/1	0.61	0.56	-	83,83,83,83	0
60	MG	AA	3249	1/1	0.97	0.13	-	55,55,55,55	0
60	MG	AA	3089	1/1	0.68	0.16	-	75,75,75,75	0
60	MG	Aa	1680	1/1	0.62	0.56	-	107,107,107,107	0
60	MG	AA	3161	1/1	0.93	0.48	-	61,61,61,61	0
60	MG	AA	3255	1/1	0.78	0.38	-	50,50,50,50	0
60	MG	BA	3170	1/1	0.88	0.25	-	13,13,13,13	0
60	MG	AA	3224	1/1	0.94	0.83	-	73,73,73,73	0
60	MG	Aa	1629	1/1	0.85	0.44	-	59,59,59,59	0
60	MG	AA	3137	1/1	0.68	0.85	-	90,90,90,90	0
60	MG	BA	3229	1/1	0.93	0.21	-	32,32,32,32	0
60	MG	BA	3125	1/1	0.94	0.44	-	40,40,40,40	0
60	MG	Aa	1603	1/1	0.99	0.13	-	68,68,68,68	1
60	MG	BA	3212	1/1	0.94	1.44	-	68,68,68,68	0
60	MG	AA	3237	1/1	0.88	0.33	-	37,37,37,37	0
60	MG	Aa	1701	1/1	0.83	0.40	-	71,71,71,71	0
60	MG	AA	2901	1/1	0.80	0.40	-	84,84,84,84	0
60	MG	AA	3185	1/1	0.90	0.37	-	83,83,83,83	0
60	MG	BA	3201	1/1	0.93	0.56	-	43,43,43,43	0
60	MG	BA	3129	1/1	0.68	0.45	-	53,53,53,53	0
60	MG	BA	3008	1/1	0.99	0.43	-	32,32,32,32	0
60	MG	Ba	1688	1/1	0.97	0.19	-	120,120,120,120	1
60	MG	Ba	1622	1/1	0.89	0.23	-	57,57,57,57	0
60	MG	BA	3115	1/1	0.89	0.55	-	21,21,21,21	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
60	MG	BA	3048	1/1	0.85	0.28	-	31,31,31,31	0
60	MG	Aa	1638	1/1	0.82	0.36	-	62,62,62,62	0
60	MG	BA	3202	1/1	0.91	0.19	-	76,76,76,76	0
60	MG	AA	2930	1/1	0.87	0.07	-	15,15,15,15	0
60	MG	AA	3131	1/1	0.87	0.49	-	46,46,46,46	0
60	MG	AA	3033	1/1	0.99	0.32	-	57,57,57,57	0
60	MG	BA	3059	1/1	0.89	0.18	-	52,52,52,52	0
60	MG	Ba	1703	1/1	0.91	0.44	-	25,25,25,25	1
60	MG	AA	3031	1/1	0.94	0.54	-	45,45,45,45	0
60	MG	AA	2947	1/1	0.92	0.32	-	72,72,72,72	0
60	MG	Ba	1618	1/1	0.97	0.37	-	57,57,57,57	0
60	MG	BA	3030	1/1	0.97	0.51	-	26,26,26,26	0
60	MG	Ba	1632	1/1	0.90	0.78	-	41,41,41,41	0
60	MG	BA	3065	1/1	0.97	0.27	-	13,13,13,13	0
60	MG	BA	3218	1/1	0.69	0.82	-	80,80,80,80	0
60	MG	Aa	1655	1/1	0.88	0.96	-	87,87,87,87	0
60	MG	Aa	1650	1/1	0.69	0.78	-	64,64,64,64	0
60	MG	BA	3005	1/1	0.94	0.34	-	21,21,21,21	0
60	MG	BA	3074	1/1	0.65	0.73	-	75,75,75,75	0
60	MG	BA	3109	1/1	0.84	1.22	-	90,90,90,90	0
60	MG	AB	203	1/1	0.71	0.68	-	56,56,56,56	0
60	MG	BA	2976	1/1	0.82	0.37	-	104,104,104,104	0
60	MG	AA	3079	1/1	0.93	0.58	-	55,55,55,55	0
60	MG	AA	3193	1/1	0.95	0.26	-	20,20,20,20	0
60	MG	Ae	201	1/1	0.82	0.92	-	108,108,108,108	0
60	MG	AA	3226	1/1	0.73	0.38	-	95,95,95,95	0
60	MG	AA	3015	1/1	0.94	0.24	-	14,14,14,14	0
60	MG	AA	3252	1/1	0.78	1.27	-	80,80,80,80	0
60	MG	BA	3025	1/1	0.98	0.19	-	12,12,12,12	0
60	MG	Ba	1675	1/1	0.86	0.97	-	58,58,58,58	0
60	MG	BA	3076	1/1	0.95	0.39	-	83,83,83,83	0
60	MG	BA	2944	1/1	0.99	0.14	-	62,62,62,62	0
60	MG	AA	3059	1/1	0.82	0.77	-	68,68,68,68	0
60	MG	Aa	1715	1/1	0.88	0.16	-	57,57,57,57	0
60	MG	Ba	1614	1/1	0.94	0.44	-	68,68,68,68	0
60	MG	BA	2989	1/1	0.97	0.60	-	31,31,31,31	0
60	MG	AA	3058	1/1	0.97	0.26	-	44,44,44,44	0
60	MG	AA	3253	1/1	0.93	0.24	-	71,71,71,71	0
60	MG	AA	2982	1/1	0.94	1.17	-	56,56,56,56	0
60	MG	Aa	1669	1/1	0.83	0.68	-	122,122,122,122	0
60	MG	Ba	1704	1/1	0.77	0.47	-	62,62,62,62	0
60	MG	AA	2978	1/1	0.79	0.64	-	124,124,124,124	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	Aa	1656	1/1	0.64	0.44	-	88,88,88,88	0
60	MG	BA	3073	1/1	0.93	0.32	-	30,30,30,30	0
60	MG	BA	3188	1/1	0.95	0.07	-	64,64,64,64	0
60	MG	BA	3186	1/1	0.90	0.66	-	70,70,70,70	0
60	MG	AA	3021	1/1	0.92	0.24	-	96,96,96,96	0
60	MG	Aa	1707	1/1	0.91	0.48	-	79,79,79,79	0
60	MG	AA	2938	1/1	0.99	0.12	-	84,84,84,84	0
60	MG	BA	2972	1/1	0.96	0.61	-	30,30,30,30	0
60	MG	BA	3208	1/1	0.91	0.28	-	52,52,52,52	0
60	MG	AA	3122	1/1	0.85	0.42	-	39,39,39,39	0
60	MG	Aa	1676	1/1	0.73	0.82	-	90,90,90,90	1
60	MG	AA	2974	1/1	0.96	0.76	-	43,43,43,43	0
60	MG	AA	3118	1/1	0.91	0.50	-	74,74,74,74	0
60	MG	Ba	1615	1/1	0.83	0.15	-	81,81,81,81	0
60	MG	AA	3042	1/1	0.98	0.47	-	27,27,27,27	0
60	MG	Aa	1623	1/1	0.95	0.32	-	74,74,74,74	0
60	MG	AA	3188	1/1	0.97	0.30	-	36,36,36,36	0
60	MG	AA	3155	1/1	0.72	0.16	-	92,92,92,92	1
60	MG	BA	3223	1/1	0.90	0.18	-	43,43,43,43	0
60	MG	Aa	1640	1/1	0.91	0.36	-	60,60,60,60	0
60	MG	Aa	1667	1/1	0.88	0.69	-	78,78,78,78	0
60	MG	BA	3199	1/1	0.86	0.23	-	34,34,34,34	0
60	MG	Ba	1738	1/1	0.65	0.94	-	106,106,106,106	0
60	MG	Ba	1709	1/1	0.96	0.35	-	52,52,52,52	0
60	MG	AA	3153	1/1	0.69	0.35	-	71,71,71,71	0
60	MG	BA	3021	1/1	0.91	0.32	-	31,31,31,31	0
60	MG	BA	2933	1/1	0.92	0.38	-	18,18,18,18	1
60	MG	AA	3007	1/1	0.98	0.13	-	43,43,43,43	0
60	MG	BA	2953	1/1	0.97	0.21	-	25,25,25,25	0
60	MG	BA	3006	1/1	0.98	0.37	-	21,21,21,21	0
60	MG	AA	2975	1/1	0.96	0.42	-	90,90,90,90	0
60	MG	AA	2934	1/1	0.96	0.25	-	32,32,32,32	1
60	MG	BA	3265	1/1	0.50	0.51	-	74,74,74,74	0
60	MG	AA	2927	1/1	0.93	0.48	-	32,32,32,32	0
60	MG	AA	3200	1/1	0.72	0.75	-	72,72,72,72	1
60	MG	B5	101	1/1	0.91	0.38	-	27,27,27,27	0
60	MG	AA	3240	1/1	0.67	0.77	-	106,106,106,106	0
60	MG	Ba	1640	1/1	0.77	0.84	-	80,80,80,80	0
60	MG	BA	3111	1/1	0.64	0.41	-	74,74,74,74	0
60	MG	Aa	1605	1/1	0.97	0.11	-	43,43,43,43	0
60	MG	AA	3060	1/1	0.94	0.24	-	46,46,46,46	0
60	MG	BA	3232	1/1	0.95	0.22	-	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
60	MG	BA	3164	1/1	0.93	0.51	-	31,31,31,31	0
60	MG	BA	2956	1/1	0.72	0.15	-	50,50,50,50	0
60	MG	BA	3082	1/1	0.91	0.17	-	34,34,34,34	0
60	MG	BA	3198	1/1	0.77	1.32	-	91,91,91,91	0
60	MG	AA	3215	1/1	0.98	0.14	-	56,56,56,56	0
60	MG	AA	3160	1/1	0.91	0.51	-	99,99,99,99	0
60	MG	BA	3149	1/1	0.75	0.42	-	76,76,76,76	0
60	MG	AA	3198	1/1	0.95	0.46	-	52,52,52,52	0
60	MG	Ba	1662	1/1	0.81	0.27	-	67,67,67,67	0
60	MG	BA	3117	1/1	0.95	0.62	-	63,63,63,63	0
60	MG	Aa	1691	1/1	0.93	0.33	-	53,53,53,53	0
60	MG	BA	3085	1/1	0.82	0.20	-	60,60,60,60	0
60	MG	BA	3000	1/1	0.93	0.44	-	16,16,16,16	0
60	MG	BA	3209	1/1	0.81	0.43	-	74,74,74,74	0
60	MG	Ba	1740	1/1	0.70	0.28	-	78,78,78,78	0
60	MG	BA	3242	1/1	0.75	0.84	-	52,52,52,52	0
60	MG	AA	3241	1/1	0.70	0.51	-	64,64,64,64	0
60	MG	BA	2916	1/1	0.96	0.68	-	62,62,62,62	0
60	MG	AA	3100	1/1	0.85	0.92	-	97,97,97,97	0
60	MG	AA	3229	1/1	0.78	0.53	-	73,73,73,73	0
60	MG	AA	3145	1/1	0.89	0.65	-	78,78,78,78	0
60	MG	Ba	1637	1/1	0.76	0.60	-	80,80,80,80	0
60	MG	BA	2994	1/1	0.91	0.56	-	14,14,14,14	0
60	MG	BA	3249	1/1	0.83	0.85	-	67,67,67,67	0
60	MG	Ba	1715	1/1	0.52	0.27	-	94,94,94,94	0
60	MG	BA	3153	1/1	0.73	0.63	-	46,46,46,46	0
60	MG	AA	3076	1/1	0.90	0.23	-	78,78,78,78	0
60	MG	BA	3130	1/1	0.74	0.41	-	45,45,45,45	0
60	MG	BA	3252	1/1	0.77	0.18	-	40,40,40,40	0
60	MG	BA	3145	1/1	0.94	0.83	-	63,63,63,63	0
60	MG	BA	3262	1/1	0.75	0.32	-	39,39,39,39	0
60	MG	BA	3081	1/1	0.87	0.16	-	83,83,83,83	0
60	MG	AA	3008	1/1	0.69	0.37	-	75,75,75,75	0
60	MG	Ba	1604	1/1	0.67	0.58	-	75,75,75,75	0
60	MG	AA	2917	1/1	0.66	0.49	-	112,112,112,112	0
60	MG	BA	3144	1/1	0.69	1.04	-	59,59,59,59	0
60	MG	AA	3068	1/1	0.97	0.27	-	19,19,19,19	0
60	MG	Ba	1730	1/1	0.93	0.24	-	62,62,62,62	0
60	MG	BA	2936	1/1	0.79	0.22	-	35,35,35,35	0
60	MG	AA	2944	1/1	0.73	0.51	-	56,56,56,56	0
60	MG	Ba	1725	1/1	0.95	0.86	-	45,45,45,45	0
60	MG	Aa	1716	1/1	0.88	0.12	-	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
60	MG	AA	3196	1/1	0.87	0.67	-	70,70,70,70	0
60	MG	Aa	1659	1/1	0.80	0.40	-	88,88,88,88	0
60	MG	BA	3009	1/1	0.98	0.32	-	3,3,3,3	0
60	MG	Ba	1698	1/1	0.55	0.85	-	89,89,89,89	1
60	MG	BA	3098	1/1	0.57	0.81	-	52,52,52,52	0
60	MG	BA	3016	1/1	0.93	0.25	-	11,11,11,11	0
60	MG	BA	3036	1/1	0.99	0.41	-	34,34,34,34	0
60	MG	Ba	1663	1/1	0.33	0.80	-	85,85,85,85	0
60	MG	Aa	1699	1/1	0.58	0.60	-	84,84,84,84	1
60	MG	AA	2956	1/1	0.95	0.21	-	61,61,61,61	0
60	MG	AA	3246	1/1	0.68	0.27	-	70,70,70,70	0
60	MG	BA	3250	1/1	0.89	1.26	-	88,88,88,88	0
60	MG	Aa	1697	1/1	0.93	0.66	-	65,65,65,65	0
60	MG	Ba	1664	1/1	0.76	0.77	-	46,46,46,46	0
60	MG	BA	2932	1/1	0.93	0.39	-	67,67,67,67	0
60	MG	AA	3057	1/1	0.98	0.10	-	92,92,92,92	0
60	MG	BA	3046	1/1	0.88	0.35	-	28,28,28,28	0
60	MG	Aa	1607	1/1	0.93	0.65	-	69,69,69,69	0
60	MG	BA	3057	1/1	0.96	0.26	-	45,45,45,45	0
60	MG	BA	3078	1/1	0.94	0.58	-	32,32,32,32	0
60	MG	BA	2970	1/1	0.98	0.42	-	53,53,53,53	0
60	MG	AA	3144	1/1	0.85	1.08	-	50,50,50,50	0
60	MG	A1	101	1/1	0.93	0.28	-	53,53,53,53	0
60	MG	Aa	1687	1/1	0.68	0.15	-	64,64,64,64	0
60	MG	BA	3196	1/1	0.92	0.31	-	68,68,68,68	0
60	MG	BA	3162	1/1	0.85	0.34	-	57,57,57,57	0
60	MG	AA	3214	1/1	0.89	0.79	-	88,88,88,88	0
60	MG	Aa	1661	1/1	0.92	0.22	-	64,64,64,64	0
60	MG	Aa	1658	1/1	0.89	0.57	-	75,75,75,75	0
60	MG	AA	2937	1/1	0.98	0.16	-	67,67,67,67	0
60	MG	Ba	1712	1/1	0.36	0.83	-	79,79,79,79	0
60	MG	AA	3154	1/1	0.46	0.20	-	142,142,142,142	0
60	MG	AA	3077	1/1	0.90	0.47	-	99,99,99,99	0
60	MG	AA	3143	1/1	0.96	0.38	-	29,29,29,29	0
60	MG	Aa	1720	1/1	0.84	1.05	-	75,75,75,75	0
60	MG	BA	3224	1/1	0.93	0.41	-	62,62,62,62	0
60	MG	AA	3227	1/1	0.99	0.31	-	39,39,39,39	0
60	MG	BA	3163	1/1	0.90	0.74	-	71,71,71,71	0
60	MG	BA	3220	1/1	0.69	0.79	-	50,50,50,50	0
60	MG	BA	3184	1/1	0.96	0.14	-	57,57,57,57	0
60	MG	Av	103	1/1	0.97	0.06	-	84,84,84,84	0
60	MG	BA	3071	1/1	0.82	0.49	-	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	Aa	1619	1/1	0.97	0.46	-	65,65,65,65	0
60	MG	Ba	1659	1/1	0.52	0.33	-	79,79,79,79	0
60	MG	Aa	1632	1/1	0.87	0.41	-	72,72,72,72	0
60	MG	Ba	1651	1/1	0.81	1.00	-	62,62,62,62	0
60	MG	AA	3024	1/1	0.93	0.36	-	25,25,25,25	0
60	MG	AA	3151	1/1	0.83	0.48	-	85,85,85,85	0
60	MG	AA	3202	1/1	0.96	0.33	-	57,57,57,57	0
60	MG	AA	3187	1/1	0.96	0.39	-	49,49,49,49	0
60	MG	BA	3237	1/1	0.93	0.25	-	55,55,55,55	0
60	MG	Aa	1723	1/1	0.79	0.40	-	83,83,83,83	0
60	MG	Aa	1612	1/1	0.89	0.19	-	32,32,32,32	0
60	MG	Ba	1669	1/1	0.39	0.60	-	94,94,94,94	0
60	MG	BA	2945	1/1	0.85	0.32	-	112,112,112,112	0
60	MG	AA	3264	1/1	0.92	0.97	-	78,78,78,78	0
60	MG	AA	3027	1/1	0.88	0.21	-	54,54,54,54	0
60	MG	AA	3010	1/1	0.98	0.48	-	10,10,10,10	0
60	MG	BA	3079	1/1	0.89	0.24	-	82,82,82,82	0
60	MG	AA	3140	1/1	0.94	0.49	-	45,45,45,45	0
60	MG	BA	2991	1/1	0.89	0.55	-	32,32,32,32	0
60	MG	AA	3165	1/1	0.88	0.37	-	97,97,97,97	0
60	MG	BA	3253	1/1	0.88	0.67	-	43,43,43,43	0
60	MG	AA	3082	1/1	0.74	0.43	-	72,72,72,72	0
60	MG	Ba	1642	1/1	0.84	0.46	-	78,78,78,78	0
60	MG	B7	102	1/1	0.91	0.66	-	57,57,57,57	0
60	MG	AA	3120	1/1	0.96	0.15	-	76,76,76,76	0
60	MG	AA	3080	1/1	0.93	0.54	-	67,67,67,67	0
60	MG	AA	3207	1/1	0.93	0.50	-	59,59,59,59	0
60	MG	AA	2935	1/1	0.84	0.64	-	69,69,69,69	0
60	MG	BA	3004	1/1	0.96	0.14	-	46,46,46,46	0
60	MG	BA	2961	1/1	0.93	0.28	-	28,28,28,28	0
60	MG	BB	201	1/1	0.84	0.49	-	54,54,54,54	0
60	MG	AA	3199	1/1	0.98	0.43	-	53,53,53,53	0
60	MG	BA	3087	1/1	0.87	0.59	-	51,51,51,51	0
60	MG	AA	3235	1/1	0.76	0.58	-	72,72,72,72	0
60	MG	AA	3166	1/1	0.79	0.35	-	48,48,48,48	0
60	MG	AA	3176	1/1	0.75	1.25	-	74,74,74,74	0
60	MG	AA	3267	1/1	0.92	0.88	-	74,74,74,74	0
60	MG	AA	3105	1/1	0.93	0.17	-	47,47,47,47	0
60	MG	AA	2950	1/1	0.94	0.24	-	51,51,51,51	0
60	MG	Aa	1683	1/1	0.94	0.12	-	66,66,66,66	0
60	MG	AA	3173	1/1	0.90	0.32	-	14,14,14,14	0
60	MG	AA	2992	1/1	0.95	0.44	-	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
60	MG	BA	3032	1/1	0.89	0.41	-	32,32,32,32	0
60	MG	AA	2926	1/1	0.96	0.36	-	26,26,26,26	0
60	MG	Ba	1650	1/1	0.93	0.52	-	49,49,49,49	0
60	MG	BA	2924	1/1	0.73	0.32	-	93,93,93,93	0
60	MG	AA	2993	1/1	0.86	0.28	-	56,56,56,56	0
60	MG	BA	3155	1/1	0.98	0.33	-	59,59,59,59	0
60	MG	BA	2907	1/1	0.97	0.51	-	49,49,49,49	0
60	MG	BA	3175	1/1	0.85	0.72	-	57,57,57,57	0
60	MG	AA	3238	1/1	0.64	0.75	-	75,75,75,75	0
60	MG	AA	2967	1/1	0.91	1.41	-	69,69,69,69	0
60	MG	BA	3142	1/1	0.93	0.84	-	53,53,53,53	0
60	MG	BA	2952	1/1	0.84	0.41	-	102,102,102,102	0
60	MG	BA	3248	1/1	0.95	0.83	-	47,47,47,47	0
60	MG	Ba	1653	1/1	0.83	0.38	-	74,74,74,74	0
60	MG	BA	3140	1/1	0.95	0.33	-	25,25,25,25	0
60	MG	BA	3061	1/1	0.99	0.14	-	35,35,35,35	0
60	MG	BA	3137	1/1	0.82	0.88	-	80,80,80,80	0
60	MG	BA	2922	1/1	0.97	0.29	-	52,52,52,52	0
60	MG	BA	2902	1/1	0.94	0.32	-	60,60,60,60	0
60	MG	AA	3132	1/1	0.67	0.99	-	78,78,78,78	0
60	MG	BA	3246	1/1	0.79	0.31	-	89,89,89,89	0
60	MG	BA	2983	1/1	0.99	0.16	-	21,21,21,21	0
60	MG	AA	3052	1/1	0.93	0.29	-	18,18,18,18	0
60	MG	Aa	1696	1/1	0.90	0.22	-	67,67,67,67	0
60	MG	AA	3212	1/1	0.88	0.65	-	68,68,68,68	0
60	MG	AA	2939	1/1	0.85	0.87	-	68,68,68,68	0
60	MG	Aa	1602	1/1	0.74	0.28	-	126,126,126,126	0
60	MG	Ba	1620	1/1	0.75	0.21	-	55,55,55,55	0
60	MG	AA	3201	1/1	0.74	1.19	-	88,88,88,88	0
60	MG	AA	3211	1/1	0.98	0.17	-	60,60,60,60	0
60	MG	BA	3245	1/1	0.85	0.27	-	90,90,90,90	0
60	MG	BA	2975	1/1	0.90	0.60	-	105,105,105,105	0
60	MG	BA	3189	1/1	0.72	0.70	-	75,75,75,75	0
60	MG	AA	3170	1/1	0.88	0.42	-	47,47,47,47	0
60	MG	AA	3003	1/1	0.95	0.28	-	43,43,43,43	0
60	MG	Ba	1705	1/1	0.60	0.34	-	76,76,76,76	0
60	MG	Ba	1707	1/1	0.45	0.46	-	76,76,76,76	0
60	MG	Aa	1712	1/1	0.44	1.12	-	117,117,117,117	0
60	MG	Ba	1690	1/1	0.86	0.37	-	56,56,56,56	0
60	MG	BA	2998	1/1	0.99	0.23	-	14,14,14,14	0
60	MG	Aa	1618	1/1	0.94	0.35	-	28,28,28,28	0
60	MG	AA	3156	1/1	0.97	0.36	-	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	BA	3264	1/1	0.77	0.89	-	89,89,89,89	0
60	MG	AA	3204	1/1	0.76	0.67	-	51,51,51,51	0
60	MG	Ba	1708	1/1	0.71	0.20	-	132,132,132,132	0
60	MG	BA	2925	1/1	0.95	0.45	-	31,31,31,31	0
60	MG	AA	3071	1/1	0.85	0.41	-	74,74,74,74	0
60	MG	Ba	1602	1/1	0.85	0.28	-	93,93,93,93	0
60	MG	Ba	1655	1/1	0.98	0.60	-	43,43,43,43	0
60	MG	Aa	1710	1/1	0.96	0.25	-	29,29,29,29	0
60	MG	BA	3107	1/1	0.98	0.38	-	45,45,45,45	0
60	MG	Aa	1689	1/1	0.88	0.25	-	65,65,65,65	1
60	MG	AA	3073	1/1	0.88	0.89	-	78,78,78,78	0
60	MG	BA	3023	1/1	0.97	0.40	-	21,21,21,21	0
60	MG	AA	2999	1/1	0.95	0.29	-	46,46,46,46	0
60	MG	Aa	1637	1/1	0.78	0.36	-	75,75,75,75	0
60	MG	BA	3205	1/1	0.78	0.42	-	92,92,92,92	0
60	MG	BA	3121	1/1	0.86	1.31	-	70,70,70,70	0
60	MG	AA	3169	1/1	0.94	0.07	-	44,44,44,44	0
60	MG	BA	2904	1/1	0.98	0.35	-	1,1,1,1	0
60	MG	AA	3142	1/1	0.84	0.40	-	53,53,53,53	0
60	MG	AA	2902	1/1	0.95	0.18	-	167,167,167,167	0
60	MG	Aa	1641	1/1	0.87	0.35	-	74,74,74,74	0
60	MG	A5	101	1/1	0.92	0.48	-	34,34,34,34	0
60	MG	BA	3128	1/1	0.96	0.39	-	26,26,26,26	0
60	MG	AA	3086	1/1	0.92	0.12	-	74,74,74,74	0
60	MG	Ba	1626	1/1	0.96	0.31	-	56,56,56,56	0
60	MG	BA	2985	1/1	0.84	0.32	-	26,26,26,26	0
60	MG	AA	3014	1/1	0.89	0.85	-	50,50,50,50	0
60	MG	Ba	1646	1/1	0.84	0.26	-	128,128,128,128	0
60	MG	BA	3135	1/1	0.92	1.30	-	96,96,96,96	0
60	MG	BA	3159	1/1	0.98	0.23	-	52,52,52,52	0
60	MG	AA	2955	1/1	0.96	0.41	-	48,48,48,48	0
60	MG	BA	2949	1/1	0.98	0.31	-	42,42,42,42	0
60	MG	Aa	1739	1/1	0.94	0.49	-	78,78,78,78	0
60	MG	Aa	1684	1/1	0.82	1.01	-	74,74,74,74	0
60	MG	AA	2941	1/1	0.76	0.76	-	92,92,92,92	0
60	MG	Ba	1735	1/1	0.71	0.21	-	122,122,122,122	0
60	MG	Ba	1714	1/1	0.75	0.10	-	62,62,62,62	0
60	MG	BA	3197	1/1	0.97	0.17	-	103,103,103,103	1
60	MG	Ba	1706	1/1	0.69	0.74	-	104,104,104,104	0
60	MG	Ba	1658	1/1	0.62	0.32	-	50,50,50,50	0
60	MG	BA	3180	1/1	0.95	0.86	-	105,105,105,105	0
60	MG	Ba	1631	1/1	0.80	0.55	-	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	BA	3238	1/1	0.55	0.95	-	113,113,113,113	0
60	MG	AA	3000	1/1	0.82	0.62	-	63,63,63,63	0
60	MG	BA	2915	1/1	0.95	0.53	-	20,20,20,20	0
60	MG	Aa	1652	1/1	0.80	0.83	-	58,58,58,58	0
60	MG	BA	2974	1/1	0.87	0.42	-	31,31,31,31	0
60	MG	BA	2963	1/1	0.96	0.23	-	55,55,55,55	0
60	MG	AA	2966	1/1	0.98	0.56	-	57,57,57,57	0
60	MG	Ba	1665	1/1	0.74	0.74	-	144,144,144,144	0
60	MG	AA	3254	1/1	0.91	0.49	-	53,53,53,53	0
60	MG	Aa	1714	1/1	0.92	0.17	-	47,47,47,47	0
60	MG	BA	2940	1/1	0.93	0.25	-	82,82,82,82	0
60	MG	Ba	1601	1/1	0.73	0.48	-	90,90,90,90	0
60	MG	AA	3141	1/1	0.81	1.13	-	86,86,86,86	0
60	MG	Aa	1627	1/1	0.96	0.19	-	53,53,53,53	0
60	MG	BA	3148	1/1	0.82	0.44	-	74,74,74,74	0
60	MG	BA	3080	1/1	0.76	0.34	-	58,58,58,58	0
60	MG	AA	3146	1/1	0.62	0.75	-	90,90,90,90	0
60	MG	BA	2947	1/1	0.64	0.33	-	44,44,44,44	0
60	MG	AA	3045	1/1	0.98	0.49	-	22,22,22,22	0
60	MG	BA	3118	1/1	0.65	0.47	-	70,70,70,70	0
60	MG	BA	3041	1/1	0.96	0.42	-	15,15,15,15	0
60	MG	BA	3026	1/1	0.93	0.20	-	40,40,40,40	0
60	MG	Aa	1742	1/1	0.33	0.55	-	106,106,106,106	0
60	MG	BA	3167	1/1	0.93	0.77	-	59,59,59,59	0
60	MG	Aa	1736	1/1	0.88	0.27	-	117,117,117,117	0
60	MG	BA	3068	1/1	0.86	0.52	-	64,64,64,64	0
60	MG	Ba	1689	1/1	0.69	0.42	-	57,57,57,57	0
60	MG	AA	3168	1/1	0.82	0.27	-	82,82,82,82	0
60	MG	BA	2977	1/1	0.74	0.40	-	46,46,46,46	0
60	MG	AA	3164	1/1	0.97	0.64	-	69,69,69,69	0
60	MG	BB	203	1/1	0.72	0.55	-	55,55,55,55	0
60	MG	Av	101	1/1	0.91	0.74	-	90,90,90,90	1
60	MG	Aa	1734	1/1	0.95	0.58	-	84,84,84,84	0
60	MG	Av	105	1/1	0.81	0.33	-	92,92,92,92	1
60	MG	Ba	1628	1/1	0.85	0.34	-	46,46,46,46	0
60	MG	BA	3143	1/1	0.89	1.02	-	95,95,95,95	0
60	MG	BA	3067	1/1	0.96	0.29	-	28,28,28,28	0
60	MG	AA	2923	1/1	0.97	0.54	-	36,36,36,36	0
60	MG	AA	3148	1/1	0.68	0.27	-	77,77,77,77	0
60	MG	AA	3178	1/1	0.79	0.33	-	35,35,35,35	0
60	MG	AA	2942	1/1	0.93	0.34	-	40,40,40,40	0
60	MG	BA	3247	1/1	0.83	0.36	-	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	AA	3110	1/1	0.71	1.25	-	91,91,91,91	0
60	MG	BA	2964	1/1	0.94	0.39	-	49,49,49,49	0
60	MG	BA	2981	1/1	0.73	1.34	-	46,46,46,46	0
60	MG	Ba	1723	1/1	0.98	0.14	-	103,103,103,103	0
60	MG	AA	2994	1/1	0.84	0.58	-	30,30,30,30	0
60	MG	BA	3256	1/1	0.97	0.50	-	39,39,39,39	0
60	MG	Ba	1660	1/1	0.87	0.73	-	60,60,60,60	0
60	MG	Aa	1703	1/1	0.34	0.93	-	94,94,94,94	0
60	MG	AA	3260	1/1	0.19	0.75	-	80,80,80,80	0
60	MG	BA	3119	1/1	0.82	0.33	-	67,67,67,67	0
60	MG	Ba	1713	1/1	0.70	0.61	-	83,83,83,83	0
60	MG	AA	2970	1/1	0.88	0.20	-	53,53,53,53	0
60	MG	AA	3017	1/1	0.91	0.32	-	18,18,18,18	0
60	MG	Bv	103	1/1	0.79	0.30	-	93,93,93,93	0
60	MG	BA	3259	1/1	0.84	0.25	-	86,86,86,86	0
60	MG	BA	2997	1/1	0.97	0.22	-	22,22,22,22	0
60	MG	AA	2908	1/1	0.95	0.40	-	25,25,25,25	0
60	MG	BA	3014	1/1	0.97	0.26	-	1,1,1,1	0
60	MG	Ba	1678	1/1	0.92	0.49	-	51,51,51,51	0
60	MG	Aa	1644	1/1	0.92	0.29	-	56,56,56,56	0
60	MG	BA	3124	1/1	0.96	0.29	-	40,40,40,40	0
60	MG	Ba	1696	1/1	0.72	0.64	-	83,83,83,83	0
60	MG	Ba	1734	1/1	0.94	0.25	-	84,84,84,84	1
60	MG	BB	202	1/1	0.84	0.33	-	46,46,46,46	0
60	MG	Aa	1643	1/1	0.76	1.21	-	90,90,90,90	0
60	MG	AA	2903	1/1	0.83	0.59	-	65,65,65,65	0
60	MG	Aa	1601	1/1	0.38	0.90	-	123,123,123,123	0
60	MG	Aa	1702	1/1	0.90	0.41	-	91,91,91,91	0
60	MG	BA	3152	1/1	0.77	0.34	-	71,71,71,71	0
60	MG	AA	3129	1/1	0.98	0.37	-	29,29,29,29	0
60	MG	BA	3204	1/1	0.59	0.53	-	64,64,64,64	0
60	MG	Aa	1604	1/1	0.96	0.13	-	76,76,76,76	0
60	MG	Aa	1651	1/1	0.83	0.66	-	58,58,58,58	0
60	MG	Aa	1617	1/1	0.86	0.36	-	49,49,49,49	1
60	MG	Aa	1660	1/1	0.89	0.47	-	49,49,49,49	0
60	MG	AA	2972	1/1	0.83	0.25	-	43,43,43,43	0
60	MG	Aa	1682	1/1	0.91	0.59	-	59,59,59,59	0
60	MG	AA	2945	1/1	0.97	0.12	-	74,74,74,74	0
60	MG	BA	3072	1/1	0.66	0.90	-	55,55,55,55	0
60	MG	BA	2934	1/1	0.80	0.68	-	72,72,72,72	0
60	MG	Ba	1636	1/1	0.92	0.20	-	60,60,60,60	0
60	MG	BA	3161	1/1	0.88	0.41	-	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
60	MG	BA	3033	1/1	0.65	0.58	-	61,61,61,61	0
60	MG	Aa	1708	1/1	0.71	0.55	-	81,81,81,81	0
60	MG	Ba	1682	1/1	0.97	0.10	-	66,66,66,66	0
60	MG	Ba	1627	1/1	0.98	0.56	-	74,74,74,74	0
60	MG	AA	3234	1/1	0.91	0.20	-	79,79,79,79	0
60	MG	BA	3240	1/1	0.86	0.99	-	84,84,84,84	0
60	MG	Bd	301	1/1	0.84	0.86	-	55,55,55,55	0
60	MG	BA	3103	1/1	0.87	0.27	-	50,50,50,50	0
60	MG	Ba	1610	1/1	0.73	0.20	-	50,50,50,50	0
60	MG	BA	3178	1/1	0.49	0.39	-	55,55,55,55	0
60	MG	Ba	1727	1/1	0.92	0.49	-	46,46,46,46	0
60	MG	AX	101	1/1	0.84	0.85	-	55,55,55,55	1
60	MG	AA	3228	1/1	0.82	0.64	-	51,51,51,51	0
60	MG	AA	3239	1/1	0.95	0.34	-	77,77,77,77	0
60	MG	AA	3040	1/1	0.94	0.14	-	21,21,21,21	0
60	MG	BA	2999	1/1	0.93	0.41	-	26,26,26,26	0
60	MG	Aa	1621	1/1	0.74	0.30	-	89,89,89,89	0
60	MG	BA	3104	1/1	0.92	0.20	-	31,31,31,31	0
60	MG	AA	3104	1/1	0.79	0.33	-	56,56,56,56	0
60	MG	BA	3047	1/1	0.93	0.27	-	36,36,36,36	0
60	MG	AA	2952	1/1	0.74	0.44	-	88,88,88,88	0
60	MG	AA	3210	1/1	0.62	0.17	-	115,115,115,115	0
60	MG	AA	3180	1/1	0.95	0.22	-	73,73,73,73	0
60	MG	Aa	1647	1/1	0.87	0.21	-	138,138,138,138	0
60	MG	AA	3081	1/1	0.96	0.34	-	99,99,99,99	0
60	MG	BA	3193	1/1	0.95	0.44	-	44,44,44,44	0
60	MG	Aa	1626	1/1	0.92	0.12	-	63,63,63,63	0
60	MG	AA	3136	1/1	0.82	0.64	-	84,84,84,84	0
60	MG	BA	3151	1/1	0.60	0.99	-	119,119,119,119	0
60	MG	Aa	1692	1/1	0.89	0.63	-	46,46,46,46	0
60	MG	AA	3053	1/1	0.97	0.64	-	42,42,42,42	0
60	MG	AA	3135	1/1	0.90	0.59	-	71,71,71,71	0
60	MG	BA	3227	1/1	0.94	0.64	-	82,82,82,82	0
60	MG	AA	3108	1/1	0.98	0.13	-	38,38,38,38	0
60	MG	BA	3243	1/1	0.81	1.07	-	111,111,111,111	0
60	MG	AA	3087	1/1	0.90	0.37	-	60,60,60,60	0
60	MG	BA	3173	1/1	0.70	0.96	-	72,72,72,72	0
60	MG	Aa	1646	1/1	0.62	0.90	-	102,102,102,102	0
60	MG	Aa	1724	1/1	0.93	0.17	-	71,71,71,71	0
60	MG	Aa	1705	1/1	0.69	0.51	-	71,71,71,71	0
60	MG	BA	3213	1/1	0.97	0.17	-	36,36,36,36	0
60	MG	Aa	1728	1/1	0.96	0.55	-	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	BA	3058	1/1	0.82	0.49	-	34,34,34,34	0
60	MG	Ba	1625	1/1	0.95	0.20	-	72,72,72,72	0
60	MG	Aa	1690	1/1	0.79	0.21	-	49,49,49,49	0
60	MG	BA	3233	1/1	0.72	0.42	-	97,97,97,97	0
60	MG	BA	3222	1/1	0.70	0.52	-	61,61,61,61	0
60	MG	BA	2954	1/1	0.95	0.22	-	57,57,57,57	0
60	MG	AA	3111	1/1	0.93	0.66	-	54,54,54,54	0
60	MG	Ba	1743	1/1	0.92	0.55	-	57,57,57,57	0
60	MG	AA	3262	1/1	0.02	1.11	-	81,81,81,81	0
60	MG	Aa	1719	1/1	0.81	0.39	-	101,101,101,101	0
60	MG	Ba	1635	1/1	0.65	0.61	-	57,57,57,57	0
60	MG	Ba	1656	1/1	0.79	0.51	-	73,73,73,73	0
60	MG	AA	3222	1/1	0.93	0.64	-	45,45,45,45	0
60	MG	BA	3126	1/1	0.82	0.37	-	122,122,122,122	0
60	MG	AA	2963	1/1	0.80	0.81	-	46,46,46,46	0
60	MG	AA	3225	1/1	0.91	0.18	-	57,57,57,57	0
60	MG	BA	3019	1/1	0.96	0.35	-	30,30,30,30	0
60	MG	BA	3182	1/1	0.89	0.32	-	63,63,63,63	0
60	MG	Ba	1607	1/1	0.97	0.18	-	75,75,75,75	0
60	MG	AA	3098	1/1	0.56	0.58	-	75,75,75,75	0
60	MG	AA	3065	1/1	0.51	0.74	-	73,73,73,73	0
60	MG	Ba	1700	1/1	0.69	0.50	-	58,58,58,58	0
60	MG	AA	3248	1/1	0.67	0.70	-	106,106,106,106	0
60	MG	AA	2990	1/1	0.85	0.60	-	34,34,34,34	0
60	MG	AA	3216	1/1	0.70	0.47	-	49,49,49,49	0
60	MG	AA	2954	1/1	0.55	0.53	-	112,112,112,112	0
60	MG	AA	3192	1/1	0.88	1.12	-	101,101,101,101	0
60	MG	AA	3020	1/1	0.88	0.29	-	39,39,39,39	0
60	MG	BA	2948	1/1	0.65	0.50	-	73,73,73,73	0
60	MG	BA	2971	1/1	0.78	0.93	-	66,66,66,66	0
60	MG	AA	3018	1/1	0.94	0.49	-	48,48,48,48	0
60	MG	AA	3181	1/1	0.59	0.46	-	61,61,61,61	0
60	MG	Aa	1718	1/1	0.95	1.02	-	84,84,84,84	0
60	MG	BA	3221	1/1	0.64	0.44	-	106,106,106,106	0
60	MG	Aa	1704	1/1	0.70	0.42	-	29,29,29,29	1
60	MG	Aa	1743	1/1	0.68	0.60	-	67,67,67,67	0
60	MG	BA	3255	1/1	0.96	0.34	-	81,81,81,81	0
60	MG	Aa	1741	1/1	0.59	1.45	-	79,79,79,79	0
60	MG	AA	2910	1/1	0.93	0.54	-	49,49,49,49	0
60	MG	BA	3226	1/1	0.92	0.35	-	75,75,75,75	0
60	MG	AA	3242	1/1	0.86	0.89	-	85,85,85,85	0
60	MG	AA	3009	1/1	0.99	0.45	-	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	Ba	1733	1/1	0.22	0.39	-	86,86,86,86	0
60	MG	BA	3166	1/1	0.91	0.13	-	50,50,50,50	0
60	MG	AA	2948	1/1	0.93	0.25	-	67,67,67,67	0
60	MG	AA	3152	1/1	0.78	0.83	-	62,62,62,62	0
60	MG	BA	3190	1/1	0.98	0.29	-	13,13,13,13	0
60	MG	BA	3146	1/1	0.59	0.85	-	84,84,84,84	0
60	MG	Aa	1636	1/1	0.45	1.40	-	88,88,88,88	0
60	MG	AA	2946	1/1	0.98	0.10	-	101,101,101,101	0
60	MG	AA	2959	1/1	0.65	0.44	-	73,73,73,73	0
60	MG	AB	202	1/1	0.74	0.40	-	62,62,62,62	0
60	MG	Aa	1672	1/1	0.65	0.33	-	87,87,87,87	0
60	MG	Ba	1649	1/1	0.86	0.36	-	49,49,49,49	0
60	MG	Ba	1638	1/1	0.84	0.24	-	40,40,40,40	0
60	MG	BA	2955	1/1	0.73	0.26	-	49,49,49,49	0
60	MG	Ba	1681	1/1	0.45	0.84	-	122,122,122,122	0
60	MG	Aa	1700	1/1	0.57	2.14	-	114,114,114,114	0
60	MG	A1	102	1/1	0.97	0.42	-	116,116,116,116	0
60	MG	BA	3089	1/1	0.97	0.20	-	56,56,56,56	0
60	MG	BA	3239	1/1	0.67	0.27	-	64,64,64,64	0
60	MG	Bv	104	1/1	0.70	1.01	-	75,75,75,75	1
60	MG	AA	3078	1/1	0.97	0.14	-	83,83,83,83	0
60	MG	AA	3139	1/1	0.89	0.40	-	44,44,44,44	0
60	MG	Ba	1603	1/1	0.94	0.10	-	64,64,64,64	0
60	MG	BA	3244	1/1	0.68	0.23	-	91,91,91,91	0
60	MG	AA	3112	1/1	0.92	0.34	-	60,60,60,60	0
60	MG	Ba	1643	1/1	0.76	0.37	-	108,108,108,108	0
60	MG	AA	3109	1/1	0.88	0.31	-	78,78,78,78	0
60	MG	BA	3215	1/1	0.95	0.39	-	65,65,65,65	0
60	MG	AA	3209	1/1	0.83	0.66	-	84,84,84,84	0
60	MG	AA	2998	1/1	0.97	0.28	-	36,36,36,36	0
60	MG	BA	3141	1/1	0.89	0.55	-	57,57,57,57	0
60	MG	Aa	1606	1/1	0.89	0.82	-	66,66,66,66	0
60	MG	Ba	1661	1/1	0.93	0.29	-	41,41,41,41	0
60	MG	AA	3047	1/1	0.95	0.51	-	40,40,40,40	0
60	MG	BA	2901	1/1	0.85	0.21	-	138,138,138,138	0
60	MG	BA	3099	1/1	0.85	0.77	-	90,90,90,90	0
60	MG	AA	3258	1/1	0.87	0.54	-	38,38,38,38	0
60	MG	AA	2977	1/1	0.97	0.84	-	54,54,54,54	0
60	MG	BA	2958	1/1	0.75	1.59	-	88,88,88,88	0
60	MG	Ba	1617	1/1	0.95	0.25	-	36,36,36,36	0
60	MG	AA	3149	1/1	0.90	0.85	-	100,100,100,100	0
60	MG	Aa	1675	1/1	0.47	0.87	-	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
60	MG	AA	3041	1/1	0.99	0.18	-	21,21,21,21	0
60	MG	B0	102	1/1	0.92	0.21	-	47,47,47,47	0
60	MG	AA	3125	1/1	0.98	0.66	-	42,42,42,42	0
60	MG	BA	3002	1/1	0.99	0.25	-	41,41,41,41	0
60	MG	AA	3005	1/1	0.96	0.23	-	57,57,57,57	0
60	MG	AA	3034	1/1	0.68	0.60	-	55,55,55,55	0
60	MG	BA	2938	1/1	0.53	1.22	-	84,84,84,84	0
60	MG	BA	3260	1/1	0.91	1.12	-	80,80,80,80	0
60	MG	Ba	1711	1/1	0.68	0.35	-	123,123,123,123	0
60	MG	AA	3004	1/1	0.96	0.23	-	39,39,39,39	0
60	MG	AA	2961	1/1	0.92	0.49	-	76,76,76,76	0
60	MG	BA	3136	1/1	0.60	0.74	-	106,106,106,106	0
60	MG	AA	3043	1/1	0.98	0.19	-	37,37,37,37	0
60	MG	AA	3127	1/1	0.90	0.46	-	89,89,89,89	0
60	MG	Aa	1630	1/1	0.99	0.11	-	36,36,36,36	0
60	MG	AA	3116	1/1	0.69	0.40	-	35,35,35,35	0
60	MG	Aa	1663	1/1	0.31	0.54	-	112,112,112,112	0
60	MG	Ba	1719	1/1	0.72	0.68	-	57,57,57,57	0
60	MG	Bx	101	1/1	0.56	0.28	-	83,83,83,83	0
60	MG	BA	2906	1/1	0.97	0.22	-	26,26,26,26	0
60	MG	AA	2984	1/1	0.98	0.21	-	45,45,45,45	0
60	MG	BA	2937	1/1	0.91	0.26	-	67,67,67,67	0
60	MG	BA	3108	1/1	0.98	0.13	-	50,50,50,50	0
60	MG	Ba	1701	1/1	0.97	0.47	-	60,60,60,60	0
60	MG	AA	2983	1/1	0.90	0.28	-	27,27,27,27	0
60	MG	BA	3075	1/1	0.94	0.29	-	44,44,44,44	0
60	MG	AA	3167	1/1	0.95	0.48	-	73,73,73,73	0
60	MG	AA	3026	1/1	0.86	0.23	-	35,35,35,35	0
60	MG	BA	3054	1/1	0.92	0.40	-	36,36,36,36	0
60	MG	Aa	1664	1/1	0.81	0.58	-	44,44,44,44	0
60	MG	BA	3064	1/1	0.88	0.29	-	44,44,44,44	0
60	MG	AA	3208	1/1	0.87	0.76	-	86,86,86,86	0
60	MG	Aa	1648	1/1	0.12	0.59	-	121,121,121,121	0
60	MG	AA	3006	1/1	0.91	0.28	-	32,32,32,32	0
60	MG	BA	3251	1/1	0.82	0.29	-	65,65,65,65	0
60	MG	AA	3244	1/1	0.79	0.99	-	67,67,67,67	0
60	MG	Aw	101	1/1	0.78	0.44	-	83,83,83,83	1
60	MG	BA	3219	1/1	0.83	0.46	-	40,40,40,40	0
60	MG	Ba	1613	1/1	0.94	0.85	-	38,38,38,38	0
60	MG	BX	101	1/1	0.94	0.60	-	31,31,31,31	1
60	MG	B5	102	1/1	0.83	0.60	-	76,76,76,76	0
60	MG	AA	3230	1/1	0.85	0.99	-	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
60	MG	AA	2936	1/1	0.96	0.53	-	5,5,5,5	0
60	MG	Aa	1706	1/1	0.77	0.58	-	54,54,54,54	0
60	MG	Ba	1645	1/1	0.79	1.00	-	101,101,101,101	0
60	MG	BA	3154	1/1	0.85	0.21	-	73,73,73,73	1
60	MG	BA	3139	1/1	0.98	0.14	-	15,15,15,15	0
60	MG	AA	3130	1/1	0.76	0.63	-	76,76,76,76	0
60	MG	Aa	1722	1/1	0.55	0.36	-	78,78,78,78	0
60	MG	AA	3048	1/1	0.79	0.42	-	68,68,68,68	0
60	MG	BA	3258	1/1	0.49	0.36	-	84,84,84,84	0
60	MG	AA	3092	1/1	0.87	0.23	-	51,51,51,51	0
60	MG	AA	3114	1/1	0.90	0.39	-	18,18,18,18	1
60	MG	AA	2905	1/1	0.93	0.36	-	15,15,15,15	0
60	MG	BA	3062	1/1	0.95	0.25	-	36,36,36,36	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.