



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 10:01 PM GMT

PDB ID : 4V7J
Title : Structure of RelE nuclease bound to the 70S ribosome (precleavage 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 : 3.30 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

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

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

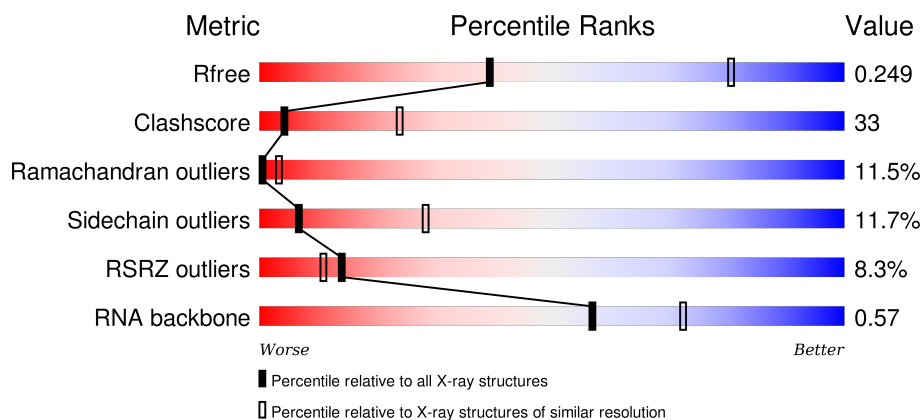
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.30 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	2060 (3.40-3.20)
Clashscore	102246	1058 (3.38-3.22)
Ramachandran outliers	100387	1038 (3.38-3.22)
Sidechain outliers	100360	1037 (3.38-3.22)
RSRZ outliers	91569	2070 (3.40-3.20)
RNA backbone	2183	1005 (3.82-2.78)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	Ab	256	<div> <div>10%</div> <div> <div></div> <div>77%</div> <div>14%</div> <div>•</div> <div>9%</div> </div> </div>
1	Bb	256	<div> <div>9%</div> <div> <div></div> <div>77%</div> <div>14%</div> <div>•</div> <div>9%</div> </div> </div>
2	Ac	239	<div> <div>8%</div> <div> <div></div> <div>69%</div> <div>17%</div> <div>14%</div> </div> </div>
2	Bc	239	<div> <div>9%</div> <div> <div></div> <div>69%</div> <div>16%</div> <div>14%</div> </div> </div>

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Mol	Chain	Length	Quality of chain
3	Ad	209	 % 82% 15% •
3	Bd	209	 5% 82% 15% •
4	Ae	162	 2% 80% 12% 7%
4	Be	162	 5% 80% 13% 7%
5	Af	101	 4% 89% 11%
5	Bf	101	 5% 89% 11%
6	Ag	156	 13% 89% 10% ••
6	Bg	156	 15% 89% 10% ••
7	Ah	138	 % 91% 9%
7	Bh	138	 7% 91% 9%
8	Ai	128	 26% 84% 14% ••
8	Bi	128	 26% 82% 16% ••
9	Aj	105	 32% 79% 14% 7%
9	Bj	105	 28% 79% 14% 7%
10	Ak	129	 9% 88% 5% 8%
10	Bk	129	 10% 88% • 8%
11	Al	132	 5% 73% 18% • 6%
11	Bl	132	 8% 74% 17% • 6%
12	Am	126	 11% 67% 25% • 6%
12	Bm	126	 14% 67% 24% • 6%
13	An	61	 13% 80% 18% •
13	Bn	61	 7% 80% 18% •
14	Ao	89	 4% 90% 8% ••
14	Bo	89	 % 90% 8% ••
15	Ap	88	 6% 85% 9% 6%

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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	25	
23	Bx	25	
24	Av	77	
24	Bv	77	
25	Aw	77	
25	Bw	77	
26	AC	229	
26	BC	229	
27	AD	276	
27	BD	276	

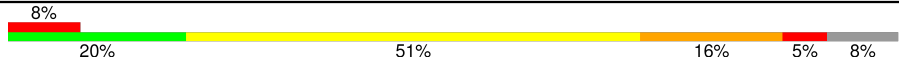

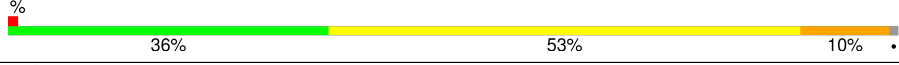
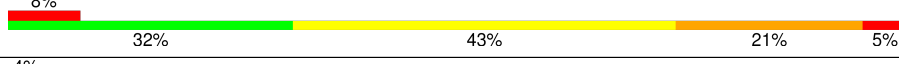
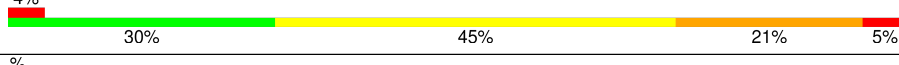
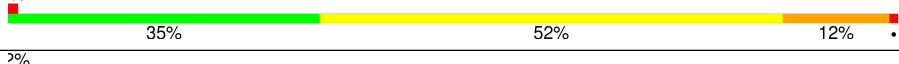
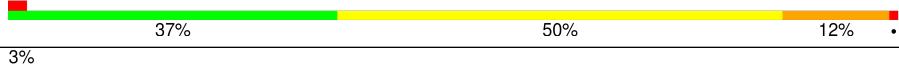
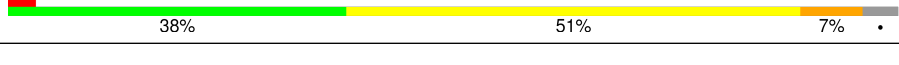
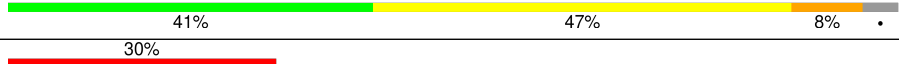
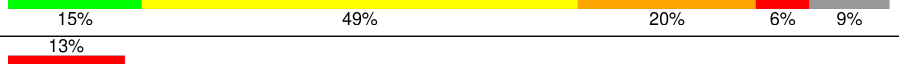

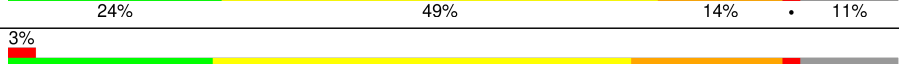
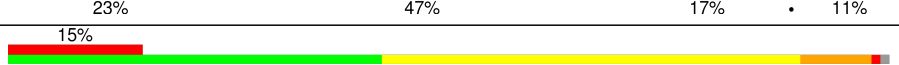
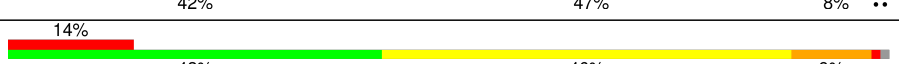
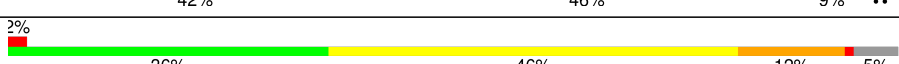
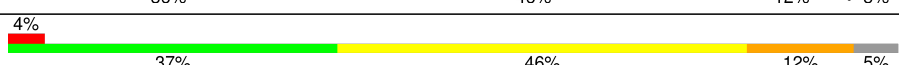
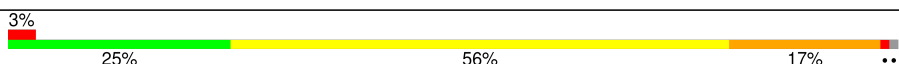
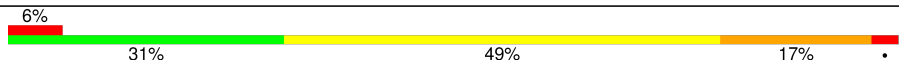
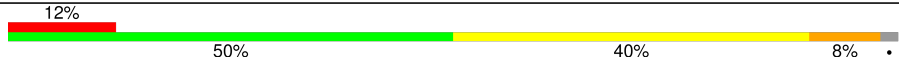



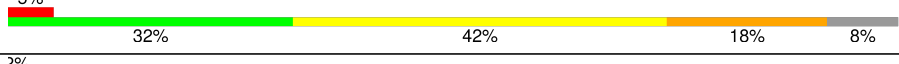
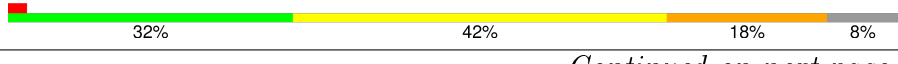

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Mol	Chain	Length	Quality of chain
28	AE	206	
28	BE	206	
29	AF	210	
29	BF	210	
30	AG	182	
30	BG	182	
31	AH	180	
31	BH	180	
32	AI	148	
32	BI	148	
33	AJ	173	
33	BJ	173	
34	AN	140	
34	BN	140	
35	AO	122	
35	BO	122	
36	AP	150	
36	BP	150	
37	AQ	141	
37	BQ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




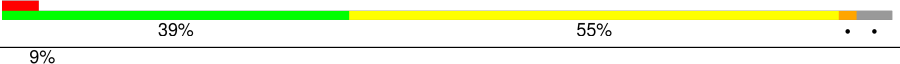
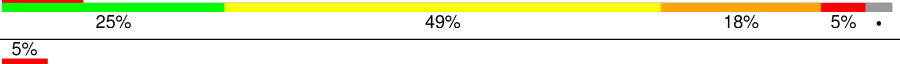


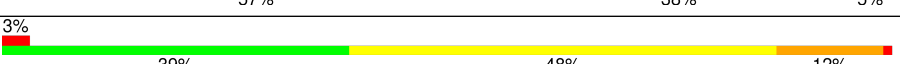
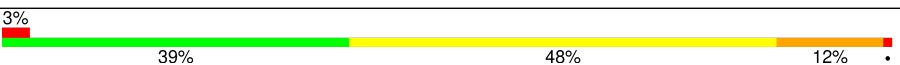
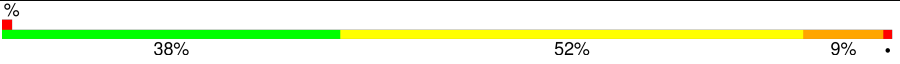
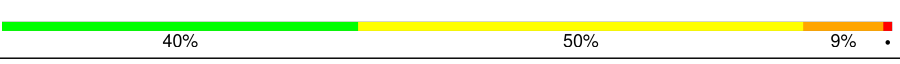

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Mol	Chain	Length	Quality of chain
40	BT	146	
41	AU	118	
41	BU	118	
42	AV	101	
42	BV	101	
43	AW	113	
43	BW	113	
44	AX	96	
44	BX	96	
45	AY	110	
45	BY	110	
46	AZ	206	
46	BZ	206	
47	A0	85	
47	B0	85	
48	A1	98	
48	B1	98	
49	A2	72	
49	B2	72	
50	A3	60	
50	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	2911	-	-	-	X
60	MG	AA	2913	-	-	-	X
60	MG	AA	2914	-	-	-	X
60	MG	AA	2915	-	-	-	X
60	MG	AA	2917	-	-	-	X
60	MG	AA	2918	-	-	-	X
60	MG	AA	2919	-	-	-	X
60	MG	AA	2920	-	-	-	X
60	MG	AA	2921	-	-	-	X
60	MG	AA	2922	-	-	-	X
60	MG	AA	2929	-	-	-	X
60	MG	AA	2931	-	-	-	X
60	MG	AA	2932	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
60	MG	AA	2942	-	-	-	X
60	MG	AA	2943	-	-	-	X
60	MG	AA	2951	-	-	-	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	2978	-	-	-	X
60	MG	AA	2982	-	-	-	X
60	MG	AA	2983	-	-	-	X
60	MG	AA	2987	-	-	-	X
60	MG	AA	2989	-	-	-	X
60	MG	AA	2990	-	-	-	X
60	MG	AA	2991	-	-	-	X
60	MG	AA	2993	-	-	-	X
60	MG	AA	2996	-	-	-	X
60	MG	AA	2998	-	-	-	X
60	MG	AA	2999	-	-	-	X
60	MG	AA	3014	-	-	-	X
60	MG	AA	3016	-	-	-	X
60	MG	AA	3018	-	-	-	X
60	MG	AA	3020	-	-	-	X
60	MG	AA	3021	-	-	-	X
60	MG	AA	3025	-	-	-	X
60	MG	AA	3027	-	-	-	X
60	MG	AA	3030	-	-	-	X
60	MG	AA	3031	-	-	-	X
60	MG	AA	3034	-	-	-	X
60	MG	AA	3036	-	-	-	X
60	MG	AA	3037	-	-	-	X
60	MG	AA	3040	-	-	-	X
60	MG	AA	3041	-	-	-	X
60	MG	AA	3046	-	-	-	X
60	MG	AA	3048	-	-	-	X
60	MG	AA	3053	-	-	-	X
60	MG	AA	3055	-	-	-	X
60	MG	AA	3056	-	-	-	X
60	MG	AA	3058	-	-	-	X
60	MG	AA	3063	-	-	-	X
60	MG	AA	3064	-	-	-	X
60	MG	AA	3071	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
60	MG	AA	3073	-	-	-	X
60	MG	AA	3074	-	-	-	X
60	MG	AA	3075	-	-	-	X
60	MG	AA	3085	-	-	-	X
60	MG	AA	3086	-	-	-	X
60	MG	AA	3088	-	-	-	X
60	MG	AA	3094	-	-	-	X
60	MG	AA	3095	-	-	-	X
60	MG	AA	3097	-	-	-	X
60	MG	AA	3098	-	-	-	X
60	MG	AA	3099	-	-	-	X
60	MG	AA	3100	-	-	-	X
60	MG	AA	3105	-	-	-	X
60	MG	AA	3108	-	-	-	X
60	MG	AA	3111	-	-	-	X
60	MG	AA	3118	-	-	-	X
60	MG	AA	3123	-	-	-	X
60	MG	AA	3125	-	-	-	X
60	MG	AA	3126	-	-	-	X
60	MG	AA	3128	-	-	-	X
60	MG	AA	3130	-	-	-	X
60	MG	AA	3135	-	-	-	X
60	MG	AA	3136	-	-	-	X
60	MG	AA	3150	-	-	-	X
60	MG	AA	3153	-	-	-	X
60	MG	AA	3161	-	-	-	X
60	MG	AA	3165	-	-	-	X
60	MG	AA	3170	-	-	-	X
60	MG	AA	3174	-	-	-	X
60	MG	AA	3176	-	-	-	X
60	MG	AA	3177	-	-	-	X
60	MG	AA	3179	-	-	-	X
60	MG	AA	3181	-	-	-	X
60	MG	AA	3184	-	-	-	X
60	MG	AA	3188	-	-	-	X
60	MG	AA	3196	-	-	-	X
60	MG	AA	3215	-	-	-	X
60	MG	AA	3220	-	-	-	X
60	MG	AA	3230	-	-	-	X
60	MG	AA	3232	-	-	-	X
60	MG	AA	3244	-	-	-	X
60	MG	AA	3257	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
60	MG	AA	3260	-	-	-	X
60	MG	AA	3262	-	-	-	X
60	MG	AA	3264	-	-	-	X
60	MG	AA	3266	-	-	-	X
60	MG	AD	302	-	-	-	X
60	MG	Aa	1611	-	-	-	X
60	MG	Aa	1614	-	-	-	X
60	MG	Aa	1617	-	-	-	X
60	MG	Aa	1623	-	-	-	X
60	MG	Aa	1625	-	-	-	X
60	MG	Aa	1632	-	-	-	X
60	MG	Aa	1634	-	-	-	X
60	MG	Aa	1636	-	-	-	X
60	MG	Aa	1646	-	-	-	X
60	MG	Aa	1650	-	-	-	X
60	MG	Aa	1654	-	-	-	X
60	MG	Aa	1668	-	-	-	X
60	MG	Aa	1670	-	-	-	X
60	MG	Aa	1672	-	-	-	X
60	MG	Aa	1680	-	-	-	X
60	MG	Aa	1681	-	-	-	X
60	MG	Aa	1686	-	-	-	X
60	MG	Aa	1687	-	-	-	X
60	MG	Aa	1695	-	-	-	X
60	MG	Aa	1697	-	-	-	X
60	MG	Aa	1706	-	-	-	X
60	MG	Aa	1722	-	-	-	X
60	MG	Aa	1724	-	-	-	X
60	MG	Aa	1727	-	-	-	X
60	MG	Aa	1732	-	-	-	X
60	MG	Aa	1735	-	-	-	X
60	MG	Aa	1737	-	-	-	X
60	MG	Aa	1740	-	-	-	X
60	MG	Aa	1744	-	-	-	X
60	MG	Am	201	-	-	-	X
60	MG	Av	104	-	-	-	X
60	MG	B0	101	-	-	-	X
60	MG	B7	101	-	-	-	X
60	MG	BA	2906	-	-	-	X
60	MG	BA	2909	-	-	-	X
60	MG	BA	2911	-	-	-	X
60	MG	BA	2913	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
60	MG	BA	2914	-	-	-	X
60	MG	BA	2915	-	-	-	X
60	MG	BA	2918	-	-	-	X
60	MG	BA	2931	-	-	-	X
60	MG	BA	2932	-	-	-	X
60	MG	BA	2950	-	-	-	X
60	MG	BA	2957	-	-	-	X
60	MG	BA	2961	-	-	-	X
60	MG	BA	2962	-	-	-	X
60	MG	BA	2965	-	-	-	X
60	MG	BA	2966	-	-	-	X
60	MG	BA	2972	-	-	-	X
60	MG	BA	2978	-	-	-	X
60	MG	BA	2979	-	-	-	X
60	MG	BA	2983	-	-	-	X
60	MG	BA	2985	-	-	-	X
60	MG	BA	2986	-	-	-	X
60	MG	BA	2987	-	-	-	X
60	MG	BA	2989	-	-	-	X
60	MG	BA	2992	-	-	-	X
60	MG	BA	2994	-	-	-	X
60	MG	BA	2995	-	-	-	X
60	MG	BA	3009	-	-	-	X
60	MG	BA	3010	-	-	-	X
60	MG	BA	3011	-	-	-	X
60	MG	BA	3012	-	-	-	X
60	MG	BA	3014	-	-	-	X
60	MG	BA	3016	-	-	-	X
60	MG	BA	3017	-	-	-	X
60	MG	BA	3021	-	-	-	X
60	MG	BA	3023	-	-	-	X
60	MG	BA	3026	-	-	-	X
60	MG	BA	3027	-	-	-	X
60	MG	BA	3028	-	-	-	X
60	MG	BA	3030	-	-	-	X
60	MG	BA	3033	-	-	-	X
60	MG	BA	3036	-	-	-	X
60	MG	BA	3037	-	-	-	X
60	MG	BA	3042	-	-	-	X
60	MG	BA	3044	-	-	-	X
60	MG	BA	3049	-	-	-	X
60	MG	BA	3051	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
60	MG	BA	3052	-	-	-	X
60	MG	BA	3054	-	-	-	X
60	MG	BA	3059	-	-	-	X
60	MG	BA	3067	-	-	-	X
60	MG	BA	3069	-	-	-	X
60	MG	BA	3070	-	-	-	X
60	MG	BA	3084	-	-	-	X
60	MG	BA	3090	-	-	-	X
60	MG	BA	3091	-	-	-	X
60	MG	BA	3094	-	-	-	X
60	MG	BA	3095	-	-	-	X
60	MG	BA	3101	-	-	-	X
60	MG	BA	3115	-	-	-	X
60	MG	BA	3120	-	-	-	X
60	MG	BA	3123	-	-	-	X
60	MG	BA	3125	-	-	-	X
60	MG	BA	3127	-	-	-	X
60	MG	BA	3132	-	-	-	X
60	MG	BA	3133	-	-	-	X
60	MG	BA	3135	-	-	-	X
60	MG	BA	3138	-	-	-	X
60	MG	BA	3147	-	-	-	X
60	MG	BA	3152	-	-	-	X
60	MG	BA	3158	-	-	-	X
60	MG	BA	3162	-	-	-	X
60	MG	BA	3167	-	-	-	X
60	MG	BA	3171	-	-	-	X
60	MG	BA	3173	-	-	-	X
60	MG	BA	3174	-	-	-	X
60	MG	BA	3178	-	-	-	X
60	MG	BA	3183	-	-	-	X
60	MG	BA	3193	-	-	-	X
60	MG	BA	3213	-	-	-	X
60	MG	BA	3215	-	-	-	X
60	MG	BA	3218	-	-	-	X
60	MG	BA	3231	-	-	-	X
60	MG	BA	3232	-	-	-	X
60	MG	BA	3237	-	-	-	X
60	MG	BA	3255	-	-	-	X
60	MG	BA	3258	-	-	-	X
60	MG	BA	3260	-	-	-	X
60	MG	BA	3262	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
60	MG	BA	3264	-	-	-	X
60	MG	BD	301	-	-	-	X
60	MG	Ba	1609	-	-	-	X
60	MG	Ba	1610	-	-	-	X
60	MG	Ba	1613	-	-	-	X
60	MG	Ba	1624	-	-	-	X
60	MG	Ba	1628	-	-	-	X
60	MG	Ba	1631	-	-	-	X
60	MG	Ba	1633	-	-	-	X
60	MG	Ba	1635	-	-	-	X
60	MG	Ba	1645	-	-	-	X
60	MG	Ba	1655	-	-	-	X
60	MG	Ba	1669	-	-	-	X
60	MG	Ba	1672	-	-	-	X
60	MG	Ba	1678	-	-	-	X
60	MG	Ba	1684	-	-	-	X
60	MG	Ba	1685	-	-	-	X
60	MG	Ba	1693	-	-	-	X
60	MG	Ba	1694	-	-	-	X
60	MG	Ba	1723	-	-	-	X
60	MG	Ba	1725	-	-	-	X
60	MG	Ba	1728	-	-	-	X
60	MG	Ba	1730	-	-	-	X
60	MG	Ba	1731	-	-	-	X
60	MG	Ba	1738	-	-	-	X
60	MG	Ba	1742	-	-	-	X
60	MG	Bm	202	-	-	-	X
60	MG	Bv	105	-	-	-	X

2 Entry composition

There are 60 unique types of molecules in this entry. The entry contains 297206 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
			770	496	133	139	2			
21	By	94	Total	C	N	O	S	0	0	0
			766	495	130	139	2			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Ay	45	ALA	ARG	ENGINEERED	UNP P0C077
Ay	81	ALA	ARG	ENGINEERED	UNP P0C077
By	45	ALA	ARG	ENGINEERED	UNP P0C077
By	81	ALA	ARG	ENGINEERED	UNP P0C077

- 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(*GP*GP*CP*AP*AP*GP*GP*AP*GP*GP*UP*A*AP*AP*AP*AP*UP*GP*(OMU)P*(A2M)P*(OMG)P*AP*AP*AP*A)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	Ax	12	Total	C	N	O	P	0	0	0
			262	121	54	76	11			
23	Bx	12	Total	C	N	O	P	0	0	0
			262	121	54	76	11			

- 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			

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

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
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			
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	Aq	1	Total	Mg	0	0
			1	1		
60	BA	366	Total	Mg	0	0
			366	366		
60	AB	3	Total	Mg	0	0
			3	3		

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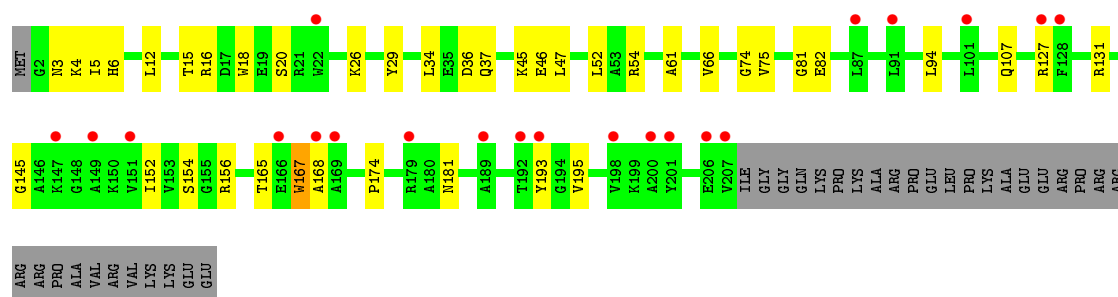
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
60	AX	1	Total 1	Mg 1	0	0
60	Bw	1	Total 1	Mg 1	0	0
60	B5	1	Total 1	Mg 1	0	0
60	BB	3	Total 3	Mg 3	0	0
60	Ba	143	Total 143	Mg 143	0	0
60	BF	1	Total 1	Mg 1	0	0
60	BX	1	Total 1	Mg 1	0	0
60	Aw	1	Total 1	Mg 1	0	0
60	AA	368	Total 368	Mg 368	0	0
60	BQ	1	Total 1	Mg 1	0	0
60	A5	1	Total 1	Mg 1	0	0
60	A1	1	Total 1	Mg 1	0	0
60	AD	2	Total 2	Mg 2	0	0
60	Bm	2	Total 2	Mg 2	0	0
60	Av	4	Total 4	Mg 4	0	0
60	Bx	1	Total 1	Mg 1	0	0
60	Aa	145	Total 145	Mg 145	0	0
60	Bq	1	Total 1	Mg 1	0	0
60	B7	2	Total 2	Mg 2	0	0
60	Am	1	Total 1	Mg 1	0	0
60	AQ	1	Total 1	Mg 1	0	0

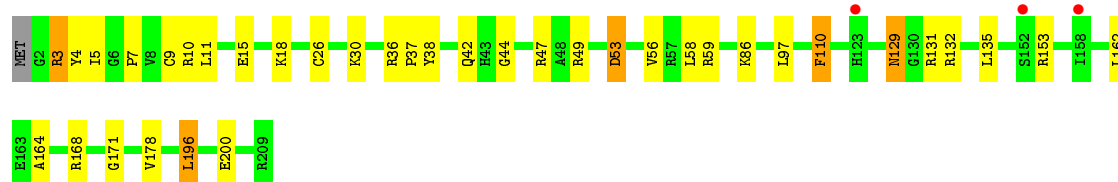
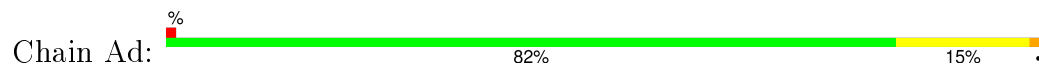
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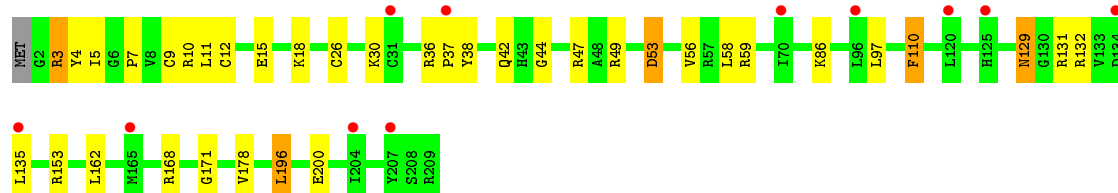
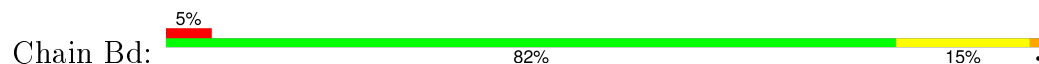
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
60	A7	2	Total 2	Mg 2	0	0
60	BD	2	Total 2	Mg 2	0	0
60	B0	2	Total 2	Mg 2	0	0
60	Bv	5	Total 5	Mg 5	0	0
60	AF	1	Total 1	Mg 1	0	0



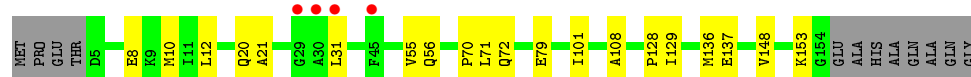
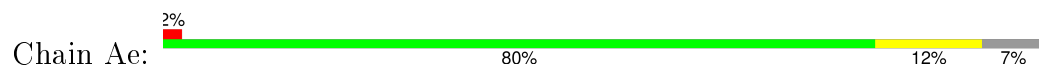
- Molecule 3: 30S ribosomal protein S4



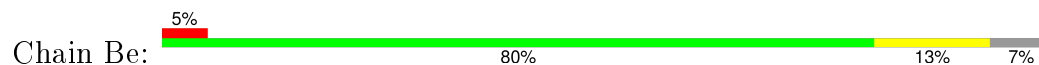
- Molecule 3: 30S ribosomal protein S4



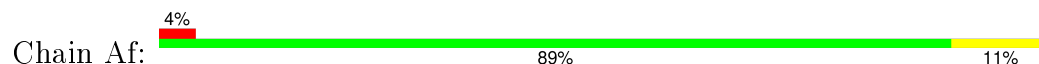
- Molecule 4: 30S ribosomal protein S5



- Molecule 4: 30S ribosomal protein S5

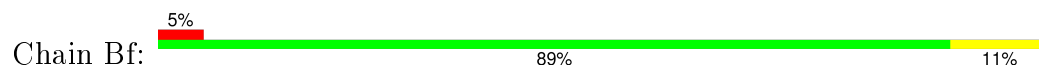


- Molecule 5: 30S ribosomal protein S6

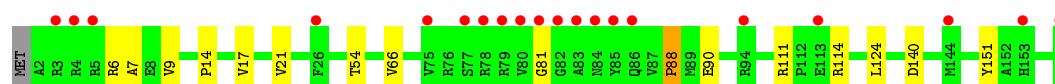
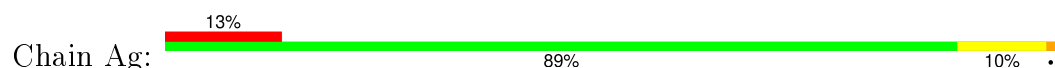




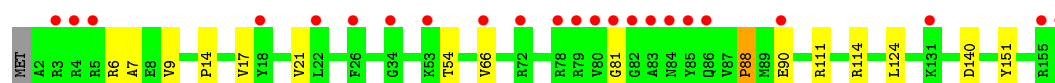
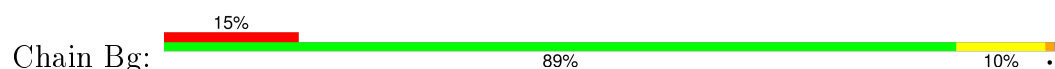
- Molecule 5: 30S ribosomal protein S6



- Molecule 6: 30S ribosomal protein S7



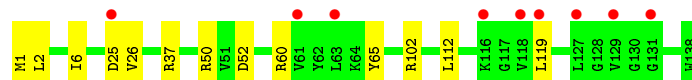
- Molecule 6: 30S ribosomal protein S7



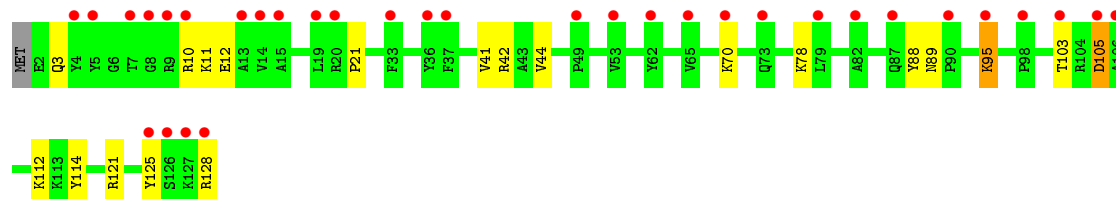
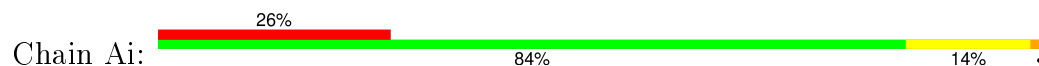
- Molecule 7: 30S ribosomal protein S8



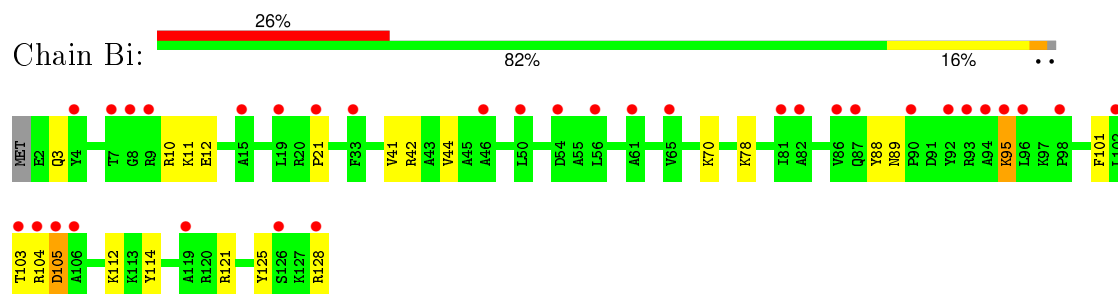
- Molecule 7: 30S ribosomal protein S8



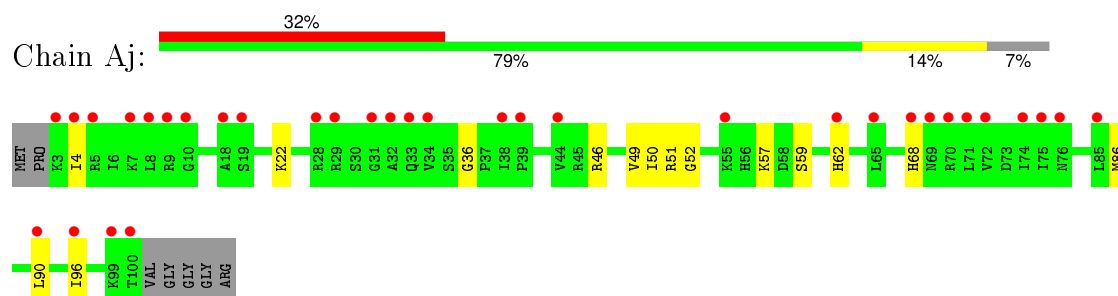
- Molecule 8: 30S ribosomal protein S9



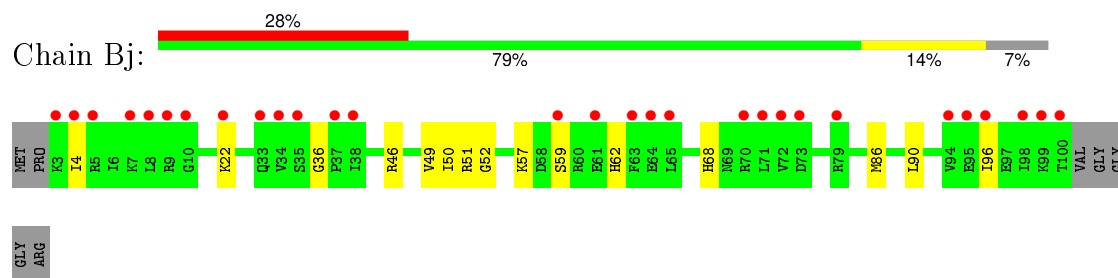
- Molecule 8: 30S ribosomal protein S9



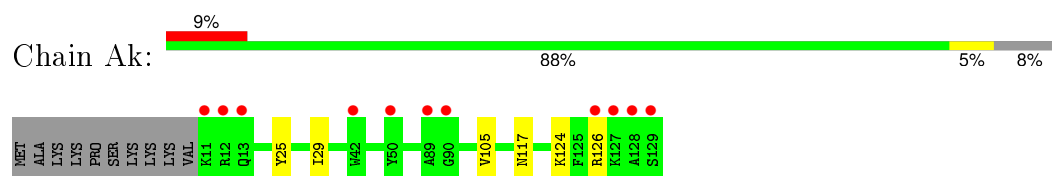
- Molecule 9: 30S ribosomal protein S10



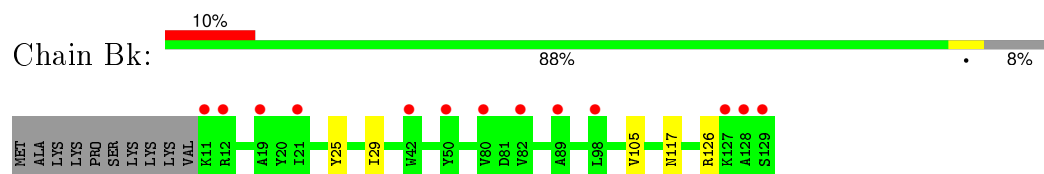
- Molecule 9: 30S ribosomal protein S10



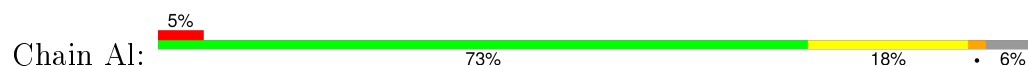
- Molecule 10: 30S ribosomal protein S11



- Molecule 10: 30S ribosomal protein S11



- Molecule 11: 30S ribosomal protein S12





- [illegible]

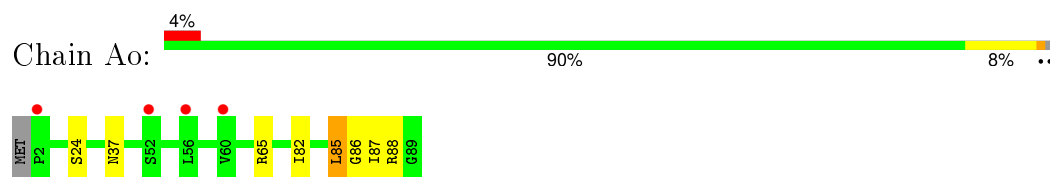
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- Phylogenetic tree showing relationships between various taxa. The tree is rooted at the bottom left and branches upwards. Taxa are labeled with three-letter codes (e.g., MET, R3, A2, etc.) and are color-coded: grey for the root (MET), yellow for most other taxa, and green for a large clade on the right (starting from L96). Red dots are placed on several branches, indicating specific evolutionary events or nodes of interest. The tree is highly branched, with many taxa having multiple descendants.

-

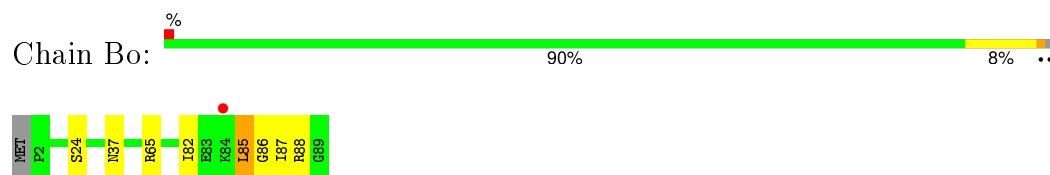
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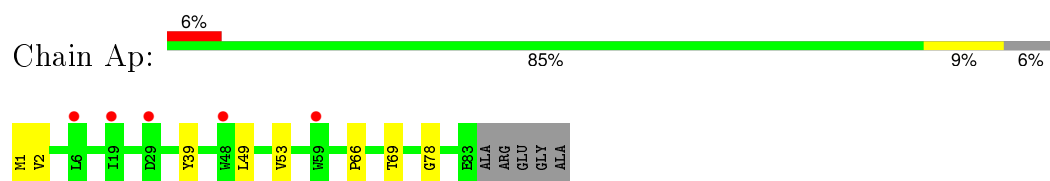
- Molecule 14: 30S ribosomal protein S15



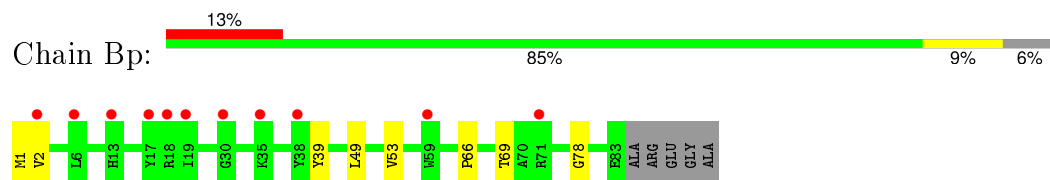
- Molecule 14: 30S ribosomal protein S15



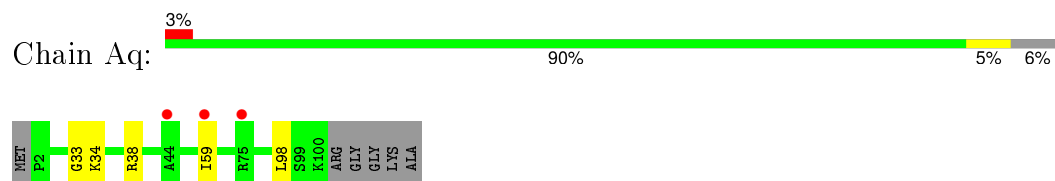
- Molecule 15: 30S ribosomal protein S16



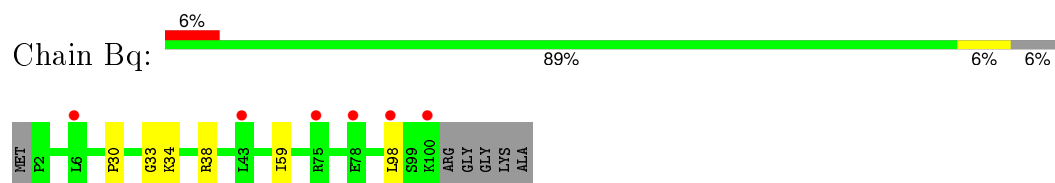
- Molecule 15: 30S ribosomal protein S16



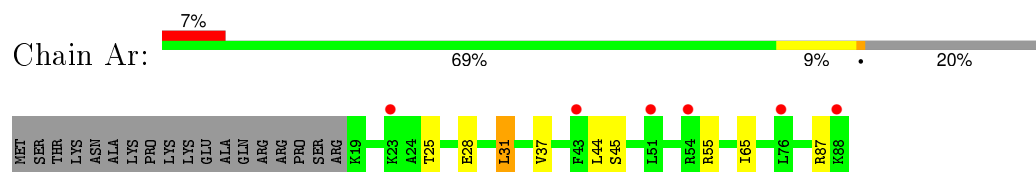
- Molecule 16: 30S ribosomal protein S17



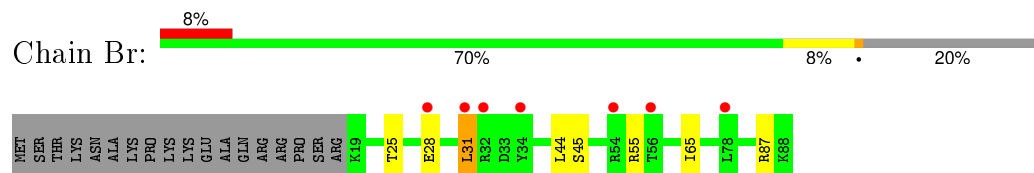
- Molecule 16: 30S ribosomal protein S17



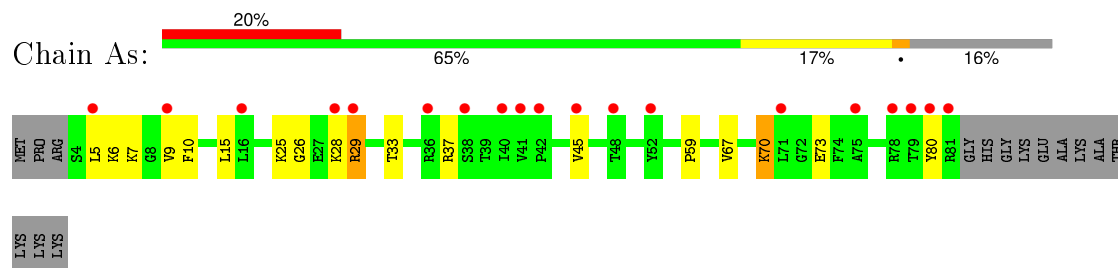
- Molecule 17: 30S ribosomal protein S18



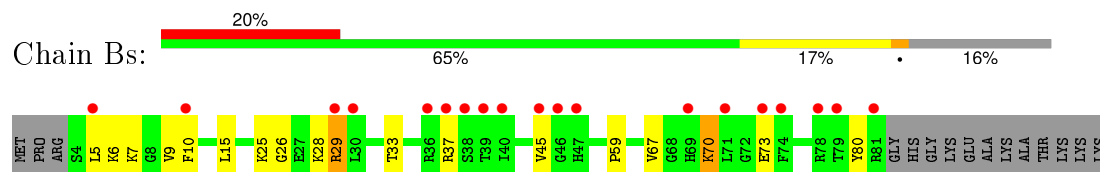
- Molecule 17: 30S ribosomal protein S18



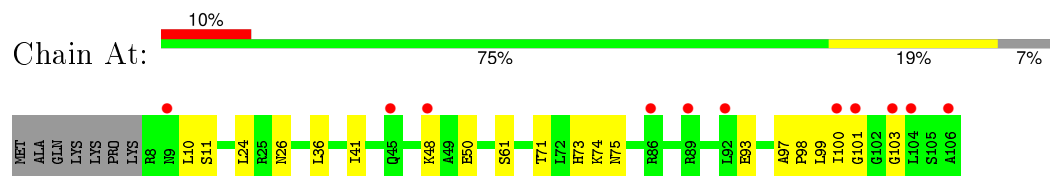
- Molecule 18: 30S ribosomal protein S19



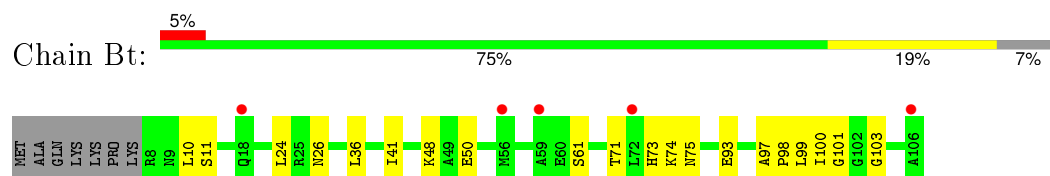
- Molecule 18: 30S ribosomal protein S19



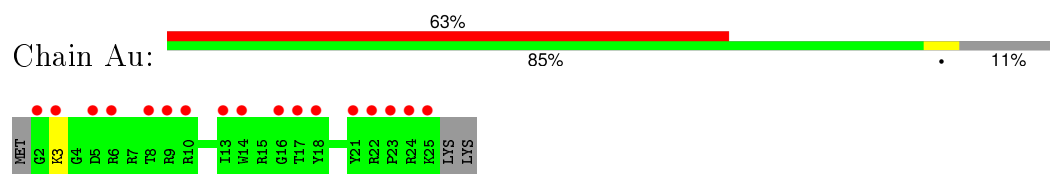
- Molecule 19: 30S ribosomal protein S20



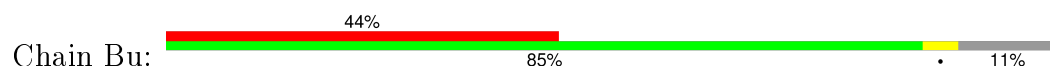
- Molecule 19: 30S ribosomal protein S20

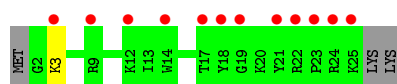


- Molecule 20: 30S ribosomal protein Thx

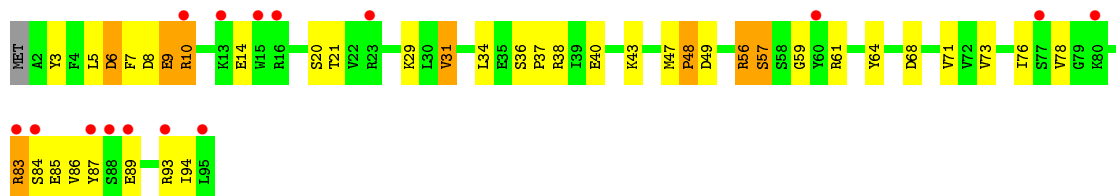


- Molecule 20: 30S ribosomal protein Thx

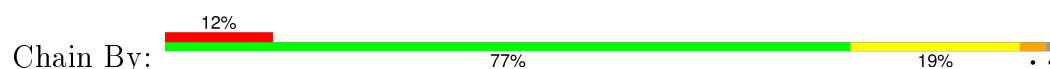




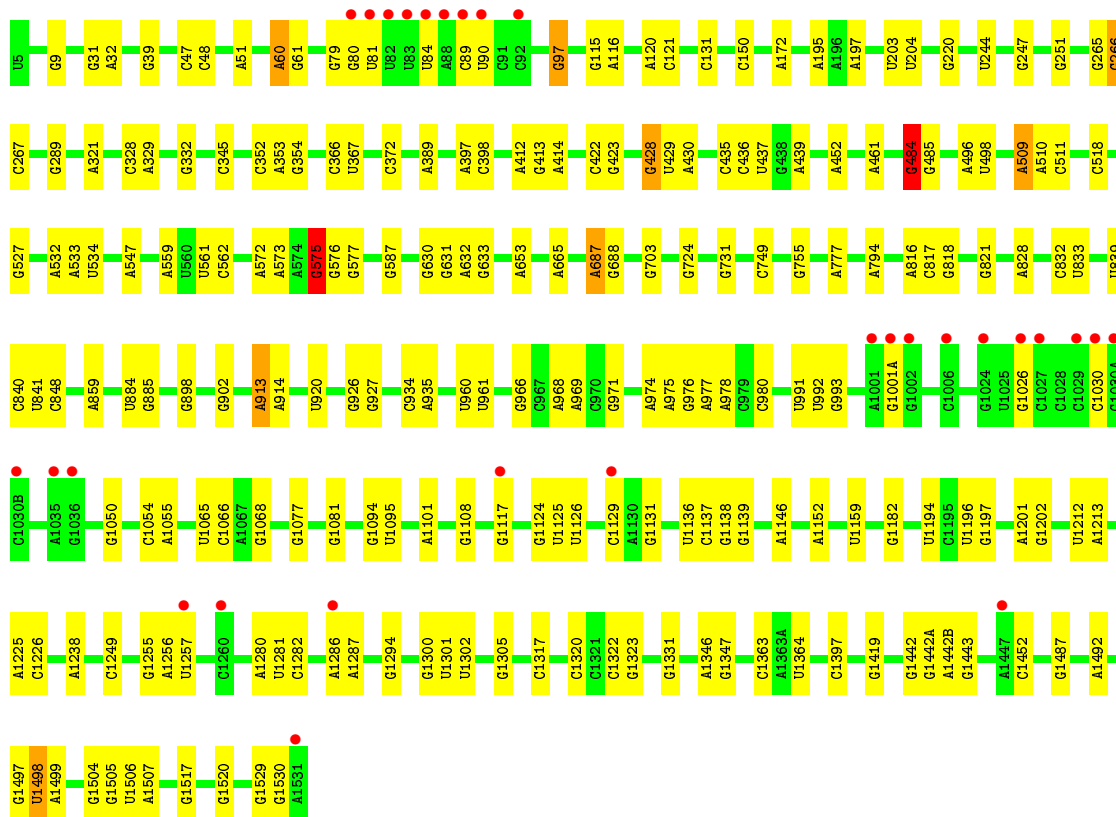
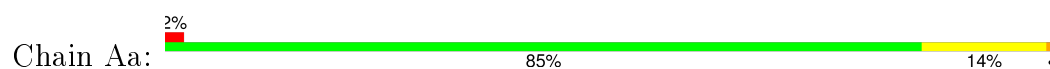
- Molecule 21: Toxin relE



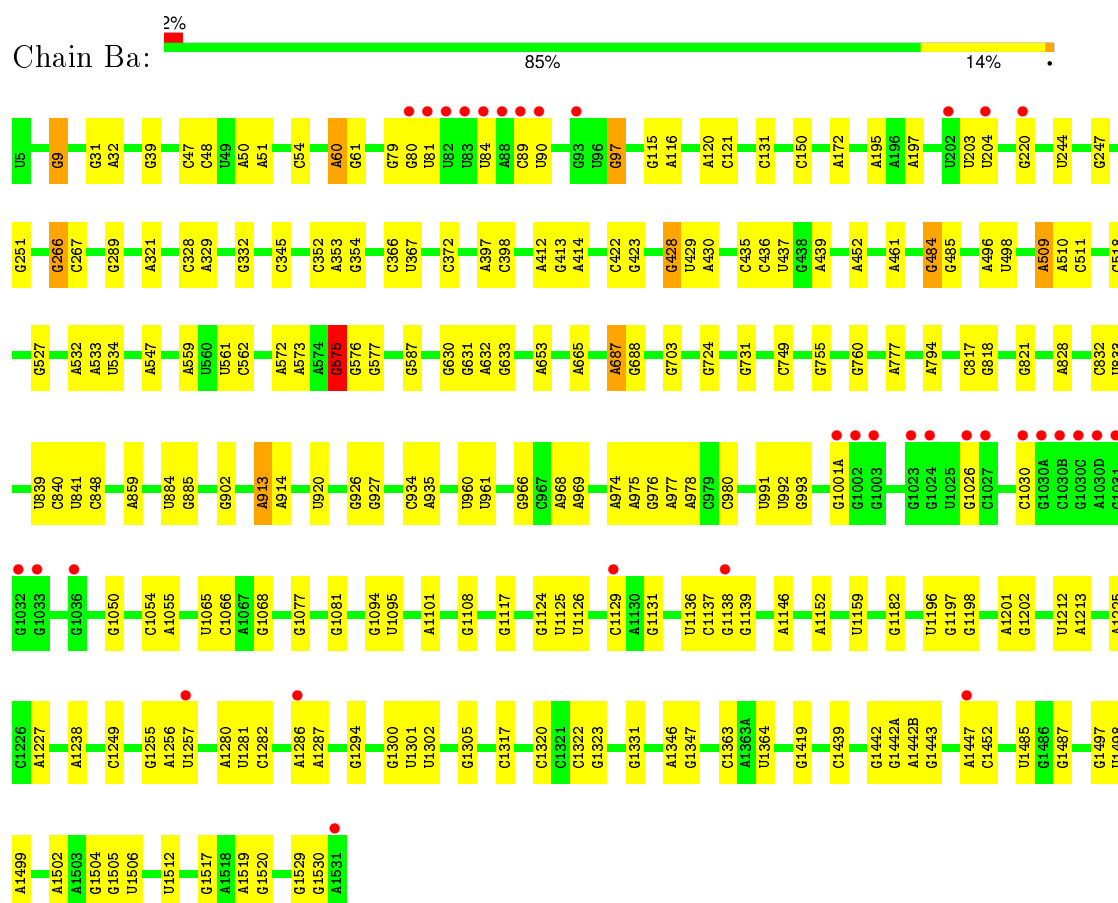
- Molecule 21: Toxin relE



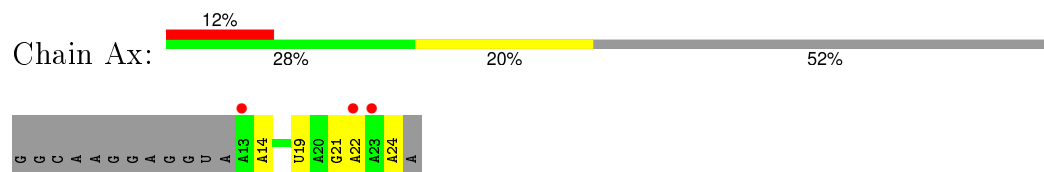
- Molecule 22: RNA (1504-MER)



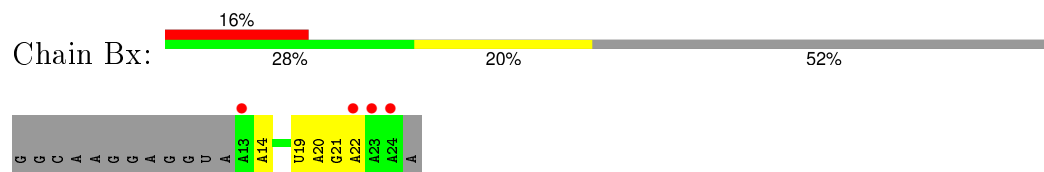
- Molecule 22: RNA (1504-MER)



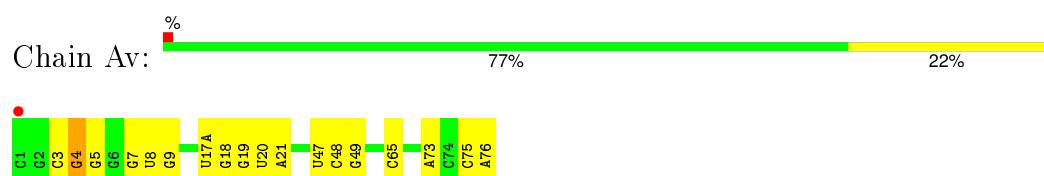
- Molecule 23: RNA (5'-R(*GP*GP*CP*AP*AP*GP*GP*AP*GP*GP*UP*A*AP*AP*AP*AP*UP*GP*(OMU)P*(A2M)P*(OMG)P*AP*AP*AP*A)-3')



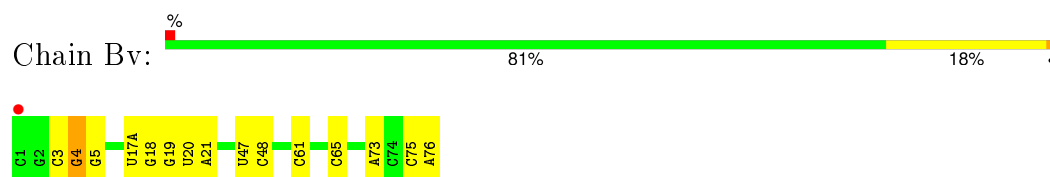
- Molecule 23: RNA (5'-R(*GP*GP*CP*AP*AP*GP*GP*AP*GP*GP*UP*A*AP*AP*AP*AP*UP*GP*(OMU)P*(A2M)P*(OMG)P*AP*AP*AP*A)-3')



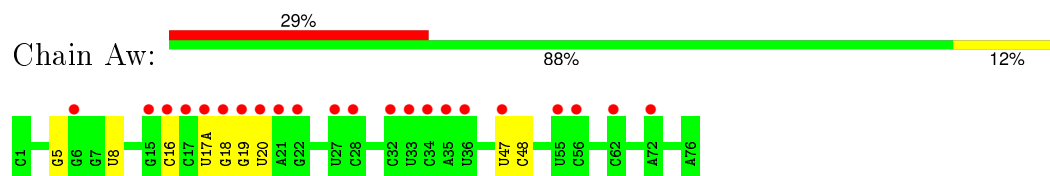
- Molecule 24: RNA (77-MER)



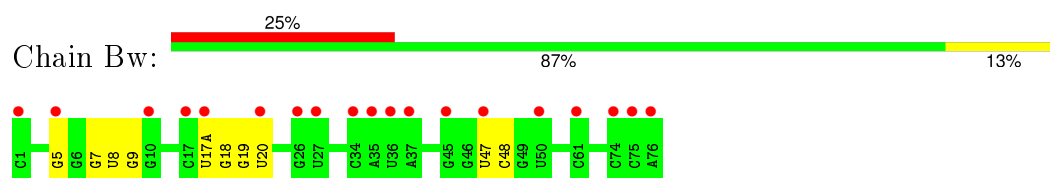
- Molecule 24: RNA (77-MER)



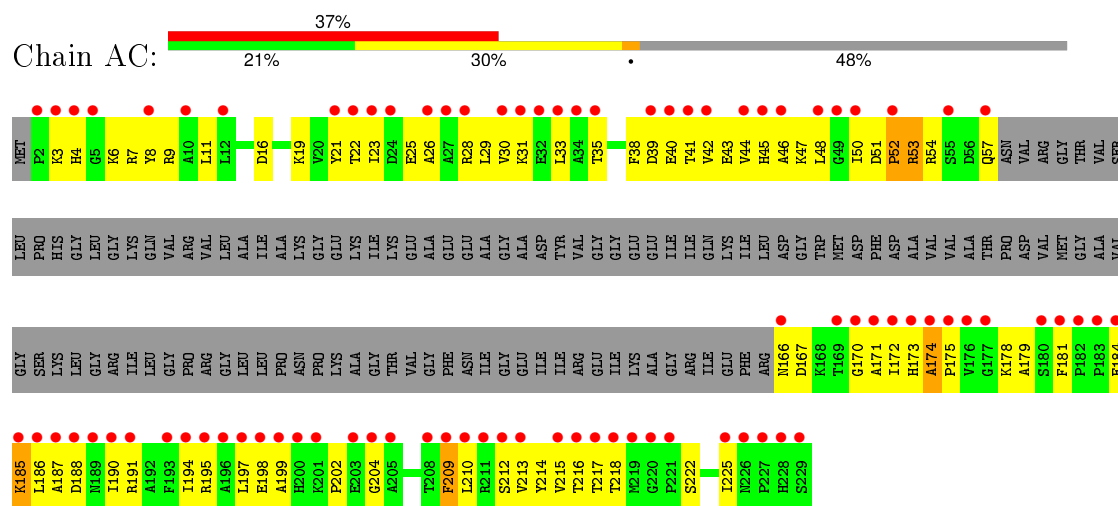
- Molecule 25: RNA (77-MER)



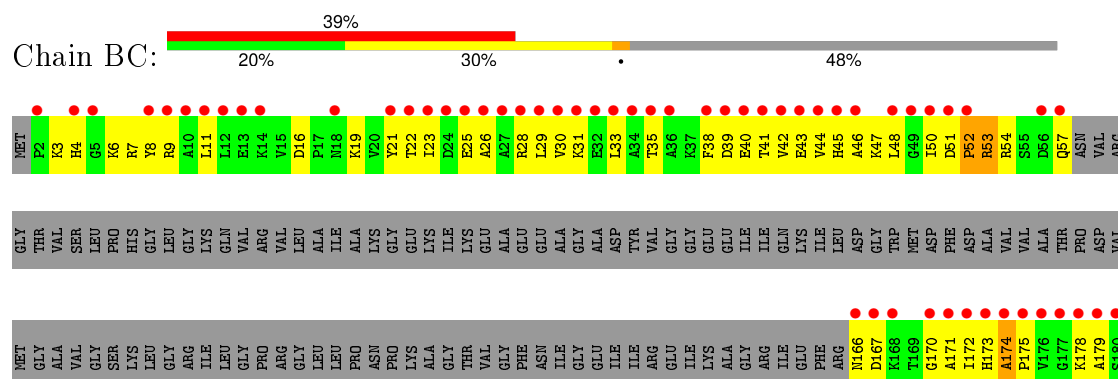
- Molecule 25: RNA (77-MER)

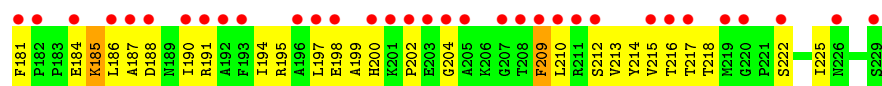


- Molecule 26: 50S ribosomal protein L1

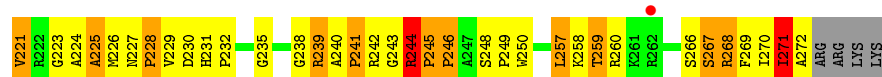
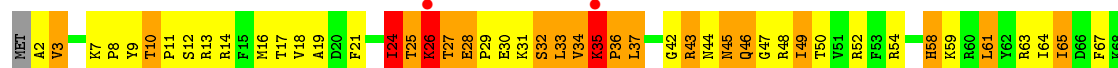
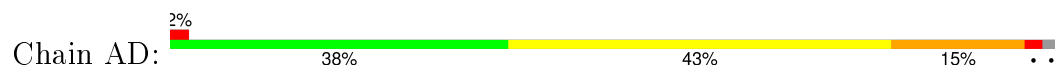


- Molecule 26: 50S ribosomal protein L1

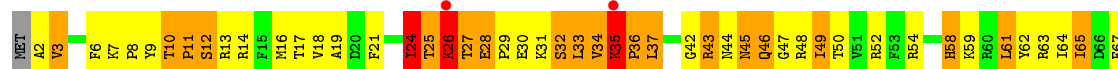




• Molecule 27: 50S ribosomal protein L2



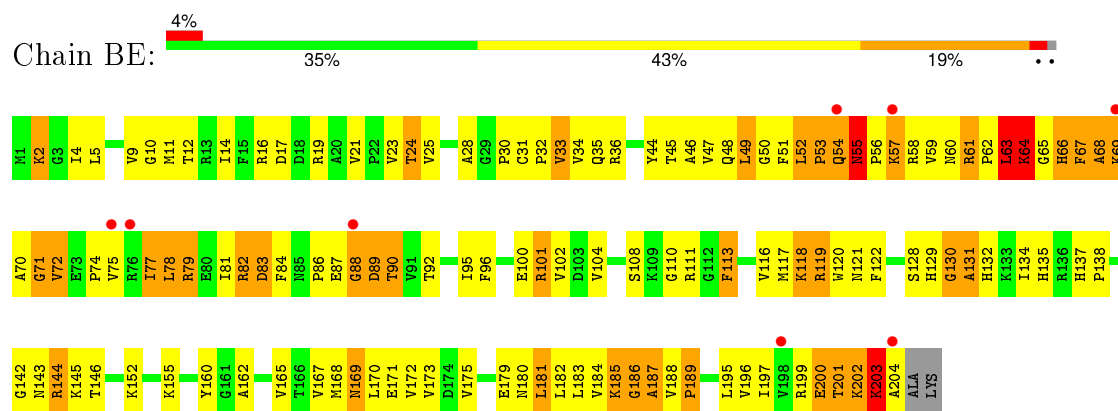
• Molecule 27: 50S ribosomal protein L2



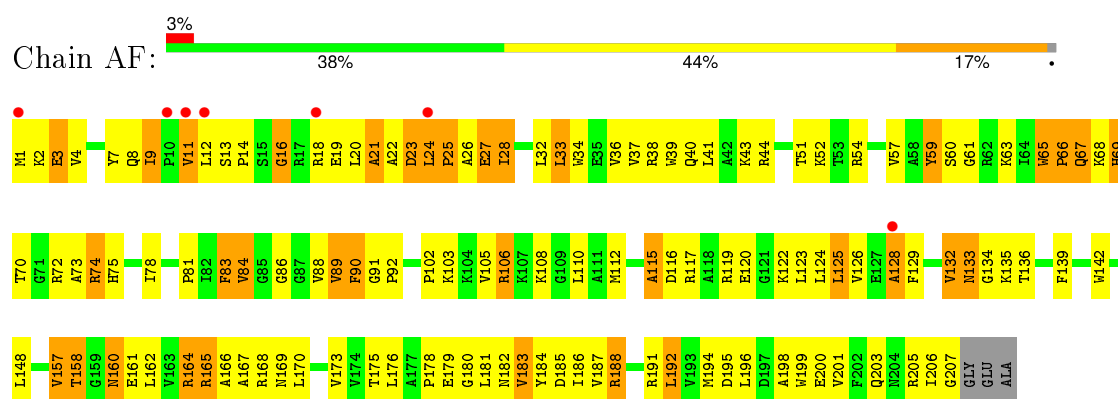
• Molecule 28: 50S ribosomal protein L3



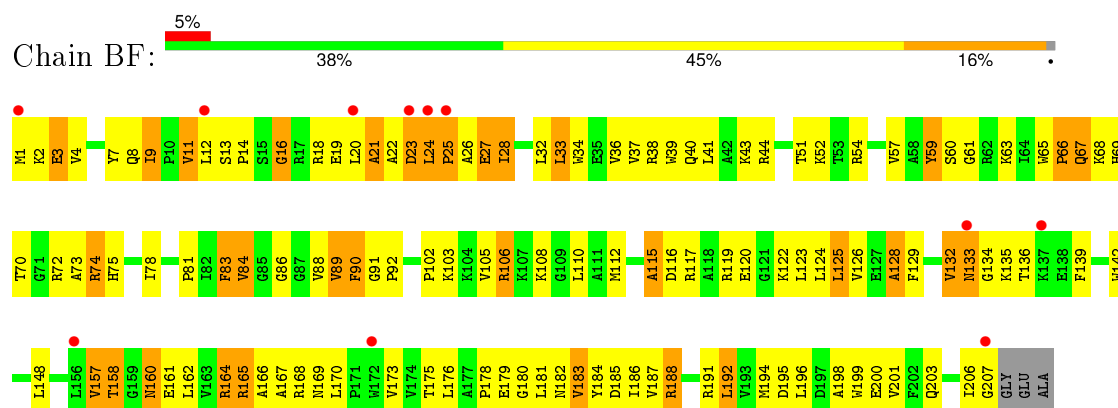
- Molecule 28: 50S ribosomal protein L3



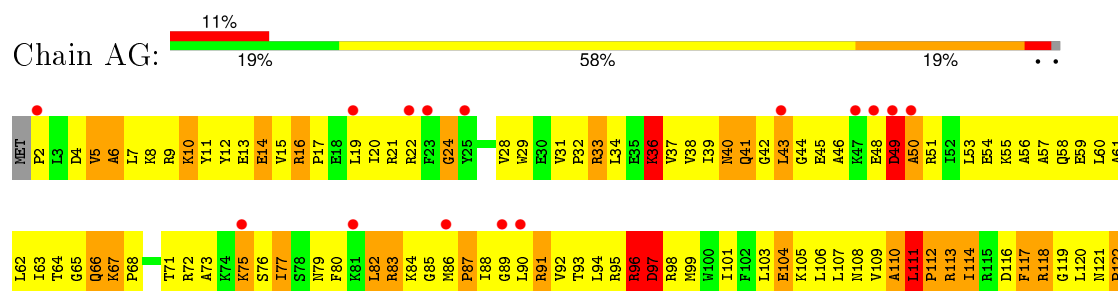
- Molecule 29: 50S ribosomal protein L4



- Molecule 29: 50S ribosomal protein L4

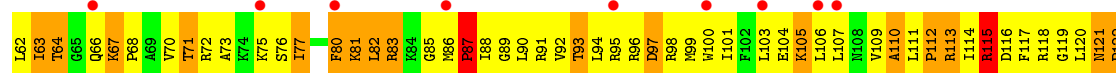
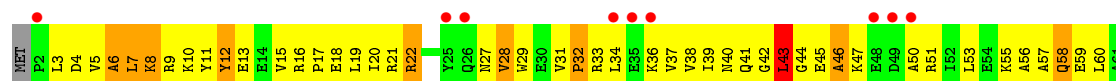


- Molecule 30: 50S ribosomal protein L5

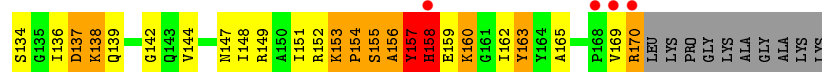




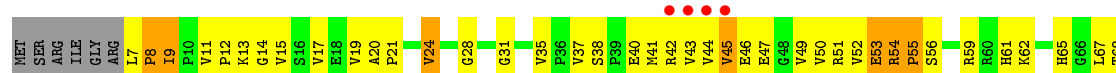
• Molecule 30: 50S ribosomal protein L5



• Molecule 31: 50S ribosomal protein L6

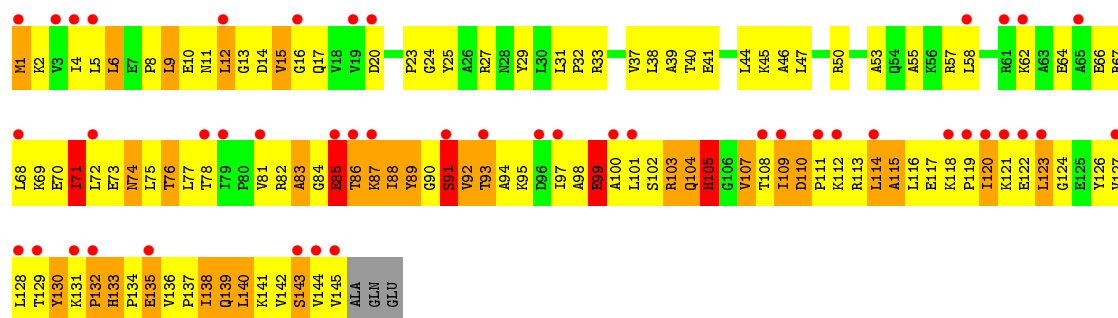


• Molecule 31: 50S ribosomal protein L6

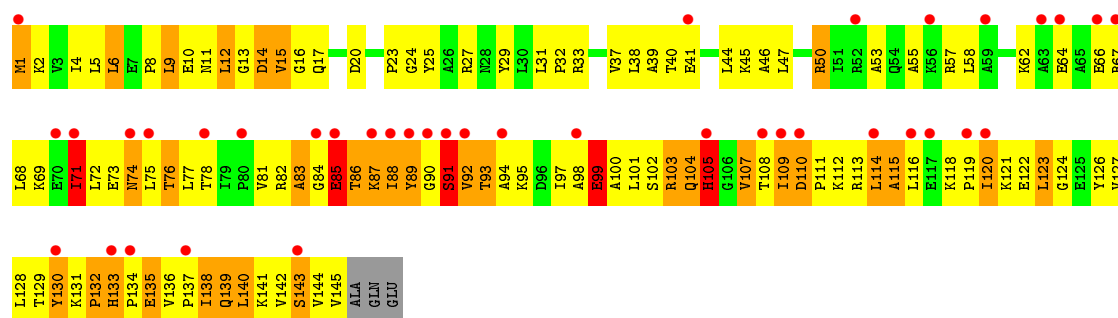


• Molecule 32: 50S ribosomal protein L9

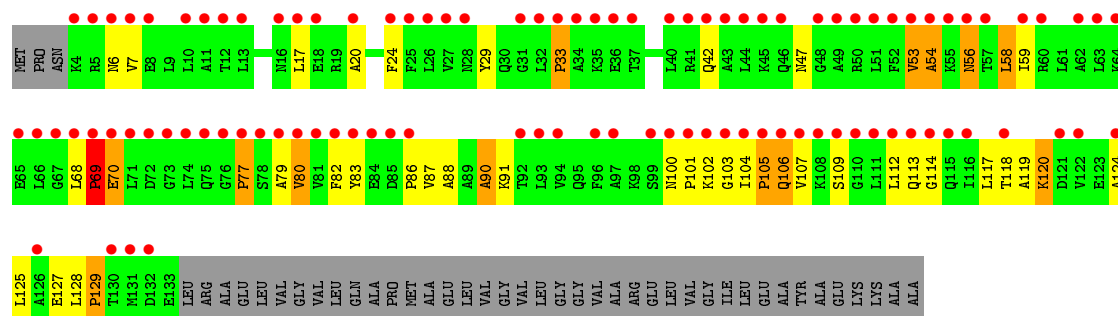




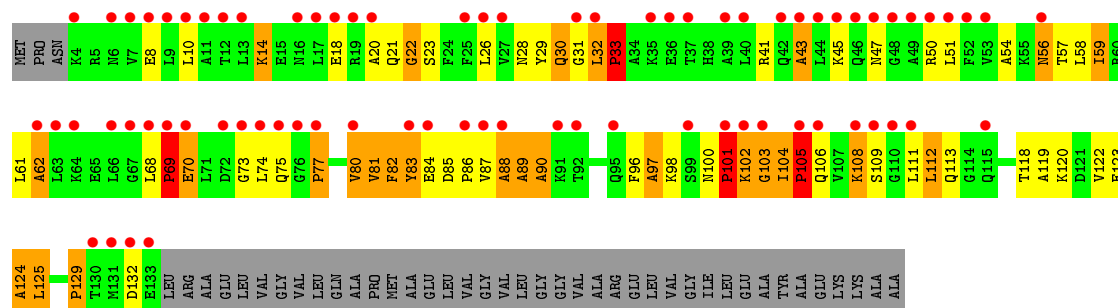
- Molecule 32: 50S ribosomal protein L9



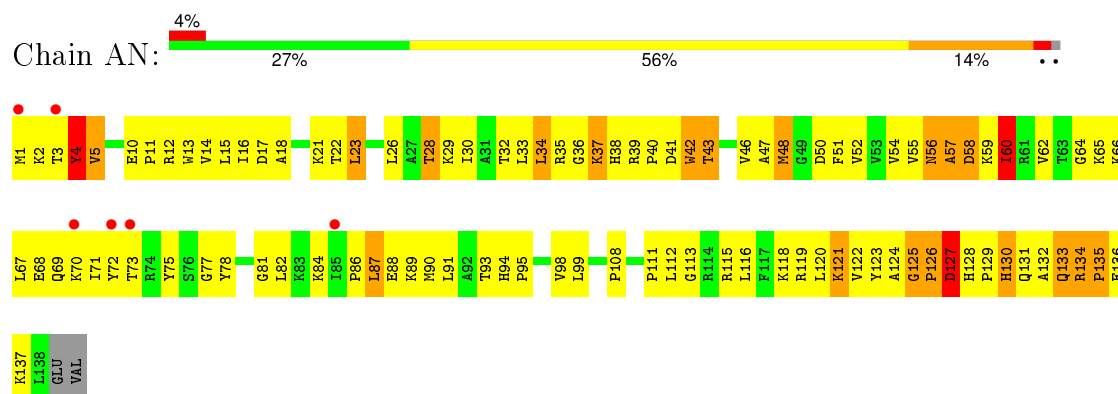
- Molecule 33: 50S ribosomal protein L10



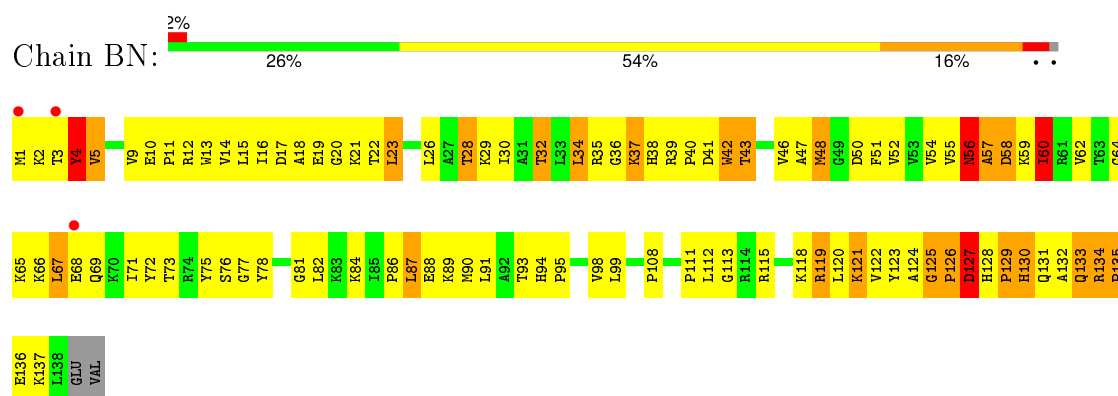
- Molecule 33: 50S ribosomal protein L10



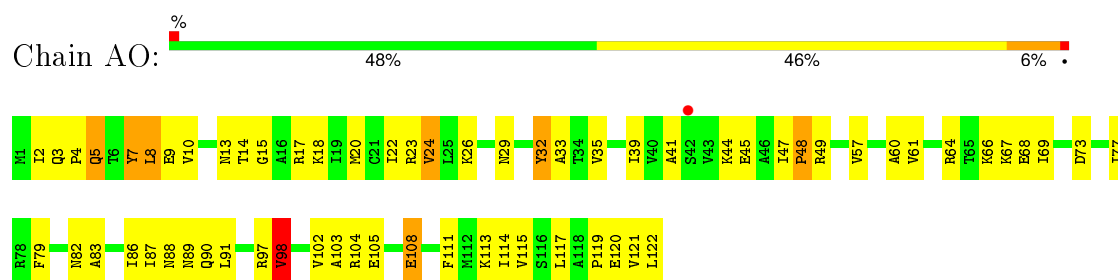
- Molecule 34: 50S ribosomal protein L13



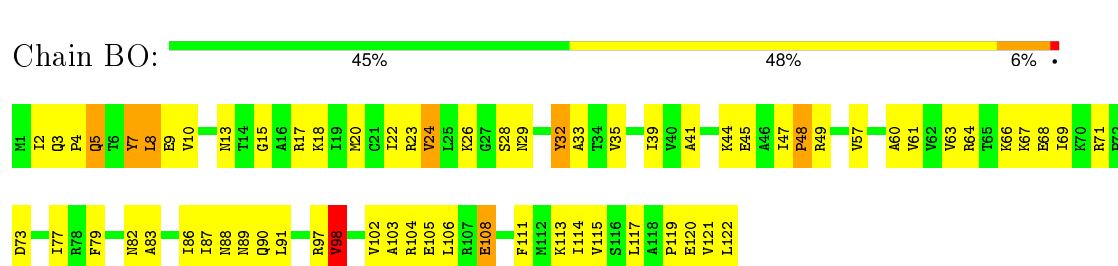
- Molecule 34: 50S ribosomal protein L13



- Molecule 35: 50S ribosomal protein L14

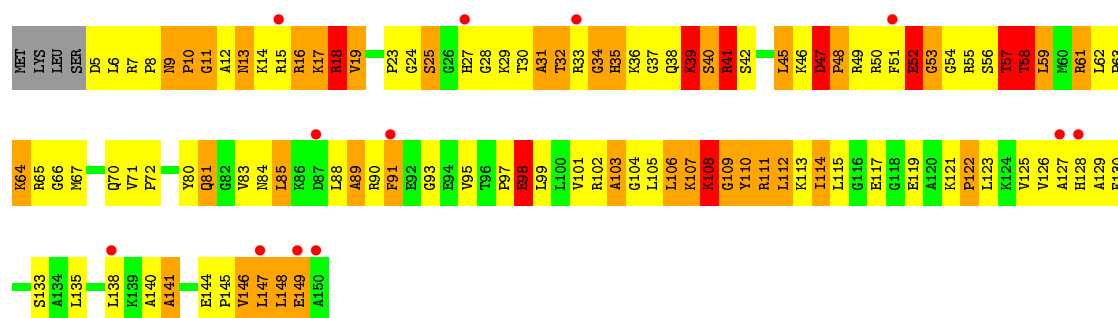


- Molecule 35: 50S ribosomal protein L14

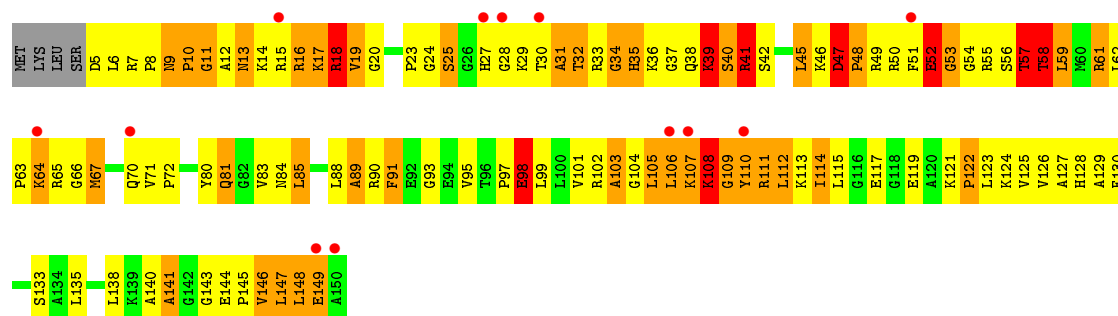
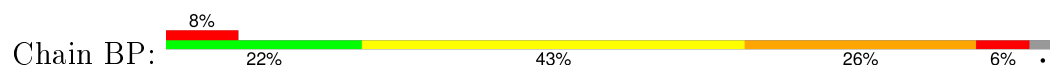


- Molecule 36: 50S ribosomal protein L15

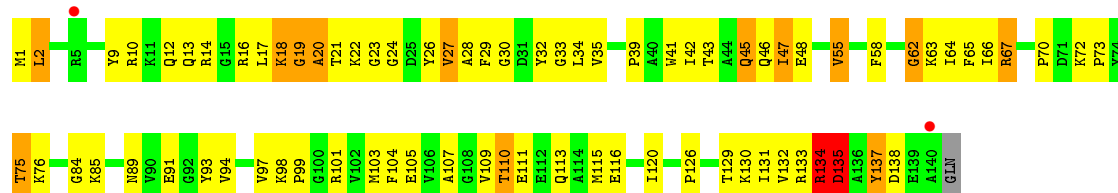




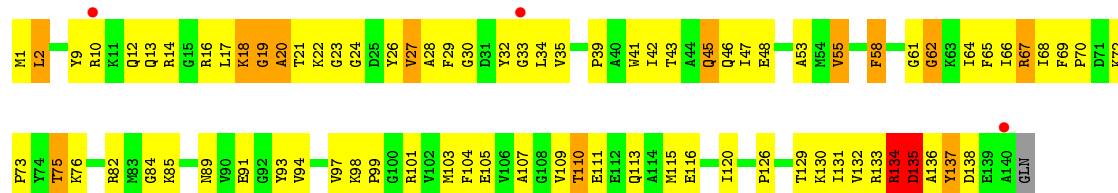
- Molecule 36: 50S ribosomal protein L15



- Molecule 37: 50S ribosomal protein L16

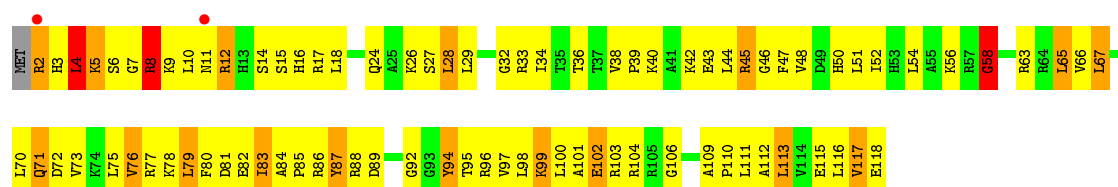


- Molecule 37: 50S ribosomal protein L16

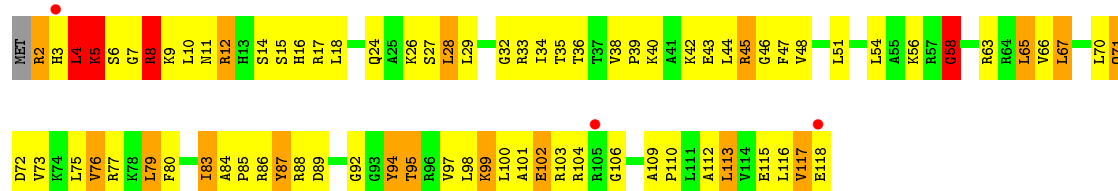


- Molecule 38: 50S ribosomal protein L17

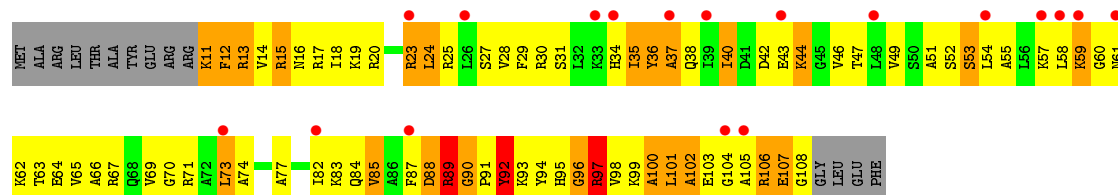
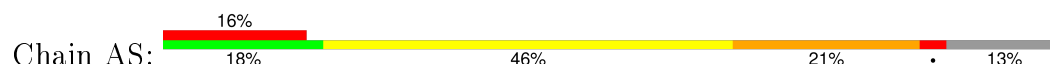




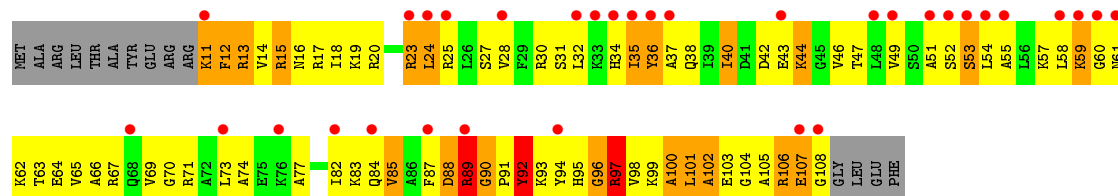
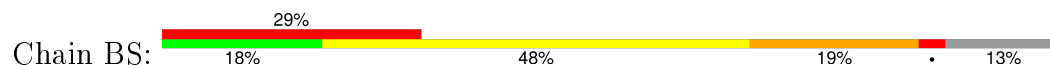
• Molecule 38: 50S ribosomal protein L17



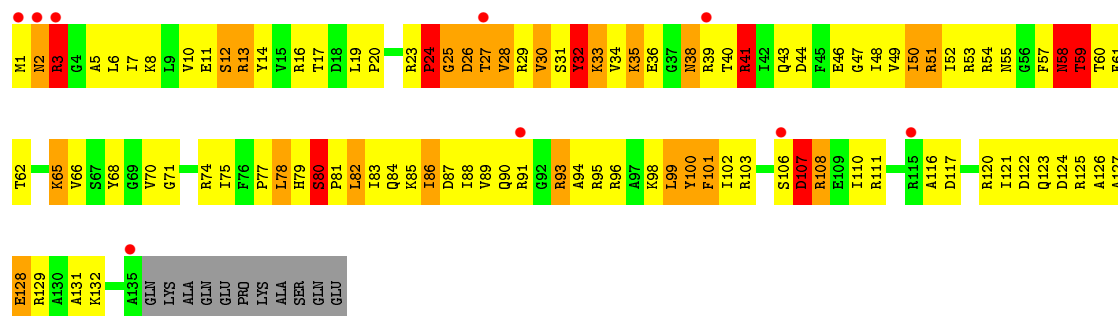
• Molecule 39: 50S ribosomal protein L18



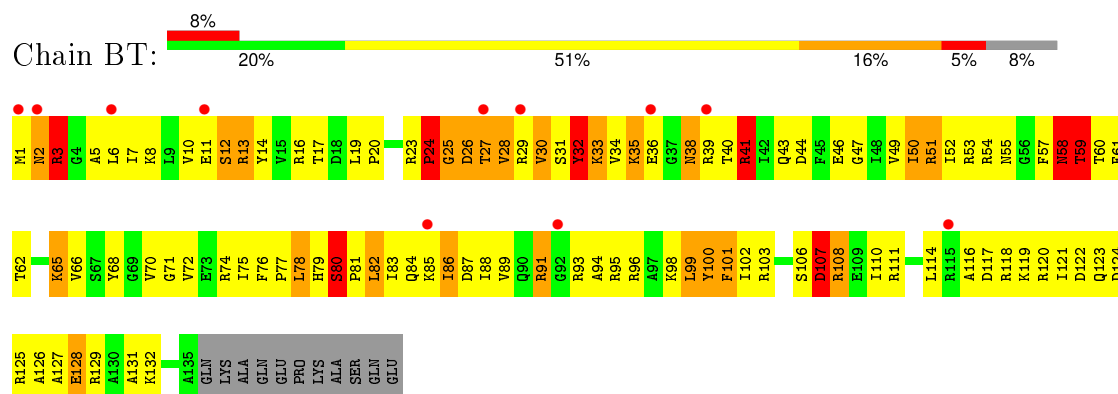
• Molecule 39: 50S ribosomal protein L18



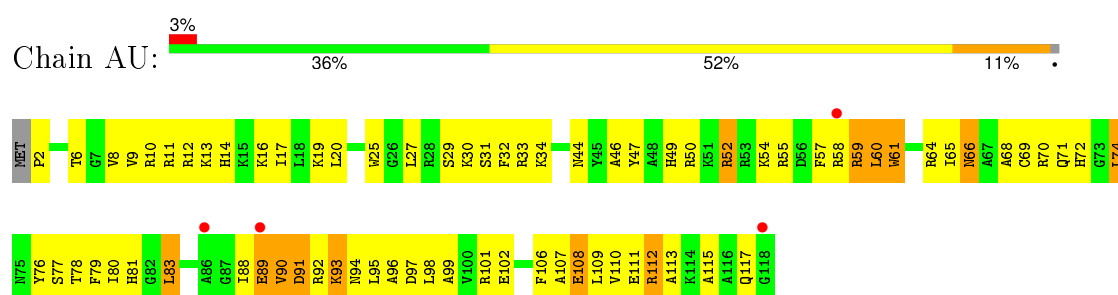
• Molecule 40: 50S ribosomal protein L19



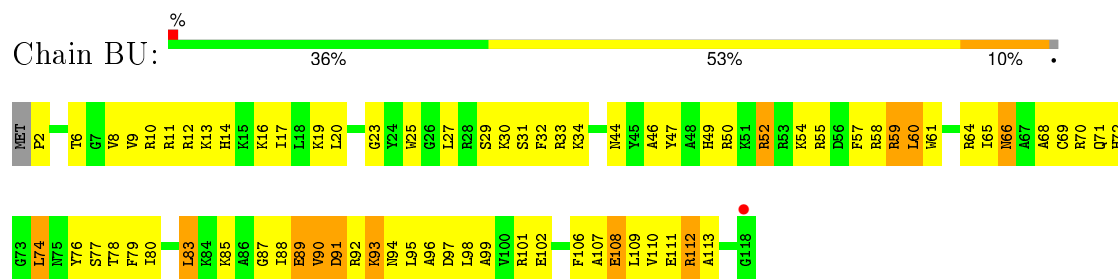
- Molecule 40: 50S ribosomal protein L19



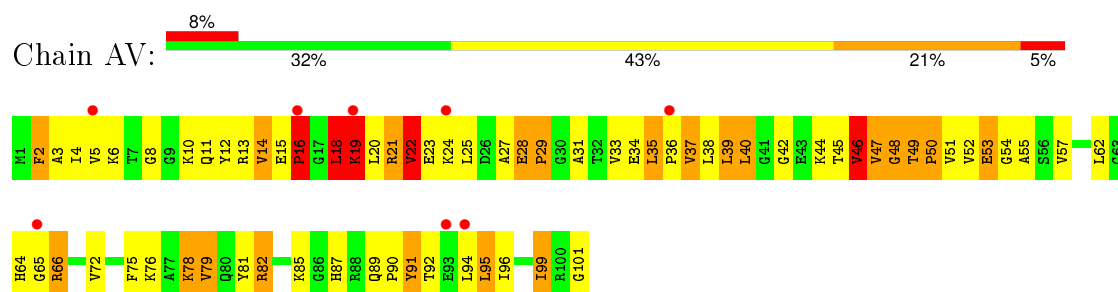
- Molecule 41: 50S ribosomal protein L20



- Molecule 41: 50S ribosomal protein L20

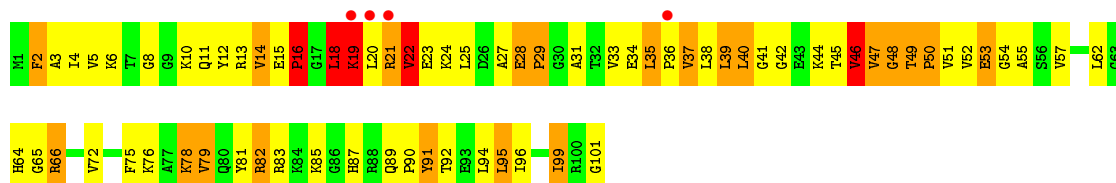


- Molecule 42: 50S ribosomal protein L21

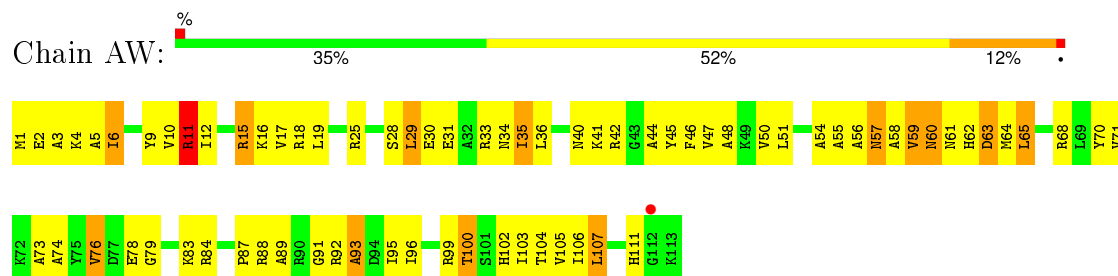


- Molecule 42: 50S ribosomal protein L21

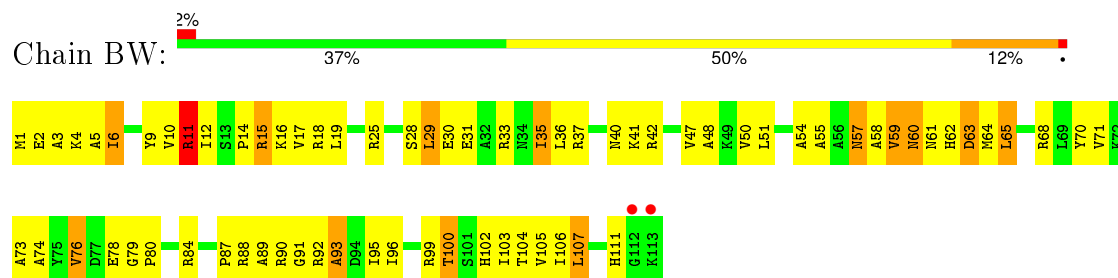




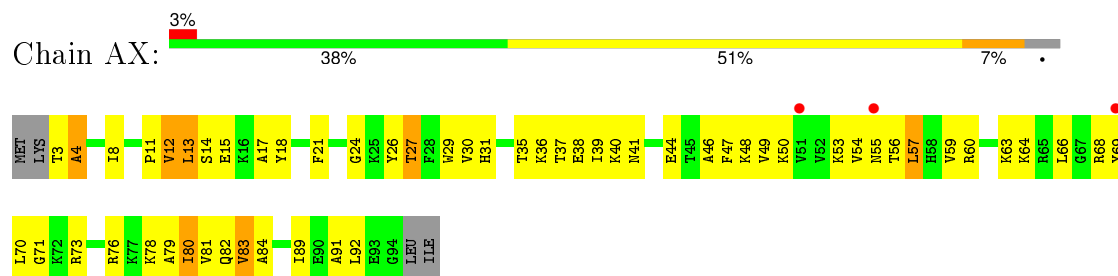
• Molecule 43: 50S ribosomal protein L22



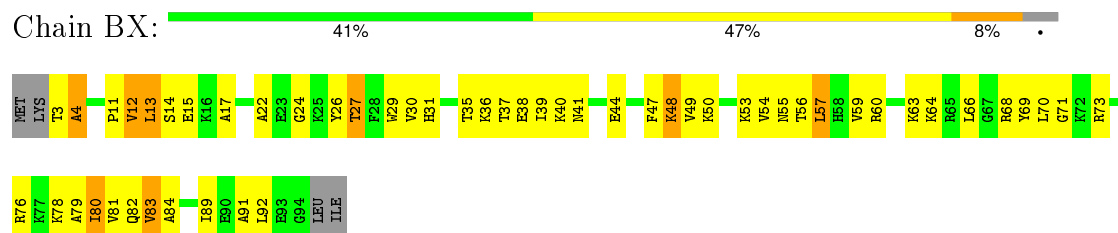
• Molecule 43: 50S ribosomal protein L22



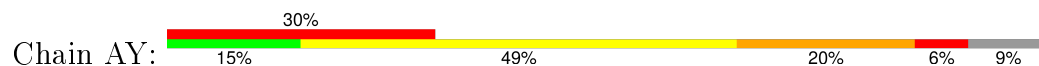
• Molecule 44: 50S ribosomal protein L23

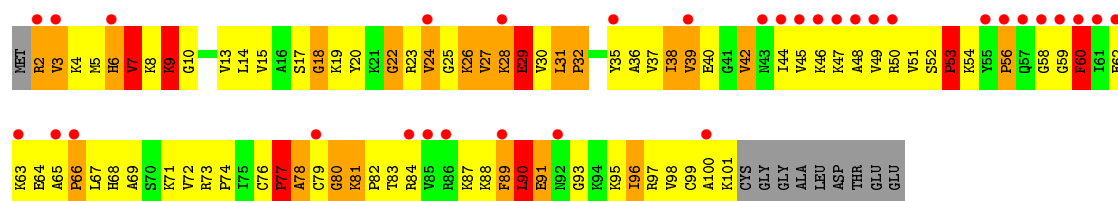


• Molecule 44: 50S ribosomal protein L23

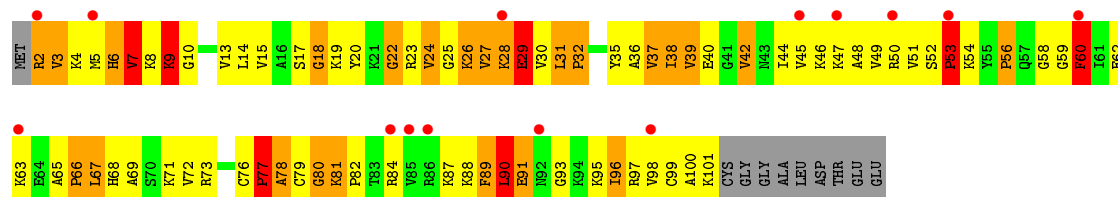
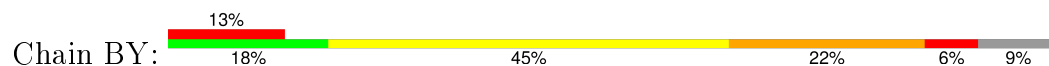


• Molecule 45: 50S ribosomal protein L24

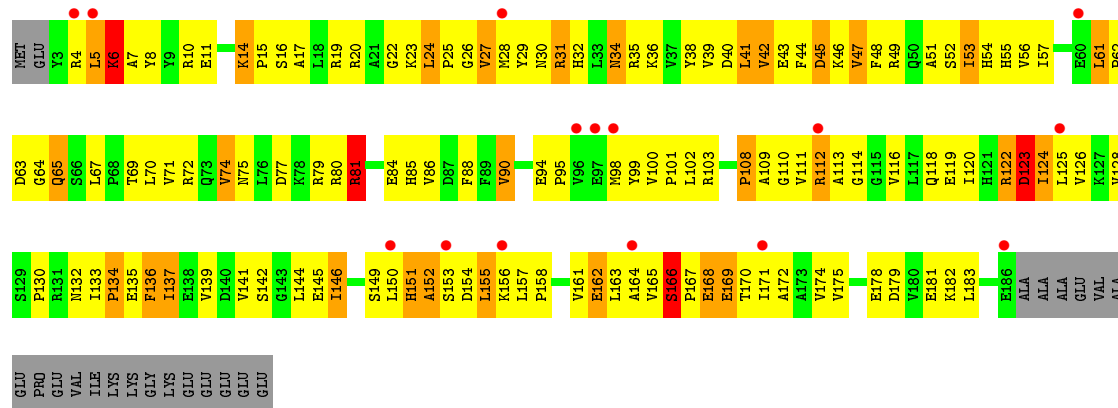




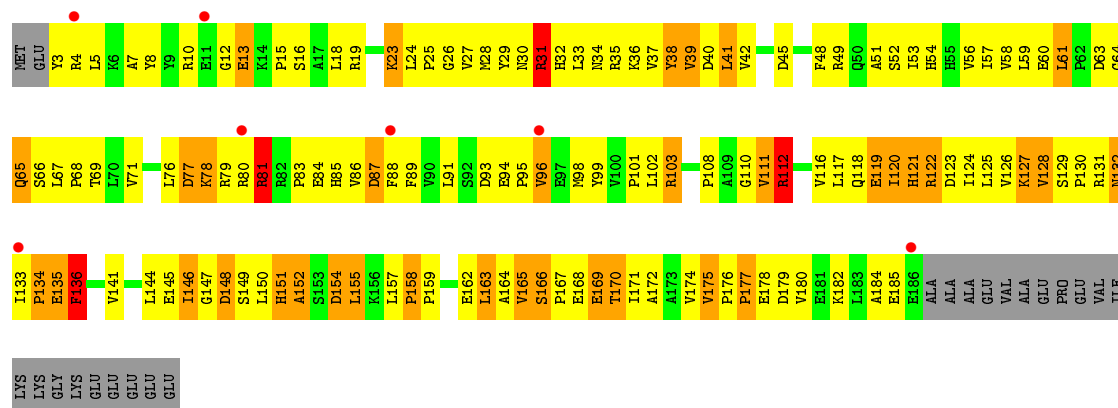
• Molecule 45: 50S ribosomal protein L24



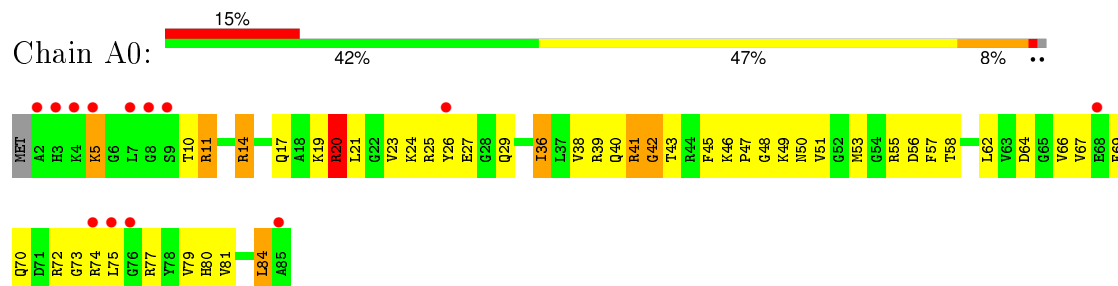
• Molecule 46: 50S ribosomal protein L25



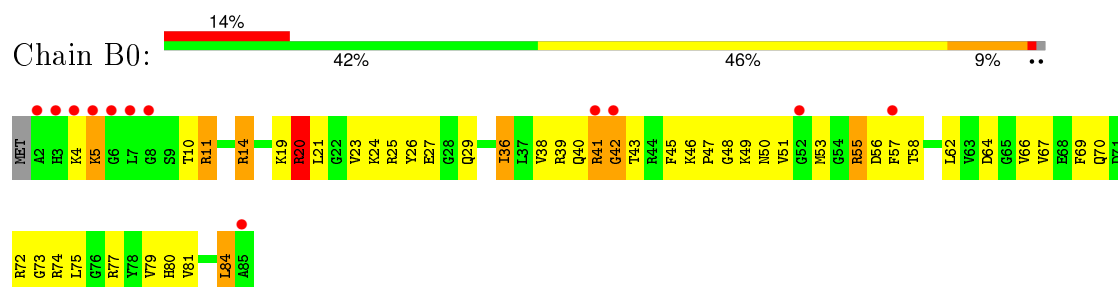
• Molecule 46: 50S ribosomal protein L25



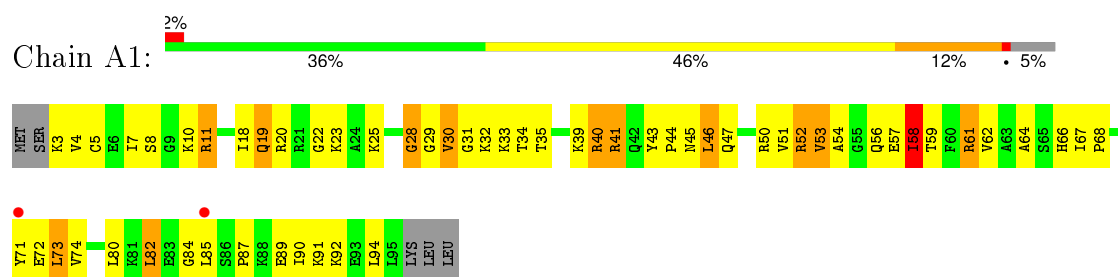
- Molecule 47: 50S ribosomal protein L27



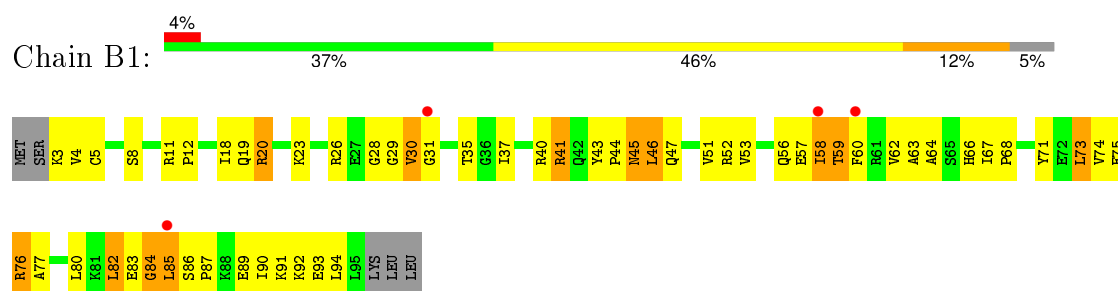
- Molecule 47: 50S ribosomal protein L27



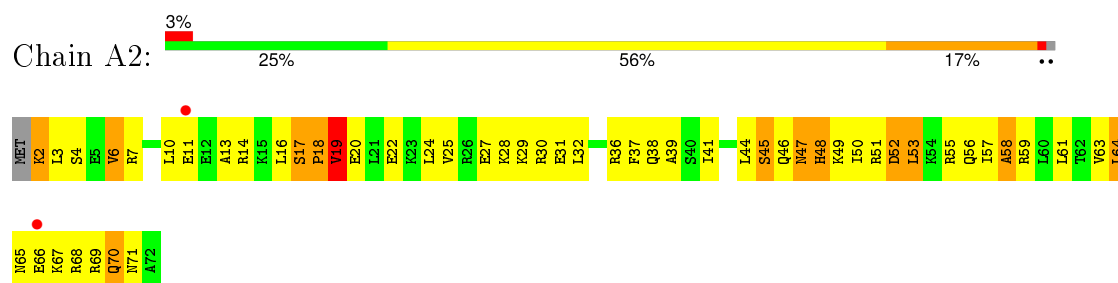
- Molecule 48: 50S ribosomal protein L28



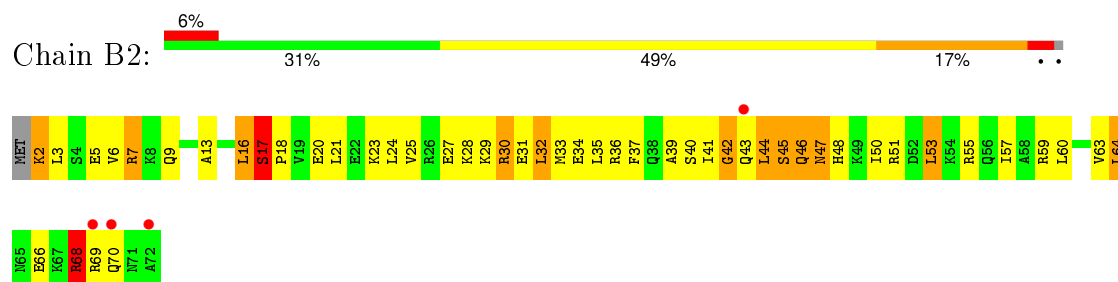
- Molecule 48: 50S ribosomal protein L28



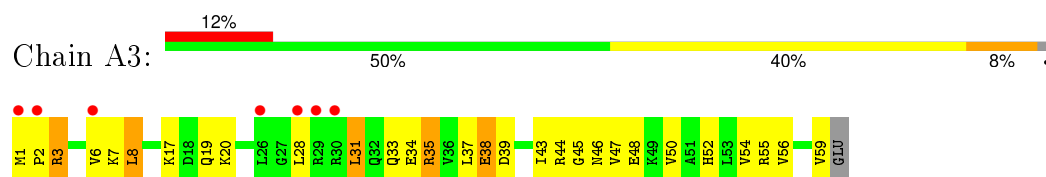
- Molecule 49: 50S ribosomal protein L29



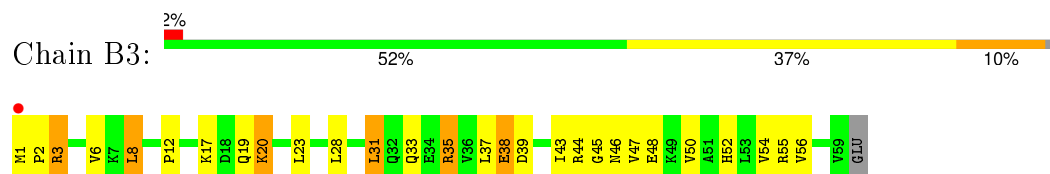
- Molecule 49: 50S ribosomal protein L29



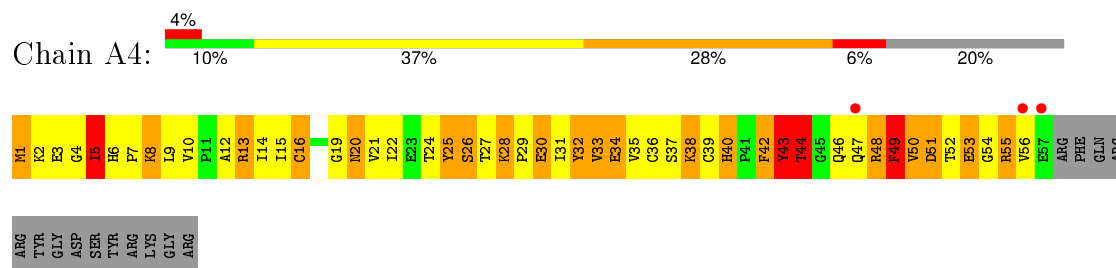
- Molecule 50: 50S ribosomal protein L30



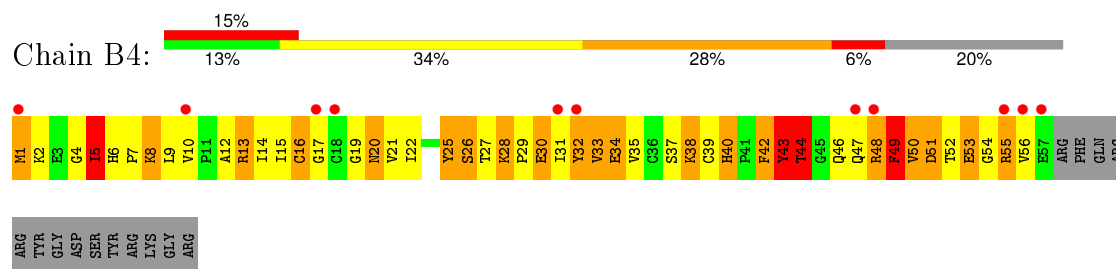
- Molecule 50: 50S ribosomal protein L30



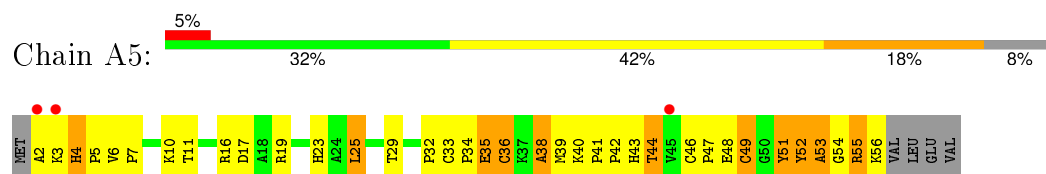
- Molecule 51: 50S ribosomal protein L31



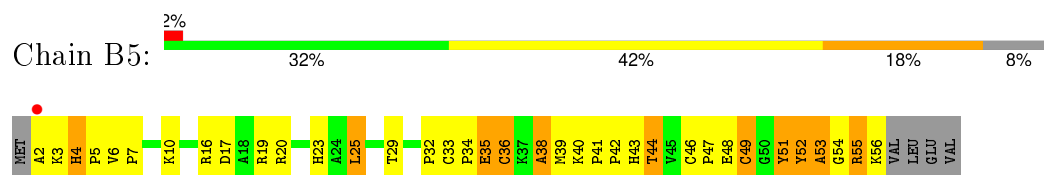
- Molecule 51: 50S ribosomal protein L31



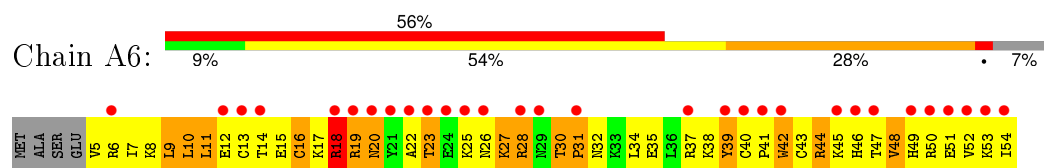
- Molecule 52: 50S ribosomal protein L32



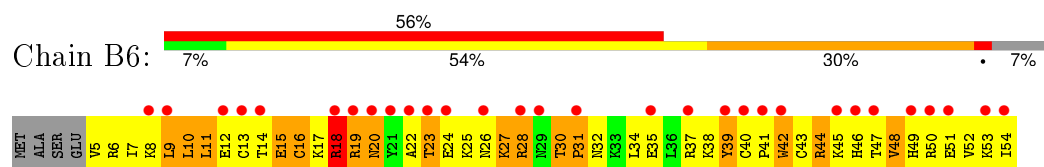
- Molecule 52: 50S ribosomal protein L32



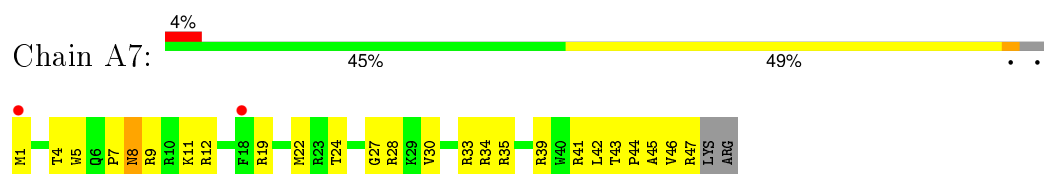
- Molecule 53: 50S ribosomal protein L33



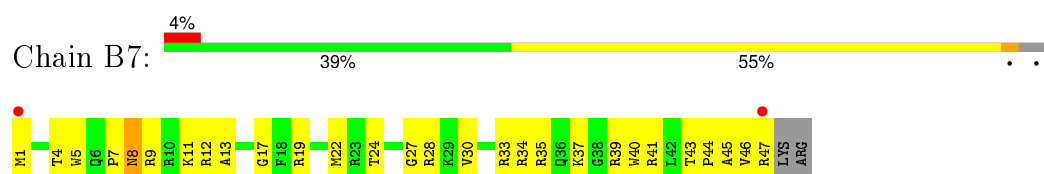
- Molecule 53: 50S ribosomal protein L33



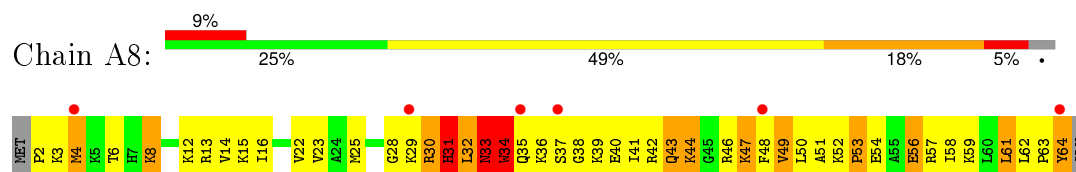
- Molecule 54: 50S ribosomal protein L34



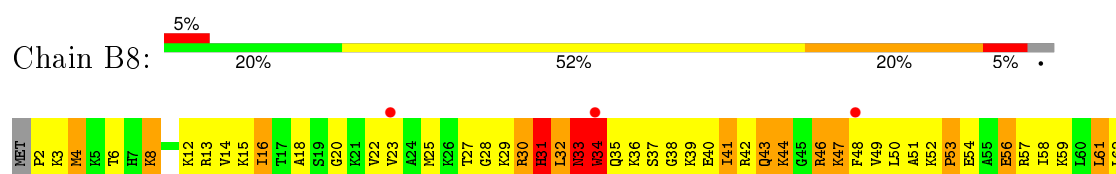
- Molecule 54: 50S ribosomal protein L34



- Molecule 55: 50S ribosomal protein L35



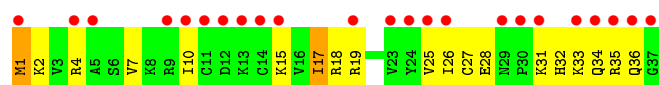
- Molecule 55: 50S ribosomal protein L35



P63
Y64
GLU

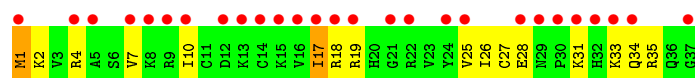
- Molecule 56: 50S ribosomal protein L36

Chain A9: 



- Molecule 56: 50S ribosomal protein L36

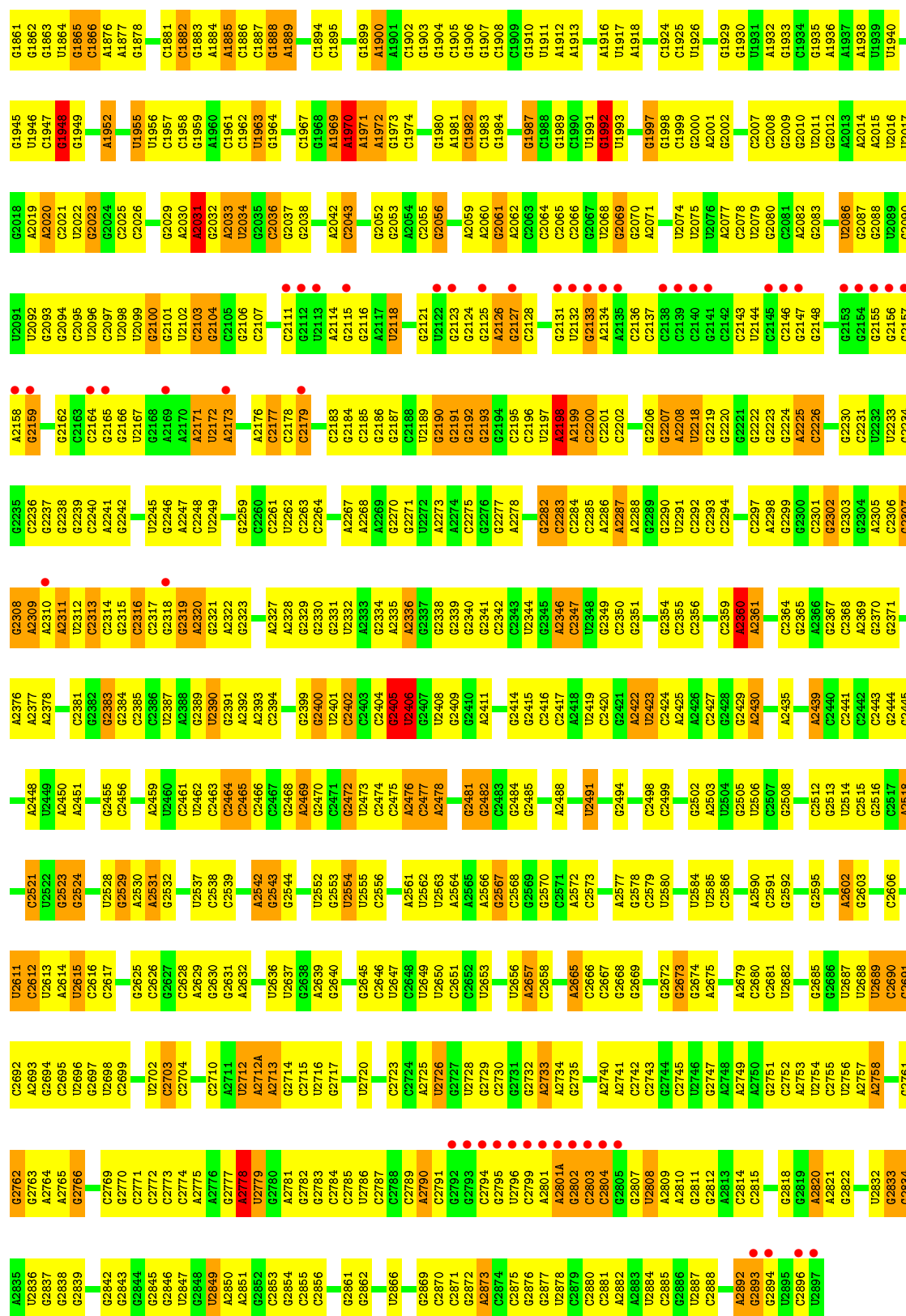
Chain B9: 



- Molecule 57: RNA (2848-MER)

Chain AA: 

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A1780		G1591	A1509B	G1440	G1358	G1285	C1207	U1141	C1012	C865		A722	G654E
	G1631		G1510	G1441	A1359	A1286	C1208	U1142	C1013	A866	A802	G723	G654F
A1784	G1682	G1595	C1511	G1442	A1360	A1287	G1209	A1143	G1014	G869	U803	U724	G654G
A1785	C1683		U1512		G1361	U1288	A1210	A1144	G1015	A870	A804	G725	G654H
A1786	C1684	C1598		A1445	C1362	C1289	U1211	G1144	G1016		G805	G726	G654I
	C1685				G1363	C1290	G1212	C1145			G806	A727	G654J
U1789		U1602	G1517	G1448	G1364	C1291	G1215	C1146	U1019	G873	U807	G728	G654K
C1790	U1688	A1603	U1518	A1449	A1365	U1292	C1216	A1147	A1020	G874	G808	G729	G654L
A1791	A1689		G1519	G1450		C1293	C1217	A1148	G809	G875	G854	C730	G654M
					G1368	U1294		G1149	G1022	A878	U810		G654N
U1786	U1693	C1607	G1520	G1450A	G1369	C1297	C1221	C1151	G1024	G879	C812	G742	G654O
C1797	G1694		U1523	C1451			C1221A	G1152	A857		U811		G654P
U1798	G1695	A1528	G1524	A1452	C1376	U1300	C1222	C1153	G1025	G880	U813	G743	G654Q
G1799	G1696				G1377	A1301	C1223	G1154	U814	G881	C814	G744	G654R
C1800	G1697				A1378		C1224	A1155	A1027	G882	C815		G654S
A1801	A1698				A1379			A1156	A1028	G883	U747		G654T
A1802					G1380	A1308	G1227	A1157		C888	G818	G748	G654U
A1803	A1701				G1381	G1309		G1158	G1037	C889	A819		G654V
U1804	G1702				C1375	G1310		C1159	C1038	A890		A752	A855
C1805					G1376	G1311	U1233	U1159	G1039	G892	U822	C753	G656
G1806					G1385	U1312	U1234	G1160	C1040	G893	G823	C754	U657
G1807					C1386	G1313	U1240	C1161	G1041	C894	U826	C755	C658
U1808					C1387	C1314	A1241	G1162	C1042	C895	U827	C756	C659
A1809					U1396	G1315	A1242	G1163	C1043	U896	U828	U757	G660
A1810					C1402	U1316	A1243	G1164	G1044	C897	U829	C758	
G1811					C1403	A1317	G1243	U1165	A1045	C898	G830	G760	G662
					C1404	G1318	A1247	C1166	C1046	C899	G831		
G1816					C1405	C1319		U1167	A1047	A899	G832	A761	G668
G1817					U1406	C1320		G1168	C1048	A900	G833		G669
A1818					C1407	A1321	G1250	G1169	C1049	A901	U833	A764	A670
A1819					C1408		C1251	G1170	A1050	C902	C834	G765	G671
U1820					G1409	G1324	A1252	G1171	G1051	C903	A835		G672
A1821					C1410	C1327	A1253	G1173	C1052	C904	G836	G768	C673
					C1411	G1328		A1174	C1053	U905	C837	G769	G674
G1826					A1412		G1256	U1175	A1106	G906	C838	G770	A675
C1827					G1413		C1257	G1176	G1107	U907	U839		A676
G1828						A1331		A1177	U1108	C908	C840	U773	
						G1332	C1261	C1178	C1109	A909	A774		G686
U1833					G1416	A1336	U1262	C1181	G889	A910	G843	G775	
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G1839					U1420	U1340	U1267	U1188	G1115	C914	U847	G780	
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					G1422	G1342	A1269	A1190	C995	G916	A849	A782	G707
G1845					G1423	C1343	C1270	G1191	A996	A917	C850	A783	C708
G1846						G1344	G1271	G1192	G997	A918	U851	A784	G709
A1847					A1427	C1345	U1272	G1193	C998		G852	G785	U709
A1848					C1428	G1346	A1273	A1194	U999	U822	G853	G786	G710
					G1429	G1347	U1274	G1195	A1000	C923	G854	G711	G711
					C1430	G1348	A1275		A1001	C924	G855	G712	G712
					U1431	A1349		U1198	G1002	C925	C856	G713	G713
					U1432			U1199	G1003	A926	C857	U714	U714
					U1433			C1200	C1004	G927	U858	G715	G715
					A1434			G1201	C1005	G928	G859	A716	A716
									C1006		U860	G717	G717
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										A933	G862	C796	C719



• Molecule 57: RNA (2848-MER)



G1015	G1016	U1019	A1020	A1021	G1022	G1023	G1024	G1025	G1026	A1027	A1028	G1037	G1038	A1039	G1040	G1041	G1042	G1043	G1044	A1045	A1046	G1047	A1048	G1049	A1050	G1051	C1052	A1106	G1107	A980	C1109	G1110	A1111	G1112	U1113	G1114	G1115	C1116	G1117	C1118	C1124	G1125	U1130	G1131	A1132	U1133	C1135	G1136	G1137	A1138	G1139	C1140	U1141	U1142	
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G721	A722	G723	U724	G725	G726	A727	G728	C730	G738	G739	U740	G741	G742	G743	G744	G745	A746	U747	G748	A752	G753	C754	C755	G756	G760	A761	A764	G765	G768	G769	G770	U773	A774	G775	G776	U779	G780	A781	A782	G783	A784	G785	G786	U787	C790	G791	G792	A793	G794	C795					
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A590	C591	U597	G598	A603	G604	C605	U606	U607	A608	A609	G610	C611	C612	G613	U614	U614A	G614B	A614C	G615	G616	G618	G619	G620	A621	G622	G623	C624	A625	G626	A627	G628	G629	G630	A631	A632	A633	C634	C635	G636	A637	G638	U639	C640	A644	A645	A646	G647	G648	G649	C650	G651	G652	A653	A654	C654B
U511	G512	G518	U519	G520	C523	U524	U525	A526	C527	A528	A529	G530	C531	A532	C533	U534	C535	A536	C537	G541	C542	C543	G544	C545	A547	A548	G549	U557	G558	G563	C564	C565	U566	G570	A571	A572	G573	C574	U575	U576	G577	A578	G579	C580	G581	G582	G583	C584	G585	A586	C587	U588	C589		
C433	U434	C435	C436	G437	G438	G440	A443	C444	C445	G446	A447	U448	C455	C456	A457	G458	U459	A460	C461	C462	U464	G465	G469	A470	A471	A472	G473	G474	U475	G476	A477	A478	A479	A480	U481	C484	C485	A482	G483	G484	G485	U489	G500	A501	A502	A505	G506	A507	G508	U427	A428	C510			
G342	U350	G351	G352	G353	G356	A359	G360	G361	U362	G363B	G363C	G363D	G363E	A363F	C364	C366	G372	U383	G386	U387	G388	G389	C392	C393	A394	U395	G396	C404	U405	G406	G407	C408	C409	G410	A412	G418	C420	U421	A422	A423	G424	G425	C426	U427	A428	C510									
C272H	U272I	G272J	U273	G274	G275	G276	C277	G278	C279	G280	G281	C286	C287	C288	G289	G290	C291	G292	U293	C296	C297	A298	A299	A300	G301	C302	U303	G304	U305	U306	G307	U308	G309	A310	A311	G315	C316	G317	C318	C319	A320	G321	C322	G323	A324	G325	G329	A330	A331	A332	A333	C334	C335	A340	G341
G152	C153	G154	C154A	U155	U156	U157	U158	G171	C174	G175	G176	G177	A181	A182	C183	G184	U185	A191	C192	U193	G194	A195	A196	U197	C198	C203	A204	G205	U206	A207	C208	G212	A213	G214	G215	A216	G217	A218	A221	A222	A225	A228	A229	U230	C231	G232	G233	A234	C235	U235	C236	C237			
G81	G82	A83	G84	G85	G88	G89	U90	A92	G93	C94	G94A	G95	G96	U98	G99	G100	G102	A103	U104	C105	G106	C107	U108	G109	G110	A111	U112	G113	A118	A119	U120	A126	A127	C128	C129	C133	C134	G139	G139A	G140	A141	A142	C142A	G143	C143A	C144	A145	G146	U147	C148	A149	C150	C151		
C238	G242	U243	A244	G245	C246	G247	C248	C249	G252	A255	A256	G258	G259	G260	G261	A262	C263	G266	C267	C268	U269	A271	A271A	C271B	C271C	G271D	U271E	U271F	G271G	G271H	C271I	C271J	U271K	U271L	U271M	U271N	C271O	C271P	G271Q	G271R	G271S	C271T	G271U	G271V	U271Y	C272	G272B	G272E	C272F	C272G					
A46	G7	A8	U9	G11	U12	A13	A14	G15	G16	G17	C18	C19	C20	A21	G26	G27	A28	U29	G30	C31	C34	G35	C45	A47	G48	A49	U50	G51	A52	A53	G54	G55	A56	C57	G58	G61	A64	C65	C66	U67	G68	C69	G70	A71	U72	A73	G74	G75	C77	A78	G79	G80			

U2349	A2173	G2106	A2033	A1980	A1884	U1796	U1693	C1607	U1518	G1448	C1363	A1286	G1209	A1142A
C2259	C2174	C2107	U2034	C1961	A1885	C1797	C1694	A1608	G1519	A1449	G1564	A1287	A1210	A1143
C2260	A2176	C2035	C2036	U1963	C1886	U1798	G1695	A1608	A1528	G1450A	A1365	U1288	G1212	G1144
C2261	C2177	C2037	G2037	C1967	G1888	G1800	G1697	A1610	A1528A	G1451	G1368	C1290	G1215	C1146
C2262	C2178	U2113	G2038	G1968	G1889	G1801	A1698	A1614	G1529	A1452	G1369	C1291	G1216	C1147
C2263	C2179	A2114	G2039	G1969	A1890	A1802	G1701	G1615	U1453	U1453	A1378	U1292	C1217	A1148
C2264	C2183	G2115	A2042	A1969	A1891	A1803	G1702	A1616	G1459	G1459	A1379	U1293		G1149
A2267	G2184	G2116	C2043	A1970	C1894	C1804	G1705	A1617	A1460	A1460	G1380	U1294	C1221	C1150
A2268	C2185	U2118	C2043	A1971	C1895	U1805	G1706	A1618	G1461	G1461	A1379	U1300	C1221A	G1151
A2269	G2186	U2119	G2052	A1972	C1896	C1806	G1707	A1619	A1535	A1535	A1385	U1301	G1222	G1153
G2270	G2187	G1973	G2053	G1974	G1899	U1807	G1708	G1627	G1536	C1462	G1386	A1301	G1223	G1154
G2271	C2188	C1974	A2054	C1974	A1900	U1808	G1709	U1629	G1537	C1463	C1387		G1224	A1155
	C2189	U1980	C2055	G1980	A1901	A1809	C1708	G1628	G1538	C1464		A1308		A1156
C2275	U2189	G2123	G2056	A1981	C1902	A1810	G1709	U1629	G1539			G1309	G1227	G1157
G2276	G2190	G2124	C2057	A1982	G1903	G1811	C1710	G1633	U1540	C1467		G1310		G1158
G2277	G2191	A2125	A2059	C1983	G1904	C1712	C1711	A1641	G1541	A1468	U1396	G1311	C1230	U1159
A2278	G2192	A2126	A2060	G1984	C1905	G1816	G1712	A1642	A1542	A1469		G1312	C1231	G1160
G2279	G2193	G2127	G2061	G1984	G1906	U1817	G1713	A1643	C1543	A1470		U1313	G1232	C1161
	C2194	C2128	A2062	G1987	G1907	U1818	G1714	A1644	A1544	A1471		C1314	G1233	G1162
C2282	C2195	C2063	C2063	G1988	C1908	A1819	G1717	A1645		A1472		C1315	U1234	G1163
C2283	C2196	C2064	C2064	C1988	C1909	U1820	G1718	A1646	C1547	A1473		U1316	U1234	G1164
C2284	C2197	C2065	C2065	G1989	C1910	A1821	G1719	C1640	C1548	C1474		A1317	U1240	U1165
C2285	A2198	G2133	C2066	U1990	G1911	G1826	G1720	A1647	A1554	G1475		G1318	A1241	C1166
A2286	A2199	A2134	G2067	G1991	A1912	C1827	A1721	G1642				G1319	A1242	U1167
A2287	C2200	A2135	U2068	G1992	A1913	G1827	G1722	G1643		G1478		C1320	G1243	G1168
A2288	C2201	C2136	G2069	U1993	A1914	G1828	A1739	C1648	A1558	G1479		A1321		G1169
G2289	C2202	C2137	C2070	U1993	G1915	G1828	G1740		G1559	G1480		G1327	A1247	G1170
G2290	A2201	C2138	A2071	G1997	U1917	U1833	A1741	G1651	A1566	G1482		G1328		G1171
U2291	C2202	C2139	A2072	G1998	U1918	U1834	G1742	G1652	A1567	G1484		A1331	G1250	A1173
C2292	C2203	C2140	U2074	C1999	A1918	G1835	C1743	G1653	G1568	G1485		G1332	G1251	A1174
C2293	U2218	G2141	U2075	G2000	C1925	G1839	G1746	A1654	A1569			A1336	G1252	U1175
C2294	C2219	C2142	A2077	G2002	U1926	G1845	G1747	C1658	A1570	U1489		G1337	A1253	A1176
	G2220	U2144	C2078	G2002	U1926	G1846	G1747A		A1571	U1490		G1338	G1256	G1178
C2297	G2221	C2145	U2079	C2007	G1929	U1847	A1749	G1491	G1491	G1491		G1339	C1257	
A2298	C2222	C2146	C2079	C2008	G1930	A1847	G1749	C1658	G1498	U1498		U1340	C1261	G1181
G2299	G2223	G2147	A2082	G2009	U1931	A1848	G1750	C1662	G1499	A1427		U1341	A1262	A1182
G2300	C2224	G2148	G2083	U2010	A1932	U1853	C1751	C1663	A1494	G1428		U1342	U1263	U1188
C2301	A2225	G2151	U2086	G2012	A1936	G1854	A1762	A1665	U1578	A1495		G1343	U1264	U1189
G2302	C2226	G2152	C2087	A2013	A1937	G1855	G1763	G1666	A1579	U1497		G1344	A1265	A1190
G2303	C2230	G2155	U2088	A2014	A1938	G1856	G1764	G1667	A1580	U1498		G1345	G1266	
A2305	A2305	G2156	G2089	A2015	U1939	G1857	G1764	A1668	G1581			G1346		G1191
C2306	U2232	G2157	G2090	U2016	U1939	G1858	C1771	C1670	C1582	C1501		G1347	G1270	G1192
G2307	G2233	A2158	U2091	U2017	G1945	G1860	G1772	U1673	A1583	U1502		U1348	G1271	A1194
G2308	G2234	G2159	U2092	G2018	U1946	G1861	A1773	C1674	A1587	U1503		A1349	A1272	G1195
A2309	G2235	G2159	G2093	A2019	G1947	G1862	A1773	U1674	A1588	C1504		U1352	U1273	C1196
A2310	C2236	G2094	G2094	A2020	C1947	G1863	U1779	C1505	C1505	G1506		A1353	A1274	G1197
A2311	G2237	C2162	C2095	C2021	G1948	U1864	A1780	C1506		C1509		U1354	A1275	G1198
U2312	G2238	C2163	U2096	U2022	G1949	G1865	A1784	G1678	U1590	A1509A		G1355	A1278	U1199
G2313	G2239	C2164	C2097	G2023	A1982	C1866	A1785	C1683	G1591	A1509B		G1356	G1279	U1200
C2314	G2240	G2165	U2098	G2024	A1982	A1876	A1786	C1684	G1595	G1510		G1357	G1280	G1201
G2315	A2241	G2166	U2099	C2025	A1982	A1877	A1786	C1685		G1511		G1358	G1281	
G2316	G2242	U2167	G2100	C2026	U1985	G1878		C1685		U1512		A1359	U1282	A1204
C2317	C2317	A2168	G2101	C2026	U1985	G1878		C1685		U1512		A1360	U1283	G1206
G2318	G2245	A2169	U2102	G2029	U1986		A1789	U1688	C1598			G1361	A1284	
G2319	G2246	A2170	C2103	A2030	C1957		C1790	A1689	U1602			G1362	G1285	
A2320	A2247	A2171	C2104	A2031	C1958		A1791		A1603					
G2321	G2248	U2172	C2105	G2032	G1959									

4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	211.57Å 451.96Å 622.44Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	50.00 – 3.30 49.99 – 3.30	Depositor EDS
% Data completeness (in resolution range)	99.8 (50.00-3.30) 99.9 (49.99-3.30)	Depositor EDS
R_{merge}	0.02	Depositor
R_{sym}	0.02	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.31 (at 3.33Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, R_{free}	0.219 , 0.247 0.222 , 0.249	Depositor DCC
R_{free} test set	40918 reflections (4.85%)	DCC
Wilson B-factor (Å ²)	99.5	Xtriage
Anisotropy	0.049	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.27 , 84.6	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.45$, $\langle L^2 \rangle = 0.28$	Xtriage
Outliers	0 of 883810 reflections	Xtriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	297206	wwPDB-VP
Average B, all atoms (Å ²)	115.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.49% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: 5MU, ZN, OMG, MG, OMU, A2M

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	0.34	0/1935	0.61	0/2609
1	Bb	0.34	0/1935	0.61	0/2609
2	Ac	0.33	0/1636	0.57	0/2205
2	Bc	0.33	0/1636	0.57	0/2205
3	Ad	0.38	0/1733	0.64	0/2318
3	Bd	0.38	0/1733	0.64	0/2318
4	Ae	0.35	0/1162	0.63	0/1564
4	Be	0.36	0/1162	0.63	0/1564
5	Af	0.33	0/856	0.65	0/1154
5	Bf	0.35	0/856	0.65	0/1154
6	Ag	0.32	0/1276	0.54	0/1709
6	Bg	0.32	0/1276	0.54	0/1709
7	Ah	0.35	0/1136	0.65	0/1527
7	Bh	0.35	0/1136	0.65	0/1527
8	Ai	0.33	0/1029	0.53	0/1379
8	Bi	0.34	0/1029	0.55	0/1379
9	Aj	0.34	0/807	0.62	0/1085
9	Bj	0.35	0/807	0.62	0/1085
10	Ak	0.34	0/900	0.62	0/1213
10	Bk	0.36	0/900	0.62	0/1213
11	Al	0.41	0/986	0.74	1/1320 (0.1%)
11	Bl	0.41	0/986	0.74	1/1320 (0.1%)
12	Am	0.30	0/947	0.63	0/1270
12	Bm	0.31	0/947	0.61	0/1270
13	An	0.34	0/501	0.57	0/664
13	Bn	0.35	0/501	0.58	0/664
14	Ao	0.33	0/745	0.60	0/992
14	Bo	0.34	0/745	0.61	0/992
15	Ap	0.34	0/716	0.60	0/963
15	Bp	0.34	0/716	0.59	0/963
16	Aq	0.35	0/836	0.64	0/1117
16	Bq	0.36	0/836	0.64	0/1117

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	Ar	0.35	0/579	0.65	0/768
17	Br	0.36	0/579	0.65	0/768
18	As	0.34	0/642	0.63	0/865
18	Bs	0.34	0/642	0.63	0/865
19	At	0.34	0/765	0.61	0/1007
19	Bt	0.32	0/765	0.60	0/1007
20	Au	0.40	0/212	0.56	0/277
20	Bu	0.37	0/212	0.56	0/277
21	Ay	0.31	0/781	0.67	1/1045 (0.1%)
21	By	0.38	0/777	0.69	0/1040
22	Aa	0.41	0/36190	0.69	14/56486 (0.0%)
22	Ba	0.41	0/36190	0.69	14/56486 (0.0%)
23	Ax	0.52	0/219	0.74	0/340
23	Bx	0.45	0/219	0.75	0/340
24	Av	0.43	0/1810	0.70	0/2821
24	Bv	0.46	0/1810	0.72	1/2821 (0.0%)
25	Aw	0.42	0/1832	0.70	0/2855
25	Bw	0.44	0/1832	0.69	0/2855
26	AC	0.33	0/956	0.53	0/1288
26	BC	0.34	0/956	0.53	0/1288
27	AD	0.45	0/2154	0.81	3/2905 (0.1%)
27	BD	0.48	0/2154	0.82	4/2905 (0.1%)
28	AE	0.45	0/1596	0.79	0/2153
28	BE	0.47	0/1596	0.80	0/2153
29	AF	0.42	0/1658	0.72	0/2244
29	BF	0.45	0/1658	0.74	0/2244
30	AG	0.37	0/1499	0.69	1/2016 (0.0%)
30	BG	0.39	0/1499	0.71	1/2016 (0.0%)
31	AH	0.38	0/1284	0.74	1/1739 (0.1%)
31	BH	0.42	0/1284	0.76	1/1739 (0.1%)
32	AI	0.42	0/1146	0.92	3/1551 (0.2%)
32	BI	0.41	0/1146	0.93	3/1551 (0.2%)
33	AJ	0.36	0/640	0.78	7/889 (0.8%)
33	BJ	0.39	0/640	0.78	6/889 (0.7%)
34	AN	0.38	0/1131	0.74	0/1525
34	BN	0.42	0/1131	0.75	1/1525 (0.1%)
35	AO	0.44	0/943	0.69	0/1269
35	BO	0.45	0/943	0.70	0/1269
36	AP	0.49	0/1131	1.03	5/1504 (0.3%)
36	BP	0.53	0/1131	1.05	5/1504 (0.3%)
37	AQ	0.39	0/1133	0.65	0/1515
37	BQ	0.42	0/1133	0.66	0/1515
38	AR	0.41	0/974	0.79	2/1302 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	BR	0.42	0/974	0.80	3/1302 (0.2%)
39	AS	0.41	0/778	0.72	0/1036
39	BS	0.44	0/778	0.73	0/1036
40	AT	0.44	0/1137	0.82	2/1519 (0.1%)
40	BT	0.45	0/1137	0.83	2/1519 (0.1%)
41	AU	0.45	0/975	0.70	0/1297
41	BU	0.50	0/975	0.74	0/1297
42	AV	0.40	0/790	0.74	0/1057
42	BV	0.44	0/790	0.76	0/1057
43	AW	0.43	0/907	0.73	0/1216
43	BW	0.44	0/907	0.73	0/1216
44	AX	0.44	0/739	0.71	0/993
44	BX	0.47	0/739	0.73	0/993
45	AY	0.47	0/788	0.75	1/1051 (0.1%)
45	BY	0.51	0/788	0.77	1/1051 (0.1%)
46	AZ	0.36	0/1499	0.66	0/2035
46	BZ	0.39	0/1499	0.71	0/2035
47	A0	0.39	0/671	0.69	0/892
47	B0	0.43	0/671	0.71	0/892
48	A1	0.41	0/738	0.77	0/981
48	B1	0.44	0/738	0.80	0/981
49	A2	0.34	0/600	0.60	0/793
49	B2	0.43	0/600	0.70	0/793
50	A3	0.35	0/472	0.68	0/634
50	B3	0.38	0/472	0.68	0/634
51	A4	0.40	0/460	0.71	1/621 (0.2%)
51	B4	0.42	0/460	0.72	1/621 (0.2%)
52	A5	0.45	0/441	0.76	0/596
52	B5	0.48	0/441	0.79	0/596
53	A6	0.45	0/440	0.77	0/586
53	B6	0.46	0/440	0.77	0/586
54	A7	0.41	0/417	0.67	0/550
54	B7	0.46	0/417	0.67	0/550
55	A8	0.53	0/515	0.87	0/679
55	B8	0.53	0/515	0.88	0/679
56	A9	0.35	0/310	0.59	0/407
56	B9	0.37	0/310	0.60	0/407
57	AA	0.49	0/68704	0.74	49/107260 (0.0%)
57	BA	0.54	2/68704 (0.0%)	0.74	59/107260 (0.1%)
58	AB	0.41	0/2853	0.70	0/4451
58	BB	0.45	0/2853	0.71	0/4451
All	All	0.45	2/321416 (0.0%)	0.72	194/480209 (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	11
22	Ba	1	11
24	Av	0	1
24	Bv	0	1
38	AR	0	1
38	BR	0	1
52	A5	0	1
52	B5	0	1
57	AA	2	50
57	BA	2	68
58	AB	0	1
58	BB	0	1
All	All	5	149

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BA	2685	G	C6-O6	5.93	1.29	1.24
57	BA	2506	U	N1-C2	5.03	1.43	1.38

All (194) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	BI	50	ARG	NE-CZ-NH2	-14.23	113.19	120.30
32	AI	50	ARG	NE-CZ-NH1	-14.08	113.26	120.30
32	BI	50	ARG	NE-CZ-NH1	13.66	127.13	120.30
32	AI	50	ARG	NE-CZ-NH2	13.15	126.88	120.30
57	AA	1992	G	C2'-C3'-O3'	10.34	132.24	109.50
57	BA	1992	G	C2'-C3'-O3'	10.27	132.09	109.50
22	Ba	1498	U	C2'-C3'-O3'	10.21	131.97	109.50
24	Bv	4	G	N9-C1'-C2'	-9.39	101.67	112.00
57	BA	1653	G	C2'-C3'-O3'	9.18	129.69	109.50
57	AA	1653	G	C2'-C3'-O3'	9.12	129.55	109.50
57	AA	1799	G	C2'-C3'-O3'	9.12	129.55	109.50
57	BA	1786	A	N9-C1'-C2'	9.01	125.72	114.00
22	Aa	115	G	C2'-C3'-O3'	9.00	129.30	109.50
57	AA	1786	A	N9-C1'-C2'	9.00	125.70	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BA	1819	A	C2'-C3'-O3'	9.00	129.31	109.50
57	BA	1799	G	C2'-C3'-O3'	8.99	129.27	109.50
57	BA	49	A	C2'-C3'-O3'	8.83	128.93	109.50
57	BA	331	A	C2'-C3'-O3'	8.77	128.80	109.50
57	AA	331	A	C2'-C3'-O3'	8.76	128.76	109.50
22	Ba	115	G	C2'-C3'-O3'	8.73	128.71	109.50
57	BA	1022	G	C2'-C3'-O3'	8.72	128.68	109.50
22	Ba	575	G	C2'-C3'-O3'	8.65	128.54	109.50
57	AA	1819	A	C2'-C3'-O3'	8.54	128.28	109.50
57	AA	49	A	C2'-C3'-O3'	8.49	128.18	109.50
57	AA	1022	G	C2'-C3'-O3'	8.46	128.10	109.50
22	Aa	575	G	C2'-C3'-O3'	8.39	127.96	109.50
36	BP	52	GLU	N-CA-C	8.21	133.17	111.00
36	AP	52	GLU	N-CA-C	8.20	133.15	111.00
57	BA	1820	U	C2'-C3'-O3'	7.93	126.95	109.50
57	BA	1652	A	C2'-C3'-O3'	7.92	126.91	109.50
57	AA	1652	A	C2'-C3'-O3'	7.86	126.78	109.50
57	AA	1820	U	C2'-C3'-O3'	7.80	126.66	109.50
36	BP	53	GLY	N-CA-C	-7.79	93.63	113.10
22	Aa	1498	U	C2'-C3'-O3'	7.79	126.63	109.50
57	AA	2360	A	N9-C1'-C2'	-7.72	103.51	112.00
36	AP	53	GLY	N-CA-C	-7.64	93.99	113.10
57	BA	2360	A	N9-C1'-C2'	-7.58	103.66	112.00
57	BA	387	U	C2'-C3'-O3'	7.54	126.09	109.50
38	AR	4	LEU	CA-CB-CG	7.42	132.36	115.30
57	AA	387	U	C2'-C3'-O3'	7.39	125.75	109.50
22	Ba	366	C	C2'-C3'-O3'	7.30	125.56	109.50
57	BA	945	A	N9-C1'-C2'	7.30	123.49	114.00
38	BR	4	LEU	CA-CB-CG	7.20	131.85	115.30
22	Aa	366	C	C2'-C3'-O3'	7.09	125.10	109.50
27	AD	244	ARG	C-N-CD	-7.06	105.08	120.60
32	BI	50	ARG	CD-NE-CZ	7.05	133.47	123.60
22	Ba	509	A	C2'-C3'-O3'	7.00	124.90	113.70
32	AI	50	ARG	CD-NE-CZ	6.99	133.39	123.60
22	Aa	913	A	C2'-C3'-O3'	6.98	124.87	113.70
27	BD	244	ARG	C-N-CD	-6.95	105.32	120.60
22	Aa	509	A	C2'-C3'-O3'	6.94	124.81	113.70
57	AA	945	A	N9-C1'-C2'	6.86	122.91	114.00
22	Ba	913	A	C2'-C3'-O3'	6.81	124.60	113.70
57	BA	2346	A	O4'-C1'-N9	6.72	113.57	108.20
57	AA	2346	A	N9-C1'-C2'	6.68	122.68	114.00
57	AA	2225	A	C2'-C3'-O3'	6.62	124.28	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BA	1495	A	N9-C1'-C2'	6.55	122.52	114.00
57	AA	2346	A	O4'-C1'-N9	6.51	113.41	108.20
33	BJ	33	PRO	N-CA-CB	6.49	111.08	103.30
57	AA	1495	A	N9-C1'-C2'	6.47	122.42	114.00
22	Aa	428	G	C2'-C3'-O3'	6.42	123.97	113.70
57	BA	2225	A	C2'-C3'-O3'	6.38	123.91	113.70
22	Aa	60	A	C2'-C3'-O3'	6.38	123.91	113.70
33	BJ	105	PRO	N-CA-CB	6.37	110.94	103.30
57	BA	2346	A	N9-C1'-C2'	6.29	122.18	114.00
57	AA	272	G	C2'-C3'-O3'	6.28	123.75	113.70
57	BA	1948	G	C5'-C4'-O4'	-6.24	101.61	109.10
36	BP	41	ARG	N-CA-C	-6.21	94.23	111.00
36	AP	41	ARG	N-CA-C	-6.21	94.23	111.00
57	BA	1365	A	C5'-C4'-C3'	6.20	125.93	116.00
22	Ba	428	G	C2'-C3'-O3'	6.19	123.61	113.70
57	AA	2405	G	N9-C1'-C2'	6.16	122.00	114.00
30	BG	125	PHE	N-CA-C	-6.12	94.47	111.00
22	Ba	60	A	C2'-C3'-O3'	6.12	123.49	113.70
57	BA	1970	A	C5'-C4'-O4'	6.11	116.43	109.10
57	BA	1493	C	N1-C1'-C2'	6.07	121.89	114.00
22	Ba	266	G	C2'-C3'-O3'	6.04	123.36	113.70
57	AA	1970	A	C5'-C4'-O4'	6.03	116.33	109.10
57	BA	272	G	C2'-C3'-O3'	6.02	123.33	113.70
36	AP	58	THR	N-CA-C	-6.00	94.79	111.00
57	AA	1365	A	C5'-C4'-C3'	5.99	125.59	116.00
57	AA	74	A	C2'-C3'-O3'	5.94	123.20	113.70
57	AA	2191	G	C2'-C3'-O3'	5.92	123.17	113.70
22	Aa	266	G	C2'-C3'-O3'	5.88	123.11	113.70
22	Aa	687	A	C2'-C3'-O3'	5.88	123.10	113.70
36	BP	58	THR	N-CA-C	-5.85	95.20	111.00
57	BA	1970	A	C5'-C4'-C3'	5.84	125.34	116.00
57	BA	2191	G	C2'-C3'-O3'	5.82	123.02	113.70
22	Ba	687	A	C2'-C3'-O3'	5.78	122.95	113.70
31	AH	158	HIS	N-CA-C	5.78	126.59	111.00
36	AP	54	GLY	N-CA-C	-5.75	98.72	113.10
40	BT	80	SER	N-CA-C	5.73	126.47	111.00
30	AG	54	GLU	N-CA-C	-5.72	95.55	111.00
57	AA	1493	C	N1-C1'-C2'	5.72	121.44	114.00
31	BH	158	HIS	N-CA-C	5.71	126.42	111.00
36	BP	54	GLY	N-CA-C	-5.71	98.83	113.10
57	BA	1698	A	N9-C1'-C2'	5.71	121.42	114.00
11	Bl	119	LYS	N-CA-C	-5.70	95.62	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BA	1155	A	C5'-C4'-O4'	-5.68	102.29	109.10
40	AT	59	THR	N-CA-C	-5.68	95.68	111.00
57	BA	1987	G	C5'-C4'-C3'	-5.67	106.92	116.00
57	AA	1155	A	C5'-C4'-O4'	-5.67	102.30	109.10
57	AA	1819	A	C4'-C3'-O3'	5.67	124.34	113.00
11	Al	119	LYS	N-CA-C	-5.67	95.70	111.00
57	BA	1799	G	C4'-C3'-O3'	5.66	124.33	113.00
57	BA	2447	G	OP1-P-O3'	5.66	117.66	105.20
57	BA	673	C	C5'-C4'-O4'	-5.66	102.31	109.10
33	AJ	69	PRO	N-CA-CB	5.66	110.09	103.30
22	Aa	484	G	N9-C1'-C2'	5.65	121.34	114.00
33	AJ	77	PRO	N-CA-CB	5.64	110.06	103.30
57	BA	272(B)	G	C5'-C4'-C3'	5.63	125.01	116.00
40	BT	59	THR	N-CA-C	-5.62	95.81	111.00
57	AA	673	C	C5'-C4'-O4'	-5.61	102.37	109.10
57	AA	1948	G	C5'-C4'-O4'	-5.61	102.37	109.10
51	A4	43	TYR	N-CA-C	5.58	126.08	111.00
22	Ba	484	G	N9-C1'-C2'	5.58	121.25	114.00
57	AA	272(B)	G	C5'-C4'-C3'	5.58	124.92	116.00
57	BA	74	A	C2'-C3'-O3'	5.57	122.61	113.70
33	AJ	105	PRO	N-CA-CB	5.55	109.96	103.30
33	AJ	33	PRO	N-CA-CB	5.52	109.93	103.30
57	BA	2405	G	N9-C1'-C2'	5.51	121.16	114.00
33	AJ	101	PRO	N-CA-CB	5.49	109.89	103.30
57	BA	2278	A	C5'-C4'-C3'	5.48	124.77	116.00
57	BA	784	A	N9-C1'-C2'	5.48	121.13	114.00
51	B4	43	TYR	N-CA-C	5.47	125.76	111.00
33	AJ	129	PRO	N-CA-CB	5.45	109.83	103.30
57	BA	1970	A	C1'-O4'-C4'	-5.44	105.55	109.90
57	AA	1698	A	N9-C1'-C2'	5.42	121.04	114.00
27	BD	210	GLY	N-CA-C	-5.42	99.55	113.10
57	BA	1159	U	C5'-C4'-C3'	-5.42	107.33	116.00
40	AT	80	SER	N-CA-C	5.41	125.62	111.00
57	BA	587	C	OP2-P-O3'	5.41	117.11	105.20
57	BA	2778	A	C5'-C4'-C3'	-5.41	107.35	116.00
57	AA	1159	U	C5'-C4'-C3'	-5.40	107.36	116.00
45	BY	7	VAL	N-CA-C	5.39	125.57	111.00
57	BA	669	G	N9-C1'-C2'	5.39	121.01	114.00
57	AA	1970	A	C5'-C4'-C3'	5.38	124.61	116.00
57	BA	1773	A	N9-C1'-C2'	-5.37	106.09	112.00
57	AA	1053	C	N1-C1'-C2'	5.37	120.98	114.00
57	AA	1799	G	C4'-C3'-O3'	5.36	123.72	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	BR	58	GLY	N-CA-C	5.36	126.50	113.10
57	BA	1053	C	N1-C1'-C2'	5.35	120.96	114.00
57	BA	964	C	C5'-C4'-C3'	-5.35	107.44	116.00
45	AY	7	VAL	N-CA-C	5.35	125.44	111.00
22	Ba	920	U	C5'-C4'-C3'	-5.34	107.45	116.00
57	AA	2521	C	C5'-C4'-C3'	-5.33	107.47	116.00
33	BJ	101	PRO	N-CA-CB	5.32	109.69	103.30
33	BJ	69	PRO	N-CA-CB	5.32	109.69	103.30
57	BA	629	G	C5'-C4'-C3'	-5.32	107.49	116.00
27	AD	210	GLY	N-CA-C	-5.31	99.81	113.10
57	BA	790	C	C2'-C3'-O3'	5.31	122.20	113.70
57	AA	272(B)	G	O4'-C1'-N9	5.31	112.45	108.20
38	AR	58	GLY	N-CA-C	5.30	126.36	113.10
33	AJ	86	PRO	N-CA-CB	5.29	109.65	103.30
57	AA	629	G	C5'-C4'-C3'	-5.29	107.54	116.00
57	BA	272(B)	G	O4'-C1'-N9	5.27	112.42	108.20
33	BJ	77	PRO	N-CA-CB	5.27	109.62	103.30
38	BR	5	LYS	N-CA-C	-5.26	96.79	111.00
57	AA	2278	A	C5'-C4'-C3'	5.26	124.42	116.00
57	AA	1987	G	C5'-C4'-C3'	-5.26	107.59	116.00
57	AA	2778	A	C5'-C4'-C3'	-5.25	107.60	116.00
57	BA	1819	A	C4'-C3'-O3'	5.24	123.48	113.00
57	BA	783	A	N9-C1'-C2'	-5.23	106.25	112.00
57	BA	2521	C	C5'-C4'-C3'	-5.20	107.67	116.00
57	AA	2094	G	C5'-C4'-C3'	-5.19	107.70	116.00
57	BA	1820	U	C4'-C3'-C2'	5.17	107.77	102.60
33	BJ	129	PRO	N-CA-CB	5.17	109.50	103.30
57	AA	669	G	N9-C1'-C2'	5.16	120.71	114.00
57	AA	1820	U	C4'-C3'-C2'	5.16	107.76	102.60
22	Aa	920	U	C5'-C4'-C3'	-5.16	107.75	116.00
22	Aa	115	G	C4'-C3'-C2'	5.14	107.74	102.60
27	BD	111	LEU	CA-CB-CG	5.14	127.12	115.30
57	BA	494	G	C5'-C4'-C3'	-5.14	107.78	116.00
57	AA	1294	U	C5'-C4'-C3'	-5.14	107.78	116.00
57	BA	2751	G	N9-C1'-C2'	5.12	120.66	114.00
57	BA	1407	C	C5'-C4'-C3'	-5.10	107.85	116.00
27	AD	111	LEU	CA-CB-CG	5.09	127.02	115.30
57	AA	2751	G	N9-C1'-C2'	5.08	120.61	114.00
57	BA	748	G	N9-C1'-C2'	5.08	120.60	114.00
57	AA	2031	A	N9-C1'-C2'	5.07	120.59	114.00
22	Ba	115	G	C4'-C3'-C2'	5.07	107.67	102.60
57	BA	1294	U	C5'-C4'-C3'	-5.06	107.90	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BA	676	A	O4'-C1'-N9	5.05	112.24	108.20
57	BA	481	G	N9-C1'-C2'	5.04	120.56	114.00
57	BA	332	A	N9-C1'-C2'	5.03	120.53	114.00
57	AA	265	A	N9-C1'-C2'	5.02	120.53	114.00
57	AA	748	G	N9-C1'-C2'	5.02	120.53	114.00
34	BN	67	LEU	N-CA-C	-5.02	97.44	111.00
57	BA	1190	G	C5'-C4'-C3'	-5.02	107.97	116.00
27	BD	229	VAL	CB-CA-C	-5.02	101.86	111.40
21	Ay	31	VAL	N-CA-C	-5.01	97.46	111.00
57	AA	49	A	C4'-C3'-C2'	5.01	107.61	102.60
22	Aa	389	A	C5'-C4'-C3'	5.00	124.00	116.00
22	Ba	575	G	O4'-C1'-N9	-5.00	104.20	108.20

All (5) chirality outliers are listed below:

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

All (149) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
52	A5	51	TYR	Sidechain
57	AA	102	G	Sidechain
57	AA	1040	C	Sidechain
57	AA	1112	G	Sidechain
57	AA	1215	G	Sidechain
57	AA	1379	A	Sidechain
57	AA	1416	G	Sidechain
57	AA	15	G	Sidechain
57	AA	1623	G	Sidechain
57	AA	1627	G	Sidechain
57	AA	1633	G	Sidechain
57	AA	1772	G	Sidechain
57	AA	1802	A	Sidechain
57	AA	1807	G	Sidechain
57	AA	1940	U	Sidechain
57	AA	1952	A	Sidechain
57	AA	1955	U	Sidechain

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Mol	Chain	Res	Type	Group
57	AA	2020	A	Sidechain
57	AA	2031	A	Sidechain
57	AA	2059	A	Sidechain
57	AA	2086	U	Sidechain
57	AA	2198	A	Sidechain
57	AA	2282	G	Sidechain
57	AA	2360	A	Sidechain
57	AA	2390	U	Sidechain
57	AA	2406	U	Sidechain
57	AA	2414	G	Sidechain
57	AA	2464	C	Sidechain
57	AA	249	C	Sidechain
57	AA	2494	G	Sidechain
57	AA	2508	G	Sidechain
57	AA	2523	G	Sidechain
57	AA	2542	A	Sidechain
57	AA	2595	G	Sidechain
57	AA	2665	A	Sidechain
57	AA	27	G	Sidechain
57	AA	271(K)	U	Sidechain
57	AA	271(Q)	G	Sidechain
57	AA	272(B)	G	Sidechain
57	AA	329	G	Sidechain
57	AA	383	U	Sidechain
57	AA	463	G	Sidechain
57	AA	465	G	Sidechain
57	AA	47	C	Sidechain
57	AA	472	A	Sidechain
57	AA	52	A	Sidechain
57	AA	652	C	Sidechain
57	AA	670	A	Sidechain
57	AA	675	A	Sidechain
57	AA	70	G	Sidechain
57	AA	700	G	Sidechain
58	AB	66	A	Sidechain
38	AR	87	TYR	Sidechain
22	Aa	1077	G	Sidechain
22	Aa	1487	G	Sidechain
22	Aa	265	G	Sidechain
22	Aa	436	C	Sidechain
22	Aa	484	G	Sidechain
22	Aa	575	G	Sidechain

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Mol	Chain	Res	Type	Group
22	Aa	587	G	Sidechain
22	Aa	832	C	Sidechain
22	Aa	884	U	Sidechain
22	Aa	898	G	Sidechain
22	Aa	97	G	Sidechain
24	Av	4	G	Sidechain
21	Ay	83	ARG	Sidechain
52	B5	51	TYR	Sidechain
57	BA	1040	C	Sidechain
57	BA	1112	G	Sidechain
57	BA	1191	G	Sidechain
57	BA	1215	G	Sidechain
57	BA	1288	U	Sidechain
57	BA	1379	A	Sidechain
57	BA	1416	G	Sidechain
57	BA	1427	A	Sidechain
57	BA	15	G	Sidechain
57	BA	1627	G	Sidechain
57	BA	1633	G	Sidechain
57	BA	1673	U	Sidechain
57	BA	1772	G	Sidechain
57	BA	1801	G	Sidechain
57	BA	1802	A	Sidechain
57	BA	1805	U	Sidechain
57	BA	1807	G	Sidechain
57	BA	1890	A	Sidechain
57	BA	1940	U	Sidechain
57	BA	1952	A	Sidechain
57	BA	1955	U	Sidechain
57	BA	2020	A	Sidechain
57	BA	2031	A	Sidechain
57	BA	2059	A	Sidechain
57	BA	2198	A	Sidechain
57	BA	2267	A	Sidechain
57	BA	2282	G	Sidechain
57	BA	2360	A	Sidechain
57	BA	2387	U	Sidechain
57	BA	2390	U	Sidechain
57	BA	2406	U	Sidechain
57	BA	2414	G	Sidechain
57	BA	2464	C	Sidechain
57	BA	2475	C	Sidechain

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Mol	Chain	Res	Type	Group
57	BA	249	C	Sidechain
57	BA	2495	G	Sidechain
57	BA	2508	G	Sidechain
57	BA	2523	G	Sidechain
57	BA	2542	A	Sidechain
57	BA	2581	G	Sidechain
57	BA	2595	G	Sidechain
57	BA	2665	A	Sidechain
57	BA	2692	C	Sidechain
57	BA	27	G	Sidechain
57	BA	271	A	Sidechain
57	BA	271(K)	U	Sidechain
57	BA	271(Q)	G	Sidechain
57	BA	272	G	Sidechain
57	BA	272(B)	G	Sidechain
57	BA	2739	U	Sidechain
57	BA	2746	U	Sidechain
57	BA	2885	C	Sidechain
57	BA	329	G	Sidechain
57	BA	383	U	Sidechain
57	BA	463	G	Sidechain
57	BA	465	G	Sidechain
57	BA	47	C	Sidechain
57	BA	472	A	Sidechain
57	BA	511	U	Sidechain
57	BA	52	A	Sidechain
57	BA	607	U	Sidechain
57	BA	652	C	Sidechain
57	BA	670	A	Sidechain
57	BA	70	G	Sidechain
57	BA	700	G	Sidechain
57	BA	746	A	Sidechain
57	BA	792	G	Sidechain
57	BA	995	C	Sidechain
58	BB	66	A	Sidechain
38	BR	87	TYR	Sidechain
22	Ba	1077	G	Sidechain
22	Ba	1485	U	Sidechain
22	Ba	1512	U	Sidechain
22	Ba	436	C	Sidechain
22	Ba	575	G	Sidechain
22	Ba	587	G	Sidechain

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Mol	Chain	Res	Type	Group
22	Ba	760	G	Sidechain
22	Ba	832	C	Sidechain
22	Ba	884	U	Sidechain
22	Ba	9	G	Sidechain
22	Ba	97	G	Sidechain
24	Bv	4	G	Sidechain

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	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
12	Am	937	0	995	0	0
12	Bm	937	0	995	0	0
13	An	492	0	529	0	0
13	Bn	492	0	529	0	0
14	Ao	734	0	771	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
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	770	0	811	0	0
21	By	766	0	804	0	0
22	Aa	32329	0	16317	0	0
22	Ba	32329	0	16318	0	0
23	Ax	262	0	138	0	0
23	Bx	262	0	138	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	97	0
26	BC	937	0	957	100	0
27	AD	2104	0	2182	280	0
27	BD	2104	0	2182	292	0
28	AE	1563	0	1629	214	0
28	BE	1563	0	1629	213	0
29	AF	1623	0	1677	167	0
29	BF	1623	0	1677	164	0
30	AG	1474	0	1535	280	0
30	BG	1474	0	1535	252	0
31	AH	1259	0	1326	138	0
31	BH	1259	0	1326	151	0
32	AI	1131	0	1218	222	0
32	BI	1131	0	1218	222	0
33	AJ	641	0	309	18	0
33	BJ	641	0	309	38	0
34	AN	1104	0	1180	132	0
34	BN	1104	0	1180	140	0
35	AO	933	0	996	92	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
35	BO	933	0	996	98	0
36	AP	1114	0	1187	272	0
36	BP	1114	0	1187	274	0
37	AQ	1112	0	1171	110	0
37	BQ	1112	0	1171	107	0
38	AR	960	0	1021	121	0
38	BR	960	0	1021	111	0
39	AS	770	0	832	127	0
39	BS	770	0	832	117	0
40	AT	1123	0	1181	206	0
40	BT	1123	0	1181	214	0
41	AU	958	0	1015	132	0
41	BU	958	0	1015	135	0
42	AV	779	0	852	151	0
42	BV	779	0	852	152	0
43	AW	896	0	953	76	0
43	BW	896	0	953	75	0
44	AX	725	0	778	67	0
44	BX	725	0	778	65	0
45	AY	775	0	870	155	0
45	BY	775	0	870	154	0
46	AZ	1467	0	1492	186	0
46	BZ	1467	0	1492	183	0
47	A0	662	0	688	70	0
47	B0	662	0	688	78	0
48	A1	731	0	808	65	0
48	B1	731	0	808	74	0
49	A2	598	0	653	74	0
49	B2	598	0	653	56	0
50	A3	467	0	523	37	0
50	B3	467	0	523	38	0
51	A4	450	0	449	108	0
51	B4	450	0	449	70	0
52	A5	427	0	445	71	0
52	B5	427	0	445	70	0
53	A6	433	0	461	98	0
53	B6	433	0	461	100	0
54	A7	409	0	454	32	0
54	B7	409	0	454	32	0
55	A8	507	0	576	109	0
55	B8	507	0	576	108	0
56	A9	307	0	336	21	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	B9	307	0	335	19	0
57	AA	61341	0	30926	1814	0
57	BA	61341	0	30928	1811	0
58	AB	2551	0	1295	103	0
58	BB	2551	0	1295	84	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	1	0	0	0	0
60	A5	1	0	0	0	0
60	A7	2	0	0	0	0
60	AA	368	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	Am	1	0	0	0	0
60	Aq	1	0	0	0	0
60	Av	4	0	0	0	0
60	Aw	1	0	0	0	0
60	B0	2	0	0	0	0
60	B5	1	0	0	0	0
60	B7	2	0	0	0	0
60	BA	366	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	BQ	1	0	0	0	0
60	BX	1	0	0	0	0
60	Ba	143	0	0	0	0
60	Bm	2	0	0	0	0
60	Bq	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

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	297206	0	201930	10512	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 33.

All (10512) 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:110:ALA:C	30:AG:112:PRO:HD2	1.47	1.34
57:BA:612:C:H2'	57:BA:613:G:H5''	1.20	1.19
57:BA:2801(A):A:H4'	57:BA:2802:G:H5'	1.19	1.18
30:BG:114:ILE:O	30:BG:116:ASP:N	1.77	1.18
27:BD:44:ASN:HB3	27:BD:49:ILE:HA	1.26	1.17
27:AD:259:THR:HG22	57:AA:1798:U:H5'	1.18	1.17
51:B4:33:VAL:HG12	51:B4:34:GLU:H	1.10	1.16
36:AP:59:LEU:HA	36:AP:61:ARG:NH1	1.61	1.16
57:BA:1884:A:H2'	57:BA:1885:A:H5''	1.16	1.15
55:A8:62:LEU:HD13	57:AA:242:G:H5''	1.17	1.15
57:AA:1899:G:N2	57:AA:1902:C:H41	1.45	1.14
58:AB:20:C:H2'	58:AB:21:G:H5''	1.24	1.14
43:BW:1:MET:HE2	43:BW:2:GLU:H	1.10	1.14
36:AP:7:ARG:HH11	36:AP:7:ARG:HA	1.10	1.13
57:BA:1845:G:H2'	57:BA:1846:G:H5''	1.18	1.13
55:B8:62:LEU:HD13	57:BA:242:G:H5''	1.17	1.13
27:BD:34:VAL:HG23	27:BD:35:LYS:H	1.13	1.13
57:AA:1884:A:H2'	57:AA:1885:A:H5''	1.17	1.13
30:AG:67:LYS:H	30:AG:67:LYS:HE3	1.11	1.12
31:BH:158:HIS:NE2	31:BH:170:ARG:HA	1.64	1.12
57:AA:2801(A):A:H4'	57:AA:2802:G:H5'	1.20	1.12
40:AT:89:VAL:HB	40:AT:91:ARG:HG3	1.31	1.12
36:BP:59:LEU:HA	36:BP:61:ARG:NH1	1.64	1.12
27:AD:44:ASN:HB3	27:AD:49:ILE:HA	1.27	1.11
46:BZ:151:HIS:HB3	46:BZ:170:THR:HA	1.26	1.11
27:BD:259:THR:HG22	57:BA:1798:U:H5'	1.20	1.11
31:AH:158:HIS:NE2	31:AH:170:ARG:HA	1.65	1.11
36:AP:64:LYS:HB3	55:A8:25:MET:HG3	1.24	1.11
42:AV:72:VAL:HG23	42:AV:85:LYS:HB3	1.32	1.11
42:AV:62:LEU:HD21	42:AV:95:LEU:HB2	1.33	1.11
53:B6:45:LYS:HG2	57:BA:2371:G:H4'	1.32	1.10
52:A5:4:HIS:HB3	52:A5:5:PRO:HD3	1.32	1.10
57:BA:1494:A:H2'	57:BA:1495:A:H5''	1.12	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BB:20:C:H2'	58:BB:21:G:H5''	1.24	1.10
57:AA:1494:A:H2'	57:AA:1495:A:H5''	1.13	1.10
36:BP:23:PRO:HD2	36:BP:33:ARG:CZ	1.82	1.10
57:BA:1899:G:N2	57:BA:1902:C:H41	1.47	1.10
57:BA:1484:G:H2'	57:BA:1485:G:H5''	1.33	1.10
32:AI:91:SER:HB3	32:AI:121:LYS:HD3	1.34	1.09
36:BP:64:LYS:HB3	55:B8:25:MET:HG3	1.24	1.09
42:BV:72:VAL:HG23	42:BV:85:LYS:HB3	1.29	1.09
32:BI:91:SER:HB3	32:BI:121:LYS:HD3	1.34	1.09
57:AA:1845:G:H2'	57:AA:1846:G:H5''	1.16	1.09
57:AA:612:C:H2'	57:AA:613:G:H5''	1.22	1.09
57:BA:612:C:C2'	57:BA:613:G:H5''	1.83	1.09
45:BY:76:CYS:HB3	45:BY:96:ILE:HD11	1.31	1.09
45:BY:76:CYS:SG	45:BY:77:PRO:HD2	1.92	1.09
30:BG:67:LYS:H	30:BG:67:LYS:HE3	0.95	1.08
57:AA:2491:U:H5'	57:AA:2570:G:H5''	1.35	1.08
52:B5:4:HIS:HB3	52:B5:5:PRO:HD3	1.33	1.08
36:AP:23:PRO:HD2	36:AP:33:ARG:CZ	1.82	1.08
51:A4:33:VAL:HG12	51:A4:34:GLU:H	1.11	1.07
30:AG:66:GLN:HG3	30:AG:67:LYS:HZ1	1.16	1.07
45:AY:76:CYS:HB3	45:AY:96:ILE:HD11	1.37	1.07
57:AA:612:C:C2'	57:AA:613:G:H5''	1.85	1.07
42:BV:62:LEU:HD21	42:BV:95:LEU:HB2	1.35	1.06
53:A6:45:LYS:HG2	57:AA:2371:G:H4'	1.33	1.06
57:AA:1590:U:H2'	57:AA:1591:G:H5''	1.36	1.06
36:BP:23:PRO:HD2	36:BP:33:ARG:NH2	1.70	1.06
41:BU:91:ASP:OD1	41:BU:96:ALA:HB2	1.55	1.06
58:AB:80:U:H2'	58:AB:81:G:H21	1.20	1.06
45:AY:76:CYS:SG	45:AY:77:PRO:HD2	1.96	1.05
27:AD:34:VAL:HG23	27:AD:35:LYS:H	1.13	1.05
40:BT:89:VAL:HB	40:BT:91:ARG:HG3	1.33	1.05
53:A6:27:LYS:HD2	53:A6:30:THR:HB	1.36	1.05
30:BG:39:ILE:HD11	30:BG:60:LEU:HD11	1.39	1.05
57:BA:1590:U:H2'	57:BA:1591:G:H5''	1.35	1.05
29:AF:24:LEU:HB3	29:AF:25:PRO:HD2	1.36	1.05
36:BP:23:PRO:HB2	36:BP:33:ARG:HD2	1.34	1.05
41:BU:83:LEU:HG	41:BU:88:ILE:HD11	1.38	1.04
36:BP:7:ARG:HA	36:BP:7:ARG:HH11	1.11	1.04
57:AA:1484:G:H2'	57:AA:1485:G:H5''	1.31	1.04
30:AG:36:LYS:HE2	30:AG:95:ARG:HH12	1.17	1.04
36:AP:23:PRO:HB2	36:AP:33:ARG:HD2	1.39	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BZ:68:PRO:HB2	46:BZ:91:LEU:HB2	1.34	1.04
57:AA:1747(A):G:H2'	57:AA:1748:G:H5''	1.37	1.04
36:AP:55:ARG:HG2	36:AP:56:SER:H	1.15	1.04
29:BF:24:LEU:HB3	29:BF:25:PRO:HD2	1.35	1.04
57:AA:1887:C:H2'	57:AA:1888:G:H5''	1.38	1.04
57:BA:1747(A):G:H2'	57:BA:1748:G:H5''	1.36	1.03
41:AU:91:ASP:OD1	41:AU:96:ALA:HB2	1.57	1.03
30:BG:98:ARG:HG3	51:B4:1:MET:SD	1.99	1.03
47:A0:11:ARG:HB2	47:A0:11:ARG:HH11	1.23	1.03
47:B0:11:ARG:HB2	47:B0:11:ARG:HH11	1.22	1.03
57:BA:1887:C:H2'	57:BA:1888:G:H5''	1.36	1.03
36:AP:23:PRO:HD2	36:AP:33:ARG:NH2	1.74	1.03
27:AD:242:ARG:HH21	57:AA:1826:G:H4'	1.23	1.03
27:AD:32:SER:O	27:AD:36:PRO:HG3	1.58	1.02
57:BA:1494:A:C2'	57:BA:1495:A:H5''	1.89	1.02
55:B8:50:LEU:HD12	55:B8:51:ALA:H	1.24	1.02
46:BZ:61:LEU:HD23	46:BZ:61:LEU:H	1.24	1.02
44:AX:12:VAL:HG23	44:AX:13:LEU:H	1.24	1.02
57:AA:1845:G:C2'	57:AA:1846:G:H5''	1.89	1.02
42:AV:99:ILE:HD13	42:AV:99:ILE:H	1.21	1.02
52:B5:3:LYS:HE3	52:B5:5:PRO:O	1.59	1.02
57:BA:155:U:H2'	57:BA:156:U:H5''	1.42	1.02
38:AR:33:ARG:HG3	38:AR:115:GLU:HG3	1.41	1.02
26:BC:42:VAL:HG22	26:BC:217:THR:HG22	1.39	1.02
48:B1:52:ARG:HH12	57:BA:2218:U:H1'	1.23	1.02
38:BR:33:ARG:HG3	38:BR:115:GLU:HG3	1.41	1.02
57:BA:1884:A:C2'	57:BA:1885:A:H5''	1.90	1.02
27:BD:32:SER:O	27:BD:36:PRO:HG3	1.60	1.02
29:BF:132:VAL:HG22	29:BF:133:ASN:H	1.22	1.02
41:AU:83:LEU:HG	41:AU:88:ILE:HD11	1.41	1.01
39:BS:97:ARG:NH2	39:BS:98:VAL:HA	1.75	1.01
30:AG:46:ALA:HB3	30:AG:82:LEU:HD11	1.42	1.01
57:AA:1899:G:H22	57:AA:1902:C:N4	1.59	1.01
57:BA:1845:G:C2'	57:BA:1846:G:H5''	1.90	1.01
45:BY:51:VAL:HG12	45:BY:53:PRO:HD2	1.42	1.01
53:B6:27:LYS:HD2	53:B6:30:THR:HB	1.37	1.01
57:AA:903:C:C2'	57:AA:904:C:H5''	1.90	1.01
30:AG:64:THR:HG23	30:AG:66:GLN:H	1.22	1.01
30:BG:110:ALA:C	30:BG:112:PRO:HD2	1.80	1.01
40:AT:16:ARG:HH12	40:AT:19:LEU:HD21	1.22	1.01
35:BO:2:ILE:HD12	35:BO:8:LEU:HD11	1.42	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:152:G:H1	57:BA:174:C:H42	1.09	1.01
32:BI:118:LYS:HG2	32:BI:119:PRO:HD2	1.42	1.01
57:BA:2491:U:H5'	57:BA:2570:G:H5''	1.41	1.01
30:BG:16:ARG:NH2	30:BG:28:VAL:HG13	1.74	1.01
53:A6:5:VAL:HG12	53:A6:8:LYS:HB3	1.42	1.01
32:AI:85:GLU:H	32:AI:123:LEU:HD12	1.26	1.00
40:BT:16:ARG:HH12	40:BT:19:LEU:HD21	1.23	1.00
57:BA:2133:G:H2'	57:BA:2157:G:H22	1.26	1.00
57:AA:2681:C:H5	57:AA:2725:A:H62	1.09	1.00
57:BA:259:G:H21	57:BA:621:A:H8	1.01	1.00
57:AA:1884:A:C2'	57:AA:1885:A:H5''	1.91	1.00
29:AF:132:VAL:HG22	29:AF:133:ASN:H	1.24	1.00
55:A8:50:LEU:HD12	55:A8:51:ALA:H	1.24	1.00
52:A5:3:LYS:HE3	52:A5:5:PRO:O	1.58	1.00
46:BZ:23:LYS:HD3	46:BZ:38:TYR:HE1	1.26	1.00
58:AB:7:G:H3'	58:AB:8:U:H5''	1.43	1.00
26:AC:42:VAL:HG22	26:AC:217:THR:HG22	1.39	1.00
45:AY:51:VAL:HG12	45:AY:53:PRO:HD2	1.42	1.00
36:BP:55:ARG:HG2	36:BP:56:SER:H	1.21	1.00
44:BX:12:VAL:HG23	44:BX:13:LEU:H	1.23	1.00
53:B6:5:VAL:HG12	53:B6:8:LYS:HB3	1.41	1.00
42:BV:99:ILE:H	42:BV:99:ILE:HD13	1.22	0.99
57:BA:903:C:C2'	57:BA:904:C:H5''	1.92	0.99
36:BP:16:ARG:HD3	36:BP:18:ARG:H	1.26	0.99
57:AA:1494:A:C2'	57:AA:1495:A:H5''	1.91	0.99
41:AU:92:ARG:HE	57:AA:996:A:H4'	1.23	0.99
42:AV:18:LEU:HD13	42:AV:19:LYS:H	1.28	0.99
30:AG:111:LEU:HA	30:AG:114:ILE:CD1	1.93	0.98
30:AG:67:LYS:CE	30:AG:67:LYS:H	1.75	0.98
57:AA:914:C:H2'	57:AA:915:C:H5'	1.45	0.98
57:AA:155:U:H2'	57:AA:156:U:H5''	1.43	0.98
57:AA:1019:U:H3	57:AA:1142(A):A:H62	1.08	0.98
41:BU:90:VAL:HG21	42:BV:47:VAL:HG21	1.45	0.98
55:A8:33:ASN:ND2	55:A8:33:ASN:H	1.58	0.98
31:AH:153:LYS:HD3	31:AH:153:LYS:H	1.27	0.98
30:BG:109:VAL:CA	30:BG:112:PRO:HG2	1.92	0.98
30:AG:46:ALA:HB2	30:AG:88:ILE:HD11	1.46	0.98
32:AI:118:LYS:HG2	32:AI:119:PRO:HD2	1.45	0.98
30:BG:111:LEU:HD22	30:BG:120:LEU:HD21	1.46	0.98
57:BA:145:G:H2'	57:BA:146:G:H5''	1.44	0.98
39:AS:97:ARG:NH2	39:AS:98:VAL:HA	1.76	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:A2:46:GLN:HB2	49:A2:49:LYS:HE3	1.43	0.98
30:AG:111:LEU:HA	30:AG:114:ILE:HD12	1.46	0.98
30:AG:45:GLU:H	30:AG:88:ILE:HG21	1.28	0.98
55:B8:61:LEU:HD23	55:B8:61:LEU:H	1.28	0.98
36:AP:16:ARG:HD3	36:AP:18:ARG:H	1.27	0.98
58:BB:80:U:H2'	58:BB:81:G:H21	1.23	0.98
42:BV:18:LEU:HD13	42:BV:19:LYS:H	1.26	0.97
38:BR:3:HIS:HB2	57:BA:1654:A:OP1	1.63	0.97
57:BA:1899:G:H22	57:BA:1902:C:N4	1.60	0.97
55:A8:33:ASN:H	55:A8:33:ASN:HD22	1.09	0.97
36:BP:71:VAL:HG13	36:BP:72:PRO:HD3	1.46	0.97
57:AA:259:G:H21	57:AA:621:A:H8	1.02	0.97
36:BP:23:PRO:HB2	36:BP:33:ARG:CD	1.93	0.97
53:B6:37:ARG:HH21	57:BA:2286:A:H62	1.12	0.97
55:A8:61:LEU:H	55:A8:61:LEU:HD23	1.27	0.97
40:AT:60:THR:HG22	40:AT:77:PRO:HA	1.47	0.97
41:AU:90:VAL:HG21	42:AV:47:VAL:HG21	1.45	0.97
57:BA:2359:C:H2'	57:BA:2360:A:H5'	1.46	0.97
57:AA:145:G:H2'	57:AA:146:G:H5''	1.46	0.97
57:AA:2133:G:H2'	57:AA:2157:G:H22	1.26	0.97
41:AU:92:ARG:NE	57:AA:996:A:H4'	1.79	0.97
40:BT:13:ARG:HA	40:BT:13:ARG:NH1	1.80	0.97
57:BA:1494:A:H2'	57:BA:1495:A:C5'	1.95	0.97
40:BT:60:THR:HG22	40:BT:77:PRO:HA	1.46	0.97
57:BA:1038:C:H3'	57:BA:1039:G:H5''	1.46	0.97
55:A8:61:LEU:HD12	55:A8:62:LEU:HG	1.46	0.96
46:AZ:128:VAL:HG21	46:AZ:132:ASN:HB2	1.47	0.96
38:AR:3:HIS:HB2	57:AA:1654:A:OP1	1.64	0.96
34:AN:2:LYS:NZ	41:AU:95:LEU:HD21	1.79	0.96
30:BG:67:LYS:N	30:BG:67:LYS:HE3	1.81	0.96
28:AE:92:THR:O	28:AE:95:ILE:HG12	1.64	0.96
50:A3:8:LEU:HD13	50:A3:31:LEU:HA	1.47	0.96
27:AD:129:ASN:H	27:AD:129:ASN:HD22	3.58	0.96
36:BP:32:THR:HG21	36:BP:37:GLY:HA2	1.47	0.96
27:AD:43:ARG:HB3	27:AD:54:ARG:HB2	1.46	0.96
42:BV:15:GLU:HB3	42:BV:16:PRO:HD2	1.47	0.96
48:A1:19:GLN:HA	48:A1:19:GLN:HE21	1.28	0.96
31:BH:153:LYS:H	31:BH:153:LYS:HD3	1.28	0.96
32:AI:113:ARG:HH12	32:AI:132:PRO:HD3	1.29	0.96
57:BA:654(L):G:H2'	57:BA:654(M):C:H4'	1.48	0.96
57:AA:1038:C:H3'	57:AA:1039:G:H5''	1.44	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AF:70:THR:HG22	29:AF:72:ARG:H	1.31	0.96
30:AG:110:ALA:C	30:AG:112:PRO:CD	2.34	0.96
57:BA:1210:A:H8	57:BA:1210:A:H5'	1.31	0.95
30:AG:67:LYS:N	30:AG:67:LYS:HE3	1.81	0.95
35:AO:2:ILE:HD12	35:AO:8:LEU:HD11	1.45	0.95
27:BD:43:ARG:HB3	27:BD:54:ARG:HB2	1.45	0.95
40:AT:50:ILE:HD11	40:AT:102:ILE:HD11	1.48	0.95
57:AA:2158:A:H4'	57:AA:2159:G:H5'	1.48	0.95
57:AA:2359:C:H2'	57:AA:2360:A:H5'	1.46	0.95
57:BA:2158:A:H4'	57:BA:2159:G:H5'	1.47	0.95
28:BE:92:THR:O	28:BE:95:ILE:HG12	1.65	0.95
57:BA:676:A:H8	57:BA:2069:G:H21	1.12	0.95
34:AN:133:GLN:HG2	34:AN:135:PRO:HD3	1.48	0.95
34:BN:2:LYS:NZ	41:BU:95:LEU:HD21	1.81	0.95
40:AT:85:LYS:NZ	40:AT:85:LYS:HB3	1.81	0.95
55:B8:33:ASN:H	55:B8:33:ASN:HD22	1.09	0.95
58:BB:7:G:H3'	58:BB:8:U:H5''	1.45	0.95
41:BU:92:ARG:HE	57:BA:996:A:H4'	1.29	0.95
36:BP:38:GLN:HG3	36:BP:39:LYS:H	1.30	0.95
57:AA:903:C:H2'	57:AA:904:C:H5''	1.45	0.95
40:AT:82:LEU:H	40:AT:82:LEU:HD12	1.30	0.95
57:AA:676:A:H8	57:AA:2069:G:H21	1.15	0.95
40:BT:85:LYS:NZ	40:BT:85:LYS:HB3	1.79	0.95
57:AA:1210:A:H8	57:AA:1210:A:H5'	1.29	0.95
58:BB:20:C:C2'	58:BB:21:G:H5''	1.97	0.95
57:AA:654(L):G:H2'	57:AA:654(M):C:H4'	1.46	0.95
40:BT:50:ILE:HD11	40:BT:102:ILE:HD11	1.46	0.94
41:BU:108:GLU:HG3	42:BV:44:LYS:HD3	1.49	0.94
36:AP:101:VAL:HB	36:AP:107:LYS:HA	1.49	0.94
40:BT:125:ARG:O	40:BT:128:GLU:HG3	1.68	0.94
57:BA:1747(A):G:C2'	57:BA:1748:G:H5''	1.98	0.94
37:AQ:63:LYS:HD2	46:AZ:175:VAL:HG21	1.48	0.94
28:BE:77:ILE:HG22	28:BE:78:LEU:H	1.32	0.94
57:BA:1019:U:H3	57:BA:1142(A):A:H62	1.12	0.94
50:B3:8:LEU:HD13	50:B3:31:LEU:HA	1.48	0.94
57:AA:1494:A:H2'	57:AA:1495:A:C5'	1.97	0.94
58:AB:20:C:C2'	58:AB:21:G:H5''	1.97	0.94
27:AD:35:LYS:HG2	27:AD:63:ARG:HA	1.50	0.94
34:BN:133:GLN:HG2	34:BN:135:PRO:HD3	1.46	0.94
46:BZ:150:LEU:H	46:BZ:150:LEU:HD23	1.32	0.94
57:BA:1899:G:H22	57:BA:1902:C:H41	0.99	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1022:G:H22	57:AA:1142(A):A:H2	1.16	0.94
40:BT:13:ARG:HA	40:BT:13:ARG:CZ	1.98	0.94
46:AZ:150:LEU:HG	46:AZ:171:ILE:HD11	1.46	0.94
40:AT:125:ARG:O	40:AT:128:GLU:HG3	1.67	0.94
57:AA:1747(A):G:C2'	57:AA:1748:G:H5''	1.98	0.94
55:B8:61:LEU:HD12	55:B8:62:LEU:HG	1.50	0.93
40:BT:54:ARG:HA	40:BT:59:THR:HB	1.50	0.93
55:B8:33:ASN:H	55:B8:33:ASN:ND2	1.58	0.93
53:A6:37:ARG:HH21	57:AA:2286:A:H62	1.12	0.93
30:BG:67:LYS:H	30:BG:67:LYS:CE	1.81	0.93
48:A1:50:ARG:HG2	48:A1:59:THR:HG22	1.47	0.93
40:BT:65:LYS:HE3	40:BT:66:VAL:H	1.34	0.93
30:AG:40:ASN:ND2	30:AG:41:GLN:H	1.65	0.93
27:BD:35:LYS:HG2	27:BD:63:ARG:HA	1.47	0.93
27:BD:242:ARG:HH21	57:BA:1826:G:H4'	1.29	0.93
57:BA:2317:C:H2'	57:BA:2318:G:H5'	1.50	0.93
32:AI:74:ASN:ND2	32:AI:74:ASN:H	1.66	0.93
36:AP:32:THR:HG21	36:AP:37:GLY:HA2	1.49	0.93
32:BI:113:ARG:HH12	32:BI:132:PRO:HD3	1.31	0.93
29:BF:70:THR:HG22	29:BF:72:ARG:H	1.33	0.93
46:BZ:120:ILE:HB	46:BZ:172:ALA:HA	1.50	0.93
40:BT:100:TYR:HD2	40:BT:103:ARG:HH21	1.15	0.93
30:AG:73:ALA:H	30:AG:87:PRO:HG3	1.34	0.93
57:AA:152:G:H1	57:AA:174:C:H42	1.10	0.93
46:AZ:54:HIS:HB3	46:AZ:101:PRO:HD3	1.50	0.93
42:AV:15:GLU:HB3	42:AV:16:PRO:HD2	1.49	0.93
29:BF:188:ARG:HA	36:BP:7:ARG:HD3	1.51	0.93
32:BI:85:GLU:H	32:BI:123:LEU:HD12	1.32	0.93
30:AG:110:ALA:O	30:AG:112:PRO:HD2	1.66	0.92
42:AV:19:LYS:HG2	42:AV:94:LEU:HB2	1.49	0.92
45:BY:28:LYS:HA	45:BY:38:ILE:HG22	1.51	0.92
57:BA:903:C:H2'	57:BA:904:C:H5''	1.49	0.92
40:AT:13:ARG:HA	40:AT:13:ARG:NH1	1.82	0.92
28:AE:2:LYS:HD3	28:AE:95:ILE:HG22	1.51	0.92
57:BA:2317:C:C2'	57:BA:2318:G:H5'	1.98	0.92
57:BA:1689:A:H62	57:BA:1698:A:H2	1.15	0.92
36:AP:85:LEU:HD23	36:AP:85:LEU:H	1.34	0.92
57:BA:914:C:H2'	57:BA:915:C:H5'	1.49	0.92
46:BZ:151:HIS:HA	46:BZ:171:ILE:HG22	1.49	0.92
28:AE:77:ILE:HG22	28:AE:78:LEU:H	1.32	0.92
41:AU:108:GLU:HG3	42:AV:44:LYS:HD3	1.49	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:101:VAL:HB	36:BP:107:LYS:HA	1.48	0.92
53:B6:48:VAL:HG23	53:B6:49:HIS:H	1.34	0.92
57:BA:1019:U:HO2'	57:BA:1021:A:H2	0.92	0.92
42:AV:19:LYS:NZ	42:AV:20:LEU:H	1.67	0.92
42:BV:19:LYS:HG2	42:BV:94:LEU:HB2	1.50	0.92
57:BA:2681:C:H5	57:BA:2725:A:H62	1.07	0.92
28:AE:9:VAL:HG13	28:AE:25:VAL:O	1.70	0.92
57:AA:528:A:O2'	57:AA:529:A:H5'	1.70	0.92
52:B5:40:LYS:CE	52:B5:46:CYS:HB3	1.98	0.92
34:BN:15:LEU:HD12	34:BN:136:GLU:HG3	1.50	0.92
57:BA:2893:G:H5'	57:BA:2894:G:H5'	1.52	0.92
57:BA:528:A:O2'	57:BA:529:A:H5'	1.70	0.92
34:AN:15:LEU:HD12	34:AN:136:GLU:HG3	1.52	0.92
57:BA:145:G:C2'	57:BA:146:G:H5''	2.00	0.92
29:AF:103:LYS:HA	29:AF:106:ARG:HG3	1.52	0.92
32:AI:74:ASN:N	32:AI:74:ASN:HD22	1.67	0.91
36:AP:23:PRO:HB2	36:AP:33:ARG:CD	2.01	0.91
57:BA:1590:U:C2'	57:BA:1591:G:H5''	2.00	0.91
57:BA:2312:U:H2'	57:BA:2313:C:H5''	1.52	0.91
40:AT:13:ARG:CZ	40:AT:13:ARG:HA	1.99	0.91
30:BG:40:ASN:HD22	30:BG:91:ARG:HB2	1.34	0.91
52:A5:3:LYS:HB3	57:AA:747:U:C5	2.05	0.91
35:AO:114:ILE:HD12	35:AO:114:ILE:H	1.34	0.91
44:AX:12:VAL:HG13	44:AX:27:THR:O	1.71	0.91
41:BU:92:ARG:NE	57:BA:996:A:H4'	1.85	0.91
46:AZ:149:SER:HB2	46:AZ:172:ALA:O	1.70	0.91
40:AT:5:ALA:HB2	57:AA:2875:C:H4'	1.53	0.91
32:BI:2:LYS:HD3	32:BI:20:ASP:HB3	1.50	0.91
36:AP:38:GLN:HG3	36:AP:39:LYS:H	1.34	0.91
57:AA:2317:C:C2'	57:AA:2318:G:H5'	1.99	0.91
27:BD:129:ASN:HD22	27:BD:129:ASN:H	3.59	0.91
50:A3:35:ARG:HH21	50:A3:37:LEU:HD21	1.36	0.91
57:AA:2392:A:H2	57:AA:2424:C:H42	1.18	0.91
34:BN:125:GLY:HA3	34:BN:126:PRO:O	1.71	0.91
57:AA:2206:G:H21	57:AA:2207:G:H5'	1.35	0.91
39:AS:13:ARG:HG3	39:AS:14:VAL:H	1.34	0.91
34:BN:47:ALA:HB2	34:BN:112:LEU:HD11	1.53	0.91
57:BA:1022:G:H22	57:BA:1142(A):A:H2	1.16	0.91
52:A5:40:LYS:CE	52:A5:46:CYS:HB3	1.99	0.91
32:AI:2:LYS:HD3	32:AI:20:ASP:HB3	1.53	0.91
45:AY:14:LEU:HD11	45:AY:22:GLY:HA2	1.53	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:AT:38:ASN:HD22	40:AT:38:ASN:C	1.75	0.90
57:BA:1116:C:H2'	57:BA:1117:G:H5''	3.75	0.90
57:AA:1779:U:H5	57:AA:1784:A:N7	1.69	0.90
36:BP:85:LEU:HD23	36:BP:85:LEU:H	1.35	0.90
57:BA:2068:U:N3	57:BA:2430:A:H2	1.68	0.90
32:BI:92:VAL:HG12	32:BI:120:ILE:HD13	1.53	0.90
26:AC:216:THR:HB	26:AC:222:SER:HB3	1.54	0.90
30:AG:73:ALA:H	30:AG:87:PRO:CG	1.83	0.90
57:AA:1590:U:C2'	57:AA:1591:G:H5''	2.01	0.90
27:AD:242:ARG:NH2	57:AA:1826:G:H4'	1.86	0.90
57:AA:2317:C:H2'	57:AA:2318:G:H5'	1.52	0.90
27:AD:27:THR:HG23	27:AD:83:GLU:HB3	1.53	0.90
45:AY:28:LYS:HA	45:AY:38:ILE:HG22	1.51	0.90
40:AT:54:ARG:HA	40:AT:59:THR:HB	1.49	0.90
57:AA:1116:C:H2'	57:AA:1117:G:H5''	3.76	0.90
46:AZ:51:ALA:HB1	46:AZ:57:ILE:HD11	1.53	0.90
51:B4:13:ARG:HB3	51:B4:13:ARG:HH11	1.37	0.90
37:AQ:12:GLN:HA	57:AA:910:A:H62	1.37	0.90
30:AG:42:GLY:HA2	30:AG:89:GLY:HA2	1.52	0.90
42:BV:19:LYS:NZ	42:BV:20:LEU:H	1.69	0.90
28:BE:199:ARG:HH12	28:BE:202:LYS:HE2	1.34	0.90
30:AG:161:THR:HG22	30:AG:163:ALA:H	1.34	0.90
36:BP:18:ARG:NH1	36:BP:18:ARG:HB3	1.86	0.90
57:AA:1899:G:H22	57:AA:1902:C:H41	0.95	0.90
48:B1:51:VAL:HG21	48:B1:74:VAL:HG21	1.53	0.90
27:BD:44:ASN:CB	27:BD:49:ILE:HA	2.02	0.90
40:BT:82:LEU:HD12	40:BT:82:LEU:H	1.35	0.90
57:AA:8:A:H2'	57:AA:9:U:C5	2.07	0.90
28:BE:9:VAL:HG13	28:BE:25:VAL:O	1.70	0.90
57:AA:27:G:H22	57:AA:512:G:H2'	1.35	0.90
27:AD:24:ILE:HD13	27:AD:25:THR:H	1.34	0.90
28:BE:2:LYS:HD3	28:BE:95:ILE:HG22	1.53	0.90
46:BZ:24:LEU:HD21	46:BZ:86:VAL:HG23	1.53	0.90
54:A7:8:ASN:HD22	54:A7:8:ASN:C	1.75	0.90
29:AF:188:ARG:HA	36:AP:7:ARG:HD3	1.51	0.89
32:BI:92:VAL:HG13	32:BI:97:ILE:HD11	1.52	0.89
42:BV:21:ARG:HG2	42:BV:91:TYR:HD2	1.37	0.89
28:BE:36:ARG:HH21	28:BE:88:GLY:CA	1.83	0.89
28:AE:36:ARG:HH21	28:AE:88:GLY:CA	1.85	0.89
50:B3:35:ARG:HH21	50:B3:37:LEU:HD21	1.37	0.89
57:AA:2206:G:N2	57:AA:2207:G:H5'	1.87	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AN:133:GLN:HG2	34:AN:134:ARG:H	1.33	0.89
34:AN:2:LYS:HZ3	41:AU:95:LEU:HD21	1.32	0.89
52:B5:3:LYS:HB3	57:BA:747:U:C5	2.06	0.89
53:A6:48:VAL:HG23	53:A6:49:HIS:H	1.35	0.89
57:AA:145:G:C2'	57:AA:146:G:H5''	2.01	0.89
29:BF:103:LYS:HA	29:BF:106:ARG:HG3	1.53	0.89
34:BN:133:GLN:HG2	34:BN:134:ARG:H	1.33	0.89
57:BA:2327:A:H2'	57:BA:2328:A:C8	2.07	0.89
57:BA:271(M):G:H2'	57:BA:271(N):U:H5''	1.52	0.89
46:BZ:157:LEU:H	46:BZ:157:LEU:HD23	1.38	0.89
35:AO:47:ILE:HG12	35:AO:48:PRO:HD2	1.54	0.89
57:BA:2206:G:H21	57:BA:2207:G:H5'	1.36	0.89
57:AA:2893:G:H5'	57:AA:2894:G:H5'	1.52	0.89
30:BG:51:ARG:HA	30:BG:51:ARG:HE	1.36	0.89
31:AH:19:VAL:HG21	31:AH:44:VAL:HA	1.55	0.89
36:AP:18:ARG:NH1	36:AP:18:ARG:HB3	1.87	0.89
36:AP:59:LEU:HA	36:AP:61:ARG:CZ	2.01	0.89
27:AD:259:THR:CG2	57:AA:1798:U:H5'	2.02	0.89
44:BX:12:VAL:HG13	44:BX:27:THR:O	1.72	0.89
27:AD:44:ASN:CB	27:AD:49:ILE:HA	2.02	0.89
34:AN:47:ALA:HB2	34:AN:112:LEU:HD11	1.54	0.89
36:AP:47:ASP:HB3	36:AP:48:PRO:CA	2.03	0.89
39:AS:29:PHE:HE1	58:AB:6:C:O2'	1.54	0.89
27:BD:70:TRP:CH2	27:BD:150:LYS:HA	2.08	0.89
39:BS:89:ARG:O	39:BS:92:TYR:HB3	1.73	0.89
35:BO:114:ILE:HD12	35:BO:114:ILE:H	1.36	0.89
39:AS:89:ARG:O	39:AS:92:TYR:HB3	1.72	0.88
40:BT:28:VAL:HG22	40:BT:47:GLY:N	1.88	0.88
57:BA:8:A:H2'	57:BA:9:U:C5	2.08	0.88
40:BT:3:ARG:HD3	57:BA:2876:G:H4'	1.55	0.88
36:AP:71:VAL:HG13	36:AP:72:PRO:HD3	1.54	0.88
30:AG:66:GLN:HG3	30:AG:67:LYS:NZ	1.87	0.88
32:BI:74:ASN:ND2	32:BI:74:ASN:H	1.68	0.88
36:BP:59:LEU:HA	36:BP:61:ARG:CZ	2.03	0.88
57:BA:1540:U:H3'	57:BA:1541:G:H3'	1.55	0.88
32:AI:74:ASN:HD22	32:AI:74:ASN:H	0.92	0.88
32:BI:74:ASN:HD22	32:BI:74:ASN:H	0.94	0.88
34:BN:2:LYS:HZ3	41:BU:95:LEU:HD21	1.36	0.88
32:BI:127:VAL:HG13	32:BI:139:GLN:HA	1.55	0.88
46:BZ:24:LEU:HD12	46:BZ:41:LEU:HD23	1.54	0.88
57:BA:2189:U:H2'	57:BA:2190:G:H5''	1.55	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AN:125:GLY:HA3	34:AN:126:PRO:O	1.73	0.88
27:BD:24:ILE:HD13	27:BD:25:THR:H	1.35	0.88
57:BA:2068:U:H3	57:BA:2430:A:H2	0.88	0.88
57:BA:2392:A:H2	57:BA:2424:C:H42	1.20	0.88
57:AA:2312:U:H2'	57:AA:2313:C:H5''	1.52	0.88
30:AG:108:ASN:O	30:AG:112:PRO:HG2	1.73	0.88
32:AI:92:VAL:HG13	32:AI:97:ILE:HD11	1.56	0.88
39:BS:13:ARG:HG3	39:BS:14:VAL:H	1.37	0.88
45:BY:14:LEU:HD11	45:BY:22:GLY:HA2	1.54	0.88
40:AT:3:ARG:HD3	57:AA:2876:G:H4'	1.56	0.88
40:BT:5:ALA:HB2	57:BA:2875:C:H4'	1.55	0.88
57:AA:1540:U:H3'	57:AA:1541:G:H3'	1.55	0.88
57:BA:2206:G:N2	57:BA:2207:G:H5'	1.88	0.88
57:BA:1779:U:H5	57:BA:1784:A:N7	1.72	0.88
48:A1:52:ARG:HH12	57:AA:2218:U:H1'	1.37	0.88
54:B7:8:ASN:HD22	54:B7:8:ASN:C	1.76	0.88
57:AA:2068:U:H3	57:AA:2430:A:H2	0.93	0.88
45:AY:81:LYS:HD3	45:AY:97:ARG:O	1.74	0.88
30:BG:56:ALA:HB2	30:BG:153:ARG:HH11	1.39	0.88
27:AD:259:THR:HG22	57:AA:1798:U:C5'	2.02	0.88
57:AA:2327:A:H2'	57:AA:2328:A:C8	2.09	0.88
32:BI:132:PRO:HG2	32:BI:133:HIS:ND1	1.88	0.87
34:AN:120:LEU:HD11	34:AN:122:VAL:HG23	1.54	0.87
29:AF:206:ILE:HG22	29:AF:207:GLY:H	1.38	0.87
32:AI:127:VAL:HG13	32:AI:139:GLN:HA	1.54	0.87
36:BP:18:ARG:HH11	36:BP:18:ARG:HB3	1.39	0.87
27:BD:27:THR:HG23	27:BD:83:GLU:HB3	1.55	0.87
28:AE:199:ARG:HH12	28:AE:202:LYS:HE2	1.38	0.87
51:B4:12:ALA:HB1	51:B4:29:PRO:HA	1.56	0.87
57:AA:2068:U:N3	57:AA:2430:A:H2	1.72	0.87
26:BC:216:THR:HB	26:BC:222:SER:HB3	1.52	0.87
40:AT:65:LYS:HA	40:AT:65:LYS:NZ	1.88	0.87
45:BY:44:ILE:O	45:BY:62:GLU:HB3	1.74	0.87
45:BY:81:LYS:HD3	45:BY:97:ARG:O	1.73	0.87
45:BY:7:VAL:HB	45:BY:8:LYS:CE	2.05	0.87
53:B6:45:LYS:HE3	57:BA:2371:G:H5''	1.56	0.87
57:AA:1689:A:H62	57:AA:1698:A:H2	1.14	0.87
36:BP:30:THR:HG22	36:BP:31:ALA:H	1.38	0.87
58:AB:7:G:C3'	58:AB:8:U:H5''	2.03	0.87
42:BV:51:VAL:HG12	42:BV:52:VAL:H	1.40	0.87
40:BT:38:ASN:C	40:BT:38:ASN:HD22	1.76	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AF:3:GLU:HA	29:AF:24:LEU:HG	1.54	0.87
30:AG:104:GLU:HG2	51:A4:24:THR:HG21	1.57	0.87
53:A6:25:LYS:HZ1	55:A8:34:TRP:HZ2	1.22	0.87
57:AA:904:C:H6	57:AA:904:C:H5'	1.37	0.87
46:AZ:151:HIS:HA	46:AZ:171:ILE:HG13	1.56	0.87
57:AA:2189:U:H2'	57:AA:2190:G:H5''	1.55	0.87
40:BT:65:LYS:HA	40:BT:65:LYS:NZ	1.90	0.87
35:BO:47:ILE:HG12	35:BO:48:PRO:HD2	1.54	0.87
57:BA:1678:G:N2	57:BA:1989:G:H22	1.73	0.87
40:AT:65:LYS:HE3	40:AT:66:VAL:H	1.36	0.87
32:AI:92:VAL:HG12	32:AI:120:ILE:HD13	1.54	0.87
29:BF:3:GLU:HA	29:BF:24:LEU:HG	1.54	0.87
57:AA:2476:A:H2'	57:AA:2477:C:H5''	1.57	0.87
57:AA:271(M):G:H2'	57:AA:271(N):U:H5''	1.54	0.87
45:AY:7:VAL:HB	45:AY:8:LYS:CE	2.04	0.87
55:B8:62:LEU:CD1	57:BA:242:G:H5''	2.05	0.87
45:BY:59:GLY:O	45:BY:60:PHE:HB2	1.71	0.86
31:BH:83:TYR:HB3	31:BH:134:SER:HA	1.57	0.86
58:BB:7:G:C3'	58:BB:8:U:H5''	2.03	0.86
48:B1:82:LEU:H	48:B1:82:LEU:HD22	1.39	0.86
45:AY:19:LYS:HE3	57:AA:329:G:H1	1.40	0.86
36:BP:71:VAL:HG12	57:BA:389:G:H1	1.38	0.86
32:BI:8:PRO:HB3	32:BI:14:ASP:H	1.39	0.86
34:BN:1:MET:O	34:BN:2:LYS:HG3	1.75	0.86
36:AP:30:THR:HG22	36:AP:31:ALA:H	1.36	0.86
27:AD:70:TRP:CH2	27:AD:150:LYS:HA	2.10	0.86
42:AV:21:ARG:HG2	42:AV:91:TYR:HD2	1.37	0.86
32:BI:74:ASN:HD22	32:BI:74:ASN:N	1.68	0.86
49:B2:13:ALA:HA	49:B2:16:LEU:HD12	1.56	0.86
57:AA:1175:U:H4'	57:AA:1176:G:H5'	1.57	0.86
34:AN:1:MET:O	34:AN:2:LYS:HG3	1.75	0.86
32:BI:68:LEU:HD21	32:BI:72:LEU:HD11	1.55	0.86
37:BQ:76:LYS:HB3	37:BQ:91:GLU:HG3	1.57	0.86
30:BG:76:SER:HB3	30:BG:83:ARG:HB3	1.57	0.86
54:A7:11:LYS:HE2	57:AA:686:G:H5''	1.58	0.86
50:A3:6:VAL:HG12	50:A3:56:VAL:HG22	1.57	0.86
51:A4:13:ARG:HB3	51:A4:13:ARG:HH11	1.37	0.86
36:AP:101:VAL:HG12	36:AP:106:LEU:HB3	1.57	0.86
57:BA:2313:C:H2'	57:BA:2314:C:H6	1.41	0.86
55:A8:62:LEU:CD1	57:AA:242:G:H5''	2.05	0.86
57:AA:1899:G:N2	57:AA:1902:C:N4	2.19	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:259:THR:HG22	57:BA:1798:U:C5'	2.04	0.86
36:AP:50:ARG:HH21	36:AP:50:ARG:HG2	1.41	0.86
36:BP:47:ASP:HB3	36:BP:48:PRO:CA	2.05	0.86
40:AT:80:SER:HB3	40:AT:81:PRO:HD3	1.56	0.86
46:BZ:23:LYS:HD3	46:BZ:38:TYR:CE1	2.11	0.86
28:BE:60:ASN:HB2	57:BA:2811:G:OP1	1.75	0.86
57:AA:673:C:H6	57:AA:673:C:H5'	1.38	0.86
30:AG:119:GLY:HA2	30:AG:179:PRO:HB2	1.57	0.86
32:AI:8:PRO:HB3	32:AI:14:ASP:H	1.40	0.86
32:AI:85:GLU:H	32:AI:123:LEU:CD1	1.89	0.86
36:AP:18:ARG:HH11	36:AP:18:ARG:HB3	1.40	0.86
36:BP:126:VAL:HA	36:BP:145:PRO:HB2	1.58	0.86
28:AE:60:ASN:HB2	57:AA:2811:G:OP1	1.76	0.86
34:BN:17:ASP:HB2	34:BN:55:VAL:HG12	1.58	0.86
57:BA:673:C:H6	57:BA:673:C:H5'	1.40	0.86
57:AA:2645:G:H3'	57:AA:2646:C:H5'	1.58	0.86
29:BF:3:GLU:CA	29:BF:24:LEU:HG	2.06	0.86
57:AA:1845:G:H2'	57:AA:1846:G:C5'	2.05	0.86
53:A6:45:LYS:HE3	57:AA:2371:G:H5''	1.56	0.86
37:BQ:12:GLN:HA	57:BA:910:A:H62	1.38	0.86
45:AY:44:ILE:O	45:AY:62:GLU:HB3	1.75	0.85
46:AZ:151:HIS:HB3	46:AZ:170:THR:HA	1.58	0.85
57:BA:1175:U:H4'	57:BA:1176:G:H5'	1.56	0.85
32:AI:115:ALA:HB3	32:AI:128:LEU:HB3	1.58	0.85
30:AG:77:ILE:HG22	30:AG:77:ILE:O	1.75	0.85
57:AA:1281:G:H5'	57:AA:1281:G:H8	1.41	0.85
42:AV:49:THR:HB	42:AV:50:PRO:CD	2.07	0.85
35:BO:23:ARG:HH11	57:BA:2562:U:H1'	1.41	0.85
57:BA:904:C:H5'	57:BA:904:C:H6	1.38	0.85
27:BD:242:ARG:NH2	57:BA:1826:G:H4'	1.90	0.85
28:BE:4:ILE:HD13	28:BE:28:ALA:HB1	1.57	0.85
41:AU:112:ARG:NH2	42:AV:46:VAL:HG11	1.91	0.85
40:AT:100:TYR:HD2	40:AT:103:ARG:HH21	1.18	0.85
30:AG:33:ARG:NH2	30:AG:162:THR:HG21	1.92	0.85
32:BI:115:ALA:HB3	32:BI:128:LEU:HB3	1.56	0.85
35:AO:23:ARG:HH11	57:AA:2562:U:H1'	1.41	0.85
53:A6:15:GLU:HG3	53:A6:47:THR:HG21	1.57	0.85
57:AA:1484:G:C2'	57:AA:1485:G:H5''	2.06	0.85
26:AC:191:ARG:HB3	26:AC:195:ARG:HH12	1.40	0.85
49:A2:51:ARG:HD3	49:A2:55:ARG:HH22	1.41	0.85
30:AG:46:ALA:HB3	30:AG:82:LEU:CD1	2.05	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AI:68:LEU:HD21	32:AI:72:LEU:HD11	1.59	0.85
51:B4:33:VAL:HG12	51:B4:34:GLU:N	1.91	0.85
27:AD:49:ILE:HD11	27:AD:52:ARG:HA	1.59	0.85
51:A4:12:ALA:HB1	51:A4:29:PRO:HA	1.58	0.85
57:AA:1887:C:C2'	57:AA:1888:G:H5''	2.07	0.85
57:BA:1887:C:C2'	57:BA:1888:G:H5''	2.05	0.85
49:B2:16:LEU:O	49:B2:17:SER:HB3	1.77	0.85
26:BC:191:ARG:HB3	26:BC:195:ARG:HH12	1.42	0.85
29:AF:3:GLU:CA	29:AF:24:LEU:HG	2.06	0.85
53:B6:15:GLU:HG3	53:B6:47:THR:HG21	1.58	0.85
54:B7:24:THR:HG23	54:B7:27:GLY:H	1.41	0.85
36:AP:126:VAL:HA	36:AP:145:PRO:HB2	1.58	0.85
45:AY:59:GLY:O	45:AY:60:PHE:HB2	1.73	0.85
34:AN:73:THR:HG23	34:AN:82:LEU:HD11	1.58	0.85
36:BP:58:THR:O	36:BP:61:ARG:NE	2.10	0.84
31:BH:41:MET:HE3	31:BH:42:ARG:H	1.40	0.84
29:BF:206:ILE:HG22	29:BF:207:GLY:H	1.41	0.84
30:AG:29:TRP:O	58:AB:57:A:H1'	1.77	0.84
42:AV:24:LYS:HE2	42:AV:90:PRO:HB2	1.57	0.84
55:A8:50:LEU:HD12	55:A8:51:ALA:N	1.92	0.84
34:AN:17:ASP:HB2	34:AN:55:VAL:HG12	1.57	0.84
54:A7:24:THR:HG23	54:A7:27:GLY:H	1.42	0.84
30:AG:63:ILE:HA	30:AG:143:GLU:HG3	1.58	0.84
30:AG:71:THR:HG21	57:AA:2312:U:O2'	1.76	0.84
44:AX:12:VAL:HG12	44:AX:27:THR:OG1	1.77	0.84
32:BI:81:VAL:HG22	32:BI:82:ARG:H	1.42	0.84
44:BX:12:VAL:HG12	44:BX:27:THR:OG1	1.77	0.84
36:AP:7:ARG:NH1	36:AP:7:ARG:HA	1.92	0.84
57:AA:672:C:C2'	57:AA:673:C:H5''	2.07	0.84
27:BD:259:THR:CG2	57:BA:1798:U:H5'	2.04	0.84
43:AW:92:ARG:HB3	43:AW:92:ARG:HH11	1.41	0.84
43:BW:92:ARG:HH11	43:BW:92:ARG:HB3	1.40	0.84
30:AG:71:THR:HG22	30:AG:89:GLY:HA3	1.60	0.84
32:AI:84:GLY:HA2	32:AI:144:VAL:HG22	1.60	0.84
34:AN:30:ILE:O	34:AN:34:LEU:HD22	1.78	0.84
40:AT:16:ARG:NH1	40:AT:19:LEU:HD21	1.92	0.84
53:B6:25:LYS:HZ1	55:B8:34:TRP:HZ2	1.21	0.84
28:AE:35:GLN:HG2	28:AE:36:ARG:H	1.42	0.84
54:B7:11:LYS:HE2	57:BA:686:G:H5''	1.56	0.84
57:BA:2645:G:H3'	57:BA:2646:C:H5'	1.58	0.84
31:BH:19:VAL:HG21	31:BH:44:VAL:HA	1.57	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2833:G:H3'	57:BA:2834:G:C5'	2.06	0.84
27:AD:24:ILE:CD1	27:AD:25:THR:H	1.90	0.84
36:AP:50:ARG:HB3	55:A8:59:LYS:HD3	1.60	0.84
27:BD:244:ARG:HB2	57:BA:1902:C:O2'	1.78	0.84
52:B5:4:HIS:HB3	52:B5:5:PRO:CD	2.07	0.84
46:AZ:163:LEU:HD12	46:AZ:165:VAL:HB	1.60	0.84
57:BA:2476:A:H2'	57:BA:2477:C:H5''	1.57	0.84
48:A1:3:LYS:HG3	48:A1:4:VAL:H	1.43	0.84
30:BG:119:GLY:HA3	30:BG:181:ARG:HB2	1.58	0.84
42:BV:49:THR:HB	42:BV:50:PRO:CD	2.08	0.84
57:AA:1948:G:H8	57:AA:1948:G:H5'	1.40	0.84
28:AE:4:ILE:HD13	28:AE:28:ALA:HB1	1.56	0.84
34:BN:120:LEU:HD11	34:BN:122:VAL:HG23	1.58	0.84
36:BP:71:VAL:CG1	36:BP:72:PRO:HD3	2.07	0.83
45:BY:50:ARG:HG3	57:BA:484:C:OP1	1.78	0.83
57:BA:1484:G:C2'	57:BA:1485:G:H5''	2.08	0.83
57:BA:146:G:H5'	57:BA:146:G:H8	1.42	0.83
36:AP:58:THR:O	36:AP:61:ARG:NE	2.10	0.83
34:BN:30:ILE:O	34:BN:34:LEU:HD22	1.77	0.83
40:AT:28:VAL:HG22	40:AT:47:GLY:N	1.92	0.83
44:BX:12:VAL:HB	44:BX:17:ALA:CB	2.09	0.83
49:B2:47:ASN:HD22	57:BA:94(A):G:H21	1.25	0.83
40:BT:16:ARG:NH1	40:BT:19:LEU:HD21	1.93	0.83
37:AQ:132:VAL:HG11	46:AZ:81:ARG:HE	1.43	0.83
36:AP:63:PRO:HD2	57:AA:2394:C:OP1	1.77	0.83
27:AD:49:ILE:HG22	57:AA:779:U:OP1	1.77	0.83
55:B8:50:LEU:HD12	55:B8:51:ALA:N	1.94	0.83
30:AG:28:VAL:O	30:AG:31:VAL:HG12	1.78	0.83
44:AX:12:VAL:HB	44:AX:17:ALA:CB	2.09	0.83
57:BA:27:G:H22	57:BA:512:G:H2'	1.42	0.83
30:AG:66:GLN:HA	30:AG:67:LYS:HE3	1.61	0.83
30:BG:56:ALA:HB2	30:BG:153:ARG:NH1	1.93	0.83
27:BD:24:ILE:CD1	27:BD:25:THR:H	1.91	0.83
35:AO:104:ARG:NE	40:AT:33:LYS:HD2	1.94	0.83
45:BY:19:LYS:HE3	57:BA:329:G:H1	1.41	0.83
28:BE:132:HIS:ND1	57:BA:1658:C:OP1	2.12	0.83
40:BT:80:SER:HB3	40:BT:81:PRO:HD3	1.60	0.83
30:AG:40:ASN:HD22	30:AG:41:GLN:H	1.21	0.83
42:BV:24:LYS:HE2	42:BV:90:PRO:HB2	1.61	0.83
51:A4:33:VAL:HG12	51:A4:34:GLU:N	1.92	0.83
37:AQ:76:LYS:HB3	37:AQ:91:GLU:HG3	1.58	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:672:C:C2'	57:BA:673:C:H5''	2.09	0.83
51:B4:48:ARG:O	51:B4:49:PHE:HB2	1.79	0.83
26:AC:53:ARG:HD3	26:AC:53:ARG:H	1.43	0.83
28:BE:101:ARG:HH11	28:BE:171:GLU:HB2	1.43	0.83
28:BE:35:GLN:HG2	28:BE:36:ARG:H	1.42	0.83
32:AI:132:PRO:HG2	32:AI:133:HIS:ND1	1.94	0.82
36:BP:48:PRO:HG2	36:BP:49:ARG:H	1.44	0.82
41:BU:112:ARG:NH2	42:BV:46:VAL:HG11	1.94	0.82
57:AA:676:A:H2	57:AA:802:A:H61	1.27	0.82
51:A4:14:ILE:HG13	51:A4:31:ILE:HG21	1.61	0.82
57:AA:2313:C:H2'	57:AA:2314:C:H6	1.43	0.82
31:AH:83:TYR:HB3	31:AH:134:SER:HA	1.58	0.82
42:AV:19:LYS:HG3	42:AV:20:LEU:N	1.93	0.82
30:BG:71:THR:HG21	57:BA:2312:U:O2'	1.79	0.82
32:BI:83:ALA:HA	32:BI:89:TYR:CG	2.14	0.82
36:BP:91:PHE:H	36:BP:91:PHE:HD1	1.26	0.82
32:AI:81:VAL:HG22	32:AI:82:ARG:H	1.44	0.82
42:AV:51:VAL:HG12	42:AV:52:VAL:H	1.41	0.82
44:BX:35:THR:O	44:BX:39:ILE:HG12	1.80	0.82
36:BP:50:ARG:HB3	55:B8:59:LYS:HD3	1.61	0.82
42:BV:19:LYS:HG3	42:BV:20:LEU:N	1.93	0.82
45:BY:10:GLY:HA2	45:BY:27:VAL:HG13	1.60	0.82
35:BO:104:ARG:NE	40:BT:33:LYS:HD2	1.94	0.82
46:AZ:53:ILE:HG22	46:AZ:71:VAL:O	1.79	0.82
51:A4:53:GLU:OE1	51:A4:55:ARG:HG3	1.80	0.82
57:BA:1948:G:H8	57:BA:1948:G:H5'	1.43	0.82
57:BA:2524:G:H8	57:BA:2524:G:H5'	1.45	0.82
27:AD:166:GLN:HE21	27:AD:166:GLN:HA	1.42	0.82
32:AI:77:LEU:HD23	32:AI:141:LYS:HG2	1.62	0.82
36:AP:29:LYS:HB3	36:AP:34:GLY:H	1.44	0.82
57:BA:1845:G:H2'	57:BA:1846:G:C5'	2.07	0.82
52:A5:4:HIS:HB3	52:A5:5:PRO:CD	2.07	0.82
34:BN:73:THR:HG23	34:BN:82:LEU:HD11	1.60	0.82
46:AZ:24:LEU:HD21	46:AZ:86:VAL:HG22	1.62	0.82
57:AA:2833:G:H3'	57:AA:2834:G:C5'	2.08	0.82
36:BP:55:ARG:HG2	36:BP:56:SER:N	1.95	0.82
34:BN:56:ASN:HA	34:BN:125:GLY:H	1.45	0.82
57:BA:1434:A:H61	57:BA:1558:A:N6	1.78	0.82
36:BP:63:PRO:HD2	57:BA:2394:C:OP1	1.79	0.82
51:B4:12:ALA:CB	51:B4:29:PRO:HA	2.09	0.82
57:BA:654(S):G:H3'	57:BA:654(T):C:C5'	2.10	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:43:THR:HB	34:BN:46:VAL:HG12	1.62	0.81
28:AE:101:ARG:HH11	28:AE:171:GLU:HB2	1.44	0.81
31:AH:41:MET:CE	31:AH:42:ARG:H	1.92	0.81
31:AH:41:MET:HG3	31:AH:42:ARG:N	1.95	0.81
44:AX:35:THR:O	44:AX:39:ILE:HG12	1.79	0.81
36:BP:29:LYS:HB3	36:BP:34:GLY:H	1.44	0.81
36:AP:144:GLU:N	36:AP:145:PRO:HD3	1.95	0.81
57:AA:1678:G:N2	57:AA:1989:G:H22	1.79	0.81
57:BA:1717:G:H2'	57:BA:1718:G:H5''	1.62	0.81
57:AA:1434:A:H61	57:AA:1558:A:N6	1.78	0.81
57:AA:330:A:H2	57:AA:1210:A:H2'	1.45	0.81
36:AP:7:ARG:CA	36:AP:7:ARG:HH11	1.92	0.81
38:AR:38:VAL:HB	38:AR:39:PRO:HD3	1.62	0.81
29:BF:24:LEU:HB3	29:BF:25:PRO:CD	2.10	0.81
30:BG:109:VAL:O	30:BG:112:PRO:HD2	1.81	0.81
30:BG:113:ARG:HE	30:BG:113:ARG:HA	1.44	0.81
32:BI:120:ILE:HG22	32:BI:121:LYS:N	1.96	0.81
36:BP:144:GLU:N	36:BP:145:PRO:HD3	1.95	0.81
57:BA:1899:G:N2	57:BA:1902:C:N4	2.20	0.81
31:BH:41:MET:HG3	31:BH:42:ARG:N	1.94	0.81
57:BA:2359:C:C2'	57:BA:2360:A:H5'	2.10	0.81
57:BA:405:U:H3'	57:BA:406:G:H5'	2.06	0.81
57:BA:860:U:H5	57:BA:917:A:N7	1.78	0.81
32:BI:1:MET:HG3	32:BI:23:PRO:HG3	1.62	0.81
36:BP:7:ARG:HH11	36:BP:7:ARG:CA	1.92	0.81
31:BH:41:MET:CE	31:BH:42:ARG:H	1.92	0.81
29:AF:139:PHE:HB2	29:AF:166:ALA:HB1	1.61	0.81
32:BI:77:LEU:HD23	32:BI:141:LYS:HG2	1.63	0.81
32:AI:83:ALA:HA	32:AI:89:TYR:CG	2.16	0.81
46:AZ:110:GLY:HA2	46:AZ:146:ILE:HG23	1.60	0.81
28:BE:50:GLY:HA2	28:BE:78:LEU:HB3	1.60	0.81
45:AY:50:ARG:HG3	57:AA:484:C:OP1	1.79	0.81
36:AP:18:ARG:HD2	57:AA:662:G:OP1	1.81	0.81
58:AB:80:U:H2'	58:AB:81:G:N2	1.94	0.81
34:AN:56:ASN:HA	34:AN:125:GLY:H	1.46	0.81
32:BI:84:GLY:HA2	32:BI:144:VAL:HG22	1.63	0.81
27:BD:49:ILE:HD11	27:BD:52:ARG:HA	1.63	0.81
27:AD:166:GLN:CA	27:AD:166:GLN:HE21	1.94	0.81
46:AZ:72:ARG:HG2	58:AB:104:U:O2'	1.81	0.81
29:AF:24:LEU:HB3	29:AF:25:PRO:CD	2.10	0.81
30:AG:51:ARG:HA	30:AG:51:ARG:NE	1.94	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:146:G:H8	57:AA:146:G:H5'	1.45	0.81
42:BV:35:LEU:HB2	42:BV:57:VAL:HG13	1.61	0.81
32:AI:62:LYS:HD2	32:AI:133:HIS:HD2	1.45	0.81
30:BG:32:PRO:HB2	30:BG:172:LEU:HD12	1.62	0.81
42:BV:72:VAL:CG2	42:BV:85:LYS:HB3	2.11	0.81
28:BE:36:ARG:HH21	28:BE:88:GLY:HA3	1.46	0.81
51:A4:12:ALA:CB	51:A4:29:PRO:HA	2.11	0.81
57:AA:2359:C:C2'	57:AA:2360:A:H5'	2.11	0.80
58:AB:112:U:H2'	58:AB:113:G:H8	1.47	0.80
36:BP:67:MET:N	57:BA:2415:G:H4'	1.95	0.80
32:BI:85:GLU:H	32:BI:123:LEU:CD1	1.94	0.80
36:BP:18:ARG:HD2	57:BA:662:G:OP1	1.81	0.80
57:BA:1021:A:H62	57:BA:1141:U:H3	1.29	0.80
27:AD:24:ILE:HG12	27:AD:25:THR:N	1.96	0.80
30:AG:4:ASP:HA	30:AG:8:LYS:HG2	1.64	0.80
27:AD:244:ARG:HB2	57:AA:1902:C:O2'	1.80	0.80
29:BF:139:PHE:HB2	29:BF:166:ALA:HB1	1.64	0.80
27:AD:28:GLU:H	27:AD:29:PRO:HD2	1.46	0.80
36:AP:71:VAL:HG12	57:AA:389:G:H1	1.45	0.80
36:AP:48:PRO:HG2	36:AP:49:ARG:H	1.44	0.80
28:AE:50:GLY:HA2	28:AE:78:LEU:HB3	1.61	0.80
36:AP:146:VAL:HG22	36:AP:147:LEU:H	1.46	0.80
55:B8:29:LYS:HD3	55:B8:44:LYS:HG2	1.63	0.80
36:BP:7:ARG:HA	36:BP:7:ARG:NH1	1.93	0.80
42:BV:21:ARG:HG2	42:BV:91:TYR:CD2	2.17	0.80
55:A8:4:MET:HG3	55:A8:61:LEU:HD13	1.64	0.80
27:BD:24:ILE:HG12	27:BD:25:THR:N	1.97	0.80
36:BP:146:VAL:HG22	36:BP:147:LEU:H	1.46	0.80
51:A4:48:ARG:O	51:A4:49:PHE:HB2	1.79	0.80
57:BA:1639:U:O2'	57:BA:1640:C:H5''	1.81	0.80
53:B6:8:LYS:HZ1	57:BA:2285:C:H5	1.26	0.80
57:AA:654(S):G:H3'	57:AA:654(T):C:C5'	2.11	0.80
39:AS:29:PHE:CD1	58:AB:7:G:H4'	2.17	0.80
51:B4:14:ILE:HG13	51:B4:31:ILE:HG21	1.62	0.80
38:BR:101:ALA:O	38:BR:102:GLU:HB2	1.82	0.80
36:AP:64:LYS:HE2	57:AA:631:A:OP1	1.82	0.80
30:AG:106:LEU:O	30:AG:110:ALA:HB3	1.82	0.80
30:AG:51:ARG:HA	30:AG:51:ARG:HE	1.46	0.80
36:AP:112:LEU:H	36:AP:128:HIS:HD2	1.29	0.80
36:BP:50:ARG:HG2	36:BP:50:ARG:HH21	1.47	0.80
47:B0:10:THR:HG22	47:B0:11:ARG:H	1.47	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BR:3:HIS:HB2	57:BA:1654:A:P	2.21	0.80
53:A6:23:THR:HG21	57:AA:2419:U:H5'	1.64	0.80
57:AA:2036:C:H6	57:AA:2036:C:H5'	1.47	0.80
57:AA:1717:G:H2'	57:AA:1718:G:H5''	1.63	0.80
57:BA:2103:C:C3'	57:BA:2104:G:H5''	2.11	0.80
57:AA:545:C:H3'	57:AA:547:A:H5''	1.63	0.80
34:AN:43:THR:HB	34:AN:46:VAL:HG12	1.62	0.80
28:AE:132:HIS:ND1	57:AA:1658:C:OP1	2.15	0.80
50:B3:6:VAL:HG12	50:B3:56:VAL:HG22	1.63	0.80
32:AI:120:ILE:HG22	32:AI:121:LYS:N	1.97	0.80
30:BG:72:ARG:HA	30:BG:87:PRO:HD2	1.64	0.80
38:BR:38:VAL:HB	38:BR:39:PRO:HD3	1.62	0.80
52:B5:40:LYS:HE2	52:B5:46:CYS:HB3	1.63	0.80
29:BF:24:LEU:CB	29:BF:25:PRO:HD2	2.12	0.79
27:BD:71:ASP:CB	27:BD:103:ARG:HH22	1.94	0.79
53:A6:35:GLU:HB3	53:A6:51:GLU:HB2	1.64	0.79
30:BG:51:ARG:NE	30:BG:51:ARG:HA	1.96	0.79
27:AD:71:ASP:CB	27:AD:103:ARG:HH22	1.94	0.79
30:BG:111:LEU:CD2	30:BG:120:LEU:HD21	2.12	0.79
40:AT:62:THR:HG22	40:AT:75:ILE:HG12	1.63	0.79
53:B6:23:THR:HG21	57:BA:2419:U:H5'	1.64	0.79
36:AP:67:MET:N	57:AA:2415:G:H4'	1.97	0.79
42:AV:21:ARG:HG2	42:AV:91:TYR:CD2	2.17	0.79
45:AY:10:GLY:HA2	45:AY:27:VAL:HG13	1.64	0.79
26:BC:53:ARG:HD3	26:BC:53:ARG:H	1.45	0.79
57:BA:545:C:H3'	57:BA:547:A:H5''	1.63	0.79
57:AA:1718:G:H8	57:AA:1718:G:H5'	1.47	0.79
32:BI:109:ILE:HG22	32:BI:110:ASP:H	1.47	0.79
57:BA:2523:G:H2'	57:BA:2524:G:H5''	1.65	0.79
57:BA:1281:G:H8	57:BA:1281:G:H5'	1.46	0.79
57:AA:1434:A:H61	57:AA:1558:A:H62	1.29	0.79
47:B0:43:THR:H	57:BA:2331:G:H4'	1.48	0.79
57:AA:2103:C:C3'	57:AA:2104:G:H5''	2.11	0.79
58:BB:80:U:H2'	58:BB:81:G:N2	1.98	0.79
31:BH:9:ILE:HG23	31:BH:9:ILE:O	1.83	0.79
57:BA:330:A:H2	57:BA:1210:A:H2'	1.45	0.79
27:BD:166:GLN:HA	27:BD:166:GLN:HE21	1.47	0.79
51:B4:53:GLU:OE1	51:B4:55:ARG:HG3	1.81	0.79
45:AY:7:VAL:HB	45:AY:8:LYS:HD2	1.64	0.79
57:BA:2801(A):A:C4'	57:BA:2802:G:H5'	2.08	0.79
57:AA:405:U:H3'	57:AA:406:G:H5'	2.07	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:141:A:H8	57:AA:1408:C:HO2'	1.28	0.79
36:BP:71:VAL:HG12	57:BA:389:G:N1	1.97	0.79
47:A0:10:THR:HG22	47:A0:11:ARG:H	1.45	0.79
42:AV:99:ILE:H	42:AV:99:ILE:CD1	1.95	0.79
33:AJ:56:ASN:CB	33:AJ:83:TYR:HA	2.11	0.79
57:BA:1158:C:H2'	57:BA:1158:C:O2	2.99	0.79
57:BA:1443:G:N2	57:BA:1460:A:H1'	13.61	0.79
36:AP:55:ARG:CG	36:AP:56:SER:H	1.94	0.79
52:A5:3:LYS:HB3	57:AA:747:U:C4	2.18	0.79
35:BO:69:ILE:HD13	35:BO:77:ILE:HG23	1.62	0.79
36:AP:55:ARG:HG2	36:AP:56:SER:N	1.91	0.79
36:BP:64:LYS:HE2	57:BA:631:A:OP1	1.82	0.79
38:AR:3:HIS:HB2	57:AA:1654:A:P	2.23	0.79
36:AP:91:PHE:HD1	36:AP:91:PHE:H	1.28	0.79
47:B0:51:VAL:HG22	47:B0:81:VAL:HG23	1.65	0.79
57:AA:70:G:H1	57:AA:99:U:H3	37.84	0.79
44:AX:12:VAL:HB	44:AX:17:ALA:HB1	1.65	0.79
30:BG:71:THR:HG23	57:BA:2312:U:H4'	1.62	0.79
32:BI:113:ARG:HH11	32:BI:113:ARG:HG2	1.47	0.79
46:AZ:81:ARG:HH11	46:AZ:81:ARG:HB2	1.46	0.79
57:AA:860:U:H5	57:AA:917:A:N7	1.81	0.78
32:AI:93:THR:HG22	32:AI:119:PRO:HB3	1.65	0.78
36:BP:62:LEU:HD23	36:BP:62:LEU:H	1.47	0.78
40:BT:91:ARG:O	40:BT:117:ASP:HB2	1.81	0.78
57:BA:70:G:H1	57:BA:99:U:H3	37.77	0.78
31:AH:41:MET:SD	31:AH:43:VAL:HG13	2.23	0.78
36:BP:101:VAL:HG12	36:BP:106:LEU:HB3	1.65	0.78
57:AA:528:A:C2	57:AA:2043:C:H4'	2.18	0.78
52:A5:40:LYS:HE2	52:A5:46:CYS:HB3	1.65	0.78
57:BA:2036:C:H6	57:BA:2036:C:H5'	1.46	0.78
52:B5:51:TYR:H	52:B5:55:ARG:HD3	1.48	0.78
38:AR:11:ASN:OD1	38:AR:12:ARG:N	2.16	0.78
37:BQ:43:THR:OG1	37:BQ:46:GLN:HG3	1.83	0.78
30:AG:76:SER:OG	30:AG:83:ARG:HB3	1.83	0.78
41:AU:90:VAL:O	41:AU:92:ARG:N	2.16	0.78
57:BA:2657:A:H2'	57:BA:2658:C:H5'	1.66	0.78
41:BU:66:ASN:HD21	41:BU:70:ARG:HE	1.30	0.78
57:AA:1210:A:C8	57:AA:1210:A:H5'	2.17	0.78
57:AA:548:A:H2'	57:AA:549:G:H5'	1.65	0.78
42:BV:21:ARG:CG	42:BV:91:TYR:HD2	1.97	0.78
27:BD:49:ILE:HG22	57:BA:779:U:OP1	1.83	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BY:90:LEU:HG	45:BY:91:GLU:H	1.47	0.78
47:B0:72:ARG:O	47:B0:75:LEU:HB2	1.83	0.78
57:AA:1639:U:O2'	57:AA:1640:C:H5''	1.83	0.78
36:BP:33:ARG:HD3	57:BA:587:C:C5	2.19	0.78
30:BG:43:LEU:HB3	30:BG:45:GLU:HG2	1.66	0.78
57:AA:2524:G:H5'	57:AA:2524:G:H8	1.46	0.78
30:BG:109:VAL:C	30:BG:112:PRO:HG2	2.04	0.78
40:BT:62:THR:HG22	40:BT:75:ILE:HG12	1.64	0.78
37:AQ:43:THR:OG1	37:AQ:46:GLN:HG3	1.84	0.78
40:AT:91:ARG:HB3	40:AT:116:ALA:HA	1.66	0.78
55:B8:33:ASN:N	55:B8:33:ASN:HD22	1.77	0.78
27:BD:28:GLU:H	27:BD:29:PRO:HD2	1.47	0.78
52:A5:51:TYR:H	52:A5:55:ARG:HD3	1.48	0.78
32:AI:113:ARG:HG2	32:AI:113:ARG:HH11	1.48	0.78
36:AP:71:VAL:CG1	36:AP:72:PRO:HD3	2.13	0.78
30:BG:161:THR:HG22	30:BG:162:THR:N	1.99	0.78
32:AI:94:ALA:HB3	32:AI:111:PRO:HA	1.65	0.78
35:AO:88:ASN:HD21	35:AO:90:GLN:HB2	1.48	0.78
58:BB:112:U:H2'	58:BB:113:G:H8	1.47	0.78
40:AT:10:VAL:O	40:AT:13:ARG:HG2	1.84	0.78
32:AI:126:TYR:HB2	32:AI:140:LEU:HD22	1.64	0.78
36:AP:112:LEU:H	36:AP:128:HIS:CD2	2.02	0.78
36:AP:81:GLN:HG2	36:AP:106:LEU:HD12	1.64	0.78
42:AV:18:LEU:HD22	42:AV:19:LYS:N	1.98	0.78
57:BA:1434:A:H61	57:BA:1558:A:H62	1.29	0.78
38:BR:11:ASN:OD1	38:BR:12:ARG:N	2.17	0.78
30:AG:29:TRP:HB3	58:AB:57:A:C4	2.19	0.77
36:BP:81:GLN:HG2	36:BP:106:LEU:HD12	1.63	0.77
55:B8:4:MET:HG3	55:B8:61:LEU:HD13	1.64	0.77
53:A6:8:LYS:HG3	53:A6:8:LYS:O	1.84	0.77
57:AA:271(P):C:O2'	57:AA:271(Q):G:H5'	1.85	0.77
30:AG:5:VAL:HG12	51:A4:24:THR:HG22	1.67	0.77
42:AV:34:GLU:O	42:AV:36:PRO:HD3	1.84	0.77
30:BG:29:TRP:HB3	58:BB:57:A:N3	1.98	0.77
36:BP:83:VAL:CG1	36:BP:112:LEU:HD21	2.14	0.77
41:BU:54:LYS:O	41:BU:58:ARG:HG3	1.84	0.77
57:AA:1485:G:H1'	57:AA:1505:C:H42	1.49	0.77
31:BH:85:LYS:HZ2	31:BH:133:VAL:N	1.80	0.77
57:BA:1210:A:C8	57:BA:1210:A:H5'	2.18	0.77
57:BA:654(S):G:H3'	57:BA:654(T):C:H5''	1.66	0.77
57:AA:2611:U:H6	57:AA:2611:U:H5'	1.50	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:AO:69:ILE:HD13	35:AO:77:ILE:HG23	1.66	0.77
57:AA:1021:A:H62	57:AA:1141:U:H3	1.30	0.77
47:B0:25:ARG:HD2	47:B0:29:GLN:NE2	1.99	0.77
27:AD:129:ASN:H	27:AD:129:ASN:ND2	3.55	0.77
27:AD:35:LYS:HD2	27:AD:35:LYS:C	2.05	0.77
30:AG:85:GLY:C	30:AG:87:PRO:HD3	2.05	0.77
32:AI:78:THR:H	32:AI:104:GLN:HE22	1.28	0.77
27:BD:35:LYS:HD2	27:BD:35:LYS:C	2.05	0.77
35:AO:24:VAL:HA	35:AO:39:ILE:HG22	1.67	0.77
45:BY:46:LYS:H	45:BY:62:GLU:HB2	1.49	0.77
42:BV:99:ILE:H	42:BV:99:ILE:CD1	1.96	0.77
29:AF:24:LEU:CB	29:AF:25:PRO:HD2	2.13	0.77
29:AF:51:THR:HB	29:AF:88:VAL:HG11	1.65	0.77
53:B6:10:LEU:H	53:B6:10:LEU:HD23	1.48	0.77
28:BE:132:HIS:HB3	57:BA:744:G:OP1	1.85	0.77
57:BA:528:A:C2	57:BA:2043:C:H4'	2.20	0.77
43:AW:92:ARG:HB3	43:AW:92:ARG:NH1	1.99	0.77
29:BF:39:TRP:O	29:BF:43:LYS:HG2	1.84	0.77
32:BI:62:LYS:HD2	32:BI:133:HIS:HD2	1.47	0.77
45:BY:79:CYS:SG	45:BY:80:GLY:N	2.56	0.77
47:A0:11:ARG:HH11	47:A0:11:ARG:CB	1.98	0.77
37:BQ:16:ARG:O	37:BQ:17:LEU:HD23	1.83	0.77
57:BA:1678:G:H22	57:BA:1989:G:H22	1.32	0.77
29:BF:74:ARG:HD2	57:BA:674:G:H1'	1.66	0.77
42:BV:34:GLU:O	42:BV:36:PRO:HD3	1.85	0.77
42:AV:35:LEU:HB2	42:AV:57:VAL:HG13	1.66	0.77
44:AX:12:VAL:HG23	44:AX:13:LEU:N	2.00	0.77
32:BI:68:LEU:CD2	32:BI:72:LEU:HD11	2.14	0.77
42:BV:18:LEU:HD22	42:BV:19:LYS:N	2.00	0.77
27:BD:43:ARG:CB	27:BD:54:ARG:HB2	2.14	0.77
57:BA:548:A:H2'	57:BA:549:G:H5'	1.67	0.77
35:BO:88:ASN:HD21	35:BO:90:GLN:HB2	1.50	0.77
55:A8:33:ASN:N	55:A8:33:ASN:HD22	1.76	0.77
57:BA:2189:U:C2'	57:BA:2190:G:H5''	2.13	0.77
29:AF:74:ARG:HD2	57:AA:674:G:H1'	1.65	0.77
53:A6:52:VAL:HG22	53:A6:53:LYS:H	1.50	0.77
30:AG:108:ASN:O	30:AG:112:PRO:CG	2.32	0.77
57:BA:612:C:H2'	57:BA:613:G:C5'	2.10	0.77
40:AT:91:ARG:O	40:AT:117:ASP:HB2	1.84	0.77
57:BA:296:C:O2'	57:BA:297:C:H5'	1.85	0.77
54:A7:34:ARG:HH12	54:A7:39:ARG:HD2	1.49	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:AG:72:ARG:CB	30:AG:87:PRO:HD2	2.14	0.77
36:AP:47:ASP:HB3	36:AP:48:PRO:C	2.04	0.77
48:B1:52:ARG:NH1	57:BA:2218:U:H1'	1.99	0.77
32:BI:93:THR:HG22	32:BI:119:PRO:HB3	1.66	0.77
32:BI:94:ALA:HB3	32:BI:111:PRO:HA	1.65	0.77
27:BD:30:GLU:HG3	27:BD:63:ARG:CZ	2.15	0.77
40:BT:91:ARG:HB3	40:BT:116:ALA:HA	1.67	0.77
36:BP:148:LEU:O	36:BP:149:GLU:HB2	1.85	0.77
57:AA:2245:U:H5'	57:AA:2246:G:H5'	1.67	0.77
55:B8:16:ILE:HD12	55:B8:57:ARG:HG2	1.64	0.77
47:A0:25:ARG:HD2	47:A0:29:GLN:NE2	1.99	0.77
55:A8:16:ILE:HD12	55:A8:57:ARG:HG2	1.66	0.77
38:AR:98:LEU:HB2	38:AR:113:LEU:CD2	2.15	0.77
36:BP:7:ARG:O	36:BP:10:PRO:HD2	1.84	0.77
31:AH:105:LEU:H	31:AH:105:LEU:HD23	1.49	0.77
29:BF:169:ASN:HD21	57:BA:322:A:H3'	1.50	0.77
57:AA:530:G:H2'	57:AA:530:G:N3	4.63	0.76
30:AG:39:ILE:HD12	30:AG:60:LEU:HD21	1.66	0.76
37:AQ:16:ARG:O	37:AQ:17:LEU:HD23	1.85	0.76
45:AY:88:LYS:NZ	45:AY:93:GLY:HA3	2.01	0.76
37:BQ:34:LEU:HD11	37:BQ:129:THR:HB	1.67	0.76
38:AR:101:ALA:O	38:AR:102:GLU:HB2	1.84	0.76
43:AW:9:TYR:H	43:AW:102:HIS:CD2	2.02	0.76
30:BG:172:LEU:O	30:BG:176:LEU:HG	1.85	0.76
30:BG:91:ARG:HD2	30:BG:92:VAL:N	1.99	0.76
31:BH:105:LEU:HD23	31:BH:105:LEU:H	1.49	0.76
31:BH:41:MET:SD	31:BH:43:VAL:HG13	2.25	0.76
57:BA:676:A:H2	57:BA:802:A:H61	1.31	0.76
36:AP:148:LEU:O	36:AP:149:GLU:HB2	1.84	0.76
36:BP:122:PRO:HA	36:BP:141:ALA:O	1.85	0.76
57:AA:2657:A:H2'	57:AA:2658:C:H5'	1.66	0.76
45:AY:7:VAL:HB	45:AY:8:LYS:CD	2.14	0.76
28:AE:132:HIS:HA	28:AE:135:HIS:CE1	2.20	0.76
57:AA:27:G:N2	57:AA:512:G:H2'	2.00	0.76
57:BA:2833:G:H3'	57:BA:2834:G:H5'	1.67	0.76
27:BD:166:GLN:CA	27:BD:166:GLN:HE21	1.97	0.76
57:AA:2523:G:H2'	57:AA:2524:G:H5''	1.66	0.76
48:B1:45:ASN:HD21	48:B1:47:GLN:HE21	1.32	0.76
57:AA:1378:A:O2'	57:AA:1379:A:H5'	1.85	0.76
27:AD:30:GLU:HG3	27:AD:63:ARG:CZ	2.15	0.76
30:AG:108:ASN:O	51:A4:36:CYS:HA	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:AV:21:ARG:CG	42:AV:91:TYR:HD2	1.97	0.76
57:BA:1718:G:H8	57:BA:1718:G:H5'	1.49	0.76
36:AP:122:PRO:HA	36:AP:141:ALA:O	1.86	0.76
36:BP:55:ARG:CG	36:BP:56:SER:H	1.98	0.76
40:AT:85:LYS:HZ3	40:AT:85:LYS:HB3	1.49	0.76
57:AA:1541:G:H4'	57:AA:1542:A:C5'	2.16	0.76
57:AA:2189:U:C2'	57:AA:2190:G:H5''	2.14	0.76
47:A0:43:THR:H	57:AA:2331:G:H4'	1.50	0.76
51:A4:2:LYS:HB2	58:AB:40:U:O4	1.86	0.76
36:AP:33:ARG:HD3	57:AA:587:C:C5	2.20	0.76
42:AV:72:VAL:CG2	42:AV:85:LYS:HB3	2.14	0.76
55:A8:62:LEU:HD13	57:AA:242:G:C5'	2.10	0.76
27:AD:43:ARG:CB	27:AD:54:ARG:HB2	2.14	0.76
43:BW:92:ARG:HB3	43:BW:92:ARG:NH1	1.99	0.76
36:AP:83:VAL:HG12	36:AP:112:LEU:HD21	1.66	0.76
41:AU:54:LYS:O	41:AU:58:ARG:HG3	1.84	0.76
56:A9:1:MET:HB3	56:A9:4:ARG:NH1	2.01	0.76
26:AC:191:ARG:HB3	26:AC:195:ARG:NH1	2.01	0.76
36:BP:125:VAL:O	36:BP:145:PRO:HD2	1.85	0.76
57:BA:271(P):C:O2'	57:BA:271(Q):G:H5'	1.85	0.76
29:AF:32:LEU:HD11	29:AF:105:VAL:HG13	1.67	0.76
52:A5:34:PRO:O	52:A5:35:GLU:HB2	1.85	0.76
30:BG:64:THR:OG1	30:BG:94:LEU:HD21	1.85	0.76
52:B5:3:LYS:HB3	57:BA:747:U:C4	2.19	0.76
57:AA:1019:U:HO2'	57:AA:1021:A:H2	1.32	0.76
38:AR:10:LEU:HB3	38:AR:17:ARG:NE	2.00	0.76
31:AH:41:MET:HE3	31:AH:42:ARG:H	1.48	0.76
29:BF:89:VAL:HG12	29:BF:90:PHE:H	1.50	0.76
45:BY:88:LYS:HZ3	45:BY:93:GLY:HA3	1.51	0.76
45:BY:88:LYS:NZ	45:BY:93:GLY:HA3	2.01	0.76
40:BT:85:LYS:HZ3	40:BT:85:LYS:HB3	1.49	0.76
57:BA:154(A):C:H3'	57:BA:155:U:C5'	2.15	0.76
53:B6:8:LYS:HG3	53:B6:8:LYS:O	1.85	0.76
28:AE:59:VAL:O	28:AE:62:PRO:HD2	1.85	0.76
57:BA:2523:G:C2'	57:BA:2524:G:H5''	2.16	0.76
57:BA:141:A:H8	57:BA:1408:C:HO2'	1.32	0.76
57:AA:330:A:C2	57:AA:1210:A:H2'	2.21	0.75
31:AH:9:ILE:HG23	31:AH:9:ILE:O	1.85	0.75
30:BG:71:THR:CG2	57:BA:2312:U:H4'	2.16	0.75
30:BG:16:ARG:HH22	30:BG:28:VAL:HG13	1.51	0.75
27:BD:181:GLU:HA	27:BD:272:ALA:HB3	1.65	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2681:C:H5	57:BA:2725:A:N6	1.83	0.75
57:AA:654(S):G:H3'	57:AA:654(T):C:H5''	1.67	0.75
36:BP:112:LEU:H	36:BP:128:HIS:HD2	1.31	0.75
57:BA:1116:C:C2'	57:BA:1117:G:H5''	4.11	0.75
28:AE:36:ARG:HH21	28:AE:88:GLY:HA3	1.49	0.75
57:AA:1158:C:H2'	57:AA:1158:C:O2	3.03	0.75
27:AD:34:VAL:CG2	27:AD:35:LYS:H	1.92	0.75
32:AI:110:ASP:OD2	32:AI:113:ARG:HB3	1.86	0.75
29:BF:51:THR:HB	29:BF:88:VAL:HG11	1.66	0.75
30:BG:29:TRP:HB3	58:BB:57:A:C4	2.19	0.75
42:BV:18:LEU:CD1	42:BV:19:LYS:H	1.99	0.75
40:AT:28:VAL:CG2	40:AT:46:GLU:HG3	2.16	0.75
44:BX:12:VAL:HB	44:BX:17:ALA:HB1	1.68	0.75
53:A6:10:LEU:HD23	53:A6:10:LEU:H	1.50	0.75
57:BA:1541:G:H4'	57:BA:1542:A:C5'	2.15	0.75
29:BF:108:LYS:HD2	29:BF:112:MET:HE2	1.67	0.75
55:A8:29:LYS:HD3	55:A8:44:LYS:HG2	1.66	0.75
39:AS:55:ALA:HB1	58:AB:117:G:H5'	1.68	0.75
30:AG:67:LYS:H	30:AG:67:LYS:CD	1.97	0.75
34:AN:13:TRP:O	34:AN:135:PRO:HD2	1.85	0.75
39:AS:30:ARG:HH22	39:AS:62:LYS:HD2	1.51	0.75
47:B0:11:ARG:CB	47:B0:11:ARG:HH11	1.98	0.75
52:A5:41:PRO:HG2	52:A5:44:THR:OG1	1.86	0.75
57:BA:1541:G:H1'	57:BA:1542:A:C5	2.22	0.75
49:A2:2:LYS:HG2	57:AA:97:C:H5''	1.69	0.75
29:AF:39:TRP:O	29:AF:43:LYS:HG2	1.86	0.75
36:AP:7:ARG:O	36:AP:10:PRO:HD2	1.85	0.75
27:BD:80:ALA:HB3	27:BD:94:LEU:HD13	1.68	0.75
57:BA:672:C:O2'	57:BA:673:C:H5''	1.87	0.75
36:BP:47:ASP:HB3	36:BP:48:PRO:C	2.07	0.75
38:BR:98:LEU:HB2	38:BR:113:LEU:CD2	2.17	0.75
57:AA:2801(A):A:C4'	57:AA:2802:G:H5'	2.09	0.75
53:B6:5:VAL:HG22	53:B6:6:ARG:H	1.51	0.75
56:B9:1:MET:HB3	56:B9:4:ARG:NH1	2.01	0.75
29:AF:108:LYS:HD2	29:AF:112:MET:HE2	1.68	0.75
38:BR:10:LEU:HB3	38:BR:17:ARG:NE	2.01	0.75
39:AS:106:ARG:O	39:AS:106:ARG:HD2	1.87	0.75
32:BI:84:GLY:HA3	32:BI:144:VAL:HG13	1.69	0.75
57:AA:903:C:H2'	57:AA:904:C:C5'	2.17	0.75
38:AR:2:ARG:HH11	57:AA:2723:C:H5''	1.51	0.75
57:AA:1541:G:H1'	57:AA:1542:A:C5	2.22	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:161:THR:HG22	30:BG:163:ALA:H	1.52	0.75
57:BA:818:G:O2'	57:BA:819:A:H5'	4.56	0.75
36:BP:83:VAL:HG12	36:BP:112:LEU:HD21	1.67	0.75
57:BA:2611:U:H5'	57:BA:2611:U:H6	1.49	0.75
29:AF:178:PRO:HG2	29:AF:179:GLU:OE1	1.87	0.75
36:AP:83:VAL:CG1	36:AP:112:LEU:HD21	2.17	0.75
44:BX:35:THR:HG22	44:BX:37:THR:H	1.50	0.75
55:B8:61:LEU:CD2	55:B8:61:LEU:H	1.88	0.75
28:BE:24:THR:HG22	28:BE:186:GLY:HA2	1.67	0.75
28:BE:62:PRO:C	28:BE:64:LYS:H	1.88	0.75
57:BA:2292:C:O2'	57:BA:2293:C:H5'	1.86	0.75
49:A2:16:LEU:O	49:A2:20:GLU:HB3	1.86	0.75
48:A1:29:GLY:O	48:A1:30:VAL:HG22	1.85	0.75
30:AG:145:THR:HG23	30:AG:148:MET:HB3	1.69	0.74
45:AY:46:LYS:H	45:AY:62:GLU:HB2	1.51	0.74
57:AA:2801(A):A:H4'	57:AA:2802:G:C5'	2.11	0.74
57:BA:530:G:H2'	57:BA:530:G:N3	4.63	0.74
55:A8:51:ALA:N	55:A8:53:PRO:HD2	2.01	0.74
28:BE:131:ALA:H	57:BA:2580:U:C5'	2.00	0.74
53:B6:37:ARG:HH21	57:BA:2286:A:N6	1.83	0.74
41:AU:66:ASN:HD21	41:AU:70:ARG:HE	1.33	0.74
47:A0:51:VAL:HG22	47:A0:81:VAL:HG23	1.68	0.74
41:BU:90:VAL:O	41:BU:92:ARG:N	2.20	0.74
55:A8:61:LEU:HD23	55:A8:61:LEU:N	2.02	0.74
57:BA:1485:G:H1'	57:BA:1505:C:H42	1.51	0.74
55:B8:51:ALA:N	55:B8:53:PRO:HD2	2.02	0.74
40:BT:10:VAL:O	40:BT:13:ARG:HG2	1.87	0.74
26:BC:191:ARG:HB3	26:BC:195:ARG:NH1	2.02	0.74
48:A1:45:ASN:HD21	57:AA:2090:G:H21	1.33	0.74
57:AA:296:C:O2'	57:AA:297:C:H5'	1.86	0.74
32:AI:84:GLY:HA3	32:AI:144:VAL:HG13	1.68	0.74
46:AZ:79:ARG:O	46:AZ:80:ARG:HB2	1.87	0.74
57:BA:2801(A):A:H4'	57:BA:2802:G:C5'	2.10	0.74
46:BZ:66:SER:O	46:BZ:67:LEU:HD13	1.87	0.74
57:AA:1022:G:N2	57:AA:1142(A):A:H2	1.84	0.74
28:BE:116:VAL:HG21	28:BE:122:PHE:CD2	2.23	0.74
55:A8:43:GLN:C	55:A8:44:LYS:HD2	2.08	0.74
27:AD:181:GLU:HA	27:AD:272:ALA:HB3	1.70	0.74
30:BG:109:VAL:C	30:BG:112:PRO:HD2	2.07	0.74
30:BG:134:GLY:C	30:BG:135:LEU:HD12	2.07	0.74
36:BP:112:LEU:H	36:BP:128:HIS:CD2	2.04	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:66:GLY:HA3	57:BA:2415:G:O3'	1.87	0.74
39:BS:106:ARG:O	39:BS:106:ARG:HD2	1.86	0.74
40:BT:28:VAL:CG2	40:BT:46:GLU:HG3	2.18	0.74
57:AA:154(A):C:H3'	57:AA:155:U:C5'	2.16	0.74
30:AG:117:PHE:O	30:AG:118:ARG:HB2	1.86	0.74
57:BA:259:G:N2	57:BA:621:A:H8	1.83	0.74
27:AD:259:THR:HG21	57:AA:1803:A:O2'	1.86	0.74
57:BA:1403:C:H5''	57:BA:1471:A:H1'	1.69	0.74
42:AV:18:LEU:CD1	42:AV:19:LYS:H	2.00	0.74
57:BA:588:U:H2'	57:BA:589:C:C6	2.23	0.74
27:AD:46:GLN:OE1	27:AD:46:GLN:N	2.21	0.74
53:A6:37:ARG:HH21	57:AA:2286:A:N6	1.84	0.74
57:BA:197:A:C8	57:BA:197:A:H5'	2.23	0.74
36:AP:125:VAL:O	36:AP:145:PRO:HD2	1.88	0.74
57:BA:1717:G:C2'	57:BA:1718:G:H5''	2.18	0.74
55:B8:43:GLN:C	55:B8:44:LYS:HD2	2.08	0.74
47:A0:72:ARG:O	47:A0:75:LEU:HB2	1.87	0.74
57:BA:2245:U:H5'	57:BA:2246:G:H5'	1.69	0.74
32:AI:68:LEU:CD2	32:AI:72:LEU:HD11	2.17	0.74
30:BG:141:PHE:O	30:BG:144:ILE:HG22	1.87	0.74
40:BT:28:VAL:HG21	40:BT:46:GLU:HG3	1.70	0.74
57:BA:1022:G:N2	57:BA:1142(A):A:H2	1.84	0.74
49:A2:13:ALA:HA	49:A2:16:LEU:HD12	1.68	0.74
28:AE:167:VAL:HG22	28:AE:170:LEU:HD11	1.69	0.74
29:AF:36:VAL:HG11	29:AF:183:VAL:HG11	1.70	0.74
27:BD:176:ARG:HG2	27:BD:176:ARG:HH11	1.52	0.74
30:AG:67:LYS:HE2	51:A4:6:HIS:CG	2.23	0.74
53:B6:35:GLU:HB3	53:B6:51:GLU:HB2	1.68	0.74
57:AA:212:G:O2'	57:AA:213:A:H5'	1.87	0.74
29:BF:178:PRO:HG2	29:BF:179:GLU:OE1	1.87	0.74
57:AA:259:G:N2	57:AA:621:A:H8	1.84	0.74
38:AR:98:LEU:HB2	38:AR:113:LEU:HD21	1.68	0.74
32:BI:98:ALA:HB1	32:BI:109:ILE:HB	1.69	0.74
32:BI:126:TYR:HB2	32:BI:140:LEU:HD22	1.68	0.74
32:BI:77:LEU:CD2	32:BI:141:LYS:HG2	2.18	0.74
55:B8:6:THR:CG2	55:B8:63:PRO:HD3	2.17	0.74
44:BX:12:VAL:HG23	44:BX:13:LEU:N	2.00	0.74
46:BZ:68:PRO:HG2	46:BZ:91:LEU:H	1.52	0.74
37:BQ:13:GLN:HG3	57:BA:910:A:C5	2.22	0.74
53:B6:52:VAL:HG22	53:B6:53:LYS:H	1.51	0.74
57:BA:365:C:H5'	57:BA:365:C:H6	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AQ:13:GLN:HG3	57:AA:910:A:C5	2.22	0.74
37:AQ:34:LEU:HD11	37:AQ:129:THR:HB	1.69	0.74
55:A8:61:LEU:H	55:A8:61:LEU:CD2	1.88	0.74
27:BD:129:ASN:ND2	27:BD:129:ASN:H	3.55	0.74
57:AA:2033:A:H4'	57:AA:2034:U:OP1	1.88	0.74
36:AP:71:VAL:HG12	57:AA:389:G:N1	2.02	0.73
29:BF:3:GLU:O	29:BF:19:GLU:HB2	1.87	0.73
57:AA:612:C:H2'	57:AA:613:G:C5'	2.12	0.73
35:BO:24:VAL:HA	35:BO:39:ILE:HG22	1.69	0.73
53:A6:8:LYS:HZ1	57:AA:2285:C:H5	1.35	0.73
28:AE:24:THR:HG22	28:AE:186:GLY:HA2	1.70	0.73
52:B5:34:PRO:O	52:B5:35:GLU:HB2	1.86	0.73
48:A1:45:ASN:ND2	57:AA:2090:G:H21	1.85	0.73
44:AX:35:THR:HG22	44:AX:37:THR:H	1.53	0.73
45:AY:90:LEU:HG	45:AY:91:GLU:H	1.53	0.73
32:BI:109:ILE:CG2	32:BI:114:LEU:HD11	2.17	0.73
57:BA:330:A:C2	57:BA:1210:A:H2'	2.22	0.73
57:AA:672:C:O2'	57:AA:673:C:H5''	1.87	0.73
57:AA:2292:C:O2'	57:AA:2293:C:H5'	1.87	0.73
27:AD:11:PRO:O	27:AD:13:ARG:N	2.22	0.73
30:AG:5:VAL:H	30:AG:8:LYS:HB3	1.53	0.73
57:BA:2121:G:H1	57:BA:2177:C:H42	1.36	0.73
29:BF:89:VAL:HG12	29:BF:90:PHE:N	2.02	0.73
38:BR:98:LEU:HB2	38:BR:113:LEU:HD21	1.70	0.73
45:BY:8:LYS:HG2	45:BY:28:LYS:NZ	2.02	0.73
49:A2:47:ASN:O	49:A2:49:LYS:N	2.20	0.73
57:AA:1717:G:C2'	57:AA:1718:G:H5''	2.18	0.73
57:AA:1786:A:H2	57:AA:2606:C:H1'	1.53	0.73
27:AD:24:ILE:CG1	27:AD:25:THR:N	2.51	0.73
38:AR:24:GLN:HE22	38:AR:36:THR:HG21	1.52	0.73
57:BA:2313:C:H2'	57:BA:2314:C:C6	2.23	0.73
34:BN:1:MET:HG2	34:BN:2:LYS:N	2.03	0.73
55:A8:6:THR:CG2	55:A8:63:PRO:HD3	2.17	0.73
47:A0:40:GLN:HE22	47:A0:43:THR:HA	1.54	0.73
46:AZ:157:LEU:H	46:AZ:157:LEU:HD23	1.52	0.73
30:AG:36:LYS:CE	30:AG:95:ARG:HH12	2.00	0.73
31:AH:43:VAL:HG11	31:AH:52:VAL:HG22	1.70	0.73
36:AP:62:LEU:HD23	36:AP:62:LEU:H	1.54	0.73
36:BP:71:VAL:HG13	36:BP:72:PRO:CD	2.17	0.73
39:BS:30:ARG:HH22	39:BS:62:LYS:HD2	1.52	0.73
42:AV:99:ILE:N	42:AV:99:ILE:HD13	2.02	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:A0:41:ARG:NH2	57:AA:2387:U:H4'	2.03	0.73
57:AA:2523:G:C2'	57:AA:2524:G:H5''	2.18	0.73
57:BA:212:G:O2'	57:BA:213:A:H5'	1.89	0.73
39:AS:13:ARG:CG	39:AS:14:VAL:H	2.01	0.73
32:BI:81:VAL:HG22	32:BI:82:ARG:N	2.03	0.73
27:BD:259:THR:HG21	57:BA:1803:A:O2'	1.88	0.73
28:BE:132:HIS:HA	28:BE:135:HIS:CE1	2.23	0.73
36:AP:66:GLY:HA3	57:AA:2415:G:O3'	1.89	0.73
30:AG:15:VAL:HG13	30:AG:175:LEU:HB3	1.70	0.73
30:AG:77:ILE:C	30:AG:79:ASN:H	1.90	0.73
45:AY:96:ILE:HG22	45:AY:97:ARG:H	1.53	0.73
38:BR:24:GLN:HE22	38:BR:36:THR:HG21	1.53	0.73
29:BF:132:VAL:HG22	29:BF:133:ASN:N	2.01	0.73
28:BE:111:ARG:HD2	28:BE:160:TYR:CE1	2.24	0.73
28:AE:131:ALA:H	57:AA:2580:U:C5'	2.02	0.73
57:AA:2833:G:H3'	57:AA:2834:G:H5'	1.69	0.73
27:AD:176:ARG:HH11	27:AD:176:ARG:HG2	1.54	0.73
57:AA:818:G:O2'	57:AA:819:A:H5'	4.59	0.73
29:AF:89:VAL:HG12	29:AF:90:PHE:H	1.54	0.73
32:AI:77:LEU:CD2	32:AI:141:LYS:HG2	2.18	0.73
45:AY:8:LYS:HG2	45:AY:28:LYS:NZ	2.04	0.73
27:BD:34:VAL:HG23	27:BD:35:LYS:N	1.97	0.73
49:A2:47:ASN:ND2	57:AA:94(A):G:N3	2.36	0.73
38:BR:4:LEU:O	38:BR:5:LYS:HD3	1.89	0.73
46:AZ:74:VAL:HG13	46:AZ:86:VAL:HG12	1.69	0.73
42:BV:5:VAL:HG23	42:BV:37:VAL:O	1.88	0.73
57:BA:2233:U:H2'	57:BA:2234:G:C8	2.23	0.73
32:AI:1:MET:HG3	32:AI:23:PRO:HG3	1.71	0.73
43:AW:65:LEU:HD23	43:AW:68:ARG:HD2	1.71	0.73
27:AD:43:ARG:HH11	27:AD:44:ASN:ND2	1.87	0.73
28:AE:116:VAL:HG21	28:AE:122:PHE:CD2	2.23	0.73
57:AA:1116:C:C2'	57:AA:1117:G:H5''	4.12	0.73
47:A0:48:GLY:HA3	47:A0:80:HIS:HD1	1.53	0.73
43:BW:9:TYR:H	43:BW:102:HIS:CD2	2.06	0.73
57:AA:1403:C:H5''	57:AA:1471:A:H1'	1.69	0.73
57:AA:365:C:H5'	57:AA:365:C:H6	1.52	0.73
57:AA:603:A:H4'	57:AA:604:G:O5'	1.89	0.73
36:BP:108:LYS:C	36:BP:110:TYR:H	1.92	0.73
29:BF:26:ALA:O	29:BF:27:GLU:HB2	1.89	0.73
27:BD:24:ILE:CG1	27:BD:25:THR:N	2.52	0.73
31:BH:43:VAL:HG11	31:BH:52:VAL:HA	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:51:ARG:HD3	30:BG:53:LEU:CD2	2.19	0.73
57:AA:1280:G:H2'	57:AA:1281:G:H5''	1.70	0.73
37:BQ:132:VAL:HG11	46:BZ:81:ARG:HE	1.52	0.73
28:BE:167:VAL:HG22	28:BE:170:LEU:HD11	1.70	0.73
57:AA:2656:U:H3	57:AA:2665:A:H2	1.36	0.72
29:AF:26:ALA:O	29:AF:27:GLU:HB2	1.88	0.72
30:BG:109:VAL:HA	30:BG:112:PRO:HG2	1.70	0.72
34:BN:133:GLN:O	34:BN:134:ARG:HB3	1.88	0.72
29:AF:132:VAL:HG22	29:AF:133:ASN:N	2.03	0.72
57:AA:1022:G:N2	57:AA:1142(A):A:C2	2.57	0.72
28:AE:62:PRO:C	28:AE:64:LYS:H	1.90	0.72
57:BA:2808:U:O2'	57:BA:2809:A:H5'	1.88	0.72
30:BG:5:VAL:HG12	30:BG:6:ALA:H	1.53	0.72
30:BG:71:THR:HG22	30:BG:89:GLY:CA	2.18	0.72
32:BI:68:LEU:CD2	32:BI:136:VAL:HG11	2.19	0.72
27:BD:11:PRO:O	27:BD:13:ARG:N	2.22	0.72
57:AA:2233:U:H2'	57:AA:2234:G:C8	2.25	0.72
27:AD:129:ASN:N	27:AD:129:ASN:HD22	4.03	0.72
31:AH:86:GLU:HB3	31:AH:132:ARG:HB3	1.72	0.72
31:AH:43:VAL:HG11	31:AH:52:VAL:HA	1.70	0.72
31:BH:43:VAL:HG11	31:BH:52:VAL:HG22	1.70	0.72
53:A6:12:GLU:HA	53:A6:23:THR:HA	1.71	0.72
37:AQ:46:GLN:HE21	57:AA:2485:G:H5''	1.53	0.72
41:BU:34:LYS:HE2	41:BU:34:LYS:HA	1.71	0.72
57:AA:271(F):C:H2'	57:AA:271(G):C:H6	1.54	0.72
57:BA:613:G:H5'	57:BA:613:G:H8	1.55	0.72
30:BG:71:THR:HG22	30:BG:89:GLY:HA3	1.70	0.72
53:A6:5:VAL:HG22	53:A6:6:ARG:H	1.54	0.72
57:BA:156:U:H4'	57:BA:157:U:H5''	1.70	0.72
54:B7:34:ARG:HH12	54:B7:39:ARG:HD2	1.52	0.72
45:AY:26:LYS:HG2	45:AY:27:VAL:H	1.55	0.72
55:B8:61:LEU:N	55:B8:61:LEU:HD23	2.02	0.72
57:BA:2206:G:H21	57:BA:2207:G:C5'	2.02	0.72
53:B6:12:GLU:HA	53:B6:23:THR:HA	1.71	0.72
57:BA:197:A:H5'	57:BA:197:A:H8	1.54	0.72
57:BA:27:G:N2	57:BA:512:G:H2'	2.04	0.72
30:BG:41:GLN:OE1	30:BG:153:ARG:HG3	1.90	0.72
36:BP:16:ARG:HH11	36:BP:16:ARG:C	1.93	0.72
42:BV:19:LYS:HB3	42:BV:94:LEU:O	1.90	0.72
45:BY:7:VAL:HB	45:BY:8:LYS:CD	2.19	0.72
42:AV:15:GLU:HB3	42:AV:16:PRO:CD	2.19	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B5:41:PRO:HG2	52:B5:44:THR:OG1	1.90	0.72
49:B2:23:LYS:O	49:B2:27:GLU:HG3	1.89	0.72
35:AO:4:PRO:O	35:AO:5:GLN:HB2	1.90	0.72
57:AA:2308:G:O6	57:AA:2310:A:H2'	1.90	0.72
29:AF:3:GLU:O	29:AF:19:GLU:HB2	1.88	0.72
41:AU:92:ARG:HE	57:AA:996:A:C4'	2.02	0.72
57:BA:2312:U:C2'	57:BA:2313:C:H5''	2.19	0.72
34:BN:18:ALA:HB1	34:BN:21:LYS:CB	2.20	0.72
40:BT:34:VAL:O	40:BT:35:LYS:HB3	1.89	0.72
46:AZ:119:GLU:HG3	46:AZ:122:ARG:NH1	2.05	0.72
41:AU:44:ASN:ND2	42:AV:75:PHE:HB3	2.05	0.72
46:AZ:69:THR:HG22	46:AZ:90:VAL:HA	1.72	0.72
30:AG:114:ILE:O	30:AG:114:ILE:HG22	1.88	0.72
45:AY:79:CYS:SG	45:AY:80:GLY:N	2.62	0.72
30:BG:111:LEU:N	30:BG:112:PRO:HD2	2.05	0.72
30:BG:39:ILE:HD12	30:BG:60:LEU:HD21	1.72	0.72
27:BD:44:ASN:HB2	27:BD:48:ARG:O	1.90	0.72
45:BY:76:CYS:HB3	45:BY:96:ILE:CD1	2.15	0.72
53:A6:5:VAL:HG13	53:A6:7:ILE:H	1.54	0.72
57:BA:903:C:H2'	57:BA:904:C:C5'	2.18	0.72
42:BV:15:GLU:HB3	42:BV:16:PRO:CD	2.18	0.72
35:AO:111:PHE:O	35:AO:115:VAL:HG23	1.88	0.72
57:BA:2033:A:H4'	57:BA:2034:U:OP1	1.90	0.72
46:BZ:7:ALA:HB2	46:BZ:59:LEU:HD22	1.71	0.72
27:AD:80:ALA:HB3	27:AD:94:LEU:HD13	1.71	0.72
31:AH:110:SER:HB2	57:AA:2653:U:O2'	1.90	0.72
30:AG:109:VAL:HG13	51:A4:33:VAL:CG1	2.19	0.72
38:BR:2:ARG:HH11	57:BA:2723:C:H5''	1.53	0.72
37:BQ:62:GLY:HA2	46:BZ:116:VAL:HG21	1.70	0.72
57:AA:1537:G:H2'	57:AA:1538:G:H8	1.55	0.72
57:BA:1280:G:H2'	57:BA:1281:G:H5''	1.72	0.72
57:BA:271(A):A:H5'	57:BA:271(B):C:OP2	1.90	0.72
46:BZ:45:ASP:O	46:BZ:49:ARG:HG2	1.89	0.72
30:AG:110:ALA:O	30:AG:112:PRO:CD	2.37	0.71
32:AI:109:ILE:CG2	32:AI:114:LEU:HD11	2.21	0.71
34:AN:1:MET:HG2	34:AN:2:LYS:N	2.04	0.71
42:AV:5:VAL:HG23	42:AV:37:VAL:O	1.90	0.71
29:BF:125:LEU:H	29:BF:125:LEU:HD23	1.55	0.71
34:BN:4:TYR:CD1	34:BN:4:TYR:N	2.58	0.71
36:BP:97:PRO:HG3	36:BP:112:LEU:HD12	1.71	0.71
28:BE:101:ARG:O	28:BE:201:THR:HG22	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:46:GLN:HE21	57:BA:2485:G:H5''	1.56	0.71
58:AB:3:C:H42	58:AB:118:G:H1	1.37	0.71
30:BG:66:GLN:OE1	30:BG:94:LEU:HD23	1.90	0.71
43:BW:65:LEU:HD23	43:BW:68:ARG:HD2	1.71	0.71
40:AT:28:VAL:HG21	40:AT:46:GLU:HG3	1.69	0.71
46:BZ:141:VAL:HA	46:BZ:144:LEU:HD21	1.72	0.71
55:A8:52:LYS:N	55:A8:53:PRO:CD	2.54	0.71
28:AE:132:HIS:HB3	57:AA:744:G:OP1	1.89	0.71
48:B1:82:LEU:HD22	48:B1:82:LEU:N	2.03	0.71
57:BA:2308:G:O6	57:BA:2310:A:H2'	1.90	0.71
46:AZ:108:PRO:HB3	46:AZ:141:VAL:HG12	1.71	0.71
57:BA:2689:U:H5''	57:BA:2690:C:H5'	1.70	0.71
27:AD:65:ILE:HD11	27:AD:67:PHE:CE1	2.25	0.71
30:AG:111:LEU:N	30:AG:112:PRO:CD	2.53	0.71
44:AX:24:GLY:O	44:AX:82:GLN:HA	1.90	0.71
42:BV:49:THR:HB	42:BV:50:PRO:HD2	1.72	0.71
53:B6:30:THR:HG22	53:B6:32:ASN:ND2	2.05	0.71
28:BE:59:VAL:O	28:BE:62:PRO:HD2	1.89	0.71
57:AA:547:A:H1'	57:AA:548:A:N7	2.05	0.71
30:AG:108:ASN:C	30:AG:112:PRO:HG2	2.11	0.71
57:BA:547:A:H1'	57:BA:548:A:N7	2.04	0.71
31:BH:41:MET:HG3	31:BH:42:ARG:H	1.54	0.71
31:BH:41:MET:HE3	31:BH:42:ARG:N	2.05	0.71
35:BO:111:PHE:O	35:BO:115:VAL:HG23	1.89	0.71
57:BA:2656:U:H3	57:BA:2665:A:H2	1.38	0.71
57:BA:2310:A:O2'	57:BA:2311:A:H5'	1.90	0.71
57:BA:1188:U:O2'	57:BA:1189:A:H5'	1.91	0.71
57:AA:2312:U:C2'	57:AA:2313:C:H5''	2.19	0.71
27:AD:24:ILE:O	27:AD:25:THR:O	2.08	0.71
31:AH:19:VAL:HG21	31:AH:43:VAL:O	1.90	0.71
36:BP:18:ARG:HH11	36:BP:18:ARG:CB	2.02	0.71
31:BH:85:LYS:NZ	31:BH:133:VAL:HG23	2.05	0.71
57:BA:1022:G:N2	57:BA:1142(A):A:C2	2.58	0.71
57:AA:672:C:H2'	57:AA:673:C:C5'	2.20	0.71
57:BA:1639:U:C2'	57:BA:1640:C:H5''	2.21	0.71
29:BF:32:LEU:HD11	29:BF:105:VAL:HG13	1.70	0.71
57:AA:1188:U:O2'	57:AA:1189:A:H5'	1.90	0.71
29:AF:66:PRO:O	29:AF:67:GLN:HB3	1.89	0.71
29:AF:83:PHE:CD2	57:AA:1257:C:H4'	2.26	0.71
30:AG:33:ARG:O	30:AG:34:LEU:HD12	1.89	0.71
31:AH:41:MET:HG3	31:AH:42:ARG:H	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:AH:85:LYS:HZ2	31:AH:133:VAL:N	1.88	0.71
36:AP:16:ARG:HD3	36:AP:18:ARG:N	2.05	0.71
57:BA:1015:G:H8	57:BA:1015:G:H5'	1.54	0.71
32:BI:78:THR:H	32:BI:104:GLN:HE22	1.36	0.71
36:BP:105:LEU:HG	57:BA:626:U:C2	2.25	0.71
44:BX:24:GLY:O	44:BX:82:GLN:HA	1.91	0.71
46:BZ:151:HIS:CD2	46:BZ:151:HIS:N	2.59	0.71
57:BA:672:C:H2'	57:BA:673:C:C5'	2.21	0.71
50:B3:43:ILE:O	50:B3:47:VAL:HG23	1.91	0.71
41:BU:77:SER:OG	57:BA:1011:G:H5''	1.91	0.71
27:BD:228:PRO:HD3	27:BD:235:GLY:CA	2.20	0.71
57:AA:2310:A:O2'	57:AA:2311:A:H5'	1.90	0.71
32:AI:81:VAL:HG22	32:AI:82:ARG:N	2.05	0.71
45:AY:7:VAL:HG21	45:AY:8:LYS:HZ1	1.55	0.71
49:B2:41:ILE:HG13	49:B2:41:ILE:O	1.91	0.71
57:BA:1786:A:H2	57:BA:2606:C:H1'	1.55	0.71
29:AF:8:GLN:HB3	29:AF:126:VAL:HA	1.73	0.71
44:AX:36:LYS:HB2	57:AA:1598:C:H5'	1.73	0.71
57:BA:1846:G:H5'	57:BA:1846:G:H8	1.55	0.71
46:BZ:23:LYS:HA	46:BZ:23:LYS:NZ	2.06	0.71
28:AE:108:SER:HB3	28:AE:165:VAL:HG21	1.73	0.71
57:AA:27:G:H22	57:AA:512:G:C2'	2.04	0.71
57:AA:1541:G:H4'	57:AA:1542:A:O4'	1.91	0.71
58:BB:3:C:H42	58:BB:118:G:H1	1.39	0.71
37:AQ:27:VAL:HG12	37:AQ:28:ALA:N	2.04	0.71
57:BA:364:C:H2'	57:BA:365:C:H5''	1.72	0.71
46:BZ:134:PRO:O	46:BZ:135:GLU:HG2	1.90	0.71
57:BA:603:A:H4'	57:BA:604:G:O5'	1.90	0.71
57:AA:2761:G:C3'	57:AA:2762:G:H5''	2.21	0.71
57:AA:298:G:H5'	57:AA:299:A:OP1	1.90	0.71
31:AH:85:LYS:NZ	31:AH:133:VAL:HG23	2.06	0.71
36:AP:16:ARG:C	36:AP:16:ARG:HH11	1.93	0.71
36:BP:16:ARG:HD3	36:BP:18:ARG:N	2.04	0.71
45:BY:7:VAL:HB	45:BY:8:LYS:HD2	1.71	0.71
57:AA:2808:U:O2'	57:AA:2809:A:H5'	1.90	0.71
57:BA:94:C:H5'	57:BA:94(A):G:OP2	1.90	0.71
57:BA:1537:G:H2'	57:BA:1538:G:H8	1.56	0.71
57:AA:2121:G:H1	57:AA:2177:C:H42	1.39	0.71
29:AF:8:GLN:HG2	29:AF:126:VAL:HB	1.73	0.71
30:AG:111:LEU:N	30:AG:112:PRO:HD2	2.05	0.71
32:AI:98:ALA:HB1	32:AI:109:ILE:HB	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:67:GLN:HG3	29:BF:67:GLN:O	1.90	0.71
32:BI:81:VAL:HG12	32:BI:143:SER:HB2	1.73	0.71
39:BS:13:ARG:CG	39:BS:14:VAL:H	2.03	0.71
39:BS:62:LYS:HB2	58:BB:50:G:P	2.30	0.71
27:BD:65:ILE:HD11	27:BD:67:PHE:CE1	2.26	0.71
40:BT:85:LYS:HB3	40:BT:85:LYS:HZ2	1.55	0.71
55:B8:52:LYS:N	55:B8:53:PRO:CD	2.53	0.71
57:AA:94:C:H5'	57:AA:94(A):G:OP2	1.90	0.71
36:AP:18:ARG:HH11	36:AP:18:ARG:CB	2.03	0.70
36:AP:97:PRO:HG3	36:AP:112:LEU:HD12	1.73	0.70
29:BF:66:PRO:O	29:BF:67:GLN:HB3	1.89	0.70
35:AO:104:ARG:HE	40:AT:33:LYS:CE	2.04	0.70
36:BP:62:LEU:HB3	57:BA:2393:A:H5'	1.73	0.70
28:BE:120:TRP:O	28:BE:121:ASN:HB2	1.89	0.70
31:BH:43:VAL:CG1	31:BH:52:VAL:HA	2.21	0.70
47:B0:41:ARG:NH2	57:BA:2387:U:H4'	2.06	0.70
57:BA:650:C:H3'	57:BA:651:G:H5''	1.72	0.70
57:AA:197:A:H5'	57:AA:197:A:C8	2.25	0.70
57:AA:622:G:O2'	57:AA:623:G:H5'	1.91	0.70
32:AI:127:VAL:HG22	32:AI:139:GLN:HB3	1.72	0.70
42:AV:49:THR:HB	42:AV:50:PRO:HD2	1.72	0.70
40:AT:25:GLY:O	40:AT:26:ASP:HB2	1.91	0.70
50:A3:8:LEU:HB2	50:A3:28:LEU:HD13	1.73	0.70
50:A3:35:ARG:HH21	50:A3:37:LEU:CD2	2.04	0.70
34:BN:68:GLU:HG2	34:BN:88:GLU:CD	2.12	0.70
29:AF:67:GLN:HG3	29:AF:67:GLN:O	1.91	0.70
29:AF:89:VAL:HG12	29:AF:90:PHE:N	2.06	0.70
34:AN:18:ALA:HB1	34:AN:21:LYS:CB	2.22	0.70
41:AU:34:LYS:HE2	41:AU:34:LYS:HA	1.72	0.70
30:BG:111:LEU:N	30:BG:112:PRO:CD	2.54	0.70
32:BI:68:LEU:HD23	32:BI:136:VAL:HG11	1.74	0.70
34:BN:58:ASP:C	34:BN:60:ILE:H	1.94	0.70
55:B8:62:LEU:HD13	57:BA:242:G:C5'	2.09	0.70
27:BD:35:LYS:HB3	27:BD:35:LYS:HZ2	1.56	0.70
45:BY:96:ILE:HG22	45:BY:97:ARG:H	1.55	0.70
46:BZ:152:ALA:HA	46:BZ:167:PRO:HB2	1.72	0.70
53:B6:5:VAL:HG13	53:B6:7:ILE:H	1.55	0.70
33:BJ:10:LEU:CB	57:BA:1046:A:H5''	2.21	0.70
47:B0:43:THR:O	47:B0:43:THR:HG23	1.91	0.70
53:A6:9:LEU:HB3	53:A6:28:ARG:HD2	1.74	0.70
29:BF:8:GLN:HG2	29:BF:126:VAL:HB	1.71	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:A8:6:THR:HG22	55:A8:63:PRO:HD3	1.74	0.70
45:BY:8:LYS:HD2	45:BY:8:LYS:N	2.06	0.70
28:AE:101:ARG:O	28:AE:201:THR:HG22	1.90	0.70
57:BA:2761:G:C3'	57:BA:2762:G:H5''	2.21	0.70
57:AA:2206:G:H21	57:AA:2207:G:C5'	2.01	0.70
30:AG:77:ILE:O	30:AG:77:ILE:CG2	2.39	0.70
30:BG:57:ALA:HB2	30:BG:90:LEU:HD21	1.73	0.70
42:BV:38:LEU:C	42:BV:39:LEU:HD13	2.12	0.70
27:BD:43:ARG:HH11	27:BD:44:ASN:ND2	1.88	0.70
44:BX:53:LYS:HZ2	44:BX:55:ASN:HD21	1.38	0.70
53:A6:30:THR:HG22	53:A6:32:ASN:ND2	2.06	0.70
57:AA:1639:U:C2'	57:AA:1640:C:H5''	2.20	0.70
49:A2:32:LEU:HD22	49:A2:36:ARG:NH1	2.05	0.70
27:AD:228:PRO:HD3	27:AD:235:GLY:CA	2.21	0.70
38:BR:28:LEU:HD12	38:BR:48:VAL:HG21	1.73	0.70
57:AA:271(A):A:H5'	57:AA:271(B):C:OP2	1.91	0.70
30:AG:111:LEU:HA	30:AG:114:ILE:HD11	1.71	0.70
36:AP:47:ASP:HB3	36:AP:48:PRO:O	1.91	0.70
42:AV:19:LYS:HB3	42:AV:94:LEU:O	1.90	0.70
30:BG:71:THR:HG22	30:BG:89:GLY:C	2.12	0.70
32:BI:83:ALA:HA	32:BI:89:TYR:CD1	2.26	0.70
34:BN:13:TRP:O	34:BN:135:PRO:HD2	1.90	0.70
27:BD:24:ILE:O	27:BD:25:THR:O	2.08	0.70
44:BX:53:LYS:NZ	44:BX:55:ASN:HD21	1.89	0.70
37:BQ:27:VAL:HG12	37:BQ:28:ALA:N	2.05	0.70
57:AA:612:C:C3'	57:AA:613:G:H5''	2.21	0.70
55:A8:32:LEU:HB3	55:A8:36:LYS:NZ	2.07	0.70
46:BZ:61:LEU:CD2	46:BZ:61:LEU:H	2.01	0.70
31:AH:136:ILE:HD12	31:AH:136:ILE:N	2.06	0.70
36:AP:108:LYS:C	36:AP:110:TYR:H	1.93	0.70
30:AG:173:LEU:HD22	30:AG:178:PHE:CZ	2.26	0.70
30:AG:42:GLY:O	30:AG:88:ILE:HG22	1.92	0.70
32:AI:109:ILE:HG22	32:AI:110:ASP:H	1.55	0.70
44:AX:53:LYS:HZ2	44:AX:55:ASN:HD21	1.39	0.70
57:BA:622:G:O2'	57:BA:623:G:H5'	1.91	0.70
30:BG:46:ALA:HB3	30:BG:82:LEU:HD11	1.74	0.70
43:BW:1:MET:HE2	43:BW:2:GLU:N	1.96	0.70
40:BT:70:VAL:HG12	40:BT:71:GLY:N	2.05	0.70
55:B8:52:LYS:N	55:B8:53:PRO:HD2	2.06	0.70
28:BE:130:GLY:HA3	57:BA:2580:U:H4'	1.73	0.70
33:BJ:41:ARG:HA	33:BJ:54:ALA:CB	2.22	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:650:C:H3'	57:AA:651:G:H5''	1.72	0.70
29:AF:169:ASN:HD21	57:AA:322:A:H3'	1.56	0.70
36:BP:24:GLY:O	36:BP:25:SER:HB3	1.91	0.70
57:AA:1286:A:H2'	57:AA:1287:A:H4'	5.40	0.70
26:AC:175:PRO:HB3	57:AA:2124:G:H4'	1.73	0.70
36:AP:105:LEU:HG	57:AA:626:U:C2	2.27	0.70
30:AG:19:LEU:HD13	30:AG:32:PRO:HG2	1.73	0.70
30:AG:72:ARG:HB3	30:AG:87:PRO:HD2	1.72	0.70
34:AN:4:TYR:N	34:AN:4:TYR:CD1	2.59	0.70
57:BA:1541:G:H4'	57:BA:1542:A:O4'	1.92	0.70
38:BR:10:LEU:HD22	38:BR:17:ARG:CD	2.22	0.70
46:AZ:19:ARG:HH12	46:AZ:84:GLU:HA	1.56	0.70
57:BA:271(F):C:H2'	57:BA:271(G):C:H6	1.55	0.70
57:AA:755:C:H2'	57:AA:756:C:H6	1.57	0.70
50:A3:19:GLN:HE22	50:A3:52:HIS:HE1	1.40	0.70
30:AG:172:LEU:HD23	30:AG:172:LEU:O	1.91	0.70
30:AG:71:THR:CG2	30:AG:89:GLY:HA3	2.21	0.70
35:BO:64:ARG:HG2	35:BO:79:PHE:CG	2.26	0.70
40:BT:28:VAL:HG13	40:BT:46:GLU:HA	1.73	0.70
55:A8:52:LYS:N	55:A8:53:PRO:HD2	2.07	0.70
57:AA:156:U:H4'	57:AA:157:U:H5''	1.72	0.70
57:AA:1786:A:C2	57:AA:2606:C:H1'	2.26	0.70
57:BA:2698:U:H2'	57:BA:2699:C:C6	2.27	0.70
30:AG:170:ARG:HH21	30:AG:182:LYS:HE2	1.56	0.70
57:AA:2691:C:H6	57:AA:2691:C:H5'	1.56	0.70
57:BA:2691:C:H5'	57:BA:2691:C:H6	1.57	0.70
30:AG:131:TYR:H	30:AG:159:VAL:HG13	1.56	0.70
29:BF:8:GLN:HB3	29:BF:126:VAL:HA	1.72	0.70
34:BN:16:ILE:HG23	34:BN:54:VAL:HG22	1.74	0.70
27:BD:46:GLN:OE1	27:BD:46:GLN:N	2.25	0.70
40:AT:89:VAL:HB	40:AT:91:ARG:CG	2.18	0.70
57:AA:1846:G:H8	57:AA:1846:G:H5'	1.57	0.70
35:BO:104:ARG:HE	40:BT:33:LYS:CE	2.05	0.70
40:BT:50:ILE:HD11	40:BT:102:ILE:CD1	2.20	0.70
49:A2:46:GLN:HG2	49:A2:49:LYS:NZ	2.07	0.70
28:BE:69:LYS:NZ	28:BE:89:ASP:HA	2.07	0.70
28:AE:51:PHE:HD1	28:AE:52:LEU:H	1.39	0.70
50:A3:43:ILE:O	50:A3:47:VAL:HG23	1.91	0.70
30:AG:105:LYS:NZ	51:A4:26:SER:HB3	2.07	0.69
45:AY:7:VAL:HG21	45:AY:8:LYS:NZ	2.06	0.69
45:AY:88:LYS:HZ3	45:AY:93:GLY:HA3	1.56	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BI:87:LYS:NZ	32:BI:121:LYS:HG3	2.07	0.69
35:AO:87:ILE:CG2	35:AO:91:LEU:HA	2.22	0.69
30:AG:109:VAL:HG13	51:A4:33:VAL:HG13	1.72	0.69
53:A6:10:LEU:H	53:A6:10:LEU:CD2	2.05	0.69
37:AQ:62:GLY:O	46:AZ:178:GLU:HB2	1.92	0.69
31:AH:149:ARG:HA	31:AH:162:ILE:HG13	1.72	0.69
30:BG:118:ARG:HB3	30:BG:181:ARG:NE	2.07	0.69
36:BP:50:ARG:O	36:BP:57:THR:HG22	1.93	0.69
55:B8:32:LEU:HB3	55:B8:36:LYS:NZ	2.06	0.69
31:BH:7:LEU:HG	31:BH:69:ARG:HH11	1.56	0.69
50:B3:35:ARG:HH21	50:B3:37:LEU:CD2	2.05	0.69
30:AG:98:ARG:CD	51:A4:1:MET:HG2	2.22	0.69
57:AA:1318:C:H3'	57:AA:1319:G:H5''	1.75	0.69
29:AF:3:GLU:HA	29:AF:24:LEU:CG	2.22	0.69
31:AH:43:VAL:CG1	31:AH:52:VAL:HA	2.22	0.69
31:AH:7:LEU:HG	31:AH:69:ARG:HH11	1.56	0.69
34:AN:58:ASP:C	34:AN:60:ILE:H	1.95	0.69
36:AP:61:ARG:NH1	55:A8:13:ARG:HD2	2.07	0.69
26:BC:175:PRO:HB3	57:BA:2124:G:H4'	1.74	0.69
45:BY:26:LYS:HG2	45:BY:27:VAL:H	1.55	0.69
28:BE:108:SER:HB3	28:BE:165:VAL:HG21	1.73	0.69
28:BE:59:VAL:HG21	28:BE:63:LEU:HA	1.74	0.69
28:AE:111:ARG:HD2	28:AE:160:TYR:CE1	2.28	0.69
28:BE:146:THR:HG23	57:BA:2032:G:H21	1.56	0.69
35:BO:4:PRO:O	35:BO:5:GLN:HB2	1.90	0.69
27:AD:35:LYS:HZ2	27:AD:35:LYS:HB3	1.57	0.69
29:AF:3:GLU:C	29:AF:24:LEU:HG	2.13	0.69
45:AY:13:VAL:HG21	45:AY:28:LYS:NZ	2.07	0.69
30:BG:109:VAL:O	30:BG:112:PRO:CD	2.40	0.69
30:BG:15:VAL:HG21	30:BG:176:LEU:HD23	1.74	0.69
32:BI:110:ASP:OD2	32:BI:113:ARG:HB3	1.93	0.69
46:BZ:151:HIS:HB3	46:BZ:170:THR:CA	2.15	0.69
28:AE:130:GLY:HA3	57:AA:2580:U:H4'	1.75	0.69
28:AE:77:ILE:HG22	28:AE:78:LEU:N	2.07	0.69
57:AA:1718:G:H5'	57:AA:1718:G:C8	2.27	0.69
46:AZ:112:ARG:HD3	46:AZ:112:ARG:O	1.92	0.69
57:BA:1378:A:O2'	57:BA:1379:A:H5'	1.92	0.69
57:AA:588:U:H2'	57:AA:589:C:C6	2.27	0.69
36:AP:33:ARG:NH2	57:AA:587:C:H3'	2.06	0.69
32:BI:69:LYS:HA	32:BI:136:VAL:HG21	1.74	0.69
43:BW:5:ALA:HB2	43:BW:54:ALA:HB2	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BO:87:ILE:CG2	35:BO:91:LEU:HA	2.22	0.69
40:BT:27:THR:HG23	40:BT:28:VAL:H	1.56	0.69
53:B6:5:VAL:HG12	53:B6:8:LYS:CB	2.22	0.69
31:BH:19:VAL:HG21	31:BH:43:VAL:O	1.91	0.69
31:BH:86:GLU:HB3	31:BH:132:ARG:HB3	1.72	0.69
27:AD:210:GLY:O	27:AD:211:ARG:HB3	1.93	0.69
46:AZ:40:ASP:OD1	46:AZ:42:VAL:HG12	1.91	0.69
36:BP:146:VAL:HG13	36:BP:147:LEU:N	2.08	0.69
57:BA:2401:U:O2'	57:BA:2402:C:H5''	1.92	0.69
27:AD:221:VAL:HG22	27:AD:226:MET:CE	2.21	0.69
41:BU:44:ASN:ND2	42:BV:75:PHE:HB3	2.07	0.69
57:AA:1015:G:H8	57:AA:1015:G:H5'	1.55	0.69
57:AA:545:C:C3'	57:AA:547:A:H5''	2.22	0.69
29:AF:24:LEU:O	29:AF:26:ALA:N	2.19	0.69
34:AN:128:HIS:CE1	34:AN:134:ARG:HH11	2.11	0.69
32:BI:118:LYS:NZ	32:BI:119:PRO:HG2	2.08	0.69
32:BI:140:LEU:HD21	32:BI:142:VAL:HG23	1.73	0.69
57:AA:613:G:H8	57:AA:613:G:H5'	1.56	0.69
28:BE:35:GLN:HG2	28:BE:36:ARG:N	2.07	0.69
57:AA:2712:U:H5'	57:AA:2712:U:O2	1.92	0.69
44:AX:47:PHE:O	44:AX:49:VAL:HG13	1.91	0.69
53:B6:9:LEU:HB3	53:B6:28:ARG:HD2	1.74	0.69
36:AP:112:LEU:HD22	36:AP:113:LYS:N	2.07	0.69
36:AP:16:ARG:C	36:AP:16:ARG:HD3	2.13	0.69
45:AY:8:LYS:HE2	45:AY:72:VAL:HG23	1.73	0.69
29:BF:3:GLU:HA	29:BF:24:LEU:CG	2.22	0.69
32:BI:68:LEU:HD23	32:BI:68:LEU:O	1.93	0.69
27:BD:70:TRP:HZ3	27:BD:146:GLU:OE2	1.75	0.69
31:BH:156:ALA:O	31:BH:157:TYR:C	2.30	0.69
46:BZ:152:ALA:CA	46:BZ:167:PRO:HB2	2.23	0.69
53:B6:10:LEU:CD2	53:B6:10:LEU:H	2.04	0.69
28:AE:69:LYS:NZ	28:AE:89:ASP:HA	2.07	0.69
50:B3:8:LEU:HB2	50:B3:28:LEU:HD13	1.74	0.69
46:AZ:24:LEU:C	46:AZ:24:LEU:HD23	2.13	0.69
57:AA:364:C:H2'	57:AA:365:C:H5''	1.74	0.69
31:BH:136:ILE:HD12	31:BH:136:ILE:N	2.07	0.69
27:AD:34:VAL:HG23	27:AD:35:LYS:N	1.96	0.69
30:AG:61:ALA:O	30:AG:65:GLY:N	2.23	0.69
32:AI:92:VAL:HG12	32:AI:120:ILE:CD1	2.23	0.69
32:AI:140:LEU:HD21	32:AI:142:VAL:HG23	1.74	0.69
29:BF:83:PHE:CD2	57:BA:1257:C:H4'	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BY:31:LEU:HD22	45:BY:31:LEU:N	2.08	0.69
40:BT:25:GLY:O	40:BT:26:ASP:HB2	1.91	0.69
28:BE:132:HIS:O	57:BA:1658:C:OP1	2.10	0.69
28:BE:77:ILE:HG22	28:BE:78:LEU:N	2.07	0.69
28:AE:120:TRP:O	28:AE:121:ASN:HB2	1.91	0.69
57:AA:1038:C:C3'	57:AA:1039:G:H5''	2.20	0.69
46:AZ:43:GLU:O	46:AZ:47:VAL:HG23	1.92	0.69
49:B2:13:ALA:O	49:B2:16:LEU:HB2	1.93	0.69
57:BA:755:C:H2'	57:BA:756:C:H6	1.57	0.69
46:AZ:182:LYS:O	46:AZ:183:LEU:HD23	1.92	0.69
57:AA:2401:U:O2'	57:AA:2402:C:H5''	1.93	0.69
27:BD:221:VAL:HG22	27:BD:226:MET:CE	2.23	0.69
41:AU:77:SER:OG	57:AA:1011:G:H5''	1.93	0.69
57:AA:197:A:H5'	57:AA:197:A:H8	1.57	0.69
30:AG:40:ASN:ND2	30:AG:41:GLN:N	2.40	0.69
34:AN:16:ILE:HG23	34:AN:54:VAL:HG22	1.73	0.69
45:AY:2:ARG:HD3	45:AY:3:VAL:HG23	1.75	0.69
51:B4:33:VAL:CG1	51:B4:34:GLU:H	1.94	0.69
51:A4:33:VAL:CG1	51:A4:34:GLU:H	1.95	0.69
31:BH:110:SER:HB2	57:BA:2653:U:O2'	1.93	0.69
29:AF:74:ARG:CD	57:AA:674:G:H1'	2.22	0.69
57:BA:1948:G:C8	57:BA:1948:G:H5'	2.28	0.69
29:BF:178:PRO:HB2	29:BF:201:VAL:HG11	1.74	0.69
53:A6:9:LEU:HD13	53:A6:9:LEU:O	1.92	0.69
35:BO:49:ARG:NH2	57:BA:1423:G:H5'	98.69	0.69
57:AA:1358:G:O2'	57:AA:1359:A:H5''	1.92	0.69
58:AB:40:U:C2	58:AB:43:C:H5''	2.27	0.69
32:AI:126:TYR:O	32:AI:140:LEU:HB3	1.92	0.69
57:BA:1286:A:H2'	57:BA:1287:A:H4'	5.41	0.69
36:BP:16:ARG:HD3	36:BP:16:ARG:C	2.13	0.69
35:BO:23:ARG:NH1	57:BA:2562:U:H1'	2.08	0.69
28:AE:59:VAL:HG21	28:AE:63:LEU:HA	1.74	0.69
57:AA:2317:C:H2'	57:AA:2318:G:C5'	2.23	0.69
49:A2:51:ARG:HD3	49:A2:55:ARG:NH2	2.07	0.69
29:BF:36:VAL:HG11	29:BF:183:VAL:HG11	1.75	0.69
35:AO:120:GLU:OE2	35:AO:122:LEU:HD21	1.93	0.69
34:AN:128:HIS:HE1	34:AN:134:ARG:HH11	1.41	0.68
44:AX:12:VAL:CB	44:AX:17:ALA:HB1	2.23	0.68
44:BX:36:LYS:HB2	57:BA:1598:C:H5'	1.74	0.68
34:BN:3:THR:O	34:BN:5:VAL:HG12	1.94	0.68
36:BP:38:GLN:CG	36:BP:39:LYS:H	2.03	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:AO:69:ILE:N	35:AO:69:ILE:HD12	2.08	0.68
40:AT:34:VAL:O	40:AT:35:LYS:HB3	1.91	0.68
40:AT:82:LEU:H	40:AT:82:LEU:CD1	2.04	0.68
40:BT:102:ILE:O	40:BT:106:SER:HB3	1.94	0.68
57:BA:1748:G:H8	57:BA:1748:G:H5'	1.58	0.68
57:BA:1038:C:H42	57:BA:1117:G:H1	1.41	0.68
41:AU:102:GLU:HG3	42:AV:2:PHE:CE1	2.28	0.68
57:BA:1384:A:N3	57:BA:1405:U:H1'	2.08	0.68
29:BF:18:ARG:HH21	29:BF:20:LEU:HD11	1.57	0.68
32:BI:91:SER:CB	32:BI:121:LYS:HD3	2.18	0.68
34:BN:133:GLN:HG2	34:BN:134:ARG:N	2.08	0.68
35:BO:104:ARG:HE	40:BT:33:LYS:HE3	1.58	0.68
52:A5:33:CYS:HB2	52:A5:40:LYS:HE3	1.75	0.68
57:AA:1678:G:H22	57:AA:1989:G:H22	1.40	0.68
49:B2:2:LYS:HB3	57:BA:97:C:H5''	1.72	0.68
28:AE:203:LYS:HD2	28:AE:203:LYS:O	1.93	0.68
27:AD:70:TRP:HZ3	27:AD:146:GLU:OE2	1.75	0.68
30:AG:131:TYR:O	30:AG:159:VAL:HG12	1.93	0.68
36:AP:35:HIS:H	57:AA:1190:G:H5'	1.58	0.68
43:AW:1:MET:CE	43:AW:2:GLU:H	2.06	0.68
55:A8:61:LEU:HG	55:A8:62:LEU:H	1.58	0.68
55:B8:6:THR:HG22	55:B8:63:PRO:HD3	1.74	0.68
40:AT:70:VAL:HG12	40:AT:71:GLY:N	2.08	0.68
45:BY:13:VAL:HG22	45:BY:14:LEU:H	1.59	0.68
57:AA:1173:G:H3'	57:AA:1174:A:C5'	2.23	0.68
57:BA:1718:G:C8	57:BA:1718:G:H5'	2.29	0.68
57:AA:1405:U:H2'	57:AA:1406:U:C6	2.28	0.68
27:AD:129:ASN:O	27:AD:193:VAL:HG12	1.93	0.68
30:AG:71:THR:HG22	30:AG:89:GLY:CA	2.22	0.68
57:BA:612:C:C3'	57:BA:613:G:H5''	2.22	0.68
29:BF:3:GLU:C	29:BF:24:LEU:HG	2.14	0.68
57:BA:545:C:C3'	57:BA:547:A:H5''	2.23	0.68
31:AH:156:ALA:O	31:AH:157:TYR:C	2.31	0.68
31:BH:7:LEU:HD23	31:BH:69:ARG:CD	2.24	0.68
57:AA:7:G:H1	57:AA:2896:C:N4	1.92	0.68
46:AZ:27:VAL:HG23	46:AZ:36:LYS:HA	1.75	0.68
46:BZ:98:MET:O	46:BZ:125:LEU:HD12	1.94	0.68
34:AN:133:GLN:HG2	34:AN:134:ARG:N	2.08	0.68
38:BR:36:THR:HG22	57:BA:1278:A:H5''	1.75	0.68
29:BF:9:ILE:HG22	29:BF:11:VAL:O	1.94	0.68
27:BD:10:THR:HG23	27:BD:13:ARG:HB3	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1948:G:H5'	57:AA:1948:G:C8	2.26	0.68
47:B0:48:GLY:HA3	47:B0:80:HIS:HD1	1.57	0.68
52:B5:54:GLY:C	52:B5:55:ARG:HE	1.95	0.68
57:BA:1188:U:C2'	57:BA:1189:A:H5'	2.23	0.68
57:BA:1786:A:C2	57:BA:2606:C:H1'	2.28	0.68
29:AF:89:VAL:HG21	57:AA:586:A:H5'	1.76	0.68
29:AF:4:VAL:HA	29:AF:19:GLU:HB3	1.75	0.68
34:AN:3:THR:O	34:AN:5:VAL:HG12	1.94	0.68
45:AY:76:CYS:HB3	45:AY:96:ILE:CD1	2.19	0.68
29:BF:4:VAL:HA	29:BF:19:GLU:HB3	1.76	0.68
34:BN:128:HIS:CE1	34:BN:134:ARG:HH11	2.12	0.68
40:AT:28:VAL:HG13	40:AT:46:GLU:HA	1.75	0.68
52:B5:54:GLY:N	52:B5:55:ARG:HE	1.91	0.68
57:AA:1188:U:C2'	57:AA:1189:A:H5'	2.24	0.68
46:BZ:53:ILE:HG22	46:BZ:71:VAL:HB	1.75	0.68
27:BD:210:GLY:O	27:BD:211:ARG:HB3	1.93	0.68
49:A2:24:LEU:HD11	49:A2:28:LYS:HE2	1.73	0.68
32:AI:94:ALA:HB1	32:AI:98:ALA:HB2	1.76	0.68
36:BP:47:ASP:HB3	36:BP:48:PRO:O	1.94	0.68
28:BE:24:THR:HG23	28:BE:184:VAL:HG23	1.76	0.68
57:BA:1038:C:C3'	57:BA:1039:G:H5''	2.22	0.68
35:AO:114:ILE:N	35:AO:114:ILE:HD12	2.07	0.68
36:AP:146:VAL:HG13	36:AP:147:LEU:N	2.08	0.68
52:A5:54:GLY:C	52:A5:55:ARG:HE	1.97	0.68
47:A0:24:LYS:O	47:A0:25:ARG:HD3	1.94	0.68
31:BH:149:ARG:HA	31:BH:162:ILE:HG13	1.75	0.68
43:AW:18:ARG:NH1	57:AA:518:G:H4'	2.09	0.68
30:AG:98:ARG:HA	30:AG:101:ILE:HD12	1.76	0.68
32:AI:77:LEU:HD22	32:AI:140:LEU:HA	1.75	0.68
43:AW:5:ALA:HB2	43:AW:54:ALA:HB2	1.74	0.68
57:BA:1405:U:H2'	57:BA:1406:U:C6	2.29	0.68
32:BI:129:THR:HG22	32:BI:130:TYR:N	2.08	0.68
27:BD:27:THR:CG2	27:BD:83:GLU:HB3	2.24	0.68
57:AA:2681:C:H5	57:AA:2725:A:N6	1.86	0.68
28:BE:46:ALA:HA	28:BE:82:ARG:O	1.93	0.68
28:AE:132:HIS:CD2	28:AE:135:HIS:NE2	2.62	0.68
46:AZ:54:HIS:HB3	46:AZ:101:PRO:CD	2.24	0.68
57:AA:2103:C:H3'	57:AA:2104:G:H5''	1.76	0.68
38:BR:10:LEU:HD22	38:BR:17:ARG:HD3	1.75	0.68
30:AG:170:ARG:HH22	30:AG:182:LYS:HG2	1.57	0.68
29:AF:83:PHE:CE2	57:AA:1257:C:H4'	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1384:A:N3	57:AA:1405:U:H1'	2.09	0.68
39:AS:17:ARG:HH21	39:AS:90:GLY:H	1.42	0.68
42:AV:18:LEU:HD13	42:AV:19:LYS:N	2.06	0.68
32:BI:142:VAL:O	32:BI:142:VAL:HG12	1.93	0.68
42:BV:28:GLU:HB3	42:BV:29:PRO:HD2	1.75	0.68
42:BV:51:VAL:HG12	42:BV:52:VAL:N	2.07	0.68
35:AO:104:ARG:HE	40:AT:33:LYS:HE3	1.58	0.68
28:AE:24:THR:HG23	28:AE:184:VAL:CG2	2.23	0.68
50:B3:8:LEU:HD11	50:B3:31:LEU:HD23	1.76	0.68
35:AO:114:ILE:H	35:AO:114:ILE:CD1	2.06	0.68
37:AQ:134:ARG:CZ	46:AZ:122:ARG:HH21	2.07	0.68
57:AA:2795:G:N3	57:AA:2795:G:H2'	2.08	0.68
57:AA:1963:U:O2	57:AA:1963:U:H2'	1.94	0.68
48:B1:84:GLY:O	48:B1:86:SER:N	2.27	0.68
30:AG:32:PRO:HB2	30:AG:172:LEU:HD12	1.76	0.68
36:AP:62:LEU:HB3	57:AA:2393:A:H5'	1.74	0.68
36:AP:71:VAL:HG13	36:AP:72:PRO:CD	2.23	0.68
39:AS:28:VAL:HG12	39:AS:89:ARG:HD3	1.76	0.68
57:BA:2443:C:O2'	57:BA:2444:G:H5'	1.94	0.68
40:AT:33:LYS:HZ2	40:AT:74:ARG:NH2	1.92	0.68
43:BW:18:ARG:NH1	57:BA:518:G:H4'	2.08	0.68
40:BT:33:LYS:HZ2	40:BT:74:ARG:NH2	1.91	0.68
57:BA:1021:A:H8	57:BA:1021:A:H3'	1.59	0.68
46:AZ:102:LEU:HD21	46:AZ:124:ILE:HD11	1.75	0.68
54:A7:8:ASN:ND2	54:A7:8:ASN:C	2.46	0.68
37:AQ:19:GLY:HA3	58:AB:92:C:OP1	1.94	0.67
36:AP:101:VAL:HG12	36:AP:107:LYS:H	1.59	0.67
39:AS:28:VAL:HB	39:AS:89:ARG:HB2	1.76	0.67
38:BR:67:LEU:HD22	38:BR:76:VAL:HG21	1.75	0.67
46:BZ:117:LEU:HA	46:BZ:174:VAL:HG22	1.75	0.67
53:B6:9:LEU:O	53:B6:9:LEU:HD13	1.93	0.67
48:A1:41:ARG:HD3	48:A1:43:TYR:CZ	2.29	0.67
30:BG:182:LYS:HD2	30:BG:182:LYS:H	1.57	0.67
29:AF:188:ARG:CA	36:AP:7:ARG:HD3	2.24	0.67
30:AG:117:PHE:CE2	30:AG:119:GLY:N	2.61	0.67
37:AQ:21:THR:O	37:AQ:21:THR:HG22	1.95	0.67
42:AV:51:VAL:HG12	42:AV:52:VAL:N	2.09	0.67
57:BA:620:G:H5''	57:BA:620:G:N3	2.10	0.67
27:BD:108:PRO:HB3	27:BD:143:HIS:CE1	2.29	0.67
40:AT:106:SER:CB	40:AT:110:ILE:HD11	2.24	0.67
57:BA:7:G:H1	57:BA:2896:C:N4	1.92	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:AZ:151:HIS:HA	46:AZ:171:ILE:CG1	2.24	0.67
43:AW:29:LEU:O	43:AW:33:ARG:HG3	1.94	0.67
55:B8:31:HIS:HE1	57:BA:2392:A:OP2	1.76	0.67
27:AD:166:GLN:NE2	27:AD:166:GLN:HA	2.08	0.67
38:AR:10:LEU:HD22	38:AR:17:ARG:CD	2.23	0.67
29:AF:164:ARG:HG2	29:AF:164:ARG:HH11	1.58	0.67
57:AA:2313:C:H2'	57:AA:2314:C:C6	2.26	0.67
34:AN:18:ALA:HB1	34:AN:21:LYS:HB2	1.77	0.67
34:BN:18:ALA:HB1	34:BN:21:LYS:HB2	1.75	0.67
27:AD:259:THR:HG23	57:AA:1803:A:H4'	1.77	0.67
40:AT:27:THR:HG23	40:AT:28:VAL:H	1.60	0.67
55:B8:32:LEU:HB3	55:B8:36:LYS:HZ2	1.57	0.67
28:AE:46:ALA:HA	28:AE:82:ARG:O	1.94	0.67
57:BA:2317:C:H2'	57:BA:2318:G:C5'	2.22	0.67
33:BJ:22:GLY:O	33:BJ:119:ALA:HA	1.94	0.67
29:BF:74:ARG:CD	57:BA:674:G:H1'	2.25	0.67
57:AA:2716:U:O2'	57:AA:2717:G:H5'	1.94	0.67
38:AR:28:LEU:HD22	38:AR:28:LEU:O	1.93	0.67
57:AA:1396:U:H2'	57:AA:1396:U:O2	1.94	0.67
57:AA:620:G:H5''	57:AA:620:G:N3	2.10	0.67
32:AI:83:ALA:HA	32:AI:89:TYR:CD1	2.28	0.67
46:AZ:146:ILE:HA	46:AZ:174:VAL:HG12	1.76	0.67
57:BA:1014:U:C2'	57:BA:1015:G:H5''	2.25	0.67
36:BP:33:ARG:NH2	57:BA:587:C:H3'	2.09	0.67
30:BG:60:LEU:O	30:BG:64:THR:HG22	1.93	0.67
55:B8:61:LEU:HG	55:B8:62:LEU:H	1.58	0.67
35:AO:23:ARG:NH1	57:AA:2562:U:H1'	2.08	0.67
36:BP:61:ARG:NH1	55:B8:13:ARG:HD2	2.10	0.67
46:BZ:37:VAL:HG23	46:BZ:38:TYR:N	2.08	0.67
55:A8:33:ASN:HA	55:A8:36:LYS:HD2	1.77	0.67
50:B3:8:LEU:CD1	50:B3:31:LEU:HD23	2.24	0.67
57:BA:1173:G:H3'	57:BA:1174:A:C5'	2.23	0.67
30:AG:124:SER:HB2	30:AG:131:TYR:CE1	2.29	0.67
34:AN:133:GLN:O	34:AN:134:ARG:HB3	1.92	0.67
42:AV:21:ARG:HB3	42:AV:91:TYR:HB2	1.76	0.67
58:BB:40:U:C2	58:BB:43:C:H5''	2.29	0.67
29:BF:22:ALA:O	29:BF:26:ALA:HB2	1.94	0.67
32:BI:77:LEU:HD22	32:BI:140:LEU:HA	1.76	0.67
36:BP:47:ASP:HB3	36:BP:48:PRO:HA	1.77	0.67
27:AD:244:ARG:HA	57:AA:1902:C:H4'	1.75	0.67
45:BY:13:VAL:HG21	45:BY:28:LYS:NZ	2.08	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:AZ:44:PHE:CZ	46:AZ:86:VAL:HG11	2.30	0.67
57:BA:2712:U:O2	57:BA:2712:U:H5'	1.95	0.67
57:BA:118:A:H5'	57:BA:119:A:H8	1.59	0.67
35:BO:98:VAL:CG1	35:BO:117:LEU:HB3	2.24	0.67
27:AD:10:THR:HG23	27:AD:13:ARG:HB3	1.76	0.67
39:AS:30:ARG:HD2	39:AS:31:SER:H	1.60	0.67
40:AT:35:LYS:NZ	40:AT:41:ARG:HH21	1.91	0.67
45:BY:8:LYS:HE2	45:BY:72:VAL:HG23	1.74	0.67
40:BT:35:LYS:NZ	40:BT:41:ARG:HH21	1.91	0.67
43:AW:29:LEU:HD21	43:AW:33:ARG:HH21	1.60	0.67
29:AF:183:VAL:O	29:AF:187:VAL:HG23	1.94	0.67
27:AD:221:VAL:HG22	27:AD:226:MET:HE3	1.75	0.67
48:B1:3:LYS:O	48:B1:12:PRO:HD3	1.95	0.67
29:AF:160:ASN:C	29:AF:160:ASN:HD22	1.98	0.67
54:B7:19:ARG:HH11	54:B7:19:ARG:HG2	1.59	0.67
26:AC:47:LYS:HD3	57:AA:2178:C:H4'	1.77	0.67
39:BS:74:ALA:HB1	39:BS:103:GLU:CB	2.25	0.67
43:BW:31:GLU:O	43:BW:35:ILE:HG12	1.93	0.67
27:BD:13:ARG:NH1	27:BD:16:MET:SD	2.68	0.67
27:BD:35:LYS:HG2	27:BD:63:ARG:CA	2.24	0.67
46:BZ:102:LEU:HD11	46:BZ:171:ILE:HD11	1.76	0.67
46:AZ:119:GLU:HG3	46:AZ:122:ARG:HH11	1.58	0.67
49:B2:39:ALA:HA	49:B2:45:SER:HB3	1.77	0.67
28:BE:203:LYS:O	28:BE:203:LYS:HD2	1.94	0.67
30:AG:46:ALA:CB	30:AG:82:LEU:HD11	2.22	0.67
32:AI:78:THR:N	32:AI:104:GLN:HE22	1.92	0.67
45:AY:51:VAL:HG12	45:AY:53:PRO:CD	2.22	0.67
57:BA:1358:G:O2'	57:BA:1359:A:H5''	1.94	0.67
34:BN:128:HIS:HE1	34:BN:134:ARG:HH11	1.42	0.67
35:AO:88:ASN:ND2	35:AO:90:GLN:H	1.92	0.67
45:BY:2:ARG:C	45:BY:4:LYS:H	1.98	0.67
31:BH:7:LEU:CG	31:BH:69:ARG:HD2	2.25	0.67
28:AE:119:ARG:HD2	28:AE:120:TRP:NE1	2.10	0.67
28:AE:24:THR:HG23	28:AE:184:VAL:HG23	1.75	0.67
57:AA:1038:C:H42	57:AA:1117:G:H1	1.41	0.67
57:BA:1292:U:H2'	57:BA:1293:C:C6	2.29	0.67
37:AQ:134:ARG:NE	46:AZ:122:ARG:HH21	1.92	0.67
52:B5:16:ARG:NH1	52:B5:17:ASP:OD1	2.28	0.67
38:AR:36:THR:HG22	57:AA:1278:A:H5''	1.76	0.67
26:AC:225:ILE:HD12	26:AC:225:ILE:O	1.95	0.67
43:AW:50:VAL:HG13	43:AW:105:VAL:HG21	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:AX:53:LYS:NZ	44:AX:55:ASN:HD21	1.93	0.67
30:BG:42:GLY:H	30:BG:43:LEU:HD22	1.59	0.67
42:BV:18:LEU:HD13	42:BV:19:LYS:N	2.04	0.67
45:BY:31:LEU:HB2	45:BY:32:PRO:HA	1.77	0.67
27:AD:43:ARG:NH1	27:AD:44:ASN:HD21	1.93	0.67
49:A2:2:LYS:CG	57:AA:97:C:H5''	2.25	0.67
57:AA:118:A:H5'	57:AA:119:A:H8	1.58	0.67
30:BG:132:ASN:HB2	57:BA:2303:G:O2'	1.95	0.67
57:AA:1014:U:C2'	57:AA:1015:G:H5''	2.25	0.67
57:AA:2123:G:H2'	57:AA:2124:G:H8	1.60	0.67
32:AI:129:THR:HG22	32:AI:130:TYR:N	2.08	0.67
41:AU:79:PHE:CE2	41:AU:83:LEU:HD11	2.29	0.67
42:AV:21:ARG:O	42:AV:22:VAL:HG13	1.94	0.67
32:BI:92:VAL:HG12	32:BI:120:ILE:CD1	2.25	0.67
39:BS:36:TYR:HD1	39:BS:36:TYR:H	1.42	0.67
41:BU:83:LEU:HG	41:BU:88:ILE:CD1	2.21	0.67
27:BD:270:ILE:C	27:BD:271:ILE:HG12	2.14	0.67
27:BD:34:VAL:CG2	27:BD:35:LYS:H	1.92	0.67
40:AT:102:ILE:HB	40:AT:110:ILE:CD1	2.25	0.67
49:A2:37:PHE:O	49:A2:41:ILE:HG23	1.95	0.67
57:BA:1021:A:C8	57:BA:1021:A:H3'	2.29	0.67
57:BA:1539:G:C2	57:BA:1540:U:H1'	2.30	0.67
27:BD:267:SER:O	27:BD:269:PHE:N	2.27	0.67
46:BZ:130:PRO:HA	46:BZ:133:ILE:HD11	1.75	0.67
41:BU:102:GLU:HG3	42:BV:2:PHE:CE1	2.29	0.67
57:BA:1796:U:H2'	57:BA:1797:C:C6	2.30	0.67
57:AA:625:G:H2'	57:AA:626:U:C6	3.03	0.66
45:AY:31:LEU:HD22	45:AY:31:LEU:N	2.10	0.66
45:AY:31:LEU:HB2	45:AY:32:PRO:HA	1.77	0.66
57:BA:1197:G:C8	57:BA:1197:G:H5'	4.58	0.66
29:BF:184:TYR:O	29:BF:188:ARG:HG2	1.95	0.66
29:BF:24:LEU:O	29:BF:26:ALA:N	2.20	0.66
29:BF:83:PHE:CE2	57:BA:1257:C:H4'	2.31	0.66
32:BI:83:ALA:HB2	32:BI:89:TYR:H	1.60	0.66
36:BP:50:ARG:NH2	36:BP:50:ARG:HG2	2.10	0.66
41:BU:79:PHE:CE2	41:BU:83:LEU:HD11	2.30	0.66
42:BV:52:VAL:HG13	42:BV:52:VAL:O	1.95	0.66
44:BX:12:VAL:CB	44:BX:17:ALA:HB1	2.25	0.66
45:BY:7:VAL:HG21	45:BY:8:LYS:NZ	2.10	0.66
53:A6:30:THR:O	53:A6:32:ASN:N	2.28	0.66
57:BA:158:U:H2'	57:BA:171:G:O4'	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1021:A:C8	57:AA:1021:A:H3'	2.30	0.66
57:AA:1021:A:H3'	57:AA:1021:A:H8	1.60	0.66
28:AE:77:ILE:HG22	28:AE:78:LEU:HD12	1.77	0.66
34:BN:67:LEU:HD23	34:BN:87:LEU:HD13	1.77	0.66
48:B1:3:LYS:HG3	48:B1:4:VAL:HG12	1.75	0.66
57:BA:1396:U:H2'	57:BA:1396:U:O2	1.93	0.66
46:BZ:57:ILE:HG22	46:BZ:58:VAL:N	2.10	0.66
57:AA:1348:G:H2'	57:AA:1349:A:H5''	1.76	0.66
29:AF:18:ARG:HH21	29:AF:20:LEU:HD11	1.59	0.66
44:AX:54:VAL:C	44:AX:55:ASN:HD22	1.99	0.66
57:BA:607:U:H3	57:BA:621:A:H2	1.42	0.66
32:BI:114:LEU:HD23	32:BI:130:TYR:CD1	2.30	0.66
32:BI:127:VAL:HG22	32:BI:139:GLN:HB3	1.76	0.66
37:BQ:21:THR:O	37:BQ:21:THR:HG22	1.94	0.66
43:BW:5:ALA:O	43:BW:6:ILE:HB	1.96	0.66
27:BD:129:ASN:HD22	27:BD:129:ASN:N	4.03	0.66
57:BA:298:G:H5'	57:BA:299:A:OP1	1.95	0.66
45:BY:51:VAL:HG12	45:BY:53:PRO:CD	2.22	0.66
27:AD:43:ARG:NH1	27:AD:44:ASN:ND2	2.42	0.66
27:BD:244:ARG:HA	57:BA:1902:C:H4'	1.78	0.66
28:BE:119:ARG:HD2	28:BE:120:TRP:NE1	2.10	0.66
28:AE:102:VAL:HA	28:AE:201:THR:H	1.60	0.66
46:AZ:152:ALA:CA	46:AZ:167:PRO:HB2	2.25	0.66
57:AA:2317:C:O2'	57:AA:2318:G:H5'	1.95	0.66
47:B0:24:LYS:O	47:B0:25:ARG:HD3	1.96	0.66
57:AA:272(G):C:H42	57:AA:363(C):G:H1	1.42	0.66
36:AP:115:LEU:H	36:AP:115:LEU:HD23	1.60	0.66
28:AE:14:ILE:HG12	28:AE:21:VAL:HG23	1.78	0.66
57:AA:2312:U:H2'	57:AA:2313:C:C5'	2.25	0.66
30:AG:40:ASN:HD22	30:AG:41:GLN:N	1.91	0.66
36:AP:33:ARG:O	36:AP:34:GLY:C	2.32	0.66
48:B1:94:LEU:HD12	48:B1:94:LEU:N	2.10	0.66
39:BS:95:HIS:CG	39:BS:96:GLY:N	2.63	0.66
40:AT:102:ILE:O	40:AT:106:SER:HB3	1.95	0.66
40:AT:65:LYS:HZ1	40:AT:65:LYS:HA	1.60	0.66
40:AT:85:LYS:HB3	40:AT:85:LYS:HZ2	1.60	0.66
27:AD:44:ASN:HB2	27:AD:48:ARG:O	1.96	0.66
28:BE:185:LYS:O	28:BE:186:GLY:O	2.13	0.66
28:AE:35:GLN:HG2	28:AE:36:ARG:N	2.09	0.66
54:B7:8:ASN:C	54:B7:8:ASN:ND2	2.47	0.66
47:A0:43:THR:HG23	47:A0:43:THR:O	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1925:C:O2'	57:BA:1926:U:H5'	1.96	0.66
30:AG:5:VAL:H	30:AG:8:LYS:CB	2.08	0.66
32:AI:83:ALA:HB2	32:AI:89:TYR:H	1.60	0.66
41:AU:79:PHE:HE2	41:AU:83:LEU:HD11	1.60	0.66
30:BG:114:ILE:O	30:BG:115:ARG:C	2.34	0.66
30:BG:72:ARG:CA	30:BG:87:PRO:HD2	2.24	0.66
36:BP:17:LYS:HG2	36:BP:17:LYS:O	1.95	0.66
27:BD:16:MET:HE1	27:BD:208:LYS:HD2	1.76	0.66
40:BT:29:ARG:NE	40:BT:86:ILE:HG22	2.10	0.66
53:B6:30:THR:O	53:B6:32:ASN:N	2.28	0.66
55:B8:33:ASN:HA	55:B8:36:LYS:HD2	1.76	0.66
31:BH:55:PRO:HG2	31:BH:61:HIS:CE1	2.30	0.66
46:AZ:128:VAL:HB	46:AZ:161:VAL:HG22	1.77	0.66
46:AZ:128:VAL:CG2	46:AZ:132:ASN:HB2	2.22	0.66
38:AR:4:LEU:O	38:AR:5:LYS:HD3	1.95	0.66
48:A1:19:GLN:HA	48:A1:19:GLN:NE2	2.07	0.66
57:AA:2392:A:H2	57:AA:2424:C:N4	1.91	0.66
29:AF:25:PRO:HB3	29:AF:119:ARG:HD3	1.78	0.66
26:BC:225:ILE:HD12	26:BC:225:ILE:O	1.95	0.66
29:BF:83:PHE:O	29:BF:84:VAL:HB	1.96	0.66
57:AA:2801(A):A:H5'	57:AA:2802:G:H8	1.61	0.66
40:AT:29:ARG:HB3	40:AT:85:LYS:HA	1.77	0.66
57:AA:1748:G:H8	57:AA:1748:G:H5'	1.60	0.66
55:B8:30:ARG:HA	55:B8:30:ARG:HE	1.60	0.66
28:BE:101:ARG:NH1	28:BE:171:GLU:HB2	2.10	0.66
28:BE:24:THR:HG23	28:BE:184:VAL:CG2	2.26	0.66
57:AA:1292:U:H2'	57:AA:1293:C:C6	2.31	0.66
55:A8:30:ARG:HA	55:A8:30:ARG:HE	1.61	0.66
38:AR:10:LEU:HD22	38:AR:17:ARG:HD3	1.76	0.66
49:A2:2:LYS:O	49:A2:6:VAL:HG23	1.95	0.66
49:B2:2:LYS:CB	57:BA:97:C:H5''	2.25	0.66
57:BA:848:G:H8	57:BA:848:G:H5'	1.60	0.66
34:AN:67:LEU:HD23	34:AN:87:LEU:HD13	1.78	0.66
57:BA:2795:G:H2'	57:BA:2795:G:N3	2.09	0.66
46:AZ:35:ARG:HH11	46:AZ:35:ARG:HG3	1.60	0.66
30:BG:38:VAL:HG22	30:BG:93:THR:HG23	1.78	0.66
57:AA:848:G:H8	57:AA:848:G:H5'	1.61	0.66
27:AD:267:SER:O	27:AD:269:PHE:N	2.28	0.66
57:AA:548:A:C2'	57:AA:549:G:H5'	2.25	0.66
42:AV:19:LYS:CG	42:AV:94:LEU:HB2	2.25	0.66
57:BA:613:G:H5'	57:BA:613:G:C8	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:89:VAL:HG21	57:BA:586:A:H5'	1.77	0.66
36:BP:33:ARG:O	36:BP:34:GLY:C	2.33	0.66
39:BS:30:ARG:HD2	39:BS:31:SER:H	1.61	0.66
27:BD:11:PRO:C	27:BD:13:ARG:H	1.99	0.66
35:AO:64:ARG:HG2	35:AO:79:PHE:CG	2.30	0.66
40:AT:50:ILE:HD11	40:AT:102:ILE:CD1	2.23	0.66
57:BA:1332:G:H21	57:BA:1610:A:H8	1.43	0.66
28:AE:120:TRP:CE3	28:AE:155:LYS:HD3	2.30	0.66
52:B5:33:CYS:HB2	52:B5:40:LYS:HE3	1.78	0.66
57:AA:2807:G:H1	57:AA:2893:G:H1	1.41	0.66
34:BN:111:PRO:HD2	57:BA:558:G:OP1	1.96	0.66
46:AZ:109:ALA:HB3	46:AZ:145:GLU:HA	1.77	0.66
29:BF:183:VAL:O	29:BF:187:VAL:HG23	1.96	0.66
41:AU:106:PHE:O	41:AU:110:VAL:HG23	1.94	0.66
51:B4:28:LYS:HE3	51:B4:28:LYS:HA	1.78	0.66
57:BA:1963:U:H2'	57:BA:1963:U:O2	1.94	0.66
35:AO:98:VAL:CG1	35:AO:117:LEU:HB3	2.26	0.66
57:BA:1310:G:O2'	57:BA:1311:G:H5'	2.70	0.66
30:AG:95:ARG:HE	58:AB:45:A:H8	1.42	0.66
44:AX:37:THR:HG21	57:AA:143:G:H1'	1.77	0.66
35:AO:64:ARG:O	35:AO:82:ASN:HA	1.96	0.66
40:BT:106:SER:CB	40:BT:110:ILE:HD11	2.26	0.66
57:AA:158:U:H2'	57:AA:171:G:O4'	1.95	0.66
28:BE:111:ARG:HD2	28:BE:160:TYR:CD1	2.30	0.66
46:AZ:101:PRO:O	46:AZ:102:LEU:HD23	1.94	0.66
34:AN:120:LEU:CD1	34:AN:122:VAL:HG23	2.25	0.66
36:AP:146:VAL:HG22	36:AP:147:LEU:N	2.11	0.66
53:A6:52:VAL:HG22	53:A6:53:LYS:N	2.09	0.66
29:AF:178:PRO:HB2	29:AF:201:VAL:HG11	1.76	0.66
57:BA:275:G:N3	57:BA:275:G:H3'	2.11	0.66
57:BA:2472:G:H5'	57:BA:2473:U:H5''	1.78	0.66
27:AD:11:PRO:C	27:AD:13:ARG:H	1.98	0.66
30:AG:57:ALA:HA	30:AG:90:LEU:HD21	1.77	0.66
30:AG:64:THR:HG23	30:AG:66:GLN:N	2.05	0.66
32:AI:68:LEU:HG	32:AI:72:LEU:HD21	1.78	0.66
36:AP:50:ARG:O	36:AP:57:THR:HG22	1.95	0.66
45:AY:2:ARG:C	45:AY:4:LYS:H	1.97	0.66
32:BI:126:TYR:O	32:BI:140:LEU:HB3	1.95	0.66
39:BS:36:TYR:N	39:BS:36:TYR:CD1	2.63	0.66
42:BV:21:ARG:HB3	42:BV:91:TYR:HB2	1.76	0.66
40:AT:32:TYR:CD2	40:AT:81:PRO:HB2	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1019:U:O2'	57:AA:1021:A:H2	1.78	0.66
40:AT:5:ALA:HB3	57:AA:2875:C:O2'	1.96	0.66
57:BA:2189:U:C3'	57:BA:2190:G:H5''	2.26	0.66
37:BQ:12:GLN:HG2	37:BQ:73:PRO:HD2	1.77	0.66
57:BA:27:G:H22	57:BA:512:G:C2'	2.08	0.66
34:AN:68:GLU:HG2	34:AN:88:GLU:CD	2.15	0.66
57:BA:272(G):C:H42	57:BA:363(C):G:H1	1.43	0.66
26:AC:52:PRO:HG2	26:AC:53:ARG:HD3	1.77	0.66
29:AF:22:ALA:O	29:AF:26:ALA:HB2	1.96	0.66
29:AF:22:ALA:HB1	29:AF:26:ALA:HB2	1.77	0.66
42:AV:24:LYS:HE2	42:AV:90:PRO:CB	2.26	0.66
39:BS:95:HIS:HD2	58:BB:48:A:H4'	1.61	0.66
32:BI:86:THR:HG23	32:BI:86:THR:O	1.96	0.66
42:BV:38:LEU:O	42:BV:39:LEU:HD13	1.96	0.66
31:BH:153:LYS:H	31:BH:153:LYS:CD	2.08	0.66
28:BE:59:VAL:O	28:BE:60:ASN:CG	2.33	0.66
58:BB:112:U:H2'	58:BB:113:G:C8	2.30	0.66
48:B1:45:ASN:HD21	48:B1:47:GLN:NE2	1.94	0.66
57:BA:271(E):U:H2'	57:BA:271(F):C:C6	2.30	0.66
57:BA:2790:A:H2'	57:BA:2790:A:N3	2.11	0.66
55:B8:14:VAL:CG2	55:B8:22:VAL:HG13	2.26	0.66
42:AV:28:GLU:HB3	42:AV:29:PRO:HD2	1.76	0.66
57:AA:1240:U:O2'	57:AA:1241:A:H5'	1.96	0.66
27:AD:13:ARG:NH1	27:AD:16:MET:SD	2.69	0.66
29:AF:63:LYS:HD3	29:AF:65:TRP:O	1.96	0.66
30:BG:55:LYS:HG2	30:BG:55:LYS:O	1.95	0.66
33:BJ:80:VAL:O	33:BJ:82:PHE:N	2.29	0.66
39:BS:17:ARG:HH21	39:BS:90:GLY:H	1.43	0.66
39:BS:28:VAL:HG12	39:BS:89:ARG:HD3	1.78	0.66
27:AD:244:ARG:HG3	57:AA:1902:C:H1'	1.77	0.66
27:BD:118:VAL:HG22	27:BD:119:ALA:H	1.60	0.66
53:B6:43:CYS:O	53:B6:44:ARG:HB2	1.95	0.66
40:BT:28:VAL:HG22	40:BT:46:GLU:C	2.16	0.66
57:AA:914:C:C2'	57:AA:915:C:H5'	2.24	0.66
28:BE:65:GLY:C	28:BE:67:PHE:H	1.99	0.66
28:AE:131:ALA:HB2	57:AA:2579:C:O3'	1.96	0.66
28:AE:101:ARG:NH1	28:AE:171:GLU:HB2	2.10	0.66
28:AE:132:HIS:O	57:AA:1658:C:OP1	2.14	0.66
55:A8:31:HIS:HE1	57:AA:2392:A:OP2	1.79	0.66
57:BA:434:U:H2'	57:BA:435:C:C6	6.09	0.66
52:A5:54:GLY:N	52:A5:55:ARG:HE	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:A0:48:GLY:CA	47:A0:80:HIS:HD1	2.09	0.66
48:A1:44:PRO:O	48:A1:46:LEU:HD13	1.96	0.66
41:BU:106:PHE:O	41:BU:110:VAL:HG23	1.95	0.66
50:B3:19:GLN:HE22	50:B3:52:HIS:HE1	1.44	0.66
35:BO:13:ASN:HD22	35:BO:97:ARG:HB2	1.61	0.66
57:BA:1866:C:H2'	57:BA:1876:A:O4'	1.96	0.66
27:AD:108:PRO:HB3	27:AD:143:HIS:CE1	2.31	0.65
27:AD:35:LYS:HZ2	27:AD:36:PRO:HD3	1.61	0.65
36:AP:24:GLY:O	36:AP:25:SER:HB3	1.95	0.65
36:AP:50:ARG:HG2	36:AP:50:ARG:NH2	2.04	0.65
57:BA:1318:C:H3'	57:BA:1319:G:H5''	1.77	0.65
27:BD:35:LYS:HZ2	27:BD:36:PRO:HD3	1.62	0.65
40:AT:82:LEU:HD12	40:AT:82:LEU:N	2.08	0.65
53:A6:43:CYS:O	53:A6:44:ARG:HB2	1.95	0.65
46:BZ:85:HIS:CE1	58:BB:75:G:H21	2.14	0.65
57:AA:1332:G:H21	57:AA:1610:A:H8	1.44	0.65
55:B8:33:ASN:HD22	55:B8:36:LYS:HD2	1.61	0.65
28:BE:132:HIS:CD2	28:BE:135:HIS:NE2	2.65	0.65
57:BA:184:C:H2'	57:BA:185:U:C6	2.32	0.65
47:B0:50:ASN:C	47:B0:62:LEU:HD12	2.17	0.65
57:AA:2790:A:N3	57:AA:2790:A:H2'	2.11	0.65
29:AF:78:ILE:HA	29:AF:83:PHE:CD1	2.32	0.65
43:AW:1:MET:HE2	43:AW:2:GLU:H	1.60	0.65
32:BI:69:LYS:HA	32:BI:136:VAL:CG2	2.27	0.65
41:BU:79:PHE:HE2	41:BU:83:LEU:HD11	1.61	0.65
42:BV:64:HIS:ND1	42:BV:92:THR:HG22	2.11	0.65
27:BD:43:ARG:NH1	27:BD:44:ASN:ND2	2.44	0.65
57:AA:2491:U:H4'	57:AA:2570:G:OP1	1.96	0.65
28:AE:131:ALA:HB3	57:AA:2579:C:O2'	1.95	0.65
28:AE:185:LYS:O	28:AE:186:GLY:O	2.13	0.65
57:BA:2103:C:H3'	57:BA:2104:G:H5''	1.76	0.65
47:B0:40:GLN:HE22	47:B0:43:THR:HA	1.60	0.65
57:BA:2036:C:H5'	57:BA:2036:C:C6	2.30	0.65
34:BN:62:VAL:CG2	34:BN:66:LYS:HB2	2.26	0.65
44:BX:57:LEU:HD21	44:BX:78:LYS:HE2	1.78	0.65
57:AA:2443:C:O2'	57:AA:2444:G:H5'	1.96	0.65
30:AG:36:LYS:HE2	30:AG:95:ARG:NH1	2.02	0.65
45:AY:13:VAL:HG22	45:AY:14:LEU:H	1.61	0.65
57:BA:2123:G:H2'	57:BA:2124:G:H8	1.60	0.65
57:BA:2312:U:H2'	57:BA:2313:C:C5'	2.24	0.65
32:BI:129:THR:HG23	32:BI:137:PRO:HA	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BW:29:LEU:HD21	43:BW:33:ARG:HH21	1.62	0.65
45:BY:2:ARG:HD3	45:BY:3:VAL:HG23	1.77	0.65
40:BT:38:ASN:ND2	40:BT:38:ASN:C	2.50	0.65
57:BA:155:U:C2'	57:BA:156:U:H5''	2.23	0.65
28:BE:77:ILE:HG22	28:BE:78:LEU:HD12	1.76	0.65
57:BA:2298:A:H2'	57:BA:2299:G:O4'	1.96	0.65
57:BA:2317:C:O2'	57:BA:2318:G:H5'	1.95	0.65
57:BA:234:C:H2'	57:BA:235:U:H6	1.61	0.65
43:AW:59:VAL:HG12	43:AW:60:ASN:N	2.12	0.65
35:AO:13:ASN:HD22	35:AO:97:ARG:HB2	1.62	0.65
27:AD:16:MET:HE1	27:AD:208:LYS:HD2	1.79	0.65
27:AD:27:THR:CG2	27:AD:83:GLU:HB3	2.23	0.65
32:AI:68:LEU:CD2	32:AI:136:VAL:HG11	2.25	0.65
39:AS:25:ARG:HD2	39:AS:88:ASP:OD1	1.97	0.65
45:AY:8:LYS:HD2	45:AY:8:LYS:N	2.11	0.65
29:BF:78:ILE:HA	29:BF:83:PHE:CD1	2.31	0.65
30:BG:73:ALA:CB	30:BG:87:PRO:HG3	2.26	0.65
32:BI:68:LEU:HG	32:BI:72:LEU:HD21	1.77	0.65
43:BW:6:ILE:HG12	43:BW:104:THR:OG1	1.96	0.65
57:BA:548:A:C2'	57:BA:549:G:H5'	2.26	0.65
37:BQ:134:ARG:NH2	46:BZ:122:ARG:HE	1.94	0.65
28:AE:100:GLU:O	28:AE:172:VAL:HG23	1.96	0.65
57:BA:2392:A:H2	57:BA:2424:C:N4	1.94	0.65
27:BD:221:VAL:HG22	27:BD:226:MET:HE3	1.79	0.65
57:BA:2306:C:C5	57:BA:2307:G:H1'	2.31	0.65
36:AP:47:ASP:HB3	36:AP:48:PRO:HA	1.76	0.65
45:AY:7:VAL:CG2	45:AY:8:LYS:NZ	2.60	0.65
57:BA:1348:G:H2'	57:BA:1349:A:H5''	1.76	0.65
58:BB:30:C:H4'	58:BB:58:A:H2	1.62	0.65
58:BB:40:U:H3'	58:BB:41:U:C5'	2.27	0.65
42:BV:19:LYS:CG	42:BV:94:LEU:HB2	2.26	0.65
31:BH:153:LYS:N	31:BH:153:LYS:HD3	2.08	0.65
40:BT:27:THR:HG23	40:BT:28:VAL:N	2.10	0.65
28:BE:102:VAL:HA	28:BE:201:THR:H	1.60	0.65
28:BE:120:TRP:CE3	28:BE:155:LYS:HD3	2.31	0.65
28:BE:69:LYS:HZ2	28:BE:89:ASP:HA	1.62	0.65
57:AA:2298:A:H2'	57:AA:2299:G:O4'	1.96	0.65
36:BP:146:VAL:HG22	36:BP:147:LEU:N	2.10	0.65
42:BV:81:TYR:CE2	57:BA:1187:G:H5''	2.32	0.65
57:BA:755:C:H2'	57:BA:756:C:C6	2.31	0.65
46:BZ:162:GLU:N	46:BZ:162:GLU:OE1	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:A2:3:LEU:O	49:A2:3:LEU:HD23	1.97	0.65
46:AZ:61:LEU:N	46:AZ:61:LEU:HD23	2.12	0.65
30:AG:33:ARG:C	30:AG:34:LEU:HD12	2.15	0.65
32:AI:81:VAL:HG12	32:AI:143:SER:HB2	1.77	0.65
37:AQ:12:GLN:HG2	37:AQ:73:PRO:HD2	1.78	0.65
30:BG:131:TYR:HB3	30:BG:159:VAL:HG13	1.78	0.65
41:BU:88:ILE:HG13	41:BU:88:ILE:O	1.95	0.65
40:BT:82:LEU:CD1	40:BT:82:LEU:H	2.07	0.65
57:AA:2789:C:H1'	57:AA:2892:A:H2	1.60	0.65
57:AA:271(E):U:H2'	57:AA:271(F):C:C6	2.30	0.65
49:B2:25:VAL:O	49:B2:29:LYS:HG2	1.96	0.65
36:BP:115:LEU:HD23	36:BP:115:LEU:H	1.61	0.65
37:BQ:110:THR:HG23	37:BQ:113:GLN:HB2	1.78	0.65
57:AA:544:G:H21	57:AA:547:A:H2'	1.61	0.65
27:AD:118:VAL:HG22	27:AD:119:ALA:N	2.12	0.65
30:AG:66:GLN:CA	30:AG:67:LYS:HE3	2.27	0.65
39:AS:36:TYR:N	39:AS:36:TYR:CD1	2.65	0.65
39:AS:74:ALA:HB1	39:AS:103:GLU:CB	2.26	0.65
26:BC:52:PRO:HG2	26:BC:53:ARG:HD3	1.78	0.65
30:BG:109:VAL:O	30:BG:112:PRO:CG	2.44	0.65
27:AD:43:ARG:HD2	27:AD:44:ASN:OD1	1.96	0.65
40:BT:29:ARG:HB3	40:BT:85:LYS:HA	1.79	0.65
57:AA:154(A):C:H3'	57:AA:155:U:H5''	1.78	0.65
31:BH:85:LYS:HZ2	31:BH:133:VAL:H	1.44	0.65
49:B2:55:ARG:NH1	57:BA:75:G:H4'	2.12	0.65
57:AA:1991:U:H2'	57:AA:1992:G:H5''	1.78	0.65
45:AY:47:LYS:HD3	57:AA:481:G:OP2	1.97	0.65
42:AV:38:LEU:C	42:AV:39:LEU:HD13	2.16	0.65
43:AW:5:ALA:O	43:AW:6:ILE:HB	1.97	0.65
45:AY:2:ARG:N	45:AY:4:LYS:HG2	2.12	0.65
45:AY:31:LEU:HD23	45:AY:36:ALA:O	1.96	0.65
29:BF:116:ASP:OD2	36:BP:5:ASP:N	2.30	0.65
32:BI:8:PRO:CB	32:BI:14:ASP:H	2.10	0.65
27:BD:118:VAL:HG22	27:BD:119:ALA:N	2.11	0.65
27:BD:121:PRO:HB3	27:BD:135:PHE:CE1	2.32	0.65
40:AT:65:LYS:HA	40:AT:65:LYS:HZ2	1.61	0.65
46:BZ:23:LYS:NZ	46:BZ:40:ASP:HA	2.11	0.65
40:BT:65:LYS:HA	40:BT:65:LYS:HZ1	1.62	0.65
57:AA:2189:U:C3'	57:AA:2190:G:H5''	2.27	0.65
51:A4:48:ARG:HG2	51:A4:49:PHE:N	2.12	0.65
27:BD:166:GLN:HA	27:BD:166:GLN:NE2	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:52:VAL:HG22	53:B6:53:LYS:N	2.11	0.65
28:AE:146:THR:HG23	57:AA:2032:G:H21	1.60	0.65
58:AB:40:U:H3'	58:AB:41:U:C5'	2.26	0.65
32:AI:68:LEU:HD23	32:AI:68:LEU:O	1.96	0.65
41:AU:33:ARG:HG3	57:AA:581:C:OP1	1.97	0.65
42:AV:64:HIS:ND1	42:AV:92:THR:HG22	2.11	0.65
44:AX:55:ASN:HB2	44:AX:80:ILE:HD13	1.79	0.65
36:BP:64:LYS:CB	55:B8:25:MET:HG3	2.16	0.65
57:BA:581:C:H2'	57:BA:582:G:C8	2.32	0.65
26:BC:47:LYS:HD3	57:BA:2178:C:H4'	1.77	0.65
30:BG:62:LEU:O	30:BG:143:GLU:HG3	1.96	0.65
27:BD:43:ARG:HB3	27:BD:54:ARG:CB	2.24	0.65
44:BX:12:VAL:CG1	44:BX:17:ALA:HB1	2.26	0.65
45:BY:13:VAL:HG22	45:BY:14:LEU:N	2.12	0.65
27:BD:259:THR:HG23	57:BA:1803:A:H4'	1.77	0.65
34:AN:73:THR:HG23	34:AN:82:LEU:CD1	2.27	0.65
57:BA:146:G:H5'	57:BA:146:G:C8	2.29	0.65
31:BH:28:GLY:HA3	31:BH:79:VAL:HB	1.79	0.65
28:AE:64:LYS:HB2	57:AA:2786:U:H4'	1.79	0.65
57:AA:8:A:H2'	57:AA:9:U:C6	2.32	0.65
30:BG:51:ARG:HD3	30:BG:53:LEU:HD23	1.77	0.65
36:AP:144:GLU:N	36:AP:145:PRO:CD	2.60	0.65
34:BN:120:LEU:CD1	34:BN:122:VAL:HG23	2.27	0.65
48:A1:45:ASN:ND2	48:A1:47:GLN:NE2	2.45	0.65
49:A2:63:VAL:HA	49:A2:66:GLU:HG2	1.79	0.65
57:AA:2472:G:H5'	57:AA:2473:U:H5''	1.78	0.65
36:AP:35:HIS:N	57:AA:1190:G:H5'	2.12	0.65
57:AA:234:C:H2'	57:AA:235:U:H6	1.62	0.65
26:AC:16:ASP:OD2	26:AC:19:LYS:HB2	1.97	0.65
31:AH:28:GLY:HA3	31:AH:79:VAL:HB	1.79	0.65
45:AY:13:VAL:HG21	45:AY:72:VAL:HB	1.78	0.65
42:BV:19:LYS:HG3	42:BV:20:LEU:O	1.97	0.65
44:BX:37:THR:HG21	57:BA:143:G:H1'	1.79	0.65
27:BD:94:LEU:HB2	27:BD:104:TYR:HE2	1.62	0.65
55:A8:33:ASN:HD22	55:A8:36:LYS:HD2	1.62	0.65
53:B6:27:LYS:HB3	53:B6:30:THR:HG22	1.77	0.65
31:BH:85:LYS:HZ1	31:BH:133:VAL:HG23	1.62	0.65
57:BA:1019:U:O2'	57:BA:1021:A:H2	1.72	0.65
57:AA:27:G:N2	57:AA:512:G:C2'	2.60	0.65
34:AN:62:VAL:CG2	34:AN:66:LYS:HB2	2.27	0.65
57:AA:275:G:N3	57:AA:275:G:H3'	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BW:84:ARG:HB2	43:BW:96:ILE:HG22	1.79	0.65
30:AG:138:GLN:OE1	30:AG:153:ARG:HG2	1.97	0.64
29:AF:116:ASP:OD2	36:AP:5:ASP:N	2.30	0.64
57:BA:2801(A):A:H5'	57:BA:2802:G:H8	1.62	0.64
57:BA:1204:A:N1	57:BA:1241:A:H2	1.96	0.64
57:BA:1286:A:O2'	57:BA:1288:U:OP2	2.15	0.64
30:BG:5:VAL:O	30:BG:8:LYS:HB3	1.96	0.64
34:BN:2:LYS:HZ2	41:BU:95:LEU:HD21	1.63	0.64
36:BP:6:LEU:H	36:BP:6:LEU:HD23	1.62	0.64
27:BD:181:GLU:HA	27:BD:272:ALA:CB	2.27	0.64
28:BE:51:PHE:O	28:BE:74:PRO:HB3	1.97	0.64
28:AE:61:ARG:H	28:AE:62:PRO:HD2	1.62	0.64
46:AZ:151:HIS:CB	46:AZ:170:THR:HA	2.26	0.64
57:BA:860:U:C5	57:BA:917:A:N7	2.64	0.64
57:BA:1536:C:H2'	57:BA:1537:G:O4'	1.98	0.64
51:A4:28:LYS:HA	51:A4:28:LYS:HE3	1.78	0.64
57:AA:2698:U:H2'	57:AA:2699:C:C6	2.31	0.64
57:AA:2306:C:C5	57:AA:2307:G:H1'	2.32	0.64
29:AF:9:ILE:HG22	29:AF:11:VAL:O	1.95	0.64
29:AF:63:LYS:NZ	29:AF:67:GLN:HB2	2.12	0.64
30:AG:118:ARG:HG3	30:AG:118:ARG:HH11	1.62	0.64
31:AH:41:MET:HE3	31:AH:42:ARG:N	2.12	0.64
32:AI:142:VAL:HG12	32:AI:142:VAL:O	1.95	0.64
39:AS:29:PHE:CZ	58:AB:7:G:O5'	2.51	0.64
57:BA:581:C:H2'	57:BA:582:G:H8	1.62	0.64
29:BF:4:VAL:HG22	29:BF:19:GLU:OE1	1.97	0.64
30:BG:32:PRO:HB2	30:BG:172:LEU:CD1	2.28	0.64
29:BF:34:TRP:HB2	36:BP:10:PRO:O	1.97	0.64
39:BS:25:ARG:HD2	39:BS:88:ASP:OD1	1.96	0.64
39:BS:28:VAL:HB	39:BS:89:ARG:HB2	1.77	0.64
41:BU:92:ARG:HE	57:BA:996:A:C4'	2.07	0.64
53:A6:27:LYS:HB3	53:A6:30:THR:HG22	1.78	0.64
57:BA:154(A):C:H3'	57:BA:155:U:H5''	1.77	0.64
43:AW:31:GLU:O	43:AW:35:ILE:HG12	1.97	0.64
57:AA:1539:G:C2	57:AA:1540:U:H1'	2.32	0.64
28:BE:4:ILE:CD1	28:BE:28:ALA:HB1	2.27	0.64
45:BY:47:LYS:HD3	57:BA:481:G:OP2	1.97	0.64
29:AF:40:GLN:OE1	29:AF:183:VAL:HG13	1.98	0.64
57:AA:2689:U:H5''	57:AA:2690:C:H5'	1.78	0.64
57:AA:1015:G:O2'	57:AA:1016:G:H5'	1.98	0.64
34:AN:58:ASP:O	34:AN:60:ILE:N	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:25:PRO:HB3	29:BF:119:ARG:HD3	1.78	0.64
53:B6:47:THR:HG23	53:B6:49:HIS:CE1	2.32	0.64
40:BT:102:ILE:HB	40:BT:110:ILE:CD1	2.28	0.64
40:BT:129:ARG:NH2	40:BT:131:ALA:HB2	2.13	0.64
35:BO:114:ILE:H	35:BO:114:ILE:CD1	2.07	0.64
41:BU:74:LEU:HD12	41:BU:74:LEU:H	1.61	0.64
47:A0:40:GLN:NE2	47:A0:43:THR:HA	2.11	0.64
38:AR:28:LEU:HD12	38:AR:48:VAL:HG21	1.79	0.64
44:BX:47:PHE:O	44:BX:49:VAL:HG13	1.97	0.64
30:AG:95:ARG:HG2	30:AG:95:ARG:HH11	1.62	0.64
39:AS:95:HIS:CG	39:AS:96:GLY:N	2.65	0.64
30:BG:123:ASN:O	30:BG:126:ASP:HB2	1.97	0.64
42:BV:19:LYS:HZ3	42:BV:20:LEU:H	1.43	0.64
57:BA:1493:C:H4'	57:BA:1494:A:OP1	1.98	0.64
57:AA:613:G:C8	57:AA:613:G:H5'	2.32	0.64
28:AE:61:ARG:HD3	57:AA:2787:C:O2'	1.97	0.64
28:AE:59:VAL:O	28:AE:60:ASN:CG	2.35	0.64
57:BA:2807:G:H1	57:BA:2893:G:H1	1.42	0.64
57:BA:2789:C:H1'	57:BA:2892:A:H2	1.62	0.64
57:BA:1412:A:H2'	57:BA:1413:G:C8	2.32	0.64
34:AN:111:PRO:HD2	57:AA:558:G:OP1	1.97	0.64
57:AA:755:C:H2'	57:AA:756:C:C6	2.31	0.64
30:AG:181:ARG:HG2	30:AG:181:ARG:O	1.96	0.64
47:B0:26:TYR:O	47:B0:67:VAL:HB	1.97	0.64
57:AA:991:C:H6	57:AA:991:C:H5'	1.63	0.64
30:AG:32:PRO:HB2	30:AG:172:LEU:CD1	2.27	0.64
32:AI:68:LEU:HD23	32:AI:136:VAL:HG11	1.80	0.64
32:AI:4:ILE:HD11	32:AI:44:LEU:HD12	1.78	0.64
41:AU:88:ILE:O	41:AU:88:ILE:HG13	1.97	0.64
27:BD:43:ARG:NH1	27:BD:44:ASN:HD21	1.94	0.64
40:AT:29:ARG:NE	40:AT:86:ILE:HG22	2.12	0.64
40:BT:65:LYS:HZ2	40:BT:65:LYS:HA	1.62	0.64
28:BE:51:PHE:HD1	28:BE:52:LEU:H	1.38	0.64
57:AA:1281:G:H5'	57:AA:1281:G:C8	2.28	0.64
46:AZ:56:VAL:HG13	46:AZ:69:THR:O	1.96	0.64
27:AD:58:HIS:HD2	27:AD:59:LYS:O	1.80	0.64
44:BX:26:TYR:HD2	44:BX:92:LEU:HD12	1.63	0.64
29:AF:34:TRP:HB2	36:AP:10:PRO:O	1.96	0.64
42:AV:52:VAL:HG13	42:AV:52:VAL:O	1.96	0.64
30:BG:154:GLY:O	30:BG:155:MET:HB3	1.98	0.64
36:BP:144:GLU:N	36:BP:145:PRO:CD	2.60	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1192:G:O2'	57:AA:1193:G:H5'	1.96	0.64
46:BZ:54:HIS:HB3	46:BZ:101:PRO:HD3	1.80	0.64
57:AA:904:C:H5'	57:AA:904:C:C6	2.27	0.64
28:BE:14:ILE:HG12	28:BE:21:VAL:HG23	1.78	0.64
57:AA:673:C:H5'	57:AA:673:C:C6	2.29	0.64
51:B4:48:ARG:HG2	51:B4:49:PHE:N	2.13	0.64
52:B5:54:GLY:C	52:B5:55:ARG:NE	2.50	0.64
52:A5:51:TYR:CG	52:A5:52:TYR:N	2.64	0.64
57:AA:1796:U:H2'	57:AA:1797:C:C6	2.33	0.64
29:BF:160:ASN:HD22	29:BF:160:ASN:C	2.00	0.64
33:BJ:97:ALA:HA	33:BJ:132:ASP:O	1.97	0.64
29:AF:125:LEU:H	29:AF:125:LEU:HD23	1.61	0.64
32:AI:87:LYS:NZ	32:AI:121:LYS:HG3	2.12	0.64
32:AI:113:ARG:NH1	32:AI:132:PRO:HD3	2.09	0.64
38:AR:67:LEU:HD22	38:AR:76:VAL:HG21	1.80	0.64
39:AS:36:TYR:H	39:AS:36:TYR:HD1	1.45	0.64
26:BC:16:ASP:OD2	26:BC:19:LYS:HB2	1.97	0.64
29:BF:63:LYS:NZ	29:BF:67:GLN:HB2	2.13	0.64
32:BI:123:LEU:HD23	32:BI:124:GLY:H	1.62	0.64
40:AT:28:VAL:HG22	40:AT:46:GLU:C	2.17	0.64
55:B8:51:ALA:C	55:B8:53:PRO:HD2	2.18	0.64
28:BE:131:ALA:HB2	57:BA:2579:C:O3'	1.97	0.64
31:BH:20:ALA:HB1	31:BH:21:PRO:CD	2.28	0.64
38:BR:3:HIS:O	38:BR:4:LEU:HB3	1.98	0.64
28:AE:51:PHE:O	28:AE:74:PRO:HB3	1.98	0.64
28:AE:65:GLY:C	28:AE:67:PHE:H	2.00	0.64
36:AP:39:LYS:HG3	57:AA:807:U:OP2	1.98	0.64
52:B5:51:TYR:CG	52:B5:52:TYR:N	2.65	0.64
52:A5:54:GLY:C	52:A5:55:ARG:NE	2.51	0.64
26:AC:26:ALA:O	26:AC:30:VAL:HG23	1.98	0.64
27:AD:94:LEU:HB2	27:AD:104:TYR:HE2	1.63	0.64
31:AH:54:ARG:HG2	31:AH:54:ARG:HH11	1.62	0.64
37:AQ:16:ARG:HH22	57:AA:952:G:P	2.20	0.64
53:A6:54:ILE:O	53:A6:54:ILE:HD12	1.97	0.64
57:BA:2158:A:H4'	57:BA:2159:G:C5'	2.25	0.64
57:AA:672:C:H2'	57:AA:673:C:H5''	1.77	0.64
29:AF:74:ARG:HD3	57:AA:674:G:O2'	1.98	0.64
57:BA:672:C:H2'	57:BA:673:C:H5''	1.79	0.64
30:BG:161:THR:CG2	30:BG:162:THR:N	2.61	0.64
57:AA:1536:C:H2'	57:AA:1537:G:O4'	1.98	0.64
35:AO:119:PRO:HB2	40:AT:68:TYR:CE2	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:AU:13:LYS:HD3	57:AA:1227:G:OP1	1.98	0.64
32:AI:129:THR:HG22	32:AI:130:TYR:O	1.98	0.64
57:BA:1049:C:H2'	57:BA:1050:A:H8	1.63	0.64
30:BG:16:ARG:O	30:BG:20:ILE:HG13	1.97	0.64
30:BG:77:ILE:HG22	30:BG:77:ILE:O	1.97	0.64
30:BG:85:GLY:C	30:BG:87:PRO:HD3	2.19	0.64
40:BT:129:ARG:HH21	40:BT:131:ALA:HB2	1.63	0.64
57:BA:2894:G:H2'	57:BA:2894:G:N3	2.12	0.64
42:BV:5:VAL:HG21	42:BV:35:LEU:HB3	1.80	0.64
47:B0:51:VAL:CG2	47:B0:81:VAL:HG23	2.27	0.64
57:AA:434:U:H2'	57:AA:435:C:C6	6.08	0.64
27:BD:58:HIS:HD2	27:BD:59:LYS:O	1.80	0.64
26:AC:46:ALA:O	26:AC:172:ILE:HG22	1.98	0.64
27:AD:118:VAL:HG22	27:AD:119:ALA:H	1.63	0.64
30:AG:126:ASP:O	30:AG:128:ARG:N	2.30	0.64
27:AD:246:PRO:HD3	57:AA:1902:C:H5'	1.79	0.64
27:BD:129:ASN:O	27:BD:193:VAL:HG12	1.98	0.64
53:A6:5:VAL:HG12	53:A6:8:LYS:CB	2.23	0.64
55:B8:33:ASN:N	55:B8:36:LYS:HD2	2.13	0.64
28:BE:64:LYS:HB2	57:BA:2786:U:H4'	1.80	0.64
28:BE:44:TYR:O	28:BE:45:THR:HB	1.98	0.64
47:B0:19:LYS:HD3	47:B0:41:ARG:NH2	2.13	0.64
57:BA:2422:A:H4'	57:BA:2423:U:OP1	1.98	0.64
44:AX:64:LYS:HZ2	44:AX:73:ARG:NH2	1.96	0.64
36:AP:64:LYS:CB	55:A8:25:MET:HG3	2.16	0.63
58:AB:112:U:H2'	58:AB:113:G:C8	2.30	0.63
29:AF:22:ALA:HB1	29:AF:26:ALA:CB	2.28	0.63
36:AP:17:LYS:HG2	36:AP:17:LYS:O	1.97	0.63
38:AR:24:GLN:NE2	38:AR:36:THR:HG21	2.14	0.63
42:AV:19:LYS:HG3	42:AV:20:LEU:O	1.98	0.63
29:BF:63:LYS:HD3	29:BF:65:TRP:O	1.98	0.63
31:BH:7:LEU:HD23	31:BH:69:ARG:HD3	1.81	0.63
57:AA:2158:A:H4'	57:AA:2159:G:C5'	2.25	0.63
49:B2:3:LEU:HD23	49:B2:3:LEU:O	1.97	0.63
44:BX:64:LYS:HZ2	44:BX:73:ARG:NH2	1.96	0.63
57:AA:1493:C:H4'	57:AA:1494:A:OP1	1.97	0.63
57:BA:991:C:H6	57:BA:991:C:H5'	1.62	0.63
29:BF:22:ALA:HB1	29:BF:26:ALA:HB2	1.81	0.63
30:BG:133:LEU:HD12	30:BG:135:LEU:HD11	1.80	0.63
29:BF:188:ARG:CA	36:BP:7:ARG:HD3	2.25	0.63
42:BV:24:LYS:HE2	42:BV:90:PRO:CB	2.27	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:AT:27:THR:O	40:AT:28:VAL:HB	1.98	0.63
31:AH:153:LYS:N	31:AH:153:LYS:HD3	2.06	0.63
35:BO:69:ILE:HD12	35:BO:69:ILE:N	2.13	0.63
46:AZ:150:LEU:CG	46:AZ:171:ILE:HD11	2.26	0.63
40:AT:129:ARG:NH2	40:AT:131:ALA:HB2	2.13	0.63
55:A8:39:LYS:O	55:A8:43:GLN:HG3	1.98	0.63
33:BJ:102:LYS:HA	33:BJ:106:GLN:CB	2.27	0.63
57:AA:271(U):G:O2'	57:AA:271(V):G:H5'	1.98	0.63
57:AA:2543:G:H2'	57:AA:2544:G:C8	2.33	0.63
49:A2:64:LEU:O	49:A2:68:ARG:HG2	1.98	0.63
27:AD:35:LYS:HZ2	27:AD:36:PRO:CD	2.11	0.63
31:AH:20:ALA:HB1	31:AH:21:PRO:CD	2.28	0.63
31:AH:7:LEU:CG	31:AH:69:ARG:HD2	2.28	0.63
57:BA:1318:C:C3'	57:BA:1319:G:H5''	2.29	0.63
42:BV:21:ARG:O	42:BV:22:VAL:HG13	1.98	0.63
27:BD:131:LEU:N	27:BD:131:LEU:HD12	2.13	0.63
45:BY:7:VAL:HG21	45:BY:8:LYS:HZ1	1.62	0.63
53:B6:54:ILE:O	53:B6:54:ILE:HD12	1.99	0.63
57:AA:61:G:H1	57:AA:94:C:H42	1.46	0.63
31:BH:124:GLU:HB2	31:BH:132:ARG:HG2	1.79	0.63
31:BH:17:VAL:O	31:BH:45:VAL:HG22	1.99	0.63
46:BZ:24:LEU:CD2	46:BZ:86:VAL:HG23	2.25	0.63
57:AA:141:A:H8	57:AA:1408:C:O2'	1.81	0.63
46:BZ:81:ARG:HB2	46:BZ:81:ARG:HH11	1.61	0.63
55:A8:14:VAL:CG2	55:A8:22:VAL:HG13	2.28	0.63
57:AA:176:G:O2'	57:AA:177:G:H5'	1.98	0.63
37:AQ:110:THR:HG23	37:AQ:113:GLN:HB2	1.81	0.63
57:AA:1925:C:O2'	57:AA:1926:U:H5'	1.98	0.63
26:BC:42:VAL:HA	26:BC:217:THR:HA	1.80	0.63
39:BS:62:LYS:HB2	58:BB:50:G:OP1	1.99	0.63
43:BW:73:ALA:HB3	43:BW:106:ILE:HD11	1.80	0.63
57:BA:544:G:H21	57:BA:547:A:H2'	1.62	0.63
36:BP:58:THR:O	36:BP:58:THR:HG22	1.99	0.63
57:BA:1443:G:H22	57:BA:1460:A:H1'	13.82	0.63
46:BZ:30:ASN:O	46:BZ:32:HIS:N	2.31	0.63
32:AI:58:LEU:HD23	32:AI:58:LEU:O	1.99	0.63
36:AP:35:HIS:CE1	57:AA:941:A:H4'	2.33	0.63
32:AI:62:LYS:HE3	32:AI:133:HIS:C	2.18	0.63
32:AI:92:VAL:HG22	32:AI:97:ILE:HG13	1.80	0.63
42:AV:5:VAL:HG21	42:AV:35:LEU:HB3	1.80	0.63
30:BG:56:ALA:CB	30:BG:153:ARG:HH11	2.09	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:9:ASN:H	36:BP:10:PRO:HD2	1.63	0.63
27:AD:43:ARG:HB3	27:AD:54:ARG:CB	2.24	0.63
57:AA:1270:C:H5''	57:AA:1271:G:C5'	2.28	0.63
57:BA:904:C:C6	57:BA:904:C:H5'	2.29	0.63
28:AE:11:MET:HE1	28:AE:24:THR:HB	1.80	0.63
40:AT:5:ALA:HB2	57:AA:2875:C:C4'	2.28	0.63
41:BU:66:ASN:C	41:BU:66:ASN:HD22	2.00	0.63
57:AA:768:G:O2'	57:AA:1379:A:N6	2.32	0.63
42:BV:76:LYS:HB2	42:BV:81:TYR:HB3	1.80	0.63
38:AR:92:GLY:HA2	38:AR:94:TYR:CE1	2.34	0.63
30:AG:55:LYS:O	30:AG:55:LYS:HD3	1.98	0.63
57:AA:1310:G:O2'	57:AA:1311:G:H5'	2.67	0.63
38:AR:7:GLY:HA3	38:AR:8:ARG:HH21	1.62	0.63
35:BO:120:GLU:OE2	35:BO:122:LEU:HD21	1.97	0.63
26:AC:214:TYR:HB3	26:AC:222:SER:HB2	1.80	0.63
29:AF:184:TYR:O	29:AF:188:ARG:HG2	1.98	0.63
30:AG:96:ARG:HA	30:AG:99:MET:HE2	1.79	0.63
30:AG:98:ARG:HG3	51:A4:1:MET:SD	2.39	0.63
57:BA:626:U:H5'	57:BA:627:A:C5'	2.29	0.63
30:BG:142:PRO:HG2	30:BG:143:GLU:OE1	1.99	0.63
36:BP:39:LYS:HG3	57:BA:807:U:OP2	1.99	0.63
40:BT:28:VAL:O	40:BT:28:VAL:HG12	1.97	0.63
57:AA:155:U:C2'	57:AA:156:U:H5''	2.23	0.63
31:BH:137:ASP:O	31:BH:138:LYS:HB2	1.98	0.63
28:AE:44:TYR:O	28:AE:45:THR:HB	1.98	0.63
50:A3:8:LEU:CD1	50:A3:31:LEU:HD23	2.28	0.63
38:BR:28:LEU:HD22	38:BR:28:LEU:O	1.99	0.63
47:A0:27:GLU:OE2	57:AA:856:C:H4'	1.98	0.63
57:AA:752:A:O2'	57:AA:753:C:OP2	2.16	0.63
41:AU:59:ARG:HD3	57:AA:1009:A:C4'	2.28	0.63
57:AA:1204:A:N1	57:AA:1241:A:H2	1.97	0.63
31:AH:17:VAL:O	31:AH:45:VAL:HG22	1.97	0.63
36:AP:40:SER:O	36:AP:41:ARG:NE	2.31	0.63
30:BG:67:LYS:NZ	51:B4:6:HIS:CE1	2.67	0.63
57:BA:1240:U:O2'	57:BA:1241:A:H5'	1.99	0.63
26:BC:26:ALA:O	26:BC:30:VAL:HG23	1.98	0.63
36:BP:32:THR:HG21	36:BP:37:GLY:CA	2.27	0.63
41:BU:33:ARG:HG3	57:BA:581:C:OP1	1.99	0.63
35:AO:61:VAL:HG12	35:AO:87:ILE:HD11	1.80	0.63
53:B6:48:VAL:HG23	53:B6:49:HIS:N	2.11	0.63
27:BD:244:ARG:HG3	57:BA:1902:C:H1'	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:A6:47:THR:HG23	53:A6:49:HIS:CE1	2.32	0.63
53:A6:48:VAL:HG23	53:A6:49:HIS:N	2.11	0.63
28:AE:131:ALA:HB2	57:AA:2580:U:H5'	1.78	0.63
46:AZ:24:LEU:HD23	46:AZ:25:PRO:N	2.13	0.63
31:AH:144:VAL:O	31:AH:148:ILE:HG12	1.98	0.63
46:AZ:111:VAL:C	46:AZ:113:ALA:H	2.02	0.63
29:BF:164:ARG:HH11	29:BF:164:ARG:HG2	1.62	0.63
57:BA:1973:G:H2'	57:BA:1974:C:C6	2.34	0.63
57:BA:2543:G:H2'	57:BA:2544:G:C8	2.34	0.63
38:BR:7:GLY:HA3	38:BR:8:ARG:HH21	1.64	0.63
57:AA:266:G:H5''	57:AA:268:C:H41	11.81	0.63
40:AT:28:VAL:O	40:AT:28:VAL:HG12	1.98	0.63
40:BT:65:LYS:CE	40:BT:66:VAL:H	2.11	0.63
28:BE:131:ALA:HB2	57:BA:2580:U:H5'	1.81	0.63
31:BH:41:MET:CG	31:BH:42:ARG:H	2.11	0.63
28:AE:111:ARG:HD2	28:AE:160:TYR:CD1	2.34	0.63
28:AE:9:VAL:HG22	28:AE:25:VAL:HB	1.79	0.63
57:AA:2894:G:N3	57:AA:2894:G:H2'	2.12	0.63
57:BA:61:G:H1	57:BA:94:C:H42	1.45	0.63
47:A0:50:ASN:C	47:A0:62:LEU:HD12	2.19	0.63
57:BA:654(V):A:H3'	57:BA:655:A:H2'	1.81	0.63
57:AA:1412:A:H2'	57:AA:1413:G:C8	2.34	0.63
52:B5:7:PRO:HA	57:BA:2615:U:C2	2.34	0.63
27:AD:69:ARG:NH2	27:AD:128:GLY:O	2.32	0.63
32:AI:86:THR:O	32:AI:86:THR:HG23	1.98	0.63
44:AX:12:VAL:CG2	44:AX:13:LEU:H	1.96	0.63
44:AX:12:VAL:CG1	44:AX:17:ALA:HB1	2.29	0.63
30:BG:125:PHE:CE2	30:BG:173:LEU:HD12	2.34	0.63
45:BY:7:VAL:CG2	45:BY:8:LYS:NZ	2.62	0.63
28:BE:62:PRO:C	28:BE:64:LYS:N	2.52	0.63
28:AE:59:VAL:HG13	28:AE:60:ASN:N	2.14	0.63
47:B0:48:GLY:CA	47:B0:80:HIS:HD1	2.11	0.63
36:AP:80:TYR:CE1	36:AP:111:ARG:HD3	2.33	0.63
41:AU:49:HIS:HD2	57:AA:534:U:O2'	1.82	0.63
52:A5:7:PRO:HA	57:AA:2615:U:C2	2.34	0.63
30:AG:98:ARG:NE	51:A4:1:MET:HG2	2.13	0.62
30:AG:5:VAL:CG1	51:A4:24:THR:HG22	2.28	0.62
57:AA:184:C:H2'	57:AA:185:U:C6	2.34	0.62
57:AA:607:U:H3	57:AA:621:A:H2	1.46	0.62
57:AA:880:G:H1	57:AA:897:C:H42	1.47	0.62
42:AV:21:ARG:H	42:AV:21:ARG:HD3	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:AY:13:VAL:HG22	45:AY:14:LEU:N	2.13	0.62
37:BQ:130:LYS:HD3	46:BZ:80:ARG:NH1	2.13	0.62
37:BQ:137:TYR:N	37:BQ:137:TYR:CD2	2.66	0.62
40:BT:32:TYR:CD2	40:BT:81:PRO:HB2	2.33	0.62
57:BA:8:A:H2'	57:BA:9:U:C6	2.33	0.62
28:BE:100:GLU:O	28:BE:172:VAL:HG23	1.99	0.62
31:BH:54:ARG:HH11	31:BH:54:ARG:HG2	1.64	0.62
31:BH:97:ARG:HG2	31:BH:98:LEU:N	2.14	0.62
57:AA:146:G:C8	57:AA:146:G:H5'	2.32	0.62
34:BN:73:THR:HG21	57:BA:1131:G:H21	1.63	0.62
57:BA:768:G:O2'	57:BA:1379:A:N6	2.31	0.62
57:AA:2147:G:H2'	57:AA:2148:G:O4'	1.98	0.62
29:BF:148:LEU:HD23	29:BF:191:ARG:HH11	1.64	0.62
32:AI:27:ARG:HG2	48:A1:71:TYR:CZ	2.34	0.62
57:AA:185:U:H4'	57:AA:218:A:H4'	1.81	0.62
57:BA:1286:A:C2'	57:BA:1288:U:OP2	2.47	0.62
30:BG:60:LEU:HD12	30:BG:68:PRO:HD3	1.81	0.62
31:AH:153:LYS:H	31:AH:153:LYS:CD	2.07	0.62
55:B8:34:TRP:HB2	57:BA:2420:C:OP1	1.99	0.62
47:A0:19:LYS:HD3	47:A0:41:ARG:NH2	2.14	0.62
41:AU:74:LEU:HD12	41:AU:74:LEU:H	1.64	0.62
36:BP:80:TYR:CE1	36:BP:111:ARG:HD3	2.34	0.62
57:BA:2716:U:O2'	57:BA:2717:G:H5'	1.99	0.62
57:BA:2147:G:H2'	57:BA:2148:G:O4'	1.99	0.62
57:AA:2537:U:H2'	57:AA:2538:C:C6	2.34	0.62
29:AF:148:LEU:HD23	29:AF:191:ARG:HH11	1.64	0.62
27:AD:24:ILE:CG1	27:AD:25:THR:H	2.11	0.62
32:AI:69:LYS:HA	32:AI:136:VAL:HG21	1.81	0.62
40:AT:78:LEU:C	40:AT:79:HIS:ND1	2.52	0.62
40:BT:106:SER:HA	40:BT:110:ILE:HG12	1.81	0.62
40:BT:35:LYS:HZ3	40:BT:41:ARG:HH21	1.46	0.62
55:A8:51:ALA:HA	55:A8:54:GLU:OE2	1.99	0.62
57:BA:903:C:O2'	57:BA:904:C:H5"	1.98	0.62
40:AT:129:ARG:HH21	40:AT:131:ALA:HB2	1.63	0.62
37:AQ:132:VAL:CG1	46:AZ:81:ARG:HE	2.11	0.62
57:AA:2036:C:C6	57:AA:2036:C:H5'	2.31	0.62
46:AZ:34:ASN:HD22	46:AZ:34:ASN:C	2.03	0.62
37:AQ:109:VAL:HG12	37:AQ:113:GLN:HB2	1.81	0.62
57:BA:492:A:H2'	57:BA:493:G:O4'	1.99	0.62
57:AA:2747:G:O6	57:AA:2755:C:H5"	1.99	0.62
57:AA:1286:A:C2'	57:AA:1288:U:OP2	2.47	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:AB:30:C:H4'	58:AB:58:A:H2	1.64	0.62
30:AG:76:SER:CB	30:AG:83:ARG:HB3	2.28	0.62
36:AP:9:ASN:H	36:AP:10:PRO:HD2	1.64	0.62
26:BC:6:LYS:HA	26:BC:9:ARG:HB2	1.81	0.62
36:BP:35:HIS:H	57:BA:1190:G:H5'	1.63	0.62
45:BY:29:GLU:N	45:BY:29:GLU:OE1	2.32	0.62
35:BO:64:ARG:O	35:BO:82:ASN:HA	1.99	0.62
46:BZ:66:SER:C	46:BZ:67:LEU:HD22	2.19	0.62
28:BE:23:VAL:HA	28:BE:186:GLY:H	1.64	0.62
41:AU:25:TRP:CH2	57:AA:17:G:H4'	2.34	0.62
28:AE:62:PRO:C	28:AE:64:LYS:N	2.53	0.62
57:BA:266:G:H5''	57:BA:268:C:H41	11.85	0.62
47:A0:25:ARG:HD2	47:A0:29:GLN:HE22	1.62	0.62
31:AH:55:PRO:HG2	31:AH:61:HIS:CE1	2.35	0.62
26:AC:186:LEU:O	26:AC:190:ILE:HG12	2.00	0.62
57:BA:2734:A:H5'	57:BA:2735:G:OP2	1.99	0.62
57:BA:271(U):G:O2'	57:BA:271(V):G:H5'	1.99	0.62
38:AR:63:ARG:NE	57:AA:1453:U:H5'	2.15	0.62
27:AD:270:ILE:C	27:AD:271:ILE:HG12	2.20	0.62
27:AD:35:LYS:HG2	27:AD:63:ARG:CA	2.28	0.62
30:AG:61:ALA:HA	30:AG:66:GLN:O	2.00	0.62
36:AP:64:LYS:HB3	55:A8:25:MET:CG	2.17	0.62
39:AS:95:HIS:HD2	58:AB:48:A:H4'	1.64	0.62
41:AU:83:LEU:HG	41:AU:88:ILE:CD1	2.24	0.62
45:AY:2:ARG:HG3	57:AA:105:C:O2'	2.00	0.62
57:BA:625:G:H2'	57:BA:626:U:C6	3.01	0.62
38:BR:24:GLN:NE2	38:BR:36:THR:HG21	2.13	0.62
43:BW:29:LEU:O	43:BW:33:ARG:HG3	1.99	0.62
27:BD:148:GLU:HB2	27:BD:151:LYS:HD2	1.81	0.62
40:AT:29:ARG:CB	40:AT:85:LYS:HA	2.29	0.62
46:BZ:68:PRO:HG3	46:BZ:91:LEU:O	1.99	0.62
39:AS:42:ASP:C	39:AS:44:LYS:H	2.02	0.62
57:BA:405:U:H5''	57:BA:406:G:O4'	5.57	0.62
38:AR:10:LEU:HB3	38:AR:17:ARG:CD	2.30	0.62
49:A2:7:ARG:NH2	57:AA:102:G:OP2	2.33	0.62
57:AA:2734:A:H5'	57:AA:2735:G:OP2	1.99	0.62
57:BA:2666:C:H5'	57:BA:2667:C:OP2	2.00	0.62
57:AA:1318:C:C3'	57:AA:1319:G:H5''	2.28	0.62
36:AP:70:GLN:HG3	57:AA:389:G:N1	2.14	0.62
57:AA:581:C:H2'	57:AA:582:G:C8	2.34	0.62
31:AH:109:PHE:C	31:AH:111:HIS:H	2.03	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AI:91:SER:CB	32:AI:121:LYS:HD3	2.20	0.62
32:AI:94:ALA:HA	32:AI:98:ALA:H	1.65	0.62
45:AY:42:VAL:HB	45:AY:65:ALA:HB3	1.80	0.62
26:BC:214:TYR:HB3	26:BC:222:SER:HB2	1.81	0.62
30:BG:173:LEU:O	30:BG:178:PHE:HD1	1.83	0.62
34:BN:58:ASP:O	34:BN:60:ILE:N	2.31	0.62
40:AT:35:LYS:O	40:AT:36:GLU:HB3	1.98	0.62
40:AT:38:ASN:HD22	40:AT:39:ARG:N	1.97	0.62
46:BZ:150:LEU:N	46:BZ:150:LEU:HD23	2.11	0.62
28:BE:61:ARG:H	28:BE:62:PRO:HD2	1.63	0.62
40:BT:5:ALA:HB3	57:BA:2875:C:O2'	2.00	0.62
57:AA:1280:G:C2'	57:AA:1281:G:H5''	2.28	0.62
38:AR:11:ASN:C	38:AR:12:ARG:HG3	2.20	0.62
57:AA:882:G:H2'	57:AA:883:G:H8	1.64	0.62
44:AX:60:ARG:HH21	54:A7:47:ARG:HH11	1.47	0.62
57:AA:852:G:O2'	57:AA:853:G:H5'	1.99	0.62
48:A1:23:LYS:HD3	48:A1:28:GLY:HA3	1.81	0.62
57:AA:1049:C:H2'	57:AA:1050:A:H8	1.65	0.62
57:AA:1286:A:H2'	57:AA:1288:U:OP2	1.98	0.62
27:AD:132:PRO:HG3	27:AD:190:TYR:CE1	2.33	0.62
31:AH:41:MET:CG	31:AH:42:ARG:N	2.62	0.62
32:AI:78:THR:HB	32:AI:104:GLN:HE21	1.63	0.62
36:AP:24:GLY:HA2	57:AA:811:U:OP2	1.99	0.62
36:AP:33:ARG:HD3	57:AA:587:C:C4	2.34	0.62
45:AY:8:LYS:HG2	45:AY:28:LYS:HZ3	1.65	0.62
30:BG:109:VAL:N	30:BG:112:PRO:HG2	2.14	0.62
34:BN:1:MET:HG2	34:BN:2:LYS:H	1.65	0.62
27:BD:69:ARG:NH2	27:BD:128:GLY:O	2.33	0.62
44:BX:54:VAL:C	44:BX:55:ASN:HD22	2.03	0.62
40:BT:78:LEU:C	40:BT:79:HIS:ND1	2.53	0.62
55:A8:34:TRP:HB2	57:AA:2420:C:OP1	1.99	0.62
57:AA:1887:C:C3'	57:AA:1888:G:H5''	2.30	0.62
38:BR:2:ARG:HB2	38:BR:5:LYS:HE2	1.82	0.62
57:BA:1116:C:C3'	57:BA:1117:G:H5''	4.03	0.62
57:BA:672:C:C2'	57:BA:673:C:C5'	2.78	0.62
57:AA:797:C:O2'	57:AA:798:G:H5'	2.32	0.62
37:AQ:27:VAL:HG13	37:AQ:105:GLU:OE2	2.00	0.62
38:BR:10:LEU:HB3	38:BR:17:ARG:CD	2.29	0.62
26:BC:186:LEU:O	26:BC:190:ILE:HG12	1.99	0.62
27:AD:148:GLU:HB2	27:AD:151:LYS:HD2	1.81	0.62
26:BC:46:ALA:O	26:BC:172:ILE:HG22	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BI:87:LYS:HZ1	32:BI:121:LYS:HG3	1.64	0.62
42:BV:21:ARG:HD3	42:BV:21:ARG:H	1.65	0.62
42:BV:46:VAL:HG22	42:BV:47:VAL:H	1.64	0.62
27:BD:25:THR:HG22	27:BD:26:LYS:N	2.15	0.62
37:BQ:27:VAL:HG13	37:BQ:105:GLU:OE2	2.00	0.62
35:BO:114:ILE:HD12	35:BO:114:ILE:N	2.09	0.62
37:BQ:19:GLY:O	37:BQ:20:ALA:HB3	2.00	0.62
28:AE:4:ILE:CD1	28:AE:28:ALA:HB1	2.27	0.62
34:BN:111:PRO:HD2	57:BA:558:G:P	2.39	0.62
57:BA:882:G:H2'	57:BA:883:G:H8	1.64	0.62
48:A1:53:VAL:HG22	48:A1:74:VAL:HG13	1.82	0.62
27:AD:91:ARG:HG2	27:AD:91:ARG:HH11	1.64	0.62
57:BA:1980:G:O2'	57:BA:1982:C:OP2	2.18	0.62
57:AA:286:C:O2'	57:AA:287:C:H5'	1.99	0.62
57:AA:654(V):A:H3'	57:AA:655:A:H2'	1.80	0.62
26:AC:57:GLN:O	26:AC:202:PRO:HG2	2.00	0.62
31:AH:124:GLU:HB2	31:AH:132:ARG:HG2	1.80	0.62
39:AS:13:ARG:HG3	39:AS:14:VAL:N	2.12	0.62
40:AT:106:SER:HA	40:AT:110:ILE:HG12	1.81	0.62
52:B5:3:LYS:NZ	57:BA:2614:A:H5'	2.15	0.62
57:BA:1270:C:H5''	57:BA:1271:G:O5'	1.99	0.62
34:AN:73:THR:HG21	57:AA:1131:G:H21	1.65	0.62
49:A2:46:GLN:HB2	49:A2:49:LYS:CE	2.26	0.62
28:BE:35:GLN:CG	28:BE:36:ARG:H	2.11	0.62
28:BE:59:VAL:HG13	28:BE:60:ASN:N	2.14	0.62
57:BA:330:A:HO2'	57:BA:331:A:H8	1.45	0.62
50:A3:6:VAL:HB	50:A3:54:VAL:HG11	1.79	0.62
29:BF:74:ARG:HD3	57:BA:674:G:O2'	1.99	0.62
29:AF:32:LEU:CD1	29:AF:105:VAL:HG13	2.29	0.62
29:BF:198:ALA:O	29:BF:201:VAL:HG12	1.99	0.62
57:BA:633:A:H2'	57:BA:634:C:H5'	1.81	0.62
44:BX:60:ARG:HH21	54:B7:47:ARG:HH11	1.45	0.62
43:BW:59:VAL:HG12	43:BW:60:ASN:N	2.13	0.62
26:AC:42:VAL:HA	26:AC:217:THR:HA	1.81	0.62
39:AS:85:VAL:O	39:AS:106:ARG:HG2	2.00	0.62
26:BC:41:THR:HG21	26:BC:175:PRO:HB2	1.82	0.62
32:BI:94:ALA:CB	32:BI:111:PRO:HA	2.30	0.62
55:A8:62:LEU:N	55:A8:63:PRO:HD2	2.15	0.62
57:AA:903:C:O2'	57:AA:904:C:H5''	1.99	0.62
58:BB:8:U:H3	58:BB:113:G:H1	1.47	0.62
34:BN:126:PRO:O	34:BN:127:ASP:HB2	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:A0:26:TYR:O	47:A0:67:VAL:HB	1.99	0.62
57:AA:492:A:H2'	57:AA:493:G:O4'	1.99	0.62
57:AA:2422:A:H4'	57:AA:2423:U:OP1	2.00	0.62
57:BA:752:A:O2'	57:BA:753:C:OP2	2.17	0.62
57:BA:1991:U:H2'	57:BA:1992:G:H5''	1.81	0.62
54:A7:19:ARG:HH11	54:A7:19:ARG:HG2	1.65	0.62
31:AH:41:MET:CG	31:AH:42:ARG:H	2.12	0.61
26:BC:57:GLN:O	26:BC:202:PRO:HG2	2.00	0.61
35:AO:9:GLU:O	35:AO:83:ALA:HA	2.00	0.61
40:AT:83:ILE:HG13	40:AT:84:GLN:HG2	1.82	0.61
35:BO:61:VAL:HG12	35:BO:87:ILE:HD11	1.81	0.61
48:A1:3:LYS:HG3	48:A1:4:VAL:N	2.14	0.61
57:AA:1866:C:H2'	57:AA:1876:A:O4'	1.99	0.61
50:A3:44:ARG:O	50:A3:48:GLU:HG2	1.99	0.61
43:AW:84:ARG:HB2	43:AW:96:ILE:HG22	1.83	0.61
27:AD:131:LEU:HD12	27:AD:131:LEU:N	2.15	0.61
27:AD:72:LYS:NZ	27:AD:75:ILE:HD12	2.15	0.61
36:AP:101:VAL:HG13	36:AP:106:LEU:HD23	1.81	0.61
41:AU:90:VAL:CG2	42:AV:39:LEU:HG	2.30	0.61
36:BP:35:HIS:N	57:BA:1190:G:H5'	2.15	0.61
30:BG:98:ARG:HG3	51:B4:1:MET:CE	2.30	0.61
32:BI:113:ARG:NH1	32:BI:132:PRO:HD3	2.09	0.61
46:BZ:141:VAL:HA	46:BZ:144:LEU:CD2	2.30	0.61
55:A8:51:ALA:C	55:A8:53:PRO:HD2	2.20	0.61
28:BE:61:ARG:HD3	57:BA:2787:C:O2'	1.99	0.61
46:AZ:152:ALA:HA	46:AZ:167:PRO:HB2	1.81	0.61
57:AA:672:C:H2'	57:AA:673:C:H5'	1.82	0.61
36:AP:144:GLU:H	36:AP:145:PRO:HD3	1.65	0.61
57:BA:654(S):G:O5'	57:BA:654(T):C:H5''	1.99	0.61
48:B1:45:ASN:HB2	57:BA:2230:G:H1'	1.82	0.61
57:AA:1378:A:H4'	57:AA:1379:A:OP1	2.00	0.61
49:A2:2:LYS:HG2	57:AA:97:C:H4'	1.82	0.61
29:AF:198:ALA:O	29:AF:201:VAL:HG12	1.99	0.61
34:BN:66:LYS:NZ	57:BA:1140:C:H5''	2.14	0.61
38:AR:7:GLY:C	38:AR:8:ARG:HE	2.03	0.61
57:AA:2147:G:H2'	57:AA:2148:G:C4'	2.30	0.61
47:B0:84:LEU:H	47:B0:84:LEU:HD12	1.64	0.61
33:AJ:102:LYS:HA	33:AJ:106:GLN:CB	2.29	0.61
27:AD:25:THR:HG22	27:AD:26:LYS:N	2.15	0.61
30:AG:82:LEU:C	30:AG:83:ARG:HG3	2.20	0.61
31:AH:137:ASP:O	31:AH:138:LYS:HB2	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BI:109:ILE:HG21	32:BI:114:LEU:HD11	1.81	0.61
32:BI:94:ALA:HA	32:BI:98:ALA:H	1.65	0.61
41:BU:59:ARG:HD3	57:BA:1009:A:H5'	1.81	0.61
42:BV:65:GLY:HA3	42:BV:91:TYR:HE1	1.64	0.61
27:BD:24:ILE:CG1	27:BD:25:THR:H	2.12	0.61
27:BD:30:GLU:HB3	27:BD:35:LYS:HG3	1.82	0.61
40:AT:27:THR:HG23	40:AT:28:VAL:N	2.14	0.61
45:BY:2:ARG:N	45:BY:4:LYS:HG2	2.16	0.61
31:AH:154:PRO:HB3	31:AH:163:TYR:CZ	2.35	0.61
40:BT:27:THR:O	40:BT:28:VAL:HB	2.00	0.61
55:A8:33:ASN:N	55:A8:36:LYS:HD2	2.16	0.61
41:BU:25:TRP:CH2	57:BA:17:G:H4'	2.34	0.61
31:BH:7:LEU:HG	31:BH:69:ARG:NH1	2.15	0.61
28:BE:9:VAL:HG22	28:BE:25:VAL:HB	1.83	0.61
46:BZ:76:LEU:HD23	46:BZ:83:PRO:HA	1.81	0.61
41:AU:59:ARG:HD3	57:AA:1009:A:H5'	1.81	0.61
31:AH:86:GLU:CB	31:AH:132:ARG:HB3	2.30	0.61
32:AI:8:PRO:CB	32:AI:14:ASP:H	2.10	0.61
32:AI:98:ALA:O	32:AI:101:LEU:HB3	1.99	0.61
29:BF:20:LEU:HD12	29:BF:199:TRP:CZ3	2.35	0.61
32:BI:127:VAL:O	32:BI:128:LEU:HD13	2.00	0.61
39:BS:85:VAL:O	39:BS:106:ARG:HG2	1.99	0.61
45:BY:39:VAL:HG12	45:BY:40:GLU:H	1.65	0.61
46:BZ:23:LYS:HA	46:BZ:23:LYS:HZ2	1.64	0.61
31:BH:85:LYS:NZ	31:BH:133:VAL:N	2.49	0.61
52:B5:51:TYR:N	52:B5:55:ARG:HD3	2.15	0.61
52:A5:16:ARG:NH1	52:A5:17:ASP:OD1	2.33	0.61
44:AX:26:TYR:HD2	44:AX:92:LEU:HD12	1.64	0.61
56:B9:35:ARG:HD3	57:BA:2742:C:OP1	2.00	0.61
32:AI:84:GLY:CA	32:AI:144:VAL:HG13	2.30	0.61
36:AP:6:LEU:HD23	36:AP:6:LEU:H	1.65	0.61
34:AN:2:LYS:HZ2	41:AU:95:LEU:HD21	1.63	0.61
42:AV:40:LEU:HD22	42:AV:46:VAL:HA	1.81	0.61
42:AV:65:GLY:HA3	42:AV:91:TYR:HE1	1.65	0.61
43:AW:5:ALA:HB1	43:AW:50:VAL:HG22	1.82	0.61
30:BG:109:VAL:C	30:BG:112:PRO:CG	2.69	0.61
30:BG:40:ASN:ND2	30:BG:91:ARG:HB2	2.11	0.61
36:BP:64:LYS:HB3	55:B8:25:MET:CG	2.15	0.61
43:BW:50:VAL:HG13	43:BW:105:VAL:HG21	1.82	0.61
27:BD:72:LYS:NZ	27:BD:75:ILE:HD12	2.16	0.61
57:BA:1887:C:C3'	57:BA:1888:G:H5''	2.29	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1270:C:H5''	57:BA:1271:G:C5'	2.30	0.61
57:BA:2491:U:H4'	57:BA:2570:G:OP1	1.99	0.61
50:A3:8:LEU:HD11	50:A3:31:LEU:HD23	1.81	0.61
57:BA:914:C:C2'	57:BA:915:C:H5'	2.25	0.61
46:AZ:42:VAL:HG13	46:AZ:43:GLU:H	1.66	0.61
37:AQ:137:TYR:N	37:AQ:137:TYR:CD2	2.68	0.61
52:A5:54:GLY:H	52:A5:55:ARG:HH21	1.46	0.61
36:BP:24:GLY:HA2	57:BA:811:U:OP2	2.00	0.61
32:BI:58:LEU:O	32:BI:58:LEU:HD23	2.00	0.61
42:AV:76:LYS:HB2	42:AV:81:TYR:HB3	1.83	0.61
53:B6:42:TRP:CE3	53:B6:42:TRP:HA	2.35	0.61
56:A9:35:ARG:HD3	57:AA:2742:C:OP1	2.00	0.61
29:AF:4:VAL:HG22	29:AF:19:GLU:OE1	2.00	0.61
30:AG:117:PHE:CG	30:AG:118:ARG:N	2.68	0.61
38:AR:45:ARG:HG3	38:AR:95:THR:CG2	2.30	0.61
43:AW:12:ILE:HD13	43:AW:17:VAL:HG22	1.82	0.61
32:BI:84:GLY:CA	32:BI:144:VAL:HG13	2.30	0.61
32:BI:4:ILE:HD11	32:BI:44:LEU:HD12	1.82	0.61
36:BP:23:PRO:HB2	36:BP:33:ARG:NE	2.16	0.61
27:BD:35:LYS:HZ2	27:BD:36:PRO:CD	2.13	0.61
40:AT:35:LYS:HZ3	40:AT:41:ARG:HH21	1.47	0.61
55:A8:33:ASN:CA	55:A8:36:LYS:HD2	2.31	0.61
37:AQ:58:PHE:O	37:AQ:58:PHE:HD1	1.84	0.61
55:B8:33:ASN:CA	55:B8:36:LYS:HD2	2.30	0.61
57:BA:1999:C:H4'	57:BA:2723:C:O2	2.01	0.61
57:BA:1209:G:H21	57:BA:1210:A:H62	1.49	0.61
57:BA:404:C:H4'	57:BA:405:U:H5'	1.83	0.61
57:AA:654(S):G:O5'	57:AA:654(T):C:H5''	2.00	0.61
57:BA:70:G:H2'	57:BA:113:G:O2'	2.00	0.61
47:B0:25:ARG:HD2	47:B0:29:GLN:HE22	1.64	0.61
46:AZ:108:PRO:HB3	46:AZ:144:LEU:HB2	1.81	0.61
29:BF:40:GLN:OE1	29:BF:183:VAL:HG13	2.01	0.61
48:A1:67:ILE:N	48:A1:68:PRO:HD2	2.16	0.61
29:BF:167:ALA:HB1	29:BF:173:VAL:HG11	1.83	0.61
51:A4:37:SER:O	51:A4:38:LYS:CB	2.48	0.61
51:A4:22:ILE:HD12	51:A4:22:ILE:N	2.16	0.61
27:AD:70:TRP:CZ3	27:AD:146:GLU:OE2	2.53	0.61
27:AD:30:GLU:HB3	27:AD:35:LYS:HG3	1.81	0.61
29:AF:65:TRP:HZ3	29:AF:73:ALA:O	1.84	0.61
30:AG:86:MET:HG2	30:AG:86:MET:O	2.01	0.61
32:AI:103:ARG:O	32:AI:105:HIS:N	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:AW:6:ILE:HG12	43:AW:104:THR:OG1	1.99	0.61
36:BP:35:HIS:CE1	57:BA:941:A:H4'	2.36	0.61
37:BQ:35:VAL:CG1	37:BQ:130:LYS:HE2	2.30	0.61
40:AT:38:ASN:ND2	40:AT:38:ASN:C	2.49	0.61
44:BX:55:ASN:HB2	44:BX:80:ILE:HD13	1.83	0.61
40:BT:82:LEU:N	40:BT:82:LEU:HD12	2.10	0.61
28:BE:131:ALA:HB3	57:BA:2579:C:O2'	2.00	0.61
28:BE:61:ARG:CD	57:BA:2787:C:H1'	2.31	0.61
31:BH:86:GLU:CB	31:BH:132:ARG:HB3	2.30	0.61
38:AR:3:HIS:O	38:AR:4:LEU:HB3	2.01	0.61
46:AZ:40:ASP:HB3	46:AZ:43:GLU:OE1	2.01	0.61
46:BZ:157:LEU:HD23	46:BZ:157:LEU:N	2.12	0.61
57:BA:1281:G:C8	57:BA:1281:G:H5'	2.32	0.61
30:AG:161:THR:HG22	30:AG:163:ALA:N	2.13	0.61
43:AW:9:TYR:H	43:AW:102:HIS:HD2	1.45	0.61
32:BI:87:LYS:HE3	32:BI:121:LYS:HG3	1.83	0.61
36:BP:64:LYS:C	36:BP:66:GLY:H	2.04	0.61
39:BS:95:HIS:CG	39:BS:96:GLY:H	2.19	0.61
42:BV:39:LEU:O	42:BV:40:LEU:HB2	2.00	0.61
35:BO:9:GLU:O	35:BO:83:ALA:HA	1.99	0.61
31:BH:109:PHE:C	31:BH:111:HIS:H	2.04	0.61
57:AA:1116:C:C3'	57:AA:1117:G:H5''	4.04	0.61
57:BA:1678:G:N2	57:BA:1989:G:N2	2.46	0.61
57:AA:404:C:H4'	57:AA:405:U:H5'	1.83	0.61
52:A5:51:TYR:N	52:A5:55:ARG:HD3	2.16	0.61
41:AU:66:ASN:C	41:AU:66:ASN:HD22	2.04	0.61
47:A0:51:VAL:CG2	47:A0:81:VAL:HG23	2.31	0.61
57:BA:852:G:O2'	57:BA:853:G:H5'	2.00	0.61
57:BA:1416:G:HO2'	57:BA:1417:C:H5	1.48	0.61
47:A0:84:LEU:H	47:A0:84:LEU:HD12	1.66	0.61
51:B4:22:ILE:N	51:B4:22:ILE:HD12	2.16	0.61
30:AG:58:GLN:HG3	30:AG:59:GLU:N	2.16	0.61
57:BA:880:G:H1	57:BA:897:C:H42	1.47	0.61
39:BS:63:THR:HG23	58:BB:50:G:OP1	2.01	0.61
34:BN:14:VAL:HG13	34:BN:137:LYS:HG3	1.83	0.61
36:BP:33:ARG:HD3	57:BA:587:C:C4	2.36	0.61
43:BW:64:MET:O	43:BW:65:LEU:HB3	2.01	0.61
53:B6:48:VAL:O	53:B6:49:HIS:HB2	2.01	0.61
57:AA:1270:C:H5''	57:AA:1271:G:H5'	1.83	0.61
57:AA:1270:C:H5''	57:AA:1271:G:O5'	2.00	0.61
39:BS:44:LYS:O	39:BS:46:VAL:HG23	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B3:6:VAL:HB	50:B3:54:VAL:HG11	1.81	0.61
57:AA:405:U:H5''	57:AA:406:G:O4'	5.57	0.61
55:B8:14:VAL:HG21	55:B8:22:VAL:CG1	2.31	0.61
29:BF:164:ARG:HG3	29:BF:175:THR:OG1	2.01	0.61
29:AF:167:ALA:HB1	29:AF:173:VAL:HG11	1.81	0.61
48:B1:67:ILE:N	48:B1:68:PRO:HD2	2.15	0.61
57:BA:1882:C:H5'	57:BA:1883:G:OP2	2.00	0.61
53:A6:42:TRP:HA	53:A6:42:TRP:CE3	2.35	0.61
26:AC:23:ILE:HG22	26:AC:187:ALA:HA	1.83	0.61
58:AB:8:U:H3	58:AB:113:G:H1	1.49	0.61
58:AB:38:C:O2	58:AB:48:A:H1'	2.01	0.61
32:AI:123:LEU:HD23	32:AI:124:GLY:H	1.64	0.61
42:AV:39:LEU:HD12	42:AV:47:VAL:HG11	1.83	0.61
41:BU:13:LYS:HD3	57:BA:1227:G:OP1	2.01	0.61
38:BR:63:ARG:NE	57:BA:1453:U:H5'	2.15	0.61
36:BP:105:LEU:HG	57:BA:626:U:N3	2.15	0.61
41:BU:92:ARG:CZ	42:BV:11:GLN:H	2.13	0.61
27:BD:43:ARG:HD2	27:BD:44:ASN:OD1	2.00	0.61
45:BY:13:VAL:HG21	45:BY:72:VAL:HB	1.82	0.61
37:BQ:58:PHE:O	37:BQ:58:PHE:HD1	1.83	0.61
35:BO:88:ASN:ND2	35:BO:90:GLN:H	1.97	0.61
31:BH:97:ARG:HG2	31:BH:98:LEU:H	1.66	0.61
28:AE:61:ARG:CD	57:AA:2787:C:H1'	2.31	0.61
37:BQ:16:ARG:HH22	57:BA:952:G:P	2.23	0.61
57:AA:2645:G:H3'	57:AA:2646:C:C5'	2.31	0.61
57:BA:1280:G:C2'	57:BA:1281:G:H5''	2.30	0.61
37:AQ:42:ILE:HG12	37:AQ:103:MET:HE1	1.82	0.61
57:AA:2761:G:H3'	57:AA:2762:G:H5''	1.82	0.61
44:AX:57:LEU:HD21	44:AX:78:LYS:HE2	1.82	0.61
30:BG:42:GLY:O	30:BG:44:GLY:N	2.33	0.60
41:BU:59:ARG:HD3	57:BA:1009:A:C4'	2.32	0.60
40:BT:83:ILE:HG13	40:BT:84:GLN:HG2	1.82	0.60
28:AE:111:ARG:CZ	38:AR:2:ARG:HH21	2.13	0.60
57:BA:1210:A:H5''	57:BA:1212:G:O4'	2.01	0.60
48:A1:50:ARG:HG2	48:A1:59:THR:CG2	2.25	0.60
46:AZ:5:LEU:HD12	46:AZ:47:VAL:HG21	1.83	0.60
37:BQ:84:GLY:O	37:BQ:85:LYS:HB2	2.01	0.60
57:BA:1412:A:H2'	57:BA:1413:G:H8	1.66	0.60
55:B8:39:LYS:O	55:B8:43:GLN:HG3	2.01	0.60
48:B1:45:ASN:CB	57:BA:2230:G:H1'	2.31	0.60
29:BF:32:LEU:CD1	29:BF:105:VAL:HG13	2.30	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:33:VAL:HG22	28:BE:33:VAL:O	2.01	0.60
57:AA:1636:C:H2'	57:AA:1637:A:C8	2.36	0.60
51:B4:37:SER:O	51:B4:38:LYS:CB	2.49	0.60
57:AA:997:G:O2'	57:AA:998:C:H5'	2.01	0.60
27:AD:186:HIS:HD2	27:AD:188:GLU:HB2	1.65	0.60
32:AI:109:ILE:HG21	32:AI:114:LEU:HD11	1.83	0.60
37:AQ:1:MET:O	37:AQ:2:LEU:HB2	2.01	0.60
41:AU:102:GLU:HG3	42:AV:2:PHE:HE1	1.66	0.60
30:BG:87:PRO:O	30:BG:88:ILE:HD13	2.01	0.60
32:BI:115:ALA:CB	32:BI:128:LEU:HB3	2.28	0.60
55:B8:62:LEU:N	55:B8:63:PRO:HD2	2.16	0.60
40:BT:5:ALA:HB2	57:BA:2875:C:C4'	2.30	0.60
57:BA:2126:A:H4'	57:BA:2127:G:O5'	2.01	0.60
35:AO:22:ILE:HD12	57:AA:1952:A:C5	2.36	0.60
58:AB:40:U:O2	58:AB:43:C:H5''	2.01	0.60
26:AC:6:LYS:HA	26:AC:9:ARG:HB2	1.81	0.60
36:AP:58:THR:O	36:AP:58:THR:HG22	2.00	0.60
58:BB:38:C:O2	58:BB:48:A:H1'	2.01	0.60
32:BI:76:THR:HG21	32:BI:139:GLN:HE22	1.66	0.60
36:BP:101:VAL:HG12	36:BP:107:LYS:H	1.67	0.60
31:BH:154:PRO:HB3	31:BH:163:TYR:CZ	2.36	0.60
40:AT:116:ALA:HB1	40:AT:121:ILE:HD11	1.82	0.60
40:AT:89:VAL:C	40:AT:91:ARG:H	2.05	0.60
57:BA:1495:A:N3	57:BA:1496:A:C2	2.69	0.60
53:A6:48:VAL:O	53:A6:49:HIS:HB2	2.01	0.60
40:BT:89:VAL:C	40:BT:91:ARG:H	2.04	0.60
49:A2:46:GLN:HG2	49:A2:49:LYS:HZ1	1.66	0.60
28:BE:69:LYS:HE3	28:BE:90:THR:OG1	2.01	0.60
33:AJ:6:ASN:O	57:AA:1046:A:H5'	2.02	0.60
37:AQ:134:ARG:NH2	46:AZ:122:ARG:HE	2.00	0.60
57:AA:70:G:H21	57:AA:71:A:H62	1.49	0.60
52:B5:54:GLY:H	52:B5:55:ARG:HH21	1.48	0.60
28:AE:144:ARG:HD2	57:AA:2572:A:N7	2.16	0.60
57:AA:1412:A:H2'	57:AA:1413:G:H8	1.66	0.60
57:BA:2147:G:H2'	57:BA:2148:G:C4'	2.32	0.60
29:AF:181:LEU:HD11	29:AF:186:ILE:HD11	1.83	0.60
57:BA:214:G:H1'	57:BA:216:A:O2'	2.02	0.60
57:BA:2376:A:H2'	57:BA:2377:A:O4'	2.01	0.60
57:AA:1980:G:O2'	57:AA:1982:C:OP2	2.19	0.60
57:AA:2126:A:H4'	57:AA:2127:G:O5'	2.01	0.60
57:AA:1319:G:O2'	57:AA:1320:C:H5'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1495:A:N3	57:AA:1496:A:C2	2.69	0.60
58:AB:74:U:H2'	58:AB:75:G:O4'	2.01	0.60
29:AF:20:LEU:HD12	29:AF:199:TRP:CZ3	2.36	0.60
27:BD:134:ARG:HG3	27:BD:135:PHE:CD2	2.37	0.60
53:B6:15:GLU:HG2	53:B6:16:CYS:O	2.01	0.60
40:BT:30:VAL:HG21	40:BT:84:GLN:H	1.66	0.60
34:BN:73:THR:HG23	34:BN:82:LEU:CD1	2.30	0.60
57:BA:141:A:H8	57:BA:1408:C:O2'	1.84	0.60
34:AN:111:PRO:HD2	57:AA:558:G:P	2.41	0.60
31:BH:144:VAL:O	31:BH:148:ILE:HG12	2.00	0.60
35:AO:113:LYS:O	35:AO:117:LEU:HB2	2.02	0.60
37:BQ:109:VAL:HG12	37:BQ:113:GLN:HB2	1.83	0.60
26:BC:23:ILE:HG22	26:BC:187:ALA:HA	1.82	0.60
57:AA:860:U:C5	57:AA:917:A:N7	2.66	0.60
30:AG:113:ARG:HA	30:AG:113:ARG:HE	1.64	0.60
30:AG:53:LEU:HD22	30:AG:53:LEU:N	2.16	0.60
31:AH:7:LEU:HG	31:AH:69:ARG:NH1	2.16	0.60
48:B1:56:GLN:HE22	48:B1:85:LEU:HD22	1.65	0.60
57:BA:1278:A:O2'	57:BA:1279:G:H5'	2.02	0.60
57:BA:621:A:H2'	57:BA:622:G:H5'	1.83	0.60
36:BP:123:LEU:HD12	36:BP:125:VAL:HG12	1.81	0.60
58:BB:74:U:H2'	58:BB:75:G:O4'	2.01	0.60
57:AA:1590:U:C3'	57:AA:1591:G:H5''	2.32	0.60
55:B8:51:ALA:HA	55:B8:54:GLU:OE2	2.01	0.60
41:BU:25:TRP:CZ3	57:BA:17:G:H4'	2.36	0.60
57:AA:527:C:OP2	57:AA:2779:U:H5	1.84	0.60
36:AP:123:LEU:HD12	36:AP:125:VAL:HG12	1.83	0.60
57:BA:1718:G:O2'	57:BA:1719:G:H5'	2.01	0.60
49:A2:2:LYS:HG2	57:AA:97:C:C5'	2.31	0.60
57:AA:1403:C:H5''	57:AA:1471:A:C1'	2.31	0.60
42:AV:81:TYR:CE2	57:AA:1187:G:H5''	2.36	0.60
29:BF:167:ALA:O	29:BF:168:ARG:HB3	2.02	0.60
57:AA:203:C:H3'	57:AA:204:A:H5''	1.84	0.60
35:AO:35:VAL:HG11	35:AO:103:ALA:HB3	1.84	0.60
57:AA:1750:G:O2'	57:AA:1751:C:H5'	2.01	0.60
57:AA:2315:G:H2'	57:AA:2316:C:C6	2.37	0.60
58:AB:7:G:H3'	58:AB:8:U:C5'	2.26	0.60
27:AD:3:VAL:CG1	27:AD:17:THR:HB	2.32	0.60
37:AQ:35:VAL:CG1	37:AQ:130:LYS:HE2	2.31	0.60
42:AV:39:LEU:HA	42:AV:47:VAL:HG13	1.83	0.60
30:BG:110:ALA:C	30:BG:112:PRO:CD	2.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:46:VAL:O	34:BN:47:ALA:HB3	1.99	0.60
36:BP:95:VAL:CG2	36:BP:125:VAL:HB	2.31	0.60
39:BS:89:ARG:NH1	39:BS:92:TYR:HA	2.16	0.60
27:BD:246:PRO:HD3	57:BA:1902:C:H5'	1.82	0.60
40:BT:38:ASN:HD22	40:BT:39:ARG:N	1.99	0.60
28:AE:69:LYS:HZ2	28:AE:89:ASP:HA	1.63	0.60
28:AE:69:LYS:HE3	28:AE:90:THR:OG1	2.02	0.60
57:BA:527:C:OP2	57:BA:2779:U:H5	1.85	0.60
57:AA:1718:G:O2'	57:AA:1719:G:H5'	2.02	0.60
29:BF:108:LYS:HD2	29:BF:112:MET:CE	2.31	0.60
57:BA:1403:C:H5''	57:BA:1471:A:C1'	2.31	0.60
34:AN:67:LEU:HB3	34:AN:88:GLU:HG2	1.84	0.60
47:B0:27:GLU:OE2	57:BA:856:C:H4'	2.02	0.60
48:A1:8:SER:HB3	48:A1:66:HIS:CD2	2.37	0.60
57:AA:2223:G:H2'	57:AA:2224:G:H5'	1.83	0.60
57:AA:1209:G:H21	57:AA:1210:A:H62	1.48	0.60
57:AA:581:C:H2'	57:AA:582:G:H8	1.63	0.60
34:AN:1:MET:HG2	34:AN:2:LYS:H	1.66	0.60
36:AP:105:LEU:HG	57:AA:626:U:N3	2.16	0.60
36:AP:101:VAL:HG12	36:AP:107:LYS:N	2.16	0.60
38:AR:44:LEU:N	38:AR:44:LEU:HD12	4.58	0.60
46:AZ:30:ASN:O	46:AZ:32:HIS:N	2.34	0.60
26:BC:7:ARG:HD3	57:BA:2128:C:H5'	1.84	0.60
30:BG:63:ILE:HD12	30:BG:141:PHE:CG	2.36	0.60
30:BG:172:LEU:HD23	30:BG:172:LEU:C	2.22	0.60
32:BI:107:VAL:O	32:BI:109:ILE:HD11	2.01	0.60
36:BP:41:ARG:HH12	36:BP:45:LEU:HD12	1.66	0.60
45:BY:2:ARG:HG3	57:BA:105:C:O2'	2.02	0.60
57:AA:158:U:H3'	57:AA:158:U:O2	2.02	0.60
28:AE:23:VAL:HA	28:AE:186:GLY:H	1.65	0.60
52:A5:33:CYS:SG	52:A5:40:LYS:HE3	2.41	0.60
34:AN:126:PRO:O	34:AN:127:ASP:HB2	2.00	0.60
39:BS:42:ASP:C	39:BS:44:LYS:H	2.02	0.60
49:B2:16:LEU:HD22	49:B2:20:GLU:HB3	1.84	0.60
52:B5:51:TYR:H	52:B5:55:ARG:CD	2.13	0.60
49:A2:32:LEU:HD22	49:A2:36:ARG:HH11	1.67	0.60
57:BA:1510:G:O2'	57:BA:1511:C:H5'	2.01	0.60
27:AD:30:GLU:HG3	27:AD:63:ARG:NE	2.17	0.60
39:AS:29:PHE:HE1	58:AB:6:C:HO2'	0.73	0.60
42:AV:19:LYS:HZ3	42:AV:20:LEU:H	1.44	0.60
42:AV:87:HIS:NE2	42:AV:89:GLN:HG2	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:132:PRO:HG3	27:BD:190:TYR:CE1	2.37	0.60
45:BY:31:LEU:HD23	45:BY:36:ALA:O	2.01	0.60
45:BY:42:VAL:HB	45:BY:65:ALA:HB3	1.82	0.60
52:A5:3:LYS:NZ	57:AA:2614:A:H5'	2.16	0.60
53:A6:15:GLU:HG2	53:A6:16:CYS:O	2.01	0.60
40:BT:29:ARG:CB	40:BT:85:LYS:HA	2.32	0.60
57:BA:1779:U:C5	57:BA:1784:A:N7	2.63	0.60
57:AA:78:A:H2'	57:AA:79:G:H8	1.67	0.60
57:BA:2657:A:H2'	57:BA:2658:C:C5'	2.32	0.60
57:AA:1402:C:H2'	57:AA:1403:C:O4'	2.88	0.60
35:BO:113:LYS:O	35:BO:117:LEU:HB2	2.01	0.60
49:B2:3:LEU:HD21	49:B2:7:ARG:NH1	2.16	0.60
57:AA:2061:G:H5''	57:AA:2503:A:C2	2.36	0.60
57:BA:2322:A:H2'	57:BA:2323:G:O4'	2.02	0.60
46:BZ:94:GLU:HB3	46:BZ:95:PRO:HD2	1.83	0.60
27:BD:91:ARG:HH11	27:BD:91:ARG:HG2	1.67	0.60
57:AA:1642:G:O2'	57:AA:1643:G:H5'	2.01	0.60
57:BA:1910:G:O2'	57:BA:1911:U:H5'	2.01	0.60
27:BD:248:SER:HB2	27:BD:249:PRO:HD2	1.83	0.60
27:AD:142:VAL:HG21	27:AD:191:ALA:HB1	1.82	0.60
32:BI:113:ARG:NH1	32:BI:113:ARG:HG2	2.16	0.60
32:BI:94:ALA:HB1	32:BI:98:ALA:HB2	1.84	0.60
36:BP:6:LEU:HG	36:BP:9:ASN:CB	2.32	0.60
37:BQ:21:THR:O	37:BQ:23:GLY:N	2.35	0.60
42:BV:46:VAL:HG13	42:BV:47:VAL:N	2.15	0.60
43:BW:4:LYS:HA	43:BW:106:ILE:HG22	1.84	0.60
27:BD:3:VAL:CG1	27:BD:17:THR:HB	2.32	0.60
40:AT:28:VAL:HB	40:AT:88:ILE:HG12	1.84	0.60
57:BA:1192:G:O2'	57:BA:1193:G:H5'	2.01	0.60
57:BA:2524:G:C8	57:BA:2524:G:H5'	2.32	0.60
37:BQ:42:ILE:HG12	37:BQ:103:MET:HE1	1.84	0.60
57:AA:639:U:H2'	57:AA:640:C:C6	2.36	0.60
42:BV:66:ARG:HG2	42:BV:66:ARG:HH11	1.66	0.60
57:AA:2666:C:H5'	57:AA:2667:C:OP2	2.02	0.60
57:AA:1910:G:O2'	57:AA:1911:U:H5'	2.01	0.60
57:AA:1210:A:H5''	57:AA:1212:G:O4'	2.01	0.60
58:AB:30:C:H2'	58:AB:31:C:O4'	2.02	0.60
30:AG:145:THR:CG2	30:AG:148:MET:HB3	2.32	0.60
30:BG:145:THR:OG1	30:BG:146:TYR:N	2.35	0.60
32:BI:129:THR:CG2	32:BI:130:TYR:N	2.64	0.60
27:BD:186:HIS:HD2	27:BD:188:GLU:HB2	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BT:35:LYS:O	40:BT:36:GLU:HB3	2.00	0.60
53:A6:11:LEU:HA	53:A6:54:ILE:O	2.01	0.60
53:B6:11:LEU:HA	53:B6:54:ILE:O	2.01	0.60
28:AE:111:ARG:HG3	38:AR:2:ARG:HG2	1.84	0.60
28:AE:35:GLN:CG	28:AE:36:ARG:H	2.13	0.60
58:BB:7:G:H3'	58:BB:8:U:C5'	2.27	0.60
36:AP:84:ASN:HA	36:AP:115:LEU:O	2.01	0.60
35:BO:13:ASN:ND2	35:BO:97:ARG:HB2	2.17	0.60
38:BR:7:GLY:C	38:BR:8:ARG:HE	2.05	0.60
57:AA:2223:G:C2'	57:AA:2224:G:H5'	2.32	0.60
41:BU:49:HIS:HD2	57:BA:534:U:O2'	1.85	0.60
30:AG:123:ASN:HB2	30:AG:126:ASP:OD1	2.02	0.59
30:AG:49:ASP:O	30:AG:50:ALA:HB3	2.02	0.59
30:AG:77:ILE:C	30:AG:79:ASN:N	2.55	0.59
34:AN:46:VAL:O	34:AN:47:ALA:HB3	2.01	0.59
36:AP:33:ARG:NH2	57:AA:587:C:H2'	2.17	0.59
41:AU:95:LEU:HD12	42:AV:11:GLN:HB2	1.84	0.59
30:BG:6:ALA:HB3	30:BG:104:GLU:OE1	2.02	0.59
32:BI:118:LYS:HG2	32:BI:119:PRO:CD	2.27	0.59
39:BS:83:LYS:HE3	39:BS:105:ALA:CB	2.31	0.59
27:BD:142:VAL:HG21	27:BD:191:ALA:HB1	1.82	0.59
27:BD:70:TRP:CZ3	27:BD:146:GLU:OE2	2.54	0.59
40:AT:23:ARG:NH2	57:AA:2849:U:O4	2.34	0.59
53:A6:11:LEU:HD12	53:A6:26:ASN:HB2	1.84	0.59
57:BA:797:C:O2'	57:BA:798:G:H5'	2.25	0.59
47:A0:42:GLY:HA3	57:AA:2331:G:O4'	2.01	0.59
57:BA:271(F):C:H2'	57:BA:271(G):C:C6	2.37	0.59
35:BO:35:VAL:HG11	35:BO:103:ALA:HB3	1.84	0.59
46:BZ:103:ARG:HD2	46:BZ:136:PHE:HD1	1.67	0.59
57:BA:1339:G:N2	57:BA:1603:A:H1'	2.16	0.59
57:AA:719:C:O2'	57:AA:720:C:H5'	2.02	0.59
57:BA:719:C:O2'	57:BA:720:C:H5'	2.02	0.59
57:BA:2747:G:O6	57:BA:2755:C:H5''	2.02	0.59
27:AD:134:ARG:HG3	27:AD:135:PHE:CD2	2.36	0.59
27:AD:186:HIS:CD2	27:AD:188:GLU:H	2.20	0.59
31:AH:7:LEU:HD23	31:AH:69:ARG:CD	2.32	0.59
31:AH:97:ARG:HG2	31:AH:98:LEU:H	1.67	0.59
32:AI:129:THR:HG23	32:AI:137:PRO:HA	1.84	0.59
36:AP:99:LEU:HA	36:AP:102:ARG:HH22	1.67	0.59
45:AY:29:GLU:N	45:AY:29:GLU:OE1	2.35	0.59
45:AY:39:VAL:HG12	45:AY:40:GLU:H	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:626:U:H5'	57:BA:627:A:H5'	1.85	0.59
30:BG:113:ARG:NE	30:BG:113:ARG:HA	2.16	0.59
32:BI:73:GLU:HB3	32:BI:136:VAL:CG2	2.33	0.59
36:BP:18:ARG:HH11	36:BP:18:ARG:C	2.04	0.59
38:BR:38:VAL:O	38:BR:42:LYS:HG3	2.01	0.59
38:BR:44:LEU:HD12	38:BR:44:LEU:N	4.58	0.59
27:BD:35:LYS:NZ	27:BD:36:PRO:HD3	2.17	0.59
40:AT:30:VAL:HG21	40:AT:84:GLN:H	1.67	0.59
35:AO:104:ARG:HE	40:AT:33:LYS:HD2	1.66	0.59
46:BZ:118:GLN:O	46:BZ:120:ILE:HG12	2.02	0.59
28:BE:111:ARG:CZ	38:BR:2:ARG:HH21	2.15	0.59
52:B5:33:CYS:SG	52:B5:40:LYS:HE3	2.42	0.59
34:AN:120:LEU:HD13	34:AN:120:LEU:C	2.21	0.59
43:BW:71:VAL:HA	43:BW:107:LEU:HD12	1.84	0.59
36:AP:65:ARG:HH12	55:A8:15:LYS:HD2	1.67	0.59
57:AA:941:A:H2'	57:AA:942:G:C8	2.37	0.59
32:AI:82:ARG:HA	32:AI:145:VAL:HG13	1.84	0.59
36:AP:18:ARG:HH11	36:AP:18:ARG:C	2.04	0.59
36:AP:6:LEU:HG	36:AP:9:ASN:CB	2.32	0.59
38:AR:38:VAL:O	38:AR:42:LYS:HG3	2.01	0.59
36:BP:99:LEU:HA	36:BP:102:ARG:HH22	1.67	0.59
43:BW:5:ALA:HB1	43:BW:50:VAL:HG22	1.84	0.59
57:BA:473:G:H2'	57:BA:474:G:H8	2.94	0.59
37:BQ:27:VAL:O	37:BQ:28:ALA:HB3	2.02	0.59
35:BO:77:ILE:HD13	40:BT:74:ARG:HD3	1.84	0.59
57:AA:1999:C:H4'	57:AA:2723:C:O2	2.01	0.59
57:BA:2103:C:C2'	57:BA:2104:G:H5''	2.32	0.59
57:AA:1510:G:O2'	57:AA:1511:C:H5'	2.01	0.59
57:AA:70:G:H2'	57:AA:113:G:O2'	2.01	0.59
57:BA:1533:G:H1'	57:BA:1537:G:H22	1.67	0.59
34:AN:66:LYS:NZ	57:AA:1140:C:H5''	2.17	0.59
28:AE:33:VAL:HG22	28:AE:33:VAL:O	2.01	0.59
27:AD:142:VAL:HG23	27:AD:192:THR:O	2.03	0.59
39:AS:93:LYS:HG3	39:AS:93:LYS:O	2.02	0.59
39:AS:95:HIS:CG	39:AS:96:GLY:H	2.20	0.59
42:AV:38:LEU:O	42:AV:52:VAL:HG12	2.01	0.59
43:AW:4:LYS:HA	43:AW:106:ILE:HG22	1.83	0.59
57:BA:2801(A):A:O4'	57:BA:2802:G:H2'	2.03	0.59
57:BA:1286:A:H2'	57:BA:1288:U:OP2	2.01	0.59
26:BC:43:GLU:HG2	26:BC:216:THR:O	2.02	0.59
29:BF:22:ALA:HB1	29:BF:26:ALA:CB	2.30	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BS:24:LEU:CB	39:BS:85:VAL:HG12	2.33	0.59
36:BP:65:ARG:HH12	55:B8:15:LYS:HD2	1.67	0.59
35:BO:104:ARG:HE	40:BT:33:LYS:HD2	1.66	0.59
57:AA:1485:G:H1'	57:AA:1505:C:N4	2.16	0.59
53:B6:25:LYS:HE2	55:B8:35:GLN:OE1	2.02	0.59
36:AP:146:VAL:HG13	36:AP:147:LEU:H	1.67	0.59
57:AA:141:A:C8	57:AA:1408:C:O2'	2.54	0.59
52:B5:54:GLY:CA	52:B5:55:ARG:HE	2.14	0.59
41:AU:44:ASN:HD21	42:AV:75:PHE:HB3	1.65	0.59
49:B2:53:LEU:O	49:B2:57:ILE:HG12	2.02	0.59
46:BZ:111:VAL:O	46:BZ:112:ARG:HB2	2.02	0.59
35:BO:119:PRO:HB2	40:BT:68:TYR:CE2	2.37	0.59
57:BA:2836:U:H2'	57:BA:2837:G:C8	2.37	0.59
57:AA:2201:C:O2'	57:AA:2202:C:H5'	2.03	0.59
57:AA:2657:A:H2'	57:AA:2658:C:C5'	2.33	0.59
27:AD:181:GLU:HA	27:AD:272:ALA:CB	2.31	0.59
32:AI:27:ARG:HG3	32:AI:27:ARG:HH11	1.68	0.59
38:AR:44:LEU:HD21	38:AR:79:LEU:HD22	12.69	0.59
39:AS:24:LEU:CB	39:AS:85:VAL:HG12	2.32	0.59
41:AU:10:ARG:HG3	57:AA:1251:C:OP1	2.01	0.59
57:BA:1015:G:O2'	57:BA:1016:G:H5'	2.01	0.59
57:BA:2315:G:H2'	57:BA:2316:C:C6	2.37	0.59
36:BP:101:VAL:HG13	36:BP:106:LEU:HD23	1.84	0.59
36:BP:112:LEU:HD22	36:BP:113:LYS:N	2.16	0.59
36:BP:23:PRO:CD	36:BP:33:ARG:CZ	2.71	0.59
36:BP:91:PHE:N	36:BP:91:PHE:CD1	2.64	0.59
41:BU:50:ARG:NH2	57:BA:993:G:OP1	2.36	0.59
40:AT:23:ARG:HG2	40:AT:120:ARG:NH1	2.17	0.59
45:BY:20:TYR:CD1	45:BY:20:TYR:N	2.71	0.59
27:AD:242:ARG:HH21	57:AA:1826:G:C4'	2.04	0.59
57:BA:672:C:H2'	57:BA:673:C:H5'	1.83	0.59
34:BN:120:LEU:C	34:BN:120:LEU:HD13	2.22	0.59
37:AQ:26:TYR:CE1	37:AQ:28:ALA:HB2	2.38	0.59
57:BA:27:G:N2	57:BA:512:G:C2'	2.63	0.59
47:B0:40:GLN:NE2	47:B0:43:THR:HA	2.16	0.59
57:BA:394:A:O2'	57:BA:395:U:H5'	2.03	0.59
57:BA:2031:A:C6	57:BA:2498:C:H1'	2.37	0.59
48:A1:87:PRO:HA	48:A1:90:ILE:HG12	1.84	0.59
35:AO:105:GLU:HA	35:AO:108:GLU:OE1	2.02	0.59
26:AC:173:HIS:O	26:AC:174:ALA:HB3	2.02	0.59
30:AG:5:VAL:O	30:AG:8:LYS:HB3	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AN:23:LEU:CD1	34:AN:98:VAL:HG12	2.33	0.59
39:AS:28:VAL:O	39:AS:89:ARG:HD2	2.02	0.59
41:AU:90:VAL:HG22	42:AV:39:LEU:HG	1.85	0.59
57:BA:1354:A:H2'	57:BA:1355:G:O4'	2.03	0.59
39:BS:74:ALA:HB1	39:BS:103:GLU:HB3	1.84	0.59
27:BD:71:ASP:CB	27:BD:103:ARG:NH2	2.66	0.59
57:AA:1887:C:H2'	57:AA:1888:G:C5'	2.25	0.59
57:AA:2728:U:O2'	57:AA:2729:G:H5'	2.03	0.59
57:BA:1826:G:H2'	57:BA:1827:C:H6	1.68	0.59
57:BA:1771:C:HO2'	57:BA:1786:A:H8	1.51	0.59
30:AG:170:ARG:NH2	30:AG:182:LYS:HG2	2.18	0.59
48:B1:12:PRO:HB3	48:B1:43:TYR:HD2	1.67	0.59
51:B4:22:ILE:H	51:B4:22:ILE:HD12	1.67	0.59
57:BA:2537:U:H2'	57:BA:2538:C:C6	2.38	0.59
48:B1:5:CYS:SG	48:B1:62:VAL:HG23	2.43	0.59
35:BO:105:GLU:HA	35:BO:108:GLU:OE1	2.02	0.59
32:AI:5:LEU:O	32:AI:6:LEU:HG	2.03	0.59
32:BI:9:LEU:HD12	32:BI:9:LEU:N	2.18	0.59
36:BP:81:GLN:HG2	36:BP:106:LEU:HA	1.83	0.59
41:BU:31:SER:C	41:BU:33:ARG:H	2.06	0.59
37:BQ:26:TYR:CE1	37:BQ:28:ALA:HB2	2.38	0.59
46:BZ:152:ALA:HB3	46:BZ:154:ASP:OD2	2.03	0.59
40:BT:27:THR:CG2	40:BT:28:VAL:H	2.14	0.59
57:BA:673:C:H5'	57:BA:673:C:C6	2.31	0.59
56:B9:31:LYS:HD3	57:BA:2478:A:OP1	2.03	0.59
52:A5:54:GLY:CA	52:A5:55:ARG:HE	2.16	0.59
57:BA:2306:C:H5	57:BA:2307:G:H1'	1.66	0.59
57:BA:1603:A:H5'	57:BA:1603:A:H8	1.66	0.59
57:BA:1711:C:O2'	57:BA:1712:C:H5'	2.02	0.59
26:AC:41:THR:HG21	26:AC:175:PRO:HB2	1.83	0.59
43:AW:64:MET:O	43:AW:65:LEU:HB3	2.02	0.59
36:BP:70:GLN:HG3	57:BA:389:G:N1	2.18	0.59
30:BG:27:ASN:HD22	30:BG:29:TRP:HB2	1.67	0.59
27:BD:30:GLU:HG3	27:BD:63:ARG:NE	2.18	0.59
27:BD:8:PRO:HB3	27:BD:14:ARG:HB2	1.85	0.59
55:A8:32:LEU:HB3	55:A8:36:LYS:HZ2	1.66	0.59
57:AA:145:G:H2'	57:AA:146:G:C5'	2.27	0.59
28:AE:70:ALA:O	28:AE:71:GLY:C	2.41	0.59
57:AA:2476:A:C2'	57:AA:2477:C:H5''	2.32	0.59
57:AA:672:C:C2'	57:AA:673:C:C5'	2.76	0.59
52:A5:51:TYR:H	52:A5:55:ARG:CD	2.15	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BO:4:PRO:O	35:BO:5:GLN:CB	2.51	0.59
57:AA:1882:C:H5'	57:AA:1883:G:OP2	2.01	0.59
57:AA:614(A):U:H4'	57:AA:614(B):G:H5''	1.84	0.59
57:AA:11:G:H22	57:AA:2628:C:P	2.25	0.59
36:AP:67:MET:H	57:AA:2415:G:H4'	1.68	0.59
27:AD:117:VAL:HG21	27:AD:128:GLY:O	2.03	0.59
30:AG:71:THR:HG22	30:AG:89:GLY:C	2.23	0.59
32:AI:94:ALA:O	32:AI:98:ALA:HB3	2.03	0.59
39:AS:83:LYS:HE3	39:AS:105:ALA:CB	2.32	0.59
45:AY:66:PRO:O	45:AY:67:LEU:HB3	2.02	0.59
58:BB:30:C:H2'	58:BB:31:C:O4'	2.03	0.59
26:BC:178:LYS:HG2	26:BC:181:PHE:CE1	2.38	0.59
32:BI:98:ALA:O	32:BI:101:LEU:HB3	2.03	0.59
35:BO:64:ARG:HG3	35:BO:64:ARG:HH11	4.46	0.59
57:BA:2133:G:H2'	57:BA:2157:G:N2	2.08	0.59
57:BA:145:G:H2'	57:BA:146:G:C5'	2.25	0.59
28:AE:11:MET:HB3	28:AE:24:THR:HA	1.84	0.59
57:AA:2287:A:H62	57:AA:2344:U:H3	1.51	0.59
57:BA:2807:G:H2'	57:BA:2808:U:H5''	1.85	0.59
34:BN:67:LEU:HB3	34:BN:88:GLU:HG2	1.84	0.59
31:AH:149:ARG:HG3	31:AH:162:ILE:O	2.03	0.59
35:AO:13:ASN:ND2	35:AO:97:ARG:HB2	2.17	0.59
57:BA:128:C:H5''	57:BA:128:C:H6	1.68	0.59
48:A1:40:ARG:HD3	48:A1:40:ARG:C	2.23	0.59
58:AB:40:U:H3'	58:AB:41:U:H5''	1.85	0.59
30:AG:36:LYS:HG2	30:AG:37:VAL:N	2.17	0.59
30:AG:38:VAL:HG22	30:AG:93:THR:HG23	1.85	0.59
31:AH:24:VAL:HG13	31:AH:35:VAL:HB	1.84	0.59
31:AH:97:ARG:HG2	31:AH:98:LEU:N	2.17	0.59
42:AV:34:GLU:O	42:AV:36:PRO:CD	2.50	0.59
48:B1:73:LEU:HD13	48:B1:94:LEU:HB3	1.84	0.59
26:BC:173:HIS:O	26:BC:174:ALA:HB3	2.02	0.59
30:BG:119:GLY:CA	30:BG:181:ARG:HB2	2.33	0.59
32:BI:87:LYS:CE	32:BI:121:LYS:HG3	2.33	0.59
36:BP:16:ARG:HB2	36:BP:16:ARG:NH1	2.18	0.59
36:BP:33:ARG:NH2	57:BA:587:C:H2'	2.17	0.59
27:BD:172:TYR:CD1	27:BD:186:HIS:HA	2.38	0.59
57:BA:158:U:H3'	57:BA:158:U:O2	2.02	0.59
28:BE:131:ALA:H	57:BA:2580:U:H5'	1.68	0.59
28:AE:78:LEU:C	28:AE:79:ARG:HD2	2.23	0.59
27:BD:242:ARG:HH21	57:BA:1826:G:C4'	2.09	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:AZ:24:LEU:CD2	46:AZ:86:VAL:HG22	2.31	0.59
47:B0:41:ARG:NH2	57:BA:2387:U:C4'	2.65	0.59
47:A0:41:ARG:NH2	57:AA:2387:U:C4'	2.65	0.59
57:BA:2103:C:H2'	57:BA:2104:G:H5''	1.85	0.59
34:BN:65:LYS:O	34:BN:69:GLN:HB2	2.03	0.59
57:AA:2712:U:H1'	57:AA:2712(A):A:C8	2.38	0.59
49:B2:2:LYS:HE3	49:B2:2:LYS:HA	1.84	0.59
57:AA:2322:A:H2'	57:AA:2323:G:O4'	2.02	0.59
57:AA:2376:A:H2'	57:AA:2377:A:O4'	2.02	0.59
46:BZ:175:VAL:CB	46:BZ:176:PRO:HD2	2.33	0.59
57:AA:2855:C:H2'	57:AA:2856:C:H6	1.68	0.59
57:BA:1636:C:H2'	57:BA:1637:A:C8	2.37	0.59
57:BA:286:C:O2'	57:BA:287:C:H5'	2.02	0.59
30:AG:42:GLY:O	30:AG:44:GLY:N	2.36	0.58
30:AG:51:ARG:NH1	30:AG:53:LEU:HD21	2.18	0.58
32:AI:118:LYS:NZ	32:AI:119:PRO:HG2	2.17	0.58
39:AS:59:LYS:HG2	39:AS:60:GLY:N	2.18	0.58
57:BA:1319:G:O2'	57:BA:1320:C:H5'	2.03	0.58
32:BI:120:ILE:HG22	32:BI:121:LYS:H	1.68	0.58
34:BN:57:ALA:H	34:BN:124:ALA:HA	1.68	0.58
27:BD:142:VAL:HG23	27:BD:192:THR:O	2.03	0.58
43:BW:40:ASN:O	43:BW:41:LYS:HG2	2.03	0.58
57:BA:1430:C:H2'	57:BA:1431:U:C6	2.38	0.58
40:BT:23:ARG:NH2	57:BA:2849:U:O4	2.35	0.58
40:BT:89:VAL:HB	40:BT:91:ARG:CG	2.20	0.58
37:AQ:9:TYR:OH	57:AA:911:A:H2'	2.02	0.58
36:AP:38:GLN:CG	36:AP:39:LYS:H	2.06	0.58
57:BA:1542:A:C8	57:BA:1544:A:H5''	2.38	0.58
57:AA:2103:C:C2'	57:AA:2104:G:H5''	2.33	0.58
57:BA:1378:A:H4'	57:BA:1379:A:OP1	2.02	0.58
49:B2:2:LYS:O	49:B2:6:VAL:HG23	2.02	0.58
57:AA:52:A:O2'	57:AA:53:A:H5'	2.03	0.58
46:BZ:4:ARG:HD2	46:BZ:60:GLU:OE1	2.02	0.58
29:AF:161:GLU:O	29:AF:165:ARG:HG2	2.02	0.58
57:AA:1146:C:O2'	57:AA:1147:C:H5'	2.03	0.58
32:AI:62:LYS:HE3	32:AI:133:HIS:O	2.03	0.58
37:AQ:19:GLY:O	37:AQ:20:ALA:HB3	2.03	0.58
39:AS:11:LYS:HD2	39:AS:11:LYS:N	2.18	0.58
41:AU:83:LEU:H	41:AU:83:LEU:HD13	1.68	0.58
45:AY:20:TYR:N	45:AY:20:TYR:CD1	2.71	0.58
29:BF:28:ILE:HG21	29:BF:116:ASP:HB2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:124:SER:HB2	30:BG:131:TYR:CE1	2.39	0.58
36:BP:97:PRO:HG2	36:BP:127:ALA:HA	1.85	0.58
36:BP:64:LYS:HD2	55:B8:25:MET:SD	2.43	0.58
42:BV:40:LEU:HD22	42:BV:46:VAL:HA	1.84	0.58
27:BD:44:ASN:N	27:BD:44:ASN:OD1	2.35	0.58
27:BD:129:ASN:ND2	27:BD:129:ASN:N	3.86	0.58
57:BA:1503:U:H2'	57:BA:1504:C:C6	2.38	0.58
28:BE:11:MET:HE1	28:BE:24:THR:HB	1.83	0.58
41:AU:25:TRP:CZ3	57:AA:17:G:H4'	2.38	0.58
49:A2:51:ARG:HB2	49:A2:55:ARG:HH21	1.67	0.58
57:AA:2524:G:H5'	57:AA:2524:G:C8	2.34	0.58
41:BU:44:ASN:HD21	42:BV:75:PHE:HB3	1.68	0.58
57:AA:2795:G:N2	57:AA:2796:U:H2'	2.18	0.58
34:AN:65:LYS:O	34:AN:69:GLN:HB2	2.04	0.58
32:AI:53:ALA:O	32:AI:57:ARG:HD2	2.02	0.58
57:AA:1973:G:H2'	57:AA:1974:C:C6	2.38	0.58
57:AA:2650:U:O2'	57:AA:2651:C:H5'	2.03	0.58
57:BA:176:G:O2'	57:BA:177:G:H5'	2.03	0.58
27:AD:248:SER:HB2	27:AD:249:PRO:HD2	1.83	0.58
57:AA:1014:U:H2'	57:AA:1015:G:H5''	1.86	0.58
57:AA:626:U:H5'	57:AA:627:A:C5'	2.32	0.58
29:AF:83:PHE:O	29:AF:84:VAL:HB	2.02	0.58
34:AN:14:VAL:HG13	34:AN:137:LYS:HG3	1.84	0.58
41:AU:31:SER:C	41:AU:33:ARG:H	2.07	0.58
42:AV:66:ARG:HG2	42:AV:66:ARG:HH11	1.68	0.58
51:B4:20:ASN:HD22	51:B4:21:VAL:N	2.01	0.58
57:BA:979:G:H3'	57:BA:980:A:H5''	1.86	0.58
30:BG:71:THR:HG22	30:BG:89:GLY:O	2.03	0.58
32:BI:81:VAL:CG2	32:BI:82:ARG:H	2.14	0.58
39:BS:49:VAL:HG12	39:BS:73:LEU:HD23	1.84	0.58
35:AO:10:VAL:HG13	35:AO:17:ARG:O	2.03	0.58
35:AO:64:ARG:HG3	35:AO:64:ARG:HH11	4.45	0.58
28:BE:61:ARG:NH2	57:BA:2810:A:H2'	2.18	0.58
31:BH:24:VAL:HG13	31:BH:35:VAL:HB	1.85	0.58
38:BR:11:ASN:C	38:BR:12:ARG:HG3	2.24	0.58
42:BV:34:GLU:O	42:BV:36:PRO:CD	2.51	0.58
57:AA:207:A:H2'	57:AA:208:C:O4'	2.03	0.58
57:BA:11:G:H22	57:BA:2628:C:P	2.25	0.58
46:AZ:67:LEU:HD12	46:AZ:67:LEU:H	1.68	0.58
58:AB:1:U:O2	58:AB:1:U:H2'	2.03	0.58
57:BA:614(A):U:H4'	57:BA:614(B):G:H5''	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:803:U:O2'	57:BA:804:A:H5'	2.03	0.58
43:AW:41:LYS:HE3	52:A5:25:LEU:HD11	1.85	0.58
39:AS:17:ARG:HD2	58:AB:9:G:OP1	2.02	0.58
38:AR:87:TYR:O	38:AR:89:ASP:N	2.33	0.58
43:AW:73:ALA:HB3	43:AW:106:ILE:HD11	1.86	0.58
30:BG:122:PRO:HG2	30:BG:123:ASN:H	1.68	0.58
30:BG:63:ILE:HG13	30:BG:63:ILE:O	2.01	0.58
32:BI:129:THR:HG22	32:BI:130:TYR:O	2.03	0.58
32:BI:62:LYS:HE3	32:BI:133:HIS:C	2.23	0.58
57:BA:1504:C:O2'	57:BA:1505:C:C5'	2.51	0.58
57:AA:1504:C:O2'	57:AA:1505:C:C5'	2.52	0.58
57:BA:1270:C:H5''	57:BA:1271:G:H5'	1.86	0.58
31:BH:105:LEU:CD2	31:BH:105:LEU:H	2.17	0.58
50:B3:8:LEU:CD1	50:B3:31:LEU:HA	2.29	0.58
37:BQ:1:MET:O	37:BQ:2:LEU:HB2	2.02	0.58
43:AW:92:ARG:HH11	43:AW:92:ARG:CB	2.15	0.58
55:A8:44:LYS:N	55:A8:44:LYS:HD2	2.18	0.58
57:AA:2401:U:C2'	57:AA:2402:C:H5''	2.34	0.58
57:AA:2306:C:H5	57:AA:2307:G:H1'	1.68	0.58
57:AA:1603:A:H8	57:AA:1603:A:H5'	1.67	0.58
57:AA:979:G:H3'	57:AA:980:A:H5''	1.86	0.58
30:AG:6:ALA:HB3	30:AG:104:GLU:OE2	2.02	0.58
32:AI:76:THR:HG21	32:AI:139:GLN:HE22	1.67	0.58
36:AP:64:LYS:C	36:AP:66:GLY:H	2.05	0.58
57:BA:1014:U:H2'	57:BA:1015:G:C5'	2.33	0.58
58:BB:81:G:H2'	58:BB:82:G:H5'	1.85	0.58
29:BF:8:GLN:CG	29:BF:126:VAL:HB	2.33	0.58
32:BI:78:THR:HB	32:BI:104:GLN:HE21	1.69	0.58
38:BR:44:LEU:HD21	38:BR:79:LEU:HD22	12.73	0.58
38:BR:45:ARG:HG3	38:BR:95:THR:CG2	2.34	0.58
39:BS:17:ARG:HA	39:BS:20:ARG:HH11	1.67	0.58
27:BD:10:THR:HG23	27:BD:13:ARG:CB	2.34	0.58
57:BA:1495:A:OP1	57:BA:1495:A:C8	2.56	0.58
44:BX:13:LEU:HD11	49:B2:41:ILE:HG22	1.85	0.58
52:B5:3:LYS:HZ3	57:BA:2614:A:H5'	1.66	0.58
35:BO:90:GLN:O	35:BO:91:LEU:HB2	2.02	0.58
50:A3:8:LEU:CD1	50:A3:31:LEU:HA	2.29	0.58
35:AO:4:PRO:O	35:AO:5:GLN:CB	2.51	0.58
57:AA:1533:G:H1'	57:AA:1537:G:H22	1.67	0.58
57:BA:2761:G:H3'	57:BA:2762:G:H5''	1.83	0.58
57:BA:2795:G:N2	57:BA:2796:U:H2'	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:A2:67:LYS:O	49:A2:70:GLN:HG2	2.03	0.58
57:AA:2555:U:H2'	57:AA:2556:C:H5'	1.84	0.58
58:AB:105:A:H2'	58:AB:106:G:O4'	2.04	0.58
32:AI:112:LYS:HD3	32:AI:112:LYS:C	5.12	0.58
32:AI:113:ARG:HG2	32:AI:113:ARG:NH1	2.18	0.58
41:AU:112:ARG:NH2	42:AV:46:VAL:CG1	2.67	0.58
42:AV:47:VAL:O	42:AV:49:THR:N	2.37	0.58
30:BG:118:ARG:HB3	30:BG:181:ARG:CZ	2.33	0.58
32:BI:92:VAL:HG22	32:BI:97:ILE:CG1	2.32	0.58
38:BR:87:TYR:O	38:BR:89:ASP:N	2.32	0.58
39:BS:93:LYS:O	39:BS:93:LYS:HG3	2.03	0.58
45:BY:13:VAL:HG21	45:BY:28:LYS:HZ2	1.68	0.58
57:BA:1504:C:O2'	57:BA:1505:C:H5'	2.04	0.58
58:BB:105:A:H2'	58:BB:106:G:O4'	2.04	0.58
57:AA:2807:G:H2'	57:AA:2808:U:H5''	1.84	0.58
57:AA:1542:A:N7	57:AA:1544:A:H5''	2.18	0.58
38:BR:9:LYS:O	38:BR:10:LEU:HD23	2.04	0.58
46:AZ:155:LEU:O	46:AZ:157:LEU:HD23	2.04	0.58
57:BA:639:U:H2'	57:BA:640:C:C6	2.38	0.58
57:BA:2473:U:C5	57:BA:2474:C:C6	2.92	0.58
57:BA:1603:A:C8	57:BA:1603:A:H5'	2.38	0.58
57:BA:2591:C:H2'	57:BA:2592:G:C8	2.39	0.58
57:AA:775:G:O2'	57:AA:776:G:H5'	6.83	0.58
57:AA:363(E):U:H5'	57:AA:363(F):A:OP2	2.03	0.58
58:AB:8:U:H6	58:AB:8:U:H5'	1.68	0.58
27:AD:172:TYR:CD1	27:AD:186:HIS:HA	2.39	0.58
27:AD:35:LYS:NZ	27:AD:36:PRO:HD3	2.18	0.58
29:AF:28:ILE:HG21	29:AF:116:ASP:HB2	1.85	0.58
36:AP:16:ARG:HD3	36:AP:17:LYS:N	2.18	0.58
36:AP:59:LEU:HA	36:AP:61:ARG:HH11	1.62	0.58
39:AS:17:ARG:HA	39:AS:20:ARG:HH11	1.68	0.58
39:AS:23:ARG:HB3	39:AS:24:LEU:HD22	1.86	0.58
57:BA:1014:U:H2'	57:BA:1015:G:H5''	1.84	0.58
36:BP:16:ARG:CD	36:BP:18:ARG:H	2.10	0.58
36:BP:67:MET:H	57:BA:2415:G:H4'	1.66	0.58
42:BV:39:LEU:HA	42:BV:47:VAL:HG13	1.86	0.58
27:BD:186:HIS:CD2	27:BD:188:GLU:H	2.20	0.58
45:BY:88:LYS:O	45:BY:90:LEU:HD23	2.03	0.58
46:BZ:144:LEU:HD11	46:BZ:150:LEU:HD22	1.85	0.58
57:AA:1826:G:H2'	57:AA:1827:C:H6	1.69	0.58
53:B6:5:VAL:HG11	53:B6:7:ILE:HG22	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AF:108:LYS:HD2	29:AF:112:MET:CE	2.31	0.58
42:BV:81:TYR:C	42:BV:82:ARG:HD2	2.24	0.58
51:A4:22:ILE:H	51:A4:22:ILE:HD12	1.67	0.58
58:BB:1:U:O2	58:BB:1:U:H2'	2.02	0.58
29:AF:128:ALA:O	29:AF:142:TRP:NE1	2.34	0.58
31:AH:85:LYS:HZ2	31:AH:133:VAL:CB	2.17	0.58
32:AI:129:THR:CG2	32:AI:130:TYR:N	2.65	0.58
39:AS:89:ARG:NH1	39:AS:92:TYR:HA	2.19	0.58
45:AY:13:VAL:HG21	45:AY:28:LYS:HZ2	1.67	0.58
36:BP:38:GLN:CD	57:BA:943:U:OP2	2.42	0.58
30:BG:109:VAL:C	30:BG:112:PRO:CD	2.72	0.58
30:BG:55:LYS:O	30:BG:59:GLU:HB2	2.03	0.58
32:BI:103:ARG:O	32:BI:105:HIS:N	2.35	0.58
32:BI:27:ARG:HG3	32:BI:27:ARG:HH11	1.67	0.58
36:BP:16:ARG:HD3	36:BP:17:LYS:N	2.19	0.58
37:BQ:21:THR:HG22	37:BQ:23:GLY:O	2.04	0.58
41:BU:65:ILE:HD11	41:BU:93:LYS:HA	1.86	0.58
57:AA:2801(A):A:O4'	57:AA:2802:G:H2'	2.03	0.58
40:AT:89:VAL:HG11	40:AT:91:ARG:NE	2.18	0.58
35:BO:104:ARG:HE	40:BT:33:LYS:CD	2.17	0.58
40:BT:125:ARG:C	40:BT:127:ALA:H	2.05	0.58
36:AP:85:LEU:CD2	36:AP:85:LEU:H	2.12	0.58
57:BA:1542:A:N7	57:BA:1544:A:H5''	2.19	0.58
57:AA:1448:G:H1'	57:AA:1528:A:N6	2.18	0.58
57:AA:1697:G:H3'	57:AA:1698:A:H5''	1.84	0.58
46:AZ:81:ARG:HH11	46:AZ:81:ARG:CB	2.16	0.58
43:BW:9:TYR:H	43:BW:102:HIS:HD2	1.49	0.58
57:AA:1339:G:N2	57:AA:1603:A:H1'	2.19	0.58
57:BA:2061:G:H5''	57:BA:2503:A:C2	2.39	0.58
43:AW:91:GLY:HA2	57:AA:1614:A:N1	2.18	0.58
30:BG:170:ARG:HG3	30:BG:180:PHE:HE1	1.69	0.58
57:BA:1701:A:H5'	57:BA:1702:G:OP2	2.03	0.58
57:AA:2657:A:C2'	57:AA:2658:C:H5'	2.34	0.58
27:AD:121:PRO:HB3	27:AD:135:PHE:CE1	2.37	0.58
31:AH:85:LYS:NZ	31:AH:133:VAL:N	2.51	0.58
34:AN:57:ALA:H	34:AN:124:ALA:HA	1.69	0.58
37:AQ:21:THR:O	37:AQ:23:GLY:N	2.36	0.58
45:AY:27:VAL:HG12	45:AY:29:GLU:H	1.68	0.58
30:BG:173:LEU:HD22	30:BG:178:PHE:CE1	2.38	0.58
36:BP:83:VAL:HG23	36:BP:105:LEU:HD13	1.85	0.58
39:BS:89:ARG:HH11	39:BS:92:TYR:HA	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BV:39:LEU:HD12	42:BV:47:VAL:HG11	1.85	0.58
27:BD:117:VAL:HG21	27:BD:128:GLY:O	2.04	0.58
27:BD:35:LYS:HG2	27:BD:63:ARG:HG3	1.85	0.58
45:BY:27:VAL:C	45:BY:28:LYS:HG2	2.23	0.58
57:BA:1485:G:H1'	57:BA:1505:C:N4	2.18	0.58
46:BZ:68:PRO:HG2	46:BZ:91:LEU:N	2.18	0.58
28:BE:14:ILE:HD11	28:BE:173:VAL:HG11	1.86	0.58
31:BH:20:ALA:HB1	31:BH:21:PRO:HD2	1.85	0.58
28:AE:131:ALA:H	57:AA:2580:U:H5'	1.69	0.58
28:AE:61:ARG:HD3	57:AA:2787:C:H1'	1.86	0.58
37:AQ:84:GLY:O	37:AQ:85:LYS:HB2	2.03	0.58
46:AZ:42:VAL:HG13	46:AZ:43:GLU:OE1	2.03	0.58
36:AP:95:VAL:CG2	36:AP:125:VAL:HB	2.34	0.58
57:AA:341:G:O2'	57:AA:342:G:H5'	2.03	0.58
41:BU:102:GLU:HG3	42:BV:2:PHE:HE1	1.68	0.58
38:BR:56:LYS:HE3	38:BR:88:ARG:HA	1.85	0.58
57:AA:214:G:H1'	57:AA:216:A:O2'	2.04	0.58
38:BR:92:GLY:HA2	38:BR:94:TYR:CE1	2.37	0.58
57:BA:363(E):U:H5'	57:BA:363(F):A:OP2	2.03	0.58
57:AA:1652:A:H3'	57:AA:1653:G:C8	2.38	0.58
57:AA:669:G:N3	57:AA:669:G:H2'	2.19	0.58
29:AF:68:LYS:HE2	57:AA:2444:G:OP2	2.04	0.58
26:AC:43:GLU:HG2	26:AC:216:THR:O	2.03	0.58
31:AH:35:VAL:O	31:AH:37:VAL:HG23	2.04	0.58
32:AI:87:LYS:HG3	32:AI:121:LYS:O	2.04	0.58
32:AI:94:ALA:HB1	32:AI:98:ALA:CB	2.33	0.58
36:AP:29:LYS:N	36:AP:29:LYS:HD2	2.19	0.58
36:AP:41:ARG:HH12	36:AP:45:LEU:HD12	1.68	0.58
41:AU:9:VAL:O	41:AU:13:LYS:HE3	2.04	0.58
45:AY:68:HIS:HB3	45:AY:71:LYS:HG2	1.86	0.58
55:A8:61:LEU:CG	55:A8:62:LEU:H	2.17	0.58
35:AO:104:ARG:HE	40:AT:33:LYS:CD	2.16	0.58
45:BY:13:VAL:HG23	45:BY:73:ARG:C	2.24	0.58
51:A4:20:ASN:HD22	51:A4:21:VAL:N	2.02	0.58
57:BA:1827:C:C2'	57:BA:1828:G:H5'	2.34	0.58
57:BA:1448:G:H1'	57:BA:1528:A:N6	2.19	0.58
57:AA:2645:G:C3'	57:AA:2646:C:H5'	2.32	0.58
39:AS:44:LYS:O	39:AS:46:VAL:HG23	2.04	0.58
33:BJ:69:PRO:O	33:BJ:70:GLU:CB	2.50	0.58
57:AA:271(F):C:H2'	57:AA:271(G):C:C6	2.36	0.58
44:AX:64:LYS:NZ	44:AX:73:ARG:NH2	2.51	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BX:64:LYS:NZ	44:BX:73:ARG:NH2	2.52	0.58
55:A8:14:VAL:HG21	55:A8:22:VAL:CG1	2.34	0.58
29:BF:161:GLU:O	29:BF:165:ARG:HG2	2.04	0.58
57:BA:532:A:OP2	57:BA:532:A:O4'	5.17	0.58
29:AF:196:LEU:O	29:AF:196:LEU:HD23	2.04	0.58
57:BA:2201:C:O2'	57:BA:2202:C:H5'	2.04	0.58
57:AA:473:G:H2'	57:AA:474:G:H8	2.95	0.57
57:AA:621:A:H2'	57:AA:622:G:H5'	1.85	0.57
27:AD:71:ASP:CB	27:AD:103:ARG:NH2	2.67	0.57
32:AI:76:THR:OG1	32:AI:77:LEU:N	2.37	0.57
41:AU:92:ARG:O	41:AU:94:ASN:N	2.36	0.57
58:BB:40:U:H3'	58:BB:41:U:H5''	1.85	0.57
30:BG:31:VAL:HG13	30:BG:31:VAL:O	2.04	0.57
34:BN:23:LEU:CD1	34:BN:98:VAL:HG12	2.34	0.57
36:BP:16:ARG:CA	36:BP:16:ARG:HH11	2.17	0.57
55:B8:61:LEU:C	55:B8:63:PRO:HD2	2.24	0.57
45:BY:27:VAL:HG12	45:BY:29:GLU:H	1.69	0.57
51:A4:15:ILE:HD13	51:A4:21:VAL:HG22	1.85	0.57
57:BA:1590:U:C3'	57:BA:1591:G:H5''	2.33	0.57
57:AA:1504:C:O2'	57:AA:1505:C:H5'	2.04	0.57
53:B6:11:LEU:HD13	53:B6:11:LEU:H	1.69	0.57
57:BA:902:C:H2'	57:BA:903:C:H6	1.69	0.57
28:BE:116:VAL:O	28:BE:117:MET:HG2	2.04	0.57
33:BJ:20:ALA:HB1	33:BJ:89:ALA:HB2	1.86	0.57
57:BA:2327:A:H2'	57:BA:2328:A:H8	1.64	0.57
57:BA:2401:U:C2'	57:BA:2402:C:H5''	2.34	0.57
57:BA:1509(A):A:H2'	57:BA:1509(B):A:H8	1.69	0.57
57:BA:2753:A:O2'	57:BA:2754:U:H5'	2.04	0.57
57:BA:1146:C:O2'	57:BA:1147:C:H5'	2.04	0.57
39:BS:67:ARG:HB3	39:BS:71:ARG:HH12	1.69	0.57
43:BW:1:MET:C	43:BW:64:MET:HE3	2.24	0.57
35:AO:60:ALA:HA	35:AO:87:ILE:HG12	1.87	0.57
35:AO:69:ILE:H	35:AO:69:ILE:HD12	1.67	0.57
46:BZ:151:HIS:N	46:BZ:151:HIS:HD2	2.02	0.57
53:B6:26:ASN:O	53:B6:27:LYS:HB2	2.04	0.57
57:AA:1779:U:C5	57:AA:1784:A:N7	2.61	0.57
26:AC:191:ARG:HD3	26:AC:195:ARG:HH22	1.69	0.57
57:BA:93:G:H2'	57:BA:94:C:C6	2.39	0.57
34:AN:67:LEU:O	34:AN:68:GLU:HB2	2.04	0.57
35:BO:13:ASN:HD21	35:BO:97:ARG:N	2.02	0.57
35:AO:13:ASN:HD21	35:AO:97:ARG:N	2.01	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2602:A:H4'	57:AA:2603:G:C5'	2.34	0.57
57:BA:845:G:HO2'	57:BA:846:C:H5	1.50	0.57
57:BA:2555:U:H2'	57:BA:2556:C:H5'	1.86	0.57
57:AA:2584:U:H2'	57:AA:2585:U:H5'	1.87	0.57
57:BA:2855:C:H2'	57:BA:2856:C:H6	1.69	0.57
32:AI:73:GLU:HB3	32:AI:136:VAL:CG2	2.33	0.57
34:AN:132:ALA:O	34:AN:133:GLN:HB3	2.05	0.57
41:AU:65:ILE:O	41:AU:69:CYS:HB3	2.04	0.57
42:AV:19:LYS:HZ2	42:AV:20:LEU:H	1.49	0.57
42:AV:38:LEU:O	42:AV:39:LEU:HD13	2.04	0.57
43:AW:40:ASN:O	43:AW:41:LYS:HG2	2.04	0.57
51:B4:15:ILE:HD13	51:B4:21:VAL:HG22	1.86	0.57
57:BA:1107:G:O2'	57:BA:1108:U:H5'	2.04	0.57
39:BS:11:LYS:N	39:BS:11:LYS:HD2	2.19	0.57
40:AT:27:THR:O	40:AT:28:VAL:CB	2.52	0.57
43:BW:12:ILE:HD13	43:BW:17:VAL:HG22	1.86	0.57
45:BY:68:HIS:HB3	45:BY:71:LYS:HG2	1.85	0.57
45:BY:8:LYS:HG2	45:BY:28:LYS:HZ3	1.68	0.57
53:A6:27:LYS:CD	53:A6:30:THR:HB	2.24	0.57
28:BE:70:ALA:O	28:BE:71:GLY:C	2.41	0.57
57:AA:1719:G:O2'	57:AA:1720:U:H5'	2.04	0.57
47:A0:48:GLY:HA3	47:A0:80:HIS:ND1	2.20	0.57
46:BZ:81:ARG:HH11	46:BZ:81:ARG:CB	2.17	0.57
52:B5:6:VAL:CG1	57:BA:2016:U:H1'	2.34	0.57
50:B3:44:ARG:O	50:B3:48:GLU:HG2	2.03	0.57
38:AR:56:LYS:HE3	38:AR:88:ARG:HA	1.86	0.57
57:AA:2176:A:H2'	57:AA:2177:C:C6	2.39	0.57
29:AF:185:ASP:HA	29:AF:188:ARG:CG	2.34	0.57
31:AH:20:ALA:HB1	31:AH:21:PRO:HD2	1.86	0.57
32:AI:81:VAL:CG2	32:AI:82:ARG:H	2.16	0.57
36:AP:16:ARG:HH11	36:AP:16:ARG:CA	2.17	0.57
39:AS:106:ARG:HH11	39:AS:106:ARG:C	2.08	0.57
41:BU:90:VAL:CG2	42:BV:39:LEU:HG	2.34	0.57
40:BT:55:ASN:H	40:BT:59:THR:CG2	2.16	0.57
53:A6:5:VAL:HG11	53:A6:7:ILE:HG22	1.85	0.57
53:A6:5:VAL:CG1	53:A6:7:ILE:HG22	2.35	0.57
57:AA:1503:U:H2'	57:AA:1504:C:C6	2.39	0.57
57:AA:902:C:H2'	57:AA:903:C:H6	1.69	0.57
57:AA:93:G:H2'	57:AA:94:C:C6	2.39	0.57
28:AE:77:ILE:CG2	28:AE:78:LEU:H	2.01	0.57
57:BA:792:G:H5''	57:BA:793:A:H5'	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:AJ:24:PHE:HA	33:AJ:87:VAL:CB	2.34	0.57
45:BY:95:LYS:HB3	45:BY:100:ALA:HA	1.86	0.57
28:BE:129:HIS:HE1	57:BA:1670:C:O2	1.87	0.57
57:AA:2193:G:H8	57:AA:2193:G:H5'	1.69	0.57
57:AA:2000:G:O2'	57:AA:2001:A:H5'	2.04	0.57
57:AA:2753:A:O2'	57:AA:2754:U:H5'	2.03	0.57
26:AC:7:ARG:HD2	26:AC:35:THR:O	2.05	0.57
30:AG:2:PRO:HA	51:A4:25:TYR:CE2	2.39	0.57
42:AV:39:LEU:O	42:AV:40:LEU:HB2	2.04	0.57
48:B1:52:ARG:HH12	57:BA:2218:U:C1'	2.08	0.57
41:BU:10:ARG:HG3	57:BA:1251:C:OP1	2.04	0.57
29:BF:21:ALA:C	29:BF:23:ASP:H	2.07	0.57
31:BH:89:ILE:HD11	31:BH:94:TYR:O	2.04	0.57
34:BN:18:ALA:HB1	34:BN:21:LYS:HB3	1.85	0.57
41:BU:92:ARG:NH1	42:BV:11:GLN:O	2.38	0.57
42:BV:19:LYS:HG2	42:BV:94:LEU:CB	2.31	0.57
27:BD:21:PHE:O	27:BD:24:ILE:HD13	2.05	0.57
31:BH:156:ALA:O	31:BH:158:HIS:N	2.37	0.57
46:BZ:120:ILE:O	46:BZ:121:HIS:HB2	2.02	0.57
52:B5:2:ALA:N	57:BA:2014:A:HO2'	2.02	0.57
40:BT:65:LYS:HG3	40:BT:66:VAL:N	2.20	0.57
55:B8:33:ASN:HA	55:B8:36:LYS:CD	2.35	0.57
57:AA:1019:U:H3	57:AA:1142(A):A:N6	1.90	0.57
31:BH:35:VAL:O	31:BH:37:VAL:HG23	2.04	0.57
28:AE:61:ARG:NH2	57:AA:2810:A:H2'	2.20	0.57
58:BB:8:U:H5'	58:BB:8:U:H6	1.69	0.57
40:AT:125:ARG:C	40:AT:127:ALA:H	2.06	0.57
57:BA:141:A:C8	57:BA:1408:C:O2'	2.57	0.57
42:BV:82:ARG:HG2	42:BV:82:ARG:HH11	1.69	0.57
26:AC:7:ARG:HD3	57:AA:2128:C:H5'	1.84	0.57
32:AI:87:LYS:HE3	32:AI:121:LYS:HG3	1.86	0.57
32:AI:127:VAL:O	32:AI:128:LEU:HD13	2.05	0.57
37:AQ:21:THR:HG22	37:AQ:23:GLY:O	2.04	0.57
38:AR:38:VAL:CG1	38:AR:42:LYS:HD2	2.34	0.57
32:BI:118:LYS:HZ2	32:BI:119:PRO:HD2	1.69	0.57
32:BI:92:VAL:HG22	32:BI:97:ILE:HG13	1.87	0.57
36:BP:101:VAL:HB	36:BP:107:LYS:CA	2.31	0.57
35:AO:90:GLN:O	35:AO:91:LEU:HB2	2.04	0.57
28:BE:78:LEU:C	28:BE:79:ARG:HD2	2.25	0.57
28:BE:50:GLY:CA	28:BE:78:LEU:HB3	2.33	0.57
28:AE:61:ARG:NH2	57:AA:2632:A:O2'	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:AE:142:GLY:HA3	57:AA:2052:G:O4'	2.05	0.57
58:BB:111:G:O2'	58:BB:112:U:H5'	2.05	0.57
43:BW:92:ARG:HH11	43:BW:92:ARG:CB	2.14	0.57
57:BA:962:G:O2'	57:BA:963:U:H5'	2.04	0.57
57:BA:364:C:H2'	57:BA:365:C:C5'	2.35	0.57
57:AA:633:A:H2'	57:AA:634:C:H5'	1.87	0.57
54:B7:19:ARG:NH1	54:B7:19:ARG:HG2	2.20	0.57
34:BN:62:VAL:HG23	34:BN:66:LYS:HD2	1.86	0.57
29:BF:148:LEU:HD23	29:BF:191:ARG:NH1	2.19	0.57
53:B6:42:TRP:HA	53:B6:42:TRP:HE3	1.70	0.57
56:B9:19:ARG:HA	57:BA:2757:A:OP1	2.05	0.57
56:A9:25:VAL:HB	56:A9:34:GLN:HB2	1.86	0.57
57:AA:128:C:H6	57:AA:128:C:H5''	1.69	0.57
29:AF:33:LEU:O	29:AF:37:VAL:HG23	2.05	0.57
57:AA:1713:U:O2'	57:AA:1714:G:H5'	2.05	0.57
28:AE:129:HIS:HE1	57:AA:1670:C:O2	1.88	0.57
47:B0:36:ILE:CD1	47:B0:39:ARG:HG2	2.35	0.57
57:AA:1286:A:O2'	57:AA:1288:U:OP2	2.18	0.57
26:AC:178:LYS:HG2	26:AC:181:PHE:CE1	2.39	0.57
36:AP:102:ARG:NH2	36:AP:102:ARG:HB3	2.20	0.57
36:AP:16:ARG:HB2	36:AP:16:ARG:NH1	2.18	0.57
38:AR:32:GLY:HA2	38:AR:116:LEU:HD12	1.87	0.57
29:BF:68:LYS:HE2	57:BA:2444:G:OP2	2.04	0.57
37:BQ:14:ARG:HD2	57:BA:958:U:H5''	1.86	0.57
46:BZ:151:HIS:HA	46:BZ:171:ILE:H	1.70	0.57
40:BT:89:VAL:HG11	40:BT:91:ARG:NE	2.20	0.57
57:BA:1887:C:H2'	57:BA:1888:G:C5'	2.23	0.57
53:B6:5:VAL:CG1	53:B6:7:ILE:HG22	2.35	0.57
31:BH:7:LEU:HG	31:BH:69:ARG:HD2	1.86	0.57
29:AF:206:ILE:HG22	29:AF:207:GLY:N	2.16	0.57
49:B2:47:ASN:HD22	57:BA:94(A):G:N2	1.99	0.57
57:BA:2657:A:C2'	57:BA:2658:C:H5'	2.33	0.57
57:BA:1419:A:O2'	57:BA:1420:U:H5''	2.05	0.57
33:BJ:88:ALA:O	33:BJ:90:ALA:N	2.37	0.57
57:BA:654(Q):C:O2'	57:BA:654(R):C:H5'	2.04	0.57
47:A0:14:ARG:HG3	47:A0:14:ARG:NH1	2.20	0.57
57:BA:2439:A:H5'	57:BA:2439:A:C8	2.40	0.57
57:AA:803:U:O2'	57:AA:804:A:H5'	2.04	0.57
57:BA:2193:G:H5'	57:BA:2193:G:H8	1.69	0.57
57:BA:1642:G:O2'	57:BA:1643:G:H5'	2.04	0.57
27:AD:142:VAL:HG23	27:AD:192:THR:C	2.25	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AF:185:ASP:OD1	29:AF:188:ARG:HD3	2.05	0.57
32:AI:82:ARG:O	32:AI:89:TYR:HB2	2.04	0.57
42:AV:19:LYS:HA	42:AV:19:LYS:HE2	1.86	0.57
30:BG:67:LYS:HZ3	51:B4:6:HIS:CE1	2.22	0.57
40:AT:29:ARG:HG2	40:AT:85:LYS:CA	2.35	0.57
40:BT:106:SER:HB2	40:BT:110:ILE:HD11	1.87	0.57
28:AE:116:VAL:O	28:AE:117:MET:HG2	2.05	0.57
52:B5:33:CYS:SG	52:B5:49:CYS:SG	3.03	0.57
27:AD:166:GLN:CA	27:AD:166:GLN:NE2	2.67	0.57
57:AA:1771:C:HO2'	57:AA:1786:A:H8	1.51	0.57
57:AA:394:A:O2'	57:AA:395:U:H5'	2.04	0.57
34:AN:62:VAL:HG23	34:AN:66:LYS:HD2	1.87	0.57
52:B5:6:VAL:HG13	52:B5:7:PRO:HD2	1.84	0.57
29:AF:148:LEU:HD23	29:AF:191:ARG:NH1	2.20	0.57
57:AA:2567:G:H2'	57:AA:2568:C:C6	2.39	0.57
57:BA:2567:G:H2'	57:BA:2568:C:C6	2.39	0.57
57:AA:2591:C:H2'	57:AA:2592:G:C8	2.39	0.57
57:BA:2853:C:H2'	57:BA:2854:G:H8	1.68	0.57
57:BA:2584:U:H2'	57:BA:2585:U:H5'	1.87	0.57
39:AS:29:PHE:CE1	58:AB:7:G:H4'	2.40	0.57
27:AD:72:LYS:HZ2	27:AD:75:ILE:HD12	1.69	0.57
29:AF:78:ILE:HA	29:AF:83:PHE:CE1	2.40	0.57
32:AI:97:ILE:O	32:AI:101:LEU:HB2	2.04	0.57
32:AI:87:LYS:HZ1	32:AI:121:LYS:HG3	1.69	0.57
38:AR:73:VAL:O	38:AR:76:VAL:HG12	2.05	0.57
39:AS:87:PHE:HB2	39:AS:106:ARG:HE	1.69	0.57
57:BA:2176:A:H2'	57:BA:2177:C:C6	2.39	0.57
57:BA:2314:C:O2'	57:BA:2315:G:H5'	2.05	0.57
30:BG:133:LEU:CD1	30:BG:135:LEU:HD11	2.34	0.57
32:BI:62:LYS:HE3	32:BI:133:HIS:O	2.05	0.57
38:BR:34:ILE:HD12	57:BA:1278:A:H4'	1.87	0.57
40:BT:66:VAL:HA	40:BT:71:GLY:HA2	1.87	0.57
33:BJ:73:GLY:C	33:BJ:75:GLN:H	2.07	0.57
28:BE:34:VAL:HG22	28:BE:48:GLN:NE2	2.20	0.57
28:AE:122:PHE:CE2	57:AA:2512:C:H4'	2.40	0.57
56:A9:1:MET:HB3	56:A9:4:ARG:CZ	2.35	0.57
57:AA:2103:C:H2'	57:AA:2104:G:H5''	1.86	0.57
29:BF:169:ASN:ND2	57:BA:322:A:H3'	2.18	0.57
42:AV:79:VAL:CG2	57:AA:1188:U:H4'	2.35	0.57
35:BO:49:ARG:HH21	57:BA:1423:G:H5'	98.58	0.57
48:B1:3:LYS:HG3	48:B1:4:VAL:H	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:AZ:34:ASN:HD22	46:AZ:35:ARG:N	2.03	0.57
27:AD:91:ARG:NH1	27:AD:91:ARG:HG2	2.18	0.57
53:B6:42:TRP:CZ2	57:BA:2349:G:H4'	2.40	0.57
57:AA:1711:C:O2'	57:AA:1712:C:H5'	2.04	0.57
57:BA:2223:G:H2'	57:BA:2224:G:H5'	1.87	0.57
35:BO:22:ILE:HD12	57:BA:1952:A:C5	2.40	0.57
44:AX:59:VAL:HG12	44:AX:59:VAL:O	2.05	0.57
44:BX:59:VAL:O	44:BX:59:VAL:HG12	2.03	0.57
50:B3:17:LYS:HG2	57:BA:969:U:OP1	2.04	0.57
57:AA:1495:A:C8	57:AA:1495:A:OP1	2.57	0.57
45:AY:13:VAL:HG23	45:AY:73:ARG:C	2.25	0.57
30:BG:57:ALA:CB	30:BG:90:LEU:HD21	2.34	0.57
32:BI:132:PRO:HG2	32:BI:133:HIS:CE1	2.39	0.57
32:BI:76:THR:OG1	32:BI:77:LEU:N	2.36	0.57
34:BN:91:LEU:CD2	34:BN:98:VAL:HG21	2.35	0.57
36:BP:144:GLU:H	36:BP:145:PRO:HD3	1.67	0.57
41:BU:9:VAL:O	41:BU:13:LYS:HE3	2.05	0.57
41:BU:95:LEU:HD12	42:BV:11:GLN:HB2	1.85	0.57
55:A8:61:LEU:C	55:A8:63:PRO:HD2	2.25	0.57
27:BD:142:VAL:HG23	27:BD:192:THR:C	2.25	0.57
40:BT:116:ALA:HB1	40:BT:121:ILE:HD11	1.87	0.57
40:BT:31:SER:HG	40:BT:43:GLN:H	1.53	0.57
47:B0:11:ARG:HB2	47:B0:11:ARG:NH1	2.05	0.57
53:B6:27:LYS:HB3	53:B6:30:THR:CG2	2.35	0.57
28:AE:134:ILE:HA	28:AE:137:HIS:CD2	2.40	0.57
28:AE:102:VAL:HB	28:AE:199:ARG:O	2.05	0.57
42:AV:81:TYR:C	42:AV:82:ARG:HD2	2.26	0.57
46:AZ:134:PRO:HB2	46:AZ:137:ILE:HD11	1.87	0.57
38:BR:117:VAL:O	38:BR:118:GLU:HB2	2.05	0.57
57:BA:1570:A:H2'	57:BA:1571:A:C8	2.40	0.57
57:AA:1701:A:H5'	57:AA:1702:G:OP2	2.03	0.57
57:AA:1509(A):A:H2'	57:AA:1509(B):A:H8	1.69	0.57
46:BZ:155:LEU:HD23	46:BZ:155:LEU:N	2.19	0.57
36:AP:33:ARG:NH2	57:AA:587:C:C3'	2.68	0.56
58:AB:5:C:O2'	58:AB:6:C:H5'	2.05	0.56
30:AG:67:LYS:HD3	51:A4:6:HIS:CD2	2.40	0.56
31:AH:7:LEU:HG	31:AH:69:ARG:HD2	1.87	0.56
45:AY:27:VAL:C	45:AY:28:LYS:HG2	2.24	0.56
32:BI:109:ILE:N	32:BI:109:ILE:HD12	2.20	0.56
42:BV:87:HIS:NE2	42:BV:89:GLN:HG2	2.20	0.56
55:B8:2:PRO:HA	57:BA:591:C:H1'	1.85	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AP:38:GLN:CD	57:AA:943:U:OP2	2.44	0.56
57:BA:185:U:H4'	57:BA:218:A:H4'	1.85	0.56
57:BA:2261:C:O2'	57:BA:2262:U:H5'	2.05	0.56
57:AA:1542:A:C8	57:AA:1544:A:H5''	2.39	0.56
46:BZ:57:ILE:HG22	46:BZ:58:VAL:H	1.69	0.56
36:BP:84:ASN:HA	36:BP:115:LEU:O	2.05	0.56
57:AA:1603:A:H5'	57:AA:1603:A:C8	2.40	0.56
50:A3:17:LYS:HG2	57:AA:969:U:OP1	2.05	0.56
57:BA:2602:A:H4'	57:BA:2603:G:C5'	2.34	0.56
57:AA:535:C:O2'	57:AA:536:A:H5'	2.05	0.56
57:AA:2845:G:O2'	57:AA:2846:G:H5'	2.04	0.56
57:AA:654(Q):C:O2'	57:AA:654(R):C:H5'	2.05	0.56
47:B0:20:ARG:HH12	57:BA:2271:G:H4'	1.68	0.56
56:B9:25:VAL:HB	56:B9:34:GLN:HB2	1.86	0.56
57:AA:266:G:C8	57:AA:266:G:H5'	4.43	0.56
27:AD:80:ALA:HB2	27:AD:96:HIS:CD2	2.40	0.56
34:AN:18:ALA:HB1	34:AN:21:LYS:HB3	1.87	0.56
36:AP:101:VAL:HB	36:AP:107:LYS:CA	2.31	0.56
36:AP:102:ARG:CB	36:AP:102:ARG:HH21	2.18	0.56
39:AS:67:ARG:HB3	39:AS:71:ARG:HH12	1.69	0.56
45:AY:95:LYS:HD3	45:AY:100:ALA:CB	2.35	0.56
57:BA:2121:G:H1	57:BA:2177:C:N4	2.03	0.56
57:BA:997:G:O2'	57:BA:998:C:H5'	2.05	0.56
41:BU:95:LEU:HD12	42:BV:11:GLN:HE21	1.69	0.56
27:AD:43:ARG:HH11	27:AD:44:ASN:CG	2.08	0.56
35:BO:60:ALA:HA	35:BO:87:ILE:HG12	1.85	0.56
53:A6:11:LEU:H	53:A6:11:LEU:HD13	1.70	0.56
57:BA:1314:C:H5'	57:BA:1314:C:H6	1.71	0.56
57:BA:1652:A:O2'	57:BA:1653:G:H5'	2.05	0.56
28:BE:134:ILE:O	28:BE:134:ILE:HD12	2.05	0.56
28:BE:50:GLY:HA3	28:BE:74:PRO:HG2	1.86	0.56
28:BE:111:ARG:HG3	38:BR:2:ARG:HG2	1.86	0.56
57:AA:1542:A:H5'	57:AA:1543:C:OP2	2.05	0.56
32:AI:46:ALA:HB2	57:AA:271(P):C:C5'	2.35	0.56
57:BA:2645:G:H3'	57:BA:2646:C:C5'	2.30	0.56
57:BA:2523:G:H2'	57:BA:2524:G:C5'	2.35	0.56
36:BP:146:VAL:HG13	36:BP:147:LEU:H	1.67	0.56
46:BZ:134:PRO:C	46:BZ:135:GLU:HG2	2.26	0.56
49:B2:44:LEU:O	49:B2:45:SER:CB	2.52	0.56
49:B2:28:LYS:HD2	49:B2:53:LEU:HD21	1.87	0.56
48:A1:51:VAL:HG21	48:A1:74:VAL:HG21	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AD:10:THR:HG23	27:AD:13:ARG:CB	2.35	0.56
27:AD:21:PHE:O	27:AD:24:ILE:HD13	2.05	0.56
29:AF:22:ALA:C	29:AF:24:LEU:H	2.08	0.56
41:AU:65:ILE:HD11	41:AU:93:LYS:HA	1.86	0.56
45:AY:77:PRO:O	45:AY:78:ALA:HB2	2.05	0.56
57:AA:1354:A:H2'	57:AA:1355:G:O4'	2.05	0.56
26:AC:54:ARG:HB3	26:AC:57:GLN:HB3	1.87	0.56
30:AG:145:THR:OG1	30:AG:146:TYR:N	2.38	0.56
32:AI:107:VAL:O	32:AI:109:ILE:HD11	2.06	0.56
32:AI:115:ALA:CB	32:AI:128:LEU:HB3	2.32	0.56
32:AI:9:LEU:HD12	32:AI:9:LEU:N	2.19	0.56
36:AP:49:ARG:HD2	55:A8:58:ILE:HG22	1.86	0.56
37:AQ:14:ARG:HD2	57:AA:958:U:H5''	1.86	0.56
51:B4:1:MET:C	51:B4:2:LYS:HD2	2.26	0.56
51:B4:6:HIS:HB3	51:B4:7:PRO:CD	2.35	0.56
57:BA:941:A:H2'	57:BA:942:G:C8	2.40	0.56
26:BC:48:LEU:HD11	26:BC:172:ILE:HB	1.87	0.56
31:BH:11:VAL:CG1	31:BH:15:VAL:HG23	2.36	0.56
32:BI:78:THR:N	32:BI:104:GLN:HE22	2.01	0.56
37:BQ:14:ARG:HG2	37:BQ:41:TRP:HH2	1.71	0.56
39:BS:106:ARG:HH11	39:BS:106:ARG:C	2.08	0.56
41:BU:31:SER:O	41:BU:33:ARG:N	2.39	0.56
26:BC:7:ARG:HD2	26:BC:35:THR:O	2.05	0.56
41:BU:8:VAL:HG23	41:BU:11:ARG:HH21	1.70	0.56
55:B8:6:THR:HG21	55:B8:63:PRO:HD3	1.86	0.56
31:BH:158:HIS:CE1	31:BH:169:VAL:O	2.57	0.56
35:AO:2:ILE:HD11	35:AO:82:ASN:HD22	1.70	0.56
40:AT:106:SER:HB2	40:AT:110:ILE:HD11	1.85	0.56
40:AT:27:THR:CG2	40:AT:28:VAL:H	2.16	0.56
46:BZ:108:PRO:CB	46:BZ:144:LEU:HB2	2.35	0.56
35:BO:69:ILE:HD12	35:BO:69:ILE:H	1.71	0.56
40:BT:27:THR:O	40:BT:28:VAL:CB	2.53	0.56
57:BA:1331:A:O2'	57:BA:1332:G:H8	1.88	0.56
28:BE:117:MET:O	28:BE:117:MET:HG3	2.05	0.56
28:BE:36:ARG:HH21	28:BE:88:GLY:HA2	1.69	0.56
57:BA:2287:A:H62	57:BA:2344:U:H3	1.52	0.56
57:BA:1697:G:H3'	57:BA:1698:A:H5''	1.88	0.56
39:BS:46:VAL:HG13	58:BB:114:C:O2'	2.06	0.56
28:AE:14:ILE:HD11	28:AE:173:VAL:HG11	1.88	0.56
27:BD:91:ARG:NH1	27:BD:91:ARG:HG2	2.20	0.56
46:BZ:175:VAL:HB	46:BZ:176:PRO:HD2	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:B9:2:LYS:HD2	56:B9:33:LYS:O	2.05	0.56
57:AA:2836:U:H2'	57:AA:2837:G:C8	2.40	0.56
47:B0:14:ARG:NH1	47:B0:14:ARG:HG3	2.20	0.56
56:A9:2:LYS:HD2	56:A9:33:LYS:O	2.04	0.56
57:BA:774:A:H2	57:BA:787:U:HO2'	1.50	0.56
57:AA:532:A:OP2	57:AA:532:A:O4'	5.17	0.56
57:AA:2439:A:C8	57:AA:2439:A:H5'	2.40	0.56
57:BA:1534:U:H2'	57:BA:1535:A:O4'	2.06	0.56
57:AA:2031:A:C6	57:AA:2498:C:H1'	2.41	0.56
29:AF:8:GLN:CG	29:AF:126:VAL:HB	2.35	0.56
32:AI:94:ALA:CB	32:AI:111:PRO:HA	2.34	0.56
45:AY:17:SER:O	57:AA:310:A:OP1	2.24	0.56
32:BI:87:LYS:HG3	32:BI:121:LYS:O	2.06	0.56
34:BN:3:THR:HG22	34:BN:5:VAL:CG1	2.35	0.56
36:BP:33:ARG:NH2	57:BA:587:C:C3'	2.68	0.56
40:BT:28:VAL:HB	40:BT:88:ILE:HG12	1.86	0.56
40:BT:28:VAL:HG13	40:BT:46:GLU:CA	2.35	0.56
53:A6:26:ASN:O	53:A6:27:LYS:HB2	2.04	0.56
31:BH:50:VAL:CG1	31:BH:51:ARG:N	2.68	0.56
46:AZ:163:LEU:HD23	46:AZ:163:LEU:H	1.70	0.56
57:AA:1280:G:C3'	57:AA:1281:G:H5''	2.35	0.56
57:AA:2523:G:H2'	57:AA:2524:G:C5'	2.35	0.56
57:BA:364:C:C2'	57:BA:365:C:H5''	2.34	0.56
44:BX:60:ARG:HH21	54:B7:47:ARG:NH1	2.03	0.56
57:BA:1750:G:O2'	57:BA:1751:C:H5'	2.05	0.56
53:B6:19:ARG:HG3	57:BA:2399:G:O2'	2.05	0.56
34:AN:131:GLN:HA	34:AN:131:GLN:OE1	2.05	0.56
57:BA:2164:C:H2'	57:BA:2165:G:H5'	1.87	0.56
43:BW:91:GLY:HA2	57:BA:1614:A:N1	2.20	0.56
32:AI:27:ARG:HD3	48:A1:71:TYR:CE1	2.39	0.56
57:AA:1014:U:H2'	57:AA:1015:G:C5'	2.35	0.56
37:AQ:14:ARG:HG2	37:AQ:41:TRP:HH2	1.71	0.56
39:AS:19:LYS:HG2	39:AS:19:LYS:O	2.05	0.56
45:AY:9:LYS:HA	57:AA:85:G:OP1	2.06	0.56
29:BF:3:GLU:O	29:BF:19:GLU:CB	2.54	0.56
29:BF:78:ILE:HA	29:BF:83:PHE:CE1	2.41	0.56
37:BQ:34:LEU:CD1	37:BQ:129:THR:HB	2.35	0.56
42:BV:19:LYS:HE2	42:BV:19:LYS:HA	1.87	0.56
35:BO:69:ILE:HD13	35:BO:77:ILE:CG2	2.33	0.56
57:AA:1505:C:H2'	57:AA:1506:C:O4'	2.06	0.56
28:AE:117:MET:HG3	28:AE:117:MET:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1040:C:H42	57:AA:1115:G:H1	1.53	0.56
57:AA:2327:A:H2'	57:AA:2328:A:H8	1.67	0.56
46:AZ:81:ARG:NH1	46:AZ:81:ARG:CB	2.68	0.56
47:B0:42:GLY:HA3	57:BA:2331:G:O4'	2.04	0.56
37:AQ:47:ILE:HG22	37:AQ:48:GLU:N	2.20	0.56
38:AR:9:LYS:O	38:AR:10:LEU:HD23	2.06	0.56
34:BN:67:LEU:O	34:BN:68:GLU:HB2	2.05	0.56
57:BA:848:G:H2'	57:BA:849:A:C8	2.41	0.56
43:AW:96:ILE:HD11	57:AA:2012:G:H4'	1.87	0.56
57:BA:853:G:O2'	57:BA:854:G:H5'	4.71	0.56
45:BY:95:LYS:HD3	45:BY:100:ALA:CB	2.35	0.56
48:A1:5:CYS:SG	48:A1:62:VAL:HG23	2.45	0.56
35:BO:18:LYS:HB2	35:BO:45:GLU:HG2	1.86	0.56
38:AR:117:VAL:O	38:AR:118:GLU:HB2	2.06	0.56
27:AD:35:LYS:HD2	27:AD:36:PRO:N	2.20	0.56
29:AF:18:ARG:HH21	29:AF:20:LEU:CD1	2.18	0.56
32:AI:114:LEU:HD23	32:AI:130:TYR:CD1	2.39	0.56
32:AI:69:LYS:HA	32:AI:136:VAL:CG2	2.35	0.56
41:AU:31:SER:O	41:AU:33:ARG:N	2.39	0.56
29:BF:18:ARG:HH21	29:BF:20:LEU:CD1	2.18	0.56
32:BI:111:PRO:O	32:BI:116:LEU:HD23	2.06	0.56
32:BI:82:ARG:HA	32:BI:145:VAL:HG13	1.86	0.56
34:BN:28:THR:HG22	34:BN:29:LYS:N	2.21	0.56
27:BD:35:LYS:HD2	27:BD:36:PRO:N	2.20	0.56
45:BY:28:LYS:CA	45:BY:38:ILE:HG22	2.32	0.56
57:BA:184:C:H2'	57:BA:185:U:H6	1.68	0.56
56:A9:31:LYS:HD3	57:AA:2478:A:OP1	2.05	0.56
57:BA:70:G:H21	57:BA:71:A:H62	1.51	0.56
57:AA:1639:U:H2'	57:AA:1640:C:H5''	1.87	0.56
31:BH:148:ILE:O	31:BH:162:ILE:HD11	2.06	0.56
41:AU:49:HIS:CD2	57:AA:534:U:O2'	2.58	0.56
43:BW:15:ARG:NH2	57:BA:1266:G:O5'	2.37	0.56
46:AZ:162:GLU:N	46:AZ:162:GLU:OE1	2.38	0.56
46:BZ:5:LEU:HD21	46:BZ:39:VAL:HG23	1.88	0.56
57:AA:1107:G:O2'	57:AA:1108:U:H5'	2.06	0.56
36:AP:48:PRO:HB3	57:AA:833:U:H5''	1.87	0.56
57:BA:1242:A:H5'	57:BA:1243:G:OP2	2.06	0.56
26:BC:54:ARG:HB3	26:BC:57:GLN:HB3	1.87	0.56
33:BJ:81:VAL:O	33:BJ:83:TYR:N	2.39	0.56
34:BN:40:PRO:HB3	41:BU:68:ALA:HB2	1.87	0.56
40:AT:25:GLY:H	40:AT:49:VAL:HG13	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2022:U:O2'	57:BA:2617:C:H5'	2.05	0.56
45:BY:39:VAL:HG12	45:BY:40:GLU:N	2.21	0.56
46:BZ:120:ILE:O	46:BZ:120:ILE:HG22	2.06	0.56
53:B6:47:THR:OG1	53:B6:48:VAL:N	2.37	0.56
53:B6:45:LYS:CE	57:BA:2371:G:H5''	2.33	0.56
53:A6:27:LYS:HD3	53:A6:27:LYS:O	2.06	0.56
55:A8:28:GLY:O	55:A8:32:LEU:HG	2.05	0.56
53:A6:25:LYS:HE2	55:A8:35:GLN:OE1	2.06	0.56
47:A0:11:ARG:HB2	47:A0:11:ARG:NH1	2.06	0.56
28:BE:11:MET:HB3	28:BE:24:THR:HA	1.88	0.56
28:AE:117:MET:HB2	28:AE:122:PHE:O	2.06	0.56
57:BA:796:C:H2'	57:BA:797:C:C6	2.41	0.56
57:AA:1771:C:H1'	57:AA:1786:A:C8	2.40	0.56
42:BV:79:VAL:CG2	57:BA:1188:U:H4'	2.35	0.56
57:BA:2712:U:H1'	57:BA:2712(A):A:C8	2.41	0.56
57:BA:52:A:O2'	57:BA:53:A:H5'	2.06	0.56
48:B1:3:LYS:HG3	48:B1:4:VAL:N	2.21	0.56
49:B2:46:GLN:OE1	49:B2:46:GLN:HA	2.06	0.56
57:AA:1799:G:H5'	57:AA:1819:A:N6	2.21	0.56
57:AA:2314:C:O2'	57:AA:2315:G:H5'	2.06	0.56
26:AC:48:LEU:HD11	26:AC:172:ILE:HB	1.88	0.56
32:AI:84:GLY:HA2	32:AI:144:VAL:CG2	2.32	0.56
42:AV:22:VAL:O	42:AV:23:GLU:HB2	2.06	0.56
58:BB:40:U:O2	58:BB:43:C:H5''	2.06	0.56
32:BI:84:GLY:HA2	32:BI:144:VAL:CG2	2.34	0.56
32:BI:83:ALA:O	32:BI:145:VAL:HG22	2.04	0.56
39:BS:83:LYS:HE3	39:BS:105:ALA:HB2	1.88	0.56
43:BW:64:MET:O	43:BW:65:LEU:CB	2.54	0.56
40:AT:65:LYS:HG3	40:AT:66:VAL:N	2.21	0.56
45:BY:2:ARG:NH2	57:BA:106:C:H1'	2.20	0.56
40:BT:91:ARG:O	40:BT:117:ASP:CB	2.52	0.56
53:B6:37:ARG:HH12	53:B6:39:TYR:HE1	1.54	0.56
28:AE:111:ARG:HG3	38:AR:2:ARG:NE	2.21	0.56
46:AZ:81:ARG:NH1	46:AZ:81:ARG:HB2	2.18	0.56
57:BA:78:A:H2'	57:BA:79:G:H8	1.68	0.56
36:BP:146:VAL:CG2	36:BP:147:LEU:H	2.13	0.56
57:BA:341:G:O2'	57:BA:342:G:H5'	2.06	0.56
29:AF:36:VAL:HG11	29:AF:183:VAL:CG1	2.35	0.56
53:A6:42:TRP:HA	53:A6:42:TRP:HE3	1.69	0.56
57:BA:300:A:H2'	57:BA:301:G:O4'	5.11	0.56
27:BD:47:GLY:HA2	57:BA:773:U:H5'	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BW:61:ASN:HD22	43:BW:61:ASN:N	2.04	0.56
57:BA:1427:A:H4'	57:BA:1428:C:O5'	2.06	0.56
57:AA:1427:A:H4'	57:AA:1428:C:O5'	2.06	0.56
57:AA:1242:A:H5'	57:AA:1243:G:OP2	2.05	0.56
27:AD:8:PRO:HB3	27:AD:14:ARG:HB2	1.88	0.56
30:AG:110:ALA:O	30:AG:111:LEU:C	2.43	0.56
32:AI:77:LEU:HD21	32:AI:141:LYS:H	1.71	0.56
32:AI:92:VAL:HG22	32:AI:97:ILE:CG1	2.36	0.56
36:AP:107:LYS:C	36:AP:109:GLY:H	2.09	0.56
41:AU:92:ARG:CZ	42:AV:11:GLN:H	2.18	0.56
39:BS:32:LEU:HD13	58:BB:31:C:N4	2.21	0.56
29:BF:185:ASP:HA	29:BF:188:ARG:CG	2.36	0.56
30:BG:60:LEU:O	30:BG:60:LEU:HD13	2.06	0.56
32:BI:112:LYS:C	32:BI:112:LYS:HD3	5.09	0.56
36:BP:102:ARG:HH21	36:BP:102:ARG:CB	2.19	0.56
36:BP:40:SER:O	36:BP:41:ARG:NE	2.37	0.56
39:BS:59:LYS:HG2	39:BS:60:GLY:N	2.20	0.56
41:BU:90:VAL:HG22	42:BV:39:LEU:HG	1.87	0.56
55:B8:61:LEU:CG	55:B8:62:LEU:H	2.17	0.56
31:AH:158:HIS:CE1	31:AH:169:VAL:O	2.58	0.56
35:BO:87:ILE:HG21	35:BO:91:LEU:HA	1.87	0.56
40:BT:23:ARG:HG2	40:BT:120:ARG:NH1	2.21	0.56
28:BE:144:ARG:HD2	57:BA:2572:A:N7	2.21	0.56
57:BA:1019:U:H3	57:BA:1142(A):A:N6	1.94	0.56
57:BA:528:A:N1	57:BA:2042:A:H2'	2.21	0.56
57:AA:271(M):G:C2'	57:AA:271(N):U:H5''	2.33	0.56
57:BA:523:C:C2'	57:BA:524:U:H5'	2.36	0.56
46:AZ:153:SER:C	46:AZ:155:LEU:H	2.08	0.56
36:BP:25:SER:HA	57:BA:811:U:H3'	1.88	0.56
57:AA:102:G:OP1	57:AA:102:G:H4'	2.06	0.56
57:BA:1339:G:H21	57:BA:1603:A:H1'	1.71	0.56
33:AJ:124:ALA:HB3	33:AJ:127:GLU:CB	2.36	0.56
29:BF:196:LEU:HD23	29:BF:196:LEU:O	2.05	0.56
45:BY:98:VAL:O	45:BY:98:VAL:HG12	2.05	0.56
57:BA:2000:G:O2'	57:BA:2001:A:H5'	2.06	0.56
58:AB:55:U:O2'	58:AB:56:G:H5'	2.06	0.56
36:AP:16:ARG:CD	36:AP:18:ARG:H	2.10	0.56
39:AS:74:ALA:HB1	39:AS:103:GLU:HB3	1.87	0.56
43:AW:71:VAL:HA	43:AW:107:LEU:HD12	1.87	0.56
57:BA:880:G:H1	57:BA:897:C:N4	2.04	0.56
32:BI:5:LEU:O	32:BI:6:LEU:HG	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BI:8:PRO:HB3	32:BI:14:ASP:N	2.16	0.56
34:BN:132:ALA:O	34:BN:133:GLN:HB3	2.06	0.56
36:BP:7:ARG:NH1	36:BP:7:ARG:CA	2.62	0.56
38:BR:32:GLY:HA2	38:BR:116:LEU:HD12	1.86	0.56
39:BS:99:LYS:O	39:BS:101:LEU:HD12	2.06	0.56
39:BS:23:ARG:HB3	39:BS:24:LEU:HD22	1.88	0.56
27:BD:116:GLN:HG2	27:BD:117:VAL:N	2.21	0.56
27:BD:30:GLU:CD	27:BD:63:ARG:HE	2.09	0.56
27:BD:71:ASP:HB2	27:BD:103:ARG:NH2	2.21	0.56
57:BA:904:C:H2'	57:BA:905:U:C6	2.41	0.56
57:BA:1040:C:H42	57:BA:1115:G:H1	1.54	0.56
36:BP:85:LEU:HD22	36:BP:114:ILE:HD11	1.88	0.56
35:AO:47:ILE:CG1	35:AO:48:PRO:HD2	2.33	0.56
47:B0:73:GLY:C	47:B0:75:LEU:H	2.09	0.56
57:AA:364:C:H2'	57:AA:365:C:C5'	2.35	0.56
42:BV:82:ARG:HD2	42:BV:82:ARG:N	2.21	0.56
44:AX:44:GLU:HG2	44:AX:49:VAL:O	2.05	0.56
55:A8:2:PRO:HA	57:AA:591:C:H1'	1.88	0.56
57:AA:848:G:H2'	57:AA:849:A:C8	2.41	0.56
33:AJ:88:ALA:C	33:AJ:90:ALA:H	2.10	0.56
53:A6:19:ARG:HG3	57:AA:2399:G:O2'	2.06	0.56
57:BA:203:C:H3'	57:BA:204:A:H5''	1.87	0.56
57:AA:1534:U:H2'	57:AA:1535:A:O4'	2.06	0.56
57:AA:1278:A:O2'	57:AA:1279:G:H5'	2.05	0.55
57:AA:953:A:O2'	57:AA:954:G:H5'	2.06	0.55
27:AD:35:LYS:HG2	27:AD:63:ARG:HG3	1.87	0.55
30:AG:159:VAL:O	30:AG:159:VAL:HG13	2.07	0.55
30:AG:72:ARG:HG2	30:AG:87:PRO:HD2	1.87	0.55
32:AI:8:PRO:HB3	32:AI:14:ASP:N	2.17	0.55
36:AP:16:ARG:O	36:AP:16:ARG:NH1	2.38	0.55
36:AP:58:THR:O	36:AP:61:ARG:CZ	2.53	0.55
41:AU:95:LEU:HD12	42:AV:11:GLN:HE21	1.71	0.55
42:AV:6:LYS:O	42:AV:37:VAL:HG21	2.05	0.55
32:BI:113:ARG:NH1	32:BI:131:LYS:O	2.39	0.55
40:AT:65:LYS:CE	40:AT:66:VAL:H	2.13	0.55
40:BT:70:VAL:CG1	40:BT:71:GLY:N	2.68	0.55
28:BE:137:HIS:HB3	28:BE:138:PRO:HD2	1.88	0.55
28:BE:61:ARG:HD3	57:BA:2787:C:H1'	1.87	0.55
28:AE:134:ILE:HD12	28:AE:134:ILE:O	2.06	0.55
28:AE:57:LYS:C	28:AE:59:VAL:H	2.09	0.55
31:AH:105:LEU:H	31:AH:105:LEU:CD2	2.16	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1292:U:O2'	57:BA:1293:C:H5'	2.07	0.55
57:AA:1947:C:C2'	57:AA:1948:G:H5''	2.36	0.55
57:BA:78:A:H2'	57:BA:79:G:C8	2.41	0.55
54:A7:34:ARG:NH1	54:A7:39:ARG:HG3	2.21	0.55
57:AA:364:C:C2'	57:AA:365:C:H5''	2.35	0.55
31:AH:136:ILE:HD12	31:AH:136:ILE:H	1.71	0.55
57:AA:2136:C:H41	57:AA:2156:G:H21	1.54	0.55
34:BN:131:GLN:OE1	34:BN:131:GLN:HA	2.06	0.55
57:AA:2463:C:O2'	57:AA:2464:C:H5'	2.05	0.55
57:BA:2506:U:H5'	57:BA:2506:U:C6	2.40	0.55
57:AA:814:C:H2'	57:AA:815:C:H6	1.72	0.55
58:AB:111:G:O2'	58:AB:112:U:H5'	2.04	0.55
29:AF:21:ALA:C	29:AF:23:ASP:H	2.09	0.55
31:AH:85:LYS:HZ1	31:AH:133:VAL:HG23	1.72	0.55
36:AP:105:LEU:HD12	36:AP:105:LEU:H	1.71	0.55
39:AS:12:PHE:HD2	39:AS:12:PHE:H	1.55	0.55
45:AY:7:VAL:HB	45:AY:8:LYS:NZ	2.20	0.55
30:BG:45:GLU:O	30:BG:88:ILE:HG13	2.06	0.55
30:BG:73:ALA:H	30:BG:87:PRO:CD	2.20	0.55
38:BR:38:VAL:CG1	38:BR:42:LYS:HD2	2.37	0.55
39:BS:87:PHE:HB2	39:BS:106:ARG:HE	1.71	0.55
39:BS:89:ARG:HH11	39:BS:89:ARG:HG2	1.70	0.55
42:BV:19:LYS:HZ2	42:BV:20:LEU:H	1.53	0.55
27:BD:35:LYS:HG2	27:BD:63:ARG:CG	2.37	0.55
57:AA:1332:G:N2	57:AA:1609:A:O2'	2.39	0.55
28:AE:111:ARG:HB2	28:AE:160:TYR:O	2.06	0.55
47:B0:41:ARG:HH22	57:BA:2387:U:H4'	1.71	0.55
57:AA:1678:G:N2	57:AA:1989:G:N2	2.51	0.55
36:AP:146:VAL:O	36:AP:148:LEU:HG	2.07	0.55
38:BR:10:LEU:HB3	38:BR:17:ARG:HD3	1.87	0.55
32:BI:53:ALA:O	32:BI:57:ARG:HD2	2.05	0.55
57:AA:2473:U:C5	57:AA:2474:C:C6	2.94	0.55
41:BU:49:HIS:CD2	57:BA:534:U:O2'	2.59	0.55
57:AA:1430:C:H2'	57:AA:1431:U:C6	2.41	0.55
57:BA:648:G:O2'	57:BA:649:G:H5'	2.06	0.55
28:BE:81:ILE:O	28:BE:81:ILE:HG22	2.06	0.55
49:B2:64:LEU:HD22	49:B2:68:ARG:HH11	1.70	0.55
48:A1:22:GLY:O	48:A1:32:LYS:HE3	2.06	0.55
27:AD:72:LYS:HB3	27:AD:72:LYS:NZ	2.21	0.55
31:AH:7:LEU:HD23	31:AH:69:ARG:HD3	1.88	0.55
34:AN:40:PRO:HB3	41:AU:68:ALA:HB2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1111:A:O2'	57:BA:1112:G:H4'	2.06	0.55
29:BF:185:ASP:OD1	29:BF:188:ARG:HD3	2.06	0.55
29:BF:20:LEU:O	29:BF:21:ALA:O	2.24	0.55
36:BP:102:ARG:NH2	36:BP:102:ARG:HB3	2.22	0.55
36:BP:107:LYS:C	36:BP:109:GLY:H	2.09	0.55
39:BS:19:LYS:HG2	39:BS:19:LYS:O	2.06	0.55
42:BV:19:LYS:CG	42:BV:20:LEU:N	2.68	0.55
27:BD:108:PRO:HG2	27:BD:111:LEU:HB2	1.87	0.55
27:BD:94:LEU:HB2	27:BD:104:TYR:CE2	2.41	0.55
35:AO:77:ILE:HD13	40:AT:74:ARG:HD3	1.88	0.55
45:BY:14:LEU:HD12	45:BY:23:ARG:H	1.71	0.55
45:BY:66:PRO:O	45:BY:67:LEU:HB3	2.06	0.55
46:BZ:166:SER:OG	46:BZ:167:PRO:HA	2.07	0.55
35:BO:10:VAL:HG13	35:BO:17:ARG:O	2.06	0.55
53:A6:27:LYS:HB3	53:A6:30:THR:CG2	2.35	0.55
57:AA:1331:A:O2'	57:AA:1332:G:H8	1.88	0.55
31:BH:24:VAL:HG11	31:BH:72:ILE:HD11	1.89	0.55
52:A5:40:LYS:NZ	52:A5:46:CYS:HB3	2.20	0.55
27:AD:268:ARG:NH1	27:AD:268:ARG:HB3	2.21	0.55
29:AF:167:ALA:O	29:AF:168:ARG:HB3	2.06	0.55
46:AZ:103:ARG:HB2	46:AZ:136:PHE:HB2	1.88	0.55
45:AY:98:VAL:O	45:AY:98:VAL:HG12	2.06	0.55
47:A0:20:ARG:HH12	57:AA:2271:G:H4'	1.71	0.55
57:BA:2650:U:O2'	57:BA:2651:C:H5'	2.06	0.55
57:AA:2853:C:H2'	57:AA:2854:G:H8	1.70	0.55
57:BA:2668:G:O2'	57:BA:2669:G:H5'	2.05	0.55
51:A4:1:MET:C	51:A4:2:LYS:HD2	2.26	0.55
57:AA:107:C:H2'	57:AA:108:U:H6	1.71	0.55
57:AA:2023:G:H5'	57:AA:2617:C:H4'	1.88	0.55
57:AA:880:G:H1	57:AA:897:C:N4	2.04	0.55
41:AU:50:ARG:NH2	57:AA:993:G:OP1	2.39	0.55
32:AI:87:LYS:CE	32:AI:121:LYS:HG3	2.37	0.55
36:AP:98:GLU:O	36:AP:101:VAL:HG22	2.07	0.55
36:AP:101:VAL:CB	36:AP:107:LYS:HA	2.32	0.55
39:AS:90:GLY:C	39:AS:92:TYR:H	2.10	0.55
30:BG:113:ARG:CA	30:BG:113:ARG:HE	2.17	0.55
36:BP:29:LYS:HD2	36:BP:29:LYS:N	2.21	0.55
42:BV:47:VAL:O	42:BV:49:THR:N	2.39	0.55
40:AT:28:VAL:HG13	40:AT:46:GLU:CA	2.36	0.55
45:BY:77:PRO:O	45:BY:78:ALA:HB2	2.07	0.55
31:AH:156:ALA:O	31:AH:158:HIS:N	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1505:C:H2'	57:BA:1506:C:O4'	2.06	0.55
51:A4:14:ILE:HA	51:A4:31:ILE:HG22	1.89	0.55
40:BT:25:GLY:H	40:BT:49:VAL:CG1	2.19	0.55
40:BT:80:SER:CB	40:BT:81:PRO:HD3	2.33	0.55
28:AE:34:VAL:HG22	28:AE:48:GLN:NE2	2.21	0.55
57:BA:1021:A:C3'	57:BA:1021:A:C8	2.89	0.55
53:A6:37:ARG:HH12	53:A6:39:TYR:HE1	1.51	0.55
37:AQ:27:VAL:O	37:AQ:28:ALA:HB3	2.06	0.55
57:BA:1947:C:C2'	57:BA:1948:G:H5''	2.36	0.55
38:AR:9:LYS:HG2	38:AR:43:GLU:OE2	2.07	0.55
39:AS:55:ALA:HB1	58:AB:117:G:C5'	2.35	0.55
55:B8:14:VAL:HG21	55:B8:22:VAL:HG13	1.89	0.55
57:BA:2001:A:H2'	57:BA:2002:G:C8	2.41	0.55
57:AA:2639:A:H2'	57:AA:2640:G:H5'	1.89	0.55
57:BA:2845:G:O2'	57:BA:2846:G:H5'	2.06	0.55
47:A0:36:ILE:CD1	47:A0:39:ARG:HG2	2.37	0.55
26:AC:22:THR:OG1	26:AC:25:GLU:HB3	2.05	0.55
57:AA:1932:A:H2'	57:AA:1933:G:O4'	2.06	0.55
30:AG:67:LYS:HZ3	51:A4:6:HIS:CE1	2.24	0.55
30:AG:111:LEU:O	30:AG:112:PRO:C	2.45	0.55
30:AG:173:LEU:HD13	30:AG:178:PHE:CD2	2.41	0.55
32:AI:78:THR:H	32:AI:104:GLN:NE2	1.99	0.55
34:AN:43:THR:HB	34:AN:46:VAL:CG1	2.34	0.55
36:AP:97:PRO:HG2	36:AP:127:ALA:HA	1.88	0.55
37:AQ:34:LEU:CD1	37:AQ:129:THR:HB	2.36	0.55
37:AQ:67:ARG:NH1	37:AQ:67:ARG:HG2	2.21	0.55
41:AU:12:ARG:HB2	41:AU:13:LYS:HE3	1.87	0.55
48:B1:75:GLU:C	48:B1:77:ALA:H	2.10	0.55
30:BG:39:ILE:HG12	30:BG:92:VAL:HG13	1.86	0.55
32:BI:87:LYS:HA	32:BI:122:GLU:HA	1.88	0.55
36:BP:98:GLU:O	36:BP:101:VAL:HG22	2.06	0.55
36:BP:6:LEU:HG	36:BP:9:ASN:HB2	1.89	0.55
37:BQ:22:LYS:O	46:BZ:78:LYS:HE2	2.06	0.55
27:BD:35:LYS:CG	27:BD:63:ARG:HA	2.30	0.55
27:BD:77:ALA:CB	27:BD:97:TYR:HA	2.36	0.55
40:AT:66:VAL:HA	40:AT:71:GLY:HA2	1.87	0.55
27:AD:44:ASN:OD1	27:AD:44:ASN:N	2.40	0.55
46:BZ:151:HIS:CA	46:BZ:171:ILE:HG22	2.31	0.55
27:AD:242:ARG:HD2	27:AD:242:ARG:N	2.21	0.55
57:BA:1652:A:H3'	57:BA:1653:G:C8	2.41	0.55
28:BE:117:MET:HB2	28:BE:122:PHE:O	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BI:46:ALA:HB2	57:BA:271(P):C:C5'	2.37	0.55
41:AU:70:ARG:HA	41:AU:74:LEU:O	2.06	0.55
57:BA:1771:C:H1'	57:BA:1786:A:C8	2.40	0.55
27:BD:211:ARG:HD3	27:BD:214:TRP:CZ3	2.42	0.55
55:B8:14:VAL:CG2	55:B8:22:VAL:CG1	2.85	0.55
44:AX:60:ARG:HH21	54:A7:47:ARG:NH1	2.05	0.55
57:AA:1419:A:O2'	57:AA:1420:U:H5''	2.07	0.55
48:B1:59:THR:O	48:B1:91:LYS:NZ	2.40	0.55
57:AA:2506:U:H5'	57:AA:2506:U:C6	2.41	0.55
38:BR:99:LYS:HD3	38:BR:99:LYS:H	1.71	0.55
57:AA:2197:U:O2'	57:AA:2198:A:H2'	2.06	0.55
57:AA:274:G:H3'	57:AA:274:G:N3	2.21	0.55
58:AB:78:A:C2	58:AB:100:A:C4	2.94	0.55
26:AC:173:HIS:O	26:AC:174:ALA:CB	2.55	0.55
39:AS:49:VAL:HG12	39:AS:73:LEU:HD23	1.87	0.55
45:AY:95:LYS:HB3	45:AY:100:ALA:HA	1.87	0.55
45:AY:27:VAL:HG12	45:AY:28:LYS:N	2.22	0.55
57:BA:958:U:H6	57:BA:958:U:H5'	1.72	0.55
29:BF:102:PRO:HA	57:BA:607:U:OP1	2.06	0.55
29:BF:65:TRP:HZ3	29:BF:73:ALA:O	1.88	0.55
37:BQ:35:VAL:HG11	37:BQ:130:LYS:HE2	1.88	0.55
39:BS:17:ARG:HA	39:BS:20:ARG:NH1	2.21	0.55
41:BU:92:ARG:O	41:BU:94:ASN:N	2.40	0.55
52:A5:2:ALA:N	57:AA:2014:A:HO2'	2.04	0.55
53:A6:47:THR:OG1	53:A6:48:VAL:N	2.40	0.55
46:BZ:67:LEU:HB3	46:BZ:68:PRO:HD2	1.88	0.55
28:BE:61:ARG:NH2	57:BA:2632:A:O2'	2.40	0.55
28:BE:88:GLY:O	28:BE:89:ASP:HB2	2.06	0.55
28:AE:52:LEU:O	28:AE:74:PRO:HA	2.07	0.55
27:BD:242:ARG:HD2	27:BD:242:ARG:N	2.22	0.55
36:AP:91:PHE:N	36:AP:91:PHE:CD1	2.65	0.55
57:AA:78:A:H2'	57:AA:79:G:C8	2.41	0.55
57:AA:438:G:O2'	57:AA:440:G:H5'	2.06	0.55
38:AR:10:LEU:HB3	38:AR:17:ARG:HD3	1.89	0.55
48:A1:8:SER:HB3	48:A1:66:HIS:NE2	2.22	0.55
57:AA:272(J):C:O2'	57:AA:274:G:H5'	2.06	0.55
48:B1:29:GLY:C	48:B1:31:GLY:H	2.10	0.55
57:AA:1348:G:C2'	57:AA:1349:A:H5''	2.37	0.55
57:AA:626:U:H5'	57:AA:627:A:H5'	1.88	0.55
27:AD:116:GLN:HG2	27:AD:117:VAL:N	2.22	0.55
29:AF:20:LEU:O	29:AF:21:ALA:O	2.25	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:AG:149:VAL:O	30:AG:149:VAL:HG13	2.07	0.55
30:AG:57:ALA:O	30:AG:68:PRO:HD2	2.07	0.55
31:AH:85:LYS:HZ2	31:AH:133:VAL:HG23	1.70	0.55
44:AX:24:GLY:HA3	44:AX:83:VAL:HG23	1.89	0.55
45:AY:17:SER:OG	45:AY:71:LYS:HD2	2.07	0.55
48:B1:73:LEU:O	48:B1:77:ALA:HB2	2.07	0.55
57:BA:1204:A:N1	57:BA:1241:A:C2	2.75	0.55
30:BG:9:ARG:O	30:BG:13:GLU:HG2	2.07	0.55
32:BI:82:ARG:O	32:BI:89:TYR:HB2	2.07	0.55
41:BU:12:ARG:HB2	41:BU:13:LYS:HE3	1.89	0.55
41:BU:83:LEU:CG	41:BU:88:ILE:HD11	2.26	0.55
27:BD:16:MET:CE	27:BD:208:LYS:HD2	2.35	0.55
36:BP:59:LEU:HA	36:BP:61:ARG:HH11	1.64	0.55
45:BY:88:LYS:CE	45:BY:93:GLY:HA3	2.37	0.55
52:A5:3:LYS:HZ3	57:AA:2614:A:H5'	1.72	0.55
30:AG:109:VAL:CG2	51:A4:33:VAL:HG21	2.36	0.55
53:B6:11:LEU:HD12	53:B6:26:ASN:HB2	1.87	0.55
57:BA:795:C:H2'	57:BA:796:C:C6	2.41	0.55
37:BQ:9:TYR:OH	57:BA:911:A:H2'	2.06	0.55
46:BZ:116:VAL:O	46:BZ:174:VAL:HG13	2.05	0.55
36:AP:108:LYS:C	36:AP:110:TYR:N	2.59	0.55
27:BD:268:ARG:HB3	27:BD:268:ARG:NH1	2.22	0.55
53:A6:42:TRP:CZ2	57:AA:2349:G:H4'	2.42	0.55
27:AD:47:GLY:HA2	57:AA:773:U:H5'	1.88	0.55
34:BN:72:TYR:CD1	34:BN:90:MET:HG3	2.42	0.55
30:AG:46:ALA:HA	30:AG:51:ARG:HB2	1.88	0.55
36:AP:32:THR:O	36:AP:33:ARG:HB3	2.06	0.55
36:AP:6:LEU:HG	36:AP:9:ASN:HB2	1.89	0.55
42:AV:46:VAL:HG22	42:AV:47:VAL:H	1.72	0.55
36:BP:48:PRO:HB3	57:BA:833:U:H5''	1.89	0.55
29:BF:22:ALA:C	29:BF:24:LEU:H	2.09	0.55
30:BG:111:LEU:O	30:BG:112:PRO:C	2.44	0.55
32:BI:77:LEU:HD21	32:BI:141:LYS:H	1.71	0.55
42:BV:47:VAL:HB	42:BV:49:THR:O	2.07	0.55
35:AO:23:ARG:HG3	35:AO:24:VAL:N	2.21	0.55
35:AO:87:ILE:HG21	35:AO:91:LEU:HA	1.88	0.55
40:AT:91:ARG:O	40:AT:117:ASP:CB	2.54	0.55
40:AT:23:ARG:HG2	40:AT:120:ARG:HH12	1.72	0.55
40:AT:25:GLY:H	40:AT:49:VAL:CG1	2.19	0.55
58:BB:78:A:C2	58:BB:100:A:C4	2.95	0.55
53:A6:35:GLU:OE1	53:A6:35:GLU:HA	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:A2:46:GLN:O	49:A2:49:LYS:HG3	2.07	0.55
28:BE:102:VAL:HB	28:BE:199:ARG:O	2.06	0.55
28:BE:62:PRO:O	28:BE:64:LYS:N	2.40	0.55
57:AA:2360:A:O2'	57:AA:2361:A:C5'	2.55	0.55
52:B5:40:LYS:NZ	52:B5:46:CYS:HB3	2.22	0.55
52:A5:48:GLU:O	52:A5:49:CYS:HB3	2.07	0.55
46:BZ:110:GLY:HA3	46:BZ:146:ILE:HG23	1.89	0.55
57:AA:796:C:H2'	57:AA:797:C:C6	2.42	0.55
37:BQ:47:ILE:HG22	37:BQ:48:GLU:N	2.21	0.55
26:AC:190:ILE:O	26:AC:194:ILE:HG12	2.07	0.55
26:BC:22:THR:OG1	26:BC:25:GLU:HB3	2.07	0.55
57:AA:1709:U:H2'	57:AA:1710:C:C6	2.41	0.55
57:BA:2584:U:C2'	57:BA:2585:U:H5'	2.36	0.55
57:BA:2223:G:C2'	57:BA:2224:G:H5'	2.37	0.55
57:AA:2732:G:H3'	57:AA:2733:A:C5'	2.36	0.55
57:AA:792:G:H5''	57:AA:793:A:H5'	1.89	0.55
57:BA:1709:U:H2'	57:BA:1710:C:C6	2.42	0.55
57:AA:2022:U:O2'	57:AA:2617:C:H5'	2.07	0.55
29:AF:3:GLU:O	29:AF:19:GLU:CB	2.54	0.55
30:AG:45:GLU:N	30:AG:88:ILE:HG13	2.21	0.55
31:AH:19:VAL:CG2	31:AH:44:VAL:HA	2.33	0.55
36:AP:23:PRO:CD	36:AP:33:ARG:CZ	2.73	0.55
37:AQ:35:VAL:HG11	37:AQ:130:LYS:HE2	1.89	0.55
26:BC:173:HIS:O	26:BC:174:ALA:CB	2.55	0.55
30:BG:68:PRO:HA	30:BG:92:VAL:HB	1.88	0.55
27:BD:27:THR:HG23	27:BD:27:THR:O	2.07	0.55
40:AT:117:ASP:O	40:AT:121:ILE:HG13	2.06	0.55
37:BQ:134:ARG:NH2	46:BZ:122:ARG:NE	2.55	0.55
37:BQ:134:ARG:CZ	46:BZ:122:ARG:HE	2.20	0.55
57:AA:1608:A:H1'	57:AA:1610:A:OP2	2.07	0.55
28:AE:11:MET:CE	28:AE:24:THR:HB	2.37	0.55
33:BJ:118:THR:O	33:BJ:119:ALA:HB3	2.06	0.55
57:AA:1292:U:O2'	57:AA:1293:C:H5'	2.07	0.55
57:BA:221:A:H4'	57:BA:222:A:O5'	2.07	0.55
54:A7:12:ARG:HD3	54:A7:46:VAL:HG21	1.89	0.55
54:B7:24:THR:HG23	54:B7:27:GLY:N	2.17	0.55
54:A7:24:THR:HG23	54:A7:27:GLY:N	2.18	0.55
52:A5:34:PRO:O	52:A5:35:GLU:CB	2.54	0.55
27:BD:228:PRO:HD3	27:BD:235:GLY:HA2	1.89	0.55
57:AA:2762:G:H8	57:AA:2762:G:H5'	1.71	0.55
31:AH:148:ILE:O	31:AH:162:ILE:HD11	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1865:G:H5'	57:BA:1866:C:OP2	2.07	0.55
57:AA:1865:G:H5'	57:AA:1866:C:OP2	2.07	0.55
42:BV:78:LYS:HE2	57:BA:572:A:OP2	2.07	0.55
57:AA:1459:G:C8	57:AA:1461:G:H1'	2.42	0.55
50:B3:45:GLY:HA3	57:BA:851:U:O2'	2.06	0.55
29:AF:123:LEU:HD12	29:AF:124:LEU:N	2.21	0.55
34:BN:71:ILE:HG21	34:BN:84:LYS:HB3	1.88	0.55
51:A4:5:ILE:HG12	51:A4:5:ILE:O	2.06	0.55
26:AC:21:TYR:HB3	26:AC:26:ALA:HB2	1.89	0.55
39:AS:99:LYS:O	39:AS:101:LEU:HD12	2.06	0.55
39:AS:17:ARG:HA	39:AS:20:ARG:NH1	2.21	0.55
39:AS:36:TYR:N	39:AS:36:TYR:HD1	2.04	0.55
42:AV:46:VAL:HG13	42:AV:47:VAL:N	2.21	0.55
45:AY:88:LYS:CE	45:AY:93:GLY:HA3	2.36	0.55
57:BA:1144:G:H2'	57:BA:1145:C:H6	1.72	0.55
58:BB:55:U:O2'	58:BB:56:G:H5'	2.07	0.55
32:BI:6:LEU:O	32:BI:15:VAL:HG12	2.07	0.55
42:BV:22:VAL:O	42:BV:23:GLU:HB2	2.07	0.55
27:BD:35:LYS:HA	27:BD:64:ILE:HG22	1.89	0.55
45:BY:17:SER:OG	45:BY:71:LYS:HD2	2.07	0.55
45:BY:7:VAL:HB	45:BY:8:LYS:NZ	2.21	0.55
51:A4:15:ILE:N	51:A4:31:ILE:O	2.40	0.55
55:A8:33:ASN:HA	55:A8:36:LYS:CD	2.36	0.55
28:BE:111:ARG:HG3	38:BR:2:ARG:NE	2.22	0.55
57:BA:1827:C:O2'	57:BA:1828:G:H5'	2.07	0.55
57:BA:1488:G:H5'	57:BA:1489:U:OP2	2.07	0.55
29:AF:164:ARG:HG3	29:AF:175:THR:OG1	2.07	0.55
57:AA:2294:C:H42	57:AA:2338:G:H1	1.54	0.55
57:AA:2164:C:H2'	57:AA:2165:G:H5'	1.89	0.55
57:BA:1684:C:O2'	57:BA:1685:C:H5'	2.07	0.55
46:BZ:31:ARG:NH1	46:BZ:31:ARG:HB2	2.22	0.55
57:AA:2199:A:H5'	57:AA:2200:C:OP2	2.07	0.55
57:AA:623:G:H2'	57:AA:624:C:C6	2.42	0.54
58:AB:104:U:O2'	58:AB:105:A:H5'	2.07	0.54
58:AB:87:G:C3'	58:AB:88:C:H5''	2.36	0.54
29:AF:102:PRO:HA	57:AA:607:U:OP1	2.07	0.54
30:AG:29:TRP:HB3	58:AB:57:A:N3	2.21	0.54
43:AW:1:MET:C	43:AW:64:MET:HE3	2.26	0.54
30:BG:91:ARG:C	30:BG:91:ARG:HD2	2.27	0.54
36:BP:18:ARG:HD2	57:BA:662:G:P	2.46	0.54
57:BA:1799:G:H5'	57:BA:1819:A:N6	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BY:9:LYS:HA	57:BA:85:G:OP1	2.06	0.54
57:AA:1503:U:O2'	57:AA:1504:C:H5'	2.07	0.54
57:BA:2728:U:O2'	57:BA:2729:G:H5'	2.07	0.54
57:AA:2762:G:H2'	57:AA:2763:G:H5'	1.89	0.54
30:AG:180:PHE:HB3	30:AG:182:LYS:HG3	1.89	0.54
57:AA:2712:U:O2'	57:AA:2713:A:H5'	2.07	0.54
48:B1:29:GLY:O	48:B1:31:GLY:N	2.40	0.54
43:AW:15:ARG:NH2	57:AA:1266:G:O5'	2.37	0.54
28:AE:81:ILE:O	28:AE:81:ILE:HG22	2.07	0.54
57:AA:300:A:H2'	57:AA:301:G:O4'	5.10	0.54
58:AB:81:G:H2'	58:AB:82:G:H5'	1.88	0.54
27:AD:71:ASP:HB2	27:AD:103:ARG:NH2	2.22	0.54
30:AG:5:VAL:N	30:AG:8:LYS:HB3	2.21	0.54
31:AH:52:VAL:O	31:AH:65:HIS:HE1	1.90	0.54
31:AH:85:LYS:HZ2	31:AH:133:VAL:H	1.54	0.54
31:AH:89:ILE:HD11	31:AH:94:TYR:O	2.06	0.54
38:AR:47:PHE:O	38:AR:51:LEU:HD13	2.06	0.54
39:AS:89:ARG:HH11	39:AS:92:TYR:HA	1.71	0.54
41:AU:90:VAL:CG2	42:AV:47:VAL:HG21	2.30	0.54
57:BA:579:G:H2'	57:BA:580:C:C6	2.42	0.54
30:BG:39:ILE:CD1	30:BG:60:LEU:HD21	2.37	0.54
32:BI:82:ARG:O	32:BI:83:ALA:HB2	2.06	0.54
36:BP:32:THR:CG2	36:BP:37:GLY:HA2	2.31	0.54
38:BR:72:ASP:HB3	38:BR:75:LEU:HB2	1.89	0.54
41:BU:83:LEU:HD13	41:BU:83:LEU:H	1.73	0.54
28:BE:122:PHE:CE2	57:BA:2512:C:H4'	2.43	0.54
57:AA:1438:U:O2'	57:AA:1439:A:H5'	2.06	0.54
57:AA:2096:U:H2'	57:AA:2097:C:C6	2.42	0.54
26:BC:191:ARG:HD3	26:BC:195:ARG:HH22	1.71	0.54
49:B2:47:ASN:ND2	57:BA:94(A):G:N3	2.55	0.54
47:B0:43:THR:HG22	57:BA:2331:G:O3'	2.07	0.54
48:A1:45:ASN:CB	57:AA:2230:G:H1'	2.38	0.54
57:AA:322:A:H5'	57:AA:340:A:H1'	1.88	0.54
57:BA:2712:U:O2'	57:BA:2713:A:H5'	2.08	0.54
48:A1:51:VAL:O	48:A1:57:GLU:O	2.25	0.54
57:AA:2584:U:C2'	57:AA:2585:U:H5'	2.37	0.54
47:A0:14:ARG:HH11	47:A0:14:ARG:CG	2.20	0.54
57:AA:110:G:O2'	57:AA:111:A:H5'	2.06	0.54
57:BA:669:G:N3	57:BA:669:G:H2'	2.21	0.54
57:BA:207:A:H2'	57:BA:208:C:O4'	2.07	0.54
38:AR:26:LYS:HE2	38:AR:71:GLN:H	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:AB:56:G:H4'	58:AB:57:A:H8	1.73	0.54
27:AD:35:LYS:HZ2	27:AD:36:PRO:N	2.06	0.54
27:AD:30:GLU:CD	27:AD:63:ARG:HE	2.10	0.54
29:AF:66:PRO:O	29:AF:67:GLN:CB	2.55	0.54
30:AG:31:VAL:O	30:AG:33:ARG:NH1	2.41	0.54
34:AN:3:THR:HG22	34:AN:5:VAL:CG1	2.38	0.54
36:AP:32:THR:HG21	36:AP:37:GLY:CA	2.31	0.54
36:AP:83:VAL:HG23	36:AP:105:LEU:HD13	1.89	0.54
45:AY:2:ARG:NH2	57:AA:106:C:H1'	2.21	0.54
30:BG:111:LEU:CD1	30:BG:120:LEU:HD11	2.38	0.54
32:BI:124:GLY:O	32:BI:142:VAL:HB	2.08	0.54
32:BI:64:GLU:OE2	32:BI:67:ARG:HD2	2.08	0.54
36:BP:16:ARG:O	36:BP:16:ARG:NH1	2.39	0.54
39:BS:13:ARG:HG3	39:BS:14:VAL:N	2.14	0.54
27:BD:72:LYS:HZ2	27:BD:75:ILE:HD12	1.72	0.54
36:BP:63:PRO:HB3	55:B8:12:LYS:O	2.07	0.54
45:BY:8:LYS:HG2	45:BY:28:LYS:HZ1	1.72	0.54
46:BZ:124:ILE:HD11	46:BZ:171:ILE:HD13	1.89	0.54
40:BT:29:ARG:CD	40:BT:86:ILE:HG22	2.37	0.54
38:AR:6:SER:HB2	57:AA:2873:A:C2	2.42	0.54
38:AR:6:SER:HB2	57:AA:2873:A:N3	2.22	0.54
28:AE:186:GLY:O	28:AE:187:ALA:HB3	2.07	0.54
57:BA:271(M):G:C2'	57:BA:271(N):U:H5''	2.31	0.54
56:A9:1:MET:HG3	57:AA:2477:C:H2'	1.88	0.54
27:BD:238:GLY:O	27:BD:239:ARG:O	2.25	0.54
57:AA:898:C:C2'	57:AA:899:A:H5'	2.37	0.54
36:BP:89:ALA:HA	36:BP:121:LYS:HD3	1.90	0.54
35:AO:18:LYS:HB2	35:AO:45:GLU:HG2	1.89	0.54
57:BA:412:A:N7	57:BA:2411:A:H2	2.06	0.54
33:AJ:103:GLY:C	33:AJ:109:SER:HA	2.27	0.54
57:AA:1570:A:H2'	57:AA:1571:A:C8	2.42	0.54
57:AA:1488:G:H5'	57:AA:1489:U:OP2	2.07	0.54
57:AA:1198:U:H2'	57:AA:1199:U:C6	2.43	0.54
26:AC:175:PRO:HD3	57:AA:2124:G:H5'	1.90	0.54
27:AD:108:PRO:HG2	27:AD:111:LEU:HB2	1.89	0.54
30:AG:121:ASN:CG	30:AG:122:PRO:HD2	2.27	0.54
36:AP:81:GLN:HG2	36:AP:106:LEU:HA	1.89	0.54
41:AU:88:ILE:HD12	41:AU:109:LEU:HD22	1.90	0.54
58:BB:87:G:C3'	58:BB:88:C:H5''	2.37	0.54
26:BC:11:LEU:HB3	26:BC:33:LEU:HD22	1.89	0.54
30:BG:73:ALA:HB2	30:BG:87:PRO:HG3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BI:47:LEU:HD12	32:BI:47:LEU:N	4.36	0.54
33:BJ:58:LEU:O	33:BJ:59:ILE:O	2.24	0.54
35:BO:2:ILE:CD1	35:BO:8:LEU:HD11	2.27	0.54
40:BT:25:GLY:H	40:BT:49:VAL:HG13	1.72	0.54
57:AA:904:C:H6	57:AA:904:C:C5'	2.14	0.54
28:BE:34:VAL:HG22	28:BE:48:GLN:HE21	1.72	0.54
53:B6:37:ARG:NH2	57:BA:2286:A:H62	1.94	0.54
40:BT:12:SER:O	40:BT:13:ARG:NH2	2.40	0.54
28:AE:50:GLY:CA	28:AE:78:LEU:HB3	2.33	0.54
52:A5:33:CYS:CB	52:A5:40:LYS:HE3	2.38	0.54
46:AZ:48:PHE:HE2	46:AZ:71:VAL:HG11	1.71	0.54
57:BA:1739:U:H2'	57:BA:1739:U:O2	2.07	0.54
57:AA:523:C:C2'	57:AA:524:U:H5'	2.37	0.54
46:AZ:141:VAL:HG13	46:AZ:144:LEU:HG	1.90	0.54
46:AZ:67:LEU:HD12	46:AZ:67:LEU:N	2.22	0.54
57:BA:2853:C:H2'	57:BA:2854:G:C8	2.43	0.54
30:AG:21:ARG:O	30:AG:21:ARG:HG2	2.06	0.54
57:BA:898:C:C2'	57:BA:899:A:H5'	2.38	0.54
57:AA:2577:A:H5''	57:AA:2578:G:H5'	1.88	0.54
57:BA:2577:A:H5''	57:BA:2578:G:H5'	1.90	0.54
38:AR:34:ILE:HD12	57:AA:1278:A:H4'	1.89	0.54
36:AP:18:ARG:HD2	57:AA:662:G:P	2.46	0.54
36:AP:102:ARG:HB3	36:AP:102:ARG:HH21	1.72	0.54
37:AQ:41:TRP:HB3	37:AQ:94:VAL:HB	1.89	0.54
42:AV:19:LYS:CG	42:AV:20:LEU:N	2.68	0.54
36:BP:49:ARG:HD2	55:B8:58:ILE:HG22	1.89	0.54
57:BA:1197:G:H5'	57:BA:1197:G:H8	3.88	0.54
57:BA:1198:U:H2'	57:BA:1199:U:C6	2.42	0.54
37:BQ:34:LEU:HD11	37:BQ:129:THR:CB	2.37	0.54
41:BU:88:ILE:HD12	41:BU:109:LEU:HD22	1.90	0.54
40:AT:28:VAL:HG13	40:AT:46:GLU:CB	2.38	0.54
37:BQ:134:ARG:NE	46:BZ:122:ARG:HH21	2.05	0.54
46:BZ:152:ALA:CB	46:BZ:167:PRO:HB2	2.38	0.54
40:BT:29:ARG:HG3	40:BT:30:VAL:HG13	1.89	0.54
28:BE:11:MET:CE	28:BE:24:THR:HB	2.37	0.54
28:BE:57:LYS:C	28:BE:59:VAL:H	2.10	0.54
28:BE:64:LYS:HG2	28:BE:64:LYS:O	2.07	0.54
31:BH:50:VAL:HG12	31:BH:51:ARG:N	2.22	0.54
57:BA:1542:A:H5'	57:BA:1543:C:OP2	2.08	0.54
35:BO:47:ILE:CG1	35:BO:48:PRO:HD2	2.32	0.54
51:A4:48:ARG:CG	51:A4:49:PHE:N	2.70	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1639:U:H2'	57:BA:1640:C:H5''	1.89	0.54
57:BA:2036:C:H6	57:BA:2036:C:C5'	2.20	0.54
29:AF:36:VAL:O	29:AF:40:GLN:HG3	2.08	0.54
46:AZ:111:VAL:HG12	46:AZ:112:ARG:H	1.73	0.54
31:BH:136:ILE:HD12	31:BH:136:ILE:H	1.72	0.54
57:AA:2853:C:H2'	57:AA:2854:G:C8	2.43	0.54
58:BB:5:C:O2'	58:BB:6:C:H5'	2.05	0.54
48:A1:80:LEU:O	48:A1:82:LEU:HD22	2.07	0.54
57:BA:2732:G:H3'	57:BA:2733:A:C5'	2.38	0.54
35:BO:68:GLU:OE1	57:BA:2685:G:H5'	2.08	0.54
36:AP:89:ALA:HA	36:AP:121:LYS:HD3	1.90	0.54
29:BF:128:ALA:O	29:BF:142:TRP:NE1	2.34	0.54
27:BD:240:ALA:HA	57:BA:1971:A:N3	2.22	0.54
57:AA:184:C:H2'	57:AA:185:U:H6	1.72	0.54
57:AA:579:G:H2'	57:AA:580:C:C6	2.42	0.54
57:AA:900:A:H2'	57:AA:901:A:C8	4.13	0.54
32:AI:87:LYS:HA	32:AI:122:GLU:HA	1.89	0.54
30:BG:6:ALA:HB3	30:BG:104:GLU:OE2	2.08	0.54
32:BI:120:ILE:CG2	32:BI:121:LYS:N	2.67	0.54
38:BR:73:VAL:O	38:BR:76:VAL:HG12	2.08	0.54
40:AT:57:PHE:CG	40:AT:58:ASN:N	2.76	0.54
40:AT:83:ILE:HG13	40:AT:84:GLN:N	2.23	0.54
57:BA:1051:G:C2	57:BA:1052:C:N4	2.75	0.54
27:AD:48:ARG:HG3	27:AD:48:ARG:NH1	2.22	0.54
37:BQ:137:TYR:N	37:BQ:137:TYR:HD2	2.05	0.54
57:BA:1503:U:H2'	57:BA:1504:C:H6	1.73	0.54
35:BO:2:ILE:HD11	35:BO:82:ASN:HD22	1.72	0.54
31:BH:52:VAL:O	31:BH:65:HIS:HE1	1.90	0.54
57:BA:330:A:O2'	57:BA:331:A:C8	2.60	0.54
41:BU:74:LEU:O	41:BU:74:LEU:HD13	2.07	0.54
48:A1:45:ASN:HD21	48:A1:47:GLN:NE2	2.05	0.54
48:B1:29:GLY:HA3	57:BA:2396:G:O2'	2.08	0.54
30:BG:130:ASN:HB3	30:BG:160:VAL:HA	1.90	0.54
57:AA:2668:G:O2'	57:AA:2669:G:H5'	2.08	0.54
57:AA:545:C:H2'	57:AA:547:A:H5''	1.90	0.54
57:AA:625:G:H2'	57:AA:626:U:H6	2.45	0.54
27:AD:63:ARG:HH22	57:AA:1568:G:P	2.31	0.54
29:AF:63:LYS:HZ1	29:AF:67:GLN:HB2	1.71	0.54
32:AI:88:ILE:HG12	32:AI:142:VAL:HG13	1.90	0.54
32:AI:77:LEU:C	32:AI:77:LEU:HD23	2.28	0.54
39:AS:95:HIS:CD2	58:AB:48:A:H4'	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:AV:47:VAL:HB	42:AV:49:THR:O	2.07	0.54
57:BA:2106:G:H2'	57:BA:2107:C:O4'	2.08	0.54
37:BQ:41:TRP:HB3	37:BQ:94:VAL:HB	1.89	0.54
40:AT:54:ARG:HG2	40:AT:54:ARG:HH11	1.73	0.54
45:BY:54:LYS:O	45:BY:56:PRO:HD2	2.08	0.54
40:BT:28:VAL:HG13	40:BT:46:GLU:CB	2.38	0.54
40:BT:29:ARG:HG2	40:BT:85:LYS:CA	2.37	0.54
57:AA:1332:G:H5''	57:AA:1332:G:H8	1.73	0.54
57:BA:1332:G:N2	57:BA:1610:A:C8	2.75	0.54
57:BA:2360:A:O2'	57:BA:2361:A:C5'	2.55	0.54
26:AC:167:ASP:OD2	26:AC:171:ALA:HB3	2.06	0.54
28:AE:50:GLY:HA3	28:AE:74:PRO:HG2	1.89	0.54
52:B5:34:PRO:O	52:B5:35:GLU:CB	2.54	0.54
54:A7:12:ARG:HG3	57:AA:686:G:O6	2.07	0.54
35:BO:111:PHE:HB3	35:BO:114:ILE:HD13	1.89	0.54
54:B7:12:ARG:HG3	57:BA:686:G:O6	2.07	0.54
47:A0:40:GLN:HE21	47:A0:57:PHE:HB3	1.71	0.54
38:BR:10:LEU:CD2	38:BR:17:ARG:HD3	2.37	0.54
27:AD:228:PRO:HD3	27:AD:235:GLY:HA2	1.88	0.54
56:A9:19:ARG:HA	57:AA:2757:A:OP1	2.07	0.54
57:BA:775:G:O2'	57:BA:776:G:H5'	6.79	0.54
43:AW:61:ASN:HD22	43:AW:61:ASN:N	2.05	0.54
57:BA:1961:C:O2'	57:BA:1962:C:H5'	2.07	0.54
57:AA:315:G:H2'	57:AA:316:C:C6	2.42	0.54
51:A4:7:PRO:O	51:A4:8:LYS:CB	2.55	0.54
38:AR:36:THR:HG22	57:AA:1278:A:C5'	2.37	0.54
27:AD:71:ASP:HB2	27:AD:103:ARG:HH22	1.73	0.54
32:AI:85:GLU:N	32:AI:123:LEU:HD12	2.10	0.54
32:AI:83:ALA:O	32:AI:145:VAL:HG22	2.08	0.54
34:AN:48:MET:H	34:AN:48:MET:CE	2.20	0.54
36:AP:17:LYS:O	36:AP:19:VAL:N	2.39	0.54
42:AV:18:LEU:HD22	42:AV:19:LYS:H	1.73	0.54
45:AY:27:VAL:HG12	45:AY:29:GLU:OE1	2.07	0.54
26:BC:45:HIS:HB3	57:BA:2177:C:H1'	1.89	0.54
26:BC:53:ARG:CD	26:BC:53:ARG:H	2.19	0.54
30:BG:111:LEU:HD11	30:BG:120:LEU:HD11	1.89	0.54
32:BI:113:ARG:O	32:BI:114:LEU:HG	2.08	0.54
32:BI:77:LEU:HD23	32:BI:77:LEU:C	2.28	0.54
34:BN:10:GLU:OE2	34:BN:11:PRO:HD2	2.08	0.54
39:BS:96:GLY:C	39:BS:98:VAL:H	2.10	0.54
41:BU:13:LYS:HE2	41:BU:13:LYS:N	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BU:65:ILE:O	41:BU:69:CYS:HB3	2.08	0.54
57:BA:2023:G:H5'	57:BA:2617:C:H4'	1.90	0.54
46:BZ:124:ILE:HD11	46:BZ:171:ILE:CD1	2.37	0.54
49:A2:45:SER:H	49:A2:46:GLN:HE21	1.53	0.54
57:AA:2133:G:H2'	57:AA:2157:G:N2	2.07	0.54
42:BV:16:PRO:O	42:BV:96:ILE:HB	2.08	0.54
49:A2:51:ARG:HB2	49:A2:55:ARG:NH2	2.22	0.54
29:BF:206:ILE:HG22	29:BF:207:GLY:N	2.19	0.54
57:BA:2476:A:C2'	57:BA:2477:C:H5''	2.33	0.54
55:B8:44:LYS:N	55:B8:44:LYS:HD2	2.20	0.54
47:A0:43:THR:HG22	57:AA:2331:G:O3'	2.08	0.54
46:AZ:19:ARG:HH12	46:AZ:84:GLU:CA	2.20	0.54
29:BF:36:VAL:O	29:BF:40:GLN:HG3	2.07	0.54
26:BC:190:ILE:O	26:BC:194:ILE:HG12	2.08	0.54
42:AV:82:ARG:HD2	42:AV:82:ARG:N	2.22	0.54
57:AA:2136:C:N4	57:AA:2156:G:H21	2.06	0.54
57:AA:2199:A:H3'	57:AA:2200:C:H6	1.72	0.54
57:AA:2074:U:H2'	57:AA:2075:U:C6	2.43	0.54
57:BA:2199:A:H3'	57:BA:2200:C:H6	1.72	0.54
30:AG:73:ALA:N	30:AG:87:PRO:HG3	2.14	0.54
36:AP:13:ASN:HD22	36:AP:13:ASN:C	2.10	0.54
44:AX:27:THR:HG22	44:AX:80:ILE:HB	1.89	0.54
38:BR:36:THR:HG22	57:BA:1278:A:C5'	2.38	0.54
26:BC:175:PRO:HD3	57:BA:2124:G:H5'	1.90	0.54
26:BC:21:TYR:HB3	26:BC:26:ALA:HB2	1.90	0.54
32:BI:118:LYS:HZ1	32:BI:119:PRO:HG2	1.72	0.54
34:BN:57:ALA:O	34:BN:58:ASP:O	2.26	0.54
36:BP:107:LYS:O	36:BP:109:GLY:N	2.40	0.54
36:BP:32:THR:O	36:BP:33:ARG:HB3	2.07	0.54
39:BS:101:LEU:HD13	39:BS:101:LEU:O	2.08	0.54
41:BU:46:ALA:O	41:BU:50:ARG:HG3	2.07	0.54
42:BV:55:ALA:HA	42:BV:101:GLY:HA2	1.90	0.54
27:BD:186:HIS:HD2	27:BD:188:GLU:H	1.55	0.54
40:AT:27:THR:OG1	40:AT:28:VAL:N	2.41	0.54
37:BQ:26:TYR:HE1	37:BQ:28:ALA:HB2	1.72	0.54
53:B6:27:LYS:O	53:B6:27:LYS:HD3	2.07	0.54
28:BE:143:ASN:O	57:BA:2052:G:H4'	2.07	0.54
28:AE:120:TRP:CD2	28:AE:155:LYS:HD3	2.43	0.54
40:AT:12:SER:O	40:AT:13:ARG:NH2	2.41	0.54
57:AA:795:C:H2'	57:AA:796:C:C6	2.43	0.54
56:B9:1:MET:HB3	56:B9:4:ARG:CZ	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:AE:4:ILE:HG12	28:AE:5:LEU:O	2.08	0.54
57:BA:1280:G:C3'	57:BA:1281:G:H5''	2.38	0.54
28:BE:168:MET:O	28:BE:170:LEU:HD12	2.07	0.54
31:BH:149:ARG:HG3	31:BH:162:ILE:O	2.07	0.54
52:A5:6:VAL:CG1	57:AA:2016:U:H1'	2.37	0.54
47:B0:14:ARG:CG	47:B0:14:ARG:HH11	2.20	0.54
57:BA:2208:A:H1'	57:BA:2219:G:C4	2.43	0.54
57:BA:1481:U:H5'	57:BA:1482:G:OP2	2.08	0.54
44:BX:40:LYS:HG2	44:BX:41:ASN:HD22	1.72	0.54
57:BA:274:G:H3'	57:BA:274:G:N3	2.22	0.54
31:AH:24:VAL:HG11	31:AH:72:ILE:HD11	1.89	0.54
39:AS:63:THR:O	39:AS:66:ALA:HB3	2.08	0.54
39:AS:88:ASP:CG	39:AS:89:ARG:H	2.11	0.54
34:AN:2:LYS:HZ1	42:AV:12:TYR:HA	1.73	0.54
45:AY:39:VAL:HG12	45:AY:40:GLU:N	2.23	0.54
48:B1:73:LEU:CD1	48:B1:94:LEU:HB3	2.38	0.54
38:BR:38:VAL:HG12	38:BR:42:LYS:HD2	1.90	0.54
28:BE:120:TRP:CD2	28:BE:155:LYS:HD3	2.43	0.54
38:AR:2:ARG:HB2	38:AR:5:LYS:HE2	1.89	0.54
57:BA:528:A:C2	57:BA:2043:C:C5'	2.91	0.54
33:AJ:58:LEU:HA	33:AJ:82:PHE:CB	2.38	0.54
36:AP:30:THR:HG22	36:AP:31:ALA:N	2.15	0.54
55:A8:30:ARG:HA	55:A8:30:ARG:NE	2.23	0.54
47:B0:40:GLN:HE21	47:B0:57:PHE:HB3	1.71	0.54
38:BR:10:LEU:HD22	38:BR:17:ARG:HD2	1.89	0.54
57:AA:1188:U:H2'	57:AA:1189:A:H5'	1.90	0.54
29:AF:41:LEU:O	29:AF:44:ARG:HG2	2.07	0.54
35:AO:13:ASN:C	35:AO:15:GLY:H	2.11	0.54
57:BA:1336:A:H2'	57:BA:1337:G:C8	2.43	0.54
41:AU:27:LEU:HD12	57:AA:2019:A:O3'	2.07	0.54
50:A3:19:GLN:NE2	50:A3:52:HIS:HE1	2.06	0.53
37:AQ:14:ARG:CD	57:AA:958:U:H5''	2.37	0.53
27:AD:129:ASN:N	27:AD:129:ASN:ND2	3.86	0.53
27:AD:16:MET:CE	27:AD:208:LYS:HD2	2.37	0.53
32:AI:93:THR:CG2	32:AI:119:PRO:HB3	2.35	0.53
34:AN:128:HIS:HE1	34:AN:134:ARG:NH1	2.06	0.53
34:AN:14:VAL:HG12	34:AN:15:LEU:N	2.23	0.53
34:AN:57:ALA:O	34:AN:58:ASP:O	2.25	0.53
42:AV:39:LEU:HA	42:AV:47:VAL:CG1	2.37	0.53
51:B4:5:ILE:O	51:B4:5:ILE:HG12	2.07	0.53
26:BC:3:LYS:HE3	57:BA:2107:C:H5'	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:134:ARG:H	34:BN:135:PRO:HD3	1.73	0.53
35:AO:88:ASN:HD21	35:AO:90:GLN:CB	2.19	0.53
43:BW:41:LYS:HE3	52:B5:25:LEU:HD11	1.90	0.53
57:BA:484:C:H2'	57:BA:485:C:C6	2.43	0.53
45:BY:27:VAL:HG12	45:BY:28:LYS:N	2.23	0.53
57:AA:1021:A:C8	57:AA:1021:A:C3'	2.90	0.53
28:BE:52:LEU:O	28:BE:74:PRO:HA	2.08	0.53
57:AA:528:A:N1	57:AA:2042:A:H2'	2.23	0.53
57:BA:234:C:H2'	57:BA:235:U:C6	2.43	0.53
42:BV:6:LYS:O	42:BV:37:VAL:HG21	2.08	0.53
30:AG:180:PHE:HB2	30:AG:182:LYS:HE3	1.90	0.53
46:BZ:69:THR:HA	46:BZ:89:PHE:O	2.07	0.53
35:AO:13:ASN:HD21	35:AO:97:ARG:H	1.56	0.53
37:BQ:110:THR:HG22	37:BQ:113:GLN:OE1	2.08	0.53
57:BA:2199:A:H5'	57:BA:2200:C:OP2	2.08	0.53
57:BA:1833:U:H2'	57:BA:1834:U:H6	1.73	0.53
57:BA:654(B):C:H2'	57:BA:654(C):G:C8	2.43	0.53
57:AA:1684:C:O2'	57:AA:1685:C:H5'	2.08	0.53
57:BA:2136:C:H41	57:BA:2156:G:H21	1.56	0.53
34:AN:72:TYR:CD1	34:AN:90:MET:HG3	2.43	0.53
48:B1:89:GLU:O	48:B1:93:GLU:HG2	2.08	0.53
29:BF:136:THR:OG1	57:BA:320:A:H2'	2.08	0.53
57:AA:1144:G:H2'	57:AA:1145:C:H6	1.72	0.53
57:AA:1344:G:H4'	57:AA:1384:A:N7	2.23	0.53
26:AC:184:GLU:O	26:AC:188:ASP:HB2	2.08	0.53
26:AC:3:LYS:HE3	57:AA:2107:C:H5'	1.89	0.53
30:AG:142:PRO:HG2	30:AG:143:GLU:OE1	2.08	0.53
31:AH:12:PRO:HD2	31:AH:15:VAL:HG21	1.90	0.53
36:AP:25:SER:HA	57:AA:811:U:H3'	1.90	0.53
36:AP:7:ARG:NH1	36:AP:7:ARG:CA	2.62	0.53
37:AQ:39:PRO:HB3	37:AQ:99:PRO:HD3	1.90	0.53
30:BG:86:MET:N	30:BG:87:PRO:HD3	2.24	0.53
32:BI:97:ILE:O	32:BI:101:LEU:HB2	2.09	0.53
27:BD:208:LYS:HB2	57:BA:729:G:C5	2.44	0.53
57:AA:1001:A:H2'	57:AA:1002:G:O4'	2.09	0.53
57:BA:2133:G:C2'	57:BA:2157:G:H22	2.11	0.53
28:BE:36:ARG:NH2	28:BE:88:GLY:CA	2.64	0.53
28:AE:49:LEU:HD23	28:AE:49:LEU:N	2.23	0.53
54:B7:43:THR:HG23	54:B7:44:PRO:HD2	1.89	0.53
57:BA:1719:G:O2'	57:BA:1720:U:H5'	2.07	0.53
30:BG:161:THR:CG2	30:BG:162:THR:H	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:AS:55:ALA:O	58:AB:117:G:H5''	2.09	0.53
39:AS:52:SER:HB3	39:AS:55:ALA:HB3	1.90	0.53
26:BC:167:ASP:OD2	26:BC:171:ALA:HB3	2.08	0.53
57:BA:781:A:H2'	57:BA:782:A:H5'	6.05	0.53
52:A5:6:VAL:HG13	52:A5:7:PRO:HD2	1.91	0.53
43:AW:96:ILE:HG12	57:AA:2012:G:O3'	2.09	0.53
46:AZ:14:LYS:C	46:AZ:16:SER:H	2.11	0.53
50:B3:1:MET:O	50:B3:3:ARG:N	2.40	0.53
53:B6:13:CYS:HB2	53:B6:22:ALA:HB3	1.89	0.53
49:A2:25:VAL:O	49:A2:29:LYS:HG2	2.07	0.53
51:A4:16:CYS:HG	51:A4:36:CYS:HG	1.55	0.53
57:AA:1799:G:H5'	57:AA:1819:A:H61	1.73	0.53
57:AA:2106:G:H2'	57:AA:2107:C:O4'	2.08	0.53
39:AS:29:PHE:CE1	58:AB:7:G:O5'	2.62	0.53
30:AG:57:ALA:CA	30:AG:90:LEU:HD21	2.39	0.53
31:AH:89:ILE:HD13	31:AH:94:TYR:HB3	1.89	0.53
38:AR:84:ALA:HB3	38:AR:85:PRO:HD3	1.91	0.53
39:AS:13:ARG:CG	39:AS:14:VAL:N	2.70	0.53
45:AY:88:LYS:O	45:AY:90:LEU:HD23	2.08	0.53
37:BQ:14:ARG:CD	57:BA:958:U:H5''	2.38	0.53
33:BJ:59:ILE:O	33:BJ:61:LEU:N	2.37	0.53
42:BV:89:GLN:OE1	42:BV:90:PRO:HD2	2.08	0.53
27:BD:26:LYS:O	27:BD:27:THR:HG22	2.08	0.53
27:BD:35:LYS:CG	27:BD:63:ARG:HG3	2.38	0.53
27:BD:70:TRP:CD1	27:BD:70:TRP:C	2.81	0.53
27:BD:79:VAL:HG21	27:BD:111:LEU:HD21	1.90	0.53
40:AT:55:ASN:H	40:AT:59:THR:CG2	2.22	0.53
36:BP:62:LEU:CD2	36:BP:62:LEU:H	2.18	0.53
44:BX:12:VAL:HG11	44:BX:17:ALA:HB1	1.89	0.53
45:BY:76:CYS:HG	45:BY:77:PRO:HD2	1.70	0.53
40:BT:34:VAL:HG13	40:BT:38:ASN:O	2.08	0.53
28:BE:61:ARG:C	28:BE:63:LEU:H	2.12	0.53
28:AE:62:PRO:O	28:AE:64:LYS:N	2.41	0.53
28:AE:61:ARG:C	28:AE:63:LEU:H	2.11	0.53
57:AA:528:A:H2	57:AA:2043:C:H5'	1.74	0.53
52:B5:48:GLU:O	52:B5:49:CYS:CB	2.55	0.53
57:BA:1292:U:H2'	57:BA:1293:C:H6	1.73	0.53
52:A5:33:CYS:SG	52:A5:49:CYS:SG	3.06	0.53
57:BA:266:G:C8	57:BA:266:G:H5'	4.44	0.53
57:BA:2481:G:O2'	57:BA:2482:G:P	2.65	0.53
57:AA:1739:U:H2'	57:AA:1739:U:O2	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:B0:48:GLY:HA3	47:B0:80:HIS:ND1	2.23	0.53
36:AP:140:ALA:O	36:AP:141:ALA:HB3	2.09	0.53
47:A0:73:GLY:C	47:A0:75:LEU:H	2.12	0.53
35:BO:7:TYR:HE1	35:BO:20:MET:HE3	1.73	0.53
50:A3:45:GLY:HA3	57:AA:851:U:O2'	2.08	0.53
53:A6:13:CYS:HB2	53:A6:22:ALA:HB3	1.91	0.53
57:AA:1051:G:C2	57:AA:1052:C:N4	2.76	0.53
46:AZ:64:GLY:O	46:AZ:65:GLN:O	2.26	0.53
57:AA:2208:A:H1'	57:AA:2219:G:C4	2.43	0.53
34:AN:4:TYR:OH	57:AA:995:C:O2	2.25	0.53
27:AD:186:HIS:HD2	27:AD:188:GLU:H	1.57	0.53
30:AG:110:ALA:CA	30:AG:112:PRO:HD2	2.32	0.53
30:AG:15:VAL:HG13	30:AG:175:LEU:CB	2.36	0.53
30:AG:39:ILE:HD11	30:AG:60:LEU:HD11	1.90	0.53
32:AI:124:GLY:O	32:AI:142:VAL:HB	2.07	0.53
32:AI:92:VAL:CG1	32:AI:97:ILE:HD11	2.35	0.53
36:BP:105:LEU:H	36:BP:105:LEU:HD12	1.73	0.53
42:BV:51:VAL:CG1	42:BV:52:VAL:H	2.18	0.53
27:BD:80:ALA:HB2	27:BD:96:HIS:CD2	2.43	0.53
57:AA:2562:U:H2'	57:AA:2563:U:H5'	1.90	0.53
40:AT:29:ARG:HG3	40:AT:30:VAL:HG13	1.91	0.53
46:BZ:108:PRO:HB2	46:BZ:144:LEU:HB2	1.89	0.53
46:BZ:102:LEU:CD1	46:BZ:171:ILE:HD11	2.38	0.53
58:BB:109:C:H5'	58:BB:110:G:O5'	2.08	0.53
53:A6:8:LYS:HD2	53:A6:25:LYS:HG2	1.90	0.53
57:AA:1314:C:H5'	57:AA:1314:C:H6	1.72	0.53
57:BA:1332:G:H8	57:BA:1332:G:H5''	1.72	0.53
28:AE:51:PHE:O	28:AE:52:LEU:C	2.46	0.53
57:BA:330:A:O2'	57:BA:331:A:H8	1.91	0.53
38:AR:101:ALA:HB2	52:A5:44:THR:HB	1.91	0.53
52:A5:48:GLU:O	52:A5:49:CYS:CB	2.57	0.53
46:AZ:4:ARG:O	46:AZ:5:LEU:HB2	2.08	0.53
51:B4:48:ARG:CG	51:B4:49:PHE:N	2.71	0.53
30:AG:174:GLU:CD	30:AG:182:LYS:HZ3	2.12	0.53
31:AH:144:VAL:HA	31:AH:147:ASN:HB2	1.91	0.53
27:BD:211:ARG:O	27:BD:215:LEU:HG	2.08	0.53
44:BX:44:GLU:HG2	44:BX:49:VAL:O	2.08	0.53
57:AA:1336:A:H2'	57:AA:1337:G:C8	2.43	0.53
35:AO:49:ARG:NH2	57:AA:1423:G:H5'	98.68	0.53
39:BS:52:SER:HB3	39:BS:55:ALA:HB3	1.91	0.53
44:AX:3:THR:O	44:AX:4:ALA:HB3	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:AU:29:SER:OG	41:AU:30:LYS:HE2	2.08	0.53
45:AY:54:LYS:HD3	57:AA:530:G:C5	78.52	0.53
58:AB:8:U:H6	58:AB:8:U:C5'	2.22	0.53
29:AF:185:ASP:HA	29:AF:188:ARG:HD3	1.91	0.53
30:AG:105:LYS:HZ1	51:A4:26:SER:HB3	1.72	0.53
31:AH:50:VAL:CG1	31:AH:51:ARG:N	2.71	0.53
32:AI:120:ILE:HG22	32:AI:121:LYS:H	1.70	0.53
32:AI:120:ILE:HG22	32:AI:122:GLU:H	1.74	0.53
34:AN:91:LEU:CD2	34:AN:98:VAL:HG21	2.39	0.53
36:AP:97:PRO:O	36:AP:98:GLU:HB3	2.09	0.53
39:AS:89:ARG:HH11	39:AS:89:ARG:HG2	1.73	0.53
45:AY:2:ARG:C	45:AY:4:LYS:N	2.61	0.53
29:BF:20:LEU:HD12	29:BF:199:TRP:HZ3	1.74	0.53
31:BH:89:ILE:HD12	31:BH:89:ILE:C	2.29	0.53
36:BP:101:VAL:CG1	36:BP:106:LEU:HD23	2.38	0.53
36:BP:17:LYS:O	36:BP:19:VAL:N	2.42	0.53
38:BR:47:PHE:O	38:BR:51:LEU:HD13	2.08	0.53
57:BA:547:A:H1'	57:BA:548:A:C8	2.43	0.53
27:BD:158:ALA:HB3	27:BD:161:THR:HG21	1.90	0.53
27:BD:63:ARG:HH22	57:BA:1568:G:P	2.31	0.53
27:BD:70:TRP:HZ3	27:BD:146:GLU:CD	2.12	0.53
40:AT:27:THR:HA	40:AT:87:ASP:HB2	1.91	0.53
40:AT:70:VAL:CG1	40:AT:71:GLY:N	2.71	0.53
46:BZ:149:SER:OG	46:BZ:172:ALA:O	2.26	0.53
57:BA:1506:C:O2	57:BA:1506:C:H2'	2.07	0.53
57:BA:1429:G:H2'	57:BA:1430:C:C6	2.44	0.53
40:BT:31:SER:OG	40:BT:43:GLN:HB3	2.08	0.53
53:A6:5:VAL:HG11	57:AA:2284:C:OP1	2.09	0.53
53:B6:35:GLU:OE1	53:B6:35:GLU:HA	2.08	0.53
55:B8:28:GLY:O	55:B8:32:LEU:HG	2.08	0.53
57:AA:1037:G:H1	57:AA:1118:C:H42	1.55	0.53
28:BE:51:PHE:CD1	28:BE:52:LEU:N	2.61	0.53
28:BE:51:PHE:O	28:BE:52:LEU:C	2.46	0.53
28:AE:36:ARG:HH21	28:AE:88:GLY:HA2	1.72	0.53
28:AE:64:LYS:O	28:AE:64:LYS:HG2	2.08	0.53
57:BA:2096:U:H2'	57:BA:2097:C:C6	2.44	0.53
47:A0:41:ARG:HH22	57:AA:2387:U:H4'	1.71	0.53
37:AQ:134:ARG:HA	37:AQ:137:TYR:CD1	2.44	0.53
49:A2:2:LYS:HG2	57:AA:97:C:C4'	2.39	0.53
54:B7:34:ARG:NH1	54:B7:39:ARG:HG3	2.23	0.53
27:BD:210:GLY:O	27:BD:211:ARG:CB	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2713:A:H3'	57:BA:2714:G:H5'	1.91	0.53
57:BA:1385:G:O2'	57:BA:1396:U:C6	2.61	0.53
27:AD:238:GLY:O	27:AD:239:ARG:O	2.26	0.53
47:B0:14:ARG:HH11	47:B0:14:ARG:HG3	1.73	0.53
29:BF:33:LEU:O	29:BF:37:VAL:HG23	2.08	0.53
52:B5:43:HIS:HD2	57:BA:2815:C:O2'	1.91	0.53
29:AF:157:VAL:HG22	29:AF:194:MET:HG2	1.89	0.53
51:A4:6:HIS:HB3	51:A4:7:PRO:CD	2.38	0.53
57:AA:1204:A:N1	57:AA:1241:A:C2	2.76	0.53
57:AA:1242:A:C5'	57:AA:1243:G:OP2	2.57	0.53
27:AD:27:THR:HG23	27:AD:27:THR:O	2.08	0.53
32:AI:47:LEU:N	32:AI:47:LEU:HD12	4.35	0.53
34:AN:10:GLU:OE2	34:AN:11:PRO:HD2	2.09	0.53
36:AP:62:LEU:N	36:AP:62:LEU:HD23	2.23	0.53
38:AR:38:VAL:HG12	38:AR:42:LYS:HD2	1.90	0.53
39:AS:88:ASP:CG	39:AS:89:ARG:N	2.62	0.53
57:BA:1283:G:N2	57:BA:1285:G:H3'	2.24	0.53
29:BF:65:TRP:CZ3	29:BF:75:HIS:HD2	2.26	0.53
39:BS:34:HIS:HB3	39:BS:53:SER:HB3	1.89	0.53
34:BN:2:LYS:HZ1	42:BV:12:TYR:HA	1.74	0.53
27:BD:43:ARG:HH11	27:BD:44:ASN:CG	2.12	0.53
55:A8:6:THR:HG21	55:A8:63:PRO:HD3	1.88	0.53
57:BA:1503:U:O2'	57:BA:1504:C:H5'	2.08	0.53
57:BA:1608:A:H1'	57:BA:1610:A:OP2	2.09	0.53
28:AE:117:MET:O	28:AE:118:LYS:HB2	2.07	0.53
54:B7:5:TRP:CZ3	57:BA:464:U:H4'	2.43	0.53
35:AO:7:TYR:HE1	35:AO:20:MET:HE3	1.72	0.53
57:AA:2001:A:H2'	57:AA:2002:G:C8	2.44	0.53
57:BA:272(J):C:O2'	57:BA:274:G:H5'	2.08	0.53
31:BH:107:VAL:O	31:BH:107:VAL:HG23	2.09	0.53
57:AA:1839:G:H5'	57:AA:1839:G:H8	1.74	0.53
57:BA:1839:G:H5'	57:BA:1839:G:H8	1.73	0.53
57:AA:2301:C:H2'	57:AA:2302:G:O4'	2.09	0.53
57:AA:225:A:O2'	57:AA:257:A:H4'	2.09	0.53
57:AA:977:G:O2'	57:AA:978:G:H5'	2.08	0.53
26:AC:216:THR:HB	26:AC:222:SER:CB	2.35	0.53
27:AD:77:ALA:CB	27:AD:97:TYR:HA	2.39	0.53
29:AF:65:TRP:CZ3	29:AF:73:ALA:O	2.62	0.53
30:AG:96:ARG:O	30:AG:98:ARG:N	2.41	0.53
36:AP:107:LYS:O	36:AP:109:GLY:N	2.41	0.53
39:AS:54:LEU:HD22	39:AS:58:LEU:H	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:AU:8:VAL:HG23	41:AU:11:ARG:HH21	1.73	0.53
57:BA:1049:C:H2'	57:BA:1050:A:C8	2.43	0.53
57:BA:1348:G:C2'	57:BA:1349:A:H5''	2.38	0.53
58:BB:56:G:H4'	58:BB:57:A:H8	1.73	0.53
30:BG:80:PHE:O	30:BG:81:LYS:O	2.27	0.53
39:BS:65:VAL:O	39:BS:69:VAL:HG12	2.09	0.53
55:A8:4:MET:CG	55:A8:61:LEU:HD13	2.38	0.53
27:BD:128:GLY:H	27:BD:193:VAL:HG13	1.74	0.53
44:BX:27:THR:HA	44:BX:80:ILE:HA	1.90	0.53
57:BA:747:U:O2	57:BA:2014:A:H1'	2.09	0.53
53:A6:45:LYS:CE	57:AA:2371:G:H5''	2.33	0.53
40:BT:46:GLU:O	40:BT:65:LYS:HD2	2.08	0.53
57:AA:2389:G:H5''	57:AA:2390:U:H5'	1.91	0.53
57:AA:1506:C:O2	57:AA:1506:C:H2'	2.07	0.53
57:BA:904:C:C5'	57:BA:904:C:H6	2.16	0.53
26:AC:166:ASN:HA	26:AC:171:ALA:O	2.09	0.53
28:AE:59:VAL:HG13	28:AE:60:ASN:H	1.73	0.53
57:AA:528:A:C2	57:AA:2043:C:C5'	2.91	0.53
57:BA:1173:G:H3'	57:BA:1174:A:H5'	1.90	0.53
57:BA:1037:G:H1	57:BA:1118:C:H42	1.56	0.53
38:BR:14:SER:HB3	57:BA:2690:C:OP2	2.09	0.53
44:BX:60:ARG:NH2	54:B7:47:ARG:HH11	2.07	0.53
34:BN:62:VAL:CG2	34:BN:66:LYS:HD2	2.39	0.53
44:BX:41:ASN:HD22	44:BX:41:ASN:N	2.05	0.53
52:B5:43:HIS:CD2	57:BA:2815:C:O2'	2.61	0.53
57:BA:1932:A:H2'	57:BA:1933:G:O4'	2.08	0.53
41:AU:76:TYR:CZ	41:AU:80:ILE:HG13	2.44	0.53
47:A0:5:LYS:NZ	47:A0:5:LYS:HB3	2.24	0.53
48:A1:20:ARG:HA	48:A1:33:LYS:O	2.09	0.53
48:A1:20:ARG:HH11	48:A1:20:ARG:HG2	1.73	0.53
57:AA:545:C:C2'	57:AA:547:A:H5''	2.39	0.53
26:AC:53:ARG:H	26:AC:53:ARG:CD	2.19	0.53
27:AD:208:LYS:HB2	57:AA:729:G:C5	2.44	0.53
30:AG:117:PHE:CD2	30:AG:118:ARG:N	2.77	0.53
30:AG:16:ARG:O	30:AG:20:ILE:HG13	2.09	0.53
30:AG:45:GLU:N	30:AG:88:ILE:HG21	2.11	0.53
41:AU:112:ARG:HH22	42:AV:46:VAL:HG11	1.72	0.53
30:BG:86:MET:O	30:BG:86:MET:HG2	2.08	0.53
30:BG:71:THR:CG2	30:BG:89:GLY:HA3	2.37	0.53
36:BP:101:VAL:HG12	36:BP:107:LYS:N	2.24	0.53
36:BP:102:ARG:HH21	36:BP:102:ARG:HB3	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BS:18:ILE:C	39:BS:20:ARG:H	2.12	0.53
57:AA:2802:G:O2'	57:AA:2803:C:H5'	2.09	0.53
57:AA:2562:U:C2'	57:AA:2563:U:H5'	2.38	0.53
31:BH:41:MET:SD	31:BH:53:GLU:O	2.67	0.53
31:BH:85:LYS:O	31:BH:85:LYS:HD3	2.09	0.53
46:AZ:165:VAL:HG12	46:AZ:166:SER:OG	2.08	0.53
36:AP:85:LEU:HD22	36:AP:114:ILE:HD11	1.91	0.53
57:AA:1528:A:N3	57:AA:1528:A:H2'	2.24	0.53
32:AI:46:ALA:HB2	57:AA:271(P):C:H5'	1.90	0.53
52:B5:53:ALA:HB3	52:B5:55:ARG:NH2	2.24	0.53
38:AR:10:LEU:CD2	38:AR:17:ARG:HD3	2.39	0.53
57:BA:57:C:H2'	57:BA:58:G:O4'	2.09	0.53
57:BA:2544:G:O5'	57:BA:2544:G:H8	1.92	0.53
57:BA:576:U:H2'	57:BA:577:G:C8	2.44	0.53
57:AA:2171:A:H4'	57:AA:2172:U:O5'	2.09	0.53
41:BU:76:TYR:CZ	41:BU:80:ILE:HG13	2.44	0.53
34:AN:71:ILE:HG21	34:AN:84:LYS:HB3	1.91	0.53
57:BA:535:C:O2'	57:BA:536:A:H5'	2.08	0.53
57:AA:1111:A:O2'	57:AA:1112:G:H4'	2.08	0.53
27:AD:70:TRP:HZ3	27:AD:146:GLU:CD	2.11	0.53
39:AS:54:LEU:O	39:AS:54:LEU:HD13	2.09	0.53
42:AV:2:PHE:O	42:AV:3:ALA:HB3	2.09	0.53
26:BC:184:GLU:O	26:BC:188:ASP:HB2	2.08	0.53
34:BN:48:MET:H	34:BN:48:MET:CE	2.22	0.53
36:BP:83:VAL:HG11	36:BP:112:LEU:HD21	1.89	0.53
39:BS:24:LEU:HB3	39:BS:85:VAL:HG12	1.91	0.53
36:BP:62:LEU:HD23	36:BP:62:LEU:N	2.16	0.53
46:BZ:119:GLU:HG3	46:BZ:122:ARG:NH1	2.23	0.53
57:BA:1438:U:O2'	57:BA:1439:A:H5'	2.09	0.53
42:AV:99:ILE:N	42:AV:99:ILE:CD1	2.64	0.53
55:A8:50:LEU:O	55:A8:51:ALA:HB3	2.09	0.53
28:AE:131:ALA:CB	57:AA:2580:U:H5'	2.39	0.53
28:AE:88:GLY:O	28:AE:89:ASP:HB2	2.08	0.53
42:AV:16:PRO:O	42:AV:96:ILE:HB	2.09	0.53
57:BA:1528:A:H2'	57:BA:1528:A:N3	2.24	0.53
57:BA:2645:G:C3'	57:BA:2646:C:H5'	2.32	0.53
36:BP:146:VAL:O	36:BP:148:LEU:HG	2.09	0.53
52:B5:52:TYR:HD1	52:B5:52:TYR:O	1.92	0.53
57:BA:2762:G:H2'	57:BA:2763:G:H5'	1.90	0.53
57:BA:900:A:H2'	57:BA:901:A:C8	4.15	0.53
50:B3:19:GLN:NE2	50:B3:52:HIS:HE1	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B5:7:PRO:HA	57:BA:2615:U:N1	2.24	0.53
57:AA:853:G:O2'	57:AA:854:G:H5'	4.71	0.53
57:BA:1713:U:O2'	57:BA:1714:G:H5'	2.09	0.53
29:AF:123:LEU:HD12	29:AF:124:LEU:H	1.73	0.53
50:A3:1:MET:O	50:A3:3:ARG:N	2.42	0.53
43:BW:95:ILE:O	43:BW:95:ILE:HG13	2.09	0.53
57:BA:2639:A:H2'	57:BA:2640:G:H5'	1.90	0.53
30:AG:65:GLY:O	51:A4:7:PRO:HD2	2.09	0.53
51:A4:9:LEU:HA	51:A4:26:SER:O	2.08	0.53
57:AA:2121:G:H1	57:AA:2177:C:N4	2.05	0.53
57:AA:2206:G:C2	57:AA:2207:G:H5'	2.44	0.53
26:AC:11:LEU:HB3	26:AC:33:LEU:HD22	1.91	0.53
27:AD:35:LYS:HG2	27:AD:63:ARG:CG	2.38	0.53
29:AF:20:LEU:HB3	29:AF:23:ASP:OD2	2.08	0.53
30:AG:138:GLN:OE1	30:AG:153:ARG:N	2.42	0.53
30:AG:17:PRO:HA	30:AG:20:ILE:HD12	1.90	0.53
45:AY:54:LYS:O	45:AY:56:PRO:HD2	2.08	0.53
30:BG:34:LEU:HD21	30:BG:103:LEU:CD1	2.39	0.53
40:AT:29:ARG:CG	40:AT:85:LYS:HA	2.38	0.53
45:BY:7:VAL:CG2	45:BY:8:LYS:HZ2	2.21	0.53
53:B6:5:VAL:HG11	57:BA:2284:C:OP1	2.09	0.53
28:BE:142:GLY:HA3	57:BA:2052:G:O4'	2.09	0.53
35:AO:111:PHE:HB3	35:AO:114:ILE:HD13	1.92	0.53
46:BZ:146:ILE:HD12	57:BA:896:A:N3	2.23	0.53
37:AQ:26:TYR:HE1	37:AQ:28:ALA:HB2	1.72	0.53
52:A5:53:ALA:HB3	52:A5:55:ARG:NH2	2.24	0.53
57:AA:2611:U:C6	57:AA:2611:U:H5'	2.39	0.53
36:BP:108:LYS:C	36:BP:110:TYR:N	2.59	0.53
57:BA:2762:G:H8	57:BA:2762:G:H5'	1.74	0.53
48:B1:41:ARG:HD3	48:B1:43:TYR:OH	2.09	0.53
57:AA:57:C:H2'	57:AA:58:G:O4'	2.08	0.53
34:AN:67:LEU:CD2	34:AN:87:LEU:HD13	2.39	0.53
57:AA:781:A:H2'	57:AA:782:A:H5'	6.07	0.53
43:AW:95:ILE:HG13	43:AW:95:ILE:O	2.09	0.53
27:AD:154:LYS:HE2	57:AA:1801:G:OP2	2.09	0.53
57:AA:654(B):C:H2'	57:AA:654(C):G:C8	2.44	0.53
57:AA:1223:G:H5'	57:AA:1224:C:OP2	2.08	0.52
57:AA:234:C:H2'	57:AA:235:U:C6	2.43	0.52
27:AD:70:TRP:CD1	27:AD:70:TRP:C	2.82	0.52
29:AF:65:TRP:CZ3	29:AF:75:HIS:HD2	2.27	0.52
30:AG:132:ASN:OD1	30:AG:158:ALA:HA	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:AG:72:ARG:CG	30:AG:87:PRO:HD2	2.39	0.52
29:BF:7:TYR:HD2	29:BF:16:GLY:H	1.56	0.52
30:BG:145:THR:HG23	30:BG:146:TYR:N	2.24	0.52
32:BI:99:GLU:OE1	32:BI:100:ALA:N	2.42	0.52
36:BP:64:LYS:C	36:BP:66:GLY:N	2.63	0.52
36:BP:97:PRO:O	36:BP:98:GLU:HB3	2.08	0.52
39:BS:36:TYR:HD1	39:BS:36:TYR:N	2.02	0.52
27:BD:121:PRO:HB3	27:BD:135:PHE:CD1	2.44	0.52
35:BO:23:ARG:HG3	35:BO:24:VAL:N	2.23	0.52
40:BT:55:ASN:H	40:BT:59:THR:HG22	1.72	0.52
28:AE:60:ASN:OD1	28:AE:61:ARG:N	2.42	0.52
57:BA:528:A:H2	57:BA:2043:C:H5'	1.72	0.52
57:AA:1464:C:O2'	57:AA:1528:A:C8	2.61	0.52
57:AA:1173:G:H3'	57:AA:1174:A:H5'	1.89	0.52
57:BA:795:C:H2'	57:BA:796:C:H6	1.73	0.52
57:BA:2468:G:HO2'	57:BA:2476:A:H8	1.54	0.52
48:A1:45:ASN:HB2	57:AA:2230:G:H1'	1.90	0.52
35:BO:3:GLN:HB2	35:BO:4:PRO:HD2	1.90	0.52
57:AA:1339:G:H21	57:AA:1603:A:H1'	1.73	0.52
27:AD:239:ARG:HB3	57:AA:2591:C:OP2	2.08	0.52
47:B0:20:ARG:NH1	57:BA:2271:G:C5'	2.72	0.52
33:AJ:118:THR:O	33:AJ:119:ALA:HB3	2.09	0.52
47:B0:5:LYS:HB3	47:B0:5:LYS:NZ	2.23	0.52
57:AA:648:G:O2'	57:AA:649:G:H5'	2.09	0.52
57:BA:1459:G:C8	57:BA:1461:G:H1'	2.44	0.52
30:AG:121:ASN:O	30:AG:122:PRO:O	2.27	0.52
32:AI:67:ARG:HH11	32:AI:67:ARG:HG2	1.74	0.52
38:AR:45:ARG:HG3	38:AR:95:THR:HG22	1.91	0.52
38:AR:63:ARG:NH1	38:AR:80:PHE:CD1	2.78	0.52
43:AW:64:MET:O	43:AW:65:LEU:CB	2.55	0.52
30:BG:27:ASN:C	30:BG:29:TRP:H	2.12	0.52
32:BI:92:VAL:CG1	32:BI:97:ILE:HD11	2.33	0.52
34:BN:43:THR:HB	34:BN:46:VAL:CG1	2.34	0.52
37:BQ:39:PRO:HB3	37:BQ:99:PRO:HD3	1.91	0.52
39:BS:54:LEU:HD22	39:BS:58:LEU:H	1.75	0.52
39:BS:88:ASP:CG	39:BS:89:ARG:N	2.63	0.52
35:AO:87:ILE:HG22	35:AO:91:LEU:HA	1.90	0.52
50:A3:47:VAL:HG11	50:A3:56:VAL:HG21	1.92	0.52
38:BR:101:ALA:HB2	52:B5:44:THR:HB	1.91	0.52
54:A7:34:ARG:HH12	54:A7:39:ARG:CD	2.22	0.52
30:AG:180:PHE:C	30:AG:182:LYS:H	2.11	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BV:2:PHE:O	42:BV:3:ALA:HB3	2.09	0.52
43:BW:96:ILE:HD11	57:BA:2012:G:H4'	1.91	0.52
57:BA:1858:G:H2'	57:BA:1883:G:H22	1.74	0.52
57:AA:898:C:H2'	57:AA:899:A:H5'	1.90	0.52
57:AA:1856:G:H2'	57:AA:1857:G:H5'	1.91	0.52
57:BA:2294:C:H42	57:BA:2338:G:H1	1.56	0.52
57:AA:221:A:H4'	57:AA:222:A:O5'	2.09	0.52
51:A4:3:GLU:CG	58:AB:43:C:OP1	2.57	0.52
27:AD:34:VAL:C	27:AD:36:PRO:HD2	2.29	0.52
29:AF:7:TYR:HD2	29:AF:16:GLY:H	1.56	0.52
32:AI:120:ILE:CD1	32:AI:120:ILE:H	2.22	0.52
32:AI:64:GLU:OE2	32:AI:67:ARG:HD2	2.09	0.52
39:AS:16:ASN:C	39:AS:18:ILE:H	2.12	0.52
41:AU:95:LEU:CD1	42:AV:11:GLN:HB2	2.38	0.52
41:AU:112:ARG:CZ	42:AV:46:VAL:HG11	2.39	0.52
45:AY:14:LEU:HD12	45:AY:23:ARG:H	1.75	0.52
45:AY:87:LYS:O	45:AY:88:LYS:HB2	2.09	0.52
57:BA:625:G:H2'	57:BA:626:U:H6	2.41	0.52
31:BH:94:TYR:OH	31:BH:160:LYS:HD3	2.09	0.52
32:BI:94:ALA:HB1	32:BI:98:ALA:CB	2.39	0.52
36:BP:93:GLY:O	36:BP:123:LEU:HB2	2.09	0.52
27:BD:108:PRO:HB3	27:BD:143:HIS:HE1	1.72	0.52
40:AT:25:GLY:O	40:AT:26:ASP:CB	2.56	0.52
57:BA:107:C:H2'	57:BA:108:U:H6	1.75	0.52
44:BX:24:GLY:HA3	44:BX:83:VAL:HG23	1.91	0.52
45:BY:28:LYS:O	45:BY:29:GLU:C	2.47	0.52
57:AA:2133:G:C2'	57:AA:2157:G:H22	2.11	0.52
46:AZ:167:PRO:O	46:AZ:168:GLU:CB	2.56	0.52
57:AA:2287:A:H2	57:AA:2346:A:C2	2.27	0.52
57:AA:2263:C:O2'	57:AA:2264:C:H5'	2.09	0.52
57:AA:2481:G:O2'	57:AA:2482:G:P	2.68	0.52
55:A8:43:GLN:O	55:A8:44:LYS:HD2	2.10	0.52
57:AA:271(G):C:O2'	57:AA:271(H):G:H5'	2.10	0.52
35:BO:13:ASN:HD21	35:BO:97:ARG:H	1.57	0.52
38:AR:14:SER:HB3	57:AA:2690:C:OP2	2.09	0.52
48:B1:62:VAL:HG22	48:B1:63:ALA:N	2.25	0.52
57:AA:1429:G:H2'	57:AA:1430:C:C6	2.44	0.52
57:BA:2639:A:C2'	57:BA:2640:G:H5'	2.40	0.52
40:BT:1:MET:O	40:BT:2:ASN:C	2.47	0.52
57:BA:2171:A:H4'	57:BA:2172:U:O5'	2.09	0.52
57:AA:2455:G:H2'	57:AA:2456:C:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1983:C:O2'	57:BA:1984:G:H5'	2.10	0.52
57:AA:1467:C:O2'	57:AA:1468:C:H5'	2.10	0.52
38:AR:104:ARG:HD2	38:AR:109:ALA:HB3	1.91	0.52
30:AG:98:ARG:NH1	51:A4:9:LEU:HB2	2.25	0.52
36:AP:64:LYS:HD2	55:A8:25:MET:SD	2.50	0.52
57:AA:547:A:H1'	57:AA:548:A:C8	2.44	0.52
57:AA:862:G:H5'	58:AB:79:C:H4'	1.91	0.52
26:AC:19:LYS:HB3	26:AC:21:TYR:CE1	2.45	0.52
30:AG:11:TYR:HD2	30:AG:12:TYR:CD1	2.28	0.52
31:AH:50:VAL:HG12	31:AH:51:ARG:N	2.24	0.52
32:AI:111:PRO:O	32:AI:116:LEU:HD23	2.09	0.52
39:AS:83:LYS:HE3	39:AS:105:ALA:HB2	1.91	0.52
39:AS:96:GLY:C	39:AS:98:VAL:H	2.12	0.52
45:AY:7:VAL:CB	45:AY:8:LYS:NZ	2.72	0.52
57:BA:613:G:H8	57:BA:613:G:C5'	2.22	0.52
51:B4:7:PRO:O	51:B4:8:LYS:CB	2.56	0.52
26:BC:19:LYS:HB3	26:BC:21:TYR:CE1	2.45	0.52
30:BG:41:GLN:OE1	30:BG:43:LEU:HD11	2.09	0.52
32:BI:88:ILE:HG12	32:BI:142:VAL:HG13	1.91	0.52
39:BS:89:ARG:HG2	39:BS:92:TYR:HA	1.91	0.52
41:BU:91:ASP:O	41:BU:92:ARG:HB3	2.10	0.52
57:BA:1799:G:H5'	57:BA:1819:A:H61	1.74	0.52
40:AT:80:SER:CB	40:AT:81:PRO:HD3	2.34	0.52
45:BY:2:ARG:C	45:BY:4:LYS:N	2.61	0.52
40:BT:27:THR:HA	40:BT:87:ASP:HB2	1.92	0.52
28:BE:132:HIS:CE1	57:BA:1658:C:OP1	2.62	0.52
58:BB:8:U:C5'	58:BB:8:U:H6	2.22	0.52
33:BJ:21:GLN:CB	33:BJ:89:ALA:HA	2.40	0.52
54:B7:8:ASN:HD22	54:B7:9:ARG:N	2.08	0.52
37:AQ:137:TYR:N	37:AQ:137:TYR:HD2	2.07	0.52
48:B1:44:PRO:O	48:B1:46:LEU:HD22	2.09	0.52
57:BA:1188:U:H2'	57:BA:1189:A:H5'	1.90	0.52
54:B7:35:ARG:HD3	57:BA:54:G:O2'	2.10	0.52
41:BU:107:ALA:O	41:BU:110:VAL:HB	2.10	0.52
57:BA:1509(A):A:H2'	57:BA:1509(B):A:C8	2.45	0.52
49:B2:64:LEU:HD22	49:B2:68:ARG:NH1	2.24	0.52
57:AA:412:A:N7	57:AA:2411:A:H2	2.08	0.52
46:AZ:17:ALA:HA	46:AZ:20:ARG:HB3	1.92	0.52
48:A1:89:GLU:HA	48:A1:92:LYS:HB3	1.91	0.52
57:AA:1493:C:H2'	57:AA:1493:C:O2	2.09	0.52
30:AG:39:ILE:HG22	30:AG:157:ILE:HG12	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:AG:5:VAL:HG22	51:A4:25:TYR:CE1	2.44	0.52
30:AG:91:ARG:C	30:AG:91:ARG:HD2	2.29	0.52
38:AR:87:TYR:C	38:AR:89:ASP:H	2.13	0.52
45:AY:8:LYS:CB	45:AY:28:LYS:HE2	2.39	0.52
29:BF:34:TRP:CZ2	36:BP:12:ALA:HB2	2.45	0.52
29:BF:67:GLN:CG	29:BF:67:GLN:O	2.56	0.52
31:BH:12:PRO:HD2	31:BH:15:VAL:HG21	1.91	0.52
34:BN:58:ASP:O	34:BN:59:LYS:HB2	2.09	0.52
39:BS:88:ASP:CG	39:BS:89:ARG:H	2.12	0.52
41:BU:95:LEU:CD1	42:BV:11:GLN:HB2	2.39	0.52
27:BD:35:LYS:HZ2	27:BD:36:PRO:N	2.08	0.52
40:AT:102:ILE:HB	40:AT:110:ILE:HD13	1.90	0.52
45:BY:23:ARG:HG2	45:BY:23:ARG:O	4.68	0.52
57:AA:1747(A):G:H2'	57:AA:1748:G:C5'	2.25	0.52
28:BE:24:THR:HG22	28:BE:186:GLY:CA	2.39	0.52
57:AA:28:A:N6	57:AA:512:G:H1'	2.24	0.52
54:B7:45:ALA:O	54:B7:46:VAL:HG23	2.10	0.52
28:AE:168:MET:O	28:AE:170:LEU:HD12	2.09	0.52
57:AA:1518:U:H2'	57:AA:1519:G:O4'	2.09	0.52
49:A2:69:ARG:O	49:A2:70:GLN:HB3	2.09	0.52
57:AA:570:G:H2'	57:AA:2030:A:C6	2.45	0.52
49:B2:63:VAL:HA	49:B2:66:GLU:HG2	1.91	0.52
27:AD:240:ALA:HA	57:AA:1971:A:N3	2.25	0.52
44:BX:3:THR:O	44:BX:4:ALA:HB3	2.09	0.52
34:AN:93:THR:O	34:AN:94:HIS:HB2	2.10	0.52
57:BA:2842:G:O2'	57:BA:2843:G:H5'	2.10	0.52
57:AA:1221(A):C:O2'	57:AA:1222:C:H5'	2.10	0.52
57:AA:1494:A:H3'	57:AA:1494:A:N3	2.24	0.52
27:AD:2:ALA:O	27:AD:3:VAL:HB	2.09	0.52
30:AG:95:ARG:O	30:AG:96:ARG:O	2.28	0.52
32:AI:101:LEU:HD23	32:AI:109:ILE:HG12	1.91	0.52
41:AU:16:LYS:O	41:AU:20:LEU:HD23	2.09	0.52
44:AX:27:THR:HA	44:AX:80:ILE:HA	1.91	0.52
46:AZ:77:ASP:O	46:AZ:79:ARG:N	2.37	0.52
29:BF:120:GLU:HB2	29:BF:122:LYS:HG2	1.92	0.52
29:BF:24:LEU:HD12	29:BF:25:PRO:HD2	1.91	0.52
34:BN:3:THR:HG22	34:BN:5:VAL:HG12	1.91	0.52
36:BP:33:ARG:O	36:BP:35:HIS:O	2.28	0.52
36:BP:38:GLN:HG3	36:BP:39:LYS:N	2.13	0.52
36:BP:67:MET:HB3	57:BA:631:A:O2'	2.10	0.52
36:BP:5:ASP:OD2	36:BP:6:LEU:HD23	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BS:49:VAL:CG1	39:BS:73:LEU:HD23	2.39	0.52
40:AT:29:ARG:CD	40:AT:86:ILE:HG22	2.39	0.52
35:BO:77:ILE:CD1	40:BT:74:ARG:HD3	2.40	0.52
40:BT:54:ARG:HH11	40:BT:54:ARG:HG2	1.74	0.52
40:BT:32:TYR:CG	40:BT:81:PRO:HB2	2.44	0.52
57:AA:904:C:H2'	57:AA:905:U:C6	2.44	0.52
28:BE:47:VAL:HG22	28:BE:49:LEU:HD23	1.92	0.52
28:BE:59:VAL:HG13	28:BE:60:ASN:H	1.73	0.52
31:BH:85:LYS:HZ2	31:BH:133:VAL:CB	2.22	0.52
57:BA:2286:A:H4'	57:BA:2287:A:O4'	2.10	0.52
57:BA:953:A:O2'	57:BA:954:G:H5'	2.10	0.52
42:BV:5:VAL:HG12	42:BV:14:VAL:HG22	1.91	0.52
54:B7:12:ARG:HD3	54:B7:46:VAL:HG21	1.91	0.52
55:B8:29:LYS:HG3	55:B8:29:LYS:O	2.09	0.52
41:BU:70:ARG:HA	41:BU:74:LEU:O	2.09	0.52
57:BA:271(G):C:O2'	57:BA:271(H):G:H5'	2.10	0.52
57:BA:2165:G:H2'	57:BA:2166:G:O4'	2.10	0.52
57:BA:654(B):C:H2'	57:BA:654(C):G:N7	2.25	0.52
57:AA:2518:A:H5'	57:AA:2518:A:C8	2.45	0.52
57:BA:2301:C:H2'	57:BA:2302:G:O4'	2.09	0.52
30:AG:104:GLU:CG	51:A4:24:THR:HG21	2.33	0.52
26:AC:45:HIS:HB3	57:AA:2177:C:H1'	1.91	0.52
57:AA:624:C:H2'	57:AA:625:G:H8	2.93	0.52
58:AB:109:C:H5'	58:AB:110:G:O5'	2.10	0.52
29:AF:26:ALA:O	29:AF:27:GLU:CB	2.58	0.52
30:AG:9:ARG:C	30:AG:11:TYR:H	2.13	0.52
30:AG:20:ILE:O	30:AG:24:GLY:HA2	2.10	0.52
34:AN:41:ASP:O	34:AN:42:TRP:C	2.48	0.52
38:AR:103:ARG:HH12	38:AR:110:PRO:HD3	1.75	0.52
30:BG:72:ARG:CB	30:BG:87:PRO:HD2	2.40	0.52
43:BW:28:SER:O	43:BW:30:GLU:N	2.43	0.52
35:AO:69:ILE:HD13	35:AO:77:ILE:CG2	2.37	0.52
57:BA:1493:C:O2	57:BA:1493:C:H2'	2.10	0.52
37:BQ:134:ARG:HA	37:BQ:137:TYR:CD1	2.44	0.52
46:BZ:29:TYR:HE1	58:BB:105:A:O4'	1.93	0.52
46:BZ:38:TYR:CG	46:BZ:38:TYR:O	2.63	0.52
40:BT:25:GLY:O	40:BT:26:ASP:CB	2.57	0.52
57:AA:1332:G:N2	57:AA:1610:A:C8	2.77	0.52
28:BE:61:ARG:CZ	57:BA:2810:A:O2'	2.57	0.52
38:BR:6:SER:HB2	57:BA:2873:A:N3	2.24	0.52
28:AE:143:ASN:O	57:AA:2052:G:H4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B5:48:GLU:O	52:B5:49:CYS:HB3	2.09	0.52
57:AA:795:C:H2'	57:AA:796:C:H6	1.75	0.52
28:BE:4:ILE:HG12	28:BE:5:LEU:O	2.10	0.52
27:BD:166:GLN:CA	27:BD:166:GLN:NE2	2.69	0.52
57:AA:1537:G:H2'	57:AA:1538:G:C8	2.42	0.52
57:AA:1385:G:O2'	57:AA:1396:U:C6	2.60	0.52
55:A8:14:VAL:CG2	55:A8:22:VAL:CG1	2.88	0.52
45:BY:95:LYS:HG2	45:BY:101:LYS:H	1.74	0.52
57:BA:2192:G:H2'	57:BA:2193:G:H5'	1.92	0.52
46:AZ:135:GLU:O	46:AZ:137:ILE:N	2.42	0.52
27:AD:47:GLY:CA	57:AA:773:U:H4'	2.39	0.52
57:AA:2801:A:H2'	57:AA:2801:A:N3	2.25	0.52
57:BA:1518:U:H2'	57:BA:1519:G:O4'	2.10	0.52
34:BN:93:THR:O	34:BN:94:HIS:HB2	2.10	0.52
29:BF:181:LEU:HD11	29:BF:186:ILE:HD11	1.92	0.52
36:AP:67:MET:HB3	57:AA:631:A:O2'	2.10	0.52
57:AA:958:U:H6	57:AA:958:U:H5'	1.74	0.52
57:AA:962:G:O2'	57:AA:963:U:H5'	2.10	0.52
27:AD:94:LEU:HB2	27:AD:104:TYR:CE2	2.42	0.52
27:AD:18:VAL:HG12	27:AD:19:ALA:N	2.24	0.52
29:AF:120:GLU:HB2	29:AF:122:LYS:HG2	1.91	0.52
29:AF:24:LEU:HD12	29:AF:25:PRO:HD2	1.91	0.52
30:AG:60:LEU:O	30:AG:60:LEU:HD13	2.10	0.52
31:AH:11:VAL:CG1	31:AH:15:VAL:HG23	2.40	0.52
32:AI:82:ARG:HG2	32:AI:145:VAL:HG11	1.92	0.52
34:AN:28:THR:HG22	34:AN:29:LYS:N	2.24	0.52
36:AP:48:PRO:HG2	36:AP:49:ARG:N	2.19	0.52
36:AP:64:LYS:C	36:AP:66:GLY:N	2.64	0.52
37:AQ:34:LEU:HD11	37:AQ:129:THR:CB	2.38	0.52
41:AU:57:PHE:C	41:AU:59:ARG:N	2.61	0.52
45:AY:28:LYS:CA	45:AY:38:ILE:HG22	2.33	0.52
57:BA:1242:A:C5'	57:BA:1243:G:OP2	2.58	0.52
57:BA:1352:U:O2'	57:BA:1353:A:H5'	2.10	0.52
57:BA:623:G:H2'	57:BA:624:C:C6	2.45	0.52
30:BG:143:GLU:CD	30:BG:143:GLU:H	2.12	0.52
32:BI:115:ALA:HB2	32:BI:129:THR:O	2.10	0.52
38:BR:84:ALA:HB3	38:BR:85:PRO:HD3	1.91	0.52
41:BU:16:LYS:O	41:BU:20:LEU:HD23	2.09	0.52
42:BV:40:LEU:N	42:BV:40:LEU:CD2	2.73	0.52
27:BD:148:GLU:CB	27:BD:151:LYS:HD2	2.40	0.52
27:BD:34:VAL:C	27:BD:36:PRO:HD2	2.30	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:AT:70:VAL:HG12	40:AT:71:GLY:O	2.10	0.52
45:BY:84:ARG:HD2	45:BY:97:ARG:NE	2.24	0.52
52:A5:4:HIS:O	57:AA:2056:G:N2	2.43	0.52
28:AE:34:VAL:HG22	28:AE:48:GLN:HE21	1.75	0.52
57:BA:2789:C:H1'	57:BA:2892:A:C2	2.43	0.52
56:A9:1:MET:HG2	57:AA:2477:C:C6	2.45	0.52
37:BQ:55:VAL:HG12	37:BQ:64:ILE:HD12	1.92	0.52
33:AJ:69:PRO:O	33:AJ:70:GLU:CB	2.58	0.52
56:B9:1:MET:HG3	57:BA:2477:C:H2'	1.92	0.52
38:AR:10:LEU:HD22	38:AR:17:ARG:HD2	1.90	0.52
46:AZ:103:ARG:CB	46:AZ:136:PHE:HB2	2.39	0.52
57:AA:1856:G:C2'	57:AA:1857:G:H5'	2.39	0.52
57:BA:1856:G:H2'	57:BA:1857:G:H5'	1.91	0.52
57:BA:769:G:O2'	57:BA:770:G:H5'	2.10	0.52
57:AA:2101:G:H2'	57:AA:2102:U:O4'	2.09	0.52
56:A9:27:CYS:SG	56:A9:28:GLU:N	2.83	0.52
27:AD:108:PRO:HA	27:AD:196:VAL:O	2.10	0.52
32:AI:118:LYS:HG2	32:AI:119:PRO:CD	2.31	0.52
39:AS:101:LEU:HD13	39:AS:101:LEU:O	2.10	0.52
39:AS:89:ARG:HG2	39:AS:92:TYR:HA	1.92	0.52
44:AX:56:THR:HG22	44:AX:79:ALA:HB2	1.92	0.52
45:AY:88:LYS:NZ	45:AY:93:GLY:CA	2.73	0.52
57:BA:2802:G:O2'	57:BA:2803:C:H5''	2.10	0.52
57:BA:624:C:H2'	57:BA:625:G:H8	2.95	0.52
29:BF:68:LYS:O	29:BF:70:THR:N	2.39	0.52
36:BP:105:LEU:O	36:BP:106:LEU:CB	2.57	0.52
36:BP:48:PRO:HG2	36:BP:49:ARG:N	2.19	0.52
37:BQ:21:THR:O	37:BQ:22:LYS:HB3	2.09	0.52
39:BS:54:LEU:HD13	39:BS:54:LEU:O	2.09	0.52
42:BV:45:THR:O	42:BV:46:VAL:HG12	2.10	0.52
27:BD:270:ILE:O	27:BD:271:ILE:HG23	2.10	0.52
45:BY:10:GLY:CA	45:BY:27:VAL:HG13	2.35	0.52
58:BB:104:U:O2'	58:BB:105:A:H5'	2.10	0.52
28:BE:134:ILE:HA	28:BE:137:HIS:CD2	2.45	0.52
46:AZ:24:LEU:HD23	46:AZ:25:PRO:O	2.10	0.52
48:A1:52:ARG:NH1	57:AA:2218:U:H1'	2.16	0.52
57:BA:1948:G:O2'	57:BA:1949:G:H5'	2.09	0.52
57:BA:102:G:OP1	57:BA:102:G:H4'	2.09	0.52
57:AA:1490:A:H5'	57:AA:1491:G:OP2	2.10	0.52
26:AC:194:ILE:O	26:AC:198:GLU:HG3	2.10	0.52
57:BA:1602:U:H3'	57:BA:1603:A:H5''	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:564:C:O2'	57:BA:565:C:H5'	2.10	0.52
57:AA:2639:A:C2'	57:AA:2640:G:H5'	2.39	0.52
46:BZ:31:ARG:HH11	46:BZ:31:ARG:HB2	1.75	0.52
29:BF:123:LEU:HD12	29:BF:124:LEU:N	2.24	0.52
32:AI:118:LYS:NZ	57:AA:1349:A:P	101.65	0.52
57:AA:2369:A:O2'	57:AA:2370:G:H5'	2.10	0.52
58:AB:40:U:N3	58:AB:43:C:H5'	2.25	0.52
27:AD:148:GLU:CB	27:AD:151:LYS:HD2	2.40	0.52
30:AG:40:ASN:OD1	57:AA:2313:C:O4'	2.27	0.52
39:AS:24:LEU:HB3	39:AS:85:VAL:HG12	1.91	0.52
42:AV:55:ALA:HA	42:AV:101:GLY:HA2	1.90	0.52
43:BW:62:HIS:HE1	57:BA:495:G:O2'	1.93	0.52
34:BN:128:HIS:HE1	34:BN:134:ARG:NH1	2.07	0.52
36:BP:97:PRO:O	36:BP:98:GLU:CB	2.58	0.52
27:BD:45:ASN:HB2	27:BD:46:GLN:OE1	2.10	0.52
27:BD:48:ARG:NH1	27:BD:48:ARG:HG3	2.25	0.52
27:BD:116:GLN:HG3	57:BA:407:G:O2'	82.80	0.52
27:BD:71:ASP:HB2	27:BD:103:ARG:HH22	1.74	0.52
36:BP:58:THR:O	36:BP:61:ARG:CZ	2.57	0.52
57:BA:1467:C:O2'	57:BA:1468:C:H5'	2.10	0.52
57:BA:2729:G:H2'	57:BA:2730:C:C6	2.45	0.52
31:BH:85:LYS:NZ	31:BH:133:VAL:H	2.07	0.52
46:AZ:102:LEU:HD21	46:AZ:124:ILE:CG1	2.39	0.52
46:AZ:102:LEU:HD11	46:AZ:124:ILE:HG12	1.91	0.52
37:BQ:16:ARG:HG2	37:BQ:17:LEU:H	1.75	0.52
55:A8:40:GLU:O	55:A8:42:ARG:N	2.43	0.52
55:B8:14:VAL:HG22	55:B8:22:VAL:HG13	1.92	0.52
46:BZ:103:ARG:HD2	46:BZ:136:PHE:CD1	2.45	0.52
57:AA:1509(A):A:H2'	57:AA:1509(B):A:C8	2.44	0.52
57:BA:898:C:H2'	57:BA:899:A:H5'	1.91	0.52
44:AX:40:LYS:HG2	44:AX:41:ASN:HD22	1.75	0.52
38:AR:99:LYS:HD3	38:AR:99:LYS:H	1.74	0.52
57:BA:2101:G:H2'	57:BA:2102:U:O4'	2.09	0.52
50:A3:19:GLN:HE22	50:A3:52:HIS:CE1	2.24	0.51
57:AA:1049:C:H2'	57:AA:1050:A:C8	2.44	0.51
57:AA:481:G:H1'	57:AA:506:G:N2	2.26	0.51
27:AD:25:THR:O	27:AD:26:LYS:C	2.49	0.51
37:AQ:67:ARG:HG2	37:AQ:67:ARG:HH11	1.75	0.51
38:AR:29:LEU:HB3	38:AR:75:LEU:HD11	1.92	0.51
31:BH:89:ILE:HD13	31:BH:94:TYR:HB3	1.91	0.51
34:BN:23:LEU:HD13	34:BN:98:VAL:HG12	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BV:18:LEU:HD22	42:BV:19:LYS:H	1.75	0.51
42:BV:38:LEU:O	42:BV:52:VAL:HG12	2.09	0.51
27:BD:72:LYS:HD3	27:BD:97:TYR:CE2	2.45	0.51
40:AT:16:ARG:NH2	40:AT:82:LEU:O	2.41	0.51
51:A4:15:ILE:O	51:A4:15:ILE:HG22	2.09	0.51
40:BT:29:ARG:CG	40:BT:85:LYS:HA	2.40	0.51
53:A6:25:LYS:NZ	55:A8:34:TRP:HZ2	2.00	0.51
57:BA:1332:G:C8	57:BA:1332:G:H5''	2.45	0.51
57:BA:1652:A:C2'	57:BA:1653:G:H5'	2.39	0.51
57:AA:2729:G:H2'	57:AA:2730:C:C6	2.45	0.51
46:AZ:171:ILE:HD12	46:AZ:171:ILE:C	2.31	0.51
57:BA:2832:U:H4'	57:BA:2833:G:H5''	1.92	0.51
56:B9:1:MET:HG2	57:BA:2477:C:C6	2.45	0.51
51:A4:47:GLN:O	51:A4:48:ARG:CB	2.57	0.51
34:BN:62:VAL:HG22	34:BN:66:LYS:HB2	1.93	0.51
35:AO:13:ASN:C	35:AO:15:GLY:N	2.63	0.51
55:A8:14:VAL:HG21	55:A8:22:VAL:HG13	1.90	0.51
37:AQ:110:THR:HG22	37:AQ:113:GLN:OE1	2.10	0.51
57:BA:2074:U:H2'	57:BA:2075:U:C6	2.45	0.51
57:AA:1833:U:H2'	57:AA:1834:U:H6	1.73	0.51
52:A5:29:THR:HG21	57:AA:2815:C:H5'	1.91	0.51
48:B1:20:ARG:HG2	48:B1:20:ARG:HH11	1.75	0.51
30:AG:72:ARG:HA	30:AG:87:PRO:HG2	1.92	0.51
31:AH:85:LYS:HD3	31:AH:85:LYS:O	2.10	0.51
32:AI:38:LEU:HB3	32:AI:40:THR:HG23	1.93	0.51
45:AY:13:VAL:CG2	45:AY:72:VAL:HB	2.38	0.51
57:BA:1344:G:H4'	57:BA:1384:A:N7	2.25	0.51
32:BI:81:VAL:CG2	32:BI:82:ARG:N	2.73	0.51
41:BU:112:ARG:NH2	42:BV:46:VAL:CG1	2.72	0.51
41:BU:90:VAL:CG2	42:BV:47:VAL:HG21	2.30	0.51
57:BA:545:C:C2'	57:BA:547:A:H5''	2.41	0.51
45:BY:62:GLU:CD	45:BY:63:LYS:N	2.63	0.51
45:BY:7:VAL:HB	45:BY:8:LYS:HE3	1.90	0.51
51:A4:34:GLU:O	51:A4:35:VAL:HG23	2.09	0.51
57:AA:1502:C:H5'	57:AA:1503:U:OP2	2.10	0.51
46:BZ:68:PRO:CB	46:BZ:91:LEU:HB2	2.23	0.51
53:B6:8:LYS:HD2	53:B6:25:LYS:HG2	1.92	0.51
57:BA:2287:A:H2	57:BA:2346:A:C2	2.29	0.51
46:AZ:99:TYR:HA	46:AZ:124:ILE:O	2.09	0.51
54:A7:43:THR:HG23	54:A7:44:PRO:HD2	1.92	0.51
57:AA:2789:C:H1'	57:AA:2892:A:C2	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2469:A:H2	57:AA:2481:G:H21	1.58	0.51
39:BS:44:LYS:HE3	39:BS:44:LYS:HA	1.92	0.51
57:AA:1677:A:H2'	57:AA:1678:G:C8	2.45	0.51
55:B8:43:GLN:O	55:B8:44:LYS:HD2	2.10	0.51
57:BA:322:A:H5'	57:BA:340:A:H1'	1.92	0.51
57:BA:650:C:C3'	57:BA:651:G:H5''	2.39	0.51
31:BH:144:VAL:HA	31:BH:147:ASN:HB2	1.91	0.51
34:AN:62:VAL:CG2	34:AN:66:LYS:HD2	2.39	0.51
57:BA:287:C:H2'	57:BA:288:C:H6	1.74	0.51
45:BY:100:ALA:O	45:BY:101:LYS:HB2	2.10	0.51
50:A3:1:MET:CE	50:A3:39:ASP:HB3	2.40	0.51
57:AA:247:G:H4'	57:AA:386:G:C5	2.46	0.51
46:AZ:94:GLU:HB2	46:AZ:95:PRO:HD2	1.92	0.51
31:AH:107:VAL:HG23	31:AH:107:VAL:O	2.11	0.51
27:AD:224:ALA:O	27:AD:225:ALA:HB2	2.09	0.51
57:BA:2463:C:O2'	57:BA:2464:C:H5'	2.10	0.51
58:AB:81:G:H5'	58:AB:81:G:N3	2.25	0.51
27:AD:11:PRO:C	27:AD:13:ARG:N	2.63	0.51
31:AH:106:THR:HG22	31:AH:112:PRO:HB3	1.93	0.51
32:AI:132:PRO:HG2	32:AI:133:HIS:CE1	2.44	0.51
34:AN:58:ASP:C	34:AN:60:ILE:N	2.62	0.51
39:AS:17:ARG:HH21	39:AS:90:GLY:N	2.06	0.51
39:AS:96:GLY:O	39:AS:98:VAL:N	2.39	0.51
57:BA:1221:C:H2'	57:BA:1221(A):C:H6	1.76	0.51
36:BP:101:VAL:CB	36:BP:107:LYS:HA	2.32	0.51
36:BP:6:LEU:N	36:BP:6:LEU:HD23	2.24	0.51
42:BV:21:ARG:HD3	42:BV:21:ARG:N	2.25	0.51
27:BD:72:LYS:NZ	27:BD:72:LYS:HB3	2.26	0.51
51:A4:15:ILE:HB	51:A4:32:TYR:HA	1.92	0.51
57:BA:1001:A:H2'	57:BA:1002:G:O4'	2.10	0.51
28:AE:51:PHE:CD1	28:AE:52:LEU:N	2.63	0.51
57:BA:225:A:O2'	57:BA:257:A:H4'	2.09	0.51
57:BA:1541:G:C4'	57:BA:1542:A:O4'	2.59	0.51
57:AA:1541:G:C4'	57:AA:1542:A:O4'	2.58	0.51
57:AA:2192:G:H2'	57:AA:2193:G:H5'	1.93	0.51
47:A0:14:ARG:HH11	47:A0:14:ARG:HG3	1.74	0.51
57:AA:2165:G:H2'	57:AA:2166:G:O4'	2.10	0.51
52:B5:29:THR:HG21	57:BA:2815:C:H5'	1.92	0.51
44:AX:41:ASN:N	44:AX:41:ASN:HD22	2.09	0.51
57:AA:2672:G:C3'	57:AA:2673:G:H5''	2.41	0.51
57:BA:2389:G:H5''	57:BA:2390:U:H5'	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1916:A:H5'	57:BA:1917:U:OP2	2.10	0.51
57:AA:1316:U:H2'	57:AA:1317:A:H8	1.75	0.51
36:AP:9:ASN:O	36:AP:11:GLY:N	2.43	0.51
39:AS:18:ILE:C	39:AS:20:ARG:H	2.13	0.51
41:AU:59:ARG:HD3	57:AA:1009:A:C5'	2.39	0.51
45:AY:13:VAL:O	45:AY:24:VAL:HA	2.10	0.51
39:BS:12:PHE:H	39:BS:12:PHE:HD2	1.56	0.51
27:BD:139:GLY:H	27:BD:165:ILE:HB	1.75	0.51
27:BD:25:THR:O	27:BD:26:LYS:C	2.48	0.51
37:AQ:58:PHE:O	37:AQ:58:PHE:CD1	2.63	0.51
57:BA:157:U:H5'	57:BA:158:U:OP2	2.09	0.51
55:B8:33:ASN:O	57:BA:2420:C:P	2.68	0.51
29:AF:133:ASN:HA	29:AF:162:LEU:HD23	1.91	0.51
46:AZ:152:ALA:HA	46:AZ:168:GLU:H	1.76	0.51
28:AE:30:PRO:O	28:AE:32:PRO:HD3	2.09	0.51
57:BA:1464:C:O2'	57:BA:1528:A:C8	2.64	0.51
57:BA:2833:G:H3'	57:BA:2834:G:H5''	1.92	0.51
57:BA:654(S):G:H2'	57:BA:654(S):G:N3	2.25	0.51
55:B8:42:ARG:O	55:B8:44:LYS:N	2.36	0.51
52:A5:52:TYR:HD1	52:A5:52:TYR:O	1.93	0.51
35:AO:3:GLN:HB2	35:AO:4:PRO:HD2	1.93	0.51
41:BU:29:SER:OG	41:BU:30:LYS:HE2	2.10	0.51
57:AA:2335:A:O2'	57:AA:2336:A:H5''	2.11	0.51
57:AA:1265:A:H8	57:AA:1265:A:OP1	1.92	0.51
27:AD:270:ILE:O	27:AD:271:ILE:HG23	2.10	0.51
29:AF:67:GLN:CG	29:AF:67:GLN:O	2.58	0.51
30:AG:58:GLN:HG3	30:AG:59:GLU:H	1.75	0.51
36:AP:63:PRO:HB3	55:A8:12:LYS:O	2.09	0.51
26:BC:43:GLU:N	26:BC:216:THR:O	2.42	0.51
29:BF:20:LEU:HB3	29:BF:23:ASP:OD2	2.10	0.51
30:BG:98:ARG:HA	30:BG:101:ILE:HD12	1.92	0.51
32:BI:38:LEU:HB3	32:BI:40:THR:HG23	1.93	0.51
41:BU:91:ASP:CG	41:BU:96:ALA:HB2	2.27	0.51
57:BA:1495:A:OP1	57:BA:1495:A:O4'	2.29	0.51
45:BY:17:SER:O	57:BA:310:A:OP1	2.29	0.51
46:BZ:165:VAL:HG12	46:BZ:166:SER:N	2.25	0.51
40:BT:70:VAL:HG12	40:BT:71:GLY:O	2.11	0.51
28:BE:55:ASN:O	28:BE:72:VAL:HG11	2.11	0.51
38:BR:6:SER:HB2	57:BA:2873:A:C2	2.45	0.51
28:AE:101:ARG:HB3	28:AE:169:ASN:HD22	1.76	0.51
46:AZ:139:VAL:CG1	46:AZ:150:LEU:HD11	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2286:A:H4'	57:AA:2287:A:O4'	2.11	0.51
27:BD:176:ARG:HG2	27:BD:176:ARG:NH1	2.25	0.51
34:BN:67:LEU:CD2	34:BN:87:LEU:HD13	2.41	0.51
49:A2:66:GLU:O	49:A2:70:GLN:NE2	2.43	0.51
57:AA:1636:C:H2'	57:AA:1637:A:H8	1.76	0.51
57:AA:1602:U:H3'	57:AA:1603:A:H5''	1.92	0.51
57:AA:1138:G:H2'	57:AA:1139:G:O4'	2.10	0.51
41:BU:52:ARG:HH11	41:BU:52:ARG:HG2	1.76	0.51
35:AO:68:GLU:OE1	57:AA:2685:G:H5'	2.11	0.51
46:AZ:45:ASP:O	46:AZ:49:ARG:HG2	2.10	0.51
55:A8:23:VAL:CG1	55:A8:46:ARG:HB3	2.40	0.51
57:BA:1810:A:H2'	57:BA:1811:G:O4'	2.11	0.51
57:AA:407:G:H2'	57:AA:408:G:H8	1.76	0.51
51:A4:3:GLU:HG2	58:AB:43:C:OP1	2.11	0.51
30:AG:38:VAL:HG13	30:AG:92:VAL:O	2.10	0.51
32:AI:62:LYS:HD2	32:AI:133:HIS:CD2	2.36	0.51
36:AP:101:VAL:CG1	36:AP:106:LEU:HD23	2.40	0.51
32:BI:118:LYS:NZ	57:BA:1349:A:P	101.59	0.51
29:BF:60:SER:OG	29:BF:61:GLY:N	2.42	0.51
29:BF:89:VAL:CG1	29:BF:90:PHE:H	2.17	0.51
32:BI:93:THR:CG2	32:BI:119:PRO:HB3	2.39	0.51
34:BN:35:ARG:O	34:BN:37:LYS:N	2.43	0.51
38:BR:63:ARG:NH1	38:BR:80:PHE:CD1	2.79	0.51
39:BS:90:GLY:C	39:BS:92:TYR:H	2.13	0.51
57:BA:545:C:H2'	57:BA:547:A:H5''	1.92	0.51
31:BH:155:SER:O	31:BH:157:TYR:N	2.43	0.51
40:AT:34:VAL:HG13	40:AT:38:ASN:O	2.10	0.51
40:AT:31:SER:OG	40:AT:43:GLN:HB3	2.11	0.51
31:AH:155:SER:O	31:AH:157:TYR:N	2.43	0.51
40:BT:27:THR:CG2	40:BT:28:VAL:N	2.73	0.51
57:AA:157:U:H5'	57:AA:158:U:OP2	2.11	0.51
28:BE:55:ASN:O	28:BE:57:LYS:N	2.44	0.51
27:AD:211:ARG:O	27:AD:215:LEU:HG	2.10	0.51
28:AE:55:ASN:O	28:AE:72:VAL:HG11	2.11	0.51
36:BP:85:LEU:CD2	36:BP:85:LEU:H	2.13	0.51
54:A7:8:ASN:HD22	54:A7:9:ARG:N	2.08	0.51
57:AA:1947:C:H2'	57:AA:1948:G:H5''	1.93	0.51
51:B4:47:GLN:O	51:B4:48:ARG:CB	2.58	0.51
57:BA:860:U:O2'	57:BA:861:A:H5'	2.11	0.51
57:BA:710:G:O2'	57:BA:711:G:H5'	2.33	0.51
57:BA:302:C:H2'	57:BA:303:U:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:A8:29:LYS:O	55:A8:29:LYS:HG3	2.11	0.51
57:AA:2762:G:C8	57:AA:2762:G:H5'	2.46	0.51
44:AX:60:ARG:NH1	57:AA:1311:G:C2	2.78	0.51
44:AX:60:ARG:NH2	54:A7:47:ARG:HH11	2.08	0.51
57:AA:1602:U:H3'	57:AA:1603:A:C5'	2.41	0.51
27:BD:47:GLY:CA	57:BA:773:U:H4'	2.41	0.51
57:AA:1854:A:H2'	57:AA:1855:G:O4'	2.11	0.51
38:BR:26:LYS:HE2	38:BR:71:GLN:H	1.74	0.51
57:AA:1638:C:H5''	57:AA:2710:C:O2'	2.10	0.51
43:BW:79:GLY:CA	43:BW:100:THR:HG22	2.40	0.51
57:AA:2656:U:H2'	57:AA:2657:A:H5''	1.93	0.51
29:AF:60:SER:OG	29:AF:61:GLY:N	2.44	0.51
41:AU:92:ARG:NH1	42:AV:11:GLN:O	2.44	0.51
45:AY:7:VAL:CG2	45:AY:8:LYS:HZ2	2.23	0.51
32:BI:94:ALA:O	32:BI:98:ALA:HB3	2.11	0.51
37:BQ:35:VAL:HG11	37:BQ:130:LYS:CE	2.41	0.51
38:BR:79:LEU:HD23	38:BR:83:ILE:HB	1.92	0.51
39:BS:20:ARG:HA	39:BS:20:ARG:NE	2.26	0.51
42:BV:39:LEU:HA	42:BV:47:VAL:CG1	2.40	0.51
31:BH:163:TYR:CD1	31:BH:163:TYR:N	2.79	0.51
53:B6:43:CYS:O	53:B6:44:ARG:NH1	2.43	0.51
40:BT:100:TYR:HD2	40:BT:103:ARG:NH2	1.97	0.51
40:BT:83:ILE:HG13	40:BT:84:GLN:N	2.25	0.51
29:BF:133:ASN:HA	29:BF:162:LEU:HD23	1.92	0.51
57:AA:1271:G:H5'	57:AA:1314:C:H5''	27.99	0.51
28:BE:186:GLY:O	28:BE:187:ALA:HB3	2.09	0.51
38:AR:5:LYS:HD2	57:AA:2820:A:O4'	2.11	0.51
28:AE:53:PRO:O	28:AE:54:GLN:O	2.29	0.51
57:BA:1291:C:H2'	57:BA:1292:U:C6	2.45	0.51
37:BQ:67:ARG:HG2	37:BQ:67:ARG:NH1	2.24	0.51
54:A7:45:ALA:O	54:A7:46:VAL:HG23	2.10	0.51
57:AA:271(P):C:C2'	57:AA:271(Q):G:H5'	2.40	0.51
57:AA:519:U:H2'	57:AA:520:G:H8	1.75	0.51
51:B4:53:GLU:OE1	51:B4:54:GLY:N	2.40	0.51
52:A5:35:GLU:O	52:A5:36:CYS:SG	2.68	0.51
57:BA:848:G:H5'	57:BA:848:G:C8	2.43	0.51
57:AA:2543:G:H8	57:AA:2543:G:H5'	1.74	0.51
57:BA:570:G:H2'	57:BA:2030:A:C6	2.46	0.51
57:AA:570:G:H2'	57:AA:2030:A:C5	2.46	0.51
57:AA:654(B):C:H2'	57:AA:654(C):G:N7	2.26	0.51
57:BA:315:G:H2'	57:BA:316:C:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:89:G:H3'	57:AA:90:U:C5'	2.41	0.51
57:BA:2197:U:O2'	57:BA:2198:A:H2'	2.11	0.51
41:AU:16:LYS:HE2	57:AA:1227:G:OP2	2.10	0.51
57:AA:1495:A:O4'	57:AA:1495:A:OP1	2.28	0.51
27:AD:117:VAL:HG22	27:AD:118:VAL:N	2.26	0.51
29:AF:25:PRO:HB3	29:AF:119:ARG:CG	2.41	0.51
32:AI:6:LEU:O	32:AI:15:VAL:HG12	2.10	0.51
34:AN:14:VAL:CG1	34:AN:137:LYS:HG3	2.41	0.51
34:AN:23:LEU:HD13	34:AN:98:VAL:HG12	1.92	0.51
29:AF:34:TRP:CZ2	36:AP:12:ALA:HB2	2.46	0.51
45:AY:38:ILE:CG2	45:AY:39:VAL:N	2.74	0.51
45:AY:7:VAL:CG2	45:AY:8:LYS:HZ1	2.21	0.51
29:BF:26:ALA:O	29:BF:27:GLU:CB	2.59	0.51
29:BF:89:VAL:O	29:BF:91:GLY:N	2.38	0.51
30:BG:77:ILE:HG23	30:BG:80:PHE:H	1.74	0.51
32:BI:130:TYR:O	32:BI:135:GLU:HB2	2.10	0.51
34:BN:14:VAL:CG1	34:BN:137:LYS:HG3	2.41	0.51
41:BU:59:ARG:HD3	57:BA:1009:A:C5'	2.41	0.51
43:BW:4:LYS:HG2	43:BW:5:ALA:N	2.25	0.51
57:BA:1494:A:N3	57:BA:1494:A:H3'	2.26	0.51
45:BY:13:VAL:O	45:BY:24:VAL:HA	2.10	0.51
57:BA:1502:C:H5'	57:BA:1503:U:OP2	2.11	0.51
30:AG:109:VAL:HG13	51:A4:33:VAL:HG11	1.91	0.51
28:BE:71:GLY:O	28:BE:72:VAL:C	2.49	0.51
28:AE:132:HIS:CE1	57:AA:1658:C:OP1	2.64	0.51
32:AI:2:LYS:HB2	32:AI:39:ALA:HB3	1.93	0.51
46:AZ:24:LEU:HD23	46:AZ:25:PRO:C	2.30	0.51
57:AA:2261:C:O2'	57:AA:2262:U:H5'	2.11	0.51
41:AU:74:LEU:O	41:AU:74:LEU:HD13	2.11	0.51
36:AP:115:LEU:N	36:AP:115:LEU:HD23	2.25	0.51
36:BP:115:LEU:HD23	36:BP:115:LEU:N	2.26	0.51
49:B2:55:ARG:HH21	49:B2:55:ARG:HG3	1.75	0.51
57:BA:1163:G:O2'	57:BA:1164:G:H5'	2.11	0.51
26:BC:194:ILE:O	26:BC:198:GLU:HG3	2.11	0.51
49:A2:27:GLU:O	49:A2:31:GLU:HG3	2.10	0.51
57:BA:2518:A:C8	57:BA:2518:A:H5'	2.46	0.51
46:BZ:184:ALA:O	46:BZ:185:GLU:HB3	2.10	0.51
55:B8:23:VAL:CG1	55:B8:46:ARG:HB3	2.41	0.51
57:AA:1316:U:H2'	57:AA:1317:A:C8	2.46	0.51
58:AB:111:G:C2'	58:AB:112:U:H5'	2.41	0.51
38:AR:45:ARG:HG3	38:AR:95:THR:HG21	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:AS:34:HIS:HB3	39:AS:53:SER:HB3	1.91	0.51
41:AU:91:ASP:O	41:AU:92:ARG:HB3	2.10	0.51
45:AY:62:GLU:CD	45:AY:63:LYS:N	2.63	0.51
57:BA:548:A:H2'	57:BA:548:A:N3	2.26	0.51
46:BZ:19:ARG:NH2	58:BB:76:G:O3'	2.42	0.51
53:B6:27:LYS:CD	53:B6:30:THR:HB	2.25	0.51
57:AA:1005:C:H2'	57:AA:1006:C:C6	2.46	0.51
57:BA:923:C:H2'	57:BA:924:C:H6	1.75	0.51
28:BE:117:MET:O	28:BE:118:LYS:HB2	2.11	0.51
28:BE:119:ARG:HG2	28:BE:160:TYR:HB2	1.93	0.51
28:AE:137:HIS:HB3	28:AE:138:PRO:HD2	1.92	0.51
28:AE:2:LYS:HB3	28:AE:95:ILE:HG21	1.93	0.51
57:AA:1116:C:H2'	57:AA:1117:G:C5'	2.97	0.51
37:AQ:55:VAL:HG12	37:AQ:64:ILE:HD12	1.92	0.51
52:B5:40:LYS:CD	52:B5:46:CYS:HB3	2.41	0.51
57:AA:654(S):G:H2'	57:AA:654(S):G:N3	2.25	0.51
53:A6:23:THR:HG21	57:AA:2419:U:C5'	2.38	0.51
53:A6:52:VAL:CG2	53:A6:53:LYS:H	2.23	0.51
27:AD:221:VAL:HG22	27:AD:226:MET:HE2	1.92	0.51
34:AN:62:VAL:HG22	34:AN:66:LYS:HB2	1.92	0.51
57:BA:570:G:H2'	57:BA:2030:A:C5	2.45	0.51
57:AA:363(E):U:H3'	57:AA:363(F):A:O4'	2.11	0.51
57:AA:2400:G:N2	57:AA:2417:C:C2	2.79	0.51
29:BF:123:LEU:HD12	29:BF:124:LEU:H	1.75	0.51
57:AA:1638:C:H4'	57:AA:2710:C:O2	2.10	0.51
49:B2:24:LEU:HG	49:B2:60:LEU:CD1	2.40	0.51
57:BA:2784:C:O2'	57:BA:2785:C:H5'	2.11	0.51
57:BA:2455:G:H2'	57:BA:2456:C:C6	2.46	0.51
57:AA:1665:A:H2'	57:AA:1666:G:O4'	2.11	0.51
57:AA:1917:U:O2'	57:AA:1918:A:H5'	2.10	0.51
57:AA:587:C:O2'	57:AA:588:U:OP2	2.24	0.51
30:AG:125:PHE:HE2	30:AG:173:LEU:HD12	1.76	0.51
31:AH:124:GLU:HB2	31:AH:132:ARG:CG	2.41	0.51
32:AI:120:ILE:H	32:AI:120:ILE:HD12	1.76	0.51
34:AN:134:ARG:H	34:AN:135:PRO:HD3	1.76	0.51
38:AR:16:HIS:ND1	57:AA:1275:A:C4	2.79	0.51
42:AV:5:VAL:HG12	42:AV:14:VAL:HG22	1.92	0.51
51:B4:15:ILE:HB	51:B4:32:TYR:HA	1.93	0.51
30:BG:46:ALA:HB2	30:BG:88:ILE:HD11	1.93	0.51
32:BI:67:ARG:HG2	32:BI:67:ARG:HH11	1.76	0.51
36:BP:9:ASN:O	36:BP:11:GLY:N	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:81:GLN:CG	36:BP:106:LEU:HD12	2.36	0.51
43:BW:47:VAL:HA	43:BW:50:VAL:HG12	1.93	0.51
40:AT:32:TYR:CG	40:AT:81:PRO:HB2	2.46	0.51
40:AT:89:VAL:HG11	40:AT:91:ARG:HE	1.76	0.51
45:BY:26:LYS:O	45:BY:27:VAL:O	2.29	0.51
40:BT:121:ILE:O	40:BT:124:ASP:HB2	2.11	0.51
40:BT:36:GLU:HG2	40:BT:36:GLU:O	2.11	0.51
55:A8:33:ASN:O	57:AA:2420:C:P	2.69	0.51
26:BC:50:ILE:HD11	26:BC:170:GLY:HA2	1.93	0.51
28:BE:59:VAL:HG11	28:BE:63:LEU:HG	1.93	0.51
28:BE:60:ASN:OD1	28:BE:61:ARG:N	2.44	0.51
31:BH:41:MET:HE2	31:BH:43:VAL:HG13	1.91	0.51
48:A1:19:GLN:CA	48:A1:19:GLN:HE21	2.07	0.51
52:A5:40:LYS:CD	52:A5:46:CYS:HB3	2.40	0.51
46:BZ:24:LEU:C	46:BZ:24:LEU:HD23	2.32	0.51
57:AA:1541:G:H4'	57:AA:1542:A:O5'	2.11	0.51
57:BA:1677:A:H2'	57:BA:1678:G:C8	2.45	0.51
57:BA:438:G:O2'	57:BA:440:G:H5'	2.11	0.51
57:BA:2530:A:H2'	57:BA:2531:A:H5'	1.93	0.51
53:B6:9:LEU:HD12	53:B6:28:ARG:CG	2.41	0.51
26:BC:166:ASN:HA	26:BC:171:ALA:O	2.11	0.51
54:A7:35:ARG:HD3	57:AA:54:G:O2'	2.11	0.51
57:AA:1865:G:H5'	57:AA:1866:C:P	2.51	0.51
57:AA:1860:G:H1	57:AA:1882:C:H42	1.58	0.51
31:AH:102:ALA:HA	31:AH:117:PRO:HD3	1.93	0.51
38:AR:65:LEU:HD21	57:AA:2870:C:H5''	1.92	0.51
27:AD:35:LYS:CG	27:AD:63:ARG:HA	2.34	0.50
27:AD:72:LYS:HD3	27:AD:97:TYR:CE2	2.46	0.50
31:AH:9:ILE:HD11	31:AH:76:VAL:HG21	1.92	0.50
31:AH:85:LYS:NZ	31:AH:133:VAL:H	2.08	0.50
36:AP:23:PRO:HB2	36:AP:33:ARG:NE	2.26	0.50
36:AP:50:ARG:HB3	55:A8:59:LYS:CD	2.38	0.50
38:AR:72:ASP:HB3	38:AR:75:LEU:HB2	1.92	0.50
42:AV:2:PHE:HB2	42:AV:42:GLY:CA	2.41	0.50
57:BA:1223:G:H5'	57:BA:1224:C:OP2	2.10	0.50
41:BU:16:LYS:HE2	57:BA:1227:G:OP2	2.10	0.50
57:BA:2369:A:O2'	57:BA:2370:G:H5'	2.11	0.50
57:BA:814:C:H2'	57:BA:815:C:H6	1.75	0.50
39:BS:16:ASN:C	39:BS:18:ILE:H	2.14	0.50
41:BU:93:LYS:HD3	57:BA:997:G:OP1	2.11	0.50
40:AT:46:GLU:O	40:AT:65:LYS:HD2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BY:8:LYS:CB	45:BY:28:LYS:HE2	2.41	0.50
45:BY:87:LYS:O	45:BY:88:LYS:HB2	2.10	0.50
31:AH:163:TYR:CD1	31:AH:163:TYR:N	2.79	0.50
57:AA:613:G:H8	57:AA:613:G:C5'	2.23	0.50
57:AA:1503:U:H2'	57:AA:1504:C:H6	1.74	0.50
27:AD:241:PRO:C	27:AD:242:ARG:HD2	2.31	0.50
28:BE:113:PHE:CD1	57:BA:1654:A:C2	2.99	0.50
28:BE:34:VAL:HG11	28:BE:78:LEU:HD23	1.93	0.50
31:BH:124:GLU:HB2	31:BH:132:ARG:CG	2.41	0.50
31:BH:7:LEU:HD23	31:BH:69:ARG:HD2	1.93	0.50
46:AZ:24:LEU:C	46:AZ:24:LEU:CD2	2.79	0.50
50:B3:1:MET:CE	50:B3:39:ASP:HB3	2.41	0.50
36:BP:13:ASN:HD22	36:BP:13:ASN:C	2.14	0.50
57:AA:2111:C:H1'	57:AA:2118:U:O4'	2.10	0.50
57:AA:1047:G:N2	57:AA:1111:A:H62	2.09	0.50
30:AG:97:ASP:O	30:AG:101:ILE:HG13	2.11	0.50
31:AH:44:VAL:O	31:AH:45:VAL:C	2.49	0.50
32:AI:88:ILE:HG22	32:AI:89:TYR:N	2.27	0.50
38:AR:45:ARG:HD3	38:AR:97:VAL:HG21	1.92	0.50
39:AS:30:ARG:HH11	39:AS:35:ILE:HB	1.76	0.50
41:AU:88:ILE:C	41:AU:90:VAL:H	2.13	0.50
30:BG:29:TRP:CB	58:BB:57:A:C4	2.94	0.50
30:BG:118:ARG:HD2	30:BG:181:ARG:HD3	1.94	0.50
36:BP:41:ARG:CA	36:BP:41:ARG:HE	2.24	0.50
38:BR:87:TYR:C	38:BR:89:ASP:H	2.12	0.50
55:A8:62:LEU:N	55:A8:63:PRO:CD	2.74	0.50
27:AD:244:ARG:HB2	57:AA:1902:C:HO2'	1.75	0.50
27:BD:145:VAL:HG12	27:BD:146:GLU:O	2.11	0.50
57:AA:191:A:H2'	57:AA:192:C:C6	2.46	0.50
57:BA:484:C:H2'	57:BA:485:C:H6	1.77	0.50
44:BX:12:VAL:CG2	44:BX:13:LEU:H	1.96	0.50
45:BY:84:ARG:HD2	45:BY:97:ARG:CD	2.41	0.50
27:AD:45:ASN:HB2	27:AD:46:GLN:OE1	2.12	0.50
57:BA:191:A:H2'	57:BA:192:C:C6	2.46	0.50
40:BT:78:LEU:O	40:BT:79:HIS:ND1	2.45	0.50
40:BT:30:VAL:HG22	40:BT:84:GLN:O	2.11	0.50
57:BA:1607:C:H4'	57:BA:1608:A:O5'	2.11	0.50
31:BH:44:VAL:O	31:BH:45:VAL:C	2.49	0.50
46:AZ:116:VAL:HB	46:AZ:175:VAL:HG23	1.93	0.50
46:AZ:166:SER:OG	46:AZ:167:PRO:HA	2.10	0.50
43:AW:28:SER:O	43:AW:30:GLU:N	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:AZ:39:VAL:HG21	46:AZ:44:PHE:CD2	2.45	0.50
57:BA:271(P):C:C2'	57:BA:271(Q):G:H5'	2.41	0.50
57:AA:1541:G:H5''	57:AA:1542:A:O5'	2.11	0.50
57:AA:2468:G:HO2'	57:AA:2476:A:H8	1.58	0.50
50:A3:6:VAL:HG12	50:A3:56:VAL:CG2	2.37	0.50
57:AA:1481:U:H5'	57:AA:1482:G:OP2	2.11	0.50
38:AR:10:LEU:HD13	38:AR:17:ARG:NH1	2.26	0.50
57:AA:650:C:C3'	57:AA:651:G:H5''	2.39	0.50
46:AZ:141:VAL:HG13	46:AZ:144:LEU:HD23	1.92	0.50
53:A6:9:LEU:HD12	53:A6:28:ARG:CG	2.41	0.50
46:AZ:109:ALA:O	46:AZ:113:ALA:HB3	2.11	0.50
35:AO:13:ASN:ND2	35:AO:97:ARG:H	2.09	0.50
49:A2:4:SER:HA	49:A2:7:ARG:NH1	2.26	0.50
47:A0:36:ILE:HG23	57:AA:2354:G:O2'	2.11	0.50
57:BA:2199:A:H3'	57:BA:2200:C:C6	2.46	0.50
31:BH:152:ARG:HG3	31:BH:152:ARG:O	2.10	0.50
57:BA:1665:A:H2'	57:BA:1666:G:O4'	2.11	0.50
57:BA:1854:A:H2'	57:BA:1855:G:O4'	2.11	0.50
51:B4:25:TYR:N	51:B4:25:TYR:CD1	2.79	0.50
57:BA:2111:C:H1'	57:BA:2118:U:O4'	2.12	0.50
57:AA:106:C:H2'	57:AA:107:C:C6	2.46	0.50
36:AP:97:PRO:O	36:AP:98:GLU:CB	2.58	0.50
39:AS:67:ARG:HB3	39:AS:71:ARG:NH1	2.26	0.50
45:AY:26:LYS:O	45:AY:27:VAL:O	2.29	0.50
58:BB:40:U:N3	58:BB:43:C:H5''	2.25	0.50
30:BG:16:ARG:N	30:BG:17:PRO:HD2	2.27	0.50
30:BG:118:ARG:HG2	30:BG:181:ARG:HG3	1.94	0.50
39:BS:67:ARG:HB3	39:BS:71:ARG:NH1	2.25	0.50
27:BD:79:VAL:HG11	27:BD:111:LEU:HD11	1.92	0.50
45:BY:25:GLY:HA3	45:BY:39:VAL:HG13	1.92	0.50
52:B5:3:LYS:HD3	57:BA:2613:U:H2'	1.92	0.50
53:A6:43:CYS:O	53:A6:44:ARG:NH1	2.44	0.50
35:BO:23:ARG:HH11	57:BA:2562:U:C1'	2.20	0.50
55:B8:50:LEU:O	55:B8:51:ALA:HB3	2.11	0.50
57:BA:16:G:O2'	57:BA:17:G:H5'	2.12	0.50
28:BE:165:VAL:HG11	57:BA:2679:A:H5'	1.93	0.50
28:BE:53:PRO:O	28:BE:54:GLN:O	2.29	0.50
28:AE:61:ARG:CZ	57:AA:2810:A:O2'	2.59	0.50
34:BN:120:LEU:C	34:BN:121:LYS:HD2	2.32	0.50
50:B3:47:VAL:HG11	50:B3:56:VAL:HG21	1.92	0.50
28:AE:170:LEU:HD12	28:AE:170:LEU:N	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:272(E):G:C2	57:BA:364:C:N3	2.80	0.50
47:B0:27:GLU:OE1	57:BA:856:C:H1'	2.11	0.50
38:AR:7:GLY:O	38:AR:8:ARG:CB	2.59	0.50
57:BA:2136:C:N4	57:BA:2156:G:H21	2.09	0.50
57:BA:654(N):G:C2'	57:BA:654(O):G:H5'	2.42	0.50
57:BA:89:G:H3'	57:BA:90:U:C5'	2.42	0.50
57:BA:2801:A:N3	57:BA:2801:A:H2'	2.26	0.50
57:AA:2564:A:C2	57:AA:2647:U:H4'	2.46	0.50
27:AD:116:GLN:HG3	57:AA:407:G:O2'	82.79	0.50
27:AD:142:VAL:CG2	27:AD:191:ALA:HB1	2.41	0.50
27:AD:35:LYS:CG	27:AD:63:ARG:HG3	2.41	0.50
30:AG:66:GLN:HA	30:AG:67:LYS:CE	2.38	0.50
30:AG:92:VAL:HA	58:AB:42:C:O2	2.12	0.50
31:AH:85:LYS:HZ3	31:AH:132:ARG:HA	1.76	0.50
32:AI:75:LEU:HD12	32:AI:75:LEU:H	1.77	0.50
42:AV:45:THR:O	42:AV:46:VAL:HG12	2.12	0.50
51:B4:34:GLU:O	51:B4:35:VAL:HG23	2.10	0.50
30:BG:6:ALA:HB3	30:BG:104:GLU:CD	2.31	0.50
34:BN:14:VAL:HG12	34:BN:15:LEU:N	2.26	0.50
34:BN:41:ASP:O	34:BN:42:TRP:C	2.48	0.50
38:BR:45:ARG:HD3	38:BR:97:VAL:HG21	1.94	0.50
39:BS:30:ARG:HH11	39:BS:35:ILE:HB	1.75	0.50
39:BS:17:ARG:HH21	39:BS:90:GLY:N	2.08	0.50
41:BU:88:ILE:C	41:BU:90:VAL:H	2.13	0.50
27:BD:2:ALA:O	27:BD:3:VAL:HB	2.11	0.50
40:AT:121:ILE:O	40:AT:124:ASP:HB2	2.11	0.50
43:BW:10:VAL:O	43:BW:11:ARG:HB2	2.12	0.50
57:AA:747:U:O2	57:AA:2014:A:H1'	2.11	0.50
58:BB:75:G:H5'	58:BB:76:G:OP2	2.12	0.50
28:BE:111:ARG:HB2	28:BE:160:TYR:O	2.10	0.50
28:AE:111:ARG:CG	38:AR:2:ARG:HG2	2.41	0.50
57:AA:528:A:HO2'	57:AA:529:A:H5'	1.71	0.50
54:A7:5:TRP:CZ3	57:AA:464:U:H4'	2.47	0.50
57:AA:2476:A:C2	57:AA:2477:C:C5	2.99	0.50
57:BA:28:A:N6	57:BA:512:G:H1'	2.27	0.50
53:A6:12:GLU:HG2	53:A6:23:THR:HG22	1.94	0.50
57:AA:1532:C:C2'	57:AA:1533:G:H5'	2.42	0.50
57:BA:420:C:H2'	57:BA:421:U:C6	2.47	0.50
57:BA:2543:G:H8	57:BA:2543:G:H5'	1.76	0.50
42:AV:82:ARG:HH11	42:AV:82:ARG:HG2	1.76	0.50
35:AO:22:ILE:HG12	35:AO:41:ALA:HA	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2340:G:O2'	57:AA:2341:G:H5'	2.11	0.50
52:A5:43:HIS:HD2	57:AA:2815:C:O2'	1.94	0.50
40:AT:1:MET:O	40:AT:2:ASN:C	2.49	0.50
57:AA:1028:A:N6	57:AA:1125:G:H2'	2.27	0.50
57:AA:1961:C:O2'	57:AA:1962:C:H5'	2.11	0.50
57:AA:693:C:O2'	57:AA:694:U:H5'	2.12	0.50
51:B4:56:VAL:HG12	51:B4:56:VAL:O	2.12	0.50
50:B3:38:GLU:OE2	50:B3:38:GLU:HA	2.11	0.50
57:AA:1547:C:O2'	57:AA:1548:C:H5'	2.11	0.50
57:BA:1265:A:OP1	57:BA:1265:A:H8	1.94	0.50
57:AA:1983:C:O2'	57:AA:1984:G:H5'	2.12	0.50
57:AA:654(N):G:C2'	57:AA:654(O):G:H5'	2.42	0.50
33:BJ:43:ALA:C	33:BJ:45:LYS:H	2.13	0.50
57:AA:863:A:O2'	57:AA:864:G:H5'	2.12	0.50
26:AC:52:PRO:CG	26:AC:53:ARG:HH11	2.24	0.50
27:AD:139:GLY:H	27:AD:165:ILE:HB	1.76	0.50
30:AG:140:ILE:HD12	30:AG:140:ILE:C	2.32	0.50
30:AG:119:GLY:CA	30:AG:179:PRO:HB2	2.37	0.50
31:AH:41:MET:CG	31:AH:43:VAL:HG13	2.41	0.50
31:AH:9:ILE:CG2	31:AH:9:ILE:O	2.58	0.50
34:AN:58:ASP:O	34:AN:59:LYS:HB2	2.12	0.50
37:AQ:21:THR:O	37:AQ:22:LYS:HB3	2.12	0.50
41:AU:83:LEU:N	41:AU:83:LEU:CD1	2.74	0.50
51:B4:14:ILE:HA	51:B4:31:ILE:HG22	1.92	0.50
32:BI:47:LEU:CD1	32:BI:47:LEU:N	4.62	0.50
32:BI:62:LYS:HE3	32:BI:134:PRO:HD3	1.92	0.50
38:BR:113:LEU:HD23	38:BR:113:LEU:O	2.11	0.50
40:AT:85:LYS:O	40:AT:86:ILE:C	2.50	0.50
57:BA:2206:G:C2	57:BA:2207:G:H5'	2.45	0.50
45:BY:88:LYS:NZ	45:BY:93:GLY:CA	2.74	0.50
37:BQ:134:ARG:CD	46:BZ:122:ARG:HH21	2.24	0.50
57:AA:445:C:O2'	57:AA:446:G:H5'	2.12	0.50
28:BE:116:VAL:HG21	28:BE:122:PHE:CE2	2.46	0.50
28:AE:101:ARG:HB2	28:AE:201:THR:HG21	1.94	0.50
46:AZ:5:LEU:HD11	46:AZ:44:PHE:HA	1.92	0.50
57:BA:271(O):C:HO2'	57:BA:271(P):C:H6	1.52	0.50
57:BA:1541:G:H4'	57:BA:1542:A:O5'	2.11	0.50
26:BC:191:ARG:CB	26:BC:195:ARG:HH12	2.21	0.50
36:AP:93:GLY:O	36:AP:123:LEU:HB2	2.11	0.50
57:BA:2469:A:H2	57:BA:2481:G:H21	1.58	0.50
43:BW:16:LYS:O	43:BW:19:LEU:HB2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B1:45:ASN:ND2	57:BA:2090:G:H21	2.09	0.50
57:BA:635:C:O2'	57:BA:639:U:OP1	2.30	0.50
35:BO:13:ASN:ND2	35:BO:97:ARG:H	2.09	0.50
57:BA:1416:G:O2'	57:BA:1417:C:H5	1.94	0.50
57:BA:1602:U:H3'	57:BA:1603:A:C5'	2.42	0.50
27:BD:239:ARG:HB3	57:BA:2591:C:OP2	2.11	0.50
57:AA:564:C:O2'	57:AA:565:C:H5'	2.11	0.50
52:A5:43:HIS:CD2	57:AA:2815:C:O2'	2.65	0.50
57:BA:2464:C:O2'	57:BA:2465:C:H6	1.94	0.50
46:BZ:128:VAL:CG2	46:BZ:132:ASN:HB2	2.42	0.50
29:BF:180:GLY:HA3	57:BA:614(C):A:C5	2.47	0.50
57:AA:1014:U:O2'	57:AA:1015:G:H5''	2.12	0.50
30:AG:173:LEU:HD13	30:AG:178:PHE:CE2	2.47	0.50
30:AG:41:GLN:HB3	30:AG:43:LEU:CD2	2.41	0.50
32:AI:41:GLU:O	32:AI:45:LYS:HG2	2.11	0.50
39:AS:14:VAL:O	39:AS:15:ARG:C	2.48	0.50
45:AY:28:LYS:O	45:AY:29:GLU:C	2.49	0.50
32:BI:89:TYR:N	32:BI:89:TYR:HD1	2.09	0.50
39:BS:63:THR:O	39:BS:66:ALA:HB3	2.11	0.50
55:B8:62:LEU:N	55:B8:63:PRO:CD	2.74	0.50
27:BD:11:PRO:C	27:BD:13:ARG:N	2.63	0.50
27:BD:79:VAL:HG11	27:BD:111:LEU:CD1	2.42	0.50
40:AT:62:THR:HA	40:AT:74:ARG:O	2.11	0.50
40:BT:23:ARG:O	40:BT:25:GLY:N	2.45	0.50
46:BZ:61:LEU:HD23	46:BZ:61:LEU:N	2.08	0.50
49:A2:44:LEU:O	49:A2:45:SER:HB3	2.11	0.50
31:BH:41:MET:CG	31:BH:43:VAL:HG13	2.42	0.50
58:BB:111:G:C2'	58:BB:112:U:H5'	2.41	0.50
32:BI:46:ALA:HB2	57:BA:271(P):C:H5'	1.92	0.50
34:AN:55:VAL:HG22	34:AN:126:PRO:HA	1.94	0.50
57:AA:1948:G:O2'	57:AA:1949:G:H5'	2.11	0.50
37:AQ:46:GLN:NE2	57:AA:2485:G:H5''	2.25	0.50
38:BR:9:LYS:HG2	38:BR:43:GLU:OE2	2.12	0.50
42:BV:79:VAL:HG22	57:BA:1188:U:H4'	1.94	0.50
34:BN:66:LYS:HZ1	57:BA:1140:C:H5''	1.77	0.50
57:BA:2338:G:H2'	57:BA:2339:G:H8	1.77	0.50
57:BA:2195:C:O2'	57:BA:2196:C:H5'	2.12	0.50
55:B8:23:VAL:HG12	55:B8:46:ARG:HH11	1.76	0.50
29:BF:157:VAL:HG22	29:BF:194:MET:HG2	1.94	0.50
44:AX:50:LYS:HD3	44:AX:84:ALA:HB2	1.92	0.50
27:BD:231:HIS:ND1	27:BD:232:PRO:HD2	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:A4:25:TYR:N	51:A4:25:TYR:CD1	2.80	0.50
57:AA:106:C:H2'	57:AA:107:C:H6	1.77	0.50
57:AA:484:C:H2'	57:AA:485:C:C6	2.47	0.50
27:AD:25:THR:HG22	27:AD:26:LYS:H	1.74	0.50
27:AD:26:LYS:O	27:AD:27:THR:HG22	2.11	0.50
30:AG:142:PRO:HG2	30:AG:143:GLU:H	1.76	0.50
30:AG:58:GLN:O	30:AG:62:LEU:HD13	2.12	0.50
30:AG:38:VAL:HG13	30:AG:93:THR:HA	1.94	0.50
34:AN:35:ARG:O	34:AN:37:LYS:N	2.44	0.50
39:AS:29:PHE:CG	58:AB:7:G:H4'	2.46	0.50
41:AU:13:LYS:N	41:AU:13:LYS:HE2	2.27	0.50
41:AU:83:LEU:CG	41:AU:88:ILE:HD11	2.28	0.50
44:AX:12:VAL:HG11	44:AX:17:ALA:HB1	1.93	0.50
57:BA:110:G:O2'	57:BA:111:A:H5'	2.10	0.50
30:BG:72:ARG:O	57:BA:2312:U:H5''	2.12	0.50
57:BA:979:G:H3'	57:BA:980:A:C5'	2.41	0.50
32:BI:89:TYR:N	32:BI:89:TYR:CD1	2.80	0.50
55:A8:61:LEU:HD12	55:A8:62:LEU:CG	2.32	0.50
52:B5:4:HIS:O	57:BA:2056:G:N2	2.44	0.50
57:AA:1505:C:O4'	57:AA:1505:C:O2	2.30	0.50
57:BA:1271:G:H5'	57:BA:1314:C:H5''	27.99	0.50
26:AC:50:ILE:HD11	26:AC:170:GLY:HA2	1.92	0.50
42:BV:99:ILE:CD1	42:BV:99:ILE:N	2.65	0.50
57:BA:2360:A:O2'	57:BA:2361:A:P	2.68	0.50
28:AE:101:ARG:HB3	28:AE:169:ASN:ND2	2.26	0.50
28:AE:36:ARG:NH2	28:AE:88:GLY:CA	2.67	0.50
57:AA:2360:A:O2'	57:AA:2361:A:P	2.70	0.50
57:BA:676:A:H8	57:BA:2069:G:N2	1.95	0.50
57:BA:528:A:H2	57:BA:2043:C:C5'	2.24	0.50
46:AZ:48:PHE:CZ	46:AZ:74:VAL:HG21	2.46	0.50
57:AA:2832:U:H4'	57:AA:2833:G:H5''	1.93	0.50
51:A4:46:GLN:NE2	51:A4:47:GLN:O	2.43	0.50
35:AO:13:ASN:O	35:AO:15:GLY:N	2.44	0.50
57:AA:1858:G:H2'	57:AA:1883:G:H22	1.75	0.50
46:AZ:156:LYS:O	46:AZ:158:PRO:HD3	2.12	0.50
41:AU:52:ARG:HG2	41:AU:52:ARG:HH11	1.77	0.50
57:BA:2564:A:C2	57:BA:2647:U:H4'	2.47	0.50
57:AA:830:G:H4'	57:AA:831:G:OP2	2.11	0.50
57:AA:1362:C:O2'	57:AA:1363:C:H5'	2.12	0.50
29:AF:8:GLN:O	29:AF:9:ILE:C	2.51	0.50
36:AP:33:ARG:O	36:AP:35:HIS:O	2.30	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AQ:35:VAL:HG11	37:AQ:130:LYS:CE	2.42	0.50
45:AY:95:LYS:HG2	45:AY:101:LYS:H	1.77	0.50
36:BP:46:LYS:HE2	57:BA:196:A:O4'	2.12	0.50
29:BF:185:ASP:HA	29:BF:188:ARG:HD3	1.92	0.50
30:BG:106:LEU:O	30:BG:110:ALA:HB3	2.12	0.50
33:BJ:59:ILE:C	33:BJ:61:LEU:H	2.14	0.50
41:BU:57:PHE:O	41:BU:58:ARG:C	2.50	0.50
27:BD:130:ALA:C	27:BD:131:LEU:HD12	2.33	0.50
40:AT:36:GLU:O	40:AT:36:GLU:HG2	2.12	0.50
44:BX:27:THR:HG22	44:BX:80:ILE:HB	1.94	0.50
46:BZ:150:LEU:CD2	46:BZ:150:LEU:H	2.15	0.50
40:BT:57:PHE:CG	40:BT:58:ASN:N	2.79	0.50
57:AA:1607:C:H4'	57:AA:1608:A:O5'	2.12	0.50
49:A2:46:GLN:CB	49:A2:49:LYS:HE3	2.29	0.50
42:BV:15:GLU:O	42:BV:16:PRO:C	2.49	0.50
27:BD:241:PRO:C	27:BD:242:ARG:HD2	2.32	0.50
46:AZ:102:LEU:HD21	46:AZ:124:ILE:CD1	2.41	0.50
52:B5:33:CYS:CB	52:B5:40:LYS:HE3	2.40	0.50
52:B5:46:CYS:SG	52:B5:47:PRO:HD2	2.52	0.50
57:BA:2263:C:O2'	57:BA:2264:C:H5'	2.10	0.50
57:BA:271(R):G:O2'	57:BA:271(S):G:H5'	2.11	0.50
37:AQ:27:VAL:HB	37:AQ:137:TYR:HD1	1.77	0.50
57:BA:2529:G:OP2	57:BA:2530:A:H5''	2.12	0.50
57:BA:271(H):G:O2'	57:BA:271(I):G:H8	1.95	0.50
41:AU:110:VAL:O	41:AU:113:ALA:HB3	2.11	0.50
57:BA:2146:C:H4'	57:BA:2147:G:C8	2.47	0.50
57:AA:576:U:H2'	57:AA:577:G:C8	2.47	0.50
26:BC:31:LYS:O	26:BC:31:LYS:HD3	2.12	0.50
42:BV:8:GLY:O	57:BA:1161:C:H1'	2.12	0.50
27:BD:154:LYS:HE2	57:BA:1801:G:OP2	2.11	0.50
57:AA:2206:G:H3'	57:AA:2206:G:N3	2.27	0.50
57:AA:2530:A:H2'	57:AA:2531:A:H5'	1.93	0.50
57:AA:259:G:O2'	57:AA:260:G:H5'	2.12	0.50
57:AA:548:A:H2'	57:AA:548:A:N3	2.27	0.50
27:AD:35:LYS:NZ	27:AD:36:PRO:N	2.60	0.50
32:AI:44:LEU:O	32:AI:47:LEU:HB3	2.12	0.50
36:AP:6:LEU:HD23	36:AP:6:LEU:N	2.27	0.50
39:AS:88:ASP:OD2	39:AS:89:ARG:N	2.45	0.50
34:BN:18:ALA:CB	34:BN:21:LYS:HB3	2.42	0.50
36:BP:106:LEU:HD13	36:BP:112:LEU:HD23	1.93	0.50
39:BS:28:VAL:O	39:BS:89:ARG:HD2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BU:68:ALA:O	41:BU:71:GLN:HB2	2.11	0.50
51:A4:14:ILE:HD12	51:A4:14:ILE:N	2.27	0.50
40:BT:85:LYS:O	40:BT:86:ILE:C	2.50	0.50
31:BH:53:GLU:HA	31:BH:65:HIS:CE1	2.47	0.50
28:AE:24:THR:HG22	28:AE:186:GLY:CA	2.41	0.50
53:A6:37:ARG:NH2	57:AA:2286:A:H62	1.94	0.50
57:BA:2807:G:C3'	57:BA:2808:U:H5''	2.42	0.50
39:AS:44:LYS:HE3	39:AS:44:LYS:HA	1.94	0.50
57:BA:94:C:O2	57:BA:94:C:H2'	2.11	0.50
37:AQ:133:ARG:HG3	37:AQ:133:ARG:NH1	2.27	0.50
57:BA:2656:U:H2'	57:BA:2657:A:H5''	1.94	0.50
29:AF:117:ARG:HH21	29:AF:187:VAL:HA	1.76	0.50
57:AA:272(E):G:C2	57:AA:364:C:N3	2.80	0.50
36:BP:108:LYS:O	36:BP:110:TYR:N	2.45	0.50
57:BA:1532:C:C2'	57:BA:1533:G:H5'	2.42	0.50
57:BA:1963:U:C2'	57:BA:1963:U:O2	2.60	0.50
44:BX:60:ARG:NH1	57:BA:1311:G:C2	2.79	0.50
49:A2:4:SER:HA	49:A2:7:ARG:HH11	1.76	0.50
57:AA:2199:A:H3'	57:AA:2200:C:C6	2.46	0.50
29:AF:157:VAL:O	29:AF:157:VAL:HG22	2.11	0.50
57:BA:2340:G:O2'	57:BA:2341:G:H5'	2.12	0.50
49:B2:59:ARG:O	49:B2:63:VAL:HG23	2.12	0.50
57:BA:654(N):G:H2'	57:BA:654(O):G:H5'	1.94	0.50
48:B1:19:GLN:HB3	48:B1:35:THR:CG2	2.42	0.50
43:AW:79:GLY:CA	43:AW:100:THR:HG22	2.42	0.50
57:BA:1547:C:O2'	57:BA:1548:C:H5'	2.11	0.50
27:AD:79:VAL:HG11	27:AD:111:LEU:HD11	1.94	0.49
30:AG:175:LEU:O	30:AG:176:LEU:HG	2.12	0.49
31:AH:41:MET:HE2	31:AH:43:VAL:HG13	1.94	0.49
32:AI:24:GLY:HA3	57:AA:2093:G:O5'	2.12	0.49
36:AP:52:GLU:HB3	57:AA:832:G:O2'	2.12	0.49
39:AS:98:VAL:HG12	39:AS:100:ALA:HB2	1.94	0.49
42:AV:21:ARG:N	42:AV:21:ARG:HD3	2.25	0.49
51:B4:9:LEU:HA	51:B4:26:SER:O	2.12	0.49
57:BA:2313:C:C6	57:BA:2314:C:H5	2.30	0.49
26:BC:6:LYS:C	26:BC:6:LYS:HD3	2.32	0.49
30:BG:109:VAL:O	30:BG:110:ALA:O	2.30	0.49
30:BG:41:GLN:NE2	30:BG:154:GLY:O	2.45	0.49
32:BI:120:ILE:H	32:BI:120:ILE:CD1	2.25	0.49
36:BP:55:ARG:CG	36:BP:56:SER:N	2.66	0.49
38:BR:29:LEU:HB3	38:BR:75:LEU:HD11	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:61:ARG:HH11	55:B8:13:ARG:HD2	1.77	0.49
57:BA:1505:C:O2	57:BA:1505:C:O4'	2.29	0.49
37:BQ:58:PHE:CD1	37:BQ:58:PHE:O	2.64	0.49
40:BT:117:ASP:O	40:BT:121:ILE:HG13	2.12	0.49
40:BT:23:ARG:HB2	40:BT:24:PRO:HD2	1.94	0.49
28:BE:131:ALA:CB	57:BA:2580:U:H5'	2.41	0.49
28:BE:30:PRO:O	28:BE:32:PRO:HD3	2.12	0.49
57:BA:1541:G:H5''	57:BA:1542:A:O5'	2.11	0.49
57:AA:1168:G:O2'	57:AA:1169:G:H5'	2.12	0.49
29:BF:74:ARG:NH2	57:BA:2445:G:OP1	2.44	0.49
57:BA:1168:G:O2'	57:BA:1169:G:H5'	2.12	0.49
26:AC:191:ARG:CB	26:AC:195:ARG:HH12	2.19	0.49
36:BP:146:VAL:O	36:BP:148:LEU:N	2.45	0.49
57:BA:2611:U:H5'	57:BA:2611:U:C6	2.39	0.49
57:BA:1537:G:H2'	57:BA:1538:G:C8	2.43	0.49
29:AF:169:ASN:ND2	57:AA:322:A:H3'	2.25	0.49
57:BA:271(D):G:O2'	57:BA:271(E):U:H5'	2.12	0.49
29:BF:36:VAL:HG11	29:BF:183:VAL:CG1	2.40	0.49
27:BD:227:ASN:ND2	57:BA:784:A:H5''	2.26	0.49
44:BX:57:LEU:N	44:BX:57:LEU:CD1	2.74	0.49
30:BG:130:ASN:ND2	30:BG:160:VAL:HG13	2.27	0.49
57:BA:1917:U:O2'	57:BA:1918:A:H5'	2.12	0.49
35:AO:66:LYS:HD3	57:AA:1666:G:OP1	2.12	0.49
57:AA:2515:C:O2'	57:AA:2516:G:H5'	2.11	0.49
57:BA:2236:C:H2'	57:BA:2237:G:H5'	1.93	0.49
28:AE:104:VAL:HG11	28:AE:188:VAL:HG21	1.93	0.49
57:BA:1638:C:H4'	57:BA:2710:C:O2	2.12	0.49
57:AA:2529:G:OP2	57:AA:2530:A:H5''	2.12	0.49
30:AG:131:TYR:HB3	30:AG:159:VAL:HG11	1.93	0.49
30:AG:173:LEU:HD22	30:AG:178:PHE:CE1	2.47	0.49
36:AP:34:GLY:O	36:AP:35:HIS:HB2	2.12	0.49
39:AS:20:ARG:NE	39:AS:20:ARG:HA	2.27	0.49
39:AS:74:ALA:O	39:AS:77:ALA:HB3	2.12	0.49
41:AU:83:LEU:H	41:AU:83:LEU:CD1	2.25	0.49
51:B4:15:ILE:O	51:B4:15:ILE:HG22	2.12	0.49
57:BA:1014:U:O2'	57:BA:1015:G:H5''	2.12	0.49
32:BI:82:ARG:HG2	32:BI:145:VAL:HG11	1.93	0.49
34:BN:133:GLN:CG	34:BN:135:PRO:HD3	2.32	0.49
36:BP:33:ARG:CZ	57:BA:587:C:H2'	2.43	0.49
38:BR:65:LEU:HD21	57:BA:2870:C:H5''	1.94	0.49
39:BS:96:GLY:O	39:BS:98:VAL:N	2.39	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:3:VAL:HG12	27:BD:17:THR:HB	1.94	0.49
40:AT:31:SER:N	40:AT:43:GLN:O	2.46	0.49
46:BZ:121:HIS:O	46:BZ:123:ASP:N	2.37	0.49
57:AA:1827:C:C2'	57:AA:1828:G:H5'	2.41	0.49
57:AA:1332:G:H5''	57:AA:1332:G:C8	2.46	0.49
57:BA:1332:G:N2	57:BA:1609:A:O2'	2.44	0.49
57:AA:528:A:C2	57:AA:2043:C:C4'	2.93	0.49
57:BA:893:C:H2'	57:BA:894:C:C6	2.47	0.49
56:A9:1:MET:SD	57:AA:2478:A:OP2	2.70	0.49
57:AA:271(R):G:O2'	57:AA:271(S):G:H5'	2.12	0.49
48:B1:80:LEU:HB2	48:B1:82:LEU:HD11	1.93	0.49
57:AA:2713:A:H3'	57:AA:2714:G:H5'	1.92	0.49
46:BZ:136:PHE:CD2	46:BZ:136:PHE:N	2.79	0.49
56:A9:7:VAL:HG12	56:A9:25:VAL:HG21	1.95	0.49
57:AA:20:C:H2'	57:AA:21:A:H8	1.77	0.49
57:AA:1916:A:H5'	57:AA:1917:U:OP2	2.12	0.49
35:BO:66:LYS:HD3	57:BA:1666:G:OP1	2.12	0.49
57:AA:1042:G:O2'	57:AA:1043:C:H5'	3.29	0.49
30:BG:152:LEU:HD23	30:BG:152:LEU:H	1.77	0.49
57:BA:519:U:H2'	57:BA:520:G:H8	1.77	0.49
57:AA:2842:G:O2'	57:AA:2843:G:H5'	2.13	0.49
27:AD:134:ARG:HG3	27:AD:135:PHE:CE2	2.47	0.49
27:AD:35:LYS:HA	27:AD:64:ILE:HG22	1.94	0.49
29:AF:20:LEU:HD12	29:AF:199:TRP:HZ3	1.75	0.49
34:AN:3:THR:HG22	34:AN:5:VAL:HG12	1.94	0.49
36:AP:81:GLN:CG	36:AP:106:LEU:HD12	2.37	0.49
38:AR:113:LEU:O	38:AR:113:LEU:HD23	2.11	0.49
42:AV:49:THR:CB	42:AV:50:PRO:CD	2.85	0.49
42:AV:52:VAL:HG13	42:AV:55:ALA:HB3	1.93	0.49
45:AY:100:ALA:O	45:AY:101:LYS:HB2	2.12	0.49
57:BA:443:A:H1'	57:BA:1201:C:O4'	2.13	0.49
36:BP:15:ARG:HH11	57:BA:597:U:H4'	1.77	0.49
29:BF:8:GLN:O	29:BF:9:ILE:C	2.51	0.49
32:BI:85:GLU:OE1	32:BI:86:THR:HB	2.11	0.49
57:BA:407:G:H2'	57:BA:408:G:H8	1.78	0.49
27:BD:142:VAL:CG2	27:BD:191:ALA:HB1	2.41	0.49
27:BD:30:GLU:CG	27:BD:63:ARG:CZ	2.89	0.49
27:BD:77:ALA:HB2	27:BD:97:TYR:HA	1.94	0.49
40:AT:78:LEU:O	40:AT:79:HIS:ND1	2.45	0.49
45:BY:45:VAL:HG12	45:BY:60:PHE:CE2	2.48	0.49
45:BY:7:VAL:CB	45:BY:8:LYS:NZ	2.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BH:109:PHE:O	31:BH:111:HIS:N	2.46	0.49
57:AA:2729:G:H2'	57:AA:2730:C:H6	1.78	0.49
27:AD:211:ARG:HD3	27:AD:214:TRP:CZ3	2.46	0.49
28:AE:65:GLY:C	28:AE:67:PHE:N	2.65	0.49
57:AA:2360:A:O2'	57:AA:2361:A:O4'	2.24	0.49
40:AT:125:ARG:C	40:AT:127:ALA:N	2.66	0.49
57:AA:2808:U:C2'	57:AA:2809:A:H5'	2.42	0.49
57:AA:271(H):G:O2'	57:AA:271(I):G:H8	1.95	0.49
49:A2:64:LEU:CD2	49:A2:68:ARG:HD3	2.42	0.49
54:A7:19:ARG:NH1	54:A7:19:ARG:HG2	2.26	0.49
33:AJ:103:GLY:O	33:AJ:109:SER:HA	2.13	0.49
57:AA:710:G:O2'	57:AA:711:G:H5'	2.33	0.49
34:AN:86:PRO:HG2	34:AN:89:LYS:HG2	1.94	0.49
34:BN:86:PRO:HG2	34:BN:89:LYS:HG2	1.94	0.49
57:BA:1856:G:C2'	57:BA:1857:G:H5'	2.42	0.49
57:BA:2464:C:O2'	57:BA:2465:C:P	2.70	0.49
57:AA:654(N):G:H2'	57:AA:654(O):G:H5'	1.94	0.49
57:AA:869:G:O2'	57:AA:870:A:H5'	2.12	0.49
57:AA:786:C:O2'	57:AA:787:U:H5'	2.13	0.49
57:BA:1042:G:O2'	57:BA:1043:C:H5'	3.27	0.49
57:AA:330:A:O2'	57:AA:331:A:C8	2.65	0.49
42:AV:2:PHE:HB2	42:AV:42:GLY:HA2	1.94	0.49
57:BA:2179:C:H4'	57:BA:2179:C:OP1	2.12	0.49
29:BF:66:PRO:O	29:BF:67:GLN:CB	2.55	0.49
36:BP:9:ASN:N	36:BP:10:PRO:HD2	2.26	0.49
42:BV:19:LYS:NZ	42:BV:20:LEU:N	2.51	0.49
40:AT:91:ARG:CB	40:AT:116:ALA:HA	2.41	0.49
45:BY:13:VAL:CG2	45:BY:72:VAL:HB	2.42	0.49
40:BT:20:PRO:HD2	40:BT:85:LYS:HB2	1.95	0.49
40:BT:23:ARG:HG2	40:BT:120:ARG:HH12	1.77	0.49
40:BT:27:THR:OG1	40:BT:28:VAL:N	2.42	0.49
57:BA:1747(A):G:H2'	57:BA:1748:G:C5'	2.25	0.49
31:BH:106:THR:HG22	31:BH:112:PRO:HB3	1.95	0.49
46:AZ:150:LEU:O	46:AZ:171:ILE:HG13	2.11	0.49
57:AA:2287:A:N6	57:AA:2344:U:H3	2.11	0.49
34:BN:55:VAL:HG22	34:BN:126:PRO:HA	1.95	0.49
51:B4:46:GLN:NE2	51:B4:47:GLN:O	2.44	0.49
55:B8:40:GLU:O	55:B8:42:ARG:N	2.45	0.49
57:AA:635:C:O2'	57:AA:639:U:OP1	2.30	0.49
57:BA:1865:G:H5'	57:BA:1866:C:P	2.52	0.49
34:BN:62:VAL:HG21	34:BN:66:LYS:HB2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BR:8:ARG:N	38:BR:8:ARG:NE	2.60	0.49
57:AA:1652:A:O2'	57:AA:1653:G:H5'	2.13	0.49
43:BW:87:PRO:HA	43:BW:93:ALA:HA	1.95	0.49
31:AH:152:ARG:O	31:AH:152:ARG:HG3	2.13	0.49
26:AC:31:LYS:O	26:AC:31:LYS:HD3	2.13	0.49
57:AA:1762:A:H8	57:AA:1762:A:O5'	1.95	0.49
37:AQ:111:GLU:O	37:AQ:115:MET:HG2	2.12	0.49
57:AA:2774:C:H2'	57:AA:2775:A:O4'	2.12	0.49
38:BR:46:GLY:HA2	57:BA:2839:G:H5'	1.95	0.49
57:AA:2528:U:H2'	57:AA:2530:A:O5'	2.12	0.49
32:AI:100:ALA:HA	32:AI:103:ARG:NH1	2.28	0.49
32:AI:88:ILE:CD1	32:AI:120:ILE:HG21	2.43	0.49
41:AU:91:ASP:O	41:AU:95:LEU:HB2	2.13	0.49
43:AW:55:ALA:C	43:AW:57:ASN:H	2.14	0.49
26:BC:30:VAL:HG11	26:BC:42:VAL:CG1	2.43	0.49
30:BG:145:THR:HG23	30:BG:146:TYR:H	1.77	0.49
32:BI:118:LYS:HZ2	32:BI:119:PRO:CD	2.25	0.49
32:BI:120:ILE:HG22	32:BI:122:GLU:H	1.77	0.49
39:BS:95:HIS:CE1	58:BB:38:C:O4'	2.66	0.49
41:BU:88:ILE:O	41:BU:90:VAL:N	2.35	0.49
27:BD:108:PRO:HA	27:BD:196:VAL:O	2.12	0.49
27:BD:31:LYS:O	27:BD:33:LEU:N	2.46	0.49
45:BY:27:VAL:HG12	45:BY:29:GLU:OE1	2.12	0.49
46:BZ:150:LEU:O	46:BZ:171:ILE:HG22	2.12	0.49
40:BT:33:LYS:NZ	40:BT:43:GLN:NE2	2.60	0.49
57:AA:1503:U:C4	57:AA:1504:C:N4	2.79	0.49
53:B6:12:GLU:HG2	53:B6:23:THR:HG22	1.94	0.49
57:AA:94:C:H2'	57:AA:94:C:O2	2.11	0.49
28:BE:49:LEU:HD23	28:BE:49:LEU:N	2.27	0.49
28:AE:132:HIS:O	28:AE:135:HIS:NE2	2.46	0.49
28:AE:119:ARG:HG2	28:AE:160:TYR:HB2	1.93	0.49
57:BA:2681:C:C5	57:BA:2725:A:N6	2.68	0.49
33:BJ:96:PHE:C	33:BJ:98:LYS:H	2.16	0.49
57:AA:1291:C:H2'	57:AA:1292:U:C6	2.47	0.49
47:B0:19:LYS:HD3	47:B0:41:ARG:HH22	1.77	0.49
57:BA:2476:A:C2	57:BA:2477:C:C5	3.00	0.49
57:AA:2544:G:O5'	57:AA:2544:G:H8	1.96	0.49
38:BR:7:GLY:O	38:BR:8:ARG:CB	2.60	0.49
57:AA:2146:C:H4'	57:AA:2147:G:C8	2.47	0.49
51:A4:37:SER:O	51:A4:38:LYS:HB2	2.11	0.49
57:BA:2881:C:C2	57:BA:2882:A:C8	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2884:U:H2'	57:BA:2885:C:H5'	1.94	0.49
46:BZ:147:GLY:O	46:BZ:148:ASP:C	2.50	0.49
57:AA:237:C:O2'	57:AA:238:C:H5'	2.12	0.49
57:AA:888:C:O2'	57:AA:889:C:H5'	2.12	0.49
37:AQ:10:ARG:HB2	37:AQ:10:ARG:HH11	1.77	0.49
54:B7:28:ARG:HG3	54:B7:28:ARG:NH1	2.27	0.49
26:AC:43:GLU:N	26:AC:216:THR:O	2.44	0.49
27:AD:31:LYS:O	27:AD:33:LEU:N	2.45	0.49
29:AF:3:GLU:HA	29:AF:24:LEU:CB	2.43	0.49
30:AG:126:ASP:HB2	57:AA:2303:G:H5'	1.94	0.49
39:AS:90:GLY:O	39:AS:92:TYR:N	2.46	0.49
44:AX:35:THR:HB	44:AX:38:GLU:H	1.78	0.49
48:B1:52:ARG:O	48:B1:56:GLN:O	2.31	0.49
57:BA:1406:U:O2'	57:BA:1407:C:H5'	6.16	0.49
30:BG:18:GLU:O	30:BG:22:ARG:HB2	2.12	0.49
32:BI:73:GLU:HB3	32:BI:136:VAL:HG23	1.93	0.49
34:BN:30:ILE:HG23	34:BN:52:VAL:HG11	1.94	0.49
39:BS:74:ALA:O	39:BS:77:ALA:HB3	2.13	0.49
41:BU:112:ARG:HH22	42:BV:46:VAL:HG11	1.75	0.49
57:BA:530:G:C2'	57:BA:530:G:N3	4.43	0.49
45:BY:90:LEU:HG	45:BY:91:GLU:N	2.23	0.49
37:BQ:27:VAL:HB	37:BQ:137:TYR:HD1	1.77	0.49
35:BO:87:ILE:HG22	35:BO:91:LEU:HA	1.92	0.49
31:BH:9:ILE:HD11	31:BH:76:VAL:HG21	1.95	0.49
28:AE:24:THR:CG2	28:AE:184:VAL:HG23	2.43	0.49
28:AE:59:VAL:HG11	28:AE:63:LEU:HG	1.93	0.49
28:AE:65:GLY:O	28:AE:67:PHE:N	2.46	0.49
57:BA:2298:A:H62	57:BA:2318:G:H8	1.59	0.49
57:AA:1292:U:H2'	57:AA:1293:C:H6	1.77	0.49
57:AA:464:U:H2'	57:AA:465:G:O4'	2.13	0.49
36:BP:147:LEU:O	36:BP:148:LEU:O	2.31	0.49
57:BA:2532:G:O2'	57:BA:2657:A:N6	2.46	0.49
47:A0:51:VAL:HG21	47:A0:79:VAL:O	2.11	0.49
46:AZ:141:VAL:HG13	46:AZ:144:LEU:CD2	2.43	0.49
35:BO:49:ARG:HH21	57:BA:1423:G:C5'	97.81	0.49
35:AO:98:VAL:HG11	35:AO:117:LEU:HB3	1.94	0.49
57:AA:287:C:H2'	57:AA:288:C:H6	1.77	0.49
42:AV:78:LYS:HE2	57:AA:572:A:OP2	2.13	0.49
47:A0:20:ARG:NH1	57:AA:2271:G:C5'	2.75	0.49
57:AA:2338:G:H2'	57:AA:2339:G:H8	1.77	0.49
57:AA:1261:C:C2'	57:AA:1262:A:O5'	2.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:B7:28:ARG:HG3	54:B7:28:ARG:HH11	1.78	0.49
29:AF:136:THR:OG1	57:AA:320:A:H2'	2.12	0.49
57:AA:1889:A:O2'	57:AA:2087:G:H5'	2.12	0.49
51:A4:56:VAL:O	51:A4:56:VAL:HG12	2.13	0.49
57:BA:2636:U:H2'	57:BA:2637:U:H6	1.78	0.49
57:AA:893:C:H2'	57:AA:894:C:C6	2.47	0.49
26:AC:213:VAL:HG12	26:AC:225:ILE:HD11	1.95	0.49
30:AG:5:VAL:HG12	30:AG:6:ALA:H	1.78	0.49
36:AP:105:LEU:O	36:AP:106:LEU:CB	2.60	0.49
36:AP:34:GLY:O	36:AP:35:HIS:CB	2.61	0.49
44:AX:36:LYS:HE2	57:AA:1342:A:OP1	2.12	0.49
48:B1:51:VAL:HG22	48:B1:52:ARG:H	1.78	0.49
51:B4:5:ILE:HD13	51:B4:6:HIS:CD2	2.48	0.49
32:BI:118:LYS:HZ3	57:BA:1349:A:P	102.12	0.49
30:BG:12:TYR:HA	30:BG:16:ARG:HB2	1.95	0.49
37:BQ:21:THR:HG21	37:BQ:101:ARG:HD2	1.94	0.49
38:BR:45:ARG:HG3	38:BR:95:THR:HG22	1.95	0.49
40:AT:28:VAL:HG22	40:AT:46:GLU:HG3	1.93	0.49
35:AO:77:ILE:CD1	40:AT:74:ARG:HD3	2.42	0.49
45:BY:35:TYR:CE2	45:BY:69:ALA:HB3	2.48	0.49
40:BT:28:VAL:HG22	40:BT:46:GLU:HG3	1.94	0.49
40:BT:62:THR:HA	40:BT:74:ARG:O	2.13	0.49
40:BT:29:ARG:HG2	40:BT:85:LYS:HA	1.94	0.49
31:BH:86:GLU:HB3	31:BH:132:ARG:CB	2.42	0.49
28:AE:119:ARG:HD2	28:AE:120:TRP:CD1	2.47	0.49
28:AE:11:MET:HB2	28:AE:23:VAL:O	2.13	0.49
27:BD:226:MET:HB3	27:BD:230:ASP:HB2	1.94	0.49
38:AR:8:ARG:N	38:AR:8:ARG:NE	2.61	0.49
57:BA:287:C:H2'	57:BA:288:C:C6	2.47	0.49
43:AW:87:PRO:HA	43:AW:93:ALA:HA	1.93	0.49
57:AA:2884:U:H2'	57:AA:2885:C:H5'	1.95	0.49
54:A7:30:VAL:HA	54:A7:33:ARG:NH1	2.27	0.49
51:B4:39:CYS:O	51:B4:42:PHE:HE2	1.96	0.49
57:AA:1113:U:H2'	57:AA:1114:G:C8	2.48	0.49
36:AP:15:ARG:HH11	57:AA:597:U:H4'	1.78	0.49
57:AA:979:G:H3'	57:AA:980:A:C5'	2.42	0.49
26:AC:30:VAL:HG11	26:AC:42:VAL:CG1	2.43	0.49
27:AD:3:VAL:HG12	27:AD:17:THR:HB	1.93	0.49
39:AS:49:VAL:CG1	39:AS:73:LEU:HD23	2.42	0.49
48:B1:75:GLU:O	48:B1:77:ALA:N	2.45	0.49
57:BA:1113:U:H2'	57:BA:1114:G:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:199:TRP:O	29:BF:203:GLN:HG2	2.12	0.49
30:BG:73:ALA:N	30:BG:87:PRO:HG3	2.27	0.49
32:BI:83:ALA:H	32:BI:145:VAL:HG22	1.77	0.49
38:BR:85:PRO:O	38:BR:87:TYR:N	2.46	0.49
39:BS:14:VAL:O	39:BS:15:ARG:C	2.50	0.49
27:AD:245:PRO:O	27:AD:246:PRO:C	2.50	0.49
27:BD:25:THR:HG22	27:BD:26:LYS:H	1.76	0.49
40:AT:38:ASN:ND2	40:AT:39:ARG:N	2.60	0.49
46:BZ:151:HIS:CB	46:BZ:170:THR:HA	2.19	0.49
57:AA:154(A):C:N4	57:AA:155:U:O2'	2.46	0.49
28:BE:101:ARG:HB3	28:BE:169:ASN:HD22	1.78	0.49
28:BE:51:PHE:O	28:BE:74:PRO:CB	2.61	0.49
57:AA:146:G:H2'	57:AA:147:U:O4'	2.12	0.49
57:AA:2134:A:C2	57:AA:2159:G:H1'	2.47	0.49
27:AD:210:GLY:O	27:AD:211:ARG:CB	2.55	0.49
57:BA:2808:U:C2'	57:BA:2809:A:H5'	2.43	0.49
40:AT:3:ARG:CD	57:AA:2876:G:H4'	2.37	0.49
40:AT:3:ARG:O	40:AT:7:ILE:HG13	2.12	0.49
57:BA:1542:A:H8	57:BA:1542:A:H3'	1.78	0.49
34:AN:120:LEU:HD11	34:AN:122:VAL:CG2	2.35	0.49
51:B4:51:ASP:OD2	51:B4:52:THR:HG23	2.12	0.49
57:BA:1490:A:H5'	57:BA:1491:G:OP2	2.12	0.49
51:A4:51:ASP:OD2	51:A4:52:THR:HG23	2.13	0.49
57:AA:2833:G:H3'	57:AA:2834:G:H5''	1.94	0.49
46:AZ:141:VAL:HG13	46:AZ:144:LEU:CG	2.43	0.49
34:BN:68:GLU:H	34:BN:88:GLU:HG3	1.77	0.49
57:AA:1163:G:O2'	57:AA:1164:G:H5'	2.13	0.49
54:A7:19:ARG:HG3	57:AA:126:A:O5'	2.13	0.49
43:AW:96:ILE:CD1	57:AA:2012:G:H4'	2.43	0.49
45:BY:95:LYS:HD3	45:BY:100:ALA:HA	1.94	0.49
56:B9:7:VAL:HG12	56:B9:25:VAL:HG21	1.94	0.49
57:AA:2464:C:O2'	57:AA:2465:C:H6	1.95	0.49
57:BA:1517:G:O2'	57:BA:1518:U:H5'	2.12	0.49
57:BA:838:C:O2'	57:BA:839:U:H5'	2.12	0.49
57:AA:2881:C:C2	57:AA:2882:A:C8	3.00	0.49
57:BA:2267:A:H5''	57:BA:2268:A:H5'	1.94	0.49
57:BA:1327:C:H2'	57:BA:1328:G:O4'	2.12	0.49
57:AA:2195:C:O2'	57:AA:2196:C:H5'	2.13	0.49
57:BA:2552:U:C2	57:BA:2554:U:H5'	2.47	0.49
57:AA:307:G:H21	57:AA:330:A:H62	1.61	0.49
31:AH:41:MET:CE	31:AH:43:VAL:HG13	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AI:74:ASN:N	32:AI:74:ASN:ND2	2.39	0.49
36:AP:101:VAL:CG2	36:AP:102:ARG:N	2.76	0.49
51:B4:5:ILE:H	51:B4:5:ILE:HD13	1.77	0.49
30:BG:77:ILE:HG22	30:BG:80:PHE:O	2.12	0.49
32:BI:44:LEU:O	32:BI:47:LEU:HB3	2.13	0.49
57:AA:1899:G:O2'	57:AA:1900:A:H5''	2.13	0.49
43:BW:55:ALA:C	43:BW:57:ASN:H	2.16	0.49
57:BA:1846:G:H5'	57:BA:1846:G:C8	2.43	0.49
45:BY:31:LEU:CD2	45:BY:31:LEU:N	2.75	0.49
53:B6:45:LYS:HG2	57:BA:2371:G:C4'	2.23	0.49
57:BA:1902:C:H2'	57:BA:1903:G:O5'	2.13	0.49
57:BA:154(A):C:N4	57:BA:155:U:O2'	2.45	0.49
55:B8:30:ARG:HA	55:B8:30:ARG:NE	2.23	0.49
29:AF:132:VAL:O	29:AF:133:ASN:C	2.51	0.49
28:BE:65:GLY:C	28:BE:67:PHE:N	2.65	0.49
28:BE:65:GLY:O	28:BE:67:PHE:N	2.46	0.49
28:AE:34:VAL:HG11	28:AE:78:LEU:HD23	1.95	0.49
42:AV:15:GLU:O	42:AV:16:PRO:C	2.50	0.49
57:BA:1291:C:H2'	57:BA:1292:U:H6	1.78	0.49
46:AZ:26:GLY:HA3	46:AZ:86:VAL:HG23	1.94	0.49
57:BA:888:C:O2'	57:BA:889:C:H5'	2.13	0.49
55:A8:37:SER:C	55:A8:39:LYS:N	2.65	0.49
53:B6:52:VAL:CG2	53:B6:53:LYS:H	2.24	0.49
27:AD:176:ARG:HH11	27:AD:176:ARG:CG	2.25	0.49
48:B1:83:GLU:O	48:B1:84:GLY:O	2.30	0.49
35:BO:98:VAL:HG11	35:BO:117:LEU:HB3	1.95	0.49
46:BZ:57:ILE:CG2	46:BZ:58:VAL:N	2.75	0.49
46:BZ:57:ILE:N	46:BZ:57:ILE:HD12	2.28	0.49
49:B2:3:LEU:CD2	49:B2:7:ARG:HH11	2.25	0.49
52:A5:7:PRO:HA	57:AA:2615:U:N1	2.27	0.49
48:A1:64:ALA:HA	48:A1:67:ILE:HD11	1.95	0.49
42:BV:66:ARG:HG2	42:BV:66:ARG:NH1	2.28	0.49
42:BV:78:LYS:HE3	57:BA:571:A:O2'	2.13	0.49
57:AA:420:C:H2'	57:AA:421:U:C6	2.48	0.49
57:BA:1839:G:C8	57:BA:1839:G:H5'	2.48	0.49
57:BA:2339:G:O2'	57:BA:2340:G:H5'	2.13	0.49
57:AA:2887:U:H2'	57:AA:2888:C:C6	2.48	0.49
57:BA:2183:C:O2'	57:BA:2184:G:H5'	2.13	0.49
57:AA:289:A:H2'	57:AA:290:G:O4'	2.12	0.49
57:BA:2672:G:C3'	57:BA:2673:G:H5''	2.42	0.49
51:A4:2:LYS:HG3	58:AB:39:A:N1	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AP:35:HIS:C	36:AP:36:LYS:HG3	2.33	0.49
42:AV:5:VAL:HG21	42:AV:35:LEU:CB	2.43	0.49
45:AY:54:LYS:C	45:AY:56:PRO:HD2	2.32	0.49
48:B1:74:VAL:O	48:B1:77:ALA:HB3	2.12	0.49
30:BG:101:ILE:O	30:BG:105:LYS:HE2	2.13	0.49
30:BG:67:LYS:HD3	51:B4:6:HIS:CD2	2.47	0.49
30:BG:73:ALA:N	30:BG:87:PRO:CG	2.76	0.49
34:BN:119:ARG:NH1	34:BN:119:ARG:HG3	2.27	0.49
41:BU:8:VAL:HG21	41:BU:12:ARG:CZ	2.42	0.49
27:BD:146:GLU:HB2	27:BD:189:CYS:HB3	1.95	0.49
57:BA:106:C:H2'	57:BA:107:C:C6	2.48	0.49
44:BX:80:ILE:O	44:BX:80:ILE:HD13	2.13	0.49
57:BA:332:A:O2'	57:BA:334:C:OP2	2.22	0.49
40:BT:98:LYS:HB3	40:BT:100:TYR:CE1	2.48	0.49
28:BE:111:ARG:CG	38:BR:2:ARG:HG2	2.43	0.49
31:BH:9:ILE:CG2	31:BH:9:ILE:O	2.56	0.49
46:AZ:171:ILE:HD12	46:AZ:172:ALA:CB	2.43	0.49
40:AT:125:ARG:O	40:AT:127:ALA:N	2.46	0.49
39:AS:43:GLU:O	39:AS:43:GLU:HG2	4.63	0.49
57:BA:1181:C:O2'	57:BA:1182:A:H5'	2.12	0.49
57:BA:1947:C:H2'	57:BA:1948:G:H5''	1.95	0.49
55:B8:29:LYS:HD3	55:B8:44:LYS:CG	2.39	0.49
46:AZ:142:SER:C	46:AZ:144:LEU:H	2.15	0.49
57:AA:1963:U:O2	57:AA:1963:U:C2'	2.59	0.49
57:AA:923:C:H2'	57:AA:924:C:H6	1.78	0.49
35:BO:13:ASN:C	35:BO:15:GLY:N	2.67	0.49
33:AJ:87:VAL:O	33:AJ:91:LYS:HA	2.13	0.49
44:AX:26:TYR:CD2	44:AX:92:LEU:HD12	2.47	0.49
46:BZ:136:PHE:HD2	46:BZ:136:PHE:N	2.11	0.49
57:AA:1652:A:C2'	57:AA:1653:G:H5'	2.43	0.49
57:AA:2464:C:O2'	57:AA:2465:C:P	2.71	0.49
57:BA:1261:C:C2'	57:BA:1262:A:O5'	2.60	0.49
57:BA:843:G:O2'	57:BA:844:C:H5'	2.13	0.49
57:BA:869:G:O2'	57:BA:870:A:H5'	2.13	0.49
57:AA:1997:G:O2'	57:AA:1998:G:H5'	2.13	0.49
57:AA:1904:G:O2'	57:AA:1905:C:H5'	2.13	0.49
34:BN:75:TYR:HA	34:BN:81:GLY:O	2.13	0.49
57:AA:1283:G:N2	57:AA:1285:G:H3'	2.27	0.49
57:AA:1355:G:O2'	57:AA:1356:G:H5'	2.52	0.48
58:AB:75:G:H5'	58:AB:76:G:OP2	2.13	0.48
30:AG:158:ALA:O	30:AG:159:VAL:HB	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:AH:109:PHE:O	31:AH:111:HIS:N	2.46	0.48
31:AH:85:LYS:HZ2	31:AH:133:VAL:CG2	2.25	0.48
31:AH:94:TYR:OH	31:AH:160:LYS:HD3	2.13	0.48
32:AI:83:ALA:H	32:AI:145:VAL:HG22	1.78	0.48
36:AP:41:ARG:CA	36:AP:41:ARG:HE	2.25	0.48
36:AP:66:GLY:O	36:AP:67:MET:HB3	2.13	0.48
42:AV:40:LEU:CD2	42:AV:40:LEU:N	2.75	0.48
42:AV:89:GLN:OE1	42:AV:90:PRO:HD2	2.13	0.48
43:AW:25:ARG:NH2	43:AW:74:ALA:O	2.45	0.48
45:AY:35:TYR:CD2	45:AY:69:ALA:HB3	2.48	0.48
45:AY:40:GLU:OE2	45:AY:40:GLU:HA	2.13	0.48
45:AY:84:ARG:HD2	45:AY:97:ARG:NE	2.28	0.48
51:B4:15:ILE:N	51:B4:31:ILE:O	2.42	0.48
38:BR:16:HIS:ND1	57:BA:1275:A:C4	2.80	0.48
36:BP:6:LEU:HG	36:BP:9:ASN:HB3	1.95	0.48
27:BD:35:LYS:NZ	27:BD:36:PRO:N	2.60	0.48
38:BR:103:ARG:HH12	38:BR:110:PRO:HD3	1.78	0.48
45:BY:22:GLY:O	45:BY:23:ARG:HG2	2.12	0.48
40:BT:46:GLU:HG2	40:BT:46:GLU:O	2.60	0.48
53:A6:26:ASN:ND2	53:A6:51:GLU:OE1	2.46	0.48
55:A8:32:LEU:O	55:A8:33:ASN:O	2.31	0.48
57:BA:146:G:H2'	57:BA:147:U:O4'	2.13	0.48
49:A2:47:ASN:HD22	57:AA:95:G:H1'	1.77	0.48
28:BE:101:ARG:HB2	28:BE:201:THR:HG21	1.95	0.48
40:BT:125:ARG:O	40:BT:127:ALA:N	2.46	0.48
57:BA:1689:A:N6	57:BA:1698:A:H2	1.97	0.48
52:A5:33:CYS:HB3	52:A5:38:ALA:O	2.13	0.48
57:AA:2807:G:C3'	57:AA:2808:U:H5''	2.42	0.48
57:BA:1541:G:H4'	57:BA:1542:A:H5''	1.94	0.48
47:A0:19:LYS:HD3	47:A0:41:ARG:HH22	1.78	0.48
46:BZ:81:ARG:NH1	46:BZ:81:ARG:CB	2.75	0.48
46:AZ:144:LEU:HD22	46:AZ:144:LEU:N	2.28	0.48
57:BA:1422:G:H2'	57:BA:1423:G:H8	2.10	0.48
42:BV:2:PHE:HB2	42:BV:42:GLY:CA	2.43	0.48
46:BZ:57:ILE:O	46:BZ:69:THR:OG1	2.31	0.48
37:BQ:110:THR:HG23	37:BQ:113:GLN:CB	2.43	0.48
38:BR:7:GLY:O	38:BR:8:ARG:HB2	2.13	0.48
57:BA:1860:G:H1	57:BA:1882:C:H42	1.60	0.48
48:A1:87:PRO:HA	48:A1:90:ILE:CG1	2.41	0.48
57:AA:1688:U:H1'	57:AA:1701:A:C6	2.48	0.48
57:AA:2208:A:H1'	57:AA:2219:G:C5	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2861:G:O2'	57:BA:2862:G:H5'	2.13	0.48
57:BA:1472:A:O2'	57:BA:1473:G:H5'	2.12	0.48
37:BQ:10:ARG:HH11	37:BQ:10:ARG:HB2	1.76	0.48
57:AA:2183:C:O2'	57:AA:2184:G:H5'	2.12	0.48
30:AG:67:LYS:CE	51:A4:6:HIS:CG	2.95	0.48
30:AG:131:TYR:H	30:AG:159:VAL:CG1	2.26	0.48
30:AG:41:GLN:HB3	30:AG:43:LEU:HD22	1.94	0.48
30:AG:64:THR:OG1	30:AG:94:LEU:HD21	2.12	0.48
31:AH:53:GLU:HA	31:AH:65:HIS:CE1	2.48	0.48
32:AI:118:LYS:HZ1	32:AI:119:PRO:HG2	1.76	0.48
32:AI:73:GLU:HB3	32:AI:136:VAL:HG23	1.95	0.48
32:AI:13:GLY:O	32:AI:17:GLN:OE1	2.31	0.48
34:AN:119:ARG:NH1	34:AN:119:ARG:HG3	2.28	0.48
36:AP:9:ASN:N	36:AP:10:PRO:HD2	2.26	0.48
42:AV:66:ARG:NH1	42:AV:66:ARG:HG2	2.28	0.48
43:AW:62:HIS:HE1	57:AA:495:G:O2'	1.97	0.48
45:AY:95:LYS:HD3	45:AY:100:ALA:HA	1.95	0.48
57:BA:1144:G:H2'	57:BA:1145:C:C6	2.48	0.48
57:BA:259:G:O2'	57:BA:260:G:H5'	2.13	0.48
26:BC:41:THR:CG2	26:BC:175:PRO:HB2	2.43	0.48
32:BI:120:ILE:H	32:BI:120:ILE:HD12	1.78	0.48
32:BI:129:THR:CG2	32:BI:130:TYR:H	2.25	0.48
32:BI:41:GLU:O	32:BI:45:LYS:HG2	2.13	0.48
32:BI:62:LYS:HD2	32:BI:133:HIS:CD2	2.37	0.48
55:B8:4:MET:CG	55:B8:61:LEU:HD13	2.38	0.48
35:AO:23:ARG:HH11	57:AA:2562:U:C1'	2.19	0.48
58:BB:106:G:O2'	58:BB:107:G:H5'	2.13	0.48
57:BA:2562:U:C2'	57:BA:2563:U:H5'	2.43	0.48
35:BO:88:ASN:HD21	35:BO:90:GLN:CB	2.22	0.48
29:BF:132:VAL:O	29:BF:133:ASN:C	2.51	0.48
57:BA:149:A:O2'	57:BA:150:C:C6	4.74	0.48
57:BA:2134:A:C2	57:BA:2159:G:H1'	2.48	0.48
31:BH:9:ILE:HD13	31:BH:9:ILE:C	2.32	0.48
28:AE:48:GLN:HE21	28:AE:78:LEU:HD22	1.78	0.48
28:AE:71:GLY:O	28:AE:72:VAL:C	2.50	0.48
40:AT:128:GLU:CD	40:AT:129:ARG:N	2.66	0.48
57:AA:2298:A:H62	57:AA:2318:G:H8	1.61	0.48
40:BT:3:ARG:CD	57:BA:2876:G:H4'	2.36	0.48
57:AA:2329:G:H2'	57:AA:2330:G:C8	2.47	0.48
34:AN:120:LEU:C	34:AN:121:LYS:HD2	2.33	0.48
57:BA:464:U:H2'	57:BA:465:G:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:120:LEU:HD11	34:BN:122:VAL:CG2	2.38	0.48
57:BA:1005:C:H2'	57:BA:1006:C:C6	2.48	0.48
36:AP:147:LEU:O	36:AP:148:LEU:O	2.32	0.48
57:AA:1719:G:C2'	57:AA:1720:U:H5'	2.43	0.48
57:AA:2103:C:H42	57:AA:2186:G:H1	1.61	0.48
41:BU:102:GLU:HG3	42:BV:2:PHE:CZ	2.49	0.48
55:A8:23:VAL:HG12	55:A8:46:ARG:HH11	1.78	0.48
57:BA:830:G:H4'	57:BA:831:G:OP2	2.13	0.48
57:BA:1762:A:O5'	57:BA:1762:A:H8	1.95	0.48
57:AA:268:C:O2	57:AA:268:C:H2'	2.14	0.48
27:AD:35:LYS:HD3	27:AD:63:ARG:HD2	1.95	0.48
30:AG:172:LEU:C	30:AG:172:LEU:HD23	2.34	0.48
31:AH:89:ILE:HD12	31:AH:89:ILE:C	2.34	0.48
34:AN:21:LYS:HG2	34:AN:22:THR:N	2.28	0.48
41:AU:102:GLU:HG3	42:AV:2:PHE:CZ	2.48	0.48
57:BA:863:A:O2'	57:BA:864:G:H5'	2.14	0.48
26:BC:52:PRO:CG	26:BC:53:ARG:HH11	2.26	0.48
36:BP:105:LEU:HG	57:BA:626:U:O2	2.13	0.48
39:BS:92:TYR:CG	39:BS:93:LYS:N	2.82	0.48
27:BD:117:VAL:HG22	27:BD:118:VAL:N	2.27	0.48
27:BD:25:THR:CG2	27:BD:26:LYS:N	2.77	0.48
40:AT:26:ASP:OD2	40:AT:26:ASP:C	2.51	0.48
44:BX:53:LYS:HZ2	44:BX:55:ASN:ND2	2.08	0.48
45:BY:35:TYR:CD2	45:BY:69:ALA:HB3	2.47	0.48
27:AD:48:ARG:HG3	27:AD:48:ARG:HH11	1.77	0.48
46:BZ:99:TYR:HB3	46:BZ:123:ASP:OD2	2.13	0.48
46:BZ:152:ALA:C	46:BZ:154:ASP:H	2.14	0.48
40:BT:38:ASN:ND2	40:BT:39:ARG:N	2.61	0.48
53:B6:25:LYS:NZ	55:B8:34:TRP:HZ2	2.01	0.48
28:BE:108:SER:HB3	28:BE:165:VAL:CG2	2.42	0.48
29:AF:74:ARG:NH2	57:AA:2445:G:OP1	2.47	0.48
39:AS:52:SER:CB	39:AS:55:ALA:HB3	2.42	0.48
49:A2:16:LEU:O	49:A2:17:SER:O	2.31	0.48
57:AA:1472:A:O2'	57:AA:1473:G:H5'	2.12	0.48
36:BP:25:SER:HB2	57:BA:812:C:H5'	1.95	0.48
54:B7:19:ARG:HG3	57:BA:126:A:O5'	2.13	0.48
57:AA:394:A:C2'	57:AA:395:U:H5'	2.44	0.48
57:BA:1386:C:OP2	57:BA:1396:U:H5	1.96	0.48
57:AA:2740:A:H2'	57:AA:2741:A:C8	2.48	0.48
28:AE:188:VAL:HG23	28:AE:189:PRO:HD2	1.94	0.48
57:AA:889:C:O2'	57:AA:890:A:O5'	2.30	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BH:102:ALA:HA	31:BH:117:PRO:HD3	1.95	0.48
57:AA:107:C:H2'	57:AA:108:U:C6	2.48	0.48
57:AA:1144:G:H2'	57:AA:1145:C:C6	2.48	0.48
57:AA:963:U:H2'	57:AA:964:C:H6	1.78	0.48
26:AC:6:LYS:HG3	57:AA:2132:U:C2	2.49	0.48
27:AD:97:TYR:CE1	27:AD:103:ARG:HG3	2.48	0.48
31:AH:41:MET:SD	31:AH:53:GLU:O	2.71	0.48
36:AP:16:ARG:NE	36:AP:18:ARG:HB2	2.28	0.48
39:AS:99:LYS:O	39:AS:101:LEU:N	2.39	0.48
42:AV:19:LYS:HG2	42:AV:94:LEU:CB	2.30	0.48
45:AY:81:LYS:HD2	45:AY:96:ILE:HG22	1.95	0.48
51:B4:14:ILE:N	51:B4:14:ILE:HD12	2.27	0.48
42:BV:89:GLN:HG3	57:BA:993:G:O2'	2.13	0.48
29:BF:3:GLU:HA	29:BF:24:LEU:CB	2.43	0.48
32:BI:101:LEU:HD23	32:BI:109:ILE:HG12	1.96	0.48
32:BI:84:GLY:O	32:BI:85:GLU:HB2	2.12	0.48
39:BS:34:HIS:CE1	39:BS:54:LEU:HB3	2.48	0.48
41:BU:8:VAL:HG22	41:BU:12:ARG:CG	2.43	0.48
42:BV:19:LYS:HG3	42:BV:20:LEU:H	1.78	0.48
57:AA:1902:C:H2'	57:AA:1903:G:O5'	2.12	0.48
40:AT:30:VAL:HA	40:AT:44:ASP:HA	1.95	0.48
53:B6:16:CYS:SG	53:B6:48:VAL:HG21	2.53	0.48
52:A5:3:LYS:HZ3	57:AA:2613:U:C2'	2.26	0.48
40:BT:98:LYS:HD3	57:BA:2847:U:OP1	2.13	0.48
57:BA:528:A:C2	57:BA:2042:A:H2'	2.47	0.48
57:AA:1784:A:H4'	57:AA:1785:A:O5'	2.14	0.48
57:BA:302:C:H2'	57:BA:303:U:H6	1.78	0.48
48:B1:45:ASN:HD22	48:B1:45:ASN:C	2.15	0.48
57:BA:633:A:C2'	57:BA:634:C:H5'	2.43	0.48
34:BN:68:GLU:HG2	34:BN:88:GLU:OE2	2.13	0.48
36:AP:108:LYS:O	36:AP:110:TYR:N	2.46	0.48
27:BD:221:VAL:HG22	27:BD:226:MET:HE2	1.91	0.48
27:AD:267:SER:C	27:AD:269:PHE:N	2.66	0.48
44:BX:26:TYR:CD2	44:BX:92:LEU:HD12	2.46	0.48
34:BN:89:LYS:O	34:BN:93:THR:HG22	2.13	0.48
57:BA:2236:C:C2'	57:BA:2237:G:H5'	2.42	0.48
57:AA:2884:U:C2'	57:AA:2885:C:H5'	2.43	0.48
31:AH:62:LYS:HB3	57:AA:2749:A:H4'	1.95	0.48
44:BX:50:LYS:HD3	44:BX:84:ALA:HB2	1.95	0.48
37:AQ:14:ARG:NH2	57:AA:956:G:OP2	2.46	0.48
27:AD:161:THR:HG21	57:AA:1819:A:H5''	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AF:89:VAL:O	29:AF:91:GLY:N	2.37	0.48
37:AQ:2:LEU:O	37:AQ:70:PRO:HG2	2.13	0.48
44:AX:30:VAL:HG11	44:AX:39:ILE:HD12	1.95	0.48
45:AY:25:GLY:HA3	45:AY:39:VAL:HG13	1.96	0.48
45:AY:52:SER:O	45:AY:56:PRO:HD3	2.14	0.48
45:AY:96:ILE:HG22	45:AY:97:ARG:N	2.23	0.48
57:BA:1015:G:H5'	57:BA:1015:G:C8	2.42	0.48
57:BA:814:C:O2'	57:BA:815:C:H5'	2.14	0.48
29:BF:65:TRP:CZ3	29:BF:73:ALA:O	2.66	0.48
34:BN:26:LEU:O	34:BN:30:ILE:HG13	2.13	0.48
42:BV:21:ARG:CG	42:BV:91:TYR:CD2	2.86	0.48
57:BA:1817:G:H2'	57:BA:1818:U:H5'	1.94	0.48
43:BW:10:VAL:O	43:BW:11:ARG:CB	2.60	0.48
37:BQ:133:ARG:HG3	37:BQ:133:ARG:NH1	2.29	0.48
31:AH:153:LYS:HB2	31:AH:154:PRO:HD2	1.96	0.48
40:BT:26:ASP:OD2	40:BT:26:ASP:C	2.51	0.48
40:BT:31:SER:HG	40:BT:43:GLN:N	2.11	0.48
57:BA:1997:G:O2'	57:BA:1998:G:H5'	2.13	0.48
28:AE:108:SER:HB3	28:AE:165:VAL:CG2	2.41	0.48
57:AA:528:A:H2	57:AA:2043:C:C5'	2.25	0.48
52:A5:41:PRO:O	52:A5:44:THR:OG1	2.30	0.48
39:BS:43:GLU:HG2	39:BS:43:GLU:O	4.63	0.48
28:BE:170:LEU:N	28:BE:170:LEU:HD12	2.28	0.48
46:BZ:4:ARG:NH1	46:BZ:58:VAL:HG11	2.29	0.48
57:BA:1683:C:H2'	57:BA:1684:C:C6	2.49	0.48
57:BA:654(A):G:C2'	57:BA:654(B):C:H5'	2.43	0.48
34:BN:115:ARG:HG3	34:BN:115:ARG:HH11	1.78	0.48
32:BI:50:ARG:O	32:BI:50:ARG:HG2	2.12	0.48
46:BZ:127:LYS:O	46:BZ:127:LYS:HG3	2.13	0.48
57:AA:2861:G:O2'	57:AA:2862:G:H5'	2.13	0.48
57:AA:927:G:H5'	57:AA:928:G:OP2	2.14	0.48
57:AA:838:C:O2'	57:AA:839:U:H5'	2.12	0.48
37:BQ:61:GLY:O	46:BZ:177:PRO:HB2	2.13	0.48
36:AP:61:ARG:HH11	55:A8:13:ARG:HD2	1.76	0.48
57:AA:480:A:H2	57:AA:499:U:O2	1.97	0.48
57:AA:860:U:O2'	57:AA:861:A:H5'	2.14	0.48
57:AA:894:C:O2'	57:AA:895:U:H5'	2.14	0.48
58:AB:65:C:O2'	58:AB:66:A:H5'	2.14	0.48
27:AD:111:LEU:HD22	27:AD:115:GLN:OE1	2.13	0.48
27:AD:77:ALA:HB2	27:AD:97:TYR:HA	1.96	0.48
32:AI:82:ARG:O	32:AI:83:ALA:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AQ:18:LYS:O	37:AQ:19:GLY:O	2.32	0.48
39:AS:24:LEU:HB3	39:AS:85:VAL:CG1	2.43	0.48
41:AU:88:ILE:O	41:AU:90:VAL:N	2.35	0.48
41:AU:93:LYS:HD3	57:AA:997:G:OP1	2.13	0.48
42:AV:91:TYR:H	42:AV:91:TYR:HD1	1.61	0.48
57:BA:1221(A):C:O2'	57:BA:1222:C:H5'	2.13	0.48
30:BG:133:LEU:HD12	30:BG:135:LEU:CD1	2.43	0.48
36:BP:52:GLU:HB3	57:BA:832:G:O2'	2.13	0.48
55:B8:61:LEU:HG	55:B8:62:LEU:N	2.26	0.48
27:BD:165:ILE:HD13	27:BD:175:LEU:HD21	1.95	0.48
40:AT:28:VAL:HG13	40:AT:46:GLU:HB2	1.96	0.48
40:AT:29:ARG:HG2	40:AT:85:LYS:HA	1.94	0.48
57:AA:2491:U:C5'	57:AA:2570:G:H5''	2.24	0.48
57:AA:1589:C:H2'	57:AA:1590:U:C6	2.48	0.48
40:BT:28:VAL:HG22	40:BT:46:GLU:CA	2.44	0.48
55:B8:53:PRO:HG2	55:B8:54:GLU:N	2.29	0.48
57:BA:445:C:O2'	57:BA:446:G:H5'	2.14	0.48
53:B6:5:VAL:HG22	53:B6:6:ARG:N	2.25	0.48
57:BA:2134:A:H1'	57:BA:2159:G:N2	2.29	0.48
57:BA:1116:C:H2'	57:BA:1117:G:C5'	2.97	0.48
28:AE:113:PHE:CD1	57:AA:1654:A:C2	3.01	0.48
28:AE:47:VAL:HG22	28:AE:49:LEU:HD23	1.94	0.48
46:AZ:152:ALA:C	46:AZ:167:PRO:HB2	2.34	0.48
46:AZ:167:PRO:O	46:AZ:168:GLU:HB2	2.13	0.48
50:A3:38:GLU:OE2	50:A3:38:GLU:HA	2.13	0.48
36:BP:30:THR:HG22	36:BP:31:ALA:N	2.17	0.48
57:AA:2097:C:O2'	57:AA:2098:U:H5'	2.13	0.48
36:AP:146:VAL:O	36:AP:148:LEU:N	2.47	0.48
57:AA:1722:A:O2'	57:AA:1739:U:H5''	2.13	0.48
57:AA:1158:C:C2'	57:AA:1158:C:O2	3.29	0.48
57:AA:1517:G:O2'	57:AA:1518:U:H5'	2.12	0.48
57:BA:634:C:H2'	57:BA:635:C:C6	2.48	0.48
57:BA:2762:G:H5'	57:BA:2762:G:C8	2.49	0.48
46:BZ:126:VAL:HA	46:BZ:164:ALA:H	1.79	0.48
46:AZ:34:ASN:ND2	46:AZ:34:ASN:C	2.66	0.48
57:AA:2555:U:C2'	57:AA:2556:C:H5'	2.44	0.48
30:BG:170:ARG:HG3	30:BG:180:PHE:CE1	2.47	0.48
35:BO:22:ILE:HG12	35:BO:41:ALA:HA	1.93	0.48
42:AV:78:LYS:HE3	57:AA:571:A:O2'	2.13	0.48
57:BA:1638:C:H5''	57:BA:2710:C:O2'	2.14	0.48
57:AA:2087:G:O2'	57:AA:2088:G:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1165:U:H2'	57:AA:1166:C:C6	2.48	0.48
57:AA:1810:A:H2'	57:AA:1811:G:O4'	2.13	0.48
41:BU:97:ASP:C	41:BU:99:ALA:N	2.67	0.48
38:AR:40:LYS:HG3	57:AA:1651:G:OP1	2.14	0.48
57:AA:309:G:N3	57:AA:329:G:O2'	2.46	0.48
57:AA:330:A:O2'	57:AA:331:A:H8	1.96	0.48
30:AG:56:ALA:CB	30:AG:153:ARG:NH1	2.77	0.48
31:AH:38:SER:C	31:AH:40:GLU:H	2.16	0.48
41:AU:93:LYS:HD2	41:AU:93:LYS:H	1.78	0.48
43:AW:4:LYS:HG2	43:AW:5:ALA:N	2.28	0.48
45:AY:35:TYR:CE2	45:AY:69:ALA:HB3	2.49	0.48
51:B4:14:ILE:O	51:B4:21:VAL:HG13	2.14	0.48
51:B4:8:LYS:O	51:B4:9:LEU:HB3	2.14	0.48
39:BS:62:LYS:CB	58:BB:50:G:OP2	2.62	0.48
30:BG:6:ALA:O	30:BG:8:LYS:N	2.47	0.48
32:BI:95:LYS:HD3	32:BI:95:LYS:C	4.99	0.48
39:BS:24:LEU:HB3	39:BS:85:VAL:CG1	2.43	0.48
42:BV:52:VAL:HG13	42:BV:55:ALA:HB3	1.94	0.48
42:BV:72:VAL:HG23	42:BV:72:VAL:O	2.14	0.48
27:BD:43:ARG:HH11	27:BD:44:ASN:HD21	1.56	0.48
27:AD:246:PRO:HD3	57:AA:1902:C:C5'	2.44	0.48
27:BD:18:VAL:HG12	27:BD:19:ALA:N	2.29	0.48
40:AT:23:ARG:O	40:AT:25:GLY:N	2.46	0.48
57:BA:500:G:N2	57:BA:502:A:H3'	2.29	0.48
55:B8:32:LEU:CB	55:B8:36:LYS:NZ	2.77	0.48
27:AD:210:GLY:O	27:AD:212:SER:N	2.42	0.48
46:AZ:40:ASP:HB3	46:AZ:43:GLU:CD	2.33	0.48
47:A0:41:ARG:HG3	57:AA:2329:G:N2	2.29	0.48
39:AS:42:ASP:C	39:AS:44:LYS:N	2.66	0.48
34:BN:120:LEU:O	34:BN:121:LYS:HD2	2.13	0.48
57:AA:2036:C:H6	57:AA:2036:C:C5'	2.23	0.48
57:AA:271(D):G:O2'	57:AA:271(E):U:H5'	2.13	0.48
57:BA:2761:G:C2'	57:BA:2762:G:H5''	2.44	0.48
28:AE:144:ARG:O	57:AA:2053:G:H5'	2.13	0.48
34:AN:66:LYS:HZ1	57:AA:1140:C:H5''	1.78	0.48
57:BA:1138:G:H2'	57:BA:1139:G:O4'	2.14	0.48
57:AA:1961:C:C2'	57:AA:1962:C:H5'	2.43	0.48
57:BA:2884:U:C2'	57:BA:2885:C:H5'	2.43	0.48
51:A4:39:CYS:O	51:A4:42:PHE:HE2	1.96	0.48
26:AC:44:VAL:HG13	26:AC:215:VAL:HG22	1.95	0.48
48:A1:11:ARG:NH1	48:A1:11:ARG:HB3	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1165:U:H2'	57:BA:1166:C:C6	2.48	0.48
57:BA:20:C:H2'	57:BA:21:A:H8	1.78	0.48
57:AA:2850:A:OP2	57:AA:2866:U:H5	1.96	0.48
51:A4:5:ILE:HD13	51:A4:6:HIS:CD2	2.48	0.48
57:AA:1368:G:O2'	57:AA:1369:G:H5'	2.14	0.48
57:AA:610:G:N2	57:AA:619:G:H1'	2.28	0.48
26:AC:6:LYS:HD3	26:AC:6:LYS:C	2.33	0.48
27:AD:146:GLU:HB2	27:AD:189:CYS:HB3	1.95	0.48
27:AD:35:LYS:HB3	27:AD:36:PRO:CD	2.44	0.48
32:AI:120:ILE:CG2	32:AI:121:LYS:N	2.69	0.48
32:AI:29:TYR:C	32:AI:32:PRO:HD2	2.34	0.48
32:AI:89:TYR:N	32:AI:89:TYR:HD1	2.12	0.48
36:AP:33:ARG:CZ	57:AA:587:C:H2'	2.44	0.48
42:AV:47:VAL:HG12	42:AV:51:VAL:C	2.34	0.48
57:BA:1362:C:O2'	57:BA:1363:C:H5'	2.13	0.48
26:BC:216:THR:HB	26:BC:222:SER:CB	2.34	0.48
29:BF:25:PRO:HB3	29:BF:119:ARG:CD	2.43	0.48
32:BI:118:LYS:NZ	32:BI:119:PRO:CG	2.76	0.48
36:BP:48:PRO:O	36:BP:50:ARG:N	2.47	0.48
39:BS:38:GLN:HB2	39:BS:47:THR:HG21	1.95	0.48
57:BA:2206:G:N3	57:BA:2206:G:H3'	2.28	0.48
27:BD:245:PRO:O	27:BD:246:PRO:C	2.51	0.48
57:BA:1430:C:H2'	57:BA:1431:U:H6	1.78	0.48
53:A6:6:ARG:N	53:A6:6:ARG:HD2	2.28	0.48
47:B0:10:THR:HG21	57:BA:2277:G:OP2	2.13	0.48
53:B6:23:THR:HG21	57:BA:2419:U:C5'	2.39	0.48
57:AA:2134:A:H1'	57:AA:2159:G:N2	2.29	0.48
28:AE:165:VAL:HG11	57:AA:2679:A:H5'	1.95	0.48
28:AE:51:PHE:O	28:AE:74:PRO:CB	2.61	0.48
37:BQ:2:LEU:O	37:BQ:70:PRO:HG2	2.14	0.48
57:AA:2703:C:H2'	57:AA:2704:C:H6	1.79	0.48
52:A5:52:TYR:CD1	52:A5:52:TYR:O	2.67	0.48
47:A0:56:ASP:O	47:A0:57:PHE:HB2	2.14	0.48
57:BA:133:C:O2'	57:BA:134:C:H5'	2.13	0.48
48:A1:41:ARG:HD3	48:A1:43:TYR:OH	2.14	0.48
57:AA:1386:C:H2'	57:AA:1387:C:C6	2.49	0.48
38:AR:7:GLY:O	38:AR:8:ARG:HB2	2.13	0.48
47:A0:27:GLU:OE1	57:AA:856:C:H1'	2.13	0.48
57:BA:1973:G:H2'	57:BA:1974:C:H6	1.77	0.48
57:BA:1636:C:H2'	57:BA:1637:A:H8	1.78	0.48
35:BO:7:TYR:CZ	35:BO:44:LYS:HG3	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2339:G:O2'	57:AA:2340:G:H5'	2.14	0.48
57:AA:1683:C:H2'	57:AA:1684:C:C6	2.49	0.48
41:BU:27:LEU:HD12	57:BA:2019:A:O3'	2.13	0.48
27:AD:50:THR:HB	57:AA:1805:U:O2	2.13	0.48
57:AA:270:A:O2'	57:AA:271:A:H5'	2.14	0.48
57:AA:624:C:H2'	57:AA:625:G:C8	3.60	0.48
27:AD:186:HIS:CD2	27:AD:188:GLU:HB2	2.47	0.48
30:AG:49:ASP:O	30:AG:50:ALA:CB	2.61	0.48
32:AI:115:ALA:HB2	32:AI:129:THR:O	2.14	0.48
32:AI:47:LEU:N	32:AI:47:LEU:CD1	4.61	0.48
41:AU:10:ARG:O	41:AU:11:ARG:C	2.52	0.48
41:AU:90:VAL:HG21	42:AV:47:VAL:CG2	2.32	0.48
43:AW:18:ARG:CG	43:AW:76:VAL:HG13	2.43	0.48
58:BB:87:G:H2'	58:BB:88:C:H5''	1.96	0.48
30:BG:34:LEU:HD23	30:BG:99:MET:SD	2.54	0.48
30:BG:68:PRO:CG	30:BG:90:LEU:HG	2.44	0.48
36:BP:48:PRO:CG	36:BP:49:ARG:H	2.21	0.48
36:BP:47:ASP:HB2	36:BP:51:PHE:HB2	1.96	0.48
39:BS:70:GLY:C	39:BS:101:LEU:HD23	2.34	0.48
41:BU:91:ASP:O	41:BU:95:LEU:HB2	2.13	0.48
52:B5:2:ALA:HB3	57:BA:747:U:C1'	2.43	0.48
53:A6:41:PRO:HD2	53:A6:45:LYS:O	2.13	0.48
57:BA:2562:U:H2'	57:BA:2563:U:H5'	1.95	0.48
28:BE:116:VAL:CG2	28:BE:122:PHE:CG	2.97	0.48
31:BH:41:MET:CE	31:BH:43:VAL:HG13	2.43	0.48
38:BR:5:LYS:HD2	57:BA:2820:A:O4'	2.13	0.48
57:BA:2287:A:N6	57:BA:2344:U:H3	2.11	0.48
28:AE:116:VAL:HG21	28:AE:122:PHE:CE2	2.49	0.48
40:BT:128:GLU:CD	40:BT:129:ARG:N	2.67	0.48
57:AA:1542:A:H3'	57:AA:1542:A:H8	1.78	0.48
42:BV:5:VAL:HG21	42:BV:35:LEU:CB	2.43	0.48
57:BA:2481:G:HO2'	57:BA:2482:G:P	2.36	0.48
44:BX:31:HIS:HE1	57:BA:71:A:C2	2.32	0.48
48:A1:29:GLY:C	48:A1:31:GLY:H	2.17	0.48
57:AA:118:A:H5'	57:AA:119:A:C8	2.45	0.48
41:BU:110:VAL:O	41:BU:113:ALA:HB3	2.13	0.48
29:BF:167:ALA:O	29:BF:168:ARG:CB	2.62	0.48
57:BA:247:G:H4'	57:BA:386:G:C5	2.49	0.48
46:BZ:163:LEU:HD23	46:BZ:163:LEU:N	2.29	0.48
29:AF:180:GLY:HA3	57:AA:614(C):A:C5	2.49	0.48
48:B1:18:ILE:HG12	48:B1:37:ILE:HG12	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:A8:8:LYS:O	55:A8:12:LYS:HG3	2.14	0.48
57:AA:833:U:H2'	57:AA:834:C:C6	2.54	0.48
27:AD:108:PRO:HB3	27:AD:143:HIS:HE1	1.78	0.48
27:AD:65:ILE:HD11	27:AD:67:PHE:CD1	2.49	0.48
30:AG:111:LEU:CA	30:AG:114:ILE:HD12	2.31	0.48
31:AH:86:GLU:HA	31:AH:132:ARG:HA	1.96	0.48
34:AN:133:GLN:CG	34:AN:134:ARG:H	2.16	0.48
39:AS:66:ALA:O	39:AS:69:VAL:HG12	2.14	0.48
45:AY:84:ARG:HD2	45:AY:97:ARG:CD	2.43	0.48
57:BA:624:C:H2'	57:BA:625:G:C8	3.61	0.48
26:BC:213:VAL:HG12	26:BC:225:ILE:HD11	1.95	0.48
36:BP:35:HIS:C	36:BP:36:LYS:HG3	2.34	0.48
36:BP:83:VAL:HG12	36:BP:112:LEU:CD2	2.40	0.48
39:BS:90:GLY:O	39:BS:92:TYR:N	2.46	0.48
42:BV:65:GLY:HA3	42:BV:91:TYR:CE1	2.45	0.48
44:BX:35:THR:HG22	44:BX:36:LYS:N	2.28	0.48
27:BD:80:ALA:HB3	27:BD:94:LEU:CD1	2.40	0.48
27:BD:94:LEU:HD22	27:BD:95:LEU:N	2.28	0.48
52:A5:3:LYS:HD3	57:AA:2613:U:H2'	1.96	0.48
51:A4:31:ILE:O	51:A4:31:ILE:HG22	2.14	0.48
57:BA:1431:U:O2'	57:BA:1432:C:H5'	2.14	0.48
47:A0:10:THR:HG21	57:AA:2277:G:OP2	2.14	0.48
55:B8:33:ASN:ND2	55:B8:33:ASN:N	2.34	0.48
57:BA:2287:A:N6	57:BA:2344:U:N3	2.61	0.48
40:BT:125:ARG:C	40:BT:127:ALA:N	2.66	0.48
57:BA:894:C:O2'	57:BA:895:U:H5'	2.14	0.48
57:AA:1181:C:O2'	57:AA:1182:A:H5'	2.13	0.48
51:A4:53:GLU:OE1	51:A4:54:GLY:N	2.39	0.48
41:BU:77:SER:HG	57:BA:1011:G:P	2.37	0.48
46:BZ:98:MET:O	46:BZ:125:LEU:HA	2.13	0.48
51:A4:27:THR:HG23	51:A4:27:THR:O	2.14	0.48
51:B4:37:SER:O	51:B4:38:LYS:HB2	2.13	0.48
57:AA:654(A):G:C2'	57:AA:654(B):C:H5'	2.44	0.48
34:AN:89:LYS:O	34:AN:93:THR:HG22	2.14	0.48
27:BD:50:THR:HB	57:BA:1805:U:O2	2.13	0.48
51:A4:8:LYS:O	51:A4:9:LEU:HB3	2.14	0.47
27:AD:79:VAL:HG21	27:AD:111:LEU:HD21	1.96	0.47
32:AI:113:ARG:NH1	32:AI:131:LYS:O	2.47	0.47
38:AR:38:VAL:CB	38:AR:39:PRO:HD3	2.41	0.47
41:AU:57:PHE:O	41:AU:58:ARG:C	2.52	0.47
41:AU:8:VAL:HG22	41:AU:12:ARG:CG	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:AV:19:LYS:CE	42:AV:20:LEU:H	2.26	0.47
42:AV:51:VAL:CG1	42:AV:52:VAL:H	2.20	0.47
43:AW:5:ALA:HB1	43:AW:50:VAL:CG2	2.44	0.47
45:AY:59:GLY:O	45:AY:60:PHE:CB	2.52	0.47
48:B1:56:GLN:HE22	48:B1:85:LEU:CD2	2.27	0.47
41:BU:59:ARG:CD	57:BA:1009:A:H5'	2.44	0.47
57:BA:1405:U:H2'	57:BA:1406:U:H6	1.79	0.47
44:BX:37:THR:CG2	57:BA:143:G:H1'	2.44	0.47
58:BB:81:G:N3	58:BB:81:G:H5'	2.28	0.47
26:BC:6:LYS:HG3	57:BA:2132:U:C2	2.48	0.47
26:BC:4:HIS:ND1	26:BC:8:TYR:HE2	2.12	0.47
29:BF:25:PRO:HB3	29:BF:119:ARG:CG	2.44	0.47
29:BF:9:ILE:HA	29:BF:13:SER:O	2.14	0.47
30:BG:116:ASP:O	30:BG:117:PHE:HB3	2.14	0.47
32:BI:77:LEU:HD23	32:BI:141:LYS:CG	2.41	0.47
38:BR:45:ARG:HD3	38:BR:97:VAL:CG2	2.44	0.47
53:A6:45:LYS:HG2	57:AA:2371:G:C4'	2.24	0.47
57:BA:232:G:H1'	57:BA:262:A:N1	14.94	0.47
40:BT:29:ARG:HD3	40:BT:86:ILE:HG22	1.94	0.47
40:BT:40:THR:O	40:BT:41:ARG:HB2	2.13	0.47
53:A6:27:LYS:NZ	57:AA:2285:C:OP1	2.47	0.47
53:B6:26:ASN:ND2	53:B6:51:GLU:OE1	2.47	0.47
49:A2:46:GLN:H	49:A2:49:LYS:HD2	1.78	0.47
28:BE:119:ARG:HD2	28:BE:120:TRP:CD1	2.49	0.47
28:BE:64:LYS:O	28:BE:64:LYS:CG	2.62	0.47
51:B4:51:ASP:OD2	51:B4:52:THR:N	2.46	0.47
52:B5:52:TYR:CD1	52:B5:52:TYR:O	2.66	0.47
57:AA:1233:C:O2'	57:AA:1234:U:H5'	2.13	0.47
48:B1:11:ARG:HB2	48:B1:12:PRO:HD2	1.95	0.47
57:BA:2307:G:OP1	57:BA:2307:G:H4'	2.14	0.47
46:AZ:7:ALA:C	46:AZ:8:TYR:CD1	2.88	0.47
57:AA:287:C:H2'	57:AA:288:C:C6	2.49	0.47
35:AO:22:ILE:HG23	57:AA:1952:A:C2	2.49	0.47
57:BA:2208:A:H1'	57:BA:2219:G:C5	2.48	0.47
57:BA:2219:G:O2'	57:BA:2220:G:H5'	2.14	0.47
57:AA:1839:G:C8	57:AA:1839:G:H5'	2.49	0.47
57:BA:2087:G:O2'	57:BA:2088:G:H5'	2.14	0.47
46:AZ:55:HIS:O	46:AZ:70:LEU:HD23	2.14	0.47
57:AA:1221:C:H2'	57:AA:1221(A):C:H6	1.79	0.47
57:AA:1578:U:H2'	57:AA:1579:A:C5'	2.44	0.47
57:AA:530:G:C2'	57:AA:530:G:N3	4.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AF:25:PRO:HB3	29:AF:119:ARG:CD	2.42	0.47
30:AG:117:PHE:CZ	30:AG:119:GLY:CA	2.98	0.47
31:AH:7:LEU:HD21	31:AH:65:HIS:NE2	2.29	0.47
32:AI:89:TYR:N	32:AI:89:TYR:CD1	2.83	0.47
36:AP:105:LEU:HD12	36:AP:105:LEU:N	2.29	0.47
38:AR:45:ARG:HA	38:AR:95:THR:HG21	1.96	0.47
37:BQ:14:ARG:NH2	57:BA:956:G:OP2	2.47	0.47
57:BA:977:G:O2'	57:BA:978:G:H5'	2.14	0.47
26:BC:41:THR:HG21	26:BC:175:PRO:CB	2.43	0.47
42:BV:91:TYR:HD1	42:BV:91:TYR:H	1.61	0.47
55:A8:4:MET:HE2	55:A8:61:LEU:HD13	1.96	0.47
55:B8:61:LEU:N	55:B8:63:PRO:HD2	2.29	0.47
27:BD:111:LEU:HD22	27:BD:115:GLN:OE1	2.15	0.47
40:AT:33:LYS:NZ	40:AT:43:GLN:NE2	2.62	0.47
46:BZ:144:LEU:HD11	46:BZ:150:LEU:CD2	2.43	0.47
57:AA:1826:G:H2'	57:AA:1827:C:C6	2.49	0.47
28:BE:187:ALA:HB3	57:BA:2729:G:H1'	1.96	0.47
31:BH:19:VAL:CG2	31:BH:44:VAL:HA	2.36	0.47
31:BH:9:ILE:CG2	31:BH:50:VAL:O	2.62	0.47
57:BA:307:G:H21	57:BA:330:A:H62	1.61	0.47
57:AA:528:A:C2	57:AA:2042:A:H2'	2.49	0.47
57:AA:1448:G:N3	57:AA:1528(A):A:H2	2.12	0.47
57:BA:26:G:C6	57:BA:27:G:N1	2.83	0.47
57:AA:523:C:O2'	57:AA:524:U:H5'	2.14	0.47
57:AA:1517:G:C2'	57:AA:1518:U:H5'	2.45	0.47
57:AA:2761:G:H2'	57:AA:2762:G:H5''	1.97	0.47
32:BI:55:ALA:C	32:BI:57:ARG:H	2.18	0.47
35:BO:13:ASN:C	35:BO:15:GLY:H	2.18	0.47
57:BA:2515:C:O2'	57:BA:2516:G:H5'	2.15	0.47
57:AA:2267:A:H5''	57:AA:2268:A:H5'	1.96	0.47
57:AA:2636:U:H2'	57:AA:2637:U:H6	1.78	0.47
56:B9:27:CYS:SG	56:B9:28:GLU:N	2.87	0.47
32:AI:118:LYS:NZ	57:AA:1349:A:OP2	102.29	0.47
58:AB:87:G:H2'	58:AB:88:C:H5''	1.95	0.47
27:AD:128:GLY:H	27:AD:193:VAL:HG13	1.78	0.47
27:AD:158:ALA:HB3	27:AD:161:THR:HG21	1.96	0.47
27:AD:165:ILE:HD13	27:AD:175:LEU:HD21	1.95	0.47
27:AD:18:VAL:HG12	27:AD:19:ALA:H	1.79	0.47
32:AI:84:GLY:O	32:AI:85:GLU:HB2	2.14	0.47
32:AI:95:LYS:HD3	32:AI:95:LYS:C	4.99	0.47
36:AP:8:PRO:HG3	57:AA:1242:A:N1	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:AS:101:LEU:H	39:AS:101:LEU:HD12	1.79	0.47
42:AV:19:LYS:NZ	42:AV:20:LEU:N	2.49	0.47
57:BA:1048:A:N6	57:BA:1106:A:N7	2.63	0.47
30:BG:173:LEU:HA	30:BG:176:LEU:HD12	1.96	0.47
32:BI:37:VAL:CG1	32:BI:38:LEU:N	2.76	0.47
40:AT:50:ILE:O	40:AT:99:LEU:HD12	2.14	0.47
45:BY:54:LYS:C	45:BY:56:PRO:HD2	2.34	0.47
30:AG:109:VAL:HG22	51:A4:33:VAL:HG21	1.95	0.47
40:BT:91:ARG:CB	40:BT:116:ALA:HA	2.41	0.47
49:A2:45:SER:O	49:A2:46:GLN:NE2	2.47	0.47
28:BE:101:ARG:HB3	28:BE:169:ASN:ND2	2.29	0.47
28:BE:2:LYS:HB3	28:BE:95:ILE:HG21	1.95	0.47
28:AE:61:ARG:NH1	57:AA:2787:C:O2	2.45	0.47
57:BA:1448:G:N3	57:BA:1528(A):A:H2	2.12	0.47
37:BQ:12:GLN:CG	37:BQ:73:PRO:HD2	2.44	0.47
37:AQ:27:VAL:CG1	37:AQ:28:ALA:N	2.76	0.47
57:AA:1722:A:C2	57:AA:1740:G:H8	2.33	0.47
37:BQ:46:GLN:NE2	57:BA:2485:G:H5''	2.28	0.47
57:BA:481:G:H1'	57:BA:506:G:N2	2.28	0.47
36:BP:110:TYR:CE2	36:BP:111:ARG:NH2	2.82	0.47
31:BH:136:ILE:N	31:BH:136:ILE:CD1	2.76	0.47
29:BF:117:ARG:HH21	29:BF:187:VAL:HA	1.78	0.47
57:BA:1386:C:H2'	57:BA:1387:C:C6	2.49	0.47
57:BA:847:U:H2'	57:BA:848:G:H5''	1.96	0.47
26:AC:197:LEU:C	26:AC:199:ALA:H	2.16	0.47
57:BA:2740:A:H2'	57:BA:2741:A:C8	2.49	0.47
48:B1:8:SER:HB3	48:B1:66:HIS:CD2	2.48	0.47
26:BC:197:LEU:C	26:BC:199:ALA:H	2.17	0.47
38:BR:94:TYR:CD1	38:BR:94:TYR:N	2.82	0.47
57:AA:2887:U:H2'	57:AA:2888:C:H6	1.79	0.47
57:BA:2769:C:H2'	57:BA:2770:G:O4'	2.14	0.47
57:BA:2887:U:H2'	57:BA:2888:C:C6	2.49	0.47
57:BA:874:G:O2'	57:BA:875:G:H5'	2.14	0.47
43:BW:89:ALA:HB1	57:BA:748:G:C8	2.49	0.47
57:AA:2179:C:H4'	57:AA:2179:C:OP1	2.12	0.47
27:AD:121:PRO:HA	27:AD:135:PHE:HD1	1.79	0.47
27:AD:34:VAL:CG2	27:AD:35:LYS:N	2.65	0.47
29:AF:52:LYS:O	29:AF:88:VAL:HG12	2.14	0.47
37:AQ:16:ARG:HG2	37:AQ:17:LEU:H	1.79	0.47
38:AR:45:ARG:HD3	38:AR:97:VAL:CG2	2.44	0.47
30:BG:71:THR:HG21	57:BA:2312:U:H4'	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BF:52:LYS:O	29:BF:88:VAL:HG12	2.14	0.47
34:BN:58:ASP:C	34:BN:60:ILE:N	2.61	0.47
36:BP:66:GLY:O	36:BP:67:MET:HB3	2.14	0.47
39:BS:61:ASN:OD1	39:BS:64:GLU:OE2	2.33	0.47
39:BS:88:ASP:OD2	39:BS:89:ARG:N	2.48	0.47
39:BS:97:ARG:HH21	39:BS:98:VAL:HA	1.71	0.47
27:AD:244:ARG:HG3	57:AA:1902:C:C1'	2.44	0.47
27:BD:147:LEU:HD12	27:BD:155:LEU:HD21	1.97	0.47
35:AO:104:ARG:CZ	40:AT:33:LYS:HD2	2.45	0.47
40:AT:28:VAL:HG22	40:AT:46:GLU:CA	2.44	0.47
53:B6:41:PRO:HD2	53:B6:45:LYS:O	2.14	0.47
35:BO:86:ILE:O	35:BO:87:ILE:HD13	2.15	0.47
40:BT:29:ARG:CZ	40:BT:86:ILE:HG22	2.44	0.47
40:BT:31:SER:N	40:BT:43:GLN:O	2.47	0.47
55:B8:33:ASN:HD22	55:B8:36:LYS:CD	2.27	0.47
57:BA:152:G:H1	57:BA:174:C:N4	1.93	0.47
28:BE:69:LYS:C	28:BE:71:GLY:N	2.68	0.47
28:BE:48:GLN:HE21	28:BE:78:LEU:HD22	1.79	0.47
28:BE:82:ARG:O	28:BE:84:PHE:N	2.47	0.47
31:BH:85:LYS:HZ2	31:BH:133:VAL:HG23	1.79	0.47
40:BT:8:LYS:HA	40:BT:11:GLU:OE1	2.14	0.47
28:AE:64:LYS:C	28:AE:66:HIS:H	2.16	0.47
46:AZ:151:HIS:O	46:AZ:152:ALA:C	2.52	0.47
51:A4:51:ASP:OD2	51:A4:52:THR:N	2.47	0.47
54:B7:5:TRP:CD1	54:B7:7:PRO:HD3	2.49	0.47
57:BA:1948:G:C2'	57:BA:1949:G:H5'	2.45	0.47
57:BA:1722:A:O2'	57:BA:1739:U:H5''	2.15	0.47
57:BA:1771:C:C1'	57:BA:1786:A:C8	2.97	0.47
57:AA:2762:G:C5'	57:AA:2762:G:H8	2.26	0.47
44:AX:57:LEU:N	44:AX:57:LEU:CD1	2.77	0.47
52:B5:42:PRO:HB2	52:B5:43:HIS:CD2	2.49	0.47
34:BN:94:HIS:N	34:BN:95:PRO:CD	2.77	0.47
57:BA:2774:C:H2'	57:BA:2775:A:O4'	2.13	0.47
31:BH:62:LYS:HB3	57:BA:2749:A:H4'	1.97	0.47
41:AU:59:ARG:CD	57:AA:1009:A:H5'	2.43	0.47
27:AD:121:PRO:HB3	27:AD:135:PHE:CD1	2.50	0.47
27:AD:35:LYS:NZ	27:AD:36:PRO:CD	2.77	0.47
29:AF:20:LEU:O	29:AF:24:LEU:HD23	2.15	0.47
30:AG:98:ARG:HG3	51:A4:1:MET:HG2	1.96	0.47
34:AN:12:ARG:NH1	34:AN:12:ARG:HB2	4.24	0.47
34:AN:18:ALA:CB	34:AN:21:LYS:HB3	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:AR:79:LEU:HD23	38:AR:83:ILE:HB	1.96	0.47
39:AS:92:TYR:CG	39:AS:93:LYS:N	2.83	0.47
41:AU:59:ARG:O	41:AU:60:LEU:C	2.53	0.47
41:AU:91:ASP:CG	41:AU:96:ALA:HB2	2.32	0.47
57:BA:1216:G:O2'	57:BA:1217:C:H5'	2.38	0.47
57:BA:1316:U:H2'	57:BA:1317:A:C8	2.49	0.47
39:BS:28:VAL:HG22	39:BS:99:LYS:NZ	2.29	0.47
41:BU:13:LYS:CE	41:BU:13:LYS:N	2.77	0.47
42:BV:47:VAL:HG12	42:BV:51:VAL:C	2.35	0.47
27:BD:186:HIS:CD2	27:BD:188:GLU:HB2	2.47	0.47
27:BD:30:GLU:CD	27:BD:63:ARG:NE	2.68	0.47
27:BD:77:ALA:HB2	27:BD:97:TYR:CG	2.50	0.47
40:AT:46:GLU:O	40:AT:46:GLU:HG2	2.57	0.47
40:BT:89:VAL:HG11	40:BT:91:ARG:HE	1.79	0.47
57:AA:1748:G:C8	57:AA:1748:G:H5'	2.46	0.47
41:AU:2:PRO:HA	57:AA:445:C:OP1	2.15	0.47
53:B6:27:LYS:NZ	57:BA:2285:C:OP1	2.46	0.47
28:BE:144:ARG:O	57:BA:2053:G:H5'	2.14	0.47
28:AE:116:VAL:CG2	28:AE:122:PHE:CG	2.97	0.47
57:AA:2287:A:C2	57:AA:2346:A:C2	3.02	0.47
52:A5:46:CYS:SG	52:A5:47:PRO:HD2	2.54	0.47
42:BV:4:ILE:O	42:BV:4:ILE:HG22	2.14	0.47
39:BS:42:ASP:C	39:BS:44:LYS:N	2.67	0.47
27:AD:28:GLU:H	27:AD:29:PRO:CD	2.22	0.47
29:BF:169:ASN:HD21	57:BA:322:A:C3'	2.24	0.47
36:AP:117:GLU:OE2	57:AA:637:A:H2'	2.15	0.47
57:BA:1771:C:O2'	57:BA:1786:A:H8	1.96	0.47
36:BP:117:GLU:OE2	57:BA:637:A:H2'	2.14	0.47
30:AG:181:ARG:O	30:AG:182:LYS:C	2.52	0.47
29:AF:164:ARG:HG2	29:AF:164:ARG:NH1	2.27	0.47
34:AN:68:GLU:H	34:AN:88:GLU:HG3	1.79	0.47
26:BC:23:ILE:CG2	26:BC:187:ALA:HA	2.44	0.47
57:AA:128:C:H2'	57:AA:129:C:O4'	2.15	0.47
57:BA:1517:G:C2'	57:BA:1518:U:H5'	2.44	0.47
57:BA:142:A:H8	57:BA:1595:G:H21	1.62	0.47
26:AC:4:HIS:ND1	26:AC:8:TYR:HE2	2.12	0.47
30:AG:16:ARG:HG3	30:AG:16:ARG:NH1	2.28	0.47
48:B1:75:GLU:C	48:B1:77:ALA:N	2.68	0.47
57:BA:1047:G:H4'	57:BA:1047:G:OP2	2.14	0.47
29:BF:51:THR:CB	29:BF:88:VAL:HG11	2.41	0.47
36:BP:16:ARG:CZ	36:BP:16:ARG:HB2	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BR:45:ARG:HG3	38:BR:95:THR:HG21	1.96	0.47
35:AO:2:ILE:HD11	35:AO:82:ASN:ND2	2.28	0.47
27:AD:46:GLN:CD	27:AD:46:GLN:H	2.17	0.47
27:BD:246:PRO:HD3	57:BA:1902:C:C5'	2.45	0.47
40:BT:102:ILE:HB	40:BT:110:ILE:HD13	1.94	0.47
40:BT:28:VAL:HG13	40:BT:46:GLU:HB2	1.97	0.47
31:BH:86:GLU:HA	31:BH:132:ARG:HA	1.96	0.47
57:BA:2097:C:O2'	57:BA:2098:U:H5'	2.14	0.47
37:BQ:19:GLY:O	37:BQ:20:ALA:CB	2.62	0.47
57:AA:2761:G:C2'	57:AA:2762:G:H5''	2.45	0.47
57:BA:2521:C:H42	57:BA:2544:G:H1	1.62	0.47
26:BC:194:ILE:HG22	26:BC:198:GLU:OE1	2.14	0.47
48:B1:66:HIS:C	48:B1:68:PRO:HD2	2.35	0.47
57:AA:814:C:O2'	57:AA:815:C:H5'	2.14	0.47
57:AA:774:A:H2	57:AA:787:U:HO2'	1.55	0.47
57:BA:2672:G:H2'	57:BA:2673:G:H5''	1.96	0.47
57:BA:1862:G:O2'	57:BA:1863:G:H5'	2.14	0.47
35:AO:67:LYS:HZ3	57:AA:2726:U:H6	1.63	0.47
38:AR:46:GLY:HA2	57:AA:2839:G:H5'	1.97	0.47
57:AA:2769:C:H2'	57:AA:2770:G:O4'	2.14	0.47
57:AA:2784:C:O2'	57:AA:2785:C:H5'	2.14	0.47
57:BA:289:A:H2'	57:BA:290:G:O4'	2.14	0.47
27:AD:25:THR:CG2	27:AD:26:LYS:N	2.77	0.47
30:AG:105:LYS:NZ	51:A4:26:SER:CB	2.76	0.47
30:AG:61:ALA:O	30:AG:64:THR:HG22	2.15	0.47
37:AQ:39:PRO:HD3	37:AQ:99:PRO:HG3	1.97	0.47
57:AA:1817:G:H2'	57:AA:1818:U:H5'	1.95	0.47
57:AA:2313:C:C6	57:AA:2314:C:H5	2.33	0.47
27:AD:142:VAL:HG22	27:AD:143:HIS:N	2.30	0.47
27:AD:145:VAL:HG12	27:AD:146:GLU:O	2.15	0.47
27:AD:165:ILE:HD13	27:AD:175:LEU:CD2	2.44	0.47
30:AG:7:LEU:O	30:AG:11:TYR:HB2	2.14	0.47
32:AI:99:GLU:OE1	32:AI:100:ALA:N	2.47	0.47
36:AP:35:HIS:CA	57:AA:1190:G:H5'	2.45	0.47
42:AV:49:THR:HB	42:AV:50:PRO:HD3	1.94	0.47
45:AY:31:LEU:CD2	45:AY:31:LEU:N	2.77	0.47
45:AY:8:LYS:HG2	45:AY:28:LYS:HZ1	1.78	0.47
26:BC:46:ALA:HA	26:BC:212:SER:O	2.15	0.47
36:BP:83:VAL:CG2	36:BP:105:LEU:HD13	2.45	0.47
36:BP:16:ARG:NE	36:BP:18:ARG:HB2	2.28	0.47
36:BP:48:PRO:O	36:BP:49:ARG:C	2.51	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BS:35:ILE:O	39:BS:35:ILE:HG12	2.14	0.47
41:BU:83:LEU:N	41:BU:83:LEU:CD1	2.78	0.47
44:BX:30:VAL:HG11	44:BX:39:ILE:HD12	1.96	0.47
30:BG:139:LEU:HA	30:BG:144:ILE:HG21	1.97	0.47
30:BG:27:ASN:O	30:BG:29:TRP:N	2.47	0.47
32:BI:118:LYS:NZ	32:BI:119:PRO:CD	2.77	0.47
38:BR:67:LEU:O	38:BR:70:LEU:O	2.32	0.47
27:BD:134:ARG:HG3	27:BD:135:PHE:CE2	2.50	0.47
27:BD:70:TRP:CZ3	27:BD:150:LYS:HA	2.48	0.47
27:BD:158:ALA:O	27:BD:161:THR:HG23	2.14	0.47
57:BA:1493:C:C4	57:BA:2206:G:O2'	2.68	0.47
57:BA:107:C:H2'	57:BA:108:U:C6	2.50	0.47
51:A4:14:ILE:O	51:A4:21:VAL:HG13	2.15	0.47
40:BT:16:ARG:NH2	40:BT:82:LEU:O	2.41	0.47
40:BT:100:TYR:CD2	40:BT:103:ARG:NH2	2.79	0.47
53:A6:11:LEU:N	53:A6:11:LEU:HD13	2.30	0.47
55:B8:32:LEU:O	55:B8:33:ASN:O	2.32	0.47
55:A8:50:LEU:CD1	55:A8:51:ALA:N	2.74	0.47
28:BE:172:VAL:HG13	28:BE:182:LEU:HD11	1.96	0.47
28:AE:132:HIS:CG	28:AE:135:HIS:NE2	2.83	0.47
28:AE:69:LYS:C	28:AE:71:GLY:N	2.68	0.47
46:AZ:52:SER:OG	46:AZ:53:ILE:N	2.48	0.47
57:AA:26:G:C6	57:AA:27:G:N1	2.82	0.47
57:BA:2329:G:H2'	57:BA:2330:G:C8	2.50	0.47
57:AA:1541:G:H4'	57:AA:1542:A:H5''	1.94	0.47
56:A9:1:MET:SD	56:A9:31:LYS:O	2.73	0.47
57:AA:2481:G:HO2'	57:AA:2482:G:P	2.37	0.47
37:AQ:137:TYR:CE2	46:AZ:81:ARG:NH1	2.83	0.47
47:A0:48:GLY:H	47:A0:51:VAL:HB	1.80	0.47
27:BD:267:SER:C	27:BD:269:PHE:N	2.67	0.47
42:BV:2:PHE:HB2	42:BV:42:GLY:HA2	1.96	0.47
41:AU:107:ALA:O	41:AU:110:VAL:HB	2.15	0.47
47:A0:27:GLU:HA	47:A0:67:VAL:O	2.15	0.47
26:AC:23:ILE:CG2	26:AC:187:ALA:HA	2.44	0.47
46:BZ:112:ARG:O	46:BZ:112:ARG:HD3	2.15	0.47
57:AA:272:G:O6	57:AA:421:U:H2'	2.15	0.47
57:BA:363(E):U:H3'	57:BA:363(F):A:O4'	2.14	0.47
27:AD:47:GLY:HA2	57:AA:773:U:C5'	2.45	0.47
39:BS:52:SER:CB	39:BS:55:ALA:HB3	2.45	0.47
57:AA:2070:G:H2'	57:AA:2071:A:C8	2.49	0.47
33:BJ:101:PRO:C	33:BJ:103:GLY:H	2.18	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2335:A:O2'	57:BA:2336:A:H5''	2.14	0.47
57:BA:2674:G:H2'	57:BA:2675:A:C8	2.50	0.47
57:BA:822:U:O2'	57:BA:823:G:H5'	2.15	0.47
57:AA:1344:G:H4'	57:AA:1384:A:C5	2.49	0.47
57:AA:478:A:N1	57:AA:500:G:H4'	2.30	0.47
58:AB:106:G:O2'	58:AB:107:G:H5'	2.15	0.47
26:AC:41:THR:CG2	26:AC:175:PRO:HB2	2.44	0.47
29:AF:199:TRP:O	29:AF:203:GLN:HG2	2.14	0.47
39:AS:17:ARG:CD	58:AB:9:G:OP1	2.63	0.47
39:AS:25:ARG:HG3	39:AS:88:ASP:HB2	1.96	0.47
43:AW:47:VAL:HA	43:AW:50:VAL:HG12	1.95	0.47
45:AY:96:ILE:HB	45:AY:99:CYS:HB2	1.97	0.47
51:B4:5:ILE:N	51:B4:5:ILE:HD13	2.30	0.47
57:BA:587:C:O2'	57:BA:588:U:OP2	2.27	0.47
34:BN:4:TYR:OH	57:BA:995:C:O2	2.27	0.47
58:BB:44:G:C2	58:BB:48:A:C2	3.02	0.47
32:BI:108:THR:C	32:BI:109:ILE:HG13	2.35	0.47
36:BP:10:PRO:O	36:BP:11:GLY:C	2.53	0.47
43:BW:54:ALA:O	43:BW:57:ASN:HB2	2.14	0.47
27:BD:35:LYS:HD3	27:BD:63:ARG:HD2	1.97	0.47
57:BA:1496:A:H8	57:BA:1577:C:O2'	1.97	0.47
58:BB:20:C:H2'	58:BB:21:G:C5'	2.18	0.47
46:BZ:19:ARG:HH12	46:BZ:84:GLU:C	2.17	0.47
46:BZ:10:ARG:HH21	46:BZ:26:GLY:H	1.62	0.47
40:BT:107:ASP:H	40:BT:110:ILE:HG12	1.80	0.47
47:B0:41:ARG:HG3	57:BA:2329:G:N2	2.29	0.47
40:BT:3:ARG:O	40:BT:7:ILE:HG13	2.15	0.47
28:BE:4:ILE:HD13	28:BE:28:ALA:CB	2.39	0.47
57:AA:79:G:H1'	57:AA:80:G:OP1	6.75	0.47
57:BA:1719:G:C2'	57:BA:1720:U:H5'	2.45	0.47
57:BA:523:C:O2'	57:BA:524:U:H5'	2.15	0.47
37:AQ:46:GLN:HE21	57:AA:2485:G:C5'	2.27	0.47
27:AD:226:MET:HB3	27:AD:230:ASP:HB2	1.96	0.47
57:AA:195:A:H61	57:AA:198:C:H3'	1.80	0.47
46:BZ:57:ILE:C	46:BZ:69:THR:OG1	2.53	0.47
57:AA:848:G:C8	57:AA:848:G:H5'	2.45	0.47
57:AA:1336:A:H2'	57:AA:1337:G:H8	1.80	0.47
57:BA:1991:U:C2'	57:BA:1992:G:H5''	2.45	0.47
35:AO:7:TYR:CZ	35:AO:44:LYS:HG3	2.50	0.47
27:BD:238:GLY:HA2	57:BA:2590:A:OP2	2.14	0.47
57:AA:1712:C:H2'	57:AA:1713:U:H6	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1336:A:H2'	57:BA:1337:G:H8	1.80	0.47
34:AN:94:HIS:N	34:AN:95:PRO:CD	2.77	0.47
57:BA:1665:A:O2'	57:BA:1666:G:H5'	2.14	0.47
57:BA:1889:A:O2'	57:BA:2087:G:H5'	2.15	0.47
29:BF:157:VAL:O	29:BF:157:VAL:HG22	2.13	0.47
57:BA:2405:G:HO2'	57:BA:2406:U:P	2.37	0.47
57:AA:614:U:O2	57:AA:614:U:O4'	2.33	0.47
32:BI:75:LEU:H	32:BI:75:LEU:HD12	1.80	0.47
57:AA:361:G:O2'	57:AA:362:U:H5'	2.15	0.47
57:BA:1441:G:O2'	57:BA:1442:G:H5'	2.15	0.47
49:A2:10:LEU:O	49:A2:11:GLU:C	2.53	0.47
57:BA:270:A:O2'	57:BA:271:A:H5'	2.15	0.47
31:BH:67:LEU:HD21	57:BA:2758:A:C4	2.50	0.47
57:AA:244:A:H2'	57:AA:245:G:O4'	2.15	0.47
57:AA:500:G:N2	57:AA:502:A:H3'	2.30	0.47
37:AQ:22:LYS:HE2	57:AA:864:G:OP2	2.14	0.47
57:AA:917:A:N1	58:AB:80:U:H4'	2.30	0.47
58:AB:11:C:OP2	58:AB:12:C:H5	1.97	0.47
32:AI:76:THR:HG21	32:AI:139:GLN:NE2	2.30	0.47
38:AR:54:LEU:HD23	38:AR:66:VAL:HG23	1.96	0.47
39:AS:65:VAL:O	39:AS:69:VAL:HG12	2.15	0.47
42:AV:18:LEU:CD2	42:AV:19:LYS:N	2.75	0.47
45:AY:4:LYS:HD2	45:AY:32:PRO:HG2	1.97	0.47
41:BU:8:VAL:HG23	57:BA:1216:G:OP1	2.15	0.47
58:BB:11:C:OP2	58:BB:12:C:H5	1.97	0.47
32:BI:100:ALA:HA	32:BI:103:ARG:NH1	2.29	0.47
32:BI:131:LYS:HA	32:BI:135:GLU:HB3	1.97	0.47
32:BI:72:LEU:O	32:BI:138:ILE:HD11	2.15	0.47
36:BP:113:LYS:HA	36:BP:129:ALA:O	2.15	0.47
39:BS:25:ARG:NH2	39:BS:40:ILE:HD12	2.30	0.47
41:BU:8:VAL:HG22	41:BU:12:ARG:HG2	1.97	0.47
41:BU:59:ARG:O	41:BU:60:LEU:C	2.52	0.47
42:BV:23:GLU:OE1	57:BA:1162:G:H1'	2.15	0.47
46:BZ:122:ARG:HG2	46:BZ:122:ARG:NH1	2.29	0.47
46:BZ:151:HIS:O	46:BZ:152:ALA:O	2.32	0.47
53:A6:16:CYS:SG	53:A6:48:VAL:HG21	2.54	0.47
40:BT:28:VAL:HG22	40:BT:47:GLY:H	1.78	0.47
28:BE:31:CYS:O	28:BE:90:THR:HA	2.15	0.47
31:BH:38:SER:C	31:BH:40:GLU:H	2.17	0.47
28:AE:77:ILE:HG22	28:AE:78:LEU:CD1	2.43	0.47
57:BA:1019:U:O2'	57:BA:1021:A:C2	2.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:67:ARG:HH11	37:BQ:67:ARG:HG2	1.79	0.47
46:AZ:10:ARG:NH2	46:AZ:26:GLY:O	2.47	0.47
57:AA:1541:G:H4'	57:AA:1542:A:C4'	2.45	0.47
29:AF:74:ARG:HD2	57:AA:674:G:C1'	2.40	0.47
44:AX:31:HIS:HE1	57:AA:71:A:C2	2.33	0.47
36:BP:111:ARG:HH21	36:BP:111:ARG:HG3	1.79	0.47
57:BA:2308:G:H8	57:BA:2309:A:H3'	1.80	0.47
57:BA:195:A:H61	57:BA:198:C:H3'	1.80	0.47
36:AP:111:ARG:HG3	36:AP:111:ARG:HH21	1.79	0.47
57:BA:1233:C:O2'	57:BA:1234:U:H5'	2.15	0.47
57:BA:780:G:H21	57:BA:783:A:H62	1.63	0.47
57:AA:1833:U:O2'	57:AA:1969:A:N1	2.39	0.47
57:AA:2086:U:H2'	57:AA:2087:G:C8	2.50	0.47
31:BH:142:GLY:HA3	57:BA:2745:C:O3'	2.15	0.47
27:AD:231:HIS:ND1	27:AD:232:PRO:HD2	2.30	0.47
37:AQ:24:GLY:N	57:AA:907:U:OP1	2.48	0.47
37:BQ:33:GLY:O	37:BQ:131:ILE:HA	2.15	0.47
57:AA:2877:G:O2'	57:AA:2878:U:H5'	2.15	0.47
57:AA:1112:G:O2'	57:AA:1113:U:C6	2.67	0.47
57:AA:1288:U:C2	57:AA:1327:C:O2	2.68	0.47
44:AX:37:THR:CG2	57:AA:143:G:H1'	2.43	0.47
57:AA:484:C:H2'	57:AA:485:C:H6	1.79	0.47
46:AZ:79:ARG:HH22	58:AB:92:C:H5''	1.80	0.47
29:AF:20:LEU:HB2	29:AF:199:TRP:HH2	1.80	0.47
36:AP:10:PRO:O	36:AP:11:GLY:C	2.53	0.47
36:AP:18:ARG:NH1	36:AP:18:ARG:O	2.48	0.47
36:AP:5:ASP:OD2	36:AP:6:LEU:HD23	2.15	0.47
42:AV:72:VAL:O	42:AV:72:VAL:HG23	2.14	0.47
43:AW:10:VAL:O	43:AW:11:ARG:HB2	2.15	0.47
45:AY:7:VAL:HB	45:AY:8:LYS:HE3	1.91	0.47
44:BX:36:LYS:HE2	57:BA:1342:A:OP1	2.15	0.47
58:BB:30:C:H4'	58:BB:58:A:C2	2.47	0.47
32:BI:103:ARG:O	32:BI:104:GLN:C	2.52	0.47
32:BI:88:ILE:HG22	32:BI:89:TYR:N	2.29	0.47
32:BI:93:THR:O	32:BI:97:ILE:HG13	2.14	0.47
36:BP:41:ARG:HA	36:BP:41:ARG:HE	1.79	0.47
55:A8:61:LEU:HG	55:A8:62:LEU:N	2.26	0.47
27:BD:102:LYS:C	27:BD:103:ARG:HG2	2.35	0.47
27:BD:35:LYS:HB3	27:BD:36:PRO:CD	2.44	0.47
40:AT:30:VAL:HG22	40:AT:84:GLN:O	2.15	0.47
55:B8:8:LYS:O	55:B8:12:LYS:HG3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BY:44:ILE:HG21	57:BA:480:A:H1'	1.96	0.47
35:BO:104:ARG:CZ	40:BT:33:LYS:HD2	2.44	0.47
57:AA:1441:G:O2'	57:AA:1442:G:H5'	2.15	0.47
57:BA:154:G:H2'	57:BA:154(A):C:C6	2.50	0.47
28:BE:69:LYS:C	28:BE:71:GLY:H	2.17	0.47
57:AA:16:G:O2'	57:AA:17:G:H5'	2.14	0.47
28:AE:69:LYS:HZ1	28:AE:89:ASP:HA	1.80	0.47
36:AP:146:VAL:CG1	36:AP:147:LEU:N	2.75	0.47
37:AQ:43:THR:HB	37:AQ:45:GLN:HE21	1.80	0.47
38:BR:10:LEU:HD13	38:BR:17:ARG:NH1	2.30	0.47
57:BA:2762:G:H8	57:BA:2762:G:C5'	2.28	0.47
46:BZ:57:ILE:CG2	46:BZ:58:VAL:H	2.28	0.47
50:B3:19:GLN:HE22	50:B3:52:HIS:CE1	2.27	0.47
57:AA:1991:U:C2'	57:AA:1992:G:H5''	2.43	0.47
38:AR:94:TYR:CD1	38:AR:94:TYR:N	2.83	0.47
56:A9:19:ARG:NH2	56:A9:26:ILE:HD11	2.29	0.47
57:BA:128:C:H2'	57:BA:129:C:O4'	2.15	0.47
52:A5:19:ARG:NH1	57:AA:1265:A:H3'	2.30	0.47
57:BA:2082:A:H2'	57:BA:2083:G:O4'	2.14	0.47
54:B7:30:VAL:HA	54:B7:33:ARG:NH1	2.30	0.47
57:BA:2764:A:N7	57:BA:2766:G:C6	2.83	0.47
57:AA:1496:A:C8	57:AA:1498:C:N3	2.84	0.46
57:AA:1578:U:H2'	57:AA:1579:A:H5'	1.96	0.46
57:AA:309:G:H1'	57:AA:608:A:C2	64.52	0.46
42:AV:89:GLN:HG3	57:AA:993:G:O2'	2.14	0.46
29:AF:65:TRP:CH2	29:AF:75:HIS:HD2	2.33	0.46
30:AG:53:LEU:HD22	30:AG:53:LEU:H	1.80	0.46
31:AH:35:VAL:HG21	31:AH:75:ALA:HB2	1.96	0.46
31:AH:86:GLU:HB3	31:AH:132:ARG:CB	2.42	0.46
32:AI:77:LEU:HD23	32:AI:77:LEU:O	2.15	0.46
36:AP:61:ARG:H	36:AP:61:ARG:HD2	1.80	0.46
37:AQ:21:THR:HA	37:AQ:98:LYS:HB2	1.97	0.46
39:AS:38:GLN:HB2	39:AS:47:THR:HG21	1.97	0.46
44:AX:53:LYS:HZ2	44:AX:55:ASN:ND2	2.09	0.46
45:AY:45:VAL:HG12	45:AY:60:PHE:CE2	2.50	0.46
36:BP:8:PRO:HG3	57:BA:1242:A:N1	2.30	0.46
57:BA:2314:C:H2'	57:BA:2315:G:H8	1.80	0.46
57:BA:836:G:H2'	57:BA:837:C:C6	2.50	0.46
32:BI:121:LYS:HD2	32:BI:121:LYS:HA	1.84	0.46
32:BI:24:GLY:HA3	57:BA:2093:G:O5'	2.14	0.46
43:BW:62:HIS:O	43:BW:63:ASP:C	2.53	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:AT:98:LYS:HB3	40:AT:100:TYR:CE1	2.50	0.46
40:AT:40:THR:O	40:AT:41:ARG:HB2	2.13	0.46
44:BX:13:LEU:HD11	49:B2:41:ILE:CG2	2.45	0.46
57:BA:106:C:H2'	57:BA:107:C:H6	1.80	0.46
45:BY:52:SER:O	45:BY:56:PRO:HD3	2.15	0.46
45:BY:81:LYS:HD2	45:BY:96:ILE:HG22	1.97	0.46
52:A5:2:ALA:HB3	57:AA:747:U:C1'	2.46	0.46
40:BT:19:LEU:HB3	40:BT:85:LYS:HD3	1.96	0.46
53:A6:27:LYS:CD	53:A6:27:LYS:O	2.64	0.46
53:B6:6:ARG:HD2	53:B6:6:ARG:N	2.29	0.46
49:A2:50:ILE:O	49:A2:53:LEU:N	2.48	0.46
40:BT:12:SER:O	40:BT:13:ARG:CZ	2.62	0.46
28:AE:64:LYS:O	28:AE:64:LYS:CG	2.62	0.46
38:AR:4:LEU:HD13	38:AR:6:SER:O	2.16	0.46
53:A6:38:LYS:O	53:A6:39:TYR:HD1	1.98	0.46
57:AA:2287:A:N6	57:AA:2344:U:N3	2.62	0.46
40:AT:8:LYS:HA	40:AT:11:GLU:OE1	2.15	0.46
57:BA:528:A:C2	57:BA:2043:C:C4'	2.94	0.46
47:A0:21:LEU:HD21	47:A0:41:ARG:NH1	2.30	0.46
57:AA:673:C:H6	57:AA:673:C:C5'	2.19	0.46
57:AA:1153:C:H2'	57:AA:1154:G:O4'	2.15	0.46
36:AP:110:TYR:CE2	36:AP:111:ARG:NH2	2.83	0.46
29:BF:41:LEU:O	29:BF:44:ARG:HG2	2.15	0.46
29:BF:59:TYR:HE2	57:BA:470:A:OP1	1.98	0.46
57:BA:394:A:C2'	57:BA:395:U:H5'	2.44	0.46
48:A1:58:ILE:CG1	48:A1:58:ILE:O	2.62	0.46
57:AA:654(U):A:H2'	57:AA:654(V):A:C8	2.50	0.46
27:BD:47:GLY:HA2	57:BA:773:U:C5'	2.45	0.46
48:B1:90:ILE:O	48:B1:93:GLU:HB2	2.16	0.46
48:B1:90:ILE:O	48:B1:93:GLU:N	2.47	0.46
49:A2:59:ARG:NH1	57:AA:77:C:OP1	2.45	0.46
57:AA:2461:C:H2'	57:AA:2462:U:C6	2.50	0.46
57:BA:2070:G:H2'	57:BA:2071:A:C8	2.50	0.46
57:BA:1904:G:O2'	57:BA:1905:C:H5'	2.14	0.46
57:AA:1209:G:N2	57:AA:1210:A:H62	2.13	0.46
57:AA:1327:C:H2'	57:AA:1328:G:O4'	2.15	0.46
27:AD:13:ARG:NH1	57:AA:729:G:OP2	2.49	0.46
32:AI:85:GLU:OE1	32:AI:86:THR:HB	2.15	0.46
36:AP:16:ARG:HB2	36:AP:16:ARG:CZ	2.45	0.46
45:AY:77:PRO:O	45:AY:78:ALA:CB	2.63	0.46
57:BA:833:U:H2'	57:BA:834:C:C6	2.52	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BC:52:PRO:HG2	26:BC:53:ARG:CD	2.45	0.46
30:BG:109:VAL:O	30:BG:110:ALA:C	2.54	0.46
34:BN:12:ARG:HB2	34:BN:12:ARG:NH1	4.23	0.46
43:BW:57:ASN:HA	43:BW:57:ASN:HD22	1.59	0.46
40:AT:29:ARG:HD3	40:AT:86:ILE:HG22	1.96	0.46
45:BY:40:GLU:HA	45:BY:40:GLU:OE2	2.14	0.46
27:AD:46:GLN:CD	27:AD:46:GLN:N	2.69	0.46
46:BZ:36:LYS:HG3	46:BZ:36:LYS:O	2.15	0.46
38:AR:33:ARG:CG	38:AR:115:GLU:HG3	2.28	0.46
57:AA:1331:A:O2'	57:AA:1332:G:H5''	2.15	0.46
53:B6:30:THR:HG23	53:B6:31:PRO:HD2	1.97	0.46
57:AA:149:A:O2'	57:AA:150:C:C6	4.76	0.46
28:BE:132:HIS:O	28:BE:135:HIS:NE2	2.48	0.46
31:BH:85:LYS:HZ3	31:BH:132:ARG:HA	1.80	0.46
40:BT:13:ARG:CA	40:BT:13:ARG:NH1	2.66	0.46
57:AA:1115:G:H2'	57:AA:1116:C:C6	2.50	0.46
35:BO:47:ILE:HG12	35:BO:48:PRO:CD	2.37	0.46
37:BQ:19:GLY:HA3	58:BB:92:C:OP1	2.15	0.46
54:B7:34:ARG:HH12	54:B7:39:ARG:CD	2.25	0.46
57:BA:2761:G:H2'	57:BA:2762:G:H5''	1.97	0.46
57:AA:847:U:H2'	57:AA:848:G:H5''	1.97	0.46
57:AA:969:U:H2'	57:AA:970:C:C6	2.50	0.46
57:BA:648:G:O4'	57:BA:2351:G:H5''	2.16	0.46
57:AA:292:C:O2'	57:AA:293:U:H5'	2.15	0.46
57:AA:1665:A:O2'	57:AA:1666:G:H5'	2.14	0.46
57:AA:2552:U:C2	57:AA:2554:U:H5'	2.51	0.46
57:AA:2364:C:O2'	57:AA:2365:G:H5'	2.15	0.46
57:AA:2777:G:H4'	57:AA:2778:A:H5'	1.96	0.46
57:AA:2314:C:H2'	57:AA:2315:G:H8	1.79	0.46
32:AI:118:LYS:HZ3	57:AA:1349:A:P	102.21	0.46
32:AI:40:THR:O	32:AI:41:GLU:C	2.53	0.46
32:AI:67:ARG:NH1	32:AI:67:ARG:HG2	2.30	0.46
41:AU:47:TYR:HA	41:AU:50:ARG:NH2	2.30	0.46
42:AV:23:GLU:OE1	57:AA:1162:G:H1'	2.14	0.46
43:AW:1:MET:HE2	43:AW:2:GLU:O	2.15	0.46
45:AY:10:GLY:CA	45:AY:27:VAL:HG13	2.41	0.46
30:BG:40:ASN:ND2	57:BA:2313:C:H4'	2.30	0.46
32:BI:40:THR:O	32:BI:41:GLU:C	2.54	0.46
38:BR:54:LEU:HD23	38:BR:66:VAL:HG23	1.97	0.46
38:BR:76:VAL:CG1	38:BR:77:ARG:N	2.78	0.46
41:BU:93:LYS:H	41:BU:93:LYS:HD2	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BW:25:ARG:NH2	43:BW:74:ALA:O	2.47	0.46
55:B8:4:MET:HE2	55:B8:61:LEU:HD13	1.97	0.46
40:AT:29:ARG:HG2	40:AT:85:LYS:C	2.36	0.46
45:BY:14:LEU:CD1	45:BY:23:ARG:H	2.28	0.46
45:BY:77:PRO:O	45:BY:78:ALA:CB	2.64	0.46
46:BZ:101:PRO:O	46:BZ:102:LEU:HD23	2.15	0.46
53:B6:44:ARG:HH11	53:B6:44:ARG:HB2	1.80	0.46
57:BA:1589:C:H2'	57:BA:1590:U:C6	2.50	0.46
46:BZ:67:LEU:N	46:BZ:67:LEU:HD22	2.30	0.46
53:B6:38:LYS:O	53:B6:39:TYR:HD1	1.98	0.46
57:AA:2807:G:C2'	57:AA:2808:U:H5''	2.45	0.46
57:BA:1434:A:H2'	57:BA:1435:G:O4'	2.63	0.46
57:AA:1378:A:C4'	57:AA:1379:A:OP1	2.62	0.46
57:BA:2308:G:C8	57:BA:2309:A:H3'	2.51	0.46
46:AZ:111:VAL:C	46:AZ:113:ALA:N	2.69	0.46
49:B2:3:LEU:O	49:B2:7:ARG:HG3	2.15	0.46
57:BA:826:U:H2'	57:BA:828:U:O4'	2.15	0.46
57:AA:2219:G:O2'	57:AA:2220:G:H5'	2.15	0.46
44:BX:66:LEU:HD23	44:BX:66:LEU:C	2.35	0.46
57:AA:1053:C:O2	57:AA:1106:A:N3	2.48	0.46
57:AA:1352:U:O2'	57:AA:1353:A:H5'	2.15	0.46
57:AA:1405:U:H2'	57:AA:1406:U:H6	1.79	0.46
57:AA:1493:C:C4	57:AA:2206:G:O2'	2.69	0.46
57:AA:443:A:H1'	57:AA:1201:C:O4'	2.14	0.46
27:AD:70:TRP:CZ3	27:AD:150:LYS:HA	2.51	0.46
27:AD:26:LYS:O	27:AD:27:THR:CB	2.64	0.46
36:AP:83:VAL:HG11	36:AP:112:LEU:HD21	1.95	0.46
36:AP:62:LEU:CD2	36:AP:62:LEU:H	2.25	0.46
37:AQ:14:ARG:HG2	37:AQ:41:TRP:CH2	2.50	0.46
42:AV:18:LEU:CG	42:AV:19:LYS:H	2.29	0.46
43:AW:10:VAL:O	43:AW:11:ARG:CB	2.62	0.46
43:AW:47:VAL:O	43:AW:50:VAL:HG12	2.15	0.46
44:AX:35:THR:HG22	44:AX:36:LYS:N	2.31	0.46
30:BG:66:GLN:NE2	51:B4:1:MET:HE3	2.30	0.46
51:B4:31:ILE:O	51:B4:31:ILE:HG22	2.14	0.46
39:BS:93:LYS:HG2	58:BB:47:C:O2'	2.14	0.46
30:BG:27:ASN:C	30:BG:29:TRP:N	2.69	0.46
36:BP:101:VAL:CG2	36:BP:102:ARG:N	2.77	0.46
36:BP:125:VAL:HG13	36:BP:138:LEU:HD21	1.97	0.46
44:BX:35:THR:HB	44:BX:38:GLU:H	1.81	0.46
40:AT:23:ARG:HB2	40:AT:24:PRO:HD2	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B2:40:SER:OG	49:B2:41:ILE:HG23	2.15	0.46
43:BW:18:ARG:CG	43:BW:76:VAL:HG13	2.45	0.46
46:BZ:122:ARG:HH11	46:BZ:122:ARG:HG2	1.81	0.46
53:A6:16:CYS:O	53:A6:17:LYS:HB2	2.16	0.46
58:BB:65:C:O2'	58:BB:66:A:H5'	2.15	0.46
57:BA:332:A:H4'	57:BA:333:G:OP1	2.16	0.46
40:BT:51:ARG:HG2	40:BT:52:ILE:N	2.31	0.46
53:A6:30:THR:HG23	53:A6:31:PRO:HD2	1.97	0.46
57:AA:1484:G:C3'	57:AA:1485:G:H5''	2.45	0.46
28:BE:152:LYS:HG2	34:BN:78:TYR:CE1	2.50	0.46
57:AA:27:G:N2	57:AA:512:G:O2'	2.48	0.46
57:AA:1416:G:O2'	57:AA:1417:C:H5	1.97	0.46
57:BA:523:C:H2'	57:BA:524:U:H5'	1.98	0.46
47:B0:51:VAL:HG21	47:B0:79:VAL:O	2.14	0.46
47:B0:70:GLN:NE2	47:B0:80:HIS:NE2	2.63	0.46
41:BU:74:LEU:HD12	41:BU:74:LEU:N	2.30	0.46
55:A8:38:GLY:O	55:A8:42:ARG:HB2	2.16	0.46
42:AV:79:VAL:HG22	57:AA:1188:U:H4'	1.97	0.46
46:BZ:52:SER:OG	46:BZ:53:ILE:N	2.46	0.46
46:AZ:35:ARG:CG	46:AZ:35:ARG:HH11	2.28	0.46
57:AA:2307:G:H4'	57:AA:2307:G:OP1	2.15	0.46
57:AA:2011:U:H2'	57:AA:2012:G:H5'	1.97	0.46
57:BA:2126:A:O2'	57:BA:2127:G:OP2	2.30	0.46
56:B9:19:ARG:NH2	56:B9:26:ILE:HD11	2.31	0.46
45:BY:95:LYS:HD3	45:BY:100:ALA:HB1	1.97	0.46
57:BA:969:U:H2'	57:BA:970:C:C6	2.51	0.46
41:BU:52:ARG:HH11	41:BU:52:ARG:CG	2.29	0.46
57:AA:2870:C:C2'	57:AA:2871:C:H5'	2.45	0.46
57:BA:519:U:H2'	57:BA:520:G:C8	2.51	0.46
38:BR:104:ARG:HD2	38:BR:109:ALA:HB3	1.97	0.46
57:BA:2877:G:O2'	57:BA:2878:U:H5'	2.14	0.46
44:AX:66:LEU:C	44:AX:66:LEU:HD23	2.35	0.46
46:AZ:125:LEU:HG	46:AZ:164:ALA:HB3	1.97	0.46
57:AA:2693:A:H2'	57:AA:2694:G:H8	1.80	0.46
26:AC:52:PRO:HG2	26:AC:53:ARG:CD	2.45	0.46
29:AF:51:THR:CB	29:AF:88:VAL:HG11	2.42	0.46
31:AH:85:LYS:CD	31:AH:133:VAL:HB	2.46	0.46
36:AP:47:ASP:HB2	36:AP:51:PHE:HB2	1.97	0.46
36:AP:48:PRO:CG	36:AP:49:ARG:H	2.21	0.46
44:AX:80:ILE:HD13	44:AX:80:ILE:O	2.14	0.46
57:BA:1053:C:O2	57:BA:1106:A:N3	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:138:GLN:C	30:BG:140:ILE:H	2.19	0.46
30:BG:4:ASP:HB2	30:BG:8:LYS:HG2	1.97	0.46
30:BG:72:ARG:HB3	30:BG:87:PRO:HD2	1.98	0.46
32:BI:92:VAL:CG1	32:BI:120:ILE:HD13	2.34	0.46
38:BR:100:LEU:HD21	38:BR:113:LEU:HB3	1.97	0.46
27:BD:36:PRO:O	27:BD:37:LEU:HD23	2.16	0.46
40:AT:77:PRO:O	40:AT:78:LEU:CB	2.63	0.46
57:BA:1578:U:H2'	57:BA:1579:A:H5'	1.97	0.46
45:BY:96:ILE:HG22	45:BY:97:ARG:N	2.25	0.46
57:BA:1431:U:H2'	57:BA:1432:C:C6	2.50	0.46
40:BT:91:ARG:HA	40:BT:117:ASP:H	1.80	0.46
28:BE:117:MET:O	28:BE:117:MET:CG	2.64	0.46
28:BE:57:LYS:HG3	28:BE:57:LYS:O	2.15	0.46
28:AE:69:LYS:C	28:AE:71:GLY:H	2.18	0.46
28:AE:10:GLY:HA3	40:AT:8:LYS:NZ	2.31	0.46
32:BI:2:LYS:HB2	32:BI:39:ALA:HB3	1.96	0.46
57:BA:674:G:H2'	57:BA:675:A:H8	4.83	0.46
37:AQ:133:ARG:HH11	37:AQ:133:ARG:HG3	1.81	0.46
27:AD:28:GLU:N	27:AD:29:PRO:HD2	2.23	0.46
57:BA:433:C:O2'	57:BA:434:U:H5'	2.29	0.46
36:BP:140:ALA:O	36:BP:141:ALA:HB3	2.16	0.46
48:A1:29:GLY:O	48:A1:30:VAL:CG2	2.59	0.46
57:BA:2713:A:H3'	57:BA:2714:G:C5'	2.46	0.46
57:BA:1386:C:H2'	57:BA:1387:C:H6	1.80	0.46
36:AP:84:ASN:HD22	36:AP:84:ASN:N	2.14	0.46
57:AA:848:G:C4	57:AA:933:A:H8	2.32	0.46
51:B4:27:THR:HG23	51:B4:27:THR:O	2.14	0.46
49:A2:63:VAL:HA	49:A2:66:GLU:CG	2.44	0.46
49:B2:3:LEU:HD23	49:B2:3:LEU:C	2.34	0.46
47:B0:39:ARG:HH21	57:BA:2355:C:H1'	1.80	0.46
58:BB:62:C:C2	58:BB:63:G:C8	3.03	0.46
57:AA:716:A:H3'	57:AA:717:G:H5''	1.97	0.46
57:BA:2086:U:H2'	57:BA:2087:G:C8	2.50	0.46
27:BD:231:HIS:CG	27:BD:232:PRO:HD2	2.51	0.46
35:BO:67:LYS:HZ3	57:BA:2726:U:H6	1.63	0.46
37:BQ:66:ILE:HG22	37:BQ:104:PHE:CE2	2.51	0.46
30:AG:5:VAL:HG22	51:A4:25:TYR:HE1	1.81	0.46
57:AA:133:C:O2'	57:AA:134:C:H5'	2.16	0.46
27:AD:14:ARG:NH2	57:AA:1693:U:O2'	2.49	0.46
58:AB:44:G:C2	58:AB:48:A:C2	3.03	0.46
31:AH:109:PHE:C	31:AH:111:HIS:N	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AI:109:ILE:HD12	32:AI:109:ILE:N	2.31	0.46
39:AS:34:HIS:CE1	39:AS:54:LEU:HB3	2.50	0.46
43:AW:62:HIS:O	43:AW:63:ASP:C	2.54	0.46
45:AY:31:LEU:HD23	45:AY:36:ALA:C	2.36	0.46
57:BA:2870:C:C2'	57:BA:2871:C:H5'	2.46	0.46
58:BB:81:G:H2'	58:BB:82:G:C5'	2.46	0.46
36:BP:125:VAL:O	36:BP:125:VAL:HG22	2.15	0.46
42:BV:28:GLU:CB	42:BV:29:PRO:HD2	2.40	0.46
27:BD:35:LYS:NZ	27:BD:36:PRO:CD	2.76	0.46
40:AT:29:ARG:CZ	40:AT:86:ILE:HG22	2.45	0.46
57:BA:1578:U:H2'	57:BA:1579:A:C5'	2.46	0.46
45:BY:84:ARG:HG3	45:BY:97:ARG:HD3	1.96	0.46
57:BA:1503:U:C4	57:BA:1504:C:N4	2.80	0.46
57:AA:1590:U:H2'	57:AA:1591:G:C5'	2.27	0.46
53:A6:5:VAL:HG13	53:A6:7:ILE:N	2.28	0.46
42:AV:99:ILE:O	42:AV:99:ILE:HG12	2.15	0.46
57:AA:154:G:H2'	57:AA:154(A):C:C6	2.50	0.46
31:BH:68:THR:O	31:BH:69:ARG:C	2.53	0.46
38:BR:4:LEU:O	38:BR:5:LYS:CD	2.61	0.46
50:A3:35:ARG:NH2	50:A3:37:LEU:HD21	2.17	0.46
57:BA:2098:U:H2'	57:BA:2099:U:O4'	2.15	0.46
49:B2:16:LEU:O	49:B2:17:SER:CB	2.53	0.46
57:BA:1153:C:H2'	57:BA:1154:G:O4'	2.16	0.46
57:BA:2230:G:H2'	57:BA:2231:C:H6	1.81	0.46
27:BD:176:ARG:CG	27:BD:176:ARG:HH11	2.24	0.46
57:AA:1386:C:H2'	57:AA:1387:C:H6	1.80	0.46
57:AA:433:C:O2'	57:AA:434:U:H5'	2.29	0.46
57:BA:359:A:H2'	57:BA:360:G:H5'	1.98	0.46
57:BA:2029:G:H2'	57:BA:2031:A:OP2	2.16	0.46
57:AA:2465:C:O2'	57:AA:2466:C:H5'	2.15	0.46
57:BA:1961:C:C2'	57:BA:1962:C:H5'	2.46	0.46
46:BZ:147:GLY:O	46:BZ:148:ASP:O	2.33	0.46
57:AA:280:C:C2'	57:AA:281:G:H5'	2.46	0.46
44:BX:71:GLY:HA3	57:BA:64:A:O3'	2.15	0.46
42:AV:8:GLY:O	57:AA:1161:C:H1'	2.15	0.46
57:AA:324:A:H2'	57:AA:325:G:O4'	2.16	0.46
57:BA:2320:A:H2'	57:BA:2320:A:N3	2.30	0.46
57:AA:1496:A:H8	57:AA:1577:C:O2'	1.98	0.46
57:AA:1907:G:O2'	57:AA:1908:C:H5'	2.16	0.46
57:AA:545:C:H2'	57:AA:547:A:C5'	2.46	0.46
27:AD:30:GLU:CG	27:AD:63:ARG:CZ	2.90	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AF:9:ILE:HA	29:AF:13:SER:O	2.15	0.46
32:AI:129:THR:CG2	32:AI:130:TYR:H	2.28	0.46
38:AR:100:LEU:N	38:AR:100:LEU:HD22	2.31	0.46
45:AY:13:VAL:CG2	45:AY:28:LYS:NZ	2.77	0.46
57:BA:1047:G:N2	57:BA:1111:A:H62	2.13	0.46
30:BG:46:ALA:HB2	30:BG:88:ILE:CG1	2.46	0.46
33:BJ:29:TYR:H	33:BJ:83:TYR:CB	2.28	0.46
34:BN:21:LYS:HG2	34:BN:22:THR:N	2.30	0.46
39:BS:98:VAL:HG12	39:BS:100:ALA:HB2	1.96	0.46
39:BS:13:ARG:CG	39:BS:14:VAL:N	2.72	0.46
39:BS:89:ARG:CG	39:BS:89:ARG:HH11	2.28	0.46
41:BU:57:PHE:C	41:BU:59:ARG:N	2.61	0.46
27:BD:71:ASP:CG	27:BD:103:ARG:HH22	2.18	0.46
27:BD:76:PRO:HG2	27:BD:98:VAL:HG21	1.97	0.46
27:BD:95:LEU:HD13	27:BD:97:TYR:CE1	2.50	0.46
40:AT:31:SER:C	40:AT:32:TYR:CD2	2.89	0.46
40:AT:90:GLN:NE2	40:AT:124:ASP:OD2	2.49	0.46
46:BZ:10:ARG:HB2	46:BZ:38:TYR:HB3	1.97	0.46
35:BO:32:TYR:N	35:BO:32:TYR:CD1	2.83	0.46
40:BT:30:VAL:HA	40:BT:44:ASP:HA	1.97	0.46
40:BT:31:SER:C	40:BT:32:TYR:CD2	2.89	0.46
46:BZ:91:LEU:HD23	46:BZ:96:VAL:HG21	1.98	0.46
46:BZ:61:LEU:HG	46:BZ:63:ASP:OD2	2.16	0.46
55:B8:30:ARG:CZ	57:BA:2419:U:O4	2.64	0.46
57:BA:2729:G:H2'	57:BA:2730:C:H6	1.79	0.46
57:BA:2811:G:O2'	57:BA:2812:G:H5'	2.14	0.46
28:AE:12:THR:O	28:AE:23:VAL:HG22	2.16	0.46
57:AA:528:A:C2	57:AA:2043:C:H5'	2.51	0.46
52:B5:35:GLU:O	52:B5:36:CYS:SG	2.73	0.46
57:AA:271(O):C:HO2'	57:AA:271(P):C:H6	1.55	0.46
57:AA:1417:C:H2'	57:AA:1418:G:O4'	2.16	0.46
57:BA:1722:A:C2	57:BA:1740:G:H8	2.33	0.46
57:AA:519:U:H2'	57:AA:520:G:C8	2.50	0.46
55:A8:30:ARG:CZ	57:AA:2419:U:O4	2.64	0.46
57:AA:2762:G:C2'	57:AA:2763:G:H5'	2.46	0.46
36:AP:80:TYR:CZ	36:AP:111:ARG:HD3	2.51	0.46
47:A0:39:ARG:HH21	57:AA:2355:C:H1'	1.81	0.46
57:AA:648:G:O4'	57:AA:2351:G:H5''	2.16	0.46
51:A4:42:PHE:HB2	51:A4:43:TYR:HD1	1.81	0.46
57:BA:927:G:O2'	57:BA:928:G:H5'	3.45	0.46
33:BJ:111:LEU:O	33:BJ:112:LEU:C	2.54	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BJ:124:ALA:O	33:BJ:125:LEU:O	2.33	0.46
57:BA:614:U:O4'	57:BA:614:U:O2	2.31	0.46
37:AQ:33:GLY:O	37:AQ:131:ILE:HA	2.15	0.46
57:AA:1573:G:H2'	57:AA:1574:C:H5'	1.98	0.46
57:AA:2531:A:H2	57:AA:2658:C:O2	1.99	0.46
26:AC:41:THR:HG21	26:AC:175:PRO:CB	2.45	0.46
26:AC:184:GLU:O	26:AC:185:LYS:HE3	2.16	0.46
27:AD:25:THR:CG2	27:AD:26:LYS:H	2.29	0.46
27:AD:79:VAL:HG11	27:AD:111:LEU:CD1	2.46	0.46
32:AI:88:ILE:HD11	32:AI:142:VAL:HG22	1.97	0.46
36:AP:106:LEU:HB3	36:AP:107:LYS:H	1.61	0.46
39:AS:29:PHE:CD1	58:AB:7:G:C4'	2.96	0.46
57:BA:1368:G:O2'	57:BA:1369:G:H5'	2.16	0.46
26:BC:181:PHE:HD2	26:BC:185:LYS:HB3	1.81	0.46
26:BC:212:SER:HG	26:BC:214:TYR:HE1	1.64	0.46
26:BC:51:ASP:HB3	26:BC:54:ARG:HB2	1.97	0.46
38:BR:44:LEU:N	38:BR:44:LEU:CD1	4.51	0.46
39:BS:101:LEU:HD12	39:BS:101:LEU:H	1.80	0.46
39:BS:99:LYS:O	39:BS:101:LEU:N	2.40	0.46
27:BD:165:ILE:HD13	27:BD:175:LEU:CD2	2.46	0.46
35:AO:64:ARG:CZ	40:AT:70:VAL:HG21	2.46	0.46
49:B2:41:ILE:CG1	49:B2:41:ILE:O	2.62	0.46
45:BY:59:GLY:O	45:BY:60:PHE:CB	2.51	0.46
55:A8:33:ASN:ND2	55:A8:33:ASN:N	2.33	0.46
31:BH:41:MET:CG	31:BH:42:ARG:N	2.61	0.46
28:AE:55:ASN:O	28:AE:57:LYS:N	2.45	0.46
33:BJ:14:LYS:O	33:BJ:18:GLU:CB	2.64	0.46
55:B8:31:HIS:CE1	57:BA:2392:A:OP2	2.63	0.46
26:AC:191:ARG:HH11	26:AC:191:ARG:HG3	1.81	0.46
36:AP:125:VAL:HG13	36:AP:138:LEU:HD21	1.97	0.46
52:B5:41:PRO:O	52:B5:44:THR:OG1	2.34	0.46
47:B0:49:LYS:H	47:B0:80:HIS:HB3	1.80	0.46
53:A6:52:VAL:CG2	53:A6:53:LYS:N	2.79	0.46
54:A7:34:ARG:NH1	54:A7:39:ARG:CG	2.79	0.46
57:BA:1422:G:O2'	57:BA:1423:G:H5'	2.67	0.46
34:AN:68:GLU:HG2	34:AN:88:GLU:OE2	2.16	0.46
37:BQ:109:VAL:HG12	37:BQ:110:THR:N	2.31	0.46
34:AN:62:VAL:HG21	34:AN:66:LYS:HB2	1.96	0.46
26:AC:194:ILE:HG22	26:AC:198:GLU:OE1	2.15	0.46
57:BA:1417:C:H2'	57:BA:1418:G:O4'	2.16	0.46
35:AO:20:MET:O	35:AO:41:ALA:HB1	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2732:G:C3'	57:AA:2733:A:H5'	2.45	0.46
37:AQ:135:ASP:O	37:AQ:138:ASP:OD2	2.33	0.46
28:AE:188:VAL:CG2	28:AE:189:PRO:HD2	2.46	0.46
57:BA:2552:U:O2	57:BA:2554:U:H5'	2.16	0.46
57:BA:927:G:H5'	57:BA:928:G:OP2	2.15	0.46
57:BA:2777:G:H4'	57:BA:2778:A:H5'	1.97	0.46
57:AA:2236:C:H2'	57:AA:2237:G:H5'	1.97	0.46
57:AA:2320:A:H2'	57:AA:2320:A:N3	2.30	0.46
40:AT:6:LEU:HD23	40:AT:6:LEU:O	2.16	0.46
57:AA:2674:G:H2'	57:AA:2675:A:C8	2.51	0.46
38:BR:40:LYS:HG3	57:BA:1651:G:OP1	2.16	0.46
57:AA:1047:G:H4'	57:AA:1047:G:OP2	2.14	0.46
57:AA:544:G:N2	57:AA:547:A:H2'	2.30	0.46
57:AA:862:G:H2'	57:AA:863:A:O4'	2.16	0.46
31:AH:97:ARG:O	31:AH:103:LEU:HD12	2.15	0.46
32:AI:103:ARG:O	32:AI:104:GLN:C	2.53	0.46
32:AI:118:LYS:NZ	32:AI:118:LYS:CB	3.87	0.46
32:AI:121:LYS:HA	32:AI:121:LYS:HD2	1.85	0.46
36:AP:6:LEU:HG	36:AP:9:ASN:HB3	1.96	0.46
42:AV:39:LEU:HB3	42:AV:47:VAL:HG21	1.97	0.46
45:AY:27:VAL:HG12	45:AY:28:LYS:H	1.81	0.46
29:BF:65:TRP:CH2	29:BF:75:HIS:HD2	2.33	0.46
32:BI:67:ARG:HG2	32:BI:67:ARG:NH1	2.31	0.46
32:BI:88:ILE:HD11	32:BI:142:VAL:HG22	1.98	0.46
36:BP:34:GLY:O	36:BP:35:HIS:CB	2.64	0.46
43:BW:5:ALA:HB1	43:BW:50:VAL:CG2	2.45	0.46
27:BD:121:PRO:HA	27:BD:135:PHE:HD1	1.80	0.46
27:BD:76:PRO:HG2	27:BD:98:VAL:CG2	2.45	0.46
40:AT:55:ASN:H	40:AT:59:THR:HG22	1.80	0.46
57:BA:455:C:H3'	57:BA:456:C:H5''	1.98	0.46
55:B8:50:LEU:CD1	55:B8:51:ALA:N	2.74	0.46
28:BE:181:LEU:HD23	40:BT:11:GLU:OE2	2.15	0.46
28:AE:117:MET:CG	28:AE:117:MET:O	2.63	0.46
34:BN:73:THR:CG2	34:BN:82:LEU:HD11	2.38	0.46
54:A7:12:ARG:NH2	54:A7:44:PRO:HB3	2.31	0.46
57:BA:909:A:H2'	57:BA:912:C:H5	1.81	0.46
57:BA:963:U:H2'	57:BA:964:C:H6	1.80	0.46
57:AA:1771:C:C1'	57:AA:1786:A:C8	2.99	0.46
57:BA:470:A:H2'	57:BA:471:A:O4'	2.15	0.46
57:BA:469:G:C2'	57:BA:470:A:H5''	2.45	0.46
57:AA:1385:G:O2'	57:AA:1396:U:H6	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:AZ:35:ARG:NH1	46:AZ:35:ARG:HG3	2.30	0.46
57:AA:2695:C:H2'	57:AA:2696:U:C6	2.51	0.46
55:A8:14:VAL:HG22	55:A8:22:VAL:HG13	1.96	0.46
57:AA:83:G:N2	57:AA:102:G:H2'	2.31	0.46
57:BA:1688:U:H1'	57:BA:1701:A:C6	2.51	0.46
57:BA:716:A:H3'	57:BA:717:G:H5''	1.97	0.46
57:BA:1427:A:H1'	57:BA:1428:C:C5	2.51	0.46
48:B1:57:GLU:O	48:B1:58:ILE:O	2.34	0.46
48:B1:58:ILE:HD11	48:B1:60:PHE:CZ	2.51	0.46
34:AN:70:LYS:HE3	34:AN:72:TYR:CE2	2.51	0.46
47:B0:77:ARG:NH2	57:BA:857:C:OP1	2.48	0.46
51:A4:43:TYR:O	51:A4:44:THR:O	2.34	0.46
41:BU:111:GLU:OE2	41:BU:111:GLU:HA	2.16	0.46
57:AA:2367:G:O2'	57:AA:2368:C:H5'	2.14	0.46
57:AA:197:A:H62	57:AA:2430:A:H2'	1.81	0.46
57:AA:545:C:H3'	57:AA:547:A:C5'	2.40	0.46
57:AA:708:C:H5'	57:AA:709:U:OP2	2.16	0.46
57:AA:860:U:O4'	57:AA:860:U:O2	2.34	0.46
27:AD:27:THR:O	27:AD:27:THR:CG2	2.64	0.46
30:AG:29:TRP:HE1	58:AB:54:G:H21	1.63	0.46
31:AH:68:THR:O	31:AH:69:ARG:C	2.54	0.46
32:AI:131:LYS:HA	32:AI:135:GLU:HB3	1.98	0.46
32:AI:37:VAL:CG1	32:AI:38:LEU:N	2.79	0.46
36:AP:112:LEU:HD22	36:AP:113:LYS:H	1.79	0.46
36:AP:32:THR:CG2	36:AP:37:GLY:HA2	2.34	0.46
38:AR:44:LEU:CD1	38:AR:44:LEU:N	4.52	0.46
41:AU:46:ALA:O	41:AU:50:ARG:HG3	2.16	0.46
43:AW:54:ALA:O	43:AW:57:ASN:HB2	2.17	0.46
45:AY:22:GLY:O	45:AY:23:ARG:HG2	2.15	0.46
45:AY:8:LYS:HB2	45:AY:28:LYS:HE2	1.98	0.46
26:BC:184:GLU:O	26:BC:185:LYS:HE3	2.16	0.46
29:BF:9:ILE:HG23	29:BF:12:LEU:C	2.37	0.46
30:BG:77:ILE:CG2	30:BG:77:ILE:O	2.62	0.46
36:BP:18:ARG:NH1	36:BP:18:ARG:O	2.48	0.46
46:BZ:77:ASP:OD2	46:BZ:79:ARG:O	2.33	0.46
57:AA:1899:G:H21	57:AA:1902:C:H5	1.64	0.46
57:BA:1493:C:C2'	57:BA:1493:C:O2	2.64	0.46
45:BY:38:ILE:CG2	45:BY:39:VAL:N	2.78	0.46
57:BA:1432:C:H2'	57:BA:1433:U:O4'	2.16	0.46
33:BJ:73:GLY:O	33:BJ:75:GLN:N	2.43	0.46
53:B6:11:LEU:HD13	53:B6:11:LEU:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BV:99:ILE:O	42:BV:99:ILE:HG12	2.15	0.46
57:AA:152:G:H1	57:AA:174:C:N4	1.94	0.46
28:BE:64:LYS:C	28:BE:66:HIS:H	2.19	0.46
31:BH:123:PHE:CE2	31:BH:133:VAL:HG22	2.51	0.46
31:BH:43:VAL:O	31:BH:43:VAL:HG23	2.16	0.46
28:AE:187:ALA:HB3	57:AA:2729:G:H1'	1.98	0.46
57:AA:2297:C:O2'	57:AA:2298:A:H5'	2.16	0.46
57:AA:2807:G:H3'	57:AA:2808:U:H5''	1.98	0.46
57:BA:1542:A:C8	57:BA:1542:A:H3'	2.51	0.46
34:AN:120:LEU:O	34:AN:121:LYS:HD2	2.16	0.46
57:BA:1409:C:H2'	57:BA:1410:G:H8	2.02	0.46
37:AQ:133:ARG:O	37:AQ:134:ARG:HG2	2.16	0.46
37:BQ:29:PHE:HB3	37:BQ:65:PHE:CE2	2.51	0.46
57:BA:2531:A:H2	57:BA:2658:C:O2	1.98	0.46
48:B1:45:ASN:HD22	48:B1:46:LEU:N	2.13	0.46
57:AA:651:G:H2'	57:AA:652:C:H5'	1.98	0.46
46:AZ:108:PRO:CB	46:AZ:144:LEU:HB2	2.46	0.46
44:AX:64:LYS:HE2	44:AX:64:LYS:HB3	1.72	0.46
46:BZ:5:LEU:HD21	46:BZ:39:VAL:CG2	2.46	0.46
53:A6:18:ARG:HG3	53:A6:19:ARG:HH11	1.81	0.46
48:B1:30:VAL:H	57:BA:2396:G:H4'	1.81	0.46
57:AA:2672:G:H3'	57:AA:2673:G:H5''	1.98	0.46
57:AA:654(N):G:H2'	57:AA:654(O):G:O4'	2.16	0.46
57:AA:963:U:H2'	57:AA:964:C:C6	2.50	0.45
26:AC:6:LYS:C	26:AC:8:TYR:N	2.68	0.45
27:AD:142:VAL:HG21	27:AD:191:ALA:CB	2.46	0.45
27:AD:72:LYS:HZ2	27:AD:72:LYS:HB3	1.80	0.45
31:AH:43:VAL:O	31:AH:43:VAL:HG23	2.16	0.45
34:AN:132:ALA:O	34:AN:133:GLN:CB	2.64	0.45
36:AP:106:LEU:HD13	36:AP:112:LEU:HD23	1.97	0.45
38:AR:76:VAL:CG1	38:AR:77:ARG:N	2.78	0.45
39:AS:105:ALA:C	39:AS:107:GLU:H	2.18	0.45
39:AS:28:VAL:HG22	39:AS:99:LYS:NZ	2.31	0.45
39:AS:98:VAL:CG1	39:AS:100:ALA:HB2	2.46	0.45
44:AX:55:ASN:HB2	44:AX:80:ILE:CD1	2.46	0.45
45:AY:2:ARG:HG2	45:AY:2:ARG:HH11	1.80	0.45
30:BG:92:VAL:HG23	58:BB:42:C:O2	2.16	0.45
32:BI:25:TYR:CE2	32:BI:29:TYR:CD2	3.04	0.45
32:BI:77:LEU:CD2	32:BI:141:LYS:N	2.79	0.45
41:BU:61:TRP:CH2	41:BU:94:ASN:HB2	2.51	0.45
27:BD:25:THR:CG2	27:BD:26:LYS:H	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BH:153:LYS:HB2	31:BH:154:PRO:HD2	1.97	0.45
40:AT:106:SER:C	40:AT:107:ASP:OD1	2.55	0.45
45:BY:2:ARG:HG2	45:BY:2:ARG:HH11	1.81	0.45
53:B6:48:VAL:CG2	53:B6:49:HIS:H	2.17	0.45
57:BA:1484:G:C3'	57:BA:1485:G:H5''	2.45	0.45
57:AA:1846:G:H5'	57:AA:1846:G:C8	2.44	0.45
57:BA:2014:A:H2'	57:BA:2015:A:C8	2.50	0.45
51:A4:30:GLU:O	51:A4:31:ILE:HD12	2.16	0.45
53:B6:11:LEU:O	53:B6:24:GLU:N	2.41	0.45
34:AN:73:THR:CG2	34:AN:82:LEU:HD11	2.36	0.45
28:BE:77:ILE:HG22	28:BE:78:LEU:CD1	2.43	0.45
31:BH:7:LEU:CD2	31:BH:69:ARG:HD2	2.45	0.45
40:AT:12:SER:O	40:AT:13:ARG:CZ	2.64	0.45
57:BA:2807:G:C2'	57:BA:2808:U:H5''	2.46	0.45
40:AT:3:ARG:C	40:AT:5:ALA:N	2.67	0.45
51:A4:51:ASP:C	51:A4:51:ASP:OD2	2.55	0.45
57:BA:79:G:H1'	57:BA:80:G:OP1	6.72	0.45
57:AA:302:C:H2'	57:AA:303:U:C6	2.51	0.45
58:BB:23:G:C2	58:BB:24:G:O6	2.69	0.45
58:AB:23:G:C2	58:AB:24:G:O6	2.70	0.45
27:BD:267:SER:O	27:BD:268:ARG:C	2.54	0.45
47:B0:36:ILE:HG23	57:BA:2354:G:O2'	2.16	0.45
57:BA:2341:G:H2'	57:BA:2342:C:C6	2.51	0.45
57:BA:1264:G:H3'	57:BA:1265:A:H5''	1.97	0.45
51:B4:42:PHE:HB2	51:B4:43:TYR:HD1	1.81	0.45
57:BA:2777:G:H5''	57:BA:2778:A:C5'	2.47	0.45
29:AF:54:ARG:HD2	29:AF:81:PRO:HD3	1.98	0.45
57:AA:2082:A:H2'	57:AA:2083:G:O4'	2.16	0.45
44:AX:29:TRP:CZ2	44:AX:76:ARG:NH2	2.84	0.45
57:AA:646:A:H2'	57:AA:647:G:O4'	2.16	0.45
57:BA:2850:A:OP2	57:BA:2866:U:H5	1.98	0.45
57:AA:843:G:O2'	57:AA:844:C:H5'	2.16	0.45
30:AG:75:LYS:HE3	57:AA:2310:A:C8	2.50	0.45
57:AA:2532:G:O2'	57:AA:2657:A:N6	2.48	0.45
57:AA:330:A:HO2'	57:AA:331:A:H8	1.58	0.45
30:AG:13:GLU:O	30:AG:14:GLU:HG3	2.16	0.45
30:AG:40:ASN:O	30:AG:41:GLN:HG3	2.16	0.45
30:AG:39:ILE:CD1	30:AG:60:LEU:HD21	2.42	0.45
32:AI:92:VAL:CG1	32:AI:120:ILE:HD13	2.35	0.45
34:AN:46:VAL:HG13	34:AN:48:MET:HG3	1.98	0.45
41:AU:68:ALA:O	41:AU:71:GLN:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:AU:8:VAL:HG22	41:AU:12:ARG:HG2	1.98	0.45
41:AU:97:ASP:C	41:AU:99:ALA:N	2.69	0.45
57:BA:1112:G:O2'	57:BA:1113:U:C6	2.67	0.45
29:BF:20:LEU:HB2	29:BF:199:TRP:HH2	1.81	0.45
32:BI:78:THR:H	32:BI:104:GLN:NE2	2.07	0.45
36:BP:105:LEU:HD12	36:BP:105:LEU:N	2.30	0.45
42:BV:19:LYS:HZ3	42:BV:20:LEU:N	2.12	0.45
43:BW:73:ALA:O	43:BW:106:ILE:HG12	2.17	0.45
27:BD:25:THR:O	27:BD:26:LYS:O	2.34	0.45
35:AO:17:ARG:HH11	35:AO:17:ARG:HG3	4.50	0.45
35:AO:2:ILE:CD1	35:AO:8:LEU:HD11	2.31	0.45
45:BY:54:LYS:HD3	57:BA:530:G:C5	78.51	0.45
53:B6:41:PRO:HD3	53:B6:47:THR:HG22	1.99	0.45
55:B8:50:LEU:C	55:B8:52:LYS:H	2.20	0.45
53:B6:10:LEU:CD2	53:B6:10:LEU:N	2.77	0.45
57:AA:866:A:C6	57:AA:914:C:C5	3.04	0.45
57:BA:1999:C:H5''	57:BA:2723:C:O2'	2.17	0.45
28:BE:132:HIS:CG	28:BE:135:HIS:NE2	2.84	0.45
28:BE:188:VAL:HG23	28:BE:189:PRO:HD2	1.96	0.45
28:AE:57:LYS:HG3	28:AE:57:LYS:O	2.16	0.45
28:AE:82:ARG:O	28:AE:84:PHE:N	2.48	0.45
46:AZ:171:ILE:HD12	46:AZ:172:ALA:HB3	1.98	0.45
53:A6:39:TYR:OH	57:AA:2347:C:OP1	2.32	0.45
57:AA:528:A:H2	57:AA:2043:C:H4'	1.77	0.45
57:BA:218:A:C2	57:BA:235:U:H4'	2.52	0.45
57:BA:2262:U:O2'	57:BA:2263:C:H5'	2.16	0.45
57:AA:2476:A:C2	57:AA:2477:C:C6	3.04	0.45
48:B1:82:LEU:CD2	48:B1:82:LEU:N	2.74	0.45
56:B9:1:MET:SD	56:B9:31:LYS:O	2.74	0.45
37:AQ:134:ARG:CZ	46:AZ:122:ARG:NH2	2.77	0.45
57:AA:1721:G:C2	57:AA:1739:U:OP2	2.69	0.45
27:BD:28:GLU:N	27:BD:29:PRO:HD2	2.24	0.45
57:BA:118:A:H5'	57:BA:119:A:C8	2.46	0.45
57:AA:760:G:H2'	57:AA:761:A:O4'	2.16	0.45
37:AQ:110:THR:HG23	37:AQ:113:GLN:CB	2.45	0.45
57:AA:1460:A:H2'	57:AA:1461:G:O4'	5.59	0.45
57:AA:1419:A:H2'	57:AA:1421:G:N7	2.30	0.45
57:AA:1487:G:O2'	57:AA:1488:G:H5'	6.22	0.45
52:B5:19:ARG:NH1	57:BA:1265:A:H3'	2.31	0.45
51:A4:2:LYS:HG2	58:AB:44:G:OP2	2.15	0.45
30:AG:101:ILE:HD13	51:A4:9:LEU:HD11	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:AY:44:ILE:HG21	57:AA:480:A:H1'	1.98	0.45
26:AC:40:GLU:O	26:AC:178:LYS:HA	2.16	0.45
26:AC:46:ALA:HA	26:AC:212:SER:O	2.16	0.45
29:AF:22:ALA:C	29:AF:24:LEU:N	2.69	0.45
31:AH:83:TYR:HB2	31:AH:84:SER:H	1.53	0.45
31:AH:8:PRO:O	31:AH:9:ILE:HG22	2.16	0.45
36:AP:101:VAL:HG23	36:AP:102:ARG:N	2.31	0.45
39:AS:70:GLY:C	39:AS:101:LEU:HD23	2.37	0.45
42:AV:2:PHE:CE2	42:AV:13:ARG:HD2	2.51	0.45
45:AY:84:ARG:HG3	45:AY:97:ARG:HD3	1.98	0.45
26:BC:40:GLU:O	26:BC:178:LYS:HA	2.16	0.45
41:BU:83:LEU:CD1	41:BU:83:LEU:H	2.29	0.45
27:BD:142:VAL:HG21	27:BD:191:ALA:CB	2.46	0.45
57:AA:191:A:H2'	57:AA:192:C:H6	1.81	0.45
57:BA:530:G:C5	57:BA:2022:U:H5''	2.51	0.45
31:BH:7:LEU:CD2	31:BH:69:ARG:CD	2.93	0.45
57:BA:2287:A:C2	57:BA:2346:A:C2	3.04	0.45
28:AE:63:LEU:O	28:AE:65:GLY:N	2.49	0.45
58:BB:7:G:C2'	58:BB:8:U:H5''	2.45	0.45
46:AZ:152:ALA:HA	46:AZ:168:GLU:N	2.31	0.45
28:AE:181:LEU:HD23	40:AT:11:GLU:OE2	2.16	0.45
57:BA:866:A:C6	57:BA:914:C:C5	3.04	0.45
55:B8:37:SER:C	55:B8:39:LYS:N	2.67	0.45
37:BQ:43:THR:HB	37:BQ:45:GLN:HE21	1.80	0.45
47:A0:49:LYS:H	47:A0:80:HIS:HB3	1.82	0.45
57:AA:2291:U:H2'	57:AA:2292:C:C6	2.51	0.45
46:AZ:141:VAL:HA	46:AZ:144:LEU:HD23	1.98	0.45
42:BV:82:ARG:NH1	42:BV:82:ARG:HG2	2.30	0.45
30:AG:174:GLU:OE1	30:AG:182:LYS:HE2	2.16	0.45
30:AG:180:PHE:CB	30:AG:182:LYS:HG3	2.45	0.45
57:BA:1789:A:H2'	57:BA:1790:C:O4'	2.15	0.45
41:AU:77:SER:HG	57:AA:1011:G:P	2.38	0.45
48:B1:41:ARG:HD3	48:B1:43:TYR:CE2	2.51	0.45
34:BN:62:VAL:HG13	34:BN:62:VAL:O	2.17	0.45
57:BA:654(U):A:H2'	57:BA:654(V):A:C8	2.51	0.45
57:AA:2742:C:O2'	57:AA:2743:C:H5'	2.16	0.45
57:AA:247:G:H4'	57:AA:386:G:C6	2.52	0.45
57:BA:2408:U:H2'	57:BA:2409:G:C8	2.52	0.45
57:BA:2693:A:H2'	57:BA:2694:G:H8	1.81	0.45
40:AT:101:PHE:C	40:AT:101:PHE:CD2	2.90	0.45
57:AA:2378:A:O5'	57:AA:2378:A:H8	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:30:G:H2'	57:AA:31:C:C6	2.52	0.45
27:AD:133:LEU:HA	27:AD:136:ILE:HD12	1.97	0.45
31:AH:41:MET:HE2	31:AH:42:ARG:C	2.36	0.45
31:AH:84:SER:O	31:AH:85:LYS:HB3	2.16	0.45
38:AR:81:ASP:O	38:AR:85:PRO:HG2	2.16	0.45
41:AU:78:THR:O	41:AU:79:PHE:C	2.55	0.45
41:AU:8:VAL:HG21	41:AU:12:ARG:CZ	2.47	0.45
42:AV:39:LEU:HB3	42:AV:47:VAL:CG2	2.47	0.45
45:AY:52:SER:HA	45:AY:56:PRO:HA	1.99	0.45
45:AY:8:LYS:HE2	45:AY:72:VAL:O	2.15	0.45
45:AY:95:LYS:HD3	45:AY:100:ALA:HB1	1.98	0.45
57:BA:1112:G:O2'	57:BA:1113:U:H6	1.99	0.45
26:BC:48:LEU:CD1	26:BC:172:ILE:HB	2.46	0.45
29:BF:20:LEU:O	29:BF:24:LEU:HD23	2.15	0.45
30:BG:103:LEU:HD23	30:BG:106:LEU:HD23	1.99	0.45
30:BG:42:GLY:N	30:BG:43:LEU:HD22	2.30	0.45
42:BV:49:THR:CB	42:BV:50:PRO:CD	2.86	0.45
55:A8:61:LEU:N	55:A8:63:PRO:HD2	2.32	0.45
27:BD:133:LEU:HA	27:BD:136:ILE:HD12	1.99	0.45
27:BD:75:ILE:HG21	27:BD:99:ASP:HB2	1.99	0.45
46:BZ:15:PRO:O	46:BZ:19:ARG:HG3	2.16	0.45
35:BO:87:ILE:HG22	35:BO:88:ASN:N	2.31	0.45
40:BT:77:PRO:O	40:BT:78:LEU:CB	2.65	0.45
55:A8:32:LEU:HB3	55:A8:36:LYS:HZ3	1.78	0.45
29:BF:132:VAL:CG2	29:BF:133:ASN:H	2.00	0.45
57:AA:902:C:H2'	57:AA:903:C:C6	2.51	0.45
28:BE:102:VAL:HG12	28:BE:200:GLU:HA	1.99	0.45
53:B6:38:LYS:O	53:B6:39:TYR:CD1	2.69	0.45
53:A6:38:LYS:O	53:A6:39:TYR:CD1	2.69	0.45
57:BA:2807:G:H3'	57:BA:2808:U:H5''	1.98	0.45
57:BA:528:A:N1	57:BA:2043:C:O5'	2.49	0.45
57:BA:1784:A:H4'	57:BA:1785:A:C5'	2.47	0.45
57:BA:1721:G:C2	57:BA:1739:U:OP2	2.69	0.45
27:AD:28:GLU:HB2	27:AD:29:PRO:HD3	1.98	0.45
47:B0:56:ASP:O	47:B0:57:PHE:HB2	2.17	0.45
52:A5:55:ARG:O	52:A5:56:LYS:HE3	2.16	0.45
36:BP:80:TYR:CZ	36:BP:111:ARG:HD3	2.51	0.45
31:AH:136:ILE:N	31:AH:136:ILE:CD1	2.75	0.45
31:AH:149:ARG:HA	31:AH:162:ILE:CG1	2.44	0.45
31:AH:148:ILE:O	31:AH:151:ILE:HG12	2.16	0.45
57:AA:2713:A:H3'	57:AA:2714:G:C5'	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2400:G:N2	57:BA:2417:C:C2	2.84	0.45
38:BR:99:LYS:CD	38:BR:99:LYS:H	2.28	0.45
50:B3:46:ASN:ND2	57:BA:851:U:H5'	2.31	0.45
46:BZ:128:VAL:HG13	46:BZ:128:VAL:O	2.15	0.45
57:AA:769:G:O2'	57:AA:770:G:H5'	2.16	0.45
28:AE:195:LEU:HD12	28:AE:196:VAL:H	1.81	0.45
57:BA:2425:A:H5''	57:BA:2427:C:O4'	2.17	0.45
57:AA:1789:A:H2'	57:AA:1790:C:O4'	2.17	0.45
30:BG:165:THR:OG1	30:BG:168:GLU:HG3	2.17	0.45
34:BN:99:LEU:HD13	34:BN:99:LEU:O	2.15	0.45
37:BQ:24:GLY:N	57:BA:907:U:OP1	2.49	0.45
57:BA:2461:C:H2'	57:BA:2462:U:C6	2.51	0.45
57:AA:1048:A:N6	57:AA:1106:A:N7	2.64	0.45
57:AA:1216:G:O2'	57:AA:1217:C:H5'	2.29	0.45
57:AA:481:G:H1'	57:AA:506:G:H21	1.81	0.45
30:AG:129:GLY:C	30:AG:130:ASN:CG	2.75	0.45
31:AH:123:PHE:CE2	31:AH:133:VAL:HG22	2.51	0.45
39:AS:64:GLU:N	39:AS:64:GLU:OE2	2.42	0.45
41:AU:65:ILE:O	41:AU:69:CYS:CB	2.65	0.45
42:AV:65:GLY:HA3	42:AV:91:TYR:CE1	2.48	0.45
48:B1:94:LEU:CD1	48:B1:94:LEU:N	2.79	0.45
30:BG:39:ILE:HD11	30:BG:60:LEU:CD1	2.29	0.45
32:BI:13:GLY:O	32:BI:17:GLN:OE1	2.35	0.45
36:BP:105:LEU:O	36:BP:106:LEU:HB2	2.17	0.45
37:BQ:22:LYS:HE2	57:BA:864:G:OP2	2.16	0.45
41:BU:112:ARG:CZ	42:BV:46:VAL:HG11	2.44	0.45
40:AT:30:VAL:HG21	40:AT:83:ILE:HG12	1.99	0.45
57:BA:309:G:H1'	57:BA:608:A:C2	64.56	0.45
45:BY:4:LYS:HD2	45:BY:32:PRO:HG2	1.99	0.45
42:BV:99:ILE:N	42:BV:99:ILE:HD13	2.04	0.45
57:BA:528:A:C2	57:BA:2043:C:H5'	2.50	0.45
47:B0:41:ARG:HG3	57:BA:2329:G:H21	1.82	0.45
58:BB:2:C:H2'	58:BB:3:C:C6	2.52	0.45
51:A4:50:VAL:O	51:A4:51:ASP:OD2	2.35	0.45
36:AP:125:VAL:HG22	36:AP:125:VAL:O	2.16	0.45
57:BA:708:C:H5'	57:BA:709:U:OP2	2.16	0.45
57:BA:2528:U:H2'	57:BA:2530:A:O5'	2.17	0.45
57:AA:634:C:H2'	57:AA:635:C:C6	2.51	0.45
57:AA:651:G:O2'	57:AA:652:C:H5'	2.16	0.45
57:BA:651:G:O2'	57:BA:652:C:H5'	2.17	0.45
28:AE:145:LYS:HB2	57:AA:2572:A:N7	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B2:44:LEU:O	49:B2:45:SER:HB3	2.15	0.45
49:B2:46:GLN:O	49:B2:48:HIS:N	2.49	0.45
43:AW:36:LEU:HD13	43:AW:48:ALA:HA	1.98	0.45
57:BA:760:G:H2'	57:BA:761:A:O4'	2.16	0.45
49:A2:22:GLU:HG2	49:A2:64:LEU:HD11	1.98	0.45
57:AA:2223:G:H2'	57:AA:2224:G:C5'	2.45	0.45
57:AA:826:U:H2'	57:AA:828:U:O4'	2.16	0.45
27:BD:240:ALA:HA	57:BA:1971:A:C2	2.52	0.45
28:BE:16:ARG:O	28:BE:17:ASP:HB2	2.15	0.45
57:BA:1958:C:O2'	57:BA:1959:G:H5'	2.17	0.45
41:AU:111:GLU:HA	41:AU:111:GLU:OE2	2.16	0.45
31:AH:67:LEU:HD21	57:AA:2758:A:C4	2.51	0.45
57:AA:197:A:N6	57:AA:2430:A:H2'	2.32	0.45
57:AA:260:G:O4'	57:AA:621:A:H1'	2.16	0.45
58:AB:16:G:O2'	58:AB:17:C:H5'	2.16	0.45
26:AC:40:GLU:O	26:AC:178:LYS:HE3	2.17	0.45
36:AP:102:ARG:O	36:AP:103:ALA:HB2	2.17	0.45
42:AV:39:LEU:HD12	42:AV:50:PRO:O	2.17	0.45
45:AY:49:VAL:HG12	45:AY:50:ARG:N	2.32	0.45
58:BB:56:G:H4'	58:BB:57:A:C8	2.52	0.45
29:BF:22:ALA:C	29:BF:24:LEU:N	2.70	0.45
30:BG:19:LEU:HA	30:BG:22:ARG:HB2	1.98	0.45
36:BP:101:VAL:C	36:BP:103:ALA:H	2.20	0.45
55:B8:2:PRO:O	55:B8:3:LYS:HB3	2.17	0.45
53:A6:44:ARG:HH11	53:A6:44:ARG:HB2	1.81	0.45
57:BA:606:U:H4'	57:BA:658:C:H4'	1.99	0.45
40:BT:106:SER:C	40:BT:107:ASP:OD1	2.54	0.45
40:BT:27:THR:O	40:BT:28:VAL:HG23	2.16	0.45
55:A8:53:PRO:HG2	55:A8:54:GLU:N	2.31	0.45
28:BE:101:ARG:HH11	28:BE:171:GLU:CB	2.22	0.45
31:BH:109:PHE:C	31:BH:111:HIS:N	2.69	0.45
27:AD:210:GLY:C	27:AD:212:SER:N	2.70	0.45
28:AE:102:VAL:HG12	28:AE:200:GLU:HA	1.97	0.45
33:AJ:29:TYR:H	33:AJ:83:TYR:CB	2.30	0.45
57:AA:1689:A:N6	57:AA:1698:A:H2	1.97	0.45
56:B9:1:MET:SD	57:BA:2478:A:OP2	2.75	0.45
57:BA:1149:G:H2'	57:BA:1150:C:C6	2.52	0.45
55:B8:40:GLU:C	55:B8:42:ARG:N	2.70	0.45
57:BA:2103:C:H42	57:BA:2186:G:H1	1.63	0.45
55:A8:40:GLU:C	55:A8:42:ARG:N	2.68	0.45
47:B0:27:GLU:HA	47:B0:67:VAL:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A1:53:VAL:O	48:A1:54:ALA:HB3	2.16	0.45
43:AW:16:LYS:O	43:AW:19:LEU:HB2	2.16	0.45
57:AA:359:A:H2'	57:AA:360:G:H5'	1.98	0.45
50:B3:46:ASN:ND2	57:BA:851:U:C4'	2.80	0.45
57:AA:2341:G:H2'	57:AA:2342:C:C6	2.52	0.45
54:B7:22:MET:O	54:B7:28:ARG:NH1	2.49	0.45
57:BA:1472:A:C2'	57:BA:1473:G:H5'	2.46	0.45
57:AA:2236:C:C2'	57:AA:2237:G:H5'	2.47	0.45
57:AA:1286:A:C6	57:AA:1289:C:C2	3.05	0.45
57:AA:2308:G:H8	57:AA:2309:A:H3'	1.81	0.45
57:AA:266:G:O2'	57:AA:267:C:OP2	4.79	0.45
57:AA:918:A:H5''	58:AB:98:G:O2'	2.16	0.45
27:AD:130:ALA:C	27:AD:131:LEU:HD12	2.36	0.45
27:AD:75:ILE:HG21	27:AD:99:ASP:HB2	1.97	0.45
32:AI:118:LYS:HZ2	32:AI:119:PRO:HD2	1.82	0.45
34:AN:26:LEU:O	34:AN:30:ILE:HG13	2.16	0.45
43:AW:17:VAL:O	43:AW:18:ARG:C	2.53	0.45
45:AY:52:SER:N	45:AY:53:PRO:HD2	2.32	0.45
32:BI:118:LYS:NZ	57:BA:1349:A:OP2	102.26	0.45
57:BA:1355:G:O2'	57:BA:1356:G:H5'	2.58	0.45
57:BA:582:G:H2'	57:BA:583:G:C8	2.52	0.45
58:BB:16:G:O2'	58:BB:17:C:H5'	2.17	0.45
30:BG:70:VAL:HA	30:BG:90:LEU:HD12	1.98	0.45
31:BH:88:LEU:HD22	31:BH:88:LEU:N	2.32	0.45
32:BI:15:VAL:O	32:BI:17:GLN:N	2.50	0.45
55:B8:3:LYS:HE2	57:BA:242:G:O5'	2.16	0.45
36:BP:62:LEU:HB3	57:BA:2393:A:C5'	2.45	0.45
52:B5:3:LYS:HZ3	57:BA:2613:U:C2'	2.30	0.45
57:BA:1331:A:O2'	57:BA:1332:G:H5''	2.16	0.45
49:A2:46:GLN:N	49:A2:49:LYS:HZ2	2.15	0.45
28:BE:47:VAL:HG13	28:BE:49:LEU:HD21	1.99	0.45
28:AE:108:SER:O	28:AE:162:ALA:HA	2.17	0.45
55:A8:31:HIS:CE1	57:AA:2392:A:OP2	2.65	0.45
57:BA:1541:G:H4'	57:BA:1542:A:C4'	2.46	0.45
57:BA:2703:C:H2'	57:BA:2704:C:H6	1.82	0.45
57:AA:2098:U:H2'	57:AA:2099:U:O4'	2.16	0.45
50:A3:47:VAL:CG1	50:A3:56:VAL:HG21	2.46	0.45
57:BA:962:G:C2'	57:BA:963:U:H5'	2.46	0.45
37:AQ:29:PHE:HB3	37:AQ:65:PHE:CE2	2.52	0.45
55:A8:37:SER:OG	55:A8:39:LYS:HB3	2.17	0.45
55:A8:42:ARG:O	55:A8:44:LYS:N	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1378:A:C4'	57:BA:1379:A:OP1	2.64	0.45
57:BA:1419:A:H2'	57:BA:1421:G:N7	2.31	0.45
57:AA:1386:C:OP2	57:AA:1396:U:H5	1.99	0.45
54:A7:35:ARG:HG3	54:A7:42:LEU:HD21	1.99	0.45
46:BZ:162:GLU:HG2	46:BZ:162:GLU:O	2.16	0.45
52:A5:6:VAL:HG13	57:AA:2016:U:H1'	1.98	0.45
57:AA:2222:G:O2'	57:AA:2223:G:H5'	2.16	0.45
57:BA:573:G:O2'	57:BA:574:C:H3'	2.16	0.45
57:AA:128:C:H2'	57:AA:129:C:H6	1.82	0.45
57:AA:2837:G:H2'	57:AA:2838:G:H8	1.80	0.45
57:AA:1427:A:H1'	57:AA:1428:C:C5	2.51	0.45
49:B2:64:LEU:CD2	49:B2:68:ARG:NH1	2.80	0.45
57:BA:1451:C:N3	57:BA:1459:G:O6	2.49	0.45
27:AD:240:ALA:HA	57:AA:1971:A:C2	2.52	0.45
57:AA:2672:G:H2'	57:AA:2673:G:H5''	1.98	0.45
57:AA:1809:A:H2'	57:AA:1810:A:C8	2.52	0.45
37:BQ:135:ASP:HB2	37:BQ:136:ALA:H	1.63	0.45
40:BT:53:ARG:O	40:BT:53:ARG:HG3	2.16	0.45
57:BA:2367:G:O2'	57:BA:2368:C:H5'	2.17	0.45
53:B6:14:THR:HG22	53:B6:50:ARG:O	2.17	0.45
57:AA:1894:C:H2'	57:AA:1895:C:H6	1.80	0.45
55:B8:47:LYS:HD2	55:B8:48:PHE:O	2.15	0.45
51:A4:6:HIS:CD2	51:A4:6:HIS:N	2.83	0.45
57:AA:1579:A:H2'	57:AA:1580:A:O4'	2.17	0.45
58:AB:65:C:N4	58:AB:109:C:H2'	2.31	0.45
31:AH:75:ALA:O	31:AH:79:VAL:HG22	2.16	0.45
31:AH:83:TYR:N	31:AH:83:TYR:CD2	2.83	0.45
32:AI:82:ARG:HA	32:AI:145:VAL:CG1	2.46	0.45
36:AP:81:GLN:HB3	36:AP:106:LEU:HD12	1.98	0.45
37:AQ:21:THR:HG21	37:AQ:101:ARG:HD2	1.98	0.45
39:AS:25:ARG:NH2	39:AS:40:ILE:HD12	2.32	0.45
57:BA:2869:G:H2'	57:BA:2870:C:C6	2.51	0.45
26:BC:52:PRO:HG2	26:BC:53:ARG:H	1.81	0.45
30:BG:154:GLY:O	30:BG:155:MET:CB	2.63	0.45
32:BI:113:ARG:HH12	32:BI:132:PRO:CD	2.16	0.45
37:BQ:14:ARG:HG2	37:BQ:41:TRP:CH2	2.50	0.45
41:BU:61:TRP:CE2	41:BU:94:ASN:HA	2.52	0.45
42:BV:19:LYS:CE	42:BV:20:LEU:H	2.27	0.45
27:BD:65:ILE:HD11	27:BD:67:PHE:CD1	2.51	0.45
40:AT:98:LYS:HD3	57:AA:2847:U:OP1	2.16	0.45
40:AT:95:ARG:NH1	57:AA:2849:U:OP2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:478:A:N1	57:BA:500:G:H4'	2.31	0.45
45:BY:27:VAL:HG12	45:BY:28:LYS:H	1.81	0.45
55:A8:32:LEU:CB	55:A8:36:LYS:NZ	2.77	0.45
53:B6:24:GLU:HB3	53:B6:25:LYS:H	1.59	0.45
29:AF:132:VAL:HG13	29:AF:133:ASN:N	2.31	0.45
28:BE:145:LYS:HB2	57:BA:2572:A:N7	2.32	0.45
57:AA:2811:G:O2'	57:AA:2812:G:H5'	2.17	0.45
52:B5:33:CYS:HB3	52:B5:38:ALA:O	2.17	0.45
52:B5:46:CYS:SG	52:B5:47:PRO:CD	3.05	0.45
51:B4:13:ARG:NH1	51:B4:13:ARG:HB3	2.17	0.45
57:BA:1784:A:H4'	57:BA:1785:A:O5'	2.17	0.45
51:B4:50:VAL:O	51:B4:51:ASP:OD2	2.34	0.45
57:BA:963:U:H2'	57:BA:964:C:C6	2.52	0.45
50:B3:6:VAL:HG23	50:B3:6:VAL:O	2.16	0.45
52:B5:55:ARG:O	52:B5:56:LYS:HE3	2.17	0.45
43:BW:14:PRO:O	43:BW:16:LYS:N	2.50	0.45
47:A0:42:GLY:O	47:A0:57:PHE:CG	2.70	0.45
57:AA:1472:A:C2'	57:AA:1473:G:H5'	2.47	0.45
54:B7:34:ARG:NH1	54:B7:39:ARG:CG	2.80	0.45
57:AA:2712:U:O2'	57:AA:2712(A):A:P	2.74	0.45
57:BA:848:G:C4	57:BA:933:A:H8	2.34	0.45
26:AC:38:PHE:CD1	57:AA:2127:G:H4'	2.52	0.45
38:BR:56:LYS:O	38:BR:58:GLY:N	2.45	0.45
58:AB:62:C:C2	58:AB:63:G:C8	3.04	0.45
41:AU:52:ARG:CG	41:AU:52:ARG:HH11	2.30	0.45
48:B1:19:GLN:O	48:B1:35:THR:HG22	2.16	0.45
57:BA:1668:A:H4'	57:BA:1669:A:O5'	2.17	0.45
46:AZ:23:LYS:HD3	46:AZ:38:TYR:HE1	1.81	0.45
57:AA:845:G:HO2'	57:AA:846:C:H5	1.64	0.45
36:AP:35:HIS:HA	57:AA:1190:G:H5'	1.98	0.45
57:AA:455:C:H3'	57:AA:456:C:H5''	1.98	0.45
57:AA:582:G:H2'	57:AA:583:G:C8	2.51	0.45
57:AA:972:G:OP2	57:AA:974:G:H5''	2.17	0.45
26:AC:51:ASP:HB3	26:AC:54:ARG:HB2	1.98	0.45
32:AI:113:ARG:O	32:AI:114:LEU:HG	2.17	0.45
36:AP:61:ARG:N	36:AP:61:ARG:HD2	2.32	0.45
36:AP:83:VAL:CG2	36:AP:105:LEU:HD13	2.47	0.45
30:BG:66:GLN:HG2	51:B4:1:MET:HG3	1.99	0.45
57:BA:1286:A:C6	57:BA:1289:C:C2	3.05	0.45
26:BC:40:GLU:O	26:BC:178:LYS:HE3	2.17	0.45
32:BI:68:LEU:HD23	32:BI:68:LEU:C	2.36	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:61:LEU:HD12	27:BD:61:LEU:HA	1.86	0.45
40:AT:100:TYR:CD2	40:AT:103:ARG:NH2	2.81	0.45
38:BR:103:ARG:NH1	38:BR:110:PRO:HB3	2.32	0.45
46:BZ:166:SER:HB2	46:BZ:167:PRO:C	2.37	0.45
58:BB:94:C:O2'	58:BB:95:C:H5'	2.17	0.45
35:BO:64:ARG:HB2	35:BO:83:ALA:HB3	1.99	0.45
40:BT:30:VAL:HG12	40:BT:44:ASP:OD2	2.16	0.45
53:A6:10:LEU:N	53:A6:10:LEU:CD2	2.79	0.45
55:A8:33:ASN:O	57:AA:2420:C:OP2	2.35	0.45
57:AA:1827:C:O2'	57:AA:1828:G:H5'	2.17	0.45
49:A2:46:GLN:HG2	49:A2:49:LYS:HZ2	1.78	0.45
28:BE:143:ASN:HD21	57:BA:2513:G:N2	2.15	0.45
50:B3:28:LEU:HA	50:B3:33:GLN:OE1	2.17	0.45
57:AA:1464:C:O2'	57:AA:1528:A:H8	2.00	0.45
57:AA:271(Q):G:O2'	57:AA:271(R):G:P	2.75	0.45
51:A4:13:ARG:CB	51:A4:13:ARG:HH11	2.20	0.45
57:AA:1149:G:H2'	57:AA:1150:C:C6	2.51	0.45
37:AQ:137:TYR:CZ	46:AZ:81:ARG:CZ	2.99	0.45
57:AA:523:C:H2'	57:AA:524:U:H5'	1.98	0.45
27:BD:7:LYS:HE3	57:BA:706:A:OP1	2.16	0.45
47:A0:51:VAL:N	47:A0:62:LEU:HD12	2.32	0.45
58:AB:2:C:H2'	58:AB:3:C:C6	2.52	0.45
27:BD:209:ALA:C	27:BD:210:GLY:O	2.52	0.45
57:BA:64:A:O2'	57:BA:65:C:H5'	2.16	0.45
31:AH:142:GLY:HA3	57:AA:2745:C:O3'	2.16	0.45
57:AA:1862:G:O2'	57:AA:1863:G:H5'	2.16	0.45
57:AA:1958:C:O2'	57:AA:1959:G:H5'	2.17	0.45
57:BA:2064:C:H2'	57:BA:2065:C:C6	2.52	0.45
54:A7:28:ARG:NH1	54:A7:28:ARG:HG3	2.32	0.45
50:A3:19:GLN:NE2	50:A3:52:HIS:CE1	2.85	0.45
26:AC:181:PHE:HD2	26:AC:185:LYS:HB3	1.82	0.45
27:AD:94:LEU:HD22	27:AD:95:LEU:N	2.31	0.45
30:AG:142:PRO:HG2	30:AG:143:GLU:CD	2.38	0.45
30:AG:161:THR:HG22	30:AG:162:THR:N	2.32	0.45
30:AG:91:ARG:HD2	30:AG:91:ARG:O	2.17	0.45
34:AN:2:LYS:O	34:AN:4:TYR:CZ	2.70	0.45
36:AP:50:ARG:HG3	36:AP:51:PHE:N	2.33	0.45
36:AP:63:PRO:C	36:AP:65:ARG:H	2.16	0.45
41:AU:92:ARG:HB3	42:AV:11:GLN:NE2	2.32	0.45
45:AY:20:TYR:CZ	45:AY:42:VAL:HA	2.52	0.45
45:AY:28:LYS:O	45:AY:38:ILE:HB	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B1:51:VAL:HG22	48:B1:52:ARG:N	2.32	0.45
48:B1:71:TYR:O	48:B1:74:VAL:N	2.48	0.45
57:BA:1204:A:H2	57:BA:1241:A:N1	2.15	0.45
26:BC:45:HIS:CB	57:BA:2177:C:H1'	2.47	0.45
26:BC:6:LYS:HA	26:BC:9:ARG:CB	2.47	0.45
30:BG:55:LYS:HA	30:BG:58:GLN:NE2	2.33	0.45
34:BN:15:LEU:C	34:BN:15:LEU:HD13	2.38	0.45
36:BP:15:ARG:HD2	57:BA:598:G:H5'	1.99	0.45
36:BP:27:HIS:HD2	36:BP:28:GLY:N	2.15	0.45
41:BU:10:ARG:O	41:BU:11:ARG:C	2.55	0.45
41:BU:60:LEU:O	41:BU:64:ARG:HG2	2.17	0.45
42:BV:18:LEU:CG	42:BV:19:LYS:H	2.29	0.45
57:BA:545:C:H3'	57:BA:547:A:C5'	2.40	0.45
27:BD:13:ARG:NH1	57:BA:729:G:OP2	2.50	0.45
40:AT:54:ARG:NH1	40:AT:54:ARG:HG2	2.31	0.45
46:BZ:149:SER:OG	46:BZ:150:LEU:N	2.50	0.45
27:BD:244:ARG:HG3	57:BA:1902:C:C1'	2.48	0.45
35:BO:2:ILE:HD11	35:BO:82:ASN:ND2	2.32	0.45
31:BH:85:LYS:CD	31:BH:133:VAL:HB	2.46	0.45
38:AR:4:LEU:O	38:AR:5:LYS:HG2	2.16	0.45
40:BT:129:ARG:NH2	40:BT:131:ALA:CB	2.79	0.45
57:AA:1697:G:H3'	57:AA:1698:A:C5'	2.47	0.45
37:AQ:134:ARG:CD	46:AZ:122:ARG:HH21	2.29	0.45
49:A2:2:LYS:HB3	57:AA:98:G:P	2.57	0.45
29:AF:160:ASN:ND2	29:AF:160:ASN:C	2.70	0.45
44:BX:47:PHE:O	44:BX:48:LYS:C	2.55	0.45
48:A1:7:ILE:HG22	48:A1:8:SER:N	2.31	0.45
57:BA:774:A:H2	57:BA:787:U:O2'	2.00	0.45
57:AA:2464:C:O2'	57:AA:2465:C:O5'	2.35	0.45
57:AA:774:A:H2	57:AA:787:U:O2'	2.01	0.45
36:BP:88:LEU:O	36:BP:90:ARG:N	2.50	0.45
49:B2:33:MET:O	49:B2:37:PHE:HD1	2.00	0.45
51:B4:16:CYS:SG	51:B4:17:GLY:N	2.90	0.45
47:B0:55:ARG:HB3	47:B0:55:ARG:HE	1.51	0.45
40:BT:6:LEU:O	40:BT:6:LEU:HD23	2.17	0.45
43:AW:78:GLU:OE2	43:AW:99:ARG:HD2	2.17	0.45
57:AA:2405:G:HO2'	57:AA:2406:U:P	2.39	0.45
57:AA:530:G:C5	57:AA:2022:U:H5''	2.52	0.44
29:AF:9:ILE:O	29:AF:9:ILE:HG22	2.17	0.44
30:AG:138:GLN:NE2	30:AG:149:VAL:HG23	2.32	0.44
36:AP:113:LYS:HA	36:AP:129:ALA:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AP:9:ASN:C	36:AP:11:GLY:H	2.21	0.44
37:AQ:66:ILE:HG22	37:AQ:104:PHE:CE2	2.52	0.44
39:AS:105:ALA:C	39:AS:107:GLU:N	2.70	0.44
39:AS:106:ARG:NH1	39:AS:107:GLU:O	2.51	0.44
39:AS:90:GLY:O	39:AS:92:TYR:HD1	2.00	0.44
42:AV:25:LEU:O	42:AV:27:ALA:N	2.49	0.44
38:AR:103:ARG:HD3	43:AW:40:ASN:ND2	2.32	0.44
45:AY:50:ARG:O	45:AY:50:ARG:HD2	2.17	0.44
45:AY:81:LYS:CD	45:AY:96:ILE:HG22	2.48	0.44
30:BG:39:ILE:HG12	30:BG:92:VAL:CG1	2.46	0.44
32:BI:118:LYS:HZ1	32:BI:119:PRO:C	2.20	0.44
34:BN:46:VAL:O	34:BN:47:ALA:CB	2.65	0.44
36:BP:106:LEU:HB3	36:BP:107:LYS:H	1.65	0.44
41:BU:6:THR:O	41:BU:9:VAL:HG23	2.17	0.44
57:AA:1902:C:C2'	57:AA:1903:G:O5'	2.65	0.44
40:AT:19:LEU:HB3	40:AT:85:LYS:HD3	1.98	0.44
40:AT:78:LEU:HB3	40:AT:79:HIS:CE1	2.52	0.44
40:AT:98:LYS:HZ3	57:AA:2847:U:P	2.41	0.44
45:BY:52:SER:N	45:BY:53:PRO:HD2	2.32	0.44
31:AH:154:PRO:O	31:AH:156:ALA:N	2.50	0.44
57:AA:2014:A:H2'	57:AA:2015:A:C8	2.53	0.44
52:B5:3:LYS:HZ1	52:B5:5:PRO:HB2	1.82	0.44
46:BZ:10:ARG:HD2	46:BZ:36:LYS:HD3	1.99	0.44
40:BT:19:LEU:HD22	40:BT:85:LYS:HG3	1.99	0.44
40:BT:65:LYS:O	40:BT:72:VAL:N	2.39	0.44
40:BT:78:LEU:HB3	40:BT:79:HIS:CE1	2.52	0.44
53:A6:10:LEU:O	53:A6:54:ILE:O	2.36	0.44
29:BF:132:VAL:HG13	29:BF:133:ASN:N	2.32	0.44
57:BA:903:C:C2'	57:BA:904:C:C5'	2.79	0.44
28:BE:108:SER:O	28:BE:162:ALA:HA	2.17	0.44
31:BH:70:THR:O	31:BH:72:ILE:N	2.50	0.44
31:BH:75:ALA:O	31:BH:79:VAL:HG22	2.17	0.44
28:AE:110:GLY:HA3	28:AE:162:ALA:HB2	1.99	0.44
28:AE:59:VAL:CG1	28:AE:63:LEU:HG	2.48	0.44
57:AA:676:A:H2	57:AA:802:A:N6	2.06	0.44
40:AT:13:ARG:NH1	40:AT:13:ARG:CA	2.68	0.44
57:BA:268:C:O2	57:BA:268:C:H2'	2.16	0.44
46:AZ:51:ALA:CB	46:AZ:57:ILE:HD11	2.36	0.44
40:BT:3:ARG:C	40:BT:5:ALA:N	2.66	0.44
57:AA:1542:A:C8	57:AA:1542:A:H3'	2.51	0.44
51:B4:51:ASP:OD2	51:B4:51:ASP:C	2.55	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:674:G:H2'	57:AA:675:A:H8	4.92	0.44
57:BA:1717:G:C3'	57:BA:1718:G:H5''	2.47	0.44
49:A2:2:LYS:CB	57:AA:97:C:H5''	2.47	0.44
46:AZ:69:THR:CG2	46:AZ:90:VAL:HG13	2.46	0.44
57:BA:2555:U:C2'	57:BA:2556:C:H5'	2.46	0.44
57:AA:573:G:O2'	57:AA:574:C:H3'	2.17	0.44
57:BA:2464:C:HO2'	57:BA:2465:C:P	2.39	0.44
57:AA:2777:G:H5''	57:AA:2778:A:C5'	2.47	0.44
57:AA:2162:G:H5'	57:AA:2173:A:H5'	2.00	0.44
48:B1:26:ARG:HG2	48:B1:26:ARG:O	2.17	0.44
57:BA:1907:G:O2'	57:BA:1908:C:H5'	2.17	0.44
57:BA:30:G:H2'	57:BA:31:C:C6	2.52	0.44
57:BA:646:A:H2'	57:BA:647:G:O4'	2.17	0.44
57:AA:1209:G:H21	57:AA:1210:A:N6	2.14	0.44
57:AA:2308:G:C8	57:AA:2309:A:H3'	2.52	0.44
57:AA:448:U:O4	57:AA:583:G:H1'	2.17	0.44
57:AA:909:A:H2'	57:AA:912:C:H5	1.81	0.44
26:AC:175:PRO:HG3	57:AA:2124:G:H5''	1.98	0.44
27:AD:102:LYS:C	27:AD:103:ARG:HG2	2.38	0.44
27:AD:30:GLU:CD	27:AD:63:ARG:NE	2.70	0.44
32:AI:72:LEU:O	32:AI:138:ILE:HD11	2.17	0.44
36:AP:17:LYS:O	36:AP:18:ARG:C	2.55	0.44
38:AR:82:GLU:O	38:AR:85:PRO:HD2	2.17	0.44
57:BA:1316:U:H2'	57:BA:1317:A:H8	1.82	0.44
26:BC:175:PRO:HG3	57:BA:2124:G:H5''	1.99	0.44
29:BF:20:LEU:HD13	29:BF:203:GLN:OE1	2.18	0.44
30:BG:125:PHE:HB3	30:BG:166:ASP:HB2	1.99	0.44
36:BP:34:GLY:O	36:BP:35:HIS:HB2	2.16	0.44
41:BU:55:ARG:NH1	57:BA:1155:A:O3'	2.50	0.44
41:BU:78:THR:O	41:BU:79:PHE:C	2.55	0.44
57:AA:1899:G:N2	57:AA:1902:C:C4	2.85	0.44
57:BA:541:C:O2'	57:BA:542:C:H5'	2.18	0.44
27:BD:72:LYS:HD3	27:BD:97:TYR:CD2	2.53	0.44
40:AT:20:PRO:HD2	40:AT:85:LYS:HB2	1.99	0.44
45:BY:13:VAL:CG2	45:BY:28:LYS:NZ	2.77	0.44
57:BA:1899:G:N2	57:BA:1902:C:C5	2.85	0.44
40:BT:57:PHE:C	40:BT:58:ASN:HD22	2.20	0.44
40:BT:70:VAL:HG12	40:BT:71:GLY:H	1.81	0.44
40:BT:89:VAL:C	40:BT:91:ARG:N	2.70	0.44
27:AD:241:PRO:O	27:AD:242:ARG:HB2	2.17	0.44
28:BE:34:VAL:CG2	28:BE:48:GLN:HE21	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:AZ:128:VAL:CB	46:AZ:161:VAL:HG22	2.44	0.44
28:AE:73:GLU:HA	28:AE:74:PRO:HD3	1.64	0.44
36:BP:114:ILE:O	36:BP:130:PHE:HA	2.17	0.44
47:B0:21:LEU:HD21	47:B0:41:ARG:NH1	2.32	0.44
57:AA:2262:U:H4'	57:AA:2328:A:C2	2.52	0.44
57:BA:889:C:O2'	57:BA:890:A:O5'	2.31	0.44
57:AA:1150:C:O2'	57:AA:1151:G:H5'	2.16	0.44
48:A1:3:LYS:HB3	48:A1:61:ARG:HH21	1.82	0.44
57:BA:296:C:C2'	57:BA:297:C:H5'	2.46	0.44
57:BA:2762:G:C2'	57:BA:2763:G:H5'	2.47	0.44
53:B6:9:LEU:C	53:B6:9:LEU:HD22	2.37	0.44
49:B2:43:GLN:O	49:B2:44:LEU:HB2	2.16	0.44
55:A8:2:PRO:O	55:A8:3:LYS:HB3	2.16	0.44
29:AF:59:TYR:HE2	57:AA:470:A:OP1	2.01	0.44
34:AN:65:LYS:HD2	34:AN:69:GLN:NE2	2.32	0.44
35:AO:13:ASN:ND2	35:AO:97:ARG:N	2.66	0.44
32:AI:55:ALA:C	32:AI:57:ARG:H	2.21	0.44
57:BA:280:C:N3	57:BA:361:G:N2	2.65	0.44
38:AR:56:LYS:O	38:AR:58:GLY:N	2.45	0.44
35:BO:22:ILE:HG23	57:BA:1952:A:C2	2.52	0.44
57:AA:2294:C:N4	57:AA:2338:G:H1	2.15	0.44
57:AA:1469:A:O2'	57:AA:1470:G:H5'	2.17	0.44
57:BA:1028:A:N6	57:BA:1125:G:H2'	2.32	0.44
57:AA:874:G:O2'	57:AA:875:G:H5'	2.17	0.44
35:AO:57:VAL:HG11	57:AA:2561:A:H5''	1.98	0.44
35:BO:102:VAL:HG22	35:BO:121:VAL:HG22	1.99	0.44
30:AG:105:LYS:CE	51:A4:26:SER:HB3	2.46	0.44
57:AA:1112:G:O2'	57:AA:1113:U:H6	1.99	0.44
57:AA:143:G:H2'	57:AA:143(A):C:C6	2.52	0.44
57:AA:476:G:H4'	57:AA:502:A:N1	2.33	0.44
57:AA:628:G:O2'	57:AA:629:G:H5'	4.82	0.44
26:AC:48:LEU:CD1	26:AC:172:ILE:HB	2.47	0.44
30:AG:113:ARG:O	30:AG:114:ILE:HG13	2.18	0.44
30:AG:114:ILE:HG12	30:AG:140:ILE:HG21	1.99	0.44
32:AI:101:LEU:HG	32:AI:107:VAL:HB	1.98	0.44
32:AI:14:ASP:O	32:AI:15:VAL:O	2.35	0.44
37:AQ:19:GLY:O	37:AQ:20:ALA:CB	2.65	0.44
38:AR:85:PRO:O	38:AR:87:TYR:N	2.51	0.44
45:AY:4:LYS:HD2	45:AY:32:PRO:CG	2.48	0.44
57:BA:862:G:H2'	57:BA:863:A:O4'	2.17	0.44
32:BI:29:TYR:C	32:BI:32:PRO:HD2	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:21:THR:O	37:BQ:21:THR:CG2	2.63	0.44
27:BD:48:ARG:HH11	27:BD:48:ARG:HG3	1.81	0.44
27:BD:27:THR:O	27:BD:27:THR:CG2	2.64	0.44
57:AA:192:C:H2'	57:AA:193:U:H5'	1.99	0.44
40:AT:107:ASP:H	40:AT:110:ILE:HG12	1.82	0.44
57:BA:1579:A:H2'	57:BA:1580:A:O4'	2.16	0.44
43:BW:17:VAL:O	43:BW:18:ARG:C	2.54	0.44
52:A5:3:LYS:HD2	52:A5:5:PRO:HD2	1.99	0.44
53:A6:41:PRO:HD3	53:A6:47:THR:HG22	1.98	0.44
35:BO:17:ARG:HG3	35:BO:17:ARG:HH11	4.51	0.44
57:AA:2787:C:O2	57:AA:2787:C:H2'	2.18	0.44
28:AE:47:VAL:HG13	28:AE:49:LEU:HD21	1.98	0.44
46:AZ:102:LEU:CD2	46:AZ:124:ILE:HD11	2.46	0.44
34:BN:55:VAL:HG22	34:BN:126:PRO:CA	2.47	0.44
46:AZ:71:VAL:HG22	46:AZ:88:PHE:CE2	2.52	0.44
34:AN:55:VAL:HG22	34:AN:126:PRO:CA	2.47	0.44
47:A0:41:ARG:HG3	57:AA:2329:G:H21	1.82	0.44
51:A4:13:ARG:HB3	51:A4:13:ARG:NH1	2.18	0.44
26:BC:191:ARG:HH11	26:BC:191:ARG:HG3	1.81	0.44
33:BJ:41:ARG:HA	33:BJ:54:ALA:HB2	1.95	0.44
36:AP:146:VAL:CG2	36:AP:147:LEU:N	2.77	0.44
47:B0:51:VAL:N	47:B0:62:LEU:HD12	2.32	0.44
41:BU:66:ASN:C	41:BU:66:ASN:ND2	2.69	0.44
46:AZ:153:SER:O	46:AZ:155:LEU:N	2.41	0.44
36:AP:133:SER:HB3	57:AA:637:A:OP1	2.18	0.44
53:A6:9:LEU:C	53:A6:9:LEU:HD22	2.37	0.44
27:AD:267:SER:O	27:AD:268:ARG:C	2.56	0.44
43:BW:96:ILE:HG12	57:BA:2012:G:O3'	2.17	0.44
57:BA:1712:C:H2'	57:BA:1713:U:H6	1.81	0.44
57:AA:2399:G:H2'	57:AA:2400:G:O4'	2.16	0.44
57:BA:292:C:O2'	57:BA:293:U:H5'	2.16	0.44
48:B1:35:THR:OG1	57:BA:2079:U:O3'	2.35	0.44
57:AA:280:C:H2'	57:AA:281:G:H5'	1.98	0.44
57:AA:809:G:O2'	57:AA:810:U:H5'	2.17	0.44
44:BX:29:TRP:CZ2	44:BX:76:ARG:NH2	2.85	0.44
46:BZ:3:TYR:HB2	46:BZ:56:VAL:O	2.17	0.44
43:BW:78:GLU:OE2	43:BW:99:ARG:HD2	2.17	0.44
57:AA:1668:A:H4'	57:AA:1669:A:O5'	2.17	0.44
51:A4:16:CYS:SG	51:A4:36:CYS:SG	3.12	0.44
46:AZ:146:ILE:HD12	57:AA:896:A:C2	2.52	0.44
26:AC:52:PRO:HG2	26:AC:53:ARG:H	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AD:71:ASP:CG	27:AD:103:ARG:HH22	2.21	0.44
32:AI:130:TYR:O	32:AI:135:GLU:HB2	2.18	0.44
36:AP:17:LYS:C	36:AP:19:VAL:N	2.71	0.44
41:AU:112:ARG:HH22	42:AV:46:VAL:CG1	2.30	0.44
45:AY:44:ILE:O	45:AY:62:GLU:OE1	2.36	0.44
51:B4:6:HIS:N	51:B4:6:HIS:CD2	2.83	0.44
30:BG:107:LEU:HD21	30:BG:178:PHE:CD2	2.52	0.44
30:BG:66:GLN:CG	51:B4:1:MET:HG3	2.47	0.44
32:BI:14:ASP:O	32:BI:15:VAL:O	2.36	0.44
36:BP:16:ARG:CB	36:BP:16:ARG:NH1	2.80	0.44
36:BP:16:ARG:O	36:BP:18:ARG:N	2.51	0.44
39:BS:97:ARG:NH2	39:BS:98:VAL:CA	2.65	0.44
41:BU:47:TYR:HA	41:BU:50:ARG:NH2	2.32	0.44
42:BV:65:GLY:CA	42:BV:91:TYR:HE1	2.30	0.44
46:BZ:79:ARG:O	46:BZ:80:ARG:HB2	2.18	0.44
27:BD:46:GLN:CD	27:BD:46:GLN:H	2.21	0.44
55:A8:4:MET:HG3	55:A8:61:LEU:CD1	2.41	0.44
27:BD:26:LYS:O	27:BD:27:THR:CB	2.65	0.44
57:BA:2206:G:H21	57:BA:2207:G:C4'	2.30	0.44
45:BY:96:ILE:HB	45:BY:99:CYS:HB2	1.99	0.44
37:BQ:133:ARG:O	37:BQ:134:ARG:HG2	2.18	0.44
57:AA:2612:C:C5	57:AA:2613:U:H5	2.35	0.44
58:BB:65:C:N4	58:BB:109:C:H2'	2.33	0.44
55:B8:53:PRO:HG2	55:B8:54:GLU:H	1.82	0.44
57:AA:150:C:H2'	57:AA:151:C:C6	2.52	0.44
28:BE:59:VAL:CG1	28:BE:63:LEU:HG	2.47	0.44
31:BH:7:LEU:CB	31:BH:69:ARG:HD2	2.48	0.44
37:AQ:55:VAL:HG12	37:AQ:64:ILE:CD1	2.47	0.44
36:AP:114:ILE:O	36:AP:130:PHE:HA	2.18	0.44
57:AA:528:A:N1	57:AA:2043:C:O5'	2.50	0.44
57:AA:1784:A:H4'	57:AA:1785:A:C5'	2.48	0.44
57:BA:197:A:N6	57:BA:2430:A:H2'	2.33	0.44
39:AS:42:ASP:O	39:AS:43:GLU:HB2	2.17	0.44
55:B8:37:SER:OG	55:B8:39:LYS:HB3	2.18	0.44
27:BD:28:GLU:H	27:BD:29:PRO:CD	2.22	0.44
57:BA:481:G:H1'	57:BA:506:G:H21	1.82	0.44
30:BG:162:THR:HG22	30:BG:162:THR:O	2.16	0.44
34:AN:67:LEU:C	34:AN:69:GLN:H	2.21	0.44
35:BO:13:ASN:O	35:BO:15:GLY:N	2.50	0.44
35:BO:13:ASN:ND2	35:BO:97:ARG:N	2.66	0.44
43:BW:96:ILE:CD1	57:BA:2012:G:H4'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AC:194:ILE:HG22	26:AC:198:GLU:CD	2.38	0.44
57:AA:418:G:O2'	57:AA:419:C:H5'	2.17	0.44
57:AA:2030:A:H4'	57:AA:2031:A:H8	1.83	0.44
29:BF:192:LEU:CD1	29:BF:194:MET:HE2	2.48	0.44
57:AA:1853:A:N1	57:AA:2087:G:H1'	2.33	0.44
57:AA:64:A:O2'	57:AA:65:C:H5'	2.18	0.44
57:AA:2077:A:H2'	57:AA:2078:C:H6	1.81	0.44
57:AA:2682:U:H6	57:AA:2682:U:H5'	1.83	0.44
57:AA:1345:C:O2'	57:AA:1346:G:H5'	2.18	0.44
57:AA:2206:G:H21	57:AA:2207:G:C4'	2.30	0.44
30:AG:76:SER:HB3	30:AG:83:ARG:HB3	1.97	0.44
36:AP:16:ARG:CB	36:AP:16:ARG:NH1	2.81	0.44
39:AS:61:ASN:OD1	39:AS:64:GLU:OE2	2.35	0.44
41:AU:92:ARG:O	41:AU:93:LYS:C	2.56	0.44
30:BG:40:ASN:ND2	57:BA:2313:C:C4'	2.80	0.44
30:BG:7:LEU:HD22	30:BG:176:LEU:HB3	1.99	0.44
42:BV:39:LEU:HD12	42:BV:50:PRO:O	2.18	0.44
27:BD:46:GLN:CD	27:BD:46:GLN:N	2.70	0.44
57:BA:1885:A:H2'	57:BA:1886:C:O4'	2.18	0.44
27:BD:88:ARG:NH2	57:BA:1817:G:OP1	2.45	0.44
27:BD:24:ILE:HA	27:BD:82:ILE:HG22	1.99	0.44
31:BH:154:PRO:O	31:BH:156:ALA:N	2.51	0.44
40:AT:91:ARG:HA	40:AT:117:ASP:H	1.82	0.44
45:BY:17:SER:O	45:BY:18:GLY:O	2.36	0.44
27:BD:259:THR:CG2	57:BA:1803:A:H4'	2.43	0.44
30:AG:109:VAL:HG21	51:A4:33:VAL:HG21	1.99	0.44
46:BZ:27:VAL:O	46:BZ:27:VAL:HG13	2.17	0.44
57:BA:1748:G:C8	57:BA:1748:G:H5'	2.45	0.44
40:AT:128:GLU:O	40:AT:129:ARG:C	2.55	0.44
57:AA:2892:A:N6	57:AA:2893:G:H21	2.16	0.44
57:AA:1947:C:C3'	57:AA:1948:G:H5''	2.47	0.44
57:AA:1948:G:C2'	57:AA:1949:G:H5'	2.47	0.44
36:BP:133:SER:HB3	57:BA:637:A:OP1	2.17	0.44
58:AB:94:C:O2'	58:AB:95:C:H5'	2.18	0.44
49:B2:45:SER:O	49:B2:46:GLN:OE1	2.36	0.44
50:B3:19:GLN:NE2	50:B3:52:HIS:CE1	2.85	0.44
26:BC:194:ILE:HG22	26:BC:198:GLU:CD	2.38	0.44
26:AC:23:ILE:HG22	26:AC:23:ILE:O	2.17	0.44
57:BA:280:C:C2'	57:BA:281:G:H5'	2.47	0.44
47:B0:36:ILE:HD11	47:B0:39:ARG:HG2	1.99	0.44
57:AA:1430:C:H2'	57:AA:1431:U:H6	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:712:G:O2'	57:AA:713:G:H5'	2.18	0.44
57:AA:2518:A:H5'	57:AA:2518:A:H8	1.82	0.44
52:A5:42:PRO:HB2	52:A5:43:HIS:CD2	2.52	0.44
57:AA:2870:C:O2'	57:AA:2871:C:H5'	2.18	0.44
54:A7:22:MET:O	54:A7:28:ARG:NH1	2.51	0.44
57:BA:2687:U:H2'	57:BA:2688:U:O4'	2.18	0.44
26:BC:28:ARG:NH1	26:BC:28:ARG:HB3	2.33	0.44
51:A4:5:ILE:H	51:A4:5:ILE:HD13	1.82	0.44
51:A4:5:ILE:N	51:A4:5:ILE:HD13	2.33	0.44
27:AD:88:ARG:NH2	57:AA:1817:G:OP1	2.47	0.44
57:AA:724:U:H2'	57:AA:725:G:O4'	2.18	0.44
46:AZ:31:ARG:HG2	58:AB:106:G:H5''	1.98	0.44
58:AB:30:C:H4'	58:AB:58:A:C2	2.49	0.44
30:AG:6:ALA:O	30:AG:10:LYS:HB2	2.17	0.44
32:AI:123:LEU:HD23	32:AI:124:GLY:N	2.32	0.44
38:AR:103:ARG:NH1	38:AR:110:PRO:HB3	2.32	0.44
42:AV:18:LEU:CD2	42:AV:19:LYS:H	2.31	0.44
44:AX:37:THR:HG21	57:AA:143:G:C1'	2.46	0.44
45:AY:89:PHE:C	45:AY:90:LEU:HD23	2.38	0.44
29:BF:125:LEU:HD13	29:BF:199:TRP:CG	2.53	0.44
36:BP:9:ASN:C	36:BP:11:GLY:H	2.21	0.44
36:BP:91:PHE:CE2	36:BP:95:VAL:HG12	2.53	0.44
37:BQ:39:PRO:HD3	37:BQ:99:PRO:HG3	1.99	0.44
39:BS:90:GLY:O	39:BS:92:TYR:HD1	2.00	0.44
42:BV:39:LEU:HB3	42:BV:47:VAL:HG21	2.00	0.44
27:BD:161:THR:HG21	57:BA:1819:A:H5''	1.99	0.44
27:BD:127:VAL:HA	27:BD:193:VAL:HG13	1.99	0.44
57:AA:232:G:H1'	57:AA:262:A:N1	14.95	0.44
35:AO:86:ILE:O	35:AO:87:ILE:HD13	2.18	0.44
45:BY:50:ARG:HD2	45:BY:50:ARG:O	2.17	0.44
45:BY:52:SER:HA	45:BY:56:PRO:HA	1.99	0.44
57:BA:2612:C:C5	57:BA:2613:U:H5	2.36	0.44
55:B8:33:ASN:O	57:BA:2420:C:OP2	2.35	0.44
57:AA:68:G:H2'	57:AA:69:C:C6	2.53	0.44
28:BE:82:ARG:HG3	28:BE:83:ASP:H	1.82	0.44
50:A3:28:LEU:HA	50:A3:33:GLN:OE1	2.18	0.44
27:BD:241:PRO:O	27:BD:242:ARG:HB2	2.18	0.44
57:BA:527:C:H4'	57:BA:528:A:O5'	2.18	0.44
57:AA:1291:C:H2'	57:AA:1292:U:H6	1.82	0.44
37:BQ:16:ARG:C	37:BQ:17:LEU:HD23	2.37	0.44
57:AA:2100:G:H1	57:AA:2189:U:H3	1.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1411:C:H2'	57:BA:1412:A:C8	2.53	0.44
57:BA:27:G:N2	57:BA:512:G:O2'	2.50	0.44
57:AA:606:U:H4'	57:AA:658:C:H4'	1.99	0.44
57:AA:633:A:C2'	57:AA:634:C:H5'	2.46	0.44
46:AZ:111:VAL:O	46:AZ:113:ALA:N	2.47	0.44
31:BH:149:ARG:HA	31:BH:162:ILE:CG1	2.45	0.44
48:A1:57:GLU:O	48:A1:58:ILE:O	2.35	0.44
57:AA:2011:U:C2'	57:AA:2012:G:H5'	2.48	0.44
57:BA:2590:A:O2'	57:BA:2591:C:H5'	2.16	0.44
57:AA:668:G:H3'	57:AA:669:G:H5''	1.99	0.44
57:AA:2590:A:O2'	57:AA:2591:C:H5'	2.18	0.44
57:BA:2155:G:C2'	57:BA:2156:G:H5'	2.48	0.44
57:BA:319:C:O2'	57:BA:320:A:H5'	2.18	0.44
57:AA:2869:G:H2'	57:AA:2870:C:C6	2.52	0.44
46:BZ:163:LEU:N	46:BZ:163:LEU:CD2	2.81	0.44
54:A7:28:ARG:HH11	54:A7:28:ARG:HG3	1.82	0.44
57:BA:2492:U:O2'	57:BA:2493:U:H5'	2.17	0.44
26:AC:45:HIS:CB	57:AA:2177:C:H1'	2.48	0.44
57:AA:548:A:C3'	57:AA:549:G:H5'	2.47	0.44
51:A4:3:GLU:HG3	58:AB:43:C:OP1	2.18	0.44
29:AF:34:TRP:CH2	36:AP:12:ALA:HB2	2.53	0.44
38:AR:100:LEU:HD21	38:AR:113:LEU:HB3	1.98	0.44
38:AR:87:TYR:OH	38:AR:116:LEU:O	2.30	0.44
42:AV:4:ILE:HG22	42:AV:4:ILE:O	2.17	0.44
43:AW:18:ARG:HG3	43:AW:76:VAL:HG13	2.00	0.44
43:AW:6:ILE:HA	43:AW:103:ILE:O	2.18	0.44
46:AZ:80:ARG:HD2	46:AZ:80:ARG:HA	1.82	0.44
57:BA:2178:C:H3'	57:BA:2179:C:H5''	2.00	0.44
26:BC:6:LYS:C	26:BC:8:TYR:N	2.69	0.44
32:BI:92:VAL:HG22	32:BI:97:ILE:HG12	1.98	0.44
34:BN:134:ARG:O	34:BN:134:ARG:HG3	2.18	0.44
41:BU:69:CYS:SG	41:BU:79:PHE:CD1	3.06	0.44
35:AO:32:TYR:CD1	35:AO:32:TYR:N	2.86	0.44
36:BP:63:PRO:HB3	55:B8:13:ARG:HB3	1.99	0.44
45:BY:30:VAL:HG12	45:BY:31:LEU:N	2.33	0.44
46:BZ:102:LEU:HD21	46:BZ:124:ILE:HD12	2.00	0.44
57:BA:1899:G:H21	57:BA:1902:C:H5	1.64	0.44
57:BA:658:C:H2'	57:BA:659:C:C6	2.53	0.44
55:A8:53:PRO:HA	55:A8:56:GLU:HB2	2.00	0.44
57:BA:2053:G:H1	57:BA:2616:C:H42	1.65	0.44
57:BA:924:C:O2'	57:BA:925:C:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:116:VAL:HG22	28:BE:122:PHE:CG	2.52	0.44
28:BE:12:THR:O	28:BE:23:VAL:HG22	2.17	0.44
28:AE:82:ARG:HG3	28:AE:83:ASP:H	1.83	0.44
38:AR:4:LEU:O	38:AR:5:LYS:CD	2.65	0.44
43:AW:34:ASN:ND2	52:A5:39:MET:CE	2.81	0.44
46:AZ:10:ARG:NH2	46:AZ:26:GLY:N	2.65	0.44
57:BA:1410:G:H2'	57:BA:1411:C:C6	2.53	0.44
37:BQ:13:GLN:HG3	57:BA:910:A:N7	2.33	0.44
43:AW:88:ARG:HB2	43:AW:92:ARG:HB2	2.00	0.44
57:BA:2468:G:H1	57:BA:2481:G:H2'	1.83	0.44
57:BA:916:G:C2'	57:BA:917:A:H5''	2.48	0.44
57:AA:651:G:C2'	57:AA:652:C:H5'	2.48	0.44
57:BA:1478:G:O2'	57:BA:1479:G:H5'	2.18	0.44
57:AA:392:C:H5''	57:AA:409:C:H5''	2.00	0.44
57:AA:435:C:H2'	57:AA:436:C:H5'	2.00	0.44
49:B2:3:LEU:HD21	49:B2:7:ARG:HH11	1.81	0.44
29:BF:175:THR:O	29:BF:176:LEU:HB2	2.17	0.44
48:A1:7:ILE:HG22	48:A1:66:HIS:HD2	1.82	0.44
57:AA:1451:C:N3	57:AA:1459:G:O6	2.51	0.44
57:AA:2029:G:H2'	57:AA:2031:A:OP2	2.18	0.44
57:AA:1432:C:H2'	57:AA:1433:U:O4'	2.17	0.44
49:B2:24:LEU:HG	49:B2:60:LEU:HD13	2.00	0.44
57:BA:2672:G:H3'	57:BA:2673:G:H5''	1.99	0.44
57:AA:927:G:O2'	57:AA:928:G:H5'	3.44	0.44
57:BA:2887:U:H2'	57:BA:2888:C:H6	1.83	0.44
57:AA:2553:G:H2'	57:AA:2554:U:C4'	2.48	0.44
57:BA:1970:A:H5'	57:BA:1972:A:H1'	1.99	0.44
41:BU:89:GLU:O	41:BU:89:GLU:HG2	2.18	0.44
51:A4:2:LYS:N	51:A4:2:LYS:HD2	2.33	0.44
57:AA:706:A:H2'	57:AA:707:G:O4'	2.18	0.44
36:AP:53:GLY:HA2	57:AA:832:G:H21	1.82	0.44
57:AA:962:G:C2'	57:AA:963:U:H5'	2.48	0.44
26:AC:30:VAL:HG11	26:AC:42:VAL:HG13	2.00	0.44
27:AD:76:PRO:HG2	27:AD:98:VAL:HG21	1.99	0.44
29:AF:20:LEU:HD13	29:AF:203:GLN:OE1	2.17	0.44
29:AF:63:LYS:HE3	29:AF:67:GLN:CB	2.48	0.44
30:AG:162:THR:O	30:AG:162:THR:HG22	2.17	0.44
30:AG:45:GLU:H	30:AG:88:ILE:CG2	2.12	0.44
30:AG:9:ARG:O	30:AG:11:TYR:N	2.47	0.44
32:AI:62:LYS:HE3	32:AI:134:PRO:HD3	2.00	0.44
34:AN:46:VAL:O	34:AN:47:ALA:CB	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AQ:39:PRO:HA	37:AQ:97:VAL:O	2.18	0.44
41:AU:95:LEU:O	41:AU:98:LEU:HG	2.17	0.44
49:B2:69:ARG:NH2	57:BA:111:A:H4'	2.33	0.44
57:BA:1221:C:H2'	57:BA:1221(A):C:C6	2.52	0.44
57:BA:1357:U:H2'	57:BA:1358:G:O4'	2.18	0.44
29:BF:63:LYS:HZ1	29:BF:67:GLN:HB2	1.82	0.44
30:BG:120:LEU:N	30:BG:179:PRO:O	2.42	0.44
30:BG:66:GLN:NE2	58:BB:43:C:H4'	2.33	0.44
32:BI:88:ILE:CD1	32:BI:120:ILE:HG21	2.47	0.44
39:BS:105:ALA:C	39:BS:107:GLU:H	2.20	0.44
39:BS:25:ARG:HG3	39:BS:88:ASP:HB2	1.99	0.44
43:BW:47:VAL:O	43:BW:50:VAL:HG12	2.17	0.44
55:B8:4:MET:HG3	55:B8:61:LEU:CD1	2.41	0.44
40:AT:78:LEU:HB3	40:AT:79:HIS:ND1	2.33	0.44
57:BA:1496:A:C8	57:BA:1498:C:N3	2.86	0.44
53:B6:27:LYS:O	53:B6:27:LYS:CD	2.66	0.44
49:A2:50:ILE:HD12	57:AA:61:G:H5'	2.00	0.44
31:BH:54:ARG:NH1	31:BH:54:ARG:HG2	2.31	0.44
31:BH:83:TYR:CD2	31:BH:83:TYR:N	2.83	0.44
55:B8:27:THR:HG23	57:BA:2361:A:OP1	2.18	0.44
52:B5:40:LYS:NZ	52:B5:46:CYS:O	2.51	0.44
57:BA:972:G:OP2	57:BA:974:G:H5''	2.17	0.44
57:BA:102:G:OP1	57:BA:102:G:C4'	2.65	0.44
42:BV:82:ARG:O	42:BV:83:ARG:HG2	2.17	0.44
57:AA:882:G:H2'	57:AA:883:G:C8	2.49	0.44
47:B0:26:TYR:N	47:B0:26:TYR:CD1	2.84	0.44
57:BA:361:G:O2'	57:BA:362:U:H5'	2.17	0.44
39:AS:108:GLY:HA3	57:AA:2376:A:O2'	2.17	0.44
46:AZ:135:GLU:O	46:AZ:137:ILE:HD13	2.18	0.44
57:AA:1431:U:H2'	57:AA:1432:C:C6	2.53	0.44
57:BA:2732:G:C3'	57:BA:2733:A:H5'	2.48	0.44
31:BH:107:VAL:HG21	31:BH:152:ARG:HB2	2.00	0.44
57:BA:654(N):G:H2'	57:BA:654(O):G:O4'	2.18	0.44
41:BU:97:ASP:C	41:BU:99:ALA:H	2.21	0.44
57:BA:20:C:H2'	57:BA:21:A:C8	2.53	0.44
37:BQ:135:ASP:O	37:BQ:138:ASP:OD2	2.35	0.44
57:AA:2064:C:H2'	57:AA:2065:C:C6	2.53	0.44
46:BZ:35:ARG:HG3	46:BZ:35:ARG:HH11	1.81	0.44
29:AF:182:ASN:HB3	57:AA:615:G:OP1	2.18	0.44
40:BT:101:PHE:C	40:BT:101:PHE:CD2	2.91	0.44
34:AN:108:PRO:O	34:AN:113:GLY:HA3	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BZ:33:LEU:HD12	46:BZ:34:ASN:H	1.82	0.44
57:BA:2114:A:O2'	57:BA:2115:G:H5'	2.18	0.44
57:AA:644:A:C2	57:AA:2369:A:H1'	2.53	0.44
31:AH:7:LEU:HB3	31:AH:69:ARG:HD2	2.00	0.44
31:AH:9:ILE:C	31:AH:9:ILE:HD13	2.37	0.44
32:AI:92:VAL:O	32:AI:119:PRO:HA	2.17	0.44
32:AI:77:LEU:HD23	32:AI:141:LYS:CG	2.43	0.44
39:AS:27:SER:HA	39:AS:88:ASP:HB3	2.00	0.44
44:AX:14:SER:O	44:AX:15:GLU:C	2.56	0.44
57:BA:613:G:C8	57:BA:613:G:C5'	2.99	0.44
48:B1:56:GLN:HB3	48:B1:87:PRO:HB3	2.00	0.44
51:B4:30:GLU:O	51:B4:31:ILE:HD12	2.17	0.44
57:BA:1317:A:H2'	57:BA:1318:C:H6	1.82	0.44
57:BA:983:A:H3'	57:BA:983:A:N3	5.18	0.44
32:BI:101:LEU:HG	32:BI:107:VAL:HB	1.99	0.44
36:BP:81:GLN:HB3	36:BP:106:LEU:HD12	2.00	0.44
41:BU:50:ARG:NH1	42:BV:72:VAL:HG12	2.33	0.44
57:AA:1899:G:N2	57:AA:1902:C:C5	2.85	0.44
43:BW:6:ILE:HG13	43:BW:104:THR:HG23	2.00	0.44
46:BZ:165:VAL:HG12	46:BZ:166:SER:OG	2.18	0.44
46:BZ:27:VAL:HA	46:BZ:37:VAL:HG13	1.98	0.44
46:BZ:27:VAL:HG12	46:BZ:85:HIS:CE1	2.53	0.44
35:BO:28:SER:HA	57:BA:2563:U:H4'	2.00	0.44
35:BO:87:ILE:HG21	35:BO:91:LEU:HD13	1.99	0.44
40:BT:30:VAL:CG2	40:BT:84:GLN:H	2.29	0.44
57:BA:2820:A:O2'	57:BA:2821:A:OP1	2.34	0.44
38:BR:4:LEU:HD13	38:BR:6:SER:O	2.17	0.44
38:BR:4:LEU:HG	57:BA:2822:G:O6	2.17	0.44
37:AQ:55:VAL:HB	46:AZ:178:GLU:HG3	2.00	0.44
57:BA:271(M):G:O2'	57:BA:271(O):C:H5'	2.17	0.44
57:AA:1462:C:H4'	57:AA:2703:C:H5'	2.00	0.44
57:BA:2476:A:C2	57:BA:2477:C:C6	3.05	0.44
57:BA:94(A):G:H2'	57:BA:95:G:O4'	2.18	0.44
46:AZ:122:ARG:O	46:AZ:123:ASP:OD1	2.36	0.44
57:BA:1717:G:H2'	57:BA:1718:G:C5'	2.42	0.44
47:B0:43:THR:CG2	47:B0:43:THR:O	2.62	0.44
57:AA:1771:C:O2'	57:AA:1786:A:H8	2.01	0.44
27:AD:176:ARG:NH1	27:AD:176:ARG:HG2	2.27	0.44
42:AV:28:GLU:CB	42:AV:29:PRO:HD2	2.41	0.44
52:B5:6:VAL:HG13	57:BA:2016:U:H1'	1.99	0.44
49:B2:59:ARG:HD3	57:BA:77:C:OP1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2850:A:H2'	57:AA:2851:A:C8	2.53	0.44
49:A2:10:LEU:HD22	49:A2:14:ARG:CZ	2.47	0.44
57:BA:1124:C:H2'	57:BA:1125:G:O4'	2.17	0.44
57:BA:2695:C:H2'	57:BA:2696:U:C6	2.53	0.44
57:AA:1956:U:C2'	57:AA:1957:C:H5'	2.48	0.44
49:B2:32:LEU:HD13	49:B2:36:ARG:HH11	1.83	0.44
49:B2:32:LEU:HD13	49:B2:36:ARG:NH1	2.32	0.44
57:BA:324:A:H2'	57:BA:325:G:O4'	2.18	0.44
57:AA:13:A:H61	57:AA:525:U:H3'	1.82	0.44
57:AA:2114:A:O2'	57:AA:2115:G:H5'	2.18	0.44
57:AA:1493:C:C2'	57:AA:1493:C:O2	2.64	0.43
36:AP:53:GLY:CA	57:AA:832:G:H21	2.31	0.43
26:AC:52:PRO:HG2	26:AC:53:ARG:HH11	1.83	0.43
27:AD:72:LYS:HD3	27:AD:97:TYR:CD2	2.53	0.43
30:AG:29:TRP:HA	30:AG:29:TRP:CE3	2.53	0.43
32:AI:69:LYS:HG3	32:AI:73:GLU:OE2	2.18	0.43
36:AP:7:ARG:HB2	36:AP:8:PRO:CD	2.48	0.43
43:AW:73:ALA:O	43:AW:106:ILE:HG12	2.17	0.43
51:B4:2:LYS:N	51:B4:2:LYS:HD2	2.33	0.43
57:BA:1344:G:H4'	57:BA:1384:A:C5	2.53	0.43
57:BA:1360:A:H2'	57:BA:1361:G:O4'	2.88	0.43
57:BA:143:G:H2'	57:BA:143(A):C:C6	2.53	0.43
29:BF:21:ALA:C	29:BF:23:ASP:N	2.71	0.43
30:BG:43:LEU:N	30:BG:43:LEU:HD22	2.32	0.43
34:BN:133:GLN:O	34:BN:134:ARG:CB	2.58	0.43
37:BQ:21:THR:HA	37:BQ:98:LYS:HB2	2.00	0.43
38:BR:38:VAL:HG22	38:BR:112:ALA:HB2	1.99	0.43
40:AT:57:PHE:C	40:AT:58:ASN:HD22	2.20	0.43
40:AT:57:PHE:CD2	40:AT:58:ASN:N	2.81	0.43
40:AT:89:VAL:C	40:AT:91:ARG:N	2.71	0.43
57:BA:480:A:H2	57:BA:499:U:O2	2.00	0.43
37:BQ:133:ARG:O	37:BQ:134:ARG:CG	2.66	0.43
40:BT:62:THR:CG2	40:BT:75:ILE:HG12	2.43	0.43
40:BT:87:ASP:O	40:BT:87:ASP:OD2	2.36	0.43
33:BJ:32:LEU:O	33:BJ:33:PRO:CB	2.66	0.43
57:BA:1313:U:H2'	57:BA:1610:A:C2	2.53	0.43
49:A2:48:HIS:CD2	57:AA:96:G:H4'	2.53	0.43
31:BH:7:LEU:HB3	31:BH:69:ARG:HD2	1.98	0.43
31:BH:83:TYR:HB2	31:BH:84:SER:H	1.52	0.43
34:BN:64:GLY:HA3	57:BA:1141:U:C5	2.53	0.43
57:BA:197:A:H62	57:BA:2430:A:H2'	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:1409:C:H2'	57:BA:1410:G:C8	2.67	0.43
57:AA:1717:G:C3'	57:AA:1718:G:H5''	2.48	0.43
37:AQ:29:PHE:HB3	37:AQ:65:PHE:CD2	2.53	0.43
41:AU:66:ASN:O	41:AU:70:ARG:N	2.50	0.43
36:BP:84:ASN:HD22	36:BP:84:ASN:N	2.16	0.43
47:B0:66:VAL:HG12	47:B0:67:VAL:N	2.33	0.43
49:A2:64:LEU:HD23	49:A2:68:ARG:HD3	2.00	0.43
39:BS:108:GLY:HA3	57:BA:2376:A:O2'	2.17	0.43
57:BA:572:A:H2'	57:BA:573:G:O4'	2.17	0.43
57:BA:2222:G:O2'	57:BA:2223:G:H5'	2.17	0.43
57:AA:2136:C:H2'	57:AA:2137:C:C6	2.53	0.43
57:AA:2155:G:C2'	57:AA:2156:G:H5'	2.48	0.43
57:AA:2199:A:N3	57:AA:2199:A:H2'	2.32	0.43
57:BA:2294:C:N4	57:BA:2338:G:H1	2.16	0.43
38:AR:96:ARG:HG3	57:AA:2882:A:H5'	2.00	0.43
37:BQ:116:GLU:O	37:BQ:120:ILE:HG12	2.18	0.43
34:AN:115:ARG:HH11	34:AN:115:ARG:HG3	1.83	0.43
57:BA:2364:C:O2'	57:BA:2365:G:H5'	2.17	0.43
34:BN:108:PRO:O	34:BN:113:GLY:HA3	2.18	0.43
57:BA:13:A:H61	57:BA:525:U:H3'	1.83	0.43
29:BF:182:ASN:HB3	57:BA:615:G:OP1	2.18	0.43
30:AG:98:ARG:CG	51:A4:1:MET:HG2	2.48	0.43
57:AA:1215:G:O2'	57:AA:1216:G:H5'	2.18	0.43
31:AH:160:LYS:NZ	57:AA:2657:A:O2'	2.51	0.43
57:AA:585:G:H2'	57:AA:1251:C:H42	1.83	0.43
57:AA:836:G:H2'	57:AA:837:C:C6	2.53	0.43
30:AG:125:PHE:N	30:AG:125:PHE:CD1	2.86	0.43
34:AN:15:LEU:HD13	34:AN:15:LEU:C	2.38	0.43
38:AR:100:LEU:HD23	38:AR:112:ALA:CA	2.48	0.43
39:AS:97:ARG:NH2	39:AS:98:VAL:CA	2.66	0.43
39:AS:97:ARG:HH21	39:AS:98:VAL:HA	1.72	0.43
46:AZ:31:ARG:HG2	58:AB:106:G:C5'	2.49	0.43
26:BC:44:VAL:HG13	26:BC:215:VAL:HG22	2.00	0.43
30:BG:109:VAL:O	30:BG:112:PRO:HB2	2.17	0.43
30:BG:138:GLN:OE1	30:BG:153:ARG:N	2.50	0.43
30:BG:12:TYR:O	30:BG:17:PRO:HD3	2.18	0.43
40:AT:27:THR:O	40:AT:28:VAL:HG23	2.17	0.43
45:BY:29:GLU:OE2	45:BY:38:ILE:HG21	2.17	0.43
57:BA:1902:C:C2'	57:BA:1903:G:O5'	2.66	0.43
57:BA:192:C:H2'	57:BA:193:U:H5'	2.00	0.43
57:BA:68:G:H2'	57:BA:69:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:68:G:H2'	57:BA:69:C:H6	1.83	0.43
57:BA:2283:C:H2'	57:BA:2284:C:H5'	2.00	0.43
57:AA:150:C:H2'	57:AA:151:C:H6	1.84	0.43
28:BE:113:PHE:CD1	57:BA:1654:A:H2	2.36	0.43
28:BE:24:THR:CG2	28:BE:184:VAL:HG23	2.46	0.43
28:BE:78:LEU:O	28:BE:78:LEU:HD12	2.18	0.43
31:BH:7:LEU:HA	31:BH:8:PRO:HD3	1.80	0.43
57:BA:1308:A:H2'	57:BA:1309:G:O4'	2.18	0.43
37:BQ:55:VAL:HG12	37:BQ:64:ILE:CD1	2.47	0.43
57:BA:1169:G:N2	57:BA:1181:C:C2	2.86	0.43
57:BA:2292:C:C2'	57:BA:2293:C:H5'	2.48	0.43
57:AA:302:C:H2'	57:AA:303:U:H6	1.83	0.43
57:BA:1402:C:H2'	57:BA:1403:C:O4'	2.89	0.43
57:BA:1771:C:C1'	57:BA:1786:A:H8	2.31	0.43
29:AF:175:THR:O	29:AF:176:LEU:HB2	2.18	0.43
48:B1:3:LYS:HA	48:B1:3:LYS:HD2	1.79	0.43
41:AU:72:HIS:ND1	41:AU:110:VAL:HG21	2.33	0.43
44:BX:26:TYR:CE2	44:BX:89:ILE:HB	2.53	0.43
44:BX:64:LYS:HE2	44:BX:64:LYS:HB3	1.70	0.43
57:AA:102:G:OP1	57:AA:102:G:C4'	2.65	0.43
57:AA:2884:U:O2'	57:AA:2885:C:H5'	2.18	0.43
57:AA:2783:G:H2'	57:AA:2784:C:C6	2.53	0.43
30:AG:165:THR:C	30:AG:167:GLU:H	2.21	0.43
57:BA:2241:A:H2'	57:BA:2242:G:C8	2.53	0.43
57:AA:544:G:C5	57:AA:545:C:C5	8.76	0.43
57:AA:954:G:N2	57:AA:964:C:H1'	2.33	0.43
58:AB:21:G:H2'	58:AB:21:G:N3	2.33	0.43
30:AG:66:GLN:C	30:AG:67:LYS:HE3	2.37	0.43
32:AI:108:THR:C	32:AI:109:ILE:HG13	2.38	0.43
32:AI:64:GLU:C	32:AI:66:GLU:H	2.20	0.43
34:AN:57:ALA:C	34:AN:58:ASP:O	2.56	0.43
36:AP:48:PRO:O	36:AP:50:ARG:N	2.51	0.43
38:AR:44:LEU:C	38:AR:44:LEU:HD13	2.37	0.43
39:AS:90:GLY:C	39:AS:92:TYR:N	2.72	0.43
29:BF:24:LEU:CB	29:BF:25:PRO:CD	2.85	0.43
29:BF:1:MET:O	29:BF:3:GLU:HG2	2.18	0.43
30:BG:72:ARG:HA	30:BG:87:PRO:CD	2.43	0.43
30:BG:73:ALA:H	30:BG:87:PRO:CG	2.32	0.43
30:BG:91:ARG:C	30:BG:91:ARG:CD	2.86	0.43
34:BN:91:LEU:HD23	34:BN:98:VAL:HG21	2.00	0.43
39:BS:84:GLN:HB3	39:BS:105:ALA:HB3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BV:49:THR:HB	42:BV:50:PRO:HD3	1.96	0.43
40:AT:30:VAL:HG12	40:AT:44:ASP:OD2	2.18	0.43
40:AT:57:PHE:O	40:AT:59:THR:HG22	2.18	0.43
40:AT:70:VAL:HG12	40:AT:71:GLY:H	1.83	0.43
57:BA:309:G:N3	57:BA:329:G:O2'	2.50	0.43
45:BY:4:LYS:HD2	45:BY:32:PRO:CG	2.48	0.43
45:BY:89:PHE:C	45:BY:90:LEU:HD23	2.38	0.43
45:BY:8:LYS:HE2	45:BY:72:VAL:O	2.19	0.43
46:BZ:19:ARG:NH1	46:BZ:84:GLU:O	2.51	0.43
28:BE:110:GLY:HA3	28:BE:162:ALA:HB2	2.01	0.43
28:BE:104:VAL:HG11	28:BE:188:VAL:HG21	2.00	0.43
31:BH:7:LEU:HD21	31:BH:65:HIS:NE2	2.33	0.43
57:AA:1658:C:H2'	57:AA:1659:U:C6	2.53	0.43
28:AE:59:VAL:CG1	28:AE:60:ASN:N	2.81	0.43
40:BT:128:GLU:O	40:BT:129:ARG:C	2.56	0.43
57:BA:271(Q):G:O2'	57:BA:271(R):G:P	2.77	0.43
57:AA:2789:C:N3	57:AA:2894:G:O6	2.51	0.43
57:BA:2100:G:H1	57:BA:2189:U:H3	1.66	0.43
57:AA:2099:U:H3	57:AA:2190:G:H1	1.66	0.43
37:BQ:18:LYS:O	37:BQ:19:GLY:O	2.35	0.43
57:AA:1478:G:HO2'	57:AA:1558:A:H2	1.67	0.43
47:B0:42:GLY:O	47:B0:57:PHE:CG	2.70	0.43
37:AQ:42:ILE:CG2	37:AQ:47:ILE:HG13	2.49	0.43
27:BD:28:GLU:HB2	27:BD:29:PRO:HD3	2.00	0.43
42:BV:76:LYS:O	42:BV:79:VAL:HG12	2.18	0.43
57:BA:1532:C:H2'	57:BA:1533:G:H5'	2.00	0.43
57:BA:754:C:H2'	57:BA:755:C:C6	2.54	0.43
57:BA:1421:G:O2'	57:BA:1422:G:H5'	2.54	0.43
57:AA:2474:C:H5'	57:AA:2475:C:OP2	2.18	0.43
57:BA:2011:U:C2'	57:BA:2012:G:H5'	2.47	0.43
57:BA:2011:U:H2'	57:BA:2012:G:H5'	2.00	0.43
49:A2:64:LEU:O	49:A2:64:LEU:HD23	2.17	0.43
38:AR:7:GLY:C	38:AR:8:ARG:NE	2.68	0.43
47:A0:26:TYR:CD1	47:A0:26:TYR:N	2.86	0.43
57:AA:419:C:O2'	57:AA:420:C:H5'	2.18	0.43
57:AA:2781:A:H5''	57:AA:2782:G:H5'	2.00	0.43
28:BE:128:SER:OG	28:BE:129:HIS:N	2.51	0.43
47:B0:36:ILE:HD12	47:B0:39:ARG:HG2	1.99	0.43
57:BA:2399:G:H2'	57:BA:2400:G:O4'	2.17	0.43
31:BH:118:PRO:HG2	31:BH:121:ILE:HD12	1.99	0.43
57:AA:280:C:N3	57:AA:361:G:N2	2.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:111:GLU:O	37:BQ:115:MET:HG2	2.18	0.43
50:A3:7:LYS:HD2	50:A3:34:GLU:HG2	2.00	0.43
34:AN:99:LEU:O	34:AN:99:LEU:HD13	2.18	0.43
38:AR:111:LEU:HD23	38:AR:111:LEU:N	2.33	0.43
57:BA:2682:U:H6	57:BA:2682:U:H5'	1.82	0.43
57:BA:1894:C:H2'	57:BA:1895:C:H6	1.83	0.43
57:BA:693:C:O2'	57:BA:694:U:H5'	2.18	0.43
57:BA:1914:C:OP1	57:BA:1915:U:OP2	2.37	0.43
26:AC:185:LYS:HE3	26:AC:185:LYS:HA	2.00	0.43
27:AD:26:LYS:O	27:AD:27:THR:HB	2.17	0.43
31:AH:9:ILE:CG2	31:AH:50:VAL:O	2.66	0.43
32:AI:25:TYR:CE2	32:AI:29:TYR:CD2	3.06	0.43
34:AN:1:MET:C	34:AN:2:LYS:HG3	2.37	0.43
34:AN:38:HIS:CE1	34:AN:50:ASP:OD2	2.72	0.43
36:AP:41:ARG:HA	36:AP:41:ARG:HE	1.83	0.43
36:AP:48:PRO:O	36:AP:49:ARG:C	2.56	0.43
42:AV:85:LYS:HE2	42:AV:85:LYS:HB2	1.73	0.43
36:BP:35:HIS:CA	57:BA:1190:G:H5'	2.47	0.43
58:BB:37:C:C2'	58:BB:38:C:H5'	2.49	0.43
26:BC:57:GLN:NE2	26:BC:204:GLY:O	2.51	0.43
29:BF:9:ILE:HG22	29:BF:9:ILE:O	2.18	0.43
32:BI:76:THR:HG21	32:BI:139:GLN:NE2	2.30	0.43
32:BI:82:ARG:HA	32:BI:145:VAL:CG1	2.48	0.43
34:BN:1:MET:C	34:BN:2:LYS:HG3	2.38	0.43
38:BR:65:LEU:HD12	38:BR:65:LEU:HA	1.74	0.43
27:AD:259:THR:HG21	57:AA:1803:A:HO2'	1.81	0.43
27:BD:14:ARG:NH2	57:BA:1693:U:O2'	2.51	0.43
40:AT:77:PRO:O	40:AT:78:LEU:HB2	2.18	0.43
45:BY:13:VAL:CG2	45:BY:14:LEU:N	2.82	0.43
45:BY:8:LYS:HB2	45:BY:28:LYS:HE2	2.00	0.43
57:BA:1899:G:O2'	57:BA:1900:A:H5''	2.18	0.43
35:BO:24:VAL:CG2	35:BO:33:ALA:HB2	2.48	0.43
35:BO:64:ARG:CZ	40:BT:70:VAL:HG21	2.47	0.43
53:A6:35:GLU:CB	53:A6:51:GLU:HB2	2.41	0.43
57:AA:1313:U:H2'	57:AA:1610:A:C2	2.53	0.43
57:AA:1021:A:H2'	57:AA:1023:U:H5'	2.01	0.43
28:BE:11:MET:HB2	28:BE:23:VAL:O	2.18	0.43
57:BA:2383:G:O2'	57:BA:2384:G:H5'	2.18	0.43
57:BA:1040:C:O2'	57:BA:1041:C:P	2.76	0.43
46:BZ:110:GLY:CA	46:BZ:146:ILE:HG23	2.48	0.43
46:BZ:157:LEU:CD2	46:BZ:157:LEU:N	2.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AN:118:LYS:O	34:AN:121:LYS:HE3	2.18	0.43
56:B9:1:MET:HE1	56:B9:10:ILE:HD13	2.00	0.43
57:AA:1478:G:O2'	57:AA:1479:G:H5'	2.18	0.43
57:AA:2230:G:C5	57:AA:2231:C:C5	3.06	0.43
57:AA:557:U:O2'	57:AA:558:G:H5'	2.19	0.43
57:AA:658:C:H2'	57:AA:659:C:C6	2.53	0.43
42:BV:76:LYS:HG3	42:BV:81:TYR:CD1	2.53	0.43
57:BA:2712:U:O2'	57:BA:2712(A):A:P	2.76	0.43
57:AA:469:G:C2'	57:AA:470:A:H5''	2.49	0.43
47:B0:27:GLU:OE2	47:B0:69:PHE:HB2	2.18	0.43
47:B0:66:VAL:CG1	47:B0:67:VAL:N	2.80	0.43
57:BA:2837:G:H2'	57:BA:2838:G:H8	1.82	0.43
57:BA:2498:C:O2'	57:BA:2499:C:H5'	2.18	0.43
46:BZ:39:VAL:HG11	46:BZ:88:PHE:CE1	2.53	0.43
57:AA:782:A:H5'	57:AA:783:A:C2	2.53	0.43
27:AD:227:ASN:ND2	57:AA:784:A:H5''	2.33	0.43
57:BA:2199:A:N3	57:BA:2199:A:H2'	2.32	0.43
57:AA:1261:C:H2'	57:AA:1262:A:O5'	2.19	0.43
57:BA:1547:C:H2'	57:BA:1548:C:H6	1.83	0.43
51:B4:43:TYR:O	51:B4:44:THR:O	2.34	0.43
49:A2:58:ALA:O	49:A2:59:ARG:C	2.57	0.43
57:BA:236:C:H2'	57:BA:237:C:C6	2.54	0.43
57:AA:1861:G:O2'	57:AA:1862:G:H5'	2.19	0.43
48:B1:92:LYS:HE3	57:BA:153:C:OP1	2.18	0.43
27:AD:257:LEU:HD22	27:AD:258:LYS:O	2.19	0.43
41:AU:55:ARG:NH1	57:AA:1155:A:O3'	2.51	0.43
57:AA:1317:A:H2'	57:AA:1318:C:H6	1.82	0.43
57:AA:1357:U:H2'	57:AA:1358:G:O4'	2.19	0.43
57:AA:1360:A:H8	57:AA:1360:A:OP1	5.39	0.43
57:AA:531:C:OP1	57:AA:561:G:N1	2.51	0.43
26:AC:53:ARG:N	26:AC:53:ARG:HD3	2.23	0.43
30:AG:60:LEU:HD12	30:AG:68:PRO:HG3	1.99	0.43
30:AG:86:MET:N	30:AG:87:PRO:CD	2.82	0.43
31:AH:88:LEU:N	31:AH:88:LEU:HD22	2.32	0.43
32:AI:68:LEU:HG	32:AI:72:LEU:CD2	2.48	0.43
41:AU:31:SER:C	41:AU:33:ARG:N	2.71	0.43
45:AY:9:LYS:O	45:AY:28:LYS:HG3	2.18	0.43
57:BA:1360:A:OP1	57:BA:1360:A:H8	5.37	0.43
57:BA:260:G:O4'	57:BA:621:A:H1'	2.18	0.43
29:BF:63:LYS:HE3	29:BF:67:GLN:CB	2.49	0.43
36:BP:33:ARG:NH2	57:BA:587:C:C2'	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:41:ARG:NH1	36:BP:45:LEU:HD12	2.31	0.43
37:BQ:39:PRO:HA	37:BQ:97:VAL:O	2.18	0.43
39:BS:105:ALA:C	39:BS:107:GLU:N	2.72	0.43
55:A8:61:LEU:CD1	55:A8:62:LEU:HG	2.32	0.43
48:B1:23:LYS:HE2	48:B1:28:GLY:H	1.83	0.43
57:BA:426:C:O2'	57:BA:427:U:H5'	2.18	0.43
57:BA:543:C:O2'	57:BA:544:G:H5'	6.52	0.43
27:BD:97:TYR:CE1	27:BD:103:ARG:HG3	2.53	0.43
27:BD:118:VAL:CG2	27:BD:119:ALA:N	2.80	0.43
53:B6:16:CYS:O	53:B6:17:LYS:HB2	2.18	0.43
52:B5:3:LYS:HG2	57:BA:2015:A:H2	1.83	0.43
35:BO:64:ARG:HG3	35:BO:64:ARG:NH1	4.66	0.43
40:BT:54:ARG:HG2	40:BT:54:ARG:NH1	2.32	0.43
58:BB:111:G:H2'	58:BB:112:U:O4'	2.19	0.43
57:BA:2789:C:N3	57:BA:2894:G:O6	2.52	0.43
57:BA:244:A:H2'	57:BA:245:G:O4'	2.18	0.43
57:AA:271(M):G:O2'	57:AA:271(O):C:H5'	2.18	0.43
55:B8:38:GLY:O	55:B8:42:ARG:HB2	2.18	0.43
57:AA:142:A:C8	57:AA:1408:C:H1'	2.54	0.43
57:BA:83:G:N2	57:BA:102:G:H2'	2.33	0.43
41:BU:74:LEU:C	41:BU:74:LEU:HD13	2.38	0.43
57:BA:1385:G:O2'	57:BA:1396:U:H6	2.00	0.43
37:AQ:109:VAL:HG12	37:AQ:110:THR:N	2.33	0.43
56:A9:19:ARG:NH1	57:AA:2755:C:C5	2.87	0.43
26:BC:23:ILE:O	26:BC:23:ILE:HG22	2.19	0.43
57:BA:2628:C:H1'	57:BA:2781:A:H2'	1.99	0.43
57:BA:668:G:H3'	57:BA:669:G:H5''	2.00	0.43
57:BA:2136:C:H2'	57:BA:2137:C:C6	2.54	0.43
57:AA:20:C:H2'	57:AA:21:A:C8	2.53	0.43
57:BA:1582:C:O2'	57:BA:1586:A:C8	2.67	0.43
53:A6:14:THR:HG22	53:A6:50:ARG:O	2.19	0.43
41:AU:8:VAL:HG23	57:AA:1216:G:OP1	2.17	0.43
57:AA:2178:C:H3'	57:AA:2179:C:H5''	2.01	0.43
46:AZ:146:ILE:HD12	57:AA:896:A:N3	2.33	0.43
57:AA:975:C:O2	57:AA:975:C:H2'	2.18	0.43
27:AD:76:PRO:HG2	27:AD:98:VAL:CG2	2.49	0.43
29:AF:125:LEU:HD13	29:AF:199:TRP:CG	2.52	0.43
29:AF:9:ILE:HG23	29:AF:12:LEU:C	2.38	0.43
30:AG:33:ARG:HB3	30:AG:34:LEU:H	1.63	0.43
31:AH:42:ARG:HG3	31:AH:42:ARG:NH1	2.33	0.43
31:AH:54:ARG:HG2	31:AH:54:ARG:NH1	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AI:75:LEU:HD12	32:AI:75:LEU:N	2.33	0.43
36:AP:27:HIS:HD2	36:AP:28:GLY:N	2.16	0.43
36:AP:33:ARG:HD3	57:AA:587:C:C6	2.54	0.43
36:AP:41:ARG:NH1	36:AP:45:LEU:HD12	2.32	0.43
37:AQ:12:GLN:CG	37:AQ:73:PRO:HD2	2.45	0.43
38:AR:79:LEU:HA	38:AR:83:ILE:HB	2.01	0.43
42:AV:49:THR:O	42:AV:50:PRO:C	2.56	0.43
57:BA:1014:U:H2'	57:BA:1015:G:H5'	2.00	0.43
32:BI:37:VAL:HG12	32:BI:38:LEU:N	2.33	0.43
57:BA:545:C:H2'	57:BA:547:A:C5'	2.48	0.43
57:BA:548:A:C3'	57:BA:549:G:H5'	2.48	0.43
40:AT:57:PHE:O	40:AT:58:ASN:C	2.56	0.43
29:AF:133:ASN:O	29:AF:135:LYS:N	2.52	0.43
49:A2:38:GLN:HA	49:A2:41:ILE:HG12	2.00	0.43
28:BE:77:ILE:CG2	28:BE:78:LEU:H	2.00	0.43
31:BH:98:LEU:HD13	31:BH:125:VAL:HG23	1.99	0.43
42:BV:15:GLU:O	42:BV:16:PRO:O	2.36	0.43
40:AT:11:GLU:O	40:AT:13:ARG:N	2.51	0.43
33:BJ:8:GLU:C	33:BJ:10:LEU:H	2.20	0.43
47:B0:19:LYS:CD	47:B0:41:ARG:HH22	2.32	0.43
57:BA:271(Q):G:HO2'	57:BA:271(R):G:P	2.42	0.43
57:AA:1448:G:H2'	57:AA:1449:A:C8	2.53	0.43
54:B7:12:ARG:NH2	54:B7:44:PRO:HB3	2.33	0.43
57:AA:142:A:H8	57:AA:1595:G:H21	1.64	0.43
57:BA:83:G:N2	57:BA:103:A:OP2	2.50	0.43
57:AA:2292:C:C2'	57:AA:2293:C:H5'	2.48	0.43
34:BN:67:LEU:C	34:BN:69:GLN:H	2.21	0.43
49:A2:69:ARG:O	49:A2:70:GLN:CB	2.67	0.43
57:AA:2521:C:H42	57:AA:2544:G:H1	1.66	0.43
57:AA:1876:A:H2'	57:AA:1877:A:C8	2.54	0.43
44:AX:26:TYR:CE2	44:AX:89:ILE:HB	2.53	0.43
26:BC:38:PHE:CD1	57:BA:2127:G:H4'	2.53	0.43
53:A6:19:ARG:HD2	53:A6:19:ARG:H	1.83	0.43
57:AA:780:G:H21	57:AA:783:A:H62	1.66	0.43
47:A0:20:ARG:HD3	57:AA:2356:C:O3'	2.18	0.43
57:AA:1833:U:O2	57:AA:1969:A:H2	2.01	0.43
57:BA:2777:G:H5''	57:BA:2778:A:H5'	2.00	0.43
26:BC:28:ARG:NH1	26:BC:28:ARG:CB	2.81	0.43
37:BQ:72:LYS:O	37:BQ:93:TYR:HA	2.18	0.43
57:BA:2248:C:C2'	57:BA:2249:U:H5'	2.49	0.43
57:AA:1204:A:H2	57:AA:1241:A:N1	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AC:6:LYS:HB3	57:AA:2132:U:C4	2.54	0.43
57:AA:541:C:O2'	57:AA:542:C:H5'	2.19	0.43
57:AA:609:A:H2'	57:AA:610:G:O4'	2.19	0.43
57:AA:916:G:C2'	57:AA:917:A:H5''	2.48	0.43
51:A4:2:LYS:CB	58:AB:40:U:O4	2.63	0.43
58:AB:82:G:O2'	58:AB:83:G:H5'	2.19	0.43
30:AG:116:ASP:O	30:AG:117:PHE:O	2.36	0.43
31:AH:83:TYR:O	31:AH:84:SER:HB3	2.19	0.43
36:AP:101:VAL:C	36:AP:103:ALA:H	2.21	0.43
36:AP:33:ARG:NH2	57:AA:587:C:C2'	2.81	0.43
41:AU:17:ILE:O	41:AU:20:LEU:HB2	2.19	0.43
57:BA:2801(A):A:H5'	57:BA:2802:G:C8	2.47	0.43
26:BC:16:ASP:HB3	26:BC:19:LYS:HB2	2.01	0.43
30:BG:140:ILE:HD12	30:BG:140:ILE:O	2.19	0.43
30:BG:76:SER:HB3	30:BG:83:ARG:CB	2.40	0.43
38:BR:33:ARG:HD2	38:BR:33:ARG:N	2.34	0.43
38:BR:79:LEU:HA	38:BR:83:ILE:HB	1.99	0.43
27:BD:101:GLU:OE1	27:BD:103:ARG:HD3	2.19	0.43
27:BD:10:THR:C	27:BD:11:PRO:O	2.56	0.43
57:AA:2801(A):A:H5'	57:AA:2802:G:C8	2.46	0.43
57:AA:262:A:H2'	57:AA:263:C:O4'	2.19	0.43
35:AO:64:ARG:HB2	35:AO:83:ALA:HB3	2.00	0.43
45:BY:14:LEU:HD12	45:BY:15:VAL:N	2.34	0.43
57:BA:1998:G:O2'	57:BA:1999:C:H5'	2.19	0.43
40:BT:11:GLU:CD	40:BT:11:GLU:H	2.22	0.43
27:AD:209:ALA:C	27:AD:210:GLY:O	2.55	0.43
28:AE:34:VAL:CG2	28:AE:48:GLN:HE21	2.32	0.43
28:AE:59:VAL:CG2	28:AE:63:LEU:HA	2.46	0.43
46:AZ:118:GLN:NE2	46:AZ:175:VAL:HG11	2.34	0.43
57:BA:1826:G:H2'	57:BA:1827:C:C6	2.50	0.43
57:AA:527:C:H4'	57:AA:528:A:O5'	2.18	0.43
47:A0:19:LYS:CD	47:A0:41:ARG:HH22	2.32	0.43
28:AE:4:ILE:HG12	28:AE:5:LEU:N	2.33	0.43
57:BA:435:C:H2'	57:BA:436:C:H5'	2.00	0.43
47:A0:51:VAL:HG21	47:A0:80:HIS:HA	2.00	0.43
57:BA:651:G:C2'	57:BA:652:C:H5'	2.49	0.43
57:BA:651:G:H2'	57:BA:652:C:H5'	1.99	0.43
34:BN:65:LYS:HD2	34:BN:69:GLN:NE2	2.34	0.43
53:B6:9:LEU:HD12	53:B6:28:ARG:HG3	2.01	0.43
57:AA:470:A:H2'	57:AA:471:A:O4'	2.18	0.43
41:BU:72:HIS:ND1	41:BU:110:VAL:HG21	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:A4:27:THR:O	51:A4:28:LYS:HB3	2.17	0.43
33:AJ:79:ALA:O	33:AJ:80:VAL:C	2.57	0.43
57:AA:1751:C:O2'	57:AA:1752:C:H5'	2.19	0.43
57:AA:1340:U:H4'	57:AA:1341:U:OP2	2.18	0.43
40:AT:51:ARG:HG2	40:AT:52:ILE:N	2.34	0.43
45:BY:95:LYS:HD3	45:BY:100:ALA:CA	2.48	0.43
56:A9:7:VAL:HG21	56:A9:36:GLN:HB2	2.00	0.43
47:A0:36:ILE:HD11	47:A0:39:ARG:HG2	2.00	0.43
57:AA:774:A:C2	57:AA:787:U:O2'	2.68	0.43
57:AA:414:C:O2	57:AA:1864:U:O2'	2.34	0.43
57:AA:1970:A:H5'	57:AA:1972:A:H1'	1.99	0.43
26:AC:28:ARG:NH1	26:AC:28:ARG:CB	2.81	0.43
57:BA:2378:A:H8	57:BA:2378:A:O5'	2.02	0.43
38:AR:36:THR:CG2	57:AA:1278:A:H5''	2.47	0.43
57:AA:544:G:C6	57:AA:545:C:C4	9.71	0.43
57:AA:954:G:O2'	57:AA:955:C:H5'	2.19	0.43
58:AB:11:C:H3'	58:AB:12:C:H6	1.84	0.43
27:AD:31:LYS:C	27:AD:33:LEU:N	2.72	0.43
29:AF:185:ASP:HA	29:AF:188:ARG:CD	2.49	0.43
31:AH:7:LEU:N	31:AH:7:LEU:HD12	2.34	0.43
34:AN:134:ARG:HG3	34:AN:134:ARG:O	2.19	0.43
34:AN:91:LEU:HD23	34:AN:98:VAL:HG21	2.01	0.43
41:AU:61:TRP:CE2	41:AU:94:ASN:HA	2.53	0.43
45:AY:30:VAL:HG12	45:AY:31:LEU:N	2.33	0.43
36:BP:53:GLY:HA2	57:BA:832:G:H21	1.83	0.43
26:BC:51:ASP:HB3	26:BC:54:ARG:CG	2.49	0.43
30:BG:40:ASN:CG	57:BA:2313:C:O4'	2.57	0.43
30:BG:41:GLN:HE21	30:BG:155:MET:HB3	1.83	0.43
34:BN:132:ALA:O	34:BN:133:GLN:CB	2.65	0.43
42:BV:27:ALA:O	42:BV:28:GLU:O	2.37	0.43
57:BA:424:G:O2'	57:BA:425:G:H5'	2.28	0.43
27:BD:61:LEU:O	27:BD:63:ARG:NH1	2.52	0.43
45:BY:52:SER:O	45:BY:54:LYS:N	2.51	0.43
35:BO:87:ILE:HG22	35:BO:88:ASN:O	2.19	0.43
40:BT:88:ILE:HG22	40:BT:89:VAL:HG13	2.01	0.43
28:BE:96:PHE:HA	28:BE:100:GLU:OE1	2.19	0.43
28:BE:52:LEU:HD12	28:BE:52:LEU:HA	1.91	0.43
31:BH:41:MET:SD	31:BH:53:GLU:N	2.84	0.43
31:BH:83:TYR:O	31:BH:84:SER:HB3	2.18	0.43
53:B6:39:TYR:OH	57:BA:2347:C:OP1	2.35	0.43
27:AD:206:LEU:HA	27:AD:211:ARG:NH1	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AD:210:GLY:C	27:AD:212:SER:H	2.18	0.43
50:B3:8:LEU:HD13	50:B3:31:LEU:HD23	1.97	0.43
46:AZ:168:GLU:OE2	46:AZ:168:GLU:HA	2.18	0.43
57:BA:1462:C:O2'	57:BA:1463:C:H5'	2.19	0.43
57:AA:1448:G:H5'	57:AA:1449:A:OP1	2.18	0.43
28:AE:4:ILE:HD13	28:AE:28:ALA:CB	2.38	0.43
57:AA:2230:G:H2'	57:AA:2231:C:H6	1.82	0.43
57:BA:724:U:H2'	57:BA:725:G:O4'	2.19	0.43
57:BA:1385:G:H4'	57:BA:1386:C:OP1	2.19	0.43
57:BA:2474:C:H5'	57:BA:2475:C:OP2	2.19	0.43
47:B0:27:GLU:OE1	57:BA:856:C:C1'	2.67	0.43
57:BA:752:A:H4'	57:BA:753:C:O5'	2.19	0.43
42:AV:82:ARG:HG2	42:AV:82:ARG:NH1	2.34	0.43
57:BA:2223:G:H2'	57:BA:2224:G:C5'	2.48	0.43
35:AO:49:ARG:HH21	57:AA:1423:G:H5'	98.58	0.43
53:A6:14:THR:HG23	53:A6:14:THR:O	2.19	0.43
26:AC:28:ARG:HB3	26:AC:28:ARG:NH1	2.33	0.43
44:AX:46:ALA:HA	49:A2:30:ARG:HH21	1.84	0.43
40:BT:114:LEU:HD23	40:BT:114:LEU:HA	1.80	0.43
57:AA:1742:G:N7	57:AA:1743:C:C4	2.87	0.43
51:A4:1:MET:N	58:AB:44:G:P	2.92	0.43
32:AI:68:LEU:C	32:AI:68:LEU:HD23	2.39	0.43
32:AI:74:ASN:CG	32:AI:75:LEU:HD12	2.39	0.43
36:AP:16:ARG:O	36:AP:18:ARG:N	2.51	0.43
39:AS:93:LYS:O	39:AS:93:LYS:CG	2.67	0.43
42:AV:65:GLY:CA	42:AV:91:TYR:HE1	2.30	0.43
44:AX:27:THR:HA	44:AX:79:ALA:O	2.19	0.43
45:AY:76:CYS:HG	45:AY:77:PRO:HD2	1.76	0.43
36:BP:53:GLY:CA	57:BA:832:G:H21	2.32	0.43
26:BC:185:LYS:HE3	26:BC:185:LYS:HA	2.00	0.43
26:BC:6:LYS:HB3	57:BA:2132:U:C4	2.54	0.43
30:BG:72:ARG:HH11	30:BG:86:MET:HA	1.83	0.43
33:BJ:59:ILE:C	33:BJ:61:LEU:N	2.72	0.43
34:BN:57:ALA:C	34:BN:58:ASP:O	2.57	0.43
39:BS:106:ARG:NH1	39:BS:107:GLU:O	2.51	0.43
40:AT:30:VAL:CG2	40:AT:84:GLN:H	2.30	0.43
43:BW:12:ILE:HB	43:BW:42:ARG:HH12	1.84	0.43
44:BX:14:SER:O	44:BX:15:GLU:C	2.55	0.43
37:BQ:133:ARG:HG3	37:BQ:133:ARG:HH11	1.83	0.43
27:BD:243:GLY:O	27:BD:244:ARG:HB3	2.18	0.43
40:BT:57:PHE:CD2	40:BT:58:ASN:N	2.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:A6:8:LYS:NZ	57:AA:2285:C:H5	2.09	0.43
57:AA:68:G:H2'	57:AA:69:C:H6	1.82	0.43
28:BE:36:ARG:NH2	28:BE:88:GLY:HA3	2.25	0.43
28:AE:49:LEU:O	28:AE:78:LEU:HB2	2.19	0.43
28:AE:78:LEU:O	28:AE:78:LEU:HD12	2.18	0.43
50:B3:35:ARG:NH2	50:B3:37:LEU:HD21	2.19	0.43
57:BA:1462:C:H4'	57:BA:2703:C:H5'	2.01	0.43
57:AA:2262:U:O2'	57:AA:2263:C:H5'	2.18	0.43
57:AA:2468:G:H1	57:AA:2481:G:H2'	1.84	0.43
55:A8:29:LYS:HD3	55:A8:44:LYS:CG	2.42	0.43
49:A2:36:ARG:O	49:A2:39:ALA:HB3	2.18	0.43
27:BD:206:LEU:HD23	27:BD:211:ARG:NH1	2.34	0.43
49:A2:70:GLN:HG3	49:A2:71:ASN:ND2	2.33	0.43
57:AA:2538:C:O2'	57:AA:2539:C:H5'	2.18	0.43
56:B9:19:ARG:NH1	57:BA:2755:C:C5	2.86	0.43
57:BA:2781:A:H5"	57:BA:2782:G:H5'	2.00	0.43
40:AT:48:ILE:HD12	40:AT:48:ILE:N	2.34	0.43
46:BZ:155:LEU:HD23	46:BZ:155:LEU:H	1.83	0.43
53:B6:18:ARG:HG3	53:B6:19:ARG:HH11	1.83	0.43
46:AZ:162:GLU:CD	46:AZ:162:GLU:N	2.72	0.43
57:AA:814:C:H2'	57:AA:815:C:C6	2.53	0.43
48:A1:20:ARG:NH1	48:A1:20:ARG:HG2	2.33	0.43
57:AA:2514:U:H2'	57:AA:2515:C:C6	2.54	0.43
57:BA:2236:C:H2'	57:BA:2237:G:O4'	2.19	0.43
37:AQ:72:LYS:O	37:AQ:93:TYR:HA	2.19	0.43
57:BA:1573:G:H2'	57:BA:1574:C:H5'	1.99	0.43
57:AA:1014:U:C2'	57:AA:1015:G:C5'	2.94	0.43
44:AX:69:TYR:CE2	57:AA:456:C:C4	3.07	0.43
58:AB:87:G:C2'	58:AB:88:C:H5"	2.49	0.43
26:AC:57:GLN:NE2	26:AC:204:GLY:O	2.52	0.43
26:AC:212:SER:OG	26:AC:214:TYR:HE1	2.02	0.43
27:AD:271:ILE:O	27:AD:272:ALA:HB2	2.19	0.43
30:AG:110:ALA:O	30:AG:112:PRO:N	2.52	0.43
32:AI:71:ILE:HG22	32:AI:72:LEU:N	2.33	0.43
36:AP:83:VAL:HG12	36:AP:112:LEU:CD2	2.42	0.43
38:AR:27:SER:HB3	38:AR:34:ILE:HD11	2.00	0.43
41:AU:69:CYS:SG	41:AU:79:PHE:CD1	3.08	0.43
42:AV:5:VAL:CG2	42:AV:35:LEU:HB3	2.47	0.43
42:AV:52:VAL:O	42:AV:53:GLU:C	2.58	0.43
43:AW:3:ALA:HB2	43:AW:58:ALA:HA	2.01	0.43
46:AZ:85:HIS:HD1	58:AB:75:G:H21	1.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B1:51:VAL:HG21	48:B1:74:VAL:CG2	2.37	0.43
57:BA:1048:A:C6	57:BA:1106:A:N7	2.87	0.43
57:BA:1155:A:O2'	57:BA:1156:A:H2'	2.19	0.43
57:BA:1345:C:O2'	57:BA:1346:G:H5'	2.18	0.43
32:BI:109:ILE:HG22	32:BI:110:ASP:N	2.26	0.43
32:BI:27:ARG:NH1	32:BI:27:ARG:HG3	2.34	0.43
36:BP:17:LYS:O	36:BP:18:ARG:C	2.57	0.43
36:BP:7:ARG:HB2	36:BP:8:PRO:CD	2.48	0.43
27:AD:259:THR:CG2	57:AA:1803:A:H4'	2.45	0.43
27:BD:118:VAL:CG2	27:BD:119:ALA:H	2.31	0.43
40:AT:26:ASP:HB3	40:AT:89:VAL:O	2.19	0.43
57:BA:479:A:H4'	57:BA:480:A:OP1	2.19	0.43
44:BX:56:THR:HG22	44:BX:79:ALA:HB2	1.99	0.43
58:BB:20:C:C3'	58:BB:21:G:H5''	2.47	0.43
57:BA:1899:G:N2	57:BA:1902:C:C4	2.85	0.43
40:BT:28:VAL:HG11	40:BT:46:GLU:CD	2.39	0.43
40:BT:70:VAL:CG1	40:BT:71:GLY:H	2.32	0.43
55:A8:32:LEU:HD12	57:AA:2391:G:OP1	2.19	0.43
55:A8:50:LEU:C	55:A8:52:LYS:H	2.22	0.43
57:BA:2787:C:O2	57:BA:2787:C:H2'	2.18	0.43
28:BE:144:ARG:HB3	28:BE:145:LYS:H	1.37	0.43
57:AA:1528:A:N6	57:AA:1544:A:C2	2.86	0.43
29:BF:74:ARG:HD2	57:BA:674:G:C1'	2.41	0.43
37:AQ:133:ARG:O	37:AQ:134:ARG:CG	2.67	0.43
57:BA:437:G:O2'	57:BA:438:G:H5'	2.19	0.43
57:BA:99:U:H4'	57:BA:102:G:H1'	2.01	0.43
28:AE:144:ARG:HD2	57:AA:2572:A:C8	2.54	0.43
57:AA:1385:G:H4'	57:AA:1386:C:OP1	2.18	0.43
57:AA:83:G:C2	57:AA:102:G:H2'	2.54	0.43
48:A1:67:ILE:N	48:A1:68:PRO:CD	2.80	0.43
29:AF:167:ALA:O	29:AF:168:ARG:CB	2.66	0.43
57:BA:1340:U:H4'	57:BA:1341:U:OP2	2.19	0.43
53:B6:19:ARG:H	53:B6:19:ARG:HD2	1.84	0.43
57:BA:1853:A:N1	57:BA:2087:G:H1'	2.33	0.43
57:BA:2884:U:H2'	57:BA:2885:C:C5'	2.49	0.43
51:A4:39:CYS:O	51:A4:40:HIS:CD2	2.72	0.43
27:BD:261:LYS:HB3	27:BD:264:LYS:HB2	2.01	0.43
57:BA:2162:G:H5'	57:BA:2173:A:H5'	2.00	0.43
57:AA:1681:G:H8	57:AA:1681:G:OP2	2.02	0.43
27:BD:224:ALA:O	27:BD:225:ALA:HB2	2.18	0.43
46:AZ:100:VAL:CG2	46:AZ:126:VAL:HG21	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2037:G:H2'	57:AA:2038:G:C8	2.54	0.43
58:AB:20:C:C3'	58:AB:21:G:H5''	2.47	0.42
27:AD:118:VAL:CG2	27:AD:119:ALA:N	2.81	0.42
27:AD:35:LYS:O	27:AD:36:PRO:C	2.58	0.42
29:AF:115:ALA:O	29:AF:116:ASP:C	2.56	0.42
31:AH:42:ARG:HG3	31:AH:42:ARG:HH11	1.83	0.42
37:AQ:35:VAL:HG23	37:AQ:101:ARG:O	2.19	0.42
44:AX:18:TYR:HA	44:AX:21:PHE:CD1	2.53	0.42
45:AY:88:LYS:HD3	45:AY:93:GLY:N	2.34	0.42
26:BC:7:ARG:CD	57:BA:2128:C:H5'	2.49	0.42
57:BA:628:G:O2'	57:BA:629:G:H5'	4.81	0.42
58:BB:11:C:H3'	58:BB:12:C:H6	1.83	0.42
30:BG:34:LEU:HB3	30:BG:99:MET:CE	2.48	0.42
34:BN:133:GLN:CG	34:BN:134:ARG:H	2.16	0.42
36:BP:107:LYS:C	36:BP:109:GLY:N	2.72	0.42
27:BD:142:VAL:HG22	27:BD:143:HIS:N	2.34	0.42
43:BW:18:ARG:HG3	43:BW:76:VAL:HG13	1.99	0.42
45:BY:88:LYS:HZ3	45:BY:93:GLY:CA	2.26	0.42
46:BZ:119:GLU:CG	46:BZ:122:ARG:NH1	2.82	0.42
40:BT:34:VAL:O	40:BT:35:LYS:CB	2.63	0.42
40:BT:76:PHE:HA	40:BT:77:PRO:HD3	1.70	0.42
57:BA:1657:C:H2'	57:BA:1658:C:C6	2.54	0.42
28:BE:63:LEU:O	28:BE:65:GLY:N	2.52	0.42
31:BH:42:ARG:HG3	31:BH:42:ARG:NH1	2.33	0.42
31:BH:97:ARG:O	31:BH:103:LEU:HD12	2.19	0.42
57:AA:2631:G:N3	57:AA:2810:A:H2	2.17	0.42
28:AE:96:PHE:HA	28:AE:100:GLU:OE1	2.19	0.42
57:AA:2383:G:O2'	57:AA:2384:G:H5'	2.18	0.42
57:AA:527:C:N4	57:AA:2779:U:OP2	2.51	0.42
57:BA:527:C:N4	57:BA:2779:U:OP2	2.52	0.42
57:BA:1528:A:N6	57:BA:1544:A:C2	2.87	0.42
56:A9:4:ARG:NH1	57:AA:2477:C:N3	2.67	0.42
57:AA:794:G:H2'	57:AA:795:C:C6	2.54	0.42
57:BA:1947:C:C3'	57:BA:1948:G:H5''	2.48	0.42
57:AA:1717:G:H2'	57:AA:1718:G:C5'	2.42	0.42
37:BQ:46:GLN:NE2	37:BQ:126:PRO:HD3	2.34	0.42
57:AA:1473:G:H1	57:AA:1518:U:H3	1.67	0.42
57:AA:1532:C:H2'	57:AA:1533:G:H5'	2.00	0.42
46:AZ:29:TYR:HA	46:AZ:34:ASN:HA	2.00	0.42
27:BD:58:HIS:CD2	27:BD:59:LYS:N	2.87	0.42
57:BA:272:G:O6	57:BA:421:U:H2'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2030:A:H4'	57:BA:2031:A:H8	1.83	0.42
57:BA:2627:G:O2'	57:BA:2781:A:N1	2.46	0.42
47:B0:20:ARG:NH1	57:BA:2271:G:H5''	2.34	0.42
57:BA:565:C:H2'	57:BA:566:U:O4'	2.19	0.42
48:B1:58:ILE:HD12	48:B1:91:LYS:HA	2.00	0.42
30:BG:129:GLY:O	30:BG:130:ASN:CB	2.66	0.42
57:AA:2870:C:H2'	57:AA:2871:C:C5'	2.49	0.42
57:AA:2850:A:OP2	57:AA:2866:U:C5	2.72	0.42
46:BZ:163:LEU:H	46:BZ:163:LEU:CD2	2.32	0.42
49:A2:10:LEU:HD13	49:A2:14:ARG:NH2	2.34	0.42
57:AA:64:A:H2'	57:AA:65:C:H6	1.84	0.42
57:BA:1662:C:O2'	57:BA:1663:C:H5'	2.19	0.42
47:B0:53:MET:HA	47:B0:58:THR:O	2.19	0.42
57:BA:2143:C:O2'	57:BA:2144:U:H5'	2.19	0.42
57:BA:2077:A:H2'	57:BA:2078:C:H6	1.84	0.42
53:A6:40:CYS:HB2	53:A6:46:HIS:CE1	2.53	0.42
57:AA:2009:G:O2'	57:AA:2010:G:H5'	2.18	0.42
57:AA:2408:U:H2'	57:AA:2409:G:C8	2.54	0.42
57:AA:1221:C:H5'	57:AA:1221:C:H6	1.84	0.42
27:AD:100:GLY:HA2	57:AA:1501:C:H1'	2.00	0.42
26:AC:7:ARG:CD	57:AA:2128:C:H5'	2.48	0.42
57:AA:307:G:H22	57:AA:310:A:C5'	2.32	0.42
36:AP:35:HIS:CE1	57:AA:941:A:HO2'	2.36	0.42
27:AD:69:ARG:C	27:AD:71:ASP:H	2.23	0.42
27:AD:80:ALA:HB3	27:AD:94:LEU:CD1	2.45	0.42
30:AG:140:ILE:HD12	30:AG:141:PHE:N	2.33	0.42
32:AI:10:GLU:O	32:AI:12:LEU:HD23	2.19	0.42
32:AI:10:GLU:OE1	32:AI:11:ASN:HB2	2.19	0.42
32:AI:77:LEU:CD2	32:AI:141:LYS:N	2.81	0.42
37:AQ:13:GLN:HG3	57:AA:910:A:N7	2.34	0.42
29:BF:115:ALA:O	29:BF:116:ASP:C	2.58	0.42
30:BG:109:VAL:O	30:BG:112:PRO:CB	2.67	0.42
30:BG:120:LEU:O	30:BG:121:ASN:C	2.57	0.42
32:BI:95:LYS:O	32:BI:99:GLU:CB	2.67	0.42
39:BS:102:ALA:O	39:BS:103:GLU:HB2	2.19	0.42
39:BS:58:LEU:O	39:BS:59:LYS:O	2.37	0.42
39:BS:51:ALA:HB3	39:BS:73:LEU:HB2	2.01	0.42
44:BX:35:THR:H	44:BX:38:GLU:HB2	1.84	0.42
55:A8:4:MET:H	55:A8:4:MET:HG2	1.63	0.42
43:BW:3:ALA:HB2	43:BW:58:ALA:HA	2.00	0.42
27:BD:158:ALA:HB3	27:BD:161:THR:CG2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BW:10:VAL:HG12	43:BW:12:ILE:HG22	2.01	0.42
45:BY:9:LYS:O	45:BY:28:LYS:HG3	2.19	0.42
46:BZ:23:LYS:HA	46:BZ:23:LYS:HZ3	1.82	0.42
57:AA:1331:A:O2'	57:AA:1332:G:C8	2.71	0.42
34:AN:64:GLY:HA3	57:AA:1141:U:C5	2.55	0.42
28:BE:59:VAL:CG1	28:BE:60:ASN:N	2.81	0.42
31:BH:7:LEU:N	31:BH:7:LEU:HD12	2.35	0.42
57:AA:1040:C:O2'	57:AA:1041:C:P	2.78	0.42
57:AA:528:A:H2	57:AA:2043:C:C4'	2.32	0.42
43:AW:28:SER:C	43:AW:30:GLU:N	2.72	0.42
52:A5:40:LYS:HB2	52:A5:41:PRO:HD2	2.01	0.42
57:AA:2703:C:H2'	57:AA:2704:C:C6	2.54	0.42
57:BA:1205:U:H4'	57:BA:1206:G:OP2	2.19	0.42
36:AP:91:PHE:CE2	36:AP:95:VAL:HG12	2.54	0.42
57:BA:1947:C:C3'	57:BA:1948:G:C5'	2.97	0.42
57:BA:1158:C:C2'	57:BA:1158:C:O2	3.26	0.42
52:A5:52:TYR:O	52:A5:53:ALA:HB2	2.19	0.42
53:A6:9:LEU:HD12	53:A6:28:ARG:HG3	2.02	0.42
42:BV:2:PHE:CE2	42:BV:13:ARG:HD2	2.54	0.42
27:AD:267:SER:C	27:AD:269:PHE:H	2.22	0.42
57:BA:392:C:H5''	57:BA:409:C:H5''	2.01	0.42
42:AV:76:LYS:HG3	42:AV:81:TYR:CD1	2.55	0.42
57:BA:280:C:H2'	57:BA:281:G:H5'	1.99	0.42
57:AA:2332:U:H5'	57:AA:2336:A:N6	2.34	0.42
52:A5:11:THR:OG1	57:AA:1264:G:H5'	2.19	0.42
47:A0:77:ARG:NH2	57:AA:857:C:OP1	2.51	0.42
57:AA:319:C:O2'	57:AA:320:A:H5'	2.19	0.42
57:BA:270:A:C2'	57:BA:271:A:H5'	2.50	0.42
57:BA:2693:A:H2'	57:BA:2694:G:C8	2.54	0.42
28:AE:179:GLU:O	28:AE:180:ASN:HB2	2.19	0.42
52:A5:10:LYS:HB2	57:AA:2017:U:O2	2.19	0.42
28:AE:19:ARG:HA	35:AO:73:ASP:HA	2.01	0.42
57:AA:1820:U:H4'	57:AA:1821:A:OP2	2.19	0.42
57:AA:2764:A:N7	57:AA:2766:G:C6	2.87	0.42
57:AA:1221:C:H2'	57:AA:1221(A):C:C6	2.55	0.42
57:AA:589:C:O2'	57:AA:590:A:H5'	2.19	0.42
57:AA:983:A:H3'	57:AA:983:A:N3	5.19	0.42
58:AB:7:G:C2'	58:AB:8:U:H5''	2.47	0.42
26:AC:40:GLU:HB2	26:AC:179:ALA:HB2	2.01	0.42
29:AF:21:ALA:C	29:AF:23:ASP:N	2.73	0.42
29:AF:68:LYS:O	29:AF:70:THR:N	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:AG:129:GLY:O	30:AG:130:ASN:CB	2.67	0.42
30:AG:37:VAL:O	30:AG:94:LEU:HB2	2.20	0.42
30:AG:85:GLY:C	30:AG:87:PRO:CD	2.83	0.42
32:AI:15:VAL:O	32:AI:17:GLN:N	2.52	0.42
34:AN:58:ASP:C	34:AN:60:ILE:HG13	2.40	0.42
36:AP:16:ARG:CZ	36:AP:18:ARG:HG2	2.49	0.42
42:AV:22:VAL:O	42:AV:23:GLU:CB	2.67	0.42
30:BG:37:VAL:HG22	30:BG:159:VAL:HA	2.00	0.42
30:BG:11:TYR:O	30:BG:15:VAL:HB	2.19	0.42
32:BI:118:LYS:CB	32:BI:118:LYS:NZ	3.85	0.42
32:BI:71:ILE:HG22	32:BI:72:LEU:N	2.34	0.42
36:BP:35:HIS:HA	57:BA:1190:G:H5'	2.00	0.42
38:BR:54:LEU:CD2	38:BR:65:LEU:HB3	2.49	0.42
39:BS:106:ARG:HB3	39:BS:106:ARG:NH1	2.35	0.42
39:BS:64:GLU:N	39:BS:64:GLU:OE2	2.45	0.42
27:BD:117:VAL:CG2	27:BD:128:GLY:O	2.67	0.42
27:BD:31:LYS:C	27:BD:33:LEU:N	2.73	0.42
27:BD:35:LYS:O	27:BD:36:PRO:C	2.56	0.42
57:AA:1885:A:H2'	57:AA:1886:C:O4'	2.20	0.42
45:BY:29:GLU:CD	45:BY:38:ILE:HG21	2.40	0.42
45:BY:81:LYS:CD	45:BY:96:ILE:HG22	2.49	0.42
46:BZ:119:GLU:O	46:BZ:121:HIS:N	2.52	0.42
51:A4:19:GLY:O	51:A4:21:VAL:HG23	2.20	0.42
42:BV:62:LEU:N	42:BV:62:LEU:HD22	2.34	0.42
57:AA:2283:C:H2'	57:AA:2284:C:H5'	2.01	0.42
57:AA:1486:A:N6	57:AA:1504:C:H42	2.17	0.42
29:BF:133:ASN:O	29:BF:135:LYS:N	2.52	0.42
53:B6:54:ILE:HD13	57:BA:2420:C:H5'	2.00	0.42
38:BR:4:LEU:HD23	57:BA:1653:G:H3'	2.01	0.42
28:BE:189:PRO:HA	57:BA:2680:C:H5'	2.01	0.42
28:AE:116:VAL:HG22	28:AE:122:PHE:CG	2.54	0.42
57:AA:1038:C:H3'	57:AA:1039:G:C5'	2.33	0.42
52:A5:40:LYS:NZ	52:A5:46:CYS:O	2.52	0.42
46:AZ:57:ILE:N	46:AZ:57:ILE:HD12	2.35	0.42
39:BS:42:ASP:O	39:BS:43:GLU:HB2	2.19	0.42
57:AA:1169:G:N2	57:AA:1181:C:C2	2.87	0.42
57:BA:2291:U:H2'	57:BA:2292:C:C6	2.54	0.42
41:AU:74:LEU:HD13	41:AU:74:LEU:C	2.39	0.42
57:BA:271(A):A:H1'	57:BA:365:C:O4'	2.19	0.42
57:AA:657:U:H2'	57:AA:658:C:C6	2.55	0.42
27:BD:206:LEU:HA	27:BD:211:ARG:NH1	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:210:GLY:C	27:BD:212:SER:H	2.23	0.42
44:AX:64:LYS:HE3	57:AA:1336:A:OP1	2.19	0.42
57:AA:1924:C:O2'	57:AA:1925:C:H5'	2.20	0.42
48:A1:8:SER:OG	48:A1:10:LYS:HG3	2.18	0.42
57:AA:2224:G:H4'	57:AA:2226:C:C2	2.55	0.42
49:A2:58:ALA:O	49:A2:61:LEU:N	2.52	0.42
37:BQ:82:ARG:HD2	47:B0:4:LYS:HE3	2.02	0.42
57:AA:2625:G:H2'	57:AA:2626:C:C6	2.54	0.42
26:AC:209:PHE:O	26:AC:210:LEU:HD23	2.20	0.42
57:AA:506:G:O3'	57:AA:507:A:H8	2.02	0.42
36:AP:25:SER:HB2	57:AA:812:C:H5'	2.01	0.42
26:AC:51:ASP:HB3	26:AC:54:ARG:CG	2.49	0.42
27:AD:127:VAL:HA	27:AD:193:VAL:HG13	2.01	0.42
30:AG:67:LYS:NZ	51:A4:6:HIS:CE1	2.86	0.42
30:AG:73:ALA:N	30:AG:87:PRO:CG	2.66	0.42
31:AH:98:LEU:HD13	31:AH:125:VAL:HG23	2.01	0.42
31:AH:160:LYS:CE	57:AA:2657:A:O2'	2.68	0.42
34:AN:30:ILE:HG23	34:AN:52:VAL:HG11	2.01	0.42
36:AP:105:LEU:HG	57:AA:626:U:O2	2.17	0.42
36:AP:63:PRO:C	36:AP:65:ARG:N	2.68	0.42
45:AY:32:PRO:O	45:AY:35:TYR:N	2.49	0.42
30:BG:138:GLN:HG2	30:BG:139:LEU:N	2.35	0.42
30:BG:143:GLU:OE1	30:BG:143:GLU:N	2.44	0.42
31:BH:126:PRO:HG3	31:BH:130:ARG:NH1	2.35	0.42
36:BP:102:ARG:O	36:BP:103:ALA:HB2	2.19	0.42
41:BU:92:ARG:HB3	42:BV:11:GLN:NE2	2.34	0.42
42:BV:52:VAL:O	42:BV:53:GLU:C	2.57	0.42
27:AD:243:GLY:O	27:AD:244:ARG:HB3	2.18	0.42
57:BA:1577:C:H2'	57:BA:1578:U:C1'	2.50	0.42
45:BY:68:HIS:HB3	45:BY:71:LYS:CG	2.48	0.42
53:B6:44:ARG:NH1	53:B6:44:ARG:HB2	2.34	0.42
51:A4:14:ILE:HG23	51:A4:33:VAL:HG23	2.02	0.42
53:A6:41:PRO:HG2	53:A6:43:CYS:O	2.19	0.42
46:BZ:10:ARG:NH2	46:BZ:26:GLY:O	2.52	0.42
40:BT:120:ARG:HA	40:BT:123:GLN:HG2	2.00	0.42
57:AA:66:C:H2'	57:AA:67:U:H6	1.84	0.42
28:BE:116:VAL:CG2	28:BE:122:PHE:CD2	2.98	0.42
31:BH:35:VAL:HG21	31:BH:75:ALA:HB2	2.01	0.42
57:AA:1657:C:H2'	57:AA:1658:C:C6	2.55	0.42
57:AA:1544:A:O2'	57:AA:1545:A:H5'	2.20	0.42
57:AA:2328:A:H2'	57:AA:2329:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2481:G:C2'	57:AA:2482:G:OP2	2.67	0.42
57:AA:271(R):G:H2'	57:AA:271(S):G:H8	1.84	0.42
34:BN:118:LYS:O	34:BN:121:LYS:HE3	2.19	0.42
57:BA:80:G:O2'	57:BA:81:G:H5'	2.19	0.42
50:B3:47:VAL:CG1	50:B3:56:VAL:HG21	2.49	0.42
47:B0:51:VAL:HG21	47:B0:80:HIS:HA	2.02	0.42
41:BU:66:ASN:O	41:BU:70:ARG:N	2.51	0.42
47:A0:70:GLN:NE2	47:A0:80:HIS:NE2	2.65	0.42
47:B0:45:PHE:CE2	47:B0:69:PHE:HE2	2.37	0.42
35:BO:7:TYR:OH	35:BO:44:LYS:HG3	2.19	0.42
57:AA:711:G:O2'	57:AA:712:G:H5'	2.19	0.42
57:BA:654(A):G:O2'	57:BA:654(B):C:H5'	2.20	0.42
57:AA:2692:C:H2'	57:AA:2693:A:H8	1.84	0.42
40:AT:93:ARG:HA	40:AT:93:ARG:HD2	1.85	0.42
27:BD:257:LEU:HD22	27:BD:258:LYS:O	2.20	0.42
30:AG:135:LEU:N	30:AG:135:LEU:HD12	2.35	0.42
57:AA:1625:C:H2'	57:AA:1626:G:O4'	2.19	0.42
29:BF:54:ARG:HD2	29:BF:81:PRO:HD3	2.00	0.42
37:AQ:116:GLU:O	37:AQ:120:ILE:HG12	2.19	0.42
57:AA:2687:U:H2'	57:AA:2688:U:O4'	2.19	0.42
28:AE:152:LYS:HG2	34:AN:78:TYR:CE1	2.54	0.42
57:AA:1014:U:H2'	57:AA:1015:G:H5'	2.01	0.42
27:AD:147:LEU:HD12	27:AD:155:LEU:HD21	2.02	0.42
27:AD:61:LEU:O	27:AD:63:ARG:NH1	2.52	0.42
32:AI:87:LYS:HG3	32:AI:121:LYS:C	2.38	0.42
36:AP:13:ASN:O	36:AP:15:ARG:N	2.52	0.42
38:AR:36:THR:HG22	57:AA:1278:A:OP1	2.19	0.42
39:AS:58:LEU:O	39:AS:59:LYS:O	2.37	0.42
41:AU:13:LYS:N	41:AU:13:LYS:CE	2.83	0.42
43:AW:10:VAL:HG12	43:AW:12:ILE:HG22	2.01	0.42
29:BF:9:ILE:HG23	29:BF:12:LEU:O	2.20	0.42
32:BI:77:LEU:O	32:BI:77:LEU:HD23	2.18	0.42
32:BI:86:THR:O	32:BI:86:THR:CG2	2.67	0.42
34:BN:46:VAL:HG13	34:BN:48:MET:HG3	2.01	0.42
41:BU:69:CYS:SG	41:BU:79:PHE:HB2	2.59	0.42
42:BV:25:LEU:H	42:BV:92:THR:HG21	1.84	0.42
42:BV:64:HIS:ND1	42:BV:92:THR:CG2	2.81	0.42
55:B8:4:MET:HE3	55:B8:61:LEU:HD22	2.01	0.42
57:BA:610:G:N2	57:BA:619:G:H1'	2.34	0.42
27:BD:6:PHE:HE1	27:BD:18:VAL:HG23	1.84	0.42
57:BA:476:G:H4'	57:BA:502:A:N1	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BY:31:LEU:HD23	45:BY:36:ALA:C	2.40	0.42
46:BZ:166:SER:CB	46:BZ:167:PRO:CA	2.97	0.42
53:A6:30:THR:HG22	53:A6:32:ASN:HD22	1.84	0.42
41:BU:2:PRO:HA	57:BA:445:C:OP1	2.20	0.42
28:BE:69:LYS:HZ1	28:BE:89:ASP:HA	1.82	0.42
57:AA:9:U:C4	57:AA:2629:A:N6	2.87	0.42
28:AE:31:CYS:O	28:AE:90:THR:HA	2.19	0.42
57:BA:2297:C:O2'	57:BA:2298:A:H5'	2.20	0.42
34:BN:126:PRO:O	34:BN:127:ASP:CB	2.67	0.42
57:BA:1448:G:H5'	57:BA:1449:A:OP1	2.19	0.42
57:BA:2099:U:H3	57:BA:2190:G:H1	1.67	0.42
28:BE:4:ILE:HG12	28:BE:5:LEU:N	2.35	0.42
52:A5:35:GLU:O	52:A5:36:CYS:CB	2.67	0.42
49:B2:21:LEU:O	49:B2:25:VAL:HG23	2.20	0.42
57:BA:882:G:H2'	57:BA:883:G:C8	2.50	0.42
27:AD:58:HIS:CD2	27:AD:59:LYS:N	2.88	0.42
57:AA:1410:G:H2'	57:AA:1411:C:C6	2.54	0.42
57:AA:2537:U:H2'	57:AA:2538:C:H6	1.83	0.42
33:AJ:79:ALA:O	33:AJ:80:VAL:O	2.37	0.42
46:BZ:136:PHE:HD2	46:BZ:136:PHE:H	1.68	0.42
48:A1:73:LEU:HD12	48:A1:94:LEU:HB3	2.01	0.42
57:BA:2538:C:O2'	57:BA:2539:C:H5'	2.19	0.42
57:BA:803:U:C2'	57:BA:804:A:H5'	2.50	0.42
40:AT:52:ILE:HG12	40:AT:61:PHE:HB3	2.01	0.42
57:AA:570:G:H2'	57:AA:2030:A:N6	2.34	0.42
43:BW:93:ALA:HB2	57:BA:1614:A:N7	2.35	0.42
38:AR:65:LEU:HD12	38:AR:65:LEU:HA	1.77	0.42
57:BA:2850:A:H2'	57:BA:2851:A:C8	2.54	0.42
47:A0:53:MET:HA	47:A0:58:THR:O	2.20	0.42
57:AA:2241:A:H2'	57:AA:2242:G:C8	2.54	0.42
46:BZ:180:VAL:C	46:BZ:182:LYS:H	2.23	0.42
58:AB:111:G:H2'	58:AB:112:U:O4'	2.19	0.42
58:AB:56:G:H4'	58:AB:57:A:C8	2.51	0.42
30:AG:103:LEU:O	30:AG:106:LEU:HB3	2.19	0.42
32:AI:116:LEU:HD12	32:AI:117:GLU:N	2.35	0.42
32:AI:77:LEU:CD2	32:AI:140:LEU:HA	2.46	0.42
32:AI:37:VAL:HG12	32:AI:38:LEU:N	2.35	0.42
32:AI:70:GLU:O	32:AI:71:ILE:HG13	2.20	0.42
37:AQ:21:THR:CG2	37:AQ:21:THR:O	2.63	0.42
39:AS:102:ALA:O	39:AS:103:GLU:HB2	2.20	0.42
34:AN:4:TYR:HB2	41:AU:64:ARG:NH2	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:AV:47:VAL:O	42:AV:48:GLY:C	2.57	0.42
42:AV:47:VAL:O	42:AV:49:THR:O	2.38	0.42
44:AX:12:VAL:CG1	44:AX:27:THR:O	2.54	0.42
57:BA:2870:C:H2'	57:BA:2871:C:C5'	2.49	0.42
58:BB:82:G:O2'	58:BB:83:G:H5'	2.18	0.42
29:BF:83:PHE:O	29:BF:84:VAL:CB	2.64	0.42
30:BG:104:GLU:C	30:BG:106:LEU:H	2.22	0.42
30:BG:106:LEU:HA	30:BG:110:ALA:HB3	2.00	0.42
31:BH:11:VAL:HG12	31:BH:15:VAL:HG23	2.00	0.42
32:BI:10:GLU:O	32:BI:12:LEU:HD23	2.19	0.42
34:BN:128:HIS:O	34:BN:128:HIS:CG	2.72	0.42
34:BN:128:HIS:HA	34:BN:129:PRO:HD2	1.84	0.42
36:BP:101:VAL:HG23	36:BP:102:ARG:N	2.34	0.42
36:BP:27:HIS:ND1	57:BA:814:C:H5	2.16	0.42
39:BS:66:ALA:O	39:BS:69:VAL:HG12	2.20	0.42
42:BV:39:LEU:HB3	42:BV:47:VAL:CG2	2.50	0.42
27:BD:67:PHE:CE1	27:BD:157:ARG:CZ	3.03	0.42
40:AT:34:VAL:HG12	40:AT:35:LYS:N	2.34	0.42
36:BP:61:ARG:N	36:BP:61:ARG:HD2	2.34	0.42
40:BT:34:VAL:HG12	40:BT:35:LYS:N	2.35	0.42
40:BT:25:GLY:N	40:BT:49:VAL:HG13	2.35	0.42
55:A8:32:LEU:HB2	55:A8:33:ASN:HD22	1.84	0.42
57:AA:1022:G:O2'	57:AA:1023:U:OP2	2.31	0.42
57:AA:1037:G:H1	57:AA:1118:C:N4	2.18	0.42
57:BA:2811:G:C2'	57:BA:2812:G:H5'	2.50	0.42
31:BH:42:ARG:HG3	31:BH:42:ARG:HH11	1.83	0.42
57:AA:1999:C:H5"	57:AA:2723:C:O2'	2.19	0.42
57:BA:1209:G:N2	57:BA:1210:A:H62	2.14	0.42
57:BA:2892:A:N6	57:BA:2893:G:H21	2.18	0.42
54:A7:5:TRP:CD1	54:A7:7:PRO:HD3	2.54	0.42
47:B0:41:ARG:HA	47:B0:41:ARG:HD2	1.43	0.42
57:BA:794:G:H2'	57:BA:795:C:C6	2.54	0.42
43:BW:88:ARG:HB2	43:BW:92:ARG:HB2	2.00	0.42
27:AD:176:ARG:NH1	27:AD:176:ARG:CG	2.82	0.42
31:BH:148:ILE:O	31:BH:151:ILE:HG12	2.20	0.42
49:B2:42:GLY:O	49:B2:43:GLN:C	2.57	0.42
57:AA:272(G):C:N4	57:AA:363(C):G:H1	2.15	0.42
57:AA:924:C:O2'	57:AA:925:C:H5'	2.19	0.42
57:BA:419:C:O2'	57:BA:420:C:H5'	2.20	0.42
48:A1:23:LYS:CD	48:A1:28:GLY:HA3	2.47	0.42
35:AO:22:ILE:HA	35:AO:22:ILE:HD13	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:B0:36:ILE:HG13	47:B0:36:ILE:O	2.16	0.42
46:BZ:28:MET:HA	46:BZ:88:PHE:O	2.20	0.42
35:AO:49:ARG:NH2	57:AA:1422:G:O2'	101.34	0.42
31:AH:107:VAL:HG21	31:AH:152:ARG:HB2	2.01	0.42
57:AA:1665:A:C2'	57:AA:1666:G:H5'	2.49	0.42
57:AA:2777:G:H5''	57:AA:2778:A:H5'	2.01	0.42
57:AA:2693:A:H2'	57:AA:2694:G:C8	2.55	0.42
57:BA:237:C:O2'	57:BA:238:C:H5'	2.20	0.42
37:AQ:75:THR:HA	37:AQ:89:ASN:O	2.20	0.42
41:AU:89:GLU:HG2	41:AU:89:GLU:O	2.20	0.42
34:AN:75:TYR:HA	34:AN:81:GLY:O	2.19	0.42
53:B6:40:CYS:HB2	53:B6:46:HIS:CE1	2.54	0.42
28:BE:195:LEU:HD12	28:BE:196:VAL:H	1.85	0.42
46:AZ:179:ASP:OD1	46:AZ:181:GLU:N	2.52	0.42
30:AG:139:LEU:HA	30:AG:144:ILE:HG21	2.02	0.42
29:AF:51:THR:HG21	29:AF:92:PRO:HD2	2.00	0.42
34:AN:48:MET:HE3	34:AN:48:MET:H	1.84	0.42
34:AN:51:PHE:CZ	34:AN:119:ARG:HD2	2.54	0.42
36:AP:105:LEU:O	36:AP:106:LEU:HB2	2.18	0.42
39:AS:13:ARG:O	39:AS:15:ARG:N	2.53	0.42
43:AW:12:ILE:HD13	43:AW:17:VAL:CG2	2.47	0.42
43:AW:44:ALA:O	43:AW:45:TYR:C	2.58	0.42
45:AY:63:LYS:HG3	45:AY:64:GLU:H	1.85	0.42
29:BF:7:TYR:HB2	29:BF:16:GLY:C	2.40	0.42
29:BF:34:TRP:CH2	36:BP:12:ALA:HB2	2.54	0.42
36:BP:32:THR:O	36:BP:33:ARG:CB	2.68	0.42
39:BS:66:ALA:O	39:BS:67:ARG:C	2.58	0.42
42:BV:41:GLY:HA3	42:BV:45:THR:OG1	2.19	0.42
27:BD:117:VAL:HG23	27:BD:129:ASN:OD1	2.20	0.42
27:BD:9:TYR:CD2	57:BA:727:A:H2	2.38	0.42
57:BA:107:C:O2'	57:BA:108:U:H5'	2.19	0.42
57:BA:1496:A:C8	57:BA:1577:C:O2'	2.70	0.42
42:AV:62:LEU:N	42:AV:62:LEU:HD22	2.35	0.42
58:BB:65:C:C2'	58:BB:66:A:H5'	2.50	0.42
46:BZ:40:ASP:OD1	46:BZ:42:VAL:HG12	2.20	0.42
53:A6:5:VAL:HG22	53:A6:6:ARG:N	2.27	0.42
57:AA:2390:U:O2'	57:AA:2391:G:H5'	2.19	0.42
57:BA:66:C:H2'	57:BA:67:U:H6	1.85	0.42
55:B8:32:LEU:HD12	57:BA:2391:G:OP1	2.20	0.42
57:BA:922:U:H2'	57:BA:923:C:C6	2.55	0.42
28:BE:24:THR:HG21	28:BE:188:VAL:HG12	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BE:68:ALA:O	28:BE:70:ALA:N	2.46	0.42
31:BH:85:LYS:NZ	31:BH:133:VAL:CG2	2.81	0.42
57:AA:2318:G:H2'	57:AA:2319:G:OP1	2.19	0.42
46:AZ:39:VAL:HG21	46:AZ:44:PHE:HD2	1.84	0.42
46:AZ:5:LEU:HD23	46:AZ:6:LYS:N	2.35	0.42
57:BA:2262:U:H4'	57:BA:2328:A:C2	2.55	0.42
57:BA:2230:G:C5	57:BA:2231:C:C5	3.07	0.42
57:BA:638:G:C5	57:BA:651:G:C2	3.07	0.42
28:BE:203:LYS:HE3	28:BE:204:ALA:HB2	2.00	0.42
57:BA:782:A:H5'	57:BA:783:A:C2	2.54	0.42
35:AO:7:TYR:OH	35:AO:44:LYS:HG3	2.20	0.42
57:AA:2092:U:C5	57:AA:2226:C:OP2	2.72	0.42
57:AA:1856:G:O2'	57:AA:1857:G:H5'	2.20	0.42
57:BA:2553:G:H2'	57:BA:2554:U:C4'	2.50	0.42
57:BA:1861:G:O2'	57:BA:1862:G:H5'	2.19	0.42
46:AZ:100:VAL:HG23	46:AZ:126:VAL:CG2	2.50	0.42
57:AA:2259:G:H1'	57:AA:2427:C:C2	2.54	0.42
28:BE:179:GLU:O	28:BE:180:ASN:HB2	2.20	0.42
43:AW:89:ALA:HB1	57:AA:748:G:C8	2.55	0.42
48:A1:18:ILE:HG23	48:A1:34:THR:HG23	2.02	0.42
58:AB:65:C:C2'	58:AB:66:A:H5'	2.50	0.42
27:AD:161:THR:O	27:AD:196:VAL:HG23	2.20	0.42
32:AI:113:ARG:CG	32:AI:113:ARG:NH1	2.82	0.42
32:AI:13:GLY:O	32:AI:14:ASP:HB2	2.20	0.42
43:AW:45:TYR:HD2	43:AW:46:PHE:CD1	2.38	0.42
57:BA:1278:A:H2'	57:BA:1279:G:C8	2.54	0.42
57:BA:644:A:C2	57:BA:2369:A:H1'	2.54	0.42
57:BA:621:A:H2'	57:BA:622:G:C5'	2.49	0.42
57:BA:975:C:O2	57:BA:975:C:H2'	2.20	0.42
26:BC:30:VAL:HG11	26:BC:42:VAL:HG13	2.01	0.42
36:BP:50:ARG:HB3	55:B8:59:LYS:CD	2.39	0.42
39:BS:51:ALA:HB2	39:BS:73:LEU:HA	2.01	0.42
42:BV:18:LEU:CD2	42:BV:19:LYS:H	2.33	0.42
45:BY:2:ARG:HD3	45:BY:2:ARG:C	2.40	0.42
45:BY:49:VAL:HG12	45:BY:50:ARG:N	2.35	0.42
31:AH:158:HIS:CE1	31:AH:169:VAL:C	2.93	0.42
52:B5:3:LYS:HD2	52:B5:5:PRO:HD2	2.02	0.42
57:BA:1469:A:O2'	57:BA:1470:G:H5'	2.20	0.42
40:BT:26:ASP:HB3	40:BT:89:VAL:O	2.20	0.42
55:A8:33:ASN:HD22	55:A8:36:LYS:CD	2.30	0.42
53:B6:10:LEU:O	53:B6:54:ILE:O	2.36	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:B8:30:ARG:NH2	57:BA:2419:U:O4	2.52	0.42
57:BA:150:C:H2'	57:BA:151:C:C6	2.55	0.42
31:BH:9:ILE:C	31:BH:9:ILE:CD1	2.88	0.42
57:BA:2346:A:C2	57:BA:2383:G:C2	3.07	0.42
28:AE:55:ASN:HA	28:AE:55:ASN:HD22	1.51	0.42
57:BA:1209:G:H21	57:BA:1210:A:N6	2.14	0.42
57:BA:2317:C:C2'	57:BA:2318:G:C5'	2.83	0.42
50:A3:37:LEU:O	50:A3:38:GLU:O	2.37	0.42
57:BA:244:A:C2	57:BA:255:A:C4	3.07	0.42
51:A4:13:ARG:HG2	51:A4:13:ARG:O	2.19	0.42
57:BA:1173:G:H5'	57:BA:1174:A:O5'	2.20	0.42
34:BN:120:LEU:HD13	34:BN:121:LYS:N	2.35	0.42
57:BA:1150:C:O2'	57:BA:1151:G:H5'	2.19	0.42
57:AA:1720:U:H2'	57:AA:1721:G:O4'	2.20	0.42
51:B4:27:THR:O	51:B4:28:LYS:HB3	2.18	0.42
57:AA:271(U):G:C2'	57:AA:271(V):G:H5'	2.50	0.42
57:AA:176:G:C2'	57:AA:177:G:H5'	2.48	0.42
26:BC:38:PHE:CD2	57:BA:2126:A:H5''	2.55	0.42
57:AA:1431:U:O2'	57:AA:1432:C:H5'	2.20	0.42
47:A0:36:ILE:HD12	47:A0:39:ARG:HG2	2.01	0.42
57:AA:713:G:H2'	57:AA:714:U:C6	2.55	0.42
57:BA:1833:U:O2	57:BA:1969:A:H2	2.03	0.42
50:B3:1:MET:HE2	50:B3:39:ASP:HB3	2.01	0.42
57:AA:1264:G:H3'	57:AA:1265:A:H5''	2.01	0.42
57:BA:1665:A:C2'	57:BA:1666:G:H5'	2.50	0.42
57:BA:1853:A:H2'	57:BA:1854:A:C8	2.55	0.42
28:AE:189:PRO:HA	57:AA:2680:C:H5'	2.01	0.42
37:AQ:32:TYR:OH	37:AQ:111:GLU:HG3	2.20	0.42
57:BA:2770:G:H5'	57:BA:2771:C:OP2	2.20	0.42
57:AA:2770:G:C5'	57:AA:2771:C:OP2	2.68	0.42
28:AE:195:LEU:HD12	28:AE:196:VAL:N	2.34	0.42
57:AA:2065:C:H2'	57:AA:2066:C:C6	2.55	0.42
57:AA:1268:A:H2'	57:AA:1269:A:C8	3.19	0.42
46:BZ:48:PHE:HA	46:BZ:51:ALA:HB3	2.02	0.42
46:BZ:64:GLY:O	46:BZ:65:GLN:O	2.38	0.42
50:A3:52:HIS:CD2	58:AB:83:G:H4'	2.54	0.42
36:AP:63:PRO:HB3	55:A8:13:ARG:HB3	2.02	0.42
57:AA:244:A:C2	57:AA:255:A:C4	3.08	0.42
57:AA:543:C:O2'	57:AA:544:G:H5'	6.50	0.42
57:AA:741:G:H2'	57:AA:742:G:O4'	2.58	0.42
29:AF:7:TYR:HB2	29:AF:16:GLY:C	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:AG:16:ARG:HH11	30:AG:16:ARG:CG	2.33	0.42
32:AI:72:LEU:O	32:AI:138:ILE:HG13	2.19	0.42
42:AV:47:VAL:C	42:AV:49:THR:N	2.73	0.42
57:BA:2870:C:O2'	57:BA:2871:C:H5'	2.20	0.42
26:BC:212:SER:OG	26:BC:214:TYR:HE1	2.01	0.42
32:BI:44:LEU:HD12	32:BI:44:LEU:HA	1.84	0.42
33:BJ:56:ASN:CB	33:BJ:83:TYR:C	2.88	0.42
34:BN:48:MET:H	34:BN:48:MET:HE3	1.84	0.42
36:BP:17:LYS:C	36:BP:19:VAL:N	2.73	0.42
36:BP:33:ARG:HD3	57:BA:587:C:C6	2.54	0.42
39:BS:59:LYS:CD	39:BS:61:ASN:HB2	2.50	0.42
27:BD:128:GLY:N	27:BD:193:VAL:HG13	2.34	0.42
40:AT:120:ARG:HA	40:AT:123:GLN:HG2	2.02	0.42
40:AT:35:LYS:HE2	40:AT:41:ARG:HE	1.85	0.42
36:BP:63:PRO:CB	55:B8:12:LYS:O	2.67	0.42
44:BX:27:THR:HA	44:BX:79:ALA:O	2.20	0.42
45:BY:13:VAL:HG11	45:BY:28:LYS:HZ2	1.85	0.42
45:BY:80:GLY:O	45:BY:81:LYS:HB3	2.19	0.42
40:BT:57:PHE:O	40:BT:58:ASN:C	2.58	0.42
57:BA:1313:U:H3'	57:BA:1314:C:H5'	2.02	0.42
53:B6:27:LYS:NZ	57:BA:2285:C:P	2.93	0.42
28:BE:61:ARG:NH1	57:BA:2787:C:O2	2.47	0.42
57:BA:676:A:H2	57:BA:802:A:N6	2.09	0.42
57:BA:1827:C:H2'	57:BA:1828:G:H5'	2.01	0.42
47:B0:21:LEU:HD11	47:B0:41:ARG:HD3	2.01	0.42
40:BT:3:ARG:HH11	40:BT:3:ARG:HG3	1.85	0.42
52:B5:52:TYR:O	52:B5:53:ALA:HB2	2.20	0.42
52:A5:55:ARG:O	52:A5:56:LYS:HB2	2.19	0.42
57:AA:2291:U:OP1	57:AA:2381:C:H5'	2.20	0.42
57:BA:1188:U:HO2'	57:BA:1189:A:H5'	1.84	0.42
55:A8:2:PRO:HA	57:AA:591:C:O2	2.19	0.42
50:B3:52:HIS:CD2	50:B3:52:HIS:H	2.38	0.42
34:AN:62:VAL:O	34:AN:62:VAL:HG13	2.19	0.42
47:A0:66:VAL:HG12	47:A0:67:VAL:N	2.35	0.42
38:BR:7:GLY:C	38:BR:8:ARG:NE	2.70	0.42
57:BA:2592:G:C6	57:BA:2593:U:C4	3.08	0.42
57:BA:2585:U:O4'	57:BA:2585:U:O2	2.38	0.42
57:BA:2092:U:C5	57:BA:2226:C:OP2	2.73	0.42
56:A9:2:LYS:HA	56:A9:2:LYS:HD2	1.93	0.42
57:BA:1708:C:O2'	57:BA:1709:U:H5'	2.20	0.42
57:AA:21:A:O2'	57:AA:22:C:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:128:ARG:HG3	57:BA:2302:G:N3	2.34	0.42
57:BA:2553:G:H3'	57:BA:2554:U:H5''	2.02	0.42
37:BQ:10:ARG:HH11	37:BQ:10:ARG:CB	2.33	0.42
57:BA:2259:G:C2	57:BA:2282:G:N1	2.88	0.42
58:AB:35:U:O2'	58:AB:36:C:H5'	2.20	0.42
58:AB:81:G:H2'	58:AB:82:G:C5'	2.48	0.42
26:AC:16:ASP:HB3	26:AC:19:LYS:HB2	2.02	0.42
27:AD:95:LEU:O	27:AD:95:LEU:HD12	2.20	0.42
30:AG:128:ARG:O	30:AG:129:GLY:O	2.37	0.42
36:AP:107:LYS:C	36:AP:109:GLY:N	2.73	0.42
41:AU:60:LEU:O	41:AU:64:ARG:HG2	2.20	0.42
45:AY:17:SER:O	45:AY:18:GLY:O	2.38	0.42
30:BG:32:PRO:O	30:BG:172:LEU:HD12	2.20	0.42
37:BQ:21:THR:HG21	37:BQ:101:ARG:CD	2.50	0.42
38:BR:45:ARG:HA	38:BR:95:THR:HG21	2.01	0.42
31:BH:170:ARG:H	31:BH:170:ARG:HD2	1.84	0.42
35:AO:24:VAL:CG2	35:AO:33:ALA:HB2	2.49	0.42
35:AO:64:ARG:HG3	35:AO:64:ARG:NH1	4.64	0.42
53:B6:35:GLU:CB	53:B6:51:GLU:HB2	2.44	0.42
28:AE:111:ARG:HG3	38:AR:2:ARG:CD	2.50	0.42
57:BA:1021:A:H2'	57:BA:1023:U:H5'	2.01	0.42
52:A5:32:PRO:HA	52:A5:39:MET:HG2	2.02	0.42
37:BQ:69:PHE:CE2	57:BA:871:U:H4'	2.55	0.42
46:AZ:71:VAL:HG22	46:AZ:88:PHE:HE2	1.84	0.42
57:BA:271(R):G:H2'	57:BA:271(S):G:H8	1.85	0.42
57:BA:1540:U:O3'	57:BA:1542:A:OP1	2.38	0.42
57:BA:2095:C:H2'	57:BA:2096:U:O4'	2.20	0.42
54:B7:5:TRP:CH2	57:BA:686:G:N7	2.88	0.42
57:BA:2481:G:C2'	57:BA:2482:G:OP2	2.68	0.42
57:BA:506:G:O3'	57:BA:507:A:H8	2.03	0.42
46:AZ:153:SER:HA	46:AZ:155:LEU:HD21	2.01	0.42
57:BA:738:G:O2'	57:BA:739:G:H5'	2.19	0.42
27:AD:266:SER:O	27:AD:267:SER:O	2.37	0.42
51:A4:27:THR:O	51:A4:28:LYS:CB	2.68	0.42
57:AA:2696:U:H2'	57:AA:2697:G:H8	1.85	0.42
57:AA:1411:C:H2'	57:AA:1412:A:C8	2.55	0.42
57:BA:2741:A:H2'	57:BA:2742:C:O4'	2.19	0.42
57:BA:2502:G:H5''	57:BA:2503:A:H5''	2.02	0.42
57:AA:803:U:C2'	57:AA:804:A:H5'	2.50	0.42
57:BA:898:C:H2'	57:BA:899:A:C5'	2.49	0.42
33:AJ:119:ALA:O	33:AJ:120:LYS:CB	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2087:G:C2'	57:BA:2088:G:H5'	2.50	0.42
57:AA:2770:G:H5'	57:AA:2771:C:OP2	2.20	0.42
57:BA:823:G:H2'	57:BA:824:A:C8	2.55	0.42
57:AA:2364:C:C2'	57:AA:2365:G:H5'	2.50	0.42
57:AA:2777:G:C4'	57:AA:2778:A:H5'	2.50	0.42
57:AA:2065:C:H2'	57:AA:2066:C:H6	1.85	0.42
57:BA:2240:C:O2'	57:BA:2241:A:H5'	2.20	0.42
57:BA:2772:C:H2'	57:BA:2773:C:C6	2.54	0.42
57:AA:1027:A:C2	57:AA:2488:A:H5'	2.55	0.42
37:BQ:75:THR:HA	37:BQ:89:ASN:O	2.20	0.42
34:AN:123:TYR:OH	34:AN:130:HIS:CE1	2.73	0.42
57:AA:426:C:O2'	57:AA:427:U:H5'	2.19	0.42
56:B9:17:ILE:CG2	56:B9:18:ARG:N	2.83	0.42
26:BC:209:PHE:O	26:BC:210:LEU:HD23	2.20	0.42
57:AA:1278:A:H2'	57:AA:1279:G:C8	2.55	0.41
57:AA:143:G:H2'	57:AA:143(A):C:H6	1.84	0.41
57:AA:218:A:C2	57:AA:235:U:H4'	2.54	0.41
36:AP:18:ARG:O	57:AA:662:G:H5''	2.20	0.41
26:AC:21:TYR:O	26:AC:225:ILE:HG22	2.19	0.41
27:AD:117:VAL:HG23	27:AD:129:ASN:OD1	2.20	0.41
29:AF:24:LEU:O	29:AF:115:ALA:HB1	2.19	0.41
30:AG:43:LEU:N	30:AG:43:LEU:HD22	2.35	0.41
30:AG:67:LYS:HE2	51:A4:6:HIS:CB	2.49	0.41
38:AR:80:PHE:O	38:AR:85:PRO:HD3	2.20	0.41
41:AU:69:CYS:SG	41:AU:79:PHE:HB2	2.60	0.41
41:AU:97:ASP:C	41:AU:99:ALA:H	2.24	0.41
45:AY:13:VAL:HG11	45:AY:28:LYS:HZ2	1.85	0.41
45:AY:80:GLY:O	45:AY:81:LYS:HB3	2.19	0.41
57:BA:111:A:O2'	57:BA:112:U:H5'	2.20	0.41
57:BA:1204:A:C2	57:BA:1241:A:N1	2.88	0.41
57:BA:585:G:H2'	57:BA:1251:C:H42	1.85	0.41
26:BC:21:TYR:O	26:BC:225:ILE:HA	2.20	0.41
26:BC:21:TYR:O	26:BC:225:ILE:HG22	2.20	0.41
30:BG:145:THR:CG2	30:BG:146:TYR:H	2.28	0.41
30:BG:81:LYS:O	30:BG:82:LEU:O	2.38	0.41
32:BI:62:LYS:CE	32:BI:134:PRO:HD3	2.50	0.41
33:BJ:58:LEU:HA	33:BJ:82:PHE:O	2.19	0.41
41:BU:88:ILE:C	41:BU:90:VAL:N	2.73	0.41
27:BD:270:ILE:O	27:BD:271:ILE:HG12	2.20	0.41
27:BD:9:TYR:CD2	57:BA:727:A:C2	3.08	0.41
40:AT:28:VAL:HG11	40:AT:46:GLU:CD	2.40	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BB:21:G:N3	58:BB:21:G:H2'	2.34	0.41
35:BO:63:VAL:HB	35:BO:106:LEU:HD11	2.02	0.41
40:BT:106:SER:O	40:BT:107:ASP:OD1	2.37	0.41
53:A6:54:ILE:HD13	57:AA:2420:C:H5'	2.02	0.41
57:AA:1002:G:C8	57:AA:1003:G:N7	4.33	0.41
57:BA:2631:G:N3	57:BA:2810:A:H2	2.18	0.41
31:BH:20:ALA:CB	31:BH:21:PRO:CD	2.97	0.41
28:BE:10:GLY:HA3	40:BT:8:LYS:NZ	2.34	0.41
28:AE:113:PHE:CD1	57:AA:1654:A:H2	2.37	0.41
52:B5:35:GLU:O	52:B5:36:CYS:CB	2.68	0.41
32:AI:2:LYS:HA	32:AI:20:ASP:HA	2.02	0.41
57:BA:1410:G:C4	57:BA:1491:G:N2	42.36	0.41
50:B3:6:VAL:HG12	50:B3:56:VAL:CG2	2.43	0.41
57:BA:2291:U:OP1	57:BA:2381:C:H5'	2.20	0.41
27:BD:221:VAL:HA	57:BA:1789:A:OP1	2.20	0.41
28:AE:144:ARG:HB3	57:AA:2572:A:C8	2.55	0.41
54:B7:37:LYS:HE2	57:BA:469:G:O6	2.20	0.41
57:AA:922:U:H2'	57:AA:923:C:C6	2.54	0.41
33:AJ:24:PHE:H	33:AJ:117:LEU:CB	2.33	0.41
57:BA:418:G:O2'	57:BA:419:C:H5'	2.19	0.41
57:BA:11:G:H2'	57:BA:12:U:H6	1.85	0.41
47:B0:20:ARG:HD3	57:BA:2356:C:O3'	2.19	0.41
50:A3:46:ASN:ND2	57:AA:851:U:H5'	2.34	0.41
55:A8:46:ARG:NH1	55:A8:46:ARG:HG2	2.35	0.41
43:BW:79:GLY:H	43:BW:100:THR:HG22	1.85	0.41
57:AA:236:C:H2'	57:AA:237:C:C6	2.55	0.41
57:AA:2087:G:C2'	57:AA:2088:G:H5'	2.50	0.41
57:AA:2884:U:H2'	57:AA:2885:C:C5'	2.49	0.41
46:AZ:125:LEU:HD23	46:AZ:164:ALA:O	2.19	0.41
57:AA:1155:A:O2'	57:AA:1156:A:H2'	2.20	0.41
57:BA:2037:G:H2'	57:BA:2038:G:C8	2.55	0.41
57:AA:2248:C:C2'	57:AA:2249:U:H5'	2.50	0.41
50:B3:20:LYS:HA	50:B3:23:LEU:HD12	2.01	0.41
52:B5:10:LYS:HB2	57:BA:2017:U:O2	2.20	0.41
57:AA:754:C:H3'	57:AA:754:C:O2	4.78	0.41
57:BA:2737:G:O2'	57:BA:2738:A:H5'	2.20	0.41
35:BO:57:VAL:HG11	57:BA:2561:A:H5''	2.01	0.41
57:BA:2007:C:O2'	57:BA:2008:C:H5'	2.20	0.41
36:AP:88:LEU:O	36:AP:90:ARG:N	2.52	0.41
57:BA:2025:C:H2'	57:BA:2026:C:C6	2.55	0.41
57:AA:1048:A:C6	57:AA:1106:A:N7	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AD:117:VAL:CG2	27:AD:128:GLY:O	2.67	0.41
27:AD:30:GLU:CG	27:AD:63:ARG:NE	2.82	0.41
29:AF:1:MET:O	29:AF:3:GLU:HG2	2.20	0.41
30:AG:60:LEU:C	30:AG:60:LEU:HD13	2.40	0.41
30:AG:96:ARG:HA	30:AG:99:MET:CE	2.49	0.41
39:AS:51:ALA:HB2	39:AS:73:LEU:HA	2.02	0.41
41:AU:92:ARG:NH2	42:AV:10:LYS:HG2	2.36	0.41
45:AY:26:LYS:CG	45:AY:27:VAL:H	2.25	0.41
57:BA:1231:G:H2'	57:BA:1232:G:C8	2.55	0.41
57:BA:1361:G:O2'	57:BA:1362:C:H5'	2.20	0.41
36:BP:18:ARG:HD2	57:BA:661:C:O3'	2.20	0.41
58:BB:87:G:C2'	58:BB:88:C:H5''	2.50	0.41
26:BC:4:HIS:ND1	26:BC:8:TYR:CE2	2.88	0.41
30:BG:114:ILE:C	30:BG:116:ASP:N	2.58	0.41
30:BG:131:TYR:CE2	30:BG:133:LEU:HD23	2.55	0.41
30:BG:29:TRP:HB3	58:BB:57:A:C2	2.55	0.41
32:BI:10:GLU:OE1	32:BI:11:ASN:HB2	2.20	0.41
32:BI:62:LYS:HG3	32:BI:133:HIS:O	2.20	0.41
33:BJ:58:LEU:C	33:BJ:59:ILE:O	2.58	0.41
39:BS:98:VAL:CG1	39:BS:100:ALA:HB2	2.50	0.41
41:BU:92:ARG:HD2	42:BV:11:GLN:NE2	2.35	0.41
42:BV:25:LEU:O	42:BV:27:ALA:N	2.53	0.41
43:BW:28:SER:C	43:BW:30:GLU:N	2.73	0.41
27:BD:12:SER:HB2	27:BD:208:LYS:HB3	2.02	0.41
31:BH:158:HIS:CE1	31:BH:169:VAL:C	2.93	0.41
35:AO:87:ILE:HG22	35:AO:88:ASN:N	2.35	0.41
46:BZ:27:VAL:HG22	46:BZ:29:TYR:HD2	1.86	0.41
46:BZ:8:TYR:HB2	46:BZ:38:TYR:CE2	2.55	0.41
57:BA:191:A:H2'	57:BA:192:C:H6	1.84	0.41
35:BO:64:ARG:CD	40:BT:70:VAL:HG21	2.50	0.41
40:BT:108:ARG:HB2	40:BT:111:ARG:NH1	2.35	0.41
40:BT:94:ALA:HB1	40:BT:99:LEU:HD23	2.02	0.41
57:AA:2134:A:N6	57:AA:2157:G:H1'	2.36	0.41
46:AZ:54:HIS:CB	46:AZ:101:PRO:HD3	2.35	0.41
46:BZ:146:ILE:HG13	46:BZ:146:ILE:O	2.19	0.41
46:AZ:48:PHE:HA	46:AZ:51:ALA:HB3	2.02	0.41
50:A3:54:VAL:HG12	50:A3:55:ARG:N	2.35	0.41
57:AA:999:U:H5''	57:AA:1154:G:O6	2.20	0.41
57:AA:80:G:O2'	57:AA:81:G:H5'	2.20	0.41
57:BA:860:U:O4'	57:BA:860:U:O2	2.37	0.41
37:AQ:30:GLY:HA2	37:AQ:107:ALA:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AQ:46:GLN:NE2	37:AQ:126:PRO:HD3	2.34	0.41
47:A0:43:THR:O	47:A0:43:THR:CG2	2.65	0.41
57:AA:1771:C:C1'	57:AA:1786:A:H8	2.33	0.41
27:BD:267:SER:C	27:BD:269:PHE:H	2.24	0.41
57:AA:460:A:H2'	57:AA:461:C:O4'	2.20	0.41
44:BX:44:GLU:OE1	57:BA:139(A):G:N2	2.34	0.41
49:A2:68:ARG:HG3	49:A2:68:ARG:HH11	1.85	0.41
55:A8:22:VAL:O	55:A8:49:VAL:HG23	2.20	0.41
57:AA:2741:A:H2'	57:AA:2742:C:O4'	2.21	0.41
37:AQ:135:ASP:HB3	46:AZ:49:ARG:HH11	1.85	0.41
57:BA:2850:A:OP2	57:BA:2866:U:C5	2.73	0.41
37:BQ:32:TYR:OH	37:BQ:111:GLU:HG3	2.21	0.41
46:AZ:46:LYS:HE2	46:AZ:46:LYS:HB2	1.96	0.41
40:AT:53:ARG:O	40:AT:53:ARG:HG3	2.19	0.41
43:BW:37:ARG:HG3	43:BW:37:ARG:HH11	1.85	0.41
54:B7:13:ALA:O	54:B7:17:GLY:HA3	2.20	0.41
28:AE:16:ARG:O	28:AE:17:ASP:HB2	2.20	0.41
36:AP:15:ARG:HD2	57:AA:598:G:H5'	2.00	0.41
27:AD:9:TYR:CD2	57:AA:727:A:H2	2.39	0.41
32:AI:27:ARG:HG3	32:AI:27:ARG:NH1	2.34	0.41
36:AP:62:LEU:HB3	57:AA:2393:A:C5'	2.45	0.41
37:AQ:13:GLN:HG3	57:AA:910:A:C6	2.55	0.41
39:AS:106:ARG:NH1	39:AS:106:ARG:HB3	2.35	0.41
45:AY:6:HIS:CD2	45:AY:6:HIS:N	2.89	0.41
51:B4:2:LYS:CG	58:BB:40:U:O4	2.67	0.41
30:BG:149:VAL:HG22	30:BG:151:ALA:O	2.21	0.41
32:BI:64:GLU:C	32:BI:66:GLU:H	2.23	0.41
34:BN:4:TYR:HB2	41:BU:64:ARG:HH22	1.85	0.41
36:BP:19:VAL:HG23	36:BP:19:VAL:O	2.20	0.41
36:BP:81:GLN:HE21	36:BP:81:GLN:HB2	1.66	0.41
39:BS:90:GLY:C	39:BS:92:TYR:N	2.74	0.41
41:BU:90:VAL:HG12	41:BU:91:ASP:N	2.35	0.41
57:BA:1884:A:C3'	57:BA:1885:A:H5''	2.48	0.41
27:BD:158:ALA:O	27:BD:159:ALA:C	2.58	0.41
40:AT:88:ILE:HG22	40:AT:89:VAL:HG13	2.02	0.41
57:BA:1493:C:C5	57:BA:2206:G:O2'	2.74	0.41
45:BY:25:GLY:HA3	45:BY:39:VAL:CG1	2.50	0.41
45:BY:31:LEU:HA	45:BY:31:LEU:HD13	1.90	0.41
33:BJ:73:GLY:C	33:BJ:75:GLN:N	2.73	0.41
57:AA:1005:C:H2'	57:AA:1006:C:H6	1.83	0.41
28:BE:11:MET:HE1	28:BE:187:ALA:H	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:AR:4:LEU:HG	57:AA:2822:G:O6	2.19	0.41
27:AD:205:VAL:O	27:AD:206:LEU:C	2.58	0.41
42:AV:15:GLU:O	42:AV:16:PRO:O	2.38	0.41
38:AR:101:ALA:O	38:AR:102:GLU:CB	2.61	0.41
46:AZ:10:ARG:O	46:AZ:36:LYS:HG3	2.19	0.41
57:BA:1449:A:H5'	57:BA:1450:G:OP2	2.20	0.41
57:AA:1173:G:H5'	57:AA:1174:A:O5'	2.20	0.41
57:AA:1480:G:C6	57:AA:1481:U:C4	3.08	0.41
55:A8:30:ARG:NH2	57:AA:2419:U:O4	2.53	0.41
52:B5:55:ARG:O	52:B5:56:LYS:HB2	2.20	0.41
37:BQ:62:GLY:O	46:BZ:178:GLU:N	2.53	0.41
57:BA:2308:G:H2'	57:BA:2309:A:O5'	2.21	0.41
30:AG:170:ARG:NH2	30:AG:182:LYS:HE2	2.31	0.41
35:BO:3:GLN:CB	35:BO:4:PRO:HD2	2.50	0.41
57:BA:53:A:H2'	57:BA:54:G:O4'	2.20	0.41
57:AA:2697:G:H2'	57:AA:2698:U:O4'	2.20	0.41
26:AC:38:PHE:CD2	57:AA:2126:A:H5''	2.55	0.41
57:AA:572:A:H2'	57:AA:573:G:O4'	2.19	0.41
57:AA:2270:G:H2'	57:AA:2271:G:O4'	2.20	0.41
50:B3:46:ASN:O	50:B3:50:VAL:HG22	2.21	0.41
57:BA:387:U:H4'	57:BA:388:G:O5'	2.20	0.41
57:AA:898:C:H2'	57:AA:899:A:C5'	2.49	0.41
57:BA:2199:A:H5''	57:BA:2200:C:H5	1.85	0.41
57:BA:316:C:H2'	57:BA:317:G:O5'	2.20	0.41
51:B4:39:CYS:O	51:B4:40:HIS:CD2	2.73	0.41
27:AD:231:HIS:CG	27:AD:232:PRO:HD2	2.55	0.41
57:BA:2065:C:H2'	57:BA:2066:C:H6	1.86	0.41
36:BP:124:LYS:HD3	36:BP:143:GLY:CA	2.50	0.41
47:A0:23:VAL:HG22	47:A0:38:VAL:HG22	2.02	0.41
34:BN:123:TYR:OH	34:BN:130:HIS:CE1	2.73	0.41
57:AA:812:C:H5''	57:AA:1250:G:O2'	2.21	0.41
57:AA:1361:G:O2'	57:AA:1362:C:H5'	2.20	0.41
57:AA:1360:A:H2'	57:AA:1361:G:O4'	2.87	0.41
27:AD:25:THR:O	27:AD:26:LYS:O	2.38	0.41
27:AD:35:LYS:CD	27:AD:35:LYS:C	2.84	0.41
30:AG:120:LEU:HG	30:AG:179:PRO:O	2.19	0.41
31:AH:70:THR:O	31:AH:72:ILE:N	2.54	0.41
31:AH:7:LEU:CB	31:AH:69:ARG:HD2	2.50	0.41
31:AH:7:LEU:HD23	31:AH:69:ARG:HD2	2.01	0.41
32:AI:77:LEU:HD22	32:AI:140:LEU:CA	2.47	0.41
36:AP:101:VAL:CG1	36:AP:107:LYS:H	2.32	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AP:6:LEU:CG	36:AP:9:ASN:HB2	2.51	0.41
38:AR:100:LEU:HD23	38:AR:112:ALA:HA	2.02	0.41
38:AR:38:VAL:HG22	38:AR:112:ALA:HB2	2.03	0.41
38:AR:78:LYS:O	38:AR:83:ILE:HG12	2.20	0.41
41:AU:88:ILE:C	41:AU:90:VAL:N	2.73	0.41
44:AX:53:LYS:HB3	44:AX:82:GLN:HB3	2.01	0.41
45:AY:2:ARG:NH1	45:AY:2:ARG:HG2	2.35	0.41
45:AY:63:LYS:HG3	45:AY:64:GLU:N	2.35	0.41
30:BG:73:ALA:HA	57:BA:2312:U:OP1	2.20	0.41
57:BA:741:G:H2'	57:BA:742:G:O4'	2.58	0.41
30:BG:106:LEU:HD12	30:BG:110:ALA:CB	2.49	0.41
30:BG:114:ILE:O	30:BG:116:ASP:CA	2.63	0.41
30:BG:110:ALA:HA	30:BG:140:ILE:O	2.20	0.41
32:BI:123:LEU:HD23	32:BI:124:GLY:N	2.30	0.41
37:BQ:35:VAL:HG23	37:BQ:101:ARG:O	2.21	0.41
38:BR:27:SER:HB3	38:BR:34:ILE:HD11	2.02	0.41
41:BU:65:ILE:O	41:BU:69:CYS:CB	2.68	0.41
42:BV:18:LEU:O	42:BV:19:LYS:O	2.38	0.41
36:BP:63:PRO:C	36:BP:65:ARG:N	2.70	0.41
44:BX:53:LYS:HB3	44:BX:82:GLN:HB3	2.02	0.41
45:BY:20:TYR:CZ	45:BY:42:VAL:HA	2.56	0.41
45:BY:97:ARG:HD2	45:BY:97:ARG:HA	1.86	0.41
31:BH:105:LEU:HD23	31:BH:113:VAL:O	2.21	0.41
49:A2:47:ASN:ND2	57:AA:94(A):G:H21	2.18	0.41
28:BE:79:ARG:N	28:BE:79:ARG:HD2	2.35	0.41
31:BH:84:SER:O	31:BH:85:LYS:HB3	2.20	0.41
28:AE:79:ARG:HH11	28:AE:79:ARG:HG2	1.86	0.41
46:AZ:6:LYS:HD3	46:AZ:6:LYS:H	1.86	0.41
57:AA:1308:A:H2'	57:AA:1309:G:O4'	2.20	0.41
57:AA:1462:C:O2'	57:AA:1463:C:H5'	2.21	0.41
34:AN:120:LEU:HD13	34:AN:121:LYS:N	2.35	0.41
57:AA:2095:C:H2'	57:AA:2096:U:O4'	2.19	0.41
57:BA:1005:C:H2'	57:BA:1006:C:H6	1.84	0.41
47:B0:48:GLY:H	47:B0:51:VAL:HB	1.85	0.41
47:A0:51:VAL:CG2	47:A0:80:HIS:HA	2.51	0.41
28:AE:170:LEU:CD1	28:AE:170:LEU:N	2.83	0.41
29:BF:32:LEU:C	29:BF:32:LEU:HD23	2.40	0.41
47:A0:66:VAL:CG1	47:A0:67:VAL:N	2.83	0.41
48:A1:73:LEU:HD22	48:A1:73:LEU:HA	1.79	0.41
57:AA:11:G:H2'	57:AA:12:U:H6	1.85	0.41
57:AA:2628:C:H1'	57:AA:2781:A:H2'	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AF:165:ARG:H	29:AF:165:ARG:HG2	1.50	0.41
57:BA:2416:C:H2'	57:BA:2417:C:H6	1.85	0.41
46:AZ:136:PHE:HD1	46:AZ:136:PHE:O	2.04	0.41
50:B3:46:ASN:HD21	57:BA:851:U:H5'	1.85	0.41
57:AA:1124:C:H2'	57:AA:1125:G:O4'	2.20	0.41
57:AA:839:U:H2'	57:AA:840:C:C6	2.54	0.41
57:BA:2770:G:C5'	57:BA:2771:C:OP2	2.68	0.41
57:AA:2404:C:H2'	57:AA:2405:G:O4'	2.20	0.41
57:AA:139:G:C5	57:AA:140:G:H2'	2.55	0.41
47:B0:46:LYS:HA	47:B0:47:PRO:HD3	1.82	0.41
57:BA:2138:C:H2'	57:BA:2139:C:C6	2.56	0.41
44:AX:8:ILE:HD12	44:AX:8:ILE:N	2.35	0.41
46:AZ:11:GLU:CD	46:AZ:11:GLU:N	2.72	0.41
57:AA:2450:A:O2'	57:AA:2451:A:H5'	2.20	0.41
47:B0:23:VAL:HG22	47:B0:38:VAL:HG22	2.01	0.41
32:AI:27:ARG:CG	48:A1:71:TYR:CZ	3.02	0.41
36:AP:63:PRO:CB	55:A8:12:LYS:O	2.68	0.41
57:AA:1317:A:H2'	57:AA:1318:C:C6	2.56	0.41
57:AA:1404:C:O2'	57:AA:1405:U:H5'	2.20	0.41
30:AG:118:ARG:HH11	30:AG:118:ARG:CG	2.30	0.41
30:AG:107:LEU:HD11	30:AG:178:PHE:CE1	2.56	0.41
32:AI:102:SER:HA	32:AI:107:VAL:O	2.20	0.41
34:AN:112:LEU:O	34:AN:116:LEU:HG	2.21	0.41
36:AP:18:ARG:HD2	57:AA:661:C:O3'	2.20	0.41
38:AR:52:ILE:HD13	38:AR:79:LEU:HD21	2.01	0.41
39:AS:59:LYS:CD	39:AS:61:ASN:HB2	2.50	0.41
34:AN:4:TYR:HB2	41:AU:64:ARG:HH22	1.86	0.41
45:AY:31:LEU:HB2	45:AY:32:PRO:CA	2.49	0.41
46:AZ:30:ASN:O	46:AZ:31:ARG:C	2.59	0.41
57:BA:143:G:H2'	57:BA:143(A):C:H6	1.86	0.41
36:BP:72:PRO:HD3	57:BA:389:G:H22	1.84	0.41
26:BC:200:HIS:O	26:BC:202:PRO:HD3	2.20	0.41
30:BG:141:PHE:HA	30:BG:142:PRO:HD2	1.71	0.41
30:BG:125:PHE:CB	30:BG:166:ASP:HB2	2.50	0.41
30:BG:173:LEU:HB3	30:BG:178:PHE:CD1	2.55	0.41
30:BG:87:PRO:C	30:BG:88:ILE:HD13	2.41	0.41
32:BI:102:SER:HA	32:BI:107:VAL:O	2.20	0.41
32:BI:118:LYS:HZ1	32:BI:119:PRO:CG	2.33	0.41
34:BN:51:PHE:CZ	34:BN:119:ARG:HD2	2.56	0.41
36:BP:125:VAL:CG2	36:BP:125:VAL:O	2.67	0.41
38:BR:100:LEU:HD23	38:BR:112:ALA:CA	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BU:17:ILE:O	41:BU:20:LEU:HB2	2.20	0.41
41:BU:31:SER:C	41:BU:33:ARG:N	2.72	0.41
42:BV:49:THR:O	42:BV:50:PRO:C	2.58	0.41
27:BD:62:TYR:CZ	57:BA:1816:G:H8	2.38	0.41
27:BD:95:LEU:O	27:BD:95:LEU:HD12	2.20	0.41
57:AA:332:A:H4'	57:AA:333:G:OP1	2.19	0.41
40:AT:70:VAL:CG1	40:AT:71:GLY:H	2.33	0.41
36:BP:61:ARG:H	36:BP:61:ARG:HD2	1.85	0.41
52:A5:3:LYS:HZ1	52:A5:5:PRO:HB2	1.86	0.41
40:BT:95:ARG:NH1	57:BA:2849:U:OP2	2.49	0.41
40:BT:78:LEU:HB3	40:BT:79:HIS:ND1	2.34	0.41
55:B8:53:PRO:HA	55:B8:56:GLU:HB2	2.02	0.41
57:BA:2134:A:N6	57:BA:2157:G:H1'	2.35	0.41
57:BA:9:U:C4	57:BA:2629:A:N6	2.88	0.41
28:BE:144:ARG:HB3	57:BA:2572:A:C8	2.56	0.41
28:AE:35:GLN:O	28:AE:36:ARG:HG3	2.20	0.41
57:AA:1540:U:O3'	57:AA:1542:A:OP1	2.39	0.41
57:BA:706:A:H2'	57:BA:707:G:O4'	2.21	0.41
41:AU:113:ALA:C	41:AU:115:ALA:H	2.24	0.41
52:B5:6:VAL:HG11	57:BA:2016:U:C1'	2.50	0.41
43:AW:83:LYS:O	43:AW:84:ARG:HD3	2.20	0.41
57:AA:1614:A:H2'	57:AA:1615:C:H5'	2.03	0.41
47:B0:14:ARG:HD2	57:BA:2279:G:O6	2.21	0.41
57:BA:828:U:O2	57:BA:828:U:H3'	2.20	0.41
57:AA:2498:C:O2'	57:AA:2499:C:H5'	2.19	0.41
53:A6:19:ARG:O	53:A6:20:ASN:HB2	2.20	0.41
48:A1:32:LYS:HE2	48:A1:32:LYS:HB3	1.97	0.41
48:B1:57:GLU:O	48:B1:58:ILE:C	2.58	0.41
57:AA:2290:G:H1	57:AA:2342:C:H42	1.68	0.41
41:BU:52:ARG:CG	41:BU:52:ARG:NH1	2.83	0.41
57:BA:2196:C:O2'	57:BA:2197:U:H5'	2.20	0.41
57:AA:1547:C:H2'	57:AA:1548:C:H6	1.85	0.41
29:BF:192:LEU:HD11	29:BF:194:MET:HE2	2.02	0.41
37:AQ:10:ARG:CB	37:AQ:10:ARG:HH11	2.33	0.41
57:BA:2065:C:H2'	57:BA:2066:C:C6	2.55	0.41
57:AA:2240:C:O2'	57:AA:2241:A:H5'	2.20	0.41
46:BZ:13:GLU:HB2	46:BZ:18:LEU:HD11	2.03	0.41
46:AZ:133:ILE:HG22	46:AZ:133:ILE:O	2.20	0.41
57:AA:1204:A:C2	57:AA:1241:A:N1	2.89	0.41
57:AA:1324:G:C4	57:AA:1328:G:O6	2.74	0.41
57:AA:2123:G:H2'	57:AA:2124:G:C8	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:407:G:H2'	57:AA:408:G:C8	2.54	0.41
30:AG:125:PHE:CE2	30:AG:173:LEU:HD12	2.54	0.41
32:AI:23:PRO:O	32:AI:27:ARG:HB2	2.21	0.41
32:AI:77:LEU:HD21	32:AI:141:LYS:N	2.35	0.41
36:AP:32:THR:O	36:AP:33:ARG:CB	2.67	0.41
36:AP:64:LYS:HD3	36:AP:64:LYS:O	2.21	0.41
36:AP:81:GLN:HB2	36:AP:81:GLN:HE21	1.68	0.41
39:AS:29:PHE:CE1	58:AB:7:G:C4'	3.04	0.41
41:AU:31:SER:HB3	41:AU:34:LYS:HB2	2.03	0.41
45:AY:2:ARG:C	45:AY:2:ARG:HD3	2.40	0.41
45:AY:52:SER:O	45:AY:54:LYS:N	2.53	0.41
57:BA:2803:C:H2'	57:BA:2804:C:C6	2.54	0.41
57:BA:863:A:H8	57:BA:863:A:O5'	2.04	0.41
26:BC:52:PRO:HG2	26:BC:53:ARG:HH11	1.86	0.41
29:BF:20:LEU:HD12	29:BF:199:TRP:CH2	2.55	0.41
30:BG:113:ARG:CG	51:B4:35:VAL:HB	2.50	0.41
30:BG:7:LEU:O	30:BG:11:TYR:HB2	2.21	0.41
30:BG:131:TYR:HE2	30:BG:133:LEU:HD23	1.86	0.41
32:BI:100:ALA:HA	32:BI:103:ARG:HH11	1.85	0.41
33:BJ:61:LEU:O	33:BJ:62:ALA:HB2	2.20	0.41
34:BN:19:GLU:HG3	34:BN:20:GLY:N	2.35	0.41
41:BU:12:ARG:HG3	41:BU:12:ARG:HH11	1.86	0.41
27:BD:100:GLY:HA2	57:BA:1501:C:H1'	2.02	0.41
27:BD:26:LYS:O	27:BD:27:THR:HB	2.20	0.41
27:BD:35:LYS:HA	27:BD:64:ILE:H	1.85	0.41
36:BP:63:PRO:C	36:BP:65:ARG:H	2.19	0.41
45:BY:28:LYS:N	45:BY:29:GLU:OE1	2.53	0.41
52:A5:3:LYS:HG2	57:AA:2015:A:H2	1.85	0.41
58:BB:71:C:C2	58:BB:72:G:C8	3.08	0.41
40:BT:29:ARG:HG2	40:BT:85:LYS:C	2.39	0.41
53:A6:30:THR:O	53:A6:31:PRO:C	2.59	0.41
49:A2:47:ASN:O	49:A2:48:HIS:C	2.59	0.41
31:BH:137:ASP:OD1	31:BH:139:GLN:HB3	2.20	0.41
28:AE:143:ASN:HD21	57:AA:2513:G:N2	2.18	0.41
38:AR:4:LEU:O	38:AR:5:LYS:CG	2.69	0.41
40:AT:129:ARG:NH2	40:AT:131:ALA:CB	2.80	0.41
52:A5:46:CYS:SG	52:A5:47:PRO:CD	3.09	0.41
57:AA:28:A:H61	57:AA:512:G:H1'	1.86	0.41
57:BA:1448:G:H2'	57:BA:1449:A:C8	2.56	0.41
57:BA:1528(A):A:C8	57:BA:1529:G:C8	3.09	0.41
57:BA:1539:G:H2'	57:BA:1540:U:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2703:C:H2'	57:BA:2704:C:C6	2.55	0.41
57:BA:674:G:H2'	57:BA:675:A:C8	5.11	0.41
37:AQ:132:VAL:HG21	46:AZ:81:ARG:HH21	1.85	0.41
51:A4:47:GLN:HB3	51:A4:48:ARG:H	1.67	0.41
57:AA:1511:C:H2'	57:AA:1512:U:O4'	2.21	0.41
48:A1:29:GLY:O	48:A1:31:GLY:N	2.42	0.41
57:AA:322:A:H5'	57:AA:340:A:C1'	2.50	0.41
57:BA:1629:U:O2	57:BA:2698:U:H5''	2.20	0.41
44:AX:47:PHE:O	44:AX:48:LYS:C	2.59	0.41
57:BA:460:A:H2'	57:BA:461:C:O4'	2.20	0.41
30:BG:132:ASN:ND2	57:BA:2303:G:H1'	2.35	0.41
46:AZ:7:ALA:O	46:AZ:62:PRO:HD3	2.21	0.41
47:A0:27:GLU:OE1	57:AA:856:C:C1'	2.68	0.41
35:AO:22:ILE:HD12	57:AA:1952:A:C6	2.54	0.41
57:AA:1708:C:O2'	57:AA:1709:U:H5'	2.21	0.41
57:BA:2270:G:H2'	57:BA:2271:G:O4'	2.20	0.41
57:AA:424:G:O2'	57:AA:425:G:H5'	2.30	0.41
44:BX:41:ASN:ND2	44:BX:41:ASN:N	2.68	0.41
50:A3:1:MET:HE2	50:A3:39:ASP:HB3	2.01	0.41
57:BA:2464:C:O2'	57:BA:2465:C:O5'	2.36	0.41
57:AA:889:C:H1'	57:AA:890:A:O4'	2.20	0.41
57:AA:845:G:OP2	57:AA:845:G:H8	2.03	0.41
30:AG:139:LEU:HD12	30:AG:139:LEU:C	2.41	0.41
57:BA:304:G:H2'	57:BA:305:U:C6	2.56	0.41
46:BZ:158:PRO:HA	46:BZ:159:PRO:HD3	1.91	0.41
33:BJ:28:ASN:C	33:BJ:30:GLN:H	2.23	0.41
57:AA:107:C:O2'	57:AA:108:U:H5'	2.21	0.41
36:AP:46:LYS:HE2	57:AA:196:A:O4'	2.21	0.41
30:AG:51:ARG:HH11	30:AG:53:LEU:HD21	1.86	0.41
32:AI:101:LEU:O	32:AI:107:VAL:CG2	2.68	0.41
38:AR:50:HIS:O	38:AR:54:LEU:HB2	2.21	0.41
43:AW:50:VAL:HG13	43:AW:105:VAL:CG2	2.47	0.41
44:AX:35:THR:H	44:AX:38:GLU:HB2	1.85	0.41
26:BC:43:GLU:HG3	26:BC:216:THR:HG23	2.03	0.41
26:BC:53:ARG:HD3	26:BC:53:ARG:N	2.25	0.41
30:BG:37:VAL:HG22	30:BG:159:VAL:HB	2.03	0.41
30:BG:6:ALA:O	30:BG:7:LEU:C	2.58	0.41
30:BG:36:LYS:HE2	30:BG:95:ARG:NH2	2.36	0.41
32:BI:69:LYS:HA	32:BI:136:VAL:CB	2.51	0.41
32:BI:72:LEU:O	32:BI:138:ILE:HG13	2.20	0.41
32:BI:87:LYS:HG3	32:BI:121:LYS:C	2.40	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:32:THR:O	34:BN:35:ARG:O	2.39	0.41
38:BR:85:PRO:C	38:BR:87:TYR:H	2.24	0.41
39:BS:27:SER:HA	39:BS:88:ASP:HB3	2.01	0.41
42:BV:47:VAL:O	42:BV:48:GLY:C	2.59	0.41
43:BW:36:LEU:HD13	43:BW:48:ALA:HA	2.01	0.41
57:AA:2803:C:H2'	57:AA:2804:C:C6	2.55	0.41
40:AT:87:ASP:OD2	40:AT:87:ASP:O	2.39	0.41
43:BW:40:ASN:C	43:BW:41:LYS:HG2	2.41	0.41
44:BX:12:VAL:CG1	44:BX:27:THR:O	2.56	0.41
52:A5:4:HIS:CD2	57:AA:2056:G:H1	2.39	0.41
40:BT:33:LYS:NZ	40:BT:74:ARG:NH2	2.66	0.41
57:BA:1002:G:C8	57:BA:1003:G:N7	4.36	0.41
28:BE:65:GLY:HA2	28:BE:70:ALA:CB	2.51	0.41
38:BR:4:LEU:O	38:BR:5:LYS:HG2	2.21	0.41
28:AE:34:VAL:CG2	28:AE:48:GLN:NE2	2.84	0.41
28:AE:79:ARG:HD2	28:AE:79:ARG:N	2.36	0.41
57:AA:1947:C:C3'	57:AA:1948:G:C5'	2.98	0.41
36:AP:148:LEU:O	36:AP:149:GLU:CB	2.61	0.41
37:BQ:29:PHE:HB3	37:BQ:65:PHE:CD2	2.55	0.41
29:AF:108:LYS:O	29:AF:112:MET:HG3	2.21	0.41
48:A1:45:ASN:ND2	48:A1:47:GLN:HE21	2.17	0.41
49:B2:25:VAL:HG13	49:B2:57:ILE:HG23	2.03	0.41
48:A1:91:LYS:O	48:A1:94:LEU:HB2	2.21	0.41
57:BA:774:A:C2	57:BA:787:U:O2'	2.67	0.41
57:BA:2166:G:H2'	57:BA:2167:U:C6	2.56	0.41
43:BW:15:ARG:HH22	57:BA:1266:G:P	2.43	0.41
38:AR:99:LYS:H	38:AR:99:LYS:CD	2.30	0.41
57:BA:2783:G:H2'	57:BA:2784:C:C6	2.56	0.41
41:AU:52:ARG:CG	41:AU:52:ARG:NH1	2.84	0.41
57:BA:2236:C:H2'	57:BA:2237:G:C5'	2.51	0.41
57:BA:64:A:H2'	57:BA:65:C:H6	1.85	0.41
57:BA:2162:G:O2'	57:BA:2163:C:H5'	2.21	0.41
57:BA:2321:G:H2'	57:BA:2321:G:N3	2.36	0.41
37:BQ:30:GLY:HA2	37:BQ:107:ALA:HB2	2.03	0.41
49:A2:18:PRO:O	49:A2:19:VAL:C	2.58	0.41
57:AA:1935:G:H1'	57:AA:1964:G:N2	2.36	0.41
26:AC:4:HIS:ND1	26:AC:8:TYR:CE2	2.89	0.41
27:AD:2:ALA:O	27:AD:3:VAL:CB	2.68	0.41
27:AD:72:LYS:HB3	27:AD:75:ILE:HD12	2.01	0.41
27:AD:77:ALA:HB2	27:AD:97:TYR:CG	2.55	0.41
29:AF:65:TRP:CZ3	29:AF:72:ARG:HB3	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AN:133:GLN:CG	34:AN:135:PRO:HD3	2.33	0.41
45:AY:95:LYS:HD3	45:AY:100:ALA:CA	2.50	0.41
45:AY:31:LEU:HD13	45:AY:31:LEU:HA	1.86	0.41
26:BC:43:GLU:CG	26:BC:216:THR:HG23	2.51	0.41
29:BF:2:LYS:HD3	29:BF:25:PRO:CG	2.51	0.41
30:BG:40:ASN:HD22	30:BG:91:ARG:CB	2.19	0.41
34:BN:119:ARG:HH11	34:BN:119:ARG:HG3	1.84	0.41
36:BP:71:VAL:HG12	57:BA:389:G:C2	2.55	0.41
39:BS:16:ASN:OD1	39:BS:16:ASN:C	2.59	0.41
55:B8:4:MET:HG2	55:B8:4:MET:H	1.65	0.41
27:BD:18:VAL:HG12	27:BD:19:ALA:H	1.86	0.41
35:AO:10:VAL:HG13	35:AO:17:ARG:C	2.41	0.41
40:AT:106:SER:O	40:AT:107:ASP:OD1	2.39	0.41
57:BA:262:A:H2'	57:BA:263:C:O4'	2.21	0.41
40:BT:98:LYS:NZ	57:BA:2847:U:OP1	2.51	0.41
40:BT:24:PRO:HA	40:BT:49:VAL:HG13	2.03	0.41
57:AA:1313:U:H2'	57:AA:1610:A:N1	2.35	0.41
57:BA:2491:U:C5'	57:BA:2570:G:H5''	2.31	0.41
57:BA:902:C:H2'	57:BA:903:C:C6	2.52	0.41
31:BH:31:GLY:O	31:BH:79:VAL:HG12	2.20	0.41
57:AA:2811:G:C2'	57:AA:2812:G:H5'	2.51	0.41
57:BA:954:G:O2'	57:BA:955:C:H5'	2.21	0.41
46:AZ:51:ALA:HB1	46:AZ:57:ILE:CD1	2.37	0.41
54:A7:5:TRP:CH2	57:AA:686:G:N7	2.88	0.41
35:AO:47:ILE:HG12	35:AO:48:PRO:CD	2.37	0.41
57:AA:2703:C:C2	57:AA:2704:C:C5	3.09	0.41
57:BA:889:C:H1'	57:BA:890:A:O4'	2.21	0.41
57:AA:1205:U:H4'	57:AA:1206:G:OP2	2.20	0.41
57:BA:557:U:H2'	57:BA:558:G:H8	1.86	0.41
57:AA:638:G:C5	57:AA:651:G:C2	3.08	0.41
57:AA:53:A:H2'	57:AA:54:G:O4'	2.20	0.41
57:AA:1667:G:H22	57:AA:1992:G:H5'	1.86	0.41
57:AA:2755:C:O2'	57:AA:2756:U:H2'	2.20	0.41
57:BA:2742:C:O2'	57:BA:2743:C:H5'	2.21	0.41
57:AA:2649:U:H2'	57:AA:2650:U:C6	2.56	0.41
57:AA:2416:C:H2'	57:AA:2417:C:H6	1.86	0.41
57:AA:350:U:H2'	57:AA:351:G:O4'	2.21	0.41
50:A3:46:ASN:O	50:A3:50:VAL:HG22	2.21	0.41
28:BE:19:ARG:HA	35:BO:73:ASP:HA	2.01	0.41
57:BA:1474:C:H3'	57:BA:1475:G:H8	1.86	0.41
57:AA:2553:G:H2'	57:AA:2554:U:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:AT:108:ARG:HB2	40:AT:111:ARG:NH1	2.36	0.41
29:AF:158:THR:HA	29:AF:195:ASP:HB2	2.02	0.41
47:A0:55:ARG:HE	47:A0:55:ARG:HB3	1.51	0.41
27:BD:266:SER:OG	57:BA:1800:C:OP1	2.33	0.41
57:BA:2009:G:O2'	57:BA:2010:G:H5'	2.21	0.41
54:B7:40:TRP:CZ3	57:BA:459:U:H4'	2.55	0.41
58:AB:29:A:H2'	58:AB:30:C:C6	2.55	0.41
26:AC:29:LEU:HD23	26:AC:29:LEU:O	2.20	0.41
26:AC:6:LYS:HA	26:AC:9:ARG:CB	2.48	0.41
30:AG:173:LEU:HB3	30:AG:178:PHE:CG	2.55	0.41
31:AH:137:ASP:OD1	31:AH:139:GLN:HB3	2.20	0.41
32:AI:29:TYR:O	32:AI:32:PRO:HD2	2.21	0.41
34:AN:2:LYS:O	34:AN:4:TYR:CE1	2.74	0.41
36:AP:67:MET:HB3	57:AA:631:A:HO2'	1.84	0.41
38:AR:63:ARG:HH12	38:AR:80:PHE:HD1	1.69	0.41
39:AS:16:ASN:OD1	39:AS:16:ASN:C	2.59	0.41
42:AV:38:LEU:HD22	42:AV:52:VAL:HG11	2.03	0.41
57:AA:1375:C:H2'	57:AA:1376:C:H6	1.85	0.41
29:AF:116:ASP:O	29:AF:120:GLU:HG3	2.21	0.41
29:AF:68:LYS:HB3	29:AF:69:HIS:H	1.69	0.41
30:AG:39:ILE:HD11	30:AG:92:VAL:CG1	2.51	0.41
30:AG:98:ARG:HG3	51:A4:1:MET:CG	2.49	0.41
32:AI:116:LEU:HD12	32:AI:117:GLU:H	1.86	0.41
32:AI:133:HIS:O	32:AI:133:HIS:CG	2.74	0.41
32:AI:64:GLU:C	32:AI:66:GLU:N	2.74	0.41
32:AI:74:ASN:O	32:AI:76:THR:N	2.50	0.41
32:AI:93:THR:O	32:AI:97:ILE:N	2.52	0.41
36:AP:55:ARG:CG	36:AP:56:SER:N	2.63	0.41
41:AU:50:ARG:NH1	42:AV:72:VAL:HG12	2.35	0.41
41:AU:6:THR:O	41:AU:9:VAL:HG23	2.21	0.41
42:AV:6:LYS:O	42:AV:37:VAL:CG2	2.69	0.41
45:AY:67:LEU:HD12	45:AY:71:LYS:HG3	2.03	0.41
26:BC:40:GLU:HB2	26:BC:179:ALA:HB2	2.02	0.41
26:BC:215:VAL:HG23	26:BC:225:ILE:HG12	2.01	0.41
30:BG:143:GLU:OE2	51:B4:26:SER:HB2	2.20	0.41
30:BG:55:LYS:C	30:BG:58:GLN:HE21	2.25	0.41
32:BI:112:LYS:HD3	32:BI:112:LYS:O	5.48	0.41
32:BI:10:GLU:C	32:BI:12:LEU:H	2.24	0.41
32:BI:29:TYR:CE1	32:BI:33:ARG:NE	2.89	0.41
32:BI:68:LEU:HG	32:BI:72:LEU:CD2	2.48	0.41
32:BI:69:LYS:HG3	32:BI:73:GLU:OE2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:2:LYS:O	34:BN:4:TYR:CZ	2.74	0.41
36:BP:99:LEU:HA	36:BP:102:ARG:NH2	2.35	0.41
37:BQ:21:THR:CG2	37:BQ:101:ARG:HB2	2.51	0.41
32:BI:27:ARG:HG2	48:BI:71:TYR:CZ	2.56	0.41
57:BA:1230:C:H2'	57:BA:1231:G:H8	1.86	0.41
29:BF:24:LEU:O	29:BF:115:ALA:HB1	2.21	0.41
33:BJ:31:GLY:O	33:BJ:108:LYS:CB	2.69	0.41
36:BP:18:ARG:NH1	36:BP:18:ARG:CB	2.67	0.41
36:BP:81:GLN:HG2	36:BP:106:LEU:CD1	2.44	0.41
38:BR:38:VAL:CB	38:BR:39:PRO:HD3	2.42	0.41
38:BR:76:VAL:HG12	38:BR:77:ARG:N	2.36	0.41
41:BU:95:LEU:O	41:BU:98:LEU:HG	2.21	0.41
27:BD:49:ILE:HG22	57:BA:779:U:P	2.60	0.41
27:BD:147:LEU:HD12	27:BD:155:LEU:CD2	2.51	0.41
27:BD:69:ARG:C	27:BD:71:ASP:H	2.24	0.41
40:AT:116:ALA:HB1	40:AT:121:ILE:CD1	2.50	0.41
38:BR:103:ARG:HD3	43:BW:40:ASN:ND2	2.36	0.41
45:BY:52:SER:N	45:BY:53:PRO:CD	2.83	0.41
45:BY:84:ARG:HH21	57:BA:299:A:H5''	1.86	0.41
46:BZ:150:LEU:N	46:BZ:150:LEU:CD2	2.81	0.41
53:B6:41:PRO:HG2	53:B6:43:CYS:O	2.20	0.41
53:B6:43:CYS:O	53:B6:44:ARG:CB	2.67	0.41
58:BB:73:A:H2'	58:BB:74:U:H5'	2.03	0.41
40:BT:51:ARG:HB2	40:BT:98:LYS:HG3	2.03	0.41
40:BT:30:VAL:HG21	40:BT:83:ILE:HG12	2.02	0.41
53:B6:5:VAL:HG13	53:B6:7:ILE:N	2.29	0.41
57:AA:1025:G:C4	57:AA:1135:C:H1'	2.55	0.41
28:BE:21:VAL:O	28:BE:23:VAL:HG13	2.20	0.41
28:BE:111:ARG:HG3	38:BR:2:ARG:CD	2.51	0.41
31:BH:137:ASP:HB3	31:BH:138:LYS:H	1.62	0.41
57:BA:2289:G:N2	57:BA:2344:U:O2	2.54	0.41
40:AT:11:GLU:CD	40:AT:11:GLU:H	2.24	0.41
52:B5:36:CYS:SG	52:B5:49:CYS:SG	3.18	0.41
36:AP:38:GLN:HG3	36:AP:39:LYS:N	2.17	0.41
43:AW:34:ASN:ND2	52:A5:39:MET:HE2	2.36	0.41
57:AA:1778:U:H2'	57:AA:1784:A:N6	2.35	0.41
46:BZ:24:LEU:C	46:BZ:24:LEU:CD2	2.89	0.41
57:BA:2328:A:H2'	57:BA:2329:G:C8	2.56	0.41
42:BV:5:VAL:CG2	42:BV:35:LEU:HB3	2.47	0.41
57:AA:271(O):C:O2'	57:AA:271(P):C:P	2.79	0.41
57:BA:912:C:H2'	57:BA:912:C:O2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:AP:95:VAL:O	36:AP:95:VAL:HG23	2.20	0.41
57:BA:2833:G:C3'	57:BA:2834:G:C5'	2.90	0.41
56:B9:4:ARG:NH1	57:BA:2477:C:N3	2.69	0.41
57:BA:1037:G:H1	57:BA:1118:C:N4	2.19	0.41
57:BA:1720:U:H2'	57:BA:1721:G:O4'	2.21	0.41
36:BP:146:VAL:CG1	36:BP:147:LEU:H	2.28	0.41
57:AA:141:A:H1'	57:AA:1408:C:O2'	2.20	0.41
44:BX:31:HIS:HE1	57:BA:71:A:H2	1.68	0.41
57:BA:900:A:C5	57:BA:901:A:C8	3.08	0.41
46:AZ:75:ASN:O	46:AZ:84:GLU:HB2	2.20	0.41
27:AD:223:GLY:O	27:AD:226:MET:HG3	2.20	0.41
57:BA:1422:G:H2'	57:BA:1423:G:C8	2.82	0.41
57:BA:784:A:C8	57:BA:792:G:C5	3.09	0.41
57:BA:1876:A:H2'	57:BA:1877:A:C8	2.56	0.41
46:AZ:61:LEU:HA	46:AZ:62:PRO:HD3	1.90	0.41
49:A2:68:ARG:NH1	49:A2:68:ARG:HG3	2.35	0.41
48:A1:56:GLN:HG3	48:A1:87:PRO:HB3	2.03	0.41
48:A1:40:ARG:HD3	48:A1:40:ARG:O	2.20	0.41
57:BA:128:C:H2'	57:BA:129:C:H6	1.86	0.41
27:AD:238:GLY:HA2	57:AA:2590:A:OP2	2.21	0.41
57:AA:2197:U:H1'	57:AA:2198:A:C8	2.56	0.41
57:BA:536:A:H2'	57:BA:537:C:C6	2.56	0.41
50:A3:3:ARG:HB2	50:A3:59:VAL:O	2.21	0.41
57:AA:1856:G:H2'	57:AA:1857:G:C5'	2.49	0.41
57:BA:2171:A:O2'	57:BA:2172:U:C6	2.70	0.41
55:B8:46:ARG:NH1	55:B8:46:ARG:HG2	2.35	0.41
57:BA:2518:A:H8	57:BA:2518:A:H5'	1.84	0.41
57:BA:2884:U:O2'	57:BA:2885:C:H5'	2.19	0.41
57:BA:869:G:H4'	57:BA:872:A:C8	15.76	0.41
57:BA:142:A:H5''	57:BA:142(A):C:H5	1.86	0.41
57:AA:758:C:O2	57:AA:1981:A:H2	2.04	0.41
44:AX:71:GLY:HA3	57:AA:64:A:O3'	2.21	0.41
57:BA:1027:A:C2	57:BA:2488:A:H5'	2.55	0.41
57:BA:1742:G:N7	57:BA:1743:C:C4	2.88	0.41
27:AD:218:ARG:HB3	27:AD:219:PRO:HD2	2.03	0.41
57:BA:1705:G:O2'	57:BA:1706:U:H5'	2.21	0.41
57:AA:2020:A:O2'	57:AA:2021:C:H5'	2.21	0.41
55:A8:47:LYS:HD2	55:A8:48:PHE:O	2.21	0.41
57:AA:2772:C:H2'	57:AA:2773:C:C6	2.55	0.41
33:BJ:104:ILE:O	33:BJ:105:PRO:CB	2.68	0.41
49:A2:52:ASP:O	49:A2:56:GLN:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:AT:132:LYS:HE3	40:AT:132:LYS:HB2	1.87	0.41
57:AA:822:U:O2'	57:AA:823:G:H5'	2.20	0.41
57:AA:1577:C:H2'	57:AA:1578:U:C1'	2.51	0.41
30:AG:64:THR:OG1	30:AG:94:LEU:HD11	2.21	0.41
37:AQ:21:THR:HG21	37:AQ:101:ARG:CD	2.52	0.41
41:AU:92:ARG:O	41:AU:95:LEU:N	2.48	0.41
42:AV:25:LEU:H	42:AV:92:THR:HG21	1.86	0.41
45:AY:13:VAL:CG1	45:AY:28:LYS:HD2	2.51	0.41
45:AY:52:SER:N	45:AY:53:PRO:CD	2.83	0.41
58:BB:88:C:O2	58:BB:88:C:H2'	2.21	0.41
26:BC:29:LEU:O	26:BC:29:LEU:HD23	2.21	0.41
29:BF:24:LEU:CD1	29:BF:25:PRO:HD2	2.51	0.41
30:BG:63:ILE:HD12	30:BG:141:PHE:CD2	2.56	0.41
32:BI:139:GLN:HE21	32:BI:139:GLN:HB2	1.51	0.41
34:BN:58:ASP:C	34:BN:60:ILE:HG13	2.41	0.41
36:BP:41:ARG:HA	36:BP:41:ARG:NE	2.35	0.41
36:BP:97:PRO:HD3	36:BP:126:VAL:O	2.20	0.41
38:BR:32:GLY:C	38:BR:33:ARG:HD2	2.41	0.41
38:BR:80:PHE:O	38:BR:85:PRO:HD3	2.20	0.41
41:BU:92:ARG:NH2	42:BV:10:LYS:HG2	2.35	0.41
55:A8:61:LEU:O	55:A8:64:TYR:HD1	2.04	0.41
57:BA:545:C:C3'	57:BA:547:A:C5'	2.96	0.41
35:AO:87:ILE:CG2	35:AO:91:LEU:C	2.89	0.41
44:BX:69:TYR:CE2	57:BA:456:C:C4	3.09	0.41
53:B6:12:GLU:O	53:B6:51:GLU:HA	2.21	0.41
57:AA:158:U:C3'	57:AA:158:U:O2	2.69	0.41
57:AA:94(A):G:H2'	57:AA:95:G:O4'	2.21	0.41
28:BE:34:VAL:CG2	28:BE:48:GLN:NE2	2.83	0.41
57:BA:1040:C:HO2'	57:BA:1041:C:P	2.44	0.41
50:B3:8:LEU:HD13	50:B3:31:LEU:CD2	2.51	0.41
57:BA:2788:C:O2'	57:BA:2809:A:N3	2.49	0.41
46:BZ:24:LEU:HD23	46:BZ:25:PRO:O	2.20	0.41
47:B0:49:LYS:HE3	47:B0:80:HIS:CD2	2.56	0.41
37:BQ:68:ILE:HD13	37:BQ:103:MET:HE3	2.03	0.41
54:A7:34:ARG:HH11	54:A7:39:ARG:HG3	1.84	0.41
48:B1:45:ASN:C	48:B1:45:ASN:ND2	2.74	0.41
57:BA:2246:G:H2'	57:BA:2247:A:C8	2.56	0.41
57:BA:2308:G:N7	57:BA:2310:A:H5'	2.35	0.41
46:BZ:125:LEU:HD23	46:BZ:164:ALA:O	2.21	0.41
46:BZ:125:LEU:HG	46:BZ:164:ALA:HB3	2.03	0.41
56:B9:2:LYS:HD2	56:B9:2:LYS:HA	1.96	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:828:U:H3'	57:AA:828:U:O2	2.21	0.41
53:A6:19:ARG:HG2	57:AA:2400:G:H4'	2.03	0.41
57:AA:565:C:H2'	57:AA:566:U:O4'	2.20	0.41
57:BA:1856:G:H2'	57:BA:1857:G:C5'	2.51	0.41
27:AD:224:ALA:O	27:AD:225:ALA:CB	2.69	0.41
57:AA:270:A:C2'	57:AA:271:A:H5'	2.50	0.41
57:BA:1956:U:C2'	57:BA:1957:C:H5'	2.50	0.41
57:BA:335:C:O5'	57:BA:335:C:H6	2.04	0.41
49:B2:30:ARG:HB2	49:B2:30:ARG:HE	1.49	0.41
49:A2:57:ILE:HG12	49:A2:57:ILE:H	1.62	0.41
57:AA:2007:C:O2'	57:AA:2008:C:H5'	2.21	0.41
28:AE:13:ARG:HD2	28:AE:20:ALA:HB1	2.03	0.41
30:AG:67:LYS:HE2	51:A4:6:HIS:HB3	2.04	0.40
57:AA:662:G:O2'	57:AA:836:G:H5'	28.76	0.40
27:AD:36:PRO:O	27:AD:37:LEU:HD23	2.20	0.40
29:AF:25:PRO:CB	29:AF:119:ARG:HD3	2.50	0.40
29:AF:2:LYS:HD3	29:AF:25:PRO:CG	2.51	0.40
30:AG:108:ASN:C	30:AG:112:PRO:CG	2.85	0.40
39:AS:17:ARG:NH2	39:AS:90:GLY:H	2.15	0.40
43:AW:12:ILE:HB	43:AW:42:ARG:HH12	1.86	0.40
45:AY:29:GLU:OE2	45:AY:38:ILE:HG21	2.21	0.40
41:BU:58:ARG:NH1	57:BA:1155:A:OP2	2.54	0.40
58:BB:29:A:H2'	58:BB:30:C:C6	2.57	0.40
30:BG:134:GLY:O	30:BG:135:LEU:HD12	2.20	0.40
30:BG:36:LYS:HE2	30:BG:95:ARG:NH1	2.36	0.40
32:BI:101:LEU:O	32:BI:107:VAL:CG2	2.69	0.40
34:BN:38:HIS:CE1	34:BN:50:ASP:OD2	2.73	0.40
36:BP:7:ARG:O	36:BP:9:ASN:N	2.54	0.40
38:BR:34:ILE:CG2	38:BR:35:THR:N	2.84	0.40
34:BN:4:TYR:HB2	41:BU:64:ARG:NH2	2.35	0.40
42:BV:18:LEU:CD2	42:BV:19:LYS:N	2.77	0.40
57:BA:407:G:H2'	57:BA:408:G:C8	2.55	0.40
45:BY:28:LYS:O	45:BY:38:ILE:HB	2.21	0.40
45:BY:44:ILE:O	45:BY:62:GLU:OE1	2.39	0.40
52:B5:4:HIS:CD2	57:BA:2056:G:H1	2.39	0.40
40:BT:50:ILE:O	40:BT:99:LEU:HD12	2.20	0.40
57:AA:1313:U:H3'	57:AA:1314:C:H5'	2.02	0.40
55:B8:32:LEU:HB2	55:B8:33:ASN:HD22	1.86	0.40
49:A2:38:GLN:HB3	49:A2:44:LEU:O	2.20	0.40
28:BE:181:LEU:HA	28:BE:181:LEU:HD12	1.81	0.40
28:AE:51:PHE:O	28:AE:74:PRO:HG3	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:AQ:9:TYR:CZ	57:AA:911:A:H2'	2.56	0.40
57:BA:2318:G:H2'	57:BA:2319:G:OP1	2.20	0.40
57:BA:2808:U:H5'	57:BA:2891:G:O6	2.21	0.40
34:BN:17:ASP:OD1	34:BN:56:ASN:HB3	2.21	0.40
54:A7:8:ASN:ND2	54:A7:11:LYS:H	2.19	0.40
47:A0:21:LEU:HD11	47:A0:41:ARG:HD3	2.03	0.40
57:AA:520:G:H2'	57:AA:521:G:H8	1.87	0.40
27:BD:28:GLU:N	27:BD:29:PRO:CD	2.83	0.40
57:AA:639:U:H2'	57:AA:640:C:H6	1.83	0.40
46:AZ:111:VAL:HG12	46:AZ:112:ARG:N	2.36	0.40
31:BH:136:ILE:H	31:BH:136:ILE:CD1	2.34	0.40
41:AU:115:ALA:C	41:AU:117:GLN:H	2.24	0.40
49:A2:65:ASN:C	49:A2:67:LYS:H	2.24	0.40
48:B1:64:ALA:O	48:B1:67:ILE:HG13	2.21	0.40
57:BA:2755:C:O2'	57:BA:2756:U:H2'	2.21	0.40
57:BA:128:C:H3'	57:BA:128:C:C6	2.55	0.40
57:BA:1751:C:O2'	57:BA:1752:C:H5'	2.21	0.40
34:BN:72:TYR:HD1	34:BN:90:MET:HG3	1.85	0.40
43:AW:15:ARG:HH22	57:AA:1266:G:P	2.44	0.40
50:A3:46:ASN:HA	50:A3:46:ASN:HD22	1.65	0.40
53:B6:14:THR:HG23	53:B6:14:THR:O	2.20	0.40
46:AZ:38:TYR:O	46:AZ:38:TYR:CG	2.73	0.40
55:B8:18:ALA:C	55:B8:20:GLY:N	2.73	0.40
57:AA:2025:C:H2'	57:AA:2026:C:C6	2.56	0.40
47:A0:45:PHE:CE2	47:A0:69:PHE:HE2	2.39	0.40
47:A0:46:LYS:HA	47:A0:47:PRO:HD3	1.80	0.40
49:B2:50:ILE:HG22	49:B2:51:ARG:N	2.36	0.40
57:AA:1208:C:H2'	57:AA:1208:C:O2	2.21	0.40
57:AA:221:A:O2'	57:AA:222:A:OP2	2.37	0.40
57:AA:2314:C:H2'	57:AA:2315:G:C8	2.56	0.40
36:AP:62:LEU:HB2	57:AA:2394:C:P	2.61	0.40
57:AA:836:G:C5	57:AA:837:C:C4	3.09	0.40
51:A4:3:GLU:OE1	58:AB:40:U:C5	2.74	0.40
27:AD:9:TYR:CD2	57:AA:727:A:C2	3.09	0.40
30:AG:96:ARG:H	30:AG:99:MET:HE1	1.86	0.40
31:AH:118:PRO:HG2	31:AH:121:ILE:HD12	2.04	0.40
37:AQ:16:ARG:C	37:AQ:17:LEU:HD23	2.41	0.40
39:AS:84:GLN:HB3	39:AS:105:ALA:HB3	2.03	0.40
39:AS:89:ARG:HH11	39:AS:89:ARG:CG	2.33	0.40
45:AY:14:LEU:CD1	45:AY:23:ARG:H	2.34	0.40
57:BA:662:G:O2'	57:BA:836:G:H5'	28.77	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BG:31:VAL:HA	30:BG:32:PRO:HD2	1.69	0.40
30:BG:58:GLN:HG3	30:BG:58:GLN:H	1.59	0.40
34:BN:119:ARG:HH11	34:BN:119:ARG:CG	2.34	0.40
34:BN:5:VAL:HG13	34:BN:5:VAL:O	2.21	0.40
36:BP:16:ARG:CZ	36:BP:18:ARG:HG2	2.51	0.40
36:BP:6:LEU:CG	36:BP:9:ASN:HB2	2.50	0.40
41:BU:92:ARG:O	41:BU:93:LYS:C	2.60	0.40
27:BD:161:THR:O	27:BD:196:VAL:HG23	2.21	0.40
27:BD:61:LEU:HB3	27:BD:63:ARG:NH1	2.36	0.40
27:BD:30:GLU:CG	27:BD:63:ARG:NE	2.83	0.40
57:AA:1885:A:H3'	57:AA:1886:C:H6	1.86	0.40
45:BY:31:LEU:CB	45:BY:32:PRO:HA	2.49	0.40
45:BY:88:LYS:HD3	45:BY:93:GLY:N	2.36	0.40
37:BQ:27:VAL:O	37:BQ:28:ALA:CB	2.68	0.40
53:A6:44:ARG:HB2	53:A6:44:ARG:NH1	2.35	0.40
57:BA:657:U:H2'	57:BA:658:C:C6	2.56	0.40
53:A6:11:LEU:HD22	53:A6:11:LEU:C	2.41	0.40
57:AA:1485:G:C8	57:AA:1486:A:N7	2.89	0.40
57:BA:1313:U:H2'	57:BA:1610:A:N1	2.36	0.40
53:B6:8:LYS:NZ	57:BA:2285:C:H5	2.06	0.40
57:BA:149:A:O2'	57:BA:150:C:H6	4.09	0.40
28:BE:182:LEU:HD12	28:BE:183:LEU:H	1.85	0.40
31:BH:41:MET:HE2	31:BH:42:ARG:C	2.42	0.40
57:BA:1039:G:C6	57:BA:1040:C:N4	2.89	0.40
28:AE:107:THR:HA	28:AE:163:GLU:O	2.21	0.40
28:AE:59:VAL:HG23	28:AE:62:PRO:HG2	2.03	0.40
28:AE:82:ARG:HA	28:AE:82:ARG:HD2	1.93	0.40
57:BA:1131:G:C2	57:BA:1132:A:C4	3.09	0.40
28:AE:176:ILE:HB	28:AE:181:LEU:HB2	2.02	0.40
40:AT:10:VAL:O	40:AT:11:GLU:C	2.59	0.40
34:AN:126:PRO:O	34:AN:127:ASP:CB	2.66	0.40
50:A3:6:VAL:HG23	50:A3:6:VAL:O	2.21	0.40
57:BA:999:U:H5''	57:BA:1154:G:O6	2.21	0.40
37:BQ:42:ILE:CG2	37:BQ:47:ILE:HG13	2.51	0.40
37:AQ:42:ILE:HG22	37:AQ:47:ILE:HG13	2.03	0.40
30:BG:161:THR:HG22	30:BG:162:THR:H	1.75	0.40
57:AA:2246:G:H2'	57:AA:2247:A:C8	2.56	0.40
57:BA:2290:G:C2	57:BA:2291:U:C2	3.09	0.40
57:AA:45:C:H2'	57:AA:47:C:H6	1.87	0.40
41:BU:34:LYS:CE	41:BU:34:LYS:HA	2.45	0.40
46:BZ:71:VAL:HA	46:BZ:87:ASP:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:210:GLY:C	27:BD:212:SER:N	2.74	0.40
35:AO:105:GLU:O	35:AO:108:GLU:HG2	2.22	0.40
35:BO:71:ARG:NE	35:BO:105:GLU:OE2	2.52	0.40
35:BO:20:MET:O	35:BO:41:ALA:HB1	2.20	0.40
57:BA:2649:U:H2'	57:BA:2650:U:C6	2.56	0.40
52:B5:29:THR:HG21	57:BA:2814:C:O2'	2.21	0.40
52:A5:29:THR:HG21	57:AA:2814:C:O2'	2.21	0.40
57:AA:2870:C:H2'	57:AA:2871:C:H5'	2.03	0.40
48:A1:11:ARG:H	48:A1:11:ARG:HG2	1.76	0.40
57:BA:2768:C:O2'	57:BA:2769:C:H5'	2.21	0.40
57:BA:2332:U:H5'	57:BA:2336:A:N6	2.35	0.40
57:BA:1945:G:H2'	57:BA:1946:U:C6	2.56	0.40
40:BT:132:LYS:HE3	40:BT:132:LYS:HB2	1.86	0.40
52:B5:32:PRO:HA	52:B5:39:MET:HG2	2.03	0.40
57:BA:2818:G:O2'	57:BA:2819:G:H5'	2.21	0.40
41:BU:85:LYS:C	41:BU:87:GLY:N	2.74	0.40
31:BH:46:GLU:O	31:BH:47:GLU:HB2	2.21	0.40
56:A9:10:ILE:HD12	56:A9:32:HIS:CG	2.56	0.40
51:A4:9:LEU:HD22	51:A4:26:SER:O	2.21	0.40
45:AY:2:ARG:NH2	57:AA:294:A:O2'	2.55	0.40
57:AA:455:C:N3	57:AA:472:A:H2'	2.36	0.40
57:AA:481:G:HO2'	57:AA:482:A:P	2.44	0.40
57:AA:708:C:H42	57:AA:723:G:H1	1.68	0.40
58:AB:78:A:H2'	58:AB:79:C:O4'	2.21	0.40
26:AC:43:GLU:CG	26:AC:216:THR:HG23	2.52	0.40
29:AF:20:LEU:HD12	29:AF:199:TRP:CH2	2.56	0.40
30:AG:105:LYS:HE2	51:A4:26:SER:HB3	2.03	0.40
30:AG:72:ARG:CA	30:AG:87:PRO:HD2	2.50	0.40
30:AG:95:ARG:HH11	30:AG:95:ARG:CG	2.28	0.40
31:AH:121:ILE:HG23	31:AH:133:VAL:HG13	2.03	0.40
32:AI:29:TYR:CE1	32:AI:33:ARG:NE	2.89	0.40
39:AS:66:ALA:O	39:AS:67:ARG:C	2.59	0.40
41:AU:68:ALA:CB	41:AU:99:ALA:HB1	2.51	0.40
41:AU:78:THR:O	41:AU:81:HIS:N	2.54	0.40
42:AV:3:ALA:HA	42:AV:40:LEU:O	2.21	0.40
43:AW:65:LEU:HD23	43:AW:68:ARG:CD	2.48	0.40
29:BF:116:ASP:O	29:BF:120:GLU:HG3	2.21	0.40
29:BF:51:THR:HG21	29:BF:92:PRO:HD2	2.02	0.40
29:BF:8:GLN:HG2	29:BF:126:VAL:CB	2.46	0.40
30:BG:97:ASP:H	30:BG:100:TRP:HD1	1.69	0.40
32:BI:62:LYS:HG2	32:BI:62:LYS:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BD:107:ALA:HA	27:BD:108:PRO:HD2	1.99	0.40
40:AT:19:LEU:HA	40:AT:20:PRO:HD3	1.97	0.40
40:AT:94:ALA:HB1	40:AT:99:LEU:HD23	2.02	0.40
57:BA:1494:A:H4'	57:BA:1494:A:OP1	2.21	0.40
57:BA:1494:A:O2'	57:BA:1495:A:H5''	2.16	0.40
57:BA:2393:A:H2'	57:BA:2394:C:O4'	2.21	0.40
45:BY:54:LYS:NZ	45:BY:54:LYS:HB3	2.35	0.40
45:BY:6:HIS:N	45:BY:6:HIS:CD2	2.89	0.40
45:BY:7:VAL:CG2	45:BY:8:LYS:HZ1	2.28	0.40
57:AA:1502:C:O2	57:AA:1502:C:H2'	2.21	0.40
53:B6:30:THR:O	53:B6:31:PRO:C	2.60	0.40
57:AA:149:A:O2'	57:AA:150:C:H6	4.12	0.40
41:BU:23:GLY:HA2	57:BA:18:C:O3'	2.20	0.40
31:BH:55:PRO:HG2	31:BH:56:SER:H	1.86	0.40
31:BH:70:THR:O	31:BH:71:LEU:C	2.60	0.40
31:BH:73:ALA:O	31:BH:76:VAL:HB	2.21	0.40
28:AE:101:ARG:HH11	28:AE:171:GLU:CB	2.23	0.40
57:AA:2360:A:O2'	57:AA:2361:A:H5''	2.21	0.40
50:B3:8:LEU:HD22	50:B3:8:LEU:C	2.41	0.40
46:AZ:151:HIS:HB3	46:AZ:171:ILE:H	1.86	0.40
46:AZ:171:ILE:O	46:AZ:172:ALA:HB2	2.22	0.40
57:BA:528:A:H2	57:BA:2043:C:C4'	2.34	0.40
40:AT:3:ARG:HH11	40:AT:3:ARG:HG3	1.86	0.40
57:AA:2318:G:C2'	57:AA:2319:G:OP1	2.69	0.40
47:B0:41:ARG:HH21	57:BA:2387:U:C1'	2.34	0.40
34:AN:126:PRO:HB2	34:AN:127:ASP:H	1.68	0.40
42:BV:5:VAL:HG12	42:BV:14:VAL:CG2	2.51	0.40
49:B2:17:SER:O	49:B2:18:PRO:C	2.60	0.40
51:B4:47:GLN:HB3	51:B4:48:ARG:H	1.67	0.40
37:AQ:42:ILE:HD12	37:AQ:42:ILE:N	2.36	0.40
48:B1:44:PRO:HA	57:BA:396:G:O3'	2.21	0.40
49:A2:2:LYS:HA	49:A2:2:LYS:HE3	2.02	0.40
27:BD:176:ARG:CG	27:BD:176:ARG:NH1	2.82	0.40
57:AA:1274:A:N3	57:AA:1297:C:H1'	2.36	0.40
57:AA:1629:U:O2	57:AA:2698:U:H5''	2.21	0.40
38:AR:92:GLY:O	57:AA:2880:C:H1'	2.22	0.40
57:BA:1511:C:H2'	57:BA:1512:U:O4'	2.22	0.40
57:BA:360:G:H2'	57:BA:361:G:O4'	2.22	0.40
57:BA:128:C:C3'	57:BA:128:C:C6	3.03	0.40
57:AA:128:C:C3'	57:AA:128:C:C6	3.05	0.40
57:AA:1710:C:O2'	57:AA:1711:C:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BA:2192:G:H2'	57:BA:2193:G:C5'	2.51	0.40
53:B6:19:ARG:O	53:B6:20:ASN:HB2	2.21	0.40
43:BW:61:ASN:ND2	43:BW:61:ASN:N	2.69	0.40
57:AA:2166:G:H2'	57:AA:2167:U:C6	2.56	0.40
44:AX:3:THR:O	44:AX:4:ALA:CB	2.69	0.40
29:AF:192:LEU:CD1	29:AF:194:MET:HE2	2.50	0.40
57:BA:2465:C:O2'	57:BA:2466:C:H5'	2.21	0.40
43:BW:80:PRO:O	43:BW:100:THR:HB	2.20	0.40
43:AW:79:GLY:H	43:AW:100:THR:HG22	1.87	0.40
57:BA:2364:C:C2'	57:BA:2365:G:H5'	2.51	0.40
50:B3:12:PRO:HB2	50:B3:20:LYS:HG3	2.04	0.40
26:AC:218:THR:HG21	57:AA:2125:G:H4'	2.03	0.40
26:BC:218:THR:HG21	57:BA:2125:G:H4'	2.03	0.40
57:AA:964:C:O2'	57:AA:2273:A:N3	2.47	0.40
45:AY:73:ARG:CZ	57:AA:335:C:H4'	2.52	0.40
57:AA:912:C:H2'	57:AA:912:C:O2	2.21	0.40
57:AA:974:G:C4	57:AA:989:G:C2	3.10	0.40
58:AB:37:C:C2'	58:AB:38:C:H5'	2.50	0.40
27:AD:118:VAL:CG2	27:AD:119:ALA:H	2.33	0.40
29:AF:89:VAL:CG1	29:AF:90:PHE:H	2.20	0.40
30:AG:177:GLY:O	30:AG:179:PRO:HD3	2.22	0.40
30:AG:38:VAL:HG22	30:AG:93:THR:HA	2.03	0.40
33:AJ:53:VAL:O	33:AJ:54:ALA:HB2	2.22	0.40
34:AN:119:ARG:HG3	34:AN:119:ARG:HH11	1.86	0.40
36:AP:50:ARG:CG	36:AP:51:PHE:N	2.84	0.40
39:AS:36:TYR:O	39:AS:37:ALA:HB2	2.22	0.40
39:AS:64:GLU:H	39:AS:64:GLU:HG2	3.73	0.40
45:AY:14:LEU:HD12	45:AY:15:VAL:N	2.37	0.40
45:AY:15:VAL:CG1	45:AY:20:TYR:O	2.70	0.40
45:AY:52:SER:O	45:AY:53:PRO:C	2.60	0.40
45:AY:8:LYS:HE3	45:AY:74:PRO:HD3	2.04	0.40
51:B4:14:ILE:HG23	51:B4:33:VAL:HG23	2.04	0.40
57:BA:2123:G:H2'	57:BA:2124:G:C8	2.47	0.40
30:BG:113:ARG:HG2	51:B4:35:VAL:HB	2.03	0.40
30:BG:5:VAL:HG12	30:BG:104:GLU:OE2	2.21	0.40
36:BP:126:VAL:HG12	36:BP:127:ALA:N	2.36	0.40
36:BP:18:ARG:O	36:BP:20:GLY:N	2.55	0.40
57:BA:618:C:H2'	57:BA:619:G:O4'	2.22	0.40
27:BD:2:ALA:O	27:BD:3:VAL:CB	2.69	0.40
27:BD:3:VAL:HA	27:BD:18:VAL:O	2.21	0.40
37:BQ:26:TYR:CD1	37:BQ:26:TYR:C	2.94	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B6:15:GLU:HB2	53:B6:49:HIS:NE2	2.37	0.40
35:BO:106:LEU:HA	35:BO:106:LEU:HD23	1.95	0.40
57:AA:873:G:N2	57:AA:905:U:C2	2.90	0.40
28:BE:110:GLY:CA	28:BE:162:ALA:HB2	2.51	0.40
28:BE:188:VAL:CG2	28:BE:189:PRO:HD2	2.51	0.40
28:BE:101:ARG:C	28:BE:201:THR:HG22	2.42	0.40
31:BH:85:LYS:HZ2	31:BH:133:VAL:CG2	2.35	0.40
34:BN:76:SER:O	34:BN:78:TYR:N	2.54	0.40
40:BT:10:VAL:O	40:BT:11:GLU:C	2.59	0.40
57:AA:17:G:H2'	57:AA:18:C:C6	2.57	0.40
36:AP:30:THR:O	36:AP:31:ALA:C	2.59	0.40
57:BA:83:G:C2	57:BA:102:G:H2'	2.56	0.40
57:BA:712:G:O2'	57:BA:713:G:H5'	2.20	0.40
47:B0:73:GLY:O	47:B0:75:LEU:N	2.53	0.40
57:AA:1523:U:H2'	57:AA:1524:G:H8	1.86	0.40
28:AE:203:LYS:HE3	28:AE:204:ALA:HB2	2.04	0.40
52:B5:16:ARG:HD2	52:B5:20:ARG:NH2	2.36	0.40
35:BO:13:ASN:ND2	35:BO:97:ARG:CB	2.85	0.40
48:A1:90:ILE:O	48:A1:94:LEU:HG	2.21	0.40
27:AD:249:PRO:HG2	27:AD:250:TRP:CD2	2.56	0.40
57:AA:359:A:C2'	57:AA:360:G:H5'	2.51	0.40
29:AF:33:LEU:HD12	29:AF:33:LEU:HA	1.88	0.40
53:A6:19:ARG:HD2	53:A6:19:ARG:N	2.36	0.40
57:BA:1683:C:H2'	57:BA:1684:C:H6	1.87	0.40
46:AZ:14:LYS:O	46:AZ:16:SER:N	2.55	0.40
50:A3:1:MET:HE1	50:A3:39:ASP:HB3	2.02	0.40
57:AA:387:U:H4'	57:AA:388:G:O5'	2.21	0.40
57:BA:350:U:H2'	57:BA:351:G:O4'	2.20	0.40
43:BW:89:ALA:O	43:BW:90:ARG:HB2	2.21	0.40
33:BJ:124:ALA:O	33:BJ:125:LEU:C	2.59	0.40
57:BA:2259:G:H1'	57:BA:2427:C:C2	2.56	0.40
57:BA:2696:U:H2'	57:BA:2697:G:H8	1.87	0.40
29:BF:158:THR:HA	29:BF:195:ASP:HB2	2.02	0.40
28:AE:182:LEU:O	28:AE:183:LEU:HD12	2.21	0.40
33:BJ:26:LEU:O	33:BJ:113:GLN:HA	2.22	0.40
29:AF:205:ARG:O	29:AF:205:ARG:HG2	2.21	0.40
57:AA:2321:G:H2'	57:AA:2321:G:N3	2.36	0.40
57:AA:967:C:H6	57:AA:967:C:O5'	2.60	0.40
56:A9:17:ILE:CG2	56:A9:18:ARG:N	2.85	0.40
49:B2:5:GLU:HB3	49:B2:9:GLN:HE21	1.86	0.40
57:AA:1240:U:O2'	57:AA:1241:A:C5'	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:2308:G:H2'	57:AA:2309:A:O5'	2.21	0.40
27:AD:7:LYS:HE3	57:AA:706:A:OP1	2.22	0.40
26:AC:21:TYR:O	26:AC:225:ILE:HA	2.21	0.40
26:AC:29:LEU:O	26:AC:33:LEU:HG	2.22	0.40
27:AD:95:LEU:HD13	27:AD:97:TYR:CE1	2.55	0.40
29:AF:8:GLN:HG2	29:AF:126:VAL:CB	2.47	0.40
30:AG:67:LYS:HD3	51:A4:6:HIS:NE2	2.37	0.40
31:AH:38:SER:HA	31:AH:39:PRO:HD3	1.93	0.40
32:AI:127:VAL:HG22	32:AI:139:GLN:CB	2.47	0.40
32:AI:86:THR:CG2	32:AI:86:THR:O	2.68	0.40
38:AR:67:LEU:O	38:AR:70:LEU:O	2.40	0.40
42:AV:5:VAL:HG12	42:AV:14:VAL:CG2	2.51	0.40
45:AY:28:LYS:NZ	45:AY:72:VAL:HG21	2.37	0.40
32:BI:27:ARG:HG2	48:B1:71:TYR:OH	2.22	0.40
51:B4:19:GLY:O	51:B4:21:VAL:HG23	2.21	0.40
57:BA:2870:C:H2'	57:BA:2871:C:H5'	2.02	0.40
41:BU:10:ARG:NH1	57:BA:583:G:OP2	2.52	0.40
29:BF:185:ASP:HA	29:BF:188:ARG:CD	2.51	0.40
32:BI:68:LEU:CD1	32:BI:130:TYR:HE2	2.34	0.40
34:BN:15:LEU:HD13	34:BN:16:ILE:N	2.36	0.40
34:BN:9:VAL:HG12	34:BN:10:GLU:N	2.37	0.40
36:BP:41:ARG:CA	36:BP:41:ARG:NE	2.84	0.40
38:BR:44:LEU:HD13	38:BR:44:LEU:C	2.41	0.40
40:BT:118:ARG:O	40:BT:119:LYS:C	2.60	0.40
55:A8:63:PRO:O	55:A8:64:TYR:O	2.40	0.40
43:BW:6:ILE:HA	43:BW:103:ILE:O	2.22	0.40
57:BA:422:A:C6	57:BA:423:A:C6	3.10	0.40
57:BA:543:C:C2	57:BA:544:G:C8	4.12	0.40
27:BD:182:LEU:O	27:BD:271:ILE:HG13	2.21	0.40
45:BY:37:VAL:O	45:BY:66:PRO:O	2.39	0.40
35:BO:104:ARG:C	35:BO:106:LEU:N	2.73	0.40
35:BO:87:ILE:CG2	35:BO:91:LEU:C	2.89	0.40
40:BT:52:ILE:HG12	40:BT:61:PHE:HB3	2.04	0.40
46:AZ:165:VAL:CG1	46:AZ:169:GLU:HB2	2.52	0.40
57:AA:2346:A:C2	57:AA:2383:G:C2	3.09	0.40
34:BN:126:PRO:HB2	34:BN:127:ASP:H	1.66	0.40
34:AN:17:ASP:OD1	34:AN:56:ASN:HB3	2.21	0.40
57:BA:2468:G:N2	57:BA:2481:G:O2'	2.54	0.40
37:AQ:26:TYR:CD1	37:AQ:26:TYR:C	2.95	0.40
55:B8:38:GLY:HA2	55:B8:41:ILE:HD11	2.04	0.40
50:B3:54:VAL:HG12	50:B3:55:ARG:N	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:AA:1523:U:H2'	57:AA:1524:G:C8	2.56	0.40
29:AF:32:LEU:HD23	29:AF:32:LEU:C	2.41	0.40
57:AA:1536:C:H2'	57:AA:1537:G:C4'	2.51	0.40
29:AF:169:ASN:HD21	57:AA:322:A:C3'	2.30	0.40
57:AA:2053:G:H1	57:AA:2616:C:H42	1.69	0.40
57:BA:275:G:C3'	57:BA:275:G:N3	2.83	0.40
57:BA:359:A:C2'	57:BA:360:G:H5'	2.51	0.40
46:BZ:175:VAL:HG12	46:BZ:176:PRO:HD2	2.03	0.40
57:AA:1973:G:H2'	57:AA:1974:C:H6	1.84	0.40
43:AW:93:ALA:HB2	57:AA:1614:A:N7	2.36	0.40
56:A9:15:LYS:NZ	57:AA:2753:A:O2'	2.54	0.40
57:BA:2224:G:H4'	57:BA:2226:C:C2	2.56	0.40
50:A3:17:LYS:HD3	50:A3:17:LYS:HA	1.80	0.40
57:BA:1809:A:H2'	57:BA:1810:A:C8	2.56	0.40
57:BA:2692:C:H2'	57:BA:2693:A:H8	1.87	0.40
57:BA:139:G:C5	57:BA:140:G:H2'	2.57	0.40
57:AA:2143:C:O2'	57:AA:2144:U:H5'	2.20	0.40
57:AA:1945:G:H2'	57:AA:1946:U:C6	2.56	0.40
49:B2:31:GLU:O	49:B2:35:LEU:HG	2.21	0.40
48:A1:35:THR:HG21	57:AA:2080:G:OP1	2.21	0.40
48:A1:35:THR:OG1	57:AA:2079:U:O3'	2.40	0.40
57:BA:1791:A:OP2	57:BA:1791:A:H8	2.04	0.40
35:AO:102:VAL:HG22	35:AO:121:VAL:HG22	2.04	0.40
57:AA:1759:A:H4'	57:AA:2715:C:O4'	2.22	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%)	160 (69%)	45 (19%)	27 (12%)	0 3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	Bb	232/256 (91%)	160 (69%)	46 (20%)	26 (11%)	0	3
2	Ac	204/239 (85%)	128 (63%)	51 (25%)	25 (12%)	0	2
2	Bc	204/239 (85%)	131 (64%)	49 (24%)	24 (12%)	0	3
3	Ad	206/209 (99%)	142 (69%)	45 (22%)	19 (9%)	1	6
3	Bd	206/209 (99%)	142 (69%)	46 (22%)	18 (9%)	1	7
4	Ae	148/162 (91%)	112 (76%)	24 (16%)	12 (8%)	1	8
4	Be	148/162 (91%)	111 (75%)	25 (17%)	12 (8%)	1	8
5	Af	99/101 (98%)	72 (73%)	19 (19%)	8 (8%)	1	8
5	Bf	99/101 (98%)	72 (73%)	19 (19%)	8 (8%)	1	8
6	Ag	153/156 (98%)	119 (78%)	24 (16%)	10 (6%)	1	13
6	Bg	153/156 (98%)	121 (79%)	22 (14%)	10 (6%)	1	13
7	Ah	136/138 (99%)	106 (78%)	27 (20%)	3 (2%)	8	41
7	Bh	136/138 (99%)	107 (79%)	26 (19%)	3 (2%)	8	41
8	Ai	125/128 (98%)	92 (74%)	22 (18%)	11 (9%)	1	7
8	Bi	125/128 (98%)	90 (72%)	23 (18%)	12 (10%)	1	5
9	Aj	96/105 (91%)	71 (74%)	18 (19%)	7 (7%)	1	10
9	Bj	96/105 (91%)	69 (72%)	20 (21%)	7 (7%)	1	10
10	Ak	117/129 (91%)	98 (84%)	16 (14%)	3 (3%)	7	36
10	Bk	117/129 (91%)	98 (84%)	16 (14%)	3 (3%)	7	36
11	Al	122/132 (92%)	93 (76%)	17 (14%)	12 (10%)	1	5
11	Bl	122/132 (92%)	93 (76%)	17 (14%)	12 (10%)	1	5
12	Am	116/126 (92%)	76 (66%)	21 (18%)	19 (16%)	0	1
12	Bm	116/126 (92%)	74 (64%)	23 (20%)	19 (16%)	0	1
13	An	58/61 (95%)	39 (67%)	10 (17%)	9 (16%)	0	1
13	Bn	58/61 (95%)	39 (67%)	10 (17%)	9 (16%)	0	1
14	Ao	86/89 (97%)	66 (77%)	16 (19%)	4 (5%)	3	20
14	Bo	86/89 (97%)	66 (77%)	16 (19%)	4 (5%)	3	20
15	Ap	81/88 (92%)	55 (68%)	21 (26%)	5 (6%)	2	14
15	Bp	81/88 (92%)	56 (69%)	20 (25%)	5 (6%)	2	14
16	Aq	97/105 (92%)	82 (84%)	13 (13%)	2 (2%)	9	42
16	Bq	97/105 (92%)	83 (86%)	11 (11%)	3 (3%)	5	32

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
17	Ar	68/88 (77%)	47 (69%)	14 (21%)	7 (10%)	1	4
17	Br	68/88 (77%)	47 (69%)	15 (22%)	6 (9%)	1	7
18	As	76/93 (82%)	50 (66%)	14 (18%)	12 (16%)	0	1
18	Bs	76/93 (82%)	49 (64%)	15 (20%)	12 (16%)	0	1
19	At	97/106 (92%)	70 (72%)	15 (16%)	12 (12%)	0	2
19	Bt	97/106 (92%)	70 (72%)	15 (16%)	12 (12%)	0	2
20	Au	22/27 (82%)	16 (73%)	5 (23%)	1 (4%)	3	21
20	Bu	22/27 (82%)	15 (68%)	6 (27%)	1 (4%)	3	21
21	Ay	92/95 (97%)	55 (60%)	12 (13%)	25 (27%)	0	0
21	By	92/95 (97%)	58 (63%)	21 (23%)	13 (14%)	0	1
26	AC	116/229 (51%)	93 (80%)	20 (17%)	3 (3%)	7	36
26	BC	116/229 (51%)	93 (80%)	20 (17%)	3 (3%)	7	36
27	AD	269/276 (98%)	203 (76%)	37 (14%)	29 (11%)	0	4
27	BD	269/276 (98%)	203 (76%)	36 (13%)	30 (11%)	0	3
28	AE	202/206 (98%)	138 (68%)	32 (16%)	32 (16%)	0	1
28	BE	202/206 (98%)	138 (68%)	31 (15%)	33 (16%)	0	1
29	AF	205/210 (98%)	154 (75%)	31 (15%)	20 (10%)	1	5
29	BF	205/210 (98%)	155 (76%)	30 (15%)	20 (10%)	1	5
30	AG	179/182 (98%)	106 (59%)	44 (25%)	29 (16%)	0	1
30	BG	179/182 (98%)	119 (66%)	31 (17%)	29 (16%)	0	1
31	AH	162/180 (90%)	109 (67%)	27 (17%)	26 (16%)	0	1
31	BH	162/180 (90%)	109 (67%)	27 (17%)	26 (16%)	0	1
32	AI	143/148 (97%)	84 (59%)	38 (27%)	21 (15%)	0	1
32	BI	143/148 (97%)	85 (59%)	36 (25%)	22 (15%)	0	1
33	AJ	128/173 (74%)	56 (44%)	43 (34%)	29 (23%)	0	0
33	BJ	128/173 (74%)	44 (34%)	38 (30%)	46 (36%)	0	0
34	AN	136/140 (97%)	101 (74%)	20 (15%)	15 (11%)	0	4
34	BN	136/140 (97%)	100 (74%)	20 (15%)	16 (12%)	0	3
35	AO	120/122 (98%)	104 (87%)	10 (8%)	6 (5%)	3	19
35	BO	120/122 (98%)	102 (85%)	13 (11%)	5 (4%)	3	23
36	AP	144/150 (96%)	76 (53%)	35 (24%)	33 (23%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
36	BP	144/150 (96%)	79 (55%)	32 (22%)	33 (23%)	0	0
37	AQ	138/141 (98%)	109 (79%)	21 (15%)	8 (6%)	2	15
37	BQ	138/141 (98%)	109 (79%)	21 (15%)	8 (6%)	2	15
38	AR	115/118 (98%)	85 (74%)	20 (17%)	10 (9%)	1	7
38	BR	115/118 (98%)	84 (73%)	21 (18%)	10 (9%)	1	7
39	AS	96/112 (86%)	60 (62%)	13 (14%)	23 (24%)	0	0
39	BS	96/112 (86%)	60 (62%)	13 (14%)	23 (24%)	0	0
40	AT	133/146 (91%)	90 (68%)	24 (18%)	19 (14%)	0	1
40	BT	133/146 (91%)	90 (68%)	23 (17%)	20 (15%)	0	1
41	AU	115/118 (98%)	88 (76%)	21 (18%)	6 (5%)	2	18
41	BU	115/118 (98%)	90 (78%)	20 (17%)	5 (4%)	3	23
42	AV	99/101 (98%)	65 (66%)	17 (17%)	17 (17%)	0	1
42	BV	99/101 (98%)	64 (65%)	18 (18%)	17 (17%)	0	1
43	AW	111/113 (98%)	89 (80%)	11 (10%)	11 (10%)	1	5
43	BW	111/113 (98%)	90 (81%)	11 (10%)	10 (9%)	1	6
44	AX	90/96 (94%)	72 (80%)	13 (14%)	5 (6%)	2	16
44	BX	90/96 (94%)	72 (80%)	11 (12%)	7 (8%)	1	9
45	AY	98/110 (89%)	51 (52%)	18 (18%)	29 (30%)	0	0
45	BY	98/110 (89%)	52 (53%)	16 (16%)	30 (31%)	0	0
46	AZ	182/206 (88%)	115 (63%)	40 (22%)	27 (15%)	0	1
46	BZ	182/206 (88%)	118 (65%)	37 (20%)	27 (15%)	0	1
47	A0	82/85 (96%)	67 (82%)	11 (13%)	4 (5%)	3	19
47	B0	82/85 (96%)	67 (82%)	11 (13%)	4 (5%)	3	19
48	A1	91/98 (93%)	74 (81%)	10 (11%)	7 (8%)	1	9
48	B1	91/98 (93%)	71 (78%)	14 (15%)	6 (7%)	1	12
49	A2	69/72 (96%)	44 (64%)	16 (23%)	9 (13%)	0	2
49	B2	69/72 (96%)	50 (72%)	13 (19%)	6 (9%)	1	7
50	A3	57/60 (95%)	47 (82%)	7 (12%)	3 (5%)	2	17
50	B3	57/60 (95%)	47 (82%)	7 (12%)	3 (5%)	2	17
51	A4	55/71 (78%)	23 (42%)	18 (33%)	14 (26%)	0	0
51	B4	55/71 (78%)	23 (42%)	18 (33%)	14 (26%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
52	A5	53/60 (88%)	40 (76%)	7 (13%)	6 (11%)	0	3
52	B5	53/60 (88%)	40 (76%)	7 (13%)	6 (11%)	0	3
53	A6	48/54 (89%)	24 (50%)	14 (29%)	10 (21%)	0	1
53	B6	48/54 (89%)	24 (50%)	14 (29%)	10 (21%)	0	1
54	A7	45/49 (92%)	43 (96%)	2 (4%)	0	100	100
54	B7	45/49 (92%)	43 (96%)	2 (4%)	0	100	100
55	A8	61/65 (94%)	41 (67%)	14 (23%)	6 (10%)	1	5
55	B8	61/65 (94%)	41 (67%)	14 (23%)	6 (10%)	1	5
56	A9	35/37 (95%)	31 (89%)	4 (11%)	0	100	100
56	B9	35/37 (95%)	31 (89%)	4 (11%)	0	100	100
All	All	12016/13122 (92%)	8475 (70%)	2157 (18%)	1384 (12%)	0	3

All (1384) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	Ab	15	VAL
1	Ab	18	GLY
1	Ab	26	PRO
1	Ab	63	MET
1	Ab	80	ILE
1	Ab	95	GLN
1	Ab	194	PRO
1	Ab	195	ASP
1	Ab	238	LEU
1	Ab	239	VAL
2	Ac	4	LYS
2	Ac	12	LEU
2	Ac	45	LYS
2	Ac	46	GLU
2	Ac	47	LEU
3	Ad	4	TYR
3	Ad	5	ILE
3	Ad	129	ASN
3	Ad	196	LEU
5	Af	40	VAL
5	Af	43	LEU
5	Af	62	TRP
7	Ah	2	LEU

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Mol	Chain	Res	Type
8	Ai	89	ASN
8	Ai	103	THR
8	Ai	105	ASP
9	Aj	36	GLY
9	Aj	51	ARG
9	Aj	57	LYS
10	Ak	25	TYR
11	Al	91	LYS
11	Al	115	LYS
12	Am	4	ILE
12	Am	5	ALA
12	Am	12	ASN
12	Am	63	THR
12	Am	66	LEU
12	Am	83	ASP
12	Am	107	ALA
12	Am	113	PRO
12	Am	117	VAL
13	An	15	LYS
13	An	16	PHE
13	An	52	GLN
18	As	10	PHE
18	As	26	GLY
18	As	28	LYS
19	At	11	SER
19	At	71	THR
19	At	74	LYS
19	At	99	LEU
20	Au	3	LYS
21	Ay	3	TYR
21	Ay	9	GLU
21	Ay	20	SER
21	Ay	31	VAL
21	Ay	36	SER
21	Ay	37	PRO
21	Ay	40	GLU
21	Ay	47	MET
21	Ay	48	PRO
21	Ay	56	ARG
21	Ay	59	GLY
21	Ay	71	VAL
21	Ay	78	VAL

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Mol	Chain	Res	Type
21	Ay	85	GLU
21	Ay	94	ILE
27	AD	25	THR
27	AD	27	THR
27	AD	34	VAL
27	AD	35	LYS
27	AD	225	ALA
27	AD	239	ARG
27	AD	267	SER
27	AD	268	ARG
27	AD	271	ILE
28	AE	53	PRO
28	AE	54	GLN
28	AE	64	LYS
28	AE	66	HIS
28	AE	68	ALA
28	AE	72	VAL
28	AE	77	ILE
28	AE	83	ASP
28	AE	88	GLY
28	AE	89	ASP
28	AE	118	LYS
28	AE	131	ALA
28	AE	186	GLY
28	AE	203	LYS
29	AF	3	GLU
29	AF	21	ALA
29	AF	27	GLU
29	AF	59	TYR
29	AF	89	VAL
29	AF	132	VAL
29	AF	133	ASN
29	AF	134	GLY
30	AG	49	ASP
30	AG	50	ALA
30	AG	75	LYS
30	AG	82	LEU
30	AG	96	ARG
30	AG	104	GLU
30	AG	110	ALA
30	AG	118	ARG
30	AG	122	PRO

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Mol	Chain	Res	Type
30	AG	126	ASP
30	AG	159	VAL
31	AH	8	PRO
31	AH	13	LYS
31	AH	24	VAL
31	AH	83	TYR
31	AH	92	ILE
31	AH	154	PRO
31	AH	155	SER
31	AH	156	ALA
31	AH	157	TYR
31	AH	159	GLU
32	AI	15	VAL
32	AI	71	ILE
32	AI	83	ALA
32	AI	85	GLU
32	AI	88	ILE
32	AI	104	GLN
32	AI	105	HIS
32	AI	120	ILE
32	AI	132	PRO
32	AI	135	GLU
32	AI	143	SER
33	AJ	17	LEU
33	AJ	33	PRO
33	AJ	53	VAL
33	AJ	54	ALA
33	AJ	68	LEU
33	AJ	90	ALA
33	AJ	105	PRO
33	AJ	112	LEU
33	AJ	120	LYS
34	AN	58	ASP
34	AN	134	ARG
35	AO	29	ASN
36	AP	9	ASN
36	AP	14	LYS
36	AP	17	LYS
36	AP	19	VAL
36	AP	25	SER
36	AP	31	ALA
36	AP	35	HIS

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Mol	Chain	Res	Type
36	AP	47	ASP
36	AP	58	THR
36	AP	103	ALA
36	AP	108	LYS
36	AP	111	ARG
36	AP	147	LEU
36	AP	148	LEU
37	AQ	2	LEU
37	AQ	19	GLY
37	AQ	27	VAL
37	AQ	134	ARG
37	AQ	135	ASP
38	AR	8	ARG
38	AR	45	ARG
39	AS	23	ARG
39	AS	24	LEU
39	AS	35	ILE
39	AS	59	LYS
39	AS	82	ILE
39	AS	94	TYR
39	AS	97	ARG
40	AT	2	ASN
40	AT	24	PRO
40	AT	26	ASP
40	AT	27	THR
40	AT	28	VAL
40	AT	30	VAL
40	AT	33	LYS
40	AT	58	ASN
40	AT	80	SER
40	AT	107	ASP
41	AU	91	ASP
41	AU	93	LYS
42	AV	16	PRO
42	AV	19	LYS
42	AV	46	VAL
42	AV	53	GLU
43	AW	11	ARG
43	AW	111	HIS
44	AX	12	VAL
45	AY	3	VAL
45	AY	7	VAL

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Mol	Chain	Res	Type
45	AY	27	VAL
45	AY	42	VAL
45	AY	60	PHE
45	AY	77	PRO
45	AY	78	ALA
46	AZ	6	LYS
46	AZ	31	ARG
46	AZ	65	GLN
46	AZ	123	ASP
46	AZ	134	PRO
46	AZ	136	PHE
46	AZ	146	ILE
46	AZ	152	ALA
48	A1	52	ARG
48	A1	58	ILE
49	A2	45	SER
49	A2	48	HIS
49	A2	70	GLN
50	A3	3	ARG
50	A3	38	GLU
51	A4	8	LYS
51	A4	26	SER
51	A4	38	LYS
51	A4	43	TYR
51	A4	44	THR
51	A4	48	ARG
52	A5	35	GLU
52	A5	36	CYS
52	A5	49	CYS
52	A5	53	ALA
53	A6	18	ARG
53	A6	19	ARG
53	A6	27	LYS
53	A6	28	ARG
53	A6	31	PRO
55	A8	33	ASN
55	A8	34	TRP
1	Bb	15	VAL
1	Bb	18	GLY
1	Bb	26	PRO
1	Bb	63	MET
1	Bb	80	ILE

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Mol	Chain	Res	Type
1	Bb	95	GLN
1	Bb	194	PRO
1	Bb	195	ASP
1	Bb	238	LEU
1	Bb	239	VAL
2	Bc	4	LYS
2	Bc	12	LEU
2	Bc	45	LYS
2	Bc	46	GLU
2	Bc	47	LEU
3	Bd	4	TYR
3	Bd	5	ILE
3	Bd	129	ASN
3	Bd	196	LEU
5	Bf	40	VAL
5	Bf	43	LEU
5	Bf	62	TRP
7	Bh	2	LEU
8	Bi	89	ASN
8	Bi	101	PHE
8	Bi	103	THR
8	Bi	105	ASP
9	Bj	36	GLY
9	Bj	51	ARG
9	Bj	57	LYS
10	Bk	25	TYR
11	Bl	91	LYS
11	Bl	115	LYS
12	Bm	4	ILE
12	Bm	5	ALA
12	Bm	12	ASN
12	Bm	21	TYR
12	Bm	63	THR
12	Bm	66	LEU
12	Bm	69	GLU
12	Bm	83	ASP
12	Bm	107	ALA
12	Bm	113	PRO
12	Bm	117	VAL
13	Bn	15	LYS
13	Bn	16	PHE
13	Bn	52	GLN

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Mol	Chain	Res	Type
18	Bs	10	PHE
18	Bs	26	GLY
18	Bs	28	LYS
19	Bt	11	SER
19	Bt	71	THR
19	Bt	74	LYS
19	Bt	99	LEU
20	Bu	3	LYS
21	By	36	SER
21	By	48	PRO
21	By	49	ASP
21	By	94	ILE
27	BD	25	THR
27	BD	27	THR
27	BD	34	VAL
27	BD	35	LYS
27	BD	239	ARG
27	BD	267	SER
27	BD	268	ARG
27	BD	271	ILE
28	BE	53	PRO
28	BE	54	GLN
28	BE	64	LYS
28	BE	66	HIS
28	BE	68	ALA
28	BE	72	VAL
28	BE	77	ILE
28	BE	83	ASP
28	BE	88	GLY
28	BE	89	ASP
28	BE	118	LYS
28	BE	131	ALA
28	BE	186	GLY
28	BE	203	LYS
29	BF	3	GLU
29	BF	21	ALA
29	BF	27	GLU
29	BF	59	TYR
29	BF	89	VAL
29	BF	132	VAL
29	BF	133	ASN
29	BF	134	GLY

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Mol	Chain	Res	Type
30	BG	6	ALA
30	BG	43	LEU
30	BG	47	LYS
30	BG	75	LYS
30	BG	81	LYS
30	BG	82	LEU
30	BG	87	PRO
30	BG	96	ARG
30	BG	110	ALA
30	BG	112	PRO
30	BG	115	ARG
30	BG	143	GLU
31	BH	8	PRO
31	BH	13	LYS
31	BH	24	VAL
31	BH	83	TYR
31	BH	92	ILE
31	BH	154	PRO
31	BH	155	SER
31	BH	156	ALA
31	BH	157	TYR
31	BH	159	GLU
32	BI	15	VAL
32	BI	71	ILE
32	BI	83	ALA
32	BI	85	GLU
32	BI	88	ILE
32	BI	104	GLN
32	BI	105	HIS
32	BI	120	ILE
32	BI	132	PRO
32	BI	135	GLU
32	BI	143	SER
33	BJ	32	LEU
33	BJ	33	PRO
33	BJ	51	LEU
33	BJ	59	ILE
33	BJ	69	PRO
33	BJ	70	GLU
33	BJ	80	VAL
33	BJ	81	VAL
33	BJ	82	PHE

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Mol	Chain	Res	Type
33	BJ	83	TYR
33	BJ	85	ASP
33	BJ	86	PRO
33	BJ	87	VAL
33	BJ	100	ASN
33	BJ	101	PRO
33	BJ	105	PRO
33	BJ	120	LYS
33	BJ	123	GLU
33	BJ	124	ALA
33	BJ	125	LEU
34	BN	58	ASP
34	BN	134	ARG
35	BO	29	ASN
36	BP	9	ASN
36	BP	14	LYS
36	BP	17	LYS
36	BP	19	VAL
36	BP	25	SER
36	BP	31	ALA
36	BP	35	HIS
36	BP	47	ASP
36	BP	58	THR
36	BP	103	ALA
36	BP	108	LYS
36	BP	111	ARG
36	BP	147	LEU
36	BP	148	LEU
37	BQ	2	LEU
37	BQ	19	GLY
37	BQ	27	VAL
37	BQ	134	ARG
37	BQ	135	ASP
38	BR	8	ARG
38	BR	45	ARG
39	BS	23	ARG
39	BS	24	LEU
39	BS	35	ILE
39	BS	59	LYS
39	BS	82	ILE
39	BS	92	TYR
39	BS	94	TYR

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Mol	Chain	Res	Type
39	BS	97	ARG
40	BT	2	ASN
40	BT	24	PRO
40	BT	26	ASP
40	BT	28	VAL
40	BT	30	VAL
40	BT	33	LYS
40	BT	58	ASN
40	BT	80	SER
40	BT	107	ASP
41	BU	91	ASP
41	BU	93	LYS
42	BV	16	PRO
42	BV	19	LYS
42	BV	46	VAL
42	BV	53	GLU
43	BW	11	ARG
43	BW	111	HIS
44	BX	12	VAL
45	BY	3	VAL
45	BY	7	VAL
45	BY	27	VAL
45	BY	42	VAL
45	BY	60	PHE
45	BY	77	PRO
45	BY	78	ALA
45	BY	90	LEU
45	BY	91	GLU
46	BZ	31	ARG
46	BZ	65	GLN
46	BZ	112	ARG
46	BZ	121	HIS
46	BZ	122	ARG
46	BZ	128	VAL
46	BZ	136	PHE
46	BZ	146	ILE
46	BZ	148	ASP
46	BZ	152	ALA
46	BZ	166	SER
48	B1	30	VAL
48	B1	58	ILE
48	B1	85	LEU

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Mol	Chain	Res	Type
49	B2	45	SER
49	B2	47	ASN
50	B3	3	ARG
50	B3	38	GLU
51	B4	8	LYS
51	B4	26	SER
51	B4	38	LYS
51	B4	43	TYR
51	B4	44	THR
51	B4	48	ARG
52	B5	35	GLU
52	B5	36	CYS
52	B5	49	CYS
52	B5	53	ALA
53	B6	18	ARG
53	B6	19	ARG
53	B6	27	LYS
53	B6	28	ARG
53	B6	31	PRO
55	B8	33	ASN
55	B8	34	TRP
1	Ab	13	ALA
1	Ab	154	LEU
1	Ab	165	VAL
1	Ab	217	ARG
2	Ac	20	SER
2	Ac	52	LEU
2	Ac	54	ARG
2	Ac	61	ALA
2	Ac	74	GLY
2	Ac	145	GLY
2	Ac	154	SER
2	Ac	156	ARG
2	Ac	165	THR
3	Ad	3	ARG
3	Ad	30	LYS
3	Ad	47	ARG
3	Ad	110	PHE
3	Ad	171	GLY
4	Ae	129	ILE
6	Ag	7	ALA
7	Ah	37	ARG

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Mol	Chain	Res	Type
8	Ai	12	GLU
8	Ai	41	VAL
8	Ai	42	ARG
8	Ai	95	LYS
9	Aj	52	GLY
9	Aj	59	SER
10	Ak	117	ASN
11	Al	27	LEU
11	Al	46	LYS
11	Al	89	ARG
11	Al	90	VAL
11	Al	92	ASP
12	Am	7	VAL
12	Am	21	TYR
12	Am	67	GLU
12	Am	100	GLY
14	Ao	87	ILE
15	Ap	49	LEU
15	Ap	78	GLY
16	Aq	33	GLY
16	Aq	34	LYS
17	Ar	28	GLU
17	Ar	45	SER
18	As	29	ARG
18	As	80	TYR
19	At	50	GLU
19	At	100	ILE
19	At	103	GLY
21	Ay	38	ARG
21	Ay	49	ASP
21	Ay	57	SER
26	AC	174	ALA
27	AD	32	SER
27	AD	36	PRO
27	AD	58	HIS
27	AD	127	VAL
27	AD	169	GLU
28	AE	2	LYS
28	AE	57	LYS
28	AE	69	LYS
28	AE	71	GLY
28	AE	90	THR

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Mol	Chain	Res	Type
28	AE	130	GLY
28	AE	185	LYS
29	AF	86	GLY
29	AF	128	ALA
30	AG	14	GLU
30	AG	48	GLU
30	AG	97	ASP
30	AG	117	PHE
30	AG	127	GLY
30	AG	129	GLY
30	AG	142	PRO
31	AH	14	GLY
31	AH	45	VAL
31	AH	110	SER
31	AH	138	LYS
31	AH	160	LYS
31	AH	165	ALA
32	AI	6	LEU
32	AI	76	THR
32	AI	91	SER
32	AI	99	GLU
32	AI	115	ALA
33	AJ	7	VAL
33	AJ	56	ASN
33	AJ	59	ILE
33	AJ	80	VAL
33	AJ	106	GLN
33	AJ	113	GLN
33	AJ	129	PRO
34	AN	4	TYR
34	AN	42	TRP
34	AN	133	GLN
35	AO	48	PRO
35	AO	98	VAL
36	AP	18	ARG
36	AP	34	GLY
36	AP	89	ALA
36	AP	98	GLU
36	AP	104	GLY
36	AP	106	LEU
36	AP	107	LYS
36	AP	141	ALA

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Mol	Chain	Res	Type
37	AQ	62	GLY
38	AR	58	GLY
38	AR	86	ARG
38	AR	117	VAL
39	AS	13	ARG
39	AS	57	LYS
39	AS	90	GLY
39	AS	92	TYR
39	AS	102	ALA
39	AS	104	GLY
39	AS	107	GLU
40	AT	3	ARG
40	AT	17	THR
40	AT	35	LYS
41	AU	32	PHE
41	AU	89	GLU
42	AV	22	VAL
42	AV	31	ALA
42	AV	35	LEU
42	AV	48	GLY
43	AW	29	LEU
43	AW	63	ASP
44	AX	91	ALA
45	AY	5	MET
45	AY	24	VAL
45	AY	26	LYS
45	AY	48	ALA
45	AY	80	GLY
45	AY	90	LEU
45	AY	91	GLU
46	AZ	5	LEU
46	AZ	42	VAL
46	AZ	81	ARG
46	AZ	114	GLY
46	AZ	154	ASP
46	AZ	166	SER
46	AZ	168	GLU
48	A1	84	GLY
49	A2	18	PRO
49	A2	19	VAL
49	A2	47	ASN
51	A4	16	CYS

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Mol	Chain	Res	Type
51	A4	40	HIS
51	A4	49	PHE
51	A4	50	VAL
53	A6	44	ARG
55	A8	31	HIS
55	A8	43	GLN
1	Bb	13	ALA
1	Bb	165	VAL
1	Bb	217	ARG
2	Bc	20	SER
2	Bc	52	LEU
2	Bc	54	ARG
2	Bc	61	ALA
2	Bc	74	GLY
2	Bc	145	GLY
2	Bc	154	SER
2	Bc	156	ARG
2	Bc	165	THR
3	Bd	3	ARG
3	Bd	30	LYS
3	Bd	47	ARG
3	Bd	110	PHE
3	Bd	171	GLY
4	Be	129	ILE
4	Be	153	LYS
6	Bg	7	ALA
7	Bh	37	ARG
8	Bi	12	GLU
8	Bi	41	VAL
8	Bi	42	ARG
8	Bi	95	LYS
9	Bj	52	GLY
9	Bj	59	SER
10	Bk	117	ASN
11	Bl	27	LEU
11	Bl	46	LYS
11	Bl	89	ARG
11	Bl	90	VAL
11	Bl	92	ASP
11	Bl	121	GLY
12	Bm	7	VAL
12	Bm	67	GLU

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Mol	Chain	Res	Type
12	Bm	100	GLY
14	Bo	87	ILE
15	Bp	49	LEU
15	Bp	78	GLY
16	Bq	33	GLY
16	Bq	34	LYS
17	Br	28	GLU
17	Br	45	SER
18	Bs	29	ARG
18	Bs	80	TYR
19	Bt	50	GLU
19	Bt	100	ILE
19	Bt	103	GLY
21	By	13	LYS
21	By	20	SER
21	By	78	VAL
26	BC	174	ALA
27	BD	32	SER
27	BD	36	PRO
27	BD	58	HIS
27	BD	127	VAL
27	BD	225	ALA
28	BE	2	LYS
28	BE	57	LYS
28	BE	63	LEU
28	BE	69	LYS
28	BE	71	GLY
28	BE	90	THR
28	BE	185	LYS
29	BF	86	GLY
30	BG	10	LYS
30	BG	50	ALA
30	BG	126	ASP
30	BG	155	MET
31	BH	14	GLY
31	BH	45	VAL
31	BH	110	SER
31	BH	138	LYS
31	BH	160	LYS
31	BH	165	ALA
32	BI	6	LEU
32	BI	76	THR

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Mol	Chain	Res	Type
32	BI	91	SER
32	BI	99	GLU
32	BI	115	ALA
33	BJ	30	GLN
33	BJ	47	ASN
33	BJ	50	ARG
33	BJ	62	ALA
33	BJ	77	PRO
33	BJ	88	ALA
33	BJ	89	ALA
33	BJ	108	LYS
33	BJ	109	SER
33	BJ	122	VAL
33	BJ	129	PRO
34	BN	42	TRP
34	BN	133	GLN
35	BO	48	PRO
35	BO	98	VAL
36	BP	18	ARG
36	BP	34	GLY
36	BP	89	ALA
36	BP	98	GLU
36	BP	104	GLY
36	BP	106	LEU
36	BP	107	LYS
36	BP	141	ALA
37	BQ	62	GLY
38	BR	58	GLY
38	BR	86	ARG
38	BR	117	VAL
39	BS	13	ARG
39	BS	57	LYS
39	BS	90	GLY
39	BS	102	ALA
39	BS	104	GLY
39	BS	107	GLU
40	BT	3	ARG
40	BT	17	THR
40	BT	27	THR
40	BT	35	LYS
41	BU	32	PHE
41	BU	89	GLU

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Mol	Chain	Res	Type
42	BV	22	VAL
42	BV	31	ALA
42	BV	35	LEU
42	BV	48	GLY
42	BV	78	LYS
43	BW	29	LEU
43	BW	59	VAL
43	BW	63	ASP
44	BX	91	ALA
45	BY	5	MET
45	BY	18	GLY
45	BY	24	VAL
45	BY	26	LYS
45	BY	48	ALA
45	BY	80	GLY
46	BZ	78	LYS
46	BZ	81	ARG
46	BZ	119	GLU
46	BZ	120	ILE
46	BZ	134	PRO
48	B1	53	VAL
48	B1	84	GLY
49	B2	42	GLY
51	B4	40	HIS
51	B4	49	PHE
51	B4	50	VAL
53	B6	44	ARG
55	B8	31	HIS
55	B8	43	GLN
1	Ab	20	GLU
1	Ab	106	LYS
1	Ab	143	GLU
1	Ab	159	PRO
2	Ac	26	LYS
2	Ac	81	GLY
3	Ad	18	LYS
3	Ad	42	GLN
3	Ad	44	GLY
3	Ad	153	ARG
3	Ad	178	VAL
4	Ae	8	GLU
4	Ae	21	ALA

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Mol	Chain	Res	Type
4	Ae	70	PRO
4	Ae	128	PRO
4	Ae	136	MET
4	Ae	153	LYS
6	Ag	6	ARG
6	Ag	14	PRO
6	Ag	54	THR
6	Ag	66	VAL
6	Ag	81	GLY
6	Ag	90	GLU
11	Al	51	ALA
12	Am	29	ARG
12	Am	69	GLU
12	Am	106	ASN
13	An	5	ALA
13	An	28	GLY
14	Ao	24	SER
17	Ar	87	ARG
18	As	45	VAL
19	At	48	LYS
19	At	98	PRO
21	Ay	10	ARG
21	Ay	84	SER
26	AC	209	PHE
27	AD	12	SER
27	AD	26	LYS
27	AD	33	LEU
27	AD	42	GLY
27	AD	246	PRO
28	AE	52	LEU
28	AE	63	LEU
29	AF	14	PRO
29	AF	16	GLY
29	AF	25	PRO
29	AF	84	VAL
29	AF	90	PHE
30	AG	6	ALA
30	AG	43	LEU
30	AG	84	LYS
30	AG	87	PRO
31	AH	55	PRO
31	AH	59	ARG

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Mol	Chain	Res	Type
31	AH	158	HIS
33	AJ	47	ASN
33	AJ	70	GLU
33	AJ	100	ASN
33	AJ	104	ILE
33	AJ	128	LEU
34	AN	57	ALA
35	AO	5	GLN
35	AO	26	LYS
36	AP	39	LYS
36	AP	40	SER
36	AP	52	GLU
36	AP	57	THR
36	AP	149	GLU
38	AR	5	LYS
38	AR	106	GLY
39	AS	100	ALA
40	AT	12	SER
40	AT	32	TYR
40	AT	126	ALA
42	AV	2	PHE
42	AV	18	LEU
42	AV	28	GLU
42	AV	49	THR
42	AV	50	PRO
42	AV	78	LYS
42	AV	79	VAL
43	AW	6	ILE
43	AW	35	ILE
43	AW	59	VAL
44	AX	4	ALA
45	AY	18	GLY
45	AY	96	ILE
46	AZ	22	GLY
46	AZ	108	PRO
47	A0	20	ARG
47	A0	74	ARG
48	A1	85	LEU
51	A4	28	LYS
52	A5	4	HIS
52	A5	38	ALA
1	Bb	20	GLU

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Mol	Chain	Res	Type
1	Bb	106	LYS
1	Bb	143	GLU
1	Bb	154	LEU
1	Bb	159	PRO
2	Bc	26	LYS
2	Bc	81	GLY
3	Bd	18	LYS
3	Bd	44	GLY
3	Bd	178	VAL
4	Be	8	GLU
4	Be	70	PRO
4	Be	71	LEU
4	Be	128	PRO
4	Be	136	MET
4	Be	148	VAL
6	Bg	6	ARG
6	Bg	14	PRO
6	Bg	54	THR
6	Bg	66	VAL
6	Bg	81	GLY
6	Bg	90	GLU
11	Bl	51	ALA
12	Bm	29	ARG
12	Bm	106	ASN
13	Bn	5	ALA
13	Bn	28	GLY
14	Bo	24	SER
17	Br	87	ARG
18	Bs	45	VAL
19	Bt	98	PRO
21	By	30	LEU
21	By	34	LEU
21	By	40	GLU
21	By	84	SER
26	BC	209	PHE
27	BD	12	SER
27	BD	26	LYS
27	BD	33	LEU
27	BD	42	GLY
27	BD	156	ALA
27	BD	169	GLU
27	BD	246	PRO

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Mol	Chain	Res	Type
28	BE	52	LEU
28	BE	75	VAL
28	BE	130	GLY
29	BF	14	PRO
29	BF	16	GLY
29	BF	25	PRO
29	BF	69	HIS
29	BF	84	VAL
29	BF	128	ALA
30	BG	7	LEU
30	BG	8	LYS
30	BG	122	PRO
30	BG	129	GLY
30	BG	146	TYR
31	BH	55	PRO
31	BH	59	ARG
31	BH	71	LEU
31	BH	158	HIS
33	BJ	22	GLY
33	BJ	43	ALA
33	BJ	56	ASN
33	BJ	57	THR
33	BJ	74	LEU
33	BJ	84	GLU
33	BJ	97	ALA
33	BJ	112	LEU
34	BN	4	TYR
34	BN	57	ALA
35	BO	5	GLN
35	BO	26	LYS
36	BP	39	LYS
36	BP	40	SER
36	BP	52	GLU
36	BP	149	GLU
38	BR	5	LYS
38	BR	106	GLY
40	BT	32	TYR
40	BT	126	ALA
42	BV	2	PHE
42	BV	18	LEU
42	BV	28	GLU
42	BV	49	THR

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Mol	Chain	Res	Type
42	BV	50	PRO
43	BW	6	ILE
43	BW	35	ILE
44	BX	4	ALA
46	BZ	12	GLY
46	BZ	77	ASP
46	BZ	93	ASP
46	BZ	168	GLU
46	BZ	170	THR
47	B0	20	ARG
47	B0	74	ARG
48	B1	76	ARG
49	B2	44	LEU
49	B2	68	ARG
51	B4	16	CYS
51	B4	28	LYS
52	B5	4	HIS
52	B5	38	ALA
1	Ab	135	GLN
1	Ab	204	ASN
2	Ac	181	ASN
4	Ae	71	LEU
4	Ae	72	GLN
4	Ae	148	VAL
8	Ai	11	LYS
8	Ai	70	LYS
9	Aj	86	MET
11	Al	26	ALA
11	Al	28	LYS
12	Am	41	PRO
13	An	23	ARG
13	An	24	CYS
13	An	60	SER
17	Ar	31	LEU
17	Ar	55	ARG
18	As	25	LYS
18	As	70	LYS
18	As	73	GLU
19	At	97	ALA
27	AD	3	VAL
27	AD	24	ILE
27	AD	156	ALA

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Mol	Chain	Res	Type
27	AD	241	PRO
27	AD	245	PRO
28	AE	58	ARG
28	AE	75	VAL
29	AF	69	HIS
29	AF	115	ALA
30	AG	10	LYS
30	AG	112	PRO
31	AH	81	GLU
31	AH	137	ASP
32	AI	16	GLY
32	AI	133	HIS
33	AJ	114	GLY
33	AJ	125	LEU
34	AN	126	PRO
34	AN	127	ASP
34	AN	135	PRO
35	AO	14	THR
36	AP	10	PRO
36	AP	48	PRO
38	AR	102	GLU
39	AS	15	ARG
39	AS	37	ALA
39	AS	85	VAL
39	AS	88	ASP
39	AS	89	ARG
40	AT	25	GLY
43	AW	56	ALA
43	AW	65	LEU
45	AY	9	LYS
45	AY	31	LEU
45	AY	39	VAL
45	AY	53	PRO
45	AY	81	LYS
45	AY	82	PRO
46	AZ	45	ASP
46	AZ	151	HIS
48	A1	28	GLY
48	A1	30	VAL
51	A4	4	GLY
51	A4	33	VAL
53	A6	16	CYS

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Mol	Chain	Res	Type
53	A6	20	ASN
1	Bb	135	GLN
1	Bb	204	ASN
2	Bc	66	VAL
2	Bc	181	ASN
3	Bd	42	GLN
3	Bd	153	ARG
4	Be	21	ALA
8	Bi	11	LYS
8	Bi	70	LYS
11	Bl	26	ALA
11	Bl	28	LYS
12	Bm	41	PRO
12	Bm	65	LYS
13	Bn	23	ARG
13	Bn	24	CYS
13	Bn	60	SER
15	Bp	39	TYR
17	Br	55	ARG
18	Bs	25	LYS
18	Bs	70	LYS
18	Bs	73	GLU
19	Bt	48	LYS
19	Bt	61	SER
19	Bt	97	ALA
21	By	6	ASP
27	BD	3	VAL
27	BD	45	ASN
27	BD	241	PRO
27	BD	245	PRO
28	BE	58	ARG
28	BE	189	PRO
28	BE	201	THR
29	BF	90	PHE
29	BF	115	ALA
30	BG	28	VAL
30	BG	105	LYS
30	BG	142	PRO
31	BH	81	GLU
31	BH	137	ASP
32	BI	16	GLY
32	BI	133	HIS

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Mol	Chain	Res	Type
33	BJ	23	SER
33	BJ	90	ALA
33	BJ	102	LYS
33	BJ	103	GLY
34	BN	126	PRO
34	BN	127	ASP
34	BN	135	PRO
36	BP	48	PRO
36	BP	57	THR
38	BR	4	LEU
38	BR	102	GLU
39	BS	37	ALA
39	BS	85	VAL
39	BS	88	ASP
39	BS	100	ALA
40	BT	25	GLY
40	BT	41	ARG
42	BV	79	VAL
43	BW	15	ARG
43	BW	65	LEU
45	BY	31	LEU
45	BY	39	VAL
45	BY	53	PRO
45	BY	81	LYS
45	BY	96	ILE
46	BZ	154	ASP
49	B2	17	SER
51	B4	4	GLY
51	B4	33	VAL
53	B6	16	CYS
53	B6	20	ASN
1	Ab	150	SER
1	Ab	236	TYR
2	Ac	66	VAL
2	Ac	75	VAL
2	Ac	129	ALA
2	Ac	168	ALA
3	Ad	37	PRO
3	Ad	53	ASP
4	Ae	108	ALA
4	Ae	137	GLU
5	Af	29	ALA

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Mol	Chain	Res	Type
7	Ah	91	ARG
8	Ai	21	PRO
11	Al	22	SER
11	Al	121	GLY
12	Am	38	GLY
12	Am	118	ALA
14	Ao	85	LEU
15	Ap	39	TYR
17	Ar	25	THR
19	At	61	SER
21	Ay	29	LYS
21	Ay	76	ILE
27	AD	45	ASN
27	AD	244	ARG
28	AE	189	PRO
28	AE	201	THR
29	AF	11	VAL
30	AG	36	LYS
31	AH	85	LYS
31	AH	126	PRO
32	AI	87	LYS
32	AI	114	LEU
33	AJ	20	ALA
33	AJ	42	GLN
33	AJ	58	LEU
33	AJ	77	PRO
34	AN	60	ILE
34	AN	77	GLY
36	AP	146	VAL
37	AQ	20	ALA
38	AR	4	LEU
39	AS	53	SER
39	AS	96	GLY
40	AT	41	ARG
41	AU	90	VAL
43	AW	93	ALA
44	AX	11	PRO
45	AY	29	GLU
45	AY	56	PRO
45	AY	66	PRO
46	AZ	14	LYS
46	AZ	41	LEU

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Mol	Chain	Res	Type
46	AZ	47	VAL
46	AZ	122	ARG
47	A0	42	GLY
48	A1	53	VAL
49	A2	17	SER
49	A2	58	ALA
55	A8	41	ILE
1	Bb	83	MET
1	Bb	84	GLU
1	Bb	150	SER
2	Bc	75	VAL
2	Bc	168	ALA
3	Bd	53	ASP
4	Be	72	GLN
4	Be	108	ALA
4	Be	137	GLU
5	Bf	29	ALA
5	Bf	96	PRO
9	Bj	86	MET
10	Bk	105	VAL
11	Bl	22	SER
14	Bo	85	LEU
17	Br	25	THR
17	Br	31	LEU
27	BD	24	ILE
27	BD	244	ARG
29	BF	11	VAL
30	BG	32	PRO
30	BG	97	ASP
30	BG	139	LEU
31	BH	85	LYS
31	BH	126	PRO
32	BI	114	LEU
33	BJ	14	LYS
33	BJ	68	LEU
34	BN	77	GLY
36	BP	10	PRO
36	BP	146	VAL
37	BQ	20	ALA
37	BQ	53	ALA
39	BS	15	ARG
39	BS	53	SER

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Mol	Chain	Res	Type
39	BS	89	ARG
39	BS	96	GLY
40	BT	12	SER
41	BU	90	VAL
43	BW	93	ALA
44	BX	11	PRO
44	BX	22	ALA
44	BX	48	LYS
45	BY	9	LYS
45	BY	29	GLU
45	BY	56	PRO
45	BY	66	PRO
45	BY	67	LEU
45	BY	82	PRO
46	BZ	111	VAL
46	BZ	129	SER
47	B0	55	ARG
55	B8	41	ILE
1	Ab	83	MET
1	Ab	84	GLU
1	Ab	131	PRO
1	Ab	230	VAL
2	Ac	15	THR
2	Ac	167	TRP
3	Ad	164	ALA
5	Af	51	PRO
5	Af	96	PRO
6	Ag	9	VAL
10	Ak	105	VAL
21	Ay	6	ASP
21	Ay	87	TYR
27	AD	28	GLU
27	AD	196	VAL
29	AF	9	ILE
29	AF	24	LEU
30	AG	24	GLY
30	AG	41	GLN
30	AG	114	ILE
36	AP	122	PRO
40	AT	86	ILE
41	AU	61	TRP
42	AV	29	PRO

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Mol	Chain	Res	Type
43	AW	15	ARG
44	AX	13	LEU
45	AY	22	GLY
47	A0	17	GLN
53	A6	23	THR
1	Bb	230	VAL
2	Bc	15	THR
2	Bc	167	TRP
3	Bd	37	PRO
5	Bf	51	PRO
6	Bg	9	VAL
8	Bi	21	PRO
12	Bm	38	GLY
27	BD	28	GLU
28	BE	61	ARG
28	BE	187	ALA
29	BF	9	ILE
29	BF	24	LEU
30	BG	46	ALA
30	BG	121	ASN
32	BI	14	ASP
32	BI	87	LYS
34	BN	56	ASN
34	BN	60	ILE
36	BP	122	PRO
40	BT	91	ARG
44	BX	13	LEU
46	BZ	135	GLU
46	BZ	165	VAL
46	BZ	169	GLU
47	B0	42	GLY
50	B3	2	PRO
53	B6	23	THR
1	Ab	130	ARG
3	Ad	56	VAL
5	Af	6	VAL
8	Ai	44	VAL
9	Aj	90	LEU
14	Ao	86	GLY
15	Ap	53	VAL
27	AD	123	ALA
28	AE	55	ASN

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Mol	Chain	Res	Type
28	AE	61	ARG
34	AN	125	GLY
38	AR	83	ILE
39	AS	91	PRO
46	AZ	15	PRO
46	AZ	120	ILE
50	A3	2	PRO
1	Bb	130	ARG
1	Bb	131	PRO
3	Bd	56	VAL
9	Bj	90	LEU
14	Bo	86	GLY
15	Bp	53	VAL
18	Bs	59	PRO
21	By	67	ILE
28	BE	55	ASN
28	BE	56	PRO
34	BN	36	GLY
34	BN	125	GLY
36	BP	109	GLY
38	BR	83	ILE
40	BT	86	ILE
42	BV	29	PRO
2	Ac	174	PRO
3	Ad	7	PRO
18	As	9	VAL
19	At	101	GLY
21	Ay	86	VAL
26	AC	52	PRO
28	AE	56	PRO
31	AH	99	VAL
33	AJ	69	PRO
45	AY	38	ILE
45	AY	58	GLY
8	Bi	44	VAL
18	Bs	9	VAL
27	BD	123	ALA
27	BD	196	VAL
31	BH	99	VAL
39	BS	91	PRO
55	B8	53	PRO
2	Ac	195	VAL

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Mol	Chain	Res	Type
6	Ag	88	PRO
18	As	59	PRO
28	AE	175	VAL
32	AI	90	GLY
34	AN	129	PRO
36	AP	109	GLY
37	AQ	47	ILE
49	A2	6	VAL
51	A4	5	ILE
53	A6	48	VAL
2	Bc	174	PRO
3	Bd	7	PRO
5	Bf	81	ILE
6	Bg	88	PRO
16	Bq	30	PRO
26	BC	52	PRO
27	BD	11	PRO
32	BI	90	GLY
33	BJ	104	ILE
36	BP	11	GLY
42	BV	54	GLY
45	BY	22	GLY
45	BY	38	ILE
45	BY	58	GLY
53	B6	48	VAL
5	Af	81	ILE
6	Ag	17	VAL
15	Ap	66	PRO
17	Ar	37	VAL
18	As	67	VAL
28	AE	86	PRO
30	AG	111	LEU
31	AH	49	VAL
36	AP	11	GLY
45	AY	37	VAL
46	AZ	130	PRO
46	AZ	137	ILE
2	Bc	195	VAL
5	Bf	6	VAL
6	Bg	17	VAL
18	Bs	67	VAL
19	Bt	101	GLY

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Mol	Chain	Res	Type
28	BE	86	PRO
31	BH	49	VAL
34	BN	129	PRO
51	B4	5	ILE
13	An	13	THR
31	AH	76	VAL
33	AJ	107	VAL
34	AN	5	VAL
34	AN	36	GLY
42	AV	54	GLY
55	A8	53	PRO
7	Bh	6	ILE
13	Bn	13	THR
15	Bp	66	PRO
28	BE	175	VAL
34	BN	5	VAL
45	BY	37	VAL

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%)	189 (94%)	13 (6%)	22	60
1	Bb	202/220 (92%)	189 (94%)	13 (6%)	22	60
2	Ac	160/188 (85%)	143 (89%)	17 (11%)	8	33
2	Bc	160/188 (85%)	143 (89%)	17 (11%)	8	33
3	Ad	180/181 (99%)	157 (87%)	23 (13%)	5	23
3	Bd	180/181 (99%)	156 (87%)	24 (13%)	5	21
4	Ae	115/123 (94%)	107 (93%)	8 (7%)	19	56
4	Be	115/123 (94%)	106 (92%)	9 (8%)	16	50
5	Af	90/90 (100%)	87 (97%)	3 (3%)	45	78
5	Bf	90/90 (100%)	87 (97%)	3 (3%)	45	78
6	Ag	126/127 (99%)	119 (94%)	7 (6%)	26	65

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	Bg	126/127 (99%)	119 (94%)	7 (6%)	26	65
7	Ah	119/119 (100%)	109 (92%)	10 (8%)	14	46
7	Bh	119/119 (100%)	109 (92%)	10 (8%)	14	46
8	Ai	98/99 (99%)	87 (89%)	11 (11%)	7	30
8	Bi	98/99 (99%)	86 (88%)	12 (12%)	6	26
9	Aj	88/92 (96%)	80 (91%)	8 (9%)	12	41
9	Bj	88/92 (96%)	80 (91%)	8 (9%)	12	41
10	Ak	90/99 (91%)	87 (97%)	3 (3%)	45	78
10	Bk	90/99 (91%)	88 (98%)	2 (2%)	60	84
11	Al	104/109 (95%)	87 (84%)	17 (16%)	3	14
11	Bl	104/109 (95%)	88 (85%)	16 (15%)	3	16
12	Am	94/101 (93%)	78 (83%)	16 (17%)	2	12
12	Bm	94/101 (93%)	75 (80%)	19 (20%)	1	6
13	An	49/50 (98%)	47 (96%)	2 (4%)	37	74
13	Bn	49/50 (98%)	47 (96%)	2 (4%)	37	74
14	Ao	79/80 (99%)	74 (94%)	5 (6%)	22	60
14	Bo	79/80 (99%)	74 (94%)	5 (6%)	22	60
15	Ap	72/74 (97%)	69 (96%)	3 (4%)	36	73
15	Bp	72/74 (97%)	69 (96%)	3 (4%)	36	73
16	Aq	94/97 (97%)	91 (97%)	3 (3%)	46	79
16	Bq	94/97 (97%)	91 (97%)	3 (3%)	46	79
17	Ar	61/77 (79%)	58 (95%)	3 (5%)	31	69
17	Br	61/77 (79%)	58 (95%)	3 (5%)	31	69
18	As	69/80 (86%)	61 (88%)	8 (12%)	7	29
18	Bs	69/80 (86%)	61 (88%)	8 (12%)	7	29
19	At	76/82 (93%)	68 (90%)	8 (10%)	8	33
19	Bt	76/82 (93%)	68 (90%)	8 (10%)	8	33
20	Au	19/22 (86%)	19 (100%)	0	100	100
20	Bu	19/22 (86%)	19 (100%)	0	100	100
21	Ay	84/85 (99%)	64 (76%)	20 (24%)	1	3
21	By	83/85 (98%)	72 (87%)	11 (13%)	5	21

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
26	AC	99/181 (55%)	96 (97%)	3 (3%)	48	79
26	BC	99/181 (55%)	96 (97%)	3 (3%)	48	79
27	AD	213/218 (98%)	182 (85%)	31 (15%)	4	18
27	BD	213/218 (98%)	181 (85%)	32 (15%)	3	17
28	AE	165/166 (99%)	144 (87%)	21 (13%)	5	24
28	BE	165/166 (99%)	144 (87%)	21 (13%)	5	24
29	AF	165/166 (99%)	141 (86%)	24 (14%)	4	18
29	BF	165/166 (99%)	142 (86%)	23 (14%)	4	20
30	AG	155/156 (99%)	134 (86%)	21 (14%)	5	21
30	BG	155/156 (99%)	131 (84%)	24 (16%)	3	16
31	AH	137/148 (93%)	127 (93%)	10 (7%)	17	53
31	BH	137/148 (93%)	128 (93%)	9 (7%)	21	59
32	AI	122/124 (98%)	99 (81%)	23 (19%)	2	8
32	BI	122/124 (98%)	99 (81%)	23 (19%)	2	8
34	AN	117/119 (98%)	101 (86%)	16 (14%)	4	20
34	BN	117/119 (98%)	101 (86%)	16 (14%)	4	20
35	AO	100/100 (100%)	93 (93%)	7 (7%)	19	56
35	BO	100/100 (100%)	93 (93%)	7 (7%)	19	56
36	AP	112/116 (97%)	89 (80%)	23 (20%)	1	6
36	BP	112/116 (97%)	87 (78%)	25 (22%)	1	4
37	AQ	110/111 (99%)	101 (92%)	9 (8%)	14	48
37	BQ	110/111 (99%)	100 (91%)	10 (9%)	12	41
38	AR	100/101 (99%)	85 (85%)	15 (15%)	3	17
38	BR	100/101 (99%)	84 (84%)	16 (16%)	3	14
39	AS	77/88 (88%)	66 (86%)	11 (14%)	4	19
39	BS	77/88 (88%)	67 (87%)	10 (13%)	5	22
40	AT	118/127 (93%)	95 (80%)	23 (20%)	2	7
40	BT	118/127 (93%)	95 (80%)	23 (20%)	2	7
41	AU	92/94 (98%)	81 (88%)	11 (12%)	6	27
41	BU	92/94 (98%)	81 (88%)	11 (12%)	6	27
42	AV	82/82 (100%)	65 (79%)	17 (21%)	1	6

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
42	BV	82/82 (100%)	65 (79%)	17 (21%)	1	6
43	AW	91/92 (99%)	83 (91%)	8 (9%)	12	44
43	BW	91/92 (99%)	83 (91%)	8 (9%)	12	44
44	AX	74/78 (95%)	66 (89%)	8 (11%)	8	32
44	BX	74/78 (95%)	66 (89%)	8 (11%)	8	32
45	AY	84/91 (92%)	71 (84%)	13 (16%)	3	16
45	BY	84/91 (92%)	72 (86%)	12 (14%)	4	19
46	AZ	162/179 (90%)	142 (88%)	20 (12%)	6	25
46	BZ	162/179 (90%)	136 (84%)	26 (16%)	3	14
47	A0	66/67 (98%)	58 (88%)	8 (12%)	6	26
47	B0	66/67 (98%)	58 (88%)	8 (12%)	6	26
48	A1	78/83 (94%)	66 (85%)	12 (15%)	3	16
48	B1	78/83 (94%)	69 (88%)	9 (12%)	7	29
49	A2	66/67 (98%)	61 (92%)	5 (8%)	16	51
49	B2	66/67 (98%)	54 (82%)	12 (18%)	2	9
50	A3	51/52 (98%)	47 (92%)	4 (8%)	16	50
50	B3	51/52 (98%)	47 (92%)	4 (8%)	16	50
51	A4	51/63 (81%)	36 (71%)	15 (29%)	0	1
51	B4	51/63 (81%)	36 (71%)	15 (29%)	0	1
52	A5	47/52 (90%)	42 (89%)	5 (11%)	8	33
52	B5	47/52 (90%)	42 (89%)	5 (11%)	8	33
53	A6	49/52 (94%)	41 (84%)	8 (16%)	3	14
53	B6	49/52 (94%)	40 (82%)	9 (18%)	2	9
54	A7	40/42 (95%)	36 (90%)	4 (10%)	9	36
54	B7	40/42 (95%)	36 (90%)	4 (10%)	9	36
55	A8	53/55 (96%)	40 (76%)	13 (24%)	1	3
55	B8	53/55 (96%)	38 (72%)	15 (28%)	0	2
56	A9	34/34 (100%)	32 (94%)	2 (6%)	24	63
56	B9	34/34 (100%)	32 (94%)	2 (6%)	24	63
All	All	9957/10598 (94%)	8789 (88%)	1168 (12%)	7	28

All (1168) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	Ab	15	VAL
1	Ab	17	PHE
1	Ab	24	TRP
1	Ab	36	ARG
1	Ab	69	LEU
1	Ab	137	ARG
1	Ab	140	HIS
1	Ab	145	LEU
1	Ab	155	LEU
1	Ab	172	ILE
1	Ab	196	LEU
1	Ab	204	ASN
1	Ab	221	LEU
2	Ac	3	ASN
2	Ac	5	ILE
2	Ac	6	HIS
2	Ac	16	ARG
2	Ac	18	TRP
2	Ac	29	TYR
2	Ac	34	LEU
2	Ac	36	ASP
2	Ac	37	GLN
2	Ac	82	GLU
2	Ac	94	LEU
2	Ac	107	GLN
2	Ac	127	ARG
2	Ac	131	ARG
2	Ac	152	ILE
2	Ac	167	TRP
2	Ac	193	TYR
3	Ad	3	ARG
3	Ad	9	CYS
3	Ad	10	ARG
3	Ad	11	LEU
3	Ad	15	GLU
3	Ad	26	CYS
3	Ad	36	ARG
3	Ad	38	TYR
3	Ad	49	ARG
3	Ad	53	ASP
3	Ad	58	LEU
3	Ad	59	ARG
3	Ad	86	LYS

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Mol	Chain	Res	Type
3	Ad	97	LEU
3	Ad	110	PHE
3	Ad	129	ASN
3	Ad	131	ARG
3	Ad	132	ARG
3	Ad	135	LEU
3	Ad	162	LEU
3	Ad	168	ARG
3	Ad	196	LEU
3	Ad	200	GLU
4	Ae	10	MET
4	Ae	12	LEU
4	Ae	20	GLN
4	Ae	31	LEU
4	Ae	55	VAL
4	Ae	56	GLN
4	Ae	79	GLU
4	Ae	101	ILE
5	Af	63	TYR
5	Af	69	GLU
5	Af	80	ARG
6	Ag	21	VAL
6	Ag	88	PRO
6	Ag	111	ARG
6	Ag	114	ARG
6	Ag	124	LEU
6	Ag	140	ASP
6	Ag	151	TYR
7	Ah	1	MET
7	Ah	25	ASP
7	Ah	26	VAL
7	Ah	50	ARG
7	Ah	52	ASP
7	Ah	60	ARG
7	Ah	65	TYR
7	Ah	102	ARG
7	Ah	112	LEU
7	Ah	119	LEU
8	Ai	3	GLN
8	Ai	10	ARG
8	Ai	78	LYS
8	Ai	88	TYR

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Mol	Chain	Res	Type
8	Ai	95	LYS
8	Ai	105	ASP
8	Ai	112	LYS
8	Ai	114	TYR
8	Ai	121	ARG
8	Ai	125	TYR
8	Ai	128	ARG
9	Aj	4	ILE
9	Aj	22	LYS
9	Aj	46	ARG
9	Aj	49	VAL
9	Aj	50	ILE
9	Aj	62	HIS
9	Aj	68	HIS
9	Aj	96	ILE
10	Ak	29	ILE
10	Ak	124	LYS
10	Ak	126	ARG
11	Al	7	ILE
11	Al	20	LYS
11	Al	27	LEU
11	Al	41	ARG
11	Al	42	THR
11	Al	47	LYS
11	Al	53	ARG
11	Al	55	VAL
11	Al	62	SER
11	Al	66	VAL
11	Al	67	THR
11	Al	85	ILE
11	Al	89	ARG
11	Al	92	ASP
11	Al	97	ARG
11	Al	102	ARG
11	Al	126	LYS
12	Am	47	ASP
12	Am	48	LEU
12	Am	56	LEU
12	Am	64	TRP
12	Am	65	LYS
12	Am	66	LEU
12	Am	69	GLU

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Mol	Chain	Res	Type
12	Am	70	LEU
12	Am	77	ASN
12	Am	79	LYS
12	Am	82	MET
12	Am	92	HIS
12	Am	93	ARG
12	Am	98	VAL
12	Am	108	ARG
12	Am	115	LYS
13	An	33	VAL
13	An	44	LEU
14	Ao	37	ASN
14	Ao	65	ARG
14	Ao	82	ILE
14	Ao	85	LEU
14	Ao	88	ARG
15	Ap	1	MET
15	Ap	2	VAL
15	Ap	69	THR
16	Aq	38	ARG
16	Aq	59	ILE
16	Aq	98	LEU
17	Ar	31	LEU
17	Ar	44	LEU
17	Ar	65	ILE
18	As	5	LEU
18	As	6	LYS
18	As	7	LYS
18	As	15	LEU
18	As	29	ARG
18	As	33	THR
18	As	37	ARG
18	As	70	LYS
19	At	10	LEU
19	At	24	LEU
19	At	26	ASN
19	At	36	LEU
19	At	41	ILE
19	At	73	HIS
19	At	75	ASN
19	At	93	GLU
21	Ay	5	LEU

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Mol	Chain	Res	Type
21	Ay	6	ASP
21	Ay	7	PHE
21	Ay	8	ASP
21	Ay	9	GLU
21	Ay	10	ARG
21	Ay	14	GLU
21	Ay	21	THR
21	Ay	34	LEU
21	Ay	43	LYS
21	Ay	48	PRO
21	Ay	56	ARG
21	Ay	57	SER
21	Ay	61	ARG
21	Ay	64	TYR
21	Ay	68	ASP
21	Ay	73	VAL
21	Ay	83	ARG
21	Ay	89	GLU
21	Ay	93	ARG
26	AC	39	ASP
26	AC	53	ARG
26	AC	185	LYS
27	AD	10	THR
27	AD	24	ILE
27	AD	26	LYS
27	AD	35	LYS
27	AD	37	LEU
27	AD	43	ARG
27	AD	46	GLN
27	AD	49	ILE
27	AD	61	LEU
27	AD	65	ILE
27	AD	71	ASP
27	AD	72	LYS
27	AD	94	LEU
27	AD	95	LEU
27	AD	98	VAL
27	AD	103	ARG
27	AD	104	TYR
27	AD	106	ILE
27	AD	122	ASP
27	AD	131	LEU

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Mol	Chain	Res	Type
27	AD	166	GLN
27	AD	192	THR
27	AD	198	ASN
27	AD	200	ASP
27	AD	221	VAL
27	AD	228	PRO
27	AD	229	VAL
27	AD	257	LEU
27	AD	259	THR
27	AD	260	ARG
27	AD	271	ILE
28	AE	24	THR
28	AE	33	VAL
28	AE	49	LEU
28	AE	55	ASN
28	AE	63	LEU
28	AE	64	LYS
28	AE	67	PHE
28	AE	78	LEU
28	AE	79	ARG
28	AE	82	ARG
28	AE	87	GLU
28	AE	101	ARG
28	AE	113	PHE
28	AE	119	ARG
28	AE	144	ARG
28	AE	169	ASN
28	AE	181	LEU
28	AE	197	ILE
28	AE	200	GLU
28	AE	202	LYS
28	AE	203	LYS
29	AF	23	ASP
29	AF	28	ILE
29	AF	33	LEU
29	AF	38	ARG
29	AF	57	VAL
29	AF	65	TRP
29	AF	66	PRO
29	AF	67	GLN
29	AF	74	ARG
29	AF	83	PHE

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Mol	Chain	Res	Type
29	AF	106	ARG
29	AF	110	LEU
29	AF	125	LEU
29	AF	129	PHE
29	AF	157	VAL
29	AF	158	THR
29	AF	160	ASN
29	AF	164	ARG
29	AF	165	ARG
29	AF	170	LEU
29	AF	183	VAL
29	AF	188	ARG
29	AF	192	LEU
29	AF	200	GLU
30	AG	5	VAL
30	AG	16	ARG
30	AG	22	ARG
30	AG	33	ARG
30	AG	36	LYS
30	AG	40	ASN
30	AG	49	ASP
30	AG	66	GLN
30	AG	67	LYS
30	AG	77	ILE
30	AG	80	PHE
30	AG	83	ARG
30	AG	91	ARG
30	AG	96	ARG
30	AG	97	ASP
30	AG	111	LEU
30	AG	113	ARG
30	AG	125	PHE
30	AG	130	ASN
30	AG	143	GLU
30	AG	145	THR
31	AH	9	ILE
31	AH	53	GLU
31	AH	54	ARG
31	AH	83	TYR
31	AH	89	ILE
31	AH	105	LEU
31	AH	153	LYS

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Mol	Chain	Res	Type
31	AH	157	TYR
31	AH	163	TYR
31	AH	170	ARG
32	AI	1	MET
32	AI	9	LEU
32	AI	12	LEU
32	AI	31	LEU
32	AI	71	ILE
32	AI	74	ASN
32	AI	85	GLU
32	AI	86	THR
32	AI	89	TYR
32	AI	91	SER
32	AI	92	VAL
32	AI	93	THR
32	AI	99	GLU
32	AI	103	ARG
32	AI	105	HIS
32	AI	107	VAL
32	AI	109	ILE
32	AI	110	ASP
32	AI	123	LEU
32	AI	130	TYR
32	AI	138	ILE
32	AI	139	GLN
32	AI	140	LEU
34	AN	4	TYR
34	AN	23	LEU
34	AN	28	THR
34	AN	32	THR
34	AN	33	LEU
34	AN	34	LEU
34	AN	37	LYS
34	AN	39	ARG
34	AN	43	THR
34	AN	48	MET
34	AN	56	ASN
34	AN	60	ILE
34	AN	87	LEU
34	AN	121	LYS
34	AN	127	ASP
34	AN	130	HIS

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Mol	Chain	Res	Type
35	AO	7	TYR
35	AO	8	LEU
35	AO	24	VAL
35	AO	32	TYR
35	AO	89	ASN
35	AO	98	VAL
35	AO	108	GLU
36	AP	13	ASN
36	AP	16	ARG
36	AP	18	ARG
36	AP	32	THR
36	AP	39	LYS
36	AP	41	ARG
36	AP	42	SER
36	AP	45	LEU
36	AP	47	ASP
36	AP	57	THR
36	AP	59	LEU
36	AP	61	ARG
36	AP	64	LYS
36	AP	81	GLN
36	AP	85	LEU
36	AP	91	PHE
36	AP	98	GLU
36	AP	108	LYS
36	AP	110	TYR
36	AP	112	LEU
36	AP	114	ILE
36	AP	119	GLU
36	AP	135	LEU
37	AQ	18	LYS
37	AQ	45	GLN
37	AQ	55	VAL
37	AQ	67	ARG
37	AQ	75	THR
37	AQ	110	THR
37	AQ	134	ARG
37	AQ	135	ASP
37	AQ	137	TYR
38	AR	2	ARG
38	AR	4	LEU
38	AR	8	ARG

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Mol	Chain	Res	Type
38	AR	12	ARG
38	AR	15	SER
38	AR	18	LEU
38	AR	28	LEU
38	AR	65	LEU
38	AR	67	LEU
38	AR	71	GLN
38	AR	76	VAL
38	AR	79	LEU
38	AR	94	TYR
38	AR	99	LYS
38	AR	113	LEU
39	AS	11	LYS
39	AS	12	PHE
39	AS	36	TYR
39	AS	40	ILE
39	AS	44	LYS
39	AS	73	LEU
39	AS	89	ARG
39	AS	92	TYR
39	AS	97	ARG
39	AS	101	LEU
39	AS	106	ARG
40	AT	3	ARG
40	AT	13	ARG
40	AT	14	TYR
40	AT	24	PRO
40	AT	32	TYR
40	AT	38	ASN
40	AT	41	ARG
40	AT	50	ILE
40	AT	51	ARG
40	AT	58	ASN
40	AT	59	THR
40	AT	65	LYS
40	AT	78	LEU
40	AT	82	LEU
40	AT	93	ARG
40	AT	96	ARG
40	AT	99	LEU
40	AT	100	TYR
40	AT	101	PHE

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Mol	Chain	Res	Type
40	AT	107	ASP
40	AT	108	ARG
40	AT	122	ASP
40	AT	128	GLU
41	AU	14	HIS
41	AU	19	LYS
41	AU	52	ARG
41	AU	59	ARG
41	AU	60	LEU
41	AU	66	ASN
41	AU	74	LEU
41	AU	83	LEU
41	AU	101	ARG
41	AU	108	GLU
41	AU	112	ARG
42	AV	14	VAL
42	AV	16	PRO
42	AV	18	LEU
42	AV	19	LYS
42	AV	21	ARG
42	AV	22	VAL
42	AV	33	VAL
42	AV	37	VAL
42	AV	39	LEU
42	AV	40	LEU
42	AV	46	VAL
42	AV	47	VAL
42	AV	66	ARG
42	AV	82	ARG
42	AV	91	TYR
42	AV	95	LEU
42	AV	99	ILE
43	AW	11	ARG
43	AW	51	LEU
43	AW	57	ASN
43	AW	60	ASN
43	AW	70	TYR
43	AW	76	VAL
43	AW	100	THR
43	AW	107	LEU
44	AX	27	THR
44	AX	57	LEU

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Mol	Chain	Res	Type
44	AX	63	LYS
44	AX	68	ARG
44	AX	70	LEU
44	AX	80	ILE
44	AX	81	VAL
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	77	PRO
45	AY	83	THR
45	AY	89	PHE
45	AY	90	LEU
46	AZ	6	LYS
46	AZ	24	LEU
46	AZ	27	VAL
46	AZ	28	MET
46	AZ	34	ASN
46	AZ	41	LEU
46	AZ	53	ILE
46	AZ	61	LEU
46	AZ	63	ASP
46	AZ	74	VAL
46	AZ	81	ARG
46	AZ	90	VAL
46	AZ	98	MET
46	AZ	112	ARG
46	AZ	123	ASP
46	AZ	124	ILE
46	AZ	155	LEU
46	AZ	162	GLU
46	AZ	166	SER
46	AZ	169	GLU
47	A0	5	LYS
47	A0	11	ARG
47	A0	14	ARG

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Mol	Chain	Res	Type
47	A0	20	ARG
47	A0	36	ILE
47	A0	41	ARG
47	A0	64	ASP
47	A0	84	LEU
48	A1	11	ARG
48	A1	19	GLN
48	A1	25	LYS
48	A1	39	LYS
48	A1	40	ARG
48	A1	41	ARG
48	A1	46	LEU
48	A1	58	ILE
48	A1	61	ARG
48	A1	72	GLU
48	A1	73	LEU
48	A1	82	LEU
49	A2	2	LYS
49	A2	19	VAL
49	A2	52	ASP
49	A2	53	LEU
49	A2	64	LEU
50	A3	8	LEU
50	A3	20	LYS
50	A3	31	LEU
50	A3	35	ARG
51	A4	1	MET
51	A4	5	ILE
51	A4	10	VAL
51	A4	13	ARG
51	A4	20	ASN
51	A4	25	TYR
51	A4	30	GLU
51	A4	32	TYR
51	A4	34	GLU
51	A4	42	PHE
51	A4	44	THR
51	A4	49	PHE
51	A4	51	ASP
51	A4	53	GLU
51	A4	55	ARG
52	A5	23	HIS

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Mol	Chain	Res	Type
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	18	ARG
53	A6	30	THR
53	A6	34	LEU
53	A6	39	TYR
53	A6	42	TRP
54	A7	1	MET
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
55	A8	34	TRP
55	A8	44	LYS
55	A8	47	LYS
55	A8	49	VAL
55	A8	56	GLU
55	A8	61	LEU
55	A8	64	TYR
56	A9	1	MET
56	A9	17	ILE
1	Bb	15	VAL
1	Bb	17	PHE
1	Bb	24	TRP
1	Bb	36	ARG
1	Bb	69	LEU
1	Bb	137	ARG
1	Bb	140	HIS
1	Bb	145	LEU
1	Bb	155	LEU
1	Bb	172	ILE
1	Bb	196	LEU

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Mol	Chain	Res	Type
1	Bb	204	ASN
1	Bb	221	LEU
2	Bc	3	ASN
2	Bc	5	ILE
2	Bc	6	HIS
2	Bc	16	ARG
2	Bc	18	TRP
2	Bc	29	TYR
2	Bc	34	LEU
2	Bc	36	ASP
2	Bc	37	GLN
2	Bc	82	GLU
2	Bc	94	LEU
2	Bc	107	GLN
2	Bc	127	ARG
2	Bc	131	ARG
2	Bc	152	ILE
2	Bc	167	TRP
2	Bc	193	TYR
3	Bd	3	ARG
3	Bd	9	CYS
3	Bd	10	ARG
3	Bd	11	LEU
3	Bd	12	CYS
3	Bd	15	GLU
3	Bd	26	CYS
3	Bd	36	ARG
3	Bd	38	TYR
3	Bd	49	ARG
3	Bd	53	ASP
3	Bd	58	LEU
3	Bd	59	ARG
3	Bd	86	LYS
3	Bd	97	LEU
3	Bd	110	PHE
3	Bd	129	ASN
3	Bd	131	ARG
3	Bd	132	ARG
3	Bd	135	LEU
3	Bd	162	LEU
3	Bd	168	ARG
3	Bd	196	LEU

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Mol	Chain	Res	Type
3	Bd	200	GLU
4	Be	6	PHE
4	Be	10	MET
4	Be	12	LEU
4	Be	20	GLN
4	Be	31	LEU
4	Be	55	VAL
4	Be	56	GLN
4	Be	79	GLU
4	Be	101	ILE
5	Bf	63	TYR
5	Bf	69	GLU
5	Bf	80	ARG
6	Bg	21	VAL
6	Bg	88	PRO
6	Bg	111	ARG
6	Bg	114	ARG
6	Bg	124	LEU
6	Bg	140	ASP
6	Bg	151	TYR
7	Bh	1	MET
7	Bh	25	ASP
7	Bh	26	VAL
7	Bh	50	ARG
7	Bh	52	ASP
7	Bh	60	ARG
7	Bh	65	TYR
7	Bh	102	ARG
7	Bh	112	LEU
7	Bh	119	LEU
8	Bi	3	GLN
8	Bi	10	ARG
8	Bi	78	LYS
8	Bi	88	TYR
8	Bi	95	LYS
8	Bi	104	ARG
8	Bi	105	ASP
8	Bi	112	LYS
8	Bi	114	TYR
8	Bi	121	ARG
8	Bi	125	TYR
8	Bi	128	ARG

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Mol	Chain	Res	Type
9	Bj	4	ILE
9	Bj	22	LYS
9	Bj	46	ARG
9	Bj	49	VAL
9	Bj	50	ILE
9	Bj	62	HIS
9	Bj	68	HIS
9	Bj	96	ILE
10	Bk	29	ILE
10	Bk	126	ARG
11	Bl	7	ILE
11	Bl	20	LYS
11	Bl	27	LEU
11	Bl	41	ARG
11	Bl	42	THR
11	Bl	47	LYS
11	Bl	53	ARG
11	Bl	55	VAL
11	Bl	62	SER
11	Bl	66	VAL
11	Bl	67	THR
11	Bl	89	ARG
11	Bl	92	ASP
11	Bl	97	ARG
11	Bl	102	ARG
11	Bl	126	LYS
12	Bm	47	ASP
12	Bm	48	LEU
12	Bm	56	LEU
12	Bm	64	TRP
12	Bm	65	LYS
12	Bm	66	LEU
12	Bm	69	GLU
12	Bm	70	LEU
12	Bm	71	ARG
12	Bm	73	GLU
12	Bm	77	ASN
12	Bm	79	LYS
12	Bm	82	MET
12	Bm	92	HIS
12	Bm	93	ARG
12	Bm	98	VAL

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Mol	Chain	Res	Type
12	Bm	106	ASN
12	Bm	108	ARG
12	Bm	115	LYS
13	Bn	33	VAL
13	Bn	44	LEU
14	Bo	37	ASN
14	Bo	65	ARG
14	Bo	82	ILE
14	Bo	85	LEU
14	Bo	88	ARG
15	Bp	1	MET
15	Bp	2	VAL
15	Bp	69	THR
16	Bq	38	ARG
16	Bq	59	ILE
16	Bq	98	LEU
17	Br	31	LEU
17	Br	44	LEU
17	Br	65	ILE
18	Bs	5	LEU
18	Bs	6	LYS
18	Bs	7	LYS
18	Bs	15	LEU
18	Bs	29	ARG
18	Bs	33	THR
18	Bs	37	ARG
18	Bs	70	LYS
19	Bt	10	LEU
19	Bt	24	LEU
19	Bt	26	ASN
19	Bt	36	LEU
19	Bt	41	ILE
19	Bt	73	HIS
19	Bt	75	ASN
19	Bt	93	GLU
21	By	5	LEU
21	By	7	PHE
21	By	29	LYS
21	By	34	LEU
21	By	47	MET
21	By	48	PRO
21	By	49	ASP

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Mol	Chain	Res	Type
21	By	56	ARG
21	By	61	ARG
21	By	63	VAL
21	By	85	GLU
26	BC	39	ASP
26	BC	53	ARG
26	BC	185	LYS
27	BD	10	THR
27	BD	24	ILE
27	BD	26	LYS
27	BD	35	LYS
27	BD	37	LEU
27	BD	43	ARG
27	BD	46	GLN
27	BD	49	ILE
27	BD	61	LEU
27	BD	65	ILE
27	BD	71	ASP
27	BD	72	LYS
27	BD	73	VAL
27	BD	94	LEU
27	BD	95	LEU
27	BD	98	VAL
27	BD	103	ARG
27	BD	104	TYR
27	BD	106	ILE
27	BD	122	ASP
27	BD	131	LEU
27	BD	166	GLN
27	BD	192	THR
27	BD	198	ASN
27	BD	200	ASP
27	BD	221	VAL
27	BD	228	PRO
27	BD	229	VAL
27	BD	257	LEU
27	BD	259	THR
27	BD	260	ARG
27	BD	271	ILE
28	BE	24	THR
28	BE	33	VAL
28	BE	49	LEU

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Mol	Chain	Res	Type
28	BE	55	ASN
28	BE	63	LEU
28	BE	64	LYS
28	BE	67	PHE
28	BE	78	LEU
28	BE	79	ARG
28	BE	82	ARG
28	BE	87	GLU
28	BE	101	ARG
28	BE	113	PHE
28	BE	119	ARG
28	BE	144	ARG
28	BE	169	ASN
28	BE	181	LEU
28	BE	197	ILE
28	BE	200	GLU
28	BE	202	LYS
28	BE	203	LYS
29	BF	23	ASP
29	BF	28	ILE
29	BF	33	LEU
29	BF	38	ARG
29	BF	57	VAL
29	BF	66	PRO
29	BF	67	GLN
29	BF	74	ARG
29	BF	83	PHE
29	BF	106	ARG
29	BF	110	LEU
29	BF	125	LEU
29	BF	129	PHE
29	BF	157	VAL
29	BF	158	THR
29	BF	160	ASN
29	BF	164	ARG
29	BF	165	ARG
29	BF	170	LEU
29	BF	183	VAL
29	BF	188	ARG
29	BF	192	LEU
29	BF	200	GLU
30	BG	3	LEU

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Mol	Chain	Res	Type
30	BG	12	TYR
30	BG	21	ARG
30	BG	22	ARG
30	BG	33	ARG
30	BG	43	LEU
30	BG	58	GLN
30	BG	63	ILE
30	BG	64	THR
30	BG	67	LYS
30	BG	71	THR
30	BG	77	ILE
30	BG	80	PHE
30	BG	83	ARG
30	BG	87	PRO
30	BG	93	THR
30	BG	113	ARG
30	BG	115	ARG
30	BG	123	ASN
30	BG	126	ASP
30	BG	143	GLU
30	BG	147	ASP
30	BG	159	VAL
30	BG	164	GLU
31	BH	9	ILE
31	BH	53	GLU
31	BH	54	ARG
31	BH	83	TYR
31	BH	89	ILE
31	BH	153	LYS
31	BH	157	TYR
31	BH	163	TYR
31	BH	170	ARG
32	BI	1	MET
32	BI	9	LEU
32	BI	12	LEU
32	BI	31	LEU
32	BI	71	ILE
32	BI	74	ASN
32	BI	85	GLU
32	BI	86	THR
32	BI	89	TYR
32	BI	91	SER

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Mol	Chain	Res	Type
32	BI	92	VAL
32	BI	93	THR
32	BI	99	GLU
32	BI	103	ARG
32	BI	105	HIS
32	BI	107	VAL
32	BI	109	ILE
32	BI	110	ASP
32	BI	123	LEU
32	BI	130	TYR
32	BI	138	ILE
32	BI	139	GLN
32	BI	140	LEU
34	BN	4	TYR
34	BN	23	LEU
34	BN	28	THR
34	BN	32	THR
34	BN	34	LEU
34	BN	37	LYS
34	BN	39	ARG
34	BN	43	THR
34	BN	48	MET
34	BN	56	ASN
34	BN	60	ILE
34	BN	87	LEU
34	BN	119	ARG
34	BN	121	LYS
34	BN	127	ASP
34	BN	130	HIS
35	BO	7	TYR
35	BO	8	LEU
35	BO	24	VAL
35	BO	32	TYR
35	BO	89	ASN
35	BO	98	VAL
35	BO	108	GLU
36	BP	13	ASN
36	BP	16	ARG
36	BP	18	ARG
36	BP	32	THR
36	BP	39	LYS
36	BP	41	ARG

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Mol	Chain	Res	Type
36	BP	42	SER
36	BP	45	LEU
36	BP	47	ASP
36	BP	57	THR
36	BP	59	LEU
36	BP	61	ARG
36	BP	64	LYS
36	BP	67	MET
36	BP	81	GLN
36	BP	85	LEU
36	BP	91	PHE
36	BP	98	GLU
36	BP	105	LEU
36	BP	108	LYS
36	BP	110	TYR
36	BP	112	LEU
36	BP	114	ILE
36	BP	119	GLU
36	BP	135	LEU
37	BQ	18	LYS
37	BQ	45	GLN
37	BQ	55	VAL
37	BQ	58	PHE
37	BQ	67	ARG
37	BQ	75	THR
37	BQ	110	THR
37	BQ	134	ARG
37	BQ	135	ASP
37	BQ	137	TYR
38	BR	2	ARG
38	BR	4	LEU
38	BR	8	ARG
38	BR	12	ARG
38	BR	15	SER
38	BR	18	LEU
38	BR	28	LEU
38	BR	65	LEU
38	BR	67	LEU
38	BR	71	GLN
38	BR	76	VAL
38	BR	79	LEU
38	BR	94	TYR

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Mol	Chain	Res	Type
38	BR	95	THR
38	BR	99	LYS
38	BR	113	LEU
39	BS	11	LYS
39	BS	12	PHE
39	BS	36	TYR
39	BS	40	ILE
39	BS	44	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	24	PRO
40	BT	32	TYR
40	BT	38	ASN
40	BT	41	ARG
40	BT	50	ILE
40	BT	51	ARG
40	BT	58	ASN
40	BT	59	THR
40	BT	65	LYS
40	BT	78	LEU
40	BT	82	LEU
40	BT	93	ARG
40	BT	96	ARG
40	BT	99	LEU
40	BT	100	TYR
40	BT	101	PHE
40	BT	107	ASP
40	BT	108	ARG
40	BT	122	ASP
40	BT	128	GLU
41	BU	14	HIS
41	BU	19	LYS
41	BU	52	ARG
41	BU	59	ARG
41	BU	60	LEU
41	BU	66	ASN

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Mol	Chain	Res	Type
41	BU	74	LEU
41	BU	83	LEU
41	BU	101	ARG
41	BU	108	GLU
41	BU	112	ARG
42	BV	14	VAL
42	BV	16	PRO
42	BV	18	LEU
42	BV	19	LYS
42	BV	21	ARG
42	BV	22	VAL
42	BV	33	VAL
42	BV	37	VAL
42	BV	39	LEU
42	BV	40	LEU
42	BV	46	VAL
42	BV	47	VAL
42	BV	66	ARG
42	BV	82	ARG
42	BV	91	TYR
42	BV	95	LEU
42	BV	99	ILE
43	BW	11	ARG
43	BW	51	LEU
43	BW	57	ASN
43	BW	60	ASN
43	BW	70	TYR
43	BW	76	VAL
43	BW	100	THR
43	BW	107	LEU
44	BX	27	THR
44	BX	57	LEU
44	BX	63	LYS
44	BX	68	ARG
44	BX	70	LEU
44	BX	80	ILE
44	BX	81	VAL
44	BX	83	VAL
45	BY	2	ARG
45	BY	6	HIS
45	BY	7	VAL
45	BY	9	LYS

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Mol	Chain	Res	Type
45	BY	28	LYS
45	BY	29	GLU
45	BY	32	PRO
45	BY	53	PRO
45	BY	60	PHE
45	BY	77	PRO
45	BY	89	PHE
45	BY	90	LEU
46	BZ	13	GLU
46	BZ	16	SER
46	BZ	23	LYS
46	BZ	31	ARG
46	BZ	38	TYR
46	BZ	39	VAL
46	BZ	41	LEU
46	BZ	61	LEU
46	BZ	81	ARG
46	BZ	87	ASP
46	BZ	96	VAL
46	BZ	103	ARG
46	BZ	112	ARG
46	BZ	127	LYS
46	BZ	131	ARG
46	BZ	132	ASN
46	BZ	136	PHE
46	BZ	145	GLU
46	BZ	151	HIS
46	BZ	155	LEU
46	BZ	158	PRO
46	BZ	163	LEU
46	BZ	169	GLU
46	BZ	175	VAL
46	BZ	177	PRO
46	BZ	179	ASP
47	B0	5	LYS
47	B0	11	ARG
47	B0	14	ARG
47	B0	20	ARG
47	B0	36	ILE
47	B0	41	ARG
47	B0	64	ASP
47	B0	84	LEU

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Mol	Chain	Res	Type
48	B1	20	ARG
48	B1	40	ARG
48	B1	41	ARG
48	B1	45	ASN
48	B1	46	LEU
48	B1	59	THR
48	B1	73	LEU
48	B1	76	ARG
48	B1	82	LEU
49	B2	2	LYS
49	B2	7	ARG
49	B2	16	LEU
49	B2	17	SER
49	B2	30	ARG
49	B2	32	LEU
49	B2	34	GLU
49	B2	46	GLN
49	B2	53	LEU
49	B2	64	LEU
49	B2	68	ARG
49	B2	70	GLN
50	B3	8	LEU
50	B3	20	LYS
50	B3	31	LEU
50	B3	35	ARG
51	B4	1	MET
51	B4	5	ILE
51	B4	10	VAL
51	B4	13	ARG
51	B4	20	ASN
51	B4	25	TYR
51	B4	30	GLU
51	B4	32	TYR
51	B4	34	GLU
51	B4	42	PHE
51	B4	44	THR
51	B4	49	PHE
51	B4	51	ASP
51	B4	53	GLU
51	B4	55	ARG
52	B5	23	HIS
52	B5	25	LEU

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Mol	Chain	Res	Type
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	34	LEU
53	B6	39	TYR
53	B6	42	TRP
54	B7	1	MET
54	B7	4	THR
54	B7	8	ASN
54	B7	41	ARG
55	B8	4	MET
55	B8	8	LYS
55	B8	16	ILE
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	46	ARG
55	B8	47	LYS
55	B8	49	VAL
55	B8	56	GLU
55	B8	61	LEU
55	B8	64	TYR
56	B9	1	MET
56	B9	17	ILE

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (314) such sidechains are listed below:

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

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Mol	Chain	Res	Type
1	Ab	204	ASN
2	Ac	69	HIS
2	Ac	107	GLN
2	Ac	123	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
3	Ad	201	GLN
4	Ae	20	GLN
4	Ae	72	GLN
4	Ae	73	ASN
4	Ae	78	HIS
5	Af	7	ASN
5	Af	18	GLN
5	Af	27	GLN
5	Af	32	ASN
5	Af	64	GLN
5	Af	100	ASN
6	Ag	13	GLN
6	Ag	28	ASN
6	Ag	68	ASN
6	Ag	84	ASN
6	Ag	106	GLN
6	Ag	148	ASN
8	Ai	3	GLN
8	Ai	31	GLN
8	Ai	58	HIS
8	Ai	124	GLN
9	Aj	56	HIS
9	Aj	78	ASN
9	Aj	84	GLN
10	Ak	13	GLN
10	Ak	26	ASN
10	Ak	78	GLN
10	Ak	116	HIS
10	Ak	117	ASN
11	Al	8	ASN
11	Al	9	GLN

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Mol	Chain	Res	Type
11	Al	49	ASN
11	Al	75	HIS
12	Am	101	GLN
14	Ao	37	ASN
14	Ao	46	HIS
15	Ap	76	GLN
16	Aq	16	GLN
17	Ar	36	ASN
18	As	14	HIS
18	As	23	ASN
18	As	65	ASN
19	At	16	HIS
19	At	26	ASN
19	At	42	GLN
19	At	75	ASN
26	AC	189	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
27	AD	227	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	69	HIS
29	AF	75	HIS
29	AF	133	ASN
29	AF	160	ASN
29	AF	169	ASN
30	AG	27	ASN
30	AG	40	ASN
30	AG	108	ASN
30	AG	123	ASN
31	AH	65	HIS
31	AH	74	ASN
31	AH	139	GLN

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Mol	Chain	Res	Type
31	AH	147	ASN
32	AI	28	ASN
32	AI	43	ASN
32	AI	74	ASN
32	AI	104	GLN
32	AI	139	GLN
34	AN	38	HIS
34	AN	45	ASN
34	AN	56	ASN
34	AN	128	HIS
35	AO	5	GLN
35	AO	13	ASN
35	AO	82	ASN
35	AO	88	ASN
36	AP	13	ASN
36	AP	84	ASN
36	AP	128	HIS
37	AQ	12	GLN
37	AQ	45	GLN
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	58	ASN
40	AT	90	GLN
40	AT	123	GLN
41	AU	44	ASN
41	AU	49	HIS
41	AU	66	ASN
42	AV	11	GLN
43	AW	34	ASN
43	AW	57	ASN
43	AW	61	ASN
43	AW	62	HIS
43	AW	102	HIS
44	AX	31	HIS
44	AX	41	ASN
44	AX	55	ASN
46	AZ	34	ASN

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Mol	Chain	Res	Type
46	AZ	118	GLN
47	A0	12	ASN
47	A0	29	GLN
47	A0	70	GLN
48	A1	19	GLN
48	A1	45	ASN
48	A1	47	GLN
49	A2	46	GLN
49	A2	47	ASN
49	A2	70	GLN
50	A3	19	GLN
50	A3	32	GLN
50	A3	46	ASN
50	A3	52	HIS
51	A4	20	ASN
51	A4	40	HIS
52	A5	4	HIS
52	A5	43	HIS
53	A6	32	ASN
53	A6	46	HIS
54	A7	8	ASN
55	A8	31	HIS
55	A8	33	ASN
56	A9	32	HIS
56	A9	34	GLN
1	Bb	37	ASN
1	Bb	40	HIS
1	Bb	78	GLN
1	Bb	135	GLN
1	Bb	146	GLN
1	Bb	204	ASN
2	Bc	69	HIS
2	Bc	107	GLN
2	Bc	123	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
3	Bd	201	GLN

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Mol	Chain	Res	Type
4	Be	20	GLN
4	Be	72	GLN
4	Be	73	ASN
4	Be	78	HIS
5	Bf	7	ASN
5	Bf	18	GLN
5	Bf	27	GLN
5	Bf	32	ASN
5	Bf	64	GLN
5	Bf	100	ASN
6	Bg	13	GLN
6	Bg	28	ASN
6	Bg	68	ASN
6	Bg	84	ASN
6	Bg	106	GLN
6	Bg	148	ASN
8	Bi	3	GLN
8	Bi	31	GLN
8	Bi	58	HIS
8	Bi	124	GLN
9	Bj	78	ASN
9	Bj	84	GLN
10	Bk	13	GLN
10	Bk	26	ASN
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	101	GLN
14	Bo	37	ASN
14	Bo	46	HIS
15	Bp	76	GLN
16	Bq	16	GLN
17	Br	36	ASN
18	Bs	14	HIS
18	Bs	23	ASN
18	Bs	65	ASN
19	Bt	16	HIS
19	Bt	26	ASN
19	Bt	42	GLN

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Mol	Chain	Res	Type
19	Bt	75	ASN
21	By	25	GLN
21	By	65	GLN
26	BC	189	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
27	BD	227	ASN
28	BE	35	GLN
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	69	HIS
29	BF	75	HIS
29	BF	133	ASN
29	BF	160	ASN
29	BF	169	ASN
30	BG	40	ASN
30	BG	58	GLN
30	BG	66	GLN
31	BH	65	HIS
31	BH	74	ASN
31	BH	139	GLN
31	BH	147	ASN
32	BI	28	ASN
32	BI	43	ASN
32	BI	74	ASN
32	BI	104	GLN
32	BI	139	GLN
34	BN	38	HIS
34	BN	45	ASN
34	BN	56	ASN
34	BN	128	HIS
35	BO	5	GLN
35	BO	13	ASN

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Mol	Chain	Res	Type
35	BO	82	ASN
35	BO	88	ASN
36	BP	13	ASN
36	BP	84	ASN
36	BP	128	HIS
37	BQ	12	GLN
37	BQ	45	GLN
38	BR	23	ASN
38	BR	24	GLN
38	BR	53	HIS
38	BR	71	GLN
39	BS	34	HIS
40	BT	38	ASN
40	BT	43	GLN
40	BT	58	ASN
40	BT	90	GLN
40	BT	123	GLN
41	BU	14	HIS
41	BU	44	ASN
41	BU	49	HIS
41	BU	66	ASN
42	BV	11	GLN
43	BW	34	ASN
43	BW	57	ASN
43	BW	61	ASN
43	BW	62	HIS
43	BW	102	HIS
44	BX	31	HIS
44	BX	41	ASN
44	BX	55	ASN
46	BZ	55	HIS
46	BZ	132	ASN
46	BZ	151	HIS
47	B0	12	ASN
47	B0	29	GLN
47	B0	70	GLN
48	B1	45	ASN
48	B1	56	GLN
49	B2	9	GLN
49	B2	47	ASN
49	B2	65	ASN
50	B3	19	GLN

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Mol	Chain	Res	Type
50	B3	32	GLN
50	B3	46	ASN
50	B3	52	HIS
51	B4	6	HIS
51	B4	20	ASN
51	B4	40	HIS
52	B5	4	HIS
52	B5	43	HIS
53	B6	32	ASN
53	B6	46	HIS
54	B7	8	ASN
55	B8	31	HIS
55	B8	33	ASN
56	B9	32	HIS
56	B9	34	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
22	Aa	1503/1504 (99%)	208 (13%)	0
22	Ba	1503/1504 (99%)	209 (13%)	0
23	Ax	11/25 (44%)	5 (45%)	0
23	Bx	11/25 (44%)	5 (45%)	0
24	Av	76/77 (98%)	18 (23%)	0
24	Bv	76/77 (98%)	14 (18%)	0
25	Aw	76/77 (98%)	9 (11%)	0
25	Bw	76/77 (98%)	10 (13%)	0
57	AA	2847/2848 (99%)	491 (17%)	61 (2%)
57	BA	2847/2848 (99%)	486 (17%)	64 (2%)
58	AB	118/119 (99%)	18 (15%)	1 (0%)
58	BB	118/119 (99%)	18 (15%)	1 (0%)
All	All	9262/9300 (99%)	1491 (16%)	127 (1%)

All (1491) 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

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Mol	Chain	Res	Type
22	Aa	48	C
22	Aa	51	A
22	Aa	60	A
22	Aa	61	G
22	Aa	79	G
22	Aa	80	G
22	Aa	81	U
22	Aa	84	U
22	Aa	89	C
22	Aa	90	U
22	Aa	97	G
22	Aa	116	A
22	Aa	120	A
22	Aa	121	C
22	Aa	131	C
22	Aa	150	C
22	Aa	172	A
22	Aa	195	A
22	Aa	197	A
22	Aa	203	U
22	Aa	204	U
22	Aa	220	G
22	Aa	244	U
22	Aa	247	G
22	Aa	251	G
22	Aa	266	G
22	Aa	267	C
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	397	A
22	Aa	398	C
22	Aa	412	A
22	Aa	413	G

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Mol	Chain	Res	Type
22	Aa	414	A
22	Aa	422	C
22	Aa	423	G
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	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
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	630	G
22	Aa	631	G
22	Aa	632	A
22	Aa	633	G
22	Aa	653	A
22	Aa	665	A
22	Aa	687	A
22	Aa	688	G
22	Aa	703	G
22	Aa	724	G

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Mol	Chain	Res	Type
22	Aa	731	G
22	Aa	749	C
22	Aa	755	G
22	Aa	777	A
22	Aa	794	A
22	Aa	816	A
22	Aa	817	C
22	Aa	818	G
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	885	G
22	Aa	902	G
22	Aa	913	A
22	Aa	914	A
22	Aa	926	G
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
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	1026	G
22	Aa	1030	C

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Mol	Chain	Res	Type
22	Aa	1050	G
22	Aa	1054	C
22	Aa	1055	A
22	Aa	1065	U
22	Aa	1066	C
22	Aa	1068	G
22	Aa	1081	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	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	1194	U
22	Aa	1196	U
22	Aa	1197	G
22	Aa	1201	A
22	Aa	1202	G
22	Aa	1212	U
22	Aa	1213	A
22	Aa	1225	A
22	Aa	1226	C
22	Aa	1238	A
22	Aa	1249	C
22	Aa	1255	G
22	Aa	1256	A
22	Aa	1257	U
22	Aa	1280	A
22	Aa	1281	U
22	Aa	1282	C

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Mol	Chain	Res	Type
22	Aa	1286	A
22	Aa	1287	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	1346	A
22	Aa	1347	G
22	Aa	1363	C
22	Aa	1364	U
22	Aa	1397	C
22	Aa	1419	G
22	Aa	1442	G
22	Aa	1442(A)	G
22	Aa	1442(B)	A
22	Aa	1443	G
22	Aa	1452	C
22	Aa	1492	A
22	Aa	1497	G
22	Aa	1498	U
22	Aa	1499	A
22	Aa	1504	G
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	14	A
23	Ax	19	OMU
23	Ax	21	OMG
23	Ax	22	A
23	Ax	24	A
24	Av	3	C
24	Av	4	G

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Mol	Chain	Res	Type
24	Av	5	G
24	Av	7	G
24	Av	8	U
24	Av	9	G
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	49	G
24	Av	65	C
24	Av	73	A
24	Av	75	C
24	Av	76	A
25	Aw	5	G
25	Aw	8	U
25	Aw	16	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	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	95	G
57	AA	100	G
57	AA	102	G
57	AA	118	A

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Mol	Chain	Res	Type
57	AA	119	A
57	AA	120	U
57	AA	129	C
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	171	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
57	AA	230	U
57	AA	233	A
57	AA	248	G
57	AA	252	G
57	AA	269	U
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	271(Y)	U
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

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Mol	Chain	Res	Type
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(F)	A
57	AA	365	C
57	AA	372	G
57	AA	386	G
57	AA	388	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
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	563	G
57	AA	573	G
57	AA	575	A

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Mol	Chain	Res	Type
57	AA	586	A
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	651	G
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
57	AA	655	A
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	764	A
57	AA	765	G
57	AA	775	G
57	AA	776	G
57	AA	782	A
57	AA	784	A
57	AA	785	G
57	AA	790	C

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Mol	Chain	Res	Type
57	AA	791	C
57	AA	792	G
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	869	G
57	AA	878	A
57	AA	890	A
57	AA	896	A
57	AA	897	C
57	AA	904	C
57	AA	910	A
57	AA	917	A
57	AA	932	G
57	AA	941	A
57	AA	945	A
57	AA	946	G
57	AA	958	U
57	AA	959	A
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	1039	G
57	AA	1041	C
57	AA	1045	A

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Mol	Chain	Res	Type
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	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
57	AA	1195	G
57	AA	1205	U
57	AA	1210	A
57	AA	1211	U
57	AA	1212	G
57	AA	1221	C
57	AA	1247	A
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

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Mol	Chain	Res	Type
57	AA	1332	G
57	AA	1345	C
57	AA	1349	A
57	AA	1359	A
57	AA	1368	G
57	AA	1378	A
57	AA	1379	A
57	AA	1380	G
57	AA	1384	A
57	AA	1385	G
57	AA	1386	C
57	AA	1407	C
57	AA	1416	G
57	AA	1417	C
57	AA	1419	A
57	AA	1420	U
57	AA	1421	G
57	AA	1427	A
57	AA	1428	C
57	AA	1437	C
57	AA	1445	A
57	AA	1449	A
57	AA	1450	G
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	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

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Mol	Chain	Res	Type
57	AA	1509(A)	A
57	AA	1528(A)	A
57	AA	1537	G
57	AA	1539	G
57	AA	1541	G
57	AA	1542	A
57	AA	1544	A
57	AA	1554	A
57	AA	1558	A
57	AA	1559	G
57	AA	1566	A
57	AA	1569	A
57	AA	1578	U
57	AA	1579	A
57	AA	1584	C
57	AA	1586	A
57	AA	1588	C
57	AA	1591	G
57	AA	1603	A
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	1648	C
57	AA	1653	G
57	AA	1654	A
57	AA	1674	G
57	AA	1694	C
57	AA	1696	G
57	AA	1718	G
57	AA	1722	A
57	AA	1739	U
57	AA	1740	G
57	AA	1742	G
57	AA	1746	G
57	AA	1748	G
57	AA	1763	G
57	AA	1764	G
57	AA	1773	A
57	AA	1780	A

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Mol	Chain	Res	Type
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	1835	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
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	1906	G
57	AA	1912	A
57	AA	1913	A
57	AA	1929	G
57	AA	1930	G
57	AA	1936	A
57	AA	1938	A
57	AA	1948	G
57	AA	1955	U
57	AA	1963	U
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	1992	G
57	AA	1993	U
57	AA	1997	G
57	AA	2023	G

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Mol	Chain	Res	Type
57	AA	2031	A
57	AA	2033	A
57	AA	2034	U
57	AA	2036	C
57	AA	2043	C
57	AA	2055	C
57	AA	2056	G
57	AA	2060	A
57	AA	2061	G
57	AA	2062	A
57	AA	2069	G
57	AA	2100	G
57	AA	2103	C
57	AA	2104	G
57	AA	2116	G
57	AA	2118	U
57	AA	2127	G
57	AA	2131	G
57	AA	2133	G
57	AA	2159	G
57	AA	2172	U
57	AA	2173	A
57	AA	2177	C
57	AA	2179	C
57	AA	2185	C
57	AA	2187	G
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	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

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Mol	Chain	Res	Type
57	AA	2288	A
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	2347	C
57	AA	2350	C
57	AA	2360	A
57	AA	2361	A
57	AA	2383	G
57	AA	2385	C
57	AA	2400	G
57	AA	2402	C
57	AA	2406	U
57	AA	2423	U
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	2469	A
57	AA	2470	G
57	AA	2472	G
57	AA	2476	A
57	AA	2477	C
57	AA	2478	A
57	AA	2482	G
57	AA	2484	G
57	AA	2491	U
57	AA	2502	G

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Mol	Chain	Res	Type
57	AA	2505	G
57	AA	2518	A
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	2586	C
57	AA	2602	A
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	2702	U
57	AA	2703	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	2758	A
57	AA	2762	G
57	AA	2765	A
57	AA	2766	G
57	AA	2778	A
57	AA	2779	U
57	AA	2790	A
57	AA	2791	C
57	AA	2794	C
57	AA	2799	C
57	AA	2801(A)	A
57	AA	2802	G

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Mol	Chain	Res	Type
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	2892	A
57	AA	2893	G
58	AB	8	U
58	AB	13	A
58	AB	15	A
58	AB	16	G
58	AB	22	U
58	AB	24	G
58	AB	41	U
58	AB	42	C
58	AB	45	A
58	AB	52	A
58	AB	53	A
58	AB	67	G
58	AB	73	A
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
22	Ba	48	C
22	Ba	50	A
22	Ba	51	A
22	Ba	54	C
22	Ba	60	A
22	Ba	61	G
22	Ba	79	G

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Mol	Chain	Res	Type
22	Ba	80	G
22	Ba	81	U
22	Ba	84	U
22	Ba	89	C
22	Ba	90	U
22	Ba	97	G
22	Ba	116	A
22	Ba	120	A
22	Ba	121	C
22	Ba	131	C
22	Ba	150	C
22	Ba	172	A
22	Ba	195	A
22	Ba	197	A
22	Ba	203	U
22	Ba	204	U
22	Ba	220	G
22	Ba	244	U
22	Ba	247	G
22	Ba	251	G
22	Ba	266	G
22	Ba	267	C
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
22	Ba	397	A
22	Ba	398	C
22	Ba	412	A
22	Ba	413	G
22	Ba	414	A
22	Ba	422	C
22	Ba	423	G
22	Ba	428	G
22	Ba	429	U

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Mol	Chain	Res	Type
22	Ba	430	A
22	Ba	435	C
22	Ba	437	U
22	Ba	439	A
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	630	G
22	Ba	631	G
22	Ba	632	A
22	Ba	633	G
22	Ba	653	A
22	Ba	665	A
22	Ba	687	A
22	Ba	688	G
22	Ba	703	G
22	Ba	724	G
22	Ba	731	G
22	Ba	749	C
22	Ba	755	G
22	Ba	777	A
22	Ba	794	A

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Mol	Chain	Res	Type
22	Ba	817	C
22	Ba	818	G
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	885	G
22	Ba	902	G
22	Ba	913	A
22	Ba	914	A
22	Ba	926	G
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	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	1026	G
22	Ba	1030	C
22	Ba	1050	G
22	Ba	1054	C
22	Ba	1055	A
22	Ba	1065	U
22	Ba	1066	C
22	Ba	1068	G
22	Ba	1081	G

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Mol	Chain	Res	Type
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	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	1196	U
22	Ba	1197	G
22	Ba	1198	G
22	Ba	1201	A
22	Ba	1202	G
22	Ba	1212	U
22	Ba	1213	A
22	Ba	1225	A
22	Ba	1227	A
22	Ba	1238	A
22	Ba	1249	C
22	Ba	1255	G
22	Ba	1256	A
22	Ba	1257	U
22	Ba	1280	A
22	Ba	1281	U
22	Ba	1282	C
22	Ba	1286	A
22	Ba	1287	A
22	Ba	1294	G
22	Ba	1300	G
22	Ba	1301	U
22	Ba	1302	U
22	Ba	1305	G

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Mol	Chain	Res	Type
22	Ba	1317	C
22	Ba	1320	C
22	Ba	1322	C
22	Ba	1323	G
22	Ba	1331	G
22	Ba	1346	A
22	Ba	1347	G
22	Ba	1363	C
22	Ba	1364	U
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	1487	G
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	14	A
23	Bx	19	OMU
23	Bx	20	A2M
23	Bx	21	OMG
23	Bx	22	A
24	Bv	3	C
24	Bv	5	G
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

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Mol	Chain	Res	Type
24	Bv	48	C
24	Bv	61	C
24	Bv	65	C
24	Bv	73	A
24	Bv	75	C
24	Bv	76	A
25	Bw	5	G
25	Bw	7	G
25	Bw	8	U
25	Bw	9	G
25	Bw	17(A)	U
25	Bw	18	G
25	Bw	19	G
25	Bw	20	U
25	Bw	47	U
25	Bw	48	C
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
57	BA	95	G
57	BA	100	G
57	BA	102	G
57	BA	118	A
57	BA	119	A
57	BA	120	U
57	BA	129	C
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

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Mol	Chain	Res	Type
57	BA	171	G
57	BA	174	C
57	BA	181	A
57	BA	182	A
57	BA	196	A
57	BA	197	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	233	A
57	BA	248	G
57	BA	252	G
57	BA	269	U
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	271(Y)	U
57	BA	272	G
57	BA	272(B)	G
57	BA	272(H)	C
57	BA	272(I)	U
57	BA	274	G
57	BA	276	A
57	BA	277	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

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Mol	Chain	Res	Type
57	BA	363(F)	A
57	BA	365	C
57	BA	372	G
57	BA	386	G
57	BA	388	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	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	531	C
57	BA	532	A
57	BA	533	G
57	BA	544	G
57	BA	547	A
57	BA	563	G
57	BA	573	G
57	BA	575	A
57	BA	586	A
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	622	G
57	BA	627	A
57	BA	637	A
57	BA	645	C

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Mol	Chain	Res	Type
57	BA	646	A
57	BA	651	G
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	669	G
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	764	A
57	BA	765	G
57	BA	775	G
57	BA	776	G
57	BA	782	A
57	BA	784	A
57	BA	785	G
57	BA	790	C
57	BA	791	C
57	BA	792	G
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	878	A
57	BA	890	A
57	BA	896	A

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Mol	Chain	Res	Type
57	BA	897	C
57	BA	904	C
57	BA	910	A
57	BA	917	A
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
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	1130	U
57	BA	1135	C
57	BA	1136	G
57	BA	1142	U

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Mol	Chain	Res	Type
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	1195	G
57	BA	1205	U
57	BA	1210	A
57	BA	1211	U
57	BA	1212	G
57	BA	1221	C
57	BA	1247	A
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
57	BA	1281	G
57	BA	1286	A
57	BA	1300	U
57	BA	1301	A
57	BA	1314	C
57	BA	1319	G
57	BA	1321	A
57	BA	1332	G
57	BA	1345	C
57	BA	1349	A
57	BA	1359	A
57	BA	1368	G
57	BA	1378	A
57	BA	1379	A
57	BA	1380	G
57	BA	1384	A
57	BA	1385	G
57	BA	1386	C
57	BA	1407	C
57	BA	1416	G
57	BA	1417	C

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Mol	Chain	Res	Type
57	BA	1419	A
57	BA	1420	U
57	BA	1421	G
57	BA	1427	A
57	BA	1428	C
57	BA	1437	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	1493	C
57	BA	1494	A
57	BA	1495	A
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	1537	G
57	BA	1539	G
57	BA	1541	G
57	BA	1542	A
57	BA	1544	A
57	BA	1554	A
57	BA	1558	A
57	BA	1559	G
57	BA	1566	A
57	BA	1569	A
57	BA	1578	U
57	BA	1579	A

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Mol	Chain	Res	Type
57	BA	1584	C
57	BA	1586	A
57	BA	1588	C
57	BA	1591	G
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	1648	C
57	BA	1653	G
57	BA	1654	A
57	BA	1674	G
57	BA	1694	C
57	BA	1696	G
57	BA	1718	G
57	BA	1722	A
57	BA	1739	U
57	BA	1740	G
57	BA	1742	G
57	BA	1746	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	1835	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

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Mol	Chain	Res	Type
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	1906	G
57	BA	1912	A
57	BA	1913	A
57	BA	1929	G
57	BA	1930	G
57	BA	1936	A
57	BA	1938	A
57	BA	1948	G
57	BA	1955	U
57	BA	1963	U
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	1992	G
57	BA	1993	U
57	BA	1997	G
57	BA	2023	G
57	BA	2031	A
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	2069	G
57	BA	2100	G
57	BA	2103	C
57	BA	2104	G

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Mol	Chain	Res	Type
57	BA	2116	G
57	BA	2118	U
57	BA	2127	G
57	BA	2131	G
57	BA	2133	G
57	BA	2159	G
57	BA	2172	U
57	BA	2173	A
57	BA	2177	C
57	BA	2179	C
57	BA	2185	C
57	BA	2187	G
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	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

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Mol	Chain	Res	Type
57	BA	2350	C
57	BA	2360	A
57	BA	2361	A
57	BA	2383	G
57	BA	2385	C
57	BA	2400	G
57	BA	2402	C
57	BA	2406	U
57	BA	2423	U
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	2469	A
57	BA	2470	G
57	BA	2472	G
57	BA	2476	A
57	BA	2477	C
57	BA	2478	A
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	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	2586	C
57	BA	2602	A
57	BA	2609	U

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Mol	Chain	Res	Type
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	2703	C
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	2758	A
57	BA	2762	G
57	BA	2765	A
57	BA	2778	A
57	BA	2779	U
57	BA	2790	A
57	BA	2791	C
57	BA	2794	C
57	BA	2799	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	2892	A
57	BA	2893	G
58	BB	8	U
58	BB	13	A

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Mol	Chain	Res	Type
58	BB	15	A
58	BB	16	G
58	BB	22	U
58	BB	24	G
58	BB	41	U
58	BB	42	C
58	BB	45	A
58	BB	52	A
58	BB	53	A
58	BB	67	G
58	BB	73	A
58	BB	81	G
58	BB	82	G
58	BB	88	C
58	BB	110	G
58	BB	113	G

All (127) 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	197	A
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
57	AA	669	G
57	AA	752	A
57	AA	764	A

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Mol	Chain	Res	Type
57	AA	790	C
57	AA	858	U
57	AA	904	C
57	AA	1022	G
57	AA	1210	A
57	AA	1286	A
57	AA	1378	A
57	AA	1427	A
57	AA	1490	A
57	AA	1494	A
57	AA	1541	G
57	AA	1558	A
57	AA	1603	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	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
57	AA	2873	A
58	AB	66	A
57	BA	49	A
57	BA	71	A

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Mol	Chain	Res	Type
57	BA	74	A
57	BA	79	G
57	BA	119	A
57	BA	128	C
57	BA	146	G
57	BA	197	A
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	669	G
57	BA	752	A
57	BA	764	A
57	BA	790	C
57	BA	858	U
57	BA	904	C
57	BA	1022	G
57	BA	1197	G
57	BA	1210	A
57	BA	1281	G
57	BA	1286	A
57	BA	1378	A
57	BA	1427	A
57	BA	1490	A
57	BA	1494	A
57	BA	1541	G
57	BA	1558	A
57	BA	1603	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

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Mol	Chain	Res	Type
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	2126	A
57	BA	2171	A
57	BA	2191	G
57	BA	2225	A
57	BA	2282	G
57	BA	2311	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
57	BA	2873	A
58	BB	66	A

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

8 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	1.37	3 (25%)	14,32,35	4.52	3 (21%)
23	OMU	Ax	19	23	12,22,23	1.17	2 (16%)	19,31,34	3.20	2 (10%)
23	A2M	Ax	20	23	16,25,26	0.61	0	18,36,39	1.00	0
23	OMG	Ax	21	23	17,26,27	1.12	1 (5%)	21,38,41	2.67	3 (14%)
24	5MU	Bv	54	24	12,22,23	1.29	3 (25%)	14,32,35	4.54	3 (21%)
23	OMU	Bx	19	23	12,22,23	1.23	1 (8%)	19,31,34	3.20	2 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
23	A2M	Bx	20	23	16,25,26	0.61	0	18,36,39	1.05	1 (5%)
23	OMG	Bx	21	23	17,26,27	1.07	1 (5%)	21,38,41	2.62	4 (19%)

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	OMU	Ax	19	23	-	0/5/27/28	0/2/2/2
23	A2M	Ax	20	23	-	0/5/27/28	0/3/3/3
23	OMG	Ax	21	23	-	0/5/27/28	0/3/3/3
24	5MU	Bv	54	24	-	0/3/25/26	0/2/2/2
23	OMU	Bx	19	23	-	0/5/27/28	0/2/2/2
23	A2M	Bx	20	23	-	0/5/27/28	0/3/3/3
23	OMG	Bx	21	23	-	0/5/27/28	0/3/3/3

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	Av	54	5MU	C6-C5	-2.08	1.34	1.40
24	Bv	54	5MU	C6-C5	-2.08	1.34	1.40
23	Ax	19	OMU	C6-C5	-2.00	1.33	1.38
24	Bv	54	5MU	C6-N1	2.43	1.38	1.35
24	Av	54	5MU	C6-N1	2.54	1.38	1.35
24	Bv	54	5MU	C4-N3	2.85	1.38	1.33
23	Ax	19	OMU	C4-N3	2.85	1.38	1.33
23	Bx	19	OMU	C4-N3	3.03	1.38	1.33
24	Av	54	5MU	C4-N3	3.21	1.39	1.33
23	Bx	21	OMG	C6-N1	3.39	1.39	1.33
23	Ax	21	OMG	C6-N1	3.60	1.39	1.33

All (18) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	Av	54	5MU	C5-C4-N3	-9.11	115.00	125.14
24	Bv	54	5MU	C5-C4-N3	-9.08	115.03	125.14
23	Bx	21	OMG	C5-C6-N1	-8.83	111.52	123.59
23	Ax	21	OMG	C5-C6-N1	-8.79	111.57	123.59
23	Ax	19	OMU	C5-C4-N3	-3.21	114.87	123.12
23	Bx	19	OMU	C5-C4-N3	-3.21	114.88	123.12

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	Ax	21	OMG	N3-C2-N1	-2.41	123.77	127.44
23	Bx	21	OMG	N3-C2-N1	-2.38	123.83	127.44
23	Bx	21	OMG	CM2-O2'-C2'	-2.13	108.57	114.59
24	Bv	54	5MU	C5M-C5-C6	2.00	122.64	118.62
24	Av	54	5MU	C5M-C5-C6	2.06	122.76	118.62
23	Bx	20	A2M	O3'-C3'-C2'	2.53	118.46	111.16
23	Bx	21	OMG	C6-N1-C2	6.69	125.23	115.94
23	Ax	21	OMG	C6-N1-C2	6.70	125.23	115.94
23	Ax	19	OMU	C4-N3-C2	13.10	127.12	114.14
23	Bx	19	OMU	C4-N3-C2	13.23	127.24	114.14
24	Av	54	5MU	C4-N3-C2	14.01	127.36	115.25
24	Bv	54	5MU	C4-N3-C2	14.19	127.51	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 ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry ⓘ

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 ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	Ab	234/256 (91%)	0.47	25 (10%) 8 6	119, 151, 187, 193	0
1	Bb	234/256 (91%)	0.53	22 (9%) 11 9	117, 151, 186, 193	0
2	Ac	206/239 (86%)	0.64	19 (9%) 11 9	116, 147, 171, 173	0
2	Bc	206/239 (86%)	0.67	21 (10%) 9 7	115, 147, 171, 174	0
3	Ad	208/209 (99%)	0.20	3 (1%) 78 73	94, 123, 145, 154	0
3	Bd	208/209 (99%)	0.38	11 (5%) 30 24	94, 124, 146, 155	0
4	Ae	150/162 (92%)	0.24	4 (2%) 58 51	90, 114, 142, 160	0
4	Be	150/162 (92%)	0.37	8 (5%) 30 24	91, 114, 143, 161	0
5	Af	101/101 (100%)	0.19	4 (3%) 42 34	103, 127, 143, 167	0
5	Bf	101/101 (100%)	0.19	5 (4%) 32 26	100, 126, 143, 167	0
6	Ag	155/156 (99%)	0.61	20 (12%) 5 3	119, 141, 173, 189	0
6	Bg	155/156 (99%)	0.81	23 (14%) 3 3	120, 141, 173, 189	0
7	Ah	138/138 (100%)	0.20	2 (1%) 78 73	99, 118, 133, 143	0
7	Bh	138/138 (100%)	0.52	9 (6%) 22 18	100, 118, 133, 144	0
8	Ai	127/128 (99%)	1.29	33 (25%) 1 1	121, 162, 182, 190	0
8	Bi	127/128 (99%)	1.23	33 (25%) 1 1	121, 162, 182, 189	0
9	Aj	98/105 (93%)	1.64	34 (34%) 0 1	118, 165, 185, 187	0
9	Bj	98/105 (93%)	1.56	29 (29%) 1 1	116, 164, 185, 188	0
10	Ak	119/129 (92%)	0.45	11 (9%) 11 9	89, 121, 156, 176	0
10	Bk	119/129 (92%)	0.54	13 (10%) 7 6	91, 120, 155, 175	0
11	Al	124/132 (93%)	0.33	7 (5%) 28 22	81, 101, 133, 169	0
11	Bl	124/132 (93%)	0.47	10 (8%) 15 11	83, 102, 134, 169	0
12	Am	118/126 (93%)	0.60	14 (11%) 6 5	115, 147, 161, 169	0
12	Bm	118/126 (93%)	0.81	18 (15%) 3 2	115, 146, 161, 168	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2		OWAB(Å ²)	Q<0.9
13	An	60/61 (98%)	0.98	8 (13%)	4 3	127, 140, 158, 161	0
13	Bn	60/61 (98%)	0.74	4 (6%)	21 17	125, 140, 157, 160	0
14	Ao	88/89 (98%)	0.32	4 (4%)	37 30	87, 114, 138, 146	0
14	Bo	88/89 (98%)	0.20	1 (1%)	82 78	88, 114, 138, 146	0
15	Ap	83/88 (94%)	0.54	5 (6%)	25 20	96, 114, 135, 162	0
15	Bp	83/88 (94%)	0.78	11 (13%)	4 3	97, 116, 136, 163	0
16	Aq	99/105 (94%)	0.27	3 (3%)	54 47	89, 112, 125, 133	0
16	Bq	99/105 (94%)	0.37	6 (6%)	25 20	92, 112, 125, 133	0
17	Ar	70/88 (79%)	0.74	6 (8%)	13 10	98, 125, 147, 153	0
17	Br	70/88 (79%)	0.58	7 (10%)	9 8	98, 123, 147, 153	0
18	As	78/93 (83%)	1.16	19 (24%)	1 1	135, 151, 180, 185	0
18	Bs	78/93 (83%)	1.21	19 (24%)	1 1	135, 151, 180, 185	0
19	At	99/106 (93%)	0.64	11 (11%)	7 6	105, 123, 157, 161	0
19	Bt	99/106 (93%)	0.54	5 (5%)	32 25	107, 124, 158, 162	0
20	Au	24/27 (88%)	3.11	17 (70%)	0 0	113, 141, 162, 175	0
20	Bu	24/27 (88%)	2.60	12 (50%)	0 0	113, 141, 162, 174	0
21	Ay	94/95 (98%)	0.85	15 (15%)	3 2	67, 133, 155, 159	0
21	By	94/95 (98%)	0.94	11 (11%)	6 5	112, 136, 154, 169	0
22	Aa	1504/1504 (100%)	0.10	29 (1%)	70 63	70, 123, 196, 208	0
22	Ba	1504/1504 (100%)	0.08	34 (2%)	64 57	70, 124, 196, 208	0
23	Ax	9/25 (36%)	1.33	3 (33%)	0 1	102, 161, 194, 201	0
23	Bx	9/25 (36%)	1.37	4 (44%)	0 0	100, 159, 202, 204	0
24	Av	76/77 (98%)	-0.32	1 (1%)	79 74	93, 120, 159, 176	0
24	Bv	76/77 (98%)	-0.25	1 (1%)	79 74	82, 113, 154, 168	0
25	Aw	77/77 (100%)	1.43	22 (28%)	1 1	135, 202, 204, 205	0
25	Bw	77/77 (100%)	1.62	19 (24%)	1 1	134, 203, 205, 207	0
26	AC	120/229 (52%)	3.20	85 (70%)	0 0	167, 186, 194, 195	0
26	BC	120/229 (52%)	3.84	90 (75%)	0 0	166, 186, 194, 195	0
27	AD	271/276 (98%)	0.11	5 (1%)	71 65	58, 81, 109, 137	0
27	BD	271/276 (98%)	0.05	3 (1%)	82 78	55, 79, 108, 137	0
28	AE	204/206 (99%)	0.24	9 (4%)	38 31	62, 88, 143, 161	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å ²)	Q<0.9
28	BE	204/206 (99%)	0.30	8 (3%)	43	36	59, 87, 143, 160	0
29	AF	207/210 (98%)	0.18	7 (3%)	49	42	61, 93, 150, 182	0
29	BF	207/210 (98%)	0.19	11 (5%)	30	24	55, 90, 150, 182	0
30	AG	181/182 (99%)	0.52	20 (11%)	7	6	113, 140, 165, 181	0
30	BG	181/182 (99%)	0.53	19 (10%)	8	7	102, 133, 164, 183	0
31	AH	164/180 (91%)	1.25	45 (27%)	1	1	103, 134, 154, 175	0
31	BH	164/180 (91%)	0.50	14 (8%)	13	10	96, 131, 151, 176	0
32	AI	145/148 (97%)	1.98	46 (31%)	1	1	91, 163, 180, 185	0
32	BI	145/148 (97%)	1.50	39 (26%)	1	1	90, 163, 181, 186	0
33	AJ	130/173 (75%)	4.60	100 (76%)	0	0	180, 195, 199, 201	0
33	BJ	130/173 (75%)	2.81	75 (57%)	0	0	167, 185, 194, 197	0
34	AN	138/140 (98%)	0.31	6 (4%)	39	32	76, 98, 133, 153	0
34	BN	138/140 (98%)	0.16	3 (2%)	65	59	73, 95, 132, 152	0
35	AO	122/122 (100%)	-0.04	1 (0%)	87	84	65, 84, 106, 133	0
35	BO	122/122 (100%)	-0.01	0	100	100	64, 83, 106, 131	0
36	AP	146/150 (97%)	0.67	12 (8%)	14	11	63, 112, 139, 175	0
36	BP	146/150 (97%)	0.56	12 (8%)	14	11	62, 111, 139, 173	0
37	AQ	140/141 (99%)	0.13	2 (1%)	78	73	76, 99, 132, 153	0
37	BQ	140/141 (99%)	0.27	3 (2%)	67	60	74, 99, 131, 153	0
38	AR	117/118 (99%)	0.19	2 (1%)	73	67	70, 90, 119, 144	0
38	BR	117/118 (99%)	0.34	3 (2%)	59	53	67, 89, 119, 143	0
39	AS	98/112 (87%)	1.01	18 (18%)	2	1	115, 139, 161, 162	0
39	BS	98/112 (87%)	1.49	33 (33%)	0	1	112, 138, 161, 163	0
40	AT	135/146 (92%)	0.17	9 (6%)	21	17	78, 103, 154, 185	0
40	BT	135/146 (92%)	0.25	11 (8%)	15	11	78, 103, 154, 185	0
41	AU	117/118 (99%)	0.15	4 (3%)	49	42	67, 88, 124, 155	0
41	BU	117/118 (99%)	0.06	1 (0%)	85	82	63, 84, 123, 156	0
42	AV	101/101 (100%)	0.36	8 (7%)	15	12	62, 114, 136, 151	0
42	BV	101/101 (100%)	0.30	4 (3%)	42	34	59, 110, 135, 151	0
43	AW	113/113 (100%)	0.18	1 (0%)	85	82	67, 83, 110, 183	0
43	BW	113/113 (100%)	0.21	2 (1%)	71	65	65, 81, 108, 183	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	AX	92/96 (95%)	0.16	3 (3%) 50 43	74, 93, 115, 124	0
44	BX	92/96 (95%)	0.15	0 100 100	66, 90, 113, 125	0
45	AY	100/110 (90%)	1.67	33 (33%) 0 1	85, 122, 162, 169	0
45	BY	100/110 (90%)	0.77	14 (14%) 4 3	84, 120, 162, 168	0
46	AZ	184/206 (89%)	0.42	15 (8%) 14 11	109, 138, 158, 193	0
46	BZ	184/206 (89%)	0.20	7 (3%) 44 37	96, 128, 152, 187	0
47	A0	84/85 (98%)	0.87	13 (15%) 3 2	87, 104, 152, 185	0
47	B0	84/85 (98%)	1.12	12 (14%) 4 3	86, 102, 153, 185	0
48	A1	93/98 (94%)	0.19	2 (2%) 65 59	68, 93, 132, 144	0
48	B1	93/98 (94%)	0.38	4 (4%) 39 32	60, 87, 133, 146	0
49	A2	71/72 (98%)	0.16	2 (2%) 56 50	89, 124, 144, 163	0
49	B2	71/72 (98%)	0.09	4 (5%) 28 22	60, 90, 134, 169	0
50	A3	59/60 (98%)	0.91	7 (11%) 6 5	79, 100, 124, 169	0
50	B3	59/60 (98%)	0.42	1 (1%) 73 67	75, 98, 121, 169	0
51	A4	57/71 (80%)	0.24	3 (5%) 30 24	153, 167, 183, 186	0
51	B4	57/71 (80%)	1.11	11 (19%) 2 1	154, 167, 182, 187	0
52	A5	55/60 (91%)	-0.02	3 (5%) 29 23	55, 91, 137, 144	0
52	B5	55/60 (91%)	-0.04	1 (1%) 71 65	54, 89, 137, 145	0
53	A6	50/54 (92%)	2.96	30 (60%) 0 0	128, 155, 169, 182	0
53	B6	50/54 (92%)	2.81	30 (60%) 0 0	128, 154, 169, 182	0
54	A7	47/49 (95%)	0.41	2 (4%) 39 32	58, 70, 95, 144	0
54	B7	47/49 (95%)	0.21	2 (4%) 39 32	53, 66, 91, 144	0
55	A8	63/65 (96%)	0.65	6 (9%) 10 9	70, 91, 118, 155	0
55	B8	63/65 (96%)	0.50	3 (4%) 34 28	70, 89, 117, 155	0
56	A9	37/37 (100%)	2.68	23 (62%) 0 0	109, 121, 141, 144	0
56	B9	37/37 (100%)	3.03	27 (72%) 0 0	105, 120, 141, 144	0
57	AA	2848/2848 (100%)	-0.02	84 (2%) 55 49	56, 90, 194, 209	0
57	BA	2848/2848 (100%)	0.12	83 (2%) 55 49	53, 87, 195, 208	0
58	AB	119/119 (100%)	-0.15	1 (0%) 87 84	96, 140, 176, 197	0
58	BB	119/119 (100%)	-0.00	0 100 100	94, 139, 175, 197	0
All	All	21494/22422 (95%)	0.42	1792 (8%) 14 11	53, 114, 186, 209	0

All (1792) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
33	AJ	63	LEU	18.2
33	AJ	85	ASP	17.9
26	BC	177	GLY	15.6
33	AJ	84	GLU	15.2
32	BI	88	ILE	14.9
33	AJ	64	LYS	14.1
32	BI	84	GLY	13.4
57	BA	277	C	13.4
26	BC	176	VAL	13.1
26	BC	174	ALA	13.0
22	Aa	82	U	13.0
33	AJ	70	GLU	12.9
33	AJ	68	LEU	12.8
47	B0	3	HIS	12.8
32	AI	144	VAL	12.5
22	Aa	83	U	12.5
33	AJ	12	THR	12.4
57	BA	654(E)	G	12.3
36	AP	150	ALA	12.3
6	Ag	82	GLY	12.2
33	AJ	67	GLY	11.9
22	Aa	89	C	11.9
32	AI	119	PRO	11.8
26	AC	229	SER	11.5
32	AI	65	ALA	11.4
33	AJ	73	GLY	11.3
33	AJ	69	PRO	11.3
57	AA	654(F)	C	11.1
32	AI	145	VAL	10.9
26	BC	44	VAL	10.5
26	BC	173	HIS	10.4
33	BJ	68	LEU	10.3
57	AA	654(E)	G	10.3
32	AI	111	PRO	10.3
33	AJ	7	VAL	10.3
57	AA	654(I)	C	10.2
22	Ba	89	C	10.1
53	A6	13	CYS	10.1
33	AJ	72	ASP	9.9
57	AA	654(D)	G	9.7
33	AJ	11	ALA	9.7
26	BC	172	ILE	9.6

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Mol	Chain	Res	Type	RSRZ
26	AC	175	PRO	9.5
57	AA	2802	G	9.4
56	A9	1	MET	9.3
10	Ak	128	ALA	9.3
33	AJ	16	ASN	9.2
33	AJ	13	LEU	9.2
26	AC	176	VAL	9.1
22	Aa	81	U	9.1
56	B9	1	MET	9.1
22	Aa	80	G	9.0
32	AI	121	LYS	9.0
32	BI	90	GLY	8.9
32	AI	118	LYS	8.9
20	Au	18	TYR	8.9
26	BC	42	VAL	8.9
50	A3	1	MET	8.8
26	BC	178	LYS	8.8
33	AJ	62	ALA	8.8
57	AA	2795	G	8.8
26	BC	209	PHE	8.7
45	AY	59	GLY	8.7
26	AC	172	ILE	8.6
57	AA	654(H)	G	8.6
33	AJ	78	SER	8.6
33	BJ	72	ASP	8.6
10	Bk	129	SER	8.4
57	AA	654(K)	C	8.3
51	B4	56	VAL	8.3
25	Bw	34	C	8.2
22	Aa	84	U	8.2
57	AA	654(G)	C	8.2
10	Ak	129	SER	8.2
39	BS	54	LEU	8.2
33	BJ	69	PRO	8.1
33	AJ	17	LEU	8.1
26	BC	171	ALA	8.1
33	AJ	122	VAL	8.1
26	AC	173	HIS	8.1
32	AI	97	ILE	8.1
26	AC	177	GLY	8.1
57	BA	654(S)	G	8.0
33	AJ	99	SER	8.0

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Mol	Chain	Res	Type	RSRZ
57	AA	654(L)	G	8.0
32	AI	61	ARG	8.0
33	BJ	73	GLY	7.9
56	A9	37	GLY	7.9
57	BA	654(K)	C	7.9
33	BJ	36	GLU	7.8
57	BA	654(F)	C	7.8
26	AC	34	ALA	7.8
6	Ag	83	ALA	7.8
6	Bg	83	ALA	7.7
20	Bu	18	TYR	7.7
33	AJ	40	LEU	7.7
6	Ag	81	GLY	7.6
33	BJ	43	ALA	7.6
33	AJ	66	LEU	7.6
57	BA	654(H)	G	7.5
33	AJ	52	PHE	7.5
51	B4	1	MET	7.5
57	BA	2802	G	7.5
26	BC	179	ALA	7.5
26	BC	175	PRO	7.4
18	As	81	ARG	7.4
33	BJ	53	VAL	7.4
33	BJ	110	GLY	7.4
32	BI	92	VAL	7.4
22	Ba	1030	C	7.3
32	AI	86	THR	7.3
33	AJ	100	ASN	7.3
31	BH	42	ARG	7.2
33	AJ	86	PRO	7.2
45	AY	58	GLY	7.2
25	Aw	17	C	7.2
52	A5	2	ALA	7.2
6	Bg	84	ASN	7.1
33	AJ	8	GLU	7.1
33	BJ	75	GLN	7.1
33	AJ	25	PHE	7.1
26	AC	228	HIS	7.1
45	AY	44	ILE	7.1
33	AJ	103	GLY	7.1
33	BJ	12	THR	7.0
53	A6	21	TYR	7.0

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Mol	Chain	Res	Type	RSRZ
57	BA	654(G)	C	6.9
57	BA	654(D)	G	6.9
32	AI	58	LEU	6.9
33	AJ	60	ARG	6.9
26	AC	188	ASP	6.9
33	AJ	44	LEU	6.9
26	AC	193	PHE	6.9
28	AE	204	ALA	6.9
57	BA	1534	U	6.8
26	BC	170	GLY	6.8
57	AA	654(S)	G	6.8
42	BV	36	PRO	6.8
6	Bg	81	GLY	6.7
33	AJ	10	LEU	6.7
53	A6	42	TRP	6.7
32	AI	122	GLU	6.7
31	AH	96	ALA	6.7
29	AF	1	MET	6.6
26	BC	166	ASN	6.6
53	A6	14	THR	6.6
49	B2	70	GLN	6.5
57	BA	654(I)	C	6.5
33	BJ	103	GLY	6.5
33	AJ	77	PRO	6.5
53	A6	45	LYS	6.4
26	AC	212	SER	6.4
53	B6	49	HIS	6.4
47	B0	5	LYS	6.4
18	Bs	81	ARG	6.4
51	B4	57	GLU	6.4
53	B6	19	ARG	6.4
56	B9	34	GLN	6.4
33	AJ	65	GLU	6.3
30	AG	2	PRO	6.3
57	BA	2799	C	6.3
33	BJ	108	LYS	6.3
26	BC	190	ILE	6.3
22	Ba	80	G	6.3
1	Bb	96	ARG	6.2
33	BJ	67	GLY	6.2
33	BJ	40	LEU	6.2
33	AJ	83	TYR	6.2

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Mol	Chain	Res	Type	RSRZ
26	AC	181	PHE	6.2
56	A9	12	ASP	6.2
31	BH	45	VAL	6.1
32	AI	109	ILE	6.1
25	Bw	17(A)	U	6.1
57	BA	2795	G	6.1
6	Bg	82	GLY	6.1
33	BJ	11	ALA	6.1
33	AJ	80	VAL	6.1
33	BJ	52	PHE	6.0
26	AC	189	ASN	6.0
45	AY	45	VAL	6.0
30	BG	49	ASP	6.0
57	AA	2796	U	6.0
26	BC	181	PHE	5.9
45	AY	60	PHE	5.9
33	BJ	84	GLU	5.9
9	Bj	5	ARG	5.9
26	AC	182	PRO	5.9
26	BC	2	PRO	5.9
47	B0	6	GLY	5.9
33	AJ	26	LEU	5.9
33	AJ	101	PRO	5.9
26	BC	180	SER	5.9
6	Bg	85	TYR	5.9
33	BJ	35	LYS	5.9
53	B6	42	TRP	5.9
26	BC	14	LYS	5.9
22	Aa	88	A	5.9
26	BC	25	GLU	5.9
20	Bu	24	ARG	5.9
26	BC	208	THR	5.8
47	B0	4	LYS	5.8
9	Aj	33	GLN	5.8
26	BC	219	MET	5.8
33	BJ	88	ALA	5.8
53	B6	20	ASN	5.8
9	Bj	71	LEU	5.8
32	AI	68	LEU	5.7
8	Bi	8	GLY	5.7
22	Ba	88	A	5.7
9	Bj	98	ILE	5.7

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Mol	Chain	Res	Type	RSRZ
57	AA	2139	C	5.7
26	BC	40	GLU	5.7
33	AJ	74	LEU	5.7
33	AJ	102	LYS	5.7
10	Bk	128	ALA	5.7
57	AA	2794	C	5.7
32	BI	56	LYS	5.7
12	Am	75	ALA	5.7
53	B6	37	ARG	5.6
33	AJ	18	GLU	5.6
56	B9	7	VAL	5.6
33	AJ	110	GLY	5.6
26	AC	42	VAL	5.6
26	BC	27	ALA	5.6
26	BC	203	GLU	5.6
53	B6	26	ASN	5.6
57	AA	2801(A)	A	5.6
33	AJ	79	ALA	5.6
32	BI	70	GLU	5.5
33	BJ	48	GLY	5.5
57	AA	2154	G	5.5
33	BJ	8	GLU	5.5
39	BS	108	GLY	5.5
22	Ba	1030(B)	C	5.5
45	AY	57	GLN	5.5
26	BC	41	THR	5.5
33	BJ	76	GLY	5.5
2	Ac	177	THR	5.4
13	Bn	2	ALA	5.4
33	BJ	109	SER	5.4
9	Bj	10	GLY	5.4
12	Am	119	GLY	5.4
18	Bs	40	ILE	5.4
57	AA	654(V)	A	5.4
2	Bc	193	TYR	5.4
31	BH	44	VAL	5.4
57	AA	654(J)	A	5.4
33	AJ	37	THR	5.4
57	BA	1535	A	5.4
33	AJ	5	ARG	5.4
33	BJ	101	PRO	5.3
22	Ba	1286	A	5.3

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Mol	Chain	Res	Type	RSRZ
32	BI	59	ALA	5.3
57	AA	1534	U	5.3
33	AJ	75	GLN	5.3
25	Bw	17	C	5.3
20	Au	5	ASP	5.3
26	BC	46	ALA	5.3
47	B0	42	GLY	5.2
13	Bn	8	GLU	5.2
32	AI	72	LEU	5.2
32	AI	132	PRO	5.2
57	AA	654(N)	G	5.2
33	BJ	70	GLU	5.2
6	Bg	5	ARG	5.2
57	AA	1535	A	5.2
26	AC	209	PHE	5.2
21	Ay	84	SER	5.2
33	AJ	115	GLN	5.2
22	Ba	82	U	5.1
26	AC	210	LEU	5.1
53	A6	29	ASN	5.1
53	A6	46	HIS	5.1
30	AG	47	LYS	5.1
26	AC	23	ILE	5.1
26	BC	39	ASP	5.1
1	Bb	132	LYS	5.1
47	B0	85	ALA	5.1
1	Ab	130	ARG	5.1
6	Ag	85	TYR	5.1
8	Ai	7	THR	5.1
57	AA	2803	C	5.1
9	Bj	65	LEU	5.1
6	Bg	156	TRP	5.1
53	A6	20	ASN	5.1
47	A0	8	GLY	5.1
6	Ag	84	ASN	5.0
49	B2	72	ALA	5.0
26	BC	32	GLU	5.0
33	BJ	46	GLN	5.0
57	BA	276	A	5.0
32	BI	71	ILE	5.0
26	AC	221	PRO	5.0
26	AC	203	GLU	4.9

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Mol	Chain	Res	Type	RSRZ
18	As	79	THR	4.9
40	AT	39	ARG	4.9
26	BC	217	THR	4.9
41	AU	118	GLY	4.9
56	B9	12	ASP	4.9
26	AC	41	THR	4.9
9	Aj	74	ILE	4.9
33	AJ	114	GLY	4.9
33	BJ	37	THR	4.9
39	BS	36	TYR	4.9
26	BC	36	ALA	4.9
20	Au	9	ARG	4.9
25	Aw	20	U	4.9
30	BG	35	GLU	4.9
57	AA	2138	C	4.8
26	AC	187	ALA	4.8
20	Au	22	ARG	4.8
8	Ai	82	ALA	4.8
26	AC	46	ALA	4.8
33	AJ	132	ASP	4.8
12	Bm	102	ARG	4.8
57	AA	2799	C	4.8
26	BC	30	VAL	4.8
12	Am	84	ILE	4.8
57	AA	229	A	4.8
57	AA	2894	G	4.8
26	AC	8	TYR	4.8
32	AI	85	GLU	4.8
51	B4	17	GLY	4.8
53	B6	13	CYS	4.7
8	Ai	9	ARG	4.7
45	BY	2	ARG	4.7
31	AH	129	THR	4.7
6	Ag	86	GLN	4.7
26	AC	27	ALA	4.7
26	AC	174	ALA	4.7
37	AQ	140	ALA	4.7
26	BC	4	HIS	4.7
57	BA	1509	C	4.7
31	AH	29	PRO	4.7
32	BI	80	PRO	4.7
39	BS	53	SER	4.7

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Mol	Chain	Res	Type	RSRZ
32	BI	120	ILE	4.7
6	Bg	80	VAL	4.7
26	AC	24	ASP	4.7
26	BC	43	GLU	4.7
21	Ay	16	ARG	4.7
33	BJ	106	GLN	4.7
33	AJ	6	ASN	4.6
32	AI	120	ILE	4.6
4	Ae	31	LEU	4.6
33	AJ	59	ILE	4.6
12	Am	7	VAL	4.6
26	AC	204	GLY	4.6
32	AI	81	VAL	4.6
56	B9	18	ARG	4.6
56	A9	13	LYS	4.6
22	Ba	81	U	4.6
57	BA	2117	A	4.6
6	Bg	78	ARG	4.6
26	BC	200	HIS	4.6
6	Ag	156	TRP	4.6
22	Ba	90	U	4.6
33	BJ	56	ASN	4.6
8	Ai	8	GLY	4.6
33	AJ	121	ASP	4.6
26	BC	31	LYS	4.6
25	Bw	35	A	4.5
33	AJ	41	ARG	4.5
20	Au	2	GLY	4.5
28	BE	54	GLN	4.5
56	A9	35	ARG	4.5
57	AA	1509	C	4.5
13	An	17	LYS	4.5
53	A6	52	VAL	4.5
26	BC	48	LEU	4.5
19	Bt	106	ALA	4.5
8	Bi	15	ALA	4.5
9	Aj	34	VAL	4.5
57	BA	2801	A	4.5
22	Aa	1030(B)	C	4.5
36	AP	149	GLU	4.5
45	AY	50	ARG	4.5
32	BI	130	TYR	4.5

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Mol	Chain	Res	Type	RSRZ
33	AJ	113	GLN	4.5
33	BJ	92	THR	4.5
53	B6	40	CYS	4.5
6	Ag	80	VAL	4.4
31	AH	168	PRO	4.4
53	A6	49	HIS	4.4
9	Bj	8	LEU	4.4
17	Br	54	ARG	4.4
26	AC	200	HIS	4.4
26	AC	4	HIS	4.4
25	Aw	17(A)	U	4.4
57	BA	2796	U	4.4
33	AJ	32	LEU	4.4
26	AC	171	ALA	4.4
45	AY	62	GLU	4.4
30	BG	50	ALA	4.4
29	BF	24	LEU	4.4
39	BS	24	LEU	4.4
53	A6	26	ASN	4.4
39	BS	60	GLY	4.4
53	B6	14	THR	4.4
57	AA	2147	G	4.4
12	Bm	98	VAL	4.3
56	A9	25	VAL	4.3
57	BA	654(V)	A	4.3
6	Bg	86	GLN	4.3
33	BJ	17	LEU	4.3
6	Bg	4	ARG	4.3
33	AJ	116	ILE	4.3
26	BC	167	ASP	4.3
26	BC	192	ALA	4.3
33	AJ	49	ALA	4.3
57	AA	2113	U	4.3
57	BA	654(J)	A	4.3
9	Aj	39	PRO	4.3
30	BG	2	PRO	4.3
33	BJ	4	LYS	4.3
10	Ak	12	ARG	4.3
25	Aw	16	C	4.3
53	B6	23	THR	4.3
26	BC	220	GLY	4.3
33	BJ	20	ALA	4.3

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Mol	Chain	Res	Type	RSRZ
39	BS	107	GLU	4.3
26	AC	197	LEU	4.3
29	AF	11	VAL	4.3
10	Bk	12	ARG	4.3
53	A6	39	TYR	4.3
47	B0	7	LEU	4.3
57	BA	654(N)	G	4.3
18	Bs	69	HIS	4.3
57	AA	2169	A	4.3
45	AY	46	LYS	4.3
8	Bi	7	THR	4.2
26	BC	24	ASP	4.2
52	B5	2	ALA	4.2
32	AI	127	VAL	4.2
22	Ba	1024	G	4.2
57	AA	2155	G	4.2
12	Bm	84	ILE	4.2
29	BF	133	ASN	4.2
30	AG	48	GLU	4.2
20	Au	25	LYS	4.2
26	BC	186	LEU	4.2
26	AC	227	PRO	4.2
32	AI	112	LYS	4.2
1	Bb	127	ILE	4.2
32	BI	63	ALA	4.2
8	Ai	5	TYR	4.2
20	Au	8	THR	4.2
33	BJ	7	VAL	4.2
57	AA	2158	A	4.2
26	BC	198	GLU	4.2
17	Ar	23	LYS	4.1
22	Ba	1030(A)	G	4.1
33	BJ	45	LYS	4.1
57	BA	508	G	4.1
40	AT	1	MET	4.1
41	BU	118	GLY	4.1
45	AY	55	TYR	4.1
57	BA	2793	G	4.1
32	BI	105	HIS	4.1
53	A6	12	GLU	4.1
20	Au	14	TRP	4.1
56	A9	34	GLN	4.1

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Mol	Chain	Res	Type	RSRZ
32	AI	100	ALA	4.1
1	Ab	135	GLN	4.1
22	Ba	204	U	4.1
39	AS	54	LEU	4.1
56	A9	14	CYS	4.1
57	AA	2131	G	4.1
57	AA	2793	G	4.1
30	BG	34	LEU	4.1
31	AH	18	GLU	4.1
2	Ac	189	ALA	4.1
51	B4	32	TYR	4.1
33	BJ	105	PRO	4.1
26	BC	35	THR	4.0
33	BJ	49	ALA	4.0
56	B9	37	GLY	4.0
22	Ba	1531	A	4.0
32	BI	66	GLU	4.0
15	Bp	13	HIS	4.0
45	AY	48	ALA	4.0
26	BC	191	ARG	4.0
57	AA	2310	A	4.0
26	BC	188	ASP	4.0
53	B6	35	GLU	4.0
53	A6	40	CYS	4.0
53	B6	31	PRO	4.0
53	B6	39	TYR	4.0
53	B6	9	LEU	4.0
8	Bi	92	TYR	4.0
26	BC	38	PHE	4.0
40	BT	1	MET	4.0
53	A6	50	ARG	4.0
30	AG	75	LYS	4.0
32	BI	67	ARG	4.0
53	A6	18	ARG	4.0
57	AA	2132	U	4.0
57	BA	2116	G	4.0
20	Au	24	ARG	4.0
33	AJ	76	GLY	4.0
32	AI	91	SER	4.0
53	A6	23	THR	4.0
57	AA	2145	C	4.0
9	Bj	73	ASP	4.0

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Mol	Chain	Res	Type	RSRZ
21	Ay	77	SER	3.9
26	AC	170	GLY	3.9
32	BI	108	THR	3.9
32	BI	134	PRO	3.9
57	AA	654(C)	G	3.9
26	BC	229	SER	3.9
8	Ai	10	ARG	3.9
30	AG	50	ALA	3.9
53	A6	31	PRO	3.9
2	Ac	91	LEU	3.9
53	A6	19	ARG	3.9
26	AC	40	GLU	3.9
32	AI	143	SER	3.9
30	AG	25	TYR	3.9
30	AG	86	MET	3.9
26	BC	201	LYS	3.9
43	BW	113	LYS	3.9
3	Bd	204	ILE	3.9
26	AC	190	ILE	3.9
8	Ai	125	TYR	3.9
46	AZ	97	GLU	3.9
29	AF	12	LEU	3.9
30	BG	86	MET	3.9
32	BI	119	PRO	3.9
11	Al	28	LYS	3.9
31	AH	101	ARG	3.9
2	Ac	207	VAL	3.8
26	AC	199	ALA	3.8
57	AA	2801	A	3.8
33	BJ	44	LEU	3.8
8	Bi	128	ARG	3.8
21	By	87	TYR	3.8
26	AC	35	THR	3.8
20	Bu	25	LYS	3.8
57	AA	654	A	3.8
26	AC	180	SER	3.8
28	AE	76	ARG	3.8
18	As	52	TYR	3.8
9	Aj	8	LEU	3.8
31	AH	115	VAL	3.8
32	BI	85	GLU	3.8
26	BC	5	GLY	3.8

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Mol	Chain	Res	Type	RSRZ
56	B9	30	PRO	3.8
51	B4	47	GLN	3.8
57	AA	2896	C	3.8
9	Aj	10	GLY	3.8
9	Aj	29	ARG	3.8
57	AA	508	G	3.8
25	Bw	27	U	3.8
36	BP	149	GLU	3.8
56	B9	8	LYS	3.8
33	AJ	111	LEU	3.8
28	BE	76	ARG	3.8
26	AC	39	ASP	3.7
33	AJ	93	LEU	3.7
56	B9	29	ASN	3.7
39	BS	23	ARG	3.7
11	Bl	128	ALA	3.7
9	Aj	9	ARG	3.7
33	AJ	53	VAL	3.7
9	Bj	4	ILE	3.7
19	At	101	GLY	3.7
40	BT	39	ARG	3.7
33	BJ	132	ASP	3.7
6	Ag	3	ARG	3.7
39	AS	104	GLY	3.7
33	AJ	109	SER	3.7
40	BT	92	GLY	3.7
31	AH	170	ARG	3.7
57	BA	2896	C	3.7
7	Bh	129	VAL	3.7
11	Al	128	ALA	3.7
12	Bm	7	VAL	3.7
26	AC	198	GLU	3.7
10	Ak	11	LYS	3.7
9	Aj	76	ASN	3.7
21	Ay	60	TYR	3.7
18	As	5	LEU	3.6
30	AG	49	ASP	3.6
32	AI	135	GLU	3.6
33	AJ	108	LYS	3.6
39	BS	49	VAL	3.6
20	Bu	23	PRO	3.6
32	AI	128	LEU	3.6

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Mol	Chain	Res	Type	RSRZ
8	Bi	87	GLN	3.6
31	AH	44	VAL	3.6
57	BA	654(Q)	C	3.6
9	Aj	7	LYS	3.6
39	AS	33	LYS	3.6
33	AJ	81	VAL	3.6
53	B6	22	ALA	3.6
26	AC	219	MET	3.6
5	Af	8	ILE	3.6
10	Bk	11	LYS	3.6
26	AC	183	PRO	3.6
47	A0	7	LEU	3.6
26	AC	3	LYS	3.6
36	BP	110	TYR	3.6
8	Bi	46	ALA	3.6
32	BI	143	SER	3.6
57	AA	654(M)	C	3.6
57	BA	2178	C	3.6
2	Ac	155	GLY	3.6
10	Ak	127	LYS	3.6
25	Aw	56	C	3.6
33	BJ	32	LEU	3.6
5	Af	101	ALA	3.6
32	BI	94	ALA	3.6
57	BA	2145	C	3.6
22	Ba	1001(A)	G	3.6
2	Bc	207	VAL	3.6
1	Bb	122	PHE	3.6
28	AE	54	GLN	3.6
26	BC	29	LEU	3.6
33	BJ	13	LEU	3.6
45	AY	47	LYS	3.6
57	BA	2804	C	3.6
40	BT	2	ASN	3.6
57	BA	2114	A	3.6
17	Ar	43	PHE	3.6
36	BP	51	PHE	3.6
12	Am	103	THR	3.5
57	AA	2140	C	3.5
9	Aj	70	ARG	3.5
26	AC	48	LEU	3.5
2	Bc	179	ARG	3.5

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Mol	Chain	Res	Type	RSRZ
25	Bw	36	U	3.5
31	AH	105	LEU	3.5
45	AY	79	CYS	3.5
22	Ba	1002	G	3.5
53	B6	18	ARG	3.5
1	Ab	231	GLU	3.5
26	BC	34	ALA	3.5
57	AA	156	U	3.5
32	AI	16	GLY	3.5
31	AH	45	VAL	3.5
31	BH	167	GLU	3.5
57	BA	2138	C	3.5
12	Bm	117	VAL	3.5
56	B9	32	HIS	3.5
8	Bi	126	SER	3.5
57	AA	888	C	3.5
53	A6	22	ALA	3.5
8	Bi	105	ASP	3.5
29	BF	1	MET	3.5
39	BS	59	LYS	3.5
26	AC	33	LEU	3.5
57	AA	2146	C	3.5
9	Aj	99	LYS	3.5
56	A9	30	PRO	3.5
12	Am	102	ARG	3.5
22	Ba	84	U	3.5
26	BC	26	ALA	3.5
33	AJ	31	GLY	3.5
56	B9	33	LYS	3.5
57	AA	2157	G	3.5
57	BA	654(P)	C	3.5
55	B8	48	PHE	3.5
20	Bu	22	ARG	3.5
33	AJ	42	GLN	3.5
45	AY	28	LYS	3.5
22	Ba	1027	C	3.5
57	BA	2801(A)	A	3.5
32	AI	123	LEU	3.5
12	Bm	4	ILE	3.4
31	AH	95	ARG	3.4
38	BR	118	GLU	3.4
56	B9	10	ILE	3.4

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Mol	Chain	Res	Type	RSRZ
26	AC	44	VAL	3.4
26	AC	196	ALA	3.4
1	Ab	116	GLU	3.4
9	Bj	95	GLU	3.4
18	Bs	10	PHE	3.4
26	BC	8	TYR	3.4
8	Bi	21	PRO	3.4
31	AH	158	HIS	3.4
57	BA	654(L)	G	3.4
26	AC	185	LYS	3.4
21	Ay	87	TYR	3.4
22	Aa	1027	C	3.4
9	Bj	64	GLU	3.4
22	Aa	1036	G	3.4
57	AA	2125	G	3.4
21	Ay	95	LEU	3.4
10	Ak	90	GLY	3.4
26	AC	194	ILE	3.4
31	AH	169	VAL	3.4
29	AF	10	PRO	3.4
31	AH	128	PRO	3.4
47	B0	2	ALA	3.4
32	AI	108	THR	3.4
33	BJ	131	MET	3.4
8	Ai	20	ARG	3.4
22	Ba	93	G	3.4
57	AA	2133	G	3.4
39	BS	82	ILE	3.4
26	BC	212	SER	3.4
26	BC	202	PRO	3.4
8	Ai	14	VAL	3.4
56	B9	9	ARG	3.4
21	By	95	LEU	3.4
9	Bj	7	LYS	3.4
33	BJ	50	ARG	3.4
47	A0	3	HIS	3.4
1	Ab	214	ILE	3.4
56	B9	25	VAL	3.4
47	A0	26	TYR	3.4
33	AJ	28	ASN	3.4
9	Aj	28	ARG	3.3
22	Aa	1001(A)	G	3.3

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Mol	Chain	Res	Type	RSRZ
22	Ba	1033	G	3.3
4	Be	135	THR	3.3
13	An	2	ALA	3.3
50	B3	1	MET	3.3
2	Ac	201	TYR	3.3
26	BC	57	GLN	3.3
8	Ai	79	LEU	3.3
20	Bu	14	TRP	3.3
36	BP	15	ARG	3.3
8	Bi	86	VAL	3.3
43	BW	112	GLY	3.3
57	BA	2113	U	3.3
18	As	71	LEU	3.3
8	Ai	105	ASP	3.3
40	AT	115	ARG	3.3
45	BY	63	LYS	3.3
53	B6	53	LYS	3.3
32	AI	79	ILE	3.3
57	BA	2139	C	3.3
31	AH	40	GLU	3.3
22	Aa	1002	G	3.3
22	Ba	1031	G	3.3
19	Bt	56	MET	3.3
26	BC	33	LEU	3.3
26	BC	197	LEU	3.3
31	AH	88	LEU	3.3
33	BJ	66	LEU	3.3
32	AI	62	LYS	3.3
19	At	106	ALA	3.3
22	Ba	1257	U	3.3
26	BC	49	GLY	3.3
29	BF	156	LEU	3.3
34	AN	1	MET	3.3
53	A6	47	THR	3.3
8	Ai	128	ARG	3.3
21	Ay	83	ARG	3.3
2	Bc	22	TRP	3.3
26	BC	204	GLY	3.3
39	AS	58	LEU	3.3
57	BA	2310	A	3.3
8	Bi	54	ASP	3.3
57	BA	2794	C	3.3

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Mol	Chain	Res	Type	RSRZ
33	BJ	42	GLN	3.2
39	AS	59	LYS	3.2
56	B9	15	LYS	3.2
1	Bb	136	VAL	3.2
26	AC	22	THR	3.2
56	B9	14	CYS	3.2
2	Ac	103	VAL	3.2
23	Bx	24	A	3.2
51	A4	57	GLU	3.2
17	Ar	54	ARG	3.2
30	AG	22	ARG	3.2
31	BH	169	VAL	3.2
39	AS	73	LEU	3.2
57	BA	1174	A	3.2
57	BA	1536	C	3.2
1	Ab	128	GLU	3.2
45	AY	85	VAL	3.2
2	Bc	127	ARG	3.2
31	AH	54	ARG	3.2
48	B1	85	LEU	3.2
18	Bs	39	THR	3.2
20	Au	17	THR	3.2
2	Ac	206	GLU	3.2
40	BT	36	GLU	3.2
32	AI	4	ILE	3.2
45	AY	39	VAL	3.2
57	BA	2115	G	3.2
57	BA	2141	G	3.2
8	Ai	127	LYS	3.2
33	AJ	112	LEU	3.2
31	AH	111	HIS	3.2
17	Br	31	LEU	3.2
33	AJ	46	GLN	3.2
32	AI	20	ASP	3.2
30	BG	48	GLU	3.2
33	BJ	77	PRO	3.2
50	A3	2	PRO	3.2
53	A6	25	LYS	3.2
9	Aj	96	ILE	3.2
33	BJ	80	VAL	3.2
46	AZ	5	LEU	3.2
26	AC	201	LYS	3.2

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Mol	Chain	Res	Type	RSRZ
9	Bj	72	VAL	3.2
56	A9	4	ARG	3.2
31	AH	112	PRO	3.2
27	AD	262	ARG	3.2
3	Bd	134	ASP	3.2
56	B9	28	GLU	3.2
22	Aa	1026	G	3.2
53	A6	41	PRO	3.2
57	BA	654(C)	G	3.2
57	BA	2137	C	3.1
26	AC	208	THR	3.1
34	BN	3	THR	3.1
46	BZ	88	PHE	3.1
51	B4	55	ARG	3.1
33	AJ	96	PHE	3.1
12	Am	97	PRO	3.1
53	B6	51	GLU	3.1
9	Bj	100	THR	3.1
33	BJ	74	LEU	3.1
22	Aa	1286	A	3.1
25	Bw	37	A	3.1
1	Ab	156	LYS	3.1
30	BG	75	LYS	3.1
46	AZ	4	ARG	3.1
26	AC	166	ASN	3.1
53	B6	29	ASN	3.1
33	AJ	130	THR	3.1
10	Ak	13	GLN	3.1
5	Bf	8	ILE	3.1
7	Bh	131	GLY	3.1
32	BI	114	LEU	3.1
57	BA	2132	U	3.1
26	BC	45	HIS	3.1
18	Bs	74	PHE	3.1
33	BJ	111	LEU	3.1
4	Be	9	LYS	3.1
1	Bb	128	GLU	3.1
45	AY	6	HIS	3.1
8	Ai	37	PHE	3.1
18	Bs	45	VAL	3.1
45	AY	49	VAL	3.1
20	Bu	19	GLY	3.1

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Mol	Chain	Res	Type	RSRZ
22	Aa	1257	U	3.1
32	BI	98	ALA	3.1
15	Ap	29	ASP	3.1
39	BS	87	PHE	3.1
22	Ba	1003	G	3.1
33	AJ	131	MET	3.1
2	Bc	149	ALA	3.1
8	Bi	4	TYR	3.1
11	Bl	28	LYS	3.1
18	Bs	5	LEU	3.1
25	Aw	34	C	3.1
26	AC	213	VAL	3.1
1	Bb	232	PRO	3.1
18	As	28	LYS	3.1
56	A9	33	LYS	3.1
57	BA	2169	A	3.1
22	Aa	1024	G	3.1
37	BQ	33	GLY	3.1
1	Bb	134	GLU	3.0
34	AN	3	THR	3.0
32	BI	87	LYS	3.0
57	BA	2803	C	3.0
3	Bd	96	LEU	3.0
57	BA	2135	A	3.0
22	Ba	83	U	3.0
10	Bk	127	LYS	3.0
33	BJ	64	LYS	3.0
2	Bc	168	ALA	3.0
30	BG	103	LEU	3.0
33	AJ	24	PHE	3.0
56	B9	16	VAL	3.0
2	Ac	53	ALA	3.0
8	Bi	93	ARG	3.0
9	Aj	32	ALA	3.0
26	AC	205	ALA	3.0
2	Ac	184	TYR	3.0
30	AG	160	VAL	3.0
33	AJ	104	ILE	3.0
15	Bp	35	LYS	3.0
32	AI	3	VAL	3.0
34	AN	72	TYR	3.0
30	BG	26	GLN	3.0

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Mol	Chain	Res	Type	RSRZ
57	AA	1536	C	3.0
33	AJ	105	PRO	3.0
2	Bc	101	LEU	3.0
22	Aa	1447	A	3.0
33	BJ	83	TYR	3.0
39	AS	34	HIS	3.0
1	Ab	123	ALA	3.0
9	Bj	99	LYS	3.0
21	By	62	LEU	3.0
8	Ai	4	TYR	3.0
6	Bg	26	PHE	3.0
9	Bj	59	SER	3.0
20	Bu	3	LYS	3.0
46	AZ	156	LYS	3.0
7	Bh	25	ASP	3.0
19	At	9	ASN	3.0
33	AJ	56	ASN	3.0
53	B6	28	ARG	3.0
51	B4	18	CYS	3.0
4	Ae	29	GLY	3.0
32	AI	87	LYS	3.0
52	A5	3	LYS	3.0
6	Bg	3	ARG	3.0
10	Bk	42	TRP	3.0
26	AC	55	SER	3.0
26	BC	196	ALA	3.0
12	Am	100	GLY	3.0
28	AE	69	LYS	3.0
19	At	92	LEU	3.0
33	BJ	26	LEU	3.0
8	Ai	15	ALA	3.0
30	BG	36	LYS	3.0
8	Ai	36	TYR	3.0
8	Ai	98	PRO	3.0
25	Bw	26	G	3.0
57	BA	2805	G	3.0
20	Bu	9	ARG	3.0
8	Bi	96	LEU	3.0
16	Bq	98	LEU	3.0
29	BF	20	LEU	3.0
20	Bu	17	THR	3.0
28	BE	204	ALA	3.0

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Mol	Chain	Res	Type	RSRZ
33	AJ	33	PRO	2.9
56	B9	4	ARG	2.9
4	Be	24	ARG	2.9
9	Bj	9	ARG	2.9
53	B6	21	TYR	2.9
39	BS	61	ASN	2.9
8	Ai	13	ALA	2.9
10	Bk	21	ILE	2.9
47	B0	52	GLY	2.9
26	AC	169	THR	2.9
32	AI	93	THR	2.9
53	B6	47	THR	2.9
57	AA	2135	A	2.9
2	Ac	87	LEU	2.9
2	Ac	19	GLU	2.9
33	BJ	16	ASN	2.9
39	AS	61	ASN	2.9
33	AJ	82	PHE	2.9
39	AS	48	LEU	2.9
31	AH	52	VAL	2.9
45	BY	98	VAL	2.9
20	Au	10	ARG	2.9
30	AG	137	GLU	2.9
47	A0	2	ALA	2.9
18	As	41	VAL	2.9
42	AV	65	GLY	2.9
23	Ax	23	A	2.9
57	BA	654(O)	G	2.9
57	BA	2164	C	2.9
1	Ab	132	LYS	2.9
45	AY	61	ILE	2.9
32	BI	89	TYR	2.9
9	Aj	31	GLY	2.9
30	AG	127	GLY	2.9
26	AC	186	LEU	2.9
33	BJ	6	ASN	2.9
40	AT	2	ASN	2.9
45	AY	3	VAL	2.9
45	BY	47	LYS	2.9
47	A0	4	LYS	2.9
56	B9	13	LYS	2.9
56	A9	36	GLN	2.9

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Mol	Chain	Res	Type	RSRZ
22	Aa	1030(A)	G	2.9
31	AH	85	LYS	2.9
31	AH	83	TYR	2.9
57	AA	2897	U	2.9
9	Bj	33	GLN	2.9
12	Bm	5	ALA	2.9
31	AH	123	PHE	2.9
57	BA	2143	C	2.9
2	Bc	200	ALA	2.9
53	A6	6	ARG	2.9
26	BC	56	ASP	2.9
26	BC	222	SER	2.9
6	Bg	79	ARG	2.9
18	Bs	29	ARG	2.9
57	AA	654(P)	C	2.9
9	Aj	69	ASN	2.8
26	BC	18	ASN	2.8
22	Aa	1117	G	2.8
2	Bc	206	GLU	2.8
26	BC	215	VAL	2.8
27	AD	83	GLU	2.8
32	BI	78	THR	2.8
33	AJ	92	THR	2.8
26	AC	28	ARG	2.8
23	Bx	13	A	2.8
1	Ab	122	PHE	2.8
5	Bf	7	ASN	2.8
26	AC	52	PRO	2.8
46	AZ	60	GLU	2.8
57	AA	2792	G	2.8
1	Bb	227	GLY	2.8
9	Bj	35	SER	2.8
19	At	103	GLY	2.8
26	AC	12	LEU	2.8
25	Aw	72	A	2.8
13	An	25	VAL	2.8
3	Ad	123	HIS	2.8
26	BC	10	ALA	2.8
29	AF	128	ALA	2.8
57	AA	2805	G	2.8
57	AA	2893	G	2.8
9	Aj	3	LYS	2.8

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Mol	Chain	Res	Type	RSRZ
54	B7	47	ARG	2.8
2	Bc	169	ALA	2.8
33	BJ	63	LEU	2.8
31	AH	58	GLU	2.8
39	AS	105	ALA	2.8
39	BS	48	LEU	2.8
56	B9	22	ARG	2.8
25	Aw	22	G	2.8
25	Aw	55	U	2.8
26	BC	211	ARG	2.8
34	AN	73	THR	2.8
9	Bj	63	PHE	2.8
32	AI	131	LYS	2.8
48	A1	85	LEU	2.8
57	AA	2123	G	2.8
10	Bk	19	ALA	2.8
33	AJ	97	ALA	2.8
33	BJ	18	GLU	2.8
57	AA	1026	U	2.8
8	Ai	62	TYR	2.8
19	At	104	LEU	2.8
21	By	11	ALA	2.8
25	Aw	19	G	2.8
2	Ac	205	GLY	2.8
53	B6	8	LYS	2.8
11	Bl	68	ALA	2.8
26	AC	211	ARG	2.8
33	AJ	106	GLN	2.8
16	Aq	59	ILE	2.8
17	Br	78	LEU	2.8
25	Bw	45	G	2.8
8	Bi	119	ALA	2.8
22	Aa	1531	A	2.8
28	BE	57	LYS	2.8
8	Ai	33	PHE	2.8
1	Ab	92	TYR	2.8
13	An	50	LYS	2.8
33	BJ	27	VAL	2.8
57	AA	275	G	2.8
26	AC	49	GLY	2.7
11	Bl	64	TYR	2.7
28	AE	151	TYR	2.7

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Mol	Chain	Res	Type	RSRZ
21	By	15	TRP	2.7
5	Af	90	VAL	2.7
9	Aj	71	LEU	2.7
25	Bw	61	C	2.7
39	AS	26	LEU	2.7
22	Ba	1030(C)	G	2.7
22	Ba	1032	G	2.7
25	Aw	18	G	2.7
26	AC	191	ARG	2.7
29	BF	23	ASP	2.7
57	AA	2112	G	2.7
38	AR	11	ASN	2.7
2	Bc	87	LEU	2.7
9	Aj	85	LEU	2.7
12	Bm	119	GLY	2.7
26	BC	50	ILE	2.7
36	AP	147	LEU	2.7
11	Bl	33	ARG	2.7
57	AA	2164	C	2.7
31	AH	17	VAL	2.7
22	Ba	1026	G	2.7
25	Aw	33	U	2.7
33	BJ	47	ASN	2.7
49	B2	43	GLN	2.7
2	Bc	201	TYR	2.7
8	Bi	106	ALA	2.7
14	Ao	52	SER	2.7
30	AG	128	ARG	2.7
30	AG	177	GLY	2.7
42	AV	94	LEU	2.7
22	Ba	1138	G	2.7
26	BC	21	TYR	2.7
33	AJ	54	ALA	2.7
5	Af	34	GLY	2.7
11	Bl	19	ARG	2.7
26	BC	52	PRO	2.7
27	BD	262	ARG	2.7
8	Ai	65	VAL	2.7
33	AJ	45	LYS	2.7
4	Be	31	LEU	2.7
11	Bl	32	PHE	2.7
33	BJ	115	GLN	2.7

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Mol	Chain	Res	Type	RSRZ
24	Bv	1	C	2.7
31	AH	131	VAL	2.7
32	AI	19	VAL	2.7
45	BY	84	ARG	2.7
1	Ab	70	PHE	2.7
2	Bc	91	LEU	2.7
26	BC	182	PRO	2.7
18	As	36	ARG	2.7
31	BH	170	ARG	2.7
36	AP	15	ARG	2.7
45	AY	65	ALA	2.7
6	Bg	34	GLY	2.7
26	BC	193	PHE	2.7
8	Bi	98	PRO	2.7
23	Bx	23	A	2.7
6	Ag	78	ARG	2.7
9	Aj	5	ARG	2.7
56	A9	9	ARG	2.7
36	AP	27	HIS	2.7
33	AJ	48	GLY	2.7
56	A9	26	ILE	2.7
45	BY	53	PRO	2.7
26	AC	216	THR	2.7
33	AJ	27	VAL	2.7
32	BI	91	SER	2.7
39	AS	43	GLU	2.7
39	BS	51	ALA	2.7
56	B9	5	ALA	2.7
56	B9	21	GLY	2.7
22	Aa	90	U	2.7
57	BA	654(T)	C	2.7
23	Ax	13	A	2.6
31	AH	53	GLU	2.6
55	A8	48	PHE	2.6
56	A9	15	LYS	2.6
18	Bs	37	ARG	2.6
1	Ab	131	PRO	2.6
31	AH	50	VAL	2.6
8	Bi	33	PHE	2.6
8	Bi	56	LEU	2.6
30	BG	25	TYR	2.6
47	A0	68	GLU	2.6

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Mol	Chain	Res	Type	RSRZ
39	BS	34	HIS	2.6
51	B4	31	ILE	2.6
16	Bq	100	LYS	2.6
27	AD	26	LYS	2.6
45	AY	43	ASN	2.6
39	BS	84	GLN	2.6
45	BY	60	PHE	2.6
13	An	55	GLY	2.6
25	Bw	50	U	2.6
57	AA	2111	C	2.6
9	Bj	34	VAL	2.6
45	BY	28	LYS	2.6
45	BY	45	VAL	2.6
46	BZ	96	VAL	2.6
56	A9	11	CYS	2.6
8	Ai	19	LEU	2.6
23	Ax	22	A	2.6
29	AF	24	LEU	2.6
32	BI	64	GLU	2.6
33	AJ	71	LEU	2.6
39	BS	58	LEU	2.6
42	AV	36	PRO	2.6
15	Bp	30	GLY	2.6
56	A9	5	ALA	2.6
9	Aj	68	HIS	2.6
30	BG	66	GLN	2.6
32	BI	52	ARG	2.6
40	AT	91	ARG	2.6
25	Aw	21	A	2.6
36	BP	64	LYS	2.6
47	A0	85	ALA	2.6
47	B0	8	GLY	2.6
9	Bj	79	ARG	2.6
12	Bm	94	ARG	2.6
39	AS	23	ARG	2.6
2	Bc	166	GLU	2.6
9	Aj	90	LEU	2.6
57	BA	2140	C	2.6
26	AC	45	HIS	2.6
22	Ba	202	U	2.6
26	BC	207	GLY	2.6
10	Ak	89	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
18	As	78	ARG	2.6
33	AJ	36	GLU	2.6
33	BJ	102	LYS	2.6
9	Aj	19	SER	2.6
18	As	38	SER	2.6
57	AA	1173	G	2.6
57	BA	2894	G	2.6
39	AS	37	ALA	2.6
56	A9	24	TYR	2.6
12	Am	117	VAL	2.6
20	Au	3	LYS	2.6
21	Ay	89	GLU	2.6
39	AS	87	PHE	2.6
40	BT	11	GLU	2.6
9	Bj	96	ILE	2.6
26	BC	23	ILE	2.6
57	AA	155	U	2.6
52	A5	45	VAL	2.6
57	BA	2159	G	2.6
26	BC	13	GLU	2.6
39	BS	89	ARG	2.6
46	BZ	133	ILE	2.6
39	BS	33	LYS	2.6
1	Bb	7	VAL	2.6
2	Bc	151	VAL	2.6
2	Bc	198	VAL	2.6
28	BE	75	VAL	2.6
9	Bj	61	GLU	2.6
26	BC	226	ASN	2.6
17	Br	32	ARG	2.6
22	Ba	1023	G	2.6
18	As	80	TYR	2.6
20	Au	21	TYR	2.6
26	BC	187	ALA	2.6
10	Bk	80	VAL	2.6
33	AJ	118	THR	2.6
4	Ae	45	PHE	2.6
33	AJ	51	LEU	2.5
53	A6	51	GLU	2.6
15	Ap	19	ILE	2.5
22	Ba	1447	A	2.5
33	AJ	55	LYS	2.5

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Mol	Chain	Res	Type	RSRZ
9	Bj	94	VAL	2.5
25	Aw	6	G	2.5
57	BA	352	G	2.5
57	BA	1176	G	2.5
1	Ab	163	PHE	2.5
12	Bm	113	PRO	2.5
40	AT	106	SER	2.5
9	Aj	38	ILE	2.5
5	Bf	88	VAL	2.5
6	Bg	18	TYR	2.5
20	Bu	21	TYR	2.5
33	BJ	62	ALA	2.5
26	AC	32	GLU	2.5
53	A6	37	ARG	2.5
9	Aj	100	THR	2.5
26	BC	210	LEU	2.5
8	Ai	95	LYS	2.5
57	AA	2115	G	2.5
57	AA	2318	G	2.5
57	BA	2144	U	2.5
18	Bs	78	ARG	2.5
50	A3	29	ARG	2.5
7	Ah	107	LEU	2.5
8	Bi	19	LEU	2.5
21	Ay	13	LYS	2.5
26	AC	31	LYS	2.5
31	BH	85	LYS	2.5
3	Ad	152	SER	2.5
8	Ai	126	SER	2.5
26	AC	220	GLY	2.5
43	AW	112	GLY	2.5
49	B2	69	ARG	2.5
8	Bi	61	ALA	2.5
9	Aj	65	LEU	2.5
9	Bj	22	LYS	2.5
6	Ag	26	PHE	2.5
8	Bi	82	ALA	2.5
19	At	45	GLN	2.5
34	BN	1	MET	2.5
26	AC	2	PRO	2.5
26	AC	50	ILE	2.5
27	BD	35	LYS	2.5

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Mol	Chain	Res	Type	RSRZ
40	AT	27	THR	2.5
28	AE	132	HIS	2.5
32	AI	101	LEU	2.5
57	AA	2804	C	2.5
57	BA	2174	C	2.5
9	Aj	4	ILE	2.5
9	Aj	75	ILE	2.5
39	BS	28	VAL	2.5
32	BI	75	LEU	2.5
39	BS	52	SER	2.5
9	Bj	70	ARG	2.5
20	Au	23	PRO	2.5
8	Ai	87	GLN	2.5
10	Ak	42	TRP	2.5
11	Bl	61	THR	2.5
31	AH	87	LEU	2.5
48	A1	71	TYR	2.5
9	Aj	44	VAL	2.5
6	Ag	79	ARG	2.5
15	Bp	6	LEU	2.5
21	By	86	VAL	2.5
30	BG	95	ARG	2.5
33	AJ	34	ALA	2.5
53	B6	50	ARG	2.5
2	Bc	192	THR	2.5
25	Bw	75	C	2.5
46	AZ	150	LEU	2.5
37	BQ	140	ALA	2.5
26	BC	51	ASP	2.5
57	BA	888	C	2.5
1	Ab	36	ARG	2.5
14	Ao	60	VAL	2.5
33	AJ	50	ARG	2.5
45	AY	2	ARG	2.5
14	Bo	84	LYS	2.5
31	BH	103	LEU	2.5
33	AJ	107	VAL	2.5
37	BQ	10	ARG	2.5
39	BS	11	LYS	2.5
31	BH	102	ALA	2.4
33	BJ	95	GLN	2.4
57	AA	2153	G	2.4

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Mol	Chain	Res	Type	RSRZ
6	Bg	90	GLU	2.4
31	AH	89	ILE	2.4
39	AS	82	ILE	2.4
25	Aw	35	A	2.4
26	BC	9	ARG	2.4
46	AZ	98	MET	2.4
57	BA	229	A	2.4
1	Ab	155	LEU	2.4
1	Bb	152	PHE	2.4
31	AH	49	VAL	2.4
15	Bp	59	TRP	2.4
12	Bm	8	GLU	2.4
21	Ay	80	LYS	2.4
53	B6	24	GLU	2.4
53	B6	46	HIS	2.4
56	A9	31	LYS	2.4
7	Bh	127	LEU	2.4
32	AI	5	LEU	2.4
57	BA	2125	G	2.4
15	Bp	17	TYR	2.4
21	By	94	ILE	2.4
1	Bb	40	HIS	2.4
18	Bs	47	HIS	2.4
45	BY	85	VAL	2.4
11	Al	33	ARG	2.4
21	Ay	10	ARG	2.4
30	AG	81	LYS	2.4
57	AA	2159	G	2.4
57	BA	2112	G	2.4
4	Be	89	ILE	2.4
1	Bb	28	PHE	2.4
6	Ag	153	HIS	2.4
7	Bh	61	VAL	2.4
7	Bh	119	LEU	2.4
32	BI	133	HIS	2.4
19	At	48	LYS	2.4
26	BC	205	ALA	2.4
28	BE	69	LYS	2.4
31	AH	102	ALA	2.4
33	AJ	35	LYS	2.4
47	A0	5	LYS	2.4
56	B9	17	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
12	Bm	64	TRP	2.4
25	Bw	1	C	2.4
30	AG	43	LEU	2.4
46	AZ	28	MET	2.4
57	AA	2165	G	2.4
57	BA	2121	G	2.4
57	BA	2173	A	2.4
21	Ay	88	SER	2.4
33	AJ	57	THR	2.4
57	BA	2189	U	2.4
2	Ac	77	ILE	2.4
21	By	89	GLU	2.4
53	A6	54	ILE	2.4
1	Ab	136	VAL	2.4
21	Ay	93	ARG	2.4
33	AJ	4	LYS	2.4
57	BA	654(M)	C	2.4
32	BI	110	ASP	2.4
25	Bw	10	G	2.4
39	BS	35	ILE	2.4
53	A6	24	GLU	2.4
16	Bq	43	LEU	2.4
17	Ar	76	LEU	2.4
38	AR	2	ARG	2.4
30	AG	89	GLY	2.4
46	AZ	164	ALA	2.4
3	Ad	158	ILE	2.4
8	Bi	103	THR	2.4
26	AC	217	THR	2.4
31	AH	92	ILE	2.4
47	A0	9	SER	2.4
57	AA	654(T)	C	2.4
6	Ag	4	ARG	2.4
17	Ar	51	LEU	2.4
18	As	29	ARG	2.4
57	BA	2134	A	2.4
31	BH	43	VAL	2.4
45	BY	5	MET	2.4
57	AA	2156	G	2.4
36	AP	127	ALA	2.4
39	BS	43	GLU	2.4
31	AH	51	ARG	2.4

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Mol	Chain	Res	Type	RSRZ
18	As	45	VAL	2.4
26	BC	22	THR	2.4
32	BI	116	LEU	2.4
42	AV	24	LYS	2.4
21	By	47	MET	2.4
32	BI	137	PRO	2.4
57	BA	654	A	2.4
11	Al	127	GLU	2.4
26	AC	184	GLU	2.4
47	A0	76	GLY	2.4
2	Ac	124	ILE	2.4
18	As	40	ILE	2.4
27	BD	26	LYS	2.4
38	BR	105	ARG	2.4
33	BJ	51	LEU	2.4
4	Be	98	THR	2.4
26	AC	218	THR	2.4
26	BC	216	THR	2.4
4	Ae	30	ALA	2.4
9	Bj	3	LYS	2.4
47	A0	74	ARG	2.4
2	Bc	128	PHE	2.4
4	Be	45	PHE	2.4
30	AG	23	PHE	2.4
46	AZ	96	VAL	2.4
11	Al	19	ARG	2.3
46	BZ	4	ARG	2.3
3	Bd	120	LEU	2.3
8	Bi	81	ILE	2.3
15	Ap	48	TRP	2.3
25	Aw	32	C	2.3
26	BC	12	LEU	2.3
36	AP	51	PHE	2.3
54	A7	18	PHE	2.3
22	Aa	1035	A	2.3
6	Ag	5	ARG	2.3
12	Am	88	ARG	2.3
20	Bu	12	LYS	2.3
31	AH	55	PRO	2.3
31	AH	56	SER	2.3
10	Bk	89	ALA	2.3
36	AP	91	PHE	2.3

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Mol	Chain	Res	Type	RSRZ
47	B0	57	PHE	2.3
57	AA	654(O)	G	2.3
22	Aa	1006	C	2.3
22	Aa	1030	C	2.3
22	Aa	1129	C	2.3
26	BC	184	GLU	2.3
12	Bm	112	GLY	2.3
45	AY	89	PHE	2.3
21	Ay	15	TRP	2.3
39	AS	57	LYS	2.3
51	B4	10	VAL	2.3
32	AI	1	MET	2.3
22	Aa	92	C	2.3
34	BN	68	GLU	2.3
53	B6	41	PRO	2.3
56	A9	10	ILE	2.3
36	BP	27	HIS	2.3
46	AZ	112	ARG	2.3
46	AZ	186	GLU	2.3
2	Bc	147	LYS	2.3
33	BJ	10	LEU	2.3
17	Br	56	THR	2.3
31	AH	38	SER	2.3
33	BJ	99	SER	2.3
57	BA	2170	A	2.3
39	BS	32	LEU	2.3
1	Bb	197	VAL	2.3
15	Bp	19	ILE	2.3
18	As	75	ALA	2.3
22	Ba	220	G	2.3
17	Ar	88	LYS	2.3
26	AC	5	GLY	2.3
29	BF	207	GLY	2.3
33	BJ	19	ARG	2.3
45	BY	50	ARG	2.3
1	Ab	127	ILE	2.3
28	BE	198	VAL	2.3
46	AZ	171	ILE	2.3
33	BJ	91	LYS	2.3
8	Bi	104	ARG	2.3
40	AT	3	ARG	2.3
55	A8	35	GLN	2.3

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Mol	Chain	Res	Type	RSRZ
1	Bb	163	PHE	2.3
6	Bg	22	LEU	2.3
18	As	16	LEU	2.3
2	Bc	189	ALA	2.3
5	Bf	101	ALA	2.3
34	AN	85	ILE	2.3
45	AY	24	VAL	2.3
21	Ay	23	ARG	2.3
44	AX	69	TYR	2.3
30	BG	106	LEU	2.3
47	A0	75	LEU	2.3
53	A6	53	LYS	2.3
25	Bw	5	G	2.3
33	AJ	124	ALA	2.3
42	BV	21	ARG	2.3
49	A2	66	GLU	2.3
56	B9	19	ARG	2.3
15	Bp	38	TYR	2.3
30	BG	107	LEU	2.3
48	B1	31	GLY	2.3
9	Bj	38	ILE	2.3
22	Ba	1030(D)	A	2.3
8	Bi	94	ALA	2.2
16	Aq	44	ALA	2.2
40	BT	27	THR	2.3
56	B9	31	LYS	2.3
57	AA	2141	G	2.3
57	BA	278	A	2.3
25	Bw	74	C	2.2
26	AC	21	TYR	2.2
45	AY	56	PRO	2.2
6	Bg	53	LYS	2.2
36	BP	70	GLN	2.2
3	Bd	31	CYS	2.2
26	BC	28	ARG	2.2
45	BY	86	ARG	2.2
23	Bx	22	A	2.2
57	BA	2151	G	2.2
55	A8	64	TYR	2.2
28	AE	150	VAL	2.2
38	BR	3	HIS	2.2
39	AS	39	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
46	BZ	80	ARG	2.2
31	BH	155	SER	2.2
33	AJ	20	ALA	2.2
32	BI	74	ASN	2.2
18	Bs	30	LEU	2.2
26	BC	11	LEU	2.2
32	AI	12	LEU	2.2
8	Bi	65	VAL	2.2
15	Bp	71	ARG	2.2
26	AC	215	VAL	2.2
8	Ai	106	ALA	2.2
13	Bn	17	LYS	2.2
25	Aw	28	C	2.2
57	AA	157	U	2.2
2	Ac	179	ARG	2.2
31	BH	100	GLY	2.2
36	BP	106	LEU	2.2
56	A9	19	ARG	2.2
1	Bb	229	VAL	2.2
2	Ac	198	VAL	2.2
9	Aj	72	VAL	2.2
50	A3	6	VAL	2.2
51	A4	56	VAL	2.2
29	BF	137	LYS	2.2
6	Ag	77	SER	2.2
12	Am	80	ARG	2.2
18	Bs	79	THR	2.2
40	BT	115	ARG	2.2
55	A8	37	SER	2.2
57	AA	2179	C	2.2
15	Bp	2	VAL	2.2
56	A9	23	VAL	2.2
31	AH	30	LYS	2.2
32	BI	117	GLU	2.2
33	BJ	86	PRO	2.2
31	AH	61	HIS	2.2
1	Ab	31	TYR	2.2
12	Bm	87	TYR	2.2
13	An	32	SER	2.2
13	An	60	SER	2.2
26	AC	30	VAL	2.2
42	AV	5	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
57	BA	2118	U	2.2
8	Bi	90	PRO	2.2
39	BS	68	GLN	2.2
6	Ag	94	ARG	2.2
16	Bq	75	ARG	2.2
10	Bk	98	LEU	2.2
10	Bk	50	TYR	2.2
12	Bm	27	LYS	2.2
33	BJ	87	VAL	2.2
12	Bm	97	PRO	2.2
19	At	89	ARG	2.2
45	AY	84	ARG	2.2
32	AI	96	ASP	2.2
3	Bd	207	TYR	2.2
10	Bk	82	VAL	2.2
6	Bg	155	ARG	2.2
30	BG	164	GLU	2.2
12	Am	118	ALA	2.2
39	BS	55	ALA	2.2
18	Bs	71	LEU	2.2
36	AP	138	LEU	2.2
18	Bs	46	GLY	2.2
6	Bg	66	VAL	2.2
24	Av	1	C	2.2
1	Bb	130	ARG	2.2
10	Ak	50	TYR	2.2
11	Bl	127	GLU	2.2
31	BH	164	TYR	2.2
48	B1	58	ILE	2.2
57	AA	352	G	2.2
57	BA	2155	G	2.2
37	AQ	5	ARG	2.2
40	BT	29	ARG	2.2
1	Ab	90	MET	2.2
40	AT	135	ALA	2.2
29	BF	25	PRO	2.2
57	BA	271(K)	U	2.2
18	As	9	VAL	2.2
31	AH	42	ARG	2.2
45	AY	86	ARG	2.2
56	B9	24	TYR	2.2
6	Ag	144	MET	2.2

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Mol	Chain	Res	Type	RSRZ
8	Bi	50	LEU	2.2
8	Bi	102	LEU	2.2
26	AC	226	ASN	2.2
42	AV	16	PRO	2.2
53	A6	28	ARG	2.2
18	Bs	73	GLU	2.1
42	AV	93	GLU	2.1
1	Bb	133	LYS	2.1
30	BG	100	TRP	2.1
55	A8	4	MET	2.1
40	BT	6	LEU	2.1
8	Ai	103	THR	2.1
57	BA	2152	G	2.1
25	Aw	47	U	2.1
19	Bt	59	ALA	2.1
30	AG	90	LEU	2.1
50	A3	28	LEU	2.1
13	An	8	GLU	2.1
16	Bq	78	GLU	2.1
18	As	42	PRO	2.1
25	Aw	62	C	2.1
31	AH	37	VAL	2.1
53	B6	12	GLU	2.1
36	AP	128	HIS	2.1
36	BP	30	THR	2.1
45	AY	92	ASN	2.1
25	Bw	47	U	2.1
33	BJ	25	PHE	2.1
41	AU	58	ARG	2.1
6	Bg	131	LYS	2.1
22	Aa	1001	A	2.1
58	AB	88	C	2.1
3	Bd	135	LEU	2.1
29	BF	172	TRP	2.1
33	BJ	9	LEU	2.1
48	B1	60	PHE	2.1
45	AY	100	ALA	2.1
20	Au	16	GLY	2.1
33	BJ	31	GLY	2.1
42	BV	19	LYS	2.1
6	Ag	113	GLU	2.1
33	AJ	94	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
57	BA	2123	G	2.1
6	Bg	72	ARG	2.1
3	Bd	165	MET	2.1
16	Bq	6	LEU	2.1
12	Bm	36	LYS	2.1
32	BI	1	MET	2.1
12	Bm	85	GLY	2.1
26	AC	26	ALA	2.1
12	Am	8	GLU	2.1
44	AX	51	VAL	2.1
46	BZ	11	GLU	2.1
1	Ab	96	ARG	2.1
8	Ai	49	PRO	2.1
15	Ap	6	LEU	2.1
32	AI	114	LEU	2.1
7	Ah	9	MET	2.1
22	Ba	1036	G	2.1
45	AY	63	LYS	2.1
54	A7	1	MET	2.1
20	Au	6	ARG	2.1
9	Aj	55	LYS	2.1
12	Am	96	LEU	2.1
14	Ao	2	PRO	2.1
31	AH	103	LEU	2.1
39	BS	76	LYS	2.1
53	B6	45	LYS	2.1
55	A8	29	LYS	2.1
57	BA	2122	U	2.1
45	AY	35	TYR	2.1
32	AI	78	THR	2.1
33	AJ	126	ALA	2.1
33	BJ	133	GLU	2.1
41	AU	89	GLU	2.1
8	Bi	9	ARG	2.1
26	AC	57	GLN	2.1
51	A4	47	GLN	2.1
32	BI	109	ILE	2.1
57	AA	2173	A	2.1
8	Ai	70	LYS	2.1
21	By	43	LYS	2.1
34	AN	70	LYS	2.1
57	BA	34	C	2.1

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Mol	Chain	Res	Type	RSRZ
9	Bj	37	PRO	2.1
29	BF	12	LEU	2.1
9	Aj	18	ALA	2.1
18	Bs	38	SER	2.1
16	Aq	75	ARG	2.1
41	AU	86	ALA	2.1
18	As	48	THR	2.1
33	BJ	130	THR	2.1
39	BS	25	ARG	2.1
47	B0	41	ARG	2.1
22	Aa	1260	C	2.1
57	BA	1175	U	2.1
14	Ao	56	LEU	2.1
46	AZ	125	LEU	2.1
3	Bd	37	PRO	2.1
4	Be	154	GLY	2.1
8	Ai	90	PRO	2.1
18	Bs	36	ARG	2.1
45	AY	66	PRO	2.1
51	B4	48	ARG	2.1
33	AJ	43	ALA	2.1
21	By	77	SER	2.1
22	Aa	1029	C	2.1
25	Aw	15	G	2.1
57	AA	2127	G	2.1
42	BV	20	LEU	2.1
45	BY	92	ASN	2.1
50	A3	30	ARG	2.1
1	Bb	148	TYR	2.1
11	Al	64	TYR	2.1
1	Bb	101	MET	2.1
26	BC	168	LYS	2.1
49	A2	11	GLU	2.1
6	Ag	75	VAL	2.1
25	Bw	76	A	2.0
57	AA	2134	A	2.0
30	BG	80	PHE	2.0
31	AH	132	ARG	2.0
56	A9	29	ASN	2.0
57	BA	654(R)	C	2.0
1	Ab	134	GLU	2.0
11	Al	16	GLU	2.0

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Mol	Chain	Res	Type	RSRZ
27	AD	169	GLU	2.0
28	BE	88	GLY	2.0
5	Bf	90	VAL	2.0
26	AC	10	ALA	2.0
54	B7	1	MET	2.0
19	At	86	ARG	2.0
35	AO	42	SER	2.0
50	A3	26	LEU	2.0
15	Ap	59	TRP	2.0
25	Aw	27	U	2.0
25	Bw	20	U	2.0
27	AD	35	LYS	2.0
42	AV	19	LYS	2.0
17	Br	28	GLU	2.0
44	AX	55	ASN	2.0
57	AA	1046	A	2.0
36	BP	28	GLY	2.0
57	AA	277	C	2.0
31	AH	113	VAL	2.0
36	BP	150	ALA	2.0
39	BS	37	ALA	2.0
1	Ab	19	HIS	2.0
3	Bd	125	HIS	2.0
20	Au	13	ILE	2.0
26	AC	225	ILE	2.0
53	B6	54	ILE	2.0
2	Ac	43	LEU	2.0
39	BS	73	LEU	2.0
1	Ab	117	GLU	2.0
55	B8	34	TRP	2.0
7	Bh	118	VAL	2.0
17	Br	34	TYR	2.0
39	BS	94	TYR	2.0
57	AA	2122	U	2.0
55	B8	23	VAL	2.0
1	Bb	222	ILE	2.0
10	Ak	126	ARG	2.0
19	At	100	ILE	2.0
40	BT	85	LYS	2.0
1	Bb	61	LEU	2.0
9	Aj	62	HIS	2.0
28	AE	57	LYS	2.0

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Mol	Chain	Res	Type	RSRZ
19	Bt	18	GLN	2.0
30	AG	19	LEU	2.0
32	BI	41	GLU	2.0
46	BZ	186	GLU	2.0
36	AP	87	ASP	2.0
13	Bn	13	THR	2.0
15	Bp	18	ARG	2.0
26	AC	195	ARG	2.0
28	AE	149	ARG	2.0
29	AF	18	ARG	2.0
8	Bi	95	LYS	2.0
32	AI	129	THR	2.0
36	AP	33	ARG	2.0
36	BP	107	LYS	2.0
7	Bh	63	LEU	2.0
8	Ai	73	GLN	2.0
22	Ba	1129	C	2.0
2	Ac	138	VAL	2.0
7	Bh	116	LYS	2.0
8	Ai	53	VAL	2.0
11	Bl	110	VAL	2.0
31	BH	99	VAL	2.0
46	AZ	153	SER	2.0
1	Ab	37	ASN	2.0
3	Bd	70	ILE	2.0
33	BJ	39	ALA	2.0
19	Bt	72	LEU	2.0
25	Aw	36	U	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
23	OMU	Bx	19	21/22	0.86	0.29	-	129,157,162,162	0
23	OMU	Ax	19	21/22	0.89	0.23	-	133,158,162,164	0
23	A2M	Bx	20	23/24	0.91	0.22	-	161,170,172,175	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
24	5MU	Bv	54	21/22	0.93	0.15	-	121,125,138,138	0
23	OMG	Ax	21	24/25	0.78	0.33	-	174,180,182,184	0
23	OMG	Bx	21	24/25	0.89	0.27	-	177,182,184,186	0
24	5MU	Av	54	21/22	0.93	0.15	-	139,140,144,145	0
23	A2M	Ax	20	23/24	0.85	0.28	-	160,168,169,173	0

6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	BA	3012	1/1	0.95	1.12	106.75	69,69,69,69	0
60	MG	BA	3152	1/1	0.91	1.02	95.48	92,92,92,92	0
60	MG	Ba	1645	1/1	0.37	1.25	83.25	89,89,89,89	0
60	MG	Ba	1728	1/1	0.45	1.10	79.27	113,113,113,113	0
60	MG	AA	2968	1/1	0.41	0.67	66.18	73,73,73,73	0
60	MG	AA	3105	1/1	0.84	1.44	65.63	92,92,92,92	0
60	MG	BA	3036	1/1	0.77	0.63	56.91	73,73,73,73	0
60	MG	BA	3213	1/1	0.87	1.01	55.76	81,81,81,81	0
60	MG	BA	3049	1/1	0.72	0.96	50.55	82,82,82,82	0
60	MG	Aa	1623	1/1	0.79	1.13	49.15	107,107,107,107	0
60	MG	AA	3058	1/1	0.94	0.70	49.06	54,54,54,54	0
60	MG	BA	3215	1/1	0.92	0.49	46.09	61,61,61,61	0
60	MG	AA	2998	1/1	0.92	0.67	45.01	51,51,51,51	0
60	MG	AA	3260	1/1	0.71	0.72	44.47	104,104,104,104	0
60	MG	BA	3258	1/1	0.34	0.99	43.78	110,110,110,110	0
60	MG	AA	2999	1/1	0.96	0.46	42.73	61,61,61,61	0
60	MG	AA	3046	1/1	0.97	0.87	42.32	59,59,59,59	0
60	MG	AA	3073	1/1	0.92	0.52	39.09	84,84,84,84	0
60	MG	AA	3016	1/1	0.72	1.19	38.89	82,82,82,82	0
60	MG	Aa	1646	1/1	0.81	1.32	38.06	81,81,81,81	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	A7	101	1/1	0.56	0.64	37.64	73,73,73,73	0
60	MG	Ba	1631	1/1	0.60	1.26	34.06	101,101,101,101	0
60	MG	BA	3011	1/1	0.66	1.35	33.37	81,81,81,81	0
60	MG	AA	2982	1/1	0.96	0.84	33.32	83,83,83,83	0
60	MG	BA	3178	1/1	0.87	0.98	33.07	71,71,71,71	0
60	MG	AA	3215	1/1	0.92	1.14	32.73	89,89,89,89	0
60	MG	AA	3135	1/1	0.88	0.50	32.38	89,89,89,89	0
60	MG	AA	2917	1/1	0.73	0.67	31.89	99,99,99,99	0
60	MG	Ba	1738	1/1	0.88	0.38	31.76	77,77,77,77	0
60	MG	BA	3101	1/1	0.85	0.86	31.00	64,64,64,64	0
60	MG	AA	3230	1/1	0.79	1.16	30.66	94,94,94,94	0
60	MG	Aa	1632	1/1	0.91	0.98	29.73	86,86,86,86	0
60	MG	AA	3055	1/1	0.95	0.70	29.61	59,59,59,59	0
60	MG	AA	3244	1/1	0.94	0.80	29.18	98,98,98,98	0
60	MG	AA	3030	1/1	0.79	0.84	29.15	94,94,94,94	0
60	MG	BA	2918	1/1	0.98	0.53	29.11	32,32,32,32	0
60	MG	AA	3262	1/1	0.56	0.57	28.06	94,94,94,94	0
60	MG	BA	3026	1/1	0.92	0.55	28.06	59,59,59,59	0
60	MG	BA	2932	1/1	0.81	0.53	27.93	87,87,87,87	0
60	MG	Ba	1684	1/1	0.84	0.51	27.79	76,76,76,76	0
60	MG	BA	3255	1/1	0.76	0.64	27.24	74,74,74,74	0
60	MG	Aa	1686	1/1	0.87	0.55	27.12	74,74,74,74	0
60	MG	BA	2965	1/1	0.66	0.61	26.83	74,74,74,74	0
60	MG	BA	2913	1/1	0.97	0.58	26.06	47,47,47,47	0
60	MG	AA	3020	1/1	0.97	0.46	26.00	63,63,63,63	0
60	MG	Ba	1635	1/1	0.94	0.65	25.85	86,86,86,86	0
60	MG	AA	2931	1/1	0.95	0.51	25.10	63,63,63,63	0
60	MG	BA	3009	1/1	0.95	0.65	24.80	38,38,38,38	0
60	MG	BA	2931	1/1	0.97	0.55	24.45	52,52,52,52	0
60	MG	BA	2995	1/1	0.95	0.51	24.43	45,45,45,45	0
60	MG	BA	3132	1/1	0.87	0.50	23.85	73,73,73,73	0
60	MG	AA	3232	1/1	0.93	0.40	23.79	70,70,70,70	0
60	MG	BA	2985	1/1	0.86	0.45	23.69	64,64,64,64	0
60	MG	AA	3264	1/1	0.69	0.77	23.57	101,101,101,101	0
60	MG	Ba	1633	1/1	0.87	0.77	23.56	71,71,71,71	0
60	MG	AA	3056	1/1	0.96	0.39	23.39	48,48,48,48	0
60	MG	BA	3021	1/1	0.99	0.68	23.27	45,45,45,45	0
60	MG	BA	3023	1/1	0.86	0.63	22.63	54,54,54,54	0
60	MG	Ba	1723	1/1	0.86	0.64	22.54	89,89,89,89	0
60	MG	Ba	1725	1/1	0.85	0.77	22.05	72,72,72,72	1
60	MG	BA	2966	1/1	0.95	0.59	21.98	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	BA	3162	1/1	0.66	0.45	21.85	86,86,86,86	0
60	MG	BA	3054	1/1	0.99	0.52	21.80	37,37,37,37	0
60	MG	Aa	1740	1/1	0.97	0.52	21.58	65,65,65,65	0
60	MG	AA	2983	1/1	0.98	0.61	21.29	43,43,43,43	0
60	MG	BA	3051	1/1	0.97	0.59	21.25	38,38,38,38	0
60	MG	AA	2915	1/1	0.97	0.45	20.87	50,50,50,50	0
60	MG	AA	3036	1/1	0.89	0.78	20.74	99,99,99,99	0
60	MG	BA	3042	1/1	0.99	0.61	20.40	48,48,48,48	0
60	MG	AA	2929	1/1	0.96	0.40	20.31	68,68,68,68	0
60	MG	BA	2978	1/1	0.95	0.51	20.26	72,72,72,72	0
60	MG	Ba	1672	1/1	0.83	0.59	19.91	106,106,106,106	0
60	MG	AA	3025	1/1	0.96	0.46	19.89	39,39,39,39	0
60	MG	Aa	1687	1/1	0.89	0.55	19.82	51,51,51,51	1
60	MG	AA	3014	1/1	0.98	0.53	19.59	51,51,51,51	0
60	MG	AA	3126	1/1	0.96	0.70	19.58	49,49,49,49	0
60	MG	AA	2913	1/1	0.97	0.47	19.50	44,44,44,44	0
60	MG	BA	3095	1/1	0.93	0.44	19.31	61,61,61,61	0
60	MG	AA	3074	1/1	0.87	0.39	18.74	87,87,87,87	0
60	MG	BA	3033	1/1	0.97	0.43	18.61	42,42,42,42	0
60	MG	Av	104	1/1	0.89	0.49	18.35	88,88,88,88	1
60	MG	AA	2969	1/1	0.97	0.40	18.35	36,36,36,36	0
60	MG	BA	3052	1/1	0.99	0.52	17.86	30,30,30,30	0
60	MG	AA	3098	1/1	0.98	0.49	17.62	47,47,47,47	0
60	MG	BA	2983	1/1	0.98	0.53	17.52	37,37,37,37	0
60	MG	AA	2918	1/1	0.98	0.59	17.28	42,42,42,42	0
60	MG	BA	3231	1/1	0.77	0.48	17.18	105,105,105,105	0
60	MG	AA	3118	1/1	0.88	0.60	17.12	59,59,59,59	0
60	MG	BA	3084	1/1	0.98	0.47	17.04	64,64,64,64	0
60	MG	AA	3075	1/1	0.80	0.48	16.65	104,104,104,104	0
60	MG	BA	3237	1/1	0.67	1.20	16.51	98,98,98,98	0
60	MG	BA	3070	1/1	0.97	0.54	16.50	96,96,96,96	0
60	MG	BA	3115	1/1	0.97	0.57	16.50	50,50,50,50	0
60	MG	Ba	1669	1/1	0.97	0.41	16.25	55,55,55,55	0
60	MG	AA	3027	1/1	0.93	0.51	16.14	57,57,57,57	0
60	MG	BA	3123	1/1	0.99	0.56	15.79	37,37,37,37	0
60	MG	BA	3167	1/1	0.83	0.48	15.46	74,74,74,74	0
60	MG	AA	3099	1/1	0.82	0.62	15.34	78,78,78,78	0
60	MG	Aa	1668	1/1	0.95	0.62	15.27	84,84,84,84	0
60	MG	Aa	1625	1/1	0.99	0.38	15.25	61,61,61,61	0
60	MG	Ba	1685	1/1	0.97	0.74	15.17	42,42,42,42	1
60	MG	BA	3094	1/1	0.96	0.53	14.99	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	Aa	1706	1/1	0.40	0.50	14.83	91,91,91,91	0
60	MG	Aa	1744	1/1	0.96	0.39	14.76	114,114,114,114	0
60	MG	AA	2964	1/1	0.83	0.54	14.71	76,76,76,76	0
60	MG	Aa	1611	1/1	0.74	1.01	14.37	82,82,82,82	0
60	MG	BA	2994	1/1	0.97	0.57	14.23	44,44,44,44	0
60	MG	BA	3262	1/1	0.86	0.58	13.88	100,100,100,100	0
60	MG	AA	3040	1/1	0.73	0.49	13.73	82,82,82,82	0
60	MG	BA	3044	1/1	0.96	0.48	13.70	52,52,52,52	0
60	MG	BA	3147	1/1	0.64	0.38	13.68	67,67,67,67	0
60	MG	BA	3120	1/1	0.97	0.46	13.65	39,39,39,39	0
60	MG	Aa	1695	1/1	0.83	0.55	13.63	97,97,97,97	0
60	MG	AA	2907	1/1	0.97	0.38	13.54	58,58,58,58	0
60	MG	AA	2996	1/1	0.96	0.61	13.39	62,62,62,62	0
60	MG	Ba	1742	1/1	0.92	0.41	13.31	105,105,105,105	0
60	MG	AA	3094	1/1	0.99	0.42	13.29	65,65,65,65	0
60	MG	AA	3161	1/1	0.95	0.49	13.18	75,75,75,75	0
60	MG	BA	3067	1/1	0.92	0.41	13.14	78,78,78,78	0
60	MG	BA	2906	1/1	0.99	0.41	12.80	35,35,35,35	0
60	MG	Aa	1727	1/1	0.47	0.62	12.64	90,90,90,90	1
60	MG	Ba	1655	1/1	0.81	0.39	12.55	66,66,66,66	0
60	MG	AA	3266	1/1	0.77	0.44	12.35	73,73,73,73	0
60	MG	AA	2932	1/1	0.87	0.39	11.99	79,79,79,79	0
60	MG	BA	3016	1/1	0.96	0.30	11.81	50,50,50,50	0
60	MG	AA	3037	1/1	0.97	0.45	11.81	52,52,52,52	0
60	MG	Ba	1678	1/1	0.94	0.44	11.69	131,131,131,131	0
60	MG	BA	2979	1/1	0.95	0.48	11.66	36,36,36,36	0
60	MG	AA	2987	1/1	0.97	0.57	11.61	41,41,41,41	0
60	MG	Ba	1730	1/1	0.89	0.40	11.55	64,64,64,64	0
60	MG	AA	3179	1/1	0.80	0.50	11.52	76,76,76,76	0
60	MG	AA	3257	1/1	0.66	0.46	11.47	75,75,75,75	0
60	MG	BA	3069	1/1	0.84	0.40	11.41	72,72,72,72	0
60	MG	AA	3123	1/1	0.98	0.48	11.36	54,54,54,54	0
60	MG	BA	2914	1/1	0.93	0.35	11.35	32,32,32,32	0
60	MG	AA	3153	1/1	0.90	0.70	11.25	92,92,92,92	0
60	MG	BA	2992	1/1	0.99	0.47	11.03	40,40,40,40	0
60	MG	AA	3150	1/1	0.64	0.39	11.03	81,81,81,81	0
60	MG	AA	3100	1/1	0.90	0.29	11.01	64,64,64,64	0
60	MG	AA	3174	1/1	0.99	0.42	11.01	50,50,50,50	0
60	MG	BA	2986	1/1	0.95	0.45	10.94	42,42,42,42	0
60	MG	Aa	1636	1/1	0.95	0.45	10.71	62,62,62,62	0
60	MG	AA	2921	1/1	0.96	0.41	10.25	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	BA	2915	1/1	0.98	0.37	10.24	32,32,32,32	0
60	MG	AA	2919	1/1	0.86	0.31	10.24	49,49,49,49	0
60	MG	AA	3086	1/1	0.72	0.29	10.14	94,94,94,94	0
60	MG	BA	2950	1/1	0.94	0.30	10.09	69,69,69,69	0
60	MG	B7	101	1/1	0.92	0.37	10.08	57,57,57,57	0
60	MG	Ba	1609	1/1	0.94	0.42	10.04	104,104,104,104	0
60	MG	AA	3041	1/1	0.96	0.35	10.03	49,49,49,49	0
60	MG	AA	2993	1/1	0.97	0.51	9.89	57,57,57,57	0
60	MG	AA	3196	1/1	0.97	0.40	9.87	59,59,59,59	0
60	MG	AA	2943	1/1	0.94	0.37	9.73	77,77,77,77	0
60	MG	AA	3048	1/1	0.91	0.37	9.69	69,69,69,69	0
60	MG	BA	3125	1/1	0.87	0.42	9.62	68,68,68,68	0
60	MG	Bm	202	1/1	0.57	1.01	9.36	97,97,97,97	0
60	MG	AA	3165	1/1	0.52	0.48	9.32	83,83,83,83	0
60	MG	AA	2909	1/1	0.89	0.38	9.12	46,46,46,46	0
60	MG	BA	3264	1/1	0.76	0.31	9.03	68,68,68,68	0
60	MG	BA	3183	1/1	0.84	0.28	9.02	67,67,67,67	0
60	MG	Ba	1694	1/1	0.86	0.35	9.00	112,112,112,112	0
60	MG	BA	3171	1/1	0.98	0.29	8.80	38,38,38,38	0
60	MG	BA	3174	1/1	0.97	0.59	8.76	63,63,63,63	0
60	MG	BA	3158	1/1	0.87	0.50	8.75	61,61,61,61	0
60	MG	BA	2961	1/1	0.82	0.36	8.73	60,60,60,60	0
60	MG	Ba	1610	1/1	0.74	0.62	8.72	87,87,87,87	0
60	MG	AA	3088	1/1	0.99	0.31	8.60	64,64,64,64	0
60	MG	Aa	1722	1/1	0.87	0.70	8.41	110,110,110,110	0
60	MG	BA	3091	1/1	0.92	0.39	8.38	66,66,66,66	0
60	MG	AA	3136	1/1	0.77	0.31	8.22	88,88,88,88	0
60	MG	BA	3030	1/1	0.99	0.27	8.05	37,37,37,37	0
60	MG	AA	3021	1/1	0.98	0.30	7.97	42,42,42,42	0
60	MG	BA	3017	1/1	0.99	0.38	7.95	40,40,40,40	0
60	MG	BA	3127	1/1	0.96	0.63	7.72	38,38,38,38	0
60	MG	Ba	1628	1/1	0.87	0.32	7.69	79,79,79,79	0
60	MG	AA	3053	1/1	0.74	0.32	7.64	79,79,79,79	0
60	MG	AA	2951	1/1	0.77	0.31	7.62	61,61,61,61	0
60	MG	Aa	1670	1/1	0.97	0.38	7.51	70,70,70,70	0
60	MG	AA	3111	1/1	0.97	0.26	7.25	91,91,91,91	0
60	MG	BA	3037	1/1	0.95	0.29	7.06	41,41,41,41	0
60	MG	BA	2962	1/1	0.92	0.32	6.94	71,71,71,71	0
60	MG	AA	3176	1/1	0.62	0.45	6.94	84,84,84,84	0
60	MG	BD	301	1/1	0.96	0.44	6.93	39,39,39,39	0
60	MG	Aa	1681	1/1	0.68	0.51	6.83	86,86,86,86	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	AA	3128	1/1	0.94	0.38	6.81	71,71,71,71	0
60	MG	Aa	1634	1/1	0.96	0.66	6.70	56,56,56,56	0
60	MG	BA	3232	1/1	0.89	0.35	6.67	82,82,82,82	0
60	MG	BA	3059	1/1	0.99	0.51	6.65	52,52,52,52	0
60	MG	BA	3014	1/1	0.97	0.30	6.62	38,38,38,38	0
60	MG	BA	2957	1/1	0.92	0.45	6.62	38,38,38,38	0
60	MG	AA	2989	1/1	0.90	0.31	6.59	50,50,50,50	0
60	MG	Aa	1737	1/1	0.98	0.32	6.56	107,107,107,107	0
60	MG	AA	3071	1/1	0.96	0.39	6.47	87,87,87,87	0
60	MG	AA	3108	1/1	0.83	0.39	6.44	69,69,69,69	0
60	MG	AA	2906	1/1	0.96	0.41	6.31	38,38,38,38	0
60	MG	BA	3010	1/1	0.96	0.38	6.29	28,28,28,28	0
60	MG	AA	3181	1/1	0.94	0.30	6.18	65,65,65,65	0
60	MG	Aa	1614	1/1	0.52	0.29	6.17	88,88,88,88	0
60	MG	BA	3173	1/1	0.71	0.45	6.03	91,91,91,91	0
60	MG	Aa	1735	1/1	0.80	0.34	5.87	80,80,80,80	1
60	MG	BA	2989	1/1	0.97	0.34	5.71	49,49,49,49	0
60	MG	AA	3177	1/1	0.97	0.45	5.71	54,54,54,54	0
60	MG	AA	3085	1/1	0.90	0.25	5.69	86,86,86,86	0
60	MG	AA	3097	1/1	0.94	0.48	5.65	69,69,69,69	0
60	MG	AA	3063	1/1	0.89	0.32	5.59	47,47,47,47	0
60	MG	Am	201	1/1	0.47	0.86	5.45	88,88,88,88	0
60	MG	BA	3133	1/1	0.91	0.28	5.41	83,83,83,83	0
60	MG	AA	2990	1/1	0.98	0.43	5.24	51,51,51,51	0
60	MG	AA	3220	1/1	0.96	0.50	5.19	47,47,47,47	0
60	MG	BA	3090	1/1	0.94	0.32	5.08	47,47,47,47	0
60	MG	AA	2920	1/1	0.92	0.34	4.87	45,45,45,45	0
60	MG	BA	3027	1/1	0.98	0.32	4.84	53,53,53,53	0
60	MG	AA	2914	1/1	0.96	0.29	4.83	37,37,37,37	0
60	MG	Ba	1731	1/1	0.86	0.25	4.80	103,103,103,103	0
60	MG	Aa	1732	1/1	0.93	0.37	4.58	58,58,58,58	0
60	MG	Ba	1613	1/1	0.79	0.35	4.53	101,101,101,101	0
60	MG	Bv	105	1/1	0.94	0.26	4.49	95,95,95,95	1
60	MG	BA	2972	1/1	0.97	0.48	4.41	79,79,79,79	0
60	MG	BA	3138	1/1	0.71	0.24	4.33	61,61,61,61	0
60	MG	BA	2911	1/1	0.95	0.27	4.16	36,36,36,36	0
60	MG	AA	2960	1/1	0.95	0.43	4.00	37,37,37,37	0
60	MG	AA	3064	1/1	0.98	0.32	3.97	59,59,59,59	0
60	MG	Aa	1672	1/1	0.93	0.30	3.85	77,77,77,77	0
60	MG	BA	3260	1/1	0.86	0.24	3.84	93,93,93,93	0
60	MG	AA	3170	1/1	0.82	0.25	3.73	82,82,82,82	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	AA	2911	1/1	0.95	0.30	3.59	39,39,39,39	0
60	MG	AA	2922	1/1	0.98	0.26	3.47	52,52,52,52	0
60	MG	BA	3028	1/1	0.96	0.31	3.41	44,44,44,44	0
60	MG	AA	3130	1/1	0.94	0.46	3.38	42,42,42,42	0
60	MG	AA	3095	1/1	0.94	0.28	3.34	67,67,67,67	0
60	MG	BA	3218	1/1	0.98	0.35	3.33	38,38,38,38	0
60	MG	AA	3188	1/1	0.84	0.24	3.32	91,91,91,91	0
60	MG	Aa	1680	1/1	0.95	0.33	3.31	115,115,115,115	0
60	MG	Aa	1650	1/1	0.93	0.30	3.18	53,53,53,53	0
60	MG	Aa	1697	1/1	0.77	0.27	3.17	129,129,129,129	0
60	MG	BA	2909	1/1	0.91	0.27	3.15	36,36,36,36	0
60	MG	AA	2991	1/1	0.96	0.29	3.07	62,62,62,62	0
60	MG	AA	2978	1/1	0.82	0.39	3.06	100,100,100,100	0
60	MG	Ba	1624	1/1	0.94	0.24	3.02	73,73,73,73	0
60	MG	AA	3034	1/1	0.95	0.23	3.00	49,49,49,49	0
60	MG	Aa	1724	1/1	0.95	0.26	2.56	100,100,100,100	0
60	MG	Aa	1654	1/1	0.92	0.21	2.53	93,93,93,93	0
60	MG	AA	3184	1/1	0.96	0.56	2.42	69,69,69,69	0
60	MG	AA	2965	1/1	0.95	0.22	2.37	80,80,80,80	0
60	MG	BA	3135	1/1	0.51	0.47	2.36	146,146,146,146	0
60	MG	BA	3193	1/1	0.97	0.25	2.31	44,44,44,44	0
60	MG	Aa	1617	1/1	0.92	0.31	2.28	66,66,66,66	0
60	MG	AA	3031	1/1	0.93	0.23	2.23	56,56,56,56	0
60	MG	AA	3018	1/1	0.97	0.21	2.20	46,46,46,46	0
60	MG	BA	2987	1/1	0.98	0.22	2.19	43,43,43,43	0
60	MG	AA	2942	1/1	0.85	0.20	2.11	65,65,65,65	0
60	MG	AD	302	1/1	0.92	0.49	2.01	64,64,64,64	0
60	MG	Ba	1693	1/1	0.91	0.18	2.01	108,108,108,108	0
60	MG	AA	2937	1/1	0.77	0.24	1.85	63,63,63,63	0
60	MG	A1	101	1/1	0.95	0.33	1.83	70,70,70,70	0
60	MG	AA	2912	1/1	0.96	0.22	1.82	56,56,56,56	0
60	MG	AD	301	1/1	0.91	0.29	1.63	38,38,38,38	0
60	MG	AA	3141	1/1	0.84	0.18	1.60	54,54,54,54	0
60	MG	AA	3125	1/1	0.98	0.44	1.54	49,49,49,49	0
60	MG	BA	3122	1/1	0.98	0.39	1.43	51,51,51,51	0
60	MG	BA	2929	1/1	0.93	0.23	1.35	43,43,43,43	0
60	MG	BA	2942	1/1	0.91	0.20	1.24	78,78,78,78	0
60	MG	BA	2937	1/1	0.64	0.25	1.24	70,70,70,70	0
60	MG	BA	3181	1/1	0.94	0.37	1.20	51,51,51,51	0
60	MG	BA	3097	1/1	0.87	0.18	1.14	65,65,65,65	0
60	MG	B0	101	1/1	0.65	0.67	1.12	104,104,104,104	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	BA	2952	1/1	0.89	0.23	0.98	87,87,87,87	0
59	ZN	Ad	301	1/1	0.99	0.34	0.96	94,94,94,94	0
60	MG	Ba	1616	1/1	0.71	0.23	0.96	99,99,99,99	0
60	MG	BD	302	1/1	0.94	0.33	0.82	53,53,53,53	0
60	MG	BA	3102	1/1	0.76	0.16	0.78	81,81,81,81	0
60	MG	Aa	1608	1/1	0.97	0.20	0.75	48,48,48,48	0
60	MG	AA	2953	1/1	0.97	0.21	0.72	81,81,81,81	0
60	MG	BA	3108	1/1	0.97	0.15	0.67	71,71,71,71	0
60	MG	AA	3214	1/1	0.93	0.27	0.65	57,57,57,57	0
60	MG	AA	2971	1/1	0.84	0.17	0.60	77,77,77,77	0
60	MG	BA	2959	1/1	0.88	0.17	0.56	62,62,62,62	0
59	ZN	Bd	301	1/1	0.98	0.33	0.54	103,103,103,103	0
60	MG	Bv	102	1/1	0.90	0.25	0.50	54,54,54,54	0
60	MG	AA	2959	1/1	0.63	0.31	0.39	77,77,77,77	0
60	MG	BA	2977	1/1	0.97	0.15	0.25	74,74,74,74	0
60	MG	Ba	1608	1/1	0.97	0.28	0.12	91,91,91,91	0
60	MG	BA	3000	1/1	0.90	0.15	0.01	61,61,61,61	0
60	MG	BA	2922	1/1	0.99	0.20	-0.01	45,45,45,45	0
60	MG	AA	2962	1/1	0.88	0.16	-0.02	53,53,53,53	0
60	MG	Ba	1649	1/1	0.95	0.21	-0.15	52,52,52,52	0
60	MG	AF	301	1/1	0.76	0.24	-0.18	87,87,87,87	0
60	MG	BA	3212	1/1	0.97	0.22	-0.19	36,36,36,36	0
60	MG	Ba	1733	1/1	0.89	0.18	-0.28	100,100,100,100	1
60	MG	AA	3233	1/1	0.92	0.19	-0.30	90,90,90,90	0
60	MG	BA	3105	1/1	0.97	0.22	-0.32	55,55,55,55	0
60	MG	BA	2967	1/1	0.92	0.14	-0.38	58,58,58,58	0
60	MG	AA	3186	1/1	0.79	0.14	-0.50	74,74,74,74	0
59	ZN	An	101	1/1	0.94	0.20	-0.51	171,171,171,171	0
60	MG	Ba	1671	1/1	0.93	0.19	-0.51	75,75,75,75	0
60	MG	BA	3096	1/1	0.85	0.16	-0.55	49,49,49,49	0
60	MG	Ba	1681	1/1	0.90	0.14	-0.56	71,71,71,71	0
60	MG	BA	2919	1/1	0.87	0.18	-0.58	40,40,40,40	0
60	MG	BA	3093	1/1	0.90	0.18	-0.87	71,71,71,71	0
60	MG	Aa	1621	1/1	0.96	0.17	-0.90	91,91,91,91	0
60	MG	Aa	1679	1/1	0.90	0.24	-0.91	131,131,131,131	0
60	MG	Aa	1689	1/1	0.46	0.20	-0.93	57,57,57,57	1
60	MG	Ba	1673	1/1	0.71	0.16	-1.07	83,83,83,83	0
60	MG	Bm	201	1/1	0.71	0.18	-1.14	103,103,103,103	0
60	MG	BF	301	1/1	0.77	0.18	-1.19	87,87,87,87	0
60	MG	Aa	1696	1/1	0.92	0.15	-1.21	93,93,93,93	0
60	MG	BA	3194	1/1	0.94	0.18	-1.21	28,28,28,28	0
60	MG	Ba	1634	1/1	0.91	0.16	-1.23	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	BA	3230	1/1	0.95	0.16	-1.25	61,61,61,61	0
59	ZN	Bn	101	1/1	0.98	0.14	-1.37	142,142,142,142	0
60	MG	BA	3185	1/1	0.88	0.14	-1.39	66,66,66,66	0
60	MG	AA	3197	1/1	0.97	0.19	-1.51	34,34,34,34	0
60	MG	Ba	1687	1/1	0.88	0.19	-1.52	69,69,69,69	1
59	ZN	B4	101	1/1	0.71	0.11	-1.53	203,203,203,203	0
60	MG	Ba	1735	1/1	0.98	0.15	-1.60	79,79,79,79	0
60	MG	AA	2939	1/1	0.90	0.16	-1.62	53,53,53,53	0
60	MG	AA	3173	1/1	0.89	0.12	-1.67	72,72,72,72	0
59	ZN	A4	101	1/1	0.91	0.06	-1.71	195,195,195,195	0
60	MG	BA	2920	1/1	0.97	0.19	-1.73	31,31,31,31	0
60	MG	Aa	1609	1/1	0.94	0.13	-1.94	82,82,82,82	0
60	MG	AA	3234	1/1	0.94	0.14	-1.99	59,59,59,59	0
60	MG	AA	3104	1/1	0.97	0.15	-2.01	64,64,64,64	0
60	MG	BA	3100	1/1	0.93	0.17	-2.02	63,63,63,63	0
60	MG	Aa	1676	1/1	0.85	0.14	-2.07	120,120,120,120	0
60	MG	Aa	1675	1/1	0.95	0.12	-2.13	58,58,58,58	0
60	MG	BA	2939	1/1	0.94	0.15	-2.27	44,44,44,44	0
60	MG	AA	3004	1/1	0.90	0.07	-2.38	84,84,84,84	0
59	ZN	A9	101	1/1	0.97	0.07	-2.42	143,143,143,143	0
60	MG	BA	2968	1/1	0.96	0.12	-2.49	63,63,63,63	0
60	MG	Ba	1722	1/1	0.91	0.18	-2.51	106,106,106,106	0
60	MG	Ba	1607	1/1	0.98	0.12	-2.75	67,67,67,67	0
59	ZN	B9	101	1/1	0.99	0.06	-2.90	124,124,124,124	0
60	MG	Aa	1673	1/1	0.96	0.17	-3.23	91,91,91,91	0
60	MG	Aa	1635	1/1	0.94	0.09	-3.24	61,61,61,61	0
60	MG	BA	3085	1/1	0.96	0.12	-3.58	72,72,72,72	0
60	MG	Aa	1656	1/1	0.84	0.12	-3.61	67,67,67,67	0
60	MG	AA	2981	1/1	0.96	0.07	-3.96	54,54,54,54	0
60	MG	Ba	1674	1/1	0.92	0.13	-4.30	57,57,57,57	0
60	MG	Aa	1683	1/1	0.92	0.08	-5.00	59,59,59,59	0
60	MG	Ba	1620	1/1	0.92	0.13	-5.77	102,102,102,102	0
60	MG	Aa	1677	1/1	0.76	1.31	-	82,82,82,82	0
60	MG	Aa	1738	1/1	0.89	0.49	-	78,78,78,78	0
60	MG	BA	3266	1/1	0.95	0.18	-	80,80,80,80	0
60	MG	BA	3209	1/1	0.75	0.22	-	107,107,107,107	0
60	MG	BA	3190	1/1	0.87	0.21	-	98,98,98,98	0
60	MG	Ba	1698	1/1	0.40	0.62	-	123,123,123,123	1
60	MG	Aa	1605	1/1	0.94	0.18	-	70,70,70,70	0
60	MG	AA	2976	1/1	0.96	0.26	-	85,85,85,85	0
60	MG	Aa	1645	1/1	0.91	0.39	-	83,83,83,83	0
60	MG	BA	3055	1/1	0.94	0.24	-	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	Ba	1618	1/1	0.90	0.36	-	56,56,56,56	0
60	MG	BA	2956	1/1	0.91	0.25	-	89,89,89,89	0
60	MG	AA	3242	1/1	0.77	0.46	-	78,78,78,78	0
60	MG	BA	2936	1/1	0.97	0.48	-	40,40,40,40	0
60	MG	AA	3051	1/1	0.98	0.36	-	66,66,66,66	0
60	MG	AA	3143	1/1	0.73	0.98	-	72,72,72,72	0
60	MG	AA	3047	1/1	0.97	0.44	-	62,62,62,62	0
60	MG	BA	3073	1/1	0.92	0.44	-	54,54,54,54	0
60	MG	AA	3225	1/1	0.64	0.57	-	71,71,71,71	0
60	MG	Ba	1621	1/1	0.77	0.33	-	84,84,84,84	0
60	MG	Ba	1696	1/1	0.93	0.87	-	99,99,99,99	0
60	MG	Ba	1706	1/1	0.71	0.53	-	131,131,131,131	0
60	MG	BA	3235	1/1	0.80	0.53	-	90,90,90,90	0
60	MG	BA	3249	1/1	0.94	0.60	-	55,55,55,55	0
60	MG	Aa	1652	1/1	0.72	1.01	-	91,91,91,91	0
60	MG	Ba	1646	1/1	0.57	1.35	-	122,122,122,122	0
60	MG	BA	3145	1/1	0.93	0.65	-	62,62,62,62	0
60	MG	AA	3238	1/1	0.81	0.70	-	74,74,74,74	0
60	MG	AA	3180	1/1	0.94	0.46	-	58,58,58,58	0
60	MG	AA	2904	1/1	0.99	0.14	-	142,142,142,142	0
60	MG	AA	3070	1/1	0.99	0.33	-	47,47,47,47	0
60	MG	Ba	1700	1/1	0.95	0.63	-	113,113,113,113	0
60	MG	BA	3053	1/1	0.82	1.05	-	70,70,70,70	0
60	MG	Ba	1688	1/1	0.68	0.24	-	90,90,90,90	1
60	MG	BA	2901	1/1	0.87	0.42	-	122,122,122,122	0
60	MG	BA	2948	1/1	0.91	0.58	-	93,93,93,93	0
60	MG	BA	3066	1/1	0.92	0.24	-	28,28,28,28	0
60	MG	BA	3048	1/1	0.92	0.58	-	95,95,95,95	0
60	MG	Av	102	1/1	0.78	0.13	-	107,107,107,107	0
60	MG	Ba	1657	1/1	0.81	0.69	-	109,109,109,109	0
60	MG	AA	2967	1/1	0.93	1.80	-	96,96,96,96	0
60	MG	AA	3231	1/1	0.84	1.03	-	107,107,107,107	0
60	MG	BA	3141	1/1	0.94	0.53	-	82,82,82,82	0
60	MG	BA	3110	1/1	0.98	0.47	-	46,46,46,46	0
60	MG	Ba	1601	1/1	0.62	0.22	-	77,77,77,77	0
60	MG	AA	2901	1/1	0.95	0.16	-	77,77,77,77	0
60	MG	BA	3161	1/1	0.91	0.20	-	51,51,51,51	0
60	MG	AA	2956	1/1	0.89	0.78	-	111,111,111,111	0
60	MG	Ba	1715	1/1	0.82	0.17	-	121,121,121,121	0
60	MG	AA	3199	1/1	0.95	0.44	-	44,44,44,44	0
60	MG	BA	3083	1/1	0.89	0.57	-	73,73,73,73	0
60	MG	Aa	1666	1/1	0.96	0.80	-	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	BA	2938	1/1	0.61	1.13	-	104,104,104,104	0
60	MG	BA	3244	1/1	0.76	1.21	-	89,89,89,89	0
60	MG	Aa	1710	1/1	0.88	0.08	-	128,128,128,128	0
60	MG	BA	3239	1/1	0.73	0.40	-	88,88,88,88	0
60	MG	Aa	1723	1/1	0.73	0.78	-	98,98,98,98	0
60	MG	BA	3057	1/1	0.97	0.40	-	58,58,58,58	0
60	MG	AA	3255	1/1	0.77	0.32	-	70,70,70,70	0
60	MG	Aa	1715	1/1	0.63	0.22	-	84,84,84,84	0
60	MG	Av	101	1/1	0.94	0.51	-	65,65,65,65	1
60	MG	BA	3087	1/1	0.90	0.49	-	74,74,74,74	0
60	MG	Aa	1661	1/1	0.92	0.29	-	91,91,91,91	0
60	MG	AA	3187	1/1	0.42	0.32	-	98,98,98,98	0
60	MG	AA	3240	1/1	0.94	0.69	-	104,104,104,104	0
60	MG	AA	3137	1/1	0.83	0.70	-	95,95,95,95	0
60	MG	Ba	1677	1/1	0.84	0.44	-	152,152,152,152	1
60	MG	Aa	1641	1/1	0.49	0.84	-	87,87,87,87	0
60	MG	BA	3179	1/1	0.83	0.51	-	90,90,90,90	0
60	MG	AA	3065	1/1	0.97	0.54	-	82,82,82,82	0
60	MG	Ba	1675	1/1	0.87	0.08	-	69,69,69,69	0
60	MG	AA	3010	1/1	0.88	0.26	-	94,94,94,94	0
60	MG	AA	3103	1/1	0.65	0.54	-	103,103,103,103	0
60	MG	BA	2974	1/1	0.96	0.20	-	118,118,118,118	0
60	MG	AA	3116	1/1	0.91	0.62	-	39,39,39,39	1
60	MG	BA	2990	1/1	0.96	0.56	-	56,56,56,56	0
60	MG	Aq	201	1/1	0.93	0.31	-	91,91,91,91	0
60	MG	AA	2924	1/1	0.95	0.23	-	54,54,54,54	0
60	MG	Aa	1643	1/1	0.95	0.17	-	117,117,117,117	0
60	MG	BA	3247	1/1	0.85	0.32	-	99,99,99,99	0
60	MG	AA	3069	1/1	0.52	0.93	-	87,87,87,87	0
60	MG	AA	3012	1/1	0.95	0.57	-	46,46,46,46	0
60	MG	AA	2955	1/1	0.97	0.41	-	60,60,60,60	0
60	MG	AA	3149	1/1	0.62	1.37	-	109,109,109,109	0
60	MG	Ba	1699	1/1	0.56	1.55	-	113,113,113,113	0
60	MG	AA	3090	1/1	0.91	0.50	-	86,86,86,86	0
60	MG	BQ	201	1/1	0.93	1.22	-	79,79,79,79	0
60	MG	AA	3191	1/1	0.95	0.59	-	102,102,102,102	0
60	MG	Ba	1643	1/1	0.56	0.86	-	95,95,95,95	0
60	MG	AA	3057	1/1	0.87	1.26	-	73,73,73,73	0
60	MG	Ba	1740	1/1	0.65	0.25	-	93,93,93,93	0
60	MG	BA	3018	1/1	0.89	0.39	-	51,51,51,51	0
60	MG	BA	3184	1/1	0.83	0.36	-	83,83,83,83	0
60	MG	BA	2928	1/1	0.97	0.49	-	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	AA	3009	1/1	0.95	0.25	-	61,61,61,61	0
60	MG	Ba	1736	1/1	0.91	0.37	-	88,88,88,88	0
60	MG	Ba	1663	1/1	0.93	0.21	-	86,86,86,86	0
60	MG	AA	3193	1/1	0.93	0.17	-	85,85,85,85	0
60	MG	BA	3063	1/1	0.92	0.30	-	59,59,59,59	0
60	MG	AA	3109	1/1	0.94	0.54	-	73,73,73,73	0
60	MG	BA	3188	1/1	0.91	0.84	-	90,90,90,90	0
60	MG	BA	3191	1/1	0.44	0.70	-	116,116,116,116	0
60	MG	Aa	1658	1/1	0.59	0.52	-	105,105,105,105	0
60	MG	BA	3172	1/1	0.75	0.35	-	45,45,45,45	0
60	MG	AA	3121	1/1	0.90	0.45	-	83,83,83,83	0
60	MG	BA	2971	1/1	0.92	0.78	-	63,63,63,63	0
60	MG	Ba	1702	1/1	0.83	0.58	-	110,110,110,110	0
60	MG	AA	3217	1/1	0.91	0.56	-	70,70,70,70	0
60	MG	BA	2958	1/1	0.78	1.16	-	100,100,100,100	0
60	MG	BA	3164	1/1	0.86	0.46	-	78,78,78,78	0
60	MG	AA	3265	1/1	0.93	0.83	-	83,83,83,83	0
60	MG	Aa	1644	1/1	0.84	1.01	-	100,100,100,100	0
60	MG	AA	3159	1/1	0.93	0.23	-	75,75,75,75	0
60	MG	AA	3122	1/1	0.91	0.13	-	101,101,101,101	0
60	MG	Ba	1619	1/1	0.91	0.31	-	70,70,70,70	0
60	MG	AA	3247	1/1	0.65	0.31	-	92,92,92,92	0
60	MG	Ba	1707	1/1	0.82	0.47	-	100,100,100,100	0
60	MG	BA	2975	1/1	0.83	0.71	-	93,93,93,93	0
60	MG	Aa	1728	1/1	0.91	0.38	-	81,81,81,81	0
60	MG	AA	3107	1/1	0.93	0.15	-	58,58,58,58	0
60	MG	BA	3224	1/1	0.95	0.16	-	89,89,89,89	0
60	MG	Aa	1733	1/1	0.95	0.27	-	79,79,79,79	0
60	MG	BA	3223	1/1	0.91	0.26	-	74,74,74,74	0
60	MG	Aa	1606	1/1	0.92	1.07	-	105,105,105,105	0
60	MG	AA	3005	1/1	0.91	0.35	-	64,64,64,64	0
60	MG	AA	3101	1/1	0.86	0.28	-	92,92,92,92	0
60	MG	BA	3176	1/1	0.95	0.55	-	66,66,66,66	0
60	MG	AA	2910	1/1	0.94	0.70	-	71,71,71,71	0
60	MG	BA	3137	1/1	0.98	0.13	-	94,94,94,94	0
60	MG	AA	3087	1/1	0.74	0.63	-	81,81,81,81	0
60	MG	BA	3263	1/1	0.80	0.57	-	66,66,66,66	0
60	MG	AA	2966	1/1	0.97	0.63	-	74,74,74,74	0
60	MG	AA	2945	1/1	0.92	0.11	-	73,73,73,73	0
60	MG	BA	2973	1/1	0.82	0.57	-	61,61,61,61	0
60	MG	BA	3008	1/1	0.98	0.49	-	34,34,34,34	0
60	MG	BA	3165	1/1	0.93	0.61	-	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	AA	2952	1/1	0.87	0.27	-	81,81,81,81	0
60	MG	BA	3046	1/1	0.92	0.55	-	76,76,76,76	0
60	MG	AA	3138	1/1	0.72	1.37	-	115,115,115,115	0
60	MG	Aa	1718	1/1	0.96	0.56	-	78,78,78,78	0
60	MG	Ba	1626	1/1	0.92	0.30	-	92,92,92,92	0
60	MG	Ba	1711	1/1	0.85	0.71	-	117,117,117,117	0
60	MG	Aa	1602	1/1	0.88	0.19	-	108,108,108,108	0
60	MG	BA	3248	1/1	0.83	0.23	-	64,64,64,64	0
60	MG	BA	3227	1/1	0.96	0.23	-	73,73,73,73	0
60	MG	Aa	1662	1/1	0.84	0.56	-	76,76,76,76	0
60	MG	Ba	1659	1/1	0.97	0.51	-	77,77,77,77	0
60	MG	AA	3146	1/1	0.55	1.05	-	87,87,87,87	0
60	MG	BA	3020	1/1	0.98	0.37	-	47,47,47,47	0
60	MG	AA	2995	1/1	0.93	0.39	-	82,82,82,82	0
60	MG	AA	3158	1/1	0.98	0.13	-	104,104,104,104	1
60	MG	Aa	1655	1/1	0.90	1.01	-	88,88,88,88	0
60	MG	Aa	1705	1/1	0.90	1.08	-	50,50,50,50	1
60	MG	BA	2917	1/1	0.90	0.49	-	75,75,75,75	0
60	MG	BA	2927	1/1	0.98	0.64	-	45,45,45,45	0
60	MG	AA	3198	1/1	0.97	0.34	-	73,73,73,73	0
60	MG	Ba	1734	1/1	0.71	0.12	-	138,138,138,138	0
60	MG	Ba	1741	1/1	0.86	0.53	-	81,81,81,81	0
60	MG	Ba	1719	1/1	0.96	0.86	-	85,85,85,85	0
60	MG	AA	3011	1/1	0.97	0.52	-	55,55,55,55	0
60	MG	Aa	1629	1/1	0.97	0.19	-	76,76,76,76	0
60	MG	Aa	1619	1/1	0.95	0.47	-	62,62,62,62	0
60	MG	AA	3032	1/1	0.95	0.21	-	64,64,64,64	0
60	MG	Aa	1703	1/1	0.95	0.32	-	70,70,70,70	0
60	MG	BA	3060	1/1	0.96	0.27	-	51,51,51,51	0
60	MG	AQ	201	1/1	0.65	1.07	-	105,105,105,105	0
60	MG	BA	3166	1/1	0.93	0.62	-	54,54,54,54	0
60	MG	AA	3212	1/1	0.81	0.42	-	79,79,79,79	0
60	MG	BA	2946	1/1	0.77	0.24	-	74,74,74,74	0
60	MG	Aa	1708	1/1	0.95	0.36	-	89,89,89,89	0
60	MG	BA	3180	1/1	0.60	0.56	-	92,92,92,92	0
60	MG	AA	3007	1/1	0.92	0.21	-	83,83,83,83	0
60	MG	Aa	1640	1/1	0.91	0.52	-	82,82,82,82	0
60	MG	BA	3092	1/1	0.94	0.45	-	83,83,83,83	0
60	MG	AA	3076	1/1	0.89	0.56	-	92,92,92,92	0
60	MG	BA	3079	1/1	0.89	0.37	-	79,79,79,79	0
60	MG	BA	3081	1/1	0.85	0.37	-	106,106,106,106	0
60	MG	AA	3254	1/1	0.85	0.34	-	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å ²)	Q<0.9
60	MG	BA	3136	1/1	0.71	1.06	-	109,109,109,109	0
60	MG	Aa	1684	1/1	0.95	0.55	-	71,71,71,71	0
60	MG	BA	3208	1/1	0.81	0.79	-	97,97,97,97	0
60	MG	AA	2988	1/1	0.81	1.15	-	89,89,89,89	0
60	MG	BA	3062	1/1	0.98	0.25	-	45,45,45,45	0
60	MG	BA	2902	1/1	0.40	0.36	-	129,129,129,129	0
60	MG	BA	3251	1/1	0.88	1.00	-	78,78,78,78	0
60	MG	AA	3050	1/1	0.80	0.54	-	87,87,87,87	0
60	MG	BA	3076	1/1	0.96	0.53	-	91,91,91,91	0
60	MG	BA	3045	1/1	0.94	0.49	-	47,47,47,47	0
60	MG	BA	3071	1/1	0.63	1.32	-	113,113,113,113	0
60	MG	AA	2933	1/1	0.95	0.82	-	84,84,84,84	0
60	MG	BA	2924	1/1	0.98	0.32	-	43,43,43,43	0
60	MG	AA	2905	1/1	0.95	0.66	-	45,45,45,45	0
60	MG	AA	2934	1/1	0.95	0.34	-	53,53,53,53	1
60	MG	Aa	1736	1/1	0.81	0.14	-	126,126,126,126	0
60	MG	BA	3088	1/1	0.69	0.52	-	113,113,113,113	0
60	MG	AA	3151	1/1	0.83	0.28	-	88,88,88,88	0
60	MG	AA	3192	1/1	0.81	0.65	-	59,59,59,59	0
60	MG	BA	3029	1/1	0.88	0.60	-	49,49,49,49	0
60	MG	AA	3219	1/1	0.74	0.66	-	94,94,94,94	0
60	MG	AA	3162	1/1	0.84	0.45	-	126,126,126,126	0
60	MG	AA	3261	1/1	0.40	0.70	-	110,110,110,110	0
60	MG	Aa	1741	1/1	0.85	1.01	-	88,88,88,88	0
60	MG	BA	3119	1/1	0.67	0.25	-	79,79,79,79	0
60	MG	AA	3115	1/1	0.90	0.59	-	108,108,108,108	0
60	MG	BA	2912	1/1	0.99	0.24	-	39,39,39,39	0
60	MG	Aa	1615	1/1	0.90	0.65	-	58,58,58,58	0
60	MG	Ba	1605	1/1	0.82	0.62	-	99,99,99,99	0
60	MG	Ba	1604	1/1	0.95	0.09	-	78,78,78,78	0
60	MG	AA	3019	1/1	0.97	0.32	-	48,48,48,48	0
60	MG	Ba	1602	1/1	0.73	0.39	-	73,73,73,73	0
60	MG	Ba	1727	1/1	0.97	0.49	-	44,44,44,44	0
60	MG	AA	2938	1/1	0.88	1.09	-	95,95,95,95	0
60	MG	Aa	1712	1/1	0.95	0.43	-	86,86,86,86	0
60	MG	AA	3015	1/1	0.81	1.00	-	103,103,103,103	0
60	MG	AA	3117	1/1	0.99	0.32	-	43,43,43,43	0
60	MG	BA	3250	1/1	0.87	0.94	-	97,97,97,97	0
60	MG	Ba	1729	1/1	0.92	0.31	-	84,84,84,84	0
60	MG	Ba	1712	1/1	0.28	0.59	-	96,96,96,96	0
60	MG	Aa	1653	1/1	0.90	0.94	-	71,71,71,71	0
60	MG	AA	3113	1/1	0.94	0.49	-	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	AA	3258	1/1	0.93	0.67	-	103,103,103,103	0
60	MG	Aw	101	1/1	0.43	0.86	-	95,95,95,95	1
60	MG	AA	2944	1/1	0.86	0.69	-	82,82,82,82	0
60	MG	BA	3056	1/1	0.91	0.22	-	53,53,53,53	0
60	MG	AA	3061	1/1	0.92	0.73	-	89,89,89,89	0
60	MG	Bx	101	1/1	0.96	0.42	-	92,92,92,92	0
60	MG	AA	2926	1/1	0.95	0.56	-	62,62,62,62	0
60	MG	AA	2903	1/1	0.87	0.22	-	98,98,98,98	0
60	MG	BA	3041	1/1	0.98	0.25	-	42,42,42,42	0
60	MG	Ba	1660	1/1	0.60	0.54	-	127,127,127,127	0
60	MG	BA	3124	1/1	0.98	0.45	-	45,45,45,45	0
60	MG	AA	3145	1/1	0.95	0.64	-	68,68,68,68	0
60	MG	BB	201	1/1	0.92	0.29	-	50,50,50,50	0
60	MG	BA	3234	1/1	0.81	0.62	-	116,116,116,116	0
60	MG	AA	3147	1/1	0.90	0.84	-	66,66,66,66	0
60	MG	AA	3246	1/1	0.83	0.96	-	103,103,103,103	0
60	MG	BA	3204	1/1	0.76	0.57	-	92,92,92,92	0
60	MG	BA	2969	1/1	0.93	0.35	-	58,58,58,58	0
60	MG	Aa	1698	1/1	0.94	0.67	-	86,86,86,86	0
60	MG	Aa	1612	1/1	0.94	0.25	-	58,58,58,58	0
60	MG	BA	3144	1/1	0.92	0.67	-	59,59,59,59	0
60	MG	BA	3159	1/1	0.98	0.18	-	110,110,110,110	0
60	MG	Aa	1713	1/1	0.67	1.60	-	149,149,149,149	0
60	MG	AA	3110	1/1	0.98	0.19	-	59,59,59,59	0
60	MG	AA	3182	1/1	0.89	0.32	-	82,82,82,82	0
60	MG	BA	3222	1/1	0.80	0.34	-	109,109,109,109	0
60	MG	BA	3198	1/1	0.98	0.21	-	70,70,70,70	0
60	MG	BA	3075	1/1	0.75	0.33	-	56,56,56,56	0
60	MG	BA	3103	1/1	0.88	0.28	-	63,63,63,63	0
60	MG	BA	2930	1/1	0.94	0.11	-	34,34,34,34	0
60	MG	AA	3237	1/1	0.68	0.82	-	88,88,88,88	0
60	MG	BA	3035	1/1	0.98	0.36	-	43,43,43,43	0
60	MG	Ba	1724	1/1	0.96	0.79	-	74,74,74,74	0
60	MG	BA	3219	1/1	0.71	0.53	-	88,88,88,88	0
60	MG	BA	3072	1/1	0.90	0.69	-	75,75,75,75	0
60	MG	BA	3226	1/1	0.80	0.35	-	50,50,50,50	0
60	MG	Ba	1690	1/1	0.84	0.46	-	67,67,67,67	0
60	MG	BA	3200	1/1	0.81	1.37	-	98,98,98,98	0
60	MG	AA	2973	1/1	0.84	0.38	-	82,82,82,82	0
60	MG	Ba	1648	1/1	0.68	0.71	-	145,145,145,145	0
60	MG	BA	2976	1/1	0.75	1.30	-	93,93,93,93	0
60	MG	BA	2916	1/1	0.97	0.50	-	28,28,28,28	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	BA	3047	1/1	0.93	0.31	-	57,57,57,57	0
60	MG	A5	101	1/1	0.91	0.59	-	62,62,62,62	0
60	MG	BA	3065	1/1	0.73	0.77	-	66,66,66,66	0
60	MG	AA	3124	1/1	0.92	0.66	-	63,63,63,63	0
60	MG	BA	3197	1/1	0.90	0.23	-	58,58,58,58	0
60	MG	Ba	1682	1/1	0.77	0.69	-	113,113,113,113	0
60	MG	BA	2910	1/1	0.96	0.47	-	70,70,70,70	0
60	MG	AA	3202	1/1	0.95	0.44	-	85,85,85,85	1
60	MG	BA	3221	1/1	0.89	0.65	-	66,66,66,66	0
60	MG	AA	2977	1/1	0.85	0.61	-	69,69,69,69	0
60	MG	BA	3031	1/1	0.95	0.53	-	46,46,46,46	0
60	MG	Aa	1688	1/1	0.96	0.51	-	72,72,72,72	0
60	MG	BA	3032	1/1	0.80	0.81	-	88,88,88,88	0
60	MG	AA	3263	1/1	0.91	0.54	-	94,94,94,94	0
60	MG	BA	2945	1/1	0.29	0.69	-	149,149,149,149	0
60	MG	BA	3086	1/1	0.77	0.44	-	65,65,65,65	0
60	MG	AA	2908	1/1	0.97	0.27	-	53,53,53,53	0
60	MG	Aa	1730	1/1	0.68	0.79	-	104,104,104,104	0
60	MG	BA	3129	1/1	0.75	0.61	-	75,75,75,75	0
60	MG	BA	3005	1/1	0.97	0.50	-	57,57,57,57	0
60	MG	Ba	1651	1/1	0.95	0.47	-	51,51,51,51	0
60	MG	Aa	1693	1/1	0.88	0.71	-	65,65,65,65	0
60	MG	Ba	1606	1/1	0.87	0.52	-	101,101,101,101	0
60	MG	Aa	1626	1/1	0.84	0.77	-	85,85,85,85	0
60	MG	Ba	1656	1/1	0.85	1.14	-	80,80,80,80	0
60	MG	AA	3235	1/1	0.90	0.22	-	102,102,102,102	0
60	MG	Aa	1729	1/1	0.90	0.44	-	60,60,60,60	0
60	MG	AA	2916	1/1	0.96	0.44	-	35,35,35,35	0
60	MG	AA	2928	1/1	0.95	0.30	-	89,89,89,89	0
60	MG	AA	3043	1/1	0.98	0.23	-	63,63,63,63	0
60	MG	AA	3060	1/1	0.98	0.38	-	55,55,55,55	0
60	MG	BA	3199	1/1	0.93	0.29	-	89,89,89,89	1
60	MG	BA	3261	1/1	0.56	0.69	-	95,95,95,95	0
60	MG	BA	2908	1/1	0.98	0.48	-	49,49,49,49	0
60	MG	AA	3226	1/1	0.83	0.28	-	91,91,91,91	0
60	MG	Aa	1704	1/1	0.95	0.55	-	86,86,86,86	0
60	MG	BA	2943	1/1	0.82	0.54	-	79,79,79,79	0
60	MG	AA	2950	1/1	0.95	0.48	-	59,59,59,59	0
60	MG	AA	3209	1/1	0.69	1.10	-	108,108,108,108	0
60	MG	AA	2961	1/1	0.86	1.12	-	99,99,99,99	0
60	MG	AA	3144	1/1	0.61	0.39	-	85,85,85,85	0
60	MG	AA	3169	1/1	0.97	0.72	-	78,78,78,78	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	BA	2935	1/1	0.82	0.75	-	124,124,124,124	0
60	MG	BA	3149	1/1	0.61	1.31	-	126,126,126,126	0
60	MG	BA	2981	1/1	0.90	0.51	-	45,45,45,45	0
60	MG	BA	2941	1/1	0.91	0.40	-	98,98,98,98	0
60	MG	AA	3183	1/1	0.86	0.38	-	79,79,79,79	0
60	MG	AA	3008	1/1	0.99	0.33	-	44,44,44,44	0
60	MG	AA	3133	1/1	0.92	0.97	-	78,78,78,78	0
60	MG	Aa	1725	1/1	0.82	0.80	-	88,88,88,88	0
60	MG	BA	2955	1/1	0.76	0.22	-	67,67,67,67	0
60	MG	AA	3106	1/1	0.74	0.41	-	75,75,75,75	0
60	MG	BA	3015	1/1	0.96	0.36	-	39,39,39,39	0
60	MG	Ba	1676	1/1	0.59	0.76	-	113,113,113,113	0
60	MG	BA	2997	1/1	0.96	0.38	-	49,49,49,49	0
60	MG	Ba	1629	1/1	0.94	0.29	-	69,69,69,69	0
60	MG	BA	3024	1/1	0.99	0.28	-	46,46,46,46	0
60	MG	AA	2958	1/1	0.94	0.22	-	77,77,77,77	0
60	MG	Aa	1665	1/1	0.20	0.72	-	88,88,88,88	0
60	MG	Aa	1667	1/1	0.92	0.54	-	100,100,100,100	0
60	MG	BA	3243	1/1	0.89	0.75	-	75,75,75,75	0
60	MG	AA	2979	1/1	0.85	0.72	-	71,71,71,71	0
60	MG	AA	3228	1/1	0.94	0.22	-	57,57,57,57	0
60	MG	Ba	1743	1/1	0.83	0.82	-	90,90,90,90	0
60	MG	AA	3175	1/1	0.88	0.63	-	54,54,54,54	0
60	MG	AA	3256	1/1	0.94	0.48	-	74,74,74,74	0
60	MG	AB	202	1/1	0.64	0.61	-	103,103,103,103	0
60	MG	BA	3148	1/1	0.53	0.49	-	82,82,82,82	0
60	MG	AA	3157	1/1	0.70	0.11	-	123,123,123,123	0
60	MG	Bq	201	1/1	0.79	0.36	-	116,116,116,116	0
60	MG	BA	3038	1/1	0.94	0.37	-	52,52,52,52	0
60	MG	BA	3236	1/1	0.82	0.29	-	64,64,64,64	0
60	MG	AA	3201	1/1	0.96	0.31	-	70,70,70,70	0
60	MG	Aa	1633	1/1	0.68	0.46	-	71,71,71,71	0
60	MG	BA	3022	1/1	0.97	0.39	-	33,33,33,33	0
60	MG	Ba	1641	1/1	0.84	0.68	-	92,92,92,92	0
60	MG	BA	3043	1/1	0.97	0.51	-	49,49,49,49	0
60	MG	AA	3119	1/1	0.89	0.25	-	143,143,143,143	0
60	MG	AA	3092	1/1	0.62	0.32	-	112,112,112,112	0
60	MG	BA	3150	1/1	0.70	1.22	-	104,104,104,104	0
60	MG	AA	3152	1/1	0.80	1.01	-	113,113,113,113	0
60	MG	Ba	1692	1/1	0.84	0.64	-	99,99,99,99	0
60	MG	Ba	1704	1/1	0.83	1.22	-	108,108,108,108	0
60	MG	Ba	1709	1/1	0.93	0.40	-	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	AA	3164	1/1	0.88	0.20	-	81,81,81,81	0
60	MG	AA	2940	1/1	0.83	0.61	-	102,102,102,102	0
60	MG	AA	3243	1/1	0.95	1.47	-	117,117,117,117	0
60	MG	AA	2902	1/1	0.85	0.31	-	131,131,131,131	0
60	MG	Ba	1691	1/1	0.95	0.60	-	61,61,61,61	0
60	MG	AA	3033	1/1	0.89	0.77	-	68,68,68,68	0
60	MG	BA	2960	1/1	0.97	0.53	-	45,45,45,45	0
60	MG	AA	3083	1/1	0.88	0.45	-	74,74,74,74	0
60	MG	AA	3006	1/1	0.99	0.28	-	39,39,39,39	0
60	MG	AA	3080	1/1	0.97	0.58	-	120,120,120,120	0
60	MG	AA	2994	1/1	0.93	0.41	-	69,69,69,69	0
60	MG	BA	3240	1/1	0.87	0.28	-	73,73,73,73	0
60	MG	AA	3082	1/1	0.92	0.52	-	69,69,69,69	0
60	MG	BA	2954	1/1	0.99	0.33	-	37,37,37,37	0
60	MG	Bv	101	1/1	0.89	0.57	-	71,71,71,71	1
60	MG	AA	2974	1/1	0.92	1.26	-	85,85,85,85	0
60	MG	AA	3166	1/1	0.91	0.49	-	94,94,94,94	0
60	MG	Ba	1667	1/1	0.82	0.63	-	91,91,91,91	0
60	MG	BA	3259	1/1	0.72	0.34	-	99,99,99,99	0
60	MG	AA	3154	1/1	0.90	0.69	-	86,86,86,86	0
60	MG	Aa	1709	1/1	0.85	0.21	-	92,92,92,92	0
60	MG	BA	2970	1/1	0.90	1.14	-	104,104,104,104	0
60	MG	Aa	1690	1/1	0.90	0.23	-	96,96,96,96	1
60	MG	AA	2930	1/1	0.89	0.18	-	38,38,38,38	0
60	MG	Aa	1726	1/1	0.95	0.34	-	57,57,57,57	0
60	MG	Aa	1664	1/1	0.91	0.70	-	114,114,114,114	0
60	MG	AA	3091	1/1	0.85	0.61	-	104,104,104,104	0
60	MG	BA	3099	1/1	0.88	0.88	-	97,97,97,97	0
60	MG	BA	3134	1/1	0.93	0.83	-	98,98,98,98	0
60	MG	Ba	1642	1/1	0.96	0.38	-	83,83,83,83	0
60	MG	B0	102	1/1	0.91	0.24	-	77,77,77,77	0
60	MG	Ba	1627	1/1	0.92	0.38	-	71,71,71,71	0
60	MG	Ba	1714	1/1	0.94	0.13	-	90,90,90,90	0
60	MG	AA	3222	1/1	0.78	0.47	-	67,67,67,67	0
60	MG	BA	3004	1/1	0.92	0.29	-	45,45,45,45	0
60	MG	Ba	1717	1/1	0.68	1.03	-	99,99,99,99	0
60	MG	Ba	1603	1/1	0.98	0.17	-	73,73,73,73	1
60	MG	BA	3160	1/1	0.96	0.32	-	73,73,73,73	0
60	MG	BA	3114	1/1	0.98	0.43	-	36,36,36,36	0
60	MG	Aa	1743	1/1	0.86	0.63	-	80,80,80,80	0
60	MG	BA	3050	1/1	0.97	0.51	-	34,34,34,34	0
60	MG	AA	3268	1/1	0.80	0.71	-	102,102,102,102	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	BA	2993	1/1	0.97	0.62	-	40,40,40,40	0
60	MG	BA	3210	1/1	0.82	0.78	-	93,93,93,93	0
60	MG	Aa	1731	1/1	0.87	0.45	-	82,82,82,82	0
60	MG	BA	3253	1/1	0.68	0.46	-	72,72,72,72	0
60	MG	AA	3140	1/1	0.86	0.54	-	107,107,107,107	0
60	MG	BA	3186	1/1	0.90	0.18	-	70,70,70,70	0
60	MG	AA	2949	1/1	0.96	0.48	-	63,63,63,63	0
60	MG	Ba	1652	1/1	0.87	0.80	-	80,80,80,80	0
60	MG	AA	3068	1/1	0.97	0.51	-	50,50,50,50	0
60	MG	Ba	1639	1/1	0.91	0.41	-	68,68,68,68	0
60	MG	Aa	1630	1/1	0.64	0.76	-	89,89,89,89	0
60	MG	Ba	1653	1/1	0.97	0.13	-	91,91,91,91	0
60	MG	Ba	1697	1/1	0.96	0.33	-	98,98,98,98	1
60	MG	BA	2921	1/1	0.79	0.78	-	77,77,77,77	0
60	MG	BA	2907	1/1	0.98	0.44	-	51,51,51,51	0
60	MG	Aa	1663	1/1	0.89	0.23	-	68,68,68,68	0
60	MG	BA	2923	1/1	0.93	0.41	-	60,60,60,60	0
60	MG	AA	3003	1/1	0.97	0.54	-	43,43,43,43	0
60	MG	AA	3038	1/1	0.95	0.82	-	95,95,95,95	0
60	MG	AA	3241	1/1	0.65	0.91	-	100,100,100,100	0
60	MG	Aa	1604	1/1	0.79	0.31	-	82,82,82,82	0
60	MG	AA	3131	1/1	0.97	0.36	-	75,75,75,75	0
60	MG	Aa	1610	1/1	0.57	0.91	-	117,117,117,117	0
60	MG	Ba	1720	1/1	0.82	0.97	-	123,123,123,123	0
60	MG	BA	3211	1/1	0.87	0.43	-	81,81,81,81	0
60	MG	Aa	1701	1/1	0.84	1.09	-	96,96,96,96	0
60	MG	Aa	1613	1/1	0.95	0.40	-	85,85,85,85	0
60	MG	BA	3146	1/1	0.73	0.36	-	112,112,112,112	0
60	MG	AA	3001	1/1	0.89	0.41	-	68,68,68,68	0
60	MG	BA	3177	1/1	0.86	0.67	-	66,66,66,66	0
60	MG	BA	3175	1/1	0.74	0.78	-	91,91,91,91	0
60	MG	AA	2975	1/1	0.78	1.60	-	97,97,97,97	0
60	MG	Aa	1702	1/1	0.91	0.54	-	65,65,65,65	0
60	MG	AA	3218	1/1	0.99	0.34	-	104,104,104,104	0
60	MG	BA	2963	1/1	0.89	0.90	-	91,91,91,91	0
60	MG	BA	3214	1/1	0.96	0.21	-	52,52,52,52	0
60	MG	BA	3207	1/1	0.84	0.26	-	90,90,90,90	0
60	MG	AA	3148	1/1	0.92	0.73	-	72,72,72,72	0
60	MG	BA	2949	1/1	0.90	0.21	-	63,63,63,63	0
60	MG	Ba	1611	1/1	0.93	0.24	-	81,81,81,81	0
60	MG	Aa	1714	1/1	0.74	0.54	-	111,111,111,111	0
60	MG	Ba	1718	1/1	0.67	0.34	-	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å ²)	Q<0.9
60	MG	Ba	1612	1/1	0.71	0.38	-	100,100,100,100	0
60	MG	AA	3221	1/1	0.88	0.26	-	59,59,59,59	0
60	MG	Ba	1686	1/1	0.84	0.11	-	79,79,79,79	0
60	MG	Ba	1683	1/1	0.93	0.11	-	93,93,93,93	0
60	MG	AA	3160	1/1	0.94	0.74	-	65,65,65,65	0
60	MG	Aa	1745	1/1	0.89	0.46	-	70,70,70,70	0
60	MG	Aa	1669	1/1	0.95	0.68	-	71,71,71,71	0
60	MG	AA	2935	1/1	0.87	0.50	-	90,90,90,90	0
60	MG	Aa	1638	1/1	0.93	0.31	-	84,84,84,84	0
60	MG	Ba	1647	1/1	0.33	0.91	-	148,148,148,148	0
60	MG	BA	2905	1/1	0.96	0.55	-	31,31,31,31	0
60	MG	Aa	1720	1/1	0.93	0.57	-	90,90,90,90	0
60	MG	Aa	1711	1/1	0.92	0.30	-	61,61,61,61	0
60	MG	Aa	1649	1/1	0.87	0.14	-	88,88,88,88	0
60	MG	Aa	1618	1/1	0.69	0.54	-	73,73,73,73	1
60	MG	BA	3140	1/1	0.83	0.88	-	60,60,60,60	0
60	MG	Ba	1654	1/1	0.89	1.18	-	97,97,97,97	0
60	MG	Aa	1716	1/1	0.93	0.10	-	79,79,79,79	0
60	MG	Aa	1682	1/1	0.82	0.34	-	97,97,97,97	0
60	MG	Aa	1648	1/1	0.87	0.43	-	118,118,118,118	0
60	MG	AA	3195	1/1	0.98	0.34	-	41,41,41,41	0
60	MG	Aa	1691	1/1	0.95	0.55	-	73,73,73,73	0
60	MG	BA	3242	1/1	0.93	0.46	-	73,73,73,73	0
60	MG	Av	103	1/1	0.94	0.78	-	69,69,69,69	1
60	MG	BA	2991	1/1	0.99	0.33	-	48,48,48,48	0
60	MG	BA	3139	1/1	0.96	0.11	-	67,67,67,67	0
60	MG	AA	2972	1/1	0.90	0.37	-	75,75,75,75	0
60	MG	AA	2985	1/1	0.86	0.39	-	44,44,44,44	0
60	MG	BA	3245	1/1	0.81	0.31	-	80,80,80,80	0
60	MG	Aa	1639	1/1	0.95	0.59	-	83,83,83,83	0
60	MG	Aa	1719	1/1	0.82	0.79	-	92,92,92,92	0
60	MG	Aa	1642	1/1	0.86	0.65	-	102,102,102,102	0
60	MG	BA	3128	1/1	0.98	0.34	-	40,40,40,40	0
60	MG	BA	3113	1/1	0.93	1.18	-	55,55,55,55	1
60	MG	BA	2953	1/1	0.92	0.43	-	100,100,100,100	0
60	MG	BA	3202	1/1	0.82	0.31	-	65,65,65,65	0
60	MG	Ba	1726	1/1	0.97	0.54	-	65,65,65,65	0
60	MG	Aa	1742	1/1	0.91	0.32	-	91,91,91,91	0
60	MG	BA	3233	1/1	0.84	0.61	-	109,109,109,109	0
60	MG	BA	3157	1/1	0.77	0.76	-	78,78,78,78	0
60	MG	BA	3064	1/1	0.96	0.50	-	44,44,44,44	0
60	MG	AA	3190	1/1	0.94	0.38	-	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å ²)	Q<0.9
60	MG	BA	2996	1/1	0.99	0.24	-	35,35,35,35	0
60	MG	Bv	104	1/1	0.80	1.59	-	118,118,118,118	1
60	MG	AA	3249	1/1	0.52	1.15	-	109,109,109,109	0
60	MG	Ba	1632	1/1	0.90	0.22	-	81,81,81,81	0
60	MG	BA	3201	1/1	0.95	0.29	-	62,62,62,62	0
60	MG	BA	3019	1/1	0.93	0.43	-	72,72,72,72	0
60	MG	BA	3074	1/1	0.65	0.65	-	97,97,97,97	0
60	MG	BA	3034	1/1	0.90	0.58	-	78,78,78,78	0
60	MG	AA	3013	1/1	0.92	0.85	-	49,49,49,49	0
60	MG	BA	3121	1/1	0.86	1.26	-	82,82,82,82	0
60	MG	BA	3003	1/1	0.97	0.17	-	73,73,73,73	0
60	MG	Ba	1713	1/1	0.42	0.37	-	105,105,105,105	0
60	MG	BA	3080	1/1	0.64	0.28	-	79,79,79,79	0
60	MG	Ba	1705	1/1	0.83	0.20	-	80,80,80,80	0
60	MG	Ba	1695	1/1	0.64	0.91	-	148,148,148,148	0
60	MG	B7	102	1/1	0.85	0.34	-	80,80,80,80	0
60	MG	Ba	1703	1/1	0.95	0.78	-	69,69,69,69	1
60	MG	Ba	1622	1/1	0.83	0.99	-	88,88,88,88	0
60	MG	Aa	1651	1/1	0.66	0.71	-	84,84,84,84	0
60	MG	Ba	1710	1/1	0.89	0.44	-	81,81,81,81	0
60	MG	AA	3079	1/1	0.92	0.33	-	95,95,95,95	0
60	MG	BA	3156	1/1	0.97	0.29	-	64,64,64,64	0
60	MG	Aa	1622	1/1	0.83	0.26	-	101,101,101,101	0
60	MG	Bv	103	1/1	0.94	0.24	-	110,110,110,110	0
60	MG	AA	3223	1/1	0.84	0.82	-	75,75,75,75	0
60	MG	BA	3182	1/1	0.62	0.49	-	140,140,140,140	0
60	MG	AA	3229	1/1	0.96	0.33	-	87,87,87,87	0
60	MG	BA	3217	1/1	0.86	0.66	-	76,76,76,76	0
60	MG	AA	2948	1/1	0.86	0.16	-	80,80,80,80	0
60	MG	Ba	1732	1/1	0.80	0.65	-	135,135,135,135	0
60	MG	AB	201	1/1	0.80	0.38	-	69,69,69,69	0
60	MG	AA	3096	1/1	0.96	0.64	-	109,109,109,109	0
60	MG	BA	3002	1/1	0.98	0.23	-	38,38,38,38	0
60	MG	Aa	1601	1/1	0.66	0.34	-	93,93,93,93	0
60	MG	BA	3169	1/1	0.98	0.58	-	58,58,58,58	0
60	MG	Ba	1661	1/1	0.81	0.88	-	98,98,98,98	0
60	MG	BA	2999	1/1	0.96	0.49	-	41,41,41,41	0
60	MG	BA	2951	1/1	0.82	0.56	-	90,90,90,90	0
60	MG	Aa	1657	1/1	0.91	1.05	-	93,93,93,93	0
60	MG	BA	3256	1/1	0.93	0.51	-	84,84,84,84	0
60	MG	Aa	1628	1/1	0.98	0.32	-	72,72,72,72	0
60	MG	Ba	1617	1/1	0.81	0.56	-	69,69,69,69	1

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	AA	2936	1/1	0.96	0.56	-	33,33,33,33	0
60	MG	BA	3025	1/1	0.98	0.33	-	69,69,69,69	0
60	MG	AA	3253	1/1	0.60	1.35	-	87,87,87,87	0
60	MG	BA	3163	1/1	0.96	0.14	-	87,87,87,87	0
60	MG	BA	2984	1/1	0.76	0.77	-	69,69,69,69	0
60	MG	Ba	1640	1/1	0.77	1.21	-	105,105,105,105	0
60	MG	Aa	1603	1/1	0.90	0.24	-	112,112,112,112	1
60	MG	BA	3265	1/1	0.52	0.84	-	104,104,104,104	0
60	MG	AA	3200	1/1	0.93	0.39	-	82,82,82,82	0
60	MG	AA	3072	1/1	0.95	0.26	-	79,79,79,79	0
60	MG	AA	3185	1/1	0.80	0.48	-	95,95,95,95	0
60	MG	BA	3126	1/1	0.69	0.77	-	154,154,154,154	0
60	MG	AA	2970	1/1	0.74	0.20	-	67,67,67,67	0
60	MG	AA	3163	1/1	0.83	0.62	-	89,89,89,89	0
60	MG	BA	3195	1/1	0.95	0.51	-	57,57,57,57	0
60	MG	A7	102	1/1	0.84	0.48	-	98,98,98,98	0
60	MG	Ba	1665	1/1	0.77	1.00	-	80,80,80,80	0
60	MG	Ba	1644	1/1	0.80	0.46	-	109,109,109,109	0
60	MG	BX	101	1/1	0.84	0.65	-	59,59,59,59	1
60	MG	AA	3207	1/1	0.65	0.71	-	122,122,122,122	0
60	MG	BA	3107	1/1	0.95	0.36	-	58,58,58,58	0
60	MG	Ba	1636	1/1	0.81	1.19	-	91,91,91,91	0
60	MG	BA	3229	1/1	0.76	0.60	-	101,101,101,101	0
60	MG	AA	3168	1/1	0.73	0.42	-	84,84,84,84	0
60	MG	BA	3118	1/1	0.83	0.52	-	82,82,82,82	0
60	MG	AA	2954	1/1	0.51	0.26	-	103,103,103,103	0
60	MG	BB	202	1/1	0.91	0.36	-	55,55,55,55	0
60	MG	AA	3142	1/1	0.78	0.24	-	65,65,65,65	0
60	MG	AA	3227	1/1	0.85	0.47	-	110,110,110,110	0
60	MG	BA	3203	1/1	0.97	0.56	-	67,67,67,67	0
60	MG	Aa	1707	1/1	0.84	0.65	-	79,79,79,79	0
60	MG	AA	3049	1/1	0.91	0.52	-	64,64,64,64	0
60	MG	Ba	1630	1/1	0.98	0.11	-	53,53,53,53	0
60	MG	BB	203	1/1	0.78	0.70	-	79,79,79,79	0
60	MG	BA	3154	1/1	0.65	0.54	-	164,164,164,164	0
60	MG	AA	3171	1/1	0.77	0.26	-	68,68,68,68	0
60	MG	BA	3189	1/1	0.88	0.89	-	62,62,62,62	0
60	MG	AA	2984	1/1	0.93	0.71	-	79,79,79,79	0
60	MG	Ba	1679	1/1	0.93	0.54	-	67,67,67,67	0
60	MG	AA	3155	1/1	0.88	0.83	-	72,72,72,72	0
60	MG	AA	3203	1/1	0.98	0.32	-	79,79,79,79	0
60	MG	AA	3062	1/1	0.87	0.17	-	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	Ba	1721	1/1	0.85	0.63	-	108,108,108,108	0
60	MG	AA	3248	1/1	0.78	0.47	-	141,141,141,141	0
60	MG	AA	3000	1/1	0.99	0.17	-	49,49,49,49	0
60	MG	AA	3035	1/1	0.94	0.47	-	74,74,74,74	0
60	MG	Ba	1662	1/1	0.90	0.20	-	68,68,68,68	0
60	MG	BA	2980	1/1	0.87	1.08	-	80,80,80,80	0
60	MG	AA	3178	1/1	0.89	1.08	-	86,86,86,86	0
60	MG	Aa	1699	1/1	0.44	0.36	-	125,125,125,125	1
60	MG	AA	3120	1/1	0.87	0.59	-	90,90,90,90	0
60	MG	Aa	1659	1/1	0.89	0.25	-	70,70,70,70	0
60	MG	AA	3172	1/1	0.96	0.46	-	58,58,58,58	0
60	MG	AA	3167	1/1	0.81	0.22	-	84,84,84,84	0
60	MG	AA	3077	1/1	0.95	0.58	-	60,60,60,60	0
60	MG	BA	3082	1/1	0.82	0.22	-	71,71,71,71	0
60	MG	Ba	1689	1/1	0.88	0.43	-	82,82,82,82	0
60	MG	Ba	1614	1/1	0.98	0.82	-	60,60,60,60	0
60	MG	AA	3216	1/1	0.98	0.30	-	74,74,74,74	0
60	MG	Ba	1615	1/1	0.91	0.81	-	86,86,86,86	0
60	MG	BA	3061	1/1	0.85	0.32	-	64,64,64,64	0
60	MG	BA	3077	1/1	0.98	0.36	-	69,69,69,69	0
60	MG	BA	3001	1/1	0.93	0.29	-	45,45,45,45	0
60	MG	BA	3112	1/1	0.94	0.32	-	81,81,81,81	0
60	MG	Aa	1671	1/1	0.80	0.40	-	113,113,113,113	0
60	MG	BA	3068	1/1	0.96	0.20	-	91,91,91,91	0
60	MG	AA	3236	1/1	0.76	1.19	-	90,90,90,90	0
60	MG	BA	3006	1/1	0.86	0.56	-	107,107,107,107	0
60	MG	BA	3039	1/1	0.99	0.31	-	44,44,44,44	0
60	MG	AA	2997	1/1	0.93	0.69	-	44,44,44,44	0
60	MG	Ba	1625	1/1	0.81	1.38	-	113,113,113,113	0
60	MG	Aa	1607	1/1	0.97	0.28	-	95,95,95,95	0
60	MG	Ba	1680	1/1	0.78	0.86	-	134,134,134,134	0
60	MG	AA	3023	1/1	0.96	0.28	-	96,96,96,96	0
60	MG	Ba	1701	1/1	0.99	0.32	-	71,71,71,71	0
60	MG	BA	3220	1/1	0.94	0.49	-	59,59,59,59	0
60	MG	BA	3196	1/1	0.97	0.55	-	45,45,45,45	0
60	MG	Ba	1670	1/1	0.67	0.59	-	132,132,132,132	0
60	MG	AA	2992	1/1	0.95	0.63	-	61,61,61,61	0
60	MG	BA	3228	1/1	0.83	0.87	-	82,82,82,82	0
60	MG	BA	2964	1/1	0.90	1.34	-	84,84,84,84	0
60	MG	AA	2963	1/1	0.95	0.85	-	65,65,65,65	0
60	MG	Aa	1717	1/1	0.82	0.17	-	90,90,90,90	0
60	MG	AX	101	1/1	0.75	1.11	-	96,96,96,96	1

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	Aa	1721	1/1	0.94	1.07	-	97,97,97,97	0
60	MG	BA	3153	1/1	0.82	0.82	-	73,73,73,73	0
60	MG	AA	3102	1/1	0.78	0.81	-	92,92,92,92	0
60	MG	BA	3192	1/1	0.97	0.39	-	43,43,43,43	0
60	MG	AA	3052	1/1	0.96	0.57	-	98,98,98,98	0
60	MG	AA	3205	1/1	0.90	0.52	-	58,58,58,58	0
60	MG	AA	2946	1/1	0.68	0.42	-	116,116,116,116	0
60	MG	AA	3127	1/1	0.98	0.66	-	44,44,44,44	0
60	MG	AA	3059	1/1	0.87	0.27	-	90,90,90,90	0
60	MG	BA	2933	1/1	0.95	0.57	-	84,84,84,84	0
60	MG	Aa	1616	1/1	0.57	0.72	-	123,123,123,123	0
60	MG	AA	3039	1/1	0.98	0.41	-	50,50,50,50	0
60	MG	AA	3054	1/1	0.93	0.42	-	43,43,43,43	0
60	MG	AA	3084	1/1	0.79	0.41	-	84,84,84,84	0
60	MG	BA	3168	1/1	0.94	0.11	-	87,87,87,87	0
60	MG	Aa	1700	1/1	0.68	0.48	-	84,84,84,84	1
60	MG	AA	3114	1/1	0.71	0.34	-	84,84,84,84	0
60	MG	Ba	1716	1/1	0.75	0.67	-	102,102,102,102	0
60	MG	BA	3130	1/1	0.81	0.55	-	63,63,63,63	0
60	MG	AA	2927	1/1	0.96	0.47	-	50,50,50,50	0
60	MG	BA	3225	1/1	0.84	0.41	-	99,99,99,99	0
60	MG	AA	3224	1/1	0.72	0.53	-	86,86,86,86	0
60	MG	BA	3257	1/1	0.95	0.58	-	63,63,63,63	0
60	MG	AA	3213	1/1	0.93	0.83	-	98,98,98,98	0
60	MG	BA	3143	1/1	0.84	2.37	-	90,90,90,90	0
60	MG	AA	3067	1/1	0.68	0.47	-	66,66,66,66	0
60	MG	Aa	1647	1/1	0.96	1.12	-	105,105,105,105	0
60	MG	Ba	1623	1/1	0.93	0.40	-	75,75,75,75	0
60	MG	BA	2904	1/1	0.99	0.12	-	138,138,138,138	0
60	MG	AA	3189	1/1	0.96	0.40	-	73,73,73,73	0
60	MG	Ba	1664	1/1	0.48	0.55	-	88,88,88,88	0
60	MG	AA	3045	1/1	0.97	0.23	-	55,55,55,55	0
60	MG	AA	3093	1/1	0.96	0.32	-	73,73,73,73	0
60	MG	Aa	1674	1/1	0.36	0.27	-	108,108,108,108	0
60	MG	Bw	101	1/1	0.41	0.32	-	140,140,140,140	1
60	MG	BA	2903	1/1	0.93	0.92	-	91,91,91,91	0
60	MG	AA	3029	1/1	0.92	0.40	-	74,74,74,74	0
60	MG	BA	3040	1/1	0.97	0.46	-	41,41,41,41	0
60	MG	BA	3098	1/1	0.93	0.56	-	77,77,77,77	0
60	MG	Ba	1668	1/1	0.82	0.65	-	80,80,80,80	0
60	MG	Ba	1638	1/1	0.92	0.52	-	79,79,79,79	0
60	MG	AA	3194	1/1	0.65	0.82	-	108,108,108,108	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	Ba	1666	1/1	0.94	1.16	-	84,84,84,84	0
60	MG	BA	2925	1/1	0.81	0.26	-	82,82,82,82	0
60	MG	Aa	1627	1/1	0.95	0.22	-	84,84,84,84	0
60	MG	AA	2941	1/1	0.96	0.48	-	68,68,68,68	0
60	MG	BA	3206	1/1	0.34	0.58	-	78,78,78,78	0
60	MG	BA	3187	1/1	0.97	0.61	-	68,68,68,68	0
60	MG	Aa	1694	1/1	0.92	0.71	-	107,107,107,107	0
60	MG	Ba	1650	1/1	0.85	0.81	-	82,82,82,82	0
60	MG	BA	3246	1/1	0.69	0.43	-	107,107,107,107	0
60	MG	AA	3210	1/1	0.90	1.01	-	99,99,99,99	0
60	MG	AA	3134	1/1	0.42	0.40	-	98,98,98,98	0
60	MG	BA	3007	1/1	0.97	0.41	-	56,56,56,56	0
60	MG	AA	3267	1/1	0.69	0.38	-	89,89,89,89	0
60	MG	AA	3024	1/1	0.95	0.45	-	51,51,51,51	0
60	MG	BA	2988	1/1	0.95	0.56	-	45,45,45,45	0
60	MG	BA	3170	1/1	0.90	0.17	-	58,58,58,58	0
60	MG	AA	2947	1/1	0.92	0.25	-	103,103,103,103	0
60	MG	BA	3155	1/1	0.89	0.24	-	77,77,77,77	1
60	MG	Aa	1685	1/1	0.96	0.08	-	85,85,85,85	0
60	MG	AA	3252	1/1	0.89	0.64	-	85,85,85,85	0
60	MG	AA	3250	1/1	0.92	0.23	-	65,65,65,65	0
60	MG	BA	3078	1/1	0.97	0.60	-	61,61,61,61	0
60	MG	Aa	1620	1/1	0.94	0.39	-	79,79,79,79	0
60	MG	BA	2934	1/1	0.94	0.52	-	65,65,65,65	1
60	MG	AB	203	1/1	0.82	0.57	-	71,71,71,71	0
60	MG	AA	3002	1/1	0.64	0.71	-	84,84,84,84	0
60	MG	AA	3239	1/1	0.17	1.07	-	113,113,113,113	0
60	MG	BA	3116	1/1	0.87	0.72	-	99,99,99,99	0
60	MG	AA	3078	1/1	0.87	0.87	-	94,94,94,94	0
60	MG	AA	3129	1/1	0.89	0.35	-	112,112,112,112	0
60	MG	AA	3251	1/1	0.95	0.61	-	68,68,68,68	0
60	MG	Aa	1637	1/1	0.73	1.22	-	99,99,99,99	0
60	MG	BA	3058	1/1	0.96	0.20	-	60,60,60,60	0
60	MG	BA	3111	1/1	0.87	0.53	-	99,99,99,99	0
60	MG	BA	3254	1/1	0.94	0.58	-	56,56,56,56	0
60	MG	Aa	1624	1/1	0.91	0.53	-	86,86,86,86	0
60	MG	AA	3042	1/1	0.98	0.18	-	49,49,49,49	0
60	MG	AA	3089	1/1	0.94	0.25	-	74,74,74,74	0
60	MG	AA	3259	1/1	0.88	0.51	-	65,65,65,65	0
60	MG	Aa	1739	1/1	0.95	0.86	-	100,100,100,100	0
60	MG	BA	3151	1/1	0.87	1.50	-	105,105,105,105	0
60	MG	Ba	1708	1/1	0.88	0.08	-	139,139,139,139	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	BA	3131	1/1	0.85	0.71	-	89,89,89,89	0
60	MG	AA	3139	1/1	0.79	0.68	-	90,90,90,90	0
60	MG	Ba	1739	1/1	0.77	0.81	-	82,82,82,82	0
60	MG	Aa	1660	1/1	0.92	0.47	-	88,88,88,88	0
60	MG	BA	3117	1/1	0.88	0.82	-	106,106,106,106	0
60	MG	AA	3066	1/1	0.98	0.24	-	55,55,55,55	0
60	MG	BA	2926	1/1	0.95	0.42	-	58,58,58,58	0
60	MG	AA	3204	1/1	0.66	0.24	-	84,84,84,84	0
60	MG	AA	3081	1/1	0.84	0.29	-	89,89,89,89	0
60	MG	BA	3241	1/1	0.91	0.55	-	106,106,106,106	0
60	MG	AA	3028	1/1	0.87	0.27	-	53,53,53,53	0
60	MG	BA	3238	1/1	0.93	0.33	-	89,89,89,89	0
60	MG	BA	2998	1/1	0.79	0.60	-	59,59,59,59	0
60	MG	BA	3089	1/1	0.96	0.34	-	61,61,61,61	0
60	MG	Aa	1678	1/1	0.88	1.24	-	111,111,111,111	1
60	MG	Aa	1631	1/1	0.99	0.17	-	52,52,52,52	0
60	MG	BA	2940	1/1	0.92	0.28	-	76,76,76,76	0
60	MG	BA	3104	1/1	0.95	0.18	-	36,36,36,36	0
60	MG	BA	3216	1/1	0.97	0.45	-	89,89,89,89	0
60	MG	AA	3022	1/1	0.95	0.36	-	43,43,43,43	0
60	MG	AA	3132	1/1	0.93	0.62	-	93,93,93,93	0
60	MG	BA	2944	1/1	0.91	0.14	-	86,86,86,86	0
60	MG	BA	2982	1/1	0.98	0.30	-	53,53,53,53	0
60	MG	BA	3205	1/1	0.91	0.39	-	113,113,113,113	0
60	MG	BA	2947	1/1	0.71	0.35	-	68,68,68,68	0
60	MG	AA	3245	1/1	0.84	0.55	-	71,71,71,71	0
60	MG	AA	2980	1/1	0.82	1.02	-	97,97,97,97	0
60	MG	AA	3156	1/1	0.79	0.38	-	83,83,83,83	0
60	MG	BA	3013	1/1	0.94	0.28	-	41,41,41,41	0
60	MG	AA	3017	1/1	0.92	0.22	-	59,59,59,59	0
60	MG	AA	2957	1/1	0.90	0.31	-	83,83,83,83	0
60	MG	AA	2923	1/1	0.93	0.78	-	75,75,75,75	0
60	MG	AA	3206	1/1	0.78	0.60	-	75,75,75,75	0
60	MG	Aa	1734	1/1	0.87	0.65	-	125,125,125,125	0
60	MG	BA	3142	1/1	0.91	0.71	-	61,61,61,61	0
60	MG	BA	3109	1/1	0.74	0.83	-	83,83,83,83	0
60	MG	AA	3211	1/1	0.61	0.14	-	97,97,97,97	0
60	MG	AA	3112	1/1	0.68	1.13	-	114,114,114,114	0
60	MG	AA	2925	1/1	0.69	0.50	-	92,92,92,92	0
60	MG	BA	3252	1/1	0.89	0.26	-	72,72,72,72	0
60	MG	Aa	1692	1/1	0.92	0.30	-	62,62,62,62	0
60	MG	Ba	1658	1/1	0.93	0.34	-	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
60	MG	AA	3044	1/1	0.97	0.42	-	46,46,46,46	0
60	MG	B5	101	1/1	0.93	0.42	-	43,43,43,43	0
60	MG	Ba	1637	1/1	0.81	0.53	-	103,103,103,103	0
60	MG	AA	3208	1/1	0.58	0.32	-	72,72,72,72	0
60	MG	BA	3106	1/1	0.97	0.55	-	58,58,58,58	0
60	MG	AA	2986	1/1	0.96	0.34	-	86,86,86,86	0
60	MG	Ba	1737	1/1	0.54	0.34	-	101,101,101,101	0
60	MG	AA	3026	1/1	0.97	0.50	-	43,43,43,43	0

6.5 Other polymers [i](#)

There are no such residues in this entry.