Full wwPDB EM Validation Report ⓘ

Mar 6, 2026 – 05:45 AM UTC

PDB ID	:	5AJ0 / pdb_00005aj0
EMDB ID	:	EMD-2875
Title	:	Cryo electron microscopy of actively translating human polysomes (POST state).
Authors	:	Behrmann, E.; Loerke, J.; Budkevich, T.V.; Yamamoto, K.; Schmidt, A.; Penczek, P.A.; Vos, M.R.; Burger, J.; Mielke, T.; Scheerer, P.; Spahn, C.M.T.
Deposited on	:	2015-02-19
Resolution	:	3.50 Å(reported)
Based on initial model	:	4UJE

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

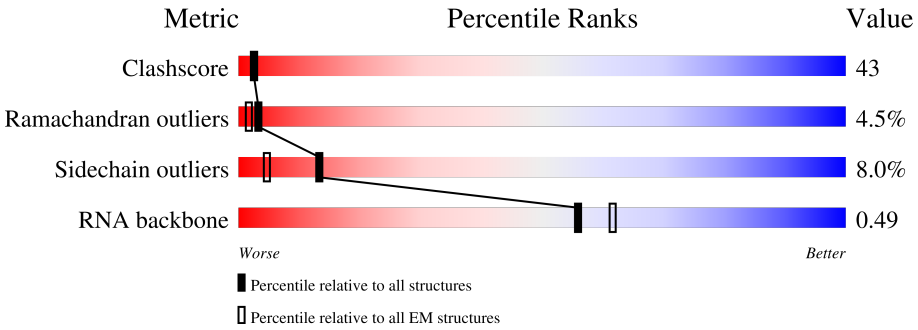
EMDB validation analysis	:	0.0.1.dev132
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	NOT EXECUTED
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 3.50 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)	EM structures (#Entries)
Clashscore	229148	23984
Ramachandran outliers	224038	23583
Sidechain outliers	223484	23102
RNA backbone	8273	3508

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. 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 <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A3	194	81% 26% 28% 21% 6% 19%
2	A4	121	98% 26% 41% 31%
3	AA	257	98% 52% 39% 7%
4	AB	403	98% 41% 50% 6%
5	AC	427	85% 40% 37% 7% 15%
6	AD	297	99% 53% 36% 9%
7	AE	288	67% 19% 27% 17% 33%

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Mol	Chain	Length	Quality of chain
8	AF	248	94% 51% 37% 6%
9	AG	266	88% 48% 37% 12%
10	AH	192	99% 59% 33% 6%
11	AI	214	97% 61% 31% 5%
12	AJ	178	95% 56% 34% 5%
13	AK	317	34% 12% 12% 6% 66%
14	AL	211	97% 40% 40% 14%
15	AM	215	65% 29% 28% 7% 35%
16	AN	204	100% 55% 41%
17	AO	203	96% 55% 38%
18	AP	184	83% 45% 34% 17%
19	AQ	188	99% 43% 41% 13%
20	AR	196	92% 45% 39% 7% 8%
21	AS	176	99% 49% 45%
22	AT	160	98% 52% 39% 6%
23	AU	128	77% 37% 29% 11% 23%
24	AV	140	92% 53% 36% 8%
25	AW	157	77% 39% 31% 7% 23%
26	AX	156	75% 46% 23% 6% 25%
27	AY	145	88% 43% 34% 10% 12%
28	AZ	136	99% 37% 43% 15%
29	Aa	148	99% 36% 51% 9%
30	Ab	159	43% 21% 19% 57%
31	Ac	115	90% 49% 36% 10%
32	Ad	125	85% 61% 22% 15%

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Mol	Chain	Length	Quality of chain
33	Ae	135	96% 47% 44%
34	Af	110	99% 46% 42% 8%
35	Ag	117	97% 58% 34% 5%
36	Ah	123	99% 44% 40% 15%
37	Ai	105	92% 51% 33% 8% 8%
38	Aj	97	87% 27% 45% 12% 13%
39	Ak	70	99% 23% 43% 20% 13%
40	Al	51	98% 43% 49% 6%
41	Am	128	39% 23% 16% 61%
42	An	25	100% 52% 44%
43	Ao	106	99% 52% 38% 8%
44	Ap	92	99% 49% 46%
45	Aq	165	84% 16% 25% 31% 12% 16%
46	At	137	89% 21% 53% 15% 11%
47	Au	217	100% 41% 46% 11%
48	A2	5029	72% 25% 27% 17% 28%
49	B1	1869	91% 29% 38% 22% 9%
50	BA	295	73% 30% 36% 6% 27%
51	BB	264	80% 33% 34% 12% 20%
52	BC	293	76% 45% 26% 5% 24%
53	BD	243	91% 53% 33% 9%
54	BE	263	98% 45% 46% 5%
55	BF	204	93% 40% 48% 5% 7%
56	BG	249	93% 33% 48% 12% 7%
57	BH	194	94% 59% 32% 6%

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Mol	Chain	Length	Quality of chain
58	BI	208	100% 46% 48% 6%
59	BJ	194	92% 22% 59% 11% 8%
60	BK	165	59% 24% 30% 41%
61	BL	158	97% 45% 44% 7%
62	BM	132	91% 46% 40% 5% 9%
63	BN	151	99% 50% 36% 13%
64	BO	151	90% 35% 44% 9% 10%
65	BP	145	83% 22% 45% 9% 7% 17%
66	BQ	146	95% 34% 47% 12% 5%
67	BR	135	93% 27% 48% 14% 7%
68	BS	152	91% 28% 48% 14% 9%
69	BT	145	99% 46% 48% 6%
70	BU	119	82% 33% 43% 6% 18%
71	BV	83	98% 51% 37% 10%
72	BW	130	99% 45% 48% 5%
73	BX	143	97% 50% 39% 8%
74	BY	133	94% 49% 41% 6%
75	BZ	125	69% 22% 32% 14% 31%
76	Ba	115	84% 30% 46% 8% 16%
77	Bb	84	95% 60% 33% 5%
78	Bc	69	90% 45% 38% 7% 10%
79	Bd	56	91% 23% 45% 21% 9%
80	Be	59	93% 39% 39% 15% 7%
81	Bf	156	47% 24% 22% 53%
82	Bg	317	99% 61% 36%

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Mol	Chain	Length	Quality of chain
83	Bv	76	100% 30% 33% 34%
83	Bw	76	100% 36% 39% 25%
84	Bx	28	100% 57% 43%
85	By	24	100% 79% 21%

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
86	MG	B1	1941	-	-	X	-

2 Entry composition (i)

There are 87 unique types of molecules in this entry. The entry contains 218559 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a RNA chain called 5.8S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	A3	157	3337	1489	587	1104	157	0	0

- Molecule 2 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	A4	119	2541	1132	454	836	119	0	0

- Molecule 3 is a protein called 60S ribosomal protein L8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	AA	252	1930	1209	395	320	6	0	0

- Molecule 4 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	AB	394	3178	2024	596	544	14	0	0

- Molecule 5 is a protein called 60S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	AC	363	2888	1817	577	480	14	0	0

- Molecule 6 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	AD	294	2392	1510	436	432	14	0	0

- Molecule 7 is a protein called 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	AE	194	Total	C	N	O	S	0	0
			1571	1013	294	263	1		

- Molecule 8 is a protein called 60S ribosomal protein L7.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	AF	234	Total	C	N	O	S	0	0
			1950	1252	376	313	9		

- Molecule 9 is a protein called 60S ribosomal protein L7a.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	AG	234	Total	C	N	O	S	0	0
			1880	1197	362	317	4		

- Molecule 10 is a protein called 60S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	AH	191	Total	C	N	O	S	0	0
			1526	960	285	275	6		

- Molecule 11 is a protein called 60S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	AI	208	Total	C	N	O	S	0	0
			1692	1074	327	278	13		

- Molecule 12 is a protein called 60S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	AJ	169	Total	C	N	O	S	0	0
			1353	855	252	240	6		

- Molecule 13 is a protein called 60S acidic ribosomal protein P0.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	AK	109	Total	C	N	O	S	0	0
			872	554	159	151	8		

- Molecule 14 is a protein called 60S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	AL	205	Total	C	N	O	S	0	0
			1657	1036	344	273	4		

- Molecule 15 is a protein called 60S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	AM	139	Total	C	N	O	S	0	0
			1138	730	218	183	7		

- Molecule 16 is a protein called 60S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	AN	203	Total	C	N	O	S	0	0
			1701	1072	359	266	4		

- Molecule 17 is a protein called 60S ribosomal protein L13a.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	AO	195	Total	C	N	O	S	0	0
			1606	1034	315	252	5		

- Molecule 18 is a protein called 60S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	AP	153	Total	C	N	O	S	0	0
			1242	776	241	216	9		

- Molecule 19 is a protein called 60S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	AQ	187	Total	C	N	O	S	0	0
			1513	944	314	250	5		

- Molecule 20 is a protein called 60S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	AR	181	Total	C	N	O	S	0	0
			1517	938	329	241	9		

- Molecule 21 is a protein called 60S ribosomal protein L18a.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	AS	175	Total	C	N	O	S	0	0
			1449	921	283	234	11		

- Molecule 22 is a protein called 60S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	AT	157	Total	C	N	O	S	0	0
			1284	815	250	214	5		

- Molecule 23 is a protein called 60S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	AU	99	Total	C	N	O	S	0	0
			808	518	141	147	2		

- Molecule 24 is a protein called 60S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	AV	129	Total	C	N	O	S	0	0
			969	613	182	169	5		

- Molecule 25 is a protein called 60S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	AW	121	Total	C	N	O	S	0	0
			989	617	202	167	3		

- Molecule 26 is a protein called 60S ribosomal protein L23a.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	AX	117	Total	C	N	O	S	0	0
			958	612	180	165	1		

- Molecule 27 is a protein called 60S ribosomal protein L26.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	AY	127	Total	C	N	O	S	0	0
			1064	668	216	177	3		

- Molecule 28 is a protein called 60S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	AZ	134	Total	C	N	O	S	0	0
			1103	712	207	181	3		

- Molecule 29 is a protein called 60S ribosomal protein L27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	Aa	147	Total	C	N	O	S	0	0
			1162	736	237	186	3		

- Molecule 30 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	Ab	68	Total	C	N	O	S	0	0
			559	344	122	90	3		

- Molecule 31 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	Ac	103	Total	C	N	O	S	0	0
			801	508	141	145	7		

- Molecule 32 is a protein called 60S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Ad	106	Total	C	N	O	S	0	0
			879	555	170	152	2		

- Molecule 33 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Ae	129	Total	C	N	O	S	0	0
			1064	673	220	166	5		

- Molecule 34 is a protein called 60S ribosomal protein L35a.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	Af	109	Total	C	N	O	S	0	0
			876	555	174	144	3		

- Molecule 35 is a protein called 60S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Ag	114	Total	C	N	O	S	0	0
			906	566	187	147	6		

- Molecule 36 is a protein called 60S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	Ah	122	Total	C	N	O	S	0	0
			1015	641	205	168	1		

- Molecule 37 is a protein called 60S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	Ai	97	Total	C	N	O	S	0	0
			794	497	168	124	5		

- Molecule 38 is a protein called 60S ribosomal protein L37.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	Aj	84	Total	C	N	O	S	0	0
			689	423	152	109	5		

- Molecule 39 is a protein called 60S ribosomal protein L38.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	Ak	69	Total	C	N	O	S	0	0
			569	366	103	99	1		

- Molecule 40 is a protein called 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	Al	50	Total	C	N	O	S	0	0
			444	281	98	64	1		

- Molecule 41 is a protein called Ubiquitin-60S ribosomal protein L40.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	Am	50	Total	C	N	O	S	0	0
			411	254	87	64	6		

- Molecule 42 is a protein called 60S ribosomal protein L41.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	An	25	Total	C	N	O	S	0	0
			240	145	64	28	3		

- Molecule 43 is a protein called 60S ribosomal protein L36a.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	Ao	105	Total	C	N	O	S	0	0
			863	542	175	140	6		

- Molecule 44 is a protein called 60S ribosomal protein L37a.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	Ap	91	Total	C	N	O	S	0	0
			708	445	136	120	7		

- Molecule 45 is a protein called 60S ribosomal protein L12.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	Aq	138	Total	C	N	O	S	0	0
			1046	654	196	193	3		

- Molecule 46 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	At	122	Total	C	N	O	S	0	0
			980	607	204	165	4		

- Molecule 47 is a protein called 60S ribosomal protein L10a.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	Au	217	Total	C	N	O	S	0	0
			1744	1114	314	307	9		

- Molecule 48 is a RNA chain called 28S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	A2	3612	Total	C	N	O	P	0	0
			77427	34482	14158	25175	3612		

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A2	245	C	-	insertion	GB 337381
A2	246	C	-	insertion	GB 337381
A2	247	C	-	insertion	GB 337381
A2	4684	G	-	insertion	GB 337381

- Molecule 49 is a RNA chain called 18S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	B1	1708	Total	C	N	O	P	0	0
			36456	16274	6546	11928	1708		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
50	BA	215	Total	C	N	O	S	0	0
			1704	1083	298	315	8		

- Molecule 51 is a protein called 40S ribosomal protein S3a.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	BB	212	Total	C	N	O	S	0	0
			1722	1093	308	307	14		

- Molecule 52 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	BC	222	Total	C	N	O	S	0	0
			1724	1114	296	304	10		

- Molecule 53 is a protein called 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	BD	220	Total	C	N	O	S	0	0
			1709	1090	308	304	7		

- Molecule 54 is a protein called 40S ribosomal protein S4, Y isoform 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	BE	257	Total	C	N	O	S	0	0
			2031	1298	381	344	8		

- Molecule 55 is a protein called 40S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	BF	190	Total	C	N	O	S	0	0
			1502	939	285	271	7		

- Molecule 56 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	BG	232	Total	C	N	O	S	0	0
			1884	1176	379	322	7		

- Molecule 57 is a protein called 40S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	BH	183	Total	C	N	O	S	0	0
			1479	941	272	265	1		

- Molecule 58 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	BI	207	Total	C	N	O	S	0	0
			1696	1064	334	293	5		

- Molecule 59 is a protein called 40S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	BJ	179	Total	C	N	O	S	0	0
			1495	953	299	241	2		

- Molecule 60 is a protein called 40S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	BK	98	Total	C	N	O	S	0	0
			827	539	148	134	6		

- Molecule 61 is a protein called 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	BL	153	Total	C	N	O	S	0	0
			1258	804	235	213	6		

- Molecule 62 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	BM	120	Total	C	N	O	S	0	0
			931	584	164	174	9		

- Molecule 63 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	BN	149	Total	C	N	O	S	0	0
			1202	770	228	203	1		

- Molecule 64 is a protein called 40S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	BO	136	Total	C	N	O	S	0	0
			1016	621	199	190	6		

- Molecule 65 is a protein called 40S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	BP	120	Total	C	N	O	S	0	0
			999	636	188	168	7		

- Molecule 66 is a protein called 40S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	BQ	139	Total	C	N	O	S	0	0
			1109	704	210	192	3		

- Molecule 67 is a protein called 40S ribosomal protein S17-like.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	BR	125	Total	C	N	O	S	0	0
			1011	634	187	186	4		

- Molecule 68 is a protein called 40S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	BS	139	Total	C	N	O	S	0	0
			1154	725	233	195	1		

- Molecule 69 is a protein called 40S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	BT	143	Total	C	N	O	S	0	0
			1112	697	214	198	3		

- Molecule 70 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	BU	97	Total	C	N	O	S	0	0
			769	483	144	138	4		

- Molecule 71 is a protein called 40S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	BV	81	Total	C	N	O	S	0	0
			617	380	114	118	5		

- Molecule 72 is a protein called 40S ribosomal protein S15a.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	BW	129	Total	C	N	O	S	0	0
			1034	659	193	176	6		

- Molecule 73 is a protein called 40S ribosomal protein S23.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	BX	139	Total	C	N	O	S	0	0
			1080	682	214	181	3		

- Molecule 74 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	BY	125	Total	C	N	O	S	0	0
			1015	642	199	169	5		

- Molecule 75 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	BZ	86	Total	C	N	O	S	0	0
			688	442	129	116	1		

- Molecule 76 is a protein called 40S ribosomal protein S26.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	Ba	97	Total	C	N	O	S	0	0
			774	481	160	128	5		

- Molecule 77 is a protein called 40S ribosomal protein S27.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	Bb	80	Total	C	N	O	S	0	0
			625	391	116	111	7		

- Molecule 78 is a protein called 40S ribosomal protein S28.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	Bc	62	Total	C	N	O	S	0	0
			488	297	97	92	2		

- Molecule 79 is a protein called 40S ribosomal protein S29.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	Bd	51	Total	C	N	O	S	0	0
			427	269	87	66	5		

- Molecule 80 is a protein called 40S ribosomal protein S30.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	Be	55	Total	C	N	O	S	0	0
			437	272	96	68	1		

- Molecule 81 is a protein called Ubiquitin-40S ribosomal protein S27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	Bf	73	Total	C	N	O	S	0	0
			601	379	115	100	7		

- Molecule 82 is a protein called Guanine nucleotide-binding protein subunit beta-2-like 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	Bg	314	Total	C	N	O	S	0	0
			2440	1537	425	466	12		

- Molecule 83 is a RNA chain called tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
83	Bv	76	Total 1623	C 723	N 290	O 534	P 76	0	0
83	Bw	76	Total 1623	C 723	N 290	O 534	P 76	0	0

- Molecule 84 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
84	Bx	28	Total 561	C 252	N 56	O 225	P 28	0	0

- Molecule 85 is a protein called Nascent protein chain.

Mol	Chain	Residues	Atoms				AltConf	Trace
85	By	24	Total 120	C 72	N 24	O 24	0	0

- Molecule 86 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
86	A3	8	Total 8	Mg 8	0
86	A4	9	Total 9	Mg 9	0
86	AA	1	Total 1	Mg 1	0
86	AB	2	Total 2	Mg 2	0
86	AN	2	Total 2	Mg 2	0
86	AY	1	Total 1	Mg 1	0
86	Aa	3	Total 3	Mg 3	0
86	Ae	2	Total 2	Mg 2	0
86	An	1	Total 1	Mg 1	0
86	A2	220	Total 220	Mg 220	0
86	B1	72	Total 72	Mg 72	0

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Mol	Chain	Residues	Atoms	AltConf
86	BD	1	Total Mg 1 1	0
86	BX	1	Total Mg 1 1	0
86	Bv	2	Total Mg 2 2	0
86	Bx	1	Total Mg 1 1	0

- Molecule 87 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	AltConf
87	Aj	1	Total Zn 1 1	0
87	Ao	1	Total Zn 1 1	0
87	Ap	1	Total Zn 1 1	0
87	Ba	1	Total Zn 1 1	0
87	Bd	1	Total Zn 1 1	0

3 Residue-property plots (i)

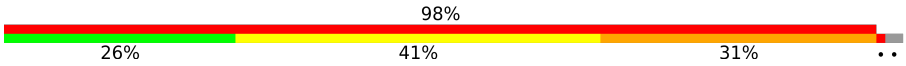
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

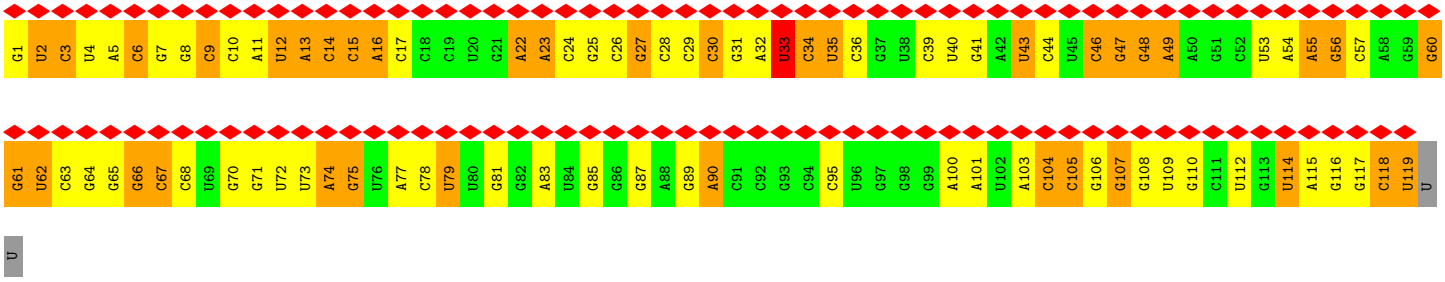
• Molecule 1: 5.8S ribosomal RNA

Chain A3:

• Molecule 2: 5S ribosomal RNA

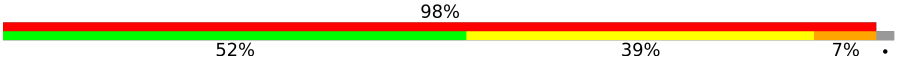
Chain A4:

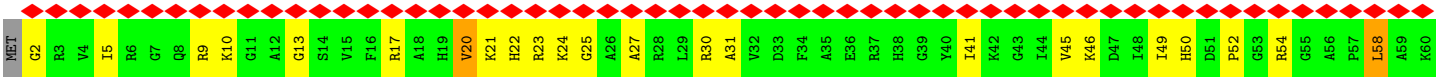




• Molecule 3: 60S ribosomal protein L8

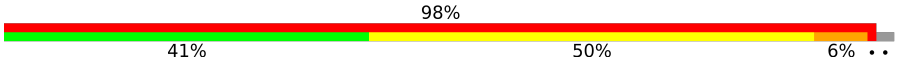
Chain AA:

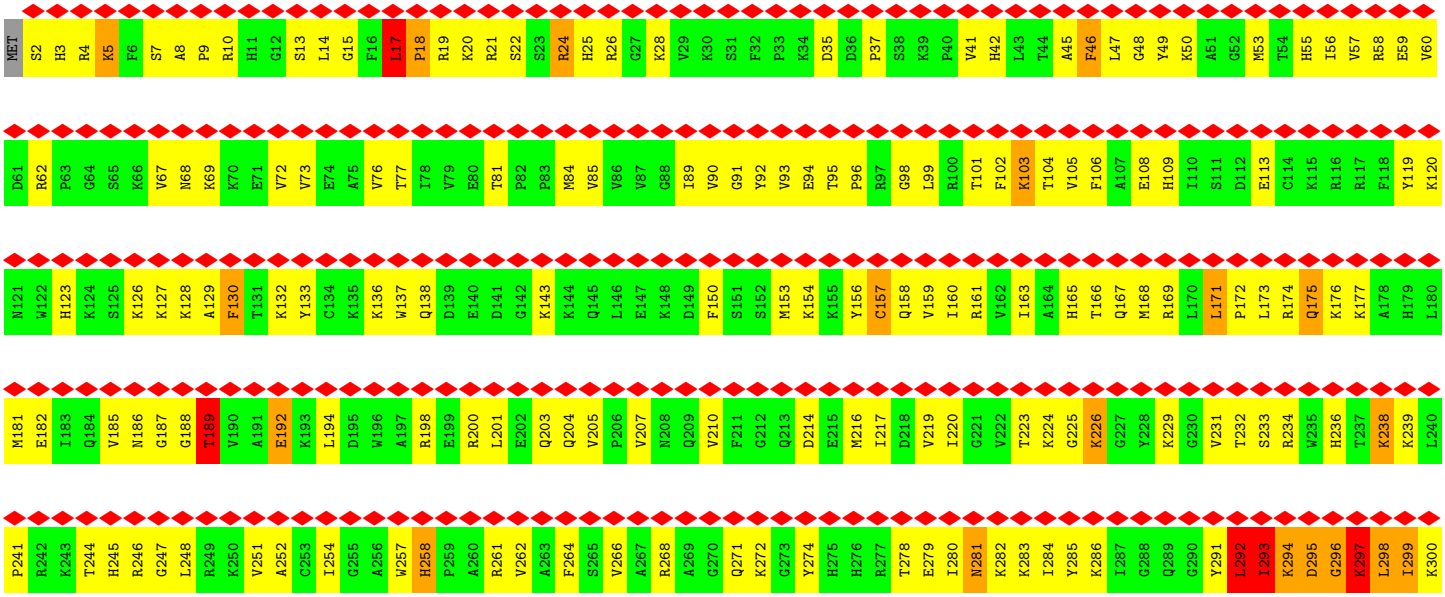




• Molecule 4: 60S ribosomal protein L3

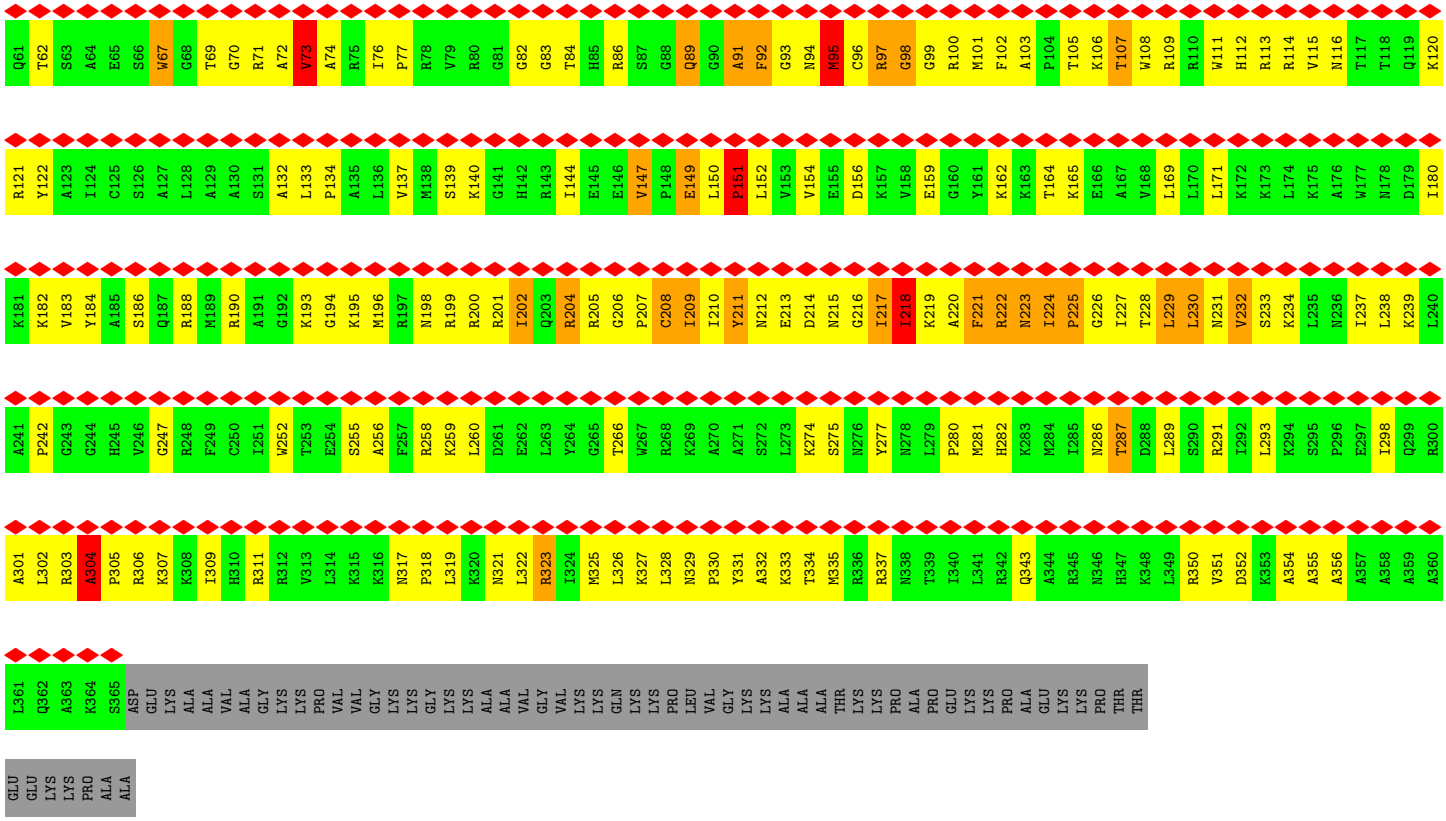
Chain AB:





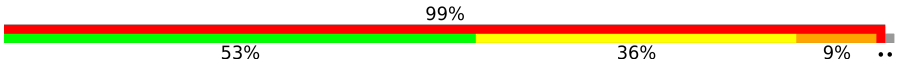
• Molecule 5: 60S ribosomal protein L4

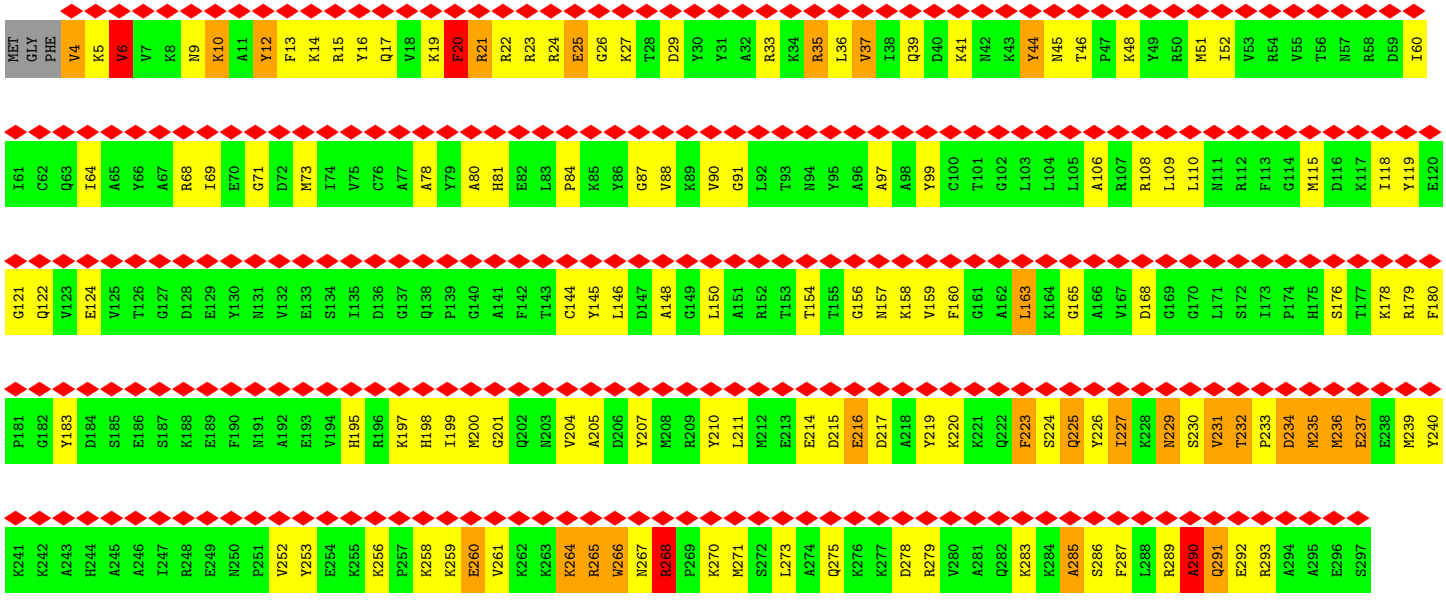
Chain AC:



• Molecule 6: 60S ribosomal protein L5

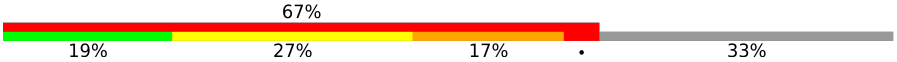
Chain AD:

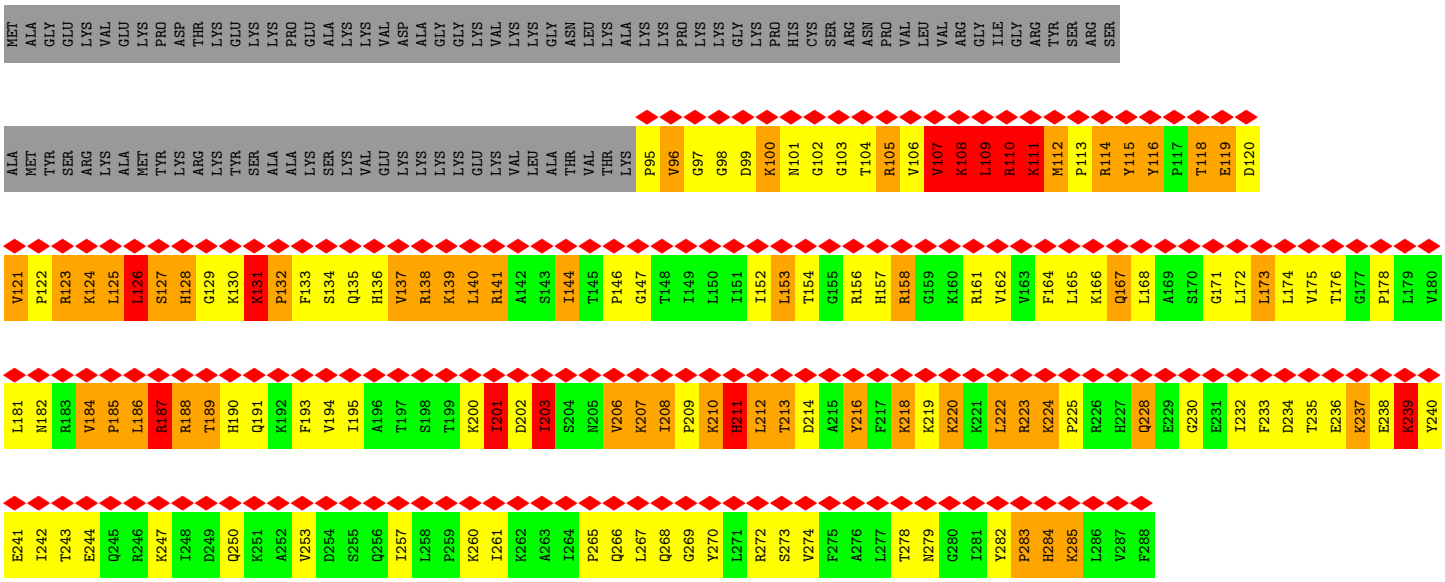




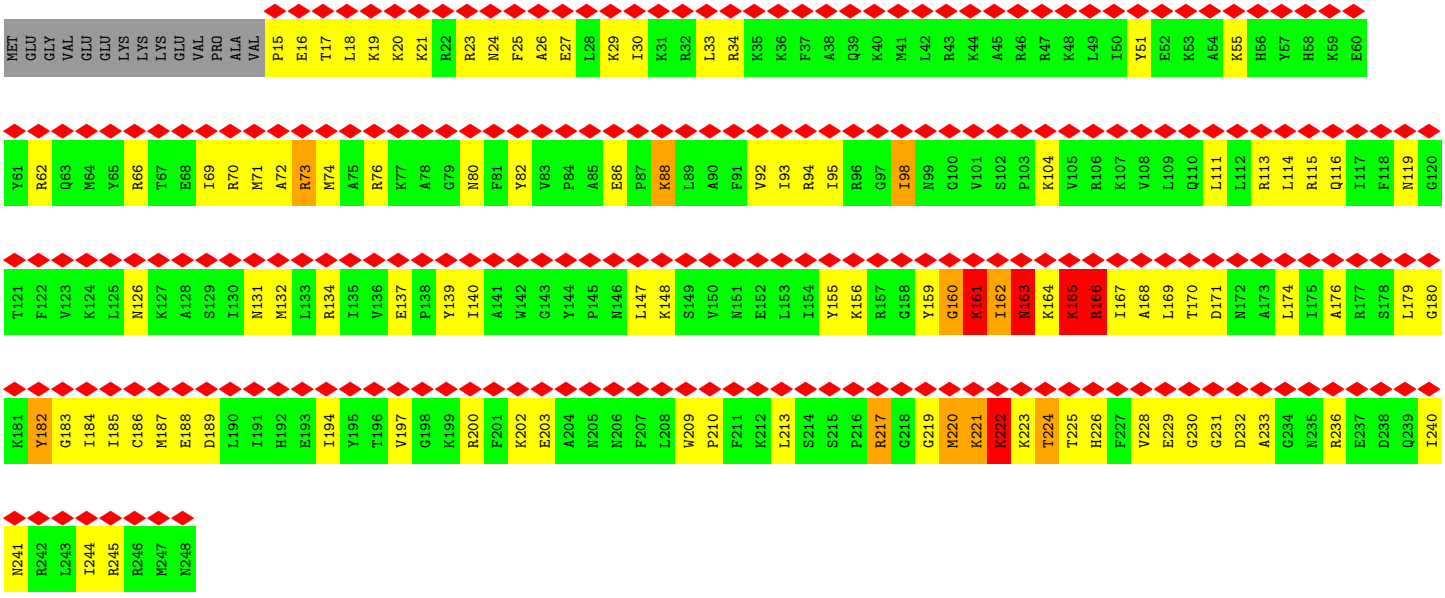
• Molecule 7: 60S ribosomal protein L6

Chain AE:

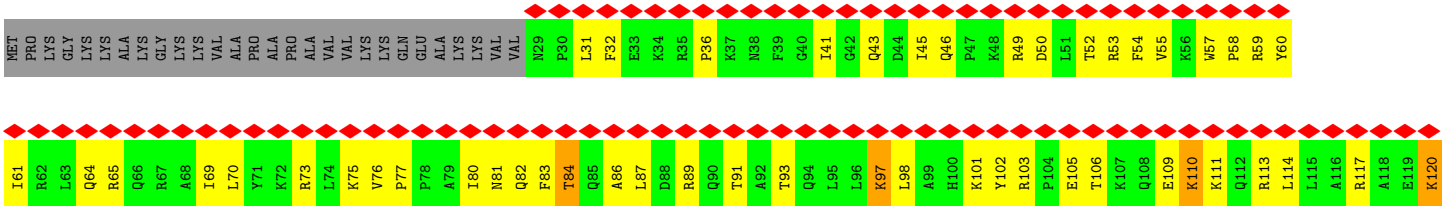


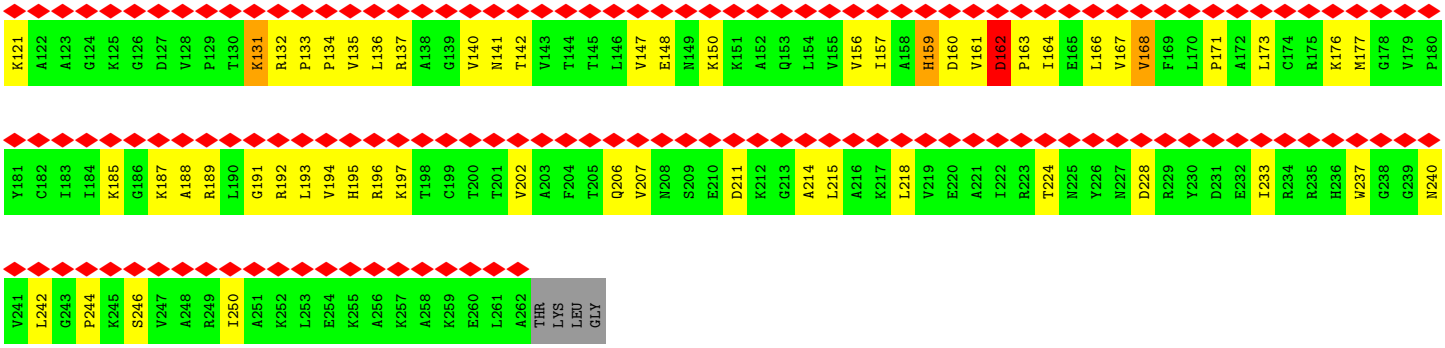


• Molecule 8: 60S ribosomal protein L7



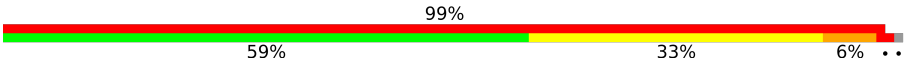
• Molecule 9: 60S ribosomal protein L7a

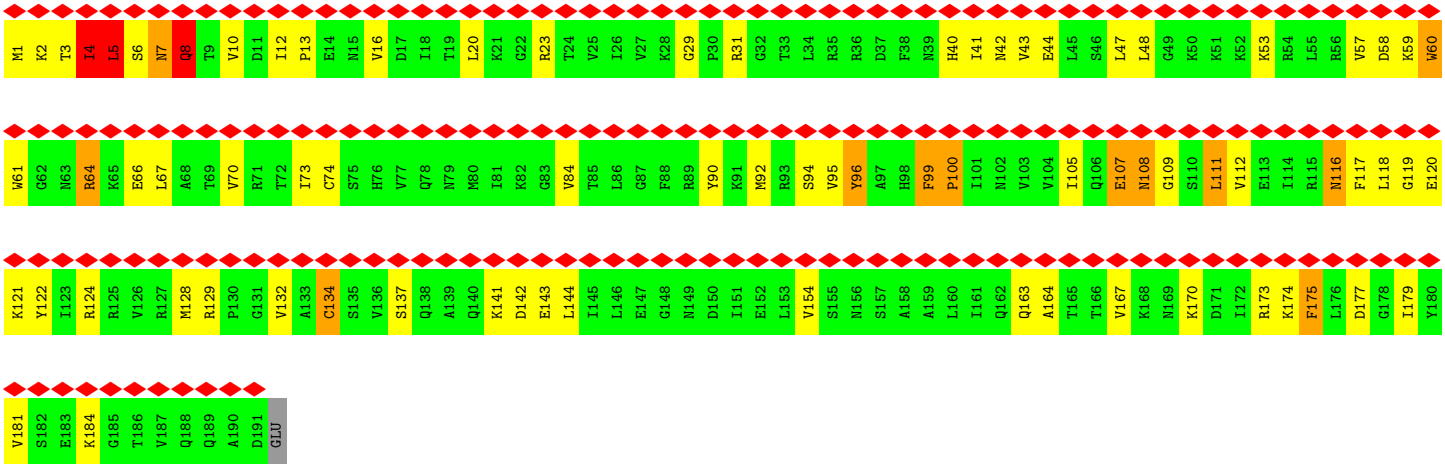




• Molecule 10: 60S ribosomal protein L9

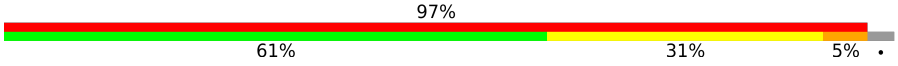
Chain AH:

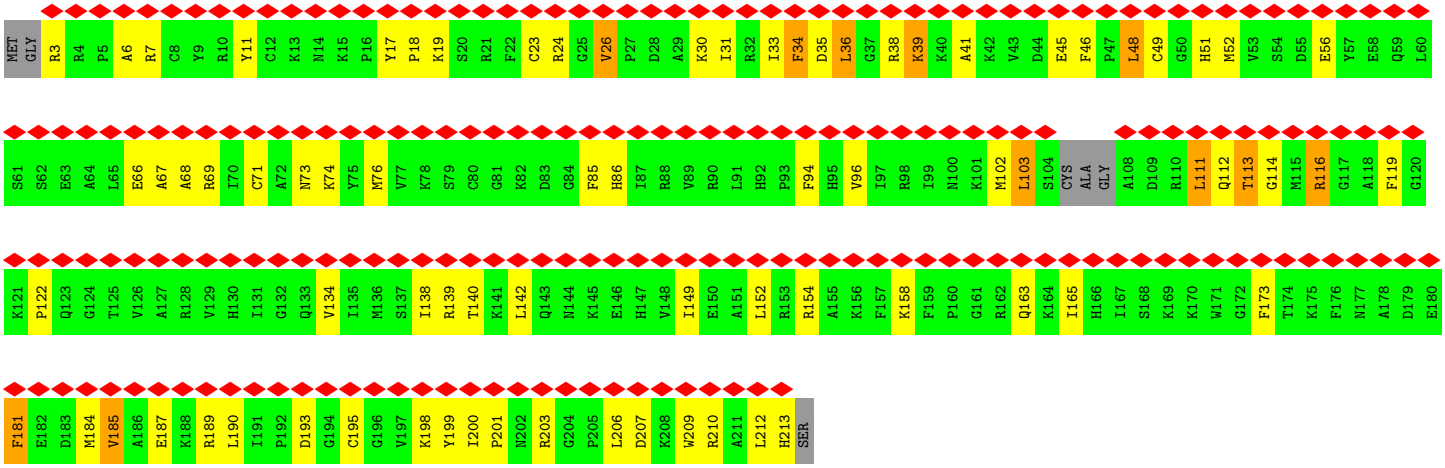




• Molecule 11: 60S ribosomal protein L10

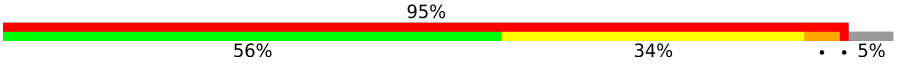
Chain AI:

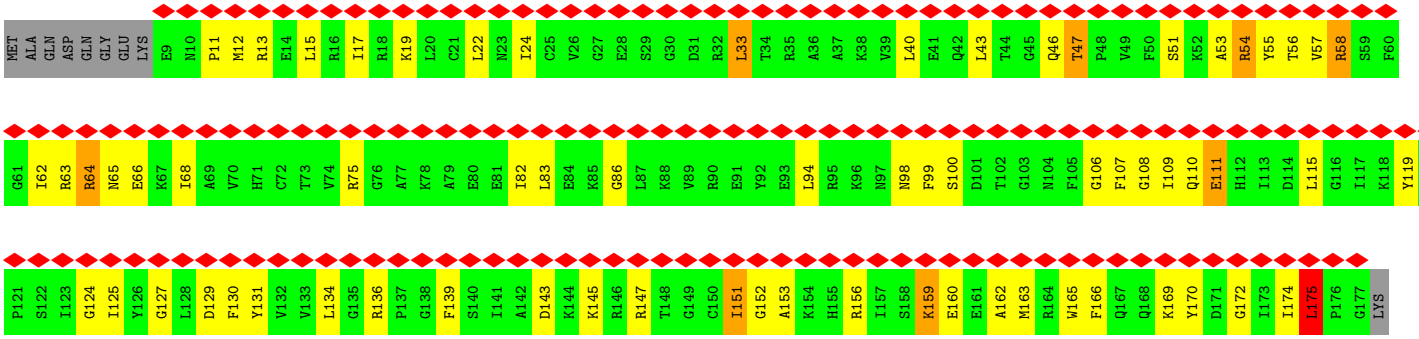




• Molecule 12: 60S ribosomal protein L11

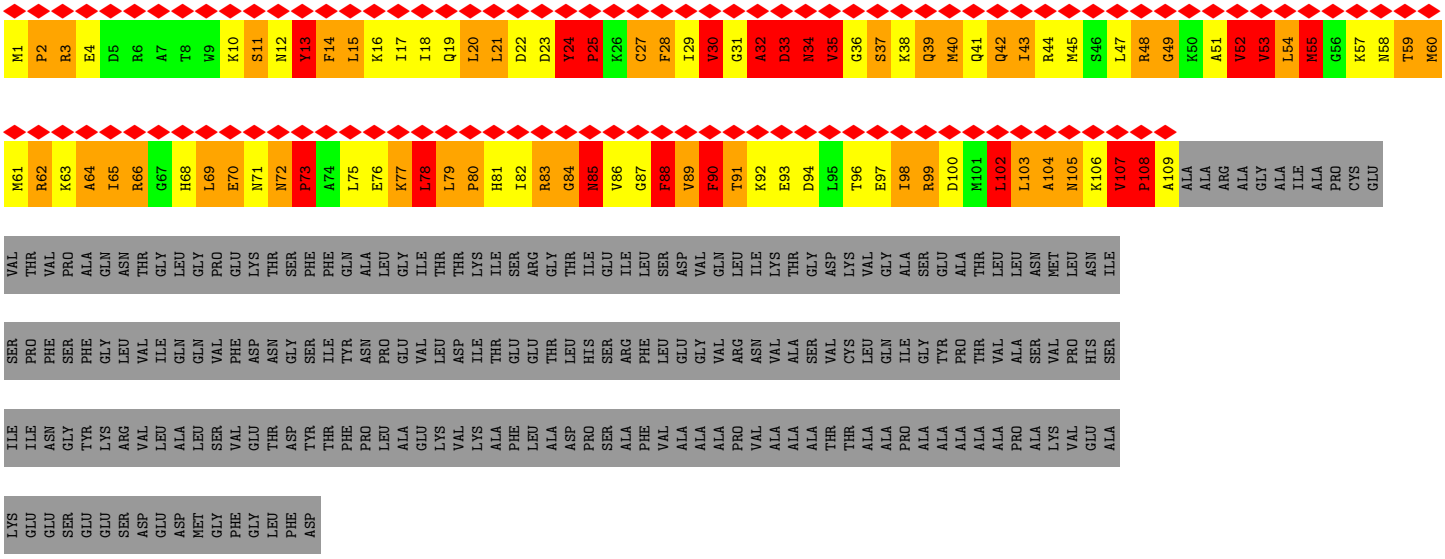
Chain AJ:





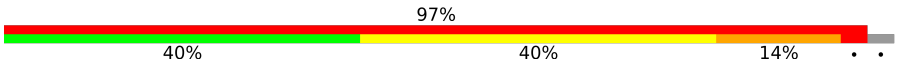
• Molecule 13: 60S acidic ribosomal protein P0

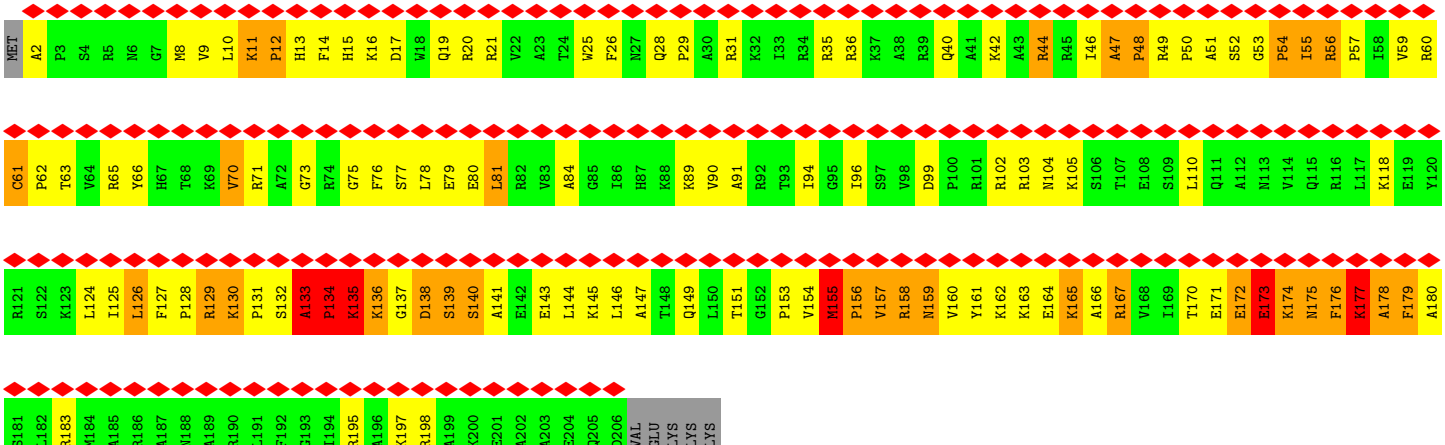
Chain AK:



• Molecule 14: 60S ribosomal protein L13

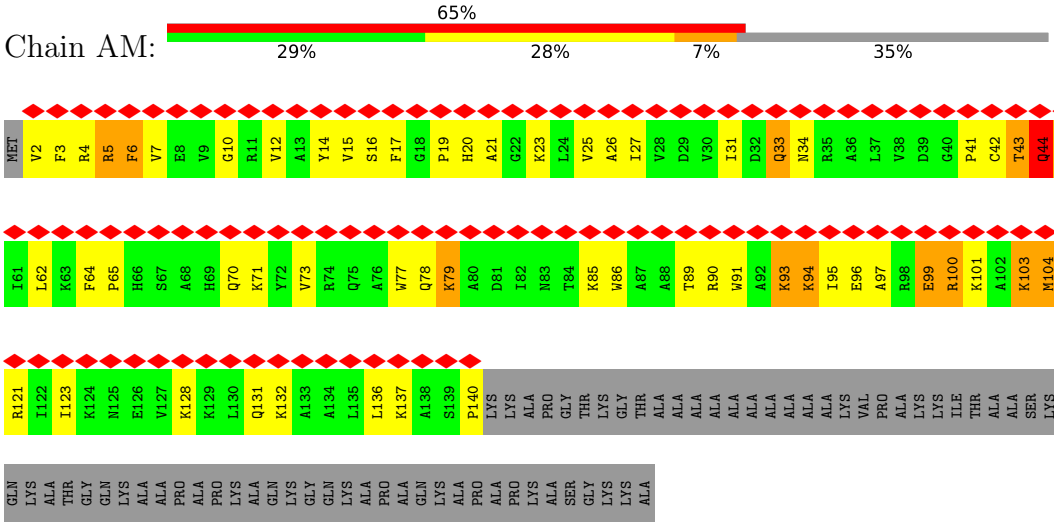
Chain AL:





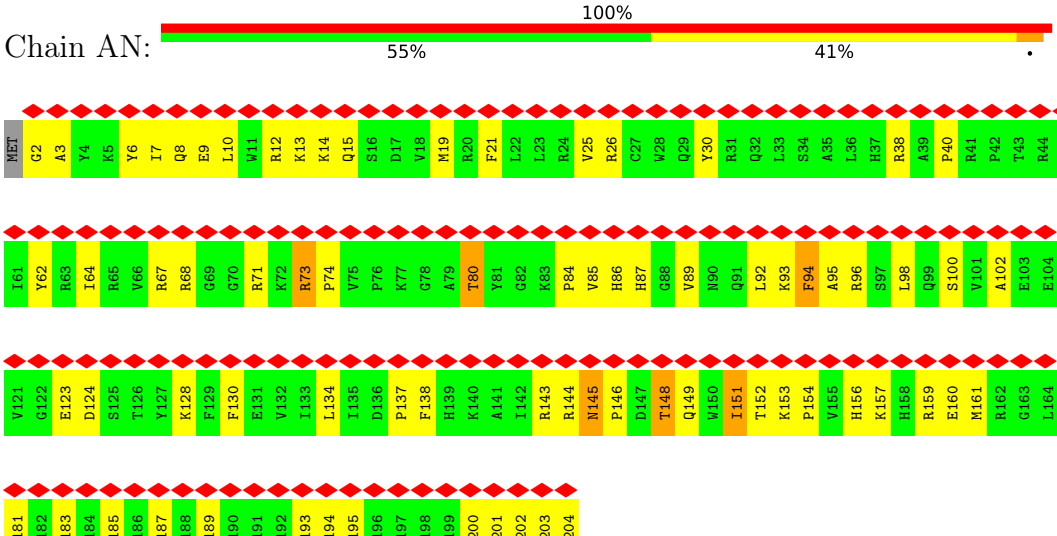
• Molecule 15: 60S ribosomal protein L14

Chain AM:



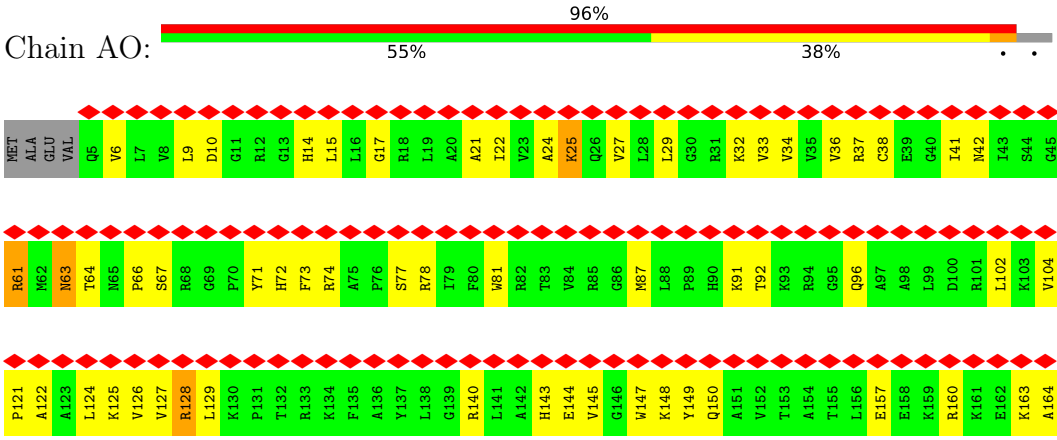
• Molecule 16: 60S ribosomal protein L15

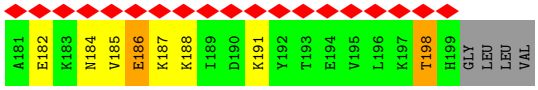
Chain AN:



• Molecule 17: 60S ribosomal protein L13a

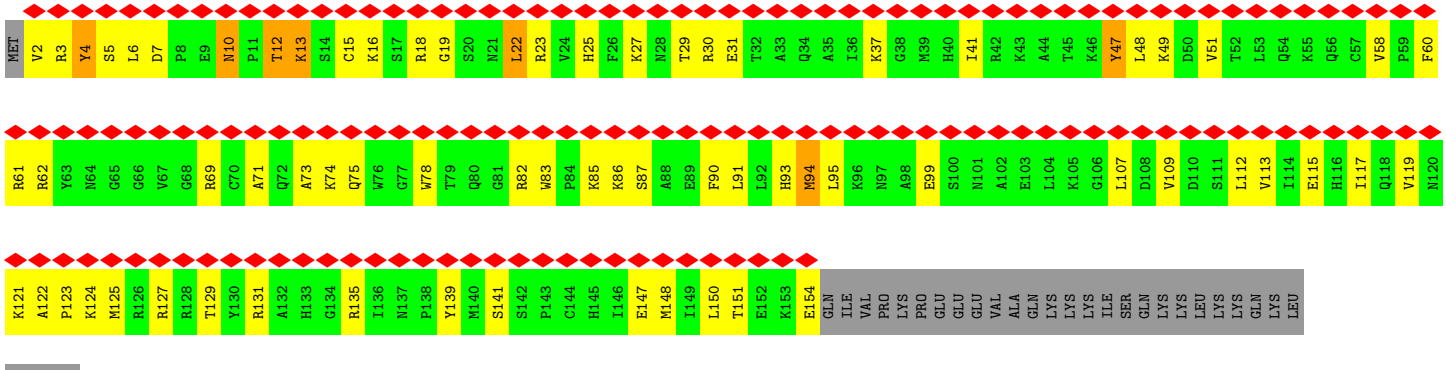
Chain AO:





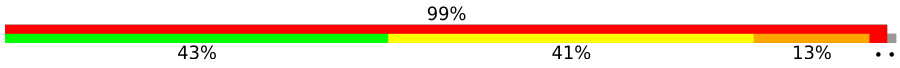
• Molecule 18: 60S ribosomal protein L17

Chain AP:



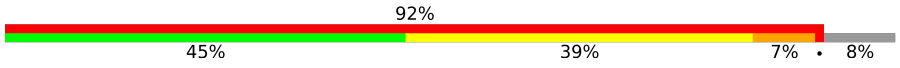
• Molecule 19: 60S ribosomal protein L18

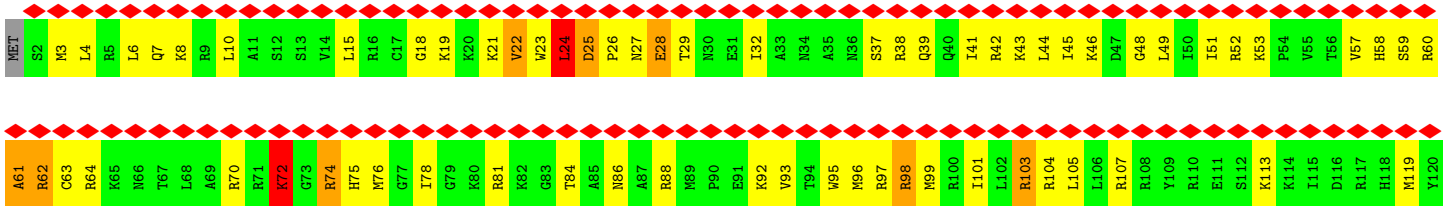
Chain AQ:

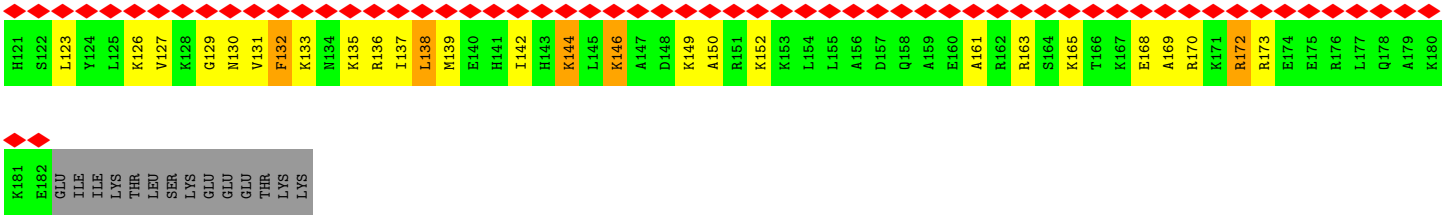


• Molecule 20: 60S ribosomal protein L19

Chain AR:

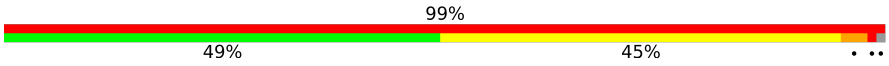


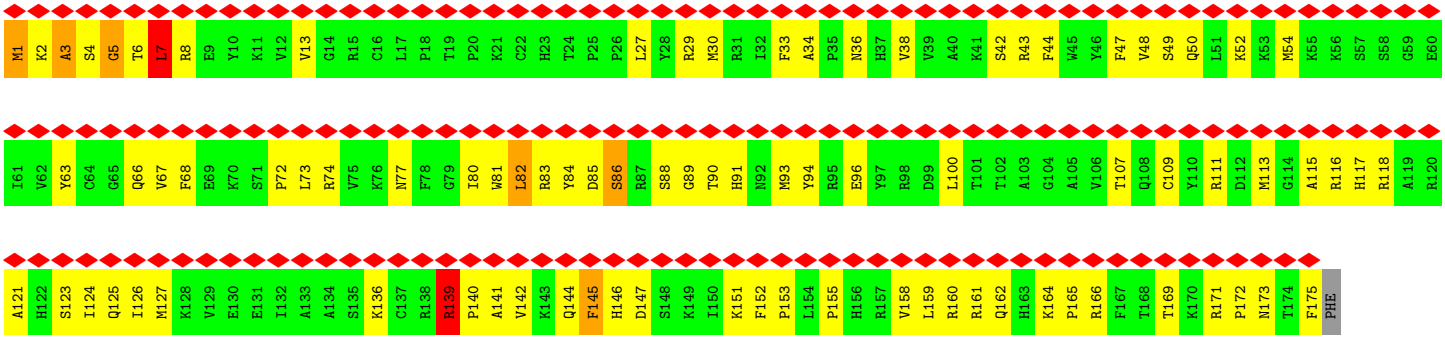




• Molecule 21: 60S ribosomal protein L18a

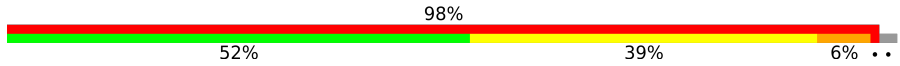
Chain AS:

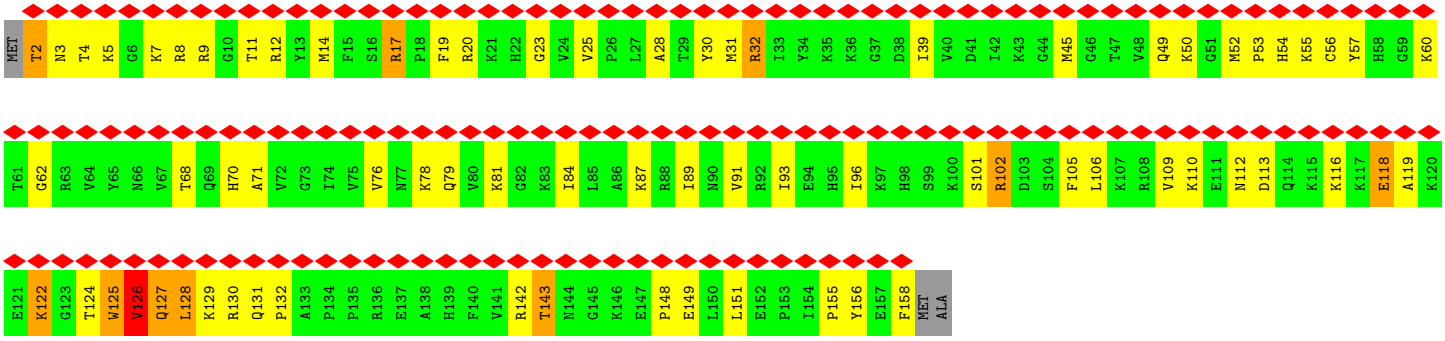




• Molecule 22: 60S ribosomal protein L21

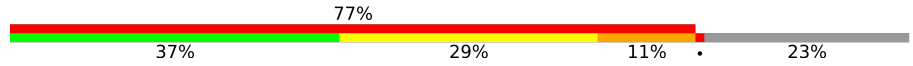
Chain AT:

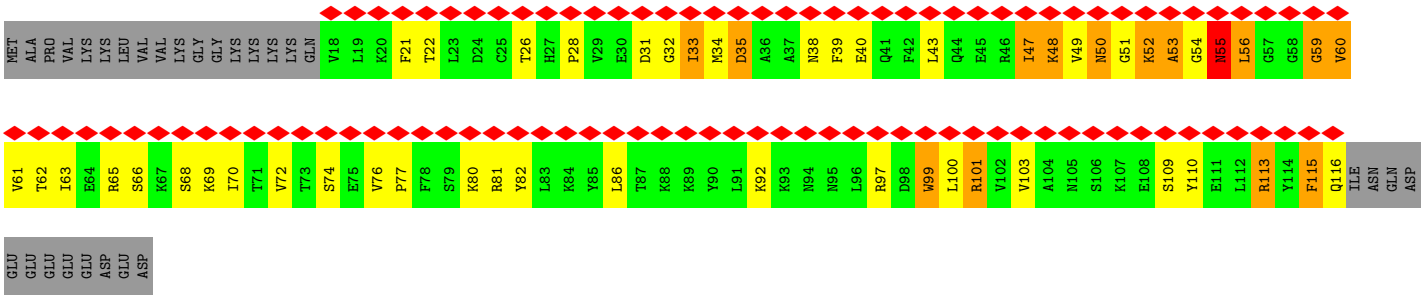




• Molecule 23: 60S ribosomal protein L22

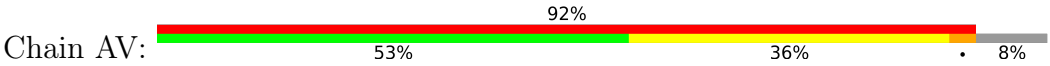
Chain AU:

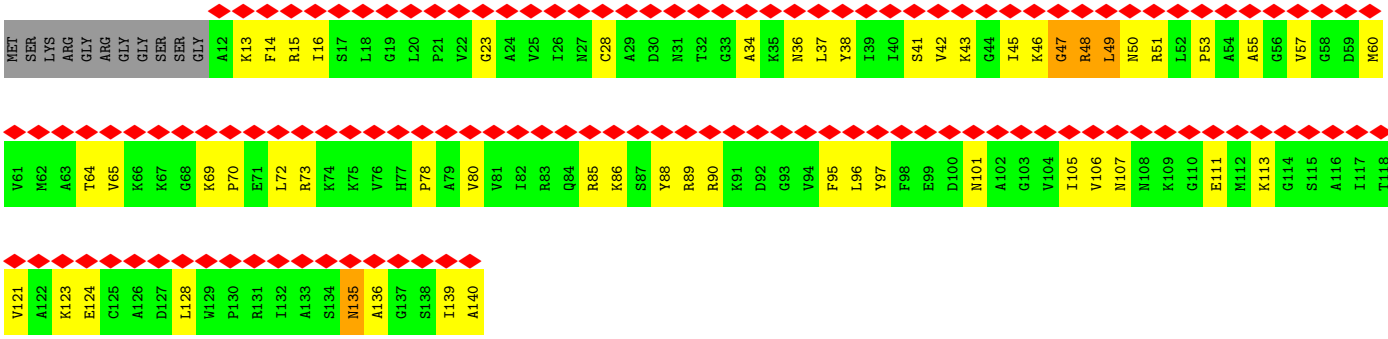




• Molecule 24: 60S ribosomal protein L23

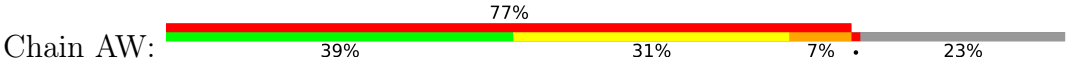
Chain AV:

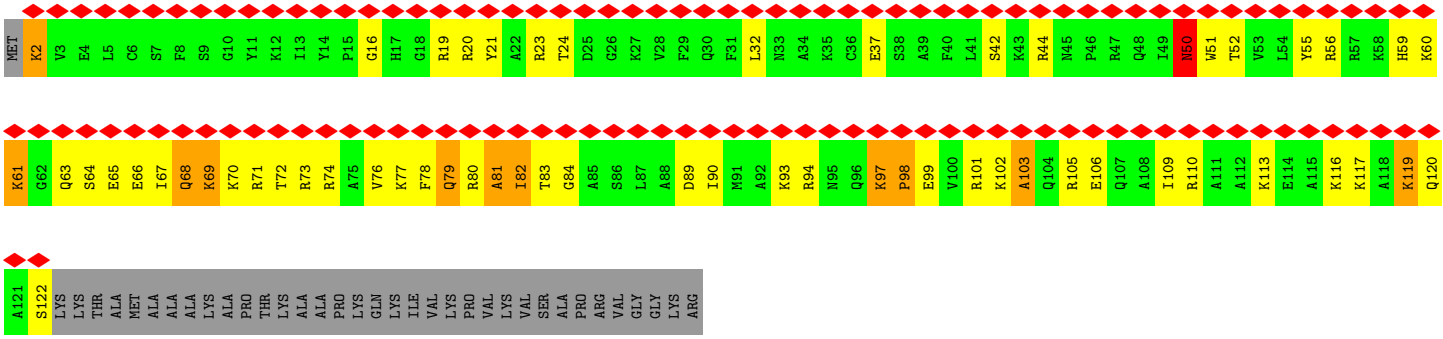




• Molecule 25: 60S ribosomal protein L24

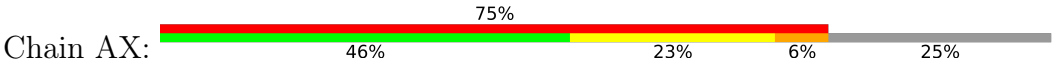
Chain AW:

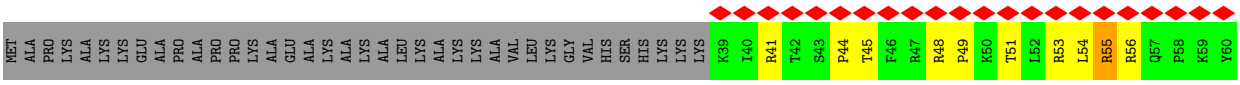


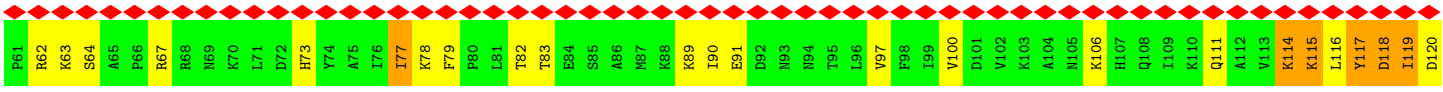


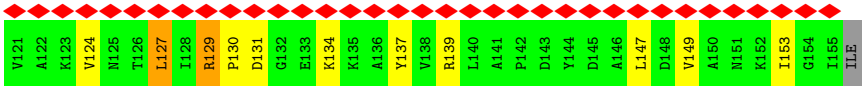
• Molecule 26: 60S ribosomal protein L23a

Chain AX:



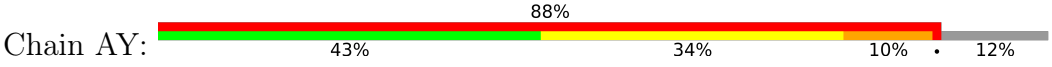


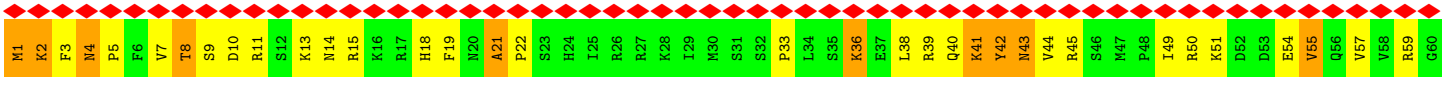




• Molecule 27: 60S ribosomal protein L26

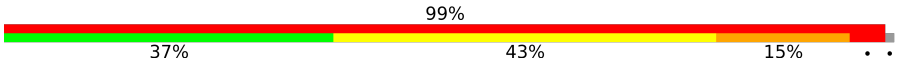
Chain AY:

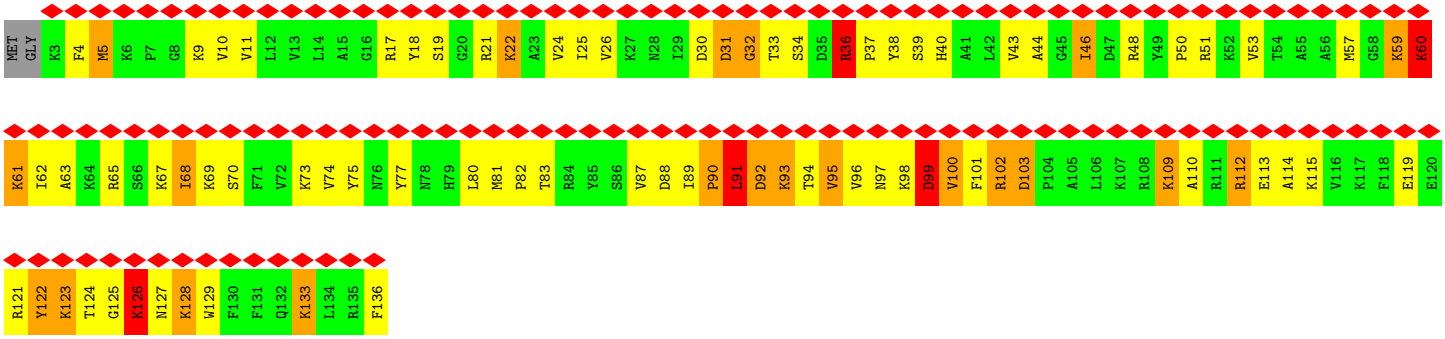




• Molecule 28: 60S ribosomal protein L27

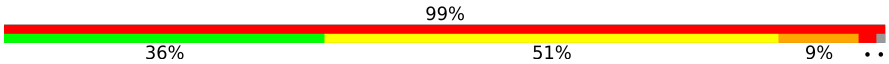
Chain AZ:

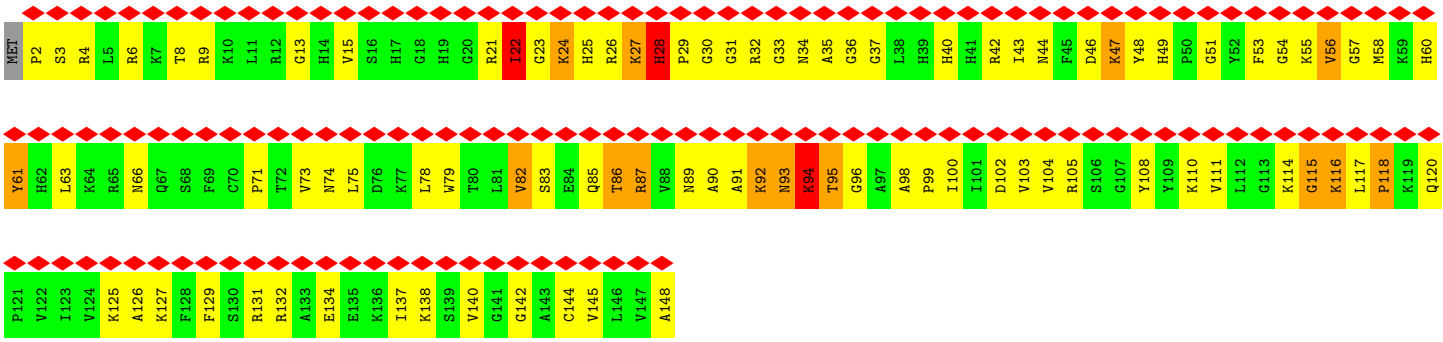




• Molecule 29: 60S ribosomal protein L27a

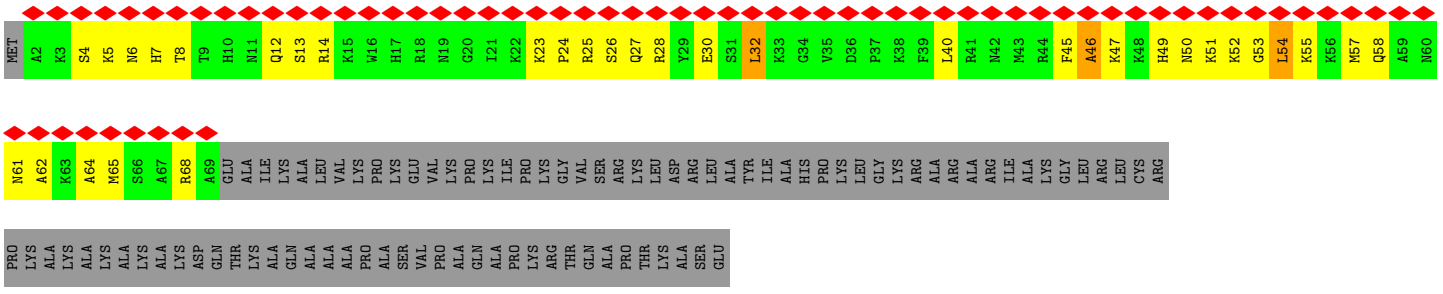
Chain Aa:





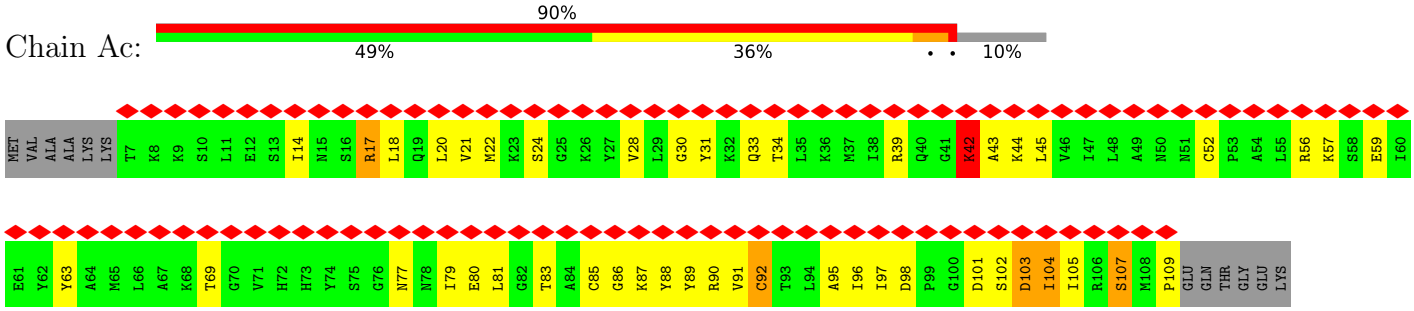
• Molecule 30: 60S ribosomal protein L29

Chain Ab:



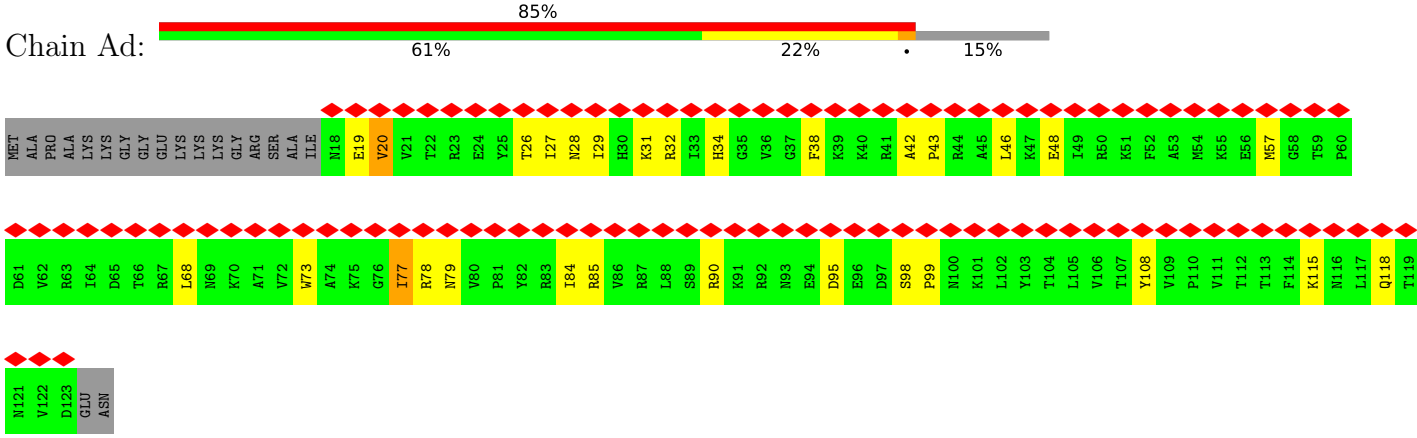
• Molecule 31: 60S ribosomal protein L30

Chain Ac:



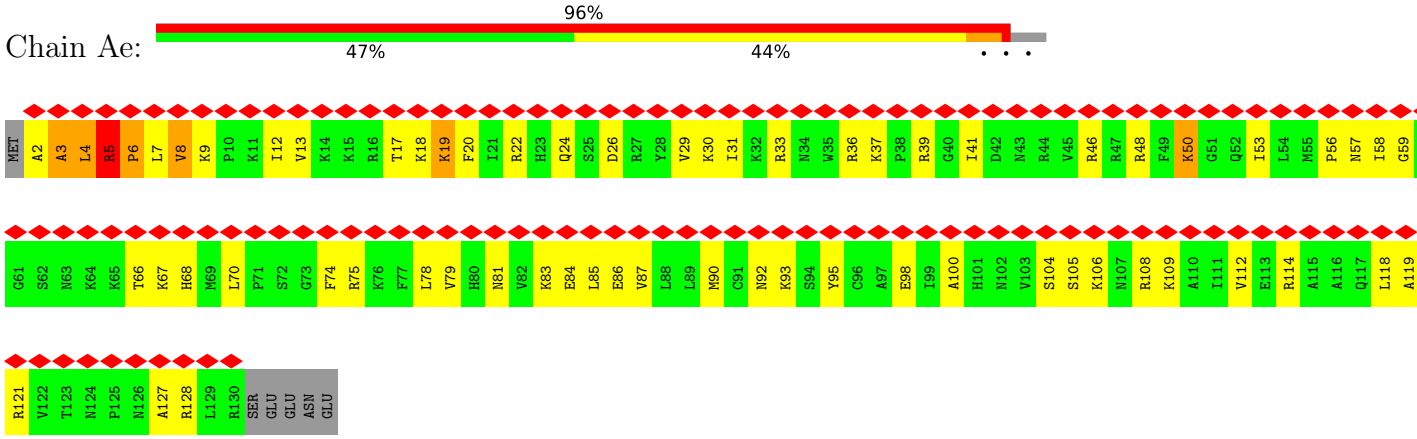
• Molecule 32: 60S ribosomal protein L31

Chain Ad:



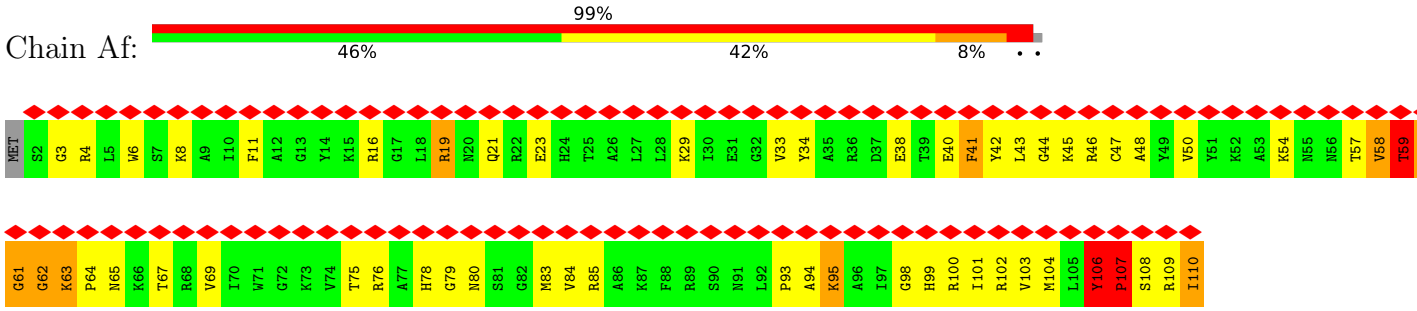
• Molecule 33: 60S ribosomal protein L32

Chain Ae:



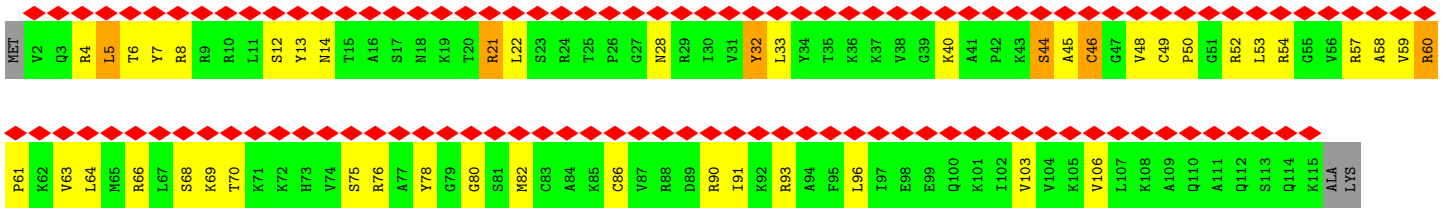
• Molecule 34: 60S ribosomal protein L35a

Chain Af:



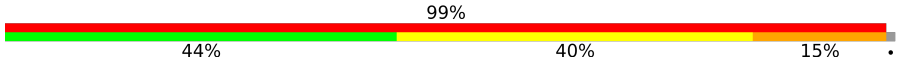
• Molecule 35: 60S ribosomal protein L34

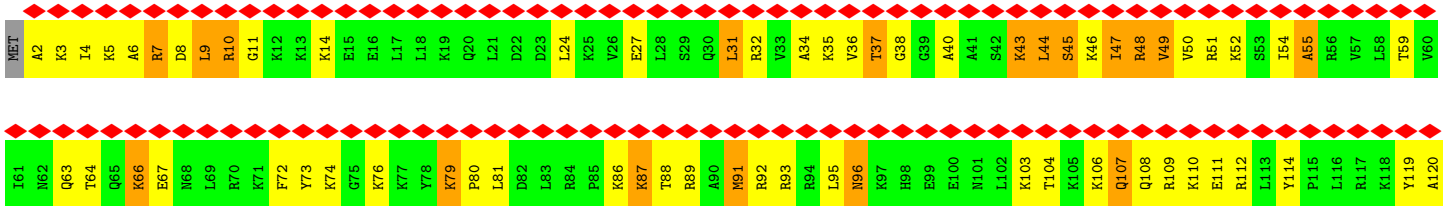
Chain Ag:



- Molecule 36: 60S ribosomal protein L35

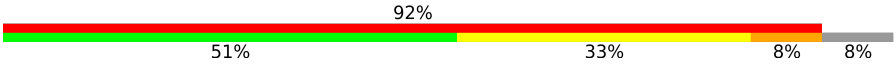
Chain Ah:

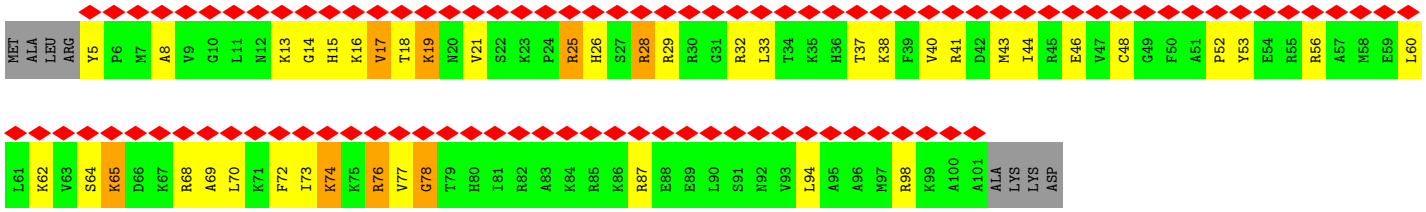




- Molecule 37: 60S ribosomal protein L36

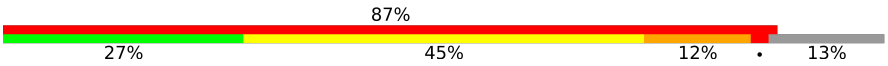
Chain Ai:

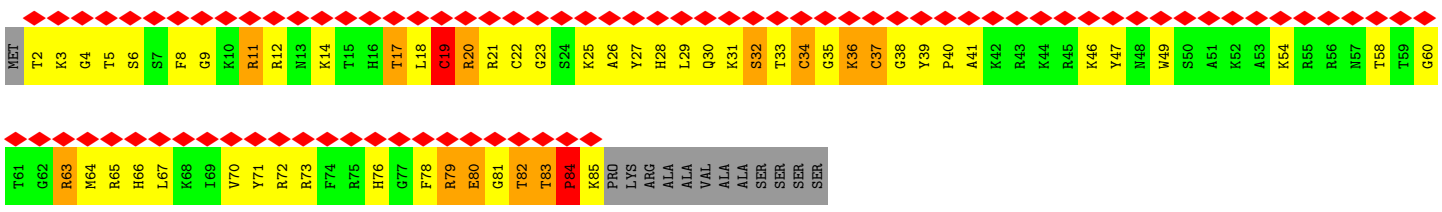




- Molecule 38: 60S ribosomal protein L37

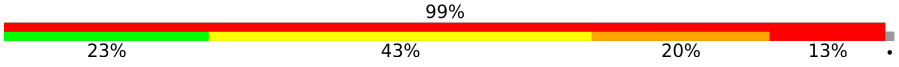
Chain Aj:

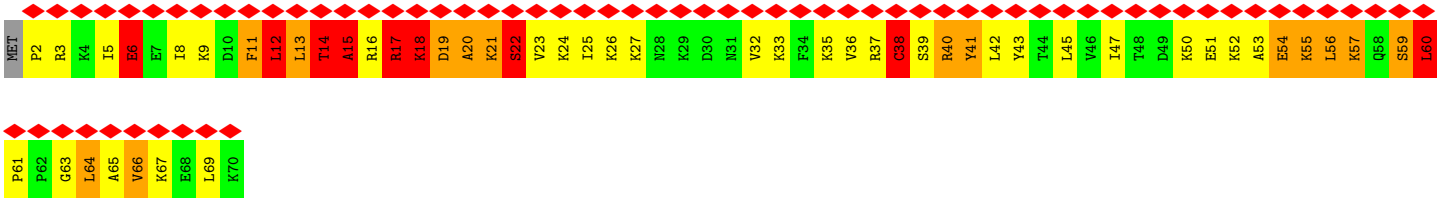




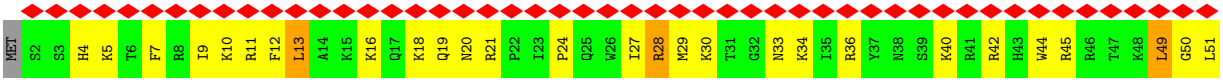
- Molecule 39: 60S ribosomal protein L38

Chain Ak:

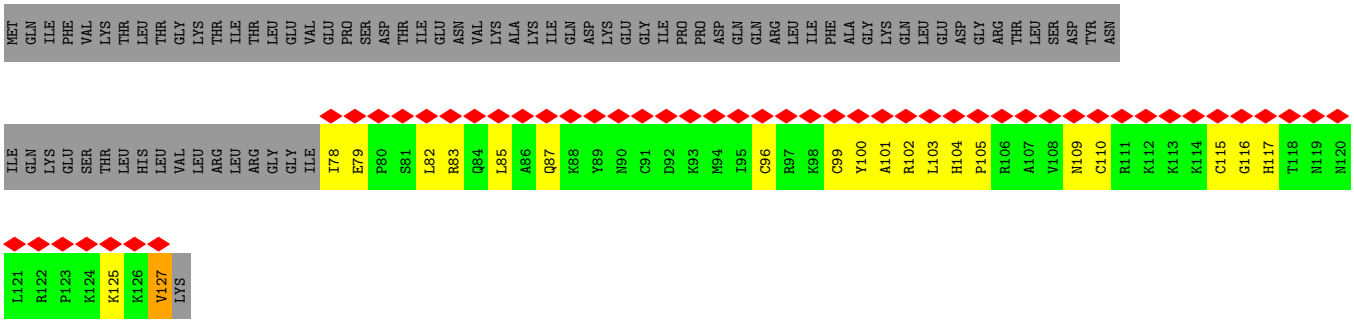




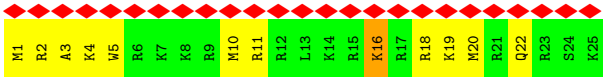
• Molecule 40: 60S ribosomal protein L39



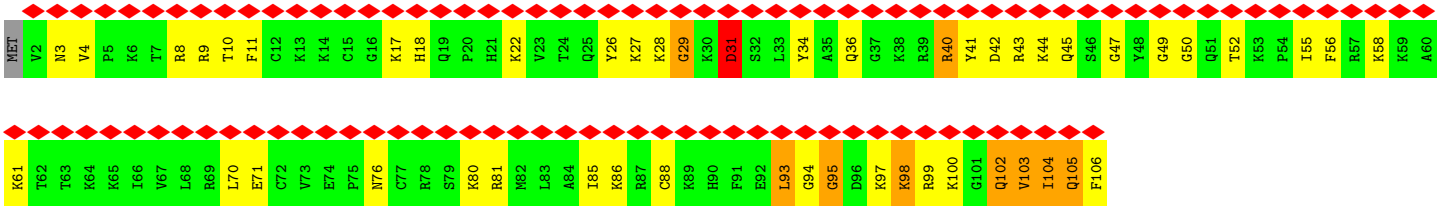
• Molecule 41: Ubiquitin-60S ribosomal protein L40



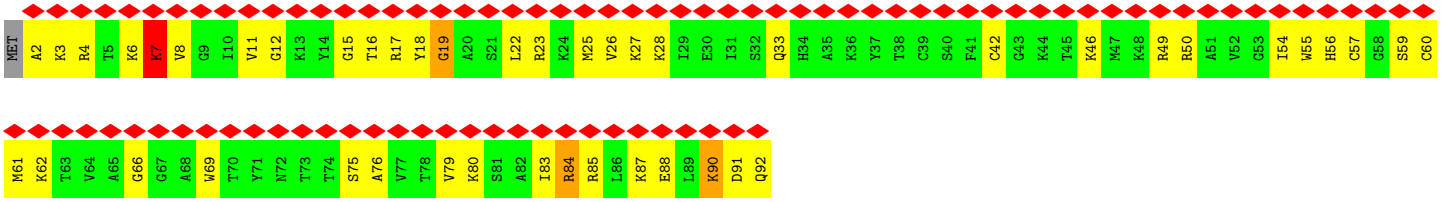
• Molecule 42: 60S ribosomal protein L41



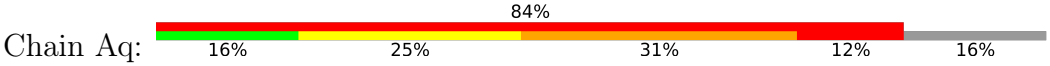
• Molecule 43: 60S ribosomal protein L36a

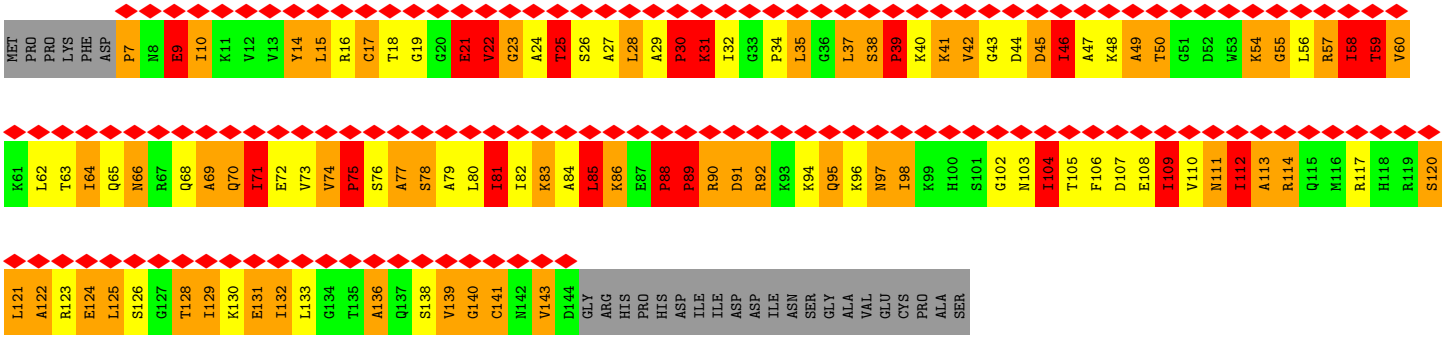


• Molecule 44: 60S ribosomal protein L37a

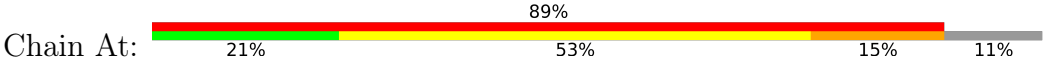


• Molecule 45: 60S ribosomal protein L12

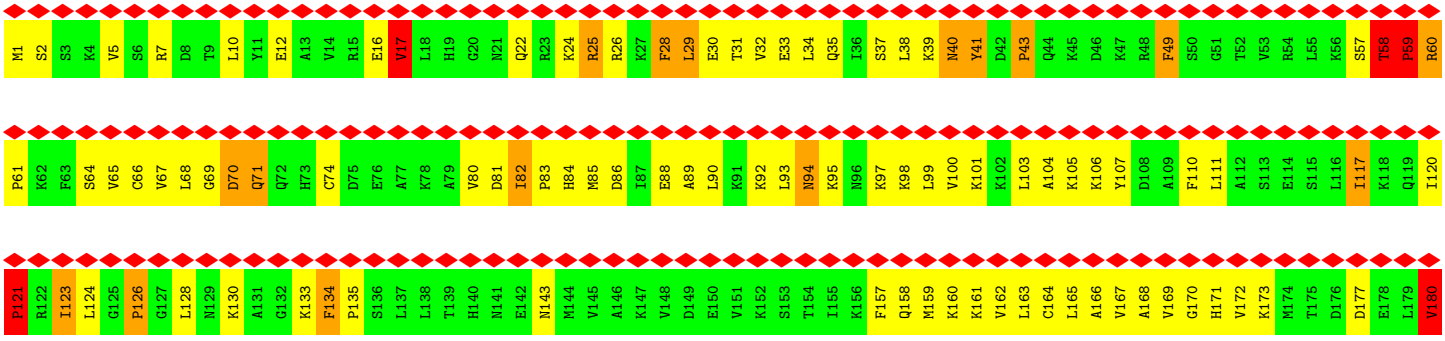


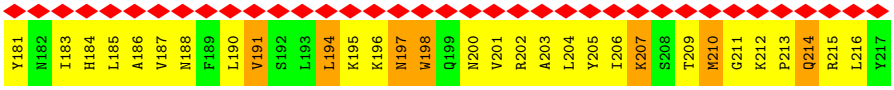


• Molecule 46: 60S ribosomal protein L28



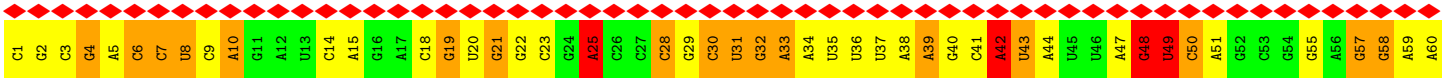
• Molecule 47: 60S ribosomal protein L10a

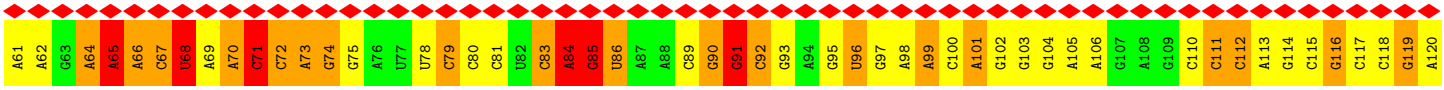


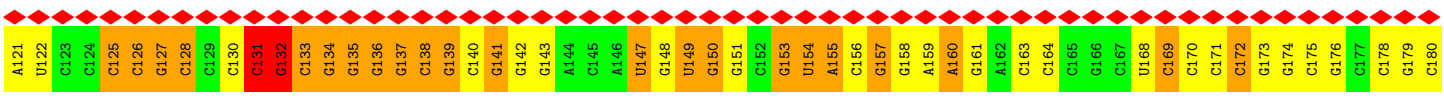


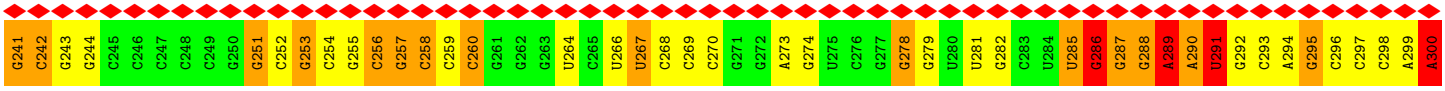
- Molecule 48: 28S ribosomal RNA

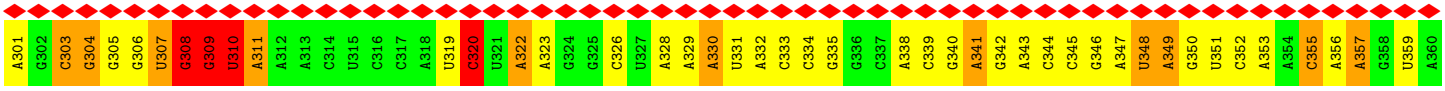
Chain A2:

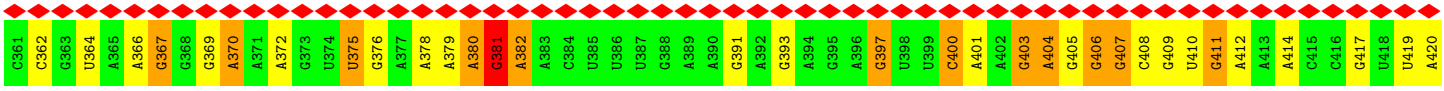


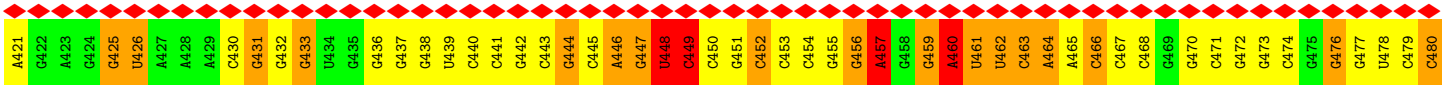


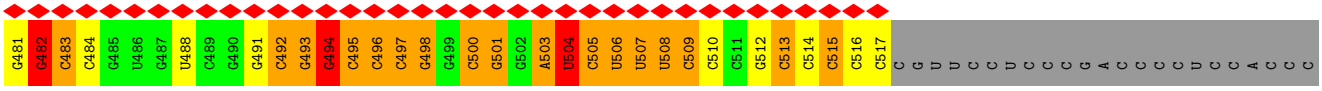


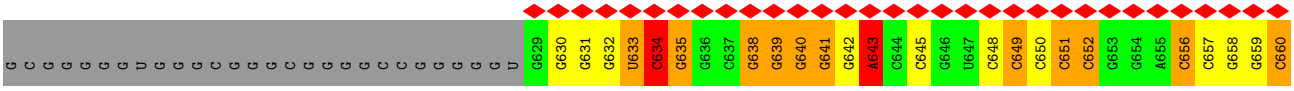








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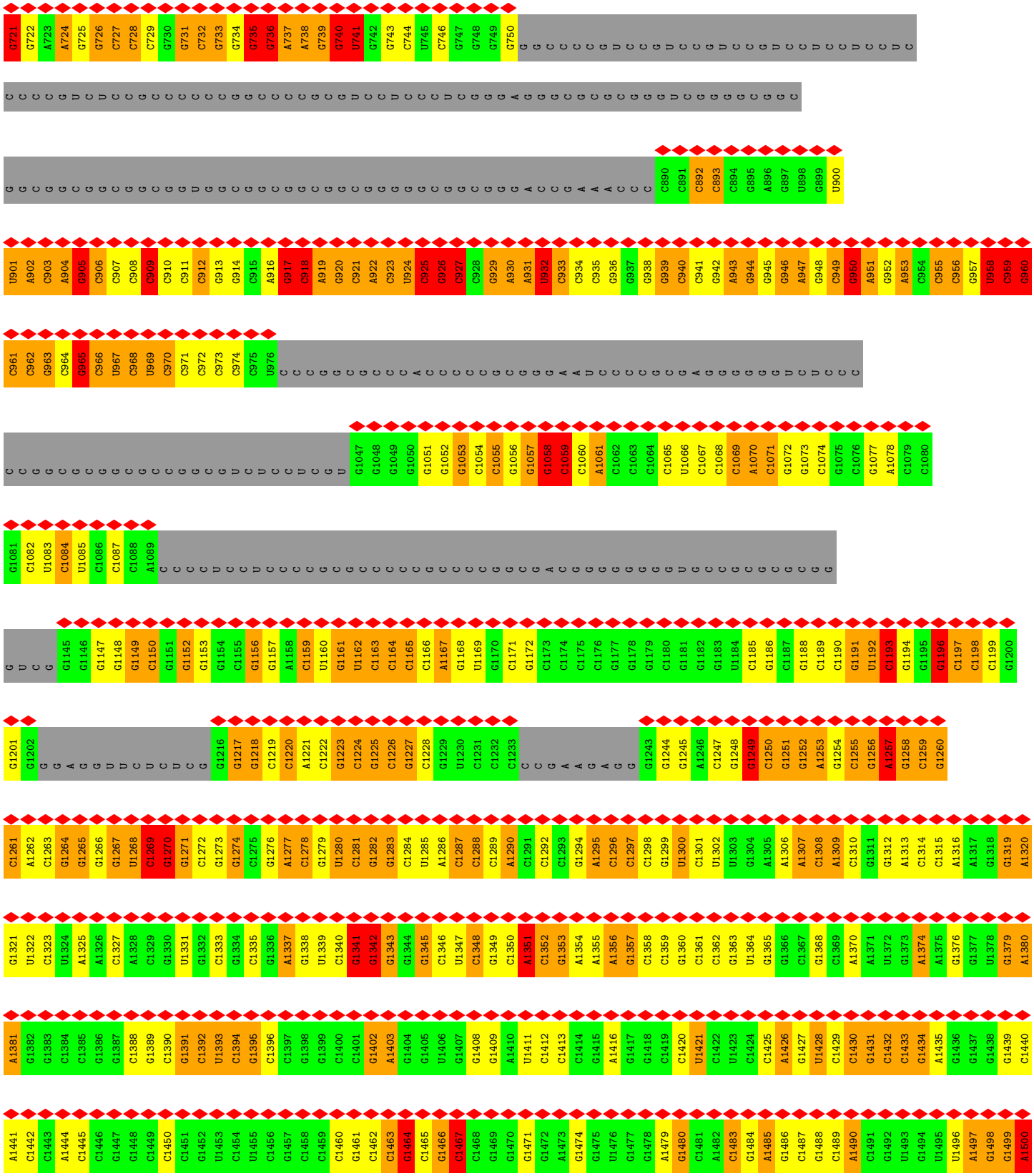
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C890 C891 C892 C893 C894 G895 A896 G897 U898 G899 U900
U901 A902 C903 A904 G905 C906 C907 C908 C909 C910 C911 C912 G913 G914 C915 A916 G917 C918 A919 G920 C921 A922 C923 U924 C925 G926 C927 C928 G929 A930 A931 U932 C933 C934 C935 G936 G937 G938 G939 C940 C941 G942 A943 G944 G945 G946 A947 G948 C949 G950 A951 G952 A953 C954 C955 C956 G957 U958 C959 G960
C961 C962 G963 C964 G965 C966 U967 C968 U969 C970 C971 C972 C973 C974 C975 U976
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G1081 C1082 U1083 C1084 U1085 C1086 C1087 C1088 A1089
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G1201 G1202 G1216 G1217 G1218 C1219 C1220 A1221 C1222 G1223 C1224 G1225 C1226 G1227 C1228 G1229 U1230 C1231 C1232 C1233 G1243 G1244 G1245 A1246 C1247 G1248 G1249 C1250 G1251 G1252 A1253 G1254 C1255 G1256 A1257 G1258 C1259 G1260
C1261 A1262 C1263 G1264 G1265 G1266 G1267 U1268 C1269 G1270 G1271 C1272 G1273 G1274 C1275 G1276 A1277 C1278 G1279 U1280 C1281 G1282 G1283 C1284 U1285 A1286 C1287 C1288 C1289 A1290 C1291 C1292 G1293 G1294 A1295 C1296 C1297 C1298 G1299 U1300 C1301 U1302 U1303 G1304 A1305 A1306 A1307 C1308 A1309 C1310 G1311 G1312 A1313 C1314 C1315 A1316 A1317 G1318 G1319 A1320
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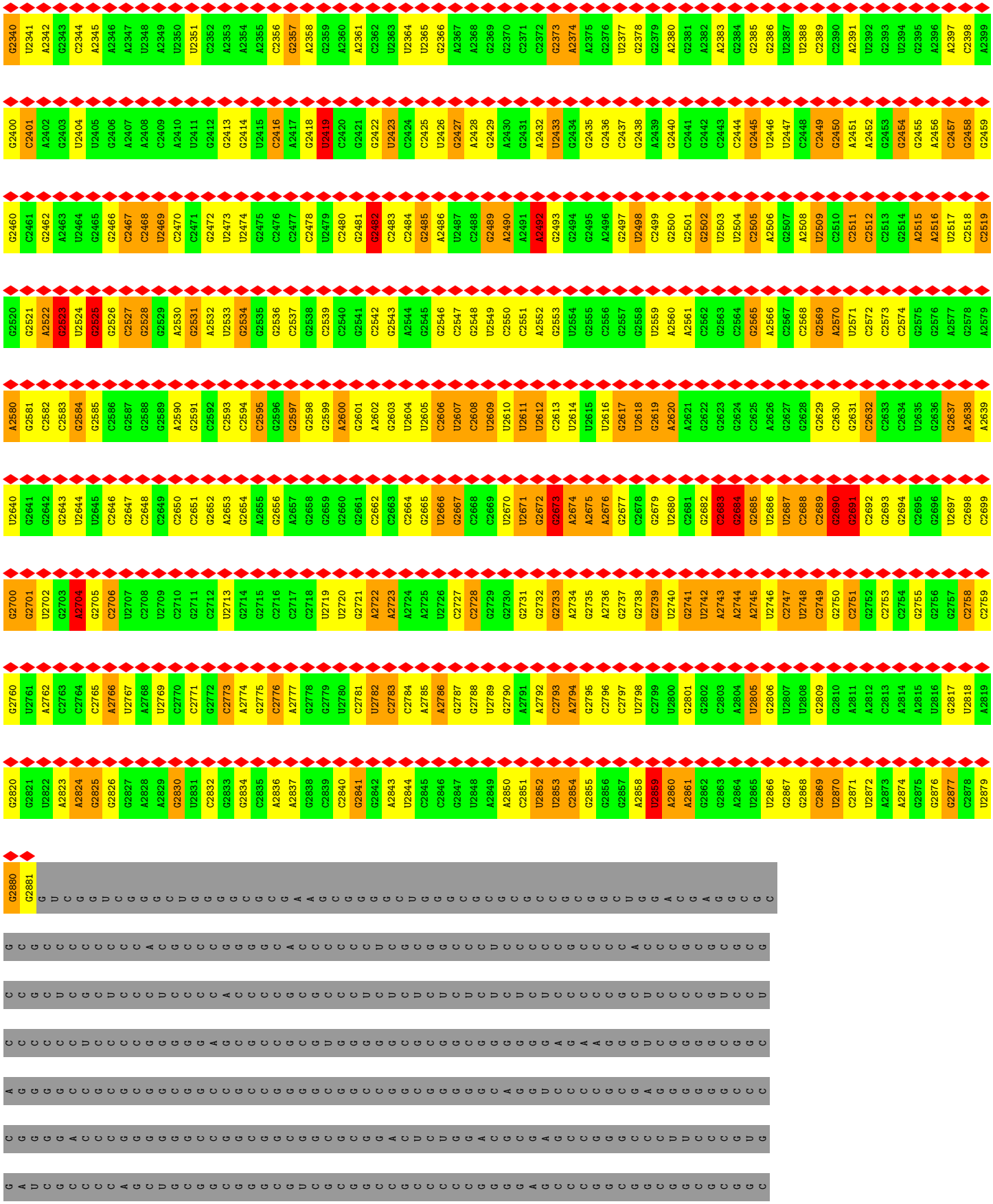
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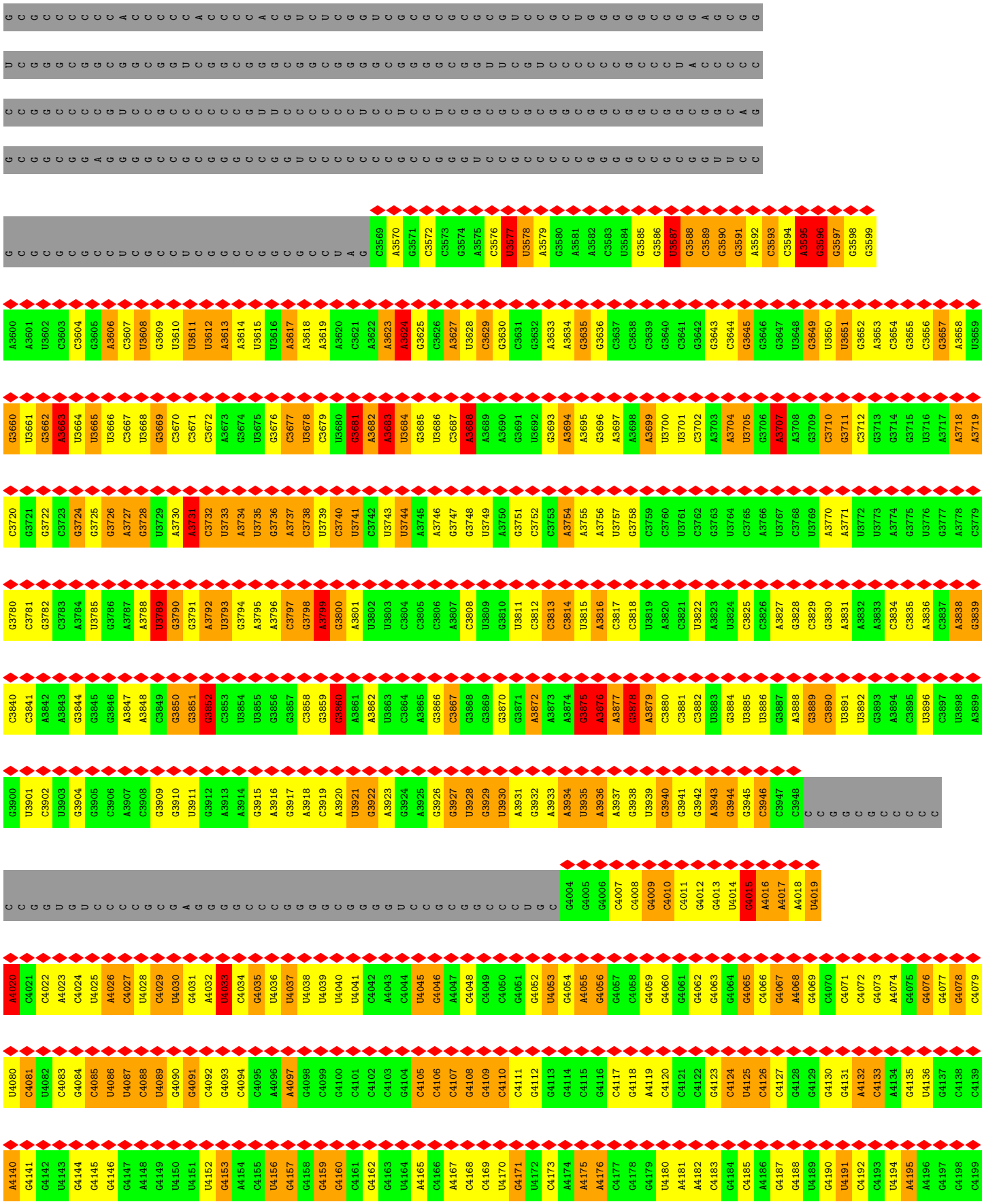
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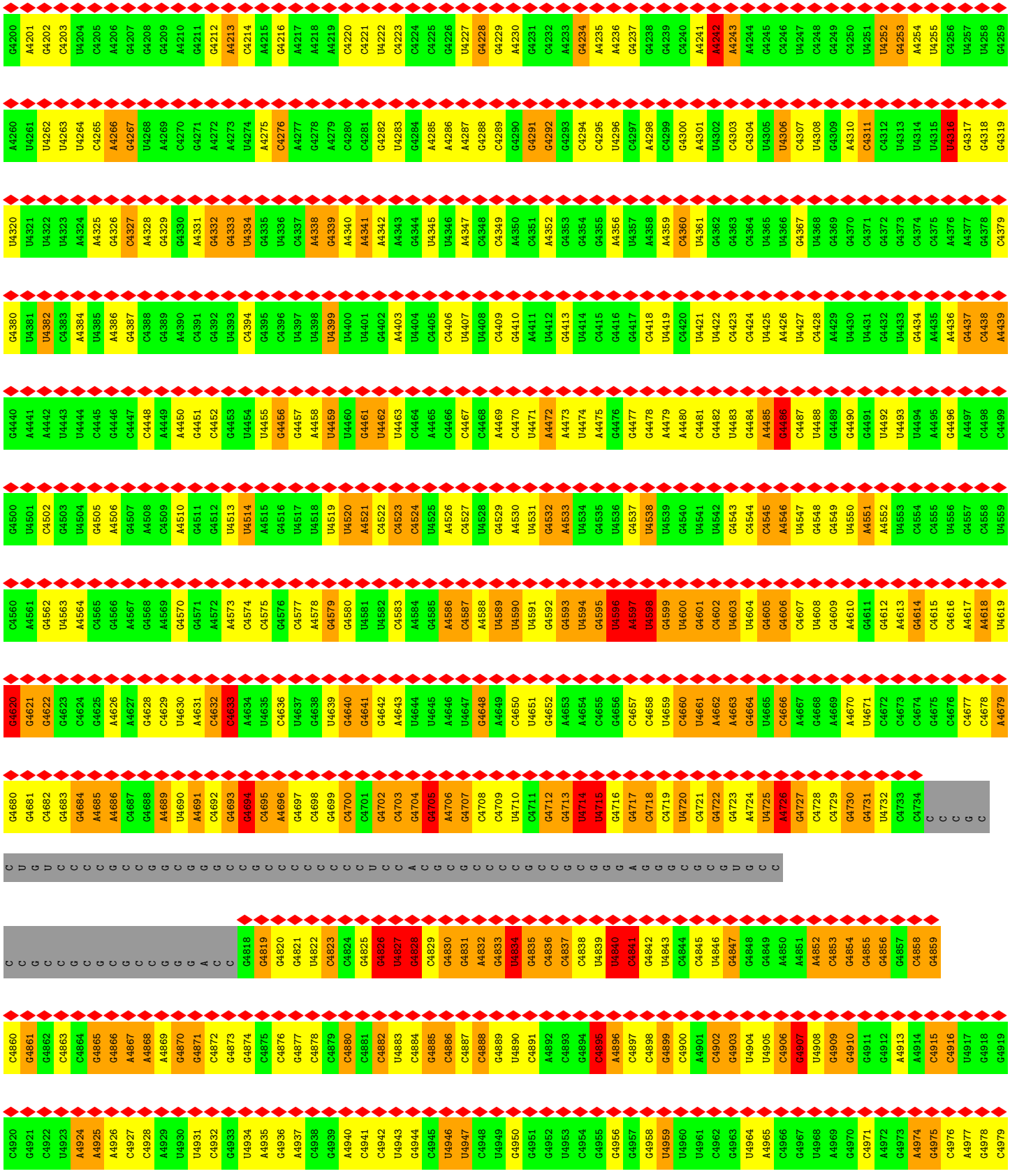
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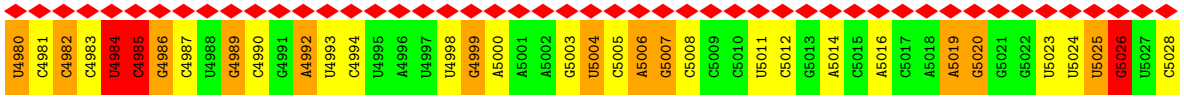

• Molecule 49: 18S ribosomal RNA

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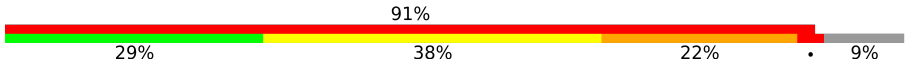

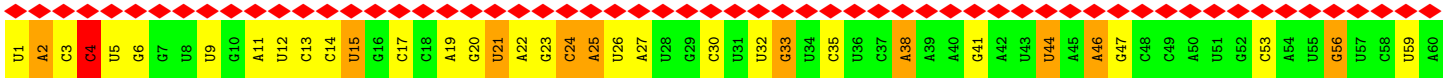

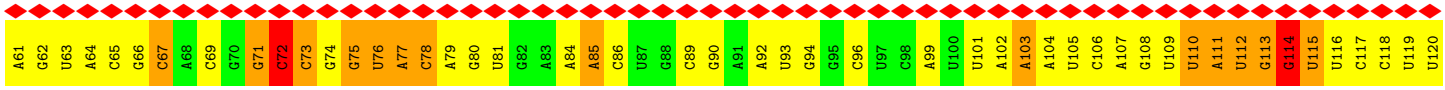

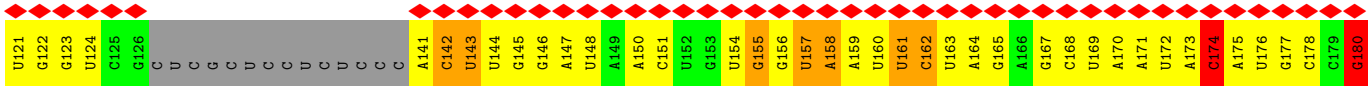

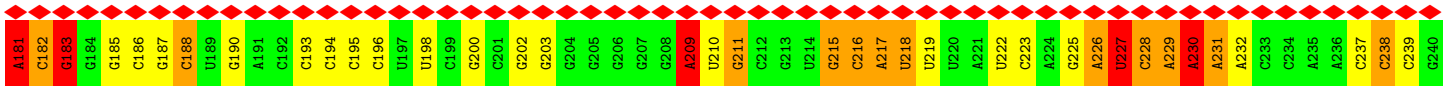

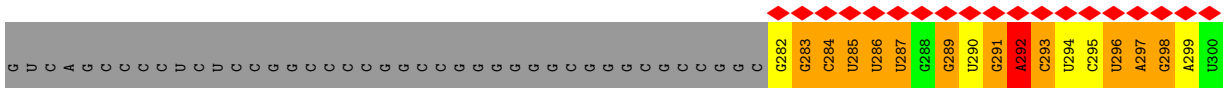

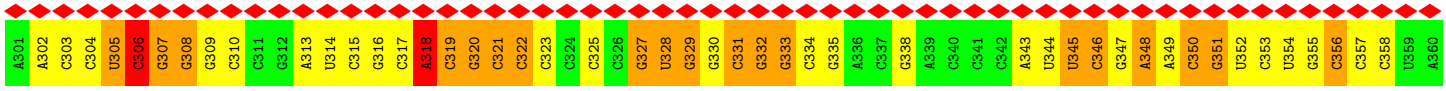

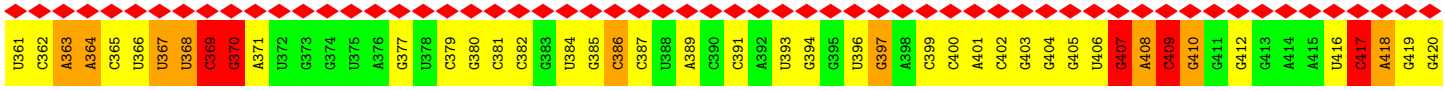

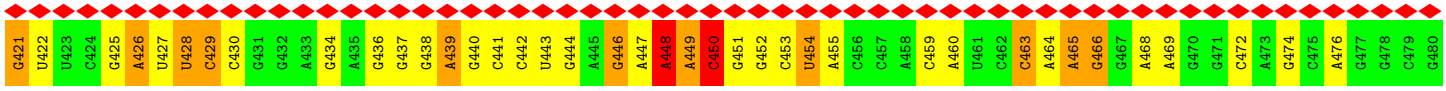

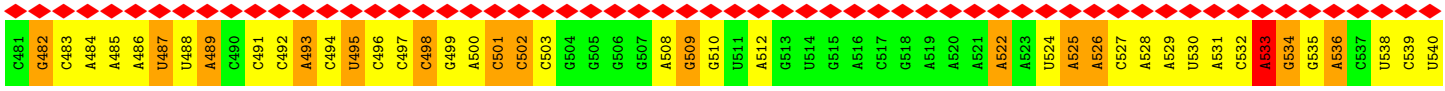

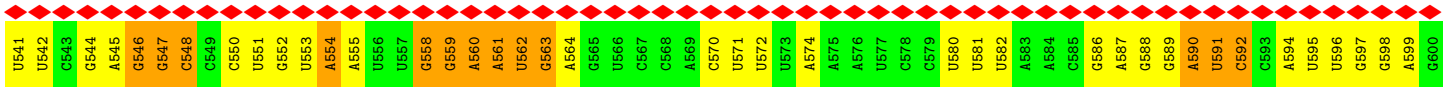

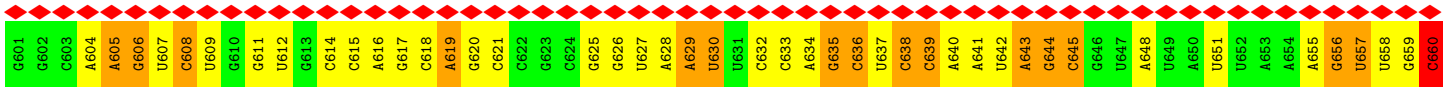

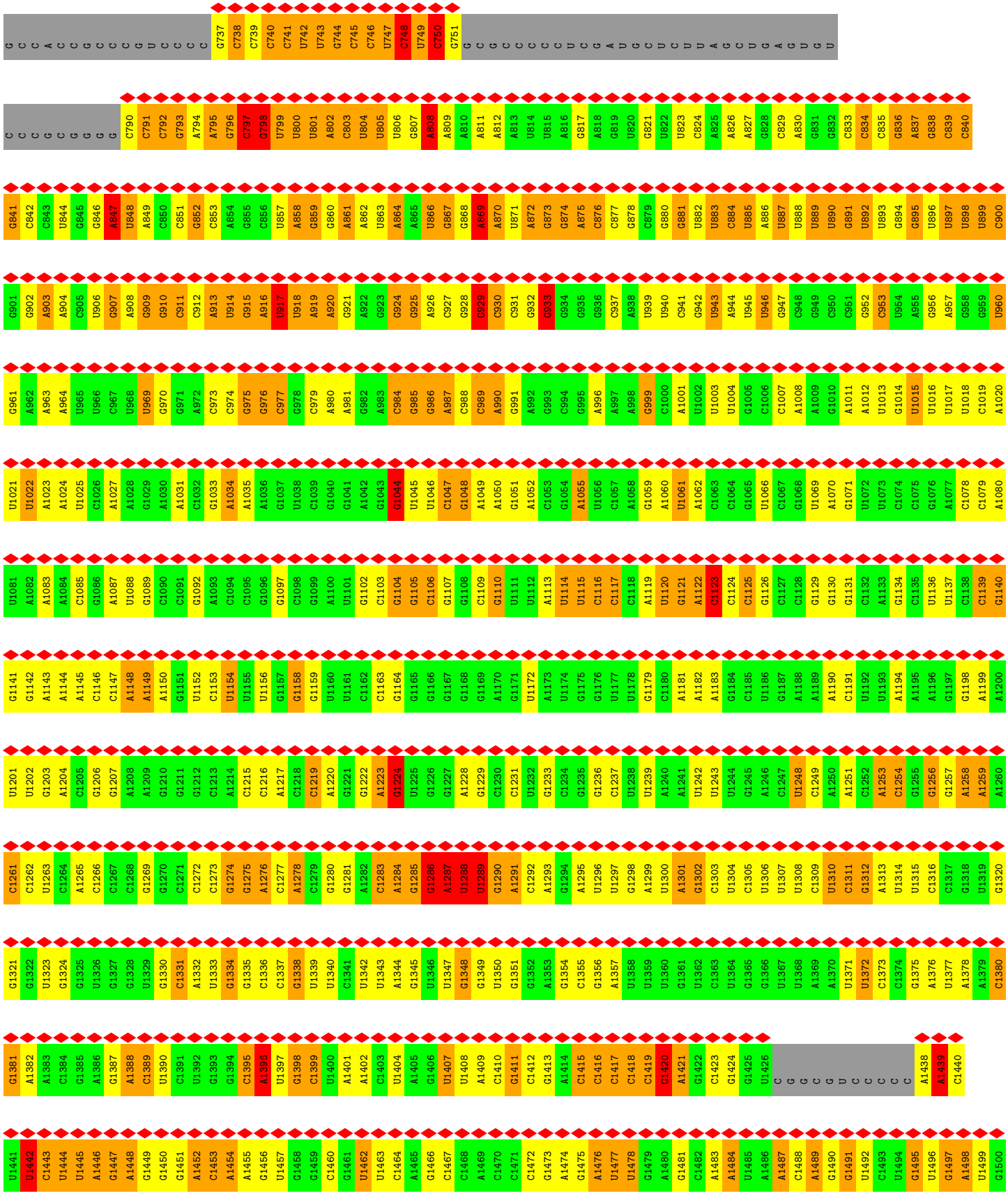
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G961 A962 A963 A964 U965 U966 C967 U968 U969 G970 G971 A972 C973 C974 G975 G976 C977 G978 C979 A980 A981 G982 A983 C984 G985 G986 A987 C988 C989 A990 G991 A992 G993 C994 G995 A996 A997 A998 G999 C1000 A1001 U1002 U1003 U1004 G1005 C1006 C1007 A1008 A1009 G1010 A1011 A1012 U1013 G1014 U1015 U1016 U1017 U1018 C1019 A1020
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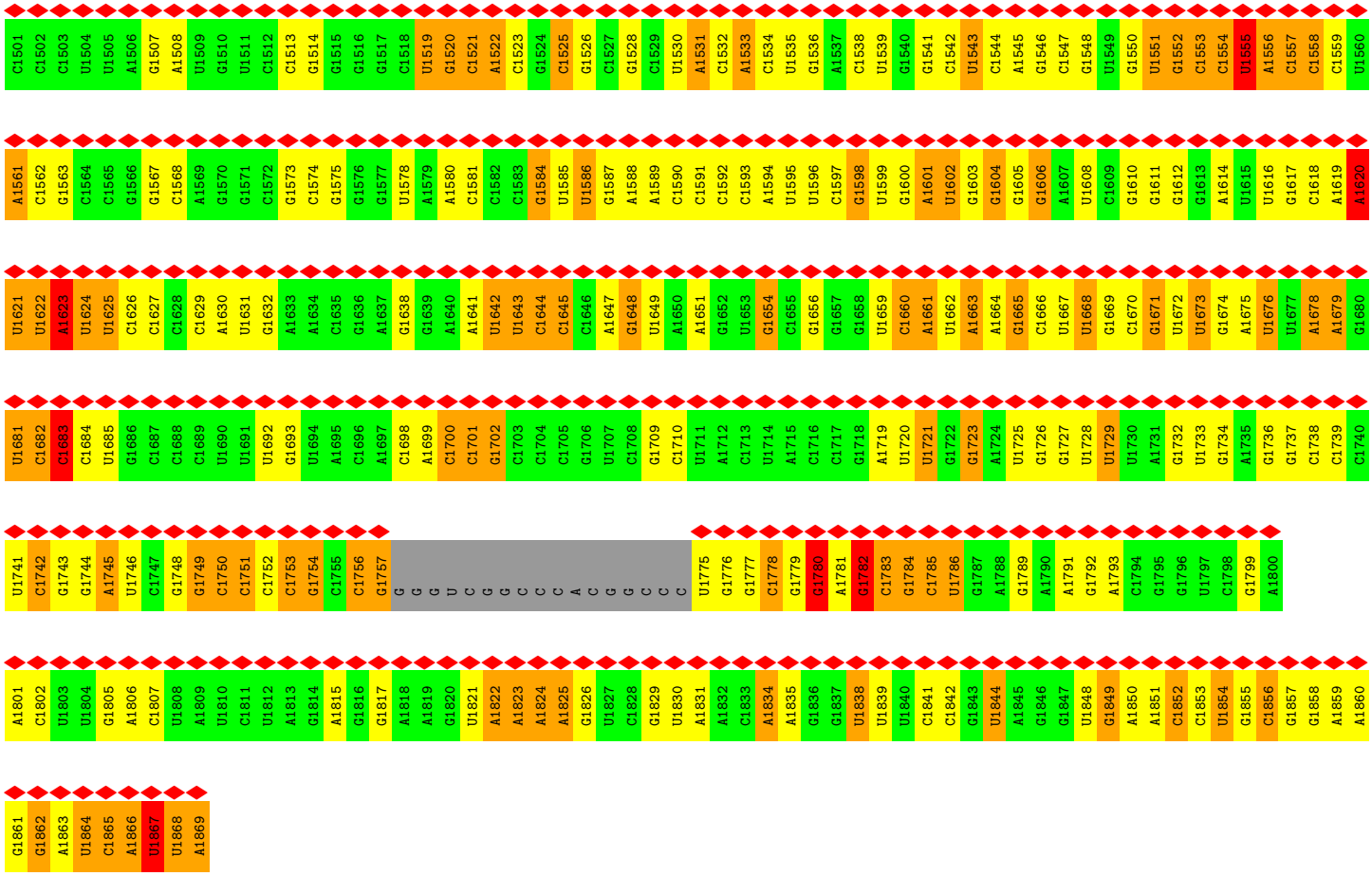
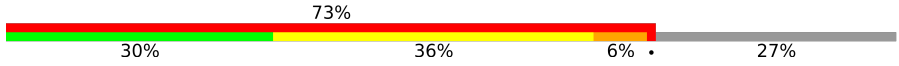
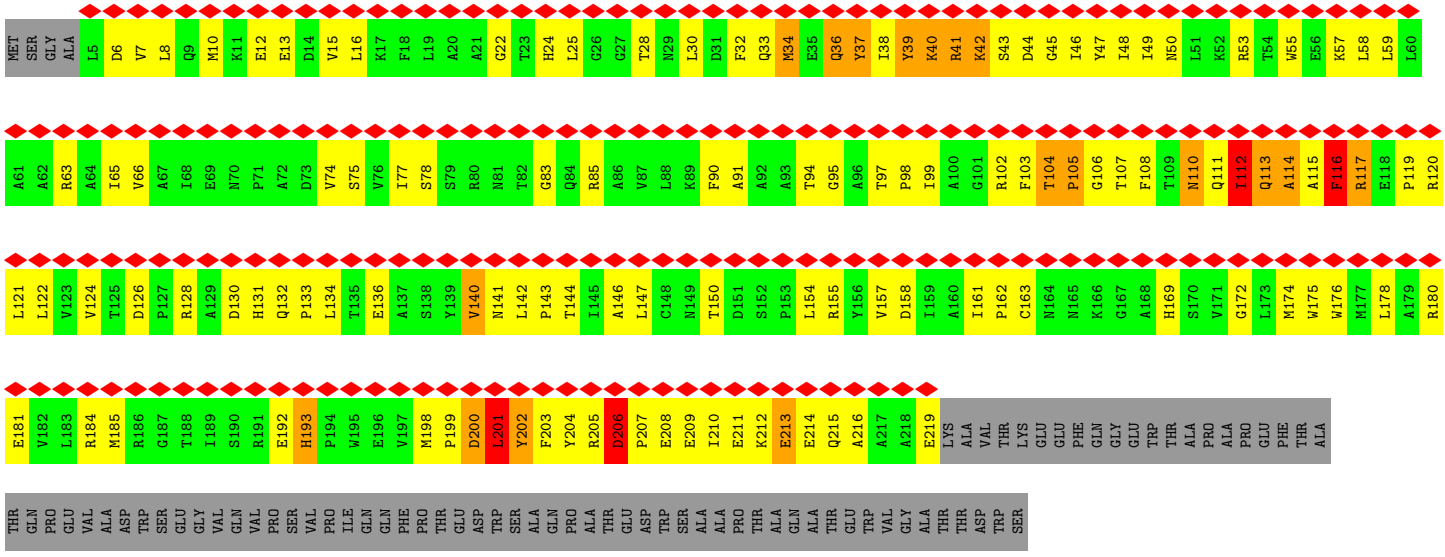


• Molecule 50: 40S ribosomal protein SA

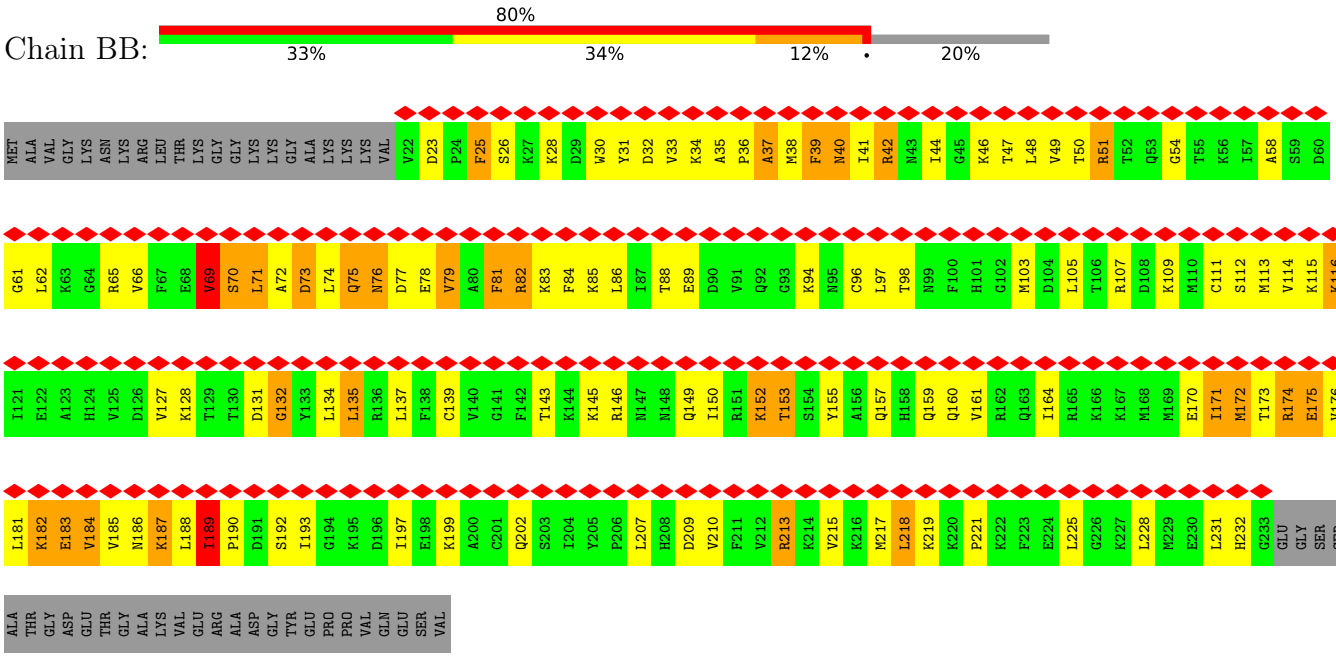
Chain BA:





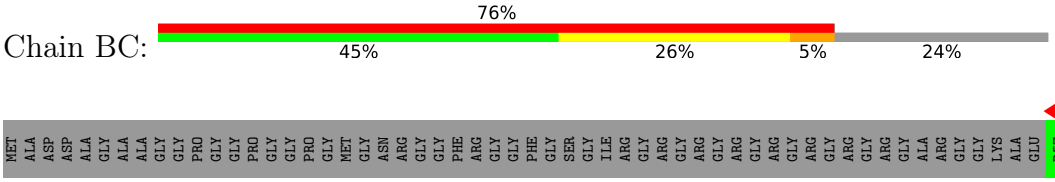
• Molecule 51: 40S ribosomal protein S3a

Chain BB:



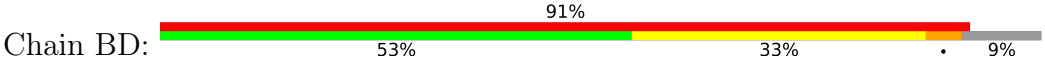
• Molecule 52: 40S ribosomal protein S2

Chain BC:



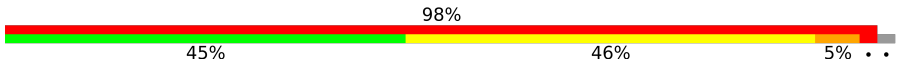
• Molecule 53: 40S ribosomal protein S3

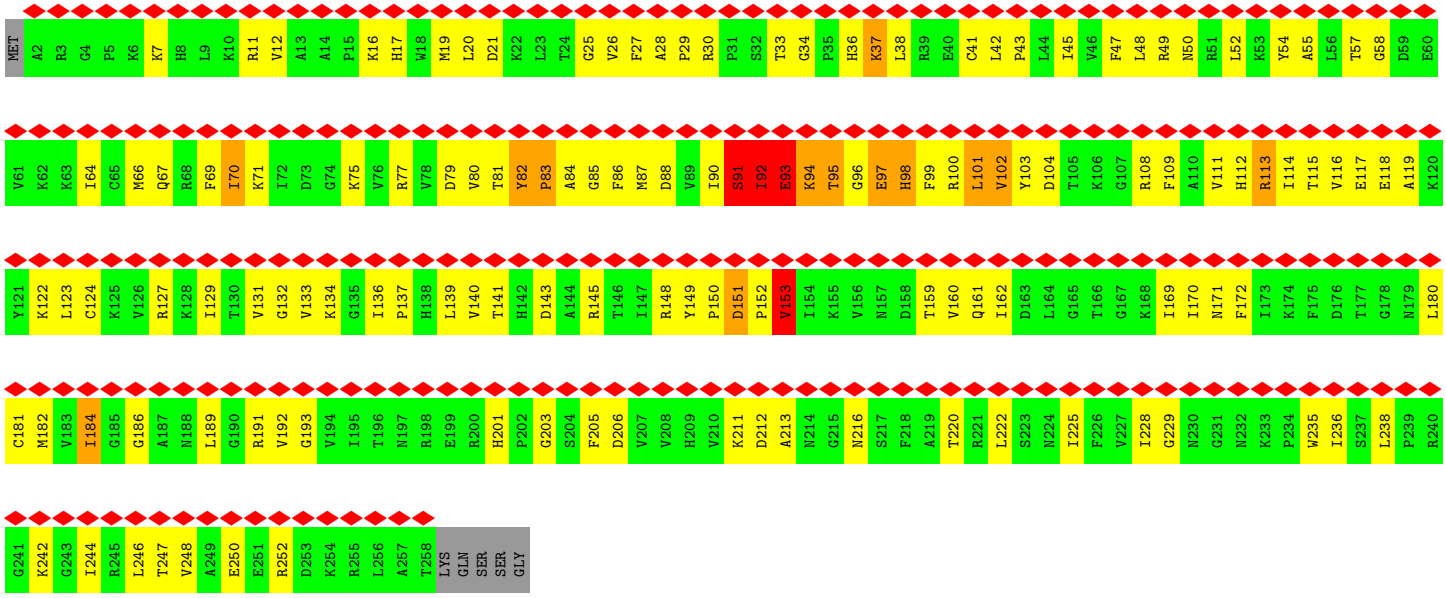
Chain BD:



• Molecule 54: 40S ribosomal protein S4, Y isoform 1

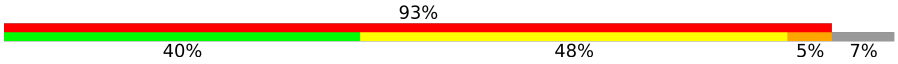
Chain BE:

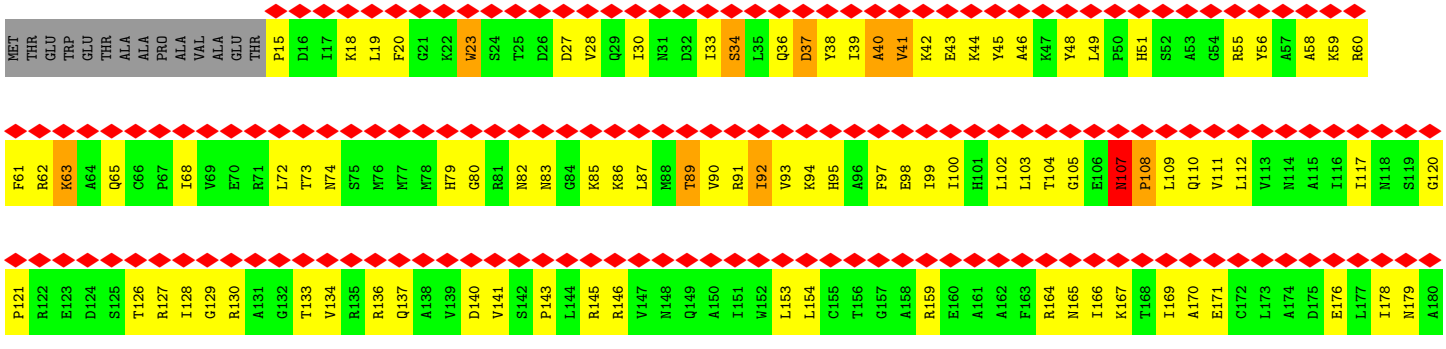


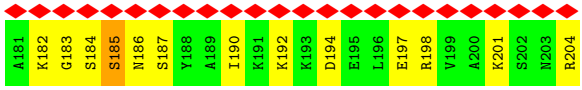


• Molecule 55: 40S ribosomal protein S5

Chain BF:

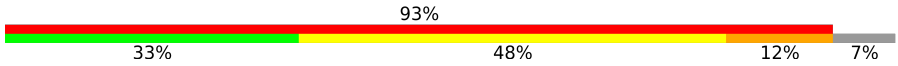


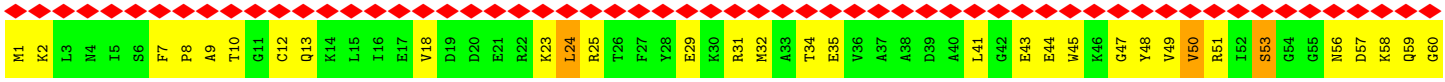


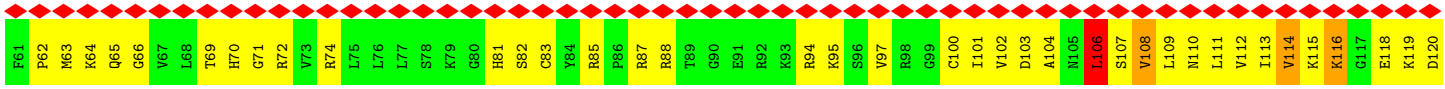


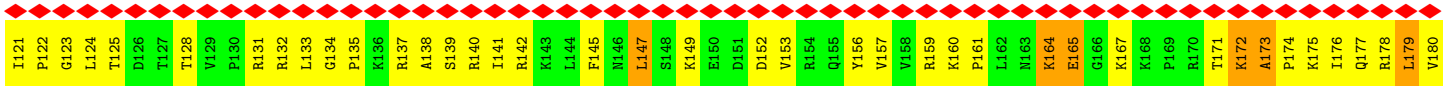
• Molecule 56: 40S ribosomal protein S6

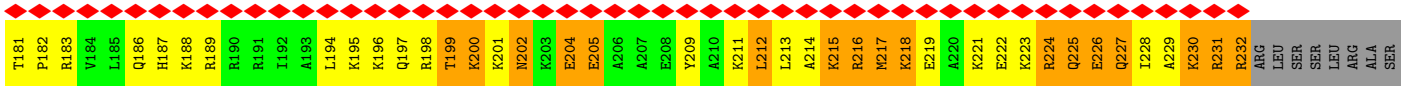
Chain BG:





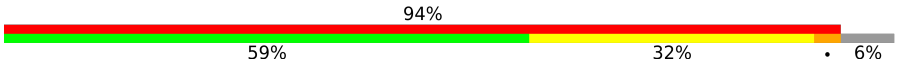


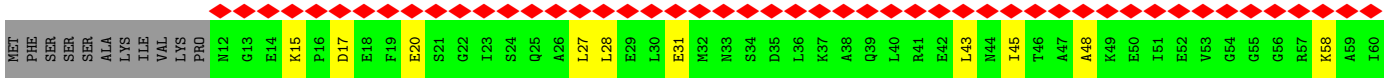


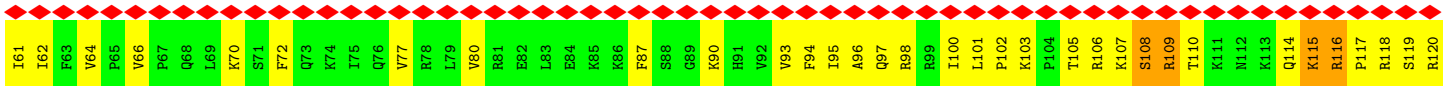


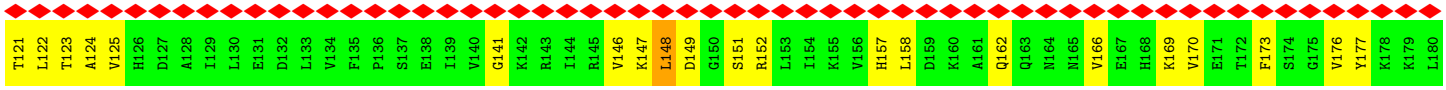
• Molecule 57: 40S ribosomal protein S7

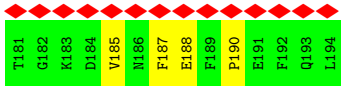
Chain BH:





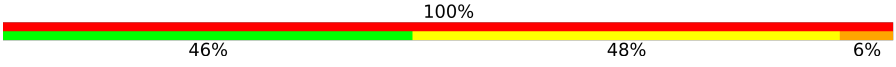


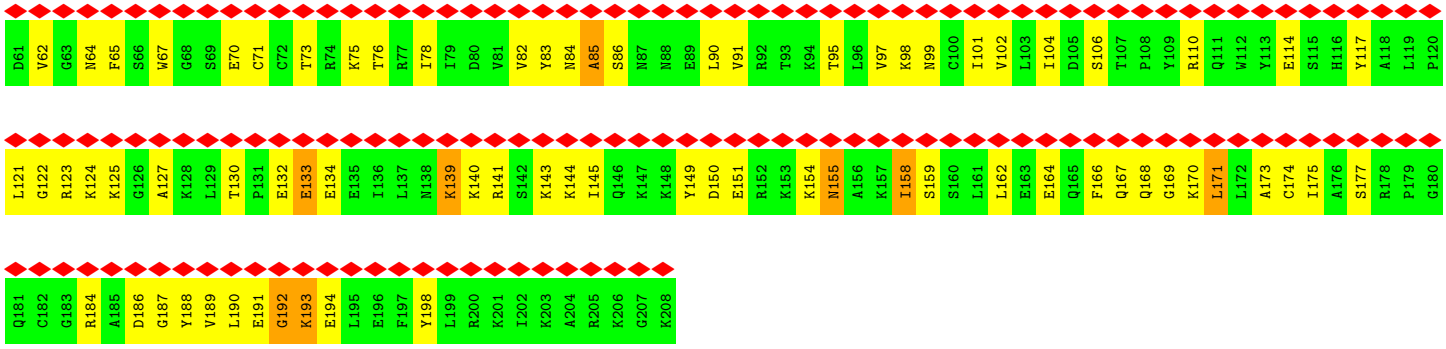




• Molecule 58: 40S ribosomal protein S8

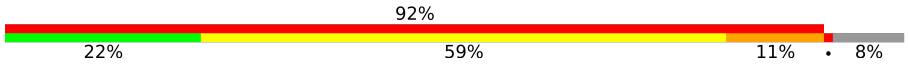
Chain BI:





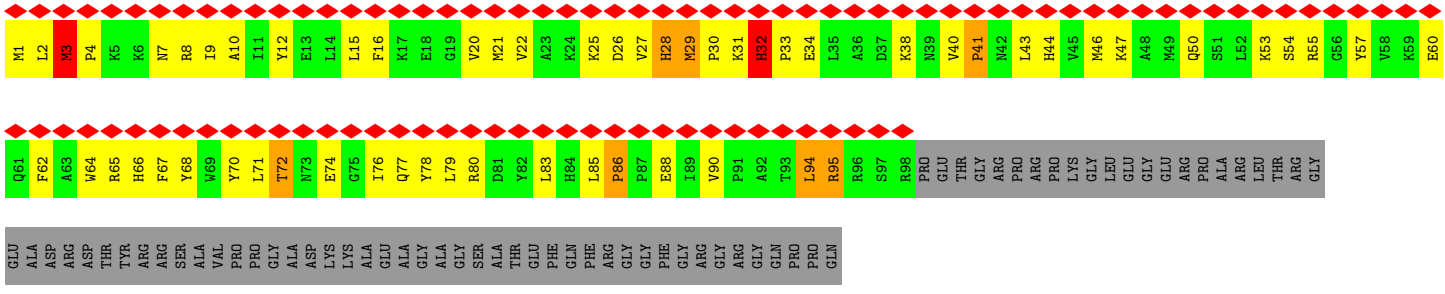
• Molecule 59: 40S ribosomal protein S9

Chain BJ:



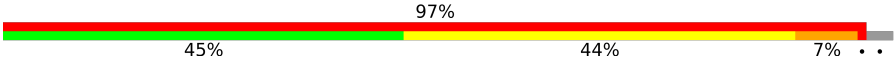
• Molecule 60: 40S ribosomal protein S10

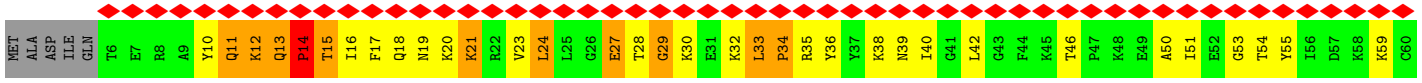
Chain BK:



• Molecule 61: 40S ribosomal protein S11

Chain BL:



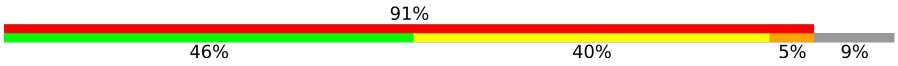


P61 F62 T63 G64 N65 V66 S67 I68 R69 G70 R71 I72 L73 S74 G75 V76 V77 T78 K79 M80 K81 M82 Q83 R84 T85 I86 V87 I88 R89 R90 D91 Y92 L93 H94 Y95 I96 R97 K98 Y99 N100 R101 F102 E103 K104 R105 H106 K107 N108 M109 S110 V111 H112 L113 S114 P115 C116 F117 R118 D119 V120

Q121 I122 G123 D124 I125 V126 T127 V128 G129 E130 C131 R132 P133 L134 S135 K136 T137 V138 R139 F140 N141 V142 L143 K144 V145 T146 K147 A148 A149 G150 T151 K152 K153 Q154 F155 Q156 K157 F158

- Molecule 62: 40S ribosomal protein S12

Chain BM:



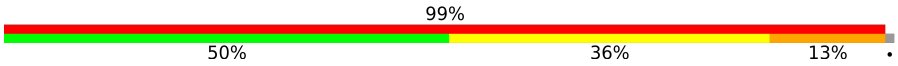
MET ALA GLU GLU GLY ILE ALA ALA GLY GLY V11 M12 D13 V14 N15 T16 A17 L18 Q19 E20 V21 L22 K23 T24 A25 L26 I27 H28 D29 G30 L31 A32 R33 G34 I35 R36 E37 A38 A39 K40 A41 L42 D43 K44 R45 Q46 A47 H48 L49 C50 V51 L52 A53 S54 N55 C56 D57 E58 P59 M60

Y61 V62 K63 L64 V65 E66 A67 L68 C69 A70 E71 H72 Q73 I74 N75 L76 I77 K78 V79 D80 D81 N82 K83 K84 L85 G86 E87 W88 V89 G90 L91 C92 K93 I94 D95 R96 E97 G98 K99 P100 R101 K102 V103 V104 G105 C106 S107 C108 V109 V110 V111 K112 D113 Y114 G115 K116 E117 S118 Q119 A120

K121 D122 V123 I124 E125 E126 Y127 F128 K129 C130 LYS LYS

- Molecule 63: 40S ribosomal protein S13

Chain BN:



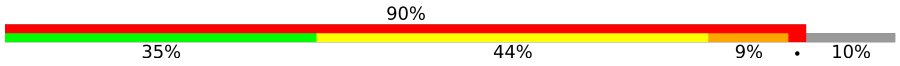
MET G2 R3 M4 H5 A6 P7 G8 K9 G10 L11 S12 Q13 S14 A15 L16 P17 Y18 R19 R20 S21 V22 P23 T24 W25 L26 K27 L28 T29 S30 D31 D32 V33 K34 E35 Q36 I37 Y38 K39 L40 A41 K42 K43 G44 L45 T46 P47 S48 Q49 I50 G51 V52 I53 L54 R55 D56 S57 H58 G59 V60

A61 Q62 V63 R64 F65 V66 T67 G68 N69 K70 I71 L72 R73 I74 L75 K76 S77 K78 G79 L80 A81 P82 D83 L84 P85 E86 D87 L88 Y89 H90 L91 I92 K93 K94 A95 V96 A97 V98 R99 K100 H101 L102 E103 R104 N105 R106 K107 D108 K109 D110 A111 K112 F113 R114 L115 I116 L117 I118 E119 S120

R121 I122 H123 R124 L125 A126 R127 Y128 Y129 K130 T131 K132 R133 V134 L135 P136 P137 N138 W139 K140 Y141 E142 S143 S144 T145 A146 S147 A148 L149 V150 ALA

- Molecule 64: 40S ribosomal protein S14

Chain BO:



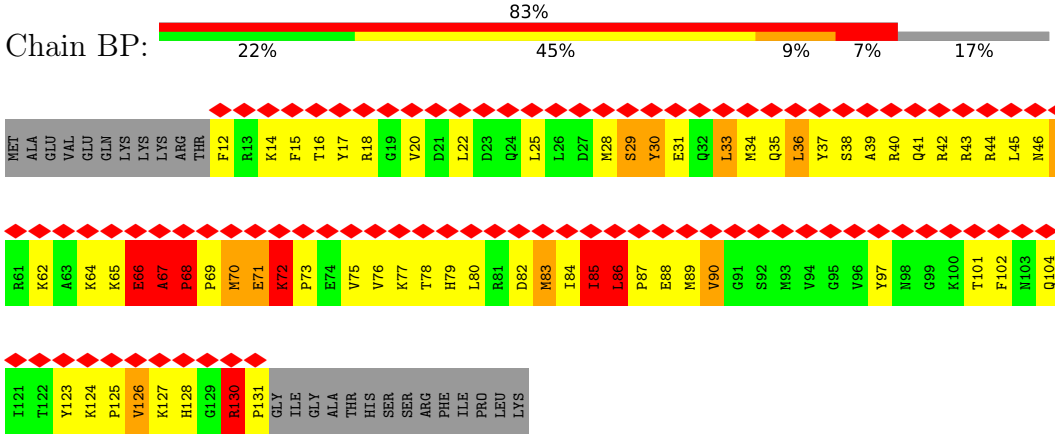
MET ALA PRO ARG LYS GLY LYS GLU LYS LYS GLU GLU GLN VAL ILE S16 L17 G18 P19 Q20 V21 A22 E23 G24 E25 N26 V27 F28 G29 V30 C31 H32 I33 F34 A35 S36 F37 N38 D39 T40 F41 V42 H43 V44 T45 D46 L47 S48 G49 K50 E51 T52 I53 C54 R55 V56 T57 G58 G59 M60

K61 V62 K63 A64 D65 R66 D67 E68 S69 S70 P71 Y72 A73 A74 M75 L76 A77 A78 Q79 D80 V81 A82 Q83 R84 C85 K86 E87 L88 G89 I90 T91 A92 L93 H94 I95 K96 L97 R98 A99 T100 G101 G102 N103 R104 T105 K106 T107 P108 G109 P110 G111 A112 Q113 S114 A115 L116 R117 A118 L119 A120

R121 S122 G123 M124 K125 I126 G127 R128 I129 E130 D131 V132 T133 P134 I135 P136 S137 D138 S139 T140 R141 R142 K143 G144 G145 R146 R147 G148 R149 R150 L151

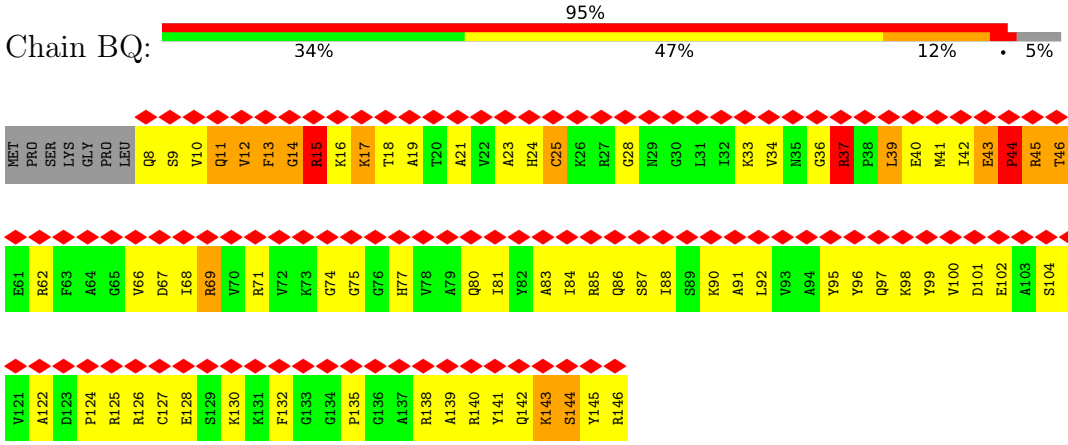
• Molecule 65: 40S ribosomal protein S15

Chain BP:



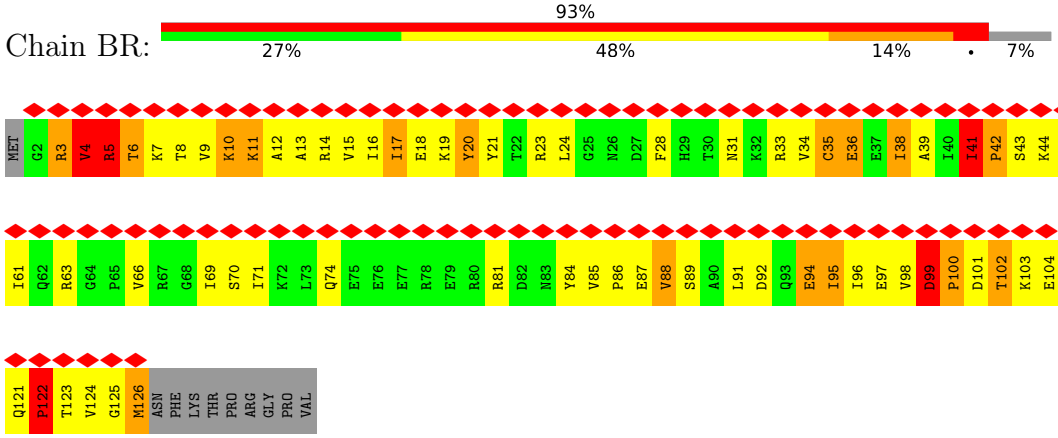
• Molecule 66: 40S ribosomal protein S16

Chain BQ:



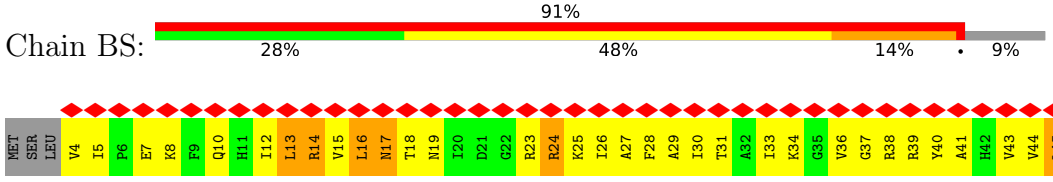
• Molecule 67: 40S ribosomal protein S17-like

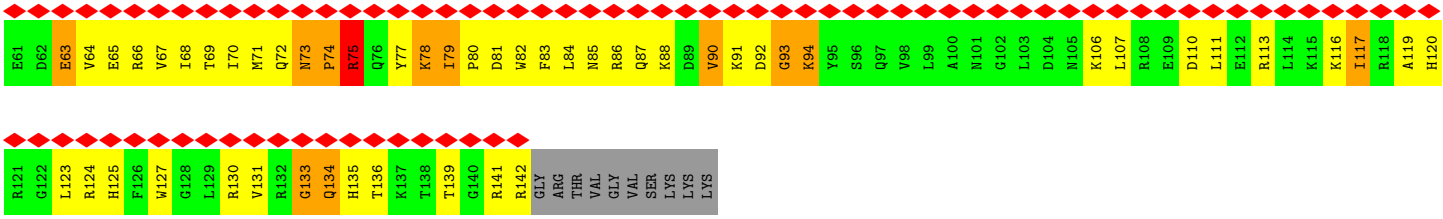
Chain BR:



• Molecule 68: 40S ribosomal protein S18

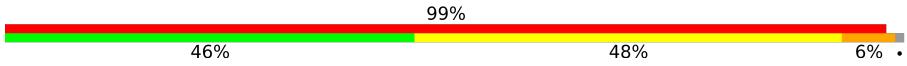
Chain BS:

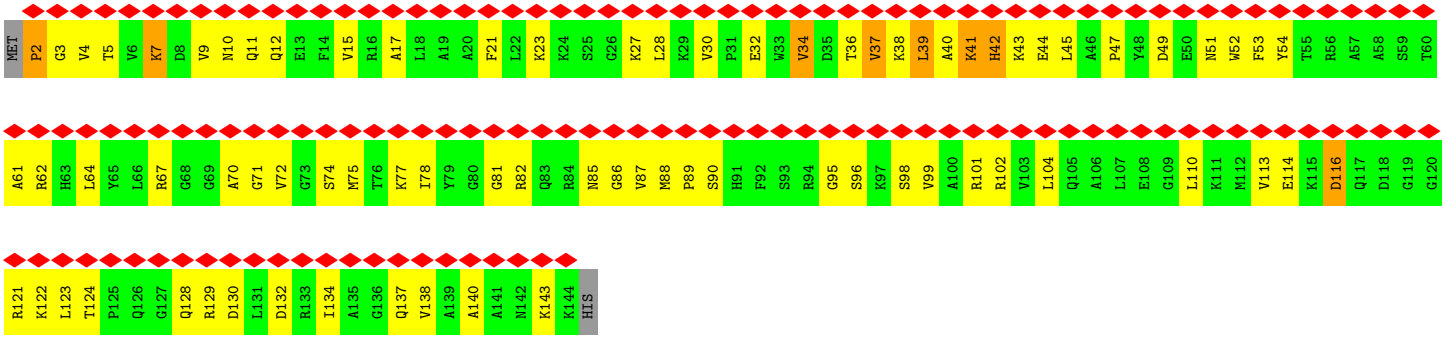




• Molecule 69: 40S ribosomal protein S19

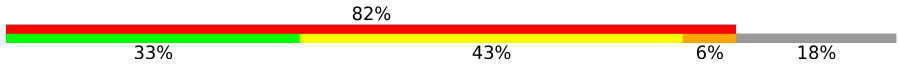
Chain BT:

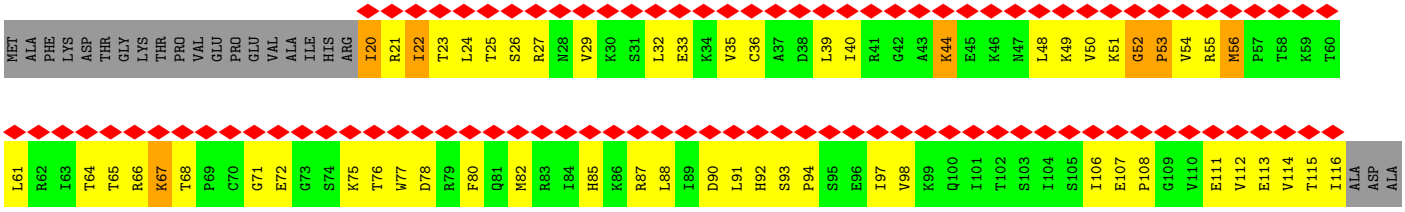




• Molecule 70: 40S ribosomal protein S20

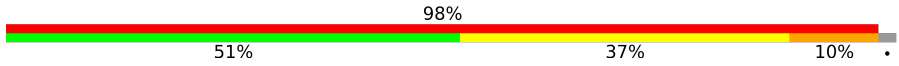
Chain BU:

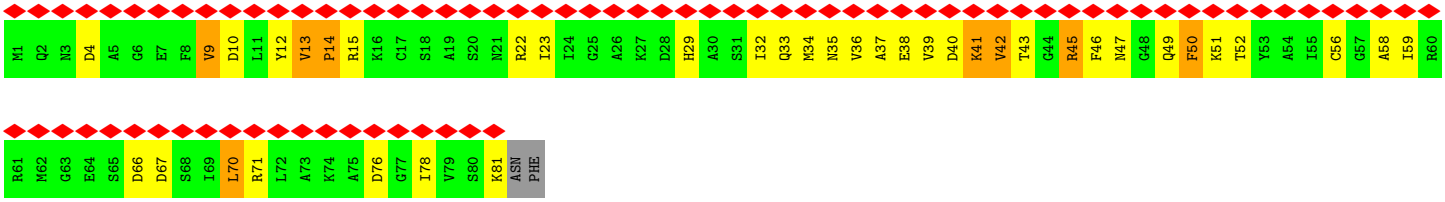




• Molecule 71: 40S ribosomal protein S21

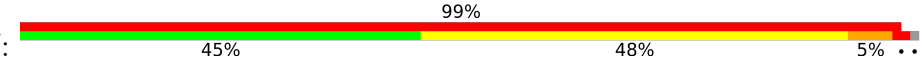
Chain BV:

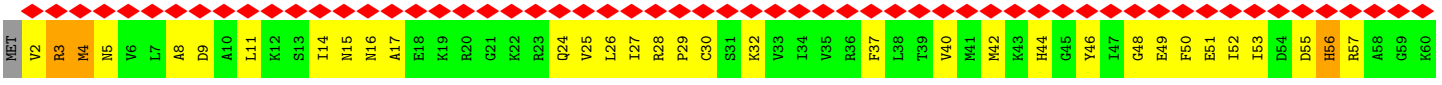


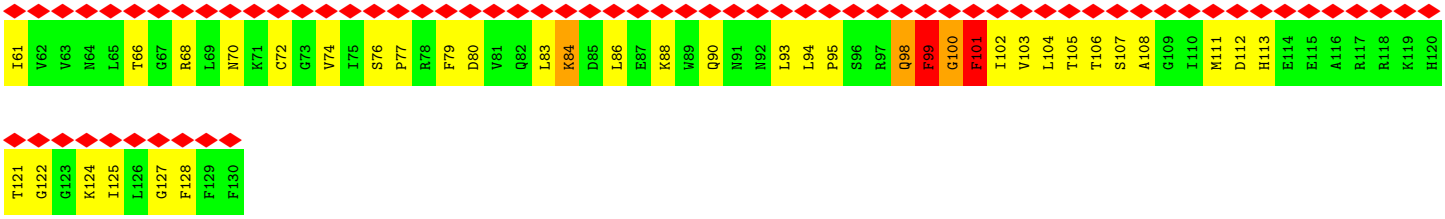


• Molecule 72: 40S ribosomal protein S15a

Chain BW:

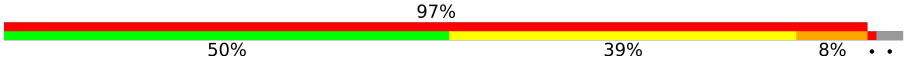


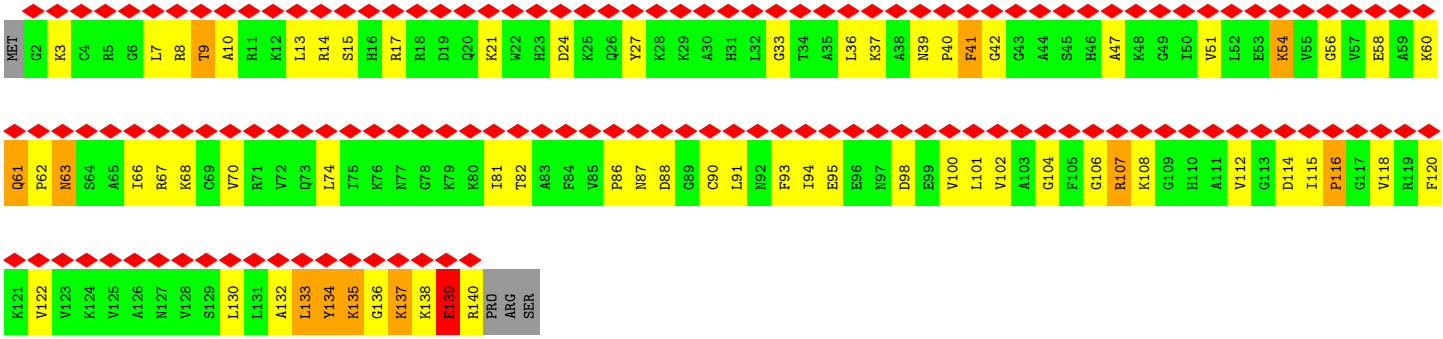




• Molecule 73: 40S ribosomal protein S23

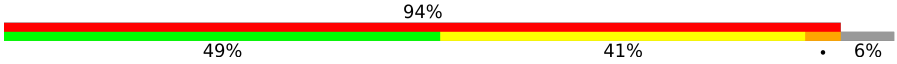
Chain BX:

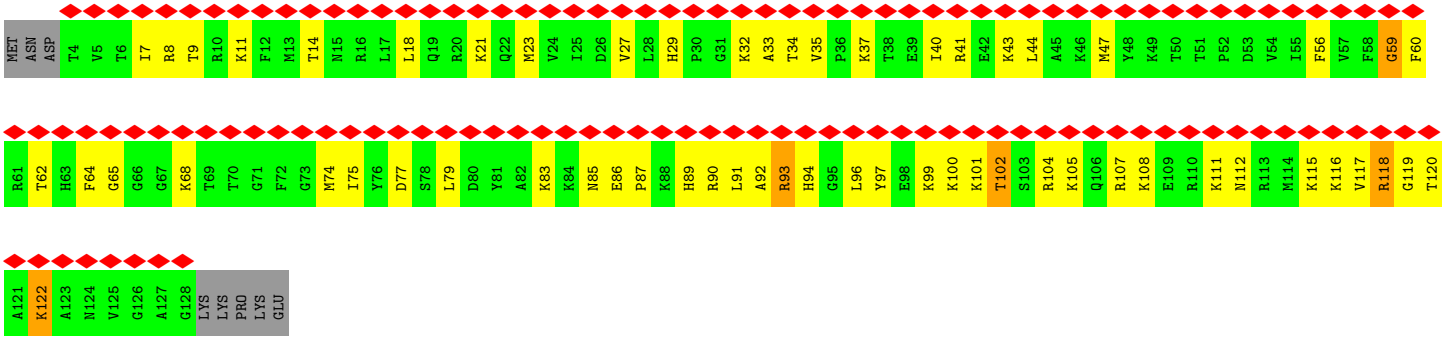




• Molecule 74: 40S ribosomal protein S24

Chain BY:



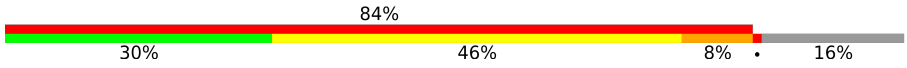


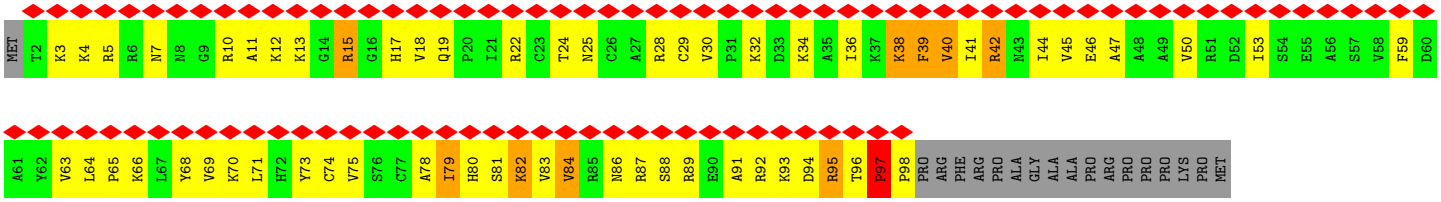
• Molecule 75: 40S ribosomal protein S25

Chain BZ:

• Molecule 76: 40S ribosomal protein S26

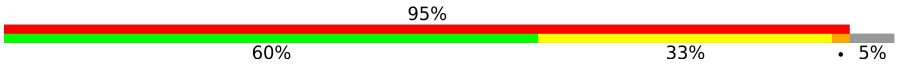
Chain Ba:

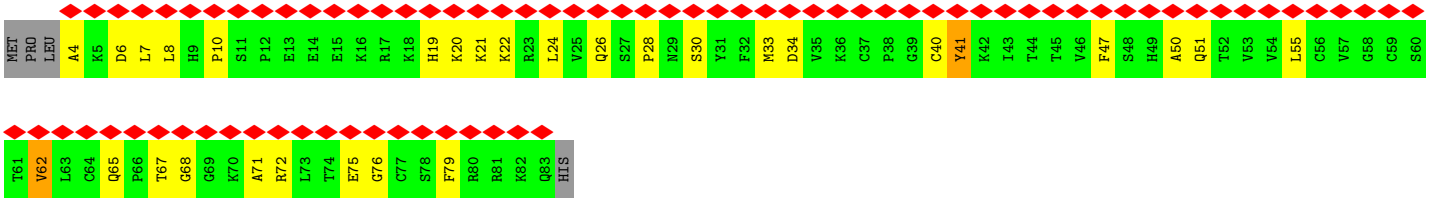




• Molecule 77: 40S ribosomal protein S27

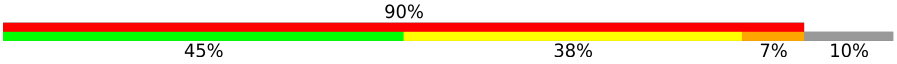
Chain Bb:

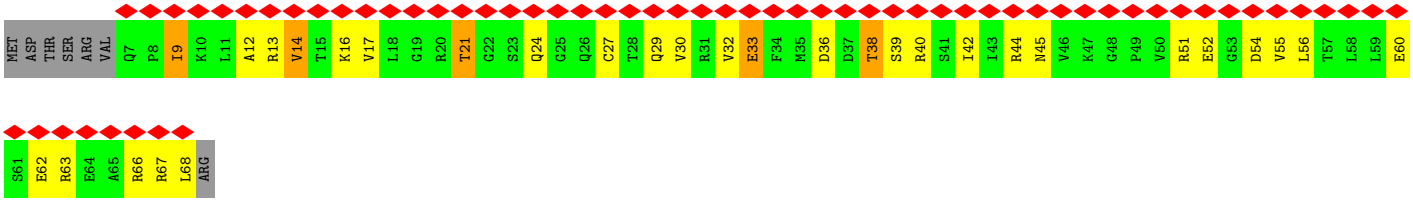




• Molecule 78: 40S ribosomal protein S28

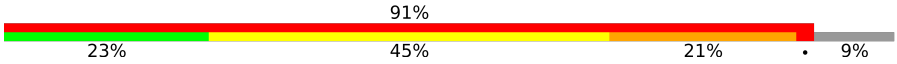
Chain Bc:





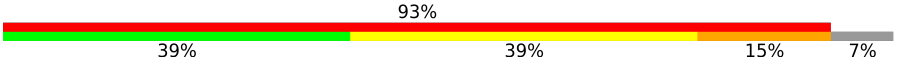
• Molecule 79: 40S ribosomal protein S29

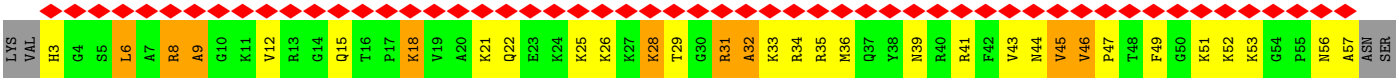
Chain Bd:



• Molecule 80: 40S ribosomal protein S30

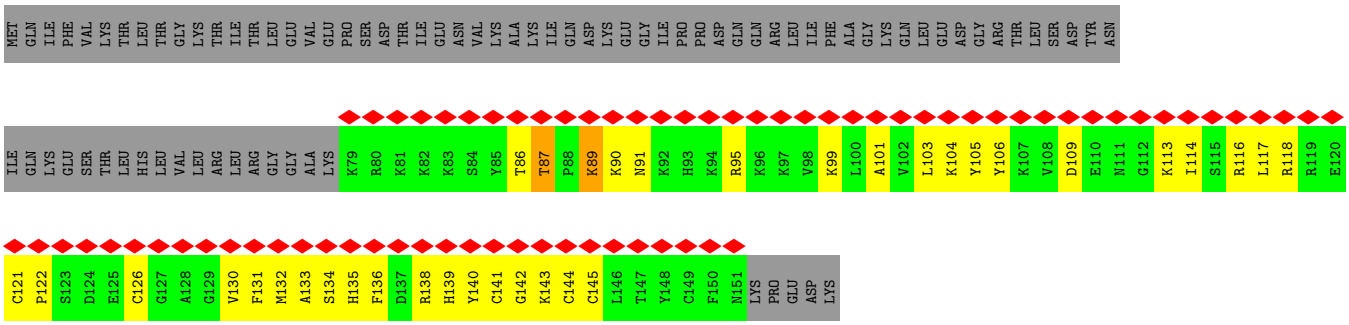
Chain Be:



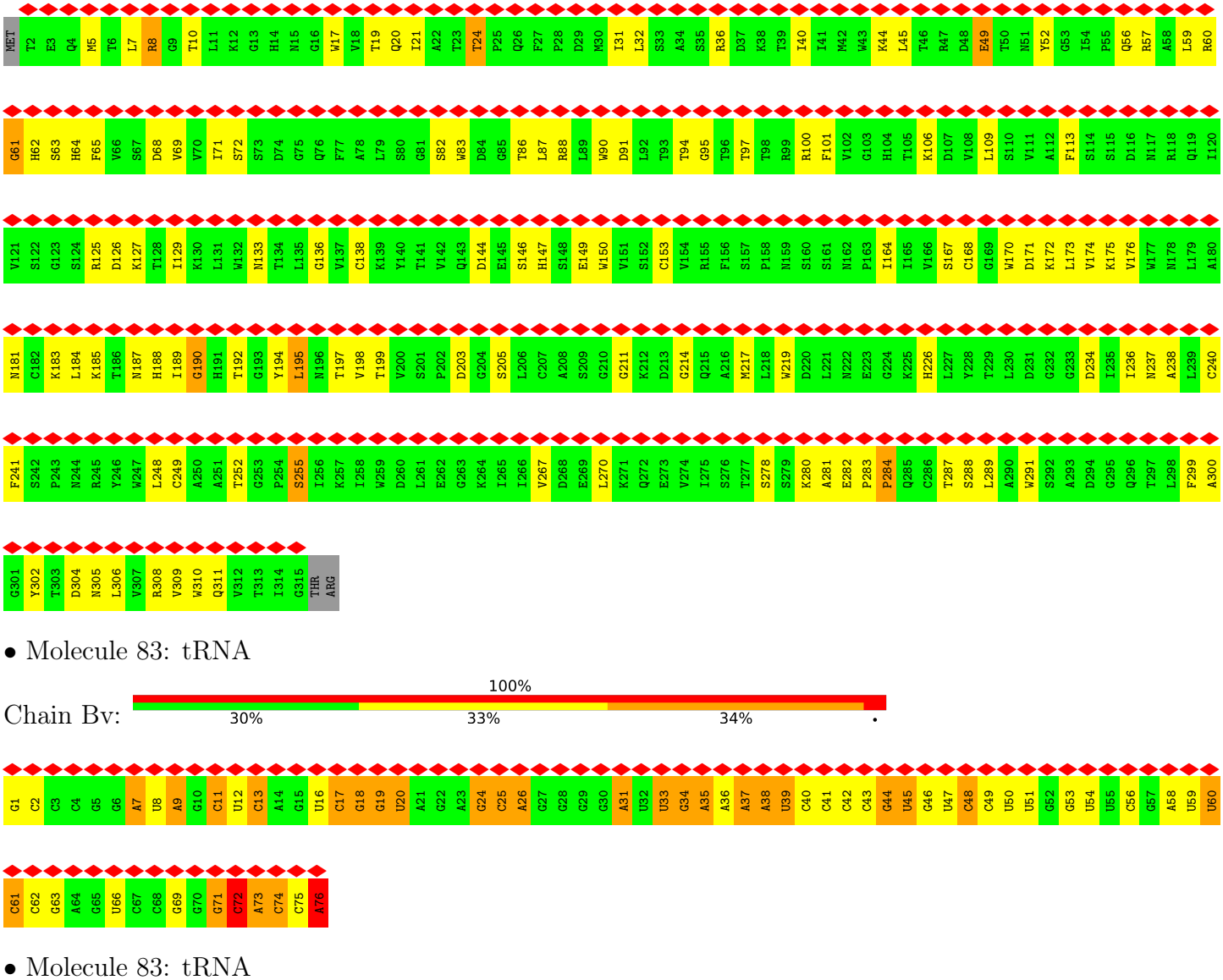


• Molecule 81: Ubiquitin-40S ribosomal protein S27a

Chain Bf:

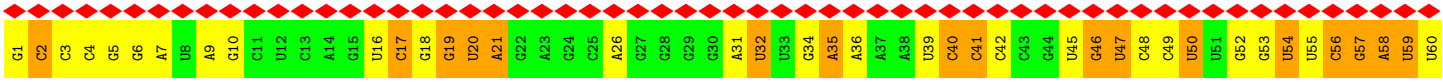


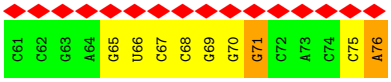
• Molecule 82: Guanine nucleotide-binding protein subunit beta-2-like 1



• Molecule 83: tRNA

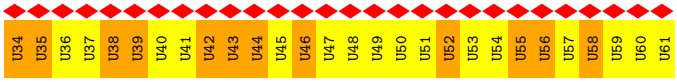
• Molecule 83: tRNA





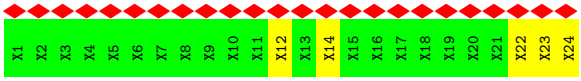
• Molecule 84: mRNA

Chain Bx:



• Molecule 85: Nascent protein chain

Chain By:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	313321	Depositor
Resolution determination method	Not provided	
CTF correction method	DEFOCUS GROUPS	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	20.00	Depositor
Minimum defocus (nm)	2000.00	Depositor
Maximum defocus (nm)	4500.00	Depositor
Magnification	205000	Depositor
Image detector	TVIPS TEMCAM-F416 (4k x 4k)	Depositor
Maximum map value	15.028	Depositor
Minimum map value	-7.978	Depositor
Average map value	0.000	Depositor
Map value standard deviation	1.000	Depositor
Recommended contour level	3	Depositor
Map size (Å)	378.0, 378.0, 378.0	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.945, 0.945, 0.945	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

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

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	A3	0.92	32/3726 (0.9%)	1.14	55/5804 (0.9%)
2	A4	0.90	23/2839 (0.8%)	0.97	31/4425 (0.7%)
3	AA	0.69	1/1968 (0.1%)	1.04	7/2639 (0.3%)
4	AB	0.60	0/3246	1.00	3/4345 (0.1%)
5	AC	0.63	4/2942 (0.1%)	1.01	10/3951 (0.3%)
6	AD	0.65	1/2437 (0.0%)	1.06	9/3262 (0.3%)
7	AE	0.73	1/1603 (0.1%)	1.27	16/2153 (0.7%)
8	AF	0.59	0/1986	0.96	4/2644 (0.2%)
9	AG	0.64	0/1913	0.94	3/2576 (0.1%)
10	AH	0.57	2/1545 (0.1%)	0.94	2/2077 (0.1%)
11	AI	0.67	0/1730	1.10	10/2311 (0.4%)
12	AJ	0.62	0/1376	0.97	3/1841 (0.2%)
13	AK	0.90	3/886 (0.3%)	1.74	32/1188 (2.7%)
14	AL	0.71	7/1688 (0.4%)	1.23	14/2260 (0.6%)
15	AM	0.64	0/1161	0.98	2/1554 (0.1%)
16	AN	0.61	0/1746	0.95	5/2338 (0.2%)
17	AO	0.62	0/1638	0.98	2/2191 (0.1%)
18	AP	0.63	0/1268	1.05	3/1701 (0.2%)
19	AQ	0.70	4/1537 (0.3%)	1.06	10/2052 (0.5%)
20	AR	0.59	0/1533	1.01	6/2025 (0.3%)
21	AS	0.59	2/1488 (0.1%)	0.96	2/1997 (0.1%)
22	AT	0.58	0/1312	0.97	3/1753 (0.2%)
23	AU	0.57	0/822	0.90	1/1103 (0.1%)
24	AV	0.58	0/983	0.98	1/1319 (0.1%)
25	AW	0.57	3/1004 (0.3%)	1.02	7/1332 (0.5%)
26	AX	0.56	0/975	0.88	0/1312
27	AY	0.58	0/1081	0.98	4/1439 (0.3%)
28	AZ	0.67	1/1126 (0.1%)	1.13	12/1502 (0.8%)
29	Aa	0.76	3/1191 (0.3%)	1.12	10/1591 (0.6%)
30	Ab	0.57	0/569	0.94	0/750
31	Ac	0.62	0/812	1.01	5/1089 (0.5%)
32	Ad	0.60	0/894	0.98	0/1204

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	Ae	0.63	1/1082 (0.1%)	0.92	2/1443 (0.1%)
34	Af	0.69	0/895	1.14	7/1198 (0.6%)
35	Ag	0.57	0/916	0.86	0/1220
36	Ah	0.63	0/1023	1.12	10/1351 (0.7%)
37	Ai	0.60	0/805	0.93	1/1065 (0.1%)
38	Aj	0.66	1/703 (0.1%)	1.23	11/929 (1.2%)
39	Ak	0.71	2/575 (0.3%)	1.12	6/761 (0.8%)
40	Al	0.62	0/454	0.91	0/599
41	Am	0.70	0/417	0.93	0/553
42	An	0.50	0/241	0.85	0/305
43	Ao	0.58	0/877	1.02	3/1156 (0.3%)
44	Ap	0.60	0/718	0.97	3/953 (0.3%)
45	Aq	0.98	3/1058 (0.3%)	2.06	39/1424 (2.7%)
46	At	0.63	0/995	1.12	5/1334 (0.4%)
47	Au	0.85	3/1772 (0.2%)	1.63	20/2375 (0.8%)
48	A2	0.80	509/86613 (0.6%)	1.04	1075/135108 (0.8%)
49	B1	0.78	213/40767 (0.5%)	1.07	543/63536 (0.9%)
50	BA	0.80	6/1741 (0.3%)	1.23	23/2366 (1.0%)
51	BB	0.65	0/1749	1.04	11/2340 (0.5%)
52	BC	0.57	0/1761	0.95	0/2379
53	BD	0.66	1/1736 (0.1%)	1.07	1/2338 (0.0%)
54	BE	0.65	2/2072 (0.1%)	1.00	6/2793 (0.2%)
55	BF	0.62	2/1524 (0.1%)	0.98	5/2048 (0.2%)
56	BG	0.62	0/1907	1.00	9/2538 (0.4%)
57	BH	0.65	0/1501	1.08	4/2009 (0.2%)
58	BI	0.69	0/1725	0.96	2/2298 (0.1%)
59	BJ	0.53	1/1520 (0.1%)	0.92	5/2030 (0.2%)
60	BK	0.71	0/851	1.09	2/1147 (0.2%)
61	BL	0.59	1/1281 (0.1%)	1.01	6/1710 (0.4%)
62	BM	0.65	0/941	1.01	2/1264 (0.2%)
63	BN	0.59	2/1226 (0.2%)	0.91	2/1649 (0.1%)
64	BO	0.66	0/1029	0.99	2/1380 (0.1%)
65	BP	0.68	2/1019 (0.2%)	1.15	9/1361 (0.7%)
66	BQ	0.54	0/1126	0.98	5/1506 (0.3%)
67	BR	0.69	5/1023 (0.5%)	1.11	8/1373 (0.6%)
68	BS	0.66	2/1172 (0.2%)	1.05	5/1570 (0.3%)
69	BT	0.57	0/1131	0.93	1/1515 (0.1%)
70	BU	0.63	1/778 (0.1%)	1.08	4/1045 (0.4%)
71	BV	0.60	2/623 (0.3%)	1.07	3/833 (0.4%)
72	BW	0.60	0/1051	0.93	0/1406
73	BX	0.66	2/1097 (0.2%)	1.03	2/1464 (0.1%)
74	BY	0.63	0/1032	1.02	2/1371 (0.1%)
75	BZ	0.58	0/696	1.04	2/929 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
76	Ba	0.69	0/786	1.09	2/1053 (0.2%)
77	Bb	0.66	0/637	0.95	0/854
78	Bc	0.63	0/490	1.12	2/656 (0.3%)
79	Bd	0.76	0/437	1.32	6/580 (1.0%)
80	Be	0.56	0/443	0.99	0/583
81	Bf	0.66	0/613	0.93	0/811
82	Bg	0.65	0/2497	0.98	3/3399 (0.1%)
83	Bv	0.46	2/1813 (0.1%)	0.73	9/2823 (0.3%)
83	Bw	0.34	1/1813 (0.1%)	0.82	7/2823 (0.2%)
84	Bx	0.41	1/616 (0.2%)	1.26	10/948 (1.1%)
All	All	0.74	852/234393 (0.4%)	1.05	2157/344230 (0.6%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
4	AB	0	3
5	AC	0	2
7	AE	0	1
8	AF	0	2
10	AH	0	3
13	AK	0	3
14	AL	0	6
39	Ak	0	1
48	A2	2	3
49	B1	1	0
54	BE	0	6
63	BN	0	2
64	BO	0	2
65	BP	0	11
66	BQ	0	6
72	BW	0	3
76	Ba	0	1
79	Bd	0	1
All	All	3	56

All (852) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	A2	3612	U	O3'-P	-17.06	1.35	1.61

Continued on next page...

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
49	B1	842	C	O3'-P	16.14	1.85	1.61
48	A2	2689	C	O3'-P	-15.67	1.37	1.61
49	B1	558	G	O3'-P	15.52	1.84	1.61
49	B1	497	C	O3'-P	14.87	1.83	1.61
49	B1	72	C	O3'-P	14.24	1.82	1.61
49	B1	1253	A	O3'-P	14.03	1.82	1.61
49	B1	1439	A	O3'-P	-13.79	1.40	1.61
48	A2	925	C	O3'-P	-13.79	1.40	1.61
49	B1	2	A	O3'-P	-13.77	1.40	1.61
48	A2	1274	G	O3'-P	-13.71	1.40	1.61
48	A2	673	C	O3'-P	-13.66	1.40	1.61
49	B1	38	A	O3'-P	-13.65	1.40	1.61
49	B1	1792	G	O3'-P	-13.65	1.40	1.61
48	A2	1288	C	O3'-P	-13.62	1.40	1.61
48	A2	2335	U	O3'-P	-13.62	1.40	1.61
48	A2	3852	G	O3'-P	-13.61	1.40	1.61
48	A2	4906	C	O3'-P	-13.60	1.40	1.61
48	A2	210	G	O3'-P	-13.59	1.40	1.61
48	A2	4903	G	O3'-P	-13.54	1.40	1.61
49	B1	1389	C	O3'-P	-13.49	1.41	1.61
48	A2	2457	C	O3'-P	-13.48	1.41	1.61
1	A3	124	U	O3'-P	-13.39	1.41	1.61
48	A2	4907	G	O3'-P	-13.39	1.41	1.61
49	B1	619	A	O3'-P	-13.39	1.41	1.61
48	A2	4519	U	O3'-P	-13.35	1.41	1.61
48	A2	238	G	O3'-P	-13.35	1.41	1.61
48	A2	1433	C	O3'-P	-13.32	1.41	1.61
48	A2	3649	G	O3'-P	-13.29	1.41	1.61
48	A2	4117	C	O3'-P	-13.29	1.41	1.61
49	B1	1725	U	O3'-P	-13.27	1.41	1.61
48	A2	4664	G	O3'-P	-13.26	1.41	1.61
48	A2	4538	U	O3'-P	-13.24	1.41	1.61
48	A2	3697	A	O3'-P	-13.24	1.41	1.61
49	B1	348	A	O3'-P	-13.23	1.41	1.61
49	B1	1648	G	O3'-P	-13.10	1.41	1.61
48	A2	1716	G	O3'-P	13.00	1.80	1.61
48	A2	4316	U	O3'-P	-12.99	1.41	1.61
48	A2	3604	C	O3'-P	-12.84	1.41	1.61
2	A4	4	U	O3'-P	-12.83	1.42	1.61
49	B1	426	A	O3'-P	-12.81	1.42	1.61
48	A2	99	A	O3'-P	-12.77	1.42	1.61
49	B1	292	A	O3'-P	-12.73	1.42	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	A2	958	U	C3'-O3'	-12.69	1.23	1.42
48	A2	2602	A	O3'-P	-12.69	1.42	1.61
2	A4	71	G	O3'-P	-12.64	1.42	1.61
49	B1	1420	G	O3'-P	12.63	1.80	1.61
48	A2	4537	G	O3'-P	-12.56	1.42	1.61
49	B1	1475	G	O3'-P	-12.56	1.42	1.61
48	A2	100	C	O3'-P	-12.55	1.42	1.61
49	B1	421	G	O3'-P	-12.54	1.42	1.61
48	A2	3665	U	O3'-P	-12.53	1.42	1.61
48	A2	4457	G	O3'-P	-12.48	1.42	1.61
49	B1	999	G	O3'-P	-12.45	1.42	1.61
48	A2	4488	U	O3'-P	-12.35	1.42	1.61
49	B1	56	G	O3'-P	-12.29	1.42	1.61
2	A4	114	U	O3'-P	-12.29	1.42	1.61
48	A2	2832	C	O3'-P	-12.27	1.42	1.61
49	B1	1122	A	O3'-P	-12.23	1.42	1.61
48	A2	4045	U	O3'-P	-12.23	1.42	1.61
49	B1	368	U	O3'-P	-12.21	1.42	1.61
49	B1	1331	C	O3'-P	-12.20	1.42	1.61
48	A2	4020	A	O3'-P	-12.19	1.42	1.61
49	B1	1291	A	O3'-P	-12.19	1.42	1.61
48	A2	1712	U	O3'-P	-12.16	1.43	1.61
49	B1	1408	U	O3'-P	-12.14	1.43	1.61
48	A2	2330	C	O3'-P	-12.13	1.43	1.61
49	B1	114	G	O3'-P	-12.10	1.43	1.61
48	A2	4135	G	O3'-P	-12.03	1.43	1.61
48	A2	1711	A	O3'-P	-12.01	1.43	1.61
48	A2	111	C	O3'-P	-11.94	1.43	1.61
48	A2	1312	G	O3'-P	-11.93	1.43	1.61
48	A2	4486	G	O3'-P	-11.93	1.43	1.61
48	A2	963	G	O3'-P	-11.91	1.43	1.61
48	A2	4520	U	O3'-P	-11.87	1.43	1.61
49	B1	1683	C	O3'-P	-11.87	1.43	1.61
48	A2	4925	A	O3'-P	-11.83	1.43	1.61
48	A2	2734	A	O3'-P	-11.82	1.43	1.61
48	A2	1760	C	O3'-P	-11.82	1.43	1.61
48	A2	1771	C	O3'-P	-11.77	1.43	1.61
49	B1	1181	A	O3'-P	-11.76	1.43	1.61
49	B1	808	A	O3'-P	-11.74	1.43	1.61
49	B1	677	G	O3'-P	-11.68	1.43	1.61
48	A2	4834	U	O3'-P	-11.66	1.43	1.61
48	A2	295	G	O3'-P	-11.66	1.43	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	A2	2679	G	O3'-P	-11.65	1.43	1.61
48	A2	960	G	O3'-P	-11.63	1.43	1.61
48	A2	503	A	O3'-P	-11.60	1.43	1.61
49	B1	4	C	O3'-P	-11.47	1.44	1.61
49	B1	436	G	O3'-P	-11.46	1.44	1.61
48	A2	3860	G	O3'-P	-11.45	1.44	1.61
48	A2	2502	G	O3'-P	-11.43	1.44	1.61
48	A2	3876	A	O3'-P	-11.43	1.44	1.61
48	A2	4633	C	O3'-P	-11.42	1.44	1.61
48	A2	1376	G	O3'-P	-11.42	1.44	1.61
49	B1	1407	U	O3'-P	-11.41	1.44	1.61
49	B1	684	G	O3'-P	-11.40	1.44	1.61
48	A2	2525	G	O3'-P	-11.31	1.44	1.61
48	A2	4712	G	O3'-P	-11.28	1.44	1.61
48	A2	3593	C	O3'-P	-11.25	1.44	1.61
49	B1	495	U	O3'-P	-11.20	1.44	1.61
48	A2	927	C	O3'-P	-11.16	1.44	1.61
1	A3	139	G	O3'-P	-11.13	1.44	1.61
48	A2	4606	G	O3'-P	-11.13	1.44	1.61
48	A2	9	C	O3'-P	-11.10	1.44	1.61
48	A2	1593	C	O3'-P	-11.05	1.44	1.61
48	A2	2781	C	O3'-P	-10.99	1.44	1.61
48	A2	1854	A	O3'-P	-10.96	1.44	1.61
48	A2	2798	U	O3'-P	-10.93	1.44	1.61
49	B1	291	G	O3'-P	-10.92	1.44	1.61
49	B1	1316	C	O3'-P	-10.92	1.44	1.61
48	A2	2830	G	O3'-P	-10.90	1.44	1.61
48	A2	4461	G	O3'-P	-10.89	1.44	1.61
49	B1	632	C	O3'-P	-10.89	1.44	1.61
48	A2	1346	C	O3'-P	-10.87	1.44	1.61
48	A2	2601	G	O3'-P	-10.84	1.44	1.61
48	A2	1228	C	O3'-P	-10.83	1.45	1.61
49	B1	418	A	O3'-P	-10.83	1.45	1.61
48	A2	3707	A	O3'-P	-10.79	1.45	1.61
48	A2	154	U	O3'-P	-10.78	1.45	1.61
48	A2	5006	A	O3'-P	-10.69	1.45	1.61
48	A2	303	C	O3'-P	-10.67	1.45	1.61
49	B1	297	A	O3'-P	-10.65	1.45	1.61
48	A2	4989	G	O3'-P	-10.63	1.45	1.61
1	A3	15	G	O3'-P	-10.59	1.45	1.61
48	A2	4462	U	O3'-P	-10.59	1.45	1.61
49	B1	1484	A	O3'-P	-10.59	1.45	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	A2	3910	G	O3'-P	-10.58	1.45	1.61
48	A2	2826	G	O3'-P	-10.56	1.45	1.61
48	A2	2751	C	O3'-P	-10.55	1.45	1.61
48	A2	15	A	O3'-P	-10.52	1.45	1.61
48	A2	25	A	O3'-P	-10.51	1.45	1.61
48	A2	2053	C	O3'-P	-10.51	1.45	1.61
49	B1	404	G	O3'-P	-10.50	1.45	1.61
49	B1	1682	C	O3'-P	-10.50	1.45	1.61
48	A2	4990	C	O3'-P	-10.49	1.45	1.61
1	A3	14	U	O3'-P	-10.47	1.45	1.61
48	A2	4521	A	O3'-P	-10.45	1.45	1.61
48	A2	1259	C	O3'-P	-10.44	1.45	1.61
48	A2	2750	G	O3'-P	-10.44	1.45	1.61
49	B1	626	G	O3'-P	-10.42	1.45	1.61
1	A3	126	C	O3'-P	-10.41	1.45	1.61
49	B1	215	G	O3'-P	-10.41	1.45	1.61
48	A2	350	G	O3'-P	-10.40	1.45	1.61
49	B1	188	C	O3'-P	-10.39	1.45	1.61
49	B1	412	G	O3'-P	-10.37	1.45	1.61
48	A2	4823	C	O3'-P	-10.36	1.45	1.61
49	B1	1526	G	O3'-P	-10.33	1.45	1.61
48	A2	1057	G	O3'-P	10.32	1.76	1.61
48	A2	4976	C	O3'-P	-10.32	1.45	1.61
49	B1	459	C	O3'-P	-10.32	1.45	1.61
48	A2	974	C	O3'-P	-10.28	1.45	1.61
48	A2	3792	A	O3'-P	-10.28	1.45	1.61
48	A2	298	C	O3'-P	-10.26	1.45	1.61
49	B1	32	U	O3'-P	-10.24	1.45	1.61
49	B1	1080	A	O3'-P	-10.24	1.45	1.61
49	B1	681	U	O3'-P	-10.24	1.45	1.61
48	A2	958	U	O3'-P	-10.23	1.45	1.61
49	B1	501	C	O3'-P	-10.18	1.45	1.61
48	A2	79	C	O3'-P	-10.17	1.45	1.61
48	A2	4830	G	O3'-P	-10.17	1.45	1.61
49	B1	370	G	O3'-P	-10.16	1.46	1.61
48	A2	1759	C	O3'-P	-10.15	1.46	1.61
48	A2	4682	C	O3'-P	-10.13	1.46	1.61
49	B1	1022	U	O3'-P	-10.12	1.46	1.61
48	A2	1353	G	O3'-P	-10.10	1.46	1.61
48	A2	4677	C	O3'-P	-10.09	1.46	1.61
49	B1	1031	A	O3'-P	-10.08	1.46	1.61
48	A2	1227	G	O3'-P	-10.07	1.46	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	A2	1249	G	O3'-P	10.06	1.76	1.61
48	A2	451	G	O3'-P	-10.03	1.46	1.61
48	A2	4992	A	O3'-P	-10.02	1.46	1.61
1	A3	150	C	O3'-P	-10.01	1.46	1.61
48	A2	1973	U	O3'-P	-10.00	1.46	1.61
1	A3	89	U	O3'-P	-9.99	1.46	1.61
48	A2	452	C	O3'-P	-9.97	1.46	1.61
2	A4	104	C	O3'-P	-9.97	1.46	1.61
49	B1	683	G	O3'-P	9.96	1.76	1.61
45	Aq	46	ILE	CB-CG2	-9.91	1.19	1.52
48	A2	3624	A	O3'-P	-9.91	1.46	1.61
48	A2	2445	G	O3'-P	-9.89	1.46	1.61
48	A2	2290	C	O3'-P	-9.89	1.46	1.61
48	A2	1295	A	O3'-P	-9.88	1.46	1.61
48	A2	4059	G	O3'-P	-9.86	1.46	1.61
48	A2	3850	G	O3'-P	-9.84	1.46	1.61
48	A2	1061	A	O3'-P	-9.83	1.46	1.61
48	A2	3651	U	O3'-P	-9.83	1.46	1.61
49	B1	351	G	O3'-P	9.83	1.75	1.61
48	A2	2505	C	O3'-P	-9.82	1.46	1.61
48	A2	3839	G	O3'-P	-9.82	1.46	1.61
48	A2	2268	C	O3'-P	-9.78	1.46	1.61
48	A2	1763	U	O3'-P	-9.77	1.46	1.61
49	B1	1220	A	O3'-P	-9.76	1.46	1.61
49	B1	615	C	O3'-P	-9.75	1.46	1.61
48	A2	319	U	O3'-P	-9.72	1.46	1.61
48	A2	3629	C	O3'-P	-9.70	1.46	1.61
1	A3	115	G	O3'-P	-9.66	1.46	1.61
48	A2	1292	C	O3'-P	-9.66	1.46	1.61
1	A3	4	C	O3'-P	-9.65	1.46	1.61
48	A2	1053	G	O3'-P	-9.63	1.46	1.61
2	A4	41	G	O3'-P	-9.63	1.46	1.61
48	A2	4040	U	O3'-P	-9.61	1.46	1.61
48	A2	260	C	O3'-P	-9.60	1.46	1.61
48	A2	959	C	O3'-P	-9.60	1.46	1.61
48	A2	2782	U	O3'-P	-9.60	1.46	1.61
48	A2	4980	U	O3'-P	-9.58	1.46	1.61
48	A2	1981	G	O3'-P	-9.53	1.46	1.61
48	A2	4974	A	O3'-P	-9.53	1.46	1.61
49	B1	105	U	O3'-P	-9.51	1.46	1.61
49	B1	1746	U	O3'-P	-9.51	1.46	1.61
48	A2	200	U	O3'-P	-9.49	1.47	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	A2	160	A	O3'-P	-9.49	1.47	1.61
49	B1	35	C	O3'-P	-9.48	1.47	1.61
48	A2	3859	G	O3'-P	-9.48	1.47	1.61
49	B1	502	C	O3'-P	-9.47	1.47	1.61
48	A2	1357	G	O3'-P	-9.47	1.47	1.61
48	A2	1530	G	O3'-P	-9.47	1.47	1.61
48	A2	2869	C	O3'-P	-9.46	1.47	1.61
49	B1	454	U	O3'-P	-9.46	1.47	1.61
48	A2	1872	A	O3'-P	-9.45	1.47	1.61
48	A2	2292	A	O3'-P	-9.45	1.47	1.61
49	B1	930	C	O3'-P	-9.43	1.47	1.61
48	A2	1271	G	O3'-P	-9.42	1.47	1.61
48	A2	2570	A	O3'-P	-9.38	1.47	1.61
49	B1	405	G	O3'-P	-9.37	1.47	1.61
49	B1	933	G	O3'-P	-9.37	1.47	1.61
49	B1	976	G	O3'-P	-9.31	1.47	1.61
48	A2	2280	G	O3'-P	-9.29	1.47	1.61
49	B1	21	U	O3'-P	-9.29	1.47	1.61
48	A2	19	G	O3'-P	-9.28	1.47	1.61
48	A2	2876	G	O3'-P	-9.27	1.47	1.61
48	A2	703	C	O3'-P	-9.26	1.47	1.61
48	A2	4704	G	O3'-P	-9.24	1.47	1.61
49	B1	1194	A	O3'-P	-9.23	1.47	1.61
49	B1	1806	A	O3'-P	-9.23	1.47	1.61
48	A2	2501	G	O3'-P	-9.21	1.47	1.61
48	A2	716	G	O3'-P	-9.20	1.47	1.61
49	B1	112	U	O3'-P	9.19	1.75	1.61
49	B1	298	G	O3'-P	-9.18	1.47	1.61
48	A2	718	C	O3'-P	-9.18	1.47	1.61
48	A2	2503	U	O3'-P	-9.18	1.47	1.61
1	A3	118	C	O3'-P	-9.17	1.47	1.61
48	A2	421	A	O3'-P	-9.16	1.47	1.61
49	B1	1460	C	O3'-P	-9.15	1.47	1.61
2	A4	106	G	O3'-P	-9.13	1.47	1.61
48	A2	190	G	O3'-P	9.09	1.74	1.61
48	A2	68	U	O3'-P	-9.09	1.47	1.61
49	B1	1395	C	O3'-P	-9.08	1.47	1.61
49	B1	33	G	O3'-P	-9.08	1.47	1.61
48	A2	961	C	O3'-P	-9.06	1.47	1.61
48	A2	2818	U	O3'-P	-9.05	1.47	1.61
48	A2	1488	G	O3'-P	-9.04	1.47	1.61
48	A2	2603	G	O3'-P	-9.03	1.47	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	A2	226	G	O3'-P	-8.99	1.47	1.61
49	B1	1676	U	O3'-P	-8.99	1.47	1.61
49	B1	1855	G	O3'-P	-8.98	1.47	1.61
48	A2	4160	G	O3'-P	-8.97	1.47	1.61
49	B1	361	U	O3'-P	8.97	1.74	1.61
48	A2	2521	G	O3'-P	-8.96	1.47	1.61
1	A3	141	C	O3'-P	-8.94	1.47	1.61
48	A2	2327	G	O3'-P	-8.94	1.47	1.61
48	A2	2458	G	O3'-P	-8.94	1.47	1.61
48	A2	4913	A	O3'-P	-8.93	1.47	1.61
48	A2	3667	C	O3'-P	-8.92	1.47	1.61
48	A2	4602	C	O3'-P	-8.90	1.47	1.61
48	A2	92	C	O3'-P	-8.89	1.47	1.61
48	A2	3617	A	O3'-P	-8.89	1.47	1.61
49	B1	1744	G	O3'-P	-8.88	1.47	1.61
49	B1	660	C	O3'-P	-8.87	1.47	1.61
48	A2	1359	C	O3'-P	-8.85	1.47	1.61
48	A2	204	G	O3'-P	-8.85	1.47	1.61
48	A2	1218	G	O3'-P	-8.84	1.47	1.61
48	A2	1193	C	O3'-P	-8.83	1.48	1.61
49	B1	350	C	O3'-P	-8.83	1.48	1.61
48	A2	49	U	O3'-P	-8.81	1.48	1.61
48	A2	4605	G	O3'-P	-8.81	1.48	1.61
48	A2	296	C	O3'-P	-8.80	1.48	1.61
48	A2	4012	G	O3'-P	-8.79	1.48	1.61
49	B1	416	U	O3'-P	-8.79	1.48	1.61
48	A2	1070	A	O3'-P	-8.79	1.48	1.61
28	AZ	36	ARG	C-N	8.74	1.40	1.33
48	A2	2704	A	O3'-P	-8.71	1.48	1.61
48	A2	207	C	O3'-P	-8.70	1.48	1.61
48	A2	4483	U	O3'-P	-8.65	1.48	1.61
48	A2	431	G	O3'-P	-8.62	1.48	1.61
1	A3	67	U	O3'-P	-8.62	1.48	1.61
48	A2	308	G	O3'-P	-8.61	1.48	1.61
48	A2	2786	A	O3'-P	-8.60	1.48	1.61
48	A2	4617	A	O3'-P	-8.60	1.48	1.61
49	B1	1453	C	O3'-P	-8.60	1.48	1.61
48	A2	2753	C	O3'-P	-8.58	1.48	1.61
48	A2	1851	C	O3'-P	-8.57	1.48	1.61
48	A2	90	G	O3'-P	-8.56	1.48	1.61
2	A4	40	U	O3'-P	-8.56	1.48	1.61
48	A2	2569	G	O3'-P	-8.53	1.48	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	A2	3740	C	O3'-P	-8.52	1.48	1.61
48	A2	286	G	O3'-P	-8.51	1.48	1.61
48	A2	916	A	O3'-P	8.50	1.74	1.61
49	B1	1123	C	O3'-P	-8.50	1.48	1.61
49	B1	450	C	O3'-P	-8.50	1.48	1.61
48	A2	1616	A	O3'-P	-8.49	1.48	1.61
48	A2	3836	A	O3'-P	-8.47	1.48	1.61
48	A2	4306	U	O3'-P	-8.44	1.48	1.61
48	A2	2269	C	O3'-P	-8.43	1.48	1.61
2	A4	33	U	O3'-P	-8.41	1.48	1.61
48	A2	2694	G	O3'-P	-8.41	1.48	1.61
48	A2	2422	G	O3'-P	-8.40	1.48	1.61
48	A2	1245	G	O3'-P	-8.39	1.48	1.61
48	A2	3818	C	O3'-P	-8.39	1.48	1.61
49	B1	20	G	O3'-P	-8.39	1.48	1.61
49	B1	1276	A	O3'-P	-8.38	1.48	1.61
1	A3	136	U	O3'-P	-8.37	1.48	1.61
48	A2	22	G	O3'-P	-8.36	1.48	1.61
1	A3	25	G	O3'-P	-8.36	1.48	1.61
49	B1	84	A	O3'-P	-8.35	1.48	1.61
48	A2	2841	G	O3'-P	-8.34	1.48	1.61
48	A2	405	G	O3'-P	-8.32	1.48	1.61
48	A2	3623	A	O3'-P	-8.29	1.48	1.61
48	A2	3662	G	O3'-P	-8.28	1.48	1.61
48	A2	2599	G	O3'-P	-8.27	1.48	1.61
49	B1	604	A	O3'-P	-8.27	1.48	1.61
48	A2	1846	G	O3'-P	-8.26	1.48	1.61
2	A4	5	A	O3'-P	-8.23	1.48	1.61
49	B1	106	C	O3'-P	-8.23	1.48	1.61
49	B1	597	G	O3'-P	-8.20	1.48	1.61
49	B1	147	A	O3'-P	-8.20	1.48	1.61
48	A2	2435	G	O3'-P	-8.18	1.48	1.61
48	A2	3687	C	O3'-P	-8.18	1.48	1.61
48	A2	1631	U	O3'-P	-8.16	1.49	1.61
49	B1	1742	C	O3'-P	-8.16	1.49	1.61
48	A2	2328	A	O3'-P	-8.15	1.49	1.61
1	A3	113	C	O3'-P	-8.14	1.49	1.61
49	B1	1561	A	O3'-P	-8.13	1.49	1.61
48	A2	2472	G	O3'-P	-8.12	1.49	1.61
48	A2	356	A	O3'-P	-8.11	1.49	1.61
49	B1	219	U	O3'-P	-8.09	1.49	1.61
48	A2	4587	C	O3'-P	-8.08	1.49	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	A2	3834	C	O3'-P	-8.08	1.49	1.61
45	Aq	75	PRO	N-CD	8.06	1.59	1.47
48	A2	2783	C	O3'-P	-8.05	1.49	1.61
7	AE	108	LYS	C-N	8.03	1.45	1.33
48	A2	4618	A	O3'-P	-8.01	1.49	1.61
1	A3	3	A	O3'-P	-7.99	1.49	1.61
49	B1	1789	G	O3'-P	-7.98	1.49	1.61
48	A2	4125	U	O3'-P	-7.98	1.49	1.61
48	A2	1572	C	O3'-P	-7.97	1.49	1.61
48	A2	3808	C	O3'-P	-7.97	1.49	1.61
48	A2	1198	C	O3'-P	-7.97	1.49	1.61
48	A2	2758	C	O3'-P	-7.97	1.49	1.61
48	A2	153	G	O3'-P	-7.96	1.49	1.61
2	A4	34	C	O3'-P	7.93	1.73	1.61
48	A2	4924	A	O3'-P	-7.93	1.49	1.61
49	B1	425	G	O3'-P	-7.92	1.49	1.61
49	B1	864	A	O3'-P	-7.89	1.49	1.61
48	A2	1313	A	O3'-P	-7.88	1.49	1.61
48	A2	432	G	O3'-P	-7.88	1.49	1.61
48	A2	656	C	O3'-P	-7.87	1.49	1.61
2	A4	90	A	O3'-P	-7.85	1.49	1.61
49	B1	1643	U	O3'-P	-7.84	1.49	1.61
48	A2	2527	C	O3'-P	-7.84	1.49	1.61
48	A2	4835	G	O3'-P	-7.84	1.49	1.61
48	A2	4041	U	O3'-P	-7.83	1.49	1.61
49	B1	1491	G	O3'-P	-7.83	1.49	1.61
49	B1	1219	C	O3'-P	-7.79	1.49	1.61
48	A2	3738	C	O3'-P	-7.77	1.49	1.61
49	B1	448	A	O3'-P	7.77	1.72	1.61
49	B1	1024	A	O3'-P	-7.76	1.49	1.61
48	A2	3663	A	O3'-P	-7.75	1.49	1.61
48	A2	1612	A	O3'-P	-7.73	1.49	1.61
48	A2	378	A	O3'-P	-7.70	1.49	1.61
45	Aq	75	PRO	CG-CD	7.70	1.76	1.50
48	A2	4590	U	O3'-P	-7.69	1.49	1.61
49	B1	1727	G	O3'-P	-7.68	1.49	1.61
49	B1	1107	G	O3'-P	-7.67	1.49	1.61
48	A2	4060	G	O3'-P	-7.67	1.49	1.61
48	A2	2611	U	O3'-P	-7.67	1.49	1.61
49	B1	689	U	O3'-P	-7.66	1.49	1.61
48	A2	4720	U	O3'-P	-7.64	1.49	1.61
48	A2	4723	G	O3'-P	-7.63	1.49	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
49	B1	1306	U	O3'-P	-7.62	1.49	1.61
48	A2	4308	U	O3'-P	-7.59	1.49	1.61
48	A2	2302	C	O3'-P	-7.58	1.49	1.61
48	A2	440	C	O3'-P	-7.57	1.49	1.61
2	A4	63	C	O3'-P	-7.57	1.49	1.61
48	A2	1071	C	O3'-P	-7.55	1.49	1.61
48	A2	2746	U	O3'-P	-7.52	1.49	1.61
48	A2	4413	G	O3'-P	-7.51	1.49	1.61
48	A2	1803	G	O3'-P	-7.50	1.49	1.61
1	A3	23	C	O3'-P	-7.50	1.50	1.61
1	A3	129	C	O3'-P	-7.50	1.50	1.61
48	A2	2747	C	O3'-P	-7.49	1.50	1.61
48	A2	2454	G	O3'-P	-7.49	1.50	1.61
49	B1	680	G	O3'-P	-7.48	1.50	1.61
48	A2	1588	U	O3'-P	-7.47	1.50	1.61
49	B1	1856	C	O3'-P	-7.46	1.50	1.61
48	A2	2245	C	O3'-P	-7.45	1.50	1.61
48	A2	4985	C	O3'-P	-7.43	1.50	1.61
48	A2	504	U	O3'-P	-7.41	1.50	1.61
48	A2	466	C	O3'-P	-7.40	1.50	1.61
50	BA	200	ASP	C-O	-7.39	1.14	1.24
49	B1	94	G	O3'-P	-7.38	1.50	1.61
48	A2	4828	G	O3'-P	-7.37	1.50	1.61
48	A2	4318	G	O3'-P	-7.36	1.50	1.61
49	B1	817	G	O3'-P	-7.36	1.50	1.61
48	A2	4124	C	O3'-P	-7.36	1.50	1.61
48	A2	2877	G	O3'-P	-7.35	1.50	1.61
48	A2	433	G	O3'-P	-7.34	1.50	1.61
48	A2	929	G	O3'-P	-7.34	1.50	1.61
48	A2	3660	G	O3'-P	-7.34	1.50	1.61
49	B1	1015	U	O3'-P	-7.33	1.50	1.61
48	A2	2872	U	O3'-P	-7.33	1.50	1.61
49	B1	1476	A	O3'-P	-7.31	1.50	1.61
48	A2	4601	G	O3'-P	-7.31	1.50	1.61
48	A2	3718	A	O3'-P	-7.30	1.50	1.61
49	B1	369	C	O3'-P	-7.27	1.50	1.61
48	A2	2523	G	O3'-P	-7.26	1.50	1.61
48	A2	278	G	O3'-P	-7.26	1.50	1.61
1	A3	119	C	O3'-P	-7.25	1.50	1.61
48	A2	2701	G	O3'-P	-7.25	1.50	1.61
48	A2	3816	A	O3'-P	-7.23	1.50	1.61
48	A2	1736	U	O3'-P	-7.22	1.50	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	A2	4523	C	O3'-P	-7.21	1.50	1.61
49	B1	1047	C	O3'-P	-7.21	1.50	1.61
48	A2	4056	G	O3'-P	-7.21	1.50	1.61
48	A2	892	C	O3'-P	-7.20	1.50	1.61
48	A2	20	U	O3'-P	-7.19	1.50	1.61
48	A2	650	C	O3'-P	-7.19	1.50	1.61
48	A2	4360	C	O3'-P	-7.19	1.50	1.61
48	A2	4162	G	O3'-P	7.19	1.72	1.61
48	A2	4728	C	O3'-P	-7.17	1.50	1.61
48	A2	1368	G	O3'-P	-7.17	1.50	1.61
2	A4	67	C	O3'-P	-7.16	1.50	1.61
49	B1	690	G	O5'-C5'	7.16	1.53	1.42
48	A2	4406	C	O3'-P	7.15	1.71	1.61
48	A2	4459	U	O3'-P	-7.14	1.50	1.61
49	B1	953	C	O3'-P	-7.13	1.50	1.61
48	A2	4993	U	O3'-P	-7.12	1.50	1.61
48	A2	1314	C	O3'-P	-7.12	1.50	1.61
48	A2	2059	C	O3'-P	-7.12	1.50	1.61
48	A2	3570	A	O3'-P	-7.12	1.50	1.61
48	A2	1987	U	O3'-P	-7.11	1.50	1.61
48	A2	1586	G	O3'-P	-7.10	1.50	1.61
48	A2	4840	U	O3'-P	-7.10	1.50	1.61
47	Au	134	PHE	C-N	7.10	1.42	1.33
49	B1	1334	G	O3'-P	-7.09	1.50	1.61
49	B1	946	U	O3'-P	-7.09	1.50	1.61
48	A2	483	C	O3'-P	-7.07	1.50	1.61
48	A2	216	G	O3'-P	-7.07	1.50	1.61
48	A2	3728	G	O3'-P	-7.07	1.50	1.61
48	A2	4959	U	O3'-P	-7.05	1.50	1.61
49	B1	307	G	O3'-P	-7.05	1.50	1.61
49	B1	1388	A	O3'-P	-7.04	1.50	1.61
49	B1	1645	C	O3'-P	-7.04	1.50	1.61
48	A2	4010	C	O3'-P	-7.03	1.50	1.61
49	B1	1667	U	O3'-P	-7.03	1.50	1.61
48	A2	1788	G	O3'-P	-7.02	1.50	1.61
48	A2	1983	A	O3'-P	-6.99	1.50	1.61
48	A2	2671	U	O3'-P	-6.99	1.50	1.61
49	B1	847	A	O3'-P	-6.99	1.50	1.61
48	A2	3670	C	O3'-P	-6.98	1.50	1.61
48	A2	4456	G	O3'-P	-6.97	1.50	1.61
49	B1	979	C	O3'-P	-6.96	1.50	1.61
48	A2	60	A	O3'-P	-6.96	1.50	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
49	B1	295	C	O3'-P	-6.95	1.50	1.61
49	B1	663	C	O3'-P	-6.94	1.50	1.61
49	B1	1644	C	O3'-P	-6.94	1.50	1.61
48	A2	1569	G	O3'-P	-6.93	1.50	1.61
48	A2	127	G	C1'-N9	-6.93	1.37	1.48
49	B1	410	G	O3'-P	-6.91	1.50	1.61
49	B1	844	U	O3'-P	-6.91	1.50	1.61
49	B1	639	C	O3'-P	-6.90	1.50	1.61
49	B1	174	C	O3'-P	-6.90	1.50	1.61
49	B1	1340	U	O3'-P	-6.89	1.50	1.61
49	B1	1729	U	O3'-P	-6.89	1.50	1.61
48	A2	910	C	O3'-P	-6.88	1.50	1.61
49	B1	1224	G	O3'-P	-6.88	1.50	1.61
48	A2	220	G	O3'-P	-6.87	1.50	1.61
49	B1	1868	U	O3'-P	6.86	1.71	1.61
48	A2	1199	C	O3'-P	6.84	1.71	1.61
48	A2	4052	G	O3'-P	-6.84	1.50	1.61
2	A4	55	A	O3'-P	-6.84	1.50	1.61
48	A2	4039	U	O3'-P	-6.83	1.50	1.61
48	A2	4994	C	O3'-P	-6.83	1.50	1.61
49	B1	803	C	O3'-P	-6.81	1.50	1.61
49	B1	940	U	O3'-P	-6.80	1.50	1.61
48	A2	4663	A	O3'-P	6.80	1.71	1.61
49	B1	1445	U	O3'-P	-6.80	1.50	1.61
48	A2	1296	C	O3'-P	-6.80	1.50	1.61
48	A2	3685	G	O3'-P	6.79	1.71	1.61
48	A2	4594	U	O3'-P	-6.79	1.50	1.61
48	A2	1731	A	O3'-P	-6.78	1.50	1.61
48	A2	2433	U	O3'-P	-6.78	1.50	1.61
48	A2	3612	U	C3'-O3'	-6.77	1.31	1.42
48	A2	1879	C	O3'-P	-6.76	1.51	1.61
49	B1	918	U	O3'-P	6.76	1.71	1.61
48	A2	1191	G	O3'-P	-6.76	1.51	1.61
48	A2	1340	C	O3'-P	-6.75	1.51	1.61
48	A2	1725	A	O3'-P	-6.75	1.51	1.61
48	A2	4327	C	O3'-P	-6.74	1.51	1.61
48	A2	125	C	O3'-P	6.74	1.71	1.61
48	A2	1319	G	O3'-P	6.72	1.71	1.61
49	B1	804	U	O3'-P	-6.71	1.51	1.61
48	A2	2733	G	O3'-P	-6.70	1.51	1.61
48	A2	1464	G	O3'-P	-6.70	1.51	1.61
48	A2	1727	G	O3'-P	-6.70	1.51	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	A2	1714	C	O3'-P	-6.69	1.51	1.61
48	A2	2728	C	O3'-P	-6.68	1.51	1.61
49	B1	148	U	O3'-P	-6.67	1.51	1.61
48	A2	3587	U	O3'-P	-6.67	1.51	1.61
48	A2	4890	U	O3'-P	-6.64	1.51	1.61
49	B1	1310	U	O3'-P	-6.64	1.51	1.61
48	A2	1613	A	O3'-P	-6.64	1.51	1.61
49	B1	974	C	O3'-P	-6.63	1.51	1.61
48	A2	1957	G	O3'-P	-6.62	1.51	1.61
48	A2	4660	C	O3'-P	-6.62	1.51	1.61
48	A2	1348	C	O3'-P	-6.61	1.51	1.61
1	A3	24	G	O3'-P	-6.61	1.51	1.61
48	A2	2691	G	O5'-C5'	6.61	1.52	1.42
48	A2	917	G	O3'-P	6.59	1.71	1.61
48	A2	1490	A	O3'-P	-6.59	1.51	1.61
49	B1	749	U	C3'-O3'	-6.58	1.32	1.42
1	A3	127	U	O3'-P	6.57	1.71	1.61
48	A2	1972	A	O3'-P	-6.55	1.51	1.61
48	A2	4603	U	O3'-P	-6.54	1.51	1.61
48	A2	3917	G	O3'-P	-6.54	1.51	1.61
49	B1	1248	U	O3'-P	-6.54	1.51	1.61
48	A2	14	C	O3'-P	-6.53	1.51	1.61
48	A2	2061	U	O3'-P	-6.51	1.51	1.61
49	B1	984	C	O3'-P	-6.51	1.51	1.61
49	B1	1304	U	O3'-P	-6.51	1.51	1.61
48	A2	4524	C	O3'-P	-6.50	1.51	1.61
48	A2	4319	G	O3'-P	-6.49	1.51	1.61
48	A2	2270	G	O3'-P	-6.49	1.51	1.61
49	B1	69	C	O3'-P	-6.48	1.51	1.61
48	A2	634	C	O3'-P	6.43	1.70	1.61
48	A2	643	A	O3'-P	-6.43	1.51	1.61
48	A2	2697	U	O3'-P	-6.42	1.51	1.61
48	A2	288	G	O3'-P	-6.42	1.51	1.61
48	A2	1974	C	O3'-P	6.41	1.70	1.61
49	B1	1254	C	O3'-P	-6.41	1.51	1.61
49	B1	1421	A	O3'-P	-6.40	1.51	1.61
2	A4	70	G	O3'-P	-6.40	1.51	1.61
49	B1	1462	U	O3'-P	-6.39	1.51	1.61
1	A3	135	C	O3'-P	-6.39	1.51	1.61
48	A2	147	U	O3'-P	6.39	1.70	1.61
2	A4	105	C	O3'-P	-6.37	1.51	1.61
48	A2	348	U	O3'-P	-6.36	1.51	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	A2	726	G	O3'-P	-6.34	1.51	1.61
1	A3	2	G	O3'-P	-6.32	1.51	1.61
1	A3	93	C	O3'-P	-6.30	1.51	1.61
48	A2	930	A	O3'-P	-6.29	1.51	1.61
48	A2	1954	G	O3'-P	6.28	1.70	1.61
48	A2	1845	G	O3'-P	-6.28	1.51	1.61
48	A2	4827	U	C5'-C4'	-6.27	1.42	1.51
48	A2	205	A	O3'-P	-6.27	1.51	1.61
48	A2	110	C	O3'-P	-6.26	1.51	1.61
48	A2	3702	C	O3'-P	6.24	1.70	1.61
48	A2	2672	G	O3'-P	-6.23	1.51	1.61
54	BE	82	TYR	C-N	6.22	1.41	1.33
48	A2	3611	U	O3'-P	-6.21	1.51	1.61
48	A2	3736	G	O3'-P	-6.21	1.51	1.61
48	A2	7	C	O3'-P	-6.20	1.51	1.61
48	A2	2702	U	O3'-P	-6.20	1.51	1.61
48	A2	3719	A	O3'-P	-6.20	1.51	1.61
49	B1	289	G	O3'-P	-6.20	1.51	1.61
48	A2	4094	C	O3'-P	-6.20	1.51	1.61
1	A3	72	A	O3'-P	-6.19	1.51	1.61
48	A2	1560	U	O3'-P	6.18	1.70	1.61
48	A2	2698	C	O3'-P	-6.18	1.51	1.61
48	A2	2759	C	O3'-P	-6.16	1.51	1.61
49	B1	119	U	O3'-P	-6.16	1.51	1.61
48	A2	2736	A	O3'-P	-6.15	1.51	1.61
48	A2	724	A	O3'-P	-6.15	1.51	1.61
49	B1	1642	U	O3'-P	-6.13	1.51	1.61
48	A2	1059	C	O3'-P	6.12	1.70	1.61
49	B1	86	C	O3'-P	-6.12	1.51	1.61
48	A2	5007	G	O3'-P	-6.11	1.51	1.61
48	A2	299	A	O3'-P	-6.11	1.51	1.61
48	A2	4825	G	O3'-P	-6.11	1.51	1.61
48	A2	1804	U	O3'-P	-6.10	1.51	1.61
49	B1	123	G	O3'-P	-6.10	1.51	1.61
48	A2	4173	C	O3'-P	-6.10	1.51	1.61
48	A2	4123	G	O3'-P	-6.09	1.52	1.61
48	A2	919	A	O3'-P	6.09	1.70	1.61
13	AK	79	LEU	C-N	6.09	1.41	1.33
48	A2	2699	C	O3'-P	-6.08	1.52	1.61
49	B1	1726	G	O3'-P	-6.08	1.52	1.61
48	A2	4685	A	O3'-P	-6.07	1.52	1.61
55	BF	107	ASN	C-N	6.07	1.41	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	A2	1574	G	O3'-P	-6.07	1.52	1.61
48	A2	702	A	O3'-P	-6.07	1.52	1.61
48	A2	4707	G	O3'-P	-6.07	1.52	1.61
48	A2	4837	C	O3'-P	-6.07	1.52	1.61
2	A4	112	U	O3'-P	6.06	1.70	1.61
48	A2	959	C	P-O5'	-6.03	1.50	1.59
48	A2	3669	G	O3'-P	-6.03	1.52	1.61
49	B1	849	A	O3'-P	-6.03	1.52	1.61
49	B1	367	U	O3'-P	-6.03	1.52	1.61
2	A4	48	G	O3'-P	-6.02	1.52	1.61
48	A2	1282	G	O3'-P	-6.02	1.52	1.61
49	B1	1044	G	O3'-P	-6.02	1.52	1.61
48	A2	1679	G	O3'-P	6.01	1.70	1.61
65	BP	67	ALA	C-N	6.01	1.40	1.33
48	A2	2246	U	O3'-P	-6.00	1.52	1.61
48	A2	4311	C	O3'-P	-6.00	1.52	1.61
48	A2	4009	G	O3'-P	-6.00	1.52	1.61
48	A2	1333	C	O3'-P	-5.99	1.52	1.61
49	B1	447	A	O3'-P	-5.99	1.52	1.61
2	A4	44	C	O3'-P	-5.99	1.52	1.61
49	B1	1554	C	O3'-P	-5.98	1.52	1.61
2	A4	62	U	O3'-P	-5.98	1.52	1.61
48	A2	2489	G	O3'-P	-5.98	1.52	1.61
14	AL	133	ALA	C-N	5.97	1.40	1.33
48	A2	406	G	O3'-P	-5.97	1.52	1.61
48	A2	2677	G	O3'-P	-5.96	1.52	1.61
48	A2	2329	U	O3'-P	-5.95	1.52	1.61
49	B1	346	C	O3'-P	-5.95	1.52	1.61
48	A2	50	C	O3'-P	-5.95	1.52	1.61
49	B1	1278	A	O3'-P	5.94	1.70	1.61
48	A2	182	C	O3'-P	-5.93	1.52	1.61
48	A2	2285	G	O3'-P	-5.93	1.52	1.61
49	B1	338	G	O3'-P	5.93	1.70	1.61
48	A2	2722	A	O3'-P	-5.92	1.52	1.61
48	A2	2824	A	O3'-P	-5.92	1.52	1.61
48	A2	150	G	O4'-C1'	5.92	1.50	1.41
48	A2	921	C	O3'-P	5.90	1.70	1.61
48	A2	3615	U	O3'-P	-5.90	1.52	1.61
49	B1	977	C	O3'-P	-5.89	1.52	1.61
49	B1	176	U	O3'-P	-5.89	1.52	1.61
48	A2	2673	G	O3'-P	-5.88	1.52	1.61
49	B1	917	U	O3'-P	-5.88	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	A2	1467	C	O3'-P	-5.88	1.52	1.61
49	B1	1702	G	O3'-P	-5.88	1.52	1.61
13	AK	25	PRO	N-CD	5.87	1.55	1.47
48	A2	3613	A	C5'-C4'	-5.87	1.42	1.51
48	A2	4599	G	O3'-P	5.87	1.70	1.61
49	B1	446	G	O3'-P	-5.87	1.52	1.61
48	A2	2490	A	O3'-P	-5.86	1.52	1.61
48	A2	908	C	O3'-P	-5.85	1.52	1.61
48	A2	3934	A	O3'-P	-5.84	1.52	1.61
48	A2	4686	A	O3'-P	-5.84	1.52	1.61
49	B1	85	A	O3'-P	-5.83	1.52	1.61
48	A2	3688	A	O3'-P	-5.83	1.52	1.61
48	A2	1287	C	O3'-P	-5.83	1.52	1.61
1	A3	142	U	O3'-P	-5.82	1.52	1.61
39	Ak	15	ALA	CA-C	-5.82	1.45	1.52
48	A2	326	C	O3'-P	-5.81	1.52	1.61
48	A2	2526	G	O3'-P	-5.81	1.52	1.61
21	AS	139	ARG	C-N	5.80	1.41	1.34
49	B1	124	U	O3'-P	-5.80	1.52	1.61
48	A2	950	G	O3'-P	5.79	1.69	1.61
1	A3	12	G	O3'-P	-5.78	1.52	1.61
48	A2	3791	G	O3'-P	-5.78	1.52	1.61
48	A2	1299	G	O3'-P	-5.77	1.52	1.61
14	AL	11	LYS	C-N	5.76	1.41	1.33
48	A2	4915	C	O3'-P	5.75	1.69	1.61
49	B1	1335	G	O3'-P	-5.75	1.52	1.61
49	B1	1681	U	O3'-P	-5.75	1.52	1.61
48	A2	3672	C	O3'-P	5.74	1.69	1.61
48	A2	21	G	O3'-P	5.74	1.69	1.61
48	A2	1331	U	O3'-P	-5.74	1.52	1.61
10	AH	99	PHE	C-N	5.73	1.41	1.33
14	AL	53	GLY	C-N	5.72	1.41	1.33
49	B1	407	G	O3'-P	-5.71	1.52	1.61
49	B1	1452	A	O3'-P	-5.71	1.52	1.61
49	B1	1584	G	O3'-P	-5.71	1.52	1.61
1	A3	116	C	O3'-P	-5.69	1.52	1.61
49	B1	1575	G	O3'-P	5.69	1.69	1.61
48	A2	1434	G	O3'-P	-5.69	1.52	1.61
71	BV	13	VAL	C-N	5.69	1.41	1.33
25	AW	98	PRO	N-CD	5.68	1.55	1.47
48	A2	180	C	O3'-P	5.67	1.69	1.61
48	A2	1571	C	O3'-P	-5.67	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
68	BS	73	ASN	C-N	5.67	1.40	1.34
48	A2	4713	G	O3'-P	-5.66	1.52	1.61
48	A2	497	C	O3'-P	-5.65	1.52	1.61
49	B1	1	U	OP3-P	5.65	1.59	1.48
48	A2	501	G	O4'-C1'	5.63	1.50	1.41
49	B1	1700	C	O3'-P	-5.62	1.52	1.61
83	Bv	33	U	O3'-P	-5.61	1.52	1.61
49	B1	1732	G	O3'-P	-5.60	1.52	1.61
48	A2	478	U	O3'-P	-5.60	1.52	1.61
49	B1	120	U	O3'-P	-5.59	1.52	1.61
48	A2	927	C	O4'-C1'	-5.59	1.33	1.41
48	A2	1416	A	O3'-P	5.58	1.69	1.61
48	A2	3801	A	O3'-P	5.58	1.69	1.61
49	B1	343	A	O3'-P	-5.58	1.52	1.61
48	A2	172	C	O3'-P	-5.57	1.52	1.61
48	A2	1764	U	O3'-P	-5.56	1.52	1.61
49	B1	1647	A	O3'-P	-5.56	1.52	1.61
49	B1	1417	C	O3'-P	5.55	1.69	1.61
48	A2	2313	C	O3'-P	-5.55	1.52	1.61
48	A2	4136	U	O3'-P	-5.55	1.52	1.61
49	B1	122	G	O3'-P	-5.54	1.52	1.61
48	A2	4984	U	O3'-P	-5.54	1.52	1.61
49	B1	1442	U	O3'-P	-5.53	1.52	1.61
1	A3	79	G	O3'-P	-5.52	1.52	1.61
1	A3	11	C	O3'-P	-5.52	1.52	1.61
48	A2	713	G	O3'-P	-5.52	1.52	1.61
48	A2	1850	G	O3'-P	-5.51	1.52	1.61
49	B1	924	G	O3'-P	-5.50	1.52	1.61
2	A4	6	C	O3'-P	-5.50	1.52	1.61
48	A2	10	A	O3'-P	-5.50	1.52	1.61
48	A2	66	A	O3'-P	-5.50	1.52	1.61
48	A2	4407	U	O3'-P	-5.49	1.52	1.61
48	A2	680	C	O3'-P	-5.48	1.52	1.61
68	BS	74	PRO	N-CD	5.48	1.55	1.47
48	A2	2057	G	O3'-P	-5.47	1.52	1.61
48	A2	4648	G	O3'-P	-5.47	1.52	1.61
25	AW	103	ALA	C-N	-5.47	1.26	1.33
48	A2	307	U	O3'-P	-5.47	1.52	1.61
48	A2	4033	U	O4'-C1'	5.47	1.50	1.42
1	A3	110	U	O3'-P	-5.46	1.52	1.61
38	Aj	84	PRO	N-CD	5.45	1.55	1.47
49	B1	1581	C	O3'-P	-5.44	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	A2	2676	A	O3'-P	-5.44	1.52	1.61
54	BE	83	PRO	N-CD	5.44	1.55	1.47
48	A2	287	G	C3'-O3'	-5.44	1.33	1.42
47	Au	82	ILE	C-N	5.44	1.39	1.33
83	Bv	1	G	P-OP2	5.43	1.59	1.49
48	A2	4097	A	O3'-P	-5.42	1.53	1.61
49	B1	1158	G	O3'-P	-5.42	1.53	1.61
84	Bx	34	U	P-OP2	5.42	1.59	1.49
53	BD	80	PRO	N-CD	5.41	1.55	1.47
83	Bw	1	G	P-OP2	5.40	1.59	1.49
48	A2	946	G	O3'-P	-5.40	1.53	1.61
5	AC	224	ILE	C-N	5.40	1.40	1.33
48	A2	1944	C	O3'-P	-5.39	1.53	1.61
48	A2	1273	G	O3'-P	-5.39	1.53	1.61
50	BA	105	PRO	N-CD	5.38	1.55	1.47
48	A2	355	C	O3'-P	-5.38	1.53	1.61
48	A2	1765	C	O3'-P	-5.38	1.53	1.61
14	AL	131	PRO	N-CD	5.37	1.55	1.47
48	A2	2478	C	O3'-P	-5.36	1.53	1.61
48	A2	926	G	O3'-P	5.36	1.69	1.61
2	A4	61	G	O3'-P	-5.35	1.53	1.61
48	A2	1270	G	O3'-P	-5.35	1.53	1.61
48	A2	1290	A	O3'-P	-5.35	1.53	1.61
49	B1	498	C	O3'-P	-5.35	1.53	1.61
19	AQ	72	LEU	C-N	5.34	1.40	1.33
39	Ak	60	LEU	C-N	5.34	1.39	1.33
48	A2	1225	G	O3'-P	5.33	1.69	1.61
49	B1	1801	A	O3'-P	-5.32	1.53	1.61
48	A2	1433	C	O4'-C1'	5.31	1.49	1.41
61	BL	14	PRO	N-CD	5.31	1.55	1.47
6	AD	290	ALA	CA-C	-5.31	1.45	1.52
14	AL	134	PRO	N-CD	5.30	1.55	1.47
67	BR	99	ASP	C-N	5.29	1.41	1.34
48	A2	328	A	O3'-P	-5.29	1.53	1.61
19	AQ	73	PRO	N-CD	5.29	1.55	1.47
49	B1	929	G	O3'-P	-5.28	1.53	1.61
48	A2	1365	G	O3'-P	-5.27	1.53	1.61
49	B1	1685	U	O3'-P	-5.27	1.53	1.61
63	BN	82	PRO	N-CD	5.27	1.55	1.47
48	A2	126	C	C1'-N1	5.27	1.56	1.48
48	A2	300	A	O4'-C1'	-5.27	1.33	1.41
19	AQ	155	ALA	C-N	5.26	1.41	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	AS	140	PRO	N-CD	5.26	1.55	1.47
48	A2	267	U	O3'-P	-5.25	1.53	1.61
67	BR	41	ILE	C-N	5.25	1.41	1.34
48	A2	219	C	O4'-C1'	5.25	1.49	1.41
48	A2	2427	G	O3'-P	-5.25	1.53	1.61
49	B1	674	C	O3'-P	-5.25	1.53	1.61
29	Aa	28	HIS	C-N	5.24	1.41	1.34
48	A2	2312	G	O3'-P	5.24	1.69	1.61
73	BX	62	PRO	N-CD	5.24	1.55	1.47
25	AW	119	LYS	C-N	-5.24	1.26	1.33
48	A2	457	A	O3'-P	-5.24	1.53	1.61
48	A2	3589	C	O3'-P	-5.24	1.53	1.61
48	A2	228	U	C3'-O3'	-5.24	1.35	1.43
5	AC	50	GLN	C-N	5.24	1.41	1.34
48	A2	2682	G	O4'-C1'	5.23	1.49	1.41
48	A2	961	C	O5'-C5'	-5.23	1.34	1.42
48	A2	690	C	O3'-P	5.22	1.69	1.61
49	B1	1624	U	O5'-C5'	5.22	1.50	1.42
48	A2	1281	C	O3'-P	-5.22	1.53	1.61
48	A2	1800	G	O3'-P	5.21	1.69	1.61
48	A2	4463	U	O3'-P	-5.21	1.53	1.61
49	B1	985	G	O3'-P	-5.21	1.53	1.61
49	B1	863	U	O3'-P	-5.20	1.53	1.61
48	A2	908	C	O5'-C5'	5.20	1.50	1.42
48	A2	3838	A	O3'-P	5.20	1.69	1.61
48	A2	1797	G	O3'-P	-5.20	1.53	1.61
48	A2	4086	U	O3'-P	-5.20	1.53	1.61
48	A2	131	C	C3'-O3'	-5.18	1.34	1.42
48	A2	3731	A	O3'-P	-5.18	1.53	1.61
49	B1	363	A	O3'-P	5.18	1.69	1.61
49	B1	1223	A	O4'-C1'	5.18	1.49	1.41
1	A3	38	U	O3'-P	-5.17	1.53	1.61
48	A2	2700	G	O3'-P	-5.17	1.53	1.61
48	A2	3678	U	O3'-P	-5.17	1.53	1.61
73	BX	61	GLN	C-N	5.17	1.41	1.34
47	Au	121	PRO	N-CD	5.17	1.54	1.47
49	B1	1222	G	O3'-P	-5.17	1.53	1.61
48	A2	1758	A	O5'-C5'	5.17	1.50	1.42
19	AQ	156	PRO	N-CD	5.16	1.54	1.47
48	A2	4036	U	O3'-P	-5.16	1.53	1.61
67	BR	42	PRO	N-CD	5.16	1.54	1.47
67	BR	100	PRO	N-CD	5.16	1.54	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	A2	4156	U	O3'-P	-5.15	1.53	1.61
50	BA	112	ILE	N-CA	-5.15	1.40	1.46
65	BP	68	PRO	N-CD	5.15	1.54	1.47
5	AC	225	PRO	N-CD	5.15	1.54	1.47
48	A2	509	C	O3'-P	5.14	1.68	1.61
48	A2	5005	C	O3'-P	-5.14	1.53	1.61
49	B1	218	U	O3'-P	-5.13	1.53	1.61
13	AK	80	PRO	N-CD	5.13	1.54	1.47
48	A2	309	G	O3'-P	-5.13	1.53	1.61
50	BA	116	PHE	CA-C	-5.13	1.46	1.52
48	A2	4091	G	O3'-P	-5.13	1.53	1.61
50	BA	116	PHE	N-CA	-5.13	1.39	1.46
48	A2	329	A	O3'-P	-5.12	1.53	1.61
48	A2	4175	A	O3'-P	-5.12	1.53	1.61
49	B1	837	A	O3'-P	5.12	1.68	1.61
48	A2	1732	G	O3'-P	-5.12	1.53	1.61
49	B1	345	U	O3'-P	-5.12	1.53	1.61
48	A2	2735	G	O3'-P	-5.12	1.53	1.61
48	A2	1796	C	O3'-P	-5.11	1.53	1.61
3	AA	249	THR	CA-C	5.11	1.55	1.52
48	A2	1758	A	O3'-P	-5.11	1.53	1.61
67	BR	122	PRO	N-CD	5.10	1.54	1.47
14	AL	54	PRO	N-CD	5.10	1.54	1.47
49	B1	1807	C	O3'-P	-5.09	1.53	1.61
49	B1	403	G	O3'-P	-5.09	1.53	1.61
48	A2	1058	G	O3'-P	5.08	1.68	1.61
55	BF	108	PRO	N-CD	5.08	1.54	1.47
48	A2	4055	A	O3'-P	5.08	1.68	1.61
50	BA	113	GLN	CA-C	-5.08	1.46	1.52
48	A2	922	A	O3'-P	-5.07	1.53	1.61
48	A2	4694	G	O3'-P	-5.07	1.53	1.61
49	B1	422	U	O3'-P	-5.07	1.53	1.61
48	A2	86	U	O3'-P	-5.06	1.53	1.61
63	BN	81	ALA	C-N	5.06	1.40	1.34
49	B1	1396	A	O3'-P	-5.05	1.53	1.61
48	A2	4836	C	O3'-P	-5.05	1.53	1.61
29	Aa	29	PRO	N-CD	5.04	1.54	1.47
71	BV	14	PRO	N-CD	5.04	1.54	1.47
5	AC	51	PRO	N-CD	5.04	1.54	1.47
48	A2	211	G	O3'-P	5.04	1.68	1.61
48	A2	5025	U	O3'-P	-5.04	1.53	1.61
59	BJ	170	PRO	N-CD	5.04	1.54	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A4	116	G	O3'-P	-5.03	1.53	1.61
48	A2	112	C	O3'-P	-5.03	1.53	1.61
48	A2	3840	C	O3'-P	-5.02	1.53	1.61
48	A2	1955	U	O3'-P	5.01	1.68	1.61
70	BU	53	PRO	N-CD	5.01	1.54	1.47
14	AL	12	PRO	N-CD	5.01	1.54	1.47
33	Ae	6	PRO	N-CD	5.01	1.54	1.47
10	AH	100	PRO	N-CD	5.01	1.54	1.47
49	B1	451	G	O3'-P	-5.01	1.53	1.61
29	Aa	118	PRO	N-CD	5.00	1.54	1.47
48	A2	721	G	O3'-P	-5.00	1.53	1.61

All (2157) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	131	C	C4'-C3'-O3'	38.38	170.56	113.00
45	Aq	75	PRO	CA-N-CD	-36.64	60.70	112.00
48	A2	1341	G	C4'-C3'-O3'	35.73	162.99	109.40
48	A2	137	G	C4'-C3'-O3'	35.32	165.98	113.00
49	B1	842	C	O3'-P-O5'	-32.49	55.26	104.00
49	B1	837	A	C4'-C3'-O3'	31.91	160.87	113.00
49	B1	688	U	C4'-C3'-O3'	-31.21	62.59	109.40
49	B1	743	U	C4'-C3'-O3'	-28.69	66.37	109.40
48	A2	1631	U	C1'-C2'-O2'	-27.87	69.99	111.80
48	A2	494	G	C4'-C3'-O3'	27.55	154.32	113.00
48	A2	958	U	C4'-C3'-O3'	26.23	152.34	113.00
49	B1	1554	C	C4'-C3'-O3'	-26.02	73.97	113.00
48	A2	58	G	C3'-C2'-O2'	-25.74	75.98	114.60
48	A2	2325	C	C3'-C2'-O2'	-25.41	76.49	114.60
1	A3	34	U	C3'-C2'-O2'	-25.12	76.92	114.60
47	Au	121	PRO	CA-N-CD	-24.47	77.74	112.00
48	A2	65	A	C3'-C2'-O2'	-24.44	77.94	114.60
48	A2	958	U	C2'-C3'-O3'	-24.15	77.48	113.70
48	A2	221	U	C3'-C2'-O2'	-23.96	78.67	114.60
48	A2	1341	G	C3'-C2'-O2'	-23.79	78.92	114.60
48	A2	3590	G	C1'-C2'-O2'	-23.43	76.66	111.80
48	A2	931	A	C3'-C2'-O2'	-23.40	79.50	114.60
48	A2	462	U	C4'-C3'-O3'	23.32	147.98	113.00
48	A2	3613	A	C3'-C2'-O2'	-23.24	79.75	114.60
49	B1	1285	G	O5'-C5'-C4'	23.16	146.23	111.50
48	A2	357	A	C3'-C2'-O2'	-23.10	79.95	114.60
48	A2	3682	A	C4'-C3'-O3'	-23.10	78.35	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	B1	558	G	P-O3'-C3'	-23.07	85.60	120.20
48	A2	1307	A	C3'-C2'-O2'	-22.95	80.17	114.60
48	A2	1259	C	C4'-C3'-O3'	-22.79	78.81	113.00
49	B1	748	C	C4'-C3'-O3'	-22.59	75.52	109.40
48	A2	718	C	C3'-C2'-O2'	-22.42	80.97	114.60
48	A2	309	G	C1'-C2'-O2'	-22.23	78.46	111.80
48	A2	1632	A	C3'-C2'-O2'	-21.82	81.86	114.60
48	A2	5007	G	C3'-C2'-O2'	-21.60	82.20	114.60
49	B1	803	C	C4'-C3'-O3'	-21.60	80.60	113.00
49	B1	836	G	C4'-C3'-O3'	-21.23	81.15	113.00
13	AK	90	PHE	CA-CB-CG	21.23	135.03	113.80
1	A3	110	U	C2'-C3'-O3'	-21.08	82.08	113.70
48	A2	2246	U	C2'-C3'-O3'	-20.81	78.29	109.50
1	A3	94	G	C3'-C2'-O2'	-20.49	83.87	114.60
49	B1	225	G	C4'-C3'-O3'	-20.27	82.59	113.00
49	B1	1778	C	C2'-C3'-O3'	20.25	144.07	113.70
45	Aq	75	PRO	CA-CB-CG	-20.21	66.09	104.50
49	B1	867	G	C4'-C3'-O3'	-20.04	82.95	113.00
48	A2	50	C	P-O5'-C5'	19.94	150.81	120.90
48	A2	131	C	C2'-C3'-O3'	-19.70	84.16	113.70
48	A2	3611	U	C4'-C3'-O3'	-19.24	84.14	113.00
48	A2	137	G	C2'-C3'-O3'	-19.13	85.01	113.70
49	B1	740	C	C4'-C3'-O3'	-19.09	84.36	113.00
49	B1	111	A	P-O3'-C3'	-19.09	91.57	120.20
48	A2	2859	U	C4'-C3'-O3'	19.03	137.94	109.40
48	A2	228	U	C1'-C2'-O2'	-18.97	83.34	111.80
48	A2	49	U	O3'-P-O5'	18.94	132.41	104.00
83	Bw	34	G	C4'-C3'-O3'	-18.79	84.82	113.00
84	Bx	45	U	C4'-C3'-O3'	18.72	141.08	113.00
48	A2	3611	U	C3'-C2'-O2'	-18.53	82.90	110.70
49	B1	744	G	C4'-C3'-O3'	-18.53	85.21	113.00
48	A2	1341	G	C2'-C3'-O3'	-18.39	81.91	109.50
48	A2	1350	C	C4'-C3'-O3'	-18.38	81.84	109.40
48	A2	85	G	C4'-C3'-O3'	-18.34	81.88	109.40
48	A2	930	A	C3'-C2'-O2'	-18.30	87.15	114.60
49	B1	890	U	C4'-C3'-O3'	-18.29	85.57	113.00
48	A2	3731	A	C4'-C3'-O3'	-18.22	85.68	113.00
48	A2	2748	U	C1'-C2'-O2'	-18.17	84.54	111.80
48	A2	2748	U	C4'-C3'-O3'	-18.04	82.33	109.40
48	A2	2689	C	C4'-C3'-O3'	-17.91	86.14	113.00
49	B1	533	A	C4'-C3'-O3'	17.91	136.26	109.40
48	A2	85	G	C1'-C2'-O2'	-17.47	85.60	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	111	C	C3'-C2'-O2'	-17.41	84.59	110.70
49	B1	690	G	C2'-C3'-O3'	-17.39	87.62	113.70
36	Ah	38	GLY	N-CA-C	17.29	133.48	112.73
48	A2	287	G	C3'-C2'-O2'	-17.19	84.91	110.70
49	B1	747	U	C4'-C3'-O3'	17.15	138.73	113.00
49	B1	1620	A	C4'-C3'-O3'	17.09	138.64	113.00
48	A2	191	C	C4'-C3'-O3'	-16.93	87.61	113.00
49	B1	795	A	C4'-C3'-O3'	-16.93	87.61	113.00
48	A2	1283	G	P-O3'-C3'	-16.92	94.82	120.20
48	A2	5006	A	C3'-C2'-O2'	-16.87	85.40	110.70
48	A2	966	C	C4'-C3'-O3'	16.75	134.52	109.40
49	B1	1289	U	C4'-C3'-O3'	16.72	134.48	109.40
48	A2	2245	C	C3'-C2'-O2'	-16.68	89.58	114.60
48	A2	191	C	P-O5'-C5'	16.62	145.83	120.90
48	A2	1300	U	P-O3'-C3'	-16.61	95.29	120.20
48	A2	3737	A	C2'-C3'-O3'	-16.59	88.82	113.70
2	A4	75	G	C4'-C3'-O3'	16.56	134.24	109.40
49	B1	1284	A	C2'-C3'-O3'	16.56	138.54	113.70
49	B1	369	C	C4'-C3'-O3'	-16.50	88.25	113.00
49	B1	837	A	C2'-C3'-O3'	-16.45	89.03	113.70
48	A2	718	C	C1'-C2'-O2'	-16.42	87.17	111.80
1	A3	94	G	C4'-C3'-O3'	-16.40	84.80	109.40
48	A2	381	G	C4'-C3'-O3'	16.34	133.90	109.40
48	A2	2793	C	C4'-C3'-O3'	-16.27	84.99	109.40
49	B1	985	G	C3'-C2'-O2'	-16.23	90.25	114.60
48	A2	5007	G	P-O5'-C5'	-16.22	96.57	120.90
48	A2	2673	G	C1'-C2'-O2'	-16.21	87.48	111.80
48	A2	3684	U	C2'-C3'-O3'	16.11	137.87	113.70
48	A2	7	C	C4'-C3'-O3'	-16.02	88.97	113.00
48	A2	4717	G	C4'-C3'-O3'	-16.00	89.00	113.00
48	A2	713	G	C1'-C2'-O2'	-15.98	84.43	108.40
48	A2	4827	U	C4'-C3'-O3'	-15.89	85.56	109.40
48	A2	289	A	C1'-C2'-O2'	-15.86	88.01	111.80
48	A2	229	G	C4'-C3'-O3'	-15.85	85.62	109.40
48	A2	7	C	C3'-C2'-O2'	-15.76	87.07	110.70
48	A2	4828	G	C1'-C2'-O2'	-15.71	88.24	111.80
49	B1	237	C	C4'-C3'-O3'	15.65	132.87	109.40
48	A2	3612	U	C3'-C2'-O2'	-15.56	87.35	110.70
48	A2	961	C	C1'-C2'-O2'	15.43	131.55	108.40
49	B1	1556	A	C4'-C3'-O3'	-15.30	86.44	109.40
49	B1	238	C	C4'-C3'-O3'	15.29	135.93	113.00
48	A2	961	C	C2'-C3'-O3'	15.29	136.63	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	3877	A	C3'-C2'-O2'	-15.16	91.86	114.60
13	AK	52	VAL	CG1-CB-CG2	15.15	144.12	110.80
48	A2	494	G	P-O3'-C3'	-15.14	97.49	120.20
48	A2	1256	G	C4'-C3'-O3'	15.13	135.69	113.00
48	A2	286	G	C3'-C2'-O2'	-15.12	88.02	110.70
48	A2	2689	C	P-O5'-C5'	-15.10	98.25	120.90
48	A2	736	G	C1'-C2'-O2'	-15.09	89.17	111.80
48	A2	3727	A	P-O5'-C5'	15.06	143.50	120.90
2	A4	34	C	P-O3'-C3'	15.01	142.71	120.20
48	A2	1226	C	P-O5'-C5'	14.97	143.36	120.90
48	A2	4686	A	P-O5'-C5'	14.93	143.30	120.90
48	A2	960	G	C4'-C3'-O3'	-14.80	90.81	113.00
48	A2	506	U	C4'-C3'-O3'	14.79	135.19	113.00
48	A2	494	G	C2'-C3'-O3'	-14.78	91.52	113.70
48	A2	2325	C	C1'-C2'-O2'	-14.78	89.64	111.80
1	A3	34	U	C4'-C3'-O3'	-14.75	87.28	109.40
48	A2	1260	G	C4'-C3'-O3'	14.71	135.07	113.00
48	A2	2690	G	C3'-C2'-O2'	-14.70	88.65	110.70
48	A2	4828	G	C3'-C2'-O2'	-14.69	92.56	114.60
48	A2	3683	A	C4'-C3'-O3'	-14.65	91.02	113.00
48	A2	939	G	P-O5'-C5'	14.57	142.75	120.90
48	A2	1296	C	C1'-C2'-O2'	-14.56	89.95	111.80
48	A2	4086	U	C4'-C3'-O3'	-14.56	91.16	113.00
48	A2	463	C	P-O5'-C5'	14.53	142.69	120.90
48	A2	2617	G	C3'-C2'-O2'	-14.53	88.91	110.70
49	B1	1702	G	C4'-C3'-O3'	-14.51	91.23	113.00
83	Bw	35	A	C4'-C3'-O3'	14.51	134.77	113.00
48	A2	713	G	C4'-C3'-O3'	-14.50	91.24	113.00
48	A2	356	A	C3'-C2'-O2'	-14.44	89.05	110.70
48	A2	2684	G	C4'-C3'-O3'	14.43	134.65	113.00
48	A2	4827	U	C2'-C3'-O3'	14.40	131.11	109.50
49	B1	804	U	C2'-C3'-O3'	14.38	135.27	113.70
48	A2	3597	G	C2'-C3'-O3'	-14.37	92.14	113.70
48	A2	4015	G	C4'-C3'-O3'	14.35	134.52	113.00
48	A2	2686	U	P-O5'-C5'	-14.33	99.41	120.90
48	A2	460	A	C4'-C3'-O3'	-14.31	91.53	113.00
48	A2	2793	C	C2'-C3'-O3'	-14.30	88.05	109.50
49	B1	1702	G	C1'-C2'-O2'	-14.28	86.98	108.40
48	A2	1849	A	C4'-C3'-O3'	-14.26	91.62	113.00
48	A2	3737	A	C4'-C3'-O3'	14.23	134.34	113.00
48	A2	4828	G	C2'-C3'-O3'	-14.19	88.21	109.50
49	B1	656	G	C3'-C2'-O2'	-14.07	93.50	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	B1	227	U	C4'-C3'-O3'	-14.04	88.34	109.40
48	A2	464	A	P-O5'-C5'	14.00	141.90	120.90
48	A2	1342	G	P-O5'-C5'	-13.96	99.96	120.90
48	A2	2246	U	C1'-C2'-O2'	-13.93	90.90	111.80
49	B1	689	U	C2'-C3'-O3'	-13.90	92.84	113.70
49	B1	1445	U	C4'-C3'-O3'	-13.90	92.14	113.00
48	A2	4714	U	C3'-C2'-O2'	-13.86	93.82	114.60
48	A2	203	U	P-O3'-C3'	13.81	140.92	120.20
49	B1	238	C	C2'-C3'-O3'	-13.81	92.98	113.70
49	B1	1749	G	C4'-C3'-O3'	-13.81	92.28	113.00
49	B1	1557	C	C2'-C3'-O3'	-13.81	92.99	113.70
48	A2	2683	C	C4'-C3'-O3'	-13.81	92.29	113.00
49	B1	1286	G	C4'-C3'-O3'	13.80	133.70	113.00
48	A2	681	A	C2'-C3'-O3'	-13.79	93.01	113.70
49	B1	182	C	P-O5'-C5'	-13.77	100.25	120.90
49	B1	1620	A	C2'-C3'-O3'	-13.72	93.12	113.70
49	B1	805	U	C2'-C3'-O3'	13.61	134.12	113.70
48	A2	3590	G	C2'-C3'-O3'	-13.58	89.12	109.50
48	A2	2691	G	O5'-C5'-C4'	13.56	131.84	111.50
48	A2	221	U	C1'-C2'-O2'	-13.55	91.47	111.80
49	B1	180	G	C4'-C3'-O3'	13.48	129.63	109.40
49	B1	836	G	C2'-C3'-O3'	13.47	133.91	113.70
50	BA	113	GLN	N-CA-C	13.45	129.37	108.79
49	B1	745	C	C4'-C3'-O3'	-13.39	92.92	113.00
48	A2	4715	U	C2'-C3'-O3'	-13.36	93.66	113.70
49	B1	848	U	P-O5'-C5'	-13.34	100.89	120.90
48	A2	3736	G	P-O3'-C3'	13.27	140.10	120.20
48	A2	1225	G	C4'-C3'-O3'	13.27	132.90	113.00
49	B1	802	A	C4'-C3'-O3'	-13.24	93.14	113.00
48	A2	1850	G	C1'-C2'-O2'	-13.19	92.02	111.80
48	A2	3743	U	C4'-C3'-O3'	-13.18	93.23	113.00
50	BA	116	PHE	N-CA-C	-13.15	87.80	109.24
48	A2	2860	A	C2'-C3'-O3'	-13.10	94.05	113.70
45	Aq	39	PRO	CA-N-CD	-13.09	93.67	112.00
48	A2	322	A	C4'-C3'-O3'	-13.06	93.41	113.00
48	A2	4619	U	P-O3'-C3'	13.06	139.79	120.20
49	B1	690	G	O5'-C5'-C4'	13.05	131.07	111.50
49	B1	370	G	C3'-C2'-O2'	-13.05	95.03	114.60
49	B1	1557	C	C4'-C3'-O3'	13.04	132.56	113.00
48	A2	1429	C	P-O5'-C5'	13.03	140.44	120.90
49	B1	1453	C	C3'-C2'-O2'	-13.02	91.17	110.70
48	A2	1296	C	C4'-C3'-O3'	-13.00	89.90	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	B1	318	A	C4'-C3'-O3'	-12.98	93.53	113.00
48	A2	2690	G	C5'-C4'-C3'	-12.97	96.54	116.00
49	B1	738	C	C2'-C3'-O3'	12.91	133.06	113.70
1	A3	93	C	C4'-C3'-O3'	-12.90	93.65	113.00
49	B1	1700	C	C1'-C2'-O2'	-12.85	92.53	111.80
49	B1	1487	A	C4'-C3'-O3'	-12.81	93.78	113.00
14	AL	177	LYS	N-CA-C	12.80	125.24	111.28
48	A2	961	C	C5'-C4'-C3'	-12.80	96.79	116.00
1	A3	111	U	C1'-C2'-O2'	-12.76	92.66	111.80
48	A2	49	U	C3'-C2'-O2'	-12.72	91.62	110.70
49	B1	112	U	P-O3'-C3'	12.70	139.25	120.20
49	B1	306	C	P-O5'-C5'	-12.66	101.91	120.90
49	B1	306	C	C3'-C2'-O2'	-12.49	95.86	114.60
49	B1	903	A	C2'-C3'-O3'	-12.49	94.97	113.70
48	A2	2825	G	C2'-C3'-O3'	12.37	132.26	113.70
48	A2	737	A	C4'-C3'-O3'	-12.33	90.90	109.40
49	B1	1786	U	P-O5'-C5'	-12.32	102.42	120.90
48	A2	2673	G	C3'-C2'-O2'	-12.30	96.15	114.60
48	A2	2689	C	C2'-C3'-O3'	12.29	132.14	113.70
48	A2	229	G	C3'-C2'-O2'	-12.28	96.18	114.60
48	A2	967	U	C4'-C3'-O3'	12.26	131.40	113.00
48	A2	4826	G	C3'-C2'-O2'	-12.22	92.37	110.70
48	A2	1716	G	P-O3'-C3'	-12.21	101.88	120.20
48	A2	1260	G	C5'-C4'-C3'	-12.19	97.71	116.00
84	Bx	45	U	C2'-C3'-O3'	-12.19	95.42	113.70
48	A2	228	U	C4'-C3'-O3'	-12.18	91.12	109.40
48	A2	968	C	C4'-C3'-O3'	12.18	131.27	113.00
49	B1	873	G	C4'-C3'-O3'	-12.16	91.17	109.40
48	A2	2246	U	C3'-C2'-O2'	-12.15	96.37	114.60
49	B1	748	C	C2'-C3'-O3'	12.15	127.72	109.50
48	A2	4907	G	P-O3'-C3'	12.11	138.36	120.20
49	B1	791	C	C2'-C3'-O3'	12.08	131.82	113.70
49	B1	1105	G	C3'-C2'-O2'	-12.05	92.62	110.70
48	A2	112	C	C1'-C2'-O2'	12.04	126.46	108.40
48	A2	463	C	C4'-C3'-O3'	12.03	131.04	113.00
49	B1	1284	A	C4'-C3'-O3'	-12.02	94.97	113.00
48	A2	3590	G	C3'-C2'-O2'	-12.00	96.60	114.60
47	Au	94	ASN	CA-CB-CG	12.00	124.60	112.60
48	A2	2683	C	C2'-C3'-O3'	11.97	131.65	113.70
48	A2	154	U	C2'-C3'-O3'	11.96	131.63	113.70
48	A2	968	C	C2'-C3'-O3'	-11.94	95.79	113.70
48	A2	2482	G	P-O3'-C3'	-11.94	102.29	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	1715	G	P-O3'-C3'	-11.91	102.34	120.20
49	B1	738	C	C4'-C3'-O3'	-11.88	95.17	113.00
49	B1	230	A	C4'-C3'-O3'	11.83	130.75	113.00
48	A2	287	G	C1'-C2'-O2'	11.80	126.11	108.40
49	B1	231	A	C2'-C3'-O3'	-11.79	96.02	113.70
48	A2	50	C	C3'-C2'-O2'	-11.77	93.05	110.70
49	B1	741	C	C2'-C3'-O3'	11.76	127.14	109.50
49	B1	798	G	C4'-C3'-O3'	-11.76	91.76	109.40
48	A2	3867	C	C4'-C3'-O3'	-11.74	95.39	113.00
48	A2	2688	C	C4'-C3'-O3'	-11.70	95.45	113.00
48	A2	1261	C	P-O5'-C5'	-11.69	103.36	120.90
49	B1	1285	G	C2'-C3'-O3'	-11.66	96.20	113.70
48	A2	139	G	C4'-C3'-O3'	11.65	130.48	113.00
49	B1	1782	G	C4'-C3'-O3'	11.64	130.46	113.00
49	B1	848	U	C1'-C2'-O2'	-11.62	90.97	108.40
48	A2	2618	U	P-O5'-C5'	-11.61	103.48	120.90
48	A2	7	C	C1'-C2'-O2'	11.61	125.81	108.40
49	B1	874	G	C4'-C3'-O3'	11.60	130.40	113.00
49	B1	744	G	O4'-C4'-C3'	-11.59	92.41	104.00
48	A2	495	C	P-O3'-C3'	-11.56	102.86	120.20
48	A2	916	A	P-O3'-C3'	11.56	137.53	120.20
45	Aq	30	PRO	CA-N-CD	-11.55	95.83	112.00
48	A2	3877	A	C1'-C2'-O2'	-11.55	94.48	111.80
49	B1	1559	C	C4'-C3'-O3'	-11.54	95.69	113.00
49	B1	239	C	O5'-C5'-C4'	11.49	128.73	111.50
49	B1	1285	G	C4'-C3'-O3'	-11.47	95.80	113.00
49	B1	749	U	C4'-C3'-O3'	-11.46	95.81	113.00
2	A4	105	C	O3'-P-O5'	11.42	121.14	104.00
48	A2	4718	C	P-O5'-C5'	11.41	138.02	120.90
49	B1	847	A	C3'-C2'-O2'	-11.41	93.59	110.70
49	B1	742	U	C4'-C3'-O3'	-11.41	92.29	109.40
48	A2	1433	C	P-O3'-C3'	-11.36	103.16	120.20
49	B1	657	U	C3'-C2'-O2'	-11.35	93.67	110.70
48	A2	736	G	C4'-C3'-O3'	-11.34	92.39	109.40
49	B1	744	G	O5'-C5'-C4'	11.32	128.48	111.50
48	A2	2747	C	C3'-C2'-O2'	-11.32	93.72	110.70
7	AE	184	VAL	N-CA-C	11.31	119.54	109.02
48	A2	131	C	P-O3'-C3'	-11.31	103.24	120.20
13	AK	25	PRO	CA-N-CD	-11.30	96.18	112.00
49	B1	1444	U	C1'-C2'-O2'	11.29	125.34	108.40
49	B1	909	G	C4'-C3'-O3'	11.27	129.91	113.00
48	A2	1217	G	P-O3'-C3'	-11.26	103.30	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	B1	1283	C	C4'-C3'-O3'	11.25	129.88	113.00
49	B1	239	C	C2'-C3'-O3'	-11.25	96.83	113.70
48	A2	290	A	C2'-C3'-O3'	11.24	130.55	113.70
49	B1	1289	U	C5'-C4'-C3'	11.23	132.04	115.20
48	A2	66	A	C2'-C3'-O3'	-11.22	96.86	113.70
49	B1	791	C	C4'-C3'-O3'	-11.22	96.17	113.00
48	A2	191	C	C1'-C2'-O2'	-11.22	91.57	108.40
45	Aq	59	THR	OG1-CB-CG2	-11.21	86.87	109.30
49	B1	1285	G	C5'-C4'-C3'	11.21	132.82	116.00
49	B1	368	U	C4'-C3'-O3'	-11.21	92.58	109.40
1	A3	36	G	C4'-C3'-O3'	-11.18	96.23	113.00
48	A2	3611	U	C1'-C2'-O2'	11.18	125.17	108.40
49	B1	368	U	P-O3'-C3'	11.11	136.87	120.20
49	B1	900	C	C4'-C3'-O3'	-11.11	96.33	113.00
48	A2	289	A	C3'-C2'-O2'	-11.10	97.95	114.60
48	A2	1226	C	O5'-C5'-C4'	-11.09	94.87	111.50
48	A2	2794	A	C4'-C3'-O3'	-11.07	96.40	113.00
48	A2	85	G	P-O5'-C5'	-11.06	104.31	120.90
48	A2	2747	C	C4'-C3'-O3'	-11.04	96.45	113.00
48	A2	1265	G	C4'-C3'-O3'	-11.02	96.46	113.00
49	B1	1625	U	P-O5'-C5'	-11.00	104.40	120.90
49	B1	1753	C	C4'-C3'-O3'	11.00	129.50	113.00
49	B1	1701	C	C1'-C2'-O2'	-11.00	95.30	111.80
48	A2	57	G	C4'-C3'-O3'	-10.98	96.53	113.00
49	B1	793	G	P-O5'-C5'	10.98	137.37	120.90
48	A2	71	C	C1'-C2'-O2'	-10.97	95.34	111.80
49	B1	1554	C	O3'-P-O5'	-10.95	87.58	104.00
49	B1	688	U	P-O3'-C3'	10.94	136.61	120.20
49	B1	748	C	O5'-C5'-C4'	-10.93	95.30	111.70
45	Aq	88	PRO	CA-N-CD	-10.93	96.70	112.00
48	A2	1225	G	O5'-P-OP2	10.91	140.72	108.00
49	B1	371	A	O5'-C5'-C4'	10.90	127.86	111.50
48	A2	210	G	O3'-P-O5'	-10.88	87.68	104.00
49	B1	322	C	C4'-C3'-O3'	-10.87	96.69	113.00
49	B1	915	G	C5'-C4'-C3'	10.85	132.28	116.00
48	A2	727	C	C5'-C4'-C3'	-10.85	99.73	116.00
49	B1	1777	G	C4'-C3'-O3'	-10.84	96.74	113.00
48	A2	2324	G	C4'-C3'-O3'	-10.84	93.14	109.40
49	B1	687	C	C4'-C3'-O3'	10.84	125.66	109.40
48	A2	153	G	C3'-C2'-O2'	-10.83	94.46	110.70
48	A2	925	C	O3'-P-O5'	-10.83	87.75	104.00
49	B1	307	G	C1'-C2'-O2'	-10.83	95.56	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	5004	U	C1'-C2'-O2'	-10.82	92.17	108.40
48	A2	3736	G	C4'-C3'-O3'	10.80	129.19	113.00
48	A2	4896	A	P-O5'-C5'	10.78	137.07	120.90
49	B1	866	U	C4'-C3'-O3'	10.78	129.17	113.00
49	B1	639	C	P-O5'-C5'	10.77	137.06	120.90
48	A2	958	U	O3'-P-O5'	-10.77	87.85	104.00
48	A2	961	C	P-O5'-C5'	-10.74	104.78	120.90
48	A2	3790	G	C2'-C3'-O3'	-10.73	97.60	113.70
48	A2	4306	U	P-O3'-C3'	-10.72	104.11	120.20
48	A2	1225	G	O5'-P-OP1	-10.70	75.91	108.00
1	A3	33	G	C1'-C2'-O2'	-10.69	95.77	111.80
48	A2	3589	C	C4'-C3'-O3'	-10.68	96.99	113.00
49	B1	183	G	O5'-C5'-C4'	-10.67	95.49	111.50
48	A2	965	G	C4'-C3'-O3'	-10.66	97.01	113.00
48	A2	2617	G	C1'-C2'-O2'	10.65	124.38	108.40
13	AK	108	PRO	CA-N-CD	-10.62	97.14	112.00
48	A2	719	U	C1'-C2'-O2'	-10.61	95.89	111.80
49	B1	321	C	C2'-C3'-O3'	-10.61	97.78	113.70
48	A2	3929	G	P-O5'-C5'	-10.61	104.99	120.90
49	B1	370	G	C4'-C3'-O3'	10.60	125.30	109.40
47	Au	121	PRO	CA-CB-CG	-10.60	84.36	104.50
49	B1	915	G	C2'-C3'-O3'	-10.60	97.80	113.70
48	A2	50	C	C1'-C2'-O2'	10.58	124.27	108.40
48	A2	496	C	C4'-C3'-O3'	10.57	128.86	113.00
48	A2	2691	G	P-O5'-C5'	10.57	136.75	120.90
48	A2	154	U	C5'-C4'-C3'	-10.56	100.16	116.00
49	B1	801	U	C4'-C3'-O3'	10.56	128.84	113.00
49	B1	975	G	C4'-C3'-O3'	-10.56	97.16	113.00
49	B1	792	C	C2'-C3'-O3'	10.55	129.53	113.70
1	A3	34	U	C1'-C2'-O2'	10.55	127.62	111.80
49	B1	746	C	P-O5'-C5'	-10.54	105.09	120.90
49	B1	859	G	C4'-C3'-O3'	10.54	128.81	113.00
48	A2	5	A	P-O3'-C3'	10.53	136.00	120.20
49	B1	1826	G	P-O5'-C5'	-10.53	105.11	120.90
48	A2	938	G	O3'-P-O5'	10.53	119.79	104.00
49	B1	744	G	C2'-C3'-O3'	-10.51	97.93	113.70
48	A2	85	G	O5'-C5'-C4'	10.48	127.43	111.70
48	A2	227	G	C2'-C3'-O3'	-10.43	98.06	113.70
49	B1	1454	A	P-O5'-C5'	-10.42	105.27	120.90
49	B1	38	A	P-O3'-C3'	-10.39	104.61	120.20
48	A2	2859	U	C2'-C3'-O3'	-10.37	93.95	109.50
48	A2	2825	G	C5'-C4'-C3'	-10.36	100.46	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	2692	C	P-O5'-C5'	10.36	136.44	120.90
48	A2	3928	U	C4'-C3'-O3'	10.33	128.50	113.00
1	A3	94	G	C1'-C2'-O2'	-10.32	96.31	111.80
48	A2	1253	A	C4'-C3'-O3'	10.32	128.49	113.00
48	A2	3578	U	P-O5'-C5'	10.28	136.32	120.90
49	B1	114	G	P-O3'-C3'	-10.28	104.78	120.20
49	B1	369	C	C2'-C3'-O3'	10.28	129.12	113.70
48	A2	3946	C	P-O3'-C3'	-10.25	104.83	120.20
48	A2	1295	A	C1'-C2'-O2'	-10.24	93.04	108.40
25	AW	98	PRO	CA-N-CD	-10.24	97.67	112.00
45	Aq	46	ILE	CA-CB-CG1	-10.24	93.00	110.40
48	A2	3588	G	C2'-C3'-O3'	-10.24	98.35	113.70
1	A3	85	U	C4'-C3'-O3'	-10.23	97.65	113.00
48	A2	1057	G	P-O3'-C3'	-10.23	104.85	120.20
48	A2	1296	C	P-O5'-C5'	-10.22	105.58	120.90
48	A2	3851	G	P-O3'-C3'	-10.20	104.90	120.20
48	A2	660	C	C4'-C3'-O3'	-10.20	97.70	113.00
48	A2	2299	G	P-O5'-C5'	-10.20	105.60	120.90
1	A3	85	U	C1'-C2'-O2'	10.18	123.67	108.40
46	At	44	ILE	N-CA-C	10.17	120.99	110.72
48	A2	2673	G	C4'-C3'-O3'	-10.17	94.14	109.40
49	B1	367	U	C2'-C3'-O3'	-10.16	98.45	113.70
47	Au	58	THR	CA-CB-OG1	10.14	124.82	109.60
48	A2	2687	U	C4'-C3'-O3'	-10.12	97.82	113.00
48	A2	3597	G	C4'-C3'-O3'	-10.12	97.82	113.00
48	A2	42	A	C1'-C2'-O2'	-10.11	96.63	111.80
48	A2	1258	G	P-O5'-C5'	-10.09	105.76	120.90
49	B1	306	C	C4'-C3'-O3'	10.09	124.54	109.40
48	A2	959	C	C5'-C4'-C3'	-10.08	100.88	116.00
48	A2	2793	C	O5'-C5'-C4'	10.07	126.81	111.70
49	B1	1105	G	C1'-C2'-O2'	10.06	123.49	108.40
49	B1	875	A	C4'-C3'-O3'	-10.05	97.92	113.00
48	A2	2256	C	C4'-C3'-O3'	-10.05	97.92	113.00
49	B1	497	C	O3'-P-O5'	-10.05	88.93	104.00
48	A2	308	G	C3'-C2'-O2'	-10.04	95.64	110.70
48	A2	4016	A	O3'-P-O5'	-10.03	88.96	104.00
48	A2	1256	G	O5'-C5'-C4'	-10.01	96.48	111.50
48	A2	3917	G	P-O3'-C3'	-10.00	105.20	120.20
48	A2	4666	C	P-O3'-C3'	-9.97	105.24	120.20
48	A2	1756	C	C4'-C3'-O3'	-9.97	98.05	113.00
48	A2	192	C	C4'-C3'-O3'	-9.96	98.06	113.00
49	B1	178	C	P-O3'-C3'	9.96	135.13	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	2690	G	C1'-C2'-O2'	9.95	123.33	108.40
48	A2	959	C	C1'-C2'-O2'	-9.95	93.48	108.40
48	A2	3736	G	O3'-P-O5'	-9.95	89.08	104.00
48	A2	3613	A	C1'-C2'-O2'	-9.94	96.89	111.80
48	A2	3613	A	C5'-C4'-C3'	-9.94	100.29	115.20
48	A2	1741	G	P-O5'-C5'	9.94	135.80	120.90
48	A2	4826	G	C1'-C2'-O2'	9.93	123.29	108.40
48	A2	1244	G	P-O3'-C3'	-9.92	105.32	120.20
49	B1	804	U	P-O5'-C5'	-9.92	106.02	120.90
1	A3	103	A	P-O5'-C5'	-9.91	106.04	120.90
48	A2	138	C	C4'-C3'-O3'	-9.90	98.16	113.00
84	Bx	44	U	O3'-P-O5'	-9.87	89.19	104.00
48	A2	4718	C	C4'-C3'-O3'	9.86	124.19	109.40
48	A2	3933	A	P-O3'-C3'	9.86	134.99	120.20
49	B1	1448	A	P-O5'-C5'	9.85	135.67	120.90
48	A2	2684	G	C2'-C3'-O3'	-9.82	98.97	113.70
48	A2	4617	A	P-O3'-C3'	9.80	134.91	120.20
48	A2	4037	U	P-O3'-C3'	-9.78	105.54	120.20
48	A2	111	C	C1'-C2'-O2'	9.77	123.06	108.40
48	A2	959	C	C4'-C3'-O3'	9.75	127.63	113.00
48	A2	212	C	P-O3'-C3'	-9.72	105.61	120.20
49	B1	1554	C	P-O5'-C5'	-9.71	106.33	120.90
48	A2	5005	C	C4'-C3'-O3'	9.70	123.94	109.40
48	A2	1350	C	C2'-C3'-O3'	9.69	124.03	109.50
48	A2	968	C	C5'-C4'-C3'	-9.68	101.48	116.00
48	A2	3697	A	P-O3'-C3'	9.66	134.69	120.20
47	Au	191	VAL	CA-CB-CG2	9.65	126.81	110.40
49	B1	871	U	C4'-C3'-O3'	9.65	123.87	109.40
48	A2	132	G	O5'-P-OP1	-9.64	79.09	108.00
49	B1	873	G	P-O3'-C3'	-9.63	105.75	120.20
48	A2	229	G	P-O5'-C5'	-9.62	106.47	120.90
48	A2	3930	U	P-O5'-C5'	9.61	135.32	120.90
48	A2	4826	G	C4'-C3'-O3'	-9.59	98.61	113.00
49	B1	533	A	C2'-C3'-O3'	-9.58	95.13	109.50
48	A2	356	A	C1'-C2'-O2'	9.57	122.76	108.40
48	A2	507	U	P-O3'-C3'	-9.55	105.87	120.20
48	A2	2511	C	P-O3'-C3'	9.55	134.52	120.20
49	B1	882	U	P-O5'-C5'	9.54	135.21	120.90
49	B1	976	G	C1'-C2'-O2'	9.53	122.70	108.40
45	Aq	74	VAL	C-N-CD	-9.53	85.94	125.00
48	A2	912	C	O3'-P-O5'	-9.52	89.72	104.00
48	A2	965	G	O3'-P-O5'	-9.51	89.73	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	2751	C	P-O3'-C3'	-9.51	105.94	120.20
49	B1	1621	U	C4'-C3'-O3'	9.50	127.24	113.00
48	A2	2684	G	C1'-C2'-O2'	-9.49	94.17	108.40
49	B1	1285	G	P-O5'-C5'	-9.49	106.67	120.90
48	A2	1197	C	C2'-C3'-O3'	-9.47	99.49	113.70
48	A2	1741	G	C1'-C2'-O2'	-9.45	94.23	108.40
83	Bv	73	A	C3'-C2'-O2'	-9.42	96.57	110.70
49	B1	308	G	C4'-C3'-O3'	-9.42	95.28	109.40
48	A2	66	A	C3'-C2'-O2'	-9.41	96.58	110.70
48	A2	3590	G	C4'-C3'-O3'	9.41	123.52	109.40
48	A2	494	G	O3'-P-O5'	9.41	118.12	104.00
49	B1	1624	U	C2'-C3'-O3'	-9.40	99.59	113.70
48	A2	2460	G	P-O3'-C3'	-9.40	106.10	120.20
48	A2	4726	A	C1'-C2'-O2'	-9.39	94.32	108.40
49	B1	397	G	P-O3'-C3'	-9.38	106.13	120.20
49	B1	416	U	O3'-P-O5'	-9.35	89.98	104.00
49	B1	902	G	C4'-C3'-O3'	9.34	127.01	113.00
49	B1	1290	G	C2'-C3'-O3'	-9.34	99.69	113.70
48	A2	2608	C	C4'-C3'-O3'	9.34	127.01	113.00
48	A2	3597	G	P-O5'-C5'	-9.34	106.89	120.90
49	B1	1623	A	O3'-P-O5'	-9.33	90.00	104.00
1	A3	126	C	P-O3'-C3'	9.33	134.20	120.20
48	A2	4162	G	P-O3'-C3'	9.32	134.19	120.20
13	AK	52	VAL	CA-CB-CG1	-9.32	94.56	110.40
48	A2	1296	C	C2'-C3'-O3'	9.31	123.47	109.50
48	A2	221	U	C2'-C3'-O3'	-9.27	95.59	109.50
48	A2	682	U	C2'-C3'-O3'	-9.26	99.81	113.70
14	AL	53	GLY	O-C-N	9.26	124.40	121.07
45	Aq	112	ILE	CA-CB-CG1	9.26	126.14	110.40
49	B1	915	G	O5'-C5'-C4'	9.26	125.39	111.50
2	A4	15	C	C4'-C3'-O3'	9.25	126.88	113.00
67	BR	114	LEU	N-CA-C	9.24	121.12	111.14
48	A2	1975	C	P-O3'-C3'	-9.24	106.34	120.20
48	A2	307	U	C4'-C3'-O3'	-9.23	99.16	113.00
29	Aa	56	VAL	N-CA-C	9.22	120.03	110.72
48	A2	4686	A	O5'-C5'-C4'	-9.22	97.67	111.50
48	A2	3682	A	N9-C1'-C2'	-9.22	98.18	112.00
48	A2	2690	G	C4'-C3'-O3'	9.21	126.81	113.00
1	A3	129	C	P-O3'-C3'	-9.21	106.39	120.20
48	A2	4537	G	P-O3'-C3'	9.20	133.99	120.20
48	A2	4980	U	P-O3'-C3'	-9.18	106.43	120.20
48	A2	258	C	C1'-C2'-O2'	9.16	122.13	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	966	C	P-O3'-C3'	9.16	133.94	120.20
48	A2	3649	G	P-O3'-C3'	9.15	133.93	120.20
1	A3	33	G	C3'-C2'-O2'	-9.15	100.88	114.60
48	A2	4707	G	P-O3'-C3'	-9.15	106.48	120.20
49	B1	688	U	O5'-C5'-C4'	9.15	125.42	111.70
49	B1	1153	C	C4'-C3'-O3'	9.14	123.11	109.40
49	B1	361	U	O3'-P-O5'	9.12	117.68	104.00
49	B1	1022	U	P-O3'-C3'	9.12	133.88	120.20
48	A2	112	C	C3'-C2'-O2'	-9.11	97.03	110.70
48	A2	4717	G	O3'-P-O5'	-9.11	90.33	104.00
48	A2	2523	G	P-O3'-C3'	9.11	133.86	120.20
48	A2	2462	G	P-O3'-C3'	-9.11	106.54	120.20
48	A2	506	U	C2'-C3'-O3'	-9.10	100.05	113.70
48	A2	3612	U	C1'-C2'-O2'	9.10	122.05	108.40
49	B1	1289	U	C2'-C3'-O3'	-9.09	95.86	109.50
48	A2	1255	C	C4'-C3'-O3'	-9.09	99.36	113.00
49	B1	890	U	C2'-C3'-O3'	9.09	127.34	113.70
48	A2	286	G	C4'-C3'-O3'	-9.09	99.37	113.00
2	A4	3	C	P-O5'-C5'	9.04	134.47	120.90
48	A2	1497	A	C4'-C3'-O3'	-9.04	99.44	113.00
48	A2	2673	G	C2'-C3'-O3'	-9.04	95.94	109.50
13	AK	73	PRO	CA-N-CD	-9.03	99.36	112.00
48	A2	5006	A	P-O5'-C5'	-9.03	107.36	120.90
49	B1	806	U	P-O5'-C5'	-9.01	107.38	120.90
57	BH	108	SER	N-CA-C	-8.99	102.22	113.01
1	A3	153	C	P-O3'-C3'	-8.99	106.72	120.20
48	A2	4685	A	O3'-P-O5'	8.98	117.47	104.00
48	A2	1764	U	P-O3'-C3'	-8.97	106.74	120.20
49	B1	1453	C	P-O3'-C3'	-8.97	106.74	120.20
48	A2	4242	A	C2'-C3'-O3'	-8.97	100.25	113.70
28	AZ	92	ASP	N-CA-C	8.96	123.45	110.10
49	B1	1753	C	C2'-C3'-O3'	-8.96	100.26	113.70
48	A2	737	A	C2'-C3'-O3'	8.96	122.93	109.50
2	A4	30	C	C4'-C3'-O3'	-8.95	99.57	113.00
48	A2	500	C	P-O3'-C3'	8.95	133.62	120.20
49	B1	230	A	C2'-C3'-O3'	-8.94	100.30	113.70
48	A2	1799	U	P-O3'-C3'	8.92	133.59	120.20
48	A2	2747	C	C1'-C2'-O2'	8.92	121.78	108.40
6	AD	264	LYS	N-CA-C	8.91	122.94	108.41
83	Bw	34	G	C2'-C3'-O3'	8.91	127.06	113.70
49	B1	320	G	C5'-C4'-C3'	8.90	129.36	116.00
48	A2	2512	C	P-O3'-C3'	-8.90	106.85	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	4596	U	N1-C1'-C2'	8.90	127.35	114.00
49	B1	437	G	P-O3'-C3'	8.90	133.55	120.20
49	B1	804	U	C4'-C3'-O3'	-8.90	99.66	113.00
48	A2	1316	A	P-O3'-C3'	8.89	133.54	120.20
49	B1	293	C	P-O3'-C3'	-8.88	106.88	120.20
83	Bv	34	G	C4'-C3'-O3'	-8.88	99.68	113.00
49	B1	898	U	C2'-C3'-O3'	-8.87	100.39	113.70
48	A2	1877	A	P-O5'-C5'	8.87	134.20	120.90
49	B1	657	U	C1'-C2'-O2'	8.86	121.69	108.40
49	B1	1454	A	O5'-C5'-C4'	8.86	124.98	111.70
48	A2	970	C	C4'-C3'-O3'	8.85	126.27	113.00
48	A2	1308	C	C4'-C3'-O3'	-8.85	96.13	109.40
48	A2	227	G	C1'-C2'-O2'	8.84	121.66	108.40
48	A2	221	U	N1-C1'-C2'	8.84	127.26	114.00
48	A2	736	G	C3'-C2'-O2'	8.83	127.84	114.60
49	B1	1553	C	C2'-C3'-O3'	-8.82	100.46	113.70
49	B1	861	A	C4'-C3'-O3'	-8.82	96.18	109.40
48	A2	1741	G	C2'-C3'-O3'	8.81	126.92	113.70
49	B1	847	A	C1'-C2'-O2'	8.81	121.62	108.40
59	BJ	111	GLN	N-CA-C	-8.81	101.64	111.07
48	A2	3588	G	C4'-C3'-O3'	8.80	126.20	113.00
48	A2	4685	A	C3'-C2'-O2'	-8.79	97.51	110.70
48	A2	3685	G	P-O3'-C3'	8.78	133.38	120.20
49	B1	451	G	P-O5'-C5'	-8.79	107.72	120.90
48	A2	309	G	C2'-C3'-O3'	8.78	122.67	109.50
49	B1	1555	U	C5'-C4'-C3'	8.78	128.37	115.20
49	B1	1624	U	O5'-C5'-C4'	8.78	124.67	111.50
48	A2	211	G	P-O3'-C3'	8.77	133.36	120.20
49	B1	693	A	C2'-C3'-O3'	8.77	126.85	113.70
48	A2	931	A	C1'-C2'-O2'	-8.76	98.66	111.80
49	B1	1557	C	O5'-C5'-C4'	-8.76	98.36	111.50
48	A2	310	U	C3'-C2'-O2'	-8.75	101.47	114.60
49	B1	691	G	C4'-C3'-O3'	8.75	126.13	113.00
48	A2	4895	C	C4'-C3'-O3'	-8.75	96.28	109.40
48	A2	4682	C	O3'-P-O5'	-8.74	90.89	104.00
47	Au	49	PHE	CA-CB-CG	8.73	122.53	113.80
49	B1	1283	C	C2'-C3'-O3'	-8.72	100.61	113.70
48	A2	220	G	C1'-C2'-O2'	-8.71	98.73	111.80
49	B1	106	C	P-O3'-C3'	-8.71	107.14	120.20
48	A2	2245	C	C4'-C3'-O3'	-8.70	96.34	109.40
48	A2	1307	A	C1'-C2'-O2'	-8.70	98.75	111.80
48	A2	1579	G	P-O5'-C5'	-8.69	107.86	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	671	C	P-O3'-C3'	-8.69	107.17	120.20
3	AA	67	TYR	N-CA-C	8.69	120.75	111.28
38	Aj	34	CYS	CA-CB-SG	8.69	134.38	114.40
48	A2	3877	A	P-O5'-C5'	-8.68	107.88	120.90
2	A4	75	G	C2'-C3'-O3'	-8.68	96.48	109.50
49	B1	356	C	C2'-C3'-O3'	-8.67	100.70	113.70
48	A2	2618	U	C4'-C3'-O3'	-8.65	96.42	109.40
48	A2	958	U	P-O3'-C3'	-8.65	107.22	120.20
48	A2	3732	C	C5'-C4'-C3'	-8.65	103.03	116.00
49	B1	891	G	C4'-C3'-O3'	-8.65	100.03	113.00
49	B1	1679	A	C4'-C3'-O3'	-8.64	100.03	113.00
1	A3	110	U	C3'-C2'-O2'	-8.64	97.75	110.70
45	Aq	42	VAL	CG1-CB-CG2	8.63	129.79	110.80
48	A2	3597	G	O5'-C5'-C4'	8.62	124.44	111.50
48	A2	731	G	O3'-P-O5'	-8.62	91.06	104.00
48	A2	186	G	P-O3'-C3'	-8.62	107.27	120.20
49	B1	356	C	C3'-C2'-O2'	-8.62	97.78	110.70
48	A2	4017	A	P-O5'-C5'	-8.60	108.00	120.90
49	B1	1805	G	P-O3'-C3'	8.60	133.09	120.20
49	B1	1447	G	O3'-P-O5'	8.59	116.88	104.00
49	B1	460	A	P-O3'-C3'	-8.58	107.33	120.20
65	BP	67	ALA	CA-C-N	-8.58	111.54	120.38
65	BP	67	ALA	C-N-CA	-8.58	111.54	120.38
48	A2	185	G	P-O3'-C3'	8.57	133.06	120.20
48	A2	400	C	O3'-P-O5'	-8.57	91.14	104.00
48	A2	2690	G	C5'-C4'-O4'	-8.57	96.94	109.80
48	A2	224	A	C4'-C3'-O3'	8.57	125.85	113.00
49	B1	638	C	O3'-P-O5'	8.57	116.85	104.00
48	A2	4725	U	C4'-C3'-O3'	-8.56	96.56	109.40
48	A2	112	C	C2'-C3'-O3'	-8.55	100.88	113.70
49	B1	689	U	O3'-P-O5'	-8.55	91.18	104.00
48	A2	1260	G	P-O3'-C3'	-8.54	107.39	120.20
48	A2	1253	A	P-O3'-C3'	8.53	133.00	120.20
48	A2	3789	U	P-O3'-C3'	-8.53	107.41	120.20
45	Aq	109	ILE	CA-CB-CG1	8.52	124.89	110.40
45	Aq	59	THR	CA-CB-OG1	-8.52	96.82	109.60
48	A2	5005	C	C2'-C3'-O3'	-8.52	96.73	109.50
48	A2	2251	C	C4'-C3'-O3'	-8.51	100.23	113.00
48	A2	229	G	C5'-C4'-C3'	8.50	127.94	115.20
48	A2	257	G	C4'-C3'-O3'	-8.50	100.26	113.00
2	A4	72	U	P-O3'-C3'	8.49	132.94	120.20
49	B1	801	U	C2'-C3'-O3'	-8.49	100.96	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A3	111	U	O3'-P-O5'	8.49	116.74	104.00
25	AW	97	LYS	C-N-CD	-8.48	90.23	125.00
49	B1	748	C	P-O5'-C5'	8.48	133.62	120.90
49	B1	838	G	C2'-C3'-O3'	-8.48	100.98	113.70
49	B1	886	A	C2'-C3'-O3'	8.47	126.41	113.70
1	A3	124	U	P-O3'-C3'	-8.47	107.50	120.20
48	A2	4136	U	P-O3'-C3'	-8.47	107.50	120.20
48	A2	682	U	O5'-C5'-C4'	8.46	124.19	111.50
48	A2	3928	U	C2'-C3'-O3'	-8.46	101.02	113.70
48	A2	3732	C	C4'-C3'-O3'	-8.45	100.32	113.00
48	A2	191	C	O5'-C5'-C4'	-8.44	98.84	111.50
60	BK	95	ARG	N-CA-C	8.44	120.48	111.28
49	B1	447	A	O3'-P-O5'	-8.44	91.34	104.00
49	B1	1854	U	P-O3'-C3'	-8.43	107.55	120.20
49	B1	841	G	C4'-C3'-O3'	-8.42	100.37	113.00
49	B1	1825	A	P-O5'-C5'	-8.42	108.27	120.90
48	A2	4085	C	C3'-C2'-O2'	-8.42	98.07	110.70
49	B1	1446	A	C3'-C2'-O2'	-8.42	101.97	114.60
48	A2	3877	A	C5'-C4'-C3'	8.41	127.82	115.20
48	A2	3916	A	O3'-P-O5'	-8.39	91.41	104.00
48	A2	650	C	P-O3'-C3'	-8.38	107.63	120.20
49	B1	216	C	C4'-C3'-O3'	8.38	121.97	109.40
49	B1	307	G	C3'-C2'-O2'	-8.37	102.04	114.60
48	A2	1356	A	C4'-C3'-O3'	-8.35	100.47	113.00
49	B1	1825	A	C4'-C3'-O3'	8.34	125.52	113.00
83	Bv	74	C	C1'-C2'-O2'	-8.32	95.92	108.40
48	A2	724	A	O3'-P-O5'	8.32	116.47	104.00
49	B1	878	G	C4'-C3'-O3'	-8.32	100.53	113.00
48	A2	4727	G	C4'-C3'-O3'	-8.29	100.57	113.00
49	B1	369	C	P-O5'-C5'	-8.29	108.47	120.90
48	A2	461	U	O5'-C5'-C4'	-8.29	99.07	111.50
48	A2	25	A	P-O3'-C3'	8.28	132.61	120.20
49	B1	892	U	C4'-C3'-O3'	-8.27	100.59	113.00
48	A2	1741	G	O5'-C5'-C4'	-8.27	99.10	111.50
48	A2	258	C	C2'-C3'-O3'	8.24	126.07	113.70
19	AQ	3	VAL	N-CA-C	8.21	118.31	110.42
48	A2	206	U	P-O3'-C3'	-8.21	107.88	120.20
48	A2	2601	G	P-O3'-C3'	-8.21	107.88	120.20
48	A2	462	U	O3'-P-O5'	8.20	116.30	104.00
48	A2	497	C	P-O3'-C3'	-8.20	107.91	120.20
13	AK	22	ASP	CA-CB-CG	8.19	120.79	112.60
49	B1	24	C	P-O3'-C3'	8.19	132.48	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	3771	A	C4'-C3'-O3'	8.18	125.27	113.00
48	A2	681	A	C4'-C3'-O3'	8.18	125.27	113.00
48	A2	138	C	P-O5'-C5'	8.18	133.16	120.90
27	AY	55	VAL	N-CA-C	8.17	119.55	108.11
49	B1	1778	C	C4'-C3'-O3'	-8.17	100.75	113.00
49	B1	320	G	P-O5'-C5'	-8.16	108.66	120.90
13	AK	107	VAL	CA-CB-CG1	8.16	124.27	110.40
48	A2	220	G	P-O3'-C3'	-8.16	107.96	120.20
48	A2	661	G	P-O5'-C5'	8.16	133.13	120.90
49	B1	239	C	C5'-C4'-C3'	8.16	128.24	116.00
49	B1	409	C	O3'-P-O5'	-8.14	91.79	104.00
48	A2	737	A	P-O5'-C5'	8.12	133.09	120.90
48	A2	2689	C	C1'-C2'-O2'	-8.12	96.22	108.40
84	Bx	45	U	C5'-C4'-C3'	8.12	128.18	116.00
48	A2	966	C	C2'-C3'-O3'	-8.09	97.36	109.50
48	A2	1259	C	P-O3'-C3'	-8.09	108.07	120.20
48	A2	968	C	P-O5'-C5'	-8.08	108.78	120.90
6	AD	21	ARG	N-CA-C	8.07	119.86	111.14
48	A2	1500	A	C2'-C3'-O3'	-8.07	101.60	113.70
49	B1	1782	G	C2'-C3'-O3'	-8.06	101.60	113.70
48	A2	1353	G	P-O3'-C3'	8.06	132.29	120.20
1	A3	110	U	C1'-C2'-O2'	8.06	120.49	108.40
48	A2	2686	U	C2'-C3'-O3'	-8.06	101.61	113.70
49	B1	986	G	C4'-C3'-O3'	-8.06	100.91	113.00
48	A2	191	C	C2'-C3'-O3'	8.06	125.78	113.70
48	A2	132	G	O5'-P-OP2	8.05	132.16	108.00
49	B1	1553	C	P-O5'-C5'	8.05	132.97	120.90
1	A3	33	G	C2'-C3'-O3'	-8.04	97.44	109.50
48	A2	2688	C	C2'-C3'-O3'	8.04	125.75	113.70
49	B1	502	C	P-O3'-C3'	-8.03	108.15	120.20
2	A4	79	U	O3'-P-O5'	8.03	116.04	104.00
48	A2	2328	A	P-O3'-C3'	8.03	132.24	120.20
48	A2	1755	U	C3'-C2'-O2'	8.02	122.73	110.70
48	A2	2690	G	O3'-P-O5'	8.02	116.03	104.00
49	B1	881	G	C2'-C3'-O3'	8.02	125.73	113.70
45	Aq	88	PRO	N-CA-CB	8.02	110.86	103.08
48	A2	5005	C	C3'-C2'-O2'	-8.02	102.57	114.60
48	A2	728	C	P-O3'-C3'	-8.01	108.18	120.20
49	B1	741	C	P-O5'-C5'	-8.01	108.89	120.90
49	B1	906	U	C2'-C3'-O3'	-8.00	101.70	113.70
48	A2	4597	A	C4'-C3'-O3'	-7.99	97.42	109.40
48	A2	4827	U	N1-C1'-C2'	7.99	125.98	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	967	U	O3'-P-O5'	7.99	115.98	104.00
48	A2	1952	C	C1'-C2'-O2'	-7.99	96.42	108.40
48	A2	4085	C	C4'-C3'-O3'	7.97	124.96	113.00
49	B1	1802	C	P-O3'-C3'	-7.97	108.24	120.20
48	A2	3877	A	C4'-C3'-O3'	-7.97	97.44	109.40
49	B1	876	C	C2'-C3'-O3'	7.96	125.65	113.70
13	AK	24	TYR	C-N-CD	-7.95	92.39	125.00
48	A2	4906	C	P-O3'-C3'	-7.95	108.28	120.20
48	A2	4030	U	P-O3'-C3'	-7.94	108.29	120.20
48	A2	727	C	C4'-C3'-O3'	-7.94	101.09	113.00
48	A2	960	G	N9-C1'-C2'	-7.93	100.11	112.00
48	A2	111	C	C2'-C3'-O3'	-7.92	101.82	113.70
49	B1	438	G	P-O3'-C3'	-7.91	108.33	120.20
48	A2	229	G	N9-C1'-C2'	7.91	125.86	114.00
50	BA	117	ARG	CA-C-N	-7.91	113.14	123.34
50	BA	117	ARG	C-N-CA	-7.91	113.14	123.34
49	B1	745	C	C2'-C3'-O3'	7.90	125.55	113.70
50	BA	114	ALA	N-CA-C	7.90	120.32	108.31
49	B1	872	A	C1'-C2'-O2'	-7.88	99.98	111.80
49	B1	1780	G	C4'-C3'-O3'	-7.88	101.19	113.00
45	Aq	22	VAL	CA-CB-CG2	7.87	123.78	110.40
45	Aq	25	THR	CA-CB-CG2	7.87	123.89	110.50
45	Aq	75	PRO	N-CA-CB	7.87	111.52	103.25
47	Au	207	LYS	N-CA-C	7.87	120.10	108.60
48	A2	48	G	C4'-C3'-O3'	7.87	124.81	113.00
49	B1	744	G	N9-C1'-C2'	-7.87	100.19	112.00
48	A2	931	A	C2'-C3'-O3'	-7.86	97.70	109.50
48	A2	2010	A	P-O3'-C3'	7.86	131.99	120.20
49	B1	898	U	O5'-C5'-C4'	7.85	123.28	111.50
38	Aj	19	CYS	N-CA-C	7.85	121.69	108.90
49	B1	892	U	C2'-C3'-O3'	7.85	125.47	113.70
48	A2	62	A	O3'-P-O5'	-7.84	92.24	104.00
48	A2	228	U	C5'-C4'-C3'	-7.84	103.45	115.20
43	Ao	100	LYS	N-CA-C	7.83	123.04	113.17
48	A2	496	C	O5'-C5'-C4'	-7.83	99.75	111.50
1	A3	94	G	P-O5'-C5'	-7.83	109.16	120.90
48	A2	5006	A	C1'-C2'-O2'	7.83	120.14	108.40
48	A2	3928	U	P-O3'-C3'	7.82	131.93	120.20
48	A2	50	C	O5'-C5'-C4'	-7.82	99.77	111.50
49	B1	1723	G	P-O3'-C3'	-7.82	108.48	120.20
18	AP	12	THR	N-CA-C	7.81	119.79	111.28
48	A2	1194	G	O3'-P-O5'	7.80	115.71	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	4715	U	N1-C1'-C2'	-7.80	100.29	112.00
14	AL	157	VAL	N-CA-C	7.79	117.83	110.74
48	A2	1751	G	C4'-C3'-O3'	7.79	124.69	113.00
48	A2	4409	C	P-O3'-C3'	-7.79	108.52	120.20
49	B1	1154	U	C4'-C3'-O3'	-7.78	97.73	109.40
48	A2	1966	G	C4'-C3'-O3'	-7.77	101.34	113.00
8	AF	98	ILE	N-CA-C	7.76	118.53	110.62
49	B1	1312	G	C4'-C3'-O3'	7.76	121.04	109.40
47	Au	134	PHE	CA-C-N	-7.76	111.99	119.90
47	Au	134	PHE	C-N-CA	-7.76	111.99	119.90
51	BB	153	THR	N-CA-C	7.75	119.81	111.36
48	A2	1297	C	N1-C1'-C2'	7.75	125.62	114.00
48	A2	1342	G	O4'-C4'-C3'	7.73	111.73	104.00
68	BS	24	ARG	N-CA-C	7.73	119.35	111.07
48	A2	8	U	C1'-C2'-O2'	-7.73	96.80	108.40
48	A2	4907	G	O3'-P-O5'	7.73	115.59	104.00
49	B1	1621	U	P-O5'-C5'	-7.72	109.31	120.90
48	A2	4015	G	C2'-C3'-O3'	-7.72	102.12	113.70
49	B1	615	C	P-O3'-C3'	7.71	131.77	120.20
49	B1	690	G	C5'-C4'-C3'	7.70	127.55	116.00
48	A2	1741	G	C3'-C2'-O2'	7.70	122.25	110.70
48	A2	4714	U	C1'-C2'-O2'	-7.70	100.25	111.80
49	B1	1481	G	O3'-P-O5'	7.69	115.54	104.00
48	A2	295	G	P-O3'-C3'	-7.69	108.67	120.20
48	A2	1433	C	O3'-P-O5'	-7.68	92.47	104.00
49	B1	1624	U	P-O5'-C5'	-7.68	109.38	120.90
48	A2	1757	A	C3'-C2'-O2'	-7.68	99.18	110.70
7	AE	153	LEU	N-CA-C	7.67	119.43	111.14
1	A3	107	C	C4'-C3'-O3'	-7.67	101.50	113.00
48	A2	2749	C	C3'-C2'-O2'	-7.67	99.20	110.70
48	A2	3596	G	C4'-C3'-O3'	7.67	124.50	113.00
48	A2	3612	U	O4'-C4'-C3'	7.67	111.67	104.00
48	A2	57	G	C3'-C2'-O2'	-7.66	99.21	110.70
48	A2	651	C	P-O3'-C3'	7.66	131.68	120.20
47	Au	180	VAL	CA-CB-CG1	7.65	123.40	110.40
48	A2	931	A	P-O3'-C3'	7.64	131.66	120.20
1	A3	7	U	C4'-C3'-O3'	-7.63	101.55	113.00
48	A2	259	C	C1'-C2'-O2'	-7.63	96.95	108.40
48	A2	3682	A	O4'-C4'-C3'	-7.63	96.37	104.00
48	A2	1068	C	C4'-C3'-O3'	-7.63	101.56	113.00
48	A2	2325	C	C2'-C3'-O3'	-7.62	98.07	109.50
49	B1	367	U	C1'-C2'-O2'	-7.59	97.01	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	B1	1491	G	P-O3'-C3'	-7.59	108.82	120.20
49	B1	1497	G	C4'-C3'-O3'	7.59	120.78	109.40
48	A2	2792	A	P-O3'-C3'	7.58	131.57	120.20
49	B1	639	C	O5'-C5'-C4'	-7.57	100.14	111.50
48	A2	153	G	C1'-C2'-O2'	7.57	119.75	108.40
13	AK	89	VAL	CA-CB-CG1	7.56	123.25	110.40
84	Bx	46	U	C5'-C4'-C3'	-7.55	104.67	116.00
49	B1	124	U	C3'-C2'-O2'	-7.55	99.38	110.70
48	A2	4827	U	P-O3'-C3'	-7.55	108.88	120.20
84	Bx	46	U	P-O5'-C5'	-7.55	109.58	120.90
48	A2	1254	G	C1'-C2'-O2'	-7.54	97.09	108.40
48	A2	925	C	OP1-P-O3'	7.54	130.61	108.00
48	A2	2054	C	P-O3'-C3'	-7.53	108.90	120.20
49	B1	799	U	N1-C1'-C2'	7.53	123.30	112.00
49	B1	871	U	C2'-C3'-O3'	-7.53	98.20	109.50
48	A2	3684	U	C5'-C4'-C3'	-7.51	104.74	116.00
68	BS	117	ILE	N-CA-C	-7.50	102.97	110.62
48	A2	180	C	O3'-P-O5'	7.50	115.25	104.00
49	B1	319	C	O3'-P-O5'	-7.50	92.75	104.00
48	A2	3727	A	O5'-C5'-C4'	-7.50	100.25	111.50
49	B1	852	G	P-O5'-C5'	-7.49	109.67	120.90
49	B1	792	C	C4'-C3'-O3'	7.48	124.23	113.00
49	B1	428	U	C4'-C3'-O3'	-7.48	98.18	109.40
45	Aq	22	VAL	CG1-CB-CG2	-7.48	94.35	110.80
48	A2	43	U	C5'-C4'-C3'	7.48	127.22	116.00
48	A2	1421	U	C4'-C3'-O3'	-7.47	101.79	113.00
48	A2	2617	G	C5'-C4'-C3'	7.47	127.21	116.00
59	BJ	144	ILE	N-CA-C	7.47	117.11	108.96
49	B1	215	G	P-O3'-C3'	7.47	131.40	120.20
48	A2	1225	G	P-O5'-C5'	-7.47	109.70	120.90
61	BL	81	LYS	N-CA-C	7.46	119.41	111.28
48	A2	1990	A	C4'-C3'-O3'	-7.45	101.83	113.00
48	A2	5005	C	C1'-C2'-O2'	-7.45	100.63	111.80
47	Au	17	VAL	CA-CB-CG1	7.45	123.06	110.40
48	A2	2685	G	O3'-P-O5'	7.44	115.16	104.00
48	A2	48	G	C2'-C3'-O3'	-7.44	102.54	113.70
49	B1	793	G	O5'-C5'-C4'	-7.44	100.35	111.50
14	AL	133	ALA	CA-C-N	-7.43	111.98	119.93
14	AL	133	ALA	C-N-CA	-7.43	111.98	119.93
48	A2	238	G	O3'-P-O5'	7.43	115.14	104.00
48	A2	641	G	P-O3'-C3'	7.43	131.34	120.20
45	Aq	46	ILE	CG1-CB-CG2	7.42	132.96	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
47	Au	117	ILE	N-CA-C	7.42	118.21	110.72
48	A2	3683	A	O3'-P-O5'	-7.41	92.88	104.00
49	B1	1444	U	C4'-C3'-O3'	7.40	124.10	113.00
48	A2	58	G	C2'-C3'-O3'	-7.40	98.40	109.50
48	A2	159	A	P-O3'-C3'	-7.40	109.10	120.20
49	B1	897	U	C2'-C3'-O3'	-7.39	102.61	113.70
48	A2	727	C	C2'-C3'-O3'	7.39	124.78	113.70
48	A2	220	G	C4'-C3'-O3'	-7.38	98.33	109.40
48	A2	4458	A	P-O3'-C3'	7.38	131.27	120.20
49	B1	738	C	P-O5'-C5'	-7.38	109.83	120.90
49	B1	868	G	C2'-C3'-O3'	7.37	120.56	109.50
48	A2	447	G	C4'-C3'-O3'	7.37	124.05	113.00
48	A2	2685	G	P-O3'-C3'	-7.37	109.15	120.20
48	A2	3876	A	C2'-C3'-O3'	-7.36	102.66	113.70
48	A2	326	C	P-O3'-C3'	-7.36	109.17	120.20
49	B1	1647	A	P-O3'-C3'	7.35	131.22	120.20
48	A2	381	G	C2'-C3'-O3'	-7.35	98.48	109.50
1	A3	103	A	C4'-C3'-O3'	7.34	124.02	113.00
49	B1	690	G	C5'-C4'-O4'	7.34	120.81	109.80
50	BA	200	ASP	CA-C-O	7.34	126.92	118.55
39	Ak	50	LYS	N-CA-C	7.34	119.28	111.28
51	BB	152	LYS	N-CA-C	7.34	119.28	111.28
84	Bx	45	U	O4'-C4'-C3'	7.34	111.34	104.00
48	A2	4924	A	O3'-P-O5'	-7.33	93.00	104.00
48	A2	4119	A	P-O3'-C3'	-7.33	109.21	120.20
13	AK	59	THR	N-CA-C	-7.32	103.23	111.07
49	B1	692	G	P-O5'-C5'	7.32	131.88	120.90
48	A2	652	C	P-O3'-C3'	-7.31	109.23	120.20
79	Bd	20	SER	N-CA-C	7.31	120.28	109.24
48	A2	1227	G	P-O3'-C3'	-7.31	109.23	120.20
48	A2	91	G	OP1-P-O3'	-7.31	86.07	108.00
13	AK	25	PRO	N-CA-CB	7.31	110.92	103.25
49	B1	891	G	P-O5'-C5'	-7.29	109.96	120.90
48	A2	330	A	P-O3'-C3'	7.29	131.13	120.20
49	B1	21	U	P-O3'-C3'	-7.29	109.27	120.20
48	A2	1219	C	P-O3'-C3'	-7.29	109.27	120.20
49	B1	1556	A	N9-C1'-C2'	7.28	124.91	114.00
48	A2	2686	U	O5'-C5'-C4'	7.27	122.41	111.50
48	A2	308	G	C4'-C3'-O3'	-7.27	102.09	113.00
48	A2	967	U	P-O3'-C3'	-7.27	109.30	120.20
49	B1	803	C	O5'-C5'-C4'	-7.27	100.60	111.50
48	A2	1225	G	C5'-C4'-O4'	-7.26	98.91	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	3744	U	C4'-C3'-O3'	7.25	123.88	113.00
49	B1	451	G	C1'-C2'-O2'	7.25	119.28	108.40
48	A2	1282	G	P-O3'-C3'	-7.25	109.33	120.20
48	A2	4726	A	C4'-C3'-O3'	7.25	123.87	113.00
1	A3	34	U	O5'-C5'-C4'	-7.24	100.84	111.70
48	A2	4135	G	P-O3'-C3'	-7.24	109.34	120.20
48	A2	112	C	O5'-C5'-C4'	7.24	122.36	111.50
48	A2	932	U	C3'-C2'-O2'	-7.24	99.84	110.70
48	A2	4827	U	C4'-C3'-C2'	-7.24	95.36	102.60
1	A3	34	U	C2'-C3'-O3'	7.23	120.35	109.50
48	A2	1644	C	O3'-P-O5'	7.23	114.85	104.00
49	B1	804	U	C5'-C4'-C3'	-7.23	105.15	116.00
28	AZ	126	LYS	N-CA-C	-7.23	98.31	109.52
48	A2	1771	C	O3'-P-O5'	7.23	114.84	104.00
49	B1	112	U	O3'-P-O5'	7.21	114.82	104.00
48	A2	4620	G	P-O3'-C3'	7.20	131.01	120.20
48	A2	507	U	O3'-P-O5'	7.20	114.80	104.00
48	A2	1269	C	P-O3'-C3'	-7.20	109.40	120.20
49	B1	1284	A	P-O5'-C5'	-7.20	110.10	120.90
2	A4	3	C	O5'-C5'-C4'	-7.19	100.71	111.50
49	B1	1453	C	C2'-C3'-O3'	-7.19	102.91	113.70
51	BB	189	ILE	CA-C-N	7.19	128.16	120.47
51	BB	189	ILE	C-N-CA	7.19	128.16	120.47
48	A2	968	C	C5'-C4'-O4'	7.19	120.58	109.80
47	Au	190	LEU	N-CA-C	-7.19	103.38	111.07
49	B1	1750	C	O4'-C4'-C3'	7.19	111.19	104.00
48	A2	1559	G	P-O3'-C3'	7.18	130.97	120.20
48	A2	737	A	C1'-C2'-O2'	-7.17	101.05	111.80
48	A2	228	U	N1-C1'-C2'	7.15	124.72	114.00
48	A2	58	G	O5'-C5'-C4'	-7.14	100.99	111.70
48	A2	3911	U	P-O3'-C3'	-7.14	109.49	120.20
49	B1	1785	C	C5'-C4'-C3'	-7.14	105.29	116.00
49	B1	181	A	C4'-C3'-O3'	7.13	120.09	109.40
1	A3	126	C	O3'-P-O5'	7.13	114.69	104.00
48	A2	673	C	O3'-P-O5'	7.13	114.69	104.00
48	A2	4130	G	P-O3'-C3'	-7.12	109.52	120.20
49	B1	802	A	O5'-C5'-C4'	-7.12	100.82	111.50
11	AI	189	ARG	N-CA-C	7.12	118.83	111.14
48	A2	3789	U	C4'-C3'-O3'	-7.11	98.73	109.40
48	A2	1756	C	P-O5'-C5'	-7.11	110.23	120.90
48	A2	4597	A	N9-C1'-C2'	7.11	124.67	114.00
49	B1	417	C	P-O3'-C3'	-7.11	109.54	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	B1	1444	U	O5'-C5'-C4'	-7.11	100.84	111.50
48	A2	1970	G	P-O5'-C5'	7.10	131.56	120.90
48	A2	464	A	O5'-C5'-C4'	-7.10	100.85	111.50
49	B1	880	G	C4'-C3'-O3'	-7.10	102.35	113.00
28	AZ	90	PRO	N-CA-C	-7.10	105.68	114.20
49	B1	798	G	C2'-C3'-O3'	7.10	120.14	109.50
48	A2	138	C	O4'-C4'-C3'	-7.10	96.90	104.00
50	BA	110	ASN	CA-C-N	7.10	135.23	121.18
50	BA	110	ASN	C-N-CA	7.10	135.23	121.18
38	Aj	36	LYS	N-CA-C	7.09	118.80	111.14
48	A2	232	A	C4'-C3'-O3'	-7.09	102.36	113.00
48	A2	2745	A	C2'-C3'-O3'	7.09	124.34	113.70
49	B1	447	A	P-O3'-C3'	-7.09	109.57	120.20
49	B1	114	G	O3'-P-O5'	7.08	114.62	104.00
49	B1	903	A	O5'-C5'-C4'	7.08	122.12	111.50
49	B1	345	U	P-O3'-C3'	-7.08	109.58	120.20
48	A2	2519	C	C4'-C3'-O3'	-7.08	102.38	113.00
49	B1	225	G	C2'-C3'-O3'	7.07	124.31	113.70
48	A2	4533	A	C4'-C3'-O3'	-7.07	102.39	113.00
48	A2	111	C	C5'-C4'-C3'	7.07	126.60	116.00
48	A2	19	G	P-O3'-C3'	7.06	130.80	120.20
48	A2	4896	A	O5'-C5'-C4'	-7.06	101.12	111.70
49	B1	298	G	P-O3'-C3'	-7.06	109.62	120.20
48	A2	1878	A	O3'-P-O5'	-7.05	93.42	104.00
48	A2	356	A	C4'-C3'-O3'	-7.04	102.43	113.00
48	A2	5	A	O3'-P-O5'	7.04	114.56	104.00
48	A2	953	A	P-O3'-C3'	7.04	130.75	120.20
48	A2	1420	C	C4'-C3'-O3'	7.03	123.54	113.00
49	B1	898	U	C4'-C3'-O3'	-7.03	102.46	113.00
48	A2	1711	A	O3'-P-O5'	-7.02	93.47	104.00
49	B1	1481	G	P-O3'-C3'	7.02	130.73	120.20
48	A2	1297	C	C1'-C2'-O2'	-7.01	101.28	111.80
48	A2	2876	G	P-O3'-C3'	-7.00	109.70	120.20
48	A2	4017	A	C2'-C3'-O3'	-7.00	103.20	113.70
48	A2	1297	C	C2'-C3'-O3'	-7.00	99.01	109.50
48	A2	1055	C	C4'-C3'-O3'	-6.99	98.91	109.40
49	B1	1623	A	C1'-C2'-O2'	-6.99	101.31	111.80
2	A4	2	U	O3'-P-O5'	6.99	114.48	104.00
48	A2	1742	G	C3'-C2'-O2'	6.98	121.18	110.70
13	AK	11	SER	CA-CB-OG	6.98	125.05	111.10
49	B1	1287	A	O5'-C5'-C4'	6.98	121.96	111.50
48	A2	732	C	P-O3'-C3'	-6.96	109.75	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	4319	G	P-O3'-C3'	-6.96	109.75	120.20
49	B1	1645	C	O3'-P-O5'	6.96	114.45	104.00
48	A2	3791	G	P-O5'-C5'	-6.96	110.45	120.90
38	Aj	19	CYS	CA-CB-SG	6.96	130.41	114.40
79	Bd	40	ARG	CA-C-N	-6.96	108.17	122.58
79	Bd	40	ARG	C-N-CA	-6.96	108.17	122.58
13	AK	2	PRO	N-CA-CB	6.96	110.56	103.25
48	A2	1919	C	O3'-P-O5'	-6.96	93.56	104.00
48	A2	86	U	C3'-C2'-O2'	-6.95	100.27	110.70
7	AE	203	ILE	N-CA-C	-6.95	106.45	113.47
14	AL	53	GLY	CA-C-N	-6.95	112.61	119.76
14	AL	53	GLY	C-N-CA	-6.95	112.61	119.76
51	BB	42	ARG	N-CA-C	6.95	121.84	113.23
48	A2	4526	A	P-O3'-C3'	6.94	130.61	120.20
48	A2	917	G	P-O3'-C3'	6.93	130.60	120.20
51	BB	114	VAL	N-CA-C	-6.93	98.38	108.71
49	B1	1525	C	P-O3'-C3'	-6.93	109.80	120.20
13	AK	108	PRO	N-CA-CB	6.92	110.52	103.25
45	Aq	7	PRO	N-CA-CB	6.92	110.62	103.00
48	A2	3921	U	P-O3'-C3'	-6.92	109.82	120.20
49	B1	110	U	P-O3'-C3'	-6.92	109.82	120.20
48	A2	1757	A	C4'-C3'-O3'	6.92	123.38	113.00
49	B1	887	U	O5'-C5'-C4'	-6.92	101.32	111.70
56	BG	114	VAL	N-CA-C	6.91	117.03	110.53
48	A2	1799	U	O3'-P-O5'	6.91	114.36	104.00
48	A2	4472	A	C4'-C3'-O3'	-6.91	102.64	113.00
49	B1	604	A	P-O3'-C3'	-6.90	109.84	120.20
48	A2	1196	G	P-O3'-C3'	-6.90	109.85	120.20
45	Aq	129	ILE	CB-CG1-CD1	6.89	128.28	113.80
48	A2	4600	U	O3'-P-O5'	6.89	114.34	104.00
49	B1	320	G	O5'-C5'-C4'	6.89	121.84	111.50
65	BP	85	ILE	N-CA-C	-6.89	100.69	109.30
48	A2	2688	C	O5'-C5'-C4'	-6.89	101.17	111.50
29	Aa	22	ILE	N-CA-C	6.88	117.00	110.53
48	A2	1258	G	P-O3'-C3'	-6.88	109.87	120.20
48	A2	680	C	O4'-C4'-C3'	-6.88	97.12	104.00
48	A2	1255	C	P-O3'-C3'	-6.88	109.88	120.20
48	A2	939	G	O5'-C5'-C4'	-6.87	101.19	111.50
48	A2	1253	A	C2'-C3'-O3'	-6.87	103.39	113.70
48	A2	241	G	C4'-C3'-O3'	-6.87	102.69	113.00
48	A2	309	G	O5'-P-OP1	6.87	128.61	108.00
48	A2	4407	U	P-O3'-C3'	-6.87	109.89	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	B1	1447	G	O5'-C5'-C4'	-6.87	101.20	111.50
48	A2	1254	G	C4'-C3'-O3'	-6.87	102.70	113.00
7	AE	108	LYS	CA-C-N	-6.86	108.43	121.54
7	AE	108	LYS	C-N-CA	-6.86	108.43	121.54
48	A2	1357	G	P-O3'-C3'	6.86	130.49	120.20
48	A2	2282	C	O3'-P-O5'	-6.86	93.71	104.00
29	Aa	15	VAL	N-CA-C	6.85	117.00	110.42
49	B1	744	G	O4'-C1'-C2'	-6.85	100.75	107.60
48	A2	1981	G	P-O3'-C3'	6.85	130.47	120.20
48	A2	1797	G	C3'-C2'-O2'	-6.85	104.33	114.60
48	A2	3613	A	P-O5'-C5'	-6.85	110.63	120.90
56	BG	167	LYS	N-CA-C	6.85	120.98	111.74
36	Ah	37	THR	N-CA-C	-6.84	99.70	109.96
48	A2	181	U	P-O3'-C3'	-6.84	109.94	120.20
48	A2	737	A	C3'-C2'-O2'	6.83	124.85	114.60
49	B1	748	C	O4'-C1'-N1	6.83	118.44	108.20
1	A3	93	C	C1'-C2'-O2'	-6.82	98.17	108.40
49	B1	902	G	C2'-C3'-O3'	-6.82	103.47	113.70
49	B1	894	G	C2'-C3'-O3'	-6.82	103.47	113.70
45	Aq	31	LYS	CB-CG-CD	6.82	126.97	111.30
48	A2	2526	G	P-O3'-C3'	6.81	130.42	120.20
48	A2	2284	U	P-O3'-C3'	6.81	130.41	120.20
48	A2	3876	A	C3'-C2'-O2'	-6.80	100.49	110.70
49	B1	803	C	C2'-C3'-O3'	6.80	123.91	113.70
48	A2	219	C	C4'-C3'-O3'	-6.80	102.80	113.00
48	A2	680	C	C4'-C3'-O3'	-6.80	102.80	113.00
48	A2	3737	A	P-O5'-C5'	6.80	131.10	120.90
1	A3	103	A	C2'-C3'-O3'	-6.80	103.50	113.70
48	A2	257	G	C1'-C2'-O2'	6.80	118.59	108.40
49	B1	1558	C	C4'-C3'-O3'	6.79	123.19	113.00
48	A2	931	A	C4'-C3'-O3'	6.79	119.58	109.40
49	B1	534	G	P-O5'-C5'	6.78	131.07	120.90
62	BM	14	VAL	N-CA-C	6.78	117.57	110.72
49	B1	839	C	O5'-C5'-C4'	-6.77	101.34	111.50
45	Aq	89	PRO	N-CA-CB	6.76	110.35	103.25
48	A2	229	G	P-O3'-C3'	6.76	130.34	120.20
49	B1	1106	C	C1'-C2'-O2'	-6.76	98.26	108.40
48	A2	1952	C	C2'-C3'-O3'	6.76	123.84	113.70
48	A2	4984	U	P-O3'-C3'	-6.76	110.06	120.20
48	A2	3738	C	O5'-C5'-C4'	-6.75	101.37	111.50
49	B1	367	U	C4'-C3'-O3'	-6.75	102.87	113.00
49	B1	884	C	C2'-C3'-O3'	-6.75	103.58	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	1498	G	P-O5'-C5'	-6.75	110.78	120.90
48	A2	2701	G	O3'-P-O5'	-6.75	93.88	104.00
2	A4	112	U	O3'-P-O5'	-6.74	93.89	104.00
48	A2	1849	A	C3'-C2'-O2'	-6.74	100.59	110.70
49	B1	802	A	C2'-C3'-O3'	6.74	123.80	113.70
19	AQ	4	ASP	CA-CB-CG	6.73	119.33	112.60
48	A2	3738	C	C3'-C2'-O2'	-6.73	100.61	110.70
48	A2	1754	C	C3'-C2'-O2'	6.73	120.79	110.70
49	B1	742	U	P-O5'-C5'	-6.73	110.81	120.90
48	A2	279	G	P-O3'-C3'	6.72	130.28	120.20
48	A2	3589	C	C1'-C2'-O2'	-6.72	98.32	108.40
45	Aq	39	PRO	N-CA-CB	6.71	110.30	103.25
48	A2	4599	G	O3'-P-O5'	-6.71	93.93	104.00
71	BV	13	VAL	CA-C-N	-6.71	113.07	119.85
71	BV	13	VAL	C-N-CA	-6.71	113.07	119.85
13	AK	2	PRO	CA-N-CD	-6.71	102.60	112.00
48	A2	2793	C	P-O3'-C3'	6.71	130.26	120.20
4	AB	157	CYS	N-CA-C	6.71	119.95	110.50
48	A2	464	A	C4'-C3'-O3'	-6.71	102.94	113.00
48	A2	319	U	P-O3'-C3'	6.71	130.26	120.20
48	A2	2064	C	C4'-C3'-O3'	6.71	123.06	113.00
48	A2	4532	G	P-O3'-C3'	6.71	130.26	120.20
1	A3	130	C	P-O3'-C3'	-6.70	110.15	120.20
48	A2	67	C	C3'-C2'-O2'	-6.70	100.65	110.70
48	A2	323	A	P-O5'-C5'	-6.70	110.85	120.90
48	A2	1066	U	P-O3'-C3'	-6.70	110.15	120.20
54	BE	82	TYR	CA-C-N	-6.70	113.40	120.03
54	BE	82	TYR	C-N-CA	-6.70	113.40	120.03
49	B1	1290	G	P-O5'-C5'	6.70	130.94	120.90
49	B1	1777	G	P-O5'-C5'	-6.70	110.86	120.90
49	B1	1496	U	P-O3'-C3'	-6.69	110.16	120.20
48	A2	695	C	C4'-C3'-O3'	-6.69	102.96	113.00
48	A2	185	G	O3'-P-O5'	6.69	114.04	104.00
48	A2	357	A	O5'-C5'-C4'	-6.69	101.66	111.70
49	B1	907	G	O5'-C5'-C4'	6.69	121.53	111.50
49	B1	321	C	C4'-C3'-O3'	6.68	123.02	113.00
48	A2	296	C	P-O3'-C3'	-6.68	110.18	120.20
48	A2	905	G	O4'-C1'-C2'	-6.68	100.92	107.60
48	A2	464	A	O4'-C4'-C3'	-6.67	97.33	104.00
49	B1	887	U	P-O5'-C5'	6.67	130.91	120.90
48	A2	918	C	P-O3'-C3'	6.67	130.21	120.20
48	A2	1218	G	P-O3'-C3'	-6.67	110.20	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	2251	C	O5'-C5'-C4'	-6.66	101.50	111.50
45	Aq	7	PRO	CA-N-CD	-6.66	102.67	112.00
48	A2	3731	A	C3'-C2'-O2'	-6.66	100.71	110.70
49	B1	33	G	P-O3'-C3'	-6.66	110.21	120.20
49	B1	72	C	O3'-P-O5'	-6.66	94.01	104.00
48	A2	3789	U	O3'-P-O5'	-6.66	94.02	104.00
49	B1	1867	U	P-O3'-C3'	-6.66	110.22	120.20
48	A2	2329	U	P-O3'-C3'	6.65	130.18	120.20
28	AZ	91	LEU	CA-C-N	6.65	130.20	120.82
28	AZ	91	LEU	C-N-CA	6.65	130.20	120.82
10	AH	99	PHE	CA-C-N	-6.65	113.14	119.85
10	AH	99	PHE	C-N-CA	-6.65	113.14	119.85
45	Aq	34	PRO	N-CA-CB	6.65	110.23	103.25
28	AZ	91	LEU	N-CA-C	-6.64	96.96	108.52
48	A2	65	A	O3'-P-O5'	-6.64	94.05	104.00
48	A2	328	A	P-O3'-C3'	6.63	130.15	120.20
48	A2	3627	A	P-O3'-C3'	6.63	130.15	120.20
49	B1	217	A	C1'-C2'-O2'	-6.63	98.45	108.40
48	A2	4689	A	C4'-C3'-O3'	-6.63	103.05	113.00
49	B1	742	U	N1-C1'-C2'	6.63	123.95	114.00
13	AK	12	ASN	N-CA-C	-6.63	105.20	113.55
48	A2	1520	U	C4'-C3'-O3'	-6.62	103.07	113.00
49	B1	1784	G	C5'-C4'-C3'	-6.62	106.07	116.00
48	A2	1877	A	O5'-C5'-C4'	-6.62	101.58	111.50
48	A2	1197	C	P-O5'-C5'	6.61	130.82	120.90
48	A2	112	C	C5'-C4'-O4'	6.61	119.72	109.80
48	A2	651	C	O3'-P-O5'	-6.61	94.08	104.00
48	A2	3877	A	O5'-C5'-C4'	6.61	121.61	111.70
48	A2	1467	C	P-O3'-C3'	6.61	130.11	120.20
48	A2	4717	G	C2'-C3'-O3'	6.61	123.61	113.70
49	B1	306	C	N1-C1'-C2'	6.60	123.91	114.00
48	A2	4123	G	O3'-P-O5'	6.60	113.90	104.00
48	A2	242	C	P-O5'-C5'	-6.60	111.00	120.90
49	B1	1106	C	C5'-C4'-C3'	6.60	125.90	116.00
49	B1	836	G	O3'-P-O5'	6.60	113.89	104.00
48	A2	741	U	P-O3'-C3'	6.59	130.09	120.20
13	AK	79	LEU	CA-C-N	-6.59	112.84	119.56
13	AK	79	LEU	C-N-CA	-6.59	112.84	119.56
48	A2	138	C	C2'-C3'-O3'	-6.59	103.81	113.70
48	A2	2830	G	O3'-P-O5'	6.59	113.88	104.00
14	AL	11	LYS	CA-C-N	-6.59	112.98	119.76
14	AL	11	LYS	C-N-CA	-6.59	112.98	119.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	1252	G	P-O5'-C5'	-6.58	111.03	120.90
49	B1	231	A	O5'-C5'-C4'	6.57	121.36	111.50
48	A2	1258	G	C3'-C2'-O2'	6.57	124.45	114.60
48	A2	286	G	C1'-C2'-O2'	6.56	118.24	108.40
48	A2	3930	U	O5'-C5'-C4'	-6.56	101.66	111.50
48	A2	1257	A	C3'-C2'-O2'	-6.56	100.87	110.70
48	A2	2860	A	O5'-C5'-C4'	6.56	121.33	111.50
2	A4	60	G	O3'-P-O5'	-6.55	94.17	104.00
49	B1	748	C	C1'-C2'-O2'	-6.55	101.97	111.80
49	B1	237	C	C2'-C3'-O3'	-6.55	99.67	109.50
48	A2	2747	C	O3'-P-O5'	-6.55	94.18	104.00
5	AC	224	ILE	CA-C-N	-6.54	113.04	119.78
5	AC	224	ILE	C-N-CA	-6.54	113.04	119.78
48	A2	1319	G	P-O3'-C3'	6.54	130.01	120.20
49	B1	1287	A	P-O5'-C5'	-6.54	111.09	120.90
49	B1	1339	U	P-O3'-C3'	6.54	130.00	120.20
55	BF	107	ASN	CA-C-N	-6.54	112.89	119.56
55	BF	107	ASN	C-N-CA	-6.54	112.89	119.56
48	A2	289	A	C2'-C3'-O3'	-6.53	99.70	109.50
31	Ac	103	ASP	N-CA-C	6.53	119.40	111.82
49	B1	986	G	C3'-C2'-O2'	-6.53	100.90	110.70
48	A2	2750	G	O3'-P-O5'	-6.53	94.21	104.00
45	Aq	47	ALA	N-CA-C	-6.52	105.31	113.20
49	B1	796	G	C4'-C3'-O3'	6.52	122.78	113.00
48	A2	480	C	P-O3'-C3'	6.52	129.98	120.20
49	B1	1105	G	C2'-C3'-O3'	-6.52	103.92	113.70
48	A2	2612	U	P-O3'-C3'	-6.52	110.42	120.20
49	B1	1844	U	C4'-C3'-O3'	-6.52	103.22	113.00
48	A2	1259	C	O3'-P-O5'	-6.51	94.23	104.00
49	B1	799	U	C2'-C3'-O3'	-6.51	103.93	113.70
5	AC	147	VAL	N-CA-C	6.51	114.33	107.76
49	B1	689	U	C5'-C4'-O4'	6.50	119.55	109.80
49	B1	910	G	C4'-C3'-O3'	-6.50	103.25	113.00
48	A2	3697	A	O3'-P-O5'	6.50	113.75	104.00
48	A2	4017	A	C5'-C4'-C3'	6.49	125.74	116.00
6	AD	37	VAL	N-CA-C	6.49	117.28	110.72
83	Bv	72	C	N1-C1'-C2'	-6.49	102.27	112.00
45	Aq	81	ILE	CA-CB-CG2	6.49	121.53	110.50
48	A2	1841	U	O3'-P-O5'	6.49	113.73	104.00
49	B1	429	C	C4'-C3'-O3'	6.49	122.73	113.00
48	A2	2750	G	O5'-C5'-C4'	-6.48	101.78	111.50
65	BP	68	PRO	CA-C-N	-6.48	111.74	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
65	BP	68	PRO	C-N-CA	-6.48	111.74	119.84
49	B1	627	U	P-O3'-C3'	-6.48	110.48	120.20
50	BA	110	ASN	O-C-N	6.48	131.01	123.30
48	A2	3731	A	N9-C1'-C2'	6.47	121.71	112.00
48	A2	1743	G	C1'-C2'-O2'	6.47	118.11	108.40
49	B1	1105	G	P-O5'-C5'	6.47	130.61	120.90
48	A2	919	A	O3'-P-O5'	-6.47	94.30	104.00
48	A2	2860	A	C4'-C3'-O3'	6.47	122.70	113.00
49	B1	1702	G	C3'-C2'-O2'	6.47	120.41	110.70
48	A2	1756	C	C1'-C2'-O2'	-6.47	98.70	108.40
48	A2	2736	A	O3'-P-O5'	-6.46	94.30	104.00
48	A2	4684	G	C4'-C3'-O3'	6.46	122.70	113.00
55	BF	120	GLY	CA-C-N	6.46	127.92	119.84
55	BF	120	GLY	C-N-CA	6.46	127.92	119.84
49	B1	881	G	O4'-C4'-C3'	6.46	110.46	104.00
48	A2	509	C	P-O3'-C3'	-6.46	110.51	120.20
48	A2	1761	U	P-O3'-C3'	-6.46	110.51	120.20
49	B1	741	C	C5'-C4'-O4'	-6.46	99.41	109.10
49	B1	1683	C	P-O3'-C3'	6.46	129.89	120.20
49	B1	897	U	O3'-P-O5'	-6.46	94.31	104.00
48	A2	508	U	C2'-C3'-O3'	6.45	123.38	113.70
48	A2	2689	C	C5'-C4'-O4'	-6.45	100.13	109.80
84	Bx	45	U	P-O5'-C5'	-6.45	111.23	120.90
49	B1	895	G	C2'-C3'-O3'	-6.45	104.03	113.70
49	B1	882	U	O5'-C5'-C4'	-6.45	101.83	111.50
48	A2	4600	U	P-O3'-C3'	6.44	129.85	120.20
48	A2	4827	U	O3'-P-O5'	6.43	113.64	104.00
49	B1	1826	G	C2'-C3'-O3'	6.42	123.33	113.70
48	A2	970	C	C2'-C3'-O3'	-6.42	104.08	113.70
48	A2	2690	G	P-O5'-C5'	-6.42	111.28	120.90
48	A2	290	A	O4'-C4'-C3'	6.41	110.41	104.00
43	Ao	95	GLY	N-CA-C	6.41	123.02	111.03
45	Aq	59	THR	CA-CB-CG2	6.41	121.39	110.50
48	A2	1839	A	C4'-C3'-O3'	-6.41	103.39	113.00
48	A2	2600	A	P-O3'-C3'	-6.41	110.59	120.20
48	A2	3636	G	O5'-C5'-C4'	6.41	121.11	111.50
48	A2	4628	G	C4'-C3'-O3'	-6.40	103.39	113.00
19	AQ	72	LEU	CA-C-N	-6.40	113.18	119.78
19	AQ	72	LEU	C-N-CA	-6.40	113.18	119.78
49	B1	1389	C	O3'-P-O5'	6.40	113.60	104.00
48	A2	3612	U	O3'-P-O5'	-6.40	94.40	104.00
49	B1	691	G	O3'-P-O5'	6.40	113.60	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	3916	A	P-O3'-C3'	-6.40	110.61	120.20
48	A2	2794	A	C2'-C3'-O3'	6.39	123.29	113.70
48	A2	3682	A	O5'-C5'-C4'	6.39	121.09	111.50
49	B1	181	A	O3'-P-O5'	-6.39	94.41	104.00
49	B1	1080	A	O3'-P-O5'	-6.39	94.41	104.00
48	A2	482	G	P-O3'-C3'	-6.39	110.61	120.20
49	B1	533	A	P-O3'-C3'	6.39	129.78	120.20
28	AZ	36	ARG	CA-C-N	-6.39	113.31	121.04
28	AZ	36	ARG	C-N-CA	-6.39	113.31	121.04
45	Aq	44	ASP	CA-CB-CG	6.39	118.99	112.60
48	A2	1763	U	P-O3'-C3'	-6.38	110.63	120.20
48	A2	4406	C	O3'-P-O5'	-6.38	94.43	104.00
2	A4	15	C	P-O5'-C5'	6.38	130.47	120.90
31	Ac	24	SER	N-CA-C	6.38	118.31	111.36
48	A2	1265	G	C2'-C3'-O3'	6.38	123.27	113.70
49	B1	231	A	O4'-C4'-C3'	-6.38	97.62	104.00
7	AE	211	HIS	N-CA-C	6.37	118.23	111.28
49	B1	976	G	P-O5'-C5'	6.37	130.46	120.90
48	A2	3929	G	C4'-C3'-O3'	6.37	122.55	113.00
49	B1	796	G	O4'-C4'-C3'	6.37	110.37	104.00
48	A2	1572	C	P-O3'-C3'	6.37	129.75	120.20
48	A2	940	C	P-O5'-C5'	-6.36	111.35	120.90
48	A2	1992	C	P-O5'-C5'	6.36	130.44	120.90
48	A2	2872	U	P-O3'-C3'	-6.36	110.66	120.20
1	A3	94	G	C5'-C4'-O4'	-6.35	99.57	109.10
48	A2	251	G	C4'-C3'-O3'	-6.35	103.47	113.00
48	A2	2422	G	O3'-P-O5'	-6.35	94.47	104.00
49	B1	1497	G	P-O5'-C5'	-6.35	111.37	120.90
48	A2	290	A	C1'-C2'-O2'	-6.35	98.88	108.40
49	B1	897	U	C4'-C3'-O3'	6.34	122.52	113.00
2	A4	56	G	P-O3'-C3'	6.34	129.71	120.20
71	BV	9	VAL	N-CA-C	6.34	117.12	110.72
49	B1	801	U	O5'-C5'-C4'	-6.34	101.99	111.50
64	BO	50	LYS	N-CA-C	6.34	118.27	111.36
2	A4	81	G	P-O3'-C3'	-6.33	110.70	120.20
48	A2	968	C	P-O3'-C3'	-6.33	110.71	120.20
48	A2	2457	C	P-O3'-C3'	-6.33	110.71	120.20
48	A2	5007	G	N9-C1'-C2'	6.33	123.49	114.00
49	B1	861	A	C2'-C3'-O3'	6.33	118.99	109.50
48	A2	4916	C	P-O3'-C3'	-6.32	110.72	120.20
48	A2	680	C	C5'-C4'-C3'	-6.32	106.53	116.00
49	B1	842	C	OP2-P-O3'	6.31	126.94	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	B1	907	G	C2'-C3'-O3'	-6.31	104.23	113.70
48	A2	225	C	O4'-C4'-C3'	-6.31	97.69	104.00
48	A2	736	G	C2'-C3'-O3'	6.31	118.97	109.50
1	A3	115	G	O3'-P-O5'	-6.31	94.53	104.00
48	A2	1352	C	P-O5'-C5'	6.31	130.36	120.90
49	B1	894	G	C4'-C3'-O3'	6.31	122.46	113.00
46	At	43	LEU	N-CA-C	6.31	118.23	111.36
48	A2	42	A	C5'-C4'-C3'	-6.31	105.74	115.20
48	A2	736	G	O3'-P-O5'	-6.30	94.55	104.00
48	A2	2526	G	O3'-P-O5'	6.30	113.45	104.00
48	A2	462	U	C2'-C3'-O3'	-6.30	104.25	113.70
48	A2	3704	A	C4'-C3'-O3'	6.30	122.45	113.00
48	A2	49	U	P-O3'-C3'	-6.29	110.76	120.20
48	A2	111	C	P-O3'-C3'	6.29	129.64	120.20
48	A2	2604	U	O3'-P-O5'	6.29	113.44	104.00
48	A2	1283	G	O3'-P-O5'	-6.29	94.56	104.00
49	B1	1556	A	C2'-C3'-O3'	6.29	118.93	109.50
48	A2	4016	A	C2'-C3'-O3'	6.29	118.93	109.50
44	Ap	8	VAL	N-CA-C	6.28	117.03	110.62
48	A2	1257	A	C1'-C2'-O2'	6.28	117.82	108.40
48	A2	1974	C	O3'-P-O5'	-6.28	94.58	104.00
83	Bw	57	G	C4'-C3'-O3'	6.28	122.42	113.00
48	A2	698	C	O3'-P-O5'	-6.28	94.58	104.00
48	A2	932	U	N1-C1'-C2'	6.28	121.42	112.00
48	A2	1226	C	O4'-C4'-C3'	-6.28	97.72	104.00
48	A2	3578	U	O5'-C5'-C4'	-6.28	102.08	111.50
48	A2	4597	A	P-O3'-C3'	6.28	129.61	120.20
49	B1	893	U	O5'-C5'-C4'	-6.27	102.09	111.50
11	AI	36	LEU	N-CA-C	6.27	118.19	111.36
48	A2	1198	C	P-O5'-C5'	-6.27	111.50	120.90
48	A2	3738	C	C2'-C3'-O3'	-6.27	104.30	113.70
56	BG	24	LEU	N-CA-C	6.27	120.13	112.23
49	B1	1678	A	C4'-C3'-O3'	6.27	122.40	113.00
49	B1	881	G	C4'-C3'-O3'	6.26	122.39	113.00
49	B1	1679	A	O5'-C5'-C4'	-6.26	102.11	111.50
48	A2	309	G	O4'-C4'-C3'	-6.26	99.84	106.10
48	A2	671	C	O3'-P-O5'	-6.26	94.61	104.00
48	A2	1754	C	O3'-P-O5'	6.26	113.39	104.00
49	B1	1286	G	P-O5'-C5'	6.26	130.29	120.90
48	A2	1265	G	C1'-C2'-O2'	-6.26	99.02	108.40
49	B1	1015	U	P-O3'-C3'	6.26	129.59	120.20
49	B1	1254	C	O3'-P-O5'	6.25	113.38	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	AE	206	VAL	N-CA-C	6.25	116.99	110.62
49	B1	686	U	C4'-C3'-O3'	-6.25	103.63	113.00
49	B1	1551	U	C4'-C3'-O3'	6.25	122.37	113.00
48	A2	3735	U	C4'-C3'-O3'	-6.24	103.64	113.00
48	A2	189	G	C4'-C3'-O3'	6.24	122.36	113.00
48	A2	2748	U	C3'-C2'-O2'	6.24	123.96	114.60
49	B1	1554	C	P-O3'-C3'	6.24	129.56	120.20
48	A2	191	C	O4'-C1'-C2'	-6.24	101.36	107.60
48	A2	4533	A	O5'-C5'-C4'	6.24	120.85	111.50
48	A2	4840	U	O3'-P-O5'	-6.24	94.65	104.00
14	AL	61	CYS	N-CA-C	6.23	117.56	109.64
20	AR	103	ARG	N-CA-C	6.23	117.74	111.07
48	A2	681	A	O4'-C4'-C3'	-6.23	97.77	104.00
65	BP	72	LYS	CA-C-N	-6.23	112.05	119.84
65	BP	72	LYS	C-N-CA	-6.23	112.05	119.84
48	A2	5006	A	O3'-P-O5'	6.23	113.34	104.00
49	B1	1557	C	P-O5'-C5'	6.23	130.24	120.90
48	A2	2492	A	P-O3'-C3'	-6.22	110.86	120.20
49	B1	407	G	P-O3'-C3'	-6.22	110.87	120.20
48	A2	4631	A	P-O3'-C3'	6.22	129.53	120.20
48	A2	3649	G	O3'-P-O5'	6.21	113.31	104.00
49	B1	289	G	P-O3'-C3'	-6.21	110.89	120.20
48	A2	2246	U	C4'-C3'-O3'	6.21	118.71	109.40
48	A2	1429	C	O5'-C5'-C4'	-6.20	102.20	111.50
48	A2	3596	G	C1'-C2'-O2'	6.20	117.70	108.40
48	A2	2330	C	P-O3'-C3'	6.20	129.50	120.20
48	A2	1742	G	P-O5'-C5'	-6.19	111.61	120.90
49	B1	687	C	O3'-P-O5'	6.19	113.29	104.00
48	A2	190	G	O3'-P-O5'	6.19	113.28	104.00
48	A2	193	C	P-O5'-C5'	-6.19	111.62	120.90
48	A2	447	G	O5'-C5'-C4'	-6.19	102.22	111.50
49	B1	1826	G	C4'-C3'-O3'	-6.18	103.72	113.00
53	BD	198	ILE	N-CA-C	6.18	116.93	110.62
1	A3	118	C	P-O3'-C3'	-6.18	110.93	120.20
48	A2	4596	U	O4'-C1'-C2'	6.18	111.98	105.80
49	B1	892	U	O5'-C5'-C4'	-6.18	102.23	111.50
48	A2	660	C	O3'-P-O5'	-6.18	94.73	104.00
48	A2	290	A	C4'-C3'-O3'	-6.17	103.74	113.00
49	B1	899	U	C4'-C3'-O3'	6.17	122.26	113.00
48	A2	85	G	C2'-C3'-O3'	6.17	118.75	109.50
1	A3	10	G	C5'-C4'-C3'	6.17	125.25	116.00
37	Ai	78	GLY	N-CA-C	6.17	120.13	112.73

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	154	U	C4'-C3'-O3'	-6.17	103.75	113.00
48	A2	43	U	C2'-C3'-O3'	-6.16	104.46	113.70
48	A2	1631	U	O3'-P-O5'	-6.16	94.76	104.00
48	A2	496	C	C2'-C3'-O3'	-6.15	104.47	113.70
48	A2	1945	A	O4'-C1'-C2'	-6.15	101.45	107.60
48	A2	3792	A	O3'-P-O5'	-6.15	94.77	104.00
48	A2	4533	A	P-O5'-C5'	-6.15	111.67	120.90
48	A2	4593	G	P-O3'-C3'	6.15	129.43	120.20
2	A4	47	G	P-O5'-C5'	-6.15	111.68	120.90
49	B1	1678	A	O3'-P-O5'	-6.14	94.78	104.00
48	A2	2700	G	P-O3'-C3'	-6.14	110.99	120.20
48	A2	736	G	P-O3'-C3'	-6.14	111.00	120.20
12	AJ	47	THR	CA-C-N	6.13	126.10	119.78
12	AJ	47	THR	C-N-CA	6.13	126.10	119.78
48	A2	456	G	O3'-P-O5'	-6.13	94.80	104.00
48	A2	1297	C	P-O5'-C5'	-6.13	111.70	120.90
48	A2	1261	C	O5'-C5'-C4'	6.13	120.70	111.50
48	A2	43	U	P-O5'-C5'	-6.13	111.71	120.90
48	A2	1803	G	O3'-P-O5'	6.13	113.19	104.00
48	A2	4598	U	O5'-C5'-C4'	-6.13	102.31	111.50
48	A2	717	G	C2'-C3'-O3'	6.12	122.88	113.70
36	Ah	45	SER	N-CA-C	-6.12	104.61	111.28
48	A2	1308	C	P-O5'-C5'	-6.12	111.72	120.90
49	B1	746	C	C5'-C4'-C3'	-6.12	106.82	116.00
49	B1	1805	G	O3'-P-O5'	6.12	113.18	104.00
1	A3	14	U	O3'-P-O5'	6.12	113.17	104.00
29	Aa	115	GLY	N-CA-C	6.12	120.37	112.54
48	A2	2569	G	P-O3'-C3'	-6.12	111.03	120.20
48	A2	4318	G	O3'-P-O5'	-6.12	94.83	104.00
48	A2	2674	A	C1'-C2'-O2'	-6.11	102.64	111.80
2	A4	3	C	C4'-C3'-O3'	6.11	122.16	113.00
48	A2	1461	G	C4'-C3'-O3'	-6.11	103.84	113.00
48	A2	967	U	C2'-C3'-O3'	-6.10	104.54	113.70
15	AM	31	ILE	N-CA-C	6.10	116.28	110.42
48	A2	1197	C	O5'-C5'-C4'	-6.10	102.35	111.50
48	A2	4086	U	C1'-C2'-O2'	-6.09	99.26	108.40
49	B1	1526	G	P-O3'-C3'	-6.09	111.06	120.20
56	BG	50	VAL	N-CA-C	6.09	116.90	108.12
17	AO	128	ARG	N-CA-C	6.09	118.00	111.36
9	AG	168	VAL	N-CA-C	6.09	116.83	110.62
48	A2	221	U	P-O5'-C5'	-6.09	111.77	120.90
49	B1	396	U	P-O3'-C3'	-6.09	111.07	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	B1	33	G	OP2-P-O3'	6.08	126.25	108.00
49	B1	1551	U	C2'-C3'-O3'	-6.08	104.58	113.70
48	A2	4819	G	O3'-P-O5'	-6.08	94.88	104.00
49	B1	35	C	O3'-P-O5'	6.08	113.12	104.00
48	A2	908	C	P-O5'-C5'	6.08	130.02	120.90
45	Aq	71	ILE	CA-CB-CG2	-6.08	100.17	110.50
48	A2	702	A	O3'-P-O5'	-6.08	94.88	104.00
2	A4	34	C	O3'-P-O5'	6.08	113.12	104.00
54	BE	67	GLN	N-CA-C	-6.08	105.62	113.16
48	A2	1274	G	P-O3'-C3'	-6.08	111.09	120.20
48	A2	1752	A	C2'-C3'-O3'	-6.08	104.59	113.70
49	B1	306	C	O4'-C1'-N1	-6.08	99.09	108.20
48	A2	1257	A	O3'-P-O5'	-6.07	94.89	104.00
45	Aq	114	ARG	N-CA-C	-6.07	105.83	113.18
48	A2	154	U	C3'-C2'-O2'	-6.07	101.59	110.70
7	AE	208	ILE	CA-C-N	-6.07	113.53	119.90
7	AE	208	ILE	C-N-CA	-6.07	113.53	119.90
49	B1	1754	G	O5'-C5'-C4'	-6.06	102.41	111.50
48	A2	1260	G	C5'-C4'-O4'	-6.06	100.71	109.80
48	A2	2674	A	C2'-C3'-O3'	-6.06	100.41	109.50
83	Bv	35	A	O5'-C5'-C4'	-6.06	102.41	111.50
38	Aj	5	THR	N-CA-C	6.06	117.88	111.28
48	A2	2824	A	C4'-C3'-O3'	-6.05	103.92	113.00
13	AK	77	LYS	N-CA-C	-6.04	104.05	112.45
48	A2	3597	G	C5'-C4'-C3'	6.04	125.06	116.00
49	B1	809	A	P-O3'-C3'	-6.04	111.14	120.20
13	AK	27	CYS	CA-CB-SG	6.04	128.29	114.40
48	A2	2609	U	O5'-C5'-C4'	-6.04	102.44	111.50
48	A2	449	C	C4'-C3'-O3'	6.04	122.06	113.00
48	A2	3731	A	C2'-C3'-O3'	6.04	122.75	113.70
48	A2	3731	A	C1'-C2'-O2'	6.03	117.45	108.40
83	Bv	33	U	C3'-C2'-O2'	-6.03	101.65	110.70
45	Aq	30	PRO	N-CA-CB	6.03	109.90	103.39
49	B1	799	U	C1'-C2'-O2'	-6.03	99.35	108.40
48	A2	2607	U	C4'-C3'-O3'	-6.03	103.96	113.00
48	A2	1251	G	P-O3'-C3'	6.03	129.24	120.20
49	B1	358	C	P-O3'-C3'	-6.03	111.16	120.20
49	B1	883	U	C2'-C3'-O3'	-6.03	104.66	113.70
7	AE	127	SER	N-CA-C	6.03	125.73	113.20
48	A2	1632	A	P-O5'-C5'	-6.02	111.87	120.90
48	A2	1965	A	P-O3'-C3'	-6.02	111.17	120.20
48	A2	1850	G	C3'-C2'-O2'	-6.01	105.58	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	B1	1181	A	P-O3'-C3'	6.01	129.21	120.20
2	A4	46	C	C4'-C3'-O3'	6.00	122.01	113.00
13	AK	25	PRO	N-CD-CG	6.00	112.21	103.20
1	A3	150	C	OP1-P-O3'	-6.00	90.00	108.00
49	B1	1443	C	C3'-C2'-O2'	-6.00	101.70	110.70
2	A4	67	C	P-O3'-C3'	-5.99	111.21	120.20
48	A2	242	C	O5'-C5'-C4'	5.99	120.49	111.50
49	B1	746	C	C2'-C3'-O3'	5.99	122.69	113.70
49	B1	1778	C	O4'-C4'-C3'	5.99	109.99	104.00
48	A2	2299	G	C2'-C3'-O3'	5.99	122.68	113.70
34	Af	19	ARG	N-CA-C	5.99	117.89	111.36
48	A2	3726	G	O3'-P-O5'	5.98	112.97	104.00
1	A3	111	U	P-O3'-C3'	5.98	129.17	120.20
48	A2	1744	C	P-O5'-C5'	-5.98	111.93	120.90
48	A2	1754	C	C4'-C3'-O3'	-5.98	104.04	113.00
49	B1	1233	G	O3'-P-O5'	5.97	112.96	104.00
48	A2	2684	G	N9-C1'-C2'	-5.97	103.04	112.00
48	A2	2859	U	O3'-P-O5'	-5.97	95.04	104.00
48	A2	4586	A	P-O3'-C3'	5.97	129.16	120.20
49	B1	1624	U	C5'-C4'-O4'	5.97	118.76	109.80
49	B1	1700	C	C3'-C2'-O2'	-5.97	105.64	114.60
48	A2	2689	C	O5'-C5'-C4'	-5.97	102.55	111.50
49	B1	1484	A	P-O3'-C3'	-5.97	111.25	120.20
48	A2	2245	C	P-O3'-C3'	-5.97	111.25	120.20
49	B1	898	U	P-O5'-C5'	-5.97	111.95	120.90
50	BA	206	ASP	CA-C-N	-5.97	114.12	120.03
50	BA	206	ASP	C-N-CA	-5.97	114.12	120.03
48	A2	4722	G	P-O3'-C3'	-5.96	111.26	120.20
12	AJ	145	LYS	N-CA-C	5.96	117.86	111.36
20	AR	72	LYS	CA-C-N	5.96	133.09	121.41
20	AR	72	LYS	C-N-CA	5.96	133.09	121.41
48	A2	959	C	C4'-C3'-C2'	-5.96	96.64	102.60
11	AI	181	PHE	N-CA-C	5.96	117.44	111.07
60	BK	94	LEU	N-CA-C	5.96	117.44	111.07
48	A2	409	G	P-O3'-C3'	5.96	129.13	120.20
38	Aj	63	ARG	CB-CA-C	-5.95	100.91	110.79
48	A2	3577	U	O3'-P-O5'	5.95	112.93	104.00
2	A4	9	C	P-O3'-C3'	5.95	129.13	120.20
47	Au	59	PRO	CA-N-CD	-5.94	103.68	112.00
51	BB	170	GLU	O-C-N	-5.94	115.82	122.12
48	A2	2325	C	C5'-C4'-C3'	5.93	124.10	115.20
48	A2	4514	U	C2'-C3'-O3'	5.93	122.60	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	B1	1444	U	O4'-C4'-C3'	5.93	109.93	104.00
44	Ap	90	LYS	N-CA-C	5.93	119.74	111.74
47	Au	43	PRO	N-CA-CB	5.93	109.54	102.60
48	A2	463	C	C5'-C4'-O4'	-5.92	100.92	109.80
49	B1	305	U	C1'-C2'-O2'	5.92	117.28	108.40
2	A4	70	G	O3'-P-O5'	-5.92	95.12	104.00
48	A2	1920	A	C2'-C3'-O3'	-5.92	104.83	113.70
49	B1	368	U	C3'-C2'-O2'	-5.91	105.73	114.60
48	A2	111	C	O3'-P-O5'	-5.91	95.13	104.00
48	A2	1071	C	P-O3'-C3'	-5.91	111.33	120.20
49	B1	422	U	P-O3'-C3'	5.91	129.07	120.20
1	A3	88	A	C4'-C3'-O3'	-5.91	104.14	113.00
3	AA	247	ARG	N-CA-CB	-5.91	100.88	110.81
48	A2	3608	U	C4'-C3'-O3'	5.91	121.86	113.00
49	B1	182	C	C1'-C2'-O2'	5.91	117.26	108.40
79	Bd	8	TRP	N-CA-C	5.91	118.74	108.76
48	A2	727	C	P-O5'-C5'	-5.90	112.04	120.90
48	A2	3613	A	C5'-C4'-O4'	-5.90	100.25	109.10
49	B1	691	G	P-O5'-C5'	5.90	129.75	120.90
48	A2	1357	G	O3'-P-O5'	5.89	112.84	104.00
48	A2	347	A	C4'-C3'-O3'	-5.89	100.56	109.40
49	B1	639	C	C1'-C2'-O2'	5.89	117.23	108.40
13	AK	73	PRO	N-CA-CB	5.89	110.58	103.45
48	A2	1741	G	C5'-C4'-O4'	-5.89	100.97	109.80
48	A2	3876	A	O3'-P-O5'	-5.88	95.17	104.00
48	A2	3727	A	C4'-C3'-O3'	-5.88	104.18	113.00
48	A2	420	A	C4'-C3'-O3'	5.88	121.81	113.00
48	A2	1752	A	C1'-C2'-O2'	5.87	117.21	108.40
48	A2	1973	U	P-O3'-C3'	-5.87	111.39	120.20
14	AL	176	PHE	N-CA-C	5.87	117.76	111.36
11	AI	34	PHE	N-CA-C	5.87	117.76	111.36
56	BG	214	ALA	N-CA-C	-5.87	104.89	111.28
83	Bw	35	A	O4'-C4'-C3'	5.87	109.86	104.00
48	A2	4705	G	P-O3'-C3'	5.86	128.99	120.20
11	AI	39	LYS	N-CA-CB	-5.86	101.49	110.16
48	A2	291	U	C2'-C3'-O3'	-5.85	104.92	113.70
48	A2	50	C	O4'-C4'-C3'	-5.85	98.15	104.00
48	A2	3940	G	C2'-C3'-O3'	-5.85	104.92	113.70
48	A2	2458	G	P-O3'-C3'	-5.85	111.43	120.20
48	A2	356	A	P-O3'-C3'	-5.84	111.43	120.20
36	Ah	55	ALA	CA-C-N	5.84	128.38	120.38
36	Ah	55	ALA	C-N-CA	5.84	128.38	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	B1	1224	G	P-O3'-C3'	5.84	128.96	120.20
49	B1	319	C	C4'-C3'-O3'	-5.84	104.24	113.00
50	BA	39	TYR	N-CA-C	5.83	117.72	111.36
48	A2	1755	U	O5'-C5'-C4'	-5.83	102.75	111.50
1	A3	124	U	OP1-P-O3'	-5.83	90.52	108.00
2	A4	2	U	C4'-C3'-O3'	-5.83	104.26	113.00
49	B1	356	C	C4'-C3'-O3'	5.83	121.74	113.00
49	B1	1289	U	N1-C1'-C2'	5.83	122.74	114.00
49	B1	1448	A	O5'-C5'-C4'	-5.82	102.77	111.50
48	A2	2690	G	O4'-C1'-N9	5.82	117.23	108.50
49	B1	852	G	C4'-C3'-O3'	-5.82	104.27	113.00
48	A2	227	G	C3'-C2'-O2'	-5.82	101.97	110.70
44	Ap	7	LYS	N-CA-C	5.82	117.42	111.14
48	A2	1757	A	C5'-C4'-C3'	5.82	124.72	116.00
48	A2	3667	C	P-O3'-C3'	5.82	128.92	120.20
49	B1	1034	A	C4'-C3'-O3'	-5.82	104.28	113.00
70	BU	44	LYS	N-CA-C	5.82	117.62	111.28
2	A4	43	U	O3'-P-O5'	5.81	112.72	104.00
48	A2	241	G	P-O3'-C3'	5.81	128.92	120.20
49	B1	1826	G	O5'-C5'-C4'	5.81	120.22	111.50
48	A2	2618	U	C2'-C3'-O3'	5.81	118.21	109.50
49	B1	841	G	O4'-C4'-C3'	-5.81	98.19	104.00
7	AE	116	TYR	CA-C-N	-5.80	114.78	120.52
7	AE	116	TYR	C-N-CA	-5.80	114.78	120.52
7	AE	201	ILE	N-CA-C	-5.80	99.52	107.99
48	A2	1753	U	P-O5'-C5'	-5.80	112.20	120.90
49	B1	1620	A	P-O3'-C3'	5.80	128.90	120.20
74	BY	118	ARG	N-CA-C	5.80	118.69	109.24
13	AK	88	PHE	CA-CB-CG	-5.79	108.01	113.80
48	A2	3922	G	P-O3'-C3'	-5.79	111.51	120.20
48	A2	4045	U	P-O3'-C3'	-5.79	111.52	120.20
48	A2	1351	A	C4'-C3'-O3'	5.79	121.68	113.00
48	A2	1992	C	O5'-C5'-C4'	-5.79	102.82	111.50
48	A2	2282	C	P-O3'-C3'	-5.79	111.52	120.20
49	B1	804	U	O4'-C4'-C3'	5.79	109.79	104.00
84	Bx	43	U	N1-C1'-C2'	5.79	120.68	112.00
48	A2	100	C	O3'-P-O5'	-5.78	95.33	104.00
48	A2	1798	C	C1'-C2'-O2'	-5.78	99.73	108.40
48	A2	1061	A	P-O3'-C3'	-5.78	111.53	120.20
48	A2	3850	G	P-O3'-C3'	5.78	128.87	120.20
49	B1	1253	A	O3'-P-O5'	5.78	112.67	104.00
49	B1	1014	G	P-O3'-C3'	5.78	128.86	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	287	G	C4'-C3'-O3'	-5.77	104.34	113.00
48	A2	2509	U	C4'-C3'-O3'	-5.77	100.75	109.40
48	A2	204	G	P-O3'-C3'	5.76	128.84	120.20
48	A2	1755	U	O3'-P-O5'	-5.76	95.36	104.00
49	B1	840	C	C2'-C3'-O3'	-5.76	105.06	113.70
48	A2	3588	G	C1'-C2'-O2'	-5.76	99.76	108.40
49	B1	1338	G	P-O3'-C3'	5.76	128.84	120.20
83	Bv	76	A	C2'-C3'-O3'	5.76	118.14	109.50
48	A2	939	G	C4'-C3'-O3'	5.76	121.64	113.00
49	B1	177	G	P-O3'-C3'	-5.76	111.56	120.20
49	B1	1445	U	C5'-C4'-C3'	5.76	124.64	116.00
39	Ak	60	LEU	CA-C-N	-5.75	114.45	120.38
39	Ak	60	LEU	C-N-CA	-5.75	114.45	120.38
65	BP	86	LEU	CA-C-N	-5.75	113.86	119.78
65	BP	86	LEU	C-N-CA	-5.75	113.86	119.78
45	Aq	83	LYS	N-CA-C	-5.75	105.97	112.87
48	A2	201	U	P-O3'-C3'	-5.75	111.58	120.20
48	A2	966	C	O3'-P-O5'	-5.75	95.38	104.00
48	A2	3669	G	P-O3'-C3'	-5.75	111.58	120.20
48	A2	4606	G	P-O3'-C3'	5.75	128.82	120.20
49	B1	320	G	C2'-C3'-O3'	-5.75	105.08	113.70
48	A2	2462	G	O3'-P-O5'	-5.74	95.38	104.00
14	AL	166	ALA	N-CA-C	5.74	118.26	108.90
49	B1	874	G	C1'-C2'-O2'	5.74	117.01	108.40
49	B1	1822	A	C4'-C3'-O3'	-5.74	104.39	113.00
48	A2	918	C	O3'-P-O5'	-5.74	95.39	104.00
49	B1	1823	A	C4'-C3'-O3'	5.74	118.01	109.40
2	A4	35	U	P-O3'-C3'	-5.74	111.60	120.20
48	A2	4040	U	P-O3'-C3'	-5.74	111.60	120.20
49	B1	873	G	C2'-C3'-O3'	5.74	118.10	109.50
5	AC	275	SER	N-CA-C	5.73	117.53	111.28
49	B1	428	U	C2'-C3'-O3'	5.73	118.10	109.50
49	B1	1785	C	P-O3'-C3'	-5.73	111.60	120.20
48	A2	3937	A	C2'-C3'-O3'	-5.73	105.10	113.70
49	B1	907	G	C4'-C3'-O3'	-5.73	104.41	113.00
48	A2	1849	A	P-O3'-C3'	-5.73	111.61	120.20
48	A2	4048	C	P-O3'-C3'	-5.72	111.61	120.20
48	A2	4827	U	O5'-C5'-C4'	5.72	120.29	111.70
48	A2	448	U	O5'-C5'-C4'	-5.72	103.12	111.70
50	BA	200	ASP	N-CA-C	-5.72	107.29	114.56
1	A3	108	A	C3'-C2'-O2'	-5.72	102.12	110.70
48	A2	1300	U	O3'-P-O5'	-5.72	95.42	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	3705	U	C2'-C3'-O3'	-5.72	105.12	113.70
29	Aa	28	HIS	CA-C-N	-5.71	112.71	119.05
29	Aa	28	HIS	C-N-CA	-5.71	112.71	119.05
48	A2	2692	C	C5'-C4'-C3'	-5.71	107.43	116.00
82	Bg	164	ILE	N-CA-C	5.71	116.11	108.11
48	A2	675	G	P-O3'-C3'	5.71	128.76	120.20
48	A2	4715	U	C3'-C2'-O2'	-5.71	102.14	110.70
48	A2	1920	A	P-O5'-C5'	5.70	129.46	120.90
49	B1	1783	C	C4'-C3'-O3'	-5.70	100.84	109.40
50	BA	113	GLN	N-CA-CB	-5.70	102.72	111.56
31	Ac	92	CYS	N-CA-C	5.70	117.57	111.36
48	A2	350	G	O3'-P-O5'	5.70	112.55	104.00
49	B1	1754	G	C4'-C3'-O3'	-5.70	104.45	113.00
48	A2	68	U	O3'-P-O5'	-5.70	95.46	104.00
48	A2	958	U	C3'-C2'-O2'	-5.70	102.16	110.70
48	A2	1265	G	C3'-C2'-O2'	-5.70	102.16	110.70
24	AV	47	GLY	N-CA-C	5.69	119.42	110.71
49	B1	534	G	C5'-C4'-C3'	-5.69	107.46	116.00
49	B1	1421	A	P-O3'-C3'	-5.69	111.66	120.20
28	AZ	123	LYS	N-CA-C	-5.69	101.86	110.28
49	B1	750	C	N1-C1'-C2'	5.69	120.53	112.00
49	B1	844	U	O3'-P-O5'	5.69	112.53	104.00
48	A2	506	U	P-O3'-C3'	-5.68	111.67	120.20
48	A2	5026	G	P-O3'-C3'	-5.68	111.67	120.20
36	Ah	44	LEU	N-CA-C	5.68	117.47	111.28
48	A2	962	C	O5'-C5'-C4'	-5.68	102.98	111.50
83	Bv	73	A	C2'-C3'-O3'	-5.68	105.18	113.70
48	A2	967	U	N1-C1'-C2'	5.68	120.52	112.00
43	Ao	99	ARG	N-CA-C	-5.68	100.72	109.52
48	A2	2690	G	C2'-C3'-O3'	5.68	122.21	113.70
48	A2	3732	C	P-O5'-C5'	-5.67	112.39	120.90
48	A2	2861	A	O5'-C5'-C4'	5.67	120.01	111.50
49	B1	977	C	O5'-C5'-C4'	5.67	120.01	111.50
68	BS	75	ARG	N-CA-C	5.67	117.46	111.28
48	A2	1498	G	O5'-C5'-C4'	-5.67	103.00	111.50
6	AD	285	ALA	CA-C-N	-5.66	113.08	120.44
6	AD	285	ALA	C-N-CA	-5.66	113.08	120.44
67	BR	99	ASP	CA-C-N	-5.66	112.77	119.05
67	BR	99	ASP	C-N-CA	-5.66	112.77	119.05
49	B1	848	U	C2'-C3'-O3'	5.66	122.19	113.70
31	Ac	43	ALA	N-CA-C	5.65	117.51	108.41
48	A2	242	C	C4'-C3'-O3'	-5.65	104.52	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	B1	688	U	O3'-P-O5'	-5.65	95.52	104.00
29	Aa	98	ALA	CA-C-N	-5.65	114.77	120.31
29	Aa	98	ALA	C-N-CA	-5.65	114.77	120.31
56	BG	116	LYS	N-CA-C	5.65	118.42	110.23
48	A2	4726	A	C5'-C4'-C3'	5.64	124.47	116.00
49	B1	231	A	C5'-C4'-O4'	5.64	118.27	109.80
49	B1	874	G	O3'-P-O5'	5.64	112.46	104.00
48	A2	382	A	P-O5'-C5'	5.64	129.36	120.90
48	A2	193	C	C1'-C2'-O2'	-5.64	99.94	108.40
14	AL	165	LYS	N-CA-C	5.64	117.42	111.28
48	A2	3612	U	C4'-C3'-O3'	5.64	121.45	113.00
48	A2	4891	C	P-O3'-C3'	-5.63	111.75	120.20
2	A4	63	C	P-O3'-C3'	-5.63	111.75	120.20
84	Bx	46	U	C4'-C3'-O3'	-5.63	104.56	113.00
48	A2	2693	G	P-O5'-C5'	-5.62	112.46	120.90
78	Bc	14	VAL	N-CA-C	5.62	116.50	107.73
48	A2	957	G	C5'-C4'-C3'	5.62	124.43	116.00
49	B1	292	A	O3'-P-O5'	5.62	112.43	104.00
49	B1	451	G	C3'-C2'-O2'	-5.62	102.28	110.70
78	Bc	36	ASP	N-CA-C	5.62	117.48	111.36
45	Aq	9	GLU	CB-CG-CD	5.62	122.15	112.60
48	A2	4720	U	P-O3'-C3'	5.62	128.62	120.20
49	B1	1316	C	O3'-P-O5'	5.62	112.42	104.00
36	Ah	43	LYS	N-CA-C	5.61	117.40	111.28
20	AR	129	GLY	N-CA-C	-5.61	105.36	112.54
48	A2	1420	C	P-O3'-C3'	-5.61	111.79	120.20
48	A2	2860	A	P-O5'-C5'	-5.61	112.49	120.90
49	B1	874	G	O4'-C4'-C3'	5.61	109.61	104.00
1	A3	34	U	N1-C1'-C2'	5.61	122.41	114.00
13	AK	73	PRO	N-CD-CG	5.61	111.61	103.20
48	A2	4827	U	C1'-C2'-O2'	-5.60	103.39	111.80
49	B1	534	G	C4'-C3'-O3'	-5.60	104.59	113.00
48	A2	735	G	C2'-C3'-O3'	5.60	122.10	113.70
48	A2	120	A	P-O5'-C5'	-5.60	112.50	120.90
57	BH	176	VAL	N-CA-C	5.60	115.80	110.42
2	A4	6	C	P-O3'-C3'	5.60	128.60	120.20
1	A3	102	G	P-O3'-C3'	-5.59	111.81	120.20
49	B1	903	A	C5'-C4'-O4'	5.59	118.19	109.80
48	A2	1989	U	O3'-P-O5'	-5.59	95.61	104.00
50	BA	104	THR	CA-C-N	-5.59	112.85	119.84
50	BA	104	THR	C-N-CA	-5.59	112.85	119.84
82	Bg	185	LYS	N-CA-C	5.59	117.24	111.03

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	155	A	O5'-C5'-C4'	-5.59	103.32	111.70
48	A2	2820	G	P-O3'-C3'	-5.59	111.82	120.20
8	AF	194	ILE	N-CA-C	5.59	115.78	110.53
49	B1	1444	U	C3'-C2'-O2'	-5.59	102.32	110.70
49	B1	792	C	O4'-C4'-C3'	5.58	109.58	104.00
47	Au	121	PRO	N-CA-CB	5.58	109.47	103.33
49	B1	851	C	C4'-C3'-O3'	-5.58	104.62	113.00
49	B1	1552	G	C4'-C3'-O3'	-5.58	104.62	113.00
25	AW	51	TRP	N-CA-C	-5.58	106.51	113.15
48	A2	1429	C	C4'-C3'-O3'	5.58	121.37	113.00
48	A2	4896	A	C2'-C3'-O3'	5.58	117.87	109.50
49	B1	744	G	C4'-C3'-C2'	-5.58	97.03	102.60
13	AK	91	THR	CA-CB-OG1	5.57	117.96	109.60
49	B1	449	A	C2'-C3'-O3'	5.57	117.86	109.50
48	A2	905	G	C2'-C3'-O3'	5.57	122.05	113.70
49	B1	1598	G	P-O5'-C5'	5.57	129.25	120.90
48	A2	1615	G	P-O3'-C3'	5.57	128.55	120.20
48	A2	192	C	O5'-C5'-C4'	-5.57	103.15	111.50
48	A2	1224	C	O5'-C5'-C4'	5.57	119.85	111.50
48	A2	3683	A	P-O5'-C5'	5.57	129.25	120.90
48	A2	3710	C	C4'-C3'-O3'	5.56	121.34	113.00
20	AR	150	ALA	N-CA-C	-5.56	105.22	111.28
49	B1	306	C	C4'-C3'-C2'	-5.56	97.04	102.60
49	B1	1407	U	O3'-P-O5'	5.56	112.34	104.00
6	AD	223	PHE	N-CA-C	-5.56	105.84	113.56
49	B1	1699	A	C4'-C3'-O3'	5.56	121.33	113.00
49	B1	1389	C	P-O3'-C3'	5.55	128.53	120.20
11	AI	187	GLU	N-CA-C	5.55	117.33	111.28
48	A2	2425	C	P-O3'-C3'	5.55	128.53	120.20
48	A2	4242	A	C4'-C3'-O3'	-5.55	104.68	113.00
48	A2	1732	G	P-O3'-C3'	-5.54	111.89	120.20
48	A2	4119	A	O3'-P-O5'	-5.54	95.68	104.00
49	B1	357	C	C2'-C3'-O3'	-5.54	105.39	113.70
48	A2	4602	C	P-O3'-C3'	-5.54	111.89	120.20
49	B1	15	U	P-O3'-C3'	5.54	128.51	120.20
5	AC	50	GLN	CA-C-N	-5.54	112.90	119.05
5	AC	50	GLN	C-N-CA	-5.54	112.90	119.05
48	A2	190	G	C4'-C3'-O3'	5.54	121.30	113.00
48	A2	214	C	P-O3'-C3'	-5.54	111.89	120.20
48	A2	4691	A	C4'-C3'-O3'	-5.54	101.10	109.40
49	B1	351	G	P-O3'-C3'	-5.54	111.90	120.20
48	A2	5007	G	C2'-C3'-O3'	-5.53	101.20	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	963	G	P-O3'-C3'	-5.53	111.90	120.20
48	A2	3793	U	O3'-P-O5'	-5.53	95.70	104.00
48	A2	4532	G	O3'-P-O5'	-5.53	95.70	104.00
49	B1	114	G	OP1-P-O3'	-5.53	91.42	108.00
22	AT	50	LYS	N-CA-C	5.52	117.30	111.28
49	B1	986	G	C1'-C2'-O2'	5.52	116.69	108.40
48	A2	4690	U	C4'-C3'-O3'	-5.52	104.72	113.00
49	B1	840	C	C4'-C3'-O3'	5.52	121.28	113.00
49	B1	356	C	C1'-C2'-O2'	5.52	116.68	108.40
48	A2	138	C	O3'-P-O5'	-5.52	95.72	104.00
49	B1	209	A	P-O3'-C3'	-5.52	111.93	120.20
1	A3	109	C	O5'-P-OP1	5.51	124.55	108.00
48	A2	2685	G	O5'-C5'-C4'	5.51	119.76	111.50
49	B1	211	G	O3'-P-O5'	5.51	112.27	104.00
48	A2	4727	G	C1'-C2'-O2'	-5.51	100.14	108.40
49	B1	369	C	C5'-C4'-C3'	-5.51	107.74	116.00
36	Ah	37	THR	CB-CA-C	5.50	118.69	109.89
49	B1	609	U	P-O3'-C3'	-5.50	111.95	120.20
64	BO	17	LEU	N-CA-C	5.50	117.28	111.28
48	A2	508	U	O4'-C4'-C3'	5.50	109.50	104.00
48	A2	1280	U	P-O3'-C3'	-5.50	111.95	120.20
49	B1	123	G	C2'-C3'-O3'	-5.50	105.45	113.70
73	BX	61	GLN	CA-C-N	-5.50	112.95	119.05
73	BX	61	GLN	C-N-CA	-5.50	112.95	119.05
22	AT	122	LYS	N-CA-C	5.50	119.97	112.88
39	Ak	63	GLY	N-CA-C	5.50	119.33	112.73
49	B1	356	C	P-O3'-C3'	5.50	128.45	120.20
6	AD	268	ARG	CA-C-N	-5.49	114.59	120.03
6	AD	268	ARG	C-N-CA	-5.49	114.59	120.03
48	A2	910	C	O3'-P-O5'	-5.49	95.76	104.00
47	Au	143	ASN	OD1-CG-ND2	-5.49	117.11	122.60
48	A2	1995	C	P-O3'-C3'	-5.49	111.96	120.20
48	A2	3636	G	C2'-C3'-O3'	-5.49	105.47	113.70
48	A2	1970	G	O5'-C5'-C4'	-5.49	103.27	111.50
49	B1	345	U	O3'-P-O5'	-5.49	95.77	104.00
48	A2	1264	G	C2'-C3'-O3'	-5.49	101.27	109.50
48	A2	3722	G	C4'-C3'-O3'	-5.49	104.77	113.00
45	Aq	45	ASP	N-CA-C	-5.48	106.63	113.15
49	B1	357	C	C5'-C4'-C3'	5.48	124.22	116.00
66	BQ	37	ARG	CA-C-N	5.48	125.43	119.78
66	BQ	37	ARG	C-N-CA	5.48	125.43	119.78
17	AO	63	ASN	N-CA-C	5.48	117.25	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	4685	A	C4'-C3'-O3'	-5.48	104.78	113.00
27	AY	21	ALA	CA-C-N	5.48	125.42	119.78
27	AY	21	ALA	C-N-CA	5.48	125.42	119.78
48	A2	1581	A	C4'-C3'-O3'	-5.48	104.79	113.00
15	AM	45	VAL	N-CA-C	-5.47	101.75	109.63
39	Ak	22	SER	N-CA-C	5.47	118.17	110.23
48	A2	42	A	C3'-C2'-O2'	-5.47	106.39	114.60
51	BB	189	ILE	N-CA-C	5.47	118.92	112.35
76	Ba	97	PRO	CA-N-CD	-5.47	104.34	112.00
48	A2	3635	G	C4'-C3'-O3'	5.47	121.21	113.00
49	B1	1555	U	C5'-C4'-O4'	5.47	117.30	109.10
38	Aj	19	CYS	CA-C-N	5.46	127.54	120.44
38	Aj	19	CYS	C-N-CA	5.46	127.54	120.44
48	A2	2005	G	C2'-C3'-O3'	-5.46	105.50	113.70
48	A2	4012	G	O3'-P-O5'	-5.46	95.80	104.00
5	AC	207	PRO	CA-C-O	-5.46	115.11	121.34
48	A2	4959	U	P-O3'-C3'	-5.46	112.01	120.20
49	B1	1254	C	P-O3'-C3'	-5.46	112.01	120.20
49	B1	503	C	P-O3'-C3'	-5.46	112.01	120.20
19	AQ	155	ALA	CA-C-N	-5.46	112.99	119.05
19	AQ	155	ALA	C-N-CA	-5.46	112.99	119.05
19	AQ	58	ARG	CA-C-N	5.46	123.59	119.66
19	AQ	58	ARG	C-N-CA	5.46	123.59	119.66
34	Af	107	PRO	CA-N-CD	-5.46	104.36	112.00
61	BL	13	GLN	CA-C-N	-5.45	113.02	119.84
61	BL	13	GLN	C-N-CA	-5.45	113.02	119.84
48	A2	2689	C	O3'-P-O5'	-5.45	95.82	104.00
1	A3	94	G	C2'-C3'-O3'	-5.45	101.33	109.50
54	BE	50	ASN	N-CA-C	5.45	117.08	111.03
67	BR	41	ILE	CA-C-N	-5.45	113.00	119.05
67	BR	41	ILE	C-N-CA	-5.45	113.00	119.05
48	A2	2686	U	C1'-C2'-O2'	5.45	116.57	108.40
48	A2	212	C	OP1-P-O3'	-5.44	91.68	108.00
48	A2	4486	G	P-O3'-C3'	-5.43	112.05	120.20
48	A2	661	G	O5'-C5'-C4'	-5.43	103.35	111.50
47	Au	25	ARG	N-CA-C	5.43	118.22	110.24
20	AR	98	ARG	N-CA-C	5.43	116.88	111.07
49	B1	740	C	C3'-C2'-O2'	5.43	118.84	110.70
48	A2	4841	C	P-O3'-C3'	5.42	128.34	120.20
48	A2	1990	A	O4'-C4'-C3'	-5.42	98.58	104.00
48	A2	4682	C	P-O3'-C3'	-5.42	112.07	120.20
21	AS	139	ARG	CA-C-N	-5.42	112.95	118.85

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AS	139	ARG	C-N-CA	-5.42	112.95	118.85
48	A2	1974	C	P-O3'-C3'	-5.42	112.08	120.20
48	A2	3838	A	O3'-P-O5'	5.42	112.12	104.00
49	B1	885	U	O5'-C5'-C4'	5.42	119.62	111.50
48	A2	2597	G	C2'-C3'-O3'	-5.42	105.58	113.70
13	AK	3	ARG	CA-C-N	5.41	130.68	122.56
13	AK	3	ARG	C-N-CA	5.41	130.68	122.56
48	A2	4715	U	C4'-C3'-O3'	-5.41	104.88	113.00
49	B1	1415	C	P-O3'-C3'	-5.41	112.08	120.20
66	BQ	44	PRO	CA-N-CD	-5.41	104.43	112.00
58	BI	140	LYS	N-CA-C	5.41	117.18	111.28
67	BR	102	THR	N-CA-C	-5.41	105.49	111.71
48	A2	3595	A	C2'-C3'-O3'	5.40	117.61	109.50
49	B1	426	A	P-O3'-C3'	5.40	128.31	120.20
7	AE	239	LYS	N-CA-C	-5.40	103.40	110.53
75	BZ	93	SER	N-CA-C	-5.40	105.39	111.28
45	Aq	39	PRO	N-CD-CG	5.40	111.30	103.20
67	BR	121	GLN	CA-C-N	-5.40	113.09	119.84
67	BR	121	GLN	C-N-CA	-5.40	113.09	119.84
48	A2	682	U	C4'-C3'-O3'	-5.40	104.91	113.00
49	B1	1785	C	C4'-C3'-O3'	5.40	121.09	113.00
49	B1	889	U	O5'-C5'-C4'	-5.39	103.41	111.50
48	A2	1970	G	C4'-C3'-O3'	5.39	121.09	113.00
48	A2	3930	U	O4'-C4'-C3'	-5.39	98.61	104.00
54	BE	26	VAL	N-CA-C	5.39	116.17	110.72
48	A2	2539	C	P-O5'-C5'	-5.39	112.81	120.90
50	BA	112	ILE	CB-CA-C	-5.39	104.86	112.14
25	AW	84	GLY	N-CA-C	-5.38	107.84	115.43
48	A2	1797	G	C4'-C3'-O3'	-5.38	101.32	109.40
38	Aj	83	THR	CA-C-N	-5.38	113.11	119.84
38	Aj	83	THR	C-N-CA	-5.38	113.11	119.84
48	A2	1752	A	P-O5'-C5'	5.38	128.97	120.90
50	BA	112	ILE	N-CA-C	-5.38	105.13	110.62
48	A2	4017	A	O5'-C5'-C4'	5.38	119.57	111.50
49	B1	749	U	N1-C1'-C2'	5.38	120.07	112.00
49	B1	841	G	C2'-C3'-O3'	-5.38	105.63	113.70
58	BI	141	ARG	N-CA-C	5.38	118.29	110.17
48	A2	3799	A	C2'-C3'-O3'	-5.37	105.64	113.70
16	AN	73	ARG	CA-C-N	5.37	125.04	119.56
16	AN	73	ARG	C-N-CA	5.37	125.04	119.56
48	A2	79	C	O3'-P-O5'	5.37	112.06	104.00
48	A2	8	U	C3'-C2'-O2'	-5.37	102.65	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	227	G	O4'-C4'-C3'	5.37	109.37	104.00
48	A2	893	C	P-O3'-C3'	-5.37	112.15	120.20
51	BB	171	ILE	N-CA-C	5.37	116.09	110.62
14	AL	44	ARG	CB-CA-C	-5.37	102.45	110.88
29	Aa	94	LYS	N-CA-C	-5.37	105.43	111.28
48	A2	4597	A	O4'-C1'-C2'	5.36	111.16	105.80
48	A2	2059	C	P-O3'-C3'	-5.36	112.16	120.20
49	B1	1754	G	C2'-C3'-O3'	5.36	121.74	113.70
48	A2	4059	G	O3'-P-O5'	-5.36	95.96	104.00
48	A2	3681	G	P-O3'-C3'	5.36	128.23	120.20
59	BJ	2	PRO	CA-N-CD	-5.35	104.51	112.00
48	A2	1254	G	O4'-C4'-C3'	-5.35	98.65	104.00
48	A2	3793	U	OP2-P-O3'	5.35	124.05	108.00
49	B1	1105	G	C5'-C4'-C3'	5.35	124.02	116.00
79	Bd	8	TRP	N-CA-CB	-5.35	101.55	110.80
46	At	40	TYR	N-CA-C	5.35	118.11	110.68
48	A2	62	A	OP2-P-O3'	5.35	124.05	108.00
48	A2	718	C	P-O3'-C3'	-5.34	112.19	120.20
48	A2	2686	U	O4'-C4'-C3'	5.34	109.34	104.00
9	AG	103	ARG	CA-C-N	5.34	125.28	119.78
9	AG	103	ARG	C-N-CA	5.34	125.28	119.78
48	A2	959	C	C5'-C4'-O4'	5.34	117.81	109.80
48	A2	640	G	P-O3'-C3'	-5.34	112.20	120.20
48	A2	1345	G	O5'-C5'-C4'	-5.34	103.50	111.50
49	B1	1126	G	P-O3'-C3'	-5.34	112.20	120.20
48	A2	3588	G	O3'-P-O5'	5.33	112.00	104.00
48	A2	4467	C	P-O3'-C3'	-5.33	112.20	120.20
74	BY	85	ASN	N-CA-C	5.33	117.09	111.28
11	AI	185	VAL	N-CA-C	5.33	116.10	110.72
28	AZ	99	ASP	N-CA-C	-5.33	105.47	111.28
49	B1	837	A	O5'-C5'-C4'	-5.33	103.51	111.50
45	Aq	46	ILE	N-CA-C	-5.33	107.19	113.42
48	A2	2331	U	O3'-P-O5'	5.32	111.99	104.00
49	B1	797	C	C2'-C3'-O3'	5.32	117.48	109.50
6	AD	35	ARG	N-CA-C	5.32	117.16	111.36
48	A2	3835	C	P-O3'-C3'	5.32	128.18	120.20
48	A2	4119	A	OP2-P-O3'	5.32	123.96	108.00
48	A2	2680	U	P-O3'-C3'	-5.32	112.22	120.20
48	A2	4171	G	P-O3'-C3'	-5.32	112.22	120.20
48	A2	309	G	O5'-P-OP2	-5.32	92.06	108.00
48	A2	1353	G	O3'-P-O5'	5.32	111.97	104.00
83	Bv	33	U	C5'-C4'-C3'	5.32	123.97	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	AZ	124	THR	N-CA-C	-5.31	104.08	111.52
8	AF	73	ARG	N-CA-CB	-5.31	102.31	110.12
48	A2	419	U	C4'-C3'-O3'	5.31	120.97	113.00
48	A2	3722	G	O5'-C5'-C4'	5.31	119.47	111.50
49	B1	747	U	C2'-C3'-O3'	-5.31	105.73	113.70
49	B1	1736	G	P-O5'-C5'	5.31	128.87	120.90
49	B1	1395	C	O3'-P-O5'	-5.31	96.04	104.00
48	A2	198	C	O3'-P-O5'	-5.31	96.04	104.00
48	A2	3592	A	P-O3'-C3'	5.31	128.16	120.20
48	A2	233	G	C4'-C3'-O3'	5.30	120.96	113.00
48	A2	1992	C	O4'-C4'-C3'	-5.30	98.69	104.00
48	A2	3734	A	C1'-C2'-O2'	-5.30	100.44	108.40
49	B1	1105	G	O5'-C5'-C4'	-5.30	103.55	111.50
50	BA	10	MET	N-CA-C	5.30	117.56	110.35
82	Bg	267	VAL	N-CA-C	5.30	115.51	110.42
1	A3	144	U	P-O3'-C3'	-5.30	112.25	120.20
48	A2	2861	A	P-O5'-C5'	-5.30	112.95	120.90
83	Bw	57	G	C5'-C4'-C3'	5.30	123.95	116.00
56	BG	25	ARG	N-CA-C	5.30	117.06	111.28
48	A2	746	C	P-O3'-C3'	-5.30	112.25	120.20
48	A2	4706	A	P-O3'-C3'	5.29	128.14	120.20
1	A3	33	G	N9-C1'-C2'	-5.29	106.06	114.00
48	A2	3743	U	C2'-C3'-O3'	5.29	121.64	113.70
29	Aa	2	PRO	N-CA-CB	5.29	108.82	103.00
48	A2	192	C	P-O5'-C5'	5.29	128.83	120.90
49	B1	945	U	C5'-C4'-C3'	5.29	123.93	116.00
48	A2	65	A	C4'-C3'-O3'	-5.29	101.47	109.40
48	A2	2298	C	C4'-C3'-O3'	-5.29	105.07	113.00
62	BM	127	TYR	N-CA-C	-5.29	105.16	111.03
25	AW	97	LYS	CA-C-N	5.28	126.44	119.84
25	AW	97	LYS	C-N-CA	5.28	126.44	119.84
48	A2	104	G	P-O3'-C3'	-5.28	112.28	120.20
76	Ba	98	PRO	CA-N-CD	-5.28	104.61	112.00
48	A2	91	G	OP2-P-O3'	5.28	123.83	108.00
48	A2	4140	A	P-O3'-C3'	5.28	128.11	120.20
49	B1	885	U	P-O5'-C5'	-5.28	112.99	120.90
75	BZ	62	VAL	O-C-N	5.28	123.81	120.07
48	A2	5006	A	P-O3'-C3'	-5.27	112.29	120.20
55	BF	15	PRO	N-CA-CB	5.27	108.80	103.00
5	AC	151	PRO	CA-N-CD	-5.27	104.62	112.00
48	A2	1265	G	N9-C1'-C2'	5.27	119.90	112.00
16	AN	153	LYS	CA-C-N	5.26	125.07	119.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	AN	153	LYS	C-N-CA	5.26	125.07	119.28
48	A2	477	G	P-O3'-C3'	-5.26	112.31	120.20
48	A2	1351	A	C2'-C3'-O3'	-5.26	105.81	113.70
48	A2	2330	C	O3'-P-O5'	-5.26	96.11	104.00
48	A2	1069	C	C4'-C3'-O3'	5.26	120.88	113.00
48	A2	933	C	O5'-C5'-C4'	-5.25	103.82	111.70
49	B1	1288	U	P-O3'-C3'	-5.25	112.32	120.20
1	A3	9	A	C4'-C3'-O3'	5.25	120.88	113.00
48	A2	1258	G	O4'-C1'-N9	5.25	116.07	108.20
49	B1	838	G	C5'-C4'-O4'	5.25	117.67	109.80
49	B1	1290	G	C4'-C3'-O3'	5.25	120.87	113.00
47	Au	120	ILE	C-N-CD	-5.25	103.49	125.00
48	A2	909	C	P-O3'-C3'	-5.25	112.33	120.20
48	A2	287	G	N9-C1'-C2'	5.24	119.86	112.00
48	A2	308	G	C2'-C3'-O3'	-5.24	105.83	113.70
48	A2	1421	U	O4'-C4'-C3'	-5.24	98.76	104.00
48	A2	3878	G	P-O5'-C5'	5.24	128.76	120.90
33	Ae	5	ARG	CA-C-N	-5.24	113.29	119.84
33	Ae	5	ARG	C-N-CA	-5.24	113.29	119.84
48	A2	225	C	C2'-C3'-O3'	-5.24	105.84	113.70
49	B1	1106	C	C4'-C3'-O3'	5.24	120.86	113.00
48	A2	259	C	O5'-C5'-C4'	-5.24	103.64	111.50
49	B1	880	G	O4'-C4'-C3'	-5.24	98.76	104.00
56	BG	173	ALA	CA-C-N	-5.24	113.29	119.84
56	BG	173	ALA	C-N-CA	-5.24	113.29	119.84
23	AU	109	SER	N-CA-C	5.24	117.64	109.52
48	A2	286	G	C5'-C4'-O4'	5.24	117.65	109.80
49	B1	884	C	O3'-P-O5'	-5.24	96.15	104.00
48	A2	1271	G	P-O3'-C3'	5.23	128.05	120.20
48	A2	2685	G	C2'-C3'-O3'	5.23	121.55	113.70
48	A2	2064	C	C2'-C3'-O3'	5.23	121.55	113.70
49	B1	1285	G	O4'-C4'-C3'	5.23	109.23	104.00
48	A2	495	C	P-O5'-C5'	-5.23	113.06	120.90
49	B1	805	U	O5'-C5'-C4'	-5.23	103.66	111.50
16	AN	80	THR	N-CA-C	5.22	117.06	111.36
57	BH	101	LEU	CA-C-N	-5.22	113.31	119.84
57	BH	101	LEU	C-N-CA	-5.22	113.31	119.84
13	AK	23	ASP	CA-CB-CG	5.22	117.82	112.60
48	A2	2304	C	P-O3'-C3'	-5.22	112.36	120.20
49	B1	839	C	P-O5'-C5'	5.22	128.73	120.90
49	B1	1679	A	C2'-C3'-O3'	5.22	121.53	113.70
51	BB	25	PHE	CA-CB-CG	-5.22	108.58	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	1741	G	O4'-C1'-N9	5.22	116.33	108.50
48	A2	2686	U	C3'-C2'-O2'	-5.22	102.87	110.70
48	A2	297	C	O3'-P-O5'	5.22	111.83	104.00
48	A2	4992	A	O3'-P-O5'	-5.22	96.17	104.00
48	A2	4015	G	P-O3'-C3'	-5.22	112.38	120.20
61	BL	33	LEU	CA-C-N	-5.22	113.32	119.84
61	BL	33	LEU	C-N-CA	-5.22	113.32	119.84
19	AQ	17	GLU	CA-C-N	-5.21	113.32	119.84
19	AQ	17	GLU	C-N-CA	-5.21	113.32	119.84
48	A2	1066	U	OP2-P-O3'	5.21	123.64	108.00
48	A2	1498	G	C3'-C2'-O2'	-5.21	102.88	110.70
48	A2	4009	G	O3'-P-O5'	-5.21	96.18	104.00
48	A2	57	G	O3'-P-O5'	-5.21	96.18	104.00
7	AE	112	MET	CA-C-N	-5.21	114.39	119.76
7	AE	112	MET	C-N-CA	-5.21	114.39	119.76
48	A2	43	U	C3'-C2'-O2'	-5.21	102.89	110.70
49	B1	84	A	O3'-P-O5'	5.21	111.81	104.00
49	B1	740	C	C1'-C2'-O2'	5.21	116.21	108.40
59	BJ	169	ARG	CA-C-N	-5.21	113.33	119.84
59	BJ	169	ARG	C-N-CA	-5.21	113.33	119.84
70	BU	52	GLY	CA-C-N	-5.21	113.33	119.84
70	BU	52	GLY	C-N-CA	-5.21	113.33	119.84
48	A2	2257	G	C4'-C3'-O3'	5.21	117.21	109.40
48	A2	2325	C	P-O3'-C3'	5.21	128.01	120.20
48	A2	2325	C	P-O5'-C5'	5.21	128.71	120.90
48	A2	4863	C	C4'-C3'-O3'	-5.20	105.20	113.00
49	B1	144	U	P-O3'-C3'	5.20	128.00	120.20
49	B1	749	U	C3'-C2'-O2'	5.20	118.50	110.70
48	A2	83	C	O3'-P-O5'	5.20	111.80	104.00
48	A2	241	G	C2'-C3'-O3'	-5.20	105.91	113.70
48	A2	932	U	O5'-C5'-C4'	-5.20	103.71	111.50
49	B1	895	G	O5'-C5'-C4'	5.20	119.29	111.50
49	B1	1288	U	N1-C1'-C2'	5.20	121.80	114.00
48	A2	1055	C	C2'-C3'-O3'	5.19	117.29	109.50
49	B1	747	U	O4'-C4'-C3'	5.19	109.19	104.00
48	A2	2269	C	P-O3'-C3'	5.19	127.99	120.20
46	At	76	SER	N-CA-C	5.19	116.94	111.28
48	A2	403	G	P-O3'-C3'	-5.19	112.41	120.20
49	B1	1746	U	O3'-P-O5'	5.19	111.79	104.00
36	Ah	81	LEU	N-CA-C	5.19	116.93	111.28
48	A2	959	C	O4'-C4'-C3'	-5.19	98.81	104.00
48	A2	3684	U	O4'-C4'-C3'	5.18	109.18	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A3	117	C	P-O3'-C3'	-5.18	112.43	120.20
47	Au	186	ALA	CA-C-O	-5.18	115.36	120.80
49	B1	1702	G	O4'-C4'-C3'	-5.18	98.82	104.00
25	AW	50	ASN	N-CA-C	5.18	116.73	111.14
11	AI	46	PHE	CA-C-N	5.18	124.97	119.28
11	AI	46	PHE	C-N-CA	5.18	124.97	119.28
3	AA	195	CYS	CA-C-N	-5.17	116.89	123.15
3	AA	195	CYS	C-N-CA	-5.17	116.89	123.15
49	B1	181	A	C5'-C4'-C3'	5.17	122.96	115.20
48	A2	4595	G	C3'-C2'-O2'	-5.17	102.94	110.70
48	A2	242	C	C5'-C4'-C3'	-5.17	108.24	116.00
50	BA	37	TYR	N-CA-C	5.17	116.91	111.28
70	BU	29	VAL	N-CA-C	5.17	115.89	110.62
49	B1	918	U	P-O3'-C3'	-5.17	112.45	120.20
5	AC	304	ALA	CA-C-N	-5.16	113.39	119.84
5	AC	304	ALA	C-N-CA	-5.16	113.39	119.84
48	A2	1308	C	C3'-C2'-O2'	-5.16	106.86	114.60
49	B1	869	A	C4'-C3'-O3'	5.16	117.14	109.40
2	A4	47	G	C4'-C3'-O3'	5.16	120.74	113.00
49	B1	25	A	O4'-C1'-N9	5.16	115.94	108.20
48	A2	3612	U	C5'-C4'-O4'	5.15	117.52	109.80
48	A2	5007	G	C4'-C3'-O3'	5.15	117.13	109.40
22	AT	96	ILE	N-CA-C	5.15	115.32	108.11
48	A2	4985	C	O3'-P-O5'	5.15	111.72	104.00
48	A2	1589	C	P-O3'-C3'	5.15	127.92	120.20
34	Af	84	VAL	N-CA-C	5.14	115.31	108.11
48	A2	2419	U	C2'-C3'-O3'	-5.14	105.99	113.70
48	A2	3738	C	C1'-C2'-O2'	5.14	116.11	108.40
11	AI	184	MET	N-CA-C	5.14	116.88	111.28
38	Aj	37	CYS	N-CA-C	5.14	121.84	114.39
49	B1	688	U	P-O5'-C5'	-5.14	113.19	120.90
48	A2	3685	G	P-O5'-C5'	-5.14	113.19	120.90
48	A2	84	A	C4'-C3'-O3'	5.13	117.10	109.40
3	AA	66	PRO	N-CA-C	5.13	120.28	113.40
48	A2	682	U	C5'-C4'-O4'	5.13	117.50	109.80
4	AB	171	LEU	CA-C-N	5.13	124.92	119.28
4	AB	171	LEU	C-N-CA	5.13	124.92	119.28
45	Aq	71	ILE	CB-CG1-CD1	5.13	124.58	113.80
45	Aq	129	ILE	CA-CB-CG2	5.13	119.22	110.50
48	A2	42	A	C2'-C3'-O3'	5.13	117.20	109.50
48	A2	1880	G	P-O3'-C3'	5.13	127.90	120.20
48	A2	2793	C	C4'-C3'-C2'	5.13	107.73	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	A2	287	G	C2'-C3'-O3'	-5.13	106.01	113.70
49	B1	1290	G	C5'-C4'-O4'	5.13	117.50	109.80
48	A2	740	G	C2'-C3'-O3'	-5.13	106.01	113.70
48	A2	2689	C	O5'-P-OP2	5.13	123.38	108.00
49	B1	305	U	C5'-C4'-C3'	5.13	123.69	116.00
48	A2	1845	G	P-O3'-C3'	-5.12	112.51	120.20
48	A2	112	C	C4'-C3'-O3'	-5.12	105.32	113.00
48	A2	234	G	P-O3'-C3'	-5.12	112.52	120.20
48	A2	2608	C	C2'-C3'-O3'	5.12	121.38	113.70
2	A4	114	U	O3'-P-O5'	-5.12	96.32	104.00
34	Af	107	PRO	N-CA-CB	-5.12	97.88	103.25
48	A2	3677	C	P-O5'-C5'	5.12	128.57	120.90
27	AY	104	VAL	N-CA-C	5.12	115.33	108.17
49	B1	881	G	O5'-C5'-C4'	-5.12	103.83	111.50
50	BA	213	GLU	N-CA-C	-5.12	105.35	111.03
8	AF	15	PRO	N-CA-CB	5.11	108.62	103.00
13	AK	13	TYR	N-CA-C	-5.11	105.16	111.40
48	A2	8	U	C4'-C3'-O3'	5.11	120.66	113.00
48	A2	676	G	O4'-C1'-C2'	-5.11	102.49	107.60
48	A2	1420	C	O3'-P-O5'	5.11	111.66	104.00
49	B1	747	U	C1'-C2'-O2'	5.11	116.06	108.40
49	B1	1754	G	P-O5'-C5'	5.11	128.56	120.90
49	B1	689	U	O5'-C5'-C4'	5.10	119.15	111.50
49	B1	893	U	P-O5'-C5'	5.10	128.55	120.90
48	A2	2064	C	O4'-C4'-C3'	5.10	109.10	104.00
49	B1	909	G	O4'-C4'-C3'	5.10	109.10	104.00
50	BA	113	GLN	CB-CA-C	-5.09	101.15	110.62
48	A2	2608	C	O4'-C4'-C3'	5.09	109.09	104.00
49	B1	1104	G	O3'-P-O5'	5.09	111.64	104.00
39	Ak	12	LEU	N-CA-C	-5.09	105.73	111.28
51	BB	26	SER	N-CA-C	5.09	116.83	111.28
36	Ah	47	ILE	N-CA-C	-5.09	105.53	110.42
48	A2	3676	G	O3'-P-O5'	5.09	111.64	104.00
48	A2	1217	G	O3'-P-O5'	-5.09	96.37	104.00
48	A2	3595	A	C4'-C3'-O3'	5.09	117.03	109.40
48	A2	4056	G	P-O3'-C3'	-5.09	112.57	120.20
49	B1	370	G	O4'-C4'-C3'	-5.09	101.01	106.10
49	B1	915	G	O4'-C4'-C3'	-5.09	98.91	104.00
46	At	10	VAL	N-CA-C	5.08	115.86	110.72
49	B1	688	U	N1-C1'-C2'	-5.08	106.37	114.00
48	A2	2416	C	P-O5'-C5'	5.08	128.52	120.90
49	B1	887	U	N1-C1'-C2'	5.08	121.62	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A3	109	C	C2'-C3'-O3'	-5.08	106.08	113.70
48	A2	404	A	C5'-C4'-C3'	5.08	123.62	116.00
48	A2	4622	G	P-O3'-C3'	-5.08	112.58	120.20
68	BS	73	ASN	CA-C-N	-5.08	113.31	118.85
68	BS	73	ASN	C-N-CA	-5.08	113.31	118.85
48	A2	2687	U	C2'-C3'-O3'	5.08	121.32	113.70
61	BL	102	PHE	N-CA-C	5.07	117.40	110.55
48	A2	2601	G	O3'-P-O5'	5.07	111.60	104.00
48	A2	320	C	P-O3'-C3'	5.06	127.79	120.20
48	A2	3875	G	C4'-C3'-O3'	-5.06	105.41	113.00
28	AZ	68	ILE	N-CA-C	5.06	116.00	108.46
48	A2	4127	C	C4'-C3'-O3'	-5.06	105.41	113.00
49	B1	422	U	O3'-P-O5'	5.06	111.59	104.00
34	Af	59	THR	CA-C-N	-5.06	113.52	119.84
34	Af	59	THR	C-N-CA	-5.06	113.52	119.84
69	BT	2	PRO	N-CA-CB	5.06	108.56	103.00
48	A2	287	G	P-O5'-C5'	5.05	128.48	120.90
48	A2	961	C	C4'-C3'-O3'	-5.05	105.42	113.00
48	A2	4318	G	OP2-P-O3'	5.05	123.17	108.00
49	B1	838	G	P-O5'-C5'	5.05	128.48	120.90
54	BE	184	ILE	N-CA-C	5.05	115.82	110.72
48	A2	2824	A	O3'-P-O5'	-5.05	96.42	104.00
48	A2	4513	U	C4'-C3'-O3'	-5.05	105.42	113.00
49	B1	307	G	P-O5'-C5'	5.05	128.48	120.90
48	A2	1352	C	C4'-C3'-O3'	5.05	120.58	113.00
49	B1	749	U	P-O5'-C5'	-5.05	113.32	120.90
48	A2	221	U	P-O3'-C3'	-5.04	112.63	120.20
49	B1	1443	C	C4'-C3'-O3'	-5.04	105.43	113.00
66	BQ	43	GLU	CA-C-N	-5.04	113.53	119.84
66	BQ	43	GLU	C-N-CA	-5.04	113.53	119.84
48	A2	1420	C	C2'-C3'-O3'	-5.04	106.13	113.70
48	A2	4532	G	C2'-C3'-O3'	-5.04	106.14	113.70
50	BA	201	LEU	N-CA-C	-5.04	105.70	111.14
2	A4	115	A	P-O3'-C3'	-5.04	112.64	120.20
3	AA	196	TRP	CA-C-N	5.04	126.14	119.84
3	AA	196	TRP	C-N-CA	5.04	126.14	119.84
49	B1	940	U	O3'-P-O5'	5.04	111.56	104.00
63	BN	81	ALA	CA-C-N	-5.04	113.46	119.05
63	BN	81	ALA	C-N-CA	-5.04	113.46	119.05
1	A3	135	C	O3'-P-O5'	-5.04	96.44	104.00
48	A2	719	U	C4'-C3'-O3'	5.04	116.96	109.40
49	B1	319	C	O5'-C5'-C4'	-5.04	103.94	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	B1	1624	U	C4'-C3'-O3'	5.04	120.56	113.00
49	B1	1745	A	P-O3'-C3'	5.04	127.76	120.20
1	A3	88	A	C2'-C3'-O3'	-5.03	106.15	113.70
13	AK	108	PRO	N-CD-CG	5.03	110.75	103.20
31	Ac	42	LYS	N-CA-C	5.03	116.77	111.28
48	A2	1252	G	C4'-C3'-O3'	-5.03	105.45	113.00
49	B1	690	G	P-O5'-C5'	-5.03	113.35	120.90
18	AP	7	ASP	CA-C-N	-5.03	114.60	119.78
18	AP	7	ASP	C-N-CA	-5.03	114.60	119.78
49	B1	839	C	C4'-C3'-O3'	5.03	120.55	113.00
48	A2	1251	G	C4'-C3'-O3'	-5.03	105.46	113.00
48	A2	3738	C	C4'-C3'-O3'	5.03	120.54	113.00
1	A3	112	G	O5'-P-OP2	-5.03	92.92	108.00
79	Bd	7	TYR	N-CA-C	5.03	116.84	111.36
83	Bw	56	C	O3'-P-O5'	-5.02	96.47	104.00
49	B1	796	G	O5'-C5'-C4'	-5.02	103.97	111.50
34	Af	107	PRO	CB-CA-C	5.02	119.84	111.56
49	B1	1125	C	P-O3'-C3'	-5.02	112.67	120.20
49	B1	1854	U	O3'-P-O5'	-5.02	96.47	104.00
48	A2	289	A	C5'-C4'-C3'	5.02	122.72	115.20
48	A2	4053	U	P-O3'-C3'	5.02	127.72	120.20
48	A2	257	G	N9-C1'-C2'	-5.01	104.48	112.00
49	B1	744	G	O4'-C1'-N9	5.01	116.02	108.50
49	B1	1824	A	P-O5'-C5'	-5.01	113.39	120.90
48	A2	4617	A	OP1-P-O3'	-5.01	92.98	108.00
48	A2	930	A	C2'-C3'-O3'	-5.00	101.99	109.50
49	B1	1824	A	C4'-C3'-O3'	-5.00	105.49	113.00
13	AK	2	PRO	N-CD-CG	5.00	110.70	103.20
48	A2	3577	U	C4'-C3'-O3'	5.00	120.51	113.00
49	B1	1553	C	O4'-C4'-C3'	-5.00	99.00	104.00

All (3) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
48	A2	131	C	C3'
48	A2	137	G	C3'
49	B1	1289	U	C4'

All (56) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
48	A2	1741	G	Sidechain

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Mol	Chain	Res	Type	Group
48	A2	2690	G	Sidechain
48	A2	3596	G	Sidechain
4	AB	295	ASP	Peptide
4	AB	296	GLY	Peptide
4	AB	297	LYS	Peptide
5	AC	98	GLY	Peptide
5	AC	99	GLY	Peptide
7	AE	108	LYS	Mainchain
8	AF	161	LYS	Peptide
8	AF	163	ASN	Peptide
10	AH	4	ILE	Peptide
10	AH	5	LEU	Peptide
10	AH	8	GLN	Peptide
13	AK	32	ALA	Peptide
13	AK	34	ASN	Peptide
13	AK	35	VAL	Peptide
14	AL	132	SER	Peptide
14	AL	133	ALA	Peptide
14	AL	134	PRO	Peptide
14	AL	135	LYS	Peptide
14	AL	136	LYS	Peptide
14	AL	138	ASP	Peptide
39	Ak	14	THR	Mainchain
54	BE	91	SER	Peptide
54	BE	92	ILE	Peptide
54	BE	93	GLU	Peptide
54	BE	94	LYS	Peptide
54	BE	95	THR	Peptide
54	BE	97	GLU	Peptide
63	BN	28	LEU	Peptide
63	BN	29	THR	Peptide
64	BO	138	ASP	Peptide
64	BO	139	SER	Peptide
65	BP	46	ASN	Peptide
65	BP	47	ARG	Peptide
65	BP	48	GLY	Peptide
65	BP	49	LEU	Peptide
65	BP	50	ARG	Peptide
65	BP	66	GLU	Peptide
65	BP	67	ALA	Peptide
65	BP	68	PRO	Peptide
65	BP	71	GLU	Peptide

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Mol	Chain	Res	Type	Group
65	BP	72	LYS	Peptide
65	BP	73	PRO	Peptide
66	BQ	13	PHE	Peptide
66	BQ	14	GLY	Peptide
66	BQ	15	ARG	Peptide
66	BQ	48	GLN	Peptide
66	BQ	51	LEU	Peptide
66	BQ	74	GLY	Peptide
72	BW	100	GLY	Peptide
72	BW	101	PHE	Peptide
72	BW	99	PHE	Peptide
76	Ba	97	PRO	Peptide
79	Bd	39	CYS	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A3	3337	0	1691	214	0
2	A4	2541	0	1284	159	0
3	AA	1930	0	2030	183	0
4	AB	3178	0	3314	340	0
5	AC	2888	0	3064	461	0
6	AD	2392	0	2424	347	0
7	AE	1571	0	1698	459	0
8	AF	1950	0	2093	286	0
9	AG	1880	0	2018	148	0
10	AH	1526	0	1605	141	0
11	AI	1692	0	1744	81	0
12	AJ	1353	0	1386	97	0
13	AK	872	0	916	353	0
14	AL	1657	0	1764	252	0
15	AM	1138	0	1204	158	0
16	AN	1701	0	1748	138	0
17	AO	1606	0	1745	137	0
18	AP	1242	0	1269	90	0
19	AQ	1513	0	1628	205	0
20	AR	1517	0	1665	231	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
21	AS	1449	0	1493	171	0
22	AT	1284	0	1352	163	0
23	AU	808	0	831	82	0
24	AV	969	0	1031	88	0
25	AW	989	0	1041	158	0
26	AX	958	0	1029	93	0
27	AY	1064	0	1145	99	0
28	AZ	1103	0	1179	149	0
29	Aa	1162	0	1213	215	0
30	Ab	559	0	590	79	0
31	Ac	801	0	845	50	0
32	Ad	879	0	924	53	0
33	Ae	1064	0	1160	126	0
34	Af	876	0	912	122	0
35	Ag	906	0	1002	74	0
36	Ah	1015	0	1147	101	0
37	Ai	794	0	870	75	0
38	Aj	689	0	717	116	0
39	Ak	569	0	637	119	0
40	Al	444	0	483	48	0
41	Am	411	0	443	29	0
42	An	240	0	289	25	0
43	Ao	863	0	929	77	0
44	Ap	708	0	756	61	0
45	Aq	1046	0	1116	241	0
46	At	980	0	1041	197	0
47	Au	1744	0	1859	347	0
48	A2	77427	0	39103	4535	0
49	B1	36456	0	18412	2629	0
50	BA	1704	0	1703	325	0
51	BB	1722	0	1794	294	0
52	BC	1724	0	1808	200	0
53	BD	1709	0	1801	196	0
54	BE	2031	0	2138	311	0
55	BF	1502	0	1557	187	0
56	BG	1884	0	2044	371	0
57	BH	1479	0	1563	130	0
58	BI	1696	0	1785	192	0
59	BJ	1495	0	1615	409	0
60	BK	827	0	854	152	0
61	BL	1258	0	1334	143	0
62	BM	931	0	961	114	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
63	BN	1202	0	1289	178	0
64	BO	1016	0	1039	174	0
65	BP	999	0	1046	254	0
66	BQ	1109	0	1174	264	0
67	BR	1011	0	1063	323	0
68	BS	1154	0	1210	234	0
69	BT	1112	0	1146	164	0
70	BU	769	0	837	131	0
71	BV	617	0	622	80	0
72	BW	1034	0	1080	138	0
73	BX	1080	0	1147	124	0
74	BY	1015	0	1085	163	0
75	BZ	688	0	766	176	0
76	Ba	774	0	821	156	0
77	Bb	625	0	646	43	0
78	Bc	488	0	514	43	0
79	Bd	427	0	426	203	0
80	Be	437	0	483	102	0
81	Bf	601	0	625	104	0
82	Bg	2440	0	2396	110	0
83	Bv	1623	0	820	71	0
83	Bw	1623	0	821	98	0
84	Bx	561	0	281	54	0
85	By	120	0	32	10	0
86	A2	220	0	0	4	0
86	A3	8	0	0	0	0
86	A4	9	0	0	0	0
86	AA	1	0	0	0	0
86	AB	2	0	0	0	0
86	AN	2	0	0	0	0
86	AY	1	0	0	0	0
86	Aa	3	0	0	0	0
86	Ae	2	0	0	0	0
86	An	1	0	0	0	0
86	B1	72	0	0	2	0
86	BD	1	0	0	0	0
86	BX	1	0	0	0	0
86	Bv	2	0	0	0	0
86	Bx	1	0	0	1	0
87	Aj	1	0	0	0	0
87	Ao	1	0	0	0	0
87	Ap	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
87	Ba	1	0	0	0	0
87	Bd	1	0	0	0	0
All	All	218559	0	162165	16253	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 43.

All (16253) 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)
6:AD:286:SER:HB3	48:A2:1163:C:C5'	1.21	1.68
64:BO:54:CYS:SG	64:BO:81:VAL:HG22	1.31	1.67
10:AH:5:LEU:HD13	10:AH:60:TRP:CH2	1.32	1.65
75:BZ:79:ILE:HG21	75:BZ:83:LEU:CD1	1.18	1.64
10:AH:5:LEU:HB3	10:AH:60:TRP:CZ3	1.14	1.63
49:B1:560:A:H3'	59:BJ:171:GLY:CA	1.28	1.62
59:BJ:117:LEU:HD12	59:BJ:157:ILE:CD1	1.31	1.61
52:BC:147:VAL:CG2	84:Bx:56:U:H5	1.05	1.60
62:BM:35:ILE:HD11	62:BM:61:TYR:CE1	1.19	1.60
49:B1:581:U:H5'	74:BY:62:THR:CG2	1.28	1.59
59:BJ:117:LEU:CD1	59:BJ:157:ILE:HD11	1.24	1.59
62:BM:35:ILE:CD1	62:BM:61:TYR:HE1	1.02	1.58
6:AD:17:GLN:CG	22:AT:20:ARG:HG2	1.18	1.57
50:BA:38:ILE:HD11	50:BA:47:TYR:CB	1.15	1.57
75:BZ:88:LEU:CD2	75:BZ:109:TYR:CE2	1.78	1.56
51:BB:182:LYS:CE	51:BB:231:LEU:HD12	1.29	1.54
54:BE:69:PHE:CE1	54:BE:94:LYS:HE2	1.40	1.53
49:B1:1314:U:C2	60:BK:2:LEU:HB2	1.05	1.53
49:B1:560:A:C3'	59:BJ:171:GLY:HA3	1.33	1.53
68:BS:44:VAL:HG21	68:BS:71:MET:SD	1.47	1.52
49:B1:1314:U:C2	60:BK:2:LEU:CB	1.93	1.52
67:BR:98:VAL:N	67:BR:117:LEU:HD21	1.24	1.52
50:BA:38:ILE:CD1	50:BA:47:TYR:HB3	1.05	1.52
8:AF:51:TYR:CZ	48:A2:1220:C:C5	1.99	1.51
47:Au:35:GLN:HG2	48:A2:4023:A:C2'	1.38	1.51
66:BQ:62:ARG:NH2	66:BQ:108:ILE:HD13	1.26	1.50
52:BC:147:VAL:HG21	84:Bx:56:U:C5	1.39	1.50
53:BD:210:ILE:HG22	67:BR:39:ALA:CB	1.06	1.50
20:AR:165:LYS:HZ3	49:B1:907:G:C5'	1.24	1.49
6:AD:12:TYR:HE1	6:AD:13:PHE:CE1	1.27	1.49
12:AJ:111:GLU:HG3	68:BS:14:ARG:NH2	1.23	1.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BD:210:ILE:CG2	67:BR:39:ALA:CB	1.91	1.48
5:AC:77:PRO:C	5:AC:91:ALA:HB2	1.32	1.48
41:Am:104:HIS:CE1	48:A2:4659:U:H5'	1.48	1.48
49:B1:1287:A:H5"	49:B1:1312:G:N1	1.26	1.48
47:Au:166:ALA:HB3	48:A2:3940:G:C4	1.49	1.48
75:BZ:99:LEU:HB3	75:BZ:109:TYR:CE1	1.47	1.47
75:BZ:88:LEU:HD23	75:BZ:109:TYR:CE2	0.96	1.46
52:BC:253:PRO:HD2	72:BW:99:PHE:CE1	1.51	1.46
42:An:2:ARG:HH12	49:B1:1852:C:C5'	1.27	1.45
5:AC:150:LEU:CD2	46:At:71:ARG:HA	0.98	1.44
25:AW:101:ARG:HB3	25:AW:105:ARG:NH1	1.33	1.44
46:At:4:HIS:CE1	46:At:38:PHE:HE2	1.32	1.44
49:B1:1522:A:C2	65:BP:128:HIS:CB	1.99	1.44
75:BZ:79:ILE:CG2	75:BZ:83:LEU:HD12	1.00	1.44
49:B1:168:C:H5"	56:BG:131:ARG:CD	1.44	1.43
14:AL:161:TYR:CD1	29:Aa:105:ARG:NH1	1.86	1.43
69:BT:41:LYS:NZ	69:BT:81:GLY:HA2	1.25	1.43
52:BC:178:HIS:CD2	52:BC:200:ARG:CD	2.02	1.43
7:AE:233:PHE:HE1	48:A2:447:G:C6	1.36	1.42
37:Ai:5:TYR:HD1	48:A2:1463:C:N4	1.16	1.42
10:AH:5:LEU:CB	10:AH:60:TRP:CZ3	2.03	1.42
48:A2:4160:G:N2	83:Bv:74:C:C4	1.87	1.42
55:BF:23:TRP:NE1	55:BF:108:PRO:HG3	1.34	1.42
75:BZ:99:LEU:HB3	75:BZ:109:TYR:CD1	1.52	1.41
49:B1:581:U:C5'	74:BY:62:THR:HG21	1.48	1.41
49:B1:1417:C:H4'	69:BT:2:PRO:N	1.22	1.41
7:AE:219:LYS:HG2	48:A2:4898:C:C5	1.52	1.41
21:AS:90:THR:HG21	22:AT:156:TYR:CE2	1.54	1.40
34:Af:63:LYS:CB	34:Af:64:PRO:HD3	1.44	1.40
20:AR:126:LYS:CG	20:AR:131:VAL:HG21	1.48	1.40
25:AW:93:LYS:NZ	56:BG:145:PHE:HE2	1.16	1.40
6:AD:12:TYR:CE1	6:AD:13:PHE:CE1	2.10	1.39
75:BZ:88:LEU:CD2	75:BZ:109:TYR:CD2	2.04	1.39
13:AK:81:HIS:NE2	13:AK:88:PHE:CE1	1.90	1.39
79:Bd:38:MET:HE3	79:Bd:42:CYS:SG	1.61	1.39
6:AD:205:ALA:CB	6:AD:233:PRO:HB3	1.49	1.38
15:AM:5:ARG:NH1	21:AS:175:PHE:CE1	1.91	1.38
23:AU:47:ILE:CD1	23:AU:63:ILE:HD11	1.52	1.38
48:A2:4982:C:O2'	58:BI:168:GLN:C	1.65	1.38
52:BC:133:TYR:CE1	52:BC:216:MET:HA	1.59	1.38
47:Au:166:ALA:CB	48:A2:3940:G:N3	1.86	1.38

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:168:C:C5’	56:BG:131:ARG:HD2	1.51	1.38
52:BC:147:VAL:CG2	84:Bx:56:U:C5	1.98	1.38
20:AR:39:GLN:NE2	48:A2:2689:C:OP2	1.57	1.37
70:BU:24:LEU:CD2	70:BU:112:VAL:HG22	1.51	1.38
18:AP:18:ARG:HG2	18:AP:147:GLU:CG	1.51	1.37
29:Aa:61:TYR:CD1	48:A2:288:G:N2	1.89	1.37
52:BC:178:HIS:CG	52:BC:200:ARG:HD2	1.57	1.37
8:AF:51:TYR:CZ	48:A2:1220:C:H5	1.37	1.37
49:B1:386:C:OP2	58:BI:10:LYS:HE3	1.21	1.37
70:BU:61:LEU:HD11	79:Bd:34:TYR:CD2	1.57	1.37
10:AH:5:LEU:HB3	10:AH:60:TRP:CE3	1.58	1.37
14:AL:195:ARG:HG2	14:AL:198:ARG:NH2	1.35	1.36
49:B1:1274:G:H22	60:BK:29:MET:CG	1.34	1.36
48:A2:900:U:O2’	48:A2:901:U:H5’	1.23	1.36
68:BS:70:ILE:HD13	68:BS:77:TYR:CE2	1.60	1.36
50:BA:38:ILE:CD1	50:BA:47:TYR:CB	1.76	1.36
67:BR:21:TYR:CD2	67:BR:71:ILE:HG21	1.59	1.35
5:AC:150:LEU:HD23	46:At:71:ARG:CA	0.89	1.35
6:AD:286:SER:CB	48:A2:1163:C:C5’	2.03	1.35
67:BR:21:TYR:CE2	67:BR:71:ILE:HD13	1.61	1.35
37:Ai:14:GLY:HA2	48:A2:72:C:OP2	1.17	1.35
47:Au:165:LEU:HD11	48:A2:3940:G:C4’	1.53	1.35
50:BA:198:MET:SD	67:BR:87:GLU:HG2	1.67	1.35
75:BZ:88:LEU:HD21	75:BZ:109:TYR:CD2	1.57	1.35
6:AD:286:SER:CB	48:A2:1163:C:H4’	1.58	1.34
21:AS:173:ASN:HA	48:A2:4724:A:C2	1.60	1.34
49:B1:1522:A:C2	65:BP:128:HIS:CG	2.12	1.34
51:BB:79:VAL:CG2	51:BB:82:ARG:HD3	1.57	1.34
20:AR:126:LYS:HE2	20:AR:131:VAL:CG1	1.57	1.34
20:AR:165:LYS:NZ	49:B1:907:G:C5’	1.79	1.34
32:Ad:46:LEU:HD13	48:A2:2351:U:O2’	1.21	1.34
8:AF:166:ARG:HH12	8:AF:209:TRP:CD1	1.46	1.34
13:AK:57:LYS:CG	48:A2:2001:U:OP1	1.74	1.34
22:AT:105:PHE:CE1	48:A2:1784:A:H4’	1.61	1.34
50:BA:206:ASP:HB3	50:BA:210:ILE:CD1	1.54	1.34
66:BQ:41:MET:CE	69:BT:10:ASN:HB2	1.56	1.34
8:AF:51:TYR:CE1	48:A2:1220:C:C4	2.16	1.33
33:Ae:3:ALA:O	33:Ae:4:LEU:HG	1.21	1.33
47:Au:213:PRO:HD3	48:A2:4023:A:OP1	1.28	1.33
8:AF:166:ARG:HH12	8:AF:209:TRP:CG	1.47	1.33
48:A2:4016:A:C2	83:Bw:56:C:C5	2.16	1.33

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:BR:21:TYR:CE2	67:BR:71:ILE:HG21	1.63	1.33
49:B1:222:U:H5"	61:BL:17:PHE:CD2	1.64	1.32
49:B1:747:U:O2'	49:B1:749:U:C5	1.80	1.32
1:A3:11:C:O2'	18:AP:5:SER:HA	1.29	1.32
1:A3:63:U:O2'	36:Ah:52:LYS:NZ	1.61	1.32
14:AL:59:VAL:CG1	48:A2:74:G:H5'	1.58	1.32
21:AS:90:THR:HG21	22:AT:156:TYR:CD2	1.63	1.32
5:AC:77:PRO:O	5:AC:91:ALA:HB2	1.26	1.32
5:AC:100:ARG:NH2	48:A2:1632:A:C2	1.97	1.32
5:AC:190:ARG:CD	5:AC:202:ILE:HD11	1.59	1.31
6:AD:12:TYR:CE1	6:AD:13:PHE:CD1	2.16	1.31
65:BP:84:ILE:HA	65:BP:115:TYR:CA	1.60	1.31
6:AD:286:SER:HB3	48:A2:1163:C:C4'	1.58	1.31
28:AZ:68:ILE:CG2	28:AZ:119:GLU:HG3	1.59	1.31
51:BB:70:SER:CB	51:BB:83:LYS:HA	1.58	1.31
49:B1:744:G:N2	57:BH:109:ARG:HD2	1.41	1.31
59:BJ:117:LEU:CD1	59:BJ:157:ILE:CD1	1.89	1.31
14:AL:59:VAL:CG1	48:A2:74:G:C5'	2.08	1.31
50:BA:111:GLN:NE2	52:BC:64:THR:HB	1.43	1.31
10:AH:5:LEU:CD1	10:AH:60:TRP:CH2	2.12	1.30
49:B1:873:G:O6	61:BL:153:LYS:HA	1.28	1.30
48:A2:1341:G:C2	48:A2:1343:G:C6	2.19	1.30
6:AD:12:TYR:HE1	6:AD:13:PHE:CD1	1.49	1.30
51:BB:38:MET:SD	51:BB:185:VAL:HG11	1.69	1.30
65:BP:84:ILE:CA	65:BP:115:TYR:HA	1.60	1.30
15:AM:5:ARG:NH1	21:AS:175:PHE:HE1	1.25	1.30
25:AW:102:LYS:CG	25:AW:105:ARG:NH2	1.94	1.30
56:BG:183:ARG:O	56:BG:186:GLN:HG2	1.24	1.30
61:BL:11:GLN:O	61:BL:12:LYS:HG3	1.16	1.30
20:AR:38:ARG:HG3	48:A2:2505:C:OP2	1.24	1.29
66:BQ:12:VAL:HG11	66:BQ:90:LYS:CB	1.62	1.29
49:B1:1274:G:N2	60:BK:29:MET:HG2	1.43	1.29
67:BR:36:GLU:OE2	67:BR:47:ARG:HD3	1.23	1.29
79:Bd:19:ARG:CZ	79:Bd:33:LYS:HE3	1.59	1.29
13:AK:37:SER:HA	48:A2:1952:C:O2'	1.15	1.29
30:Ab:4:SER:HB2	48:A2:1836:G:OP1	1.21	1.29
49:B1:1287:A:H1'	62:BM:36:ARG:NH1	1.44	1.29
49:B1:1302:G:H21	81:Bf:95:ARG:NH1	1.30	1.29
28:AZ:97:ASN:O	28:AZ:100:VAL:HG12	1.16	1.29
70:BU:27:ARG:NH2	79:Bd:51:GLY:HA3	1.47	1.29
67:BR:21:TYR:HE2	67:BR:71:ILE:CD1	1.46	1.28

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AE:146:PRO:O	7:AE:200:LYS:HE3	1.33	1.28
29:Aa:92:LYS:O	29:Aa:94:LYS:N	1.63	1.28
49:B1:846:G:H2'	54:BE:19:MET:SD	1.72	1.28
49:B1:1417:C:C4'	69:BT:2:PRO:N	1.95	1.28
10:AH:134:CYS:SG	10:AH:144:LEU:HD11	1.72	1.28
67:BR:97:GLU:HB3	67:BR:116:ASN:O	1.32	1.28
42:An:2:ARG:NH1	49:B1:1852:C:C5'	1.93	1.28
20:AR:165:LYS:CE	49:B1:907:G:H5"	1.64	1.28
23:AU:56:LEU:CD2	23:AU:61:VAL:HG23	1.64	1.28
46:At:66:ARG:NH1	48:A2:473:G:OP1	1.64	1.28
66:BQ:25:CYS:SG	66:BQ:95:TYR:HB2	1.73	1.28
14:AL:165:LYS:HD2	48:A2:505:C:OP2	1.31	1.27
25:AW:102:LYS:HG3	25:AW:105:ARG:NH2	1.47	1.27
5:AC:217:ILE:HD11	5:AC:221:PHE:CE1	1.69	1.27
8:AF:69:ILE:HG22	8:AF:73:ARG:NE	1.47	1.27
29:Aa:83:SER:HB2	29:Aa:86:THR:CG2	1.64	1.27
25:AW:101:ARG:CB	25:AW:105:ARG:NH1	1.97	1.27
49:B1:502:C:P	54:BE:66:MET:HE1	1.74	1.27
70:BU:27:ARG:HH21	79:Bd:51:GLY:CA	1.48	1.27
79:Bd:36:LEU:HD11	79:Bd:43:PHE:CE2	1.70	1.27
14:AL:59:VAL:HG11	48:A2:74:G:C5'	1.61	1.27
54:BE:36:HIS:NE2	54:BE:85:GLY:HA3	1.49	1.27
13:AK:34:ASN:CB	48:A2:1950:G:H5'	1.66	1.26
17:AO:179:LYS:HE2	48:A2:4830:G:C8	1.70	1.26
49:B1:873:G:C6	61:BL:153:LYS:HA	1.68	1.26
49:B1:1121:G:OP1	86:B1:1941:MG:MG	0.70	1.26
52:BC:97:PHE:C	52:BC:98:LEU:HD23	1.58	1.26
6:AD:17:GLN:CG	22:AT:20:ARG:CG	2.12	1.26
7:AE:219:LYS:HG2	48:A2:4898:C:C6	1.70	1.26
49:B1:589:G:N2	80:Be:26:LYS:HE2	1.50	1.26
49:B1:1555:U:P	79:Bd:22:ARG:NH2	2.09	1.26
50:BA:206:ASP:CB	50:BA:210:ILE:HD11	1.66	1.26
17:AO:118:MET:HE1	48:A2:4832:A:N6	1.48	1.26
54:BE:86:PHE:CE2	54:BE:184:ILE:HG22	1.69	1.26
5:AC:150:LEU:HD23	46:At:71:ARG:C	1.58	1.26
7:AE:136:HIS:ND1	48:A2:701:G:O2'	1.67	1.26
20:AR:39:GLN:NE2	48:A2:2689:C:P	2.07	1.26
38:Aj:3:LYS:HE3	48:A2:1621:U:OP2	1.09	1.26
46:At:4:HIS:CE1	46:At:38:PHE:CE2	2.23	1.26
24:AV:47:GLY:HA3	48:A2:4455:U:O2'	1.36	1.25
41:Am:104:HIS:CE1	48:A2:4659:U:C5'	2.18	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BC:253:PRO:O	52:BC:256:TRP:HD1	1.18	1.25
28:AZ:88:ASP:OD1	28:AZ:90:PRO:HD3	1.11	1.25
67:BR:95:ILE:CG2	67:BR:114:LEU:HB3	1.66	1.25
29:Aa:61:TYR:CE1	48:A2:288:G:N2	2.04	1.25
48:A2:4983:C:OP1	58:BI:169:GLY:CA	1.82	1.25
10:AH:8:GLN:HG3	10:AH:74:CYS:CB	1.66	1.25
12:AJ:111:GLU:CG	68:BS:14:ARG:HH21	1.48	1.25
49:B1:1522:A:H2	65:BP:128:HIS:CD2	1.54	1.25
7:AE:175:VAL:CG2	7:AE:189:THR:OG1	1.84	1.25
49:B1:688:U:O2'	57:BH:103:LYS:HD3	1.35	1.25
49:B1:1046:U:O2'	64:BO:140:THR:HB	1.21	1.25
49:B1:1555:U:P	79:Bd:22:ARG:HH21	1.57	1.24
49:B1:1603:G:H5'	68:BS:38:ARG:NH1	1.51	1.24
79:Bd:36:LEU:CD1	79:Bd:43:PHE:HE2	1.49	1.24
5:AC:77:PRO:O	5:AC:91:ALA:CB	1.84	1.24
7:AE:233:PHE:CE1	48:A2:447:G:C6	2.25	1.24
48:A2:3879:A:C6	85:By:22:UNK:CB	2.19	1.24
49:B1:407:G:N3	73:BX:36:LEU:HD22	1.51	1.24
5:AC:190:ARG:HE	5:AC:202:ILE:CD1	1.49	1.24
17:AO:167:HIS:CE1	48:A2:4719:C:C5	2.24	1.24
49:B1:1825:A:OP1	84:Bx:50:U:OP1	1.55	1.24
65:BP:62:LYS:O	65:BP:66:GLU:HG2	1.37	1.24
7:AE:240:TYR:HE1	48:A2:4897:C:C4'	1.49	1.24
20:AR:165:LYS:NZ	49:B1:907:G:H5"	0.91	1.24
46:At:52:GLU:OE1	46:At:79:ARG:NH2	1.70	1.24
47:Au:166:ALA:CA	48:A2:3940:G:H1'	1.68	1.24
64:BO:54:CYS:SG	64:BO:81:VAL:CG2	2.24	1.24
49:B1:827:A:C4'	59:BJ:8:VAL:HG11	1.67	1.24
49:B1:1314:U:C6	60:BK:2:LEU:HD22	1.71	1.24
13:AK:81:HIS:CE1	13:AK:88:PHE:CE1	2.25	1.23
17:AO:49:ARG:NH2	48:A2:1910:A:H2'	1.53	1.23
49:B1:1454:A:H2'	67:BR:3:ARG:CD	1.66	1.23
49:B1:1578:U:C5	53:BD:4:GLN:NE2	2.05	1.23
50:BA:37:TYR:CD2	50:BA:162:PRO:HG3	1.73	1.23
64:BO:105:THR:CG2	76:Ba:24:THR:HG23	1.67	1.23
54:BE:137:PRO:HG3	56:BG:209:TYR:OH	1.35	1.23
66:BQ:33:LYS:CE	66:BQ:36:GLY:HA2	1.67	1.23
67:BR:95:ILE:HG23	67:BR:114:LEU:CB	1.68	1.23
5:AC:149:GLU:HA	46:At:71:ARG:O	1.33	1.23
62:BM:35:ILE:CD1	62:BM:61:TYR:CE1	1.92	1.23
67:BR:97:GLU:C	67:BR:117:LEU:HD21	1.62	1.23

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:BU:27:ARG:NH2	79:Bd:51:GLY:CA	1.99	1.23
8:AF:51:TYR:CE1	48:A2:1220:C:C5	2.25	1.23
48:A2:4983:C:OP1	58:BI:169:GLY:HA3	1.33	1.23
49:B1:1309:C:P	81:Bf:118:ARG:NE	2.12	1.23
59:BJ:120:ALA:O	59:BJ:125:HIS:HD2	1.20	1.23
6:AD:205:ALA:HB1	6:AD:233:PRO:CB	1.68	1.22
28:AZ:33:THR:OG1	28:AZ:40:HIS:CE1	1.92	1.22
36:Ah:31:LEU:CB	36:Ah:47:ILE:HD12	1.68	1.22
46:At:108:MET:SD	48:A2:949:C:O2'	1.97	1.22
20:AR:165:LYS:HE2	49:B1:907:G:O5'	1.35	1.22
48:A2:204:G:H1'	48:A2:228:U:O2	1.31	1.22
49:B1:747:U:O2'	49:B1:749:U:C4	1.82	1.22
66:BQ:97:GLN:OE1	66:BQ:105:LYS:HE2	1.36	1.22
7:AE:273:SER:HB2	48:A2:4839:U:O2'	1.38	1.22
42:An:2:ARG:NH1	49:B1:1852:C:H5"	1.52	1.22
49:B1:1417:C:O4'	69:BT:2:PRO:CA	1.88	1.22
68:BS:70:ILE:CD1	68:BS:77:TYR:CE2	2.21	1.22
47:Au:35:GLN:CB	48:A2:4023:A:O2'	1.87	1.22
49:B1:589:G:N2	80:Be:26:LYS:CE	2.02	1.22
62:BM:14:VAL:CG1	62:BM:127:TYR:CE1	2.22	1.22
4:AB:393:LYS:CE	48:A2:4998:U:H5'	1.68	1.22
36:Ah:31:LEU:HB3	36:Ah:47:ILE:CD1	1.68	1.22
66:BQ:41:MET:HE2	69:BT:10:ASN:CB	1.70	1.22
21:AS:90:THR:CG2	22:AT:156:TYR:CE2	2.23	1.21
37:Ai:5:TYR:CD1	48:A2:1463:C:N4	2.08	1.21
46:At:52:GLU:O	46:At:61:VAL:HG22	1.38	1.21
6:AD:29:ASP:HB3	48:A2:4242:A:C8	1.74	1.21
48:A2:1341:G:N2	48:A2:1343:G:C5	2.08	1.21
6:AD:17:GLN:HG3	22:AT:20:ARG:CG	1.68	1.21
7:AE:127:SER:O	7:AE:128:HIS:CB	1.88	1.21
25:AW:113:LYS:HG2	49:B1:328:U:O4	1.41	1.21
26:AX:111:GLN:O	26:AX:115:LYS:HG2	1.40	1.21
37:Ai:14:GLY:CA	48:A2:72:C:OP2	1.89	1.21
47:Au:207:LYS:HE2	48:A2:4022:C:O2'	1.35	1.21
49:B1:688:U:C2'	57:BH:103:LYS:CD	2.18	1.21
54:BE:87:MET:CE	54:BE:123:LEU:H	1.53	1.21
66:BQ:105:LYS:O	66:BQ:108:ILE:HG22	1.40	1.21
7:AE:111:LYS:HE3	48:A2:682:U:OP1	1.32	1.21
48:A2:4731:G:N2	48:A2:4821:G:C6	2.07	1.21
49:B1:875:A:N1	49:B1:912:C:N3	1.89	1.21
7:AE:119:GLU:HG2	33:Ae:7:LEU:CD2	1.70	1.21

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AN:86:HIS:ND1	48:A2:33:A:OP2	1.73	1.21
46:At:107:ARG:NH2	48:A2:951:A:H5'	1.56	1.21
8:AF:166:ARG:NH1	8:AF:209:TRP:CG	2.08	1.20
13:AK:48:ARG:NH1	45:Aq:122:ALA:HB2	1.54	1.20
59:BJ:120:ALA:O	59:BJ:125:HIS:CD2	1.94	1.20
15:AM:41:PRO:HB3	15:AM:70:GLN:NE2	1.55	1.20
22:AT:109:VAL:HG13	48:A2:1785:G:O6	1.34	1.20
49:B1:1285:G:O6	62:BM:56:CYS:HA	1.36	1.20
52:BC:178:HIS:CD2	52:BC:200:ARG:HD2	1.71	1.20
70:BU:61:LEU:HD11	79:Bd:34:TYR:CE2	1.77	1.20
49:B1:737:G:C8	49:B1:737:G:OP2	1.93	1.20
50:BA:111:GLN:NE2	52:BC:64:THR:CB	2.05	1.20
7:AE:240:TYR:OH	48:A2:4897:C:H5'	1.35	1.20
36:Ah:109:ARG:NH2	48:A2:153:G:H5"	1.52	1.20
48:A2:4160:G:C2	83:Bv:74:C:C4	2.28	1.20
53:BD:210:ILE:CB	67:BR:39:ALA:HB2	1.70	1.20
63:BN:124:ARG:HG2	63:BN:127:ARG:NH2	1.56	1.20
68:BS:4:VAL:HG11	75:BZ:90:GLU:OE1	1.39	1.20
20:AR:126:LYS:CE	20:AR:131:VAL:HG11	1.71	1.20
49:B1:1552:G:H5'	49:B1:1557:C:H5	1.05	1.20
51:BB:182:LYS:CE	51:BB:231:LEU:CD1	2.19	1.20
7:AE:105:ARG:NH2	48:A2:678:C:O2	1.74	1.19
48:A2:900:U:C2'	48:A2:901:U:H5'	1.72	1.19
49:B1:1287:A:C5'	49:B1:1312:G:N1	2.04	1.19
49:B1:1314:U:N1	60:BK:2:LEU:HB2	1.57	1.19
50:BA:176:TRP:HA	50:BA:202:TYR:CE2	1.76	1.19
67:BR:21:TYR:CD2	67:BR:71:ILE:CG2	2.24	1.19
49:B1:168:C:C5'	56:BG:131:ARG:CD	2.11	1.19
49:B1:1522:A:H2	65:BP:128:HIS:CG	1.54	1.19
48:A2:904:A:N1	48:A2:906:C:H5	1.38	1.19
66:BQ:51:LEU:HD12	66:BQ:81:ILE:CG2	1.73	1.19
48:A2:4982:C:C2'	58:BI:168:GLN:O	1.91	1.19
49:B1:1313:A:OP2	62:BM:33:ARG:NH2	1.75	1.19
54:BE:36:HIS:CD2	54:BE:85:GLY:HA3	1.76	1.19
2:A4:14:C:OP1	6:AD:24:ARG:NH1	1.73	1.18
5:AC:100:ARG:CZ	48:A2:1632:A:N1	2.06	1.18
14:AL:13:HIS:O	14:AL:14:PHE:CD1	1.96	1.18
47:Au:166:ALA:HB3	48:A2:3940:G:N3	1.48	1.18
49:B1:227:U:H1'	49:B1:228:C:OP2	1.43	1.18
49:B1:1314:U:N3	60:BK:2:LEU:CB	2.04	1.18
55:BF:23:TRP:NE1	55:BF:108:PRO:CG	2.06	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:311:ARG:HH12	48:A2:946:G:C5'	1.57	1.18
10:AH:7:ASN:HB2	10:AH:57:VAL:O	1.43	1.18
46:At:42:GLY:O	46:At:48:THR:HG21	1.37	1.18
85:By:23:UNK:O	85:By:24:UNK:CB	1.89	1.18
49:B1:1287:A:H5"	49:B1:1312:G:C2	1.78	1.18
66:BQ:12:VAL:CG1	66:BQ:90:LYS:HB3	1.72	1.18
5:AC:150:LEU:CB	46:At:71:ARG:HB3	1.72	1.18
9:AG:163:PRO:CD	48:A2:148:G:H22	1.57	1.18
20:AR:39:GLN:HE22	48:A2:2689:C:P	1.64	1.18
22:AT:119:ALA:HB2	22:AT:126:VAL:CG1	1.74	1.18
13:AK:81:HIS:CE1	13:AK:88:PHE:HE1	1.57	1.18
48:A2:32:G:N2	48:A2:50:C:H41	1.39	1.18
49:B1:689:U:C6	49:B1:742:U:N3	2.12	1.18
59:BJ:96:TYR:CE2	59:BJ:100:LEU:HD21	1.78	1.18
5:AC:86:ARG:O	5:AC:89:GLN:HB2	1.40	1.17
5:AC:212:ASN:HB3	5:AC:232:VAL:CG2	1.72	1.17
20:AR:126:LYS:HG2	20:AR:131:VAL:HG21	1.18	1.17
22:AT:112:ASN:OD1	22:AT:128:LEU:HB2	1.44	1.17
48:A2:3731:A:N6	49:B1:1825:A:C5	2.12	1.17
12:AJ:111:GLU:CD	12:AJ:125:ILE:HG21	1.67	1.17
23:AU:56:LEU:HD23	23:AU:61:VAL:CG2	1.73	1.17
35:Ag:49:CYS:SG	48:A2:2631:G:C2	2.37	1.17
47:Au:207:LYS:HD2	47:Au:213:PRO:HB3	1.17	1.17
49:B1:434:G:OP1	58:BI:23:LYS:HG3	1.41	1.17
49:B1:1752:C:O2	49:B1:1780:G:N2	1.75	1.17
68:BS:44:VAL:CG2	68:BS:71:MET:SD	2.32	1.17
14:AL:44:ARG:NE	48:A2:182:C:C6	2.12	1.17
14:AL:70:VAL:CG1	14:AL:159:ASN:OD1	1.93	1.17
32:Ad:46:LEU:CD1	48:A2:2351:U:O2'	1.90	1.17
7:AE:175:VAL:O	7:AE:186:LEU:O	1.62	1.17
12:AJ:111:GLU:CG	68:BS:14:ARG:NH2	2.03	1.17
49:B1:407:G:C2	73:BX:36:LEU:HD22	1.78	1.17
50:BA:107:THR:O	50:BA:116:PHE:CA	1.92	1.17
1:A3:72:A:OP2	27:AY:51:LYS:HB2	1.43	1.17
3:AA:196:TRP:HZ2	48:A2:3624:A:OP1	1.27	1.17
13:AK:59:THR:HB	48:A2:1942:G:H5'	1.19	1.17
13:AK:81:HIS:NE2	13:AK:88:PHE:HE1	1.25	1.17
49:B1:688:U:H2'	57:BH:103:LYS:CG	1.73	1.17
65:BP:85:ILE:HD11	65:BP:116:LEU:HD23	1.24	1.17
7:AE:175:VAL:HG21	7:AE:189:THR:OG1	1.03	1.16
13:AK:37:SER:CA	48:A2:1952:C:O2'	1.92	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:Aa:90:ALA:HB1	29:Aa:99:PRO:CD	1.75	1.16
68:BS:74:PRO:HG3	68:BS:84:LEU:HD21	1.28	1.16
1:A3:153:C:H5"	9:AG:185:LYS:HE2	1.28	1.16
30:Ab:45:PHE:CE2	48:A2:1797:G:N2	2.13	1.16
34:Af:63:LYS:CB	34:Af:64:PRO:CD	2.22	1.16
48:A2:4016:A:C2	83:Bw:56:C:C6	2.32	1.16
49:B1:157:U:C5'	56:BG:58:LYS:O	1.92	1.16
49:B1:157:U:C4'	56:BG:58:LYS:O	1.92	1.16
51:BB:173:THR:O	51:BB:177:GLN:HB2	1.45	1.16
70:BU:20:ILE:HG22	70:BU:116:ILE:CA	1.75	1.16
7:AE:126:LEU:HD12	48:A2:958:U:C4	1.80	1.16
10:AH:5:LEU:HD13	10:AH:60:TRP:CZ3	1.81	1.16
49:B1:227:U:H1'	49:B1:228:C:P	1.85	1.16
49:B1:1442:U:O2'	66:BQ:13:PHE:CD1	1.99	1.16
50:BA:111:GLN:HE21	52:BC:64:THR:CB	1.58	1.16
65:BP:85:ILE:HD11	65:BP:116:LEU:CD2	1.74	1.16
68:BS:70:ILE:HD11	68:BS:77:TYR:CZ	1.78	1.16
6:AD:22:ARG:HH21	6:AD:27:LYS:CD	1.57	1.16
13:AK:48:ARG:HH11	45:Aq:122:ALA:CA	1.57	1.16
67:BR:100:PRO:CD	67:BR:119:VAL:HG22	1.74	1.16
62:BM:14:VAL:HG11	62:BM:127:TYR:CE1	1.81	1.16
1:A3:102:G:H5"	38:Aj:39:TYR:OH	1.40	1.15
5:AC:77:PRO:HB2	5:AC:91:ALA:HB1	1.25	1.15
38:Aj:3:LYS:CE	48:A2:1621:U:OP2	1.93	1.15
65:BP:65:LYS:CB	65:BP:66:GLU:OE1	1.94	1.15
24:AV:45:ILE:CD1	24:AV:53:PRO:HB3	1.76	1.15
52:BC:178:HIS:CD2	52:BC:200:ARG:HD3	1.74	1.15
61:BL:30:LYS:HD2	61:BL:33:LEU:HD21	1.24	1.15
62:BM:14:VAL:HG13	62:BM:127:TYR:CD1	1.81	1.15
21:AS:173:ASN:CA	48:A2:4724:A:H2	1.60	1.15
25:AW:101:ARG:CB	25:AW:105:ARG:HH12	1.55	1.15
40:Al:36:ARG:HH11	48:A2:407:G:N2	1.42	1.15
49:B1:294:U:C4	61:BL:65:ASN:HB3	1.80	1.15
66:BQ:51:LEU:CD1	66:BQ:81:ILE:HG23	1.76	1.15
76:Ba:46:GLU:OE2	84:Bx:38:U:H1'	1.40	1.15
8:AF:51:TYR:CE1	48:A2:1220:C:N4	2.13	1.15
48:A2:1226:C:OP2	48:A2:1226:C:C6	1.99	1.15
49:B1:536:A:H4'	80:Be:47:PRO:HG2	1.28	1.15
54:BE:98:HIS:HB3	54:BE:114:ILE:CG2	1.76	1.15
9:AG:163:PRO:HD2	48:A2:148:G:H22	0.98	1.15
15:AM:20:HIS:CE1	15:AM:48:GLN:HE22	1.63	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AR:165:LYS:CE	49:B1:907:G:C5'	2.23	1.15
49:B1:560:A:H5'	59:BJ:172:ARG:N	1.61	1.15
49:B1:1309:C:P	81:Bf:118:ARG:HE	1.67	1.14
51:BB:182:LYS:HE2	51:BB:231:LEU:HD12	1.24	1.14
8:AF:166:ARG:HB3	8:AF:209:TRP:CE3	1.81	1.14
14:AL:128:PRO:HD2	14:AL:136:LYS:CE	1.77	1.14
21:AS:90:THR:CG2	22:AT:156:TYR:CD2	2.30	1.14
34:Af:63:LYS:HB2	34:Af:64:PRO:HD3	1.17	1.14
49:B1:1113:A:O2'	51:BB:202:GLN:HB3	1.42	1.14
51:BB:79:VAL:HG21	51:BB:82:ARG:HD3	1.27	1.14
16:AN:108:ARG:NH2	48:A2:2440:G:H5"	1.62	1.14
23:AU:48:LYS:HG2	23:AU:53:ALA:HB2	1.28	1.14
47:Au:67:VAL:HG22	47:Au:111:LEU:HB2	1.18	1.14
54:BE:95:THR:CG2	54:BE:97:GLU:HG3	1.78	1.14
65:BP:49:LEU:H	65:BP:50:ARG:HG2	1.06	1.14
66:BQ:16:LYS:CG	66:BQ:17:LYS:H	1.52	1.14
79:Bd:38:MET:CG	79:Bd:43:PHE:HB2	1.78	1.14
79:Bd:38:MET:HE2	79:Bd:43:PHE:HA	1.20	1.14
42:An:10:MET:HE2	49:B1:1172:U:H4'	1.28	1.14
51:BB:127:VAL:HG13	51:BB:176:VAL:CG1	1.77	1.14
7:AE:173:LEU:HD12	7:AE:189:THR:O	1.48	1.14
17:AO:179:LYS:HD2	48:A2:4830:G:N7	1.63	1.14
49:B1:918:U:H4'	63:BN:20:ARG:NH2	1.63	1.14
51:BB:127:VAL:HG13	51:BB:176:VAL:HG11	1.25	1.14
80:Be:35:ARG:HD3	80:Be:39:ASN:HD21	0.99	1.14
5:AC:77:PRO:HB2	5:AC:91:ALA:CB	1.78	1.13
5:AC:311:ARG:NH1	48:A2:946:G:H5'	1.62	1.13
13:AK:45:MET:HG2	45:Aq:121:LEU:CD2	1.77	1.13
13:AK:55:MET:CE	13:AK:61:MET:HE2	1.77	1.13
48:A2:4160:G:N2	83:Bv:74:C:C5	2.16	1.13
49:B1:872:A:C8	49:B1:874:G:C2	2.35	1.13
6:AD:290:ALA:HB2	48:A2:1163:C:OP1	1.46	1.13
7:AE:274:VAL:O	48:A2:4839:U:H1'	1.44	1.13
23:AU:47:ILE:HD12	23:AU:63:ILE:HD11	1.30	1.13
48:A2:961:C:H6	48:A2:961:C:H5"	1.05	1.13
68:BS:92:ASP:OD2	68:BS:94:LYS:HB2	1.45	1.13
4:AB:62:ARG:HH12	48:A2:4578:A:H5'	0.99	1.13
28:AZ:97:ASN:O	28:AZ:100:VAL:CG1	1.95	1.13
40:Al:36:ARG:NH1	48:A2:407:G:H21	1.47	1.13
49:B1:1522:A:C2	65:BP:128:HIS:HB3	1.74	1.13
53:BD:71:ALA:HB3	60:BK:20:VAL:HG21	1.27	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BI:173:ALA:HB1	58:BI:188:TYR:O	1.48	1.13
70:BU:20:ILE:CG2	70:BU:116:ILE:HA	1.79	1.13
25:AW:102:LYS:HG2	25:AW:105:ARG:HH21	1.03	1.13
50:BA:107:THR:O	50:BA:116:PHE:HA	0.96	1.13
50:BA:176:TRP:N	50:BA:202:TYR:CD2	2.16	1.13
53:BD:76:ARG:HE	60:BK:66:HIS:CG	1.66	1.13
55:BF:167:LYS:NZ	75:BZ:75:GLU:OE1	1.82	1.13
75:BZ:99:LEU:CB	75:BZ:109:TYR:CE1	2.31	1.13
5:AC:73:VAL:HG23	5:AC:74:ALA:H	1.03	1.12
7:AE:219:LYS:CG	48:A2:4898:C:C5	2.30	1.12
12:AJ:111:GLU:OE1	12:AJ:125:ILE:HG21	1.47	1.12
20:AR:97:ARG:NH2	48:A2:2704:A:H8	1.47	1.13
15:AM:47:ARG:HG2	21:AS:73:LEU:HD22	1.15	1.12
30:Ab:45:PHE:CZ	48:A2:1797:G:N2	2.16	1.12
48:A2:4544:C:H2'	48:A2:4545:C:H5'	1.13	1.13
48:A2:4731:G:N2	48:A2:4821:G:O6	1.80	1.12
49:B1:386:C:OP2	58:BI:10:LYS:CE	1.97	1.12
49:B1:799:U:OP1	57:BH:110:THR:HB	1.48	1.12
49:B1:827:A:C5'	59:BJ:8:VAL:HG11	1.79	1.12
79:Bd:11:PRO:O	79:Bd:12:ARG:HB2	1.42	1.13
50:BA:176:TRP:CA	50:BA:202:TYR:CE2	2.31	1.12
22:AT:78:LYS:HD3	22:AT:87:LYS:HZ1	1.04	1.12
49:B1:688:U:H3'	57:BH:103:LYS:HD2	1.30	1.12
52:BC:253:PRO:CD	72:BW:99:PHE:CE1	2.31	1.12
59:BJ:169:ARG:HB3	59:BJ:173:VAL:HB	1.19	1.12
5:AC:190:ARG:NE	5:AC:202:ILE:HD11	1.64	1.12
9:AG:113:ARG:NH2	48:A2:119:G:C4	2.17	1.12
27:AY:59:ARG:HH12	48:A2:196:G:H2'	1.04	1.12
28:AZ:68:ILE:HG22	28:AZ:119:GLU:HG3	1.14	1.12
47:Au:85:MET:HE3	47:Au:89:ALA:HB1	1.21	1.12
47:Au:166:ALA:CB	48:A2:3940:G:C4	2.27	1.12
49:B1:681:U:H4'	73:BX:9:THR:HG23	1.23	1.12
67:BR:95:ILE:HA	67:BR:114:LEU:HD13	1.14	1.12
7:AE:111:LYS:HB2	46:At:87:ARG:HH12	1.09	1.12
10:AH:8:GLN:HG3	10:AH:74:CYS:HB2	1.14	1.12
35:Ag:21:ARG:HD3	48:A2:2666:U:O2	1.50	1.12
38:Aj:21:ARG:HD3	38:Aj:39:TYR:CE1	1.83	1.12
48:A2:4983:C:OP2	58:BI:169:GLY:O	1.68	1.12
49:B1:798:G:O3'	57:BH:110:THR:HG21	1.50	1.12
49:B1:823:U:O2	59:BJ:142:VAL:HA	1.49	1.12
7:AE:112:MET:HE3	7:AE:113:PRO:HD2	1.31	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AI:193:ASP:OD1	48:A2:1733:A:H1'	1.49	1.12
19:AQ:68:ARG:NH2	48:A2:1483:C:H2'	1.65	1.12
2:A4:33:U:C6	6:AD:207:TYR:CE1	2.37	1.11
13:AK:17:ILE:HD13	13:AK:61:MET:HE1	1.22	1.11
48:A2:130:C:H3'	48:A2:131:C:H5"	1.22	1.11
49:B1:407:G:C4	73:BX:36:LEU:HD22	1.84	1.11
49:B1:747:U:O2'	49:B1:749:U:O4	1.63	1.11
66:BQ:44:PRO:HG2	66:BQ:47:LEU:HB2	1.23	1.11
13:AK:41:GLN:CB	45:Aq:121:LEU:HD13	1.79	1.11
13:AK:57:LYS:HB2	13:AK:60:MET:HB2	1.20	1.11
15:AM:25:VAL:HG12	15:AM:45:VAL:HG11	1.16	1.11
32:Ad:38:PHE:CD2	48:A2:4596:U:C4	2.38	1.11
47:Au:35:GLN:CG	48:A2:4023:A:O2'	0.82	1.11
75:BZ:68:ILE:HB	75:BZ:109:TYR:HB2	1.32	1.11
6:AD:232:THR:H	6:AD:235:MET:HG2	1.00	1.11
7:AE:119:GLU:HG2	33:Ae:7:LEU:HD21	1.31	1.11
48:A2:1720:A:H2'	48:A2:1721:G:H5'	1.31	1.11
48:A2:1741:G:C6	48:A2:1742:G:N7	2.19	1.11
49:B1:407:G:C4	73:BX:36:LEU:CD2	2.33	1.11
49:B1:561:A:H5"	59:BJ:170:PRO:HG2	1.22	1.11
49:B1:693:A:C2	49:B1:737:G:O6	2.03	1.11
49:B1:1274:G:N2	60:BK:29:MET:CG	2.06	1.11
52:BC:256:TRP:CH2	72:BW:68:ARG:CB	2.33	1.11
59:BJ:136:ARG:HB3	59:BJ:158:ASP:O	1.46	1.11
5:AC:150:LEU:HB2	46:At:71:ARG:CB	1.80	1.11
7:AE:105:ARG:HG2	48:A2:464:A:N1	1.64	1.11
24:AV:45:ILE:HD12	24:AV:53:PRO:HB3	1.12	1.11
47:Au:165:LEU:CD1	48:A2:3940:G:O4'	1.98	1.11
49:B1:502:C:OP1	54:BE:66:MET:HE1	1.49	1.11
49:B1:875:A:N1	49:B1:912:C:C4	2.19	1.11
49:B1:1309:C:OP1	81:Bf:118:ARG:NE	1.83	1.11
66:BQ:39:LEU:HD11	66:BQ:51:LEU:HD22	1.17	1.11
75:BZ:79:ILE:HG22	75:BZ:83:LEU:HD12	1.28	1.11
75:BZ:99:LEU:CB	75:BZ:109:TYR:CD1	2.33	1.11
3:AA:87:PHE:CE1	48:A2:4089:U:H5"	1.86	1.11
15:AM:25:VAL:CG1	15:AM:45:VAL:HG11	1.81	1.11
37:Ai:5:TYR:N	48:A2:1463:C:N3	1.97	1.11
46:At:98:ARG:HD2	48:A2:951:A:C4'	1.80	1.11
47:Au:166:ALA:HB3	48:A2:3940:G:N9	1.65	1.11
48:A2:1341:G:N2	48:A2:1343:G:C4	2.18	1.11
52:BC:253:PRO:O	52:BC:256:TRP:CD1	2.03	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BF:39:ILE:HG23	55:BF:68:ILE:CG2	1.80	1.11
59:BJ:87:LEU:HD21	59:BJ:100:LEU:HD11	1.28	1.11
69:BT:41:LYS:NZ	69:BT:81:GLY:CA	2.14	1.11
82:Bg:88:ARG:HD2	82:Bg:90:TRP:CE2	1.84	1.11
6:AD:235:MET:SD	6:AD:235:MET:N	2.11	1.10
14:AL:44:ARG:NE	48:A2:182:C:C5	2.19	1.10
49:B1:1016:U:C5	77:Bb:30:SER:OG	2.04	1.10
50:BA:206:ASP:CB	50:BA:210:ILE:CD1	2.23	1.10
79:Bd:38:MET:HE2	79:Bd:43:PHE:CA	1.80	1.10
48:A2:1752:A:C2	48:A2:1753:U:C2	2.39	1.10
51:BB:71:LEU:HD22	51:BB:75:GLN:HB2	1.17	1.10
53:BD:210:ILE:HG22	67:BR:39:ALA:HB1	1.14	1.10
48:A2:133:C:N3	48:A2:134:G:C5	2.19	1.10
66:BQ:62:ARG:HD3	66:BQ:92:LEU:CG	1.80	1.10
67:BR:97:GLU:CB	67:BR:116:ASN:O	2.00	1.10
8:AF:69:ILE:CG2	8:AF:73:ARG:HE	1.65	1.10
14:AL:59:VAL:HG11	48:A2:74:G:H5"	1.17	1.10
17:AO:179:LYS:CE	48:A2:4830:G:C8	2.35	1.10
20:AR:169:ALA:O	20:AR:172:ARG:HG3	1.51	1.10
47:Au:35:GLN:HG3	48:A2:4023:A:O2'	1.38	1.10
66:BQ:21:ALA:HB2	66:BQ:83:ALA:HB1	1.32	1.10
79:Bd:20:SER:C	79:Bd:31:ILE:CD1	2.23	1.10
6:AD:17:GLN:HG2	22:AT:20:ARG:HG2	1.16	1.10
6:AD:286:SER:CB	48:A2:1163:C:C4'	2.18	1.10
7:AE:219:LYS:NZ	48:A2:1274:G:H5'	1.66	1.10
48:A2:1745:C:C4	48:A2:1746:G:N7	2.20	1.10
49:B1:1307:U:H1'	81:Bf:135:HIS:CE1	1.87	1.10
17:AO:114:LYS:O	48:A2:4718:C:H5'	1.52	1.09
49:B1:688:U:H2'	57:BH:103:LYS:HG2	1.25	1.09
65:BP:34:MET:SD	65:BP:45:LEU:HD13	1.91	1.09
67:BR:100:PRO:HD3	67:BR:119:VAL:HG22	1.12	1.09
5:AC:190:ARG:NE	5:AC:202:ILE:CD1	2.13	1.09
48:A2:1720:A:C2'	48:A2:1721:G:H5'	1.81	1.09
49:B1:1407:U:H5"	66:BQ:71:ARG:HH12	0.99	1.09
52:BC:253:PRO:HA	52:BC:256:TRP:NE1	1.67	1.09
66:BQ:16:LYS:HG3	66:BQ:17:LYS:N	1.57	1.09
70:BU:20:ILE:HG13	70:BU:98:VAL:HG21	1.26	1.09
72:BW:102:ILE:H	72:BW:113:HIS:HB2	1.17	1.09
12:AJ:65:ASN:O	43:Ao:103:VAL:HG23	1.52	1.09
45:Aq:43:GLY:HA2	45:Aq:46:ILE:HG22	1.34	1.09
53:BD:142:LEU:HD13	53:BD:150:MET:SD	1.91	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BG:211:LYS:HG3	56:BG:215:LYS:HE3	1.35	1.09
66:BQ:62:ARG:NH2	66:BQ:108:ILE:CD1	2.15	1.09
69:BT:41:LYS:HZ2	69:BT:81:GLY:CA	1.65	1.09
8:AF:70:ARG:HD2	48:A2:1191:G:HO2'	1.01	1.09
13:AK:81:HIS:CD2	13:AK:88:PHE:HE1	1.70	1.09
14:AL:167:ARG:HD2	29:Aa:100:ILE:HD11	1.33	1.09
25:AW:102:LYS:CG	25:AW:105:ARG:HH21	1.58	1.09
28:AZ:33:THR:HB	28:AZ:36:ARG:HG2	1.34	1.09
54:BE:69:PHE:CE1	54:BE:94:LYS:CE	2.34	1.09
5:AC:77:PRO:CA	5:AC:91:ALA:HB2	1.81	1.09
45:Aq:46:ILE:HD13	45:Aq:71:ILE:HB	1.33	1.09
48:A2:4544:C:C2'	48:A2:4545:C:H5'	1.82	1.09
49:B1:689:U:C6	49:B1:742:U:C4	2.41	1.09
49:B1:1665:G:N1	69:BT:87:VAL:HG11	1.66	1.09
51:BB:139:CYS:HB2	51:BB:172:MET:HE1	1.33	1.09
51:BB:173:THR:O	51:BB:177:GLN:CB	2.01	1.09
6:AD:283:LYS:HA	48:A2:1162:U:OP2	1.53	1.08
14:AL:70:VAL:HG12	14:AL:159:ASN:OD1	1.50	1.08
15:AM:100:ARG:HB3	17:AO:198:THR:OG1	1.52	1.08
29:Aa:90:ALA:CB	29:Aa:99:PRO:HD3	1.83	1.08
46:At:98:ARG:HH11	48:A2:951:A:H5"	1.15	1.08
49:B1:168:C:C4'	56:BG:131:ARG:HD2	1.82	1.08
49:B1:402:C:H5'	58:BI:14:THR:CG2	1.81	1.08
50:BA:206:ASP:HB3	50:BA:210:ILE:HD11	1.15	1.08
51:BB:38:MET:SD	51:BB:185:VAL:CG1	2.41	1.08
51:BB:70:SER:HB3	51:BB:83:LYS:HA	1.26	1.08
14:AL:60:ARG:NH1	48:A2:72:C:N3	2.01	1.08
20:AR:126:LYS:HG3	20:AR:131:VAL:HG21	1.31	1.08
25:AW:60:LYS:O	25:AW:61:LYS:HG2	1.52	1.08
25:AW:97:LYS:HB3	25:AW:98:PRO:HD3	1.33	1.08
34:Af:63:LYS:HB3	34:Af:64:PRO:HD3	1.18	1.08
48:A2:1739:U:C2	48:A2:1740:G:C8	2.41	1.08
48:A2:3731:A:N6	49:B1:1825:A:C6	2.21	1.08
49:B1:827:A:H4'	59:BJ:8:VAL:CG1	1.84	1.08
49:B1:1417:C:C1'	69:BT:2:PRO:HA	1.81	1.08
49:B1:1863:A:N3	76:Ba:79:ILE:HD12	1.65	1.08
53:BD:69:LEU:O	53:BD:73:VAL:HG23	1.53	1.08
59:BJ:141:VAL:HG21	59:BJ:162:ARG:HH21	1.08	1.08
7:AE:203:ILE:O	7:AE:206:VAL:HG23	1.52	1.08
15:AM:46:ARG:HD2	15:AM:47:ARG:H	1.16	1.08
48:A2:1989:U:C5	48:A2:1991:A:H5"	1.88	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:3726:G:H21	83:Bv:12:U:H4'	1.12	1.08
49:B1:581:U:C5'	74:BY:62:THR:CG2	2.15	1.08
49:B1:872:A:O2'	49:B1:874:G:N2	1.87	1.08
49:B1:1015:U:H5'	77:Bb:20:LYS:NZ	1.66	1.08
65:BP:119:PHE:CE2	68:BS:117:ILE:HG23	1.89	1.08
79:Bd:36:LEU:CD1	79:Bd:43:PHE:CE2	2.30	1.08
5:AC:217:ILE:HD12	5:AC:220:ALA:HB3	1.34	1.08
7:AE:111:LYS:CB	46:At:87:ARG:HH12	1.67	1.08
10:AH:5:LEU:CD1	10:AH:60:TRP:CZ3	2.34	1.08
13:AK:14:PHE:CZ	48:A2:1941:A:N7	2.21	1.08
20:AR:61:ALA:HB2	48:A2:2612:U:C5'	1.82	1.08
23:AU:47:ILE:HG22	23:AU:49:VAL:CG2	1.83	1.08
28:AZ:68:ILE:HG22	28:AZ:119:GLU:CG	1.84	1.08
29:Aa:79:TRP:HE1	29:Aa:117:LEU:HD12	1.14	1.08
29:Aa:83:SER:CB	29:Aa:86:THR:HG23	1.83	1.08
47:Au:207:LYS:CE	48:A2:4022:C:O2'	1.99	1.08
52:BC:256:TRP:CH2	72:BW:68:ARG:HB2	1.88	1.08
55:BF:103:LEU:HD22	55:BF:104:THR:HG23	1.32	1.08
29:Aa:74:ASN:HB3	29:Aa:114:LYS:HG3	1.33	1.08
48:A2:900:U:O2'	48:A2:901:U:C5'	2.00	1.08
48:A2:2685:G:H5"	48:A2:2685:G:H8	1.15	1.08
49:B1:386:C:P	58:BI:10:LYS:HE3	1.94	1.08
54:BE:98:HIS:HB3	54:BE:114:ILE:HG23	1.14	1.08
55:BF:39:ILE:HG23	55:BF:68:ILE:HG21	1.13	1.08
67:BR:42:PRO:HD2	67:BR:46:LEU:HD23	1.25	1.08
70:BU:24:LEU:HD21	70:BU:112:VAL:HG22	1.10	1.08
71:BV:37:ALA:CB	71:BV:46:PHE:CE1	2.37	1.08
80:Be:35:ARG:HD3	80:Be:39:ASN:ND2	1.65	1.08
82:Bg:88:ARG:HD2	82:Bg:90:TRP:CZ2	1.89	1.08
8:AF:70:ARG:HD2	48:A2:1191:G:O2'	1.51	1.07
13:AK:58:ASN:HB3	13:AK:82:ILE:HG23	1.36	1.07
40:Al:45:ARG:HH21	48:A2:2775:G:H5'	1.16	1.07
49:B1:168:C:H5"	56:BG:131:ARG:HD3	1.36	1.07
49:B1:1519:U:C2	49:B1:1623:A:N7	2.22	1.07
50:BA:216:ALA:HA	50:BA:219:GLU:HG2	1.31	1.07
53:BD:74:GLN:HE21	53:BD:84:VAL:HB	0.94	1.07
59:BJ:169:ARG:HD3	59:BJ:173:VAL:HG23	1.25	1.07
61:BL:11:GLN:O	61:BL:12:LYS:CG	2.01	1.07
65:BP:34:MET:HE2	65:BP:45:LEU:HB3	1.33	1.07
68:BS:74:PRO:HG3	68:BS:84:LEU:CD2	1.82	1.07
79:Bd:23:VAL:HG23	79:Bd:38:MET:SD	1.94	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AB:389:MET:HG2	48:A2:4999:G:H22	1.18	1.07
6:AD:29:ASP:HB3	48:A2:4242:A:N7	1.70	1.07
7:AE:111:LYS:NZ	48:A2:682:U:OP2	1.87	1.07
16:AN:71:ARG:HD2	16:AN:94:PHE:HB2	1.37	1.07
28:AZ:59:LYS:HD2	28:AZ:60:LYS:H	1.11	1.07
38:Aj:67:LEU:HD21	38:Aj:71:TYR:HE2	1.14	1.07
45:Aq:59:THR:HB	45:Aq:75:PRO:CG	1.83	1.07
49:B1:1236:G:O2'	65:BP:130:ARG:HD2	1.54	1.07
54:BE:19:MET:HE3	54:BE:108:ARG:HD3	1.33	1.07
5:AC:190:ARG:HE	5:AC:202:ILE:HD12	1.17	1.07
7:AE:95:PRO:HD2	7:AE:107:VAL:HB	1.09	1.07
13:AK:45:MET:CG	45:Aq:121:LEU:HD22	1.83	1.07
25:AW:81:ALA:O	25:AW:82:ILE:HG13	1.54	1.07
47:Au:204:LEU:HD11	47:Au:216:LEU:HB2	1.35	1.07
67:BR:36:GLU:CD	67:BR:47:ARG:HD3	1.79	1.07
79:Bd:38:MET:HG3	79:Bd:43:PHE:HB2	1.12	1.07
5:AC:150:LEU:CG	46:At:71:ARG:HA	1.82	1.07
6:AD:225:GLN:O	6:AD:229:ASN:ND2	1.88	1.07
13:AK:57:LYS:HB2	13:AK:60:MET:CB	1.85	1.07
35:Ag:70:THR:HG21	48:A2:2566:A:OP2	1.51	1.07
50:BA:38:ILE:HD12	50:BA:47:TYR:CB	1.81	1.07
50:BA:176:TRP:N	50:BA:202:TYR:CE2	2.22	1.07
55:BF:23:TRP:CE2	55:BF:108:PRO:HG3	1.90	1.07
65:BP:34:MET:HE3	65:BP:42:ARG:HA	1.30	1.07
5:AC:212:ASN:HB3	5:AC:232:VAL:HG23	1.12	1.07
5:AC:219:LYS:HE3	48:A2:220:G:C8	1.89	1.07
13:AK:41:GLN:HB3	45:Aq:121:LEU:HD13	1.07	1.07
15:AM:42:CYS:HG	15:AM:77:TRP:CD1	1.73	1.07
21:AS:7:LEU:HD23	21:AS:107:THR:OG1	1.55	1.07
22:AT:23:GLY:HA2	48:A2:4241:A:OP1	1.54	1.07
29:Aa:94:LYS:NZ	29:Aa:94:LYS:O	1.88	1.07
39:Ak:14:THR:O	39:Ak:17:ARG:HB3	1.54	1.07
47:Au:105:LYS:NZ	48:A2:4011:C:OP1	1.88	1.07
47:Au:124:LEU:HB3	47:Au:128:LEU:HD12	1.17	1.07
47:Au:166:ALA:HB1	48:A2:3940:G:N3	1.69	1.07
67:BR:5:ARG:HE	67:BR:53:TYR:HB2	1.19	1.07
67:BR:97:GLU:HB2	67:BR:117:LEU:HD23	1.32	1.07
4:AB:393:LYS:HE2	48:A2:4998:U:H5'	1.27	1.06
6:AD:17:GLN:HG2	22:AT:20:ARG:CG	1.79	1.06
13:AK:48:ARG:NH1	45:Aq:122:ALA:CB	2.18	1.06
22:AT:127:GLN:NE2	48:A2:1816:G:N2	2.02	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AV:42:VAL:HB	24:AV:45:ILE:HD11	1.37	1.06
49:B1:582:U:H4'	74:BY:32:LYS:HA	1.37	1.06
49:B1:681:U:C4'	73:BX:9:THR:HG23	1.85	1.06
80:Be:28:LYS:HB2	80:Be:32:ALA:HB1	1.16	1.06
4:AB:19:ARG:O	48:A2:4529:G:H5"	1.53	1.06
7:AE:240:TYR:CE1	48:A2:4897:C:C4'	2.38	1.06
13:AK:58:ASN:HA	13:AK:61:MET:HB2	1.32	1.06
14:AL:44:ARG:NH2	48:A2:182:C:C6	2.23	1.06
47:Au:28:PHE:CE1	47:Au:30:GLU:HG3	1.89	1.06
47:Au:85:MET:HG3	47:Au:89:ALA:HB3	1.31	1.06
49:B1:1307:U:H1'	81:Bf:135:HIS:ND1	1.70	1.06
49:B1:1555:U:OP2	79:Bd:22:ARG:NH2	1.88	1.06
49:B1:1672:U:OP1	66:BQ:18:THR:HB	1.55	1.06
50:BA:85:ARG:HG2	50:BA:204:TYR:CA	1.84	1.06
51:BB:182:LYS:HE3	51:BB:231:LEU:HD12	1.16	1.06
54:BE:79:ASP:HB3	54:BE:82:TYR:HB2	1.35	1.06
65:BP:82:ASP:O	65:BP:115:TYR:HD2	1.36	1.06
67:BR:35:CYS:HA	67:BR:38:ILE:HD11	1.32	1.06
76:Ba:4:LYS:CE	76:Ba:92:ARG:HH21	1.67	1.06
16:AN:73:ARG:NH2	48:A2:32:G:H5'	1.68	1.06
23:AU:43:LEU:O	23:AU:47:ILE:HG13	1.52	1.06
27:AY:36:LYS:HD3	27:AY:36:LYS:H	1.17	1.06
48:A2:3726:G:N2	83:Bv:12:U:H4'	1.68	1.06
49:B1:617:G:H4'	73:BX:88:ASP:OD1	1.53	1.06
49:B1:688:U:H2'	57:BH:103:LYS:CD	1.83	1.06
49:B1:1552:G:H5'	49:B1:1557:C:C5	1.89	1.06
5:AC:77:PRO:C	5:AC:91:ALA:CB	2.27	1.06
7:AE:240:TYR:CZ	48:A2:4897:C:H5'	1.90	1.06
8:AF:69:ILE:CG2	8:AF:73:ARG:NE	2.18	1.06
8:AF:166:ARG:NH1	8:AF:209:TRP:CD1	2.22	1.06
11:AI:111:LEU:HD23	83:Bv:73:A:O2'	1.54	1.06
20:AR:126:LYS:HG2	20:AR:131:VAL:CG2	1.86	1.06
28:AZ:96:VAL:HG22	28:AZ:110:ALA:HB1	1.38	1.06
33:Ae:3:ALA:O	33:Ae:4:LEU:CG	2.03	1.06
46:At:66:ARG:O	48:A2:474:C:OP1	1.71	1.06
46:At:98:ARG:HD2	48:A2:951:A:H4'	1.09	1.06
49:B1:305:U:O4	58:BI:55:TYR:CE2	2.09	1.06
51:BB:182:LYS:HE2	51:BB:231:LEU:CD1	1.85	1.06
54:BE:86:PHE:CE2	54:BE:184:ILE:CG2	2.39	1.06
79:Bd:19:ARG:NH2	79:Bd:33:LYS:HE3	1.69	1.06
7:AE:173:LEU:HD11	7:AE:191:GLN:HA	1.32	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AL:195:ARG:CG	14:AL:198:ARG:HH22	1.68	1.06
15:AM:43:THR:O	15:AM:44:GLN:HB2	1.30	1.06
33:Ae:33:ARG:CZ	48:A2:1286:A:H8	1.69	1.06
39:Ak:52:LYS:HA	39:Ak:55:LYS:HD2	1.31	1.06
47:Au:25:ARG:NH1	47:Au:26:ARG:O	1.88	1.06
48:A2:4982:C:H3'	58:BI:169:GLY:HA3	1.38	1.06
49:B1:402:C:H5'	58:BI:14:THR:HG21	1.31	1.06
59:BJ:50:LEU:CD1	59:BJ:105:PHE:HE2	1.69	1.06
62:BM:14:VAL:CG1	62:BM:127:TYR:CZ	2.39	1.06
3:AA:65:ASP:OD2	3:AA:72:ARG:NE	1.88	1.05
12:AJ:111:GLU:OE1	12:AJ:125:ILE:CG2	2.03	1.05
27:AY:51:LYS:O	27:AY:70:VAL:HG23	1.56	1.05
28:AZ:88:ASP:OD1	28:AZ:90:PRO:CD	2.03	1.05
45:Aq:22:VAL:HA	45:Aq:46:ILE:CG2	1.85	1.05
45:Aq:38:SER:HB3	45:Aq:39:PRO:HD3	1.37	1.05
48:A2:1942:G:O2'	48:A2:2005:G:N2	1.89	1.05
49:B1:1417:C:O4'	69:BT:2:PRO:C	1.97	1.05
49:B1:1417:C:O4'	69:BT:2:PRO:HA	1.49	1.05
49:B1:1603:G:C5'	68:BS:38:ARG:NH1	2.18	1.05
54:BE:36:HIS:CD2	54:BE:85:GLY:CA	2.39	1.05
65:BP:53:GLN:HB2	65:BP:83:MET:HE3	1.31	1.05
68:BS:52:LEU:H	68:BS:52:LEU:HD12	1.20	1.05
76:Ba:42:ARG:NH2	84:Bx:39:U:O5'	1.89	1.05
8:AF:70:ARG:CD	48:A2:1191:G:O2'	2.04	1.05
14:AL:136:LYS:HG3	14:AL:137:GLY:HA2	1.35	1.05
49:B1:161:U:O4	74:BY:115:LYS:HE2	1.56	1.05
50:BA:28:THR:HG22	50:BA:46:ILE:HD13	1.39	1.05
50:BA:38:ILE:CD1	50:BA:47:TYR:HB2	1.84	1.05
54:BE:149:TYR:CE2	56:BG:205:GLU:HB3	1.91	1.05
5:AC:217:ILE:HD11	5:AC:221:PHE:HE1	0.89	1.05
19:AQ:68:ARG:HH22	48:A2:1483:C:C2'	1.68	1.05
20:AR:38:ARG:CG	48:A2:2505:C:OP2	2.04	1.05
39:Ak:60:LEU:HD13	39:Ak:61:PRO:HD2	1.32	1.05
44:Ap:42:CYS:HA	48:A2:2653:A:N6	1.71	1.05
45:Aq:59:THR:CB	45:Aq:75:PRO:HG2	1.85	1.05
48:A2:1741:G:C2	48:A2:1742:G:C8	2.44	1.05
48:A2:3796:A:H2'	48:A2:3797:C:H5'	1.30	1.05
49:B1:407:G:C6	73:BX:36:LEU:HD23	1.89	1.05
49:B1:744:G:H21	57:BH:109:ARG:CD	1.68	1.05
49:B1:750:C:O2	49:B1:793:G:N2	1.88	1.05
49:B1:1314:U:C4	60:BK:2:LEU:HB3	1.92	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BF:41:VAL:HG21	55:BF:109:LEU:HD21	1.27	1.05
67:BR:99:ASP:O	67:BR:102:THR:HG22	1.55	1.05
5:AC:72:ALA:HA	48:A2:3877:A:OP1	1.57	1.05
13:AK:40:MET:HE1	48:A2:1978:U:H1'	1.32	1.05
19:AQ:164:LYS:HD2	48:A2:1479:A:H1'	1.30	1.05
22:AT:56:CYS:HB3	22:AT:78:LYS:NZ	1.72	1.05
42:An:2:ARG:HD2	42:An:5:TRP:CD1	1.91	1.05
49:B1:345:U:O2'	54:BE:33:THR:HA	1.55	1.05
49:B1:875:A:C2	49:B1:912:C:C2	2.45	1.05
49:B1:1552:G:OP2	49:B1:1578:U:N3	1.89	1.05
54:BE:114:ILE:HD11	54:BE:118:GLU:HG2	1.37	1.05
79:Bd:19:ARG:CZ	79:Bd:33:LYS:CE	2.35	1.05
79:Bd:38:MET:HG3	79:Bd:43:PHE:CB	1.86	1.05
7:AE:207:LYS:NZ	7:AE:208:ILE:O	1.88	1.05
8:AF:184:ILE:HG22	8:AF:189:ASP:HB3	1.33	1.05
50:BA:206:ASP:HB3	50:BA:210:ILE:HD13	1.39	1.05
63:BN:16:LEU:HD11	63:BN:62:GLN:OE1	1.54	1.05
63:BN:124:ARG:HG2	63:BN:127:ARG:HH22	0.94	1.05
70:BU:26:SER:CB	70:BU:32:LEU:HB2	1.86	1.05
75:BZ:82:SER:HA	75:BZ:85:ARG:HH21	1.20	1.05
5:AC:218:ILE:HD12	5:AC:229:LEU:HG	1.38	1.04
9:AG:163:PRO:HD2	48:A2:148:G:N2	1.70	1.04
16:AN:73:ARG:HH21	48:A2:32:G:H5'	0.91	1.04
21:AS:80:ILE:HG22	21:AS:82:LEU:HD21	1.38	1.04
22:AT:78:LYS:HD3	22:AT:87:LYS:NZ	1.72	1.04
47:Au:1:MET:HE3	47:Au:202:ARG:HG3	1.33	1.04
50:BA:41:ARG:HH11	50:BA:41:ARG:HB3	1.17	1.04
51:BB:79:VAL:HG21	51:BB:82:ARG:CD	1.85	1.04
64:BO:86:LYS:O	64:BO:89:GLY:N	1.90	1.04
65:BP:85:ILE:N	65:BP:114:HIS:O	1.90	1.04
66:BQ:42:ILE:HG22	66:BQ:44:PRO:HD2	1.36	1.04
82:Bg:88:ARG:HD3	82:Bg:97:THR:OG1	1.55	1.04
13:AK:34:ASN:HB2	48:A2:1950:G:C5'	1.88	1.04
20:AR:60:ARG:O	20:AR:62:ARG:N	1.89	1.04
49:B1:1665:G:C2	69:BT:87:VAL:HG11	1.91	1.04
53:BD:71:ALA:CB	60:BK:20:VAL:HG21	1.87	1.04
56:BG:157:VAL:HG21	56:BG:176:ILE:HD11	1.39	1.04
67:BR:98:VAL:HG23	67:BR:102:THR:HG21	1.39	1.04
5:AC:77:PRO:CB	5:AC:91:ALA:CB	2.35	1.04
18:AP:18:ARG:CG	18:AP:147:GLU:HG3	1.88	1.04
21:AS:7:LEU:H	21:AS:7:LEU:HD22	1.17	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:463:C:N4	48:A2:680:C:O2	1.90	1.04
49:B1:157:U:H1'	56:BG:59:GLN:O	1.57	1.04
53:BD:76:ARG:HH21	60:BK:66:HIS:CE1	1.73	1.04
67:BR:21:TYR:HE2	67:BR:71:ILE:HD13	0.90	1.04
70:BU:20:ILE:HG21	70:BU:116:ILE:HG12	1.33	1.04
7:AE:111:LYS:CB	46:At:87:ARG:NH1	2.20	1.04
7:AE:240:TYR:CE1	48:A2:4897:C:H4'	1.93	1.04
52:BC:147:VAL:HG23	84:Bx:56:U:H5	1.17	1.04
67:BR:95:ILE:HG13	67:BR:114:LEU:HD22	1.38	1.04
79:Bd:38:MET:CE	79:Bd:42:CYS:SG	2.45	1.04
83:Bw:35:A:H8	83:Bw:35:A:H5"	1.19	1.04
7:AE:146:PRO:O	7:AE:200:LYS:CE	2.05	1.04
13:AK:45:MET:HG2	45:Aq:121:LEU:HD22	1.05	1.04
25:AW:102:LYS:HG3	25:AW:105:ARG:HH22	1.07	1.04
33:Ae:33:ARG:NH1	48:A2:1286:A:H8	1.54	1.04
47:Au:158:GLN:H	47:Au:165:LEU:HD22	1.21	1.04
48:A2:945:G:N3	48:A2:1267:G:N2	2.04	1.04
48:A2:959:C:O2'	48:A2:960:G:OP1	1.76	1.04
48:A2:3671:C:OP1	49:B1:1052:A:H4'	1.56	1.04
48:A2:4982:C:C2'	58:BI:168:GLN:C	2.30	1.04
48:A2:4983:C:P	58:BI:169:GLY:HA3	1.97	1.04
49:B1:1020:A:OP2	63:BN:70:LYS:NZ	1.91	1.04
75:BZ:79:ILE:CG2	75:BZ:83:LEU:CD1	1.96	1.04
20:AR:62:ARG:NH2	48:A2:4607:C:H5	1.54	1.03
34:Af:57:THR:HB	48:A2:1281:C:OP1	1.57	1.03
47:Au:26:ARG:HG2	47:Au:210:MET:SD	1.97	1.03
48:A2:132:G:O6	48:A2:136:G:N2	1.91	1.03
48:A2:2067:G:N1	48:A2:2247:A:C2	2.26	1.03
49:B1:827:A:H4'	59:BJ:8:VAL:HG11	1.04	1.03
49:B1:1309:C:OP1	81:Bf:118:ARG:CD	2.05	1.03
49:B1:1314:U:N3	60:BK:2:LEU:HB3	1.69	1.03
51:BB:71:LEU:CD2	51:BB:84:PHE:CE2	2.41	1.03
68:BS:70:ILE:CD1	68:BS:77:TYR:CD2	2.40	1.03
72:BW:102:ILE:HG21	72:BW:125:ILE:HG23	1.37	1.03
5:AC:211:TYR:CD2	5:AC:217:ILE:HG21	1.94	1.03
5:AC:218:ILE:HA	5:AC:229:LEU:HD23	1.39	1.03
7:AE:141:ARG:NH2	34:Af:108:SER:O	1.91	1.03
7:AE:188:ARG:O	48:A2:4899:G:H4'	1.57	1.03
25:AW:101:ARG:HB2	25:AW:105:ARG:HH12	1.18	1.03
33:Ae:33:ARG:CD	48:A2:1286:A:N7	2.22	1.03
48:A2:191:C:O2	48:A2:243:G:N1	1.89	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:205:A:C6	48:A2:229:G:O6	2.12	1.03
48:A2:1164:C:N4	48:A2:1167:A:O2'	1.91	1.03
48:A2:1745:C:H2'	48:A2:1746:G:H5'	1.40	1.03
49:B1:157:U:H5'	56:BG:58:LYS:O	1.52	1.03
49:B1:227:U:O2'	49:B1:228:C:OP2	1.74	1.03
49:B1:1286:G:OP2	62:BM:104:VAL:HB	1.56	1.03
49:B1:1590:C:OP1	69:BT:82:ARG:HD2	1.59	1.03
53:BD:76:ARG:HD3	60:BK:68:TYR:OH	1.56	1.03
62:BM:14:VAL:HG13	62:BM:127:TYR:CE1	1.87	1.03
65:BP:65:LYS:C	65:BP:66:GLU:OE1	2.01	1.03
66:BQ:97:GLN:HG3	66:BQ:105:LYS:HG3	1.40	1.03
67:BR:98:VAL:N	67:BR:117:LEU:CD2	2.21	1.03
75:BZ:62:VAL:HG11	75:BZ:91:LEU:CD2	1.87	1.03
19:AQ:16:LYS:O	19:AQ:52:PHE:CD1	2.10	1.03
20:AR:97:ARG:NH2	48:A2:2704:A:C8	2.25	1.03
48:A2:3727:A:OP2	48:A2:3727:A:C8	2.12	1.03
49:B1:1864:U:H3'	76:Ba:5:ARG:HH21	1.19	1.03
51:BB:79:VAL:HG23	51:BB:82:ARG:HD3	1.37	1.03
8:AF:51:TYR:HE1	48:A2:1220:C:N4	1.51	1.03
47:Au:165:LEU:HD12	48:A2:3940:G:O4'	1.58	1.03
48:A2:4110:C:H2'	48:A2:4111:C:C5	1.94	1.03
49:B1:582:U:C4'	74:BY:32:LYS:HA	1.88	1.03
66:BQ:39:LEU:HD21	66:BQ:51:LEU:CD2	1.89	1.03
20:AR:126:LYS:HE2	20:AR:131:VAL:HG11	1.03	1.03
28:AZ:97:ASN:OD1	28:AZ:99:ASP:N	1.92	1.03
39:Ak:16:ARG:O	39:Ak:18:LYS:N	1.92	1.03
48:A2:4726:A:C6	48:A2:4826:G:N2	2.26	1.03
49:B1:1287:A:C1'	62:BM:36:ARG:HH12	1.72	1.03
51:BB:180:ASP:N	51:BB:183:GLU:OE1	1.91	1.03
59:BJ:169:ARG:HD3	59:BJ:173:VAL:CG2	1.88	1.03
65:BP:34:MET:CG	65:BP:45:LEU:HD13	1.88	1.03
70:BU:24:LEU:HD22	70:BU:112:VAL:HG22	1.41	1.03
20:AR:126:LYS:O	20:AR:131:VAL:HG23	1.59	1.02
47:Au:164:CYS:SG	48:A2:4024:C:O2	2.16	1.02
48:A2:4160:G:C2	83:Bv:74:C:N3	2.27	1.02
49:B1:1287:A:C1'	62:BM:36:ARG:NH1	2.21	1.02
67:BR:36:GLU:HA	67:BR:41:ILE:HD11	1.37	1.02
75:BZ:48:VAL:HA	75:BZ:80:ARG:HD2	1.40	1.02
3:AA:247:ARG:HG3	49:B1:1069:U:H4'	1.39	1.02
8:AF:184:ILE:HA	8:AF:189:ASP:CB	1.88	1.02
19:AQ:68:ARG:HH22	48:A2:1483:C:H2'	1.17	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AR:23:TRP:HH2	20:AR:32:ILE:HG13	1.25	1.02
46:At:51:VAL:CG2	46:At:113:ARG:HD2	1.89	1.02
47:Au:10:LEU:HA	47:Au:216:LEU:HD11	1.03	1.02
47:Au:83:PRO:HG3	47:Au:107:TYR:CE1	1.94	1.02
47:Au:165:LEU:CD1	48:A2:3940:G:C4'	2.38	1.02
49:B1:802:A:H3'	49:B1:803:C:H6	1.24	1.02
49:B1:1314:U:O2	49:B1:1314:U:H2'	1.54	1.02
51:BB:127:VAL:CG1	51:BB:176:VAL:HG11	1.87	1.02
55:BF:40:ALA:HB1	55:BF:45:TYR:HB3	1.40	1.02
66:BQ:51:LEU:HD12	66:BQ:81:ILE:HG23	1.10	1.02
66:BQ:62:ARG:CD	66:BQ:92:LEU:HG	1.89	1.02
68:BS:44:VAL:HG11	68:BS:71:MET:SD	1.99	1.02
75:BZ:88:LEU:HD23	75:BZ:109:TYR:CD2	1.82	1.02
80:Be:35:ARG:CD	80:Be:39:ASN:HD21	1.72	1.02
81:Bf:105:TYR:CD1	81:Bf:118:ARG:NH1	2.28	1.02
5:AC:73:VAL:HG23	5:AC:74:ALA:N	1.71	1.02
20:AR:98:ARG:HH21	20:AR:133:LYS:HA	1.20	1.02
21:AS:169:THR:HG23	48:A2:4832:A:N7	1.73	1.02
25:AW:72:THR:OG1	49:B1:1783:C:N4	1.92	1.02
48:A2:1258:G:N3	48:A2:1259:C:C4	2.27	1.02
49:B1:14:C:H5"	52:BC:190:SER:CB	1.89	1.02
49:B1:580:U:C2'	74:BY:62:THR:HB	1.90	1.02
49:B1:617:G:OP1	73:BX:68:LYS:HE2	1.59	1.02
49:B1:693:A:N1	49:B1:737:G:O6	1.92	1.02
49:B1:1665:G:C2	69:BT:87:VAL:CG1	2.43	1.02
54:BE:87:MET:HE3	54:BE:123:LEU:H	1.25	1.02
67:BR:20:TYR:HD2	67:BR:23:ARG:HD2	1.24	1.02
79:Bd:36:LEU:HD13	79:Bd:43:PHE:HE2	1.23	1.02
15:AM:101:LYS:CA	17:AO:198:THR:HG21	1.88	1.02
19:AQ:172:ARG:NH1	29:Aa:56:VAL:CG2	2.21	1.02
20:AR:169:ALA:HA	20:AR:172:ARG:HD2	1.40	1.02
22:AT:4:THR:HG21	48:A2:4169:C:C6	1.94	1.02
38:Aj:82:THR:HG23	38:Aj:83:THR:H	1.24	1.02
48:A2:1739:U:C4	48:A2:1740:G:N7	2.28	1.02
48:A2:4726:A:N1	48:A2:4826:G:N2	2.07	1.02
50:BA:38:ILE:HD12	50:BA:47:TYR:HB2	1.36	1.02
53:BD:211:VAL:HG23	67:BR:20:TYR:OH	1.60	1.02
59:BJ:109:ARG:HH12	59:BJ:111:GLN:NE2	1.57	1.02
13:AK:37:SER:CA	48:A2:1952:C:HO2'	1.70	1.02
13:AK:63:LYS:HA	13:AK:66:ARG:HB2	1.39	1.02
14:AL:47:ALA:HB1	14:AL:48:PRO:HD2	1.41	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AT:87:LYS:HE2	48:A2:4267:G:O6	1.60	1.02
23:AU:47:ILE:HD11	23:AU:63:ILE:HD11	1.40	1.02
37:Ai:28:ARG:NH2	48:A2:320:C:H5	1.56	1.02
39:Ak:8:ILE:HG23	39:Ak:56:LEU:HD11	1.37	1.02
47:Au:38:LEU:CB	47:Au:163:LEU:HB3	1.90	1.02
48:A2:945:G:H1'	48:A2:1267:G:H22	1.24	1.02
48:A2:3726:G:H21	83:Bv:12:U:C4'	1.72	1.02
49:B1:502:C:H5'	54:BE:66:MET:SD	2.00	1.02
65:BP:52:LYS:HG2	65:BP:83:MET:HE2	1.42	1.02
8:AF:148:LYS:HG2	48:A2:931:A:OP2	1.58	1.01
14:AL:161:TYR:CG	29:Aa:105:ARG:NH1	2.28	1.01
29:Aa:79:TRP:HZ2	29:Aa:118:PRO:HD2	1.25	1.01
48:A2:1341:G:N2	48:A2:1343:G:C6	2.25	1.01
49:B1:688:U:C3'	57:BH:103:LYS:HD2	1.90	1.01
49:B1:799:U:OP1	57:BH:110:THR:CB	2.08	1.01
49:B1:1402:A:OP1	70:BU:52:GLY:N	1.93	1.01
65:BP:34:MET:HE2	65:BP:45:LEU:CB	1.89	1.01
66:BQ:33:LYS:HB3	66:BQ:69:ARG:HB2	1.39	1.01
6:AD:233:PRO:HA	6:AD:236:MET:SD	2.00	1.01
7:AE:219:LYS:HZ3	48:A2:1274:G:H5'	1.20	1.01
14:AL:162:LYS:H	29:Aa:105:ARG:NH2	1.58	1.01
36:Ah:109:ARG:HH21	48:A2:153:G:H5"	0.85	1.01
46:At:98:ARG:CD	48:A2:951:A:H4'	1.89	1.01
47:Au:166:ALA:HB3	48:A2:3940:G:C1'	1.90	1.01
49:B1:744:G:N2	57:BH:109:ARG:CD	2.23	1.01
67:BR:36:GLU:HA	67:BR:41:ILE:CD1	1.90	1.01
5:AC:150:LEU:HD21	46:At:71:ARG:HA	1.41	1.01
6:AD:195:HIS:CE1	6:AD:199:ILE:HD11	1.96	1.01
13:AK:48:ARG:NH1	45:Aq:122:ALA:CA	2.23	1.01
13:AK:81:HIS:NE2	13:AK:88:PHE:CD1	2.28	1.01
15:AM:101:LYS:N	17:AO:198:THR:HG21	1.73	1.01
16:AN:176:LYS:HZ1	48:A2:64:A:H5'	1.24	1.01
20:AR:19:LYS:O	20:AR:22:VAL:CG2	2.08	1.01
20:AR:62:ARG:NH2	48:A2:4607:C:C5	2.25	1.01
47:Au:38:LEU:HB2	47:Au:163:LEU:CB	1.90	1.01
47:Au:164:CYS:SG	48:A2:4024:C:H1'	2.00	1.01
56:BG:58:LYS:N	56:BG:107:SER:HB2	1.76	1.01
65:BP:64:LYS:O	65:BP:67:ALA:CB	2.08	1.01
68:BS:10:GLN:OE1	68:BS:13:LEU:HD11	1.59	1.01
1:A3:154:G:OP1	9:AG:89:ARG:NE	1.91	1.01
7:AE:95:PRO:CD	7:AE:107:VAL:HB	1.90	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AE:105:ARG:HG2	48:A2:464:A:C2	1.94	1.01
13:AK:10:LYS:HE3	48:A2:1941:A:N3	1.75	1.01
34:Af:61:GLY:O	34:Af:63:LYS:N	1.94	1.01
47:Au:207:LYS:NZ	47:Au:211:GLY:O	1.93	1.01
48:A2:32:G:N2	48:A2:50:C:N4	2.07	1.01
49:B1:103:A:H5'	58:BI:12:ARG:NH1	1.75	1.01
49:B1:448:A:N6	58:BI:29:LEU:HD23	1.75	1.01
59:BJ:50:LEU:HD11	59:BJ:105:PHE:HE2	1.22	1.01
66:BQ:44:PRO:HG2	66:BQ:47:LEU:CB	1.89	1.01
73:BX:135:LYS:O	73:BX:137:LYS:N	1.94	1.01
5:AC:211:TYR:CZ	5:AC:229:LEU:HD22	1.95	1.01
5:AC:219:LYS:HD2	5:AC:222:ARG:HH21	1.25	1.01
14:AL:128:PRO:HD2	14:AL:136:LYS:HE2	1.39	1.01
23:AU:47:ILE:CG2	23:AU:49:VAL:HG23	1.90	1.01
47:Au:207:LYS:HG2	47:Au:213:PRO:HA	1.42	1.01
48:A2:204:G:H1'	48:A2:228:U:C2	1.95	1.01
48:A2:3929:G:O2'	83:Bw:19:G:H2'	1.60	1.01
49:B1:222:U:H5"	61:BL:17:PHE:HD2	0.86	1.01
49:B1:282:G:H3'	49:B1:283:G:H8	1.21	1.01
49:B1:1552:G:C4'	49:B1:1557:C:H41	1.73	1.01
75:BZ:62:VAL:HG22	75:BZ:97:ILE:HD11	1.41	1.01
6:AD:205:ALA:HB2	6:AD:236:MET:HE1	1.40	1.00
7:AE:140:LEU:HA	7:AE:191:GLN:HE22	1.26	1.00
7:AE:210:LYS:HD3	7:AE:210:LYS:H	1.20	1.00
14:AL:165:LYS:CD	48:A2:505:C:OP2	2.09	1.00
15:AM:101:LYS:HB2	17:AO:198:THR:HG21	1.43	1.00
19:AQ:15:ARG:HD3	19:AQ:52:PHE:O	1.60	1.00
29:Aa:26:ARG:O	29:Aa:27:LYS:NZ	1.93	1.00
36:Ah:112:ARG:NH2	48:A2:258:C:O2'	1.93	1.00
47:Au:60:ARG:HG3	47:Au:171:HIS:CG	1.96	1.00
48:A2:904:A:N1	48:A2:906:C:C5	2.29	1.00
48:A2:1888:A:N7	48:A2:1889:A:N6	2.09	1.00
50:BA:7:VAL:HG21	71:BV:42:VAL:CA	1.91	1.00
75:BZ:68:ILE:HG13	75:BZ:97:ILE:HD13	1.01	1.00
2:A4:95:C:H4'	8:AF:229:GLU:OE2	1.61	1.00
7:AE:203:ILE:HG13	7:AE:206:VAL:HG21	1.42	1.00
20:AR:23:TRP:CZ2	20:AR:32:ILE:HG21	1.96	1.00
48:A2:121:A:N1	48:A2:150:G:N7	2.08	1.00
48:A2:1741:G:N1	48:A2:1742:G:N7	2.09	1.00
49:B1:797:C:C4'	49:B1:798:G:H5'	1.92	1.00
49:B1:1046:U:H4'	64:BO:140:THR:HG21	1.42	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1274:G:H22	60:BK:29:MET:HG2	0.85	1.00
49:B1:1513:C:O3'	79:Bd:9:SER:HB2	1.60	1.00
53:BD:210:ILE:HG22	67:BR:39:ALA:HB3	1.04	1.00
54:BE:16:LYS:O	54:BE:19:MET:HE2	1.61	1.00
59:BJ:54:ARG:HD3	59:BJ:98:LEU:CD2	1.91	1.00
68:BS:45:LEU:O	68:BS:49:ASP:N	1.95	1.00
75:BZ:63:PRO:CG	75:BZ:96:LEU:HD21	1.90	1.00
5:AC:190:ARG:HD3	5:AC:202:ILE:HD11	1.41	1.00
14:AL:128:PRO:CD	14:AL:136:LYS:HE2	1.91	1.00
15:AM:5:ARG:NH1	21:AS:175:PHE:CZ	2.30	1.00
17:AO:118:MET:CE	48:A2:4832:A:H62	1.73	1.00
23:AU:49:VAL:HG21	23:AU:61:VAL:HG21	1.43	1.00
29:Aa:21:ARG:O	29:Aa:24:LYS:HG3	1.59	1.00
48:A2:133:C:C2	48:A2:134:G:C5	2.48	1.00
48:A2:3731:A:N6	49:B1:1825:A:C4	2.26	1.00
49:B1:1286:G:H1'	62:BM:34:GLY:HA2	1.41	1.00
50:BA:85:ARG:HG2	50:BA:204:TYR:HA	1.04	1.00
54:BE:93:GLU:HB2	54:BE:94:LYS:HB2	1.39	1.00
66:BQ:11:GLN:NE2	66:BQ:24:HIS:CD2	2.28	1.00
13:AK:34:ASN:HB2	48:A2:1950:G:H5'	1.38	1.00
20:AR:126:LYS:CG	20:AR:131:VAL:CG2	2.37	1.00
48:A2:2246:U:H6	48:A2:2246:U:OP1	1.42	1.00
49:B1:112:U:OP1	61:BL:69:ARG:HD2	1.61	1.00
66:BQ:58:LEU:HD22	66:BQ:62:ARG:NH1	1.76	1.00
6:AD:279:ARG:HE	48:A2:1160:U:H4'	1.26	1.00
10:AH:8:GLN:CG	10:AH:74:CYS:HB2	1.91	1.00
14:AL:59:VAL:HG13	48:A2:74:G:C5'	1.89	1.00
24:AV:47:GLY:CA	48:A2:4455:U:O2'	2.10	1.00
46:At:107:ARG:HH22	48:A2:951:A:H5'	0.84	1.00
48:A2:309:G:C5'	48:A2:310:U:OP1	2.10	1.00
48:A2:680:C:H2'	48:A2:681:A:H5'	1.44	1.00
48:A2:4726:A:N6	48:A2:4826:G:H22	1.59	1.00
56:BG:183:ARG:O	56:BG:186:GLN:CG	2.10	1.00
66:BQ:25:CYS:SG	66:BQ:95:TYR:CD2	2.54	1.00
1:A3:70:G:H2'	27:AY:114:ASP:OD2	1.62	1.00
7:AE:123:ARG:NE	48:A2:956:C:H5	1.60	1.00
8:AF:131:ASN:HD22	48:A2:1709:U:H5'	1.27	1.00
49:B1:1373:C:OP1	67:BR:7:LYS:N	1.95	1.00
49:B1:1603:G:C4'	68:BS:38:ARG:HH12	1.74	1.00
72:BW:102:ILE:HG23	72:BW:127:GLY:O	1.62	1.00
4:AB:389:MET:HG2	48:A2:4999:G:N2	1.75	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AE:200:LYS:NZ	7:AE:202:ASP:HA	1.77	1.00
13:AK:34:ASN:HB3	48:A2:1950:G:H5'	1.43	1.00
42:An:2:ARG:NH1	49:B1:1852:C:H5'	1.61	1.00
47:Au:160:LYS:HG2	47:Au:161:LYS:H	1.24	1.00
49:B1:1866:A:H1'	76:Ba:95:ARG:C	1.86	1.00
53:BD:213:PRO:HD3	67:BR:19:LYS:HD2	1.44	1.00
58:BI:48:VAL:HG21	58:BI:54:LYS:HE3	1.42	1.00
62:BM:77:ILE:HD12	62:BM:128:PHE:HA	1.44	1.00
75:BZ:88:LEU:HD23	75:BZ:109:TYR:CZ	1.97	1.00
22:AT:119:ALA:HB2	22:AT:126:VAL:HG11	1.42	0.99
24:AV:42:VAL:HB	24:AV:45:ILE:CD1	1.92	0.99
48:A2:1817:G:H5"	48:A2:1817:G:N3	1.77	0.99
49:B1:1261:C:O2	79:Bd:10:HIS:NE2	1.94	0.99
74:BY:41:ARG:NH2	74:BY:94:HIS:HE1	1.58	0.99
6:AD:16:TYR:CE1	48:A2:4227:U:C5	2.50	0.99
6:AD:211:LEU:O	6:AD:215:ASP:O	1.79	0.99
22:AT:128:LEU:H	22:AT:128:LEU:HD12	1.26	0.99
79:Bd:23:VAL:CG2	79:Bd:38:MET:SD	2.50	0.99
1:A3:109:C:N4	38:Aj:20:ARG:HH12	1.60	0.99
5:AC:274:LYS:HE2	48:A2:1358:C:OP1	1.61	0.99
6:AD:286:SER:CB	48:A2:1163:C:H5"	1.74	0.99
7:AE:203:ILE:C	7:AE:206:VAL:HG23	1.85	0.99
38:Aj:21:ARG:HD3	38:Aj:39:TYR:HE1	1.11	0.99
45:Aq:22:VAL:HA	45:Aq:46:ILE:HG23	1.42	0.99
48:A2:1745:C:N4	48:A2:1746:G:N7	2.09	0.99
49:B1:1302:G:N2	81:Bf:95:ARG:NH1	2.08	0.99
59:BJ:162:ARG:O	59:BJ:166:GLY:N	1.93	0.99
3:AA:196:TRP:CZ2	48:A2:3624:A:OP1	2.14	0.99
9:AG:113:ARG:NH2	48:A2:119:G:C2	2.30	0.99
13:AK:107:VAL:HG12	13:AK:108:PRO:HD3	1.42	0.99
14:AL:129:ARG:HD2	14:AL:129:ARG:H	1.27	0.99
46:At:37:SER:HB2	48:A2:2246:U:OP2	1.61	0.99
47:Au:214:GLN:HA	47:Au:214:GLN:HE21	1.26	0.99
48:A2:1741:G:N1	48:A2:1742:G:C5	2.30	0.99
49:B1:64:A:H3'	56:BG:175:LYS:HE3	1.38	0.99
49:B1:308:G:OP1	58:BI:53:LYS:NZ	1.96	0.99
49:B1:1401:A:H4'	70:BU:52:GLY:HA3	1.01	0.99
49:B1:1603:G:C5'	68:BS:38:ARG:HH12	1.75	0.99
54:BE:87:MET:HE2	54:BE:123:LEU:H	1.27	0.99
68:BS:70:ILE:HD13	68:BS:77:TYR:CD2	1.94	0.99
74:BY:86:GLU:HB2	74:BY:91:LEU:HD11	1.45	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AO:179:LYS:CD	48:A2:4830:G:C8	2.44	0.99
21:AS:74:ARG:HH12	48:A2:909:C:H5'	1.26	0.99
22:AT:17:ARG:HH22	22:AT:45:MET:HE1	1.23	0.99
49:B1:747:U:O2'	49:B1:749:U:H5	1.45	0.99
75:BZ:63:PRO:HG3	75:BZ:96:LEU:HD21	1.01	0.99
13:AK:14:PHE:CE1	48:A2:1941:A:C4	2.51	0.99
49:B1:1261:C:H2'	79:Bd:10:HIS:NE2	1.76	0.99
53:BD:79:PHE:HB3	53:BD:84:VAL:HG23	1.40	0.99
7:AE:111:LYS:CE	48:A2:682:U:OP1	2.11	0.99
47:Au:165:LEU:HD11	48:A2:3940:G:H4'	1.41	0.99
48:A2:1226:C:OP2	48:A2:1226:C:C5	2.16	0.99
54:BE:137:PRO:CG	56:BG:209:TYR:OH	2.11	0.99
19:AQ:17:GLU:OE2	48:A2:2248:C:H5'	1.61	0.99
47:Au:10:LEU:HA	47:Au:216:LEU:CD1	1.92	0.99
59:BJ:117:LEU:HD12	59:BJ:157:ILE:HD12	1.45	0.99
4:AB:174:ARG:O	4:AB:176:LYS:HG3	1.62	0.99
8:AF:184:ILE:HG22	8:AF:189:ASP:CB	1.93	0.99
25:AW:56:ARG:CZ	48:A2:4999:G:N7	2.26	0.99
48:A2:462:U:H6	48:A2:462:U:H5"	1.25	0.99
48:A2:3879:A:N6	85:By:22:UNK:CB	2.24	0.99
49:B1:864:A:N6	57:BH:106:ARG:NH2	2.11	0.99
49:B1:1314:U:N3	60:BK:2:LEU:HB2	1.73	0.99
80:Be:51:LYS:HE2	84:Bx:58:U:H1'	1.43	0.99
82:Bg:88:ARG:HG3	82:Bg:97:THR:CG2	1.93	0.99
7:AE:111:LYS:HB3	46:At:87:ARG:NH1	1.77	0.99
29:Aa:79:TRP:CZ2	29:Aa:118:PRO:CD	2.46	0.99
38:Aj:67:LEU:HD21	38:Aj:71:TYR:CE2	1.97	0.99
48:A2:961:C:H5"	48:A2:961:C:C6	1.97	0.99
59:BJ:50:LEU:CD1	59:BJ:105:PHE:CE2	2.45	0.99
75:BZ:63:PRO:HG3	75:BZ:96:LEU:CD2	1.92	0.99
47:Au:166:ALA:N	48:A2:3940:G:H1'	1.78	0.98
67:BR:35:CYS:HA	67:BR:38:ILE:CD1	1.91	0.98
67:BR:95:ILE:CA	67:BR:114:LEU:HD13	1.93	0.98
68:BS:40:TYR:HE1	68:BS:71:MET:CE	1.75	0.98
6:AD:176:SER:HB3	48:A2:4285:A:H4'	1.42	0.98
35:Ag:28:ASN:ND2	48:A2:2616:U:OP1	1.95	0.98
48:A2:902:A:H5"	48:A2:902:A:H8	1.23	0.98
48:A2:3682:A:H5"	48:A2:3683:A:OP1	1.62	0.98
49:B1:386:C:OP2	58:BI:10:LYS:HG3	1.62	0.98
49:B1:1256:G:N2	79:Bd:30:LEU:H	1.59	0.98
50:BA:7:VAL:HG11	71:BV:42:VAL:HA	1.44	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AB:62:ARG:NH1	48:A2:4578:A:H5'	1.77	0.98
4:AB:317:LEU:HD21	48:A2:4959:U:H5"	1.41	0.98
53:BD:116:ARG:HD3	53:BD:152:PHE:HZ	1.28	0.98
13:AK:81:HIS:CD2	13:AK:88:PHE:CE1	2.49	0.98
38:Aj:3:LYS:HE3	48:A2:1621:U:P	2.04	0.98
54:BE:118:GLU:N	54:BE:118:GLU:OE1	1.94	0.98
55:BF:39:ILE:CG2	55:BF:68:ILE:HG21	1.92	0.98
63:BN:22:VAL:HB	63:BN:23:PRO:CD	1.93	0.98
5:AC:219:LYS:NZ	48:A2:220:G:H8	1.60	0.98
13:AK:52:VAL:HG11	13:AK:90:PHE:N	1.78	0.98
14:AL:59:VAL:CG1	48:A2:74:G:H5"	1.83	0.98
15:AM:101:LYS:CB	17:AO:198:THR:HG21	1.93	0.98
18:AP:18:ARG:HG2	18:AP:147:GLU:HG3	0.99	0.98
22:AT:119:ALA:HB2	22:AT:126:VAL:HG13	1.43	0.98
33:Ae:128:ARG:HH21	48:A2:2285:G:P	1.87	0.98
48:A2:133:C:C4	48:A2:134:G:C4	2.51	0.98
48:A2:227:G:N2	48:A2:234:G:N1	2.11	0.98
49:B1:1287:A:H1'	62:BM:36:ARG:HH12	0.93	0.98
54:BE:93:GLU:CB	54:BE:94:LYS:HB2	1.92	0.98
66:BQ:97:GLN:HG2	66:BQ:102:GLU:OE2	1.64	0.98
7:AE:188:ARG:O	48:A2:4899:G:C4'	2.10	0.98
13:AK:59:THR:HB	48:A2:1942:G:C5'	1.94	0.98
20:AR:74:ARG:NH1	48:A2:2870:U:OP2	1.96	0.98
47:Au:35:GLN:CD	48:A2:4023:A:O2'	2.07	0.98
49:B1:864:A:N6	57:BH:106:ARG:HH21	1.60	0.98
67:BR:97:GLU:C	67:BR:117:LEU:CD2	2.35	0.98
75:BZ:99:LEU:HD12	75:BZ:99:LEU:O	1.63	0.98
3:AA:244:GLY:O	48:A2:3628:U:H5"	1.61	0.98
7:AE:125:LEU:H	48:A2:946:G:N2	1.61	0.98
13:AK:55:MET:HE1	13:AK:61:MET:CE	1.94	0.98
47:Au:165:LEU:HD11	48:A2:3940:G:C5'	1.92	0.98
48:A2:2006:A:H4'	48:A2:2007:A:OP1	1.60	0.98
49:B1:580:U:O2'	74:BY:62:THR:HB	1.61	0.98
49:B1:797:C:H4'	49:B1:798:G:C5'	1.93	0.98
51:BB:182:LYS:CD	51:BB:231:LEU:HD12	1.93	0.98
68:BS:70:ILE:CD1	68:BS:77:TYR:CZ	2.41	0.98
6:AD:4:VAL:HG21	48:A2:1737:C:H1'	1.45	0.98
33:Ae:5:ARG:HH12	48:A2:694:G:H4'	1.26	0.98
49:B1:1046:U:O2'	64:BO:140:THR:CB	2.11	0.98
50:BA:216:ALA:HA	50:BA:219:GLU:CG	1.94	0.98
57:BH:115:LYS:O	57:BH:116:ARG:HB2	1.61	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:BO:103:ASN:HB3	64:BO:142:ARG:NH1	1.78	0.98
68:BS:70:ILE:HD11	68:BS:77:TYR:CE1	1.99	0.98
5:AC:77:PRO:CB	5:AC:91:ALA:HB1	1.93	0.98
10:AH:4:ILE:HG22	10:AH:5:LEU:H	1.28	0.98
62:BM:14:VAL:HG13	62:BM:127:TYR:CG	1.98	0.98
67:BR:97:GLU:HB2	67:BR:117:LEU:HA	1.43	0.98
7:AE:203:ILE:HA	7:AE:206:VAL:CG2	1.94	0.98
24:AV:45:ILE:HD12	24:AV:53:PRO:CB	1.92	0.98
29:Aa:25:HIS:CD2	48:A2:1321:G:H22	1.82	0.98
49:B1:1467:C:OP2	67:BR:3:ARG:NH1	1.96	0.98
51:BB:77:ASP:O	51:BB:78:GLU:HG2	1.62	0.98
52:BC:133:TYR:CD1	52:BC:216:MET:HA	1.97	0.98
53:BD:71:ALA:O	53:BD:75:LYS:HG2	1.64	0.98
54:BE:69:PHE:CD1	54:BE:94:LYS:HE2	1.98	0.98
65:BP:65:LYS:HB3	65:BP:66:GLU:OE1	1.60	0.98
66:BQ:23:ALA:HB2	66:BQ:87:SER:HB2	1.46	0.98
1:A3:112:G:OP1	48:A2:2758:C:H1'	1.64	0.97
5:AC:57:LEU:HD22	5:AC:58:ALA:H	1.25	0.97
6:AD:290:ALA:O	6:AD:292:GLU:N	1.97	0.97
14:AL:165:LYS:CE	48:A2:505:C:O5'	2.11	0.97
15:AM:47:ARG:CG	21:AS:73:LEU:HD22	1.94	0.97
17:AO:179:LYS:HE2	48:A2:4830:G:H8	1.08	0.97
43:Ao:4:VAL:HG23	43:Ao:93:LEU:O	1.64	0.97
45:Aq:22:VAL:CA	45:Aq:46:ILE:HG23	1.94	0.97
48:A2:3796:A:C2'	48:A2:3797:C:H5'	1.92	0.97
49:B1:686:U:O2	57:BH:118:ARG:NH1	1.97	0.97
55:BF:93:VAL:CG1	55:BF:97:PHE:CZ	2.45	0.97
75:BZ:68:ILE:CG1	75:BZ:97:ILE:HD13	1.93	0.97
10:AH:5:LEU:CB	10:AH:60:TRP:HZ3	1.58	0.97
12:AJ:65:ASN:C	43:Ao:103:VAL:HG23	1.87	0.97
20:AR:19:LYS:O	20:AR:22:VAL:HG23	1.61	0.97
45:Aq:39:PRO:HB3	45:Aq:42:VAL:HG21	1.45	0.97
48:A2:1752:A:C6	48:A2:1753:U:C4	2.52	0.97
48:A2:3710:C:O2'	83:Bw:71:G:H5'	1.61	0.97
49:B1:227:U:C1'	49:B1:228:C:OP2	2.13	0.97
49:B1:1401:A:C4'	70:BU:52:GLY:HA3	1.93	0.97
49:B1:1603:G:C4'	68:BS:38:ARG:NH1	2.27	0.97
6:AD:12:TYR:CE1	6:AD:13:PHE:HD1	1.81	0.97
9:AG:113:ARG:CZ	48:A2:119:G:C6	2.46	0.97
17:AO:114:LYS:O	48:A2:4718:C:C5'	2.11	0.97
45:Aq:42:VAL:O	45:Aq:46:ILE:HG21	1.64	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Au:1:MET:CE	47:Au:202:ARG:HG3	1.93	0.97
49:B1:574:A:H4'	74:BY:89:HIS:CB	1.94	0.97
49:B1:582:U:H4'	74:BY:32:LYS:CA	1.92	0.97
13:AK:55:MET:HE1	13:AK:61:MET:HE2	0.99	0.97
21:AS:93:MET:HG3	48:A2:1933:G:H4'	1.43	0.97
25:AW:119:LYS:O	25:AW:122:SER:OG	1.82	0.97
50:BA:103:PHE:CE2	50:BA:136:GLU:OE1	2.17	0.97
5:AC:149:GLU:CA	46:At:71:ARG:O	2.13	0.97
7:AE:126:LEU:HD12	48:A2:958:U:C5	1.99	0.97
10:AH:7:ASN:CB	10:AH:57:VAL:O	2.12	0.97
22:AT:4:THR:HG22	48:A2:4169:C:H5"	1.45	0.97
30:Ab:4:SER:CB	48:A2:1836:G:OP1	2.11	0.97
52:BC:252:THR:CB	72:BW:99:PHE:HZ	1.77	0.97
66:BQ:33:LYS:HE3	66:BQ:36:GLY:HA2	1.42	0.97
68:BS:74:PRO:CG	68:BS:84:LEU:HD21	1.94	0.97
5:AC:100:ARG:CZ	48:A2:1632:A:C2	2.46	0.97
7:AE:237:LYS:HZ3	7:AE:237:LYS:HA	1.29	0.97
14:AL:44:ARG:CZ	48:A2:182:C:C6	2.47	0.97
19:AQ:164:LYS:HB2	48:A2:1479:A:O4'	1.63	0.97
46:At:107:ARG:HH22	48:A2:951:A:C5'	1.76	0.97
49:B1:407:G:C5	73:BX:36:LEU:HD23	1.99	0.97
49:B1:1454:A:C2'	67:BR:3:ARG:HD3	1.93	0.97
64:BO:85:CYS:SG	64:BO:90:ILE:HD11	2.04	0.97
48:A2:130:C:H5"	48:A2:131:C:OP2	1.63	0.97
48:A2:307:U:H2'	48:A2:308:G:H5'	1.41	0.97
49:B1:229:A:O2'	49:B1:230:A:O5'	1.83	0.97
75:BZ:68:ILE:HB	75:BZ:109:TYR:CB	1.94	0.97
1:A3:36:G:O2'	1:A3:103:A:N1	1.96	0.97
5:AC:212:ASN:HD22	5:AC:232:VAL:HG21	1.29	0.97
7:AE:187:ARG:NH2	48:A2:4900:C:OP1	1.97	0.97
14:AL:177:LYS:HA	14:AL:177:LYS:NZ	1.78	0.97
36:Ah:109:ARG:HH21	48:A2:153:G:C5'	1.77	0.97
47:Au:162:VAL:HG21	48:A2:3938:G:H21	1.29	0.97
48:A2:1161:G:N2	48:A2:1164:C:OP1	1.98	0.97
49:B1:1407:U:H5"	66:BQ:71:ARG:NH1	1.79	0.97
5:AC:94:ASN:ND2	5:AC:102:PHE:HB2	1.78	0.97
7:AE:240:TYR:HD2	7:AE:242:ILE:HG22	1.30	0.97
48:A2:4896:A:C8	48:A2:4896:A:OP1	2.18	0.97
49:B1:1454:A:H2'	67:BR:3:ARG:HD3	0.97	0.97
49:B1:1679:A:N6	55:BF:60:ARG:HA	1.78	0.97
75:BZ:68:ILE:HG13	75:BZ:97:ILE:CD1	1.93	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AU:54:GLY:O	23:AU:56:LEU:N	1.98	0.96
28:AZ:95:VAL:HG13	28:AZ:109:LYS:CG	1.95	0.96
80:Be:28:LYS:CB	80:Be:32:ALA:HB1	1.94	0.96
5:AC:183:VAL:HG11	5:AC:225:PRO:C	1.90	0.96
23:AU:47:ILE:HG22	23:AU:49:VAL:HG23	0.99	0.96
25:AW:44:ARG:HA	48:A2:3587:U:OP1	1.64	0.96
48:A2:204:G:C1'	48:A2:228:U:O2	2.12	0.96
49:B1:802:A:N6	57:BH:106:ARG:HH12	1.63	0.96
59:BJ:158:ASP:OD1	59:BJ:159:PHE:N	1.98	0.96
13:AK:84:GLY:HA2	48:A2:2002:G:H4'	1.46	0.96
14:AL:162:LYS:H	29:Aa:105:ARG:HH22	1.01	0.96
28:AZ:30:ASP:C	28:AZ:31:ASP:OD1	2.07	0.96
29:Aa:79:TRP:CZ2	29:Aa:118:PRO:HD2	1.99	0.96
47:Au:10:LEU:CA	47:Au:216:LEU:HD11	1.94	0.96
48:A2:1342:G:O2'	48:A2:1343:G:OP1	1.83	0.96
49:B1:1286:G:H2'	49:B1:1287:A:OP1	1.64	0.96
3:AA:240:ALA:O	48:A2:3677:C:O2'	1.81	0.96
34:Af:41:PHE:HE2	34:Af:110:ILE:HD11	1.27	0.96
39:Ak:16:ARG:HG2	39:Ak:61:PRO:HB3	1.45	0.96
48:A2:3875:G:H5"	48:A2:3876:A:OP2	1.65	0.96
49:B1:1417:C:C4'	69:BT:2:PRO:CA	2.40	0.96
49:B1:1562:C:H5"	69:BT:71:GLY:HA3	1.47	0.96
6:AD:286:SER:OG	48:A2:1164:C:OP2	1.83	0.96
17:AO:49:ARG:NH2	48:A2:1910:A:C2'	2.27	0.96
20:AR:165:LYS:HE2	49:B1:907:G:C5'	1.90	0.96
49:B1:1289:U:O2'	49:B1:1290:G:O5'	1.82	0.96
49:B1:1507:G:C6	81:Bf:91:ASN:OD1	2.18	0.96
52:BC:253:PRO:HD2	72:BW:99:PHE:HE1	1.17	0.96
68:BS:15:VAL:HG12	68:BS:16:LEU:CD2	1.95	0.96
5:AC:289:LEU:HG	5:AC:293:LEU:HD11	1.47	0.96
14:AL:44:ARG:NE	48:A2:182:C:H6	1.59	0.96
15:AM:2:VAL:HG12	15:AM:3:PHE:CD2	2.01	0.96
48:A2:2606:C:H2'	48:A2:2607:U:C6	2.01	0.96
48:A2:2840:C:O2	48:A2:3596:G:N7	1.98	0.96
49:B1:633:C:H1'	80:Be:12:VAL:HG12	1.47	0.96
61:BL:18:GLN:O	61:BL:19:ASN:ND2	1.99	0.96
5:AC:311:ARG:HH12	48:A2:946:G:H5'	1.21	0.96
7:AE:100:LYS:HD2	48:A2:678:C:H3'	1.43	0.96
7:AE:173:LEU:HD11	7:AE:191:GLN:CA	1.93	0.96
37:Ai:5:TYR:N	48:A2:1463:C:C4	2.33	0.96
49:B1:1314:U:H1'	60:BK:2:LEU:HD13	1.47	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1522:A:C2	65:BP:128:HIS:CD2	2.43	0.96
60:BK:64:TRP:CE3	79:Bd:23:VAL:HA	2.01	0.96
67:BR:61:ILE:HG12	67:BR:66:VAL:HG21	1.47	0.96
13:AK:83:ARG:HG3	13:AK:84:GLY:H	1.29	0.96
39:Ak:20:ALA:HA	39:Ak:38:CYS:HA	1.47	0.96
49:B1:1397:U:H4'	49:B1:1398:G:N2	1.79	0.96
55:BF:40:ALA:HB1	55:BF:45:TYR:CB	1.94	0.96
70:BU:20:ILE:HG22	70:BU:116:ILE:HA	0.97	0.96
13:AK:14:PHE:CE1	48:A2:1941:A:C5	2.54	0.96
13:AK:53:VAL:CG1	48:A2:1978:U:H5'	1.96	0.96
15:AM:101:LYS:HE2	48:A2:4834:U:OP1	1.66	0.96
22:AT:78:LYS:CD	22:AT:87:LYS:HZ1	1.78	0.96
48:A2:3929:G:H1	48:A2:4016:A:N6	1.63	0.96
59:BJ:117:LEU:HD12	59:BJ:157:ILE:HD13	1.41	0.96
67:BR:42:PRO:HD2	67:BR:46:LEU:CD2	1.94	0.96
5:AC:97:ARG:NH1	48:A2:348:U:O4'	1.99	0.96
47:Au:124:LEU:HB3	47:Au:128:LEU:CD1	1.96	0.96
14:AL:59:VAL:HG13	48:A2:74:G:OP1	1.65	0.95
22:AT:105:PHE:CE1	48:A2:1784:A:C4'	2.49	0.95
32:Ad:38:PHE:CG	48:A2:4596:U:N3	2.34	0.95
48:A2:307:U:C2'	48:A2:308:G:H5'	1.95	0.95
49:B1:1016:U:O2	63:BN:61:ALA:CB	2.14	0.95
49:B1:1545:A:H4'	66:BQ:75:GLY:HA2	1.48	0.95
56:BG:57:ASP:C	56:BG:107:SER:CB	2.39	0.95
64:BO:78:ALA:CB	64:BO:118:ALA:HB3	1.97	0.95
51:BB:70:SER:CA	51:BB:83:LYS:HA	1.97	0.95
51:BB:182:LYS:CD	51:BB:231:LEU:CD1	2.44	0.95
64:BO:142:ARG:HG3	76:Ba:22:ARG:CD	1.94	0.95
65:BP:84:ILE:HG23	65:BP:115:TYR:CD2	2.00	0.95
70:BU:24:LEU:HD21	70:BU:112:VAL:CG2	1.94	0.95
14:AL:134:PRO:HB3	14:AL:135:LYS:HD3	1.45	0.95
49:B1:1309:C:P	81:Bf:118:ARG:CD	2.54	0.95
54:BE:115:THR:HB	54:BE:118:GLU:CD	1.91	0.95
65:BP:49:LEU:N	65:BP:50:ARG:HG2	1.80	0.95
81:Bf:105:TYR:HD1	81:Bf:118:ARG:HH11	1.12	0.95
4:AB:317:LEU:CD2	48:A2:4959:U:H5"	1.96	0.95
6:AD:12:TYR:CD1	6:AD:13:PHE:CD1	2.53	0.95
6:AD:232:THR:N	6:AD:235:MET:HG2	1.80	0.95
22:AT:78:LYS:CD	22:AT:87:LYS:NZ	2.29	0.95
25:AW:42:SER:HB2	25:AW:44:ARG:NH1	1.80	0.95
39:Ak:64:LEU:HD12	39:Ak:65:ALA:N	1.79	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1522:A:C2	65:BP:128:HIS:HB2	1.98	0.95
56:BG:217:MET:HB3	56:BG:221:LYS:NZ	1.80	0.95
65:BP:65:LYS:CG	65:BP:66:GLU:OE1	2.13	0.95
67:BR:100:PRO:CD	67:BR:119:VAL:CG2	2.43	0.95
1:A3:52:A:N6	40:Al:27:ILE:HD13	1.81	0.95
4:AB:393:LYS:HE3	48:A2:4998:U:H5'	1.47	0.95
13:AK:14:PHE:CD2	48:A2:1941:A:C6	2.55	0.95
15:AM:25:VAL:HG12	15:AM:45:VAL:CG1	1.95	0.95
48:A2:4982:C:C3'	58:BI:169:GLY:HA3	1.95	0.95
49:B1:1256:G:N1	79:Bd:40:ARG:HG3	1.81	0.95
49:B1:1314:U:C6	60:BK:2:LEU:CD2	2.50	0.95
51:BB:41:ILE:HD11	51:BB:73:ASP:HB2	1.47	0.95
54:BE:69:PHE:HE1	54:BE:94:LYS:HE2	1.14	0.95
54:BE:98:HIS:C	54:BE:114:ILE:HG22	1.89	0.95
55:BF:103:LEU:CD2	55:BF:104:THR:HG23	1.94	0.95
70:BU:24:LEU:CD2	70:BU:112:VAL:CG2	2.43	0.95
28:AZ:95:VAL:O	28:AZ:110:ALA:HB2	1.65	0.95
48:A2:4241:A:H5'	48:A2:4243:A:H1'	1.46	0.95
49:B1:282:G:H3'	49:B1:283:G:C8	2.01	0.95
49:B1:1522:A:N1	65:BP:128:HIS:HB3	1.79	0.95
49:B1:1593:C:H5	75:BZ:104:ARG:HH21	1.12	0.95
53:BD:74:GLN:NE2	53:BD:84:VAL:HB	1.79	0.95
3:AA:87:PHE:HE1	48:A2:4089:U:H5"	1.28	0.95
13:AK:52:VAL:HG11	13:AK:90:PHE:H	1.26	0.95
21:AS:77:ASN:ND2	21:AS:146:HIS:NE2	2.15	0.95
48:A2:2853:U:N3	48:A2:3663:A:N1	2.13	0.95
52:BC:133:TYR:HE1	52:BC:216:MET:CA	1.80	0.95
64:BO:78:ALA:HB3	64:BO:118:ALA:CB	1.96	0.95
49:B1:407:G:C2	73:BX:36:LEU:CD2	2.49	0.95
49:B1:823:U:C5	74:BY:64:PHE:CE1	2.55	0.95
49:B1:918:U:H4'	63:BN:20:ARG:HH22	1.19	0.95
51:BB:70:SER:HB3	51:BB:83:LYS:CA	1.96	0.95
7:AE:109:LEU:O	7:AE:111:LYS:N	2.00	0.95
7:AE:139:LYS:C	7:AE:140:LEU:HD23	1.92	0.95
17:AO:21:ALA:HA	17:AO:87:MET:HE1	1.47	0.95
18:AP:18:ARG:HG2	18:AP:147:GLU:HG2	1.45	0.95
48:A2:1258:G:C2	48:A2:1259:C:C4	2.55	0.95
49:B1:1401:A:H4'	70:BU:52:GLY:CA	1.96	0.95
63:BN:22:VAL:HB	63:BN:23:PRO:HD2	1.44	0.95
3:AA:54:ARG:NH2	48:A2:3651:U:OP1	1.99	0.95
4:AB:393:LYS:CE	48:A2:5000:A:H4'	1.96	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AE:140:LEU:HA	7:AE:191:GLN:NE2	1.81	0.95
27:AY:41:LYS:HD2	27:AY:42:TYR:CE1	2.01	0.95
30:Ab:45:PHE:CD1	48:A2:1797:G:N1	2.34	0.95
48:A2:4983:C:P	58:BI:169:GLY:O	2.23	0.95
51:BB:70:SER:CB	51:BB:83:LYS:CA	2.44	0.95
13:AK:57:LYS:HG2	48:A2:2001:U:OP1	0.77	0.94
23:AU:47:ILE:O	23:AU:49:VAL:N	1.99	0.94
39:Ak:60:LEU:CD1	39:Ak:61:PRO:HD2	1.95	0.94
49:B1:827:A:H5'	59:BJ:8:VAL:HG21	1.49	0.94
13:AK:58:ASN:HA	13:AK:61:MET:CB	1.97	0.94
33:Ae:33:ARG:CZ	48:A2:1286:A:C8	2.50	0.94
42:An:1:MET:HG3	49:B1:1852:C:OP1	1.67	0.94
49:B1:802:A:H3'	49:B1:803:C:C6	2.01	0.94
70:BU:48:LEU:HD11	70:BU:97:ILE:HG21	1.46	0.94
79:Bd:11:PRO:O	79:Bd:12:ARG:CB	2.14	0.94
2:A4:11:A:O2'	2:A4:13:A:OP2	1.85	0.94
21:AS:90:THR:HG21	22:AT:156:TYR:CZ	2.02	0.94
22:AT:109:VAL:HG13	48:A2:1785:G:C6	2.01	0.94
28:AZ:33:THR:HG1	28:AZ:40:HIS:CE1	1.85	0.94
48:A2:1741:G:N1	48:A2:1742:G:C8	2.36	0.94
55:BF:23:TRP:HE1	55:BF:108:PRO:HG3	1.18	0.94
66:BQ:33:LYS:CE	66:BQ:36:GLY:CA	2.45	0.94
73:BX:54:LYS:NZ	73:BX:94:ILE:O	1.99	0.94
82:Bg:88:ARG:CD	82:Bg:90:TRP:CZ2	2.50	0.94
5:AC:150:LEU:N	46:At:71:ARG:O	2.00	0.94
27:AY:65:GLN:N	27:AY:65:GLN:OE1	1.99	0.94
43:Ao:102:GLN:HE21	43:Ao:103:VAL:H	1.13	0.94
48:A2:71:C:O2'	48:A2:72:C:O5'	1.85	0.94
48:A2:133:C:C5	48:A2:134:G:H2'	2.01	0.94
54:BE:95:THR:CB	54:BE:97:GLU:HG3	1.97	0.94
70:BU:61:LEU:CD1	79:Bd:34:TYR:CE2	2.51	0.94
34:Af:63:LYS:HB2	34:Af:64:PRO:CD	1.86	0.94
50:BA:37:TYR:HD2	50:BA:162:PRO:HG3	1.05	0.94
50:BA:103:PHE:CZ	50:BA:136:GLU:OE1	2.21	0.94
54:BE:34:GLY:HA3	54:BE:83:PRO:HG3	1.48	0.94
56:BG:160:LYS:C	56:BG:171:THR:HG23	1.92	0.94
68:BS:40:TYR:HE1	68:BS:71:MET:HE3	1.30	0.94
19:AQ:170:LYS:HB2	19:AQ:170:LYS:HZ2	1.31	0.94
51:BB:105:LEU:HD13	51:BB:213:ARG:HA	1.50	0.94
67:BR:95:ILE:HA	67:BR:114:LEU:CD1	1.97	0.94
5:AC:219:LYS:CE	48:A2:220:G:C8	2.50	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AE:140:LEU:HD13	7:AE:167:GLN:HE21	1.31	0.94
26:AX:106:LYS:HG3	48:A2:2758:C:OP1	1.67	0.94
47:Au:38:LEU:HB2	47:Au:163:LEU:HB3	0.97	0.94
48:A2:1162:U:O3'	48:A2:1163:C:O2	1.85	0.94
49:B1:688:U:C2'	57:BH:103:LYS:HD3	1.85	0.94
49:B1:1534:C:O2	49:B1:1598:G:N2	2.00	0.94
51:BB:127:VAL:CG1	51:BB:176:VAL:CG1	2.44	0.94
52:BC:253:PRO:HA	52:BC:256:TRP:HE1	1.31	0.94
70:BU:61:LEU:HD11	79:Bd:34:TYR:HD2	1.26	0.94
3:AA:247:ARG:CG	49:B1:1069:U:H4'	1.97	0.94
5:AC:93:GLY:O	5:AC:100:ARG:O	1.86	0.94
6:AD:29:ASP:CB	48:A2:4242:A:C8	2.49	0.94
18:AP:18:ARG:CG	18:AP:147:GLU:CG	2.44	0.94
25:AW:113:LYS:CG	49:B1:328:U:O4	2.16	0.94
29:Aa:28:HIS:CD2	29:Aa:32:ARG:HG2	2.02	0.94
37:Ai:56:ARG:NH2	48:A2:4037:U:OP1	2.00	0.94
45:Aq:46:ILE:HD12	45:Aq:49:ALA:HB2	1.48	0.94
48:A2:1258:G:HO2'	48:A2:1259:C:H5	0.98	0.94
48:A2:2685:G:H5"	48:A2:2685:G:C8	2.03	0.94
49:B1:14:C:H5"	52:BC:190:SER:HB3	1.49	0.94
49:B1:872:A:C8	49:B1:874:G:N3	2.36	0.94
54:BE:87:MET:HE1	54:BE:236:ILE:HG13	1.50	0.94
63:BN:54:LEU:HG	63:BN:58:HIS:CD2	2.03	0.94
66:BQ:41:MET:HE2	69:BT:10:ASN:HB2	0.94	0.94
70:BU:50:VAL:HG22	70:BU:91:LEU:HD22	1.48	0.94
75:BZ:98:LYS:O	75:BZ:110:THR:N	2.00	0.94
47:Au:67:VAL:HG22	47:Au:111:LEU:CB	1.98	0.94
47:Au:166:ALA:CB	48:A2:3940:G:H1'	1.96	0.94
48:A2:944:G:O2'	48:A2:945:G:O4'	1.85	0.94
49:B1:1555:U:OP1	79:Bd:22:ARG:NH2	1.99	0.94
1:A3:81:C:H4'	1:A3:82:A:H5"	1.50	0.94
5:AC:58:ALA:HB1	5:AC:60:HIS:CD2	2.03	0.94
13:AK:78:LEU:HB3	13:AK:80:PRO:HD2	1.47	0.94
16:AN:85:VAL:HG21	48:A2:44:A:OP2	1.67	0.94
20:AR:169:ALA:HA	20:AR:172:ARG:CD	1.97	0.94
48:A2:31:U:O2'	48:A2:32:G:OP1	1.85	0.94
48:A2:1739:U:N3	48:A2:1740:G:N7	2.16	0.94
49:B1:976:G:O2'	49:B1:977:C:O4'	1.85	0.94
52:BC:97:PHE:O	52:BC:98:LEU:HD23	1.67	0.94
80:Be:41:ARG:HA	80:Be:45:VAL:HG21	1.49	0.94
6:AD:229:ASN:HD22	6:AD:229:ASN:H	1.15	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AO:91:LYS:HA	48:A2:426:U:O4	1.67	0.93
48:A2:3929:G:C2	83:Bw:19:G:C2	2.56	0.93
49:B1:802:A:H61	57:BH:106:ARG:HH12	0.95	0.93
51:BB:71:LEU:HG	51:BB:84:PHE:HE2	1.30	0.93
8:AF:51:TYR:CE2	48:A2:1220:C:H5	1.85	0.93
25:AW:42:SER:CB	25:AW:44:ARG:NH1	2.31	0.93
45:Aq:41:LYS:HB2	45:Aq:70:GLN:HA	1.48	0.93
48:A2:2773:C:N4	85:By:12:UNK:N	2.16	0.93
49:B1:1679:A:H62	55:BF:60:ARG:HA	1.33	0.93
49:B1:1830:U:C4	84:Bx:47:U:H5"	2.03	0.93
49:B1:1867:U:O2'	76:Ba:38:LYS:CB	2.16	0.93
53:BD:210:ILE:HB	67:BR:39:ALA:HB2	1.49	0.93
65:BP:52:LYS:HB2	65:BP:80:LEU:CD1	1.97	0.93
12:AJ:111:GLU:OE2	12:AJ:125:ILE:HG21	1.68	0.93
16:AN:108:ARG:HH22	48:A2:2440:G:H5"	1.21	0.93
17:AO:179:LYS:CD	48:A2:4830:G:N7	2.31	0.93
52:BC:256:TRP:CH2	72:BW:68:ARG:HB3	2.01	0.93
54:BE:47:PHE:HE1	54:BE:111:VAL:HG12	1.33	0.93
6:AD:12:TYR:CE1	6:AD:13:PHE:HE1	1.69	0.93
8:AF:69:ILE:O	8:AF:73:ARG:HG3	1.67	0.93
27:AY:59:ARG:NH1	48:A2:196:G:H2'	1.82	0.93
27:AY:66:GLN:O	27:AY:68:GLY:N	2.00	0.93
28:AZ:87:VAL:HG22	28:AZ:127:ASN:ND2	1.83	0.93
37:Ai:28:ARG:HH21	48:A2:320:C:H5	0.95	0.93
49:B1:582:U:C4'	74:BY:32:LYS:CA	2.46	0.93
49:B1:633:C:H1'	80:Be:12:VAL:CG1	1.98	0.93
54:BE:149:TYR:CB	56:BG:209:TYR:HD2	1.81	0.93
59:BJ:89:GLU:OE1	59:BJ:89:GLU:N	2.00	0.93
67:BR:3:ARG:HG3	67:BR:4:VAL:H	1.32	0.93
70:BU:20:ILE:CG2	70:BU:116:ILE:HG12	1.97	0.93
79:Bd:36:LEU:HD11	79:Bd:43:PHE:CD2	2.02	0.93
7:AE:114:ARG:HG2	48:A2:453:C:OP1	1.68	0.93
23:AU:48:LYS:CG	23:AU:53:ALA:HB2	1.97	0.93
37:Ai:15:HIS:N	48:A2:72:C:OP2	2.01	0.93
49:B1:286:U:O2'	49:B1:287:U:OP1	1.85	0.93
50:BA:39:TYR:CD2	67:BR:105:MET:SD	2.62	0.93
70:BU:27:ARG:NH2	79:Bd:51:GLY:HA2	1.78	0.93
79:Bd:20:SER:C	79:Bd:31:ILE:HD12	1.89	0.93
20:AR:168:GLU:O	20:AR:172:ARG:HG2	1.69	0.93
34:Af:63:LYS:HB3	34:Af:64:PRO:CD	1.93	0.93
47:Au:67:VAL:CG2	47:Au:111:LEU:HB2	1.99	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BC:147:VAL:HG21	84:Bx:56:U:C6	2.01	0.93
60:BK:27:VAL:HG12	60:BK:46:MET:SD	2.09	0.93
61:BL:30:LYS:CD	61:BL:33:LEU:HD21	1.99	0.93
66:BQ:25:CYS:SG	66:BQ:95:TYR:CB	2.56	0.93
67:BR:97:GLU:HB2	67:BR:117:LEU:CD2	1.97	0.93
1:A3:86:U:O2	36:Ah:5:LYS:HB3	1.69	0.93
13:AK:14:PHE:CZ	48:A2:1941:A:C5	2.57	0.93
20:AR:61:ALA:HB2	48:A2:2612:U:H5'	1.45	0.93
22:AT:129:LYS:CE	48:A2:1816:G:O2'	2.17	0.93
33:Ae:33:ARG:HD3	48:A2:1286:A:C8	2.02	0.93
46:At:57:GLY:O	46:At:121:GLN:OE1	1.86	0.93
51:BB:173:THR:O	51:BB:177:GLN:N	2.00	0.93
53:BD:210:ILE:CG2	67:BR:39:ALA:HB1	1.77	0.93
13:AK:48:ARG:HH11	45:Aq:122:ALA:HA	1.33	0.93
48:A2:285:U:H5"	48:A2:286:G:OP2	1.68	0.93
49:B1:561:A:OP1	59:BJ:171:GLY:CA	2.16	0.93
49:B1:1286:G:H1'	62:BM:34:GLY:CA	1.98	0.93
53:BD:210:ILE:CG2	67:BR:39:ALA:HB2	1.76	0.93
62:BM:35:ILE:HD13	62:BM:61:TYR:CE1	2.01	0.93
13:AK:41:GLN:HB3	45:Aq:121:LEU:CD1	1.98	0.93
38:Aj:21:ARG:NE	38:Aj:39:TYR:HD1	1.66	0.93
45:Aq:39:PRO:HB2	45:Aq:42:VAL:HG22	1.50	0.93
59:BJ:39:ASN:HB2	80:Be:34:ARG:HH21	1.33	0.93
67:BR:42:PRO:CD	67:BR:46:LEU:HD23	1.99	0.93
17:AO:167:HIS:NE2	48:A2:4719:C:C5	2.37	0.93
46:At:107:ARG:NH2	48:A2:951:A:C5'	2.31	0.93
48:A2:3929:G:H1'	83:Bw:19:G:N9	1.83	0.93
51:BB:36:PRO:HG2	51:BB:39:PHE:HE2	1.32	0.93
59:BJ:54:ARG:HD3	59:BJ:98:LEU:HD23	1.49	0.93
66:BQ:12:VAL:HG21	66:BQ:91:ALA:HA	1.51	0.93
8:AF:165:LYS:HA	48:A2:2254:G:O2'	1.69	0.92
13:AK:34:ASN:CB	48:A2:1950:G:C5'	2.47	0.92
14:AL:60:ARG:HD3	48:A2:72:C:O2	1.69	0.92
21:AS:172:PRO:O	48:A2:4724:A:N1	2.01	0.92
28:AZ:33:THR:CB	28:AZ:36:ARG:HG2	2.00	0.92
29:Aa:79:TRP:NE1	29:Aa:117:LEU:HD12	1.82	0.92
45:Aq:46:ILE:CD1	45:Aq:49:ALA:HB2	1.99	0.92
49:B1:14:C:H5"	52:BC:190:SER:OG	1.68	0.92
49:B1:294:U:O4	61:BL:65:ASN:HB3	1.68	0.92
49:B1:1544:C:H4'	66:BQ:80:GLN:NE2	1.83	0.92
7:AE:240:TYR:CE1	48:A2:4897:C:C5'	2.51	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AT:17:ARG:NH2	22:AT:45:MET:HE1	1.83	0.92
45:Aq:28:LEU:HB2	45:Aq:42:VAL:HG23	1.51	0.92
48:A2:163:C:H42	48:A2:264:U:H3	1.13	0.92
51:BB:171:ILE:HD12	51:BB:197:ILE:HG12	1.49	0.92
54:BE:100:ARG:NH1	54:BE:236:ILE:HG21	1.84	0.92
1:A3:109:C:C5	38:Aj:20:ARG:NH2	2.36	0.92
7:AE:115:TYR:CE2	46:At:119:ARG:HD3	2.04	0.92
7:AE:118:THR:OG1	33:Ae:90:MET:SD	2.27	0.92
7:AE:228:GLN:HB2	48:A2:1277:A:H61	1.32	0.92
13:AK:48:ARG:NH1	45:Aq:122:ALA:N	2.17	0.92
19:AQ:42:THR:HB	48:A2:1411:U:H5"	1.50	0.92
47:Au:207:LYS:HD2	47:Au:213:PRO:CB	1.98	0.92
48:A2:309:G:H5"	48:A2:310:U:OP1	1.66	0.92
49:B1:292:A:H2	61:BL:67:SER:HB2	1.34	0.92
49:B1:589:G:N2	80:Be:26:LYS:HE3	1.83	0.92
49:B1:872:A:C2	49:B1:915:G:C6	2.58	0.92
49:B1:1309:C:O2'	81:Bf:131:PHE:O	1.88	0.92
60:BK:28:HIS:HE1	60:BK:32:HIS:CE1	1.86	0.92
79:Bd:26:ASN:CB	79:Bd:39:CYS:SG	2.57	0.92
7:AE:240:TYR:CE1	48:A2:4897:C:H5'	2.03	0.92
20:AR:98:ARG:NH2	20:AR:133:LYS:HA	1.83	0.92
34:Af:60:PRO:O	34:Af:62:GLY:N	2.00	0.92
48:A2:682:U:H2'	48:A2:683:U:H6	1.31	0.92
49:B1:368:U:H3'	49:B1:369:C:C6	2.05	0.92
65:BP:48:GLY:C	65:BP:49:LEU:HD23	1.95	0.92
82:Bg:88:ARG:HG3	82:Bg:97:THR:HG23	1.49	0.92
2:A4:7:G:N7	6:AD:22:ARG:NH1	2.16	0.92
4:AB:393:LYS:HE2	48:A2:4998:U:C5'	1.99	0.92
6:AD:286:SER:HB3	48:A2:1163:C:H5"	0.93	0.92
7:AE:233:PHE:CE2	48:A2:447:G:OP1	2.23	0.92
13:AK:14:PHE:CD1	48:A2:1941:A:C4	2.57	0.92
22:AT:4:THR:CG2	48:A2:4169:C:C6	2.52	0.92
48:A2:1943:A:H8	48:A2:1943:A:OP2	1.50	0.92
48:A2:4105:C:O2	48:A2:4111:C:N4	2.01	0.92
49:B1:502:C:P	54:BE:66:MET:CE	2.57	0.92
49:B1:1858:G:OP1	76:Ba:17:HIS:NE2	2.01	0.92
59:BJ:117:LEU:HD13	59:BJ:157:ILE:HD11	0.94	0.92
3:AA:227:ARG:O	3:AA:234:LYS:CE	2.18	0.92
22:AT:56:CYS:CB	22:AT:78:LYS:NZ	2.32	0.92
47:Au:166:ALA:C	48:A2:3940:G:H1'	1.76	0.92
48:A2:1755:U:H2'	48:A2:1756:C:C6	2.03	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:2004:C:N3	48:A2:2005:G:C2	2.37	0.92
49:B1:560:A:H5'	59:BJ:172:ARG:H	1.33	0.92
49:B1:737:G:OP2	49:B1:737:G:H8	1.33	0.92
59:BJ:136:ARG:CB	59:BJ:158:ASP:O	2.18	0.92
82:Bg:88:ARG:CD	82:Bg:90:TRP:CE2	2.51	0.92
6:AD:22:ARG:NH2	6:AD:27:LYS:NZ	2.16	0.92
20:AR:60:ARG:O	20:AR:63:CYS:N	2.03	0.92
37:Ai:15:HIS:ND1	48:A2:72:C:C6	2.37	0.92
52:BC:147:VAL:HG23	84:Bx:56:U:C5	1.92	0.92
66:BQ:62:ARG:HH22	66:BQ:108:ILE:HD13	1.27	0.92
75:BZ:65:TYR:CE2	75:BZ:76:ARG:HG2	2.05	0.92
2:A4:14:C:P	6:AD:24:ARG:HH12	1.91	0.92
15:AM:6:PHE:HE1	21:AS:151:LYS:HD2	1.31	0.92
47:Au:43:PRO:CB	47:Au:161:LYS:O	2.17	0.92
49:B1:833:C:H2'	49:B1:834:C:C6	2.05	0.92
49:B1:1307:U:O2'	81:Bf:135:HIS:HA	1.70	0.92
70:BU:61:LEU:CD1	79:Bd:34:TYR:CD2	2.52	0.92
75:BZ:78:LYS:C	75:BZ:79:ILE:HD13	1.95	0.92
76:Ba:94:ASP:OD1	76:Ba:95:ARG:N	2.03	0.92
4:AB:119:TYR:HE1	48:A2:4925:A:OP1	1.51	0.92
8:AF:66:ARG:NH2	48:A2:1192:U:O2'	2.02	0.92
19:AQ:10:ASP:OD1	19:AQ:11:ARG:N	2.03	0.92
30:Ab:50:ASN:HA	48:A2:1795:U:C1'	2.00	0.92
42:An:2:ARG:HH12	49:B1:1852:C:H5'	0.77	0.92
45:Aq:43:GLY:HA2	45:Aq:46:ILE:CG2	2.00	0.92
46:At:66:ARG:CD	46:At:68:SER:HB2	2.00	0.92
54:BE:100:ARG:NH1	54:BE:236:ILE:CG2	2.33	0.92
2:A4:47:G:O2'	6:AD:223:PHE:CE1	2.21	0.92
5:AC:57:LEU:HD22	5:AC:58:ALA:N	1.84	0.92
12:AJ:65:ASN:O	43:Ao:103:VAL:CG2	2.17	0.92
17:AO:167:HIS:CE1	48:A2:4719:C:H5	1.80	0.92
21:AS:139:ARG:HA	21:AS:139:ARG:HE	1.33	0.92
29:Aa:83:SER:HB2	29:Aa:86:THR:HG23	0.93	0.92
37:Ai:5:TYR:N	48:A2:1463:C:N4	2.16	0.92
46:At:69:GLY:O	46:At:70:GLN:NE2	2.02	0.92
49:B1:864:A:H61	57:BH:106:ARG:NH2	1.67	0.92
49:B1:890:U:H5'	49:B1:891:G:H5"	1.52	0.92
49:B1:1256:G:N1	79:Bd:30:LEU:HG	1.85	0.92
51:BB:171:ILE:CD1	51:BB:197:ILE:HG12	2.00	0.92
72:BW:94:LEU:HD21	72:BW:101:PHE:H	1.35	0.92
79:Bd:21:CYS:HB3	79:Bd:26:ASN:H	1.35	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A4:13:A:H2	6:AD:21:ARG:HB2	1.35	0.91
14:AL:103:ARG:HG2	37:Ai:25:ARG:CZ	2.00	0.91
14:AL:195:ARG:CG	14:AL:198:ARG:NH2	2.30	0.91
47:Au:160:LYS:HD3	48:A2:3939:U:H5'	1.51	0.91
48:A2:1949:G:N2	48:A2:2000:C:O2	2.03	0.91
49:B1:168:C:H5"	56:BG:131:ARG:HD2	0.98	0.91
49:B1:1454:A:C2'	67:BR:3:ARG:CD	2.49	0.91
50:BA:28:THR:HG22	50:BA:46:ILE:CD1	2.00	0.91
65:BP:65:LYS:HG2	65:BP:66:GLU:OE1	1.70	0.91
7:AE:100:LYS:HB3	48:A2:678:C:H5'	1.51	0.91
33:Ae:33:ARG:HD3	48:A2:1286:A:N7	1.83	0.91
49:B1:509:G:H5'	59:BJ:3:VAL:HA	1.52	0.91
51:BB:71:LEU:HD21	51:BB:84:PHE:CE2	2.04	0.91
66:BQ:42:ILE:HG22	66:BQ:44:PRO:CD	2.00	0.91
76:Ba:4:LYS:HE3	76:Ba:92:ARG:NH2	1.83	0.91
8:AF:179:LEU:HG	8:AF:184:ILE:HD11	1.52	0.91
18:AP:13:LYS:O	18:AP:107:LEU:CD2	2.18	0.91
22:AT:56:CYS:CB	22:AT:78:LYS:HZ1	1.84	0.91
49:B1:551:U:OP1	80:Be:39:ASN:CG	2.12	0.91
49:B1:581:U:H5'	74:BY:62:THR:HG22	1.52	0.91
50:BA:37:TYR:HD2	50:BA:162:PRO:CG	1.83	0.91
52:BC:200:ARG:HH11	52:BC:200:ARG:HG2	1.35	0.91
28:AZ:50:PRO:CG	28:AZ:122:TYR:HE2	1.84	0.91
36:Ah:46:LYS:HA	36:Ah:49:VAL:CG2	2.00	0.91
48:A2:4160:G:N2	83:Bv:74:C:N3	2.18	0.91
49:B1:407:G:C5	73:BX:36:LEU:CD2	2.52	0.91
8:AF:179:LEU:CD2	8:AF:184:ILE:HD11	2.00	0.91
13:AK:40:MET:HE2	48:A2:1981:G:O6	1.70	0.91
15:AM:47:ARG:HG2	21:AS:73:LEU:CD2	1.99	0.91
21:AS:81:TRP:C	21:AS:82:LEU:HD22	1.95	0.91
21:AS:173:ASN:HA	48:A2:4724:A:H2	0.75	0.91
28:AZ:68:ILE:HG21	28:AZ:119:GLU:HG3	1.49	0.91
29:Aa:61:TYR:CG	48:A2:288:G:N2	2.22	0.91
45:Aq:39:PRO:HB3	45:Aq:42:VAL:CG2	2.00	0.91
49:B1:582:U:O4'	74:BY:32:LYS:C	2.13	0.91
49:B1:1021:U:H5'	63:BN:128:TYR:HE1	1.31	0.91
51:BB:71:LEU:CD2	51:BB:75:GLN:HB2	2.00	0.91
51:BB:182:LYS:CG	51:BB:231:LEU:CD1	2.49	0.91
59:BJ:112:THR:O	59:BJ:116:LYS:HG2	1.70	0.91
65:BP:85:ILE:HG22	65:BP:112:ILE:HA	1.51	0.91
70:BU:48:LEU:CD1	70:BU:97:ILE:HG21	1.99	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:323:ARG:HB3	48:A2:1264:G:O2'	1.71	0.91
11:AI:111:LEU:CD2	83:Bv:73:A:O2'	2.18	0.91
14:AL:60:ARG:HH12	48:A2:72:C:H42	1.18	0.91
39:Ak:16:ARG:C	39:Ak:18:LYS:H	1.79	0.91
48:A2:2879:U:H2'	48:A2:2880:G:H5'	1.53	0.91
49:B1:1552:G:H4'	49:B1:1557:C:H41	1.36	0.91
3:AA:227:ARG:O	3:AA:234:LYS:NZ	2.03	0.91
7:AE:237:LYS:HA	7:AE:237:LYS:NZ	1.83	0.91
8:AF:184:ILE:HA	8:AF:189:ASP:HB2	1.53	0.91
18:AP:69:ARG:HH22	48:A2:4530:A:H2	1.18	0.91
34:Af:57:THR:CB	48:A2:1281:C:OP1	2.18	0.91
7:AE:119:GLU:HG2	33:Ae:7:LEU:HD22	1.52	0.91
9:AG:113:ARG:NH2	48:A2:119:G:N3	2.19	0.91
16:AN:71:ARG:CD	16:AN:94:PHE:HB2	2.01	0.91
28:AZ:95:VAL:HG13	28:AZ:109:LYS:HG2	1.50	0.91
29:Aa:61:TYR:CD2	48:A2:288:G:N1	2.39	0.91
49:B1:1397:U:H1'	82:Bg:63:SER:OG	1.70	0.91
49:B1:1483:A:H4'	53:BD:160:SER:HB3	1.50	0.91
71:BV:14:PRO:HB2	71:BV:23:ILE:HG23	1.52	0.91
5:AC:311:ARG:NH1	48:A2:946:G:C5'	2.27	0.91
8:AF:51:TYR:CE2	48:A2:1220:C:C5	2.58	0.91
48:A2:130:C:C3'	48:A2:131:C:H5"	2.01	0.91
60:BK:28:HIS:HE1	60:BK:32:HIS:NE2	1.67	0.91
64:BO:105:THR:CG2	76:Ba:24:THR:CG2	2.48	0.91
1:A3:11:C:O2'	18:AP:5:SER:CA	2.19	0.91
5:AC:51:PRO:HB3	14:AL:26:PHE:HE1	1.34	0.91
6:AD:90:VAL:HG23	6:AD:226:TYR:CE1	2.06	0.91
14:AL:136:LYS:HG3	14:AL:137:GLY:CA	2.00	0.91
39:Ak:14:THR:O	39:Ak:17:ARG:CB	2.18	0.91
45:Aq:60:VAL:HG22	45:Aq:73:VAL:HG12	1.53	0.91
47:Au:17:VAL:CG2	47:Au:207:LYS:HA	2.00	0.91
47:Au:165:LEU:CD1	48:A2:3940:G:H5'	2.00	0.91
48:A2:1977:C:H2'	48:A2:1978:U:O2	1.70	0.91
49:B1:797:C:H4'	49:B1:798:G:H5'	0.97	0.91
55:BF:41:VAL:CG2	55:BF:109:LEU:HD21	2.00	0.91
65:BP:68:PRO:HD2	65:BP:71:GLU:HB2	1.53	0.91
1:A3:33:G:N2	48:A2:335:G:O6	2.04	0.90
5:AC:190:ARG:HA	5:AC:202:ILE:CD1	2.01	0.90
7:AE:102:GLY:HA3	48:A2:677:G:O2'	1.71	0.90
48:A2:4264:U:C4	48:A2:4265:C:O2	2.25	0.90
54:BE:149:TYR:CD1	56:BG:209:TYR:CD2	2.57	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:BU:20:ILE:HG13	70:BU:98:VAL:CG2	2.00	0.90
7:AE:105:ARG:CG	48:A2:464:A:N1	2.34	0.90
48:A2:4597:A:H3'	48:A2:4598:U:H4'	1.54	0.90
58:BI:43:ILE:HG23	58:BI:56:ARG:O	1.72	0.90
66:BQ:25:CYS:SG	66:BQ:95:TYR:HD2	1.90	0.90
20:AR:99:MET:HE3	20:AR:103:ARG:HH11	1.35	0.90
25:AW:98:PRO:HD2	25:AW:99:GLU:H	1.37	0.90
29:Aa:87:ARG:HG3	29:Aa:87:ARG:HH11	1.34	0.90
38:Aj:38:GLY:C	38:Aj:40:PRO:HD2	1.96	0.90
49:B1:227:U:C1'	49:B1:228:C:P	2.56	0.90
49:B1:1741:U:OP1	58:BI:58:LEU:HD12	1.71	0.90
75:BZ:82:SER:HA	75:BZ:85:ARG:NH2	1.85	0.90
8:AF:165:LYS:HB3	48:A2:2254:G:C1'	2.01	0.90
8:AF:223:LYS:HA	8:AF:232:ASP:HB3	1.50	0.90
22:AT:119:ALA:HB1	22:AT:124:THR:O	1.70	0.90
23:AU:47:ILE:CD1	23:AU:63:ILE:CD1	2.47	0.90
30:Ab:50:ASN:CG	48:A2:1795:U:H1'	1.95	0.90
63:BN:34:LYS:O	63:BN:37:ILE:HG22	1.70	0.90
67:BR:21:TYR:CE2	67:BR:71:ILE:CD1	2.33	0.90
2:A4:9:C:OP1	22:AT:28:ALA:HB2	1.71	0.90
6:AD:290:ALA:O	6:AD:291:GLN:C	2.12	0.90
13:AK:17:ILE:HD13	13:AK:61:MET:CE	2.00	0.90
19:AQ:30:LYS:HE3	48:A2:2247:A:O2'	1.72	0.90
49:B1:1287:A:H5"	49:B1:1312:G:H1	1.24	0.90
49:B1:1488:C:H3'	49:B1:1489:A:H4'	1.53	0.90
56:BG:57:ASP:C	56:BG:107:SER:HB2	1.97	0.90
65:BP:53:GLN:HB2	65:BP:83:MET:CE	2.00	0.90
75:BZ:69:THR:HG1	75:BZ:72:VAL:HB	1.34	0.90
18:AP:69:ARG:NH2	48:A2:4530:A:H2	1.69	0.90
31:Ac:30:GLY:HA3	48:A2:2654:G:O6	1.71	0.90
48:A2:1989:U:C5	48:A2:1992:C:H5	1.90	0.90
48:A2:2858:A:H4'	48:A2:2859:U:OP1	1.69	0.90
48:A2:4016:A:N1	83:Bw:56:C:C5	2.38	0.90
49:B1:182:C:H2'	49:B1:183:G:H1'	1.51	0.90
49:B1:560:A:H3'	59:BJ:171:GLY:C	1.95	0.90
49:B1:801:U:H2'	49:B1:802:A:C8	2.07	0.90
51:BB:128:LYS:O	51:BB:177:GLN:OE1	1.89	0.90
66:BQ:16:LYS:HG3	66:BQ:17:LYS:H	0.73	0.90
79:Bd:38:MET:CB	79:Bd:43:PHE:HB2	2.02	0.90
5:AC:212:ASN:CB	5:AC:232:VAL:HG23	2.00	0.90
48:A2:3732:C:OP1	48:A2:3733:U:OP2	1.88	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:495:U:OP1	54:BE:58:GLY:N	2.03	0.90
53:BD:68:GLU:HG3	60:BK:20:VAL:HG22	1.51	0.90
54:BE:96:GLY:O	54:BE:97:GLU:HG2	1.72	0.90
68:BS:92:ASP:OD2	68:BS:94:LYS:CB	2.20	0.90
70:BU:26:SER:HB2	70:BU:32:LEU:HB2	1.51	0.90
7:AE:203:ILE:CA	7:AE:206:VAL:HG23	2.02	0.90
28:AZ:33:THR:OG1	28:AZ:40:HIS:HE1	1.53	0.90
48:A2:3813:C:H3'	48:A2:3814:C:H2'	1.50	0.90
49:B1:168:C:H4'	56:BG:131:ARG:HD2	1.51	0.90
49:B1:688:U:C2'	57:BH:103:LYS:HD2	2.02	0.90
49:B1:829:C:H3'	54:BE:21:ASP:OD1	1.71	0.90
49:B1:1867:U:O2'	76:Ba:38:LYS:HB2	1.72	0.90
65:BP:30:TYR:HA	65:BP:33:LEU:HD11	1.53	0.90
83:Bw:35:A:H5"	83:Bw:35:A:C8	2.06	0.90
25:AW:109:ILE:O	25:AW:113:LYS:HG3	1.71	0.90
45:Aq:125:LEU:HA	45:Aq:129:ILE:HB	1.53	0.90
49:B1:368:U:H3'	49:B1:369:C:C5	2.07	0.90
51:BB:183:GLU:HA	51:BB:186:ASN:HD22	1.36	0.90
65:BP:34:MET:CE	65:BP:42:ARG:HA	2.02	0.90
65:BP:35:GLN:O	65:BP:35:GLN:NE2	2.05	0.90
1:A3:108:A:O2'	1:A3:109:C:OP1	1.90	0.90
6:AD:22:ARG:HE	6:AD:27:LYS:HD2	1.37	0.90
47:Au:207:LYS:CD	47:Au:213:PRO:HB3	2.02	0.90
48:A2:131:C:H5'	48:A2:131:C:H6	1.37	0.90
48:A2:221:U:H5'	48:A2:239:U:H1'	1.51	0.90
48:A2:3737:A:OP2	48:A2:3738:C:N4	2.03	0.90
49:B1:142:C:O2	56:BG:180:VAL:HG11	1.71	0.90
49:B1:1552:G:C5'	49:B1:1557:C:H5	1.84	0.90
47:Au:85:MET:CE	47:Au:89:ALA:HB1	2.02	0.89
5:AC:150:LEU:CD2	46:At:71:ARG:CA	1.82	0.89
48:A2:121:A:N6	48:A2:150:G:O6	2.06	0.89
48:A2:1943:A:OP2	48:A2:1943:A:C8	2.23	0.89
49:B1:222:U:C5'	61:BL:17:PHE:CD2	2.54	0.89
49:B1:1015:U:H5'	77:Bb:20:LYS:HZ2	1.31	0.89
62:BM:14:VAL:HG13	62:BM:127:TYR:CZ	2.05	0.89
64:BO:142:ARG:HA	64:BO:142:ARG:HH11	1.37	0.89
8:AF:166:ARG:HB3	8:AF:209:TRP:CD2	2.06	0.89
25:AW:56:ARG:NH1	48:A2:4999:G:N7	2.19	0.89
29:Aa:8:THR:HG21	48:A2:1321:G:H3'	1.53	0.89
49:B1:574:A:H4'	74:BY:89:HIS:HB2	1.52	0.89
49:B1:797:C:H1'	49:B1:798:G:OP2	1.73	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A4:73:U:H3'	2:A4:74:A:H5"	1.54	0.89
5:AC:44:LEU:HD22	48:A2:1356:A:H5"	1.51	0.89
13:AK:32:ALA:N	13:AK:85:ASN:HB2	1.88	0.89
36:Ah:31:LEU:HB3	36:Ah:47:ILE:HD12	0.90	0.89
50:BA:201:LEU:CD2	67:BR:85:VAL:CG2	2.51	0.89
51:BB:41:ILE:CD1	51:BB:73:ASP:HB2	2.02	0.89
53:BD:116:ARG:NH1	53:BD:152:PHE:CZ	2.40	0.89
66:BQ:42:ILE:HD12	66:BQ:48:GLN:CB	2.02	0.89
7:AE:187:ARG:HH11	7:AE:187:ARG:HG2	1.38	0.89
8:AF:161:LYS:C	8:AF:162:ILE:HD12	1.98	0.89
19:AQ:164:LYS:CD	48:A2:1479:A:H1'	2.01	0.89
20:AR:25:ASP:OD2	20:AR:48:GLY:O	1.89	0.89
26:AX:55:ARG:HH11	26:AX:55:ARG:HA	1.37	0.89
28:AZ:68:ILE:CG2	28:AZ:119:GLU:CG	2.47	0.89
36:Ah:106:LYS:NZ	48:A2:112:C:OP2	2.03	0.89
48:A2:2003:C:H2'	48:A2:2004:C:H5'	1.54	0.89
50:BA:85:ARG:CG	50:BA:204:TYR:HA	1.98	0.89
64:BO:140:THR:O	64:BO:141:ARG:O	1.90	0.89
75:BZ:69:THR:OG1	75:BZ:72:VAL:CB	2.20	0.89
14:AL:165:LYS:HE2	48:A2:505:C:O5'	1.72	0.89
21:AS:80:ILE:HG22	21:AS:82:LEU:CD2	2.03	0.89
39:Ak:37:ARG:NH1	48:A2:2516:A:OP2	2.05	0.89
45:Aq:109:ILE:HB	45:Aq:129:ILE:HG13	1.53	0.89
48:A2:903:C:O2'	48:A2:904:A:OP2	1.88	0.89
48:A2:2066:G:H2'	48:A2:2067:G:C8	2.08	0.89
49:B1:875:A:C2	49:B1:912:C:N3	2.40	0.89
51:BB:171:ILE:HD12	51:BB:197:ILE:CG1	2.03	0.89
54:BE:149:TYR:HE2	56:BG:205:GLU:HB3	1.29	0.89
67:BR:5:ARG:NE	67:BR:53:TYR:HB2	1.88	0.89
75:BZ:79:ILE:HG21	75:BZ:83:LEU:HD11	1.48	0.89
2:A4:85:G:OP1	8:AF:222:LYS:NZ	2.06	0.89
5:AC:58:ALA:HB1	5:AC:60:HIS:HD2	1.37	0.89
14:AL:134:PRO:CB	14:AL:135:LYS:HD3	2.03	0.89
33:Ae:29:VAL:HG23	48:A2:1315:C:H5"	1.54	0.89
47:Au:124:LEU:CB	47:Au:128:LEU:HD12	2.02	0.89
49:B1:1286:G:C1'	62:BM:34:GLY:HA2	2.01	0.89
49:B1:1309:C:P	81:Bf:118:ARG:HD3	2.13	0.89
49:B1:1309:C:OP1	81:Bf:118:ARG:HD3	1.72	0.89
67:BR:98:VAL:H	67:BR:117:LEU:HD21	1.33	0.89
68:BS:74:PRO:HG3	68:BS:84:LEU:CD1	2.01	0.89
7:AE:137:VAL:C	7:AE:138:ARG:HD2	1.98	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:227:U:C2'	49:B1:228:C:OP2	2.21	0.89
49:B1:527:C:OP1	59:BJ:124:HIS:HB3	1.72	0.89
51:BB:111:CYS:SG	76:Ba:68:TYR:HB2	2.13	0.89
54:BE:95:THR:HB	54:BE:97:GLU:HG3	1.53	0.89
62:BM:11:VAL:HG12	62:BM:13:ASP:OD1	1.73	0.89
67:BR:97:GLU:CB	67:BR:117:LEU:HD23	2.02	0.89
5:AC:62:THR:HB	48:A2:369:G:OP1	1.72	0.89
5:AC:150:LEU:HD23	46:At:71:ARG:CB	2.02	0.89
14:AL:161:TYR:HD1	29:Aa:105:ARG:HH12	1.11	0.89
15:AM:46:ARG:HD2	15:AM:47:ARG:N	1.86	0.89
38:Aj:67:LEU:CD2	38:Aj:71:TYR:HE2	1.85	0.89
54:BE:19:MET:CE	54:BE:108:ARG:HD3	2.03	0.89
63:BN:21:SER:O	63:BN:65:PHE:HB3	1.72	0.89
63:BN:78:LYS:O	63:BN:80:LEU:CD1	2.21	0.89
68:BS:74:PRO:HG3	68:BS:84:LEU:HD11	1.54	0.89
2:A4:95:C:H4'	8:AF:229:GLU:CD	1.96	0.89
4:AB:393:LYS:CE	48:A2:4998:U:C5'	2.51	0.89
5:AC:54:VAL:HG13	5:AC:105:THR:O	1.72	0.89
8:AF:73:ARG:NH2	48:A2:717:G:H5"	1.88	0.89
16:AN:176:LYS:NZ	48:A2:64:A:H5'	1.86	0.89
48:A2:154:U:H5"	48:A2:154:U:H6	1.37	0.89
49:B1:873:G:O6	61:BL:153:LYS:CA	2.19	0.89
49:B1:1311:C:OP1	81:Bf:143:LYS:HE2	1.73	0.89
50:BA:203:PHE:O	50:BA:204:TYR:HB3	1.73	0.89
66:BQ:58:LEU:HD22	66:BQ:62:ARG:HH12	1.34	0.89
67:BR:35:CYS:HA	67:BR:38:ILE:CG1	2.03	0.89
68:BS:45:LEU:HA	68:BS:48:ALA:HB3	1.54	0.89
75:BZ:69:THR:OG1	75:BZ:72:VAL:HB	1.71	0.89
6:AD:286:SER:OG	48:A2:1164:C:P	2.30	0.88
7:AE:111:LYS:HZ1	48:A2:682:U:P	1.95	0.88
44:Ap:42:CYS:HA	48:A2:2653:A:H61	1.33	0.88
47:Au:85:MET:HE3	47:Au:89:ALA:CB	2.04	0.88
48:A2:2066:G:H2'	48:A2:2067:G:H8	1.38	0.88
48:A2:2880:G:C2'	48:A2:2881:G:H5'	2.03	0.88
64:BO:87:GLU:O	64:BO:88:LEU:HD23	1.74	0.88
5:AC:76:ILE:HD11	5:AC:95:MET:HE2	1.55	0.88
5:AC:219:LYS:CD	5:AC:222:ARG:HH21	1.87	0.88
6:AD:36:LEU:HD23	48:A2:4287:A:H1'	1.55	0.88
7:AE:228:GLN:HB2	48:A2:1277:A:N6	1.88	0.88
47:Au:60:ARG:HE	47:Au:61:PRO:HG3	1.37	0.88
48:A2:966:C:H42	48:A2:1258:G:H1	0.89	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:688:U:H3'	57:BH:103:LYS:CD	2.02	0.88
61:BL:30:LYS:HB3	61:BL:33:LEU:HD13	1.52	0.88
65:BP:34:MET:O	65:BP:42:ARG:HD3	1.72	0.88
66:BQ:33:LYS:HE2	66:BQ:36:GLY:HA2	1.54	0.88
68:BS:10:GLN:OE1	68:BS:13:LEU:CD1	2.22	0.88
2:A4:33:U:C1'	6:AD:207:TYR:CD1	2.56	0.88
5:AC:71:ARG:HH21	85:By:14:UNK:C	1.85	0.88
6:AD:224:SER:HA	6:AD:227:ILE:HD11	1.53	0.88
7:AE:220:LYS:H	48:A2:4898:C:H42	1.15	0.88
13:AK:61:MET:HA	13:AK:61:MET:HE3	1.53	0.88
14:AL:13:HIS:O	14:AL:14:PHE:HD1	1.51	0.88
19:AQ:153:GLY:HA3	19:AQ:163:THR:HG21	1.54	0.88
35:Ag:66:ARG:NH2	48:A2:2497:G:H5'	1.88	0.88
48:A2:49:U:O2	48:A2:49:U:H2'	1.73	0.88
48:A2:1258:G:H1'	48:A2:1259:C:C5	2.08	0.88
66:BQ:97:GLN:OE1	66:BQ:105:LYS:CE	2.20	0.88
5:AC:219:LYS:NZ	48:A2:220:G:C8	2.41	0.88
13:AK:17:ILE:CD1	13:AK:61:MET:HE1	2.04	0.88
47:Au:204:LEU:CD1	47:Au:216:LEU:HB2	2.02	0.88
48:A2:1888:A:C5	48:A2:1889:A:N6	2.42	0.88
49:B1:331:C:H6	49:B1:331:C:OP2	1.56	0.88
49:B1:1455:A:OP1	67:BR:5:ARG:NH2	2.07	0.88
49:B1:1784:G:C2	49:B1:1785:C:C2	2.60	0.88
65:BP:64:LYS:O	65:BP:67:ALA:HB1	1.73	0.88
67:BR:95:ILE:CG1	67:BR:114:LEU:HD22	2.04	0.88
68:BS:40:TYR:CE1	68:BS:71:MET:CE	2.56	0.88
80:Be:28:LYS:HB2	80:Be:32:ALA:CB	2.02	0.88
5:AC:97:ARG:HH12	48:A2:348:U:C4'	1.86	0.88
19:AQ:172:ARG:HH11	29:Aa:56:VAL:CG2	1.84	0.88
37:Ai:5:TYR:N	48:A2:1463:C:H42	1.70	0.88
48:A2:3683:A:H2'	48:A2:3684:U:C6	2.09	0.88
49:B1:78:C:C4'	56:BG:175:LYS:HG2	2.03	0.88
49:B1:1522:A:N1	65:BP:128:HIS:CG	2.40	0.88
5:AC:77:PRO:CA	5:AC:91:ALA:CB	2.48	0.88
5:AC:217:ILE:CD1	5:AC:221:PHE:CE1	2.56	0.88
66:BQ:33:LYS:CG	66:BQ:36:GLY:HA2	2.03	0.88
71:BV:41:LYS:HD2	71:BV:41:LYS:H	1.37	0.88
5:AC:214:ASP:OD1	5:AC:216:GLY:N	2.06	0.88
6:AD:235:MET:O	6:AD:239:MET:CB	2.22	0.88
7:AE:123:ARG:NH1	7:AE:124:LYS:HB2	1.88	0.88
12:AJ:111:GLU:CD	12:AJ:125:ILE:CG2	2.45	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AW:101:ARG:HB3	25:AW:105:ARG:HH11	1.06	0.88
48:A2:2246:U:OP1	48:A2:2246:U:C6	2.26	0.88
48:A2:2852:U:H2'	48:A2:2854:C:C5	2.09	0.88
48:A2:3661:U:H5"	48:A2:3790:G:OP2	1.74	0.88
49:B1:1125:C:O4'	67:BR:123:THR:CG2	2.22	0.88
49:B1:1866:A:H1'	76:Ba:95:ARG:CA	2.03	0.88
58:BI:56:ARG:HH11	58:BI:56:ARG:HG3	1.38	0.88
72:BW:94:LEU:CD2	72:BW:101:PHE:H	1.87	0.88
75:BZ:69:THR:OG1	75:BZ:72:VAL:CG2	2.22	0.88
75:BZ:77:LEU:O	75:BZ:78:LYS:HB3	1.71	0.88
2:A4:33:U:N1	6:AD:207:TYR:CD1	2.42	0.88
5:AC:218:ILE:CD1	5:AC:229:LEU:HG	2.03	0.88
7:AE:240:TYR:CD2	7:AE:242:ILE:HG22	2.07	0.88
13:AK:14:PHE:CG	48:A2:1941:A:C6	2.62	0.88
15:AM:90:ARG:O	15:AM:94:LYS:HG3	1.71	0.88
22:AT:105:PHE:CZ	48:A2:1784:A:H4'	2.09	0.88
24:AV:45:ILE:CD1	24:AV:53:PRO:CB	2.51	0.88
29:Aa:57:GLY:HA2	48:A2:4326:G:O3'	1.74	0.88
49:B1:797:C:H5'	57:BH:109:ARG:HH21	1.39	0.88
49:B1:1046:U:C4'	64:BO:140:THR:HG21	2.02	0.88
49:B1:1125:C:O4'	67:BR:123:THR:HG21	1.72	0.88
56:BG:216:ARG:HH21	56:BG:219:GLU:HG3	1.38	0.88
75:BZ:63:PRO:HB3	75:BZ:111:ARG:NE	1.89	0.88
4:AB:224:LYS:HE3	48:A2:4588:A:OP2	1.74	0.88
5:AC:52:TYR:CE2	48:A2:344:C:H4'	2.09	0.88
5:AC:97:ARG:HH11	5:AC:97:ARG:HG3	1.35	0.88
6:AD:22:ARG:NH2	6:AD:27:LYS:CD	2.36	0.88
14:AL:165:LYS:HE3	48:A2:505:C:O5'	1.74	0.88
15:AM:101:LYS:HA	15:AM:104:MET:HE3	1.55	0.88
20:AR:126:LYS:CE	20:AR:131:VAL:CG1	2.40	0.88
27:AY:86:GLN:NE2	27:AY:96:HIS:HA	1.88	0.88
45:Aq:22:VAL:CA	45:Aq:46:ILE:CG2	2.51	0.88
49:B1:1866:A:C8	76:Ba:95:ARG:O	2.27	0.88
66:BQ:62:ARG:CZ	66:BQ:108:ILE:HD13	2.02	0.88
18:AP:13:LYS:O	18:AP:107:LEU:HD21	1.71	0.88
20:AR:24:LEU:HD22	20:AR:25:ASP:H	1.39	0.88
20:AR:165:LYS:NZ	49:B1:907:G:C4'	2.37	0.88
27:AY:42:TYR:HB2	27:AY:44:VAL:HG12	1.54	0.88
29:Aa:94:LYS:HE2	29:Aa:94:LYS:HA	1.56	0.88
39:Ak:2:PRO:HB2	48:A2:2671:U:O2	1.74	0.88
48:A2:71:C:HO2'	48:A2:72:C:P	1.97	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BD:76:ARG:HE	60:BK:66:HIS:CE1	1.92	0.88
54:BE:100:ARG:HH12	54:BE:236:ILE:CG2	1.87	0.88
55:BF:103:LEU:O	55:BF:104:THR:OG1	1.91	0.88
56:BG:57:ASP:C	56:BG:107:SER:HB3	1.99	0.88
59:BJ:122:SER:HB2	59:BJ:125:HIS:CB	2.04	0.88
66:BQ:41:MET:CE	69:BT:10:ASN:CB	2.38	0.88
67:BR:71:ILE:HG13	67:BR:74:GLN:H	1.39	0.88
7:AE:203:ILE:CG1	7:AE:206:VAL:HG21	2.04	0.87
13:AK:41:GLN:CB	45:Aq:121:LEU:CD1	2.51	0.87
32:Ad:34:HIS:CD2	48:A2:4597:A:HO2'	1.93	0.87
33:Ae:57:ASN:C	48:A2:2298:C:O2	2.17	0.87
48:A2:3879:A:C5	85:By:22:UNK:CB	2.57	0.87
49:B1:493:A:H4'	74:BY:89:HIS:HD2	1.39	0.87
7:AE:101:ASN:OD1	7:AE:102:GLY:N	2.06	0.87
46:At:52:GLU:O	46:At:61:VAL:CG2	2.22	0.87
47:Au:93:LEU:HD23	47:Au:99:LEU:CD2	2.04	0.87
48:A2:2044:G:H2'	48:A2:2045:G:C8	2.08	0.87
48:A2:2853:U:H5'	48:A2:2853:U:H6	1.39	0.87
49:B1:428:U:H4'	59:BJ:2:PRO:HG2	1.54	0.87
51:BB:181:LEU:O	51:BB:184:VAL:HG23	1.74	0.87
65:BP:30:TYR:HA	65:BP:33:LEU:CG	2.04	0.87
67:BR:12:ALA:O	67:BR:16:ILE:HG12	1.73	0.87
3:AA:207:VAL:CG1	48:A2:3890:C:H5'	2.03	0.87
4:AB:294:LYS:C	4:AB:297:LYS:HA	1.98	0.87
13:AK:14:PHE:CZ	48:A2:1941:A:C8	2.63	0.87
13:AK:53:VAL:CB	48:A2:1978:U:H5'	2.03	0.87
48:A2:130:C:N4	48:A2:137:G:O6	2.06	0.87
49:B1:1256:G:C2	79:Bd:40:ARG:HD2	2.10	0.87
49:B1:1284:A:H5'	49:B1:1285:G:C5'	2.03	0.87
51:BB:39:PHE:HB3	51:BB:74:LEU:O	1.74	0.87
59:BJ:81:LEU:HD12	59:BJ:87:LEU:HD11	1.56	0.87
65:BP:82:ASP:O	65:BP:115:TYR:CD2	2.27	0.87
4:AB:294:LYS:O	4:AB:297:LYS:HA	1.74	0.87
7:AE:219:LYS:HA	48:A2:4898:C:C4	2.08	0.87
7:AE:273:SER:CB	48:A2:4839:U:O2'	2.22	0.87
9:AG:244:PRO:HD2	48:A2:4124:C:O2'	1.74	0.87
25:AW:76:VAL:HG22	25:AW:77:LYS:H	1.37	0.87
48:A2:1258:G:N3	48:A2:1259:C:C5	2.43	0.87
50:BA:198:MET:SD	67:BR:87:GLU:CG	2.60	0.87
66:BQ:50:LYS:HD3	66:BQ:50:LYS:C	1.98	0.87
66:BQ:62:ARG:HD3	66:BQ:92:LEU:HG	1.46	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:BS:15:VAL:HG12	68:BS:16:LEU:HD23	1.54	0.87
68:BS:40:TYR:CE1	68:BS:71:MET:HE1	2.09	0.87
71:BV:35:ASN:ND2	71:BV:50:PHE:CD2	2.41	0.87
10:AH:92:MET:HE2	10:AH:179:ILE:HG22	1.55	0.87
29:Aa:57:GLY:C	48:A2:4326:G:H4'	1.99	0.87
39:Ak:6:GLU:N	39:Ak:6:GLU:OE1	2.08	0.87
48:A2:89:C:O4'	48:A2:286:G:O2'	1.91	0.87
49:B1:581:U:O2	74:BY:33:ALA:CA	2.22	0.87
49:B1:1286:G:H4'	49:B1:1313:A:H62	1.38	0.87
49:B1:1665:G:OP1	69:BT:88:MET:HG3	1.74	0.87
54:BE:16:LYS:O	54:BE:19:MET:CE	2.22	0.87
63:BN:29:THR:HB	63:BN:31:ASP:N	1.90	0.87
67:BR:20:TYR:CE2	67:BR:38:ILE:HG22	2.09	0.87
75:BZ:69:THR:OG1	75:BZ:72:VAL:HG23	1.75	0.87
76:Ba:40:VAL:CG2	76:Ba:69:VAL:O	2.21	0.87
21:AS:1:MET:CE	21:AS:7:LEU:HD12	2.04	0.87
25:AW:61:LYS:O	25:AW:65:GLU:HG3	1.75	0.87
31:Ac:33:GLN:HB2	48:A2:2637:G:N2	1.90	0.87
47:Au:43:PRO:HB2	47:Au:161:LYS:O	1.75	0.87
49:B1:527:C:C5'	59:BJ:125:HIS:HA	2.04	0.87
53:BD:76:ARG:NH2	60:BK:66:HIS:CE1	2.43	0.87
70:BU:23:THR:HG23	70:BU:87:ARG:O	1.73	0.87
74:BY:86:GLU:CD	74:BY:90:ARG:NH1	2.33	0.87
2:A4:108:G:OP1	6:AD:273:LEU:HB2	1.73	0.87
8:AF:166:ARG:HH11	8:AF:166:ARG:CB	1.88	0.87
8:AF:184:ILE:HG22	8:AF:189:ASP:C	2.00	0.87
10:AH:5:LEU:CG	10:AH:60:TRP:CZ3	2.57	0.87
10:AH:64:ARG:HH11	10:AH:64:ARG:HG2	1.38	0.87
14:AL:103:ARG:HG2	37:Ai:25:ARG:NH2	1.88	0.87
16:AN:108:ARG:HH22	48:A2:2440:G:C5'	1.87	0.87
39:Ak:23:VAL:HG23	39:Ak:64:LEU:HD21	1.54	0.87
49:B1:5:U:OP2	52:BC:230:THR:CG2	2.23	0.87
49:B1:5:U:P	52:BC:230:THR:HG22	2.14	0.87
49:B1:581:U:O2	74:BY:33:ALA:HA	1.75	0.87
52:BC:256:TRP:HH2	72:BW:68:ARG:HB3	1.37	0.87
53:BD:76:ARG:NE	60:BK:66:HIS:CG	2.43	0.87
75:BZ:91:LEU:O	75:BZ:94:LYS:HB2	1.75	0.87
6:AD:229:ASN:O	6:AD:230:SER:OG	1.93	0.87
7:AE:220:LYS:H	48:A2:4898:C:N4	1.73	0.87
47:Au:35:GLN:CG	48:A2:4023:A:C2'	2.17	0.87
48:A2:959:C:H2'	48:A2:960:G:C8	2.10	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:744:G:H21	57:BH:109:ARG:HD2	1.10	0.87
49:B1:1256:G:C4	79:Bd:30:LEU:HD23	2.10	0.87
49:B1:1749:G:H2'	49:B1:1750:C:C6	2.10	0.87
51:BB:81:PHE:CE2	51:BB:109:LYS:HE2	2.09	0.87
54:BE:87:MET:CE	54:BE:123:LEU:N	2.37	0.87
54:BE:149:TYR:HD1	56:BG:209:TYR:CD2	1.92	0.87
67:BR:97:GLU:HB3	67:BR:116:ASN:C	1.99	0.87
2:A4:33:U:N1	6:AD:207:TYR:CE1	2.43	0.87
5:AC:218:ILE:HD12	5:AC:229:LEU:CG	2.04	0.87
6:AD:35:ARG:HD2	48:A2:4288:G:O2'	1.75	0.87
6:AD:205:ALA:HB2	6:AD:236:MET:CE	2.05	0.87
33:Ae:33:ARG:CD	48:A2:1286:A:C8	2.58	0.87
49:B1:448:A:H61	58:BI:29:LEU:HD23	1.36	0.87
65:BP:48:GLY:N	65:BP:49:LEU:CD2	2.38	0.87
79:Bd:32:ARG:NH2	79:Bd:43:PHE:CD2	2.43	0.87
3:AA:61:VAL:HG12	3:AA:63:PHE:CE1	2.09	0.86
3:AA:67:TYR:CE2	48:A2:4056:G:O2'	2.27	0.86
19:AQ:65:ARG:NH1	48:A2:1484:G:OP1	2.08	0.86
21:AS:74:ARG:HH22	48:A2:909:C:C5'	1.87	0.86
25:AW:80:ARG:HH22	56:BG:128:THR:HG22	1.39	0.86
29:Aa:42:ARG:CZ	48:A2:4338:A:O2'	2.21	0.86
36:Ah:9:LEU:O	36:Ah:11:GLY:N	2.08	0.86
48:A2:735:G:O2'	48:A2:736:G:H5'	1.74	0.86
49:B1:428:U:C4'	59:BJ:2:PRO:HG2	2.05	0.86
49:B1:581:U:O2'	74:BY:32:LYS:O	1.92	0.86
76:Ba:82:LYS:HZ2	76:Ba:82:LYS:HB3	1.39	0.86
4:AB:225:GLY:O	48:A2:4936:G:OP2	1.93	0.86
15:AM:101:LYS:HB2	17:AO:198:THR:CG2	2.05	0.86
20:AR:61:ALA:HB2	48:A2:2612:U:H5"	1.52	0.86
28:AZ:33:THR:O	28:AZ:34:SER:OG	1.93	0.86
48:A2:131:C:H6	48:A2:131:C:C5'	1.87	0.86
49:B1:1314:U:O2	60:BK:2:LEU:HB2	1.74	0.86
58:BI:34:ALA:HB2	58:BI:56:ARG:HD3	1.57	0.86
59:BJ:122:SER:HB2	59:BJ:125:HIS:HB3	1.56	0.86
62:BM:14:VAL:CG1	62:BM:127:TYR:CD1	2.50	0.86
1:A3:109:C:C4	38:Aj:20:ARG:NH1	2.42	0.86
9:AG:113:ARG:NH2	48:A2:119:G:C5	2.42	0.86
16:AN:93:LYS:HE3	48:A2:281:U:O2	1.75	0.86
17:AO:118:MET:CE	48:A2:4832:A:N6	2.35	0.86
19:AQ:170:LYS:HB2	19:AQ:170:LYS:NZ	1.91	0.86
21:AS:74:ARG:NH1	48:A2:909:C:H5'	1.90	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Au:68:LEU:HD22	47:Au:85:MET:HB3	1.57	0.86
48:A2:1322:U:O4	48:A2:1500:A:H1'	1.75	0.86
48:A2:1739:U:N3	48:A2:1740:G:C8	2.43	0.86
48:A2:2006:A:C4'	48:A2:2007:A:OP1	2.24	0.86
48:A2:2067:G:N2	48:A2:2247:A:C6	2.43	0.86
49:B1:744:G:N2	57:BH:109:ARG:HB2	1.89	0.86
49:B1:829:C:H5"	54:BE:21:ASP:CG	1.99	0.86
49:B1:1651:A:H1'	55:BF:83:ASN:ND2	1.89	0.86
49:B1:1750:C:N4	49:B1:1784:G:O6	2.08	0.86
49:B1:1754:G:N2	49:B1:1778:C:O2	2.07	0.86
52:BC:133:TYR:HE1	52:BC:216:MET:HA	1.07	0.86
76:Ba:30:VAL:HG21	76:Ba:74:CYS:CB	2.05	0.86
6:AD:22:ARG:HH21	6:AD:27:LYS:NZ	1.71	0.86
48:A2:4983:C:OP1	58:BI:169:GLY:HA2	1.76	0.86
49:B1:157:U:H1'	56:BG:59:GLN:C	1.99	0.86
49:B1:1302:G:H21	81:Bf:95:ARG:HH12	1.21	0.86
66:BQ:62:ARG:CZ	66:BQ:108:ILE:CD1	2.54	0.86
1:A3:108:A:C2'	1:A3:109:C:OP1	2.21	0.86
4:AB:391:PRO:HD2	25:AW:63:GLN:OE1	1.75	0.86
6:AD:205:ALA:CB	6:AD:233:PRO:CB	2.39	0.86
7:AE:140:LEU:CB	7:AE:144:ILE:HD11	2.05	0.86
13:AK:1:MET:HB3	13:AK:2:PRO:CD	2.04	0.86
18:AP:10:ASN:ND2	18:AP:13:LYS:HG3	1.89	0.86
39:Ak:23:VAL:CG2	39:Ak:64:LEU:HD21	2.04	0.86
40:Al:36:ARG:HH22	48:A2:407:G:H5'	1.40	0.86
45:Aq:39:PRO:CB	45:Aq:42:VAL:CG2	2.54	0.86
49:B1:428:U:C5'	59:BJ:2:PRO:HG2	2.06	0.86
53:BD:76:ARG:CD	60:BK:68:TYR:OH	2.23	0.86
58:BI:104:ILE:HD11	58:BI:173:ALA:HB2	1.58	0.86
75:BZ:50:PHE:CD2	75:BZ:83:LEU:HD21	2.10	0.86
76:Ba:4:LYS:HE3	76:Ba:92:ARG:HH21	1.38	0.86
1:A3:85:U:O2'	1:A3:86:U:H5'	1.75	0.86
10:AH:5:LEU:CB	10:AH:60:TRP:CE3	2.42	0.86
18:AP:3:ARG:HD3	48:A2:403:G:C5	2.10	0.86
49:B1:157:U:C1'	56:BG:59:GLN:C	2.49	0.86
49:B1:1309:C:C1'	81:Bf:133:ALA:HB2	2.05	0.86
50:BA:41:ARG:HB2	50:BA:47:TYR:CE1	2.10	0.86
50:BA:201:LEU:CD2	67:BR:85:VAL:HG22	2.04	0.86
66:BQ:24:HIS:O	66:BQ:68:ILE:HA	1.76	0.86
67:BR:100:PRO:HD2	67:BR:119:VAL:CG2	2.06	0.86
5:AC:169:LEU:CD1	48:A2:215:A:H61	1.89	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AE:136:HIS:CE1	48:A2:701:G:O2'	2.27	0.86
24:AV:97:TYR:CE1	25:AW:21:TYR:CE1	2.63	0.86
49:B1:77:A:O2'	49:B1:78:C:H5'	1.76	0.86
56:BG:63:MET:CE	56:BG:106:LEU:HD11	2.05	0.86
59:BJ:103:GLU:OE1	59:BJ:103:GLU:N	2.08	0.86
62:BM:77:ILE:HD11	62:BM:127:TYR:CE2	2.10	0.86
7:AE:127:SER:O	7:AE:128:HIS:HB2	1.06	0.86
8:AF:51:TYR:CZ	48:A2:1220:C:C4	2.52	0.86
19:AQ:172:ARG:NH1	29:Aa:56:VAL:HG22	1.89	0.86
29:Aa:61:TYR:CZ	48:A2:288:G:N2	2.44	0.86
48:A2:1581:A:OP1	48:A2:2774:A:N6	2.07	0.86
48:A2:1783:A:C2'	48:A2:1784:A:H5'	2.06	0.86
49:B1:606:G:H5"	80:Be:56:ASN:C	1.99	0.86
64:BO:34:PHE:HZ	64:BO:100:THR:HG23	1.41	0.86
23:AU:34:MET:HE3	23:AU:35:ASP:N	1.90	0.86
38:Aj:26:ALA:O	38:Aj:34:CYS:HA	1.74	0.86
42:An:2:ARG:HH11	49:B1:1852:C:H5"	1.38	0.86
47:Au:166:ALA:H	48:A2:3940:G:C1'	1.88	0.86
48:A2:127:G:O2'	48:A2:128:C:H5'	1.75	0.86
66:BQ:96:TYR:O	66:BQ:100:VAL:N	2.08	0.86
2:A4:56:G:OP1	12:AJ:152:GLY:HA2	1.76	0.86
7:AE:200:LYS:HZ3	7:AE:202:ASP:HA	1.37	0.86
20:AR:173:ARG:CD	49:B1:910:G:OP2	2.24	0.86
49:B1:168:C:O2	56:BG:133:LEU:HD12	1.75	0.86
49:B1:1555:U:OP2	79:Bd:22:ARG:CZ	2.22	0.86
52:BC:252:THR:CB	72:BW:99:PHE:CZ	2.59	0.86
66:BQ:47:LEU:HD12	66:BQ:81:ILE:HG13	1.58	0.86
6:AD:287:PHE:HA	48:A2:1162:U:HO2'	1.40	0.85
10:AH:5:LEU:O	10:AH:5:LEU:HD23	1.76	0.85
20:AR:81:ARG:NH2	48:A2:3578:U:OP1	2.09	0.85
29:Aa:74:ASN:HB3	29:Aa:114:LYS:CG	2.06	0.85
48:A2:133:C:C2	48:A2:134:G:N7	2.44	0.85
49:B1:536:A:H4'	80:Be:47:PRO:CG	2.06	0.85
49:B1:561:A:H5"	59:BJ:170:PRO:CG	2.06	0.85
49:B1:589:G:H21	80:Be:26:LYS:HE2	1.37	0.85
49:B1:689:U:C5	49:B1:742:U:N3	2.44	0.85
49:B1:802:A:H61	57:BH:106:ARG:NH1	1.74	0.85
49:B1:1021:U:C5'	63:BN:128:TYR:HE1	1.89	0.85
66:BQ:33:LYS:HE3	66:BQ:36:GLY:CA	2.05	0.85
66:BQ:97:GLN:CD	66:BQ:105:LYS:HE2	2.00	0.85
1:A3:81:C:H4'	1:A3:82:A:C5'	2.06	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AD:234:ASP:OD2	6:AD:235:MET:HE1	1.76	0.85
7:AE:120:ASP:OD1	7:AE:121:VAL:N	2.09	0.85
48:A2:4016:A:N1	83:Bw:56:C:C6	2.45	0.85
53:BD:19:ALA:HB1	79:Bd:46:TYR:HD2	1.41	0.85
59:BJ:39:ASN:HA	80:Be:34:ARG:NE	1.91	0.85
5:AC:289:LEU:HG	5:AC:293:LEU:CD1	2.06	0.85
6:AD:286:SER:CB	48:A2:1163:C:H5'	2.04	0.85
7:AE:203:ILE:CA	7:AE:206:VAL:CG2	2.53	0.85
10:AH:134:CYS:SG	10:AH:144:LEU:CD1	2.61	0.85
22:AT:101:SER:HB3	48:A2:1712:U:H1'	1.58	0.85
39:Ak:60:LEU:HD13	39:Ak:61:PRO:CD	2.06	0.85
53:BD:116:ARG:HD3	53:BD:152:PHE:CZ	2.10	0.85
66:BQ:12:VAL:HG11	66:BQ:90:LYS:HB3	0.87	0.85
7:AE:201:ILE:HD11	7:AE:260:LYS:HB3	1.59	0.85
8:AF:131:ASN:HD22	48:A2:1709:U:C5'	1.89	0.85
8:AF:182:TYR:HE2	8:AF:203:GLU:CB	1.89	0.85
10:AH:7:ASN:HB3	10:AH:58:ASP:HA	1.58	0.85
14:AL:128:PRO:CG	14:AL:136:LYS:HE2	2.06	0.85
15:AM:46:ARG:NH2	48:A2:924:U:H5"	1.91	0.85
49:B1:67:C:OP2	56:BG:172:LYS:NZ	2.08	0.85
49:B1:1261:C:C2'	79:Bd:10:HIS:NE2	2.38	0.85
49:B1:1286:G:H4'	49:B1:1313:A:N6	1.90	0.85
64:BO:105:THR:HG23	76:Ba:24:THR:HG23	1.58	0.85
7:AE:126:LEU:CD1	48:A2:958:U:C5	2.58	0.85
7:AE:233:PHE:HE1	48:A2:447:G:O6	1.59	0.85
13:AK:81:HIS:CE1	13:AK:86:VAL:HG11	2.11	0.85
14:AL:59:VAL:HG13	48:A2:74:G:H5'	1.47	0.85
17:AO:179:LYS:HD2	48:A2:4830:G:C8	2.08	0.85
48:A2:2880:G:O2'	48:A2:2881:G:H5'	1.75	0.85
49:B1:864:A:H61	57:BH:106:ARG:HH21	1.14	0.85
49:B1:1856:C:OP2	64:BO:146:ARG:HB2	1.77	0.85
51:BB:181:LEU:HA	51:BB:184:VAL:CG2	2.06	0.85
4:AB:244:THR:HG22	48:A2:4487:C:O2'	1.76	0.85
5:AC:77:PRO:O	5:AC:91:ALA:N	2.09	0.85
5:AC:94:ASN:HD21	5:AC:102:PHE:HB2	1.40	0.85
6:AD:235:MET:O	6:AD:239:MET:N	2.09	0.85
10:AH:105:ILE:HD12	10:AH:109:GLY:HA2	1.58	0.85
28:AZ:98:LYS:O	28:AZ:101:PHE:HD2	1.59	0.85
33:Ae:4:LEU:CD1	33:Ae:121:ARG:N	2.40	0.85
48:A2:32:G:H21	48:A2:50:C:N4	1.71	0.85
54:BE:87:MET:HE2	54:BE:123:LEU:HB2	1.58	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AF:179:LEU:CG	8:AF:184:ILE:HD11	2.06	0.85
14:AL:10:LEU:HB3	14:AL:12:PRO:HD3	1.57	0.85
17:AO:49:ARG:HH21	48:A2:1910:A:H2'	1.37	0.85
28:AZ:33:THR:HG21	28:AZ:36:ARG:HD3	1.57	0.85
29:Aa:91:ALA:CB	29:Aa:120:GLN:HB3	2.05	0.85
33:Ae:36:ARG:HD3	48:A2:1643:C:OP2	1.76	0.85
39:Ak:32:VAL:HG11	39:Ak:53:ALA:CB	2.06	0.85
40:Al:36:ARG:NH1	48:A2:407:G:N2	2.14	0.85
43:Ao:47:GLY:HA2	48:A2:282:G:H5'	1.56	0.85
48:A2:220:G:OP1	48:A2:220:G:N2	2.09	0.85
49:B1:1016:U:H5	77:Bb:30:SER:OG	1.57	0.85
49:B1:1856:C:OP2	64:BO:146:ARG:CB	2.24	0.85
50:BA:199:PRO:O	50:BA:203:PHE:CD1	2.30	0.85
51:BB:71:LEU:CG	51:BB:84:PHE:HE2	1.89	0.85
52:BC:178:HIS:CG	52:BC:200:ARG:CD	2.39	0.85
53:BD:210:ILE:CB	67:BR:39:ALA:CB	2.40	0.85
66:BQ:39:LEU:CD1	66:BQ:51:LEU:HD22	2.04	0.85
1:A3:135:C:OP2	26:AX:63:LYS:HE3	1.77	0.85
6:AD:233:PRO:HA	6:AD:236:MET:CE	2.07	0.85
8:AF:225:THR:OG1	8:AF:231:GLY:HA3	1.76	0.85
9:AG:82:GLN:HG2	9:AG:233:ILE:CG2	2.07	0.85
14:AL:70:VAL:HG13	14:AL:159:ASN:OD1	1.73	0.85
33:Ae:106:LYS:HD3	48:A2:2284:U:H3	1.42	0.85
39:Ak:60:LEU:HD22	39:Ak:61:PRO:CD	2.06	0.85
49:B1:873:G:C6	61:BL:153:LYS:CA	2.57	0.85
52:BC:133:TYR:CE1	52:BC:216:MET:CA	2.51	0.85
67:BR:5:ARG:HH11	67:BR:5:ARG:HG3	1.41	0.85
67:BR:17:ILE:HD12	67:BR:17:ILE:O	1.76	0.85
75:BZ:50:PHE:CE2	75:BZ:83:LEU:HD21	2.12	0.85
1:A3:109:C:N4	38:Aj:20:ARG:NH1	2.24	0.85
5:AC:215:ASN:O	5:AC:215:ASN:ND2	2.10	0.85
8:AF:184:ILE:CG2	8:AF:189:ASP:HB3	2.07	0.85
13:AK:53:VAL:HB	48:A2:1978:U:H5'	1.57	0.85
21:AS:7:LEU:CD2	21:AS:107:THR:OG1	2.25	0.85
37:Ai:15:HIS:ND1	48:A2:72:C:C5	2.45	0.85
39:Ak:18:LYS:O	39:Ak:20:ALA:N	2.10	0.85
48:A2:2003:C:C2'	48:A2:2004:C:H5'	2.07	0.85
48:A2:2466:G:C6	48:A2:2468:C:O4'	2.30	0.85
48:A2:4110:C:H2'	48:A2:4111:C:C6	2.11	0.85
49:B1:589:G:H22	80:Be:26:LYS:HE2	1.39	0.85
50:BA:66:VAL:HG12	71:BV:46:PHE:CE1	2.12	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:BP:66:GLU:OE1	65:BP:66:GLU:N	2.08	0.85
66:BQ:62:ARG:HD3	66:BQ:92:LEU:CD1	2.07	0.85
67:BR:4:VAL:O	67:BR:5:ARG:O	1.94	0.85
75:BZ:92:LEU:HD12	75:BZ:92:LEU:O	1.77	0.85
76:Ba:87:ARG:HB3	76:Ba:91:ALA:CB	2.07	0.85
7:AE:119:GLU:CG	33:Ae:7:LEU:HD21	2.07	0.85
13:AK:40:MET:HE3	48:A2:1977:C:H2'	1.58	0.85
13:AK:84:GLY:CA	48:A2:2002:G:H4'	2.06	0.85
15:AM:91:TRP:HZ2	48:A2:4827:U:HO2'	0.89	0.85
27:AY:41:LYS:HD2	27:AY:42:TYR:HE1	1.41	0.85
48:A2:2853:U:H5'	48:A2:2853:U:C6	2.12	0.85
48:A2:4016:A:C6	83:Bw:56:C:N1	2.44	0.85
51:BB:118:GLN:O	51:BB:119:THR:OG1	1.94	0.85
8:AF:217:ARG:HH11	8:AF:217:ARG:HG3	1.42	0.84
23:AU:56:LEU:HD23	23:AU:61:VAL:HG23	0.86	0.84
45:Aq:39:PRO:CB	45:Aq:42:VAL:HG22	2.05	0.84
48:A2:1197:C:C2'	48:A2:1198:C:H5'	2.07	0.84
49:B1:151:C:OP1	74:BY:120:THR:OG1	1.94	0.84
49:B1:491:C:OP2	74:BY:104:ARG:HB2	1.76	0.84
49:B1:1284:A:H5'	49:B1:1285:G:H5"	1.59	0.84
49:B1:1452:A:H5"	67:BR:48:ASN:CG	2.01	0.84
49:B1:1865:C:O2	76:Ba:7:ASN:CG	2.20	0.84
50:BA:111:GLN:HE21	52:BC:64:THR:HB	1.11	0.84
61:BL:30:LYS:HB3	61:BL:33:LEU:CD1	2.07	0.84
1:A3:102:G:C5'	38:Aj:39:TYR:OH	2.25	0.84
4:AB:132:LYS:HB2	48:A2:4689:A:OP1	1.77	0.84
5:AC:211:TYR:CE1	5:AC:229:LEU:HD13	2.11	0.84
6:AD:17:GLN:HG2	22:AT:20:ARG:HA	1.58	0.84
10:AH:23:ARG:NH1	48:A2:4725:U:O2'	2.09	0.84
25:AW:116:LYS:HD3	49:B1:328:U:OP1	1.75	0.84
35:Ag:7:TYR:HE1	48:A2:2783:C:HO2'	0.88	0.84
48:A2:163:C:C4	48:A2:164:C:C5	2.64	0.84
48:A2:2067:G:C6	48:A2:2247:A:C2	2.65	0.84
49:B1:744:G:H21	57:BH:109:ARG:HB2	1.42	0.84
49:B1:744:G:H2'	49:B1:745:C:C6	2.11	0.84
50:BA:40:LYS:HD2	67:BR:101:ASP:OD2	1.77	0.84
54:BE:36:HIS:NE2	54:BE:85:GLY:CA	2.38	0.84
65:BP:52:LYS:HB2	65:BP:80:LEU:HD11	1.58	0.84
4:AB:231:VAL:HG11	4:AB:251:VAL:HG23	1.59	0.84
7:AE:96:VAL:N	7:AE:107:VAL:HG12	1.92	0.84
25:AW:42:SER:CB	25:AW:44:ARG:HH12	1.90	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:At:87:ARG:O	46:At:91:SER:N	2.09	0.84
48:A2:1745:C:H2'	48:A2:1746:G:C5'	2.06	0.84
49:B1:64:A:H3'	56:BG:175:LYS:CE	2.07	0.84
49:B1:229:A:N6	49:B1:900:C:O2	2.10	0.84
49:B1:744:G:H21	57:BH:109:ARG:CB	1.88	0.84
53:BD:210:ILE:HA	67:BR:39:ALA:CB	2.08	0.84
65:BP:30:TYR:HA	65:BP:33:LEU:CD1	2.08	0.84
70:BU:56:MET:HE2	70:BU:88:LEU:HD22	1.58	0.84
81:Bf:105:TYR:HD1	81:Bf:118:ARG:NH1	1.72	0.84
15:AM:6:PHE:CE1	21:AS:151:LYS:HD2	2.11	0.84
25:AW:60:LYS:O	25:AW:61:LYS:CG	2.24	0.84
25:AW:65:GLU:HA	25:AW:68:GLN:HG2	1.59	0.84
49:B1:24:C:OP1	59:BJ:11:LYS:NZ	2.11	0.84
49:B1:1507:G:O6	81:Bf:91:ASN:ND2	2.10	0.84
49:B1:1676:U:H5'	55:BF:74:ASN:HB3	1.59	0.84
49:B1:1864:U:OP2	76:Ba:4:LYS:NZ	2.10	0.84
49:B1:1866:A:H8	76:Ba:95:ARG:O	1.57	0.84
50:BA:216:ALA:CA	50:BA:219:GLU:HG2	2.07	0.84
4:AB:130:PHE:H	48:A2:4689:A:H5'	1.41	0.84
12:AJ:119:TYR:CE1	68:BS:12:ILE:HD12	2.12	0.84
13:AK:37:SER:O	13:AK:40:MET:HG2	1.77	0.84
29:Aa:91:ALA:HB1	29:Aa:120:GLN:HB3	1.58	0.84
30:Ab:53:GLY:HA3	48:A2:1795:U:C5'	2.07	0.84
39:Ak:20:ALA:HB2	39:Ak:38:CYS:HB3	1.60	0.84
47:Au:17:VAL:HG21	47:Au:207:LYS:HA	1.58	0.84
48:A2:133:C:N3	48:A2:134:G:C4	2.44	0.84
49:B1:1450:G:H3'	67:BR:44:LYS:NZ	1.92	0.84
54:BE:152:PRO:HG2	56:BG:216:ARG:HD3	1.59	0.84
67:BR:99:ASP:HB2	67:BR:102:THR:HB	1.58	0.84
5:AC:139:SER:O	46:At:15:SER:OG	1.94	0.84
8:AF:223:LYS:HA	8:AF:232:ASP:CB	2.07	0.84
15:AM:41:PRO:HB3	15:AM:70:GLN:HE22	1.38	0.84
19:AQ:3:VAL:CG1	48:A2:2256:C:H5'	2.06	0.84
43:Ao:27:LYS:HG3	43:Ao:28:LYS:H	1.40	0.84
48:A2:4596:U:H4'	48:A2:4598:U:H1'	1.59	0.84
49:B1:231:A:OP2	49:B1:889:U:O2'	1.96	0.84
49:B1:560:A:H4'	49:B1:561:A:N7	1.92	0.84
49:B1:582:U:H4'	74:BY:32:LYS:N	1.91	0.84
50:BA:175:TRP:C	50:BA:202:TYR:CE2	2.55	0.84
72:BW:100:GLY:HA3	72:BW:101:PHE:CD2	2.13	0.84
1:A3:150:C:C5	9:AG:65:ARG:NH2	2.46	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A4:7:G:H4'	6:AD:33:ARG:NH2	1.93	0.84
4:AB:174:ARG:NH2	48:A2:4932:C:O2'	2.10	0.84
10:AH:60:TRP:CE3	10:AH:60:TRP:HA	2.13	0.84
14:AL:128:PRO:HD2	14:AL:136:LYS:CD	2.08	0.84
24:AV:41:SER:CB	48:A2:4469:A:O2'	2.26	0.84
27:AY:55:VAL:HG13	27:AY:104:VAL:HG13	1.59	0.84
34:Af:34:TYR:CG	48:A2:1900:G:N2	2.45	0.84
54:BE:149:TYR:HB3	56:BG:209:TYR:HD2	1.43	0.84
71:BV:37:ALA:CB	71:BV:46:PHE:HE1	1.91	0.84
1:A3:150:C:C4	9:AG:65:ARG:NH1	2.45	0.84
5:AC:190:ARG:CB	5:AC:202:ILE:HD11	2.07	0.84
16:AN:93:LYS:HD2	48:A2:294:A:H2	1.40	0.84
39:Ak:52:LYS:HA	39:Ak:55:LYS:CD	2.06	0.84
41:Am:104:HIS:NE2	48:A2:4659:U:H5'	1.91	0.84
48:A2:901:U:H2'	48:A2:902:A:C8	2.12	0.84
49:B1:23:G:P	59:BJ:15:THR:HG21	2.18	0.84
49:B1:1452:A:H5"	67:BR:48:ASN:ND2	1.93	0.84
51:BB:79:VAL:HB	51:BB:81:PHE:CE1	2.12	0.84
52:BC:252:THR:HB	72:BW:99:PHE:HZ	1.40	0.84
59:BJ:117:LEU:CD1	59:BJ:157:ILE:HD13	1.98	0.84
69:BT:41:LYS:HZ1	69:BT:81:GLY:HA2	1.33	0.84
70:BU:50:VAL:HG22	70:BU:91:LEU:CD2	2.06	0.84
79:Bd:38:MET:HE2	79:Bd:43:PHE:N	1.92	0.84
1:A3:49:G:OP1	36:Ah:48:ARG:HG3	1.77	0.84
2:A4:75:G:N2	2:A4:100:A:OP2	2.09	0.84
8:AF:161:LYS:CA	8:AF:162:ILE:HD12	2.08	0.84
24:AV:43:LYS:HE3	24:AV:60:MET:HE3	1.58	0.84
41:Am:104:HIS:CE1	48:A2:4659:U:H5"	2.11	0.84
49:B1:1283:C:H3'	62:BM:102:LYS:NZ	1.92	0.84
49:B1:1507:G:O6	81:Bf:91:ASN:CG	2.20	0.84
49:B1:1587:G:O2'	69:BT:78:ILE:HA	1.77	0.84
63:BN:21:SER:C	63:BN:65:PHE:HB3	2.03	0.84
68:BS:74:PRO:CG	68:BS:84:LEU:HD11	2.06	0.84
75:BZ:68:ILE:CB	75:BZ:109:TYR:HB2	2.08	0.84
20:AR:173:ARG:NE	49:B1:910:G:P	2.51	0.84
22:AT:3:ASN:HD22	48:A2:4180:U:P	2.00	0.84
29:Aa:42:ARG:NH2	48:A2:4338:A:O2'	2.11	0.84
48:A2:3681:G:H2'	48:A2:3683:A:C8	2.12	0.84
49:B1:560:A:H4'	49:B1:561:A:C8	2.13	0.84
49:B1:874:G:H2'	49:B1:875:A:H8	1.42	0.84
49:B1:1866:A:H1'	76:Ba:95:ARG:HA	1.59	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BB:44:ILE:CD1	51:BB:74:LEU:HD11	2.08	0.84
79:Bd:41:GLN:NE2	79:Bd:41:GLN:N	2.26	0.84
20:AR:97:ARG:HH22	48:A2:2704:A:H8	1.15	0.83
20:AR:173:ARG:NE	49:B1:910:G:OP2	2.11	0.83
29:Aa:90:ALA:HB1	29:Aa:99:PRO:HD3	0.88	0.83
29:Aa:132:ARG:HH21	48:A2:1450:C:H5"	1.42	0.83
48:A2:2740:U:O3'	48:A2:2741:G:H4'	1.77	0.83
48:A2:2741:G:H2'	48:A2:2742:U:H5"	1.57	0.83
48:A2:3693:G:O2'	48:A2:3694:A:H5'	1.77	0.83
49:B1:580:U:O2'	74:BY:62:THR:CB	2.26	0.83
49:B1:1237:C:O5'	65:BP:130:ARG:HG3	1.78	0.83
49:B1:1446:A:O2'	49:B1:1447:G:H5"	1.77	0.83
54:BE:87:MET:HE2	54:BE:123:LEU:N	1.93	0.83
59:BJ:14:VAL:CG2	59:BJ:48:PHE:HB2	2.08	0.83
4:AB:14:LEU:HA	4:AB:17:LEU:HD12	1.59	0.83
15:AM:17:PHE:HB2	48:A2:1902:C:C4	2.13	0.83
43:Ao:93:LEU:O	43:Ao:93:LEU:HD12	1.77	0.83
48:A2:1752:A:N1	48:A2:1753:U:N3	2.24	0.83
48:A2:1888:A:C6	48:A2:1889:A:C6	2.65	0.83
49:B1:1396:A:O2'	49:B1:1397:U:H5'	1.78	0.83
59:BJ:109:ARG:O	59:BJ:113:GLN:N	2.09	0.83
59:BJ:141:VAL:HG21	59:BJ:162:ARG:NH2	1.90	0.83
70:BU:48:LEU:HD22	70:BU:93:SER:OG	1.76	0.83
1:A3:43:A:H1'	38:Aj:21:ARG:O	1.77	0.83
20:AR:126:LYS:O	20:AR:131:VAL:CG2	2.26	0.83
24:AV:96:LEU:HA	25:AW:20:ARG:O	1.77	0.83
25:AW:109:ILE:HG22	25:AW:113:LYS:HE3	1.60	0.83
38:Aj:19:CYS:O	38:Aj:23:GLY:N	2.11	0.83
48:A2:4062:G:H3'	48:A2:4063:G:N2	1.93	0.83
49:B1:494:C:H5"	54:BE:57:THR:OG1	1.77	0.83
51:BB:70:SER:O	51:BB:71:LEU:O	1.96	0.83
52:BC:252:THR:OG1	72:BW:99:PHE:CZ	2.31	0.83
65:BP:51:ARG:HA	65:BP:54:HIS:HB3	1.59	0.83
66:BQ:33:LYS:HE2	66:BQ:36:GLY:CA	2.09	0.83
70:BU:22:ILE:HG23	70:BU:114:VAL:HG12	1.60	0.83
5:AC:211:TYR:CE1	5:AC:229:LEU:HD22	2.13	0.83
7:AE:123:ARG:HH21	7:AE:126:LEU:HD23	1.44	0.83
8:AF:148:LYS:CG	48:A2:930:A:H3'	2.09	0.83
15:AM:43:THR:O	15:AM:44:GLN:CB	2.20	0.83
45:Aq:46:ILE:CD1	45:Aq:71:ILE:HB	2.09	0.83
46:At:95:HIS:HE1	48:A2:952:G:H5"	1.43	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:966:C:N4	48:A2:1258:G:H1	1.73	0.83
49:B1:103:A:C5'	58:BI:12:ARG:NH1	2.41	0.83
49:B1:527:C:H4'	59:BJ:125:HIS:CB	2.09	0.83
49:B1:1286:G:P	62:BM:104:VAL:HB	2.18	0.83
54:BE:86:PHE:HE2	54:BE:184:ILE:CG2	1.90	0.83
70:BU:27:ARG:HH21	79:Bd:51:GLY:HA3	0.69	0.83
13:AK:48:ARG:HH11	45:Aq:122:ALA:N	1.76	0.83
16:AN:138:PHE:CG	48:A2:18:C:H4'	2.13	0.83
20:AR:23:TRP:CH2	20:AR:32:ILE:HG13	2.12	0.83
49:B1:157:U:O4'	56:BG:58:LYS:O	1.96	0.83
49:B1:1311:C:OP1	81:Bf:143:LYS:CE	2.26	0.83
49:B1:1398:G:H2'	49:B1:1398:G:N3	1.92	0.83
50:BA:175:TRP:C	50:BA:202:TYR:HE2	1.86	0.83
72:BW:9:ASP:OD2	72:BW:29:PRO:HG2	1.78	0.83
1:A3:109:C:C6	38:Aj:20:ARG:NH2	2.47	0.83
2:A4:22:A:C6	2:A4:23:A:C6	2.66	0.83
3:AA:249:THR:OG1	49:B1:1044:G:C8	2.32	0.83
6:AD:17:GLN:HG3	22:AT:20:ARG:HG2	0.84	0.83
20:AR:60:ARG:N	48:A2:2613:C:OP1	2.10	0.83
27:AY:8:THR:HG22	48:A2:341:A:OP2	1.79	0.83
38:Aj:39:TYR:N	38:Aj:40:PRO:HD2	1.93	0.83
47:Au:65:VAL:O	47:Au:83:PRO:HD2	1.79	0.83
48:A2:121:A:N6	48:A2:150:G:C6	2.45	0.83
48:A2:1224:C:H5'	48:A2:1225:G:N2	1.93	0.83
48:A2:1259:C:H2'	48:A2:1260:G:C8	2.12	0.83
48:A2:2043:C:O2'	48:A2:2044:G:H5'	1.78	0.83
48:A2:2689:C:H6	48:A2:2689:C:H5"	1.42	0.83
49:B1:384:U:O2'	61:BL:135:SER:HA	1.77	0.83
49:B1:560:A:H2'	59:BJ:171:GLY:O	1.79	0.83
49:B1:918:U:C4'	63:BN:20:ARG:NH2	2.41	0.83
54:BE:91:SER:CA	54:BE:92:ILE:HD12	2.08	0.83
56:BG:56:ASN:HB2	56:BG:108:VAL:HB	1.61	0.83
59:BJ:131:ARG:HD3	59:BJ:143:ASN:HD21	1.43	0.83
66:BQ:39:LEU:HD12	66:BQ:39:LEU:O	1.78	0.83
5:AC:234:LYS:HE2	48:A2:1347:U:O2	1.77	0.83
6:AD:232:THR:HG23	6:AD:235:MET:CG	2.08	0.83
6:AD:279:ARG:HE	48:A2:1160:U:C4'	1.91	0.83
7:AE:175:VAL:CG2	7:AE:189:THR:HG1	1.75	0.83
8:AF:163:ASN:O	8:AF:164:LYS:HD3	1.77	0.83
13:AK:14:PHE:CE1	48:A2:1941:A:C8	2.66	0.83
14:AL:103:ARG:HA	37:Ai:25:ARG:HH22	1.41	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AO:118:MET:HE1	48:A2:4832:A:H62	0.77	0.83
48:A2:86:U:C4	48:A2:97:G:C2	2.66	0.83
51:BB:77:ASP:O	51:BB:78:GLU:CG	2.26	0.83
62:BM:127:TYR:O	62:BM:128:PHE:C	2.18	0.83
71:BV:38:GLU:CG	71:BV:49:GLN:O	2.25	0.83
75:BZ:62:VAL:HG22	75:BZ:97:ILE:CD1	2.08	0.83
79:Bd:24:CYS:O	79:Bd:25:SER:CB	2.26	0.83
15:AM:91:TRP:O	15:AM:95:ILE:HD12	1.79	0.83
48:A2:682:U:H2'	48:A2:683:U:C6	2.13	0.83
48:A2:4160:G:C2	83:Bv:74:C:N4	2.46	0.83
49:B1:182:C:H2'	49:B1:183:G:C1'	2.08	0.83
49:B1:448:A:N6	58:BI:29:LEU:CD2	2.41	0.83
49:B1:681:U:H4'	73:BX:9:THR:CG2	2.06	0.83
49:B1:1625:U:O4	49:B1:1626:C:N4	2.12	0.83
65:BP:85:ILE:CD1	65:BP:116:LEU:CD2	2.57	0.83
65:BP:85:ILE:HG21	65:BP:111:MET:O	1.78	0.83
5:AC:100:ARG:NH2	48:A2:1632:A:H2	1.73	0.83
19:AQ:164:LYS:CB	48:A2:1479:A:O4'	2.26	0.83
47:Au:204:LEU:HD21	47:Au:216:LEU:HD22	1.61	0.83
48:A2:1500:A:H4'	48:A2:1501:C:O5'	1.77	0.83
48:A2:2640:U:N3	61:BL:158:PHE:CE2	2.45	0.83
48:A2:3682:A:H5"	48:A2:3683:A:P	2.19	0.83
49:B1:78:C:H4'	56:BG:175:LYS:HG2	1.60	0.83
58:BI:173:ALA:CB	58:BI:188:TYR:O	2.27	0.83
69:BT:41:LYS:HD3	69:BT:43:LYS:HG2	1.57	0.83
75:BZ:63:PRO:HB3	75:BZ:111:ARG:HE	1.43	0.83
2:A4:7:G:H4'	6:AD:33:ARG:CZ	2.09	0.83
7:AE:207:LYS:NZ	7:AE:208:ILE:H	1.77	0.83
16:AN:178:HIS:ND1	48:A2:68:U:OP1	2.12	0.83
20:AR:126:LYS:CD	20:AR:131:VAL:HG11	2.09	0.83
28:AZ:50:PRO:HG3	28:AZ:122:TYR:HE2	1.42	0.83
48:A2:463:C:N4	48:A2:680:C:C2	2.47	0.83
48:A2:2879:U:C2'	48:A2:2880:G:H5'	2.09	0.83
49:B1:346:C:OP1	54:BE:37:LYS:HA	1.77	0.83
49:B1:1278:A:OP1	60:BK:55:ARG:NH2	2.12	0.83
65:BP:126:VAL:HG13	65:BP:127:LYS:H	1.44	0.83
5:AC:51:PRO:HB3	14:AL:26:PHE:CE1	2.14	0.82
6:AD:232:THR:O	6:AD:236:MET:HG3	1.76	0.82
8:AF:70:ARG:NE	48:A2:1191:G:O2'	2.11	0.82
15:AM:19:PRO:HB3	48:A2:923:C:N3	1.93	0.82
20:AR:60:ARG:HG3	20:AR:63:CYS:HB3	1.60	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AS:172:PRO:O	48:A2:4724:A:C2	2.32	0.82
47:Au:97:LYS:HG2	47:Au:101:LYS:HE3	1.58	0.82
48:A2:227:G:H3'	48:A2:228:U:C5'	2.09	0.82
49:B1:827:A:C5'	59:BJ:8:VAL:HG21	2.08	0.82
50:BA:41:ARG:HH11	50:BA:41:ARG:CB	1.92	0.82
54:BE:99:PHE:N	54:BE:114:ILE:HG22	1.94	0.82
1:A3:36:G:C6	36:Ah:89:ARG:NH1	2.47	0.82
10:AH:128:MET:SD	10:AH:134:CYS:HB3	2.19	0.82
14:AL:129:ARG:C	14:AL:130:LYS:HD2	2.03	0.82
19:AQ:75:ARG:HH11	19:AQ:75:ARG:HG3	1.42	0.82
39:Ak:20:ALA:CB	39:Ak:38:CYS:HA	2.09	0.82
48:A2:2044:G:H2'	48:A2:2045:G:H8	1.44	0.82
48:A2:3727:A:OP2	48:A2:3727:A:N7	2.11	0.82
49:B1:571:U:OP1	74:BY:37:LYS:HB2	1.79	0.82
49:B1:636:C:O2'	49:B1:637:U:H5'	1.79	0.82
49:B1:1121:G:P	86:B1:1941:MG:MG	1.61	0.82
49:B1:1513:C:H5'	79:Bd:7:TYR:O	1.77	0.82
50:BA:206:ASP:OD1	50:BA:207:PRO:HD3	1.79	0.82
69:BT:40:ALA:O	69:BT:41:LYS:HG3	1.80	0.82
1:A3:27:U:OP1	5:AC:56:GLU:HG3	1.79	0.82
4:AB:391:PRO:HD3	25:AW:63:GLN:HE22	1.44	0.82
20:AR:165:LYS:HZ1	49:B1:907:G:C3'	1.92	0.82
22:AT:127:GLN:HE22	48:A2:1816:G:N2	1.72	0.82
30:Ab:54:LEU:HA	48:A2:1794:C:O2'	1.78	0.82
45:Aq:109:ILE:HB	45:Aq:129:ILE:CG1	2.09	0.82
48:A2:2064:C:H6	48:A2:2064:C:H5"	1.44	0.82
49:B1:802:A:N6	57:BH:106:ARG:NH1	2.27	0.82
56:BG:217:MET:HB3	56:BG:221:LYS:HZ1	1.43	0.82
59:BJ:101:LYS:HE3	59:BJ:103:GLU:HB2	1.59	0.82
62:BM:33:ARG:HD2	62:BM:91:LEU:HD21	1.60	0.82
63:BN:20:ARG:HA	63:BN:65:PHE:CE1	2.13	0.82
1:A3:102:G:H4'	38:Aj:21:ARG:HD3	1.60	0.82
7:AE:138:ARG:HD2	7:AE:138:ARG:N	1.95	0.82
7:AE:207:LYS:HE2	7:AE:207:LYS:HA	1.61	0.82
20:AR:27:ASN:HB3	20:AR:28:GLU:OE1	1.78	0.82
20:AR:169:ALA:HA	20:AR:172:ARG:CG	2.10	0.82
33:Ae:33:ARG:NH1	48:A2:1286:A:C8	2.46	0.82
49:B1:740:C:O2'	49:B1:741:C:H2'	1.78	0.82
49:B1:1488:C:C3'	49:B1:1489:A:H4'	2.09	0.82
56:BG:211:LYS:HG3	56:BG:215:LYS:CE	2.08	0.82
56:BG:224:ARG:O	56:BG:228:ILE:HG13	1.79	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:BP:53:GLN:CB	65:BP:83:MET:HE3	2.10	0.82
74:BY:86:GLU:OE2	74:BY:90:ARG:NH1	2.10	0.82
5:AC:183:VAL:CG1	5:AC:225:PRO:HB2	2.09	0.82
9:AG:192:ARG:HH21	48:A2:6:C:P	2.01	0.82
15:AM:136:LEU:O	15:AM:140:PRO:HD3	1.79	0.82
19:AQ:3:VAL:HG11	48:A2:2256:C:H5'	1.59	0.82
20:AR:161:ALA:O	20:AR:165:LYS:HG2	1.79	0.82
21:AS:1:MET:N	21:AS:43:ARG:HH21	1.76	0.82
47:Au:60:ARG:CD	47:Au:171:HIS:HB3	2.08	0.82
47:Au:65:VAL:O	47:Au:82:ILE:HG23	1.79	0.82
49:B1:1552:G:OP2	49:B1:1578:U:C4	2.31	0.82
60:BK:28:HIS:CE1	60:BK:32:HIS:CE1	2.67	0.82
72:BW:46:TYR:O	72:BW:66:THR:HB	1.80	0.82
6:AD:22:ARG:HH21	6:AD:27:LYS:CE	1.91	0.82
6:AD:22:ARG:HH21	6:AD:27:LYS:HD2	1.40	0.82
9:AG:163:PRO:CD	48:A2:148:G:N2	2.35	0.82
10:AH:60:TRP:CD1	21:AS:153:PRO:CG	2.63	0.82
12:AJ:98:ASN:HA	48:A2:4212:G:OP1	1.80	0.82
16:AN:73:ARG:HH21	48:A2:32:G:C5'	1.86	0.82
45:Aq:109:ILE:CG1	45:Aq:110:VAL:H	1.92	0.82
49:B1:1287:A:H1'	62:BM:36:ARG:CZ	2.09	0.82
49:B1:1590:C:OP1	69:BT:82:ARG:CD	2.28	0.82
53:BD:75:LYS:O	60:BK:22:VAL:HG21	1.80	0.82
55:BF:18:LYS:HD3	55:BF:46:ALA:O	1.79	0.82
59:BJ:32:ILE:O	59:BJ:36:GLY:N	2.12	0.82
64:BO:78:ALA:CB	64:BO:118:ALA:CB	2.57	0.82
72:BW:94:LEU:HD21	72:BW:101:PHE:N	1.93	0.82
74:BY:7:ILE:HB	74:BY:47:MET:HE1	1.61	0.82
80:Be:46:VAL:HG23	80:Be:47:PRO:HD3	1.61	0.82
6:AD:286:SER:OG	48:A2:1163:C:H4'	1.79	0.82
7:AE:123:ARG:HE	48:A2:956:C:H5	0.85	0.82
19:AQ:68:ARG:CZ	48:A2:1483:C:H2'	2.08	0.82
32:Ad:34:HIS:CD2	48:A2:4597:A:O2'	2.32	0.82
34:Af:109:ARG:NH1	48:A2:939:G:H5'	1.95	0.82
47:Au:204:LEU:HD21	47:Au:216:LEU:CD2	2.10	0.82
48:A2:1258:G:H1'	48:A2:1259:C:C6	2.15	0.82
48:A2:1743:G:C6	48:A2:1744:C:C4	2.67	0.82
48:A2:3726:G:H21	83:Bv:12:U:C3'	1.92	0.82
63:BN:75:LEU:HD13	63:BN:75:LEU:O	1.79	0.82
65:BP:34:MET:HE1	65:BP:41:GLN:O	1.78	0.82
66:BQ:58:LEU:HD22	66:BQ:108:ILE:HD11	1.60	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AE:219:LYS:CG	48:A2:4898:C:C6	2.57	0.82
22:AT:56:CYS:HB3	22:AT:78:LYS:HZ1	1.38	0.82
29:Aa:44:ASN:O	29:Aa:48:TYR:HB2	1.79	0.82
48:A2:130:C:O2	48:A2:138:C:N4	2.11	0.82
49:B1:1539:U:O2'	69:BT:47:PRO:HA	1.77	0.82
53:BD:76:ARG:NE	60:BK:66:HIS:ND1	2.28	0.82
79:Bd:38:MET:CE	79:Bd:43:PHE:N	2.43	0.82
82:Bg:168:CYS:SG	82:Bg:198:VAL:HB	2.20	0.82
2:A4:22:A:N3	2:A4:22:A:H2'	1.93	0.82
5:AC:323:ARG:CB	48:A2:1264:G:O2'	2.27	0.82
8:AF:34:ARG:NH1	48:A2:1421:U:H1'	1.95	0.82
34:Af:42:TYR:O	34:Af:45:LYS:HG2	1.79	0.82
47:Au:85:MET:HG3	47:Au:89:ALA:CB	2.09	0.82
49:B1:386:C:OP2	58:BI:10:LYS:CG	2.28	0.82
49:B1:619:A:H61	73:BX:114:ASP:HB3	1.44	0.82
50:BA:7:VAL:CG1	71:BV:42:VAL:HA	2.10	0.82
50:BA:111:GLN:HA	50:BA:116:PHE:CD2	2.14	0.82
51:BB:127:VAL:HG11	51:BB:176:VAL:HB	1.59	0.82
59:BJ:138:ARG:HA	59:BJ:156:HIS:HB3	1.62	0.82
59:BJ:155:LYS:O	59:BJ:157:ILE:N	2.12	0.82
7:AE:173:LEU:HD11	7:AE:191:GLN:N	1.93	0.82
30:Ab:27:GLN:HG3	48:A2:1444:A:O4'	1.80	0.82
33:Ae:5:ARG:NH1	48:A2:694:G:H4'	1.94	0.82
48:A2:130:C:H3'	48:A2:131:C:C5'	2.07	0.82
49:B1:659:G:H5"	73:BX:17:ARG:HH21	1.45	0.82
49:B1:688:U:C2'	57:BH:103:LYS:CG	2.55	0.82
50:BA:7:VAL:HG21	71:BV:42:VAL:HA	1.59	0.82
66:BQ:42:ILE:CG2	66:BQ:44:PRO:HD2	2.09	0.82
76:Ba:94:ASP:O	76:Ba:95:ARG:HD3	1.80	0.82
79:Bd:24:CYS:O	79:Bd:25:SER:HB2	1.80	0.82
7:AE:126:LEU:HD21	48:A2:956:C:C4	2.14	0.81
20:AR:165:LYS:HZ1	49:B1:907:G:C4'	1.93	0.81
22:AT:4:THR:CG2	48:A2:4169:C:H5"	2.09	0.81
34:Af:59:THR:HG23	34:Af:60:PRO:CD	2.10	0.81
39:Ak:16:ARG:CG	39:Ak:61:PRO:HB3	2.09	0.81
48:A2:462:U:H5"	48:A2:462:U:C6	2.14	0.81
48:A2:735:G:N7	48:A2:903:C:N4	2.28	0.81
48:A2:1888:A:C5	48:A2:1889:A:C6	2.67	0.81
48:A2:2690:G:H3'	48:A2:2690:G:P	2.18	0.81
48:A2:3929:G:C5	83:Bw:19:G:C6	2.68	0.81
48:A2:4546:A:O2'	48:A2:4547:U:H5'	1.80	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:168:C:C5’	56:BG:131:ARG:HD3	1.98	0.81
49:B1:1087:A:OP1	76:Ba:3:LYS:HE2	1.80	0.81
49:B1:1507:G:O6	81:Bf:91:ASN:OD1	1.97	0.81
65:BP:84:ILE:CG2	65:BP:115:TYR:CD2	2.62	0.81
70:BU:27:ARG:HH22	79:Bd:51:GLY:HA2	1.40	0.81
1:A3:153:C:H5”	9:AG:185:LYS:CE	2.07	0.81
47:Au:28:PHE:HZ	47:Au:209:THR:CB	1.93	0.81
61:BL:17:PHE:HD1	61:BL:19:ASN:H	1.28	0.81
65:BP:51:ARG:CZ	65:BP:51:ARG:HB3	2.09	0.81
66:BQ:62:ARG:CD	66:BQ:92:LEU:CG	2.54	0.81
66:BQ:105:LYS:O	66:BQ:108:ILE:CG2	2.27	0.81
68:BS:17:ASN:ND2	68:BS:18:THR:OG1	2.13	0.81
3:AA:67:TYR:OH	48:A2:4056:G:O2’	1.98	0.81
7:AE:128:HIS:CE1	48:A2:1265:G:OP2	2.33	0.81
7:AE:161:ARG:NH2	48:A2:4839:U:O2	2.12	0.81
12:AJ:127:GLY:HA3	48:A2:4213:A:C2	2.15	0.81
15:AM:19:PRO:CB	48:A2:923:C:N3	2.44	0.81
48:A2:959:C:C2’	48:A2:960:G:OP1	2.27	0.81
48:A2:1197:C:H2’	48:A2:1198:C:H5’	1.60	0.81
48:A2:1268:U:O2’	48:A2:1269:C:O5’	1.97	0.81
48:A2:2067:G:C2	48:A2:2247:A:N1	2.48	0.81
48:A2:3936:A:H2’	48:A2:3936:A:OP1	1.79	0.81
49:B1:369:C:O2’	49:B1:370:G:OP1	1.97	0.81
54:BE:95:THR:HG21	54:BE:97:GLU:HG3	1.62	0.81
54:BE:149:TYR:HA	56:BG:209:TYR:CE2	2.15	0.81
56:BG:106:LEU:H	56:BG:106:LEU:HD22	1.46	0.81
57:BH:115:LYS:O	57:BH:116:ARG:CB	2.27	0.81
59:BJ:151:LEU:O	59:BJ:151:LEU:HD23	1.81	0.81
63:BN:23:PRO:O	63:BN:24:THR:OG1	1.98	0.81
67:BR:21:TYR:CE2	67:BR:71:ILE:CG2	2.54	0.81
67:BR:98:VAL:CG2	67:BR:102:THR:HG21	2.11	0.81
68:BS:44:VAL:CG1	68:BS:71:MET:SD	2.68	0.81
74:BY:83:LYS:HA	74:BY:91:LEU:HD21	1.63	0.81
75:BZ:78:LYS:O	75:BZ:79:ILE:HD13	1.80	0.81
2:A4:33:U:H1’	6:AD:207:TYR:CD1	2.15	0.81
5:AC:211:TYR:O	5:AC:231:ASN:HA	1.80	0.81
6:AD:287:PHE:HA	48:A2:1162:U:O2’	1.79	0.81
7:AE:141:ARG:O	7:AE:144:ILE:HG12	1.81	0.81
21:AS:7:LEU:HD23	21:AS:107:THR:CA	2.10	0.81
46:At:19:LYS:HG2	46:At:24:THR:HG22	1.61	0.81
48:A2:713:G:N2	48:A2:934:C:C2	2.49	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:4726:A:N6	48:A2:4826:G:N2	2.27	0.81
49:B1:581:U:H5'	74:BY:62:THR:HG21	0.82	0.81
50:BA:206:ASP:CG	50:BA:207:PRO:HD3	2.05	0.81
52:BC:253:PRO:HA	52:BC:256:TRP:CD1	2.16	0.81
62:BM:14:VAL:HG13	62:BM:127:TYR:CD2	2.14	0.81
6:AD:176:SER:HB2	48:A2:4285:A:O3'	1.79	0.81
13:AK:55:MET:SD	13:AK:61:MET:HG3	2.20	0.81
15:AM:97:ALA:O	17:AO:198:THR:HG23	1.80	0.81
21:AS:7:LEU:HD23	21:AS:107:THR:CB	2.09	0.81
44:Ap:18:TYR:H	48:A2:3606:A:H61	1.27	0.81
48:A2:2618:U:HO2'	48:A2:2673:G:H1	1.24	0.81
49:B1:799:U:O2'	49:B1:800:U:H5'	1.81	0.81
49:B1:1497:G:C8	60:BK:62:PHE:CE1	2.69	0.81
59:BJ:50:LEU:HD12	59:BJ:105:PHE:CE2	2.14	0.81
64:BO:88:LEU:O	64:BO:90:ILE:HG23	1.79	0.81
8:AF:221:LYS:O	8:AF:223:LYS:N	2.13	0.81
15:AM:42:CYS:HG	15:AM:77:TRP:HD1	1.29	0.81
22:AT:87:LYS:HE2	48:A2:4267:G:C6	2.16	0.81
41:Am:104:HIS:ND1	48:A2:4659:U:C5'	2.42	0.81
47:Au:158:GLN:H	47:Au:165:LEU:CD2	1.93	0.81
48:A2:1722:C:O2'	48:A2:1723:G:OP2	1.98	0.81
48:A2:4596:U:O2'	48:A2:4598:U:OP2	1.98	0.81
50:BA:85:ARG:HG3	50:BA:201:LEU:O	1.81	0.81
65:BP:62:LYS:O	65:BP:66:GLU:CG	2.27	0.81
66:BQ:62:ARG:HD2	66:BQ:92:LEU:HG	1.62	0.81
79:Bd:26:ASN:HB2	79:Bd:39:CYS:SG	2.20	0.81
3:AA:245:ARG:HA	48:A2:3628:U:OP1	1.80	0.81
5:AC:150:LEU:HB2	46:At:71:ARG:HB3	0.89	0.81
14:AL:130:LYS:HD2	14:AL:130:LYS:N	1.94	0.81
20:AR:126:LYS:HG2	20:AR:131:VAL:CB	2.10	0.81
25:AW:78:PHE:CE2	25:AW:79:GLN:O	2.34	0.81
38:Aj:28:HIS:CE1	38:Aj:30:GLN:HB3	2.16	0.81
39:Ak:21:LYS:HD3	39:Ak:22:SER:H	1.44	0.81
48:A2:1056:G:H8	48:A2:1056:G:H5"	1.44	0.81
49:B1:157:U:C1'	56:BG:59:GLN:O	2.29	0.81
49:B1:984:C:H1'	64:BO:138:ASP:O	1.80	0.81
49:B1:1543:U:O2	66:BQ:77:HIS:CE1	2.33	0.81
63:BN:78:LYS:O	63:BN:80:LEU:HD12	1.78	0.81
71:BV:38:GLU:HG3	71:BV:49:GLN:O	1.79	0.81
84:Bx:44:U:OP1	86:Bx:101:MG:MG	1.23	0.81
38:Aj:21:ARG:NE	38:Aj:39:TYR:CD1	2.48	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Au:43:PRO:CG	47:Au:161:LYS:O	2.29	0.81
48:A2:2859:U:OP1	48:A2:2859:U:H2'	1.81	0.81
49:B1:1286:G:C6	62:BM:35:ILE:HB	2.16	0.81
49:B1:1622:U:H4'	49:B1:1623:A:H5'	1.63	0.81
54:BE:17:HIS:HA	54:BE:108:ARG:HG2	1.62	0.81
57:BH:118:ARG:O	57:BH:121:THR:HG22	1.81	0.81
65:BP:48:GLY:N	65:BP:49:LEU:HD21	1.96	0.81
68:BS:25:LYS:O	68:BS:29:ALA:HB2	1.81	0.81
68:BS:66:ARG:O	68:BS:66:ARG:HD2	1.80	0.81
7:AE:105:ARG:CD	48:A2:680:C:H1'	2.11	0.81
7:AE:112:MET:CE	7:AE:113:PRO:HD2	2.10	0.81
9:AG:59:ARG:NH2	48:A2:2449:C:H1'	1.95	0.81
19:AQ:15:ARG:CD	19:AQ:52:PHE:O	2.28	0.81
39:Ak:60:LEU:HD22	39:Ak:61:PRO:HD2	1.62	0.81
43:Ao:102:GLN:HE21	43:Ao:103:VAL:N	1.77	0.81
46:At:66:ARG:HD2	46:At:68:SER:HB2	1.63	0.81
48:A2:133:C:C5	48:A2:135:G:C6	2.68	0.81
48:A2:1740:G:C2	48:A2:1756:C:O2	2.34	0.81
49:B1:689:U:C5	49:B1:742:U:C2	2.69	0.81
49:B1:869:A:C6	57:BH:114:GLN:NE2	2.49	0.81
49:B1:1113:A:O2'	51:BB:202:GLN:CB	2.26	0.81
49:B1:1314:U:O2	49:B1:1314:U:C2'	2.28	0.81
49:B1:1668:U:OP2	66:BQ:141:TYR:OH	1.98	0.81
51:BB:180:ASP:OD1	51:BB:183:GLU:N	2.13	0.81
4:AB:293:ILE:HD12	4:AB:296:GLY:O	1.81	0.81
4:AB:391:PRO:CD	25:AW:63:GLN:HE22	1.94	0.81
13:AK:57:LYS:HB3	13:AK:59:THR:OG1	1.79	0.81
48:A2:680:C:C2'	48:A2:681:A:H5'	2.09	0.81
48:A2:2067:G:C2	48:A2:2247:A:C6	2.69	0.81
49:B1:509:G:H5"	59:BJ:3:VAL:HG12	1.63	0.81
49:B1:528:A:OP1	59:BJ:122:SER:HB3	1.81	0.81
49:B1:1404:U:C5	70:BU:88:LEU:HD21	2.16	0.81
49:B1:1672:U:OP1	66:BQ:18:THR:CB	2.29	0.81
54:BE:115:THR:HB	54:BE:118:GLU:OE2	1.79	0.81
1:A3:11:C:O2	18:AP:5:SER:OG	1.98	0.80
4:AB:278:THR:HG23	48:A2:4678:C:OP1	1.82	0.80
5:AC:77:PRO:CB	5:AC:91:ALA:HB2	2.05	0.80
10:AH:124:ARG:HD3	10:AH:164:ALA:HB1	1.63	0.80
21:AS:1:MET:HE3	21:AS:34:ALA:HA	1.62	0.80
39:Ak:20:ALA:CA	39:Ak:38:CYS:HA	2.09	0.80
48:A2:221:U:O2'	48:A2:238:G:N2	2.14	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:2065:C:O2'	48:A2:2066:G:H5'	1.80	0.80
48:A2:3929:G:C1'	83:Bw:19:G:C8	2.65	0.80
49:B1:689:U:C4	49:B1:742:U:C2	2.69	0.80
49:B1:1017:U:H5'	63:BN:55:ARG:HH21	1.46	0.80
49:B1:1622:U:H4'	49:B1:1623:A:C5'	2.10	0.80
10:AH:5:LEU:HD13	10:AH:60:TRP:HH2	1.00	0.80
30:Ab:30:GLU:O	48:A2:1445:C:H4'	1.81	0.80
30:Ab:53:GLY:HA3	48:A2:1795:U:H5"	1.64	0.80
34:Af:29:LYS:HB2	34:Af:83:MET:HE3	1.62	0.80
49:B1:142:C:C2	56:BG:180:VAL:HG11	2.15	0.80
49:B1:823:U:H5	74:BY:64:PHE:CZ	1.98	0.80
49:B1:1555:U:H4'	49:B1:1556:A:C2	2.16	0.80
55:BF:198:ARG:HB3	83:Bw:41:C:H5'	1.62	0.80
56:BG:213:LEU:HD22	56:BG:217:MET:SD	2.21	0.80
65:BP:34:MET:HG3	65:BP:45:LEU:HD13	1.63	0.80
4:AB:56:ILE:HD12	4:AB:76:VAL:HG21	1.64	0.80
13:AK:107:VAL:CG1	13:AK:108:PRO:HD3	2.11	0.80
16:AN:2:GLY:HA2	48:A2:116:G:OP1	1.80	0.80
19:AQ:172:ARG:HH11	29:Aa:56:VAL:HG21	1.47	0.80
21:AS:146:HIS:O	21:AS:147:ASP:OD1	1.99	0.80
27:AY:45:ARG:NH2	48:A2:234:G:H5"	1.94	0.80
30:Ab:50:ASN:HA	48:A2:1795:U:O4'	1.81	0.80
49:B1:190:G:OP2	58:BI:143:LYS:CD	2.28	0.80
49:B1:688:U:C2'	57:BH:103:LYS:HG2	2.09	0.80
49:B1:795:A:H2'	49:B1:796:G:C8	2.16	0.80
49:B1:1203:G:H1'	52:BC:115:GLN:CG	2.11	0.80
49:B1:1309:C:OP2	81:Bf:118:ARG:NE	2.14	0.80
50:BA:206:ASP:HB2	50:BA:210:ILE:HD11	1.61	0.80
51:BB:36:PRO:HG2	51:BB:39:PHE:CE2	2.16	0.80
79:Bd:41:GLN:N	79:Bd:41:GLN:HE21	1.78	0.80
23:AU:48:LYS:N	23:AU:82:TYR:OH	2.15	0.80
49:B1:561:A:C5'	59:BJ:170:PRO:HG2	2.09	0.80
67:BR:100:PRO:HD3	67:BR:119:VAL:CG2	2.02	0.80
68:BS:7:GLU:HA	75:BZ:49:LEU:HD21	1.63	0.80
2:A4:117:G:OP2	6:AD:258:LYS:HE3	1.80	0.80
5:AC:6:PRO:HB3	48:A2:661:G:H4'	1.63	0.80
6:AD:286:SER:CB	48:A2:1164:C:OP2	2.30	0.80
8:AF:165:LYS:HB3	48:A2:2254:G:H1'	1.64	0.80
13:AK:27:CYS:SG	13:AK:90:PHE:HB3	2.21	0.80
25:AW:16:GLY:O	48:A2:4590:U:H4'	1.81	0.80
48:A2:4981:C:H5"	58:BI:124:LYS:NZ	1.97	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1286:G:H22	62:BM:36:ARG:HB2	1.42	0.80
50:BA:38:ILE:CD1	50:BA:47:TYR:CG	2.64	0.80
51:BB:183:GLU:HA	51:BB:186:ASN:ND2	1.96	0.80
54:BE:87:MET:O	54:BE:122:LYS:HE3	1.82	0.80
54:BE:149:TYR:HA	56:BG:209:TYR:CD2	2.17	0.80
61:BL:80:MET:HE2	61:BL:121:GLN:HA	1.61	0.80
64:BO:83:GLN:NE2	64:BO:87:GLU:HG2	1.96	0.80
65:BP:85:ILE:CD1	65:BP:116:LEU:HG	2.12	0.80
79:Bd:32:ARG:NH2	79:Bd:43:PHE:CE2	2.49	0.80
2:A4:14:C:N4	2:A4:65:G:O6	2.13	0.80
2:A4:49:A:OP1	6:AD:223:PHE:HA	1.81	0.80
3:AA:9:ARG:NH2	48:A2:1611:G:N7	2.28	0.80
5:AC:321:ASN:HB2	48:A2:1264:G:H8	1.46	0.80
6:AD:200:MET:HE2	6:AD:237:GLU:OE1	1.81	0.80
7:AE:111:LYS:HB2	46:At:87:ARG:NH1	1.85	0.80
7:AE:207:LYS:CE	7:AE:208:ILE:H	1.94	0.80
9:AG:244:PRO:CD	48:A2:4124:C:O2'	2.30	0.80
19:AQ:150:ARG:HD2	48:A2:1480:G:OP1	1.82	0.80
22:AT:127:GLN:NE2	48:A2:1816:G:H22	1.76	0.80
47:Au:100:VAL:HG13	47:Au:124:LEU:HD22	1.61	0.80
48:A2:196:G:N2	48:A2:231:G:N1	2.29	0.80
48:A2:1162:U:H4'	48:A2:1163:C:C2	2.16	0.80
48:A2:3599:G:N2	49:B1:1721:U:O4	2.13	0.80
49:B1:1016:U:H1'	63:BN:61:ALA:HB1	1.63	0.80
56:BG:32:MET:HB2	56:BG:100:CYS:SG	2.21	0.80
59:BJ:107:GLU:HA	59:BJ:112:THR:HG21	1.62	0.80
79:Bd:23:VAL:HG21	79:Bd:38:MET:HE1	1.62	0.80
4:AB:129:ALA:HA	48:A2:4689:A:H4'	1.63	0.80
4:AB:158:GLN:HG2	4:AB:159:VAL:HG23	1.64	0.80
5:AC:222:ARG:NH1	27:AY:3:PHE:CE2	2.50	0.80
7:AE:125:LEU:H	48:A2:946:G:H21	1.27	0.80
7:AE:125:LEU:N	48:A2:946:G:H21	1.79	0.80
20:AR:93:VAL:HG11	48:A2:2704:A:H1'	1.63	0.80
29:Aa:58:MET:N	48:A2:4326:G:H4'	1.96	0.80
47:Au:158:GLN:N	47:Au:165:LEU:HD22	1.97	0.80
49:B1:1256:G:C2	79:Bd:40:ARG:CD	2.64	0.80
49:B1:1274:G:N2	60:BK:29:MET:HG3	1.96	0.80
49:B1:1630:A:OP1	68:BS:37:GLY:CA	2.29	0.80
76:Ba:46:GLU:OE1	84:Bx:39:U:P	2.39	0.80
2:A4:15:C:H1'	2:A4:65:G:N2	1.95	0.80
7:AE:212:LEU:O	7:AE:212:LEU:HD23	1.81	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:Ab:49:HIS:O	48:A2:1795:U:H4'	1.80	0.80
45:Aq:38:SER:CB	45:Aq:39:PRO:HD3	2.10	0.80
48:A2:205:A:N1	48:A2:229:G:O6	2.13	0.80
48:A2:1740:G:N1	48:A2:1756:C:O2	2.15	0.80
48:A2:4714:U:C6	48:A2:4714:U:H5"	2.16	0.80
49:B1:550:C:H4'	80:Be:43:VAL:HG11	1.63	0.80
49:B1:561:A:C8	49:B1:561:A:H5'	2.16	0.80
49:B1:1333:U:C5'	53:BD:147:ALA:HB2	2.11	0.80
49:B1:1679:A:C6	55:BF:60:ARG:HA	2.17	0.80
49:B1:1784:G:C5	49:B1:1785:C:C4	2.70	0.80
64:BO:34:PHE:CZ	64:BO:100:THR:HG23	2.17	0.80
6:AD:205:ALA:HB1	6:AD:233:PRO:HB3	0.81	0.80
13:AK:57:LYS:CB	13:AK:60:MET:HB2	2.09	0.80
14:AL:103:ARG:HG2	37:Ai:25:ARG:NH1	1.97	0.80
28:AZ:33:THR:N	28:AZ:36:ARG:O	2.15	0.80
48:A2:2606:C:C2	48:A2:2607:U:C5	2.69	0.80
64:BO:86:LYS:C	64:BO:89:GLY:H	1.90	0.80
81:Bf:121:CYS:HA	81:Bf:132:MET:HE3	1.64	0.80
7:AE:136:HIS:CE1	48:A2:702:A:O4'	2.35	0.80
8:AF:165:LYS:HB3	48:A2:2254:G:O2'	1.82	0.80
13:AK:58:ASN:HB3	13:AK:82:ILE:CG2	2.11	0.80
22:AT:9:ARG:O	48:A2:4171:G:OP2	2.00	0.80
34:Af:41:PHE:CE2	34:Af:110:ILE:HD11	2.15	0.80
48:A2:133:C:N3	48:A2:134:G:C6	2.50	0.80
48:A2:2502:G:C1'	48:A2:2690:G:H21	1.95	0.80
48:A2:4597:A:H8	48:A2:5006:A:H61	1.26	0.80
49:B1:156:G:H4'	56:BG:108:VAL:HG21	1.62	0.80
49:B1:182:C:H5"	49:B1:183:G:OP2	1.81	0.80
49:B1:688:U:O2'	57:BH:103:LYS:CD	2.18	0.80
49:B1:1277:C:H5'	60:BK:54:SER:OG	1.82	0.80
49:B1:1404:U:C4	70:BU:88:LEU:HD21	2.17	0.80
51:BB:115:LYS:HG2	51:BB:116:LYS:H	1.46	0.80
54:BE:95:THR:HB	54:BE:97:GLU:CG	2.11	0.80
67:BR:97:GLU:HB2	67:BR:117:LEU:CA	2.11	0.80
2:A4:33:U:H1'	6:AD:207:TYR:HD1	1.46	0.79
5:AC:224:ILE:O	5:AC:227:ILE:HG22	1.81	0.79
6:AD:205:ALA:CB	6:AD:236:MET:HE1	2.12	0.79
7:AE:137:VAL:O	7:AE:138:ARG:NH1	2.15	0.79
7:AE:240:TYR:HE1	48:A2:4897:C:C5'	1.91	0.79
12:AJ:166:PHE:CE2	12:AJ:172:GLY:HA3	2.16	0.79
13:AK:53:VAL:HG11	48:A2:1978:U:H5'	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AO:49:ARG:HH21	48:A2:1910:A:C2'	1.93	0.79
22:AT:119:ALA:CB	22:AT:126:VAL:HG13	2.11	0.79
31:Ac:88:TYR:CE1	63:BN:144:SER:OG	2.35	0.79
40:Al:44:TRP:CZ2	48:A2:2388:U:H1'	2.17	0.79
48:A2:494:G:OP2	48:A2:495:C:OP2	2.00	0.79
48:A2:1341:G:N3	48:A2:1343:G:C6	2.50	0.79
48:A2:3693:G:C2'	48:A2:3694:A:H5'	2.10	0.79
49:B1:1555:U:OP2	79:Bd:22:ARG:NE	2.15	0.79
50:BA:37:TYR:CD2	50:BA:162:PRO:CG	2.60	0.79
50:BA:41:ARG:HB3	50:BA:41:ARG:NH1	1.95	0.79
50:BA:176:TRP:N	50:BA:202:TYR:HD2	1.76	0.79
58:BI:162:LEU:HD11	58:BI:191:GLU:OE1	1.81	0.79
7:AE:136:HIS:NE2	48:A2:702:A:H1'	1.96	0.79
8:AF:51:TYR:CZ	48:A2:1220:C:N4	2.49	0.79
29:Aa:79:TRP:HZ2	29:Aa:118:PRO:CD	1.91	0.79
36:Ah:3:LYS:O	36:Ah:4:ILE:HD13	1.81	0.79
48:A2:943:A:H5"	48:A2:944:G:OP1	1.81	0.79
48:A2:1977:C:C2	48:A2:1978:U:O2	2.34	0.79
48:A2:3699:A:H5"	48:A2:3700:U:OP2	1.82	0.79
48:A2:4063:G:N2	48:A2:4063:G:OP2	2.13	0.79
49:B1:737:G:H8	49:B1:737:G:P	2.05	0.79
49:B1:1274:G:O6	79:Bd:7:TYR:HE2	1.65	0.79
64:BO:105:THR:HG22	76:Ba:24:THR:HG23	1.63	0.79
66:BQ:51:LEU:O	66:BQ:53:GLU:N	2.15	0.79
7:AE:203:ILE:O	7:AE:206:VAL:CG2	2.29	0.79
15:AM:113:MET:HE1	48:A2:4839:U:C6	2.17	0.79
29:Aa:26:ARG:C	29:Aa:27:LYS:HZ3	1.90	0.79
44:Ap:18:TYR:N	48:A2:3606:A:H61	1.80	0.79
45:Aq:22:VAL:C	45:Aq:46:ILE:HG21	2.07	0.79
48:A2:230:U:O2	48:A2:230:U:O2'	1.98	0.79
48:A2:3731:A:N6	49:B1:1825:A:C2	2.50	0.79
48:A2:3915:G:H4'	51:BB:54:GLY:HA2	1.64	0.79
49:B1:874:G:C8	49:B1:875:A:C8	2.70	0.79
49:B1:1276:A:O2'	60:BK:54:SER:HB3	1.82	0.79
49:B1:1287:A:C5'	49:B1:1312:G:H1	1.81	0.79
49:B1:1292:C:H2'	49:B1:1293:A:C8	2.17	0.79
54:BE:137:PRO:HG2	56:BG:209:TYR:CE2	2.16	0.79
56:BG:56:ASN:O	56:BG:107:SER:N	2.15	0.79
79:Bd:26:ASN:HB3	79:Bd:39:CYS:SG	2.21	0.79
1:A3:70:G:H2'	27:AY:114:ASP:CG	2.08	0.79
13:AK:40:MET:CE	48:A2:1978:U:H1'	2.13	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AP:3:ARG:HD3	48:A2:403:G:C6	2.18	0.79
25:AW:82:ILE:O	25:AW:83:THR:OG1	2.00	0.79
49:B1:823:U:C5	74:BY:64:PHE:CZ	2.71	0.79
49:B1:1287:A:C5'	49:B1:1312:G:C6	2.64	0.79
49:B1:1333:U:H5'	53:BD:147:ALA:HB2	1.61	0.79
50:BA:42:LYS:N	50:BA:46:ILE:O	2.14	0.79
63:BN:32:ASP:O	63:BN:36:GLN:N	2.13	0.79
5:AC:221:PHE:HD2	5:AC:227:ILE:CD1	1.96	0.79
7:AE:105:ARG:HD3	48:A2:680:C:O4'	1.82	0.79
8:AF:73:ARG:HH21	48:A2:717:G:H5"	1.47	0.79
13:AK:37:SER:C	48:A2:1952:C:O2'	2.25	0.79
13:AK:40:MET:CE	48:A2:1981:G:O6	2.31	0.79
13:AK:81:HIS:CG	13:AK:82:ILE:H	2.00	0.79
21:AS:7:LEU:H	21:AS:7:LEU:CD2	1.96	0.79
47:Au:37:SER:OG	48:A2:4024:C:O3'	1.99	0.79
48:A2:1977:C:C2'	48:A2:1978:U:O2	2.30	0.79
48:A2:3929:G:H1'	83:Bw:19:G:C8	2.17	0.79
49:B1:3:C:O2	59:BJ:18:ARG:NH2	2.15	0.79
49:B1:190:G:OP2	58:BI:143:LYS:HD2	1.82	0.79
49:B1:1291:A:O2'	81:Bf:140:TYR:CE1	2.35	0.79
49:B1:1865:C:OP1	76:Ba:87:ARG:NH2	2.16	0.79
55:BF:40:ALA:O	55:BF:42:LYS:HG3	1.83	0.79
64:BO:116:LEU:HB3	76:Ba:53:ILE:HD11	1.62	0.79
5:AC:103:ALA:CB	48:A2:1322:U:H1'	2.12	0.79
15:AM:91:TRP:HA	15:AM:94:LYS:CD	2.13	0.79
24:AV:97:TYR:CE1	25:AW:21:TYR:HE1	2.00	0.79
48:A2:69:A:H2'	48:A2:71:C:N4	1.97	0.79
48:A2:3798:G:H5"	48:A2:3798:G:C8	2.18	0.79
48:A2:3929:G:C4	83:Bw:19:G:C6	2.70	0.79
49:B1:320:G:H2'	49:B1:321:C:H6	1.48	0.79
49:B1:1519:U:O4'	49:B1:1623:A:N6	2.16	0.79
53:BD:116:ARG:CZ	53:BD:150:MET:CE	2.61	0.79
55:BF:61:PHE:CG	78:Bc:51:ARG:HD3	2.18	0.79
76:Ba:44:ILE:HG13	76:Ba:45:VAL:HG23	1.63	0.79
2:A4:95:C:C4'	8:AF:229:GLU:CD	2.55	0.79
5:AC:53:ALA:CB	48:A2:344:C:H1'	2.12	0.79
5:AC:77:PRO:O	5:AC:91:ALA:CA	2.31	0.79
5:AC:190:ARG:CA	5:AC:202:ILE:CD1	2.60	0.79
8:AF:222:LYS:HG3	8:AF:225:THR:CG2	2.13	0.79
23:AU:48:LYS:HG2	23:AU:53:ALA:CB	2.10	0.79
33:Ae:81:ASN:HB3	48:A2:2281:C:OP1	1.82	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:Ai:15:HIS:HB3	48:A2:72:C:C6	2.17	0.79
49:B1:1287:A:H4'	49:B1:1312:G:H1	1.46	0.79
50:BA:199:PRO:O	50:BA:203:PHE:HD1	1.64	0.79
51:BB:71:LEU:HD22	51:BB:75:GLN:CB	2.06	0.79
68:BS:15:VAL:HG13	68:BS:68:ILE:CD1	2.13	0.79
68:BS:92:ASP:C	68:BS:94:LYS:H	1.86	0.79
79:Bd:20:SER:O	79:Bd:31:ILE:CD1	2.31	0.79
4:AB:189:THR:HB	4:AB:192:GLU:OE2	1.83	0.79
6:AD:223:PHE:O	6:AD:226:TYR:HB2	1.83	0.79
9:AG:50:ASP:O	26:AX:41:ARG:O	2.01	0.79
28:AZ:51:ARG:HB3	28:AZ:65:ARG:HD2	1.62	0.79
48:A2:4702:G:H5"	48:A2:4703:C:OP2	1.83	0.79
49:B1:745:C:O2	57:BH:109:ARG:HD3	1.82	0.79
54:BE:94:LYS:N	54:BE:95:THR:O	2.15	0.79
66:BQ:12:VAL:CG1	66:BQ:90:LYS:CB	2.44	0.79
79:Bd:22:ARG:HB2	79:Bd:37:ASN:HB2	1.65	0.79
7:AE:240:TYR:OH	48:A2:4897:C:C5'	2.25	0.79
12:AJ:111:GLU:HG3	68:BS:14:ARG:HH22	1.42	0.79
15:AM:100:ARG:CB	17:AO:198:THR:OG1	2.30	0.79
25:AW:113:LYS:HG2	49:B1:328:U:C4	2.18	0.79
35:Ag:21:ARG:CD	48:A2:2666:U:O2	2.30	0.79
40:Al:45:ARG:NH2	48:A2:2775:G:H5'	1.95	0.79
47:Au:126:PRO:O	47:Au:130:LYS:HD3	1.82	0.79
48:A2:121:A:C6	48:A2:150:G:N7	2.49	0.79
48:A2:1224:C:C3'	48:A2:1225:G:H21	1.95	0.79
49:B1:1256:G:H22	79:Bd:30:LEU:H	1.30	0.79
53:BD:79:PHE:CB	53:BD:84:VAL:HG23	2.13	0.79
59:BJ:30:LYS:HD2	59:BJ:31:LEU:N	1.98	0.79
9:AG:55:VAL:HG21	26:AX:41:ARG:CD	2.13	0.79
13:AK:19:GLN:C	13:AK:21:LEU:H	1.91	0.79
14:AL:89:LYS:HD3	36:Ah:114:TYR:CD1	2.18	0.79
18:AP:47:TYR:O	18:AP:51:VAL:HG23	1.83	0.79
47:Au:83:PRO:HG3	47:Au:107:TYR:CZ	2.17	0.79
48:A2:69:A:C2'	48:A2:71:C:H42	1.95	0.79
52:BC:132:ASP:CG	52:BC:133:TYR:H	1.91	0.79
53:BD:76:ARG:HE	60:BK:66:HIS:CD2	2.00	0.79
60:BK:80:ARG:HA	60:BK:83:LEU:HD12	1.64	0.79
66:BQ:44:PRO:CG	66:BQ:47:LEU:HB2	2.10	0.79
67:BR:99:ASP:HB2	67:BR:102:THR:CG2	2.11	0.79
5:AC:190:ARG:CB	5:AC:202:ILE:CD1	2.62	0.78
5:AC:234:LYS:CE	48:A2:1347:U:O2	2.31	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AW:64:SER:O	25:AW:67:ILE:HG13	1.82	0.78
26:AX:111:GLN:O	26:AX:115:LYS:CG	2.28	0.78
28:AZ:57:MET:HG3	28:AZ:61:LYS:HB3	1.64	0.78
29:Aa:116:LYS:HA	29:Aa:116:LYS:HE2	1.65	0.78
33:Ae:8:VAL:HG22	48:A2:693:U:C4'	2.12	0.78
47:Au:207:LYS:CG	47:Au:213:PRO:HA	2.12	0.78
49:B1:294:U:C4	61:BL:65:ASN:CB	2.65	0.78
49:B1:581:U:C4'	74:BY:62:THR:HG21	2.13	0.78
49:B1:805:U:H5"	49:B1:805:U:H6	1.47	0.78
65:BP:83:MET:O	65:BP:115:TYR:O	2.00	0.78
66:BQ:10:VAL:HG21	66:BQ:98:LYS:HG3	1.64	0.78
70:BU:26:SER:OG	70:BU:32:LEU:HB2	1.82	0.78
75:BZ:82:SER:CA	75:BZ:85:ARG:HH21	1.97	0.78
80:Be:51:LYS:CE	84:Bx:58:U:H1'	2.12	0.78
6:AD:195:HIS:O	6:AD:199:ILE:HG13	1.83	0.78
6:AD:233:PRO:HA	6:AD:236:MET:HE2	1.64	0.78
8:AF:76:ARG:NE	48:A2:719:U:H5"	1.98	0.78
21:AS:90:THR:HG21	22:AT:156:TYR:CG	2.18	0.78
45:Aq:59:THR:HB	45:Aq:75:PRO:HG2	0.91	0.78
48:A2:902:A:H5"	48:A2:902:A:C8	2.14	0.78
48:A2:966:C:H2'	48:A2:969:U:O4	1.83	0.78
48:A2:1783:A:H2'	48:A2:1784:A:H5'	1.64	0.78
48:A2:4981:C:H5"	58:BI:124:LYS:HZ3	1.47	0.78
49:B1:1097:G:H4'	50:BA:32:PHE:CD1	2.17	0.78
59:BJ:96:TYR:CZ	59:BJ:100:LEU:HD21	2.17	0.78
65:BP:84:ILE:O	65:BP:86:LEU:HD22	1.83	0.78
68:BS:48:ALA:CB	68:BS:50:ILE:HD12	2.12	0.78
5:AC:183:VAL:HG12	5:AC:225:PRO:HB2	1.65	0.78
7:AE:100:LYS:HB2	48:A2:679:G:OP1	1.84	0.78
7:AE:173:LEU:HD21	7:AE:191:GLN:HB2	1.64	0.78
7:AE:208:ILE:HD12	7:AE:209:PRO:HD3	1.63	0.78
10:AH:173:ARG:HD3	48:A2:4438:C:N4	1.98	0.78
22:AT:112:ASN:OD1	22:AT:128:LEU:CB	2.29	0.78
28:AZ:53:VAL:HB	28:AZ:62:ILE:HD11	1.65	0.78
28:AZ:95:VAL:CG1	28:AZ:109:LYS:HG3	2.13	0.78
37:Ai:14:GLY:C	48:A2:72:C:OP2	2.26	0.78
47:Au:28:PHE:HE1	47:Au:30:GLU:HG3	1.47	0.78
48:A2:163:C:C5	48:A2:164:C:C5	2.71	0.78
48:A2:4983:C:P	58:BI:169:GLY:CA	2.65	0.78
59:BJ:87:LEU:HD22	59:BJ:96:TYR:CD2	2.18	0.78
65:BP:52:LYS:CG	65:BP:83:MET:HE2	2.13	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:226:ARG:HH21	48:A2:4144:G:C5'	1.96	0.78
4:AB:299:ILE:H	4:AB:299:ILE:HD12	1.48	0.78
5:AC:217:ILE:CD1	5:AC:220:ALA:HB3	2.11	0.78
13:AK:40:MET:HE2	48:A2:1977:C:O2	1.82	0.78
48:A2:3929:G:C4	83:Bw:19:G:C5	2.72	0.78
48:A2:4686:A:OP2	48:A2:4686:A:C8	2.36	0.78
65:BP:44:ARG:HH21	65:BP:52:LYS:NZ	1.81	0.78
67:BR:99:ASP:HB2	67:BR:102:THR:CB	2.11	0.78
76:Ba:40:VAL:HG23	76:Ba:69:VAL:O	1.83	0.78
76:Ba:87:ARG:HB3	76:Ba:91:ALA:HB1	1.65	0.78
6:AD:287:PHE:O	6:AD:290:ALA:HB3	1.82	0.78
6:AD:290:ALA:HB2	48:A2:1163:C:P	2.22	0.78
7:AE:247:LYS:HD3	48:A2:4896:A:H61	1.47	0.78
13:AK:84:GLY:C	48:A2:2002:G:H4'	2.08	0.78
29:Aa:25:HIS:HD2	48:A2:1321:G:H22	1.29	0.78
37:Ai:29:ARG:NH1	37:Ai:32:ARG:HB2	1.98	0.78
48:A2:287:G:N2	48:A2:309:G:H21	1.81	0.78
49:B1:744:G:H21	57:BH:109:ARG:CG	1.95	0.78
49:B1:803:C:H3'	49:B1:804:U:H6	1.48	0.78
53:BD:210:ILE:CA	67:BR:39:ALA:CB	2.62	0.78
65:BP:65:LYS:C	65:BP:67:ALA:HB3	2.08	0.78
65:BP:84:ILE:HG22	65:BP:115:TYR:CG	2.19	0.78
66:BQ:62:ARG:HD3	66:BQ:92:LEU:CB	2.14	0.78
1:A3:109:C:C5	38:Aj:20:ARG:NH1	2.51	0.78
4:AB:8:ALA:HB2	24:AV:49:LEU:HD22	1.65	0.78
12:AJ:129:ASP:OD1	48:A2:4212:G:O2'	2.01	0.78
25:AW:81:ALA:O	25:AW:82:ILE:CG1	2.31	0.78
49:B1:560:A:C5'	59:BJ:172:ARG:N	2.46	0.78
49:B1:689:U:O2'	49:B1:690:G:O4'	2.01	0.78
69:BT:41:LYS:HZ1	69:BT:82:ARG:N	1.81	0.78
4:AB:76:VAL:HG11	4:AB:332:MET:HG2	1.65	0.78
6:AD:90:VAL:HG21	6:AD:226:TYR:CD1	2.19	0.78
6:AD:286:SER:HG	48:A2:1164:C:P	2.05	0.78
6:AD:290:ALA:CB	48:A2:1163:C:OP1	2.29	0.78
16:AN:201:HIS:CD2	48:A2:1343:G:P	2.72	0.78
20:AR:61:ALA:CB	48:A2:2612:U:H5'	2.13	0.78
39:Ak:21:LYS:HD2	39:Ak:21:LYS:H	1.46	0.78
47:Au:26:ARG:CG	47:Au:210:MET:HE1	2.14	0.78
48:A2:133:C:N4	48:A2:134:G:N3	2.32	0.78
48:A2:1989:U:C6	48:A2:1992:C:C5	2.70	0.78
48:A2:3710:C:H2'	48:A2:3711:G:H5'	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1015:U:H5'	77:Bb:20:LYS:HZ3	1.47	0.78
50:BA:42:LYS:HE3	50:BA:48:ILE:CD1	2.13	0.78
69:BT:39:LEU:HD12	69:BT:43:LYS:O	1.84	0.78
1:A3:151:G:OP1	1:A3:151:G:C8	2.37	0.78
19:AQ:164:LYS:CA	48:A2:1479:A:O4'	2.31	0.78
47:Au:60:ARG:HE	47:Au:61:PRO:CG	1.96	0.78
47:Au:67:VAL:CG2	47:Au:111:LEU:HD12	2.14	0.78
49:B1:1491:G:H1'	70:BU:72:GLU:OE1	1.84	0.78
49:B1:1864:U:C6	76:Ba:5:ARG:NH2	2.52	0.78
50:BA:59:LEU:HD21	50:BA:63:ARG:HH21	1.48	0.78
50:BA:66:VAL:HG11	71:BV:46:PHE:CD1	2.16	0.78
52:BC:135:GLY:O	52:BC:136:HIS:ND1	2.16	0.78
55:BF:61:PHE:CE1	78:Bc:51:ARG:HG3	2.18	0.78
79:Bd:32:ARG:NH2	79:Bd:43:PHE:CG	2.51	0.78
25:AW:93:LYS:NZ	56:BG:145:PHE:CE2	2.07	0.78
40:Al:36:ARG:HH11	48:A2:407:G:H21	0.78	0.78
41:Am:104:HIS:ND1	48:A2:4659:U:H5"	1.99	0.78
42:An:20:MET:HE1	49:B1:1817:G:O2'	1.84	0.78
48:A2:460:A:H61	48:A2:681:A:N6	1.80	0.78
48:A2:4896:A:OP1	48:A2:4896:A:H8	1.63	0.78
49:B1:642:U:OP1	59:BJ:41:ARG:HB3	1.84	0.78
49:B1:1593:C:OP2	55:BF:91:ARG:NH2	2.17	0.78
66:BQ:25:CYS:HB2	66:BQ:68:ILE:HG12	1.66	0.78
83:Bv:71:G:C2'	83:Bv:72:C:H5'	2.14	0.78
1:A3:109:C:C4	38:Aj:20:ARG:NH2	2.50	0.78
1:A3:123:U:H3'	1:A3:124:U:H5"	1.64	0.78
2:A4:1:G:C8	6:AD:264:LYS:HD3	2.19	0.78
6:AD:235:MET:O	6:AD:239:MET:HB2	1.83	0.78
8:AF:222:LYS:HG3	8:AF:225:THR:HG23	1.66	0.78
13:AK:84:GLY:HA2	48:A2:2002:G:C4'	2.13	0.78
19:AQ:16:LYS:O	19:AQ:52:PHE:CE1	2.36	0.78
20:AR:139:MET:HA	20:AR:142:ILE:HD12	1.65	0.78
22:AT:127:GLN:CD	48:A2:1816:G:H22	1.91	0.78
35:Ag:4:ARG:HD3	48:A2:2374:A:H2	1.48	0.78
53:BD:68:GLU:OE2	60:BK:70:TYR:HA	1.84	0.78
57:BH:64:VAL:HG13	57:BH:72:PHE:CE2	2.19	0.78
65:BP:70:MET:O	65:BP:72:LYS:HA	1.84	0.78
74:BY:86:GLU:OE1	74:BY:90:ARG:NH1	2.17	0.78
2:A4:9:C:OP1	22:AT:28:ALA:CB	2.32	0.77
28:AZ:136:PHE:O	48:A2:4092:C:H5'	1.84	0.77
33:Ae:4:LEU:HD11	33:Ae:121:ARG:N	1.98	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Ae:8:VAL:CG1	48:A2:693:U:H5'	2.14	0.77
33:Ae:33:ARG:NE	48:A2:1286:A:C8	2.52	0.77
34:Af:59:THR:HG23	34:Af:60:PRO:HD2	1.66	0.77
46:At:38:PHE:O	46:At:45:HIS:CE1	2.37	0.77
46:At:95:HIS:ND1	48:A2:952:G:OP1	2.18	0.77
47:Au:207:LYS:HE2	48:A2:4022:C:C2'	2.12	0.77
48:A2:133:C:H6	48:A2:133:C:C5'	1.96	0.77
48:A2:4731:G:C2	48:A2:4821:G:O6	2.37	0.77
49:B1:502:C:C5'	54:BE:66:MET:SD	2.71	0.77
49:B1:676:C:H5"	63:BN:5:HIS:CD2	2.19	0.77
49:B1:1124:C:O2'	67:BR:123:THR:CG2	2.32	0.77
50:BA:38:ILE:HD11	50:BA:47:TYR:CG	2.17	0.77
51:BB:71:LEU:CD2	51:BB:84:PHE:HE2	1.97	0.77
51:BB:131:ASP:OD1	51:BB:181:LEU:HD11	1.84	0.77
71:BV:37:ALA:HB3	71:BV:46:PHE:CE1	2.18	0.77
80:Be:35:ARG:O	80:Be:39:ASN:ND2	2.17	0.77
8:AF:217:ARG:HG3	8:AF:217:ARG:NH1	1.99	0.77
9:AG:55:VAL:HG21	26:AX:41:ARG:HD2	1.66	0.77
14:AL:57:PRO:HG3	14:AL:75:GLY:O	1.85	0.77
16:AN:86:HIS:CE1	48:A2:33:A:OP2	2.37	0.77
19:AQ:184:ARG:NH1	48:A2:4303:C:OP2	2.18	0.77
29:Aa:92:LYS:O	29:Aa:93:ASN:C	2.27	0.77
35:Ag:7:TYR:CE1	48:A2:2783:C:O2'	2.38	0.77
45:Aq:22:VAL:O	45:Aq:28:LEU:HB3	1.85	0.77
49:B1:1495:G:O2'	79:Bd:39:CYS:SG	2.41	0.77
65:BP:68:PRO:HD2	65:BP:71:GLU:CB	2.15	0.77
75:BZ:99:LEU:CB	75:BZ:109:TYR:HE1	1.98	0.77
79:Bd:20:SER:O	79:Bd:31:ILE:HD12	1.84	0.77
4:AB:214:ASP:OD1	4:AB:363:ILE:HG12	1.85	0.77
4:AB:247:GLY:CA	48:A2:2817:G:H5"	2.14	0.77
7:AE:111:LYS:CE	48:A2:682:U:P	2.72	0.77
7:AE:123:ARG:HG2	48:A2:948:G:OP1	1.85	0.77
7:AE:272:ARG:HG2	48:A2:4841:C:OP1	1.84	0.77
13:AK:62:ARG:HB3	48:A2:1941:A:OP2	1.84	0.77
25:AW:102:LYS:N	25:AW:105:ARG:CZ	2.48	0.77
29:Aa:92:LYS:C	29:Aa:94:LYS:H	1.92	0.77
45:Aq:28:LEU:HA	45:Aq:42:VAL:HB	1.64	0.77
47:Au:214:GLN:HA	47:Au:214:GLN:NE2	1.99	0.77
49:B1:319:C:H2'	49:B1:320:G:C8	2.18	0.77
49:B1:688:U:C3'	57:BH:103:LYS:CD	2.56	0.77
56:BG:141:ILE:CG2	56:BG:153:VAL:HG21	2.13	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BJ:70:ARG:HE	59:BJ:94:LEU:HD12	1.50	0.77
59:BJ:163:SER:N	59:BJ:164:PRO:HD2	1.98	0.77
62:BM:14:VAL:HG13	62:BM:127:TYR:CE2	2.18	0.77
64:BO:85:CYS:SG	64:BO:93:LEU:HD11	2.23	0.77
65:BP:68:PRO:HB2	65:BP:69:PRO:CD	2.15	0.77
80:Be:51:LYS:CD	84:Bx:59:U:O4'	2.32	0.77
1:A3:102:G:H4'	38:Aj:21:ARG:CD	2.13	0.77
4:AB:357:ARG:NE	48:A2:4577:C:H5"	1.99	0.77
6:AD:224:SER:HA	6:AD:227:ILE:CD1	2.13	0.77
12:AJ:98:ASN:ND2	48:A2:4212:G:OP1	2.18	0.77
15:AM:44:GLN:OE1	48:A2:922:A:H1'	1.85	0.77
16:AN:108:ARG:HH12	48:A2:2440:G:H4'	1.48	0.77
17:AO:167:HIS:CE1	48:A2:4719:C:C4	2.71	0.77
48:A2:1755:U:N3	48:A2:1756:C:C4	2.52	0.77
48:A2:3929:G:H1	48:A2:4016:A:H61	1.23	0.77
49:B1:677:G:OP1	63:BN:120:SER:OG	2.03	0.77
49:B1:742:U:C6	49:B1:743:U:C5	2.72	0.77
49:B1:874:G:H2'	49:B1:875:A:C8	2.19	0.77
49:B1:1286:G:N3	49:B1:1287:A:OP1	2.16	0.77
52:BC:60:TRP:CZ3	52:BC:62:PRO:HA	2.20	0.77
59:BJ:14:VAL:HG23	59:BJ:48:PHE:HB2	1.64	0.77
59:BJ:87:LEU:HD22	59:BJ:96:TYR:CE2	2.19	0.77
66:BQ:41:MET:HE1	69:BT:10:ASN:HB2	1.63	0.77
6:AD:286:SER:O	6:AD:289:ARG:N	2.17	0.77
13:AK:1:MET:HB3	13:AK:2:PRO:HD3	1.67	0.77
13:AK:57:LYS:HG2	48:A2:2001:U:P	2.20	0.77
48:A2:900:U:C2'	48:A2:901:U:C5'	2.57	0.77
48:A2:4896:A:H8	48:A2:4896:A:P	2.08	0.77
49:B1:581:U:C4'	74:BY:62:THR:CG2	2.62	0.77
49:B1:984:C:O2'	64:BO:138:ASP:HB3	1.85	0.77
49:B1:1863:A:N3	76:Ba:79:ILE:CD1	2.47	0.77
50:BA:176:TRP:CA	50:BA:202:TYR:CD2	2.66	0.77
51:BB:171:ILE:CD1	51:BB:197:ILE:CG1	2.63	0.77
59:BJ:169:ARG:HB3	59:BJ:173:VAL:CB	2.07	0.77
64:BO:78:ALA:HB3	64:BO:118:ALA:HB1	1.66	0.77
2:A4:22:A:N1	2:A4:23:A:C5	2.52	0.77
12:AJ:111:GLU:CB	68:BS:14:ARG:HH21	1.97	0.77
17:AO:25:LYS:HD3	48:A2:1895:C:OP1	1.85	0.77
20:AR:126:LYS:HG3	20:AR:131:VAL:CG2	2.08	0.77
20:AR:173:ARG:HD2	49:B1:910:G:OP2	1.85	0.77
28:AZ:59:LYS:O	28:AZ:62:ILE:HG22	1.85	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Ae:4:LEU:HD12	33:Ae:121:ARG:HB2	1.65	0.77
34:Af:19:ARG:O	48:A2:1294:G:H5'	1.84	0.77
46:At:51:VAL:HG23	46:At:113:ARG:HD2	1.67	0.77
48:A2:1258:G:N2	48:A2:1259:C:N3	2.33	0.77
49:B1:1287:A:H5'	49:B1:1312:G:C6	2.20	0.77
63:BN:75:LEU:HD11	63:BN:81:ALA:N	1.99	0.77
5:AC:303:ARG:O	5:AC:304:ALA:CB	2.32	0.77
6:AD:205:ALA:HB2	6:AD:233:PRO:HB3	1.62	0.77
7:AE:108:LYS:HE2	7:AE:109:LEU:H	1.49	0.77
19:AQ:43:PHE:HD1	48:A2:1411:U:O2'	1.68	0.77
19:AQ:75:ARG:HG3	19:AQ:75:ARG:NH1	1.99	0.77
23:AU:52:LYS:NZ	23:AU:52:LYS:HB3	1.98	0.77
47:Au:164:CYS:SG	48:A2:4024:C:C1'	2.73	0.77
48:A2:1740:G:H21	48:A2:1741:G:H1'	1.49	0.77
49:B1:379:C:H5'	58:BI:33:ALA:HB2	1.66	0.77
49:B1:617:G:OP1	73:BX:68:LYS:CE	2.31	0.77
49:B1:872:A:N1	49:B1:915:G:C5	2.52	0.77
49:B1:1046:U:HO2'	64:BO:140:THR:HB	1.50	0.77
59:BJ:168:GLY:H	59:BJ:172:ARG:NH2	1.83	0.77
66:BQ:50:LYS:HD3	66:BQ:50:LYS:O	1.84	0.77
68:BS:92:ASP:O	68:BS:94:LYS:N	2.16	0.77
2:A4:33:U:C2	6:AD:207:TYR:CD1	2.73	0.77
20:AR:99:MET:CE	20:AR:103:ARG:HH11	1.97	0.77
48:A2:1749:A:H2'	48:A2:1751:G:H8	1.48	0.77
49:B1:142:C:O2	56:BG:180:VAL:CG1	2.33	0.77
49:B1:582:U:H4'	74:BY:32:LYS:H	1.50	0.77
58:BI:171:LEU:HD21	58:BI:189:VAL:HG11	1.67	0.77
21:AS:74:ARG:HH22	48:A2:909:C:H5"	1.50	0.77
25:AW:116:LYS:O	25:AW:120:GLN:HG2	1.84	0.77
48:A2:50:C:O2'	48:A2:51:A:H5'	1.83	0.77
49:B1:1021:U:H5'	63:BN:128:TYR:CE1	2.18	0.77
49:B1:1124:C:O2'	67:BR:123:THR:HB	1.83	0.77
49:B1:1291:A:H1'	81:Bf:140:TYR:OH	1.84	0.77
49:B1:1314:U:H3	60:BK:2:LEU:H	1.31	0.77
49:B1:1350:U:H1'	50:BA:112:ILE:HD13	1.67	0.77
49:B1:1603:G:O4'	68:BS:38:ARG:NH1	2.17	0.77
68:BS:14:ARG:HH11	68:BS:14:ARG:HG2	1.47	0.77
79:Bd:23:VAL:HG21	79:Bd:38:MET:SD	2.25	0.77
5:AC:100:ARG:NH1	48:A2:1632:A:N1	2.33	0.77
5:AC:219:LYS:HZ1	48:A2:220:G:H8	1.31	0.77
7:AE:105:ARG:NE	48:A2:680:C:H1'	2.00	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AS:77:ASN:ND2	21:AS:146:HIS:CE1	2.54	0.77
37:Ai:68:ARG:NH2	48:A2:3693:G:OP2	2.18	0.77
48:A2:943:A:O2'	48:A2:944:G:N7	2.18	0.77
48:A2:3741:U:OP1	83:Bv:24:G:O2'	2.00	0.77
48:A2:4014:U:C2'	48:A2:4015:G:H5'	2.15	0.77
48:A2:4088:C:H3'	48:A2:4089:U:C6	2.20	0.77
49:B1:527:C:H4'	59:BJ:125:HIS:HB2	1.67	0.77
49:B1:658:U:H1'	73:BX:17:ARG:CZ	2.15	0.77
50:BA:7:VAL:HG21	71:BV:42:VAL:N	2.00	0.77
53:BD:142:LEU:CD1	53:BD:150:MET:SD	2.72	0.77
54:BE:114:ILE:CD1	54:BE:118:GLU:HG2	2.15	0.77
68:BS:59:LEU:HD23	68:BS:60:THR:H	1.48	0.77
5:AC:190:ARG:CA	5:AC:202:ILE:HD13	2.15	0.76
5:AC:274:LYS:CE	48:A2:1358:C:OP1	2.33	0.76
6:AD:90:VAL:CG2	6:AD:226:TYR:CE1	2.67	0.76
48:A2:965:G:N2	48:A2:1259:C:N3	2.33	0.76
48:A2:2685:G:H8	48:A2:2685:G:C5'	1.97	0.76
48:A2:2741:G:C2'	48:A2:2742:U:H5"	2.14	0.76
48:A2:4597:A:H8	48:A2:5006:A:N6	1.83	0.76
49:B1:1286:G:N2	62:BM:36:ARG:HB2	1.99	0.76
51:BB:174:ARG:HH11	51:BB:174:ARG:HG2	1.49	0.76
59:BJ:27:GLN:O	59:BJ:30:LYS:HG3	1.85	0.76
66:BQ:39:LEU:HD21	66:BQ:51:LEU:HD21	1.65	0.76
71:BV:38:GLU:CB	71:BV:49:GLN:O	2.34	0.76
74:BY:117:VAL:O	74:BY:122:LYS:HE3	1.85	0.76
83:Bw:40:C:H6	83:Bw:40:C:H5"	1.50	0.76
3:AA:9:ARG:CD	48:A2:1610:C:OP2	2.33	0.76
3:AA:24:LYS:HG3	3:AA:49:ILE:HD12	1.66	0.76
14:AL:44:ARG:CZ	48:A2:182:C:H6	1.94	0.76
20:AR:59:SER:HA	48:A2:2613:C:C5'	2.15	0.76
28:AZ:50:PRO:HG3	28:AZ:122:TYR:CE2	2.19	0.76
47:Au:38:LEU:CD1	47:Au:159:MET:HE2	2.14	0.76
51:BB:182:LYS:CG	51:BB:231:LEU:HD11	2.15	0.76
54:BE:114:ILE:HG13	54:BE:115:THR:H	1.50	0.76
64:BO:105:THR:HG21	76:Ba:24:THR:CG2	2.14	0.76
70:BU:67:LYS:HE2	70:BU:78:ASP:OD1	1.85	0.76
79:Bd:21:CYS:SG	79:Bd:39:CYS:N	2.59	0.76
82:Bg:24:THR:HG22	82:Bg:71:ILE:HG21	1.66	0.76
9:AG:162:ASP:HB3	9:AG:163:PRO:CD	2.16	0.76
35:Ag:66:ARG:HH22	48:A2:2497:G:H5'	1.48	0.76
36:Ah:88:THR:HG22	36:Ah:91:MET:SD	2.25	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Au:166:ALA:HB3	48:A2:3940:G:H1'	1.59	0.76
47:Au:213:PRO:CD	48:A2:4023:A:OP1	2.23	0.76
48:A2:900:U:H2'	48:A2:901:U:O4'	1.85	0.76
48:A2:4016:A:C6	83:Bw:56:C:C6	2.73	0.76
49:B1:483:C:OP1	73:BX:47:ALA:HA	1.84	0.76
49:B1:693:A:C2	49:B1:737:G:C6	2.72	0.76
49:B1:1454:A:O2'	67:BR:3:ARG:CZ	2.33	0.76
53:BD:11:PHE:HZ	70:BU:25:THR:HG22	1.49	0.76
58:BI:76:THR:HG21	58:BI:104:ILE:HG23	1.68	0.76
3:AA:247:ARG:CD	49:B1:1069:U:H4'	2.15	0.76
6:AD:286:SER:HB2	48:A2:1163:C:H4'	1.67	0.76
9:AG:82:GLN:HG2	9:AG:233:ILE:HG21	1.65	0.76
13:AK:81:HIS:CE1	13:AK:86:VAL:CG1	2.69	0.76
14:AL:44:ARG:NE	48:A2:182:C:H5	1.77	0.76
15:AM:56:GLN:OE1	48:A2:4827:U:C5	2.38	0.76
21:AS:90:THR:HG23	22:AT:156:TYR:CD2	2.21	0.76
27:AY:2:LYS:HD2	27:AY:7:VAL:HG13	1.65	0.76
48:A2:945:G:O6	48:A2:946:G:O6	2.04	0.76
48:A2:1741:G:C2	48:A2:1742:G:N9	2.53	0.76
49:B1:64:A:C3'	56:BG:175:LYS:HE3	2.15	0.76
49:B1:226:A:H5'	49:B1:226:A:C8	2.20	0.76
49:B1:384:U:H4'	61:BL:134:LEU:O	1.86	0.76
49:B1:795:A:H2'	49:B1:796:G:H8	1.50	0.76
74:BY:83:LYS:HE2	74:BY:96:LEU:HD21	1.65	0.76
75:BZ:99:LEU:CD2	75:BZ:109:TYR:CE1	2.67	0.76
5:AC:112:HIS:HB2	16:AN:202:ARG:O	1.86	0.76
7:AE:147:GLY:HA3	7:AE:203:ILE:HG22	1.67	0.76
8:AF:70:ARG:CZ	48:A2:1191:G:O2'	2.34	0.76
14:AL:127:PHE:HA	14:AL:136:LYS:HD3	1.67	0.76
21:AS:118:ARG:NH2	48:A2:2040:C:O2	2.19	0.76
39:Ak:54:GLU:OE1	39:Ak:57:LYS:HE3	1.85	0.76
48:A2:1341:G:N2	48:A2:1343:G:C2	2.53	0.76
49:B1:163:U:H4'	56:BG:83:CYS:HA	1.68	0.76
49:B1:229:A:N1	49:B1:900:C:H1'	1.99	0.76
53:BD:72:VAL:HG22	60:BK:20:VAL:HG13	1.67	0.76
59:BJ:70:ARG:HE	59:BJ:94:LEU:CD1	1.99	0.76
66:BQ:11:GLN:HE21	66:BQ:24:HIS:CD2	2.03	0.76
66:BQ:34:VAL:HG11	66:BQ:84:ILE:HD13	1.67	0.76
2:A4:61:G:OP1	6:AD:271:MET:HG2	1.85	0.76
5:AC:190:ARG:HB2	5:AC:202:ILE:CD1	2.15	0.76
6:AD:230:SER:O	6:AD:231:VAL:HG23	1.84	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AK:55:MET:HG2	13:AK:88:PHE:HB2	1.68	0.76
13:AK:60:MET:HE3	48:A2:1941:A:O3'	1.86	0.76
32:Ad:38:PHE:CG	48:A2:4596:U:C4	2.72	0.76
49:B1:441:C:H4'	49:B1:1737:G:O2'	1.86	0.76
49:B1:560:A:C3'	59:BJ:171:GLY:CA	2.16	0.76
49:B1:659:G:N2	73:BX:17:ARG:HH12	1.84	0.76
49:B1:823:U:O2	59:BJ:142:VAL:CA	2.32	0.76
54:BE:47:PHE:CE1	54:BE:111:VAL:HG12	2.19	0.76
2:A4:90:A:O2'	11:AI:11:TYR:CD1	2.38	0.76
13:AK:14:PHE:CD2	48:A2:1941:A:N6	2.54	0.76
14:AL:177:LYS:HA	14:AL:177:LYS:HZ2	1.47	0.76
21:AS:80:ILE:CG2	21:AS:82:LEU:HD21	2.15	0.76
49:B1:317:C:C2'	49:B1:318:A:H5'	2.16	0.76
59:BJ:35:TYR:CD1	59:BJ:106:LEU:HB3	2.20	0.76
65:BP:47:ARG:O	65:BP:49:LEU:HD23	1.85	0.76
67:BR:36:GLU:OE1	67:BR:47:ARG:CD	2.34	0.76
3:AA:208:GLU:OE1	48:A2:1613:A:C2	2.39	0.76
6:AD:232:THR:CG2	6:AD:235:MET:HE2	2.14	0.76
7:AE:136:HIS:CE1	48:A2:701:G:HO2'	2.04	0.76
7:AE:173:LEU:HD21	7:AE:191:GLN:CB	2.16	0.76
17:AO:87:MET:CE	48:A2:1894:C:H1'	2.15	0.76
22:AT:3:ASN:ND2	48:A2:4180:U:P	2.59	0.76
22:AT:87:LYS:CE	48:A2:4267:G:O6	2.33	0.76
23:AU:47:ILE:HG22	23:AU:47:ILE:O	1.85	0.76
27:AY:36:LYS:H	27:AY:36:LYS:CD	1.96	0.76
35:Ag:49:CYS:HA	44:Ap:61:MET:HG3	1.68	0.76
37:Ai:28:ARG:NH2	48:A2:320:C:C5	2.46	0.76
44:Ap:2:ALA:HA	48:A2:1551:U:C5	2.20	0.76
48:A2:227:G:O6	86:A2:5226:MG:MG	1.26	0.76
48:A2:903:C:H6	48:A2:903:C:H5"	1.48	0.76
49:B1:168:C:C4'	56:BG:131:ARG:HB2	2.16	0.76
49:B1:749:U:H3'	49:B1:750:C:H6	1.49	0.76
49:B1:872:A:N7	49:B1:874:G:C2	2.53	0.76
49:B1:1333:U:H4'	53:BD:147:ALA:HB2	1.68	0.76
50:BA:207:PRO:O	50:BA:210:ILE:HG12	1.86	0.76
53:BD:74:GLN:HE21	53:BD:84:VAL:CB	1.89	0.76
55:BF:127:ARG:HG2	55:BF:134:VAL:HG13	1.67	0.76
59:BJ:114:VAL:HG12	59:BJ:120:ALA:HB2	1.68	0.76
65:BP:49:LEU:HB2	65:BP:50:ARG:HB3	1.67	0.76
5:AC:150:LEU:CD2	46:At:71:ARG:C	2.35	0.76
8:AF:179:LEU:CD2	8:AF:184:ILE:CD1	2.64	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AH:60:TRP:HA	10:AH:60:TRP:HE3	1.48	0.76
13:AK:14:PHE:CD1	48:A2:1941:A:C5	2.73	0.76
21:AS:1:MET:HE1	21:AS:7:LEU:HD12	1.67	0.76
27:AY:1:MET:HG2	48:A2:1351:A:H1'	1.66	0.76
29:Aa:30:GLY:O	48:A2:39:A:C5	2.39	0.76
47:Au:160:LYS:CD	48:A2:3939:U:H5'	2.16	0.76
48:A2:2858:A:O4'	48:A2:2860:A:H5'	1.86	0.76
48:A2:4014:U:O2'	48:A2:4015:G:H5'	1.85	0.76
48:A2:4865:G:H3'	48:A2:4865:G:OP2	1.86	0.76
48:A2:4865:G:H4'	48:A2:4866:G:OP1	1.86	0.76
51:BB:41:ILE:HD11	51:BB:73:ASP:C	2.11	0.76
64:BO:142:ARG:HG3	76:Ba:22:ARG:CG	2.16	0.76
67:BR:15:VAL:O	67:BR:19:LYS:HG2	1.85	0.76
69:BT:41:LYS:HD3	69:BT:43:LYS:CE	2.16	0.76
76:Ba:4:LYS:CE	76:Ba:92:ARG:NH2	2.41	0.76
14:AL:59:VAL:HG13	48:A2:74:G:P	2.25	0.76
14:AL:134:PRO:HB3	14:AL:135:LYS:CD	2.15	0.76
15:AM:70:GLN:HB3	48:A2:725:G:H5"	1.66	0.76
20:AR:24:LEU:HD12	20:AR:51:ILE:HD11	1.67	0.76
20:AR:26:PRO:CB	48:A2:2365:U:O2'	2.33	0.76
25:AW:109:ILE:O	25:AW:113:LYS:HE3	1.85	0.76
46:At:51:VAL:HG23	46:At:113:ARG:CD	2.15	0.76
48:A2:3710:C:C2'	48:A2:3711:G:H5'	2.16	0.76
49:B1:316:G:OP2	56:BG:183:ARG:HD2	1.85	0.76
49:B1:1778:C:C6	49:B1:1778:C:H5"	2.21	0.76
56:BG:101:ILE:HG22	56:BG:102:VAL:N	1.99	0.76
62:BM:14:VAL:HG22	62:BM:127:TYR:CD1	2.20	0.76
64:BO:83:GLN:C	64:BO:83:GLN:HE21	1.94	0.76
67:BR:36:GLU:CD	67:BR:47:ARG:CD	2.58	0.76
67:BR:99:ASP:O	67:BR:117:LEU:HD13	1.86	0.76
76:Ba:30:VAL:HG21	76:Ba:74:CYS:HB3	1.67	0.76
5:AC:71:ARG:NH2	85:By:14:UNK:C	2.49	0.75
5:AC:289:LEU:CG	5:AC:293:LEU:HD11	2.15	0.75
8:AF:69:ILE:HG22	8:AF:73:ARG:HE	1.23	0.75
33:Ae:8:VAL:HG11	48:A2:693:U:H5'	1.68	0.75
48:A2:1989:U:C5	48:A2:1992:C:C5	2.73	0.75
49:B1:1123:C:O3'	51:BB:149:GLN:HG3	1.86	0.75
49:B1:1308:U:H1'	81:Bf:133:ALA:HB1	1.66	0.75
49:B1:1587:G:O6	69:BT:67:ARG:HG3	1.87	0.75
49:B1:1603:G:H5'	68:BS:38:ARG:HH11	1.51	0.75
52:BC:135:GLY:O	52:BC:136:HIS:CG	2.39	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BJ:141:VAL:CG2	59:BJ:162:ARG:HH21	1.96	0.75
67:BR:20:TYR:CD2	67:BR:23:ARG:HD2	2.16	0.75
67:BR:21:TYR:HE2	67:BR:71:ILE:HD12	1.50	0.75
1:A3:150:C:C5	9:AG:65:ARG:CZ	2.70	0.75
7:AE:210:LYS:HD3	7:AE:210:LYS:N	2.00	0.75
30:Ab:45:PHE:CG	48:A2:1797:G:N1	2.54	0.75
38:Aj:67:LEU:CD2	38:Aj:71:TYR:CE2	2.64	0.75
41:Am:96:CYS:HB3	41:Am:99:CYS:SG	2.26	0.75
45:Aq:40:LYS:HB2	45:Aq:68:GLN:HG3	1.68	0.75
47:Au:93:LEU:HD23	47:Au:99:LEU:HD21	1.68	0.75
48:A2:205:A:C5	48:A2:229:G:C6	2.74	0.75
48:A2:447:G:O2'	48:A2:448:U:O2	2.03	0.75
48:A2:1740:G:H2'	48:A2:1740:G:N3	2.01	0.75
49:B1:560:A:C3'	59:BJ:171:GLY:C	2.57	0.75
49:B1:561:A:OP1	59:BJ:171:GLY:HA2	1.87	0.75
49:B1:990:A:O5'	51:BB:116:LYS:HE3	1.86	0.75
66:BQ:62:ARG:CG	66:BQ:92:LEU:HD12	2.16	0.75
1:A3:103:A:OP2	1:A3:104:A:H2'	1.85	0.75
15:AM:20:HIS:CE1	15:AM:48:GLN:NE2	2.48	0.75
28:AZ:70:SER:OG	28:AZ:115:LYS:HB2	1.86	0.75
30:Ab:45:PHE:CD2	48:A2:1797:G:C2	2.74	0.75
45:Aq:31:LYS:HG2	45:Aq:38:SER:HA	1.67	0.75
46:At:51:VAL:CG2	46:At:113:ARG:CD	2.64	0.75
48:A2:4016:A:C5	83:Bw:56:C:C1'	2.70	0.75
53:BD:11:PHE:CZ	70:BU:25:THR:HG22	2.20	0.75
56:BG:194:LEU:HB3	56:BG:198:ARG:HH12	1.51	0.75
59:BJ:38:ARG:O	80:Be:34:ARG:HG3	1.86	0.75
59:BJ:136:ARG:CA	59:BJ:158:ASP:O	2.34	0.75
63:BN:36:GLN:O	63:BN:40:LEU:HD23	1.86	0.75
64:BO:105:THR:HG21	76:Ba:24:THR:HG23	1.68	0.75
80:Be:33:LYS:HG3	80:Be:36:MET:HE2	1.67	0.75
6:AD:17:GLN:HG2	22:AT:20:ARG:CA	2.17	0.75
6:AD:22:ARG:NE	6:AD:27:LYS:HD2	2.01	0.75
13:AK:84:GLY:O	13:AK:86:VAL:N	2.19	0.75
16:AN:50:ARG:HA	48:A2:113:A:H1'	1.69	0.75
20:AR:119:MET:CE	20:AR:149:LYS:HD2	2.16	0.75
25:AW:56:ARG:NH1	48:A2:4999:G:C8	2.54	0.75
27:AY:55:VAL:HG21	27:AY:70:VAL:CG1	2.16	0.75
30:Ab:54:LEU:CD1	48:A2:1809:C:O2'	2.34	0.75
38:Aj:49:TRP:CZ3	48:A2:1628:A:H1'	2.20	0.75
47:Au:165:LEU:HD11	48:A2:3940:G:O4'	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:70:A:H5'	48:A2:71:C:N4	2.01	0.75
49:B1:885:U:OP1	61:BL:30:LYS:NZ	2.18	0.75
49:B1:1284:A:O2'	49:B1:1287:A:C2	2.39	0.75
49:B1:1590:C:P	69:BT:82:ARG:HD2	2.27	0.75
13:AK:77:LYS:O	13:AK:80:PRO:HG2	1.86	0.75
19:AQ:174:PHE:C	19:AQ:175:GLU:HG2	2.09	0.75
23:AU:47:ILE:HD11	23:AU:63:ILE:CD1	2.14	0.75
39:Ak:52:LYS:CA	39:Ak:55:LYS:HD2	2.12	0.75
44:Ap:11:VAL:HG11	44:Ap:23:ARG:HB3	1.69	0.75
48:A2:70:A:H5'	48:A2:71:C:C4	2.22	0.75
49:B1:1593:C:H5	75:BZ:104:ARG:NH2	1.82	0.75
54:BE:86:PHE:CD2	54:BE:184:ILE:HG22	2.19	0.75
56:BG:212:LEU:HA	56:BG:215:LYS:HD2	1.68	0.75
65:BP:34:MET:O	65:BP:42:ARG:CD	2.35	0.75
71:BV:35:ASN:OD1	71:BV:52:THR:HG22	1.86	0.75
7:AE:140:LEU:HB2	7:AE:144:ILE:HD11	1.67	0.75
21:AS:115:ALA:HB2	48:A2:2041:G:H21	1.52	0.75
22:AT:89:ILE:HG22	22:AT:91:VAL:HG23	1.68	0.75
29:Aa:87:ARG:HG3	29:Aa:87:ARG:NH1	1.97	0.75
35:Ag:14:ASN:O	48:A2:1526:G:H5"	1.87	0.75
48:A2:227:G:H8	48:A2:227:G:C5'	2.00	0.75
48:A2:961:C:H6	48:A2:961:C:C5'	1.94	0.75
48:A2:1740:G:N1	48:A2:1756:C:C2	2.54	0.75
48:A2:4853:C:H2'	48:A2:4854:G:H4'	1.66	0.75
49:B1:291:G:N2	61:BL:68:ILE:O	2.20	0.75
49:B1:510:G:OP2	59:BJ:3:VAL:HG12	1.86	0.75
49:B1:1654:G:OP1	69:BT:90:SER:HB3	1.87	0.75
52:BC:98:LEU:HD23	52:BC:98:LEU:N	2.01	0.75
56:BG:227:GLN:O	56:BG:231:ARG:HG2	1.86	0.75
63:BN:75:LEU:HD12	63:BN:81:ALA:HB2	1.68	0.75
66:BQ:11:GLN:HE21	66:BQ:24:HIS:CG	2.05	0.75
68:BS:16:LEU:HD23	68:BS:16:LEU:N	2.02	0.75
70:BU:22:ILE:HA	70:BU:113:GLU:O	1.86	0.75
14:AL:8:MET:CE	48:A2:1327:C:H4'	2.16	0.75
22:AT:129:LYS:HE2	48:A2:1816:G:O2'	1.84	0.75
25:AW:97:LYS:CB	25:AW:98:PRO:HD3	2.12	0.75
28:AZ:33:THR:CG2	28:AZ:36:ARG:HD3	2.16	0.75
48:A2:679:G:O2'	48:A2:680:C:H5'	1.87	0.75
48:A2:1258:G:C2	48:A2:1259:C:N3	2.55	0.75
48:A2:4026:A:H5"	48:A2:4026:A:H8	1.51	0.75
49:B1:805:U:H5"	49:B1:805:U:C6	2.20	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1284:A:C5'	49:B1:1285:G:H5"	2.16	0.75
56:BG:141:ILE:HD13	56:BG:157:VAL:HG22	1.67	0.75
59:BJ:159:PHE:CD2	59:BJ:164:PRO:HG2	2.22	0.75
62:BM:52:LEU:HD23	62:BM:76:LEU:HD21	1.68	0.75
65:BP:51:ARG:CA	65:BP:54:HIS:HB3	2.16	0.75
78:Bc:16:LYS:HA	78:Bc:52:GLU:OE2	1.86	0.75
82:Bg:88:ARG:HG3	82:Bg:97:THR:HG21	1.67	0.75
7:AE:193:PHE:HE2	48:A2:4899:G:H21	1.32	0.75
7:AE:203:ILE:HA	7:AE:206:VAL:HG23	1.66	0.75
13:AK:10:LYS:HE3	48:A2:1941:A:C4	2.22	0.75
13:AK:25:PRO:HD2	13:AK:92:LYS:HB3	1.69	0.75
13:AK:63:LYS:HA	13:AK:66:ARG:CB	2.14	0.75
15:AM:44:GLN:O	48:A2:922:A:C2	2.39	0.75
23:AU:48:LYS:HA	23:AU:53:ALA:HA	1.67	0.75
49:B1:162:C:O2'	56:BG:95:LYS:NZ	2.17	0.75
50:BA:44:ASP:C	67:BR:125:GLY:HA2	2.12	0.75
66:BQ:25:CYS:CB	66:BQ:68:ILE:HG12	2.16	0.75
79:Bd:19:ARG:NE	79:Bd:33:LYS:HE3	2.01	0.75
83:Bw:17:C:H6	83:Bw:17:C:H5"	1.52	0.75
7:AE:125:LEU:CB	48:A2:946:G:H21	2.00	0.75
13:AK:40:MET:SD	48:A2:1980:A:N6	2.59	0.75
14:AL:56:ARG:N	14:AL:56:ARG:HD2	2.00	0.75
15:AM:114:LYS:HD3	15:AM:115:ALA:N	2.02	0.75
20:AR:60:ARG:O	20:AR:61:ALA:C	2.30	0.75
20:AR:61:ALA:HA	20:AR:64:ARG:NH1	2.00	0.75
20:AR:165:LYS:HZ1	49:B1:907:G:C5'	1.99	0.75
39:Ak:60:LEU:CD2	39:Ak:61:PRO:HD2	2.17	0.75
42:An:2:ARG:HD2	42:An:5:TRP:NE1	2.01	0.75
47:Au:38:LEU:HD12	47:Au:163:LEU:HA	1.69	0.75
48:A2:227:G:N2	48:A2:234:G:C6	2.55	0.75
48:A2:727:C:H2'	48:A2:728:C:O4'	1.87	0.75
48:A2:4106:C:H42	48:A2:4110:C:N4	1.84	0.75
49:B1:448:A:H61	58:BI:29:LEU:CD2	1.98	0.75
49:B1:560:A:C2'	59:BJ:171:GLY:HA3	2.16	0.75
49:B1:561:A:P	59:BJ:171:GLY:HA3	2.27	0.75
49:B1:659:G:N2	73:BX:17:ARG:NH1	2.34	0.75
56:BG:194:LEU:HB3	56:BG:198:ARG:NH1	2.02	0.75
59:BJ:163:SER:N	59:BJ:164:PRO:CD	2.50	0.75
70:BU:56:MET:HE2	70:BU:88:LEU:CD2	2.17	0.75
71:BV:35:ASN:ND2	71:BV:50:PHE:HD2	1.85	0.75
79:Bd:20:SER:C	79:Bd:31:ILE:HD13	2.12	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AB:285:TYR:HA	4:AB:363:ILE:CD1	2.17	0.74
7:AE:115:TYR:HE2	46:At:119:ARG:HD3	1.52	0.74
48:A2:3608:U:C2'	48:A2:3609:G:H5'	2.17	0.74
48:A2:4016:A:C4	83:Bw:56:C:C6	2.75	0.74
48:A2:4347:A:N6	83:Bv:76:A:OP1	2.20	0.74
48:A2:5019:A:H4'	48:A2:5020:G:OP1	1.86	0.74
49:B1:1659:U:C5'	79:Bd:30:LEU:HD13	2.16	0.74
49:B1:1660:C:H5"	79:Bd:19:ARG:NH1	2.02	0.74
49:B1:1866:A:O2'	76:Ba:96:THR:N	2.20	0.74
51:BB:157:GLN:HB2	51:BB:160:GLN:OE1	1.87	0.74
53:BD:141:LYS:HD3	53:BD:179:GLN:O	1.87	0.74
54:BE:69:PHE:HE1	54:BE:94:LYS:CE	1.88	0.74
68:BS:59:LEU:HD23	68:BS:60:THR:N	2.02	0.74
74:BY:119:GLY:H	74:BY:122:LYS:HZ1	1.35	0.74
1:A3:94:G:C5	38:Aj:82:THR:O	2.40	0.74
5:AC:50:GLN:HG3	48:A2:342:G:H4'	1.69	0.74
15:AM:101:LYS:N	17:AO:198:THR:CG2	2.49	0.74
27:AY:59:ARG:HH12	48:A2:196:G:C2'	1.94	0.74
48:A2:132:G:H5"	48:A2:132:G:N3	2.02	0.74
49:B1:744:G:H22	57:BH:109:ARG:HD2	1.46	0.74
64:BO:83:GLN:HE22	64:BO:87:GLU:HG2	1.52	0.74
75:BZ:76:ARG:C	75:BZ:77:LEU:HD23	2.11	0.74
83:Bw:35:A:H8	83:Bw:35:A:C5'	2.00	0.74
2:A4:43:U:H5'	12:AJ:143:ASP:HB3	1.69	0.74
6:AD:9:ASN:HB3	6:AD:12:TYR:CD1	2.22	0.74
35:Ag:50:PRO:HD3	44:Ap:61:MET:SD	2.27	0.74
38:Aj:31:LYS:O	38:Aj:33:THR:N	2.20	0.74
48:A2:1981:G:OP2	48:A2:1981:G:N2	2.20	0.74
48:A2:4472:A:H2'	48:A2:4473:A:C8	2.22	0.74
49:B1:3:C:O2	59:BJ:18:ARG:CZ	2.36	0.74
49:B1:5:U:OP2	52:BC:230:THR:HB	1.87	0.74
49:B1:1622:U:H2'	49:B1:1622:U:O2	1.87	0.74
51:BB:41:ILE:HD11	51:BB:73:ASP:CB	2.17	0.74
65:BP:51:ARG:O	65:BP:55:SER:N	2.20	0.74
68:BS:16:LEU:HG	68:BS:19:ASN:ND2	2.03	0.74
1:A3:70:G:C2'	27:AY:114:ASP:OD2	2.33	0.74
6:AD:232:THR:HG23	6:AD:235:MET:SD	2.27	0.74
19:AQ:33:ARG:O	19:AQ:37:ARG:HD3	1.86	0.74
25:AW:79:GLN:HG3	56:BG:131:ARG:HH22	1.52	0.74
47:Au:74:CYS:HB2	47:Au:84:HIS:CE1	2.22	0.74
48:A2:460:A:N6	48:A2:681:A:H61	1.86	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:502:C:OP2	54:BE:66:MET:HE1	1.87	0.74
49:B1:910:G:O2'	49:B1:911:C:H5'	1.88	0.74
56:BG:216:ARG:HA	56:BG:216:ARG:NE	2.01	0.74
63:BN:124:ARG:CG	63:BN:127:ARG:HH22	1.88	0.74
68:BS:30:ILE:HA	68:BS:33:ILE:HD13	1.69	0.74
75:BZ:99:LEU:CB	75:BZ:109:TYR:HD1	2.01	0.74
8:AF:51:TYR:OH	48:A2:1220:C:C5	2.40	0.74
10:AH:5:LEU:HB3	10:AH:60:TRP:HZ3	0.91	0.74
12:AJ:111:GLU:HG3	68:BS:14:ARG:HH21	0.76	0.74
13:AK:107:VAL:HG12	13:AK:108:PRO:CD	2.15	0.74
25:AW:81:ALA:C	25:AW:82:ILE:HG13	2.11	0.74
28:AZ:46:ILE:HD11	28:AZ:48:ARG:O	1.87	0.74
44:Ap:18:TYR:HA	48:A2:3606:A:N6	2.02	0.74
47:Au:26:ARG:HG2	47:Au:210:MET:CE	2.17	0.74
48:A2:3929:G:H1'	83:Bw:19:G:H2'	1.69	0.74
48:A2:4331:A:C2'	48:A2:4332:G:H5'	2.17	0.74
48:A2:4620:G:H3'	48:A2:4620:G:OP1	1.87	0.74
49:B1:283:G:OP2	49:B1:891:G:OP2	2.05	0.74
49:B1:1283:C:C3'	62:BM:102:LYS:HZ1	2.00	0.74
49:B1:1310:U:O4'	81:Bf:142:GLY:HA3	1.88	0.74
52:BC:178:HIS:NE2	52:BC:200:ARG:HD3	2.02	0.74
59:BJ:47:LYS:NZ	59:BJ:47:LYS:HB2	2.02	0.74
66:BQ:9:SER:HB2	66:BQ:25:CYS:O	1.87	0.74
69:BT:40:ALA:C	69:BT:41:LYS:HG3	2.13	0.74
3:AA:87:PHE:CE1	48:A2:4089:U:C5'	2.69	0.74
7:AE:123:ARG:CG	7:AE:124:LYS:H	1.99	0.74
10:AH:1:MET:HG3	10:AH:3:THR:OG1	1.88	0.74
23:AU:34:MET:HE3	23:AU:35:ASP:H	1.51	0.74
26:AX:53:ARG:NH2	48:A2:2454:G:N7	2.35	0.74
48:A2:4982:C:H3'	58:BI:169:GLY:CA	2.16	0.74
49:B1:284:C:H3'	49:B1:284:C:H6	1.52	0.74
49:B1:1472:C:H3'	49:B1:1472:C:O2	1.87	0.74
49:B1:1630:A:H5"	68:BS:37:GLY:N	2.02	0.74
50:BA:212:LYS:HG2	50:BA:215:GLN:OE1	1.87	0.74
50:BA:215:GLN:HG2	50:BA:219:GLU:OE2	1.88	0.74
66:BQ:12:VAL:CG2	66:BQ:91:ALA:HA	2.18	0.74
1:A3:43:A:H4'	38:Aj:22:CYS:O	1.88	0.74
4:AB:91:GLY:HA3	4:AB:153:MET:SD	2.28	0.74
5:AC:74:ALA:HB3	48:A2:2331:U:OP1	1.88	0.74
5:AC:289:LEU:O	5:AC:293:LEU:HG	1.87	0.74
12:AJ:159:LYS:HE3	12:AJ:159:LYS:O	1.88	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AK:52:VAL:HG21	13:AK:89:VAL:O	1.88	0.74
14:AL:172:GLU:CD	14:AL:172:GLU:H	1.93	0.74
15:AM:100:ARG:C	17:AO:198:THR:OG1	2.31	0.74
16:AN:84:PRO:HD2	48:A2:43:U:OP1	1.87	0.74
20:AR:24:LEU:CD2	20:AR:25:ASP:H	1.99	0.74
28:AZ:95:VAL:HG11	28:AZ:113:GLU:HG3	1.69	0.74
47:Au:210:MET:SD	48:A2:3945:G:O3'	2.45	0.74
48:A2:1740:G:C6	48:A2:1756:C:N3	2.55	0.74
49:B1:76:U:H5"	56:BG:159:ARG:NH2	2.02	0.74
49:B1:580:U:H2'	74:BY:62:THR:HB	1.68	0.74
49:B1:1105:G:N2	49:B1:1106:C:H1'	2.03	0.74
51:BB:174:ARG:HG2	51:BB:174:ARG:NH1	2.01	0.74
54:BE:87:MET:HE2	54:BE:123:LEU:CB	2.17	0.74
55:BF:136:ARG:NH1	83:Bw:32:U:H4'	2.03	0.74
56:BG:106:LEU:HG	56:BG:109:LEU:HD21	1.70	0.74
67:BR:97:GLU:CB	67:BR:117:LEU:CD2	2.64	0.74
76:Ba:38:LYS:HD3	76:Ba:71:LEU:HD12	1.68	0.74
6:AD:224:SER:HA	6:AD:227:ILE:CG1	2.17	0.74
14:AL:44:ARG:NH2	48:A2:182:C:C5	2.55	0.74
21:AS:74:ARG:HH12	48:A2:909:C:C5'	2.00	0.74
24:AV:42:VAL:HG22	24:AV:55:ALA:HB2	1.69	0.74
27:AY:61:HIS:HB2	48:A2:228:U:O4	1.87	0.74
29:Aa:8:THR:HG21	48:A2:1321:G:C3'	2.17	0.74
35:Ag:6:THR:HG21	48:A2:2380:A:H1'	1.70	0.74
48:A2:121:A:N6	48:A2:150:G:C5	2.56	0.74
48:A2:309:G:H5'	48:A2:310:U:OP1	1.88	0.74
48:A2:965:G:O2'	48:A2:966:C:H5'	1.87	0.74
48:A2:1341:G:C2	48:A2:1343:G:C5	2.64	0.74
48:A2:1989:U:H6	48:A2:1991:A:C8	2.05	0.74
49:B1:380:G:H1'	58:BI:5:ARG:HE	1.51	0.74
49:B1:1603:G:C4'	68:BS:38:ARG:CZ	2.66	0.74
49:B1:1659:U:H5'	79:Bd:30:LEU:HD13	1.69	0.74
62:BM:14:VAL:HG11	62:BM:127:TYR:CZ	2.12	0.74
62:BM:26:LEU:HG	62:BM:89:VAL:O	1.88	0.74
65:BP:44:ARG:NH2	65:BP:52:LYS:NZ	2.36	0.74
66:BQ:62:ARG:HD3	66:BQ:92:LEU:HD12	1.68	0.74
67:BR:97:GLU:CA	67:BR:117:LEU:CD2	2.65	0.74
70:BU:94:PRO:HD2	70:BU:97:ILE:HD12	1.68	0.74
7:AE:207:LYS:HE2	7:AE:207:LYS:CA	2.14	0.74
20:AR:169:ALA:C	20:AR:172:ARG:HG3	2.12	0.74
25:AW:50:ASN:HB2	48:A2:4964:U:C5	2.23	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AY:51:LYS:O	27:AY:70:VAL:CG2	2.34	0.74
38:Aj:17:THR:OG1	38:Aj:29:LEU:HD21	1.88	0.74
45:Aq:40:LYS:HB2	45:Aq:68:GLN:CG	2.17	0.74
46:At:95:HIS:CE1	48:A2:952:G:OP1	2.41	0.74
47:Au:97:LYS:NZ	47:Au:101:LYS:HE2	2.01	0.74
48:A2:1267:G:H2'	48:A2:1267:G:N3	2.01	0.74
48:A2:1741:G:C6	48:A2:1742:G:C8	2.75	0.74
48:A2:2704:A:C8	48:A2:2704:A:OP1	2.41	0.74
48:A2:3682:A:C5'	48:A2:3683:A:OP1	2.36	0.74
49:B1:659:G:H5"	73:BX:17:ARG:NH2	2.03	0.74
49:B1:1291:A:H1'	81:Bf:140:TYR:CZ	2.21	0.74
49:B1:1309:C:O5'	81:Bf:118:ARG:HD3	1.86	0.74
52:BC:256:TRP:HZ3	72:BW:66:THR:CG2	2.00	0.74
59:BJ:110:LEU:CD1	59:BJ:114:VAL:HG23	2.18	0.74
4:AB:119:TYR:CE1	48:A2:4925:A:OP1	2.39	0.74
7:AE:140:LEU:HD22	7:AE:167:GLN:NE2	2.03	0.74
13:AK:34:ASN:HB2	48:A2:1950:G:H5"	1.68	0.74
14:AL:84:ALA:HA	14:AL:118:LYS:HZ1	1.53	0.74
48:A2:84:A:H4'	48:A2:85:G:OP1	1.86	0.74
48:A2:964:C:H2'	48:A2:965:G:C8	2.23	0.74
48:A2:2690:G:H3'	48:A2:2690:G:OP1	1.88	0.74
49:B1:5:U:P	52:BC:230:THR:CG2	2.75	0.74
50:BA:66:VAL:CG1	71:BV:46:PHE:CD1	2.69	0.74
51:BB:173:THR:C	51:BB:177:GLN:HB2	2.13	0.74
72:BW:14:ILE:HD13	72:BW:25:VAL:HG11	1.70	0.74
75:BZ:48:VAL:HA	75:BZ:80:ARG:CD	2.16	0.74
79:Bd:39:CYS:HB3	79:Bd:41:GLN:NE2	2.03	0.74
2:A4:49:A:OP1	6:AD:223:PHE:CA	2.36	0.73
2:A4:75:G:H5'	21:AS:50:GLN:O	1.88	0.73
6:AD:176:SER:CB	48:A2:4285:A:O3'	2.36	0.73
7:AE:220:LYS:N	48:A2:4898:C:N4	2.36	0.73
8:AF:230:GLY:HA3	21:AS:2:LYS:HB3	1.70	0.73
14:AL:161:TYR:CE1	29:Aa:105:ARG:NH1	2.56	0.73
14:AL:162:LYS:N	29:Aa:105:ARG:NH2	2.33	0.73
18:AP:129:THR:HG23	18:AP:139:TYR:HB2	1.71	0.73
33:Ae:84:GLU:O	33:Ae:87:VAL:HG12	1.88	0.73
48:A2:112:C:H3'	48:A2:155:A:N6	2.02	0.73
48:A2:4016:A:C6	83:Bw:56:C:C2	2.76	0.73
48:A2:4016:A:N3	83:Bw:56:C:C6	2.56	0.73
49:B1:929:G:N2	49:B1:1104:G:O2'	2.21	0.73
49:B1:1630:A:OP1	68:BS:37:GLY:HA3	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BA:206:ASP:HB2	50:BA:210:ILE:CD1	2.13	0.73
51:BB:71:LEU:HD13	51:BB:75:GLN:CB	2.18	0.73
54:BE:103:TYR:CD2	54:BE:189:LEU:HD12	2.23	0.73
54:BE:114:ILE:HG13	54:BE:118:GLU:HB2	1.70	0.73
55:BF:61:PHE:CZ	78:Bc:51:ARG:HG3	2.23	0.73
56:BG:110:ASN:O	56:BG:111:LEU:HD23	1.88	0.73
59:BJ:35:TYR:OH	59:BJ:103:GLU:HB3	1.87	0.73
64:BO:44:VAL:CG2	64:BO:81:VAL:CG1	2.66	0.73
67:BR:41:ILE:HD12	67:BR:41:ILE:N	2.03	0.73
84:Bx:38:U:H4'	84:Bx:39:U:OP2	1.87	0.73
2:A4:46:C:OP1	6:AD:158:LYS:HG2	1.88	0.73
4:AB:62:ARG:O	4:AB:68:ASN:HB2	1.88	0.73
5:AC:221:PHE:HB3	5:AC:227:ILE:HD13	1.69	0.73
7:AE:114:ARG:HH11	7:AE:114:ARG:CB	2.01	0.73
7:AE:123:ARG:NE	48:A2:956:C:C5	2.46	0.73
7:AE:250:GLN:NE2	48:A2:4896:A:C2	2.56	0.73
8:AF:163:ASN:C	8:AF:164:LYS:HD3	2.13	0.73
16:AN:85:VAL:CG2	48:A2:44:A:OP2	2.35	0.73
26:AX:44:PRO:HB2	48:A2:4055:A:H5'	1.70	0.73
28:AZ:30:ASP:O	28:AZ:31:ASP:OD1	2.07	0.73
48:A2:1341:G:C2	48:A2:1343:G:N1	2.54	0.73
49:B1:77:A:O3'	56:BG:173:ALA:HB3	1.88	0.73
49:B1:169:U:H4'	56:BG:134:GLY:O	1.87	0.73
49:B1:292:A:C2	61:BL:67:SER:HB2	2.21	0.73
49:B1:837:A:O3'	74:BY:9:THR:HG22	1.89	0.73
49:B1:839:C:C1'	49:B1:841:G:H1'	2.18	0.73
49:B1:860:G:O2'	72:BW:107:SER:HB3	1.89	0.73
49:B1:1451:G:OP2	67:BR:44:LYS:NZ	2.20	0.73
49:B1:1856:C:P	64:BO:146:ARG:HB2	2.28	0.73
50:BA:201:LEU:CD2	67:BR:85:VAL:HG21	2.17	0.73
54:BE:123:LEU:HD11	54:BE:235:TRP:HB2	1.69	0.73
56:BG:64:LYS:HB2	56:BG:97:VAL:HG11	1.68	0.73
67:BR:36:GLU:OE1	67:BR:47:ARG:NE	2.21	0.73
68:BS:88:LYS:O	68:BS:93:GLY:HA2	1.88	0.73
7:AE:134:SER:CB	48:A2:1272:C:OP1	2.36	0.73
14:AL:8:MET:HE2	48:A2:1327:C:H4'	1.68	0.73
18:AP:83:TRP:O	48:A2:3827:A:H5"	1.87	0.73
25:AW:76:VAL:HG22	25:AW:77:LYS:N	2.03	0.73
39:Ak:40:ARG:NH2	39:Ak:41:TYR:OH	2.21	0.73
47:Au:25:ARG:O	47:Au:26:ARG:HD2	1.89	0.73
48:A2:69:A:C2'	48:A2:71:C:N4	2.50	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:121:A:N1	48:A2:150:G:C8	2.56	0.73
49:B1:799:U:C2'	49:B1:800:U:H5'	2.17	0.73
49:B1:984:C:O2'	64:BO:138:ASP:CB	2.36	0.73
51:BB:70:SER:HA	51:BB:83:LYS:HA	1.70	0.73
51:BB:79:VAL:CG2	51:BB:82:ARG:CD	2.45	0.73
54:BE:152:PRO:CG	56:BG:216:ARG:HD3	2.17	0.73
59:BJ:160:SER:O	59:BJ:162:ARG:NH1	2.21	0.73
65:BP:47:ARG:O	65:BP:49:LEU:CD2	2.36	0.73
68:BS:59:LEU:HD21	68:BS:63:GLU:HB3	1.71	0.73
79:Bd:38:MET:CE	79:Bd:43:PHE:CA	2.64	0.73
3:AA:208:GLU:OE1	48:A2:1613:A:H2	1.69	0.73
5:AC:212:ASN:ND2	5:AC:255:SER:OG	2.21	0.73
6:AD:232:THR:HG23	6:AD:235:MET:HE2	1.69	0.73
14:AL:78:LEU:HD11	48:A2:157:G:H4'	1.70	0.73
19:AQ:14:ARG:HH21	48:A2:1676:C:H41	1.36	0.73
25:AW:64:SER:O	25:AW:67:ILE:CG1	2.36	0.73
30:Ab:45:PHE:CE2	48:A2:1797:G:C2	2.75	0.73
47:Au:104:ALA:HB2	47:Au:128:LEU:HD21	1.70	0.73
49:B1:1314:U:C2	60:BK:2:LEU:CA	2.71	0.73
49:B1:1415:C:O3'	69:BT:129:ARG:HA	1.87	0.73
49:B1:1535:U:O2'	55:BF:82:ASN:ND2	2.21	0.73
49:B1:1791:A:H1'	56:BG:66:GLY:O	1.88	0.73
51:BB:182:LYS:HE3	51:BB:231:LEU:HA	1.71	0.73
64:BO:142:ARG:HG3	76:Ba:22:ARG:HG3	1.70	0.73
70:BU:22:ILE:HG23	70:BU:114:VAL:CG1	2.17	0.73
75:BZ:77:LEU:HD23	75:BZ:77:LEU:N	2.02	0.73
5:AC:149:GLU:C	46:At:71:ARG:O	2.30	0.73
7:AE:219:LYS:HZ1	48:A2:1274:G:H5'	1.52	0.73
13:AK:58:ASN:HA	13:AK:61:MET:CG	2.17	0.73
14:AL:16:LYS:HG2	14:AL:21:ARG:HH22	1.53	0.73
16:AN:13:LYS:HZ3	37:Ai:44:ILE:HG23	1.53	0.73
24:AV:15:ARG:CZ	48:A2:4632:C:O2	2.36	0.73
26:AX:56:ARG:NH1	26:AX:62:ARG:HH21	1.86	0.73
28:AZ:59:LYS:CD	28:AZ:60:LYS:H	1.98	0.73
28:AZ:95:VAL:CG1	28:AZ:109:LYS:CG	2.67	0.73
39:Ak:8:ILE:HG23	39:Ak:56:LEU:CD1	2.15	0.73
48:A2:4160:G:N3	83:Bv:74:C:N3	2.36	0.73
49:B1:227:U:H1'	49:B1:228:C:O5'	1.87	0.73
49:B1:1399:C:H6	49:B1:1399:C:P	2.12	0.73
51:BB:70:SER:HB2	51:BB:83:LYS:HA	1.69	0.73
59:BJ:12:THR:O	59:BJ:45:ARG:HG2	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BJ:84:ILE:O	59:BJ:108:ARG:CZ	2.37	0.73
59:BJ:136:ARG:O	59:BJ:158:ASP:O	2.07	0.73
3:AA:224:THR:HB	48:A2:3677:C:H4'	1.71	0.73
7:AE:105:ARG:NE	48:A2:464:A:N1	2.36	0.73
7:AE:203:ILE:HG13	7:AE:206:VAL:CG2	2.18	0.73
16:AN:84:PRO:HA	16:AN:87:HIS:CD2	2.24	0.73
17:AO:34:VAL:HG11	17:AO:112:TYR:CE2	2.24	0.73
19:AQ:104:ARG:HD2	48:A2:1335:C:OP2	1.89	0.73
32:Ad:38:PHE:CD1	48:A2:4596:U:C2	2.77	0.73
40:Al:13:LEU:HG	48:A2:2386:G:O2'	1.89	0.73
43:Ao:106:PHE:CE1	83:Bv:19:G:C5	2.76	0.73
45:Aq:84:ALA:HB1	45:Aq:104:ILE:HG13	1.69	0.73
49:B1:1679:A:N7	55:BF:60:ARG:CB	2.50	0.73
51:BB:127:VAL:HG13	51:BB:176:VAL:HG12	1.71	0.73
53:BD:75:LYS:O	60:BK:22:VAL:HG11	1.88	0.73
58:BI:150:ASP:OD1	58:BI:154:LYS:CE	2.36	0.73
4:AB:393:LYS:HE3	48:A2:4998:U:C5'	2.18	0.73
7:AE:130:LYS:HG2	48:A2:1268:U:H1'	1.71	0.73
7:AE:134:SER:HB2	48:A2:1272:C:OP1	1.89	0.73
12:AJ:99:PHE:HB3	12:AJ:159:LYS:CE	2.17	0.73
13:AK:48:ARG:CZ	45:Aq:122:ALA:HB2	2.18	0.73
19:AQ:11:ARG:HH11	19:AQ:11:ARG:HG3	1.52	0.73
28:AZ:25:ILE:HG12	28:AZ:43:VAL:HG12	1.71	0.73
45:Aq:38:SER:H	45:Aq:68:GLN:HA	1.54	0.73
47:Au:28:PHE:HZ	47:Au:209:THR:HB	1.54	0.73
48:A2:69:A:O2'	48:A2:71:C:N4	2.21	0.73
48:A2:379:A:H4'	48:A2:380:A:H5'	1.70	0.73
48:A2:1308:C:H4'	48:A2:1309:A:O5'	1.87	0.73
48:A2:1989:U:C6	48:A2:1992:C:H5	2.07	0.73
49:B1:742:U:C5	49:B1:743:U:C4	2.77	0.73
49:B1:1143:A:OP2	52:BC:187:ARG:NH2	2.21	0.73
49:B1:1305:C:H5	81:Bf:95:ARG:HH22	1.33	0.73
51:BB:131:ASP:OD1	51:BB:181:LEU:CD1	2.37	0.73
52:BC:167:ARG:HD3	52:BC:219:ILE:CD1	2.18	0.73
54:BE:86:PHE:CD2	54:BE:184:ILE:CG2	2.72	0.73
54:BE:91:SER:C	54:BE:92:ILE:HD12	2.14	0.73
61:BL:30:LYS:HD3	61:BL:33:LEU:HD11	1.70	0.73
66:BQ:37:ARG:HG3	69:BT:7:LYS:HG2	1.71	0.73
67:BR:3:ARG:HG3	67:BR:4:VAL:N	2.02	0.73
67:BR:36:GLU:OE2	67:BR:47:ARG:CD	2.19	0.73
70:BU:22:ILE:HD12	70:BU:22:ILE:N	2.03	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:BU:50:VAL:HG13	70:BU:91:LEU:CD2	2.17	0.73
3:AA:224:THR:HB	48:A2:3677:C:C4'	2.18	0.73
4:AB:261:ARG:HB2	17:AO:64:THR:HG21	1.71	0.73
7:AE:125:LEU:CA	48:A2:946:G:H21	2.01	0.73
19:AQ:72:LEU:HD13	48:A2:1439:G:C5'	2.18	0.73
26:AX:51:THR:O	48:A2:2454:G:N2	2.18	0.73
38:Aj:21:ARG:CZ	38:Aj:39:TYR:HD1	2.02	0.73
47:Au:165:LEU:CD1	48:A2:3940:G:C5'	2.58	0.73
48:A2:3596:G:C3'	48:A2:3596:G:C8	2.72	0.73
49:B1:748:C:H5'	49:B1:749:U:C6	2.23	0.73
49:B1:872:A:C2	49:B1:915:G:C5	2.76	0.73
49:B1:1781:A:O2'	49:B1:1782:G:H5'	1.89	0.73
50:BA:110:ASN:O	50:BA:116:PHE:HD2	1.72	0.73
63:BN:80:LEU:HD12	63:BN:80:LEU:N	2.04	0.73
69:BT:41:LYS:HE2	69:BT:43:LYS:NZ	2.04	0.73
70:BU:24:LEU:HD23	70:BU:112:VAL:HA	1.71	0.73
81:Bf:126:CYS:HG	81:Bf:144:CYS:CB	2.00	0.73
5:AC:217:ILE:O	5:AC:220:ALA:N	2.22	0.73
6:AD:279:ARG:HH21	48:A2:1160:U:H5"	1.51	0.73
10:AH:99:PHE:HE2	48:A2:4564:A:HO2'	1.33	0.73
19:AQ:164:LYS:HD2	48:A2:1479:A:C1'	2.14	0.73
20:AR:126:LYS:CG	20:AR:131:VAL:HG11	2.18	0.73
20:AR:144:LYS:HZ2	20:AR:144:LYS:HB2	1.54	0.73
23:AU:47:ILE:HD12	23:AU:63:ILE:CD1	2.15	0.73
23:AU:47:ILE:CG2	23:AU:49:VAL:CG2	2.57	0.73
26:AX:116:LEU:HB3	26:AX:117:TYR:CD1	2.24	0.73
48:A2:139:G:H5"	48:A2:139:G:C8	2.24	0.73
48:A2:1740:G:N2	48:A2:1741:G:C4	2.57	0.73
50:BA:205:ARG:NH2	67:BR:86:PRO:HG2	2.03	0.73
62:BM:94:ILE:HG22	62:BM:100:PRO:HA	1.70	0.73
66:BQ:42:ILE:HD12	66:BQ:48:GLN:HB2	1.71	0.73
79:Bd:19:ARG:NH1	79:Bd:33:LYS:NZ	2.36	0.73
5:AC:211:TYR:CD2	5:AC:217:ILE:CG2	2.71	0.73
7:AE:140:LEU:HD23	7:AE:140:LEU:N	2.03	0.73
7:AE:157:HIS:CE1	7:AE:184:VAL:HG22	2.24	0.73
14:AL:129:ARG:H	14:AL:129:ARG:CD	1.96	0.73
20:AR:26:PRO:HB2	48:A2:2365:U:O2'	1.89	0.73
20:AR:144:LYS:HB2	20:AR:144:LYS:NZ	2.03	0.73
25:AW:116:LYS:CE	49:B1:328:U:OP1	2.36	0.73
25:AW:116:LYS:CD	49:B1:328:U:OP1	2.37	0.73
34:Af:59:THR:CG2	34:Af:60:PRO:HD2	2.19	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:Aq:38:SER:N	45:Aq:68:GLN:HA	2.04	0.73
48:A2:191:C:C6	48:A2:191:C:H5"	2.24	0.73
48:A2:191:C:H6	48:A2:191:C:C5'	2.02	0.73
48:A2:677:G:H8	48:A2:677:G:C5'	2.01	0.73
48:A2:905:G:H3'	48:A2:905:G:C4	2.22	0.73
49:B1:1020:A:H4'	63:BN:128:TYR:OH	1.89	0.73
49:B1:1483:A:C4'	53:BD:160:SER:HB3	2.17	0.73
52:BC:200:ARG:HG2	52:BC:200:ARG:NH1	1.99	0.73
69:BT:42:HIS:O	69:BT:43:LYS:HD3	1.87	0.73
70:BU:56:MET:CE	70:BU:88:LEU:HD22	2.19	0.73
75:BZ:99:LEU:HD23	75:BZ:109:TYR:CE1	2.23	0.73
79:Bd:36:LEU:HD23	79:Bd:36:LEU:C	2.14	0.73
4:AB:252:ALA:HB3	48:A2:4419:U:O2	1.88	0.72
5:AC:54:VAL:CG1	5:AC:105:THR:O	2.36	0.72
14:AL:140:SER:O	14:AL:143:GLU:N	2.22	0.72
46:At:98:ARG:NH1	48:A2:951:A:H5"	1.99	0.72
48:A2:132:G:N3	48:A2:132:G:H3'	2.04	0.72
48:A2:462:U:H6	48:A2:462:U:C5'	2.00	0.72
48:A2:1224:C:H3'	48:A2:1225:G:N3	2.04	0.72
48:A2:2606:C:H2'	48:A2:2607:U:H6	1.50	0.72
49:B1:536:A:C4'	80:Be:47:PRO:HG2	2.16	0.72
49:B1:741:C:O2	49:B1:741:C:H5'	1.88	0.72
49:B1:1283:C:C6	62:BM:102:LYS:NZ	2.54	0.72
49:B1:1333:U:C4'	53:BD:147:ALA:HB2	2.18	0.72
49:B1:1825:A:OP1	84:Bx:50:U:P	2.47	0.72
51:BB:81:PHE:HD1	51:BB:81:PHE:H	1.37	0.72
59:BJ:161:LEU:O	59:BJ:162:ARG:NH1	2.21	0.72
66:BQ:42:ILE:HD12	66:BQ:48:GLN:CG	2.19	0.72
69:BT:41:LYS:HZ1	69:BT:81:GLY:CA	1.95	0.72
80:Be:51:LYS:HD2	84:Bx:59:U:O5'	1.87	0.72
3:AA:227:ARG:O	3:AA:234:LYS:HE2	1.89	0.72
13:AK:55:MET:SD	13:AK:61:MET:SD	2.87	0.72
15:AM:4:ARG:HH12	48:A2:4726:A:H62	1.36	0.72
37:Ai:15:HIS:HB3	48:A2:72:C:H6	1.52	0.72
47:Au:67:VAL:HG21	47:Au:111:LEU:HD12	1.71	0.72
48:A2:1226:C:OP2	48:A2:1226:C:H6	1.64	0.72
49:B1:1660:C:H5"	79:Bd:19:ARG:HH12	1.52	0.72
59:BJ:109:ARG:NH1	59:BJ:111:GLN:NE2	2.35	0.72
59:BJ:149:VAL:HG11	59:BJ:154:GLN:HG3	1.69	0.72
61:BL:13:GLN:HG2	61:BL:18:GLN:HE21	1.54	0.72
67:BR:88:VAL:HG13	67:BR:89:SER:H	1.52	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:BZ:99:LEU:CD2	75:BZ:109:TYR:HE1	2.03	0.72
4:AB:252:ALA:HB3	48:A2:4419:U:H1'	1.71	0.72
8:AF:148:LYS:HG2	48:A2:930:A:H3'	1.71	0.72
13:AK:30:VAL:HG12	13:AK:87:GLY:H	1.53	0.72
13:AK:58:ASN:HA	13:AK:61:MET:HG2	1.71	0.72
15:AM:96:GLU:O	15:AM:100:ARG:HD3	1.89	0.72
28:AZ:51:ARG:CB	28:AZ:65:ARG:HD2	2.18	0.72
38:Aj:21:ARG:CD	38:Aj:39:TYR:CE1	2.69	0.72
47:Au:60:ARG:CG	47:Au:61:PRO:HD3	2.19	0.72
48:A2:3888:A:H2'	48:A2:3889:G:H5"	1.72	0.72
48:A2:4026:A:H4'	48:A2:4026:A:OP1	1.88	0.72
48:A2:4661:U:H4'	48:A2:4662:A:OP1	1.88	0.72
49:B1:320:G:H2'	49:B1:321:C:C6	2.23	0.72
49:B1:659:G:N3	73:BX:17:ARG:NH2	2.37	0.72
49:B1:870:A:N6	49:B1:916:A:OP2	2.22	0.72
49:B1:1286:G:C1'	62:BM:34:GLY:CA	2.64	0.72
52:BC:97:PHE:C	52:BC:98:LEU:CD2	2.53	0.72
54:BE:100:ARG:NH1	54:BE:236:ILE:HG23	2.04	0.72
68:BS:48:ALA:HB1	68:BS:50:ILE:CD1	2.18	0.72
71:BV:37:ALA:HB3	71:BV:46:PHE:HE1	1.50	0.72
2:A4:108:G:H5'	2:A4:109:U:OP2	1.89	0.72
7:AE:219:LYS:HG2	48:A2:4898:C:C4	2.22	0.72
19:AQ:42:THR:CB	48:A2:1411:U:H5"	2.19	0.72
19:AQ:172:ARG:HH12	29:Aa:56:VAL:HG22	1.53	0.72
28:AZ:26:VAL:CG1	28:AZ:91:LEU:HD23	2.19	0.72
29:Aa:91:ALA:HB1	29:Aa:120:GLN:CG	2.20	0.72
39:Ak:40:ARG:HB3	39:Ak:41:TYR:CD1	2.25	0.72
48:A2:1268:U:C2'	48:A2:1269:C:O5'	2.38	0.72
48:A2:4160:G:N1	83:Bv:74:C:N4	2.36	0.72
49:B1:330:G:H2'	49:B1:331:C:H5'	1.70	0.72
49:B1:1314:U:C1'	60:BK:2:LEU:HD13	2.18	0.72
49:B1:1417:C:H1'	69:BT:2:PRO:HA	1.70	0.72
49:B1:1423:C:OP1	66:BQ:33:LYS:HD2	1.90	0.72
49:B1:1519:U:O2	49:B1:1623:A:N7	2.23	0.72
50:BA:201:LEU:HD23	50:BA:201:LEU:N	2.04	0.72
53:BD:76:ARG:NE	60:BK:66:HIS:CE1	2.58	0.72
53:BD:116:ARG:NH2	53:BD:150:MET:HE3	2.03	0.72
54:BE:47:PHE:CE1	54:BE:111:VAL:CG1	2.72	0.72
56:BG:216:ARG:HH21	56:BG:219:GLU:CG	2.02	0.72
59:BJ:90:GLY:O	59:BJ:92:MET:N	2.22	0.72
71:BV:38:GLU:HB2	71:BV:49:GLN:O	1.88	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:Bg:88:ARG:HD2	82:Bg:90:TRP:NE1	2.04	0.72
14:AL:60:ARG:NH1	48:A2:72:C:H42	1.88	0.72
20:AR:59:SER:HB2	48:A2:2612:U:O3'	1.90	0.72
27:AY:36:LYS:HD3	27:AY:36:LYS:N	2.00	0.72
32:Ad:38:PHE:N	48:A2:4596:U:H3	1.87	0.72
39:Ak:12:LEU:C	39:Ak:12:LEU:HD23	2.15	0.72
39:Ak:35:LYS:NZ	48:A2:2672:G:OP1	2.21	0.72
43:Ao:45:GLN:HA	43:Ao:52:THR:HG21	1.71	0.72
45:Aq:23:GLY:O	45:Aq:27:ALA:HB3	1.89	0.72
45:Aq:46:ILE:HA	45:Aq:49:ALA:HB2	1.71	0.72
48:A2:904:A:H4'	48:A2:905:G:OP1	1.90	0.72
49:B1:1237:C:C5'	65:BP:130:ARG:HG3	2.18	0.72
50:BA:28:THR:CG2	50:BA:46:ILE:CD1	2.67	0.72
65:BP:119:PHE:CZ	68:BS:117:ILE:HG23	2.25	0.72
73:BX:132:ALA:HA	73:BX:137:LYS:HB2	1.71	0.72
3:AA:95:GLN:HB3	48:A2:4087:U:O4	1.89	0.72
4:AB:393:LYS:HE3	48:A2:5000:A:H4'	1.69	0.72
11:AI:113:THR:HG22	11:AI:114:GLY:H	1.54	0.72
18:AP:2:VAL:HG12	48:A2:403:G:OP2	1.89	0.72
31:Ac:101:ASP:OD2	63:BN:42:LYS:O	2.07	0.72
45:Aq:77:ALA:O	45:Aq:79:ALA:N	2.23	0.72
46:At:95:HIS:CE1	48:A2:952:G:H5"	2.23	0.72
47:Au:26:ARG:NE	48:A2:3946:C:OP1	2.22	0.72
48:A2:4106:C:H42	48:A2:4110:C:H42	1.35	0.72
49:B1:307:G:H1'	58:BI:45:THR:HG21	1.71	0.72
49:B1:1286:G:N9	62:BM:34:GLY:HA2	2.05	0.72
52:BC:104:ASP:HB2	52:BC:129:ALA:O	1.88	0.72
52:BC:252:THR:OG1	72:BW:99:PHE:HZ	1.67	0.72
53:BD:116:ARG:CZ	53:BD:150:MET:HE2	2.20	0.72
60:BK:28:HIS:CE1	60:BK:32:HIS:NE2	2.56	0.72
65:BP:50:ARG:O	65:BP:52:LYS:N	2.21	0.72
75:BZ:62:VAL:CG2	75:BZ:97:ILE:HD11	2.19	0.72
2:A4:90:A:HO2'	11:AI:11:TYR:HD1	1.36	0.72
4:AB:390:GLY:HA3	25:AW:63:GLN:NE2	2.05	0.72
5:AC:48:ASN:ND2	48:A2:1353:G:OP1	2.22	0.72
7:AE:109:LEU:O	7:AE:110:ARG:C	2.33	0.72
10:AH:8:GLN:NE2	10:AH:8:GLN:HA	2.02	0.72
13:AK:25:PRO:CD	13:AK:92:LYS:HB3	2.20	0.72
14:AL:139:SER:O	14:AL:141:ALA:N	2.23	0.72
21:AS:74:ARG:HH22	48:A2:909:C:H5'	1.53	0.72
24:AV:97:TYR:CE1	25:AW:21:TYR:CD1	2.77	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Au:60:ARG:HE	47:Au:61:PRO:HD3	1.54	0.72
47:Au:104:ALA:HB1	47:Au:133:LYS:CD	2.19	0.72
58:BI:132:GLU:O	58:BI:133:GLU:HB3	1.88	0.72
79:Bd:23:VAL:HG11	79:Bd:46:TYR:CE1	2.25	0.72
5:AC:190:ARG:NE	5:AC:202:ILE:HD12	1.95	0.72
17:AO:140:ARG:NH2	48:A2:4643:A:H4'	2.04	0.72
24:AV:97:TYR:CZ	25:AW:21:TYR:CD1	2.77	0.72
27:AY:8:THR:HG23	48:A2:340:G:H5"	1.71	0.72
33:Ae:36:ARG:HG3	48:A2:1644:C:OP1	1.90	0.72
34:Af:19:ARG:O	48:A2:1294:G:C5'	2.38	0.72
48:A2:707:C:H2'	48:A2:708:U:C6	2.24	0.72
48:A2:2532:A:C2	48:A2:2532:A:OP1	2.43	0.72
49:B1:65:C:OP2	56:BG:175:LYS:HG3	1.90	0.72
52:BC:256:TRP:CZ2	72:BW:68:ARG:HG2	2.24	0.72
53:BD:116:ARG:NE	53:BD:150:MET:CE	2.53	0.72
55:BF:93:VAL:HG12	55:BF:97:PHE:CZ	2.23	0.72
75:BZ:59:CYS:O	75:BZ:63:PRO:HD3	1.90	0.72
76:Ba:30:VAL:HG21	76:Ba:74:CYS:HB2	1.69	0.72
5:AC:190:ARG:CG	5:AC:202:ILE:HD11	2.19	0.72
5:AC:211:TYR:CE1	5:AC:229:LEU:HA	2.24	0.72
6:AD:17:GLN:HG2	22:AT:20:ARG:CB	2.19	0.72
8:AF:159:TYR:CD1	8:AF:166:ARG:HD3	2.25	0.72
21:AS:7:LEU:HD23	21:AS:107:THR:HA	1.70	0.72
21:AS:83:ARG:HD3	21:AS:125:GLN:OE1	1.90	0.72
25:AW:80:ARG:HH21	56:BG:128:THR:HB	1.55	0.72
45:Aq:38:SER:CB	45:Aq:39:PRO:CD	2.67	0.72
45:Aq:138:SER:C	45:Aq:140:GLY:H	1.97	0.72
49:B1:747:U:C2'	49:B1:749:U:O4	2.37	0.72
49:B1:840:C:H2'	74:BY:14:THR:HG23	1.71	0.72
49:B1:1865:C:H5"	76:Ba:87:ARG:NH2	2.04	0.72
51:BB:171:ILE:O	51:BB:175:GLU:HG2	1.89	0.72
52:BC:256:TRP:HZ3	72:BW:66:THR:HG22	1.54	0.72
54:BE:36:HIS:HE2	54:BE:85:GLY:HA3	1.52	0.72
54:BE:98:HIS:CB	54:BE:114:ILE:HG23	2.08	0.72
65:BP:65:LYS:CA	65:BP:66:GLU:OE1	2.37	0.72
68:BS:74:PRO:CB	68:BS:84:LEU:HD21	2.18	0.72
4:AB:57:VAL:HG22	4:AB:73:VAL:HG22	1.71	0.72
6:AD:4:VAL:CG2	48:A2:1737:C:H1'	2.18	0.72
13:AK:35:VAL:HB	13:AK:39:GLN:CB	2.20	0.72
22:AT:128:LEU:HD12	22:AT:128:LEU:N	2.03	0.72
25:AW:72:THR:CB	49:B1:1783:C:N4	2.53	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:Aa:91:ALA:HB1	29:Aa:120:GLN:CB	2.19	0.72
30:Ab:50:ASN:HA	48:A2:1795:U:H1'	1.71	0.72
34:Af:34:TYR:CD1	48:A2:1900:G:N2	2.57	0.72
48:A2:945:G:H1'	48:A2:1267:G:N2	2.00	0.72
48:A2:1888:A:H2'	48:A2:1889:A:C8	2.25	0.72
48:A2:4026:A:H5"	48:A2:4026:A:C8	2.24	0.72
49:B1:72:C:OP2	49:B1:72:C:C6	2.43	0.72
49:B1:695:C:O2'	49:B1:696:G:H5'	1.89	0.72
50:BA:39:TYR:CE2	67:BR:105:MET:SD	2.83	0.72
50:BA:201:LEU:HD22	67:BR:85:VAL:CG2	2.20	0.72
54:BE:149:TYR:CD2	56:BG:205:GLU:HB3	2.24	0.72
55:BF:23:TRP:CD1	55:BF:108:PRO:CG	2.73	0.72
59:BJ:35:TYR:CZ	59:BJ:106:LEU:HB2	2.25	0.72
59:BJ:117:LEU:HD13	59:BJ:157:ILE:CD1	1.89	0.72
66:BQ:44:PRO:HG2	66:BQ:47:LEU:CG	2.20	0.72
74:BY:41:ARG:NH2	74:BY:94:HIS:CE1	2.51	0.72
1:A3:126:C:H3'	1:A3:126:C:O2	1.90	0.71
5:AC:322:LEU:N	48:A2:1264:G:C8	2.58	0.71
7:AE:96:VAL:CA	7:AE:107:VAL:HG12	2.19	0.71
8:AF:131:ASN:ND2	48:A2:1709:U:C5'	2.52	0.71
10:AH:5:LEU:HD23	10:AH:5:LEU:C	2.14	0.71
17:AO:74:ARG:HD2	17:AO:145:VAL:HG12	1.71	0.71
21:AS:7:LEU:CD2	21:AS:107:THR:HA	2.19	0.71
47:Au:60:ARG:CG	47:Au:171:HIS:HB3	2.20	0.71
48:A2:1989:U:H6	48:A2:1991:A:N7	1.87	0.71
48:A2:4858:C:H3'	48:A2:4859:G:H5"	1.72	0.71
49:B1:465:A:H4'	49:B1:466:G:H5'	1.71	0.71
49:B1:1286:G:OP2	62:BM:104:VAL:CB	2.36	0.71
67:BR:13:ALA:O	67:BR:17:ILE:HG22	1.88	0.71
82:Bg:45:LEU:HD22	82:Bg:52:TYR:CE2	2.25	0.71
7:AE:233:PHE:HD2	7:AE:236:GLU:CD	1.98	0.71
8:AF:73:ARG:HH21	48:A2:717:G:C5'	2.02	0.71
8:AF:164:LYS:C	8:AF:165:LYS:HG3	2.13	0.71
13:AK:16:LYS:O	13:AK:19:GLN:N	2.22	0.71
13:AK:102:LEU:O	13:AK:104:ALA:N	2.23	0.71
20:AR:126:LYS:HG2	20:AR:131:VAL:HG11	1.73	0.71
35:Ag:54:ARG:HH22	48:A2:2629:G:N2	1.89	0.71
36:Ah:24:LEU:HB3	36:Ah:54:ILE:HG12	1.71	0.71
37:Ai:62:LYS:HE2	37:Ai:98:ARG:NH1	2.05	0.71
43:Ao:102:GLN:HA	43:Ao:102:GLN:NE2	2.05	0.71
45:Aq:38:SER:HB3	45:Aq:39:PRO:CD	2.17	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:3608:U:H2'	48:A2:3609:G:H5'	1.72	0.71
48:A2:3730:A:C8	48:A2:3736:G:N2	2.58	0.71
48:A2:3929:G:H1'	83:Bw:19:G:C4	2.25	0.71
49:B1:1020:A:OP2	63:BN:70:LYS:CE	2.39	0.71
49:B1:1283:C:C3'	62:BM:102:LYS:NZ	2.53	0.71
49:B1:1488:C:H3'	49:B1:1489:A:C4'	2.20	0.71
49:B1:1552:G:O4'	49:B1:1557:C:N4	2.23	0.71
49:B1:1648:G:H5"	66:BQ:126:ARG:O	1.90	0.71
53:BD:210:ILE:CA	67:BR:39:ALA:HB2	2.20	0.71
54:BE:87:MET:HG2	54:BE:123:LEU:O	1.89	0.71
59:BJ:39:ASN:HB2	80:Be:34:ARG:NH2	2.04	0.71
66:BQ:42:ILE:CD1	66:BQ:48:GLN:HG3	2.19	0.71
75:BZ:46:ASN:OD1	75:BZ:78:LYS:C	2.33	0.71
80:Be:21:LYS:O	80:Be:22:GLN:HG2	1.90	0.71
83:Bw:40:C:H2'	83:Bw:41:C:C5	2.25	0.71
4:AB:225:GLY:C	48:A2:4936:G:OP2	2.34	0.71
5:AC:57:LEU:HD13	5:AC:57:LEU:C	2.14	0.71
7:AE:140:LEU:HD13	7:AE:167:GLN:NE2	2.03	0.71
7:AE:203:ILE:HA	7:AE:206:VAL:HG21	1.73	0.71
9:AG:113:ARG:CZ	48:A2:119:G:C5	2.73	0.71
9:AG:141:ASN:HB2	48:A2:149:U:C4	2.25	0.71
10:AH:60:TRP:CD1	21:AS:153:PRO:HG3	2.24	0.71
13:AK:107:VAL:HB	13:AK:108:PRO:HD3	1.72	0.71
29:Aa:61:TYR:CD2	48:A2:288:G:N2	2.57	0.71
31:Ac:83:THR:HG23	63:BN:147:SER:O	1.91	0.71
35:Ag:4:ARG:HD3	48:A2:2374:A:C2	2.24	0.71
44:Ap:18:TYR:H	48:A2:3606:A:N6	1.88	0.71
49:B1:580:U:C2'	74:BY:62:THR:CB	2.67	0.71
49:B1:1862:G:C6	76:Ba:75:VAL:CG2	2.74	0.71
50:BA:38:ILE:HG13	50:BA:48:ILE:O	1.90	0.71
54:BE:137:PRO:CG	56:BG:209:TYR:CZ	2.73	0.71
67:BR:3:ARG:C	67:BR:4:VAL:HG13	2.15	0.71
72:BW:3:ARG:NH1	72:BW:3:ARG:HG2	2.05	0.71
4:AB:55:HIS:CE1	48:A2:4589:U:O2'	2.43	0.71
7:AE:123:ARG:HH21	7:AE:126:LEU:CD2	2.03	0.71
7:AE:237:LYS:O	7:AE:237:LYS:HD3	1.90	0.71
8:AF:219:GLY:C	8:AF:220:MET:HG3	2.13	0.71
22:AT:17:ARG:NH2	22:AT:45:MET:CE	2.53	0.71
43:Ao:4:VAL:CG2	43:Ao:93:LEU:O	2.37	0.71
48:A2:4983:C:P	58:BI:169:GLY:C	2.73	0.71
49:B1:291:G:O2'	61:BL:42:LEU:N	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:551:U:OP1	80:Be:39:ASN:OD1	2.08	0.71
49:B1:574:A:H4'	74:BY:89:HIS:CG	2.24	0.71
50:BA:7:VAL:CG2	71:BV:42:VAL:HA	2.20	0.71
68:BS:48:ALA:HB1	68:BS:50:ILE:HD12	1.72	0.71
72:BW:40:VAL:HG12	72:BW:44:HIS:CE1	2.25	0.71
75:BZ:48:VAL:HG22	75:BZ:80:ARG:NE	2.05	0.71
83:Bw:17:C:H5"	83:Bw:17:C:C6	2.26	0.71
4:AB:268:ARG:NH1	48:A2:3867:C:O2'	2.24	0.71
5:AC:53:ALA:HB3	48:A2:344:C:H1'	1.71	0.71
5:AC:73:VAL:CG2	5:AC:74:ALA:N	2.44	0.71
5:AC:95:MET:SD	5:AC:95:MET:N	2.63	0.71
6:AD:224:SER:CA	6:AD:227:ILE:HD11	2.20	0.71
7:AE:203:ILE:CG1	7:AE:206:VAL:CG2	2.68	0.71
17:AO:63:ASN:ND2	48:A2:2026:G:OP1	2.24	0.71
20:AR:23:TRP:CH2	20:AR:32:ILE:HG21	2.25	0.71
22:AT:54:HIS:NE2	48:A2:4263:U:H4'	2.06	0.71
26:AX:83:THR:HG21	48:A2:2413:G:H5'	1.70	0.71
27:AY:15:ARG:NH1	48:A2:226:G:OP1	2.23	0.71
29:Aa:31:GLY:HA2	48:A2:39:A:C8	2.25	0.71
35:Ag:12:SER:O	48:A2:2782:U:O2'	2.07	0.71
47:Au:187:VAL:O	47:Au:191:VAL:HG13	1.90	0.71
48:A2:229:G:O2'	48:A2:230:U:H5'	1.89	0.71
48:A2:2825:G:H5"	48:A2:2825:G:C8	2.25	0.71
48:A2:3596:G:C8	48:A2:3596:G:H3'	2.25	0.71
49:B1:407:G:C6	73:BX:36:LEU:CD2	2.71	0.71
49:B1:798:G:O3'	57:BH:110:THR:CG2	2.35	0.71
50:BA:63:ARG:HH12	71:BV:78:ILE:HG12	1.55	0.71
50:BA:206:ASP:CB	50:BA:210:ILE:HD13	2.08	0.71
52:BC:104:ASP:HB3	52:BC:130:ILE:HA	1.72	0.71
54:BE:100:ARG:O	54:BE:102:VAL:HG13	1.90	0.71
66:BQ:33:LYS:CD	66:BQ:36:GLY:HA2	2.20	0.71
71:BV:36:VAL:HG22	71:BV:51:LYS:O	1.91	0.71
77:Bb:33:MET:HE3	77:Bb:79:PHE:HB3	1.72	0.71
79:Bd:23:VAL:HG21	79:Bd:38:MET:CE	2.20	0.71
5:AC:72:ALA:O	5:AC:73:VAL:HG22	1.90	0.71
6:AD:22:ARG:NH2	6:AD:27:LYS:HZ3	1.88	0.71
20:AR:23:TRP:HB3	48:A2:2366:G:OP1	1.90	0.71
24:AV:42:VAL:CB	24:AV:45:ILE:HD11	2.17	0.71
24:AV:90:ARG:CZ	24:AV:96:LEU:HD21	2.21	0.71
33:Ae:12:ILE:HG23	33:Ae:66:THR:HB	1.71	0.71
47:Au:98:LYS:HE3	48:A2:4013:G:OP2	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:309:G:H5"	48:A2:310:U:P	2.30	0.71
48:A2:3929:G:N3	83:Bw:19:G:C2	2.58	0.71
49:B1:161:U:O4	74:BY:115:LYS:CE	2.37	0.71
49:B1:294:U:N3	61:BL:65:ASN:HB3	2.04	0.71
49:B1:522:A:OP1	59:BJ:146:SER:HB2	1.91	0.71
49:B1:870:A:O2'	49:B1:916:A:C2	2.43	0.71
51:BB:44:ILE:HD13	51:BB:74:LEU:HD11	1.72	0.71
54:BE:123:LEU:HD12	54:BE:236:ILE:HG12	1.70	0.71
55:BF:103:LEU:HD23	55:BF:104:THR:N	2.06	0.71
62:BM:32:ALA:HB3	62:BM:110:VAL:HB	1.71	0.71
67:BR:99:ASP:C	67:BR:102:THR:HG22	2.16	0.71
71:BV:37:ALA:HB1	71:BV:46:PHE:CE1	2.26	0.71
1:A3:149:G:C1'	9:AG:61:ILE:HD12	2.20	0.71
4:AB:298:LEU:O	4:AB:298:LEU:HD23	1.90	0.71
5:AC:8:ILE:HG23	5:AC:149:GLU:OE2	1.91	0.71
16:AN:62:TYR:CD1	16:AN:134:LEU:HD12	2.26	0.71
16:AN:138:PHE:CD1	48:A2:18:C:H4'	2.25	0.71
45:Aq:46:ILE:HD13	45:Aq:71:ILE:CB	2.17	0.71
47:Au:205:TYR:CE2	47:Au:215:ARG:HB2	2.26	0.71
48:A2:132:G:C6	48:A2:135:G:N1	2.59	0.71
48:A2:2498:U:H4'	48:A2:2498:U:OP1	1.89	0.71
48:A2:4084:G:H4'	48:A2:4085:C:H4'	1.73	0.71
49:B1:402:C:C5'	58:BI:14:THR:HG21	2.18	0.71
49:B1:580:U:O2'	74:BY:62:THR:CG2	2.39	0.71
49:B1:823:U:H5	74:BY:64:PHE:CE1	2.06	0.71
49:B1:823:U:C6	74:BY:64:PHE:CD1	2.79	0.71
49:B1:861:A:H4'	72:BW:107:SER:O	1.89	0.71
49:B1:862:A:N3	72:BW:105:THR:HG22	2.06	0.71
49:B1:1444:U:O2'	49:B1:1445:U:O4'	2.06	0.71
53:BD:76:ARG:O	53:BD:77:PHE:CD2	2.44	0.71
54:BE:95:THR:HB	54:BE:96:GLY:C	2.16	0.71
66:BQ:39:LEU:HD11	66:BQ:51:LEU:CD2	2.10	0.71
70:BU:49:LYS:HB2	70:BU:92:HIS:CE1	2.25	0.71
2:A4:95:C:H4'	8:AF:229:GLU:CG	2.20	0.71
2:A4:95:C:C4'	8:AF:229:GLU:OE2	2.36	0.71
13:AK:59:THR:CB	48:A2:1942:G:H5'	2.11	0.71
32:Ad:38:PHE:CE1	48:A2:4596:U:C2	2.78	0.71
32:Ad:57:MET:CE	32:Ad:90:ARG:HB2	2.19	0.71
45:Aq:42:VAL:HA	45:Aq:71:ILE:HG13	1.71	0.71
45:Aq:62:LEU:HA	45:Aq:70:GLN:O	1.91	0.71
48:A2:132:G:O6	48:A2:135:G:N2	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:1258:G:C4	48:A2:1259:C:C5	2.79	0.71
48:A2:2880:G:H2'	48:A2:2881:G:H5'	1.71	0.71
48:A2:4982:C:H2'	58:BI:168:GLN:C	2.15	0.71
49:B1:181:A:H1'	49:B1:182:C:N1	2.05	0.71
49:B1:1415:C:H4'	69:BT:128:GLN:HG3	1.73	0.71
50:BA:37:TYR:HE2	50:BA:162:PRO:HD3	1.55	0.71
54:BE:102:VAL:O	54:BE:109:PHE:CD1	2.44	0.71
55:BF:23:TRP:HE1	55:BF:97:PHE:HB3	1.56	0.71
56:BG:1:MET:HE1	56:BG:24:LEU:HD13	1.72	0.71
56:BG:226:GLU:HA	56:BG:226:GLU:OE1	1.90	0.71
59:BJ:138:ARG:N	59:BJ:156:HIS:O	2.19	0.71
2:A4:1:G:O6	2:A4:119:U:O4	2.08	0.71
4:AB:160:ILE:HD13	4:AB:194:LEU:HB2	1.72	0.71
7:AE:201:ILE:HD12	7:AE:202:ASP:N	2.06	0.71
11:AI:39:LYS:HZ1	48:A2:1731:A:H5"	1.55	0.71
13:AK:63:LYS:HG2	13:AK:63:LYS:O	1.90	0.71
20:AR:23:TRP:HZ2	20:AR:32:ILE:HG21	1.50	0.71
39:Ak:36:VAL:O	39:Ak:42:LEU:HD12	1.91	0.71
47:Au:60:ARG:HB3	47:Au:61:PRO:HD3	1.73	0.71
48:A2:1977:C:N1	48:A2:1978:U:O2	2.23	0.71
48:A2:4692:C:O2'	48:A2:4693:G:H5"	1.89	0.71
49:B1:53:C:H4'	74:BY:108:LYS:HB3	1.72	0.71
49:B1:823:U:C5	74:BY:64:PHE:CD1	2.78	0.71
49:B1:846:G:C2'	54:BE:19:MET:SD	2.67	0.71
49:B1:1698:C:O2	84:Bx:52:U:O4	2.09	0.71
59:BJ:30:LYS:HD2	59:BJ:30:LYS:C	2.16	0.71
65:BP:69:PRO:O	65:BP:71:GLU:N	2.22	0.71
66:BQ:62:ARG:HD3	66:BQ:92:LEU:HB3	1.72	0.71
72:BW:3:ARG:HG2	72:BW:3:ARG:HH11	1.56	0.71
5:AC:217:ILE:HD12	5:AC:220:ALA:CB	2.16	0.71
5:AC:223:ASN:ND2	48:A2:221:U:OP2	2.24	0.71
5:AC:335:MET:SD	48:A2:934:C:OP1	2.49	0.71
14:AL:155:MET:HG2	14:AL:158:ARG:NH2	2.05	0.71
20:AR:19:LYS:O	20:AR:22:VAL:HG22	1.88	0.71
47:Au:60:ARG:HE	47:Au:61:PRO:CD	2.04	0.71
48:A2:1259:C:H3'	48:A2:1260:G:H8	1.55	0.71
48:A2:3798:G:H5"	48:A2:3798:G:H8	1.55	0.71
49:B1:157:U:O4'	56:BG:59:GLN:HA	1.91	0.71
49:B1:168:C:H4'	56:BG:131:ARG:CD	2.20	0.71
49:B1:282:G:H8	49:B1:282:G:P	2.13	0.71
49:B1:952:G:C4	49:B1:975:G:N2	2.58	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1287:A:C4'	49:B1:1312:G:H1	2.03	0.71
49:B1:1300:U:O2'	65:BP:51:ARG:HD2	1.90	0.71
49:B1:1333:U:H5'	53:BD:147:ALA:CB	2.20	0.71
50:BA:44:ASP:HA	67:BR:125:GLY:HA2	1.72	0.71
57:BH:141:GLY:HA2	63:BN:18:TYR:CE2	2.26	0.71
59:BJ:110:LEU:HD12	59:BJ:114:VAL:HG23	1.73	0.71
70:BU:50:VAL:HG13	70:BU:91:LEU:HD23	1.72	0.71
71:BV:40:ASP:HB2	71:BV:45:ARG:O	1.91	0.71
71:BV:51:LYS:HD3	71:BV:76:ASP:OD2	1.91	0.71
72:BW:94:LEU:CD2	72:BW:101:PHE:N	2.51	0.71
76:Ba:63:VAL:HG22	76:Ba:65:PRO:HD3	1.70	0.71
79:Bd:21:CYS:N	79:Bd:31:ILE:CD1	2.54	0.71
7:AE:100:LYS:NZ	48:A2:679:G:OP2	2.23	0.70
14:AL:177:LYS:HA	14:AL:177:LYS:HZ3	1.55	0.70
36:Ah:44:LEU:O	36:Ah:47:ILE:HG22	1.91	0.70
49:B1:1300:U:O4	65:BP:54:HIS:CE1	2.44	0.70
51:BB:71:LEU:CD1	51:BB:75:GLN:HG2	2.21	0.70
53:BD:72:VAL:HG22	60:BK:20:VAL:CG1	2.20	0.70
63:BN:54:LEU:HG	63:BN:58:HIS:NE2	2.06	0.70
64:BO:83:GLN:HE21	64:BO:83:GLN:CA	2.04	0.70
4:AB:393:LYS:HE2	48:A2:4998:U:P	2.31	0.70
5:AC:67:TRP:HA	5:AC:67:TRP:CE3	2.24	0.70
6:AD:22:ARG:NH2	6:AD:27:LYS:HD2	2.01	0.70
6:AD:176:SER:HB3	48:A2:4285:A:C4'	2.21	0.70
16:AN:189:ARG:HH22	48:A2:29:G:H8	1.36	0.70
47:Au:39:LYS:HD2	47:Au:40:ASN:N	2.06	0.70
48:A2:3684:U:C6	48:A2:3684:U:H5"	2.26	0.70
49:B1:502:C:OP2	54:BE:66:MET:CE	2.39	0.70
53:BD:116:ARG:NH1	53:BD:152:PHE:CE1	2.55	0.70
63:BN:26:LEU:C	63:BN:26:LEU:HD12	2.15	0.70
71:BV:14:PRO:HB2	71:BV:23:ILE:CG2	2.21	0.70
75:BZ:77:LEU:O	75:BZ:78:LYS:CB	2.34	0.70
1:A3:123:U:H2'	48:A2:2523:G:O6	1.91	0.70
1:A3:149:G:H1'	9:AG:61:ILE:CD1	2.20	0.70
3:AA:208:GLU:CD	48:A2:1613:A:C2	2.70	0.70
20:AR:23:TRP:O	20:AR:24:LEU:HB2	1.90	0.70
35:Ag:8:ARG:HB3	48:A2:2509:U:H5	1.57	0.70
41:Am:109:ASN:ND2	48:A2:1928:U:H2'	2.05	0.70
45:Aq:25:THR:HG23	45:Aq:26:SER:H	1.55	0.70
47:Au:26:ARG:HG2	47:Au:210:MET:HE1	1.72	0.70
48:A2:133:C:C4	48:A2:134:G:H2'	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:1888:A:N6	48:A2:1889:A:N6	2.39	0.70
48:A2:3798:G:O2'	48:A2:3800:G:OP2	2.06	0.70
49:B1:546:G:C4'	49:B1:547:G:OP2	2.38	0.70
49:B1:612:U:H4'	80:Be:15:GLN:OE1	1.89	0.70
49:B1:1415:C:H5"	69:BT:129:ARG:CG	2.21	0.70
49:B1:1674:G:H5"	55:BF:86:LYS:HE3	1.74	0.70
50:BA:110:ASN:C	50:BA:116:PHE:CD2	2.69	0.70
51:BB:71:LEU:HD23	51:BB:84:PHE:CD2	2.26	0.70
63:BN:30:SER:O	63:BN:33:VAL:N	2.23	0.70
80:Be:51:LYS:HD2	84:Bx:59:U:C4'	2.22	0.70
3:AA:9:ARG:NH2	48:A2:1610:C:C4	2.58	0.70
19:AQ:3:VAL:HG21	48:A2:2256:C:O3'	1.90	0.70
21:AS:142:VAL:HG12	21:AS:146:HIS:CE1	2.25	0.70
24:AV:95:PHE:O	25:AW:20:ARG:N	2.21	0.70
27:AY:55:VAL:HG23	27:AY:70:VAL:HG13	1.73	0.70
29:Aa:9:ARG:HD3	48:A2:2323:U:O4	1.91	0.70
36:Ah:31:LEU:CB	36:Ah:47:ILE:CD1	2.47	0.70
43:Ao:106:PHE:CD2	83:Bv:19:G:C6	2.80	0.70
48:A2:113:A:C2'	48:A2:114:G:H5'	2.21	0.70
48:A2:1817:G:O2'	48:A2:1818:A:OP1	2.06	0.70
48:A2:2043:C:C2'	48:A2:2044:G:H5'	2.19	0.70
48:A2:2388:U:H3'	48:A2:2388:U:O2	1.91	0.70
48:A2:4332:G:C6	83:Bw:76:A:C2	2.79	0.70
49:B1:142:C:O2	56:BG:180:VAL:CB	2.40	0.70
49:B1:792:C:C6	49:B1:792:C:H5"	2.27	0.70
49:B1:1679:A:C5	55:BF:60:ARG:HA	2.26	0.70
50:BA:169:HIS:CD2	50:BA:203:PHE:CE2	2.80	0.70
53:BD:79:PHE:HB3	53:BD:84:VAL:CG2	2.20	0.70
56:BG:186:GLN:HG3	56:BG:187:HIS:N	2.06	0.70
79:Bd:8:TRP:CZ2	79:Bd:11:PRO:HA	2.26	0.70
79:Bd:38:MET:CE	79:Bd:43:PHE:HA	2.11	0.70
5:AC:103:ALA:HB1	48:A2:1322:U:H1'	1.73	0.70
7:AE:173:LEU:CD1	7:AE:191:GLN:HA	2.16	0.70
8:AF:69:ILE:HG22	8:AF:73:ARG:CD	2.21	0.70
8:AF:147:LEU:HG	48:A2:931:A:H2	1.57	0.70
8:AF:164:LYS:HD3	8:AF:164:LYS:N	2.06	0.70
13:AK:14:PHE:CE2	48:A2:1941:A:C5	2.80	0.70
36:Ah:74:LYS:NZ	48:A2:135:G:OP2	2.23	0.70
46:At:86:ALA:O	46:At:90:LEU:HB3	1.90	0.70
48:A2:4981:C:C5'	58:BI:124:LYS:NZ	2.55	0.70
49:B1:582:U:O4'	74:BY:33:ALA:N	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:890:U:H5'	49:B1:891:G:C5'	2.21	0.70
50:BA:169:HIS:HA	50:BA:203:PHE:CD2	2.26	0.70
55:BF:93:VAL:HG12	55:BF:97:PHE:CE2	2.26	0.70
56:BG:63:MET:HE3	56:BG:106:LEU:CD1	2.20	0.70
63:BN:26:LEU:HD11	63:BN:28:LEU:CB	2.22	0.70
64:BO:45:THR:HG21	64:BO:49:GLY:O	1.92	0.70
66:BQ:12:VAL:HG21	66:BQ:91:ALA:CA	2.21	0.70
69:BT:75:MET:HA	69:BT:78:ILE:HD12	1.72	0.70
70:BU:20:ILE:CG2	70:BU:116:ILE:CG1	2.69	0.70
74:BY:104:ARG:NH2	74:BY:108:LYS:HE3	2.07	0.70
83:Bv:71:G:H2'	83:Bv:72:C:H5'	1.73	0.70
3:AA:208:GLU:CD	48:A2:1613:A:H2	1.99	0.70
4:AB:99:LEU:HB2	48:A2:4544:C:H4'	1.71	0.70
8:AF:165:LYS:CA	48:A2:2254:G:O2'	2.40	0.70
8:AF:219:GLY:HA2	48:A2:1887:U:H4'	1.71	0.70
13:AK:14:PHE:CE1	48:A2:1941:A:N9	2.59	0.70
14:AL:164:GLU:O	29:Aa:100:ILE:HD12	1.90	0.70
26:AX:114:LYS:NZ	26:AX:114:LYS:HB2	2.07	0.70
29:Aa:79:TRP:NE1	29:Aa:117:LEU:CD1	2.53	0.70
37:Ai:5:TYR:HD1	48:A2:1463:C:H41	0.70	0.70
43:Ao:40:ARG:HH11	43:Ao:40:ARG:CB	2.04	0.70
49:B1:165:G:H4'	56:BG:53:SER:HB3	1.72	0.70
55:BF:23:TRP:CD1	55:BF:108:PRO:HG2	2.27	0.70
59:BJ:109:ARG:HH12	59:BJ:111:GLN:CD	1.98	0.70
67:BR:97:GLU:HB2	67:BR:117:LEU:CG	2.20	0.70
68:BS:70:ILE:HD12	68:BS:77:TYR:CG	2.27	0.70
3:AA:179:ILE:N	48:A2:3625:G:OP1	2.22	0.70
10:AH:5:LEU:HD12	10:AH:60:TRP:CH2	2.24	0.70
13:AK:81:HIS:HE2	13:AK:88:PHE:HD1	1.37	0.70
33:Ae:104:SER:HB2	48:A2:2284:U:O2'	1.92	0.70
35:Ag:57:ARG:NH1	48:A2:2664:C:OP1	2.24	0.70
48:A2:190:G:C2	48:A2:244:G:C2	2.79	0.70
48:A2:2859:U:O2'	48:A2:2860:A:H5"	1.92	0.70
49:B1:305:U:C4	58:BI:55:TYR:CE2	2.79	0.70
65:BP:85:ILE:HB	65:BP:114:HIS:O	1.92	0.70
70:BU:87:ARG:C	70:BU:88:LEU:HD12	2.17	0.70
3:AA:27:ALA:HB2	3:AA:58:LEU:HD21	1.74	0.70
7:AE:238:GLU:N	7:AE:238:GLU:OE1	2.24	0.70
8:AF:93:ILE:HD12	8:AF:119:ASN:O	1.92	0.70
20:AR:173:ARG:HE	49:B1:910:G:P	2.13	0.70
21:AS:1:MET:H1	21:AS:43:ARG:HH21	1.40	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AX:139:ARG:HD2	48:A2:2512:C:OP1	1.92	0.70
43:Ao:4:VAL:O	43:Ao:94:GLY:HA2	1.91	0.70
46:At:78:VAL:HG21	48:A2:472:G:O2'	1.92	0.70
47:Au:1:MET:HE3	47:Au:202:ARG:CG	2.15	0.70
48:A2:1166:C:H6	48:A2:1166:C:H3'	1.57	0.70
48:A2:1560:U:H2'	48:A2:1561:C:C6	2.26	0.70
49:B1:386:C:OP2	58:BI:10:LYS:CD	2.39	0.70
49:B1:561:A:OP1	59:BJ:171:GLY:HA3	1.87	0.70
49:B1:803:C:H3'	49:B1:804:U:C6	2.27	0.70
49:B1:976:G:H2'	49:B1:977:C:C6	2.26	0.70
49:B1:1603:G:C4'	68:BS:38:ARG:NH2	2.54	0.70
50:BA:30:LEU:HD21	50:BA:38:ILE:HG21	1.74	0.70
54:BE:114:ILE:HD11	54:BE:118:GLU:CG	2.20	0.70
56:BG:219:GLU:O	56:BG:223:LYS:HD3	1.92	0.70
59:BJ:29:LEU:HD23	59:BJ:40:LYS:HE3	1.74	0.70
60:BK:2:LEU:HG	60:BK:3:MET:O	1.92	0.70
64:BO:100:THR:O	64:BO:104:ARG:HB2	1.92	0.70
69:BT:41:LYS:HE2	69:BT:43:LYS:CE	2.22	0.70
5:AC:44:LEU:HD22	48:A2:1356:A:C5'	2.22	0.70
6:AD:19:LYS:HE3	48:A2:4241:A:O2'	1.92	0.70
6:AD:232:THR:OG1	6:AD:235:MET:SD	2.45	0.70
7:AE:233:PHE:CZ	48:A2:446:A:C2	2.79	0.70
8:AF:76:ARG:CZ	48:A2:719:U:H5"	2.22	0.70
8:AF:131:ASN:ND2	48:A2:1709:U:H5'	2.04	0.70
9:AG:69:ILE:HG23	9:AG:73:ARG:HH11	1.57	0.70
13:AK:29:ILE:HG23	13:AK:81:HIS:CE1	2.25	0.70
17:AO:49:ARG:HH22	48:A2:1910:A:H2'	1.53	0.70
19:AQ:12:LYS:C	19:AQ:13:VAL:HG13	2.15	0.70
24:AV:41:SER:HB2	48:A2:4469:A:O2'	1.92	0.70
24:AV:89:ARG:HB2	24:AV:95:PHE:CE1	2.27	0.70
25:AW:68:GLN:O	25:AW:68:GLN:HG3	1.90	0.70
33:Ae:3:ALA:C	33:Ae:4:LEU:HG	2.13	0.70
39:Ak:16:ARG:CD	39:Ak:61:PRO:HB3	2.20	0.70
42:An:4:LYS:HE2	49:B1:1844:U:H5	1.56	0.70
44:Ap:23:ARG:NH2	48:A2:2854:C:OP1	2.25	0.70
47:Au:17:VAL:HG21	47:Au:207:LYS:CA	2.21	0.70
47:Au:205:TYR:CD2	47:Au:215:ARG:HB2	2.27	0.70
48:A2:1499:G:H2'	48:A2:1499:G:N3	2.06	0.70
49:B1:580:U:H2'	74:BY:62:THR:CB	2.22	0.70
49:B1:692:G:N2	49:B1:739:C:H1'	2.06	0.70
49:B1:1314:U:C4	60:BK:2:LEU:CB	2.67	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BA:172:GLY:HA2	50:BA:202:TYR:HB3	1.72	0.70
54:BE:137:PRO:HG2	56:BG:209:TYR:HE2	1.57	0.70
62:BM:35:ILE:HD11	62:BM:61:TYR:CZ	2.13	0.70
6:AD:29:ASP:CB	48:A2:4242:A:H8	2.04	0.70
7:AE:152:ILE:HD12	7:AE:189:THR:HG21	1.74	0.70
9:AG:141:ASN:HB2	48:A2:149:U:O4	1.91	0.70
13:AK:35:VAL:HB	13:AK:39:GLN:HG3	1.74	0.70
14:AL:160:VAL:CG2	48:A2:638:G:OP1	2.40	0.70
33:Ae:17:THR:O	48:A2:1285:U:OP1	2.09	0.70
33:Ae:106:LYS:HB2	48:A2:2284:U:C2	2.27	0.70
45:Aq:43:GLY:CA	45:Aq:46:ILE:HG22	2.19	0.70
47:Au:184:HIS:HA	47:Au:187:VAL:HG22	1.74	0.70
48:A2:285:U:C2	48:A2:287:G:OP2	2.44	0.70
48:A2:1224:C:C4	48:A2:1225:G:H1'	2.27	0.70
48:A2:1940:U:H4'	48:A2:1941:A:H5"	1.74	0.70
48:A2:3929:G:C1'	83:Bw:19:G:H2'	2.22	0.70
48:A2:4016:A:N1	83:Bw:56:C:C4	2.59	0.70
49:B1:282:G:C3'	49:B1:283:G:H8	2.00	0.70
49:B1:421:G:OP1	61:BL:97:ARG:HG2	1.92	0.70
49:B1:1593:C:P	55:BF:91:ARG:HH21	2.15	0.70
52:BC:97:PHE:O	52:BC:98:LEU:CD2	2.40	0.70
54:BE:116:VAL:HG23	54:BE:117:GLU:N	2.07	0.70
56:BG:18:VAL:HG13	56:BG:23:LYS:HD3	1.73	0.70
62:BM:77:ILE:HD11	62:BM:127:TYR:HE2	1.51	0.70
67:BR:99:ASP:HB2	67:BR:102:THR:HG22	1.73	0.70
12:AJ:111:GLU:OE1	12:AJ:125:ILE:HG23	1.91	0.69
15:AM:56:GLN:NE2	48:A2:4827:U:C2	2.59	0.69
19:AQ:68:ARG:NH1	48:A2:1483:C:C6	2.60	0.69
25:AW:82:ILE:O	25:AW:82:ILE:HG22	1.92	0.69
30:Ab:53:GLY:C	48:A2:1795:U:H5'	2.17	0.69
39:Ak:26:LYS:HE3	48:A2:2674:A:H5"	1.74	0.69
48:A2:32:G:H22	48:A2:50:C:H41	1.35	0.69
48:A2:71:C:H4'	48:A2:72:C:OP1	1.91	0.69
48:A2:191:C:O2	48:A2:243:G:C2	2.45	0.69
48:A2:4264:U:C5	48:A2:4265:C:C2	2.80	0.69
49:B1:183:G:H4'	49:B1:183:G:OP1	1.91	0.69
49:B1:874:G:O6	49:B1:914:U:O2	2.10	0.69
49:B1:1047:C:H4'	64:BO:142:ARG:O	1.92	0.69
49:B1:1293:A:H1'	81:Bf:138:ARG:HG3	1.73	0.69
50:BA:181:GLU:HG3	50:BA:185:MET:HE3	1.73	0.69
53:BD:217:ILE:O	53:BD:218:LEU:HB2	1.90	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:BT:41:LYS:HE2	69:BT:43:LYS:HZ1	1.56	0.69
73:BX:137:LYS:N	73:BX:137:LYS:HE2	2.06	0.69
5:AC:52:TYR:HE2	48:A2:344:C:H4'	1.57	0.69
7:AE:105:ARG:HD3	48:A2:680:C:C1'	2.22	0.69
15:AM:71:LYS:HB2	48:A2:726:G:OP2	1.92	0.69
16:AN:67:ARG:NH2	48:A2:2437:C:OP1	2.24	0.69
28:AZ:33:THR:HB	28:AZ:36:ARG:CG	2.18	0.69
28:AZ:33:THR:C	28:AZ:34:SER:HG	1.99	0.69
48:A2:131:C:H5'	48:A2:131:C:C6	2.26	0.69
48:A2:900:U:C3'	48:A2:901:U:H5'	2.21	0.69
48:A2:1257:A:O2'	48:A2:1258:G:H5'	1.92	0.69
49:B1:1331:C:P	49:B1:1490:G:OP2	2.49	0.69
50:BA:112:ILE:HG23	50:BA:113:GLN:N	2.06	0.69
51:BB:81:PHE:CD2	51:BB:109:LYS:HG2	2.27	0.69
53:BD:76:ARG:NH2	60:BK:66:HIS:ND1	2.40	0.69
55:BF:30:ILE:HG23	55:BF:117:ILE:HD11	1.74	0.69
65:BP:34:MET:SD	65:BP:45:LEU:CD1	2.77	0.69
65:BP:119:PHE:CD2	68:BS:117:ILE:HG23	2.26	0.69
79:Bd:36:LEU:HD13	79:Bd:43:PHE:CE2	2.15	0.69
2:A4:95:C:H4'	8:AF:229:GLU:HG2	1.74	0.69
4:AB:2:SER:HB3	48:A2:4479:A:OP2	1.93	0.69
4:AB:247:GLY:CA	48:A2:2817:G:OP1	2.40	0.69
5:AC:76:ILE:CD1	5:AC:95:MET:HE2	2.22	0.69
7:AE:187:ARG:HG2	7:AE:187:ARG:NH1	2.07	0.69
7:AE:233:PHE:CE2	48:A2:446:A:N3	2.60	0.69
23:AU:47:ILE:O	23:AU:49:VAL:HG23	1.92	0.69
24:AV:97:TYR:HE1	25:AW:21:TYR:HE1	1.37	0.69
29:Aa:55:LYS:HE2	48:A2:92:C:C2	2.27	0.69
30:Ab:54:LEU:HD21	48:A2:1793:G:N2	2.08	0.69
44:Ap:18:TYR:CA	48:A2:3606:A:H61	2.05	0.69
48:A2:251:G:N2	48:A2:252:C:H1'	2.07	0.69
48:A2:901:U:H4'	48:A2:902:A:OP1	1.91	0.69
48:A2:1740:G:H2'	48:A2:1741:G:C8	2.26	0.69
48:A2:4016:A:C5	83:Bw:56:C:H1'	2.27	0.69
49:B1:22:A:O3'	59:BJ:15:THR:HG21	1.92	0.69
49:B1:222:U:C5'	61:BL:17:PHE:HD2	1.83	0.69
49:B1:1678:A:H2'	49:B1:1679:A:H5'	1.74	0.69
50:BA:115:ALA:HB1	50:BA:117:ARG:NH2	2.08	0.69
50:BA:172:GLY:O	50:BA:202:TYR:HB3	1.92	0.69
51:BB:75:GLN:HG3	51:BB:189:ILE:HG23	1.74	0.69
51:BB:135:LEU:HD22	51:BB:217:MET:HE1	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BC:167:ARG:HD3	52:BC:219:ILE:HD13	1.73	0.69
54:BE:100:ARG:HH12	54:BE:236:ILE:HG23	1.55	0.69
68:BS:92:ASP:C	68:BS:94:LYS:N	2.48	0.69
82:Bg:88:ARG:HD3	82:Bg:97:THR:HG1	1.55	0.69
6:AD:90:VAL:HG23	6:AD:226:TYR:HE1	1.58	0.69
7:AE:100:LYS:HD2	48:A2:678:C:C3'	2.20	0.69
27:AY:55:VAL:CG2	27:AY:70:VAL:HG13	2.23	0.69
34:Af:59:THR:HB	48:A2:4902:C:N4	2.06	0.69
38:Aj:82:THR:HG23	38:Aj:83:THR:N	2.04	0.69
45:Aq:22:VAL:HB	45:Aq:25:THR:O	1.92	0.69
48:A2:135:G:O2'	48:A2:136:G:O4'	2.09	0.69
48:A2:1991:A:C2	48:A2:1992:C:H1'	2.27	0.69
48:A2:2793:C:H2'	48:A2:2793:C:O2	1.92	0.69
49:B1:64:A:H2'	56:BG:175:LYS:NZ	2.08	0.69
49:B1:911:C:O2'	49:B1:912:C:H5'	1.92	0.69
49:B1:957:A:OP1	64:BO:57:THR:OG1	2.07	0.69
49:B1:1603:G:H4'	68:BS:38:ARG:CZ	2.23	0.69
65:BP:115:TYR:O	65:BP:116:LEU:HG	1.92	0.69
66:BQ:33:LYS:HD3	66:BQ:69:ARG:HD3	1.73	0.69
68:BS:15:VAL:HG13	68:BS:68:ILE:HD11	1.72	0.69
4:AB:105:VAL:HG11	4:AB:150:PHE:CZ	2.27	0.69
5:AC:97:ARG:NH1	48:A2:348:U:C1'	2.55	0.69
7:AE:136:HIS:CE1	48:A2:702:A:C1'	2.75	0.69
7:AE:200:LYS:HZ2	7:AE:202:ASP:HA	1.55	0.69
8:AF:70:ARG:CD	48:A2:1191:G:HO2'	1.83	0.69
13:AK:55:MET:H	48:A2:1979:A:H5'	1.57	0.69
20:AR:60:ARG:CZ	20:AR:63:CYS:SG	2.80	0.69
27:AY:59:ARG:NH2	48:A2:196:G:O2'	2.25	0.69
45:Aq:22:VAL:C	45:Aq:46:ILE:CG2	2.66	0.69
45:Aq:71:ILE:O	45:Aq:73:VAL:HG13	1.93	0.69
48:A2:190:G:N2	48:A2:244:G:C2	2.61	0.69
48:A2:3929:G:N2	83:Bw:19:G:N2	2.40	0.69
49:B1:827:A:C5'	59:BJ:8:VAL:CG1	2.64	0.69
49:B1:840:C:O3'	74:BY:14:THR:OG1	2.10	0.69
56:BG:23:LYS:CG	56:BG:41:LEU:HD12	2.22	0.69
59:BJ:88:ASP:OD1	59:BJ:91:LYS:N	2.26	0.69
59:BJ:103:GLU:H	59:BJ:103:GLU:CD	2.01	0.69
65:BP:48:GLY:N	65:BP:49:LEU:HD23	2.07	0.69
72:BW:101:PHE:CD1	72:BW:112:ASP:OD2	2.45	0.69
5:AC:52:TYR:HD2	48:A2:344:C:H5'	1.58	0.69
9:AG:192:ARG:NH2	48:A2:6:C:P	2.64	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AK:48:ARG:HA	13:AK:51:ALA:HB2	1.74	0.69
13:AK:55:MET:H	48:A2:1979:A:C5'	2.05	0.69
14:AL:20:ARG:NH1	48:A2:50:C:H5'	2.05	0.69
14:AL:57:PRO:HD2	14:AL:73:GLY:O	1.93	0.69
16:AN:194:ARG:NH2	48:A2:79:C:P	2.66	0.69
20:AR:23:TRP:CB	48:A2:2366:G:OP1	2.41	0.69
24:AV:80:VAL:HG23	24:AV:106:VAL:HG11	1.74	0.69
25:AW:113:LYS:HE2	49:B1:328:U:H3	1.56	0.69
46:At:60:VAL:O	46:At:82:ILE:N	2.24	0.69
48:A2:2067:G:N2	48:A2:2247:A:C5	2.60	0.69
48:A2:2608:C:N3	48:A2:4610:A:C2	2.60	0.69
51:BB:127:VAL:HG11	51:BB:176:VAL:CB	2.22	0.69
51:BB:139:CYS:CB	51:BB:172:MET:HE1	2.18	0.69
53:BD:210:ILE:HG21	67:BR:16:ILE:CD1	2.22	0.69
54:BE:87:MET:HE3	54:BE:123:LEU:N	2.05	0.69
59:BJ:87:LEU:CD2	59:BJ:100:LEU:HD11	2.16	0.69
72:BW:40:VAL:CG1	72:BW:44:HIS:CE1	2.75	0.69
75:BZ:97:ILE:CG2	75:BZ:109:TYR:HB3	2.22	0.69
76:Ba:42:ARG:CZ	76:Ba:42:ARG:HB3	2.22	0.69
2:A4:22:A:N6	2:A4:23:A:N6	2.40	0.69
6:AD:286:SER:HB2	48:A2:1163:C:C4'	2.17	0.69
7:AE:153:LEU:HD21	7:AE:195:ILE:HD11	1.75	0.69
10:AH:100:PRO:O	10:AH:116:ASN:ND2	2.22	0.69
11:AI:210:ARG:NH1	48:A2:1162:U:C5	2.61	0.69
19:AQ:176:ARG:HH11	19:AQ:176:ARG:HG2	1.55	0.69
20:AR:132:PHE:CE2	20:AR:138:LEU:HD23	2.27	0.69
29:Aa:61:TYR:CD2	48:A2:288:G:C2	2.81	0.69
46:At:71:ARG:HH11	46:At:71:ARG:HG3	1.56	0.69
46:At:98:ARG:NH2	48:A2:952:G:OP1	2.25	0.69
47:Au:203:ALA:HB2	47:Au:215:ARG:CZ	2.22	0.69
48:A2:1785:G:H4'	48:A2:1786:A:OP1	1.92	0.69
49:B1:62:G:H2'	49:B1:63:U:H5'	1.74	0.69
49:B1:589:G:H22	80:Be:26:LYS:CE	1.96	0.69
50:BA:172:GLY:O	50:BA:202:TYR:CB	2.41	0.69
56:BG:101:ILE:HG22	56:BG:102:VAL:H	1.57	0.69
66:BQ:21:ALA:HB2	66:BQ:83:ALA:CB	2.15	0.69
67:BR:95:ILE:HG22	67:BR:96:ILE:N	2.07	0.69
2:A4:10:C:C4	6:AD:20:PHE:CE2	2.81	0.69
13:AK:55:MET:CG	13:AK:88:PHE:HB2	2.23	0.69
13:AK:58:ASN:N	48:A2:2002:G:OP1	2.26	0.69
15:AM:91:TRP:HZ2	48:A2:4827:U:O2'	1.69	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AS:115:ALA:HB2	48:A2:2041:G:N2	2.08	0.69
33:Ae:8:VAL:HG22	48:A2:693:U:H4'	1.74	0.69
39:Ak:40:ARG:NH1	39:Ak:40:ARG:HG2	2.07	0.69
45:Aq:104:ILE:CG1	45:Aq:105:THR:H	2.05	0.69
46:At:37:SER:CB	48:A2:2246:U:OP2	2.39	0.69
46:At:67:ARG:O	46:At:67:ARG:HD2	1.93	0.69
47:Au:100:VAL:HG13	47:Au:124:LEU:CD2	2.22	0.69
48:A2:70:A:H4'	48:A2:71:C:C4	2.27	0.69
48:A2:133:C:C4	48:A2:135:G:C6	2.80	0.69
48:A2:182:C:O4'	48:A2:182:C:OP2	2.11	0.69
48:A2:493:G:H2'	48:A2:493:G:N3	2.06	0.69
48:A2:718:C:N3	48:A2:920:G:O6	2.25	0.69
48:A2:735:G:C2'	48:A2:736:G:H5'	2.23	0.69
48:A2:738:A:H4'	48:A2:739:G:OP1	1.92	0.69
48:A2:1752:A:O2'	48:A2:1753:U:H5'	1.92	0.69
48:A2:2689:C:H5'	48:A2:2690:G:H5'	1.73	0.69
48:A2:3596:G:H3'	48:A2:3596:G:H8	1.58	0.69
49:B1:14:C:C5'	52:BC:190:SER:HB3	2.23	0.69
49:B1:428:U:H5'	59:BJ:2:PRO:HG2	1.75	0.69
49:B1:634:A:H2'	49:B1:635:G:C8	2.28	0.69
49:B1:1483:A:H4'	53:BD:160:SER:CB	2.21	0.69
49:B1:1561:A:OP1	69:BT:77:LYS:NZ	2.22	0.69
49:B1:1578:U:H5	53:BD:4:GLN:NE2	1.87	0.69
49:B1:1672:U:OP2	66:BQ:17:LYS:HE3	1.93	0.69
49:B1:1741:U:OP1	58:BI:58:LEU:CD1	2.41	0.69
50:BA:205:ARG:HH21	67:BR:86:PRO:HD2	1.56	0.69
51:BB:70:SER:HB3	51:BB:83:LYS:CG	2.22	0.69
52:BC:177:PRO:CG	71:BV:9:VAL:HG11	2.21	0.69
54:BE:139:LEU:HB2	54:BE:150:PRO:HB3	1.74	0.69
56:BG:106:LEU:H	56:BG:106:LEU:CD2	2.06	0.69
65:BP:34:MET:O	65:BP:42:ARG:CG	2.41	0.69
65:BP:47:ARG:C	65:BP:49:LEU:CD2	2.66	0.69
68:BS:78:LYS:HE2	69:BT:36:THR:OG1	1.93	0.69
68:BS:92:ASP:OD2	68:BS:94:LYS:CG	2.41	0.69
69:BT:42:HIS:H	69:BT:43:LYS:NZ	1.91	0.69
70:BU:61:LEU:CD1	79:Bd:34:TYR:HE2	2.03	0.69
73:BX:91:LEU:HD21	80:Be:6:LEU:HD12	1.75	0.69
75:BZ:62:VAL:HG11	75:BZ:91:LEU:HD23	1.71	0.69
75:BZ:69:THR:O	75:BZ:73:VAL:HG23	1.92	0.69
76:Ba:40:VAL:HG22	76:Ba:69:VAL:O	1.92	0.69
83:Bw:21:A:H2'	83:Bw:21:A:N3	2.06	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A4:33:U:C1'	6:AD:207:TYR:HD1	2.01	0.69
5:AC:321:ASN:HB2	48:A2:1264:G:C8	2.26	0.69
10:AH:167:VAL:HG12	10:AH:170:LYS:HB2	1.74	0.69
14:AL:60:ARG:HH12	48:A2:72:C:N4	1.90	0.69
16:AN:2:GLY:N	48:A2:115:C:OP1	2.26	0.69
25:AW:42:SER:HB2	25:AW:44:ARG:HH11	1.55	0.69
42:An:1:MET:HG3	49:B1:1852:C:P	2.32	0.69
47:Au:104:ALA:HB2	47:Au:128:LEU:CD2	2.23	0.69
48:A2:680:C:H2'	48:A2:681:A:C5'	2.23	0.69
48:A2:1888:A:C6	48:A2:1889:A:N6	2.61	0.69
48:A2:3682:A:H5'	48:A2:3683:A:C8	2.28	0.69
49:B1:77:A:O2'	56:BG:174:PRO:O	2.09	0.69
49:B1:495:U:P	54:BE:58:GLY:H	2.14	0.69
49:B1:1864:U:OP1	76:Ba:86:ASN:OD1	2.11	0.69
66:BQ:85:ARG:CZ	66:BQ:119:LEU:HD21	2.23	0.69
75:BZ:48:VAL:HG22	75:BZ:80:ARG:CZ	2.23	0.69
5:AC:62:THR:CB	48:A2:369:G:OP1	2.41	0.69
5:AC:212:ASN:HD21	5:AC:255:SER:C	2.01	0.69
13:AK:34:ASN:O	13:AK:35:VAL:HG13	1.93	0.69
13:AK:35:VAL:HB	13:AK:39:GLN:CG	2.23	0.69
15:AM:2:VAL:HG21	48:A2:4726:A:OP2	1.93	0.69
15:AM:79:LYS:C	15:AM:79:LYS:HD2	2.17	0.69
48:A2:287:G:H4'	48:A2:288:G:C8	2.27	0.69
48:A2:1943:A:H2	48:A2:2007:A:C2	2.11	0.69
48:A2:2044:G:O2'	48:A2:2045:G:H5'	1.92	0.69
49:B1:157:U:C1'	56:BG:59:GLN:HA	2.23	0.69
49:B1:316:G:OP1	56:BG:183:ARG:NH1	2.26	0.69
49:B1:1022:U:H3'	49:B1:1022:U:O2	1.91	0.69
49:B1:1256:G:H22	79:Bd:30:LEU:N	1.89	0.69
51:BB:35:ALA:HB3	51:BB:42:ARG:HA	1.75	0.69
54:BE:114:ILE:HG13	54:BE:115:THR:N	2.06	0.69
65:BP:44:ARG:NH2	65:BP:52:LYS:HZ3	1.90	0.69
67:BR:31:ASN:HD22	67:BR:55:THR:HG22	1.56	0.69
71:BV:37:ALA:HB2	71:BV:46:PHE:CE1	2.28	0.69
76:Ba:88:SER:O	76:Ba:91:ALA:HB3	1.93	0.69
2:A4:22:A:N6	2:A4:23:A:C6	2.61	0.68
7:AE:114:ARG:HH11	7:AE:114:ARG:HB2	1.55	0.68
14:AL:60:ARG:NH1	48:A2:72:C:C4	2.61	0.68
20:AR:99:MET:O	20:AR:103:ARG:HG3	1.93	0.68
24:AV:42:VAL:CG2	24:AV:55:ALA:HB2	2.24	0.68
47:Au:166:ALA:CB	48:A2:3940:G:C1'	2.61	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:1976:G:H2'	48:A2:1977:C:C6	2.28	0.68
48:A2:4062:G:H3'	48:A2:4063:G:H21	1.55	0.68
48:A2:4946:U:C4'	48:A2:4947:U:OP1	2.41	0.68
48:A2:4982:C:O2'	58:BI:168:GLN:O	0.69	0.68
49:B1:1402:A:H1'	70:BU:54:VAL:HG22	1.74	0.68
52:BC:178:HIS:CD2	52:BC:200:ARG:NE	2.60	0.68
59:BJ:39:ASN:HA	80:Be:34:ARG:HE	1.57	0.68
61:BL:28:THR:O	61:BL:29:GLY:O	2.11	0.68
65:BP:34:MET:HE2	65:BP:45:LEU:HB2	1.75	0.68
69:BT:41:LYS:HD3	69:BT:43:LYS:HZ3	1.58	0.68
5:AC:71:ARG:NH2	85:By:14:UNK:O	2.26	0.68
14:AL:44:ARG:CZ	48:A2:182:C:C5	2.70	0.68
14:AL:128:PRO:HD2	14:AL:136:LYS:HD3	1.75	0.68
36:Ah:112:ARG:HH22	48:A2:258:C:H1'	1.58	0.68
41:Am:99:CYS:O	41:Am:100:TYR:HB2	1.92	0.68
47:Au:130:LYS:HB2	48:A2:4017:A:OP1	1.92	0.68
48:A2:1256:G:N2	48:A2:1257:A:OP2	2.26	0.68
48:A2:1341:G:N2	48:A2:1343:G:N1	2.40	0.68
48:A2:1755:U:O2'	48:A2:1756:C:O4'	2.11	0.68
48:A2:1943:A:C2	48:A2:2007:A:C2	2.81	0.68
48:A2:1945:A:C2	48:A2:1946:G:C8	2.81	0.68
48:A2:3929:G:O2'	83:Bw:19:G:C2'	2.41	0.68
48:A2:4034:C:H2'	48:A2:4035:G:O4'	1.93	0.68
48:A2:4981:C:C5'	58:BI:124:LYS:HZ1	2.05	0.68
49:B1:571:U:P	74:BY:37:LYS:HB2	2.33	0.68
49:B1:872:A:N1	49:B1:915:G:C6	2.61	0.68
49:B1:875:A:H61	49:B1:912:C:H42	1.37	0.68
49:B1:876:C:H6	49:B1:876:C:H5"	1.58	0.68
49:B1:1552:G:OP2	49:B1:1578:U:O4	2.11	0.68
58:BI:158:ILE:O	58:BI:162:LEU:HB2	1.91	0.68
65:BP:30:TYR:CA	65:BP:33:LEU:HD11	2.22	0.68
66:BQ:62:ARG:HG2	66:BQ:92:LEU:CD1	2.23	0.68
67:BR:17:ILE:HD12	67:BR:17:ILE:C	2.18	0.68
1:A3:150:C:N4	9:AG:65:ARG:NH1	2.41	0.68
4:AB:41:VAL:HG22	4:AB:187:GLY:HA3	1.75	0.68
5:AC:303:ARG:O	5:AC:304:ALA:HB3	1.93	0.68
10:AH:4:ILE:HG22	10:AH:5:LEU:N	2.02	0.68
17:AO:176:ARG:HG2	48:A2:4830:G:H1	1.58	0.68
38:Aj:9:GLY:HA2	48:A2:2771:C:O2	1.93	0.68
46:At:105:ASP:C	46:At:106:LEU:HG	2.18	0.68
48:A2:3731:A:N6	49:B1:1825:A:N1	2.41	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:77:A:C2'	49:B1:78:C:H5'	2.22	0.68
49:B1:502:C:OP2	54:BE:66:MET:SD	2.51	0.68
49:B1:640:A:H4'	59:BJ:20:PHE:HE2	1.57	0.68
49:B1:874:G:C8	49:B1:875:A:N7	2.61	0.68
49:B1:1254:C:O2'	70:BU:71:GLY:HA3	1.93	0.68
49:B1:1387:G:N2	67:BR:8:THR:HG21	2.07	0.68
49:B1:1866:A:C1'	76:Ba:95:ARG:C	2.66	0.68
52:BC:60:TRP:CD1	52:BC:92:GLU:HB3	2.28	0.68
52:BC:167:ARG:CD	52:BC:219:ILE:HD13	2.23	0.68
66:BQ:58:LEU:HB3	66:BQ:62:ARG:NH1	2.08	0.68
67:BR:114:LEU:O	67:BR:115:SER:CB	2.40	0.68
5:AC:231:ASN:OD1	5:AC:233:SER:N	2.26	0.68
20:AR:61:ALA:CB	48:A2:2612:U:C5'	2.66	0.68
22:AT:109:VAL:CG1	48:A2:1785:G:C6	2.77	0.68
28:AZ:30:ASP:CG	28:AZ:31:ASP:OD1	2.37	0.68
33:Ae:18:LYS:O	33:Ae:19:LYS:HG2	1.93	0.68
48:A2:2852:U:H2'	48:A2:2854:C:H5	1.58	0.68
49:B1:581:U:H5'	74:BY:62:THR:HG23	1.64	0.68
49:B1:872:A:C2'	49:B1:874:G:N2	2.55	0.68
49:B1:1864:U:O4	76:Ba:34:LYS:NZ	2.25	0.68
53:BD:79:PHE:CB	53:BD:84:VAL:CG2	2.71	0.68
56:BG:57:ASP:O	56:BG:107:SER:HB3	1.92	0.68
61:BL:80:MET:HE2	61:BL:121:GLN:CA	2.23	0.68
62:BM:127:TYR:O	62:BM:129:LYS:N	2.26	0.68
64:BO:141:ARG:NE	76:Ba:22:ARG:HH21	1.92	0.68
67:BR:119:VAL:O	67:BR:120:THR:HG22	1.93	0.68
72:BW:102:ILE:HG22	72:BW:103:VAL:N	2.08	0.68
1:A3:33:G:H2'	48:A2:58:G:H2'	1.75	0.68
7:AE:123:ARG:CD	7:AE:124:LYS:H	2.07	0.68
11:AI:102:MET:SD	48:A2:4403:A:H5'	2.34	0.68
13:AK:104:ALA:C	13:AK:106:LYS:H	2.00	0.68
14:AL:170:THR:O	14:AL:173:GLU:OE1	2.11	0.68
18:AP:15:CYS:SG	18:AP:150:LEU:HB2	2.34	0.68
20:AR:32:ILE:HD11	20:AR:49:LEU:HD13	1.76	0.68
27:AY:64:GLY:O	27:AY:66:GLN:HG3	1.93	0.68
48:A2:1744:C:O2'	48:A2:1745:C:H5'	1.94	0.68
49:B1:5:U:OP2	52:BC:230:THR:HG22	1.89	0.68
49:B1:5:U:OP1	52:BC:230:THR:HG22	1.93	0.68
49:B1:560:A:H2'	59:BJ:171:GLY:C	2.18	0.68
49:B1:1594:A:OP2	75:BZ:104:ARG:HG2	1.94	0.68
49:B1:1603:G:H4'	68:BS:38:ARG:NH2	2.08	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1830:U:C5	84:Bx:47:U:H5"	2.28	0.68
56:BG:50:VAL:HG22	56:BG:113:ILE:HG22	1.76	0.68
57:BH:64:VAL:HB	57:BH:95:ILE:O	1.94	0.68
65:BP:18:ARG:HH12	65:BP:38:SER:H	1.39	0.68
79:Bd:22:ARG:HB3	79:Bd:37:ASN:O	1.94	0.68
5:AC:91:ALA:O	5:AC:96:CYS:SG	2.50	0.68
5:AC:287:THR:HG22	46:At:2:SER:HA	1.74	0.68
16:AN:73:ARG:HB3	16:AN:89:VAL:HG13	1.75	0.68
25:AW:80:ARG:HH22	56:BG:128:THR:CG2	2.07	0.68
26:AX:56:ARG:NH2	26:AX:62:ARG:NH2	2.42	0.68
28:AZ:60:LYS:HZ2	28:AZ:60:LYS:HB2	1.58	0.68
29:Aa:94:LYS:HE2	29:Aa:94:LYS:CA	2.22	0.68
47:Au:203:ALA:HB1	47:Au:215:ARG:CD	2.24	0.68
48:A2:681:A:C5	48:A2:682:U:C5	2.82	0.68
48:A2:681:A:N7	48:A2:682:U:C5	2.62	0.68
48:A2:2064:C:H5"	48:A2:2064:C:C6	2.28	0.68
49:B1:659:G:C2	73:BX:17:ARG:NH2	2.60	0.68
50:BA:44:ASP:CA	67:BR:125:GLY:HA2	2.24	0.68
53:BD:19:ALA:HB1	79:Bd:46:TYR:CD2	2.27	0.68
55:BF:167:LYS:NZ	75:BZ:75:GLU:CD	2.50	0.68
56:BG:153:VAL:HG23	56:BG:156:TYR:HB2	1.75	0.68
59:BJ:47:LYS:HB2	59:BJ:47:LYS:HZ3	1.58	0.68
59:BJ:160:SER:O	59:BJ:162:ARG:HG2	1.93	0.68
60:BK:64:TRP:HA	79:Bd:23:VAL:O	1.94	0.68
74:BY:44:LEU:HA	74:BY:47:MET:HE3	1.74	0.68
75:BZ:48:VAL:CA	75:BZ:80:ARG:HD2	2.22	0.68
79:Bd:30:LEU:HD12	79:Bd:31:ILE:N	2.08	0.68
7:AE:119:GLU:CG	33:Ae:7:LEU:CD2	2.62	0.68
11:AI:185:VAL:HG12	11:AI:190:LEU:HB2	1.74	0.68
13:AK:16:LYS:HA	13:AK:19:GLN:HB2	1.75	0.68
13:AK:83:ARG:CG	13:AK:84:GLY:H	2.03	0.68
20:AR:105:LEU:HD22	20:AR:135:LYS:HG3	1.76	0.68
34:Af:4:ARG:NH1	48:A2:4714:U:H3'	2.09	0.68
37:Ai:26:HIS:CE1	48:A2:156:C:O2	2.46	0.68
48:A2:2482:G:H3'	48:A2:2482:G:N3	2.08	0.68
48:A2:3681:G:H2'	48:A2:3682:A:H5'	1.75	0.68
49:B1:1046:U:C2'	64:BO:140:THR:HB	2.24	0.68
49:B1:1261:C:O2	79:Bd:10:HIS:CE1	2.46	0.68
50:BA:37:TYR:CE2	50:BA:162:PRO:HD3	2.28	0.68
50:BA:42:LYS:NZ	50:BA:46:ILE:HG21	2.08	0.68
55:BF:40:ALA:HB1	55:BF:45:TYR:CG	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BK:76:ILE:HD13	60:BK:94:LEU:HD22	1.74	0.68
75:BZ:63:PRO:HA	75:BZ:111:ARG:HD2	1.76	0.68
3:AA:58:LEU:HD11	3:AA:75:LEU:HB3	1.75	0.68
6:AD:215:ASP:OD1	6:AD:216:GLU:N	2.26	0.68
10:AH:44:GLU:CD	15:AM:2:VAL:HB	2.18	0.68
13:AK:84:GLY:HA2	48:A2:2002:G:O3'	1.93	0.68
21:AS:68:PHE:CE1	48:A2:721:G:N2	2.62	0.68
48:A2:48:G:H2'	48:A2:49:U:OP2	1.93	0.68
48:A2:4702:G:H3'	48:A2:4703:C:H5"	1.75	0.68
49:B1:5:U:OP2	52:BC:230:THR:CB	2.42	0.68
49:B1:292:A:O2'	61:BL:39:ASN:O	2.11	0.68
49:B1:331:C:OP2	49:B1:331:C:C6	2.45	0.68
49:B1:1203:G:H1'	52:BC:115:GLN:HG3	1.74	0.68
66:BQ:14:GLY:HA2	66:BQ:21:ALA:H	1.58	0.68
67:BR:94:GLU:C	67:BR:95:ILE:HD12	2.18	0.68
3:AA:88:VAL:HG13	3:AA:99:GLY:O	1.93	0.68
5:AC:97:ARG:NH1	5:AC:97:ARG:HG3	2.06	0.68
7:AE:222:LEU:HG	7:AE:235:THR:OG1	1.94	0.68
8:AF:229:GLU:O	21:AS:2:LYS:HD3	1.94	0.68
13:AK:81:HIS:CD2	13:AK:82:ILE:H	2.11	0.68
29:Aa:33:GLY:HA3	48:A2:95:G:OP1	1.93	0.68
29:Aa:94:LYS:O	29:Aa:95:THR:HB	1.94	0.68
45:Aq:28:LEU:HB2	45:Aq:42:VAL:C	2.18	0.68
46:At:52:GLU:HB2	46:At:61:VAL:HG21	1.76	0.68
48:A2:251:G:H21	48:A2:252:C:H1'	1.59	0.68
48:A2:676:G:H8	48:A2:676:G:O5'	1.77	0.68
49:B1:118:C:H3'	49:B1:118:C:O2	1.94	0.68
49:B1:619:A:N6	73:BX:114:ASP:HB3	2.07	0.68
59:BJ:84:ILE:O	59:BJ:108:ARG:NE	2.26	0.68
59:BJ:119:LEU:HD11	59:BJ:159:PHE:CE1	2.29	0.68
61:BL:35:ARG:CG	61:BL:36:TYR:N	2.57	0.68
61:BL:61:PRO:HD3	61:BL:141:ASN:ND2	2.09	0.68
64:BO:142:ARG:HG3	76:Ba:22:ARG:NE	2.09	0.68
66:BQ:25:CYS:SG	66:BQ:95:TYR:CG	2.87	0.68
66:BQ:34:VAL:HG11	66:BQ:84:ILE:CD1	2.23	0.68
66:BQ:62:ARG:CD	66:BQ:92:LEU:CD1	2.72	0.68
71:BV:37:ALA:CB	71:BV:46:PHE:CZ	2.76	0.68
74:BY:96:LEU:N	74:BY:96:LEU:HD12	2.09	0.68
79:Bd:21:CYS:HB3	79:Bd:26:ASN:N	2.07	0.68
79:Bd:32:ARG:NH2	79:Bd:43:PHE:CZ	2.62	0.68
5:AC:72:ALA:CA	48:A2:3877:A:OP1	2.39	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AF:73:ARG:NH2	48:A2:717:G:C5'	2.57	0.68
10:AH:7:ASN:CA	10:AH:57:VAL:O	2.41	0.68
14:AL:171:GLU:HB3	14:AL:172:GLU:OE1	1.94	0.68
14:AL:177:LYS:O	14:AL:178:ALA:C	2.37	0.68
15:AM:91:TRP:HA	15:AM:94:LYS:HD3	1.75	0.68
16:AN:93:LYS:CD	48:A2:294:A:H2	2.06	0.68
21:AS:3:ALA:HB3	48:A2:2043:C:OP1	1.94	0.68
22:AT:129:LYS:HE3	48:A2:1816:G:O2'	1.92	0.68
47:Au:17:VAL:HG22	47:Au:207:LYS:HA	1.74	0.68
47:Au:92:LYS:HA	47:Au:95:LYS:HE2	1.76	0.68
48:A2:70:A:H4'	48:A2:71:C:C5	2.28	0.68
48:A2:514:C:C2'	48:A2:515:C:H5'	2.23	0.68
48:A2:1059:C:C6	48:A2:1059:C:OP2	2.47	0.68
48:A2:1166:C:C5	48:A2:1167:A:N7	2.62	0.68
49:B1:407:G:N2	73:BX:36:LEU:HB2	2.08	0.68
49:B1:524:U:H5"	49:B1:525:A:H1'	1.76	0.68
49:B1:1424:G:OP1	66:BQ:36:GLY:HA3	1.93	0.68
49:B1:1752:C:N3	49:B1:1780:G:N1	2.40	0.68
50:BA:63:ARG:NH1	71:BV:78:ILE:HG12	2.08	0.68
51:BB:70:SER:HA	51:BB:84:PHE:H	1.58	0.68
51:BB:181:LEU:C	51:BB:184:VAL:HG23	2.19	0.68
52:BC:104:ASP:CB	52:BC:130:ILE:HG22	2.24	0.68
59:BJ:88:ASP:OD2	59:BJ:91:LYS:HG3	1.93	0.68
65:BP:33:LEU:HD22	65:BP:87:PRO:HG2	1.75	0.68
66:BQ:34:VAL:CG1	66:BQ:84:ILE:HD13	2.24	0.68
68:BS:86:ARG:HG3	68:BS:90:VAL:HG22	1.76	0.68
82:Bg:88:ARG:CG	82:Bg:97:THR:HG23	2.22	0.68
1:A3:149:G:H1'	9:AG:61:ILE:HD12	1.76	0.67
4:AB:300:LYS:CE	4:AB:313:SER:HB2	2.23	0.67
6:AD:19:LYS:NZ	48:A2:4228:G:O6	2.21	0.67
6:AD:230:SER:O	6:AD:231:VAL:CB	2.42	0.67
7:AE:137:VAL:C	7:AE:138:ARG:HH11	2.01	0.67
7:AE:206:VAL:O	7:AE:207:LYS:HB3	1.94	0.67
7:AE:233:PHE:CD2	7:AE:236:GLU:CD	2.72	0.67
20:AR:119:MET:HE1	20:AR:149:LYS:HD2	1.74	0.67
26:AX:55:ARG:NH1	26:AX:55:ARG:HG3	2.10	0.67
47:Au:93:LEU:HD22	47:Au:99:LEU:HG	1.76	0.67
48:A2:508:U:OP2	48:A2:508:U:C6	2.47	0.67
48:A2:2502:G:O4'	48:A2:2690:G:N2	2.27	0.67
48:A2:2617:G:O2'	48:A2:2618:U:H5'	1.93	0.67
49:B1:112:U:P	61:BL:69:ARG:HD2	2.33	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:345:U:O2'	54:BE:33:THR:CA	2.37	0.67
51:BB:71:LEU:HD23	51:BB:84:PHE:CE2	2.28	0.67
51:BB:127:VAL:HG23	51:BB:177:GLN:NE2	2.09	0.67
65:BP:51:ARG:HB3	65:BP:51:ARG:NH1	2.08	0.67
74:BY:89:HIS:O	74:BY:92:ALA:HB3	1.93	0.67
75:BZ:99:LEU:HA	75:BZ:109:TYR:HA	1.74	0.67
76:Ba:82:LYS:HB3	76:Ba:82:LYS:NZ	2.01	0.67
76:Ba:88:SER:N	76:Ba:91:ALA:HB3	2.09	0.67
2:A4:61:G:H5"	6:AD:271:MET:HE3	1.76	0.67
6:AD:17:GLN:O	48:A2:4227:U:N3	2.21	0.67
6:AD:233:PRO:CA	6:AD:236:MET:HE2	2.23	0.67
7:AE:107:VAL:O	7:AE:108:LYS:HB2	1.93	0.67
8:AF:184:ILE:CA	8:AF:189:ASP:HB2	2.23	0.67
13:AK:72:ASN:CB	13:AK:73:PRO:CD	2.72	0.67
21:AS:2:LYS:O	21:AS:2:LYS:HG3	1.94	0.67
21:AS:30:MET:HE1	21:AS:47:PHE:HB3	1.76	0.67
21:AS:74:ARG:NH2	48:A2:909:C:H5'	2.09	0.67
28:AZ:59:LYS:HD2	28:AZ:60:LYS:N	1.97	0.67
28:AZ:95:VAL:HG13	28:AZ:109:LYS:HG3	1.73	0.67
39:Ak:5:ILE:HG21	39:Ak:11:PHE:H	1.59	0.67
39:Ak:64:LEU:HD12	39:Ak:65:ALA:H	1.58	0.67
41:Am:101:ALA:O	41:Am:103:LEU:HG	1.94	0.67
48:A2:286:G:O5'	48:A2:286:G:H8	1.76	0.67
49:B1:157:U:O4'	56:BG:59:GLN:CA	2.42	0.67
49:B1:502:C:OP1	54:BE:66:MET:CE	2.35	0.67
49:B1:1603:G:O4'	68:BS:38:ARG:NH2	2.27	0.67
51:BB:71:LEU:HD21	51:BB:75:GLN:CD	2.19	0.67
56:BG:183:ARG:C	56:BG:186:GLN:HG2	2.16	0.67
59:BJ:161:LEU:HB3	59:BJ:162:ARG:HH12	1.58	0.67
63:BN:75:LEU:HD13	63:BN:75:LEU:C	2.19	0.67
65:BP:52:LYS:HZ2	65:BP:83:MET:HE2	1.58	0.67
67:BR:95:ILE:C	67:BR:96:ILE:HD12	2.18	0.67
5:AC:242:PRO:HB2	48:A2:2276:G:H4'	1.76	0.67
10:AH:61:TRP:CH2	15:AM:33:GLN:HG3	2.28	0.67
13:AK:84:GLY:HA2	48:A2:2002:G:C3'	2.24	0.67
20:AR:165:LYS:CE	49:B1:907:G:O5'	2.21	0.67
22:AT:125:TRP:O	22:AT:126:VAL:HG22	1.93	0.67
25:AW:68:GLN:O	25:AW:69:LYS:HB2	1.92	0.67
29:Aa:79:TRP:CZ2	29:Aa:118:PRO:HD3	2.28	0.67
35:Ag:49:CYS:SG	48:A2:2631:G:N3	2.59	0.67
39:Ak:40:ARG:HG2	39:Ak:40:ARG:HH11	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:Aq:46:ILE:CD1	45:Aq:71:ILE:CB	2.72	0.67
47:Au:39:LYS:HD2	47:Au:39:LYS:C	2.19	0.67
47:Au:162:VAL:HG21	48:A2:3938:G:N2	2.08	0.67
48:A2:196:G:N2	48:A2:231:G:H1	1.89	0.67
48:A2:4721:C:H2'	48:A2:4722:G:O4'	1.94	0.67
49:B1:582:U:O4'	74:BY:32:LYS:CA	2.42	0.67
49:B1:1519:U:C1'	49:B1:1623:A:H62	2.07	0.67
50:BA:112:ILE:O	50:BA:113:GLN:HG2	1.93	0.67
59:BJ:87:LEU:CD2	59:BJ:96:TYR:CE2	2.77	0.67
59:BJ:162:ARG:C	59:BJ:164:PRO:HD2	2.18	0.67
65:BP:85:ILE:CD1	65:BP:116:LEU:CG	2.72	0.67
68:BS:70:ILE:CD1	68:BS:77:TYR:CG	2.76	0.67
79:Bd:38:MET:CE	79:Bd:42:CYS:C	2.67	0.67
84:Bx:38:U:H3'	84:Bx:39:U:O4'	1.95	0.67
2:A4:15:C:H1'	2:A4:65:G:H21	1.60	0.67
6:AD:22:ARG:HH21	6:AD:27:LYS:HD3	1.55	0.67
6:AD:22:ARG:NH2	6:AD:27:LYS:HZ2	1.89	0.67
13:AK:52:VAL:HB	13:AK:89:VAL:C	2.20	0.67
27:AY:41:LYS:CD	27:AY:42:TYR:HE1	2.07	0.67
29:Aa:26:ARG:NH1	48:A2:1637:C:C5	2.62	0.67
32:Ad:38:PHE:CD2	48:A2:4596:U:C5	2.82	0.67
46:At:98:ARG:CZ	48:A2:952:G:P	2.82	0.67
47:Au:38:LEU:HD11	47:Au:159:MET:HE2	1.75	0.67
47:Au:203:ALA:HB1	47:Au:215:ARG:HD2	1.76	0.67
48:A2:959:C:C2	48:A2:1266:G:N2	2.62	0.67
48:A2:1161:G:H4'	48:A2:1162:U:OP2	1.93	0.67
48:A2:2466:G:C5	48:A2:2468:C:O4'	2.47	0.67
49:B1:104:A:H4'	58:BI:18:ARG:HH21	1.58	0.67
49:B1:380:G:H1'	58:BI:5:ARG:NE	2.08	0.67
49:B1:1618:C:H5	79:Bd:14:PHE:HZ	1.41	0.67
54:BE:123:LEU:CD1	54:BE:236:ILE:HG12	2.25	0.67
55:BF:23:TRP:NE1	55:BF:108:PRO:HG2	2.07	0.67
55:BF:93:VAL:HG13	55:BF:97:PHE:CZ	2.28	0.67
64:BO:142:ARG:HG3	76:Ba:22:ARG:HD2	1.74	0.67
64:BO:142:ARG:CG	76:Ba:22:ARG:HG3	2.23	0.67
68:BS:14:ARG:HD3	68:BS:17:ASN:O	1.95	0.67
2:A4:10:C:O2	6:AD:21:ARG:N	2.27	0.67
9:AG:70:LEU:HD11	16:AN:25:VAL:HG22	1.75	0.67
16:AN:84:PRO:HD2	48:A2:43:U:P	2.35	0.67
19:AQ:14:ARG:HH21	48:A2:1676:C:N4	1.92	0.67
20:AR:38:ARG:O	20:AR:41:ILE:HG22	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AT:105:PHE:HE1	48:A2:1784:A:H4'	1.53	0.67
28:AZ:46:ILE:HD13	28:AZ:68:ILE:CG1	2.25	0.67
30:Ab:54:LEU:HD11	48:A2:1809:C:O2'	1.95	0.67
38:Aj:3:LYS:CE	48:A2:1621:U:P	2.77	0.67
39:Ak:12:LEU:O	39:Ak:15:ALA:HB3	1.94	0.67
48:A2:1989:U:C6	48:A2:1991:A:C8	2.82	0.67
49:B1:238:C:H42	49:B1:283:G:H1	1.42	0.67
49:B1:873:G:OP1	61:BL:153:LYS:CE	2.42	0.67
49:B1:1398:G:O2'	82:Bg:100:ARG:NE	2.28	0.67
49:B1:1415:C:C4'	69:BT:128:GLN:HG3	2.24	0.67
49:B1:1466:G:OP1	67:BR:4:VAL:HA	1.93	0.67
49:B1:1782:G:C2	49:B1:1784:G:N7	2.61	0.67
49:B1:1862:G:O6	76:Ba:75:VAL:CG2	2.42	0.67
51:BB:181:LEU:HA	51:BB:184:VAL:HG23	1.76	0.67
54:BE:87:MET:O	54:BE:87:MET:HG3	1.93	0.67
54:BE:229:GLY:HA2	54:BE:235:TRP:CD1	2.29	0.67
56:BG:12:CYS:SG	56:BG:124:LEU:HD13	2.33	0.67
63:BN:82:PRO:O	63:BN:83:ASP:HB3	1.94	0.67
75:BZ:62:VAL:HG11	75:BZ:91:LEU:HD22	1.75	0.67
2:A4:13:A:C2	6:AD:21:ARG:HB2	2.26	0.67
2:A4:105:C:OP2	11:AI:203:ARG:NH1	2.27	0.67
3:AA:9:ARG:HD2	48:A2:1610:C:OP2	1.94	0.67
3:AA:207:VAL:HG12	48:A2:3890:C:H5'	1.76	0.67
5:AC:94:ASN:HD21	5:AC:102:PHE:CB	2.08	0.67
15:AM:19:PRO:HB3	48:A2:923:C:C4	2.29	0.67
19:AQ:140:SER:O	48:A2:1441:A:H5'	1.94	0.67
26:AX:56:ARG:HH22	26:AX:62:ARG:NH2	1.91	0.67
30:Ab:54:LEU:HD13	30:Ab:54:LEU:O	1.94	0.67
47:Au:37:SER:O	47:Au:201:VAL:HG22	1.95	0.67
47:Au:159:MET:HG2	47:Au:162:VAL:O	1.95	0.67
49:B1:498:C:H5"	54:BE:7:LYS:HE2	1.75	0.67
49:B1:1600:G:H5"	75:BZ:43:LYS:HE2	1.75	0.67
49:B1:1756:C:H2'	49:B1:1757:G:H8	1.58	0.67
51:BB:179:ASN:HB3	51:BB:183:GLU:CB	2.24	0.67
59:BJ:151:LEU:HD23	59:BJ:151:LEU:C	2.19	0.67
67:BR:35:CYS:SG	67:BR:38:ILE:HD11	2.33	0.67
67:BR:123:THR:HG22	67:BR:123:THR:O	1.94	0.67
69:BT:38:LYS:HE2	69:BT:98:SER:OG	1.95	0.67
72:BW:68:ARG:NH1	72:BW:70:ASN:ND2	2.42	0.67
75:BZ:63:PRO:CA	75:BZ:111:ARG:HD2	2.25	0.67
5:AC:4:ALA:HA	48:A2:659:G:N2	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AD:229:ASN:HD22	6:AD:229:ASN:N	1.92	0.67
16:AN:80:THR:OG1	16:AN:87:HIS:HA	1.95	0.67
48:A2:446:A:OP1	48:A2:1277:A:C8	2.48	0.67
48:A2:465:A:H62	48:A2:677:G:H21	1.40	0.67
48:A2:693:U:H3'	48:A2:694:G:H21	1.59	0.67
48:A2:905:G:H3'	48:A2:905:G:N3	2.09	0.67
48:A2:918:C:H3'	48:A2:918:C:O2	1.93	0.67
49:B1:1017:U:H5'	63:BN:55:ARG:NH2	2.10	0.67
49:B1:1698:C:O2	84:Bx:52:U:C4	2.41	0.67
49:B1:1784:G:H2'	49:B1:1785:C:C6	2.30	0.67
49:B1:1824:A:H3'	49:B1:1824:A:N3	2.09	0.67
52:BC:252:THR:HB	72:BW:99:PHE:CZ	2.24	0.67
68:BS:52:LEU:HD12	68:BS:52:LEU:N	2.03	0.67
5:AC:169:LEU:HD12	48:A2:215:A:H61	1.58	0.67
10:AH:134:CYS:HG	10:AH:144:LEU:HD11	1.60	0.67
16:AN:194:ARG:NH2	48:A2:79:C:OP2	2.28	0.67
30:Ab:53:GLY:HA3	48:A2:1795:U:H5'	1.74	0.67
35:Ag:49:CYS:SG	35:Ag:50:PRO:HD2	2.34	0.67
45:Aq:58:ILE:HD11	45:Aq:73:VAL:HB	1.75	0.67
47:Au:37:SER:O	47:Au:201:VAL:HG13	1.95	0.67
48:A2:4714:U:H5"	48:A2:4714:U:H6	1.60	0.67
49:B1:910:G:C2'	49:B1:911:C:H5'	2.25	0.67
50:BA:42:LYS:HE3	50:BA:48:ILE:HD13	1.75	0.67
51:BB:153:THR:HB	51:BB:155:TYR:CE2	2.30	0.67
51:BB:173:THR:O	51:BB:177:GLN:CA	2.42	0.67
54:BE:93:GLU:HB3	54:BE:94:LYS:HB2	1.75	0.67
65:BP:59:ARG:HE	65:BP:76:VAL:HG13	1.60	0.67
68:BS:74:PRO:HG3	68:BS:84:LEU:CG	2.24	0.67
5:AC:201:ARG:C	5:AC:202:ILE:HD12	2.20	0.67
8:AF:51:TYR:OH	48:A2:1220:C:N4	2.27	0.67
8:AF:230:GLY:HA3	21:AS:2:LYS:CB	2.24	0.67
10:AH:1:MET:CG	10:AH:3:THR:OG1	2.43	0.67
12:AJ:65:ASN:C	43:Ao:103:VAL:CG2	2.63	0.67
16:AN:181:HIS:CE1	48:A2:99:A:H4'	2.30	0.67
22:AT:39:ILE:HD12	22:AT:102:ARG:CD	2.25	0.67
48:A2:1755:U:C4	48:A2:1756:C:C4	2.83	0.67
48:A2:3683:A:H1'	49:B1:970:G:N7	2.10	0.67
49:B1:190:G:OP2	58:BI:143:LYS:HD3	1.93	0.67
49:B1:368:U:H3'	49:B1:369:C:H6	1.59	0.67
49:B1:618:C:OP1	73:BX:86:PRO:O	2.13	0.67
49:B1:837:A:H2'	49:B1:838:G:C5'	2.24	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:860:G:O2'	72:BW:107:SER:CB	2.43	0.67
49:B1:1124:C:O2'	67:BR:123:THR:CB	2.43	0.67
50:BA:201:LEU:HD21	67:BR:85:VAL:HG21	1.76	0.67
69:BT:41:LYS:CE	69:BT:43:LYS:HE2	2.23	0.67
69:BT:42:HIS:H	69:BT:43:LYS:HZ3	1.39	0.67
3:AA:249:THR:OG1	49:B1:1044:G:H8	1.76	0.67
6:AD:287:PHE:CD2	11:AI:209:TRP:CZ3	2.82	0.67
13:AK:34:ASN:O	13:AK:35:VAL:HG22	1.93	0.67
14:AL:16:LYS:HG3	48:A2:47:A:OP2	1.94	0.67
18:AP:85:LYS:HG2	48:A2:3827:A:H4'	1.76	0.67
26:AX:44:PRO:HB2	48:A2:4055:A:C5'	2.25	0.67
44:Ap:2:ALA:N	48:A2:1551:U:O4	2.27	0.67
47:Au:60:ARG:NE	47:Au:61:PRO:HG3	2.10	0.67
47:Au:104:ALA:HB1	47:Au:133:LYS:HE2	1.76	0.67
48:A2:1752:A:N1	48:A2:1753:U:C4	2.63	0.67
48:A2:2055:C:H2'	48:A2:2056:G:O4'	1.95	0.67
48:A2:2469:U:H6	48:A2:2469:U:O5'	1.77	0.67
48:A2:4686:A:OP2	48:A2:4686:A:H8	1.77	0.67
49:B1:307:G:H1'	58:BI:45:THR:CG2	2.25	0.67
49:B1:509:G:H5"	59:BJ:3:VAL:CG1	2.25	0.67
49:B1:1204:A:O2'	49:B1:1700:C:OP2	2.12	0.67
49:B1:1256:G:N2	79:Bd:30:LEU:N	2.37	0.67
49:B1:1291:A:HO2'	81:Bf:140:TYR:HE1	1.34	0.67
49:B1:1507:G:H22	81:Bf:90:LYS:N	1.93	0.67
49:B1:1622:U:OP2	49:B1:1623:A:H5"	1.95	0.67
51:BB:97:LEU:HG	51:BB:232:HIS:CE1	2.29	0.67
67:BR:35:CYS:CA	67:BR:38:ILE:HD11	2.19	0.67
75:BZ:88:LEU:HD23	75:BZ:109:TYR:HE2	0.86	0.67
1:A3:3:A:H4'	18:AP:61:ARG:NE	2.09	0.66
5:AC:190:ARG:HA	5:AC:202:ILE:HD13	1.76	0.66
7:AE:233:PHE:CE1	48:A2:447:G:O6	2.42	0.66
10:AH:67:LEU:O	10:AH:70:VAL:HG12	1.94	0.66
13:AK:57:LYS:O	13:AK:60:MET:CA	2.43	0.66
33:Ae:33:ARG:HD2	48:A2:1286:A:N7	2.07	0.66
35:Ag:78:TYR:CZ	48:A2:2731:G:H4'	2.29	0.66
37:Ai:15:HIS:CG	48:A2:72:C:C5	2.83	0.66
47:Au:204:LEU:HD11	47:Au:216:LEU:CB	2.20	0.66
48:A2:3796:A:H2'	48:A2:3797:C:C5'	2.17	0.66
48:A2:4870:G:H4'	48:A2:4871:G:OP1	1.95	0.66
49:B1:581:U:O2	74:BY:33:ALA:CB	2.44	0.66
49:B1:1159:G:O4'	72:BW:4:MET:SD	2.53	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1284:A:H5”	49:B1:1284:A:H8	1.59	0.66
49:B1:1287:A:H2’	49:B1:1287:A:N3	2.10	0.66
52:BC:253:PRO:C	52:BC:256:TRP:CD1	2.73	0.66
69:BT:41:LYS:HD3	69:BT:43:LYS:NZ	2.10	0.66
4:AB:8:ALA:HB2	24:AV:49:LEU:CD2	2.26	0.66
4:AB:95:THR:HG22	48:A2:4868:A:H5”	1.76	0.66
5:AC:204:ARG:HA	48:A2:2277:U:OP2	1.95	0.66
7:AE:96:VAL:HG22	7:AE:107:VAL:CG1	2.25	0.66
7:AE:100:LYS:HB2	48:A2:679:G:P	2.35	0.66
10:AH:7:ASN:CB	10:AH:58:ASP:HA	2.26	0.66
13:AK:15:LEU:O	13:AK:19:GLN:HB2	1.94	0.66
20:AR:126:LYS:HG2	20:AR:131:VAL:CG1	2.25	0.66
25:AW:98:PRO:HD2	25:AW:99:GLU:N	2.05	0.66
36:Ah:112:ARG:CZ	48:A2:258:C:O2’	2.43	0.66
41:Am:100:TYR:OH	48:A2:4387:G:OP1	2.12	0.66
48:A2:227:G:H3’	48:A2:228:U:H5’	1.76	0.66
48:A2:1354:A:H4’	48:A2:1355:A:OP2	1.95	0.66
49:B1:168:C:O2’	56:BG:133:LEU:HB2	1.93	0.66
49:B1:305:U:N3	58:BI:55:TYR:CD2	2.61	0.66
49:B1:571:U:OP1	74:BY:37:LYS:HD3	1.95	0.66
49:B1:637:U:H6	49:B1:637:U:O5’	1.78	0.66
49:B1:1612:G:H1’	68:BS:87:GLN:HG3	1.77	0.66
63:BN:20:ARG:HA	63:BN:65:PHE:CZ	2.30	0.66
65:BP:85:ILE:CG2	65:BP:111:MET:O	2.43	0.66
65:BP:86:LEU:HD23	65:BP:86:LEU:H	1.61	0.66
76:Ba:4:LYS:HE2	76:Ba:92:ARG:HH21	1.55	0.66
4:AB:244:THR:HA	48:A2:4487:C:O2’	1.95	0.66
7:AE:133:PHE:CD2	48:A2:1270:G:N2	2.62	0.66
11:AI:18:PRO:HA	11:AI:94:PHE:O	1.96	0.66
14:AL:60:ARG:HD3	48:A2:72:C:C2	2.29	0.66
37:Ai:94:LEU:HD21	37:Ai:98:ARG:CZ	2.24	0.66
45:Aq:9:GLU:HB2	45:Aq:65:GLN:HA	1.75	0.66
47:Au:67:VAL:HA	47:Au:111:LEU:O	1.95	0.66
47:Au:205:TYR:HA	47:Au:215:ARG:HA	1.77	0.66
48:A2:154:U:H5”	48:A2:154:U:C6	2.27	0.66
48:A2:1389:G:C2’	48:A2:1390:C:OP1	2.43	0.66
48:A2:4907:G:C8	48:A2:4907:G:OP1	2.48	0.66
49:B1:440:G:H5”	58:BI:2:GLY:N	2.09	0.66
49:B1:990:A:P	51:BB:116:LYS:HE3	2.35	0.66
49:B1:1497:G:O6	60:BK:67:PHE:CE1	2.49	0.66
49:B1:1544:C:H4’	66:BQ:80:GLN:HE21	1.57	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1603:G:H5'	68:BS:38:ARG:HH12	1.37	0.66
49:B1:1603:G:C4'	68:BS:38:ARG:HH22	2.09	0.66
53:BD:218:LEU:HD23	82:Bg:172:LYS:HD2	1.77	0.66
65:BP:50:ARG:HA	65:BP:54:HIS:HB2	1.77	0.66
65:BP:65:LYS:C	65:BP:67:ALA:CB	2.68	0.66
68:BS:36:VAL:HG13	68:BS:40:TYR:HD1	1.59	0.66
1:A3:35:C:O2	48:A2:21:G:N2	2.20	0.66
2:A4:75:G:H5"	21:AS:49:SER:O	1.95	0.66
4:AB:337:VAL:HG11	4:AB:345:LEU:HD13	1.76	0.66
4:AB:393:LYS:CD	48:A2:5000:A:H4'	2.25	0.66
6:AD:12:TYR:HE1	6:AD:13:PHE:HE1	1.02	0.66
6:AD:146:LEU:HD11	6:AD:163:LEU:HG	1.77	0.66
7:AE:233:PHE:CZ	48:A2:447:G:OP1	2.48	0.66
13:AK:28:PHE:HB2	13:AK:89:VAL:HG13	1.78	0.66
13:AK:53:VAL:O	13:AK:54:LEU:HD22	1.96	0.66
16:AN:98:LEU:HD21	48:A2:295:G:H5"	1.76	0.66
18:AP:37:LYS:HB2	18:AP:117:ILE:HG22	1.78	0.66
20:AR:126:LYS:HE2	20:AR:131:VAL:HG13	1.68	0.66
26:AX:117:TYR:HB2	26:AX:119:ILE:HG12	1.77	0.66
30:Ab:27:GLN:HB3	48:A2:1444:A:H1'	1.77	0.66
32:Ad:79:ASN:HD22	48:A2:4615:C:H5"	1.60	0.66
47:Au:204:LEU:O	47:Au:215:ARG:HG3	1.96	0.66
48:A2:656:C:H2'	48:A2:657:C:O4'	1.95	0.66
48:A2:1297:C:O2'	48:A2:1298:C:OP2	2.14	0.66
48:A2:1740:G:C2	48:A2:1741:G:C5	2.83	0.66
49:B1:407:G:N1	73:BX:36:LEU:HD23	2.11	0.66
49:B1:454:U:H5"	56:BG:94:ARG:HB2	1.77	0.66
49:B1:1256:G:C5	79:Bd:30:LEU:HD23	2.31	0.66
49:B1:1672:U:OP2	66:BQ:17:LYS:CE	2.43	0.66
49:B1:1784:G:C6	49:B1:1785:C:C4	2.82	0.66
50:BA:110:ASN:C	50:BA:116:PHE:HD2	2.03	0.66
53:BD:72:VAL:CG2	60:BK:20:VAL:HG13	2.25	0.66
53:BD:73:VAL:O	53:BD:77:PHE:CD2	2.48	0.66
59:BJ:113:GLN:HG3	59:BJ:149:VAL:HG21	1.77	0.66
65:BP:86:LEU:HD23	65:BP:86:LEU:N	2.11	0.66
68:BS:70:ILE:HD12	68:BS:77:TYR:CD2	2.28	0.66
79:Bd:19:ARG:CZ	79:Bd:33:LYS:NZ	2.58	0.66
6:AD:234:ASP:CG	6:AD:235:MET:HE1	2.20	0.66
14:AL:124:LEU:HA	36:Ah:121:VAL:HG12	1.77	0.66
14:AL:126:LEU:HD11	14:AL:135:LYS:HB3	1.76	0.66
14:AL:165:LYS:HE2	48:A2:505:C:C5'	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AR:74:ARG:HG2	48:A2:2869:C:OP2	1.94	0.66
23:AU:47:ILE:HD12	23:AU:56:LEU:HD11	1.76	0.66
47:Au:33:GLU:OE1	47:Au:168:ALA:HA	1.95	0.66
48:A2:127:G:C2'	48:A2:128:C:H5'	2.26	0.66
48:A2:1256:G:N3	48:A2:1256:G:H2'	2.08	0.66
48:A2:2068:C:H3'	48:A2:2068:C:OP1	1.95	0.66
48:A2:3712:C:H6	48:A2:3712:C:O5'	1.77	0.66
48:A2:3728:G:N2	48:A2:3739:U:O2	2.29	0.66
48:A2:4725:U:H4'	48:A2:4726:A:OP2	1.94	0.66
49:B1:617:G:O5'	73:BX:88:ASP:HA	1.95	0.66
49:B1:1679:A:N6	55:BF:60:ARG:CA	2.54	0.66
50:BA:110:ASN:O	50:BA:116:PHE:CD2	2.48	0.66
54:BE:213:ALA:HB2	54:BE:242:LYS:HD2	1.78	0.66
58:BI:40:PRO:O	58:BI:59:ARG:HG3	1.96	0.66
6:AD:12:TYR:CD1	6:AD:13:PHE:N	2.63	0.66
8:AF:111:LEU:HD23	48:A2:1821:G:H1'	1.76	0.66
13:AK:10:LYS:CE	48:A2:1941:A:N3	2.54	0.66
15:AM:16:SER:HB2	48:A2:1902:C:H42	1.61	0.66
16:AN:94:PHE:CE2	16:AN:96:ARG:HB2	2.30	0.66
19:AQ:68:ARG:NH1	48:A2:1483:C:H2'	2.10	0.66
20:AR:26:PRO:HB3	48:A2:2365:U:O2'	1.95	0.66
20:AR:173:ARG:NE	49:B1:910:G:OP1	2.23	0.66
26:AX:55:ARG:HA	26:AX:55:ARG:NH1	2.09	0.66
26:AX:82:THR:OG1	36:Ah:36:VAL:HG12	1.96	0.66
30:Ab:53:GLY:CA	48:A2:1795:U:H5'	2.26	0.66
47:Au:60:ARG:NE	47:Au:61:PRO:HD3	2.11	0.66
48:A2:3606:A:H2'	48:A2:3607:C:O4'	1.95	0.66
48:A2:4132:A:H4'	48:A2:4133:C:O5'	1.94	0.66
49:B1:687:C:OP1	72:BW:32:LYS:HE3	1.96	0.66
50:BA:74:VAL:HG13	50:BA:121:LEU:HD22	1.77	0.66
50:BA:103:PHE:CE2	50:BA:133:PRO:HA	2.30	0.66
50:BA:180:ARG:HG2	50:BA:184:ARG:HH12	1.60	0.66
54:BE:48:LEU:HA	54:BE:52:LEU:HD12	1.76	0.66
73:BX:139:GLU:O	73:BX:140:ARG:HG3	1.95	0.66
75:BZ:65:TYR:HE2	75:BZ:76:ARG:HG2	1.57	0.66
82:Bg:88:ARG:CG	82:Bg:97:THR:CG2	2.73	0.66
7:AE:162:VAL:HG11	7:AE:175:VAL:HG12	1.76	0.66
8:AF:184:ILE:C	8:AF:186:CYS:H	2.03	0.66
15:AM:91:TRP:CZ2	48:A2:4827:U:H2'	2.30	0.66
22:AT:119:ALA:CB	22:AT:124:THR:O	2.44	0.66
30:Ab:50:ASN:OD1	48:A2:1795:U:H1'	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:Ai:37:THR:HB	37:Ai:41:ARG:NH1	2.11	0.66
47:Au:83:PRO:HG3	47:Au:107:TYR:CD1	2.30	0.66
48:A2:4160:G:N2	83:Bv:74:C:C6	2.61	0.66
50:BA:42:LYS:HZ2	50:BA:46:ILE:HG21	1.60	0.66
51:BB:182:LYS:O	51:BB:186:ASN:ND2	2.28	0.66
55:BF:23:TRP:CE2	55:BF:108:PRO:CG	2.71	0.66
56:BG:63:MET:CE	56:BG:106:LEU:CD1	2.73	0.66
58:BI:48:VAL:CG2	58:BI:54:LYS:HE3	2.22	0.66
68:BS:25:LYS:O	68:BS:29:ALA:CB	2.44	0.66
72:BW:83:LEU:HD23	72:BW:86:LEU:HD12	1.78	0.66
76:Ba:87:ARG:HB3	76:Ba:91:ALA:HB3	1.76	0.66
1:A3:85:U:O2'	1:A3:86:U:C5'	2.44	0.66
4:AB:390:GLY:HA3	25:AW:63:GLN:CD	2.20	0.66
5:AC:183:VAL:HG11	5:AC:225:PRO:O	1.95	0.66
5:AC:311:ARG:HH12	48:A2:946:G:C4'	2.06	0.66
6:AD:15:ARG:O	6:AD:17:GLN:CD	2.39	0.66
6:AD:23:ARG:NH2	48:A2:4242:A:OP2	2.28	0.66
6:AD:29:ASP:HB3	48:A2:4242:A:H8	1.51	0.66
6:AD:229:ASN:C	6:AD:230:SER:HG	1.99	0.66
10:AH:60:TRP:CD1	21:AS:153:PRO:HG2	2.30	0.66
18:AP:18:ARG:CG	18:AP:147:GLU:HG2	2.17	0.66
20:AR:25:ASP:OD1	20:AR:25:ASP:N	2.27	0.66
20:AR:99:MET:HE1	48:A2:2646:C:O3'	1.96	0.66
22:AT:4:THR:HG21	48:A2:4169:C:C5	2.31	0.66
22:AT:14:MET:HE1	22:AT:55:LYS:HA	1.78	0.66
27:AY:41:LYS:HZ2	27:AY:42:TYR:HE1	1.41	0.66
36:Ah:46:LYS:HA	36:Ah:49:VAL:HG22	1.78	0.66
45:Aq:24:ALA:O	45:Aq:25:THR:HB	1.95	0.66
46:At:99:LYS:HD3	48:A2:670:C:C5'	2.26	0.66
48:A2:1149:G:O3'	48:A2:1150:C:H4'	1.96	0.66
48:A2:1614:A:H2'	48:A2:1615:G:H5"	1.76	0.66
48:A2:1745:C:C5	48:A2:1746:G:C5	2.84	0.66
48:A2:1888:A:H62	48:A2:1889:A:N6	1.93	0.66
48:A2:4063:G:H21	48:A2:4063:G:P	2.19	0.66
49:B1:157:U:O4'	56:BG:59:GLN:C	2.38	0.66
49:B1:553:U:H3'	49:B1:554:A:H5"	1.78	0.66
49:B1:1679:A:N7	55:BF:60:ARG:HB2	2.10	0.66
66:BQ:62:ARG:CZ	66:BQ:108:ILE:HD11	2.25	0.66
66:BQ:102:GLU:CG	82:Bg:57:ARG:HA	2.26	0.66
67:BR:34:VAL:HG12	67:BR:38:ILE:HG12	1.78	0.66
75:BZ:99:LEU:HA	75:BZ:108:ILE:O	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A4:114:U:H4'	6:AD:73:MET:HE1	1.77	0.66
5:AC:139:SER:O	46:At:15:SER:CB	2.44	0.66
5:AC:301:ALA:HB1	19:AQ:132:LYS:NZ	2.11	0.66
5:AC:322:LEU:HB3	48:A2:1264:G:C5	2.31	0.66
6:AD:279:ARG:NE	48:A2:1160:U:H4'	2.06	0.66
7:AE:105:ARG:HE	48:A2:464:A:N6	1.94	0.66
7:AE:123:ARG:O	7:AE:124:LYS:HG2	1.95	0.66
9:AG:113:ARG:CZ	48:A2:119:G:N1	2.59	0.66
17:AO:22:ILE:HG23	21:AS:166:ARG:NH2	2.11	0.66
17:AO:114:LYS:O	48:A2:4718:C:H5"	1.93	0.66
22:AT:4:THR:HG23	48:A2:4169:C:C6	2.30	0.66
24:AV:97:TYR:CZ	25:AW:21:TYR:HD1	2.13	0.66
24:AV:120:PRO:HG3	25:AW:23:ARG:O	1.95	0.66
24:AV:121:VAL:HG21	24:AV:136:ALA:HB2	1.78	0.66
30:Ab:6:ASN:HD22	48:A2:4182:A:H5'	1.61	0.66
44:Ap:18:TYR:HA	48:A2:3606:A:H61	1.59	0.66
46:At:52:GLU:HB2	46:At:61:VAL:CG2	2.25	0.66
48:A2:506:U:H2'	48:A2:507:U:H5"	1.78	0.66
48:A2:514:C:H2'	48:A2:515:C:H5'	1.77	0.66
48:A2:633:U:H4'	48:A2:634:C:H5'	1.78	0.66
48:A2:4160:G:N2	83:Bv:74:C:C2	2.64	0.66
49:B1:740:C:O2'	49:B1:741:C:O2	2.12	0.66
51:BB:79:VAL:HB	51:BB:81:PHE:CD1	2.31	0.66
67:BR:95:ILE:HG23	67:BR:114:LEU:HB3	0.77	0.66
1:A3:49:G:OP1	36:Ah:48:ARG:CG	2.43	0.66
6:AD:226:TYR:CE1	6:AD:231:VAL:HG11	2.31	0.66
9:AG:59:ARG:HH21	48:A2:2449:C:H1'	1.58	0.66
13:AK:31:GLY:HA2	13:AK:85:ASN:O	1.96	0.66
14:AL:103:ARG:CG	37:Ai:25:ARG:NH1	2.59	0.66
19:AQ:3:VAL:HG21	48:A2:2257:G:P	2.36	0.66
19:AQ:157:GLY:HA2	19:AQ:161:SER:CB	2.26	0.66
37:Ai:14:GLY:HA2	48:A2:72:C:P	2.35	0.66
45:Aq:37:LEU:HD23	45:Aq:69:ALA:HB2	1.78	0.66
48:A2:205:A:C2	48:A2:229:G:O6	2.48	0.66
48:A2:463:C:N4	48:A2:680:C:N3	2.44	0.66
48:A2:947:A:N6	48:A2:1266:G:O6	2.29	0.66
48:A2:1363:G:H4'	48:A2:1364:U:H6	1.61	0.66
48:A2:3931:A:H1'	48:A2:4015:G:H5"	1.77	0.66
48:A2:4333:G:N2	83:Bw:76:A:H2'	2.10	0.66
49:B1:167:G:H5"	56:BG:8:PRO:O	1.96	0.66
49:B1:168:C:H4'	56:BG:131:ARG:HB2	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:181:A:H1'	49:B1:182:C:C6	2.30	0.66
49:B1:222:U:H5"	61:BL:17:PHE:CE2	2.27	0.66
49:B1:749:U:H2'	49:B1:749:U:O2	1.95	0.66
49:B1:827:A:H5'	59:BJ:8:VAL:CG2	2.24	0.66
49:B1:873:G:OP1	61:BL:153:LYS:HE3	1.96	0.66
49:B1:1158:G:H5"	72:BW:76:SER:OG	1.96	0.66
50:BA:8:LEU:HD11	71:BV:39:VAL:HG11	1.78	0.66
51:BB:82:ARG:NH2	51:BB:188:LEU:O	2.28	0.66
55:BF:107:ASN:HD22	55:BF:107:ASN:N	1.92	0.66
58:BI:8:TRP:CZ3	58:BI:20:PRO:HB3	2.31	0.66
66:BQ:42:ILE:O	66:BQ:45:ARG:NH1	2.29	0.66
69:BT:11:GLN:OE1	69:BT:62:ARG:HG3	1.96	0.66
5:AC:69:THR:CG2	48:A2:4352:A:OP1	2.43	0.65
7:AE:113:PRO:HG2	7:AE:116:TYR:CZ	2.31	0.65
10:AH:41:ILE:HD13	10:AH:73:ILE:HD11	1.77	0.65
13:AK:45:MET:SD	13:AK:48:ARG:NH1	2.69	0.65
15:AM:91:TRP:HA	15:AM:94:LYS:HD2	1.78	0.65
48:A2:113:A:H2'	48:A2:114:G:H5'	1.79	0.65
48:A2:214:C:H4'	48:A2:215:A:OP1	1.96	0.65
48:A2:1943:A:N6	48:A2:2006:A:C5	2.64	0.65
48:A2:3929:G:N1	48:A2:4016:A:N6	2.31	0.65
48:A2:4985:C:H3'	48:A2:4985:C:OP1	1.96	0.65
49:B1:346:C:OP1	54:BE:37:LYS:CA	2.44	0.65
49:B1:824:C:C2	59:BJ:144:ILE:HG12	2.30	0.65
49:B1:833:C:H2'	49:B1:834:C:H6	1.60	0.65
49:B1:1256:G:N1	79:Bd:30:LEU:CG	2.59	0.65
49:B1:1308:U:C4'	81:Bf:134:SER:O	2.44	0.65
49:B1:1648:G:H3'	66:BQ:127:CYS:HA	1.76	0.65
49:B1:1757:G:H1	49:B1:1775:U:H3	1.42	0.65
51:BB:70:SER:HB2	51:BB:82:ARG:C	2.20	0.65
52:BC:63:VAL:O	52:BC:64:THR:HG22	1.96	0.65
56:BG:106:LEU:HD22	56:BG:106:LEU:N	2.10	0.65
66:BQ:62:ARG:CD	66:BQ:92:LEU:HD12	2.25	0.65
67:BR:18:GLU:CD	67:BR:69:ILE:HG12	2.21	0.65
3:AA:54:ARG:HH22	48:A2:3651:U:P	2.20	0.65
6:AD:178:LYS:HE2	48:A2:4285:A:H5"	1.76	0.65
6:AD:232:THR:HG23	6:AD:235:MET:CE	2.25	0.65
6:AD:286:SER:O	6:AD:289:ARG:HB3	1.96	0.65
8:AF:165:LYS:HB3	48:A2:2254:G:C2'	2.26	0.65
8:AF:222:LYS:O	8:AF:223:LYS:HB2	1.96	0.65
9:AG:166:LEU:HA	16:AN:7:ILE:HD11	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AY:55:VAL:HG13	27:AY:104:VAL:CG1	2.26	0.65
40:Al:34:LYS:NZ	48:A2:355:C:H4'	2.11	0.65
43:Ao:102:GLN:NE2	43:Ao:103:VAL:H	1.90	0.65
46:At:47:LYS:NZ	46:At:102:TYR:HA	2.11	0.65
46:At:122:LYS:N	46:At:123:PRO:HD3	2.12	0.65
48:A2:112:C:H3'	48:A2:155:A:H61	1.61	0.65
48:A2:140:C:H2'	48:A2:141:G:C8	2.32	0.65
48:A2:680:C:N4	48:A2:681:A:C5	2.65	0.65
48:A2:1060:C:OP1	48:A2:1197:C:H5'	1.96	0.65
49:B1:606:G:H3'	49:B1:606:G:OP2	1.96	0.65
51:BB:39:PHE:O	51:BB:40:ASN:HB2	1.95	0.65
51:BB:182:LYS:HG3	51:BB:231:LEU:CD1	2.24	0.65
52:BC:132:ASP:OD1	52:BC:133:TYR:N	2.28	0.65
54:BE:36:HIS:CD2	54:BE:85:GLY:HA2	2.29	0.65
54:BE:115:THR:HG22	54:BE:116:VAL:N	2.11	0.65
56:BG:161:PRO:HA	56:BG:171:THR:OG1	1.96	0.65
59:BJ:161:LEU:C	59:BJ:162:ARG:HH11	2.04	0.65
62:BM:14:VAL:CG2	62:BM:127:TYR:CD1	2.79	0.65
69:BT:41:LYS:CD	69:BT:43:LYS:HE2	2.26	0.65
4:AB:37:PRO:HA	4:AB:188:GLY:HA2	1.79	0.65
7:AE:265:PRO:O	48:A2:4889:G:OP1	2.15	0.65
9:AG:113:ARG:NH2	48:A2:119:G:C6	2.63	0.65
22:AT:132:PRO:HD3	48:A2:1818:A:O2'	1.97	0.65
38:Aj:54:LYS:O	38:Aj:58:THR:HG23	1.96	0.65
45:Aq:125:LEU:HA	45:Aq:129:ILE:CB	2.26	0.65
48:A2:2036:G:H3'	48:A2:2037:G:H5'	1.79	0.65
48:A2:3678:U:H2'	48:A2:3679:C:C6	2.32	0.65
49:B1:581:U:O2	74:BY:33:ALA:HB1	1.96	0.65
49:B1:1237:C:H4'	65:BP:130:ARG:HB2	1.76	0.65
51:BB:41:ILE:O	51:BB:41:ILE:HG13	1.97	0.65
52:BC:65:LYS:HA	52:BC:68:ARG:NH2	2.10	0.65
54:BE:95:THR:HB	54:BE:97:GLU:N	2.12	0.65
61:BL:35:ARG:CG	61:BL:36:TYR:H	2.08	0.65
62:BM:56:CYS:HG	62:BM:61:TYR:HD2	1.37	0.65
74:BY:86:GLU:HB2	74:BY:91:LEU:CD1	2.22	0.65
77:Bb:19:HIS:HB3	77:Bb:22:LYS:CG	2.25	0.65
83:Bv:12:U:H2'	83:Bv:13:C:O4'	1.96	0.65
1:A3:3:A:H4'	18:AP:61:ARG:HE	1.61	0.65
1:A3:109:C:C5	38:Aj:20:ARG:CZ	2.80	0.65
2:A4:35:U:O2'	6:AD:156:GLY:HA3	1.97	0.65
4:AB:382:MET:HE1	48:A2:4958:G:O3'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:4:ALA:CB	48:A2:659:G:N2	2.59	0.65
5:AC:234:LYS:HD3	48:A2:1356:A:H2	1.62	0.65
9:AG:162:ASP:HB3	9:AG:163:PRO:HD3	1.78	0.65
14:AL:128:PRO:CD	14:AL:136:LYS:CD	2.74	0.65
18:AP:4:TYR:HE2	18:AP:16:LYS:HD3	1.61	0.65
22:AT:118:GLU:O	22:AT:122:LYS:HG3	1.96	0.65
31:Ac:87:LYS:HD3	31:Ac:89:TYR:OH	1.97	0.65
45:Aq:45:ASP:O	45:Aq:46:ILE:HD12	1.97	0.65
48:A2:73:A:H2'	48:A2:74:G:O4'	1.96	0.65
48:A2:121:A:H2	48:A2:122:U:O4'	1.79	0.65
48:A2:901:U:C5	48:A2:902:A:N6	2.65	0.65
48:A2:2607:U:C2	48:A2:2608:C:C5	2.85	0.65
48:A2:3929:G:N9	83:Bw:19:G:C5	2.64	0.65
48:A2:4880:C:O2	48:A2:4880:C:O5'	2.13	0.65
49:B1:977:C:H5'	51:BB:66:VAL:CG2	2.27	0.65
49:B1:1231:C:OP2	68:BS:139:THR:OG1	2.14	0.65
49:B1:1782:G:C2	49:B1:1784:G:C5	2.84	0.65
50:BA:66:VAL:HG21	50:BA:185:MET:SD	2.36	0.65
61:BL:13:GLN:HE22	61:BL:15:THR:CA	2.09	0.65
63:BN:55:ARG:HA	63:BN:60:VAL:O	1.95	0.65
73:BX:54:LYS:HD2	73:BX:91:LEU:HD11	1.78	0.65
3:AA:87:PHE:HE1	48:A2:4089:U:C5'	2.03	0.65
5:AC:326:LEU:CD2	5:AC:333:LYS:HB2	2.26	0.65
6:AD:145:TYR:CD1	48:A2:4287:A:H4'	2.32	0.65
10:AH:41:ILE:HG22	10:AH:43:VAL:HG23	1.78	0.65
29:Aa:95:THR:HG23	29:Aa:96:GLY:N	2.10	0.65
48:A2:495:C:H5"	48:A2:496:C:OP2	1.97	0.65
48:A2:678:C:H4'	48:A2:679:G:OP1	1.97	0.65
48:A2:1735:G:H2'	48:A2:1736:U:O4'	1.96	0.65
48:A2:3645:G:H3'	48:A2:3645:G:OP2	1.97	0.65
49:B1:582:U:O4'	74:BY:32:LYS:HA	1.96	0.65
49:B1:1720:U:H3'	49:B1:1721:U:H5"	1.78	0.65
53:BD:211:VAL:HG22	67:BR:38:ILE:O	1.95	0.65
59:BJ:35:TYR:HB2	59:BJ:37:LEU:HD11	1.77	0.65
59:BJ:162:ARG:CB	59:BJ:164:PRO:HD2	2.26	0.65
60:BK:31:LYS:C	60:BK:33:PRO:HD3	2.21	0.65
65:BP:84:ILE:HA	65:BP:115:TYR:C	2.22	0.65
72:BW:80:ASP:OD1	72:BW:124:LYS:HG2	1.97	0.65
7:AE:233:PHE:CE1	48:A2:447:G:N1	2.64	0.65
8:AF:69:ILE:HD13	48:A2:717:G:H4'	1.77	0.65
9:AG:111:LYS:NZ	48:A2:141:G:H5'	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AH:60:TRP:NE1	21:AS:153:PRO:HG3	2.11	0.65
20:AR:75:HIS:ND1	48:A2:2868:G:OP1	2.30	0.65
22:AT:127:GLN:NE2	48:A2:1816:G:H21	1.90	0.65
25:AW:79:GLN:HG3	56:BG:131:ARG:NH2	2.12	0.65
28:AZ:88:ASP:HB3	28:AZ:121:ARG:HH22	1.62	0.65
40:Al:36:ARG:HH12	48:A2:407:G:P	2.19	0.65
48:A2:125:C:H2'	48:A2:126:C:C6	2.32	0.65
48:A2:901:U:C2'	48:A2:902:A:C8	2.79	0.65
49:B1:168:C:H5'	56:BG:131:ARG:HB3	1.79	0.65
49:B1:284:C:H2'	49:B1:285:U:C5	2.32	0.65
56:BG:226:GLU:O	56:BG:230:LYS:HG2	1.97	0.65
58:BI:150:ASP:OD1	58:BI:154:LYS:HD2	1.96	0.65
61:BL:11:GLN:C	61:BL:12:LYS:HG3	2.14	0.65
65:BP:33:LEU:HB2	65:BP:37:TYR:CE1	2.32	0.65
68:BS:44:VAL:HG21	68:BS:71:MET:CE	2.25	0.65
82:Bg:147:HIS:CE1	82:Bg:175:LYS:HD2	2.32	0.65
1:A3:93:C:H5"	38:Aj:76:HIS:CD2	2.31	0.65
2:A4:43:U:C4'	12:AJ:143:ASP:HB3	2.27	0.65
4:AB:173:LEU:HD21	4:AB:342:LYS:HG2	1.77	0.65
5:AC:102:PHE:HB3	48:A2:1320:A:OP1	1.96	0.65
5:AC:211:TYR:HD2	5:AC:217:ILE:HG21	1.53	0.65
7:AE:110:ARG:HG3	7:AE:110:ARG:NH1	2.12	0.65
7:AE:175:VAL:HG21	7:AE:189:THR:HG1	0.82	0.65
7:AE:270:TYR:CE1	15:AM:107:PHE:HA	2.32	0.65
8:AF:229:GLU:O	21:AS:2:LYS:HB2	1.96	0.65
13:AK:61:MET:HE3	13:AK:61:MET:CA	2.25	0.65
14:AL:94:ILE:HG23	14:AL:124:LEU:CD2	2.27	0.65
21:AS:169:THR:CG2	48:A2:4832:A:N7	2.56	0.65
29:Aa:75:LEU:HD12	29:Aa:114:LYS:O	1.96	0.65
29:Aa:92:LYS:C	29:Aa:94:LYS:N	2.35	0.65
45:Aq:31:LYS:HD3	45:Aq:32:ILE:H	1.62	0.65
48:A2:205:A:C5	48:A2:229:G:O6	2.48	0.65
48:A2:1225:G:C6	48:A2:1252:G:H1'	2.31	0.65
49:B1:749:U:H3'	49:B1:750:C:C6	2.30	0.65
49:B1:933:G:H22	76:Ba:19:GLN:NE2	1.94	0.65
49:B1:1283:C:H3'	62:BM:102:LYS:HZ1	1.58	0.65
50:BA:77:ILE:HG12	50:BA:99:ILE:CG2	2.26	0.65
50:BA:176:TRP:H	50:BA:202:TYR:HD2	1.41	0.65
53:BD:211:VAL:CG2	67:BR:20:TYR:OH	2.40	0.65
63:BN:75:LEU:HD11	63:BN:81:ALA:CA	2.26	0.65
66:BQ:41:MET:CE	69:BT:10:ASN:CG	2.70	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:BV:41:LYS:H	71:BV:41:LYS:CD	2.07	0.65
1:A3:94:G:N2	38:Aj:79:ARG:HD2	2.12	0.65
4:AB:391:PRO:HD2	25:AW:63:GLN:CD	2.21	0.65
6:AD:236:MET:O	6:AD:240:TYR:HD2	1.79	0.65
9:AG:164:ILE:HG22	9:AG:168:VAL:HG13	1.79	0.65
13:AK:107:VAL:HB	13:AK:108:PRO:CD	2.26	0.65
19:AQ:12:LYS:O	19:AQ:13:VAL:HG22	1.96	0.65
19:AQ:12:LYS:HG3	19:AQ:14:ARG:H	1.62	0.65
22:AT:101:SER:HB3	48:A2:1712:U:C1'	2.26	0.65
33:Ae:50:LYS:HD2	48:A2:1865:C:OP1	1.96	0.65
40:Al:4:HIS:HA	48:A2:2760:G:O2'	1.97	0.65
46:At:86:ALA:O	46:At:90:LEU:CB	2.44	0.65
48:A2:4514:U:H6	48:A2:4514:U:H5"	1.61	0.65
49:B1:589:G:C2	80:Be:26:LYS:HE3	2.32	0.65
49:B1:644:G:H5'	59:BJ:41:ARG:HH22	1.62	0.65
49:B1:805:U:OP1	72:BW:121:THR:O	2.14	0.65
49:B1:898:U:H2'	49:B1:899:U:C6	2.32	0.65
49:B1:1407:U:C5'	66:BQ:71:ARG:HH12	1.92	0.65
49:B1:1745:A:C8	56:BG:66:GLY:CA	2.80	0.65
51:BB:76:ASN:O	51:BB:77:ASP:HB3	1.97	0.65
54:BE:148:ARG:NH2	56:BG:202:ASN:HA	2.11	0.65
65:BP:47:ARG:C	65:BP:49:LEU:HD23	2.21	0.65
68:BS:10:GLN:CG	68:BS:13:LEU:HD21	2.26	0.65
79:Bd:19:ARG:NE	79:Bd:33:LYS:CE	2.59	0.65
83:Bw:35:A:C8	83:Bw:35:A:C5'	2.77	0.65
1:A3:157:U:C2	48:A2:1:C:N4	2.64	0.65
2:A4:95:C:O2'	8:AF:229:GLU:HG2	1.96	0.65
5:AC:334:THR:O	5:AC:337:ARG:HG2	1.96	0.65
7:AE:233:PHE:CE1	48:A2:447:G:C5	2.84	0.65
11:AI:152:LEU:HB2	11:AI:165:ILE:HD12	1.78	0.65
13:AK:41:GLN:HG2	45:Aq:121:LEU:HD12	1.79	0.65
14:AL:172:GLU:O	14:AL:175:ASN:N	2.30	0.65
25:AW:50:ASN:HB2	48:A2:4964:U:H5	1.61	0.65
29:Aa:25:HIS:HD2	48:A2:1321:G:H1	1.45	0.65
48:A2:1903:G:C2	48:A2:2044:G:C5	2.85	0.65
48:A2:1977:C:C5	48:A2:1978:U:N3	2.58	0.65
48:A2:2000:C:O2'	48:A2:2001:U:H5'	1.96	0.65
48:A2:3931:A:C2	48:A2:4015:G:O4'	2.50	0.65
48:A2:4027:C:C6	48:A2:4027:C:OP2	2.50	0.65
48:A2:4111:C:O5'	48:A2:4111:C:H6	1.80	0.65
49:B1:402:C:H5'	58:BI:14:THR:HG22	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:562:U:C6	49:B1:562:U:H3'	2.31	0.65
49:B1:581:U:O2	74:BY:34:THR:N	2.29	0.65
49:B1:1017:U:C5'	63:BN:55:ARG:HH21	2.08	0.65
49:B1:1307:U:C1'	81:Bf:135:HIS:CE1	2.74	0.65
55:BF:102:LEU:HD11	75:BZ:100:VAL:HG21	1.79	0.65
59:BJ:161:LEU:HB3	59:BJ:162:ARG:NH1	2.12	0.65
60:BK:64:TRP:CH2	79:Bd:23:VAL:HG22	2.32	0.65
63:BN:78:LYS:O	63:BN:80:LEU:HD11	1.97	0.65
67:BR:3:ARG:O	67:BR:4:VAL:HG13	1.97	0.65
76:Ba:44:ILE:HD13	76:Ba:65:PRO:HB2	1.78	0.65
76:Ba:81:SER:O	76:Ba:82:LYS:HB2	1.97	0.65
79:Bd:23:VAL:HG13	79:Bd:46:TYR:OH	1.96	0.65
3:AA:61:VAL:CG1	3:AA:63:PHE:CE1	2.79	0.65
6:AD:230:SER:O	6:AD:231:VAL:CG2	2.44	0.65
7:AE:123:ARG:CG	48:A2:948:G:OP1	2.45	0.65
14:AL:126:LEU:HD11	14:AL:135:LYS:CB	2.26	0.65
15:AM:101:LYS:H	17:AO:198:THR:HG21	1.61	0.65
20:AR:165:LYS:HE3	49:B1:908:A:OP2	1.97	0.65
33:Ae:4:LEU:HD12	33:Ae:121:ARG:CB	2.26	0.65
38:Aj:31:LYS:O	38:Aj:32:SER:C	2.40	0.65
39:Ak:55:LYS:O	39:Ak:59:SER:OG	2.15	0.65
42:An:5:TRP:CG	49:B1:1852:C:H5	2.15	0.65
45:Aq:109:ILE:HG12	45:Aq:110:VAL:H	1.61	0.65
48:A2:132:G:O3'	48:A2:133:C:O4'	2.14	0.65
48:A2:227:G:C3'	48:A2:228:U:C5'	2.75	0.65
48:A2:266:U:H2'	48:A2:267:U:C6	2.32	0.65
48:A2:1752:A:C2	48:A2:1753:U:N1	2.64	0.65
48:A2:1860:C:OP1	86:A2:5317:MG:MG	1.39	0.65
48:A2:1943:A:C2	48:A2:2007:A:N3	2.65	0.65
48:A2:4009:G:H2'	48:A2:4010:C:O4'	1.97	0.65
49:B1:744:G:C2	57:BH:109:ARG:HB2	2.30	0.65
49:B1:801:U:O4	57:BH:106:ARG:CZ	2.45	0.65
49:B1:1286:G:O6	62:BM:35:ILE:HB	1.95	0.65
50:BA:208:GLU:O	50:BA:211:GLU:HB3	1.96	0.65
53:BD:17:PHE:CE2	53:BD:77:PHE:CE1	2.85	0.65
56:BG:194:LEU:CB	56:BG:198:ARG:HH12	2.08	0.65
59:BJ:29:LEU:HD21	59:BJ:40:LYS:CE	2.27	0.65
3:AA:80:GLU:HG2	44:Ap:76:ALA:CB	2.27	0.64
5:AC:190:ARG:CD	5:AC:202:ILE:CD1	2.51	0.64
5:AC:330:PRO:HB2	8:AF:51:TYR:CE1	2.32	0.64
8:AF:166:ARG:CB	8:AF:209:TRP:CE3	2.72	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AK:77:LYS:O	13:AK:81:HIS:N	2.30	0.64
19:AQ:18:PRO:O	19:AQ:20:SER:N	2.30	0.64
22:AT:56:CYS:CB	22:AT:78:LYS:HZ2	2.08	0.64
30:Ab:12:GLN:HE22	48:A2:1653:U:H1'	1.61	0.64
33:Ae:26:ASP:OD2	48:A2:430:C:H5'	1.97	0.64
37:Ai:70:LEU:HD12	37:Ai:87:ARG:HE	1.62	0.64
45:Aq:125:LEU:CA	45:Aq:129:ILE:HB	2.26	0.64
48:A2:3660:G:O2'	48:A2:3789:U:OP2	2.15	0.64
48:A2:4471:U:C2	48:A2:4473:A:OP2	2.50	0.64
50:BA:33:GLN:HB3	50:BA:154:LEU:HD12	1.78	0.64
51:BB:177:GLN:OE1	51:BB:177:GLN:HA	1.96	0.64
54:BE:98:HIS:CB	54:BE:114:ILE:CG2	2.67	0.64
56:BG:141:ILE:HG22	56:BG:153:VAL:HG21	1.77	0.64
59:BJ:155:LYS:O	59:BJ:157:ILE:HG12	1.97	0.64
59:BJ:162:ARG:HB3	59:BJ:164:PRO:HD2	1.78	0.64
64:BO:44:VAL:HG21	64:BO:81:VAL:CG1	2.26	0.64
65:BP:34:MET:HG3	65:BP:45:LEU:HD22	1.79	0.64
67:BR:71:ILE:HG12	67:BR:74:GLN:CG	2.27	0.64
3:AA:46:LYS:O	48:A2:4090:G:N2	2.30	0.64
5:AC:156:ASP:O	5:AC:159:GLU:HG2	1.97	0.64
5:AC:196:MET:SD	48:A2:346:G:C6	2.90	0.64
5:AC:211:TYR:HE1	5:AC:229:LEU:CA	2.10	0.64
8:AF:161:LYS:HD3	8:AF:161:LYS:O	1.97	0.64
9:AG:141:ASN:ND2	48:A2:149:U:C5	2.65	0.64
10:AH:64:ARG:HG2	10:AH:64:ARG:NH1	2.12	0.64
12:AJ:66:GLU:O	12:AJ:68:ILE:HG13	1.97	0.64
19:AQ:164:LYS:HB2	48:A2:1479:A:C1'	2.26	0.64
25:AW:50:ASN:CB	48:A2:4964:U:C5	2.81	0.64
26:AX:127:LEU:HB3	48:A2:2416:C:H5'	1.79	0.64
47:Au:17:VAL:HG21	47:Au:206:ILE:C	2.22	0.64
48:A2:1258:G:O3'	48:A2:1259:C:H6	1.79	0.64
48:A2:1756:C:H2'	48:A2:1757:A:C8	2.31	0.64
49:B1:839:C:H1'	49:B1:841:G:H1'	1.79	0.64
51:BB:71:LEU:HG	51:BB:84:PHE:CE2	2.22	0.64
54:BE:19:MET:HE3	54:BE:108:ARG:CD	2.21	0.64
59:BJ:29:LEU:CD2	59:BJ:40:LYS:CE	2.76	0.64
64:BO:56:VAL:HG11	64:BO:77:ALA:HA	1.78	0.64
71:BV:41:LYS:HD2	71:BV:41:LYS:N	2.03	0.64
75:BZ:62:VAL:HG12	75:BZ:63:PRO:HD3	1.80	0.64
75:BZ:69:THR:HG1	75:BZ:72:VAL:CB	2.06	0.64
1:A3:109:C:H41	38:Aj:20:ARG:HH12	1.41	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AD:286:SER:CA	48:A2:1163:C:H5”	2.27	0.64
7:AE:165:LEU:HD12	7:AE:174:LEU:HD22	1.78	0.64
7:AE:274:VAL:O	48:A2:4839:U:C1’	2.34	0.64
8:AF:184:ILE:CA	8:AF:189:ASP:CB	2.72	0.64
13:AK:32:ALA:O	13:AK:85:ASN:HB3	1.97	0.64
16:AN:93:LYS:HD2	48:A2:294:A:C2	2.28	0.64
19:AQ:164:LYS:HB2	48:A2:1479:A:C4’	2.26	0.64
32:Ad:38:PHE:CE1	48:A2:4598:U:C5	2.85	0.64
34:Af:100:ARG:NE	48:A2:4714:U:OP2	2.30	0.64
48:A2:1252:G:H3’	48:A2:1253:A:H8	1.63	0.64
48:A2:4714:U:H6	48:A2:4714:U:C5’	2.10	0.64
49:B1:872:A:H8	49:B1:874:G:N3	1.94	0.64
49:B1:918:U:OP1	63:BN:64:ARG:NH2	2.29	0.64
49:B1:1751:C:O2	49:B1:1782:G:N2	2.31	0.64
51:BB:33:VAL:HG22	51:BB:96:CYS:SG	2.37	0.64
54:BE:137:PRO:HG3	56:BG:209:TYR:HH	1.60	0.64
58:BI:139:LYS:HB3	58:BI:144:LYS:HB2	1.79	0.64
59:BJ:172:ARG:O	59:BJ:175:ARG:N	2.31	0.64
68:BS:77:TYR:O	68:BS:78:LYS:HB2	1.96	0.64
70:BU:22:ILE:HD12	70:BU:22:ILE:H	1.62	0.64
82:Bg:236:ILE:HG12	82:Bg:252:THR:HG22	1.79	0.64
1:A3:150:C:N4	9:AG:65:ARG:HH12	1.96	0.64
4:AB:258:HIS:HB2	48:A2:4479:A:O2’	1.98	0.64
8:AF:148:LYS:HG3	48:A2:930:A:H3’	1.78	0.64
8:AF:166:ARG:HH11	8:AF:166:ARG:CG	2.11	0.64
13:AK:61:MET:CE	13:AK:61:MET:HA	2.19	0.64
22:AT:109:VAL:CG1	48:A2:1785:G:O6	2.28	0.64
28:AZ:32:GLY:HA2	28:AZ:37:PRO:HA	1.78	0.64
29:Aa:116:LYS:HE2	29:Aa:116:LYS:CA	2.28	0.64
47:Au:196:LYS:NZ	48:A2:3696:G:OP1	2.30	0.64
48:A2:701:G:H2’	48:A2:702:A:C8	2.33	0.64
48:A2:1224:C:H3’	48:A2:1225:G:H21	1.63	0.64
48:A2:1337:A:C8	48:A2:1485:A:C6	2.85	0.64
48:A2:2590:A:H5’	48:A2:2667:G:H4’	1.80	0.64
49:B1:157:U:H4’	56:BG:58:LYS:O	1.93	0.64
49:B1:330:G:H5”	56:BG:189:ARG:HH11	1.62	0.64
49:B1:826:A:H4’	59:BJ:10:ARG:HB3	1.79	0.64
49:B1:1483:A:C5’	53:BD:159:HIS:O	2.45	0.64
49:B1:1567:G:C2	68:BS:82:TRP:CZ3	2.86	0.64
49:B1:1665:G:OP1	69:BT:89:PRO:HD2	1.97	0.64
52:BC:74:LYS:HD2	52:BC:269:PHE:CE1	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BD:211:VAL:HG23	67:BR:20:TYR:HH	1.61	0.64
59:BJ:87:LEU:CD2	59:BJ:96:TYR:HE2	2.11	0.64
60:BK:57:TYR:CD2	60:BK:78:TYR:HB3	2.33	0.64
63:BN:34:LYS:O	63:BN:37:ILE:CG2	2.44	0.64
64:BO:34:PHE:HZ	64:BO:100:THR:CG2	2.10	0.64
4:AB:50:LYS:HB2	4:AB:345:LEU:HD11	1.80	0.64
6:AD:10:LYS:HE3	6:AD:10:LYS:O	1.97	0.64
7:AE:219:LYS:HZ3	48:A2:1274:G:C5'	2.04	0.64
15:AM:44:GLN:O	48:A2:922:A:H2	1.79	0.64
15:AM:91:TRP:CZ2	48:A2:4827:U:C2'	2.81	0.64
21:AS:84:TYR:HB3	21:AS:113:MET:HE2	1.78	0.64
22:AT:39:ILE:HD12	22:AT:102:ARG:HD2	1.78	0.64
23:AU:81:ARG:NH2	48:A2:2600:A:C8	2.66	0.64
45:Aq:58:ILE:HB	45:Aq:75:PRO:HB2	1.78	0.64
47:Au:17:VAL:HG21	47:Au:207:LYS:N	2.12	0.64
48:A2:137:G:H5"	48:A2:137:G:H8	1.61	0.64
48:A2:460:A:H2'	48:A2:461:U:O4'	1.97	0.64
48:A2:1739:U:H2'	48:A2:1740:G:O4'	1.98	0.64
49:B1:1308:U:O2	81:Bf:133:ALA:HB1	1.97	0.64
50:BA:201:LEU:HD23	67:BR:85:VAL:HG22	1.78	0.64
51:BB:70:SER:HA	51:BB:84:PHE:N	2.13	0.64
54:BE:91:SER:HA	54:BE:92:ILE:HD12	1.79	0.64
54:BE:95:THR:HG22	54:BE:97:GLU:HG3	1.78	0.64
58:BI:52:ASN:N	58:BI:52:ASN:OD1	2.31	0.64
59:BJ:136:ARG:HH11	59:BJ:160:SER:HB2	1.61	0.64
63:BN:29:THR:HB	63:BN:30:SER:C	2.23	0.64
65:BP:84:ILE:HA	65:BP:115:TYR:HA	0.75	0.64
68:BS:44:VAL:CB	68:BS:71:MET:SD	2.86	0.64
79:Bd:36:LEU:HD21	79:Bd:43:PHE:CD2	2.32	0.64
84:Bx:39:U:O2	84:Bx:39:U:H3'	1.98	0.64
1:A3:109:C:C4	38:Aj:20:ARG:CZ	2.81	0.64
8:AF:209:TRP:CD1	8:AF:210:PRO:HD2	2.33	0.64
13:AK:58:ASN:HD21	13:AK:86:VAL:HB	1.62	0.64
33:Ae:4:LEU:O	33:Ae:5:ARG:HB2	1.98	0.64
48:A2:1740:G:O6	48:A2:1756:C:N3	2.31	0.64
48:A2:2853:U:H4'	48:A2:2854:C:OP2	1.97	0.64
49:B1:527:C:H5"	59:BJ:125:HIS:HA	1.77	0.64
49:B1:797:C:H5'	57:BH:109:ARG:NH2	2.11	0.64
52:BC:256:TRP:CZ2	72:BW:68:ARG:CB	2.81	0.64
54:BE:98:HIS:HB3	54:BE:114:ILE:HG22	1.74	0.64
58:BI:64:ASN:HB3	58:BI:186:ASP:OD1	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:BO:42:VAL:HG13	64:BO:81:VAL:HG21	1.78	0.64
67:BR:3:ARG:O	67:BR:4:VAL:HG22	1.97	0.64
76:Ba:88:SER:HB2	76:Ba:91:ALA:HB2	1.79	0.64
79:Bd:32:ARG:NH2	79:Bd:43:PHE:CD1	2.62	0.64
2:A4:95:C:C4'	8:AF:229:GLU:CG	2.76	0.64
4:AB:20:LYS:HG3	48:A2:4530:A:P	2.38	0.64
7:AE:110:ARG:HG3	7:AE:110:ARG:HH11	1.63	0.64
7:AE:128:HIS:NE2	48:A2:1265:G:P	2.71	0.64
7:AE:173:LEU:HD11	7:AE:190:HIS:C	2.22	0.64
7:AE:261:ILE:HA	7:AE:267:LEU:HD23	1.78	0.64
13:AK:57:LYS:O	13:AK:61:MET:N	2.30	0.64
13:AK:58:ASN:CA	13:AK:61:MET:HB2	2.18	0.64
14:AL:94:ILE:HG23	14:AL:124:LEU:HD22	1.80	0.64
14:AL:165:LYS:HE2	48:A2:505:C:P	2.36	0.64
20:AR:99:MET:HG2	20:AR:103:ARG:HD2	1.80	0.64
20:AR:146:LYS:NZ	20:AR:146:LYS:HB3	2.13	0.64
26:AX:55:ARG:HH11	26:AX:55:ARG:CA	2.09	0.64
28:AZ:26:VAL:CG1	28:AZ:91:LEU:CD2	2.76	0.64
30:Ab:54:LEU:O	30:Ab:54:LEU:HD22	1.98	0.64
38:Aj:60:GLY:HA2	38:Aj:64:MET:SD	2.37	0.64
46:At:25:TYR:HD2	46:At:34:ALA:HB1	1.63	0.64
47:Au:207:LYS:HE3	48:A2:4022:C:O2'	1.94	0.64
48:A2:681:A:C6	48:A2:682:U:C4	2.85	0.64
48:A2:682:U:O2'	48:A2:683:U:H5'	1.97	0.64
48:A2:1807:A:H2'	48:A2:1808:G:H8	1.62	0.64
48:A2:2825:G:H5"	48:A2:2825:G:H8	1.62	0.64
49:B1:38:A:OP1	59:BJ:5:ARG:HB3	1.98	0.64
58:BI:34:ALA:CB	58:BI:56:ARG:HD3	2.26	0.64
2:A4:43:U:C5'	12:AJ:143:ASP:HB3	2.28	0.64
5:AC:94:ASN:O	5:AC:96:CYS:N	2.31	0.64
6:AD:160:PHE:HE1	48:A2:4285:A:H1'	1.62	0.64
6:AD:232:THR:HG23	6:AD:235:MET:HG3	1.79	0.64
14:AL:59:VAL:HG12	48:A2:74:G:H5'	1.73	0.64
17:AO:63:ASN:HD21	48:A2:2026:G:P	2.21	0.64
32:Ad:38:PHE:H	48:A2:4596:U:H3	1.44	0.64
33:Ae:26:ASP:OD2	48:A2:430:C:H4'	1.98	0.64
47:Au:38:LEU:HD13	47:Au:159:MET:HE2	1.79	0.64
47:Au:60:ARG:CB	47:Au:61:PRO:HD3	2.27	0.64
48:A2:132:G:C6	48:A2:135:G:C2	2.86	0.64
48:A2:677:G:H8	48:A2:677:G:H5"	1.60	0.64
48:A2:1192:U:H2'	48:A2:1192:U:OP2	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:2745:A:H8	48:A2:2745:A:H5"	1.62	0.64
48:A2:4331:A:O2'	48:A2:4332:G:H5'	1.96	0.64
48:A2:4882:C:C6	48:A2:4882:C:OP2	2.51	0.64
48:A2:4981:C:H5'	58:BI:124:LYS:HZ1	1.63	0.64
49:B1:744:G:N2	57:BH:109:ARG:CG	2.56	0.64
49:B1:1278:A:OP1	60:BK:55:ARG:CZ	2.46	0.64
56:BG:215:LYS:O	56:BG:219:GLU:HG2	1.97	0.64
59:BJ:35:TYR:CE1	59:BJ:106:LEU:CB	2.81	0.64
62:BM:56:CYS:SG	62:BM:61:TYR:CD2	2.88	0.64
66:BQ:58:LEU:CD2	66:BQ:108:ILE:HD11	2.27	0.64
66:BQ:105:LYS:C	66:BQ:108:ILE:HG22	2.22	0.64
3:AA:182:ALA:HB2	48:A2:3623:A:O2'	1.97	0.64
7:AE:118:THR:OG1	33:Ae:90:MET:CE	2.46	0.64
8:AF:73:ARG:HG2	48:A2:718:C:OP1	1.98	0.64
11:AI:185:VAL:HG12	11:AI:190:LEU:HD12	1.79	0.64
16:AN:194:ARG:CZ	48:A2:79:C:OP2	2.46	0.64
17:AO:42:ASN:ND2	17:AO:125:LYS:HD2	2.12	0.64
24:AV:45:ILE:O	24:AV:46:LYS:HD3	1.98	0.64
29:Aa:92:LYS:O	29:Aa:94:LYS:CA	2.45	0.64
43:Ao:93:LEU:HD12	43:Ao:93:LEU:C	2.21	0.64
47:Au:207:LYS:HZ3	48:A2:4023:A:P	2.21	0.64
48:A2:900:U:O2'	48:A2:901:U:C4'	2.46	0.64
49:B1:168:C:H5'	56:BG:131:ARG:CB	2.28	0.64
49:B1:837:A:H8	49:B1:837:A:O5'	1.81	0.64
51:BB:139:CYS:HB2	51:BB:172:MET:CE	2.20	0.64
52:BC:256:TRP:CZ3	72:BW:66:THR:HG21	2.32	0.64
61:BL:153:LYS:O	61:BL:155:PHE:CE2	2.51	0.64
62:BM:91:LEU:O	62:BM:104:VAL:HG22	1.97	0.64
63:BN:63:VAL:HG21	63:BN:71:ILE:HG23	1.79	0.64
65:BP:65:LYS:HB3	65:BP:66:GLU:CD	2.22	0.64
1:A3:81:C:OP1	1:A3:82:A:O4'	2.16	0.64
4:AB:224:LYS:HG2	4:AB:340:THR:CG2	2.28	0.64
4:AB:393:LYS:HD2	48:A2:5000:A:H4'	1.80	0.64
8:AF:184:ILE:HA	8:AF:189:ASP:HB3	1.78	0.64
9:AG:163:PRO:CG	48:A2:148:G:N2	2.61	0.64
9:AG:244:PRO:CG	48:A2:4124:C:O2'	2.45	0.64
15:AM:19:PRO:HG3	48:A2:923:C:O2	1.98	0.64
18:AP:139:TYR:CE1	48:A2:3830:G:H4'	2.32	0.64
19:AQ:12:LYS:O	19:AQ:13:VAL:HG13	1.97	0.64
23:AU:56:LEU:CD2	23:AU:61:VAL:CG2	2.52	0.64
27:AY:45:ARG:HH21	48:A2:234:G:H5"	1.59	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Au:7:ARG:HD2	47:Au:180:VAL:HG11	1.80	0.64
48:A2:191:C:H5"	48:A2:191:C:H6	1.60	0.64
48:A2:1226:C:H6	48:A2:1226:C:P	2.21	0.64
48:A2:1945:A:H8	48:A2:1945:A:P	2.21	0.64
48:A2:1948:A:N6	48:A2:1949:G:O6	2.31	0.64
49:B1:103:A:H5'	58:BI:12:ARG:HH11	1.58	0.64
49:B1:330:G:H5"	56:BG:189:ARG:NH1	2.13	0.64
49:B1:560:A:C2'	59:BJ:171:GLY:CA	2.75	0.64
49:B1:617:G:C4'	73:BX:88:ASP:OD1	2.39	0.64
49:B1:625:G:O6	73:BX:63:ASN:HB3	1.99	0.64
49:B1:1110:G:O2'	67:BR:122:PRO:HB3	1.98	0.64
54:BE:149:TYR:CB	56:BG:209:TYR:CD2	2.73	0.64
56:BG:69:THR:HG22	56:BG:71:GLY:H	1.61	0.64
63:BN:26:LEU:HD11	63:BN:28:LEU:HB2	1.80	0.64
68:BS:67:VAL:O	68:BS:71:MET:HG2	1.98	0.64
1:A3:82:A:H2'	1:A3:83:C:H5'	1.78	0.63
2:A4:107:G:H5"	6:AD:273:LEU:CD2	2.27	0.63
3:AA:9:ARG:HD3	48:A2:1610:C:OP2	1.97	0.63
9:AG:166:LEU:HA	16:AN:7:ILE:CD1	2.28	0.63
14:AL:51:ALA:O	14:AL:52:SER:OG	2.12	0.63
16:AN:14:LYS:HD2	48:A2:274:G:C5	2.33	0.63
16:AN:86:HIS:CG	48:A2:33:A:OP2	2.50	0.63
29:Aa:25:HIS:HD2	48:A2:1321:G:N2	1.95	0.63
31:Ac:88:TYR:HE1	63:BN:144:SER:OG	1.79	0.63
46:At:98:ARG:CZ	48:A2:952:G:OP1	2.46	0.63
48:A2:141:G:C6	48:A2:142:G:N7	2.66	0.63
48:A2:425:G:OP2	48:A2:425:G:H4'	1.97	0.63
48:A2:1973:U:OP2	48:A2:1973:U:H2'	1.98	0.63
48:A2:4452:C:OP2	86:A2:5240:MG:MG	1.40	0.63
48:A2:4547:U:H6	48:A2:4547:U:O5'	1.80	0.63
49:B1:151:C:P	74:BY:120:THR:HG1	2.20	0.63
49:B1:331:C:H3'	49:B1:332:G:H5"	1.80	0.63
49:B1:745:C:O2	57:BH:109:ARG:CD	2.46	0.63
49:B1:1159:G:OP1	72:BW:76:SER:HB3	1.99	0.63
50:BA:205:ARG:NH2	67:BR:86:PRO:CG	2.61	0.63
51:BB:182:LYS:HE3	51:BB:231:LEU:CD1	2.11	0.63
56:BG:142:ARG:HA	56:BG:147:LEU:HD11	1.80	0.63
58:BI:190:LEU:HD22	58:BI:194:GLU:HB3	1.79	0.63
64:BO:141:ARG:HG3	64:BO:142:ARG:H	1.61	0.63
80:Be:51:LYS:HD2	84:Bx:59:U:C5'	2.29	0.63
3:AA:68:ARG:NH2	48:A2:4054:G:C5	2.65	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AE:113:PRO:HA	48:A2:453:C:OP1	1.98	0.63
8:AF:165:LYS:CB	48:A2:2254:G:O2'	2.46	0.63
13:AK:44:ARG:HD2	48:A2:1978:U:O5'	1.98	0.63
14:AL:78:LEU:CD1	48:A2:157:G:H4'	2.28	0.63
26:AX:116:LEU:HB3	26:AX:117:TYR:CE1	2.33	0.63
27:AY:55:VAL:N	27:AY:68:GLY:O	2.20	0.63
30:Ab:54:LEU:HD12	48:A2:1809:C:O2'	1.97	0.63
36:Ah:24:LEU:HB3	36:Ah:54:ILE:CG1	2.28	0.63
45:Aq:78:SER:N	45:Aq:81:ILE:HB	2.13	0.63
48:A2:64:A:H4'	48:A2:65:A:O5'	1.99	0.63
49:B1:75:G:N2	49:B1:77:A:OP1	2.31	0.63
49:B1:620:G:N3	49:B1:620:G:H2'	2.11	0.63
49:B1:689:U:N1	49:B1:742:U:N3	2.33	0.63
49:B1:1310:U:C5'	81:Bf:130:VAL:HG13	2.28	0.63
49:B1:1315:U:H4'	60:BK:1:MET:HB3	1.79	0.63
49:B1:1402:A:O5'	70:BU:51:LYS:HD3	1.99	0.63
54:BE:11:ARG:HD3	54:BE:28:ALA:HB2	1.80	0.63
58:BI:104:ILE:HD11	58:BI:173:ALA:CB	2.28	0.63
59:BJ:130:ILE:HG13	59:BJ:131:ARG:H	1.63	0.63
61:BL:13:GLN:HE22	61:BL:15:THR:C	2.07	0.63
62:BM:35:ILE:CG1	62:BM:61:TYR:HE1	2.01	0.63
63:BN:20:ARG:O	63:BN:21:SER:OG	2.14	0.63
66:BQ:40:GLU:O	66:BQ:48:GLN:NE2	2.31	0.63
66:BQ:58:LEU:HD22	66:BQ:108:ILE:CD1	2.27	0.63
67:BR:5:ARG:HB2	67:BR:10:LYS:HE2	1.80	0.63
68:BS:23:ARG:HD3	68:BS:23:ARG:H	1.63	0.63
4:AB:108:GLU:HB2	4:AB:137:TRP:CE3	2.32	0.63
7:AE:115:TYR:HE2	46:At:119:ARG:HB2	1.63	0.63
11:AI:34:PHE:CD2	48:A2:1730:U:H4'	2.33	0.63
13:AK:53:VAL:HB	48:A2:1978:U:C5'	2.28	0.63
14:AL:129:ARG:N	14:AL:129:ARG:HH11	1.95	0.63
16:AN:108:ARG:NH1	48:A2:2440:G:H4'	2.13	0.63
20:AR:22:VAL:O	20:AR:23:TRP:HB2	1.98	0.63
33:Ae:6:PRO:HG2	33:Ae:9:LYS:CG	2.29	0.63
36:Ah:109:ARG:NH2	48:A2:153:G:C5'	2.46	0.63
39:Ak:17:ARG:O	39:Ak:18:LYS:HG3	1.98	0.63
43:Ao:106:PHE:CG	83:Bv:19:G:C6	2.86	0.63
48:A2:508:U:C6	48:A2:508:U:P	2.91	0.63
48:A2:1166:C:H2'	48:A2:1167:A:C8	2.33	0.63
49:B1:75:G:O6	56:BG:171:THR:HB	1.98	0.63
49:B1:1223:A:H2'	49:B1:1224:G:O4'	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1308:U:O4'	81:Bf:134:SER:O	2.16	0.63
49:B1:1387:G:H22	67:BR:8:THR:HG21	1.64	0.63
79:Bd:29:GLY:HA3	79:Bd:39:CYS:O	1.97	0.63
1:A3:145:C:H2'	1:A3:146:U:C6	2.33	0.63
3:AA:13:GLY:O	3:AA:17:ARG:HG3	1.98	0.63
4:AB:393:LYS:NZ	48:A2:5000:A:H4'	2.13	0.63
5:AC:83:GLY:HA3	48:A2:362:C:O4'	1.98	0.63
6:AD:290:ALA:O	6:AD:293:ARG:N	2.32	0.63
7:AE:147:GLY:CA	7:AE:203:ILE:CG2	2.76	0.63
7:AE:237:LYS:HZ3	7:AE:237:LYS:CA	2.09	0.63
13:AK:38:LYS:C	13:AK:40:MET:H	2.07	0.63
14:AL:126:LEU:HG	14:AL:135:LYS:O	1.98	0.63
21:AS:74:ARG:CZ	48:A2:909:C:H5'	2.28	0.63
34:Af:8:LYS:HB3	34:Af:100:ARG:NH1	2.14	0.63
39:Ak:14:THR:C	39:Ak:17:ARG:HB2	2.24	0.63
39:Ak:60:LEU:CG	39:Ak:61:PRO:HD2	2.28	0.63
45:Aq:109:ILE:CG2	45:Aq:129:ILE:HG23	2.29	0.63
48:A2:1943:A:H2	48:A2:2007:A:N3	1.96	0.63
48:A2:3711:G:O2'	48:A2:3712:C:H5'	1.98	0.63
48:A2:3929:G:C2	83:Bw:19:G:N1	2.67	0.63
49:B1:616:A:OP1	73:BX:66:ILE:HB	1.99	0.63
49:B1:823:U:C6	74:BY:64:PHE:CE1	2.86	0.63
49:B1:1514:G:P	79:Bd:9:SER:HB2	2.38	0.63
51:BB:48:LEU:HB2	64:BO:51:GLU:HG3	1.80	0.63
76:Ba:42:ARG:NH2	84:Bx:39:U:C5'	2.61	0.63
1:A3:124:U:OP1	1:A3:124:U:H3'	1.97	0.63
5:AC:211:TYR:OH	5:AC:229:LEU:HA	1.97	0.63
5:AC:239:LYS:NZ	48:A2:1353:G:H22	1.96	0.63
6:AD:264:LYS:O	6:AD:265:ARG:HG3	1.99	0.63
7:AE:147:GLY:N	7:AE:203:ILE:HG21	2.12	0.63
15:AM:128:LYS:O	15:AM:131:GLN:HG2	1.99	0.63
16:AN:71:ARG:HD2	16:AN:94:PHE:CB	2.20	0.63
31:Ac:91:VAL:HG23	48:A2:2652:G:O2'	1.99	0.63
38:Aj:12:ARG:HD2	48:A2:2383:A:H1'	1.78	0.63
46:At:4:HIS:HE1	46:At:38:PHE:HE2	1.29	0.63
48:A2:901:U:H3'	48:A2:902:A:N7	2.12	0.63
48:A2:1755:U:O4	48:A2:1756:C:N4	2.31	0.63
48:A2:2067:G:C2	48:A2:2247:A:C2	2.86	0.63
49:B1:407:G:N1	73:BX:36:LEU:CD2	2.61	0.63
49:B1:552:G:H3'	49:B1:553:U:H5"	1.81	0.63
49:B1:560:A:OP2	59:BJ:172:ARG:HB3	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:695:C:H2'	49:B1:696:G:C8	2.34	0.63
49:B1:792:C:C6	49:B1:792:C:C5'	2.82	0.63
49:B1:1287:A:OP2	49:B1:1312:G:C2	2.51	0.63
50:BA:42:LYS:HE3	50:BA:48:ILE:HD11	1.79	0.63
54:BE:52:LEU:HB3	54:BE:54:TYR:CD1	2.33	0.63
55:BF:19:LEU:HB2	55:BF:23:TRP:O	1.97	0.63
59:BJ:105:PHE:O	59:BJ:108:ARG:N	2.26	0.63
61:BL:80:MET:CE	61:BL:121:GLN:HA	2.28	0.63
67:BR:21:TYR:CD2	67:BR:71:ILE:CB	2.82	0.63
76:Ba:12:LYS:HD3	76:Ba:18:VAL:HG23	1.79	0.63
3:AA:226:ARG:HH11	3:AA:226:ARG:HG2	1.64	0.63
6:AD:201:GLY:O	6:AD:204:VAL:HG22	1.98	0.63
6:AD:214:GLU:HA	6:AD:214:GLU:OE1	1.98	0.63
7:AE:95:PRO:C	7:AE:96:VAL:HG23	2.23	0.63
7:AE:96:VAL:HA	7:AE:107:VAL:HG12	1.81	0.63
7:AE:240:TYR:HE1	48:A2:4897:C:O4'	1.82	0.63
8:AF:162:ILE:HD12	8:AF:162:ILE:N	2.13	0.63
8:AF:179:LEU:HD21	8:AF:184:ILE:HD11	1.77	0.63
13:AK:52:VAL:C	13:AK:53:VAL:HG23	2.24	0.63
13:AK:52:VAL:CG1	13:AK:90:PHE:N	2.59	0.63
14:AL:128:PRO:HB2	14:AL:130:LYS:O	1.98	0.63
14:AL:162:LYS:N	29:Aa:105:ARG:HH22	1.84	0.63
15:AM:96:GLU:HA	15:AM:96:GLU:OE1	1.98	0.63
27:AY:42:TYR:CB	27:AY:44:VAL:HG12	2.26	0.63
31:Ac:33:GLN:CB	48:A2:2637:G:N2	2.62	0.63
38:Aj:2:THR:HG23	48:A2:3613:A:H1'	1.81	0.63
39:Ak:21:LYS:HD2	39:Ak:21:LYS:N	2.14	0.63
41:Am:101:ALA:O	41:Am:102:ARG:C	2.40	0.63
41:Am:104:HIS:ND1	41:Am:105:PRO:HD2	2.12	0.63
47:Au:210:MET:SD	48:A2:3945:G:H5"	2.38	0.63
48:A2:85:G:H4'	48:A2:86:U:O5'	1.98	0.63
48:A2:2064:C:H6	48:A2:2064:C:C5'	2.11	0.63
48:A2:2287:A:H4'	48:A2:2313:C:H4'	1.80	0.63
51:BB:39:PHE:HE1	51:BB:75:GLN:HE22	1.44	0.63
52:BC:256:TRP:CZ3	72:BW:66:THR:CG2	2.82	0.63
54:BE:98:HIS:HD1	54:BE:119:ALA:HB2	1.64	0.63
55:BF:109:LEU:O	55:BF:112:LEU:N	2.31	0.63
58:BI:193:LYS:NZ	61:BL:12:LYS:O	2.26	0.63
59:BJ:168:GLY:C	59:BJ:172:ARG:HH21	2.06	0.63
62:BM:35:ILE:CD1	62:BM:61:TYR:CD1	2.75	0.63
67:BR:84:TYR:CD2	67:BR:86:PRO:HD3	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:BS:86:ARG:HG3	68:BS:90:VAL:CG2	2.29	0.63
75:BZ:46:ASN:HD21	75:BZ:79:ILE:C	2.07	0.63
82:Bg:88:ARG:CD	82:Bg:97:THR:OG1	2.42	0.63
7:AE:100:LYS:HB2	48:A2:678:C:H4'	1.81	0.63
8:AF:182:TYR:HE2	8:AF:203:GLU:HB2	1.62	0.63
11:AI:6:ALA:HB3	48:A2:4394:C:OP2	1.99	0.63
22:AT:4:THR:HG23	48:A2:4169:C:H6	1.62	0.63
26:AX:55:ARG:HH11	26:AX:55:ARG:HG3	1.63	0.63
29:Aa:9:ARG:CD	48:A2:2323:U:H3	2.11	0.63
33:Ae:128:ARG:NH2	48:A2:2285:G:P	2.67	0.63
45:Aq:60:VAL:HG13	45:Aq:71:ILE:HG23	1.80	0.63
46:At:84:LYS:HB2	46:At:89:THR:N	2.14	0.63
47:Au:98:LYS:O	47:Au:98:LYS:HD3	1.98	0.63
48:A2:191:C:C6	48:A2:191:C:C5'	2.80	0.63
48:A2:1165:C:H4'	48:A2:1166:C:O5'	1.97	0.63
48:A2:1945:A:P	48:A2:1945:A:C8	2.92	0.63
48:A2:4854:G:H3'	48:A2:4855:G:C8	2.33	0.63
49:B1:76:U:H6	49:B1:76:U:O5'	1.82	0.63
49:B1:875:A:C6	49:B1:912:C:N3	2.65	0.63
49:B1:913:A:N3	57:BH:66:VAL:HG11	2.14	0.63
49:B1:918:U:O5'	49:B1:918:U:O2	2.16	0.63
49:B1:1256:G:C2	79:Bd:30:LEU:HB3	2.34	0.63
49:B1:1284:A:H5'	49:B1:1285:G:H4'	1.80	0.63
49:B1:1307:U:HO2'	81:Bf:135:HIS:HA	1.64	0.63
49:B1:1398:G:C2	82:Bg:61:GLY:HA2	2.34	0.63
50:BA:38:ILE:HD11	50:BA:47:TYR:CA	2.19	0.63
50:BA:130:ASP:O	50:BA:133:PRO:HD2	1.97	0.63
51:BB:79:VAL:HG21	51:BB:82:ARG:HD2	1.75	0.63
53:BD:17:PHE:HE2	53:BD:77:PHE:CD1	2.16	0.63
54:BE:124:CYS:HB2	54:BE:141:THR:CG2	2.29	0.63
57:BH:105:THR:OG1	57:BH:108:SER:HB3	1.98	0.63
65:BP:34:MET:HE1	65:BP:41:GLN:C	2.22	0.63
83:Bw:20:U:H4'	83:Bw:21:A:OP1	1.97	0.63
4:AB:99:LEU:HD22	4:AB:158:GLN:HE22	1.62	0.63
7:AE:105:ARG:CZ	48:A2:680:C:C1'	2.76	0.63
14:AL:47:ALA:HB1	14:AL:48:PRO:CD	2.24	0.63
14:AL:160:VAL:HG21	48:A2:638:G:OP1	1.99	0.63
16:AN:108:ARG:CZ	48:A2:2440:G:H5"	2.28	0.63
19:AQ:18:PRO:C	19:AQ:20:SER:H	2.06	0.63
19:AQ:72:LEU:HD13	48:A2:1439:G:OP1	1.99	0.63
27:AY:55:VAL:CG2	27:AY:70:VAL:CG1	2.76	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:Ai:94:LEU:HD21	37:Ai:98:ARG:NH1	2.14	0.63
39:Ak:12:LEU:HD23	39:Ak:13:LEU:N	2.14	0.63
43:Ao:3:ASN:HD21	43:Ao:95:GLY:H	1.46	0.63
46:At:66:ARG:CG	46:At:68:SER:HB2	2.29	0.63
47:Au:68:LEU:CD2	47:Au:85:MET:HB3	2.27	0.63
48:A2:345:C:O2'	48:A2:346:G:H5'	1.98	0.63
48:A2:1166:C:H2'	48:A2:1167:A:H8	1.64	0.63
48:A2:1943:A:OP2	48:A2:1943:A:H3'	1.99	0.63
48:A2:4946:U:H4'	48:A2:4947:U:OP1	1.98	0.63
49:B1:1203:G:H1'	52:BC:115:GLN:HG2	1.80	0.63
49:B1:1648:G:O2'	49:B1:1649:U:OP2	2.15	0.63
50:BA:59:LEU:HD21	50:BA:63:ARG:NH2	2.14	0.63
50:BA:172:GLY:CA	50:BA:202:TYR:HB3	2.28	0.63
51:BB:131:ASP:OD2	51:BB:181:LEU:HD13	1.99	0.63
51:BB:182:LYS:HG2	51:BB:231:LEU:HD11	1.80	0.63
53:BD:72:VAL:CG1	60:BK:68:TYR:HD1	2.11	0.63
58:BI:56:ARG:HH11	58:BI:56:ARG:CG	2.11	0.63
67:BR:114:LEU:O	67:BR:115:SER:HB2	1.99	0.63
1:A3:86:U:H3	36:Ah:8:ASP:H	1.47	0.63
2:A4:33:U:C6	6:AD:207:TYR:HE1	2.08	0.63
8:AF:70:ARG:HA	8:AF:73:ARG:HD2	1.81	0.63
8:AF:161:LYS:CB	8:AF:209:TRP:HE3	2.12	0.63
9:AG:105:GLU:OE1	9:AG:113:ARG:CZ	2.47	0.63
19:AQ:98:LEU:HD11	19:AQ:100:VAL:CG2	2.29	0.63
19:AQ:167:VAL:HG23	19:AQ:175:GLU:OE2	1.99	0.63
20:AR:60:ARG:CG	20:AR:63:CYS:HB3	2.28	0.63
31:Ac:28:VAL:HB	31:Ac:33:GLN:CD	2.24	0.63
38:Aj:80:GLU:HA	38:Aj:80:GLU:OE1	1.98	0.63
40:Al:5:LYS:O	48:A2:2760:G:H4'	1.97	0.63
48:A2:1258:G:C4	48:A2:1259:C:C4	2.87	0.63
48:A2:3681:G:C2'	48:A2:3683:A:C8	2.82	0.63
48:A2:4544:C:C2'	48:A2:4545:C:C5'	2.70	0.63
48:A2:4982:C:O3'	58:BI:169:GLY:HA3	1.97	0.63
49:B1:546:G:H4'	49:B1:547:G:OP2	1.97	0.63
49:B1:1285:G:O6	62:BM:56:CYS:CA	2.31	0.63
50:BA:201:LEU:HD23	50:BA:201:LEU:H	1.63	0.63
54:BE:98:HIS:HB2	54:BE:114:ILE:O	1.99	0.63
54:BE:102:VAL:O	54:BE:109:PHE:HD1	1.82	0.63
64:BO:44:VAL:HG23	64:BO:81:VAL:CG1	2.28	0.63
65:BP:30:TYR:HA	65:BP:33:LEU:HD21	1.80	0.63
65:BP:85:ILE:HD12	65:BP:116:LEU:HG	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AJ:134:LEU:HD11	12:AJ:162:ALA:HA	1.81	0.62
13:AK:57:LYS:HD2	13:AK:60:MET:SD	2.39	0.62
17:AO:63:ASN:OD1	48:A2:2025:U:O3'	2.17	0.62
19:AQ:12:LYS:HD3	19:AQ:14:ARG:CD	2.30	0.62
46:At:11:ARG:NH2	48:A2:2248:C:C5	2.67	0.62
49:B1:78:C:H4'	56:BG:175:LYS:CG	2.28	0.62
49:B1:331:C:OP2	49:B1:331:C:H3'	1.99	0.62
49:B1:491:C:OP2	74:BY:104:ARG:HD3	2.00	0.62
49:B1:526:A:H4'	80:Be:31:ARG:NH1	2.13	0.62
50:BA:103:PHE:CE2	50:BA:136:GLU:CD	2.76	0.62
50:BA:169:HIS:HD2	50:BA:203:PHE:CE2	2.16	0.62
55:BF:23:TRP:HE1	55:BF:108:PRO:CG	1.89	0.62
57:BH:117:PRO:HB2	57:BH:120:ARG:HG2	1.79	0.62
58:BI:155:ASN:HB3	61:BL:23:VAL:O	1.98	0.62
60:BK:76:ILE:HA	60:BK:79:LEU:HD12	1.80	0.62
61:BL:96:ILE:HD12	73:BX:10:ALA:HB1	1.80	0.62
79:Bd:23:VAL:HG11	79:Bd:46:TYR:HE1	1.64	0.62
79:Bd:32:ARG:NH2	79:Bd:43:PHE:CE1	2.67	0.62
80:Be:51:LYS:HD2	84:Bx:59:U:O4'	1.97	0.62
4:AB:375:GLY:HA2	48:A2:4626:A:H5"	1.79	0.62
6:AD:110:LEU:HB3	6:AD:115:MET:O	1.98	0.62
10:AH:7:ASN:HB2	10:AH:57:VAL:C	2.24	0.62
20:AR:172:ARG:HB2	49:B1:909:G:OP1	1.99	0.62
22:AT:56:CYS:HB3	22:AT:78:LYS:CE	2.29	0.62
25:AW:72:THR:HB	49:B1:1783:C:C4	2.35	0.62
36:Ah:50:VAL:O	36:Ah:54:ILE:HG13	1.99	0.62
41:Am:110:CYS:HB3	41:Am:115:CYS:SG	2.39	0.62
47:Au:104:ALA:HB1	47:Au:133:LYS:CE	2.29	0.62
48:A2:4252:U:H4'	48:A2:4253:G:OP1	1.99	0.62
49:B1:64:A:H2'	56:BG:175:LYS:HZ2	1.62	0.62
49:B1:496:C:H5'	54:BE:29:PRO:CA	2.28	0.62
49:B1:582:U:C4'	74:BY:32:LYS:N	2.62	0.62
49:B1:991:G:H3'	49:B1:991:G:N3	2.14	0.62
49:B1:1125:C:H5'	67:BR:123:THR:HG22	1.80	0.62
49:B1:1618:C:H5	79:Bd:14:PHE:CZ	2.16	0.62
49:B1:1630:A:P	68:BS:37:GLY:HA3	2.38	0.62
50:BA:41:ARG:HB2	50:BA:47:TYR:CD1	2.33	0.62
51:BB:25:PHE:CG	64:BO:88:LEU:HD11	2.34	0.62
51:BB:183:GLU:O	51:BB:187:LYS:HE3	2.00	0.62
55:BF:41:VAL:HG22	55:BF:41:VAL:O	1.99	0.62
59:BJ:50:LEU:HD11	59:BJ:105:PHE:CE2	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:BM:32:ALA:HB1	62:BM:37:GLU:HG3	1.81	0.62
68:BS:12:ILE:C	68:BS:13:LEU:HD23	2.23	0.62
73:BX:112:VAL:HB	73:BX:115:ILE:HD13	1.81	0.62
5:AC:76:ILE:HG22	5:AC:91:ALA:HB3	1.79	0.62
7:AE:100:LYS:CE	48:A2:679:G:OP2	2.47	0.62
8:AF:116:GLN:HB3	19:AQ:3:VAL:O	1.98	0.62
13:AK:14:PHE:CG	48:A2:1941:A:N1	2.67	0.62
13:AK:83:ARG:HG3	13:AK:84:GLY:N	2.07	0.62
19:AQ:97:LYS:O	19:AQ:98:LEU:O	2.16	0.62
27:AY:67:ILE:O	27:AY:67:ILE:HG13	2.00	0.62
43:Ao:28:LYS:O	43:Ao:28:LYS:HG2	1.98	0.62
47:Au:117:ILE:O	47:Au:121:PRO:HD2	2.00	0.62
48:A2:287:G:N2	48:A2:309:G:N2	2.47	0.62
48:A2:508:U:OP2	48:A2:508:U:H6	1.82	0.62
48:A2:901:U:H2'	48:A2:902:A:N9	2.15	0.62
48:A2:1263:C:O2'	48:A2:1265:G:N7	2.31	0.62
48:A2:3929:G:H1'	83:Bw:19:G:C2'	2.29	0.62
49:B1:952:G:H1'	64:BO:50:LYS:O	1.99	0.62
49:B1:1415:C:H5"	69:BT:129:ARG:HG3	1.81	0.62
49:B1:1544:C:H4'	66:BQ:80:GLN:HE22	1.64	0.62
49:B1:1783:C:H4'	49:B1:1784:G:O5'	1.99	0.62
56:BG:137:ARG:HG3	56:BG:178:ARG:HG3	1.81	0.62
59:BJ:130:ILE:HD12	59:BJ:145:PRO:HA	1.81	0.62
65:BP:30:TYR:HA	65:BP:33:LEU:CD2	2.29	0.62
68:BS:40:TYR:CE1	68:BS:71:MET:HE3	2.21	0.62
69:BT:41:LYS:HD3	69:BT:43:LYS:HE2	1.82	0.62
69:BT:114:GLU:O	69:BT:122:LYS:HG2	2.00	0.62
5:AC:201:ARG:O	5:AC:202:ILE:HD12	2.00	0.62
8:AF:229:GLU:C	21:AS:2:LYS:HB2	2.24	0.62
10:AH:31:ARG:HB3	10:AH:84:VAL:O	1.99	0.62
14:AL:125:ILE:HG13	14:AL:144:LEU:HD13	1.80	0.62
14:AL:144:LEU:O	14:AL:144:LEU:HG	1.99	0.62
25:AW:76:VAL:CG2	25:AW:77:LYS:H	2.12	0.62
25:AW:80:ARG:NH2	56:BG:128:THR:HB	2.14	0.62
45:Aq:42:VAL:HA	45:Aq:71:ILE:CG1	2.29	0.62
45:Aq:104:ILE:HG12	45:Aq:105:THR:H	1.64	0.62
47:Au:165:LEU:HD13	48:A2:3940:G:H5'	1.77	0.62
47:Au:171:HIS:NE2	47:Au:173:LYS:HB2	2.14	0.62
48:A2:732:C:H2'	48:A2:733:G:C8	2.33	0.62
48:A2:1224:C:H5'	48:A2:1225:G:H21	1.64	0.62
48:A2:1741:G:N2	48:A2:1742:G:H1'	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:1743:G:H1	48:A2:1753:U:H3	1.46	0.62
48:A2:2738:G:H3'	48:A2:2738:G:N3	2.14	0.62
48:A2:4016:A:C5	83:Bw:56:C:C6	2.88	0.62
48:A2:4546:A:C6	48:A2:4681:G:N7	2.67	0.62
49:B1:805:U:H6	49:B1:805:U:C5'	2.11	0.62
49:B1:874:G:O6	49:B1:914:U:C2	2.51	0.62
49:B1:986:G:C2'	49:B1:987:A:H5'	2.29	0.62
49:B1:1295:A:H2'	49:B1:1296:U:H5'	1.82	0.62
49:B1:1308:U:O2	81:Bf:133:ALA:CB	2.47	0.62
49:B1:1309:C:H1'	81:Bf:133:ALA:HB2	1.80	0.62
49:B1:1584:G:O4'	49:B1:1586:U:H5'	1.99	0.62
49:B1:1651:A:H1'	55:BF:83:ASN:HD21	1.65	0.62
49:B1:1679:A:N6	55:BF:59:LYS:C	2.57	0.62
50:BA:39:TYR:CG	67:BR:105:MET:SD	2.91	0.62
50:BA:91:ALA:HB1	50:BA:98:PRO:HD3	1.78	0.62
51:BB:89:GLU:HB3	51:BB:228:LEU:HD22	1.82	0.62
54:BE:92:ILE:HG22	54:BE:95:THR:OG1	1.98	0.62
54:BE:212:ASP:OD1	54:BE:216:ASN:HB2	1.99	0.62
60:BK:3:MET:HB3	60:BK:44:HIS:CE1	2.34	0.62
2:A4:107:G:H5"	6:AD:273:LEU:HD22	1.81	0.62
3:AA:247:ARG:CG	49:B1:1069:U:C5'	2.78	0.62
10:AH:99:PHE:CE1	10:AH:119:GLY:HA3	2.35	0.62
13:AK:38:LYS:C	13:AK:40:MET:N	2.56	0.62
13:AK:72:ASN:HB3	13:AK:73:PRO:HD3	1.82	0.62
13:AK:81:HIS:CG	13:AK:88:PHE:HE1	2.15	0.62
17:AO:140:ARG:HH22	48:A2:4643:A:H4'	1.63	0.62
18:AP:69:ARG:NH2	48:A2:4530:A:C2	2.59	0.62
20:AR:59:SER:HA	48:A2:2613:C:H5"	1.81	0.62
21:AS:139:ARG:HA	21:AS:139:ARG:NE	2.07	0.62
47:Au:38:LEU:HD12	47:Au:163:LEU:CA	2.29	0.62
48:A2:949:C:H4'	48:A2:949:C:OP1	1.99	0.62
48:A2:1256:G:H2'	48:A2:1257:A:C4	2.34	0.62
48:A2:1307:A:O2'	48:A2:1308:C:H3'	1.98	0.62
48:A2:2854:C:H5'	48:A2:2855:G:C5	2.35	0.62
49:B1:319:C:O2'	49:B1:320:G:O4'	2.15	0.62
49:B1:370:G:H2'	49:B1:370:G:OP2	1.99	0.62
49:B1:434:G:OP1	58:BI:23:LYS:CG	2.34	0.62
49:B1:1104:G:C5	49:B1:1105:G:N7	2.67	0.62
49:B1:1292:C:H2'	49:B1:1293:A:H8	1.64	0.62
49:B1:1778:C:C6	49:B1:1778:C:C5'	2.83	0.62
50:BA:205:ARG:HH22	67:BR:86:PRO:HG2	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:BR:125:GLY:O	67:BR:126:MET:HB3	1.97	0.62
3:AA:123:ARG:NH1	48:A2:4053:U:OP1	2.33	0.62
4:AB:76:VAL:CG1	4:AB:332:MET:HG2	2.28	0.62
4:AB:126:LYS:NZ	48:A2:4924:A:OP2	2.33	0.62
5:AC:302:LEU:HD22	19:AQ:38:ARG:HB3	1.80	0.62
8:AF:179:LEU:HD21	8:AF:184:ILE:CD1	2.29	0.62
14:AL:60:ARG:NH1	48:A2:72:C:N4	2.46	0.62
15:AM:17:PHE:HB2	48:A2:1902:C:C5	2.34	0.62
25:AW:101:ARG:O	25:AW:105:ARG:HG3	2.00	0.62
46:At:98:ARG:HD2	48:A2:951:A:C3'	2.29	0.62
48:A2:1379:G:C2'	48:A2:1380:A:OP2	2.48	0.62
49:B1:526:A:H4'	80:Be:31:ARG:HH12	1.63	0.62
54:BE:247:THR:HG22	54:BE:248:VAL:H	1.64	0.62
63:BN:32:ASP:HA	63:BN:35:GLU:HB2	1.82	0.62
66:BQ:51:LEU:HD12	66:BQ:81:ILE:HG22	1.79	0.62
68:BS:69:THR:O	68:BS:72:GLN:HG2	2.00	0.62
1:A3:52:A:H62	40:Al:27:ILE:HD13	1.64	0.62
2:A4:22:A:C2	2:A4:23:A:C5	2.88	0.62
3:AA:21:LYS:HE3	48:A2:2722:A:H1'	1.80	0.62
3:AA:247:ARG:HG3	49:B1:1069:U:C4'	2.21	0.62
4:AB:352:LEU:HD13	48:A2:4640:G:H4'	1.80	0.62
5:AC:212:ASN:HD21	5:AC:256:ALA:N	1.97	0.62
15:AM:20:HIS:HE1	15:AM:48:GLN:HE22	1.35	0.62
17:AO:25:LYS:HG2	48:A2:1894:C:H5"	1.81	0.62
17:AO:87:MET:HE3	48:A2:1894:C:H1'	1.81	0.62
19:AQ:12:LYS:CD	19:AQ:14:ARG:HD2	2.30	0.62
45:Aq:23:GLY:HA3	45:Aq:71:ILE:HD12	1.81	0.62
47:Au:66:CYS:HB2	47:Au:107:TYR:CD2	2.34	0.62
47:Au:117:ILE:O	47:Au:121:PRO:CD	2.48	0.62
48:A2:495:C:C5'	48:A2:496:C:OP2	2.47	0.62
48:A2:1224:C:OP2	48:A2:1252:G:N2	2.24	0.62
49:B1:1415:C:H5"	69:BT:129:ARG:HG2	1.82	0.62
49:B1:1612:G:C1'	68:BS:87:GLN:HG3	2.30	0.62
51:BB:71:LEU:HD11	51:BB:75:GLN:HG2	1.80	0.62
58:BI:101:ILE:HD11	58:BI:198:TYR:CD1	2.34	0.62
59:BJ:41:ARG:HA	59:BJ:44:TRP:CE3	2.35	0.62
64:BO:142:ARG:HH11	64:BO:142:ARG:CA	2.09	0.62
65:BP:49:LEU:O	65:BP:53:GLN:HB3	2.00	0.62
66:BQ:10:VAL:HG12	66:BQ:11:GLN:N	2.14	0.62
71:BV:41:LYS:C	71:BV:42:VAL:HG23	2.23	0.62
78:Bc:14:VAL:HG13	78:Bc:30:VAL:CG1	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AB:2:SER:OG	48:A2:4478:G:O5'	2.13	0.62
5:AC:190:ARG:HD3	5:AC:202:ILE:CD1	2.25	0.62
5:AC:190:ARG:CA	5:AC:202:ILE:HD11	2.28	0.62
6:AD:215:ASP:OD1	6:AD:217:ASP:N	2.30	0.62
8:AF:132:MET:CE	48:A2:1819:A:H2	2.12	0.62
8:AF:184:ILE:CG2	8:AF:189:ASP:CB	2.73	0.62
19:AQ:145:GLY:O	48:A2:1485:A:OP1	2.17	0.62
20:AR:99:MET:HE3	20:AR:103:ARG:NH1	2.09	0.62
48:A2:1227:G:H4'	48:A2:1251:G:C1'	2.29	0.62
49:B1:65:C:N3	56:BG:133:LEU:HD23	2.13	0.62
49:B1:332:G:OP1	49:B1:332:G:H4'	2.00	0.62
49:B1:837:A:H2'	49:B1:838:G:H5'	1.80	0.62
49:B1:1450:G:H3'	67:BR:44:LYS:HZ1	1.64	0.62
49:B1:1733:U:H2'	49:B1:1734:G:O4'	1.99	0.62
51:BB:70:SER:HB3	51:BB:83:LYS:HG2	1.82	0.62
51:BB:97:LEU:HD12	51:BB:228:LEU:HD11	1.81	0.62
55:BF:95:HIS:HB3	75:BZ:106:GLN:HG2	1.81	0.62
56:BG:230:LYS:N	56:BG:230:LYS:HE2	2.14	0.62
59:BJ:115:PHE:CB	59:BJ:123:ILE:HD13	2.30	0.62
64:BO:90:ILE:O	64:BO:90:ILE:HD12	2.00	0.62
65:BP:126:VAL:HG23	65:BP:128:HIS:CD2	2.35	0.62
67:BR:97:GLU:HA	67:BR:117:LEU:HG	1.82	0.62
68:BS:70:ILE:CD1	68:BS:77:TYR:CE1	2.77	0.62
73:BX:54:LYS:HZ1	73:BX:95:GLU:HA	1.65	0.62
6:AD:91:GLY:O	6:AD:97:ALA:HB2	2.00	0.62
7:AE:240:TYR:CZ	48:A2:4897:C:C5'	2.72	0.62
14:AL:154:VAL:O	14:AL:155:MET:HB2	2.00	0.62
20:AR:131:VAL:HB	20:AR:132:PHE:CD1	2.35	0.62
25:AW:93:LYS:HD3	56:BG:145:PHE:CD2	2.34	0.62
30:Ab:45:PHE:HE1	48:A2:1474:G:OP1	1.83	0.62
47:Au:204:LEU:C	47:Au:204:LEU:HD12	2.24	0.62
49:B1:96:C:O2	49:B1:96:C:O5'	2.18	0.62
49:B1:547:G:OP1	49:B1:547:G:H3'	2.00	0.62
49:B1:562:U:H3'	49:B1:562:U:H6	1.64	0.62
49:B1:1287:A:OP2	49:B1:1312:G:N3	2.33	0.62
49:B1:1423:C:O2'	69:BT:7:LYS:CE	2.48	0.62
49:B1:1784:G:C4	49:B1:1785:C:C5	2.88	0.62
51:BB:97:LEU:HD13	51:BB:98:THR:N	2.13	0.62
56:BG:23:LYS:HG3	56:BG:41:LEU:HD12	1.81	0.62
56:BG:141:ILE:HG21	56:BG:153:VAL:HG21	1.81	0.62
56:BG:176:ILE:O	56:BG:179:LEU:HD23	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BH:20:GLU:HG2	57:BH:48:ALA:HB3	1.81	0.62
59:BJ:136:ARG:C	59:BJ:158:ASP:O	2.43	0.62
65:BP:84:ILE:CG2	65:BP:115:TYR:CG	2.82	0.62
69:BT:4:VAL:O	69:BT:132:ASP:OD1	2.17	0.62
69:BT:41:LYS:HE2	69:BT:43:LYS:HE2	1.81	0.62
1:A3:141:C:H4'	16:AN:60:VAL:HG21	1.82	0.62
4:AB:300:LYS:HE2	4:AB:313:SER:HB2	1.82	0.62
9:AG:31:LEU:HD13	28:AZ:122:TYR:HE1	1.63	0.62
9:AG:161:VAL:HG13	48:A2:148:G:C6	2.35	0.62
13:AK:10:LYS:CE	48:A2:1941:A:C2	2.82	0.62
19:AQ:170:LYS:HZ2	19:AQ:170:LYS:CB	2.11	0.62
35:Ag:49:CYS:SG	48:A2:2631:G:N2	2.73	0.62
48:A2:310:U:OP1	48:A2:310:U:H3'	1.98	0.62
48:A2:943:A:H1'	48:A2:944:G:O6	2.00	0.62
48:A2:1740:G:N3	48:A2:1741:G:C8	2.68	0.62
48:A2:1755:U:H2'	48:A2:1756:C:H6	1.63	0.62
48:A2:4009:G:C4'	48:A2:4020:A:O4'	2.48	0.62
49:B1:574:A:H5'	74:BY:89:HIS:CD2	2.35	0.62
49:B1:837:A:H2'	49:B1:838:G:O5'	2.00	0.62
49:B1:1269:G:OP1	81:Bf:89:LYS:NZ	2.29	0.62
49:B1:1286:G:C2'	49:B1:1287:A:OP1	2.41	0.62
49:B1:1550:G:O2'	49:B1:1558:C:O2	2.16	0.62
54:BE:137:PRO:CG	56:BG:209:TYR:CE2	2.83	0.62
59:BJ:134:HIS:O	59:BJ:159:PHE:CB	2.48	0.62
59:BJ:138:ARG:HG2	59:BJ:139:LYS:H	1.65	0.62
59:BJ:162:ARG:O	59:BJ:166:GLY:CA	2.48	0.62
65:BP:52:LYS:HZ2	65:BP:83:MET:CE	2.13	0.62
66:BQ:23:ALA:HB2	66:BQ:87:SER:CB	2.25	0.62
70:BU:26:SER:OG	70:BU:32:LEU:CB	2.47	0.62
1:A3:12:G:OP1	18:AP:3:ARG:NH1	2.33	0.61
3:AA:118:GLU:OE2	48:A2:3652:G:N2	2.32	0.61
5:AC:186:SER:CB	5:AC:204:ARG:HH21	2.12	0.61
5:AC:215:ASN:HD22	5:AC:215:ASN:C	2.01	0.61
6:AD:232:THR:OG1	6:AD:234:ASP:OD1	2.18	0.61
7:AE:109:LEU:N	7:AE:109:LEU:HD22	2.15	0.61
7:AE:123:ARG:CZ	7:AE:124:LYS:HB2	2.29	0.61
7:AE:147:GLY:CA	7:AE:203:ILE:HG22	2.29	0.61
8:AF:166:ARG:HH11	8:AF:166:ARG:HB2	1.65	0.61
10:AH:99:PHE:CD1	10:AH:119:GLY:CA	2.83	0.61
13:AK:82:ILE:HG22	13:AK:82:ILE:O	2.00	0.61
14:AL:36:ARG:HH22	48:A2:1347:U:H5	1.48	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AM:47:ARG:HH11	21:AS:73:LEU:HB3	1.65	0.61
15:AM:47:ARG:NH1	21:AS:73:LEU:HB3	2.15	0.61
28:AZ:10:VAL:O	28:AZ:83:THR:HG22	2.00	0.61
30:Ab:50:ASN:O	30:Ab:54:LEU:N	2.29	0.61
43:Ao:8:ARG:NH2	48:A2:4254:A:O2'	2.32	0.61
47:Au:97:LYS:HZ3	47:Au:101:LYS:HE2	1.62	0.61
48:A2:140:C:H2'	48:A2:141:G:H8	1.64	0.61
48:A2:460:A:N6	48:A2:681:A:N6	2.46	0.61
48:A2:1161:G:H21	48:A2:1164:C:P	2.19	0.61
48:A2:1463:C:H4'	48:A2:1464:G:C2	2.35	0.61
56:BG:32:MET:CB	56:BG:100:CYS:SG	2.88	0.61
56:BG:58:LYS:CA	56:BG:107:SER:HB2	2.30	0.61
59:BJ:121:LYS:O	59:BJ:125:HIS:HB3	2.00	0.61
67:BR:94:GLU:HB2	67:BR:95:ILE:HD12	1.81	0.61
68:BS:19:ASN:CG	68:BS:33:ILE:HG13	2.24	0.61
71:BV:37:ALA:HB2	71:BV:46:PHE:CZ	2.35	0.61
77:Bb:40:CYS:O	77:Bb:41:TYR:HB3	1.99	0.61
82:Bg:88:ARG:HD3	82:Bg:90:TRP:CZ2	2.35	0.61
3:AA:30:ARG:HH22	3:AA:41:ILE:HD13	1.65	0.61
4:AB:96:PRO:O	17:AO:149:TYR:HB3	1.99	0.61
4:AB:241:PRO:HG2	4:AB:244:THR:HG23	1.81	0.61
5:AC:134:PRO:HG3	5:AC:150:LEU:HD21	1.82	0.61
5:AC:190:ARG:HA	5:AC:202:ILE:HD11	1.78	0.61
5:AC:252:TRP:CZ3	5:AC:260:LEU:HD11	2.34	0.61
7:AE:165:LEU:HD12	7:AE:174:LEU:CD2	2.30	0.61
7:AE:203:ILE:CA	7:AE:206:VAL:HG21	2.27	0.61
9:AG:188:ALA:HB2	48:A2:6:C:O2'	1.99	0.61
10:AH:4:ILE:HG13	21:AS:144:GLN:OE1	2.00	0.61
14:AL:103:ARG:CG	37:Ai:25:ARG:HH12	2.13	0.61
15:AM:79:LYS:HD2	15:AM:79:LYS:O	2.01	0.61
15:AM:123:ILE:HA	17:AO:187:LYS:HE2	1.82	0.61
21:AS:74:ARG:NH2	48:A2:909:C:C5'	2.62	0.61
28:AZ:94:THR:C	28:AZ:95:VAL:HG23	2.24	0.61
29:Aa:9:ARG:HD3	48:A2:2323:U:C4	2.36	0.61
29:Aa:61:TYR:CE2	48:A2:288:G:N2	2.68	0.61
36:Ah:6:ALA:HA	36:Ah:9:LEU:HD12	1.82	0.61
48:A2:400:C:O5'	48:A2:400:C:H6	1.83	0.61
48:A2:1888:A:C5	48:A2:1889:A:C5	2.87	0.61
48:A2:3727:A:H8	48:A2:3727:A:P	2.23	0.61
48:A2:3731:A:C6	49:B1:1825:A:C2	2.88	0.61
49:B1:522:A:H5'	59:BJ:145:PRO:HD2	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1017:U:OP2	63:BN:62:GLN:OE1	2.17	0.61
50:BA:215:GLN:O	50:BA:219:GLU:HG2	2.01	0.61
52:BC:104:ASP:CB	52:BC:130:ILE:HA	2.29	0.61
59:BJ:37:LEU:HD12	59:BJ:37:LEU:N	2.14	0.61
59:BJ:124:HIS:NE2	80:Be:35:ARG:CG	2.63	0.61
75:BZ:32:LYS:HE2	75:BZ:34:LYS:O	1.99	0.61
78:Bc:16:LYS:HA	78:Bc:52:GLU:CD	2.25	0.61
2:A4:43:U:H4'	12:AJ:143:ASP:HB3	1.81	0.61
3:AA:207:VAL:HG13	48:A2:3890:C:H5'	1.82	0.61
4:AB:174:ARG:O	4:AB:176:LYS:N	2.33	0.61
8:AF:184:ILE:CG2	8:AF:189:ASP:C	2.72	0.61
11:AI:76:MET:HE2	11:AI:76:MET:HA	1.82	0.61
11:AI:116:ARG:HA	48:A2:4157:G:N2	2.15	0.61
14:AL:165:LYS:CE	48:A2:505:C:P	2.87	0.61
18:AP:109:VAL:HA	18:AP:112:LEU:HD13	1.82	0.61
19:AQ:72:LEU:CD1	48:A2:1439:G:H5"	2.29	0.61
20:AR:86:ASN:HB3	48:A2:1532:G:OP1	2.00	0.61
23:AU:103:VAL:HG21	23:AU:113:ARG:HH11	1.65	0.61
30:Ab:12:GLN:NE2	48:A2:1653:U:H1'	2.15	0.61
32:Ad:38:PHE:CE2	48:A2:4596:U:C6	2.88	0.61
43:Ao:31:ASP:N	43:Ao:31:ASP:OD1	2.32	0.61
47:Au:38:LEU:CD1	47:Au:159:MET:HG3	2.30	0.61
48:A2:204:G:C1'	48:A2:228:U:C2	2.77	0.61
48:A2:676:G:C5'	48:A2:676:G:C8	2.84	0.61
48:A2:958:U:O2'	48:A2:959:C:O4'	2.18	0.61
48:A2:3727:A:OP2	48:A2:3727:A:H8	1.78	0.61
49:B1:827:A:H5'	59:BJ:8:VAL:HG11	1.78	0.61
49:B1:925:G:H5'	63:BN:91:LEU:HD21	1.81	0.61
49:B1:1137:U:O2'	50:BA:155:ARG:NH2	2.33	0.61
49:B1:1286:G:H2'	49:B1:1286:G:N3	2.15	0.61
55:BF:103:LEU:HD13	55:BF:178:ILE:CD1	2.29	0.61
59:BJ:81:LEU:HD12	59:BJ:87:LEU:CD1	2.28	0.61
59:BJ:154:GLN:O	59:BJ:157:ILE:HG23	2.00	0.61
65:BP:65:LYS:O	65:BP:67:ALA:HB3	2.00	0.61
67:BR:35:CYS:HA	67:BR:38:ILE:HG13	1.81	0.61
72:BW:28:ARG:HB3	72:BW:29:PRO:HD3	1.82	0.61
73:BX:87:ASN:HB3	73:BX:134:TYR:CE1	2.35	0.61
5:AC:287:THR:CG2	46:At:5:LEU:HD13	2.30	0.61
8:AF:69:ILE:HG21	8:AF:73:ARG:HE	1.58	0.61
18:AP:10:ASN:OD1	18:AP:10:ASN:N	2.32	0.61
20:AR:72:LYS:HB3	20:AR:74:ARG:NH2	2.14	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AR:107:ARG:HH21	48:A2:2644:U:H5'	1.65	0.61
28:AZ:125:GLY:O	28:AZ:128:LYS:NZ	2.33	0.61
34:Af:106:TYR:CG	34:Af:107:PRO:HD2	2.33	0.61
47:Au:207:LYS:HG2	47:Au:213:PRO:CA	2.25	0.61
48:A2:1341:G:C2	48:A2:1343:G:O6	2.53	0.61
48:A2:1743:G:C6	48:A2:1744:C:N4	2.69	0.61
49:B1:1314:U:C5	60:BK:2:LEU:CD2	2.83	0.61
53:BD:64:ARG:NH2	60:BK:72:THR:HA	2.16	0.61
54:BE:71:LYS:CG	54:BE:91:SER:O	2.48	0.61
65:BP:30:TYR:HA	65:BP:33:LEU:HG	1.81	0.61
65:BP:118:GLU:HA	68:BS:120:HIS:CE1	2.36	0.61
66:BQ:34:VAL:CG1	66:BQ:84:ILE:CD1	2.78	0.61
66:BQ:39:LEU:HD21	66:BQ:51:LEU:HD23	1.80	0.61
70:BU:24:LEU:HD22	70:BU:112:VAL:CG2	2.23	0.61
72:BW:102:ILE:HG21	72:BW:125:ILE:CG2	2.20	0.61
73:BX:100:VAL:HG13	73:BX:122:VAL:HG13	1.83	0.61
75:BZ:55:TYR:CE1	75:BZ:59:CYS:SG	2.94	0.61
75:BZ:65:TYR:OH	75:BZ:76:ARG:HD2	2.00	0.61
75:BZ:68:ILE:CG2	75:BZ:88:LEU:HD11	2.30	0.61
76:Ba:46:GLU:HB2	84:Bx:39:U:OP1	2.01	0.61
1:A3:27:U:OP1	5:AC:56:GLU:CG	2.49	0.61
4:AB:53:MET:HG2	4:AB:77:THR:HG22	1.81	0.61
5:AC:115:VAL:O	5:AC:120:LYS:HE3	2.00	0.61
7:AE:115:TYR:CZ	46:At:119:ARG:HD3	2.36	0.61
8:AF:166:ARG:HG3	48:A2:2255:A:OP1	2.00	0.61
10:AH:59:LYS:HE2	10:AH:66:GLU:HB3	1.82	0.61
13:AK:96:THR:O	13:AK:97:GLU:C	2.43	0.61
23:AU:59:GLY:O	23:AU:60:VAL:HG22	2.00	0.61
32:Ad:38:PHE:HE1	48:A2:4598:U:C6	2.17	0.61
36:Ah:89:ARG:NH1	36:Ah:93:ARG:HH12	1.98	0.61
44:Ap:79:VAL:O	44:Ap:83:ILE:HG12	2.01	0.61
48:A2:163:C:N4	48:A2:264:U:H3	1.91	0.61
48:A2:191:C:C6	48:A2:191:C:C4'	2.84	0.61
48:A2:1467:C:OP1	48:A2:1467:C:H3'	1.99	0.61
48:A2:4264:U:C4	48:A2:4265:C:C2	2.87	0.61
49:B1:919:A:OP1	72:BW:56:HIS:HD2	1.84	0.61
52:BC:251:LEU:O	72:BW:68:ARG:CZ	2.48	0.61
53:BD:22:ASN:O	53:BD:26:THR:HG22	1.99	0.61
66:BQ:39:LEU:CD2	66:BQ:51:LEU:CD2	2.72	0.61
69:BT:23:LYS:HG2	69:BT:54:TYR:CZ	2.35	0.61
71:BV:38:GLU:O	71:BV:47:ASN:HB2	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:BZ:99:LEU:HD12	75:BZ:99:LEU:C	2.25	0.61
78:Bc:66:ARG:O	78:Bc:66:ARG:HD2	1.99	0.61
84:Bx:46:U:C2'	84:Bx:47:U:H5'	2.31	0.61
6:AD:22:ARG:CZ	6:AD:27:LYS:HD2	2.31	0.61
7:AE:100:LYS:HB3	48:A2:678:C:C5'	2.26	0.61
8:AF:166:ARG:NH1	8:AF:209:TRP:CD2	2.67	0.61
22:AT:78:LYS:HD2	22:AT:87:LYS:NZ	2.14	0.61
25:AW:60:LYS:O	25:AW:61:LYS:CB	2.47	0.61
25:AW:109:ILE:O	25:AW:113:LYS:CG	2.46	0.61
29:Aa:25:HIS:CD2	48:A2:1321:G:N2	2.63	0.61
32:Ad:38:PHE:CE2	48:A2:4596:U:C5	2.88	0.61
33:Ae:4:LEU:HD11	33:Ae:120:ILE:C	2.25	0.61
48:A2:901:U:C3'	48:A2:902:A:C8	2.84	0.61
48:A2:4016:A:N7	83:Bw:56:C:H1'	2.15	0.61
49:B1:381:C:H5'	58:BI:48:VAL:CG1	2.30	0.61
49:B1:510:G:OP2	59:BJ:3:VAL:CG1	2.49	0.61
49:B1:581:U:C4'	74:BY:62:THR:HG23	2.30	0.61
49:B1:1016:U:O2	63:BN:61:ALA:HB3	2.00	0.61
49:B1:1552:G:H5"	49:B1:1553:C:O2	2.00	0.61
49:B1:1578:U:C6	53:BD:4:GLN:NE2	2.41	0.61
49:B1:1679:A:C6	55:BF:60:ARG:CA	2.83	0.61
49:B1:1679:A:N7	55:BF:60:ARG:HG3	2.15	0.61
49:B1:1679:A:C5	55:BF:60:ARG:CA	2.83	0.61
49:B1:1865:C:O2	76:Ba:7:ASN:CB	2.48	0.61
50:BA:212:LYS:HA	50:BA:215:GLN:CB	2.31	0.61
51:BB:79:VAL:CG1	51:BB:81:PHE:HE1	2.14	0.61
53:BD:210:ILE:CA	67:BR:39:ALA:HB1	2.27	0.61
54:BE:149:TYR:CA	56:BG:209:TYR:CD2	2.84	0.61
55:BF:41:VAL:HG21	55:BF:109:LEU:CD2	2.18	0.61
56:BG:218:LYS:HA	56:BG:221:LYS:HD2	1.83	0.61
59:BJ:39:ASN:CB	80:Be:34:ARG:HH21	2.12	0.61
59:BJ:133:ARG:O	59:BJ:162:ARG:HD2	2.00	0.61
61:BL:10:TYR:O	61:BL:11:GLN:HB2	1.99	0.61
63:BN:22:VAL:CB	63:BN:23:PRO:CD	2.70	0.61
67:BR:116:ASN:O	67:BR:117:LEU:HG	2.00	0.61
69:BT:49:ASP:O	69:BT:52:TRP:HE3	1.84	0.61
83:Bw:45:U:O2'	83:Bw:46:G:H5"	2.01	0.61
4:AB:47:LEU:HD21	4:AB:181:MET:HG3	1.82	0.61
7:AE:240:TYR:HE2	7:AE:243:THR:HG22	1.66	0.61
9:AG:242:LEU:HB3	9:AG:246:SER:OG	2.01	0.61
13:AK:55:MET:SD	13:AK:61:MET:CG	2.88	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AO:60:LYS:NZ	48:A2:2027:G:OP1	2.28	0.61
43:Ao:34:TYR:OH	48:A2:3700:U:H5"	2.00	0.61
46:At:71:ARG:HH11	46:At:71:ARG:CG	2.13	0.61
47:Au:35:GLN:HG2	48:A2:4023:A:C3'	2.27	0.61
48:A2:1259:C:H2'	48:A2:1260:G:H8	1.61	0.61
48:A2:1783:A:O2'	48:A2:1784:A:H5'	2.00	0.61
49:B1:64:A:H5'	56:BG:175:LYS:HZ2	1.65	0.61
49:B1:77:A:H4'	56:BG:173:ALA:HB1	1.83	0.61
49:B1:151:C:P	74:BY:120:THR:OG1	2.59	0.61
50:BA:200:ASP:HB2	67:BR:85:VAL:HG13	1.83	0.61
53:BD:116:ARG:CZ	53:BD:150:MET:HE3	2.29	0.61
62:BM:33:ARG:HD2	62:BM:91:LEU:CD2	2.31	0.61
64:BO:78:ALA:HB1	64:BO:119:LEU:HD12	1.83	0.61
66:BQ:33:LYS:HD3	66:BQ:69:ARG:CD	2.29	0.61
72:BW:3:ARG:HH11	72:BW:3:ARG:CG	2.14	0.61
3:AA:227:ARG:HH11	3:AA:227:ARG:CG	2.14	0.61
7:AE:208:ILE:HG13	7:AE:209:PRO:CD	2.30	0.61
7:AE:232:ILE:HG22	7:AE:236:GLU:HB2	1.83	0.61
8:AF:161:LYS:HB2	8:AF:209:TRP:HE3	1.65	0.61
9:AG:140:VAL:HG12	16:AN:3:ALA:CB	2.31	0.61
13:AK:59:THR:C	48:A2:1942:G:H5"	2.26	0.61
16:AN:14:LYS:HB2	16:AN:19:MET:SD	2.41	0.61
24:AV:48:ARG:HD2	48:A2:4583:C:OP1	2.01	0.61
32:Ad:46:LEU:HD11	48:A2:2351:U:O2'	1.92	0.61
45:Aq:41:LYS:HB2	45:Aq:70:GLN:CA	2.26	0.61
47:Au:35:GLN:CD	48:A2:4023:A:HO2'	1.96	0.61
47:Au:105:LYS:CE	48:A2:4011:C:OP1	2.48	0.61
47:Au:205:TYR:CD1	48:A2:4024:C:H5'	2.36	0.61
48:A2:1815:U:O2'	48:A2:1816:G:H5"	2.00	0.61
48:A2:3681:G:H3'	48:A2:3681:G:N3	2.16	0.61
49:B1:62:G:C2'	49:B1:63:U:H5'	2.30	0.61
49:B1:222:U:C5'	61:BL:17:PHE:CE2	2.82	0.61
49:B1:1142:G:P	52:BC:187:ARG:NH1	2.74	0.61
49:B1:1567:G:C2	68:BS:82:TRP:CE3	2.89	0.61
51:BB:78:GLU:HG3	51:BB:189:ILE:HG23	1.83	0.61
59:BJ:114:VAL:O	59:BJ:118:GLY:O	2.18	0.61
62:BM:75:ASN:HB3	62:BM:128:PHE:CE1	2.36	0.61
66:BQ:58:LEU:CD2	66:BQ:62:ARG:NH1	2.61	0.61
67:BR:97:GLU:CA	67:BR:117:LEU:HD21	2.27	0.61
76:Ba:36:ILE:HG13	76:Ba:84:VAL:HG21	1.82	0.61
3:AA:9:ARG:NE	48:A2:1610:C:C5	2.69	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AD:234:ASP:OD1	6:AD:234:ASP:N	2.21	0.61
7:AE:113:PRO:HG2	7:AE:116:TYR:OH	2.00	0.61
7:AE:131:LYS:HB3	7:AE:132:PRO:CD	2.31	0.61
17:AO:114:LYS:C	48:A2:4718:C:H5'	2.25	0.61
29:Aa:132:ARG:NH1	29:Aa:132:ARG:HB2	2.16	0.61
43:Ao:55:ILE:O	48:A2:4341:A:H4'	1.99	0.61
45:Aq:58:ILE:HD12	45:Aq:59:THR:H	1.64	0.61
46:At:121:GLN:C	46:At:123:PRO:HD3	2.26	0.61
47:Au:60:ARG:HG2	47:Au:61:PRO:N	2.14	0.61
48:A2:119:G:P	48:A2:119:G:H3'	2.40	0.61
48:A2:1226:C:O2'	48:A2:1227:G:H5'	2.01	0.61
49:B1:282:G:P	49:B1:282:G:C8	2.94	0.61
49:B1:1308:U:H4'	81:Bf:134:SER:OG	2.01	0.61
50:BA:111:GLN:HA	50:BA:116:PHE:CE2	2.35	0.61
50:BA:111:GLN:CA	50:BA:116:PHE:CD2	2.84	0.61
55:BF:93:VAL:HG13	55:BF:97:PHE:CE1	2.36	0.61
65:BP:66:GLU:N	65:BP:67:ALA:HB2	2.16	0.61
67:BR:99:ASP:CB	67:BR:102:THR:CG2	2.79	0.61
68:BS:74:PRO:HG2	68:BS:84:LEU:HD11	1.83	0.61
73:BX:21:LYS:HE2	73:BX:27:TYR:CD1	2.36	0.61
75:BZ:48:VAL:CG2	75:BZ:80:ARG:NE	2.63	0.61
5:AC:343:GLN:HG2	48:A2:714:A:O2'	2.00	0.61
8:AF:34:ARG:HH12	48:A2:1421:U:H1'	1.64	0.61
15:AM:42:CYS:SG	15:AM:77:TRP:CD1	2.90	0.61
18:AP:78:TRP:CZ2	48:A2:3862:A:O2'	2.54	0.61
20:AR:97:ARG:HH21	48:A2:2704:A:H8	1.44	0.61
21:AS:29:ARG:HB2	22:AT:148:PRO:HB2	1.82	0.61
34:Af:16:ARG:HB3	34:Af:21:GLN:HG2	1.83	0.61
35:Ag:68:SER:OG	48:A2:2566:A:H5"	2.01	0.61
48:A2:1877:A:H4'	48:A2:2050:A:N1	2.16	0.61
48:A2:2747:C:O2'	48:A2:2748:U:O5'	2.16	0.61
49:B1:332:G:N7	56:BG:186:GLN:HB2	2.16	0.61
49:B1:619:A:N1	73:BX:114:ASP:CB	2.63	0.61
49:B1:1745:A:H8	56:BG:66:GLY:CA	2.13	0.61
49:B1:1864:U:C2	76:Ba:75:VAL:HG11	2.36	0.61
58:BI:36:THR:O	58:BI:95:THR:HA	2.01	0.61
58:BI:78:ILE:HG23	58:BI:102:VAL:CG1	2.31	0.61
59:BJ:110:LEU:HA	59:BJ:113:GLN:HB2	1.83	0.61
59:BJ:120:ALA:HA	59:BJ:129:LEU:CD1	2.31	0.61
59:BJ:124:HIS:NE2	80:Be:35:ARG:HG2	2.15	0.61
60:BK:8:ARG:O	60:BK:12:TYR:HD1	1.84	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:BL:13:GLN:HE22	61:BL:16:ILE:N	1.99	0.61
65:BP:44:ARG:HH21	65:BP:52:LYS:HZ1	1.47	0.61
65:BP:51:ARG:HH11	65:BP:51:ARG:HG2	1.65	0.61
66:BQ:23:ALA:CB	66:BQ:87:SER:HB2	2.24	0.61
74:BY:83:LYS:HE2	74:BY:96:LEU:CD2	2.31	0.61
1:A3:153:C:OP1	9:AG:185:LYS:HE3	2.01	0.60
4:AB:94:GLU:CG	4:AB:158:GLN:HE21	2.14	0.60
4:AB:168:MET:HG3	4:AB:177:LYS:O	2.01	0.60
6:AD:225:GLN:HA	6:AD:225:GLN:OE1	2.01	0.60
7:AE:118:THR:O	7:AE:119:GLU:HB3	2.00	0.60
8:AF:95:ILE:CG2	8:AF:223:LYS:HE3	2.31	0.60
10:AH:8:GLN:HG3	10:AH:74:CYS:SG	2.40	0.60
12:AJ:174:ILE:O	12:AJ:175:LEU:HB2	2.00	0.60
13:AK:55:MET:N	48:A2:1979:A:H5'	2.15	0.60
20:AR:99:MET:CE	20:AR:103:ARG:NH1	2.64	0.60
20:AR:131:VAL:HB	20:AR:132:PHE:CE1	2.36	0.60
26:AX:55:ARG:HH11	26:AX:55:ARG:CG	2.14	0.60
29:Aa:25:HIS:CD2	48:A2:1321:G:H1	2.19	0.60
29:Aa:85:GLN:NE2	48:A2:645:C:O2'	2.34	0.60
43:Ao:3:ASN:ND2	43:Ao:95:GLY:H	1.98	0.60
45:Aq:40:LYS:HB2	45:Aq:68:GLN:HB2	1.82	0.60
46:At:99:LYS:HD3	48:A2:670:C:O5'	2.00	0.60
48:A2:131:C:C6	48:A2:131:C:C3'	2.84	0.60
48:A2:1888:A:N6	48:A2:1889:A:C6	2.69	0.60
48:A2:4331:A:H2'	48:A2:4332:G:H5'	1.84	0.60
49:B1:571:U:OP1	74:BY:37:LYS:CB	2.47	0.60
49:B1:1587:G:H4'	49:B1:1588:A:OP2	1.99	0.60
49:B1:1838:U:H1'	64:BO:150:ARG:HG2	1.82	0.60
50:BA:205:ARG:NH2	67:BR:86:PRO:HD2	2.16	0.60
53:BD:11:PHE:CZ	70:BU:25:THR:CG2	2.83	0.60
54:BE:80:VAL:HG13	54:BE:81:THR:HG23	1.83	0.60
59:BJ:118:GLY:O	59:BJ:119:LEU:HB3	2.01	0.60
65:BP:34:MET:O	65:BP:42:ARG:HG2	2.01	0.60
65:BP:84:ILE:CB	65:BP:115:TYR:HA	2.29	0.60
67:BR:21:TYR:CD2	67:BR:71:ILE:HG22	2.31	0.60
67:BR:36:GLU:HA	67:BR:41:ILE:HD13	1.80	0.60
73:BX:87:ASN:HB2	73:BX:90:CYS:SG	2.41	0.60
79:Bd:39:CYS:HB2	79:Bd:41:GLN:H	1.66	0.60
1:A3:94:G:C2	38:Aj:79:ARG:HD2	2.36	0.60
4:AB:220:ILE:HB	4:AB:346:THR:OG1	2.02	0.60
9:AG:55:VAL:HG21	26:AX:41:ARG:HD3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AV:16:ILE:HD11	24:AV:57:VAL:H	1.65	0.60
29:Aa:61:TYR:CZ	48:A2:310:U:C5	2.89	0.60
39:Ak:41:TYR:HA	48:A2:2516:A:P	2.41	0.60
45:Aq:62:LEU:HA	45:Aq:70:GLN:C	2.25	0.60
46:At:47:LYS:CE	46:At:102:TYR:HA	2.31	0.60
48:A2:1943:A:C2'	48:A2:1944:C:H5'	2.31	0.60
48:A2:3682:A:OP1	48:A2:3683:A:OP1	2.19	0.60
48:A2:3735:U:H2'	48:A2:3736:G:O4'	2.02	0.60
48:A2:4016:A:N6	83:Bw:56:C:C2	2.69	0.60
49:B1:161:U:C4	74:BY:115:LYS:HE2	2.34	0.60
49:B1:168:C:H5'	56:BG:131:ARG:CD	2.21	0.60
49:B1:309:G:H21	49:B1:310:C:H1'	1.65	0.60
49:B1:872:A:C8	49:B1:874:G:N2	2.67	0.60
49:B1:1309:C:O5'	81:Bf:118:ARG:CD	2.49	0.60
49:B1:1423:C:O2'	69:BT:7:LYS:HE3	2.01	0.60
50:BA:111:GLN:NE2	52:BC:64:THR:CG2	2.64	0.60
51:BB:174:ARG:HH11	51:BB:174:ARG:CG	2.14	0.60
54:BE:92:ILE:HG22	54:BE:92:ILE:O	2.01	0.60
55:BF:18:LYS:CD	55:BF:46:ALA:O	2.49	0.60
58:BI:8:TRP:HB2	58:BI:18:ARG:NH1	2.15	0.60
61:BL:15:THR:HG22	61:BL:15:THR:O	2.01	0.60
61:BL:35:ARG:HD2	61:BL:51:ILE:O	2.00	0.60
68:BS:59:LEU:CD2	68:BS:63:GLU:HB3	2.30	0.60
69:BT:41:LYS:HZ1	69:BT:81:GLY:C	2.09	0.60
73:BX:93:PHE:O	73:BX:140:ARG:NH1	2.33	0.60
4:AB:261:ARG:CB	17:AO:64:THR:HG21	2.30	0.60
5:AC:100:ARG:CZ	48:A2:1632:A:C6	2.82	0.60
7:AE:125:LEU:O	7:AE:126:LEU:HG	2.00	0.60
14:AL:70:VAL:HG13	14:AL:157:VAL:HG11	1.83	0.60
19:AQ:11:ARG:HH11	19:AQ:11:ARG:CG	2.14	0.60
19:AQ:72:LEU:HD13	48:A2:1439:G:H5'	1.81	0.60
22:AT:60:LYS:HB3	22:AT:76:VAL:HG11	1.82	0.60
47:Au:38:LEU:HD12	47:Au:159:MET:HG3	1.83	0.60
47:Au:69:GLY:O	47:Au:70:ASP:HB3	2.00	0.60
47:Au:104:ALA:HB1	47:Au:133:LYS:HD2	1.82	0.60
48:A2:1306:A:N1	48:A2:1307:A:N3	2.49	0.60
48:A2:2342:A:OP2	86:A2:5186:MG:MG	1.43	0.60
48:A2:3682:A:H5'	48:A2:3683:A:N7	2.16	0.60
49:B1:830:A:H3'	49:B1:830:A:N3	2.16	0.60
49:B1:1125:C:O4'	67:BR:123:THR:HG23	2.01	0.60
49:B1:1862:G:C6	76:Ba:75:VAL:HG21	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BA:66:VAL:CG1	71:BV:46:PHE:CE1	2.83	0.60
52:BC:62:PRO:HB2	52:BC:68:ARG:HG2	1.82	0.60
54:BE:116:VAL:HG23	54:BE:117:GLU:H	1.65	0.60
56:BG:63:MET:HE3	56:BG:106:LEU:HD12	1.83	0.60
61:BL:35:ARG:HG3	61:BL:36:TYR:H	1.64	0.60
66:BQ:18:THR:HG22	66:BQ:18:THR:O	2.01	0.60
66:BQ:62:ARG:CG	66:BQ:92:LEU:CD1	2.78	0.60
67:BR:20:TYR:HD2	67:BR:23:ARG:CD	2.06	0.60
67:BR:98:VAL:C	67:BR:99:ASP:OD1	2.43	0.60
78:Bc:14:VAL:CG1	78:Bc:52:GLU:HA	2.30	0.60
5:AC:140:LYS:C	46:At:15:SER:HB3	2.26	0.60
5:AC:322:LEU:N	48:A2:1264:G:N7	2.44	0.60
5:AC:322:LEU:HB3	48:A2:1264:G:N7	2.17	0.60
7:AE:111:LYS:NZ	48:A2:682:U:P	2.64	0.60
7:AE:118:THR:O	7:AE:119:GLU:CB	2.49	0.60
7:AE:219:LYS:CB	48:A2:4898:C:C5	2.84	0.60
17:AO:29:LEU:O	34:Af:98:GLY:HA2	2.01	0.60
17:AO:149:TYR:OH	48:A2:4546:A:OP1	2.19	0.60
19:AQ:68:ARG:HH12	48:A2:1483:C:C2'	2.14	0.60
20:AR:97:ARG:O	20:AR:101:ILE:HG12	2.01	0.60
20:AR:107:ARG:HH21	48:A2:2644:U:C5'	2.14	0.60
28:AZ:97:ASN:OD1	28:AZ:99:ASP:HB3	2.02	0.60
29:Aa:91:ALA:HB2	29:Aa:120:GLN:HB3	1.83	0.60
35:Ag:49:CYS:HA	44:Ap:61:MET:CG	2.30	0.60
39:Ak:21:LYS:H	39:Ak:21:LYS:CD	2.11	0.60
48:A2:3814:C:H6	48:A2:3814:C:O5'	1.83	0.60
48:A2:3931:A:N3	48:A2:4015:G:O4'	2.34	0.60
48:A2:4484:G:H3'	48:A2:4484:G:N3	2.16	0.60
48:A2:4872:C:H3'	48:A2:4872:C:C6	2.37	0.60
49:B1:21:U:O3'	59:BJ:19:PRO:HD3	2.01	0.60
49:B1:689:U:C4	49:B1:742:U:O2	2.55	0.60
49:B1:744:G:N2	57:BH:109:ARG:CB	2.56	0.60
49:B1:1020:A:OP2	63:BN:70:LYS:HE3	2.02	0.60
49:B1:1121:G:N2	51:BB:146:ARG:NH2	2.50	0.60
50:BA:39:TYR:CE2	67:BR:108:LEU:CD1	2.84	0.60
50:BA:210:ILE:O	50:BA:213:GLU:HB3	2.02	0.60
54:BE:92:ILE:CG2	54:BE:95:THR:OG1	2.49	0.60
69:BT:34:VAL:HB	69:BT:53:PHE:CE1	2.35	0.60
74:BY:112:ASN:O	74:BY:116:LYS:HD3	2.00	0.60
79:Bd:38:MET:HE3	79:Bd:43:PHE:N	2.15	0.60
1:A3:112:G:OP1	48:A2:2758:C:C1'	2.47	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AB:293:ILE:HD13	4:AB:296:GLY:N	2.16	0.60
5:AC:286:ASN:ND2	5:AC:291:ARG:HH21	1.99	0.60
6:AD:90:VAL:CG2	6:AD:226:TYR:CD1	2.83	0.60
7:AE:112:MET:HE3	7:AE:113:PRO:CD	2.18	0.60
11:AI:116:ARG:HA	48:A2:4157:G:H21	1.66	0.60
15:AM:71:LYS:HE2	48:A2:726:G:OP2	2.01	0.60
19:AQ:147:GLU:HG2	19:AQ:150:ARG:HH21	1.66	0.60
21:AS:6:THR:O	21:AS:6:THR:HG23	2.01	0.60
22:AT:56:CYS:SG	22:AT:78:LYS:NZ	2.70	0.60
23:AU:43:LEU:O	23:AU:47:ILE:CG1	2.38	0.60
46:At:101:LYS:O	46:At:104:PRO:HD3	2.01	0.60
48:A2:127:G:H1	48:A2:140:C:H42	1.50	0.60
48:A2:1752:A:N1	48:A2:1753:U:C2	2.68	0.60
48:A2:2467:C:O5'	48:A2:2468:C:OP2	2.20	0.60
49:B1:157:U:C1'	56:BG:59:GLN:CA	2.79	0.60
49:B1:586:G:OP2	59:BJ:174:LYS:HE2	2.01	0.60
49:B1:1256:G:C6	79:Bd:30:LEU:HG	2.36	0.60
49:B1:1417:C:C4'	69:BT:2:PRO:HA	2.19	0.60
49:B1:1442:U:O2'	66:BQ:13:PHE:CE1	2.52	0.60
50:BA:111:GLN:CA	50:BA:116:PHE:CE2	2.84	0.60
59:BJ:161:LEU:O	59:BJ:162:ARG:HD3	2.00	0.60
65:BP:85:ILE:HG21	65:BP:111:MET:C	2.25	0.60
66:BQ:25:CYS:HA	66:BQ:67:ASP:O	2.01	0.60
67:BR:44:LYS:HA	67:BR:47:ARG:HD2	1.84	0.60
69:BT:41:LYS:HZ1	69:BT:82:ARG:H	1.48	0.60
74:BY:96:LEU:HD12	74:BY:96:LEU:H	1.67	0.60
82:Bg:170:TRP:C	82:Bg:172:LYS:H	2.09	0.60
2:A4:73:U:C3'	2:A4:74:A:H5"	2.30	0.60
4:AB:102:PHE:O	48:A2:4686:A:H4'	2.00	0.60
5:AC:212:ASN:ND2	5:AC:232:VAL:HG21	2.09	0.60
7:AE:126:LEU:HD13	48:A2:958:U:C5	2.37	0.60
13:AK:24:TYR:CD2	13:AK:27:CYS:SG	2.94	0.60
13:AK:60:MET:HA	48:A2:1941:A:H4'	1.82	0.60
14:AL:154:VAL:O	14:AL:155:MET:CB	2.49	0.60
14:AL:177:LYS:O	14:AL:178:ALA:O	2.19	0.60
18:AP:71:ALA:HB1	48:A2:4928:C:OP1	2.00	0.60
22:AT:4:THR:CG2	48:A2:4169:C:H6	2.08	0.60
23:AU:21:PHE:CD1	23:AU:80:LYS:HB3	2.36	0.60
28:AZ:50:PRO:CG	28:AZ:122:TYR:CE2	2.75	0.60
29:Aa:9:ARG:HD2	48:A2:2323:U:H3	1.67	0.60
43:Ao:70:LEU:O	43:Ao:80:LYS:HA	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:1402:G:O2'	48:A2:1403:A:O5'	2.19	0.60
48:A2:3619:A:H1'	48:A2:3756:A:N6	2.17	0.60
49:B1:368:U:H4'	49:B1:369:C:OP2	2.01	0.60
49:B1:696:G:H8	49:B1:696:G:O5'	1.85	0.60
49:B1:750:C:C2	49:B1:751:G:C8	2.90	0.60
49:B1:917:U:C1'	57:BH:118:ARG:HD2	2.32	0.60
53:BD:210:ILE:HG21	67:BR:16:ILE:HD11	1.82	0.60
54:BE:123:LEU:HD11	54:BE:235:TRP:CB	2.30	0.60
54:BE:151:ASP:OD1	56:BG:212:LEU:HD21	2.02	0.60
58:BI:114:GLU:HG3	58:BI:134:GLU:OE2	2.01	0.60
68:BS:66:ARG:HD2	68:BS:66:ARG:C	2.26	0.60
2:A4:22:A:C6	2:A4:23:A:C5	2.89	0.60
3:AA:226:ARG:HG3	3:AA:229:ALA:HB2	1.82	0.60
4:AB:14:LEU:O	4:AB:17:LEU:HB2	2.01	0.60
5:AC:53:ALA:HB2	48:A2:344:C:H1'	1.83	0.60
5:AC:150:LEU:CG	46:At:71:ARG:CB	2.79	0.60
7:AE:111:LYS:HB3	46:At:87:ARG:HH11	1.62	0.60
8:AF:220:MET:O	8:AF:221:LYS:HG2	2.02	0.60
15:AM:3:PHE:CZ	21:AS:155:PRO:HB3	2.37	0.60
15:AM:19:PRO:HG3	48:A2:923:C:C2	2.36	0.60
19:AQ:18:PRO:C	19:AQ:20:SER:N	2.58	0.60
22:AT:25:VAL:HG23	22:AT:30:TYR:HE2	1.66	0.60
26:AX:56:ARG:CZ	26:AX:62:ARG:HH21	2.13	0.60
31:Ac:81:LEU:HD23	31:Ac:91:VAL:O	2.01	0.60
33:Ae:12:ILE:HG22	33:Ae:13:VAL:N	2.17	0.60
35:Ag:40:LYS:NZ	48:A2:2580:A:OP1	2.34	0.60
38:Aj:38:GLY:C	38:Aj:40:PRO:CD	2.73	0.60
43:Ao:61:LYS:HG3	48:A2:4334:U:OP2	2.01	0.60
46:At:66:ARG:HD2	46:At:68:SER:CB	2.31	0.60
47:Au:157:PHE:HA	47:Au:165:LEU:CD2	2.32	0.60
48:A2:65:A:O2'	48:A2:66:A:H5'	2.00	0.60
48:A2:139:G:C8	48:A2:139:G:C5'	2.85	0.60
48:A2:482:G:H2'	48:A2:483:C:O4'	2.02	0.60
48:A2:2246:U:H2'	48:A2:2249:G:O4'	2.02	0.60
48:A2:3684:U:C6	48:A2:3684:U:C5'	2.84	0.60
48:A2:5006:A:H5'	48:A2:5007:G:OP2	2.02	0.60
49:B1:1015:U:C5'	77:Bb:20:LYS:HZ2	2.09	0.60
49:B1:1023:A:OP2	63:BN:124:ARG:HD3	2.01	0.60
49:B1:1261:C:O2'	79:Bd:10:HIS:CD2	2.54	0.60
49:B1:1745:A:H1'	56:BG:66:GLY:HA2	1.83	0.60
51:BB:153:THR:HB	51:BB:155:TYR:CD2	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BD:210:ILE:HD12	53:BD:211:VAL:C	2.26	0.60
54:BE:149:TYR:HB3	56:BG:209:TYR:CD2	2.30	0.60
58:BI:170:LYS:O	58:BI:171:LEU:HB2	2.02	0.60
69:BT:38:LYS:CE	69:BT:99:VAL:HG13	2.32	0.60
75:BZ:92:LEU:HD12	75:BZ:92:LEU:C	2.26	0.60
1:A3:33:G:H8	1:A3:33:G:O5'	1.83	0.60
1:A3:53:G:H5"	40:Al:19:GLN:NE2	2.17	0.60
1:A3:80:A:H3'	1:A3:80:A:N3	2.16	0.60
2:A4:14:C:P	6:AD:24:ARG:NH1	2.64	0.60
4:AB:17:LEU:N	4:AB:18:PRO:HD3	2.15	0.60
5:AC:67:TRP:HA	5:AC:67:TRP:HE3	1.66	0.60
7:AE:105:ARG:CD	48:A2:680:C:C1'	2.79	0.60
20:AR:4:LEU:HD11	20:AR:29:THR:HG23	1.82	0.60
33:Ae:7:LEU:O	33:Ae:9:LYS:HG2	2.02	0.60
36:Ah:112:ARG:NH2	48:A2:258:C:C2'	2.63	0.60
46:At:66:ARG:HG2	46:At:68:SER:HB2	1.83	0.60
46:At:90:LEU:HG	46:At:94:ARG:NH1	2.16	0.60
48:A2:90:G:C8	48:A2:92:C:C6	2.90	0.60
48:A2:672:G:H2'	48:A2:673:C:O4'	2.01	0.60
48:A2:1379:G:H2'	48:A2:1380:A:OP2	2.02	0.60
48:A2:2618:U:O2'	48:A2:2673:G:N1	2.22	0.60
48:A2:3710:C:O2'	83:Bw:71:G:C5'	2.46	0.60
49:B1:658:U:H1'	73:BX:17:ARG:NH1	2.15	0.60
49:B1:977:C:H5'	51:BB:66:VAL:HG22	1.84	0.60
49:B1:1451:G:H8	67:BR:44:LYS:HZ3	1.45	0.60
49:B1:1701:C:H5'	84:Bx:48:U:O4	2.01	0.60
52:BC:178:HIS:NE2	52:BC:200:ARG:CD	2.61	0.60
61:BL:20:LYS:O	61:BL:21:LYS:HG2	2.01	0.60
68:BS:60:THR:O	68:BS:64:VAL:HG23	2.01	0.60
79:Bd:38:MET:HE2	79:Bd:42:CYS:C	2.27	0.60
2:A4:95:C:C4'	8:AF:229:GLU:HG2	2.30	0.60
4:AB:173:LEU:HD21	4:AB:342:LYS:CG	2.32	0.60
5:AC:93:GLY:O	5:AC:100:ARG:N	2.34	0.60
9:AG:113:ARG:NH2	48:A2:119:G:N1	2.49	0.60
19:AQ:156:PRO:HG3	29:Aa:48:TYR:HA	1.83	0.60
20:AR:59:SER:HA	48:A2:2613:C:H5'	1.80	0.60
25:AW:80:ARG:NH2	56:BG:128:THR:HG22	2.15	0.60
30:Ab:45:PHE:CE1	48:A2:1797:G:N1	2.64	0.60
35:Ag:93:ARG:HD3	48:A2:4091:G:OP2	2.01	0.60
39:Ak:16:ARG:HG2	39:Ak:61:PRO:CB	2.25	0.60
43:Ao:106:PHE:CD1	83:Bv:19:G:C5	2.90	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:135:G:O2'	48:A2:136:G:O5'	2.19	0.60
48:A2:1263:C:C2	48:A2:1265:G:C6	2.90	0.60
48:A2:2685:G:C2	48:A2:2687:U:OP2	2.55	0.60
48:A2:3727:A:C8	48:A2:3727:A:P	2.95	0.60
48:A2:4291:G:H3'	48:A2:4291:G:N3	2.16	0.60
49:B1:76:U:H5"	56:BG:159:ARG:HH22	1.65	0.60
49:B1:693:A:C2	49:B1:694:G:C2	2.89	0.60
49:B1:1102:G:C2	49:B1:1130:G:N2	2.70	0.60
49:B1:1311:C:OP1	81:Bf:143:LYS:HE3	2.01	0.60
49:B1:1351:G:OP1	52:BC:89:LYS:HE3	2.02	0.60
49:B1:1388:A:H2'	53:BD:205:PRO:HB2	1.84	0.60
49:B1:1752:C:C2	49:B1:1780:G:N2	2.53	0.60
50:BA:212:LYS:O	50:BA:215:GLN:HB3	2.01	0.60
56:BG:102:VAL:HG12	56:BG:102:VAL:O	2.02	0.60
56:BG:113:ILE:O	56:BG:113:ILE:HG13	2.02	0.60
56:BG:213:LEU:O	56:BG:213:LEU:HD23	2.00	0.60
58:BI:150:ASP:OD1	58:BI:154:LYS:NZ	2.35	0.60
59:BJ:107:GLU:HG3	59:BJ:116:LYS:HE3	1.84	0.60
59:BJ:119:LEU:HD11	59:BJ:159:PHE:HE1	1.64	0.60
62:BM:21:VAL:HG13	62:BM:22:LEU:HD12	1.83	0.60
64:BO:83:GLN:O	64:BO:87:GLU:HG2	2.00	0.60
67:BR:5:ARG:HG3	67:BR:5:ARG:NH1	2.16	0.60
67:BR:71:ILE:HG12	67:BR:74:GLN:HG2	1.83	0.60
71:BV:40:ASP:HA	71:BV:47:ASN:ND2	2.16	0.60
80:Be:29:THR:N	80:Be:32:ALA:HB3	2.16	0.60
82:Bg:20:GLN:HG3	82:Bg:68:ASP:HA	1.82	0.60
3:AA:226:ARG:HH11	3:AA:226:ARG:CG	2.15	0.60
5:AC:217:ILE:O	5:AC:218:ILE:C	2.43	0.60
6:AD:23:ARG:NE	48:A2:4242:A:OP2	2.34	0.60
8:AF:159:TYR:CD1	8:AF:166:ARG:CD	2.85	0.60
8:AF:161:LYS:N	8:AF:162:ILE:HD12	2.15	0.60
11:AI:96:VAL:CG1	11:AI:122:PRO:HB3	2.31	0.60
13:AK:41:GLN:HG2	45:Aq:121:LEU:CD1	2.31	0.60
14:AL:55:ILE:HG23	14:AL:76:PHE:HE1	1.65	0.60
18:AP:4:TYR:CE2	18:AP:16:LYS:HD3	2.36	0.60
18:AP:99:GLU:OE2	18:AP:109:VAL:HB	2.01	0.60
21:AS:118:ARG:HD3	48:A2:2015:G:O2'	2.02	0.60
29:Aa:28:HIS:HD2	29:Aa:32:ARG:HG2	1.66	0.60
33:Ae:46:ARG:NH1	48:A2:2260:U:H5'	2.16	0.60
38:Aj:21:ARG:HD3	38:Aj:39:TYR:CD1	2.37	0.60
46:At:38:PHE:HD1	46:At:45:HIS:HE2	1.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:At:84:LYS:HB2	46:At:89:THR:CB	2.31	0.60
47:Au:26:ARG:HB3	48:A2:3945:G:OP1	2.02	0.60
48:A2:1745:C:C4	48:A2:1746:G:C8	2.88	0.60
48:A2:2606:C:H2'	48:A2:2606:C:O2	2.01	0.60
49:B1:284:C:C3'	49:B1:284:C:C6	2.85	0.60
49:B1:560:A:O3'	59:BJ:171:GLY:HA3	1.97	0.60
49:B1:794:A:H2'	49:B1:795:A:O4'	2.02	0.60
49:B1:1256:G:C6	79:Bd:30:LEU:CD2	2.84	0.60
49:B1:1624:U:C4	49:B1:1625:U:C2	2.90	0.60
51:BB:97:LEU:CD1	51:BB:228:LEU:HD11	2.32	0.60
52:BC:253:PRO:CD	72:BW:99:PHE:CD1	2.84	0.60
53:BD:210:ILE:HA	67:BR:39:ALA:HB1	1.82	0.60
54:BE:100:ARG:HH11	54:BE:236:ILE:HG21	1.65	0.60
54:BE:111:VAL:O	54:BE:111:VAL:HG23	2.00	0.60
54:BE:114:ILE:CG1	54:BE:118:GLU:HB2	2.31	0.60
59:BJ:40:LYS:HG3	80:Be:34:ARG:NH1	2.17	0.60
59:BJ:135:ILE:HA	59:BJ:159:PHE:HB3	1.84	0.60
61:BL:11:GLN:HA	61:BL:11:GLN:OE1	2.02	0.60
67:BR:101:ASP:O	67:BR:104:GLU:HB2	2.02	0.60
70:BU:20:ILE:N	70:BU:20:ILE:HD13	2.17	0.60
73:BX:56:GLY:N	80:Be:6:LEU:HD21	2.17	0.60
74:BY:7:ILE:HG12	74:BY:27:VAL:HG22	1.84	0.60
75:BZ:83:LEU:HD22	75:BZ:83:LEU:O	2.01	0.60
77:Bb:19:HIS:HB3	77:Bb:22:LYS:HG2	1.84	0.60
2:A4:22:A:C2	2:A4:23:A:C8	2.90	0.59
3:AA:9:ARG:NH2	48:A2:1610:C:C5	2.71	0.59
4:AB:231:VAL:HG11	4:AB:251:VAL:CG2	2.30	0.59
5:AC:77:PRO:CD	5:AC:91:ALA:CB	2.80	0.59
6:AD:178:LYS:HE2	48:A2:4285:A:C5'	2.32	0.59
6:AD:229:ASN:ND2	6:AD:229:ASN:H	1.93	0.59
7:AE:208:ILE:HG13	7:AE:209:PRO:HD2	1.84	0.59
14:AL:15:HIS:CD2	48:A2:95:G:O3'	2.54	0.59
14:AL:35:ARG:HD2	48:A2:1345:G:OP1	2.02	0.59
24:AV:120:PRO:HD3	25:AW:24:THR:O	2.02	0.59
28:AZ:92:ASP:N	28:AZ:92:ASP:OD1	2.33	0.59
32:Ad:19:GLU:O	32:Ad:20:VAL:HB	2.02	0.59
46:At:66:ARG:NE	46:At:75:THR:O	2.22	0.59
47:Au:24:LYS:O	47:Au:26:ARG:HD3	2.01	0.59
47:Au:196:LYS:NZ	48:A2:3696:G:H5'	2.17	0.59
48:A2:1755:U:C4	48:A2:1756:C:N4	2.70	0.59
48:A2:2583:C:H2'	48:A2:2584:G:H5"	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:167:G:C5'	56:BG:8:PRO:O	2.49	0.59
49:B1:528:A:OP1	59:BJ:122:SER:CB	2.50	0.59
49:B1:1256:G:C5	79:Bd:30:LEU:CD2	2.85	0.59
50:BA:176:TRP:HA	50:BA:202:TYR:CZ	2.33	0.59
56:BG:211:LYS:O	56:BG:215:LYS:HD2	2.02	0.59
58:BI:57:ALA:O	58:BI:58:LEU:C	2.44	0.59
66:BQ:50:LYS:NZ	66:BQ:53:GLU:OE2	2.35	0.59
67:BR:71:ILE:CG1	67:BR:74:GLN:HG2	2.32	0.59
68:BS:92:ASP:OD2	68:BS:94:LYS:CD	2.50	0.59
2:A4:36:C:O2'	6:AD:154:THR:HG21	2.02	0.59
3:AA:5:ILE:CD1	3:AA:232:GLY:HA2	2.32	0.59
3:AA:225:ILE:HD12	3:AA:235:VAL:O	2.01	0.59
7:AE:105:ARG:NH1	48:A2:680:C:C1'	2.65	0.59
8:AF:115:ARG:HB3	19:AQ:4:ASP:HB3	1.85	0.59
8:AF:222:LYS:HE2	8:AF:225:THR:HG23	1.83	0.59
13:AK:81:HIS:CG	13:AK:82:ILE:N	2.68	0.59
16:AN:138:PHE:CD2	48:A2:18:C:H4'	2.36	0.59
17:AO:182:GLU:HA	17:AO:187:LYS:HD2	1.83	0.59
23:AU:34:MET:CE	23:AU:35:ASP:H	2.13	0.59
42:An:20:MET:CE	49:B1:1817:G:O2'	2.49	0.59
48:A2:70:A:C4'	48:A2:71:C:C4	2.85	0.59
48:A2:133:C:C6	48:A2:133:C:C3'	2.85	0.59
48:A2:4088:C:H3'	48:A2:4089:U:C5	2.37	0.59
49:B1:1404:U:H5	70:BU:21:ARG:HH12	1.50	0.59
49:B1:1521:C:OP2	49:B1:1521:C:C6	2.55	0.59
51:BB:182:LYS:HE2	51:BB:231:LEU:HD11	1.81	0.59
54:BE:98:HIS:CE1	54:BE:116:VAL:HA	2.37	0.59
59:BJ:170:PRO:HD2	59:BJ:172:ARG:HG2	1.83	0.59
1:A3:154:G:H5"	9:AG:89:ARG:HD2	1.83	0.59
2:A4:33:U:C5	6:AD:207:TYR:CZ	2.90	0.59
5:AC:183:VAL:HG21	5:AC:226:GLY:HA3	1.83	0.59
5:AC:211:TYR:CE1	5:AC:229:LEU:CD1	2.85	0.59
5:AC:218:ILE:CA	5:AC:229:LEU:HD23	2.24	0.59
9:AG:83:PHE:O	9:AG:84:THR:HG22	2.02	0.59
13:AK:44:ARG:O	13:AK:47:LEU:N	2.34	0.59
15:AM:56:GLN:CD	48:A2:4827:U:C6	2.81	0.59
17:AO:49:ARG:NH2	48:A2:1910:A:N3	2.50	0.59
18:AP:131:ARG:HH21	48:A2:1578:U:H2'	1.67	0.59
31:Ac:22:MET:HE2	31:Ac:85:CYS:C	2.27	0.59
36:Ah:93:ARG:NH2	48:A2:19:G:OP2	2.34	0.59
48:A2:2502:G:C1'	48:A2:2690:G:N2	2.63	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:2566:A:H5'	48:A2:2749:C:O4'	2.02	0.59
48:A2:3935:U:H3'	48:A2:3935:U:P	2.42	0.59
49:B1:560:A:C2'	59:BJ:171:GLY:C	2.74	0.59
49:B1:1105:G:N2	49:B1:1106:C:C2	2.70	0.59
49:B1:1520:G:O2'	65:BP:123:TYR:CE1	2.54	0.59
50:BA:77:ILE:CD1	50:BA:122:LEU:HD11	2.32	0.59
52:BC:90:GLU:C	52:BC:160:LEU:HD11	2.27	0.59
54:BE:151:ASP:OD1	56:BG:212:LEU:CD2	2.50	0.59
55:BF:166:ILE:HG22	75:BZ:71:ALA:CB	2.32	0.59
56:BG:216:ARG:HH11	56:BG:216:ARG:HG3	1.68	0.59
58:BI:124:LYS:O	58:BI:124:LYS:HG3	2.02	0.59
63:BN:30:SER:O	63:BN:31:ASP:C	2.45	0.59
75:BZ:99:LEU:HD23	75:BZ:109:TYR:CZ	2.37	0.59
1:A3:103:A:C8	1:A3:104:A:C8	2.91	0.59
2:A4:10:C:C4	6:AD:20:PHE:CZ	2.91	0.59
4:AB:258:HIS:CB	48:A2:4479:A:O2'	2.50	0.59
5:AC:94:ASN:C	5:AC:96:CYS:H	2.10	0.59
7:AE:219:LYS:HA	48:A2:4898:C:N4	2.16	0.59
13:AK:69:LEU:HG	13:AK:70:GLU:H	1.66	0.59
17:AO:33:VAL:HG13	17:AO:102:LEU:HD13	1.85	0.59
19:AQ:176:ARG:HH11	19:AQ:176:ARG:CG	2.14	0.59
28:AZ:95:VAL:O	28:AZ:110:ALA:CB	2.47	0.59
34:Af:75:THR:O	48:A2:939:G:O2'	2.19	0.59
45:Aq:107:ASP:C	45:Aq:109:ILE:H	2.11	0.59
46:At:38:PHE:O	46:At:38:PHE:HD1	1.86	0.59
48:A2:2398:C:H3'	48:A2:2398:C:O2	2.01	0.59
48:A2:2643:G:H4'	48:A2:2656:G:H4'	1.84	0.59
48:A2:3683:A:H2'	48:A2:3684:U:H6	1.62	0.59
48:A2:3929:G:C2'	83:Bw:19:G:H2'	2.32	0.59
48:A2:4597:A:H5"	48:A2:4598:U:OP2	2.02	0.59
49:B1:1507:G:C6	81:Bf:91:ASN:CG	2.78	0.59
49:B1:1507:G:N2	81:Bf:90:LYS:O	2.35	0.59
49:B1:1622:U:C6	68:BS:124:ARG:HD2	2.37	0.59
49:B1:1775:U:O5'	49:B1:1775:U:H6	1.84	0.59
50:BA:44:ASP:O	67:BR:125:GLY:HA2	2.02	0.59
50:BA:90:PHE:CZ	50:BA:178:LEU:HD22	2.37	0.59
50:BA:111:GLN:HE22	52:BC:64:THR:HG21	1.67	0.59
55:BF:38:TYR:OH	78:Bc:54:ASP:OD2	2.20	0.59
59:BJ:115:PHE:CG	59:BJ:123:ILE:CD1	2.85	0.59
62:BM:61:TYR:OH	62:BM:107:SER:HB2	2.02	0.59
65:BP:51:ARG:HH11	65:BP:51:ARG:CG	2.14	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:BP:97:TYR:HB2	65:BP:102:PHE:CE1	2.38	0.59
67:BR:16:ILE:CG2	67:BR:38:ILE:HD13	2.32	0.59
4:AB:13:SER:HA	48:A2:4551:A:N1	2.18	0.59
7:AE:105:ARG:HE	48:A2:464:A:H61	1.51	0.59
9:AG:106:THR:HB	9:AG:195:HIS:CD2	2.37	0.59
13:AK:93:GLU:HB2	13:AK:98:ILE:HG12	1.84	0.59
15:AM:137:LYS:O	15:AM:140:PRO:HD2	2.02	0.59
45:Aq:31:LYS:CD	45:Aq:32:ILE:H	2.15	0.59
48:A2:1425:C:H2'	48:A2:1426:A:O4'	2.02	0.59
48:A2:4880:C:O2	48:A2:4880:C:O4'	2.18	0.59
49:B1:491:C:OP2	74:BY:104:ARG:CB	2.47	0.59
49:B1:1204:A:OP1	52:BC:117:ARG:HB2	2.02	0.59
49:B1:1284:A:H5'	49:B1:1285:G:H5'	1.82	0.59
49:B1:1600:G:H5"	75:BZ:43:LYS:CD	2.33	0.59
51:BB:181:LEU:CA	51:BB:184:VAL:HG23	2.32	0.59
56:BG:147:LEU:H	56:BG:147:LEU:HD13	1.68	0.59
56:BG:221:LYS:O	56:BG:225:GLN:NE2	2.35	0.59
59:BJ:122:SER:O	59:BJ:125:HIS:N	2.35	0.59
66:BQ:42:ILE:HD12	66:BQ:48:GLN:HG3	1.82	0.59
68:BS:66:ARG:HE	68:BS:70:ILE:CG1	2.15	0.59
1:A3:75:G:O2'	40:Al:29:MET:CE	2.51	0.59
4:AB:8:ALA:CB	24:AV:49:LEU:HD22	2.32	0.59
8:AF:167:ILE:HG21	8:AF:174:LEU:CD2	2.33	0.59
8:AF:182:TYR:HE2	8:AF:203:GLU:HB3	1.66	0.59
13:AK:81:HIS:CE1	13:AK:88:PHE:CD1	2.81	0.59
17:AO:10:ASP:OD1	17:AO:37:ARG:HD2	2.02	0.59
32:Ad:38:PHE:CD1	32:Ad:78:ARG:HB2	2.36	0.59
45:Aq:88:PRO:O	45:Aq:90:ARG:N	2.36	0.59
45:Aq:138:SER:C	45:Aq:140:GLY:N	2.60	0.59
48:A2:190:G:C2	48:A2:244:G:N2	2.70	0.59
48:A2:488:U:O5'	48:A2:488:U:H6	1.85	0.59
48:A2:1594:G:H3'	48:A2:1594:G:N3	2.17	0.59
48:A2:1745:C:C5	48:A2:1746:G:N7	2.70	0.59
48:A2:1888:A:H62	48:A2:1889:A:H61	1.48	0.59
48:A2:4714:U:O2	48:A2:4905:U:H1'	2.02	0.59
49:B1:527:C:H4'	59:BJ:125:HIS:HA	1.84	0.59
49:B1:1016:U:O2	63:BN:61:ALA:HB1	2.02	0.59
52:BC:252:THR:HG1	72:BW:99:PHE:HZ	1.17	0.59
54:BE:149:TYR:CA	56:BG:209:TYR:HD2	2.14	0.59
57:BH:62:ILE:HD11	57:BH:94:PHE:CE2	2.38	0.59
61:BL:14:PRO:O	61:BL:15:THR:OG1	2.16	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:BO:38:ASN:OD1	64:BO:39:ASP:N	2.35	0.59
67:BR:5:ARG:HH11	67:BR:5:ARG:CG	2.14	0.59
72:BW:98:GLN:O	72:BW:99:PHE:O	2.20	0.59
83:Bv:20:U:H3'	83:Bv:20:U:O2	2.02	0.59
2:A4:22:A:C6	2:A4:23:A:N6	2.71	0.59
4:AB:90:VAL:HG13	4:AB:104:THR:HG22	1.84	0.59
5:AC:211:TYR:CE1	5:AC:229:LEU:CA	2.85	0.59
7:AE:105:ARG:NH2	48:A2:678:C:C2	2.68	0.59
19:AQ:78:LYS:CE	48:A2:1413:C:H4'	2.33	0.59
19:AQ:153:GLY:HA3	19:AQ:163:THR:CG2	2.30	0.59
20:AR:3:MET:SD	48:A2:2364:U:H4'	2.42	0.59
25:AW:80:ARG:CD	56:BG:9:ALA:O	2.50	0.59
29:Aa:47:LYS:O	29:Aa:47:LYS:HG3	2.02	0.59
34:Af:99:HIS:CE1	48:A2:4712:G:H5"	2.38	0.59
38:Aj:38:GLY:O	38:Aj:41:ALA:N	2.23	0.59
46:At:73:PRO:HA	46:At:76:SER:HB2	1.85	0.59
47:Au:105:LYS:HZ3	48:A2:4011:C:P	2.23	0.59
48:A2:192:C:O5'	48:A2:192:C:H6	1.84	0.59
48:A2:1389:G:C5	48:A2:1391:G:H5"	2.37	0.59
48:A2:1943:A:H2'	48:A2:1944:C:H5'	1.84	0.59
48:A2:2532:A:OP1	48:A2:2532:A:H2	1.84	0.59
49:B1:168:C:H4'	56:BG:131:ARG:CG	2.32	0.59
49:B1:317:C:O2'	49:B1:318:A:H5'	2.01	0.59
49:B1:800:U:H2'	49:B1:801:U:O4'	2.02	0.59
49:B1:1105:G:H5"	77:Bb:68:GLY:C	2.28	0.59
49:B1:1274:G:H22	60:BK:29:MET:CB	2.13	0.59
51:BB:137:LEU:HD11	51:BB:172:MET:HB3	1.84	0.59
54:BE:85:GLY:CA	54:BE:88:ASP:OD2	2.51	0.59
54:BE:246:LEU:HB3	54:BE:250:GLU:HB2	1.84	0.59
56:BG:226:GLU:O	56:BG:230:LYS:HE2	2.02	0.59
68:BS:66:ARG:HE	68:BS:70:ILE:HG13	1.68	0.59
75:BZ:102:LYS:O	75:BZ:102:LYS:HG3	2.02	0.59
6:AD:23:ARG:HH21	48:A2:4242:A:P	2.26	0.59
8:AF:166:ARG:NH1	8:AF:209:TRP:CB	2.66	0.59
9:AG:36:PRO:HA	48:A2:4097:A:C2	2.37	0.59
10:AH:7:ASN:HB3	10:AH:58:ASP:CA	2.31	0.59
20:AR:131:VAL:CG1	20:AR:132:PHE:CE1	2.86	0.59
28:AZ:36:ARG:CG	28:AZ:36:ARG:HH11	2.16	0.59
34:Af:23:GLU:HG2	48:A2:433:G:H1'	1.82	0.59
36:Ah:24:LEU:HB3	36:Ah:54:ILE:CD1	2.32	0.59
38:Aj:39:TYR:N	38:Aj:40:PRO:CD	2.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:Ap:19:GLY:HA2	48:A2:2853:U:O2	2.03	0.59
46:At:17:LEU:C	46:At:18:ILE:HD13	2.28	0.59
48:A2:900:U:C2'	48:A2:901:U:O4'	2.50	0.59
49:B1:1535:U:O4	55:BF:159:ARG:HG3	2.02	0.59
49:B1:1543:U:H4'	66:BQ:43:GLU:HG2	1.83	0.59
64:BO:116:LEU:HD13	76:Ba:45:VAL:HG22	1.84	0.59
65:BP:130:ARG:H	65:BP:131:PRO:CD	2.16	0.59
66:BQ:102:GLU:HG3	82:Bg:57:ARG:HA	1.83	0.59
68:BS:18:THR:HG22	68:BS:18:THR:O	2.02	0.59
68:BS:72:GLN:HG3	68:BS:73:ASN:N	2.18	0.59
69:BT:39:LEU:O	69:BT:39:LEU:HD23	2.03	0.59
1:A3:26:C:O2'	5:AC:54:VAL:O	2.21	0.59
3:AA:31:ALA:HB2	48:A2:4053:U:H5'	1.85	0.59
4:AB:280:ILE:O	4:AB:281:ASN:HB2	2.02	0.59
4:AB:294:LYS:HA	4:AB:297:LYS:O	2.03	0.59
5:AC:132:ALA:HA	5:AC:151:PRO:HG2	1.84	0.59
9:AG:87:LEU:HD21	9:AG:91:THR:HG22	1.84	0.59
13:AK:25:PRO:HD2	13:AK:92:LYS:CB	2.33	0.59
13:AK:55:MET:CE	13:AK:61:MET:CE	2.69	0.59
15:AM:101:LYS:HG3	15:AM:104:MET:CE	2.33	0.59
28:AZ:5:MET:HE1	28:AZ:80:LEU:HD11	1.84	0.59
45:Aq:140:GLY:O	45:Aq:141:CYS:HB2	2.01	0.59
47:Au:177:ASP:O	47:Au:180:VAL:HG12	2.03	0.59
48:A2:212:C:OP2	48:A2:212:C:C6	2.56	0.59
48:A2:217:C:C2	48:A2:233:G:N2	2.71	0.59
48:A2:681:A:N6	48:A2:682:U:C4	2.71	0.59
48:A2:1741:G:N2	48:A2:1742:G:C4	2.70	0.59
48:A2:1743:G:C2	48:A2:1744:C:C2	2.91	0.59
49:B1:984:C:H1'	64:BO:138:ASP:HB2	1.85	0.59
49:B1:1377:U:C4	50:BA:102:ARG:NE	2.71	0.59
49:B1:1389:C:O2	53:BD:162:ASP:HB2	2.03	0.59
50:BA:176:TRP:HB2	50:BA:202:TYR:CD2	2.37	0.59
54:BE:252:ARG:HD3	59:BJ:72:PHE:CE2	2.38	0.59
56:BG:64:LYS:CB	56:BG:97:VAL:HG11	2.33	0.59
64:BO:78:ALA:HB1	64:BO:118:ALA:HB3	1.80	0.59
75:BZ:76:ARG:NE	75:BZ:76:ARG:O	2.36	0.59
82:Bg:45:LEU:HD22	82:Bg:52:TYR:CD2	2.38	0.59
83:Bw:40:C:H2'	83:Bw:41:C:H5	1.67	0.59
4:AB:226:LYS:HB3	4:AB:229:LYS:HE3	1.84	0.59
4:AB:254:ILE:O	4:AB:266:VAL:HG11	2.03	0.59
7:AE:95:PRO:O	7:AE:96:VAL:HG23	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AK:32:ALA:H	13:AK:85:ASN:HB2	1.65	0.59
34:Af:59:THR:HG23	34:Af:60:PRO:N	2.18	0.59
34:Af:75:THR:HG22	48:A2:940:C:H4'	1.85	0.59
48:A2:48:G:C2'	48:A2:49:U:OP2	2.51	0.59
48:A2:968:C:OP1	48:A2:969:U:OP1	2.21	0.59
48:A2:1192:U:H3'	48:A2:1193:C:H5"	1.85	0.59
49:B1:797:C:C1'	49:B1:798:G:OP2	2.46	0.59
49:B1:1256:G:N2	79:Bd:30:LEU:HB3	2.18	0.59
53:BD:142:LEU:HD12	53:BD:150:MET:HG3	1.84	0.59
59:BJ:54:ARG:CD	59:BJ:98:LEU:CD2	2.77	0.59
65:BP:18:ARG:HH12	65:BP:38:SER:N	2.01	0.59
2:A4:3:C:O5'	2:A4:3:C:H6	1.86	0.58
5:AC:94:ASN:OD1	5:AC:100:ARG:O	2.20	0.58
5:AC:137:VAL:CG1	5:AC:144:ILE:HD11	2.32	0.58
5:AC:218:ILE:HA	5:AC:229:LEU:CD2	2.23	0.58
6:AD:22:ARG:NH2	6:AD:27:LYS:HD3	2.16	0.58
6:AD:230:SER:O	6:AD:231:VAL:HB	2.02	0.58
8:AF:184:ILE:C	8:AF:186:CYS:N	2.60	0.58
13:AK:19:GLN:C	13:AK:21:LEU:N	2.56	0.58
14:AL:128:PRO:CD	14:AL:136:LYS:HD3	2.33	0.58
19:AQ:164:LYS:CG	48:A2:1479:A:H1'	2.33	0.58
20:AR:119:MET:HE3	20:AR:149:LYS:HD2	1.84	0.58
21:AS:96:GLU:HB2	21:AS:139:ARG:HG2	1.85	0.58
32:Ad:57:MET:HE1	32:Ad:90:ARG:HB2	1.82	0.58
45:Aq:31:LYS:CG	45:Aq:32:ILE:H	2.14	0.58
47:Au:160:LYS:HG2	47:Au:161:LYS:N	2.05	0.58
48:A2:214:C:C4'	48:A2:215:A:OP1	2.47	0.58
48:A2:1949:G:C2	48:A2:2001:U:N3	2.71	0.58
49:B1:368:U:H3'	49:B1:369:C:H5	1.67	0.58
49:B1:536:A:O3'	80:Be:47:PRO:HG3	2.03	0.58
49:B1:928:G:H4'	77:Bb:51:GLN:O	2.02	0.58
49:B1:1018:U:OP2	63:BN:62:GLN:NE2	2.36	0.58
49:B1:1567:G:O2'	69:BT:38:LYS:HG3	2.03	0.58
49:B1:1665:G:N2	69:BT:87:VAL:CG1	2.66	0.58
49:B1:1738:C:H6	49:B1:1738:C:O5'	1.86	0.58
53:BD:72:VAL:CG2	60:BK:20:VAL:CG1	2.81	0.58
66:BQ:13:PHE:HA	66:BQ:21:ALA:O	2.02	0.58
66:BQ:33:LYS:HB3	66:BQ:69:ARG:CB	2.25	0.58
68:BS:47:LYS:N	68:BS:47:LYS:HZ2	2.00	0.58
75:BZ:66:LYS:O	75:BZ:67:LEU:HD12	2.03	0.58
3:AA:30:ARG:HH21	3:AA:63:PHE:HB3	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:4:ALA:HB2	48:A2:659:G:N2	2.18	0.58
8:AF:76:ARG:NH2	48:A2:719:U:OP2	2.36	0.58
11:AI:116:ARG:CA	48:A2:4157:G:N2	2.66	0.58
17:AO:176:ARG:HD3	48:A2:4730:G:H5'	1.86	0.58
18:AP:60:PHE:CE1	18:AP:82:ARG:HB3	2.37	0.58
19:AQ:75:ARG:HH11	19:AQ:75:ARG:CG	2.14	0.58
19:AQ:164:LYS:HA	48:A2:1479:A:O4'	2.02	0.58
21:AS:142:VAL:CG1	21:AS:146:HIS:CE1	2.86	0.58
33:Ae:6:PRO:HG2	33:Ae:9:LYS:HG3	1.85	0.58
47:Au:74:CYS:CB	47:Au:84:HIS:CE1	2.85	0.58
48:A2:31:U:C3'	48:A2:32:G:C8	2.85	0.58
48:A2:1283:G:H2'	48:A2:1284:C:C5	2.38	0.58
49:B1:227:U:H1'	49:B1:228:C:C5'	2.33	0.58
49:B1:606:G:C5'	80:Be:56:ASN:HB3	2.34	0.58
49:B1:802:A:P	49:B1:802:A:H8	2.25	0.58
49:B1:823:U:H1'	59:BJ:140:GLN:OE1	2.03	0.58
49:B1:1756:C:H2'	49:B1:1757:G:C8	2.37	0.58
50:BA:204:TYR:CG	50:BA:205:ARG:N	2.71	0.58
51:BB:75:GLN:HA	51:BB:75:GLN:HE21	1.68	0.58
56:BG:101:ILE:CG2	56:BG:102:VAL:N	2.65	0.58
65:BP:52:LYS:HD3	65:BP:53:GLN:H	1.68	0.58
65:BP:85:ILE:CG2	65:BP:112:ILE:HA	2.29	0.58
68:BS:63:GLU:HA	68:BS:63:GLU:OE1	2.01	0.58
79:Bd:36:LEU:HD21	79:Bd:43:PHE:HD2	1.68	0.58
2:A4:3:C:OP2	2:A4:3:C:C6	2.56	0.58
7:AE:136:HIS:CE1	48:A2:701:G:C2'	2.86	0.58
8:AF:24:ASN:HA	8:AF:27:GLU:HG2	1.85	0.58
8:AF:104:LYS:HE2	48:A2:1708:U:OP1	2.04	0.58
10:AH:1:MET:HE3	10:AH:3:THR:CG2	2.32	0.58
13:AK:55:MET:SD	13:AK:61:MET:HE2	2.43	0.58
14:AL:16:LYS:CD	48:A2:47:A:H5"	2.33	0.58
14:AL:16:LYS:HD2	48:A2:47:A:H5"	1.84	0.58
19:AQ:156:PRO:HG3	29:Aa:48:TYR:CA	2.33	0.58
20:AR:28:GLU:OE1	20:AR:28:GLU:N	2.36	0.58
28:AZ:33:THR:O	28:AZ:33:THR:HG22	2.03	0.58
31:Ac:91:VAL:HG23	48:A2:2652:G:HO2'	1.68	0.58
34:Af:54:LYS:HE2	48:A2:437:G:H4'	1.84	0.58
45:Aq:22:VAL:N	45:Aq:46:ILE:HG23	2.16	0.58
46:At:47:LYS:HE3	46:At:102:TYR:CD2	2.38	0.58
47:Au:203:ALA:HB1	47:Au:215:ARG:NE	2.18	0.58
48:A2:168:U:H2'	48:A2:169:C:O4'	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:1224:C:H3'	48:A2:1225:G:N2	2.18	0.58
49:B1:85:A:OP1	74:BY:122:LYS:NZ	2.25	0.58
49:B1:181:A:C8	49:B1:182:C:C4	2.91	0.58
49:B1:222:U:H1'	58:BI:71:CYS:SG	2.42	0.58
49:B1:525:A:H2'	49:B1:526:A:C1'	2.34	0.58
49:B1:839:C:H2'	49:B1:840:C:H5"	1.85	0.58
49:B1:1417:C:C5'	69:BT:2:PRO:N	2.63	0.58
49:B1:1513:C:H5"	79:Bd:9:SER:H	1.68	0.58
49:B1:1737:G:H2'	49:B1:1738:C:C6	2.38	0.58
50:BA:41:ARG:CB	50:BA:47:TYR:CE1	2.86	0.58
51:BB:180:ASP:OD1	51:BB:182:LYS:HB2	2.02	0.58
61:BL:30:LYS:HD2	61:BL:33:LEU:CD2	2.16	0.58
61:BL:35:ARG:HG2	61:BL:36:TYR:N	2.18	0.58
65:BP:52:LYS:HG2	65:BP:83:MET:CE	2.27	0.58
68:BS:45:LEU:CA	68:BS:48:ALA:HB3	2.31	0.58
79:Bd:21:CYS:N	79:Bd:31:ILE:HD13	2.18	0.58
79:Bd:38:MET:HG3	79:Bd:43:PHE:CD2	2.37	0.58
83:Bw:39:U:H2'	83:Bw:40:C:O4'	2.02	0.58
3:AA:196:TRP:N	3:AA:197:PRO:HD3	2.18	0.58
5:AC:44:LEU:CD2	48:A2:1356:A:H5"	2.28	0.58
8:AF:70:ARG:NH1	48:A2:1191:G:H4'	2.18	0.58
9:AG:148:GLU:O	9:AG:177:MET:HE2	2.03	0.58
10:AH:41:ILE:HG21	10:AH:73:ILE:HD11	1.85	0.58
10:AH:96:TYR:HA	10:AH:177:ASP:OD1	2.03	0.58
17:AO:48:TYR:CD2	17:AO:51:LYS:HE2	2.38	0.58
20:AR:24:LEU:HD12	20:AR:51:ILE:CD1	2.34	0.58
20:AR:132:PHE:CD2	20:AR:138:LEU:HA	2.38	0.58
21:AS:111:ARG:HD2	48:A2:2042:U:O2	2.02	0.58
22:AT:118:GLU:OE2	22:AT:122:LYS:HD3	2.03	0.58
25:AW:102:LYS:HG2	25:AW:105:ARG:NH2	1.77	0.58
29:Aa:116:LYS:O	29:Aa:116:LYS:NZ	2.34	0.58
35:Ag:57:ARG:HG3	35:Ag:59:VAL:HG13	1.85	0.58
47:Au:32:VAL:HA	47:Au:207:LYS:O	2.03	0.58
47:Au:38:LEU:HD13	47:Au:159:MET:CE	2.34	0.58
47:Au:60:ARG:HB3	47:Au:61:PRO:CD	2.33	0.58
48:A2:131:C:C6	48:A2:131:C:C4'	2.86	0.58
48:A2:206:U:O2	48:A2:230:U:H3'	2.02	0.58
48:A2:1162:U:O2'	48:A2:1163:C:OP1	2.15	0.58
48:A2:1258:G:C1'	48:A2:1259:C:C5	2.84	0.58
48:A2:1320:A:H62	48:A2:2325:C:H5	1.51	0.58
48:A2:1341:G:N3	48:A2:1343:G:O6	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:3738:C:H2'	48:A2:3739:U:O4'	2.03	0.58
49:B1:285:U:O2'	49:B1:286:U:OP2	2.22	0.58
49:B1:799:U:OP1	57:BH:110:THR:OG1	2.21	0.58
49:B1:898:U:H2'	49:B1:899:U:H6	1.68	0.58
49:B1:1404:U:C5	70:BU:88:LEU:CD2	2.86	0.58
49:B1:1649:U:OP1	66:BQ:128:GLU:N	2.30	0.58
49:B1:1678:A:H2'	49:B1:1679:A:C5'	2.33	0.58
50:BA:111:GLN:N	50:BA:116:PHE:CE2	2.71	0.58
51:BB:75:GLN:HE21	51:BB:75:GLN:CA	2.16	0.58
51:BB:118:GLN:C	51:BB:119:THR:HG1	2.04	0.58
53:BD:76:ARG:CZ	60:BK:66:HIS:CE1	2.86	0.58
56:BG:23:LYS:HG2	56:BG:41:LEU:HD12	1.84	0.58
56:BG:101:ILE:CG2	56:BG:102:VAL:H	2.16	0.58
65:BP:49:LEU:H	65:BP:50:ARG:CG	1.98	0.58
68:BS:55:ARG:HB2	68:BS:58:GLU:HG3	1.85	0.58
72:BW:94:LEU:HD21	72:BW:101:PHE:O	2.03	0.58
76:Ba:15:ARG:HD3	76:Ba:15:ARG:H	1.67	0.58
1:A3:102:G:H5"	38:Aj:39:TYR:CZ	2.34	0.58
1:A3:126:C:O2	1:A3:126:C:C3'	2.52	0.58
3:AA:30:ARG:HG2	3:AA:74:GLU:OE2	2.03	0.58
3:AA:67:TYR:CZ	48:A2:4056:G:O2'	2.33	0.58
5:AC:210:ILE:HG22	5:AC:232:VAL:HG22	1.85	0.58
6:AD:51:MET:HB2	6:AD:144:CYS:SG	2.43	0.58
7:AE:100:LYS:CB	48:A2:678:C:H4'	2.33	0.58
7:AE:147:GLY:N	7:AE:203:ILE:CG2	2.66	0.58
7:AE:240:TYR:CE2	7:AE:243:THR:HG22	2.38	0.58
16:AN:95:ALA:O	48:A2:294:A:H5'	2.04	0.58
16:AN:179:LYS:HD3	48:A2:292:G:OP1	2.03	0.58
20:AR:70:ARG:HH12	48:A2:2790:G:P	2.27	0.58
32:Ad:38:PHE:HE1	48:A2:4598:U:C5	2.18	0.58
39:Ak:14:THR:O	39:Ak:17:ARG:HB2	2.03	0.58
43:Ao:44:LYS:CD	43:Ao:52:THR:HB	2.33	0.58
45:Aq:109:ILE:HG21	45:Aq:129:ILE:HG23	1.84	0.58
48:A2:227:G:N2	48:A2:234:G:C2	2.71	0.58
48:A2:1266:G:H3'	48:A2:1266:G:C8	2.38	0.58
48:A2:1500:A:H4'	48:A2:1501:C:C5'	2.34	0.58
48:A2:2570:A:H2'	48:A2:2571:U:C6	2.38	0.58
49:B1:547:G:H4'	49:B1:548:C:OP2	2.02	0.58
49:B1:591:U:O4'	49:B1:591:U:O2	2.19	0.58
49:B1:689:U:C6	49:B1:742:U:O4	2.55	0.58
49:B1:737:G:H8	49:B1:737:G:O5'	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:931:C:OP1	51:BB:159:GLN:HB2	2.04	0.58
49:B1:1444:U:O2'	49:B1:1445:U:C5'	2.50	0.58
49:B1:1603:G:O6	68:BS:25:LYS:HG3	2.02	0.58
50:BA:39:TYR:HE2	67:BR:108:LEU:CD1	2.15	0.58
51:BB:35:ALA:N	51:BB:42:ARG:O	2.25	0.58
51:BB:115:LYS:HG2	51:BB:116:LYS:N	2.17	0.58
51:BB:171:ILE:O	51:BB:174:ARG:HG3	2.02	0.58
54:BE:112:HIS:O	54:BE:114:ILE:N	2.36	0.58
58:BI:158:ILE:HD12	58:BI:162:LEU:HB3	1.85	0.58
60:BK:57:TYR:HA	60:BK:78:TYR:CD2	2.38	0.58
64:BO:42:VAL:CG1	64:BO:81:VAL:HG21	2.33	0.58
66:BQ:44:PRO:HG2	66:BQ:47:LEU:HG	1.85	0.58
67:BR:14:ARG:O	67:BR:17:ILE:HG23	2.04	0.58
79:Bd:19:ARG:NH1	79:Bd:33:LYS:HZ2	2.00	0.58
3:AA:227:ARG:NH1	3:AA:227:ARG:HG3	2.19	0.58
4:AB:49:TYR:CE1	4:AB:344:VAL:HG22	2.38	0.58
4:AB:247:GLY:HA2	48:A2:2817:G:H5"	1.86	0.58
5:AC:116:ASN:HA	48:A2:1341:G:OP1	2.03	0.58
5:AC:140:LYS:O	46:At:15:SER:HB3	2.04	0.58
5:AC:211:TYR:CD1	5:AC:229:LEU:HD13	2.37	0.58
6:AD:286:SER:HB2	48:A2:1163:C:C5'	2.20	0.58
7:AE:111:LYS:HE3	48:A2:682:U:P	2.32	0.58
7:AE:203:ILE:O	7:AE:203:ILE:HG12	2.03	0.58
10:AH:5:LEU:CG	10:AH:60:TRP:HZ3	2.06	0.58
14:AL:16:LYS:HG2	14:AL:21:ARG:NH2	2.18	0.58
18:AP:19:GLY:HA3	18:AP:22:LEU:HD21	1.84	0.58
19:AQ:101:CYS:HA	19:AQ:121:LEU:O	2.04	0.58
34:Af:40:GLU:OE2	34:Af:109:ARG:NH2	2.37	0.58
37:Ai:69:ALA:O	37:Ai:73:ILE:HG12	2.04	0.58
48:A2:677:G:C5'	48:A2:677:G:C8	2.85	0.58
48:A2:695:C:H3'	48:A2:696:G:H8	1.68	0.58
48:A2:1225:G:N2	48:A2:1225:G:OP2	2.37	0.58
48:A2:1259:C:C2'	48:A2:1260:G:H8	2.16	0.58
48:A2:4731:G:H8	48:A2:4731:G:O5'	1.85	0.58
49:B1:102:A:OP1	58:BI:19:LYS:HD3	2.04	0.58
49:B1:103:A:C5'	58:BI:12:ARG:HH12	2.17	0.58
49:B1:294:U:O4	61:BL:65:ASN:CB	2.48	0.58
49:B1:401:A:O2'	58:BI:14:THR:HG23	2.04	0.58
49:B1:434:G:H5"	58:BI:23:LYS:HD3	1.83	0.58
49:B1:1499:U:H4'	53:BD:176:LEU:HD13	1.85	0.58
49:B1:1539:U:OP1	69:BT:43:LYS:HB3	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1751:C:C2	49:B1:1782:G:N2	2.72	0.58
51:BB:79:VAL:CB	51:BB:81:PHE:CE1	2.86	0.58
54:BE:71:LYS:HG2	54:BE:91:SER:O	2.04	0.58
55:BF:171:GLU:OE2	75:BZ:72:VAL:HG23	2.03	0.58
59:BJ:29:LEU:CD2	59:BJ:40:LYS:HE3	2.32	0.58
61:BL:151:THR:O	61:BL:154:GLN:HG3	2.04	0.58
65:BP:30:TYR:C	65:BP:33:LEU:HG	2.28	0.58
67:BR:119:VAL:C	67:BR:120:THR:CG2	2.76	0.58
72:BW:14:ILE:HD11	72:BW:27:ILE:HD11	1.84	0.58
79:Bd:31:ILE:HG23	79:Bd:38:MET:H	1.68	0.58
2:A4:47:G:C2'	6:AD:223:PHE:CE1	2.86	0.58
5:AC:222:ARG:O	5:AC:222:ARG:HG3	2.03	0.58
6:AD:14:LYS:HZ1	48:A2:1724:A:H4'	1.68	0.58
19:AQ:12:LYS:HD2	19:AQ:14:ARG:HD2	1.86	0.58
20:AR:23:TRP:HE3	20:AR:24:LEU:H	1.52	0.58
20:AR:60:ARG:NH2	20:AR:63:CYS:SG	2.76	0.58
22:AT:57:TYR:OH	22:AT:87:LYS:HD3	2.04	0.58
23:AU:99:TRP:HA	23:AU:99:TRP:CE3	2.39	0.58
28:AZ:36:ARG:NH1	28:AZ:38:TYR:OH	2.36	0.58
29:Aa:61:TYR:CG	48:A2:288:G:C2	2.91	0.58
30:Ab:27:GLN:CG	48:A2:1444:A:O4'	2.50	0.58
31:Ac:20:LEU:HD13	63:BN:43:LYS:O	2.04	0.58
34:Af:33:VAL:HG21	34:Af:42:TYR:CE2	2.38	0.58
48:A2:1341:G:N2	48:A2:1343:G:N3	2.51	0.58
48:A2:1976:G:H2'	48:A2:1977:C:O4'	2.04	0.58
48:A2:3731:A:C2	49:B1:1709:G:N2	2.72	0.58
48:A2:3935:U:OP2	48:A2:3935:U:H2'	2.04	0.58
49:B1:168:C:O2'	56:BG:133:LEU:CB	2.52	0.58
49:B1:496:C:H5'	54:BE:29:PRO:HA	1.84	0.58
49:B1:839:C:N1	49:B1:841:G:H1'	2.18	0.58
49:B1:1315:U:H4'	60:BK:1:MET:CB	2.34	0.58
50:BA:208:GLU:HB2	50:BA:211:GLU:OE1	2.03	0.58
51:BB:77:ASP:C	51:BB:78:GLU:HG2	2.29	0.58
56:BG:7:PHE:CD1	56:BG:124:LEU:HD12	2.39	0.58
56:BG:62:PRO:HG2	56:BG:83:CYS:SG	2.44	0.58
58:BI:42:ARG:HE	58:BI:44:HIS:CE1	2.21	0.58
63:BN:26:LEU:HD11	63:BN:28:LEU:HB3	1.85	0.58
65:BP:30:TYR:O	65:BP:33:LEU:HG	2.03	0.58
65:BP:69:PRO:C	65:BP:71:GLU:H	2.09	0.58
68:BS:15:VAL:O	68:BS:19:ASN:HB2	2.04	0.58
72:BW:101:PHE:CE1	72:BW:112:ASP:OD2	2.56	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A4:36:C:H4'	6:AD:154:THR:HG22	1.84	0.58
5:AC:77:PRO:N	5:AC:91:ALA:CB	2.67	0.58
5:AC:211:TYR:CE1	5:AC:229:LEU:CD2	2.85	0.58
6:AD:219:TYR:CE2	6:AD:227:ILE:HG21	2.39	0.58
7:AE:165:LEU:CD2	7:AE:203:ILE:HD12	2.34	0.58
10:AH:96:TYR:HA	10:AH:177:ASP:CG	2.28	0.58
15:AM:4:ARG:NH1	48:A2:4726:A:H62	2.02	0.58
15:AM:41:PRO:HB3	15:AM:70:GLN:HE21	1.58	0.58
18:AP:122:ALA:HB1	18:AP:123:PRO:HD2	1.85	0.58
20:AR:26:PRO:O	20:AR:29:THR:OG1	2.18	0.58
24:AV:50:ASN:O	48:A2:3813:C:H4'	2.04	0.58
26:AX:90:ILE:HG22	26:AX:147:LEU:HD13	1.85	0.58
29:Aa:54:GLY:HA2	48:A2:4303:C:OP1	2.04	0.58
35:Ag:8:ARG:HB3	48:A2:2509:U:C5	2.37	0.58
38:Aj:21:ARG:CD	38:Aj:39:TYR:CD1	2.87	0.58
40:Al:36:ARG:NH1	48:A2:407:G:O5'	2.18	0.58
48:A2:243:G:H2'	48:A2:244:G:C8	2.39	0.58
48:A2:905:G:C4	48:A2:905:G:C3'	2.86	0.58
48:A2:1166:C:H3'	48:A2:1166:C:C6	2.36	0.58
48:A2:1319:G:C5	48:A2:2325:C:C4	2.91	0.58
48:A2:1945:A:H8	48:A2:1945:A:O5'	1.87	0.58
48:A2:1989:U:C4	48:A2:1991:A:OP2	2.57	0.58
48:A2:2640:U:C4	61:BL:158:PHE:CE2	2.91	0.58
48:A2:4266:A:H3'	48:A2:4267:G:H5"	1.85	0.58
49:B1:502:C:P	54:BE:66:MET:SD	3.01	0.58
49:B1:924:G:H21	63:BN:87:ASP:HB2	1.68	0.58
51:BB:32:ASP:OD2	51:BB:34:LYS:HE2	2.02	0.58
57:BH:61:ILE:HG22	57:BH:93:VAL:HB	1.86	0.58
58:BI:193:LYS:HE2	61:BL:11:GLN:NE2	2.19	0.58
63:BN:124:ARG:CG	63:BN:127:ARG:NH2	2.50	0.58
68:BS:66:ARG:HH11	68:BS:66:ARG:HG2	1.67	0.58
72:BW:100:GLY:CA	72:BW:101:PHE:CD2	2.85	0.58
5:AC:318:PRO:HB3	5:AC:325:MET:SD	2.44	0.58
6:AD:4:VAL:HG21	48:A2:1737:C:C1'	2.30	0.58
7:AE:207:LYS:HE2	7:AE:208:ILE:H	1.69	0.58
13:AK:39:GLN:HA	13:AK:42:GLN:CB	2.34	0.58
13:AK:39:GLN:HA	13:AK:42:GLN:HB3	1.86	0.58
14:AL:103:ARG:HG2	37:Ai:25:ARG:HH22	1.68	0.58
22:AT:125:TRP:O	22:AT:127:GLN:N	2.31	0.58
29:Aa:73:VAL:HB	29:Aa:108:TYR:CB	2.34	0.58
30:Ab:50:ASN:CA	48:A2:1795:U:H1'	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Af:34:TYR:CB	48:A2:1900:G:N2	2.67	0.58
47:Au:93:LEU:CD2	47:Au:99:LEU:HG	2.33	0.58
48:A2:307:U:C3'	48:A2:308:G:H5'	2.33	0.58
48:A2:1294:G:C6	48:A2:1295:A:C4	2.91	0.58
48:A2:1895:C:H5"	48:A2:1896:C:H2'	1.86	0.58
48:A2:1963:G:OP2	48:A2:1963:G:C8	2.57	0.58
48:A2:1991:A:C2	48:A2:1992:C:C1'	2.86	0.58
48:A2:2853:U:C2	48:A2:3663:A:N1	2.71	0.58
48:A2:3875:G:C5'	48:A2:3876:A:OP2	2.45	0.58
48:A2:3880:C:O5'	48:A2:3880:C:H6	1.86	0.58
48:A2:4873:G:C6	48:A2:4874:G:N7	2.72	0.58
49:B1:331:C:C3'	49:B1:332:G:H5"	2.33	0.58
49:B1:1139:C:O2'	49:B1:1140:G:C8	2.57	0.58
49:B1:1507:G:C2	81:Bf:90:LYS:O	2.57	0.58
49:B1:1778:C:H3'	49:B1:1779:G:H8	1.68	0.58
50:BA:176:TRP:HA	50:BA:202:TYR:HE2	1.62	0.58
53:BD:17:PHE:CE2	53:BD:77:PHE:CD1	2.91	0.58
53:BD:156:LEU:HD23	53:BD:189:MET:HE1	1.85	0.58
54:BE:95:THR:HG21	54:BE:97:GLU:CG	2.32	0.58
56:BG:212:LEU:O	56:BG:215:LYS:HB2	2.03	0.58
57:BH:43:LEU:HD11	57:BH:72:PHE:CZ	2.39	0.58
58:BI:166:PHE:C	58:BI:168:GLN:H	2.11	0.58
59:BJ:87:LEU:HD21	59:BJ:100:LEU:CD1	2.18	0.58
73:BX:40:PRO:O	73:BX:41:PHE:HB2	2.02	0.58
73:BX:74:LEU:HD11	73:BX:81:ILE:HD11	1.85	0.58
79:Bd:20:SER:O	79:Bd:31:ILE:HD13	2.02	0.58
1:A3:108:A:H2'	1:A3:109:C:OP1	2.01	0.58
3:AA:96:LEU:O	44:Ap:87:LYS:HD2	2.04	0.58
4:AB:105:VAL:HG11	4:AB:150:PHE:CE2	2.38	0.58
4:AB:391:PRO:CD	25:AW:63:GLN:NE2	2.66	0.58
5:AC:100:ARG:HH22	48:A2:1632:A:H2	1.50	0.58
5:AC:221:PHE:N	5:AC:221:PHE:CD1	2.72	0.58
5:AC:301:ALA:HB1	19:AQ:132:LYS:HZ1	1.69	0.58
5:AC:318:PRO:HB2	8:AF:155:TYR:HB3	1.84	0.58
17:AO:49:ARG:NH2	48:A2:1910:A:O2'	2.37	0.58
20:AR:169:ALA:CA	20:AR:172:ARG:CG	2.81	0.58
21:AS:7:LEU:HD22	21:AS:7:LEU:N	2.02	0.58
36:Ah:9:LEU:O	36:Ah:10:ARG:C	2.46	0.58
44:Ap:2:ALA:N	48:A2:1551:U:C4	2.71	0.58
48:A2:133:C:N4	48:A2:135:G:C4	2.72	0.58
48:A2:2590:A:C5'	48:A2:2667:G:H4'	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:65:C:C6	56:BG:174:PRO:HB3	2.39	0.58
49:B1:496:C:H5"	49:B1:496:C:O2	2.04	0.58
49:B1:1331:C:OP1	49:B1:1490:G:OP2	2.22	0.58
49:B1:1404:U:H5	70:BU:21:ARG:NH1	2.01	0.58
49:B1:1530:U:H4'	69:BT:86:GLY:O	2.04	0.58
58:BI:171:LEU:HD21	58:BI:189:VAL:CG1	2.34	0.58
73:BX:135:LYS:O	73:BX:137:LYS:HE2	2.04	0.58
3:AA:247:ARG:CG	49:B1:1069:U:C4'	2.77	0.57
4:AB:391:PRO:HD2	25:AW:63:GLN:NE2	2.18	0.57
5:AC:193:LYS:HD3	48:A2:346:G:C8	2.39	0.57
5:AC:212:ASN:ND2	5:AC:256:ALA:N	2.52	0.57
6:AD:60:ILE:HG12	6:AD:80:ALA:HB2	1.86	0.57
7:AE:209:PRO:HD3	7:AE:253:VAL:HG22	1.86	0.57
7:AE:219:LYS:CD	48:A2:4898:C:C5	2.87	0.57
9:AG:105:GLU:OE2	9:AG:113:ARG:HD3	2.04	0.57
13:AK:1:MET:CB	13:AK:2:PRO:CD	2.79	0.57
13:AK:54:LEU:HA	48:A2:1979:A:OP2	2.04	0.57
13:AK:59:THR:O	48:A2:1942:G:H5"	2.04	0.57
14:AL:103:ARG:CA	37:Ai:25:ARG:HH22	2.14	0.57
23:AU:52:LYS:HB3	23:AU:52:LYS:HZ3	1.68	0.57
24:AV:45:ILE:HD13	24:AV:53:PRO:HB3	1.77	0.57
28:AZ:94:THR:O	28:AZ:95:VAL:HG23	2.04	0.57
29:Aa:8:THR:HG21	48:A2:1321:G:C2'	2.34	0.57
32:Ad:38:PHE:CD1	48:A2:4596:U:N3	2.72	0.57
32:Ad:118:GLN:OE1	48:A2:5014:A:H1'	2.04	0.57
37:Ai:15:HIS:CB	48:A2:72:C:C5	2.87	0.57
48:A2:133:C:C6	48:A2:133:C:H3'	2.39	0.57
48:A2:257:G:N2	48:A2:258:C:H1'	2.19	0.57
48:A2:676:G:H8	48:A2:676:G:P	2.27	0.57
48:A2:2858:A:C1'	48:A2:2860:A:H5'	2.34	0.57
49:B1:154:U:H4'	56:BG:13:GLN:HB3	1.85	0.57
49:B1:581:U:C5'	74:BY:62:THR:HG23	2.25	0.57
49:B1:659:G:N3	49:B1:659:G:H3'	2.19	0.57
49:B1:740:C:O2'	49:B1:741:C:H5'	2.04	0.57
49:B1:898:U:O2'	49:B1:899:U:H5'	2.04	0.57
49:B1:903:A:O2'	49:B1:904:A:H5'	2.04	0.57
53:BD:76:ARG:HB2	60:BK:22:VAL:HG21	1.86	0.57
54:BE:79:ASP:CB	54:BE:82:TYR:HB2	2.24	0.57
54:BE:87:MET:HE2	54:BE:123:LEU:CA	2.34	0.57
72:BW:26:LEU:HD12	77:Bb:7:LEU:HG	1.86	0.57
72:BW:42:MET:HE3	72:BW:50:PHE:CD2	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:Bg:173:LEU:CD2	82:Bg:189:ILE:HG12	2.34	0.57
1:A3:27:U:OP1	5:AC:56:GLU:CB	2.52	0.57
4:AB:257:TRP:NE1	48:A2:4480:A:N7	2.53	0.57
4:AB:268:ARG:CD	48:A2:4527:C:O2	2.52	0.57
5:AC:211:TYR:HE1	5:AC:229:LEU:HD13	1.68	0.57
7:AE:126:LEU:HB2	48:A2:958:U:O4	2.04	0.57
12:AJ:100:SER:O	12:AJ:159:LYS:HD2	2.05	0.57
15:AM:56:GLN:NE2	48:A2:4827:U:N1	2.52	0.57
16:AN:13:LYS:NZ	37:Ai:44:ILE:HG23	2.18	0.57
24:AV:121:VAL:HG21	24:AV:136:ALA:CB	2.33	0.57
29:Aa:74:ASN:CB	29:Aa:114:LYS:HG3	2.21	0.57
33:Ae:24:GLN:HE22	48:A2:1298:C:H4'	1.69	0.57
33:Ae:58:ILE:HG13	48:A2:2059:C:O2'	2.05	0.57
44:Ap:2:ALA:HA	48:A2:1551:U:H5	1.67	0.57
46:At:60:VAL:HG12	46:At:61:VAL:N	2.19	0.57
47:Au:89:ALA:O	47:Au:93:LEU:HG	2.04	0.57
48:A2:133:C:C2	48:A2:134:G:C6	2.91	0.57
48:A2:133:C:N4	48:A2:135:G:C2	2.72	0.57
48:A2:133:C:H6	48:A2:133:C:H5"	1.67	0.57
48:A2:204:G:N3	48:A2:228:U:O2'	2.35	0.57
48:A2:205:A:C4	48:A2:229:G:C6	2.92	0.57
48:A2:3737:A:OP2	48:A2:3738:C:C4	2.56	0.57
48:A2:4678:C:N4	48:A2:4679:A:N6	2.52	0.57
49:B1:741:C:H4'	49:B1:742:U:OP2	2.03	0.57
49:B1:1261:C:C2	79:Bd:10:HIS:NE2	2.71	0.57
49:B1:1286:G:C4	62:BM:35:ILE:N	2.71	0.57
49:B1:1497:G:O6	60:BK:67:PHE:CZ	2.57	0.57
49:B1:1661:A:H3'	49:B1:1661:A:OP2	2.04	0.57
49:B1:1745:A:O2'	56:BG:65:GLN:NE2	2.37	0.57
56:BG:1:MET:CE	56:BG:24:LEU:HD13	2.34	0.57
59:BJ:136:ARG:CB	59:BJ:159:PHE:HA	2.34	0.57
65:BP:52:LYS:HB2	65:BP:80:LEU:HD13	1.84	0.57
72:BW:100:GLY:HA3	72:BW:101:PHE:CE2	2.38	0.57
3:AA:63:PHE:N	3:AA:63:PHE:CD1	2.73	0.57
6:AD:286:SER:HB3	48:A2:1164:C:OP2	2.03	0.57
7:AE:273:SER:HB2	48:A2:4839:U:C2'	2.33	0.57
14:AL:153:PRO:HB3	36:Ah:121:VAL:CG2	2.35	0.57
20:AR:146:LYS:HB3	20:AR:146:LYS:HZ3	1.69	0.57
25:AW:59:HIS:O	25:AW:60:LYS:HB2	2.03	0.57
30:Ab:50:ASN:CB	48:A2:1795:U:H1'	2.34	0.57
37:Ai:16:LYS:O	37:Ai:17:VAL:HG13	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Ak:40:ARG:HH11	39:Ak:40:ARG:CG	2.14	0.57
45:Aq:24:ALA:HB3	45:Aq:27:ALA:HB3	1.85	0.57
45:Aq:108:GLU:C	45:Aq:112:ILE:HB	2.28	0.57
45:Aq:109:ILE:CG1	45:Aq:110:VAL:N	2.65	0.57
47:Au:32:VAL:HB	47:Au:169:VAL:HG23	1.86	0.57
48:A2:1753:U:O5'	48:A2:1753:U:H6	1.87	0.57
48:A2:4152:U:H3'	48:A2:4153:G:C5'	2.35	0.57
49:B1:161:U:C2	56:BG:87:ARG:NH1	2.72	0.57
49:B1:331:C:H3'	49:B1:332:G:C5'	2.34	0.57
49:B1:562:U:O3'	49:B1:563:G:O4'	2.21	0.57
49:B1:960:U:OP1	64:BO:149:ARG:NH2	2.37	0.57
49:B1:1087:A:OP1	76:Ba:3:LYS:CE	2.52	0.57
49:B1:1659:U:H5"	79:Bd:30:LEU:HD13	1.85	0.57
49:B1:1679:A:C8	55:BF:60:ARG:HB2	2.39	0.57
49:B1:1749:G:C6	49:B1:1750:C:N4	2.73	0.57
51:BB:134:LEU:HD22	51:BB:218:LEU:HD21	1.87	0.57
56:BG:56:ASN:O	56:BG:108:VAL:N	2.37	0.57
59:BJ:101:LYS:HD2	59:BJ:103:GLU:OE1	2.04	0.57
66:BQ:12:VAL:HG11	66:BQ:90:LYS:HB2	1.77	0.57
66:BQ:97:GLN:CG	66:BQ:102:GLU:OE2	2.48	0.57
72:BW:108:ALA:HB3	72:BW:111:MET:HE3	1.86	0.57
76:Ba:38:LYS:HG2	76:Ba:71:LEU:HB3	1.86	0.57
5:AC:309:ILE:HG22	5:AC:311:ARG:HG3	1.85	0.57
7:AE:154:THR:HG21	34:Af:106:TYR:CD2	2.39	0.57
7:AE:167:GLN:OE1	7:AE:171:GLY:HA2	2.05	0.57
7:AE:232:ILE:O	7:AE:236:GLU:HB2	2.04	0.57
8:AF:131:ASN:ND2	48:A2:1709:U:H5"	2.19	0.57
10:AH:44:GLU:OE2	15:AM:2:VAL:HB	2.05	0.57
19:AQ:72:LEU:HD13	48:A2:1439:G:H5"	1.86	0.57
19:AQ:72:LEU:CD1	48:A2:1439:G:C5'	2.81	0.57
21:AS:84:TYR:CD2	21:AS:113:MET:HE1	2.39	0.57
22:AT:116:LYS:HB2	22:AT:128:LEU:HD21	1.84	0.57
25:AW:102:LYS:CA	25:AW:105:ARG:NH2	2.67	0.57
28:AZ:39:SER:HB3	28:AZ:77:TYR:CE2	2.40	0.57
35:Ag:53:LEU:HD13	35:Ag:80:GLY:O	2.05	0.57
36:Ah:93:ARG:CZ	48:A2:19:G:OP2	2.53	0.57
47:Au:130:LYS:N	47:Au:130:LYS:HD2	2.19	0.57
48:A2:163:C:N4	48:A2:164:C:C4	2.72	0.57
48:A2:285:U:O2	48:A2:291:U:C2	2.57	0.57
48:A2:903:C:H5"	48:A2:903:C:C6	2.36	0.57
48:A2:2573:C:H2'	48:A2:2574:C:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:3724:G:H2'	48:A2:3725:G:C8	2.39	0.57
48:A2:5020:G:H3'	48:A2:5020:G:C8	2.39	0.57
49:B1:180:G:C2	49:B1:181:A:N6	2.72	0.57
49:B1:449:A:H4'	49:B1:450:C:OP2	2.05	0.57
49:B1:634:A:C6	49:B1:635:G:C6	2.92	0.57
49:B1:742:U:HO2'	49:B1:743:U:H6	1.49	0.57
49:B1:834:C:H2'	49:B1:835:C:O4'	2.04	0.57
49:B1:897:U:H2'	49:B1:898:U:O4'	2.05	0.57
50:BA:41:ARG:CB	50:BA:47:TYR:CD1	2.88	0.57
55:BF:73:THR:HB	55:BF:89:THR:CG2	2.34	0.57
56:BG:69:THR:O	56:BG:101:ILE:CG1	2.52	0.57
58:BI:37:LYS:HB2	58:BI:59:ARG:HB3	1.86	0.57
59:BJ:35:TYR:CE1	59:BJ:106:LEU:HB2	2.38	0.57
63:BN:79:GLY:C	63:BN:80:LEU:HD12	2.29	0.57
65:BP:125:PRO:O	65:BP:126:VAL:HB	2.03	0.57
69:BT:116:ASP:OD2	69:BT:122:LYS:HD3	2.04	0.57
70:BU:39:LEU:HD13	70:BU:39:LEU:C	2.29	0.57
70:BU:61:LEU:CD1	79:Bd:34:TYR:HD2	2.05	0.57
2:A4:47:G:O2'	6:AD:223:PHE:CZ	2.47	0.57
3:AA:67:TYR:HE2	48:A2:4056:G:O2'	1.87	0.57
5:AC:77:PRO:CG	5:AC:91:ALA:HB1	2.34	0.57
5:AC:114:ARG:NH2	48:A2:1342:G:C2	2.73	0.57
6:AD:41:LYS:HZ2	22:AT:93:ILE:HD13	1.68	0.57
7:AE:105:ARG:CZ	48:A2:680:C:H1'	2.33	0.57
9:AG:93:THR:HG22	9:AG:97:LYS:HE3	1.85	0.57
10:AH:121:LYS:HB3	48:A2:4574:C:N3	2.19	0.57
13:AK:14:PHE:CE2	48:A2:1941:A:C6	2.92	0.57
23:AU:82:TYR:CE1	23:AU:86:LEU:HD11	2.40	0.57
27:AY:42:TYR:N	27:AY:42:TYR:HD1	2.01	0.57
29:Aa:61:TYR:CE2	48:A2:288:G:C2	2.93	0.57
42:An:4:LYS:HE2	49:B1:1844:U:C5	2.38	0.57
43:Ao:3:ASN:HD21	43:Ao:95:GLY:N	2.01	0.57
43:Ao:41:TYR:CZ	43:Ao:45:GLN:NE2	2.73	0.57
48:A2:1740:G:C2	48:A2:1741:G:C8	2.93	0.57
48:A2:2480:C:H2'	48:A2:2481:G:O4'	2.04	0.57
48:A2:4661:U:C4'	48:A2:4662:A:OP1	2.50	0.57
49:B1:53:C:O2'	74:BY:108:LYS:HD3	2.04	0.57
49:B1:157:U:H1'	56:BG:59:GLN:CA	2.34	0.57
49:B1:331:C:H2'	49:B1:332:G:H5"	1.85	0.57
49:B1:658:U:C4'	73:BX:17:ARG:NH2	2.68	0.57
49:B1:991:G:N7	76:Ba:7:ASN:ND2	2.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1216:C:H5”	49:B1:1217:A:H5”	1.86	0.57
49:B1:1310:U:H5”	81:Bf:130:VAL:HG13	1.86	0.57
49:B1:1543:U:O2	66:BQ:77:HIS:HE1	1.84	0.57
49:B1:1679:A:C6	55:BF:60:ARG:N	2.73	0.57
50:BA:202:TYR:HD1	50:BA:202:TYR:N	2.02	0.57
51:BB:79:VAL:CG1	51:BB:81:PHE:CE1	2.88	0.57
51:BB:115:LYS:CG	51:BB:116:LYS:H	2.16	0.57
52:BC:167:ARG:CD	52:BC:219:ILE:CD1	2.82	0.57
58:BI:82:VAL:O	58:BI:101:ILE:HB	2.04	0.57
59:BJ:113:GLN:HG3	59:BJ:149:VAL:CG2	2.34	0.57
59:BJ:122:SER:HB2	59:BJ:125:HIS:HB2	1.83	0.57
66:BQ:8:GLN:O	66:BQ:8:GLN:HG2	2.05	0.57
66:BQ:42:ILE:CA	66:BQ:45:ARG:HH12	2.17	0.57
67:BR:95:ILE:HG22	67:BR:96:ILE:H	1.68	0.57
68:BS:16:LEU:HG	68:BS:19:ASN:HD22	1.69	0.57
82:Bg:5:MET:HE3	82:Bg:270:LEU:HD11	1.85	0.57
4:AB:103:LYS:HA	48:A2:4686:A:H4’	1.86	0.57
7:AE:219:LYS:CA	48:A2:4898:C:C4	2.86	0.57
11:AI:113:THR:HG22	11:AI:114:GLY:N	2.19	0.57
29:Aa:116:LYS:O	29:Aa:116:LYS:HG3	2.04	0.57
40:Al:24:PRO:HG2	40:Al:27:ILE:HD12	1.86	0.57
44:Ap:2:ALA:CA	48:A2:1551:U:C5	2.87	0.57
48:A2:902:A:H8	48:A2:902:A:C5’	2.07	0.57
48:A2:1740:G:N2	48:A2:1741:G:H1’	2.17	0.57
48:A2:1752:A:C5	48:A2:1753:U:C5	2.92	0.57
48:A2:1807:A:H2’	48:A2:1808:G:C8	2.38	0.57
48:A2:2853:U:O2	48:A2:3663:A:C2	2.57	0.57
48:A2:3608:U:H2’	48:A2:3609:G:C5’	2.33	0.57
48:A2:4016:A:C5	83:Bw:56:C:N1	2.73	0.57
49:B1:142:C:O2	56:BG:180:VAL:HB	2.05	0.57
49:B1:305:U:H1’	58:BI:43:ILE:CD1	2.34	0.57
49:B1:744:G:H2’	49:B1:745:C:C5	2.40	0.57
49:B1:1046:U:C4’	64:BO:140:THR:CG2	2.82	0.57
49:B1:1402:A:H1’	70:BU:54:VAL:CG2	2.34	0.57
50:BA:111:GLN:NE2	52:BC:64:THR:OG1	2.28	0.57
51:BB:75:GLN:HG3	51:BB:189:ILE:HD13	1.86	0.57
51:BB:97:LEU:HG	51:BB:232:HIS:NE2	2.19	0.57
52:BC:183:LYS:HE2	72:BW:95:PRO:HA	1.87	0.57
53:BD:71:ALA:HB1	60:BK:20:VAL:HG21	1.84	0.57
54:BE:34:GLY:HA3	54:BE:83:PRO:CG	2.31	0.57
65:BP:34:MET:HA	65:BP:37:TYR:HB2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:BR:28:PHE:HA	67:BR:55:THR:HG21	1.86	0.57
75:BZ:46:ASN:OD1	75:BZ:78:LYS:O	2.22	0.57
82:Bg:197:THR:HG21	82:Bg:238:ALA:HA	1.85	0.57
2:A4:14:C:O2	2:A4:14:C:H2'	2.02	0.57
4:AB:262:VAL:HG21	4:AB:268:ARG:HH21	1.69	0.57
6:AD:19:LYS:O	6:AD:20:PHE:HB2	2.03	0.57
6:AD:275:GLN:O	6:AD:279:ARG:HG3	2.04	0.57
6:AD:290:ALA:HB2	48:A2:1162:U:HO2'	1.69	0.57
7:AE:114:ARG:CZ	48:A2:683:U:OP1	2.51	0.57
7:AE:115:TYR:CD1	7:AE:116:TYR:N	2.73	0.57
7:AE:126:LEU:HD23	7:AE:126:LEU:N	2.20	0.57
7:AE:233:PHE:CZ	48:A2:446:A:N3	2.72	0.57
13:AK:52:VAL:CB	13:AK:90:PHE:O	2.53	0.57
13:AK:63:LYS:HB3	48:A2:1941:A:OP1	2.04	0.57
16:AN:71:ARG:HD2	16:AN:94:PHE:CD1	2.39	0.57
22:AT:11:THR:HG22	22:AT:14:MET:HE2	1.85	0.57
23:AU:56:LEU:HD11	23:AU:63:ILE:CD1	2.34	0.57
26:AX:118:ASP:OD1	26:AX:118:ASP:N	2.37	0.57
28:AZ:46:ILE:HD13	28:AZ:68:ILE:HG13	1.86	0.57
34:Af:78:HIS:HB2	34:Af:85:ARG:HG3	1.87	0.57
36:Ah:79:LYS:NZ	48:A2:136:G:OP1	2.37	0.57
39:Ak:41:TYR:CD1	39:Ak:41:TYR:N	2.73	0.57
43:Ao:41:TYR:CE1	43:Ao:45:GLN:NE2	2.73	0.57
48:A2:132:G:N1	48:A2:135:G:N1	2.52	0.57
48:A2:1615:G:H2'	48:A2:1623:G:C8	2.39	0.57
48:A2:1741:G:C4	48:A2:1742:G:C8	2.93	0.57
48:A2:2860:A:H2'	48:A2:2861:A:H5'	1.86	0.57
48:A2:4597:A:C8	48:A2:5006:A:N6	2.67	0.57
48:A2:4603:U:H2'	48:A2:4604:U:C6	2.40	0.57
49:B1:298:G:OP1	54:BE:134:LYS:HA	2.05	0.57
49:B1:332:G:C8	56:BG:186:GLN:HB2	2.40	0.57
49:B1:522:A:O2'	59:BJ:131:ARG:NH1	2.37	0.57
49:B1:617:G:N7	73:BX:67:ARG:NH2	2.53	0.57
49:B1:1121:G:N2	51:BB:146:ARG:HH22	2.03	0.57
49:B1:1284:A:H5'	49:B1:1285:G:C4'	2.35	0.57
51:BB:36:PRO:O	51:BB:39:PHE:HD2	1.88	0.57
51:BB:39:PHE:CE1	51:BB:75:GLN:NE2	2.73	0.57
54:BE:96:GLY:C	54:BE:97:GLU:HG2	2.30	0.57
54:BE:153:VAL:HB	54:BE:172:PHE:CE2	2.39	0.57
64:BO:145:GLY:O	64:BO:146:ARG:C	2.47	0.57
68:BS:80:PRO:HB2	68:BS:82:TRP:CE2	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A3:129:C:O2	1:A3:129:C:O5'	2.23	0.57
2:A4:75:G:C5'	21:AS:50:GLN:O	2.53	0.57
7:AE:105:ARG:NH1	48:A2:680:C:C6	2.73	0.57
7:AE:164:PHE:CE1	7:AE:173:LEU:HB3	2.39	0.57
7:AE:200:LYS:HZ3	7:AE:203:ILE:H	1.53	0.57
8:AF:51:TYR:OH	48:A2:1220:C:H5	1.74	0.57
8:AF:219:GLY:HA2	48:A2:1887:U:C4'	2.35	0.57
10:AH:2:LYS:HB3	15:AM:33:GLN:HE22	1.70	0.57
12:AJ:151:ILE:HG22	12:AJ:151:ILE:O	2.05	0.57
13:AK:55:MET:C	48:A2:1979:A:H5'	2.28	0.57
16:AN:113:LEU:HB3	16:AN:134:LEU:HB3	1.86	0.57
19:AQ:42:THR:CG2	48:A2:1411:U:H5"	2.35	0.57
19:AQ:167:VAL:CG2	19:AQ:175:GLU:OE2	2.52	0.57
29:Aa:58:MET:HG3	48:A2:4326:G:H1'	1.87	0.57
30:Ab:28:ARG:HG2	48:A2:1787:A:C4	2.39	0.57
39:Ak:52:LYS:O	39:Ak:55:LYS:HG3	2.04	0.57
45:Aq:76:SER:O	45:Aq:77:ALA:O	2.22	0.57
47:Au:207:LYS:HZ2	47:Au:213:PRO:N	2.03	0.57
48:A2:90:G:N7	48:A2:92:C:C6	2.73	0.57
48:A2:227:G:C5'	48:A2:227:G:C8	2.85	0.57
48:A2:680:C:N4	48:A2:681:A:C4	2.73	0.57
48:A2:924:U:OP2	48:A2:924:U:H2'	2.05	0.57
48:A2:1431:G:OP2	48:A2:1431:G:C8	2.58	0.57
48:A2:2860:A:H2'	48:A2:2861:A:C5'	2.35	0.57
48:A2:2867:G:C1'	48:A2:3589:C:H1'	2.35	0.57
48:A2:4546:A:C2'	48:A2:4547:U:H5'	2.35	0.57
49:B1:448:A:N7	58:BI:26:LYS:HA	2.20	0.57
49:B1:688:U:H4'	49:B1:689:U:H5'	1.87	0.57
49:B1:952:G:C4	49:B1:975:G:C2	2.92	0.57
49:B1:1021:U:C5'	63:BN:128:TYR:CE1	2.80	0.57
49:B1:1466:G:H5"	67:BR:4:VAL:HG12	1.87	0.57
49:B1:1552:G:H4'	49:B1:1557:C:N4	2.16	0.57
53:BD:74:GLN:C	53:BD:76:ARG:H	2.12	0.57
53:BD:75:LYS:O	60:BK:22:VAL:CG2	2.51	0.57
60:BK:71:LEU:HD21	60:BK:79:LEU:HD11	1.87	0.57
64:BO:61:LYS:HE2	64:BO:76:LEU:HB3	1.87	0.57
64:BO:85:CYS:CB	64:BO:124:MET:HE1	2.34	0.57
66:BQ:42:ILE:HG13	66:BQ:48:GLN:HG3	1.87	0.57
68:BS:10:GLN:HG2	68:BS:13:LEU:HD21	1.86	0.57
72:BW:68:ARG:HH12	72:BW:70:ASN:ND2	2.03	0.57
1:A3:27:U:H5'	5:AC:56:GLU:HB2	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:67:TRP:CE2	5:AC:71:ARG:NH1	2.73	0.57
6:AD:287:PHE:HA	48:A2:1162:U:C2'	2.33	0.57
10:AH:120:GLU:HG3	48:A2:4573:A:C2	2.39	0.57
13:AK:33:ASP:O	48:A2:1949:G:H4'	2.04	0.57
14:AL:80:GLU:HG2	14:AL:110:LEU:HD12	1.86	0.57
34:Af:104:MET:HB3	34:Af:106:TYR:CE1	2.39	0.57
39:Ak:11:PHE:HD1	39:Ak:12:LEU:CA	2.17	0.57
45:Aq:17:CYS:O	45:Aq:18:THR:HB	2.03	0.57
46:At:4:HIS:ND1	46:At:38:PHE:CE2	2.70	0.57
48:A2:904:A:C2	48:A2:906:C:C5	2.92	0.57
48:A2:970:C:H2'	48:A2:971:C:C6	2.40	0.57
48:A2:3935:U:H3'	48:A2:3935:U:OP1	2.05	0.57
49:B1:304:C:O2'	58:BI:184:ARG:NH2	2.38	0.57
49:B1:990:A:OP1	51:BB:116:LYS:HE3	2.04	0.57
49:B1:1256:G:C2	79:Bd:30:LEU:HD23	2.39	0.57
49:B1:1521:C:OP2	49:B1:1521:C:O4'	2.22	0.57
49:B1:1651:A:H1'	55:BF:83:ASN:HD22	1.68	0.57
50:BA:77:ILE:HB	50:BA:124:VAL:HG12	1.87	0.57
50:BA:169:HIS:CD2	50:BA:203:PHE:CD2	2.93	0.57
51:BB:39:PHE:CD1	51:BB:75:GLN:NE2	2.73	0.57
51:BB:81:PHE:O	51:BB:82:ARG:HB2	2.04	0.57
52:BC:103:LYS:HD3	52:BC:133:TYR:CE2	2.39	0.57
52:BC:132:ASP:CG	52:BC:133:TYR:N	2.61	0.57
53:BD:76:ARG:CZ	60:BK:66:HIS:ND1	2.68	0.57
66:BQ:41:MET:HE1	69:BT:10:ASN:CB	2.29	0.57
67:BR:63:ARG:HA	82:Bg:280:LYS:NZ	2.20	0.57
73:BX:54:LYS:NZ	73:BX:95:GLU:HA	2.20	0.57
79:Bd:21:CYS:HA	79:Bd:31:ILE:HD13	1.87	0.57
1:A3:126:C:O2	1:A3:126:C:C2'	2.52	0.57
4:AB:20:LYS:HG3	48:A2:4530:A:OP1	2.04	0.57
4:AB:285:TYR:HA	4:AB:363:ILE:HD11	1.87	0.57
7:AE:233:PHE:HE2	48:A2:446:A:H2'	1.68	0.57
9:AG:106:THR:HG22	9:AG:109:GLU:HG2	1.86	0.57
11:AI:195:CYS:SG	48:A2:1732:G:H1'	2.44	0.57
13:AK:10:LYS:HE3	48:A2:1941:A:C2	2.40	0.57
14:AL:176:PHE:CD2	14:AL:177:LYS:NZ	2.73	0.57
17:AO:179:LYS:CE	48:A2:4830:G:H8	1.89	0.57
27:AY:41:LYS:NZ	27:AY:42:TYR:HE1	2.03	0.57
28:AZ:60:LYS:HA	28:AZ:60:LYS:HZ1	1.69	0.57
34:Af:4:ARG:HH11	48:A2:4714:U:H5'	1.69	0.57
38:Aj:18:LEU:HA	38:Aj:25:LYS:HA	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Ak:64:LEU:HD12	39:Ak:64:LEU:C	2.30	0.57
47:Au:26:ARG:CD	47:Au:210:MET:HE1	2.35	0.57
47:Au:164:CYS:SG	48:A2:4024:C:C2'	2.93	0.57
48:A2:163:C:C4	48:A2:164:C:C4	2.93	0.57
48:A2:1741:G:C2	48:A2:1742:G:C4	2.93	0.57
48:A2:1971:A:H2'	48:A2:1972:A:O4'	2.04	0.57
48:A2:2067:G:N2	48:A2:2249:G:H22	2.03	0.57
49:B1:891:G:H3'	49:B1:892:U:C6	2.40	0.57
49:B1:924:G:H5"	63:BN:4:MET:SD	2.45	0.57
49:B1:1451:G:P	67:BR:44:LYS:HZ1	2.27	0.57
49:B1:1491:G:C1'	70:BU:72:GLU:OE1	2.53	0.57
50:BA:111:GLN:CG	50:BA:116:PHE:CE2	2.88	0.57
51:BB:71:LEU:HD13	51:BB:75:GLN:HG2	1.87	0.57
55:BF:20:PHE:CE2	55:BF:97:PHE:HD2	2.23	0.57
55:BF:103:LEU:HD13	55:BF:178:ILE:HD13	1.86	0.57
59:BJ:136:ARG:HB3	59:BJ:159:PHE:HA	1.87	0.57
68:BS:92:ASP:OD2	68:BS:94:LYS:HD2	2.05	0.57
1:A3:11:C:HO2'	18:AP:5:SER:HA	1.63	0.56
1:A3:75:G:C8	40:Al:30:LYS:HG2	2.40	0.56
2:A4:119:U:OP1	2:A4:119:U:H4'	2.05	0.56
5:AC:137:VAL:HG12	5:AC:144:ILE:HD11	1.87	0.56
5:AC:211:TYR:HE1	5:AC:230:LEU:N	2.03	0.56
6:AD:12:TYR:HD1	6:AD:13:PHE:N	2.02	0.56
7:AE:283:PRO:HB2	34:Af:41:PHE:CE1	2.40	0.56
9:AG:57:TRP:CH2	26:AX:41:ARG:NH1	2.72	0.56
14:AL:128:PRO:CD	14:AL:136:LYS:CE	2.56	0.56
19:AQ:167:VAL:HB	19:AQ:175:GLU:OE2	2.05	0.56
20:AR:107:ARG:NH2	48:A2:2644:U:H5'	2.20	0.56
20:AR:146:LYS:NZ	20:AR:146:LYS:CB	2.68	0.56
22:AT:12:ARG:HG3	48:A2:4237:G:O2'	2.05	0.56
25:AW:102:LYS:N	25:AW:105:ARG:NH2	2.53	0.56
32:Ad:38:PHE:CD2	48:A2:4596:U:N3	2.60	0.56
36:Ah:45:SER:O	36:Ah:49:VAL:HG22	2.04	0.56
48:A2:90:G:C8	48:A2:92:C:C5	2.93	0.56
48:A2:1263:C:N3	48:A2:1265:G:C6	2.72	0.56
48:A2:1580:C:O4'	48:A2:2777:A:C2	2.58	0.56
48:A2:3617:A:H4'	48:A2:3618:A:O5'	2.04	0.56
48:A2:3726:G:C2	83:Bv:12:U:H4'	2.40	0.56
48:A2:4071:C:H2'	48:A2:4072:C:C6	2.40	0.56
48:A2:4873:G:C4	48:A2:4874:G:C8	2.92	0.56
49:B1:309:G:N2	49:B1:310:C:C2	2.72	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:463:C:OP1	49:B1:463:C:H4'	2.05	0.56
49:B1:527:C:H5'	59:BJ:125:HIS:HA	1.87	0.56
49:B1:530:U:H2'	49:B1:531:A:C8	2.40	0.56
49:B1:1124:C:O2'	67:BR:123:THR:HG22	2.04	0.56
49:B1:1309:C:OP2	81:Bf:118:ARG:CZ	2.53	0.56
49:B1:1342:U:H4'	49:B1:1343:U:O5'	2.04	0.56
49:B1:1445:U:O2'	49:B1:1446:A:H5'	2.05	0.56
49:B1:1454:A:C2'	67:BR:3:ARG:NE	2.67	0.56
53:BD:69:LEU:O	53:BD:73:VAL:CG2	2.41	0.56
53:BD:162:ASP:N	53:BD:163:PRO:HD2	2.19	0.56
56:BG:186:GLN:CG	56:BG:187:HIS:N	2.67	0.56
59:BJ:88:ASP:OD1	59:BJ:91:LYS:HB2	2.03	0.56
66:BQ:14:GLY:O	66:BQ:86:GLN:NE2	2.37	0.56
67:BR:99:ASP:CB	67:BR:102:THR:HB	2.34	0.56
69:BT:113:VAL:C	69:BT:124:THR:HG23	2.30	0.56
79:Bd:5:GLN:HB3	79:Bd:7:TYR:CE1	2.40	0.56
2:A4:13:A:H5'	2:A4:109:U:O2'	2.05	0.56
2:A4:65:G:H8	2:A4:65:G:C5'	2.18	0.56
5:AC:74:ALA:CB	48:A2:2331:U:OP1	2.53	0.56
6:AD:290:ALA:HB2	48:A2:1162:U:O2'	2.05	0.56
7:AE:118:THR:CG2	33:Ae:92:ASN:OD1	2.53	0.56
13:AK:104:ALA:C	13:AK:106:LYS:N	2.61	0.56
14:AL:19:GLN:NE2	48:A2:1499:G:OP1	2.37	0.56
14:AL:84:ALA:HA	14:AL:118:LYS:NZ	2.19	0.56
15:AM:99:GLU:HA	15:AM:99:GLU:OE1	2.04	0.56
20:AR:24:LEU:HB3	20:AR:25:ASP:OD1	2.06	0.56
29:Aa:28:HIS:CE1	29:Aa:32:ARG:NH2	2.73	0.56
39:Ak:32:VAL:HG11	39:Ak:53:ALA:HB2	1.87	0.56
39:Ak:69:LEU:HD13	48:A2:2675:A:C5	2.39	0.56
43:Ao:36:GLN:HE21	48:A2:4325:A:H5"	1.70	0.56
46:At:84:LYS:HB3	46:At:88:ALA:HB3	1.87	0.56
47:Au:29:LEU:HD22	47:Au:171:HIS:CD2	2.40	0.56
47:Au:204:LEU:HD21	47:Au:216:LEU:HD23	1.85	0.56
48:A2:131:C:H6	48:A2:131:C:C4'	2.17	0.56
48:A2:133:C:N4	48:A2:134:G:C4	2.72	0.56
48:A2:1166:C:C6	48:A2:1166:C:C3'	2.87	0.56
48:A2:1268:U:HO2'	48:A2:1269:C:C5'	2.18	0.56
48:A2:1306:A:N6	48:A2:1307:A:C2	2.72	0.56
48:A2:1740:G:H2'	48:A2:1741:G:H8	1.68	0.56
48:A2:2823:A:C4'	48:A2:4594:U:OP1	2.52	0.56
49:B1:229:A:H2'	49:B1:888:U:H1'	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:367:U:H2'	49:B1:368:U:OP1	2.04	0.56
49:B1:527:C:H4'	59:BJ:125:HIS:CA	2.35	0.56
49:B1:1120:U:O4'	49:B1:1120:U:O2	2.22	0.56
49:B1:1256:G:N3	79:Bd:40:ARG:HD2	2.19	0.56
49:B1:1286:G:H1	62:BM:36:ARG:HG3	1.70	0.56
49:B1:1745:A:C8	56:BG:66:GLY:HA2	2.40	0.56
50:BA:78:SER:OG	50:BA:83:GLY:HA3	2.04	0.56
52:BC:103:LYS:HZ3	52:BC:133:TYR:HD2	1.53	0.56
53:BD:15:GLY:C	79:Bd:50:ILE:HG22	2.31	0.56
55:BF:73:THR:HB	55:BF:89:THR:HG21	1.88	0.56
56:BG:228:ILE:O	56:BG:232:ARG:HD2	2.05	0.56
65:BP:47:ARG:C	65:BP:49:LEU:HD21	2.30	0.56
71:BV:40:ASP:HB3	71:BV:43:THR:OG1	2.05	0.56
78:Bc:29:GLN:HG2	78:Bc:45:ASN:OD1	2.04	0.56
1:A3:110:U:C3'	1:A3:110:U:C6	2.88	0.56
3:AA:237:LEU:HD22	48:A2:3629:C:O4'	2.04	0.56
4:AB:160:ILE:CD1	4:AB:194:LEU:HB2	2.35	0.56
5:AC:92:PHE:CD1	5:AC:92:PHE:N	2.73	0.56
6:AD:224:SER:O	6:AD:227:ILE:HG13	2.04	0.56
7:AE:105:ARG:NH1	48:A2:680:C:O4'	2.38	0.56
8:AF:147:LEU:HG	48:A2:931:A:C2	2.39	0.56
8:AF:161:LYS:HB2	8:AF:209:TRP:CE3	2.41	0.56
8:AF:182:TYR:CE2	8:AF:203:GLU:CB	2.80	0.56
8:AF:226:HIS:HA	8:AF:233:ALA:O	2.05	0.56
11:AI:210:ARG:NH1	48:A2:1162:U:C6	2.74	0.56
16:AN:55:ALA:HB3	48:A2:150:G:OP1	2.04	0.56
20:AR:132:PHE:CD1	20:AR:132:PHE:N	2.73	0.56
21:AS:68:PHE:CZ	48:A2:721:G:N2	2.73	0.56
21:AS:84:TYR:CD1	21:AS:85:ASP:N	2.73	0.56
22:AT:57:TYR:CE1	22:AT:89:ILE:HD11	2.41	0.56
24:AV:88:TYR:OH	24:AV:96:LEU:HD11	2.04	0.56
25:AW:78:PHE:CD2	25:AW:79:GLN:O	2.57	0.56
25:AW:80:ARG:NH2	56:BG:128:THR:CG2	2.68	0.56
26:AX:117:TYR:CE2	26:AX:153:ILE:CG2	2.88	0.56
34:Af:33:VAL:CG2	34:Af:42:TYR:HE2	2.18	0.56
34:Af:54:LYS:HE2	48:A2:437:G:H5"	1.87	0.56
35:Ag:54:ARG:NH2	48:A2:2662:C:O2	2.38	0.56
37:Ai:33:LEU:HD21	37:Ai:38:LYS:HG2	1.86	0.56
41:Am:104:HIS:CG	48:A2:4659:U:H4'	2.40	0.56
43:Ao:40:ARG:HB2	43:Ao:40:ARG:NH1	2.20	0.56
44:Ap:42:CYS:HA	48:A2:2653:A:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:Aq:63:THR:O	45:Aq:64:ILE:HB	2.05	0.56
47:Au:49:PHE:HB2	47:Au:159:MET:HE3	1.87	0.56
47:Au:66:CYS:HB2	47:Au:107:TYR:CG	2.40	0.56
48:A2:132:G:C6	48:A2:135:G:N2	2.73	0.56
48:A2:171:C:H2'	48:A2:172:C:C6	2.41	0.56
48:A2:676:G:C6	48:A2:677:G:C6	2.93	0.56
48:A2:945:G:C6	48:A2:946:G:C6	2.92	0.56
48:A2:1255:C:H3'	48:A2:1256:G:C5	2.41	0.56
48:A2:1462:C:N3	48:A2:1466:G:O6	2.38	0.56
48:A2:1576:C:O2	48:A2:1576:C:O5'	2.23	0.56
48:A2:1834:G:OP2	48:A2:1834:G:C8	2.58	0.56
48:A2:2068:C:C5	48:A2:2247:A:C6	2.93	0.56
48:A2:2743:A:O2'	48:A2:2744:A:O5'	2.22	0.56
48:A2:3929:G:O4'	83:Bw:19:G:C8	2.59	0.56
48:A2:4106:C:N4	48:A2:4110:C:H42	2.02	0.56
48:A2:4828:G:H8	48:A2:4828:G:C5'	2.18	0.56
49:B1:2:A:OP1	52:BC:223:TYR:HE1	1.87	0.56
49:B1:112:U:O2'	49:B1:114:G:H2'	2.05	0.56
49:B1:551:U:H2'	49:B1:552:G:C8	2.39	0.56
49:B1:691:G:H5"	49:B1:691:G:C8	2.40	0.56
49:B1:748:C:H5'	49:B1:749:U:C5	2.39	0.56
49:B1:1134:G:OP1	76:Ba:13:LYS:NZ	2.38	0.56
49:B1:1274:G:OP2	60:BK:1:MET:SD	2.64	0.56
49:B1:1507:G:H3'	49:B1:1508:A:C5'	2.35	0.56
49:B1:1679:A:N6	55:BF:59:LYS:O	2.38	0.56
51:BB:115:LYS:H	51:BB:118:GLN:HE21	1.53	0.56
51:BB:131:ASP:CG	51:BB:181:LEU:CD1	2.78	0.56
52:BC:94:ILE:HD13	52:BC:159:LYS:O	2.05	0.56
54:BE:86:PHE:CD1	54:BE:87:MET:N	2.73	0.56
54:BE:91:SER:OG	54:BE:92:ILE:N	2.36	0.56
58:BI:23:LYS:O	58:BI:24:LYS:HB2	2.05	0.56
58:BI:85:ALA:HB1	61:BL:10:TYR:CD1	2.40	0.56
61:BL:55:TYR:CD1	61:BL:115:PRO:HG2	2.41	0.56
61:BL:96:ILE:HD11	61:BL:103:GLU:OE1	2.05	0.56
63:BN:23:PRO:HG2	63:BN:24:THR:H	1.70	0.56
63:BN:91:LEU:HD12	63:BN:125:LEU:HD12	1.86	0.56
66:BQ:9:SER:OG	66:BQ:24:HIS:HE1	1.89	0.56
66:BQ:39:LEU:CD2	66:BQ:51:LEU:HD21	2.35	0.56
80:Be:36:MET:HA	80:Be:39:ASN:HD22	1.71	0.56
82:Bg:184:LEU:HD11	82:Bg:187:ASN:OD1	2.05	0.56
2:A4:114:U:H4'	6:AD:73:MET:CE	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AB:244:THR:HG22	48:A2:4487:C:HO2'	1.70	0.56
5:AC:287:THR:HG23	46:At:5:LEU:HD13	1.88	0.56
7:AE:125:LEU:N	48:A2:946:G:N2	2.36	0.56
10:AH:99:PHE:CD1	10:AH:119:GLY:HA3	2.41	0.56
11:AI:67:ALA:HB1	11:AI:158:LYS:HD3	1.88	0.56
12:AJ:56:THR:HG23	12:AJ:62:ILE:O	2.06	0.56
13:AK:10:LYS:HE2	48:A2:1941:A:C2	2.40	0.56
13:AK:55:MET:O	48:A2:1979:A:H5'	2.06	0.56
14:AL:165:LYS:HB3	48:A2:505:C:OP2	2.06	0.56
21:AS:116:ARG:O	48:A2:2015:G:H1'	2.05	0.56
27:AY:15:ARG:NH1	48:A2:226:G:H5'	2.21	0.56
38:Aj:78:PHE:O	38:Aj:79:ARG:O	2.23	0.56
45:Aq:120:SER:O	45:Aq:121:LEU:HB2	2.05	0.56
46:At:84:LYS:HB2	46:At:89:THR:HB	1.87	0.56
48:A2:252:C:O2	48:A2:252:C:H2'	2.04	0.56
48:A2:517:C:O5'	48:A2:517:C:H6	1.88	0.56
48:A2:2470:C:O5'	48:A2:2470:C:H6	1.89	0.56
48:A2:4110:C:H6	48:A2:4110:C:O5'	1.89	0.56
48:A2:4833:G:HO2'	48:A2:4834:U:P	2.27	0.56
49:B1:331:C:C2'	49:B1:332:G:H5"	2.34	0.56
49:B1:509:G:H5'	59:BJ:3:VAL:CA	2.32	0.56
49:B1:590:A:N3	49:B1:590:A:H2'	2.19	0.56
49:B1:635:G:C6	49:B1:636:C:N4	2.73	0.56
49:B1:1114:U:OP2	51:BB:199:LYS:HE3	2.05	0.56
49:B1:1273:C:H1'	49:B1:1275:G:OP1	2.05	0.56
49:B1:1320:G:C2	49:B1:1321:G:H1'	2.40	0.56
49:B1:1555:U:C4'	49:B1:1556:A:C2	2.88	0.56
49:B1:1756:C:O2'	49:B1:1757:G:O5'	2.21	0.56
49:B1:1785:C:H2'	49:B1:1786:U:H6	1.69	0.56
49:B1:1824:A:N3	49:B1:1824:A:H5"	2.21	0.56
50:BA:65:ILE:HG23	50:BA:74:VAL:HG21	1.88	0.56
52:BC:88:ILE:HG22	52:BC:160:LEU:HD12	1.88	0.56
54:BE:85:GLY:HA3	54:BE:88:ASP:OD2	2.04	0.56
56:BG:103:ASP:O	56:BG:104:ALA:HB3	2.05	0.56
56:BG:123:GLY:C	56:BG:124:LEU:HD22	2.30	0.56
57:BH:100:ILE:HD13	57:BH:122:LEU:CD1	2.36	0.56
58:BI:193:LYS:HE2	61:BL:11:GLN:HE22	1.70	0.56
59:BJ:124:HIS:CD2	80:Be:35:ARG:CG	2.89	0.56
65:BP:30:TYR:CD1	65:BP:31:GLU:N	2.73	0.56
65:BP:48:GLY:CA	65:BP:49:LEU:HD23	2.35	0.56
66:BQ:97:GLN:CG	66:BQ:105:LYS:HE2	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:Bv:34:G:C6	83:Bv:35:A:C5	2.94	0.56
2:A4:33:U:C5	6:AD:207:TYR:CE1	2.92	0.56
2:A4:90:A:O2'	11:AI:11:TYR:HD1	1.83	0.56
3:AA:30:ARG:NH2	3:AA:63:PHE:HB3	2.21	0.56
3:AA:95:GLN:HE21	44:Ap:87:LYS:NZ	2.02	0.56
4:AB:216:MET:HG2	4:AB:281:ASN:HA	1.87	0.56
4:AB:234:ARG:HD3	4:AB:272:LYS:HB2	1.87	0.56
5:AC:58:ALA:C	5:AC:60:HIS:H	2.13	0.56
5:AC:211:TYR:CZ	5:AC:229:LEU:HA	2.39	0.56
5:AC:219:LYS:CD	5:AC:222:ARG:NH2	2.66	0.56
6:AD:179:ARG:NH2	48:A2:4285:A:OP1	2.29	0.56
7:AE:136:HIS:NE2	48:A2:702:A:C1'	2.66	0.56
9:AG:80:ILE:HG22	9:AG:164:ILE:HG21	1.86	0.56
13:AK:72:ASN:HB2	13:AK:73:PRO:CD	2.35	0.56
19:AQ:62:SER:HB2	19:AQ:89:ASP:OD2	2.05	0.56
21:AS:82:LEU:HD22	21:AS:82:LEU:N	2.20	0.56
22:AT:79:GLN:HA	22:AT:84:ILE:HG22	1.88	0.56
25:AW:80:ARG:HD3	56:BG:9:ALA:O	2.04	0.56
27:AY:41:LYS:NZ	27:AY:42:TYR:CE1	2.73	0.56
28:AZ:36:ARG:HB2	28:AZ:38:TYR:CE2	2.41	0.56
29:Aa:21:ARG:O	29:Aa:24:LYS:CG	2.45	0.56
29:Aa:61:TYR:H	48:A2:4316:U:H3	1.53	0.56
40:Al:12:PHE:HE1	40:Al:49:LEU:HD13	1.71	0.56
46:At:38:PHE:O	46:At:45:HIS:NE2	2.38	0.56
47:Au:60:ARG:HG2	47:Au:61:PRO:CD	2.36	0.56
47:Au:70:ASP:O	47:Au:71:GLN:CB	2.53	0.56
48:A2:1409:G:H1'	48:A2:1441:A:H61	1.71	0.56
48:A2:1957:G:C6	48:A2:1958:C:H1'	2.41	0.56
48:A2:4833:G:O2'	48:A2:4834:U:OP1	2.22	0.56
48:A2:4915:C:H2'	48:A2:4916:C:C6	2.39	0.56
49:B1:156:G:H4'	56:BG:108:VAL:CG2	2.35	0.56
49:B1:509:G:C5'	59:BJ:3:VAL:HA	2.32	0.56
49:B1:1256:G:N3	49:B1:1256:G:H5'	2.21	0.56
51:BB:182:LYS:HG3	51:BB:231:LEU:HD13	1.87	0.56
52:BC:78:LEU:HG	52:BC:82:TYR:CE2	2.41	0.56
52:BC:133:TYR:CE1	52:BC:216:MET:HG2	2.40	0.56
54:BE:64:ILE:HD12	54:BE:70:ILE:HD11	1.88	0.56
56:BG:160:LYS:C	56:BG:160:LYS:HD3	2.29	0.56
56:BG:211:LYS:O	56:BG:215:LYS:HE3	2.05	0.56
59:BJ:35:TYR:CE1	59:BJ:106:LEU:C	2.83	0.56
59:BJ:40:LYS:HZ3	80:Be:34:ARG:NH1	2.03	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:BQ:97:GLN:HG2	66:BQ:102:GLU:CD	2.30	0.56
68:BS:16:LEU:O	68:BS:17:ASN:HB3	2.06	0.56
70:BU:80:PHE:CD1	79:Bd:52:PHE:HB3	2.41	0.56
72:BW:102:ILE:CG2	72:BW:103:VAL:N	2.68	0.56
72:BW:102:ILE:N	72:BW:113:HIS:HB2	2.03	0.56
79:Bd:13:LYS:O	79:Bd:18:SER:CB	2.54	0.56
79:Bd:23:VAL:CG1	79:Bd:46:TYR:OH	2.54	0.56
2:A4:15:C:C2	2:A4:65:G:N2	2.73	0.56
7:AE:99:ASP:HB2	7:AE:104:THR:HA	1.86	0.56
7:AE:152:ILE:HD13	7:AE:194:VAL:HG12	1.88	0.56
7:AE:186:LEU:O	7:AE:187:ARG:O	2.24	0.56
8:AF:74:MET:HE1	48:A2:1071:C:O2'	2.06	0.56
12:AJ:111:GLU:CG	68:BS:14:ARG:HH22	2.08	0.56
13:AK:34:ASN:HB3	48:A2:1950:G:C5'	2.27	0.56
13:AK:108:PRO:HD2	13:AK:109:ALA:H	1.71	0.56
16:AN:98:LEU:CD2	48:A2:295:G:H5"	2.35	0.56
17:AO:176:ARG:HG2	48:A2:4830:G:N1	2.21	0.56
26:AX:48:ARG:HG2	48:A2:2451:A:H1'	1.86	0.56
26:AX:117:TYR:CD1	26:AX:117:TYR:N	2.73	0.56
27:AY:117:LYS:HE2	27:AY:117:LYS:HA	1.88	0.56
29:Aa:30:GLY:C	48:A2:39:A:N7	2.63	0.56
39:Ak:14:THR:C	39:Ak:17:ARG:CB	2.78	0.56
47:Au:32:VAL:HG12	47:Au:169:VAL:CG2	2.35	0.56
47:Au:38:LEU:CD1	47:Au:159:MET:SD	2.94	0.56
48:A2:71:C:O2'	48:A2:72:C:H2'	2.05	0.56
48:A2:1720:A:C3'	48:A2:1721:G:H5'	2.34	0.56
48:A2:3737:A:OP2	48:A2:3738:C:C5	2.59	0.56
48:A2:3813:C:OP2	48:A2:3814:C:O2'	2.23	0.56
49:B1:353:C:H4'	61:BL:73:LEU:HD11	1.87	0.56
49:B1:377:G:H5"	58:BI:98:LYS:HB3	1.88	0.56
49:B1:1454:A:H4'	49:B1:1455:A:O5'	2.05	0.56
49:B1:1568:C:H5'	69:BT:38:LYS:NZ	2.20	0.56
50:BA:120:ARG:O	50:BA:143:PRO:HD2	2.05	0.56
50:BA:219:GLU:HA	50:BA:219:GLU:OE1	2.05	0.56
52:BC:103:LYS:HB2	52:BC:131:GLY:O	2.06	0.56
53:BD:11:PHE:HZ	70:BU:25:THR:CG2	2.17	0.56
53:BD:213:PRO:HD3	67:BR:19:LYS:CD	2.25	0.56
54:BE:87:MET:CE	54:BE:236:ILE:HG13	2.32	0.56
54:BE:191:ARG:NH2	54:BE:244:ILE:HG13	2.20	0.56
55:BF:126:THR:HG21	78:Bc:27:CYS:SG	2.45	0.56
59:BJ:35:TYR:CG	59:BJ:106:LEU:HB3	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:BX:56:GLY:CA	80:Be:6:LEU:HD21	2.35	0.56
73:BX:68:LYS:HD3	73:BX:91:LEU:CB	2.35	0.56
77:Bb:19:HIS:HB3	77:Bb:22:LYS:HG3	1.88	0.56
79:Bd:9:SER:O	79:Bd:10:HIS:HB3	2.04	0.56
1:A3:28:C:H4'	5:AC:51:PRO:HG3	1.87	0.56
3:AA:9:ARG:CZ	48:A2:1610:C:C5	2.89	0.56
4:AB:177:LYS:HE3	48:A2:4944:G:OP2	2.05	0.56
4:AB:298:LEU:HD23	4:AB:298:LEU:C	2.30	0.56
5:AC:76:ILE:CD1	5:AC:95:MET:CE	2.83	0.56
7:AE:115:TYR:C	7:AE:116:TYR:HD1	2.13	0.56
13:AK:44:ARG:HD3	48:A2:1978:U:OP1	2.06	0.56
13:AK:81:HIS:NE2	13:AK:86:VAL:HG11	2.21	0.56
15:AM:15:VAL:HG13	15:AM:54:CYS:SG	2.46	0.56
19:AQ:10:ASP:OD1	19:AQ:11:ARG:HD2	2.05	0.56
19:AQ:42:THR:CG2	48:A2:1411:U:C5'	2.83	0.56
26:AX:117:TYR:CD2	26:AX:153:ILE:HG22	2.41	0.56
29:Aa:35:ALA:HB2	48:A2:38:A:H5"	1.87	0.56
39:Ak:36:VAL:C	39:Ak:42:LEU:HD12	2.29	0.56
39:Ak:52:LYS:HA	39:Ak:55:LYS:CG	2.35	0.56
45:Aq:31:LYS:HG2	45:Aq:38:SER:CA	2.36	0.56
45:Aq:37:LEU:CD2	45:Aq:69:ALA:HB2	2.35	0.56
45:Aq:62:LEU:H	45:Aq:62:LEU:HD12	1.71	0.56
48:A2:291:U:H2'	48:A2:292:G:C8	2.40	0.56
48:A2:728:C:H2'	48:A2:729:C:C6	2.41	0.56
48:A2:1972:A:H2'	48:A2:1973:U:C5	2.41	0.56
48:A2:2386:G:OP2	48:A2:2386:G:N2	2.37	0.56
48:A2:3798:G:H8	48:A2:3798:G:C5'	2.18	0.56
48:A2:4727:G:C2	48:A2:4826:G:C2	2.94	0.56
49:B1:524:U:H5"	49:B1:525:A:C1'	2.35	0.56
49:B1:561:A:H2'	49:B1:561:A:N3	2.21	0.56
49:B1:1333:U:OP1	53:BD:146:ARG:HA	2.06	0.56
49:B1:1474:A:O2'	66:BQ:124:PRO:HG3	2.05	0.56
49:B1:1591:C:H5'	55:BF:85:LYS:HE2	1.87	0.56
54:BE:88:ASP:OD1	54:BE:122:LYS:NZ	2.33	0.56
61:BL:80:MET:HE3	61:BL:122:ILE:HG13	1.87	0.56
66:BQ:102:GLU:HG2	82:Bg:57:ARG:HA	1.88	0.56
67:BR:5:ARG:HG2	67:BR:49:LYS:HZ1	1.71	0.56
3:AA:67:TYR:CD1	3:AA:67:TYR:N	2.73	0.56
6:AD:16:TYR:HE1	48:A2:4227:U:C5	2.22	0.56
6:AD:232:THR:CG2	6:AD:235:MET:SD	2.94	0.56
7:AE:208:ILE:CD1	7:AE:209:PRO:HD3	2.32	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AF:176:ALA:O	8:AF:180:GLY:HA3	2.05	0.56
8:AF:225:THR:HG1	8:AF:231:GLY:HA3	1.69	0.56
16:AN:93:LYS:CD	48:A2:294:A:C2	2.89	0.56
19:AQ:34:PHE:HA	19:AQ:37:ARG:NH1	2.21	0.56
20:AR:95:TRP:CZ3	20:AR:130:ASN:OD1	2.59	0.56
20:AR:173:ARG:HG2	49:B1:910:G:P	2.46	0.56
21:AS:82:LEU:CD1	21:AS:126:ILE:HD13	2.36	0.56
21:AS:82:LEU:HD11	21:AS:109:CYS:SG	2.45	0.56
30:Ab:58:GLN:NE2	30:Ab:61:ASN:HB3	2.21	0.56
33:Ae:50:LYS:CD	48:A2:1865:C:OP1	2.53	0.56
33:Ae:104:SER:HB2	48:A2:2285:G:OP1	2.05	0.56
37:Ai:78:GLY:O	48:A2:278:G:H4'	2.05	0.56
43:Ao:50:GLY:CA	48:A2:3896:U:O2'	2.54	0.56
47:Au:57:SER:O	47:Au:58:THR:CB	2.53	0.56
47:Au:168:ALA:HB2	48:A2:3941:G:H4'	1.88	0.56
48:A2:133:C:N4	48:A2:134:G:H2'	2.20	0.56
48:A2:309:G:C5'	48:A2:310:U:P	2.91	0.56
48:A2:516:C:O5'	48:A2:516:C:H6	1.89	0.56
48:A2:681:A:H2'	48:A2:682:U:O4'	2.06	0.56
48:A2:905:G:N3	48:A2:905:G:C2'	2.69	0.56
48:A2:1225:G:N2	48:A2:1225:G:P	2.79	0.56
48:A2:1226:C:C6	48:A2:1226:C:P	2.97	0.56
48:A2:3726:G:N2	83:Bv:12:U:C4'	2.45	0.56
49:B1:216:C:O2'	49:B1:217:A:H8	1.88	0.56
49:B1:496:C:H5'	54:BE:29:PRO:HB3	1.87	0.56
49:B1:581:U:H5"	74:BY:65:GLY:N	2.21	0.56
49:B1:1349:G:H21	50:BA:112:ILE:HD11	1.71	0.56
49:B1:1679:A:N7	55:BF:60:ARG:HA	2.20	0.56
50:BA:85:ARG:HG2	50:BA:204:TYR:CB	2.35	0.56
50:BA:116:PHE:C	50:BA:116:PHE:HD1	2.14	0.56
55:BF:204:ARG:NH1	78:Bc:60:GLU:HB2	2.21	0.56
57:BH:87:PHE:CE2	57:BH:90:LYS:HD2	2.41	0.56
59:BJ:13:TYR:HH	59:BJ:44:TRP:HZ3	1.54	0.56
61:BL:30:LYS:CB	61:BL:33:LEU:HD13	2.32	0.56
64:BO:44:VAL:HG23	64:BO:81:VAL:HG11	1.87	0.56
68:BS:30:ILE:O	68:BS:31:THR:C	2.49	0.56
74:BY:44:LEU:HA	74:BY:47:MET:CE	2.36	0.56
82:Bg:44:LYS:HG3	82:Bg:56:GLN:HG3	1.88	0.56
83:Bv:16:U:O3'	83:Bv:17:C:H2'	2.05	0.56
3:AA:50:HIS:HB2	44:Ap:54:ILE:HD12	1.86	0.56
4:AB:244:THR:CG2	48:A2:4487:C:O2'	2.51	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AB:317:LEU:CD2	48:A2:4959:U:C5'	2.80	0.56
5:AC:150:LEU:CD2	46:At:71:ARG:CB	2.75	0.56
6:AD:232:THR:CB	6:AD:235:MET:SD	2.94	0.56
7:AE:123:ARG:HG3	7:AE:124:LYS:O	2.05	0.56
7:AE:178:PRO:HG2	7:AE:181:LEU:HB2	1.88	0.56
8:AF:20:LYS:O	8:AF:23:ARG:HB3	2.06	0.56
17:AO:9:LEU:HD23	17:AO:118:MET:HB2	1.88	0.56
17:AO:126:VAL:HG21	48:A2:4724:A:N7	2.21	0.56
18:AP:10:ASN:HD21	18:AP:13:LYS:HE2	1.71	0.56
20:AR:59:SER:OG	48:A2:4609:G:H4'	2.06	0.56
21:AS:1:MET:H3	21:AS:43:ARG:HH21	1.51	0.56
23:AU:48:LYS:HB2	23:AU:82:TYR:OH	2.05	0.56
23:AU:66:SER:HB2	23:AU:69:LYS:O	2.06	0.56
29:Aa:56:VAL:O	48:A2:4327:C:OP1	2.23	0.56
30:Ab:54:LEU:CD2	48:A2:1793:G:N2	2.69	0.56
34:Af:59:THR:OG1	34:Af:60:PRO:HD2	2.06	0.56
48:A2:1392:C:H3'	48:A2:1393:U:C5'	2.36	0.56
48:A2:1731:A:H2'	48:A2:1732:G:C8	2.41	0.56
49:B1:692:G:C2	49:B1:739:C:C2	2.93	0.56
50:BA:103:PHE:HE2	50:BA:136:GLU:CD	2.13	0.56
50:BA:105:PRO:HA	50:BA:136:GLU:OE2	2.04	0.56
51:BB:25:PHE:CZ	64:BO:53:ILE:HA	2.41	0.56
51:BB:70:SER:HB2	51:BB:82:ARG:O	2.06	0.56
55:BF:98:GLU:OE2	75:BZ:100:VAL:HB	2.05	0.56
63:BN:75:LEU:HD11	63:BN:81:ALA:HA	1.87	0.56
65:BP:118:GLU:O	68:BS:119:ALA:HA	2.06	0.56
66:BQ:108:ILE:HG23	66:BQ:109:LYS:N	2.19	0.56
68:BS:52:LEU:H	68:BS:52:LEU:CD1	1.95	0.56
72:BW:90:GLN:HG2	72:BW:113:HIS:CE1	2.41	0.56
5:AC:103:ALA:HB2	48:A2:1322:U:H1'	1.85	0.56
7:AE:99:ASP:OD2	7:AE:104:THR:HA	2.06	0.56
8:AF:69:ILE:CG2	8:AF:73:ARG:CZ	2.84	0.56
13:AK:57:LYS:O	13:AK:60:MET:N	2.39	0.56
14:AL:47:ALA:CB	14:AL:48:PRO:HD2	2.28	0.56
14:AL:103:ARG:HG3	37:Ai:25:ARG:HH12	1.71	0.56
15:AM:91:TRP:CZ2	48:A2:4827:U:O2'	2.52	0.56
16:AN:13:LYS:HE3	37:Ai:48:CYS:SG	2.46	0.56
19:AQ:2:GLY:N	48:A2:1878:A:H5'	2.20	0.56
20:AR:39:GLN:CD	48:A2:2688:C:H5"	2.32	0.56
20:AR:62:ARG:NH1	20:AR:62:ARG:HG3	2.20	0.56
23:AU:115:PHE:N	23:AU:115:PHE:CD1	2.72	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AY:5:PRO:O	48:A2:340:G:H4'	2.06	0.56
33:Ae:36:ARG:HD3	48:A2:1643:C:P	2.46	0.56
34:Af:59:THR:O	34:Af:61:GLY:N	2.39	0.56
35:Ag:5:LEU:HD13	35:Ag:5:LEU:H	1.71	0.56
46:At:87:ARG:O	46:At:91:SER:CB	2.53	0.56
48:A2:86:U:O4	48:A2:97:G:N3	2.38	0.56
48:A2:1989:U:C6	48:A2:1991:A:N7	2.74	0.56
48:A2:2858:A:O4'	48:A2:2860:A:C5'	2.54	0.56
48:A2:3576:C:O2'	48:A2:3577:U:H5"	2.06	0.56
49:B1:227:U:O2	49:B1:228:C:H5'	2.05	0.56
49:B1:309:G:O2'	49:B1:310:C:H5'	2.05	0.56
49:B1:929:G:H1'	77:Bb:68:GLY:H	1.71	0.56
49:B1:1351:G:H4'	50:BA:110:ASN:HB3	1.88	0.56
49:B1:1519:U:C2	49:B1:1623:A:C8	2.92	0.56
54:BE:100:ARG:HH12	54:BE:236:ILE:HD12	1.71	0.56
59:BJ:31:LEU:HD23	59:BJ:43:VAL:HG13	1.88	0.56
59:BJ:114:VAL:CG1	59:BJ:120:ALA:HB2	2.35	0.56
60:BK:47:LYS:O	60:BK:50:GLN:HG2	2.06	0.56
78:Bc:12:ALA:O	78:Bc:55:VAL:HA	2.06	0.56
1:A3:149:G:C1'	9:AG:61:ILE:CD1	2.81	0.55
4:AB:223:THR:HG21	48:A2:4586:A:H5"	1.88	0.55
5:AC:217:ILE:O	5:AC:219:LYS:N	2.39	0.55
7:AE:156:ARG:NH2	48:A2:4897:C:OP2	2.39	0.55
10:AH:128:MET:SD	10:AH:134:CYS:CB	2.94	0.55
14:AL:155:MET:CG	14:AL:158:ARG:NH2	2.69	0.55
15:AM:23:LYS:HE2	15:AM:45:VAL:HB	1.89	0.55
16:AN:148:THR:O	16:AN:151:ILE:HG22	2.06	0.55
16:AN:171:SER:O	48:A2:293:C:H4'	2.06	0.55
19:AQ:169:SER:HB2	19:AQ:174:PHE:CE2	2.41	0.55
20:AR:81:ARG:HG2	20:AR:88:ARG:NH1	2.22	0.55
23:AU:31:ASP:HB3	23:AU:33:ILE:HG12	1.88	0.55
23:AU:62:THR:O	23:AU:72:VAL:HA	2.05	0.55
27:AY:42:TYR:N	27:AY:42:TYR:CD1	2.73	0.55
34:Af:106:TYR:CB	34:Af:107:PRO:HD2	2.36	0.55
35:Ag:44:SER:HB3	35:Ag:48:VAL:HG12	1.88	0.55
48:A2:31:U:H3'	48:A2:32:G:C8	2.41	0.55
48:A2:132:G:C2	48:A2:135:G:C6	2.94	0.55
48:A2:445:C:N4	48:A2:1278:C:N3	2.55	0.55
48:A2:713:G:N2	48:A2:934:C:O2	2.39	0.55
48:A2:1260:G:C2'	48:A2:1261:C:H5'	2.36	0.55
48:A2:2533:U:H5'	48:A2:2534:G:OP1	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:3711:G:H2'	48:A2:3712:C:C6	2.41	0.55
48:A2:4080:U:H2'	48:A2:4081:C:O4'	2.06	0.55
48:A2:4714:U:C6	48:A2:4714:U:C5'	2.86	0.55
49:B1:22:A:O3'	59:BJ:15:THR:CG2	2.54	0.55
49:B1:168:C:H4'	56:BG:131:ARG:CB	2.36	0.55
49:B1:562:U:C6	49:B1:562:U:C3'	2.89	0.55
49:B1:655:A:H4'	49:B1:656:G:H3'	1.88	0.55
49:B1:1399:C:H5'	82:Bg:100:ARG:CZ	2.36	0.55
49:B1:1679:A:C6	55:BF:59:LYS:C	2.85	0.55
51:BB:44:ILE:HD12	51:BB:74:LEU:HD21	1.88	0.55
51:BB:77:ASP:O	51:BB:78:GLU:CD	2.48	0.55
59:BJ:172:ARG:HG3	59:BJ:173:VAL:N	2.21	0.55
68:BS:26:ILE:HD13	68:BS:59:LEU:HD12	1.87	0.55
69:BT:41:LYS:HD3	69:BT:43:LYS:CG	2.33	0.55
5:AC:169:LEU:HD13	48:A2:215:A:H61	1.71	0.55
7:AE:232:ILE:HG22	7:AE:236:GLU:CB	2.37	0.55
7:AE:274:VAL:N	48:A2:4839:U:O2'	2.39	0.55
9:AG:111:LYS:HZ3	48:A2:141:G:H5'	1.69	0.55
9:AG:164:ILE:HG22	9:AG:168:VAL:CG1	2.36	0.55
19:AQ:17:GLU:OE2	48:A2:2248:C:OP2	2.24	0.55
19:AQ:36:ALA:HB1	19:AQ:45:GLN:NE2	2.20	0.55
24:AV:13:LYS:O	48:A2:4579:G:O2'	2.22	0.55
36:Ah:2:ALA:O	36:Ah:3:LYS:HB2	2.06	0.55
43:Ao:45:GLN:HA	43:Ao:52:THR:CG2	2.36	0.55
45:Aq:26:SER:C	45:Aq:28:LEU:H	2.14	0.55
45:Aq:26:SER:O	45:Aq:30:PRO:HD2	2.05	0.55
48:A2:949:C:H5'	48:A2:950:G:H5"	1.86	0.55
48:A2:1741:G:N2	48:A2:1742:G:N9	2.54	0.55
48:A2:1940:U:OP1	48:A2:1941:A:H3'	2.06	0.55
48:A2:1979:A:H2	48:A2:2000:C:HO2'	1.52	0.55
48:A2:2064:C:H2'	48:A2:2065:C:O4'	2.07	0.55
48:A2:3671:C:OP1	49:B1:1052:A:C4'	2.44	0.55
49:B1:1016:U:O2'	63:BN:61:ALA:CB	2.54	0.55
49:B1:1417:C:O4'	69:BT:3:GLY:N	2.39	0.55
50:BA:7:VAL:HG21	71:BV:42:VAL:C	2.31	0.55
51:BB:71:LEU:O	51:BB:72:ALA:HB3	2.05	0.55
52:BC:65:LYS:HA	52:BC:68:ARG:CZ	2.37	0.55
52:BC:256:TRP:CZ2	72:BW:68:ARG:CG	2.89	0.55
54:BE:19:MET:SD	54:BE:108:ARG:HD3	2.46	0.55
54:BE:180:LEU:HD12	54:BE:193:GLY:O	2.07	0.55
59:BJ:124:HIS:CD2	80:Be:35:ARG:HG3	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:BL:82:MET:HE3	61:BL:85:THR:CG2	2.36	0.55
65:BP:14:LYS:HE3	65:BP:22:LEU:HB3	1.88	0.55
66:BQ:12:VAL:CG1	66:BQ:90:LYS:HB2	2.35	0.55
69:BT:12:GLN:O	69:BT:15:VAL:HG12	2.05	0.55
80:Be:8:ARG:O	80:Be:9:ALA:HB2	2.05	0.55
4:AB:392:LEU:HD22	4:AB:394:LYS:HE2	1.89	0.55
10:AH:8:GLN:HG3	10:AH:74:CYS:HB3	1.78	0.55
13:AK:37:SER:HA	48:A2:1952:C:HO2'	0.73	0.55
13:AK:52:VAL:HG21	13:AK:89:VAL:C	2.31	0.55
14:AL:178:ALA:O	14:AL:180:ALA:N	2.39	0.55
15:AM:2:VAL:HG12	15:AM:3:PHE:CE2	2.41	0.55
17:AO:147:TRP:CE3	17:AO:150:GLN:HB2	2.42	0.55
19:AQ:158:THR:CB	19:AQ:159:PRO:HD3	2.37	0.55
20:AR:18:GLY:HA3	48:A2:2801:G:OP1	2.06	0.55
20:AR:62:ARG:HH11	20:AR:62:ARG:CG	2.18	0.55
21:AS:94:TYR:HB3	48:A2:1934:U:OP1	2.06	0.55
22:AT:118:GLU:OE1	22:AT:122:LYS:HG3	2.06	0.55
28:AZ:31:ASP:OD1	28:AZ:31:ASP:N	2.36	0.55
33:Ae:57:ASN:O	48:A2:2298:C:H1'	2.05	0.55
36:Ah:27:GLU:O	36:Ah:31:LEU:HD13	2.06	0.55
44:Ap:55:TRP:CD1	44:Ap:66:GLY:HA3	2.42	0.55
45:Aq:42:VAL:HG13	45:Aq:69:ALA:HB3	1.88	0.55
46:At:51:VAL:HG22	46:At:113:ARG:HD2	1.84	0.55
48:A2:70:A:C5'	48:A2:71:C:C4	2.89	0.55
48:A2:287:G:H22	48:A2:309:G:N2	2.04	0.55
48:A2:449:C:H2'	48:A2:450:C:O4'	2.06	0.55
48:A2:1224:C:H3'	48:A2:1225:G:C2	2.41	0.55
48:A2:2867:G:O4'	48:A2:3589:C:H1'	2.06	0.55
49:B1:387:C:OP2	58:BI:10:LYS:NZ	2.38	0.55
49:B1:1399:C:P	49:B1:1399:C:C6	2.98	0.55
49:B1:1467:C:OP2	67:BR:3:ARG:CZ	2.55	0.55
49:B1:1487:A:OP1	52:BC:121:ARG:NH2	2.37	0.55
49:B1:1600:G:C5'	75:BZ:43:LYS:HG3	2.36	0.55
50:BA:34:MET:HE1	50:BA:154:LEU:HD21	1.89	0.55
50:BA:114:ALA:O	50:BA:116:PHE:N	2.28	0.55
50:BA:204:TYR:CE1	50:BA:205:ARG:O	2.60	0.55
54:BE:114:ILE:CG1	54:BE:115:THR:H	2.18	0.55
57:BH:100:ILE:HD13	57:BH:122:LEU:HD12	1.89	0.55
58:BI:65:PHE:O	58:BI:73:THR:HG23	2.07	0.55
58:BI:150:ASP:OD1	58:BI:154:LYS:CD	2.54	0.55
61:BL:30:LYS:HB2	61:BL:33:LEU:HD22	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:BR:42:PRO:CD	67:BR:46:LEU:CD2	2.73	0.55
68:BS:46:ARG:CZ	69:BT:37:VAL:HG21	2.36	0.55
70:BU:24:LEU:HD13	70:BU:106:ILE:HD11	1.88	0.55
73:BX:135:LYS:O	73:BX:137:LYS:HD2	2.06	0.55
74:BY:87:PRO:HD2	74:BY:90:ARG:NE	2.21	0.55
2:A4:3:C:OP2	2:A4:3:C:C5	2.60	0.55
2:A4:62:U:OP1	6:AD:279:ARG:NH1	2.39	0.55
4:AB:81:THR:OG1	4:AB:207:VAL:HG21	2.05	0.55
5:AC:221:PHE:C	5:AC:223:ASN:H	2.14	0.55
5:AC:228:THR:HG21	5:AC:239:LYS:HG2	1.88	0.55
6:AD:235:MET:O	6:AD:239:MET:HB3	2.04	0.55
7:AE:140:LEU:HB3	7:AE:144:ILE:HD11	1.84	0.55
8:AF:183:GLY:O	8:AF:184:ILE:CG1	2.54	0.55
11:AI:52:MET:O	11:AI:134:VAL:HA	2.06	0.55
12:AJ:15:LEU:HB2	12:AJ:165:TRP:CD1	2.42	0.55
22:AT:3:ASN:ND2	48:A2:4180:U:OP2	2.39	0.55
33:Ae:57:ASN:O	48:A2:2298:C:O2	2.23	0.55
35:Ag:13:TYR:CD1	48:A2:2492:A:C2	2.94	0.55
37:Ai:73:ILE:O	37:Ai:77:VAL:HG22	2.07	0.55
38:Aj:34:CYS:HB3	38:Aj:38:GLY:H	1.71	0.55
46:At:98:ARG:HD2	48:A2:951:A:O3’	2.06	0.55
47:Au:60:ARG:CB	47:Au:61:PRO:CD	2.85	0.55
47:Au:93:LEU:HD21	47:Au:103:LEU:HD11	1.87	0.55
47:Au:157:PHE:HA	47:Au:165:LEU:HD21	1.89	0.55
48:A2:31:U:H2’	48:A2:32:G:C1’	2.37	0.55
48:A2:949:C:H3’	48:A2:950:G:H5”	1.89	0.55
48:A2:1599:G:H1’	48:A2:2492:A:N6	2.21	0.55
48:A2:2003:C:C3’	48:A2:2004:C:H5’	2.37	0.55
48:A2:4946:U:H1’	48:A2:4947:U:O5’	2.05	0.55
49:B1:164:A:H2’	49:B1:165:G:O4’	2.06	0.55
49:B1:441:C:H2’	49:B1:442:C:C6	2.41	0.55
49:B1:495:U:O2’	54:BE:27:PHE:O	2.24	0.55
49:B1:872:A:C2	49:B1:915:G:O6	2.58	0.55
49:B1:1587:G:O6	69:BT:67:ARG:CG	2.53	0.55
49:B1:1665:G:OP1	69:BT:88:MET:CG	2.52	0.55
55:BF:143:PRO:HD3	78:Bc:56:LEU:HD13	1.88	0.55
56:BG:145:PHE:CG	56:BG:156:TYR:HB3	2.41	0.55
56:BG:211:LYS:CG	56:BG:215:LYS:HE3	2.24	0.55
56:BG:219:GLU:HA	56:BG:219:GLU:OE1	2.06	0.55
64:BO:61:LYS:CE	64:BO:76:LEU:HB3	2.36	0.55
64:BO:144:GLY:C	64:BO:148:GLY:HA2	2.31	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:BS:134:GLN:HG3	68:BS:135:HIS:H	1.72	0.55
83:Bw:2:C:H6	83:Bw:2:C:C5'	2.19	0.55
1:A3:16:G:OP2	1:A3:16:G:C8	2.59	0.55
2:A4:7:G:O5'	6:AD:33:ARG:NH1	2.40	0.55
7:AE:136:HIS:HE1	48:A2:701:G:N3	2.04	0.55
14:AL:40:GLN:HB3	48:A2:182:C:N4	2.21	0.55
16:AN:6:TYR:CZ	37:Ai:40:VAL:HG22	2.41	0.55
19:AQ:16:LYS:O	19:AQ:52:PHE:CG	2.57	0.55
24:AV:65:VAL:O	24:AV:73:ARG:HG2	2.07	0.55
33:Ae:8:VAL:HG13	48:A2:693:U:H4'	1.87	0.55
39:Ak:11:PHE:C	39:Ak:11:PHE:CD1	2.85	0.55
45:Aq:58:ILE:CD1	45:Aq:73:VAL:HB	2.35	0.55
47:Au:167:VAL:HA	48:A2:3940:G:O2'	2.07	0.55
48:A2:651:C:H2'	48:A2:652:C:O4'	2.06	0.55
48:A2:1260:G:C2'	48:A2:1261:C:C5'	2.83	0.55
48:A2:1966:G:N2	48:A2:1985:U:C5	2.74	0.55
48:A2:2609:U:O2'	48:A2:2611:U:C4'	2.54	0.55
48:A2:3731:A:N6	49:B1:1825:A:N3	2.54	0.55
48:A2:4031:G:C2	48:A2:4032:A:C6	2.94	0.55
49:B1:23:G:O5'	59:BJ:15:THR:HG21	2.07	0.55
49:B1:59:U:C4'	49:B1:501:C:H4'	2.36	0.55
49:B1:1159:G:C1'	72:BW:4:MET:SD	2.94	0.55
49:B1:1256:G:C2	79:Bd:40:ARG:CG	2.89	0.55
49:B1:1334:G:H5'	53:BD:140:GLY:HA2	1.88	0.55
49:B1:1356:G:H2'	49:B1:1357:A:C8	2.42	0.55
50:BA:111:GLN:HE22	52:BC:64:THR:CG2	2.20	0.55
52:BC:62:PRO:HD3	52:BC:71:LYS:NZ	2.21	0.55
52:BC:87:PRO:HB3	71:BV:29:HIS:CE1	2.41	0.55
53:BD:209:SER:O	67:BR:39:ALA:HB1	2.07	0.55
55:BF:171:GLU:OE2	75:BZ:72:VAL:CG2	2.54	0.55
57:BH:157:HIS:HD1	57:BH:190:PRO:HG3	1.72	0.55
65:BP:34:MET:CE	65:BP:41:GLN:O	2.52	0.55
67:BR:34:VAL:O	67:BR:38:ILE:CG1	2.55	0.55
69:BT:42:HIS:CD2	69:BT:42:HIS:N	2.73	0.55
73:BX:87:ASN:HB3	73:BX:134:TYR:CZ	2.42	0.55
74:BY:97:TYR:CD1	74:BY:97:TYR:C	2.85	0.55
2:A4:23:A:N3	2:A4:118:C:O2'	2.40	0.55
8:AF:115:ARG:HB3	19:AQ:4:ASP:CB	2.37	0.55
10:AH:23:ARG:HD3	48:A2:4725:U:O2'	2.06	0.55
12:AJ:99:PHE:HB3	12:AJ:159:LYS:HE2	1.86	0.55
13:AK:38:LYS:O	13:AK:42:GLN:HB2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AL:50:PRO:HB3	14:AL:149:GLN:HB2	1.88	0.55
17:AO:77:SER:HB2	17:AO:104:VAL:HG22	1.87	0.55
17:AO:87:MET:HE2	48:A2:1894:C:H1'	1.89	0.55
25:AW:72:THR:CB	49:B1:1783:C:C4	2.90	0.55
29:Aa:35:ALA:CB	48:A2:38:A:H5"	2.36	0.55
33:Ae:41:ILE:HD12	48:A2:1302:U:O4	2.05	0.55
34:Af:106:TYR:HB2	34:Af:107:PRO:HD2	1.89	0.55
36:Ah:6:ALA:O	36:Ah:9:LEU:HB2	2.07	0.55
39:Ak:20:ALA:HB2	39:Ak:38:CYS:CB	2.35	0.55
48:A2:1749:A:O5'	48:A2:1749:A:H8	1.90	0.55
48:A2:2498:U:O2'	48:A2:2509:U:O2	2.19	0.55
48:A2:2732:G:C6	48:A2:2733:G:C2	2.94	0.55
48:A2:3744:U:N3	48:A2:3747:G:N2	2.55	0.55
49:B1:688:U:OP2	57:BH:123:THR:OG1	2.15	0.55
49:B1:1033:G:OP1	63:BN:109:LYS:NZ	2.33	0.55
49:B1:1274:G:H5'	60:BK:47:LYS:HE3	1.89	0.55
49:B1:1619:A:H4'	65:BP:44:ARG:HH12	1.71	0.55
49:B1:1679:A:N7	55:BF:60:ARG:CA	2.70	0.55
51:BB:75:GLN:CG	51:BB:189:ILE:HG23	2.36	0.55
53:BD:72:VAL:CG1	60:BK:68:TYR:CD1	2.90	0.55
55:BF:20:PHE:CE2	55:BF:97:PHE:CD2	2.95	0.55
58:BI:26:LYS:O	58:BI:29:LEU:HG	2.07	0.55
58:BI:188:TYR:OH	58:BI:194:GLU:OE2	2.24	0.55
59:BJ:129:LEU:HB3	59:BJ:135:ILE:HD11	1.87	0.55
62:BM:87:GLU:HG3	62:BM:88:TRP:CE3	2.42	0.55
65:BP:41:GLN:HE21	65:BP:84:ILE:HD12	1.72	0.55
73:BX:14:ARG:HG3	73:BX:15:SER:N	2.22	0.55
79:Bd:41:GLN:HE21	79:Bd:41:GLN:H	1.49	0.55
80:Be:49:PHE:CE1	80:Be:51:LYS:HG3	2.41	0.55
5:AC:211:TYR:CD1	5:AC:211:TYR:N	2.75	0.55
6:AD:41:LYS:HZ1	22:AT:93:ILE:HG21	1.72	0.55
7:AE:115:TYR:CD1	7:AE:115:TYR:C	2.85	0.55
7:AE:153:LEU:HD21	7:AE:195:ILE:CD1	2.35	0.55
7:AE:224:LYS:N	7:AE:224:LYS:HD2	2.21	0.55
9:AG:73:ARG:HA	9:AG:73:ARG:NE	2.21	0.55
10:AH:129:ARG:NH2	48:A2:4666:C:H4'	2.21	0.55
13:AK:55:MET:HB3	13:AK:87:GLY:HA2	1.88	0.55
17:AO:22:ILE:HG23	21:AS:166:ARG:HH21	1.72	0.55
20:AR:132:PHE:CD2	20:AR:138:LEU:HD23	2.41	0.55
24:AV:96:LEU:CA	25:AW:20:ARG:O	2.52	0.55
26:AX:114:LYS:O	26:AX:118:ASP:HA	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Ac:92:CYS:SG	48:A2:2653:A:N7	2.79	0.55
35:Ag:78:TYR:CE2	48:A2:2731:G:H4'	2.42	0.55
45:Aq:109:ILE:O	45:Aq:113:ALA:N	2.39	0.55
48:A2:1363:G:H4'	48:A2:1364:U:C6	2.42	0.55
48:A2:2536:G:O2'	48:A2:2537:C:H5'	2.06	0.55
48:A2:2685:G:C8	48:A2:2685:G:C4'	2.89	0.55
48:A2:2727:C:O2	48:A2:2727:C:O5'	2.24	0.55
48:A2:4194:U:H4'	48:A2:4195:A:O4'	2.06	0.55
48:A2:4663:A:H2'	48:A2:4664:G:H5'	1.88	0.55
48:A2:4896:A:H8	48:A2:4896:A:O5'	1.90	0.55
48:A2:5024:U:H2'	48:A2:5025:U:C6	2.42	0.55
49:B1:193:C:O5'	49:B1:193:C:H6	1.89	0.55
49:B1:1104:G:C2	49:B1:1129:G:C2	2.95	0.55
51:BB:40:ASN:O	51:BB:42:ARG:HG3	2.07	0.55
52:BC:253:PRO:CA	52:BC:256:TRP:CD1	2.87	0.55
63:BN:63:VAL:HG21	63:BN:71:ILE:CG2	2.37	0.55
64:BO:28:PHE:HA	64:BO:92:ALA:O	2.07	0.55
65:BP:30:TYR:CA	65:BP:33:LEU:HG	2.37	0.55
67:BR:8:THR:HG23	67:BR:9:VAL:N	2.22	0.55
67:BR:99:ASP:CB	67:BR:102:THR:HG22	2.36	0.55
67:BR:112:GLY:O	67:BR:113:SER:CB	2.55	0.55
70:BU:21:ARG:HB3	70:BU:90:ASP:OD1	2.07	0.55
80:Be:29:THR:C	80:Be:32:ALA:HB3	2.32	0.55
4:AB:150:PHE:O	4:AB:153:MET:HB3	2.07	0.55
4:AB:302:ASN:HB3	4:AB:314:ILE:HG13	1.89	0.55
4:AB:305:THR:HB	4:AB:365:LEU:O	2.06	0.55
9:AG:70:LEU:HD13	9:AG:70:LEU:C	2.31	0.55
11:AI:49:CYS:HA	11:AI:138:ILE:O	2.07	0.55
12:AJ:63:ARG:HD2	12:AJ:66:GLU:OE2	2.07	0.55
13:AK:52:VAL:CG2	13:AK:90:PHE:O	2.54	0.55
16:AN:201:HIS:CG	48:A2:1343:G:P	3.00	0.55
19:AQ:17:GLU:OE2	48:A2:2248:C:C5'	2.47	0.55
22:AT:126:VAL:HG23	22:AT:127:GLN:N	2.21	0.55
24:AV:123:LYS:HB2	24:AV:140:ALA:HB2	1.88	0.55
26:AX:56:ARG:HH22	26:AX:62:ARG:HH22	1.53	0.55
30:Ab:54:LEU:HD23	48:A2:1794:C:O2	2.07	0.55
31:Ac:20:LEU:HD21	63:BN:44:GLY:HA3	1.89	0.55
45:Aq:46:ILE:HD11	45:Aq:71:ILE:CG2	2.37	0.55
46:At:88:ALA:HA	46:At:91:SER:OG	2.07	0.55
48:A2:1739:U:N3	48:A2:1740:G:C5	2.75	0.55
48:A2:2331:U:H2'	48:A2:2332:U:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:2854:C:H4'	48:A2:2855:G:C4	2.41	0.55
49:B1:104:A:H4'	58:BI:18:ARG:NH2	2.21	0.55
49:B1:171:A:H4'	56:BG:177:GLN:OE1	2.06	0.55
49:B1:238:C:N4	49:B1:283:G:H1	2.05	0.55
49:B1:1416:C:O4'	69:BT:132:ASP:OD2	2.25	0.55
49:B1:1719:A:H2'	49:B1:1720:U:H5'	1.89	0.55
54:BE:86:PHE:CE2	54:BE:184:ILE:HG21	2.37	0.55
54:BE:149:TYR:N	54:BE:150:PRO:HD3	2.22	0.55
56:BG:216:ARG:HG3	56:BG:216:ARG:NH1	2.22	0.55
58:BI:117:TYR:HB3	58:BI:151:GLU:OE1	2.07	0.55
59:BJ:101:LYS:CE	59:BJ:103:GLU:HB2	2.35	0.55
59:BJ:138:ARG:NH2	59:BJ:153:SER:HB3	2.22	0.55
68:BS:106:LYS:HE2	68:BS:106:LYS:HA	1.89	0.55
72:BW:68:ARG:O	72:BW:68:ARG:HG3	2.06	0.55
3:AA:103:PRO:HA	3:AA:162:ASN:O	2.07	0.55
4:AB:182:GLU:OE1	48:A2:4543:G:H4'	2.07	0.55
4:AB:356:LYS:C	4:AB:358:ARG:H	2.14	0.55
6:AD:268:ARG:HD2	48:A2:1159:C:OP1	2.07	0.55
7:AE:115:TYR:C	7:AE:116:TYR:CD1	2.85	0.55
8:AF:21:LYS:HA	8:AF:24:ASN:HB2	1.87	0.55
9:AG:43:GLN:HB2	48:A2:4093:G:N2	2.22	0.55
13:AK:14:PHE:CE2	48:A2:1941:A:N7	2.72	0.55
14:AL:172:GLU:O	14:AL:175:ASN:HB3	2.07	0.55
15:AM:2:VAL:O	15:AM:3:PHE:HB2	2.07	0.55
15:AM:97:ALA:O	17:AO:198:THR:CG2	2.50	0.55
15:AM:101:LYS:HG3	15:AM:104:MET:HE3	1.89	0.55
31:Ac:103:ASP:O	31:Ac:105:ILE:N	2.40	0.55
33:Ae:4:LEU:HD12	33:Ae:121:ARG:CA	2.36	0.55
48:A2:205:A:C5	48:A2:229:G:C5	2.94	0.55
48:A2:452:C:H2'	48:A2:453:C:O4'	2.07	0.55
48:A2:669:G:N2	48:A2:670:C:C2	2.75	0.55
48:A2:674:C:H2'	48:A2:675:G:O4'	2.07	0.55
48:A2:959:C:N3	48:A2:1266:G:C2	2.75	0.55
48:A2:1258:G:N2	48:A2:1259:C:C2	2.73	0.55
48:A2:1389:G:H2'	48:A2:1390:C:OP1	2.07	0.55
48:A2:1585:C:H5'	48:A2:2777:A:O2'	2.06	0.55
48:A2:2805:U:H5'	48:A2:2805:U:O2	2.07	0.55
48:A2:3877:A:O4'	48:A2:4410:G:H1'	2.06	0.55
49:B1:78:C:O2'	56:BG:175:LYS:HG2	2.07	0.55
49:B1:587:A:N3	49:B1:592:C:N4	2.55	0.55
49:B1:1594:A:P	75:BZ:104:ARG:H	2.30	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1600:G:H5”	75:BZ:43:LYS:CE	2.37	0.55
50:BA:204:TYR:CD1	50:BA:205:ARG:N	2.73	0.55
50:BA:206:ASP:HB3	50:BA:207:PRO:CD	2.37	0.55
64:BO:146:ARG:HD2	76:Ba:29:CYS:SG	2.47	0.55
74:BY:99:LYS:HE3	74:BY:102:THR:HB	1.87	0.55
77:Bb:75:GLU:HG3	77:Bb:76:GLY:H	1.72	0.55
79:Bd:38:MET:HG3	79:Bd:43:PHE:CG	2.42	0.55
79:Bd:39:CYS:HB3	79:Bd:41:GLN:HE22	1.68	0.55
2:A4:95:C:C5’	8:AF:229:GLU:OE2	2.54	0.55
3:AA:22:HIS:CE1	48:A2:2721:G:H4’	2.42	0.55
5:AC:52:TYR:CE2	48:A2:344:C:C4’	2.88	0.55
12:AJ:111:GLU:CB	68:BS:14:ARG:NH2	2.64	0.55
16:AN:84:PRO:HA	16:AN:87:HIS:HD2	1.69	0.55
17:AO:167:HIS:CE1	48:A2:4719:C:N4	2.75	0.55
20:AR:60:ARG:C	20:AR:62:ARG:N	2.62	0.55
24:AV:45:ILE:HD13	24:AV:53:PRO:CA	2.37	0.55
28:AZ:122:TYR:C	28:AZ:122:TYR:CD1	2.85	0.55
29:Aa:94:LYS:CA	29:Aa:94:LYS:CE	2.85	0.55
47:Au:93:LEU:CD2	47:Au:103:LEU:HD11	2.36	0.55
48:A2:7:C:O2’	48:A2:8:U:O5’	2.25	0.55
48:A2:227:G:H8	48:A2:227:G:O5’	1.88	0.55
48:A2:290:A:O5’	48:A2:290:A:H8	1.89	0.55
48:A2:465:A:H62	48:A2:677:G:N2	2.04	0.55
48:A2:927:C:C6	48:A2:927:C:O5’	2.60	0.55
48:A2:2546:G:H2’	48:A2:2547:C:C6	2.42	0.55
48:A2:3710:C:O2’	48:A2:3711:G:H5’	2.06	0.55
49:B1:113:G:H4’	49:B1:114:G:OP2	2.07	0.55
49:B1:580:U:O2’	74:BY:62:THR:HG22	2.06	0.55
49:B1:907:G:C6	49:B1:908:A:C6	2.95	0.55
49:B1:961:G:H4’	84:Bx:42:U:O2	2.06	0.55
49:B1:1278:A:OP1	60:BK:55:ARG:NE	2.39	0.55
49:B1:1310:U:C1’	81:Bf:142:GLY:HA3	2.36	0.55
49:B1:1625:U:C4	49:B1:1626:C:C5	2.94	0.55
50:BA:202:TYR:N	50:BA:202:TYR:CD1	2.73	0.55
56:BG:7:PHE:CE2	56:BG:124:LEU:HB3	2.42	0.55
64:BO:83:GLN:HE22	64:BO:87:GLU:CG	2.20	0.55
66:BQ:13:PHE:HE2	66:BQ:15:ARG:HH12	1.53	0.55
67:BR:19:LYS:C	67:BR:20:TYR:CD1	2.85	0.55
80:Be:33:LYS:HG3	80:Be:36:MET:CE	2.36	0.55
80:Be:56:ASN:O	80:Be:57:ALA:HB2	2.05	0.55
2:A4:32:A:H8	2:A4:32:A:OP2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AD:36:LEU:CD2	48:A2:4287:A:H1'	2.34	0.54
6:AD:232:THR:HG21	6:AD:235:MET:HE2	1.89	0.54
14:AL:89:LYS:HZ2	36:Ah:110:LYS:HG2	1.72	0.54
15:AM:4:ARG:NH1	48:A2:4726:A:N6	2.55	0.54
16:AN:146:PRO:HA	16:AN:149:GLN:CD	2.32	0.54
24:AV:43:LYS:HE3	24:AV:60:MET:CE	2.33	0.54
25:AW:64:SER:O	25:AW:67:ILE:HG12	2.08	0.54
25:AW:117:LYS:HA	49:B1:327:G:OP1	2.07	0.54
26:AX:91:GLU:HG3	26:AX:147:LEU:HD11	1.88	0.54
28:AZ:10:VAL:HG21	28:AZ:87:VAL:HG23	1.89	0.54
29:Aa:91:ALA:CB	29:Aa:120:GLN:CB	2.82	0.54
35:Ag:5:LEU:C	35:Ag:5:LEU:HD22	2.32	0.54
46:At:61:VAL:O	46:At:61:VAL:HG23	2.06	0.54
47:Au:28:PHE:CD1	48:A2:3945:G:OP1	2.60	0.54
47:Au:212:LYS:HE2	47:Au:214:GLN:OE1	2.07	0.54
48:A2:121:A:N3	48:A2:121:A:C2'	2.68	0.54
48:A2:352:C:H2'	48:A2:352:C:O2	2.07	0.54
48:A2:1257:A:O2'	48:A2:1258:G:O4'	2.22	0.54
48:A2:1479:A:H3'	48:A2:1480:G:H5"	1.89	0.54
48:A2:2004:C:C4	48:A2:2005:G:C2	2.95	0.54
48:A2:2640:U:C2	61:BL:158:PHE:CE2	2.95	0.54
48:A2:3585:G:C6	48:A2:3588:G:N1	2.75	0.54
49:B1:171:A:H4'	56:BG:177:GLN:HE22	1.71	0.54
49:B1:296:U:O2'	54:BE:131:VAL:HG23	2.05	0.54
49:B1:618:C:P	73:BX:86:PRO:O	2.65	0.54
49:B1:628:A:H3'	49:B1:629:A:C5'	2.37	0.54
49:B1:1142:G:OP2	52:BC:187:ARG:NH1	2.40	0.54
49:B1:1390:U:H1'	53:BD:162:ASP:OD1	2.07	0.54
49:B1:1867:U:O2'	76:Ba:38:LYS:HB3	2.05	0.54
54:BE:85:GLY:O	54:BE:88:ASP:HB2	2.07	0.54
55:BF:153:LEU:HD22	55:BF:192:LYS:HG3	1.89	0.54
59:BJ:136:ARG:HB3	59:BJ:158:ASP:C	2.27	0.54
71:BV:12:TYR:C	71:BV:12:TYR:CD1	2.85	0.54
77:Bb:33:MET:HE3	77:Bb:79:PHE:CB	2.37	0.54
83:Bv:47:U:H3'	83:Bv:48:C:C5'	2.36	0.54
83:Bv:72:C:H3'	83:Bv:72:C:C6	2.42	0.54
4:AB:45:ALA:O	4:AB:46:PHE:HD1	1.89	0.54
4:AB:391:PRO:HD2	25:AW:63:GLN:HE22	1.72	0.54
5:AC:196:MET:CB	48:A2:346:G:O6	2.55	0.54
8:AF:184:ILE:HG22	8:AF:189:ASP:CA	2.37	0.54
12:AJ:24:ILE:HD12	12:AJ:40:LEU:HG	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AK:48:ARG:HH12	45:Aq:122:ALA:N	2.04	0.54
14:AL:63:THR:CA	48:A2:71:C:O2	2.55	0.54
17:AO:167:HIS:ND1	48:A2:4719:C:N4	2.56	0.54
20:AR:24:LEU:HD22	20:AR:25:ASP:N	2.17	0.54
25:AW:82:ILE:O	25:AW:82:ILE:CG2	2.55	0.54
34:Af:34:TYR:CD1	48:A2:1900:G:C2	2.94	0.54
47:Au:68:LEU:CD2	47:Au:85:MET:CB	2.86	0.54
47:Au:160:LYS:CG	47:Au:161:LYS:H	2.04	0.54
47:Au:207:LYS:CG	47:Au:213:PRO:CA	2.85	0.54
47:Au:210:MET:SD	48:A2:3945:G:H4'	2.47	0.54
48:A2:126:C:H6	48:A2:126:C:O5'	1.90	0.54
48:A2:196:G:N2	48:A2:231:G:C6	2.74	0.54
48:A2:1878:A:H3'	48:A2:1878:A:N3	2.21	0.54
48:A2:1988:G:O2'	48:A2:1989:U:O2	2.23	0.54
48:A2:4089:U:P	48:A2:4089:U:H6	2.30	0.54
49:B1:14:C:OP2	52:BC:232:THR:HG21	2.07	0.54
49:B1:168:C:C4'	56:BG:131:ARG:CB	2.85	0.54
49:B1:612:U:H1'	80:Be:12:VAL:HG22	1.89	0.54
49:B1:1105:G:N2	49:B1:1106:C:C1'	2.70	0.54
49:B1:1397:U:O3'	49:B1:1398:G:N3	2.40	0.54
49:B1:1644:C:O2'	66:BQ:139:ALA:HA	2.07	0.54
49:B1:1692:U:H2'	49:B1:1693:G:C8	2.42	0.54
50:BA:40:LYS:CD	67:BR:101:ASP:OD2	2.54	0.54
50:BA:204:TYR:O	50:BA:205:ARG:HG2	2.06	0.54
50:BA:206:ASP:CB	50:BA:207:PRO:CD	2.85	0.54
54:BE:115:THR:HB	54:BE:118:GLU:OE1	2.08	0.54
54:BE:139:LEU:CB	54:BE:150:PRO:HB3	2.37	0.54
56:BG:7:PHE:CE1	56:BG:124:LEU:HD12	2.43	0.54
61:BL:55:TYR:CZ	61:BL:116:CYS:HB3	2.42	0.54
63:BN:25:TRP:C	63:BN:25:TRP:CD1	2.86	0.54
64:BO:141:ARG:HE	76:Ba:22:ARG:NH2	2.06	0.54
75:BZ:79:ILE:HG22	75:BZ:83:LEU:HB3	1.88	0.54
76:Ba:88:SER:N	76:Ba:91:ALA:CB	2.70	0.54
82:Bg:101:PHE:CE2	82:Bg:136:GLY:HA2	2.41	0.54
1:A3:94:G:C4	38:Aj:82:THR:O	2.60	0.54
1:A3:96:C:OP1	36:Ah:66:LYS:HG3	2.08	0.54
2:A4:43:U:H4'	12:AJ:143:ASP:O	2.08	0.54
4:AB:2:SER:OG	48:A2:4478:G:C8	2.61	0.54
5:AC:52:TYR:C	5:AC:52:TYR:CD1	2.85	0.54
5:AC:77:PRO:CD	5:AC:91:ALA:HB3	2.37	0.54
9:AG:46:GLN:HB3	9:AG:49:ARG:HH12	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AL:8:MET:HE1	48:A2:1327:C:H4'	1.90	0.54
14:AL:57:PRO:HG3	14:AL:75:GLY:C	2.32	0.54
15:AM:65:PRO:HB2	48:A2:907:C:O2'	2.08	0.54
19:AQ:79:THR:HG22	19:AQ:99:LYS:CD	2.37	0.54
21:AS:127:MET:SD	22:AT:155:PRO:HA	2.47	0.54
28:AZ:122:TYR:C	28:AZ:122:TYR:HD1	2.15	0.54
29:Aa:21:ARG:O	29:Aa:24:LYS:HE2	2.08	0.54
33:Ae:4:LEU:HD12	33:Ae:121:ARG:N	2.20	0.54
34:Af:16:ARG:CB	34:Af:21:GLN:HG2	2.37	0.54
36:Ah:31:LEU:C	36:Ah:47:ILE:CD1	2.81	0.54
37:Ai:37:THR:HB	37:Ai:41:ARG:HH12	1.72	0.54
46:At:108:MET:CG	48:A2:949:C:O2'	2.55	0.54
48:A2:1943:A:H8	48:A2:1943:A:P	2.30	0.54
48:A2:2249:G:H8	48:A2:2249:G:O5'	1.90	0.54
48:A2:3872:A:H3'	48:A2:3872:A:N3	2.22	0.54
48:A2:4109:G:O2'	48:A2:4110:C:C5	2.54	0.54
48:A2:4185:C:H6	48:A2:4185:C:O5'	1.90	0.54
49:B1:115:U:H4'	49:B1:115:U:OP1	2.08	0.54
49:B1:227:U:C1'	49:B1:228:C:O5'	2.54	0.54
49:B1:491:C:OP2	74:BY:104:ARG:CG	2.55	0.54
49:B1:826:A:H5"	59:BJ:10:ARG:HG2	1.89	0.54
49:B1:1454:A:H2'	67:BR:3:ARG:NE	2.20	0.54
49:B1:1594:A:OP1	75:BZ:103:HIS:HA	2.07	0.54
49:B1:1600:G:P	75:BZ:43:LYS:HG3	2.47	0.54
50:BA:39:TYR:CD1	50:BA:39:TYR:C	2.86	0.54
51:BB:119:THR:HB	51:BB:143:THR:CG2	2.37	0.54
53:BD:33:GLY:HA2	53:BD:103:GLU:OE1	2.07	0.54
56:BG:70:HIS:HB3	56:BG:103:ASP:OD2	2.07	0.54
59:BJ:48:PHE:C	59:BJ:48:PHE:CD1	2.86	0.54
60:BK:77:GLN:O	60:BK:80:ARG:HB3	2.08	0.54
65:BP:37:TYR:OH	65:BP:87:PRO:HD3	2.07	0.54
69:BT:41:LYS:HB3	69:BT:95:GLY:HA2	1.89	0.54
83:Bw:58:A:H3'	83:Bw:58:A:C8	2.43	0.54
1:A3:157:U:N3	48:A2:1:C:N4	2.56	0.54
4:AB:46:PHE:CE1	4:AB:210:VAL:HG21	2.43	0.54
4:AB:217:ILE:HD12	4:AB:284:ILE:CD1	2.37	0.54
4:AB:282:LYS:HZ1	4:AB:337:VAL:HA	1.71	0.54
5:AC:221:PHE:CD2	5:AC:227:ILE:CD1	2.85	0.54
13:AK:58:ASN:CA	13:AK:61:MET:HG2	2.37	0.54
17:AO:49:ARG:NH1	48:A2:1910:A:C2	2.76	0.54
20:AR:95:TRP:HZ3	20:AR:130:ASN:OD1	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AS:30:MET:HE1	21:AS:47:PHE:CB	2.37	0.54
24:AV:28:CYS:HB3	24:AV:34:ALA:O	2.07	0.54
26:AX:53:ARG:NH2	48:A2:2454:G:C8	2.76	0.54
26:AX:73:HIS:CE1	26:AX:115:LYS:HG3	2.43	0.54
27:AY:81:TYR:CD1	27:AY:96:HIS:HB3	2.42	0.54
32:Ad:42:ALA:HB3	32:Ad:43:PRO:HD3	1.90	0.54
34:Af:34:TYR:HB3	48:A2:1900:G:N2	2.23	0.54
34:Af:43:LEU:HB3	48:A2:939:G:H4'	1.88	0.54
40:Al:36:ARG:NH2	48:A2:407:G:H5'	2.18	0.54
41:Am:117:HIS:O	48:A2:1927:G:H4'	2.07	0.54
43:Ao:50:GLY:HA3	48:A2:3896:U:O2'	2.06	0.54
47:Au:203:ALA:CB	47:Au:215:ARG:CZ	2.86	0.54
48:A2:658:G:H1'	48:A2:661:G:O6	2.08	0.54
48:A2:1162:U:H3'	48:A2:1163:C:H5'	1.89	0.54
48:A2:1306:A:C6	48:A2:1307:A:C2	2.96	0.54
48:A2:1352:C:H2'	48:A2:1353:G:N2	2.22	0.54
48:A2:1743:G:N1	48:A2:1744:C:C4	2.76	0.54
49:B1:369:C:HO2'	49:B1:370:G:P	2.25	0.54
49:B1:562:U:OP2	59:BJ:170:PRO:HB2	2.08	0.54
49:B1:800:U:H3'	49:B1:800:U:H6	1.72	0.54
49:B1:869:A:N1	57:BH:114:GLN:NE2	2.53	0.54
49:B1:1013:U:H4'	49:B1:1104:G:H21	1.72	0.54
49:B1:1472:C:O2	49:B1:1472:C:C3'	2.55	0.54
49:B1:1856:C:OP2	64:BO:146:ARG:HB3	2.04	0.54
50:BA:42:LYS:HZ2	50:BA:46:ILE:CG2	2.21	0.54
50:BA:175:TRP:HB2	50:BA:202:TYR:CD2	2.42	0.54
54:BE:192:VAL:HB	54:BE:242:LYS:O	2.07	0.54
57:BH:27:LEU:CD1	57:BH:45:ILE:HD11	2.38	0.54
59:BJ:35:TYR:OH	59:BJ:103:GLU:CB	2.54	0.54
59:BJ:70:ARG:NE	59:BJ:94:LEU:HD12	2.20	0.54
59:BJ:109:ARG:O	59:BJ:112:THR:HB	2.08	0.54
59:BJ:109:ARG:HA	59:BJ:147:PHE:O	2.07	0.54
59:BJ:110:LEU:CD1	59:BJ:114:VAL:CG2	2.85	0.54
61:BL:11:GLN:HG3	61:BL:12:LYS:N	2.23	0.54
67:BR:97:GLU:CB	67:BR:116:ASN:C	2.69	0.54
70:BU:48:LEU:CD2	70:BU:93:SER:OG	2.52	0.54
72:BW:30:CYS:SG	72:BW:61:ILE:HG13	2.48	0.54
77:Bb:34:ASP:O	77:Bb:79:PHE:HA	2.08	0.54
81:Bf:144:CYS:O	81:Bf:145:CYS:HB2	2.06	0.54
1:A3:111:U:H4'	1:A3:112:G:H8	1.72	0.54
2:A4:43:U:H5'	12:AJ:143:ASP:CB	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A4:43:U:H4'	12:AJ:143:ASP:C	2.32	0.54
3:AA:117:GLU:HG2	3:AA:124:GLY:H	1.73	0.54
5:AC:77:PRO:HD2	5:AC:91:ALA:HB3	1.89	0.54
7:AE:162:VAL:HG11	7:AE:175:VAL:CG1	2.36	0.54
13:AK:57:LYS:O	13:AK:60:MET:C	2.51	0.54
16:AN:201:HIS:CD2	16:AN:203:TYR:H	2.25	0.54
24:AV:45:ILE:HD13	24:AV:53:PRO:CB	2.35	0.54
28:AZ:57:MET:SD	28:AZ:61:LYS:HG3	2.48	0.54
29:Aa:28:HIS:CD2	29:Aa:32:ARG:CG	2.86	0.54
29:Aa:61:TYR:CE2	48:A2:310:U:C6	2.95	0.54
30:Ab:32:LEU:HD13	30:Ab:32:LEU:O	2.07	0.54
33:Ae:78:LEU:HB3	46:At:20:ARG:NH1	2.23	0.54
39:Ak:37:ARG:NH2	48:A2:2515:A:H5"	2.23	0.54
44:Ap:4:ARG:HD2	48:A2:1535:A:OP2	2.08	0.54
48:A2:3686:U:OP1	83:Bw:4:C:O4'	2.26	0.54
48:A2:4067:G:H3'	48:A2:4068:A:H5"	1.90	0.54
48:A2:4925:A:H2'	48:A2:4926:A:C8	2.43	0.54
49:B1:78:C:O2'	56:BG:175:LYS:HD3	2.07	0.54
49:B1:303:C:H2'	49:B1:304:C:O4'	2.07	0.54
49:B1:381:C:P	58:BI:48:VAL:HG13	2.48	0.54
49:B1:454:U:H5"	56:BG:94:ARG:CB	2.38	0.54
49:B1:984:C:O2'	64:BO:138:ASP:HB2	2.08	0.54
49:B1:1314:U:C6	60:BK:2:LEU:CB	2.89	0.54
49:B1:1444:U:O2'	49:B1:1445:U:H5'	2.08	0.54
49:B1:1522:A:N3	65:BP:128:HIS:HB2	2.21	0.54
49:B1:1679:A:N7	55:BF:60:ARG:CG	2.70	0.54
50:BA:212:LYS:HA	50:BA:215:GLN:HB3	1.88	0.54
51:BB:161:VAL:HA	51:BB:164:ILE:HG22	1.88	0.54
55:BF:41:VAL:CG2	55:BF:109:LEU:CD2	2.82	0.54
62:BM:35:ILE:HD13	62:BM:61:TYR:CD1	2.40	0.54
81:Bf:121:CYS:CA	81:Bf:132:MET:HE3	2.36	0.54
82:Bg:174:VAL:HB	82:Bg:188:HIS:HB2	1.88	0.54
2:A4:7:G:C8	6:AD:22:ARG:NH1	2.74	0.54
4:AB:2:SER:N	48:A2:4478:G:OP2	2.40	0.54
5:AC:298:ILE:O	5:AC:302:LEU:HG	2.08	0.54
7:AE:201:ILE:HD12	7:AE:201:ILE:C	2.33	0.54
7:AE:208:ILE:CD1	7:AE:209:PRO:CD	2.86	0.54
13:AK:52:VAL:HG22	13:AK:91:THR:HB	1.89	0.54
13:AK:93:GLU:CB	13:AK:98:ILE:HG12	2.38	0.54
17:AO:38:CYS:SG	17:AO:77:SER:HA	2.47	0.54
17:AO:108:ILE:HD12	17:AO:160:ARG:CZ	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AP:13:LYS:NZ	18:AP:154:GLU:OE1	2.40	0.54
22:AT:84:ILE:HG13	30:Ab:24:PRO:HD3	1.90	0.54
25:AW:68:GLN:O	25:AW:69:LYS:CB	2.55	0.54
33:Ae:24:GLN:NE2	48:A2:1298:C:H4'	2.22	0.54
33:Ae:68:HIS:NE2	46:At:22:LYS:HE2	2.21	0.54
38:Aj:4:GLY:HA3	48:A2:3614:A:H62	1.72	0.54
43:Ao:106:PHE:CG	83:Bv:19:G:O6	2.61	0.54
45:Aq:82:ILE:C	45:Aq:84:ALA:N	2.62	0.54
48:A2:681:A:N6	48:A2:682:U:O4	2.41	0.54
48:A2:715:C:C2	48:A2:930:A:C2	2.96	0.54
48:A2:1466:G:N3	48:A2:1466:G:H2'	2.22	0.54
48:A2:2043:C:H2'	48:A2:2044:G:H5'	1.89	0.54
48:A2:2398:C:O2	48:A2:2398:C:O5'	2.26	0.54
49:B1:64:A:H5'	56:BG:175:LYS:NZ	2.23	0.54
49:B1:168:C:O2	56:BG:133:LEU:CD1	2.50	0.54
49:B1:198:U:C2	49:B1:200:G:OP2	2.60	0.54
49:B1:829:C:H5"	54:BE:21:ASP:OD1	2.06	0.54
54:BE:114:ILE:CG1	54:BE:118:GLU:CB	2.86	0.54
59:BJ:88:ASP:C	59:BJ:90:GLY:H	2.16	0.54
59:BJ:101:LYS:HD2	59:BJ:103:GLU:CD	2.32	0.54
67:BR:19:LYS:C	67:BR:20:TYR:HD1	2.16	0.54
67:BR:101:ASP:O	67:BR:104:GLU:N	2.41	0.54
69:BT:41:LYS:C	69:BT:42:HIS:CD2	2.86	0.54
72:BW:37:PHE:CD2	72:BW:103:VAL:HG21	2.42	0.54
81:Bf:121:CYS:SG	81:Bf:122:PRO:HD2	2.48	0.54
3:AA:221:LYS:O	48:A2:3720:C:H4'	2.07	0.54
5:AC:106:LYS:HD2	5:AC:108:TRP:CZ2	2.43	0.54
5:AC:150:LEU:HB3	5:AC:151:PRO:HD2	1.90	0.54
8:AF:18:LEU:HA	8:AF:21:LYS:HB3	1.90	0.54
12:AJ:131:TYR:CE2	48:A2:4222:U:H1'	2.43	0.54
13:AK:41:GLN:CG	45:Aq:121:LEU:CD1	2.85	0.54
18:AP:30:ARG:HA	18:AP:119:VAL:HG11	1.90	0.54
20:AR:10:LEU:HD11	20:AR:38:ARG:HG2	1.88	0.54
24:AV:47:GLY:CA	48:A2:4455:U:HO2'	2.20	0.54
26:AX:82:THR:OG1	36:Ah:36:VAL:CG1	2.55	0.54
27:AY:8:THR:HG21	27:AY:13:LYS:HD2	1.89	0.54
29:Aa:86:THR:HB	48:A2:504:U:H5'	1.90	0.54
29:Aa:87:ARG:HH11	29:Aa:87:ARG:CG	2.12	0.54
31:Ac:105:ILE:O	31:Ac:109:PRO:HG2	2.07	0.54
35:Ag:50:PRO:CD	44:Ap:61:MET:SD	2.96	0.54
35:Ag:54:ARG:NH2	48:A2:2630:C:O2	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Ak:47:ILE:CG2	39:Ak:53:ALA:HB2	2.37	0.54
41:Am:109:ASN:HD21	48:A2:1928:U:H2'	1.72	0.54
46:At:40:TYR:CE1	46:At:106:LEU:HD22	2.43	0.54
48:A2:682:U:C2	48:A2:683:U:C6	2.95	0.54
48:A2:1306:A:N6	48:A2:1307:A:N1	2.56	0.54
48:A2:3875:G:H8	48:A2:3875:G:O5'	1.91	0.54
48:A2:4027:C:OP2	48:A2:4027:C:H6	1.89	0.54
49:B1:305:U:N3	58:BI:55:TYR:CG	2.75	0.54
49:B1:420:G:H4'	72:BW:88:LYS:NZ	2.22	0.54
49:B1:633:C:H1'	80:Be:12:VAL:HG11	1.86	0.54
49:B1:876:C:H6	49:B1:876:C:C5'	2.19	0.54
49:B1:1603:G:O4'	68:BS:38:ARG:CZ	2.55	0.54
49:B1:1784:G:C6	49:B1:1785:C:N3	2.76	0.54
49:B1:1830:U:C5	84:Bx:47:U:C5'	2.91	0.54
50:BA:141:ASN:O	71:BV:32:ILE:HD13	2.08	0.54
54:BE:103:TYR:CE2	54:BE:189:LEU:HD12	2.42	0.54
55:BF:90:VAL:HG12	66:BQ:46:THR:HG22	1.90	0.54
56:BG:48:TYR:HA	56:BG:116:LYS:O	2.07	0.54
61:BL:11:GLN:HG3	61:BL:12:LYS:H	1.72	0.54
64:BO:44:VAL:CG2	64:BO:81:VAL:HG11	2.38	0.54
65:BP:49:LEU:CB	65:BP:50:ARG:HB3	2.35	0.54
75:BZ:50:PHE:CD1	75:BZ:50:PHE:N	2.73	0.54
1:A3:108:A:C2	1:A3:109:C:C2	2.96	0.54
4:AB:67:VAL:HG23	24:AV:14:PHE:CZ	2.43	0.54
4:AB:226:LYS:CB	4:AB:229:LYS:HE3	2.38	0.54
4:AB:316:PRO:HB3	4:AB:373:LYS:HD3	1.89	0.54
5:AC:4:ALA:HA	48:A2:659:G:H22	1.72	0.54
5:AC:193:LYS:HD3	48:A2:346:G:N7	2.22	0.54
14:AL:128:PRO:HG2	14:AL:136:LYS:HE2	1.88	0.54
15:AM:3:PHE:CE1	21:AS:155:PRO:HB3	2.43	0.54
19:AQ:164:LYS:CB	48:A2:1479:A:C1'	2.85	0.54
20:AR:81:ARG:CZ	48:A2:3578:U:OP1	2.55	0.54
22:AT:56:CYS:HB3	22:AT:78:LYS:HZ2	1.65	0.54
27:AY:33:PRO:HD2	27:AY:104:VAL:O	2.08	0.54
28:AZ:122:TYR:HD1	28:AZ:122:TYR:O	1.90	0.54
29:Aa:22:ILE:HG23	48:A2:1302:U:OP1	2.07	0.54
37:Ai:15:HIS:HB3	48:A2:72:C:C5	2.43	0.54
47:Au:97:LYS:O	47:Au:101:LYS:HG3	2.08	0.54
48:A2:33:A:C8	48:A2:49:U:O4	2.61	0.54
48:A2:1749:A:H2'	48:A2:1751:G:C8	2.37	0.54
48:A2:2745:A:H5"	48:A2:2745:A:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:4033:U:H6	48:A2:4033:U:OP2	1.91	0.54
48:A2:4650:C:H2'	48:A2:4651:U:C6	2.43	0.54
49:B1:163:U:OP1	56:BG:85:ARG:N	2.40	0.54
49:B1:180:G:N1	49:B1:181:A:N6	2.55	0.54
49:B1:401:A:O3'	58:BI:14:THR:HG21	2.07	0.54
49:B1:841:G:O6	74:BY:11:LYS:HA	2.07	0.54
49:B1:932:G:OP1	51:BB:157:GLN:O	2.25	0.54
49:B1:1499:U:H4'	53:BD:176:LEU:CD1	2.38	0.54
49:B1:1538:C:H2'	49:B1:1539:U:C6	2.42	0.54
49:B1:1547:C:N3	49:B1:1656:G:H1'	2.23	0.54
49:B1:1643:U:O2'	66:BQ:142:GLN:HA	2.08	0.54
51:BB:174:ARG:HD2	51:BB:175:GLU:OE1	2.07	0.54
53:BD:73:VAL:O	53:BD:73:VAL:HG12	2.08	0.54
54:BE:149:TYR:CG	56:BG:209:TYR:HD2	2.25	0.54
55:BF:18:LYS:HB3	55:BF:46:ALA:O	2.08	0.54
57:BH:121:THR:O	57:BH:125:VAL:HG23	2.07	0.54
61:BL:30:LYS:HB3	61:BL:33:LEU:HD11	1.90	0.54
66:BQ:52:LEU:O	66:BQ:54:PRO:HD2	2.07	0.54
72:BW:100:GLY:C	72:BW:101:PHE:CD2	2.85	0.54
1:A3:153:C:C5'	9:AG:185:LYS:HE2	2.20	0.54
2:A4:65:G:H5"	2:A4:65:G:C8	2.43	0.54
3:AA:87:PHE:CZ	48:A2:4089:U:H5"	2.40	0.54
3:AA:129:ALA:HB3	3:AA:132:ASN:HD22	1.72	0.54
4:AB:153:MET:SD	4:AB:157:CYS:SG	3.05	0.54
4:AB:393:LYS:HE3	48:A2:4998:U:C4'	2.38	0.54
6:AD:290:ALA:C	6:AD:292:GLU:N	2.66	0.54
7:AE:128:HIS:NE2	48:A2:1265:G:OP2	2.41	0.54
7:AE:216:TYR:C	7:AE:216:TYR:CD1	2.85	0.54
10:AH:163:GLN:NE2	48:A2:4648:G:H21	2.05	0.54
13:AK:18:ILE:HA	13:AK:21:LEU:HB3	1.90	0.54
15:AM:86:TRP:O	15:AM:89:THR:HG22	2.08	0.54
17:AO:49:ARG:HH22	48:A2:1910:A:C2'	2.12	0.54
18:AP:47:TYR:C	18:AP:47:TYR:CD1	2.86	0.54
34:Af:54:LYS:HE2	48:A2:437:G:C5'	2.38	0.54
38:Aj:46:LYS:HD3	48:A2:23:C:OP2	2.08	0.54
38:Aj:70:VAL:HG22	38:Aj:73:ARG:HH21	1.72	0.54
39:Ak:60:LEU:HD22	39:Ak:61:PRO:HD3	1.86	0.54
43:Ao:10:THR:HG21	43:Ao:81:ARG:HH21	1.71	0.54
43:Ao:40:ARG:HH11	43:Ao:40:ARG:HB2	1.73	0.54
45:Aq:40:LYS:HB2	45:Aq:68:GLN:CB	2.37	0.54
46:At:78:VAL:O	46:At:78:VAL:HG13	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Au:38:LEU:HD13	47:Au:159:MET:SD	2.48	0.54
47:Au:60:ARG:CG	47:Au:61:PRO:CD	2.85	0.54
48:A2:86:U:O4	48:A2:97:G:C2	2.60	0.54
48:A2:710:C:H2'	48:A2:711:G:C8	2.43	0.54
48:A2:1225:G:OP2	48:A2:1225:G:C2	2.60	0.54
48:A2:1260:G:H2'	48:A2:1261:C:C5'	2.38	0.54
48:A2:2246:U:H3'	48:A2:2247:A:C5'	2.37	0.54
48:A2:2247:A:OP1	48:A2:2248:C:H2'	2.08	0.54
48:A2:4156:U:H4'	48:A2:4183:C:C5	2.43	0.54
48:A2:4670:A:H3'	48:A2:4670:A:N3	2.23	0.54
48:A2:4992:A:H3'	48:A2:4992:A:N3	2.23	0.54
49:B1:121:U:H5"	54:BE:77:ARG:HH12	1.72	0.54
49:B1:154:U:H5'	56:BG:13:GLN:HG3	1.89	0.54
49:B1:861:A:C5'	72:BW:107:SER:O	2.56	0.54
49:B1:988:C:OP2	49:B1:989:C:O2'	2.19	0.54
49:B1:1397:U:C1'	82:Bg:63:SER:OG	2.49	0.54
50:BA:55:TRP:CZ3	50:BA:58:LEU:HD23	2.43	0.54
51:BB:38:MET:SD	51:BB:185:VAL:CB	2.95	0.54
51:BB:115:LYS:N	51:BB:118:GLN:HE21	2.05	0.54
52:BC:74:LYS:HE3	52:BC:272:HIS:CD2	2.43	0.54
52:BC:200:ARG:HA	52:BC:221:ASP:OD2	2.08	0.54
54:BE:141:THR:HG22	54:BE:143:ASP:H	1.73	0.54
56:BG:45:TRP:HZ3	56:BG:50:VAL:HG21	1.73	0.54
68:BS:70:ILE:CD1	68:BS:77:TYR:CD1	2.91	0.54
79:Bd:21:CYS:CA	79:Bd:31:ILE:HD13	2.38	0.54
83:Bv:47:U:H3'	83:Bv:48:C:H5'	1.89	0.54
83:Bw:40:C:H2'	83:Bw:41:C:C6	2.42	0.54
1:A3:72:A:OP2	27:AY:51:LYS:CB	2.35	0.54
1:A3:96:C:H1'	36:Ah:63:GLN:NE2	2.23	0.54
2:A4:117:G:OP1	6:AD:256:LYS:HB2	2.08	0.54
4:AB:56:ILE:HD12	4:AB:76:VAL:CG2	2.36	0.54
4:AB:89:ILE:HG13	4:AB:201:LEU:HD21	1.90	0.54
4:AB:293:ILE:CD1	4:AB:296:GLY:CA	2.86	0.54
5:AC:4:ALA:CA	48:A2:659:G:N2	2.70	0.54
7:AE:158:ARG:HD2	48:A2:4903:G:N2	2.23	0.54
7:AE:247:LYS:CD	48:A2:4896:A:H61	2.19	0.54
13:AK:52:VAL:HG12	13:AK:53:VAL:N	2.21	0.54
19:AQ:29:VAL:HG22	19:AQ:51:LEU:HB3	1.89	0.54
24:AV:42:VAL:O	24:AV:45:ILE:HG13	2.08	0.54
26:AX:114:LYS:HB2	26:AX:114:LYS:HZ3	1.72	0.54
27:AY:41:LYS:CE	27:AY:42:TYR:HE1	2.20	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Af:34:TYR:CD1	48:A2:1900:G:N1	2.76	0.54
38:Aj:49:TRP:CE3	48:A2:1628:A:H1'	2.42	0.54
39:Ak:41:TYR:HE2	48:A2:2517:U:OP1	1.90	0.54
45:Aq:28:LEU:HB2	45:Aq:42:VAL:O	2.08	0.54
47:Au:105:LYS:NZ	48:A2:4011:C:P	2.81	0.54
48:A2:1529:A:O2'	48:A2:2793:C:O2	2.22	0.54
48:A2:1581:A:O2'	48:A2:1582:A:H5"	2.08	0.54
48:A2:1808:G:O2'	48:A2:1809:C:H5'	2.08	0.54
48:A2:2458:G:H2'	48:A2:2459:G:C8	2.43	0.54
48:A2:2493:G:O5'	48:A2:2493:G:C8	2.61	0.54
48:A2:2498:U:O2	48:A2:2499:C:C5	2.61	0.54
48:A2:2766:A:H3'	48:A2:2766:A:N3	2.23	0.54
48:A2:3704:A:H2'	48:A2:3705:U:O4'	2.07	0.54
48:A2:3931:A:H1'	48:A2:4015:G:C5'	2.38	0.54
48:A2:4600:U:H2'	48:A2:4601:G:C8	2.43	0.54
48:A2:4983:C:H2'	48:A2:4984:U:OP1	2.08	0.54
49:B1:59:U:H2'	49:B1:61:A:OP2	2.07	0.54
49:B1:330:G:C2'	49:B1:331:C:H5'	2.36	0.54
49:B1:581:U:H5"	74:BY:65:GLY:H	1.72	0.54
49:B1:630:U:H3'	49:B1:630:U:H6	1.73	0.54
49:B1:847:A:OP1	54:BE:108:ARG:NH1	2.41	0.54
49:B1:1558:C:H6	49:B1:1558:C:H5"	1.72	0.54
51:BB:81:PHE:CZ	51:BB:109:LYS:HE2	2.42	0.54
51:BB:189:ILE:HB	51:BB:190:PRO:HD3	1.90	0.54
52:BC:60:TRP:HZ3	52:BC:62:PRO:HA	1.72	0.54
55:BF:128:ILE:CG1	55:BF:137:GLN:HB3	2.38	0.54
55:BF:141:VAL:HG23	55:BF:145:ARG:HD3	1.90	0.54
60:BK:38:LYS:HE2	60:BK:38:LYS:HA	1.90	0.54
62:BM:16:THR:O	62:BM:19:GLN:HG2	2.07	0.54
64:BO:83:GLN:NE2	64:BO:87:GLU:CG	2.70	0.54
65:BP:68:PRO:HB2	65:BP:69:PRO:HD2	1.89	0.54
75:BZ:68:ILE:HG21	75:BZ:97:ILE:HG21	1.89	0.54
75:BZ:99:LEU:HD22	75:BZ:109:TYR:HE1	1.73	0.54
82:Bg:188:HIS:HB3	82:Bg:219:TRP:CH2	2.43	0.54
1:A3:110:U:C5	1:A3:112:G:H1'	2.42	0.53
3:AA:46:LYS:HE2	3:AA:62:VAL:HG11	1.90	0.53
4:AB:379:PHE:CD1	4:AB:385:LYS:HA	2.42	0.53
7:AE:240:TYR:CE2	7:AE:243:THR:CG2	2.92	0.53
8:AF:148:LYS:HB2	48:A2:930:A:H5"	1.88	0.53
10:AH:6:SER:O	10:AH:7:ASN:HB3	2.08	0.53
12:AJ:19:LYS:HD3	12:AJ:75:ARG:NH2	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AL:11:LYS:H	19:AQ:168:ARG:HH22	1.56	0.53
15:AM:99:GLU:O	15:AM:103:LYS:HG3	2.08	0.53
19:AQ:172:ARG:O	19:AQ:173:LYS:HB3	2.08	0.53
23:AU:76:VAL:HG13	23:AU:77:PRO:HD2	1.90	0.53
25:AW:110:ARG:HA	25:AW:113:LYS:HD2	1.89	0.53
27:AY:41:LYS:HD2	27:AY:42:TYR:CD1	2.43	0.53
27:AY:50:ARG:HB3	27:AY:115:ARG:NH2	2.23	0.53
30:Ab:45:PHE:CG	48:A2:1797:G:C2	2.96	0.53
42:An:5:TRP:CG	49:B1:1852:C:C5	2.96	0.53
45:Aq:40:LYS:HB3	45:Aq:69:ALA:O	2.08	0.53
47:Au:60:ARG:HG3	47:Au:171:HIS:CB	2.36	0.53
48:A2:133:C:C6	48:A2:133:C:C4'	2.90	0.53
48:A2:212:C:OP2	48:A2:212:C:H6	1.91	0.53
48:A2:966:C:H2'	48:A2:969:U:C4	2.43	0.53
48:A2:4907:G:H1'	48:A2:4909:G:O4'	2.09	0.53
48:A2:4982:C:C3'	58:BI:169:GLY:CA	2.78	0.53
49:B1:658:U:O3'	73:BX:17:ARG:NE	2.41	0.53
49:B1:1022:U:C6	63:BN:128:TYR:CE1	2.96	0.53
49:B1:1598:G:N7	75:BZ:81:GLY:HA3	2.22	0.53
52:BC:63:VAL:HG22	52:BC:64:THR:H	1.72	0.53
55:BF:201:LYS:HD2	55:BF:204:ARG:HH21	1.73	0.53
59:BJ:84:ILE:O	59:BJ:108:ARG:NH2	2.41	0.53
61:BL:21:LYS:O	61:BL:21:LYS:HG3	2.07	0.53
69:BT:41:LYS:HZ2	69:BT:81:GLY:HA2	0.73	0.53
70:BU:50:VAL:HG13	70:BU:91:LEU:HD21	1.89	0.53
75:BZ:65:TYR:HE2	75:BZ:76:ARG:CG	2.20	0.53
80:Be:51:LYS:HD3	84:Bx:59:U:O4'	2.07	0.53
1:A3:125:C:H2'	48:A2:2523:G:C2	2.43	0.53
3:AA:247:ARG:HG2	49:B1:1069:U:C5'	2.39	0.53
4:AB:229:LYS:HD2	4:AB:272:LYS:HD3	1.90	0.53
4:AB:245:HIS:CD2	4:AB:246:ARG:HG3	2.43	0.53
4:AB:247:GLY:HA3	48:A2:2817:G:H5"	1.87	0.53
5:AC:33:ARG:HG3	5:AC:122:TYR:OH	2.08	0.53
5:AC:211:TYR:HE1	5:AC:229:LEU:HA	1.68	0.53
8:AF:222:LYS:CG	8:AF:225:THR:CG2	2.86	0.53
9:AG:82:GLN:HE21	9:AG:233:ILE:HG22	1.73	0.53
11:AI:48:LEU:CD2	11:AI:142:LEU:HA	2.39	0.53
12:AJ:99:PHE:HD1	12:AJ:159:LYS:HZ3	1.56	0.53
13:AK:41:GLN:CG	45:Aq:121:LEU:HD13	2.36	0.53
14:AL:153:PRO:HB3	36:Ah:121:VAL:HG21	1.89	0.53
16:AN:187:SER:CB	48:A2:29:G:OP1	2.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AR:172:ARG:CB	49:B1:909:G:OP1	2.56	0.53
25:AW:19:ARG:HD2	48:A2:4591:U:O3'	2.08	0.53
25:AW:70:LYS:O	25:AW:71:ARG:HB2	2.06	0.53
29:Aa:91:ALA:HB1	29:Aa:120:GLN:HG2	1.90	0.53
38:Aj:83:THR:OG1	38:Aj:84:PRO:HD2	2.08	0.53
39:Ak:2:PRO:HG2	48:A2:2672:G:O4'	2.08	0.53
39:Ak:15:ALA:C	39:Ak:17:ARG:N	2.65	0.53
42:An:4:LYS:CE	49:B1:1844:U:H5	2.19	0.53
43:Ao:29:GLY:O	48:A2:4306:U:H4'	2.07	0.53
45:Aq:46:ILE:HA	45:Aq:49:ALA:CB	2.38	0.53
47:Au:43:PRO:HG3	47:Au:161:LYS:O	2.08	0.53
48:A2:6:C:O2	48:A2:6:C:H2'	2.08	0.53
48:A2:446:A:N3	48:A2:446:A:H3'	2.23	0.53
48:A2:1192:U:H3'	48:A2:1192:U:P	2.49	0.53
48:A2:1402:G:O2'	48:A2:1403:A:P	2.66	0.53
48:A2:1499:G:H5"	48:A2:1500:A:OP2	2.07	0.53
48:A2:1582:A:H8	48:A2:1582:A:O5'	1.91	0.53
48:A2:2065:C:C2'	48:A2:2066:G:H5'	2.38	0.53
48:A2:4872:C:H6	48:A2:4872:C:O5'	1.91	0.53
49:B1:527:C:H4'	59:BJ:125:HIS:ND1	2.23	0.53
49:B1:840:C:H1'	74:BY:21:LYS:HD2	1.90	0.53
49:B1:1022:U:O2	49:B1:1022:U:C3'	2.56	0.53
49:B1:1103:C:H2'	49:B1:1104:G:O4'	2.09	0.53
49:B1:1616:U:OP2	65:BP:43:ARG:NH2	2.41	0.53
49:B1:1619:A:OP1	65:BP:47:ARG:HG3	2.09	0.53
50:BA:28:THR:CG2	50:BA:46:ILE:HD11	2.37	0.53
50:BA:216:ALA:HA	50:BA:219:GLU:HG3	1.84	0.53
52:BC:82:TYR:CZ	52:BC:164:PRO:HD3	2.43	0.53
52:BC:113:GLN:OE1	52:BC:122:THR:HB	2.07	0.53
53:BD:62:LYS:HB2	60:BK:94:LEU:HD12	1.90	0.53
53:BD:73:VAL:HG21	53:BD:86:LEU:HD21	1.89	0.53
54:BE:90:ILE:HG22	54:BE:92:ILE:CD1	2.39	0.53
54:BE:92:ILE:CG2	54:BE:95:THR:H	2.21	0.53
54:BE:104:ASP:HB2	54:BE:108:ARG:O	2.08	0.53
55:BF:204:ARG:HA	78:Bc:63:ARG:HH21	1.73	0.53
55:BF:204:ARG:HA	78:Bc:63:ARG:NH2	2.24	0.53
56:BG:217:MET:O	56:BG:221:LYS:HE3	2.08	0.53
58:BI:174:CYS:HB3	58:BI:188:TYR:CZ	2.43	0.53
59:BJ:24:ARG:HG2	59:BJ:28:GLU:OE2	2.08	0.53
60:BK:3:MET:HE1	60:BK:47:LYS:HE2	1.89	0.53
63:BN:26:LEU:CD1	63:BN:28:LEU:HB2	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:BN:75:LEU:CD1	63:BN:81:ALA:CA	2.86	0.53
65:BP:34:MET:HE3	65:BP:42:ARG:CA	2.20	0.53
66:BQ:16:LYS:CG	66:BQ:17:LYS:N	2.27	0.53
69:BT:47:PRO:HG2	69:BT:52:TRP:CD2	2.43	0.53
72:BW:9:ASP:OD2	72:BW:29:PRO:CG	2.54	0.53
76:Ba:18:VAL:CG1	76:Ba:32:LYS:HG2	2.38	0.53
2:A4:13:A:HO2'	2:A4:14:C:P	2.30	0.53
3:AA:30:ARG:HA	3:AA:74:GLU:OE1	2.08	0.53
6:AD:259:LYS:O	6:AD:260:GLU:HB3	2.07	0.53
7:AE:128:HIS:CE1	48:A2:1265:G:C8	2.96	0.53
13:AK:36:GLY:O	13:AK:37:SER:C	2.52	0.53
14:AL:80:GLU:CG	14:AL:110:LEU:HD12	2.38	0.53
14:AL:165:LYS:CE	48:A2:505:C:C5'	2.86	0.53
33:Ae:36:ARG:CG	48:A2:1644:C:OP1	2.56	0.53
33:Ae:106:LYS:HB2	48:A2:2284:U:O2	2.08	0.53
34:Af:58:VAL:HG21	34:Af:65:ASN:HB2	1.89	0.53
36:Ah:40:ALA:HB1	36:Ah:43:LYS:HB2	1.91	0.53
36:Ah:88:THR:O	36:Ah:92:ARG:HD3	2.08	0.53
38:Aj:26:ALA:O	38:Aj:35:GLY:N	2.41	0.53
39:Ak:11:PHE:HD1	39:Ak:12:LEU:HA	1.74	0.53
47:Au:210:MET:HG2	48:A2:3945:G:H4'	1.90	0.53
48:A2:117:C:C4	48:A2:118:C:N4	2.77	0.53
48:A2:1255:C:C6	48:A2:1256:G:N7	2.76	0.53
48:A2:1499:G:N3	48:A2:1499:G:C2'	2.71	0.53
48:A2:1977:C:C6	48:A2:1978:U:N3	2.74	0.53
48:A2:2067:G:N2	48:A2:2249:G:H1	2.06	0.53
48:A2:2502:G:H1'	48:A2:2690:G:N2	2.22	0.53
48:A2:2525:G:O4'	48:A2:2525:G:OP2	2.26	0.53
48:A2:2741:G:O2'	48:A2:2742:U:H5"	2.07	0.53
48:A2:4884:C:H3'	48:A2:4885:G:H5"	1.90	0.53
49:B1:283:G:N3	49:B1:283:G:H2'	2.23	0.53
49:B1:284:C:H3'	49:B1:284:C:C6	2.37	0.53
49:B1:635:G:H8	49:B1:635:G:O5'	1.91	0.53
49:B1:744:G:H2'	49:B1:745:C:H6	1.69	0.53
49:B1:1050:A:H2'	49:B1:1051:G:O4'	2.08	0.53
49:B1:1125:C:OP1	51:BB:150:ILE:HD12	2.09	0.53
49:B1:1629:C:H5"	68:BS:39:ARG:HD3	1.90	0.53
50:BA:111:GLN:N	50:BA:116:PHE:CD2	2.77	0.53
51:BB:71:LEU:CD1	51:BB:75:GLN:CG	2.85	0.53
52:BC:167:ARG:HD3	52:BC:219:ILE:HD11	1.88	0.53
56:BG:176:ILE:HB	56:BG:179:LEU:HD22	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BG:211:LYS:CG	56:BG:215:LYS:CE	2.85	0.53
63:BN:26:LEU:HD12	63:BN:27:LYS:N	2.22	0.53
66:BQ:145:TYR:O	66:BQ:146:ARG:HB2	2.08	0.53
69:BT:41:LYS:CD	69:BT:43:LYS:CE	2.86	0.53
69:BT:42:HIS:C	69:BT:43:LYS:HZ2	2.16	0.53
70:BU:24:LEU:HA	70:BU:111:GLU:O	2.08	0.53
84:Bx:46:U:O2'	84:Bx:47:U:H5'	2.07	0.53
4:AB:335:GLY:HA3	48:A2:4636:C:H4'	1.89	0.53
5:AC:199:ARG:HH12	48:A2:2274:C:H5"	1.73	0.53
5:AC:311:ARG:HH12	48:A2:946:G:H5"	1.63	0.53
6:AD:12:TYR:CD1	6:AD:12:TYR:C	2.85	0.53
7:AE:188:ARG:O	48:A2:4899:G:C5'	2.56	0.53
8:AF:182:TYR:N	8:AF:182:TYR:CD1	2.73	0.53
9:AG:141:ASN:N	48:A2:149:U:O4	2.41	0.53
13:AK:72:ASN:HB2	13:AK:73:PRO:HD2	1.90	0.53
16:AN:84:PRO:CD	48:A2:43:U:OP1	2.55	0.53
20:AR:4:LEU:HD12	48:A2:2365:U:H4'	1.90	0.53
21:AS:72:PRO:O	21:AS:100:LEU:HD22	2.08	0.53
36:Ah:24:LEU:HB3	36:Ah:54:ILE:HD11	1.90	0.53
47:Au:60:ARG:HD3	47:Au:171:HIS:HB3	1.90	0.53
48:A2:379:A:O4'	48:A2:380:A:C8	2.60	0.53
48:A2:1249:G:O2'	48:A2:1250:C:P	2.66	0.53
48:A2:1612:A:C2	48:A2:3610:U:O4'	2.61	0.53
48:A2:1743:G:C5	48:A2:1744:C:C5	2.97	0.53
48:A2:1948:A:N6	48:A2:1949:G:C6	2.77	0.53
48:A2:3731:A:H2	49:B1:1709:G:H21	1.56	0.53
48:A2:4872:C:C6	48:A2:4872:C:C3'	2.92	0.53
49:B1:859:G:C8	49:B1:859:G:H5"	2.43	0.53
49:B1:873:G:OP1	61:BL:153:LYS:NZ	2.41	0.53
49:B1:1105:G:H21	49:B1:1106:C:H1'	1.72	0.53
49:B1:1372:U:O2'	67:BR:4:VAL:HG23	2.09	0.53
49:B1:1507:G:H22	81:Bf:90:LYS:CA	2.21	0.53
51:BB:137:LEU:HD12	51:BB:172:MET:SD	2.48	0.53
52:BC:166:ARG:NE	71:BV:10:ASP:OD2	2.42	0.53
54:BE:201:HIS:HB2	54:BE:205:PHE:O	2.08	0.53
56:BG:119:LYS:HG2	56:BG:125:THR:HG21	1.89	0.53
59:BJ:41:ARG:HG3	59:BJ:42:GLU:N	2.22	0.53
65:BP:90:VAL:HA	65:BP:107:ILE:CG2	2.37	0.53
66:BQ:42:ILE:HD12	66:BQ:48:GLN:CA	2.38	0.53
75:BZ:78:LYS:O	75:BZ:78:LYS:HG2	2.08	0.53
3:AA:80:GLU:HG2	44:Ap:76:ALA:HB1	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AB:56:ILE:HG21	4:AB:365:LEU:HD22	1.91	0.53
4:AB:92:TYR:CE2	4:AB:161:ARG:HD2	2.43	0.53
4:AB:174:ARG:HH12	48:A2:4932:C:H4'	1.73	0.53
4:AB:224:LYS:HG2	4:AB:340:THR:HG23	1.90	0.53
5:AC:327:LYS:HZ3	48:A2:960:G:H21	1.56	0.53
9:AG:191:GLY:O	9:AG:194:VAL:HG12	2.09	0.53
14:AL:78:LEU:HD11	48:A2:157:G:C4'	2.37	0.53
16:AN:114:ARG:NH2	16:AN:157:LYS:HG2	2.24	0.53
20:AR:61:ALA:CB	48:A2:2612:U:H5"	2.33	0.53
22:AT:78:LYS:HD2	22:AT:87:LYS:HZ2	1.72	0.53
28:AZ:59:LYS:HE3	48:A2:4111:C:C5'	2.38	0.53
38:Aj:2:THR:HA	38:Aj:6:SER:OG	2.08	0.53
45:Aq:28:LEU:CA	45:Aq:42:VAL:HB	2.35	0.53
47:Au:93:LEU:HA	47:Au:99:LEU:HD23	1.91	0.53
48:A2:1260:G:H2'	48:A2:1261:C:O5'	2.09	0.53
48:A2:1306:A:C6	48:A2:1307:A:C4	2.96	0.53
48:A2:1815:U:C2'	48:A2:1816:G:H5"	2.39	0.53
48:A2:1888:A:C8	48:A2:1889:A:N7	2.76	0.53
48:A2:2794:A:C2	48:A2:2795:G:C4	2.96	0.53
48:A2:4009:G:H4'	48:A2:4020:A:O4'	2.08	0.53
49:B1:4:C:H5'	52:BC:230:THR:HG21	1.90	0.53
49:B1:168:C:C5'	56:BG:131:ARG:CB	2.87	0.53
49:B1:297:A:H5"	54:BE:132:GLY:O	2.08	0.53
49:B1:606:G:H4'	80:Be:57:ALA:HA	1.90	0.53
49:B1:823:U:O2	59:BJ:142:VAL:HG13	2.09	0.53
49:B1:1130:G:C5'	63:BN:10:GLY:HA2	2.39	0.53
49:B1:1256:G:N3	49:B1:1256:G:H3'	2.24	0.53
49:B1:1309:C:O4'	81:Bf:133:ALA:HB2	2.08	0.53
49:B1:1629:C:H2'	49:B1:1630:A:O4'	2.09	0.53
49:B1:1698:C:H42	84:Bx:52:U:H6	1.51	0.53
50:BA:7:VAL:HG21	71:BV:42:VAL:H	1.70	0.53
51:BB:71:LEU:HD13	51:BB:75:GLN:CG	2.38	0.53
55:BF:36:GLN:O	55:BF:37:ASP:HB2	2.08	0.53
60:BK:26:ASP:OD2	60:BK:31:LYS:HB3	2.08	0.53
61:BL:104:LYS:NZ	73:BX:8:ARG:HD3	2.24	0.53
65:BP:56:LEU:HD13	65:BP:56:LEU:C	2.34	0.53
70:BU:21:ARG:O	70:BU:114:VAL:HA	2.07	0.53
71:BV:51:LYS:CD	71:BV:76:ASP:OD2	2.57	0.53
82:Bg:87:LEU:HB2	82:Bg:101:PHE:HB2	1.90	0.53
1:A3:35:C:O5'	1:A3:35:C:H6	1.90	0.53
2:A4:22:A:N3	2:A4:22:A:C2'	2.69	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:104:VAL:O	3:AA:107:MET:HG2	2.08	0.53
3:AA:114:CYS:O	3:AA:165:VAL:HG12	2.08	0.53
3:AA:226:ARG:HH21	48:A2:4144:G:H5"	1.74	0.53
6:AD:267:ASN:OD1	6:AD:268:ARG:N	2.42	0.53
9:AG:134:PRO:HB3	9:AG:206:GLN:HB3	1.91	0.53
12:AJ:51:SER:OG	48:A2:4221:C:OP1	2.23	0.53
17:AO:164:ALA:HB1	48:A2:4720:U:H4'	1.90	0.53
18:AP:13:LYS:C	18:AP:107:LEU:HD21	2.33	0.53
27:AY:8:THR:HG23	48:A2:340:G:C5'	2.37	0.53
33:Ae:29:VAL:CG2	48:A2:1315:C:H5"	2.33	0.53
33:Ae:58:ILE:HG12	48:A2:2060:G:O4'	2.09	0.53
33:Ae:59:GLY:HA3	48:A2:1880:G:O2'	2.09	0.53
37:Ai:32:ARG:HD2	48:A2:303:C:H5'	1.90	0.53
40:Al:20:ASN:ND2	40:Al:42:ARG:H	2.07	0.53
46:At:59:GLY:HA3	46:At:83:ASN:OD1	2.08	0.53
47:Au:60:ARG:CD	47:Au:61:PRO:HD3	2.37	0.53
48:A2:121:A:N3	48:A2:121:A:H2'	2.22	0.53
48:A2:492:C:H4'	48:A2:493:G:OP1	2.07	0.53
48:A2:1976:G:O6	48:A2:1981:G:N2	2.42	0.53
48:A2:2001:U:O2'	48:A2:2002:G:H5'	2.09	0.53
48:A2:2005:G:H2'	48:A2:2006:A:OP2	2.09	0.53
48:A2:2498:U:O2	48:A2:2499:C:C6	2.62	0.53
48:A2:4083:C:O3'	48:A2:4084:G:H2'	2.07	0.53
48:A2:4190:G:H4'	48:A2:4191:U:OP2	2.09	0.53
48:A2:4191:U:C4	48:A2:4298:A:C2	2.96	0.53
48:A2:4915:C:H2'	48:A2:4916:C:C5	2.43	0.53
49:B1:309:G:N2	49:B1:310:C:H1'	2.24	0.53
49:B1:493:A:H4'	74:BY:89:HIS:CD2	2.30	0.53
49:B1:877:C:H6	49:B1:877:C:O5'	1.92	0.53
49:B1:1287:A:C4	81:Bf:99:LYS:HB2	2.44	0.53
49:B1:1659:U:H5'	79:Bd:30:LEU:CD1	2.36	0.53
49:B1:1745:A:C2'	56:BG:65:GLN:HE21	2.22	0.53
51:BB:131:ASP:OD2	51:BB:181:LEU:CD1	2.56	0.53
54:BE:161:GLN:HB3	54:BE:170:ILE:O	2.08	0.53
60:BK:64:TRP:HZ3	79:Bd:22:ARG:HG2	1.73	0.53
61:BL:42:LEU:O	61:BL:42:LEU:HG	2.09	0.53
61:BL:148:ALA:CB	61:BL:152:LYS:HE3	2.38	0.53
65:BP:64:LYS:O	65:BP:67:ALA:HB2	2.04	0.53
75:BZ:99:LEU:CA	75:BZ:108:ILE:O	2.56	0.53
5:AC:134:PRO:HG3	5:AC:150:LEU:CD2	2.39	0.53
8:AF:147:LEU:HD21	48:A2:931:A:N3	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AK:16:LYS:O	13:AK:20:LEU:N	2.41	0.53
14:AL:176:PHE:CE2	14:AL:177:LYS:NZ	2.77	0.53
15:AM:19:PRO:CB	48:A2:923:C:C4	2.91	0.53
16:AN:96:ARG:NH2	16:AN:100:SER:HB3	2.23	0.53
16:AN:189:ARG:NH2	48:A2:29:G:OP2	2.42	0.53
17:AO:15:LEU:HA	17:AO:42:ASN:O	2.09	0.53
18:AP:10:ASN:HD21	18:AP:13:LYS:CE	2.21	0.53
18:AP:86:LYS:HB2	48:A2:3828:G:H5"	1.91	0.53
20:AR:98:ARG:NH1	20:AR:130:ASN:HD21	2.07	0.53
25:AW:77:LYS:HD2	25:AW:78:PHE:H	1.73	0.53
36:Ah:40:ALA:O	36:Ah:44:LEU:HD13	2.09	0.53
39:Ak:16:ARG:C	39:Ak:18:LYS:N	2.48	0.53
43:Ao:27:LYS:HG3	43:Ao:28:LYS:N	2.16	0.53
45:Aq:28:LEU:HB2	45:Aq:42:VAL:CG2	2.30	0.53
45:Aq:123:ARG:O	45:Aq:124:GLU:O	2.27	0.53
48:A2:131:C:C5'	48:A2:131:C:C6	2.79	0.53
48:A2:712:G:H2'	48:A2:713:G:C8	2.44	0.53
48:A2:1749:A:O2'	48:A2:1751:G:OP1	2.23	0.53
48:A2:2483:C:H2'	48:A2:2485:G:C8	2.44	0.53
48:A2:4885:G:N3	48:A2:4885:G:H5'	2.24	0.53
48:A2:4978:G:H2'	48:A2:4979:C:C6	2.44	0.53
49:B1:571:U:H4'	74:BY:34:THR:HG21	1.90	0.53
49:B1:933:G:H1	76:Ba:19:GLN:HE22	1.56	0.53
49:B1:1314:U:N1	60:BK:2:LEU:CB	2.40	0.53
49:B1:1466:G:OP1	67:BR:5:ARG:NH1	2.42	0.53
49:B1:1674:G:H5"	55:BF:86:LYS:CE	2.38	0.53
49:B1:1778:C:C5'	49:B1:1778:C:H6	2.22	0.53
50:BA:40:LYS:HG2	50:BA:41:ARG:H	1.74	0.53
51:BB:116:LYS:C	51:BB:117:TRP:CG	2.85	0.53
51:BB:179:ASN:HD22	51:BB:187:LYS:NZ	2.07	0.53
54:BE:47:PHE:CE1	54:BE:111:VAL:HG11	2.43	0.53
54:BE:149:TYR:CG	56:BG:209:TYR:CD2	2.97	0.53
64:BO:44:VAL:CG2	64:BO:81:VAL:HG13	2.38	0.53
64:BO:89:GLY:C	64:BO:90:ILE:HG23	2.34	0.53
66:BQ:143:LYS:O	66:BQ:144:SER:HB3	2.09	0.53
69:BT:38:LYS:HD3	69:BT:99:VAL:CG1	2.39	0.53
72:BW:102:ILE:CG2	72:BW:125:ILE:HG23	2.25	0.53
77:Bb:33:MET:HB2	77:Bb:79:PHE:HB2	1.91	0.53
2:A4:77:A:H1'	2:A4:100:A:N6	2.23	0.53
3:AA:179:ILE:HD12	48:A2:3624:A:H5"	1.90	0.53
4:AB:92:TYR:CE1	4:AB:101:THR:HG22	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AB:99:LEU:CD2	4:AB:158:GLN:HE22	2.22	0.53
6:AD:232:THR:CG2	6:AD:235:MET:CE	2.86	0.53
7:AE:157:HIS:ND1	7:AE:184:VAL:HG22	2.23	0.53
7:AE:203:ILE:CB	7:AE:206:VAL:HG21	2.38	0.53
7:AE:224:LYS:HB2	7:AE:225:PRO:HD3	1.89	0.53
8:AF:69:ILE:O	8:AF:73:ARG:CG	2.50	0.53
25:AW:73:ARG:O	25:AW:74:ARG:HB2	2.07	0.53
27:AY:41:LYS:HB3	27:AY:42:TYR:CD1	2.43	0.53
32:Ad:31:LYS:HA	48:A2:5006:A:N3	2.24	0.53
45:Aq:59:THR:HG21	45:Aq:75:PRO:HD2	1.91	0.53
46:At:83:ASN:O	46:At:84:LYS:HG2	2.08	0.53
47:Au:166:ALA:N	48:A2:3940:G:C1’	2.51	0.53
47:Au:206:ILE:C	47:Au:207:LYS:HG3	2.33	0.53
48:A2:634:C:H2’	48:A2:635:G:C8	2.44	0.53
48:A2:1466:G:N3	48:A2:1466:G:C2’	2.72	0.53
48:A2:1581:A:C2’	48:A2:1582:A:H5”	2.39	0.53
48:A2:1997:C:H2’	48:A2:1998:A:H8	1.74	0.53
48:A2:3591:G:C2	48:A2:4604:U:H5’	2.43	0.53
48:A2:3934:A:H2’	48:A2:3935:U:OP1	2.08	0.53
48:A2:4359:A:O4’	83:Bv:76:A:C2	2.62	0.53
48:A2:4546:A:H2’	48:A2:4547:U:C5’	2.39	0.53
48:A2:4831:G:C2’	48:A2:4832:A:OP1	2.56	0.53
49:B1:284:C:H2’	49:B1:285:U:C4	2.44	0.53
49:B1:466:G:H3’	49:B1:466:G:N3	2.24	0.53
49:B1:499:G:C2	49:B1:501:C:O2	2.62	0.53
49:B1:527:C:C4’	59:BJ:125:HIS:HA	2.39	0.53
49:B1:991:G:H1’	76:Ba:11:ALA:HB1	1.90	0.53
49:B1:1019:C:H5”	63:BN:72:LEU:HD13	1.91	0.53
49:B1:1256:G:N3	79:Bd:30:LEU:HD23	2.24	0.53
50:BA:7:VAL:CG2	71:BV:42:VAL:H	2.22	0.53
53:BD:106:ARG:HH21	53:BD:173:ARG:HB3	1.73	0.53
54:BE:149:TYR:CD1	56:BG:209:TYR:CG	2.97	0.53
56:BG:63:MET:HE2	56:BG:106:LEU:HD11	1.88	0.53
60:BK:83:LEU:HD22	60:BK:88:GLU:HA	1.91	0.53
62:BM:35:ILE:HG12	62:BM:108:CYS:SG	2.48	0.53
63:BN:31:ASP:O	63:BN:35:GLU:N	2.35	0.53
64:BO:43:HIS:HA	64:BO:54:CYS:O	2.08	0.53
64:BO:144:GLY:O	64:BO:148:GLY:HA2	2.09	0.53
64:BO:147:ARG:HA	76:Ba:28:ARG:HG3	1.91	0.53
68:BS:107:LEU:O	68:BS:111:LEU:HG	2.09	0.53
72:BW:83:LEU:HD23	72:BW:86:LEU:CD1	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:Be:49:PHE:HE1	80:Be:51:LYS:HG3	1.74	0.53
82:Bg:88:ARG:HD3	82:Bg:90:TRP:CE2	2.41	0.53
2:A4:22:A:N1	2:A4:23:A:C6	2.76	0.53
3:AA:225:ILE:HD13	3:AA:233:ARG:O	2.09	0.53
3:AA:226:ARG:HH21	48:A2:4144:G:H5'	1.73	0.53
4:AB:257:TRP:CE3	48:A2:3870:G:OP1	2.61	0.53
4:AB:354:GLN:HB2	4:AB:356:LYS:HG3	1.90	0.53
7:AE:161:ARG:HD3	7:AE:270:TYR:CE2	2.43	0.53
9:AG:110:LYS:HD3	9:AG:110:LYS:C	2.33	0.53
10:AH:43:VAL:HG11	10:AH:70:VAL:HG23	1.89	0.53
13:AK:40:MET:SD	48:A2:1981:G:O6	2.66	0.53
13:AK:40:MET:HB3	48:A2:1977:C:O2'	2.08	0.53
13:AK:61:MET:O	13:AK:64:ALA:HB3	2.09	0.53
13:AK:78:LEU:CB	13:AK:80:PRO:HD2	2.29	0.53
18:AP:127:ARG:NH2	48:A2:3830:G:OP1	2.42	0.53
23:AU:61:VAL:HG12	23:AU:74:SER:HB3	1.90	0.53
26:AX:56:ARG:NH1	26:AX:62:ARG:NH2	2.56	0.53
28:AZ:99:ASP:O	28:AZ:101:PHE:N	2.41	0.53
32:Ad:34:HIS:HD2	48:A2:4597:A:O2'	1.90	0.53
33:Ae:4:LEU:CD1	33:Ae:121:ARG:H	2.20	0.53
44:Ap:23:ARG:HH22	48:A2:2854:C:P	2.32	0.53
47:Au:10:LEU:HG	47:Au:216:LEU:HD21	1.90	0.53
47:Au:165:LEU:HG	47:Au:166:ALA:N	2.23	0.53
48:A2:204:G:H21	48:A2:229:G:P	2.31	0.53
48:A2:205:A:C6	48:A2:229:G:C6	2.93	0.53
48:A2:237:G:H2'	48:A2:238:G:C8	2.43	0.53
48:A2:1279:G:H1'	48:A2:1280:U:C6	2.43	0.53
48:A2:1284:C:C2	48:A2:1285:U:H1'	2.43	0.53
48:A2:1948:A:C6	48:A2:1949:G:C6	2.97	0.53
48:A2:2608:C:C6	48:A2:2608:C:H5"	2.43	0.53
49:B1:180:G:C2	49:B1:181:A:C6	2.96	0.53
49:B1:217:A:C6	49:B1:218:U:N3	2.77	0.53
49:B1:217:A:N1	49:B1:218:U:C2	2.77	0.53
49:B1:455:A:OP1	56:BG:94:ARG:HG2	2.09	0.53
49:B1:572:U:OP1	74:BY:59:GLY:N	2.41	0.53
49:B1:833:C:C2'	49:B1:834:C:C6	2.85	0.53
49:B1:1286:G:H22	62:BM:36:ARG:CB	2.16	0.53
49:B1:1448:A:H2'	49:B1:1449:G:O4'	2.09	0.53
49:B1:1865:C:H5"	76:Ba:87:ARG:HH22	1.71	0.53
50:BA:111:GLN:HG3	50:BA:116:PHE:HE2	1.74	0.53
51:BB:37:ALA:O	51:BB:38:MET:HG2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BB:181:LEU:CA	51:BB:184:VAL:CG2	2.86	0.53
52:BC:134:ASN:C	52:BC:134:ASN:HD22	2.16	0.53
53:BD:75:LYS:O	60:BK:22:VAL:CG1	2.57	0.53
55:BF:107:ASN:HD22	55:BF:107:ASN:H	1.57	0.53
56:BG:69:THR:C	56:BG:101:ILE:HG13	2.34	0.53
57:BH:158:LEU:HD11	57:BH:187:PHE:CD1	2.44	0.53
65:BP:85:ILE:HD11	65:BP:116:LEU:HD21	1.83	0.53
66:BQ:42:ILE:CG1	66:BQ:48:GLN:HG3	2.38	0.53
67:BR:5:ARG:HG2	67:BR:49:LYS:NZ	2.24	0.53
68:BS:73:ASN:HD21	68:BS:75:ARG:HG3	1.74	0.53
76:Ba:46:GLU:CD	84:Bx:38:U:H1'	2.26	0.53
1:A3:102:G:H4'	38:Aj:21:ARG:CG	2.39	0.53
5:AC:50:GLN:HG3	48:A2:342:G:C4'	2.37	0.53
5:AC:182:LYS:NZ	48:A2:2279:A:N7	2.57	0.53
5:AC:211:TYR:CE1	5:AC:229:LEU:CG	2.92	0.53
6:AD:81:HIS:O	6:AD:84:PRO:HD2	2.09	0.53
6:AD:226:TYR:CD1	6:AD:231:VAL:HG11	2.43	0.53
7:AE:207:LYS:HG3	7:AE:208:ILE:N	2.23	0.53
8:AF:147:LEU:HD11	48:A2:931:A:C2	2.44	0.53
9:AG:207:VAL:HB	9:AG:215:LEU:HD13	1.91	0.53
10:AH:99:PHE:HE2	48:A2:4564:A:O2'	1.91	0.53
10:AH:173:ARG:CD	48:A2:4438:C:N4	2.71	0.53
13:AK:48:ARG:CA	13:AK:51:ALA:HB2	2.39	0.53
17:AO:147:TRP:NE1	17:AO:149:TYR:HB2	2.24	0.53
17:AO:176:ARG:CG	48:A2:4830:G:H1	2.22	0.53
25:AW:116:LYS:HE2	49:B1:328:U:OP1	2.08	0.53
34:Af:44:GLY:HA2	48:A2:940:C:OP1	2.09	0.53
45:Aq:37:LEU:HG	45:Aq:64:ILE:HG23	1.89	0.53
48:A2:1164:C:N4	48:A2:1167:A:C1'	2.72	0.53
48:A2:1197:C:H2'	48:A2:1198:C:C5'	2.33	0.53
48:A2:4086:U:C2'	48:A2:4087:U:H5"	2.38	0.53
49:B1:44:U:H3'	49:B1:44:U:O2	2.08	0.53
49:B1:302:A:N3	58:BI:64:ASN:ND2	2.56	0.53
49:B1:498:C:H5"	54:BE:7:LYS:CE	2.38	0.53
49:B1:1003:U:H2'	49:B1:1004:U:C6	2.44	0.53
49:B1:1274:G:O6	79:Bd:7:TYR:CE2	2.55	0.53
49:B1:1567:G:N2	68:BS:82:TRP:CZ3	2.77	0.53
49:B1:1664:A:O2'	49:B1:1665:G:P	2.67	0.53
50:BA:41:ARG:HA	50:BA:47:TYR:CD1	2.44	0.53
50:BA:115:ALA:CB	50:BA:117:ARG:NH2	2.71	0.53
52:BC:252:THR:OG1	72:BW:99:PHE:CE1	2.55	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BD:220:THR:HA	82:Bg:190:GLY:HA2	1.90	0.53
54:BE:191:ARG:HH22	54:BE:244:ILE:HG13	1.74	0.53
59:BJ:54:ARG:HB2	59:BJ:54:ARG:NH1	2.24	0.53
62:BM:77:ILE:HD11	62:BM:127:TYR:CD2	2.43	0.53
63:BN:98:VAL:HG12	63:BN:115:LEU:HD12	1.90	0.53
67:BR:100:PRO:O	67:BR:103:LYS:HB3	2.09	0.53
67:BR:112:GLY:O	67:BR:113:SER:OG	2.26	0.53
68:BS:78:LYS:HG2	68:BS:79:ILE:H	1.74	0.53
79:Bd:43:PHE:CD1	79:Bd:43:PHE:C	2.87	0.53
5:AC:286:ASN:HD22	5:AC:291:ARG:HH21	1.57	0.52
6:AD:26:GLY:HA2	48:A2:4242:A:H61	1.74	0.52
6:AD:265:ARG:CG	6:AD:265:ARG:HH11	2.22	0.52
6:AD:265:ARG:HG2	6:AD:265:ARG:NH1	2.24	0.52
13:AK:52:VAL:O	13:AK:53:VAL:HG23	2.08	0.52
16:AN:168:GLY:O	16:AN:172:ARG:HG3	2.09	0.52
26:AX:106:LYS:HE3	26:AX:124:VAL:O	2.10	0.52
28:AZ:101:PHE:O	28:AZ:102:ARG:HB2	2.09	0.52
39:Ak:23:VAL:HA	39:Ak:35:LYS:O	2.09	0.52
45:Aq:54:LYS:O	45:Aq:55:GLY:O	2.27	0.52
45:Aq:125:LEU:HA	45:Aq:129:ILE:HD13	1.90	0.52
47:Au:204:LEU:HG	47:Au:216:LEU:HB3	1.91	0.52
48:A2:352:C:C2	48:A2:353:A:C8	2.97	0.52
48:A2:1185:C:H2'	48:A2:1186:G:C8	2.44	0.52
48:A2:1296:C:N4	48:A2:1306:A:N7	2.57	0.52
48:A2:3731:A:H2	49:B1:1709:G:N2	2.07	0.52
49:B1:1407:U:H4'	66:BQ:71:ARG:HH22	1.73	0.52
49:B1:1785:C:O2'	49:B1:1786:U:H5'	2.09	0.52
49:B1:1848:U:H2'	49:B1:1850:A:OP2	2.10	0.52
50:BA:7:VAL:HG11	71:BV:42:VAL:HG13	1.90	0.52
50:BA:175:TRP:C	50:BA:202:TYR:CD2	2.80	0.52
52:BC:256:TRP:CZ3	72:BW:68:ARG:HB2	2.41	0.52
54:BE:139:LEU:HB2	54:BE:150:PRO:CB	2.39	0.52
58:BI:84:ASN:OD1	58:BI:97:VAL:HG21	2.09	0.52
58:BI:123:ARG:HD2	58:BI:130:THR:HG21	1.89	0.52
59:BJ:124:HIS:HE2	80:Be:35:ARG:HG2	1.72	0.52
62:BM:102:LYS:HE3	62:BM:104:VAL:CG1	2.37	0.52
65:BP:86:LEU:HD23	65:BP:89:MET:HE2	1.91	0.52
67:BR:97:GLU:OE1	67:BR:117:LEU:N	2.42	0.52
68:BS:26:ILE:HG23	68:BS:27:ALA:N	2.24	0.52
83:Bw:19:G:H8	83:Bw:19:G:O5'	1.92	0.52
5:AC:196:MET:HB3	48:A2:346:G:O6	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:198:ASN:ND2	27:AY:10:ASP:HA	2.24	0.52
6:AD:16:TYR:CE1	48:A2:4227:U:C4	2.97	0.52
7:AE:137:VAL:HG13	48:A2:702:A:H5"	1.92	0.52
8:AF:76:ARG:NE	48:A2:719:U:C5'	2.70	0.52
13:AK:14:PHE:CD2	48:A2:1941:A:C5	2.98	0.52
15:AM:101:LYS:HE2	48:A2:4834:U:P	2.48	0.52
19:AQ:104:ARG:CD	48:A2:1335:C:OP2	2.55	0.52
20:AR:15:LEU:HD21	20:AR:45:ILE:HD13	1.91	0.52
22:AT:68:THR:HG21	48:A2:4275:A:O3'	2.09	0.52
25:AW:72:THR:HG1	49:B1:1783:C:H42	1.52	0.52
29:Aa:83:SER:HB2	29:Aa:86:THR:HG21	1.81	0.52
30:Ab:45:PHE:CE1	48:A2:1474:G:OP1	2.62	0.52
30:Ab:47:LYS:HE2	48:A2:1808:G:H4'	1.90	0.52
38:Aj:26:ALA:O	38:Aj:34:CYS:CA	2.52	0.52
38:Aj:28:HIS:N	38:Aj:33:THR:O	2.23	0.52
39:Ak:2:PRO:HA	48:A2:2516:A:OP1	2.09	0.52
48:A2:273:A:N1	48:A2:300:A:H5'	2.24	0.52
48:A2:464:A:C2	48:A2:680:C:O2	2.62	0.52
48:A2:901:U:O2'	48:A2:902:A:OP1	2.25	0.52
48:A2:926:G:H3'	48:A2:927:C:H5'	1.89	0.52
48:A2:1152:G:H2'	48:A2:1153:G:O4'	2.10	0.52
48:A2:1610:C:O5'	48:A2:1610:C:H6	1.92	0.52
48:A2:1966:G:O2'	48:A2:1984:G:H5"	2.08	0.52
48:A2:1972:A:H2'	48:A2:1973:U:C4	2.44	0.52
48:A2:1985:U:H2'	48:A2:1986:G:O4'	2.08	0.52
48:A2:2274:C:O5'	48:A2:2274:C:H6	1.91	0.52
48:A2:2637:G:HO2'	48:A2:2638:A:H8	1.57	0.52
48:A2:3922:G:C2	48:A2:4031:G:C2	2.97	0.52
48:A2:4983:C:OP1	58:BI:169:GLY:C	2.51	0.52
49:B1:802:A:C8	49:B1:802:A:P	3.02	0.52
49:B1:913:A:N6	57:BH:98:ARG:HD2	2.23	0.52
49:B1:1442:U:C4	49:B1:1443:C:C4	2.97	0.52
49:B1:1622:U:H6	65:BP:123:TYR:HH	1.48	0.52
50:BA:208:GLU:HA	50:BA:211:GLU:HB3	1.91	0.52
58:BI:122:GLY:HA2	58:BI:167:GLN:HG2	1.91	0.52
59:BJ:35:TYR:OH	59:BJ:103:GLU:CA	2.57	0.52
64:BO:146:ARG:O	76:Ba:28:ARG:HA	2.10	0.52
69:BT:72:VAL:HG22	69:BT:104:LEU:HD12	1.92	0.52
71:BV:50:PHE:CD1	71:BV:50:PHE:N	2.73	0.52
72:BW:51:GLU:OE1	77:Bb:8:LEU:HD22	2.09	0.52
75:BZ:76:ARG:NE	75:BZ:76:ARG:HA	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:Bf:117:LEU:HD23	81:Bf:118:ARG:NH1	2.25	0.52
82:Bg:72:SER:HA	82:Bg:113:PHE:CZ	2.43	0.52
82:Bg:217:MET:SD	82:Bg:219:TRP:CZ2	3.02	0.52
4:AB:219:VAL:CG2	4:AB:282:LYS:HD2	2.40	0.52
5:AC:134:PRO:HA	5:AC:150:LEU:HD11	1.91	0.52
5:AC:212:ASN:CB	5:AC:232:VAL:CG2	2.66	0.52
6:AD:87:GLY:O	6:AD:239:MET:HE2	2.10	0.52
7:AE:108:LYS:O	7:AE:109:LEU:HB3	2.10	0.52
7:AE:114:ARG:HG2	48:A2:453:C:P	2.49	0.52
10:AH:99:PHE:CD2	10:AH:118:LEU:C	2.88	0.52
13:AK:41:GLN:O	13:AK:45:MET:HB3	2.09	0.52
15:AM:46:ARG:NH2	48:A2:925:C:OP1	2.41	0.52
17:AO:24:ALA:O	17:AO:27:VAL:HG12	2.09	0.52
18:AP:30:ARG:HD3	18:AP:30:ARG:C	2.34	0.52
21:AS:161:ARG:HD2	21:AS:162:GLN:HG3	1.91	0.52
25:AW:80:ARG:NH2	56:BG:128:THR:CB	2.72	0.52
28:AZ:26:VAL:HG13	28:AZ:91:LEU:CD2	2.39	0.52
29:Aa:90:ALA:CB	29:Aa:99:PRO:CG	2.88	0.52
33:Ae:58:ILE:HD11	48:A2:2060:G:H5'	1.90	0.52
34:Af:3:GLY:O	48:A2:4904:U:O2	2.27	0.52
34:Af:48:ALA:HB1	34:Af:69:VAL:CG1	2.39	0.52
38:Aj:21:ARG:CZ	38:Aj:39:TYR:CD1	2.89	0.52
39:Ak:11:PHE:CD1	39:Ak:12:LEU:HA	2.44	0.52
43:Ao:40:ARG:HH11	43:Ao:40:ARG:HB3	1.75	0.52
47:Au:58:THR:HB	47:Au:59:PRO:CD	2.39	0.52
47:Au:203:ALA:CB	47:Au:215:ARG:NE	2.73	0.52
48:A2:1259:C:C3'	48:A2:1260:G:H8	2.20	0.52
48:A2:1878:A:O2'	48:A2:1879:C:H5"	2.09	0.52
48:A2:2572:C:H2'	48:A2:2573:C:C6	2.44	0.52
49:B1:107:A:H2'	49:B1:108:G:C8	2.44	0.52
49:B1:168:C:H5'	56:BG:131:ARG:HD3	1.86	0.52
49:B1:173:A:O2'	49:B1:174:C:O4'	2.27	0.52
49:B1:382:C:H41	58:BI:5:ARG:HH22	1.58	0.52
49:B1:547:G:H3'	49:B1:548:C:H5"	1.91	0.52
49:B1:635:G:H2'	49:B1:636:C:C6	2.45	0.52
49:B1:986:G:C6	49:B1:987:A:C5	2.97	0.52
49:B1:1144:A:H2'	49:B1:1145:A:C8	2.44	0.52
49:B1:1158:G:H5"	72:BW:76:SER:HG	1.73	0.52
49:B1:1523:C:C6	68:BS:141:ARG:NH1	2.77	0.52
49:B1:1665:G:N2	69:BT:87:VAL:HG13	2.24	0.52
49:B1:1698:C:N4	84:Bx:52:U:C6	2.62	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BD:48:ILE:O	53:BD:86:LEU:HA	2.08	0.52
54:BE:98:HIS:NE2	54:BE:116:VAL:HG12	2.25	0.52
56:BG:121:ILE:CG2	56:BG:124:LEU:HD23	2.39	0.52
61:BL:30:LYS:CB	61:BL:33:LEU:CD1	2.86	0.52
65:BP:75:VAL:HG21	65:BP:104:GLN:HG2	1.92	0.52
66:BQ:21:ALA:CB	66:BQ:83:ALA:HB1	2.23	0.52
67:BR:7:LYS:O	67:BR:11:LYS:HB2	2.09	0.52
68:BS:16:LEU:HD23	68:BS:16:LEU:H	1.70	0.52
70:BU:20:ILE:HG22	70:BU:116:ILE:CB	2.37	0.52
75:BZ:68:ILE:HB	75:BZ:109:TYR:HB3	1.85	0.52
83:Bw:54:U:OP1	83:Bw:54:U:H4'	2.09	0.52
1:A3:109:C:C5	38:Aj:20:ARG:HH22	1.67	0.52
1:A3:150:C:C4	9:AG:65:ARG:CZ	2.92	0.52
4:AB:4:ARG:NH1	4:AB:7:SER:HA	2.25	0.52
4:AB:85:VAL:HB	4:AB:165:HIS:CE1	2.45	0.52
4:AB:300:LYS:HE3	4:AB:313:SER:HB2	1.89	0.52
6:AD:41:LYS:NZ	22:AT:93:ILE:HG21	2.25	0.52
7:AE:109:LEU:C	7:AE:111:LYS:N	2.68	0.52
7:AE:165:LEU:HD22	7:AE:203:ILE:HD12	1.90	0.52
8:AF:70:ARG:NH1	48:A2:1191:G:O2'	2.42	0.52
8:AF:167:ILE:HG22	8:AF:168:ALA:O	2.09	0.52
11:AI:67:ALA:CB	11:AI:158:LYS:HD3	2.40	0.52
13:AK:45:MET:SD	45:Aq:122:ALA:N	2.81	0.52
14:AL:128:PRO:HD2	14:AL:136:LYS:NZ	2.23	0.52
17:AO:163:LYS:O	17:AO:166:ILE:HG22	2.09	0.52
18:AP:113:VAL:HG22	18:AP:151:THR:O	2.10	0.52
19:AQ:154:LYS:HB2	19:AQ:154:LYS:NZ	2.24	0.52
21:AS:173:ASN:CA	48:A2:4724:A:C2	2.51	0.52
22:AT:129:LYS:HE2	48:A2:1816:G:HO2'	1.73	0.52
24:AV:135:ASN:N	24:AV:135:ASN:HD22	2.07	0.52
29:Aa:115:GLY:HA3	48:A2:1381:A:N7	2.24	0.52
30:Ab:27:GLN:CB	48:A2:1444:A:O4'	2.57	0.52
33:Ae:6:PRO:HG2	33:Ae:9:LYS:HG2	1.92	0.52
38:Aj:82:THR:CG2	38:Aj:83:THR:H	2.05	0.52
43:Ao:40:ARG:CB	43:Ao:40:ARG:NH1	2.73	0.52
45:Aq:9:GLU:HB3	45:Aq:65:GLN:O	2.10	0.52
45:Aq:28:LEU:HG	45:Aq:29:ALA:N	2.23	0.52
49:B1:77:A:H4'	56:BG:173:ALA:CB	2.39	0.52
49:B1:228:C:O2'	49:B1:229:A:O5'	2.28	0.52
49:B1:307:G:O2'	58:BI:45:THR:HB	2.09	0.52
49:B1:563:G:H8	49:B1:563:G:OP2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:580:U:C2'	74:BY:62:THR:CG2	2.88	0.52
49:B1:639:C:O2'	49:B1:640:A:H5'	2.09	0.52
49:B1:739:C:C2	49:B1:740:C:C6	2.98	0.52
49:B1:873:G:H4'	49:B1:874:G:OP2	2.09	0.52
49:B1:1016:U:O2'	63:BN:61:ALA:HA	2.08	0.52
49:B1:1528:G:O2'	49:B1:1666:C:OP1	2.28	0.52
49:B1:1567:G:C6	68:BS:82:TRP:CD2	2.98	0.52
56:BG:160:LYS:O	56:BG:171:THR:HG23	2.07	0.52
60:BK:85:LEU:HB2	60:BK:86:PRO:HD3	1.91	0.52
63:BN:54:LEU:CG	63:BN:58:HIS:CD2	2.86	0.52
66:BQ:105:LYS:C	66:BQ:105:LYS:HD2	2.35	0.52
72:BW:102:ILE:H	72:BW:113:HIS:CB	2.05	0.52
1:A3:36:G:O6	36:Ah:89:ARG:NH1	2.42	0.52
4:AB:59:GLU:OE2	4:AB:69:LYS:HA	2.08	0.52
4:AB:154:LYS:HG2	4:AB:194:LEU:HD22	1.92	0.52
6:AD:15:ARG:O	6:AD:17:GLN:NE2	2.43	0.52
7:AE:109:LEU:N	7:AE:109:LEU:CD2	2.73	0.52
8:AF:162:ILE:N	8:AF:162:ILE:CD1	2.73	0.52
13:AK:25:PRO:N	13:AK:92:LYS:HB3	2.25	0.52
14:AL:44:ARG:NH2	48:A2:182:C:H3'	2.24	0.52
15:AM:114:LYS:HA	15:AM:117:LYS:NZ	2.25	0.52
18:AP:10:ASN:HD22	18:AP:13:LYS:HG3	1.69	0.52
21:AS:144:GLN:O	21:AS:146:HIS:N	2.43	0.52
23:AU:32:GLY:O	23:AU:34:MET:N	2.43	0.52
23:AU:39:PHE:CE1	23:AU:43:LEU:HD11	2.44	0.52
29:Aa:73:VAL:HG12	29:Aa:110:LYS:O	2.08	0.52
30:Ab:23:LYS:CG	30:Ab:24:PRO:HD2	2.40	0.52
36:Ah:47:ILE:CG2	36:Ah:48:ARG:N	2.72	0.52
45:Aq:109:ILE:HG13	45:Aq:110:VAL:H	1.69	0.52
47:Au:35:GLN:CG	48:A2:4023:A:HO2'	1.25	0.52
47:Au:39:LYS:O	47:Au:40:ASN:HB3	2.08	0.52
47:Au:67:VAL:HG13	47:Au:111:LEU:O	2.10	0.52
48:A2:69:A:H2'	48:A2:71:C:H41	1.71	0.52
48:A2:121:A:N6	48:A2:151:G:C6	2.78	0.52
48:A2:133:C:C4	48:A2:135:G:N1	2.78	0.52
48:A2:1257:A:O2'	48:A2:1258:G:C5'	2.57	0.52
48:A2:2004:C:N3	48:A2:2005:G:N3	2.57	0.52
48:A2:4686:A:H8	48:A2:4686:A:P	2.33	0.52
49:B1:113:G:O4'	49:B1:113:G:N3	2.43	0.52
49:B1:1035:A:H1'	49:B1:1857:G:H1'	1.91	0.52
49:B1:1309:C:O4'	81:Bf:133:ALA:CA	2.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1552:G:C5'	49:B1:1557:C:C5	2.72	0.52
50:BA:42:LYS:HG2	50:BA:43:SER:H	1.74	0.52
51:BB:171:ILE:HD11	51:BB:197:ILE:HG12	1.90	0.52
52:BC:74:LYS:HE3	52:BC:272:HIS:NE2	2.25	0.52
59:BJ:40:LYS:H	80:Be:34:ARG:NH2	2.07	0.52
65:BP:51:ARG:NH1	65:BP:51:ARG:CG	2.73	0.52
65:BP:52:LYS:NZ	65:BP:83:MET:CE	2.71	0.52
66:BQ:107:GLU:O	66:BQ:111:ILE:HG12	2.10	0.52
68:BS:59:LEU:CD2	68:BS:60:THR:N	2.73	0.52
68:BS:123:LEU:O	68:BS:127:TRP:HD1	1.92	0.52
73:BX:133:LEU:HD23	73:BX:133:LEU:N	2.25	0.52
82:Bg:153:CYS:O	82:Bg:167:SER:HA	2.10	0.52
2:A4:10:C:C2	6:AD:20:PHE:CD1	2.97	0.52
4:AB:26:ARG:HH11	4:AB:26:ARG:HG2	1.75	0.52
5:AC:252:TRP:CH2	5:AC:260:LEU:HD11	2.45	0.52
6:AD:265:ARG:N	6:AD:265:ARG:CD	2.73	0.52
7:AE:108:LYS:C	7:AE:109:LEU:HD22	2.34	0.52
8:AF:222:LYS:HE2	8:AF:225:THR:CG2	2.38	0.52
20:AR:70:ARG:NH1	48:A2:2790:G:OP1	2.37	0.52
21:AS:142:VAL:HG12	21:AS:146:HIS:ND1	2.25	0.52
25:AW:97:LYS:HB3	25:AW:98:PRO:CD	2.24	0.52
29:Aa:28:HIS:NE2	29:Aa:32:ARG:CZ	2.73	0.52
29:Aa:61:TYR:N	48:A2:4316:U:O4	2.41	0.52
31:Ac:88:TYR:CD1	63:BN:144:SER:OG	2.63	0.52
33:Ae:85:LEU:C	33:Ae:85:LEU:HD13	2.35	0.52
47:Au:85:MET:CG	47:Au:89:ALA:CB	2.86	0.52
48:A2:3780:G:O5'	48:A2:3780:G:C8	2.63	0.52
49:B1:163:U:O4	74:BY:118:ARG:NH2	2.42	0.52
49:B1:407:G:C2	73:BX:36:LEU:HB2	2.44	0.52
49:B1:558:G:H2'	49:B1:559:G:H8	1.74	0.52
49:B1:745:C:H6	49:B1:745:C:O5'	1.92	0.52
49:B1:861:A:H62	57:BH:107:LYS:HG3	1.75	0.52
49:B1:1477:U:O2'	49:B1:1478:U:OP2	2.22	0.52
49:B1:1644:C:H4'	66:BQ:140:ARG:HB2	1.92	0.52
50:BA:37:TYR:OH	50:BA:57:LYS:HE3	2.10	0.52
50:BA:42:LYS:CE	50:BA:48:ILE:CD1	2.85	0.52
50:BA:175:TRP:O	50:BA:202:TYR:HE2	1.92	0.52
56:BG:159:ARG:O	56:BG:161:PRO:HD3	2.09	0.52
56:BG:211:LYS:HD2	56:BG:215:LYS:HZ1	1.74	0.52
56:BG:216:ARG:NH2	56:BG:219:GLU:CB	2.73	0.52
56:BG:217:MET:HB3	56:BG:221:LYS:HZ2	1.70	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BI:76:THR:HG21	58:BI:104:ILE:CG2	2.39	0.52
63:BN:25:TRP:O	63:BN:26:LEU:HB3	2.08	0.52
67:BR:57:LEU:O	67:BR:61:ILE:HG13	2.10	0.52
76:Ba:39:PHE:CE1	76:Ba:70:LYS:HD2	2.45	0.52
80:Be:29:THR:N	80:Be:32:ALA:CB	2.73	0.52
1:A3:53:G:H4'	40:Al:40:LYS:HE2	1.92	0.52
1:A3:136:U:OP1	26:AX:62:ARG:NH1	2.42	0.52
3:AA:95:GLN:HB3	48:A2:4087:U:C4	2.45	0.52
4:AB:229:LYS:HB3	4:AB:233:SER:OG	2.09	0.52
5:AC:121:ARG:HD3	5:AC:277:TYR:CD1	2.44	0.52
5:AC:132:ALA:HA	5:AC:151:PRO:CG	2.40	0.52
5:AC:190:ARG:HB2	5:AC:202:ILE:HD13	1.92	0.52
6:AD:252:VAL:O	6:AD:253:TYR:HB3	2.09	0.52
6:AD:286:SER:OG	48:A2:1164:C:OP1	2.27	0.52
8:AF:115:ARG:O	19:AQ:4:ASP:HA	2.09	0.52
13:AK:60:MET:HE3	48:A2:1941:A:O2'	2.10	0.52
13:AK:97:GLU:O	13:AK:98:ILE:C	2.53	0.52
20:AR:39:GLN:NE2	48:A2:2688:C:O3'	2.21	0.52
29:Aa:90:ALA:HB1	29:Aa:99:PRO:CG	2.39	0.52
34:Af:23:GLU:HG2	48:A2:433:G:C1'	2.39	0.52
48:A2:195:A:C2	48:A2:197:U:C5	2.97	0.52
48:A2:287:G:H4'	48:A2:288:G:H8	1.75	0.52
48:A2:1389:G:C6	48:A2:1391:G:H5"	2.45	0.52
48:A2:1989:U:H5	48:A2:1991:A:H5"	1.62	0.52
49:B1:64:A:C2'	56:BG:175:LYS:HZ2	2.21	0.52
49:B1:1567:G:O3'	69:BT:38:LYS:NZ	2.42	0.52
50:BA:85:ARG:HB3	50:BA:204:TYR:HB2	1.91	0.52
50:BA:176:TRP:CA	50:BA:202:TYR:HE2	2.11	0.52
51:BB:31:TYR:CE2	51:BB:94:LYS:HD2	2.45	0.52
52:BC:260:VAL:O	52:BC:261:PHE:HB2	2.10	0.52
55:BF:92:ILE:HD13	55:BF:169:ILE:HG21	1.91	0.52
56:BG:211:LYS:CG	56:BG:215:LYS:NZ	2.73	0.52
61:BL:33:LEU:CD1	61:BL:33:LEU:N	2.73	0.52
63:BN:25:TRP:CD1	63:BN:26:LEU:HB3	2.45	0.52
64:BO:142:ARG:CG	76:Ba:22:ARG:NE	2.73	0.52
65:BP:29:SER:HB2	65:BP:31:GLU:HG2	1.92	0.52
65:BP:97:TYR:HB2	65:BP:102:PHE:CD1	2.45	0.52
67:BR:35:CYS:CA	67:BR:38:ILE:HG13	2.40	0.52
70:BU:20:ILE:HA	70:BU:115:THR:O	2.10	0.52
3:AA:70:LYS:NZ	3:AA:72:ARG:CZ	2.73	0.52
3:AA:130:SER:HA	3:AA:169:VAL:CG1	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:226:ARG:CG	3:AA:226:ARG:NH1	2.73	0.52
4:AB:317:LEU:HD23	48:A2:4959:U:H5"	1.86	0.52
5:AC:52:TYR:CD2	48:A2:344:C:C4'	2.93	0.52
5:AC:208:CYS:C	5:AC:209:ILE:HD12	2.35	0.52
6:AD:44:TYR:CD2	48:A2:1806:G:H4'	2.44	0.52
6:AD:176:SER:HB3	48:A2:4285:A:O3'	2.10	0.52
6:AD:264:LYS:C	6:AD:265:ARG:HG3	2.35	0.52
7:AE:123:ARG:CB	48:A2:948:G:OP1	2.58	0.52
7:AE:123:ARG:HD2	7:AE:124:LYS:N	2.25	0.52
7:AE:270:TYR:HA	15:AM:110:PHE:CE2	2.45	0.52
8:AF:69:ILE:HG21	8:AF:73:ARG:NE	2.18	0.52
8:AF:166:ARG:HH12	8:AF:209:TRP:CB	2.18	0.52
10:AH:111:LEU:CD1	10:AH:112:VAL:N	2.73	0.52
12:AJ:94:LEU:HD22	12:AJ:107:PHE:HB3	1.91	0.52
12:AJ:153:ALA:O	12:AJ:156:ARG:HG2	2.09	0.52
14:AL:195:ARG:HA	14:AL:198:ARG:CZ	2.39	0.52
16:AN:96:ARG:HG3	48:A2:30:C:H5'	1.92	0.52
17:AO:48:TYR:O	17:AO:51:LYS:HG2	2.10	0.52
19:AQ:68:ARG:HH12	48:A2:1483:C:H2'	1.75	0.52
28:AZ:33:THR:HG23	28:AZ:98:LYS:NZ	2.25	0.52
30:Ab:45:PHE:CD1	48:A2:1797:G:C6	2.97	0.52
35:Ag:58:ALA:N	48:A2:2664:C:OP1	2.35	0.52
37:Ai:17:VAL:O	37:Ai:19:LYS:N	2.43	0.52
45:Aq:131:GLU:O	45:Aq:132:ILE:C	2.52	0.52
48:A2:1740:G:N3	48:A2:1740:G:C2'	2.73	0.52
48:A2:1875:C:H6	48:A2:1875:C:O5'	1.93	0.52
48:A2:2373:G:C2'	48:A2:2373:G:N3	2.73	0.52
48:A2:2388:U:O2	48:A2:2388:U:C3'	2.56	0.52
48:A2:4045:U:H4'	48:A2:4046:G:OP1	2.10	0.52
49:B1:307:G:H4'	49:B1:308:G:OP2	2.10	0.52
49:B1:332:G:H1'	49:B1:333:G:N7	2.24	0.52
49:B1:633:C:C1'	80:Be:12:VAL:CG1	2.82	0.52
49:B1:803:C:H4'	72:BW:80:ASP:OD2	2.10	0.52
49:B1:1158:G:H21	72:BW:4:MET:HE3	1.74	0.52
49:B1:1606:G:N2	49:B1:1632:G:H1'	2.25	0.52
49:B1:1728:U:H2'	49:B1:1729:U:O4'	2.10	0.52
54:BE:103:TYR:HB2	54:BE:182:MET:HE2	1.90	0.52
54:BE:114:ILE:CG1	54:BE:115:THR:N	2.73	0.52
55:BF:90:VAL:CG1	66:BQ:46:THR:HG22	2.40	0.52
57:BH:119:SER:HA	57:BH:124:ALA:CB	2.40	0.52
64:BO:85:CYS:O	64:BO:89:GLY:N	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:BO:145:GLY:O	64:BO:148:GLY:N	2.43	0.52
66:BQ:33:LYS:CG	66:BQ:36:GLY:CA	2.85	0.52
69:BT:134:ILE:O	69:BT:137:GLN:HG2	2.09	0.52
4:AB:261:ARG:HD2	48:A2:3841:C:H4'	1.92	0.52
4:AB:316:PRO:HG2	4:AB:319:GLY:O	2.10	0.52
5:AC:318:PRO:O	5:AC:319:LEU:HB2	2.10	0.52
7:AE:187:ARG:NH2	48:A2:4900:C:P	2.83	0.52
7:AE:235:THR:O	7:AE:238:GLU:O	2.27	0.52
11:AI:35:ASP:HB2	11:AI:39:LYS:NZ	2.25	0.52
15:AM:19:PRO:CG	48:A2:923:C:C2	2.93	0.52
16:AN:62:TYR:CE1	16:AN:134:LEU:HD12	2.44	0.52
18:AP:10:ASN:ND2	18:AP:13:LYS:CE	2.73	0.52
22:AT:62:GLY:HA3	22:AT:76:VAL:HG22	1.90	0.52
25:AW:98:PRO:CD	25:AW:99:GLU:N	2.73	0.52
47:Au:74:CYS:CB	47:Au:84:HIS:NE2	2.73	0.52
48:A2:121:A:N3	48:A2:121:A:H3'	2.25	0.52
48:A2:1402:G:HO2'	48:A2:1403:A:P	2.32	0.52
48:A2:1750:C:H2'	48:A2:1750:C:O2	2.08	0.52
48:A2:1989:U:O2	48:A2:1989:U:H3'	2.10	0.52
48:A2:2617:G:H2'	48:A2:2618:U:C6	2.45	0.52
48:A2:3629:C:H2'	48:A2:3630:G:C8	2.44	0.52
48:A2:4062:G:C6	48:A2:4063:G:C6	2.98	0.52
48:A2:4621:G:H5"	48:A2:4621:G:H8	1.75	0.52
49:B1:681:U:O4'	73:BX:9:THR:HG23	2.10	0.52
49:B1:840:C:O2'	74:BY:14:THR:HA	2.10	0.52
49:B1:1148:A:H4'	49:B1:1149:A:O4'	2.10	0.52
49:B1:1256:G:C2	79:Bd:40:ARG:HG3	2.42	0.52
50:BA:112:ILE:CG2	50:BA:113:GLN:N	2.72	0.52
50:BA:116:PHE:C	50:BA:116:PHE:CD1	2.82	0.52
51:BB:70:SER:HB3	51:BB:83:LYS:CB	2.40	0.52
51:BB:71:LEU:CD2	51:BB:84:PHE:CD2	2.88	0.52
51:BB:183:GLU:HB3	51:BB:187:LYS:HZ1	1.75	0.52
52:BC:130:ILE:CD1	52:BC:159:LYS:HD3	2.40	0.52
53:BD:16:ILE:HD13	79:Bd:22:ARG:NH1	2.25	0.52
54:BE:86:PHE:CD2	54:BE:184:ILE:HG21	2.45	0.52
59:BJ:87:LEU:HD22	59:BJ:96:TYR:HD2	1.71	0.52
59:BJ:88:ASP:OD1	59:BJ:91:LYS:CB	2.58	0.52
61:BL:40:ILE:HD12	61:BL:143:LEU:HD11	1.91	0.52
63:BN:28:LEU:HG	63:BN:33:VAL:HG23	1.91	0.52
63:BN:40:LEU:CD2	63:BN:40:LEU:N	2.73	0.52
64:BO:127:GLY:C	76:Ba:59:PHE:HE2	2.18	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:BP:66:GLU:N	65:BP:67:ALA:CB	2.73	0.52
66:BQ:58:LEU:CD2	66:BQ:62:ARG:HH12	2.13	0.52
68:BS:15:VAL:HB	68:BS:19:ASN:HB2	1.92	0.52
68:BS:74:PRO:CG	68:BS:84:LEU:CD2	2.68	0.52
73:BX:90:CYS:O	73:BX:94:ILE:HG13	2.09	0.52
83:Bw:50:U:H3'	83:Bw:50:U:H6	1.74	0.52
2:A4:9:C:H2'	2:A4:10:C:H5'	1.90	0.52
4:AB:352:LEU:CD1	48:A2:4640:G:H4'	2.40	0.52
5:AC:182:LYS:NZ	48:A2:2279:A:C8	2.77	0.52
5:AC:330:PRO:CB	8:AF:51:TYR:CE1	2.93	0.52
10:AH:111:LEU:HD13	10:AH:112:VAL:H	1.75	0.52
13:AK:14:PHE:CD1	48:A2:1941:A:C2	2.98	0.52
14:AL:90:VAL:O	14:AL:94:ILE:HG12	2.09	0.52
17:AO:188:LYS:HA	17:AO:191:LYS:HD2	1.91	0.52
19:AQ:11:ARG:CG	19:AQ:11:ARG:NH1	2.73	0.52
19:AQ:157:GLY:HA2	19:AQ:161:SER:HB3	1.90	0.52
22:AT:87:LYS:HE2	48:A2:4267:G:N1	2.25	0.52
26:AX:117:TYR:CD2	26:AX:153:ILE:CG2	2.93	0.52
37:Ai:8:ALA:O	37:Ai:13:LYS:HG3	2.10	0.52
39:Ak:54:GLU:CD	39:Ak:57:LYS:HZ2	2.18	0.52
48:A2:683:U:N3	48:A2:684:U:C4	2.78	0.52
48:A2:1258:G:C2	48:A2:1259:C:N4	2.78	0.52
48:A2:1559:G:N3	48:A2:1559:G:H2'	2.23	0.52
48:A2:2484:C:H4'	48:A2:2485:G:C2	2.45	0.52
48:A2:2685:G:C8	48:A2:2685:G:C5'	2.80	0.52
48:A2:4264:U:O4	48:A2:4265:C:O2	2.28	0.52
48:A2:4550:U:O2'	48:A2:4551:A:H5"	2.11	0.52
48:A2:4964:U:H4'	48:A2:4965:A:H5'	1.91	0.52
49:B1:161:U:O2	56:BG:87:ARG:NH1	2.42	0.52
49:B1:216:C:O2'	49:B1:217:A:H5"	2.10	0.52
49:B1:527:C:H2'	49:B1:528:A:O4'	2.09	0.52
49:B1:1610:G:N2	68:BS:85:ASN:OD1	2.42	0.52
49:B1:1862:G:C6	76:Ba:75:VAL:HG23	2.43	0.52
50:BA:204:TYR:O	50:BA:205:ARG:CG	2.57	0.52
50:BA:208:GLU:HA	50:BA:211:GLU:CB	2.40	0.52
55:BF:61:PHE:CD1	78:Bc:51:ARG:HD3	2.45	0.52
56:BG:229:ALA:HB3	56:BG:230:LYS:HE2	1.90	0.52
57:BH:147:LYS:O	72:BW:42:MET:SD	2.68	0.52
62:BM:122:ASP:O	62:BM:125:GLU:HG2	2.10	0.52
67:BR:20:TYR:CD1	67:BR:20:TYR:N	2.78	0.52
74:BY:90:ARG:O	74:BY:93:ARG:HG2	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:Ba:42:ARG:CB	76:Ba:42:ARG:NH1	2.73	0.52
80:Be:51:LYS:NZ	84:Bx:59:U:C6	2.77	0.52
2:A4:65:G:C5'	2:A4:65:G:C8	2.94	0.51
3:AA:21:LYS:HD3	48:A2:1523:C:H5"	1.93	0.51
4:AB:252:ALA:CB	48:A2:4419:U:H1'	2.39	0.51
6:AD:39:GLN:OE1	6:AD:48:LYS:HB2	2.11	0.51
7:AE:123:ARG:HG3	7:AE:124:LYS:H	1.73	0.51
8:AF:166:ARG:HH11	8:AF:209:TRP:CG	2.18	0.51
11:AI:7:ARG:NH2	48:A2:4367:G:OP2	2.43	0.51
11:AI:48:LEU:HD23	11:AI:142:LEU:HA	1.92	0.51
11:AI:119:PHE:CE1	48:A2:4185:C:H4'	2.45	0.51
12:AJ:110:GLN:O	12:AJ:111:GLU:HB2	2.10	0.51
13:AK:32:ALA:CA	13:AK:85:ASN:HB2	2.40	0.51
16:AN:67:ARG:NE	48:A2:2437:C:H5"	2.25	0.51
22:AT:112:ASN:O	22:AT:128:LEU:HD23	2.10	0.51
25:AW:101:ARG:C	25:AW:105:ARG:NH1	2.68	0.51
28:AZ:60:LYS:O	28:AZ:60:LYS:HG3	2.08	0.51
29:Aa:26:ARG:HG3	48:A2:1636:G:H5"	1.92	0.51
34:Af:6:TRP:CE3	34:Af:102:ARG:HG2	2.45	0.51
34:Af:40:GLU:C	34:Af:42:TYR:H	2.18	0.51
37:Ai:15:HIS:CG	48:A2:72:C:C6	2.98	0.51
37:Ai:17:VAL:O	37:Ai:17:VAL:HG23	2.10	0.51
44:Ap:6:LYS:HG3	44:Ap:7:LYS:H	1.73	0.51
45:Aq:28:LEU:CB	45:Aq:42:VAL:HG23	2.30	0.51
46:At:28:GLU:HG2	46:At:29:PRO:HD2	1.91	0.51
46:At:61:VAL:HG12	46:At:81:THR:HG22	1.92	0.51
48:A2:130:C:C5'	48:A2:131:C:OP2	2.47	0.51
48:A2:441:C:H2'	48:A2:442:G:C8	2.44	0.51
48:A2:513:C:O2'	48:A2:514:C:H5'	2.09	0.51
48:A2:1266:G:C8	48:A2:1266:G:C3'	2.92	0.51
48:A2:1957:G:C5	48:A2:1958:C:H1'	2.45	0.51
48:A2:2021:A:H4'	48:A2:2022:A:H5"	1.93	0.51
48:A2:2502:G:C4'	48:A2:2690:G:H21	2.23	0.51
48:A2:2606:C:C2'	48:A2:2607:U:H6	2.21	0.51
48:A2:2689:C:C6	48:A2:2689:C:C3'	2.93	0.51
48:A2:4831:G:O2'	48:A2:4832:A:OP1	2.25	0.51
49:B1:918:U:C3'	63:BN:20:ARG:NH2	2.73	0.51
49:B1:1046:U:HO2'	64:BO:140:THR:CB	2.12	0.51
49:B1:1265:A:H2'	49:B1:1265:A:N3	2.23	0.51
49:B1:1611:G:O2'	68:BS:87:GLN:HB2	2.10	0.51
51:BB:70:SER:C	51:BB:71:LEU:O	2.53	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BB:171:ILE:CD1	51:BB:197:ILE:HG13	2.40	0.51
53:BD:75:LYS:O	60:BK:22:VAL:CB	2.58	0.51
56:BG:69:THR:O	56:BG:101:ILE:HG12	2.10	0.51
56:BG:74:ARG:HG2	56:BG:94:ARG:HE	1.74	0.51
57:BH:148:LEU:HD21	72:BW:48:GLY:HA2	1.92	0.51
59:BJ:168:GLY:O	59:BJ:172:ARG:NH2	2.43	0.51
63:BN:67:THR:HG21	63:BN:74:ILE:HD11	1.91	0.51
65:BP:77:LYS:HD3	65:BP:102:PHE:CD2	2.45	0.51
68:BS:48:ALA:HB3	68:BS:50:ILE:HD12	1.89	0.51
69:BT:17:ALA:O	69:BT:21:PHE:HD2	1.93	0.51
69:BT:41:LYS:CE	69:BT:43:LYS:NZ	2.73	0.51
70:BU:64:THR:HG22	70:BU:77:TRP:CE3	2.44	0.51
3:AA:70:LYS:CE	3:AA:72:ARG:NH2	2.73	0.51
5:AC:86:ARG:HD2	48:A2:370:A:H4'	1.92	0.51
5:AC:289:LEU:HB3	46:At:4:HIS:CE1	2.44	0.51
7:AE:165:LEU:HD22	7:AE:203:ILE:CD1	2.41	0.51
7:AE:187:ARG:NH1	7:AE:187:ARG:CG	2.73	0.51
8:AF:94:ARG:HH22	8:AF:98:ILE:HG12	1.75	0.51
8:AF:223:LYS:CA	8:AF:232:ASP:HB3	2.33	0.51
13:AK:21:LEU:O	13:AK:24:TYR:CD2	2.63	0.51
13:AK:59:THR:C	48:A2:1942:G:C5'	2.83	0.51
29:Aa:28:HIS:CE1	29:Aa:32:ARG:CZ	2.94	0.51
32:Ad:42:ALA:HB3	32:Ad:77:ILE:HG22	1.92	0.51
47:Au:34:LEU:HB2	47:Au:169:VAL:HG11	1.92	0.51
47:Au:83:PRO:CG	47:Au:107:TYR:CZ	2.92	0.51
48:A2:133:C:C5	48:A2:134:G:C2'	2.85	0.51
48:A2:676:G:H8	48:A2:676:G:C5'	2.23	0.51
48:A2:715:C:H1'	48:A2:932:U:O2'	2.11	0.51
48:A2:918:C:O2	48:A2:918:C:C3'	2.57	0.51
48:A2:2727:C:O2	48:A2:2727:C:O4'	2.24	0.51
48:A2:4421:U:H2'	48:A2:4422:U:O4'	2.09	0.51
48:A2:4708:C:H2'	48:A2:4709:C:O4'	2.09	0.51
49:B1:12:U:H1'	49:B1:1357:A:H1'	1.92	0.51
49:B1:527:C:H4'	59:BJ:125:HIS:CG	2.44	0.51
49:B1:590:A:N3	49:B1:590:A:C2'	2.73	0.51
49:B1:1625:U:C4	49:B1:1626:C:C4	2.97	0.51
49:B1:1630:A:OP1	68:BS:37:GLY:C	2.53	0.51
49:B1:1866:A:O2'	76:Ba:96:THR:CA	2.59	0.51
52:BC:155:ILE:O	52:BC:159:LYS:HG2	2.09	0.51
54:BE:90:ILE:HG22	54:BE:91:SER:N	2.23	0.51
54:BE:98:HIS:C	54:BE:99:PHE:CG	2.88	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BK:27:VAL:O	60:BK:29:MET:N	2.42	0.51
63:BN:78:LYS:C	63:BN:80:LEU:HD12	2.35	0.51
64:BO:141:ARG:HG3	64:BO:142:ARG:N	2.25	0.51
65:BP:86:LEU:N	65:BP:86:LEU:CD2	2.73	0.51
67:BR:4:VAL:C	67:BR:5:ARG:O	2.53	0.51
74:BY:87:PRO:CD	74:BY:90:ARG:NH2	2.73	0.51
74:BY:99:LYS:CE	74:BY:102:THR:HB	2.40	0.51
74:BY:105:LYS:HD3	74:BY:108:LYS:HD2	1.91	0.51
75:BZ:65:TYR:CE2	75:BZ:76:ARG:CG	2.86	0.51
80:Be:49:PHE:CE1	80:Be:51:LYS:CD	2.93	0.51
3:AA:201:GLY:O	3:AA:204:MET:HG2	2.10	0.51
7:AE:219:LYS:CA	48:A2:4898:C:N4	2.73	0.51
8:AF:29:LYS:O	8:AF:33:LEU:HG	2.10	0.51
8:AF:169:LEU:O	8:AF:171:ASP:N	2.43	0.51
8:AF:217:ARG:HH11	8:AF:217:ARG:CG	2.14	0.51
10:AH:8:GLN:HB2	10:AH:57:VAL:HB	1.92	0.51
10:AH:60:TRP:NE1	21:AS:153:PRO:CG	2.70	0.51
10:AH:174:LYS:O	10:AH:175:PHE:HB2	2.09	0.51
12:AJ:64:ARG:O	43:Ao:103:VAL:CG2	2.58	0.51
13:AK:24:TYR:C	13:AK:24:TYR:CD1	2.89	0.51
13:AK:77:LYS:C	13:AK:80:PRO:HG2	2.35	0.51
14:AL:137:GLY:O	14:AL:140:SER:HA	2.11	0.51
19:AQ:5:ILE:O	19:AQ:5:ILE:HG13	2.10	0.51
22:AT:14:MET:HE1	22:AT:55:LYS:CB	2.40	0.51
22:AT:128:LEU:H	22:AT:128:LEU:CD1	2.07	0.51
23:AU:92:LYS:HE2	48:A2:2605:U:O5'	2.11	0.51
29:Aa:102:ASP:OD2	29:Aa:104:VAL:HB	2.08	0.51
30:Ab:27:GLN:CB	48:A2:1444:A:C1'	2.88	0.51
32:Ad:118:GLN:O	32:Ad:120:VAL:HG23	2.09	0.51
35:Ag:78:TYR:HB3	35:Ag:82:MET:CG	2.40	0.51
46:At:30:ASN:OD1	46:At:50:GLY:HA3	2.10	0.51
48:A2:130:C:C3'	48:A2:131:C:C5'	2.79	0.51
48:A2:661:G:H8	48:A2:661:G:O5'	1.93	0.51
48:A2:1256:G:N3	48:A2:1256:G:C2'	2.71	0.51
48:A2:2067:G:N2	48:A2:2249:G:N2	2.59	0.51
48:A2:2737:G:H1'	48:A2:2745:A:H1'	1.92	0.51
48:A2:2880:G:H2'	48:A2:2881:G:C5'	2.40	0.51
48:A2:4252:U:OP2	48:A2:4252:U:H6	1.92	0.51
48:A2:4828:G:H8	48:A2:4828:G:H5'	1.76	0.51
49:B1:5:U:H2'	49:B1:6:G:C8	2.45	0.51
49:B1:581:U:O4'	74:BY:62:THR:CG2	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:739:C:H2'	49:B1:739:C:O2	2.09	0.51
49:B1:803:C:H2'	49:B1:803:C:O2	2.10	0.51
49:B1:827:A:O5'	59:BJ:8:VAL:HG21	2.10	0.51
49:B1:861:A:C2	57:BH:106:ARG:HD2	2.45	0.51
49:B1:1046:U:O4'	64:BO:140:THR:CG2	2.58	0.51
50:BA:176:TRP:CG	50:BA:199:PRO:HB3	2.46	0.51
50:BA:208:GLU:C	50:BA:211:GLU:HB3	2.36	0.51
55:BF:179:ASN:HB2	55:BF:187:SER:HB3	1.92	0.51
59:BJ:136:ARG:N	59:BJ:158:ASP:O	2.43	0.51
62:BM:14:VAL:CG1	62:BM:127:TYR:CE2	2.82	0.51
66:BQ:25:CYS:HB2	66:BQ:68:ILE:CG1	2.38	0.51
72:BW:46:TYR:O	72:BW:66:THR:CB	2.57	0.51
75:BZ:74:SER:HB2	75:BZ:79:ILE:O	2.10	0.51
4:AB:94:GLU:HG2	4:AB:158:GLN:NE2	2.26	0.51
8:AF:93:ILE:HD12	8:AF:119:ASN:C	2.36	0.51
11:AI:41:ALA:HB1	11:AI:45:GLU:OE1	2.11	0.51
11:AI:181:PHE:CE2	11:AI:185:VAL:HG11	2.46	0.51
13:AK:31:GLY:O	13:AK:32:ALA:HB2	2.09	0.51
13:AK:40:MET:CE	48:A2:1977:C:H2'	2.34	0.51
21:AS:139:ARG:NE	21:AS:139:ARG:CA	2.73	0.51
28:AZ:36:ARG:HH11	28:AZ:36:ARG:CB	2.23	0.51
29:Aa:61:TYR:CG	48:A2:288:G:N1	2.76	0.51
29:Aa:94:LYS:HA	29:Aa:94:LYS:CE	2.36	0.51
43:Ao:102:GLN:NE2	43:Ao:102:GLN:CA	2.73	0.51
47:Au:196:LYS:O	47:Au:197:ASN:CB	2.58	0.51
48:A2:410:U:C2'	48:A2:411:G:H5'	2.40	0.51
48:A2:452:C:H2'	48:A2:453:C:C6	2.45	0.51
48:A2:905:G:N3	48:A2:905:G:C3'	2.72	0.51
48:A2:1338:G:O2'	48:A2:1339:U:H5'	2.11	0.51
48:A2:1943:A:C6	48:A2:2006:A:C6	2.99	0.51
48:A2:3922:G:N1	48:A2:4031:G:C2	2.78	0.51
48:A2:4084:G:H4'	48:A2:4085:C:C4'	2.39	0.51
49:B1:226:A:H5'	49:B1:226:A:H8	1.72	0.51
49:B1:611:G:H21	80:Be:12:VAL:CG1	2.24	0.51
49:B1:636:C:HO2'	49:B1:637:U:H5'	1.73	0.51
49:B1:687:C:N4	57:BH:118:ARG:NH2	2.58	0.51
49:B1:1622:U:C2	68:BS:120:HIS:HB2	2.46	0.51
51:BB:182:LYS:CG	51:BB:231:LEU:HD13	2.40	0.51
60:BK:29:MET:SD	60:BK:30:PRO:HD3	2.50	0.51
60:BK:53:LYS:HD3	60:BK:60:GLU:OE1	2.10	0.51
61:BL:80:MET:HE2	61:BL:121:GLN:C	2.35	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:BM:17:ALA:HB1	62:BM:124:ILE:CD1	2.40	0.51
67:BR:41:ILE:HD12	67:BR:41:ILE:H	1.76	0.51
72:BW:11:LEU:HD12	72:BW:74:VAL:CG2	2.41	0.51
76:Ba:39:PHE:CE1	76:Ba:70:LYS:CD	2.93	0.51
83:Bw:56:C:H2'	83:Bw:56:C:O2	2.10	0.51
3:AA:70:LYS:HZ2	3:AA:72:ARG:NH1	2.08	0.51
5:AC:209:ILE:N	5:AC:209:ILE:CD1	2.73	0.51
7:AE:233:PHE:CD2	7:AE:236:GLU:OE1	2.64	0.51
8:AF:165:LYS:HB2	48:A2:2254:G:H4'	1.93	0.51
10:AH:95:VAL:HG22	41:Am:82:LEU:HB3	1.93	0.51
11:AI:210:ARG:HD3	48:A2:1162:U:C4	2.46	0.51
14:AL:42:LYS:O	14:AL:46:ILE:HG12	2.10	0.51
15:AM:20:HIS:CE1	48:A2:923:C:O2'	2.63	0.51
18:AP:47:TYR:OH	18:AP:58:VAL:HG22	2.10	0.51
19:AQ:103:LEU:HG	19:AQ:123:PHE:CE1	2.45	0.51
20:AR:126:LYS:CG	20:AR:131:VAL:CG1	2.86	0.51
22:AT:19:PHE:HE2	22:AT:20:ARG:CZ	2.24	0.51
25:AW:109:ILE:O	25:AW:113:LYS:CE	2.57	0.51
28:AZ:17:ARG:HD3	35:Ag:75:SER:HB3	1.92	0.51
40:Al:10:LYS:HD3	48:A2:2760:G:OP1	2.10	0.51
46:At:43:LEU:N	46:At:43:LEU:HD23	2.25	0.51
47:Au:35:GLN:HG2	48:A2:4023:A:HO2'	0.69	0.51
47:Au:74:CYS:HB2	47:Au:84:HIS:CD2	2.46	0.51
47:Au:124:LEU:HD13	47:Au:128:LEU:CD1	2.39	0.51
48:A2:285:U:C2	48:A2:291:U:N3	2.79	0.51
48:A2:959:C:O3'	48:A2:960:G:C8	2.63	0.51
48:A2:1669:U:H2'	48:A2:1670:G:C8	2.46	0.51
48:A2:2670:U:C2	48:A2:2671:U:C5	2.99	0.51
48:A2:2689:C:H5'	48:A2:2690:G:C5'	2.38	0.51
48:A2:3876:A:H3'	48:A2:3876:A:H8	1.76	0.51
48:A2:4834:U:N3	48:A2:4835:G:C6	2.79	0.51
49:B1:428:U:H4'	59:BJ:2:PRO:CG	2.33	0.51
49:B1:550:C:H4'	80:Be:43:VAL:HG21	1.93	0.51
49:B1:833:C:C4	49:B1:834:C:N4	2.79	0.51
49:B1:917:U:C6	57:BH:118:ARG:NH1	2.79	0.51
49:B1:1287:A:C8	62:BM:36:ARG:NH2	2.79	0.51
49:B1:1398:G:H1	82:Bg:60:ARG:HG3	1.75	0.51
49:B1:1442:U:O4	49:B1:1443:C:N4	2.44	0.51
51:BB:86:LEU:HB3	51:BB:98:THR:OG1	2.09	0.51
51:BB:175:GLU:HG3	51:BB:193:ILE:HG12	1.93	0.51
54:BE:115:THR:CG2	54:BE:116:VAL:N	2.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BE:116:VAL:CG2	54:BE:117:GLU:N	2.74	0.51
63:BN:30:SER:O	63:BN:33:VAL:HB	2.09	0.51
65:BP:34:MET:HG3	65:BP:45:LEU:CD1	2.37	0.51
65:BP:48:GLY:C	65:BP:49:LEU:CD2	2.76	0.51
65:BP:84:ILE:HG22	65:BP:115:TYR:CA	2.40	0.51
69:BT:38:LYS:HE3	69:BT:99:VAL:HG13	1.92	0.51
70:BU:20:ILE:HG22	70:BU:116:ILE:CG1	2.39	0.51
76:Ba:46:GLU:OE1	84:Bx:39:U:OP2	2.28	0.51
76:Ba:46:GLU:O	76:Ba:50:VAL:HG23	2.10	0.51
83:Bw:31:A:C2'	83:Bw:32:U:H5'	2.39	0.51
2:A4:33:U:C2	6:AD:207:TYR:CG	2.99	0.51
3:AA:205:ASN:OD1	48:A2:1615:G:C8	2.64	0.51
5:AC:69:THR:HG21	48:A2:4352:A:OP1	2.10	0.51
5:AC:102:PHE:CB	48:A2:1320:A:OP1	2.59	0.51
5:AC:231:ASN:OD1	5:AC:232:VAL:N	2.43	0.51
7:AE:123:ARG:CD	7:AE:124:LYS:N	2.73	0.51
9:AG:75:LYS:HG2	9:AG:240:ASN:HB2	1.92	0.51
9:AG:106:THR:H	9:AG:109:GLU:CG	2.22	0.51
10:AH:12:ILE:HB	10:AH:53:LYS:HB3	1.93	0.51
13:AK:14:PHE:CD1	48:A2:1941:A:N3	2.78	0.51
13:AK:108:PRO:CD	13:AK:109:ALA:H	2.22	0.51
24:AV:105:ILE:HG23	24:AV:113:LYS:HB3	1.93	0.51
31:Ac:80:GLU:O	31:Ac:83:THR:HB	2.10	0.51
33:Ae:57:ASN:CA	48:A2:2298:C:O2	2.58	0.51
35:Ag:59:VAL:HB	35:Ag:63:VAL:HB	1.93	0.51
39:Ak:24:LYS:HB2	39:Ak:35:LYS:HB2	1.91	0.51
45:Aq:23:GLY:C	45:Aq:25:THR:H	2.19	0.51
45:Aq:97:ASN:O	45:Aq:98:ILE:C	2.54	0.51
47:Au:26:ARG:HG3	48:A2:3946:C:OP2	2.09	0.51
48:A2:1260:G:O2'	48:A2:1261:C:O4'	2.27	0.51
48:A2:1966:G:H1'	48:A2:1984:G:C8	2.46	0.51
48:A2:3679:C:O5'	48:A2:3679:C:H6	1.93	0.51
48:A2:3732:C:N4	49:B1:1710:C:O2'	2.24	0.51
49:B1:171:A:C4'	56:BG:177:GLN:HE22	2.24	0.51
49:B1:805:U:P	72:BW:121:THR:O	2.68	0.51
49:B1:821:G:O6	59:BJ:150:ARG:HG3	2.11	0.51
49:B1:1280:G:H2'	49:B1:1281:G:H8	1.75	0.51
49:B1:1520:G:H2'	49:B1:1520:G:N3	2.26	0.51
49:B1:1554:C:H4'	49:B1:1555:U:H5'	1.92	0.51
49:B1:1567:G:N1	68:BS:82:TRP:CE3	2.78	0.51
49:B1:1784:G:N1	49:B1:1785:C:N3	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BC:164:PRO:HB2	52:BC:248:TYR:CE2	2.46	0.51
52:BC:250:TYR:HE1	72:BW:99:PHE:HE2	1.57	0.51
55:BF:103:LEU:HB2	75:BZ:67:LEU:HD21	1.92	0.51
55:BF:166:ILE:HG22	75:BZ:71:ALA:HB2	1.92	0.51
56:BG:50:VAL:HG11	56:BG:111:LEU:HB3	1.91	0.51
56:BG:56:ASN:O	56:BG:107:SER:HB3	2.10	0.51
64:BO:76:LEU:CD2	64:BO:76:LEU:N	2.73	0.51
64:BO:119:LEU:O	64:BO:124:MET:HB2	2.10	0.51
65:BP:85:ILE:HG13	65:BP:107:ILE:HD12	1.93	0.51
65:BP:87:PRO:O	65:BP:88:GLU:HB2	2.11	0.51
67:BR:119:VAL:O	67:BR:120:THR:CG2	2.56	0.51
68:BS:14:ARG:NH1	68:BS:14:ARG:CG	2.73	0.51
68:BS:17:ASN:HD22	68:BS:18:THR:N	2.07	0.51
82:Bg:44:LYS:HZ2	82:Bg:44:LYS:HB2	1.76	0.51
3:AA:228:ASP:O	3:AA:229:ALA:O	2.29	0.51
4:AB:224:LYS:HE3	48:A2:4588:A:P	2.51	0.51
5:AC:20:LYS:HD3	5:AC:258:ARG:NH2	2.26	0.51
5:AC:107:THR:O	14:AL:26:PHE:HZ	1.94	0.51
5:AC:323:ARG:HB2	48:A2:1264:G:O2'	2.10	0.51
6:AD:286:SER:HB2	48:A2:1162:U:OP1	2.11	0.51
7:AE:123:ARG:CG	7:AE:124:LYS:N	2.73	0.51
8:AF:184:ILE:O	8:AF:186:CYS:N	2.44	0.51
13:AK:72:ASN:HB3	13:AK:73:PRO:CD	2.40	0.51
14:AL:144:LEU:HD23	36:Ah:120:ALA:HB3	1.92	0.51
30:Ab:45:PHE:CZ	48:A2:1797:G:C2	2.96	0.51
48:A2:132:G:N3	48:A2:132:G:C3'	2.73	0.51
48:A2:740:G:H3'	48:A2:741:U:C6	2.46	0.51
48:A2:1817:G:N2	48:A2:1817:G:OP2	2.44	0.51
48:A2:3727:A:H8	48:A2:3727:A:O5'	1.92	0.51
48:A2:3757:U:O5'	48:A2:3757:U:O2	2.28	0.51
48:A2:4832:A:HO2'	48:A2:4833:G:P	2.33	0.51
49:B1:157:U:H4'	56:BG:58:LYS:HD3	1.93	0.51
49:B1:161:U:C4'	74:BY:116:LYS:O	2.59	0.51
49:B1:550:C:H4'	80:Be:43:VAL:CG1	2.38	0.51
49:B1:628:A:H61	53:BD:141:LYS:NZ	2.07	0.51
49:B1:1125:C:H5'	67:BR:123:THR:CG2	2.41	0.51
49:B1:1284:A:O2'	49:B1:1287:A:N1	2.44	0.51
49:B1:1331:C:OP2	49:B1:1490:G:OP2	2.28	0.51
49:B1:1519:U:O2	49:B1:1623:A:C8	2.64	0.51
49:B1:1539:U:H5"	69:BT:45:LEU:O	2.11	0.51
49:B1:1749:G:H2'	49:B1:1750:C:H6	1.69	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1863:A:C2	76:Ba:79:ILE:HD12	2.43	0.51
50:BA:107:THR:HG23	50:BA:115:ALA:CB	2.40	0.51
50:BA:169:HIS:CD2	50:BA:203:PHE:HE2	2.26	0.51
55:BF:92:ILE:HD13	55:BF:169:ILE:CG2	2.40	0.51
57:BH:28:LEU:O	57:BH:31:GLU:HG2	2.10	0.51
61:BL:13:GLN:HG2	61:BL:18:GLN:NE2	2.24	0.51
66:BQ:39:LEU:HD12	66:BQ:39:LEU:C	2.35	0.51
67:BR:95:ILE:HG23	67:BR:114:LEU:CG	2.38	0.51
67:BR:98:VAL:HG23	67:BR:99:ASP:CG	2.36	0.51
68:BS:14:ARG:HG2	68:BS:14:ARG:NH1	2.23	0.51
70:BU:24:LEU:CD2	70:BU:112:VAL:HA	2.40	0.51
82:Bg:214:GLY:HA2	82:Bg:234:ASP:O	2.11	0.51
2:A4:6:C:H4'	6:AD:52:ILE:HD13	1.91	0.51
4:AB:293:ILE:CD1	4:AB:296:GLY:N	2.73	0.51
7:AE:132:PRO:HD2	7:AE:135:GLN:HB2	1.91	0.51
14:AL:25:TRP:HH2	48:A2:332:A:OP1	1.94	0.51
15:AM:2:VAL:CG2	48:A2:4726:A:OP2	2.59	0.51
19:AQ:69:LYS:O	19:AQ:75:ARG:NH1	2.44	0.51
22:AT:68:THR:HG22	22:AT:71:ALA:O	2.11	0.51
23:AU:100:LEU:O	23:AU:101:ARG:HB3	2.10	0.51
33:Ae:46:ARG:HH11	48:A2:2260:U:H5'	1.75	0.51
34:Af:46:ARG:HB2	34:Af:106:TYR:CE1	2.46	0.51
39:Ak:16:ARG:HD3	39:Ak:61:PRO:HB3	1.91	0.51
43:Ao:17:LYS:HB2	43:Ao:17:LYS:NZ	2.26	0.51
43:Ao:106:PHE:CZ	83:Bv:19:G:C4	2.99	0.51
46:At:84:LYS:HD3	46:At:88:ALA:HB1	1.93	0.51
48:A2:287:G:N1	48:A2:309:G:N2	2.59	0.51
48:A2:1746:G:C2'	48:A2:1746:G:N3	2.73	0.51
48:A2:2549:U:H2'	48:A2:2550:C:C6	2.45	0.51
48:A2:4828:G:C5'	48:A2:4828:G:C8	2.94	0.51
49:B1:81:U:O5'	49:B1:81:U:H6	1.94	0.51
49:B1:321:C:H2'	49:B1:322:C:H6	1.76	0.51
49:B1:742:U:O2'	49:B1:743:U:H6	1.94	0.51
49:B1:852:G:C2'	49:B1:853:C:H5'	2.40	0.51
49:B1:1598:G:C8	75:BZ:81:GLY:HA3	2.46	0.51
50:BA:176:TRP:CB	50:BA:202:TYR:CD2	2.94	0.51
52:BC:94:ILE:HD11	52:BC:159:LYS:CD	2.41	0.51
54:BE:70:ILE:HG23	54:BE:92:ILE:HD11	1.92	0.51
59:BJ:41:ARG:O	59:BJ:44:TRP:HB2	2.11	0.51
59:BJ:50:LEU:HD22	59:BJ:102:ILE:HG12	1.92	0.51
59:BJ:172:ARG:O	59:BJ:173:VAL:C	2.54	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:BL:33:LEU:N	61:BL:33:LEU:HD12	2.26	0.51
62:BM:64:LEU:HD22	81:Bf:106:TYR:HB2	1.93	0.51
64:BO:85:CYS:HB3	64:BO:124:MET:HE1	1.92	0.51
65:BP:51:ARG:NH1	65:BP:51:ARG:CB	2.73	0.51
65:BP:53:GLN:CA	65:BP:83:MET:HE3	2.40	0.51
66:BQ:33:LYS:HG3	66:BQ:36:GLY:HA2	1.89	0.51
66:BQ:52:LEU:C	66:BQ:54:PRO:HD2	2.36	0.51
74:BY:87:PRO:HG2	74:BY:90:ARG:HH21	1.76	0.51
4:AB:35:ASP:HB3	4:AB:186:ASN:OD1	2.11	0.51
4:AB:173:LEU:CD2	4:AB:342:LYS:HD2	2.40	0.51
4:AB:282:LYS:NZ	4:AB:337:VAL:HA	2.26	0.51
4:AB:294:LYS:HA	4:AB:297:LYS:C	2.36	0.51
5:AC:57:LEU:HD13	5:AC:58:ALA:O	2.11	0.51
5:AC:311:ARG:HH12	48:A2:946:G:H4'	1.74	0.51
6:AD:16:TYR:CZ	48:A2:4227:U:C4	2.99	0.51
6:AD:232:THR:C	6:AD:235:MET:SD	2.94	0.51
8:AF:76:ARG:HD2	48:A2:720:G:OP2	2.11	0.51
10:AH:4:ILE:CG2	10:AH:5:LEU:N	2.73	0.51
10:AH:99:PHE:CG	10:AH:119:GLY:N	2.79	0.51
10:AH:173:ARG:NH1	48:A2:4438:C:C5	2.79	0.51
13:AK:104:ALA:HB1	13:AK:107:VAL:HB	1.93	0.51
14:AL:63:THR:N	48:A2:71:C:O2	2.43	0.51
14:AL:155:MET:HG2	14:AL:158:ARG:CZ	2.41	0.51
19:AQ:157:GLY:HA2	19:AQ:161:SER:OG	2.11	0.51
21:AS:7:LEU:CD2	21:AS:107:THR:CB	2.82	0.51
25:AW:70:LYS:O	25:AW:70:LYS:HG3	2.11	0.51
26:AX:91:GLU:HA	26:AX:147:LEU:HD21	1.93	0.51
27:AY:55:VAL:CG1	27:AY:104:VAL:HG13	2.37	0.51
30:Ab:50:ASN:HA	48:A2:1795:U:C4'	2.40	0.51
44:Ap:17:ARG:NE	48:A2:1559:G:OP1	2.43	0.51
46:At:66:ARG:O	46:At:67:ARG:HB3	2.10	0.51
48:A2:70:A:C5'	48:A2:71:C:N4	2.73	0.51
48:A2:481:G:N2	48:A2:664:C:C1'	2.74	0.51
48:A2:1267:G:N3	48:A2:1267:G:C2'	2.73	0.51
48:A2:2593:C:C2'	48:A2:2594:C:H5'	2.41	0.51
48:A2:3796:A:C2'	48:A2:3797:C:C5'	2.80	0.51
49:B1:96:C:H1'	49:B1:474:G:C5'	2.41	0.51
49:B1:750:C:H2'	49:B1:751:G:O4'	2.11	0.51
49:B1:929:G:C1'	77:Bb:68:GLY:H	2.24	0.51
49:B1:1253:A:C4	49:B1:1666:C:H4'	2.46	0.51
49:B1:1338:G:OP1	70:BU:76:THR:CB	2.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BA:192:GLU:O	50:BA:193:HIS:HB2	2.10	0.51
51:BB:81:PHE:CD1	51:BB:81:PHE:N	2.77	0.51
51:BB:116:LYS:HB3	51:BB:117:TRP:NE1	2.26	0.51
52:BC:167:ARG:HD2	52:BC:219:ILE:HD13	1.93	0.51
52:BC:253:PRO:HD3	72:BW:99:PHE:CE1	2.39	0.51
56:BG:119:LYS:HG2	56:BG:125:THR:CG2	2.41	0.51
60:BK:29:MET:HG3	60:BK:30:PRO:HD3	1.92	0.51
84:Bx:59:U:O2'	84:Bx:60:U:H5'	2.11	0.51
2:A4:10:C:N4	6:AD:20:PHE:CE2	2.79	0.51
5:AC:120:LYS:HD3	48:A2:1357:G:OP2	2.10	0.51
7:AE:140:LEU:CD1	7:AE:167:GLN:NE2	2.73	0.51
7:AE:147:GLY:CA	7:AE:203:ILE:HG21	2.41	0.51
9:AG:192:ARG:NH2	48:A2:6:C:OP1	2.44	0.51
10:AH:96:TYR:HD1	10:AH:96:TYR:H	1.58	0.51
14:AL:25:TRP:CH2	48:A2:332:A:OP1	2.64	0.51
15:AM:42:CYS:SG	15:AM:78:GLN:NE2	2.83	0.51
15:AM:44:GLN:O	48:A2:922:A:N3	2.44	0.51
17:AO:122:ALA:HB2	21:AS:161:ARG:HD3	1.93	0.51
18:AP:86:LYS:CB	48:A2:3828:G:H5"	2.41	0.51
20:AR:133:LYS:H	20:AR:137:ILE:HD11	1.76	0.51
26:AX:114:LYS:HB2	26:AX:114:LYS:HZ2	1.76	0.51
28:AZ:60:LYS:HB2	28:AZ:60:LYS:NZ	2.26	0.51
34:Af:33:VAL:HG13	34:Af:38:GLU:HB2	1.93	0.51
35:Ag:21:ARG:HD3	48:A2:2666:U:H1'	1.93	0.51
43:Ao:11:PHE:HB2	43:Ao:18:HIS:CD2	2.45	0.51
47:Au:28:PHE:CZ	47:Au:209:THR:HB	2.42	0.51
47:Au:93:LEU:CD2	47:Au:99:LEU:CD2	2.86	0.51
48:A2:132:G:N3	48:A2:132:G:C5'	2.72	0.51
48:A2:133:C:H6	48:A2:133:C:C4'	2.24	0.51
48:A2:1431:G:C8	48:A2:1431:G:P	3.04	0.51
48:A2:1740:G:C2	48:A2:1741:G:C4	2.98	0.51
48:A2:2855:G:H3'	48:A2:2855:G:N3	2.26	0.51
48:A2:3816:A:H4'	48:A2:4630:U:O2'	2.11	0.51
49:B1:320:G:H2'	49:B1:321:C:O4'	2.11	0.51
49:B1:496:C:H5'	54:BE:29:PRO:CB	2.40	0.51
49:B1:1122:A:O2'	51:BB:146:ARG:NE	2.43	0.51
49:B1:1602:U:H4'	68:BS:24:ARG:HH12	1.76	0.51
50:BA:12:GLU:O	50:BA:15:VAL:HG22	2.10	0.51
51:BB:65:ARG:HG2	64:BO:50:LYS:HD2	1.91	0.51
52:BC:104:ASP:OD2	52:BC:130:ILE:HG22	2.11	0.51
57:BH:109:ARG:HG2	57:BH:110:THR:N	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BH:117:PRO:HD2	57:BH:120:ARG:HG3	1.93	0.51
58:BI:168:GLN:HA	58:BI:168:GLN:OE1	2.10	0.51
60:BK:79:LEU:O	60:BK:83:LEU:HG	2.11	0.51
65:BP:16:THR:HB	65:BP:20:VAL:O	2.11	0.51
68:BS:36:VAL:HG13	68:BS:40:TYR:CD1	2.44	0.51
70:BU:50:VAL:CG2	70:BU:91:LEU:CD2	2.86	0.51
76:Ba:10:ARG:HB3	76:Ba:34:LYS:HB2	1.93	0.51
83:Bv:72:C:C6	83:Bv:72:C:C3'	2.94	0.51
83:Bw:17:C:H6	83:Bw:17:C:C5'	2.23	0.51
4:AB:21:ARG:HE	4:AB:271:GLN:HE22	1.59	0.50
5:AC:97:ARG:NH1	5:AC:97:ARG:CG	2.73	0.50
6:AD:234:ASP:CG	6:AD:235:MET:SD	2.94	0.50
8:AF:183:GLY:O	8:AF:184:ILE:HG12	2.10	0.50
10:AH:120:GLU:HG3	48:A2:4573:A:H2	1.74	0.50
11:AI:68:ALA:HA	11:AI:158:LYS:HD2	1.92	0.50
11:AI:149:ILE:HA	11:AI:165:ILE:HD11	1.93	0.50
13:AK:21:LEU:HA	13:AK:24:TYR:HD2	1.76	0.50
15:AM:113:MET:CE	48:A2:4839:U:C6	2.92	0.50
17:AO:14:HIS:O	17:AO:41:ILE:HG23	2.10	0.50
18:AP:25:HIS:ND1	48:A2:2340:G:O6	2.41	0.50
19:AQ:93:GLN:OE1	29:Aa:87:ARG:NH2	2.43	0.50
25:AW:2:LYS:NZ	25:AW:2:LYS:HB3	2.25	0.50
29:Aa:34:ASN:N	48:A2:95:G:OP1	2.44	0.50
33:Ae:26:ASP:OD2	48:A2:430:C:C4'	2.58	0.50
34:Af:33:VAL:HG21	34:Af:42:TYR:HE2	1.72	0.50
34:Af:42:TYR:O	34:Af:45:LYS:CG	2.56	0.50
45:Aq:128:THR:O	45:Aq:131:GLU:HB2	2.11	0.50
48:A2:289:A:N3	48:A2:289:A:C2'	2.74	0.50
48:A2:722:G:H22	48:A2:925:C:H2'	1.76	0.50
48:A2:1164:C:N4	48:A2:1167:A:H1'	2.26	0.50
48:A2:1427:G:H2'	48:A2:1428:U:C6	2.46	0.50
48:A2:1739:U:N3	48:A2:1757:A:C2	2.79	0.50
48:A2:3663:A:H2'	48:A2:3664:U:O4'	2.11	0.50
48:A2:3929:G:C2	83:Bw:19:G:N2	2.76	0.50
48:A2:4220:C:H2'	48:A2:4221:C:C6	2.46	0.50
49:B1:67:C:H3'	49:B1:67:C:O2	2.11	0.50
49:B1:619:A:N1	73:BX:114:ASP:HB2	2.25	0.50
49:B1:917:U:H1'	57:BH:118:ARG:HD2	1.91	0.50
49:B1:1389:C:OP1	67:BR:43:SER:HB2	2.11	0.50
49:B1:1456:G:H2'	49:B1:1457:U:C6	2.46	0.50
49:B1:1543:U:O2'	66:BQ:77:HIS:CE1	2.64	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1738:C:H2'	49:B1:1739:C:C6	2.45	0.50
51:BB:89:GLU:CG	51:BB:228:LEU:HD22	2.41	0.50
62:BM:85:LEU:HD22	62:BM:109:VAL:HG21	1.93	0.50
63:BN:21:SER:O	63:BN:65:PHE:CB	2.52	0.50
63:BN:57:SER:HG	63:BN:58:HIS:CE1	2.29	0.50
68:BS:41:ALA:O	68:BS:45:LEU:HD22	2.11	0.50
69:BT:114:GLU:HB2	69:BT:124:THR:HG22	1.92	0.50
4:AB:41:VAL:HA	4:AB:187:GLY:CA	2.41	0.50
5:AC:59:GLY:HA2	48:A2:352:C:OP1	2.11	0.50
6:AD:84:PRO:HA	6:AD:88:VAL:O	2.11	0.50
6:AD:286:SER:HB2	48:A2:1163:C:H5'	1.88	0.50
13:AK:14:PHE:CG	48:A2:1941:A:C5	2.95	0.50
18:AP:139:TYR:CZ	48:A2:3830:G:H4'	2.46	0.50
19:AQ:175:GLU:HA	29:Aa:51:GLY:C	2.37	0.50
20:AR:60:ARG:HH22	48:A2:2788:G:C5'	2.24	0.50
22:AT:126:VAL:CG2	22:AT:127:GLN:N	2.74	0.50
28:AZ:126:LYS:HB3	28:AZ:126:LYS:HZ2	1.76	0.50
28:AZ:126:LYS:HB3	28:AZ:126:LYS:NZ	2.27	0.50
29:Aa:131:ARG:CZ	48:A2:1471:G:H5"	2.41	0.50
33:Ae:3:ALA:O	33:Ae:4:LEU:CD2	2.58	0.50
33:Ae:108:ARG:NH2	33:Ae:127:ALA:HB3	2.26	0.50
34:Af:109:ARG:HH12	48:A2:939:G:H5'	1.74	0.50
35:Ag:13:TYR:CG	48:A2:2492:A:C2	2.99	0.50
47:Au:38:LEU:CD1	47:Au:159:MET:CE	2.85	0.50
47:Au:90:LEU:O	47:Au:123:ILE:HG21	2.12	0.50
48:A2:676:G:C8	48:A2:676:G:P	3.04	0.50
48:A2:1059:C:OP2	48:A2:1059:C:H6	1.91	0.50
48:A2:1341:G:N7	48:A2:1363:G:C6	2.79	0.50
48:A2:1427:G:H5"	48:A2:1428:U:OP2	2.12	0.50
48:A2:1614:A:C2'	48:A2:1615:G:H5"	2.39	0.50
48:A2:3876:A:C3'	48:A2:3876:A:C8	2.94	0.50
48:A2:4532:G:H2'	48:A2:4533:A:O4'	2.11	0.50
48:A2:4651:U:H2'	48:A2:4652:G:H5'	1.93	0.50
49:B1:619:A:N1	73:BX:114:ASP:HB3	2.26	0.50
49:B1:826:A:O3'	59:BJ:10:ARG:CB	2.59	0.50
49:B1:1097:G:H4'	50:BA:32:PHE:CE1	2.47	0.50
49:B1:1120:U:H3'	49:B1:1121:G:H5"	1.93	0.50
49:B1:1552:G:C4'	49:B1:1557:C:N4	2.57	0.50
49:B1:1756:C:HO2'	49:B1:1757:G:C5'	2.23	0.50
49:B1:1865:C:O2	76:Ba:7:ASN:ND2	2.44	0.50
50:BA:77:ILE:HD12	50:BA:122:LEU:HD11	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BA:111:GLN:CG	50:BA:116:PHE:HE2	2.24	0.50
54:BE:92:ILE:O	54:BE:94:LYS:N	2.43	0.50
55:BF:72:LEU:HD12	55:BF:93:VAL:HG21	1.92	0.50
55:BF:103:LEU:HD23	55:BF:103:LEU:C	2.36	0.50
57:BH:17:ASP:OD1	57:BH:20:GLU:HG3	2.11	0.50
58:BI:154:LYS:O	61:BL:24:LEU:HA	2.11	0.50
59:BJ:110:LEU:HB2	59:BJ:147:PHE:CD2	2.46	0.50
63:BN:70:LYS:HB3	63:BN:73:ARG:HD2	1.93	0.50
65:BP:17:TYR:OH	65:BP:18:ARG:CZ	2.60	0.50
67:BR:5:ARG:NE	67:BR:53:TYR:CD1	2.80	0.50
67:BR:96:ILE:HG22	67:BR:97:GLU:N	2.27	0.50
74:BY:83:LYS:CA	74:BY:91:LEU:HD21	2.39	0.50
78:Bc:14:VAL:HG22	78:Bc:30:VAL:HG11	1.92	0.50
81:Bf:141:CYS:SG	81:Bf:144:CYS:SG	3.00	0.50
83:Bw:41:C:C2'	83:Bw:42:C:H5'	2.42	0.50
1:A3:81:C:H4'	1:A3:82:A:O5'	2.10	0.50
1:A3:110:U:C3'	1:A3:110:U:H6	2.25	0.50
2:A4:87:G:N2	2:A4:89:G:H3'	2.27	0.50
4:AB:220:ILE:HG23	4:AB:278:THR:HG22	1.92	0.50
4:AB:284:ILE:HA	4:AB:332:MET:O	2.12	0.50
6:AD:148:ALA:HB2	48:A2:4285:A:N1	2.26	0.50
6:AD:224:SER:HA	6:AD:227:ILE:HG13	1.92	0.50
6:AD:278:ASP:OD2	48:A2:1169:U:H4'	2.10	0.50
7:AE:131:LYS:HB3	7:AE:132:PRO:HD3	1.93	0.50
8:AF:164:LYS:N	8:AF:164:LYS:CD	2.73	0.50
9:AG:106:THR:O	9:AG:110:LYS:HB2	2.11	0.50
14:AL:125:ILE:O	36:Ah:119:TYR:HA	2.11	0.50
15:AM:56:GLN:CD	48:A2:4827:U:C5	2.89	0.50
19:AQ:11:ARG:HB3	48:A2:2062:C:O3'	2.10	0.50
19:AQ:56:THR:HG21	19:AQ:146:ARG:NH1	2.26	0.50
20:AR:23:TRP:HE3	20:AR:24:LEU:O	1.95	0.50
24:AV:96:LEU:C	24:AV:96:LEU:HD12	2.37	0.50
28:AZ:26:VAL:HG13	28:AZ:91:LEU:HD23	1.93	0.50
29:Aa:75:LEU:HD12	29:Aa:114:LYS:H	1.77	0.50
29:Aa:92:LYS:O	29:Aa:92:LYS:HG3	2.10	0.50
34:Af:80:ASN:HD21	48:A2:2046:G:H2'	1.76	0.50
34:Af:100:ARG:CD	48:A2:4714:U:OP2	2.59	0.50
42:An:3:ALA:HB3	49:B1:1842:C:OP1	2.11	0.50
48:A2:227:G:C3'	48:A2:228:U:H5"	2.42	0.50
48:A2:1321:G:N2	48:A2:1501:C:OP2	2.44	0.50
48:A2:1736:U:H2'	48:A2:1737:C:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:2339:A:H5'	48:A2:2341:U:H1'	1.94	0.50
48:A2:3927:G:OP2	48:A2:3927:G:C8	2.65	0.50
48:A2:4877:G:C6	48:A2:4878:C:C5	3.00	0.50
49:B1:524:U:OP1	49:B1:525:A:O2'	2.27	0.50
49:B1:1286:G:N9	62:BM:34:GLY:CA	2.75	0.50
49:B1:1398:G:H22	82:Bg:60:ARG:NH1	2.08	0.50
49:B1:1399:C:H6	49:B1:1399:C:OP2	1.94	0.50
49:B1:1520:G:N3	49:B1:1520:G:C2'	2.74	0.50
50:BA:130:ASP:C	50:BA:133:PRO:HD2	2.37	0.50
51:BB:70:SER:HB2	51:BB:83:LYS:N	2.27	0.50
55:BF:28:VAL:HA	55:BF:110:GLN:OE1	2.11	0.50
57:BH:66:VAL:HG23	57:BH:97:GLN:O	2.11	0.50
59:BJ:162:ARG:N	59:BJ:166:GLY:HA3	2.26	0.50
60:BK:7:ASN:HD21	60:BK:44:HIS:HB3	1.77	0.50
62:BM:56:CYS:SG	62:BM:61:TYR:HD2	2.30	0.50
67:BR:34:VAL:O	67:BR:38:ILE:HG13	2.11	0.50
67:BR:35:CYS:CA	67:BR:38:ILE:CG1	2.86	0.50
68:BS:40:TYR:CD1	68:BS:71:MET:HE1	2.46	0.50
70:BU:48:LEU:HD11	70:BU:97:ILE:CG2	2.32	0.50
73:BX:68:LYS:HZ3	73:BX:91:LEU:HD23	1.75	0.50
81:Bf:105:TYR:CE1	81:Bf:118:ARG:NH1	2.76	0.50
1:A3:27:U:OP1	5:AC:56:GLU:HB3	2.11	0.50
4:AB:41:VAL:HA	4:AB:187:GLY:HA3	1.94	0.50
4:AB:224:LYS:HG2	4:AB:340:THR:HG22	1.93	0.50
6:AD:287:PHE:CE2	11:AI:209:TRP:CZ3	2.99	0.50
7:AE:135:GLN:O	7:AE:136:HIS:HB2	2.10	0.50
7:AE:173:LEU:CD2	7:AE:191:GLN:HB2	2.37	0.50
8:AF:113:ARG:HB3	8:AF:210:PRO:HG3	1.93	0.50
16:AN:14:LYS:CB	16:AN:19:MET:SD	2.99	0.50
16:AN:115:VAL:HG22	16:AN:134:LEU:HD21	1.92	0.50
17:AO:173:GLN:CD	17:AO:176:ARG:HH21	2.19	0.50
22:AT:4:THR:CG2	48:A2:4169:C:C5	2.90	0.50
23:AU:92:LYS:HE3	48:A2:2606:C:OP1	2.11	0.50
26:AX:56:ARG:HH12	26:AX:62:ARG:NH2	2.09	0.50
26:AX:129:ARG:HB3	26:AX:131:ASP:OD1	2.11	0.50
34:Af:19:ARG:O	48:A2:1294:G:H5"	2.09	0.50
43:Ao:44:LYS:HE2	43:Ao:52:THR:HB	1.92	0.50
45:Aq:23:GLY:N	45:Aq:46:ILE:CG2	2.73	0.50
47:Au:25:ARG:C	47:Au:26:ARG:CD	2.85	0.50
48:A2:101:A:H5'	48:A2:102:G:OP2	2.10	0.50
48:A2:1576:C:H6	48:A2:1581:A:H61	1.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:1752:A:C4	48:A2:1753:U:C6	2.99	0.50
48:A2:1806:G:H8	48:A2:1806:G:O5'	1.94	0.50
48:A2:2499:C:H3'	48:A2:2499:C:O2	2.11	0.50
48:A2:3597:G:O2'	48:A2:3598:G:H5'	2.11	0.50
48:A2:4310:A:H3'	48:A2:4311:C:C5'	2.42	0.50
49:B1:381:C:OP2	58:BI:54:LYS:NZ	2.33	0.50
49:B1:1287:A:O4'	62:BM:36:ARG:NH1	2.45	0.50
50:BA:41:ARG:O	50:BA:41:ARG:HG3	2.11	0.50
50:BA:66:VAL:HG12	71:BV:46:PHE:CD1	2.39	0.50
51:BB:116:LYS:C	51:BB:117:TRP:CD1	2.89	0.50
52:BC:65:LYS:HE3	52:BC:266:TYR:CD1	2.46	0.50
66:BQ:10:VAL:CG1	66:BQ:11:GLN:N	2.74	0.50
67:BR:95:ILE:CG2	67:BR:96:ILE:N	2.73	0.50
71:BV:15:ARG:NH1	71:BV:33:GLN:HB2	2.26	0.50
73:BX:51:VAL:HG13	73:BX:70:VAL:HG13	1.92	0.50
75:BZ:46:ASN:ND2	75:BZ:80:ARG:HA	2.25	0.50
82:Bg:7:LEU:HD12	82:Bg:309:VAL:O	2.11	0.50
82:Bg:125:ARG:C	82:Bg:127:LYS:H	2.20	0.50
83:Bw:59:U:O2	83:Bw:59:U:H2'	2.11	0.50
4:AB:167:GLN:HE22	4:AB:204:GLN:HE21	1.59	0.50
5:AC:54:VAL:HA	5:AC:105:THR:OG1	2.12	0.50
5:AC:71:ARG:O	5:AC:73:VAL:HG13	2.11	0.50
6:AD:35:ARG:HD2	48:A2:4288:G:HO2'	1.73	0.50
8:AF:148:LYS:HB3	8:AF:245:ARG:NH2	2.27	0.50
9:AG:98:LEU:O	9:AG:102:TYR:HD2	1.94	0.50
9:AG:113:ARG:NH1	48:A2:119:G:C6	2.80	0.50
9:AG:156:VAL:HB	9:AG:202:VAL:HB	1.93	0.50
11:AI:181:PHE:O	11:AI:185:VAL:HG22	2.11	0.50
12:AJ:99:PHE:HB3	12:AJ:159:LYS:NZ	2.27	0.50
18:AP:85:LYS:CG	48:A2:3827:A:H4'	2.41	0.50
18:AP:131:ARG:NH2	48:A2:1578:U:H2'	2.26	0.50
19:AQ:147:GLU:HG2	19:AQ:150:ARG:NH2	2.26	0.50
20:AR:41:ILE:HD12	20:AR:44:LEU:HD12	1.92	0.50
24:AV:106:VAL:HG23	24:AV:111:GLU:O	2.11	0.50
25:AW:102:LYS:N	25:AW:105:ARG:NH1	2.60	0.50
27:AY:18:HIS:CE1	48:A2:226:G:O2'	2.64	0.50
28:AZ:126:LYS:NZ	28:AZ:126:LYS:CB	2.73	0.50
29:Aa:30:GLY:O	48:A2:39:A:C6	2.65	0.50
29:Aa:30:GLY:O	48:A2:39:A:N7	2.44	0.50
34:Af:59:THR:HB	48:A2:4902:C:C4	2.46	0.50
34:Af:59:THR:C	34:Af:61:GLY:H	2.20	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:Ag:64:LEU:HB3	48:A2:2728:C:H4'	1.92	0.50
36:Ah:31:LEU:O	36:Ah:34:ALA:HB3	2.11	0.50
43:Ao:106:PHE:CD1	83:Bv:19:G:N7	2.80	0.50
47:Au:207:LYS:NZ	48:A2:4023:A:P	2.84	0.50
48:A2:89:C:C4'	48:A2:286:G:O2'	2.59	0.50
48:A2:1227:G:H4'	48:A2:1251:G:H1'	1.92	0.50
48:A2:1256:G:N3	48:A2:1257:A:OP2	2.45	0.50
48:A2:1945:A:C8	48:A2:1945:A:O5'	2.65	0.50
48:A2:2004:C:N4	48:A2:2005:G:N1	2.60	0.50
48:A2:2469:U:H3'	48:A2:2470:C:C6	2.46	0.50
48:A2:2640:U:C4	61:BL:158:PHE:HE2	2.29	0.50
48:A2:4065:G:OP2	48:A2:4065:G:C8	2.65	0.50
48:A2:4612:G:H2'	48:A2:4613:A:O4'	2.11	0.50
49:B1:117:C:OP1	58:BI:50:GLY:O	2.30	0.50
49:B1:574:A:C5'	74:BY:89:HIS:CG	2.94	0.50
49:B1:682:U:P	73:BX:8:ARG:HB2	2.51	0.50
49:B1:799:U:P	57:BH:110:THR:HG21	2.51	0.50
49:B1:823:U:O4'	59:BJ:140:GLN:NE2	2.45	0.50
49:B1:1105:G:C2	49:B1:1106:C:C2	3.00	0.50
49:B1:1159:G:H1'	72:BW:4:MET:SD	2.51	0.50
49:B1:1452:A:H4'	49:B1:1453:C:O5'	2.11	0.50
49:B1:1473:G:N2	49:B1:1473:G:OP2	2.45	0.50
51:BB:30:TRP:CH2	51:BB:48:LEU:HD11	2.46	0.50
54:BE:11:ARG:HG3	54:BE:25:GLY:O	2.11	0.50
54:BE:92:ILE:HG22	54:BE:95:THR:H	1.77	0.50
54:BE:98:HIS:ND1	54:BE:119:ALA:HB2	2.26	0.50
58:BI:194:GLU:HG2	61:BL:11:GLN:NE2	2.26	0.50
62:BM:61:TYR:CE2	62:BM:107:SER:HB2	2.47	0.50
65:BP:52:LYS:O	65:BP:56:LEU:HB3	2.11	0.50
66:BQ:33:LYS:HD3	66:BQ:69:ARG:NE	2.26	0.50
67:BR:97:GLU:CB	67:BR:117:LEU:HA	2.28	0.50
67:BR:99:ASP:CA	67:BR:102:THR:HG22	2.41	0.50
73:BX:21:LYS:HE2	73:BX:27:TYR:CE1	2.45	0.50
73:BX:51:VAL:HG22	73:BX:70:VAL:HG11	1.94	0.50
83:Bv:34:G:O6	83:Bv:35:A:N6	2.44	0.50
2:A4:31:G:H2'	2:A4:32:A:C8	2.47	0.50
3:AA:158:ILE:HD12	3:AA:162:ASN:ND2	2.27	0.50
5:AC:201:ARG:C	5:AC:202:ILE:CD1	2.84	0.50
5:AC:327:LYS:NZ	48:A2:960:G:H21	2.10	0.50
6:AD:5:LYS:O	6:AD:6:VAL:HG22	2.10	0.50
8:AF:69:ILE:HG21	8:AF:73:ARG:HH21	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AF:147:LEU:CG	48:A2:931:A:C2	2.94	0.50
14:AL:59:VAL:CG1	48:A2:74:G:OP1	2.50	0.50
18:AP:82:ARG:HG2	48:A2:3827:A:OP1	2.12	0.50
19:AQ:42:THR:CG2	48:A2:1411:U:H5'	2.42	0.50
21:AS:84:TYR:CE1	21:AS:86:SER:N	2.80	0.50
22:AT:143:THR:HG23	22:AT:143:THR:O	2.11	0.50
24:AV:69:LYS:HB2	24:AV:72:LEU:HD13	1.93	0.50
26:AX:83:THR:CG2	48:A2:2413:G:H5'	2.38	0.50
28:AZ:22:LYS:HE2	28:AZ:129:TRP:CH2	2.47	0.50
28:AZ:96:VAL:CG2	28:AZ:110:ALA:HB1	2.25	0.50
29:Aa:25:HIS:HD2	48:A2:1321:G:N1	2.08	0.50
29:Aa:61:TYR:OH	48:A2:310:U:C5	2.59	0.50
39:Ak:11:PHE:CD1	39:Ak:12:LEU:N	2.79	0.50
39:Ak:51:GLU:O	39:Ak:55:LYS:HG3	2.11	0.50
47:Au:7:ARG:CD	47:Au:180:VAL:HG11	2.41	0.50
48:A2:289:A:N3	48:A2:289:A:H2'	2.26	0.50
48:A2:695:C:H2'	48:A2:695:C:O2	2.12	0.50
48:A2:1166:C:N4	48:A2:1167:A:N6	2.60	0.50
48:A2:1746:G:N3	48:A2:1746:G:H2'	2.27	0.50
48:A2:2283:U:H4'	48:A2:2284:U:H5"	1.93	0.50
48:A2:2794:A:C6	48:A2:2795:G:C6	3.00	0.50
48:A2:3798:G:C8	48:A2:3798:G:C5'	2.92	0.50
48:A2:4717:G:O2'	48:A2:4718:C:H3'	2.12	0.50
48:A2:4846:U:C2'	48:A2:4847:G:H5"	2.42	0.50
49:B1:171:A:H5"	56:BG:177:GLN:CD	2.37	0.50
49:B1:635:G:O2'	49:B1:636:C:H5'	2.12	0.50
49:B1:872:A:H2	49:B1:915:G:C6	2.26	0.50
49:B1:937:C:OP1	63:BN:107:LYS:HD3	2.12	0.50
49:B1:1139:C:O2'	49:B1:1140:G:O5'	2.30	0.50
49:B1:1522:A:C6	65:BP:128:HIS:HB3	2.45	0.50
49:B1:1573:G:H2'	49:B1:1574:C:C6	2.46	0.50
50:BA:147:LEU:HB3	50:BA:163:CYS:SG	2.52	0.50
50:BA:212:LYS:HA	50:BA:215:GLN:HB2	1.93	0.50
52:BC:135:GLY:O	52:BC:136:HIS:CE1	2.65	0.50
52:BC:251:LEU:O	72:BW:68:ARG:NH2	2.45	0.50
54:BE:87:MET:HE1	54:BE:236:ILE:CG1	2.34	0.50
54:BE:191:ARG:NH1	54:BE:244:ILE:HA	2.27	0.50
68:BS:14:ARG:HA	68:BS:19:ASN:O	2.12	0.50
69:BT:36:THR:O	69:BT:37:VAL:HB	2.12	0.50
69:BT:41:LYS:CD	69:BT:43:LYS:NZ	2.75	0.50
71:BV:35:ASN:ND2	71:BV:50:PHE:CE2	2.71	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:BW:83:LEU:O	72:BW:84:LYS:HB2	2.10	0.50
75:BZ:79:ILE:HG21	75:BZ:83:LEU:HD12	0.50	0.50
80:Be:41:ARG:HA	80:Be:45:VAL:CG2	2.32	0.50
80:Be:49:PHE:CE1	80:Be:51:LYS:HD3	2.47	0.50
82:Bg:149:GLU:HB3	82:Bg:170:TRP:HB2	1.94	0.50
1:A3:53:G:H4'	40:Al:40:LYS:HD3	1.94	0.50
2:A4:100:A:O2'	2:A4:101:A:H5'	2.12	0.50
3:AA:101:VAL:HA	3:AA:164:ALA:O	2.12	0.50
3:AA:132:ASN:ND2	48:A2:3653:A:H5"	2.27	0.50
4:AB:357:ARG:CZ	48:A2:4577:C:H5"	2.41	0.50
5:AC:150:LEU:CB	46:At:71:ARG:CB	2.58	0.50
5:AC:221:PHE:N	5:AC:221:PHE:HD1	2.09	0.50
5:AC:221:PHE:O	5:AC:223:ASN:N	2.42	0.50
7:AE:102:GLY:CA	48:A2:677:G:O2'	2.54	0.50
7:AE:130:LYS:HE3	48:A2:703:C:O2	2.11	0.50
7:AE:136:HIS:ND1	48:A2:702:A:O4'	2.44	0.50
8:AF:62:ARG:HG2	48:A2:932:U:OP2	2.11	0.50
8:AF:80:ASN:ND2	22:AT:142:ARG:HA	2.26	0.50
9:AG:83:PHE:HE2	9:AG:164:ILE:HG23	1.77	0.50
12:AJ:64:ARG:HH21	83:Bv:56:C:H5'	1.76	0.50
12:AJ:165:TRP:NE1	12:AJ:169:LYS:HD2	2.26	0.50
14:AL:15:HIS:HD2	48:A2:96:U:OP1	1.94	0.50
16:AN:137:PRO:HG2	16:AN:138:PHE:CE2	2.46	0.50
19:AQ:3:VAL:CG2	48:A2:2257:G:P	3.00	0.50
20:AR:84:THR:HA	48:A2:2844:U:OP1	2.12	0.50
21:AS:67:VAL:HA	48:A2:719:U:O4	2.12	0.50
27:AY:59:ARG:HH22	48:A2:196:G:C2'	2.23	0.50
31:Ac:103:ASP:O	31:Ac:104:ILE:C	2.54	0.50
39:Ak:20:ALA:HB2	39:Ak:38:CYS:HA	1.92	0.50
39:Ak:21:LYS:O	39:Ak:64:LEU:HD13	2.12	0.50
45:Aq:91:ASP:HB2	45:Aq:95:GLN:HB2	1.93	0.50
47:Au:74:CYS:HB2	47:Au:84:HIS:NE2	2.26	0.50
48:A2:2:G:C2'	48:A2:3:C:H5'	2.41	0.50
48:A2:1741:G:N2	48:A2:1742:G:C1'	2.73	0.50
48:A2:1838:C:O2'	48:A2:1839:A:H5'	2.12	0.50
48:A2:1981:G:H5'	48:A2:1999:C:O2'	2.12	0.50
48:A2:2345:A:H1'	48:A2:3822:U:H5'	1.94	0.50
48:A2:2436:G:H1'	48:A2:3643:G:H21	1.77	0.50
48:A2:2531:G:H1'	48:A2:2745:A:N6	2.26	0.50
48:A2:4194:U:H4'	48:A2:4195:A:C5'	2.42	0.50
48:A2:4514:U:H5"	48:A2:4514:U:C6	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:14:C:H2'	49:B1:15:U:C6	2.46	0.50
49:B1:202:G:H2'	49:B1:203:G:O4'	2.11	0.50
49:B1:1130:G:N2	49:B1:1131:G:C5	2.80	0.50
49:B1:1351:G:C4'	50:BA:110:ASN:HB3	2.41	0.50
49:B1:1466:G:P	67:BR:5:ARG:HH12	2.35	0.50
49:B1:1507:G:C5	81:Bf:91:ASN:OD1	2.65	0.50
49:B1:1625:U:C4	49:B1:1626:C:N4	2.80	0.50
49:B1:1782:G:N2	49:B1:1784:G:C5	2.80	0.50
54:BE:186:GLY:O	54:BE:189:LEU:HD22	2.12	0.50
55:BF:128:ILE:HG13	55:BF:137:GLN:HB3	1.94	0.50
56:BG:57:ASP:O	56:BG:107:SER:CB	2.53	0.50
58:BI:110:ARG:HH11	58:BI:123:ARG:HH11	1.60	0.50
58:BI:188:TYR:HE2	58:BI:194:GLU:OE1	1.95	0.50
59:BJ:96:TYR:CZ	59:BJ:100:LEU:CD2	2.92	0.50
63:BN:80:LEU:CD1	63:BN:80:LEU:N	2.73	0.50
64:BO:83:GLN:NE2	64:BO:83:GLN:O	2.43	0.50
65:BP:50:ARG:O	65:BP:51:ARG:C	2.55	0.50
69:BT:74:SER:O	69:BT:78:ILE:HG13	2.12	0.50
74:BY:89:HIS:ND1	74:BY:90:ARG:N	2.60	0.50
83:Bw:67:C:H6	83:Bw:67:C:H5"	1.77	0.50
3:AA:205:ASN:OD1	48:A2:1615:G:H8	1.94	0.50
5:AC:218:ILE:HD12	5:AC:229:LEU:CD2	2.42	0.50
6:AD:14:LYS:NZ	48:A2:1724:A:H4'	2.26	0.50
6:AD:99:TYR:CE2	6:AD:165:GLY:HA2	2.47	0.50
7:AE:105:ARG:CZ	48:A2:678:C:O2	2.55	0.50
7:AE:110:ARG:HH11	7:AE:110:ARG:CG	2.22	0.50
7:AE:126:LEU:CD1	48:A2:958:U:C4	2.71	0.50
7:AE:222:LEU:HD23	7:AE:235:THR:HG21	1.94	0.50
8:AF:71:MET:O	8:AF:74:MET:HG2	2.12	0.50
12:AJ:64:ARG:O	43:Ao:103:VAL:HG22	2.10	0.50
13:AK:27:CYS:SG	13:AK:90:PHE:CB	2.97	0.50
13:AK:81:HIS:CE1	13:AK:86:VAL:HG13	2.46	0.50
18:AP:10:ASN:ND2	18:AP:13:LYS:NZ	2.60	0.50
19:AQ:10:ASP:OD1	19:AQ:11:ARG:HG3	2.11	0.50
19:AQ:176:ARG:CG	19:AQ:176:ARG:NH1	2.73	0.50
20:AR:74:ARG:O	20:AR:75:HIS:HB2	2.11	0.50
21:AS:159:LEU:HG	21:AS:160:ARG:HG3	1.94	0.50
25:AW:61:LYS:O	25:AW:65:GLU:CG	2.55	0.50
27:AY:81:TYR:CE1	27:AY:96:HIS:HB3	2.47	0.50
37:Ai:15:HIS:CB	48:A2:72:C:C6	2.91	0.50
37:Ai:94:LEU:C	37:Ai:94:LEU:HD13	2.36	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Ak:11:PHE:HD1	39:Ak:12:LEU:N	2.09	0.50
47:Au:97:LYS:NZ	47:Au:101:LYS:CE	2.73	0.50
47:Au:207:LYS:HZ2	47:Au:213:PRO:CD	2.25	0.50
48:A2:86:U:O2	48:A2:86:U:H2'	2.10	0.50
48:A2:137:G:C3'	48:A2:137:G:C8	2.94	0.50
48:A2:169:C:H4'	48:A2:170:C:OP1	2.11	0.50
48:A2:204:G:N2	48:A2:229:G:P	2.85	0.50
48:A2:290:A:O5'	48:A2:290:A:C8	2.65	0.50
48:A2:965:G:H1	48:A2:1259:C:N4	2.09	0.50
48:A2:1225:G:C8	48:A2:1226:C:O4'	2.65	0.50
48:A2:1341:G:O2'	48:A2:1342:G:H5"	2.10	0.50
48:A2:1847:U:H2'	48:A2:1848:A:O4'	2.11	0.50
48:A2:4651:U:C2'	48:A2:4652:G:H5'	2.42	0.50
49:B1:190:G:O2'	49:B1:209:A:N6	2.44	0.50
49:B1:382:C:N4	58:BI:5:ARG:HH22	2.10	0.50
49:B1:444:G:N2	49:B1:446:G:H3'	2.26	0.50
49:B1:1078:C:O2'	49:B1:1079:C:H5'	2.10	0.50
49:B1:1483:A:C4'	53:BD:160:SER:CB	2.85	0.50
49:B1:1602:U:H4'	68:BS:24:ARG:NH1	2.26	0.50
50:BA:40:LYS:HG2	50:BA:41:ARG:N	2.27	0.50
50:BA:172:GLY:C	50:BA:202:TYR:HB3	2.36	0.50
54:BE:86:PHE:HD1	54:BE:101:LEU:O	1.95	0.50
56:BG:106:LEU:CG	56:BG:109:LEU:HD21	2.41	0.50
58:BI:57:ALA:C	58:BI:59:ARG:N	2.67	0.50
59:BJ:115:PHE:CG	59:BJ:123:ILE:HD13	2.47	0.50
60:BK:7:ASN:OD1	60:BK:40:VAL:HG21	2.12	0.50
62:BM:35:ILE:CG1	62:BM:61:TYR:CE1	2.86	0.50
66:BQ:14:GLY:O	66:BQ:86:GLN:CD	2.55	0.50
67:BR:14:ARG:HA	67:BR:17:ILE:CG2	2.42	0.50
67:BR:99:ASP:OD2	67:BR:102:THR:HB	2.11	0.50
68:BS:73:ASN:HD21	68:BS:75:ARG:CG	2.24	0.50
73:BX:132:ALA:CA	73:BX:137:LYS:HB2	2.42	0.50
76:Ba:87:ARG:NH1	76:Ba:94:ASP:HB3	2.27	0.50
78:Bc:9:ILE:HD13	78:Bc:9:ILE:H	1.77	0.50
78:Bc:21:THR:O	78:Bc:27:CYS:HB2	2.12	0.50
4:AB:257:TRP:CD2	48:A2:3870:G:OP1	2.65	0.50
6:AD:226:TYR:HA	6:AD:229:ASN:HD21	1.76	0.50
13:AK:10:LYS:HG2	13:AK:60:MET:HE2	1.94	0.50
13:AK:55:MET:H	48:A2:1979:A:H5"	1.76	0.50
14:AL:89:LYS:HZ2	36:Ah:110:LYS:CG	2.24	0.50
15:AM:46:ARG:HB3	48:A2:924:U:OP1	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AM:56:GLN:OE1	48:A2:4827:U:C4	2.65	0.50
17:AO:73:PHE:HB3	17:AO:78:ARG:HB3	1.94	0.50
20:AR:8:LYS:HE3	20:AR:19:LYS:HG2	1.94	0.50
24:AV:88:TYR:CZ	24:AV:96:LEU:HD11	2.47	0.50
25:AW:102:LYS:CA	25:AW:105:ARG:CZ	2.89	0.50
26:AX:100:VAL:O	26:AX:134:LYS:HB3	2.12	0.50
28:AZ:4:PHE:CE2	31:Ac:39:ARG:HA	2.47	0.50
28:AZ:11:VAL:HG12	28:AZ:82:PRO:HA	1.94	0.50
33:Ae:26:ASP:OD2	48:A2:430:C:C5'	2.60	0.50
39:Ak:23:VAL:CG2	39:Ak:64:LEU:CD2	2.85	0.50
45:Aq:41:LYS:HB2	45:Aq:71:ILE:N	2.27	0.50
47:Au:93:LEU:HD23	47:Au:99:LEU:HD23	1.89	0.50
47:Au:210:MET:SD	48:A2:3945:G:C4'	3.00	0.50
48:A2:682:U:C2	48:A2:683:U:C5	2.99	0.50
48:A2:1252:G:C5	48:A2:1253:A:H1'	2.47	0.50
48:A2:1297:C:O2	48:A2:1298:C:C6	2.64	0.50
48:A2:2004:C:N3	48:A2:2005:G:N2	2.58	0.50
48:A2:4451:G:N3	48:A2:4670:A:H2'	2.26	0.50
49:B1:78:C:O4'	56:BG:175:LYS:HG2	2.12	0.50
49:B1:154:U:H1'	49:B1:165:G:N2	2.26	0.50
49:B1:171:A:H4'	56:BG:177:GLN:NE2	2.27	0.50
49:B1:307:G:N3	58:BI:45:THR:HG22	2.27	0.50
49:B1:620:G:N3	49:B1:620:G:C2'	2.75	0.50
49:B1:791:C:H2'	49:B1:792:C:C6	2.46	0.50
49:B1:801:U:H2'	49:B1:802:A:H8	1.69	0.50
49:B1:826:A:O3'	59:BJ:10:ARG:HB2	2.12	0.50
49:B1:1256:G:H1	79:Bd:40:ARG:HG3	1.71	0.50
49:B1:1488:C:C2'	49:B1:1489:A:H4'	2.42	0.50
49:B1:1543:U:O2	66:BQ:77:HIS:NE2	2.45	0.50
49:B1:1784:G:OP2	49:B1:1785:C:OP2	2.29	0.50
51:BB:71:LEU:CD2	51:BB:75:GLN:CD	2.84	0.50
55:BF:39:ILE:CG2	55:BF:68:ILE:CG2	2.68	0.50
57:BH:147:LYS:O	57:BH:149:ASP:N	2.39	0.50
59:BJ:19:PRO:HB2	59:BJ:20:PHE:CE1	2.47	0.50
59:BJ:144:ILE:HD12	59:BJ:144:ILE:H	1.77	0.50
67:BR:33:ARG:HD2	82:Bg:106:LYS:HZ1	1.77	0.50
68:BS:47:LYS:N	68:BS:47:LYS:NZ	2.60	0.50
72:BW:11:LEU:HD12	72:BW:74:VAL:HG22	1.94	0.50
75:BZ:68:ILE:HG22	75:BZ:88:LEU:HD11	1.94	0.50
82:Bg:8:ARG:HD2	82:Bg:311:GLN:OE1	2.12	0.50
82:Bg:64:HIS:CG	82:Bg:83:TRP:HB2	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A3:140:C:H2'	1:A3:141:C:C6	2.47	0.49
2:A4:65:G:H8	2:A4:65:G:H5"	1.76	0.49
5:AC:211:TYR:HE1	5:AC:229:LEU:C	2.20	0.49
6:AD:25:GLU:O	12:AJ:147:ARG:HG2	2.12	0.49
6:AD:157:ASN:OD1	6:AD:159:VAL:HG12	2.12	0.49
6:AD:224:SER:C	6:AD:227:ILE:HG13	2.38	0.49
10:AH:111:LEU:HD12	10:AH:112:VAL:N	2.27	0.49
10:AH:173:ARG:HH21	41:Am:127:VAL:N	2.09	0.49
14:AL:15:HIS:NE2	48:A2:95:G:H5'	2.27	0.49
18:AP:25:HIS:O	18:AP:29:THR:HG23	2.12	0.49
20:AR:24:LEU:CD2	20:AR:25:ASP:N	2.73	0.49
22:AT:8:ARG:HD3	22:AT:52:MET:SD	2.52	0.49
23:AU:59:GLY:O	23:AU:61:VAL:N	2.43	0.49
30:Ab:47:LYS:O	30:Ab:50:ASN:HB2	2.12	0.49
33:Ae:79:VAL:HG23	33:Ae:84:GLU:HB2	1.93	0.49
40:Al:7:PHE:CE2	40:Al:11:ARG:HD2	2.47	0.49
45:Aq:77:ALA:HB1	45:Aq:81:ILE:HG12	1.94	0.49
46:At:71:ARG:CG	46:At:71:ARG:NH1	2.73	0.49
48:A2:135:G:N2	48:A2:136:G:N2	2.60	0.49
48:A2:184:U:C4	48:A2:241:G:H1'	2.46	0.49
48:A2:206:U:O2'	48:A2:229:G:N2	2.43	0.49
48:A2:281:U:H5"	48:A2:4140:A:OP1	2.12	0.49
48:A2:307:U:C3'	48:A2:308:G:C5'	2.90	0.49
48:A2:949:C:C3'	48:A2:950:G:H5"	2.42	0.49
48:A2:1148:G:N2	48:A2:1149:G:O6	2.45	0.49
48:A2:1288:C:O5'	48:A2:1288:C:H6	1.94	0.49
48:A2:3684:U:C5'	48:A2:3684:U:H6	2.24	0.49
48:A2:4310:A:C3'	48:A2:4311:C:H5"	2.41	0.49
48:A2:4836:C:C2	48:A2:4837:C:C5	3.00	0.49
49:B1:59:U:H5'	49:B1:501:C:H4'	1.92	0.49
49:B1:526:A:O2'	80:Be:31:ARG:NH2	2.45	0.49
49:B1:689:U:C5	49:B1:742:U:C4	2.92	0.49
49:B1:926:A:H5"	63:BN:90:HIS:ND1	2.27	0.49
49:B1:929:G:H2'	49:B1:930:C:O4'	2.12	0.49
49:B1:1130:G:H5'	63:BN:10:GLY:HA2	1.93	0.49
50:BA:172:GLY:HA3	50:BA:202:TYR:C	2.36	0.49
56:BG:31:ARG:HB2	56:BG:34:THR:CG2	2.42	0.49
58:BI:56:ARG:HG3	58:BI:56:ARG:NH1	2.17	0.49
59:BJ:122:SER:O	59:BJ:123:ILE:C	2.55	0.49
64:BO:103:ASN:HB3	64:BO:142:ARG:CZ	2.39	0.49
72:BW:11:LEU:HD21	72:BW:37:PHE:CE1	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:Bc:17:VAL:HG23	78:Bc:52:GLU:HG3	1.93	0.49
4:AB:94:GLU:CA	4:AB:158:GLN:HE21	2.25	0.49
5:AC:229:LEU:CD1	5:AC:229:LEU:C	2.85	0.49
5:AC:234:LYS:HD3	48:A2:1356:A:C2	2.46	0.49
6:AD:23:ARG:CZ	48:A2:4242:A:OP2	2.59	0.49
7:AE:128:HIS:HE1	48:A2:1265:G:C8	2.30	0.49
8:AF:224:THR:C	8:AF:225:THR:HG23	2.37	0.49
9:AG:164:ILE:O	9:AG:168:VAL:HG13	2.12	0.49
10:AH:132:VAL:CG2	10:AH:154:VAL:HG22	2.42	0.49
17:AO:110:PRO:HB2	17:AO:111:PRO:HD3	1.93	0.49
22:AT:17:ARG:CZ	22:AT:45:MET:CE	2.90	0.49
24:AV:46:LYS:HE2	48:A2:4471:U:O2'	2.12	0.49
26:AX:97:VAL:HG22	26:AX:137:TYR:CD1	2.47	0.49
28:AZ:36:ARG:NH1	28:AZ:36:ARG:HG3	2.27	0.49
31:Ac:22:MET:HE2	31:Ac:86:GLY:N	2.28	0.49
34:Af:47:CYS:SG	34:Af:103:VAL:HG22	2.52	0.49
38:Aj:14:LYS:HZ3	38:Aj:14:LYS:HB2	1.78	0.49
39:Ak:2:PRO:HG2	48:A2:2672:G:C1'	2.42	0.49
39:Ak:24:LYS:HA	39:Ak:67:LYS:O	2.13	0.49
45:Aq:110:VAL:HA	45:Aq:114:ARG:HB2	1.94	0.49
47:Au:28:PHE:CZ	47:Au:30:GLU:HA	2.47	0.49
48:A2:366:A:H5"	48:A2:367:G:OP2	2.12	0.49
48:A2:1060:C:H2'	48:A2:1061:A:O4'	2.11	0.49
48:A2:1268:U:H2'	48:A2:1269:C:O5'	2.11	0.49
48:A2:1743:G:O6	48:A2:1744:C:N4	2.45	0.49
48:A2:1788:G:C6	48:A2:1789:C:C4	2.99	0.49
48:A2:1944:C:H3'	48:A2:1945:A:N7	2.27	0.49
48:A2:2773:C:N4	85:By:12:UNK:CB	2.75	0.49
48:A2:3942:G:H1'	48:A2:4020:A:H61	1.77	0.49
48:A2:4974:A:H3'	48:A2:4974:A:N3	2.27	0.49
49:B1:65:C:N3	56:BG:133:LEU:CD2	2.75	0.49
49:B1:560:A:H3'	59:BJ:171:GLY:N	2.12	0.49
49:B1:580:U:H2'	74:BY:62:THR:CG2	2.43	0.49
49:B1:744:G:C2'	49:B1:745:C:C6	2.90	0.49
49:B1:866:U:H2'	49:B1:867:G:O5'	2.13	0.49
49:B1:953:C:H4'	64:BO:52:THR:O	2.12	0.49
49:B1:1256:G:H1	79:Bd:30:LEU:HG	1.75	0.49
49:B1:1644:C:H2'	49:B1:1645:C:O4'	2.12	0.49
50:BA:163:CYS:SG	50:BA:174:MET:HE1	2.52	0.49
53:BD:116:ARG:NH2	53:BD:150:MET:CE	2.72	0.49
54:BE:80:VAL:HG13	54:BE:81:THR:CG2	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BE:91:SER:C	54:BE:92:ILE:CG1	2.85	0.49
56:BG:45:TRP:HE1	56:BG:121:ILE:HG12	1.76	0.49
56:BG:106:LEU:HG	56:BG:109:LEU:CD2	2.40	0.49
59:BJ:37:LEU:N	59:BJ:37:LEU:CD1	2.75	0.49
59:BJ:124:HIS:CD2	80:Be:35:ARG:HG2	2.48	0.49
60:BK:25:LYS:O	60:BK:27:VAL:HG13	2.12	0.49
60:BK:29:MET:CG	60:BK:30:PRO:HD3	2.41	0.49
66:BQ:33:LYS:HG2	66:BQ:36:GLY:HA2	1.89	0.49
67:BR:36:GLU:CA	67:BR:41:ILE:HD11	2.25	0.49
67:BR:98:VAL:O	67:BR:99:ASP:OD1	2.30	0.49
70:BU:61:LEU:HD12	79:Bd:34:TYR:HE2	1.75	0.49
74:BY:87:PRO:CD	74:BY:90:ARG:CZ	2.90	0.49
1:A3:34:U:O2'	1:A3:35:C:O5'	2.28	0.49
1:A3:149:G:O4'	9:AG:61:ILE:HD12	2.12	0.49
1:A3:151:G:H5'	9:AG:64:GLN:HG3	1.94	0.49
3:AA:61:VAL:CG1	3:AA:63:PHE:CZ	2.94	0.49
4:AB:137:TRP:O	4:AB:143:LYS:HG3	2.12	0.49
6:AD:35:ARG:CD	48:A2:4288:G:O2'	2.52	0.49
7:AE:219:LYS:CD	48:A2:4898:C:C6	2.95	0.49
8:AF:94:ARG:HG3	8:AF:139:TYR:O	2.11	0.49
10:AH:92:MET:HE2	10:AH:179:ILE:CG2	2.37	0.49
12:AJ:111:GLU:CD	68:BS:14:ARG:NH2	2.68	0.49
13:AK:35:VAL:HB	13:AK:39:GLN:HB2	1.93	0.49
13:AK:66:ARG:O	13:AK:69:LEU:HB2	2.11	0.49
13:AK:79:LEU:N	13:AK:80:PRO:HD2	2.28	0.49
14:AL:10:LEU:HB3	14:AL:12:PRO:CD	2.36	0.49
20:AR:99:MET:HE1	48:A2:2647:G:P	2.52	0.49
26:AX:117:TYR:HB2	26:AX:119:ILE:CG1	2.42	0.49
27:AY:73:VAL:HG13	27:AY:80:ILE:HG22	1.93	0.49
29:Aa:28:HIS:N	29:Aa:28:HIS:ND1	2.60	0.49
33:Ae:37:LYS:N	48:A2:1644:C:OP1	2.45	0.49
33:Ae:53:ILE:HG22	48:A2:431:G:C5'	2.42	0.49
35:Ag:21:ARG:CZ	35:Ag:33:LEU:HD23	2.42	0.49
41:Am:109:ASN:ND2	48:A2:1928:U:C2'	2.74	0.49
44:Ap:75:SER:O	44:Ap:79:VAL:HG23	2.12	0.49
45:Aq:111:ASN:O	45:Aq:112:ILE:CG1	2.60	0.49
45:Aq:123:ARG:O	45:Aq:124:GLU:C	2.55	0.49
46:At:38:PHE:C	46:At:38:PHE:CD1	2.88	0.49
47:Au:39:LYS:C	47:Au:39:LYS:CD	2.85	0.49
47:Au:67:VAL:HG22	47:Au:111:LEU:CG	2.41	0.49
47:Au:106:LYS:HD3	47:Au:107:TYR:CZ	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Au:204:LEU:CD1	47:Au:216:LEU:CB	2.85	0.49
48:A2:127:G:N2	48:A2:141:G:C6	2.79	0.49
48:A2:138:C:C6	48:A2:138:C:H3'	2.47	0.49
48:A2:717:G:O2'	48:A2:718:C:H5'	2.12	0.49
48:A2:958:U:O2'	48:A2:959:C:H6	1.96	0.49
48:A2:3707:A:H1'	48:A2:3904:G:H5'	1.95	0.49
49:B1:173:A:O2'	49:B1:174:C:O5'	2.30	0.49
49:B1:606:G:H5"	80:Be:56:ASN:CB	2.41	0.49
49:B1:696:G:H8	49:B1:696:G:P	2.35	0.49
49:B1:837:A:C2	74:BY:47:MET:O	2.65	0.49
49:B1:891:G:H3'	49:B1:892:U:C5	2.46	0.49
49:B1:1201:U:O4'	49:B1:1357:A:N1	2.46	0.49
49:B1:1464:C:O4'	49:B1:1464:C:O2	2.30	0.49
51:BB:31:TYR:CD1	51:BB:49:VAL:HG21	2.47	0.49
51:BB:37:ALA:O	51:BB:38:MET:HE3	2.13	0.49
53:BD:46:THR:HB	53:BD:84:VAL:HG22	1.93	0.49
56:BG:56:ASN:O	56:BG:107:SER:CA	2.60	0.49
59:BJ:30:LYS:CD	59:BJ:31:LEU:N	2.74	0.49
59:BJ:113:GLN:OE1	59:BJ:154:GLN:NE2	2.45	0.49
61:BL:13:GLN:NE2	61:BL:15:THR:N	2.60	0.49
66:BQ:42:ILE:C	66:BQ:45:ARG:HH12	2.21	0.49
66:BQ:85:ARG:NE	66:BQ:119:LEU:HD21	2.26	0.49
71:BV:22:ARG:NH2	71:BV:58:ALA:H	2.10	0.49
74:BY:87:PRO:HD2	74:BY:90:ARG:CZ	2.43	0.49
74:BY:94:HIS:HB3	74:BY:96:LEU:CD1	2.42	0.49
75:BZ:62:VAL:CG2	75:BZ:97:ILE:CD1	2.85	0.49
76:Ba:94:ASP:CG	76:Ba:95:ARG:H	2.04	0.49
78:Bc:60:GLU:CD	78:Bc:63:ARG:HG2	2.37	0.49
80:Be:35:ARG:O	80:Be:39:ASN:CG	2.56	0.49
1:A3:110:U:H6	1:A3:110:U:H3'	1.78	0.49
2:A4:83:A:H4'	8:AF:224:THR:OG1	2.12	0.49
3:AA:70:LYS:NZ	3:AA:72:ARG:NH1	2.60	0.49
4:AB:316:PRO:CB	4:AB:373:LYS:HD3	2.42	0.49
5:AC:171:LEU:HD13	5:AC:180:ILE:HG13	1.94	0.49
5:AC:309:ILE:CG2	5:AC:311:ARG:HG3	2.42	0.49
9:AG:106:THR:H	9:AG:109:GLU:HG2	1.77	0.49
14:AL:140:SER:O	14:AL:141:ALA:C	2.55	0.49
14:AL:195:ARG:HG2	14:AL:198:ARG:HH22	0.73	0.49
18:AP:125:MET:HE1	48:A2:2397:A:H5"	1.94	0.49
19:AQ:101:CYS:SG	19:AQ:121:LEU:HB2	2.51	0.49
20:AR:19:LYS:C	20:AR:22:VAL:HG22	2.37	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AU:34:MET:HE3	23:AU:34:MET:C	2.37	0.49
26:AX:56:ARG:HH12	26:AX:62:ARG:HH21	1.60	0.49
33:Ae:67:LYS:HG2	33:Ae:68:HIS:CD2	2.48	0.49
35:Ag:54:ARG:NH2	48:A2:2629:G:N2	2.57	0.49
45:Aq:38:SER:H	45:Aq:68:GLN:CA	2.24	0.49
47:Au:210:MET:CG	48:A2:3945:G:H4'	2.41	0.49
48:A2:163:C:C4	48:A2:164:C:C6	3.00	0.49
48:A2:1259:C:C2'	48:A2:1260:G:C8	2.88	0.49
48:A2:1266:G:H3'	48:A2:1266:G:H8	1.78	0.49
48:A2:2068:C:C5	48:A2:2247:A:N1	2.81	0.49
48:A2:2609:U:O2'	48:A2:2611:U:O4'	2.31	0.49
48:A2:3752:C:H5'	48:A2:3792:A:H4'	1.93	0.49
48:A2:3755:A:O2'	48:A2:3756:A:H3'	2.12	0.49
48:A2:4264:U:C5	48:A2:4265:C:N3	2.81	0.49
49:B1:283:G:H3'	49:B1:891:G:H1'	1.93	0.49
49:B1:286:U:H6	49:B1:286:U:H3'	1.77	0.49
49:B1:397:G:OP2	61:BL:108:ASN:ND2	2.45	0.49
49:B1:637:U:H2'	49:B1:638:C:O4'	2.12	0.49
49:B1:928:G:H21	77:Bb:68:GLY:HA2	1.77	0.49
49:B1:1289:U:O2'	49:B1:1290:G:P	2.71	0.49
49:B1:1514:G:OP1	79:Bd:9:SER:CB	2.60	0.49
49:B1:1627:C:H5"	69:BT:42:HIS:CE1	2.47	0.49
51:BB:187:LYS:HG2	51:BB:192:SER:OG	2.11	0.49
52:BC:134:ASN:ND2	52:BC:134:ASN:O	2.45	0.49
54:BE:100:ARG:O	54:BE:102:VAL:N	2.45	0.49
63:BN:40:LEU:HD23	63:BN:40:LEU:N	2.27	0.49
65:BP:41:GLN:HE22	65:BP:113:GLY:HA2	1.76	0.49
66:BQ:13:PHE:HE2	66:BQ:15:ARG:NH1	2.10	0.49
67:BR:53:TYR:CE2	67:BR:57:LEU:HD11	2.47	0.49
67:BR:98:VAL:HG23	67:BR:99:ASP:N	2.28	0.49
75:BZ:69:THR:OG1	75:BZ:72:VAL:N	2.41	0.49
78:Bc:21:THR:HG21	78:Bc:67:ARG:CD	2.42	0.49
80:Be:35:ARG:NE	80:Be:39:ASN:HD21	2.08	0.49
82:Bg:62:HIS:ND1	82:Bg:82:SER:HB2	2.27	0.49
2:A4:117:G:OP1	6:AD:256:LYS:HG3	2.12	0.49
4:AB:76:VAL:HG13	4:AB:333:LEU:C	2.38	0.49
4:AB:224:LYS:CE	48:A2:4588:A:OP2	2.54	0.49
5:AC:327:LYS:HD3	8:AF:171:ASP:OD2	2.13	0.49
6:AD:287:PHE:CD2	11:AI:209:TRP:CH2	3.00	0.49
10:AH:8:GLN:NE2	10:AH:8:GLN:CA	2.73	0.49
15:AM:101:LYS:CA	15:AM:104:MET:HE3	2.34	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AN:64:ILE:CG2	16:AN:102:ALA:HB1	2.43	0.49
19:AQ:98:LEU:HD11	19:AQ:100:VAL:HG23	1.93	0.49
19:AQ:150:ARG:NH1	19:AQ:164:LYS:HD3	2.27	0.49
20:AR:70:ARG:NH1	48:A2:2790:G:P	2.85	0.49
22:AT:49:GLN:HB3	48:A2:4295:C:H5'	1.93	0.49
23:AU:80:LYS:HE2	23:AU:110:TYR:CZ	2.48	0.49
24:AV:37:LEU:HD23	24:AV:65:VAL:HG22	1.93	0.49
25:AW:73:ARG:HD2	56:BG:35:GLU:HG2	1.93	0.49
26:AX:89:LYS:NZ	48:A2:2416:C:H42	2.10	0.49
28:AZ:90:PRO:O	28:AZ:92:ASP:N	2.46	0.49
39:Ak:21:LYS:N	39:Ak:21:LYS:CD	2.73	0.49
45:Aq:80:LEU:HA	45:Aq:83:LYS:HB2	1.92	0.49
45:Aq:125:LEU:HA	45:Aq:129:ILE:CG1	2.43	0.49
48:A2:1073:G:C2	48:A2:1074:C:C2	3.00	0.49
48:A2:1252:G:H3'	48:A2:1253:A:C8	2.44	0.49
48:A2:1260:G:O2'	48:A2:1261:C:H5'	2.13	0.49
48:A2:1814:G:H2'	48:A2:1815:U:H5"	1.94	0.49
48:A2:2246:U:C3'	48:A2:2247:A:C5'	2.90	0.49
48:A2:4595:G:O2'	48:A2:4597:A:OP2	2.30	0.49
49:B1:407:G:C2	73:BX:36:LEU:CB	2.96	0.49
49:B1:746:C:H2'	49:B1:747:U:C6	2.47	0.49
49:B1:802:A:N3	49:B1:802:A:H2'	2.27	0.49
49:B1:830:A:OP1	54:BE:21:ASP:OD2	2.30	0.49
49:B1:1444:U:O5'	49:B1:1444:U:H6	1.93	0.49
49:B1:1614:A:OP2	65:BP:39:ALA:CB	2.61	0.49
58:BI:164:GLU:O	58:BI:168:GLN:HG2	2.13	0.49
62:BM:61:TYR:CZ	62:BM:107:SER:HB2	2.47	0.49
63:BN:25:TRP:HD1	63:BN:26:LEU:CB	2.25	0.49
65:BP:84:ILE:CG2	65:BP:115:TYR:HA	2.41	0.49
72:BW:24:GLN:NE2	77:Bb:7:LEU:H	2.11	0.49
75:BZ:74:SER:CB	75:BZ:79:ILE:O	2.61	0.49
3:AA:20:VAL:HG21	48:A2:3650:U:C6	2.48	0.49
4:AB:4:ARG:O	4:AB:5:LYS:CB	2.61	0.49
10:AH:5:LEU:HB2	10:AH:59:LYS:O	2.12	0.49
10:AH:12:ILE:HB	10:AH:53:LYS:O	2.12	0.49
17:AO:6:VAL:HG12	17:AO:32:LYS:HB2	1.94	0.49
18:AP:31:GLU:HG3	18:AP:60:PHE:CD2	2.47	0.49
18:AP:129:THR:HG23	18:AP:139:TYR:CB	2.41	0.49
19:AQ:172:ARG:HB2	29:Aa:56:VAL:HG21	1.95	0.49
21:AS:84:TYR:HE2	21:AS:93:MET:HE3	1.78	0.49
22:AT:14:MET:HE1	22:AT:55:LYS:CA	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AU:52:LYS:NZ	23:AU:52:LYS:CB	2.73	0.49
24:AV:23:GLY:HA2	24:AV:38:TYR:CZ	2.47	0.49
25:AW:109:ILE:CG2	25:AW:113:LYS:HE3	2.36	0.49
26:AX:106:LYS:N	48:A2:2758:C:OP1	2.43	0.49
27:AY:41:LYS:HB3	27:AY:42:TYR:HD1	1.77	0.49
27:AY:54:GLU:O	27:AY:106:ILE:HG23	2.12	0.49
29:Aa:9:ARG:HD3	48:A2:2323:U:N3	2.28	0.49
29:Aa:79:TRP:CE2	29:Aa:118:PRO:HD3	2.48	0.49
32:Ad:38:PHE:HB2	48:A2:4596:U:O4	2.13	0.49
32:Ad:115:LYS:HB3	48:A2:4956:G:OP1	2.12	0.49
36:Ah:108:GLN:O	36:Ah:112:ARG:HG3	2.11	0.49
47:Au:25:ARG:C	47:Au:26:ARG:HD2	2.37	0.49
48:A2:133:C:N4	48:A2:134:G:C2	2.78	0.49
48:A2:459:G:O2'	48:A2:460:A:H5'	2.12	0.49
48:A2:901:U:C6	48:A2:902:A:C6	3.00	0.49
48:A2:1890:G:H2'	48:A2:1891:G:O4'	2.12	0.49
48:A2:2473:U:H2'	48:A2:2474:U:C6	2.48	0.49
48:A2:2489:G:H8	48:A2:2489:G:O5'	1.96	0.49
48:A2:2497:G:H1'	48:A2:2518:C:H1'	1.93	0.49
48:A2:2684:G:O2'	48:A2:2685:G:C8	2.63	0.49
48:A2:3611:U:O2'	48:A2:3612:U:O5'	2.27	0.49
48:A2:3844:G:H8	48:A2:3844:G:O5'	1.94	0.49
48:A2:4980:U:H2'	48:A2:4982:C:C4	2.48	0.49
49:B1:182:C:H2'	49:B1:183:G:O4'	2.12	0.49
49:B1:309:G:C2	49:B1:310:C:C2	3.00	0.49
49:B1:440:G:O2'	49:B1:1737:G:H1'	2.13	0.49
49:B1:662:G:H4'	49:B1:663:C:OP1	2.11	0.49
49:B1:799:U:P	57:BH:110:THR:CB	3.00	0.49
49:B1:852:G:H2'	49:B1:853:C:H5'	1.94	0.49
49:B1:869:A:C5	57:BH:114:GLN:NE2	2.81	0.49
49:B1:1088:U:H4'	49:B1:1089:G:OP2	2.13	0.49
49:B1:1395:C:H1'	49:B1:1474:A:C4	2.48	0.49
49:B1:1593:C:P	55:BF:91:ARG:NH2	2.81	0.49
49:B1:1825:A:H8	49:B1:1825:A:H5"	1.77	0.49
50:BA:205:ARG:NH2	67:BR:86:PRO:CD	2.75	0.49
51:BB:44:ILE:HD12	51:BB:74:LEU:HD11	1.91	0.49
51:BB:46:LYS:HD3	64:BO:19:PRO:HB2	1.94	0.49
51:BB:119:THR:HB	51:BB:143:THR:HG21	1.94	0.49
51:BB:182:LYS:CD	51:BB:231:LEU:HD13	2.40	0.49
54:BE:91:SER:C	54:BE:92:ILE:CD1	2.86	0.49
55:BF:107:ASN:N	55:BF:107:ASN:ND2	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BI:192:GLY:HA3	61:BL:19:ASN:OD1	2.13	0.49
59:BJ:35:TYR:CE1	59:BJ:106:LEU:HB3	2.47	0.49
65:BP:34:MET:CE	65:BP:45:LEU:HB2	2.41	0.49
68:BS:14:ARG:HH11	68:BS:14:ARG:CG	2.14	0.49
70:BU:21:ARG:CB	70:BU:90:ASP:OD1	2.60	0.49
76:Ba:42:ARG:CZ	76:Ba:42:ARG:CB	2.90	0.49
82:Bg:86:THR:HG21	82:Bg:100:ARG:NH2	2.28	0.49
82:Bg:237:ASN:HB2	82:Bg:287:THR:HA	1.95	0.49
1:A3:150:C:C5	9:AG:65:ARG:NH1	2.80	0.49
2:A4:10:C:C5	6:AD:20:PHE:CZ	3.00	0.49
2:A4:39:C:O2'	12:AJ:46:GLN:CD	2.56	0.49
3:AA:247:ARG:CD	49:B1:1069:U:C4'	2.88	0.49
4:AB:254:ILE:HD12	4:AB:254:ILE:N	2.27	0.49
5:AC:169:LEU:HD12	48:A2:215:A:N6	2.25	0.49
5:AC:217:ILE:C	5:AC:219:LYS:N	2.69	0.49
5:AC:217:ILE:HG23	5:AC:218:ILE:N	2.27	0.49
5:AC:289:LEU:HD11	5:AC:293:LEU:HD21	1.94	0.49
7:AE:96:VAL:CG2	7:AE:107:VAL:CG1	2.91	0.49
8:AF:26:ALA:O	8:AF:30:ILE:HG13	2.12	0.49
13:AK:11:SER:HA	13:AK:14:PHE:CB	2.43	0.49
20:AR:21:LYS:HB3	20:AR:52:ARG:O	2.13	0.49
21:AS:74:ARG:HH12	48:A2:909:C:H4'	1.78	0.49
28:AZ:89:ILE:O	28:AZ:89:ILE:HG13	2.13	0.49
37:Ai:60:LEU:O	37:Ai:64:SER:HB3	2.13	0.49
38:Aj:8:PHE:O	38:Aj:11:ARG:HG2	2.12	0.49
40:Al:36:ARG:HH12	48:A2:407:G:C5'	2.22	0.49
47:Au:93:LEU:HD13	47:Au:103:LEU:HD12	1.93	0.49
48:A2:960:G:H8	48:A2:960:G:O5'	1.96	0.49
48:A2:2484:C:H4'	48:A2:2485:G:C4	2.48	0.49
48:A2:3934:A:C2'	48:A2:3935:U:OP1	2.61	0.49
48:A2:4107:C:H4'	48:A2:4108:G:OP1	2.10	0.49
48:A2:4125:U:H3'	48:A2:4126:C:C5'	2.42	0.49
49:B1:65:C:C2	56:BG:133:LEU:HD23	2.48	0.49
49:B1:71:G:C2'	49:B1:79:A:H61	2.26	0.49
49:B1:116:U:N3	49:B1:117:C:N3	2.61	0.49
49:B1:118:C:O2	49:B1:118:C:C3'	2.59	0.49
49:B1:322:C:O2'	49:B1:323:C:H5'	2.13	0.49
49:B1:384:U:O2'	61:BL:135:SER:CA	2.56	0.49
49:B1:491:C:P	74:BY:104:ARG:HB2	2.52	0.49
49:B1:827:A:C5'	59:BJ:8:VAL:CG2	2.85	0.49
49:B1:1648:G:C3'	66:BQ:127:CYS:HA	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1668:U:OP1	66:BQ:132:PHE:O	2.30	0.49
51:BB:103:MET:HB3	51:BB:215:VAL:HG12	1.94	0.49
54:BE:124:CYS:O	54:BE:159:THR:HA	2.12	0.49
61:BL:17:PHE:HD1	61:BL:19:ASN:N	2.05	0.49
64:BO:143:LYS:C	64:BO:145:GLY:H	2.20	0.49
65:BP:33:LEU:O	65:BP:37:TYR:HD1	1.96	0.49
66:BQ:28:GLY:HA3	66:BQ:67:ASP:OD2	2.13	0.49
66:BQ:58:LEU:HB3	66:BQ:62:ARG:HH11	1.76	0.49
67:BR:5:ARG:NH1	67:BR:5:ARG:CG	2.73	0.49
70:BU:48:LEU:HD13	70:BU:97:ILE:HG21	1.91	0.49
75:BZ:66:LYS:C	75:BZ:67:LEU:CD1	2.85	0.49
77:Bb:20:LYS:HE3	77:Bb:28:PRO:HA	1.94	0.49
79:Bd:13:LYS:O	79:Bd:18:SER:HB3	2.11	0.49
5:AC:152:LEU:O	5:AC:252:TRP:HB2	2.13	0.49
5:AC:323:ARG:HB3	48:A2:1264:G:HO2'	1.74	0.49
5:AC:331:TYR:CE1	8:AF:55:LYS:HG2	2.48	0.49
6:AD:33:ARG:NH1	6:AD:37:VAL:HG21	2.28	0.49
8:AF:29:LYS:O	8:AF:33:LEU:N	2.42	0.49
8:AF:220:MET:C	8:AF:221:LYS:CG	2.86	0.49
9:AG:87:LEU:HD11	9:AG:91:THR:HG21	1.94	0.49
10:AH:108:ASN:N	10:AH:108:ASN:ND2	2.60	0.49
14:AL:55:ILE:HG22	14:AL:96:ILE:HA	1.95	0.49
19:AQ:8:ASN:HD22	19:AQ:8:ASN:H	1.59	0.49
23:AU:50:ASN:HD22	23:AU:50:ASN:C	2.21	0.49
26:AX:44:PRO:CB	48:A2:4055:A:H5'	2.42	0.49
29:Aa:23:GLY:O	29:Aa:24:LYS:O	2.31	0.49
34:Af:16:ARG:O	48:A2:1897:G:H1'	2.13	0.49
35:Ag:69:LYS:HB2	48:A2:2748:U:N3	2.28	0.49
39:Ak:21:LYS:O	39:Ak:64:LEU:HD22	2.13	0.49
45:Aq:63:THR:H	45:Aq:70:GLN:HB3	1.77	0.49
47:Au:97:LYS:HZ2	47:Au:101:LYS:CE	2.25	0.49
48:A2:903:C:H6	48:A2:903:C:C5'	2.23	0.49
48:A2:905:G:N3	48:A2:905:G:H2'	2.27	0.49
48:A2:1614:A:H3'	48:A2:1614:A:N3	2.28	0.49
48:A2:1744:C:C2'	48:A2:1745:C:H5'	2.42	0.49
48:A2:1768:A:H2'	48:A2:1771:C:C5	2.47	0.49
48:A2:4826:G:O2'	48:A2:4827:U:H5'	2.13	0.49
49:B1:362:C:O2	49:B1:402:C:N3	2.46	0.49
49:B1:847:A:OP2	54:BE:16:LYS:HD3	2.13	0.49
49:B1:1295:A:C2'	49:B1:1296:U:H5'	2.42	0.49
49:B1:1416:C:C2'	69:BT:3:GLY:HA2	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BA:39:TYR:CD1	50:BA:40:LYS:HB2	2.47	0.49
50:BA:41:ARG:HB2	50:BA:47:TYR:HE1	1.68	0.49
50:BA:131:HIS:HA	50:BA:134:LEU:HD12	1.95	0.49
53:BD:32:ASP:OD2	53:BD:58:VAL:HG23	2.13	0.49
53:BD:76:ARG:O	53:BD:77:PHE:CG	2.65	0.49
55:BF:61:PHE:CD1	78:Bc:51:ARG:CD	2.95	0.49
57:BH:157:HIS:ND1	57:BH:190:PRO:HG3	2.27	0.49
64:BO:56:VAL:HG12	64:BO:77:ALA:CB	2.43	0.49
69:BT:30:VAL:HA	69:BT:102:ARG:HH11	1.78	0.49
72:BW:52:ILE:HG12	72:BW:61:ILE:HG12	1.95	0.49
82:Bg:278:SER:HB2	82:Bg:281:ALA:HB3	1.94	0.49
83:Bw:50:U:H3'	83:Bw:50:U:C6	2.47	0.49
6:AD:10:LYS:CD	6:AD:10:LYS:C	2.85	0.49
6:AD:178:LYS:HA	6:AD:183:TYR:CD1	2.48	0.49
13:AK:49:GLY:C	13:AK:51:ALA:H	2.21	0.49
13:AK:108:PRO:CD	13:AK:109:ALA:N	2.76	0.49
14:AL:61:CYS:HB2	14:AL:66:TYR:O	2.12	0.49
20:AR:32:ILE:CD1	20:AR:49:LEU:HD13	2.43	0.49
21:AS:1:MET:CE	21:AS:7:LEU:CD1	2.86	0.49
21:AS:3:ALA:HB2	21:AS:121:ALA:CB	2.43	0.49
28:AZ:61:LYS:HD3	28:AZ:61:LYS:HA	1.57	0.49
28:AZ:91:LEU:O	28:AZ:91:LEU:HG	2.13	0.49
29:Aa:60:HIS:CD2	29:Aa:63:LEU:HD23	2.48	0.49
29:Aa:61:TYR:CD1	48:A2:4316:U:O4	2.66	0.49
30:Ab:58:GLN:NE2	30:Ab:61:ASN:OD1	2.40	0.49
32:Ad:32:ARG:HD3	32:Ad:48:GLU:OE2	2.12	0.49
38:Aj:3:LYS:HA	48:A2:3613:A:C2	2.48	0.49
47:Au:41:TYR:O	47:Au:163:LEU:HD11	2.13	0.49
47:Au:60:ARG:HG3	47:Au:171:HIS:CD2	2.43	0.49
47:Au:213:PRO:HG3	48:A2:4023:A:H5'	1.95	0.49
48:A2:1741:G:N1	48:A2:1742:G:C4	2.79	0.49
48:A2:2398:C:O2	48:A2:2398:C:C3'	2.61	0.49
48:A2:2683:C:N3	48:A2:2691:G:O6	2.46	0.49
49:B1:22:A:H4'	59:BJ:16:PRO:O	2.12	0.49
49:B1:154:U:H2'	49:B1:155:G:O4'	2.12	0.49
49:B1:181:A:H1'	49:B1:182:C:C2	2.48	0.49
49:B1:217:A:C2	49:B1:218:U:C2	3.01	0.49
49:B1:526:A:OP2	80:Be:28:LYS:HB3	2.12	0.49
49:B1:598:G:H2'	49:B1:599:A:C8	2.48	0.49
49:B1:1016:U:O2	63:BN:61:ALA:HB2	2.08	0.49
49:B1:1300:U:O4	65:BP:54:HIS:ND1	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BA:77:ILE:HG12	50:BA:99:ILE:HG23	1.95	0.49
53:BD:76:ARG:HD3	60:BK:68:TYR:CZ	2.43	0.49
54:BE:103:TYR:HD2	54:BE:189:LEU:HD12	1.78	0.49
56:BG:181:THR:HB	56:BG:182:PRO:HD2	1.95	0.49
61:BL:111:VAL:HG23	61:BL:140:PHE:C	2.38	0.49
62:BM:14:VAL:HG22	62:BM:127:TYR:HD1	1.75	0.49
62:BM:81:ASP:OD1	62:BM:84:LYS:HE2	2.13	0.49
65:BP:118:GLU:HB3	68:BS:119:ALA:HB1	1.93	0.49
68:BS:59:LEU:HD21	68:BS:63:GLU:CB	2.42	0.49
70:BU:22:ILE:CG2	70:BU:114:VAL:HG12	2.39	0.49
70:BU:36:CYS:O	70:BU:40:ILE:HG12	2.13	0.49
73:BX:68:LYS:HD3	73:BX:91:LEU:HB3	1.95	0.49
75:BZ:88:LEU:CD2	75:BZ:109:TYR:CZ	2.74	0.49
78:Bc:60:GLU:HG2	78:Bc:62:GLU:H	1.78	0.49
1:A3:13:G:O2'	18:AP:121:LYS:O	2.30	0.49
1:A3:26:C:H2'	1:A3:27:U:C6	2.48	0.49
1:A3:142:U:H2'	1:A3:143:G:C8	2.47	0.49
2:A4:15:C:C1'	2:A4:65:G:N2	2.73	0.49
3:AA:211:PHE:CZ	3:AA:235:VAL:HG23	2.47	0.49
4:AB:4:ARG:O	4:AB:5:LYS:HB3	2.13	0.49
4:AB:168:MET:SD	4:AB:171:LEU:HD12	2.53	0.49
4:AB:217:ILE:HD12	4:AB:284:ILE:HD11	1.94	0.49
4:AB:357:ARG:CD	48:A2:4577:C:H5"	2.42	0.49
4:AB:389:MET:HE2	4:AB:392:LEU:HD21	1.95	0.49
7:AE:134:SER:N	48:A2:1272:C:OP1	2.46	0.49
7:AE:140:LEU:CD2	7:AE:167:GLN:NE2	2.73	0.49
7:AE:164:PHE:HE1	7:AE:173:LEU:HB3	1.76	0.49
12:AJ:17:ILE:CD1	12:AJ:83:LEU:HD13	2.42	0.49
19:AQ:154:LYS:NZ	19:AQ:154:LYS:CB	2.73	0.49
23:AU:40:GLU:CD	23:AU:65:ARG:HB2	2.37	0.49
23:AU:60:VAL:O	23:AU:74:SER:HB2	2.13	0.49
28:AZ:81:MET:HE1	35:Ag:96:LEU:HD21	1.95	0.49
29:Aa:61:TYR:CD1	29:Aa:61:TYR:N	2.79	0.49
30:Ab:57:MET:SD	48:A2:1794:C:H5'	2.52	0.49
33:Ae:36:ARG:HG3	48:A2:1644:C:P	2.52	0.49
39:Ak:15:ALA:C	39:Ak:17:ARG:H	2.21	0.49
45:Aq:46:ILE:C	45:Aq:48:LYS:H	2.21	0.49
45:Aq:125:LEU:HA	45:Aq:129:ILE:CD1	2.43	0.49
46:At:108:MET:HE2	48:A2:949:C:O2	2.13	0.49
48:A2:41:C:H2'	48:A2:42:A:H5"	1.94	0.49
48:A2:375:U:H6	48:A2:375:U:O5'	1.96	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:960:G:H8	48:A2:960:G:P	2.36	0.49
48:A2:1390:C:O5'	48:A2:1390:C:H6	1.96	0.49
48:A2:1755:U:N3	48:A2:1756:C:C5	2.80	0.49
48:A2:2653:A:H4'	48:A2:2654:G:OP2	2.12	0.49
49:B1:150:A:H2'	49:B1:151:C:H5'	1.95	0.49
49:B1:594:A:O3'	49:B1:595:U:O4'	2.30	0.49
49:B1:872:A:H2	49:B1:915:G:O6	1.94	0.49
49:B1:1104:G:C5	49:B1:1105:G:C8	3.00	0.49
49:B1:1156:U:O2	49:B1:1156:U:O5'	2.31	0.49
49:B1:1286:G:C4	62:BM:34:GLY:CA	2.96	0.49
49:B1:1387:G:N2	67:BR:8:THR:CG2	2.73	0.49
49:B1:1539:U:C5'	69:BT:45:LEU:O	2.60	0.49
49:B1:1578:U:H5	53:BD:4:GLN:HE22	1.52	0.49
49:B1:1785:C:H2'	49:B1:1786:U:C6	2.48	0.49
49:B1:1865:C:P	76:Ba:87:ARG:HH21	2.34	0.49
50:BA:181:GLU:CG	50:BA:185:MET:HE3	2.42	0.49
52:BC:63:VAL:O	52:BC:64:THR:CG2	2.61	0.49
52:BC:209:VAL:HG11	52:BC:233:LEU:HD22	1.94	0.49
53:BD:210:ILE:HD12	53:BD:211:VAL:O	2.13	0.49
54:BE:42:LEU:HD22	54:BE:43:PRO:HD2	1.95	0.49
54:BE:49:ARG:HG3	54:BE:55:ALA:O	2.12	0.49
59:BJ:40:LYS:NZ	80:Be:34:ARG:NH1	2.61	0.49
59:BJ:55:LYS:HE3	59:BJ:58:ARG:HH22	1.78	0.49
60:BK:64:TRP:CZ3	79:Bd:22:ARG:HG2	2.48	0.49
62:BM:122:ASP:O	62:BM:126:GLU:HG2	2.13	0.49
63:BN:91:LEU:HD12	63:BN:125:LEU:CD1	2.43	0.49
68:BS:30:ILE:CA	68:BS:33:ILE:HD13	2.40	0.49
72:BW:98:GLN:C	72:BW:99:PHE:O	2.56	0.49
1:A3:70:G:N2	1:A3:87:G:H1'	2.28	0.48
3:AA:63:PHE:HZ	3:AA:76:PHE:CE2	2.31	0.48
4:AB:56:ILE:HD11	4:AB:332:MET:SD	2.53	0.48
4:AB:103:LYS:O	4:AB:153:MET:HE1	2.13	0.48
4:AB:248:LEU:N	48:A2:2817:G:OP1	2.45	0.48
5:AC:41:HIS:CD2	5:AC:238:LEU:HD23	2.48	0.48
6:AD:264:LYS:C	6:AD:265:ARG:CG	2.85	0.48
7:AE:222:LEU:HD23	7:AE:222:LEU:N	2.27	0.48
8:AF:228:VAL:HG11	21:AS:42:SER:CB	2.43	0.48
9:AG:61:ILE:O	9:AG:64:GLN:HG2	2.12	0.48
11:AI:210:ARG:HD3	48:A2:1162:U:O4	2.13	0.48
13:AK:55:MET:HB2	13:AK:87:GLY:C	2.38	0.48
17:AO:49:ARG:NH1	48:A2:1910:A:H2	2.11	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AQ:167:VAL:CB	19:AQ:175:GLU:OE2	2.61	0.48
24:AV:139:ILE:O	24:AV:140:ALA:OXT	2.30	0.48
26:AX:44:PRO:CB	48:A2:4055:A:C5'	2.89	0.48
29:Aa:125:LYS:HG2	29:Aa:145:VAL:HB	1.94	0.48
33:Ae:8:VAL:HG22	48:A2:693:U:O4'	2.13	0.48
37:Ai:64:SER:O	37:Ai:65:LYS:CB	2.61	0.48
44:Ap:18:TYR:CA	48:A2:3606:A:N6	2.69	0.48
44:Ap:46:LYS:HD3	48:A2:2650:C:OP1	2.11	0.48
48:A2:1166:C:H2'	48:A2:1167:A:O5'	2.13	0.48
48:A2:1255:C:H2'	48:A2:1256:G:C8	2.48	0.48
48:A2:1670:G:H4'	48:A2:2262:G:N2	2.28	0.48
48:A2:2339:A:H4'	48:A2:2340:G:H4'	1.95	0.48
48:A2:2530:A:N1	48:A2:2747:C:C4	2.81	0.48
48:A2:3656:C:H2'	48:A2:3657:G:H8	1.78	0.48
48:A2:3929:G:C4	83:Bw:19:G:C4	3.01	0.48
48:A2:4031:G:N2	48:A2:4032:A:N1	2.61	0.48
49:B1:64:A:C3'	56:BG:175:LYS:CE	2.86	0.48
49:B1:216:C:O2'	49:B1:217:A:O4'	2.31	0.48
49:B1:284:C:C2'	49:B1:285:U:C4	2.96	0.48
49:B1:317:C:H2'	49:B1:318:A:H5'	1.92	0.48
49:B1:499:G:N1	49:B1:501:C:O2	2.45	0.48
49:B1:933:G:H22	76:Ba:19:GLN:CD	2.21	0.48
49:B1:1049:A:H2'	49:B1:1050:A:H5'	1.93	0.48
49:B1:1410:C:H2'	49:B1:1411:G:N9	2.28	0.48
49:B1:1547:C:H1'	49:B1:1670:C:C4'	2.43	0.48
49:B1:1567:G:N1	68:BS:82:TRP:CD2	2.80	0.48
52:BC:65:LYS:NZ	52:BC:273:LEU:HD13	2.28	0.48
53:BD:212:GLU:O	53:BD:213:PRO:O	2.30	0.48
57:BH:107:LYS:C	57:BH:109:ARG:N	2.65	0.48
59:BJ:107:GLU:O	59:BJ:107:GLU:HG2	2.13	0.48
59:BJ:170:PRO:CG	59:BJ:171:GLY:H	2.25	0.48
61:BL:32:LYS:C	61:BL:34:PRO:CD	2.86	0.48
63:BN:58:HIS:N	63:BN:58:HIS:ND1	2.60	0.48
64:BO:98:ARG:HB3	64:BO:132:VAL:O	2.12	0.48
67:BR:97:GLU:CB	67:BR:117:LEU:CG	2.91	0.48
69:BT:98:SER:HA	69:BT:101:ARG:NE	2.28	0.48
71:BV:41:LYS:HD2	71:BV:41:LYS:O	2.13	0.48
1:A3:81:C:C4'	1:A3:82:A:H5"	2.34	0.48
3:AA:21:LYS:CE	48:A2:2722:A:H1'	2.42	0.48
3:AA:79:ALA:O	3:AA:82:ILE:HG12	2.13	0.48
4:AB:175:GLN:HG3	48:A2:4943:U:H4'	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AB:341:LYS:O	4:AB:342:LYS:HB2	2.13	0.48
5:AC:52:TYR:CG	5:AC:53:ALA:N	2.81	0.48
7:AE:125:LEU:C	7:AE:126:LEU:HG	2.38	0.48
8:AF:224:THR:C	8:AF:225:THR:CG2	2.86	0.48
13:AK:24:TYR:CE2	13:AK:27:CYS:SG	3.07	0.48
39:Ak:14:THR:O	39:Ak:14:THR:HG22	2.12	0.48
40:Al:36:ARG:NH1	48:A2:407:G:P	2.84	0.48
45:Aq:128:THR:HA	45:Aq:131:GLU:CG	2.43	0.48
48:A2:1755:U:C2	48:A2:1756:C:C6	3.01	0.48
48:A2:1836:G:H2'	48:A2:1837:C:C6	2.48	0.48
48:A2:1970:G:C2	48:A2:1971:A:C8	3.01	0.48
48:A2:2805:U:H3'	48:A2:2805:U:OP2	2.12	0.48
48:A2:4613:A:H2'	48:A2:4614:G:O4'	2.13	0.48
49:B1:182:C:C3'	49:B1:183:G:O4'	2.60	0.48
49:B1:581:U:O4'	74:BY:62:THR:HG21	2.13	0.48
49:B1:689:U:N3	49:B1:742:U:O2	2.46	0.48
49:B1:1272:C:H4'	79:Bd:5:GLN:HE22	1.77	0.48
49:B1:1756:C:H4'	49:B1:1757:G:OP1	2.12	0.48
50:BA:90:PHE:HZ	50:BA:178:LEU:HD22	1.77	0.48
51:BB:44:ILE:CD1	51:BB:74:LEU:CD1	2.86	0.48
52:BC:253:PRO:CA	52:BC:256:TRP:HE1	2.15	0.48
53:BD:116:ARG:O	53:BD:120:TYR:CD2	2.66	0.48
53:BD:116:ARG:HH21	53:BD:150:MET:HE3	1.78	0.48
54:BE:149:TYR:HA	56:BG:209:TYR:HE2	1.70	0.48
55:BF:185:SER:HA	55:BF:190:ILE:HG21	1.95	0.48
56:BG:31:ARG:HB2	56:BG:34:THR:HG21	1.94	0.48
56:BG:44:GLU:HB3	56:BG:120:ASP:HB2	1.95	0.48
56:BG:142:ARG:NH1	56:BG:152:ASP:HA	2.28	0.48
59:BJ:24:ARG:O	59:BJ:28:GLU:HG3	2.12	0.48
60:BK:27:VAL:HA	60:BK:46:MET:HE1	1.95	0.48
65:BP:60:LEU:HD13	65:BP:60:LEU:C	2.38	0.48
66:BQ:41:MET:HE2	69:BT:10:ASN:CG	2.33	0.48
66:BQ:135:PRO:HD3	66:BQ:141:TYR:CD2	2.48	0.48
67:BR:119:VAL:C	67:BR:120:THR:HG23	2.38	0.48
72:BW:94:LEU:HD22	72:BW:101:PHE:H	1.75	0.48
80:Be:29:THR:O	80:Be:32:ALA:HB3	2.13	0.48
82:Bg:21:ILE:HD13	82:Bg:299:PHE:HB3	1.93	0.48
1:A3:154:G:OP1	9:AG:89:ARG:CZ	2.60	0.48
4:AB:81:THR:CB	4:AB:207:VAL:HG21	2.44	0.48
4:AB:156:TYR:CE1	48:A2:4867:A:C8	3.01	0.48
4:AB:295:ASP:N	4:AB:296:GLY:O	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AD:180:PHE:HB3	6:AD:195:HIS:CD2	2.48	0.48
7:AE:105:ARG:CZ	48:A2:680:C:N1	2.76	0.48
9:AG:69:ILE:O	9:AG:73:ARG:HG2	2.13	0.48
10:AH:122:TYR:CD1	48:A2:4575:C:H4'	2.49	0.48
12:AJ:17:ILE:HD13	12:AJ:83:LEU:HD13	1.94	0.48
13:AK:32:ALA:H	13:AK:85:ASN:CB	2.25	0.48
15:AM:7:VAL:HG22	21:AS:152:PHE:O	2.13	0.48
16:AN:68:ARG:HH21	16:AN:123:GLU:HB2	1.78	0.48
16:AN:143:ARG:NH2	36:Ah:95:LEU:HA	2.27	0.48
18:AP:18:ARG:HB2	48:A2:393:G:H5"	1.95	0.48
19:AQ:8:ASN:ND2	19:AQ:8:ASN:N	2.60	0.48
19:AQ:30:LYS:HE3	48:A2:2247:A:C2'	2.43	0.48
21:AS:44:PHE:CE2	21:AS:48:VAL:HG21	2.47	0.48
22:AT:8:ARG:NH2	48:A2:4295:C:O2'	2.47	0.48
23:AU:26:THR:OG1	23:AU:68:SER:HB2	2.13	0.48
26:AX:79:PHE:CE2	36:Ah:32:ARG:HB3	2.49	0.48
27:AY:55:VAL:HG21	27:AY:70:VAL:HG12	1.94	0.48
28:AZ:46:ILE:CD1	28:AZ:68:ILE:HG13	2.43	0.48
39:Ak:8:ILE:O	39:Ak:11:PHE:HB3	2.14	0.48
45:Aq:28:LEU:O	45:Aq:42:VAL:HG21	2.14	0.48
45:Aq:31:LYS:HG2	45:Aq:38:SER:C	2.38	0.48
48:A2:32:G:N7	48:A2:48:G:N2	2.61	0.48
48:A2:173:G:N1	48:A2:255:G:O6	2.45	0.48
48:A2:243:G:O5'	48:A2:243:G:H8	1.95	0.48
48:A2:287:G:O2'	48:A2:288:G:C8	2.65	0.48
48:A2:902:A:C8	48:A2:902:A:C5'	2.91	0.48
48:A2:1196:G:OP2	48:A2:1196:G:N2	2.43	0.48
48:A2:2373:G:N3	48:A2:2373:G:H2'	2.29	0.48
48:A2:3688:A:H1'	48:A2:4141:G:H5'	1.93	0.48
48:A2:4546:A:H2'	48:A2:4547:U:C6	2.48	0.48
49:B1:21:U:O2'	59:BJ:17:ARG:O	2.19	0.48
49:B1:78:C:O4'	56:BG:175:LYS:HA	2.11	0.48
49:B1:619:A:C6	73:BX:114:ASP:HB3	2.48	0.48
49:B1:827:A:O5'	59:BJ:8:VAL:HG11	2.11	0.48
49:B1:1287:A:N3	49:B1:1287:A:C2'	2.76	0.48
49:B1:1453:C:C2'	49:B1:1454:A:H5'	2.43	0.48
49:B1:1631:U:OP1	68:BS:34:LYS:HA	2.14	0.48
50:BA:178:LEU:HD23	50:BA:178:LEU:C	2.38	0.48
52:BC:130:ILE:HG12	52:BC:158:ALA:HB1	1.96	0.48
56:BG:205:GLU:OE1	56:BG:205:GLU:HA	2.12	0.48
59:BJ:13:TYR:OH	59:BJ:44:TRP:HZ3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BJ:81:LEU:CD1	59:BJ:87:LEU:HD11	2.38	0.48
63:BN:26:LEU:CD2	63:BN:60:VAL:HG22	2.42	0.48
63:BN:100:LYS:HG2	63:BN:104:ARG:NH1	2.28	0.48
81:Bf:141:CYS:O	81:Bf:145:CYS:HA	2.13	0.48
82:Bg:45:LEU:HD22	82:Bg:52:TYR:HE2	1.74	0.48
3:AA:2:GLY:HA2	48:A2:1624:A:H61	1.77	0.48
4:AB:232:THR:HG21	4:AB:239:LYS:HG2	1.94	0.48
4:AB:262:VAL:HG21	4:AB:268:ARG:NH2	2.28	0.48
6:AD:68:ARG:HB2	6:AD:71:GLY:O	2.13	0.48
7:AE:115:TYR:HE2	46:At:119:ARG:CD	2.24	0.48
7:AE:213:THR:OG1	7:AE:214:ASP:N	2.46	0.48
9:AG:147:VAL:HG11	9:AG:173:LEU:HD23	1.96	0.48
21:AS:4:SER:HA	48:A2:2043:C:H4'	1.94	0.48
22:AT:78:LYS:HB3	22:AT:87:LYS:HE3	1.95	0.48
24:AV:50:ASN:N	48:A2:4456:G:OP1	2.47	0.48
29:Aa:8:THR:CG2	48:A2:1321:G:C2'	2.92	0.48
29:Aa:100:ILE:CG2	29:Aa:125:LYS:HE2	2.43	0.48
32:Ad:84:ILE:HG23	32:Ad:108:TYR:HE1	1.79	0.48
36:Ah:46:LYS:CA	36:Ah:49:VAL:CG2	2.86	0.48
48:A2:380:A:H2'	48:A2:381:G:OP1	2.14	0.48
48:A2:961:C:C6	48:A2:961:C:C5'	2.81	0.48
48:A2:1082:C:H2'	48:A2:1083:U:O4'	2.13	0.48
48:A2:1166:C:C6	48:A2:1167:A:N7	2.81	0.48
48:A2:1742:G:N2	48:A2:1743:G:H1'	2.28	0.48
48:A2:2261:A:H2'	48:A2:2262:G:H5'	1.95	0.48
48:A2:2449:C:H4'	48:A2:2450:G:OP1	2.14	0.48
48:A2:2867:G:O4'	48:A2:3589:C:O2'	2.27	0.48
48:A2:3798:G:O2'	48:A2:3799:A:OP1	2.31	0.48
49:B1:67:C:P	56:BG:172:LYS:NZ	2.86	0.48
49:B1:229:A:O2'	49:B1:230:A:P	2.72	0.48
49:B1:560:A:H3'	59:BJ:171:GLY:HA3	0.64	0.48
49:B1:1299:A:H8	49:B1:1299:A:O5'	1.97	0.48
49:B1:1618:C:C5	79:Bd:14:PHE:HZ	2.27	0.48
49:B1:1673:U:H2'	49:B1:1674:G:O4'	2.12	0.48
49:B1:1719:A:C2'	49:B1:1720:U:H5'	2.44	0.48
49:B1:1785:C:H2'	49:B1:1786:U:O5'	2.13	0.48
50:BA:114:ALA:C	50:BA:116:PHE:H	2.18	0.48
55:BF:48:TYR:CD2	66:BQ:53:GLU:HG2	2.49	0.48
56:BG:69:THR:C	56:BG:101:ILE:CG1	2.86	0.48
57:BH:70:LYS:HB2	57:BH:70:LYS:NZ	2.29	0.48
58:BI:193:LYS:HG2	58:BI:194:GLU:N	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BJ:110:LEU:O	59:BJ:114:VAL:HG23	2.13	0.48
60:BK:38:LYS:HA	60:BK:38:LYS:CE	2.44	0.48
64:BO:45:THR:HG21	64:BO:49:GLY:C	2.37	0.48
66:BQ:42:ILE:HD12	66:BQ:48:GLN:HA	1.95	0.48
70:BU:68:THR:O	79:Bd:40:ARG:NH2	2.45	0.48
76:Ba:12:LYS:HD3	76:Ba:18:VAL:CG2	2.42	0.48
80:Be:28:LYS:C	80:Be:32:ALA:CB	2.86	0.48
82:Bg:188:HIS:HB3	82:Bg:219:TRP:CZ2	2.48	0.48
3:AA:228:ASP:O	3:AA:229:ALA:C	2.55	0.48
4:AB:247:GLY:HA3	48:A2:2817:G:OP1	2.11	0.48
4:AB:279:GLU:HB2	4:AB:282:LYS:HE3	1.95	0.48
5:AC:133:LEU:HD13	46:At:6:GLN:HE21	1.78	0.48
5:AC:184:TYR:CZ	5:AC:225:PRO:HD2	2.49	0.48
8:AF:184:ILE:HA	8:AF:189:ASP:CG	2.35	0.48
10:AH:90:TYR:CE2	10:AH:184:LYS:HG2	2.48	0.48
13:AK:69:LEU:O	13:AK:70:GLU:C	2.57	0.48
14:AL:15:HIS:HD2	48:A2:95:G:O3'	1.96	0.48
14:AL:40:GLN:HB3	48:A2:182:C:H41	1.78	0.48
22:AT:7:LYS:O	48:A2:4296:U:O2'	2.27	0.48
22:AT:70:HIS:CD2	48:A2:4276:C:OP1	2.65	0.48
23:AU:28:PRO:HB2	23:AU:34:MET:HB2	1.96	0.48
23:AU:60:VAL:HB	23:AU:76:VAL:CG2	2.43	0.48
32:Ad:57:MET:HE3	32:Ad:90:ARG:HB2	1.94	0.48
39:Ak:52:LYS:C	39:Ak:55:LYS:HG3	2.38	0.48
47:Au:34:LEU:HD12	47:Au:205:TYR:O	2.14	0.48
48:A2:352:C:N3	48:A2:353:A:N7	2.62	0.48
48:A2:460:A:H61	48:A2:681:A:H61	1.44	0.48
48:A2:693:U:C3'	48:A2:694:G:H21	2.25	0.48
48:A2:1077:G:H2'	48:A2:1078:A:C8	2.47	0.48
48:A2:1225:G:P	48:A2:1225:G:C2	3.06	0.48
48:A2:1226:C:H6	48:A2:1226:C:O5'	1.96	0.48
48:A2:1500:A:H5'	48:A2:1502:C:OP2	2.12	0.48
48:A2:1752:A:H2'	48:A2:1753:U:C6	2.49	0.48
48:A2:1752:A:N6	48:A2:1753:U:O4	2.46	0.48
48:A2:2525:G:OP2	48:A2:2525:G:C8	2.66	0.48
48:A2:4858:C:H3'	48:A2:4859:G:C5'	2.40	0.48
49:B1:298:G:OP1	54:BE:134:LYS:CA	2.61	0.48
49:B1:318:A:N1	49:B1:332:G:N2	2.62	0.48
49:B1:439:A:H4'	49:B1:1799:G:H4'	1.95	0.48
49:B1:487:U:C5	49:B1:512:A:N1	2.82	0.48
49:B1:611:G:H21	80:Be:12:VAL:HG13	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:873:G:C4'	49:B1:874:G:OP2	2.59	0.48
49:B1:1700:C:N4	49:B1:1702:G:N2	2.62	0.48
50:BA:155:ARG:O	50:BA:157:VAL:HG23	2.13	0.48
51:BB:112:SER:O	51:BB:113:MET:HB2	2.13	0.48
55:BF:38:TYR:OH	78:Bc:54:ASP:CG	2.57	0.48
57:BH:43:LEU:HD11	57:BH:72:PHE:CE1	2.48	0.48
59:BJ:19:PRO:HB2	59:BJ:20:PHE:CD1	2.49	0.48
59:BJ:54:ARG:HD3	59:BJ:98:LEU:HD22	1.88	0.48
59:BJ:159:PHE:CE2	59:BJ:164:PRO:HG2	2.47	0.48
61:BL:13:GLN:NE2	61:BL:16:ILE:N	2.61	0.48
61:BL:36:TYR:CE2	61:BL:38:LYS:HB2	2.48	0.48
65:BP:54:HIS:HD1	65:BP:54:HIS:C	2.22	0.48
66:BQ:9:SER:OG	66:BQ:24:HIS:CE1	2.66	0.48
67:BR:99:ASP:O	67:BR:102:THR:CG2	2.44	0.48
68:BS:124:ARG:HB2	68:BS:131:VAL:HG22	1.94	0.48
69:BT:9:VAL:HG11	69:BT:138:VAL:CG1	2.43	0.48
69:BT:61:ALA:O	69:BT:64:LEU:HG	2.13	0.48
72:BW:15:ASN:HB2	72:BW:72:CYS:SG	2.53	0.48
5:AC:190:ARG:CB	5:AC:202:ILE:HD13	2.40	0.48
6:AD:150:LEU:HD11	48:A2:4242:A:N6	2.29	0.48
7:AE:190:HIS:NE2	48:A2:700:C:H4'	2.29	0.48
8:AF:132:MET:HE2	48:A2:1707:U:O2	2.13	0.48
9:AG:196:ARG:CD	48:A2:147:U:H2'	2.44	0.48
13:AK:45:MET:CE	45:Aq:122:ALA:H	2.26	0.48
14:AL:49:ARG:HG3	36:Ah:119:TYR:O	2.13	0.48
16:AN:176:LYS:O	48:A2:67:C:C5'	2.61	0.48
20:AR:98:ARG:HH12	20:AR:130:ASN:HD21	1.61	0.48
24:AV:135:ASN:N	24:AV:135:ASN:ND2	2.60	0.48
29:Aa:73:VAL:HB	29:Aa:108:TYR:CD2	2.48	0.48
32:Ad:38:PHE:CZ	48:A2:4596:U:C2	3.02	0.48
33:Ae:53:ILE:HG22	48:A2:431:G:H4'	1.95	0.48
34:Af:80:ASN:OD1	48:A2:2046:G:O2'	2.21	0.48
47:Au:59:PRO:O	47:Au:60:ARG:HB3	2.13	0.48
47:Au:60:ARG:CD	47:Au:171:HIS:CB	2.86	0.48
48:A2:31:U:H2'	48:A2:32:G:N9	2.27	0.48
48:A2:133:C:H5	48:A2:134:G:H2'	1.69	0.48
48:A2:136:G:H3'	48:A2:136:G:C8	2.49	0.48
48:A2:136:G:H3'	48:A2:136:G:H8	1.78	0.48
48:A2:1057:G:H2'	48:A2:1058:G:O4'	2.12	0.48
48:A2:1224:C:P	48:A2:1252:G:H21	2.34	0.48
48:A2:1388:C:H2'	48:A2:1389:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:1432:C:H2'	48:A2:1433:C:C6	2.48	0.48
48:A2:2447:U:H2'	48:A2:2485:G:H22	1.79	0.48
48:A2:2531:G:H2'	48:A2:2532:A:H2	1.79	0.48
48:A2:3654:C:H4'	48:A2:3655:G:OP2	2.12	0.48
49:B1:305:U:C2'	49:B1:306:C:OP1	2.61	0.48
49:B1:387:C:OP2	58:BI:10:LYS:CE	2.61	0.48
49:B1:539:C:H2'	49:B1:540:U:C6	2.48	0.48
49:B1:1274:G:H5'	60:BK:47:LYS:CD	2.44	0.48
49:B1:1624:U:O4	49:B1:1625:U:C2	2.67	0.48
49:B1:1648:G:O2'	49:B1:1649:U:P	2.71	0.48
50:BA:91:ALA:CB	50:BA:98:PRO:HD3	2.44	0.48
51:BB:218:LEU:HD22	51:BB:219:LYS:H	1.79	0.48
52:BC:58:LYS:HB2	52:BC:58:LYS:NZ	2.28	0.48
56:BG:160:LYS:O	56:BG:171:THR:HA	2.14	0.48
59:BJ:112:THR:HG22	59:BJ:116:LYS:HE2	1.95	0.48
59:BJ:151:LEU:C	59:BJ:151:LEU:CD2	2.86	0.48
59:BJ:153:SER:C	59:BJ:155:LYS:H	2.22	0.48
61:BL:13:GLN:HE22	61:BL:15:THR:N	2.10	0.48
63:BN:29:THR:CB	63:BN:30:SER:C	2.85	0.48
66:BQ:12:VAL:HG21	66:BQ:91:ALA:N	2.28	0.48
70:BU:40:ILE:HG23	70:BU:44:LYS:HE3	1.94	0.48
74:BY:83:LYS:O	74:BY:91:LEU:HD21	2.14	0.48
74:BY:119:GLY:N	74:BY:122:LYS:HZ1	2.07	0.48
83:Bw:60:U:H6	83:Bw:60:U:H5"	1.79	0.48
1:A3:123:U:C2'	48:A2:2523:G:O6	2.61	0.48
4:AB:19:ARG:O	48:A2:4529:G:C5'	2.44	0.48
4:AB:252:ALA:HB1	48:A2:4486:G:C2	2.49	0.48
5:AC:199:ARG:NH1	48:A2:2274:C:H5"	2.28	0.48
5:AC:317:ASN:OD1	8:AF:156:LYS:HG3	2.14	0.48
7:AE:115:TYR:CE2	46:At:119:ARG:HB2	2.44	0.48
8:AF:95:ILE:HG22	8:AF:223:LYS:HE3	1.95	0.48
13:AK:28:PHE:CE2	13:AK:99:ARG:HB2	2.48	0.48
13:AK:55:MET:CB	13:AK:87:GLY:HA2	2.43	0.48
22:AT:17:ARG:CZ	22:AT:45:MET:HE1	2.42	0.48
23:AU:56:LEU:HD11	23:AU:63:ILE:HD12	1.95	0.48
25:AW:50:ASN:OD1	25:AW:50:ASN:N	2.46	0.48
25:AW:74:ARG:NH1	56:BG:51:ARG:NH1	2.61	0.48
28:AZ:33:THR:HG23	28:AZ:98:LYS:HZ3	1.79	0.48
30:Ab:53:GLY:O	48:A2:1794:C:O2'	2.25	0.48
31:Ac:30:GLY:O	31:Ac:34:THR:HG23	2.14	0.48
38:Aj:31:LYS:HE3	38:Aj:33:THR:HG21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:55:G:H5”	48:A2:55:G:H8	1.79	0.48
48:A2:205:A:N7	48:A2:229:G:N7	2.61	0.48
48:A2:227:G:H8	48:A2:227:G:H5”	1.76	0.48
48:A2:228:U:O2	48:A2:228:U:O2’	2.31	0.48
48:A2:717:G:C6	48:A2:718:C:C4	3.01	0.48
48:A2:1745:C:C2’	48:A2:1746:G:C5’	2.86	0.48
48:A2:1870:U:O4	48:A2:1920:A:N6	2.47	0.48
48:A2:1951:A:H4’	48:A2:1981:G:H8	1.79	0.48
48:A2:1981:G:H3’	48:A2:1981:G:N3	2.29	0.48
48:A2:2672:G:H5”	48:A2:2673:G:OP2	2.14	0.48
48:A2:2793:C:O2	48:A2:2793:C:C2’	2.62	0.48
48:A2:4034:C:H2’	48:A2:4035:G:O5’	2.13	0.48
48:A2:4152:U:H3’	48:A2:4153:G:H5’	1.96	0.48
48:A2:4544:C:C3’	48:A2:4545:C:H5’	2.42	0.48
48:A2:4826:G:O2’	48:A2:4827:U:P	2.69	0.48
48:A2:4896:A:C8	48:A2:4896:A:O5’	2.66	0.48
49:B1:46:A:H4’	49:B1:47:G:H5”	1.96	0.48
49:B1:554:A:H4’	49:B1:555:A:OP2	2.13	0.48
49:B1:749:U:O2	49:B1:750:C:C6	2.67	0.48
49:B1:799:U:H2’	49:B1:800:U:H5’	1.93	0.48
49:B1:1122:A:H1’	51:BB:146:ARG:NH2	2.29	0.48
49:B1:1745:A:C1’	56:BG:66:GLY:HA2	2.43	0.48
50:BA:42:LYS:CE	50:BA:48:ILE:HD11	2.42	0.48
51:BB:186:ASN:O	51:BB:190:PRO:HD2	2.14	0.48
54:BE:116:VAL:CG2	54:BE:117:GLU:H	2.26	0.48
55:BF:72:LEU:HD12	55:BF:93:VAL:CG2	2.44	0.48
57:BH:146:VAL:HG22	57:BH:152:ARG:HG3	1.94	0.48
64:BO:17:LEU:O	64:BO:19:PRO:HD2	2.13	0.48
66:BQ:45:ARG:HD3	66:BQ:45:ARG:HA	1.54	0.48
68:BS:10:GLN:OE1	68:BS:13:LEU:HD13	2.10	0.48
68:BS:30:ILE:HG22	68:BS:36:VAL:HG11	1.95	0.48
70:BU:20:ILE:CG2	70:BU:116:ILE:CB	2.92	0.48
71:BV:14:PRO:CB	71:BV:23:ILE:CG2	2.90	0.48
82:Bg:176:VAL:O	82:Bg:184:LEU:HD22	2.14	0.48
3:AA:30:ARG:NH2	3:AA:41:ILE:HD13	2.29	0.48
3:AA:222:PRO:HA	48:A2:3720:C:O4’	2.13	0.48
4:AB:262:VAL:O	48:A2:4527:C:H4’	2.14	0.48
6:AD:163:LEU:HD22	6:AD:163:LEU:O	2.14	0.48
7:AE:133:PHE:CD2	48:A2:701:G:H1’	2.49	0.48
7:AE:168:LEU:HB2	7:AE:172:LEU:O	2.13	0.48
7:AE:233:PHE:CE2	48:A2:446:A:H2’	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AF:182:TYR:CE2	8:AF:203:GLU:HB2	2.45	0.48
13:AK:52:VAL:HG11	13:AK:90:PHE:CA	2.42	0.48
14:AL:59:VAL:HG22	48:A2:74:G:OP1	2.13	0.48
14:AL:167:ARG:CD	29:Aa:100:ILE:HD11	2.23	0.48
15:AM:46:ARG:O	15:AM:47:ARG:C	2.56	0.48
20:AR:105:LEU:HD22	20:AR:135:LYS:CG	2.44	0.48
21:AS:74:ARG:NH1	48:A2:909:C:H4'	2.28	0.48
28:AZ:89:ILE:C	28:AZ:91:LEU:H	2.20	0.48
29:Aa:36:GLY:HA3	29:Aa:40:HIS:CE1	2.49	0.48
34:Af:108:SER:OG	34:Af:110:ILE:HD12	2.14	0.48
39:Ak:18:LYS:HG3	39:Ak:19:ASP:OD1	2.14	0.48
43:Ao:9:ARG:O	48:A2:4252:U:H5'	2.13	0.48
45:Aq:29:ALA:HA	45:Aq:31:LYS:HD2	1.94	0.48
47:Au:10:LEU:CD2	47:Au:183:ILE:HG22	2.44	0.48
48:A2:1560:U:H2'	48:A2:1561:C:C5	2.48	0.48
48:A2:1861:G:H3'	48:A2:1862:C:H5'	1.96	0.48
48:A2:1990:A:C2	48:A2:1991:A:H1'	2.48	0.48
48:A2:2640:U:N3	61:BL:158:PHE:HE2	2.10	0.48
48:A2:3918:A:O2'	48:A2:3919:C:H5'	2.14	0.48
48:A2:4009:G:H5'	48:A2:4020:A:C4'	2.43	0.48
48:A2:4832:A:O2'	48:A2:4833:G:O5'	2.29	0.48
49:B1:156:G:O2'	56:BG:60:GLY:HA2	2.13	0.48
49:B1:381:C:H5'	58:BI:48:VAL:HG13	1.95	0.48
49:B1:642:U:H4'	49:B1:644:G:H4'	1.96	0.48
49:B1:1022:U:H1'	63:BN:128:TYR:CG	2.49	0.48
49:B1:1124:C:OP1	51:BB:150:ILE:N	2.46	0.48
49:B1:1590:C:OP1	69:BT:82:ARG:NH1	2.47	0.48
49:B1:1600:G:H5"	75:BZ:43:LYS:HG3	1.94	0.48
50:BA:41:ARG:HA	50:BA:47:TYR:HD1	1.79	0.48
52:BC:105:GLU:OE1	52:BC:212:LYS:HE3	2.14	0.48
53:BD:30:ALA:HA	53:BD:103:GLU:OE2	2.13	0.48
54:BE:95:THR:CB	54:BE:97:GLU:N	2.76	0.48
57:BH:110:THR:OG1	57:BH:110:THR:O	2.31	0.48
61:BL:82:MET:HG2	61:BL:85:THR:CG2	2.44	0.48
65:BP:44:ARG:NH2	65:BP:52:LYS:HZ1	2.07	0.48
65:BP:86:LEU:CD2	65:BP:89:MET:HE2	2.43	0.48
68:BS:90:VAL:O	68:BS:91:LYS:HB2	2.14	0.48
69:BT:62:ARG:C	69:BT:62:ARG:HD3	2.38	0.48
70:BU:82:MET:HE2	79:Bd:52:PHE:CZ	2.49	0.48
71:BV:51:LYS:NZ	71:BV:76:ASP:OD1	2.46	0.48
78:Bc:33:GLU:HA	78:Bc:40:ARG:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:5:ILE:HD13	3:AA:232:GLY:HA2	1.94	0.48
4:AB:96:PRO:HD2	48:A2:4868:A:C4'	2.44	0.48
8:AF:220:MET:C	8:AF:221:LYS:HG2	2.39	0.48
12:AJ:106:GLY:C	48:A2:4212:G:H4'	2.38	0.48
25:AW:90:ILE:O	25:AW:94:ARG:HG3	2.14	0.48
26:AX:114:LYS:NZ	26:AX:114:LYS:CB	2.73	0.48
28:AZ:39:SER:HB3	28:AZ:77:TYR:CD2	2.49	0.48
30:Ab:54:LEU:HD21	48:A2:1793:G:H22	1.77	0.48
33:Ae:118:LEU:HD23	46:At:120:SER:OG	2.14	0.48
35:Ag:90:ARG:NH1	48:A2:4091:G:O3'	2.47	0.48
45:Aq:16:ARG:HG3	45:Aq:17:CYS:H	1.79	0.48
45:Aq:23:GLY:CA	45:Aq:71:ILE:HD12	2.42	0.48
46:At:47:LYS:HE2	46:At:103:ARG:H	1.78	0.48
47:Au:97:LYS:HZ2	47:Au:101:LYS:HE2	1.74	0.48
47:Au:164:CYS:SG	48:A2:4024:C:O2'	2.68	0.48
48:A2:1322:U:H2'	48:A2:1323:C:C6	2.49	0.48
48:A2:3876:A:H3'	48:A2:3876:A:C8	2.49	0.48
48:A2:4037:U:H2'	48:A2:4038:U:C6	2.49	0.48
48:A2:4546:A:N1	48:A2:4681:G:C8	2.82	0.48
48:A2:4828:G:H5'	48:A2:4828:G:C8	2.49	0.48
48:A2:4870:G:H5"	48:A2:4870:G:H8	1.79	0.48
48:A2:4872:C:H2'	48:A2:4873:G:O4'	2.14	0.48
49:B1:286:U:C3'	49:B1:286:U:C6	2.97	0.48
49:B1:293:C:O5'	49:B1:293:C:H6	1.96	0.48
49:B1:522:A:H5'	59:BJ:145:PRO:HG2	1.94	0.48
49:B1:524:U:O3'	49:B1:525:A:O4'	2.31	0.48
49:B1:744:G:N3	57:BH:109:ARG:HB2	2.28	0.48
49:B1:1301:A:N3	49:B1:1301:A:H2'	2.29	0.48
49:B1:1483:A:H5"	53:BD:159:HIS:O	2.14	0.48
49:B1:1593:C:C5	75:BZ:104:ARG:NH2	2.70	0.48
49:B1:1751:C:H1'	49:B1:1782:G:N2	2.29	0.48
50:BA:143:PRO:HB3	50:BA:158:ASP:OD2	2.14	0.48
51:BB:49:VAL:HG11	51:BB:58:ALA:HB1	1.96	0.48
53:BD:132:LYS:HB2	53:BD:189:MET:HE2	1.96	0.48
53:BD:210:ILE:CG2	67:BR:39:ALA:HB3	1.95	0.48
54:BE:148:ARG:HH22	56:BG:202:ASN:HA	1.76	0.48
54:BE:211:LYS:HA	54:BE:216:ASN:O	2.14	0.48
55:BF:38:TYR:C	55:BF:39:ILE:HG13	2.38	0.48
59:BJ:3:VAL:O	59:BJ:4:ALA:HB2	2.14	0.48
59:BJ:30:LYS:C	59:BJ:30:LYS:CD	2.86	0.48
59:BJ:129:LEU:CB	59:BJ:135:ILE:HD11	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:BO:85:CYS:HB2	64:BO:124:MET:HE1	1.94	0.48
66:BQ:37:ARG:HG3	69:BT:7:LYS:CG	2.41	0.48
74:BY:117:VAL:HG23	74:BY:122:LYS:HG3	1.95	0.48
75:BZ:79:ILE:CG2	75:BZ:83:LEU:CG	2.85	0.48
76:Ba:45:VAL:HG11	76:Ba:53:ILE:HD12	1.95	0.48
76:Ba:82:LYS:NZ	76:Ba:82:LYS:CB	2.73	0.48
83:Bw:2:C:H6	83:Bw:2:C:H5"	1.78	0.48
3:AA:204:MET:HB2	48:A2:1613:A:C2	2.48	0.48
4:AB:96:PRO:HD2	48:A2:4868:A:H4'	1.96	0.48
7:AE:100:LYS:CD	48:A2:679:G:OP2	2.62	0.48
7:AE:114:ARG:HD2	48:A2:683:U:OP1	2.14	0.48
7:AE:119:GLU:CG	33:Ae:7:LEU:HD22	2.36	0.48
8:AF:202:LYS:HD2	48:A2:1820:U:OP2	2.14	0.48
15:AM:41:PRO:CB	15:AM:70:GLN:HE22	2.18	0.48
16:AN:38:ARG:HD3	16:AN:38:ARG:C	2.39	0.48
19:AQ:8:ASN:H	19:AQ:8:ASN:ND2	2.12	0.48
19:AQ:67:ILE:HG23	19:AQ:96:PRO:HG3	1.95	0.48
45:Aq:46:ILE:CD1	45:Aq:71:ILE:CG2	2.92	0.48
48:A2:425:G:O2'	48:A2:426:U:O5'	2.28	0.48
48:A2:1164:C:H2'	48:A2:1164:C:O2	2.12	0.48
48:A2:1973:U:C4	48:A2:1983:A:H2'	2.49	0.48
48:A2:2444:C:H1'	48:A2:3643:G:H1	1.78	0.48
48:A2:3656:C:H2'	48:A2:3657:G:C8	2.48	0.48
48:A2:3661:U:O2'	48:A2:3662:G:H5'	2.14	0.48
48:A2:3929:G:C6	48:A2:4016:A:N6	2.70	0.48
48:A2:4332:G:C5	83:Bw:76:A:C6	3.02	0.48
49:B1:79:A:H2'	49:B1:80:G:H5'	1.95	0.48
49:B1:792:C:O5'	49:B1:792:C:H6	1.97	0.48
49:B1:839:C:O2'	49:B1:841:G:H4'	2.14	0.48
49:B1:1259:A:N3	49:B1:1259:A:O5'	2.47	0.48
49:B1:1444:U:O2	49:B1:1445:U:C2	2.66	0.48
49:B1:1450:G:H3'	67:BR:44:LYS:HZ3	1.76	0.48
49:B1:1670:C:H2'	49:B1:1671:G:O4'	2.14	0.48
49:B1:1700:C:C4	49:B1:1702:G:C2	3.01	0.48
49:B1:1862:G:O2'	49:B1:1863:A:H2'	2.14	0.48
49:B1:1867:U:OP2	49:B1:1867:U:C6	2.67	0.48
51:BB:72:ALA:O	51:BB:73:ASP:HB3	2.13	0.48
52:BC:64:THR:O	52:BC:66:LEU:N	2.45	0.48
54:BE:133:VAL:O	54:BE:136:ILE:HG12	2.14	0.48
54:BE:162:ILE:HD13	54:BE:169:ILE:HG22	1.95	0.48
55:BF:43:GLU:HA	55:BF:43:GLU:OE1	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BG:164:LYS:HD3	56:BG:164:LYS:HA	1.69	0.48
59:BJ:115:PHE:CG	59:BJ:123:ILE:HD11	2.49	0.48
61:BL:33:LEU:N	61:BL:34:PRO:CD	2.76	0.48
63:BN:75:LEU:HD12	63:BN:81:ALA:CB	2.40	0.48
68:BS:5:ILE:HG21	68:BS:8:LYS:HE3	1.95	0.48
70:BU:26:SER:OG	70:BU:32:LEU:CA	2.62	0.48
72:BW:93:LEU:HD22	72:BW:128:PHE:CD2	2.49	0.48
72:BW:94:LEU:HD22	72:BW:101:PHE:N	2.29	0.48
76:Ba:41:ILE:HG12	76:Ba:68:TYR:HD1	1.77	0.48
81:Bf:126:CYS:O	81:Bf:130:VAL:HB	2.14	0.48
2:A4:90:A:H2	11:AI:56:GLU:HG2	1.78	0.47
3:AA:209:HIS:CD2	3:AA:210:PRO:HD2	2.49	0.47
4:AB:238:LYS:HD2	48:A2:4419:U:H5"	1.96	0.47
4:AB:317:LEU:HD23	48:A2:4959:U:C5'	2.43	0.47
5:AC:221:PHE:HD2	5:AC:227:ILE:HD11	1.76	0.47
5:AC:274:LYS:NZ	48:A2:1358:C:OP1	2.46	0.47
6:AD:45:ASN:HB2	48:A2:1805:G:H4'	1.96	0.47
6:AD:220:LYS:O	6:AD:224:SER:HB3	2.14	0.47
6:AD:224:SER:CA	6:AD:227:ILE:CD1	2.87	0.47
6:AD:279:ARG:HE	48:A2:1160:U:C5'	2.25	0.47
8:AF:182:TYR:CE2	8:AF:203:GLU:HG3	2.49	0.47
12:AJ:57:VAL:O	12:AJ:58:ARG:HB3	2.14	0.47
13:AK:1:MET:O	13:AK:3:ARG:N	2.39	0.47
13:AK:27:CYS:CB	13:AK:90:PHE:HB3	2.44	0.47
14:AL:15:HIS:HD2	48:A2:96:U:P	2.37	0.47
15:AM:33:GLN:HB2	21:AS:145:PHE:HZ	1.78	0.47
15:AM:33:GLN:HB2	21:AS:145:PHE:CZ	2.49	0.47
19:AQ:159:PRO:O	19:AQ:161:SER:N	2.46	0.47
21:AS:13:VAL:HG22	21:AS:63:TYR:HB3	1.96	0.47
24:AV:139:ILE:C	24:AV:140:ALA:OXT	2.57	0.47
28:AZ:62:ILE:HG23	28:AZ:63:ALA:N	2.28	0.47
34:Af:33:VAL:HG13	34:Af:38:GLU:CB	2.44	0.47
34:Af:58:VAL:HG11	34:Af:65:ASN:HB2	1.96	0.47
34:Af:59:THR:CB	34:Af:60:PRO:HD2	2.44	0.47
35:Ag:78:TYR:HB3	35:Ag:82:MET:HG2	1.96	0.47
46:At:87:ARG:O	46:At:91:SER:HB3	2.13	0.47
48:A2:410:U:H2'	48:A2:411:G:H5'	1.95	0.47
48:A2:507:U:C5'	48:A2:508:U:OP2	2.62	0.47
48:A2:1171:C:H2'	48:A2:1172:G:C8	2.49	0.47
48:A2:1197:C:O2'	48:A2:1198:C:H5'	2.13	0.47
48:A2:1580:C:H2'	48:A2:1581:A:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:1740:G:N2	48:A2:1741:G:N9	2.62	0.47
48:A2:3683:A:H2'	48:A2:3684:U:C5	2.48	0.47
48:A2:4033:U:OP2	48:A2:4033:U:C6	2.67	0.47
48:A2:4125:U:H3'	48:A2:4126:C:H5"	1.95	0.47
48:A2:4946:U:O2'	48:A2:4947:U:H4'	2.13	0.47
49:B1:30:C:O2'	49:B1:596:U:OP1	2.32	0.47
49:B1:101:U:H5"	58:BI:19:LYS:HB3	1.96	0.47
49:B1:294:U:O4	61:BL:65:ASN:N	2.47	0.47
49:B1:448:A:C8	58:BI:26:LYS:N	2.82	0.47
49:B1:589:G:H21	80:Be:26:LYS:CE	2.02	0.47
49:B1:866:U:H2'	49:B1:867:G:H5'	1.95	0.47
49:B1:1104:G:C6	49:B1:1105:G:N7	2.82	0.47
49:B1:1276:A:O2'	60:BK:54:SER:CB	2.59	0.47
49:B1:1314:U:N3	60:BK:2:LEU:N	2.61	0.47
49:B1:1507:G:H3'	49:B1:1508:A:H5'	1.96	0.47
49:B1:1830:U:C4	84:Bx:47:U:C5'	2.89	0.47
50:BA:39:TYR:OH	67:BR:108:LEU:HD11	2.14	0.47
50:BA:50:ASN:HD21	50:BA:53:ARG:HB2	1.79	0.47
50:BA:200:ASP:HA	50:BA:203:PHE:HB2	1.96	0.47
51:BB:161:VAL:O	51:BB:164:ILE:HG22	2.14	0.47
53:BD:25:LEU:O	53:BD:29:LEU:HB2	2.14	0.47
53:BD:71:ALA:CB	60:BK:20:VAL:CG2	2.78	0.47
53:BD:72:VAL:HG13	60:BK:68:TYR:HD1	1.77	0.47
54:BE:220:THR:HG23	54:BE:225:ILE:HD11	1.96	0.47
55:BF:56:TYR:O	55:BF:62:ARG:HG3	2.14	0.47
58:BI:145:ILE:HG22	58:BI:149:TYR:CE2	2.49	0.47
62:BM:13:ASP:O	62:BM:17:ALA:HB3	2.13	0.47
63:BN:75:LEU:C	63:BN:75:LEU:CD1	2.86	0.47
64:BO:97:LEU:HB3	64:BO:131:ASP:OD1	2.14	0.47
65:BP:85:ILE:HD11	65:BP:116:LEU:CG	2.33	0.47
70:BU:78:ASP:HB3	70:BU:80:PHE:CE2	2.49	0.47
73:BX:106:GLY:O	73:BX:107:ARG:HB3	2.14	0.47
2:A4:73:U:H2'	2:A4:74:A:OP1	2.15	0.47
4:AB:363:ILE:O	4:AB:363:ILE:HG13	2.13	0.47
5:AC:51:PRO:CB	14:AL:26:PHE:CE1	2.94	0.47
7:AE:114:ARG:HH11	7:AE:114:ARG:CG	2.27	0.47
7:AE:140:LEU:HB3	7:AE:144:ILE:CD1	2.43	0.47
9:AG:45:ILE:HD12	9:AG:45:ILE:O	2.14	0.47
14:AL:46:ILE:O	14:AL:47:ALA:CB	2.62	0.47
14:AL:55:ILE:HG23	14:AL:76:PHE:CE1	2.48	0.47
14:AL:165:LYS:CB	48:A2:505:C:OP2	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AO:54:TYR:HE2	17:AO:145:VAL:HG11	1.79	0.47
17:AO:185:VAL:O	17:AO:186:GLU:HB2	2.13	0.47
18:AP:139:TYR:CZ	48:A2:3830:G:C4'	2.97	0.47
21:AS:8:ARG:HD3	21:AS:66:GLN:HE22	1.79	0.47
27:AY:57:VAL:O	27:AY:64:GLY:HA2	2.14	0.47
29:Aa:37:GLY:O	29:Aa:42:ARG:HA	2.13	0.47
29:Aa:89:ASN:O	29:Aa:92:LYS:HB3	2.14	0.47
30:Ab:57:MET:CB	48:A2:1794:C:H4'	2.44	0.47
34:Af:54:LYS:HE2	48:A2:437:G:C4'	2.44	0.47
36:Ah:89:ARG:HA	36:Ah:92:ARG:HE	1.78	0.47
38:Aj:47:TYR:HB3	38:Aj:49:TRP:CD1	2.49	0.47
45:Aq:31:LYS:O	45:Aq:32:ILE:C	2.56	0.47
45:Aq:104:ILE:CG1	45:Aq:105:THR:N	2.74	0.47
48:A2:86:U:O4	48:A2:97:G:C4	2.67	0.47
48:A2:133:C:C5'	48:A2:133:C:C6	2.87	0.47
48:A2:722:G:O5'	48:A2:722:G:H8	1.98	0.47
48:A2:949:C:H3'	48:A2:950:G:C5'	2.43	0.47
48:A2:1059:C:H2'	48:A2:1060:C:O4'	2.14	0.47
48:A2:1255:C:C6	48:A2:1256:G:O6	2.66	0.47
48:A2:2548:G:H2'	48:A2:2549:U:O4'	2.13	0.47
48:A2:3612:U:H5'	48:A2:3613:A:H5"	1.95	0.47
48:A2:4009:G:H5'	48:A2:4020:A:H5'	1.96	0.47
49:B1:13:C:H4'	49:B1:1355:C:O2	2.14	0.47
49:B1:494:C:H5"	54:BE:57:THR:HG1	1.79	0.47
49:B1:535:G:O2'	49:B1:536:A:OP2	2.32	0.47
49:B1:640:A:H4'	59:BJ:20:PHE:CE2	2.44	0.47
49:B1:660:C:C4	49:B1:661:U:C4	3.02	0.47
49:B1:920:A:OP1	72:BW:57:ARG:HD3	2.14	0.47
49:B1:1105:G:C2	49:B1:1106:C:N1	2.82	0.47
49:B1:1130:G:H4'	63:BN:10:GLY:CA	2.43	0.47
49:B1:1256:G:C2	79:Bd:30:LEU:CB	2.98	0.47
49:B1:1307:U:O5'	49:B1:1307:U:H6	1.96	0.47
49:B1:1599:U:O4	55:BF:165:ASN:C	2.58	0.47
49:B1:1622:U:O2	49:B1:1622:U:C2'	2.59	0.47
49:B1:1675:A:H4'	49:B1:1675:A:OP1	2.13	0.47
50:BA:210:ILE:HA	50:BA:213:GLU:OE1	2.14	0.47
51:BB:97:LEU:HD12	51:BB:228:LEU:HD21	1.96	0.47
55:BF:98:GLU:HG3	75:BZ:100:VAL:HG11	1.96	0.47
64:BO:142:ARG:NH1	64:BO:142:ARG:CA	2.75	0.47
65:BP:118:GLU:HB3	68:BS:119:ALA:CB	2.43	0.47
68:BS:45:LEU:HD12	68:BS:50:ILE:CD1	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:BT:130:ASP:C	69:BT:132:ASP:H	2.21	0.47
83:Bv:44:G:C2'	83:Bv:45:U:H5'	2.43	0.47
1:A3:67:U:OP2	36:Ah:7:ARG:NH2	2.47	0.47
1:A3:118:C:O2'	1:A3:119:C:H5'	2.15	0.47
3:AA:117:GLU:HB2	3:AA:162:ASN:HB2	1.96	0.47
4:AB:84:MET:SD	4:AB:166:THR:HG22	2.55	0.47
5:AC:211:TYR:CE1	5:AC:230:LEU:N	2.83	0.47
5:AC:287:THR:HG23	5:AC:287:THR:O	2.12	0.47
5:AC:318:PRO:CB	8:AF:155:TYR:HB3	2.43	0.47
7:AE:103:GLY:O	7:AE:104:THR:HG22	2.14	0.47
7:AE:233:PHE:CE2	48:A2:446:A:C2	3.02	0.47
8:AF:161:LYS:CA	8:AF:162:ILE:CD1	2.86	0.47
10:AH:42:ASN:O	48:A2:4725:U:C2	2.67	0.47
12:AJ:15:LEU:CD1	12:AJ:165:TRP:HB2	2.44	0.47
13:AK:69:LEU:CG	13:AK:70:GLU:H	2.25	0.47
15:AM:56:GLN:HG2	15:AM:91:TRP:HH2	1.79	0.47
16:AN:195:ARG:HD2	48:A2:98:A:H5'	1.96	0.47
17:AO:157:GLU:O	17:AO:160:ARG:HG2	2.14	0.47
19:AQ:79:THR:OG1	19:AQ:136:THR:HG22	2.15	0.47
21:AS:83:ARG:HG2	21:AS:83:ARG:O	2.13	0.47
21:AS:90:THR:HG21	22:AT:156:TYR:CE1	2.47	0.47
22:AT:5:LYS:HG2	22:AT:9:ARG:HD3	1.96	0.47
29:Aa:9:ARG:HD3	48:A2:2323:U:H3	1.78	0.47
29:Aa:42:ARG:NH1	48:A2:4338:A:H1'	2.29	0.47
35:Ag:59:VAL:HB	35:Ag:63:VAL:CG1	2.44	0.47
36:Ah:66:LYS:HD3	36:Ah:66:LYS:HA	1.57	0.47
47:Au:7:ARG:CD	47:Au:180:VAL:CG1	2.92	0.47
47:Au:43:PRO:HB2	47:Au:161:LYS:HA	1.96	0.47
48:A2:945:G:O6	48:A2:946:G:C6	2.67	0.47
48:A2:959:C:O3'	48:A2:960:G:H8	1.97	0.47
48:A2:1337:A:H2'	48:A2:1484:G:H1	1.79	0.47
48:A2:1996:U:O5'	48:A2:1996:U:H6	1.98	0.47
48:A2:3608:U:O2'	48:A2:3609:G:H5'	2.13	0.47
49:B1:182:C:C2'	49:B1:183:G:H1'	2.35	0.47
49:B1:187:G:H2'	49:B1:188:C:C6	2.50	0.47
49:B1:749:U:O2	49:B1:749:U:C2'	2.62	0.47
49:B1:821:G:O6	59:BJ:150:ARG:CG	2.61	0.47
49:B1:1228:A:H2'	49:B1:1229:G:C8	2.49	0.47
49:B1:1451:G:OP2	67:BR:44:LYS:CE	2.62	0.47
49:B1:1751:C:O2	49:B1:1751:C:H2'	2.14	0.47
50:BA:37:TYR:N	50:BA:37:TYR:HD1	2.12	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BA:42:LYS:NZ	50:BA:46:ILE:CG2	2.73	0.47
52:BC:60:TRP:HE3	52:BC:61:MET:C	2.23	0.47
58:BI:62:VAL:HB	58:BI:75:LYS:HE2	1.95	0.47
59:BJ:40:LYS:HZ3	80:Be:34:ARG:HH12	1.62	0.47
59:BJ:111:GLN:HG3	59:BJ:112:THR:N	2.29	0.47
59:BJ:129:LEU:HB3	59:BJ:135:ILE:CD1	2.44	0.47
59:BJ:135:ILE:O	59:BJ:141:VAL:HG13	2.14	0.47
73:BX:47:ALA:O	73:BX:101:LEU:HD12	2.13	0.47
78:Bc:14:VAL:HG13	78:Bc:30:VAL:HG13	1.96	0.47
83:Bv:72:C:N4	83:Bv:73:A:N6	2.62	0.47
83:Bw:40:C:H6	83:Bw:40:C:C5'	2.23	0.47
4:AB:56:ILE:HG21	4:AB:365:LEU:CD2	2.44	0.47
4:AB:335:GLY:CA	48:A2:4636:C:H4'	2.45	0.47
4:AB:385:LYS:HE3	4:AB:389:MET:SD	2.54	0.47
5:AC:76:ILE:CG2	5:AC:91:ALA:HB3	2.44	0.47
5:AC:219:LYS:HZ2	48:A2:220:G:H8	1.56	0.47
7:AE:129:GLY:O	7:AE:131:LYS:HG3	2.14	0.47
9:AG:69:ILE:HG23	9:AG:73:ARG:NH1	2.28	0.47
13:AK:25:PRO:CD	13:AK:92:LYS:CB	2.92	0.47
13:AK:32:ALA:N	13:AK:85:ASN:CB	2.72	0.47
14:AL:126:LEU:HD11	14:AL:135:LYS:HB2	1.96	0.47
14:AL:171:GLU:HB3	14:AL:172:GLU:CD	2.39	0.47
20:AR:136:ARG:HH12	48:A2:2874:A:H5"	1.80	0.47
27:AY:4:ASN:HD22	27:AY:4:ASN:N	2.12	0.47
31:Ac:21:VAL:HG21	31:Ac:104:ILE:HD11	1.97	0.47
34:Af:42:TYR:O	34:Af:43:LEU:C	2.58	0.47
36:Ah:88:THR:CG2	36:Ah:91:MET:SD	2.98	0.47
37:Ai:26:HIS:NE2	48:A2:270:C:O2	2.38	0.47
39:Ak:54:GLU:CD	39:Ak:57:LYS:HE3	2.39	0.47
41:Am:125:LYS:HG2	48:A2:4437:G:OP1	2.15	0.47
43:Ao:45:GLN:NE2	43:Ao:52:THR:OG1	2.48	0.47
43:Ao:45:GLN:CA	43:Ao:52:THR:HG21	2.44	0.47
45:Aq:77:ALA:HB1	45:Aq:81:ILE:CG1	2.45	0.47
45:Aq:108:GLU:HA	45:Aq:112:ILE:CG1	2.44	0.47
48:A2:132:G:C2	48:A2:132:G:OP2	2.68	0.47
48:A2:1743:G:N1	48:A2:1744:C:N3	2.63	0.47
48:A2:1850:G:H4'	48:A2:1851:C:OP2	2.15	0.47
48:A2:2445:G:H8	48:A2:2445:G:O5'	1.97	0.47
48:A2:3796:A:O2'	48:A2:3797:C:H5'	2.12	0.47
48:A2:4839:U:OP1	48:A2:4840:U:O5'	2.32	0.47
48:A2:4859:G:O2'	48:A2:4860:C:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:4873:G:C5	48:A2:4874:G:N7	2.82	0.47
48:A2:4982:C:H4'	48:A2:4983:C:O4'	2.14	0.47
49:B1:389:A:H1'	58:BI:86:SER:O	2.14	0.47
49:B1:872:A:N7	49:B1:874:G:N1	2.62	0.47
49:B1:1278:A:C2	49:B1:1320:G:C2	3.02	0.47
49:B1:1315:U:H5'	60:BK:1:MET:CE	2.44	0.47
49:B1:1336:C:H2'	49:B1:1337:C:O4'	2.14	0.47
51:BB:66:VAL:HB	51:BB:85:LYS:HE2	1.97	0.47
55:BF:103:LEU:CD2	55:BF:103:LEU:C	2.87	0.47
59:BJ:115:PHE:HB2	59:BJ:123:ILE:HD13	1.97	0.47
60:BK:32:HIS:N	60:BK:33:PRO:HD3	2.30	0.47
66:BQ:11:GLN:NE2	66:BQ:24:HIS:CG	2.71	0.47
68:BS:74:PRO:HB3	68:BS:84:LEU:HD21	1.93	0.47
69:BT:130:ASP:O	69:BT:132:ASP:N	2.48	0.47
70:BU:66:ARG:HH12	70:BU:75:LYS:HG2	1.80	0.47
73:BX:56:GLY:HA3	80:Be:6:LEU:HD21	1.97	0.47
74:BY:43:LYS:O	74:BY:47:MET:HE2	2.15	0.47
82:Bg:32:LEU:HD11	82:Bg:40:ILE:HG22	1.96	0.47
83:Bv:73:A:H8	83:Bv:73:A:O5'	1.97	0.47
83:Bw:58:A:H3'	83:Bw:58:A:H8	1.78	0.47
1:A3:154:G:H5"	9:AG:89:ARG:CD	2.45	0.47
4:AB:17:LEU:HD13	4:AB:264:PHE:CD2	2.48	0.47
4:AB:76:VAL:HG13	4:AB:333:LEU:O	2.14	0.47
4:AB:94:GLU:HA	4:AB:158:GLN:NE2	2.30	0.47
5:AC:77:PRO:N	5:AC:91:ALA:HB3	2.29	0.47
7:AE:140:LEU:CB	7:AE:144:ILE:CD1	2.86	0.47
10:AH:7:ASN:HA	10:AH:57:VAL:O	2.15	0.47
16:AN:146:PRO:HA	16:AN:149:GLN:HG3	1.96	0.47
17:AO:74:ARG:CD	17:AO:145:VAL:HG12	2.42	0.47
17:AO:91:LYS:CA	48:A2:426:U:O4	2.52	0.47
19:AQ:147:GLU:CG	19:AQ:150:ARG:HH21	2.28	0.47
19:AQ:156:PRO:HG3	29:Aa:48:TYR:N	2.29	0.47
19:AQ:156:PRO:HG3	29:Aa:47:LYS:C	2.39	0.47
20:AR:149:LYS:O	20:AR:152:LYS:N	2.46	0.47
21:AS:1:MET:HE1	21:AS:7:LEU:CD1	2.40	0.47
21:AS:48:VAL:HG12	21:AS:54:MET:HB2	1.97	0.47
24:AV:121:VAL:O	24:AV:139:ILE:HA	2.15	0.47
28:AZ:59:LYS:O	28:AZ:62:ILE:N	2.45	0.47
28:AZ:88:ASP:OD1	28:AZ:89:ILE:N	2.47	0.47
29:Aa:32:ARG:HD2	48:A2:37:U:H4'	1.96	0.47
30:Ab:27:GLN:CB	48:A2:1444:A:H1'	2.41	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Af:40:GLU:C	34:Af:42:TYR:N	2.73	0.47
35:Ag:5:LEU:HD13	48:A2:2784:C:O2'	2.15	0.47
35:Ag:66:ARG:HE	48:A2:2518:C:H5"	1.78	0.47
38:Aj:3:LYS:HA	48:A2:3613:A:N3	2.30	0.47
39:Ak:25:ILE:HD11	39:Ak:66:VAL:CG1	2.44	0.47
42:An:5:TRP:HA	42:An:5:TRP:CE3	2.49	0.47
45:Aq:104:ILE:CD1	45:Aq:105:THR:H	2.26	0.47
48:A2:2067:G:N2	48:A2:2249:G:N1	2.62	0.47
48:A2:4546:A:C6	48:A2:4681:G:C8	3.02	0.47
48:A2:4591:U:C2'	48:A2:4592:G:H5'	2.44	0.47
48:A2:4727:G:N2	48:A2:4826:G:C2	2.82	0.47
48:A2:4842:G:H2'	48:A2:4843:U:C6	2.49	0.47
49:B1:168:C:O2'	56:BG:133:LEU:C	2.58	0.47
49:B1:316:G:OP2	56:BG:183:ARG:CD	2.59	0.47
49:B1:508:A:C5	49:B1:509:G:H1'	2.49	0.47
49:B1:658:U:C4	73:BX:24:ASP:HB2	2.50	0.47
49:B1:688:U:H2'	57:BH:103:LYS:HD2	1.75	0.47
49:B1:827:A:H5'	59:BJ:8:VAL:CB	2.44	0.47
49:B1:976:G:H2'	49:B1:977:C:H6	1.77	0.47
49:B1:1239:U:H5"	65:BP:124:LYS:HD2	1.96	0.47
49:B1:1347:U:H2'	49:B1:1348:G:C8	2.49	0.47
49:B1:1567:G:C6	68:BS:82:TRP:CG	3.03	0.47
49:B1:1824:A:N3	49:B1:1824:A:C3'	2.77	0.47
55:BF:143:PRO:HA	55:BF:146:ARG:HE	1.79	0.47
56:BG:7:PHE:CD1	56:BG:113:ILE:HG12	2.49	0.47
57:BH:141:GLY:HA2	63:BN:18:TYR:CZ	2.49	0.47
58:BI:78:ILE:HG23	58:BI:102:VAL:HG11	1.96	0.47
64:BO:142:ARG:NH1	64:BO:142:ARG:HA	2.18	0.47
65:BP:30:TYR:CA	65:BP:33:LEU:CD1	2.86	0.47
66:BQ:11:GLN:HE22	66:BQ:24:HIS:CD2	2.28	0.47
66:BQ:42:ILE:N	66:BQ:45:ARG:HH12	2.13	0.47
67:BR:95:ILE:O	67:BR:96:ILE:HG13	2.14	0.47
68:BS:67:VAL:HG12	68:BS:71:MET:CG	2.45	0.47
72:BW:17:ALA:CB	72:BW:25:VAL:HG22	2.44	0.47
72:BW:106:THR:HG22	72:BW:122:GLY:O	2.15	0.47
75:BZ:91:LEU:HD23	75:BZ:96:LEU:HD22	1.96	0.47
82:Bg:237:ASN:CB	82:Bg:287:THR:HA	2.44	0.47
83:Bv:9:A:H2'	83:Bv:11:C:H41	1.80	0.47
4:AB:5:LYS:NZ	48:A2:4418:C:OP2	2.48	0.47
5:AC:54:VAL:HG12	5:AC:56:GLU:H	1.79	0.47
5:AC:94:ASN:OD1	5:AC:101:MET:C	2.57	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:137:VAL:HG22	5:AC:247:GLY:C	2.39	0.47
6:AD:29:ASP:HB2	48:A2:4242:A:C8	2.44	0.47
6:AD:219:TYR:CE2	6:AD:227:ILE:CG2	2.98	0.47
7:AE:156:ARG:O	7:AE:158:ARG:HG2	2.15	0.47
8:AF:184:ILE:CB	8:AF:189:ASP:HB2	2.44	0.47
14:AL:77:SER:HB2	14:AL:102:ARG:HB3	1.95	0.47
16:AN:9:GLU:HG3	37:Ai:44:ILE:HD13	1.96	0.47
16:AN:128:LYS:HE2	16:AN:130:PHE:CZ	2.50	0.47
17:AO:36:VAL:CG1	17:AO:108:ILE:HG12	2.44	0.47
20:AR:123:LEU:O	20:AR:127:VAL:HG23	2.15	0.47
21:AS:159:LEU:HD12	48:A2:1902:C:O2	2.15	0.47
22:AT:4:THR:HG22	22:AT:4:THR:O	2.14	0.47
24:AV:95:PHE:O	25:AW:19:ARG:HA	2.15	0.47
28:AZ:125:GLY:C	28:AZ:128:LYS:NZ	2.73	0.47
39:Ak:37:ARG:NH1	39:Ak:41:TYR:C	2.73	0.47
46:At:66:ARG:HG2	46:At:68:SER:H	1.80	0.47
47:Au:207:LYS:HZ2	47:Au:213:PRO:HD3	1.79	0.47
48:A2:70:A:H5'	48:A2:71:C:N3	2.29	0.47
48:A2:661:G:H8	48:A2:661:G:P	2.37	0.47
48:A2:901:U:C5	48:A2:902:A:C6	3.03	0.47
48:A2:926:G:C2'	48:A2:927:C:OP1	2.63	0.47
48:A2:1060:C:H2'	48:A2:1061:A:C8	2.49	0.47
48:A2:1072:G:C2	48:A2:1190:C:C2	3.02	0.47
48:A2:1192:U:H3'	48:A2:1192:U:OP1	2.14	0.47
48:A2:1409:G:H1'	48:A2:1441:A:N6	2.30	0.47
48:A2:2419:U:C4'	48:A2:2497:G:C2	2.98	0.47
48:A2:2684:G:OP2	48:A2:2684:G:H8	1.98	0.47
48:A2:4641:G:H2'	48:A2:4642:G:C8	2.48	0.47
48:A2:4720:U:H2'	48:A2:4721:C:C6	2.49	0.47
48:A2:4726:A:H61	48:A2:4826:G:N2	2.06	0.47
49:B1:452:G:H2'	49:B1:453:C:C6	2.49	0.47
49:B1:570:C:O2	74:BY:33:ALA:HB1	2.15	0.47
49:B1:693:A:O5'	49:B1:693:A:C8	2.67	0.47
49:B1:866:U:H2'	49:B1:867:G:C5'	2.44	0.47
49:B1:875:A:N6	49:B1:912:C:H42	2.09	0.47
49:B1:988:C:O5'	49:B1:988:C:H6	1.98	0.47
49:B1:1302:G:H21	81:Bf:95:ARG:CZ	2.15	0.47
49:B1:1307:U:C1'	81:Bf:135:HIS:ND1	2.59	0.47
49:B1:1865:C:C5'	76:Ba:87:ARG:NH2	2.75	0.47
50:BA:22:GLY:HA2	50:BA:24:HIS:CE1	2.49	0.47
51:BB:41:ILE:CD1	51:BB:73:ASP:C	2.85	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BF:127:ARG:HG2	55:BF:134:VAL:CG1	2.41	0.47
56:BG:217:MET:HB3	56:BG:221:LYS:CE	2.44	0.47
59:BJ:111:GLN:OE1	59:BJ:127:ARG:HD3	2.14	0.47
59:BJ:169:ARG:HD3	59:BJ:173:VAL:HG21	1.87	0.47
61:BL:11:GLN:CG	61:BL:12:LYS:H	2.27	0.47
64:BO:92:ALA:HA	64:BO:125:LYS:O	2.14	0.47
67:BR:21:TYR:CZ	67:BR:71:ILE:HD13	2.36	0.47
67:BR:97:GLU:CB	67:BR:117:LEU:HG	2.45	0.47
83:Bw:41:C:H2'	83:Bw:42:C:H5'	1.97	0.47
1:A3:41:A:H8	1:A3:41:A:O5'	1.97	0.47
1:A3:146:U:O5'	1:A3:146:U:H6	1.97	0.47
2:A4:3:C:H6	2:A4:3:C:P	2.37	0.47
2:A4:90:A:C1'	11:AI:11:TYR:CE1	2.97	0.47
3:AA:95:GLN:HE21	44:Ap:87:LYS:HZ1	1.61	0.47
3:AA:122:ASP:HB2	3:AA:125:LYS:CE	2.45	0.47
3:AA:177:LYS:HD3	44:Ap:69:TRP:CZ2	2.50	0.47
3:AA:195:CYS:C	3:AA:197:PRO:HD3	2.39	0.47
4:AB:24:ARG:O	4:AB:24:ARG:HD2	2.15	0.47
4:AB:98:GLY:HA2	17:AO:149:TYR:CE1	2.50	0.47
4:AB:103:LYS:HA	48:A2:4686:A:O2'	2.14	0.47
4:AB:378:ARG:HG3	25:AW:32:LEU:HD21	1.96	0.47
5:AC:94:ASN:OD1	5:AC:102:PHE:N	2.48	0.47
5:AC:122:TYR:CE2	5:AC:280:PRO:HB3	2.50	0.47
5:AC:147:VAL:O	46:At:73:PRO:HG2	2.15	0.47
6:AD:12:TYR:CD1	6:AD:13:PHE:CE1	2.86	0.47
6:AD:17:GLN:HG3	22:AT:20:ARG:CD	2.39	0.47
7:AE:103:GLY:C	7:AE:104:THR:CG2	2.88	0.47
7:AE:175:VAL:O	7:AE:186:LEU:C	2.49	0.47
8:AF:164:LYS:C	8:AF:165:LYS:CG	2.86	0.47
8:AF:167:ILE:HG21	8:AF:174:LEU:HD21	1.97	0.47
8:AF:179:LEU:HD23	8:AF:184:ILE:CD1	2.43	0.47
8:AF:223:LYS:HA	8:AF:232:ASP:HB2	1.94	0.47
12:AJ:15:LEU:HD13	12:AJ:165:TRP:HB2	1.96	0.47
12:AJ:33:LEU:O	12:AJ:33:LEU:HD22	2.14	0.47
12:AJ:43:LEU:HD21	12:AJ:115:LEU:HD13	1.97	0.47
13:AK:24:TYR:CD1	13:AK:27:CYS:SG	3.07	0.47
14:AL:20:ARG:HH12	48:A2:50:C:H5'	1.76	0.47
14:AL:80:GLU:CD	14:AL:102:ARG:HH12	2.22	0.47
15:AM:46:ARG:NH2	48:A2:924:U:C5'	2.71	0.47
15:AM:56:GLN:CG	15:AM:91:TRP:HH2	2.28	0.47
15:AM:117:LYS:HG2	48:A2:4838:C:OP2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AN:71:ARG:NH1	16:AN:92:LEU:HD22	2.30	0.47
16:AN:115:VAL:HG22	16:AN:134:LEU:CD2	2.45	0.47
17:AO:127:VAL:HG22	21:AS:158:VAL:HG21	1.96	0.47
18:AP:62:ARG:NH1	48:A2:417:G:OP1	2.48	0.47
19:AQ:12:LYS:HD3	19:AQ:14:ARG:HG3	1.96	0.47
21:AS:85:ASP:OD1	21:AS:90:THR:HA	2.15	0.47
23:AU:34:MET:HE3	23:AU:34:MET:CA	2.44	0.47
24:AV:90:ARG:NH2	24:AV:96:LEU:HD21	2.29	0.47
26:AX:45:THR:OG1	48:A2:4055:A:OP1	2.27	0.47
26:AX:53:ARG:CZ	48:A2:2454:G:N7	2.77	0.47
26:AX:117:TYR:CE2	26:AX:153:ILE:HG21	2.50	0.47
29:Aa:4:ARG:HA	29:Aa:9:ARG:HE	1.80	0.47
29:Aa:42:ARG:NH1	48:A2:4338:A:O2'	2.47	0.47
29:Aa:134:GLU:OE1	29:Aa:138:LYS:HE2	2.15	0.47
37:Ai:56:ARG:CZ	48:A2:4037:U:OP1	2.62	0.47
43:Ao:55:ILE:O	48:A2:4341:A:C4'	2.62	0.47
46:At:84:LYS:HB2	46:At:89:THR:CA	2.44	0.47
47:Au:106:LYS:HE2	47:Au:107:TYR:CE1	2.49	0.47
47:Au:124:LEU:HD13	47:Au:128:LEU:HD11	1.96	0.47
48:A2:89:C:H1'	48:A2:286:G:H4'	1.97	0.47
48:A2:149:U:O2'	48:A2:150:G:N2	2.47	0.47
48:A2:257:G:H2'	48:A2:257:G:N3	2.29	0.47
48:A2:311:A:H8	48:A2:311:A:O5'	1.97	0.47
48:A2:733:G:H8	48:A2:733:G:OP2	1.96	0.47
48:A2:743:G:C6	48:A2:744:C:C4	3.03	0.47
48:A2:927:C:O5'	48:A2:927:C:H6	1.98	0.47
48:A2:962:C:C2'	48:A2:963:G:H5'	2.44	0.47
48:A2:1276:G:O2'	48:A2:1277:A:P	2.72	0.47
48:A2:1355:A:H2'	48:A2:1356:A:O4'	2.14	0.47
48:A2:2061:U:H2'	48:A2:2062:C:C6	2.49	0.47
48:A2:2518:C:O2'	48:A2:2519:C:H5'	2.15	0.47
48:A2:2565:G:O2'	48:A2:2566:A:C8	2.66	0.47
48:A2:2606:C:C2'	48:A2:2607:U:C6	2.88	0.47
48:A2:2609:U:O2'	48:A2:2611:U:H4'	2.13	0.47
48:A2:2841:G:H2'	48:A2:3590:G:O6	2.14	0.47
48:A2:2853:U:O4	48:A2:3663:A:N6	2.48	0.47
48:A2:3780:G:O5'	48:A2:3780:G:H8	1.97	0.47
48:A2:4602:C:C2	48:A2:4622:G:N2	2.83	0.47
49:B1:286:U:HO2'	49:B1:287:U:P	2.28	0.47
49:B1:524:U:H3'	80:Be:29:THR:OG1	2.14	0.47
49:B1:527:C:H5"	59:BJ:125:HIS:CA	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:546:G:O4'	49:B1:547:G:OP2	2.32	0.47
49:B1:633:C:C1'	80:Be:12:VAL:HG12	2.33	0.47
49:B1:663:C:OP2	73:BX:3:LYS:NZ	2.48	0.47
49:B1:875:A:C2	49:B1:912:C:C4	2.93	0.47
49:B1:918:U:P	63:BN:64:ARG:HH22	2.38	0.47
49:B1:1017:U:OP1	63:BN:62:GLN:HA	2.15	0.47
49:B1:1117:C:O4'	49:B1:1117:C:O2	2.32	0.47
49:B1:1287:A:OP2	49:B1:1312:G:C4	2.68	0.47
49:B1:1287:A:H62	81:Bf:101:ALA:N	2.13	0.47
49:B1:1308:U:H4'	81:Bf:134:SER:N	2.30	0.47
49:B1:1315:U:C5'	60:BK:1:MET:HE2	2.44	0.47
49:B1:1585:U:H3'	49:B1:1586:U:C5'	2.45	0.47
49:B1:1624:U:C5	49:B1:1625:U:C5	3.03	0.47
49:B1:1865:C:O2	76:Ba:7:ASN:HB2	2.15	0.47
49:B1:1865:C:H5'	49:B1:1866:A:C2	2.50	0.47
49:B1:1868:U:OP2	76:Ba:39:PHE:HB2	2.15	0.47
50:BA:42:LYS:CE	50:BA:48:ILE:HD13	2.44	0.47
50:BA:106:GLY:O	50:BA:110:ASN:OD1	2.32	0.47
50:BA:169:HIS:HA	50:BA:203:PHE:CE2	2.49	0.47
51:BB:103:MET:SD	51:BB:188:LEU:HD13	2.54	0.47
52:BC:104:ASP:CG	52:BC:130:ILE:HG22	2.39	0.47
52:BC:134:ASN:C	52:BC:134:ASN:ND2	2.73	0.47
53:BD:10:LYS:HE2	70:BU:111:GLU:CD	2.39	0.47
54:BE:103:TYR:H	54:BE:182:MET:HE1	1.78	0.47
54:BE:152:PRO:CG	56:BG:216:ARG:CD	2.91	0.47
55:BF:95:HIS:O	55:BF:99:ILE:CD1	2.62	0.47
57:BH:162:GLN:O	57:BH:166:VAL:HB	2.13	0.47
60:BK:27:VAL:O	60:BK:27:VAL:HG23	2.14	0.47
61:BL:86:ILE:HG13	61:BL:111:VAL:HG13	1.95	0.47
62:BM:128:PHE:O	62:BM:129:LYS:HB2	2.14	0.47
64:BO:20:GLN:HG3	64:BO:21:VAL:N	2.30	0.47
64:BO:141:ARG:HE	76:Ba:22:ARG:HH21	1.58	0.47
64:BO:146:ARG:HG3	64:BO:147:ARG:N	2.30	0.47
65:BP:48:GLY:CA	65:BP:49:LEU:CD2	2.90	0.47
66:BQ:37:ARG:HG2	69:BT:7:LYS:HB3	1.95	0.47
67:BR:5:ARG:NE	67:BR:53:TYR:CB	2.70	0.47
67:BR:92:ASP:HB2	67:BR:96:ILE:HD11	1.97	0.47
68:BS:15:VAL:HG12	68:BS:16:LEU:CG	2.44	0.47
68:BS:75:ARG:NH2	68:BS:81:ASP:HB3	2.30	0.47
69:BT:42:HIS:C	69:BT:43:LYS:NZ	2.73	0.47
71:BV:67:ASP:O	71:BV:70:LEU:HG	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:BX:137:LYS:HE2	73:BX:137:LYS:H	1.75	0.47
76:Ba:44:ILE:HG13	76:Ba:45:VAL:N	2.30	0.47
76:Ba:46:GLU:OE1	84:Bx:38:U:O3'	2.31	0.47
79:Bd:39:CYS:CB	79:Bd:41:GLN:H	2.26	0.47
83:Bv:59:U:O5'	83:Bv:59:U:H6	1.97	0.47
1:A3:133:G:H5"	26:AX:67:ARG:O	2.15	0.47
5:AC:52:TYR:CD2	48:A2:344:C:H5'	2.44	0.47
5:AC:72:ALA:HA	48:A2:2329:U:H3	1.80	0.47
5:AC:239:LYS:HZ1	48:A2:1353:G:H22	1.63	0.47
6:AD:275:GLN:HE22	48:A2:1159:C:H1'	1.79	0.47
7:AE:99:ASP:CB	7:AE:104:THR:HA	2.45	0.47
13:AK:14:PHE:CG	48:A2:1941:A:C2	3.03	0.47
14:AL:21:ARG:HG2	16:AN:193:ARG:NH1	2.30	0.47
14:AL:28:GLN:HB3	14:AL:29:PRO:HD3	1.96	0.47
14:AL:54:PRO:HB2	14:AL:56:ARG:CZ	2.45	0.47
14:AL:81:LEU:HD21	14:AL:91:ALA:HB2	1.97	0.47
14:AL:144:LEU:O	14:AL:146:LEU:N	2.46	0.47
19:AQ:37:ARG:O	19:AQ:38:ARG:HG2	2.15	0.47
19:AQ:50:ARG:NE	19:AQ:138:LEU:HD21	2.30	0.47
23:AU:49:VAL:HG12	23:AU:50:ASN:N	2.30	0.47
31:Ac:18:LEU:O	31:Ac:21:VAL:HB	2.15	0.47
34:Af:59:THR:C	34:Af:61:GLY:N	2.73	0.47
36:Ah:103:LYS:HZ3	36:Ah:107:GLN:HB3	1.79	0.47
39:Ak:3:ARG:HB2	39:Ak:43:TYR:HD1	1.79	0.47
47:Au:24:LYS:C	47:Au:26:ARG:NH1	2.73	0.47
48:A2:105:A:C2'	48:A2:106:A:H5'	2.45	0.47
48:A2:111:C:O2'	48:A2:112:C:H5'	2.15	0.47
48:A2:273:A:C2	48:A2:300:A:H5'	2.50	0.47
48:A2:917:G:O2'	48:A2:918:C:OP2	2.29	0.47
48:A2:1559:G:N3	48:A2:1559:G:C2'	2.77	0.47
48:A2:1741:G:C8	48:A2:1741:G:OP2	2.67	0.47
48:A2:4421:U:H2'	48:A2:4422:U:C6	2.49	0.47
48:A2:4931:U:H1'	48:A2:4944:G:C2	2.50	0.47
49:B1:73:C:O3'	49:B1:74:G:O4'	2.32	0.47
49:B1:110:U:N3	49:B1:111:A:N7	2.63	0.47
49:B1:379:C:H5'	58:BI:33:ALA:CB	2.39	0.47
49:B1:561:A:H5'	49:B1:561:A:N9	2.30	0.47
49:B1:581:U:O2	74:BY:33:ALA:C	2.57	0.47
49:B1:641:A:O2'	49:B1:645:C:OP1	2.33	0.47
49:B1:668:A:H5'	49:B1:1198:G:H4'	1.97	0.47
49:B1:1237:C:C4'	65:BP:130:ARG:HG3	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1323:U:H2'	49:B1:1324:G:C8	2.50	0.47
49:B1:1674:G:H5"	55:BF:86:LYS:CD	2.44	0.47
49:B1:1745:A:C2'	56:BG:65:GLN:NE2	2.78	0.47
51:BB:25:PHE:CB	64:BO:88:LEU:HD11	2.45	0.47
51:BB:73:ASP:CG	51:BB:74:LEU:H	2.22	0.47
51:BB:89:GLU:HB3	51:BB:228:LEU:CD2	2.45	0.47
53:BD:23:GLU:OE1	79:Bd:46:TYR:OH	2.32	0.47
53:BD:74:GLN:C	53:BD:76:ARG:N	2.73	0.47
54:BE:84:ALA:HB1	54:BE:101:LEU:CD1	2.45	0.47
56:BG:161:PRO:N	56:BG:171:THR:HG23	2.28	0.47
56:BG:194:LEU:CB	56:BG:198:ARG:NH1	2.74	0.47
59:BJ:149:VAL:HG13	59:BJ:154:GLN:HA	1.97	0.47
60:BK:43:LEU:HD23	60:BK:43:LEU:C	2.40	0.47
64:BO:86:LYS:C	64:BO:88:LEU:N	2.73	0.47
67:BR:21:TYR:CD2	67:BR:71:ILE:HB	2.49	0.47
68:BS:30:ILE:O	68:BS:33:ILE:HD13	2.14	0.47
75:BZ:66:LYS:C	75:BZ:67:LEU:HD12	2.39	0.47
75:BZ:79:ILE:HD13	75:BZ:79:ILE:N	2.27	0.47
75:BZ:87:ALA:O	75:BZ:91:LEU:HD13	2.14	0.47
83:Bv:49:C:H2'	83:Bv:50:U:C6	2.50	0.47
3:AA:90:CYS:CB	3:AA:101:VAL:HG13	2.44	0.47
3:AA:178:PRO:HD3	44:Ap:25:MET:HE3	1.97	0.47
4:AB:10:ARG:HG3	48:A2:4421:U:OP1	2.15	0.47
4:AB:286:LYS:H	4:AB:332:MET:HB3	1.80	0.47
4:AB:312:LYS:NZ	4:AB:380:GLN:OE1	2.36	0.47
5:AC:41:HIS:CE1	5:AC:45:ARG:HD2	2.50	0.47
5:AC:212:ASN:HB3	5:AC:232:VAL:CB	2.43	0.47
6:AD:285:ALA:O	6:AD:286:SER:C	2.57	0.47
7:AE:114:ARG:NE	48:A2:683:U:OP1	2.47	0.47
9:AG:242:LEU:HD22	9:AG:250:ILE:HD11	1.95	0.47
10:AH:105:ILE:O	10:AH:105:ILE:HG13	2.15	0.47
13:AK:29:ILE:CG2	13:AK:81:HIS:CE1	2.97	0.47
13:AK:83:ARG:HB3	13:AK:86:VAL:CG2	2.45	0.47
14:AL:160:VAL:HG23	48:A2:638:G:OP1	2.14	0.47
14:AL:175:ASN:ND2	14:AL:175:ASN:C	2.73	0.47
16:AN:195:ARG:HD2	48:A2:98:A:OP1	2.15	0.47
22:AT:39:ILE:HD12	22:AT:102:ARG:HD3	1.94	0.47
22:AT:125:TRP:CE3	22:AT:127:GLN:CD	2.93	0.47
28:AZ:59:LYS:HE3	48:A2:4111:C:H5'	1.97	0.47
29:Aa:85:GLN:HE22	48:A2:645:C:C2'	2.28	0.47
33:Ae:106:LYS:HD3	48:A2:2284:U:N3	2.22	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Af:11:PHE:HB2	34:Af:101:ILE:CD1	2.45	0.47
38:Aj:46:LYS:NZ	48:A2:23:C:OP2	2.46	0.47
38:Aj:65:ARG:HG3	38:Aj:66:HIS:N	2.30	0.47
45:Aq:16:ARG:HH11	45:Aq:60:VAL:HG23	1.80	0.47
45:Aq:59:THR:O	45:Aq:60:VAL:HB	2.14	0.47
46:At:107:ARG:O	46:At:111:ILE:HG13	2.15	0.47
47:Au:60:ARG:NH2	48:A2:3943:A:OP1	2.48	0.47
48:A2:306:G:H2'	48:A2:307:U:O4'	2.15	0.47
48:A2:492:C:C2	48:A2:493:G:N7	2.82	0.47
48:A2:693:U:H3'	48:A2:694:G:N2	2.26	0.47
48:A2:696:G:H4'	48:A2:1282:G:C4'	2.45	0.47
48:A2:1166:C:H6	48:A2:1166:C:C3'	2.24	0.47
48:A2:1341:G:C4	48:A2:1343:G:O6	2.68	0.47
48:A2:1761:U:H2'	48:A2:1762:A:C8	2.50	0.47
48:A2:1798:C:N4	48:A2:1799:U:C4	2.82	0.47
48:A2:2340:G:O2'	48:A2:2341:U:P	2.73	0.47
48:A2:2619:G:C2'	48:A2:2620:A:H5'	2.44	0.47
48:A2:3695:A:C6	48:A2:3696:G:C6	3.03	0.47
48:A2:4222:U:H2'	48:A2:4223:C:C6	2.50	0.47
48:A2:4603:U:H2'	48:A2:4604:U:C5	2.50	0.47
49:B1:14:C:OP1	52:BC:190:SER:OG	2.25	0.47
49:B1:26:U:H2'	49:B1:27:A:O4'	2.15	0.47
49:B1:296:U:O2'	54:BE:131:VAL:CG2	2.63	0.47
49:B1:454:U:H2'	49:B1:455:A:C8	2.50	0.47
49:B1:621:C:O4'	49:B1:621:C:O2	2.31	0.47
49:B1:691:G:H5"	49:B1:691:G:H8	1.79	0.47
49:B1:802:A:C8	49:B1:802:A:OP2	2.68	0.47
49:B1:836:G:OP1	49:B1:836:G:C6	2.68	0.47
49:B1:1784:G:H2'	49:B1:1785:C:O4'	2.14	0.47
51:BB:70:SER:HB2	51:BB:83:LYS:CA	2.33	0.47
52:BC:210:PRO:HD3	52:BC:236:PHE:CE2	2.49	0.47
52:BC:256:TRP:HZ2	72:BW:68:ARG:HG2	1.77	0.47
53:BD:15:GLY:HA3	79:Bd:50:ILE:HA	1.97	0.47
53:BD:37:VAL:HG12	53:BD:50:ILE:HG12	1.96	0.47
55:BF:167:LYS:HZ2	75:BZ:75:GLU:CD	2.22	0.47
58:BI:84:ASN:H	58:BI:91:VAL:CG2	2.27	0.47
58:BI:85:ALA:HB1	61:BL:10:TYR:CG	2.49	0.47
58:BI:150:ASP:OD1	58:BI:154:LYS:HE3	2.14	0.47
59:BJ:70:ARG:HE	59:BJ:94:LEU:HD11	1.79	0.47
59:BJ:152:ASP:OD1	59:BJ:153:SER:N	2.47	0.47
59:BJ:170:PRO:HG2	59:BJ:171:GLY:H	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:BL:35:ARG:HD3	61:BL:50:ALA:O	2.15	0.47
61:BL:55:TYR:OH	61:BL:116:CYS:HB3	2.15	0.47
65:BP:50:ARG:CA	65:BP:54:HIS:HB2	2.44	0.47
65:BP:126:VAL:HG22	65:BP:127:LYS:N	2.30	0.47
66:BQ:42:ILE:HB	66:BQ:45:ARG:NH1	2.29	0.47
68:BS:67:VAL:HG12	68:BS:71:MET:HG2	1.96	0.47
75:BZ:61:GLU:HG2	75:BZ:61:GLU:O	2.14	0.47
77:Bb:30:SER:HB2	77:Bb:47:PHE:CZ	2.49	0.47
82:Bg:8:ARG:NH1	82:Bg:49:GLU:HA	2.29	0.47
82:Bg:240:CYS:O	82:Bg:248:LEU:HD12	2.15	0.47
1:A3:102:G:O2'	38:Aj:21:ARG:HD2	2.15	0.47
4:AB:285:TYR:CE2	4:AB:334:LYS:HB2	2.50	0.47
5:AC:331:TYR:CE2	5:AC:335:MET:HB2	2.50	0.47
6:AD:9:ASN:CB	6:AD:12:TYR:CD1	2.96	0.47
6:AD:287:PHE:CD2	11:AI:209:TRP:HZ3	2.29	0.47
7:AE:208:ILE:CG1	7:AE:209:PRO:CD	2.93	0.47
8:AF:132:MET:HE1	48:A2:1819:A:H2	1.78	0.47
10:AH:121:LYS:N	48:A2:4574:C:N3	2.57	0.47
12:AJ:11:PRO:O	12:AJ:13:ARG:N	2.48	0.47
14:AL:174:LYS:HG2	14:AL:175:ASN:N	2.29	0.47
16:AN:194:ARG:NH2	48:A2:79:C:OP1	2.47	0.47
17:AO:25:LYS:CG	48:A2:1894:C:H5"	2.45	0.47
17:AO:81:TRP:HB2	17:AO:104:VAL:HG11	1.97	0.47
17:AO:143:HIS:HB2	17:AO:150:GLN:OE1	2.14	0.47
28:AZ:33:THR:OG1	28:AZ:36:ARG:HG2	2.15	0.47
33:Ae:20:PHE:CD2	33:Ae:56:PRO:HD3	2.50	0.47
34:Af:62:GLY:C	34:Af:63:LYS:HG2	2.40	0.47
35:Ag:48:VAL:HG21	35:Ag:86:CYS:SG	2.55	0.47
38:Aj:14:LYS:HB2	38:Aj:14:LYS:NZ	2.29	0.47
44:Ap:4:ARG:HD2	48:A2:1535:A:P	2.55	0.47
45:Aq:19:GLY:O	45:Aq:50:THR:HG21	2.15	0.47
48:A2:226:G:H22	48:A2:235:C:H1'	1.80	0.47
48:A2:338:A:H2'	48:A2:339:C:O4'	2.15	0.47
48:A2:462:U:C6	48:A2:462:U:C5'	2.88	0.47
48:A2:661:G:O5'	48:A2:661:G:C8	2.68	0.47
48:A2:892:C:H2'	48:A2:893:C:C6	2.49	0.47
48:A2:1056:G:H5"	48:A2:1056:G:C8	2.35	0.47
48:A2:2531:G:H2'	48:A2:2532:A:C2	2.49	0.47
48:A2:2853:U:O2	48:A2:3663:A:H2	1.98	0.47
48:A2:3681:G:HO2'	48:A2:3683:A:H8	1.62	0.47
48:A2:3901:U:H2'	48:A2:3902:C:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:4253:G:H5'	48:A2:4255:U:C6	2.50	0.47
49:B1:182:C:O3'	49:B1:183:G:H4'	2.11	0.47
49:B1:402:C:O5'	49:B1:402:C:H6	1.98	0.47
49:B1:687:C:C4	57:BH:118:ARG:NH2	2.83	0.47
49:B1:918:U:O2'	49:B1:919:A:P	2.73	0.47
49:B1:1256:G:C6	79:Bd:40:ARG:HG3	2.48	0.47
49:B1:1621:U:HO2'	68:BS:120:HIS:CE1	2.32	0.47
49:B1:1862:G:O2'	49:B1:1863:A:H3'	2.14	0.47
50:BA:57:LYS:HB3	50:BA:161:ILE:HG12	1.97	0.47
50:BA:201:LEU:CD2	50:BA:201:LEU:H	2.24	0.47
51:BB:39:PHE:HD1	51:BB:75:GLN:HE21	1.63	0.47
53:BD:218:LEU:H	53:BD:219:PRO:HD3	1.80	0.47
54:BE:95:THR:CB	54:BE:97:GLU:CG	2.76	0.47
56:BG:139:SER:HA	56:BG:142:ARG:HD3	1.97	0.47
59:BJ:105:PHE:C	59:BJ:107:GLU:N	2.73	0.47
63:BN:75:LEU:CD1	63:BN:81:ALA:HB2	2.43	0.47
66:BQ:33:LYS:CE	66:BQ:36:GLY:HA3	2.43	0.47
66:BQ:42:ILE:H	66:BQ:45:ARG:HH12	1.63	0.47
67:BR:8:THR:CG2	67:BR:9:VAL:N	2.78	0.47
67:BR:20:TYR:HD1	67:BR:20:TYR:N	2.12	0.47
67:BR:84:TYR:CE2	67:BR:86:PRO:HD3	2.50	0.47
70:BU:66:ARG:HG3	70:BU:68:THR:HG22	1.95	0.47
72:BW:76:SER:HB2	72:BW:77:PRO:HD3	1.97	0.47
74:BY:83:LYS:O	74:BY:91:LEU:CD2	2.63	0.47
74:BY:86:GLU:CB	74:BY:91:LEU:HD11	2.29	0.47
75:BZ:55:TYR:HE1	75:BZ:59:CYS:SG	2.38	0.47
78:Bc:38:THR:HG23	78:Bc:39:SER:N	2.29	0.47
83:Bw:67:C:H5"	83:Bw:67:C:C6	2.49	0.47
1:A3:122:G:H2'	1:A3:123:U:C5'	2.45	0.46
3:AA:205:ASN:O	3:AA:208:GLU:HB2	2.15	0.46
6:AD:286:SER:C	48:A2:1163:C:C5'	2.88	0.46
7:AE:207:LYS:CE	7:AE:208:ILE:N	2.73	0.46
17:AO:167:HIS:NE2	48:A2:4719:C:C6	2.81	0.46
18:AP:139:TYR:CD1	48:A2:3830:G:H4'	2.49	0.46
19:AQ:14:ARG:NH2	48:A2:1676:C:N4	2.62	0.46
24:AV:36:ASN:O	24:AV:65:VAL:HG13	2.15	0.46
27:AY:42:TYR:CD2	27:AY:119:LEU:HD21	2.50	0.46
28:AZ:59:LYS:C	28:AZ:61:LYS:N	2.73	0.46
31:Ac:30:GLY:HA3	48:A2:2654:G:C6	2.47	0.46
32:Ad:84:ILE:HG23	32:Ad:108:TYR:CE1	2.50	0.46
38:Aj:27:TYR:HA	38:Aj:34:CYS:HA	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:Aj:31:LYS:C	38:Aj:33:THR:N	2.72	0.46
45:Aq:18:THR:H	45:Aq:57:ARG:HB2	1.79	0.46
45:Aq:25:THR:CG2	45:Aq:26:SER:H	2.21	0.46
45:Aq:46:ILE:CG1	45:Aq:49:ALA:HB2	2.45	0.46
45:Aq:70:GLN:C	45:Aq:72:GLU:H	2.22	0.46
45:Aq:103:ASN:O	45:Aq:104:ILE:HB	2.14	0.46
46:At:28:GLU:HG2	46:At:29:PRO:CD	2.44	0.46
46:At:60:VAL:CG1	46:At:61:VAL:N	2.78	0.46
47:Au:180:VAL:CG1	47:Au:181:TYR:N	2.78	0.46
47:Au:200:ASN:OD1	47:Au:201:VAL:N	2.48	0.46
48:A2:301:A:H8	48:A2:301:A:O5'	1.97	0.46
48:A2:1255:C:H6	48:A2:1256:G:O6	1.97	0.46
48:A2:1739:U:H3'	48:A2:1740:G:H8	1.81	0.46
48:A2:1848:A:C6	48:A2:1849:A:C6	3.03	0.46
48:A2:1909:C:H4'	48:A2:1910:A:C8	2.50	0.46
48:A2:2456:A:H8	48:A2:2456:A:O5'	1.98	0.46
48:A2:2609:U:H6	48:A2:2609:U:O5'	1.98	0.46
48:A2:4485:A:H5'	48:A2:4486:G:H5'	1.96	0.46
49:B1:571:U:O3'	74:BY:60:PHE:HD2	1.98	0.46
49:B1:861:A:H62	57:BH:107:LYS:CG	2.28	0.46
49:B1:1531:A:H2'	49:B1:1532:C:C6	2.50	0.46
50:BA:8:LEU:HD11	71:BV:39:VAL:CG1	2.44	0.46
50:BA:122:LEU:O	50:BA:144:THR:HA	2.15	0.46
53:BD:46:THR:HB	53:BD:84:VAL:HA	1.96	0.46
54:BE:116:VAL:C	54:BE:118:GLU:N	2.73	0.46
56:BG:217:MET:O	56:BG:221:LYS:HD2	2.15	0.46
58:BI:25:ARG:O	58:BI:28:GLU:HG2	2.15	0.46
58:BI:84:ASN:O	58:BI:85:ALA:HB3	2.14	0.46
59:BJ:161:LEU:O	59:BJ:161:LEU:HG	2.15	0.46
62:BM:61:TYR:OH	62:BM:106:CYS:O	2.33	0.46
64:BO:34:PHE:HB3	64:BO:41:PHE:HB2	1.96	0.46
65:BP:54:HIS:ND1	65:BP:54:HIS:C	2.73	0.46
65:BP:85:ILE:CD1	65:BP:116:LEU:HD23	2.16	0.46
67:BR:21:TYR:HD2	67:BR:71:ILE:HB	1.80	0.46
67:BR:33:ARG:HG3	82:Bg:125:ARG:NH1	2.30	0.46
68:BS:133:GLY:C	68:BS:134:GLN:HG2	2.39	0.46
2:A4:28:C:H2'	2:A4:29:C:H5'	1.97	0.46
4:AB:95:THR:HA	48:A2:4868:A:H5"	1.97	0.46
5:AC:56:GLU:CD	5:AC:57:LEU:N	2.73	0.46
5:AC:212:ASN:HD21	5:AC:255:SER:CB	2.28	0.46
6:AD:233:PRO:O	6:AD:236:MET:HE2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AE:105:ARG:NH1	48:A2:680:C:N1	2.63	0.46
8:AF:51:TYR:HH	48:A2:1220:C:N4	2.12	0.46
8:AF:222:LYS:CG	8:AF:225:THR:HG21	2.45	0.46
11:AI:116:ARG:O	48:A2:4157:G:N2	2.44	0.46
12:AJ:53:ALA:O	48:A2:4220:C:OP1	2.32	0.46
13:AK:52:VAL:C	13:AK:53:VAL:CG2	2.88	0.46
13:AK:57:LYS:HB2	13:AK:60:MET:H	1.80	0.46
13:AK:59:THR:CB	48:A2:1942:G:C5'	2.80	0.46
14:AL:48:PRO:HA	14:AL:147:ALA:O	2.15	0.46
15:AM:4:ARG:C	15:AM:5:ARG:HG2	2.40	0.46
15:AM:113:MET:HG2	15:AM:117:LYS:NZ	2.31	0.46
15:AM:121:ARG:HD3	48:A2:4886:C:N3	2.31	0.46
16:AN:187:SER:OG	48:A2:29:G:OP1	2.32	0.46
19:AQ:158:THR:HB	19:AQ:159:PRO:HD3	1.97	0.46
23:AU:35:ASP:OD2	23:AU:38:ASN:HB2	2.15	0.46
23:AU:115:PHE:N	23:AU:115:PHE:HD1	2.14	0.46
24:AV:70:PRO:HG3	49:B1:1723:G:O3'	2.15	0.46
24:AV:121:VAL:O	24:AV:140:ALA:N	2.36	0.46
24:AV:121:VAL:CG2	24:AV:136:ALA:CB	2.93	0.46
25:AW:73:ARG:HD2	56:BG:35:GLU:CG	2.45	0.46
27:AY:79:VAL:CG1	27:AY:98:GLY:HA2	2.45	0.46
33:Ae:78:LEU:HD23	33:Ae:79:VAL:N	2.30	0.46
36:Ah:31:LEU:C	36:Ah:47:ILE:HD11	2.40	0.46
45:Aq:131:GLU:O	45:Aq:133:LEU:N	2.49	0.46
48:A2:500:C:C2'	48:A2:501:G:H5'	2.45	0.46
48:A2:696:G:H4'	48:A2:1282:G:H4'	1.97	0.46
48:A2:1255:C:OP2	48:A2:1256:G:N1	2.48	0.46
48:A2:3793:U:H2'	48:A2:3794:G:O4'	2.15	0.46
48:A2:3927:G:H2'	48:A2:3935:U:O2	2.14	0.46
48:A2:3935:U:P	48:A2:3935:U:C3'	3.04	0.46
48:A2:5024:U:H2'	48:A2:5025:U:H6	1.79	0.46
49:B1:143:U:O4	56:BG:188:LYS:HD2	2.15	0.46
49:B1:491:C:H4'	49:B1:574:A:C2	2.50	0.46
49:B1:495:U:OP1	54:BE:58:GLY:CA	2.64	0.46
49:B1:522:A:H5'	59:BJ:145:PRO:CD	2.45	0.46
49:B1:641:A:OP1	59:BJ:40:LYS:HD2	2.15	0.46
49:B1:799:U:P	57:BH:110:THR:OG1	2.74	0.46
49:B1:910:G:H2'	49:B1:911:C:H5'	1.96	0.46
49:B1:931:C:OP1	51:BB:159:GLN:CB	2.62	0.46
49:B1:944:A:H5"	64:BO:134:PRO:HB2	1.97	0.46
49:B1:1060:A:C8	49:B1:1062:A:C5	3.02	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1190:A:H2'	49:B1:1191:C:O4'	2.15	0.46
49:B1:1453:C:OP1	67:BR:45:LYS:HA	2.15	0.46
49:B1:1547:C:C1'	49:B1:1670:C:H4'	2.45	0.46
50:BA:111:GLN:N	50:BA:116:PHE:HE2	2.11	0.46
55:BF:40:ALA:O	55:BF:41:VAL:HG12	2.15	0.46
55:BF:154:LEU:O	55:BF:176:GLU:HG2	2.14	0.46
56:BG:64:LYS:HZ3	56:BG:81:HIS:HA	1.81	0.46
60:BK:31:LYS:HG3	60:BK:33:PRO:HD3	1.98	0.46
60:BK:34:GLU:HG2	60:BK:41:PRO:HB3	1.96	0.46
61:BL:82:MET:HE3	61:BL:85:THR:HG21	1.97	0.46
65:BP:49:LEU:O	65:BP:52:LYS:HD3	2.15	0.46
65:BP:51:ARG:CZ	65:BP:51:ARG:CB	2.86	0.46
68:BS:30:ILE:CG2	68:BS:36:VAL:HG11	2.46	0.46
69:BT:27:LYS:HG2	69:BT:110:LEU:HG	1.96	0.46
69:BT:61:ALA:HA	69:BT:64:LEU:CD2	2.45	0.46
71:BV:71:ARG:HD3	77:Bb:4:ALA:HB3	1.96	0.46
81:Bf:126:CYS:CB	81:Bf:144:CYS:HG	2.25	0.46
2:A4:22:A:C2	2:A4:23:A:N7	2.83	0.46
4:AB:47:LEU:CD2	4:AB:346:THR:HG22	2.45	0.46
4:AB:293:ILE:HD13	4:AB:296:GLY:H	1.80	0.46
5:AC:76:ILE:HG23	5:AC:77:PRO:HD2	1.97	0.46
6:AD:226:TYR:CD1	6:AD:231:VAL:CG1	2.99	0.46
7:AE:126:LEU:HD21	48:A2:956:C:N4	2.31	0.46
7:AE:233:PHE:CD1	48:A2:447:G:N1	2.83	0.46
8:AF:17:THR:O	8:AF:21:LYS:N	2.45	0.46
8:AF:98:ILE:HG23	19:AQ:5:ILE:HB	1.95	0.46
10:AH:141:LYS:HG2	10:AH:142:ASP:OD1	2.16	0.46
12:AJ:175:LEU:HD12	12:AJ:175:LEU:HA	1.78	0.46
13:AK:10:LYS:HG2	48:A2:1941:A:N3	2.30	0.46
13:AK:33:ASP:O	13:AK:34:ASN:HB3	2.16	0.46
14:AL:179:PHE:CE2	14:AL:183:ARG:HG2	2.51	0.46
20:AR:60:ARG:NH1	48:A2:2787:G:O2'	2.42	0.46
21:AS:144:GLN:C	21:AS:146:HIS:N	2.73	0.46
22:AT:130:ARG:O	48:A2:1818:A:H4'	2.15	0.46
27:AY:125:SER:OG	48:A2:191:C:H2'	2.15	0.46
28:AZ:36:ARG:CG	28:AZ:36:ARG:NH1	2.74	0.46
29:Aa:55:LYS:HE2	48:A2:92:C:O2	2.14	0.46
29:Aa:115:GLY:O	29:Aa:116:LYS:HB3	2.15	0.46
34:Af:4:ARG:HA	48:A2:4903:G:O6	2.16	0.46
48:A2:117:C:H2'	48:A2:118:C:C6	2.50	0.46
48:A2:227:G:H4'	48:A2:228:U:OP2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:962:C:H2'	48:A2:963:G:H5'	1.96	0.46
48:A2:2550:C:H2'	48:A2:2551:C:O4'	2.15	0.46
48:A2:3922:G:N2	48:A2:3923:A:C2	2.83	0.46
48:A2:3944:G:O6	48:A2:4008:C:N3	2.49	0.46
48:A2:4876:C:H2'	48:A2:4877:G:C8	2.50	0.46
48:A2:4983:C:C2'	48:A2:4984:U:OP1	2.62	0.46
49:B1:305:U:C4	58:BI:55:TYR:CD2	3.02	0.46
49:B1:334:C:H2'	49:B1:335:G:C8	2.50	0.46
49:B1:742:U:C5	49:B1:743:U:C5	3.02	0.46
49:B1:824:C:O2	59:BJ:144:ILE:HG21	2.14	0.46
49:B1:839:C:OP1	49:B1:839:C:C5	2.69	0.46
49:B1:921:G:O4'	77:Bb:21:LYS:HD3	2.14	0.46
49:B1:927:C:O2	77:Bb:51:GLN:NE2	2.48	0.46
49:B1:1046:U:H4'	64:BO:140:THR:CG2	2.31	0.46
49:B1:1522:A:N1	65:BP:128:HIS:CB	2.41	0.46
49:B1:1784:G:C4	49:B1:1785:C:C6	3.04	0.46
50:BA:103:PHE:HZ	50:BA:136:GLU:OE1	1.93	0.46
50:BA:124:VAL:O	50:BA:146:ALA:HA	2.16	0.46
51:BB:175:GLU:OE1	51:BB:175:GLU:N	2.48	0.46
52:BC:104:ASP:CB	52:BC:129:ALA:O	2.62	0.46
52:BC:130:ILE:HD11	52:BC:159:LYS:HA	1.97	0.46
58:BI:84:ASN:ND2	58:BI:90:LEU:HD12	2.30	0.46
62:BM:91:LEU:O	62:BM:104:VAL:CG2	2.63	0.46
63:BN:40:LEU:HD23	63:BN:40:LEU:H	1.80	0.46
63:BN:75:LEU:CD1	63:BN:81:ALA:HA	2.45	0.46
64:BO:103:ASN:O	64:BO:142:ARG:NH2	2.48	0.46
65:BP:85:ILE:CB	65:BP:114:HIS:O	2.62	0.46
66:BQ:84:ILE:O	66:BQ:88:ILE:HG12	2.15	0.46
67:BR:20:TYR:CD2	67:BR:38:ILE:CG2	2.99	0.46
70:BU:26:SER:O	70:BU:27:ARG:C	2.56	0.46
71:BV:37:ALA:HB1	71:BV:46:PHE:CZ	2.49	0.46
78:Bc:14:VAL:HG13	78:Bc:30:VAL:HG11	1.97	0.46
3:AA:68:ARG:NH2	48:A2:4054:G:C6	2.83	0.46
4:AB:173:LEU:HD21	4:AB:342:LYS:CD	2.45	0.46
4:AB:232:THR:O	4:AB:236:HIS:HA	2.15	0.46
4:AB:295:ASP:N	4:AB:296:GLY:C	2.73	0.46
5:AC:54:VAL:HG13	5:AC:105:THR:C	2.38	0.46
6:AD:41:LYS:HD3	22:AT:93:ILE:CD1	2.45	0.46
8:AF:92:VAL:HG11	8:AF:114:LEU:HD11	1.97	0.46
13:AK:32:ALA:C	13:AK:34:ASN:N	2.73	0.46
13:AK:48:ARG:HG2	13:AK:49:GLY:H	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AL:129:ARG:N	14:AL:129:ARG:NH1	2.60	0.46
15:AM:101:LYS:O	15:AM:104:MET:HG3	2.16	0.46
16:AN:68:ARG:NH2	16:AN:123:GLU:HB2	2.31	0.46
16:AN:71:ARG:O	16:AN:92:LEU:HB2	2.15	0.46
17:AO:33:VAL:O	17:AO:102:LEU:HD12	2.16	0.46
17:AO:73:PHE:HB3	17:AO:78:ARG:CB	2.45	0.46
19:AQ:14:ARG:NH2	48:A2:1676:C:H41	2.09	0.46
19:AQ:68:ARG:NH2	48:A2:1483:C:C2'	2.42	0.46
19:AQ:69:LYS:NZ	48:A2:1440:C:H4'	2.30	0.46
19:AQ:148:VAL:HG12	19:AQ:152:PHE:CE2	2.50	0.46
26:AX:117:TYR:HE2	26:AX:153:ILE:CG2	2.29	0.46
31:Ac:52:CYS:SG	31:Ac:57:LYS:HD3	2.56	0.46
39:Ak:54:GLU:CD	39:Ak:57:LYS:NZ	2.73	0.46
45:Aq:16:ARG:O	45:Aq:17:CYS:CB	2.62	0.46
48:A2:514:C:O2'	48:A2:515:C:H5'	2.16	0.46
48:A2:630:G:H2'	48:A2:631:G:C8	2.50	0.46
48:A2:1979:A:N3	48:A2:2000:C:O2'	2.47	0.46
49:B1:3:C:O5'	49:B1:3:C:H6	1.98	0.46
49:B1:873:G:N7	61:BL:153:LYS:HG3	2.31	0.46
49:B1:1047:C:C5'	64:BO:142:ARG:O	2.63	0.46
49:B1:1256:G:N2	79:Bd:40:ARG:CD	2.78	0.46
49:B1:1438:A:H5"	49:B1:1439:A:OP2	2.15	0.46
50:BA:74:VAL:HG22	50:BA:121:LEU:HB3	1.98	0.46
50:BA:201:LEU:HD22	67:BR:85:VAL:HG22	1.86	0.46
50:BA:202:TYR:HD1	50:BA:202:TYR:H	1.62	0.46
52:BC:177:PRO:HG2	71:BV:9:VAL:HG11	1.97	0.46
52:BC:251:LEU:HB3	72:BW:68:ARG:HD2	1.98	0.46
55:BF:92:ILE:C	55:BF:94:LYS:N	2.73	0.46
55:BF:103:LEU:HB2	75:BZ:67:LEU:CD2	2.45	0.46
55:BF:107:ASN:H	55:BF:107:ASN:ND2	2.13	0.46
57:BH:117:PRO:HB2	57:BH:120:ARG:CG	2.45	0.46
59:BJ:149:VAL:CG1	59:BJ:154:GLN:HA	2.46	0.46
63:BN:30:SER:OG	63:BN:31:ASP:N	2.48	0.46
67:BR:34:VAL:O	67:BR:38:ILE:HG12	2.16	0.46
69:BT:38:LYS:HD3	69:BT:99:VAL:HG13	1.97	0.46
75:BZ:63:PRO:HB3	75:BZ:111:ARG:CD	2.44	0.46
75:BZ:70:PRO:HD3	75:BZ:107:VAL:HB	1.97	0.46
1:A3:15:G:H1'	48:A2:414:A:H61	1.81	0.46
2:A4:22:A:C2	2:A4:23:A:C4	3.04	0.46
4:AB:174:ARG:O	4:AB:175:GLN:C	2.59	0.46
4:AB:216:MET:SD	4:AB:281:ASN:HB3	2.56	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AB:244:THR:CA	48:A2:4487:C:O2'	2.62	0.46
7:AE:211:HIS:ND1	7:AE:211:HIS:C	2.73	0.46
7:AE:233:PHE:O	7:AE:235:THR:N	2.47	0.46
8:AF:19:LYS:HD2	8:AF:19:LYS:C	2.40	0.46
8:AF:219:GLY:O	8:AF:220:MET:HG3	2.14	0.46
10:AH:111:LEU:CD1	10:AH:112:VAL:H	2.28	0.46
11:AI:36:LEU:HD13	11:AI:73:ASN:HB2	1.97	0.46
13:AK:54:LEU:HA	13:AK:54:LEU:HD13	1.80	0.46
25:AW:109:ILE:O	25:AW:113:LYS:CD	2.63	0.46
34:Af:100:ARG:HD2	48:A2:4714:U:OP2	2.16	0.46
35:Ag:21:ARG:CG	48:A2:2666:U:O2	2.63	0.46
46:At:72:LYS:O	46:At:76:SER:HB2	2.15	0.46
46:At:86:ALA:HA	46:At:89:THR:CG2	2.46	0.46
48:A2:444:G:OP2	48:A2:444:G:C8	2.68	0.46
48:A2:737:A:O5'	48:A2:737:A:H2'	2.16	0.46
48:A2:1227:G:C4'	48:A2:1251:G:H1'	2.46	0.46
48:A2:1389:G:O2'	48:A2:1390:C:OP1	2.29	0.46
48:A2:3888:A:C2'	48:A2:3889:G:H5"	2.44	0.46
48:A2:4727:G:N2	48:A2:4826:G:N3	2.64	0.46
49:B1:96:C:O2	49:B1:96:C:O4'	2.34	0.46
49:B1:538:U:H2'	49:B1:539:C:C6	2.50	0.46
49:B1:582:U:C5'	74:BY:32:LYS:N	2.79	0.46
49:B1:874:G:N7	49:B1:875:A:C5	2.83	0.46
49:B1:1265:A:N3	49:B1:1265:A:C2'	2.78	0.46
49:B1:1314:U:C2	60:BK:2:LEU:N	2.83	0.46
49:B1:1377:U:C4	50:BA:102:ARG:CZ	2.98	0.46
49:B1:1415:C:O4'	69:BT:128:GLN:HG3	2.16	0.46
49:B1:1442:U:C4	49:B1:1443:C:N4	2.83	0.46
50:BA:7:VAL:HG11	71:BV:42:VAL:CA	2.32	0.46
50:BA:37:TYR:N	50:BA:37:TYR:CD1	2.82	0.46
51:BB:28:LYS:HG2	51:BB:50:THR:HA	1.98	0.46
51:BB:145:LYS:HE2	51:BB:152:LYS:O	2.15	0.46
51:BB:180:ASP:OD1	51:BB:182:LYS:N	2.48	0.46
52:BC:250:TYR:HE1	72:BW:99:PHE:CE2	2.34	0.46
53:BD:96:LEU:HD11	53:BD:190:LEU:HD22	1.97	0.46
54:BE:246:LEU:O	54:BE:250:GLU:HB2	2.15	0.46
55:BF:61:PHE:CZ	78:Bc:51:ARG:CG	2.97	0.46
56:BG:58:LYS:N	56:BG:107:SER:CB	2.58	0.46
56:BG:164:LYS:O	56:BG:165:GLU:CB	2.64	0.46
56:BG:179:LEU:O	56:BG:179:LEU:HG	2.15	0.46
56:BG:216:ARG:HH21	56:BG:219:GLU:CB	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:BN:75:LEU:HD11	63:BN:80:LEU:C	2.40	0.46
65:BP:48:GLY:O	65:BP:49:LEU:HD23	2.14	0.46
65:BP:60:LEU:HG	65:BP:89:MET:HG2	1.97	0.46
65:BP:130:ARG:H	65:BP:131:PRO:HD3	1.81	0.46
66:BQ:42:ILE:HB	66:BQ:48:GLN:HB2	1.97	0.46
66:BQ:42:ILE:HB	66:BQ:45:ARG:HH12	1.81	0.46
66:BQ:62:ARG:NH1	66:BQ:108:ILE:HD11	2.30	0.46
66:BQ:108:ILE:CG2	66:BQ:109:LYS:N	2.79	0.46
67:BR:61:ILE:HG12	67:BR:66:VAL:CG2	2.33	0.46
68:BS:74:PRO:HG2	68:BS:75:ARG:HG2	1.97	0.46
73:BX:139:GLU:O	73:BX:140:ARG:CG	2.63	0.46
74:BY:96:LEU:H	74:BY:96:LEU:CD1	2.28	0.46
75:BZ:65:TYR:HE2	75:BZ:76:ARG:CB	2.29	0.46
75:BZ:76:ARG:CB	75:BZ:77:LEU:HD23	2.46	0.46
83:Bw:58:A:H1'	83:Bw:60:U:O4	2.16	0.46
84:Bx:39:U:O2	84:Bx:39:U:C3'	2.63	0.46
1:A3:53:G:H5"	40:Al:19:GLN:HE22	1.81	0.46
1:A3:154:G:H4'	9:AG:189:ARG:NH1	2.30	0.46
1:A3:157:U:C2	48:A2:1:C:C4	3.03	0.46
3:AA:226:ARG:NH2	48:A2:4144:G:C5'	2.74	0.46
5:AC:71:ARG:CZ	85:By:14:UNK:O	2.63	0.46
5:AC:165:LYS:HD2	48:A2:219:C:OP2	2.16	0.46
5:AC:212:ASN:CG	5:AC:255:SER:OG	2.58	0.46
5:AC:328:LEU:HD22	8:AF:187:MET:HE3	1.98	0.46
6:AD:15:ARG:O	6:AD:17:GLN:OE1	2.33	0.46
6:AD:33:ARG:CZ	6:AD:37:VAL:HG21	2.45	0.46
7:AE:98:GLY:O	48:A2:679:G:C8	2.68	0.46
7:AE:223:ARG:CD	48:A2:447:G:H5'	2.45	0.46
9:AG:77:PRO:HA	9:AG:237:TRP:CZ3	2.51	0.46
9:AG:110:LYS:HZ1	9:AG:113:ARG:NH2	2.13	0.46
9:AG:150:LYS:HG3	9:AG:177:MET:HE3	1.97	0.46
10:AH:105:ILE:HB	10:AH:111:LEU:O	2.15	0.46
12:AJ:82:ILE:HG22	12:AJ:130:PHE:HE2	1.81	0.46
12:AJ:99:PHE:HB3	12:AJ:159:LYS:CD	2.46	0.46
13:AK:84:GLY:HA2	48:A2:2002:G:O2'	2.16	0.46
18:AP:74:LYS:HE3	48:A2:4940:A:OP1	2.16	0.46
19:AQ:63:LEU:HD22	19:AQ:63:LEU:O	2.16	0.46
21:AS:43:ARG:HD2	21:AS:47:PHE:CE2	2.50	0.46
26:AX:56:ARG:CZ	26:AX:62:ARG:NH2	2.75	0.46
27:AY:66:GLN:C	27:AY:68:GLY:N	2.73	0.46
30:Ab:54:LEU:HD21	48:A2:1809:C:O2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Ac:45:LEU:C	31:Ac:45:LEU:HD13	2.41	0.46
33:Ae:2:ALA:C	33:Ae:4:LEU:N	2.73	0.46
35:Ag:45:ALA:HB2	35:Ag:82:MET:HA	1.97	0.46
43:Ao:106:PHE:CE2	83:Bv:19:G:C6	3.03	0.46
45:Aq:22:VAL:CA	45:Aq:46:ILE:HG21	2.35	0.46
45:Aq:23:GLY:N	45:Aq:46:ILE:CG1	2.78	0.46
48:A2:171:C:H2'	48:A2:172:C:H6	1.79	0.46
48:A2:1164:C:H42	48:A2:1167:A:C2'	2.26	0.46
48:A2:1224:C:C5'	48:A2:1225:G:N2	2.71	0.46
48:A2:1620:A:H2'	48:A2:1620:A:OP1	2.15	0.46
48:A2:2505:C:O5'	48:A2:2505:C:H6	1.98	0.46
48:A2:4033:U:O2'	48:A2:4034:C:C5	2.66	0.46
48:A2:4213:A:N7	48:A2:4214:C:N4	2.63	0.46
48:A2:4926:A:C6	48:A2:4927:C:C4	3.04	0.46
49:B1:298:G:OP1	54:BE:134:LYS:N	2.49	0.46
49:B1:750:C:O2'	49:B1:751:G:H1'	2.15	0.46
49:B1:861:A:N3	57:BH:106:ARG:HD2	2.31	0.46
49:B1:881:G:C8	49:B1:881:G:H5"	2.51	0.46
49:B1:931:C:H2'	49:B1:932:G:C8	2.50	0.46
49:B1:1219:C:O4'	78:Bc:24:GLN:NE2	2.47	0.46
49:B1:1453:C:O2	67:BR:28:PHE:CE1	2.68	0.46
49:B1:1614:A:OP2	65:BP:39:ALA:HB2	2.15	0.46
49:B1:1750:C:O2	49:B1:1750:C:H2'	2.16	0.46
50:BA:111:GLN:HG2	50:BA:116:PHE:CE2	2.51	0.46
52:BC:68:ARG:HD2	52:BC:276:THR:HB	1.97	0.46
53:BD:212:GLU:HB3	53:BD:213:PRO:HD2	1.96	0.46
54:BE:124:CYS:HB2	54:BE:141:THR:HG21	1.96	0.46
54:BE:181:CYS:HA	54:BE:228:ILE:H	1.81	0.46
55:BF:87:LEU:HD22	66:BQ:46:THR:OG1	2.16	0.46
59:BJ:87:LEU:CD2	59:BJ:96:TYR:CD2	2.94	0.46
66:BQ:62:ARG:HG2	66:BQ:92:LEU:HD11	1.93	0.46
66:BQ:86:GLN:HE22	66:BQ:122:ALA:HB2	1.81	0.46
69:BT:70:ALA:O	69:BT:121:ARG:HG2	2.16	0.46
70:BU:32:LEU:O	70:BU:35:VAL:HG12	2.16	0.46
70:BU:66:ARG:O	70:BU:67:LYS:HB2	2.16	0.46
78:Bc:68:LEU:HD11	84:Bx:38:U:C6	2.50	0.46
80:Be:18:LYS:O	80:Be:18:LYS:HG2	2.16	0.46
81:Bf:104:LYS:HE2	81:Bf:106:TYR:O	2.15	0.46
1:A3:32:C:N4	1:A3:33:G:C6	2.84	0.46
5:AC:36:ILE:HD12	5:AC:122:TYR:CE1	2.50	0.46
6:AD:41:LYS:N	6:AD:41:LYS:HD2	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AD:283:LYS:HD3	11:AI:206:LEU:HD22	1.97	0.46
7:AE:123:ARG:NH2	7:AE:126:LEU:HD23	2.21	0.46
7:AE:207:LYS:HE2	7:AE:208:ILE:N	2.30	0.46
7:AE:210:LYS:H	7:AE:210:LYS:CD	2.05	0.46
8:AF:51:TYR:CD1	48:A2:1220:C:C5	2.97	0.46
8:AF:69:ILE:HG21	8:AF:73:ARG:NH2	2.31	0.46
8:AF:241:ASN:HA	8:AF:244:ILE:HG22	1.98	0.46
11:AI:31:ILE:HG22	11:AI:66:GLU:OE1	2.15	0.46
13:AK:87:GLY:O	13:AK:88:PHE:O	2.33	0.46
14:AL:9:VAL:HG23	29:Aa:49:HIS:CE1	2.49	0.46
14:AL:61:CYS:HA	14:AL:62:PRO:HD3	1.83	0.46
14:AL:163:LYS:HD2	14:AL:165:LYS:NZ	2.31	0.46
16:AN:8:GLN:O	16:AN:12:ARG:HG3	2.16	0.46
16:AN:48:ALA:O	16:AN:53:TYR:HB3	2.15	0.46
20:AR:57:VAL:HG22	20:AR:59:SER:H	1.81	0.46
21:AS:7:LEU:HD21	21:AS:107:THR:HA	1.95	0.46
28:AZ:60:LYS:NZ	28:AZ:60:LYS:CB	2.79	0.46
28:AZ:70:SER:OG	28:AZ:115:LYS:CB	2.59	0.46
30:Ab:32:LEU:HD11	30:Ab:40:LEU:HD13	1.98	0.46
30:Ab:45:PHE:HB3	48:A2:1797:G:C6	2.51	0.46
32:Ad:29:ILE:CD1	32:Ad:84:ILE:HD12	2.46	0.46
33:Ae:8:VAL:CG2	48:A2:693:U:C4’	2.90	0.46
40:Al:12:PHE:CZ	40:Al:16:LYS:HE2	2.50	0.46
45:Aq:74:VAL:O	45:Aq:75:PRO:CG	2.60	0.46
48:A2:512:G:O6	48:A2:513:C:N4	2.49	0.46
48:A2:1755:U:C2	48:A2:1756:C:C5	3.04	0.46
48:A2:2457:C:N4	48:A2:2458:G:O6	2.48	0.46
48:A2:2532:A:OP1	48:A2:2532:A:N3	2.48	0.46
48:A2:4546:A:C2’	48:A2:4547:U:C5’	2.93	0.46
49:B1:12:U:H2’	49:B1:13:C:C6	2.51	0.46
49:B1:72:C:O2’	49:B1:73:C:H5”	2.15	0.46
49:B1:77:A:H1’	56:BG:176:ILE:HG13	1.98	0.46
49:B1:560:A:H5’	59:BJ:171:GLY:C	2.36	0.46
49:B1:658:U:H4’	73:BX:17:ARG:NH2	2.30	0.46
49:B1:836:G:OP1	49:B1:836:G:N1	2.49	0.46
49:B1:926:A:H5”	63:BN:90:HIS:CG	2.51	0.46
49:B1:1266:C:O5’	49:B1:1266:C:H6	1.98	0.46
49:B1:1380:C:N4	49:B1:1381:G:O6	2.49	0.46
49:B1:1444:U:O5’	49:B1:1444:U:C6	2.68	0.46
49:B1:1547:C:O2’	49:B1:1670:C:H5’	2.15	0.46
51:BB:49:VAL:HG22	51:BB:62:LEU:HD21	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BB:132:GLY:O	51:BB:221:PRO:HD3	2.16	0.46
52:BC:187:ARG:HE	52:BC:192:LEU:HD11	1.80	0.46
53:BD:106:ARG:NH2	53:BD:173:ARG:HD2	2.31	0.46
54:BE:64:ILE:CG2	74:BY:18:LEU:HD21	2.46	0.46
55:BF:109:LEU:O	55:BF:110:GLN:C	2.59	0.46
55:BF:109:LEU:HD12	55:BF:112:LEU:HB3	1.98	0.46
56:BG:102:VAL:C	56:BG:104:ALA:H	2.23	0.46
57:BH:146:VAL:O	72:BW:49:GLU:HG3	2.15	0.46
57:BH:170:VAL:HA	57:BH:173:PHE:CD2	2.51	0.46
65:BP:84:ILE:HG22	65:BP:115:TYR:HA	1.98	0.46
67:BR:51:ALA:O	67:BR:55:THR:HG23	2.16	0.46
69:BT:140:ALA:O	69:BT:143:LYS:HG2	2.16	0.46
70:BU:49:LYS:HB2	70:BU:92:HIS:ND1	2.30	0.46
71:BV:14:PRO:CB	71:BV:23:ILE:HG23	2.37	0.46
72:BW:5:ASN:OD1	72:BW:8:ALA:HB2	2.16	0.46
83:Bw:49:C:P	83:Bw:49:C:C6	3.09	0.46
84:Bx:55:U:H2'	84:Bx:56:U:H4'	1.97	0.46
1:A3:53:G:H4'	40:Al:40:LYS:CD	2.46	0.46
3:AA:67:TYR:CE2	48:A2:4056:G:C2'	2.98	0.46
4:AB:24:ARG:HE	4:AB:28:LYS:HE3	1.80	0.46
4:AB:323:TYR:CD1	4:AB:324:GLY:N	2.84	0.46
7:AE:161:ARG:HD3	7:AE:270:TYR:CZ	2.50	0.46
7:AE:284:HIS:HB3	34:Af:41:PHE:HB3	1.97	0.46
9:AG:168:VAL:O	9:AG:171:PRO:HD2	2.16	0.46
10:AH:6:SER:O	10:AH:58:ASP:OD1	2.34	0.46
13:AK:24:TYR:CG	13:AK:27:CYS:SG	3.08	0.46
14:AL:65:ARG:HB3	29:Aa:66:ASN:ND2	2.31	0.46
17:AO:71:TYR:CE2	48:A2:3858:C:H5'	2.51	0.46
20:AR:43:LYS:O	20:AR:46:LYS:HG2	2.16	0.46
20:AR:78:ILE:CG2	48:A2:2843:A:H2	2.29	0.46
20:AR:165:LYS:NZ	49:B1:907:G:H4'	2.30	0.46
25:AW:60:LYS:CD	25:AW:60:LYS:N	2.79	0.46
27:AY:21:ALA:HA	27:AY:22:PRO:HD3	1.84	0.46
27:AY:86:GLN:HG3	27:AY:95:VAL:O	2.15	0.46
29:Aa:32:ARG:HA	48:A2:1497:A:OP1	2.16	0.46
33:Ae:68:HIS:CD2	46:At:22:LYS:HE2	2.51	0.46
39:Ak:8:ILE:HG12	39:Ak:56:LEU:CD1	2.45	0.46
41:Am:109:ASN:HD22	48:A2:1928:U:C2'	2.29	0.46
43:Ao:106:PHE:CZ	83:Bv:19:G:C5	3.03	0.46
48:A2:55:G:H5"	48:A2:55:G:C8	2.51	0.46
48:A2:658:G:H4'	48:A2:659:G:O5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:1306:A:N1	48:A2:1307:A:C4	2.84	0.46
48:A2:1500:A:O5'	48:A2:1500:A:C8	2.69	0.46
48:A2:1707:U:H2'	48:A2:1708:U:C6	2.50	0.46
48:A2:1773:U:H2'	48:A2:1774:U:H5'	1.97	0.46
48:A2:1785:G:N2	48:A2:1788:G:H21	2.13	0.46
48:A2:2037:G:H8	48:A2:2037:G:OP2	1.98	0.46
48:A2:3700:U:O2'	48:A2:3701:U:H5'	2.16	0.46
48:A2:4310:A:H3'	48:A2:4311:C:H5"	1.96	0.46
48:A2:4505:G:H2'	48:A2:4506:A:C8	2.50	0.46
48:A2:4693:G:H1'	48:A2:4694:G:H2'	1.98	0.46
49:B1:215:G:C8	49:B1:216:C:H5	2.34	0.46
49:B1:305:U:H1'	58:BI:43:ILE:HD12	1.96	0.46
49:B1:574:A:C5'	74:BY:89:HIS:CD2	2.98	0.46
49:B1:692:G:H22	49:B1:739:C:H1'	1.77	0.46
49:B1:1563:G:P	69:BT:72:VAL:H	2.38	0.46
50:BA:85:ARG:CB	50:BA:204:TYR:HB2	2.45	0.46
51:BB:46:LYS:NZ	64:BO:20:GLN:HB3	2.31	0.46
52:BC:104:ASP:HB3	52:BC:130:ILE:HG22	1.98	0.46
53:BD:21:LEU:CD2	53:BD:37:VAL:HG21	2.46	0.46
55:BF:184:SER:C	55:BF:186:ASN:H	2.24	0.46
62:BM:111:VAL:HG12	62:BM:113:ASP:O	2.16	0.46
63:BN:55:ARG:HD2	63:BN:56:ASP:OD1	2.16	0.46
64:BO:129:ILE:HG21	76:Ba:44:ILE:HD12	1.98	0.46
67:BR:35:CYS:C	67:BR:38:ILE:HG13	2.41	0.46
67:BR:99:ASP:C	67:BR:117:LEU:HD13	2.40	0.46
69:BT:38:LYS:CE	69:BT:96:SER:HB3	2.46	0.46
71:BV:12:TYR:HE1	71:BV:14:PRO:CA	2.29	0.46
74:BY:104:ARG:HD2	74:BY:105:LYS:H	1.81	0.46
75:BZ:98:LYS:O	75:BZ:109:TYR:HA	2.16	0.46
78:Bc:14:VAL:HG12	78:Bc:52:GLU:HA	1.97	0.46
82:Bg:283:PRO:HB2	82:Bg:284:PRO:HD3	1.98	0.46
1:A3:108:A:C2	1:A3:109:C:O2	2.68	0.46
5:AC:97:ARG:NH1	48:A2:348:U:H1'	2.30	0.46
6:AD:122:GLN:HG3	6:AD:124:GLU:O	2.16	0.46
7:AE:136:HIS:CE1	48:A2:701:G:N3	2.84	0.46
7:AE:140:LEU:CD1	7:AE:167:GLN:HE21	2.14	0.46
7:AE:158:ARG:HD2	48:A2:4903:G:H21	1.80	0.46
7:AE:237:LYS:HD3	7:AE:237:LYS:C	2.41	0.46
8:AF:147:LEU:CG	48:A2:931:A:H2	2.24	0.46
8:AF:166:ARG:NH1	8:AF:166:ARG:CG	2.73	0.46
8:AF:220:MET:HE3	8:AF:223:LYS:HG2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AG:135:VAL:HG13	9:AG:137:ARG:NH1	2.31	0.46
10:AH:41:ILE:HD13	10:AH:73:ILE:CD1	2.44	0.46
11:AI:31:ILE:O	11:AI:31:ILE:HG13	2.15	0.46
13:AK:99:ARG:HA	13:AK:102:LEU:HB3	1.96	0.46
15:AM:20:HIS:ND1	15:AM:45:VAL:HG23	2.30	0.46
16:AN:187:SER:HB3	48:A2:29:G:OP1	2.15	0.46
18:AP:18:ARG:H	48:A2:393:G:H4'	1.81	0.46
19:AQ:179:GLY:HA2	19:AQ:186:TYR:O	2.16	0.46
20:AR:126:LYS:CB	20:AR:131:VAL:HG21	2.33	0.46
21:AS:144:GLN:C	21:AS:146:HIS:H	2.24	0.46
23:AU:92:LYS:HG2	48:A2:2605:U:C6	2.50	0.46
25:AW:102:LYS:HA	25:AW:105:ARG:CZ	2.46	0.46
33:Ae:105:SER:HA	33:Ae:108:ARG:HB3	1.97	0.46
45:Aq:29:ALA:O	45:Aq:31:LYS:HD2	2.16	0.46
47:Au:35:GLN:CG	48:A2:4023:A:C1'	2.90	0.46
48:A2:138:C:C6	48:A2:138:C:C3'	2.98	0.46
48:A2:190:G:H8	48:A2:190:G:O5'	1.99	0.46
48:A2:959:C:H2'	48:A2:960:G:N9	2.31	0.46
48:A2:1069:C:H42	48:A2:1193:C:H42	1.63	0.46
48:A2:1260:G:H2'	48:A2:1261:C:O4'	2.16	0.46
48:A2:1339:U:O2'	48:A2:1487:C:H1'	2.16	0.46
48:A2:4713:G:N3	48:A2:4906:C:N4	2.64	0.46
49:B1:92:A:H4'	49:B1:93:U:OP2	2.15	0.46
49:B1:168:C:O2'	56:BG:133:LEU:O	2.31	0.46
49:B1:345:U:H1'	54:BE:33:THR:HB	1.98	0.46
49:B1:417:C:H2'	49:B1:418:A:H5"	1.98	0.46
49:B1:635:G:C6	49:B1:636:C:C4	3.04	0.46
49:B1:827:A:O5'	59:BJ:8:VAL:CG1	2.64	0.46
49:B1:875:A:H61	49:B1:912:C:N4	2.09	0.46
49:B1:1125:C:C4'	67:BR:123:THR:CG2	2.94	0.46
49:B1:1277:C:C5'	60:BK:54:SER:OG	2.61	0.46
49:B1:1298:G:O4'	65:BP:79:HIS:CD2	2.68	0.46
49:B1:1692:U:OP1	76:Ba:89:ARG:HG3	2.16	0.46
49:B1:1834:A:C2'	49:B1:1834:A:N3	2.79	0.46
52:BC:147:VAL:CB	84:Bx:56:U:C5	2.88	0.46
53:BD:68:GLU:O	53:BD:71:ALA:HB3	2.16	0.46
59:BJ:162:ARG:H	59:BJ:166:GLY:HA3	1.81	0.46
60:BK:64:TRP:CZ3	79:Bd:23:VAL:HA	2.48	0.46
63:BN:66:VAL:HG13	63:BN:67:THR:H	1.80	0.46
65:BP:22:LEU:HD13	65:BP:22:LEU:C	2.40	0.46
66:BQ:9:SER:C	66:BQ:10:VAL:HG23	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:BR:69:ILE:HG13	67:BR:70:SER:N	2.31	0.46
67:BR:97:GLU:CA	67:BR:117:LEU:HG	2.45	0.46
72:BW:53:ILE:HD13	77:Bb:24:LEU:HD13	1.97	0.46
73:BX:139:GLU:CG	73:BX:140:ARG:N	2.75	0.46
81:Bf:126:CYS:CB	81:Bf:144:CYS:SG	3.04	0.46
1:A3:53:G:H4'	40:Al:40:LYS:CE	2.46	0.46
4:AB:58:ARG:HG3	4:AB:364:ASP:O	2.15	0.46
4:AB:175:GLN:O	48:A2:4944:G:OP1	2.34	0.46
7:AE:136:HIS:CE1	48:A2:702:A:H1'	2.45	0.46
7:AE:223:ARG:HD3	48:A2:447:G:H5'	1.97	0.46
9:AG:57:TRP:HH2	26:AX:41:ARG:HH12	1.63	0.46
11:AI:102:MET:O	11:AI:103:LEU:HB2	2.16	0.46
12:AJ:55:TYR:HE2	12:AJ:57:VAL:HG22	1.80	0.46
13:AK:57:LYS:CB	13:AK:60:MET:H	2.29	0.46
14:AL:14:PHE:C	14:AL:16:LYS:N	2.73	0.46
16:AN:2:GLY:CA	48:A2:115:C:OP1	2.64	0.46
16:AN:194:ARG:CZ	48:A2:79:C:P	3.03	0.46
17:AO:126:VAL:HG21	48:A2:4724:A:C5	2.50	0.46
19:AQ:12:LYS:HD3	19:AQ:14:ARG:HD2	1.96	0.46
21:AS:74:ARG:HH12	48:A2:909:C:C4'	2.28	0.46
22:AT:124:THR:O	22:AT:126:VAL:HG13	2.16	0.46
24:AV:45:ILE:HD13	24:AV:53:PRO:HA	1.98	0.46
33:Ae:36:ARG:CZ	48:A2:1643:C:OP1	2.64	0.46
36:Ah:46:LYS:CA	36:Ah:49:VAL:HG22	2.45	0.46
39:Ak:20:ALA:CB	39:Ak:38:CYS:CA	2.89	0.46
43:Ao:44:LYS:HD3	43:Ao:52:THR:HB	1.96	0.46
45:Aq:40:LYS:O	45:Aq:41:LYS:CG	2.64	0.46
45:Aq:82:ILE:C	45:Aq:84:ALA:H	2.23	0.46
48:A2:66:A:C5	48:A2:322:A:H1'	2.51	0.46
48:A2:463:C:H5"	48:A2:463:C:H6	1.80	0.46
48:A2:471:C:O2'	48:A2:472:G:H5'	2.16	0.46
48:A2:642:G:O2'	48:A2:643:A:P	2.74	0.46
48:A2:1741:G:N3	48:A2:1742:G:C8	2.84	0.46
48:A2:1919:C:H4'	48:A2:1920:A:O5'	2.15	0.46
48:A2:2265:G:H8	48:A2:2265:G:O5'	1.99	0.46
48:A2:2825:G:H8	48:A2:2825:G:C5'	2.28	0.46
48:A2:3596:G:C3'	48:A2:3597:G:H5"	2.46	0.46
48:A2:4345:U:O4'	48:A2:4506:A:C2	2.69	0.46
48:A2:4614:G:H2'	48:A2:4615:C:C6	2.51	0.46
49:B1:309:G:N2	49:B1:310:C:O2	2.48	0.46
49:B1:525:A:OP1	80:Be:29:THR:OG1	2.22	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:648:A:H4'	73:BX:104:GLY:O	2.16	0.46
49:B1:740:C:O2'	49:B1:741:C:C2	2.69	0.46
49:B1:807:G:H2'	49:B1:808:A:O4'	2.15	0.46
49:B1:1022:U:H1'	63:BN:128:TYR:HB2	1.98	0.46
49:B1:1256:G:C2	79:Bd:30:LEU:CG	2.98	0.46
49:B1:1454:A:O2'	67:BR:3:ARG:NE	2.48	0.46
49:B1:1539:U:O2'	69:BT:47:PRO:CA	2.56	0.46
50:BA:7:VAL:CB	71:BV:42:VAL:HA	2.45	0.46
50:BA:154:LEU:HB3	71:BV:66:ASP:OD2	2.16	0.46
51:BB:179:ASN:HD22	51:BB:187:LYS:HZ1	1.63	0.46
54:BE:160:VAL:CG1	54:BE:169:ILE:HB	2.45	0.46
56:BG:138:ALA:O	56:BG:142:ARG:HG3	2.16	0.46
58:BI:57:ALA:O	58:BI:59:ARG:N	2.49	0.46
59:BJ:110:LEU:O	59:BJ:111:GLN:C	2.56	0.46
62:BM:77:ILE:HB	62:BM:128:PHE:CD2	2.51	0.46
63:BN:58:HIS:O	63:BN:60:VAL:HG23	2.16	0.46
67:BR:97:GLU:OE1	67:BR:117:LEU:HA	2.16	0.46
72:BW:98:GLN:O	72:BW:99:PHE:C	2.58	0.46
74:BY:23:MET:HE3	74:BY:75:ILE:HD12	1.97	0.46
77:Bb:55:LEU:HD23	77:Bb:62:VAL:HA	1.97	0.46
81:Bf:140:TYR:CE2	81:Bf:142:GLY:HA2	2.51	0.46
83:Bv:17:C:O2'	83:Bv:18:G:H5'	2.15	0.46
1:A3:36:G:C5	36:Ah:89:ARG:HD3	2.51	0.45
4:AB:247:GLY:HA2	48:A2:2817:G:OP1	2.16	0.45
5:AC:164:THR:HG21	48:A2:219:C:C6	2.51	0.45
6:AD:290:ALA:CB	48:A2:1162:U:O2'	2.64	0.45
7:AE:219:LYS:CB	48:A2:4898:C:C4	2.99	0.45
13:AK:85:ASN:C	13:AK:85:ASN:HD22	2.24	0.45
14:AL:155:MET:SD	14:AL:158:ARG:NH2	2.89	0.45
15:AM:104:MET:CE	17:AO:198:THR:HB	2.46	0.45
16:AN:67:ARG:NE	48:A2:2437:C:OP1	2.49	0.45
18:AP:95:LEU:HD23	18:AP:148:MET:SD	2.56	0.45
19:AQ:72:LEU:CD1	48:A2:1439:G:H5'	2.45	0.45
19:AQ:143:ARG:N	48:A2:1442:C:OP1	2.49	0.45
24:AV:64:THR:HG21	48:A2:3770:A:O4'	2.17	0.45
25:AW:90:ILE:CG2	25:AW:94:ARG:CZ	2.94	0.45
26:AX:127:LEU:CB	48:A2:2416:C:H5'	2.44	0.45
27:AY:41:LYS:NZ	27:AY:42:TYR:OH	2.47	0.45
33:Ae:22:ARG:HE	33:Ae:36:ARG:HB3	1.81	0.45
39:Ak:55:LYS:HG3	39:Ak:55:LYS:H	1.54	0.45
41:Am:85:LEU:C	41:Am:85:LEU:HD13	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:Aq:39:PRO:HA	45:Aq:42:VAL:HG13	1.98	0.45
46:At:20:ARG:O	46:At:21:ASN:HB2	2.16	0.45
46:At:98:ARG:CD	48:A2:951:A:C4'	2.68	0.45
47:Au:38:LEU:HD12	47:Au:163:LEU:C	2.40	0.45
48:A2:662:A:H2'	48:A2:663:C:C6	2.50	0.45
48:A2:959:C:C2'	48:A2:960:G:C8	2.93	0.45
48:A2:1555:G:C6	48:A2:1556:G:N1	2.84	0.45
48:A2:3681:G:H2'	48:A2:3683:A:N7	2.28	0.45
48:A2:3727:A:C8	48:A2:3727:A:O5'	2.68	0.45
48:A2:3851:G:O2'	48:A2:3852:G:P	2.74	0.45
48:A2:4545:C:H2'	48:A2:4545:C:O2	2.16	0.45
49:B1:171:A:H5"	56:BG:177:GLN:NE2	2.29	0.45
49:B1:872:A:C8	49:B1:874:G:C4	3.03	0.45
49:B1:1305:C:H5	81:Bf:95:ARG:NH2	2.09	0.45
49:B1:1541:G:H2'	49:B1:1542:C:C6	2.51	0.45
49:B1:1867:U:O2'	76:Ba:38:LYS:CA	2.65	0.45
51:BB:117:TRP:CD1	51:BB:117:TRP:N	2.84	0.45
51:BB:179:ASN:HB3	51:BB:183:GLU:CG	2.45	0.45
52:BC:178:HIS:ND1	52:BC:200:ARG:HD2	2.17	0.45
54:BE:45:ILE:O	54:BE:49:ARG:HB3	2.16	0.45
55:BF:141:VAL:O	78:Bc:56:LEU:HD11	2.15	0.45
55:BF:197:GLU:O	55:BF:201:LYS:HG2	2.16	0.45
57:BH:158:LEU:HD11	57:BH:187:PHE:HD1	1.81	0.45
61:BL:19:ASN:C	61:BL:21:LYS:N	2.73	0.45
68:BS:74:PRO:HB2	68:BS:79:ILE:HB	1.97	0.45
1:A3:75:G:O4'	40:Al:30:LYS:HA	2.17	0.45
2:A4:12:U:H5'	2:A4:68:C:H1'	1.98	0.45
2:A4:48:G:O2'	2:A4:49:A:O5'	2.34	0.45
3:AA:122:ASP:OD2	3:AA:125:LYS:HG3	2.16	0.45
5:AC:60:HIS:ND1	5:AC:92:PHE:CD2	2.80	0.45
5:AC:102:PHE:CE1	48:A2:1502:C:H5'	2.50	0.45
7:AE:99:ASP:CG	7:AE:104:THR:HA	2.40	0.45
12:AJ:109:ILE:HG12	12:AJ:130:PHE:HE1	1.81	0.45
13:AK:52:VAL:CG1	13:AK:90:PHE:O	2.64	0.45
19:AQ:154:LYS:HB2	19:AQ:154:LYS:HZ2	1.81	0.45
22:AT:70:HIS:CE1	48:A2:4276:C:OP1	2.70	0.45
25:AW:102:LYS:CB	25:AW:105:ARG:NH2	2.74	0.45
26:AX:117:TYR:HD2	26:AX:153:ILE:HG22	1.81	0.45
28:AZ:68:ILE:HG22	28:AZ:119:GLU:CD	2.38	0.45
29:Aa:53:PHE:HD1	48:A2:93:G:OP2	1.98	0.45
30:Ab:50:ASN:N	48:A2:1795:U:O2'	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Ad:46:LEU:HD12	48:A2:2351:U:H4'	1.96	0.45
34:Af:46:ARG:HH22	48:A2:699:G:H5"	1.81	0.45
34:Af:79:GLY:HA2	48:A2:2047:C:O2'	2.16	0.45
38:Aj:78:PHE:C	38:Aj:79:ARG:O	2.58	0.45
48:A2:285:U:N3	48:A2:287:G:OP2	2.48	0.45
48:A2:480:C:OP2	48:A2:481:G:OP2	2.35	0.45
48:A2:1252:G:C8	48:A2:1253:A:C8	3.04	0.45
48:A2:1297:C:O2'	48:A2:1298:C:P	2.74	0.45
48:A2:2606:C:O2	48:A2:2606:C:C2'	2.63	0.45
48:A2:2830:G:O5'	48:A2:2830:G:H8	1.99	0.45
48:A2:3711:G:H2'	48:A2:3712:C:O4'	2.16	0.45
48:A2:3726:G:N2	83:Bv:12:U:O3'	2.47	0.45
48:A2:4485:A:H1'	48:A2:4520:U:C4	2.52	0.45
48:A2:4873:G:C2	48:A2:4874:G:C8	3.04	0.45
49:B1:171:A:C5'	56:BG:177:GLN:CD	2.89	0.45
49:B1:606:G:H5"	80:Be:57:ALA:N	2.30	0.45
49:B1:659:G:H5"	73:BX:17:ARG:CZ	2.46	0.45
49:B1:1007:C:O2'	63:BN:104:ARG:NE	2.48	0.45
49:B1:1124:C:P	51:BB:149:GLN:HG3	2.57	0.45
49:B1:1263:U:H4'	79:Bd:27:ARG:HD3	1.98	0.45
49:B1:1568:C:H5'	69:BT:38:LYS:HZ1	1.82	0.45
49:B1:1592:C:H5"	55:BF:91:ARG:NH2	2.31	0.45
49:B1:1864:U:C3'	76:Ba:5:ARG:HH21	2.09	0.45
50:BA:59:LEU:CD2	50:BA:63:ARG:NH2	2.78	0.45
53:BD:11:PHE:CE1	70:BU:25:THR:HG21	2.50	0.45
55:BF:49:LEU:HD12	66:BQ:50:LYS:N	2.32	0.45
55:BF:140:ASP:HB3	78:Bc:56:LEU:HD21	1.99	0.45
57:BH:177:TYR:CD2	57:BH:185:VAL:HG13	2.51	0.45
59:BJ:39:ASN:HA	80:Be:34:ARG:CZ	2.44	0.45
59:BJ:168:GLY:O	59:BJ:172:ARG:NE	2.49	0.45
59:BJ:168:GLY:N	59:BJ:172:ARG:NH2	2.60	0.45
61:BL:118:ARG:O	61:BL:119:ASP:HB2	2.16	0.45
63:BN:25:TRP:CD1	63:BN:26:LEU:CB	2.99	0.45
64:BO:17:LEU:HD22	64:BO:21:VAL:HG22	1.98	0.45
65:BP:84:ILE:HG23	65:BP:115:TYR:CE2	2.48	0.45
66:BQ:100:VAL:O	66:BQ:101:ASP:C	2.55	0.45
67:BR:28:PHE:HA	67:BR:55:THR:CG2	2.46	0.45
68:BS:80:PRO:HG2	68:BS:82:TRP:CZ2	2.51	0.45
75:BZ:97:ILE:HG23	75:BZ:109:TYR:HB3	1.96	0.45
1:A3:67:U:H2'	1:A3:68:G:C8	2.52	0.45
1:A3:67:U:H5"	38:Aj:85:LYS:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A3:109:C:O2'	1:A3:110:U:O5'	2.24	0.45
2:A4:8:G:H8	2:A4:8:G:O5'	2.00	0.45
4:AB:390:GLY:CA	25:AW:63:GLN:NE2	2.78	0.45
5:AC:234:LYS:NZ	48:A2:1347:U:O2	2.50	0.45
8:AF:236:ARG:HD2	8:AF:240:ILE:HA	1.98	0.45
12:AJ:111:GLU:CD	68:BS:14:ARG:HH22	2.24	0.45
13:AK:93:GLU:HB3	13:AK:94:ASP:H	1.65	0.45
14:AL:177:LYS:HG3	29:Aa:144:CYS:O	2.17	0.45
15:AM:2:VAL:CG1	15:AM:3:PHE:CD2	2.87	0.45
17:AO:149:TYR:HH	48:A2:4546:A:P	2.37	0.45
19:AQ:172:ARG:NH1	29:Aa:56:VAL:HG23	2.26	0.45
20:AR:60:ARG:HH22	48:A2:2788:G:P	2.38	0.45
23:AU:50:ASN:O	23:AU:52:LYS:N	2.49	0.45
24:AV:97:TYR:CE1	25:AW:21:TYR:HD1	2.29	0.45
28:AZ:19:SER:HB2	35:Ag:91:ILE:CD1	2.46	0.45
29:Aa:3:SER:O	29:Aa:6:ARG:HB3	2.16	0.45
34:Af:99:HIS:ND1	48:A2:4712:G:H5"	2.31	0.45
34:Af:106:TYR:HB2	34:Af:107:PRO:CD	2.46	0.45
35:Ag:5:LEU:HD23	35:Ag:32:TYR:CG	2.51	0.45
35:Ag:49:CYS:SG	48:A2:2631:G:N1	2.85	0.45
39:Ak:19:ASP:O	39:Ak:21:LYS:N	2.49	0.45
47:Au:29:LEU:HD22	47:Au:171:HIS:HD2	1.82	0.45
48:A2:132:G:C2	48:A2:135:G:O6	2.70	0.45
48:A2:472:G:H2'	48:A2:473:G:O4'	2.16	0.45
48:A2:1166:C:C6	48:A2:1167:A:C8	3.04	0.45
48:A2:2606:C:O2	48:A2:2607:U:C5	2.68	0.45
48:A2:4538:U:H4'	48:A2:5025:U:O2'	2.17	0.45
49:B1:349:A:H2'	49:B1:350:C:C6	2.51	0.45
49:B1:365:C:H2'	49:B1:366:U:C6	2.51	0.45
49:B1:570:C:O2'	74:BY:35:VAL:C	2.60	0.45
49:B1:608:C:H5"	49:B1:608:C:H6	1.82	0.45
49:B1:977:C:C5'	51:BB:66:VAL:CG2	2.95	0.45
49:B1:1314:U:O2	60:BK:2:LEU:CA	2.64	0.45
49:B1:1815:A:O5'	49:B1:1815:A:H8	2.00	0.45
50:BA:12:GLU:HA	50:BA:15:VAL:HG22	1.98	0.45
51:BB:71:LEU:HD13	51:BB:75:GLN:HB2	1.97	0.45
51:BB:181:LEU:O	51:BB:185:VAL:HG23	2.17	0.45
52:BC:74:LYS:HD2	52:BC:269:PHE:CD1	2.51	0.45
55:BF:51:HIS:O	66:BQ:50:LYS:HE2	2.17	0.45
55:BF:95:HIS:O	55:BF:99:ILE:HD12	2.16	0.45
56:BG:164:LYS:O	56:BG:165:GLU:HB3	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BI:110:ARG:HD3	58:BI:123:ARG:NH1	2.31	0.45
59:BJ:3:VAL:O	59:BJ:4:ALA:CB	2.64	0.45
64:BO:143:LYS:C	64:BO:145:GLY:N	2.73	0.45
66:BQ:51:LEU:HD13	66:BQ:81:ILE:HG23	1.87	0.45
68:BS:28:PHE:O	68:BS:31:THR:N	2.48	0.45
68:BS:141:ARG:O	68:BS:142:ARG:HB2	2.15	0.45
69:BT:43:LYS:HE3	69:BT:82:ARG:O	2.16	0.45
69:BT:130:ASP:C	69:BT:132:ASP:N	2.73	0.45
70:BU:67:LYS:NZ	70:BU:76:THR:HG22	2.31	0.45
73:BX:41:PHE:HE1	73:BX:120:PHE:CE1	2.34	0.45
76:Ba:42:ARG:NH2	84:Bx:39:U:P	2.89	0.45
81:Bf:86:THR:O	81:Bf:87:THR:HB	2.15	0.45
83:Bv:60:U:O5’	83:Bv:61:C:H5	1.99	0.45
1:A3:121:G:H5”	1:A3:121:G:H8	1.81	0.45
1:A3:125:C:H2’	48:A2:2523:G:N2	2.31	0.45
2:A4:39:C:O2’	12:AJ:46:GLN:NE2	2.50	0.45
4:AB:224:LYS:HE2	4:AB:339:GLY:O	2.15	0.45
5:AC:202:ILE:CD1	5:AC:202:ILE:N	2.80	0.45
10:AH:92:MET:HG2	10:AH:181:VAL:HA	1.98	0.45
13:AK:16:LYS:CA	13:AK:19:GLN:HB2	2.46	0.45
15:AM:27:ILE:HD11	15:AM:55:MET:SD	2.57	0.45
15:AM:44:GLN:NE2	48:A2:922:A:C4	2.84	0.45
20:AR:26:PRO:HG3	48:A2:2366:G:O4’	2.17	0.45
23:AU:54:GLY:C	23:AU:56:LEU:N	2.74	0.45
23:AU:63:ILE:HG12	23:AU:72:VAL:HG12	1.98	0.45
24:AV:78:PRO:HB2	24:AV:106:VAL:O	2.16	0.45
31:Ac:30:GLY:CA	48:A2:2654:G:O6	2.55	0.45
44:Ap:33:GLN:HB2	44:Ap:49:ARG:HD2	1.98	0.45
45:Aq:37:LEU:HD23	45:Aq:69:ALA:CB	2.45	0.45
47:Au:31:THR:HA	47:Au:171:HIS:HA	1.98	0.45
47:Au:32:VAL:CG1	47:Au:169:VAL:CG2	2.95	0.45
47:Au:38:LEU:HD23	47:Au:201:VAL:HG22	1.99	0.45
48:A2:35:U:H2’	48:A2:36:U:H5’	1.98	0.45
48:A2:50:C:C6	48:A2:50:C:OP2	2.70	0.45
48:A2:195:A:C4	48:A2:216:G:N2	2.84	0.45
48:A2:381:G:H2’	48:A2:406:G:O6	2.15	0.45
48:A2:473:G:C2	48:A2:669:G:N2	2.84	0.45
48:A2:508:U:P	48:A2:508:U:C5	3.10	0.45
48:A2:704:C:H2’	48:A2:705:G:C8	2.52	0.45
48:A2:1225:G:H21	48:A2:1225:G:P	2.39	0.45
48:A2:1268:U:HO2’	48:A2:1269:C:C4’	2.28	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:1360:G:H4'	48:A2:1361:C:H3'	1.99	0.45
48:A2:1754:C:O2	48:A2:1754:C:H2'	2.14	0.45
48:A2:1941:A:H4'	48:A2:1942:G:O5'	2.17	0.45
48:A2:1964:A:OP1	48:A2:1992:C:H5'	2.16	0.45
48:A2:4016:A:C6	83:Bw:56:C:C1'	2.98	0.45
49:B1:285:U:HO2'	49:B1:286:U:P	2.39	0.45
49:B1:367:U:C2'	49:B1:368:U:OP1	2.64	0.45
49:B1:582:U:C1'	74:BY:33:ALA:N	2.79	0.45
49:B1:840:C:O2'	74:BY:14:THR:CA	2.64	0.45
49:B1:860:G:O2'	72:BW:107:SER:HB2	2.15	0.45
49:B1:991:G:C6	76:Ba:95:ARG:NH2	2.79	0.45
49:B1:1059:G:C5	49:B1:1060:A:N1	2.84	0.45
49:B1:1263:U:O2'	79:Bd:16:GLN:HG2	2.16	0.45
49:B1:1297:U:H2'	49:B1:1299:A:N7	2.31	0.45
49:B1:1310:U:O5'	49:B1:1310:U:H6	1.99	0.45
49:B1:1373:C:OP1	67:BR:6:THR:HA	2.17	0.45
49:B1:1757:G:H8	49:B1:1757:G:H5"	1.81	0.45
55:BF:93:VAL:HG11	55:BF:97:PHE:CZ	2.44	0.45
57:BH:96:ALA:HB3	57:BH:98:ARG:NH1	2.31	0.45
63:BN:20:ARG:C	63:BN:21:SER:HG	2.19	0.45
64:BO:61:LYS:HE3	64:BO:76:LEU:HD12	1.99	0.45
65:BP:90:VAL:HG13	65:BP:107:ILE:HG22	1.99	0.45
66:BQ:33:LYS:CD	66:BQ:69:ARG:NE	2.80	0.45
66:BQ:53:GLU:HB2	66:BQ:54:PRO:HD3	1.98	0.45
68:BS:63:GLU:HA	68:BS:66:ARG:HB3	1.98	0.45
69:BT:41:LYS:CE	69:BT:43:LYS:CE	2.87	0.45
74:BY:79:LEU:HD11	74:BY:83:LYS:HE3	1.98	0.45
75:BZ:76:ARG:NE	75:BZ:76:ARG:CA	2.80	0.45
75:BZ:99:LEU:CA	75:BZ:109:TYR:CD1	2.98	0.45
3:AA:207:VAL:HG23	3:AA:208:GLU:HG3	1.99	0.45
4:AB:20:LYS:HG3	48:A2:4530:A:OP2	2.17	0.45
4:AB:47:LEU:HD11	4:AB:181:MET:CG	2.46	0.45
4:AB:126:LYS:O	4:AB:127:LYS:HB3	2.16	0.45
4:AB:138:GLN:OE1	4:AB:138:GLN:HA	2.16	0.45
5:AC:217:ILE:CG2	5:AC:218:ILE:N	2.80	0.45
5:AC:219:LYS:NZ	5:AC:222:ARG:NH2	2.64	0.45
9:AG:87:LEU:HD11	9:AG:91:THR:CG2	2.46	0.45
9:AG:163:PRO:N	48:A2:148:G:H22	2.12	0.45
10:AH:107:GLU:H	10:AH:111:LEU:HB3	1.81	0.45
13:AK:39:GLN:O	13:AK:43:ILE:HB	2.16	0.45
15:AM:6:PHE:HB3	21:AS:153:PRO:CA	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AQ:27:LEU:HD11	46:At:5:LEU:HD12	1.97	0.45
20:AR:21:LYS:NZ	48:A2:2801:G:OP2	2.43	0.45
27:AY:15:ARG:O	27:AY:19:PHE:HD2	2.00	0.45
29:Aa:103:VAL:HG21	29:Aa:126:ALA:HB2	1.97	0.45
30:Ab:45:PHE:CG	48:A2:1797:G:C6	3.04	0.45
34:Af:60:PRO:C	34:Af:62:GLY:N	2.73	0.45
39:Ak:33:LYS:NZ	48:A2:2674:A:OP2	2.40	0.45
40:Al:34:LYS:CE	48:A2:355:C:H4'	2.46	0.45
40:Al:34:LYS:HZ1	48:A2:355:C:H4'	1.82	0.45
41:Am:116:GLY:O	48:A2:1927:G:H1'	2.15	0.45
45:Aq:55:GLY:O	45:Aq:56:LEU:HB2	2.16	0.45
48:A2:33:A:H2'	48:A2:34:A:C8	2.52	0.45
48:A2:632:G:C2'	48:A2:633:U:H5"	2.47	0.45
48:A2:923:C:H6	48:A2:923:C:OP1	2.00	0.45
48:A2:1352:C:H2'	48:A2:1353:G:H21	1.80	0.45
48:A2:1402:G:C2'	48:A2:1403:A:OP2	2.64	0.45
48:A2:1595:A:H3'	48:A2:1596:C:H5'	1.99	0.45
48:A2:1804:U:O2'	48:A2:1805:G:H5'	2.16	0.45
48:A2:2011:A:H5'	48:A2:2012:C:OP2	2.17	0.45
48:A2:2361:A:C2	48:A2:2809:G:H4'	2.51	0.45
48:A2:2498:U:C2	48:A2:2499:C:C5	3.05	0.45
48:A2:2689:C:H6	48:A2:2689:C:C5'	2.21	0.45
48:A2:2704:A:OP1	48:A2:2704:A:H3'	2.17	0.45
48:A2:2706:C:OP2	48:A2:2706:C:H6	1.99	0.45
48:A2:3595:A:O2'	48:A2:3596:G:P	2.75	0.45
48:A2:4522:C:O2'	48:A2:4523:C:H5'	2.16	0.45
48:A2:4670:A:H5'	48:A2:4671:U:OP2	2.17	0.45
48:A2:4974:A:O5'	48:A2:4975:G:OP2	2.35	0.45
49:B1:181:A:H8	49:B1:182:C:C4	2.34	0.45
49:B1:346:C:OP1	54:BE:37:LYS:CB	2.65	0.45
49:B1:346:C:H5"	54:BE:38:LEU:CD1	2.47	0.45
49:B1:658:U:H4'	73:BX:17:ARG:HH21	1.82	0.45
49:B1:688:U:H6	49:B1:688:U:HO2'	1.64	0.45
49:B1:1079:C:H5'	49:B1:1179:G:H4'	1.97	0.45
49:B1:1398:G:C2	82:Bg:61:GLY:CA	2.99	0.45
49:B1:1483:A:H4'	53:BD:160:SER:CA	2.46	0.45
49:B1:1546:G:H21	49:B1:1670:C:H1'	1.82	0.45
49:B1:1595:U:H2'	49:B1:1596:U:C6	2.52	0.45
49:B1:1698:C:N4	84:Bx:52:U:H6	2.09	0.45
52:BC:61:MET:N	52:BC:71:LYS:HZ1	2.15	0.45
52:BC:133:TYR:CZ	52:BC:216:MET:HG2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BC:166:ARG:HG3	52:BC:181:PRO:HG3	1.98	0.45
54:BE:90:ILE:CG2	54:BE:91:SER:N	2.80	0.45
59:BJ:179:LYS:HA	59:BJ:179:LYS:HD2	1.76	0.45
67:BR:95:ILE:CG2	67:BR:96:ILE:H	2.27	0.45
70:BU:33:GLU:HA	70:BU:33:GLU:OE1	2.16	0.45
81:Bf:116:ARG:HA	81:Bf:116:ARG:NH1	2.31	0.45
3:AA:63:PHE:HZ	3:AA:76:PHE:HE2	1.63	0.45
4:AB:62:ARG:NH2	48:A2:4579:G:OP2	2.50	0.45
4:AB:291:TYR:CE2	4:AB:327:THR:HG22	2.51	0.45
4:AB:303:ALA:O	4:AB:312:LYS:HD2	2.16	0.45
6:AD:10:LYS:HE3	6:AD:10:LYS:C	2.41	0.45
6:AD:210:TYR:CE2	6:AD:214:GLU:HG3	2.51	0.45
7:AE:130:LYS:C	7:AE:131:LYS:HG3	2.41	0.45
7:AE:239:LYS:HD2	48:A2:4895:C:H42	1.82	0.45
8:AF:167:ILE:HG22	8:AF:168:ALA:N	2.31	0.45
8:AF:219:GLY:CA	48:A2:1887:U:H5"	2.46	0.45
9:AG:36:PRO:CA	48:A2:4097:A:C2	2.99	0.45
9:AG:113:ARG:NH1	48:A2:119:G:C5	2.84	0.45
11:AI:203:ARG:O	11:AI:203:ARG:HG3	2.17	0.45
13:AK:1:MET:HB3	13:AK:2:PRO:HD2	1.93	0.45
13:AK:44:ARG:O	13:AK:45:MET:C	2.60	0.45
13:AK:48:ARG:C	13:AK:51:ALA:HB2	2.42	0.45
15:AM:14:TYR:O	15:AM:56:GLN:N	2.48	0.45
20:AR:74:ARG:CG	48:A2:2869:C:OP2	2.64	0.45
28:AZ:33:THR:HB	28:AZ:36:ARG:O	2.16	0.45
35:Ag:5:LEU:HD22	35:Ag:5:LEU:O	2.17	0.45
35:Ag:69:LYS:HB2	48:A2:2748:U:C2	2.52	0.45
39:Ak:5:ILE:O	39:Ak:45:LEU:HD12	2.17	0.45
43:Ao:105:GLN:O	43:Ao:106:PHE:CD2	2.70	0.45
46:At:46:ARG:NE	48:A2:660:C:C5	2.83	0.45
48:A2:113:A:O2'	48:A2:114:G:H5'	2.16	0.45
48:A2:404:A:O2'	48:A2:408:C:O2'	2.35	0.45
48:A2:512:G:C6	48:A2:513:C:C4	3.05	0.45
48:A2:1269:C:H2'	48:A2:1270:G:O5'	2.16	0.45
48:A2:1390:C:N4	48:A2:1392:C:C2	2.85	0.45
48:A2:1745:C:C2'	48:A2:1746:G:H5'	2.29	0.45
48:A2:2297:G:N2	48:A2:2300:G:OP2	2.35	0.45
48:A2:2340:G:HO2'	48:A2:2341:U:P	2.40	0.45
48:A2:2419:U:O4'	48:A2:2497:G:C2	2.69	0.45
48:A2:2685:G:C8	48:A2:2685:G:C3'	2.99	0.45
48:A2:3588:G:C3'	48:A2:3588:G:C8	2.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:3881:C:H2'	48:A2:3882:C:C6	2.52	0.45
48:A2:4663:A:H2'	48:A2:4664:G:C5'	2.46	0.45
48:A2:4700:C:C6	48:A2:4700:C:OP2	2.70	0.45
49:B1:96:C:H1'	49:B1:474:G:H5'	1.99	0.45
49:B1:282:G:C6	49:B1:283:G:C6	3.04	0.45
49:B1:570:C:O2'	74:BY:35:VAL:O	2.33	0.45
49:B1:605:A:OP2	49:B1:605:A:C8	2.70	0.45
49:B1:745:C:C6	49:B1:745:C:O5'	2.70	0.45
49:B1:792:C:C5'	49:B1:792:C:H6	2.28	0.45
49:B1:836:G:OP1	49:B1:836:G:C2	2.70	0.45
49:B1:1287:A:H5"	49:B1:1312:G:N2	2.24	0.45
49:B1:1290:G:O2'	49:B1:1291:A:H5'	2.16	0.45
49:B1:1497:G:N7	60:BK:62:PHE:CZ	2.85	0.45
49:B1:1866:A:H1'	76:Ba:95:ARG:O	2.13	0.45
63:BN:37:ILE:HG23	63:BN:38:TYR:N	2.31	0.45
64:BO:141:ARG:CG	64:BO:142:ARG:H	2.28	0.45
68:BS:86:ARG:HD2	68:BS:86:ARG:HA	1.83	0.45
69:BT:61:ALA:HA	69:BT:64:LEU:HD21	1.99	0.45
76:Ba:38:LYS:HG2	76:Ba:71:LEU:HD12	1.97	0.45
76:Ba:39:PHE:CE1	76:Ba:70:LYS:HD3	2.52	0.45
83:Bw:56:C:C6	83:Bw:56:C:O5'	2.70	0.45
4:AB:385:LYS:HG2	4:AB:389:MET:SD	2.56	0.45
5:AC:102:PHE:CG	48:A2:1320:A:H5'	2.51	0.45
5:AC:306:ARG:O	5:AC:307:LYS:HG3	2.17	0.45
6:AD:16:TYR:CE1	48:A2:4227:U:C6	3.01	0.45
6:AD:121:GLY:HA3	6:AD:168:ASP:O	2.16	0.45
7:AE:96:VAL:N	7:AE:107:VAL:CG1	2.72	0.45
7:AE:133:PHE:O	7:AE:133:PHE:CD1	2.70	0.45
7:AE:283:PRO:O	7:AE:285:LYS:N	2.50	0.45
12:AJ:22:LEU:HD11	12:AJ:82:ILE:HG21	1.97	0.45
14:AL:137:GLY:O	14:AL:140:SER:N	2.50	0.45
17:AO:121:PRO:HA	17:AO:124:LEU:CD1	2.47	0.45
17:AO:128:ARG:HH11	48:A2:2037:G:H5"	1.82	0.45
26:AX:117:TYR:N	26:AX:117:TYR:HD1	2.14	0.45
27:AY:38:LEU:HD11	27:AY:109:LEU:HG	1.98	0.45
27:AY:59:ARG:NH1	48:A2:196:G:C2'	2.67	0.45
32:Ad:77:ILE:H	32:Ad:77:ILE:HG13	1.56	0.45
35:Ag:103:VAL:O	35:Ag:106:VAL:HG12	2.17	0.45
36:Ah:31:LEU:HB2	36:Ah:47:ILE:HD12	1.81	0.45
46:At:59:GLY:CA	46:At:83:ASN:OD1	2.65	0.45
47:Au:130:LYS:N	47:Au:130:LYS:CD	2.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:442:G:H2'	48:A2:443:C:O4'	2.16	0.45
48:A2:943:A:H8	48:A2:943:A:O5'	1.99	0.45
48:A2:1294:G:O6	48:A2:1295:A:C2	2.70	0.45
48:A2:2432:A:H2'	48:A2:2433:U:C6	2.52	0.45
48:A2:2836:A:H2'	48:A2:2837:A:O4'	2.16	0.45
48:A2:4076:G:H2'	48:A2:4077:G:C8	2.51	0.45
48:A2:4546:A:H62	48:A2:4680:G:H21	1.65	0.45
48:A2:4597:A:C4	48:A2:4626:A:C6	3.05	0.45
48:A2:4882:C:O5'	48:A2:4883:U:OP2	2.34	0.45
48:A2:4983:C:OP1	58:BI:106:SER:OG	2.34	0.45
49:B1:12:U:C1'	49:B1:1357:A:H1'	2.46	0.45
49:B1:429:C:H2'	49:B1:430:C:C6	2.52	0.45
49:B1:676:C:OP1	63:BN:5:HIS:HD2	1.99	0.45
49:B1:742:U:C5	49:B1:743:U:O4	2.69	0.45
49:B1:827:A:O5'	59:BJ:8:VAL:CG2	2.65	0.45
49:B1:836:G:C4	49:B1:836:G:O5'	2.70	0.45
49:B1:1420:G:N3	49:B1:1420:G:H2'	2.32	0.45
49:B1:1568:C:H6	49:B1:1568:C:O5'	2.00	0.45
49:B1:1620:A:C6	49:B1:1624:U:C2	3.04	0.45
49:B1:1781:A:H8	49:B1:1781:A:O5'	2.00	0.45
50:BA:103:PHE:HE2	50:BA:136:GLU:OE1	1.87	0.45
50:BA:206:ASP:CG	50:BA:207:PRO:CD	2.86	0.45
54:BE:206:ASP:HB2	54:BE:222:LEU:CD1	2.47	0.45
55:BF:40:ALA:C	55:BF:42:LYS:N	2.73	0.45
55:BF:68:ILE:HD11	55:BF:109:LEU:HD11	1.98	0.45
61:BL:46:THR:HG23	61:BL:62:PHE:CD1	2.52	0.45
73:BX:51:VAL:HG13	73:BX:70:VAL:CG1	2.47	0.45
73:BX:108:LYS:HD3	73:BX:108:LYS:C	2.41	0.45
74:BY:96:LEU:N	74:BY:96:LEU:CD1	2.78	0.45
82:Bg:17:TRP:HB2	82:Bg:36:ARG:HD2	1.98	0.45
83:Bv:34:G:C6	83:Bv:35:A:C6	3.05	0.45
1:A3:43:A:C1'	38:Aj:21:ARG:O	2.59	0.45
1:A3:102:G:H4'	38:Aj:39:TYR:HE1	1.82	0.45
1:A3:125:C:OP2	48:A2:2523:G:N1	2.50	0.45
1:A3:153:C:H2'	1:A3:154:G:H8	1.82	0.45
3:AA:98:ILE:HD11	44:Ap:80:LYS:HA	1.98	0.45
3:AA:226:ARG:NH2	48:A2:4144:G:H5"	2.32	0.45
5:AC:287:THR:CG2	46:At:2:SER:HA	2.45	0.45
6:AD:17:GLN:CB	22:AT:20:ARG:HG2	2.25	0.45
6:AD:233:PRO:CA	6:AD:236:MET:CE	2.85	0.45
8:AF:21:LYS:O	8:AF:25:PHE:N	2.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AG:82:GLN:HE21	9:AG:233:ILE:CG2	2.29	0.45
9:AG:176:LYS:NZ	37:Ai:43:MET:HG3	2.32	0.45
10:AH:96:TYR:N	10:AH:96:TYR:CD1	2.85	0.45
12:AJ:169:LYS:O	12:AJ:170:TYR:HB2	2.17	0.45
13:AK:11:SER:HA	13:AK:14:PHE:HB2	1.99	0.45
13:AK:57:LYS:C	13:AK:61:MET:HG2	2.41	0.45
13:AK:60:MET:CE	48:A2:1941:A:O2'	2.65	0.45
13:AK:81:HIS:ND1	13:AK:88:PHE:HE1	2.06	0.45
13:AK:107:VAL:CB	13:AK:108:PRO:HD3	2.44	0.45
14:AL:129:ARG:O	14:AL:130:LYS:HE3	2.17	0.45
15:AM:6:PHE:HB2	21:AS:152:PHE:C	2.42	0.45
16:AN:84:PRO:HG2	48:A2:42:A:O3'	2.17	0.45
18:AP:25:HIS:CD2	48:A2:3829:C:OP2	2.70	0.45
19:AQ:12:LYS:CD	19:AQ:14:ARG:CD	2.90	0.45
19:AQ:13:VAL:O	48:A2:1673:G:H5"	2.17	0.45
19:AQ:43:PHE:CD1	48:A2:1411:U:O2'	2.59	0.45
22:AT:78:LYS:CD	22:AT:87:LYS:HZ2	2.18	0.45
25:AW:50:ASN:CG	48:A2:4964:U:C5	2.95	0.45
27:AY:42:TYR:O	27:AY:43:ASN:C	2.58	0.45
29:Aa:61:TYR:CE2	48:A2:310:U:H6	2.34	0.45
29:Aa:90:ALA:CB	29:Aa:99:PRO:CD	2.62	0.45
32:Ad:42:ALA:HB2	32:Ad:77:ILE:HA	1.99	0.45
38:Aj:31:LYS:CB	38:Aj:33:THR:HG22	2.46	0.45
42:An:16:LYS:HB2	42:An:16:LYS:NZ	2.31	0.45
45:Aq:104:ILE:HG22	45:Aq:143:VAL:HA	1.97	0.45
45:Aq:136:ALA:HB1	45:Aq:139:VAL:HB	1.99	0.45
46:At:28:GLU:CG	46:At:29:PRO:HD2	2.47	0.45
47:Au:43:PRO:HB2	47:Au:161:LYS:C	2.40	0.45
48:A2:31:U:O3'	48:A2:32:G:H8	2.00	0.45
48:A2:462:U:H2'	48:A2:463:C:O5'	2.16	0.45
48:A2:492:C:C4'	48:A2:493:G:OP1	2.65	0.45
48:A2:495:C:H4'	48:A2:498:G:H8	1.82	0.45
48:A2:510:C:H6	48:A2:510:C:O5'	1.98	0.45
48:A2:934:C:O2'	48:A2:935:C:H5'	2.17	0.45
48:A2:935:C:H2'	48:A2:936:G:C8	2.52	0.45
48:A2:972:C:O2'	48:A2:973:C:H5'	2.17	0.45
48:A2:1056:G:C6	48:A2:1057:G:C5	3.04	0.45
48:A2:1069:C:C2	48:A2:1070:A:C8	3.04	0.45
48:A2:1165:C:P	48:A2:1165:C:C6	3.10	0.45
48:A2:1342:G:HO2'	48:A2:1343:G:P	2.22	0.45
48:A2:1720:A:O2'	48:A2:1721:G:H5'	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:2608:C:C6	48:A2:2608:C:C5'	2.99	0.45
48:A2:4111:C:O2'	48:A2:4112:G:H5'	2.17	0.45
48:A2:4715:U:O2'	48:A2:4716:G:H5'	2.17	0.45
48:A2:4855:G:C6	48:A2:4856:G:N7	2.84	0.45
49:B1:636:C:H2'	49:B1:637:U:C6	2.52	0.45
49:B1:690:G:C2'	49:B1:691:G:O5'	2.64	0.45
49:B1:744:G:HO2'	49:B1:745:C:H6	1.64	0.45
49:B1:750:C:P	49:B1:750:C:H3'	2.57	0.45
49:B1:869:A:H1'	49:B1:870:A:OP1	2.16	0.45
49:B1:984:C:C2'	64:BO:138:ASP:HB2	2.47	0.45
49:B1:1022:U:H1'	63:BN:128:TYR:CD1	2.52	0.45
49:B1:1290:G:N2	49:B1:1310:U:H1'	2.32	0.45
49:B1:1373:C:OP1	67:BR:6:THR:HG22	2.17	0.45
49:B1:1547:C:O4'	49:B1:1670:C:H4'	2.17	0.45
49:B1:1589:A:O3'	69:BT:82:ARG:HD2	2.17	0.45
49:B1:1617:G:O3'	79:Bd:14:PHE:CE2	2.69	0.45
49:B1:1822:A:C2	49:B1:1823:A:N6	2.85	0.45
50:BA:38:ILE:HD13	50:BA:47:TYR:CG	2.52	0.45
50:BA:208:GLU:HB3	67:BR:81:ARG:HD3	1.98	0.45
51:BB:89:GLU:CB	51:BB:228:LEU:HD22	2.46	0.45
52:BC:252:THR:HG23	52:BC:255:LEU:HD13	1.98	0.45
53:BD:35:SER:HB2	53:BD:51:LEU:O	2.17	0.45
55:BF:62:ARG:HA	55:BF:65:GLN:NE2	2.32	0.45
55:BF:194:ASP:O	55:BF:198:ARG:HG2	2.16	0.45
56:BG:44:GLU:CB	56:BG:120:ASP:HB2	2.46	0.45
59:BJ:35:TYR:OH	59:BJ:103:GLU:O	2.29	0.45
59:BJ:52:LYS:HB3	59:BJ:52:LYS:HE2	1.73	0.45
60:BK:80:ARG:HA	60:BK:83:LEU:HB2	1.99	0.45
63:BN:58:HIS:HB2	63:BN:60:VAL:HG23	1.99	0.45
63:BN:78:LYS:C	63:BN:80:LEU:CD1	2.88	0.45
64:BO:103:ASN:CB	64:BO:142:ARG:NH1	2.65	0.45
65:BP:30:TYR:CD1	65:BP:30:TYR:N	2.85	0.45
65:BP:75:VAL:HG21	65:BP:104:GLN:CD	2.42	0.45
82:Bg:32:LEU:HB3	82:Bg:71:ILE:HD11	1.98	0.45
2:A4:13:A:O2'	2:A4:14:C:OP2	2.34	0.45
2:A4:73:U:C2'	2:A4:74:A:OP1	2.64	0.45
2:A4:90:A:H4'	11:AI:11:TYR:CD1	2.52	0.45
3:AA:10:LYS:NZ	48:A2:3658:A:OP1	2.49	0.45
3:AA:122:ASP:O	3:AA:125:LYS:HE2	2.17	0.45
3:AA:239:ALA:C	48:A2:3678:U:H5'	2.42	0.45
4:AB:262:VAL:O	48:A2:4527:C:C4'	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:211:TYR:N	5:AC:230:LEU:O	2.46	0.45
5:AC:350:ARG:O	5:AC:354:ALA:HB3	2.17	0.45
6:AD:265:ARG:O	6:AD:266:TRP:CG	2.70	0.45
8:AF:88:LYS:NZ	8:AF:88:LYS:HB3	2.31	0.45
13:AK:14:PHE:CB	48:A2:1941:A:N1	2.79	0.45
13:AK:81:HIS:HE1	13:AK:86:VAL:HG13	1.81	0.45
14:AL:94:ILE:HG23	14:AL:124:LEU:HD21	1.99	0.45
14:AL:165:LYS:CE	48:A2:505:C:OP2	2.61	0.45
19:AQ:88:ASP:HB2	19:AQ:109:ALA:N	2.32	0.45
20:AR:62:ARG:HG3	20:AR:62:ARG:HH11	1.80	0.45
21:AS:82:LEU:CD2	21:AS:82:LEU:N	2.80	0.45
21:AS:90:THR:O	21:AS:91:HIS:CG	2.70	0.45
23:AU:32:GLY:C	23:AU:34:MET:N	2.73	0.45
27:AY:9:SER:HA	48:A2:223:G:H21	1.81	0.45
28:AZ:9:LYS:HE2	28:AZ:82:PRO:HB2	1.98	0.45
28:AZ:67:LYS:HE3	48:A2:2552:A:H5"	1.99	0.45
36:Ah:46:LYS:O	36:Ah:49:VAL:HG23	2.17	0.45
37:Ai:29:ARG:CZ	37:Ai:32:ARG:HB2	2.47	0.45
45:Aq:16:ARG:HH11	45:Aq:60:VAL:CG2	2.30	0.45
45:Aq:45:ASP:HA	45:Aq:48:LYS:HB3	1.99	0.45
45:Aq:91:ASP:HB2	45:Aq:95:GLN:CB	2.47	0.45
45:Aq:125:LEU:CA	45:Aq:129:ILE:HD13	2.47	0.45
46:At:117:ILE:HD13	46:At:117:ILE:O	2.16	0.45
48:A2:287:G:O2'	48:A2:288:G:H8	2.00	0.45
48:A2:734:G:O3'	48:A2:735:G:O4'	2.35	0.45
48:A2:1750:C:H4'	48:A2:1752:A:OP2	2.17	0.45
48:A2:2419:U:H4'	48:A2:2497:G:N1	2.32	0.45
48:A2:2446:U:H4'	48:A2:2447:U:H5'	1.98	0.45
48:A2:4492:U:H2'	48:A2:4493:U:H2'	1.98	0.45
49:B1:154:U:H5'	56:BG:13:GLN:CB	2.47	0.45
49:B1:283:G:C8	49:B1:283:G:OP2	2.70	0.45
49:B1:522:A:C4'	59:BJ:131:ARG:HH22	2.30	0.45
49:B1:847:A:OP2	54:BE:16:LYS:CD	2.65	0.45
49:B1:944:A:H5"	64:BO:134:PRO:CB	2.46	0.45
49:B1:1017:U:O4'	63:BN:55:ARG:NH2	2.49	0.45
49:B1:1398:G:C4	49:B1:1398:G:O5'	2.70	0.45
49:B1:1407:U:O3'	66:BQ:71:ARG:NH2	2.50	0.45
50:BA:114:ALA:C	50:BA:116:PHE:N	2.72	0.45
54:BE:82:TYR:CD1	54:BE:83:PRO:O	2.70	0.45
59:BJ:38:ARG:HB3	59:BJ:42:GLU:OE1	2.17	0.45
59:BJ:46:VAL:HG21	59:BJ:106:LEU:HD21	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:BL:27:GLU:OE1	61:BL:29:GLY:HA3	2.17	0.45
64:BO:38:ASN:O	64:BO:68:GLU:HG3	2.17	0.45
67:BR:5:ARG:CZ	67:BR:53:TYR:HD1	2.30	0.45
67:BR:97:GLU:OE1	67:BR:117:LEU:CA	2.65	0.45
71:BV:38:GLU:OE1	71:BV:49:GLN:HB2	2.17	0.45
75:BZ:31:LYS:NZ	75:BZ:31:LYS:HB3	2.32	0.45
76:Ba:38:LYS:CD	76:Ba:71:LEU:HD12	2.41	0.45
76:Ba:46:GLU:OE1	76:Ba:46:GLU:HA	2.17	0.45
76:Ba:88:SER:H	76:Ba:91:ALA:CB	2.29	0.45
83:Bw:58:A:C8	83:Bw:58:A:C3'	2.99	0.45
1:A3:58:G:O6	38:Aj:63:ARG:NH2	2.50	0.45
1:A3:109:C:O2	1:A3:109:C:H2'	2.17	0.45
6:AD:224:SER:CB	6:AD:227:ILE:HD11	2.46	0.45
7:AE:182:ASN:OD1	7:AE:272:ARG:HA	2.17	0.45
9:AG:113:ARG:NE	48:A2:119:G:N1	2.65	0.45
10:AH:96:TYR:HD1	10:AH:96:TYR:N	2.15	0.45
13:AK:13:TYR:C	13:AK:15:LEU:H	2.25	0.45
13:AK:38:LYS:O	13:AK:40:MET:N	2.50	0.45
14:AL:79:GLU:HB3	14:AL:104:ASN:OD1	2.17	0.45
16:AN:71:ARG:CG	16:AN:94:PHE:HB2	2.46	0.45
18:AP:47:TYR:OH	18:AP:58:VAL:HA	2.15	0.45
20:AR:126:LYS:CA	20:AR:131:VAL:HG21	2.46	0.45
21:AS:173:ASN:C	48:A2:4724:A:H2	2.22	0.45
22:AT:125:TRP:CE3	22:AT:127:GLN:OE1	2.70	0.45
26:AX:106:LYS:HD3	48:A2:2758:C:OP2	2.17	0.45
27:AY:50:ARG:HB3	27:AY:115:ARG:HH21	1.81	0.45
27:AY:86:GLN:HG2	27:AY:94:THR:OG1	2.17	0.45
29:Aa:71:PRO:HB2	29:Aa:108:TYR:CD1	2.52	0.45
33:Ae:75:ARG:HB2	33:Ae:95:TYR:CD2	2.52	0.45
33:Ae:78:LEU:HD21	33:Ae:100:ALA:HB2	1.98	0.45
33:Ae:79:VAL:HG23	33:Ae:84:GLU:CB	2.46	0.45
34:Af:40:GLU:O	34:Af:42:TYR:N	2.50	0.45
34:Af:57:THR:HG21	48:A2:1281:C:P	2.57	0.45
36:Ah:95:LEU:O	36:Ah:96:ASN:CB	2.64	0.45
36:Ah:112:ARG:NH2	48:A2:258:C:H1'	2.28	0.45
37:Ai:53:TYR:HB2	37:Ai:76:ARG:HD3	1.97	0.45
38:Aj:49:TRP:HZ3	48:A2:1628:A:H1'	1.78	0.45
39:Ak:56:LEU:HA	39:Ak:59:SER:OG	2.18	0.45
42:An:16:LYS:HA	42:An:19:LYS:HE3	1.99	0.45
44:Ap:56:HIS:ND1	44:Ap:57:CYS:N	2.65	0.45
46:At:18:ILE:HD11	46:At:27:THR:OG1	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:At:98:ARG:HD2	48:A2:951:A:C5'	2.43	0.45
48:A2:31:U:O3'	48:A2:32:G:C8	2.70	0.45
48:A2:673:C:H2'	48:A2:674:C:H5"	1.99	0.45
48:A2:735:G:C3'	48:A2:736:G:H5'	2.46	0.45
48:A2:1160:U:O2	48:A2:1168:G:C2	2.70	0.45
48:A2:2597:G:O2'	48:A2:2598:G:H5'	2.17	0.45
48:A2:3585:G:C2	48:A2:3588:G:C2	3.05	0.45
48:A2:3683:A:H1'	49:B1:970:G:C5	2.52	0.45
48:A2:5019:A:C4'	48:A2:5020:G:OP1	2.56	0.45
49:B1:53:C:H4'	74:BY:108:LYS:HD3	1.99	0.45
49:B1:78:C:C2'	56:BG:175:LYS:HG2	2.47	0.45
49:B1:562:U:OP2	59:BJ:170:PRO:CB	2.65	0.45
49:B1:563:G:N7	49:B1:586:G:N2	2.65	0.45
49:B1:792:C:C2	49:B1:793:G:C8	3.05	0.45
49:B1:991:G:O2'	76:Ba:11:ALA:O	2.20	0.45
49:B1:1078:C:H2'	49:B1:1079:C:O4'	2.17	0.45
49:B1:1256:G:C6	79:Bd:30:LEU:CG	3.00	0.45
49:B1:1309:C:O4'	81:Bf:133:ALA:HA	2.16	0.45
49:B1:1397:U:O3'	49:B1:1398:G:C2	2.70	0.45
49:B1:1668:U:OP2	66:BQ:141:TYR:CZ	2.70	0.45
49:B1:1862:G:O6	76:Ba:75:VAL:HG21	2.15	0.45
49:B1:1868:U:O2'	49:B1:1869:A:H4'	2.17	0.45
54:BE:98:HIS:O	54:BE:99:PHE:CG	2.70	0.45
55:BF:23:TRP:CZ2	55:BF:108:PRO:HG3	2.49	0.45
57:BH:77:VAL:O	57:BH:80:VAL:HG12	2.16	0.45
58:BI:130:THR:C	58:BI:132:GLU:H	2.25	0.45
59:BJ:54:ARG:HB2	59:BJ:54:ARG:CZ	2.46	0.45
63:BN:34:LYS:O	63:BN:38:TYR:CD2	2.70	0.45
64:BO:142:ARG:CD	76:Ba:22:ARG:HG3	2.47	0.45
65:BP:69:PRO:C	65:BP:71:GLU:N	2.73	0.45
65:BP:125:PRO:O	65:BP:126:VAL:CB	2.65	0.45
67:BR:21:TYR:CD1	67:BR:21:TYR:O	2.70	0.45
69:BT:41:LYS:C	69:BT:42:HIS:HD2	2.25	0.45
69:BT:42:HIS:C	69:BT:43:LYS:HD3	2.42	0.45
76:Ba:42:ARG:HH21	84:Bx:39:U:C5'	2.19	0.45
83:Bv:34:G:C5	83:Bv:35:A:N7	2.85	0.45
1:A3:34:U:O2'	1:A3:35:C:C5'	2.65	0.44
1:A3:60:G:H1'	36:Ah:55:ALA:HB1	1.98	0.44
1:A3:93:C:H3'	38:Aj:72:ARG:HH11	1.82	0.44
3:AA:21:LYS:CD	48:A2:1523:C:H5"	2.47	0.44
4:AB:106:PHE:HB2	4:AB:133:TYR:CE1	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AB:244:THR:CB	48:A2:4487:C:O2'	2.64	0.44
4:AB:247:GLY:HA3	48:A2:2817:G:C5'	2.46	0.44
5:AC:233:SER:HB2	5:AC:259:LYS:NZ	2.32	0.44
7:AE:118:THR:HG23	33:Ae:92:ASN:OD1	2.16	0.44
7:AE:188:ARG:HB2	48:A2:4899:G:H5'	1.99	0.44
9:AG:161:VAL:HG13	48:A2:148:G:N1	2.33	0.44
10:AH:42:ASN:O	48:A2:4725:U:O2	2.33	0.44
13:AK:18:ILE:CA	13:AK:21:LEU:HB3	2.47	0.44
13:AK:55:MET:SD	13:AK:61:MET:CE	3.05	0.44
14:AL:28:GLN:HA	14:AL:31:ARG:HE	1.81	0.44
15:AM:89:THR:O	15:AM:93:LYS:HG3	2.17	0.44
16:AN:53:TYR:CE1	16:AN:59:TYR:HB3	2.52	0.44
16:AN:189:ARG:HH21	48:A2:28:C:H3'	1.81	0.44
17:AO:96:GLN:HE22	48:A2:425:G:H22	1.64	0.44
19:AQ:50:ARG:HE	19:AQ:138:LEU:HD21	1.81	0.44
20:AR:39:GLN:HG3	20:AR:42:ARG:NH2	2.33	0.44
20:AR:126:LYS:CE	20:AR:131:VAL:HG13	2.34	0.44
21:AS:30:MET:HG2	22:AT:151:LEU:O	2.16	0.44
21:AS:118:ARG:HH21	48:A2:2040:C:H1'	1.82	0.44
26:AX:44:PRO:CB	48:A2:4055:A:H5"	2.47	0.44
27:AY:2:LYS:NZ	27:AY:2:LYS:HB3	2.32	0.44
28:AZ:50:PRO:HG2	28:AZ:122:TYR:HE2	1.77	0.44
30:Ab:57:MET:HB2	48:A2:1794:C:H4'	1.99	0.44
33:Ae:83:LYS:O	33:Ae:86:GLU:HB2	2.17	0.44
34:Af:41:PHE:CD1	34:Af:41:PHE:O	2.70	0.44
34:Af:75:THR:HA	48:A2:940:C:H4'	1.98	0.44
45:Aq:58:ILE:CD1	45:Aq:59:THR:H	2.30	0.44
46:At:47:LYS:HB3	46:At:103:ARG:HG2	2.00	0.44
47:Au:60:ARG:CG	47:Au:171:HIS:CB	2.90	0.44
48:A2:1165:C:O2	48:A2:1166:C:C4	2.70	0.44
48:A2:1573:U:H5'	48:A2:1574:G:H5'	1.99	0.44
48:A2:1576:C:O2	48:A2:1576:C:O4'	2.35	0.44
48:A2:1953:G:H1'	48:A2:1976:G:N2	2.32	0.44
48:A2:2684:G:OP2	48:A2:2684:G:C8	2.70	0.44
48:A2:2841:G:O2'	48:A2:3595:A:H1'	2.17	0.44
48:A2:3681:G:H2'	48:A2:3682:A:C5'	2.44	0.44
48:A2:3929:G:H1'	83:Bw:19:G:C1'	2.47	0.44
48:A2:4985:C:H3'	48:A2:4986:G:H5"	2.00	0.44
48:A2:4986:G:H2'	48:A2:4987:C:O4'	2.18	0.44
48:A2:5020:G:C8	48:A2:5020:G:C3'	2.99	0.44
49:B1:364:A:N6	49:B1:397:G:C6	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:448:A:H4'	49:B1:449:A:H5'	1.98	0.44
49:B1:498:C:O5'	49:B1:498:C:H6	2.00	0.44
49:B1:857:U:H2'	49:B1:858:A:C8	2.51	0.44
49:B1:883:U:O2'	49:B1:884:C:H5'	2.17	0.44
49:B1:928:G:O2'	49:B1:929:G:C8	2.67	0.44
49:B1:952:G:N9	49:B1:975:G:N2	2.65	0.44
49:B1:1022:U:C1'	63:BN:128:TYR:CD1	3.00	0.44
49:B1:1062:A:H4'	49:B1:1853:C:O2'	2.17	0.44
49:B1:1309:C:N1	81:Bf:133:ALA:HB2	2.31	0.44
49:B1:1399:C:C6	49:B1:1399:C:OP2	2.70	0.44
49:B1:1821:U:O2'	49:B1:1822:A:H5'	2.17	0.44
53:BD:79:PHE:CB	53:BD:84:VAL:HG21	2.47	0.44
54:BE:97:GLU:O	54:BE:98:HIS:CG	2.71	0.44
58:BI:175:ILE:HG22	58:BI:177:SER:H	1.81	0.44
59:BJ:109:ARG:NH1	59:BJ:111:GLN:CD	2.71	0.44
59:BJ:112:THR:CG2	59:BJ:116:LYS:HE2	2.48	0.44
59:BJ:130:ILE:HG13	59:BJ:131:ARG:N	2.30	0.44
59:BJ:169:ARG:CD	59:BJ:173:VAL:CG2	2.78	0.44
63:BN:18:TYR:O	63:BN:18:TYR:CD2	2.70	0.44
64:BO:120:ALA:HB1	76:Ba:53:ILE:HA	1.99	0.44
65:BP:30:TYR:N	65:BP:30:TYR:HD1	2.15	0.44
65:BP:35:GLN:NE2	65:BP:35:GLN:C	2.73	0.44
67:BR:5:ARG:CZ	67:BR:53:TYR:CD1	3.01	0.44
69:BT:30:VAL:HG23	69:BT:34:VAL:CG2	2.47	0.44
70:BU:67:LYS:HG2	70:BU:78:ASP:OD2	2.17	0.44
70:BU:82:MET:HG3	79:Bd:52:PHE:CE1	2.53	0.44
83:Bw:31:A:H2'	83:Bw:32:U:H5'	1.99	0.44
1:A3:34:U:O2'	1:A3:35:C:P	2.69	0.44
4:AB:22:SER:HB2	4:AB:24:ARG:NH1	2.31	0.44
4:AB:174:ARG:HH22	48:A2:4932:C:C2'	2.29	0.44
6:AD:68:ARG:HG3	6:AD:73:MET:CG	2.47	0.44
7:AE:233:PHE:HE2	48:A2:446:A:C2'	2.31	0.44
8:AF:132:MET:CE	48:A2:1819:A:C2	2.98	0.44
10:AH:29:GLY:HA3	10:AH:84:VAL:CG2	2.47	0.44
10:AH:94:SER:HB3	10:AH:142:ASP:OD2	2.17	0.44
13:AK:58:ASN:N	13:AK:61:MET:HG2	2.32	0.44
14:AL:129:ARG:H	14:AL:129:ARG:HH11	1.64	0.44
15:AM:2:VAL:CG1	15:AM:3:PHE:CE2	3.00	0.44
17:AO:72:HIS:O	48:A2:4547:U:H5"	2.16	0.44
18:AP:18:ARG:NE	18:AP:147:GLU:HG2	2.32	0.44
19:AQ:10:ASP:CG	19:AQ:11:ARG:H	2.15	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AR:21:LYS:HD2	20:AR:52:ARG:HH12	1.81	0.44
20:AR:23:TRP:CE3	20:AR:24:LEU:O	2.70	0.44
24:AV:48:ARG:CG	24:AV:48:ARG:HH11	2.30	0.44
27:AY:74:TYR:CD2	27:AY:81:TYR:HE2	2.35	0.44
30:Ab:6:ASN:ND2	48:A2:4182:A:H5'	2.28	0.44
31:Ac:20:LEU:CD2	63:BN:44:GLY:HA3	2.47	0.44
31:Ac:34:THR:HG22	31:Ac:95:ALA:HB2	1.98	0.44
34:Af:76:ARG:HG3	34:Af:85:ARG:HD2	1.99	0.44
36:Ah:46:LYS:O	36:Ah:50:VAL:HG23	2.17	0.44
39:Ak:5:ILE:HG21	39:Ak:11:PHE:N	2.28	0.44
41:Am:78:ILE:HG23	41:Am:83:ARG:HD2	1.99	0.44
45:Aq:23:GLY:H	45:Aq:46:ILE:HG13	1.82	0.44
47:Au:28:PHE:HZ	47:Au:209:THR:OG1	1.99	0.44
47:Au:64:SER:HB2	47:Au:107:TYR:HA	1.98	0.44
47:Au:134:PHE:O	47:Au:134:PHE:CD2	2.70	0.44
48:A2:160:A:H2'	48:A2:161:G:C8	2.51	0.44
48:A2:366:A:C2	48:A2:1627:C:O4'	2.70	0.44
48:A2:494:G:O6	48:A2:498:G:C6	2.71	0.44
48:A2:905:G:C2	48:A2:906:C:OP2	2.70	0.44
48:A2:1657:C:H5"	48:A2:4339:G:OP2	2.18	0.44
48:A2:1701:A:O2'	48:A2:1702:C:H5'	2.17	0.44
48:A2:1817:G:OP2	48:A2:1817:G:C2	2.70	0.44
48:A2:1943:A:C2	48:A2:2007:A:H2	2.33	0.44
48:A2:2067:G:N1	48:A2:2247:A:N3	2.64	0.44
48:A2:2357:G:H1'	48:A2:2404:U:O2	2.17	0.44
48:A2:2530:A:C2	48:A2:2747:C:N3	2.85	0.44
48:A2:2689:C:H5"	48:A2:2689:C:C6	2.35	0.44
48:A2:2738:G:C8	48:A2:2744:A:C2	3.05	0.44
48:A2:3682:A:P	48:A2:3683:A:OP1	2.75	0.44
48:A2:4328:A:N6	48:A2:4329:G:O6	2.49	0.44
48:A2:4531:U:H2'	48:A2:4532:G:H5'	1.98	0.44
48:A2:4727:G:N2	48:A2:4826:G:C4	2.86	0.44
48:A2:4832:A:H1'	48:A2:4834:U:N3	2.31	0.44
49:B1:92:A:H2'	49:B1:446:G:N2	2.32	0.44
49:B1:158:A:H2'	49:B1:159:A:O4'	2.17	0.44
49:B1:223:C:C2	49:B1:299:A:C2	3.04	0.44
49:B1:532:C:H5"	49:B1:533:A:OP2	2.17	0.44
49:B1:561:A:H4'	59:BJ:170:PRO:CG	2.48	0.44
49:B1:617:G:C8	73:BX:67:ARG:NH1	2.86	0.44
49:B1:841:G:P	74:BY:14:THR:OG1	2.75	0.44
49:B1:907:G:H2'	49:B1:908:A:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:946:U:H4'	49:B1:1046:U:OP1	2.17	0.44
49:B1:1021:U:H5"	63:BN:128:TYR:HE1	1.77	0.44
49:B1:1375:G:H2'	49:B1:1376:A:O4'	2.18	0.44
49:B1:1780:G:H2'	49:B1:1781:A:C8	2.52	0.44
50:BA:45:GLY:O	50:BA:47:TYR:CE1	2.70	0.44
50:BA:103:PHE:CD1	50:BA:103:PHE:O	2.70	0.44
51:BB:131:ASP:CG	51:BB:181:LEU:HD11	2.41	0.44
52:BC:60:TRP:HZ2	52:BC:93:ILE:CG1	2.30	0.44
54:BE:124:CYS:HB2	54:BE:141:THR:HG23	2.00	0.44
54:BE:216:ASN:HD22	54:BE:244:ILE:HD11	1.81	0.44
59:BJ:88:ASP:C	59:BJ:90:GLY:N	2.73	0.44
59:BJ:134:HIS:O	59:BJ:159:PHE:CG	2.70	0.44
61:BL:101:ARG:HD2	73:BX:7:LEU:HA	1.98	0.44
64:BO:137:SER:C	64:BO:138:ASP:CG	2.85	0.44
68:BS:75:ARG:HG2	68:BS:75:ARG:H	1.56	0.44
73:BX:36:LEU:HD12	73:BX:42:GLY:O	2.18	0.44
74:BY:23:MET:HE3	74:BY:75:ILE:CD1	2.47	0.44
74:BY:87:PRO:CG	74:BY:90:ARG:HH21	2.30	0.44
79:Bd:36:LEU:HD23	79:Bd:36:LEU:O	2.16	0.44
4:AB:163:ILE:HG12	4:AB:182:GLU:HG2	1.99	0.44
5:AC:47:ASN:HA	5:AC:112:HIS:ND1	2.32	0.44
5:AC:112:HIS:CE1	16:AN:202:ARG:HH21	2.36	0.44
5:AC:228:THR:HG21	5:AC:239:LYS:CG	2.46	0.44
6:AD:235:MET:O	6:AD:239:MET:CA	2.65	0.44
7:AE:125:LEU:C	7:AE:126:LEU:CG	2.90	0.44
7:AE:190:HIS:CD2	48:A2:700:C:H4'	2.52	0.44
12:AJ:159:LYS:HE3	12:AJ:159:LYS:CA	2.46	0.44
13:AK:13:TYR:C	13:AK:15:LEU:N	2.76	0.44
15:AM:56:GLN:NE2	48:A2:4827:U:C6	2.85	0.44
16:AN:194:ARG:NE	48:A2:79:C:OP1	2.51	0.44
17:AO:17:GLY:HA3	48:A2:2033:G:O3'	2.18	0.44
21:AS:93:MET:HE1	21:AS:117:HIS:CE1	2.52	0.44
22:AT:118:GLU:CD	22:AT:122:LYS:HD3	2.42	0.44
29:Aa:126:ALA:HB3	29:Aa:129:PHE:CZ	2.53	0.44
30:Ab:46:ALA:O	30:Ab:47:LYS:C	2.58	0.44
44:Ap:56:HIS:CE1	44:Ap:57:CYS:O	2.70	0.44
45:Aq:22:VAL:HA	45:Aq:46:ILE:HG21	1.85	0.44
45:Aq:46:ILE:HD12	45:Aq:46:ILE:HA	1.49	0.44
47:Au:37:SER:HG	48:A2:4024:C:C3'	2.21	0.44
48:A2:61:A:H8	48:A2:61:A:O5'	2.00	0.44
48:A2:148:G:H3'	48:A2:149:U:H5'	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:382:A:H1'	48:A2:397:G:N2	2.32	0.44
48:A2:414:A:C2	48:A2:2335:U:O4'	2.70	0.44
48:A2:445:C:H5'	48:A2:446:A:O5'	2.18	0.44
48:A2:632:G:H2'	48:A2:633:U:H5"	1.99	0.44
48:A2:1164:C:N4	48:A2:1167:A:C2'	2.79	0.44
48:A2:1225:G:N3	48:A2:1225:G:P	2.90	0.44
48:A2:1520:U:C4'	48:A2:1611:G:H5'	2.47	0.44
48:A2:1944:C:H5"	48:A2:1945:A:OP1	2.17	0.44
48:A2:2026:G:OP2	48:A2:4423:C:H4'	2.16	0.44
48:A2:4016:A:C8	48:A2:4016:A:OP1	2.70	0.44
48:A2:4031:G:N2	48:A2:4032:A:C2	2.85	0.44
49:B1:74:G:H2'	49:B1:75:G:O4'	2.18	0.44
49:B1:329:G:N2	49:B1:330:G:H1'	2.33	0.44
49:B1:491:C:OP2	74:BY:104:ARG:CD	2.65	0.44
49:B1:643:A:H4'	49:B1:644:G:O5'	2.17	0.44
49:B1:644:G:O2'	49:B1:645:C:C6	2.66	0.44
49:B1:802:A:C8	49:B1:802:A:O5'	2.70	0.44
49:B1:942:G:H21	64:BO:137:SER:HB2	1.81	0.44
49:B1:977:C:C5'	51:BB:66:VAL:HG21	2.47	0.44
49:B1:1291:A:O2'	81:Bf:140:TYR:HE1	1.88	0.44
49:B1:1293:A:C2	81:Bf:135:HIS:NE2	2.85	0.44
49:B1:1417:C:H2'	49:B1:1418:C:O4'	2.17	0.44
49:B1:1598:G:C8	75:BZ:81:GLY:CA	3.01	0.44
49:B1:1605:G:C6	49:B1:1606:G:N1	2.86	0.44
49:B1:1608:U:C5'	68:BS:130:ARG:NH1	2.80	0.44
49:B1:1645:C:H5'	66:BQ:138:ARG:O	2.16	0.44
50:BA:16:LEU:HD13	50:BA:16:LEU:C	2.43	0.44
50:BA:126:ASP:OD1	50:BA:128:ARG:HB2	2.18	0.44
53:BD:142:LEU:CD1	53:BD:150:MET:CG	2.95	0.44
54:BE:82:TYR:CE1	54:BE:83:PRO:O	2.70	0.44
54:BE:98:HIS:CB	54:BE:114:ILE:O	2.64	0.44
54:BE:99:PHE:HA	54:BE:112:HIS:O	2.18	0.44
55:BF:44:LYS:O	55:BF:45:TYR:CG	2.70	0.44
59:BJ:29:LEU:HD23	59:BJ:40:LYS:CE	2.40	0.44
60:BK:90:VAL:HB	60:BK:95:ARG:HB2	1.99	0.44
61:BL:17:PHE:CE1	61:BL:19:ASN:O	2.70	0.44
67:BR:21:TYR:CG	67:BR:71:ILE:CG2	2.91	0.44
67:BR:24:LEU:HD13	67:BR:54:VAL:CG1	2.47	0.44
76:Ba:42:ARG:HB3	76:Ba:42:ARG:NH1	2.33	0.44
82:Bg:19:THR:O	82:Bg:288:SER:HB2	2.18	0.44
82:Bg:302:TYR:OH	82:Bg:310:TRP:HH2	2.01	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A3:80:A:H2'	1:A3:82:A:C2	2.52	0.44
1:A3:112:G:O3'	48:A2:2423:U:O2'	2.34	0.44
2:A4:65:G:O6	2:A4:66:G:C2	2.70	0.44
5:AC:289:LEU:CD1	5:AC:293:LEU:HD11	2.47	0.44
6:AD:46:THR:HG21	48:A2:1800:G:H4'	1.99	0.44
6:AD:224:SER:HB2	6:AD:227:ILE:HD11	1.98	0.44
7:AE:203:ILE:O	7:AE:206:VAL:CB	2.65	0.44
7:AE:266:GLN:HE22	48:A2:4888:C:H5'	1.82	0.44
8:AF:132:MET:HE1	48:A2:1819:A:C2	2.52	0.44
9:AG:58:PRO:HB2	9:AG:60:TYR:CE1	2.52	0.44
11:AI:19:LYS:HG3	11:AI:26:VAL:HG11	1.99	0.44
12:AJ:159:LYS:HE3	12:AJ:159:LYS:C	2.41	0.44
13:AK:32:ALA:C	13:AK:85:ASN:CB	2.90	0.44
13:AK:34:ASN:CA	48:A2:1950:G:H5'	2.40	0.44
13:AK:57:LYS:HB3	13:AK:59:THR:HG1	1.81	0.44
14:AL:56:ARG:HG3	14:AL:73:GLY:O	2.18	0.44
14:AL:146:LEU:HD12	36:Ah:122:LYS:HG2	1.99	0.44
14:AL:160:VAL:O	14:AL:161:TYR:CD1	2.70	0.44
16:AN:176:LYS:O	48:A2:67:C:H5'	2.17	0.44
18:AP:18:ARG:CD	18:AP:147:GLU:HG2	2.47	0.44
19:AQ:48:LEU:HD22	19:AQ:48:LEU:O	2.18	0.44
19:AQ:79:THR:HG22	19:AQ:99:LYS:HD3	1.99	0.44
21:AS:93:MET:CG	48:A2:1933:G:H4'	2.30	0.44
22:AT:31:MET:O	22:AT:32:ARG:CB	2.65	0.44
25:AW:77:LYS:HG3	25:AW:78:PHE:N	2.33	0.44
32:Ad:26:THR:HG23	32:Ad:85:ARG:HH11	1.83	0.44
33:Ae:33:ARG:NE	48:A2:1286:A:N7	2.61	0.44
38:Aj:18:LEU:HD23	38:Aj:25:LYS:H	1.81	0.44
46:At:15:SER:C	46:At:16:PHE:CG	2.94	0.44
46:At:85:ASN:ND2	48:A2:682:U:H4'	2.33	0.44
47:Au:86:ASP:C	47:Au:88:GLU:N	2.75	0.44
48:A2:86:U:C4	48:A2:97:G:N2	2.84	0.44
48:A2:135:G:O5'	48:A2:135:G:C8	2.70	0.44
48:A2:149:U:H1'	48:A2:150:G:N2	2.33	0.44
48:A2:219:C:O4'	48:A2:219:C:O2	2.35	0.44
48:A2:456:G:C2'	48:A2:457:A:O5'	2.66	0.44
48:A2:1165:C:C6	48:A2:1165:C:OP1	2.70	0.44
48:A2:1337:A:H4'	48:A2:1338:G:O5'	2.17	0.44
48:A2:1798:C:O2	48:A2:1798:C:H2'	2.17	0.44
48:A2:2249:G:O5'	48:A2:2249:G:C8	2.70	0.44
48:A2:2504:U:H2'	48:A2:2506:A:OP2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:2593:C:O2'	48:A2:2594:C:H5'	2.17	0.44
48:A2:3668:U:H3'	48:A2:3669:G:H5'	1.99	0.44
48:A2:3726:G:N2	83:Bv:12:U:O2'	2.51	0.44
48:A2:4007:C:H2'	48:A2:4008:C:C6	2.53	0.44
48:A2:4615:C:O5'	48:A2:4615:C:H6	2.01	0.44
49:B1:59:U:C5'	49:B1:501:C:H4'	2.48	0.44
49:B1:861:A:C4'	72:BW:107:SER:O	2.60	0.44
49:B1:1016:U:H4'	49:B1:1017:U:OP2	2.18	0.44
49:B1:1105:G:N3	49:B1:1105:G:H2'	2.32	0.44
49:B1:1298:G:OP1	49:B1:1298:G:N2	2.50	0.44
49:B1:1395:C:H2'	49:B1:1396:A:O4'	2.17	0.44
49:B1:1497:G:C8	60:BK:62:PHE:CD1	3.06	0.44
49:B1:1547:C:H1'	49:B1:1670:C:H4'	1.99	0.44
49:B1:1642:U:H2'	49:B1:1643:U:C6	2.53	0.44
49:B1:1784:G:C5	49:B1:1785:C:C5	3.05	0.44
49:B1:1784:G:C4	49:B1:1785:C:C4	3.04	0.44
49:B1:1862:G:N1	76:Ba:75:VAL:HG23	2.33	0.44
49:B1:1866:A:O2'	76:Ba:96:THR:HA	2.18	0.44
50:BA:208:GLU:CA	50:BA:211:GLU:HB3	2.47	0.44
52:BC:178:HIS:HB3	52:BC:200:ARG:HE	1.82	0.44
59:BJ:29:LEU:CD2	59:BJ:40:LYS:NZ	2.80	0.44
60:BK:3:MET:CB	60:BK:4:PRO:HD2	2.47	0.44
61:BL:153:LYS:O	61:BL:155:PHE:CD2	2.70	0.44
62:BM:114:TYR:OH	62:BM:124:ILE:HG21	2.17	0.44
68:BS:48:ALA:C	68:BS:49:ASP:CG	2.85	0.44
1:A3:79:G:H8	1:A3:79:G:O5'	2.01	0.44
2:A4:95:C:O4'	8:AF:229:GLU:CG	2.66	0.44
5:AC:52:TYR:CE1	5:AC:53:ALA:O	2.70	0.44
5:AC:114:ARG:O	48:A2:1489:C:H4'	2.17	0.44
6:AD:150:LEU:HD11	48:A2:4242:A:H62	1.82	0.44
6:AD:260:GLU:HG2	6:AD:261:VAL:N	2.33	0.44
8:AF:111:LEU:HD22	48:A2:1820:U:O2	2.17	0.44
8:AF:184:ILE:HA	8:AF:189:ASP:OD2	2.18	0.44
10:AH:64:ARG:NH1	10:AH:64:ARG:CG	2.73	0.44
13:AK:17:ILE:O	13:AK:21:LEU:HB2	2.17	0.44
16:AN:200:LEU:HB3	16:AN:204:ARG:NH2	2.33	0.44
18:AP:23:ARG:O	18:AP:86:LYS:HE2	2.17	0.44
20:AR:169:ALA:C	20:AR:172:ARG:CG	2.86	0.44
23:AU:52:LYS:HB3	23:AU:52:LYS:HZ2	1.79	0.44
23:AU:56:LEU:HD11	23:AU:63:ILE:HD11	1.99	0.44
24:AV:107:ASN:HD21	24:AV:111:GLU:HB2	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AW:98:PRO:CD	25:AW:99:GLU:H	2.16	0.44
26:AX:77:ILE:HD13	26:AX:77:ILE:C	2.43	0.44
28:AZ:24:VAL:HG22	28:AZ:44:ALA:O	2.17	0.44
28:AZ:73:LYS:HB2	28:AZ:75:TYR:CE2	2.53	0.44
28:AZ:95:VAL:CG1	28:AZ:113:GLU:HG3	2.43	0.44
33:Ae:109:LYS:O	33:Ae:112:VAL:HG12	2.18	0.44
34:Af:61:GLY:C	34:Af:63:LYS:N	2.69	0.44
34:Af:78:HIS:CE1	48:A2:2048:C:H5"	2.53	0.44
40:Al:44:TRP:CH2	40:Al:45:ARG:HD3	2.53	0.44
43:Ao:86:LYS:HD2	48:A2:4292:G:O6	2.18	0.44
43:Ao:106:PHE:CD1	43:Ao:106:PHE:O	2.70	0.44
46:At:15:SER:OG	46:At:16:PHE:CE1	2.70	0.44
47:Au:34:LEU:HB2	47:Au:169:VAL:CG1	2.48	0.44
48:A2:190:G:N1	48:A2:244:G:N1	2.66	0.44
48:A2:205:A:C2'	48:A2:205:A:N3	2.80	0.44
48:A2:1741:G:C5	48:A2:1742:G:C8	3.05	0.44
48:A2:1930:U:O2	48:A2:1930:U:O4'	2.36	0.44
48:A2:2288:G:H2'	48:A2:2289:C:C6	2.52	0.44
48:A2:2607:U:O2	48:A2:2607:U:H2'	2.17	0.44
48:A2:4700:C:OP2	48:A2:4700:C:H6	2.00	0.44
49:B1:305:U:O2'	58:BI:43:ILE:HD12	2.18	0.44
49:B1:869:A:C2	57:BH:114:GLN:NE2	2.85	0.44
49:B1:1201:U:O4'	49:B1:1357:A:C2	2.71	0.44
49:B1:1519:U:C6	49:B1:1623:A:N6	2.86	0.44
50:BA:175:TRP:HB2	50:BA:202:TYR:HD2	1.82	0.44
51:BB:70:SER:HA	51:BB:83:LYS:CA	2.46	0.44
51:BB:183:GLU:CA	51:BB:186:ASN:ND2	2.75	0.44
53:BD:32:ASP:HB3	53:BD:57:ASN:HB3	1.98	0.44
54:BE:71:LYS:HG3	54:BE:91:SER:O	2.17	0.44
55:BF:61:PHE:CD2	78:Bc:51:ARG:HD3	2.53	0.44
56:BG:142:ARG:CB	56:BG:147:LEU:HD21	2.47	0.44
57:BH:146:VAL:HG12	72:BW:42:MET:SD	2.58	0.44
58:BI:56:ARG:CG	58:BI:56:ARG:NH1	2.73	0.44
64:BO:35:ALA:CB	64:BO:112:ALA:HB2	2.48	0.44
65:BP:30:TYR:HE1	65:BP:31:GLU:OE1	2.01	0.44
65:BP:65:LYS:HD2	65:BP:66:GLU:OE2	2.18	0.44
67:BR:23:ARG:HG2	82:Bg:194:TYR:CE2	2.53	0.44
67:BR:95:ILE:O	67:BR:96:ILE:HD12	2.17	0.44
68:BS:74:PRO:CG	68:BS:84:LEU:CD1	2.77	0.44
69:BT:9:VAL:HG11	69:BT:138:VAL:HG11	1.99	0.44
70:BU:48:LEU:HD13	70:BU:93:SER:OG	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:BZ:99:LEU:O	75:BZ:99:LEU:CD1	2.51	0.44
1:A3:21:C:H5'	48:A2:2312:G:O5'	2.18	0.44
1:A3:75:G:O2'	40:Al:29:MET:HE3	2.17	0.44
1:A3:135:C:OP2	26:AX:63:LYS:CE	2.57	0.44
3:AA:241:ARG:HA	48:A2:3678:U:C1'	2.48	0.44
4:AB:217:ILE:HG23	4:AB:348:ARG:O	2.17	0.44
5:AC:97:ARG:NH1	48:A2:348:U:C4'	2.68	0.44
5:AC:150:LEU:CG	46:At:71:ARG:CA	2.62	0.44
5:AC:212:ASN:CG	5:AC:255:SER:HG	2.25	0.44
6:AD:286:SER:C	48:A2:1163:C:H5'	2.42	0.44
13:AK:14:PHE:HB2	48:A2:1941:A:C2	2.53	0.44
14:AL:165:LYS:HD3	48:A2:503:A:O2'	2.18	0.44
14:AL:174:LYS:HG2	14:AL:175:ASN:H	1.82	0.44
16:AN:146:PRO:HA	16:AN:149:GLN:CG	2.48	0.44
18:AP:27:LYS:HD3	48:A2:2340:G:OP2	2.18	0.44
18:AP:73:ALA:HB1	18:AP:78:TRP:O	2.18	0.44
19:AQ:12:LYS:C	19:AQ:13:VAL:CG1	2.86	0.44
19:AQ:78:LYS:HE3	48:A2:1413:C:C5'	2.47	0.44
20:AR:149:LYS:HA	20:AR:152:LYS:HG3	1.98	0.44
21:AS:89:GLY:O	21:AS:91:HIS:CD2	2.70	0.44
22:AT:54:HIS:HB3	22:AT:57:TYR:HD2	1.83	0.44
24:AV:15:ARG:HB2	48:A2:4580:G:H5"	1.98	0.44
29:Aa:25:HIS:HD2	48:A2:1321:G:C2	2.36	0.44
31:Ac:14:ILE:O	31:Ac:18:LEU:HG	2.18	0.44
34:Af:62:GLY:O	34:Af:63:LYS:HG2	2.16	0.44
36:Ah:5:LYS:O	36:Ah:6:ALA:C	2.61	0.44
43:Ao:44:LYS:CE	43:Ao:52:THR:HB	2.47	0.44
47:Au:60:ARG:HD2	47:Au:171:HIS:CB	2.47	0.44
47:Au:74:CYS:HB2	47:Au:84:HIS:CG	2.53	0.44
47:Au:194:LEU:HD22	47:Au:195:LYS:N	2.32	0.44
48:A2:48:G:O2'	48:A2:49:U:H6	1.99	0.44
48:A2:132:G:OP2	48:A2:132:G:C4	2.70	0.44
48:A2:215:A:H4'	48:A2:216:G:H5"	1.98	0.44
48:A2:375:U:C4'	48:A2:408:C:H2'	2.47	0.44
48:A2:648:C:O2'	48:A2:649:C:O5'	2.32	0.44
48:A2:2344:C:H5'	48:A2:2345:A:H5"	1.99	0.44
48:A2:2568:C:H2'	48:A2:2569:G:H5'	1.99	0.44
48:A2:3694:A:H2'	48:A2:3695:A:O5'	2.18	0.44
48:A2:3927:G:OP2	48:A2:3927:G:N9	2.51	0.44
48:A2:3929:G:N2	83:Bw:19:G:C2	2.83	0.44
48:A2:4031:G:H2'	48:A2:4032:A:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:103:A:C5	49:B1:356:C:C4	3.06	0.44
49:B1:563:G:OP2	49:B1:563:G:C8	2.70	0.44
49:B1:598:G:H2'	49:B1:599:A:H8	1.82	0.44
49:B1:659:G:N2	73:BX:17:ARG:CZ	2.81	0.44
49:B1:952:G:H4'	64:BO:51:GLU:CD	2.43	0.44
50:BA:112:ILE:HG23	50:BA:113:GLN:H	1.81	0.44
50:BA:212:LYS:C	50:BA:215:GLN:HB3	2.41	0.44
51:BB:73:ASP:O	51:BB:76:ASN:N	2.51	0.44
51:BB:77:ASP:O	51:BB:78:GLU:OE2	2.35	0.44
54:BE:97:GLU:O	54:BE:98:HIS:CD2	2.70	0.44
56:BG:107:SER:C	56:BG:108:VAL:HG23	2.42	0.44
56:BG:137:ARG:HD2	56:BG:140:ARG:NH1	2.32	0.44
65:BP:20:VAL:HG23	65:BP:25:LEU:HD21	2.00	0.44
67:BR:3:ARG:CG	67:BR:4:VAL:N	2.70	0.44
70:BU:93:SER:HB3	70:BU:97:ILE:HB	2.00	0.44
4:AB:48:GLY:CA	4:AB:81:THR:HG22	2.48	0.44
4:AB:120:LYS:HG3	48:A2:4926:A:H5'	1.99	0.44
4:AB:292:LEU:HD22	4:AB:292:LEU:HA	1.74	0.44
5:AC:45:ARG:HH12	48:A2:2275:G:H4'	1.83	0.44
5:AC:94:ASN:HD21	5:AC:102:PHE:CA	2.31	0.44
5:AC:206:GLY:N	5:AC:226:GLY:CA	2.81	0.44
6:AD:60:ILE:CG1	6:AD:80:ALA:HB2	2.47	0.44
8:AF:34:ARG:HH11	48:A2:1421:U:H1'	1.79	0.44
11:AI:38:ARG:HD2	11:AI:41:ALA:HB2	2.00	0.44
11:AI:102:MET:SD	48:A2:4403:A:C5'	3.04	0.44
13:AK:80:PRO:O	13:AK:83:ARG:NH2	2.51	0.44
14:AL:16:LYS:CG	14:AL:17:ASP:H	2.31	0.44
14:AL:63:THR:HB	29:Aa:66:ASN:OD1	2.18	0.44
15:AM:120:ASN:ND2	48:A2:4837:C:OP2	2.50	0.44
16:AN:152:THR:HG21	36:Ah:95:LEU:HD21	1.98	0.44
17:AO:37:ARG:NE	17:AO:108:ILE:HD11	2.33	0.44
19:AQ:12:LYS:HD3	19:AQ:14:ARG:CG	2.48	0.44
19:AQ:174:PHE:C	19:AQ:175:GLU:CG	2.85	0.44
20:AR:144:LYS:NZ	20:AR:144:LYS:CB	2.77	0.44
25:AW:83:THR:HG21	56:BG:132:ARG:HG3	1.99	0.44
27:AY:54:GLU:HB2	27:AY:108:ARG:HB2	2.00	0.44
34:Af:80:ASN:CG	48:A2:2046:G:HO2'	2.22	0.44
36:Ah:59:THR:O	36:Ah:63:GLN:HG2	2.17	0.44
37:Ai:26:HIS:ND1	48:A2:158:G:H1'	2.32	0.44
38:Aj:20:ARG:H	38:Aj:20:ARG:HG3	1.38	0.44
43:Ao:10:THR:HG21	43:Ao:81:ARG:NH2	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:At:32:LEU:HD22	46:At:110:ALA:HA	2.00	0.44
47:Au:110:PHE:HB3	47:Au:135:PRO:HB3	2.00	0.44
48:A2:30:C:H2'	48:A2:31:U:C6	2.52	0.44
48:A2:227:G:H3'	48:A2:228:U:H5"	1.94	0.44
48:A2:467:C:H2'	48:A2:468:C:C6	2.52	0.44
48:A2:923:C:OP1	48:A2:923:C:C6	2.71	0.44
48:A2:925:C:H1'	48:A2:926:G:C8	2.52	0.44
48:A2:1753:U:H2'	48:A2:1754:C:O4'	2.16	0.44
48:A2:2525:G:OP2	48:A2:2525:G:H8	2.01	0.44
48:A2:2684:G:N2	48:A2:2691:G:C2	2.86	0.44
48:A2:3929:G:O6	48:A2:4016:A:N1	2.51	0.44
48:A2:4663:A:C2'	48:A2:4664:G:H5'	2.47	0.44
48:A2:4705:G:H8	48:A2:4705:G:OP2	1.99	0.44
48:A2:4852:A:H4'	48:A2:4853:C:O4'	2.18	0.44
49:B1:59:U:H4'	49:B1:501:C:H4'	1.99	0.44
49:B1:92:A:C6	49:B1:446:G:C6	3.06	0.44
49:B1:185:G:C2	49:B1:186:C:C2	3.06	0.44
49:B1:316:G:C6	49:B1:335:G:N1	2.86	0.44
49:B1:560:A:C4'	49:B1:561:A:N7	2.72	0.44
49:B1:643:A:OP1	59:BJ:38:ARG:NH1	2.51	0.44
49:B1:658:U:C1'	73:BX:17:ARG:NH2	2.80	0.44
49:B1:693:A:H2	49:B1:737:G:C6	2.31	0.44
49:B1:696:G:C8	49:B1:696:G:OP2	2.70	0.44
49:B1:1011:A:H2'	49:B1:1012:A:O4'	2.17	0.44
49:B1:1017:U:P	63:BN:62:GLN:OE1	2.76	0.44
49:B1:1397:U:H4'	49:B1:1398:G:H21	1.75	0.44
49:B1:1557:C:H3'	49:B1:1557:C:O2	2.18	0.44
49:B1:1602:U:C4	49:B1:1604:G:C8	3.06	0.44
50:BA:117:ARG:C	50:BA:119:PRO:HD3	2.42	0.44
50:BA:214:GLU:CD	50:BA:214:GLU:C	2.86	0.44
51:BB:44:ILE:CD1	51:BB:74:LEU:HD21	2.47	0.44
53:BD:116:ARG:CD	53:BD:152:PHE:CZ	2.93	0.44
54:BE:213:ALA:HB2	54:BE:242:LYS:CD	2.47	0.44
56:BG:7:PHE:HB2	56:BG:10:THR:HB	1.99	0.44
59:BJ:35:TYR:CD1	59:BJ:106:LEU:O	2.71	0.44
59:BJ:138:ARG:HA	59:BJ:156:HIS:CB	2.42	0.44
61:BL:11:GLN:CG	61:BL:12:LYS:N	2.80	0.44
61:BL:40:ILE:HD12	61:BL:143:LEU:CD1	2.48	0.44
64:BO:84:ARG:HD2	64:BO:84:ARG:HA	1.78	0.44
66:BQ:15:ARG:HA	66:BQ:19:ALA:O	2.17	0.44
66:BQ:58:LEU:CD2	66:BQ:108:ILE:CD1	2.93	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:BQ:62:ARG:HG2	66:BQ:92:LEU:HD12	1.85	0.44
72:BW:105:THR:HB	72:BW:124:LYS:HB2	2.00	0.44
73:BX:41:PHE:HZ	73:BX:102:VAL:HG23	1.82	0.44
74:BY:8:ARG:HH22	74:BY:68:LYS:HE2	1.82	0.44
74:BY:107:ARG:O	74:BY:111:LYS:HG3	2.18	0.44
76:Ba:71:LEU:HD21	76:Ba:73:TYR:CE1	2.52	0.44
82:Bg:181:ASN:ND2	82:Bg:183:LYS:HD2	2.33	0.44
82:Bg:282:GLU:HB3	82:Bg:284:PRO:HD2	2.00	0.44
1:A3:86:U:O4	36:Ah:8:ASP:HB2	2.18	0.44
2:A4:26:C:H2'	2:A4:27:G:O4'	2.18	0.44
3:AA:70:LYS:NZ	3:AA:72:ARG:NH2	2.66	0.44
4:AB:15:GLY:CA	48:A2:4550:U:O4'	2.66	0.44
4:AB:293:ILE:CD1	4:AB:296:GLY:HA3	2.48	0.44
5:AC:221:PHE:C	5:AC:223:ASN:N	2.76	0.44
5:AC:289:LEU:HB3	46:At:4:HIS:NE2	2.33	0.44
6:AD:150:LEU:CD1	48:A2:4242:A:N6	2.80	0.44
7:AE:116:TYR:N	7:AE:116:TYR:CD1	2.85	0.44
7:AE:123:ARG:NH1	7:AE:124:LYS:CB	2.73	0.44
8:AF:111:LEU:O	48:A2:1821:G:H5'	2.18	0.44
8:AF:115:ARG:HH22	48:A2:1822:C:H5'	1.81	0.44
10:AH:174:LYS:HG2	48:A2:4439:A:O2'	2.18	0.44
12:AJ:119:TYR:OH	12:AJ:124:GLY:HA2	2.18	0.44
13:AK:52:VAL:HG22	13:AK:90:PHE:O	2.18	0.44
21:AS:171:ARG:HG2	48:A2:4724:A:H61	1.82	0.44
27:AY:44:VAL:HG11	27:AY:119:LEU:HD11	1.98	0.44
28:AZ:133:LYS:NZ	28:AZ:133:LYS:HB3	2.33	0.44
29:Aa:9:ARG:CD	48:A2:2323:U:N3	2.78	0.44
34:Af:41:PHE:O	34:Af:41:PHE:CG	2.70	0.44
38:Aj:4:GLY:HA3	48:A2:1583:A:OP2	2.18	0.44
45:Aq:30:PRO:O	45:Aq:32:ILE:O	2.36	0.44
45:Aq:125:LEU:HD12	45:Aq:126:SER:H	1.83	0.44
46:At:63:VAL:HG22	46:At:79:ARG:HB3	1.99	0.44
46:At:98:ARG:HD3	46:At:107:ARG:NH2	2.33	0.44
48:A2:133:C:C5	48:A2:135:G:C5	3.06	0.44
48:A2:412:A:C5'	48:A2:2289:C:O2'	2.66	0.44
48:A2:412:A:H5'	48:A2:2289:C:O2'	2.17	0.44
48:A2:1165:C:C6	48:A2:1165:C:OP2	2.70	0.44
48:A2:1534:G:H1'	48:A2:1556:G:N2	2.33	0.44
48:A2:2037:G:OP2	48:A2:2037:G:H2'	2.18	0.44
48:A2:2610:U:H6	48:A2:2610:U:O5'	2.00	0.44
48:A2:2747:C:O2'	48:A2:2748:U:H2'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:3618:A:OP2	48:A2:3800:G:H5'	2.18	0.44
48:A2:3931:A:H2'	48:A2:3932:G:O4'	2.18	0.44
48:A2:4110:C:O5'	48:A2:4110:C:C6	2.70	0.44
49:B1:96:C:OP2	59:BJ:2:PRO:HG3	2.18	0.44
49:B1:163:U:OP1	56:BG:85:ARG:HB3	2.17	0.44
49:B1:190:G:H1'	49:B1:210:U:O4	2.18	0.44
49:B1:887:U:C6	49:B1:888:U:C5	3.06	0.44
49:B1:980:A:H2'	49:B1:981:A:C8	2.53	0.44
49:B1:986:G:O6	49:B1:987:A:C6	2.70	0.44
49:B1:1223:A:OP1	55:BF:79:HIS:N	2.37	0.44
49:B1:1274:G:H5'	60:BK:47:LYS:CE	2.47	0.44
49:B1:1543:U:C2'	66:BQ:77:HIS:HE1	2.31	0.44
49:B1:1585:U:H3'	49:B1:1586:U:H5'	1.99	0.44
49:B1:1752:C:C2	49:B1:1781:A:C2	3.06	0.44
51:BB:189:ILE:N	51:BB:190:PRO:HD2	2.33	0.44
53:BD:106:ARG:HH22	53:BD:173:ARG:HD2	1.82	0.44
54:BE:92:ILE:HG22	54:BE:95:THR:N	2.33	0.44
54:BE:98:HIS:O	54:BE:99:PHE:CD1	2.70	0.44
58:BI:188:TYR:CE2	58:BI:194:GLU:OE1	2.71	0.44
62:BM:68:LEU:HD23	81:Bf:114:ILE:HD13	2.00	0.44
63:BN:54:LEU:HA	63:BN:58:HIS:CD2	2.52	0.44
67:BR:96:ILE:CG2	67:BR:97:GLU:N	2.81	0.44
70:BU:50:VAL:CG1	70:BU:91:LEU:CD2	2.93	0.44
73:BX:137:LYS:N	73:BX:137:LYS:CE	2.80	0.44
75:BZ:48:VAL:CG2	75:BZ:80:ARG:CZ	2.93	0.44
81:Bf:126:CYS:HG	81:Bf:144:CYS:HB3	1.80	0.44
81:Bf:135:HIS:CG	81:Bf:136:PHE:H	2.36	0.44
82:Bg:32:LEU:CB	82:Bg:71:ILE:HD11	2.48	0.44
83:Bv:71:G:O2'	83:Bv:72:C:H5'	2.18	0.44
3:AA:61:VAL:HG11	3:AA:63:PHE:CZ	2.53	0.44
4:AB:84:MET:O	4:AB:205:VAL:N	2.50	0.44
5:AC:317:ASN:HA	5:AC:318:PRO:HD3	1.88	0.44
7:AE:173:LEU:HD21	7:AE:191:GLN:CA	2.48	0.44
8:AF:93:ILE:HD13	8:AF:213:LEU:HD12	2.00	0.44
9:AG:86:ALA:CB	9:AG:185:LYS:HG3	2.48	0.44
12:AJ:159:LYS:HE3	12:AJ:159:LYS:HA	2.00	0.44
13:AK:104:ALA:O	13:AK:106:LYS:N	2.51	0.44
16:AN:146:PRO:HG2	36:Ah:104:THR:HB	1.98	0.44
18:AP:124:LYS:HB2	18:AP:141:SER:O	2.18	0.44
25:AW:60:LYS:N	25:AW:60:LYS:HD2	2.31	0.44
25:AW:89:ASP:O	25:AW:93:LYS:HG3	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Ae:8:VAL:HG13	48:A2:693:U:H5'	1.97	0.44
35:Ag:40:LYS:HD2	35:Ag:52:ARG:CZ	2.48	0.44
36:Ah:43:LYS:O	36:Ah:46:LYS:HB3	2.17	0.44
39:Ak:9:LYS:HA	39:Ak:9:LYS:HD2	1.81	0.44
41:Am:117:HIS:HB2	48:A2:1927:G:O2'	2.18	0.44
44:Ap:3:LYS:HE3	44:Ap:6:LYS:HA	1.99	0.44
45:Aq:104:ILE:HD13	45:Aq:105:THR:H	1.83	0.44
47:Au:1:MET:HG2	47:Au:2:SER:N	2.32	0.44
47:Au:7:ARG:HA	47:Au:10:LEU:HD12	2.00	0.44
47:Au:12:GLU:O	47:Au:16:GLU:HG3	2.17	0.44
47:Au:28:PHE:CD1	47:Au:28:PHE:O	2.71	0.44
47:Au:28:PHE:CZ	47:Au:209:THR:OG1	2.70	0.44
48:A2:117:C:N3	48:A2:118:C:C4	2.86	0.44
48:A2:438:G:H2'	48:A2:439:U:C6	2.53	0.44
48:A2:677:G:C8	48:A2:677:G:C4'	3.00	0.44
48:A2:1247:C:H2'	48:A2:1248:G:H8	1.83	0.44
48:A2:1256:G:C2	48:A2:1257:A:OP2	2.70	0.44
48:A2:1337:A:N7	48:A2:1485:A:C6	2.85	0.44
48:A2:1721:G:N3	48:A2:1724:A:N6	2.66	0.44
48:A2:1786:A:N6	48:A2:1815:U:H1'	2.33	0.44
48:A2:2067:G:C6	48:A2:2247:A:H2	2.32	0.44
48:A2:2427:G:C6	48:A2:2428:A:C6	3.05	0.44
48:A2:2823:A:H5"	48:A2:2824:A:OP1	2.18	0.44
48:A2:4110:C:C2'	48:A2:4111:C:C6	2.93	0.44
48:A2:4640:G:O2'	48:A2:4641:G:H5"	2.18	0.44
49:B1:289:G:H2'	49:B1:290:U:C6	2.53	0.44
49:B1:551:U:OP1	80:Be:39:ASN:CB	2.66	0.44
49:B1:953:C:H1'	64:BO:52:THR:HB	1.99	0.44
49:B1:1201:U:H2'	49:B1:1202:U:C6	2.53	0.44
49:B1:1314:U:N3	60:BK:2:LEU:CA	2.78	0.44
49:B1:1314:U:C5	60:BK:2:LEU:HD23	2.51	0.44
49:B1:1416:C:H2'	69:BT:3:GLY:HA2	2.00	0.44
49:B1:1620:A:N1	49:B1:1624:U:O2	2.51	0.44
50:BA:108:PHE:HB3	50:BA:140:VAL:HG21	1.99	0.44
50:BA:203:PHE:O	50:BA:204:TYR:CB	2.50	0.44
51:BB:71:LEU:CG	51:BB:84:PHE:CE2	2.75	0.44
53:BD:167:TYR:O	53:BD:189:MET:HA	2.18	0.44
55:BF:49:LEU:HD12	66:BQ:50:LYS:HB2	1.99	0.44
57:BH:17:ASP:H	57:BH:20:GLU:HB2	1.82	0.44
62:BM:18:LEU:O	62:BM:22:LEU:HD13	2.17	0.44
62:BM:26:LEU:C	62:BM:26:LEU:HD13	2.43	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:BM:127:TYR:C	62:BM:129:LYS:N	2.74	0.44
66:BQ:86:GLN:HE21	66:BQ:90:LYS:NZ	2.15	0.44
67:BR:3:ARG:C	67:BR:4:VAL:CG1	2.85	0.44
67:BR:33:ARG:HG3	82:Bg:125:ARG:HH12	1.83	0.44
67:BR:117:LEU:HD23	67:BR:117:LEU:HA	1.76	0.44
70:BU:88:LEU:N	70:BU:88:LEU:CD1	2.80	0.44
74:BY:104:ARG:O	74:BY:105:LYS:HB2	2.17	0.44
74:BY:104:ARG:HH21	74:BY:108:LYS:HE3	1.82	0.44
76:Ba:64:LEU:O	76:Ba:66:LYS:HD2	2.18	0.44
1:A3:7:U:O2'	48:A2:1288:C:H5"	2.18	0.43
1:A3:127:U:O4	1:A3:129:C:N4	2.51	0.43
4:AB:94:GLU:HA	4:AB:158:GLN:HE21	1.83	0.43
4:AB:262:VAL:O	48:A2:4527:C:H5'	2.17	0.43
5:AC:49:ARG:HB2	48:A2:343:A:OP1	2.17	0.43
5:AC:57:LEU:C	5:AC:57:LEU:CD1	2.86	0.43
5:AC:77:PRO:CG	5:AC:91:ALA:CB	2.93	0.43
6:AD:5:LYS:C	6:AD:6:VAL:HG22	2.42	0.43
6:AD:26:GLY:O	6:AD:150:LEU:HD12	2.18	0.43
11:AI:17:TYR:HE1	48:A2:1769:A:H62	1.65	0.43
13:AK:84:GLY:O	48:A2:2002:G:H4'	2.17	0.43
14:AL:35:ARG:CD	48:A2:1345:G:OP1	2.66	0.43
15:AM:19:PRO:CB	48:A2:923:C:C2	2.99	0.43
15:AM:56:GLN:HG2	15:AM:91:TRP:CH2	2.52	0.43
22:AT:131:GLN:HG3	22:AT:132:PRO:HD2	2.00	0.43
29:Aa:58:MET:HE2	48:A2:1374:A:C2	2.53	0.43
31:Ac:21:VAL:HG21	31:Ac:104:ILE:CD1	2.48	0.43
32:Ad:28:ASN:H	32:Ad:32:ARG:HH12	1.66	0.43
33:Ae:85:LEU:HD12	33:Ae:114:ARG:HG3	2.00	0.43
34:Af:93:PRO:O	34:Af:94:ALA:HB3	2.18	0.43
35:Ag:50:PRO:HD3	44:Ap:61:MET:CE	2.48	0.43
39:Ak:11:PHE:CD1	39:Ak:12:LEU:CA	2.99	0.43
41:Am:100:TYR:O	48:A2:4434:G:O2'	2.36	0.43
43:Ao:26:TYR:CE2	43:Ao:27:LYS:O	2.70	0.43
46:At:61:VAL:HA	46:At:81:THR:HA	1.99	0.43
48:A2:32:G:N2	48:A2:51:A:N6	2.66	0.43
48:A2:117:C:N4	48:A2:118:C:N4	2.65	0.43
48:A2:141:G:C6	48:A2:142:G:C8	3.07	0.43
48:A2:182:C:O2'	48:A2:183:G:C4	2.63	0.43
48:A2:194:A:H2'	48:A2:195:A:O5'	2.18	0.43
48:A2:308:G:O2'	48:A2:4317:G:OP1	2.34	0.43
48:A2:349:A:OP2	48:A2:349:A:C8	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:692:G:C5	48:A2:693:U:C4	3.06	0.43
48:A2:715:C:O2'	48:A2:716:G:H5'	2.18	0.43
48:A2:1056:G:H2'	48:A2:1057:G:O4'	2.17	0.43
48:A2:1223:G:H3'	48:A2:1252:G:N2	2.33	0.43
48:A2:1570:U:H1'	48:A2:3799:A:H1'	2.00	0.43
48:A2:1739:U:H2'	48:A2:1740:G:C1'	2.48	0.43
48:A2:1742:G:N3	48:A2:1742:G:C2'	2.81	0.43
48:A2:1901:C:OP1	48:A2:1901:C:H3'	2.17	0.43
48:A2:2550:C:O5'	48:A2:2550:C:H6	2.01	0.43
48:A2:3656:C:H2'	48:A2:3657:G:O4'	2.18	0.43
48:A2:4170:U:H4'	48:A2:4236:A:C2	2.53	0.43
48:A2:4424:C:N4	48:A2:4425:U:O4	2.51	0.43
48:A2:4650:C:H41	48:A2:4660:C:C4'	2.30	0.43
49:B1:56:G:O5'	74:BY:111:LYS:HD3	2.18	0.43
49:B1:430:C:H6	49:B1:430:C:O5'	2.01	0.43
49:B1:1298:G:H4'	65:BP:78:THR:HA	1.99	0.43
53:BD:9:ARG:O	53:BD:12:VAL:HG12	2.17	0.43
54:BE:41:CYS:HB2	54:BE:84:ALA:O	2.19	0.43
55:BF:40:ALA:O	55:BF:42:LYS:N	2.50	0.43
56:BG:7:PHE:CZ	56:BG:113:ILE:HD13	2.52	0.43
57:BH:43:LEU:HD11	57:BH:72:PHE:CE2	2.53	0.43
58:BI:104:ILE:HB	58:BI:171:LEU:HB3	2.00	0.43
58:BI:166:PHE:C	58:BI:168:GLN:N	2.74	0.43
59:BJ:165:TYR:CD1	59:BJ:165:TYR:O	2.70	0.43
61:BL:77:VAL:HG22	61:BL:86:ILE:HD12	1.99	0.43
67:BR:20:TYR:CE2	67:BR:38:ILE:CG2	2.91	0.43
68:BS:66:ARG:HG2	68:BS:66:ARG:NH1	2.30	0.43
72:BW:90:GLN:HG2	72:BW:113:HIS:NE2	2.33	0.43
73:BX:68:LYS:HD3	73:BX:91:LEU:HB2	1.98	0.43
79:Bd:13:LYS:C	79:Bd:18:SER:HB3	2.43	0.43
82:Bg:203:ASP:OD2	82:Bg:205:SER:HB2	2.18	0.43
83:Bv:39:U:H2'	83:Bv:40:C:H6	1.83	0.43
83:Bw:46:G:H2'	83:Bw:47:U:H5"	1.99	0.43
83:Bw:50:U:C6	83:Bw:50:U:C3'	3.01	0.43
1:A3:43:A:H4'	38:Aj:22:CYS:C	2.41	0.43
1:A3:59:A:OP2	1:A3:98:C:H5'	2.19	0.43
1:A3:149:G:C2	1:A3:151:G:N7	2.86	0.43
3:AA:80:GLU:HG2	44:Ap:76:ALA:HB2	1.97	0.43
4:AB:25:HIS:ND1	48:A2:4942:C:H5"	2.33	0.43
4:AB:94:GLU:CG	4:AB:158:GLN:NE2	2.81	0.43
5:AC:214:ASP:OD1	5:AC:215:ASN:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AD:220:LYS:O	6:AD:224:SER:CB	2.66	0.43
7:AE:173:LEU:CD1	7:AE:190:HIS:C	2.90	0.43
14:AL:44:ARG:CZ	48:A2:182:C:H5"	2.48	0.43
15:AM:113:MET:HG2	15:AM:117:LYS:HZ3	1.82	0.43
17:AO:147:TRP:CZ3	17:AO:150:GLN:HB2	2.53	0.43
20:AR:6:LEU:HD13	48:A2:2391:A:OP1	2.17	0.43
20:AR:15:LEU:CD2	20:AR:45:ILE:HD13	2.48	0.43
23:AU:32:GLY:C	23:AU:34:MET:H	2.26	0.43
26:AX:129:ARG:HG2	26:AX:130:PRO:HD2	1.99	0.43
27:AY:39:ARG:O	27:AY:43:ASN:N	2.51	0.43
29:Aa:61:TYR:N	29:Aa:61:TYR:HD1	2.16	0.43
34:Af:40:GLU:C	34:Af:40:GLU:CD	2.86	0.43
39:Ak:2:PRO:HG2	48:A2:2672:G:H1'	1.99	0.43
45:Aq:121:LEU:O	45:Aq:122:ALA:HB3	2.17	0.43
47:Au:80:VAL:O	47:Au:81:ASP:HB3	2.17	0.43
48:A2:25:A:N3	48:A2:333:C:O2'	2.46	0.43
48:A2:33:A:OP1	48:A2:33:A:H4'	2.19	0.43
48:A2:505:C:C4	48:A2:506:U:C4	3.06	0.43
48:A2:1164:C:H42	48:A2:1167:A:C1'	2.32	0.43
48:A2:1188:G:C2	48:A2:1189:C:C2	3.06	0.43
48:A2:1533:C:H2'	48:A2:1534:G:H5'	1.99	0.43
48:A2:1614:A:H5"	48:A2:4496:G:O3'	2.18	0.43
48:A2:1755:U:C4	48:A2:1756:C:C5	3.07	0.43
48:A2:1919:C:C2	48:A2:1920:A:N6	2.86	0.43
48:A2:2068:C:C6	48:A2:2247:A:C6	3.06	0.43
48:A2:4229:G:H3'	48:A2:4229:G:N3	2.33	0.43
48:A2:4605:G:H2'	48:A2:4606:G:O4'	2.19	0.43
48:A2:4657:C:H2'	48:A2:4658:C:O4'	2.18	0.43
49:B1:13:C:H5"	52:BC:235:ASN:ND2	2.32	0.43
49:B1:65:C:OP2	56:BG:175:LYS:N	2.32	0.43
49:B1:282:G:C8	49:B1:282:G:OP2	2.70	0.43
49:B1:286:U:C6	49:B1:286:U:O5'	2.70	0.43
49:B1:321:C:H2'	49:B1:322:C:C6	2.53	0.43
49:B1:743:U:H4'	49:B1:744:G:H5'	1.99	0.43
49:B1:1015:U:C5'	77:Bb:20:LYS:NZ	2.57	0.43
50:BA:77:ILE:HG12	50:BA:99:ILE:HG21	1.98	0.43
50:BA:111:GLN:HG3	50:BA:116:PHE:CE2	2.53	0.43
55:BF:136:ARG:HH12	83:Bw:32:U:H4'	1.78	0.43
56:BG:101:ILE:HG21	56:BG:103:ASP:OD1	2.18	0.43
57:BH:188:GLU:HG2	57:BH:190:PRO:HD3	2.00	0.43
59:BJ:149:VAL:HG11	59:BJ:154:GLN:CG	2.45	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:BL:77:VAL:CG2	61:BL:86:ILE:HD12	2.48	0.43
63:BN:43:LYS:HA	63:BN:43:LYS:HD3	1.62	0.43
64:BO:44:VAL:HG21	64:BO:81:VAL:HG13	1.98	0.43
66:BQ:14:GLY:CA	66:BQ:21:ALA:H	2.29	0.43
66:BQ:37:ARG:CG	69:BT:7:LYS:HG2	2.46	0.43
67:BR:126:MET:O	67:BR:126:MET:HE2	2.18	0.43
68:BS:63:GLU:O	68:BS:66:ARG:HB3	2.18	0.43
79:Bd:19:ARG:NH1	79:Bd:33:LYS:HZ1	2.14	0.43
79:Bd:22:ARG:CB	79:Bd:37:ASN:HB2	2.42	0.43
82:Bg:109:LEU:HD21	82:Bg:125:ARG:NH2	2.32	0.43
83:Bv:25:C:C2'	83:Bv:26:A:H5'	2.47	0.43
5:AC:51:PRO:O	5:AC:52:TYR:CD1	2.70	0.43
5:AC:190:ARG:HH12	5:AC:199:ARG:NH1	2.17	0.43
5:AC:322:LEU:O	5:AC:323:ARG:HB3	2.18	0.43
7:AE:105:ARG:CD	48:A2:464:A:N1	2.80	0.43
7:AE:266:GLN:HE22	48:A2:4888:C:H4'	1.82	0.43
7:AE:283:PRO:CB	34:Af:41:PHE:CE1	3.00	0.43
8:AF:111:LEU:O	48:A2:1821:G:C4'	2.67	0.43
8:AF:164:LYS:O	8:AF:165:LYS:HD2	2.18	0.43
9:AG:53:ARG:HG3	9:AG:54:PHE:CD2	2.52	0.43
9:AG:120:LYS:HA	9:AG:120:LYS:HD2	1.75	0.43
9:AG:224:THR:HA	9:AG:228:ASP:OD2	2.18	0.43
13:AK:1:MET:C	13:AK:3:ARG:N	2.76	0.43
14:AL:178:ALA:C	14:AL:180:ALA:H	2.25	0.43
18:AP:10:ASN:ND2	18:AP:13:LYS:CG	2.73	0.43
19:AQ:65:ARG:NH2	48:A2:1441:A:OP1	2.50	0.43
20:AR:81:ARG:NH2	48:A2:3579:A:OP2	2.52	0.43
21:AS:84:TYR:HB2	21:AS:124:ILE:HG12	2.00	0.43
24:AV:47:GLY:HA2	48:A2:4455:U:O2'	2.10	0.43
25:AW:78:PHE:CG	25:AW:79:GLN:N	2.87	0.43
25:AW:109:ILE:HG22	25:AW:113:LYS:CE	2.42	0.43
26:AX:53:ARG:NE	48:A2:2454:G:C5	2.86	0.43
26:AX:117:TYR:CB	26:AX:119:ILE:HG12	2.47	0.43
27:AY:33:PRO:HG3	48:A2:234:G:O2'	2.18	0.43
27:AY:41:LYS:C	27:AY:42:TYR:HD1	2.25	0.43
33:Ae:2:ALA:O	33:Ae:4:LEU:N	2.52	0.43
36:Ah:48:ARG:O	36:Ah:52:LYS:HG2	2.18	0.43
37:Ai:74:LYS:HB2	37:Ai:74:LYS:NZ	2.33	0.43
47:Au:93:LEU:CD2	47:Au:103:LEU:CD1	2.95	0.43
48:A2:229:G:C2'	48:A2:230:U:H5'	2.47	0.43
48:A2:972:C:H2'	48:A2:973:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:1296:C:C4	48:A2:1306:A:C8	3.06	0.43
48:A2:1591:U:O5'	48:A2:1591:U:H6	2.02	0.43
48:A2:1981:G:N3	48:A2:1981:G:O5'	2.52	0.43
48:A2:3929:G:C1'	83:Bw:19:G:C4	2.98	0.43
48:A2:4131:G:H8	48:A2:4131:G:O5'	2.00	0.43
48:A2:4826:G:O2'	48:A2:4827:U:C5'	2.65	0.43
48:A2:4974:A:C2	48:A2:4975:G:C8	3.06	0.43
49:B1:64:A:C3'	56:BG:175:LYS:HZ2	2.32	0.43
49:B1:77:A:C2	56:BG:179:LEU:HD21	2.52	0.43
49:B1:182:C:C2'	49:B1:183:G:O4'	2.67	0.43
49:B1:1130:G:H4'	63:BN:10:GLY:HA3	2.00	0.43
49:B1:1597:C:H4'	49:B1:1603:G:N1	2.32	0.43
49:B1:1779:G:H2'	49:B1:1779:G:N3	2.33	0.43
49:B1:1849:G:H2'	49:B1:1850:A:O4'	2.18	0.43
49:B1:1853:C:H2'	49:B1:1854:U:C6	2.53	0.43
50:BA:90:PHE:CE1	50:BA:178:LEU:HD22	2.54	0.43
51:BB:41:ILE:HD11	51:BB:73:ASP:CA	2.49	0.43
52:BC:102:LEU:O	52:BC:104:ASP:N	2.52	0.43
55:BF:98:GLU:OE2	75:BZ:100:VAL:CG1	2.66	0.43
57:BH:103:LYS:O	57:BH:103:LYS:HG3	2.18	0.43
57:BH:115:LYS:HG2	57:BH:116:ARG:N	2.33	0.43
59:BJ:81:LEU:CD1	59:BJ:97:ILE:HG12	2.48	0.43
62:BM:94:ILE:HG22	62:BM:100:PRO:CA	2.45	0.43
64:BO:30:VAL:HG23	64:BO:47:LEU:HA	2.00	0.43
65:BP:130:ARG:N	65:BP:131:PRO:CD	2.82	0.43
67:BR:20:TYR:CD2	67:BR:38:ILE:HG22	2.52	0.43
67:BR:71:ILE:HD11	67:BR:74:GLN:HG2	2.00	0.43
67:BR:97:GLU:C	67:BR:117:LEU:HD23	2.33	0.43
67:BR:98:VAL:CA	67:BR:117:LEU:HD21	2.31	0.43
68:BS:82:TRP:CZ3	68:BS:83:PHE:HB2	2.53	0.43
76:Ba:25:ASN:ND2	76:Ba:81:SER:OG	2.51	0.43
79:Bd:23:VAL:CG1	79:Bd:46:TYR:CE1	2.99	0.43
79:Bd:38:MET:HG3	79:Bd:43:PHE:HD2	1.83	0.43
3:AA:90:CYS:HB3	3:AA:101:VAL:HG13	2.00	0.43
4:AB:393:LYS:HE3	48:A2:5000:A:C4'	2.44	0.43
5:AC:29:LYS:O	5:AC:29:LYS:HG3	2.19	0.43
7:AE:123:ARG:C	7:AE:124:LYS:HG2	2.43	0.43
7:AE:138:ARG:N	7:AE:138:ARG:CD	2.73	0.43
7:AE:218:LYS:HG3	7:AE:220:LYS:HE2	2.00	0.43
8:AF:70:ARG:CZ	48:A2:1191:G:O3'	2.66	0.43
10:AH:13:PRO:HG2	10:AH:16:VAL:HG22	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AI:193:ASP:OD2	11:AI:198:LYS:HD2	2.19	0.43
12:AJ:111:GLU:OE2	12:AJ:125:ILE:CG2	2.51	0.43
14:AL:77:SER:HA	14:AL:99:ASP:O	2.17	0.43
15:AM:6:PHE:HB2	21:AS:152:PHE:O	2.17	0.43
17:AO:48:TYR:CE1	48:A2:1911:U:C1'	3.01	0.43
17:AO:61:ARG:HD3	17:AO:66:PRO:HB3	2.00	0.43
19:AQ:2:GLY:CA	48:A2:1878:A:H5'	2.48	0.43
19:AQ:3:VAL:CG2	48:A2:2256:C:H5'	2.47	0.43
19:AQ:175:GLU:O	19:AQ:180:ARG:HG3	2.19	0.43
21:AS:29:ARG:HB3	22:AT:149:GLU:O	2.18	0.43
22:AT:25:VAL:HG23	22:AT:30:TYR:CE2	2.49	0.43
23:AU:55:ASN:OD1	23:AU:55:ASN:N	2.33	0.43
24:AV:64:THR:HG21	48:A2:3770:A:H5'	2.00	0.43
26:AX:127:LEU:HB3	48:A2:2416:C:C5'	2.47	0.43
27:AY:64:GLY:O	27:AY:65:GLN:C	2.60	0.43
29:Aa:103:VAL:HG22	29:Aa:125:LYS:O	2.18	0.43
30:Ab:13:SER:OG	48:A2:1706:G:N2	2.52	0.43
31:Ac:45:LEU:HB2	31:Ac:105:ILE:HG22	1.99	0.43
31:Ac:88:TYR:HE1	63:BN:144:SER:HG	1.53	0.43
34:Af:54:LYS:HB3	48:A2:4710:U:OP2	2.18	0.43
40:Al:9:ILE:O	40:Al:13:LEU:HD13	2.18	0.43
43:Ao:22:LYS:HB2	43:Ao:71:GLU:HB2	2.00	0.43
48:A2:133:C:C2	48:A2:134:G:C8	3.05	0.43
48:A2:454:C:H2'	48:A2:455:G:C8	2.53	0.43
48:A2:476:G:H1	48:A2:666:G:H22	1.66	0.43
48:A2:1156:G:H2'	48:A2:1157:G:O4'	2.18	0.43
48:A2:1159:C:C4	48:A2:1160:U:C4	3.05	0.43
48:A2:1337:A:N7	48:A2:1485:A:C5	2.86	0.43
48:A2:1393:U:H6	48:A2:1393:U:O5'	2.01	0.43
48:A2:1752:A:C5	48:A2:1753:U:C4	3.05	0.43
48:A2:1953:G:C2	48:A2:1954:G:C5	3.06	0.43
48:A2:2057:G:H5"	48:A2:2058:C:OP2	2.18	0.43
48:A2:4089:U:C6	48:A2:4089:U:OP2	2.71	0.43
48:A2:4833:G:H3'	48:A2:4834:U:C5'	2.48	0.43
49:B1:305:U:O2'	49:B1:306:C:P	2.76	0.43
49:B1:420:G:H4'	72:BW:88:LYS:HZ2	1.82	0.43
49:B1:580:U:H2'	74:BY:62:THR:HG21	1.99	0.43
49:B1:688:U:O4	57:BH:102:PRO:CB	2.67	0.43
49:B1:846:G:C8	54:BE:108:ARG:NH2	2.86	0.43
49:B1:872:A:N7	49:B1:874:G:C4	2.86	0.43
49:B1:984:C:C1'	64:BO:138:ASP:HB2	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1114:U:O2'	49:B1:1115:U:H2'	2.18	0.43
50:BA:34:MET:HE2	50:BA:34:MET:HB2	1.67	0.43
50:BA:180:ARG:HG2	50:BA:184:ARG:NH1	2.32	0.43
52:BC:63:VAL:C	52:BC:64:THR:HG22	2.42	0.43
53:BD:66:ILE:C	53:BD:66:ILE:HD13	2.44	0.43
53:BD:156:LEU:CD2	53:BD:189:MET:HE1	2.48	0.43
54:BE:19:MET:SD	54:BE:108:ARG:CD	3.07	0.43
56:BG:121:ILE:HG22	56:BG:122:PRO:HD2	1.99	0.43
57:BH:100:ILE:HD11	57:BH:125:VAL:HG11	2.00	0.43
59:BJ:159:PHE:CD2	59:BJ:159:PHE:O	2.70	0.43
63:BN:18:TYR:O	63:BN:18:TYR:CG	2.70	0.43
65:BP:30:TYR:CE1	65:BP:31:GLU:OE1	2.71	0.43
67:BR:63:ARG:HA	82:Bg:280:LYS:HZ2	1.82	0.43
82:Bg:219:TRP:CZ3	82:Bg:226:HIS:HB2	2.53	0.43
82:Bg:305:ASN:C	82:Bg:306:LEU:HD12	2.42	0.43
1:A3:52:A:H4'	40:Al:18:LYS:O	2.19	0.43
1:A3:108:A:N1	1:A3:109:C:C2	2.87	0.43
2:A4:90:A:C2	11:AI:56:GLU:HG2	2.54	0.43
3:AA:185:ALA:O	3:AA:189:TYR:HD1	2.01	0.43
4:AB:2:SER:CB	48:A2:4478:G:H3'	2.49	0.43
4:AB:126:LYS:CB	4:AB:128:LYS:HG2	2.48	0.43
4:AB:262:VAL:O	48:A2:4527:C:C5'	2.67	0.43
5:AC:102:PHE:CD1	48:A2:1502:C:H5'	2.53	0.43
5:AC:109:ARG:HD2	5:AC:111:TRP:CZ2	2.53	0.43
5:AC:144:ILE:HG22	5:AC:144:ILE:O	2.19	0.43
5:AC:211:TYR:CZ	5:AC:229:LEU:CD2	2.86	0.43
6:AD:16:TYR:CZ	48:A2:4227:U:C5	3.04	0.43
6:AD:265:ARG:CG	6:AD:265:ARG:NH1	2.78	0.43
7:AE:137:VAL:CG2	7:AE:138:ARG:N	2.81	0.43
7:AE:250:GLN:NE2	48:A2:4896:A:H2	2.13	0.43
8:AF:223:LYS:C	8:AF:225:THR:H	2.24	0.43
11:AI:34:PHE:HD2	48:A2:1730:U:H4'	1.81	0.43
13:AK:14:PHE:CE2	48:A2:1941:A:N6	2.87	0.43
13:AK:34:ASN:C	13:AK:35:VAL:HG22	2.44	0.43
14:AL:102:ARG:HA	48:A2:75:G:C6	2.53	0.43
14:AL:139:SER:O	14:AL:139:SER:OG	2.29	0.43
16:AN:146:PRO:HG3	36:Ah:104:THR:N	2.33	0.43
16:AN:160:GLU:HG2	16:AN:161:MET:N	2.34	0.43
19:AQ:97:LYS:HG3	19:AQ:117:GLY:C	2.42	0.43
20:AR:4:LEU:HD12	48:A2:2365:U:C4'	2.49	0.43
20:AR:23:TRP:HH2	20:AR:32:ILE:CG1	2.12	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AS:36:ASN:ND2	21:AS:38:VAL:HB	2.33	0.43
25:AW:67:ILE:HG13	25:AW:68:GLN:N	2.34	0.43
26:AX:79:PHE:CD2	36:Ah:32:ARG:HB3	2.52	0.43
28:AZ:60:LYS:HA	28:AZ:60:LYS:NZ	2.33	0.43
29:Aa:100:ILE:HG21	29:Aa:125:LYS:HE2	2.00	0.43
31:Ac:44:LYS:O	31:Ac:69:THR:HG23	2.18	0.43
33:Ae:70:LEU:HD13	33:Ae:74:PHE:O	2.18	0.43
34:Af:45:LYS:NZ	34:Af:108:SER:HA	2.33	0.43
34:Af:46:ARG:NH2	48:A2:699:G:H5"	2.33	0.43
36:Ah:72:PHE:CE1	36:Ah:73:TYR:CE2	3.06	0.43
42:An:5:TRP:HA	42:An:5:TRP:HE3	1.83	0.43
45:Aq:31:LYS:CG	45:Aq:32:ILE:N	2.81	0.43
45:Aq:37:LEU:HB2	45:Aq:68:GLN:C	2.43	0.43
45:Aq:66:ASN:O	45:Aq:68:GLN:HG2	2.18	0.43
48:A2:219:C:O2'	48:A2:220:G:H3'	2.19	0.43
48:A2:695:C:H3'	48:A2:696:G:C8	2.51	0.43
48:A2:1053:G:C6	48:A2:1054:C:C4	3.05	0.43
48:A2:1412:C:O2'	48:A2:1413:C:H5'	2.19	0.43
48:A2:1864:G:N2	48:A2:1879:C:O4'	2.51	0.43
48:A2:1977:C:H3'	48:A2:1978:U:C2	2.53	0.43
48:A2:2452:A:N1	48:A2:2485:G:N7	2.66	0.43
48:A2:3635:G:O6	48:A2:3649:G:C6	2.71	0.43
48:A2:3734:A:C5	48:A2:3735:U:C5	3.06	0.43
48:A2:3938:G:H2'	48:A2:3939:U:C6	2.53	0.43
48:A2:4086:U:C3'	48:A2:4087:U:H5"	2.48	0.43
48:A2:4691:A:OP2	48:A2:5026:G:O6	2.36	0.43
48:A2:4729:C:H2'	48:A2:4730:G:C8	2.52	0.43
48:A2:4935:A:H2'	48:A2:4936:G:O4'	2.19	0.43
49:B1:320:G:C2'	49:B1:321:C:O4'	2.67	0.43
49:B1:331:C:H3'	49:B1:331:C:P	2.59	0.43
49:B1:454:U:C5'	56:BG:94:ARG:HB2	2.48	0.43
49:B1:805:U:C6	49:B1:805:U:C5'	2.92	0.43
49:B1:928:G:H21	77:Bb:68:GLY:CA	2.31	0.43
49:B1:929:G:C4'	77:Bb:67:THR:HA	2.47	0.43
49:B1:1398:G:HO2'	82:Bg:100:ARG:HE	1.66	0.43
49:B1:1675:A:O2'	55:BF:74:ASN:HB3	2.18	0.43
49:B1:1745:A:H3'	49:B1:1745:A:N3	2.33	0.43
51:BB:50:THR:O	51:BB:51:ARG:HB2	2.19	0.43
53:BD:48:ILE:HB	53:BD:86:LEU:HG	2.00	0.43
53:BD:64:ARG:HH21	60:BK:72:THR:HA	1.82	0.43
54:BE:70:ILE:HA	54:BE:92:ILE:HG13	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BE:114:ILE:HG13	54:BE:118:GLU:CB	2.44	0.43
54:BE:115:THR:HG22	54:BE:116:VAL:H	1.83	0.43
55:BF:103:LEU:C	55:BF:104:THR:HG1	2.11	0.43
56:BG:50:VAL:CG1	56:BG:111:LEU:HB3	2.48	0.43
56:BG:200:LYS:CD	56:BG:204:GLU:OE1	2.67	0.43
59:BJ:172:ARG:HG3	59:BJ:173:VAL:H	1.82	0.43
62:BM:92:CYS:SG	62:BM:100:PRO:HB3	2.59	0.43
68:BS:27:ALA:O	68:BS:41:ALA:CB	2.67	0.43
68:BS:33:ILE:HD12	68:BS:33:ILE:N	2.33	0.43
68:BS:86:ARG:HE	68:BS:90:VAL:HG22	1.82	0.43
72:BW:86:LEU:O	72:BW:90:GLN:HG3	2.18	0.43
82:Bg:188:HIS:HB3	82:Bg:219:TRP:CZ3	2.53	0.43
1:A3:150:C:C6	9:AG:65:ARG:NH2	2.84	0.43
5:AC:84:THR:HG22	5:AC:86:ARG:H	1.82	0.43
6:AD:64:ILE:HD13	6:AD:109:LEU:HD22	2.01	0.43
7:AE:176:THR:HA	7:AE:185:PRO:O	2.19	0.43
15:AM:104:MET:HE2	17:AO:198:THR:HB	2.00	0.43
22:AT:78:LYS:CB	22:AT:87:LYS:NZ	2.82	0.43
29:Aa:30:GLY:HA2	48:A2:39:A:N6	2.33	0.43
34:Af:43:LEU:HD22	34:Af:76:ARG:HA	1.99	0.43
35:Ag:21:ARG:HD3	48:A2:2666:U:C2	2.41	0.43
36:Ah:24:LEU:CB	36:Ah:54:ILE:HG12	2.43	0.43
45:Aq:70:GLN:O	45:Aq:72:GLU:N	2.45	0.43
46:At:38:PHE:HD1	46:At:38:PHE:C	2.26	0.43
48:A2:221:U:O3'	48:A2:238:G:N2	2.52	0.43
48:A2:227:G:C8	48:A2:227:G:C4'	3.02	0.43
48:A2:491:G:H3'	48:A2:492:C:H5"	1.99	0.43
48:A2:1259:C:H3'	48:A2:1260:G:C8	2.45	0.43
48:A2:1506:A:H3'	48:A2:1506:A:N3	2.34	0.43
48:A2:3597:G:N2	48:A2:3598:G:C4	2.86	0.43
48:A2:3682:A:C5'	48:A2:3683:A:C8	3.00	0.43
48:A2:4083:C:H4'	48:A2:4084:G:OP1	2.19	0.43
48:A2:4212:G:H8	48:A2:4212:G:O5'	2.02	0.43
48:A2:4427:U:C6	48:A2:4450:A:N6	2.87	0.43
48:A2:4909:G:H8	48:A2:4909:G:H5"	1.83	0.43
49:B1:9:U:H2'	49:B1:11:A:OP2	2.19	0.43
49:B1:101:U:H2'	49:B1:104:A:C2	2.53	0.43
49:B1:162:C:HO2'	56:BG:95:LYS:HZ1	1.56	0.43
49:B1:168:C:C4'	56:BG:131:ARG:CD	2.66	0.43
49:B1:285:U:O3'	49:B1:286:U:C4	2.70	0.43
49:B1:351:G:H2'	49:B1:352:U:H5'	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:560:A:H5'	59:BJ:172:ARG:CA	2.45	0.43
49:B1:581:U:C2	74:BY:33:ALA:HA	2.50	0.43
49:B1:1152:U:H1'	72:BW:16:ASN:HD21	1.84	0.43
49:B1:1202:U:O2	52:BC:115:GLN:HB3	2.19	0.43
49:B1:1256:G:N1	79:Bd:40:ARG:CG	2.65	0.43
49:B1:1859:A:O2'	49:B1:1860:A:H5'	2.19	0.43
50:BA:42:LYS:HG2	50:BA:43:SER:N	2.33	0.43
51:BB:118:GLN:C	51:BB:119:THR:OG1	2.55	0.43
57:BH:87:PHE:CD2	57:BH:90:LYS:HD2	2.54	0.43
59:BJ:35:TYR:CD2	59:BJ:106:LEU:HD13	2.53	0.43
59:BJ:89:GLU:N	59:BJ:89:GLU:CD	2.74	0.43
59:BJ:131:ARG:NE	59:BJ:143:ASN:OD1	2.48	0.43
60:BK:50:GLN:HA	60:BK:53:LYS:HG2	2.01	0.43
61:BL:40:ILE:HD13	61:BL:62:PHE:CZ	2.53	0.43
62:BM:51:VAL:HB	62:BM:109:VAL:HB	2.00	0.43
64:BO:75:MET:SD	64:BO:114:SER:OG	2.76	0.43
66:BQ:13:PHE:O	66:BQ:13:PHE:CG	2.70	0.43
68:BS:78:LYS:O	68:BS:79:ILE:HB	2.18	0.43
72:BW:24:GLN:NE2	77:Bb:6:ASP:HA	2.33	0.43
83:Bv:61:C:H2'	83:Bv:62:C:C6	2.54	0.43
1:A3:3:A:H2'	1:A3:4:C:O4'	2.19	0.43
1:A3:17:A:H2'	1:A3:18:U:C6	2.54	0.43
2:A4:33:U:C2	6:AD:207:TYR:CE1	3.02	0.43
2:A4:47:G:H2'	2:A4:48:G:C5'	2.48	0.43
2:A4:56:G:P	12:AJ:152:GLY:HA2	2.56	0.43
3:AA:25:GLY:HA2	48:A2:3650:U:O2	2.19	0.43
3:AA:70:LYS:HZ2	3:AA:72:ARG:CZ	2.31	0.43
4:AB:119:TYR:OH	4:AB:129:ALA:HB3	2.19	0.43
5:AC:195:LYS:HB3	5:AC:200:ARG:HG2	1.99	0.43
6:AD:118:ILE:O	6:AD:119:TYR:HB2	2.19	0.43
6:AD:224:SER:CA	6:AD:227:ILE:HG13	2.48	0.43
6:AD:286:SER:CA	48:A2:1163:C:C5'	2.86	0.43
8:AF:159:TYR:CG	8:AF:166:ARG:NE	2.86	0.43
8:AF:179:LEU:HD23	8:AF:184:ILE:HD12	2.00	0.43
9:AG:160:ASP:C	9:AG:187:LYS:HD3	2.44	0.43
11:AI:30:LYS:HE3	11:AI:66:GLU:HG2	2.00	0.43
11:AI:33:ILE:O	11:AI:33:ILE:HG13	2.19	0.43
12:AJ:62:ILE:O	12:AJ:62:ILE:HG13	2.18	0.43
15:AM:10:GLY:HA2	15:AM:64:PHE:CD2	2.54	0.43
18:AP:90:PHE:O	18:AP:94:MET:SD	2.77	0.43
19:AQ:18:PRO:HG2	19:AQ:25:LEU:CD2	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AQ:53:MET:HG2	19:AQ:57:ASN:HB2	2.01	0.43
21:AS:141:ALA:O	21:AS:144:GLN:HB3	2.19	0.43
25:AW:50:ASN:C	25:AW:52:THR:H	2.25	0.43
27:AY:55:VAL:O	27:AY:66:GLN:O	2.37	0.43
28:AZ:33:THR:HG21	28:AZ:36:ARG:CD	2.38	0.43
33:Ae:48:ARG:O	48:A2:1864:G:O2'	2.37	0.43
36:Ah:64:THR:O	36:Ah:67:GLU:HG2	2.18	0.43
45:Aq:23:GLY:CA	45:Aq:46:ILE:HG12	2.48	0.43
45:Aq:23:GLY:H	45:Aq:46:ILE:CG1	2.31	0.43
45:Aq:28:LEU:CB	45:Aq:42:VAL:O	2.66	0.43
45:Aq:89:PRO:O	45:Aq:90:ARG:O	2.35	0.43
45:Aq:96:LYS:O	45:Aq:97:ASN:CB	2.66	0.43
48:A2:661:G:C8	48:A2:661:G:H3'	2.54	0.43
48:A2:944:G:HO2'	48:A2:945:G:C1'	2.29	0.43
48:A2:1484:G:H5"	48:A2:1485:A:OP2	2.18	0.43
48:A2:1948:A:C6	48:A2:1949:G:C5	3.06	0.43
48:A2:2045:G:H8	48:A2:2045:G:O5'	2.02	0.43
48:A2:2249:G:C6	48:A2:2250:C:N3	2.86	0.43
48:A2:4108:G:H4'	48:A2:4109:G:C5	2.54	0.43
48:A2:4543:G:C2	48:A2:4685:A:C6	3.06	0.43
48:A2:5003:G:H2'	48:A2:5004:U:O4'	2.18	0.43
49:B1:381:C:C5'	58:BI:48:VAL:CG1	2.96	0.43
49:B1:443:U:H6	49:B1:443:U:O5'	2.01	0.43
49:B1:746:C:O2'	49:B1:747:U:H5'	2.18	0.43
49:B1:860:G:C2'	72:BW:107:SER:HB3	2.48	0.43
49:B1:1154:U:O4	52:BC:227:ARG:HD2	2.19	0.43
49:B1:1276:A:C6	49:B1:1277:C:C2	3.06	0.43
49:B1:1464:C:H4'	67:BR:60:ARG:CZ	2.49	0.43
49:B1:1521:C:OP2	49:B1:1521:C:N1	2.51	0.43
49:B1:1535:U:O4	55:BF:159:ARG:NE	2.49	0.43
49:B1:1602:U:H3'	49:B1:1602:U:OP2	2.18	0.43
53:BD:4:GLN:N	53:BD:4:GLN:OE1	2.51	0.43
54:BE:91:SER:N	54:BE:92:ILE:HD12	2.32	0.43
54:BE:97:GLU:C	54:BE:98:HIS:CG	2.96	0.43
55:BF:170:ALA:HB3	75:BZ:106:GLN:HE21	1.84	0.43
59:BJ:46:VAL:HG12	59:BJ:102:ILE:HG23	2.00	0.43
59:BJ:96:TYR:O	59:BJ:97:ILE:C	2.62	0.43
59:BJ:153:SER:O	59:BJ:154:GLN:HB3	2.18	0.43
59:BJ:176:LYS:O	59:BJ:180:LYS:HG3	2.18	0.43
60:BK:16:PHE:HE1	60:BK:83:LEU:HD23	1.82	0.43
65:BP:52:LYS:HG2	65:BP:53:GLN:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:BQ:99:TYR:CD1	66:BQ:99:TYR:O	2.70	0.43
72:BW:55:ASP:OD1	72:BW:56:HIS:N	2.51	0.43
79:Bd:31:ILE:HG23	79:Bd:38:MET:N	2.33	0.43
82:Bg:184:LEU:C	82:Bg:184:LEU:HD13	2.44	0.43
83:Bw:57:G:H8	83:Bw:57:G:O5'	2.01	0.43
84:Bx:43:U:O2'	84:Bx:44:U:H5'	2.19	0.43
3:AA:50:HIS:HB2	44:Ap:54:ILE:CD1	2.49	0.43
4:AB:35:ASP:HB3	4:AB:186:ASN:CG	2.44	0.43
4:AB:55:HIS:HE1	48:A2:4589:U:O2'	1.98	0.43
4:AB:234:ARG:HD3	4:AB:272:LYS:CB	2.49	0.43
7:AE:146:PRO:O	7:AE:200:LYS:HE2	2.07	0.43
11:AI:52:MET:HE2	11:AI:163:GLN:CG	2.48	0.43
11:AI:113:THR:CG2	11:AI:114:GLY:H	2.28	0.43
16:AN:200:LEU:HB3	16:AN:204:ARG:HH21	1.83	0.43
19:AQ:34:PHE:HA	19:AQ:37:ARG:HH11	1.82	0.43
20:AR:169:ALA:CA	20:AR:172:ARG:HG3	2.47	0.43
21:AS:139:ARG:NH1	48:A2:1933:G:OP1	2.52	0.43
24:AV:90:ARG:NE	24:AV:96:LEU:HD21	2.34	0.43
25:AW:50:ASN:HB2	48:A2:4964:U:C4	2.54	0.43
28:AZ:87:VAL:HG22	28:AZ:127:ASN:HD21	1.79	0.43
32:Ad:68:LEU:C	32:Ad:68:LEU:HD13	2.44	0.43
35:Ag:68:SER:HB2	48:A2:2749:C:H5'	2.01	0.43
45:Aq:77:ALA:HA	45:Aq:80:LEU:HB3	2.01	0.43
46:At:69:GLY:C	46:At:70:GLN:NE2	2.73	0.43
46:At:108:MET:HG3	48:A2:949:C:C2	2.54	0.43
47:Au:97:LYS:HG2	47:Au:101:LYS:CE	2.41	0.43
48:A2:508:U:OP2	48:A2:508:U:C5	2.71	0.43
48:A2:670:C:C2'	48:A2:671:C:H5'	2.48	0.43
48:A2:1084:C:H5	48:A2:1150:C:H1'	1.83	0.43
48:A2:1736:U:H6	48:A2:1736:U:O5'	2.01	0.43
48:A2:1786:A:N6	48:A2:1815:U:C1'	2.82	0.43
48:A2:1877:A:H2'	48:A2:1878:A:O5'	2.19	0.43
48:A2:1945:A:C2	48:A2:1946:G:N9	2.87	0.43
48:A2:1952:C:H6	48:A2:1952:C:H5"	1.84	0.43
48:A2:2052:A:H8	48:A2:2052:A:O5'	2.02	0.43
48:A2:2606:C:O2	48:A2:2607:U:C6	2.71	0.43
48:A2:3593:C:H2'	48:A2:3594:C:O4'	2.19	0.43
48:A2:3611:U:C5	48:A2:3617:A:C2	3.07	0.43
48:A2:3693:G:H2'	48:A2:3694:A:H5'	1.99	0.43
48:A2:3744:U:O5'	48:A2:3744:U:H6	2.00	0.43
48:A2:3812:C:C2'	48:A2:3813:C:H5'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:3875:G:O6	48:A2:3876:A:N6	2.51	0.43
48:A2:4338:A:O5'	48:A2:4339:G:OP1	2.37	0.43
48:A2:4473:A:H8	48:A2:4473:A:O5'	2.01	0.43
49:B1:30:C:H1'	49:B1:596:U:H5"	2.01	0.43
49:B1:644:G:H5'	59:BJ:41:ARG:NH2	2.30	0.43
49:B1:744:G:C2'	49:B1:745:C:H6	2.30	0.43
49:B1:792:C:H2'	49:B1:793:G:C8	2.54	0.43
49:B1:800:U:C6	49:B1:800:U:C3'	3.02	0.43
49:B1:1286:G:C1'	62:BM:34:GLY:HA3	2.46	0.43
49:B1:1338:G:OP1	70:BU:76:THR:HB	2.18	0.43
49:B1:1388:A:H61	53:BD:161:GLY:HA3	1.83	0.43
49:B1:1648:G:C5'	66:BQ:126:ARG:O	2.63	0.43
50:BA:103:PHE:O	50:BA:103:PHE:CG	2.71	0.43
51:BB:69:VAL:O	51:BB:69:VAL:HG22	2.18	0.43
57:BH:117:PRO:O	57:BH:120:ARG:HB2	2.18	0.43
59:BJ:95:ASP:O	59:BJ:98:LEU:HB2	2.19	0.43
61:BL:111:VAL:HG23	61:BL:140:PHE:O	2.18	0.43
62:BM:64:LEU:HD22	81:Bf:106:TYR:CB	2.48	0.43
63:BN:53:ILE:O	63:BN:57:SER:HB3	2.18	0.43
63:BN:124:ARG:HA	63:BN:127:ARG:CZ	2.49	0.43
64:BO:86:LYS:O	64:BO:88:LEU:N	2.52	0.43
69:BT:114:GLU:N	69:BT:124:THR:HG23	2.33	0.43
70:BU:107:GLU:HG3	70:BU:108:PRO:HD2	2.00	0.43
71:BV:12:TYR:HE1	71:BV:14:PRO:HA	1.83	0.43
76:Ba:12:LYS:HG3	76:Ba:15:ARG:HG2	2.01	0.43
82:Bg:20:GLN:CG	82:Bg:68:ASP:HA	2.47	0.43
82:Bg:20:GLN:HB2	82:Bg:69:VAL:HG12	2.00	0.43
1:A3:75:G:O2'	40:Al:29:MET:HE2	2.18	0.43
1:A3:121:G:H2'	1:A3:122:G:C5'	2.49	0.43
2:A4:27:G:H2'	2:A4:28:C:C6	2.53	0.43
4:AB:26:ARG:HD2	4:AB:181:MET:SD	2.59	0.43
4:AB:93:VAL:HG23	4:AB:102:PHE:HB2	2.01	0.43
5:AC:52:TYR:CD2	48:A2:344:C:C5'	3.02	0.43
8:AF:25:PHE:O	8:AF:29:LYS:HG2	2.19	0.43
8:AF:222:LYS:HD2	8:AF:222:LYS:HA	1.59	0.43
9:AG:105:GLU:HA	9:AG:109:GLU:CD	2.43	0.43
13:AK:63:LYS:CA	13:AK:66:ARG:CB	2.91	0.43
13:AK:98:ILE:C	13:AK:100:ASP:H	2.26	0.43
14:AL:55:ILE:HD13	14:AL:56:ARG:N	2.33	0.43
16:AN:15:GLN:HG2	37:Ai:52:PRO:HD2	2.01	0.43
16:AN:68:ARG:HH21	16:AN:123:GLU:CB	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AN:201:HIS:CD2	48:A2:1343:G:OP1	2.71	0.43
19:AQ:16:LYS:H	19:AQ:16:LYS:HG2	1.56	0.43
19:AQ:71:LYS:NZ	19:AQ:71:LYS:HB3	2.34	0.43
26:AX:45:THR:CA	48:A2:4055:A:OP1	2.67	0.43
32:Ad:77:ILE:HD12	32:Ad:78:ARG:H	1.84	0.43
34:Af:46:ARG:HH12	48:A2:699:G:H5"	1.83	0.43
36:Ah:112:ARG:HH22	48:A2:258:C:C1'	2.30	0.43
37:Ai:15:HIS:CB	48:A2:72:C:H5	2.31	0.43
38:Aj:9:GLY:CA	48:A2:2771:C:O2	2.65	0.43
45:Aq:37:LEU:N	45:Aq:37:LEU:CD1	2.81	0.43
45:Aq:112:ILE:HG22	45:Aq:112:ILE:O	2.18	0.43
46:At:51:VAL:HG23	46:At:113:ARG:HD3	1.96	0.43
47:Au:191:VAL:HG12	47:Au:198:TRP:HB3	2.00	0.43
48:A2:50:C:OP2	48:A2:50:C:H6	2.01	0.43
48:A2:135:G:OP2	48:A2:135:G:C8	2.72	0.43
48:A2:1752:A:C4	48:A2:1753:U:C5	3.06	0.43
48:A2:2617:G:H2'	48:A2:2618:U:C5	2.54	0.43
48:A2:4982:C:O2'	58:BI:168:GLN:CA	2.58	0.43
49:B1:5:U:P	52:BC:230:THR:HG21	2.57	0.43
49:B1:812:A:H2	54:BE:12:VAL:CG1	2.32	0.43
49:B1:952:G:H4'	64:BO:51:GLU:OE1	2.18	0.43
49:B1:1016:U:C2	63:BN:61:ALA:CB	2.97	0.43
49:B1:1308:U:H4'	81:Bf:134:SER:O	2.18	0.43
49:B1:1314:U:O2	60:BK:2:LEU:N	2.52	0.43
49:B1:1420:G:O2'	49:B1:1421:A:H5'	2.19	0.43
49:B1:1534:C:H5'	49:B1:1536:G:H1'	1.99	0.43
49:B1:1622:U:P	49:B1:1623:A:H5"	2.59	0.43
49:B1:1745:A:H8	56:BG:66:GLY:N	2.17	0.43
51:BB:30:TRP:CE3	64:BO:19:PRO:HG3	2.53	0.43
51:BB:44:ILE:HD11	51:BB:74:LEU:HG	2.01	0.43
51:BB:187:LYS:HE3	51:BB:187:LYS:HB2	1.66	0.43
52:BC:68:ARG:NH1	52:BC:68:ARG:HB2	2.34	0.43
53:BD:161:GLY:O	53:BD:164:VAL:HG23	2.19	0.43
56:BG:1:MET:HG2	56:BG:2:LYS:N	2.33	0.43
57:BH:58:LYS:HG3	57:BH:90:LYS:HE2	2.00	0.43
59:BJ:158:ASP:CG	59:BJ:159:PHE:N	2.73	0.43
62:BM:68:LEU:N	81:Bf:114:ILE:HD11	2.34	0.43
64:BO:140:THR:C	64:BO:141:ARG:O	2.60	0.43
65:BP:15:PHE:CZ	65:BP:110:GLU:HA	2.53	0.43
65:BP:126:VAL:HG13	65:BP:127:LYS:N	2.24	0.43
73:BX:36:LEU:CD1	73:BX:42:GLY:O	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:BX:108:LYS:HD3	73:BX:108:LYS:O	2.18	0.43
75:BZ:68:ILE:O	75:BZ:109:TYR:HB2	2.19	0.43
79:Bd:38:MET:CE	79:Bd:42:CYS:CB	2.96	0.43
82:Bg:125:ARG:HG3	82:Bg:150:TRP:CG	2.54	0.43
2:A4:16:A:H2'	2:A4:17:C:C6	2.54	0.43
4:AB:312:LYS:HD3	4:AB:370:THR:CG2	2.49	0.43
4:AB:354:GLN:O	4:AB:360:LEU:HD11	2.18	0.43
6:AD:9:ASN:ND2	6:AD:12:TYR:CE2	2.87	0.43
7:AE:96:VAL:H	7:AE:107:VAL:HG12	1.81	0.43
7:AE:115:TYR:OH	46:At:119:ARG:HD3	2.18	0.43
13:AK:87:GLY:O	13:AK:88:PHE:C	2.61	0.43
13:AK:103:LEU:O	13:AK:104:ALA:HB2	2.19	0.43
19:AQ:154:LYS:H	19:AQ:154:LYS:HG3	1.52	0.43
20:AR:138:LEU:O	20:AR:138:LEU:HD22	2.19	0.43
27:AY:18:HIS:CE1	48:A2:226:G:HO2'	2.36	0.43
27:AY:44:VAL:HG11	27:AY:119:LEU:CD1	2.48	0.43
27:AY:51:LYS:HG3	27:AY:71:VAL:O	2.19	0.43
29:Aa:71:PRO:HB2	29:Aa:108:TYR:HD1	1.84	0.43
35:Ag:4:ARG:HD2	48:A2:2378:G:N2	2.34	0.43
38:Aj:2:THR:HG22	48:A2:3613:A:O3'	2.19	0.43
38:Aj:21:ARG:HB2	38:Aj:39:TYR:CE1	2.54	0.43
45:Aq:42:VAL:C	45:Aq:46:ILE:HB	2.43	0.43
48:A2:133:C:C4	48:A2:134:G:N9	2.86	0.43
48:A2:357:A:H5'	48:A2:359:U:H1'	2.01	0.43
48:A2:482:G:C2	48:A2:662:A:N1	2.87	0.43
48:A2:735:G:O6	48:A2:903:C:N3	2.52	0.43
48:A2:1284:C:N3	48:A2:1285:U:H1'	2.33	0.43
48:A2:1310:C:H6	48:A2:1310:C:O5'	2.01	0.43
48:A2:1319:G:C6	48:A2:2325:C:C4	3.06	0.43
48:A2:1577:G:O2'	48:A2:1579:G:N2	2.52	0.43
48:A2:2511:C:C4	48:A2:2512:C:N4	2.87	0.43
48:A2:2732:G:C6	48:A2:2733:G:N1	2.87	0.43
48:A2:2789:U:O5'	48:A2:2789:U:H6	2.02	0.43
48:A2:3669:G:H1'	48:A2:3749:U:O2	2.18	0.43
48:A2:3738:C:O5'	48:A2:3738:C:H6	2.01	0.43
48:A2:4107:C:C4'	48:A2:4108:G:O5'	2.67	0.43
48:A2:4201:A:H2'	48:A2:4202:G:C8	2.54	0.43
48:A2:4202:G:H2'	48:A2:4203:C:O4'	2.19	0.43
48:A2:4265:C:O2'	48:A2:4266:A:H2'	2.19	0.43
48:A2:4286:A:H2'	48:A2:4287:A:C8	2.54	0.43
48:A2:4946:U:O4'	48:A2:4947:U:OP1	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:4986:G:H2'	48:A2:4987:C:C6	2.54	0.43
49:B1:419:G:O2'	72:BW:88:LYS:HG3	2.19	0.43
49:B1:587:A:H5'	49:B1:592:C:N3	2.34	0.43
49:B1:687:C:N4	57:BH:118:ARG:HH21	2.17	0.43
49:B1:823:U:C5	74:BY:64:PHE:CE2	3.06	0.43
49:B1:861:A:H2	57:BH:106:ARG:HH11	1.66	0.43
49:B1:866:U:O2'	49:B1:867:G:H5'	2.19	0.43
49:B1:1287:A:HO2'	49:B1:1288:U:P	2.42	0.43
49:B1:1413:G:H21	49:B1:1424:G:H1	1.66	0.43
49:B1:1483:A:H5'	53:BD:159:HIS:O	2.18	0.43
49:B1:1491:G:H2'	49:B1:1492:U:C6	2.54	0.43
49:B1:1630:A:OP1	68:BS:37:GLY:N	2.51	0.43
49:B1:1681:U:H2'	49:B1:1682:C:C6	2.54	0.43
52:BC:60:TRP:HB3	52:BC:71:LYS:NZ	2.34	0.43
53:BD:76:ARG:CD	60:BK:68:TYR:CZ	3.00	0.43
55:BF:42:LYS:H	55:BF:45:TYR:HB2	1.84	0.43
60:BK:2:LEU:HG	60:BK:3:MET:N	2.33	0.43
60:BK:15:LEU:HD12	60:BK:21:MET:HG3	2.01	0.43
61:BL:76:VAL:HG12	61:BL:89:ARG:O	2.19	0.43
61:BL:148:ALA:HB1	61:BL:152:LYS:HE3	2.00	0.43
65:BP:57:LEU:HD23	65:BP:57:LEU:C	2.44	0.43
66:BQ:47:LEU:O	66:BQ:50:LYS:N	2.52	0.43
83:Bv:37:A:H3'	83:Bv:38:A:H8	1.84	0.43
1:A3:39:G:N3	1:A3:104:A:C2	2.87	0.42
2:A4:60:G:H5"	6:AD:270:LYS:HA	2.01	0.42
4:AB:46:PHE:CE2	4:AB:207:VAL:HA	2.54	0.42
4:AB:285:TYR:CD1	4:AB:363:ILE:HD12	2.54	0.42
5:AC:212:ASN:HB3	5:AC:232:VAL:HG21	1.84	0.42
6:AD:106:ALA:O	6:AD:110:LEU:HD13	2.18	0.42
7:AE:165:LEU:HD23	7:AE:203:ILE:HD12	2.00	0.42
7:AE:268:GLN:NE2	48:A2:4889:G:OP2	2.52	0.42
10:AH:5:LEU:CD1	10:AH:60:TRP:HH2	1.91	0.42
10:AH:6:SER:OG	10:AH:70:VAL:HG11	2.19	0.42
10:AH:23:ARG:NH2	48:A2:4724:A:OP1	2.52	0.42
15:AM:64:PHE:CZ	15:AM:73:VAL:HG13	2.54	0.42
20:AR:165:LYS:NZ	49:B1:907:G:C3'	2.70	0.42
22:AT:5:LYS:HD2	48:A2:4180:U:OP1	2.19	0.42
24:AV:45:ILE:HG22	24:AV:46:LYS:N	2.34	0.42
28:AZ:37:PRO:HD2	28:AZ:38:TYR:HD2	1.84	0.42
31:Ac:17:ARG:HG3	31:Ac:102:SER:OG	2.18	0.42
32:Ad:27:ILE:HG13	32:Ad:32:ARG:NH1	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Af:46:ARG:HD2	34:Af:106:TYR:CZ	2.54	0.42
36:Ah:103:LYS:NZ	36:Ah:107:GLN:HB3	2.34	0.42
39:Ak:41:TYR:CE2	48:A2:2517:U:OP1	2.70	0.42
43:Ao:106:PHE:CE1	83:Bv:19:G:C4	3.07	0.42
47:Au:28:PHE:CD1	47:Au:28:PHE:C	2.97	0.42
48:A2:3:C:H2'	48:A2:4:G:O5'	2.19	0.42
48:A2:194:A:H2'	48:A2:195:A:C5'	2.49	0.42
48:A2:309:G:O4'	48:A2:309:G:P	2.76	0.42
48:A2:500:C:O2'	48:A2:501:G:H5'	2.19	0.42
48:A2:1084:C:OP2	48:A2:1150:C:H5"	2.19	0.42
48:A2:1296:C:N4	48:A2:1306:A:C8	2.87	0.42
48:A2:1743:G:N2	48:A2:1744:C:C2	2.87	0.42
49:B1:1256:G:N2	79:Bd:40:ARG:HD3	2.34	0.42
49:B1:1258:A:C6	49:B1:1663:A:N3	2.87	0.42
49:B1:1288:U:O2	49:B1:1288:U:C2'	2.66	0.42
49:B1:1295:A:H2'	49:B1:1296:U:C5'	2.48	0.42
49:B1:1299:A:O2'	49:B1:1301:A:OP1	2.33	0.42
49:B1:1622:U:H5'	68:BS:120:HIS:CG	2.54	0.42
51:BB:118:GLN:HB2	51:BB:119:THR:H	1.64	0.42
54:BE:116:VAL:C	54:BE:118:GLU:H	2.27	0.42
59:BJ:121:LYS:O	59:BJ:125:HIS:CB	2.65	0.42
62:BM:123:VAL:O	62:BM:126:GLU:HB2	2.18	0.42
63:BN:107:LYS:HG2	63:BN:107:LYS:O	2.19	0.42
64:BO:89:GLY:O	64:BO:90:ILE:HG23	2.19	0.42
65:BP:33:LEU:HB2	65:BP:37:TYR:CD1	2.54	0.42
67:BR:97:GLU:HB2	67:BR:116:ASN:O	2.07	0.42
72:BW:55:ASP:OD1	72:BW:57:ARG:N	2.44	0.42
78:Bc:13:ARG:HA	78:Bc:54:ASP:O	2.18	0.42
1:A3:121:G:H2'	1:A3:122:G:O5'	2.19	0.42
1:A3:143:G:O2'	1:A3:144:U:H5'	2.18	0.42
3:AA:144:LYS:HB3	3:AA:160:SER:HB3	2.01	0.42
3:AA:229:ALA:O	3:AA:234:LYS:HE3	2.19	0.42
4:AB:94:GLU:HG2	4:AB:158:GLN:HE21	1.82	0.42
5:AC:209:ILE:HD12	5:AC:209:ILE:N	2.34	0.42
7:AE:110:ARG:NH2	48:A2:955:C:OP1	2.52	0.42
12:AJ:160:GLU:O	12:AJ:163:MET:HG2	2.19	0.42
14:AL:70:VAL:HG13	14:AL:157:VAL:CG1	2.49	0.42
14:AL:103:ARG:CG	37:Ai:25:ARG:HH22	2.32	0.42
15:AM:119:ARG:O	15:AM:123:ILE:HG13	2.20	0.42
16:AN:26:ARG:HB3	16:AN:30:TYR:CE2	2.54	0.42
16:AN:154:PRO:O	16:AN:157:LYS:HG3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AO:15:LEU:HD21	17:AO:129:LEU:HD11	2.00	0.42
19:AQ:178:ARG:O	29:Aa:51:GLY:HA2	2.19	0.42
22:AT:87:LYS:HE2	48:A2:4267:G:H1	1.84	0.42
25:AW:106:GLU:HA	25:AW:109:ILE:HB	2.01	0.42
29:Aa:23:GLY:N	48:A2:1833:U:OP1	2.50	0.42
32:Ad:20:VAL:O	32:Ad:20:VAL:HG13	2.19	0.42
34:Af:57:THR:C	34:Af:58:VAL:HG13	2.44	0.42
39:Ak:11:PHE:O	39:Ak:14:THR:HB	2.19	0.42
45:Aq:43:GLY:HA2	45:Aq:46:ILE:HG21	1.97	0.42
48:A2:40:G:C8	48:A2:41:C:C6	3.07	0.42
48:A2:238:G:H8	48:A2:238:G:O5'	2.01	0.42
48:A2:1192:U:P	48:A2:1192:U:C3'	3.07	0.42
48:A2:1485:A:H4'	48:A2:1486:G:H5'	2.01	0.42
48:A2:1919:C:N3	48:A2:1920:A:N6	2.67	0.42
48:A2:2590:A:H2'	48:A2:2591:G:C8	2.54	0.42
48:A2:2595:C:C2	48:A2:2701:G:C2	3.07	0.42
48:A2:2843:A:H2'	48:A2:2844:U:C6	2.54	0.42
48:A2:3754:A:C6	48:A2:3758:G:C2	3.07	0.42
48:A2:3814:C:H2'	48:A2:3814:C:O5'	2.19	0.42
48:A2:3901:U:H6	48:A2:3901:U:O5'	2.01	0.42
48:A2:4018:A:O2'	48:A2:4019:U:C5	2.70	0.42
48:A2:4159:G:H1	83:Bv:74:C:H42	1.66	0.42
48:A2:4175:A:H3'	48:A2:4175:A:N3	2.34	0.42
48:A2:4191:U:C4	48:A2:4192:C:C4	3.07	0.42
48:A2:4695:C:H2'	48:A2:4696:A:H4'	2.01	0.42
49:B1:11:A:C2'	49:B1:12:U:H5'	2.49	0.42
49:B1:75:G:O2'	49:B1:76:U:C5	2.70	0.42
49:B1:78:C:C4'	56:BG:175:LYS:CG	2.86	0.42
49:B1:232:A:OP2	49:B1:890:U:H1'	2.20	0.42
49:B1:285:U:H1'	49:B1:286:U:O4	2.18	0.42
49:B1:345:U:O2	54:BE:33:THR:HB	2.18	0.42
49:B1:659:G:C5'	73:BX:17:ARG:HH21	2.21	0.42
49:B1:747:U:H2'	49:B1:749:U:O4	2.17	0.42
49:B1:747:U:O2	49:B1:795:A:C2	2.73	0.42
49:B1:866:U:C2'	49:B1:867:G:H5'	2.48	0.42
49:B1:988:C:H2'	49:B1:989:C:OP1	2.18	0.42
49:B1:1102:G:N2	49:B1:1103:C:C2	2.86	0.42
49:B1:1140:G:O2'	49:B1:1141:G:H5'	2.19	0.42
49:B1:1333:U:O3'	53:BD:147:ALA:HB1	2.19	0.42
49:B1:1498:A:OP2	53:BD:27:ARG:NH1	2.53	0.42
49:B1:1543:U:H1'	66:BQ:77:HIS:CE1	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1701:C:H4'	84:Bx:48:U:C4	2.53	0.42
49:B1:1869:A:C8	49:B1:1869:A:H5'	2.54	0.42
50:BA:206:ASP:CB	50:BA:207:PRO:HD3	2.49	0.42
51:BB:105:LEU:HD13	51:BB:213:ARG:CA	2.36	0.42
51:BB:134:LEU:CD2	51:BB:218:LEU:HD21	2.48	0.42
54:BE:11:ARG:HH11	54:BE:20:LEU:HB3	1.83	0.42
55:BF:27:ASP:O	55:BF:28:VAL:C	2.61	0.42
56:BG:157:VAL:HG21	56:BG:176:ILE:CD1	2.30	0.42
58:BI:13:LYS:NZ	61:BL:137:THR:HB	2.35	0.42
58:BI:162:LEU:O	58:BI:166:PHE:HD1	2.02	0.42
59:BJ:86:VAL:HG22	59:BJ:104:ASP:HB3	2.01	0.42
61:BL:18:GLN:C	61:BL:19:ASN:ND2	2.73	0.42
63:BN:23:PRO:CG	63:BN:24:THR:H	2.32	0.42
67:BR:95:ILE:C	67:BR:114:LEU:HD13	2.43	0.42
68:BS:43:VAL:O	68:BS:47:LYS:HG2	2.19	0.42
69:BT:104:LEU:HD21	69:BT:121:ARG:HD3	1.99	0.42
75:BZ:58:LEU:HD11	75:BZ:79:ILE:HG13	2.01	0.42
1:A3:34:U:O2'	1:A3:35:C:H5'	2.19	0.42
1:A3:109:C:H41	38:Aj:20:ARG:NH1	2.06	0.42
1:A3:154:G:H5"	9:AG:89:ARG:NE	2.34	0.42
3:AA:224:THR:HB	48:A2:3677:C:O4'	2.19	0.42
4:AB:41:VAL:HG13	4:AB:185:VAL:CG1	2.49	0.42
5:AC:102:PHE:CD2	48:A2:1320:A:H5'	2.54	0.42
8:AF:165:LYS:O	8:AF:167:ILE:N	2.51	0.42
13:AK:65:ILE:HD12	13:AK:75:LEU:HD12	2.01	0.42
16:AN:13:LYS:HZ3	37:Ai:44:ILE:CG2	2.26	0.42
19:AQ:11:ARG:HG3	19:AQ:11:ARG:H	1.54	0.42
19:AQ:91:ARG:HH22	48:A2:1484:G:H1'	1.83	0.42
19:AQ:173:LYS:O	19:AQ:173:LYS:HG2	2.19	0.42
28:AZ:53:VAL:HB	28:AZ:62:ILE:CD1	2.40	0.42
29:Aa:27:LYS:C	29:Aa:28:HIS:ND1	2.77	0.42
35:Ag:76:ARG:NH2	48:A2:2561:A:H5"	2.34	0.42
39:Ak:25:ILE:HD13	39:Ak:57:LYS:HG3	2.01	0.42
45:Aq:112:ILE:HD13	45:Aq:112:ILE:HG21	1.80	0.42
48:A2:401:A:C2	48:A2:404:A:C8	3.07	0.42
48:A2:464:A:OP2	48:A2:466:C:N4	2.52	0.42
48:A2:717:G:C6	48:A2:718:C:N4	2.87	0.42
48:A2:717:G:C2'	48:A2:718:C:H5'	2.50	0.42
48:A2:740:G:H3'	48:A2:741:U:H6	1.82	0.42
48:A2:1286:A:O2'	48:A2:1287:C:H5'	2.18	0.42
48:A2:2632:C:H6	48:A2:2632:C:OP1	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:3597:G:H2'	48:A2:3598:G:H8	1.83	0.42
48:A2:3627:A:H1'	48:A2:3718:A:C2	2.55	0.42
48:A2:3684:U:O2	48:A2:3711:G:N2	2.53	0.42
48:A2:4546:A:C4	48:A2:4681:G:C5	3.07	0.42
48:A2:4562:G:H1'	48:A2:4563:U:H5	1.84	0.42
49:B1:1287:A:H4'	49:B1:1311:C:H42	1.83	0.42
49:B1:1373:C:O2'	67:BR:10:LYS:HE3	2.20	0.42
49:B1:1495:G:H1'	79:Bd:41:GLN:HB2	2.01	0.42
49:B1:1601:A:OP1	75:BZ:43:LYS:HE2	2.20	0.42
49:B1:1621:U:OP1	65:BP:40:ARG:CD	2.67	0.42
49:B1:1775:U:O5'	49:B1:1775:U:C6	2.70	0.42
50:BA:77:ILE:HD13	50:BA:133:PRO:HB3	2.00	0.42
51:BB:62:LEU:O	51:BB:88:THR:HB	2.19	0.42
54:BE:86:PHE:CD1	54:BE:102:VAL:HA	2.54	0.42
56:BG:44:GLU:OE1	56:BG:120:ASP:HB2	2.19	0.42
59:BJ:164:PRO:O	59:BJ:165:TYR:HB2	2.19	0.42
61:BL:35:ARG:NH2	61:BL:53:GLY:O	2.52	0.42
66:BQ:12:VAL:HG21	66:BQ:90:LYS:C	2.44	0.42
69:BT:42:HIS:N	69:BT:43:LYS:NZ	2.65	0.42
72:BW:77:PRO:HG2	72:BW:79:PHE:CE2	2.54	0.42
82:Bg:249:CYS:SG	82:Bg:289:LEU:HD12	2.60	0.42
84:Bx:34:U:H2'	84:Bx:35:U:H5'	2.02	0.42
4:AB:99:LEU:HD22	4:AB:158:GLN:NE2	2.33	0.42
4:AB:380:GLN:HG2	4:AB:381:THR:HG23	2.01	0.42
5:AC:212:ASN:ND2	5:AC:255:SER:C	2.74	0.42
5:AC:289:LEU:O	5:AC:293:LEU:CG	2.64	0.42
9:AG:83:PHE:CE2	9:AG:164:ILE:HG23	2.54	0.42
9:AG:197:LYS:HG2	48:A2:6:C:OP1	2.19	0.42
13:AK:18:ILE:C	13:AK:21:LEU:HB3	2.44	0.42
13:AK:96:THR:O	13:AK:100:ASP:N	2.52	0.42
14:AL:129:ARG:CD	14:AL:129:ARG:N	2.73	0.42
19:AQ:78:LYS:HE3	48:A2:1413:C:H5'	2.00	0.42
20:AR:104:ARG:NH2	48:A2:2877:G:H5"	2.35	0.42
20:AR:173:ARG:CD	49:B1:910:G:P	3.04	0.42
23:AU:47:ILE:C	23:AU:49:VAL:N	2.73	0.42
30:Ab:23:LYS:HG3	30:Ab:24:PRO:HD2	2.00	0.42
31:Ac:79:ILE:HA	31:Ac:90:ARG:HB3	2.01	0.42
32:Ad:34:HIS:NE2	48:A2:4597:A:O2'	2.34	0.42
37:Ai:56:ARG:NH1	37:Ai:72:PHE:CE1	2.88	0.42
40:Al:34:LYS:HE3	48:A2:355:C:H4'	2.00	0.42
44:Ap:50:ARG:HB3	44:Ap:54:ILE:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:Aq:14:TYR:O	45:Aq:15:LEU:HB2	2.20	0.42
46:At:16:PHE:CD1	46:At:16:PHE:N	2.86	0.42
48:A2:252:C:C2'	48:A2:253:G:OP1	2.68	0.42
48:A2:683:U:C4	48:A2:684:U:C4	3.07	0.42
48:A2:699:G:O2'	48:A2:700:C:H5'	2.19	0.42
48:A2:1227:G:H5'	48:A2:1251:G:H1'	2.00	0.42
48:A2:1252:G:C4	48:A2:1253:A:H1'	2.54	0.42
48:A2:1589:C:O2	48:A2:3799:A:H2	2.02	0.42
48:A2:1658:C:H5"	48:A2:1659:U:O5'	2.20	0.42
48:A2:1975:C:O2'	48:A2:1976:G:H5'	2.19	0.42
48:A2:2850:A:H2'	48:A2:2851:C:O4'	2.19	0.42
48:A2:3635:G:O6	48:A2:3649:G:O6	2.37	0.42
48:A2:3669:G:H1'	48:A2:3749:U:C2	2.54	0.42
48:A2:3817:C:OP1	48:A2:4629:C:O2'	2.33	0.42
49:B1:19:A:H4'	49:B1:621:C:H5'	2.00	0.42
49:B1:25:A:HO2'	49:B1:26:U:H6	1.65	0.42
49:B1:109:U:H2'	49:B1:110:U:O4'	2.19	0.42
49:B1:606:G:C5'	80:Be:56:ASN:CB	2.97	0.42
49:B1:833:C:C2'	49:B1:834:C:H6	2.30	0.42
49:B1:952:G:H4'	64:BO:51:GLU:OE2	2.19	0.42
49:B1:986:G:C6	49:B1:987:A:C4	3.07	0.42
49:B1:996:A:H5"	63:BN:7:PRO:HD3	2.01	0.42
49:B1:1439:A:H5'	49:B1:1440:C:OP2	2.19	0.42
50:BA:116:PHE:HD1	50:BA:117:ARG:N	2.17	0.42
51:BB:71:LEU:CD1	51:BB:75:GLN:CB	2.93	0.42
52:BC:177:PRO:HG3	71:BV:9:VAL:HG11	1.98	0.42
53:BD:70:THR:HG22	53:BD:70:THR:O	2.19	0.42
54:BE:248:VAL:HG12	59:BJ:72:PHE:CD2	2.54	0.42
66:BQ:100:VAL:HG12	66:BQ:104:SER:OG	2.19	0.42
69:BT:43:LYS:HD3	69:BT:43:LYS:HA	1.81	0.42
69:BT:85:ASN:CB	69:BT:88:MET:HB3	2.50	0.42
69:BT:114:GLU:HB2	69:BT:124:THR:CG2	2.50	0.42
79:Bd:8:TRP:CE2	79:Bd:11:PRO:HA	2.54	0.42
82:Bg:40:ILE:HB	82:Bg:59:LEU:HB2	2.00	0.42
1:A3:36:G:N7	36:Ah:89:ARG:HD3	2.34	0.42
1:A3:79:G:H3'	1:A3:80:A:H5"	2.02	0.42
1:A3:93:C:C5'	38:Aj:76:HIS:NE2	2.83	0.42
1:A3:121:G:H2'	1:A3:122:G:H5"	2.01	0.42
4:AB:312:LYS:HD3	4:AB:370:THR:HG21	2.01	0.42
5:AC:164:THR:HG21	48:A2:219:C:N1	2.35	0.42
5:AC:211:TYR:CE2	5:AC:229:LEU:HD22	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:351:VAL:O	5:AC:355:ALA:HB3	2.20	0.42
6:AD:9:ASN:ND2	6:AD:12:TYR:CZ	2.87	0.42
8:AF:161:LYS:N	8:AF:162:ILE:CD1	2.81	0.42
10:AH:5:LEU:C	10:AH:5:LEU:CD2	2.86	0.42
10:AH:58:ASP:OD1	10:AH:59:LYS:N	2.53	0.42
12:AJ:134:LEU:HD11	12:AJ:162:ALA:CA	2.48	0.42
13:AK:41:GLN:HB2	45:Aq:121:LEU:CD1	2.47	0.42
13:AK:52:VAL:HB	13:AK:90:PHE:N	2.35	0.42
13:AK:52:VAL:CG1	13:AK:53:VAL:N	2.80	0.42
14:AL:103:ARG:NH1	14:AL:105:LYS:HE2	2.34	0.42
14:AL:144:LEU:C	14:AL:146:LEU:H	2.26	0.42
16:AN:93:LYS:NZ	48:A2:295:G:N3	2.64	0.42
17:AO:71:TYR:CD2	48:A2:3858:C:H5'	2.54	0.42
19:AQ:76:GLU:H	19:AQ:76:GLU:HG2	1.56	0.42
21:AS:4:SER:O	21:AS:5:GLY:C	2.62	0.42
24:AV:48:ARG:HB3	24:AV:51:ARG:HE	1.85	0.42
25:AW:50:ASN:HA	25:AW:55:TYR:CG	2.55	0.42
27:AY:95:VAL:HG11	48:A2:380:A:H5"	2.02	0.42
31:Ac:59:GLU:O	31:Ac:63:TYR:HD1	2.02	0.42
33:Ae:4:LEU:CD1	33:Ae:121:ARG:CA	2.95	0.42
33:Ae:78:LEU:HD22	46:At:20:ARG:NH1	2.35	0.42
34:Af:46:ARG:NH1	48:A2:699:G:H5"	2.34	0.42
35:Ag:45:ALA:CB	35:Ag:82:MET:SD	3.07	0.42
45:Aq:29:ALA:O	45:Aq:31:LYS:CD	2.67	0.42
46:At:52:GLU:H	46:At:61:VAL:HG23	1.85	0.42
48:A2:353:A:H4'	48:A2:372:A:H62	1.84	0.42
48:A2:482:G:C2	48:A2:662:A:C2	3.08	0.42
48:A2:483:C:H2'	48:A2:484:C:C6	2.54	0.42
48:A2:3880:C:O5'	48:A2:3880:C:C6	2.70	0.42
48:A2:3920:A:O2'	48:A2:3921:U:H5'	2.19	0.42
48:A2:4379:C:H2'	48:A2:4380:G:O4'	2.19	0.42
48:A2:4858:C:H2'	48:A2:4859:G:H4'	2.00	0.42
48:A2:4940:A:H2'	48:A2:4941:C:O4'	2.19	0.42
49:B1:606:G:N2	49:B1:608:C:C2	2.87	0.42
49:B1:661:U:H5"	49:B1:662:G:H2'	2.01	0.42
49:B1:1280:G:H2'	49:B1:1281:G:C8	2.54	0.42
49:B1:1778:C:H2'	49:B1:1779:G:C8	2.54	0.42
50:BA:207:PRO:C	50:BA:209:GLU:N	2.78	0.42
51:BB:182:LYS:HE3	51:BB:231:LEU:CA	2.45	0.42
53:BD:15:GLY:CA	79:Bd:50:ILE:HA	2.48	0.42
54:BE:104:ASP:CB	54:BE:108:ARG:O	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BG:231:ARG:HA	56:BG:231:ARG:HD3	1.87	0.42
59:BJ:138:ARG:HH22	59:BJ:153:SER:HB3	1.83	0.42
60:BK:74:GLU:O	60:BK:77:GLN:HB2	2.20	0.42
62:BM:44:LYS:O	62:BM:45:ARG:HB2	2.19	0.42
65:BP:52:LYS:CG	65:BP:80:LEU:HD13	2.49	0.42
66:BQ:52:LEU:O	66:BQ:54:PRO:CD	2.68	0.42
68:BS:17:ASN:ND2	68:BS:17:ASN:C	2.77	0.42
68:BS:46:ARG:NH1	69:BT:37:VAL:HG21	2.34	0.42
70:BU:22:ILE:HG13	70:BU:114:VAL:HG12	2.02	0.42
70:BU:67:LYS:HE3	70:BU:77:TRP:C	2.44	0.42
72:BW:83:LEU:O	72:BW:84:LYS:CB	2.67	0.42
74:BY:7:ILE:CB	74:BY:47:MET:HE1	2.43	0.42
77:Bb:50:ALA:HB3	77:Bb:71:ALA:HB2	2.01	0.42
77:Bb:75:GLU:HG3	77:Bb:76:GLY:N	2.34	0.42
78:Bc:42:ILE:HD12	78:Bc:44:ARG:HD3	2.00	0.42
2:A4:22:A:N1	2:A4:23:A:C4	2.87	0.42
3:AA:242:ARG:NH1	3:AA:246:LEU:HD23	2.33	0.42
4:AB:19:ARG:HD3	4:AB:234:ARG:NE	2.34	0.42
4:AB:194:LEU:HD21	4:AB:198:ARG:HD2	2.02	0.42
4:AB:247:GLY:C	48:A2:2817:G:OP1	2.62	0.42
5:AC:100:ARG:NE	48:A2:1632:A:C6	2.88	0.42
5:AC:219:LYS:HZ2	5:AC:222:ARG:NH2	2.17	0.42
6:AD:15:ARG:CZ	48:A2:1725:A:H1'	2.49	0.42
7:AE:137:VAL:CG1	48:A2:702:A:H5"	2.50	0.42
7:AE:166:LYS:HB2	7:AE:166:LYS:HE3	1.71	0.42
10:AH:1:MET:HE3	10:AH:3:THR:HG21	2.00	0.42
12:AJ:166:PHE:CD2	12:AJ:172:GLY:HA3	2.54	0.42
13:AK:32:ALA:C	13:AK:34:ASN:H	2.27	0.42
13:AK:32:ALA:C	13:AK:85:ASN:HB3	2.43	0.42
13:AK:83:ARG:CG	13:AK:84:GLY:N	2.73	0.42
14:AL:76:PHE:O	14:AL:77:SER:HB3	2.20	0.42
14:AL:78:LEU:HD13	48:A2:158:G:OP2	2.19	0.42
14:AL:197:LYS:HD3	48:A2:4320:U:H4'	2.02	0.42
17:AO:67:SER:HA	48:A2:4548:G:H4'	2.00	0.42
19:AQ:38:ARG:HD2	19:AQ:38:ARG:HA	1.78	0.42
19:AQ:78:LYS:HE3	48:A2:1413:C:H4'	1.99	0.42
20:AR:92:LYS:NZ	48:A2:2585:G:H4'	2.34	0.42
21:AS:3:ALA:O	48:A2:2043:C:OP1	2.38	0.42
21:AS:90:THR:HG21	22:AT:156:TYR:CD1	2.53	0.42
22:AT:105:PHE:O	22:AT:109:VAL:HG23	2.19	0.42
29:Aa:30:GLY:HA2	48:A2:39:A:H62	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:Aa:61:TYR:N	48:A2:4316:U:H3	2.16	0.42
30:Ab:45:PHE:O	30:Ab:46:ALA:C	2.61	0.42
31:Ac:97:ILE:HG13	31:Ac:98:ASP:N	2.34	0.42
33:Ae:8:VAL:CG2	48:A2:693:U:C5'	2.97	0.42
35:Ag:45:ALA:O	35:Ag:46:CYS:CB	2.67	0.42
37:Ai:29:ARG:HD2	37:Ai:32:ARG:HG3	2.01	0.42
45:Aq:62:LEU:HG	45:Aq:71:ILE:HD13	2.00	0.42
45:Aq:107:ASP:C	45:Aq:109:ILE:N	2.77	0.42
46:At:33:LYS:HE3	46:At:109:ALA:CB	2.50	0.42
46:At:88:ALA:O	46:At:92:SER:CB	2.67	0.42
47:Au:160:LYS:CD	48:A2:3939:U:C5'	2.95	0.42
48:A2:132:G:O6	48:A2:135:G:C2	2.72	0.42
48:A2:466:C:H2'	48:A2:467:C:C6	2.55	0.42
48:A2:661:G:H2'	48:A2:662:A:O5'	2.19	0.42
48:A2:715:C:N3	48:A2:930:A:N1	2.67	0.42
48:A2:1430:C:H2'	48:A2:1431:G:C4	2.54	0.42
48:A2:1576:C:O2'	48:A2:1579:G:H1'	2.19	0.42
48:A2:1754:C:O2	48:A2:1754:C:C2'	2.67	0.42
48:A2:1771:C:H2'	48:A2:1772:U:H6	1.84	0.42
48:A2:1778:U:H2'	48:A2:1779:G:O4'	2.20	0.42
48:A2:1857:U:O2'	48:A2:1858:G:H5'	2.20	0.42
48:A2:1966:G:OP2	48:A2:1967:U:H5	2.01	0.42
48:A2:2823:A:O4'	48:A2:4594:U:OP1	2.36	0.42
48:A2:3812:C:O2'	48:A2:3813:C:H5'	2.19	0.42
48:A2:3877:A:O2'	48:A2:3878:G:P	2.77	0.42
48:A2:3884:G:H4'	48:A2:3885:U:OP2	2.20	0.42
48:A2:3929:G:C6	48:A2:3930:U:C2	3.07	0.42
48:A2:4077:G:C6	48:A2:4078:G:N1	2.86	0.42
48:A2:4107:C:H4'	48:A2:4108:G:O5'	2.17	0.42
48:A2:4333:G:H2'	48:A2:4334:U:C6	2.55	0.42
48:A2:4521:A:O2'	48:A2:4522:C:H2'	2.19	0.42
48:A2:4547:U:H2'	48:A2:4548:G:C8	2.55	0.42
48:A2:4712:G:H2'	48:A2:4713:G:O4'	2.19	0.42
48:A2:4826:G:HO2'	48:A2:4827:U:P	2.43	0.42
49:B1:141:A:H4'	49:B1:142:C:H5'	2.01	0.42
49:B1:171:A:C4'	56:BG:177:GLN:NE2	2.82	0.42
49:B1:558:G:H5'	59:BJ:175:ARG:CD	2.50	0.42
49:B1:570:C:O2'	74:BY:34:THR:O	2.37	0.42
49:B1:670:A:H1'	49:B1:1164:G:O4'	2.19	0.42
49:B1:689:U:H6	49:B1:742:U:C4	2.25	0.42
49:B1:1416:C:H6	49:B1:1416:C:O5'	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1641:A:H4'	83:Bv:31:A:O2'	2.20	0.42
49:B1:1824:A:H1'	73:BX:61:GLN:OE1	2.19	0.42
49:B1:1866:A:C1'	76:Ba:95:ARG:O	2.68	0.42
54:BE:103:TYR:CZ	54:BE:184:ILE:O	2.73	0.42
55:BF:55:ARG:HG3	66:BQ:125:ARG:HH11	1.85	0.42
55:BF:100:ILE:HG21	55:BF:111:VAL:HG21	2.02	0.42
59:BJ:14:VAL:HG22	59:BJ:48:PHE:HB2	1.99	0.42
59:BJ:138:ARG:CA	59:BJ:156:HIS:HB3	2.42	0.42
61:BL:101:ARG:HH21	73:BX:13:LEU:CD1	2.33	0.42
63:BN:57:SER:OG	63:BN:58:HIS:CE1	2.72	0.42
68:BS:15:VAL:HG13	68:BS:68:ILE:HD13	1.99	0.42
70:BU:65:THR:HB	70:BU:78:ASP:HB2	2.02	0.42
75:BZ:76:ARG:HG3	75:BZ:77:LEU:CD2	2.49	0.42
82:Bg:91:ASP:HB3	82:Bg:95:GLY:O	2.20	0.42
82:Bg:129:ILE:HB	82:Bg:144:ASP:HB2	2.02	0.42
82:Bg:172:LYS:HE3	82:Bg:192:THR:O	2.20	0.42
1:A3:109:C:C2	38:Aj:20:ARG:NH2	2.85	0.42
3:AA:226:ARG:NH2	48:A2:4144:G:H4'	2.34	0.42
3:AA:247:ARG:NE	49:B1:1069:U:H4'	2.35	0.42
4:AB:4:ARG:HH11	4:AB:7:SER:HA	1.85	0.42
4:AB:94:GLU:HG3	4:AB:158:GLN:HG3	2.02	0.42
4:AB:137:TRP:O	4:AB:143:LYS:HE2	2.19	0.42
4:AB:223:THR:CG2	48:A2:4586:A:H5"	2.50	0.42
7:AE:228:GLN:H	7:AE:228:GLN:HG3	1.62	0.42
8:AF:115:ARG:HB3	19:AQ:4:ASP:CG	2.44	0.42
8:AF:160:GLY:H	8:AF:169:LEU:HG	1.84	0.42
8:AF:166:ARG:CG	48:A2:2255:A:OP1	2.65	0.42
10:AH:10:VAL:HG22	10:AH:74:CYS:SG	2.60	0.42
11:AI:111:LEU:CD2	83:Bv:73:A:HO2'	2.31	0.42
13:AK:41:GLN:O	13:AK:45:MET:CB	2.67	0.42
14:AL:10:LEU:HA	19:AQ:168:ARG:NH2	2.34	0.42
14:AL:16:LYS:HD3	48:A2:47:A:H5"	2.01	0.42
14:AL:135:LYS:N	14:AL:135:LYS:HD2	2.34	0.42
17:AO:34:VAL:HG11	17:AO:112:TYR:CZ	2.54	0.42
17:AO:167:HIS:HE1	48:A2:4719:C:H5	1.49	0.42
20:AR:131:VAL:CB	20:AR:132:PHE:CE1	3.03	0.42
21:AS:159:LEU:O	21:AS:160:ARG:HB2	2.19	0.42
21:AS:173:ASN:C	48:A2:4724:A:C2	2.97	0.42
22:AT:119:ALA:CB	22:AT:126:VAL:CG1	2.65	0.42
29:Aa:43:ILE:O	29:Aa:46:ASP:O	2.38	0.42
34:Af:106:TYR:C	34:Af:108:SER:N	2.77	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:Ao:106:PHE:CE1	83:Bv:19:G:N7	2.86	0.42
45:Aq:24:ALA:HB3	45:Aq:27:ALA:CB	2.50	0.42
45:Aq:85:LEU:HG	45:Aq:86:LYS:N	2.35	0.42
48:A2:91:G:C2'	48:A2:92:C:OP1	2.68	0.42
48:A2:133:C:C5	48:A2:135:G:O6	2.70	0.42
48:A2:639:G:C6	48:A2:640:G:N7	2.87	0.42
48:A2:1341:G:N3	48:A2:1343:G:C5	2.84	0.42
48:A2:1356:A:H2'	48:A2:1357:G:O4'	2.20	0.42
48:A2:1393:U:H2'	48:A2:1394:C:OP1	2.20	0.42
48:A2:1942:G:H21	48:A2:2006:A:N6	2.17	0.42
48:A2:2249:G:C6	48:A2:2250:C:C4	3.07	0.42
48:A2:2254:G:H2'	48:A2:2255:A:C8	2.55	0.42
48:A2:2418:G:H2'	48:A2:2419:U:O5'	2.20	0.42
48:A2:2690:G:C2'	48:A2:2691:G:OP1	2.68	0.42
48:A2:3634:A:H4'	48:A2:3635:G:OP2	2.19	0.42
48:A2:4045:U:C2	48:A2:4131:G:C2	3.08	0.42
48:A2:4062:G:C5	48:A2:4063:G:C6	3.08	0.42
48:A2:4902:C:H3'	48:A2:4903:G:H5'	2.00	0.42
49:B1:142:C:O2	56:BG:180:VAL:HG21	2.20	0.42
49:B1:283:G:H3'	49:B1:891:G:C1'	2.49	0.42
49:B1:347:G:O2'	49:B1:348:A:H5'	2.19	0.42
49:B1:876:C:C4'	49:B1:876:C:C6	3.03	0.42
49:B1:911:C:H2'	49:B1:912:C:O5'	2.20	0.42
49:B1:943:U:O2	64:BO:137:SER:N	2.51	0.42
49:B1:952:G:O2'	64:BO:51:GLU:HA	2.19	0.42
49:B1:957:A:OP1	64:BO:57:THR:CB	2.66	0.42
49:B1:999:G:OP1	49:B1:1034:A:H1'	2.20	0.42
49:B1:1522:A:N3	65:BP:128:HIS:CB	2.68	0.42
50:BA:75:SER:HA	50:BA:97:THR:O	2.20	0.42
51:BB:30:TRP:HA	51:BB:47:THR:O	2.20	0.42
51:BB:179:ASN:HB3	51:BB:183:GLU:HB3	1.99	0.42
56:BG:211:LYS:HG3	56:BG:215:LYS:NZ	2.31	0.42
59:BJ:136:ARG:NH1	59:BJ:160:SER:HB2	2.32	0.42
61:BL:101:ARG:HH21	73:BX:13:LEU:HD11	1.84	0.42
63:BN:54:LEU:CD2	63:BN:58:HIS:HD2	2.33	0.42
66:BQ:34:VAL:CG1	66:BQ:84:ILE:HD11	2.49	0.42
70:BU:87:ARG:O	70:BU:88:LEU:HD12	2.19	0.42
73:BX:135:LYS:C	73:BX:137:LYS:N	2.73	0.42
81:Bf:132:MET:SD	81:Bf:139:HIS:HB3	2.60	0.42
82:Bg:153:CYS:HB3	82:Bg:198:VAL:HG12	2.02	0.42
3:AA:201:GLY:N	48:A2:3660:G:OP1	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AB:113:GLU:OE2	4:AB:169:ARG:HG3	2.20	0.42
4:AB:119:TYR:OH	4:AB:129:ALA:CB	2.67	0.42
4:AB:126:LYS:HB3	4:AB:128:LYS:HG2	2.02	0.42
4:AB:238:LYS:NZ	4:AB:238:LYS:HB2	2.35	0.42
5:AC:46:LYS:O	5:AC:49:ARG:HG2	2.20	0.42
5:AC:94:ASN:C	5:AC:96:CYS:N	2.73	0.42
5:AC:150:LEU:HG	46:At:71:ARG:HA	1.90	0.42
6:AD:41:LYS:HD3	22:AT:93:ILE:HD13	2.01	0.42
7:AE:114:ARG:N	48:A2:453:C:OP1	2.47	0.42
7:AE:137:VAL:HG22	7:AE:138:ARG:N	2.34	0.42
7:AE:268:GLN:NE2	7:AE:269:GLY:H	2.18	0.42
8:AF:72:ALA:HA	8:AF:82:TYR:HB3	2.01	0.42
8:AF:182:TYR:CD2	8:AF:200:ARG:HG2	2.55	0.42
8:AF:184:ILE:CA	8:AF:189:ASP:HB3	2.45	0.42
8:AF:228:VAL:HG22	21:AS:38:VAL:HG12	2.01	0.42
9:AG:163:PRO:HG2	48:A2:148:G:N2	2.34	0.42
11:AI:212:LEU:O	11:AI:213:HIS:HB2	2.20	0.42
12:AJ:55:TYR:CE2	12:AJ:57:VAL:HG22	2.54	0.42
13:AK:93:GLU:CB	13:AK:98:ILE:CG1	2.98	0.42
16:AN:14:LYS:HD2	48:A2:274:G:N7	2.35	0.42
20:AR:10:LEU:HG	20:AR:41:ILE:HG21	2.02	0.42
22:AT:17:ARG:NH1	22:AT:45:MET:CE	2.83	0.42
25:AW:50:ASN:C	25:AW:52:THR:N	2.78	0.42
25:AW:90:ILE:HG23	25:AW:94:ARG:NE	2.35	0.42
26:AX:116:LEU:HD23	26:AX:116:LEU:HA	1.78	0.42
28:AZ:26:VAL:HG12	28:AZ:91:LEU:HD23	1.97	0.42
29:Aa:55:LYS:HE2	48:A2:92:C:N3	2.34	0.42
29:Aa:73:VAL:HG13	29:Aa:111:VAL:HA	2.02	0.42
34:Af:95:LYS:HB2	34:Af:95:LYS:NZ	2.35	0.42
38:Aj:2:THR:CG2	48:A2:3613:A:H1'	2.49	0.42
39:Ak:23:VAL:CB	39:Ak:64:LEU:HD21	2.50	0.42
40:Al:36:ARG:NH1	48:A2:407:G:C2	2.85	0.42
41:Am:83:ARG:O	41:Am:87:GLN:HG3	2.19	0.42
43:Ao:106:PHE:CE2	83:Bv:19:G:N1	2.87	0.42
46:At:4:HIS:HE1	46:At:38:PHE:CE2	2.15	0.42
47:Au:26:ARG:HD3	47:Au:210:MET:HE1	2.02	0.42
47:Au:32:VAL:N	47:Au:170:GLY:O	2.50	0.42
47:Au:38:LEU:CD1	47:Au:159:MET:CG	2.96	0.42
48:A2:139:G:C8	48:A2:139:G:OP2	2.73	0.42
48:A2:242:C:H2'	48:A2:243:G:C8	2.54	0.42
48:A2:268:C:H2'	48:A2:269:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:1389:G:H3'	48:A2:1391:G:OP2	2.18	0.42
48:A2:1615:G:C5'	48:A2:1616:A:OP1	2.67	0.42
48:A2:1707:U:H2'	48:A2:1708:U:H6	1.84	0.42
48:A2:2342:A:C2	48:A2:3831:A:C4	3.08	0.42
48:A2:3651:U:O5'	48:A2:3651:U:H6	2.03	0.42
48:A2:3682:A:C5'	48:A2:3683:A:P	2.93	0.42
48:A2:3918:A:H2'	48:A2:3919:C:C5'	2.50	0.42
48:A2:4855:G:H2'	48:A2:4856:G:H5"	2.01	0.42
49:B1:160:U:N3	49:B1:468:A:O2'	2.53	0.42
49:B1:282:G:C6	49:B1:283:G:C5	3.08	0.42
49:B1:284:C:O2'	49:B1:285:U:C4	2.70	0.42
49:B1:488:U:H3'	49:B1:489:A:C5'	2.50	0.42
49:B1:554:A:C2	49:B1:589:G:H2'	2.54	0.42
49:B1:605:A:OP2	49:B1:605:A:H8	2.03	0.42
49:B1:696:G:C8	49:B1:696:G:O5'	2.71	0.42
49:B1:744:G:O2'	49:B1:745:C:O4'	2.29	0.42
49:B1:811:A:HO2'	49:B1:812:A:H8	1.68	0.42
49:B1:846:G:C4	54:BE:19:MET:SD	3.12	0.42
49:B1:926:A:C5'	63:BN:90:HIS:CG	3.03	0.42
49:B1:1206:G:N3	49:B1:1834:A:H1'	2.35	0.42
49:B1:1390:U:H1'	53:BD:162:ASP:CG	2.45	0.42
49:B1:1483:A:O2'	53:BD:160:SER:HB3	2.20	0.42
49:B1:1520:G:N3	49:B1:1520:G:H3'	2.35	0.42
49:B1:1612:G:H4'	68:BS:87:GLN:HB3	2.02	0.42
50:BA:13:GLU:O	50:BA:16:LEU:HB3	2.20	0.42
50:BA:49:ILE:HD11	50:BA:150:THR:HG23	2.00	0.42
50:BA:201:LEU:HD21	67:BR:85:VAL:CG2	2.37	0.42
52:BC:62:PRO:HD3	52:BC:71:LYS:HZ1	1.83	0.42
52:BC:102:LEU:H	52:BC:102:LEU:HG	1.51	0.42
54:BE:30:ARG:O	54:BE:30:ARG:HG3	2.19	0.42
55:BF:20:PHE:CZ	55:BF:97:PHE:CE2	3.07	0.42
55:BF:63:LYS:HB2	55:BF:63:LYS:NZ	2.35	0.42
56:BG:58:LYS:HA	56:BG:107:SER:OG	2.19	0.42
56:BG:132:ARG:HD2	56:BG:132:ARG:H	1.85	0.42
61:BL:42:LEU:HD21	61:BL:72:ILE:CD1	2.50	0.42
64:BO:150:ARG:O	64:BO:151:LEU:HB3	2.19	0.42
65:BP:68:PRO:HD3	65:BP:71:GLU:O	2.19	0.42
67:BR:41:ILE:CD1	67:BR:41:ILE:N	2.73	0.42
67:BR:97:GLU:HA	67:BR:117:LEU:CG	2.49	0.42
70:BU:49:LYS:HG3	70:BU:92:HIS:HE1	1.83	0.42
73:BX:82:THR:O	73:BX:118:VAL:HG13	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:BY:56:PHE:HB2	74:BY:74:MET:HB2	2.02	0.42
75:BZ:63:PRO:O	75:BZ:111:ARG:HD3	2.20	0.42
75:BZ:108:ILE:O	75:BZ:109:TYR:HD1	2.03	0.42
83:Bw:20:U:O2	83:Bw:20:U:H2'	2.19	0.42
2:A4:14:C:C4	2:A4:66:G:N2	2.88	0.42
3:AA:202:VAL:HG11	3:AA:217:GLN:HB3	2.01	0.42
3:AA:227:ARG:HH11	3:AA:227:ARG:CB	2.32	0.42
4:AB:55:HIS:HE1	48:A2:4590:U:H5'	1.85	0.42
4:AB:194:LEU:HD23	4:AB:194:LEU:C	2.45	0.42
5:AC:329:ASN:ND2	5:AC:332:ALA:HB2	2.34	0.42
7:AE:187:ARG:HH22	48:A2:4900:C:P	2.40	0.42
8:AF:116:GLN:CG	8:AF:119:ASN:HB3	2.50	0.42
8:AF:224:THR:O	8:AF:225:THR:HG22	2.20	0.42
10:AH:8:GLN:CB	10:AH:74:CYS:HB2	2.48	0.42
11:AI:76:MET:HB3	11:AI:85:PHE:CE1	2.54	0.42
13:AK:57:LYS:O	13:AK:60:MET:CB	2.68	0.42
13:AK:59:THR:CA	48:A2:1942:G:H5"	2.50	0.42
14:AL:2:ALA:O	48:A2:1496:U:H5'	2.20	0.42
18:AP:37:LYS:HE3	18:AP:115:GLU:O	2.19	0.42
19:AQ:16:LYS:HB2	19:AQ:17:GLU:H	1.64	0.42
21:AS:7:LEU:HD23	21:AS:107:THR:HG1	1.76	0.42
29:Aa:13:GLY:O	33:Ae:39:ARG:HD2	2.20	0.42
29:Aa:25:HIS:NE2	48:A2:1501:C:OP2	2.53	0.42
31:Ac:87:LYS:HD3	31:Ac:89:TYR:CZ	2.55	0.42
44:Ap:59:SER:O	44:Ap:60:CYS:SG	2.78	0.42
45:Aq:38:SER:HB2	45:Aq:39:PRO:CD	2.45	0.42
46:At:94:ARG:HB3	46:At:98:ARG:CZ	2.49	0.42
48:A2:470:G:C2	48:A2:672:G:C6	3.08	0.42
48:A2:676:G:C8	48:A2:676:G:C4'	3.02	0.42
48:A2:1051:G:O2'	48:A2:1052:G:H5'	2.19	0.42
48:A2:1263:C:C4	48:A2:1265:G:O6	2.73	0.42
48:A2:1615:G:O5'	48:A2:1616:A:OP1	2.38	0.42
48:A2:1745:C:C5	48:A2:1746:G:C6	3.07	0.42
48:A2:2474:U:H6	48:A2:2474:U:O5'	2.02	0.42
48:A2:3635:G:C6	48:A2:3649:G:O6	2.73	0.42
48:A2:4016:A:H2	83:Bw:56:C:C5	2.15	0.42
48:A2:4698:C:H4'	48:A2:5026:G:C4	2.54	0.42
48:A2:4828:G:H8	48:A2:4828:G:H5"	1.84	0.42
48:A2:4846:U:H2'	48:A2:4847:G:H5"	2.01	0.42
49:B1:66:G:C3'	49:B1:67:C:H5"	2.49	0.42
49:B1:393:U:H4'	49:B1:394:G:O5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:681:U:H4'	73:BX:9:THR:CB	2.49	0.42
49:B1:977:C:H5"	51:BB:66:VAL:HG21	2.02	0.42
49:B1:1307:U:H1'	81:Bf:135:HIS:HE1	1.69	0.42
49:B1:1455:A:N6	49:B1:1456:G:C6	2.88	0.42
49:B1:1600:G:H5"	75:BZ:43:LYS:CG	2.50	0.42
49:B1:1622:U:H5'	68:BS:120:HIS:CD2	2.54	0.42
51:BB:119:THR:HB	51:BB:143:THR:HG23	2.02	0.42
52:BC:94:ILE:HD11	52:BC:159:LYS:HD3	2.01	0.42
52:BC:166:ARG:CZ	71:BV:10:ASP:OD2	2.68	0.42
55:BF:28:VAL:HG13	55:BF:110:GLN:CD	2.45	0.42
56:BG:59:GLN:HB2	56:BG:72:ARG:HH22	1.84	0.42
59:BJ:111:GLN:CG	59:BJ:112:THR:N	2.82	0.42
59:BJ:131:ARG:HD3	59:BJ:143:ASN:ND2	2.23	0.42
61:BL:19:ASN:C	61:BL:21:LYS:H	2.27	0.42
64:BO:56:VAL:CG1	64:BO:77:ALA:HA	2.48	0.42
69:BT:41:LYS:CD	69:BT:43:LYS:HG2	2.40	0.42
70:BU:26:SER:OG	70:BU:32:LEU:HA	2.20	0.42
70:BU:32:LEU:HD22	70:BU:85:HIS:HB2	2.01	0.42
71:BV:40:ASP:HA	71:BV:47:ASN:HD21	1.85	0.42
75:BZ:62:VAL:N	75:BZ:63:PRO:CD	2.83	0.42
79:Bd:23:VAL:HG21	79:Bd:46:TYR:CE1	2.55	0.42
80:Be:44:ASN:O	80:Be:47:PRO:HD2	2.20	0.42
82:Bg:31:ILE:CG1	82:Bg:45:LEU:HD11	2.49	0.42
82:Bg:133:ASN:HB2	82:Bg:138:CYS:HB2	2.01	0.42
82:Bg:302:TYR:HB3	82:Bg:304:ASP:OD1	2.20	0.42
83:Bv:20:U:O2	83:Bv:20:U:C3'	2.68	0.42
1:A3:45:C:C2	1:A3:46:G:C8	3.08	0.42
1:A3:117:C:O2'	1:A3:118:C:H5'	2.19	0.42
3:AA:2:GLY:HA2	48:A2:1624:A:N6	2.34	0.42
3:AA:130:SER:HA	3:AA:169:VAL:HG12	2.02	0.42
4:AB:90:VAL:HG21	4:AB:163:ILE:HD11	2.02	0.42
4:AB:257:TRP:C	4:AB:257:TRP:CD1	2.97	0.42
4:AB:336:CYS:SG	48:A2:4587:C:O2'	2.72	0.42
5:AC:154:VAL:HG22	5:AC:252:TRP:O	2.19	0.42
5:AC:232:VAL:HG11	5:AC:256:ALA:HA	2.02	0.42
5:AC:306:ARG:HG2	5:AC:307:LYS:N	2.35	0.42
5:AC:331:TYR:HA	8:AF:51:TYR:CE2	2.55	0.42
10:AH:29:GLY:HA3	10:AH:84:VAL:HG22	2.00	0.42
15:AM:4:ARG:HH12	48:A2:4726:A:N6	2.05	0.42
17:AO:51:LYS:HD2	17:AO:144:GLU:OE2	2.20	0.42
18:AP:23:ARG:NH2	18:AP:125:MET:SD	2.93	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AP:135:ARG:HH22	48:A2:1578:U:H1'	1.85	0.42
20:AR:10:LEU:CD1	20:AR:38:ARG:HG2	2.50	0.42
20:AR:58:HIS:O	20:AR:58:HIS:ND1	2.53	0.42
20:AR:93:VAL:HA	20:AR:96:MET:HE2	2.02	0.42
20:AR:107:ARG:HH21	48:A2:2644:U:H5"	1.85	0.42
21:AS:164:LYS:HB3	21:AS:165:PRO:CD	2.50	0.42
28:AZ:102:ARG:O	28:AZ:103:ASP:HB2	2.20	0.42
31:Ac:31:TYR:CE1	31:Ac:56:ARG:HG3	2.54	0.42
33:Ae:30:LYS:HG3	33:Ae:31:ILE:HG13	2.02	0.42
33:Ae:53:ILE:HG22	48:A2:431:G:H5'	2.01	0.42
34:Af:50:VAL:HG13	34:Af:67:THR:HG23	2.02	0.42
39:Ak:12:LEU:C	39:Ak:12:LEU:CD2	2.85	0.42
44:Ap:84:ARG:O	44:Ap:88:GLU:OE1	2.38	0.42
45:Aq:24:ALA:O	45:Aq:25:THR:CB	2.66	0.42
46:At:17:LEU:HD21	46:At:19:LYS:HE3	2.02	0.42
46:At:61:VAL:HA	46:At:80:THR:O	2.20	0.42
48:A2:178:C:H2'	48:A2:179:G:C8	2.55	0.42
48:A2:425:G:C8	48:A2:3860:G:O4'	2.73	0.42
48:A2:943:A:H4'	48:A2:944:G:H5'	2.01	0.42
48:A2:1225:G:O6	48:A2:1252:G:H1'	2.20	0.42
48:A2:1745:C:H2'	48:A2:1746:G:O5'	2.18	0.42
48:A2:3839:G:C8	48:A2:4524:C:O2'	2.72	0.42
48:A2:4088:C:C3'	48:A2:4089:U:C6	3.00	0.42
48:A2:4859:G:H2'	48:A2:4860:C:C6	2.55	0.42
48:A2:5006:A:C5'	48:A2:5007:G:OP2	2.67	0.42
49:B1:11:A:O2'	49:B1:12:U:H5'	2.20	0.42
49:B1:145:G:OP2	56:BG:139:SER:CB	2.67	0.42
49:B1:181:A:O3'	49:B1:182:C:O4'	2.38	0.42
49:B1:346:C:C5'	54:BE:38:LEU:HG	2.50	0.42
49:B1:381:C:OP1	58:BI:48:VAL:HG13	2.20	0.42
49:B1:522:A:H5'	59:BJ:145:PRO:CG	2.49	0.42
49:B1:891:G:H3'	49:B1:892:U:H6	1.84	0.42
49:B1:1389:C:H5'	53:BD:205:PRO:HB3	2.01	0.42
49:B1:1415:C:O4'	69:BT:128:GLN:CG	2.67	0.42
49:B1:1552:G:C5'	49:B1:1553:C:O2	2.68	0.42
49:B1:1683:C:H2'	49:B1:1684:C:C6	2.54	0.42
50:BA:43:SER:C	50:BA:44:ASP:CG	2.87	0.42
53:BD:70:THR:HG23	53:BD:86:LEU:HD13	2.01	0.42
58:BI:27:TYR:HA	58:BI:49:ARG:HD2	2.02	0.42
58:BI:132:GLU:O	58:BI:133:GLU:CB	2.64	0.42
58:BI:139:LYS:HB3	58:BI:144:LYS:HD2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BJ:35:TYR:CZ	59:BJ:106:LEU:CB	2.98	0.42
63:BN:26:LEU:HD21	63:BN:60:VAL:HG22	2.02	0.42
65:BP:64:LYS:C	65:BP:67:ALA:HB2	2.45	0.42
66:BQ:37:ARG:CG	69:BT:7:LYS:CG	2.98	0.42
66:BQ:66:VAL:HG12	66:BQ:68:ILE:HG13	2.02	0.42
74:BY:21:LYS:HE2	74:BY:77:ASP:OD1	2.19	0.42
79:Bd:20:SER:CA	79:Bd:31:ILE:HD12	2.48	0.42
80:Be:28:LYS:C	80:Be:32:ALA:HB3	2.44	0.42
83:Bv:44:G:H2'	83:Bv:45:U:H5'	2.02	0.42
1:A3:127:U:C2	48:A2:2522:A:OP1	2.73	0.41
2:A4:1:G:C2	2:A4:2:U:H1'	2.55	0.41
3:AA:107:MET:SD	3:AA:113:VAL:HG11	2.60	0.41
4:AB:223:THR:HG22	4:AB:338:VAL:HG13	2.02	0.41
5:AC:150:LEU:O	5:AC:151:PRO:C	2.63	0.41
7:AE:133:PHE:CD1	7:AE:133:PHE:C	2.98	0.41
7:AE:187:ARG:HG3	7:AE:188:ARG:H	1.85	0.41
7:AE:243:THR:O	7:AE:244:GLU:C	2.63	0.41
18:AP:93:HIS:CE1	48:A2:391:G:O6	2.73	0.41
20:AR:21:LYS:CD	20:AR:52:ARG:HH12	2.33	0.41
20:AR:93:VAL:HA	20:AR:96:MET:CE	2.50	0.41
22:AT:54:HIS:HB3	22:AT:57:TYR:CD2	2.55	0.41
22:AT:124:THR:HG22	22:AT:126:VAL:H	1.83	0.41
24:AV:86:LYS:HZ1	48:A2:4633:C:C1'	2.32	0.41
27:AY:11:ARG:NH1	48:A2:225:C:OP1	2.53	0.41
29:Aa:131:ARG:NE	48:A2:1471:G:OP1	2.53	0.41
29:Aa:137:ILE:O	29:Aa:140:VAL:HG22	2.20	0.41
30:Ab:50:ASN:O	30:Ab:52:LYS:N	2.52	0.41
31:Ac:42:LYS:NZ	31:Ac:42:LYS:HA	2.35	0.41
33:Ae:7:LEU:HD12	33:Ae:93:LYS:HB3	2.02	0.41
40:Al:28:ARG:HA	40:Al:33:ASN:ND2	2.35	0.41
42:An:11:ARG:NH2	49:B1:1183:A:H4'	2.35	0.41
45:Aq:28:LEU:O	45:Aq:31:LYS:HG3	2.20	0.41
46:At:84:LYS:HD3	46:At:88:ALA:CB	2.49	0.41
47:Au:206:ILE:C	47:Au:207:LYS:CG	2.92	0.41
48:A2:71:C:O2'	48:A2:72:C:C3'	2.68	0.41
48:A2:199:C:H2'	48:A2:200:U:O4'	2.20	0.41
48:A2:229:G:N3	48:A2:229:G:H2'	2.34	0.41
48:A2:1341:G:N1	48:A2:1343:G:N1	2.68	0.41
48:A2:1395:G:C6	48:A2:1396:C:C4	3.08	0.41
48:A2:1702:C:OP2	48:A2:1702:C:C6	2.73	0.41
48:A2:1852:A:O2'	48:A2:1853:G:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:2560:A:H8	48:A2:2560:A:OP2	2.01	0.41
48:A2:2765:C:H5"	48:A2:2766:A:O4'	2.20	0.41
48:A2:3727:A:C2	48:A2:3740:C:C2	3.07	0.41
48:A2:3918:A:C2'	48:A2:3919:C:H5'	2.50	0.41
48:A2:4008:C:H6	48:A2:4008:C:O5'	2.01	0.41
48:A2:4234:G:H8	48:A2:4234:G:OP2	2.03	0.41
48:A2:4282:G:H2'	48:A2:4283:U:C6	2.55	0.41
48:A2:4471:U:H2'	48:A2:4473:A:OP2	2.20	0.41
49:B1:171:A:H4'	56:BG:177:GLN:CD	2.44	0.41
49:B1:193:C:H2'	49:B1:194:C:C6	2.55	0.41
49:B1:377:G:H5"	58:BI:99:ASN:H	1.84	0.41
49:B1:488:U:H3'	49:B1:489:A:H5'	2.02	0.41
49:B1:495:U:C4	49:B1:496:C:C5	3.08	0.41
49:B1:500:A:H3'	49:B1:501:C:C6	2.55	0.41
49:B1:560:A:C5'	59:BJ:172:ARG:HB3	2.50	0.41
49:B1:560:A:P	59:BJ:172:ARG:HB3	2.60	0.41
49:B1:688:U:O4	57:BH:102:PRO:HB2	2.20	0.41
49:B1:790:C:H2'	49:B1:791:C:O4'	2.20	0.41
49:B1:864:A:N6	57:BH:106:ARG:HH22	2.11	0.41
49:B1:957:A:OP2	64:BO:59:GLY:HA3	2.20	0.41
49:B1:1070:A:H2'	49:B1:1071:G:O4'	2.19	0.41
49:B1:1110:G:P	49:B1:1110:G:H3'	2.60	0.41
49:B1:1533:A:OP1	55:BF:164:ARG:NH2	2.35	0.41
49:B1:1664:A:O2'	49:B1:1665:G:OP2	2.36	0.41
49:B1:1751:C:H1'	49:B1:1782:G:H22	1.85	0.41
49:B1:1823:A:H1'	49:B1:1824:A:C2	2.55	0.41
49:B1:1824:A:C8	73:BX:61:GLN:NE2	2.88	0.41
51:BB:61:GLY:O	51:BB:65:ARG:HG3	2.20	0.41
54:BE:150:PRO:O	54:BE:151:ASP:CB	2.68	0.41
55:BF:95:HIS:O	55:BF:99:ILE:HG13	2.20	0.41
56:BG:186:GLN:CG	56:BG:187:HIS:H	2.32	0.41
57:BH:107:LYS:C	57:BH:109:ARG:H	2.17	0.41
63:BN:46:THR:HG23	63:BN:47:PRO:HD2	2.01	0.41
64:BO:21:VAL:O	64:BO:22:ALA:HB3	2.20	0.41
68:BS:82:TRP:CE3	68:BS:83:PHE:N	2.88	0.41
71:BV:50:PHE:N	71:BV:50:PHE:HD1	2.18	0.41
74:BY:35:VAL:HB	74:BY:40:ILE:HG13	2.02	0.41
75:BZ:110:THR:HG22	75:BZ:111:ARG:H	1.84	0.41
76:Ba:74:CYS:O	76:Ba:78:ALA:HB2	2.19	0.41
82:Bg:65:PHE:HB2	82:Bg:83:TRP:CD1	2.55	0.41
82:Bg:197:THR:HG21	82:Bg:238:ALA:CA	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:Bx:38:U:H5'	84:Bx:39:U:C6	2.54	0.41
1:A3:15:G:H1'	48:A2:414:A:N6	2.35	0.41
3:AA:211:PHE:CD1	3:AA:219:ILE:HG23	2.55	0.41
4:AB:14:LEU:O	48:A2:4549:G:O2'	2.37	0.41
5:AC:41:HIS:O	5:AC:45:ARG:HG3	2.21	0.41
5:AC:56:GLU:HA	5:AC:56:GLU:OE1	2.20	0.41
5:AC:289:LEU:H	46:At:4:HIS:CD2	2.38	0.41
6:AD:64:ILE:CD1	6:AD:109:LEU:HD22	2.50	0.41
7:AE:134:SER:HB2	48:A2:1272:C:P	2.59	0.41
11:AI:71:CYS:SG	11:AI:154:ARG:HB3	2.60	0.41
13:AK:79:LEU:C	13:AK:81:HIS:N	2.76	0.41
14:AL:13:HIS:C	14:AL:14:PHE:CD1	2.88	0.41
14:AL:55:ILE:HD13	14:AL:55:ILE:C	2.46	0.41
17:AO:149:TYR:CZ	48:A2:4546:A:OP1	2.74	0.41
19:AQ:150:ARG:HH12	19:AQ:164:LYS:HD3	1.83	0.41
21:AS:84:TYR:HE1	21:AS:86:SER:HB3	1.85	0.41
28:AZ:133:LYS:HE3	48:A2:2733:G:OP2	2.20	0.41
29:Aa:103:VAL:HG21	29:Aa:126:ALA:CB	2.50	0.41
30:Ab:30:GLU:HA	30:Ab:30:GLU:OE1	2.20	0.41
30:Ab:64:ALA:O	30:Ab:68:ARG:HG3	2.20	0.41
35:Ag:60:ARG:HG3	35:Ag:61:PRO:HD2	2.02	0.41
37:Ai:43:MET:O	37:Ai:46:GLU:HG2	2.21	0.41
38:Aj:12:ARG:HG2	48:A2:2383:A:O2'	2.20	0.41
38:Aj:67:LEU:C	38:Aj:67:LEU:HD13	2.45	0.41
39:Ak:40:ARG:HB3	39:Ak:41:TYR:CE1	2.55	0.41
41:Am:78:ILE:CG2	41:Am:83:ARG:HD2	2.49	0.41
43:Ao:98:LYS:HE2	48:A2:4195:A:OP1	2.20	0.41
44:Ap:11:VAL:HG21	44:Ap:27:LYS:HB2	2.01	0.41
45:Aq:80:LEU:O	45:Aq:83:LYS:HB3	2.20	0.41
45:Aq:94:LYS:O	45:Aq:96:LYS:N	2.41	0.41
45:Aq:133:LEU:O	45:Aq:136:ALA:N	2.45	0.41
46:At:38:PHE:CE1	46:At:45:HIS:NE2	2.88	0.41
48:A2:138:C:H2'	48:A2:139:G:O4'	2.19	0.41
48:A2:253:G:C2'	48:A2:254:C:O5'	2.68	0.41
48:A2:344:C:O2'	48:A2:345:C:H5'	2.19	0.41
48:A2:1499:G:H5"	48:A2:1500:A:N7	2.35	0.41
48:A2:1989:U:C5	48:A2:1991:A:OP2	2.72	0.41
48:A2:2009:C:O2'	48:A2:2010:A:H5'	2.20	0.41
48:A2:2361:A:N6	48:A2:2401:C:O2	2.53	0.41
48:A2:2438:G:H2'	48:A2:2440:G:OP2	2.20	0.41
48:A2:2455:G:H2'	48:A2:2456:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:3597:G:O2'	48:A2:3598:G:C5'	2.68	0.41
48:A2:4068:A:H2'	48:A2:4069:G:O4'	2.20	0.41
48:A2:4714:U:O2'	48:A2:4715:U:P	2.78	0.41
49:B1:228:C:O2'	49:B1:229:A:P	2.79	0.41
49:B1:659:G:H5"	73:BX:17:ARG:HE	1.85	0.41
49:B1:748:C:C2'	49:B1:748:C:O5'	2.68	0.41
49:B1:991:G:C1'	76:Ba:11:ALA:HB1	2.50	0.41
49:B1:1120:U:C3'	49:B1:1121:G:H5"	2.49	0.41
49:B1:1348:G:N1	49:B1:1382:A:C2	2.88	0.41
49:B1:1349:G:H21	50:BA:112:ILE:CD1	2.32	0.41
49:B1:1668:U:OP2	66:BQ:141:TYR:CE2	2.73	0.41
49:B1:1784:G:C5	49:B1:1785:C:N4	2.88	0.41
50:BA:7:VAL:CG2	71:BV:42:VAL:CA	2.77	0.41
51:BB:69:VAL:O	51:BB:69:VAL:HG13	2.20	0.41
53:BD:99:ILE:HG23	53:BD:173:ARG:HH21	1.85	0.41
53:BD:216:GLU:O	53:BD:217:ILE:HG12	2.20	0.41
55:BF:98:GLU:OE2	75:BZ:100:VAL:HG12	2.20	0.41
55:BF:198:ARG:HB3	83:Bw:41:C:C5'	2.41	0.41
56:BG:64:LYS:NZ	56:BG:82:SER:H	2.18	0.41
56:BG:175:LYS:HG3	56:BG:175:LYS:H	1.74	0.41
59:BJ:31:LEU:O	59:BJ:34:GLU:HB3	2.20	0.41
62:BM:52:LEU:HB3	62:BM:65:VAL:HG11	2.02	0.41
62:BM:76:LEU:HD13	62:BM:76:LEU:C	2.45	0.41
63:BN:26:LEU:C	63:BN:26:LEU:CD1	2.85	0.41
65:BP:64:LYS:C	65:BP:67:ALA:CB	2.90	0.41
74:BY:35:VAL:HB	74:BY:40:ILE:CG1	2.50	0.41
76:Ba:71:LEU:HD11	76:Ba:73:TYR:CE2	2.55	0.41
83:Bw:41:C:C6	83:Bw:41:C:O5'	2.73	0.41
1:A3:20:A:H2'	1:A3:21:C:O4'	2.21	0.41
1:A3:34:U:HO2'	1:A3:35:C:P	2.43	0.41
1:A3:78:G:H2'	1:A3:79:G:O4'	2.21	0.41
1:A3:135:C:P	26:AX:63:LYS:HE3	2.59	0.41
2:A4:14:C:O2	2:A4:14:C:C2'	2.67	0.41
2:A4:30:C:N3	2:A4:48:G:N7	2.68	0.41
4:AB:220:ILE:HG12	4:AB:278:THR:CG2	2.50	0.41
4:AB:293:ILE:H	4:AB:293:ILE:HG13	1.66	0.41
5:AC:48:ASN:CG	48:A2:1353:G:OP1	2.62	0.41
5:AC:322:LEU:O	5:AC:323:ARG:CB	2.69	0.41
7:AE:103:GLY:C	7:AE:104:THR:HG23	2.44	0.41
7:AE:273:SER:CB	48:A2:4839:U:HO2'	2.30	0.41
8:AF:184:ILE:CB	8:AF:189:ASP:CB	2.98	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AG:131:LYS:HG2	9:AG:132:ARG:N	2.35	0.41
11:AI:23:CYS:SG	11:AI:26:VAL:HB	2.61	0.41
11:AI:66:GLU:O	11:AI:69:ARG:HG2	2.20	0.41
13:AK:58:ASN:CB	13:AK:82:ILE:HG23	2.26	0.41
14:AL:104:ASN:HB3	14:AL:110:LEU:HD13	2.02	0.41
15:AM:121:ARG:CD	48:A2:4886:C:C2	3.03	0.41
15:AM:123:ILE:HG12	17:AO:187:LYS:CE	2.51	0.41
16:AN:73:ARG:HA	16:AN:74:PRO:HD3	1.85	0.41
23:AU:39:PHE:HD1	23:AU:70:ILE:HD13	1.85	0.41
28:AZ:91:LEU:CD1	28:AZ:114:ALA:HA	2.49	0.41
29:Aa:27:LYS:HB2	29:Aa:28:HIS:ND1	2.35	0.41
29:Aa:78:LEU:HD13	29:Aa:78:LEU:C	2.44	0.41
29:Aa:90:ALA:HB2	29:Aa:99:PRO:HB3	2.02	0.41
29:Aa:125:LYS:HA	29:Aa:145:VAL:O	2.20	0.41
32:Ad:79:ASN:CG	48:A2:4615:C:OP1	2.63	0.41
47:Au:34:LEU:HB3	47:Au:167:VAL:HG23	2.03	0.41
47:Au:37:SER:OG	48:A2:4024:C:H4'	2.20	0.41
48:A2:2:G:O2'	48:A2:3:C:H5'	2.20	0.41
48:A2:516:C:O5'	48:A2:516:C:C6	2.70	0.41
48:A2:926:G:H2'	48:A2:927:C:OP1	2.20	0.41
48:A2:1071:C:H2'	48:A2:1072:G:C8	2.56	0.41
48:A2:1294:G:C6	48:A2:1295:A:C2	3.09	0.41
48:A2:1300:U:HO2'	48:A2:1301:C:H6	1.64	0.41
48:A2:1319:G:C6	48:A2:2325:C:C5	3.09	0.41
48:A2:1716:G:H5'	48:A2:4176:A:O2'	2.20	0.41
48:A2:1804:U:H2'	48:A2:1805:G:O4'	2.19	0.41
48:A2:1842:U:H2'	48:A2:1843:U:O4'	2.20	0.41
48:A2:1944:C:O3'	48:A2:1945:A:C8	2.74	0.41
48:A2:1987:U:C5	48:A2:1988:G:C5	3.08	0.41
48:A2:2482:G:N3	48:A2:2482:G:C3'	2.81	0.41
48:A2:2706:C:OP2	48:A2:2706:C:C6	2.74	0.41
48:A2:2740:U:O2'	48:A2:2741:G:O4'	2.36	0.41
48:A2:3665:U:C4	48:A2:3666:U:C4	3.09	0.41
48:A2:4016:A:N7	83:Bw:56:C:C1'	2.82	0.41
48:A2:4181:A:H2'	48:A2:4182:A:C8	2.55	0.41
48:A2:4332:G:O6	83:Bw:76:A:C2	2.73	0.41
48:A2:4461:G:H1'	48:A2:4490:G:H21	1.85	0.41
48:A2:4514:U:H6	48:A2:4514:U:C5'	2.30	0.41
48:A2:4840:U:O2	48:A2:4840:U:O4'	2.38	0.41
49:B1:11:A:H8	49:B1:11:A:O5'	2.02	0.41
49:B1:229:A:H2'	49:B1:888:U:O2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:599:A:H8	49:B1:599:A:O5'	2.03	0.41
49:B1:973:C:O2	64:BO:55:ARG:NH2	2.54	0.41
49:B1:1020:A:C4'	63:BN:128:TYR:OH	2.65	0.41
49:B1:1136:U:H2'	49:B1:1137:U:C6	2.56	0.41
49:B1:1621:U:O2'	68:BS:120:HIS:CE1	2.74	0.41
49:B1:1743:G:H8	49:B1:1743:G:O5'	2.03	0.41
52:BC:173:LYS:O	52:BC:174:ILE:C	2.63	0.41
53:BD:4:GLN:O	53:BD:4:GLN:HG2	2.19	0.41
54:BE:141:THR:HB	54:BE:145:ARG:H	1.85	0.41
55:BF:128:ILE:HG12	55:BF:137:GLN:HB3	2.01	0.41
60:BK:3:MET:HB3	60:BK:44:HIS:ND1	2.35	0.41
60:BK:83:LEU:C	60:BK:86:PRO:HD2	2.45	0.41
61:BL:120:VAL:HG13	61:BL:121:GLN:N	2.35	0.41
63:BN:66:VAL:HG13	63:BN:67:THR:N	2.35	0.41
65:BP:36:LEU:N	65:BP:36:LEU:CD2	2.83	0.41
66:BQ:132:PHE:CD1	70:BU:77:TRP:HD1	2.37	0.41
67:BR:4:VAL:O	67:BR:5:ARG:C	2.62	0.41
67:BR:5:ARG:HE	67:BR:53:TYR:CB	2.08	0.41
67:BR:71:ILE:CD1	67:BR:74:GLN:HG2	2.51	0.41
68:BS:15:VAL:HG12	68:BS:16:LEU:HD21	1.92	0.41
70:BU:20:ILE:HG23	70:BU:116:ILE:HG23	2.01	0.41
77:Bb:21:LYS:HG3	77:Bb:26:GLN:NE2	2.34	0.41
2:A4:36:C:H4'	6:AD:154:THR:CG2	2.48	0.41
2:A4:39:C:O4'	12:AJ:47:THR:O	2.39	0.41
3:AA:180:LEU:HD12	44:Ap:26:VAL:HG21	2.03	0.41
3:AA:240:ALA:C	48:A2:3677:C:O2'	2.58	0.41
4:AB:200:ARG:HA	4:AB:203:GLN:OE1	2.20	0.41
5:AC:221:PHE:CD2	5:AC:227:ILE:HD11	2.54	0.41
6:AD:205:ALA:HB2	6:AD:236:MET:SD	2.60	0.41
8:AF:166:ARG:NH1	8:AF:209:TRP:HB3	2.35	0.41
10:AH:1:MET:HE3	10:AH:3:THR:HG23	2.01	0.41
11:AI:112:GLN:O	11:AI:113:THR:CB	2.68	0.41
12:AJ:134:LEU:HD11	12:AJ:162:ALA:CB	2.51	0.41
13:AK:3:ARG:O	13:AK:10:LYS:HB3	2.20	0.41
13:AK:39:GLN:HA	13:AK:42:GLN:HB2	2.01	0.41
15:AM:10:GLY:HA3	15:AM:62:LEU:O	2.19	0.41
17:AO:160:ARG:O	17:AO:163:LYS:HB3	2.20	0.41
23:AU:39:PHE:HE1	23:AU:43:LEU:HD11	1.86	0.41
24:AV:85:ARG:H	24:AV:101:ASN:ND2	2.18	0.41
30:Ab:62:ALA:HA	30:Ab:65:MET:HG2	2.01	0.41
32:Ad:98:SER:HB3	32:Ad:99:PRO:HD2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:Ag:21:ARG:NH2	35:Ag:33:LEU:HD23	2.34	0.41
35:Ag:54:ARG:HH22	48:A2:2629:G:H21	1.66	0.41
45:Aq:130:LYS:O	45:Aq:131:GLU:C	2.64	0.41
46:At:6:GLN:O	46:At:10:VAL:HG23	2.20	0.41
48:A2:6:C:O2	48:A2:6:C:C2'	2.67	0.41
48:A2:132:G:N3	48:A2:132:G:OP2	2.54	0.41
48:A2:148:G:H3'	48:A2:149:U:C5'	2.50	0.41
48:A2:156:C:H5"	48:A2:157:G:H2'	2.02	0.41
48:A2:195:A:H2'	48:A2:234:G:OP1	2.19	0.41
48:A2:256:C:OP2	48:A2:256:C:C6	2.73	0.41
48:A2:353:A:H4'	48:A2:372:A:N6	2.34	0.41
48:A2:683:U:C4	48:A2:684:U:O4	2.73	0.41
48:A2:750:G:N2	48:A2:892:C:C2	2.89	0.41
48:A2:1306:A:C2	48:A2:1307:A:C4	3.08	0.41
48:A2:2278:G:C2	48:A2:2280:G:H1'	2.55	0.41
48:A2:2527:C:H2'	48:A2:2528:G:O4'	2.20	0.41
48:A2:2722:A:C2	48:A2:2723:A:C4	3.09	0.41
48:A2:2796:C:H2'	48:A2:2797:C:C6	2.56	0.41
48:A2:2840:C:O5'	48:A2:2840:C:H6	2.03	0.41
48:A2:3891:U:H2'	48:A2:3892:U:C6	2.55	0.41
48:A2:4029:C:H2'	48:A2:4030:U:O4'	2.20	0.41
48:A2:4262:U:H2'	48:A2:4263:U:C6	2.56	0.41
48:A2:4470:C:O2'	48:A2:4471:U:H5'	2.20	0.41
48:A2:4686:A:H8	48:A2:4686:A:O5'	2.03	0.41
48:A2:4836:C:O2	48:A2:4837:C:C5	2.73	0.41
48:A2:4872:C:H3'	48:A2:4872:C:H6	1.79	0.41
49:B1:745:C:C2	57:BH:109:ARG:CD	3.03	0.41
49:B1:750:C:C3'	49:B1:750:C:OP2	2.68	0.41
49:B1:821:G:N2	59:BJ:147:PHE:CE1	2.88	0.41
49:B1:887:U:C5	49:B1:888:U:C5	3.08	0.41
49:B1:1016:U:C1'	63:BN:61:ALA:HB1	2.40	0.41
49:B1:1140:G:H2'	49:B1:1141:G:O4'	2.20	0.41
49:B1:1314:U:C5	60:BK:2:LEU:CB	3.03	0.41
49:B1:1377:U:C5	50:BA:102:ARG:NE	2.89	0.41
49:B1:1748:G:H2'	49:B1:1749:G:O5'	2.20	0.41
49:B1:1751:C:O2	49:B1:1782:G:C2	2.72	0.41
49:B1:1853:C:H2'	49:B1:1854:U:O4'	2.20	0.41
56:BG:70:HIS:HD2	56:BG:103:ASP:OD1	2.03	0.41
56:BG:227:GLN:O	56:BG:231:ARG:NE	2.42	0.41
59:BJ:13:TYR:OH	59:BJ:44:TRP:CZ3	2.71	0.41
60:BK:27:VAL:CG2	60:BK:29:MET:HE3	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:Bd:21:CYS:N	79:Bd:31:ILE:HD11	2.35	0.41
79:Bd:38:MET:HE3	79:Bd:42:CYS:CB	2.45	0.41
1:A3:52:A:C6	40:Al:27:ILE:HD13	2.53	0.41
1:A3:86:U:N3	36:Ah:7:ARG:HB2	2.35	0.41
1:A3:93:C:H5"	38:Aj:76:HIS:NE2	2.34	0.41
1:A3:103:A:H8	1:A3:104:A:C8	2.39	0.41
1:A3:125:C:O2	1:A3:125:C:O2'	2.38	0.41
4:AB:127:LYS:HG2	4:AB:127:LYS:O	2.21	0.41
7:AE:96:VAL:HG12	7:AE:97:GLY:N	2.35	0.41
7:AE:112:MET:N	46:At:87:ARG:NH1	2.68	0.41
7:AE:212:LEU:HD23	7:AE:212:LEU:C	2.42	0.41
8:AF:220:MET:CE	8:AF:223:LYS:HG2	2.50	0.41
9:AG:83:PHE:HB3	9:AG:159:HIS:HD2	1.85	0.41
10:AH:23:ARG:NH1	48:A2:4725:U:C2'	2.84	0.41
10:AH:137:SER:HB3	10:AH:143:GLU:HB3	2.03	0.41
11:AI:74:LYS:HD3	11:AI:74:LYS:HA	1.92	0.41
11:AI:138:ILE:HG22	11:AI:140:THR:HG23	2.02	0.41
15:AM:34:ASN:O	15:AM:52:PHE:HD2	2.03	0.41
16:AN:10:LEU:HD13	16:AN:10:LEU:C	2.44	0.41
16:AN:40:PRO:HG3	48:A2:8:U:H5'	2.01	0.41
17:AO:119:VAL:CG1	17:AO:124:LEU:HD21	2.51	0.41
20:AR:99:MET:HG2	20:AR:103:ARG:CD	2.49	0.41
22:AT:2:THR:HG23	22:AT:3:ASN:H	1.86	0.41
24:AV:97:TYR:CE2	25:AW:37:GLU:OE2	2.74	0.41
25:AW:101:ARG:HB2	25:AW:105:ARG:NH1	1.93	0.41
26:AX:48:ARG:HA	26:AX:49:PRO:HD3	1.92	0.41
27:AY:89:LYS:HE3	27:AY:95:VAL:HB	2.02	0.41
28:AZ:67:LYS:HE2	48:A2:2553:G:P	2.60	0.41
28:AZ:74:VAL:O	48:A2:2559:U:H4'	2.20	0.41
30:Ab:5:LYS:CE	30:Ab:8:THR:HB	2.50	0.41
30:Ab:50:ASN:ND2	48:A2:1795:U:O2	2.53	0.41
33:Ae:50:LYS:HD3	33:Ae:50:LYS:H	1.85	0.41
38:Aj:9:GLY:HA2	48:A2:2771:C:H1'	2.02	0.41
38:Aj:25:LYS:HG2	38:Aj:25:LYS:O	2.19	0.41
45:Aq:16:ARG:HB2	45:Aq:59:THR:C	2.45	0.41
46:At:108:MET:HG3	48:A2:949:C:N1	2.36	0.41
47:Au:35:GLN:HG2	48:A2:4023:A:C1'	2.34	0.41
47:Au:35:GLN:HG3	48:A2:4023:A:C2'	2.25	0.41
48:A2:267:U:H2'	48:A2:268:C:C6	2.55	0.41
48:A2:287:G:H1	48:A2:309:G:N2	2.17	0.41
48:A2:944:G:N2	48:A2:2056:G:O2'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:1353:G:H5'	48:A2:1355:A:O4'	2.19	0.41
48:A2:1431:G:O3'	48:A2:1432:C:O4'	2.38	0.41
48:A2:1533:C:C2'	48:A2:1534:G:H5'	2.51	0.41
48:A2:1960:A:O2'	48:A2:1961:U:O5'	2.36	0.41
48:A2:2468:C:HO2'	48:A2:2469:U:P	2.44	0.41
48:A2:2739:G:O2'	48:A2:2740:U:P	2.78	0.41
48:A2:3597:G:C2	48:A2:3598:G:C4	3.08	0.41
48:A2:4187:G:H2'	48:A2:4188:G:O5'	2.20	0.41
48:A2:4546:A:C5	48:A2:4681:G:N7	2.88	0.41
48:A2:4616:C:O5'	48:A2:4616:C:H6	2.03	0.41
49:B1:154:U:C5'	56:BG:13:GLN:CB	2.99	0.41
49:B1:346:C:H2'	49:B1:347:G:O4'	2.19	0.41
49:B1:382:C:H41	58:BI:5:ARG:NH2	2.17	0.41
49:B1:693:A:O5'	49:B1:693:A:H8	2.02	0.41
49:B1:1669:G:OP2	66:BQ:130:LYS:HD2	2.20	0.41
49:B1:1737:G:H2'	49:B1:1738:C:O4'	2.20	0.41
49:B1:1756:C:O2'	49:B1:1757:G:P	2.78	0.41
50:BA:30:LEU:CD2	50:BA:38:ILE:HG21	2.47	0.41
52:BC:60:TRP:HB3	52:BC:71:LYS:HE2	2.03	0.41
52:BC:66:LEU:C	52:BC:66:LEU:HD13	2.46	0.41
52:BC:209:VAL:HB	52:BC:210:PRO:CD	2.51	0.41
54:BE:11:ARG:NH1	54:BE:20:LEU:HB3	2.36	0.41
54:BE:98:HIS:O	54:BE:113:ARG:HA	2.19	0.41
54:BE:150:PRO:O	54:BE:151:ASP:HB2	2.20	0.41
55:BF:58:ALA:HB3	55:BF:62:ARG:HD3	2.03	0.41
55:BF:62:ARG:HA	55:BF:65:GLN:HE22	1.86	0.41
55:BF:100:ILE:O	55:BF:103:LEU:O	2.39	0.41
56:BG:45:TRP:NE1	56:BG:121:ILE:HG12	2.34	0.41
56:BG:101:ILE:CG2	56:BG:103:ASP:OD1	2.69	0.41
58:BI:124:LYS:O	58:BI:125:LYS:C	2.63	0.41
59:BJ:110:LEU:CB	59:BJ:147:PHE:HB3	2.51	0.41
65:BP:34:MET:HG3	65:BP:45:LEU:CD2	2.48	0.41
66:BQ:16:LYS:CD	66:BQ:17:LYS:N	2.84	0.41
69:BT:41:LYS:CD	69:BT:43:LYS:HZ3	2.27	0.41
72:BW:28:ARG:CB	72:BW:29:PRO:HD3	2.49	0.41
75:BZ:46:ASN:OD1	75:BZ:79:ILE:N	2.53	0.41
77:Bb:7:LEU:O	77:Bb:10:PRO:HD3	2.20	0.41
79:Bd:30:LEU:HD12	79:Bd:30:LEU:C	2.46	0.41
81:Bf:109:ASP:O	81:Bf:113:LYS:HB3	2.21	0.41
3:AA:80:GLU:OE2	44:Ap:66:GLY:HA2	2.21	0.41
3:AA:149:LYS:HB2	3:AA:149:LYS:NZ	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:82:GLY:C	48:A2:362:C:H1'	2.46	0.41
5:AC:97:ARG:HH11	48:A2:348:U:H1'	1.85	0.41
5:AC:113:ARG:HD2	48:A2:1490:A:OP1	2.21	0.41
7:AE:108:LYS:CE	7:AE:109:LEU:H	2.26	0.41
7:AE:112:MET:O	46:At:87:ARG:NH1	2.53	0.41
9:AG:76:VAL:HG23	9:AG:81:ASN:HB3	2.02	0.41
9:AG:114:LEU:HD23	9:AG:117:ARG:HH22	1.85	0.41
9:AG:137:ARG:HB3	9:AG:142:THR:HG21	2.02	0.41
9:AG:166:LEU:HA	16:AN:7:ILE:HD12	2.02	0.41
11:AI:51:HIS:HB2	11:AI:134:VAL:CG1	2.50	0.41
12:AJ:53:ALA:O	12:AJ:54:ARG:CB	2.69	0.41
16:AN:144:ARG:O	16:AN:145:ASN:HB3	2.19	0.41
18:AP:87:SER:O	18:AP:91:LEU:HD13	2.21	0.41
19:AQ:15:ARG:HD2	19:AQ:52:PHE:O	2.18	0.41
20:AR:37:SER:HA	48:A2:2505:C:OP1	2.21	0.41
20:AR:131:VAL:HG11	20:AR:132:PHE:CE1	2.56	0.41
26:AX:77:ILE:HG21	26:AX:116:LEU:HD12	2.02	0.41
28:AZ:33:THR:CB	28:AZ:36:ARG:CG	2.86	0.41
36:Ah:24:LEU:HD13	36:Ah:54:ILE:HG12	2.01	0.41
36:Ah:86:LYS:O	36:Ah:87:LYS:C	2.63	0.41
44:Ap:90:LYS:HD3	44:Ap:90:LYS:HA	1.87	0.41
44:Ap:91:ASP:O	44:Ap:92:GLN:HB2	2.21	0.41
45:Aq:21:GLU:HB2	45:Aq:22:VAL:H	1.58	0.41
45:Aq:42:VAL:CG2	45:Aq:43:GLY:N	2.82	0.41
46:At:104:PRO:O	46:At:107:ARG:HG3	2.19	0.41
47:Au:58:THR:HB	47:Au:59:PRO:HD3	2.03	0.41
47:Au:98:LYS:HE2	47:Au:98:LYS:HA	2.03	0.41
47:Au:166:ALA:CB	48:A2:3940:G:C2	2.86	0.41
48:A2:80:C:H2'	48:A2:81:C:C6	2.55	0.41
48:A2:380:A:C2'	48:A2:381:G:OP1	2.69	0.41
48:A2:493:G:N3	48:A2:493:G:C2'	2.82	0.41
48:A2:702:A:H8	48:A2:702:A:OP2	2.02	0.41
48:A2:947:A:H5'	48:A2:948:G:OP1	2.21	0.41
48:A2:1225:G:C5	48:A2:1226:C:H1'	2.56	0.41
48:A2:1297:C:C2	48:A2:1298:C:C6	3.09	0.41
48:A2:1583:A:OP2	48:A2:3614:A:N6	2.53	0.41
48:A2:2414:G:N2	48:A2:2762:A:N3	2.68	0.41
48:A2:2608:C:C4	48:A2:4610:A:N1	2.89	0.41
48:A2:2859:U:C2'	48:A2:2860:A:H5"	2.51	0.41
48:A2:2866:U:O2'	48:A2:3589:C:H2'	2.21	0.41
48:A2:3681:G:C8	48:A2:3683:A:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:4016:A:O2'	48:A2:4017:A:O4'	2.38	0.41
49:B1:154:U:H1'	49:B1:165:G:H21	1.86	0.41
49:B1:320:G:O2'	49:B1:321:C:O4'	2.28	0.41
49:B1:381:C:C5'	58:BI:48:VAL:HG13	2.50	0.41
49:B1:409:C:O2'	49:B1:410:G:H5'	2.20	0.41
49:B1:561:A:H5"	59:BJ:171:GLY:H	1.86	0.41
49:B1:621:C:O2	49:B1:621:C:O5'	2.39	0.41
49:B1:630:U:C3'	49:B1:630:U:C6	3.03	0.41
49:B1:641:A:P	59:BJ:40:LYS:HD2	2.61	0.41
49:B1:658:U:O4'	73:BX:17:ARG:NH2	2.54	0.41
49:B1:750:C:O2'	49:B1:751:G:C1'	2.69	0.41
49:B1:918:U:P	63:BN:64:ARG:NH2	2.94	0.41
49:B1:969:U:H5"	49:B1:970:G:H3'	2.02	0.41
49:B1:991:G:N7	76:Ba:7:ASN:CG	2.79	0.41
49:B1:1035:A:C1'	49:B1:1857:G:H1'	2.50	0.41
49:B1:1116:C:H4'	49:B1:1117:C:OP1	2.20	0.41
49:B1:1261:C:OP2	49:B1:1261:C:H6	2.04	0.41
49:B1:1388:A:N6	53:BD:161:GLY:HA3	2.36	0.41
49:B1:1497:G:N7	60:BK:62:PHE:CE1	2.88	0.41
49:B1:1578:U:C5	53:BD:4:GLN:HE21	1.73	0.41
49:B1:1669:G:OP2	66:BQ:130:LYS:CD	2.69	0.41
49:B1:1781:A:C2'	49:B1:1782:G:H5'	2.50	0.41
50:BA:169:HIS:CB	50:BA:203:PHE:HE2	2.34	0.41
51:BB:77:ASP:C	51:BB:78:GLU:CG	2.91	0.41
51:BB:181:LEU:H	51:BB:181:LEU:HD12	1.86	0.41
52:BC:135:GLY:C	52:BC:136:HIS:CG	2.97	0.41
53:BD:79:PHE:CG	53:BD:84:VAL:CG2	3.03	0.41
55:BF:104:THR:OG1	55:BF:105:GLY:N	2.53	0.41
56:BG:118:GLU:O	56:BG:119:LYS:HB2	2.21	0.41
56:BG:213:LEU:HD23	56:BG:213:LEU:C	2.46	0.41
58:BI:65:PHE:HA	58:BI:187:GLY:O	2.20	0.41
58:BI:83:TYR:O	58:BI:83:TYR:CD2	2.74	0.41
59:BJ:115:PHE:CD1	59:BJ:115:PHE:C	2.98	0.41
68:BS:28:PHE:O	68:BS:31:THR:HB	2.21	0.41
68:BS:47:LYS:HG2	68:BS:47:LYS:H	1.56	0.41
74:BY:100:LYS:HG3	74:BY:101:LYS:N	2.36	0.41
75:BZ:73:VAL:O	75:BZ:77:LEU:HG	2.20	0.41
76:Ba:30:VAL:CG2	76:Ba:74:CYS:HB3	2.45	0.41
78:Bc:17:VAL:HG23	78:Bc:52:GLU:CG	2.50	0.41
82:Bg:240:CYS:SG	82:Bg:291:TRP:HD1	2.43	0.41
1:A3:71:A:N6	1:A3:87:G:O4'	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A4:10:C:O2	6:AD:20:PHE:HA	2.21	0.41
4:AB:17:LEU:N	4:AB:18:PRO:CD	2.81	0.41
5:AC:329:ASN:HB2	8:AF:188:GLU:OE2	2.21	0.41
6:AD:9:ASN:CG	6:AD:12:TYR:CG	2.99	0.41
6:AD:264:LYS:C	6:AD:265:ARG:HD2	2.46	0.41
7:AE:125:LEU:HB2	48:A2:946:G:H21	1.79	0.41
7:AE:200:LYS:HZ3	7:AE:203:ILE:N	2.18	0.41
8:AF:94:ARG:HB2	8:AF:140:ILE:HG22	2.02	0.41
9:AG:52:THR:O	9:AG:55:VAL:HG12	2.21	0.41
9:AG:102:TYR:OH	9:AG:207:VAL:HG23	2.20	0.41
9:AG:157:ILE:HG23	9:AG:167:VAL:CG1	2.50	0.41
11:AI:86:HIS:HB3	11:AI:139:ARG:HG2	2.03	0.41
12:AJ:108:GLY:C	12:AJ:109:ILE:HG23	2.45	0.41
13:AK:72:ASN:CB	13:AK:73:PRO:HD3	2.43	0.41
16:AN:156:HIS:O	16:AN:159:ARG:HG3	2.20	0.41
17:AO:128:ARG:NH1	48:A2:2037:G:H5"	2.35	0.41
20:AR:76:MET:HG3	20:AR:76:MET:O	2.21	0.41
20:AR:172:ARG:CZ	49:B1:908:A:H5"	2.50	0.41
26:AX:64:SER:OG	36:Ah:80:PRO:HB3	2.21	0.41
33:Ae:5:ARG:HH22	48:A2:695:C:P	2.43	0.41
34:Af:40:GLU:HA	34:Af:40:GLU:OE1	2.20	0.41
39:Ak:25:ILE:CD1	39:Ak:66:VAL:HG12	2.51	0.41
47:Au:25:ARG:C	47:Au:26:ARG:HD3	2.46	0.41
47:Au:83:PRO:CG	47:Au:107:TYR:CE1	2.85	0.41
47:Au:158:GLN:HB3	48:A2:3940:G:H5"	2.02	0.41
48:A2:32:G:P	48:A2:32:G:O4'	2.79	0.41
48:A2:406:G:H4'	48:A2:407:G:H5"	2.03	0.41
48:A2:468:C:H42	48:A2:674:C:N4	2.17	0.41
48:A2:651:C:O5'	48:A2:651:C:H6	2.03	0.41
48:A2:676:G:C6	48:A2:677:G:N1	2.89	0.41
48:A2:958:U:O2	48:A2:959:C:C6	2.73	0.41
48:A2:1188:G:C6	48:A2:1189:C:C4	3.09	0.41
48:A2:1252:G:N7	48:A2:1253:A:C4	2.89	0.41
48:A2:1278:C:O2	48:A2:1279:G:C6	2.74	0.41
48:A2:1739:U:C4	48:A2:1740:G:C8	2.97	0.41
48:A2:1866:G:N2	48:A2:1889:A:H1'	2.35	0.41
48:A2:2468:C:O2'	48:A2:2469:U:P	2.79	0.41
48:A2:3929:G:N3	83:Bw:19:G:N3	2.68	0.41
48:A2:4819:G:H2'	48:A2:4820:G:C8	2.54	0.41
48:A2:4860:C:H3'	48:A2:4861:G:H8	1.85	0.41
49:B1:285:U:O2'	49:B1:286:U:P	2.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:344:U:H2'	49:B1:345:U:C6	2.54	0.41
49:B1:659:G:H5"	73:BX:17:ARG:NE	2.35	0.41
49:B1:913:A:C2	57:BH:66:VAL:HG11	2.55	0.41
49:B1:1115:U:H1'	49:B1:1116:C:C5	2.55	0.41
49:B1:1418:C:O3'	49:B1:1419:C:H2'	2.21	0.41
49:B1:1678:A:C2'	49:B1:1679:A:H5'	2.46	0.41
50:BA:172:GLY:CA	50:BA:202:TYR:CB	2.98	0.41
56:BG:49:VAL:HB	56:BG:114:VAL:HB	2.02	0.41
56:BG:121:ILE:CG2	56:BG:122:PRO:HD2	2.51	0.41
59:BJ:25:LEU:O	59:BJ:29:LEU:HG	2.21	0.41
60:BK:65:ARG:NH2	79:Bd:20:SER:OG	2.51	0.41
60:BK:76:ILE:O	60:BK:79:LEU:HB2	2.21	0.41
62:BM:36:ARG:HH21	81:Bf:103:LEU:HD13	1.85	0.41
64:BO:83:GLN:NE2	64:BO:83:GLN:CA	2.73	0.41
66:BQ:42:ILE:CD1	66:BQ:48:GLN:HB2	2.48	0.41
67:BR:44:LYS:O	67:BR:47:ARG:HB2	2.21	0.41
67:BR:126:MET:O	67:BR:126:MET:SD	2.79	0.41
68:BS:45:LEU:HD12	68:BS:50:ILE:HD12	2.02	0.41
69:BT:40:ALA:C	69:BT:41:LYS:CG	2.89	0.41
70:BU:88:LEU:HD12	70:BU:88:LEU:N	2.35	0.41
73:BX:106:GLY:O	73:BX:107:ARG:CB	2.68	0.41
73:BX:122:VAL:O	73:BX:130:LEU:HD12	2.21	0.41
74:BY:83:LYS:HD3	74:BY:96:LEU:HD23	2.02	0.41
78:Bc:12:ALA:O	78:Bc:55:VAL:HG13	2.21	0.41
79:Bd:36:LEU:C	79:Bd:36:LEU:CD2	2.86	0.41
82:Bg:10:THR:HG22	82:Bg:308:ARG:HG2	2.03	0.41
4:AB:60:VAL:HG21	4:AB:72:VAL:HG21	2.02	0.41
4:AB:268:ARG:HD3	48:A2:4527:C:O2	2.21	0.41
5:AC:183:VAL:HG11	5:AC:226:GLY:N	2.33	0.41
6:AD:234:ASP:CG	6:AD:235:MET:CE	2.90	0.41
8:AF:179:LEU:HG	8:AF:179:LEU:O	2.20	0.41
9:AG:43:GLN:HB2	48:A2:4093:G:H22	1.83	0.41
12:AJ:86:GLY:HA3	12:AJ:107:PHE:CZ	2.55	0.41
21:AS:84:TYR:CE2	21:AS:93:MET:HE3	2.54	0.41
23:AU:80:LYS:HB2	23:AU:110:TYR:CE2	2.55	0.41
24:AV:42:VAL:HB	24:AV:45:ILE:HD12	1.94	0.41
25:AW:119:LYS:C	25:AW:122:SER:OG	2.61	0.41
28:AZ:59:LYS:O	28:AZ:61:LYS:N	2.53	0.41
28:AZ:112:ARG:NH2	48:A2:2551:C:O2'	2.54	0.41
31:Ac:33:GLN:CA	48:A2:2637:G:H22	2.33	0.41
33:Ae:36:ARG:NE	48:A2:1643:C:OP1	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:Ap:22:LEU:O	44:Ap:26:VAL:HG23	2.20	0.41
46:At:98:ARG:CD	48:A2:951:A:C5'	2.99	0.41
47:Au:92:LYS:CA	47:Au:95:LYS:HE2	2.49	0.41
48:A2:57:G:H8	48:A2:57:G:O5'	2.03	0.41
48:A2:70:A:C4'	48:A2:71:C:N4	2.84	0.41
48:A2:176:G:N1	48:A2:253:G:C2	2.89	0.41
48:A2:330:A:H5"	48:A2:331:U:OP2	2.21	0.41
48:A2:681:A:C5	48:A2:682:U:C4	3.08	0.41
48:A2:903:C:O2'	48:A2:904:A:P	2.78	0.41
48:A2:911:C:H2'	48:A2:912:C:O4'	2.21	0.41
48:A2:1224:C:N3	48:A2:1225:G:H1'	2.36	0.41
48:A2:1319:G:H2'	48:A2:1320:A:N7	2.36	0.41
48:A2:1942:G:C2'	48:A2:2005:G:H22	2.30	0.41
48:A2:1973:U:C6	48:A2:1973:U:O5'	2.74	0.41
48:A2:2499:C:H2'	48:A2:2500:G:C8	2.55	0.41
48:A2:3596:G:C3'	48:A2:3596:G:H8	2.20	0.41
48:A2:3661:U:H2'	48:A2:3662:G:O4'	2.20	0.41
48:A2:3731:A:C6	49:B1:1825:A:N1	2.89	0.41
48:A2:4909:G:H2'	48:A2:4910:G:O5'	2.21	0.41
48:A2:4985:C:H3'	48:A2:4986:G:C5'	2.51	0.41
49:B1:305:U:O4	58:BI:55:TYR:CD2	2.68	0.41
49:B1:351:G:C2'	49:B1:352:U:H5'	2.51	0.41
49:B1:548:C:OP1	49:B1:548:C:H4'	2.20	0.41
49:B1:807:G:N2	49:B1:808:A:N3	2.69	0.41
49:B1:929:G:H4'	77:Bb:67:THR:HG23	2.01	0.41
49:B1:1003:U:H2'	49:B1:1004:U:O4'	2.20	0.41
49:B1:1055:A:N6	49:B1:1061:U:OP2	2.54	0.41
49:B1:1309:C:O4'	81:Bf:133:ALA:CB	2.69	0.41
49:B1:1674:G:C5'	55:BF:86:LYS:HG3	2.51	0.41
49:B1:1865:C:C5'	76:Ba:87:ARG:HH21	2.34	0.41
50:BA:39:TYR:HE2	67:BR:108:LEU:HD13	1.83	0.41
51:BB:38:MET:HE2	51:BB:38:MET:HB3	1.96	0.41
53:BD:96:LEU:CD1	53:BD:190:LEU:HD22	2.50	0.41
55:BF:33:ILE:O	55:BF:34:SER:CB	2.69	0.41
57:BH:62:ILE:HD11	57:BH:94:PHE:HE2	1.83	0.41
58:BI:67:TRP:CD1	58:BI:70:GLU:H	2.39	0.41
59:BJ:74:GLY:O	59:BJ:78:LEU:HG	2.20	0.41
61:BL:157:LYS:HB2	61:BL:157:LYS:NZ	2.35	0.41
63:BN:53:ILE:O	63:BN:57:SER:N	2.32	0.41
65:BP:126:VAL:CG2	65:BP:128:HIS:CD2	3.04	0.41
66:BQ:11:GLN:HA	66:BQ:23:ALA:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:BR:21:TYR:CG	67:BR:71:ILE:HG21	2.37	0.41
68:BS:106:LYS:HA	68:BS:106:LYS:CE	2.50	0.41
69:BT:23:LYS:HG2	69:BT:54:TYR:CE1	2.55	0.41
71:BV:12:TYR:HD1	71:BV:13:VAL:C	2.29	0.41
75:BZ:62:VAL:CG1	75:BZ:91:LEU:HD23	2.46	0.41
83:Bv:39:U:H2'	83:Bv:40:C:C6	2.56	0.41
1:A3:81:C:H5'	1:A3:82:A:OP1	2.21	0.41
2:A4:3:C:H4'	2:A4:24:C:H42	1.86	0.41
2:A4:23:A:C2	2:A4:118:C:O2'	2.71	0.41
3:AA:24:LYS:CG	3:AA:49:ILE:HD12	2.43	0.41
3:AA:97:ASN:HB2	3:AA:100:ASN:ND2	2.36	0.41
3:AA:156:LYS:HE2	3:AA:158:ILE:CG2	2.51	0.41
4:AB:26:ARG:NH1	4:AB:181:MET:SD	2.94	0.41
5:AC:48:ASN:HD21	48:A2:1353:G:C5'	2.33	0.41
5:AC:322:LEU:CB	48:A2:1264:G:N7	2.84	0.41
6:AD:12:TYR:HD1	6:AD:13:PHE:CD1	2.25	0.41
6:AD:78:ALA:HA	6:AD:108:ARG:HH12	1.86	0.41
6:AD:227:ILE:HG13	6:AD:227:ILE:H	1.48	0.41
6:AD:232:THR:CA	6:AD:235:MET:HG2	2.48	0.41
7:AE:105:ARG:HG2	48:A2:464:A:H2	1.72	0.41
7:AE:173:LEU:CD1	7:AE:191:GLN:N	2.77	0.41
7:AE:201:ILE:HG23	7:AE:201:ILE:O	2.21	0.41
7:AE:233:PHE:CZ	48:A2:446:A:H3'	2.56	0.41
8:AF:16:GLU:HG2	8:AF:17:THR:N	2.35	0.41
8:AF:116:GLN:HG3	8:AF:119:ASN:HB3	2.03	0.41
9:AG:101:LYS:HE3	9:AG:211:ASP:OD1	2.20	0.41
9:AG:196:ARG:NE	48:A2:147:U:H2'	2.36	0.41
10:AH:95:VAL:O	10:AH:177:ASP:OD1	2.39	0.41
10:AH:118:LEU:HD11	10:AH:167:VAL:HG22	2.03	0.41
10:AH:120:GLU:HA	48:A2:4573:A:H2	1.86	0.41
11:AI:207:ASP:HA	11:AI:210:ARG:HD2	2.03	0.41
13:AK:28:PHE:CD2	13:AK:99:ARG:HB2	2.55	0.41
14:AL:144:LEU:HD23	36:Ah:120:ALA:CB	2.51	0.41
14:AL:170:THR:O	14:AL:173:GLU:HB2	2.21	0.41
16:AN:185:GLY:HA3	48:A2:78:U:OP1	2.21	0.41
17:AO:48:TYR:CE1	48:A2:1911:U:C2	3.09	0.41
18:AP:3:ARG:HG3	18:AP:3:ARG:HH11	1.86	0.41
20:AR:58:HIS:CE1	48:A2:4607:C:OP1	2.74	0.41
21:AS:74:ARG:NH1	48:A2:909:C:C5'	2.71	0.41
22:AT:31:MET:O	22:AT:32:ARG:HB2	2.21	0.41
22:AT:127:GLN:HA	48:A2:1816:G:H22	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AU:34:MET:HB3	23:AU:35:ASP:H	1.68	0.41
23:AU:60:VAL:O	23:AU:74:SER:HA	2.20	0.41
24:AV:97:TYR:HE2	25:AW:37:GLU:OE2	2.04	0.41
25:AW:79:GLN:N	25:AW:79:GLN:OE1	2.53	0.41
27:AY:124:LYS:HB3	27:AY:124:LYS:NZ	2.35	0.41
28:AZ:46:ILE:HD12	28:AZ:69:LYS:O	2.20	0.41
29:Aa:73:VAL:CG1	29:Aa:111:VAL:HG22	2.51	0.41
29:Aa:79:TRP:CE2	29:Aa:117:LEU:CD1	3.03	0.41
29:Aa:116:LYS:O	29:Aa:116:LYS:CG	2.69	0.41
31:Ac:104:ILE:O	31:Ac:107:SER:HB2	2.21	0.41
34:Af:54:LYS:CE	48:A2:437:G:H5"	2.50	0.41
34:Af:106:TYR:O	34:Af:107:PRO:C	2.64	0.41
36:Ah:87:LYS:HE2	36:Ah:91:MET:HB3	2.03	0.41
40:Al:16:LYS:HD2	40:Al:16:LYS:N	2.36	0.41
43:Ao:10:THR:CG2	43:Ao:81:ARG:HH21	2.34	0.41
43:Ao:88:CYS:HA	48:A2:4192:C:OP2	2.20	0.41
44:Ap:11:VAL:CG2	44:Ap:27:LYS:HB2	2.50	0.41
44:Ap:16:THR:HA	48:A2:2855:G:C8	2.56	0.41
44:Ap:17:ARG:NH2	48:A2:1559:G:OP1	2.54	0.41
44:Ap:85:ARG:NE	49:B1:939:U:H5'	2.35	0.41
45:Aq:59:THR:CG2	45:Aq:75:PRO:HD2	2.50	0.41
45:Aq:65:GLN:O	45:Aq:66:ASN:HB2	2.21	0.41
47:Au:37:SER:O	47:Au:201:VAL:HA	2.21	0.41
47:Au:100:VAL:HG22	47:Au:124:LEU:HD23	2.02	0.41
47:Au:194:LEU:HD22	47:Au:195:LYS:H	1.85	0.41
48:A2:436:G:O2'	48:A2:437:G:H5'	2.21	0.41
48:A2:481:G:N2	48:A2:664:C:H1'	2.36	0.41
48:A2:676:G:OP2	48:A2:676:G:N7	2.54	0.41
48:A2:712:G:C2	48:A2:713:G:C4	3.09	0.41
48:A2:715:C:H1'	48:A2:932:U:HO2'	1.85	0.41
48:A2:735:G:C5	48:A2:903:C:N4	2.87	0.41
48:A2:904:A:N3	48:A2:905:G:C6	2.89	0.41
48:A2:1262:A:C2'	48:A2:1263:C:H5'	2.51	0.41
48:A2:1289:C:O2'	48:A2:1290:A:H5'	2.21	0.41
48:A2:1561:C:H6	48:A2:1561:C:O5'	2.04	0.41
48:A2:1746:G:O2'	48:A2:1747:A:P	2.79	0.41
48:A2:1752:A:C2	48:A2:1753:U:N3	2.66	0.41
48:A2:1752:A:N3	48:A2:1753:U:C6	2.88	0.41
48:A2:1755:U:C2'	48:A2:1756:C:O4'	2.68	0.41
48:A2:1874:C:O2	48:A2:1874:C:H2'	2.20	0.41
48:A2:1957:G:N1	48:A2:1973:U:O4	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:2295:G:O2'	48:A2:2296:C:H5'	2.21	0.41
48:A2:2468:C:O2'	48:A2:2469:U:OP2	2.38	0.41
48:A2:2512:C:O5'	48:A2:2512:C:H6	2.04	0.41
48:A2:2581:G:H2'	48:A2:2582:C:C6	2.56	0.41
48:A2:2732:G:O6	48:A2:2733:G:N1	2.53	0.41
48:A2:2738:G:N3	48:A2:2738:G:C3'	2.83	0.41
48:A2:2854:C:H5'	48:A2:2855:G:N7	2.35	0.41
48:A2:2860:A:H2'	48:A2:2861:A:O4'	2.20	0.41
48:A2:3814:C:O5'	48:A2:3814:C:C6	2.70	0.41
48:A2:4045:U:C4'	48:A2:4046:G:OP1	2.63	0.41
48:A2:4167:A:O2'	48:A2:4168:C:H5'	2.20	0.41
48:A2:4693:G:O3'	48:A2:4694:G:H2'	2.21	0.41
49:B1:79:A:C2'	49:B1:80:G:H5'	2.51	0.41
49:B1:406:U:H2'	49:B1:408:A:C8	2.56	0.41
49:B1:463:C:OP1	49:B1:463:C:C4'	2.68	0.41
49:B1:466:G:C8	56:BG:59:GLN:NE2	2.89	0.41
49:B1:551:U:H5'	80:Be:39:ASN:HB3	2.03	0.41
49:B1:633:C:C1'	80:Be:12:VAL:HG11	2.48	0.41
49:B1:658:U:H1'	73:BX:17:ARG:NH2	2.35	0.41
49:B1:677:G:N2	49:B1:1027:A:OP2	2.53	0.41
49:B1:745:C:N4	49:B1:746:C:N4	2.69	0.41
49:B1:750:C:C2'	49:B1:751:G:O4'	2.68	0.41
49:B1:812:A:H2	54:BE:12:VAL:HG12	1.86	0.41
49:B1:837:A:O3'	74:BY:9:THR:CG2	2.65	0.41
49:B1:840:C:H1'	74:BY:21:LYS:CD	2.49	0.41
49:B1:847:A:C8	49:B1:848:U:C5	3.09	0.41
49:B1:921:G:O4'	77:Bb:21:LYS:CD	2.69	0.41
49:B1:942:G:C2	49:B1:985:G:C2	3.09	0.41
49:B1:976:G:O2'	49:B1:977:C:C5'	2.69	0.41
49:B1:1092:G:H4'	72:BW:2:VAL:HG13	2.02	0.41
49:B1:1104:G:C6	49:B1:1105:G:C5	3.09	0.41
49:B1:1287:A:H1'	62:BM:36:ARG:NH2	2.33	0.41
49:B1:1310:U:C4'	81:Bf:142:GLY:HA3	2.51	0.41
49:B1:1350:U:H1'	50:BA:112:ILE:CD1	2.46	0.41
49:B1:1495:G:C1'	79:Bd:41:GLN:HB2	2.50	0.41
49:B1:1507:G:N2	81:Bf:90:LYS:N	2.66	0.41
49:B1:1532:C:C4'	49:B1:1604:G:H21	2.34	0.41
49:B1:1597:C:H4'	49:B1:1603:G:C6	2.56	0.41
49:B1:1749:G:C4	49:B1:1750:C:C5	3.08	0.41
49:B1:1864:U:P	76:Ba:4:LYS:HZ3	2.37	0.41
51:BB:32:ASP:HA	51:BB:46:LYS:HG2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BB:36:PRO:O	51:BB:39:PHE:CD2	2.72	0.41
52:BC:61:MET:H	52:BC:71:LYS:HZ1	1.69	0.41
54:BE:99:PHE:N	54:BE:114:ILE:CG2	2.76	0.41
55:BF:34:SER:OG	78:Bc:55:VAL:HG12	2.21	0.41
55:BF:37:ASP:C	55:BF:39:ILE:H	2.27	0.41
55:BF:40:ALA:C	55:BF:41:VAL:HG12	2.46	0.41
55:BF:182:LYS:O	55:BF:184:SER:N	2.54	0.41
56:BG:29:GLU:O	56:BG:29:GLU:HG3	2.21	0.41
56:BG:58:LYS:HA	56:BG:107:SER:CB	2.51	0.41
56:BG:119:LYS:HG2	56:BG:125:THR:HB	2.03	0.41
59:BJ:35:TYR:HB2	59:BJ:37:LEU:CD1	2.48	0.41
59:BJ:96:TYR:O	59:BJ:99:GLY:N	2.54	0.41
59:BJ:115:PHE:CD2	59:BJ:123:ILE:HG12	2.56	0.41
60:BK:50:GLN:HA	60:BK:53:LYS:HE3	2.02	0.41
61:BL:132:ARG:O	61:BL:134:LEU:HD12	2.21	0.41
64:BO:54:CYS:SG	64:BO:81:VAL:HG13	2.61	0.41
64:BO:56:VAL:HG21	64:BO:80:ASP:OD2	2.21	0.41
65:BP:33:LEU:O	65:BP:37:TYR:CD1	2.73	0.41
65:BP:34:MET:CE	65:BP:45:LEU:CB	2.78	0.41
65:BP:84:ILE:H	65:BP:84:ILE:HG12	1.59	0.41
66:BQ:25:CYS:SG	66:BQ:25:CYS:O	2.79	0.41
66:BQ:86:GLN:NE2	66:BQ:122:ALA:HB2	2.36	0.41
67:BR:24:LEU:HD13	67:BR:54:VAL:HG11	2.02	0.41
68:BS:110:ASP:HA	68:BS:113:ARG:NH1	2.36	0.41
70:BU:80:PHE:HB3	79:Bd:52:PHE:CD1	2.56	0.41
72:BW:102:ILE:HG22	72:BW:103:VAL:C	2.45	0.41
73:BX:39:ASN:HB2	73:BX:108:LYS:HE3	2.02	0.41
73:BX:115:ILE:HA	73:BX:116:PRO:HD3	1.86	0.41
76:Ba:44:ILE:HG21	76:Ba:65:PRO:HB2	2.02	0.41
76:Ba:46:GLU:CD	76:Ba:47:ALA:H	2.29	0.41
81:Bf:126:CYS:SG	81:Bf:144:CYS:CB	3.02	0.41
82:Bg:170:TRP:C	82:Bg:172:LYS:N	2.78	0.41
83:Bv:35:A:H2'	83:Bv:36:A:C8	2.56	0.41
1:A3:18:U:O5'	1:A3:18:U:H6	2.03	0.41
4:AB:48:GLY:HA3	4:AB:81:THR:HG22	2.03	0.41
4:AB:91:GLY:HA3	4:AB:157:CYS:SG	2.61	0.41
5:AC:120:LYS:HD3	48:A2:1357:G:P	2.60	0.41
5:AC:218:ILE:HD12	5:AC:229:LEU:CD1	2.51	0.41
5:AC:335:MET:HE1	48:A2:934:C:OP1	2.21	0.41
7:AE:233:PHE:CE2	48:A2:446:A:H3'	2.56	0.41
7:AE:253:VAL:O	7:AE:257:ILE:HG12	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AF:24:ASN:O	8:AF:27:GLU:HG2	2.21	0.41
8:AF:76:ARG:HE	48:A2:719:U:C5'	2.34	0.41
9:AG:86:ALA:HB2	9:AG:185:LYS:HG3	2.02	0.41
10:AH:132:VAL:HG21	10:AH:154:VAL:HG22	2.03	0.41
11:AI:185:VAL:CG1	11:AI:190:LEU:HD12	2.49	0.41
13:AK:62:ARG:C	13:AK:64:ALA:N	2.78	0.41
14:AL:71:ARG:HG3	48:A2:103:G:OP1	2.21	0.41
15:AM:19:PRO:CG	48:A2:923:C:N3	2.83	0.41
20:AR:57:VAL:HG13	48:A2:4608:U:H5"	2.03	0.41
21:AS:85:ASP:HB3	21:AS:123:SER:HB3	2.02	0.41
21:AS:164:LYS:HB3	21:AS:165:PRO:HD2	2.03	0.41
26:AX:45:THR:HA	48:A2:4055:A:OP1	2.21	0.41
28:AZ:18:TYR:HA	28:AZ:21:ARG:HD2	2.03	0.41
28:AZ:36:ARG:HH11	28:AZ:36:ARG:HB3	1.86	0.41
29:Aa:127:LYS:HE2	29:Aa:148:ALA:O	2.21	0.41
29:Aa:140:VAL:HG23	29:Aa:142:GLY:H	1.85	0.41
30:Ab:7:HIS:O	48:A2:1854:A:H5'	2.21	0.41
38:Aj:25:LYS:HE3	40:Al:51:LEU:HD12	2.03	0.41
38:Aj:79:ARG:O	38:Aj:80:GLU:HG2	2.20	0.41
39:Ak:25:ILE:HD11	39:Ak:66:VAL:HG11	2.02	0.41
42:An:18:ARG:O	42:An:22:GLN:HG2	2.21	0.41
43:Ao:56:PHE:CZ	43:Ao:58:LYS:O	2.74	0.41
43:Ao:85:ILE:HG22	43:Ao:86:LYS:N	2.35	0.41
45:Aq:58:ILE:CG1	45:Aq:59:THR:H	2.33	0.41
45:Aq:62:LEU:CG	45:Aq:71:ILE:HD13	2.51	0.41
47:Au:130:LYS:HG2	48:A2:4016:A:O3'	2.21	0.41
47:Au:207:LYS:HE3	47:Au:207:LYS:HB3	1.59	0.41
48:A2:258:C:H6	48:A2:258:C:H5"	1.86	0.41
48:A2:304:G:H2'	48:A2:305:G:O4'	2.21	0.41
48:A2:474:C:O5'	48:A2:474:C:H6	2.04	0.41
48:A2:494:G:C6	48:A2:498:G:C5	3.09	0.41
48:A2:901:U:C6	48:A2:902:A:N6	2.89	0.41
48:A2:1248:G:C2'	48:A2:1249:G:O5'	2.69	0.41
48:A2:1337:A:N6	48:A2:1485:A:O4'	2.53	0.41
48:A2:1743:G:C2	48:A2:1754:C:C2	3.09	0.41
48:A2:1837:C:H6	48:A2:1837:C:O5'	2.04	0.41
48:A2:2049:C:O2'	48:A2:2050:A:H5'	2.21	0.41
48:A2:2325:C:O2	48:A2:2325:C:O5'	2.38	0.41
48:A2:2339:A:H5'	48:A2:2341:U:C1'	2.51	0.41
48:A2:3732:C:OP1	48:A2:3732:C:H3'	2.21	0.41
48:A2:3746:A:H3'	48:A2:3747:G:H5"	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:4045:U:O3'	48:A2:4046:G:H2'	2.21	0.41
48:A2:4300:G:N1	48:A2:4334:U:H3'	2.36	0.41
48:A2:4822:U:H2'	48:A2:4823:C:C6	2.56	0.41
49:B1:195:C:H2'	49:B1:196:C:C6	2.55	0.41
49:B1:482:G:N2	49:B1:484:A:H3'	2.36	0.41
49:B1:635:G:C5	49:B1:636:C:C4	3.09	0.41
49:B1:643:A:OP1	59:BJ:38:ARG:CZ	2.69	0.41
49:B1:658:U:O3'	73:BX:17:ARG:CZ	2.69	0.41
49:B1:738:C:O2	49:B1:738:C:H2'	2.20	0.41
49:B1:739:C:O2	49:B1:739:C:C2'	2.69	0.41
49:B1:1079:C:O2'	49:B1:1182:A:N1	2.54	0.41
49:B1:1146:C:H2'	49:B1:1147:C:C6	2.56	0.41
49:B1:1402:A:C1'	70:BU:54:VAL:HG22	2.49	0.41
49:B1:1418:C:O2'	49:B1:1419:C:H2'	2.21	0.41
50:BA:36:GLN:H	50:BA:36:GLN:HG3	1.55	0.41
52:BC:125:LYS:HE3	52:BC:127:PHE:CZ	2.55	0.41
52:BC:173:LYS:HB2	71:BV:4:ASP:CG	2.46	0.41
55:BF:72:LEU:HD13	55:BF:72:LEU:C	2.45	0.41
58:BI:191:GLU:OE1	58:BI:191:GLU:HA	2.21	0.41
59:BJ:153:SER:O	59:BJ:155:LYS:N	2.49	0.41
60:BK:9:ILE:HG13	60:BK:10:ALA:N	2.36	0.41
66:BQ:50:LYS:NZ	66:BQ:53:GLU:CD	2.79	0.41
70:BU:20:ILE:CG2	70:BU:116:ILE:CA	2.61	0.41
75:BZ:63:PRO:CB	75:BZ:111:ARG:NE	2.73	0.41
75:BZ:66:LYS:HB3	75:BZ:67:LEU:HD13	2.03	0.41
81:Bf:89:LYS:N	81:Bf:89:LYS:HD2	2.36	0.41
81:Bf:105:TYR:HB3	81:Bf:116:ARG:HH22	1.86	0.41
82:Bg:300:ALA:HB3	82:Bg:310:TRP:HZ3	1.86	0.41
1:A3:124:U:OP1	1:A3:124:U:C3'	2.68	0.40
2:A4:12:U:OP2	2:A4:67:C:O2'	2.34	0.40
2:A4:55:A:O3'	12:AJ:152:GLY:CA	2.69	0.40
3:AA:49:ILE:HG13	3:AA:58:LEU:HB3	2.03	0.40
3:AA:54:ARG:NH2	48:A2:3651:U:H5"	2.36	0.40
3:AA:196:TRP:O	3:AA:196:TRP:CE3	2.73	0.40
3:AA:247:ARG:HD3	49:B1:1069:U:C4'	2.50	0.40
5:AC:137:VAL:HG11	5:AC:144:ILE:HD11	2.00	0.40
5:AC:281:MET:HE3	5:AC:282:HIS:H	1.85	0.40
7:AE:188:ARG:O	48:A2:4899:G:O4'	2.38	0.40
9:AG:111:LYS:CE	48:A2:141:G:H5'	2.51	0.40
10:AH:40:HIS:ND1	10:AH:41:ILE:HG13	2.36	0.40
10:AH:92:MET:HG2	10:AH:181:VAL:HG22	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AI:199:TYR:O	11:AI:201:PRO:HD3	2.21	0.40
13:AK:32:ALA:H	13:AK:85:ASN:CG	2.30	0.40
13:AK:94:ASP:O	13:AK:97:GLU:HB3	2.20	0.40
14:AL:140:SER:O	14:AL:144:LEU:N	2.47	0.40
16:AN:204:ARG:HD3	48:A2:1325:A:OP1	2.21	0.40
17:AO:49:ARG:CZ	48:A2:1910:A:N3	2.84	0.40
17:AO:108:ILE:HD12	17:AO:160:ARG:NH1	2.35	0.40
19:AQ:156:PRO:O	19:AQ:163:THR:OG1	2.39	0.40
20:AR:93:VAL:CG1	48:A2:2704:A:H1'	2.42	0.40
20:AR:132:PHE:CZ	20:AR:138:LEU:HD23	2.56	0.40
23:AU:22:THR:HG21	23:AU:69:LYS:HE3	2.03	0.40
26:AX:115:LYS:HG2	26:AX:115:LYS:H	1.63	0.40
27:AY:14:ASN:ND2	48:A2:224:A:O2'	2.54	0.40
28:AZ:87:VAL:HG22	28:AZ:127:ASN:CG	2.43	0.40
31:Ac:31:TYR:CD1	31:Ac:56:ARG:HG3	2.55	0.40
45:Aq:42:VAL:O	45:Aq:46:ILE:CG2	2.50	0.40
46:At:122:LYS:N	46:At:123:PRO:CD	2.84	0.40
47:Au:123:ILE:HG22	47:Au:124:LEU:N	2.36	0.40
48:A2:135:G:O2'	48:A2:136:G:P	2.78	0.40
48:A2:163:C:N3	48:A2:164:C:C6	2.88	0.40
48:A2:227:G:C2	48:A2:234:G:N1	2.86	0.40
48:A2:1161:G:C2	48:A2:1164:C:OP1	2.70	0.40
48:A2:1217:G:H2'	48:A2:1218:G:C8	2.57	0.40
48:A2:1434:G:H2'	48:A2:1435:A:H5'	2.03	0.40
48:A2:1507:A:C2	48:A2:1633:G:N2	2.89	0.40
48:A2:1581:A:H5'	48:A2:2776:C:O2	2.22	0.40
48:A2:1658:C:H5"	48:A2:1659:U:P	2.61	0.40
48:A2:1743:G:C4	48:A2:1744:C:C5	3.08	0.40
48:A2:1856:C:H2'	48:A2:1857:U:C6	2.56	0.40
48:A2:1963:G:H1	48:A2:1968:C:N4	2.19	0.40
48:A2:2482:G:O4'	48:A2:4054:G:N2	2.54	0.40
48:A2:4693:G:H4'	48:A2:4694:G:N2	2.36	0.40
48:A2:4698:C:H2'	48:A2:4699:G:O4'	2.20	0.40
49:B1:167:G:H5'	56:BG:8:PRO:O	2.21	0.40
49:B1:655:A:H5'	49:B1:657:U:OP1	2.21	0.40
49:B1:665:G:C2	49:B1:1163:C:O2	2.74	0.40
49:B1:679:A:H2'	49:B1:680:G:H5'	2.02	0.40
49:B1:689:U:O2'	49:B1:690:G:C4'	2.69	0.40
49:B1:827:A:H5'	59:BJ:8:VAL:CG1	2.44	0.40
49:B1:913:A:O2'	49:B1:914:U:P	2.79	0.40
49:B1:963:A:H2'	49:B1:964:A:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:1620:A:C2	49:B1:1624:U:H1'	2.57	0.40
50:BA:7:VAL:HG11	71:BV:42:VAL:CG1	2.50	0.40
50:BA:38:ILE:HD13	50:BA:47:TYR:CD2	2.56	0.40
52:BC:73:MET:O	52:BC:73:MET:HG2	2.21	0.40
53:BD:65:ARG:HA	60:BK:70:TYR:OH	2.20	0.40
53:BD:76:ARG:NE	60:BK:66:HIS:CD2	2.78	0.40
54:BE:149:TYR:CG	56:BG:209:TYR:HB2	2.56	0.40
56:BG:74:ARG:HG2	56:BG:94:ARG:NE	2.36	0.40
56:BG:196:LYS:HA	56:BG:199:THR:OG1	2.21	0.40
58:BI:104:ILE:CD1	58:BI:173:ALA:HB2	2.42	0.40
59:BJ:29:LEU:HD21	59:BJ:40:LYS:HE2	2.03	0.40
62:BM:68:LEU:CD2	81:Bf:114:ILE:HD13	2.51	0.40
63:BN:28:LEU:HD23	63:BN:33:VAL:HG22	2.03	0.40
63:BN:29:THR:HB	63:BN:31:ASP:H	1.78	0.40
67:BR:16:ILE:HG21	67:BR:38:ILE:HD13	2.03	0.40
67:BR:97:GLU:CA	67:BR:117:LEU:CG	2.98	0.40
77:Bb:40:CYS:O	77:Bb:41:TYR:CB	2.69	0.40
82:Bg:59:LEU:HD22	82:Bg:90:TRP:CE3	2.56	0.40
82:Bg:175:LYS:HB3	82:Bg:184:LEU:HD21	2.02	0.40
83:Bw:69:G:O2'	83:Bw:70:G:H5'	2.21	0.40
3:AA:122:ASP:HB2	3:AA:125:LYS:HE3	2.02	0.40
3:AA:249:THR:OG1	49:B1:1044:G:H2'	2.21	0.40
4:AB:266:VAL:HG22	48:A2:4421:U:O4'	2.21	0.40
5:AC:44:LEU:HD11	5:AC:237:ILE:HD12	2.03	0.40
5:AC:352:ASP:O	5:AC:356:ALA:HB3	2.21	0.40
7:AE:108:LYS:HD2	7:AE:108:LYS:HA	1.80	0.40
7:AE:113:PRO:HG2	7:AE:116:TYR:CE1	2.55	0.40
8:AF:161:LYS:CB	8:AF:209:TRP:CE3	2.98	0.40
11:AI:139:ARG:HD2	11:AI:173:PHE:CE2	2.56	0.40
13:AK:16:LYS:C	13:AK:18:ILE:N	2.78	0.40
13:AK:60:MET:HB2	48:A2:1942:G:OP2	2.21	0.40
14:AL:76:PHE:O	14:AL:80:GLU:HB2	2.21	0.40
15:AM:60:PHE:CE1	15:AM:85:LYS:HG2	2.56	0.40
16:AN:178:HIS:HA	16:AN:181:HIS:NE2	2.36	0.40
19:AQ:30:LYS:HE3	48:A2:2247:A:HO2'	1.83	0.40
19:AQ:62:SER:HB3	48:A2:1484:G:OP2	2.21	0.40
19:AQ:66:MET:HE2	19:AQ:100:VAL:HG21	2.03	0.40
19:AQ:67:ILE:HG23	19:AQ:96:PRO:CG	2.51	0.40
19:AQ:85:THR:HG21	19:AQ:104:ARG:NH2	2.36	0.40
21:AS:3:ALA:HB2	21:AS:121:ALA:HB2	2.01	0.40
22:AT:70:HIS:CE1	48:A2:4276:C:P	3.14	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AX:149:VAL:O	26:AX:153:ILE:HG23	2.21	0.40
28:AZ:59:LYS:HB2	48:A2:4111:C:OP1	2.21	0.40
28:AZ:68:ILE:HG21	28:AZ:119:GLU:CG	2.31	0.40
28:AZ:97:ASN:OD1	28:AZ:98:LYS:N	2.53	0.40
29:Aa:8:THR:CG2	48:A2:1321:G:H2'	2.51	0.40
29:Aa:32:ARG:NH1	48:A2:1498:G:OP2	2.54	0.40
29:Aa:57:GLY:CA	48:A2:4326:G:H4'	2.50	0.40
30:Ab:28:ARG:HG2	48:A2:1787:A:N3	2.36	0.40
32:Ad:46:LEU:HD11	32:Ad:73:TRP:HE1	1.86	0.40
34:Af:34:TYR:HB3	48:A2:1900:G:C2	2.56	0.40
38:Aj:82:THR:O	38:Aj:83:THR:HB	2.21	0.40
40:Al:50:GLY:O	40:Al:51:LEU:HB2	2.21	0.40
46:At:70:GLN:C	46:At:71:ARG:HG3	2.46	0.40
47:Au:30:GLU:HB3	47:Au:209:THR:H	1.86	0.40
48:A2:43:U:O2	48:A2:43:U:H2'	2.20	0.40
48:A2:1944:C:O3'	48:A2:1945:A:H8	2.04	0.40
48:A2:1979:A:O2'	48:A2:1980:A:C8	2.71	0.40
48:A2:2340:G:O2'	48:A2:2341:U:OP2	2.35	0.40
48:A2:2613:C:H2'	48:A2:2614:U:C6	2.57	0.40
48:A2:2794:A:N6	48:A2:2795:G:C6	2.89	0.40
48:A2:2860:A:C2'	48:A2:2861:A:H5'	2.50	0.40
48:A2:3644:C:H4'	48:A2:3645:G:O5'	2.20	0.40
48:A2:4031:G:N2	48:A2:4032:A:C6	2.88	0.40
48:A2:4303:C:H2'	48:A2:4304:C:O4'	2.22	0.40
48:A2:4981:C:H5'	58:BI:124:LYS:NZ	2.29	0.40
49:B1:64:A:C2'	56:BG:175:LYS:NZ	2.82	0.40
49:B1:96:C:H1'	49:B1:474:G:H5"	2.02	0.40
49:B1:99:A:H8	49:B1:99:A:O5'	2.04	0.40
49:B1:508:A:C6	49:B1:509:G:H1'	2.56	0.40
49:B1:563:G:O2'	49:B1:564:A:H5'	2.21	0.40
49:B1:668:A:C5'	49:B1:1198:G:H4'	2.50	0.40
49:B1:941:C:O2'	49:B1:942:G:H5'	2.21	0.40
49:B1:1262:C:N3	79:Bd:16:GLN:HB3	2.37	0.40
49:B1:1276:A:H2'	49:B1:1277:C:H5'	2.03	0.40
49:B1:1302:G:N2	81:Bf:95:ARG:HH12	1.95	0.40
49:B1:1423:C:O2'	69:BT:7:LYS:HD3	2.21	0.40
49:B1:1484:A:H5'	53:BD:159:HIS:HB2	2.03	0.40
49:B1:1745:A:H2'	56:BG:65:GLN:NE2	2.35	0.40
50:BA:38:ILE:CD1	50:BA:47:TYR:CD2	3.05	0.40
50:BA:212:LYS:CA	50:BA:215:GLN:HB3	2.49	0.40
51:BB:34:LYS:O	51:BB:97:LEU:HD22	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BB:46:LYS:CD	64:BO:19:PRO:HB2	2.51	0.40
51:BB:71:LEU:HD13	51:BB:75:GLN:HB3	1.98	0.40
51:BB:178:THR:O	51:BB:179:ASN:CB	2.70	0.40
53:BD:68:GLU:HG3	60:BK:20:VAL:CG2	2.37	0.40
54:BE:115:THR:CG2	54:BE:116:VAL:H	2.34	0.40
56:BG:142:ARG:HG2	56:BG:147:LEU:HD21	2.03	0.40
56:BG:142:ARG:HH22	56:BG:149:LYS:HA	1.87	0.40
57:BH:149:ASP:OD2	57:BH:151:SER:HB2	2.21	0.40
65:BP:52:LYS:HG3	65:BP:80:LEU:HD13	2.04	0.40
69:BT:38:LYS:HE3	69:BT:96:SER:HB3	2.03	0.40
74:BY:87:PRO:HD3	74:BY:90:ARG:NH2	2.36	0.40
75:BZ:99:LEU:HD23	75:BZ:109:TYR:OH	2.21	0.40
76:Ba:46:GLU:CD	76:Ba:47:ALA:N	2.78	0.40
77:Bb:65:GLN:HB2	77:Bb:72:ARG:CZ	2.51	0.40
82:Bg:199:THR:HG23	82:Bg:241:PHE:CE2	2.56	0.40
83:Bv:60:U:OP2	83:Bv:60:U:H6	2.04	0.40
1:A3:44:A:N6	38:Aj:63:ARG:NH2	2.69	0.40
1:A3:149:G:O4'	9:AG:61:ILE:CD1	2.68	0.40
1:A3:157:U:O2	48:A2:1:C:C4	2.74	0.40
2:A4:13:A:O2'	2:A4:14:C:P	2.78	0.40
3:AA:90:CYS:HA	3:AA:101:VAL:O	2.21	0.40
4:AB:22:SER:HB2	4:AB:24:ARG:HH12	1.85	0.40
4:AB:352:LEU:HD12	48:A2:4639:U:O2'	2.21	0.40
4:AB:393:LYS:HE2	48:A2:4998:U:O5'	2.21	0.40
5:AC:52:TYR:HD2	48:A2:344:C:C5'	2.30	0.40
5:AC:188:ARG:HD2	48:A2:2280:G:O6	2.21	0.40
5:AC:311:ARG:NH1	48:A2:946:G:H5"	2.28	0.40
13:AK:44:ARG:CD	48:A2:1978:U:OP1	2.69	0.40
13:AK:45:MET:CB	45:Aq:121:LEU:HD22	2.49	0.40
15:AM:79:LYS:C	15:AM:79:LYS:CD	2.86	0.40
18:AP:2:VAL:CG1	48:A2:403:G:OP2	2.65	0.40
19:AQ:63:LEU:HD12	19:AQ:112:ARG:NH2	2.36	0.40
20:AR:4:LEU:HA	20:AR:7:GLN:OE1	2.21	0.40
20:AR:75:HIS:CE1	48:A2:2868:G:OP1	2.74	0.40
21:AS:84:TYR:CD2	21:AS:113:MET:CE	3.05	0.40
22:AT:78:LYS:HB3	22:AT:87:LYS:CE	2.52	0.40
27:AY:80:ILE:HD11	27:AY:104:VAL:HG21	2.03	0.40
29:Aa:54:GLY:CA	48:A2:4303:C:OP1	2.69	0.40
31:Ac:20:LEU:CD1	63:BN:43:LYS:O	2.69	0.40
31:Ac:21:VAL:HG11	31:Ac:96:ILE:HD12	2.03	0.40
32:Ad:38:PHE:CZ	48:A2:4596:U:N1	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Ae:98:GLU:CD	48:A2:2303:C:HO2'	2.24	0.40
38:Aj:63:ARG:HH11	38:Aj:65:ARG:HD2	1.86	0.40
44:Ap:15:GLY:HA2	48:A2:2855:G:H1'	2.03	0.40
45:Aq:30:PRO:O	45:Aq:31:LYS:C	2.64	0.40
45:Aq:46:ILE:C	45:Aq:48:LYS:N	2.79	0.40
45:Aq:111:ASN:O	45:Aq:112:ILE:HG12	2.21	0.40
47:Au:26:ARG:CB	47:Au:210:MET:HE1	2.52	0.40
48:A2:294:A:H2'	48:A2:295:G:H8	1.87	0.40
48:A2:352:C:O2	48:A2:352:C:C2'	2.68	0.40
48:A2:940:C:H2'	48:A2:941:C:C6	2.56	0.40
48:A2:1163:C:O2	48:A2:1163:C:P	2.79	0.40
48:A2:1498:G:H3'	48:A2:1499:G:C5'	2.51	0.40
48:A2:1740:G:C2'	48:A2:1741:G:H8	2.32	0.40
48:A2:1805:G:O2'	48:A2:1806:G:H5'	2.22	0.40
48:A2:1817:G:O2'	48:A2:1818:A:P	2.78	0.40
48:A2:2542:C:H2'	48:A2:2543:G:O4'	2.21	0.40
48:A2:2573:C:H2'	48:A2:2574:C:H6	1.83	0.40
48:A2:4027:C:H2'	48:A2:4028:U:O4'	2.21	0.40
48:A2:4382:U:O4	48:A2:4437:G:N2	2.54	0.40
48:A2:4706:A:H2'	48:A2:4707:G:C8	2.56	0.40
48:A2:4716:G:C2	48:A2:4836:C:O2	2.74	0.40
48:A2:4905:U:C2	48:A2:4906:C:H5	2.38	0.40
49:B1:354:U:H2'	49:B1:355:G:C8	2.56	0.40
49:B1:533:A:O2'	49:B1:534:G:N7	2.54	0.40
49:B1:895:G:O2'	49:B1:896:U:H5'	2.20	0.40
49:B1:984:C:C2'	49:B1:985:G:O5'	2.70	0.40
49:B1:1022:U:H1'	63:BN:128:TYR:CB	2.51	0.40
49:B1:1048:G:OP1	64:BO:143:LYS:O	2.38	0.40
49:B1:1679:A:C8	49:B1:1679:A:O5'	2.75	0.40
49:B1:1753:C:H1'	49:B1:1780:G:N2	2.36	0.40
49:B1:1865:C:H5"	76:Ba:87:ARG:HH21	1.85	0.40
50:BA:175:TRP:CB	50:BA:202:TYR:CD2	3.04	0.40
51:BB:107:ARG:HG3	64:BO:131:ASP:O	2.21	0.40
52:BC:252:THR:CG2	52:BC:255:LEU:HD13	2.51	0.40
53:BD:76:ARG:HE	60:BK:66:HIS:ND1	1.58	0.40
53:BD:137:VAL:HB	53:BD:185:LYS:HB2	2.03	0.40
53:BD:210:ILE:HA	67:BR:39:ALA:CA	2.52	0.40
54:BE:64:ILE:CD1	54:BE:70:ILE:HD11	2.51	0.40
54:BE:127:ARG:N	54:BE:140:VAL:O	2.53	0.40
59:BJ:30:LYS:HD2	59:BJ:31:LEU:CA	2.51	0.40
59:BJ:134:HIS:O	59:BJ:159:PHE:HB3	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:BL:117:PHE:CD1	61:BL:145:VAL:HG23	2.56	0.40
63:BN:20:ARG:NE	72:BW:56:HIS:NE2	2.70	0.40
64:BO:133:THR:O	64:BO:135:ILE:HG12	2.22	0.40
66:BQ:99:TYR:CD1	66:BQ:99:TYR:C	3.00	0.40
73:BX:33:GLY:O	73:BX:37:LYS:HG2	2.22	0.40
75:BZ:110:THR:HG22	75:BZ:111:ARG:N	2.36	0.40
78:Bc:32:VAL:O	78:Bc:33:GLU:HG3	2.20	0.40
81:Bf:109:ASP:HB2	81:Bf:113:LYS:HB3	2.03	0.40
81:Bf:144:CYS:O	81:Bf:145:CYS:CB	2.69	0.40
1:A3:88:A:C2	1:A3:89:U:H1'	2.56	0.40
3:AA:23:ARG:HA	3:AA:52:PRO:HD2	2.04	0.40
4:AB:9:PRO:HG2	48:A2:4583:C:H5"	2.03	0.40
4:AB:172:PRO:CB	4:AB:324:GLY:HA3	2.52	0.40
4:AB:389:MET:CE	4:AB:392:LEU:HD21	2.51	0.40
8:AF:76:ARG:CD	48:A2:720:G:OP2	2.68	0.40
8:AF:126:ASN:OD1	22:AT:132:PRO:HB2	2.21	0.40
8:AF:134:ARG:HA	8:AF:137:GLU:HG3	2.03	0.40
9:AG:214:ALA:O	9:AG:218:LEU:HD23	2.22	0.40
12:AJ:99:PHE:HB3	12:AJ:159:LYS:HD3	2.02	0.40
12:AJ:136:ARG:HB2	12:AJ:139:PHE:CZ	2.57	0.40
13:AK:57:LYS:O	13:AK:60:MET:HB3	2.21	0.40
15:AM:12:VAL:HA	15:AM:26:ALA:HA	2.03	0.40
16:AN:21:PHE:O	16:AN:25:VAL:HG23	2.22	0.40
19:AQ:156:PRO:HG2	19:AQ:157:GLY:H	1.86	0.40
25:AW:50:ASN:CB	48:A2:4964:U:H5	2.24	0.40
26:AX:78:LYS:HB3	26:AX:79:PHE:CD1	2.56	0.40
28:AZ:30:ASP:OD2	28:AZ:31:ASP:OD1	2.40	0.40
28:AZ:89:ILE:N	28:AZ:90:PRO:CD	2.85	0.40
28:AZ:95:VAL:HG11	28:AZ:113:GLU:CG	2.46	0.40
31:Ac:77:ASN:HB3	31:Ac:80:GLU:OE1	2.22	0.40
33:Ae:119:ALA:HB2	46:At:119:ARG:HH12	1.86	0.40
38:Aj:82:THR:CG2	38:Aj:83:THR:N	2.73	0.40
43:Ao:104:ILE:O	43:Ao:106:PHE:N	2.49	0.40
45:Aq:91:ASP:O	45:Aq:92:ARG:HB2	2.21	0.40
48:A2:136:G:C8	48:A2:136:G:C3'	3.04	0.40
48:A2:141:G:O6	48:A2:142:G:C5	2.74	0.40
48:A2:376:G:N1	48:A2:379:A:OP2	2.54	0.40
48:A2:459:G:H2'	48:A2:460:A:C8	2.55	0.40
48:A2:1260:G:O2'	48:A2:1261:C:C4'	2.69	0.40
48:A2:1467:C:O2'	48:A2:4311:C:N4	2.55	0.40
48:A2:1755:U:H2'	48:A2:1756:C:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:1903:G:C2	48:A2:2044:G:C6	3.09	0.40
48:A2:1919:C:C2	48:A2:1920:A:C6	3.09	0.40
48:A2:2329:U:H3'	48:A2:2330:C:H5"	2.04	0.40
48:A2:2573:C:H6	48:A2:2573:C:O5'	2.05	0.40
48:A2:4028:U:H6	48:A2:4028:U:O5'	2.05	0.40
48:A2:4715:U:C2'	48:A2:4716:G:O5'	2.70	0.40
48:A2:4845:C:H2'	48:A2:4846:U:C1'	2.52	0.40
49:B1:72:C:O2	49:B1:73:C:H2'	2.22	0.40
49:B1:89:C:H2'	49:B1:90:G:C8	2.56	0.40
49:B1:216:C:O2'	49:B1:217:A:C8	2.70	0.40
49:B1:399:C:H4'	49:B1:400:C:OP2	2.22	0.40
49:B1:533:A:O2'	49:B1:534:G:C8	2.67	0.40
49:B1:800:U:H3'	49:B1:800:U:C6	2.55	0.40
49:B1:866:U:O5'	49:B1:866:U:H6	2.05	0.40
49:B1:946:U:O2'	49:B1:947:G:H5'	2.22	0.40
49:B1:1049:A:H2'	49:B1:1050:A:C5'	2.50	0.40
49:B1:1412:C:H2'	49:B1:1413:G:O4'	2.20	0.40
49:B1:1415:C:C4'	69:BT:128:GLN:CG	2.98	0.40
49:B1:1453:C:C3'	49:B1:1454:A:H5'	2.51	0.40
49:B1:1454:A:H3'	67:BR:3:ARG:HD2	2.02	0.40
49:B1:1521:C:C6	49:B1:1521:C:P	3.14	0.40
49:B1:1838:U:O2	64:BO:150:ARG:NH1	2.55	0.40
51:BB:79:VAL:HG11	51:BB:81:PHE:CE1	2.57	0.40
51:BB:115:LYS:CG	51:BB:116:LYS:N	2.81	0.40
52:BC:104:ASP:HB3	52:BC:130:ILE:CA	2.48	0.40
52:BC:205:VAL:O	52:BC:205:VAL:HG23	2.22	0.40
53:BD:16:ILE:HD11	79:Bd:36:LEU:HA	2.03	0.40
54:BE:90:ILE:HG22	54:BE:92:ILE:HD12	2.02	0.40
54:BE:149:TYR:CE2	56:BG:205:GLU:C	3.00	0.40
59:BJ:121:LYS:O	59:BJ:122:SER:CB	2.69	0.40
61:BL:59:LYS:HD3	61:BL:134:LEU:HD23	2.02	0.40
62:BM:31:LEU:CD1	62:BM:33:ARG:HG3	2.52	0.40
63:BN:75:LEU:CD1	63:BN:81:ALA:N	2.76	0.40
64:BO:143:LYS:O	64:BO:145:GLY:N	2.54	0.40
65:BP:87:PRO:O	65:BP:88:GLU:CB	2.69	0.40
67:BR:88:VAL:HG22	67:BR:89:SER:N	2.35	0.40
68:BS:55:ARG:HB2	68:BS:58:GLU:CG	2.52	0.40
70:BU:80:PHE:HB3	79:Bd:52:PHE:HB3	2.03	0.40
71:BV:56:CYS:SG	71:BV:59:ILE:HG12	2.62	0.40
75:BZ:76:ARG:HB3	75:BZ:77:LEU:HD23	2.02	0.40
82:Bg:195:LEU:HA	82:Bg:211:GLY:CA	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A4:78:C:H2'	2:A4:79:U:O4'	2.21	0.40
2:A4:95:C:H5'	8:AF:229:GLU:OE2	2.20	0.40
3:AA:193:ARG:HG3	3:AA:195:CYS:SG	2.61	0.40
4:AB:123:HIS:NE2	48:A2:5019:A:OP1	2.54	0.40
4:AB:174:ARG:HH22	48:A2:4932:C:C1'	2.34	0.40
7:AE:116:TYR:N	7:AE:116:TYR:HD1	2.20	0.40
8:AF:111:LEU:O	48:A2:1821:G:H4'	2.22	0.40
8:AF:223:LYS:O	8:AF:225:THR:N	2.48	0.40
10:AH:40:HIS:CE1	10:AH:41:ILE:HG13	2.56	0.40
13:AK:13:TYR:O	13:AK:15:LEU:N	2.45	0.40
16:AN:2:GLY:CA	48:A2:116:G:OP1	2.60	0.40
18:AP:18:ARG:O	48:A2:393:G:H4'	2.22	0.40
21:AS:1:MET:SD	21:AS:33:PHE:O	2.80	0.40
24:AV:124:GLU:O	24:AV:128:LEU:HD13	2.21	0.40
26:AX:44:PRO:HB2	48:A2:4055:A:H5"	2.02	0.40
37:Ai:26:HIS:CE1	48:A2:156:C:C2	3.10	0.40
45:Aq:7:PRO:HD2	45:Aq:66:ASN:HD22	1.87	0.40
46:At:46:ARG:HH21	48:A2:660:C:H5	1.69	0.40
46:At:98:ARG:CD	48:A2:951:A:H5"	2.50	0.40
47:Au:74:CYS:HB3	47:Au:84:HIS:NE2	2.36	0.40
47:Au:93:LEU:CD2	47:Au:99:LEU:CG	2.99	0.40
48:A2:83:C:H5"	48:A2:84:A:OP2	2.22	0.40
48:A2:223:G:H2'	48:A2:224:A:O4'	2.22	0.40
48:A2:410:U:C3'	48:A2:411:G:H5'	2.52	0.40
48:A2:510:C:O5'	48:A2:510:C:C6	2.74	0.40
48:A2:727:C:H6	48:A2:727:C:H5"	1.87	0.40
48:A2:965:G:H1	48:A2:1259:C:H42	1.70	0.40
48:A2:1260:G:C2'	48:A2:1261:C:O4'	2.69	0.40
48:A2:1614:A:C3'	48:A2:1615:G:H5"	2.52	0.40
48:A2:1645:C:H2'	48:A2:1646:U:C6	2.57	0.40
48:A2:1805:G:H2'	48:A2:1806:G:C8	2.56	0.40
48:A2:1869:A:H8	48:A2:1869:A:P	2.45	0.40
48:A2:1914:G:H2'	48:A2:1915:A:C8	2.55	0.40
48:A2:2024:A:H61	48:A2:4399:U:H5"	1.87	0.40
48:A2:2245:C:O2'	48:A2:2246:U:P	2.78	0.40
48:A2:2269:C:H1'	48:A2:2300:G:H2'	2.04	0.40
48:A2:2553:G:H1	48:A2:2743:A:N6	2.20	0.40
48:A2:2740:U:O2'	48:A2:2741:G:C4'	2.70	0.40
48:A2:2823:A:O2'	48:A2:4593:G:H4'	2.22	0.40
48:A2:3623:A:H2'	48:A2:3624:A:C4	2.56	0.40
48:A2:3711:G:H2'	48:A2:3712:C:O5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:A2:3814:C:O5'	48:A2:3814:C:C2'	2.70	0.40
48:A2:3920:A:H61	48:A2:4033:U:H3	1.69	0.40
48:A2:4288:G:H2'	48:A2:4289:C:O4'	2.21	0.40
48:A2:4683:G:H3'	48:A2:4684:G:H21	1.87	0.40
49:B1:65:C:C4	56:BG:133:LEU:HD22	2.56	0.40
49:B1:283:G:H2'	49:B1:284:C:OP1	2.22	0.40
49:B1:1022:U:C6	63:BN:128:TYR:CD1	3.10	0.40
49:B1:1102:G:C2	49:B1:1103:C:C4	3.09	0.40
49:B1:1156:U:O2	49:B1:1156:U:H2'	2.21	0.40
49:B1:1248:U:H2'	49:B1:1249:C:C6	2.57	0.40
54:BE:82:TYR:CD2	54:BE:83:PRO:HD2	2.57	0.40
56:BG:8:PRO:HD3	56:BG:112:VAL:HG13	2.02	0.40
57:BH:166:VAL:O	57:BH:169:LYS:HB2	2.21	0.40
59:BJ:87:LEU:HD23	59:BJ:96:TYR:HE2	1.85	0.40
61:BL:38:LYS:HD3	61:BL:61:PRO:O	2.22	0.40
65:BP:60:LEU:HD11	65:BP:89:MET:HA	2.04	0.40
66:BQ:41:MET:HE1	69:BT:10:ASN:CG	2.46	0.40
68:BS:24:ARG:O	68:BS:25:LYS:HG2	2.22	0.40
68:BS:111:LEU:HD22	68:BS:125:HIS:CD2	2.57	0.40
69:BT:36:THR:O	69:BT:37:VAL:CB	2.70	0.40
71:BV:36:VAL:O	71:BV:51:LYS:N	2.46	0.40
72:BW:93:LEU:HD22	72:BW:128:PHE:CE2	2.56	0.40
72:BW:104:LEU:HD13	72:BW:125:ILE:HG12	2.02	0.40
73:BX:95:GLU:HB2	73:BX:98:ASP:OD2	2.21	0.40
77:Bb:65:GLN:CB	77:Bb:72:ARG:CZ	2.99	0.40
83:Bv:7:A:H8	83:Bv:7:A:OP2	2.04	0.40
84:Bx:47:U:H2'	84:Bx:48:U: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 PDB entries followed by that with respect to all EM entries.

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
3	AA	250/257 (97%)	237 (95%)	7 (3%)	6 (2%)	4 29
4	AB	392/403 (97%)	370 (94%)	10 (3%)	12 (3%)	3 25
5	AC	361/427 (84%)	333 (92%)	13 (4%)	15 (4%)	2 19
6	AD	292/297 (98%)	270 (92%)	14 (5%)	8 (3%)	4 27
7	AE	192/288 (67%)	161 (84%)	12 (6%)	19 (10%)	0 6
8	AF	232/248 (94%)	213 (92%)	10 (4%)	9 (4%)	2 20
9	AG	232/266 (87%)	217 (94%)	10 (4%)	5 (2%)	5 30
10	AH	189/192 (98%)	175 (93%)	8 (4%)	6 (3%)	3 24
11	AI	204/214 (95%)	192 (94%)	7 (3%)	5 (2%)	4 28
12	AJ	167/178 (94%)	154 (92%)	7 (4%)	6 (4%)	2 22
13	AK	107/317 (34%)	34 (32%)	37 (35%)	36 (34%)	0 0
14	AL	203/211 (96%)	175 (86%)	14 (7%)	14 (7%)	1 10
15	AM	137/215 (64%)	127 (93%)	5 (4%)	5 (4%)	2 22
16	AN	201/204 (98%)	193 (96%)	6 (3%)	2 (1%)	12 44
17	AO	193/203 (95%)	187 (97%)	3 (2%)	3 (2%)	7 36
18	AP	151/184 (82%)	147 (97%)	4 (3%)	0	100 100
19	AQ	185/188 (98%)	163 (88%)	10 (5%)	12 (6%)	1 11
20	AR	179/196 (91%)	171 (96%)	4 (2%)	4 (2%)	5 30
21	AS	173/176 (98%)	156 (90%)	11 (6%)	6 (4%)	3 23
22	AT	155/160 (97%)	144 (93%)	6 (4%)	5 (3%)	3 24
23	AU	97/128 (76%)	81 (84%)	7 (7%)	9 (9%)	0 6
24	AV	127/140 (91%)	125 (98%)	2 (2%)	0	100 100
25	AW	119/157 (76%)	96 (81%)	18 (15%)	5 (4%)	2 19
26	AX	115/156 (74%)	113 (98%)	2 (2%)	0	100 100
27	AY	125/145 (86%)	119 (95%)	2 (2%)	4 (3%)	3 24
28	AZ	132/136 (97%)	118 (89%)	6 (4%)	8 (6%)	1 12
29	Aa	145/148 (98%)	135 (93%)	6 (4%)	4 (3%)	4 26
30	Ab	66/159 (42%)	57 (86%)	5 (8%)	4 (6%)	1 12
31	Ac	101/115 (88%)	97 (96%)	2 (2%)	2 (2%)	6 32
32	Ad	104/125 (83%)	99 (95%)	3 (3%)	2 (2%)	6 33
33	Ae	127/135 (94%)	116 (91%)	6 (5%)	5 (4%)	2 20
34	Af	107/110 (97%)	93 (87%)	5 (5%)	9 (8%)	0 7

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
35	Ag	112/117 (96%)	107 (96%)	3 (3%)	2 (2%)	6 34
36	Ah	120/123 (98%)	112 (93%)	2 (2%)	6 (5%)	1 15
37	Ai	95/105 (90%)	83 (87%)	7 (7%)	5 (5%)	1 14
38	Aj	82/97 (84%)	69 (84%)	7 (8%)	6 (7%)	1 9
39	Ak	67/70 (96%)	50 (75%)	7 (10%)	10 (15%)	0 2
40	Al	48/51 (94%)	47 (98%)	1 (2%)	0	100 100
41	Am	48/128 (38%)	44 (92%)	3 (6%)	1 (2%)	5 31
42	An	23/25 (92%)	23 (100%)	0	0	100 100
43	Ao	103/106 (97%)	94 (91%)	5 (5%)	4 (4%)	2 20
44	Ap	89/92 (97%)	84 (94%)	3 (3%)	2 (2%)	5 30
45	Aq	136/165 (82%)	40 (29%)	47 (35%)	49 (36%)	0 0
46	At	120/137 (88%)	107 (89%)	10 (8%)	3 (2%)	4 28
47	Au	215/217 (99%)	185 (86%)	20 (9%)	10 (5%)	2 17
50	BA	213/295 (72%)	197 (92%)	12 (6%)	4 (2%)	6 33
51	BB	210/264 (80%)	180 (86%)	12 (6%)	18 (9%)	0 7
52	BC	220/293 (75%)	204 (93%)	7 (3%)	9 (4%)	2 19
53	BD	218/243 (90%)	201 (92%)	10 (5%)	7 (3%)	3 24
54	BE	255/263 (97%)	230 (90%)	14 (6%)	11 (4%)	2 18
55	BF	188/204 (92%)	163 (87%)	15 (8%)	10 (5%)	1 14
56	BG	230/249 (92%)	211 (92%)	11 (5%)	8 (4%)	3 23
57	BH	181/194 (93%)	169 (93%)	8 (4%)	4 (2%)	5 30
58	BI	205/208 (99%)	175 (85%)	20 (10%)	10 (5%)	1 16
59	BJ	177/194 (91%)	137 (77%)	28 (16%)	12 (7%)	1 10
60	BK	96/165 (58%)	84 (88%)	7 (7%)	5 (5%)	1 14
61	BL	151/158 (96%)	133 (88%)	11 (7%)	7 (5%)	2 17
62	BM	118/132 (89%)	113 (96%)	1 (1%)	4 (3%)	3 23
63	BN	147/151 (97%)	126 (86%)	13 (9%)	8 (5%)	1 14
64	BO	134/151 (89%)	113 (84%)	11 (8%)	10 (8%)	1 9
65	BP	118/145 (81%)	100 (85%)	9 (8%)	9 (8%)	1 8
66	BQ	137/146 (94%)	120 (88%)	10 (7%)	7 (5%)	1 15
67	BR	123/135 (91%)	106 (86%)	9 (7%)	8 (6%)	1 11

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
68	BS	137/152 (90%)	125 (91%)	7 (5%)	5 (4%)	2 22
69	BT	141/145 (97%)	131 (93%)	6 (4%)	4 (3%)	4 26
70	BU	95/119 (80%)	91 (96%)	2 (2%)	2 (2%)	5 31
71	BV	79/83 (95%)	77 (98%)	2 (2%)	0	100 100
72	BW	127/130 (98%)	120 (94%)	3 (2%)	4 (3%)	3 25
73	BX	137/143 (96%)	124 (90%)	8 (6%)	5 (4%)	2 22
74	BY	123/133 (92%)	116 (94%)	6 (5%)	1 (1%)	16 49
75	BZ	84/125 (67%)	80 (95%)	1 (1%)	3 (4%)	2 22
76	Ba	95/115 (83%)	87 (92%)	7 (7%)	1 (1%)	11 43
77	Bb	78/84 (93%)	72 (92%)	4 (5%)	2 (3%)	4 27
78	Bc	60/69 (87%)	57 (95%)	1 (2%)	2 (3%)	3 23
79	Bd	49/56 (88%)	42 (86%)	4 (8%)	3 (6%)	1 12
80	Be	53/59 (90%)	49 (92%)	2 (4%)	2 (4%)	2 20
81	Bf	71/156 (46%)	63 (89%)	7 (10%)	1 (1%)	9 38
82	Bg	312/317 (98%)	292 (94%)	12 (4%)	8 (3%)	4 27
All	All	11580/13387 (86%)	10401 (90%)	657 (6%)	522 (4%)	3 17

All (522) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	AA	138	SER
3	AA	144	LYS
3	AA	197	PRO
4	AB	189	THR
4	AB	356	LYS
5	AC	149	GLU
5	AC	151	PRO
5	AC	304	ALA
6	AD	6	VAL
6	AD	231	VAL
6	AD	290	ALA
6	AD	291	GLN
7	AE	96	VAL
7	AE	107	VAL
7	AE	110	ARG
7	AE	111	LYS
7	AE	128	HIS

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Mol	Chain	Res	Type
7	AE	158	ARG
7	AE	185	PRO
7	AE	187	ARG
7	AE	230	GLY
7	AE	284	HIS
8	AF	166	ARG
8	AF	170	THR
8	AF	222	LYS
9	AG	162	ASP
11	AI	24	ARG
11	AI	113	THR
12	AJ	12	MET
12	AJ	54	ARG
13	AK	30	VAL
13	AK	32	ALA
13	AK	35	VAL
13	AK	48	ARG
13	AK	64	ALA
13	AK	72	ASN
13	AK	78	LEU
13	AK	85	ASN
13	AK	88	PHE
13	AK	102	LEU
13	AK	104	ALA
14	AL	47	ALA
14	AL	139	SER
14	AL	140	SER
14	AL	145	LYS
14	AL	156	PRO
14	AL	173	GLU
14	AL	178	ALA
14	AL	179	PHE
15	AM	21	ALA
15	AM	44	GLN
17	AO	184	ASN
19	AQ	4	ASP
19	AQ	13	VAL
19	AQ	16	LYS
19	AQ	98	LEU
19	AQ	161	SER
20	AR	24	LEU
20	AR	61	ALA

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Mol	Chain	Res	Type
20	AR	113	LYS
22	AT	32	ARG
22	AT	53	PRO
23	AU	48	LYS
23	AU	55	ASN
25	AW	61	LYS
25	AW	82	ILE
27	AY	67	ILE
28	AZ	93	LYS
28	AZ	95	VAL
28	AZ	100	VAL
29	Aa	24	LYS
29	Aa	82	VAL
29	Aa	93	ASN
29	Aa	95	THR
31	Ac	104	ILE
31	Ac	107	SER
32	Ad	20	VAL
34	Af	59	THR
34	Af	61	GLY
34	Af	62	GLY
34	Af	63	LYS
34	Af	106	TYR
34	Af	107	PRO
35	Ag	44	SER
36	Ah	10	ARG
37	Ai	18	THR
37	Ai	65	LYS
38	Aj	32	SER
38	Aj	79	ARG
38	Aj	82	THR
39	Ak	17	ARG
39	Ak	19	ASP
39	Ak	38	CYS
43	Ao	76	ASN
45	Aq	10	ILE
45	Aq	17	CYS
45	Aq	25	THR
45	Aq	31	LYS
45	Aq	35	LEU
45	Aq	38	SER
45	Aq	39	PRO

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Mol	Chain	Res	Type
45	Aq	49	ALA
45	Aq	58	ILE
45	Aq	75	PRO
45	Aq	77	ALA
45	Aq	78	SER
45	Aq	88	PRO
45	Aq	90	ARG
45	Aq	104	ILE
45	Aq	106	PHE
45	Aq	112	ILE
45	Aq	113	ALA
45	Aq	124	GLU
45	Aq	141	CYS
47	Au	5	VAL
47	Au	59	PRO
47	Au	60	ARG
50	BA	206	ASP
51	BB	39	PHE
51	BB	40	ASN
51	BB	51	ARG
51	BB	71	LEU
51	BB	73	ASP
52	BC	65	LYS
53	BD	213	PRO
53	BD	217	ILE
53	BD	218	LEU
54	BE	92	ILE
54	BE	93	GLU
54	BE	101	LEU
54	BE	113	ARG
54	BE	151	ASP
55	BF	40	ALA
55	BF	121	PRO
55	BF	129	GLY
56	BG	43	GLU
57	BH	115	LYS
57	BH	116	ARG
58	BI	133	GLU
58	BI	155	ASN
58	BI	193	LYS
59	BJ	4	ALA
59	BJ	91	LYS

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Mol	Chain	Res	Type
59	BJ	156	HIS
59	BJ	165	TYR
59	BJ	170	PRO
60	BK	28	HIS
61	BL	29	GLY
62	BM	129	LYS
63	BN	23	PRO
63	BN	25	TRP
63	BN	62	GLN
64	BO	90	ILE
64	BO	139	SER
64	BO	141	ARG
64	BO	146	ARG
65	BP	48	GLY
65	BP	68	PRO
65	BP	101	THR
65	BP	126	VAL
66	BQ	51	LEU
66	BQ	52	LEU
67	BR	3	ARG
67	BR	4	VAL
67	BR	5	ARG
67	BR	95	ILE
67	BR	115	SER
68	BS	78	LYS
68	BS	134	GLN
69	BT	37	VAL
72	BW	98	GLN
72	BW	99	PHE
72	BW	101	PHE
73	BX	136	GLY
73	BX	139	GLU
76	Ba	97	PRO
77	Bb	41	TYR
78	Bc	38	THR
79	Bd	11	PRO
79	Bd	12	ARG
79	Bd	25	SER
81	Bf	87	THR
82	Bg	49	GLU
4	AB	5	LYS
4	AB	18	PRO

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Mol	Chain	Res	Type
4	AB	175	GLN
5	AC	91	ALA
5	AC	218	ILE
5	AC	223	ASN
5	AC	323	ARG
6	AD	20	PHE
6	AD	266	TRP
7	AE	283	PRO
8	AF	165	LYS
8	AF	185	ILE
8	AF	224	THR
9	AG	41	ILE
9	AG	131	LYS
10	AH	4	ILE
10	AH	116	ASN
10	AH	117	PHE
11	AI	111	LEU
11	AI	116	ARG
12	AJ	151	ILE
13	AK	15	LEU
13	AK	37	SER
13	AK	39	GLN
13	AK	40	MET
13	AK	52	VAL
13	AK	55	MET
13	AK	68	HIS
13	AK	84	GLY
14	AL	138	ASP
14	AL	155	MET
15	AM	104	MET
17	AO	198	THR
19	AQ	19	LYS
19	AQ	104	ARG
21	AS	5	GLY
21	AS	86	SER
21	AS	145	PHE
22	AT	81	LYS
23	AU	53	ALA
25	AW	81	ALA
27	AY	43	ASN
27	AY	65	GLN
28	AZ	32	GLY

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Mol	Chain	Res	Type
28	AZ	102	ARG
30	Ab	26	SER
30	Ab	51	LYS
33	Ae	4	LEU
35	Ag	46	CYS
36	Ah	9	LEU
36	Ah	96	ASN
36	Ah	122	LYS
38	Aj	81	GLY
39	Ak	14	THR
39	Ak	20	ALA
43	Ao	29	GLY
45	Aq	14	TYR
45	Aq	21	GLU
45	Aq	41	LYS
45	Aq	55	GLY
45	Aq	60	VAL
45	Aq	66	ASN
45	Aq	69	ALA
45	Aq	71	ILE
45	Aq	91	ASP
45	Aq	117	ARG
45	Aq	140	GLY
47	Au	197	ASN
51	BB	37	ALA
52	BC	63	VAL
52	BC	103	LYS
52	BC	174	ILE
54	BE	98	HIS
55	BF	34	SER
55	BF	183	GLY
56	BG	88	ARG
56	BG	165	GLU
57	BH	109	ARG
57	BH	148	LEU
58	BI	159	SER
59	BJ	3	VAL
59	BJ	131	ARG
60	BK	41	PRO
61	BL	14	PRO
61	BL	15	THR
63	BN	20	ARG

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Mol	Chain	Res	Type
63	BN	24	THR
63	BN	31	ASP
63	BN	107	LYS
64	BO	19	PRO
64	BO	21	VAL
64	BO	91	THR
65	BP	51	ARG
65	BP	116	LEU
65	BP	130	ARG
66	BQ	15	ARG
66	BQ	53	GLU
66	BQ	144	SER
67	BR	113	SER
68	BS	93	GLY
70	BU	67	LYS
72	BW	84	LYS
73	BX	107	ARG
73	BX	116	PRO
75	BZ	104	ARG
78	Bc	33	GLU
80	Be	32	ALA
82	Bg	126	ASP
3	AA	229	ALA
4	AB	281	ASN
4	AB	292	LEU
5	AC	95	MET
5	AC	194	GLY
5	AC	222	ARG
7	AE	108	LYS
7	AE	109	LEU
7	AE	122	PRO
7	AE	126	LEU
7	AE	131	LYS
7	AE	132	PRO
9	AG	32	PHE
9	AG	133	PRO
10	AH	175	PHE
12	AJ	58	ARG
13	AK	14	PHE
13	AK	25	PRO
13	AK	33	ASP
13	AK	34	ASN

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Mol	Chain	Res	Type
13	AK	62	ARG
13	AK	70	GLU
13	AK	83	ARG
13	AK	103	LEU
13	AK	105	ASN
13	AK	107	VAL
14	AL	158	ARG
15	AM	5	ARG
16	AN	94	PHE
16	AN	145	ASN
19	AQ	160	HIS
21	AS	88	SER
22	AT	127	GLN
23	AU	33	ILE
23	AU	51	GLY
28	AZ	22	LYS
28	AZ	103	ASP
32	Ad	95	ASP
33	Ae	19	LYS
37	Ai	17	VAL
39	Ak	11	PHE
39	Ak	18	LYS
41	Am	79	GLU
43	Ao	31	ASP
44	Ap	12	GLY
45	Aq	15	LEU
45	Aq	54	LYS
45	Aq	70	GLN
45	Aq	86	LYS
45	Aq	95	GLN
45	Aq	131	GLU
47	Au	22	GLN
47	Au	126	PRO
51	BB	70	SER
51	BB	76	ASN
51	BB	82	ARG
51	BB	119	THR
51	BB	207	LEU
51	BB	213	ARG
52	BC	171	GLY
52	BC	261	PHE
53	BD	75	LYS

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Mol	Chain	Res	Type
55	BF	37	ASP
55	BF	80	GLY
58	BI	85	ALA
58	BI	171	LEU
59	BJ	101	LYS
59	BJ	121	LYS
59	BJ	122	SER
61	BL	11	GLN
61	BL	12	LYS
64	BO	89	GLY
67	BR	122	PRO
69	BT	28	LEU
69	BT	32	GLU
73	BX	41	PHE
75	BZ	40	VAL
75	BZ	78	LYS
82	Bg	146	SER
82	Bg	171	ASP
82	Bg	255	SER
82	Bg	284	PRO
3	AA	180	LEU
3	AA	250	LYS
4	AB	17	LEU
5	AC	52	TYR
5	AC	73	VAL
6	AD	44	TYR
7	AE	119	GLU
10	AH	7	ASN
10	AH	8	GLN
11	AI	103	LEU
12	AJ	111	GLU
13	AK	66	ARG
14	AL	133	ALA
15	AM	33	GLN
20	AR	53	LYS
21	AS	3	ALA
21	AS	7	LEU
23	AU	101	ARG
28	AZ	60	LYS
33	Ae	3	ALA
34	Af	41	PHE
39	Ak	6	GLU

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Mol	Chain	Res	Type
43	Ao	49	GLY
44	Ap	19	GLY
45	Aq	89	PRO
45	Aq	92	ARG
45	Aq	120	SER
45	Aq	122	ALA
46	At	21	ASN
47	Au	40	ASN
47	Au	58	THR
47	Au	70	ASP
50	BA	6	ASP
51	BB	23	ASP
51	BB	179	ASN
51	BB	209	ASP
52	BC	135	GLY
52	BC	176	LYS
53	BD	83	SER
54	BE	171	ASN
56	BG	47	GLY
56	BG	106	LEU
58	BI	127	ALA
58	BI	158	ILE
59	BJ	36	GLY
59	BJ	104	ASP
60	BK	32	HIS
61	BL	21	LYS
62	BM	102	LYS
65	BP	67	ALA
66	BQ	44	PRO
68	BS	79	ILE
5	AC	305	PRO
7	AE	234	ASP
8	AF	160	GLY
13	AK	71	ASN
13	AK	98	ILE
13	AK	108	PRO
19	AQ	38	ARG
23	AU	35	ASP
23	AU	59	GLY
25	AW	69	LYS
30	Ab	25	ARG
30	Ab	46	ALA

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Mol	Chain	Res	Type
33	Ae	5	ARG
34	Af	58	VAL
34	Af	60	PRO
36	Ah	7	ARG
36	Ah	87	LYS
37	Ai	19	LYS
38	Aj	80	GLU
45	Aq	98	ILE
45	Aq	121	LEU
45	Aq	136	ALA
53	BD	76	ARG
53	BD	113	LEU
54	BE	203	GLY
55	BF	92	ILE
56	BG	115	LYS
56	BG	135	PRO
58	BI	24	LYS
61	BL	34	PRO
63	BN	22	VAL
65	BP	49	LEU
66	BQ	143	LYS
68	BS	133	GLY
70	BU	53	PRO
74	BY	59	GLY
80	Be	9	ALA
4	AB	3	HIS
4	AB	293	ILE
4	AB	298	LEU
4	AB	326	VAL
6	AD	260	GLU
8	AF	163	ASN
13	AK	49	GLY
13	AK	53	VAL
13	AK	99	ARG
14	AL	135	LYS
17	AO	186	GLU
19	AQ	157	GLY
25	AW	103	ALA
37	Ai	21	VAL
39	Ak	15	ALA
39	Ak	60	LEU
45	Aq	85	LEU

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Mol	Chain	Res	Type
47	Au	172	VAL
50	BA	95	GLY
50	BA	193	HIS
51	BB	69	VAL
51	BB	132	GLY
51	BB	210	VAL
54	BE	91	SER
55	BF	185	SER
58	BI	192	GLY
64	BO	140	THR
69	BT	51	ASN
77	Bb	62	VAL
19	AQ	5	ILE
19	AQ	159	PRO
45	Aq	23	GLY
45	Aq	64	ILE
55	BF	41	VAL
60	BK	86	PRO
82	Bg	61	GLY
5	AC	70	GLY
5	AC	98	GLY
8	AF	197	VAL
23	AU	47	ILE
27	AY	70	VAL
45	Aq	102	GLY
45	Aq	132	ILE
52	BC	61	MET
60	BK	3	MET
62	BM	30	GLY
82	Bg	190	GLY
12	AJ	175	LEU
33	Ae	8	VAL
46	At	28	GLU
54	BE	153	VAL
56	BG	108	VAL
14	AL	48	PRO
22	AT	126	VAL
46	At	122	LYS
54	BE	102	VAL
38	Aj	84	PRO
62	BM	115	GLY
64	BO	145	GLY

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Mol	Chain	Res	Type
67	BR	88	VAL

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	
3	AA	194/199 (98%)	182 (94%)	12 (6%)	16	43
4	AB	343/349 (98%)	318 (93%)	25 (7%)	13	38
5	AC	302/348 (87%)	275 (91%)	27 (9%)	9	32
6	AD	248/250 (99%)	227 (92%)	21 (8%)	10	34
7	AE	174/252 (69%)	124 (71%)	50 (29%)	0	2
8	AF	203/215 (94%)	192 (95%)	11 (5%)	20	46
9	AG	199/223 (89%)	190 (96%)	9 (4%)	24	50
10	AH	170/171 (99%)	158 (93%)	12 (7%)	13	38
11	AI	178/181 (98%)	174 (98%)	4 (2%)	45	65
12	AJ	142/149 (95%)	138 (97%)	4 (3%)	38	61
13	AK	95/258 (37%)	68 (72%)	27 (28%)	0	2
14	AL	171/177 (97%)	154 (90%)	17 (10%)	7	29
15	AM	118/161 (73%)	105 (89%)	13 (11%)	6	26
16	AN	171/172 (99%)	166 (97%)	5 (3%)	37	60
17	AO	168/174 (97%)	164 (98%)	4 (2%)	43	64
18	AP	134/163 (82%)	122 (91%)	12 (9%)	9	32
19	AQ	164/165 (99%)	145 (88%)	19 (12%)	5	24
20	AR	160/175 (91%)	146 (91%)	14 (9%)	9	32
21	AS	156/157 (99%)	149 (96%)	7 (4%)	24	50
22	AT	138/140 (99%)	126 (91%)	12 (9%)	9	33
23	AU	89/115 (77%)	79 (89%)	10 (11%)	6	25
24	AV	100/107 (94%)	97 (97%)	3 (3%)	36	60
25	AW	100/126 (79%)	95 (95%)	5 (5%)	22	48

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
26	AX	105/133 (79%)	94 (90%)	11 (10%)	6 27
27	AY	119/135 (88%)	107 (90%)	12 (10%)	7 28
28	AZ	117/118 (99%)	100 (86%)	17 (14%)	3 17
29	Aa	120/121 (99%)	109 (91%)	11 (9%)	8 32
30	Ab	58/126 (46%)	54 (93%)	4 (7%)	14 39
31	Ac	88/97 (91%)	86 (98%)	2 (2%)	44 64
32	Ad	97/110 (88%)	96 (99%)	1 (1%)	68 75
33	Ae	115/121 (95%)	114 (99%)	1 (1%)	70 76
34	Af	88/89 (99%)	84 (96%)	4 (4%)	24 50
35	Ag	98/100 (98%)	93 (95%)	5 (5%)	21 48
36	Ah	109/110 (99%)	96 (88%)	13 (12%)	5 23
37	Ai	83/89 (93%)	79 (95%)	4 (5%)	23 49
38	Aj	71/80 (89%)	65 (92%)	6 (8%)	10 34
39	Ak	64/65 (98%)	44 (69%)	20 (31%)	0 2
40	Al	47/48 (98%)	43 (92%)	4 (8%)	10 34
41	Am	46/116 (40%)	45 (98%)	1 (2%)	45 65
42	An	24/24 (100%)	23 (96%)	1 (4%)	26 52
43	Ao	93/94 (99%)	82 (88%)	11 (12%)	5 23
44	Ap	74/75 (99%)	70 (95%)	4 (5%)	20 46
45	Aq	114/137 (83%)	87 (76%)	27 (24%)	1 4
46	At	106/121 (88%)	87 (82%)	19 (18%)	2 10
47	Au	196/196 (100%)	179 (91%)	17 (9%)	9 33
50	BA	180/243 (74%)	165 (92%)	15 (8%)	10 34
51	BB	193/231 (84%)	174 (90%)	19 (10%)	7 30
52	BC	188/225 (84%)	179 (95%)	9 (5%)	23 49
53	BD	183/202 (91%)	175 (96%)	8 (4%)	25 51
54	BE	220/225 (98%)	214 (97%)	6 (3%)	39 62
55	BF	160/170 (94%)	154 (96%)	6 (4%)	29 55
56	BG	202/218 (93%)	175 (87%)	27 (13%)	4 20
57	BH	164/174 (94%)	163 (99%)	1 (1%)	78 79
58	BI	179/180 (99%)	174 (97%)	5 (3%)	38 61

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
59	BJ	160/168 (95%)	151 (94%)	9 (6%)	19 46
60	BK	89/136 (65%)	85 (96%)	4 (4%)	24 50
61	BL	138/142 (97%)	134 (97%)	4 (3%)	37 60
62	BM	102/108 (94%)	100 (98%)	2 (2%)	48 67
63	BN	130/131 (99%)	121 (93%)	9 (7%)	14 39
64	BO	106/119 (89%)	97 (92%)	9 (8%)	10 34
65	BP	109/130 (84%)	92 (84%)	17 (16%)	2 15
66	BQ	115/121 (95%)	103 (90%)	12 (10%)	7 27
67	BR	113/122 (93%)	95 (84%)	18 (16%)	2 14
68	BS	121/132 (92%)	103 (85%)	18 (15%)	3 17
69	BT	113/115 (98%)	104 (92%)	9 (8%)	11 35
70	BU	90/107 (84%)	86 (96%)	4 (4%)	25 51
71	BV	65/67 (97%)	58 (89%)	7 (11%)	6 26
72	BW	112/113 (99%)	109 (97%)	3 (3%)	39 62
73	BX	111/115 (96%)	100 (90%)	11 (10%)	7 29
74	BY	107/115 (93%)	103 (96%)	4 (4%)	30 56
75	BZ	75/103 (73%)	58 (77%)	17 (23%)	1 5
76	Ba	84/98 (86%)	72 (86%)	12 (14%)	3 18
77	Bb	72/76 (95%)	72 (100%)	0	100 100
78	Bc	55/62 (89%)	53 (96%)	2 (4%)	31 57
79	Bd	45/49 (92%)	39 (87%)	6 (13%)	4 20
80	Be	44/48 (92%)	33 (75%)	11 (25%)	0 4
81	Bf	66/140 (47%)	65 (98%)	1 (2%)	57 71
82	Bg	272/275 (99%)	267 (98%)	5 (2%)	51 69
All	All	10112/11392 (89%)	9304 (92%)	808 (8%)	13 35

All (808) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	AA	20	VAL
3	AA	45	VAL
3	AA	58	LEU
3	AA	63	PHE
3	AA	72	ARG

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Mol	Chain	Res	Type
3	AA	93	LYS
3	AA	101	VAL
3	AA	102	LEU
3	AA	149	LYS
3	AA	226	ARG
3	AA	227	ARG
3	AA	228	ASP
4	AB	17	LEU
4	AB	24	ARG
4	AB	42	HIS
4	AB	46	PHE
4	AB	103	LYS
4	AB	109	HIS
4	AB	130	PHE
4	AB	136	LYS
4	AB	189	THR
4	AB	192	GLU
4	AB	226	LYS
4	AB	238	LYS
4	AB	258	HIS
4	AB	274	TYR
4	AB	283	LYS
4	AB	292	LEU
4	AB	293	ILE
4	AB	294	LYS
4	AB	297	LYS
4	AB	299	ILE
4	AB	325	GLU
4	AB	351	LEU
4	AB	354	GLN
4	AB	365	LEU
4	AB	394	LYS
5	AC	52	TYR
5	AC	56	GLU
5	AC	57	LEU
5	AC	67	TRP
5	AC	73	VAL
5	AC	89	GLN
5	AC	92	PHE
5	AC	95	MET
5	AC	97	ARG
5	AC	107	THR

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Mol	Chain	Res	Type
5	AC	151	PRO
5	AC	162	LYS
5	AC	202	ILE
5	AC	204	ARG
5	AC	205	ARG
5	AC	208	CYS
5	AC	209	ILE
5	AC	211	TYR
5	AC	213	GLU
5	AC	217	ILE
5	AC	218	ILE
5	AC	221	PHE
5	AC	229	LEU
5	AC	230	LEU
5	AC	232	VAL
5	AC	266	THR
5	AC	287	THR
6	AD	4	VAL
6	AD	6	VAL
6	AD	10	LYS
6	AD	12	TYR
6	AD	20	PHE
6	AD	25	GLU
6	AD	69	ILE
6	AD	163	LEU
6	AD	197	LYS
6	AD	198	HIS
6	AD	216	GLU
6	AD	225	GLN
6	AD	227	ILE
6	AD	229	ASN
6	AD	232	THR
6	AD	234	ASP
6	AD	235	MET
6	AD	236	MET
6	AD	237	GLU
6	AD	265	ARG
6	AD	268	ARG
7	AE	100	LYS
7	AE	105	ARG
7	AE	106	VAL
7	AE	107	VAL

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Mol	Chain	Res	Type
7	AE	108	LYS
7	AE	109	LEU
7	AE	110	ARG
7	AE	111	LYS
7	AE	114	ARG
7	AE	115	TYR
7	AE	118	THR
7	AE	121	VAL
7	AE	123	ARG
7	AE	124	LYS
7	AE	125	LEU
7	AE	126	LEU
7	AE	131	LYS
7	AE	137	VAL
7	AE	138	ARG
7	AE	139	LYS
7	AE	140	LEU
7	AE	141	ARG
7	AE	144	ILE
7	AE	167	GLN
7	AE	173	LEU
7	AE	186	LEU
7	AE	187	ARG
7	AE	188	ARG
7	AE	189	THR
7	AE	201	ILE
7	AE	203	ILE
7	AE	207	LYS
7	AE	210	LYS
7	AE	211	HIS
7	AE	212	LEU
7	AE	213	THR
7	AE	216	TYR
7	AE	218	LYS
7	AE	220	LYS
7	AE	222	LEU
7	AE	223	ARG
7	AE	224	LYS
7	AE	228	GLN
7	AE	237	LYS
7	AE	239	LYS
7	AE	241	GLU

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Mol	Chain	Res	Type
7	AE	278	THR
7	AE	279	ASN
7	AE	282	TYR
7	AE	285	LYS
8	AF	86	GLU
8	AF	88	LYS
8	AF	161	LYS
8	AF	162	ILE
8	AF	165	LYS
8	AF	166	ARG
8	AF	182	TYR
8	AF	217	ARG
8	AF	220	MET
8	AF	221	LYS
8	AF	222	LYS
9	AG	84	THR
9	AG	97	LYS
9	AG	110	LYS
9	AG	120	LYS
9	AG	121	LYS
9	AG	136	LEU
9	AG	159	HIS
9	AG	162	ASP
9	AG	193	LEU
10	AH	5	LEU
10	AH	8	GLN
10	AH	20	LEU
10	AH	47	LEU
10	AH	48	LEU
10	AH	60	TRP
10	AH	64	ARG
10	AH	96	TYR
10	AH	107	GLU
10	AH	108	ASN
10	AH	111	LEU
10	AH	134	CYS
11	AI	3	ARG
11	AI	26	VAL
11	AI	48	LEU
11	AI	200	ILE
12	AJ	33	LEU
12	AJ	64	ARG

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Mol	Chain	Res	Type
12	AJ	159	LYS
12	AJ	175	LEU
13	AK	4	GLU
13	AK	13	TYR
13	AK	20	LEU
13	AK	21	LEU
13	AK	24	TYR
13	AK	25	PRO
13	AK	28	PHE
13	AK	30	VAL
13	AK	33	ASP
13	AK	35	VAL
13	AK	42	GLN
13	AK	43	ILE
13	AK	53	VAL
13	AK	54	LEU
13	AK	55	MET
13	AK	60	MET
13	AK	65	ILE
13	AK	69	LEU
13	AK	73	PRO
13	AK	76	GLU
13	AK	78	LEU
13	AK	85	ASN
13	AK	90	PHE
13	AK	102	LEU
13	AK	105	ASN
13	AK	107	VAL
13	AK	108	PRO
14	AL	55	ILE
14	AL	56	ARG
14	AL	70	VAL
14	AL	81	LEU
14	AL	126	LEU
14	AL	129	ARG
14	AL	130	LYS
14	AL	151	THR
14	AL	155	MET
14	AL	156	PRO
14	AL	159	ASN
14	AL	167	ARG
14	AL	172	GLU

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Mol	Chain	Res	Type
14	AL	173	GLU
14	AL	174	LYS
14	AL	175	ASN
14	AL	177	LYS
15	AM	6	PHE
15	AM	43	THR
15	AM	44	GLN
15	AM	47	ARG
15	AM	50	MET
15	AM	79	LYS
15	AM	93	LYS
15	AM	94	LYS
15	AM	99	GLU
15	AM	100	ARG
15	AM	103	LYS
15	AM	114	LYS
15	AM	132	LYS
16	AN	113	LEU
16	AN	124	ASP
16	AN	148	THR
16	AN	151	ILE
16	AN	183	THR
17	AO	25	LYS
17	AO	61	ARG
17	AO	92	THR
17	AO	148	LYS
18	AP	4	TYR
18	AP	6	LEU
18	AP	10	ASN
18	AP	12	THR
18	AP	13	LYS
18	AP	22	LEU
18	AP	41	ILE
18	AP	47	TYR
18	AP	48	LEU
18	AP	49	LYS
18	AP	75	GLN
18	AP	94	MET
19	AQ	8	ASN
19	AQ	9	LYS
19	AQ	11	ARG
19	AQ	13	VAL

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Mol	Chain	Res	Type
19	AQ	16	LYS
19	AQ	37	ARG
19	AQ	48	LEU
19	AQ	63	LEU
19	AQ	75	ARG
19	AQ	76	GLU
19	AQ	92	VAL
19	AQ	98	LEU
19	AQ	99	LYS
19	AQ	154	LYS
19	AQ	158	THR
19	AQ	170	LYS
19	AQ	172	ARG
19	AQ	175	GLU
19	AQ	176	ARG
20	AR	22	VAL
20	AR	24	LEU
20	AR	25	ASP
20	AR	28	GLU
20	AR	62	ARG
20	AR	72	LYS
20	AR	74	ARG
20	AR	132	PHE
20	AR	138	LEU
20	AR	144	LYS
20	AR	146	LYS
20	AR	163	ARG
20	AR	170	ARG
20	AR	172	ARG
21	AS	1	MET
21	AS	7	LEU
21	AS	27	LEU
21	AS	52	LYS
21	AS	82	LEU
21	AS	136	LYS
21	AS	139	ARG
22	AT	2	THR
22	AT	17	ARG
22	AT	102	ARG
22	AT	106	LEU
22	AT	110	LYS
22	AT	113	ASP

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Mol	Chain	Res	Type
22	AT	118	GLU
22	AT	125	TRP
22	AT	126	VAL
22	AT	128	LEU
22	AT	143	THR
22	AT	158	PHE
23	AU	50	ASN
23	AU	52	LYS
23	AU	55	ASN
23	AU	56	LEU
23	AU	60	VAL
23	AU	97	ARG
23	AU	99	TRP
23	AU	113	ARG
23	AU	115	PHE
23	AU	116	GLN
24	AV	48	ARG
24	AV	49	LEU
24	AV	135	ASN
25	AW	2	LYS
25	AW	50	ASN
25	AW	66	GLU
25	AW	68	GLN
25	AW	79	GLN
26	AX	54	LEU
26	AX	55	ARG
26	AX	77	ILE
26	AX	114	LYS
26	AX	115	LYS
26	AX	117	TYR
26	AX	118	ASP
26	AX	119	ILE
26	AX	120	ASP
26	AX	127	LEU
26	AX	129	ARG
27	AY	1	MET
27	AY	2	LYS
27	AY	4	ASN
27	AY	8	THR
27	AY	36	LYS
27	AY	40	GLN
27	AY	41	LYS

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Mol	Chain	Res	Type
27	AY	42	TYR
27	AY	49	ILE
27	AY	65	GLN
27	AY	122	LYS
27	AY	124	LYS
28	AZ	5	MET
28	AZ	31	ASP
28	AZ	36	ARG
28	AZ	46	ILE
28	AZ	59	LYS
28	AZ	60	LYS
28	AZ	61	LYS
28	AZ	91	LEU
28	AZ	93	LYS
28	AZ	99	ASP
28	AZ	109	LYS
28	AZ	112	ARG
28	AZ	122	TYR
28	AZ	123	LYS
28	AZ	126	LYS
28	AZ	128	LYS
28	AZ	133	LYS
29	Aa	22	ILE
29	Aa	27	LYS
29	Aa	28	HIS
29	Aa	47	LYS
29	Aa	61	TYR
29	Aa	82	VAL
29	Aa	86	THR
29	Aa	87	ARG
29	Aa	92	LYS
29	Aa	94	LYS
29	Aa	116	LYS
30	Ab	14	ARG
30	Ab	32	LEU
30	Ab	54	LEU
30	Ab	55	LYS
31	Ac	17	ARG
31	Ac	42	LYS
32	Ad	77	ILE
33	Ae	50	LYS
34	Af	95	LYS

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Mol	Chain	Res	Type
34	Af	106	TYR
34	Af	107	PRO
34	Af	110	ILE
35	Ag	5	LEU
35	Ag	21	ARG
35	Ag	22	LEU
35	Ag	32	TYR
35	Ag	60	ARG
36	Ah	14	LYS
36	Ah	31	LEU
36	Ah	35	LYS
36	Ah	37	THR
36	Ah	48	ARG
36	Ah	49	VAL
36	Ah	51	ARG
36	Ah	66	LYS
36	Ah	76	LYS
36	Ah	79	LYS
36	Ah	91	MET
36	Ah	107	GLN
36	Ah	111	GLU
37	Ai	25	ARG
37	Ai	28	ARG
37	Ai	74	LYS
37	Ai	76	ARG
38	Aj	11	ARG
38	Aj	17	THR
38	Aj	19	CYS
38	Aj	20	ARG
38	Aj	36	LYS
38	Aj	37	CYS
39	Ak	6	GLU
39	Ak	12	LEU
39	Ak	13	LEU
39	Ak	17	ARG
39	Ak	18	LYS
39	Ak	21	LYS
39	Ak	22	SER
39	Ak	27	LYS
39	Ak	38	CYS
39	Ak	39	SER
39	Ak	40	ARG

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Mol	Chain	Res	Type
39	Ak	41	TYR
39	Ak	54	GLU
39	Ak	55	LYS
39	Ak	56	LEU
39	Ak	57	LYS
39	Ak	59	SER
39	Ak	60	LEU
39	Ak	64	LEU
39	Ak	66	VAL
40	Al	13	LEU
40	Al	21	ARG
40	Al	28	ARG
40	Al	49	LEU
41	Am	127	VAL
42	An	16	LYS
43	Ao	31	ASP
43	Ao	40	ARG
43	Ao	42	ASP
43	Ao	43	ARG
43	Ao	93	LEU
43	Ao	97	LYS
43	Ao	98	LYS
43	Ao	102	GLN
43	Ao	103	VAL
43	Ao	104	ILE
43	Ao	105	GLN
44	Ap	7	LYS
44	Ap	28	LYS
44	Ap	62	LYS
44	Ap	84	ARG
45	Aq	9	GLU
45	Aq	10	ILE
45	Aq	21	GLU
45	Aq	22	VAL
45	Aq	28	LEU
45	Aq	30	PRO
45	Aq	31	LYS
45	Aq	35	LEU
45	Aq	37	LEU
45	Aq	39	PRO
45	Aq	46	ILE
45	Aq	50	THR

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Mol	Chain	Res	Type
45	Aq	57	ARG
45	Aq	58	ILE
45	Aq	59	THR
45	Aq	71	ILE
45	Aq	75	PRO
45	Aq	81	ILE
45	Aq	85	LEU
45	Aq	97	ASN
45	Aq	104	ILE
45	Aq	109	ILE
45	Aq	111	ASN
45	Aq	125	LEU
45	Aq	128	THR
45	Aq	139	VAL
45	Aq	143	VAL
46	At	13	CYS
46	At	16	PHE
46	At	18	ILE
46	At	41	ASN
46	At	46	ARG
46	At	56	ASP
46	At	62	VAL
46	At	64	ILE
46	At	67	ARG
46	At	68	SER
46	At	70	GLN
46	At	71	ARG
46	At	79	ARG
46	At	80	THR
46	At	83	ASN
46	At	87	ARG
46	At	89	THR
46	At	106	LEU
46	At	117	ILE
47	Au	17	VAL
47	Au	28	PHE
47	Au	29	LEU
47	Au	41	TYR
47	Au	58	THR
47	Au	59	PRO
47	Au	71	GLN
47	Au	94	ASN

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Mol	Chain	Res	Type
47	Au	121	PRO
47	Au	123	ILE
47	Au	180	VAL
47	Au	185	LEU
47	Au	188	ASN
47	Au	194	LEU
47	Au	198	TRP
47	Au	210	MET
47	Au	214	GLN
50	BA	25	LEU
50	BA	34	MET
50	BA	36	GLN
50	BA	40	LYS
50	BA	41	ARG
50	BA	42	LYS
50	BA	94	THR
50	BA	104	THR
50	BA	112	ILE
50	BA	116	PHE
50	BA	132	GLN
50	BA	140	VAL
50	BA	142	LEU
50	BA	201	LEU
50	BA	202	TYR
51	BB	69	VAL
51	BB	75	GLN
51	BB	79	VAL
51	BB	81	PHE
51	BB	116	LYS
51	BB	117	TRP
51	BB	135	LEU
51	BB	172	MET
51	BB	174	ARG
51	BB	175	GLU
51	BB	177	GLN
51	BB	179	ASN
51	BB	182	LYS
51	BB	183	GLU
51	BB	184	VAL
51	BB	187	LYS
51	BB	189	ILE
51	BB	218	LEU

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Mol	Chain	Res	Type
51	BB	225	LEU
52	BC	98	LEU
52	BC	102	LEU
52	BC	116	THR
52	BC	121	ARG
52	BC	134	ASN
52	BC	160	LEU
52	BC	167	ARG
52	BC	200	ARG
52	BC	209	VAL
53	BD	12	VAL
53	BD	18	LYS
53	BD	26	THR
53	BD	55	THR
53	BD	66	ILE
53	BD	113	LEU
53	BD	162	ASP
53	BD	218	LEU
54	BE	37	LYS
54	BE	70	ILE
54	BE	75	LYS
54	BE	129	ILE
54	BE	153	VAL
54	BE	238	LEU
55	BF	23	TRP
55	BF	63	LYS
55	BF	89	THR
55	BF	107	ASN
55	BF	130	ARG
55	BF	133	THR
56	BG	53	SER
56	BG	106	LEU
56	BG	147	LEU
56	BG	164	LYS
56	BG	172	LYS
56	BG	179	LEU
56	BG	195	LYS
56	BG	197	GLN
56	BG	199	THR
56	BG	200	LYS
56	BG	201	LYS
56	BG	202	ASN

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Mol	Chain	Res	Type
56	BG	204	GLU
56	BG	205	GLU
56	BG	212	LEU
56	BG	215	LYS
56	BG	216	ARG
56	BG	217	MET
56	BG	218	LYS
56	BG	222	GLU
56	BG	224	ARG
56	BG	225	GLN
56	BG	226	GLU
56	BG	227	GLN
56	BG	230	LYS
56	BG	231	ARG
56	BG	232	ARG
57	BH	15	LYS
58	BI	19	LYS
58	BI	52	ASN
58	BI	58	LEU
58	BI	121	LEU
58	BI	139	LYS
59	BJ	47	LYS
59	BJ	49	THR
59	BJ	50	LEU
59	BJ	52	LYS
59	BJ	54	ARG
59	BJ	55	LYS
59	BJ	131	ARG
59	BJ	140	GLN
59	BJ	179	LYS
60	BK	3	MET
60	BK	29	MET
60	BK	32	HIS
60	BK	72	THR
61	BL	24	LEU
61	BL	27	GLU
61	BL	54	THR
61	BL	151	THR
62	BM	52	LEU
62	BM	88	TRP
63	BN	26	LEU
63	BN	40	LEU

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Mol	Chain	Res	Type
63	BN	42	LYS
63	BN	54	LEU
63	BN	58	HIS
63	BN	63	VAL
63	BN	76	LYS
63	BN	78	LYS
63	BN	80	LEU
64	BO	21	VAL
64	BO	45	THR
64	BO	75	MET
64	BO	76	LEU
64	BO	79	GLN
64	BO	83	GLN
64	BO	90	ILE
64	BO	105	THR
64	BO	138	ASP
65	BP	12	PHE
65	BP	28	MET
65	BP	29	SER
65	BP	30	TYR
65	BP	33	LEU
65	BP	36	LEU
65	BP	49	LEU
65	BP	51	ARG
65	BP	52	LYS
65	BP	66	GLU
65	BP	70	MET
65	BP	72	LYS
65	BP	83	MET
65	BP	85	ILE
65	BP	86	LEU
65	BP	90	VAL
65	BP	130	ARG
66	BQ	11	GLN
66	BQ	12	VAL
66	BQ	17	LYS
66	BQ	25	CYS
66	BQ	37	ARG
66	BQ	39	LEU
66	BQ	45	ARG
66	BQ	46	THR
66	BQ	47	LEU

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Mol	Chain	Res	Type
66	BQ	50	LYS
66	BQ	51	LEU
66	BQ	69	ARG
67	BR	4	VAL
67	BR	5	ARG
67	BR	6	THR
67	BR	10	LYS
67	BR	11	LYS
67	BR	17	ILE
67	BR	20	TYR
67	BR	35	CYS
67	BR	36	GLU
67	BR	38	ILE
67	BR	41	ILE
67	BR	58	MET
67	BR	91	LEU
67	BR	94	GLU
67	BR	99	ASP
67	BR	118	GLN
67	BR	124	VAL
67	BR	126	MET
68	BS	13	LEU
68	BS	14	ARG
68	BS	16	LEU
68	BS	17	ASN
68	BS	45	LEU
68	BS	47	LYS
68	BS	49	ASP
68	BS	52	LEU
68	BS	53	THR
68	BS	59	LEU
68	BS	60	THR
68	BS	63	GLU
68	BS	65	GLU
68	BS	75	ARG
68	BS	90	VAL
68	BS	94	LYS
68	BS	116	LYS
68	BS	136	THR
69	BT	5	THR
69	BT	7	LYS
69	BT	34	VAL

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Mol	Chain	Res	Type
69	BT	39	LEU
69	BT	41	LYS
69	BT	42	HIS
69	BT	44	GLU
69	BT	116	ASP
69	BT	123	LEU
70	BU	20	ILE
70	BU	22	ILE
70	BU	55	ARG
70	BU	56	MET
71	BV	34	MET
71	BV	41	LYS
71	BV	42	VAL
71	BV	45	ARG
71	BV	50	PHE
71	BV	70	LEU
71	BV	81	LYS
72	BW	3	ARG
72	BW	4	MET
72	BW	56	HIS
73	BX	9	THR
73	BX	54	LYS
73	BX	58	GLU
73	BX	60	LYS
73	BX	63	ASN
73	BX	133	LEU
73	BX	134	TYR
73	BX	135	LYS
73	BX	137	LYS
73	BX	138	LYS
73	BX	139	GLU
74	BY	29	HIS
74	BY	93	ARG
74	BY	102	THR
74	BY	122	LYS
75	BZ	34	LYS
75	BZ	44	LEU
75	BZ	50	PHE
75	BZ	60	LYS
75	BZ	61	GLU
75	BZ	65	TYR
75	BZ	66	LYS

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Mol	Chain	Res	Type
75	BZ	67	LEU
75	BZ	75	GLU
75	BZ	77	LEU
75	BZ	83	LEU
75	BZ	85	ARG
75	BZ	88	LEU
75	BZ	92	LEU
75	BZ	96	LEU
75	BZ	98	LYS
75	BZ	102	LYS
76	Ba	15	ARG
76	Ba	38	LYS
76	Ba	39	PHE
76	Ba	40	VAL
76	Ba	42	ARG
76	Ba	79	ILE
76	Ba	80	HIS
76	Ba	82	LYS
76	Ba	83	VAL
76	Ba	84	VAL
76	Ba	93	LYS
76	Ba	95	ARG
78	Bc	9	ILE
78	Bc	21	THR
79	Bd	24	CYS
79	Bd	30	LEU
79	Bd	31	ILE
79	Bd	36	LEU
79	Bd	40	ARG
79	Bd	41	GLN
80	Be	3	HIS
80	Be	6	LEU
80	Be	8	ARG
80	Be	18	LYS
80	Be	25	LYS
80	Be	28	LYS
80	Be	31	ARG
80	Be	45	VAL
80	Be	46	VAL
80	Be	52	LYS
80	Be	53	LYS
81	Bf	89	LYS

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Mol	Chain	Res	Type
82	Bg	8	ARG
82	Bg	24	THR
82	Bg	94	THR
82	Bg	195	LEU
82	Bg	255	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (268) such sidechains are listed below:

Mol	Chain	Res	Type
3	AA	95	GLN
3	AA	97	ASN
3	AA	132	ASN
3	AA	139	HIS
3	AA	140	ASN
3	AA	187	HIS
3	AA	209	HIS
3	AA	216	HIS
4	AB	11	HIS
4	AB	55	HIS
4	AB	158	GLN
4	AB	179	HIS
4	AB	186	ASN
4	AB	204	GLN
4	AB	209	GLN
4	AB	245	HIS
4	AB	322	HIS
5	AC	38	ASN
5	AC	48	ASN
5	AC	50	GLN
5	AC	187	GLN
5	AC	198	ASN
5	AC	212	ASN
5	AC	223	ASN
5	AC	278	ASN
5	AC	310	HIS
5	AC	329	ASN
5	AC	362	GLN
6	AD	9	ASN
6	AD	63	GLN
6	AD	81	HIS
6	AD	191	ASN
6	AD	229	ASN

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Mol	Chain	Res	Type
6	AD	244	HIS
7	AE	167	GLN
7	AE	191	GLN
7	AE	227	HIS
7	AE	268	GLN
7	AE	279	ASN
8	AF	80	ASN
8	AF	131	ASN
8	AF	205	ASN
8	AF	226	HIS
8	AF	235	ASN
9	AG	82	GLN
9	AG	195	HIS
10	AH	8	GLN
10	AH	102	ASN
10	AH	108	ASN
10	AH	163	GLN
11	AI	14	ASN
11	AI	59	GLN
11	AI	130	HIS
11	AI	147	HIS
11	AI	213	HIS
12	AJ	46	GLN
12	AJ	112	HIS
12	AJ	168	GLN
13	AK	85	ASN
14	AL	15	HIS
14	AL	19	GLN
14	AL	175	ASN
15	AM	20	HIS
15	AM	33	GLN
15	AM	83	ASN
15	AM	125	ASN
16	AN	8	GLN
16	AN	87	HIS
16	AN	145	ASN
16	AN	201	HIS
17	AO	42	ASN
17	AO	63	ASN
17	AO	65	ASN
17	AO	96	GLN
17	AO	180	GLN

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Mol	Chain	Res	Type
17	AO	199	HIS
18	AP	10	ASN
18	AP	75	GLN
18	AP	80	GLN
18	AP	93	HIS
19	AQ	7	HIS
19	AQ	8	ASN
19	AQ	40	ASN
19	AQ	151	HIS
19	AQ	162	HIS
20	AR	27	ASN
20	AR	130	ASN
21	AS	77	ASN
21	AS	156	HIS
21	AS	162	GLN
21	AS	163	HIS
22	AT	3	ASN
22	AT	70	HIS
22	AT	98	HIS
23	AU	50	ASN
23	AU	116	GLN
24	AV	77	HIS
24	AV	101	ASN
24	AV	135	ASN
25	AW	63	GLN
26	AX	73	HIS
26	AX	93	ASN
26	AX	107	HIS
26	AX	111	GLN
27	AY	4	ASN
27	AY	18	HIS
27	AY	86	GLN
27	AY	96	HIS
28	AZ	40	HIS
28	AZ	78	ASN
29	Aa	14	HIS
29	Aa	17	HIS
29	Aa	19	HIS
29	Aa	25	HIS
29	Aa	39	HIS
29	Aa	40	HIS
29	Aa	44	ASN

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Mol	Chain	Res	Type
29	Aa	49	HIS
29	Aa	60	HIS
29	Aa	85	GLN
29	Aa	89	ASN
30	Ab	6	ASN
30	Ab	10	HIS
30	Ab	12	GLN
30	Ab	60	ASN
31	Ac	15	ASN
32	Ad	28	ASN
32	Ad	79	ASN
32	Ad	100	ASN
33	Ae	23	HIS
33	Ae	24	GLN
33	Ae	34	ASN
34	Af	65	ASN
34	Af	99	HIS
35	Ag	3	GLN
35	Ag	110	GLN
36	Ah	63	GLN
36	Ah	65	GLN
38	Aj	66	HIS
40	Al	19	GLN
40	Al	20	ASN
41	Am	87	GLN
43	Ao	3	ASN
43	Ao	18	HIS
43	Ao	36	GLN
43	Ao	45	GLN
43	Ao	102	GLN
44	Ap	33	GLN
45	Aq	103	ASN
46	At	4	HIS
46	At	6	GLN
46	At	41	ASN
46	At	70	GLN
46	At	95	HIS
46	At	100	ASN
46	At	121	GLN
47	Au	143	ASN
47	Au	182	ASN
50	BA	111	GLN

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Mol	Chain	Res	Type
50	BA	132	GLN
50	BA	169	HIS
50	BA	193	HIS
51	BB	75	GLN
51	BB	101	HIS
51	BB	118	GLN
51	BB	179	ASN
51	BB	186	ASN
52	BC	115	GLN
52	BC	134	ASN
52	BC	178	HIS
52	BC	235	ASN
53	BD	22	ASN
53	BD	74	GLN
53	BD	101	GLN
54	BE	138	HIS
54	BE	197	ASN
54	BE	216	ASN
55	BF	31	ASN
55	BF	65	GLN
55	BF	82	ASN
55	BF	95	HIS
55	BF	101	HIS
55	BF	107	ASN
55	BF	203	ASN
56	BG	65	GLN
56	BG	70	HIS
56	BG	146	ASN
56	BG	163	ASN
56	BG	186	GLN
56	BG	197	GLN
56	BG	225	GLN
57	BH	39	GLN
57	BH	97	GLN
57	BH	114	GLN
57	BH	126	HIS
57	BH	168	HIS
58	BI	44	HIS
58	BI	88	ASN
58	BI	116	HIS
59	BJ	75	ASN
59	BJ	111	GLN

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Mol	Chain	Res	Type
59	BJ	125	HIS
60	BK	28	HIS
61	BL	13	GLN
61	BL	18	GLN
61	BL	108	ASN
61	BL	112	HIS
62	BM	46	GLN
62	BM	48	HIS
63	BN	5	HIS
64	BO	20	GLN
64	BO	26	ASN
64	BO	79	GLN
64	BO	83	GLN
64	BO	113	GLN
65	BP	35	GLN
65	BP	41	GLN
65	BP	79	HIS
65	BP	104	GLN
66	BQ	11	GLN
66	BQ	24	HIS
66	BQ	77	HIS
66	BQ	80	GLN
66	BQ	86	GLN
66	BQ	142	GLN
68	BS	17	ASN
68	BS	19	ASN
68	BS	42	HIS
68	BS	73	ASN
68	BS	87	GLN
68	BS	125	HIS
69	BT	42	HIS
70	BU	92	HIS
70	BU	100	GLN
71	BV	29	HIS
72	BW	15	ASN
72	BW	16	ASN
72	BW	24	GLN
72	BW	44	HIS
72	BW	56	HIS
72	BW	64	ASN
72	BW	70	ASN
73	BX	16	HIS

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Mol	Chain	Res	Type
73	BX	61	GLN
73	BX	92	ASN
73	BX	110	HIS
73	BX	127	ASN
74	BY	89	HIS
74	BY	94	HIS
75	BZ	45	ASN
76	Ba	19	GLN
76	Ba	25	ASN
76	Ba	86	ASN
78	Bc	7	GLN
78	Bc	24	GLN
79	Bd	28	HIS
79	Bd	41	GLN
80	Be	39	ASN
82	Bg	20	GLN
82	Bg	26	GLN
82	Bg	56	GLN
82	Bg	133	ASN
82	Bg	143	GLN
82	Bg	147	HIS
82	Bg	159	ASN
82	Bg	162	ASN
82	Bg	191	HIS
82	Bg	226	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A3	156/194 (80%)	28 (17%)	4 (2%)
2	A4	118/121 (97%)	23 (19%)	1 (0%)
48	A2	3600/5029 (71%)	698 (19%)	48 (1%)
49	B1	1701/1869 (91%)	291 (17%)	19 (1%)
83	Bv	75/76 (98%)	38 (50%)	0
83	Bw	75/76 (98%)	34 (45%)	0
84	Bx	27/28 (96%)	18 (66%)	0
All	All	5752/7393 (77%)	1130 (19%)	72 (1%)

All (1130) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A3	2	G
1	A3	12	G
1	A3	16	G
1	A3	35	C
1	A3	59	A
1	A3	63	U
1	A3	72	A
1	A3	80	A
1	A3	81	C
1	A3	82	A
1	A3	87	G
1	A3	105	C
1	A3	108	A
1	A3	109	C
1	A3	110	U
1	A3	111	U
1	A3	112	G
1	A3	121	G
1	A3	122	G
1	A3	123	U
1	A3	124	U
1	A3	126	C
1	A3	128	C
1	A3	129	C
1	A3	130	C
1	A3	135	C
1	A3	148	A
1	A3	151	G
2	A4	12	U
2	A4	13	A
2	A4	14	C
2	A4	16	A
2	A4	22	A
2	A4	23	A
2	A4	25	G
2	A4	27	G
2	A4	33	U
2	A4	34	C
2	A4	49	A
2	A4	53	U
2	A4	54	A
2	A4	57	C
2	A4	64	G

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Mol	Chain	Res	Type
2	A4	66	G
2	A4	74	A
2	A4	103	A
2	A4	104	C
2	A4	107	G
2	A4	110	G
2	A4	118	C
2	A4	119	U
48	A2	4	G
48	A2	6	C
48	A2	10	A
48	A2	25	A
48	A2	28	C
48	A2	30	C
48	A2	32	G
48	A2	33	A
48	A2	39	A
48	A2	42	A
48	A2	48	G
48	A2	49	U
48	A2	59	A
48	A2	64	A
48	A2	65	A
48	A2	68	U
48	A2	71	C
48	A2	72	C
48	A2	73	A
48	A2	74	G
48	A2	84	A
48	A2	85	G
48	A2	91	G
48	A2	96	U
48	A2	101	A
48	A2	116	G
48	A2	119	G
48	A2	128	C
48	A2	131	C
48	A2	132	G
48	A2	133	C
48	A2	134	G
48	A2	135	G
48	A2	136	G

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Mol	Chain	Res	Type
48	A2	141	G
48	A2	143	G
48	A2	149	U
48	A2	157	G
48	A2	169	C
48	A2	174	G
48	A2	175	C
48	A2	181	U
48	A2	182	C
48	A2	183	G
48	A2	184	U
48	A2	185	G
48	A2	195	A
48	A2	196	G
48	A2	197	U
48	A2	201	U
48	A2	206	U
48	A2	212	C
48	A2	213	C
48	A2	214	C
48	A2	215	A
48	A2	222	G
48	A2	227	G
48	A2	228	U
48	A2	234	G
48	A2	253	G
48	A2	256	C
48	A2	260	C
48	A2	285	U
48	A2	286	G
48	A2	289	A
48	A2	291	U
48	A2	300	A
48	A2	304	G
48	A2	308	G
48	A2	309	G
48	A2	310	U
48	A2	311	A
48	A2	320	C
48	A2	334	C
48	A2	341	A
48	A2	349	A

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Mol	Chain	Res	Type
48	A2	351	U
48	A2	364	U
48	A2	367	G
48	A2	370	A
48	A2	375	U
48	A2	380	A
48	A2	381	G
48	A2	397	G
48	A2	407	G
48	A2	411	G
48	A2	425	G
48	A2	426	U
48	A2	444	G
48	A2	446	A
48	A2	448	U
48	A2	449	C
48	A2	457	A
48	A2	459	G
48	A2	460	A
48	A2	476	G
48	A2	479	C
48	A2	482	G
48	A2	492	C
48	A2	493	G
48	A2	494	G
48	A2	497	C
48	A2	498	G
48	A2	504	U
48	A2	505	C
48	A2	509	C
48	A2	513	C
48	A2	515	C
48	A2	633	U
48	A2	634	C
48	A2	635	G
48	A2	638	G
48	A2	639	G
48	A2	641	G
48	A2	643	A
48	A2	649	C
48	A2	674	C
48	A2	676	G

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Mol	Chain	Res	Type
48	A2	677	G
48	A2	678	C
48	A2	679	G
48	A2	689	G
48	A2	692	G
48	A2	693	U
48	A2	694	G
48	A2	695	C
48	A2	702	A
48	A2	720	G
48	A2	721	G
48	A2	724	A
48	A2	731	G
48	A2	733	G
48	A2	735	G
48	A2	736	G
48	A2	738	A
48	A2	739	G
48	A2	740	G
48	A2	741	U
48	A2	901	U
48	A2	902	A
48	A2	903	C
48	A2	904	A
48	A2	905	G
48	A2	906	C
48	A2	909	C
48	A2	913	G
48	A2	914	G
48	A2	917	G
48	A2	918	C
48	A2	919	A
48	A2	920	G
48	A2	921	C
48	A2	923	C
48	A2	924	U
48	A2	925	C
48	A2	926	G
48	A2	927	C
48	A2	929	G
48	A2	932	U
48	A2	933	C

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Mol	Chain	Res	Type
48	A2	942	G
48	A2	943	A
48	A2	944	G
48	A2	947	A
48	A2	949	C
48	A2	950	G
48	A2	951	A
48	A2	953	A
48	A2	955	C
48	A2	956	C
48	A2	960	G
48	A2	965	G
48	A2	967	U
48	A2	969	U
48	A2	1055	C
48	A2	1058	G
48	A2	1059	C
48	A2	1065	C
48	A2	1067	C
48	A2	1084	C
48	A2	1085	U
48	A2	1087	C
48	A2	1147	G
48	A2	1149	G
48	A2	1150	C
48	A2	1152	G
48	A2	1156	G
48	A2	1159	C
48	A2	1161	G
48	A2	1162	U
48	A2	1163	C
48	A2	1164	C
48	A2	1165	C
48	A2	1167	A
48	A2	1192	U
48	A2	1193	C
48	A2	1196	G
48	A2	1201	G
48	A2	1220	C
48	A2	1221	A
48	A2	1222	C
48	A2	1223	G

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Mol	Chain	Res	Type
48	A2	1249	G
48	A2	1250	C
48	A2	1257	A
48	A2	1267	G
48	A2	1268	U
48	A2	1269	C
48	A2	1270	G
48	A2	1271	G
48	A2	1277	A
48	A2	1278	C
48	A2	1309	A
48	A2	1320	A
48	A2	1337	A
48	A2	1341	G
48	A2	1343	G
48	A2	1348	C
48	A2	1349	G
48	A2	1351	A
48	A2	1362	C
48	A2	1370	A
48	A2	1374	A
48	A2	1380	A
48	A2	1381	A
48	A2	1391	G
48	A2	1392	C
48	A2	1393	U
48	A2	1394	C
48	A2	1395	G
48	A2	1403	A
48	A2	1408	G
48	A2	1426	A
48	A2	1428	U
48	A2	1430	C
48	A2	1431	G
48	A2	1432	C
48	A2	1460	C
48	A2	1463	C
48	A2	1464	G
48	A2	1465	C
48	A2	1466	G
48	A2	1467	C
48	A2	1480	G

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Mol	Chain	Res	Type
48	A2	1483	C
48	A2	1485	A
48	A2	1499	G
48	A2	1500	A
48	A2	1501	C
48	A2	1507	A
48	A2	1516	A
48	A2	1548	C
48	A2	1560	U
48	A2	1573	U
48	A2	1578	U
48	A2	1581	A
48	A2	1589	C
48	A2	1595	A
48	A2	1606	G
48	A2	1607	G
48	A2	1613	A
48	A2	1620	A
48	A2	1623	G
48	A2	1636	G
48	A2	1643	C
48	A2	1659	U
48	A2	1678	C
48	A2	1679	G
48	A2	1702	C
48	A2	1713	C
48	A2	1721	G
48	A2	1723	G
48	A2	1737	C
48	A2	1739	U
48	A2	1745	C
48	A2	1746	G
48	A2	1747	A
48	A2	1748	A
48	A2	1751	G
48	A2	1769	A
48	A2	1776	A
48	A2	1784	A
48	A2	1785	G
48	A2	1786	A
48	A2	1803	G
48	A2	1814	G

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Mol	Chain	Res	Type
48	A2	1815	U
48	A2	1816	G
48	A2	1817	G
48	A2	1818	A
48	A2	1823	G
48	A2	1833	U
48	A2	1834	G
48	A2	1835	G
48	A2	1836	G
48	A2	1844	U
48	A2	1860	C
48	A2	1862	C
48	A2	1873	A
48	A2	1876	G
48	A2	1889	A
48	A2	1893	G
48	A2	1896	C
48	A2	1902	C
48	A2	1903	G
48	A2	1921	G
48	A2	1928	U
48	A2	1929	G
48	A2	1932	G
48	A2	1939	A
48	A2	1940	U
48	A2	1941	A
48	A2	1942	G
48	A2	1943	A
48	A2	1945	A
48	A2	1956	G
48	A2	1961	U
48	A2	1963	G
48	A2	1964	A
48	A2	1965	A
48	A2	1968	C
48	A2	1972	A
48	A2	1973	U
48	A2	1978	U
48	A2	1980	A
48	A2	1983	A
48	A2	1984	G
48	A2	2004	C

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Mol	Chain	Res	Type
48	A2	2005	G
48	A2	2006	A
48	A2	2007	A
48	A2	2008	U
48	A2	2011	A
48	A2	2025	U
48	A2	2029	U
48	A2	2037	G
48	A2	2044	G
48	A2	2050	A
48	A2	2057	G
48	A2	2246	U
48	A2	2247	A
48	A2	2279	A
48	A2	2280	G
48	A2	2285	G
48	A2	2301	G
48	A2	2312	G
48	A2	2324	G
48	A2	2327	G
48	A2	2330	C
48	A2	2331	U
48	A2	2339	A
48	A2	2340	G
48	A2	2356	C
48	A2	2357	G
48	A2	2358	A
48	A2	2373	G
48	A2	2374	A
48	A2	2377	U
48	A2	2385	G
48	A2	2389	C
48	A2	2400	G
48	A2	2401	C
48	A2	2419	U
48	A2	2423	U
48	A2	2426	U
48	A2	2429	G
48	A2	2449	C
48	A2	2450	G
48	A2	2467	C
48	A2	2468	C

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Mol	Chain	Res	Type
48	A2	2469	U
48	A2	2482	G
48	A2	2485	G
48	A2	2486	A
48	A2	2490	A
48	A2	2492	A
48	A2	2498	U
48	A2	2515	A
48	A2	2516	A
48	A2	2522	A
48	A2	2523	G
48	A2	2524	U
48	A2	2525	G
48	A2	2528	G
48	A2	2531	G
48	A2	2534	G
48	A2	2565	G
48	A2	2580	A
48	A2	2584	G
48	A2	2595	C
48	A2	2606	C
48	A2	2619	G
48	A2	2620	A
48	A2	2632	C
48	A2	2637	G
48	A2	2638	A
48	A2	2639	A
48	A2	2648	C
48	A2	2651	C
48	A2	2665	G
48	A2	2666	U
48	A2	2667	G
48	A2	2673	G
48	A2	2675	A
48	A2	2676	A
48	A2	2683	C
48	A2	2684	G
48	A2	2690	G
48	A2	2691	G
48	A2	2700	G
48	A2	2704	A
48	A2	2705	G

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Mol	Chain	Res	Type
48	A2	2706	C
48	A2	2713	U
48	A2	2719	U
48	A2	2720	U
48	A2	2723	A
48	A2	2739	G
48	A2	2741	G
48	A2	2742	U
48	A2	2744	A
48	A2	2751	C
48	A2	2755	G
48	A2	2766	A
48	A2	2767	U
48	A2	2769	U
48	A2	2773	C
48	A2	2776	C
48	A2	2785	A
48	A2	2786	A
48	A2	2805	U
48	A2	2806	G
48	A2	2834	G
48	A2	2852	U
48	A2	2853	U
48	A2	2854	C
48	A2	2859	U
48	A2	2870	U
48	A2	2871	C
48	A2	2880	G
48	A2	3572	C
48	A2	3577	U
48	A2	3586	G
48	A2	3587	U
48	A2	3591	G
48	A2	3595	A
48	A2	3596	G
48	A2	3606	A
48	A2	3624	A
48	A2	3633	A
48	A2	3645	G
48	A2	3657	G
48	A2	3663	A
48	A2	3681	G

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Mol	Chain	Res	Type
48	A2	3683	A
48	A2	3688	A
48	A2	3694	A
48	A2	3699	A
48	A2	3707	A
48	A2	3711	G
48	A2	3719	A
48	A2	3724	G
48	A2	3731	A
48	A2	3733	U
48	A2	3741	U
48	A2	3748	G
48	A2	3751	G
48	A2	3754	A
48	A2	3781	C
48	A2	3782	G
48	A2	3785	U
48	A2	3788	A
48	A2	3789	U
48	A2	3795	A
48	A2	3797	C
48	A2	3798	G
48	A2	3799	A
48	A2	3800	G
48	A2	3811	U
48	A2	3813	C
48	A2	3814	C
48	A2	3815	U
48	A2	3825	C
48	A2	3838	A
48	A2	3847	A
48	A2	3848	A
48	A2	3850	G
48	A2	3852	G
48	A2	3860	G
48	A2	3866	G
48	A2	3872	A
48	A2	3875	G
48	A2	3876	A
48	A2	3878	G
48	A2	3879	A
48	A2	3886	U

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Mol	Chain	Res	Type
48	A2	3889	G
48	A2	3890	C
48	A2	3909	G
48	A2	3926	G
48	A2	3927	G
48	A2	3928	U
48	A2	3935	U
48	A2	3936	A
48	A2	3943	A
48	A2	3944	G
48	A2	4015	G
48	A2	4019	U
48	A2	4020	A
48	A2	4025	U
48	A2	4026	A
48	A2	4027	C
48	A2	4029	C
48	A2	4033	U
48	A2	4035	G
48	A2	4046	G
48	A2	4065	G
48	A2	4066	C
48	A2	4067	G
48	A2	4068	A
48	A2	4073	G
48	A2	4074	A
48	A2	4076	G
48	A2	4078	G
48	A2	4079	C
48	A2	4081	C
48	A2	4087	U
48	A2	4088	C
48	A2	4089	U
48	A2	4105	C
48	A2	4106	C
48	A2	4108	G
48	A2	4109	G
48	A2	4110	C
48	A2	4118	G
48	A2	4120	C
48	A2	4126	C
48	A2	4132	A

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Mol	Chain	Res	Type
48	A2	4133	C
48	A2	4145	G
48	A2	4146	G
48	A2	4153	G
48	A2	4157	G
48	A2	4159	G
48	A2	4165	A
48	A2	4176	A
48	A2	4191	U
48	A2	4195	A
48	A2	4213	A
48	A2	4216	G
48	A2	4228	G
48	A2	4230	A
48	A2	4234	G
48	A2	4235	A
48	A2	4242	A
48	A2	4243	A
48	A2	4252	U
48	A2	4253	G
48	A2	4266	A
48	A2	4267	G
48	A2	4276	C
48	A2	4291	G
48	A2	4292	G
48	A2	4294	C
48	A2	4301	A
48	A2	4307	C
48	A2	4316	U
48	A2	4332	G
48	A2	4333	G
48	A2	4334	U
48	A2	4338	A
48	A2	4339	G
48	A2	4340	A
48	A2	4341	A
48	A2	4342	A
48	A2	4349	C
48	A2	4356	A
48	A2	4360	C
48	A2	4361	U
48	A2	4382	U

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Mol	Chain	Res	Type
48	A2	4384	A
48	A2	4386	A
48	A2	4399	U
48	A2	4426	A
48	A2	4428	C
48	A2	4436	A
48	A2	4437	G
48	A2	4438	C
48	A2	4439	A
48	A2	4448	C
48	A2	4459	U
48	A2	4462	U
48	A2	4474	U
48	A2	4475	A
48	A2	4477	G
48	A2	4481	C
48	A2	4482	G
48	A2	4485	A
48	A2	4486	G
48	A2	4502	C
48	A2	4510	A
48	A2	4545	C
48	A2	4546	A
48	A2	4551	A
48	A2	4552	A
48	A2	4570	G
48	A2	4579	G
48	A2	4589	U
48	A2	4596	U
48	A2	4598	U
48	A2	4599	G
48	A2	4614	G
48	A2	4618	A
48	A2	4620	G
48	A2	4621	G
48	A2	4632	C
48	A2	4633	C
48	A2	4640	G
48	A2	4641	G
48	A2	4662	A
48	A2	4679	A
48	A2	4693	G

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Mol	Chain	Res	Type
48	A2	4694	G
48	A2	4695	C
48	A2	4696	A
48	A2	4697	G
48	A2	4700	C
48	A2	4702	G
48	A2	4703	C
48	A2	4704	G
48	A2	4705	G
48	A2	4714	U
48	A2	4715	U
48	A2	4726	A
48	A2	4730	G
48	A2	4731	G
48	A2	4732	U
48	A2	4826	G
48	A2	4827	U
48	A2	4828	G
48	A2	4829	C
48	A2	4831	G
48	A2	4832	A
48	A2	4833	G
48	A2	4834	U
48	A2	4840	U
48	A2	4841	C
48	A2	4847	G
48	A2	4852	A
48	A2	4853	C
48	A2	4854	G
48	A2	4855	G
48	A2	4856	G
48	A2	4858	C
48	A2	4859	G
48	A2	4861	G
48	A2	4865	G
48	A2	4866	G
48	A2	4867	A
48	A2	4868	A
48	A2	4869	A
48	A2	4870	G
48	A2	4871	G
48	A2	4880	C

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Mol	Chain	Res	Type
48	A2	4882	C
48	A2	4885	G
48	A2	4886	C
48	A2	4887	C
48	A2	4888	C
48	A2	4895	C
48	A2	4899	G
48	A2	4902	C
48	A2	4907	G
48	A2	4908	U
48	A2	4909	G
48	A2	4910	G
48	A2	4934	U
48	A2	4937	A
48	A2	4947	U
48	A2	4950	G
48	A2	4971	C
48	A2	4975	G
48	A2	4977	A
48	A2	4982	C
48	A2	4984	U
48	A2	4985	C
48	A2	4986	G
48	A2	4989	G
48	A2	4999	G
48	A2	5008	C
48	A2	5011	U
48	A2	5012	C
48	A2	5016	A
48	A2	5019	A
48	A2	5020	G
48	A2	5023	U
48	A2	5026	G
48	A2	5028	C
49	B1	4	C
49	B1	17	C
49	B1	33	G
49	B1	41	G
49	B1	44	U
49	B1	46	A
49	B1	67	C
49	B1	71	G

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Mol	Chain	Res	Type
49	B1	72	C
49	B1	73	C
49	B1	75	G
49	B1	76	U
49	B1	77	A
49	B1	78	C
49	B1	103	A
49	B1	113	G
49	B1	114	G
49	B1	115	U
49	B1	142	C
49	B1	143	U
49	B1	146	G
49	B1	155	G
49	B1	157	U
49	B1	158	A
49	B1	161	U
49	B1	162	C
49	B1	170	A
49	B1	172	U
49	B1	174	C
49	B1	175	A
49	B1	180	G
49	B1	181	A
49	B1	183	G
49	B1	209	A
49	B1	211	G
49	B1	228	C
49	B1	229	A
49	B1	230	A
49	B1	283	G
49	B1	284	C
49	B1	285	U
49	B1	286	U
49	B1	287	U
49	B1	292	A
49	B1	296	U
49	B1	306	C
49	B1	313	A
49	B1	314	U
49	B1	315	C
49	B1	318	A

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Mol	Chain	Res	Type
49	B1	325	C
49	B1	327	G
49	B1	328	U
49	B1	329	G
49	B1	331	C
49	B1	332	G
49	B1	333	G
49	B1	363	A
49	B1	364	A
49	B1	370	G
49	B1	385	G
49	B1	386	C
49	B1	391	C
49	B1	407	G
49	B1	408	A
49	B1	409	C
49	B1	417	C
49	B1	426	A
49	B1	427	U
49	B1	439	A
49	B1	448	A
49	B1	450	C
49	B1	463	C
49	B1	464	A
49	B1	465	A
49	B1	466	G
49	B1	469	A
49	B1	472	C
49	B1	476	A
49	B1	482	G
49	B1	485	A
49	B1	486	A
49	B1	487	U
49	B1	489	A
49	B1	492	C
49	B1	493	A
49	B1	509	G
49	B1	522	A
49	B1	525	A
49	B1	526	A
49	B1	529	A
49	B1	533	A

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Mol	Chain	Res	Type
49	B1	536	A
49	B1	541	U
49	B1	542	U
49	B1	544	G
49	B1	545	A
49	B1	546	G
49	B1	547	G
49	B1	548	C
49	B1	554	A
49	B1	559	G
49	B1	560	A
49	B1	561	A
49	B1	562	U
49	B1	563	G
49	B1	588	G
49	B1	590	A
49	B1	591	U
49	B1	592	C
49	B1	605	A
49	B1	606	G
49	B1	607	U
49	B1	608	C
49	B1	614	C
49	B1	629	A
49	B1	630	U
49	B1	635	G
49	B1	636	C
49	B1	643	A
49	B1	644	G
49	B1	645	C
49	B1	651	U
49	B1	660	C
49	B1	668	A
49	B1	669	A
49	B1	671	A
49	B1	672	A
49	B1	673	G
49	B1	675	U
49	B1	681	U
49	B1	684	G
49	B1	696	G
49	B1	748	C

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Mol	Chain	Res	Type
49	B1	750	C
49	B1	797	C
49	B1	798	G
49	B1	800	U
49	B1	808	A
49	B1	834	C
49	B1	847	A
49	B1	858	A
49	B1	869	A
49	B1	870	A
49	B1	911	C
49	B1	913	A
49	B1	914	U
49	B1	916	A
49	B1	917	U
49	B1	919	A
49	B1	920	A
49	B1	925	G
49	B1	929	G
49	B1	933	G
49	B1	943	U
49	B1	956	G
49	B1	960	U
49	B1	969	U
49	B1	987	A
49	B1	989	C
49	B1	990	A
49	B1	1001	A
49	B1	1008	A
49	B1	1025	U
49	B1	1044	G
49	B1	1045	U
49	B1	1048	G
49	B1	1055	A
49	B1	1061	U
49	B1	1066	U
49	B1	1083	A
49	B1	1085	C
49	B1	1109	C
49	B1	1110	G
49	B1	1114	U
49	B1	1115	U

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Mol	Chain	Res	Type
49	B1	1116	C
49	B1	1117	C
49	B1	1119	A
49	B1	1120	U
49	B1	1121	G
49	B1	1123	C
49	B1	1139	C
49	B1	1140	G
49	B1	1148	A
49	B1	1149	A
49	B1	1150	A
49	B1	1199	A
49	B1	1207	G
49	B1	1215	C
49	B1	1224	G
49	B1	1242	U
49	B1	1243	U
49	B1	1251	A
49	B1	1256	G
49	B1	1257	G
49	B1	1258	A
49	B1	1259	A
49	B1	1261	C
49	B1	1274	G
49	B1	1275	G
49	B1	1286	G
49	B1	1288	U
49	B1	1301	A
49	B1	1302	G
49	B1	1303	C
49	B1	1311	C
49	B1	1330	G
49	B1	1332	A
49	B1	1344	A
49	B1	1345	G
49	B1	1348	G
49	B1	1354	G
49	B1	1371	U
49	B1	1372	U
49	B1	1378	A
49	B1	1380	C
49	B1	1381	G

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Mol	Chain	Res	Type
49	B1	1396	A
49	B1	1399	C
49	B1	1409	A
49	B1	1411	G
49	B1	1416	C
49	B1	1418	C
49	B1	1419	C
49	B1	1420	G
49	B1	1439	A
49	B1	1442	U
49	B1	1462	U
49	B1	1463	U
49	B1	1476	A
49	B1	1477	U
49	B1	1478	U
49	B1	1489	A
49	B1	1495	G
49	B1	1498	A
49	B1	1519	U
49	B1	1520	G
49	B1	1521	C
49	B1	1522	A
49	B1	1525	C
49	B1	1531	A
49	B1	1533	A
49	B1	1543	U
49	B1	1548	G
49	B1	1551	U
49	B1	1580	A
49	B1	1586	U
49	B1	1601	A
49	B1	1602	U
49	B1	1604	G
49	B1	1606	G
49	B1	1620	A
49	B1	1622	U
49	B1	1623	A
49	B1	1638	G
49	B1	1654	G
49	B1	1660	C
49	B1	1661	A
49	B1	1662	U

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Mol	Chain	Res	Type
49	B1	1663	A
49	B1	1665	G
49	B1	1668	U
49	B1	1671	G
49	B1	1673	U
49	B1	1683	C
49	B1	1721	U
49	B1	1742	C
49	B1	1751	C
49	B1	1757	G
49	B1	1776	G
49	B1	1780	G
49	B1	1782	G
49	B1	1793	A
49	B1	1829	G
49	B1	1831	A
49	B1	1834	A
49	B1	1835	A
49	B1	1838	U
49	B1	1839	U
49	B1	1841	C
49	B1	1849	G
49	B1	1851	A
49	B1	1852	C
49	B1	1861	G
49	B1	1862	G
49	B1	1864	U
49	B1	1865	C
49	B1	1866	A
49	B1	1867	U
49	B1	1869	A
83	Bv	2	C
83	Bv	7	A
83	Bv	8	U
83	Bv	9	A
83	Bv	11	C
83	Bv	13	C
83	Bv	17	C
83	Bv	18	G
83	Bv	19	G
83	Bv	20	U
83	Bv	24	G

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Mol	Chain	Res	Type
83	Bv	25	C
83	Bv	26	A
83	Bv	31	A
83	Bv	33	U
83	Bv	37	A
83	Bv	38	A
83	Bv	39	U
83	Bv	41	C
83	Bv	42	C
83	Bv	43	C
83	Bv	44	G
83	Bv	45	U
83	Bv	46	G
83	Bv	48	C
83	Bv	51	U
83	Bv	53	G
83	Bv	54	U
83	Bv	58	A
83	Bv	60	U
83	Bv	61	C
83	Bv	63	G
83	Bv	66	U
83	Bv	69	G
83	Bv	71	G
83	Bv	72	C
83	Bv	75	C
83	Bv	76	A
83	Bw	2	C
83	Bw	3	C
83	Bw	5	G
83	Bw	6	G
83	Bw	7	A
83	Bw	9	A
83	Bw	10	G
83	Bw	16	U
83	Bw	17	C
83	Bw	18	G
83	Bw	19	G
83	Bw	20	U
83	Bw	21	A
83	Bw	26	A
83	Bw	32	U

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Mol	Chain	Res	Type
83	Bw	36	A
83	Bw	40	C
83	Bw	41	C
83	Bw	46	G
83	Bw	47	U
83	Bw	48	C
83	Bw	50	U
83	Bw	52	G
83	Bw	53	G
83	Bw	54	U
83	Bw	55	U
83	Bw	58	A
83	Bw	59	U
83	Bw	65	G
83	Bw	66	U
83	Bw	68	C
83	Bw	71	G
83	Bw	75	C
83	Bw	76	A
84	Bx	35	U
84	Bx	36	U
84	Bx	37	U
84	Bx	38	U
84	Bx	39	U
84	Bx	40	U
84	Bx	41	U
84	Bx	42	U
84	Bx	49	U
84	Bx	51	U
84	Bx	52	U
84	Bx	53	U
84	Bx	54	U
84	Bx	55	U
84	Bx	56	U
84	Bx	57	U
84	Bx	58	U
84	Bx	61	U

All (72) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A3	34	U

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Mol	Chain	Res	Type
1	A3	81	C
1	A3	108	A
1	A3	110	U
2	A4	13	A
48	A2	31	U
48	A2	70	A
48	A2	71	C
48	A2	84	A
48	A2	135	G
48	A2	227	G
48	A2	229	G
48	A2	230	U
48	A2	309	G
48	A2	738	A
48	A2	740	G
48	A2	901	U
48	A2	902	A
48	A2	958	U
48	A2	959	C
48	A2	1161	G
48	A2	1162	U
48	A2	1342	G
48	A2	1379	G
48	A2	1402	G
48	A2	1500	A
48	A2	1559	G
48	A2	1785	G
48	A2	1816	G
48	A2	1943	A
48	A2	2005	G
48	A2	2006	A
48	A2	2485	G
48	A2	2508	A
48	A2	2684	G
48	A2	2743	A
48	A2	3595	A
48	A2	3798	G
48	A2	3799	A
48	A2	3814	C
48	A2	4026	A
48	A2	4107	C
48	A2	4242	A

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Mol	Chain	Res	Type
48	A2	4596	U
48	A2	4597	A
48	A2	4661	U
48	A2	4714	U
48	A2	4828	G
48	A2	4832	A
48	A2	4865	G
48	A2	4870	G
48	A2	4907	G
48	A2	4946	U
49	B1	180	G
49	B1	226	A
49	B1	227	U
49	B1	229	A
49	B1	283	G
49	B1	286	U
49	B1	369	C
49	B1	546	G
49	B1	547	G
49	B1	560	A
49	B1	561	A
49	B1	683	G
49	B1	797	C
49	B1	869	A
49	B1	1287	A
49	B1	1289	U
49	B1	1398	G
49	B1	1555	U
49	B1	1756	C

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

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 331 ligands modelled in this entry, 331 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
49	B1	8
48	A2	5

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B1	842:C	O3'	843:C	P	1.85
1	B1	558:G	O3'	559:G	P	1.84
1	B1	497:C	O3'	498:C	P	1.83
1	B1	72:C	O3'	73:C	P	1.82
1	B1	1253:A	O3'	1254:C	P	1.82
1	A2	1716:G	O3'	1717:U	P	1.80
1	B1	1420:G	O3'	1421:A	P	1.80
1	A2	1057:G	O3'	1058:G	P	1.76
1	A2	1249:G	O3'	1250:C	P	1.76
1	B1	683:G	O3'	684:G	P	1.76
1	B1	351:G	O3'	352:U	P	1.75
1	A2	2689:C	O3'	2690:G	P	1.37
1	A2	3612:U	O3'	3613:A	P	1.35

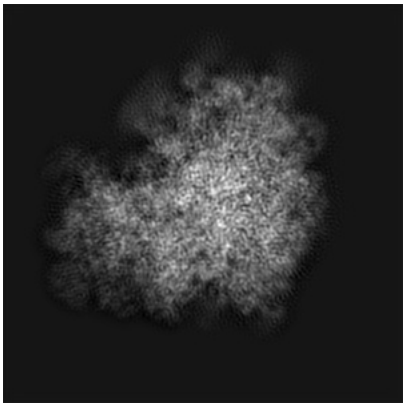
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-2875. These allow visual inspection of the internal detail of the map and identification of artifacts.

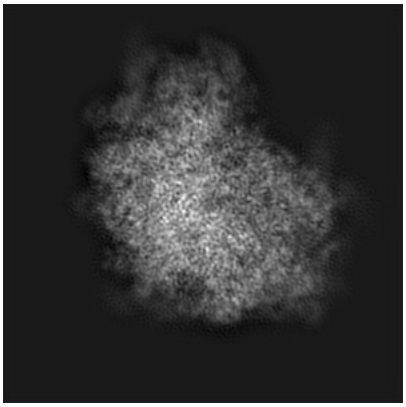
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

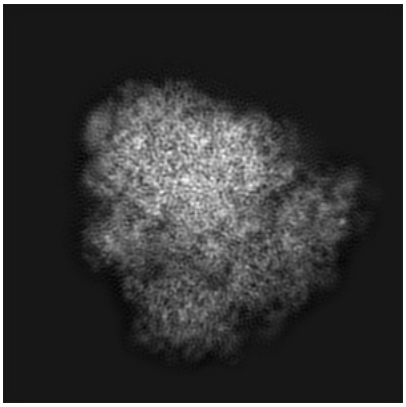
6.1.1 Primary map



X



Y

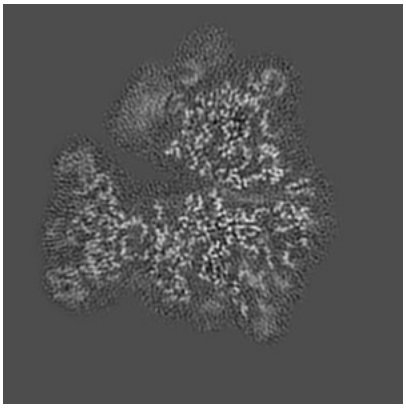


Z

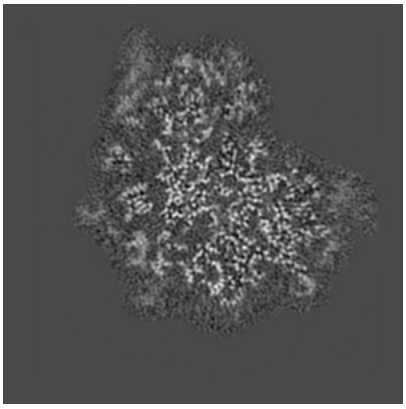
The images above show the map projected in three orthogonal directions.

6.2 Central slices

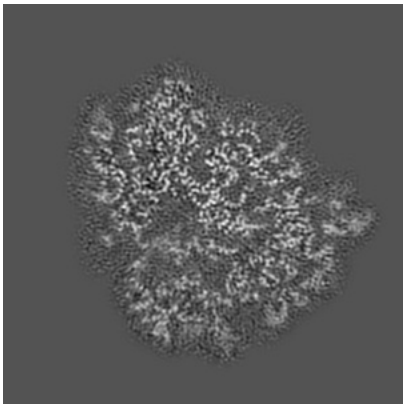
6.2.1 Primary map



X Index: 200



Y Index: 200

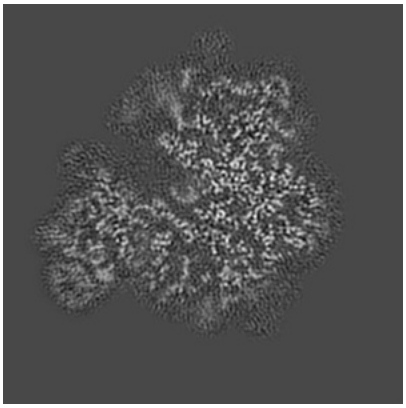


Z Index: 200

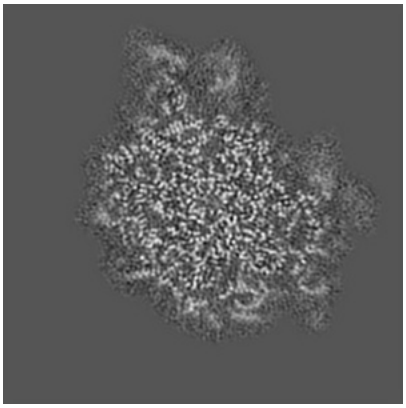
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

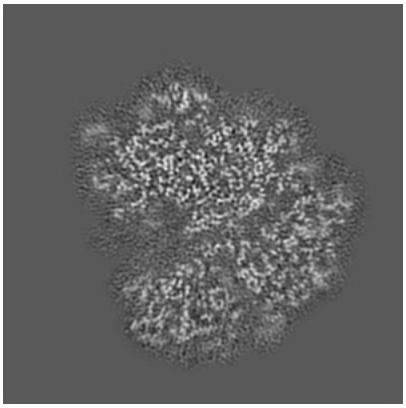
6.3.1 Primary map



X Index: 186



Y Index: 220

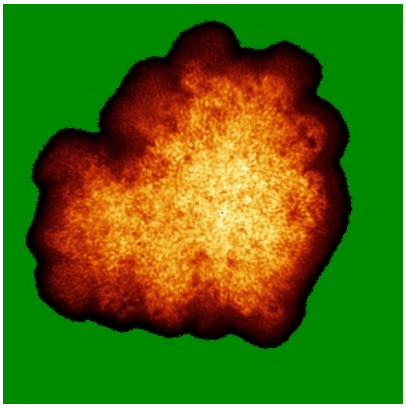


Z Index: 184

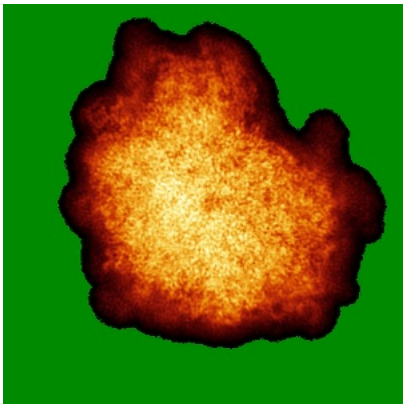
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

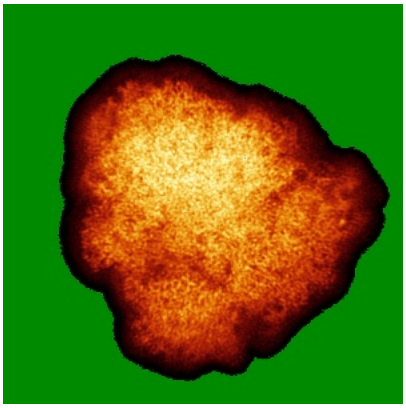
6.4.1 Primary map



X



Y

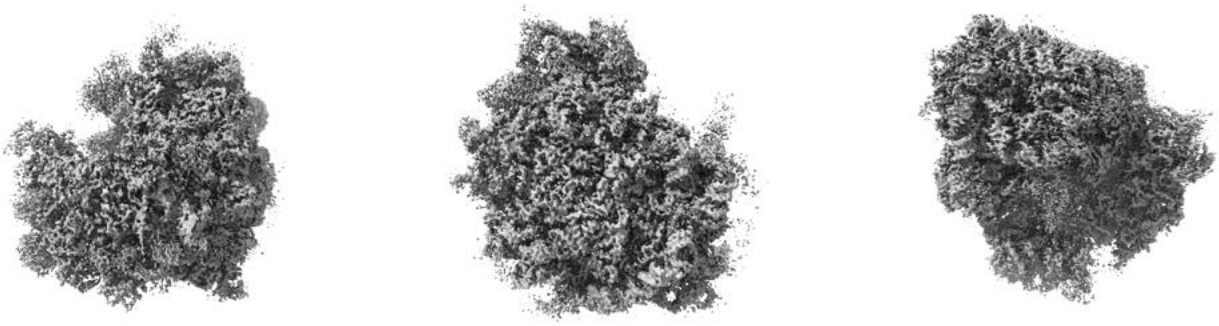


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 3.0. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

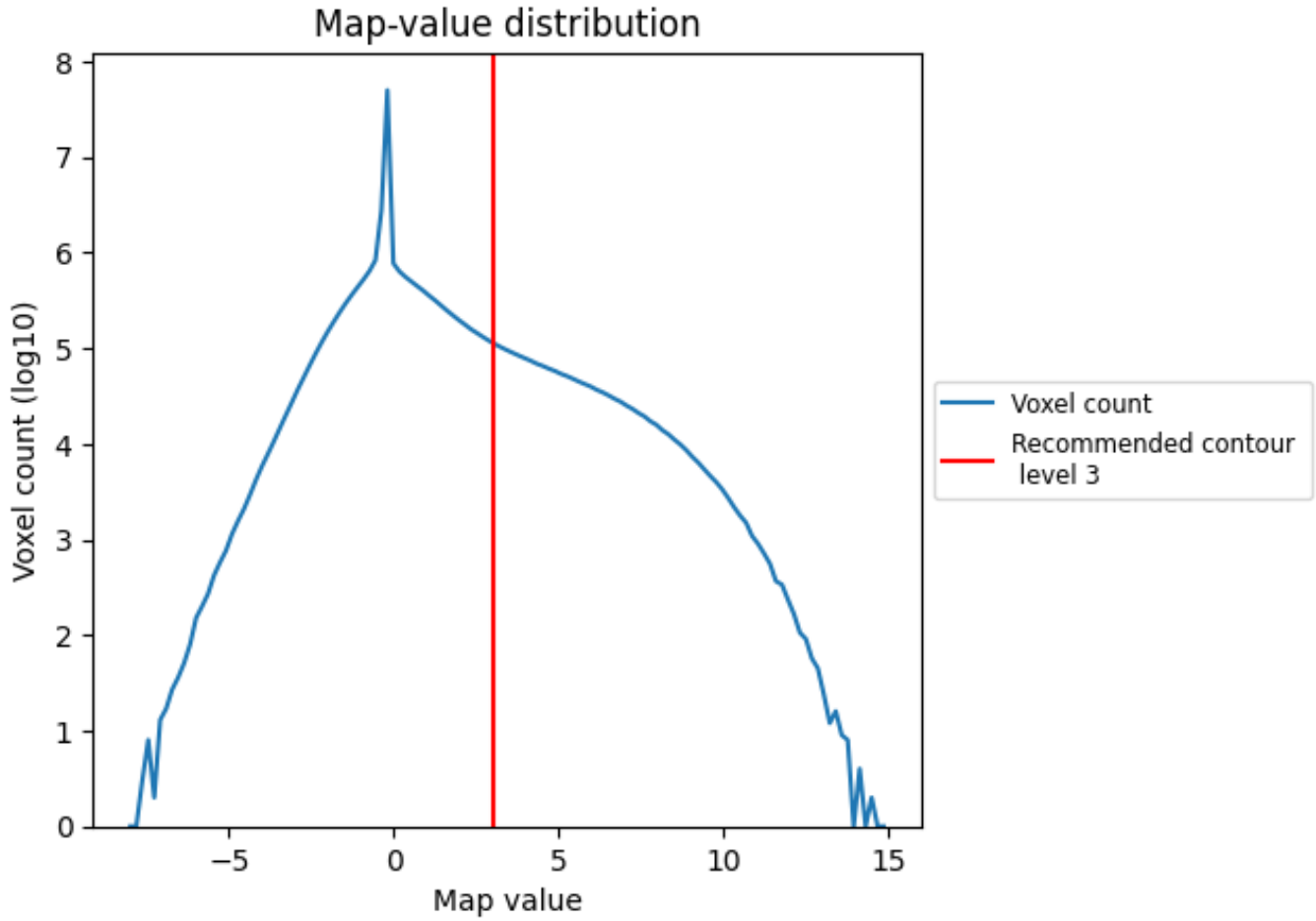
6.6 Mask visualisation (i)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

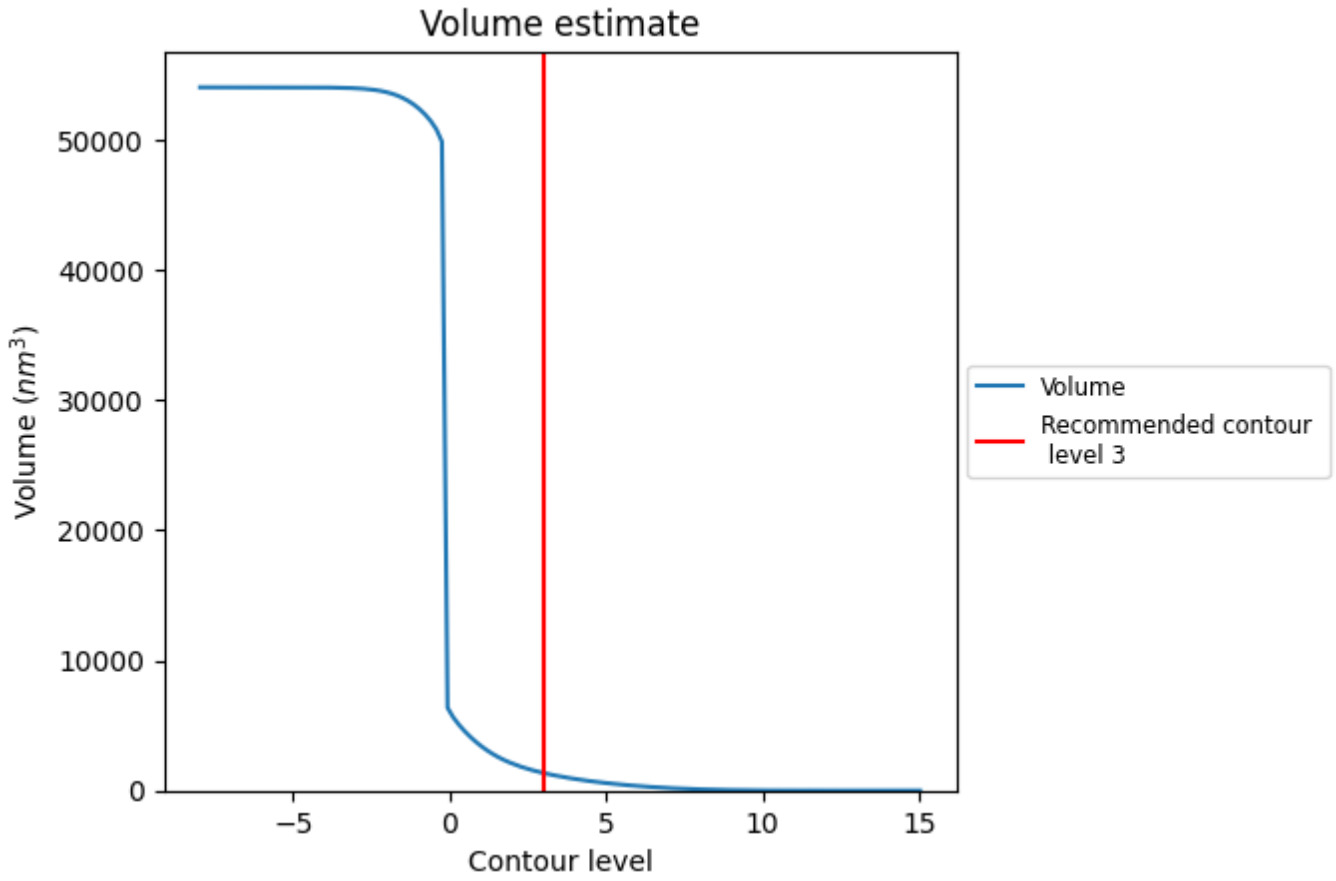
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

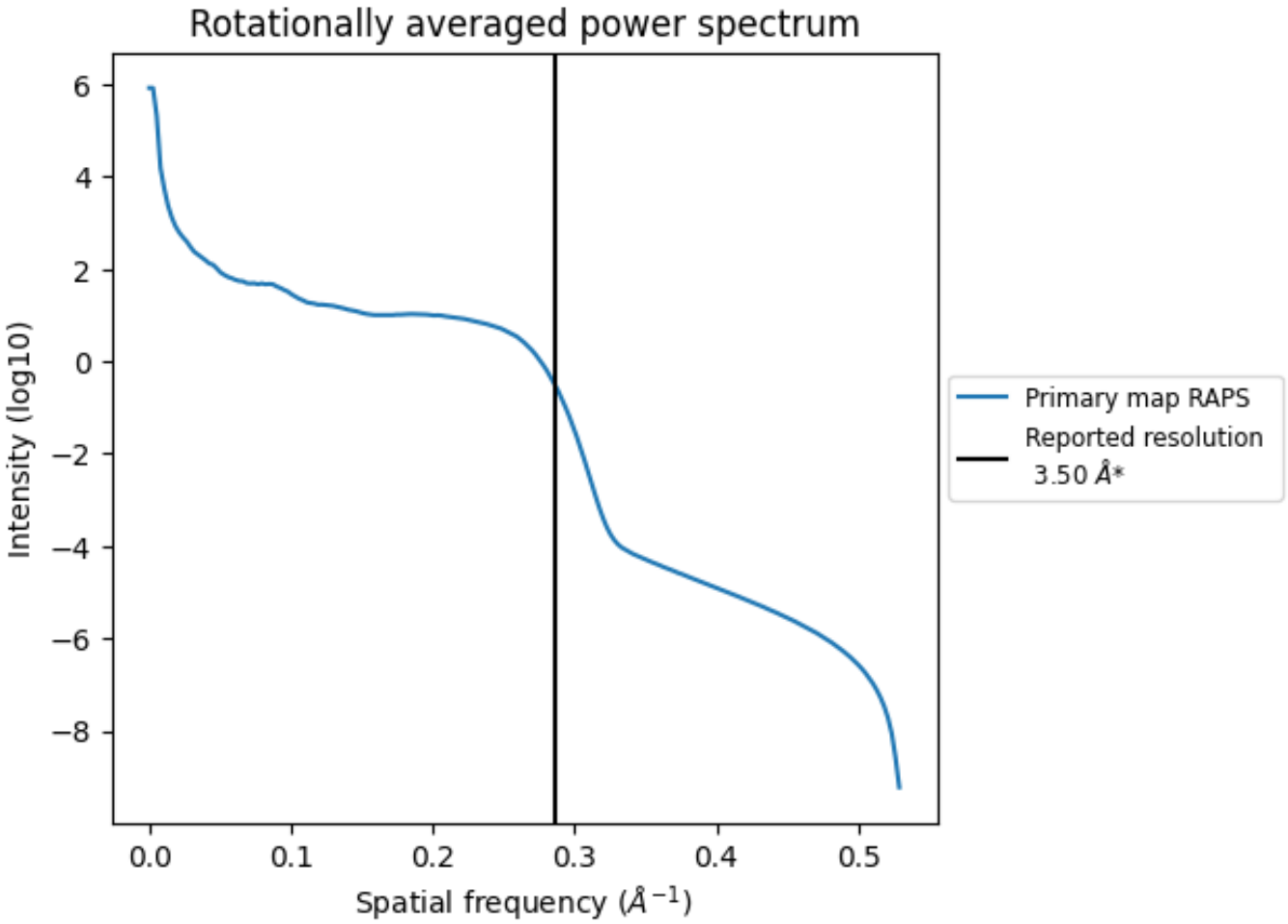
7.2 Volume estimate



The volume at the recommended contour level is 1346 nm^3; this corresponds to an approximate mass of 1216 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)



*Reported resolution corresponds to spatial frequency of 0.286 Å^{-1}

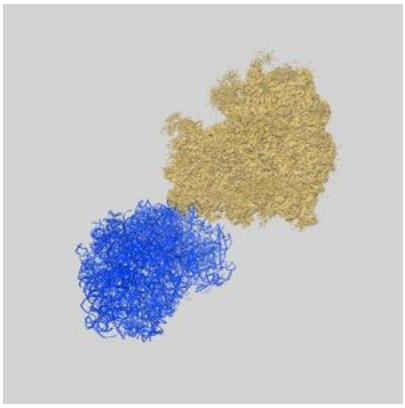
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

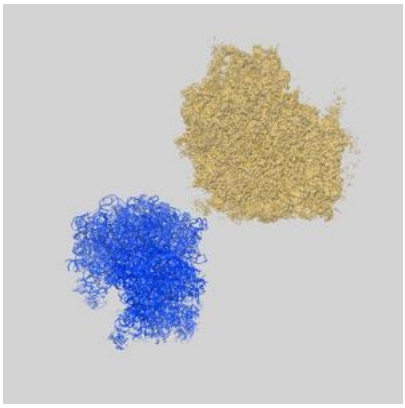
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-2875 and PDB model 5AJ0. Per-residue inclusion information can be found in section 3 on page 21.

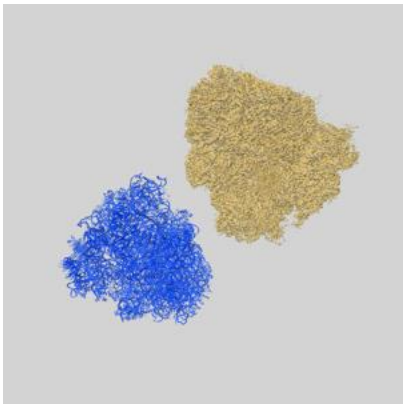
9.1 Map-model overlay



X



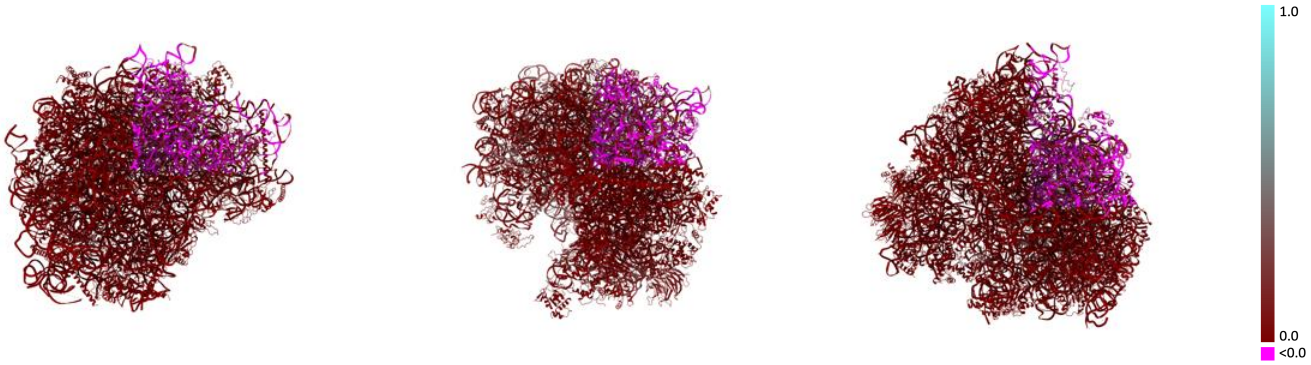
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 3.0 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

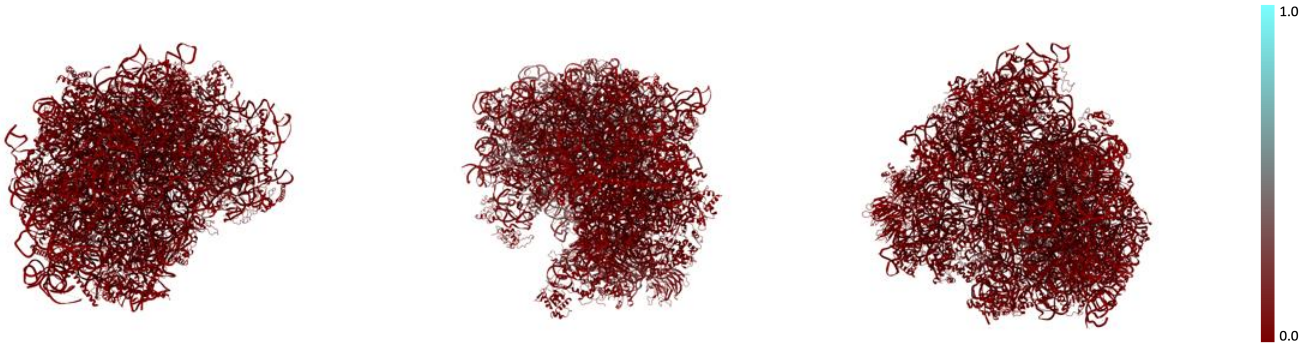
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

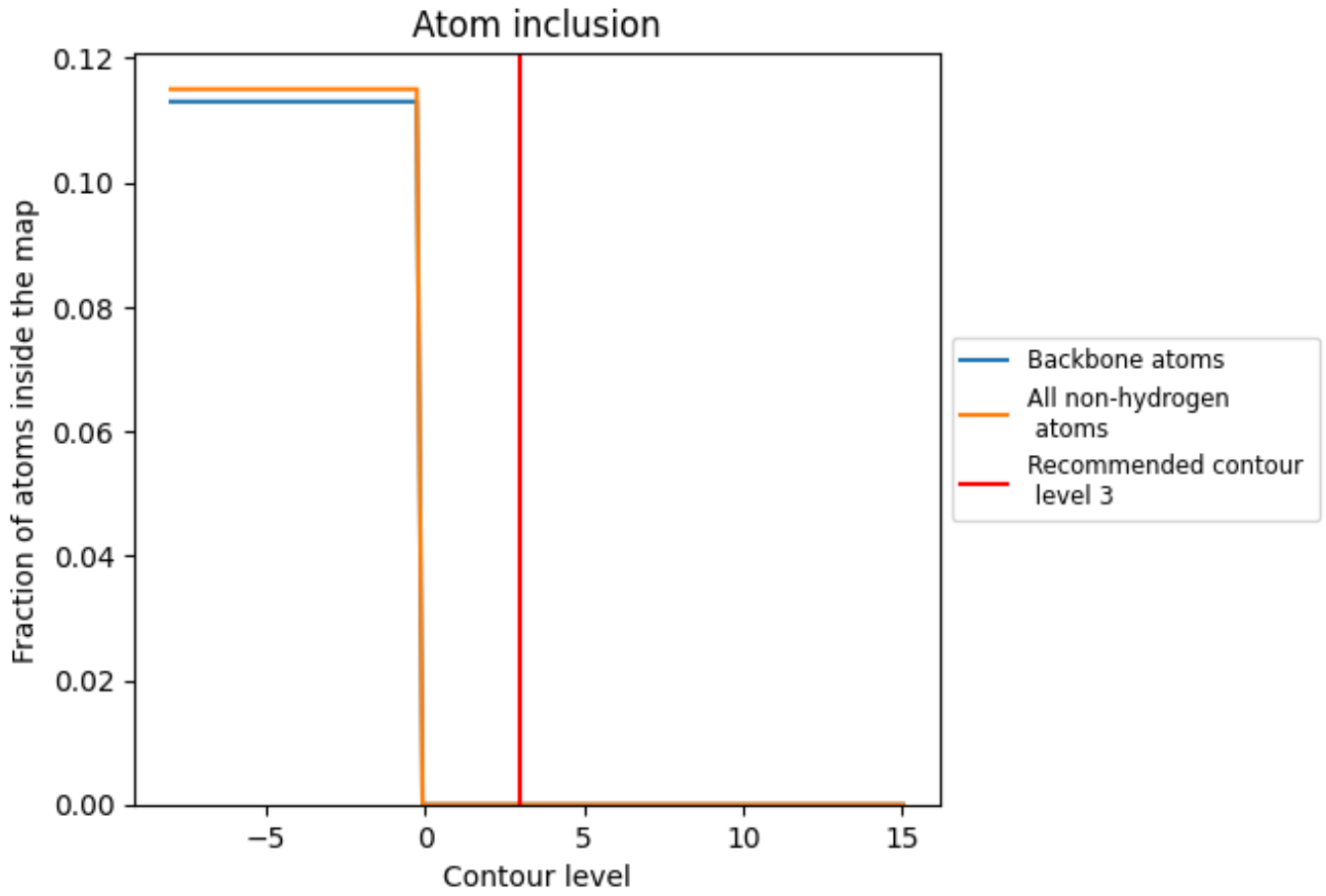
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (3).

9.4 Atom inclusion (i)



At the recommended contour level, 0% of all backbone atoms, 0% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (3) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.0000	0.0000
A2	0.0000	0.0000
A3	0.0000	0.0030
A4	0.0000	0.0000
AA	0.0000	0.0010
AB	0.0000	0.0000
AC	0.0000	0.0000
AD	0.0000	0.0000
AE	0.0000	0.0000
AF	0.0000	0.0000
AG	0.0000	-0.0010
AH	0.0000	0.0000
AI	0.0000	0.0000
AJ	0.0000	0.0000
AK	0.0000	0.0000
AL	0.0000	0.0000
AM	0.0000	0.0000
AN	0.0000	0.0000
AO	0.0000	0.0000
AP	0.0000	0.0010
AQ	0.0000	0.0000
AR	0.0000	0.0150
AS	0.0000	0.0000
AT	0.0000	0.0000
AU	0.0000	-0.0210
AV	0.0000	0.0000
AW	0.0000	0.0000
AX	0.0000	0.0020
AY	0.0000	0.0000
AZ	0.0000	0.0050
Aa	0.0000	0.0000
Ab	0.0000	0.0000
Ac	0.0000	-0.0080
Ad	0.0000	0.0000
Ae	0.0000	0.0000

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Chain	Atom inclusion	Q-score
Af	0.0000	0.0000
Ag	0.0000	0.0190
Ah	0.0000	0.0000
Ai	0.0000	0.0000
Aj	0.0000	-0.0050
Ak	0.0000	0.0040
Al	0.0000	0.0220
Am	0.0000	0.0000
An	0.0000	0.0000
Ao	0.0000	0.0000
Ap	0.0000	-0.0110
Aq	0.0000	0.0000
At	0.0000	0.0000
Au	0.0000	0.0000
B1	0.0000	0.0000
BA	0.0000	0.0000
BB	0.0000	0.0000
BC	0.0000	0.0000
BD	0.0000	0.0000
BE	0.0000	0.0000
BF	0.0000	0.0000
BG	0.0000	0.0000
BH	0.0000	0.0000
BI	0.0000	0.0150
BJ	0.0000	0.0000
BK	0.0000	0.0000
BL	0.0000	0.0040
BM	0.0000	0.0000
BN	0.0000	0.0010
BO	0.0000	0.0000
BP	0.0000	0.0000
BQ	0.0000	0.0000
BR	0.0000	0.0000
BS	0.0000	0.0000
BT	0.0000	0.0000
BU	0.0000	0.0000
BV	0.0000	0.0000
BW	0.0000	0.0000
BX	0.0000	0.0000
BY	0.0000	0.0000
BZ	0.0000	0.0000
Ba	0.0000	0.0000

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Chain	Atom inclusion	Q-score
Bb	0.0000	0.0000
Bc	0.0000	0.0000
Bd	0.0000	0.0000
Be	0.0000	0.0000
Bf	0.0000	0.0000
Bg	0.0000	0.0000
Bv	0.0000	0.0000
Bw	0.0000	0.0000
Bx	0.0000	0.0000
By	0.0000	0.0210