



Full wwPDB X-ray Structure Validation Report ⓘ

May 21, 2020 – 08:46 am BST

PDB ID : 1VVJ
Title : Crystal Structure of Frameshift Suppressor tRNA SufA6 bound to Codon CCC-G on the Ribosome
Authors : Maehigashi, T.; Dunkle, J.A.; Dunham, C.M.
Deposited on : 2013-05-24
Resolution : 3.44 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.11
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.11

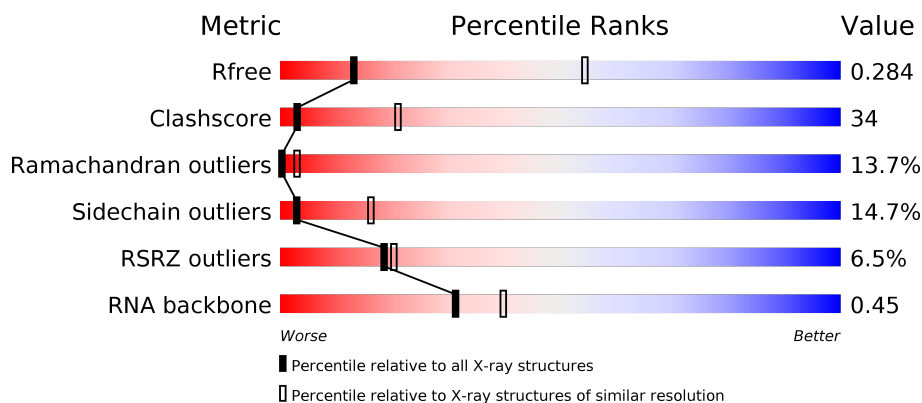
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.44 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1278 (3.50-3.38)
Clashscore	141614	1361 (3.50-3.38)
Ramachandran outliers	138981	1327 (3.50-3.38)
Sidechain outliers	138945	1328 (3.50-3.38)
RSRZ outliers	127900	1192 (3.50-3.38)
RNA backbone	3102	1024 (3.92-2.96)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria 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 $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	QA	1522	<div> <div>4%</div> <div>36%</div> <div>46%</div> <div>15%</div> <div>..</div> </div>
1	XA	1522	<div> <div>3%</div> <div>38%</div> <div>45%</div> <div>14%</div> <div>..</div> </div>
2	QB	256	<div> <div>12%</div> <div>16%</div> <div>59%</div> <div>16%</div> <div>7%</div> </div>
2	XB	256	<div> <div>9%</div> <div>16%</div> <div>60%</div> <div>16%</div> <div>7%</div> </div>

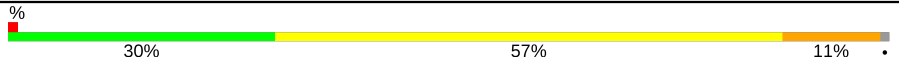
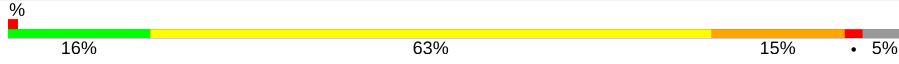
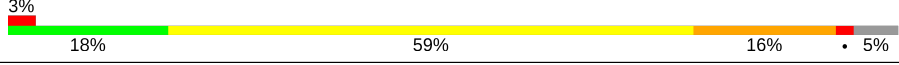
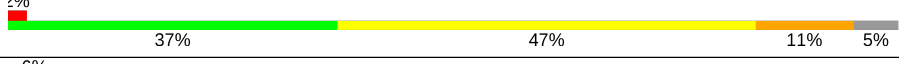
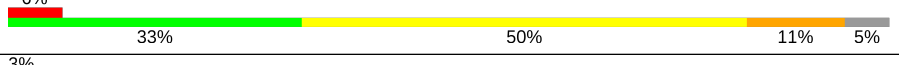
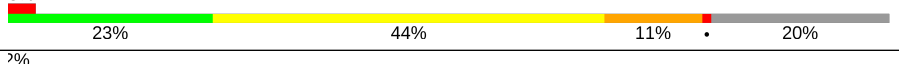
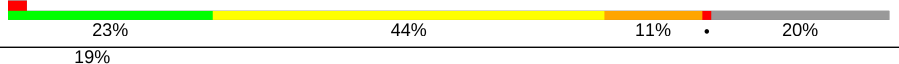
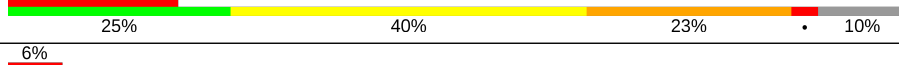
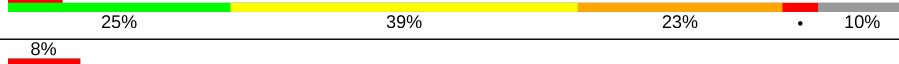
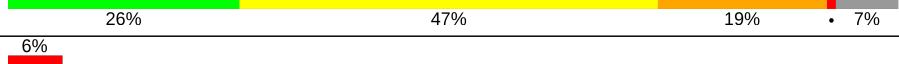
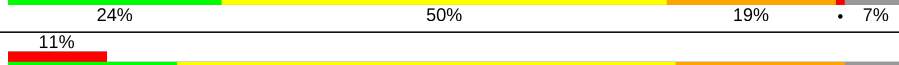
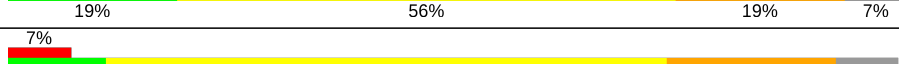
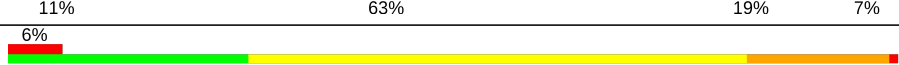
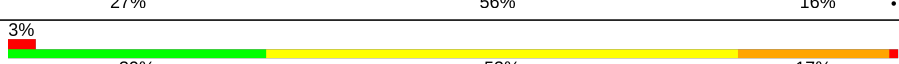
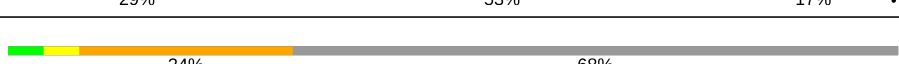
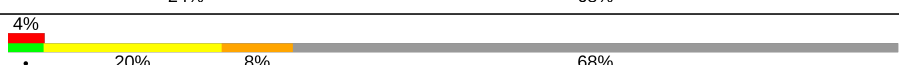
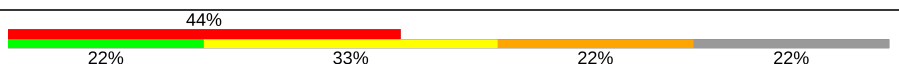
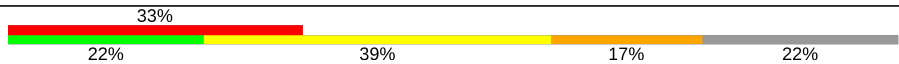
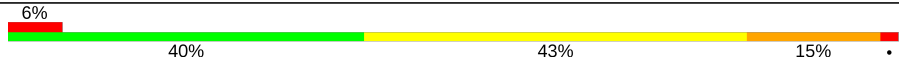


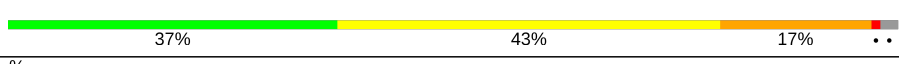
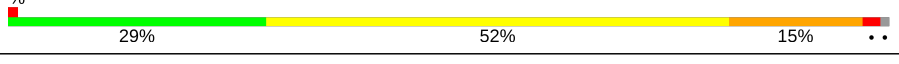


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Mol	Chain	Length	Quality of chain
3	QC	239	
3	XC	239	
4	QD	209	
4	XD	209	
5	QE	162	
5	XE	162	
6	QF	101	
6	XF	101	
7	QG	156	
7	XG	156	
8	QH	138	
8	XH	138	
9	QI	128	
9	XI	128	
10	QJ	105	
10	XJ	105	
11	QK	129	
11	XK	129	
12	QL	132	
12	XL	132	
13	QM	126	
13	XM	126	
14	QN	61	
14	XN	61	
15	QO	89	

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Mol	Chain	Length	Quality of chain
15	XO	89	
16	QP	88	
16	XP	88	
17	QQ	105	
17	XQ	105	
18	QR	88	
18	XR	88	
19	QS	93	
19	XS	93	
20	QT	106	
20	XT	106	
21	QU	27	
21	XU	27	
22	QV	77	
22	XV	77	
23	QX	25	
23	XX	25	
24	QY	18	
24	XY	18	
25	RA	2916	
25	YA	2916	
26	RB	122	
26	YB	122	
27	RD	276	
27	YD	276	

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Mol	Chain	Length	Quality of chain
28	RE	206	
28	YE	206	
29	RF	210	
29	YF	210	
30	RG	182	
30	YG	182	
31	RH	180	
31	YH	180	
32	RI	148	
32	YI	148	
33	RN	140	
33	YN	140	
34	RO	122	
34	YO	122	
35	RP	150	
35	YP	150	
36	RQ	141	
36	YQ	141	
37	RR	118	
37	YR	118	
38	RS	112	
38	YS	112	
39	RT	146	
39	YT	146	
40	RU	118	





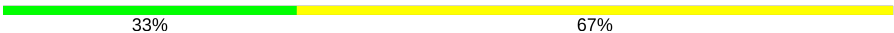
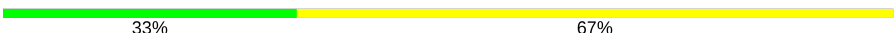
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Mol	Chain	Length	Quality of chain
40	YU	118	
41	RV	101	
41	YV	101	
42	RW	113	
42	YW	113	
43	RX	96	
43	YX	96	
44	RY	110	
44	YY	110	
45	RZ	206	
45	YZ	206	
46	R0	85	
46	Y0	85	
47	R1	98	
47	Y1	98	
48	R2	72	
48	Y2	72	
49	R3	60	
49	Y3	60	
50	R4	71	
50	Y4	71	
51	R5	60	
51	Y5	60	
52	R6	54	
52	Y6	54	

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Mol	Chain	Length	Quality of chain
53	R7	49	
53	Y7	49	
54	R8	65	
54	Y8	65	
55	Z6	3	
55	Z8	3	

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
56	MG	QA	1615	-	-	-	X
56	MG	RA	3176	-	-	-	X
56	MG	RA	3202	-	-	-	X
56	MG	XA	1605	-	-	-	X
56	MG	YA	3012	-	-	-	X

2 Entry composition

There are 58 unique types of molecules in this entry. The entry contains 291123 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	QA	1500	Total	C	N	O	P	0	0	0
			32247	14353	5981	10414	1499			
1	XA	1501	Total	C	N	O	P	0	0	0
			32269	14363	5986	10420	1500			

- Molecule 2 is a protein called 30S ribosomal protein S2.

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

- Molecule 3 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	QC	205	Total	C	N	O	S	0	0	0
			1605	1011	313	280	1			
3	XC	205	Total	C	N	O	S	0	0	0
			1605	1011	313	280	1			

- Molecule 4 is a protein called 30S ribosomal protein S4.

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

- Molecule 5 is a protein called 30S ribosomal protein S5.

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

- Molecule 6 is a protein called 30S ribosomal protein S6.

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

- Molecule 7 is a protein called 30S ribosomal protein S7.

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

- Molecule 8 is a protein called 30S ribosomal protein S8.

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

- Molecule 9 is a protein called 30S ribosomal protein S9.

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

- Molecule 10 is a protein called 30S ribosomal protein S10.

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

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

- Molecule 11 is a protein called 30S ribosomal protein S11.

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

- Molecule 12 is a protein called 30S ribosomal protein S12.

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

- Molecule 13 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	QM	121	Total	C	N	O	S	0	0	0
			964	597	199	166	2			
13	XM	121	Total	C	N	O	S	0	0	0
			964	597	199	166	2			

- Molecule 14 is a protein called 30S ribosomal protein S14.

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

- Molecule 15 is a protein called 30S ribosomal protein S15.

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

- Molecule 16 is a protein called 30S ribosomal protein S16.

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

- Molecule 17 is a protein called 30S ribosomal protein S17.

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

- Molecule 18 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	QR	70	Total	C	N	O	0	0	0
			574	367	112	95			
18	XR	70	Total	C	N	O	0	0	0
			574	367	112	95			

- Molecule 19 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	QS	84	Total	C	N	O	S	0	0	0
			674	430	126	116	2			
19	XS	84	Total	C	N	O	S	0	0	0
			674	430	126	116	2			

- Molecule 20 is a protein called 30S ribosomal protein S20.

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

- Molecule 21 is a protein called 30S ribosomal protein S21.

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

- Molecule 22 is a RNA chain called P-site tRNA fMet.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	QV	77	Total	C	N	O	P	0	0	0
			1644	732	297	538	77			
22	XV	77	Total	C	N	O	P	0	0	0
			1644	732	297	538	77			

- Molecule 23 is a RNA chain called A-site ASL SufA6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	QX	8	Total	C	N	O	P	0	0	0
			170	76	31	55	8			
23	XX	8	Total	C	N	O	P	0	0	0
			170	76	31	55	8			

- Molecule 24 is a RNA chain called messenger RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	QY	14	Total	C	N	O	P	0	0	0
			303	135	55	99	14			
24	XY	14	Total	C	N	O	P	0	0	0
			303	135	55	99	14			

- Molecule 25 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	RA	2883	Total	C	N	O	P	0	0	0
			62091	27636	11613	19960	2882			
25	YA	2882	Total	C	N	O	P	0	0	0
			62071	27627	11611	19952	2881			

- Molecule 26 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	RB	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	YB	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	RF	202	Total	C	N	O	S	0	0	0
			1585	1011	297	275	2			
29	YF	202	Total	C	N	O	S	0	0	0
			1585	1011	297	275	2			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	RR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			
37	YR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	RS	111	Total	C	N	O	S	0	0	0
			882	556	176	150				
38	YS	111	Total	C	N	O	S	0	0	0
			882	556	176	150				

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	RZ	172	Total	C	N	O	S	0	0	0
			1378	879	248	248	3			
45	YZ	172	Total	C	N	O	S	0	0	0
			1378	879	248	248	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	R0	82	Total	C	N	O	S	0	0	0
			648	401	138	108	1			
46	Y0	82	Total	C	N	O	S	0	0	0
			648	401	138	108	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	R1	97	Total	C	N	O	S	0	0	0
			763	481	150	131	1			
47	Y1	97	Total	C	N	O	S	0	0	0
			763	481	150	131	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	R2	69	Total	C	N	O	S	0	0	0
			581	358	118	104	1			
48	Y2	69	Total	C	N	O	S	0	0	0
			581	358	118	104	1			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	R3	59	Total	C	N	O	0	0	0
			469	298	90	81			
49	Y3	59	Total	C	N	O	0	0	0
			469	298	90	81			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	R4	71	Total	C	N	O	S	0	0	0
			581	364	108	104	5			
50	Y4	71	Total	C	N	O	S	0	0	0
			581	364	108	104	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	R5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			
51	Y5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	R6	49	Total	C	N	O	S	0	0	0
			424	264	87	69	4			
52	Y6	49	Total	C	N	O	S	0	0	0
			424	264	87	69	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	R7	49	Total	C	N	O	S	0	0	0
			430	263	108	57	2			
53	Y7	49	Total	C	N	O	S	0	0	0
			430	263	108	57	2			

- Molecule 54 is a protein called tRNA acceptor end mimic.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	R8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			
54	Y8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			

- Molecule 55 is a RNA chain called RNA (5'-R(*CP*CP*(PPU))-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	Z6	3	Total	C	N	O	P	0	0	0
			74	40	13	19	2			
55	Z8	3	Total	C	N	O	P	0	0	0
			74	40	13	19	2			

- Molecule 56 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

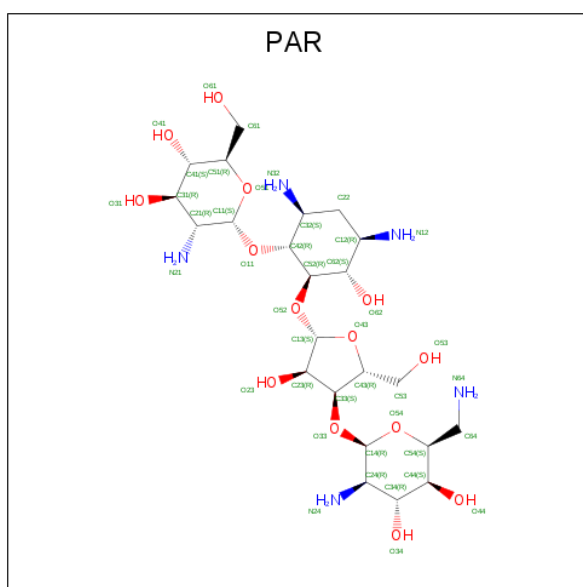
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	RE	2	Total	Mg	0	0
			2	2		
56	YX	1	Total	Mg	0	0
			1	1		
56	XA	63	Total	Mg	0	0
			63	63		
56	QA	60	Total	Mg	0	0
			60	60		
56	Y5	1	Total	Mg	0	0
			1	1		
56	RP	1	Total	Mg	0	0
			1	1		
56	QX	2	Total	Mg	0	0
			2	2		
56	YA	242	Total	Mg	0	0
			242	242		
56	YB	2	Total	Mg	0	0
			2	2		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	QF	1	Total 1 Mg 1	0	0
56	QM	1	Total 1 Mg 1	0	0
56	R5	1	Total 1 Mg 1	0	0
56	RB	2	Total 2 Mg 2	0	0
56	RA	212	Total 212 Mg 212	0	0
56	XM	2	Total 2 Mg 2	0	0
56	QH	1	Total 1 Mg 1	0	0
56	XV	2	Total 2 Mg 2	0	0
56	RF	1	Total 1 Mg 1	0	0
56	QV	2	Total 2 Mg 2	0	0
56	YE	2	Total 2 Mg 2	0	0

- Molecule 57 is PAROMOMYCIN (three-letter code: PAR) (formula: $C_{23}H_{45}N_5O_{14}$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
57	QA	1	Total	C	N	O	0	0
			42	23	5	14		
57	XA	1	Total	C	N	O	0	0
			42	23	5	14		

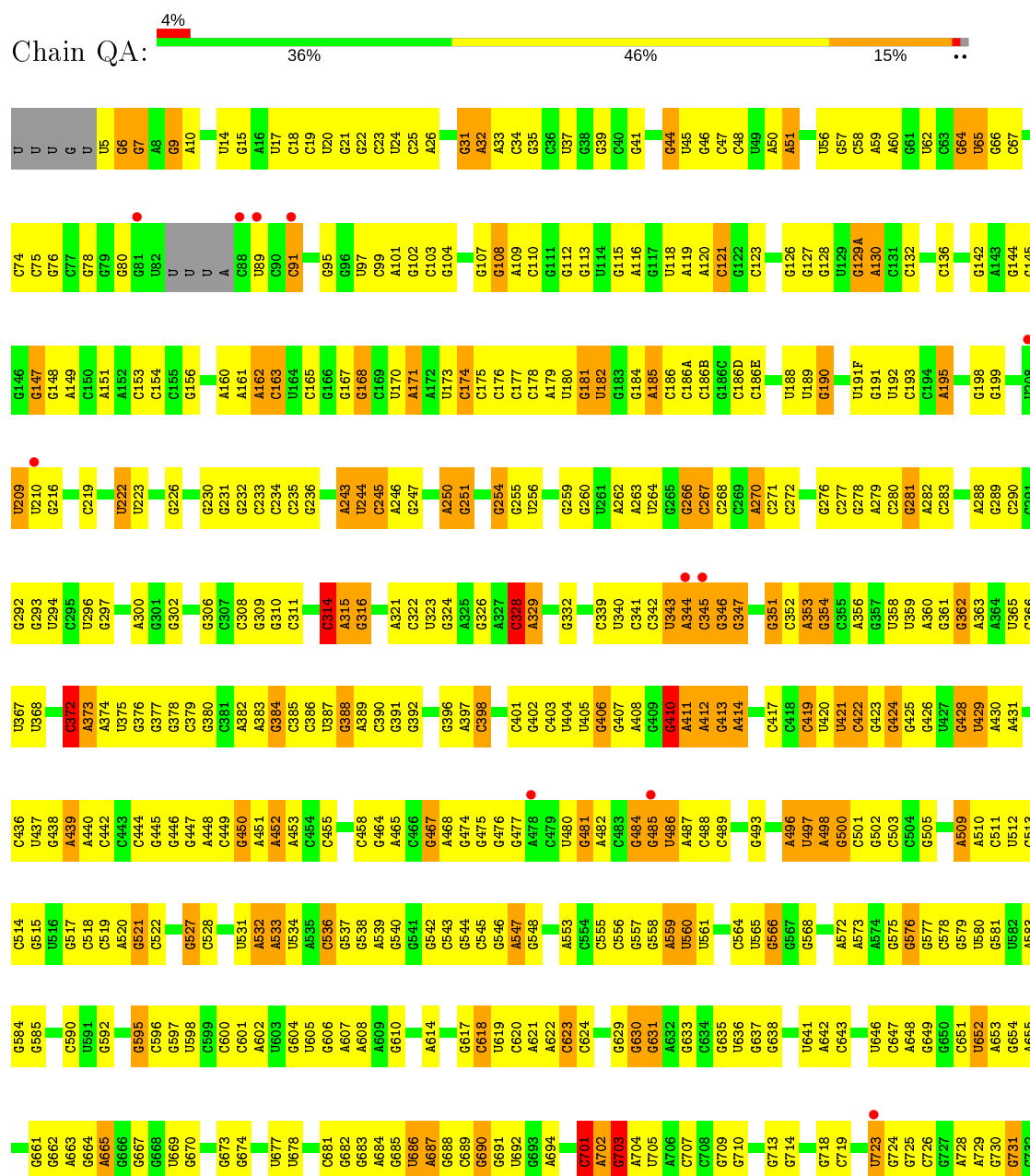
- Molecule 58 is ZINC ION (three-letter code: ZN) (formula: Zn).

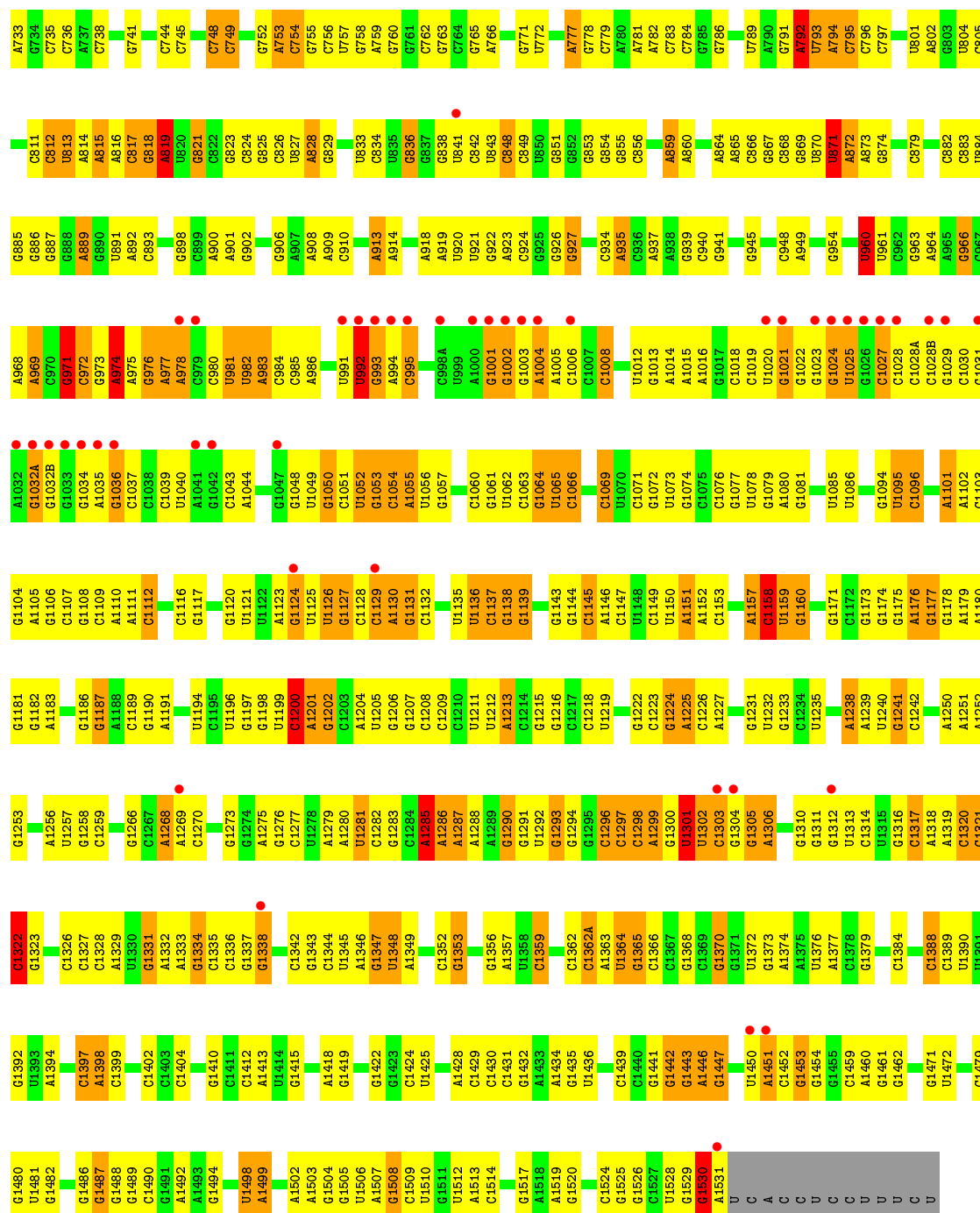
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	XD	1	Total	Zn	0	0
			1	1		
58	QD	1	Total	Zn	0	0
			1	1		
58	QN	1	Total	Zn	0	0
			1	1		
58	XN	1	Total	Zn	0	0
			1	1		

3 Residue-property plots

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

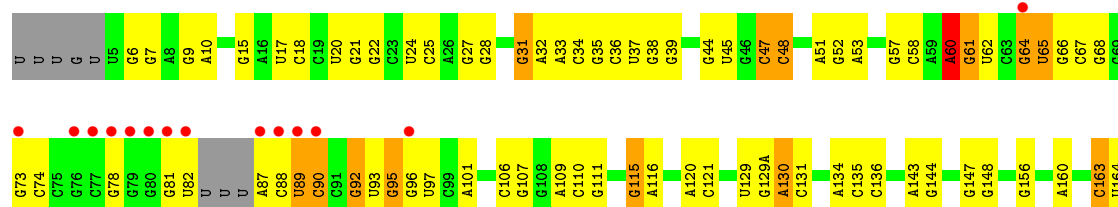
• Molecule 1: 16S rRNA



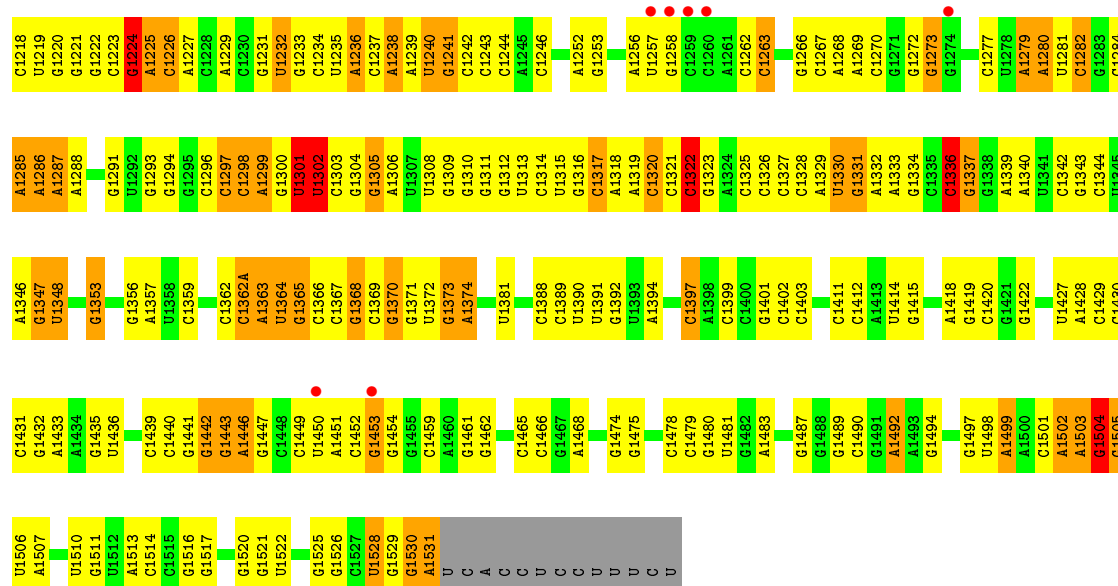


• Molecule 1: 16S rRNA

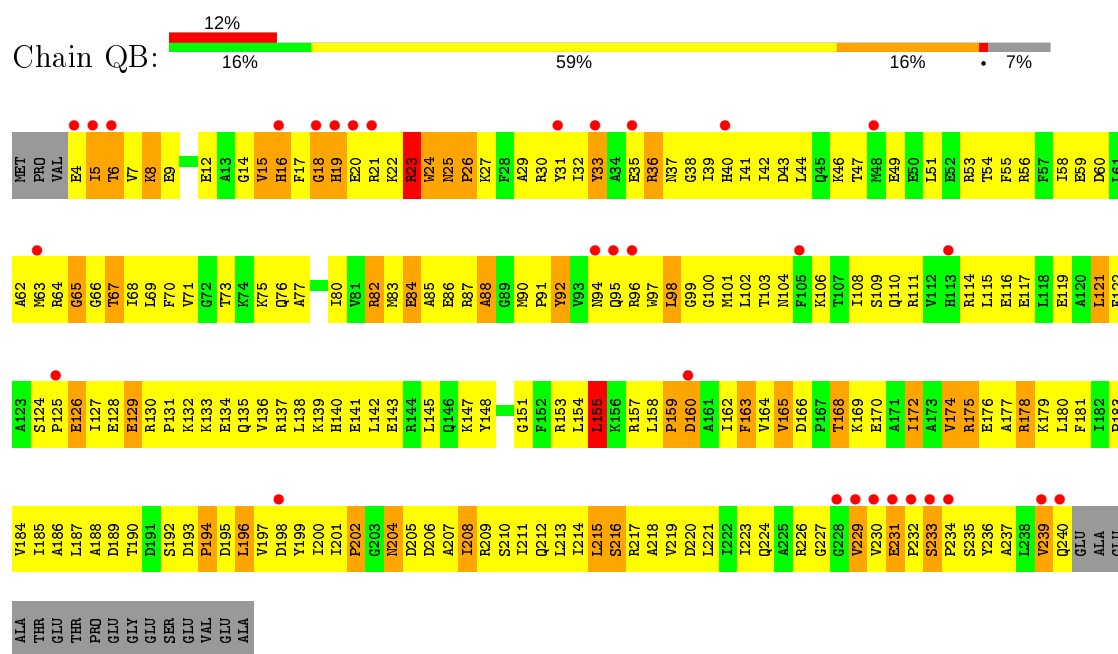
Chain XA: 3% 38% 45% 14%



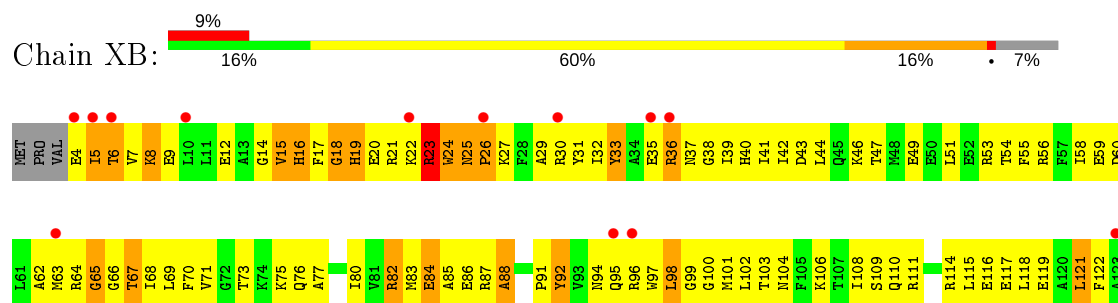
C1153	C1154	G1078	A937	A1014	A937	G769	G701	A607	A535	A453	G371	A300	C235	G165
G1154	G1155	A1080	A938	A1015	A939	G773	A702	A608	C596	C454	C372	G301	G236	G166
G1156	G1157	U1085	C940	A1016	C941	G774	G703	6630	G537	C455	A373	A303	C237	G167
A1157	C1158	U1086	G942	U1020	G942	A777	A704	6631	A539	C456	A374	G309	G238	G168
U1159	U1160	U1091	A946	G1021	A947	G778	G708	6632	G540	C458	U375	G310	C240	U170
C1161	C1162	G1094	G947	G1022	G948	G779	G711	6633	G541	C464	G377	C311	C241	A171
C1163	C1164	U1095	C949	G1023	C950	G780	A712	6634	C545	C466	G384	A313	C242	A172
C1165	C1166	C1096	U950	U1025	G951	G785	G714	6635	A547	C468	U376	G317	C244	U173
G1167	G1168	U1099	G952	G1026	G952	U789	A715	6636	C548	C474	G377	G318	C245	C174
U1169	U1170	C1100	U953	G1027	U953	U790	G719	6637	C549	C475	G384	G319	A246	G177
C1171	C1172	A1101	G954	G1028	G954	A790	G720	6638	G550	U480	G388	G320	A250	G181
G1173	G1174	U1102	U955	G1029	U955	A791	G721	6639	C554	C481	G390	A321	U252	U182
U1175	U1176	C1103	U956	G1030	U956	A792	G722	6640	C555	C482	C397	A325	U253	G183
A1177	A1178	G1104	U957	G1031	U957	A793	G723	6641	C556	C484	C398	G331	U254	A185
G1179	G1180	A1105	U958	G1032	U958	G795	G724	6642	C557	C485	C401	G332	U255	C186
C1181	C1182	U1106	U959	G1033	U959	G796	G725	6643	C558	C486	G402	C333	U256	C186B
G1183	G1184	C1107	G960	G1034	G960	G797	G726	6644	A559	C487	G406	C334	G257	G186C
C1185	C1186	U1108	G961	G1035	G961	G798	G727	6645	U560	C488	G407	C335	G258	C186D
G1187	G1188	G1109	G962	G1036	G962	C811	G728	6646	U561	C489	G410	G336	G259	C186E
A1189	A1190	U1110	G963	G1037	G963	C812	A729	6647	C562	C490	G411	G337	G260	C186F
C1191	C1192	C1112	U964	G1038	U964	U813	G730	6648	C563	C491	A412	G338	U261	C187
G1193	G1194	U1113	U965	G1039	U965	U814	G731	6649	C564	C492	A413	G339	A262	U188
U1195	U1196	C1114	U966	G1040	U966	U815	G732	6650	C565	C493	G414	U340	A263	U189
C1197	C1198	U1115	U967	G1041	U967	U816	G733	6651	C566	C494	G415	U341	U264	G190
G1199	G1200	C1116	U968	G1042	U968	U817	G734	6652	C567	C495	G416	U342	G265	G191A
A1201	A1202	U1117	U969	G1043	U969	U818	G735	6653	C568	C496	G417	U343	G266	G191B
U1203	U1204	U1118	U970	G1044	U970	U819	G736	6654	C569	C497	G418	U344	C267	G191C
C1205	C1206	U1119	U971	G1045	U971	U820	G737	6655	C570	C498	G419	U345	C268	U191D
G1207	G1208	U1120	U972	G1046	U972	U821	G738	6656	C571	C499	G420	U346	A270	G191E
C1209	C1210	U1121	U973	G1047	U973	U822	G739	6657	C572	C500	G421	U347	C271	G191F
U1211	U1212	C1117	U974	G1048	U974	U823	G740	6658	C573	C501	G422	U348	C272	G191
A1213	A1214	U1122	U975	G1049	U975	U824	G741	6659	C574	C502	G423	U349	C273	U192
C1215	C1216	C1118	U976	G1050	U976	U825	G742	6660	C575	C503	G424	U350	A273	C193
G1217	G1218	U1123	U977	G1051	U977	U826	G743	6661	C576	C504	G425	U351	G276	C194
C1219	C1220	U1124	U978	G1052	U978	U827	G744	6662	C577	C505	G426	U352	G277	A195
U1221	U1222	C1119	U979	G1053	U979	U828	G745	6663	C578	C506	G427	U353	C278	A196
G1223	G1224	U1125	U980	G1054	U980	U829	G746	6664	C579	C507	G428	U354	A279	G197
C1225	C1226	U1126	U981	G1055	U981	U830	G747	6665	C580	C508	G429	U355	C280	G198
U1227	U1228	C1120	U982	G1056	U982	U831	G748	6666	C581	C509	G430	U356	C281	G199
C1229	C1230	U1127	U983	G1057	U983	U832	G749	6667	C582	C510	G431	U357	A282	G200
G1231	G1232	U1128	U984	G1058	U984	U833	G750	6668	C583	C511	G432	U358	U283	C201
C1233	C1234	U1129	U985	G1059	U985	U834	G751	6669	C584	C512	G433	U359	U284	U208
U1235	U1236	C1121	U986	G1060	U986	U835	G752	6670	C585	C513	G434	U360	A285	U209
G1237	G1238	U1130	U987	G1061	U987	U836	G753	6671	C586	C514	G435	U361	C286	U210
C1239	C1240	U1131	U988	G1062	U988	U837	G754	6672	C587	C515	G436	U362	C287	G216
U1241	U1242	U1132	U989	G1063	U989	U838	G755	6673	C588	C516	G437	U363	C288	C217
C1243	C1244	U1133	U990	G1064	U990	U839	G756	6674	C589	C517	G438	U364	C289	C218
G1245	G1246	U1134	U991	G1065	U991	U840	G757	6675	C590	C518	G439	U365	C290	C219
U1247	U1248	U1135	U992	G1066	U992	U841	G758	6676	C591	C519	G440	U366	C291	G292
C1249	C1250	U1136	U993	G1067	U993	U842	G759	6677	C592	C520	G441	U367	C292	C293
U1251	U1252	C1122	U994	G1068	U994	U843	G760	6678	C593	C521	G442	U368	U294	G220
G1253	G1254	U1137	U995	G1069	U995	U844	G761	6679	C594	C522	G443	U369	C295	G227
C1255	C1256	U1138	U996	G1070	U996	U845	G762	6680	C595	C523	G444	U370	C296	G232
U1257	U1258	U1139	U997	G1071	U997	U846	G763	6681	C596	C524	G445	U371	C297	C233
C1259	C1260	U1140	U998	G1072	U998	U847	G764	6682	C597	C525	G446	U372	U298	G234
U1261	U1262	C1123	U999	G1073	U999	U848	G765	6683	C598	C526	G447	U373	C299	
G1263	G1264	U1141	U1000	G1074	U1000	U849	G766	6684	C599	C527	G448	U374	U299	
C1265	C1266	U1142	U1001	G1075	U1001	U850	G767	6685	C600	C528	G449	U375	C300	
U1267	U1268	U1143	U1002	G1076	U1002	U851	G768	6686	C601	C529	G450	U376	C301	
C1269	C1270	U1144	U1003	G1077	U1003	U852	G769	6687	C602	C530	G451	U377	C302	
U1271	U1272	C1124	U1004	G1078	U1004	U853	G770	6688	C603	C531	G452	U378	C303	
A1273	A1274	U1145	U1005	G1079	U1005	U854	G771	6689	C604	C532	G453	U379	C304	
C1275	C1276	U1146	U1006	G1080	U1006	U855	G772	6690	C605	C533	G454	U380	C305	
G1277	G1278	U1147	U1007	G1081	U1007	U856	G773	6691	C606	C534	G455	U381	C306	
C1279	C1280	U1148	U1008	G1082	U1008	U857	G774	6692	C607	C535	G456	U382	C307	
U1281	U1282	A1151	U1009	G1083	U1009	U858	G775	6693	C608	C536	G457	U383	C308	
C1283	C1284	A1152	U1010	G1084	U1010	U859	G776	6694	C609	C537	G458	U384	C309	
G1285	G1286		G1010	G1085	G1010		A768	6695	C610	C538	G459	U385	C310	

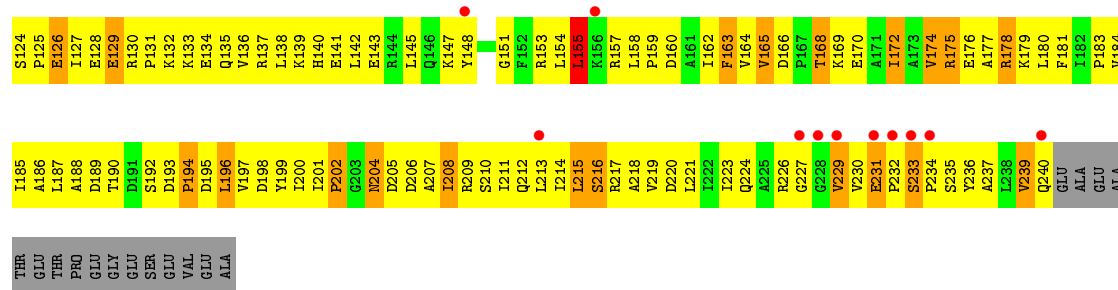


- Molecule 2: 30S ribosomal protein S2

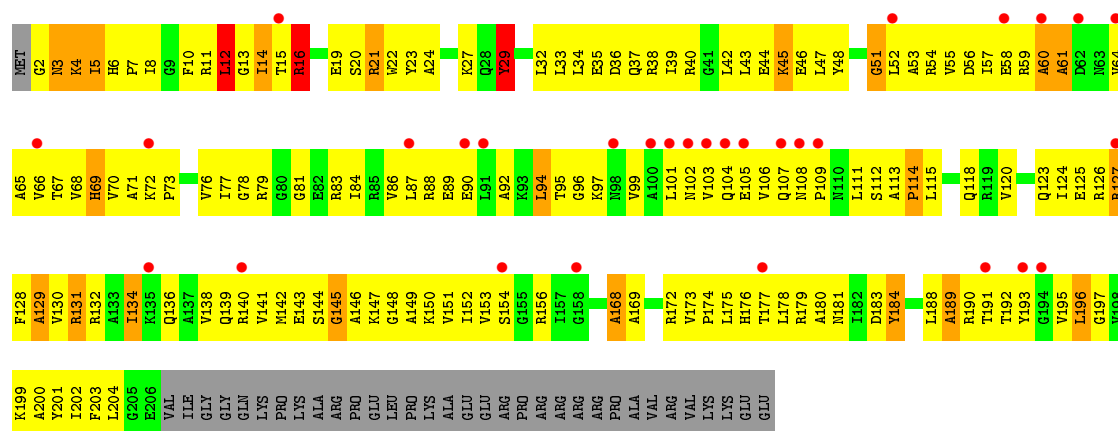


- Molecule 2: 30S ribosomal protein S2

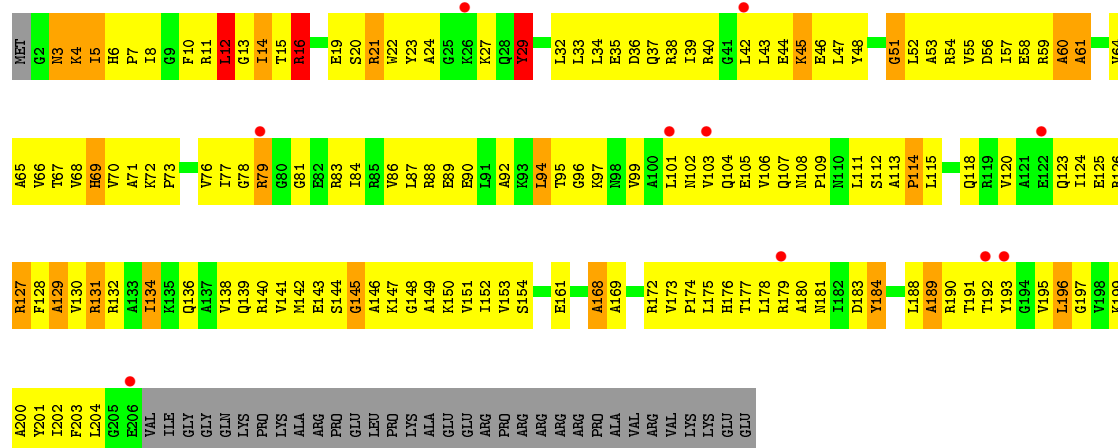




• Molecule 3: 30S ribosomal protein S3

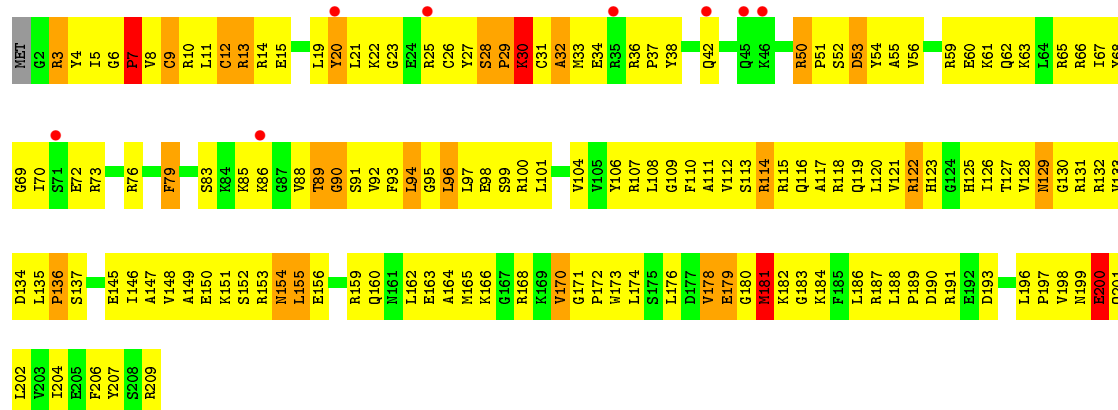


• Molecule 3: 30S ribosomal protein S3

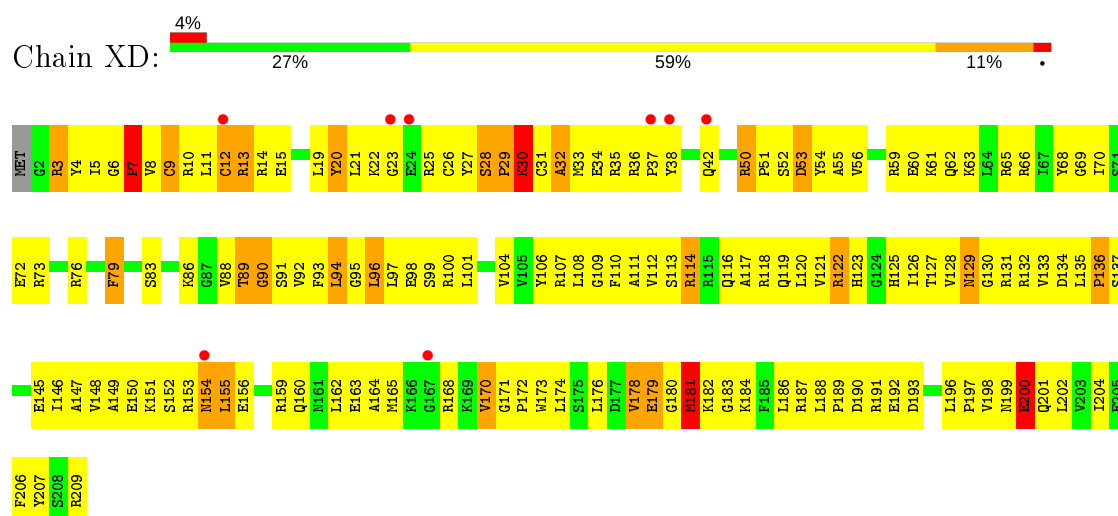


• Molecule 4: 30S ribosomal protein S4

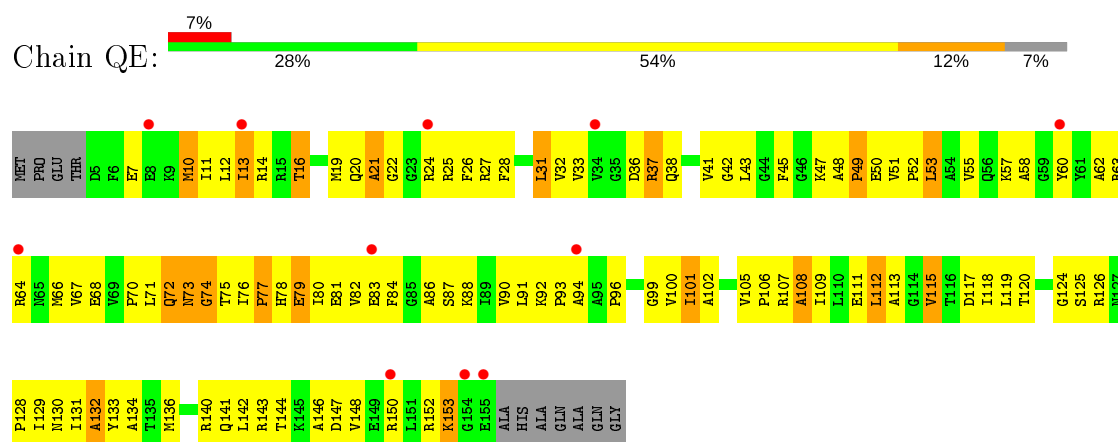




• Molecule 4: 30S ribosomal protein S4

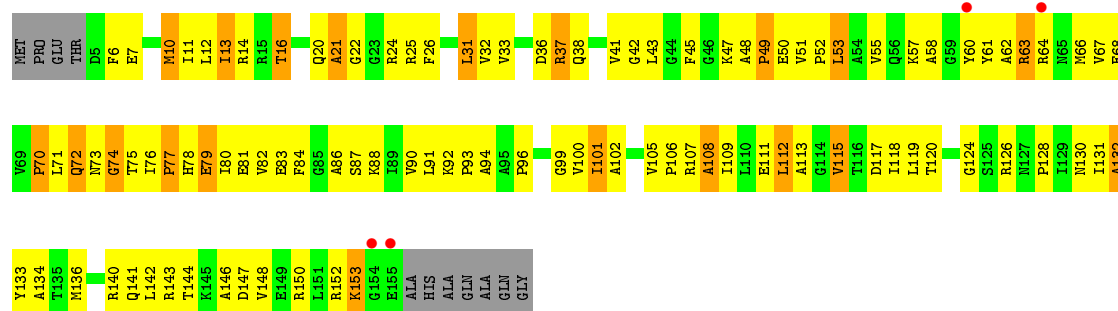


• Molecule 5: 30S ribosomal protein S5

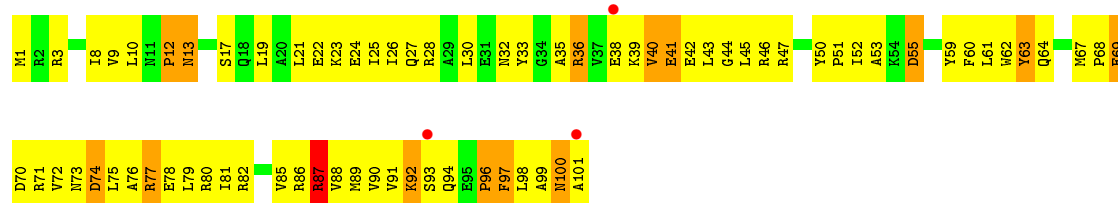


• Molecule 5: 30S ribosomal protein S5

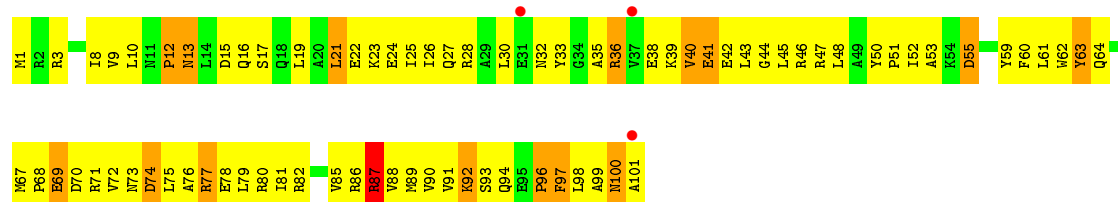




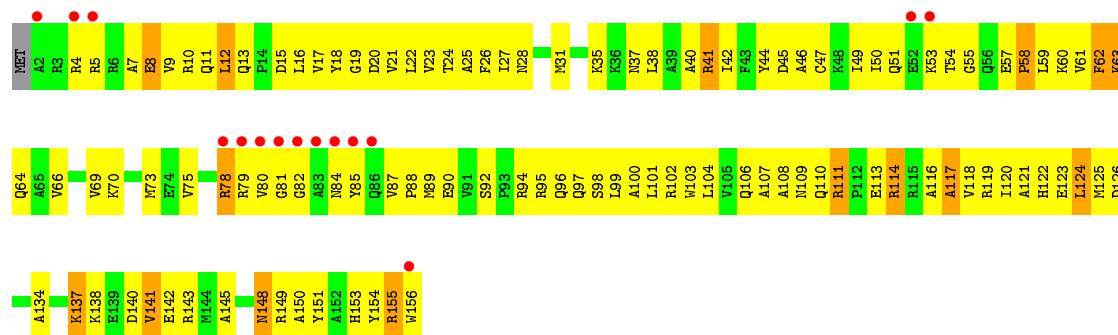
- Molecule 6: 30S ribosomal protein S6



- Molecule 6: 30S ribosomal protein S6

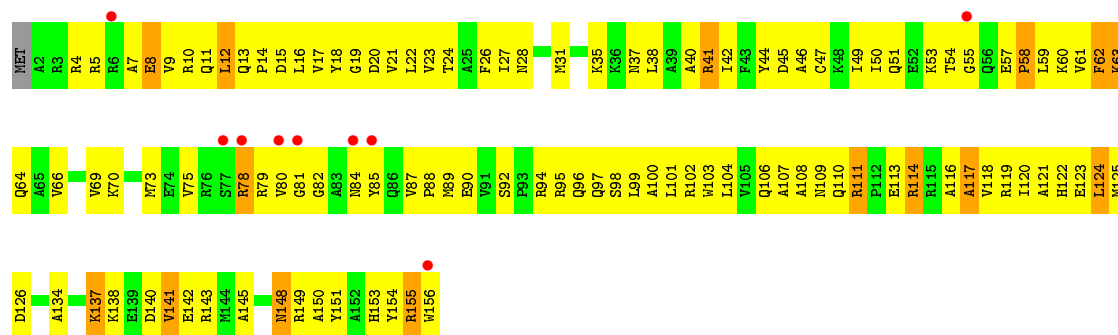


- Molecule 7: 30S ribosomal protein S7

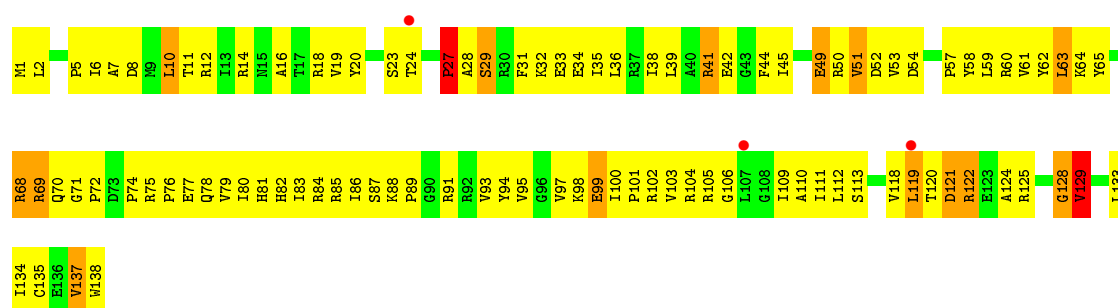


- Molecule 7: 30S ribosomal protein S7

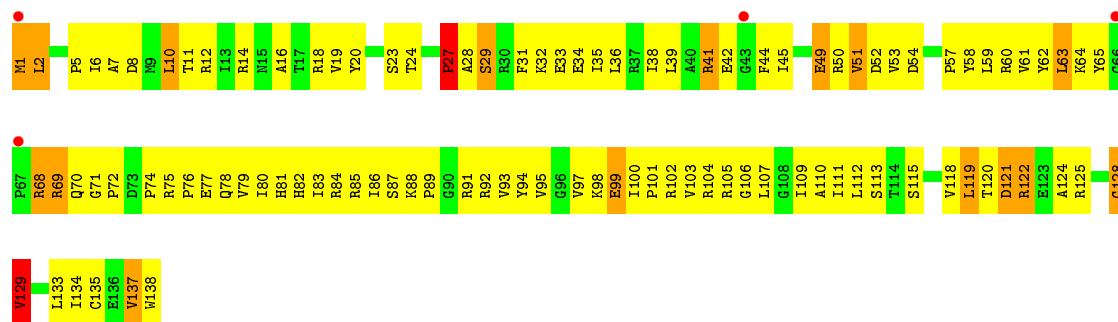




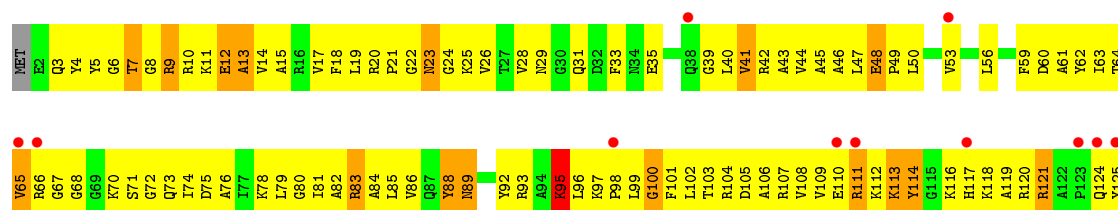
• Molecule 8: 30S ribosomal protein S8



• Molecule 8: 30S ribosomal protein S8

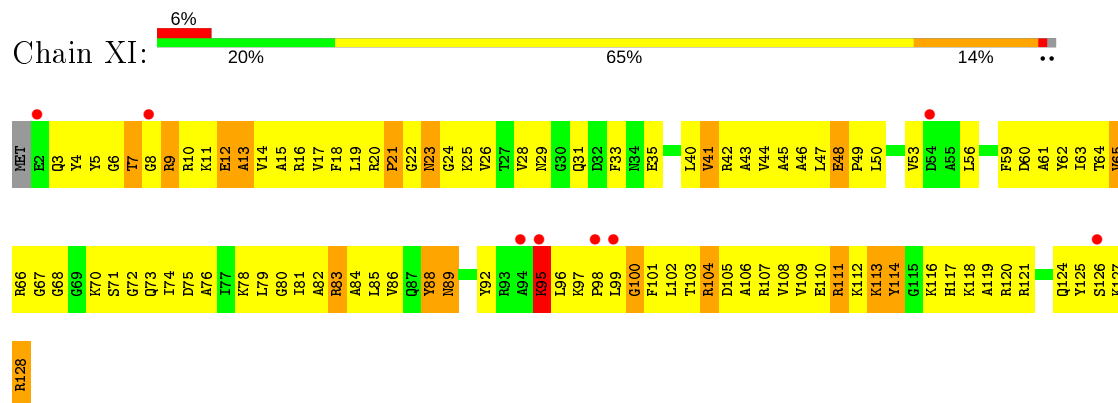


• Molecule 9: 30S ribosomal protein S9

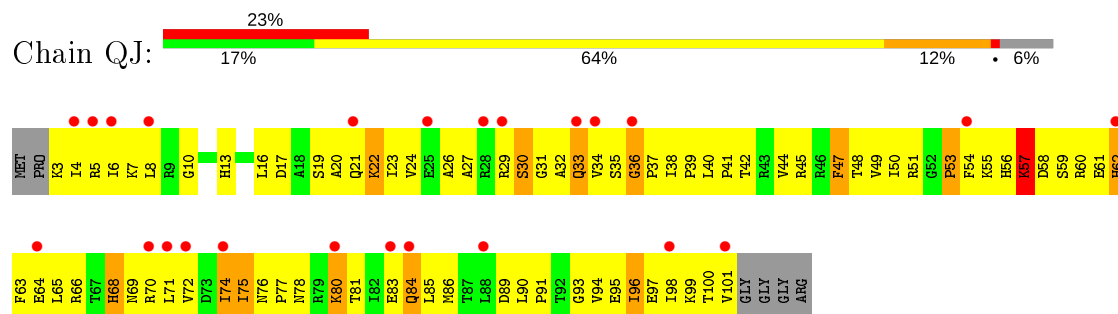




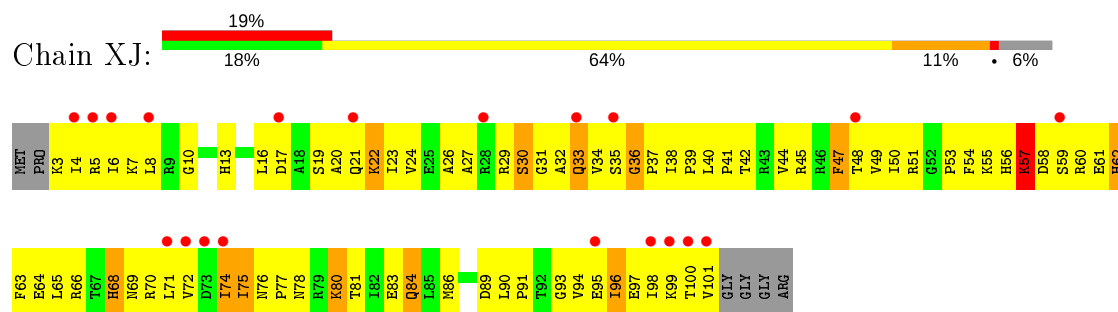
• Molecule 9: 30S ribosomal protein S9



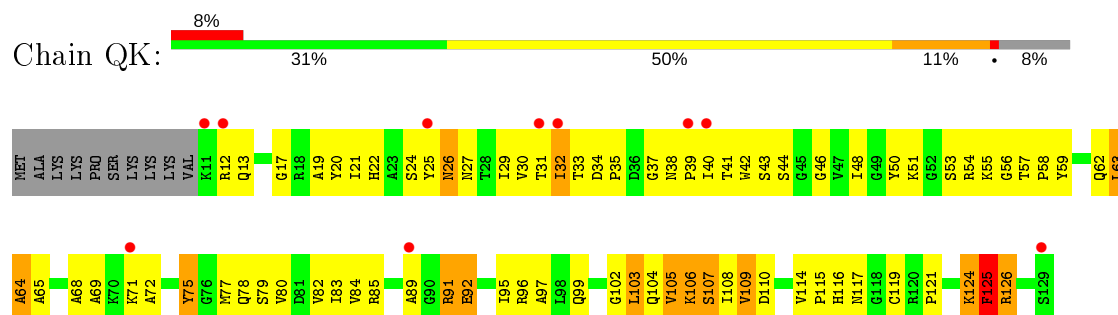
• Molecule 10: 30S ribosomal protein S10



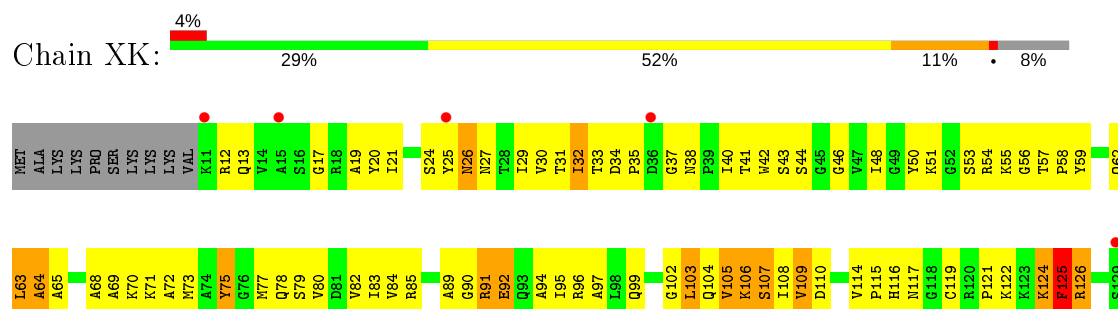
• Molecule 10: 30S ribosomal protein S10



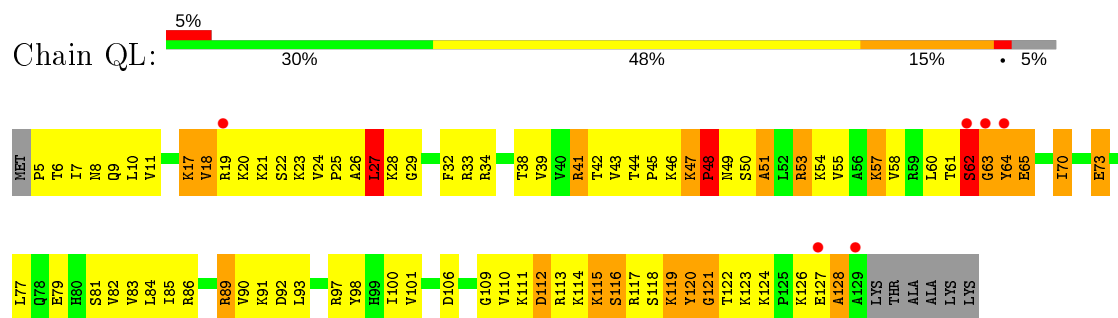
• Molecule 11: 30S ribosomal protein S11



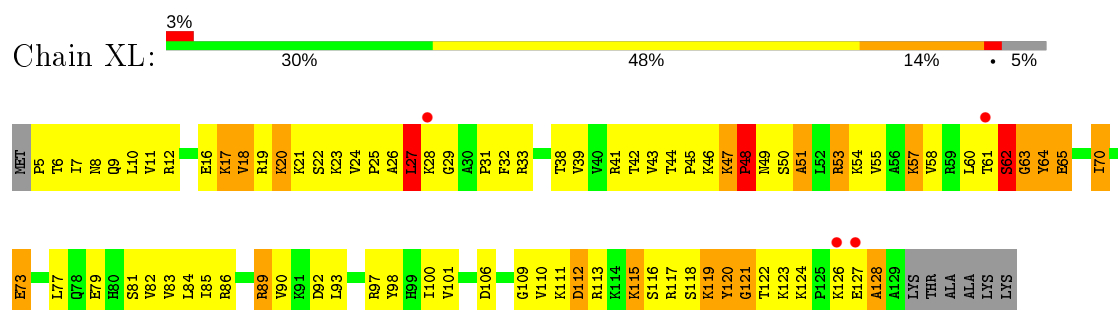
- Molecule 11: 30S ribosomal protein S11



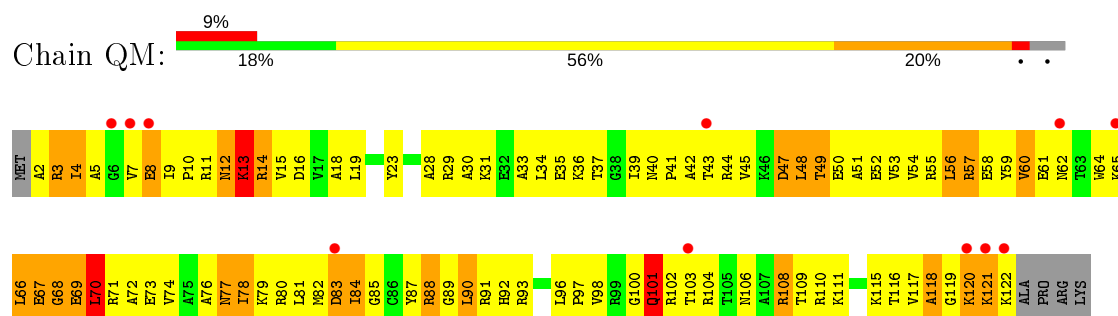
- Molecule 12: 30S ribosomal protein S12



- Molecule 12: 30S ribosomal protein S12

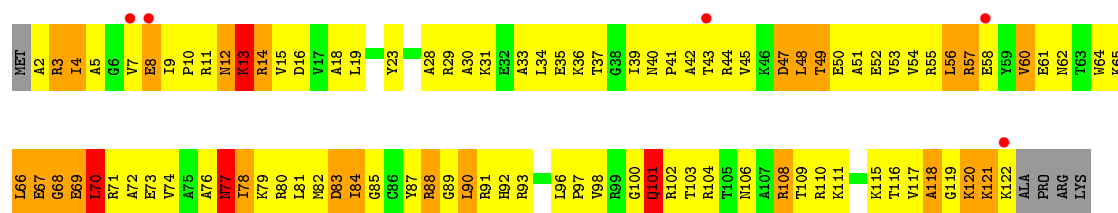


- Molecule 13: 30S ribosomal protein S13

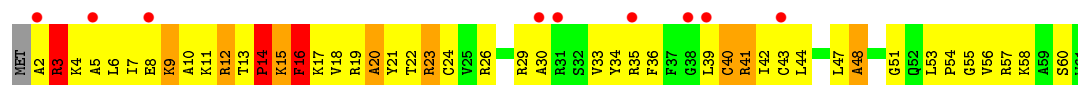


- Molecule 13: 30S ribosomal protein S13

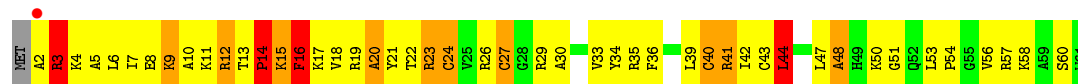




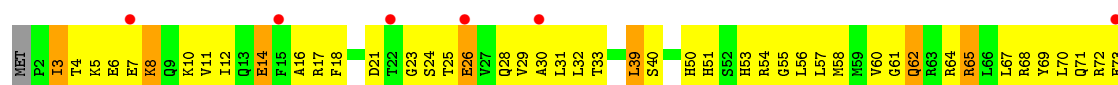
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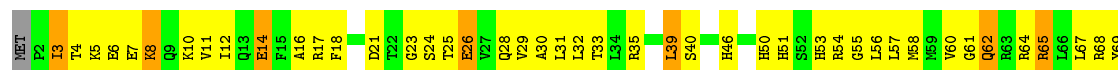
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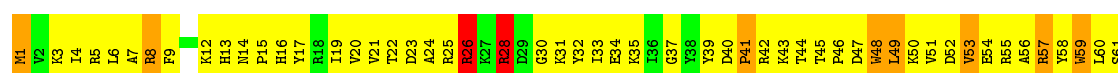
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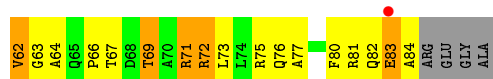


- Molecule 15: 30S ribosomal protein S15

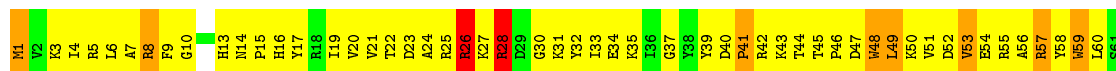


- Molecule 16: 30S ribosomal protein S16

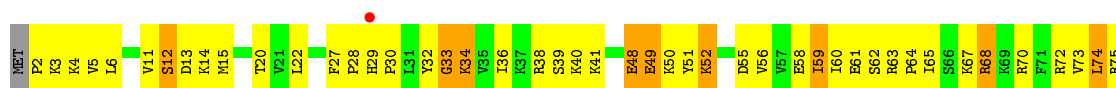




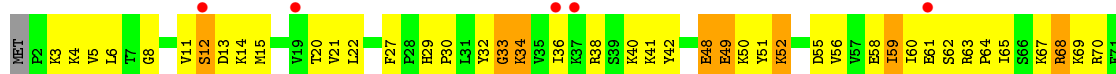
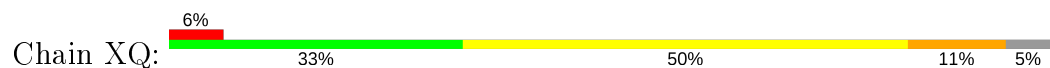
- Molecule 16: 30S ribosomal protein S16



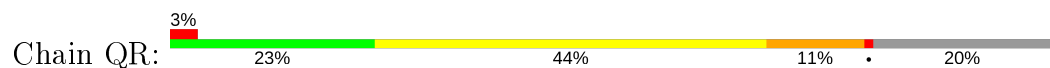
- Molecule 17: 30S ribosomal protein S17



- Molecule 17: 30S ribosomal protein S17

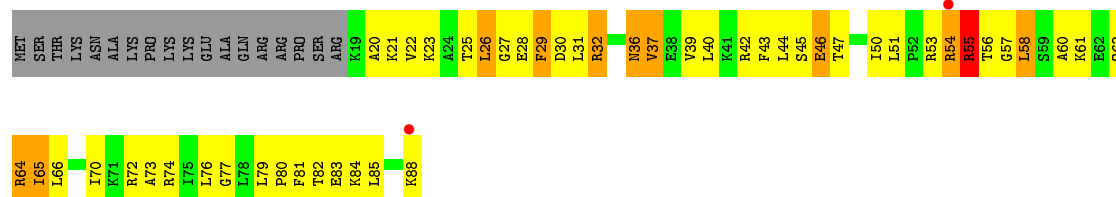


- Molecule 18: 30S ribosomal protein S18

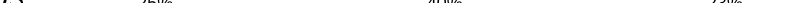


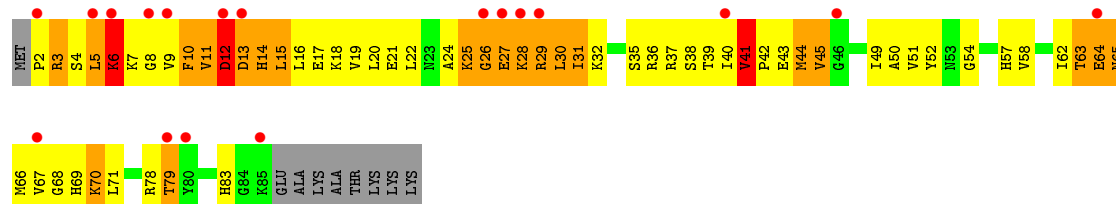
- Molecule 18: 30S ribosomal protein S18

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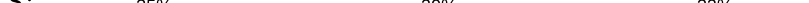


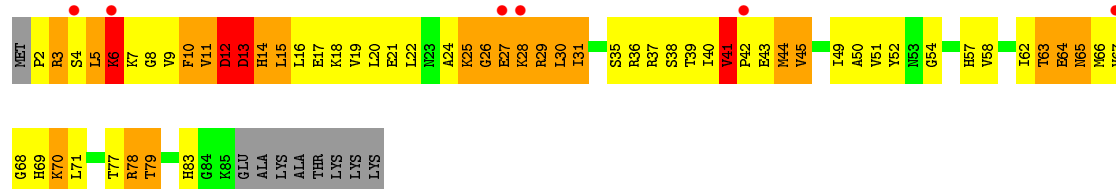
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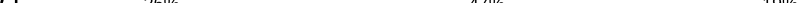


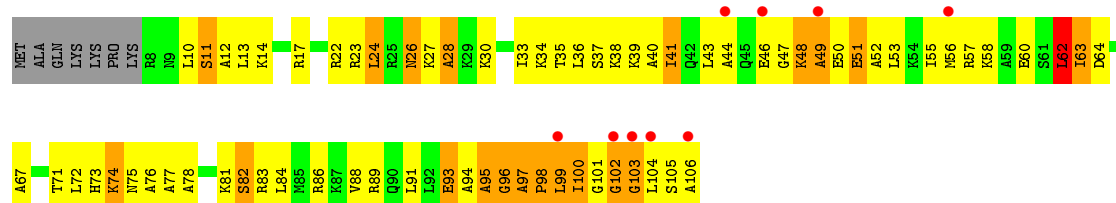
- Molecule 19: 30S ribosomal protein S19

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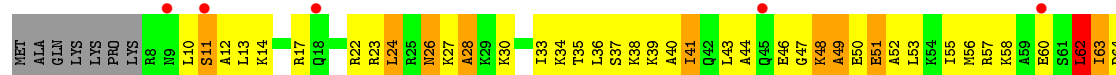
- Molecule 20: 30S ribosomal protein S20

Chain QT: 



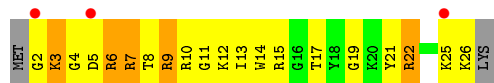
- Molecule 20: 30S ribosomal protein S20

Chain XT: 

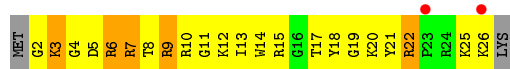
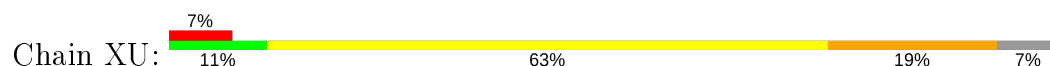




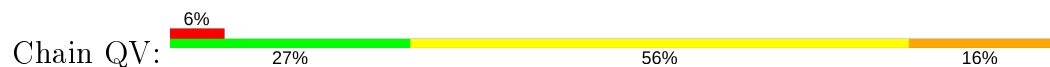
- Molecule 21: 30S ribosomal protein S21



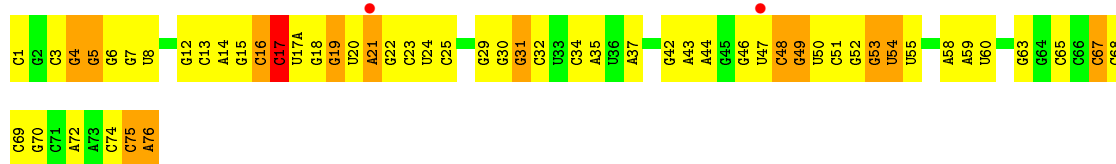
- Molecule 21: 30S ribosomal protein S21



- Molecule 22: P-site tRNA fMet



- Molecule 22: P-site tRNA fMet



- Molecule 23: A-site ASL SufA6

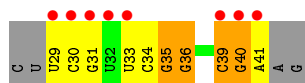
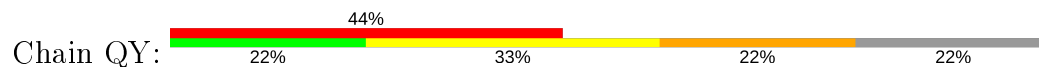


- Molecule 23: A-site ASL SufA6

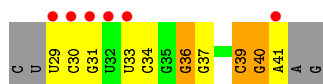
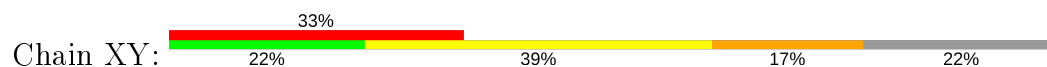




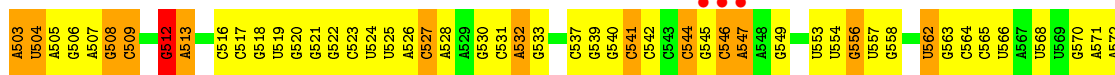
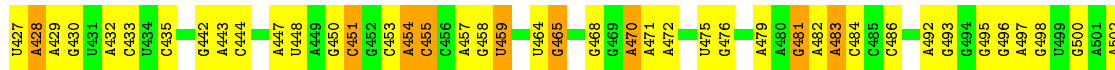
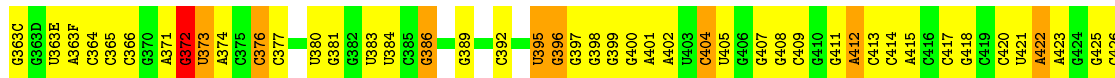
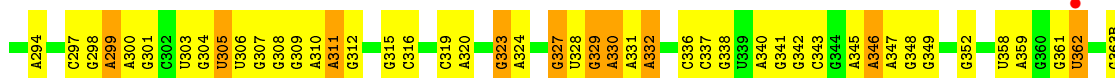
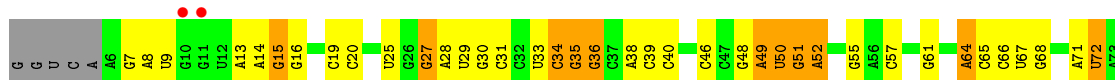
- Molecule 24: messenger RNA



- Molecule 24: messenger RNA

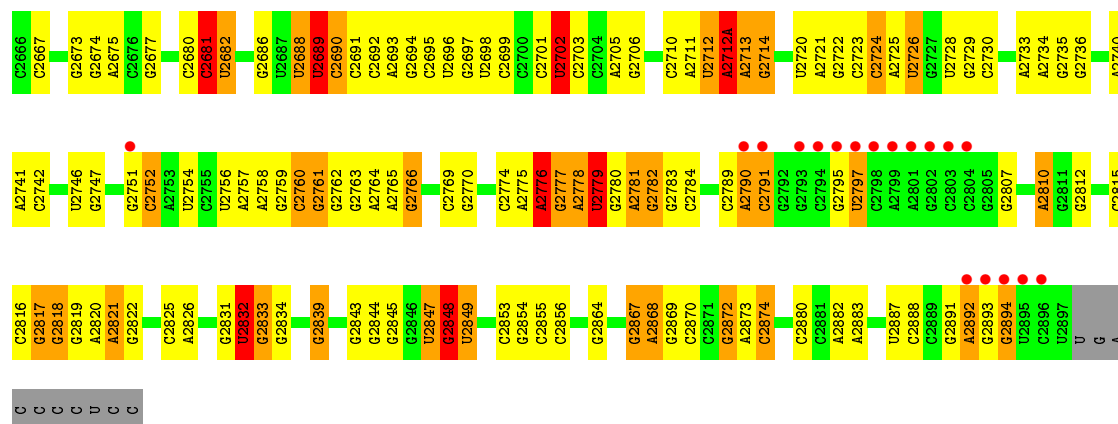


- Molecule 25: 23S rRNA

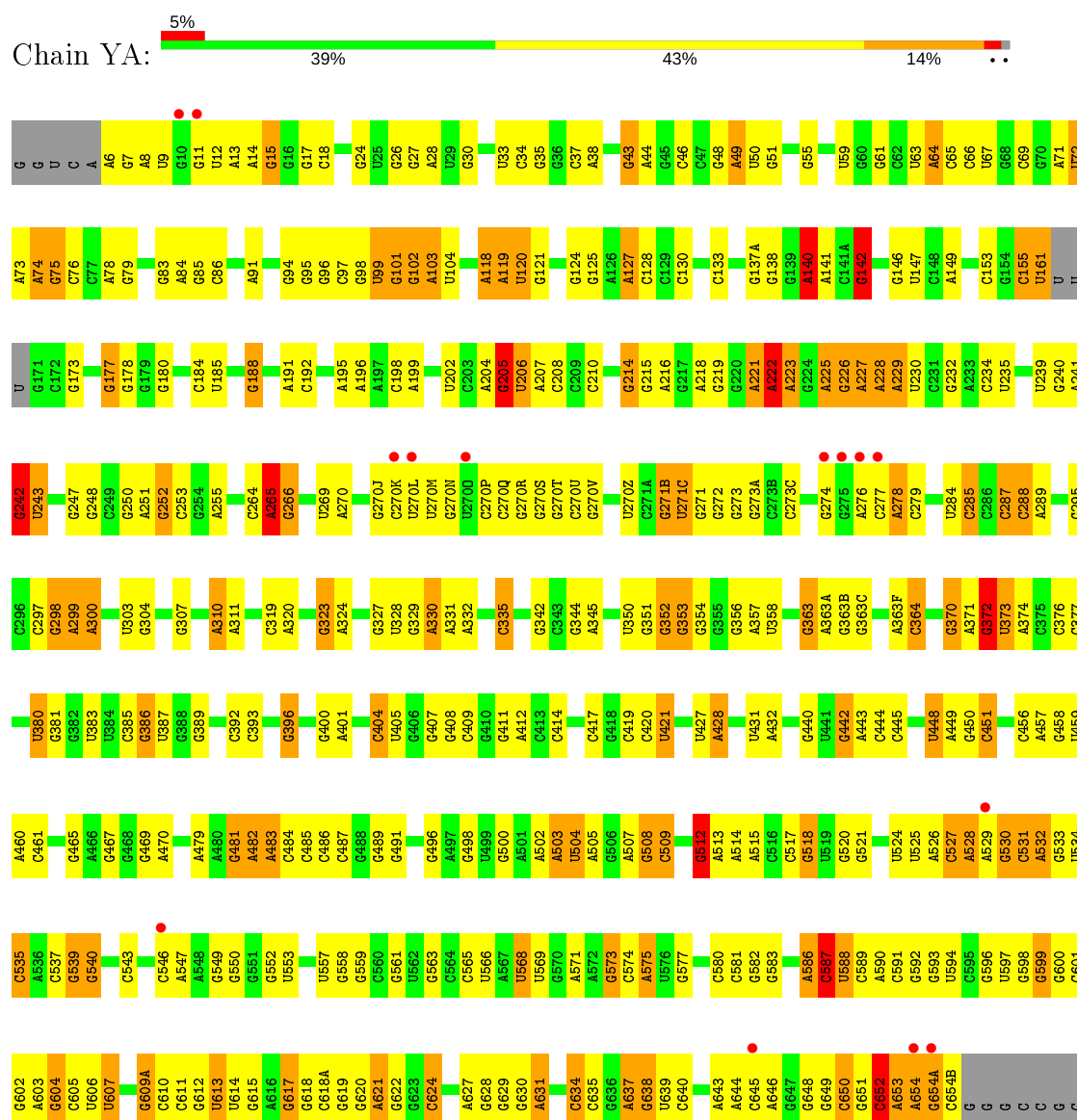




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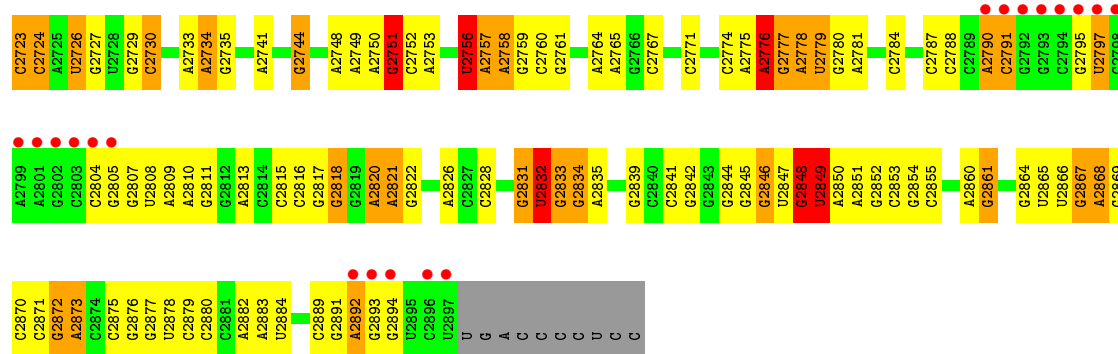


• Molecule 25: 23S rRNA

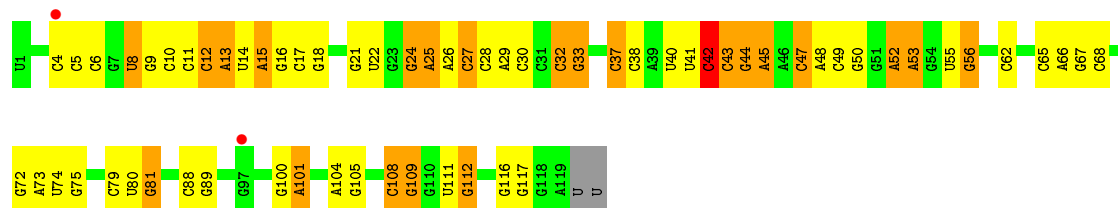




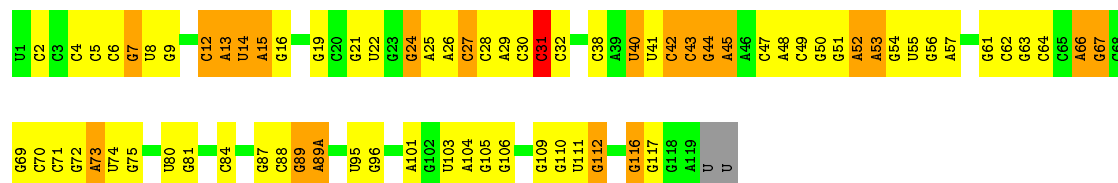
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U2649		A2426	U2357	A2287	G2211	U2144	A2071	U1993	U1917	C1844	G1776	A1689
U2653	C2579	C2427	G2358	A2288	A2212	C2145		U1994	A1918			A1690
A2654	U2580	G2428	C2359	G2289	U2213	G2146	U2074	U1995	U1919	A1847	U1779	C1691
C2655	C2581	G2429	A2360	U2291	G2214	G2147		U1996	C1920	A1848	A1780	U1692
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A2657	C2583	A2431	C2364	C2293	G2218	U2150	G2083	U1998	C1925	U1850	C1782	C1694
C2658	U2584	A2432	G2365	C2294	G2219	G2151	C2084	U1999	U1925	U1851	A1783	U1695
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A2660	G2586		G2367	C2296	A2225	U2153	G2087	G2002	G1929	A1854	A1785	G1697
C2661	U2438	U2439		U2297	C2226	G2154		G2003	U1930	U1855	A1786	A1698
A2662	A2439	C2440	G2370	A2298	A2227	G2155	G2093		A1932	U1856	G1787	G1699
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C2666	C2593	C2443	G2373	A2304	U2232	U2159	U2099	U2011	A1937	G1859	A1791	U1706
	U2594		C2374	A2305	U2233	G2160	G2100	A2013	A1938	G1860	G1792	
U2673		G2445	G2375	C2306	G2234	C2161	G2101	A2014	U1939	G1861	C1793	
	G2597	G2446	A2376	G2307		G2162	U2102	A2015		G1862	U1794	
C2677	C2598	A2447	A2377	G2308	G2238	C2163	C2103	U2016	C1941	U1863	U1795	U1709
C2678	U2599	A2448	G2378	A2309	G2239	U2164	G2104	U2017	C1942	U1864	U1796	
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C2680	A2602	A2450	C2380	A2311		G2166	C2106	A2020	U1944	A1871	U1798	G1718
C2681		A2451	C2381	U2312	U2243	U2167	G2107	C2021	G1945	A1872	G1799	G1725
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U2689	C2612		G2386	C2317	G2250	U2172	G2112	U2031	U1951	C1882	U1805	G1731
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C2700	C2625	A2476	G2399	C2331	U2262	C2185	G2124	C2044	A1966	C1895	U1818	A1755
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		A2478	C2402	A2335		C2188	A2126	G2048	G1968	G1897	U1820	U1757
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A2713	U2636		A2411	G2345	G2276	G2194	G2133	G2056	G1979			G1765
G2714	U2637	C2489		A2346	G2277		A2134	G2057	G1980	U1906	A1829	U1766
C2715	U2638	A2494	G2415	C2347	A2278	U2197	A2135	A2059	A1981	G1907	C1830	U1767
U2716	A2639	G2495	U2419	C2348	G2279	A2198	C2136	A2060	C1982	C1908	U1768	
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C2718	U2641	C2497	U2419	C2350	C2281	C2205	C2138	A2062		G1910	U1834	G1770
G2719	G2642	A2497	U2419	G2351	G2282	C2206	C2139	C2063	C1988		G1836	C1771
U2720		C2498	A2422	C2283	C2282	C2207	C2140		U1989	A1913	G1837	
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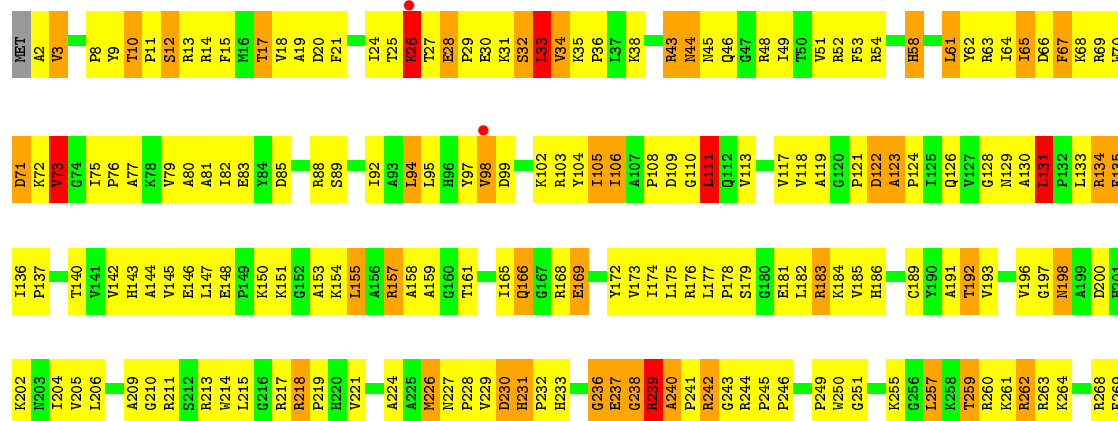
• Molecule 26: 5S rRNA



• Molecule 26: 5S rRNA



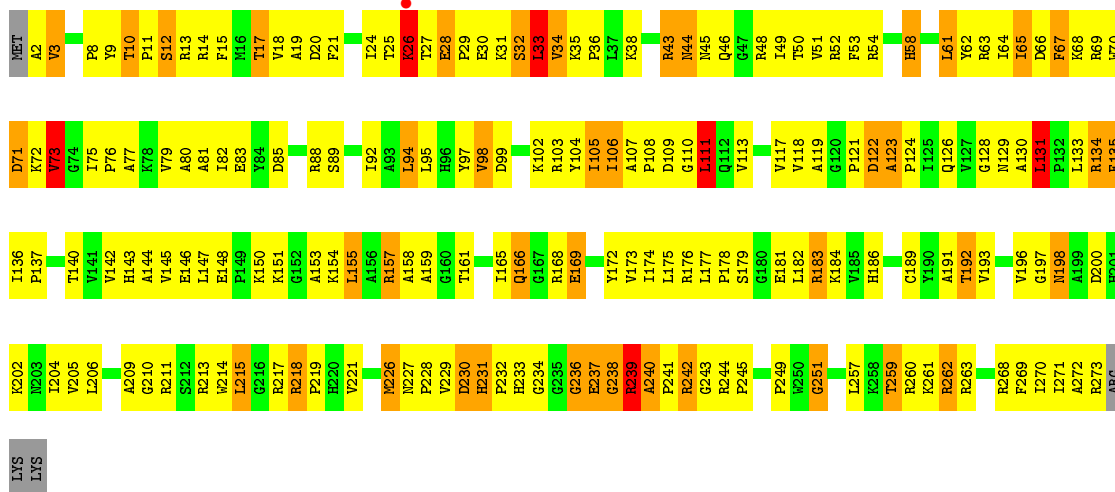
• Molecule 27: 50S ribosomal protein L2



I270
I271
A272
R273
ARG
LYS
LYS

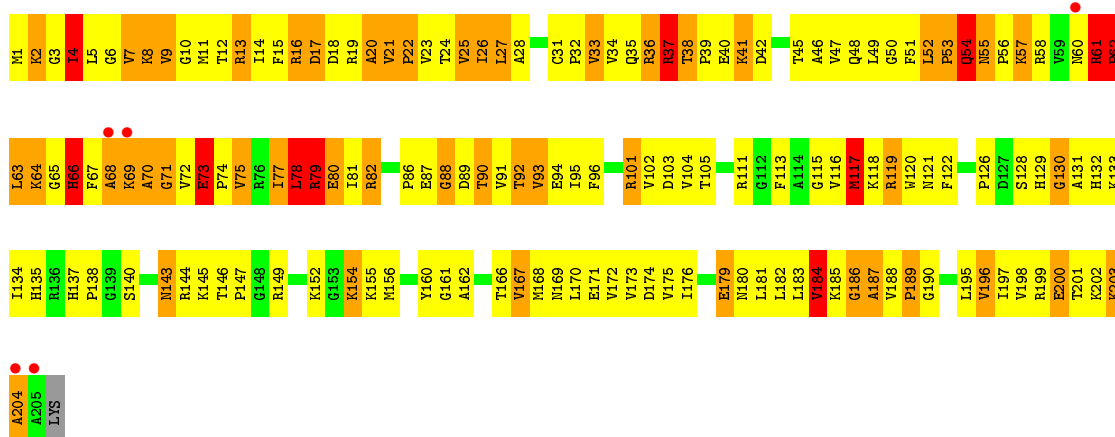
- Molecule 27: 50S ribosomal protein L2

Chain YD: 



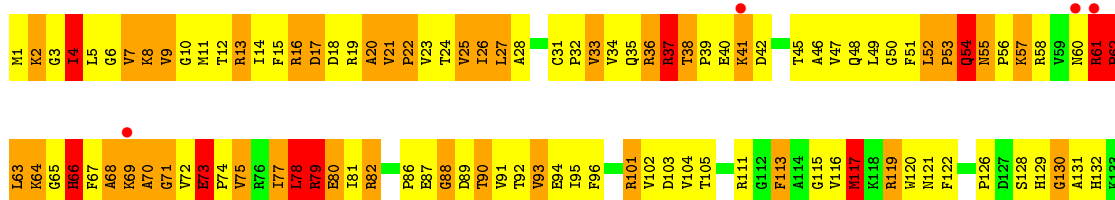
- Molecule 28: 50S ribosomal protein L3

Chain RE: 



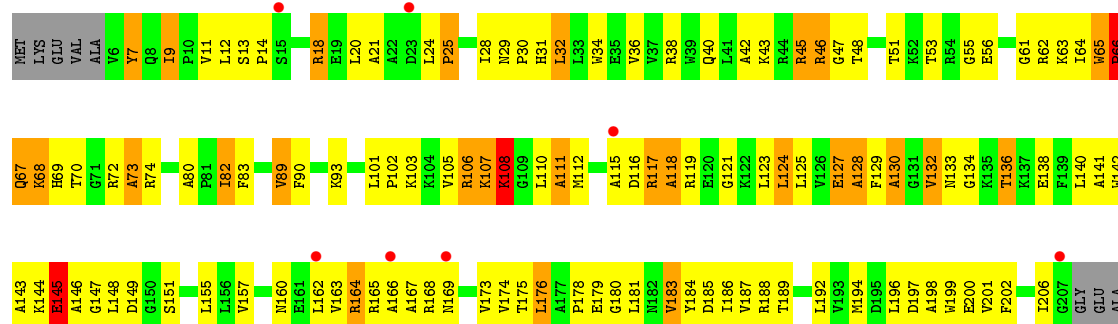
- Molecule 28: 50S ribosomal protein L3

Chain YE: 

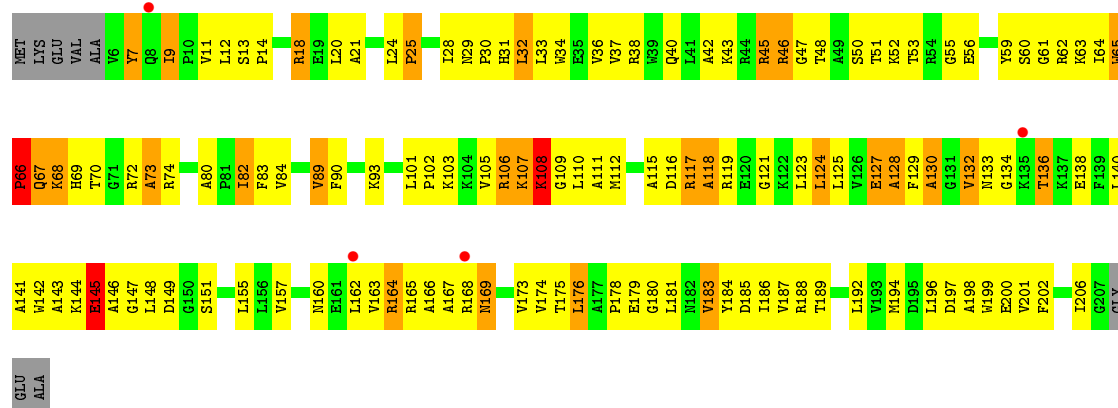




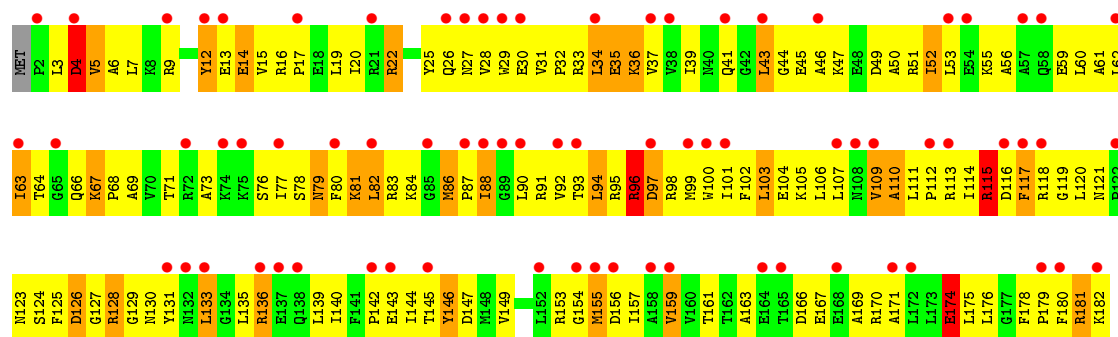
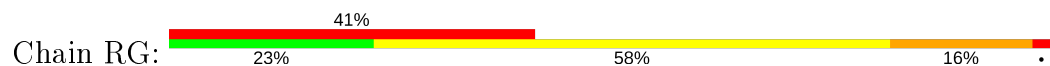
- Molecule 29: 50S ribosomal protein L4



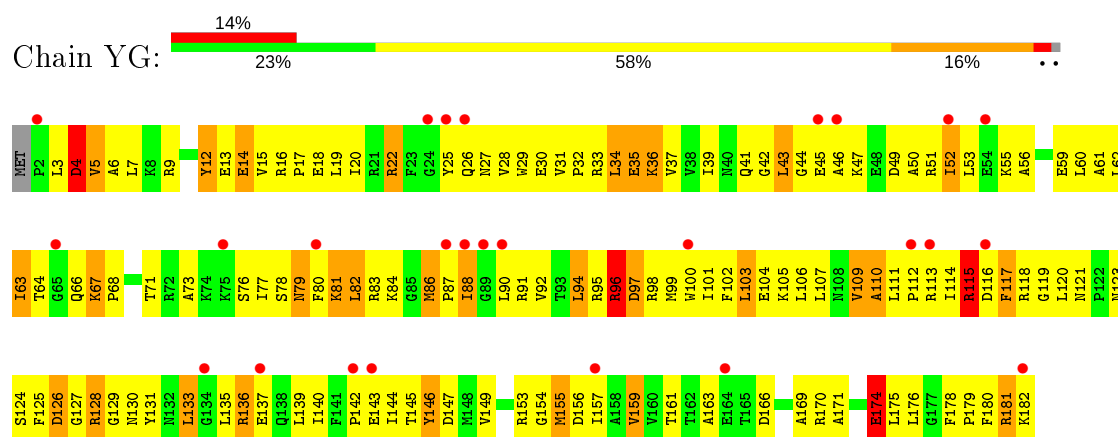
- Molecule 29: 50S ribosomal protein L4



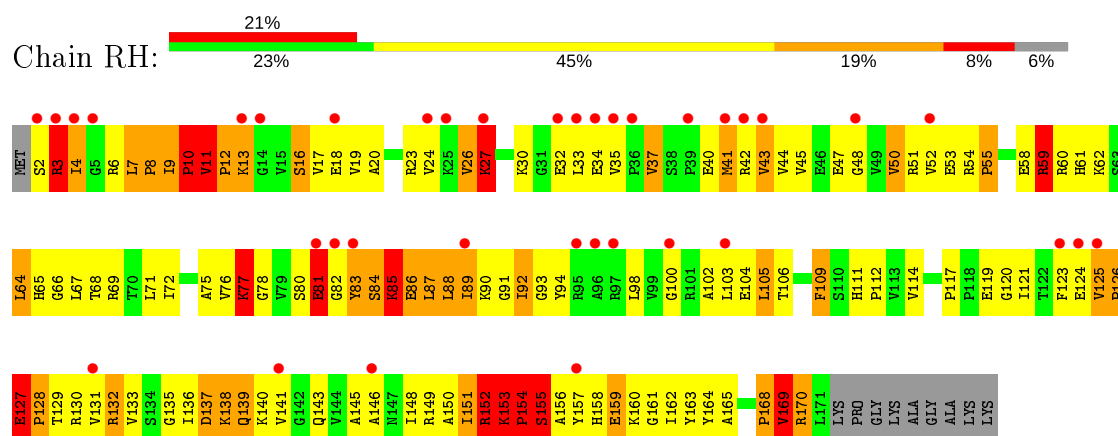
- Molecule 30: 50S ribosomal protein L5



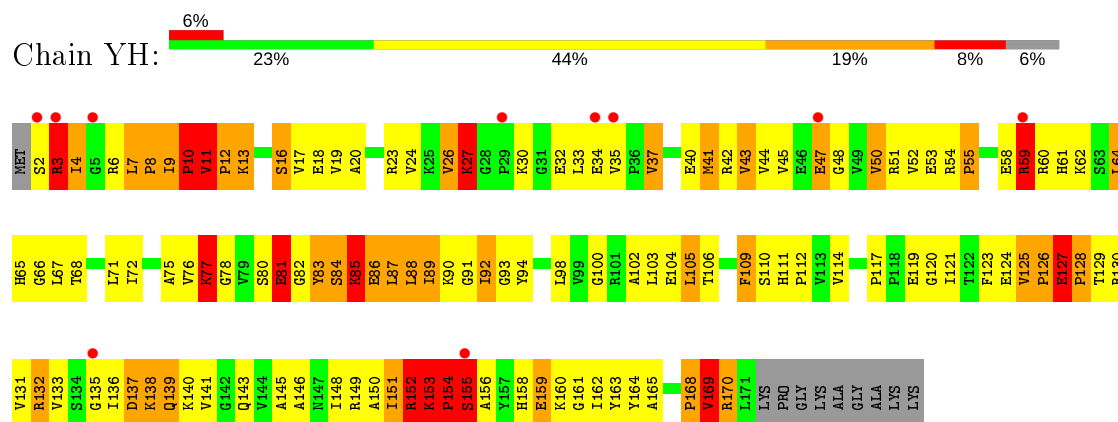
- Molecule 30: 50S ribosomal protein L5



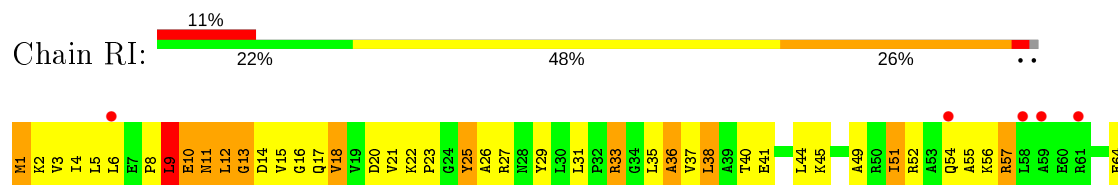
• Molecule 31: 50S ribosomal protein L6

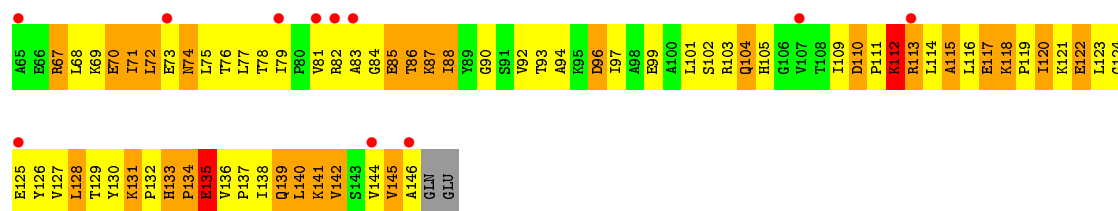


• Molecule 31: 50S ribosomal protein L6

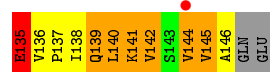
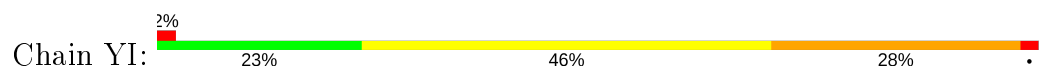


• Molecule 32: 50S ribosomal protein L9

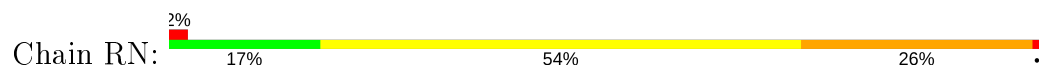




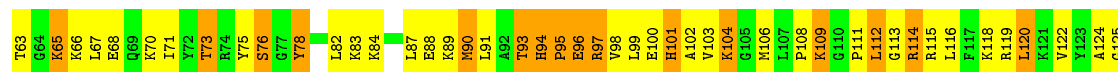
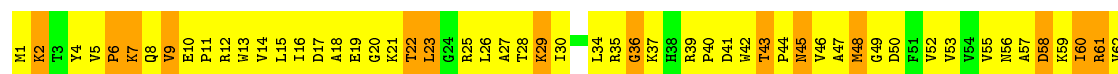
• Molecule 32: 50S ribosomal protein L9



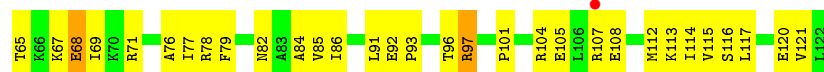
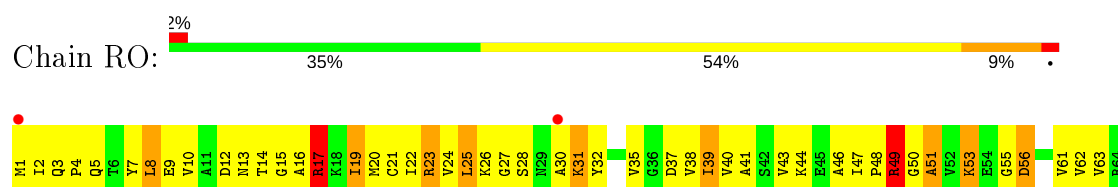
• Molecule 33: 50S ribosomal protein L13



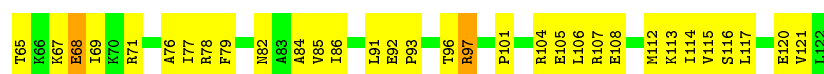
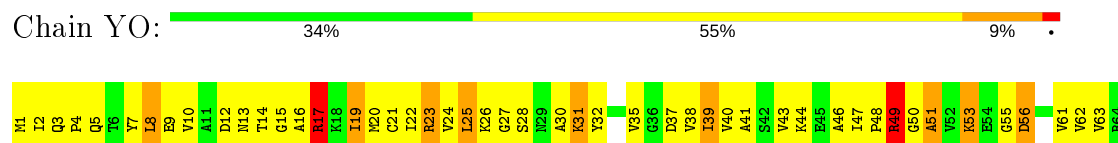
• Molecule 33: 50S ribosomal protein L13



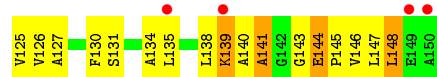
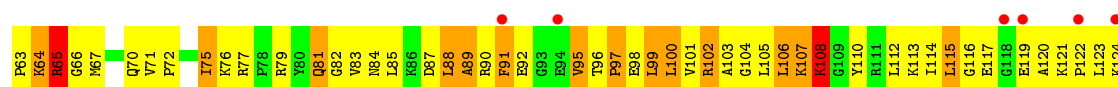
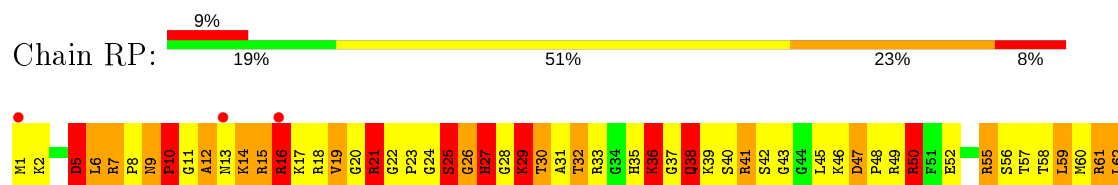
• Molecule 34: 50S ribosomal protein L14



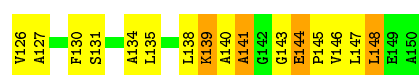
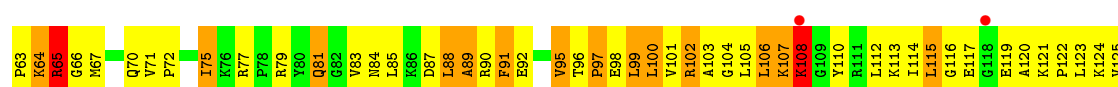
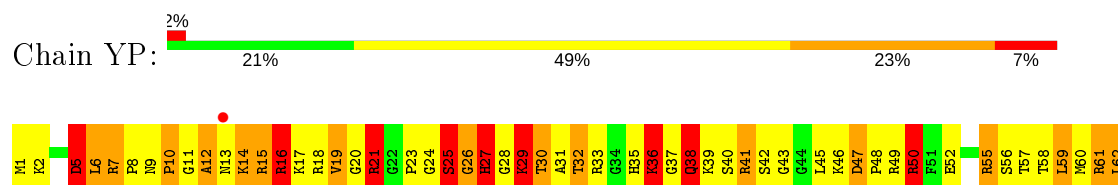
- Molecule 34: 50S ribosomal protein L14



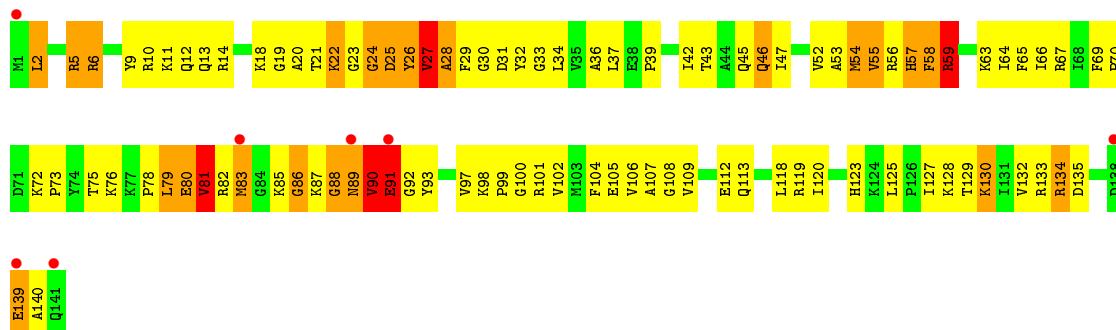
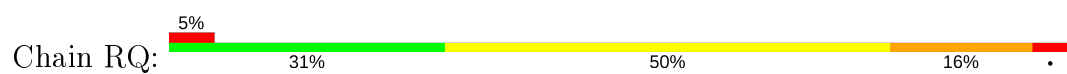
- Molecule 35: 50S ribosomal protein L15



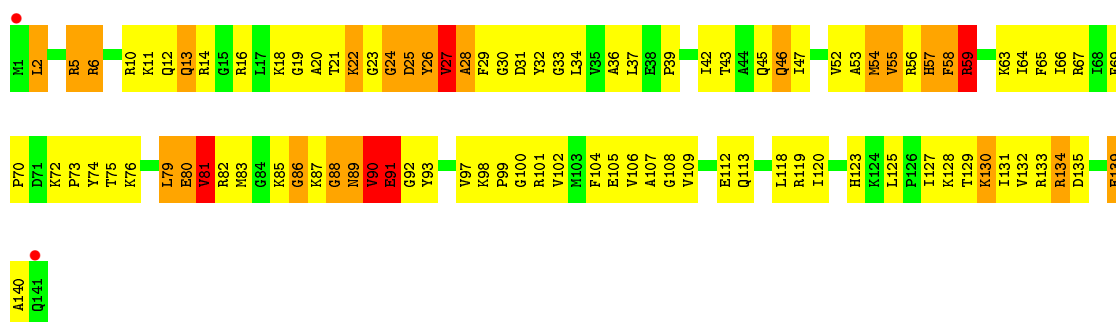
- Molecule 35: 50S ribosomal protein L15



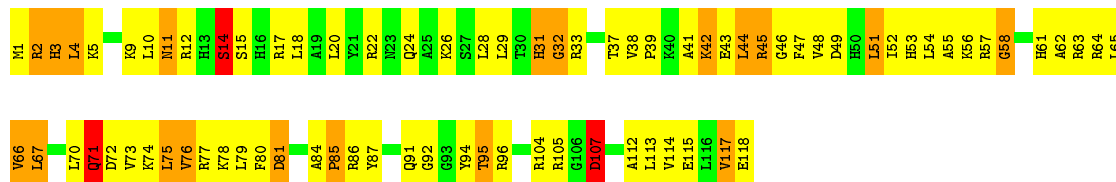
- Molecule 36: 50S ribosomal protein L16



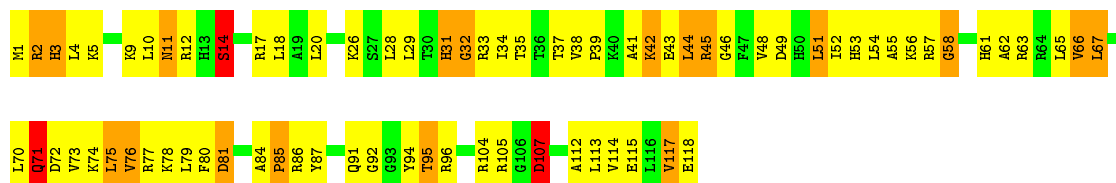
- Molecule 36: 50S ribosomal protein L16



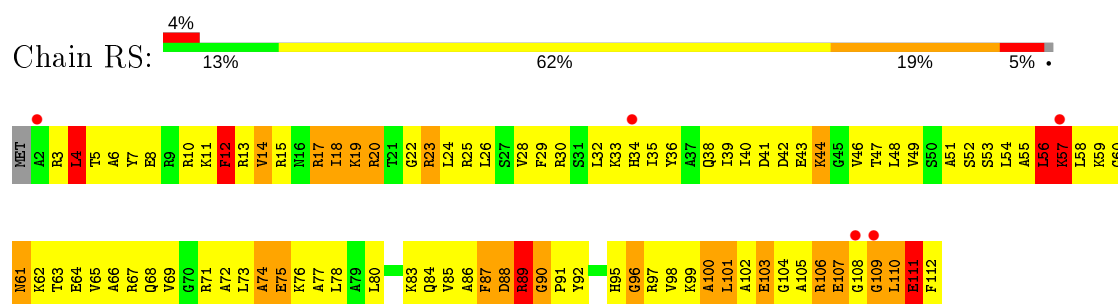
- Molecule 37: 50S ribosomal protein L17



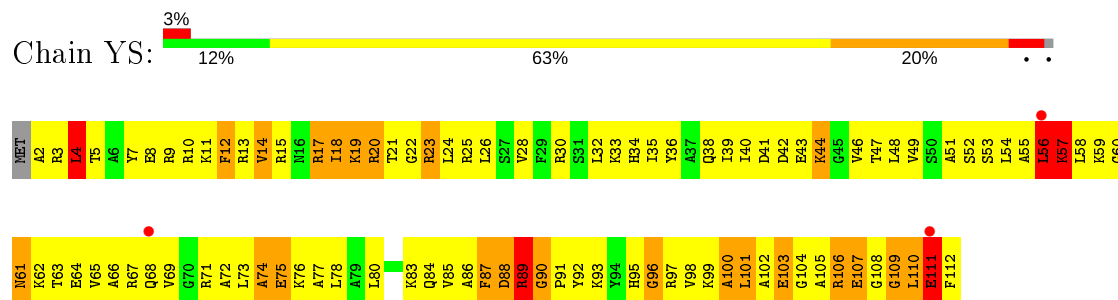
- Molecule 37: 50S ribosomal protein L17



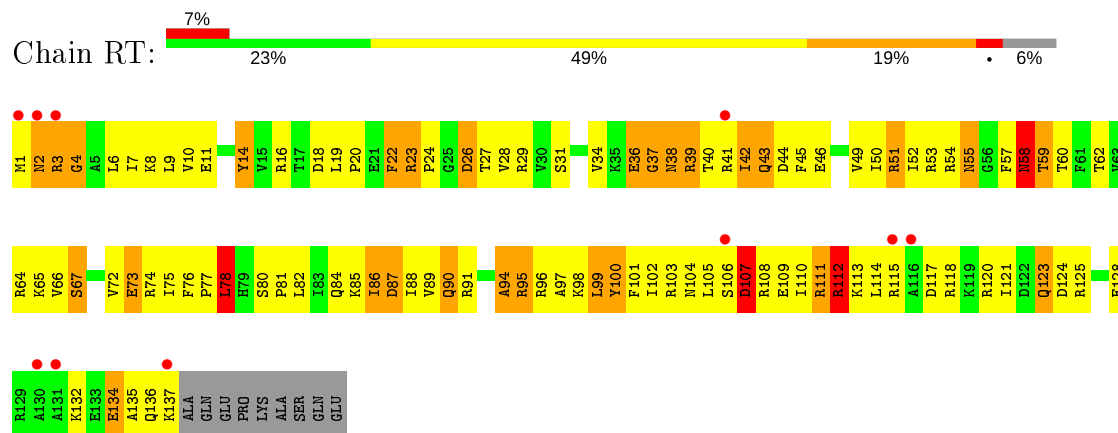
- Molecule 38: 50S ribosomal protein L18



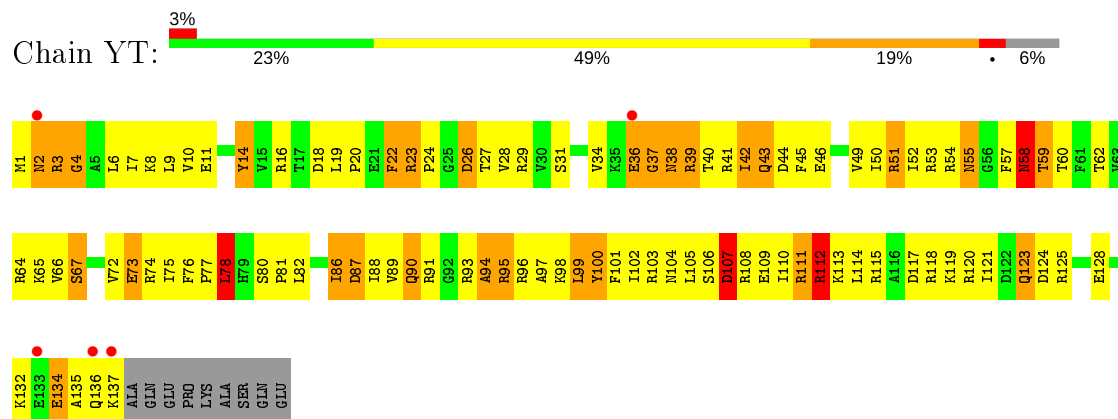
- Molecule 38: 50S ribosomal protein L18



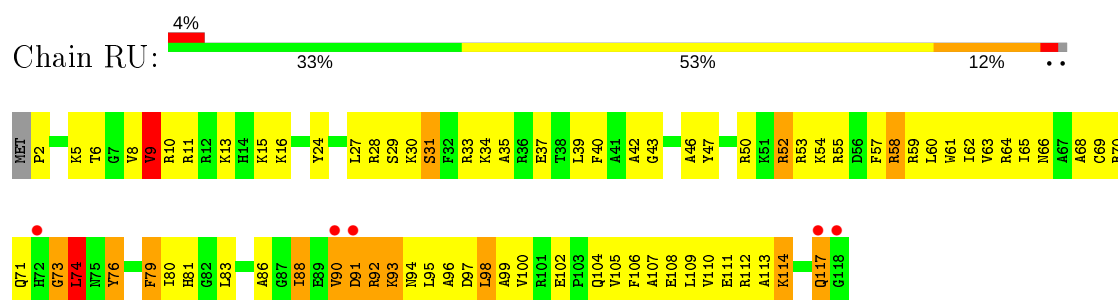
- Molecule 39: 50S ribosomal protein L19



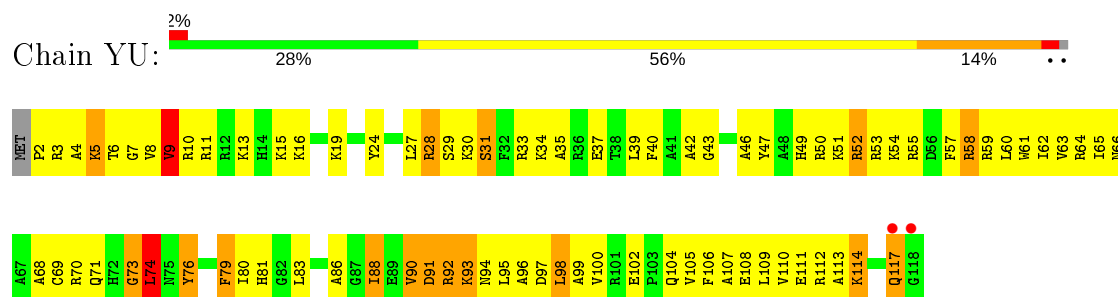
- Molecule 39: 50S ribosomal protein L19



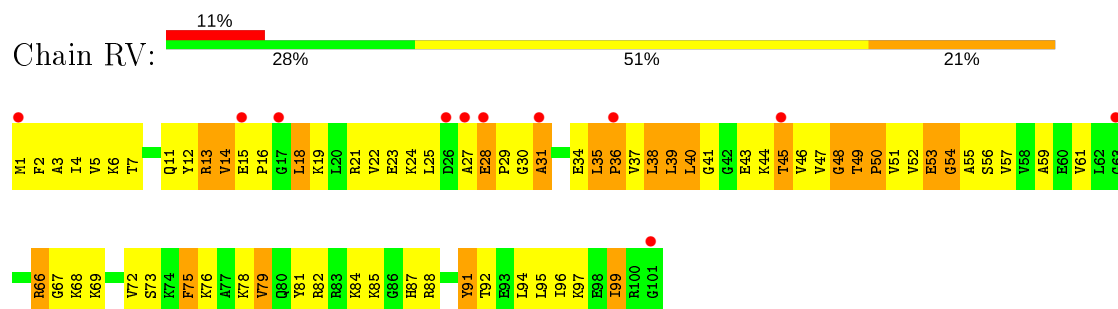
- Molecule 40: 50S ribosomal protein L20



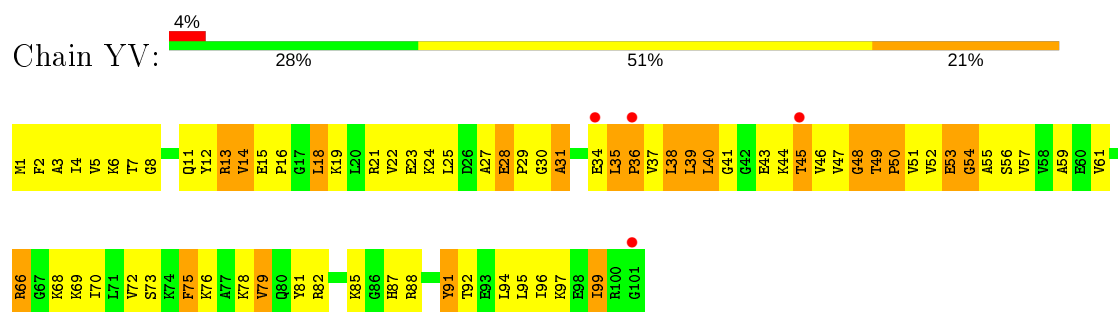
- Molecule 40: 50S ribosomal protein L20



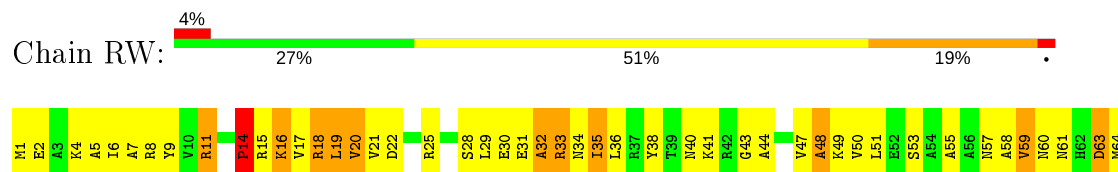
- Molecule 41: 50S ribosomal protein L21

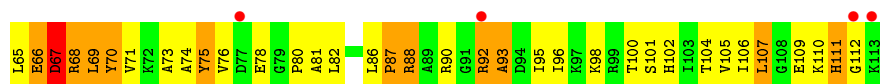


- Molecule 41: 50S ribosomal protein L21

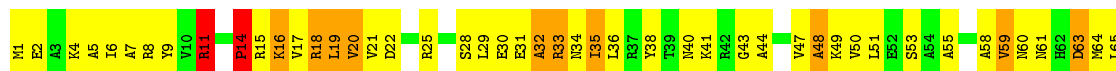


- Molecule 42: 50S ribosomal protein L22

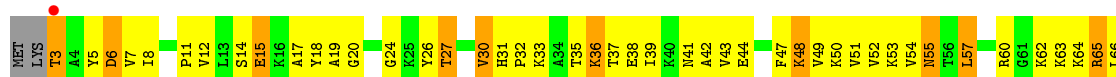




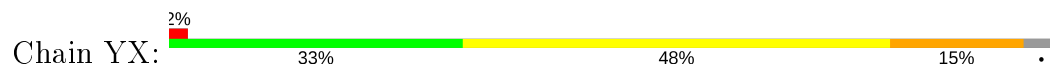
- Molecule 42: 50S ribosomal protein L22



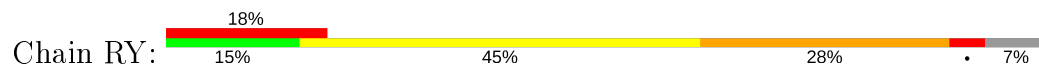
- Molecule 43: 50S ribosomal protein L23



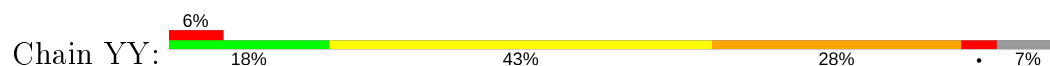
- Molecule 43: 50S ribosomal protein L23

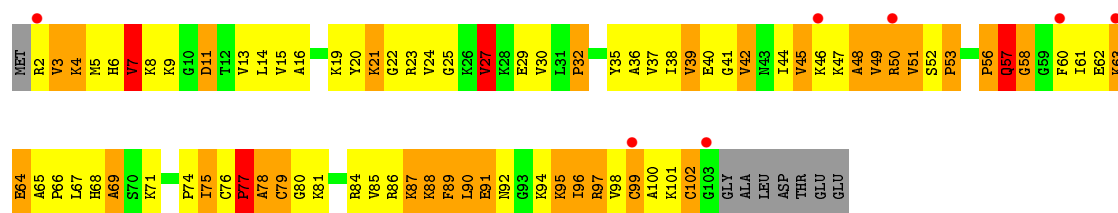


- Molecule 44: 50S ribosomal protein L24

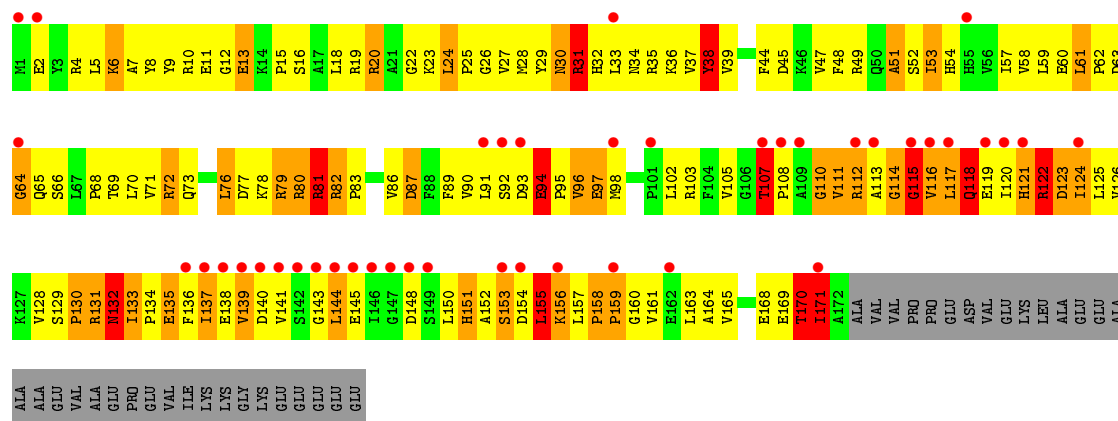
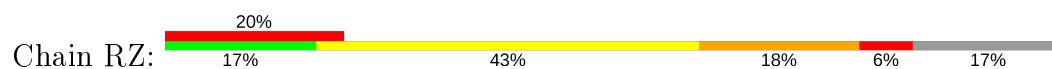


- Molecule 44: 50S ribosomal protein L24

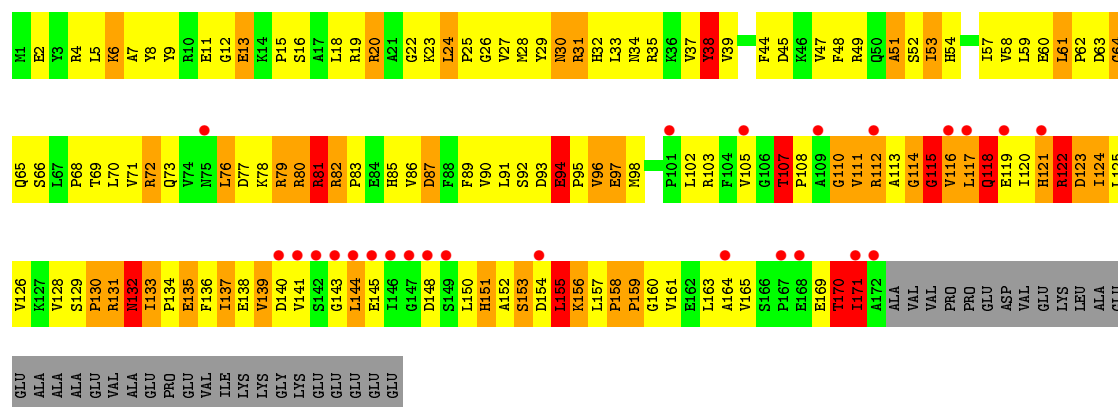
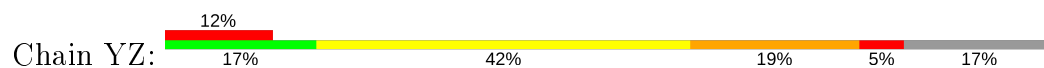




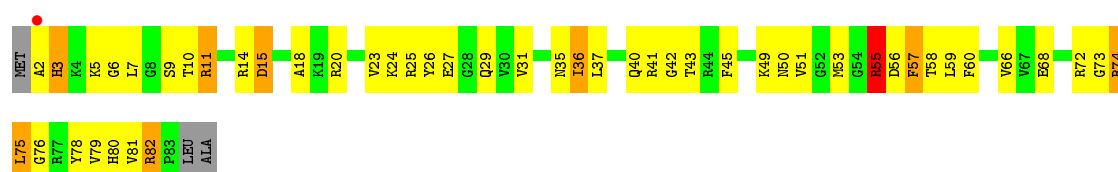
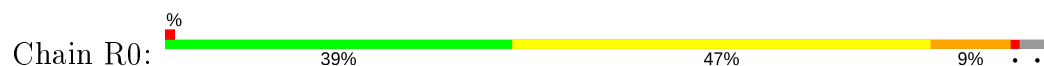
• Molecule 45: 50S ribosomal protein L25



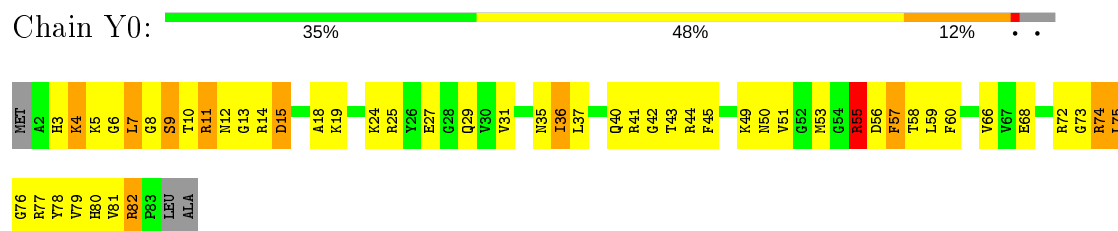
• Molecule 45: 50S ribosomal protein L25



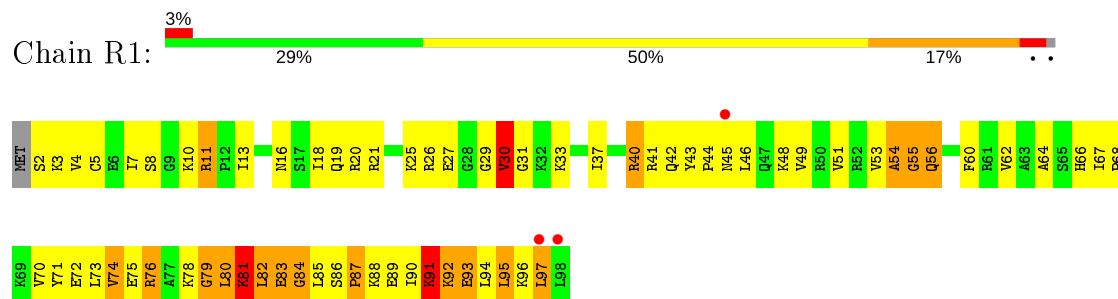
• Molecule 46: 50S ribosomal protein L27



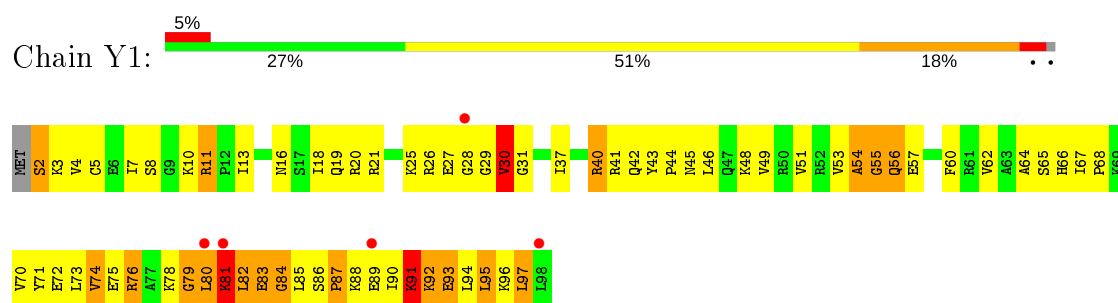
- Molecule 46: 50S ribosomal protein L27



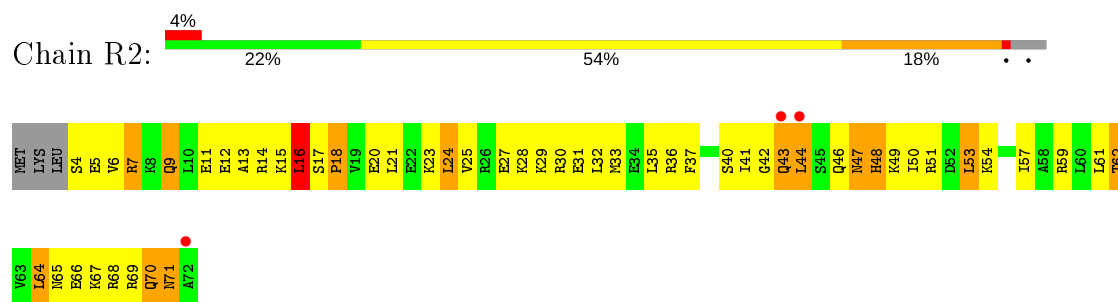
- Molecule 47: 50S ribosomal protein L28



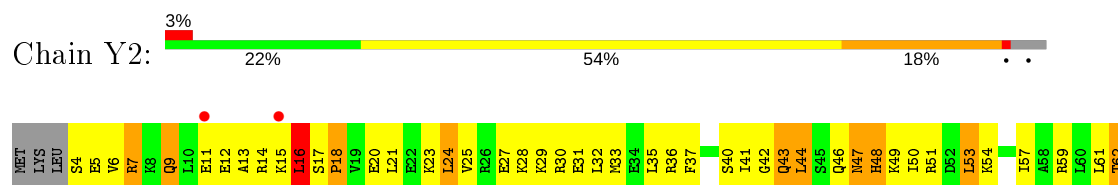
- Molecule 47: 50S ribosomal protein L28



- Molecule 48: 50S ribosomal protein L29



- Molecule 48: 50S ribosomal protein L29





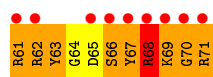
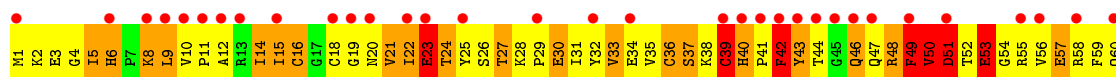
- Molecule 49: 50S ribosomal protein L30



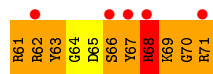
- Molecule 49: 50S ribosomal protein L30



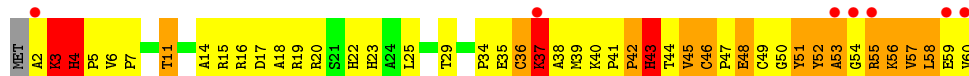
- Molecule 50: 50S ribosomal protein L32



- Molecule 50: 50S ribosomal protein L32

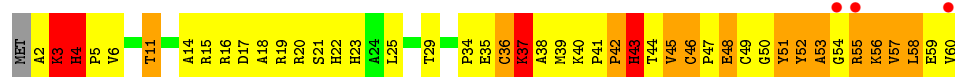


- Molecule 51: 50S ribosomal protein L33



- Molecule 51: 50S ribosomal protein L33

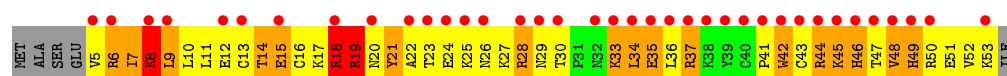




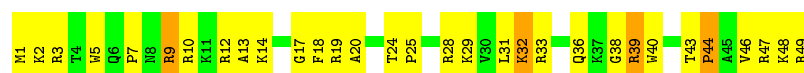
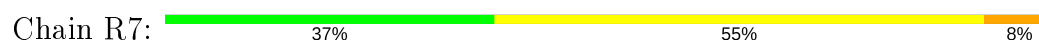
- Molecule 52: 50S ribosomal protein L34



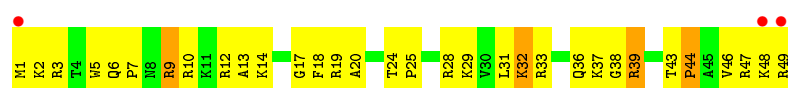
- Molecule 52: 50S ribosomal protein L34



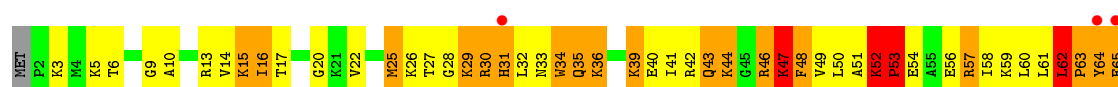
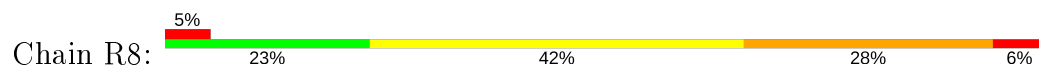
- Molecule 53: 50S ribosomal protein L35



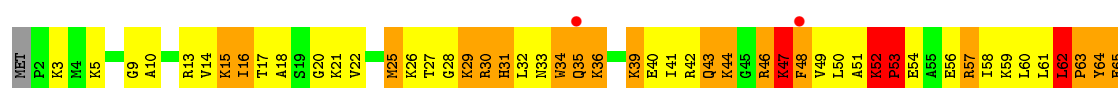
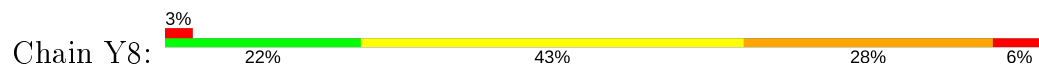
- Molecule 53: 50S ribosomal protein L35



- Molecule 54: tRNA acceptor end mimic



- Molecule 54: tRNA acceptor end mimic



- Molecule 55: RNA (5'-R(*CP*CP*(PPU))-3')





- Molecule 55: RNA (5'-R(*CP*CP*(PPU))-3')

Chain Z8: 33% 67%



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	209.55Å 449.21Å 619.24Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	34.81 – 3.44 34.81 – 3.26	Depositor EDS
% Data completeness (in resolution range)	98.7 (34.81-3.44) 98.2 (34.81-3.26)	Depositor EDS
R_{merge}	0.20	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.44 (at 3.25Å)	Xtriage
Refinement program	PHENIX 1.8.2_1309	Depositor
R, R_{free}	0.243 , 0.285 0.243 , 0.284	Depositor DCC
R_{free} test set	40944 reflections (4.64%)	wwPDB-VP
Wilson B-factor (Å ²)	65.0	Xtriage
Anisotropy	0.193	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.24 , 65.2	EDS
L-test for twinning ²	$\langle L \rangle = 0.37$, $\langle L^2 \rangle = 0.19$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.87	EDS
Total number of atoms	291123	wwPDB-VP
Average B, all atoms (Å ²)	85.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.41% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, MG, PAR, 1MG, PPU

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	QA	0.42	0/36098	0.97	58/56341 (0.1%)
1	XA	0.45	0/36123	1.00	71/56380 (0.1%)
2	QB	0.35	0/1959	0.65	0/2642
2	XB	0.35	0/1959	0.65	0/2642
3	QC	0.36	0/1629	0.60	0/2195
3	XC	0.36	0/1629	0.60	0/2195
4	QD	0.42	0/1733	0.69	1/2318 (0.0%)
4	XD	0.42	0/1733	0.70	1/2318 (0.0%)
5	QE	0.38	0/1171	0.66	0/1576
5	XE	0.38	0/1171	0.66	0/1576
6	QF	0.43	0/856	0.68	0/1154
6	XF	0.43	0/856	0.68	0/1154
7	QG	0.37	0/1276	0.60	0/1709
7	XG	0.37	0/1276	0.61	0/1709
8	QH	0.40	0/1136	0.69	0/1527
8	XH	0.40	0/1136	0.69	0/1527
9	QI	0.36	0/1029	0.67	0/1379
9	XI	0.36	0/1029	0.67	0/1379
10	QJ	0.35	0/814	0.61	0/1095
10	XJ	0.36	0/814	0.61	0/1095
11	QK	0.40	0/900	0.67	0/1213
11	XK	0.40	0/900	0.67	0/1213
12	QL	0.45	0/991	1.00	4/1327 (0.3%)
12	XL	0.45	0/991	1.00	4/1327 (0.3%)
13	QM	0.34	0/974	0.66	0/1303
13	XM	0.35	0/974	0.66	0/1303
14	QN	0.43	0/501	0.70	1/664 (0.2%)
14	XN	0.43	0/501	0.70	1/664 (0.2%)
15	QO	0.39	0/745	0.66	0/992
15	XO	0.39	0/745	0.66	0/992
16	QP	0.37	0/721	0.67	0/970
16	XP	0.37	0/721	0.67	0/970

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	QQ	0.38	0/847	0.68	0/1131
17	XQ	0.38	0/847	0.68	0/1131
18	QR	0.39	0/579	0.72	0/768
18	XR	0.39	0/579	0.73	0/768
19	QS	0.36	0/689	0.84	2/926 (0.2%)
19	XS	0.36	0/689	0.84	2/926 (0.2%)
20	QT	0.34	0/765	0.69	0/1007
20	XT	0.33	0/765	0.69	0/1007
21	QU	0.37	0/221	0.63	0/288
21	XU	0.37	0/221	0.62	0/288
22	QV	0.52	0/1836	0.99	6/2859 (0.2%)
22	XV	0.52	0/1836	0.99	6/2859 (0.2%)
23	QX	0.40	0/189	0.75	0/292
23	XX	0.66	0/189	1.09	2/292 (0.7%)
24	QY	0.51	0/311	0.88	0/483
24	XY	0.52	0/311	0.89	0/483
25	RA	0.52	2/69543 (0.0%)	1.06	149/108563 (0.1%)
25	YA	0.59	2/69521 (0.0%)	1.10	200/108529 (0.2%)
26	RB	0.44	0/2878	1.04	7/4490 (0.2%)
26	YB	0.46	0/2878	1.03	2/4490 (0.0%)
27	RD	0.62	2/2165 (0.1%)	0.90	3/2919 (0.1%)
27	YD	0.62	2/2165 (0.1%)	0.90	3/2919 (0.1%)
28	RE	0.52	0/1601	0.91	2/2160 (0.1%)
28	YE	0.52	0/1601	0.91	2/2160 (0.1%)
29	RF	0.50	0/1620	0.76	0/2194
29	YF	0.50	0/1620	0.76	0/2194
30	RG	0.40	0/1499	0.66	0/2016
30	YG	0.40	0/1499	0.66	0/2016
31	RH	0.45	0/1332	0.85	4/1802 (0.2%)
31	YH	0.45	0/1332	0.85	4/1802 (0.2%)
32	RI	0.40	0/1151	0.80	1/1558 (0.1%)
32	YI	0.40	0/1151	0.79	1/1558 (0.1%)
33	RN	0.46	0/1131	0.78	1/1525 (0.1%)
33	YN	0.46	0/1131	0.78	1/1525 (0.1%)
34	RO	0.53	0/943	0.71	0/1269
34	YO	0.53	0/943	0.71	0/1269
35	RP	0.50	0/1162	0.94	3/1544 (0.2%)
35	YP	0.49	0/1162	0.95	3/1544 (0.2%)
36	RQ	0.53	0/1143	0.89	3/1527 (0.2%)
36	YQ	0.53	0/1143	0.89	3/1527 (0.2%)
37	RR	0.45	0/982	0.80	1/1312 (0.1%)
37	YR	0.45	0/982	0.80	1/1312 (0.1%)
38	RS	0.46	0/892	0.82	1/1187 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	YS	0.45	0/892	0.82	1/1187 (0.1%)
39	RT	0.47	0/1155	0.73	2/1542 (0.1%)
39	YT	0.47	0/1155	0.73	2/1542 (0.1%)
40	RU	0.48	0/982	0.78	0/1306
40	YU	0.48	0/982	0.78	0/1306
41	RV	0.47	0/790	0.82	0/1057
41	YV	0.47	0/790	0.82	0/1057
42	RW	0.45	0/911	0.75	0/1220
42	YW	0.45	0/911	0.75	0/1220
43	RX	0.56	0/739	0.78	0/993
43	YX	0.56	0/739	0.77	0/993
44	RY	0.52	0/798	0.80	0/1064
44	YY	0.52	0/798	0.80	0/1064
45	RZ	0.47	0/1408	0.77	1/1908 (0.1%)
45	YZ	0.47	0/1408	0.77	1/1908 (0.1%)
46	R0	0.57	0/657	0.80	0/874
46	Y0	0.60	0/657	0.85	0/874
47	R1	0.49	0/770	0.85	1/1022 (0.1%)
47	Y1	0.49	0/770	0.85	1/1022 (0.1%)
48	R2	0.50	0/583	0.83	1/771 (0.1%)
48	Y2	0.50	0/583	0.84	1/771 (0.1%)
49	R3	0.43	0/474	0.71	0/635
49	Y3	0.43	0/474	0.71	0/635
50	R4	0.38	0/594	0.78	1/795 (0.1%)
50	Y4	0.38	0/594	0.78	1/795 (0.1%)
51	R5	0.51	0/473	0.74	0/639
51	Y5	0.51	0/473	0.74	0/639
52	R6	0.42	0/431	0.76	0/575
52	Y6	0.42	0/431	0.76	0/575
53	R7	0.56	0/438	0.76	0/575
53	Y7	0.56	0/438	0.76	0/575
54	R8	0.62	0/525	0.93	1/691 (0.1%)
54	Y8	0.62	0/525	0.93	1/691 (0.1%)
55	Z6	0.82	0/40	1.81	1/60 (1.7%)
55	Z8	0.80	0/40	1.80	1/60 (1.7%)
All	All	0.50	8/315563 (0.0%)	0.98	571/471909 (0.1%)

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	YD	236	GLY	C-N	8.59	1.53	1.34
27	RD	236	GLY	C-N	8.55	1.53	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	YD	239	ARG	CA-C	-6.77	1.35	1.52
27	RD	239	ARG	CA-C	-6.76	1.35	1.52
25	YA	783	A	N7-C5	-5.95	1.35	1.39
25	RA	654(T)	C	C1'-N1	5.65	1.57	1.48
25	YA	654(T)	C	C1'-N1	5.13	1.56	1.48
25	RA	751	A	N9-C4	-5.01	1.34	1.37

All (571) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	QL	47	LYS	C-N-CD	-20.50	75.51	120.60
12	XL	47	LYS	C-N-CD	-20.46	75.58	120.60
25	YA	761	A	N1-C6-N6	12.76	126.25	118.60
25	YA	945	A	N9-C1'-C2'	12.75	130.58	114.00
22	QV	17	C	C2-N1-C1'	11.85	131.84	118.80
22	XV	17	C	C2-N1-C1'	11.84	131.82	118.80
1	QA	254	G	O5'-P-OP1	-10.70	96.07	105.70
28	YE	21	VAL	C-N-CD	-10.15	98.26	120.60
1	QA	960	U	N1-C2-O2	10.14	129.90	122.80
28	RE	21	VAL	C-N-CD	-10.13	98.32	120.60
25	YA	945	A	P-O3'-C3'	10.00	131.70	119.70
25	YA	761	A	C5-C6-N6	-9.98	115.71	123.70
1	QA	960	U	N3-C2-O2	-9.72	115.40	122.20
23	XX	6	C	O5'-P-OP1	-9.65	97.01	105.70
25	YA	945	A	C4-N9-C1'	9.32	143.08	126.30
25	YA	761	A	C4-C5-N7	9.24	115.32	110.70
25	RA	1929	G	C6-C5-N7	-9.20	124.88	130.40
25	YA	945	A	C8-N9-C1'	-9.19	111.17	127.70
1	QA	328	C	N1-C2-O2	8.92	124.25	118.90
1	QA	328	C	C2-N1-C1'	8.83	128.51	118.80
22	XV	17	C	C6-N1-C1'	-8.82	110.21	120.80
12	QL	47	LYS	C-N-CA	8.77	158.85	122.00
12	XL	47	LYS	C-N-CA	8.76	158.80	122.00
25	YA	1253	A	N1-C6-N6	8.74	123.84	118.60
25	RA	1899	G	N1-C2-N2	-8.72	108.35	116.20
36	RQ	81	VAL	CB-CA-C	-8.71	94.85	111.40
36	YQ	81	VAL	CB-CA-C	-8.70	94.88	111.40
22	QV	17	C	C6-N1-C1'	-8.68	110.39	120.80
25	YA	2681	C	P-O3'-C3'	8.64	130.06	119.70
25	YA	1929	G	C6-C5-N7	-8.63	125.22	130.40
1	XA	1336	C	C2-N1-C1'	8.59	128.25	118.80
25	YA	1950	G	C4-N9-C1'	8.55	137.62	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	761	A	C5-N7-C8	-8.53	99.64	103.90
45	YZ	115	GLY	N-CA-C	8.49	134.31	113.10
45	RZ	115	GLY	N-CA-C	8.48	134.31	113.10
25	RA	1929	G	C4-C5-N7	8.44	114.17	110.80
25	YA	2506	U	N3-C2-O2	-8.39	116.33	122.20
25	YA	2506	U	N1-C2-O2	8.35	128.64	122.80
1	XA	1301	U	C2-N1-C1'	8.30	127.66	117.70
25	YA	530	G	N1-C6-O6	-8.25	114.95	119.90
1	XA	1158	C	C2-N1-C1'	8.20	127.82	118.80
25	RA	1929	G	C5-C6-O6	-8.14	123.71	128.60
1	XA	1336	C	N1-C2-O2	8.13	123.78	118.90
25	YA	1950	G	N7-C8-N9	8.11	117.16	113.10
1	XA	372	C	C2-N1-C1'	8.11	127.72	118.80
25	YA	783	A	N7-C8-N9	8.10	117.85	113.80
25	YA	783	A	N1-C6-N6	8.07	123.44	118.60
1	XA	254	G	O5'-P-OP1	-8.04	98.46	105.70
1	QA	1301	U	C2-N1-C1'	8.01	127.31	117.70
25	RA	2779	U	O4'-C1'-N1	7.95	114.56	108.20
25	YA	1929	G	OP1-P-O3'	7.93	122.65	105.20
25	YA	783	A	C6-C5-N7	-7.90	126.77	132.30
25	YA	2712(A)	A	N7-C8-N9	7.90	117.75	113.80
1	XA	1064	G	P-O3'-C3'	7.89	129.17	119.70
47	R1	79	GLY	N-CA-C	-7.87	93.42	113.10
1	QA	1322	C	C2-N1-C1'	7.87	127.46	118.80
25	YA	761	A	C6-C5-N7	-7.86	126.80	132.30
25	RA	165	U	C2-N1-C1'	7.85	127.12	117.70
47	Y1	79	GLY	N-CA-C	-7.82	93.54	113.10
25	YA	783	A	C5-N7-C8	-7.79	100.00	103.90
25	RA	685	A	N1-C6-N6	-7.77	113.94	118.60
1	QA	1322	C	N1-C2-O2	7.75	123.55	118.90
25	YA	1950	G	O4'-C1'-N9	7.72	114.37	108.20
1	QA	121	C	C2-N3-C4	-7.71	116.04	119.90
25	RA	2426	A	P-O3'-C3'	7.69	128.93	119.70
25	YA	528	A	N1-C2-N3	7.65	133.12	129.30
25	YA	2584	U	N3-C2-O2	-7.58	116.89	122.20
25	RA	1899	G	N3-C2-N2	7.56	125.19	119.90
1	XA	1322	C	C2-N1-C1'	7.51	127.06	118.80
25	YA	1396	U	C2-N1-C1'	7.50	126.71	117.70
25	RA	1396	U	N1-C2-O2	7.49	128.04	122.80
25	YA	2031	A	O4'-C1'-N9	7.45	114.16	108.20
22	XV	17	C	N1-C2-O2	7.41	123.34	118.90
25	YA	783	A	C8-N9-C4	-7.40	102.84	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1302	U	C2-N1-C1'	7.39	126.57	117.70
23	XX	7	G	P-O3'-C3'	-7.38	110.85	119.70
1	QA	1301	U	N1-C2-O2	7.35	127.94	122.80
1	XA	713	G	N1-C6-O6	-7.34	115.50	119.90
25	RA	1372	U	N1-C2-O2	7.32	127.93	122.80
25	YA	1929	G	C4-C5-N7	7.29	113.72	110.80
25	YA	912	C	N3-C2-O2	-7.28	116.81	121.90
25	RA	2702	U	N1-C2-O2	7.28	127.89	122.80
35	YP	59	LEU	N-CA-C	-7.26	91.40	111.00
35	RP	59	LEU	N-CA-C	-7.26	91.41	111.00
25	YA	1950	G	C8-N9-C4	-7.25	103.50	106.40
25	YA	912	C	N1-C2-O2	7.23	123.24	118.90
1	XA	328	C	C6-N1-C2	-7.23	117.41	120.30
25	YA	242	G	P-O3'-C3'	7.22	128.36	119.70
25	RA	1929	G	OP1-P-O3'	7.21	121.07	105.20
25	RA	2712(A)	A	C8-N9-C4	-7.21	102.92	105.80
25	YA	2447	G	C8-N9-C1'	7.18	136.34	127.00
25	YA	761	A	N9-C4-C5	-7.16	102.94	105.80
22	QV	17	C	N1-C2-O2	7.14	123.18	118.90
25	RA	1929	G	N1-C6-O6	7.12	124.17	119.90
25	YA	140	A	C8-N9-C4	-7.10	102.96	105.80
1	XA	1322	C	N1-C2-O2	7.09	123.15	118.90
1	QA	1158	C	C2-N1-C1'	7.08	126.58	118.80
36	RQ	81	VAL	N-CA-C	7.08	130.11	111.00
25	YA	528	A	C2-N3-C4	-7.08	107.06	110.60
36	YQ	81	VAL	N-CA-C	7.07	130.08	111.00
25	RA	1396	U	C2-N1-C1'	7.06	126.17	117.70
25	YA	1396	U	N1-C2-O2	7.05	127.74	122.80
25	RA	2031	A	O4'-C1'-N9	7.00	113.80	108.20
25	RA	2712(A)	A	N7-C8-N9	6.99	117.30	113.80
25	RA	1955	U	P-O3'-C3'	6.97	128.06	119.70
1	QA	723	U	C2-N1-C1'	6.96	126.05	117.70
1	XA	1301	U	N1-C2-O2	6.94	127.66	122.80
25	RA	205	G	P-O3'-C3'	6.93	128.02	119.70
25	YA	2447	G	N3-C4-N9	-6.93	121.84	126.00
25	YA	1130	U	P-O3'-C3'	6.92	128.00	119.70
25	YA	140	A	N7-C8-N9	6.91	117.26	113.80
1	QA	372	C	C2-N1-C1'	6.90	126.39	118.80
25	YA	1496	A	C8-N9-C4	-6.89	103.04	105.80
1	QA	1301	U	N3-C2-O2	-6.87	117.39	122.20
25	YA	828	U	N3-C2-O2	-6.85	117.40	122.20
25	YA	1929	G	N9-C4-C5	-6.84	102.67	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	328	C	N3-C2-O2	-6.82	117.13	121.90
25	YA	2032	G	N3-C4-C5	6.81	132.00	128.60
25	YA	2060	A	P-O3'-C3'	6.80	127.87	119.70
25	YA	2573	C	N1-C2-O2	6.78	122.97	118.90
25	YA	1396	U	N3-C2-O2	-6.77	117.46	122.20
1	XA	792	A	P-O3'-C3'	6.77	127.82	119.70
25	RA	2702	U	C2-N1-C1'	6.71	125.75	117.70
25	RA	1786	A	N7-C8-N9	6.71	117.15	113.80
25	RA	1130	U	P-O3'-C3'	6.70	127.74	119.70
55	Z6	74	C	N1-C2-O2	6.70	122.92	118.90
25	RA	165	U	N1-C2-O2	6.69	127.48	122.80
25	RA	2307	G	O4'-C1'-N9	6.68	113.55	108.20
55	Z8	74	C	N1-C2-O2	6.68	122.91	118.90
25	RA	1396	U	N3-C2-O2	-6.65	117.55	122.20
25	YA	2447	G	C4-N9-C1'	-6.64	117.86	126.50
25	RA	676	A	O4'-C1'-N9	6.64	113.51	108.20
25	RA	512	G	N3-C4-N9	-6.61	122.03	126.00
25	RA	512	G	C8-N9-C1'	6.61	135.59	127.00
25	RA	2681	C	P-O3'-C3'	6.60	127.62	119.70
1	XA	792	A	N1-C6-N6	6.59	122.55	118.60
1	XA	1053	G	C4-N9-C1'	-6.59	117.94	126.50
25	YA	1300	U	P-O3'-C3'	6.58	127.59	119.70
25	YA	1496	A	N7-C8-N9	6.56	117.08	113.80
25	YA	2779	U	O4'-C1'-N1	6.56	113.45	108.20
27	RD	131	LEU	CA-CB-CG	6.55	130.38	115.30
27	YD	131	LEU	CA-CB-CG	6.53	130.32	115.30
25	YA	2681	C	OP2-P-O3'	6.53	119.56	105.20
12	XL	48	PRO	CA-N-CD	-6.53	102.36	111.50
1	QA	328	C	C6-N1-C2	-6.52	117.69	120.30
1	XA	186(A)	C	C6-N1-C2	-6.51	117.70	120.30
25	YA	1554	A	P-O3'-C3'	6.51	127.51	119.70
25	YA	512	G	O4'-C1'-N9	6.48	113.39	108.20
12	QL	48	PRO	CA-N-CD	-6.46	102.46	111.50
25	YA	2375	G	N1-C6-O6	6.45	123.77	119.90
1	XA	372	C	C6-N1-C1'	-6.44	113.08	120.80
25	RA	1795	C	C6-N1-C2	-6.43	117.73	120.30
25	RA	2584	U	N3-C2-O2	-6.43	117.70	122.20
25	RA	1929	G	N9-C4-C5	-6.42	102.83	105.40
25	YA	676	A	C5-N7-C8	-6.41	100.69	103.90
25	YA	530	G	N3-C2-N2	6.40	124.38	119.90
1	XA	913	A	P-O3'-C3'	6.39	127.36	119.70
25	RA	2490	G	C4-N9-C1'	6.38	134.79	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1372	U	N3-C2-O2	-6.36	117.75	122.20
1	XA	1301	U	C6-N1-C1'	-6.36	112.30	121.20
25	YA	1332	G	C4-N9-C1'	6.36	134.77	126.50
1	QA	328	C	C5-C6-N1	6.36	124.18	121.00
25	YA	676	A	C2-N3-C4	-6.34	107.43	110.60
25	RA	2584	U	C6-N1-C2	-6.33	117.20	121.00
1	XA	792	A	C4-C5-N7	6.33	113.86	110.70
25	RA	1332	G	C6-C5-N7	-6.32	126.61	130.40
22	QV	17	C	C6-N1-C2	-6.32	117.77	120.30
1	XA	1336	C	C6-N1-C1'	-6.30	113.24	120.80
25	YA	1799	G	P-O3'-C3'	6.30	127.26	119.70
25	YA	2682	U	OP1-P-OP2	-6.30	110.15	119.60
25	YA	2832	U	P-O3'-C3'	6.30	127.26	119.70
25	YA	1950	G	C8-N9-C1'	-6.29	118.82	127.00
1	XA	372	C	N1-C2-O2	6.29	122.67	118.90
25	YA	205	G	O4'-C1'-N9	6.29	113.23	108.20
25	RA	2688	U	N3-C2-O2	-6.29	117.80	122.20
25	RA	465	G	C8-N9-C4	-6.29	103.89	106.40
1	XA	960	U	C2-N1-C1'	6.28	125.23	117.70
25	YA	2419	U	OP1-P-O3'	6.28	119.01	105.20
25	YA	783	A	C4-C5-N7	6.27	113.83	110.70
25	YA	2584	U	C5-C4-O4	6.27	129.66	125.90
25	YA	1332	G	C8-N9-C1'	-6.27	118.85	127.00
1	XA	1054	C	N1-C2-O2	6.25	122.65	118.90
25	YA	2311	A	C2-N3-C4	-6.25	107.47	110.60
25	RA	1543	A	P-O3'-C3'	6.25	127.19	119.70
1	XA	1224	G	P-O3'-C3'	6.24	127.19	119.70
25	YA	1253	A	C5-C6-N6	-6.23	118.72	123.70
1	XA	372	C	C5-C6-N1	6.22	124.11	121.00
25	YA	1930	G	C6-C5-N7	6.21	134.12	130.40
25	RA	165	U	N3-C2-O2	-6.20	117.86	122.20
25	RA	828	U	C2-N1-C1'	6.20	125.14	117.70
25	RA	2420	C	O5'-P-OP1	-6.19	100.13	105.70
25	YA	1314	C	C6-N1-C2	-6.19	117.82	120.30
25	RA	2395	C	C5-C6-N1	6.17	124.09	121.00
25	YA	1253	A	C4-C5-N7	6.17	113.79	110.70
25	RA	1781	C	C2-N1-C1'	6.17	125.58	118.80
25	RA	372	G	C4-N9-C1'	-6.16	118.49	126.50
1	XA	701	C	P-O3'-C3'	6.15	127.08	119.70
1	XA	1158	C	N1-C2-O2	6.15	122.59	118.90
1	XA	754	C	C2-N1-C1'	6.13	125.55	118.80
1	QA	1530	G	OP2-P-O3'	6.12	118.67	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1322	C	C6-N1-C1'	-6.10	113.48	120.80
1	XA	1158	C	C6-N1-C2	-6.09	117.86	120.30
25	RA	676	A	N7-C8-N9	6.08	116.84	113.80
25	YA	1332	G	C6-C5-N7	-6.08	126.75	130.40
25	RA	1781	C	C6-N1-C1'	-6.07	113.52	120.80
25	RA	1653	G	P-O3'-C3'	6.06	126.97	119.70
25	YA	2702	U	O4'-C1'-N1	6.05	113.04	108.20
37	YR	9	LYS	N-CA-C	-6.03	94.71	111.00
37	RR	9	LYS	N-CA-C	-6.03	94.72	111.00
1	QA	1158	C	N1-C2-O2	6.02	122.51	118.90
1	QA	1322	C	C6-N1-C1'	-6.02	113.58	120.80
25	RA	685	A	C8-N9-C4	-6.02	103.39	105.80
25	YA	1247	A	C8-N9-C4	6.01	108.20	105.80
25	RA	512	G	C4-N9-C1'	-6.01	118.69	126.50
25	RA	621	A	O4'-C1'-N9	6.01	113.01	108.20
26	RB	44	G	C4-N9-C1'	-6.01	118.69	126.50
25	RA	2307	G	C4-N9-C1'	6.01	134.31	126.50
25	YA	1786	A	N7-C8-N9	6.00	116.80	113.80
1	XA	1054	C	C2-N1-C1'	5.99	125.39	118.80
25	YA	1929	G	N3-C4-N9	5.99	129.59	126.00
25	RA	1929	G	N3-C4-N9	5.99	129.59	126.00
25	YA	1607	C	N1-C2-O2	5.97	122.48	118.90
1	QA	871	U	P-O3'-C3'	5.97	126.86	119.70
25	YA	1937	A	P-O3'-C3'	5.97	126.86	119.70
25	YA	2439	A	P-O3'-C3'	5.97	126.86	119.70
25	RA	2584	U	C2-N1-C1'	5.96	124.85	117.70
1	XA	713	G	C5-C6-O6	5.96	132.18	128.60
25	YA	59	U	N3-C2-O2	-5.94	118.04	122.20
25	YA	912	C	C2-N1-C1'	5.94	125.33	118.80
1	QA	971	G	O4'-C1'-N9	5.93	112.94	108.20
25	RA	1980	G	P-O3'-C3'	5.93	126.81	119.70
25	RA	856	C	C5-C6-N1	5.93	123.96	121.00
25	YA	1653	G	P-O3'-C3'	5.92	126.81	119.70
1	QA	1065	U	P-O3'-C3'	5.92	126.80	119.70
25	YA	142	G	C4-N9-C1'	-5.91	118.82	126.50
25	YA	2848	G	P-O3'-C3'	5.90	126.78	119.70
22	QV	17	C	C5-C6-N1	5.88	123.94	121.00
25	YA	652	C	N1-C2-O2	5.87	122.42	118.90
31	YH	125	VAL	C-N-CD	-5.87	107.68	120.60
25	YA	298	G	C5-N7-C8	-5.86	101.37	104.30
1	QA	121	C	N1-C2-N3	5.86	123.30	119.20
25	YA	2429	G	OP2-P-O3'	5.86	118.09	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2439	A	C8-N9-C4	-5.86	103.46	105.80
25	RA	2439	A	P-O3'-C3'	5.85	126.72	119.70
1	XA	1054	C	C6-N1-C1'	-5.85	113.78	120.80
12	QL	119	LYS	N-CA-C	-5.84	95.22	111.00
28	RE	58	ARG	N-CA-C	-5.84	95.23	111.00
25	RA	1332	G	C4-N9-C1'	5.84	134.09	126.50
25	RA	2702	U	N3-C2-O2	-5.84	118.11	122.20
31	RH	125	VAL	C-N-CD	-5.84	107.76	120.60
1	QA	328	C	C6-N1-C1'	-5.84	113.80	120.80
25	RA	624	C	C2-N1-C1'	5.83	125.22	118.80
25	RA	1505	C	C2-N1-C1'	5.83	125.21	118.80
35	RP	26	GLY	N-CA-C	-5.83	98.53	113.10
22	XV	17	C	C6-N1-C2	-5.83	117.97	120.30
26	YB	31	C	N1-C2-O2	5.83	122.39	118.90
25	RA	512	G	O4'-C1'-N9	5.82	112.86	108.20
25	RA	685	A	P-O3'-C3'	5.82	126.69	119.70
25	YA	1950	G	C6-C5-N7	-5.82	126.91	130.40
25	RA	306	U	O5'-P-OP1	5.82	117.68	110.70
28	YE	58	ARG	N-CA-C	-5.82	95.29	111.00
25	RA	1694	C	P-O3'-C3'	5.81	126.68	119.70
35	YP	26	GLY	N-CA-C	-5.81	98.58	113.10
12	XL	119	LYS	N-CA-C	-5.80	95.33	111.00
1	QA	1069	C	C6-N1-C2	-5.80	117.98	120.30
25	RA	685	A	N9-C4-C5	5.79	108.12	105.80
25	YA	2032	G	C4-C5-N7	5.79	113.12	110.80
25	RA	2032	G	C5-N7-C8	-5.79	101.41	104.30
25	RA	74	A	N1-C6-N6	5.79	122.07	118.60
25	YA	1359	A	C5-C6-N6	-5.78	119.07	123.70
25	YA	2584	U	N1-C2-N3	5.78	118.37	114.90
25	YA	2573	C	C2-N1-C1'	5.78	125.16	118.80
25	RA	1929	G	C5-N7-C8	-5.78	101.41	104.30
25	RA	2205	C	C2-N1-C1'	5.78	125.16	118.80
25	YA	2032	G	N1-C6-O6	5.78	123.36	119.90
25	YA	828	U	C2-N1-C1'	5.77	124.62	117.70
1	QA	687	A	P-O3'-C3'	5.76	126.61	119.70
25	RA	242	G	P-O3'-C3'	5.76	126.61	119.70
25	RA	1505	C	N1-C2-O2	5.76	122.36	118.90
1	QA	1200	C	P-O3'-C3'	5.75	126.60	119.70
48	Y2	16	LEU	N-CA-C	-5.75	95.49	111.00
1	QA	701	C	P-O3'-C3'	5.74	126.59	119.70
48	R2	16	LEU	N-CA-C	-5.74	95.50	111.00
1	QA	974	A	O4'-C1'-N9	5.73	112.79	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1786	A	C5-N7-C8	-5.73	101.03	103.90
1	QA	372	C	C6-N1-C2	-5.73	118.01	120.30
25	YA	1929	G	N1-C6-O6	5.72	123.33	119.90
25	YA	1881	C	C2-N1-C1'	5.71	125.08	118.80
19	XS	6	LYS	N-CA-C	-5.71	95.59	111.00
25	RA	856	C	C6-N1-C2	-5.71	118.02	120.30
25	YA	2712(A)	A	C8-N9-C4	-5.70	103.52	105.80
25	YA	2406	U	O5'-P-OP2	-5.70	100.57	105.70
19	QS	6	LYS	N-CA-C	-5.70	95.61	111.00
25	RA	2326	C	C6-N1-C2	-5.69	118.02	120.30
1	XA	1336	C	N3-C2-O2	-5.69	117.92	121.90
25	RA	1332	G	C8-N9-C1'	-5.68	119.61	127.00
25	YA	1359	A	N9-C4-C5	-5.68	103.53	105.80
25	RA	383	U	N1-C2-O2	5.68	126.77	122.80
25	RA	1372	U	C2-N1-C1'	5.67	124.51	117.70
1	XA	754	C	N1-C2-O2	5.67	122.30	118.90
1	QA	1200	C	OP2-P-O3'	5.67	117.66	105.20
1	XA	753	A	P-O3'-C3'	5.67	126.50	119.70
14	QN	40	CYS	CA-CB-SG	5.66	124.18	114.00
25	RA	650	C	C6-N1-C2	-5.65	118.04	120.30
26	RB	37	C	C6-N1-C2	-5.65	118.04	120.30
25	YA	2544	G	N1-C6-O6	5.65	123.29	119.90
1	XA	1094	G	OP2-P-O3'	5.65	117.62	105.20
25	RA	1197	G	C5-C6-O6	5.65	131.99	128.60
14	XN	40	CYS	CA-CB-SG	5.63	124.14	114.00
1	QA	913	A	P-O3'-C3'	5.63	126.45	119.70
25	RA	752	A	C8-N9-C4	-5.63	103.55	105.80
25	YA	2573	C	C6-N1-C1'	-5.62	114.06	120.80
25	YA	512	G	C8-N9-C1'	5.62	134.30	127.00
25	YA	1830	C	C5-C6-N1	5.62	123.81	121.00
25	RA	1078	U	P-O3'-C3'	5.61	126.43	119.70
25	YA	860	U	N3-C2-O2	-5.60	118.28	122.20
25	YA	828	U	N1-C2-O2	5.60	126.72	122.80
1	XA	812	C	P-O3'-C3'	5.60	126.42	119.70
25	RA	74	A	N7-C8-N9	5.59	116.59	113.80
25	RA	372	G	C8-N9-C1'	5.59	134.26	127.00
25	RA	2335	A	O4'-C1'-N9	5.59	112.67	108.20
1	XA	1094	G	P-O3'-C3'	5.58	126.39	119.70
25	RA	1941	C	C6-N1-C2	-5.58	118.07	120.30
25	YA	2198	A	P-O3'-C3'	5.58	126.39	119.70
25	YA	1979	C	C6-N1-C2	-5.57	118.07	120.30
25	YA	792	G	N3-C4-C5	-5.57	125.81	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	205	G	OP2-P-O3'	5.57	117.44	105.20
25	YA	372	G	OP2-P-O3'	5.56	117.43	105.20
25	YA	1193	G	C8-N9-C4	5.56	108.62	106.40
50	R4	39	CYS	N-CA-C	-5.55	96.00	111.00
25	YA	974(A)	C	P-O3'-C3'	5.54	126.35	119.70
33	YN	114	ARG	N-CA-C	-5.54	96.03	111.00
1	QA	372	C	N1-C2-O2	5.54	122.22	118.90
25	RA	2776	A	C8-N9-C4	-5.54	103.58	105.80
1	XA	701	C	OP2-P-O3'	5.54	117.38	105.20
1	XA	792	A	C6-C5-N7	-5.54	128.43	132.30
1	QA	372	C	C5-C6-N1	5.53	123.77	121.00
25	RA	1914	C	N1-C2-O2	5.53	122.22	118.90
25	RA	1992	G	C8-N9-C4	-5.53	104.19	106.40
25	YA	2318	G	O4'-C1'-N9	5.53	112.62	108.20
1	XA	1053	G	C8-N9-C1'	5.53	134.19	127.00
25	RA	1411	C	N1-C2-O2	5.53	122.22	118.90
25	YA	1130	U	C6-N1-C2	-5.53	117.69	121.00
25	YA	796	C	C6-N1-C2	5.52	122.51	120.30
1	QA	690	G	O4'-C1'-N9	5.52	112.62	108.20
33	RN	114	ARG	N-CA-C	-5.52	96.09	111.00
50	Y4	39	CYS	N-CA-C	-5.52	96.10	111.00
25	YA	1786	A	C5-N7-C8	-5.52	101.14	103.90
1	XA	690	G	O4'-C1'-N9	5.51	112.61	108.20
25	RA	372	G	O4'-C1'-N9	5.51	112.61	108.20
1	XA	328	C	P-O3'-C3'	5.50	126.30	119.70
1	QA	1322	C	C5-C6-N1	5.49	123.75	121.00
25	RA	475	U	C2-N1-C1'	5.49	124.29	117.70
25	YA	287	C	C6-N1-C2	5.49	122.49	120.30
25	RA	828	U	N1-C2-O2	5.48	126.64	122.80
25	RA	2585	U	P-O3'-C3'	5.48	126.28	119.70
26	RB	42	C	C5-C4-N4	-5.48	116.36	120.20
25	YA	1314	C	C2-N1-C1'	5.48	124.83	118.80
1	XA	481	G	P-O3'-C3'	5.48	126.28	119.70
25	RA	1937	A	C8-N9-C4	5.47	107.99	105.80
25	YA	535	C	C6-N1-C2	-5.47	118.11	120.30
25	YA	1929	G	O4'-C1'-N9	-5.47	103.82	108.20
25	YA	2751	G	C3'-C2'-C1'	5.47	105.88	101.50
1	QA	792	A	P-O3'-C3'	5.47	126.26	119.70
25	RA	912	C	C6-N1-C2	-5.47	118.11	120.30
26	YB	43	C	C2-N1-C1'	5.47	124.81	118.80
31	YH	127	GLU	N-CA-C	-5.47	96.24	111.00
25	YA	1929	G	C5-C6-O6	-5.46	125.32	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	703	G	P-O3'-C3'	5.46	126.26	119.70
1	XA	871	U	P-O3'-C3'	5.46	126.25	119.70
1	QA	1301	U	C6-N1-C1'	-5.45	113.57	121.20
25	RA	1786	A	C8-N9-C4	-5.45	103.62	105.80
1	XA	687	A	P-O3'-C3'	5.45	126.25	119.70
25	YA	1253	A	N9-C4-C5	-5.45	103.62	105.80
26	RB	43	C	N3-C2-O2	-5.45	118.08	121.90
35	RP	25	SER	N-CA-C	-5.45	96.29	111.00
27	RD	251	GLY	N-CA-C	5.44	126.70	113.10
25	YA	1050	A	N7-C8-N9	5.44	116.52	113.80
4	QD	12	CYS	CA-CB-SG	5.44	123.79	114.00
25	YA	2584	U	C6-N1-C2	-5.44	117.74	121.00
25	YA	2588	G	C4-C5-N7	5.44	112.97	110.80
25	YA	974(A)	C	N3-C2-O2	-5.43	118.10	121.90
27	YD	251	GLY	N-CA-C	5.43	126.67	113.10
25	RA	593	G	O4'-C1'-N9	5.43	112.54	108.20
25	YA	487	C	N1-C2-O2	5.42	122.15	118.90
1	XA	971	G	C4-N9-C1'	-5.42	119.46	126.50
35	YP	25	SER	N-CA-C	-5.42	96.37	111.00
1	QA	533	A	P-O3'-C3'	5.42	126.20	119.70
31	RH	127	GLU	N-CA-C	-5.42	96.38	111.00
25	YA	676	A	O4'-C1'-N9	5.42	112.53	108.20
4	XD	12	CYS	CA-CB-SG	5.41	123.74	114.00
25	RA	702	G	C4-N9-C1'	5.41	133.53	126.50
25	RA	2326	C	C5-C6-N1	5.41	123.70	121.00
1	XA	1158	C	C6-N1-C1'	-5.41	114.31	120.80
25	RA	1899	G	C6-C5-N7	-5.40	127.16	130.40
32	RI	135	GLU	N-CA-C	5.39	125.56	111.00
1	XA	792	A	C2-N3-C4	-5.39	107.90	110.60
32	YI	135	GLU	N-CA-C	5.39	125.56	111.00
25	RA	1786	A	C6-C5-N7	-5.39	128.53	132.30
25	YA	1819	A	P-O3'-C3'	5.39	126.17	119.70
1	XA	893	C	N1-C2-O2	5.39	122.13	118.90
27	YD	111	LEU	CA-CB-CG	5.38	127.68	115.30
25	RA	270(Z)	U	O4'-C1'-N1	5.38	112.50	108.20
25	RA	1899	G	N3-C4-N9	5.38	129.23	126.00
31	RH	100	GLY	N-CA-C	-5.38	99.66	113.10
31	YH	100	GLY	N-CA-C	-5.37	99.67	113.10
25	RA	1781	C	O4'-C1'-N1	5.37	112.49	108.20
25	RA	1496	A	N7-C8-N9	5.36	116.48	113.80
1	XA	1003	G	N9-C1'-C2'	-5.36	106.11	112.00
1	XA	428	G	P-O3'-C3'	5.36	126.13	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	265	A	C5-C6-N1	5.36	120.38	117.70
25	RA	1379	A	O4'-C1'-N9	5.35	112.48	108.20
27	RD	111	LEU	CA-CB-CG	5.35	127.61	115.30
25	RA	787	U	O5'-P-OP2	-5.35	100.89	105.70
22	XV	17	C	N3-C2-O2	-5.35	118.16	121.90
25	YA	1936	A	N1-C6-N6	5.34	121.81	118.60
25	RA	27	G	C4-N9-C1'	-5.34	119.56	126.50
25	RA	226	G	P-O3'-C3'	5.34	126.11	119.70
25	RA	2689	U	P-O3'-C3'	5.34	126.11	119.70
1	XA	1302	U	C6-N1-C1'	-5.34	113.72	121.20
1	QA	882	C	N1-C2-O2	5.34	122.10	118.90
1	XA	1158	C	C5-C6-N1	5.34	123.67	121.00
25	RA	74	A	C8-N9-C4	-5.33	103.67	105.80
25	YA	372	G	P-O3'-C3'	5.33	126.10	119.70
25	YA	2032	G	C5-N7-C8	-5.33	101.63	104.30
1	XA	1528	U	P-O3'-C3'	5.32	126.08	119.70
22	XV	17	C	C5-C6-N1	5.32	123.66	121.00
25	YA	1319	G	N7-C8-N9	5.31	115.76	113.10
25	RA	2782	G	N3-C4-N9	5.31	129.19	126.00
25	YA	140	A	O4'-C1'-N9	5.31	112.45	108.20
25	YA	848	G	N3-C4-N9	5.31	129.19	126.00
54	R8	36	LYS	N-CA-C	-5.31	96.66	111.00
25	RA	1929	G	N7-C8-N9	5.31	115.75	113.10
25	RA	1992	G	N3-C4-C5	-5.31	125.95	128.60
1	XA	1503	A	P-O3'-C3'	5.30	126.07	119.70
25	YA	1558	A	P-O3'-C3'	5.30	126.07	119.70
25	YA	1694	C	P-O3'-C3'	5.30	126.06	119.70
54	Y8	36	LYS	N-CA-C	-5.30	96.68	111.00
1	XA	1302	U	N1-C2-O2	5.30	126.51	122.80
25	YA	704	G	P-O3'-C3'	5.28	126.04	119.70
25	YA	1950	G	C5-N7-C8	-5.28	101.66	104.30
25	YA	205	G	P-O3'-C3'	5.28	126.04	119.70
25	YA	1210	A	N7-C8-N9	5.28	116.44	113.80
1	XA	792	A	C5-N7-C8	-5.28	101.26	103.90
1	XA	1200	C	P-O3'-C3'	5.27	126.03	119.70
25	YA	335	C	C6-N1-C2	-5.27	118.19	120.30
1	XA	1374	A	O4'-C1'-N9	5.27	112.41	108.20
25	YA	205	G	OP2-P-O3'	5.26	116.78	105.20
25	RA	1558	A	P-O3'-C3'	5.26	126.02	119.70
25	YA	1332	G	N3-C4-N9	5.26	129.16	126.00
25	YA	2375	G	C5-C6-O6	-5.26	125.44	128.60
25	YA	2779	U	C2-N1-C1'	5.26	124.01	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	372	G	OP2-P-O3'	5.25	116.76	105.20
25	YA	404	C	P-O3'-C3'	5.25	126.00	119.70
38	RS	110	LEU	CA-CB-CG	5.25	127.38	115.30
25	YA	2254	C	N1-C2-O2	-5.25	115.75	118.90
25	YA	1218	C	N1-C2-O2	5.25	122.05	118.90
25	YA	624	C	N1-C2-O2	5.25	122.05	118.90
25	YA	1204	A	O4'-C1'-N9	5.24	112.39	108.20
25	YA	1407	C	N1-C2-O2	5.24	122.05	118.90
1	XA	1065	U	P-O3'-C3'	5.23	125.98	119.70
25	YA	1936	A	N9-C4-C5	-5.23	103.71	105.80
25	YA	2585	U	C6-N1-C2	5.23	124.14	121.00
25	RA	1241	A	O4'-C1'-N9	5.23	112.38	108.20
25	YA	1607	C	C2-N1-C1'	5.23	124.55	118.80
36	YQ	5	ARG	N-CA-C	-5.22	96.90	111.00
1	QA	960	U	C2-N1-C1'	5.22	123.96	117.70
25	RA	404	C	P-O3'-C3'	5.22	125.96	119.70
1	QA	703	G	P-O3'-C3'	5.21	125.96	119.70
25	RA	102	G	C8-N9-C1'	-5.21	120.23	127.00
1	QA	410	G	P-O3'-C3'	5.21	125.95	119.70
36	RQ	5	ARG	N-CA-C	-5.21	96.94	111.00
25	RA	1411	C	C2-N1-C1'	5.20	124.52	118.80
25	RA	2519	U	O5'-P-OP1	-5.20	101.02	105.70
19	XS	79	THR	N-CA-C	-5.20	96.96	111.00
25	RA	2205	C	C6-N1-C2	-5.20	118.22	120.30
25	RA	1729	A	O4'-C1'-N9	5.20	112.36	108.20
25	RA	2848	G	P-O3'-C3'	5.19	125.93	119.70
26	RB	44	G	N3-C4-N9	-5.19	122.88	126.00
25	RA	83	G	P-O3'-C3'	5.19	125.93	119.70
25	RA	475	U	C6-N1-C2	-5.19	117.89	121.00
25	RA	2394	C	N1-C2-O2	5.19	122.01	118.90
1	QA	1027	C	OP1-P-O3'	5.19	116.61	105.20
25	RA	846	C	P-O3'-C3'	5.18	125.92	119.70
25	RA	828	U	N3-C2-O2	-5.18	118.57	122.20
25	RA	2832	U	P-O3'-C3'	5.18	125.92	119.70
25	RA	265	A	O4'-C1'-N9	5.18	112.34	108.20
1	QA	31	G	P-O3'-C3'	5.18	125.92	119.70
25	RA	624	C	C5-C6-N1	5.18	123.59	121.00
25	YA	2712	U	N3-C2-O2	-5.17	118.58	122.20
25	YA	1930	G	C4-N9-C1'	-5.17	119.78	126.50
38	YS	110	LEU	CA-CB-CG	5.17	127.19	115.30
1	QA	819	A	N1-C6-N6	5.17	121.70	118.60
25	YA	1313	U	C5-C6-N1	5.17	125.28	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2849	U	O4'-C1'-N1	5.17	112.33	108.20
25	YA	142	G	C8-N9-C1'	5.16	133.71	127.00
25	YA	1699	G	C5-C6-O6	5.16	131.69	128.60
19	QS	79	THR	N-CA-C	-5.16	97.08	111.00
25	RA	2394	C	N3-C2-O2	-5.16	118.29	121.90
25	RA	2634	G	N1-C6-O6	5.15	122.99	119.90
25	YA	774	A	N3-C4-N9	-5.15	123.28	127.40
26	RB	44	G	N3-C4-C5	5.15	131.18	128.60
25	YA	1964	G	N1-C6-O6	5.15	122.99	119.90
25	YA	2311	A	N1-C2-N3	5.15	131.87	129.30
25	YA	2447	G	N9-C4-C5	5.15	107.46	105.40
25	YA	604	G	N3-C4-N9	5.14	129.09	126.00
25	YA	1806	C	C6-N1-C2	-5.14	118.24	120.30
1	QA	328	C	P-O3'-C3'	5.14	125.87	119.70
26	RB	44	G	C8-N9-C1'	5.14	133.68	127.00
1	QA	484	G	P-O3'-C3'	5.14	125.86	119.70
25	YA	910	A	N1-C6-N6	5.14	121.68	118.60
25	RA	2542	A	C8-N9-C4	5.13	107.85	105.80
25	RA	395	U	O4'-C1'-N1	5.13	112.31	108.20
25	RA	1637	A	C8-N9-C4	-5.13	103.75	105.80
25	RA	2634	G	C4-C5-N7	5.13	112.85	110.80
25	YA	587	C	P-O3'-C3'	5.13	125.85	119.70
25	YA	659	C	N1-C2-O2	5.13	121.98	118.90
1	QA	1065	U	OP2-P-O3'	5.12	116.47	105.20
25	YA	856	C	C6-N1-C2	-5.12	118.25	120.30
25	YA	2726	U	O4'-C1'-N1	5.12	112.30	108.20
25	YA	2776	A	P-O3'-C3'	5.12	125.84	119.70
1	QA	906	G	C5-C6-O6	-5.11	125.53	128.60
25	YA	930	U	N1-C2-O2	5.11	126.38	122.80
25	YA	1359	A	N1-C6-N6	5.11	121.66	118.60
25	YA	2468	G	O4'-C1'-N9	5.10	112.28	108.20
25	RA	810	U	N3-C4-O4	5.10	122.97	119.40
1	XA	971	G	N3-C4-N9	-5.10	122.94	126.00
1	XA	1336	C	C5-C6-N1	5.10	123.55	121.00
1	QA	1334	G	C4-N9-C1'	5.09	133.12	126.50
1	QA	1151	A	O4'-C1'-N9	5.08	112.27	108.20
39	RT	123	GLN	N-CA-C	-5.08	97.27	111.00
39	YT	123	GLN	N-CA-C	-5.08	97.28	111.00
25	RA	1313	U	C2-N1-C1'	5.08	123.79	117.70
1	XA	60	A	P-O3'-C3'	5.07	125.79	119.70
25	RA	2634	G	C5-C6-O6	-5.07	125.56	128.60
39	YT	59	THR	N-CA-C	-5.07	97.31	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	676	A	C8-N9-C4	-5.07	103.77	105.80
25	YA	1698	A	N1-C2-N3	5.06	131.83	129.30
25	YA	2345	G	C5-C6-O6	5.06	131.64	128.60
39	RT	59	THR	N-CA-C	-5.06	97.35	111.00
1	QA	412	A	P-O3'-C3'	5.06	125.77	119.70
1	QA	992	U	P-O3'-C3'	5.06	125.77	119.70
25	YA	2567	G	O5'-P-OP1	-5.06	101.15	105.70
25	YA	1931	U	N3-C2-O2	-5.05	118.66	122.20
25	YA	2756	U	OP1-P-O3'	5.05	116.32	105.20
1	XA	992	U	P-O3'-C3'	5.05	125.76	119.70
25	YA	1253	A	C5-N7-C8	-5.05	101.38	103.90
25	YA	2439	A	C8-N9-C4	-5.05	103.78	105.80
1	QA	121	C	C4-C5-C6	5.04	119.92	117.40
1	QA	1285	A	P-O3'-C3'	5.04	125.75	119.70
1	XA	353	A	OP2-P-O3'	5.04	116.30	105.20
25	YA	846	C	P-O3'-C3'	5.04	125.75	119.70
31	RH	127	GLU	C-N-CD	-5.04	109.51	120.60
31	YH	127	GLU	C-N-CD	-5.04	109.51	120.60
25	YA	1929	G	P-O3'-C3'	5.04	125.75	119.70
25	YA	1130	U	C5-C6-N1	5.03	125.22	122.70
25	YA	214	G	N3-C4-C5	-5.03	126.08	128.60
25	YA	59	U	C6-N1-C2	-5.03	117.98	121.00
25	RA	2490	G	C8-N9-C4	-5.03	104.39	106.40
25	YA	568	U	N1-C2-O2	-5.02	119.28	122.80
25	RA	2490	G	N3-C4-C5	-5.02	126.09	128.60
25	YA	2430	A	C8-N9-C4	-5.02	103.79	105.80
1	QA	314	C	C2-N1-C1'	5.02	124.32	118.80
25	YA	974(A)	C	N1-C2-O2	5.02	121.91	118.90
25	YA	1253	A	C6-C5-N7	-5.02	128.79	132.30
22	QV	17	C	N3-C2-O2	-5.01	118.39	121.90
25	RA	739	G	N1-C6-O6	-5.01	116.89	119.90
1	XA	1504	G	N3-C4-C5	-5.01	126.10	128.60
25	YA	222	A	P-O3'-C3'	5.01	125.71	119.70
25	YA	1699	G	C4-C5-N7	-5.01	108.80	110.80
25	YA	2610	C	OP2-P-O3'	5.00	116.21	105.20

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	QA	32247	0	16275	828	0
1	XA	32269	0	16289	816	0
2	QB	1924	0	1975	291	0
2	XB	1924	0	1975	301	0
3	QC	1605	0	1668	208	0
3	XC	1605	0	1668	209	1
4	QD	1703	0	1762	240	0
4	XD	1703	0	1763	215	0
5	QE	1155	0	1213	147	0
5	XE	1155	0	1213	142	0
6	QF	843	0	857	93	0
6	XF	843	0	857	99	0
7	QG	1257	0	1296	149	0
7	XG	1257	0	1296	147	0
8	QH	1116	0	1176	155	0
8	XH	1116	0	1177	164	0
9	QI	1010	0	1037	151	0
9	XI	1010	0	1037	160	0
10	QJ	801	0	849	138	0
10	XJ	801	0	849	136	0
11	QK	885	0	904	108	1
11	XK	885	0	904	118	0
12	QL	975	0	1062	109	0
12	XL	975	0	1062	113	0
13	QM	964	0	1034	171	0
13	XM	964	0	1034	180	0
14	QN	492	0	531	89	0
14	XN	492	0	529	87	0
15	QO	734	0	771	75	0
15	XO	734	0	771	74	0
16	QP	705	0	725	114	0
16	XP	705	0	725	113	0
17	QQ	834	0	904	84	0
17	XQ	834	0	904	82	0
18	QR	574	0	644	68	0
18	XR	574	0	644	67	0
19	QS	674	0	699	104	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	XS	674	0	699	143	0
20	QT	763	0	860	108	0
20	XT	763	0	861	102	0
21	QU	217	0	234	30	0
21	XU	217	0	234	29	0
22	QV	1644	0	836	41	0
22	XV	1644	0	836	40	0
23	QX	170	0	87	16	0
23	XX	170	0	88	10	0
24	QY	303	0	154	13	0
24	XY	303	0	154	17	0
25	RA	62091	0	31301	1401	0
25	YA	62071	0	31286	1351	0
26	RB	2573	0	1306	70	0
26	YB	2573	0	1306	61	0
27	RD	2115	0	2195	324	0
27	YD	2115	0	2195	350	0
28	RE	1568	0	1634	277	0
28	YE	1568	0	1634	266	0
29	RF	1585	0	1632	174	0
29	YF	1585	0	1632	182	0
30	RG	1474	0	1535	212	0
30	YG	1474	0	1535	206	0
31	RH	1307	0	1382	217	0
31	YH	1307	0	1382	219	1
32	RI	1136	0	1223	179	0
32	YI	1136	0	1223	176	0
33	RN	1104	0	1180	194	0
33	YN	1104	0	1180	186	0
34	RO	933	0	996	123	0
34	YO	933	0	996	124	0
35	RP	1145	0	1228	248	0
35	YP	1145	0	1228	247	0
36	RQ	1122	0	1179	168	0
36	YQ	1122	0	1179	168	0
37	RR	968	0	1033	115	0
37	YR	968	0	1033	112	0
38	RS	882	0	943	158	0
38	YS	882	0	943	163	0
39	RT	1141	0	1202	152	0
39	YT	1141	0	1202	156	0
40	RU	964	0	1022	130	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
40	YU	964	0	1022	138	0
41	RV	779	0	852	132	0
41	YV	779	0	852	130	1
42	RW	900	0	964	101	0
42	YW	900	0	964	108	0
43	RX	725	0	778	68	0
43	YX	725	0	778	82	0
44	RY	785	0	878	163	0
44	YY	785	0	878	154	1
45	RZ	1378	0	1407	227	0
45	YZ	1378	0	1407	227	0
46	R0	648	0	672	88	0
46	Y0	648	0	672	85	0
47	R1	763	0	848	141	0
47	Y1	763	0	848	145	0
48	R2	581	0	629	80	0
48	Y2	581	0	629	75	0
49	R3	469	0	518	40	0
49	Y3	469	0	518	41	0
50	R4	581	0	574	159	0
50	Y4	581	0	574	180	0
51	R5	459	0	480	77	0
51	Y5	459	0	480	75	1
52	R6	424	0	450	93	0
52	Y6	424	0	450	90	0
53	R7	430	0	480	47	0
53	Y7	430	0	480	42	0
54	R8	517	0	582	106	0
54	Y8	517	0	582	100	0
55	Z6	74	0	51	10	0
55	Z8	74	0	51	4	0
56	QA	60	0	0	0	0
56	QF	1	0	0	0	0
56	QH	1	0	0	0	0
56	QM	1	0	0	0	0
56	QV	2	0	0	0	0
56	QX	2	0	0	0	0
56	R5	1	0	0	0	0
56	RA	212	0	0	0	0
56	RB	2	0	0	0	0
56	RE	2	0	0	0	0
56	RF	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	RP	1	0	0	0	0
56	XA	63	0	0	0	0
56	XM	2	0	0	0	0
56	XV	2	0	0	0	0
56	Y5	1	0	0	0	0
56	YA	242	0	0	0	0
56	YB	2	0	0	0	0
56	YE	2	0	0	0	0
56	YX	1	0	0	0	0
57	QA	42	0	45	4	0
57	XA	42	0	45	1	0
58	QD	1	0	0	0	0
58	QN	1	0	0	0	0
58	XD	1	0	0	0	0
58	XN	1	0	0	0	0
All	All	291123	0	197505	16608	3

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 34.

All (16608) 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)
14:QN:39:LEU:HD22	14:QN:43:CYS:SG	1.33	1.63
36:YQ:81:VAL:HG23	46:Y0:7:LEU:CD2	1.21	1.60
31:RH:127:GLU:CG	31:RH:128:PRO:HD3	1.35	1.54
31:YH:127:GLU:CG	31:YH:128:PRO:HD3	1.35	1.52
19:QS:5:LEU:HD22	50:R4:67:TYR:CE2	1.45	1.51
36:YQ:81:VAL:CG2	46:Y0:7:LEU:HD21	0.94	1.42
47:R1:81:LYS:HA	47:R1:81:LYS:NZ	1.42	1.34
47:Y1:81:LYS:HA	47:Y1:81:LYS:NZ	1.43	1.33
19:QS:5:LEU:CD2	50:R4:67:TYR:CE2	2.11	1.31
13:QM:121:LYS:NZ	24:QY:40:G:OP1	1.65	1.28
47:R1:81:LYS:N	47:R1:81:LYS:HE2	1.50	1.26
36:YQ:81:VAL:CG2	46:Y0:7:LEU:CD2	1.85	1.26
47:Y1:81:LYS:HE2	47:Y1:81:LYS:N	1.50	1.26
36:RQ:80:GLU:CG	46:R0:5:LYS:HB3	1.66	1.25
32:RI:144:VAL:O	32:RI:145:VAL:HG12	1.31	1.25
14:QN:39:LEU:CD2	14:QN:43:CYS:SG	2.27	1.23
46:Y0:3:HIS:CD2	46:Y0:4:LYS:O	1.93	1.22
36:YQ:80:GLU:OE1	46:Y0:5:LYS:HD2	1.09	1.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:127:GLU:HG2	31:YH:128:PRO:CD	1.69	1.21
31:RH:127:GLU:HG2	31:RH:128:PRO:CD	1.69	1.21
14:QN:26:ARG:HB3	14:QN:43:CYS:SG	1.81	1.21
31:YH:127:GLU:CB	31:YH:128:PRO:HD3	1.69	1.20
31:RH:127:GLU:CB	31:RH:128:PRO:HD3	1.69	1.19
44:RY:95:LYS:HB3	44:RY:100:ALA:HA	1.20	1.17
2:QB:101:MET:HA	2:QB:108:ILE:HG13	1.25	1.16
47:Y1:82:LEU:HD12	47:Y1:82:LEU:C	1.66	1.16
13:XM:121:LYS:NZ	24:XY:40:G:OP1	1.76	1.16
44:YY:76:CYS:HB3	44:YY:96:ILE:HD13	1.17	1.16
31:RH:132:ARG:HH11	31:RH:132:ARG:HB2	1.10	1.16
44:YY:95:LYS:HB3	44:YY:100:ALA:HA	1.20	1.16
35:RP:50:ARG:HB3	35:RP:50:ARG:HH21	1.13	1.14
2:XB:101:MET:HA	2:XB:108:ILE:HG13	1.25	1.14
19:QS:41:VAL:HB	19:QS:42:PRO:HA	1.26	1.14
47:R1:82:LEU:HD12	47:R1:82:LEU:C	1.66	1.13
10:QJ:6:ILE:HG22	10:QJ:98:ILE:HG13	1.30	1.13
47:Y1:82:LEU:CD1	47:Y1:83:GLU:O	1.97	1.12
13:XM:121:LYS:NZ	24:XY:39:C:O2'	1.82	1.12
35:YP:50:ARG:HB3	35:YP:50:ARG:HH21	1.13	1.12
45:RZ:152:ALA:HB2	45:RZ:169:GLU:HB3	1.15	1.12
47:R1:82:LEU:CD1	47:R1:83:GLU:O	1.97	1.11
40:RU:8:VAL:HG23	40:RU:11:ARG:HH21	1.14	1.11
40:YU:8:VAL:HG23	40:YU:11:ARG:HH21	1.14	1.11
45:YZ:152:ALA:HB2	45:YZ:169:GLU:HB3	1.15	1.11
27:YD:44:ASN:HB2	27:YD:48:ARG:O	1.50	1.11
28:YE:179:GLU:HB3	28:YE:181:LEU:HD23	1.32	1.11
28:RE:179:GLU:HB3	28:RE:181:LEU:HD23	1.31	1.11
29:RF:101:LEU:HD12	29:RF:102:PRO:HD2	1.21	1.11
19:XS:5:LEU:CD1	50:Y4:66:SER:HB2	1.80	1.11
29:YF:101:LEU:HD12	29:YF:102:PRO:HD2	1.21	1.11
47:Y1:82:LEU:HD12	47:Y1:83:GLU:N	1.66	1.11
32:YI:92:VAL:HG13	32:YI:120:ILE:HG23	1.32	1.11
31:YH:132:ARG:HB2	31:YH:132:ARG:HH11	1.10	1.10
27:RD:44:ASN:HB2	27:RD:48:ARG:O	1.50	1.10
31:RH:86:GLU:HG3	31:RH:165:ALA:H	1.06	1.10
4:QD:170:VAL:O	6:XF:21:LEU:HD21	1.48	1.10
47:R1:82:LEU:HD12	47:R1:83:GLU:N	1.66	1.10
44:RY:76:CYS:HB3	44:RY:96:ILE:HD13	1.17	1.10
28:YE:50:GLY:HA2	28:YE:77:ILE:HA	1.31	1.10
2:XB:178:ARG:HH21	8:XH:74:PRO:HB3	1.15	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:134:ARG:H	33:YN:135:PRO:HD3	1.11	1.09
25:RA:270(T):G:H5"	47:R1:97:LEU:HD22	1.34	1.08
32:RI:92:VAL:HG13	32:RI:120:ILE:HG23	1.32	1.08
31:YH:152:ARG:HG3	31:YH:153:LYS:HE2	1.33	1.08
2:XB:80:ILE:HD11	2:XB:208:ILE:HG23	1.33	1.08
10:XJ:6:ILE:HG22	10:XJ:98:ILE:HG13	1.30	1.08
15:XO:87:ILE:HG22	15:XO:88:ARG:H	1.18	1.08
3:QC:15:THR:HG23	3:QC:181:ASN:HA	1.35	1.08
35:RP:19:VAL:HG22	35:RP:20:GLY:H	1.15	1.08
19:XS:41:VAL:HB	19:XS:42:PRO:HA	1.26	1.08
27:YD:131:LEU:HB2	27:YD:136:ILE:HD11	1.35	1.08
11:QK:79:SER:HB2	11:QK:106:LYS:HD2	1.35	1.08
3:XC:15:THR:HG23	3:XC:181:ASN:HA	1.35	1.08
31:YH:86:GLU:HG3	31:YH:165:ALA:H	1.05	1.08
27:RD:131:LEU:HB2	27:RD:136:ILE:HD11	1.35	1.08
36:YQ:81:VAL:HG22	46:Y0:7:LEU:HD21	1.15	1.08
35:YP:126:VAL:HG12	35:YP:147:LEU:HD21	1.30	1.07
13:XM:8:GLU:OE2	30:YG:115:ARG:NH1	1.85	1.07
36:YQ:81:VAL:HG23	46:Y0:7:LEU:HD22	1.35	1.07
36:YQ:81:VAL:HG21	46:Y0:7:LEU:HD21	1.33	1.07
47:Y1:81:LYS:HZ3	47:Y1:81:LYS:CA	1.65	1.07
2:QB:178:ARG:HH21	8:QH:74:PRO:HB3	1.02	1.07
35:RP:126:VAL:HG12	35:RP:147:LEU:HD21	1.30	1.07
31:RH:152:ARG:HG3	31:RH:153:LYS:HE2	1.34	1.07
15:QO:87:ILE:HG22	15:QO:88:ARG:H	1.18	1.07
25:YA:1050:A:H8	25:YA:2751:G:H2'	1.14	1.07
50:R4:71:ARG:HH11	50:R4:71:ARG:HG3	1.13	1.07
19:XS:5:LEU:HD22	50:Y4:67:TYR:CZ	1.90	1.06
28:RE:50:GLY:HA2	28:RE:77:ILE:HA	1.31	1.06
47:Y1:82:LEU:CD1	47:Y1:83:GLU:N	2.18	1.06
50:Y4:71:ARG:HG3	50:Y4:71:ARG:HH11	1.13	1.06
35:RP:59:LEU:HA	35:RP:61:ARG:NH2	1.69	1.06
35:YP:59:LEU:HA	35:YP:61:ARG:NH2	1.69	1.06
28:RE:21:VAL:HB	28:RE:22:PRO:HB3	1.37	1.06
54:Y8:52:LYS:H	54:Y8:53:PRO:CD	1.69	1.06
31:YH:153:LYS:HB3	31:YH:154:PRO:HD2	1.06	1.06
4:QD:166:LYS:HD2	27:YD:134:ARG:NH1	1.71	1.06
28:RE:63:LEU:HD12	28:RE:64:LYS:H	1.18	1.06
1:QA:1531:A:H5"	1:QA:1531:A:H8	1.19	1.06
47:R1:82:LEU:CD1	47:R1:83:GLU:N	2.18	1.06
29:RF:46:ARG:HH11	29:RF:46:ARG:HG2	1.20	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:51:LYS:HA	11:QK:55:LYS:HD3	1.36	1.05
28:YE:63:LEU:HD12	28:YE:64:LYS:H	1.18	1.05
28:YE:21:VAL:HB	28:YE:22:PRO:HB3	1.37	1.05
13:QM:88:ARG:HB3	13:QM:88:ARG:HH11	1.19	1.05
33:RN:134:ARG:H	33:RN:135:PRO:HD3	1.11	1.05
13:XM:88:ARG:HH11	13:XM:88:ARG:HB3	1.19	1.05
35:YP:19:VAL:HG22	35:YP:20:GLY:H	1.15	1.05
13:QM:49:THR:HG22	13:QM:51:ALA:H	1.22	1.05
19:XS:5:LEU:HD11	50:Y4:66:SER:CB	1.86	1.05
13:QM:3:ARG:HA	13:QM:9:ILE:HG21	1.34	1.05
32:RI:4:ILE:HG12	32:RI:18:VAL:HG22	1.38	1.05
13:XM:3:ARG:HA	13:XM:9:ILE:HG21	1.35	1.05
5:QE:11:ILE:HD11	5:QE:31:LEU:HD12	1.38	1.05
40:RU:90:VAL:HG12	40:RU:91:ASP:H	1.18	1.05
36:YQ:80:GLU:OE1	46:Y0:5:LYS:CD	2.05	1.05
31:RH:127:GLU:CB	31:RH:128:PRO:CD	2.35	1.04
11:XK:51:LYS:HA	11:XK:55:LYS:HD3	1.36	1.04
11:XK:79:SER:HB2	11:XK:106:LYS:HD2	1.35	1.04
25:RA:518:G:H4'	42:RW:18:ARG:HH12	1.21	1.04
45:YZ:138:GLU:O	45:YZ:156:LYS:HD3	1.56	1.04
41:YV:49:THR:HB	41:YV:50:PRO:HD2	1.39	1.04
2:QB:80:ILE:HD11	2:QB:208:ILE:HG23	1.34	1.04
38:RS:106:ARG:HA	38:RS:110:LEU:HD11	1.39	1.04
36:RQ:81:VAL:O	36:RQ:82:ARG:CD	2.06	1.04
37:RR:67:LEU:HD13	37:RR:76:VAL:HG21	1.39	1.04
38:RS:83:LYS:O	38:RS:109:GLY:HA3	1.57	1.04
45:RZ:138:GLU:O	45:RZ:156:LYS:HD3	1.56	1.04
40:YU:90:VAL:HG12	40:YU:91:ASP:H	1.18	1.04
13:QM:62:ASN:ND2	50:R4:49:PHE:HD2	1.56	1.04
31:YH:127:GLU:CG	31:YH:128:PRO:CD	2.31	1.04
2:QB:4:GLU:HG2	2:QB:5:ILE:H	1.19	1.03
38:YS:106:ARG:HA	38:YS:110:LEU:HD11	1.39	1.03
2:QB:18:GLY:H	2:QB:42:ILE:HG22	1.21	1.03
38:YS:83:LYS:O	38:YS:109:GLY:HA3	1.57	1.03
2:XB:4:GLU:HG2	2:XB:5:ILE:H	1.19	1.03
31:YH:127:GLU:CB	31:YH:128:PRO:CD	2.35	1.03
32:RI:78:THR:HG22	32:RI:141:LYS:HD2	1.41	1.03
8:XH:29:SER:HB3	8:XH:32:LYS:HG3	1.39	1.03
32:YI:4:ILE:HG12	32:YI:18:VAL:HG22	1.38	1.03
54:R8:52:LYS:H	54:R8:53:PRO:CD	1.69	1.03
27:RD:35:LYS:HG2	27:RD:64:ILE:N	1.72	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YO:53:LYS:HD2	34:YO:53:LYS:H	1.23	1.02
29:RF:67:GLN:O	29:RF:67:GLN:HG3	1.58	1.02
36:RQ:80:GLU:O	36:RQ:81:VAL:HG13	1.59	1.02
27:YD:35:LYS:HG2	27:YD:64:ILE:N	1.73	1.02
36:YQ:81:VAL:O	36:YQ:82:ARG:CD	2.06	1.02
29:YF:67:GLN:O	29:YF:68:LYS:HB2	1.56	1.02
29:RF:67:GLN:O	29:RF:68:LYS:HB2	1.56	1.02
36:YQ:12:GLN:HG2	36:YQ:73:PRO:HD2	1.42	1.02
36:YQ:65:PHE:O	36:YQ:66:ILE:HG12	1.59	1.02
1:QA:1498:U:O2'	1:QA:1499:A:OP2	1.76	1.02
5:XE:11:ILE:HD11	5:XE:31:LEU:HD12	1.38	1.02
36:RQ:12:GLN:HG2	36:RQ:73:PRO:HD2	1.42	1.02
2:XB:18:GLY:H	2:XB:42:ILE:HG22	1.22	1.02
29:YF:46:ARG:HG2	29:YF:46:ARG:HH11	1.20	1.02
31:RH:153:LYS:HB3	31:RH:154:PRO:HD2	1.06	1.02
46:Y0:3:HIS:HD2	46:Y0:4:LYS:N	1.56	1.02
44:YY:97:ARG:HH21	44:YY:98:VAL:HB	1.25	1.02
29:RF:185:ASP:HA	29:RF:188:ARG:HD3	1.40	1.01
34:RO:53:LYS:H	34:RO:53:LYS:HD2	1.23	1.01
30:YG:13:GLU:O	30:YG:14:GLU:HB2	1.60	1.01
19:XS:5:LEU:HD11	50:Y4:66:SER:HB2	1.02	1.01
38:RS:26:LEU:HD12	38:RS:39:ILE:HD11	1.40	1.01
13:XM:49:THR:HG22	13:XM:51:ALA:H	1.22	1.01
32:YI:78:THR:HG22	32:YI:141:LYS:HD2	1.41	1.01
13:QM:50:GLU:OE1	50:R4:32:TYR:CE2	2.13	1.01
25:RA:2701:C:H3'	25:RA:2702:U:H5''	1.42	1.01
7:QG:78:ARG:HG3	7:QG:79:ARG:H	1.24	1.01
19:QS:41:VAL:HB	19:QS:42:PRO:CA	1.91	1.01
26:RB:42:C:H42	30:RG:91:ARG:HH21	1.06	1.01
12:QL:8:ASN:OD1	17:QQ:34:LYS:HE2	1.61	1.01
41:RV:49:THR:HB	41:RV:50:PRO:HD2	1.39	1.01
44:RY:97:ARG:HH21	44:RY:98:VAL:HB	1.25	1.01
37:YR:67:LEU:HD13	37:YR:76:VAL:HG21	1.39	1.01
36:RQ:79:LEU:HD13	36:RQ:80:GLU:OE1	1.61	1.00
19:XS:41:VAL:HB	19:XS:42:PRO:CA	1.91	1.00
32:YI:144:VAL:HG22	32:YI:145:VAL:H	1.22	1.00
27:RD:227:ASN:HB3	27:RD:228:PRO:HD2	1.43	1.00
29:YF:67:GLN:O	29:YF:67:GLN:HG3	1.58	1.00
25:YA:518:G:H4'	42:YW:18:ARG:HH12	1.24	1.00
33:YN:96:GLU:HG2	33:YN:97:ARG:H	1.26	1.00
36:RQ:81:VAL:O	36:RQ:82:ARG:NE	1.94	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:Y6:7:ILE:HG13	52:Y6:8:LYS:H	1.25	1.00
36:YQ:79:LEU:HD13	36:YQ:80:GLU:OE1	1.61	1.00
50:R4:56:VAL:HA	50:R4:60:GLN:HB2	1.43	1.00
36:RQ:65:PHE:O	36:RQ:66:ILE:HG12	1.59	1.00
48:R2:50:ILE:HD12	48:R2:51:ARG:N	1.76	1.00
36:YQ:80:GLU:O	36:YQ:81:VAL:HG13	1.60	1.00
37:YR:54:LEU:HD23	37:YR:66:VAL:HG23	1.44	1.00
29:YF:185:ASP:HA	29:YF:188:ARG:HD3	1.41	1.00
1:QA:686:U:H1'	11:QK:42:TRP:HE1	1.27	0.99
8:QH:29:SER:HB3	8:QH:32:LYS:HG3	1.39	0.99
46:R0:2:ALA:HB1	46:R0:3:HIS:CD2	1.97	0.99
31:RH:153:LYS:HB3	31:RH:154:PRO:CD	1.92	0.99
31:YH:153:LYS:HB3	31:YH:154:PRO:CD	1.92	0.99
45:YZ:152:ALA:CB	45:YZ:169:GLU:HB3	1.92	0.99
31:RH:77:LYS:HZ3	31:RH:77:LYS:HB3	1.22	0.99
38:YS:26:LEU:HD12	38:YS:39:ILE:HD11	1.40	0.99
28:RE:201:THR:HG22	28:RE:203:LYS:H	1.26	0.99
31:RH:127:GLU:CG	31:RH:128:PRO:CD	2.30	0.99
45:RZ:152:ALA:CB	45:RZ:169:GLU:HB3	1.92	0.99
28:YE:201:THR:HG22	28:YE:203:LYS:H	1.26	0.99
5:QE:79:GLU:OE2	8:QH:104:ARG:HA	1.63	0.99
38:RS:83:LYS:NZ	38:RS:109:GLY:HA2	1.78	0.99
8:QH:23:SER:HA	8:QH:63:LEU:HD22	1.45	0.99
48:Y2:50:ILE:HD12	48:Y2:51:ARG:N	1.76	0.99
35:YP:105:LEU:O	35:YP:106:LEU:HB2	1.60	0.99
8:QH:84:ARG:HH12	8:QH:86:ILE:HD13	1.28	0.99
10:XJ:6:ILE:HD11	10:XJ:72:VAL:HB	1.44	0.99
3:QC:95:THR:HG22	3:QC:96:GLY:H	1.27	0.99
35:RP:105:LEU:O	35:RP:106:LEU:HB2	1.60	0.99
10:QJ:6:ILE:HD11	10:QJ:72:VAL:HB	1.44	0.98
35:RP:50:ARG:CB	35:RP:50:ARG:HH21	1.76	0.98
45:RZ:120:ILE:HB	45:RZ:171:ILE:HA	1.45	0.98
36:YQ:81:VAL:O	36:YQ:82:ARG:NE	1.94	0.98
3:QC:181:ASN:HD21	3:QC:204:LEU:HD12	1.27	0.98
25:YA:2015:A:H1'	51:Y5:2:ALA:HA	1.43	0.98
35:YP:50:ARG:HH21	35:YP:50:ARG:CB	1.76	0.98
42:RW:86:LEU:HD12	42:RW:87:PRO:HD2	1.45	0.98
32:RI:144:VAL:O	32:RI:145:VAL:CG1	2.11	0.98
46:Y0:3:HIS:CD2	46:Y0:4:LYS:N	2.31	0.98
25:YA:2562:U:O2'	34:YO:23:ARG:NH1	1.97	0.98
27:RD:44:ASN:HB3	27:RD:49:ILE:HA	1.45	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:196:LEU:HD12	2:QB:197:VAL:HG23	1.45	0.98
30:RG:13:GLU:O	30:RG:14:GLU:HB2	1.60	0.98
14:QN:24:CYS:SG	14:QN:39:LEU:HA	2.03	0.98
36:RQ:79:LEU:HD22	36:RQ:79:LEU:O	1.64	0.98
3:QC:19:GLU:HA	3:QC:54:ARG:HH12	1.29	0.98
4:QD:94:LEU:HD12	4:QD:94:LEU:H	1.28	0.98
8:XH:84:ARG:HH12	8:XH:86:ILE:HD13	1.28	0.98
31:YH:86:GLU:HG3	31:YH:165:ALA:N	1.79	0.98
4:QD:30:LYS:C	4:QD:32:ALA:H	1.62	0.98
39:YT:62:THR:HG22	39:YT:75:ILE:HG12	1.46	0.98
7:XG:78:ARG:HG3	7:XG:79:ARG:H	1.24	0.97
28:RE:20:ALA:O	28:RE:21:VAL:HG22	1.64	0.97
52:Y6:41:PRO:HG2	52:Y6:45:LYS:H	1.29	0.97
3:QC:16:ARG:HD2	3:QC:54:ARG:HH21	1.28	0.97
47:R1:81:LYS:HZ3	47:R1:81:LYS:HA	0.82	0.97
48:R2:50:ILE:HD12	48:R2:51:ARG:H	1.24	0.97
48:Y2:50:ILE:HD12	48:Y2:51:ARG:H	1.24	0.97
36:YQ:79:LEU:HD13	36:YQ:79:LEU:O	1.63	0.97
36:RQ:80:GLU:HG3	46:R0:5:LYS:HB3	1.43	0.97
7:XG:62:PHE:HA	7:XG:124:LEU:HD21	1.47	0.97
27:YD:44:ASN:HB3	27:YD:49:ILE:HA	1.45	0.97
3:XC:16:ARG:HB2	3:XC:16:ARG:HH11	1.30	0.97
4:QD:166:LYS:HG3	27:YD:135:PHE:HZ	1.28	0.97
38:YS:83:LYS:NZ	38:YS:109:GLY:HA2	1.78	0.97
32:YI:38:LEU:HD12	32:YI:38:LEU:H	1.30	0.97
36:YQ:79:LEU:HD22	36:YQ:79:LEU:O	1.64	0.97
5:QE:78:HIS:CD2	8:QH:104:ARG:HG2	1.99	0.97
52:R6:7:ILE:HG13	52:R6:8:LYS:H	1.25	0.97
36:RQ:79:LEU:HD13	36:RQ:79:LEU:O	1.63	0.97
3:XC:181:ASN:HD21	3:XC:204:LEU:HD12	1.27	0.97
42:YW:86:LEU:HD12	42:YW:87:PRO:HD2	1.45	0.97
12:QL:10:LEU:HD13	17:QQ:32:TYR:CE2	2.00	0.96
25:RA:2298:A:H62	25:RA:2318:G:H8	1.09	0.96
51:Y5:58:LEU:HD13	51:Y5:60:VAL:HG12	1.47	0.96
1:QA:343:U:HO2'	1:QA:346:G:H1	1.00	0.96
1:QA:1049:U:HO2'	14:QN:2:ALA:N	1.61	0.96
2:XB:7:VAL:HG21	2:XB:217:ARG:HH11	1.31	0.96
4:XD:30:LYS:C	4:XD:32:ALA:H	1.62	0.96
2:QB:178:ARG:NH2	8:QH:74:PRO:HB3	1.79	0.96
33:RN:96:GLU:HG2	33:RN:97:ARG:H	1.26	0.96
8:XH:23:SER:HA	8:XH:63:LEU:HD22	1.45	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:7:VAL:HG21	2:QB:217:ARG:HH11	1.30	0.96
30:RG:112:PRO:HB3	50:R4:37:SER:HB2	1.47	0.96
10:XJ:32:ALA:HB3	10:XJ:76:ASN:HB2	1.47	0.96
30:YG:112:PRO:HB3	50:Y4:37:SER:HB2	1.47	0.96
45:YZ:120:ILE:HB	45:YZ:171:ILE:HA	1.44	0.96
52:R6:47:THR:HG22	52:R6:48:VAL:HG12	1.45	0.96
28:YE:20:ALA:O	28:YE:21:VAL:HG22	1.64	0.96
44:YY:84:ARG:HH12	44:YY:97:ARG:HB2	1.28	0.96
7:QG:62:PHE:HA	7:QG:124:LEU:HD21	1.47	0.96
19:XS:9:VAL:HG12	50:Y4:66:SER:O	1.64	0.96
3:XC:19:GLU:HA	3:XC:54:ARG:HH12	1.29	0.96
3:XC:95:THR:HG22	3:XC:96:GLY:H	1.27	0.96
4:QD:166:LYS:CD	27:YD:134:ARG:NH1	2.27	0.96
2:QB:8:LYS:HD3	2:QB:8:LYS:H	1.31	0.95
12:QL:6:THR:H	12:QL:9:GLN:HE21	1.14	0.95
3:XC:16:ARG:HD2	3:XC:54:ARG:HH21	1.28	0.95
50:Y4:56:VAL:HA	50:Y4:60:GLN:HB2	1.43	0.95
29:YF:101:LEU:HD12	29:YF:102:PRO:CD	1.96	0.95
10:QJ:32:ALA:HB3	10:QJ:76:ASN:HB2	1.47	0.95
19:QS:5:LEU:HD22	50:R4:67:TYR:HE2	1.19	0.95
25:RA:2712:U:HO2'	25:RA:2712(A):A:H8	1.11	0.95
51:Y5:56:LYS:H	51:Y5:56:LYS:HD2	1.31	0.95
10:QJ:75:ILE:HG13	10:QJ:76:ASN:H	1.31	0.95
27:YD:227:ASN:HB3	27:YD:228:PRO:HD2	1.44	0.95
16:QP:4:ILE:HD11	16:QP:64:ALA:HB1	1.46	0.95
44:RY:84:ARG:HH12	44:RY:97:ARG:HB2	1.28	0.95
13:XM:57:ARG:HB2	13:XM:57:ARG:HH11	1.32	0.95
29:YF:103:LYS:HA	29:YF:106:ARG:HG3	1.49	0.95
41:YV:99:ILE:HD13	41:YV:99:ILE:H	1.32	0.95
29:RF:101:LEU:HD12	29:RF:102:PRO:CD	1.96	0.95
37:RR:54:LEU:HD23	37:RR:66:VAL:HG23	1.44	0.95
6:XF:86:ARG:O	6:XF:87:ARG:HG2	1.66	0.95
46:Y0:10:THR:HG22	46:Y0:11:ARG:H	1.27	0.95
48:R2:13:ALA:HA	48:R2:16:LEU:HD23	1.48	0.95
31:RH:86:GLU:HG3	31:RH:165:ALA:N	1.79	0.95
32:RI:38:LEU:HD12	32:RI:38:LEU:H	1.30	0.95
2:XB:196:LEU:HD12	2:XB:197:VAL:HG23	1.45	0.95
4:XD:94:LEU:HD12	4:XD:94:LEU:H	1.28	0.95
28:YE:78:LEU:HG	28:YE:79:ARG:HE	1.30	0.95
31:YH:153:LYS:CB	31:YH:154:PRO:HD2	1.97	0.95
35:YP:62:LEU:HD22	35:YP:62:LEU:N	1.82	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:4:ILE:HD11	16:XP:64:ALA:HB1	1.46	0.94
47:Y1:81:LYS:N	47:Y1:81:LYS:CE	2.30	0.94
48:Y2:13:ALA:HA	48:Y2:16:LEU:HD23	1.48	0.94
47:R1:81:LYS:CA	47:R1:81:LYS:CE	2.45	0.94
45:RZ:120:ILE:CD1	45:RZ:169:GLU:HG3	1.97	0.94
25:RA:1371:G:HO2'	25:RA:1372:U:H5	1.14	0.94
35:RP:62:LEU:HD22	35:RP:62:LEU:N	1.82	0.94
47:Y1:81:LYS:CA	47:Y1:81:LYS:CE	2.45	0.94
41:YV:35:LEU:HD21	41:YV:57:VAL:HG22	1.47	0.94
34:RO:2:ILE:HD11	34:RO:82:ASN:HD22	1.33	0.94
44:RY:51:VAL:HG13	44:RY:52:SER:H	1.31	0.94
3:QC:16:ARG:HB2	3:QC:16:ARG:HH11	1.29	0.94
6:QF:86:ARG:O	6:QF:87:ARG:HG2	1.66	0.94
25:YA:958:U:OP2	36:YQ:14:ARG:NH1	2.00	0.94
44:YY:51:VAL:HG13	44:YY:52:SER:H	1.31	0.94
45:YZ:120:ILE:CD1	45:YZ:169:GLU:HG3	1.97	0.94
27:RD:28:GLU:HB2	27:RD:29:PRO:CD	1.98	0.94
3:XC:11:ARG:HB3	3:XC:15:THR:HB	1.48	0.94
27:RD:108:PRO:HB3	27:RD:143:HIS:HE1	1.32	0.94
38:RS:59:LYS:HG2	38:RS:60:GLY:H	1.31	0.94
10:XJ:75:ILE:HG13	10:XJ:76:ASN:H	1.31	0.94
25:YA:138:G:N2	43:YX:44:GLU:OE2	1.99	0.94
47:R1:81:LYS:CE	47:R1:81:LYS:N	2.30	0.94
28:RE:78:LEU:HG	28:RE:79:ARG:HE	1.31	0.94
41:RV:35:LEU:HD21	41:RV:57:VAL:HG22	1.47	0.94
31:YH:77:LYS:NZ	31:YH:77:LYS:HB3	1.82	0.94
25:RA:2645:G:H3'	25:RA:2646:C:H5'	1.47	0.94
39:RT:62:THR:HG22	39:RT:75:ILE:HG12	1.46	0.94
52:Y6:47:THR:HG22	52:Y6:48:VAL:HG12	1.45	0.94
25:YA:1496:A:H8	25:YA:1577:C:HO2'	1.00	0.94
27:YD:28:GLU:HB2	27:YD:29:PRO:CD	1.98	0.94
51:R5:56:LYS:H	51:R5:56:LYS:HD2	1.31	0.93
39:RT:11:GLU:CD	39:RT:11:GLU:H	1.71	0.93
43:RX:57:LEU:CD1	43:RX:78:LYS:HB2	1.98	0.93
2:XB:8:LYS:H	2:XB:8:LYS:HD3	1.31	0.93
12:XL:10:LEU:HD13	17:XQ:32:TYR:CE2	2.03	0.93
33:RN:134:ARG:H	33:RN:135:PRO:CD	1.81	0.93
31:YH:77:LYS:HZ3	31:YH:77:LYS:HB3	1.31	0.93
7:QG:15:ASP:HB3	7:QG:20:ASP:H	1.31	0.93
31:YH:127:GLU:HB3	31:YH:128:PRO:CD	1.99	0.93
52:R6:41:PRO:HG2	52:R6:45:LYS:H	1.30	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:70:VAL:HG12	3:XC:72:LYS:H	1.34	0.93
33:YN:134:ARG:H	33:YN:135:PRO:CD	1.81	0.93
39:YT:11:GLU:H	39:YT:11:GLU:CD	1.71	0.93
13:QM:90:LEU:HA	13:QM:93:ARG:HD2	1.50	0.93
19:QS:40:ILE:HG12	19:QS:41:VAL:HG22	1.51	0.93
25:YA:859:G:O2'	25:YA:860:U:O2	1.87	0.93
13:QM:57:ARG:HH11	13:QM:57:ARG:HB2	1.32	0.93
35:RP:1:MET:HE2	35:RP:5:ASP:HB3	1.51	0.93
51:R5:58:LEU:HD13	51:R5:60:VAL:HG12	1.47	0.93
31:RH:127:GLU:HB3	31:RH:128:PRO:CD	1.99	0.93
27:YD:108:PRO:HB3	27:YD:143:HIS:CE1	2.04	0.93
43:YX:57:LEU:CD1	43:YX:78:LYS:HB2	1.98	0.93
20:QT:49:ALA:HB1	20:QT:99:LEU:HB2	1.51	0.93
27:RD:147:LEU:HD13	27:RD:155:LEU:HD11	1.51	0.93
41:RV:99:ILE:H	41:RV:99:ILE:HD13	1.32	0.93
6:XF:24:GLU:HA	6:XF:27:GLN:HG3	1.49	0.93
27:YD:108:PRO:HB3	27:YD:143:HIS:HE1	1.32	0.93
25:YA:71:A:H2	43:YX:31:HIS:HE1	1.16	0.93
36:RQ:34:LEU:HD11	36:RQ:129:THR:HB	1.50	0.92
15:XO:82:ILE:HD11	15:XO:88:ARG:HG3	1.51	0.92
10:XJ:8:LEU:HD11	10:XJ:23:ILE:HD12	1.49	0.92
37:YR:33:ARG:NH2	51:Y5:55:ARG:HG2	1.85	0.92
45:RZ:18:LEU:H	45:RZ:18:LEU:HD12	1.33	0.92
28:YE:14:ILE:HG12	28:YE:15:PHE:H	1.33	0.92
35:YP:65:ARG:HG3	35:YP:65:ARG:HH11	1.35	0.92
5:QE:53:LEU:HD12	5:QE:53:LEU:H	1.34	0.92
29:RF:103:LYS:HA	29:RF:106:ARG:HG3	1.48	0.92
19:XS:40:ILE:HG12	19:XS:41:VAL:HG22	1.51	0.92
25:YA:1050:A:C8	25:YA:2751:G:H2'	2.04	0.92
38:YS:59:LYS:HG2	38:YS:60:GLY:H	1.31	0.92
47:R1:81:LYS:CA	47:R1:81:LYS:NZ	2.31	0.92
32:RI:115:ALA:HB3	32:RI:128:LEU:HD11	1.50	0.92
25:RA:1454:U:OP1	37:RR:77:ARG:NH1	2.03	0.92
5:XE:79:GLU:OE2	8:XH:104:ARG:HA	1.69	0.92
17:XQ:4:LYS:HE3	17:XQ:6:LEU:HD21	1.51	0.92
32:YI:144:VAL:HG13	32:YI:145:VAL:HG13	1.52	0.92
27:RD:183:ARG:HH11	27:RD:183:ARG:HG2	1.34	0.92
45:RZ:107:THR:HB	45:RZ:144:LEU:HB2	1.52	0.92
45:YZ:18:LEU:HD12	45:YZ:18:LEU:H	1.33	0.92
8:QH:6:ILE:HB	8:QH:85:ARG:NH1	1.85	0.92
8:XH:6:ILE:HB	8:XH:85:ARG:NH1	1.85	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:81:LYS:CE	47:R1:81:LYS:HA	2.00	0.92
30:RG:37:VAL:HG22	30:RG:159:VAL:HA	1.52	0.92
31:RH:153:LYS:CB	31:RH:154:PRO:HD2	1.97	0.92
5:XE:53:LEU:HD12	5:XE:53:LEU:H	1.34	0.92
2:QB:32:ILE:HD11	2:QB:40:HIS:HB3	1.52	0.92
3:QC:11:ARG:HB3	3:QC:15:THR:HB	1.48	0.92
6:QF:24:GLU:HA	6:QF:27:GLN:HG3	1.49	0.92
17:QQ:4:LYS:HE3	17:QQ:6:LEU:HD21	1.51	0.92
36:RQ:80:GLU:HG2	46:R0:5:LYS:HD3	1.50	0.92
27:RD:108:PRO:HB3	27:RD:143:HIS:CE1	2.05	0.92
41:RV:24:LYS:HA	41:RV:92:THR:HG23	1.52	0.91
4:QD:166:LYS:CG	27:YD:135:PHE:HZ	1.83	0.91
5:QE:101:ILE:HD11	5:QE:119:LEU:HD23	1.51	0.91
7:XG:15:ASP:HB3	7:XG:20:ASP:H	1.31	0.91
36:YQ:34:LEU:HD11	36:YQ:129:THR:HB	1.50	0.91
8:QH:6:ILE:HD12	8:QH:6:ILE:H	1.34	0.91
3:XC:20:SER:HB2	3:XC:40:ARG:HH22	1.34	0.91
4:QD:166:LYS:HD2	27:YD:134:ARG:HH12	1.35	0.91
22:QV:1:C:C4'	46:R0:5:LYS:HE2	2.00	0.91
47:Y1:81:LYS:HA	47:Y1:81:LYS:CE	2.01	0.91
3:QC:70:VAL:HG12	3:QC:72:LYS:H	1.34	0.91
4:QD:166:LYS:HG3	27:YD:135:PHE:CZ	2.05	0.91
30:RG:101:ILE:HG13	30:RG:102:PHE:N	1.86	0.91
31:RH:77:LYS:NZ	31:RH:77:LYS:HB3	1.82	0.91
2:XB:33:TYR:HB2	2:XB:43:ASP:HB2	1.53	0.91
30:YG:37:VAL:HG22	30:YG:159:VAL:HA	1.52	0.91
38:YS:67:ARG:NH1	38:YS:67:ARG:HB2	1.85	0.91
40:YU:92:ARG:HG2	40:YU:92:ARG:O	1.69	0.91
44:YY:30:VAL:HG22	44:YY:37:VAL:HG12	1.53	0.91
3:QC:20:SER:HB2	3:QC:40:ARG:HH22	1.33	0.91
10:QJ:8:LEU:HD11	10:QJ:23:ILE:HD12	1.50	0.91
37:RR:33:ARG:NH2	51:R5:55:ARG:HG2	1.85	0.91
5:XE:101:ILE:HD11	5:XE:119:LEU:HD23	1.51	0.91
35:YP:1:MET:HE2	35:YP:5:ASP:HB3	1.50	0.91
2:QB:33:TYR:HB2	2:QB:43:ASP:HB2	1.53	0.91
29:RF:7:TYR:HB3	29:RF:21:ALA:HB1	1.53	0.91
15:QO:82:ILE:HD11	15:QO:88:ARG:HG3	1.51	0.91
27:YD:10:THR:HG23	27:YD:13:ARG:HB3	1.51	0.91
13:QM:77:ASN:HA	50:R4:71:ARG:NH2	1.86	0.91
28:RE:14:ILE:HG12	28:RE:15:PHE:H	1.33	0.91
36:RQ:81:VAL:HG23	46:R0:7:LEU:HD11	1.51	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RS:67:ARG:HB2	38:RS:67:ARG:NH1	1.85	0.90
11:XK:99:GLN:HG2	11:XK:105:VAL:HG21	1.53	0.90
47:Y1:80:LEU:O	47:Y1:81:LYS:HB2	1.71	0.90
34:YO:2:ILE:HD11	34:YO:82:ASN:HD22	1.33	0.90
2:QB:77:ALA:HB2	2:QB:211:ILE:HD13	1.53	0.90
5:QE:100:VAL:HG22	5:QE:118:ILE:HG22	1.52	0.90
20:XT:49:ALA:HB1	20:XT:99:LEU:HB2	1.51	0.90
44:YY:38:ILE:HG22	44:YY:66:PRO:HA	1.54	0.90
4:QD:170:VAL:HG22	4:QD:171:GLY:H	1.34	0.90
4:XD:170:VAL:HG22	4:XD:171:GLY:H	1.35	0.90
1:XA:523:A:H61	12:XL:92:ASP:HB2	1.34	0.90
36:YQ:80:GLU:CD	46:Y0:5:LYS:HD2	1.92	0.90
25:RA:676:A:H8	25:RA:2069:G:H21	1.18	0.90
13:XM:90:LEU:HA	13:XM:93:ARG:HD2	1.50	0.90
41:YV:24:LYS:HA	41:YV:92:THR:HG23	1.52	0.90
13:QM:50:GLU:OE1	50:R4:32:TYR:HE2	1.51	0.90
27:RD:10:THR:HG23	27:RD:13:ARG:HB3	1.51	0.90
31:RH:4:ILE:HG13	31:RH:6:ARG:CZ	2.01	0.90
1:QA:1071:C:H5'	5:QE:49:PRO:HG2	1.53	0.90
5:XE:100:VAL:HG22	5:XE:118:ILE:HG22	1.52	0.90
48:Y2:65:ASN:HB3	48:Y2:69:ARG:HH12	1.34	0.90
27:YD:147:LEU:HD13	27:YD:155:LEU:HD11	1.51	0.90
27:YD:44:ASN:H	27:YD:44:ASN:HD22	1.19	0.90
35:YP:106:LEU:O	35:YP:107:LYS:HB2	1.71	0.90
41:YV:44:LYS:O	41:YV:46:VAL:HG12	1.72	0.90
22:QV:1:C:O4'	46:R0:5:LYS:CE	2.20	0.90
25:RA:859:G:O2'	25:RA:860:U:O2	1.88	0.90
1:XA:186(E):C:H42	1:XA:191(B):G:H1	1.19	0.90
8:XH:6:ILE:HD12	8:XH:6:ILE:H	1.35	0.90
51:Y5:3:LYS:HA	51:Y5:3:LYS:HE3	1.54	0.90
25:YA:483:A:H4'	44:YY:49:VAL:HA	1.50	0.90
48:R2:65:ASN:HB3	48:R2:69:ARG:HH12	1.34	0.90
35:RP:58:THR:O	35:RP:61:ARG:NE	2.05	0.90
32:YI:115:ALA:HB3	32:YI:128:LEU:HD11	1.50	0.90
45:YZ:107:THR:HB	45:YZ:144:LEU:HB2	1.52	0.90
13:QM:77:ASN:HA	50:R4:71:ARG:HH22	1.36	0.90
25:RA:819:A:OP2	25:RA:1187:G:N2	2.03	0.90
31:YH:4:ILE:HG13	31:YH:6:ARG:CZ	2.01	0.90
14:QN:26:ARG:CB	14:QN:43:CYS:SG	2.60	0.89
31:RH:26:VAL:HG13	31:RH:27:LYS:H	1.35	0.89
19:XS:64:GLU:O	19:XS:67:VAL:HG23	1.72	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:270(R):G:N3	47:Y1:78:LYS:NZ	2.20	0.89
27:YD:183:ARG:HH11	27:YD:183:ARG:HG2	1.34	0.89
31:YH:26:VAL:HG13	31:YH:27:LYS:H	1.35	0.89
2:QB:7:VAL:HG21	2:QB:217:ARG:NH1	1.87	0.89
2:XB:7:VAL:HG21	2:XB:217:ARG:NH1	1.87	0.89
42:YW:65:LEU:HD12	42:YW:68:ARG:HH11	1.36	0.89
31:RH:10:PRO:HD2	31:RH:50:VAL:O	1.72	0.89
36:RQ:80:GLU:CG	46:R0:5:LYS:CB	2.50	0.89
2:XB:126:GLU:HG3	2:XB:129:GLU:HG3	1.54	0.89
1:QA:1106:G:H5''	3:QC:172:ARG:HG2	1.55	0.89
25:RA:242:G:H5'	54:R8:62:LEU:HD22	1.52	0.89
19:XS:5:LEU:HD22	50:Y4:67:TYR:CE2	2.06	0.89
46:Y0:3:HIS:HD2	46:Y0:4:LYS:O	1.53	0.89
51:Y5:40:LYS:HZ1	51:Y5:48:GLU:HB2	1.36	0.89
25:YA:1952:A:OP1	34:YO:44:LYS:NZ	2.05	0.89
27:YD:69:ARG:HH21	27:YD:130:ALA:HB2	1.37	0.89
35:YP:88:LEU:HD12	35:YP:95:VAL:HG11	1.52	0.89
27:RD:69:ARG:HH21	27:RD:130:ALA:HB2	1.37	0.89
19:QS:64:GLU:O	19:QS:67:VAL:HG23	1.73	0.89
40:RU:92:ARG:O	40:RU:92:ARG:HG2	1.69	0.89
30:YG:116:ASP:O	30:YG:117:PHE:HB3	1.72	0.89
51:R5:3:LYS:HE3	51:R5:3:LYS:HA	1.54	0.89
25:RA:2729:G:H1'	28:RE:187:ALA:HB2	1.53	0.89
12:XL:6:THR:H	12:XL:9:GLN:HE21	1.15	0.89
54:Y8:52:LYS:H	54:Y8:53:PRO:HD3	1.35	0.89
28:YE:63:LEU:HD12	28:YE:64:LYS:N	1.88	0.89
54:R8:52:LYS:H	54:R8:53:PRO:HD3	1.35	0.89
41:RV:44:LYS:O	41:RV:46:VAL:HG12	1.72	0.89
44:RY:76:CYS:SG	44:RY:77:PRO:HD2	2.13	0.89
54:Y8:59:LYS:NZ	54:Y8:59:LYS:HB2	1.88	0.89
35:RP:88:LEU:HD12	35:RP:95:VAL:HG11	1.52	0.89
35:YP:58:THR:O	35:YP:61:ARG:NE	2.05	0.89
1:QA:677:U:H3	1:QA:713:G:H1	1.20	0.89
10:QJ:74:ILE:H	10:QJ:74:ILE:HD13	1.38	0.89
35:RP:65:ARG:HG3	35:RP:65:ARG:HH11	1.35	0.89
27:RD:27:THR:HG23	27:RD:28:GLU:H	1.38	0.88
31:YH:10:PRO:HD2	31:YH:50:VAL:O	1.72	0.88
2:XB:18:GLY:N	2:XB:42:ILE:HG22	1.87	0.88
2:XB:32:ILE:HD11	2:XB:40:HIS:HB3	1.52	0.88
5:XE:71:LEU:O	5:XE:72:GLN:HG3	1.73	0.88
2:XB:178:ARG:HH21	8:XH:74:PRO:CB	1.86	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:126:GLU:HG3	2:QB:129:GLU:HG3	1.54	0.88
25:RA:2015:A:H1'	51:R5:2:ALA:HA	1.53	0.88
30:RG:88:ILE:HD13	30:RG:88:ILE:O	1.72	0.88
30:YG:88:ILE:O	30:YG:88:ILE:HD13	1.72	0.88
2:QB:18:GLY:N	2:QB:42:ILE:HG22	1.87	0.88
51:R5:40:LYS:HZ1	51:R5:48:GLU:HB2	1.38	0.88
32:RI:75:LEU:HB3	32:RI:105:HIS:CE1	2.08	0.88
35:YP:64:LYS:O	35:YP:66:GLY:N	2.07	0.88
14:QN:24:CYS:SG	14:QN:40:CYS:N	2.46	0.88
47:R1:80:LEU:O	47:R1:81:LYS:HB2	1.71	0.88
28:RE:63:LEU:HD12	28:RE:64:LYS:N	1.88	0.88
33:RN:22:THR:HG22	33:RN:23:LEU:N	1.88	0.88
25:YA:2701:C:H3'	25:YA:2702:U:H5''	1.55	0.88
44:YY:76:CYS:SG	44:YY:77:PRO:HD2	2.13	0.88
5:QE:41:VAL:HG11	5:QE:113:ALA:HB2	1.54	0.88
25:RA:631:A:OP2	54:R8:46:ARG:NH2	2.06	0.88
35:RP:106:LEU:O	35:RP:107:LYS:HB2	1.71	0.88
44:RY:30:VAL:HG22	44:RY:37:VAL:HG12	1.53	0.88
2:XB:77:ALA:HB2	2:XB:211:ILE:HD13	1.53	0.88
1:XA:1286:A:H5''	21:XU:26:LYS:HD2	1.56	0.88
46:Y0:3:HIS:NE2	46:Y0:4:LYS:O	2.05	0.88
25:YA:1689:A:H62	25:YA:1698:A:H2	1.21	0.88
5:XE:152:ARG:O	8:XH:64:LYS:NZ	2.07	0.88
20:XT:23:ARG:HA	20:XT:26:ASN:HD21	1.36	0.88
13:XM:8:GLU:OE1	30:YG:115:ARG:CZ	2.22	0.88
33:YN:22:THR:HG22	33:YN:23:LEU:N	1.88	0.88
20:QT:23:ARG:HA	20:QT:26:ASN:HD21	1.36	0.88
54:R8:59:LYS:NZ	54:R8:59:LYS:HB2	1.88	0.88
42:RW:65:LEU:HD12	42:RW:68:ARG:HH11	1.36	0.88
35:YP:49:ARG:HD2	54:Y8:58:ILE:HG22	1.54	0.88
38:YS:106:ARG:NH1	38:YS:106:ARG:HB2	1.89	0.88
13:QM:97:PRO:HB2	13:QM:101:GLN:NE2	1.89	0.88
27:RD:28:GLU:HB2	27:RD:29:PRO:HD2	1.56	0.88
21:XU:6:ARG:HE	21:XU:15:ARG:CZ	1.87	0.88
23:XX:2:U:O2'	23:XX:3:G:H5'	1.74	0.88
28:YE:77:ILE:HD12	28:YE:78:LEU:N	1.89	0.88
28:RE:77:ILE:HD12	28:RE:78:LEU:N	1.89	0.87
32:RI:88:ILE:HG12	32:RI:122:GLU:H	1.39	0.87
35:RP:49:ARG:HD2	54:R8:58:ILE:HG22	1.54	0.87
5:XE:41:VAL:HG11	5:XE:113:ALA:HB2	1.54	0.87
46:Y0:25:ARG:HD2	46:Y0:29:GLN:NE2	1.90	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:82:LEU:HD13	47:Y1:83:GLU:O	1.74	0.87
46:R0:25:ARG:HD2	46:R0:29:GLN:NE2	1.90	0.87
4:XD:114:ARG:HH11	4:XD:114:ARG:HG3	1.39	0.87
19:XS:8:GLY:O	19:XS:9:VAL:HG22	1.74	0.87
27:YD:44:ASN:CB	27:YD:49:ILE:HA	2.05	0.87
32:YI:9:LEU:O	32:YI:10:GLU:HG3	1.74	0.87
36:YQ:64:ILE:HA	36:YQ:106:VAL:HG12	1.54	0.87
8:QH:51:VAL:HG21	8:QH:60:ARG:HG2	1.55	0.87
27:RD:181:GLU:HA	27:RD:272:ALA:HB3	1.57	0.87
38:RS:106:ARG:NH1	38:RS:106:ARG:HB2	1.88	0.87
44:RY:38:ILE:HG22	44:RY:66:PRO:HA	1.54	0.87
13:XM:97:PRO:HB2	13:XM:101:GLN:NE2	1.89	0.87
2:QB:96:ARG:H	2:QB:96:ARG:HD2	1.38	0.87
11:QK:99:GLN:HG2	11:QK:105:VAL:HG21	1.53	0.87
21:QU:6:ARG:HE	21:QU:15:ARG:CZ	1.87	0.87
41:RV:19:LYS:HD2	41:RV:95:LEU:HD23	1.55	0.87
47:Y1:82:LEU:HD11	47:Y1:83:GLU:O	1.75	0.87
13:XM:8:GLU:OE1	30:YG:115:ARG:NH2	2.07	0.87
19:QS:41:VAL:HG13	19:QS:44:MET:HB2	1.57	0.87
27:RD:44:ASN:HD22	27:RD:44:ASN:H	1.19	0.87
1:QA:339:C:OP2	34:RO:97:ARG:NH1	2.08	0.87
27:YD:27:THR:HG23	27:YD:28:GLU:H	1.38	0.87
4:QD:166:LYS:CG	27:YD:135:PHE:CZ	2.58	0.87
15:QO:56:LEU:O	15:QO:60:VAL:HG23	1.75	0.87
8:XH:51:VAL:HG21	8:XH:60:ARG:HG2	1.55	0.87
11:XK:32:ILE:HD12	11:XK:72:ALA:HB2	1.56	0.87
5:QE:152:ARG:O	8:QH:64:LYS:NZ	2.06	0.87
10:QJ:47:PHE:HE1	10:QJ:63:PHE:HB2	1.40	0.87
19:QS:8:GLY:O	19:QS:9:VAL:HG22	1.74	0.87
10:XJ:74:ILE:HD13	10:XJ:74:ILE:H	1.38	0.87
1:QA:1286:A:H5''	21:QU:26:LYS:HD2	1.56	0.87
23:QX:2:U:O2'	23:QX:3:G:H5'	1.74	0.87
35:RP:64:LYS:O	35:RP:66:GLY:N	2.07	0.87
25:YA:270(T):G:H5''	47:Y1:97:LEU:HD22	1.55	0.87
35:YP:18:ARG:O	35:YP:19:VAL:HB	1.75	0.87
45:YZ:24:LEU:HD11	45:YZ:86:VAL:HG23	1.57	0.87
47:R1:92:LYS:HG3	47:R1:96:LYS:HB2	1.57	0.86
36:RQ:64:ILE:HA	36:RQ:106:VAL:HG12	1.54	0.86
27:YD:181:GLU:HA	27:YD:272:ALA:HB3	1.57	0.86
32:YI:75:LEU:HB3	32:YI:105:HIS:CE1	2.08	0.86
1:QA:343:U:O2'	1:QA:346:G:N1	2.07	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:27:GLU:O	19:QS:28:LYS:HG2	1.74	0.86
13:XM:4:ILE:H	13:XM:9:ILE:CG2	1.88	0.86
29:YF:29:ASN:H	29:YF:112:MET:HE3	1.40	0.86
30:YG:145:THR:HG23	50:Y4:28:LYS:HZ1	1.38	0.86
25:RA:1542:G:O6	25:RA:1543:A:N6	2.08	0.86
1:XA:1123:A:H4'	10:XJ:36:GLY:HA3	1.55	0.86
30:YG:101:ILE:HG13	30:YG:102:PHE:N	1.86	0.86
30:YG:161:THR:HG22	30:YG:163:ALA:H	1.39	0.86
40:YU:92:ARG:HD2	41:YV:11:GLN:NE2	1.90	0.86
11:QK:32:ILE:HD12	11:QK:72:ALA:HB2	1.56	0.86
29:RF:29:ASN:H	29:RF:112:MET:HE3	1.40	0.86
30:RG:116:ASP:O	30:RG:117:PHE:HB3	1.72	0.86
38:RS:106:ARG:HH11	38:RS:106:ARG:HB2	1.40	0.86
19:XS:27:GLU:O	19:XS:28:LYS:HG2	1.74	0.86
5:QE:71:LEU:O	5:QE:72:GLN:HG3	1.73	0.86
30:RG:161:THR:HG22	30:RG:163:ALA:H	1.39	0.86
25:RA:138:G:N2	43:RX:44:GLU:OE2	2.07	0.86
10:XJ:7:LYS:HB2	10:XJ:97:GLU:HB2	1.57	0.86
25:YA:2494:G:OP1	46:Y0:3:HIS:HB3	1.74	0.86
29:YF:7:TYR:HB3	29:YF:21:ALA:HB1	1.54	0.86
32:YI:109:ILE:HB	32:YI:130:TYR:OH	1.75	0.86
1:QA:1223:C:H5''	1:QA:1224:G:H5''	1.57	0.86
2:QB:67:THR:HG21	2:QB:155:LEU:HD21	1.57	0.86
27:RD:44:ASN:CB	27:RD:49:ILE:HA	2.04	0.86
29:RF:82:ILE:HG13	29:RF:82:ILE:O	1.73	0.86
45:YZ:53:ILE:HG22	45:YZ:71:VAL:O	1.76	0.86
31:YH:127:GLU:HG2	31:YH:128:PRO:HD3	0.86	0.86
32:RI:109:ILE:HB	32:RI:130:TYR:OH	1.75	0.86
22:XV:74:C:O2	25:YA:2252:G:N2	2.09	0.86
27:YD:35:LYS:HG2	27:YD:64:ILE:H	1.41	0.86
41:YV:19:LYS:HD2	41:YV:95:LEU:HD23	1.55	0.86
13:QM:4:ILE:H	13:QM:9:ILE:CG2	1.88	0.86
26:RB:42:C:H42	30:RG:91:ARG:NH2	1.74	0.86
32:RI:51:ILE:O	32:RI:55:ALA:N	2.09	0.86
35:RP:75:ILE:HD13	35:RP:75:ILE:H	1.39	0.86
36:RQ:75:THR:HA	36:RQ:88:GLY:O	1.75	0.86
44:RY:51:VAL:O	44:RY:56:PRO:HA	1.76	0.86
1:XA:448:A:OP2	1:XA:485:G:N2	2.09	0.86
1:QA:559:A:H4'	1:QA:560:U:H3'	1.56	0.85
13:QM:14:ARG:H	13:QM:44:ARG:HD3	1.41	0.85
2:XB:67:THR:HG21	2:XB:155:LEU:HD21	1.56	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:41:VAL:HG13	19:XS:44:MET:HB2	1.57	0.85
28:RE:61:ARG:O	28:RE:63:LEU:HG	1.77	0.85
40:RU:92:ARG:HD2	41:RV:11:GLN:NE2	1.90	0.85
2:XB:96:ARG:H	2:XB:96:ARG:HD2	1.39	0.85
45:YZ:72:ARG:HB2	45:YZ:72:ARG:HH11	1.42	0.85
4:QD:114:ARG:HH11	4:QD:114:ARG:HG3	1.39	0.85
36:RQ:80:GLU:HG2	46:R0:5:LYS:HB3	1.56	0.85
15:XO:56:LEU:O	15:XO:60:VAL:HG23	1.75	0.85
45:YZ:5:LEU:HD11	45:YZ:39:VAL:HB	1.56	0.85
47:R1:82:LEU:HD13	47:R1:83:GLU:O	1.74	0.85
51:R5:39:MET:O	51:R5:40:LYS:HG3	1.77	0.85
20:XT:36:LEU:HD13	20:XT:39:LYS:HD3	1.57	0.85
45:RZ:59:LEU:O	45:RZ:60:GLU:HG2	1.75	0.85
5:XE:78:HIS:CD2	8:XH:104:ARG:HG2	2.10	0.85
24:XY:29:U:H2'	24:XY:30:C:C6	2.11	0.85
36:YQ:75:THR:HA	36:YQ:88:GLY:O	1.76	0.85
38:YS:106:ARG:HB2	38:YS:106:ARG:HH11	1.40	0.85
39:YT:111:ARG:O	39:YT:112:ARG:HG3	1.76	0.85
30:YG:67:LYS:HE2	50:Y4:6:HIS:NE2	1.91	0.85
44:YY:51:VAL:O	44:YY:56:PRO:HA	1.76	0.85
20:QT:36:LEU:HD13	20:QT:39:LYS:HD3	1.57	0.85
22:QV:1:C:O4'	46:R0:5:LYS:HE2	1.77	0.85
29:RF:32:LEU:HD13	29:RF:105:VAL:HG13	1.59	0.85
32:RI:9:LEU:O	32:RI:10:GLU:HG3	1.74	0.85
40:RU:64:ARG:HH21	40:RU:64:ARG:HG2	1.42	0.85
35:YP:101:VAL:HG23	35:YP:107:LYS:H	1.41	0.85
45:YZ:59:LEU:O	45:YZ:60:GLU:HG2	1.76	0.85
27:RD:17:THR:HG22	27:RD:205:VAL:H	1.41	0.85
30:RG:67:LYS:HE2	50:R4:6:HIS:NE2	1.91	0.85
45:RZ:5:LEU:HD11	45:RZ:39:VAL:HB	1.57	0.85
31:YH:89:ILE:HD11	31:YH:129:THR:HB	1.58	0.85
32:YI:88:ILE:HG12	32:YI:122:GLU:H	1.39	0.85
35:YP:75:ILE:H	35:YP:75:ILE:HD13	1.39	0.85
7:XG:44:TYR:HA	7:XG:47:CYS:SG	2.17	0.85
15:XO:3:ILE:HD13	15:XO:3:ILE:H	1.40	0.85
27:YD:28:GLU:HB2	27:YD:29:PRO:HD2	1.56	0.85
29:YF:82:ILE:HG13	29:YF:82:ILE:O	1.73	0.85
28:RE:81:ILE:O	28:RE:82:ARG:HB2	1.76	0.85
5:XE:51:VAL:HB	5:XE:52:PRO:HD3	1.59	0.85
13:XM:57:ARG:HH21	50:Y4:34:GLU:HA	1.42	0.85
24:QY:29:U:H2'	24:QY:30:C:C6	2.11	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2056:G:N2	51:R5:4:HIS:O	2.10	0.84
54:R8:59:LYS:NZ	54:R8:59:LYS:CB	2.39	0.84
31:RH:127:GLU:HG2	31:RH:128:PRO:HD3	0.86	0.84
31:RH:89:ILE:HD11	31:RH:129:THR:HB	1.58	0.84
35:RP:18:ARG:O	35:RP:19:VAL:HB	1.75	0.84
45:RZ:53:ILE:HG22	45:RZ:71:VAL:O	1.76	0.84
41:YV:49:THR:HB	41:YV:50:PRO:CD	2.07	0.84
10:QJ:7:LYS:HB2	10:QJ:97:GLU:HB2	1.57	0.84
47:R1:81:LYS:CA	47:R1:81:LYS:HZ3	1.79	0.84
28:RE:95:ILE:H	28:RE:95:ILE:HD12	1.41	0.84
27:YD:17:THR:HG22	27:YD:205:VAL:H	1.41	0.84
13:XM:14:ARG:H	13:XM:44:ARG:HD3	1.41	0.84
28:YE:95:ILE:H	28:YE:95:ILE:HD12	1.42	0.84
34:YO:26:LYS:HB2	34:YO:30:ALA:HB2	1.59	0.84
38:YS:106:ARG:HA	38:YS:110:LEU:CD1	2.07	0.84
19:QS:5:LEU:CD2	50:R4:67:TYR:CZ	2.60	0.84
1:XA:345:C:H5'	1:XA:346:G:H5'	1.59	0.84
28:YE:81:ILE:O	28:YE:82:ARG:HB2	1.75	0.84
31:YH:54:ARG:NH1	31:YH:62:LYS:HG2	1.92	0.84
7:QG:44:TYR:HA	7:QG:47:CYS:SG	2.17	0.84
15:QO:82:ILE:HD11	15:QO:88:ARG:CG	2.07	0.84
17:QQ:59:ILE:HG22	17:QQ:73:VAL:HA	1.60	0.84
28:RE:24:THR:HG21	28:RE:188:VAL:HG11	1.59	0.84
28:YE:61:ARG:O	28:YE:63:LEU:HG	1.77	0.84
25:RA:1043:C:N3	25:RA:1112:G:N2	2.25	0.84
25:RA:2810:A:O3'	28:RE:61:ARG:HG3	1.77	0.84
35:RP:62:LEU:CD2	54:R8:25:MET:HB2	2.08	0.84
45:RZ:108:PRO:HB2	45:RZ:112:ARG:HB2	1.60	0.84
30:YG:98:ARG:HA	30:YG:101:ILE:HG12	1.59	0.84
35:YP:62:LEU:CD2	54:Y8:25:MET:HB2	2.08	0.84
38:YS:83:LYS:HG2	38:YS:109:GLY:CA	2.07	0.84
44:YY:57:GLN:NE2	44:YY:58:GLY:H	1.76	0.84
5:QE:81:GLU:HB3	5:QE:90:VAL:HG22	1.60	0.84
14:QN:21:TYR:HE2	14:QN:23:ARG:HH21	1.24	0.84
27:RD:35:LYS:HG2	27:RD:64:ILE:H	1.40	0.84
30:RG:98:ARG:HA	30:RG:101:ILE:HG12	1.59	0.84
34:RO:26:LYS:HB2	34:RO:30:ALA:HB2	1.59	0.84
38:RS:89:ARG:HD2	38:RS:92:TYR:O	1.78	0.84
41:RV:49:THR:HB	41:RV:50:PRO:CD	2.07	0.84
51:Y5:40:LYS:HD3	51:Y5:46:CYS:HB3	1.60	0.84
29:YF:53:THR:HG23	29:YF:56:GLU:OE1	1.77	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YQ:30:GLY:HA2	36:YQ:107:ALA:HB2	1.60	0.84
4:QD:96:LEU:H	4:QD:96:LEU:HD22	1.43	0.84
14:QN:24:CYS:SG	14:QN:43:CYS:CB	2.65	0.84
19:QS:5:LEU:HD21	50:R4:67:TYR:CE2	2.10	0.84
47:R1:82:LEU:HD11	47:R1:83:GLU:O	1.75	0.84
38:RS:83:LYS:HG2	38:RS:109:GLY:CA	2.07	0.84
13:QM:23:TYR:HB3	13:QM:67:GLU:HG2	1.59	0.84
14:QN:8:GLU:OE2	14:QN:11:LYS:HD2	1.78	0.84
31:RH:54:ARG:NH1	31:RH:62:LYS:HG2	1.92	0.84
39:RT:111:ARG:O	39:RT:112:ARG:HG3	1.76	0.84
10:XJ:4:ILE:HB	10:XJ:74:ILE:HD11	1.60	0.84
15:XO:82:ILE:HD11	15:XO:88:ARG:CG	2.07	0.84
38:YS:89:ARG:HD2	38:YS:92:TYR:O	1.78	0.84
39:YT:3:ARG:HG3	39:YT:7:ILE:HG12	1.60	0.84
13:XM:23:TYR:HB3	13:XM:67:GLU:HG2	1.60	0.84
25:YA:2563:U:H4'	34:YO:28:SER:HA	1.59	0.84
1:QA:1531:A:H5''	1:QA:1531:A:C8	2.10	0.83
5:QE:51:VAL:HB	5:QE:52:PRO:HD3	1.59	0.83
31:RH:105:LEU:H	31:RH:105:LEU:HD13	1.42	0.83
44:RY:81:LYS:HD3	44:RY:97:ARG:HE	1.43	0.83
45:RZ:24:LEU:HD11	45:RZ:86:VAL:HG23	1.57	0.83
1:XA:973:G:H3'	1:XA:974:A:H5''	1.59	0.83
10:XJ:47:PHE:HE1	10:XJ:63:PHE:HB2	1.40	0.83
19:XS:64:GLU:HB2	50:Y4:55:ARG:HH12	1.42	0.83
47:Y1:92:LYS:HG3	47:Y1:96:LYS:HB2	1.57	0.83
29:YF:32:LEU:HD13	29:YF:105:VAL:HG13	1.59	0.83
32:YI:74:ASN:H	32:YI:74:ASN:HD22	1.25	0.83
35:YP:126:VAL:HG22	35:YP:145:PRO:HG2	1.60	0.83
45:YZ:108:PRO:HB2	45:YZ:112:ARG:HB2	1.60	0.83
37:RR:117:VAL:HG22	37:RR:118:GLU:H	1.43	0.83
39:RT:24:PRO:HA	39:RT:49:VAL:HG13	1.59	0.83
10:XJ:37:PRO:HA	10:XJ:72:VAL:HG22	1.59	0.83
52:Y6:27:LYS:HB2	52:Y6:27:LYS:NZ	1.93	0.83
25:YA:571:A:O2'	41:YV:78:LYS:NZ	2.11	0.83
31:YH:13:LYS:HA	31:YH:13:LYS:HE2	1.60	0.83
37:YR:117:VAL:HG22	37:YR:118:GLU:H	1.43	0.83
51:R5:40:LYS:HD3	51:R5:46:CYS:HB3	1.60	0.83
25:RA:2451:A:C6	55:Z6:76:PPU:HE2	2.12	0.83
3:XC:15:THR:CG2	3:XC:181:ASN:HA	2.08	0.83
14:YN:12:ARG:C	14:YN:14:PRO:HD2	1.98	0.83
14:YN:21:TYR:HE2	14:YN:23:ARG:HH21	1.24	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:50:ALA:HB1	19:QS:57:HIS:HB3	1.60	0.83
25:RA:571:A:O2'	41:RV:78:LYS:NZ	2.10	0.83
32:RI:74:ASN:HD22	32:RI:74:ASN:H	1.25	0.83
25:YA:1490:A:O2'	27:YD:99:ASP:OD2	1.95	0.83
1:QA:1139:G:N2	1:QA:1143:G:O6	2.12	0.83
35:RP:65:ARG:HG3	35:RP:65:ARG:NH1	1.90	0.83
45:RZ:94:GLU:HB2	45:RZ:130:PRO:HD3	1.61	0.83
51:Y5:39:MET:O	51:Y5:40:LYS:HG3	1.77	0.83
14:QN:12:ARG:C	14:QN:14:PRO:HD2	1.98	0.83
28:RE:35:GLN:HG2	28:RE:37:ARG:HE	1.44	0.83
39:RT:3:ARG:HG3	39:RT:7:ILE:HG12	1.60	0.83
1:XA:1189:C:OP1	10:XJ:51:ARG:NH2	2.12	0.83
14:XN:8:GLU:OE2	14:XN:11:LYS:HD2	1.78	0.83
25:YA:1190:G:OP1	35:YP:30:THR:OG1	1.96	0.83
28:YE:7:VAL:HG23	28:YE:8:LYS:H	1.44	0.83
10:QJ:37:PRO:HA	10:QJ:72:VAL:HG22	1.59	0.83
25:RA:674:G:H1'	29:RF:74:ARG:HD3	1.58	0.83
33:RN:133:GLN:HB2	33:RN:135:PRO:HD3	1.59	0.83
44:RY:57:GLN:NE2	44:RY:58:GLY:H	1.76	0.83
1:XA:686:U:H1'	11:XK:42:TRP:HE1	1.43	0.83
25:YA:674:G:H1'	29:YF:74:ARG:HD3	1.60	0.83
32:YI:79:ILE:HB	32:YI:142:VAL:HA	1.61	0.83
33:YN:131:GLN:NE2	33:YN:132:ALA:H	1.75	0.83
35:YP:59:LEU:HA	35:YP:61:ARG:HH21	1.44	0.83
1:QA:595:G:H1	1:QA:641:U:HO2'	1.21	0.83
2:QB:193:ASP:OD2	2:QB:196:LEU:HG	1.78	0.83
15:QO:3:ILE:H	15:QO:3:ILE:HD13	1.40	0.83
25:RA:2093:G:H21	25:RA:2198:A:H62	1.27	0.83
38:RS:88:ASP:O	38:RS:89:ARG:HB3	1.78	0.83
1:XA:1298:C:OP2	7:XG:114:ARG:NH2	2.11	0.83
1:XA:1313:U:OP2	50:Y4:67:TYR:OH	1.97	0.83
39:YT:24:PRO:HA	39:YT:49:VAL:HG13	1.59	0.83
39:YT:53:ARG:O	39:YT:59:THR:HG23	1.78	0.83
29:RF:53:THR:HG23	29:RF:56:GLU:OE1	1.77	0.83
32:RI:145:VAL:HG22	32:RI:146:ALA:H	1.41	0.83
33:RN:131:GLN:NE2	33:RN:132:ALA:H	1.75	0.83
39:RT:53:ARG:O	39:RT:59:THR:HG23	1.78	0.83
41:RV:66:ARG:NH1	41:RV:88:ARG:HD3	1.94	0.83
2:XB:204:ASN:ND2	2:XB:206:ASP:H	1.77	0.83
7:XG:78:ARG:HG3	7:XG:79:ARG:N	1.93	0.83
22:XV:1:C:O2'	46:Y0:6:GLY:O	1.95	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:YZ:108:PRO:CG	45:YZ:112:ARG:H	1.92	0.83
50:R4:36:CYS:O	50:R4:39:CYS:HB2	1.79	0.82
52:R6:27:LYS:HB2	52:R6:27:LYS:NZ	1.93	0.82
38:RS:106:ARG:HA	38:RS:110:LEU:CD1	2.07	0.82
2:XB:185:ILE:HG22	2:XB:199:TYR:HB2	1.60	0.82
2:XB:193:ASP:OD2	2:XB:196:LEU:HG	1.78	0.82
2:QB:178:ARG:HH21	8:QH:74:PRO:CB	1.89	0.82
2:QB:204:ASN:ND2	2:QB:206:ASP:H	1.77	0.82
7:QG:78:ARG:HG3	7:QG:79:ARG:N	1.93	0.82
12:QL:38:THR:HG23	12:QL:39:VAL:HG23	1.60	0.82
28:RE:15:PHE:CE1	28:RE:20:ALA:HB2	2.14	0.82
36:RQ:30:GLY:HA2	36:RQ:107:ALA:HB2	1.60	0.82
19:XS:50:ALA:HB1	19:XS:57:HIS:HB3	1.60	0.82
25:YA:1899:G:H21	25:YA:1902:C:H41	1.26	0.82
31:YH:105:LEU:H	31:YH:105:LEU:HD13	1.42	0.82
23:QX:6:C:O2'	23:QX:7:G:OP1	1.96	0.82
25:RA:1496:A:H8	25:RA:1577:C:HO2'	1.27	0.82
27:YD:25:THR:CG2	27:YD:82:ILE:H	1.93	0.82
33:YN:133:GLN:HB2	33:YN:135:PRO:HD3	1.59	0.82
44:YY:81:LYS:HD3	44:YY:97:ARG:HE	1.43	0.82
35:RP:101:VAL:HG23	35:RP:107:LYS:H	1.41	0.82
11:XK:124:LYS:HD2	11:XK:125:PHE:HE1	1.45	0.82
12:XL:38:THR:HG23	12:XL:39:VAL:HG23	1.60	0.82
28:YE:15:PHE:CE1	28:YE:20:ALA:HB2	2.14	0.82
40:YU:64:ARG:HG2	40:YU:64:ARG:HH21	1.42	0.82
3:QC:113:ALA:HB3	3:QC:114:PRO:HD3	1.62	0.82
28:RE:7:VAL:HG23	28:RE:8:LYS:H	1.44	0.82
17:XQ:59:ILE:HG22	17:XQ:73:VAL:HA	1.60	0.82
25:YA:1322:A:N6	25:YA:1333:C:O2	2.12	0.82
31:YH:153:LYS:HG2	31:YH:162:ILE:HG13	1.61	0.82
1:XA:346:G:H4'	39:YT:41:ARG:HH11	1.44	0.82
40:YU:88:ILE:HD13	40:YU:88:ILE:H	1.44	0.82
13:QM:62:ASN:ND2	50:R4:49:PHE:CD2	2.45	0.82
1:XA:708:C:OP1	11:XK:85:ARG:NH2	2.10	0.82
4:XD:96:LEU:HD22	4:XD:96:LEU:H	1.43	0.82
2:QB:185:ILE:HG22	2:QB:199:TYR:HB2	1.61	0.82
27:RD:35:LYS:NZ	27:RD:104:TYR:HB2	1.93	0.82
33:RN:22:THR:HG22	33:RN:23:LEU:H	1.44	0.82
40:RU:88:ILE:HD13	40:RU:88:ILE:H	1.44	0.82
30:YG:179:PRO:HG3	50:Y4:38:LYS:NZ	1.95	0.82
50:Y4:36:CYS:O	50:Y4:39:CYS:HB2	1.79	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y4:71:ARG:NH1	50:Y4:71:ARG:HG3	1.90	0.82
27:YD:35:LYS:NZ	27:YD:104:TYR:HB2	1.93	0.82
33:YN:22:THR:HG22	33:YN:23:LEU:H	1.45	0.82
35:YP:39:LYS:HA	35:YP:45:LEU:CD1	2.10	0.82
39:YT:102:ILE:HA	39:YT:105:LEU:HD21	1.62	0.82
50:R4:33:VAL:HG12	50:R4:34:GLU:H	1.44	0.82
26:RB:65:C:H41	26:RB:108:C:H2'	1.45	0.82
45:RZ:108:PRO:CG	45:RZ:112:ARG:H	1.92	0.82
5:XE:81:GLU:HB3	5:XE:90:VAL:HG22	1.60	0.82
48:Y2:16:LEU:O	48:Y2:16:LEU:HG	1.78	0.82
10:QJ:63:PHE:HD1	14:QN:58:LYS:HA	1.43	0.82
12:QL:86:ARG:HB2	12:QL:101:VAL:HG22	1.62	0.82
30:RG:179:PRO:HG3	50:R4:38:LYS:NZ	1.95	0.82
2:XB:84:GLU:OE1	2:XB:216:SER:HA	1.80	0.82
13:XM:11:ARG:HH21	30:YG:146:TYR:HD2	1.28	0.82
34:YO:14:THR:HG21	34:YO:86:ILE:HB	1.62	0.82
2:QB:196:LEU:CD1	2:QB:197:VAL:HG23	2.10	0.82
29:RF:155:LEU:HD13	29:RF:174:VAL:HG13	1.62	0.82
45:RZ:72:ARG:HH11	45:RZ:72:ARG:HB2	1.42	0.82
16:XP:4:ILE:CD1	16:XP:64:ALA:HB1	2.09	0.82
38:YS:19:LYS:O	38:YS:20:ARG:HB3	1.80	0.82
2:QB:84:GLU:OE1	2:QB:216:SER:HA	1.80	0.81
45:YZ:94:GLU:HB2	45:YZ:130:PRO:HD3	1.61	0.81
1:QA:17:U:O2	1:QA:1079:G:N2	2.13	0.81
25:RA:1454:U:H5'	37:RR:63:ARG:HE	1.45	0.81
31:RH:8:PRO:C	31:RH:9:ILE:HG12	2.00	0.81
30:YG:67:LYS:HE2	50:Y4:6:HIS:CE1	2.14	0.81
38:YS:88:ASP:O	38:YS:89:ARG:HB3	1.78	0.81
48:R2:43:GLN:O	48:R2:44:LEU:HG	1.81	0.81
1:XA:1071:C:H5"	5:XE:49:PRO:HG2	1.62	0.81
13:XM:8:GLU:OE2	30:YG:115:ARG:CZ	2.28	0.81
28:YE:24:THR:HG21	28:YE:188:VAL:HG11	1.59	0.81
10:QJ:4:ILE:HB	10:QJ:74:ILE:HD11	1.60	0.81
16:QP:4:ILE:CD1	16:QP:64:ALA:HB1	2.08	0.81
48:R2:16:LEU:O	48:R2:16:LEU:HG	1.78	0.81
54:R8:52:LYS:N	54:R8:53:PRO:CD	2.43	0.81
31:RH:132:ARG:HB2	31:RH:132:ARG:NH1	1.94	0.81
31:RH:153:LYS:HG2	31:RH:162:ILE:HG13	1.61	0.81
34:RO:53:LYS:N	34:RO:53:LYS:HD2	1.96	0.81
36:RQ:90:VAL:HG13	36:RQ:91:GLU:N	1.95	0.81
39:RT:102:ILE:HA	39:RT:105:LEU:HD21	1.62	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YV:66:ARG:NH1	41:YV:88:ARG:HD3	1.94	0.81
4:QD:108:LEU:HD11	4:QD:174:LEU:HD22	1.60	0.81
31:RH:152:ARG:O	31:RH:153:LYS:HB2	1.80	0.81
10:XJ:63:PHE:HD1	14:YN:58:LYS:HA	1.43	0.81
10:XJ:6:ILE:HD12	10:XJ:6:ILE:O	1.81	0.81
53:Y7:48:LYS:HG2	53:Y7:49:ARG:H	1.46	0.81
31:YH:10:PRO:O	31:YH:11:VAL:HG13	1.80	0.81
31:RH:26:VAL:HG13	31:RH:27:LYS:N	1.96	0.81
35:RP:39:LYS:HA	35:RP:45:LEU:CD1	2.10	0.81
38:RS:106:ARG:CA	38:RS:110:LEU:HD21	2.10	0.81
4:XD:108:LEU:HD11	4:XD:174:LEU:HD22	1.60	0.81
36:YQ:90:VAL:HG13	36:YQ:91:GLU:N	1.95	0.81
3:QC:15:THR:CG2	3:QC:181:ASN:HA	2.08	0.81
13:QM:7:VAL:CG1	30:RG:115:ARG:HH12	1.94	0.81
16:QP:51:VAL:HG12	16:QP:52:ASP:H	1.46	0.81
27:RD:27:THR:HG23	27:RD:28:GLU:N	1.96	0.81
35:RP:126:VAL:HG22	35:RP:145:PRO:HG2	1.61	0.81
28:YE:116:VAL:HG21	28:YE:122:PHE:CD2	2.16	0.81
30:YG:47:LYS:HD3	30:YG:81:LYS:HB2	1.63	0.81
10:QJ:6:ILE:O	10:QJ:6:ILE:HD12	1.80	0.81
30:RG:67:LYS:HE2	50:R4:6:HIS:CE1	2.14	0.81
25:RA:1728:G:H3'	25:RA:1729:A:H5''	1.61	0.81
30:RG:47:LYS:HD3	30:RG:81:LYS:HB2	1.63	0.81
2:XB:122:PHE:HD1	2:XB:139:LYS:HZ1	1.29	0.81
7:QG:111:ARG:HH11	7:QG:111:ARG:HB3	1.46	0.81
51:R5:4:HIS:HB3	51:R5:5:PRO:CD	2.11	0.81
53:R7:48:LYS:HG2	53:R7:49:ARG:H	1.46	0.81
28:RE:3:GLY:O	28:RE:4:ILE:HB	1.81	0.81
33:RN:35:ARG:HG3	33:RN:37:LYS:HG3	1.63	0.81
38:RS:36:TYR:HD2	38:RS:52:SER:HB3	1.46	0.81
54:Y8:59:LYS:NZ	54:Y8:59:LYS:CB	2.39	0.81
28:YE:50:GLY:CA	28:YE:77:ILE:HA	2.10	0.81
33:YN:43:THR:HB	33:YN:46:VAL:HG12	1.63	0.81
25:YA:1359:A:N6	25:YA:1372:U:O4	2.14	0.81
29:YF:155:LEU:HD13	29:YF:174:VAL:HG13	1.62	0.81
33:YN:35:ARG:HG3	33:YN:37:LYS:HG3	1.63	0.81
3:QC:47:LEU:HD11	3:QC:76:VAL:HG12	1.62	0.81
3:QC:52:LEU:H	3:QC:52:LEU:HD23	1.46	0.81
5:QE:50:GLU:HB3	5:QE:53:LEU:HD13	1.61	0.81
23:QX:4:C:C2'	23:QX:5:C:H5'	2.11	0.81
28:RE:116:VAL:HG21	28:RE:122:PHE:CD2	2.16	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RT:39:ARG:HG2	39:RT:40:THR:H	1.46	0.81
48:Y2:43:GLN:O	48:Y2:44:LEU:HG	1.81	0.81
2:QB:4:GLU:HG2	2:QB:5:ILE:N	1.94	0.80
28:RE:52:LEU:HB2	28:RE:75:VAL:HG23	1.62	0.80
31:RH:13:LYS:HA	31:RH:13:LYS:HE2	1.60	0.80
39:RT:62:THR:CG2	39:RT:75:ILE:HG12	2.11	0.80
44:RY:76:CYS:HB3	44:RY:96:ILE:CD1	2.07	0.80
2:XB:181:PHE:HE1	8:XH:70:GLN:O	1.64	0.80
3:XC:113:ALA:HB3	3:XC:114:PRO:HD3	1.62	0.80
3:XC:47:LEU:HD11	3:XC:76:VAL:HG12	1.62	0.80
25:YA:631:A:OP2	54:Y8:46:ARG:NH2	2.14	0.80
45:YZ:137:ILE:HB	45:YZ:156:LYS:HD2	1.62	0.80
44:RY:6:HIS:O	44:RY:7:VAL:HG13	1.81	0.80
3:XC:52:LEU:H	3:XC:52:LEU:HD23	1.46	0.80
39:YT:39:ARG:HG2	39:YT:40:THR:H	1.46	0.80
38:YS:36:TYR:HD2	38:YS:52:SER:HB3	1.46	0.80
28:RE:50:GLY:CA	28:RE:77:ILE:HA	2.10	0.80
16:XP:51:VAL:HG12	16:XP:52:ASP:H	1.46	0.80
27:YD:27:THR:HG23	27:YD:28:GLU:N	1.96	0.80
28:YE:35:GLN:HG2	28:YE:37:ARG:HE	1.44	0.80
44:YY:76:CYS:HB3	44:YY:96:ILE:CD1	2.07	0.80
4:QD:28:SER:HB3	4:QD:29:PRO:CD	2.12	0.80
38:RS:19:LYS:O	38:RS:20:ARG:HB3	1.80	0.80
3:XC:20:SER:HB2	3:XC:40:ARG:NH2	1.96	0.80
31:YH:8:PRO:C	31:YH:9:ILE:HG12	2.00	0.80
44:YY:6:HIS:O	44:YY:7:VAL:HG13	1.81	0.80
3:QC:20:SER:HB2	3:QC:40:ARG:NH2	1.95	0.80
27:RD:27:THR:HG21	27:RD:83:GLU:HB3	1.63	0.80
50:Y4:33:VAL:HG12	50:Y4:34:GLU:H	1.44	0.80
29:YF:198:ALA:HA	29:YF:201:VAL:HG12	1.62	0.80
3:QC:138:VAL:HG13	3:QC:149:ALA:HB1	1.64	0.80
16:QP:51:VAL:HG12	16:QP:52:ASP:N	1.97	0.80
28:RE:201:THR:CG2	28:RE:203:LYS:HB3	2.12	0.80
32:RI:79:ILE:HB	32:RI:142:VAL:HA	1.61	0.80
5:XE:50:GLU:HB3	5:XE:53:LEU:HD13	1.61	0.80
54:Y8:52:LYS:N	54:Y8:53:PRO:CD	2.43	0.80
28:YE:201:THR:CG2	28:YE:203:LYS:HB3	2.11	0.80
36:YQ:80:GLU:O	36:YQ:81:VAL:CG1	2.30	0.80
1:QA:973:G:H3'	1:QA:974:A:H5''	1.64	0.80
5:QE:126:ARG:HG3	5:QE:126:ARG:HH11	1.47	0.80
27:RD:121:PRO:HB3	27:RD:135:PHE:HE1	1.46	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:47:ASP:OD2	35:RP:49:ARG:HG2	1.82	0.80
2:XB:196:LEU:CD1	2:XB:197:VAL:HG23	2.10	0.80
2:XB:212:GLN:CD	2:XB:235:SER:HB2	2.03	0.80
4:XD:28:SER:HB3	4:XD:29:PRO:CD	2.12	0.80
25:YA:1454:U:H5'	37:YR:63:ARG:HE	1.46	0.80
1:QA:1239:A:H62	1:QA:1299:A:H62	1.26	0.80
27:RD:25:THR:HG22	27:RD:82:ILE:H	1.47	0.80
29:RF:198:ALA:HA	29:RF:201:VAL:HG12	1.62	0.80
41:RV:99:ILE:HD13	41:RV:99:ILE:N	1.95	0.80
5:XE:126:ARG:HG3	5:XE:126:ARG:HH11	1.47	0.80
7:XG:111:ARG:HH11	7:XG:111:ARG:HB3	1.46	0.80
8:XH:84:ARG:HG3	8:XH:84:ARG:HH11	1.45	0.80
51:Y5:4:HIS:HB3	51:Y5:5:PRO:CD	2.11	0.80
27:YD:121:PRO:HB3	27:YD:135:PHE:HE1	1.46	0.80
25:YA:2208:U:H1'	27:YD:151:LYS:HE2	1.64	0.80
28:YE:3:GLY:O	28:YE:4:ILE:HB	1.81	0.80
30:YG:61:ALA:HB2	30:YG:68:PRO:CD	2.12	0.80
34:YO:31:LYS:HG3	34:YO:32:TYR:CE2	2.17	0.80
38:YS:106:ARG:CA	38:YS:110:LEU:HD21	2.10	0.80
14:QN:39:LEU:HB3	14:QN:43:CYS:HB3	1.64	0.80
29:RF:145:GLU:HG3	29:RF:145:GLU:O	1.81	0.80
34:RO:14:THR:HG21	34:RO:86:ILE:HB	1.62	0.80
9:XI:19:LEU:HD23	9:XI:61:ALA:HB2	1.63	0.80
16:XP:4:ILE:HG13	16:XP:21:VAL:HG12	1.64	0.80
28:YE:52:LEU:HB2	28:YE:75:VAL:HG23	1.62	0.80
41:YV:99:ILE:HD13	41:YV:99:ILE:N	1.95	0.80
16:QP:4:ILE:HG13	16:QP:21:VAL:HG12	1.64	0.79
2:XB:4:GLU:HG2	2:XB:5:ILE:N	1.94	0.79
16:XP:51:VAL:HG12	16:XP:52:ASP:N	1.97	0.79
27:YD:34:VAL:HG13	27:YD:34:VAL:O	1.80	0.79
27:YD:68:LYS:HB2	27:YD:70:TRP:CH2	2.17	0.79
31:YH:152:ARG:O	31:YH:153:LYS:HB2	1.80	0.79
45:YZ:158:PRO:HB3	45:YZ:159:PRO:HD2	1.63	0.79
2:QB:35:GLU:O	2:QB:36:ARG:HD3	1.82	0.79
27:RD:34:VAL:HG13	27:RD:34:VAL:O	1.81	0.79
12:XL:48:PRO:HD2	12:XL:49:ASN:N	1.97	0.79
25:YA:2056:G:N2	51:Y5:4:HIS:O	2.15	0.79
25:YA:918:A:N3	26:YB:80:U:O2'	2.16	0.79
39:YT:62:THR:CG2	39:YT:75:ILE:HG12	2.11	0.79
2:QB:212:GLN:CD	2:QB:235:SER:HB2	2.02	0.79
27:RD:25:THR:CG2	27:RD:82:ILE:H	1.93	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:77:ILE:HD13	30:RG:82:LEU:HD12	1.64	0.79
31:RH:126:PRO:CG	31:RH:127:GLU:H	1.95	0.79
36:RQ:81:VAL:O	36:RQ:82:ARG:CG	2.31	0.79
2:XB:35:GLU:O	2:XB:36:ARG:HD3	1.82	0.79
5:XE:10:MET:HB3	5:XE:32:VAL:HG22	1.63	0.79
2:XB:178:ARG:NH2	8:XH:74:PRO:HB3	1.96	0.79
11:XK:32:ILE:CD1	11:XK:72:ALA:HB2	2.12	0.79
20:XT:50:GLU:HG3	20:XT:51:GLU:N	1.98	0.79
30:YG:77:ILE:HD13	30:YG:82:LEU:HD12	1.64	0.79
31:YH:126:PRO:CG	31:YH:127:GLU:H	1.95	0.79
31:YH:169:VAL:HG22	31:YH:170:ARG:H	1.48	0.79
8:QH:84:ARG:HG3	8:QH:84:ARG:HH11	1.45	0.79
28:RE:137:HIS:HB3	28:RE:138:PRO:HD2	1.65	0.79
29:RF:11:VAL:HB	29:RF:18:ARG:HG3	1.64	0.79
30:RG:61:ALA:HB2	30:RG:68:PRO:CD	2.12	0.79
2:XB:187:LEU:HA	2:XB:201:ILE:HB	1.65	0.79
2:XB:18:GLY:H	2:XB:42:ILE:CG2	1.95	0.79
8:XH:100:ILE:HB	8:XH:125:ARG:HH12	1.47	0.79
9:QI:19:LEU:HD23	9:QI:61:ALA:HB2	1.64	0.79
12:QL:48:PRO:HD2	12:QL:49:ASN:N	1.97	0.79
32:RI:2:LYS:CA	32:RI:20:ASP:HB3	2.13	0.79
35:RP:14:LYS:O	35:RP:16:ARG:HG2	1.83	0.79
39:RT:102:ILE:HA	39:RT:105:LEU:CD2	2.13	0.79
45:RZ:137:ILE:HB	45:RZ:156:LYS:HD2	1.63	0.79
35:YP:14:LYS:O	35:YP:16:ARG:HG2	1.83	0.79
36:YQ:81:VAL:O	36:YQ:82:ARG:CG	2.31	0.79
27:RD:54:ARG:NH1	27:RD:54:ARG:HG3	1.98	0.79
31:RH:10:PRO:O	31:RH:11:VAL:HG13	1.80	0.79
25:RA:583:G:H5''	40:RU:10:ARG:HH12	1.46	0.79
8:XH:20:TYR:HA	8:XH:65:TYR:CE2	2.18	0.79
9:XI:15:ALA:HB2	9:XI:65:VAL:HG23	1.65	0.79
12:XL:86:ARG:HB2	12:XL:101:VAL:HG22	1.62	0.79
14:YN:39:LEU:HB3	14:YN:43:CYS:HB2	1.63	0.79
35:YP:65:ARG:HG3	35:YP:65:ARG:NH1	1.90	0.79
27:RD:68:LYS:HB2	27:RD:70:TRP:CH2	2.17	0.79
28:RE:111:ARG:HE	28:RE:160:TYR:HE1	1.31	0.79
31:RH:86:GLU:CG	31:RH:165:ALA:H	1.94	0.79
32:RI:93:THR:HG22	32:RI:119:PRO:HB3	1.65	0.79
1:XA:1053:G:H5'	1:XA:1054:C:H5'	1.64	0.79
4:XD:28:SER:HB3	4:XD:29:PRO:HD2	1.65	0.79
12:XL:6:THR:N	12:XL:9:GLN:HE21	1.80	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:951:G:OP2	13:XM:102:ARG:NH2	2.15	0.79
13:XM:4:ILE:H	13:XM:9:ILE:HG21	1.47	0.79
27:YD:17:THR:CG2	27:YD:205:VAL:H	1.96	0.79
28:YE:24:THR:HG21	28:YE:188:VAL:CG1	2.13	0.79
40:YU:105:VAL:HG22	41:YV:44:LYS:HD2	1.65	0.79
11:QK:124:LYS:HD2	11:QK:125:PHE:HE1	1.45	0.79
19:QS:41:VAL:HG12	19:QS:44:MET:N	1.98	0.79
20:QT:89:ARG:HH21	20:QT:104:LEU:HD21	1.47	0.79
35:RP:59:LEU:HA	35:RP:61:ARG:HH21	1.44	0.79
39:YT:102:ILE:HA	39:YT:105:LEU:CD2	2.13	0.79
1:QA:1077:G:N2	1:QA:1080:A:OP2	2.14	0.79
1:QA:1189:C:OP1	10:QJ:51:ARG:NH2	2.15	0.79
33:RN:71:ILE:HG21	33:RN:84:LYS:HB3	1.65	0.79
18:XR:43:PHE:HE2	18:XR:58:LEU:HD11	1.47	0.79
20:XT:100:ILE:HG13	20:XT:102:GLY:H	1.48	0.79
49:Y3:56:VAL:HG12	49:Y3:57:GLU:H	1.48	0.79
25:YA:1021:A:OP2	33:YN:65:LYS:NZ	2.15	0.79
13:XM:3:ARG:HH21	30:YG:139:LEU:HD13	1.46	0.79
31:YH:26:VAL:HG13	31:YH:27:LYS:N	1.96	0.79
44:YY:86:ARG:HB2	44:YY:95:LYS:HD2	1.64	0.79
30:RG:145:THR:HG23	50:R4:28:LYS:HZ1	1.48	0.79
34:RO:31:LYS:HG3	34:RO:32:TYR:CE2	2.17	0.79
35:RP:97:PRO:O	35:RP:98:GLU:HB3	1.83	0.79
45:RZ:158:PRO:HB3	45:RZ:159:PRO:HD2	1.63	0.79
1:XA:1077:G:N2	1:XA:1080:A:OP2	2.14	0.79
18:XR:56:THR:HB	18:XR:58:LEU:CD1	2.13	0.79
47:Y1:11:ARG:NH1	47:Y1:11:ARG:HB3	1.98	0.79
27:YD:27:THR:HG21	27:YD:83:GLU:HB3	1.63	0.79
31:YH:153:LYS:CG	31:YH:162:ILE:H	1.96	0.79
32:YI:11:ASN:O	32:YI:12:LEU:HB2	1.83	0.79
45:YZ:30:ASN:O	45:YZ:32:HIS:N	2.16	0.79
7:QG:113:GLU:HB2	7:QG:119:ARG:HG2	1.65	0.78
8:QH:20:TYR:HA	8:QH:65:TYR:CE2	2.18	0.78
33:RN:43:THR:HB	33:RN:46:VAL:HG12	1.63	0.78
33:RN:62:VAL:HG12	33:RN:66:LYS:HD2	1.65	0.78
9:XI:83:ARG:O	9:XI:86:VAL:HG12	1.84	0.78
31:YH:150:ALA:O	31:YH:152:ARG:N	2.14	0.78
4:QD:28:SER:HB3	4:QD:29:PRO:HD2	1.65	0.78
12:QL:6:THR:N	12:QL:9:GLN:HE21	1.80	0.78
18:QR:56:THR:HB	18:QR:58:LEU:CD1	2.13	0.78
47:R1:11:ARG:NH1	47:R1:11:ARG:HB3	1.98	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RU:105:VAL:HG22	41:RV:44:LYS:HD2	1.65	0.78
1:XA:642:A:N3	8:XH:113:SER:OG	2.16	0.78
19:XS:41:VAL:HG12	19:XS:44:MET:N	1.98	0.78
32:YI:93:THR:HG22	32:YI:119:PRO:HB3	1.65	0.78
34:YO:53:LYS:HD2	34:YO:53:LYS:N	1.96	0.78
35:YP:47:ASP:OD2	35:YP:49:ARG:HG2	1.82	0.78
43:YX:70:LEU:N	43:YX:70:LEU:HD23	1.98	0.78
2:QB:84:GLU:HB3	2:QB:219:VAL:HG21	1.65	0.78
5:QE:10:MET:HB3	5:QE:32:VAL:HG22	1.63	0.78
20:QT:50:GLU:HG3	20:QT:51:GLU:N	1.97	0.78
25:RA:1803:A:H4'	27:RD:259:THR:CG2	2.14	0.78
25:RA:265:A:N6	25:RA:427:U:O2'	2.16	0.78
25:RA:1803:A:H4'	27:RD:259:THR:HG21	1.65	0.78
35:RP:138:LEU:C	35:RP:140:ALA:H	1.85	0.78
45:RZ:130:PRO:HA	45:RZ:133:ILE:HD11	1.65	0.78
13:XM:3:ARG:CA	13:XM:9:ILE:HG21	2.13	0.78
50:Y4:58:ARG:O	50:Y4:63:TYR:HB2	1.84	0.78
25:YA:1607:C:N4	25:YA:1622:G:OP2	2.15	0.78
27:YD:54:ARG:HG3	27:YD:54:ARG:NH1	1.98	0.78
30:YG:128:ARG:HG3	30:YG:128:ARG:HH21	1.48	0.78
32:YI:2:LYS:CA	32:YI:20:ASP:HB3	2.13	0.78
34:YO:97:ARG:H	34:YO:117:LEU:HD22	1.48	0.78
40:YU:90:VAL:HG12	40:YU:91:ASP:N	1.98	0.78
9:QI:15:ALA:HB2	9:QI:65:VAL:HG23	1.65	0.78
10:QJ:40:LEU:HB2	10:QJ:69:ASN:HB3	1.65	0.78
11:QK:32:ILE:CD1	11:QK:72:ALA:HB2	2.12	0.78
13:QM:4:ILE:H	13:QM:9:ILE:HG21	1.47	0.78
49:R3:56:VAL:HG12	49:R3:57:GLU:H	1.47	0.78
30:RG:61:ALA:HB2	30:RG:68:PRO:HD3	1.65	0.78
36:RQ:80:GLU:O	36:RQ:81:VAL:CG1	2.30	0.78
38:RS:106:ARG:HA	38:RS:110:LEU:HD21	1.64	0.78
3:XC:138:VAL:HG13	3:XC:149:ALA:HB1	1.64	0.78
26:YB:40:U:O2	26:YB:45:A:N6	2.16	0.78
41:YV:47:VAL:HG13	41:YV:48:GLY:H	1.49	0.78
36:RQ:119:ARG:HH11	36:RQ:119:ARG:HG2	1.48	0.78
43:RX:70:LEU:HD23	43:RX:70:LEU:N	1.99	0.78
10:XJ:16:LEU:HD23	10:XJ:94:VAL:HG13	1.66	0.78
28:YE:137:HIS:HB3	28:YE:138:PRO:HD2	1.64	0.78
18:QR:43:PHE:HE2	18:QR:58:LEU:HD11	1.47	0.78
25:RA:307:G:H21	25:RA:330:A:H62	1.32	0.78
27:RD:54:ARG:HH11	27:RD:54:ARG:HG3	1.49	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:YZ:28:MET:O	45:YZ:34:ASN:HA	1.84	0.78
3:QC:181:ASN:ND2	3:QC:204:LEU:HD12	1.99	0.78
20:QT:100:ILE:HG13	20:QT:102:GLY:H	1.48	0.78
40:RU:90:VAL:HG12	40:RU:91:ASP:N	1.97	0.78
25:YA:2287:A:H62	25:YA:2344:U:H3	1.32	0.78
28:YE:4:ILE:HD12	28:YE:28:ALA:HB1	1.66	0.78
34:YO:47:ILE:HD12	34:YO:48:PRO:HD2	1.66	0.78
27:RD:142:VAL:HG23	27:RD:193:VAL:HA	1.66	0.78
29:RF:20:LEU:HD12	29:RF:21:ALA:H	1.49	0.78
36:RQ:20:ALA:HB1	36:RQ:99:PRO:HB2	1.65	0.78
1:XA:346:G:H4'	39:YT:41:ARG:NH1	1.98	0.78
25:YA:352:G:H3'	25:YA:353:G:H8	1.47	0.78
27:YD:94:LEU:HD22	27:YD:95:LEU:N	1.98	0.78
30:YG:97:ASP:H	30:YG:100:TRP:HD1	1.31	0.78
1:QA:1342:C:H4'	9:QI:125:TYR:HB3	1.64	0.78
31:RH:153:LYS:CG	31:RH:162:ILE:H	1.96	0.78
1:XA:1327:C:OP2	21:XU:12:LYS:NZ	2.17	0.78
13:XM:88:ARG:CB	13:XM:88:ARG:HH11	1.96	0.78
27:YD:34:VAL:HG21	27:YD:103:ARG:HA	1.66	0.78
29:YF:145:GLU:HG3	29:YF:145:GLU:O	1.81	0.78
2:QB:122:PHE:HD1	2:QB:139:LYS:HZ1	1.30	0.78
6:QF:23:LYS:O	6:QF:27:GLN:HG2	1.84	0.78
27:RD:94:LEU:HD22	27:RD:95:LEU:N	1.98	0.78
28:RE:24:THR:HG21	28:RE:188:VAL:CG1	2.13	0.78
28:RE:4:ILE:HD12	28:RE:28:ALA:HB1	1.66	0.78
30:RG:128:ARG:HG3	30:RG:128:ARG:HH21	1.48	0.78
34:RO:47:ILE:HD12	34:RO:48:PRO:HD2	1.66	0.78
35:RP:19:VAL:HG22	35:RP:20:GLY:N	1.97	0.78
44:RY:86:ARG:HB2	44:RY:95:LYS:HD2	1.64	0.78
6:XF:24:GLU:HA	6:XF:27:GLN:CG	2.14	0.78
1:XA:1226:C:O2'	13:XM:103:THR:O	2.02	0.78
25:YA:1899:G:H21	25:YA:1902:C:N4	1.81	0.78
2:QB:18:GLY:H	2:QB:42:ILE:CG2	1.95	0.77
10:QJ:16:LEU:HD23	10:QJ:94:VAL:HG13	1.66	0.77
52:R6:15:GLU:CD	52:R6:41:PRO:HB3	2.04	0.77
27:RD:25:THR:O	27:RD:27:THR:N	2.17	0.77
2:XB:21:ARG:HG3	2:XB:38:GLY:C	2.05	0.77
40:YU:66:ASN:O	40:YU:70:ARG:HB2	1.84	0.77
2:QB:178:ARG:NE	8:QH:71:GLY:O	2.17	0.77
2:QB:21:ARG:HG3	2:QB:38:GLY:C	2.05	0.77
27:RD:35:LYS:HZ1	27:RD:104:TYR:HB2	1.48	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:29:ASN:H	29:RF:112:MET:CE	1.97	0.77
35:RP:84:ASN:ND2	35:RP:116:GLY:HA3	1.99	0.77
2:XB:239:VAL:HG12	2:XB:240:GLN:NE2	1.99	0.77
13:XM:15:VAL:HG23	13:XM:43:THR:O	1.84	0.77
19:XS:5:LEU:CD2	50:Y4:67:TYR:CZ	2.66	0.77
31:YH:132:ARG:HB2	31:YH:132:ARG:NH1	1.94	0.77
1:QA:186:C:H5'	20:QT:78:ALA:HB1	1.64	0.77
5:QE:11:ILE:CD1	5:QE:31:LEU:HD12	2.13	0.77
6:QF:24:GLU:HA	6:QF:27:GLN:CG	2.14	0.77
23:QX:5:C:H2'	23:QX:6:C:H6	1.49	0.77
25:RA:878:A:N6	25:RA:899:A:O2'	2.16	0.77
27:RD:17:THR:CG2	27:RD:205:VAL:H	1.96	0.77
35:RP:62:LEU:CD2	35:RP:62:LEU:N	2.46	0.77
35:RP:75:ILE:HD13	35:RP:75:ILE:N	2.00	0.77
39:RT:43:GLN:HG2	39:RT:44:ASP:N	1.99	0.77
40:RU:66:ASN:O	40:RU:70:ARG:HB2	1.84	0.77
42:RW:65:LEU:CD1	42:RW:68:ARG:HH11	1.97	0.77
44:RY:97:ARG:HH21	44:RY:98:VAL:CB	1.98	0.77
2:XB:84:GLU:HB3	2:XB:219:VAL:HG21	1.65	0.77
25:YA:1728:G:N1	25:YA:1730:U:OP2	2.18	0.77
27:YD:25:THR:HG22	27:YD:82:ILE:H	1.46	0.77
31:YH:152:ARG:HG3	31:YH:153:LYS:CE	2.13	0.77
2:QB:101:MET:CA	2:QB:108:ILE:HG13	2.11	0.77
14:QN:39:LEU:HD22	14:QN:43:CYS:HG	1.46	0.77
22:QV:1:C:H4'	46:R0:5:LYS:HE2	1.65	0.77
30:RG:127:GLY:HA2	30:RG:166:ASP:CG	2.05	0.77
45:RZ:28:MET:O	45:RZ:34:ASN:HA	1.84	0.77
45:RZ:30:ASN:O	45:RZ:32:HIS:N	2.16	0.77
4:XD:30:LYS:C	4:XD:32:ALA:N	2.36	0.77
52:Y6:15:GLU:CD	52:Y6:41:PRO:HB3	2.04	0.77
30:YG:127:GLY:HA2	30:YG:166:ASP:CG	2.05	0.77
35:YP:84:ASN:ND2	35:YP:116:GLY:HA3	1.99	0.77
37:YR:74:LYS:O	37:YR:75:LEU:HB3	1.84	0.77
45:YZ:130:PRO:HA	45:YZ:133:ILE:HD11	1.66	0.77
50:R4:22:ILE:O	50:R4:24:THR:HG23	1.84	0.77
25:RA:1689:A:H62	25:RA:1698:A:H2	1.29	0.77
25:RA:2311:A:H1'	30:RG:82:LEU:HD11	1.67	0.77
31:RH:150:ALA:O	31:RH:152:ARG:N	2.14	0.77
35:RP:114:ILE:HD11	35:RP:130:PHE:CE1	2.19	0.77
38:RS:60:GLY:O	38:RS:61:ASN:HB3	1.84	0.77
7:XG:113:GLU:HB2	7:XG:119:ARG:HG2	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:XV:74:C:N3	25:YA:2252:G:N1	2.30	0.77
47:Y1:13:ILE:HD11	47:Y1:42:GLN:OE1	1.84	0.77
25:YA:84:A:N1	25:YA:98:G:O2'	2.17	0.77
29:YF:11:VAL:HB	29:YF:18:ARG:HG3	1.64	0.77
29:YF:20:LEU:HD12	29:YF:21:ALA:H	1.49	0.77
33:YN:71:ILE:HG21	33:YN:84:LYS:HB3	1.65	0.77
17:QQ:41:LYS:NZ	17:QQ:92:ARG:HH22	1.82	0.77
17:QQ:59:ILE:HD13	17:QQ:59:ILE:H	1.50	0.77
36:RQ:66:ILE:HG13	36:RQ:67:ARG:N	1.99	0.77
44:RY:44:ILE:HG13	44:RY:45:VAL:N	2.00	0.77
1:XA:1002:G:H2'	1:XA:1003:G:H8	1.49	0.77
9:XI:53:VAL:HB	9:XI:95:LYS:HE3	1.67	0.77
27:YD:44:ASN:N	27:YD:44:ASN:HD22	1.78	0.77
25:YA:498:G:N3	44:YY:47:LYS:NZ	2.32	0.77
44:YY:79:CYS:SG	44:YY:80:GLY:N	2.57	0.77
1:QA:642:A:N3	8:QH:113:SER:OG	2.18	0.77
2:QB:239:VAL:HG12	2:QB:240:GLN:NE2	1.99	0.77
8:QH:100:ILE:HB	8:QH:125:ARG:HH12	1.47	0.77
47:R1:86:SER:N	47:R1:87:PRO:CD	2.48	0.77
4:XD:76:ARG:HD2	4:XD:207:TYR:CE2	2.20	0.77
50:Y4:22:ILE:O	50:Y4:24:THR:HG23	1.84	0.77
36:YQ:20:ALA:CB	36:YQ:99:PRO:HD2	2.14	0.77
50:R4:58:ARG:O	50:R4:63:TYR:HB2	1.84	0.77
2:XB:44:LEU:HD12	2:XB:44:LEU:H	1.48	0.77
54:Y8:59:LYS:HZ3	54:Y8:59:LYS:CB	1.96	0.77
25:YA:330:A:HO2'	25:YA:331:A:H8	1.31	0.77
42:YW:18:ARG:HG3	42:YW:76:VAL:CG1	2.15	0.77
42:YW:65:LEU:CD1	42:YW:68:ARG:HH11	1.97	0.77
7:QG:148:ASN:HD22	7:QG:148:ASN:N	1.82	0.77
47:R1:13:ILE:HD11	47:R1:42:GLN:OE1	1.84	0.77
27:RD:146:GLU:HB2	27:RD:189:CYS:HB3	1.67	0.77
25:RA:2580:U:H4'	28:RE:130:GLY:HA3	1.67	0.77
32:RI:11:ASN:O	32:RI:12:LEU:HB2	1.83	0.77
34:RO:97:ARG:H	34:RO:117:LEU:HD22	1.48	0.77
44:RY:79:CYS:SG	44:RY:80:GLY:N	2.57	0.77
7:XG:150:ALA:HA	11:XK:59:TYR:CD2	2.19	0.77
20:XT:89:ARG:HH21	20:XT:104:LEU:HD21	1.47	0.77
45:YZ:108:PRO:HG2	45:YZ:112:ARG:H	1.49	0.77
13:QM:7:VAL:HB	30:RG:115:ARG:NH1	2.00	0.77
20:QT:26:ASN:O	20:QT:30:LYS:HB2	1.85	0.77
37:RR:33:ARG:HH22	51:R5:55:ARG:HG2	1.50	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2314:C:OP1	30:RG:91:ARG:NH1	2.18	0.77
5:XE:11:ILE:CD1	5:XE:31:LEU:HD12	2.13	0.77
5:XE:42:GLY:HA3	5:XE:66:MET:HG2	1.67	0.77
6:XF:23:LYS:O	6:XF:27:GLN:HG2	1.84	0.77
1:XA:1342:C:H4'	9:XI:125:TYR:HB3	1.66	0.77
20:XT:13:LEU:HD12	20:XT:14:LYS:N	2.00	0.77
49:Y3:35:ARG:HB3	49:Y3:37:LEU:HD21	1.66	0.77
50:Y4:1:MET:HB2	50:Y4:6:HIS:NE2	2.00	0.77
27:YD:153:ALA:O	27:YD:154:LYS:HG3	1.85	0.77
27:YD:25:THR:O	27:YD:27:THR:N	2.17	0.77
29:YF:183:VAL:O	29:YF:187:VAL:HG23	1.85	0.77
38:YS:60:GLY:O	38:YS:61:ASN:HB3	1.83	0.77
2:QB:187:LEU:HA	2:QB:201:ILE:HB	1.65	0.76
2:QB:44:LEU:HD12	2:QB:44:LEU:H	1.49	0.76
4:QD:76:ARG:HD2	4:QD:207:TYR:CE2	2.20	0.76
5:QE:12:LEU:HD23	5:QE:13:ILE:N	2.00	0.76
29:RF:183:VAL:O	29:RF:187:VAL:HG23	1.85	0.76
13:QM:3:ARG:NH2	30:RG:139:LEU:HD13	1.99	0.76
31:RH:153:LYS:HA	31:RH:153:LYS:NZ	1.99	0.76
36:RQ:20:ALA:CB	36:RQ:99:PRO:HD2	2.14	0.76
1:XA:973:G:OP1	10:XJ:57:LYS:NZ	2.17	0.76
7:XG:79:ARG:HH22	7:XG:82:GLY:HA2	1.51	0.76
25:YA:957:A:H5'	36:YQ:76:LYS:HD2	1.66	0.76
13:QM:88:ARG:CB	13:QM:88:ARG:HH11	1.96	0.76
54:R8:59:LYS:HZ3	54:R8:59:LYS:CB	1.96	0.76
30:RG:101:ILE:HG13	30:RG:102:PHE:H	1.48	0.76
40:RU:88:ILE:HG22	40:RU:90:VAL:HG23	1.67	0.76
44:RY:97:ARG:NH2	44:RY:98:VAL:HB	2.00	0.76
19:XS:39:THR:HG22	19:XS:40:ILE:H	1.50	0.76
51:Y5:40:LYS:CD	51:Y5:46:CYS:HB3	2.15	0.76
31:YH:153:LYS:HA	31:YH:153:LYS:NZ	1.99	0.76
34:YO:104:ARG:HH11	34:YO:104:ARG:HG2	1.50	0.76
35:YP:114:ILE:HD11	35:YP:130:PHE:CE1	2.19	0.76
36:YQ:119:ARG:HH11	36:YQ:119:ARG:HG2	1.48	0.76
38:YS:106:ARG:HA	38:YS:110:LEU:HD21	1.64	0.76
2:QB:178:ARG:HD2	8:QH:71:GLY:CA	2.16	0.76
16:QP:6:LEU:HB3	16:QP:17:TYR:HD2	1.50	0.76
50:R4:1:MET:HB2	50:R4:6:HIS:NE2	2.00	0.76
52:R6:34:LEU:HD13	52:R6:34:LEU:H	1.50	0.76
54:R8:59:LYS:HZ2	54:R8:59:LYS:HB2	1.49	0.76
25:YA:819:A:OP2	25:YA:1187:G:N2	2.17	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2729:G:H1'	28:YE:187:ALA:HB2	1.67	0.76
33:YN:62:VAL:HG12	33:YN:66:LYS:HD2	1.65	0.76
36:YQ:66:ILE:HG13	36:YQ:67:ARG:N	2.00	0.76
36:YQ:20:ALA:HB1	36:YQ:99:PRO:HB2	1.65	0.76
44:YY:94:LYS:O	44:YY:101:LYS:HB3	1.85	0.76
13:QM:15:VAL:HG23	13:QM:43:THR:O	1.84	0.76
16:QP:22:THR:HA	16:QP:33:ILE:HG12	1.66	0.76
27:RD:153:ALA:O	27:RD:154:LYS:HG3	1.85	0.76
27:RD:44:ASN:HD22	27:RD:44:ASN:N	1.79	0.76
36:RQ:90:VAL:HG13	36:RQ:91:GLU:H	1.49	0.76
44:RY:81:LYS:HD3	44:RY:97:ARG:NE	2.00	0.76
45:RZ:7:ALA:HB2	45:RZ:59:LEU:HD22	1.67	0.76
28:YE:111:ARG:HE	28:YE:160:TYR:HE1	1.31	0.76
30:YG:142:PRO:HB2	50:Y4:31:ILE:HD13	1.68	0.76
30:YG:61:ALA:HB2	30:YG:68:PRO:HD3	1.65	0.76
35:YP:138:LEU:C	35:YP:140:ALA:H	1.85	0.76
44:YY:95:LYS:HB3	44:YY:100:ALA:CA	2.10	0.76
9:QI:83:ARG:O	9:QI:86:VAL:HG12	1.84	0.76
21:QU:10:ARG:HG2	21:QU:13:ILE:HD12	1.68	0.76
25:RA:2112:G:O6	25:RA:2169:A:N6	2.19	0.76
27:RD:34:VAL:HG21	27:RD:103:ARG:HA	1.66	0.76
5:XE:12:LEU:HD23	5:XE:13:ILE:N	2.00	0.76
1:XA:1152:A:H5''	10:XJ:13:HIS:HD2	1.51	0.76
22:QV:1:C:O4'	46:R0:5:LYS:HE3	1.84	0.76
49:R3:35:ARG:HB3	49:R3:37:LEU:HD21	1.66	0.76
19:QS:5:LEU:CD2	50:R4:67:TYR:CD2	2.68	0.76
25:RA:2308:G:H22	25:RA:2311:A:H2	1.33	0.76
30:RG:127:GLY:O	30:RG:128:ARG:HG2	1.85	0.76
31:RH:169:VAL:HG22	31:RH:170:ARG:H	1.47	0.76
1:XA:1226:C:O2'	13:XM:111:LYS:NZ	2.19	0.76
7:XG:37:ASN:ND2	9:XI:40:LEU:HD23	2.00	0.76
25:YA:2655:G:N2	25:YA:2665:A:OP2	2.18	0.76
30:YG:127:GLY:O	30:YG:128:ARG:HG2	1.85	0.76
30:YG:76:SER:OG	30:YG:83:ARG:HA	1.85	0.76
25:YA:583:G:H5''	40:YU:10:ARG:HH12	1.51	0.76
8:QH:5:PRO:O	8:QH:8:ASP:HB3	1.85	0.76
20:QT:13:LEU:HD12	20:QT:14:LYS:N	2.00	0.76
51:R5:47:PRO:O	51:R5:48:GLU:HG3	1.85	0.76
3:XC:59:ARG:HH22	3:XC:97:LYS:HE3	1.51	0.76
5:XE:53:LEU:CD1	5:XE:53:LEU:H	1.99	0.76
29:YF:29:ASN:H	29:YF:112:MET:CE	1.98	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:125:VAL:HA	31:YH:126:PRO:HB3	1.68	0.76
36:YQ:90:VAL:HG13	36:YQ:91:GLU:H	1.49	0.76
5:XE:36:ASP:OD2	5:XE:38:GLN:HB2	1.86	0.76
9:XI:113:LYS:HD2	9:XI:113:LYS:H	1.51	0.76
16:XP:6:LEU:HB3	16:XP:17:TYR:HD2	1.50	0.76
29:YF:101:LEU:CD1	29:YF:102:PRO:HD2	2.11	0.76
39:YT:111:ARG:O	39:YT:113:LYS:N	2.17	0.76
42:YW:73:ALA:HB3	42:YW:106:ILE:HG12	1.68	0.76
44:YY:81:LYS:HD3	44:YY:97:ARG:NE	2.00	0.76
1:QA:452:A:N6	1:QA:480:U:O2	2.19	0.76
3:QC:59:ARG:HH22	3:QC:97:LYS:HE3	1.50	0.76
5:QE:53:LEU:CD1	5:QE:53:LEU:H	1.99	0.76
9:QI:53:VAL:HB	9:QI:95:LYS:HE3	1.67	0.76
25:RA:518:G:H4'	42:RW:18:ARG:NH1	2.00	0.76
47:Y1:86:SER:N	47:Y1:87:PRO:CD	2.48	0.76
50:Y4:34:GLU:HG3	50:Y4:35:VAL:H	1.51	0.76
29:YF:29:ASN:HB3	29:YF:112:MET:HE1	1.68	0.76
25:YA:2392:A:H8	35:YP:60:MET:HG3	1.49	0.76
39:YT:50:ILE:HD12	39:YT:102:ILE:HD11	1.68	0.76
4:QD:153:ARG:NH1	4:QD:181:MET:HG3	2.01	0.76
5:QE:72:GLN:NE2	5:QE:144:THR:HG22	2.01	0.76
8:QH:91:ARG:HG2	8:QH:91:ARG:HH11	1.51	0.76
14:QN:22:THR:O	14:QN:23:ARG:HB2	1.85	0.76
47:R1:56:GLN:N	47:R1:56:GLN:NE2	2.34	0.76
50:R4:34:GLU:HG3	50:R4:35:VAL:H	1.51	0.76
27:RD:69:ARG:HH21	27:RD:130:ALA:CB	1.99	0.76
32:RI:2:LYS:HA	32:RI:20:ASP:HB3	1.68	0.76
1:XA:688:G:H2'	1:XA:689:C:H6	1.48	0.76
1:XA:963:G:N3	10:XJ:55:LYS:NZ	2.32	0.76
2:XB:117:GLU:O	2:XB:121:LEU:HB2	1.86	0.76
10:XJ:38:ILE:HG12	10:XJ:71:LEU:O	1.86	0.76
52:Y6:34:LEU:HD13	52:Y6:34:LEU:H	1.50	0.76
30:YG:3:LEU:HD12	30:YG:4:ASP:H	1.51	0.76
35:YP:97:PRO:O	35:YP:98:GLU:HB3	1.83	0.76
6:QF:91:VAL:HG13	18:QR:72:ARG:HH12	1.51	0.75
25:RA:654:A:O2'	25:RA:654(A):G:N7	2.19	0.75
37:RR:74:LYS:O	37:RR:75:LEU:HB3	1.84	0.75
1:XA:411:A:H62	1:XA:413:G:H21	1.32	0.75
17:XQ:41:LYS:NZ	17:XQ:92:ARG:HH22	1.82	0.75
28:YE:63:LEU:CD1	28:YE:65:GLY:H	1.99	0.75
30:YG:101:ILE:HG13	30:YG:102:PHE:H	1.49	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YO:47:ILE:CD1	34:YO:48:PRO:HD2	2.16	0.75
35:YP:62:LEU:CD2	35:YP:62:LEU:N	2.47	0.75
10:QJ:38:ILE:HG12	10:QJ:71:LEU:O	1.86	0.75
51:R5:40:LYS:CD	51:R5:46:CYS:HB3	2.15	0.75
25:RA:2562:U:O2'	34:RO:23:ARG:NH1	2.20	0.75
26:RB:56:G:OP1	30:RG:27:ASN:ND2	2.18	0.75
34:RO:104:ARG:HG2	34:RO:104:ARG:HH11	1.50	0.75
16:XP:22:THR:HA	16:XP:33:ILE:HG12	1.66	0.75
18:XR:53:ARG:HH21	18:XR:60:ALA:N	1.84	0.75
46:Y0:3:HIS:CD2	46:Y0:4:LYS:H	2.04	0.75
27:YD:69:ARG:HH21	27:YD:130:ALA:CB	1.99	0.75
28:YE:36:ARG:HH21	28:YE:88:GLY:HA2	1.51	0.75
40:YU:88:ILE:HG22	40:YU:90:VAL:HG23	1.67	0.75
4:QD:30:LYS:C	4:QD:32:ALA:N	2.36	0.75
18:QR:53:ARG:HH21	18:QR:60:ALA:N	1.84	0.75
25:RA:102:G:OP2	48:R2:7:ARG:NH2	2.19	0.75
29:RF:129:PHE:HA	29:RF:142:TRP:NE1	2.02	0.75
30:RG:76:SER:OG	30:RG:83:ARG:HA	1.85	0.75
31:RH:150:ALA:C	31:RH:152:ARG:H	1.88	0.75
31:RH:152:ARG:HG3	31:RH:153:LYS:CE	2.14	0.75
8:XH:5:PRO:O	8:XH:8:ASP:HB3	1.85	0.75
10:XJ:40:LEU:HB2	10:XJ:69:ASN:HB3	1.65	0.75
25:YA:1187:G:H5''	41:YV:81:TYR:CE2	2.21	0.75
28:YE:23:VAL:HG21	28:YE:183:LEU:HD23	1.69	0.75
40:YU:92:ARG:HH11	40:YU:95:LEU:CD1	2.00	0.75
44:YY:44:ILE:HG13	44:YY:45:VAL:N	2.00	0.75
2:QB:117:GLU:O	2:QB:121:LEU:HB2	1.86	0.75
12:QL:11:VAL:HG13	17:QQ:29:HIS:HD2	1.51	0.75
35:RP:62:LEU:HD21	54:R8:25:MET:HB2	1.69	0.75
30:RG:3:LEU:HD12	30:RG:4:ASP:H	1.52	0.75
40:RU:52:ARG:HG2	40:RU:52:ARG:HH11	1.51	0.75
41:RV:47:VAL:HG13	41:RV:48:GLY:H	1.49	0.75
45:RZ:108:PRO:HG2	45:RZ:112:ARG:H	1.49	0.75
4:XD:153:ARG:NH1	4:XD:181:MET:HG3	2.00	0.75
5:XE:11:ILE:HD11	5:XE:31:LEU:CD1	2.17	0.75
35:YP:62:LEU:HD21	54:Y8:25:MET:HB2	1.69	0.75
25:YA:2198:A:O2'	25:YA:2199:A:O5'	2.04	0.75
27:YD:142:VAL:HG23	27:YD:193:VAL:HA	1.67	0.75
43:YX:57:LEU:HD11	43:YX:78:LYS:HB2	1.68	0.75
44:YY:97:ARG:HH21	44:YY:98:VAL:CB	1.98	0.75
5:QE:42:GLY:HA3	5:QE:66:MET:HG2	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:178:ARG:HD2	8:QH:71:GLY:C	2.07	0.75
7:QG:37:ASN:ND2	9:QI:40:LEU:HD23	2.00	0.75
11:QK:48:ILE:HD11	11:QK:64:ALA:HA	1.67	0.75
12:QL:48:PRO:HD2	12:QL:49:ASN:H	1.52	0.75
13:QM:3:ARG:CA	13:QM:9:ILE:HG21	2.13	0.75
25:RA:1814:G:H4'	27:RD:51:VAL:HG21	1.68	0.75
36:RQ:81:VAL:CG2	46:R0:7:LEU:HD11	2.16	0.75
45:RZ:76:LEU:HD23	45:RZ:76:LEU:H	1.51	0.75
13:XM:49:THR:HG22	13:XM:51:ALA:N	2.01	0.75
16:XP:43:LYS:HG2	16:XP:48:TRP:CE3	2.22	0.75
41:YV:52:VAL:HG21	41:YV:55:ALA:HB3	1.68	0.75
45:YZ:76:LEU:HD23	45:YZ:76:LEU:H	1.51	0.75
5:QE:45:PHE:CE2	5:QE:47:LYS:HD2	2.22	0.75
20:QT:58:LYS:HE3	20:QT:62:LEU:HD11	1.69	0.75
30:RG:142:PRO:HB2	50:R4:31:ILE:HD13	1.68	0.75
45:RZ:5:LEU:HD23	45:RZ:47:VAL:HG21	1.68	0.75
1:XA:486:U:H2'	1:XA:487:A:H8	1.51	0.75
7:XG:23:VAL:HG12	7:XG:27:ILE:HD11	1.69	0.75
14:XN:22:THR:O	14:XN:23:ARG:HB2	1.85	0.75
47:Y1:56:GLN:N	47:Y1:56:GLN:NE2	2.34	0.75
54:Y8:59:LYS:HZ2	54:Y8:59:LYS:HB2	1.49	0.75
44:YY:90:LEU:HD22	44:YY:90:LEU:N	2.01	0.75
5:QE:11:ILE:HD11	5:QE:31:LEU:CD1	2.17	0.75
10:QJ:27:ALA:HB1	10:QJ:34:VAL:HG21	1.69	0.75
19:QS:41:VAL:HG12	19:QS:44:MET:H	1.50	0.75
47:R1:3:LYS:HD3	47:R1:43:TYR:HD2	1.52	0.75
4:XD:11:LEU:C	4:XD:13:ARG:N	2.36	0.75
7:XG:148:ASN:N	7:XG:148:ASN:HD22	1.82	0.75
25:YA:530:G:C2	25:YA:2022:U:OP1	2.40	0.75
39:YT:43:GLN:HG2	39:YT:44:ASP:N	1.99	0.75
41:YV:35:LEU:H	41:YV:35:LEU:HD22	1.51	0.75
41:YV:51:VAL:HG12	41:YV:52:VAL:H	1.52	0.75
45:YZ:5:LEU:HD23	45:YZ:47:VAL:HG21	1.68	0.75
19:QS:39:THR:HG22	19:QS:40:ILE:H	1.50	0.75
23:QX:2:U:C2'	23:QX:3:G:H5'	2.17	0.75
37:RR:73:VAL:O	37:RR:76:VAL:HG12	1.87	0.75
44:RY:94:LYS:O	44:RY:101:LYS:HB3	1.85	0.75
1:XA:1403:C:O2	1:XA:1499:A:N6	2.19	0.75
20:XT:58:LYS:HE3	20:XT:62:LEU:HD11	1.69	0.75
37:YR:33:ARG:HH22	51:Y5:55:ARG:HG2	1.51	0.75
25:YA:1287:A:N7	37:YR:107:ASP:HB2	2.01	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:146:GLU:HB2	27:YD:189:CYS:HB3	1.67	0.75
35:YP:75:ILE:N	35:YP:75:ILE:HD13	2.00	0.75
44:YY:97:ARG:NH2	44:YY:98:VAL:HB	2.01	0.75
1:QA:1049:U:O2'	14:QN:2:ALA:N	2.20	0.75
15:QO:87:ILE:HG22	15:QO:88:ARG:N	2.00	0.75
20:QT:35:THR:O	20:QT:39:LYS:HG3	1.87	0.75
25:RA:25:U:H5''	42:RW:80:PRO:HD3	1.69	0.75
28:RE:63:LEU:CD1	28:RE:65:GLY:H	2.00	0.75
30:RG:97:ASP:H	30:RG:100:TRP:HD1	1.31	0.75
41:RV:15:GLU:O	41:RV:18:LEU:HB2	1.87	0.75
44:RY:90:LEU:N	44:RY:90:LEU:HD22	2.02	0.75
5:XE:72:GLN:NE2	5:XE:144:THR:HG22	2.00	0.75
7:XG:9:VAL:HG13	7:XG:94:ARG:HE	1.52	0.75
8:XH:91:ARG:HH11	8:XH:91:ARG:HG2	1.51	0.75
11:XK:48:ILE:HD11	11:XK:64:ALA:HA	1.67	0.75
13:XM:8:GLU:CD	30:YG:115:ARG:CZ	2.56	0.75
47:Y1:80:LEU:O	47:Y1:81:LYS:CB	2.35	0.75
47:Y1:81:LYS:CA	47:Y1:81:LYS:NZ	2.31	0.75
51:Y5:47:PRO:O	51:Y5:48:GLU:HG3	1.86	0.75
29:YF:7:TYR:HB3	29:YF:21:ALA:CB	2.16	0.75
1:QA:19:C:OP1	5:QE:125:SER:OG	2.04	0.74
1:QA:448:A:OP2	1:QA:485:G:N2	2.18	0.74
4:QD:25:ARG:HH12	4:QD:30:LYS:HG3	1.52	0.74
1:QA:864:A:H5'	5:QE:86:ALA:HB2	1.69	0.74
25:RA:1021:A:N6	25:RA:1141:U:O2	2.20	0.74
25:RA:1379:A:O2'	25:RA:1380:G:OP1	2.05	0.74
28:RE:36:ARG:HH21	28:RE:88:GLY:HA2	1.51	0.74
31:RH:153:LYS:HG2	31:RH:162:ILE:H	1.52	0.74
38:RS:62:LYS:HB3	38:RS:97:ARG:HD3	1.69	0.74
39:RT:111:ARG:O	39:RT:113:LYS:N	2.17	0.74
42:RW:40:ASN:O	42:RW:41:LYS:HG2	1.86	0.74
21:XU:10:ARG:HG2	21:XU:13:ILE:HD12	1.68	0.74
42:YW:40:ASN:O	42:YW:41:LYS:HG2	1.86	0.74
1:QA:1298:C:OP2	7:QG:114:ARG:NH2	2.20	0.74
13:QM:37:THR:HG21	13:QM:39:ILE:HD11	1.68	0.74
16:QP:43:LYS:HG2	16:QP:48:TRP:CE3	2.22	0.74
25:RA:768:G:O2'	25:RA:1379:A:N6	2.20	0.74
32:RI:3:VAL:HG12	32:RI:38:LEU:HA	1.69	0.74
32:RI:5:LEU:HD12	32:RI:5:LEU:H	1.51	0.74
40:RU:92:ARG:HH11	40:RU:95:LEU:CD1	2.00	0.74
41:RV:52:VAL:HG21	41:RV:55:ALA:HB3	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:XQ:59:ILE:HD13	17:XQ:59:ILE:H	1.50	0.74
20:XT:26:ASN:O	20:XT:30:LYS:HB2	1.85	0.74
27:YD:54:ARG:HG3	27:YD:54:ARG:HH11	1.49	0.74
28:YE:61:ARG:HB2	28:YE:62:PRO:HD3	1.69	0.74
31:YH:150:ALA:C	31:YH:152:ARG:H	1.88	0.74
37:YR:73:VAL:O	37:YR:76:VAL:HG12	1.87	0.74
25:RA:141:A:H8	25:RA:1595:G:H21	1.35	0.74
25:RA:392:C:H5''	25:RA:409:C:H5''	1.70	0.74
32:RI:145:VAL:HG22	32:RI:146:ALA:N	2.03	0.74
42:RW:18:ARG:HG3	42:RW:76:VAL:CG1	2.15	0.74
19:XS:41:VAL:HG12	19:XS:44:MET:H	1.50	0.74
19:XS:3:ARG:HG3	19:XS:4:SER:H	1.52	0.74
1:XA:1312:G:OP1	50:Y4:58:ARG:NH1	2.17	0.74
32:YI:2:LYS:HA	32:YI:20:ASP:HB3	1.68	0.74
45:YZ:60:GLU:HA	45:YZ:66:SER:HA	1.69	0.74
9:QI:113:LYS:H	9:QI:113:LYS:HD2	1.51	0.74
47:R1:26:ARG:O	47:R1:26:ARG:HD2	1.86	0.74
29:RF:136:THR:HG22	29:RF:166:ALA:O	1.87	0.74
29:RF:7:TYR:HB3	29:RF:21:ALA:CB	2.16	0.74
43:RX:57:LEU:HD11	43:RX:78:LYS:HB2	1.68	0.74
45:RZ:63:ASP:O	45:RZ:65:GLN:HG2	1.88	0.74
2:XB:101:MET:CA	2:XB:108:ILE:HG13	2.11	0.74
13:XM:57:ARG:HH21	50:Y4:34:GLU:CA	2.00	0.74
27:YD:30:GLU:HG3	27:YD:63:ARG:CZ	2.17	0.74
39:YT:78:LEU:HD13	39:YT:78:LEU:O	1.88	0.74
45:YZ:103:ARG:HB2	45:YZ:138:GLU:HA	1.69	0.74
7:QG:9:VAL:HG13	7:QG:94:ARG:HE	1.52	0.74
25:RA:363(B):G:H2'	25:RA:363(C):G:H8	1.51	0.74
25:RA:807:U:OP2	35:RP:41:ARG:NH1	2.21	0.74
34:RO:26:LYS:HB2	34:RO:30:ALA:CB	2.18	0.74
4:XD:25:ARG:HH12	4:XD:30:LYS:HG3	1.52	0.74
1:XA:527:G:O6	12:XL:49:ASN:ND2	2.20	0.74
16:XP:43:LYS:O	16:XP:45:THR:N	2.21	0.74
23:XX:2:U:C2'	23:XX:3:G:H5'	2.17	0.74
49:Y3:7:LYS:HB2	49:Y3:34:GLU:HG2	1.69	0.74
40:YU:52:ARG:HH11	40:YU:52:ARG:HG2	1.51	0.74
45:YZ:7:ALA:HB2	45:YZ:59:LEU:HD22	1.67	0.74
1:QA:451:A:N7	1:QA:481:G:N2	2.36	0.74
2:QB:168:THR:HB	2:QB:192:SER:HB2	1.70	0.74
50:R4:71:ARG:NH1	50:R4:71:ARG:HG3	1.90	0.74
28:RE:201:THR:HG22	28:RE:203:LYS:HB3	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RS:83:LYS:HZ2	38:RS:109:GLY:HA2	1.49	0.74
3:XC:181:ASN:ND2	3:XC:204:LEU:HD12	1.99	0.74
5:XE:10:MET:CB	5:XE:32:VAL:HG22	2.18	0.74
6:XF:91:VAL:HG13	18:XR:72:ARG:HH12	1.51	0.74
10:XJ:33:GLN:O	10:XJ:75:ILE:HG12	1.87	0.74
20:XT:35:THR:O	20:XT:39:LYS:HG3	1.87	0.74
29:YF:136:THR:HG22	29:YF:166:ALA:O	1.87	0.74
33:YN:96:GLU:HG2	33:YN:97:ARG:N	2.01	0.74
36:YQ:79:LEU:CD2	36:YQ:79:LEU:O	2.36	0.74
40:YU:64:ARG:HH21	40:YU:64:ARG:CG	2.00	0.74
44:YY:51:VAL:HG13	44:YY:52:SER:N	2.03	0.74
1:QA:973:G:OP1	10:QJ:57:LYS:NZ	2.20	0.74
15:QO:70:LEU:O	15:QO:70:LEU:HD12	1.88	0.74
48:R2:47:ASN:HD22	48:R2:47:ASN:H	1.33	0.74
25:RA:1667:G:O2'	25:RA:1669:A:N6	2.20	0.74
27:RD:77:ALA:CB	27:RD:97:TYR:HA	2.18	0.74
45:RZ:154:ASP:CG	45:RZ:155:LEU:H	1.91	0.74
47:Y1:26:ARG:O	47:Y1:26:ARG:HD2	1.86	0.74
49:Y3:29:ARG:HH11	49:Y3:29:ARG:HB2	1.52	0.74
29:YF:129:PHE:HA	29:YF:142:TRP:NE1	2.02	0.74
39:YT:26:ASP:HB3	39:YT:91:ARG:HA	1.69	0.74
1:QA:446:G:H1	1:QA:488:C:H42	1.35	0.74
7:QG:23:VAL:HG12	7:QG:27:ILE:HD11	1.69	0.74
5:QE:78:HIS:CG	8:QH:104:ARG:HG2	2.22	0.74
10:QJ:33:GLN:O	10:QJ:75:ILE:HG12	1.88	0.74
25:RA:1043:C:H42	25:RA:1112:G:H1	1.32	0.74
41:RV:35:LEU:H	41:RV:35:LEU:HD22	1.51	0.74
36:RQ:20:ALA:HB3	45:RZ:79:ARG:NH1	2.03	0.74
1:XA:1178:G:N2	1:XA:1181:G:N7	2.36	0.74
7:XG:78:ARG:HH12	7:XG:80:VAL:HG23	1.53	0.74
25:YA:1068:G:O2'	25:YA:1096:A:N3	2.20	0.74
31:YH:153:LYS:HG2	31:YH:162:ILE:H	1.52	0.74
32:YI:3:VAL:HG12	32:YI:38:LEU:HA	1.69	0.74
38:YS:36:TYR:CD2	38:YS:52:SER:HB3	2.23	0.74
39:YT:54:ARG:HH11	39:YT:54:ARG:HG2	1.52	0.74
45:YZ:154:ASP:CG	45:YZ:155:LEU:H	1.91	0.74
5:QE:72:GLN:HE21	5:QE:144:THR:HG22	1.53	0.74
25:RA:1754:C:OP1	39:RT:96:ARG:NH1	2.21	0.74
39:RT:50:ILE:HD12	39:RT:102:ILE:HD11	1.68	0.74
6:XF:19:LEU:HD23	6:XF:19:LEU:O	1.88	0.74
10:XJ:27:ALA:HB1	10:XJ:34:VAL:HG21	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:XO:70:LEU:HD12	15:XO:70:LEU:O	1.88	0.74
33:YN:1:MET:HE1	40:YU:95:LEU:HD21	1.70	0.74
25:YA:2467:C:H4'	36:YQ:123:HIS:ND1	2.01	0.74
41:YV:15:GLU:O	41:YV:18:LEU:HB2	1.86	0.74
45:YZ:63:ASP:O	45:YZ:65:GLN:HG2	1.88	0.74
2:QB:115:LEU:HD13	2:QB:145:LEU:HB3	1.69	0.74
4:QD:91:SER:HA	4:QD:94:LEU:HD13	1.70	0.74
6:QF:19:LEU:HD23	6:QF:19:LEU:O	1.88	0.74
10:QJ:3:LYS:HD2	10:QJ:77:PRO:HD3	1.70	0.74
51:R5:2:ALA:O	51:R5:3:LYS:HB2	1.88	0.74
35:RP:50:ARG:NH2	35:RP:50:ARG:HB3	1.97	0.74
35:RP:62:LEU:HD22	35:RP:62:LEU:H	1.53	0.74
36:RQ:80:GLU:CD	46:R0:5:LYS:CB	2.56	0.74
41:RV:51:VAL:HG12	41:RV:52:VAL:H	1.51	0.74
42:RW:73:ALA:HB3	42:RW:106:ILE:HG12	1.68	0.74
44:RY:52:SER:OG	44:RY:53:PRO:HD3	1.88	0.74
2:XB:47:THR:O	2:XB:51:LEU:HG	1.87	0.74
5:XE:45:PHE:CE2	5:XE:47:LYS:HD2	2.22	0.74
5:XE:72:GLN:HE21	5:XE:144:THR:HG22	1.53	0.74
1:XA:1152:A:H5''	10:XJ:13:HIS:CD2	2.22	0.74
50:Y4:41:PRO:O	50:Y4:42:PHE:HB3	1.87	0.74
27:YD:131:LEU:HB2	27:YD:136:ILE:CD1	2.17	0.74
28:YE:78:LEU:HG	28:YE:79:ARG:NE	2.03	0.74
2:QB:47:THR:O	2:QB:51:LEU:HG	1.87	0.73
3:QC:86:VAL:O	3:QC:89:GLU:HB3	1.88	0.73
47:R1:76:ARG:HG2	47:R1:76:ARG:HH11	1.53	0.73
47:R1:80:LEU:O	47:R1:81:LYS:CB	2.35	0.73
33:RN:58:ASP:H	33:RN:60:ILE:HD11	1.53	0.73
36:RQ:79:LEU:CD1	36:RQ:79:LEU:O	2.35	0.73
38:RS:36:TYR:CD2	38:RS:52:SER:HB3	2.23	0.73
42:RW:70:TYR:HD2	42:RW:70:TYR:H	1.36	0.73
44:RY:95:LYS:HB3	44:RY:100:ALA:CA	2.10	0.73
45:RZ:103:ARG:HB2	45:RZ:138:GLU:HA	1.69	0.73
25:YA:2014:A:O2'	51:Y5:2:ALA:HB2	1.88	0.73
25:YA:2051:A:H2	25:YA:2052:G:O6	1.71	0.73
34:YO:26:LYS:HB2	34:YO:30:ALA:CB	2.17	0.73
1:QA:108:G:H5''	1:QA:109:A:H5''	1.70	0.73
3:QC:134:ILE:HD11	3:QC:153:VAL:HG21	1.70	0.73
49:R3:29:ARG:HB2	49:R3:29:ARG:HH11	1.53	0.73
29:RF:29:ASN:HB3	29:RF:112:MET:HE1	1.68	0.73
29:RF:9:ILE:HD11	29:RF:125:LEU:HG	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:47:ILE:CD1	34:RO:48:PRO:HD2	2.16	0.73
45:RZ:9:TYR:HE2	45:RZ:61:LEU:HD13	1.53	0.73
13:XM:37:THR:HG21	13:XM:39:ILE:HD11	1.68	0.73
32:YI:5:LEU:H	32:YI:5:LEU:HD12	1.51	0.73
39:YT:102:ILE:HB	39:YT:110:ILE:CD1	2.18	0.73
4:QD:11:LEU:C	4:QD:13:ARG:N	2.36	0.73
28:RE:203:LYS:O	28:RE:203:LYS:HD2	1.88	0.73
13:QM:11:ARG:NH2	30:RG:146:TYR:CD2	2.57	0.73
45:RZ:60:GLU:HA	45:RZ:66:SER:HA	1.69	0.73
15:XO:87:ILE:HG22	15:XO:88:ARG:N	2.00	0.73
25:YA:2306:C:H3'	25:YA:2307:G:H5''	1.71	0.73
31:YH:153:LYS:HG3	31:YH:161:GLY:CA	2.18	0.73
1:QA:1104:G:H4'	2:QB:111:ARG:NH1	2.04	0.73
28:RE:77:ILE:HD12	28:RE:78:LEU:H	1.52	0.73
40:RU:64:ARG:CG	40:RU:64:ARG:HH21	2.00	0.73
25:RA:483:A:H4'	44:RY:49:VAL:HA	1.70	0.73
1:XA:765:G:N2	1:XA:813:U:OP2	2.21	0.73
25:YA:71:A:H2	43:YX:31:HIS:CE1	2.05	0.73
27:RD:30:GLU:HG3	27:RD:63:ARG:CZ	2.18	0.73
28:RE:23:VAL:HG21	28:RE:183:LEU:HD23	1.68	0.73
28:RE:61:ARG:HB2	28:RE:62:PRO:HD3	1.69	0.73
31:RH:153:LYS:HG3	31:RH:161:GLY:CA	2.18	0.73
39:RT:23:ARG:HB2	39:RT:24:PRO:HD2	1.70	0.73
3:XC:134:ILE:HD11	3:XC:153:VAL:HG21	1.70	0.73
4:XD:146:ILE:HD12	4:XD:146:ILE:N	2.04	0.73
16:XP:60:LEU:HA	16:XP:64:ALA:HB3	1.71	0.73
54:Y8:61:LEU:O	54:Y8:62:LEU:HB2	1.88	0.73
25:YA:2469:A:H2	25:YA:2481:G:H21	1.36	0.73
2:QB:132:LYS:HA	2:QB:135:GLN:HB2	1.71	0.73
5:QE:10:MET:CB	5:QE:32:VAL:HG22	2.17	0.73
7:QG:79:ARG:HH22	7:QG:82:GLY:HA2	1.51	0.73
16:QP:43:LYS:O	16:QP:45:THR:N	2.21	0.73
50:R4:41:PRO:O	50:R4:42:PHE:HB3	1.87	0.73
27:RD:131:LEU:HB2	27:RD:136:ILE:CD1	2.17	0.73
39:RT:26:ASP:HB3	39:RT:91:ARG:HA	1.69	0.73
2:XB:115:LEU:HD13	2:XB:145:LEU:HB3	1.68	0.73
2:XB:8:LYS:N	2:XB:8:LYS:HD3	2.03	0.73
18:XR:56:THR:HB	18:XR:58:LEU:HD12	1.71	0.73
25:YA:593:G:O3'	54:Y8:61:LEU:HD22	1.89	0.73
25:YA:1998:G:OP2	28:YE:136:ARG:NH2	2.21	0.73
25:YA:352:G:H3'	25:YA:353:G:C8	2.24	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:7:LEU:HD21	30:YG:176:LEU:HD22	1.70	0.73
38:YS:62:LYS:HB3	38:YS:97:ARG:HD3	1.69	0.73
1:QA:1318:A:H4'	19:QS:11:VAL:HG11	1.70	0.73
13:QM:121:LYS:HE2	13:QM:121:LYS:HA	1.71	0.73
16:QP:45:THR:HG23	16:QP:46:PRO:HD2	1.70	0.73
49:R3:7:LYS:HB2	49:R3:34:GLU:HG2	1.69	0.73
28:RE:55:ASN:C	28:RE:57:LYS:H	1.91	0.73
31:RH:125:VAL:HA	31:RH:126:PRO:HB3	1.68	0.73
31:RH:84:SER:O	31:RH:85:LYS:HB2	1.89	0.73
33:RN:96:GLU:HG2	33:RN:97:ARG:N	2.01	0.73
3:XC:86:VAL:O	3:XC:89:GLU:HB3	1.88	0.73
8:XH:20:TYR:HD1	8:XH:65:TYR:CD2	2.07	0.73
50:Y4:29:PRO:O	50:Y4:30:GLU:HB2	1.89	0.73
27:YD:77:ALA:CB	27:YD:97:TYR:HA	2.18	0.73
36:YQ:79:LEU:CD1	36:YQ:79:LEU:O	2.35	0.73
5:QE:36:ASP:OD2	5:QE:38:GLN:HB2	1.86	0.73
14:QN:24:CYS:SG	14:QN:43:CYS:HB2	2.28	0.73
19:QS:3:ARG:HG3	19:QS:4:SER:H	1.52	0.73
36:RQ:90:VAL:CG1	36:RQ:91:GLU:H	2.02	0.73
3:XC:13:GLY:HA3	14:XN:57:ARG:NH2	2.04	0.73
51:Y5:40:LYS:CE	51:Y5:46:CYS:HB3	2.19	0.73
52:Y6:13:CYS:HA	52:Y6:50:ARG:O	1.89	0.73
25:YA:569:U:OP1	25:YA:945:A:C4	2.42	0.73
28:YE:55:ASN:C	28:YE:57:LYS:H	1.91	0.73
33:YN:58:ASP:H	33:YN:60:ILE:HD11	1.53	0.73
36:YQ:20:ALA:HB3	45:YZ:79:ARG:NH1	2.03	0.73
25:YA:518:G:H4'	42:YW:18:ARG:NH1	2.02	0.73
4:QD:146:ILE:N	4:QD:146:ILE:HD12	2.04	0.73
13:QM:3:ARG:HG2	50:R4:34:GLU:OE1	1.88	0.73
29:RF:101:LEU:CD1	29:RF:102:PRO:HD2	2.11	0.73
29:RF:157:VAL:HB	29:RF:194:MET:HB3	1.70	0.73
40:RU:34:LYS:HA	40:RU:34:LYS:HE2	1.70	0.73
48:Y2:29:LYS:HD3	48:Y2:57:ILE:HD13	1.71	0.73
28:YE:203:LYS:HD2	28:YE:203:LYS:O	1.88	0.73
28:YE:77:ILE:HD12	28:YE:78:LEU:H	1.52	0.73
1:QA:414:A:OP2	1:QA:428:G:N2	2.22	0.72
3:QC:13:GLY:HA3	14:QN:57:ARG:NH2	2.04	0.72
7:QG:78:ARG:HH12	7:QG:80:VAL:HG23	1.52	0.72
20:QT:50:GLU:HG3	20:QT:51:GLU:H	1.55	0.72
48:R2:27:GLU:OE1	48:R2:27:GLU:N	2.19	0.72
25:RA:1138:G:H21	33:RN:106:MET:HE3	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:56:PRO:O	28:RE:57:LYS:HB2	1.89	0.72
31:RH:80:SER:O	31:RH:81:GLU:HB2	1.89	0.72
33:RN:1:MET:HE1	40:RU:95:LEU:HD21	1.71	0.72
6:XF:77:ARG:HB2	6:XF:77:ARG:HH11	1.53	0.72
54:Y8:16:ILE:HD11	54:Y8:57:ARG:HG2	1.70	0.72
25:YA:2112:G:O6	25:YA:2169:A:N6	2.22	0.72
27:YD:35:LYS:HZ1	27:YD:65:ILE:HA	1.52	0.72
32:YI:131:LYS:HB3	32:YI:132:PRO:HA	1.71	0.72
37:YR:3:HIS:O	37:YR:5:LYS:N	2.22	0.72
38:YS:83:LYS:HZ2	38:YS:109:GLY:HA2	1.53	0.72
1:QA:67:C:O2'	1:QA:171:A:N3	2.20	0.72
6:QF:25:ILE:HD13	6:QF:28:ARG:NH1	2.05	0.72
19:QS:5:LEU:HD21	50:R4:67:TYR:CD2	2.24	0.72
25:RA:1279:G:H4'	37:RR:31:HIS:HD2	1.52	0.72
32:RI:133:HIS:CD2	32:RI:134:PRO:HD2	2.24	0.72
2:XB:75:LYS:O	2:XB:75:LYS:HD3	1.89	0.72
8:XH:41:ARG:HH11	8:XH:41:ARG:CB	2.03	0.72
46:Y0:10:THR:HG22	46:Y0:11:ARG:N	1.98	0.72
51:Y5:58:LEU:CD1	51:Y5:60:VAL:HG12	2.18	0.72
25:YA:297:C:H5''	44:YY:85:VAL:HG21	1.70	0.72
30:YG:146:TYR:O	30:YG:149:VAL:HG22	1.89	0.72
31:YH:125:VAL:HG12	31:YH:126:PRO:HG3	1.71	0.72
31:YH:54:ARG:HH12	31:YH:62:LYS:HG2	1.54	0.72
35:YP:88:LEU:C	35:YP:90:ARG:H	1.92	0.72
36:YQ:79:LEU:C	36:YQ:79:LEU:HD22	2.07	0.72
38:YS:83:LYS:HG2	38:YS:109:GLY:N	2.04	0.72
40:YU:98:LEU:HD23	40:YU:99:ALA:N	2.04	0.72
53:R7:10:ARG:O	53:R7:14:LYS:HB2	1.89	0.72
25:RA:2781:A:H5''	25:RA:2782:G:H5'	1.71	0.72
28:RE:13:ARG:HA	28:RE:22:PRO:HA	1.71	0.72
31:RH:54:ARG:HH12	31:RH:62:LYS:HG2	1.54	0.72
34:RO:113:LYS:HG2	34:RO:117:LEU:HD11	1.71	0.72
1:XA:971:G:N2	1:XA:1363:A:OP2	2.20	0.72
25:YA:1013:C:H42	25:YA:1149:G:H1	1.36	0.72
35:YP:126:VAL:CG1	35:YP:147:LEU:HD21	2.17	0.72
38:YS:26:LEU:HD23	38:YS:26:LEU:O	1.90	0.72
44:YY:52:SER:OG	44:YY:53:PRO:HD3	1.88	0.72
11:QK:48:ILE:HD12	11:QK:63:LEU:HB3	1.71	0.72
16:QP:72:ARG:HD3	16:QP:72:ARG:C	2.10	0.72
23:QX:5:C:H2'	23:QX:6:C:C6	2.24	0.72
28:RE:78:LEU:HG	28:RE:79:ARG:NE	2.03	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:26:VAL:CG1	31:RH:27:LYS:H	2.02	0.72
32:RI:131:LYS:HB3	32:RI:132:PRO:HA	1.70	0.72
35:RP:127:ALA:C	35:RP:147:LEU:HD23	2.10	0.72
35:RP:88:LEU:C	35:RP:90:ARG:H	1.92	0.72
38:RS:42:ASP:O	38:RS:43:GLU:HB2	1.90	0.72
39:RT:117:ASP:O	39:RT:121:ILE:HG13	1.89	0.72
39:RT:54:ARG:HG2	39:RT:54:ARG:HH11	1.52	0.72
16:XP:20:VAL:HG21	16:XP:32:TYR:CG	2.24	0.72
12:XL:10:LEU:HD13	17:XQ:32:TYR:HE2	1.52	0.72
20:XT:47:GLY:O	20:XT:49:ALA:N	2.19	0.72
54:Y8:29:LYS:HD3	54:Y8:44:LYS:HB2	1.71	0.72
36:YQ:90:VAL:CG1	36:YQ:91:GLU:H	2.02	0.72
41:YV:39:LEU:O	41:YV:40:LEU:HD23	1.90	0.72
6:QF:77:ARG:HB2	6:QF:77:ARG:HH11	1.53	0.72
12:QL:126:LYS:HB2	12:QL:126:LYS:NZ	2.04	0.72
51:R5:40:LYS:CE	51:R5:46:CYS:HB3	2.19	0.72
31:RH:30:LYS:HD2	31:RH:81:GLU:H	1.54	0.72
49:Y3:56:VAL:HG12	49:Y3:57:GLU:N	2.04	0.72
28:YE:21:VAL:HB	28:YE:22:PRO:CB	2.18	0.72
29:YF:124:LEU:HD12	29:YF:125:LEU:N	2.04	0.72
32:YI:130:TYR:C	32:YI:131:LYS:HD2	2.10	0.72
33:YN:89:LYS:O	33:YN:93:THR:HG22	1.90	0.72
37:YR:117:VAL:HG22	37:YR:118:GLU:N	2.05	0.72
38:YS:83:LYS:C	38:YS:109:GLY:HA3	2.10	0.72
45:YZ:9:TYR:HE2	45:YZ:61:LEU:HD13	1.53	0.72
1:QA:377:G:H1	1:QA:386:C:H42	1.37	0.72
1:QA:757:U:O2'	1:QA:879:C:O2	2.07	0.72
15:QO:71:GLN:HB2	15:QO:78:TYR:CD1	2.25	0.72
20:QT:97:ALA:O	20:QT:99:LEU:HD13	1.89	0.72
49:R3:56:VAL:HG12	49:R3:57:GLU:N	2.04	0.72
52:R6:13:CYS:HA	52:R6:50:ARG:O	1.89	0.72
29:RF:124:LEU:HD12	29:RF:125:LEU:N	2.04	0.72
32:RI:99:GLU:HG2	32:RI:103:ARG:HH21	1.55	0.72
39:RT:78:LEU:HD13	39:RT:78:LEU:O	1.87	0.72
1:XA:1494:G:N7	57:XA:1664:PAR:N32	2.37	0.72
2:XB:21:ARG:O	2:XB:23:ARG:HD3	1.90	0.72
3:XC:16:ARG:NH1	3:XC:16:ARG:HB2	2.04	0.72
12:XL:48:PRO:HD2	12:XL:49:ASN:H	1.52	0.72
16:XP:72:ARG:HD3	16:XP:72:ARG:C	2.10	0.72
20:XT:97:ALA:O	20:XT:99:LEU:HD13	1.89	0.72
25:YA:2502:G:H5''	25:YA:2503:A:H5''	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:152:ARG:O	31:YH:153:LYS:HD2	1.90	0.72
32:YI:133:HIS:CD2	32:YI:134:PRO:HD2	2.25	0.72
25:YA:64:A:C5	43:YX:66:LEU:HD13	2.23	0.72
2:QB:21:ARG:O	2:QB:23:ARG:HD3	1.89	0.72
6:QF:72:VAL:CG2	6:QF:90:VAL:HG11	2.20	0.72
15:QO:79:ARG:O	15:QO:82:ILE:HG22	1.89	0.72
47:R1:80:LEU:HB2	47:R1:81:LYS:HE2	1.71	0.72
51:R5:58:LEU:CD1	51:R5:60:VAL:HG12	2.19	0.72
28:RE:28:ALA:HB3	28:RE:93:VAL:HG22	1.72	0.72
30:RG:146:TYR:O	30:RG:149:VAL:HG22	1.89	0.72
25:RA:1190:G:H5'	35:RP:32:THR:HA	1.72	0.72
36:RQ:79:LEU:HD22	36:RQ:79:LEU:C	2.07	0.72
36:RQ:80:GLU:HG2	46:R0:5:LYS:CD	2.19	0.72
14:YN:24:CYS:HB2	14:YN:40:CYS:N	2.03	0.72
47:Y1:3:LYS:HD3	47:Y1:43:TYR:HD2	1.52	0.72
25:YA:2683:C:OP1	39:YT:53:ARG:NH2	2.22	0.72
28:YE:14:ILE:HD11	39:YT:14:TYR:OH	1.90	0.72
28:YE:201:THR:HG22	28:YE:203:LYS:HB3	1.69	0.72
29:YF:157:VAL:HB	29:YF:194:MET:HB3	1.70	0.72
31:YH:128:PRO:HD2	31:YH:129:THR:H	1.55	0.72
31:YH:132:ARG:CB	31:YH:132:ARG:HH11	1.97	0.72
37:YR:85:PRO:O	37:YR:87:TYR:N	2.22	0.72
10:QJ:75:ILE:HG13	10:QJ:76:ASN:N	2.05	0.72
20:QT:83:ARG:HA	20:QT:86:ARG:HB3	1.71	0.72
29:RF:32:LEU:O	29:RF:32:LEU:HD12	1.90	0.72
30:RG:7:LEU:HD21	30:RG:176:LEU:HD22	1.70	0.72
35:RP:114:ILE:HD13	35:RP:125:VAL:HG21	1.72	0.72
35:RP:29:LYS:HD2	35:RP:30:THR:HG22	1.72	0.72
39:RT:57:PHE:C	39:RT:58:ASN:HD22	1.93	0.72
40:RU:69:CYS:HB3	40:RU:106:PHE:HZ	1.55	0.72
40:RU:98:LEU:HD23	40:RU:99:ALA:N	2.04	0.72
1:XA:1238:A:H62	1:XA:1301:U:H3	1.37	0.72
4:XD:91:SER:HA	4:XD:94:LEU:HD13	1.70	0.72
10:XJ:3:LYS:HD2	10:XJ:77:PRO:HD3	1.70	0.72
12:XL:8:ASN:OD1	17:XQ:34:LYS:HE2	1.89	0.72
53:Y7:10:ARG:O	53:Y7:14:LYS:HB2	1.89	0.72
28:YE:13:ARG:HA	28:YE:22:PRO:HA	1.71	0.72
29:YF:32:LEU:HD12	29:YF:32:LEU:O	1.90	0.72
32:YI:99:GLU:HG2	32:YI:103:ARG:HH21	1.54	0.72
8:QH:20:TYR:HD1	8:QH:65:TYR:CD2	2.07	0.72
14:QN:24:CYS:SG	14:QN:39:LEU:CA	2.78	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:10:LEU:HD13	17:QQ:32:TYR:CD2	2.25	0.72
54:R8:60:LEU:O	54:R8:63:PRO:HD2	1.90	0.72
25:RA:49:A:H5''	25:RA:50:U:H3'	1.70	0.72
28:RE:93:VAL:H	28:RE:95:ILE:HD12	1.54	0.72
38:RS:103:GLU:O	38:RS:106:ARG:HG3	1.90	0.72
39:RT:102:ILE:HB	39:RT:110:ILE:CD1	2.19	0.72
40:RU:66:ASN:HB2	40:RU:76:TYR:HB2	1.72	0.72
44:RY:51:VAL:HG13	44:RY:52:SER:N	2.03	0.72
1:XA:1199:U:H4'	10:XJ:54:PHE:CZ	2.24	0.72
12:XL:126:LYS:NZ	12:XL:126:LYS:HB2	2.04	0.72
32:YI:27:ARG:HD3	47:Y1:71:TYR:HE1	1.55	0.72
48:Y2:27:GLU:OE1	48:Y2:27:GLU:N	2.19	0.72
32:YI:144:VAL:HG22	32:YI:145:VAL:N	2.02	0.72
35:YP:127:ALA:C	35:YP:147:LEU:HD23	2.10	0.72
44:YY:57:GLN:HE21	44:YY:58:GLY:H	1.37	0.72
10:QJ:98:ILE:H	10:QJ:98:ILE:HD12	1.55	0.72
20:QT:27:LYS:O	20:QT:30:LYS:HB3	1.89	0.72
54:R8:16:ILE:HD11	54:R8:57:ARG:HG2	1.70	0.72
54:R8:61:LEU:O	54:R8:62:LEU:HB2	1.88	0.72
25:RA:987:G:O2'	25:RA:1000:A:N3	2.22	0.72
31:RH:89:ILE:CD1	31:RH:129:THR:HB	2.20	0.72
32:RI:130:TYR:C	32:RI:131:LYS:HD2	2.10	0.72
36:RQ:79:LEU:O	36:RQ:79:LEU:CD2	2.36	0.72
37:RR:117:VAL:HG22	37:RR:118:GLU:N	2.05	0.72
8:XH:10:LEU:HD23	8:XH:10:LEU:N	2.04	0.72
15:XO:79:ARG:O	15:XO:82:ILE:HG22	1.90	0.72
47:Y1:76:ARG:HH11	47:Y1:76:ARG:HG2	1.53	0.72
47:Y1:80:LEU:HB2	47:Y1:81:LYS:HE2	1.71	0.72
54:Y8:60:LEU:C	54:Y8:63:PRO:HD2	2.11	0.72
42:YW:70:TYR:H	42:YW:70:TYR:HD2	1.37	0.72
23:QX:4:C:H2'	23:QX:5:C:H5'	1.72	0.71
53:R7:5:TRP:NE1	53:R7:7:PRO:HG3	2.04	0.71
25:RA:2832:U:H4'	25:RA:2833:G:H5''	1.71	0.71
25:RA:637:A:H2'	35:RP:117:GLU:OE2	1.89	0.71
29:RF:32:LEU:HD12	29:RF:32:LEU:C	2.10	0.71
26:RB:45:A:O4'	30:RG:95:ARG:NH1	2.23	0.71
31:RH:152:ARG:O	31:RH:153:LYS:HD2	1.90	0.71
38:RS:26:LEU:HD23	38:RS:26:LEU:O	1.90	0.71
40:RU:8:VAL:HG23	40:RU:11:ARG:NH2	1.99	0.71
1:XA:1318:A:H4'	19:XS:11:VAL:HG11	1.70	0.71
5:XE:76:ILE:HB	5:XE:77:PRO:HD2	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:XT:83:ARG:HA	20:XT:86:ARG:HB3	1.71	0.71
46:Y0:43:THR:HG23	46:Y0:43:THR:O	1.90	0.71
52:Y6:28:ARG:HB3	52:Y6:30:THR:H	1.55	0.71
25:YA:1138:G:H21	33:YN:106:MET:HE3	1.55	0.71
25:YA:1903:G:OP2	27:YD:241:PRO:HB2	1.90	0.71
25:YA:2327:A:H2'	25:YA:2328:A:C8	2.25	0.71
28:YE:197:ILE:HD11	28:YE:199:ARG:HH12	1.55	0.71
28:YE:56:PRO:O	28:YE:57:LYS:HB2	1.89	0.71
29:YF:32:LEU:HD12	29:YF:32:LEU:C	2.10	0.71
29:YF:9:ILE:HD11	29:YF:125:LEU:HG	1.70	0.71
31:YH:26:VAL:CG1	31:YH:27:LYS:H	2.02	0.71
31:YH:30:LYS:HD2	31:YH:81:GLU:H	1.54	0.71
31:YH:84:SER:O	31:YH:85:LYS:HB2	1.88	0.71
34:YO:3:GLN:HB2	34:YO:4:PRO:HD2	1.72	0.71
38:YS:67:ARG:O	38:YS:71:ARG:HG3	1.89	0.71
39:YT:117:ASP:O	39:YT:121:ILE:HG13	1.89	0.71
40:YU:34:LYS:HE2	40:YU:34:LYS:HA	1.70	0.71
1:QA:842:C:O2'	1:QA:848:C:N4	2.23	0.71
13:QM:49:THR:HG22	13:QM:51:ALA:N	2.02	0.71
28:RE:197:ILE:HD11	28:RE:199:ARG:HH12	1.55	0.71
28:RE:21:VAL:HB	28:RE:22:PRO:CB	2.18	0.71
34:RO:3:GLN:HB2	34:RO:4:PRO:HD2	1.72	0.71
35:RP:85:LEU:HA	35:RP:88:LEU:HD22	1.71	0.71
37:RR:85:PRO:O	37:RR:87:TYR:N	2.22	0.71
42:RW:1:MET:HE2	42:RW:2:GLU:H	1.55	0.71
1:XA:960:U:O2'	1:XA:961:U:OP2	2.06	0.71
10:XJ:5:ARG:HG3	10:XJ:71:LEU:HD11	1.72	0.71
10:XJ:98:ILE:H	10:XJ:98:ILE:HD12	1.55	0.71
16:XP:45:THR:HG23	16:XP:46:PRO:HD2	1.70	0.71
48:Y2:41:ILE:HD12	48:Y2:41:ILE:C	2.10	0.71
25:YA:607:U:H3	25:YA:621:A:H2	1.38	0.71
25:YA:1221:C:OP1	41:YV:68:LYS:HE2	1.90	0.71
2:QB:187:LEU:HD11	2:QB:204:ASN:O	1.91	0.71
8:QH:10:LEU:N	8:QH:10:LEU:HD23	2.05	0.71
10:QJ:49:VAL:O	10:QJ:60:ARG:HB3	1.90	0.71
16:QP:20:VAL:HG21	16:QP:32:TYR:CG	2.24	0.71
19:QS:40:ILE:HG13	19:QS:44:MET:SD	2.30	0.71
20:QT:57:ARG:HD3	20:QT:102:GLY:O	1.90	0.71
32:RI:92:VAL:CG1	32:RI:120:ILE:HG23	2.18	0.71
37:RR:3:HIS:O	37:RR:5:LYS:N	2.22	0.71
45:RZ:140:ASP:OD2	45:RZ:156:LYS:N	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1151:A:H1'	10:XJ:39:PRO:HB2	1.70	0.71
1:XA:986:A:H1'	19:XS:54:GLY:O	1.90	0.71
47:Y1:80:LEU:C	47:Y1:81:LYS:HE2	2.10	0.71
53:Y7:5:TRP:NE1	53:Y7:7:PRO:HG3	2.04	0.71
54:Y8:58:ILE:HD13	54:Y8:61:LEU:HD11	1.72	0.71
40:YU:69:CYS:HB3	40:YU:106:PHE:HZ	1.55	0.71
45:YZ:138:GLU:C	45:YZ:156:LYS:HD3	2.11	0.71
1:QA:1054:C:OP2	1:QA:1197:G:P	2.48	0.71
48:R2:29:LYS:HD3	48:R2:57:ILE:HD13	1.71	0.71
25:RA:1826:G:H4'	27:RD:242:ARG:HH21	1.55	0.71
33:RN:1:MET:CE	40:RU:95:LEU:HD21	2.20	0.71
2:XB:168:THR:HB	2:XB:192:SER:HB2	1.70	0.71
6:XF:25:ILE:HD13	6:XF:28:ARG:NH1	2.05	0.71
11:XK:124:LYS:HD2	11:XK:125:PHE:CE1	2.25	0.71
19:XS:40:ILE:HG13	19:XS:44:MET:SD	2.31	0.71
20:XT:63:ILE:HG22	20:XT:77:ALA:HB1	1.73	0.71
51:Y5:2:ALA:O	51:Y5:3:LYS:HB2	1.88	0.71
54:Y8:60:LEU:O	54:Y8:63:PRO:HD2	1.90	0.71
29:YF:185:ASP:HA	29:YF:188:ARG:CD	2.20	0.71
29:YF:185:ASP:OD1	29:YF:188:ARG:NH1	2.23	0.71
32:YI:73:GLU:HG3	32:YI:136:VAL:HG23	1.72	0.71
35:YP:85:LEU:HA	35:YP:88:LEU:HD22	1.71	0.71
38:YS:103:GLU:O	38:YS:106:ARG:HG3	1.90	0.71
2:QB:75:LYS:HD3	2:QB:75:LYS:O	1.89	0.71
16:QP:60:LEU:HA	16:QP:64:ALA:HB3	1.71	0.71
26:RB:56:G:H5'	30:RG:27:ASN:ND2	2.05	0.71
27:RD:244:ARG:HB2	27:RD:245:PRO:HD2	1.72	0.71
43:RX:12:VAL:HG12	43:RX:27:THR:O	1.91	0.71
13:XM:121:LYS:NZ	24:XY:40:G:P	2.62	0.71
25:YA:185:U:H4'	25:YA:218:A:H4'	1.72	0.71
33:YN:1:MET:CE	40:YU:95:LEU:HD21	2.21	0.71
25:YA:637:A:H2'	35:YP:117:GLU:OE2	1.88	0.71
35:YP:58:THR:O	35:YP:61:ARG:CZ	2.38	0.71
43:YX:12:VAL:HG12	43:YX:27:THR:O	1.90	0.71
45:YZ:140:ASP:OD2	45:YZ:156:LYS:N	2.24	0.71
2:QB:59:GLU:O	2:QB:62:ALA:HB3	1.90	0.71
52:R6:25:LYS:HD2	54:R8:34:TRP:HZ2	1.56	0.71
35:RP:49:ARG:HD2	54:R8:58:ILE:CG2	2.20	0.71
25:RA:1939:U:OP1	25:RA:2604:U:O2'	2.08	0.71
38:RS:83:LYS:HG2	38:RS:109:GLY:N	2.04	0.71
38:RS:67:ARG:O	38:RS:71:ARG:HG3	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RV:39:LEU:O	41:RV:40:LEU:HD23	1.90	0.71
2:XB:126:GLU:CG	2:XB:129:GLU:HG3	2.20	0.71
20:XT:27:LYS:O	20:XT:30:LYS:HB3	1.89	0.71
27:YD:263:ARG:HB2	27:YD:263:ARG:NH1	2.06	0.71
25:YA:1814:G:H4'	27:YD:51:VAL:HG21	1.73	0.71
8:QH:41:ARG:HH11	8:QH:41:ARG:CB	2.03	0.71
10:QJ:5:ARG:HG3	10:QJ:71:LEU:HD11	1.72	0.71
11:QK:17:GLY:HA3	11:QK:77:MET:CE	2.21	0.71
10:QJ:49:VAL:CG2	14:QN:41:ARG:HB2	2.21	0.71
46:R0:25:ARG:HD2	46:R0:29:GLN:HE22	1.55	0.71
50:R4:29:PRO:O	50:R4:30:GLU:HB2	1.89	0.71
54:R8:58:ILE:HD13	54:R8:61:LEU:HD11	1.72	0.71
25:RA:1403:C:H5''	25:RA:1471:A:H1'	1.73	0.71
25:RA:2635:C:H5''	28:RE:78:LEU:HA	1.72	0.71
25:RA:2563:U:H4'	34:RO:28:SER:HA	1.72	0.71
38:RS:106:ARG:CA	38:RS:110:LEU:HD11	2.19	0.71
2:XB:59:GLU:O	2:XB:62:ALA:HB3	1.90	0.71
3:XC:123:GLN:O	3:XC:128:PHE:HB2	1.90	0.71
7:XG:78:ARG:HH12	7:XG:80:VAL:CG2	2.04	0.71
11:XK:48:ILE:HD12	11:XK:63:LEU:HB3	1.71	0.71
25:YA:64:A:C4	43:YX:66:LEU:HD13	2.25	0.71
28:YE:93:VAL:H	28:YE:95:ILE:HD12	1.54	0.71
38:YS:83:LYS:HZ1	38:YS:109:GLY:HA2	1.52	0.71
39:YT:23:ARG:HB2	39:YT:24:PRO:HD2	1.71	0.71
1:QA:474:G:H5'	16:QP:81:ARG:HG3	1.71	0.71
1:QA:971:G:H5''	1:QA:972:C:H5''	1.73	0.71
3:QC:16:ARG:HB2	3:QC:16:ARG:NH1	2.04	0.71
8:QH:84:ARG:HH12	8:QH:86:ILE:CD1	2.02	0.71
54:R8:60:LEU:C	54:R8:63:PRO:HD2	2.11	0.71
32:RI:73:GLU:HG3	32:RI:136:VAL:HG23	1.72	0.71
38:RS:83:LYS:C	38:RS:109:GLY:HA3	2.10	0.71
2:XB:214:ILE:HA	2:XB:217:ARG:HH21	1.55	0.71
15:XO:65:ARG:HB2	15:XO:65:ARG:HH11	1.56	0.71
20:XT:57:ARG:HD3	20:XT:102:GLY:O	1.90	0.71
51:Y5:40:LYS:HE2	51:Y5:47:PRO:HD2	1.73	0.71
52:Y6:29:ASN:OD1	52:Y6:30:THR:HG22	1.90	0.71
52:Y6:36:LEU:HD13	52:Y6:50:ARG:NH1	2.05	0.71
25:YA:1286:A:O2'	25:YA:1288:U:OP2	2.06	0.71
25:YA:2131:G:H4'	25:YA:2132:U:H4'	1.73	0.71
35:YP:49:ARG:HD2	54:Y8:58:ILE:CG2	2.20	0.71
42:YW:6:ILE:HG12	42:YW:104:THR:HG23	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:R0:27:GLU:HG3	46:R0:68:GLU:HA	1.72	0.71
25:RA:1285:G:N2	25:RA:1329:U:OP1	2.19	0.71
25:RA:2392:A:OP2	25:RA:2422:A:N6	2.24	0.71
29:RF:185:ASP:OD1	29:RF:188:ARG:NH1	2.24	0.71
35:RP:83:VAL:CG1	35:RP:112:LEU:HD21	2.21	0.71
28:RE:14:ILE:HD11	39:RT:14:TYR:OH	1.90	0.71
1:XA:243:A:H4'	1:XA:244:U:H3'	1.72	0.71
1:XA:537:G:H5''	12:XL:113:ARG:HH12	1.55	0.71
3:XC:152:ILE:HB	3:XC:199:LYS:HB2	1.72	0.71
9:XI:62:TYR:C	9:XI:63:ILE:HD12	2.12	0.71
15:XO:71:GLN:HB2	15:XO:78:TYR:CD1	2.25	0.71
48:Y2:7:ARG:HH11	48:Y2:7:ARG:HG3	1.55	0.71
25:YA:26:G:H1'	25:YA:515:A:H61	1.56	0.71
13:QM:121:LYS:HE2	13:QM:121:LYS:CA	2.21	0.71
18:QR:56:THR:HB	18:QR:58:LEU:HD12	1.71	0.71
20:QT:23:ARG:CA	20:QT:26:ASN:HD21	2.04	0.71
25:RA:579:G:O2'	25:RA:2019:A:OP1	2.09	0.71
27:RD:263:ARG:NH1	27:RD:263:ARG:HB2	2.05	0.71
27:RD:43:ARG:HB3	27:RD:54:ARG:HB2	1.73	0.71
29:RF:101:LEU:O	29:RF:106:ARG:NH1	2.23	0.71
41:RV:51:VAL:HG12	41:RV:52:VAL:N	2.06	0.71
2:XB:172:ILE:HD12	2:XB:172:ILE:H	1.56	0.71
12:XL:24:VAL:HG12	12:XL:24:VAL:O	1.90	0.71
47:Y1:81:LYS:CA	47:Y1:81:LYS:HE2	2.13	0.71
25:YA:137(A):G:H1'	43:YX:41:ASN:ND2	2.06	0.71
25:YA:363:G:H2'	25:YA:363(A):A:H8	1.56	0.71
29:YF:66:PRO:O	29:YF:67:GLN:HB3	1.89	0.71
25:YA:2713:A:OP1	37:YR:14:SER:OG	2.08	0.71
2:QB:126:GLU:CG	2:QB:129:GLU:HG3	2.20	0.70
4:QD:170:VAL:O	6:XF:21:LEU:CD2	2.34	0.70
4:QD:190:ASP:HB3	4:QD:193:ASP:OD1	1.91	0.70
5:QE:78:HIS:HE1	5:QE:143:ARG:H	1.38	0.70
5:QE:79:GLU:OE2	8:QH:104:ARG:CA	2.37	0.70
48:R2:41:ILE:C	48:R2:41:ILE:HD12	2.10	0.70
52:R6:36:LEU:HD13	52:R6:50:ARG:NH1	2.05	0.70
29:RF:178:PRO:HB2	29:RF:201:VAL:HG11	1.73	0.70
2:XB:132:LYS:HA	2:XB:135:GLN:HB2	1.71	0.70
11:XK:17:GLY:HA3	11:XK:77:MET:CE	2.21	0.70
46:Y0:25:ARG:HD2	46:Y0:29:GLN:HE22	1.55	0.70
31:YH:80:SER:O	31:YH:81:GLU:HB2	1.89	0.70
9:QI:15:ALA:HA	9:QI:64:THR:O	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:R8:29:LYS:HD3	54:R8:44:LYS:HB2	1.71	0.70
25:RA:1080:C:N4	25:RA:1088:A:OP2	2.24	0.70
31:RH:125:VAL:HG12	31:RH:126:PRO:HG3	1.71	0.70
36:RQ:79:LEU:CD1	36:RQ:80:GLU:OE1	2.38	0.70
9:XI:15:ALA:HA	9:XI:64:THR:O	1.91	0.70
20:XT:23:ARG:CA	20:XT:26:ASN:HD21	2.04	0.70
25:YA:1403:C:H5''	25:YA:1471:A:H1'	1.72	0.70
27:YD:244:ARG:HB2	27:YD:245:PRO:HD2	1.72	0.70
31:YH:59:ARG:HG3	31:YH:59:ARG:HH11	1.56	0.70
35:YP:20:GLY:HA2	35:YP:27:HIS:O	1.91	0.70
36:YQ:134:ARG:CZ	45:YZ:122:ARG:NH2	2.55	0.70
1:QA:1152:A:OP1	10:QJ:68:HIS:NE2	2.23	0.70
11:QK:124:LYS:HD2	11:QK:125:PHE:CE1	2.25	0.70
20:QT:63:ILE:HG22	20:QT:77:ALA:HB1	1.73	0.70
25:RA:1012:U:H3	33:RN:25:ARG:HH11	1.37	0.70
25:RA:227:A:O2'	25:RA:228:A:O5'	2.08	0.70
25:RA:2392:A:H8	35:RP:60:MET:HG3	1.56	0.70
29:RF:164:ARG:HG3	29:RF:175:THR:OG1	1.92	0.70
29:RF:66:PRO:O	29:RF:67:GLN:HB3	1.90	0.70
31:RH:132:ARG:CB	31:RH:132:ARG:HH11	1.97	0.70
2:XB:187:LEU:HD11	2:XB:204:ASN:O	1.90	0.70
5:XE:82:VAL:HG12	5:XE:83:GLU:N	2.06	0.70
6:XF:72:VAL:CG2	6:XF:90:VAL:HG11	2.20	0.70
10:XJ:6:ILE:HG13	10:XJ:72:VAL:O	1.91	0.70
47:Y1:80:LEU:C	47:Y1:81:LYS:HD2	2.12	0.70
25:YA:558:G:P	33:YN:111:PRO:HD2	2.31	0.70
31:YH:89:ILE:CD1	31:YH:129:THR:HB	2.20	0.70
34:YO:113:LYS:HG2	34:YO:117:LEU:HD11	1.71	0.70
2:QB:8:LYS:HD3	2:QB:8:LYS:N	2.03	0.70
47:R1:80:LEU:C	47:R1:81:LYS:HE2	2.10	0.70
36:RQ:134:ARG:CZ	45:RZ:122:ARG:NH2	2.54	0.70
36:RQ:32:TYR:CD1	36:RQ:133:ARG:HA	2.27	0.70
28:YE:14:ILE:HG12	28:YE:15:PHE:N	2.06	0.70
29:YF:178:PRO:HG2	29:YF:179:GLU:OE2	1.90	0.70
31:YH:103:LEU:HD12	31:YH:131:VAL:HG21	1.73	0.70
6:QF:60:PHE:C	6:QF:61:LEU:HD12	2.12	0.70
10:QJ:6:ILE:HG13	10:QJ:72:VAL:O	1.91	0.70
52:R6:29:ASN:OD1	52:R6:30:THR:HG22	1.91	0.70
31:RH:154:PRO:O	31:RH:155:SER:HB2	1.91	0.70
35:RP:58:THR:O	35:RP:61:ARG:CZ	2.38	0.70
38:RS:54:LEU:HD13	38:RS:54:LEU:O	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RY:48:ALA:O	44:RY:49:VAL:C	2.30	0.70
1:XA:842:C:O2'	1:XA:848:C:N4	2.24	0.70
1:XA:827:U:O2	1:XA:874:G:N2	2.24	0.70
13:XM:121:LYS:HA	13:XM:121:LYS:HE2	1.71	0.70
13:XM:4:ILE:N	13:XM:9:ILE:HG21	2.06	0.70
26:YB:15:A:H5'	26:YB:16:G:C8	2.26	0.70
26:YB:42:C:N4	30:YG:91:ARG:HH21	1.89	0.70
27:YD:43:ARG:HB3	27:YD:54:ARG:HB2	1.73	0.70
1:QA:1305:G:H5'	21:QU:4:GLY:HA3	1.73	0.70
25:RA:607:U:OP1	29:RF:102:PRO:HA	1.92	0.70
26:RB:80:U:H2'	26:RB:81:G:H21	1.55	0.70
29:RF:178:PRO:HG2	29:RF:179:GLU:OE2	1.90	0.70
33:RN:89:LYS:O	33:RN:93:THR:HG22	1.90	0.70
4:XD:190:ASP:HB3	4:XD:193:ASP:OD1	1.91	0.70
8:XH:87:SER:HB2	8:XH:93:VAL:HB	1.73	0.70
13:XM:121:LYS:HE2	13:XM:121:LYS:CA	2.21	0.70
47:Y1:7:ILE:CD1	47:Y1:70:VAL:HG22	2.22	0.70
52:Y6:25:LYS:HD2	54:Y8:34:TRP:HZ2	1.56	0.70
29:YF:101:LEU:O	29:YF:106:ARG:NH1	2.23	0.70
31:YH:152:ARG:O	31:YH:153:LYS:CB	2.39	0.70
31:YH:86:GLU:CG	31:YH:165:ALA:H	1.94	0.70
38:YS:42:ASP:O	38:YS:43:GLU:HB2	1.90	0.70
39:YT:41:ARG:NH2	39:YT:43:GLN:HB2	2.06	0.70
40:YU:65:ILE:HG12	40:YU:96:ALA:HB1	1.73	0.70
41:YV:22:VAL:HG12	41:YV:23:GLU:N	2.06	0.70
42:YW:29:LEU:HD21	42:YW:33:ARG:CZ	2.22	0.70
2:QB:214:ILE:HA	2:QB:217:ARG:HH21	1.55	0.70
15:QO:74:ASP:CG	15:QO:77:ARG:HG2	2.12	0.70
48:R2:7:ARG:HH11	48:R2:7:ARG:HG3	1.55	0.70
27:RD:65:ILE:O	27:RD:65:ILE:HD13	1.91	0.70
29:RF:65:TRP:HZ3	29:RF:73:ALA:O	1.74	0.70
31:RH:152:ARG:O	31:RH:153:LYS:CB	2.39	0.70
32:RI:6:LEU:HD13	32:RI:36:ALA:HA	1.74	0.70
44:RY:57:GLN:HE21	44:RY:58:GLY:H	1.37	0.70
44:RY:45:VAL:HG12	44:RY:60:PHE:CD1	2.27	0.70
2:XB:101:MET:HA	2:XB:108:ILE:CG1	2.14	0.70
10:XJ:49:VAL:O	10:XJ:60:ARG:HB3	1.90	0.70
15:XO:74:ASP:CG	15:XO:77:ARG:HG2	2.12	0.70
51:Y5:40:LYS:HE2	51:Y5:47:PRO:CD	2.21	0.70
25:YA:265:A:N6	25:YA:427:U:O2'	2.22	0.70
28:YE:28:ALA:HB3	28:YE:93:VAL:HG22	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:164:ARG:HG3	29:YF:175:THR:OG1	1.92	0.70
29:YF:178:PRO:HB2	29:YF:201:VAL:HG11	1.73	0.70
36:YQ:32:TYR:CD1	36:YQ:133:ARG:HA	2.27	0.70
1:QA:922:G:H4'	5:QE:20:GLN:HA	1.74	0.70
5:QE:76:ILE:HB	5:QE:77:PRO:HD2	1.72	0.70
36:RQ:80:GLU:CD	46:R0:5:LYS:HB3	2.12	0.70
32:RI:27:ARG:HD3	47:R1:71:TYR:HE1	1.55	0.70
47:R1:82:LEU:HD13	47:R1:83:GLU:N	2.05	0.70
31:RH:154:PRO:HG2	31:RH:162:ILE:O	1.92	0.70
38:RS:106:ARG:N	38:RS:110:LEU:HD21	2.07	0.70
38:RS:83:LYS:HZ1	38:RS:109:GLY:HA2	1.56	0.70
8:XH:49:GLU:HG3	8:XH:51:VAL:HG13	1.74	0.70
17:XQ:4:LYS:CE	17:XQ:6:LEU:HD21	2.21	0.70
25:YA:2111:C:N3	25:YA:2118:U:O2'	2.25	0.70
30:YG:131:TYR:O	30:YG:159:VAL:HG13	1.92	0.70
31:YH:154:PRO:HG2	31:YH:162:ILE:O	1.92	0.70
32:YI:92:VAL:HG13	32:YI:120:ILE:CG2	2.16	0.70
36:YQ:43:THR:OG1	36:YQ:46:GLN:HB2	1.91	0.70
39:YT:57:PHE:C	39:YT:58:ASN:HD22	1.93	0.70
40:YU:66:ASN:HB2	40:YU:76:TYR:HB2	1.73	0.70
1:QA:542:G:OP1	4:QD:10:ARG:NH2	2.25	0.70
8:QH:87:SER:HB2	8:QH:93:VAL:HB	1.74	0.70
48:R2:47:ASN:O	48:R2:49:LYS:N	2.25	0.70
51:R5:40:LYS:HE2	51:R5:47:PRO:HD2	1.73	0.70
27:RD:65:ILE:HD11	27:RD:67:PHE:CD1	2.27	0.70
13:QM:7:VAL:CB	30:RG:115:ARG:HH12	2.05	0.70
30:RG:131:TYR:O	30:RG:159:VAL:HG13	1.92	0.70
40:RU:65:ILE:HG12	40:RU:96:ALA:HB1	1.73	0.70
42:RW:29:LEU:HD21	42:RW:33:ARG:CZ	2.22	0.70
1:XA:437:U:H2'	1:XA:438:G:O4'	1.92	0.70
2:XB:162:ILE:HD11	2:XB:184:VAL:HG13	1.74	0.70
10:XJ:49:VAL:CG2	14:XN:41:ARG:HB2	2.21	0.70
25:YA:1820:U:C2	27:YD:202:LYS:HB3	2.27	0.70
28:YE:103:ASP:OD1	28:YE:201:THR:HA	1.92	0.70
34:YO:63:VAL:HG13	34:YO:84:ALA:HA	1.73	0.70
38:YS:54:LEU:HD13	38:YS:54:LEU:O	1.91	0.70
9:QI:62:TYR:C	9:QI:63:ILE:HD12	2.11	0.70
16:QP:14:ASN:N	16:QP:15:PRO:HD3	2.07	0.70
17:QQ:52:LYS:HD2	17:QQ:55:ASP:OD1	1.91	0.70
19:QS:51:VAL:O	19:QS:57:HIS:HA	1.92	0.70
13:QM:93:ARG:NH1	25:RA:887:A:OP1	2.25	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RI:21:VAL:HG22	32:RI:22:LYS:H	1.57	0.70
1:XA:201:C:N4	1:XA:209:U:O2	2.25	0.70
25:YA:2404:C:H1'	35:YP:67:MET:CE	2.20	0.70
27:YD:65:ILE:HD13	27:YD:65:ILE:O	1.91	0.70
35:YP:83:VAL:CG1	35:YP:112:LEU:HD21	2.21	0.70
35:YP:114:ILE:HD13	35:YP:125:VAL:HG21	1.72	0.70
35:YP:64:LYS:C	35:YP:66:GLY:H	1.94	0.70
42:YW:1:MET:HA	42:YW:1:MET:HE3	1.72	0.70
43:YX:57:LEU:HD11	43:YX:78:LYS:HD2	1.73	0.70
1:QA:1348:U:H4'	9:QI:120:ARG:HD2	1.72	0.69
13:QM:4:ILE:N	13:QM:9:ILE:HG21	2.06	0.69
22:QV:1:C:C4'	46:R0:5:LYS:CE	2.70	0.69
47:R1:7:ILE:CD1	47:R1:70:VAL:HG22	2.22	0.69
47:R1:7:ILE:HD12	47:R1:70:VAL:HG22	1.73	0.69
25:RA:2485:G:OP1	36:RQ:46:GLN:NE2	2.24	0.69
43:RX:57:LEU:HD11	43:RX:78:LYS:HD2	1.73	0.69
1:XA:130:A:N3	1:XA:263:A:O2'	2.23	0.69
1:XA:941:G:H1	1:XA:1342:C:H42	1.38	0.69
1:XA:1226:C:H2'	13:XM:103:THR:HB	1.74	0.69
25:YA:2734:A:H3'	25:YA:2735:G:H8	1.57	0.69
25:YA:956:G:N2	25:YA:960:A:OP2	2.24	0.69
13:XM:7:VAL:HG21	30:YG:113:ARG:O	1.92	0.69
1:XA:1446:A:N3	39:YT:118:ARG:HD2	2.06	0.69
25:YA:482:A:H4'	44:YY:47:LYS:HD2	1.74	0.69
1:QA:793:U:H3'	1:QA:794:A:H5''	1.74	0.69
2:QB:95:GLN:HE21	2:QB:147:LYS:HE2	1.56	0.69
3:QC:152:ILE:HB	3:QC:199:LYS:HB2	1.73	0.69
3:QC:147:LYS:O	3:QC:203:PHE:HB3	1.92	0.69
4:QD:120:LEU:HD22	4:QD:125:HIS:HB2	1.73	0.69
7:QG:78:ARG:HH12	7:QG:80:VAL:CG2	2.04	0.69
9:QI:113:LYS:N	9:QI:113:LYS:HD2	2.07	0.69
25:RA:1971:A:C4	27:RD:241:PRO:HD3	2.27	0.69
30:RG:56:ALA:HB2	30:RG:153:ARG:HE	1.57	0.69
31:RH:128:PRO:HD2	31:RH:129:THR:H	1.55	0.69
45:RZ:138:GLU:C	45:RZ:156:LYS:HD3	2.11	0.69
1:XA:356:A:N3	1:XA:368:U:O2'	2.25	0.69
2:XB:95:GLN:HE21	2:XB:147:LYS:HE2	1.56	0.69
2:XB:162:ILE:O	2:XB:162:ILE:HG13	1.92	0.69
10:XJ:38:ILE:HG13	10:XJ:38:ILE:O	1.92	0.69
17:XQ:52:LYS:HD2	17:XQ:55:ASP:OD1	1.91	0.69
19:XS:51:VAL:O	19:XS:57:HIS:HA	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:Y0:27:GLU:HG3	46:Y0:68:GLU:HA	1.72	0.69
47:Y1:7:ILE:HD12	47:Y1:70:VAL:HG22	1.73	0.69
47:Y1:82:LEU:HD12	47:Y1:83:GLU:CA	2.22	0.69
32:YI:6:LEU:HD13	32:YI:36:ALA:HA	1.74	0.69
35:YP:19:VAL:HG22	35:YP:20:GLY:N	1.97	0.69
41:YV:41:GLY:HA3	41:YV:46:VAL:HG11	1.74	0.69
41:YV:51:VAL:HG12	41:YV:52:VAL:N	2.06	0.69
45:YZ:121:HIS:O	45:YZ:122:ARG:HB2	1.92	0.69
2:QB:162:ILE:O	2:QB:162:ILE:HG13	1.92	0.69
3:QC:16:ARG:HD2	3:QC:54:ARG:NH2	2.03	0.69
10:QJ:38:ILE:O	10:QJ:38:ILE:HG13	1.92	0.69
21:QU:6:ARG:HE	21:QU:15:ARG:NE	1.90	0.69
46:R0:6:GLY:C	46:R0:7:LEU:HD22	2.12	0.69
47:R1:82:LEU:HD12	47:R1:83:GLU:CA	2.21	0.69
27:RD:76:PRO:O	27:RD:98:VAL:HG23	1.91	0.69
29:RF:103:LYS:HA	29:RF:106:ARG:CG	2.21	0.69
31:RH:103:LEU:HD12	31:RH:131:VAL:HG21	1.73	0.69
35:RP:20:GLY:HA2	35:RP:27:HIS:O	1.92	0.69
35:RP:64:LYS:C	35:RP:66:GLY:H	1.94	0.69
25:RA:2849:U:O4	39:RT:23:ARG:NH2	2.24	0.69
1:XA:1322:C:H5'	13:XM:100:GLY:HA2	1.73	0.69
1:XA:677:U:H3	1:XA:713:G:H1	1.39	0.69
1:XA:895:G:H1	1:XA:904:C:H42	1.37	0.69
6:XF:67:MET:HB2	6:XF:68:PRO:HD2	1.75	0.69
10:XJ:48:THR:HA	10:XJ:62:HIS:HB3	1.75	0.69
14:YN:6:LEU:HD23	14:YN:6:LEU:O	1.92	0.69
47:Y1:53:VAL:HG22	47:Y1:74:VAL:HG13	1.74	0.69
25:YA:1499:C:H2'	25:YA:1500:G:C8	2.27	0.69
25:YA:768:G:O2'	25:YA:1379:A:N6	2.22	0.69
27:YD:89:SER:HB2	27:YD:159:ALA:HB2	1.75	0.69
35:YP:50:ARG:HB3	35:YP:50:ARG:NH2	1.97	0.69
5:QE:82:VAL:HG12	5:QE:83:GLU:N	2.06	0.69
17:QQ:4:LYS:CE	17:QQ:6:LEU:HD21	2.21	0.69
47:R1:74:VAL:O	47:R1:74:VAL:HG12	1.93	0.69
51:R5:4:HIS:HB3	51:R5:5:PRO:HD3	1.75	0.69
25:RA:1490:A:O2'	27:RD:99:ASP:OD2	2.10	0.69
28:RE:103:ASP:OD1	28:RE:201:THR:HA	1.92	0.69
31:RH:59:ARG:HH11	31:RH:59:ARG:HG3	1.56	0.69
33:RN:120:LEU:HD11	33:RN:122:VAL:HG23	1.74	0.69
44:RY:2:ARG:HH11	44:RY:2:ARG:HG2	1.57	0.69
1:XA:1219:U:OP1	14:YN:19:ARG:NH2	2.19	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1414:U:H2'	1:XA:1415:G:H8	1.58	0.69
3:XC:16:ARG:HD2	3:XC:54:ARG:NH2	2.03	0.69
16:XP:14:ASN:N	16:XP:15:PRO:HD3	2.07	0.69
16:XP:1:MET:O	16:XP:24:ALA:HB2	1.92	0.69
20:XT:50:GLU:HG3	20:XT:51:GLU:H	1.54	0.69
27:YD:65:ILE:HD11	27:YD:67:PHE:CD1	2.27	0.69
34:YO:8:LEU:N	34:YO:8:LEU:HD22	2.07	0.69
25:YA:2393:A:H4'	35:YP:61:ARG:O	1.92	0.69
35:YP:64:LYS:HB2	54:Y8:25:MET:CG	2.22	0.69
2:QB:212:GLN:NE2	2:QB:216:SER:HB2	2.08	0.69
3:QC:123:GLN:O	3:QC:128:PHE:HB2	1.91	0.69
4:QD:30:LYS:HA	4:QD:34:GLU:HB2	1.75	0.69
12:QL:24:VAL:HG12	12:QL:24:VAL:O	1.90	0.69
15:QO:65:ARG:HH11	15:QO:65:ARG:HB2	1.57	0.69
1:QA:280:C:N3	17:QQ:39:SER:N	2.38	0.69
26:RB:15:A:H5'	26:RB:16:G:C8	2.26	0.69
28:RE:7:VAL:HG23	28:RE:8:LYS:N	2.07	0.69
31:RH:4:ILE:HG13	31:RH:6:ARG:NE	2.08	0.69
35:RP:126:VAL:CG1	35:RP:147:LEU:HD21	2.16	0.69
45:RZ:121:HIS:O	45:RZ:122:ARG:HB2	1.92	0.69
45:RZ:129:SER:HB3	45:RZ:132:ASN:OD1	1.92	0.69
6:XF:60:PHE:C	6:XF:61:LEU:HD12	2.13	0.69
48:Y2:47:ASN:O	48:Y2:49:LYS:N	2.25	0.69
25:YA:1077:A:H5'	25:YA:1078:U:H5''	1.75	0.69
25:YA:192:C:O2'	25:YA:802:A:N3	2.25	0.69
27:YD:76:PRO:O	27:YD:98:VAL:HG23	1.91	0.69
42:YW:86:LEU:HD12	42:YW:87:PRO:CD	2.23	0.69
1:QA:1531:A:C5'	1:QA:1531:A:H8	2.01	0.69
4:QD:188:LEU:HD23	4:QD:189:PRO:HD2	1.75	0.69
8:QH:6:ILE:N	8:QH:6:ILE:HD12	2.08	0.69
25:RA:307:G:N2	25:RA:310:A:OP2	2.25	0.69
28:RE:65:GLY:HA2	28:RE:70:ALA:CB	2.23	0.69
33:RN:46:VAL:O	33:RN:47:ALA:HB3	1.92	0.69
36:RQ:43:THR:OG1	36:RQ:46:GLN:HB2	1.91	0.69
44:RY:29:GLU:HB3	44:RY:38:ILE:HG12	1.74	0.69
3:XC:105:GLU:HG2	3:XC:106:VAL:H	1.58	0.69
47:Y1:64:ALA:HA	47:Y1:67:ILE:HG13	1.75	0.69
29:YF:65:TRP:HZ3	29:YF:73:ALA:O	1.74	0.69
33:YN:120:LEU:HD11	33:YN:122:VAL:HG23	1.74	0.69
33:YN:68:GLU:HG2	33:YN:88:GLU:OE1	1.92	0.69
35:YP:61:ARG:HD2	35:YP:61:ARG:H	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YV:66:ARG:HH12	41:YV:88:ARG:NH1	1.90	0.69
44:YY:45:VAL:HG12	44:YY:60:PHE:CD1	2.27	0.69
1:QA:380:G:N2	1:QA:383:A:OP2	2.26	0.69
1:QA:45:U:H2'	1:QA:46:G:C8	2.27	0.69
1:QA:592:G:H1	1:QA:647:C:H42	1.39	0.69
3:QC:105:GLU:HG2	3:QC:106:VAL:H	1.58	0.69
8:QH:31:PHE:CE2	8:QH:35:ILE:HD11	2.27	0.69
1:QA:280:C:C2	17:QQ:38:ARG:HG3	2.27	0.69
47:R1:4:VAL:HG23	47:R1:10:LYS:O	1.93	0.69
47:R1:81:LYS:CA	47:R1:81:LYS:HE2	2.13	0.69
25:RA:2392:A:C8	35:RP:60:MET:HG3	2.27	0.69
25:RA:498:G:N3	44:RY:47:LYS:NZ	2.36	0.69
25:RA:586:A:N1	25:RA:809:G:O2'	2.22	0.69
25:RA:1142(A):A:H4'	33:RN:25:ARG:HH22	1.58	0.69
33:RN:68:GLU:HG2	33:RN:88:GLU:OE1	1.92	0.69
35:RP:39:LYS:CA	35:RP:45:LEU:HD11	2.23	0.69
41:RV:41:GLY:HA3	41:RV:46:VAL:HG11	1.74	0.69
41:RV:66:ARG:HH12	41:RV:88:ARG:NH1	1.90	0.69
8:XH:84:ARG:HH12	8:XH:86:ILE:CD1	2.02	0.69
25:YA:1318:C:H2'	25:YA:1319:G:H5''	1.74	0.69
25:YA:2401:U:H2'	25:YA:2402:C:H5''	1.74	0.69
30:YG:16:ARG:HH21	30:YG:31:VAL:CG1	2.05	0.69
2:QB:126:GLU:O	2:QB:126:GLU:HG2	1.92	0.69
5:QE:78:HIS:HA	8:QH:105:ARG:HB2	1.73	0.69
16:QP:1:MET:O	16:QP:24:ALA:HB2	1.92	0.69
25:RA:2602:A:C2	55:Z6:76:PPU:H8	2.28	0.69
34:RO:63:VAL:HG13	34:RO:84:ALA:HA	1.72	0.69
39:RT:41:ARG:NH2	39:RT:43:GLN:HB2	2.06	0.69
45:RZ:53:ILE:HG22	45:RZ:71:VAL:HG13	1.74	0.69
2:XB:178:ARG:NH2	8:XH:68:ARG:HH22	1.90	0.69
2:XB:212:GLN:NE2	2:XB:216:SER:HB2	2.08	0.69
19:XS:5:LEU:CD1	50:Y4:66:SER:CB	2.59	0.69
47:Y1:82:LEU:HD13	47:Y1:83:GLU:N	2.05	0.69
51:Y5:40:LYS:HG2	51:Y5:47:PRO:HD2	1.75	0.69
52:Y6:14:THR:HG21	52:Y6:19:ARG:HH21	1.58	0.69
25:YA:2343:C:HO2'	25:YA:2373:G:HO2'	1.38	0.69
27:YD:17:THR:HG22	27:YD:205:VAL:N	2.08	0.69
30:YG:28:VAL:HG23	30:YG:29:TRP:CD1	2.28	0.69
31:YH:150:ALA:C	31:YH:152:ARG:N	2.44	0.69
31:YH:89:ILE:HG12	31:YH:89:ILE:O	1.92	0.69
35:YP:29:LYS:HD2	35:YP:30:THR:HG22	1.72	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:62:LEU:H	35:YP:62:LEU:HD22	1.53	0.69
35:YP:62:LEU:HD23	54:Y8:25:MET:HB2	1.74	0.69
38:YS:106:ARG:N	38:YS:110:LEU:HD21	2.07	0.69
1:QA:713:G:H2'	1:QA:714:G:C8	2.28	0.69
2:QB:172:ILE:HD12	2:QB:172:ILE:H	1.56	0.69
46:R0:43:THR:O	46:R0:43:THR:HG23	1.90	0.69
47:R1:80:LEU:C	47:R1:81:LYS:HD2	2.12	0.69
51:R5:40:LYS:HG2	51:R5:47:PRO:HD2	1.75	0.69
52:R6:28:ARG:HB3	52:R6:30:THR:H	1.55	0.69
30:RG:171:ALA:O	30:RG:175:LEU:HG	1.93	0.69
30:RG:28:VAL:HG23	30:RG:29:TRP:CD1	2.28	0.69
32:RI:13:GLY:HA3	32:RI:17:GLN:OE1	1.93	0.69
35:RP:64:LYS:HB2	54:R8:25:MET:CG	2.22	0.69
40:RU:90:VAL:O	40:RU:92:ARG:N	2.26	0.69
41:RV:22:VAL:HG12	41:RV:23:GLU:N	2.05	0.69
7:XG:8:GLU:H	7:XG:8:GLU:CD	1.96	0.69
8:XH:31:PHE:CE2	8:XH:35:ILE:HD11	2.27	0.69
19:XS:5:LEU:CG	50:Y4:66:SER:HB2	2.23	0.69
25:YA:380:U:H2'	25:YA:381:G:H8	1.57	0.69
27:YD:17:THR:CG2	27:YD:204:ILE:HA	2.23	0.69
28:YE:7:VAL:HG23	28:YE:8:LYS:N	2.07	0.69
31:YH:154:PRO:O	31:YH:155:SER:HB2	1.91	0.69
33:YN:56:ASN:HD22	33:YN:125:GLY:C	1.96	0.69
6:QF:3:ARG:HB3	6:QF:93:SER:HB2	1.75	0.69
8:QH:49:GLU:HG3	8:QH:51:VAL:HG13	1.74	0.69
48:R2:23:LYS:O	48:R2:27:GLU:OE1	2.11	0.69
33:RN:7:LYS:HD3	33:RN:9:VAL:HA	1.75	0.69
6:XF:100:ASN:ND2	18:XR:23:LYS:HE3	2.08	0.69
9:XI:113:LYS:HD2	9:XI:113:LYS:N	2.07	0.69
33:YN:7:LYS:HD3	33:YN:9:VAL:HA	1.75	0.69
34:YO:1:MET:HE3	34:YO:67:LYS:HE2	1.75	0.69
37:YR:29:LEU:HD23	37:YR:79:LEU:HD12	1.75	0.69
2:QB:101:MET:HA	2:QB:108:ILE:CG1	2.15	0.69
10:QJ:54:PHE:CZ	10:QJ:55:LYS:NZ	2.61	0.69
6:QF:100:ASN:ND2	18:QR:23:LYS:HE3	2.08	0.69
51:R5:40:LYS:HE2	51:R5:47:PRO:CD	2.21	0.69
27:RD:89:SER:HB2	27:RD:159:ALA:HB2	1.75	0.69
27:RD:35:LYS:HB3	27:RD:63:ARG:HA	1.75	0.69
35:RP:61:ARG:H	35:RP:61:ARG:HD2	1.58	0.69
42:RW:6:ILE:HG12	42:RW:104:THR:HG23	1.73	0.69
7:XG:155:ARG:N	7:XG:155:ARG:HD3	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:31:ILE:HG23	19:XS:49:ILE:HA	1.75	0.69
20:XT:64:ASP:HA	20:XT:67:ALA:HB3	1.74	0.69
25:YA:242:G:H5'	54:Y8:3:LYS:HE3	1.73	0.69
25:YA:654:A:O2'	25:YA:654(A):G:N7	2.26	0.69
27:YD:35:LYS:HB3	27:YD:63:ARG:HA	1.75	0.69
28:YE:65:GLY:HA2	28:YE:70:ALA:CB	2.23	0.69
40:YU:8:VAL:HG23	40:YU:11:ARG:NH2	1.99	0.69
40:YU:65:ILE:HD11	40:YU:93:LYS:HA	1.74	0.69
43:YX:12:VAL:HG11	43:YX:27:THR:OG1	1.93	0.69
45:YZ:53:ILE:HG22	45:YZ:71:VAL:HG13	1.74	0.69
1:QA:243:A:H4'	1:QA:244:U:H3'	1.75	0.68
3:QC:195:VAL:HG12	3:QC:196:LEU:N	2.08	0.68
7:QG:155:ARG:HD3	7:QG:155:ARG:N	2.07	0.68
9:QI:46:ALA:HA	9:QI:78:LYS:HB2	1.75	0.68
20:QT:64:ASP:HA	20:QT:67:ALA:HB3	1.74	0.68
25:RA:270(T):G:OP1	47:R1:97:LEU:HD13	1.93	0.68
25:RA:2014:A:O2'	51:R5:2:ALA:HB2	1.92	0.68
29:RF:185:ASP:HA	29:RF:188:ARG:CD	2.20	0.68
30:RG:16:ARG:HH21	30:RG:31:VAL:CG1	2.05	0.68
38:RS:52:SER:O	38:RS:56:LEU:HD22	1.94	0.68
13:XM:57:ARG:NH2	50:Y4:34:GLU:HA	2.07	0.68
52:Y6:41:PRO:CG	52:Y6:45:LYS:H	2.05	0.68
25:YA:568:U:H5'	25:YA:945:A:C2	2.27	0.68
30:YG:56:ALA:HB2	30:YG:153:ARG:HE	1.57	0.68
38:YS:106:ARG:CA	38:YS:110:LEU:HD11	2.19	0.68
1:QA:1048:G:H1	1:QA:1209:C:H42	1.39	0.68
1:QA:1288:A:N3	1:QA:1352:C:O2'	2.25	0.68
8:QH:112:LEU:HA	8:QH:134:ILE:HG12	1.75	0.68
10:QJ:48:THR:HA	10:QJ:62:HIS:HB3	1.74	0.68
13:QM:119:GLY:HA3	22:QV:29:G:OP1	1.93	0.68
13:QM:90:LEU:CA	13:QM:93:ARG:HD2	2.23	0.68
52:R6:14:THR:HG21	52:R6:19:ARG:HH21	1.58	0.68
27:RD:17:THR:HG22	27:RD:205:VAL:N	2.08	0.68
30:RG:112:PRO:CB	50:R4:37:SER:HB2	2.22	0.68
35:RP:62:LEU:HD23	54:R8:25:MET:HB2	1.74	0.68
44:RY:40:GLU:HA	44:RY:64:GLU:OE1	1.94	0.68
3:XC:107:GLN:CD	3:XC:107:GLN:H	1.97	0.68
4:XD:188:LEU:HD23	4:XD:189:PRO:HD2	1.74	0.68
5:XE:78:HIS:HE1	5:XE:143:ARG:H	1.38	0.68
25:YA:2068:U:H3	25:YA:2430:A:H2	1.42	0.68
32:YI:5:LEU:N	32:YI:5:LEU:HD12	2.08	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YY:2:ARG:HH11	44:YY:2:ARG:HG2	1.57	0.68
1:QA:1349:A:OP2	9:QI:118:LYS:NZ	2.23	0.68
1:QA:475:G:H2'	1:QA:476:G:H8	1.58	0.68
2:QB:162:ILE:HD11	2:QB:184:VAL:HG13	1.74	0.68
47:R1:53:VAL:HG22	47:R1:74:VAL:HG13	1.74	0.68
25:RA:526:A:OP1	25:RA:527:C:OP1	2.11	0.68
25:RA:630:G:N2	25:RA:633:A:OP2	2.26	0.68
35:RP:26:GLY:O	35:RP:28:GLY:N	2.26	0.68
4:XD:96:LEU:HD22	4:XD:96:LEU:N	2.08	0.68
10:XJ:75:ILE:HG13	10:XJ:76:ASN:N	2.05	0.68
13:XM:117:VAL:HG22	13:XM:118:ALA:H	1.59	0.68
1:XA:1014:A:H4'	19:XS:14:HIS:HE2	1.58	0.68
25:YA:1803:A:H4'	27:YD:259:THR:CG2	2.23	0.68
25:YA:852:G:H1	25:YA:925:C:H42	1.42	0.68
30:YG:112:PRO:CB	50:Y4:37:SER:HB2	2.22	0.68
44:YY:48:ALA:O	44:YY:49:VAL:C	2.30	0.68
44:YY:61:ILE:CG2	44:YY:62:GLU:N	2.56	0.68
1:QA:765:G:H1	1:QA:812:C:H2'	1.57	0.68
2:QB:165:VAL:HG23	2:QB:166:ASP:H	1.57	0.68
3:QC:107:GLN:CD	3:QC:107:GLN:H	1.97	0.68
3:QC:150:LYS:HB3	3:QC:201:TYR:HB2	1.75	0.68
52:R6:41:PRO:CG	52:R6:45:LYS:H	2.05	0.68
52:R6:7:ILE:HG13	52:R6:8:LYS:N	2.06	0.68
25:RA:2208:U:H1'	27:RD:151:LYS:HE2	1.75	0.68
25:RA:774:A:H2	25:RA:787:U:HO2'	1.40	0.68
34:RO:8:LEU:HD22	34:RO:8:LEU:N	2.08	0.68
40:RU:65:ILE:HD11	40:RU:93:LYS:HA	1.74	0.68
1:XA:673:G:H2'	1:XA:674:G:C8	2.29	0.68
4:XD:30:LYS:HA	4:XD:34:GLU:HB2	1.75	0.68
10:XJ:96:ILE:HD13	10:XJ:96:ILE:N	2.09	0.68
25:YA:2361:A:O5'	54:Y8:27:THR:OG1	2.11	0.68
25:YA:2233:U:H2'	25:YA:2234:G:C8	2.28	0.68
32:YI:92:VAL:CG1	32:YI:120:ILE:HG23	2.18	0.68
33:YN:46:VAL:O	33:YN:47:ALA:HB3	1.92	0.68
39:YT:109:GLU:O	39:YT:113:LYS:HB2	1.94	0.68
4:QD:198:VAL:HG12	4:QD:199:ASN:N	2.09	0.68
5:QE:53:LEU:HD12	5:QE:53:LEU:N	2.09	0.68
16:QP:3:LYS:C	16:QP:4:ILE:HD12	2.14	0.68
20:QT:47:GLY:O	20:QT:49:ALA:N	2.19	0.68
47:R1:83:GLU:HG2	47:R1:84:GLY:N	2.09	0.68
50:R4:15:ILE:HD13	50:R4:15:ILE:N	2.09	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:126:PRO:HG2	31:RH:127:GLU:H	1.59	0.68
39:RT:109:GLU:O	39:RT:113:LYS:HB2	1.94	0.68
41:RV:18:LEU:O	41:RV:95:LEU:HA	1.93	0.68
8:XH:6:ILE:H	8:XH:6:ILE:CD1	2.07	0.68
9:XI:48:GLU:N	9:XI:49:PRO:HD2	2.09	0.68
25:YA:1509:C:H3'	25:YA:1510:A:H5''	1.75	0.68
25:YA:780:G:H21	25:YA:783:A:H62	1.42	0.68
31:YH:126:PRO:HG2	31:YH:127:GLU:H	1.58	0.68
25:YA:1279:G:H4'	37:YR:31:HIS:HD2	1.58	0.68
38:YS:57:LYS:H	38:YS:57:LYS:HD3	1.59	0.68
44:YY:29:GLU:HB3	44:YY:38:ILE:HG12	1.74	0.68
1:QA:1123:A:H4'	10:QJ:36:GLY:HA3	1.76	0.68
4:QD:96:LEU:N	4:QD:96:LEU:HD22	2.07	0.68
20:QT:89:ARG:NH2	20:QT:104:LEU:HD21	2.09	0.68
20:QT:97:ALA:O	20:QT:99:LEU:N	2.27	0.68
51:R5:20:ARG:HA	51:R5:23:HIS:ND1	2.09	0.68
25:RA:1203:G:O2'	25:RA:1242:A:N6	2.26	0.68
25:RA:581:C:N4	25:RA:582:G:O6	2.27	0.68
27:RD:17:THR:CG2	27:RD:204:ILE:HA	2.23	0.68
31:RH:126:PRO:HB2	31:RH:130:ARG:O	1.93	0.68
35:RP:15:ARG:O	35:RP:16:ARG:C	2.32	0.68
17:XQ:59:ILE:N	17:XQ:59:ILE:HD13	2.08	0.68
17:XQ:41:LYS:HZ1	17:XQ:92:ARG:HH22	1.41	0.68
41:YV:18:LEU:O	41:YV:95:LEU:HA	1.94	0.68
42:YW:29:LEU:HD21	42:YW:33:ARG:NE	2.09	0.68
1:QA:1053:G:H5'	1:QA:1054:C:H5'	1.74	0.68
9:QI:28:VAL:HG13	9:QI:63:ILE:CG2	2.24	0.68
47:R1:64:ALA:HA	47:R1:67:ILE:HG13	1.75	0.68
25:RA:372:G:H5''	47:R1:66:HIS:CD2	2.28	0.68
33:RN:134:ARG:N	33:RN:135:PRO:HD3	1.97	0.68
34:RO:25:LEU:HB2	34:RO:38:VAL:HG13	1.74	0.68
36:RQ:12:GLN:CG	36:RQ:73:PRO:HD2	2.21	0.68
37:RR:29:LEU:HD23	37:RR:79:LEU:HD12	1.75	0.68
39:RT:108:ARG:HA	39:RT:111:ARG:CZ	2.24	0.68
43:RX:12:VAL:HG11	43:RX:27:THR:OG1	1.93	0.68
2:XB:126:GLU:O	2:XB:126:GLU:HG2	1.92	0.68
6:XF:3:ARG:HB3	6:XF:93:SER:HB2	1.75	0.68
10:XJ:6:ILE:HG22	10:XJ:98:ILE:CG1	2.16	0.68
11:XK:124:LYS:HB3	11:XK:125:PHE:HD1	1.58	0.68
1:XA:880:C:OP1	12:XL:8:ASN:ND2	2.25	0.68
13:XM:68:GLY:CA	30:YG:116:ASP:OD2	2.41	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:3:LYS:C	16:XP:4:ILE:HD12	2.14	0.68
47:Y1:4:VAL:HG23	47:Y1:10:LYS:O	1.93	0.68
48:Y2:23:LYS:O	48:Y2:27:GLU:OE1	2.11	0.68
28:YE:16:ARG:HG3	28:YE:16:ARG:O	1.93	0.68
28:YE:9:VAL:HB	28:YE:25:VAL:HG23	1.76	0.68
31:YH:4:ILE:HG13	31:YH:6:ARG:NE	2.08	0.68
32:YI:13:GLY:HA3	32:YI:17:GLN:OE1	1.93	0.68
38:YS:100:ALA:HA	38:YS:103:GLU:HG2	1.75	0.68
39:YT:50:ILE:HG22	39:YT:62:THR:OG1	1.94	0.68
2:QB:215:LEU:O	2:QB:219:VAL:HG23	1.94	0.68
14:QN:6:LEU:HD23	14:QN:6:LEU:O	1.93	0.68
17:QQ:59:ILE:N	17:QQ:59:ILE:HD13	2.09	0.68
17:QQ:74:LEU:HD12	17:QQ:75:ARG:HG2	1.76	0.68
25:RA:2199:A:H3'	25:RA:2205:C:H6	1.59	0.68
38:RS:100:ALA:HA	38:RS:103:GLU:HG2	1.75	0.68
39:RT:50:ILE:HG22	39:RT:62:THR:OG1	1.94	0.68
1:XA:291:C:H42	1:XA:309:G:H1	1.42	0.68
4:XD:198:VAL:HG12	4:XD:199:ASN:N	2.09	0.68
8:XH:112:LEU:HA	8:XH:134:ILE:HG12	1.75	0.68
8:XH:6:ILE:N	8:XH:6:ILE:HD12	2.08	0.68
13:XM:78:ILE:HG23	13:XM:92:HIS:ND1	2.09	0.68
21:XU:6:ARG:HE	21:XU:15:ARG:NE	1.91	0.68
47:Y1:74:VAL:HG12	47:Y1:74:VAL:O	1.93	0.68
32:YI:8:PRO:HG3	32:YI:14:ASP:HB2	1.76	0.68
35:YP:15:ARG:O	35:YP:16:ARG:C	2.32	0.68
36:YQ:79:LEU:CD1	36:YQ:80:GLU:OE1	2.38	0.68
45:YZ:129:SER:HB3	45:YZ:132:ASN:OD1	1.92	0.68
45:YZ:18:LEU:H	45:YZ:18:LEU:CD1	2.06	0.68
25:RA:1265:A:H1'	25:RA:1267:U:C6	2.28	0.68
25:RA:2134:A:OP2	25:RA:2157:G:N2	2.26	0.68
25:RA:558:G:P	33:RN:111:PRO:HD2	2.34	0.68
25:RA:587:C:OP2	35:RP:21:ARG:NH2	2.27	0.68
25:RA:2746:U:H5''	31:RH:138:LYS:HE2	1.76	0.68
33:RN:56:ASN:HD22	33:RN:125:GLY:C	1.96	0.68
36:RQ:104:PHE:HE1	36:RQ:125:LEU:HD11	1.59	0.68
45:RZ:18:LEU:CD1	45:RZ:18:LEU:H	2.06	0.68
1:XA:1128:C:H42	1:XA:1144:G:H1	1.40	0.68
3:XC:147:LYS:O	3:XC:203:PHE:HB3	1.92	0.68
7:XG:138:LYS:HE2	7:XG:142:GLU:OE2	1.94	0.68
7:XG:79:ARG:NH2	7:XG:82:GLY:HA2	2.09	0.68
1:XA:954:G:H4'	13:XM:121:LYS:HG3	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:Y5:20:ARG:HA	51:Y5:23:HIS:ND1	2.09	0.68
25:YA:1364:G:N2	25:YA:1367:A:OP2	2.17	0.68
25:YA:2832:U:H4'	25:YA:2833:G:H5''	1.76	0.68
25:YA:2680:C:H5'	28:YE:189:PRO:HA	1.75	0.68
30:YG:171:ALA:O	30:YG:175:LEU:HG	1.93	0.68
31:YH:126:PRO:CD	31:YH:127:GLU:H	2.07	0.68
31:YH:4:ILE:HG13	31:YH:6:ARG:NH1	2.09	0.68
32:YI:74:ASN:CG	32:YI:75:LEU:H	1.97	0.68
35:YP:39:LYS:CA	35:YP:45:LEU:HD11	2.23	0.68
36:YQ:66:ILE:HG13	36:YQ:67:ARG:H	1.58	0.68
1:QA:1074:G:H4'	2:QB:104:ASN:HB2	1.75	0.68
2:QB:7:VAL:HG22	2:QB:8:LYS:HD3	1.76	0.68
16:QP:66:PRO:HG2	16:QP:71:ARG:NH1	2.09	0.68
28:RE:13:ARG:CB	28:RE:13:ARG:HH11	2.07	0.68
29:RF:67:GLN:O	29:RF:67:GLN:CG	2.32	0.68
31:RH:88:LEU:HD22	31:RH:88:LEU:H	1.58	0.68
32:RI:115:ALA:HB3	32:RI:128:LEU:CD1	2.23	0.68
36:RQ:90:VAL:CG1	36:RQ:91:GLU:N	2.57	0.68
25:RA:1187:G:H5''	41:RV:81:TYR:CE2	2.29	0.68
1:XA:1192:C:O2	5:XE:25:ARG:NH2	2.27	0.68
13:XM:90:LEU:CA	13:XM:93:ARG:HD2	2.23	0.68
48:Y2:64:LEU:HD22	48:Y2:68:ARG:HD2	1.76	0.68
50:Y4:15:ILE:N	50:Y4:15:ILE:HD13	2.09	0.68
25:YA:2392:A:C8	35:YP:60:MET:HG3	2.27	0.68
27:YD:35:LYS:HZ1	27:YD:104:TYR:HB2	1.57	0.68
31:YH:126:PRO:HB2	31:YH:130:ARG:O	1.94	0.68
32:YI:21:VAL:HG22	32:YI:22:LYS:H	1.57	0.68
32:YI:99:GLU:CG	32:YI:103:ARG:HH21	2.07	0.68
36:YQ:133:ARG:O	36:YQ:134:ARG:HB2	1.94	0.68
44:YY:40:GLU:HA	44:YY:64:GLU:OE1	1.94	0.68
45:YZ:125:LEU:O	45:YZ:164:ALA:HB3	1.94	0.68
1:QA:745:C:OP1	1:QA:851:G:O2'	2.13	0.67
7:QG:8:GLU:H	7:QG:8:GLU:CD	1.96	0.67
9:QI:48:GLU:N	9:QI:49:PRO:HD2	2.10	0.67
11:QK:124:LYS:HB3	11:QK:125:PHE:HD1	1.58	0.67
12:QL:11:VAL:HG13	17:QQ:29:HIS:CD2	2.28	0.67
47:R1:20:ARG:HH11	47:R1:20:ARG:HG2	1.58	0.67
25:RA:1337:G:H2'	25:RA:1338:G:H8	1.58	0.67
44:RY:49:VAL:O	44:RY:51:VAL:N	2.27	0.67
45:RZ:125:LEU:O	45:RZ:164:ALA:HB3	1.94	0.67
1:XA:1175:G:H2'	1:XA:1176:A:C8	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:29:PRO:O	4:XD:30:LYS:HD3	1.94	0.67
7:XG:50:ILE:HB	7:XG:58:PRO:HB3	1.75	0.67
8:XH:20:TYR:HE2	8:XH:75:ARG:HD2	1.60	0.67
25:YA:2037:G:H2'	25:YA:2038:G:C8	2.28	0.67
32:YI:127:VAL:HA	32:YI:139:GLN:HA	1.76	0.67
36:YQ:90:VAL:CG1	36:YQ:91:GLU:N	2.57	0.67
4:QD:173:TRP:CD2	4:QD:189:PRO:HB3	2.29	0.67
4:QD:29:PRO:O	4:QD:30:LYS:HD3	1.94	0.67
8:QH:100:ILE:HB	8:QH:125:ARG:NH1	2.09	0.67
10:QJ:96:ILE:N	10:QJ:96:ILE:HD13	2.09	0.67
13:QM:23:TYR:CB	13:QM:67:GLU:HG2	2.25	0.67
25:RA:1286:A:O2'	25:RA:1288:U:OP2	2.10	0.67
28:RE:116:VAL:O	28:RE:117:MET:HB3	1.94	0.67
29:RF:184:TYR:O	29:RF:188:ARG:HG3	1.94	0.67
47:Y1:20:ARG:HH11	47:Y1:20:ARG:HG2	1.58	0.67
25:YA:27:G:N2	25:YA:513:A:OP2	2.27	0.67
31:YH:77:LYS:HG2	31:YH:77:LYS:O	1.94	0.67
34:YO:14:THR:O	34:YO:51:ALA:HB3	1.95	0.67
36:YQ:104:PHE:CE1	36:YQ:125:LEU:HD11	2.29	0.67
38:YS:35:ILE:HD13	38:YS:101:LEU:HD23	1.76	0.67
39:YT:50:ILE:CD1	39:YT:102:ILE:HD11	2.25	0.67
44:YY:21:LYS:HG3	44:YY:22:GLY:N	2.09	0.67
1:QA:411:A:C5	1:QA:413:G:H1'	2.29	0.67
2:QB:24:TRP:H	2:QB:24:TRP:HD1	1.43	0.67
6:QF:67:MET:HB2	6:QF:68:PRO:HD2	1.75	0.67
7:QG:79:ARG:NH2	7:QG:82:GLY:HA2	2.09	0.67
52:R6:48:VAL:HG13	52:R6:49:HIS:H	1.60	0.67
27:RD:135:PHE:N	27:RD:135:PHE:CD2	2.62	0.67
31:RH:89:ILE:O	31:RH:89:ILE:HG12	1.92	0.67
36:RQ:133:ARG:O	36:RQ:134:ARG:HB2	1.94	0.67
36:RQ:80:GLU:OE2	36:RQ:80:GLU:HA	1.94	0.67
38:RS:57:LYS:HD3	38:RS:57:LYS:H	1.59	0.67
3:XC:195:VAL:HG12	3:XC:196:LEU:N	2.07	0.67
4:XD:120:LEU:HD22	4:XD:125:HIS:HB2	1.74	0.67
7:XG:120:ILE:O	7:XG:124:LEU:HB2	1.95	0.67
27:YD:44:ASN:N	27:YD:44:ASN:ND2	2.41	0.67
33:YN:96:GLU:CG	33:YN:97:ARG:H	2.00	0.67
35:YP:65:ARG:CG	35:YP:65:ARG:HH11	2.06	0.67
36:YQ:33:GLY:HA2	36:YQ:105:GLU:HA	1.76	0.67
8:QH:14:ARG:O	8:QH:18:ARG:HD3	1.94	0.67
9:QI:112:LYS:HA	9:QI:119:ALA:HB2	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:95:G:O2'	48:R2:48:HIS:ND1	2.26	0.67
25:RA:323:G:H2'	29:RF:169:ASN:OD1	1.93	0.67
34:RO:13:ASN:ND2	34:RO:96:THR:O	2.27	0.67
36:RQ:20:ALA:HB1	36:RQ:99:PRO:HD2	1.77	0.67
38:RS:35:ILE:HD13	38:RS:101:LEU:HD23	1.76	0.67
40:RU:92:ARG:O	40:RU:94:ASN:N	2.25	0.67
1:XA:1014:A:H4'	19:XS:14:HIS:NE2	2.10	0.67
2:XB:71:VAL:CG2	2:XB:164:VAL:HG22	2.24	0.67
11:XK:95:ILE:HD12	11:XK:108:ILE:HD13	1.76	0.67
25:YA:2576:G:O2'	25:YA:2579:C:OP2	2.10	0.67
35:YP:26:GLY:O	35:YP:28:GLY:N	2.26	0.67
36:YQ:90:VAL:O	36:YQ:92:GLY:N	2.25	0.67
41:YV:25:LEU:H	41:YV:92:THR:HG21	1.60	0.67
44:YY:14:LEU:HD23	44:YY:15:VAL:N	2.09	0.67
7:QG:120:ILE:O	7:QG:124:LEU:HB2	1.95	0.67
7:QG:141:VAL:O	7:QG:141:VAL:HG12	1.95	0.67
7:QG:28:ASN:O	7:QG:31:MET:HB3	1.95	0.67
7:QG:50:ILE:HB	7:QG:58:PRO:HB3	1.75	0.67
10:QJ:6:ILE:HG22	10:QJ:98:ILE:CG1	2.16	0.67
11:QK:95:ILE:HD12	11:QK:108:ILE:HD13	1.77	0.67
6:QF:96:PRO:HB3	18:QR:30:ASP:OD2	1.95	0.67
52:R6:43:CYS:SG	52:R6:44:ARG:HD3	2.35	0.67
28:RE:10:GLY:H	28:RE:25:VAL:HG23	1.59	0.67
36:RQ:104:PHE:CE1	36:RQ:125:LEU:HD11	2.30	0.67
42:RW:29:LEU:HD21	42:RW:33:ARG:NE	2.09	0.67
3:XC:150:LYS:HB3	3:XC:201:TYR:HB2	1.75	0.67
4:XD:173:TRP:CD2	4:XD:189:PRO:HB3	2.29	0.67
8:XH:14:ARG:O	8:XH:18:ARG:HD3	1.94	0.67
9:XI:28:VAL:HG13	9:XI:63:ILE:CG2	2.24	0.67
16:XP:66:PRO:HG2	16:XP:71:ARG:NH1	2.09	0.67
20:XT:83:ARG:HA	20:XT:86:ARG:HD3	1.77	0.67
50:Y4:33:VAL:HG12	50:Y4:34:GLU:N	2.10	0.67
25:YA:1434:A:H61	25:YA:1558:A:N6	1.93	0.67
28:YE:116:VAL:O	28:YE:117:MET:HB3	1.94	0.67
32:YI:13:GLY:HA3	32:YI:17:GLN:CD	2.15	0.67
36:YQ:12:GLN:CG	36:YQ:73:PRO:HD2	2.21	0.67
44:YY:49:VAL:O	44:YY:51:VAL:N	2.27	0.67
8:QH:20:TYR:HE2	8:QH:75:ARG:HD2	1.59	0.67
50:R4:33:VAL:HG12	50:R4:34:GLU:N	2.10	0.67
25:RA:1007:C:OP1	33:RN:35:ARG:NH1	2.27	0.67
25:RA:2690:C:N4	25:RA:2713:A:O2'	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:14:ILE:HG12	28:RE:15:PHE:N	2.06	0.67
25:RA:565:C:OP1	41:RV:82:ARG:NH2	2.27	0.67
9:XI:33:PHE:CZ	9:XI:47:LEU:HD21	2.30	0.67
9:XI:46:ALA:HA	9:XI:78:LYS:HB2	1.75	0.67
47:Y1:51:VAL:HG11	47:Y1:74:VAL:HG21	1.76	0.67
25:YA:1309:G:H4'	53:Y7:7:PRO:HB2	1.75	0.67
28:YE:13:ARG:HH11	28:YE:13:ARG:CB	2.07	0.67
25:YA:443:A:N7	29:YF:45:ARG:HD2	2.10	0.67
38:YS:52:SER:O	38:YS:56:LEU:HD22	1.93	0.67
38:YS:67:ARG:CZ	38:YS:67:ARG:HB2	2.24	0.67
39:YT:108:ARG:HA	39:YT:111:ARG:CZ	2.23	0.67
5:QE:78:HIS:CD2	8:QH:104:ARG:CG	2.76	0.67
13:QM:78:ILE:HG23	13:QM:92:HIS:ND1	2.09	0.67
48:R2:47:ASN:ND2	48:R2:47:ASN:H	1.92	0.67
52:R6:7:ILE:C	52:R6:9:LEU:H	1.98	0.67
31:RH:4:ILE:HG13	31:RH:6:ARG:NH1	2.09	0.67
32:RI:5:LEU:N	32:RI:5:LEU:HD12	2.08	0.67
36:RQ:32:TYR:HD1	36:RQ:133:ARG:HA	1.60	0.67
37:RR:26:LYS:HE2	37:RR:70:LEU:O	1.95	0.67
41:RV:25:LEU:H	41:RV:92:THR:HG21	1.60	0.67
44:RY:61:ILE:CG2	44:RY:62:GLU:N	2.56	0.67
1:XA:148:G:H1	1:XA:174:C:H42	1.43	0.67
16:XP:21:VAL:HG11	16:XP:59:TRP:CD1	2.30	0.67
51:Y5:4:HIS:HB3	51:Y5:5:PRO:HD3	1.75	0.67
52:Y6:48:VAL:HG13	52:Y6:49:HIS:H	1.60	0.67
25:YA:141:A:H8	25:YA:1595:G:H21	1.41	0.67
28:YE:26:ILE:HD13	28:YE:27:LEU:N	2.10	0.67
29:YF:184:TYR:O	29:YF:188:ARG:HG3	1.94	0.67
31:YH:88:LEU:H	31:YH:88:LEU:HD22	1.58	0.67
36:YQ:104:PHE:HE1	36:YQ:125:LEU:HD11	1.58	0.67
36:YQ:81:VAL:C	36:YQ:82:ARG:HG2	2.15	0.67
45:YZ:27:VAL:HG22	45:YZ:28:MET:N	2.10	0.67
1:QA:1002:G:H2'	1:QA:1003:G:H8	1.60	0.67
25:RA:2655:G:N2	25:RA:2665:A:OP2	2.28	0.67
25:RA:27:G:HO2'	25:RA:28:A:H8	1.43	0.67
31:RH:126:PRO:CD	31:RH:127:GLU:H	2.07	0.67
35:RP:90:ARG:NE	35:RP:91:PHE:HD1	1.93	0.67
36:RQ:66:ILE:HG13	36:RQ:67:ARG:H	1.57	0.67
36:RQ:81:VAL:C	36:RQ:82:ARG:HG2	2.14	0.67
2:XB:164:VAL:HB	2:XB:186:ALA:CB	2.25	0.67
7:XG:28:ASN:O	7:XG:31:MET:HB3	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:54:PHE:CZ	10:XJ:55:LYS:NZ	2.61	0.67
10:XJ:6:ILE:HD11	10:XJ:72:VAL:CB	2.24	0.67
47:Y1:86:SER:N	47:Y1:87:PRO:HD2	2.10	0.67
50:Y4:16:CYS:SG	50:Y4:33:VAL:HB	2.35	0.67
28:YE:62:PRO:O	28:YE:64:LYS:N	2.28	0.67
29:YF:34:TRP:HA	35:YP:6:LEU:HD12	1.77	0.67
34:YO:13:ASN:ND2	34:YO:96:THR:O	2.27	0.67
25:YA:1190:G:H5'	35:YP:32:THR:HA	1.77	0.67
25:YA:1030:G:OP2	36:YQ:128:LYS:HE2	1.94	0.67
2:QB:164:VAL:HB	2:QB:186:ALA:CB	2.25	0.67
7:QG:138:LYS:HE2	7:QG:142:GLU:OE2	1.94	0.67
9:QI:33:PHE:CZ	9:QI:47:LEU:HD21	2.30	0.67
18:QR:70:ILE:O	18:QR:74:ARG:HG3	1.95	0.67
19:QS:31:ILE:HG23	19:QS:49:ILE:HA	1.75	0.67
31:RH:124:GLU:HB3	31:RH:132:ARG:HD2	1.77	0.67
36:RQ:90:VAL:O	36:RQ:92:GLY:N	2.25	0.67
44:RY:21:LYS:HG3	44:RY:22:GLY:N	2.09	0.67
1:XA:320:C:HO2'	1:XA:1435:G:HO2'	1.43	0.67
2:XB:165:VAL:HG23	2:XB:166:ASP:H	1.58	0.67
49:Y3:29:ARG:NH1	49:Y3:29:ARG:HB2	2.10	0.67
25:YA:102:G:O2'	25:YA:103:A:OP2	2.13	0.67
25:YA:353:G:H2'	25:YA:354:G:H8	1.60	0.67
27:YD:241:PRO:O	27:YD:243:GLY:N	2.28	0.67
34:YO:25:LEU:HB2	34:YO:38:VAL:HG13	1.74	0.67
40:YU:90:VAL:O	40:YU:92:ARG:N	2.26	0.67
41:YV:44:LYS:O	41:YV:46:VAL:N	2.28	0.67
2:QB:71:VAL:CG2	2:QB:164:VAL:HG22	2.25	0.67
8:QH:6:ILE:H	8:QH:6:ILE:CD1	2.06	0.67
13:QM:3:ARG:HD2	13:QM:9:ILE:HG12	1.77	0.67
20:QT:83:ARG:HA	20:QT:86:ARG:HD3	1.76	0.67
28:RE:16:ARG:HG3	28:RE:16:ARG:O	1.93	0.67
38:RS:107:GLU:H	38:RS:110:LEU:HD11	1.60	0.67
1:XA:1450:U:O2'	1:XA:1451:A:N7	2.27	0.67
10:XJ:34:VAL:HG22	10:XJ:74:ILE:HG22	1.77	0.67
17:XQ:56:VAL:HB	17:XQ:78:GLU:HB3	1.76	0.67
30:YG:179:PRO:HG3	50:Y4:38:LYS:HZ2	1.59	0.67
25:YA:2051:A:C2	25:YA:2052:G:O6	2.48	0.67
29:YF:103:LYS:HA	29:YF:106:ARG:CG	2.21	0.67
29:YF:46:ARG:HH11	29:YF:46:ARG:CG	2.04	0.67
36:YQ:80:GLU:OE2	36:YQ:80:GLU:HA	1.94	0.67
42:YW:18:ARG:HG3	42:YW:76:VAL:HG13	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YY:89:PHE:C	44:YY:90:LEU:HD13	2.15	0.67
1:QA:160:A:H61	1:QA:347:G:H1'	1.60	0.66
1:QA:377:G:OP1	16:QP:5:ARG:NH1	2.23	0.66
13:QM:117:VAL:HG22	13:QM:118:ALA:H	1.59	0.66
20:QT:36:LEU:HD12	20:QT:55:ILE:HG23	1.76	0.66
47:R1:80:LEU:HD23	47:R1:80:LEU:N	2.10	0.66
25:RA:2197:U:H1'	25:RA:2198:A:C8	2.29	0.66
27:RD:35:LYS:CG	27:RD:64:ILE:N	2.56	0.66
31:RH:77:LYS:HG2	31:RH:77:LYS:O	1.94	0.66
32:RI:127:VAL:HA	32:RI:139:GLN:HA	1.76	0.66
34:RO:14:THR:O	34:RO:51:ALA:HB3	1.94	0.66
38:RS:67:ARG:HB2	38:RS:67:ARG:CZ	2.24	0.66
2:XB:215:LEU:O	2:XB:219:VAL:HG23	1.94	0.66
3:XC:73:PRO:O	3:XC:76:VAL:HG22	1.95	0.66
25:YA:1026:U:H4'	25:YA:1027:A:OP1	1.95	0.66
27:YD:35:LYS:CA	27:YD:64:ILE:HG22	2.25	0.66
35:YP:61:ARG:H	35:YP:61:ARG:CD	2.09	0.66
36:YQ:88:GLY:C	36:YQ:90:VAL:N	2.47	0.66
44:YY:60:PHE:O	44:YY:61:ILE:HD12	1.95	0.66
1:QA:1152:A:H2'	1:QA:1153:C:C6	2.31	0.66
4:QD:52:SER:HB3	4:QD:55:ALA:HB2	1.77	0.66
1:QA:1226:C:O2'	13:QM:103:THR:O	2.08	0.66
16:QP:21:VAL:HG11	16:QP:59:TRP:CD1	2.30	0.66
25:RA:562:U:O2'	25:RA:572:A:O4'	2.12	0.66
28:RE:36:ARG:HB3	28:RE:36:ARG:HH11	1.60	0.66
31:RH:125:VAL:CG1	31:RH:126:PRO:HG3	2.25	0.66
35:RP:122:PRO:HA	35:RP:141:ALA:O	1.95	0.66
25:RA:1266:G:N7	42:RW:15:ARG:NH1	2.44	0.66
45:RZ:33:LEU:HD21	45:RZ:35:ARG:HD2	1.78	0.66
18:XR:70:ILE:O	18:XR:74:ARG:HG3	1.95	0.66
47:Y1:56:GLN:N	47:Y1:56:GLN:HE21	1.93	0.66
52:Y6:43:CYS:SG	52:Y6:44:ARG:HD3	2.35	0.66
1:QA:1050:G:H1	1:QA:1208:C:H42	1.43	0.66
1:QA:188:U:H2'	1:QA:189:U:H5''	1.76	0.66
13:QM:13:LYS:HA	13:QM:44:ARG:HD2	1.78	0.66
17:QQ:56:VAL:HB	17:QQ:78:GLU:HB3	1.76	0.66
17:QQ:41:LYS:HZ1	17:QQ:92:ARG:HH22	1.42	0.66
50:R4:37:SER:C	50:R4:39:CYS:H	1.98	0.66
25:RA:1899:G:H21	25:RA:1902:C:N4	1.93	0.66
27:RD:68:LYS:HB2	27:RD:70:TRP:CZ3	2.30	0.66
32:RI:55:ALA:O	32:RI:57:ARG:N	2.27	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:66:GLY:O	35:RP:67:MET:HB3	1.94	0.66
29:RF:34:TRP:HA	35:RP:6:LEU:HD12	1.77	0.66
36:RQ:88:GLY:C	36:RQ:90:VAL:N	2.47	0.66
43:RX:57:LEU:HD12	43:RX:78:LYS:HB2	1.77	0.66
44:RY:42:VAL:CG1	44:RY:65:ALA:HB3	2.25	0.66
44:RY:89:PHE:C	44:RY:90:LEU:HD13	2.15	0.66
8:XH:100:ILE:HB	8:XH:125:ARG:NH1	2.09	0.66
20:XT:89:ARG:NH2	20:XT:104:LEU:HD21	2.09	0.66
20:XT:97:ALA:O	20:XT:99:LEU:N	2.27	0.66
51:Y5:56:LYS:H	51:Y5:56:LYS:CD	2.07	0.66
25:YA:1024:G:OP2	25:YA:1025:G:H3'	1.95	0.66
25:YA:2818:G:OP2	37:YR:42:LYS:NZ	2.28	0.66
28:YE:28:ALA:O	28:YE:93:VAL:HG23	1.96	0.66
33:YN:58:ASP:H	33:YN:60:ILE:CD1	2.09	0.66
36:YQ:32:TYR:HD1	36:YQ:133:ARG:HA	1.60	0.66
44:YY:75:ILE:HG12	44:YY:76:CYS:N	2.10	0.66
3:QC:73:PRO:O	3:QC:76:VAL:HG22	1.95	0.66
4:QD:165:MET:HA	4:QD:165:MET:HE3	1.78	0.66
19:QS:65:ASN:N	19:QS:65:ASN:HD22	1.94	0.66
49:R3:29:ARG:HB2	49:R3:29:ARG:NH1	2.10	0.66
27:RD:80:ALA:HB3	27:RD:94:LEU:CD1	2.26	0.66
28:RE:9:VAL:HB	28:RE:25:VAL:HG23	1.75	0.66
13:QM:7:VAL:HB	30:RG:115:ARG:HH12	1.56	0.66
35:RP:81:GLN:NE2	35:RP:106:LEU:O	2.29	0.66
41:RV:44:LYS:O	41:RV:46:VAL:N	2.28	0.66
3:XC:140:ARG:CZ	3:XC:140:ARG:HB2	2.25	0.66
8:XH:84:ARG:NH1	8:XH:84:ARG:HG3	2.10	0.66
13:XM:3:ARG:HD2	13:XM:9:ILE:HG12	1.77	0.66
47:Y1:83:GLU:HG2	47:Y1:84:GLY:N	2.09	0.66
48:Y2:65:ASN:HB3	48:Y2:69:ARG:NH1	2.10	0.66
25:YA:392:C:H5''	25:YA:409:C:H5''	1.76	0.66
27:YD:172:TYR:HB3	27:YD:184:LYS:HG2	1.77	0.66
35:YP:66:GLY:O	35:YP:67:MET:HB3	1.94	0.66
2:QB:25:ASN:O	2:QB:27:LYS:N	2.27	0.66
8:QH:23:SER:HA	8:QH:63:LEU:CD2	2.24	0.66
47:R1:86:SER:N	47:R1:87:PRO:HD2	2.10	0.66
25:RA:128:C:O3'	53:R7:49:ARG:NH2	2.29	0.66
31:RH:168:PRO:O	31:RH:169:VAL:HG12	1.96	0.66
36:RQ:33:GLY:HA2	36:RQ:105:GLU:HA	1.76	0.66
38:RS:106:ARG:HA	38:RS:110:LEU:CD2	2.25	0.66
40:RU:88:ILE:N	40:RU:88:ILE:HD13	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:67:C:O2'	1:XA:171:A:N3	2.26	0.66
1:XA:27:G:H4'	4:XD:209:ARG:HG3	1.75	0.66
7:XG:69:VAL:O	7:XG:69:VAL:HG12	1.95	0.66
19:XS:64:GLU:CD	50:Y4:55:ARG:HH22	1.99	0.66
51:Y5:40:LYS:NZ	51:Y5:48:GLU:HB2	2.10	0.66
54:Y8:30:ARG:O	54:Y8:31:HIS:HB2	1.96	0.66
33:YN:57:ALA:HA	33:YN:60:ILE:HD11	1.78	0.66
35:YP:122:PRO:HA	35:YP:141:ALA:O	1.95	0.66
35:YP:81:GLN:NE2	35:YP:106:LEU:O	2.29	0.66
25:YA:1754:C:OP1	39:YT:96:ARG:NH1	2.27	0.66
40:YU:88:ILE:N	40:YU:88:ILE:HD13	2.10	0.66
41:YV:53:GLU:O	41:YV:53:GLU:HG2	1.94	0.66
43:YX:11:PRO:HB3	43:YX:92:LEU:HD21	1.78	0.66
45:YZ:112:ARG:NH2	45:YZ:145:GLU:HA	2.10	0.66
1:QA:191:G:C4	20:QT:105:SER:HB3	2.31	0.66
2:QB:87:ARG:HH11	2:QB:223:ILE:CD1	2.09	0.66
47:R1:51:VAL:HG11	47:R1:74:VAL:HG21	1.76	0.66
27:RD:145:VAL:HG12	27:RD:146:GLU:O	1.96	0.66
27:RD:241:PRO:O	27:RD:243:GLY:N	2.28	0.66
27:RD:44:ASN:HB3	27:RD:49:ILE:HG22	1.78	0.66
28:RE:174:ASP:CG	28:RE:175:VAL:H	1.98	0.66
28:RE:62:PRO:O	28:RE:64:LYS:N	2.28	0.66
32:RI:13:GLY:HA3	32:RI:17:GLN:CD	2.15	0.66
39:RT:50:ILE:CD1	39:RT:102:ILE:HD11	2.25	0.66
44:RY:94:LYS:HE3	44:RY:101:LYS:NZ	2.11	0.66
44:RY:14:LEU:HD23	44:RY:15:VAL:N	2.10	0.66
1:XA:1443:G:N2	25:YA:2864:G:OP1	2.28	0.66
5:XE:75:THR:HG23	5:XE:76:ILE:N	2.11	0.66
46:Y0:3:HIS:HD2	46:Y0:4:LYS:C	1.99	0.66
19:XS:64:GLU:CB	50:Y4:55:ARG:HH12	2.08	0.66
50:Y4:71:ARG:CG	50:Y4:71:ARG:HH11	1.98	0.66
35:YP:61:ARG:NH2	54:Y8:13:ARG:HD2	2.10	0.66
25:YA:1354:A:OP1	27:YD:38:LYS:HE2	1.96	0.66
27:YD:68:LYS:HB2	27:YD:70:TRP:CZ3	2.31	0.66
28:YE:174:ASP:CG	28:YE:175:VAL:H	1.98	0.66
25:RA:2602:A:H2	55:Z6:76:PPU:C8	2.09	0.66
1:QA:1128:C:H42	1:QA:1144:G:H1	1.43	0.66
3:QC:101:LEU:HD23	3:QC:102:ASN:N	2.11	0.66
7:QG:78:ARG:NH1	7:QG:80:VAL:HG23	2.11	0.66
13:QM:81:LEU:O	13:QM:84:ILE:HG22	1.95	0.66
17:QQ:27:PHE:CZ	17:QQ:36:ILE:HD11	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:101:ARG:CZ	28:RE:171:GLU:HB2	2.25	0.66
28:RE:26:ILE:HD13	28:RE:27:LEU:N	2.10	0.66
25:RA:320:A:N3	29:RF:169:ASN:ND2	2.43	0.66
32:RI:68:LEU:HA	32:RI:71:ILE:CG2	2.26	0.66
32:RI:99:GLU:CG	32:RI:103:ARG:HH21	2.07	0.66
34:RO:86:ILE:HD12	34:RO:86:ILE:H	1.61	0.66
35:RP:1:MET:CE	35:RP:5:ASP:HB3	2.25	0.66
39:RT:11:GLU:CD	39:RT:11:GLU:N	2.47	0.66
44:RY:47:LYS:HG2	44:RY:60:PHE:CE1	2.31	0.66
44:RY:75:ILE:HG12	44:RY:76:CYS:N	2.10	0.66
1:XA:1348:U:H3	1:XA:1374:A:H2	1.43	0.66
4:XD:52:SER:O	4:XD:56:VAL:HG23	1.96	0.66
7:XG:141:VAL:O	7:XG:141:VAL:HG12	1.95	0.66
8:XH:29:SER:HB3	8:XH:32:LYS:CG	2.22	0.66
13:XM:74:VAL:O	13:XM:78:ILE:HG13	1.96	0.66
25:YA:2392:A:H2	25:YA:2424:C:H42	1.43	0.66
25:YA:910:A:C5	36:YQ:13:GLN:HG3	2.31	0.66
27:YD:135:PHE:N	27:YD:135:PHE:CD2	2.62	0.66
28:YE:37:ARG:HA	28:YE:37:ARG:NE	2.11	0.66
32:YI:115:ALA:HB3	32:YI:128:LEU:CD1	2.22	0.66
36:YQ:20:ALA:HB1	36:YQ:99:PRO:HD2	1.76	0.66
1:QA:1002:G:H2'	1:QA:1003:G:C8	2.30	0.66
5:QE:75:THR:HG23	5:QE:76:ILE:N	2.11	0.66
35:RP:61:ARG:NH2	54:R8:13:ARG:HD2	2.10	0.66
25:RA:2115:G:N2	25:RA:2165:G:N7	2.40	0.66
27:RD:35:LYS:CA	27:RD:64:ILE:HG22	2.26	0.66
29:RF:175:THR:O	29:RF:176:LEU:HB2	1.96	0.66
32:RI:74:ASN:CG	32:RI:75:LEU:H	1.97	0.66
32:RI:79:ILE:HG21	32:RI:142:VAL:HG12	1.77	0.66
33:RN:58:ASP:H	33:RN:60:ILE:CD1	2.08	0.66
38:RS:88:ASP:OD2	38:RS:90:GLY:N	2.28	0.66
10:XJ:39:PRO:HB3	10:XJ:70:ARG:HH12	1.60	0.66
10:XJ:81:THR:C	10:XJ:83:GLU:H	2.00	0.66
25:YA:602:G:O2'	25:YA:604:G:O2'	2.13	0.66
30:YG:136:ARG:O	30:YG:154:GLY:HA3	1.95	0.66
30:YG:145:THR:HG23	50:Y4:28:LYS:NZ	2.11	0.66
25:YA:559:G:H22	40:YU:49:HIS:CE1	2.12	0.66
25:YA:489:G:N7	42:YW:49:LYS:NZ	2.42	0.66
44:YY:94:LYS:HE3	44:YY:101:LYS:NZ	2.11	0.66
27:RD:35:LYS:HZ1	27:RD:65:ILE:HA	1.60	0.66
30:RG:136:ARG:O	30:RG:154:GLY:HA3	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RI:8:PRO:HG3	32:RI:14:ASP:HB2	1.76	0.66
1:XA:272:C:H2'	1:XA:273:A:H8	1.61	0.66
8:XH:20:TYR:HA	8:XH:65:TYR:HE2	1.60	0.66
12:XL:26:ALA:O	12:XL:27:LEU:O	2.14	0.66
19:XS:15:LEU:O	19:XS:19:VAL:N	2.26	0.66
19:XS:35:SER:O	19:XS:71:LEU:HD12	1.96	0.66
47:Y1:80:LEU:HD23	47:Y1:80:LEU:N	2.10	0.66
27:YD:183:ARG:HH11	27:YD:183:ARG:CG	2.07	0.66
31:YH:125:VAL:CG1	31:YH:126:PRO:HG3	2.25	0.66
33:YN:134:ARG:N	33:YN:135:PRO:HD3	1.97	0.66
38:YS:107:GLU:H	38:YS:110:LEU:HD11	1.60	0.66
44:YY:42:VAL:CG1	44:YY:65:ALA:HB3	2.25	0.66
45:YZ:102:LEU:HD22	45:YZ:156:LYS:NZ	2.11	0.66
1:QA:1238:A:H62	1:QA:1301:U:H3	1.44	0.66
1:QA:1239:A:H62	1:QA:1299:A:N6	1.92	0.66
1:QA:748:C:H1'	1:QA:749:C:H5	1.60	0.66
3:QC:140:ARG:CZ	3:QC:140:ARG:HB2	2.25	0.66
6:QF:41:GLU:O	6:QF:43:LEU:HD12	1.96	0.66
8:QH:10:LEU:HD23	8:QH:10:LEU:H	1.60	0.66
27:RD:121:PRO:HB3	27:RD:135:PHE:CE1	2.30	0.66
32:RI:51:ILE:HA	32:RI:54:GLN:HB2	1.77	0.66
34:RO:113:LYS:O	34:RO:117:LEU:HD12	1.96	0.66
41:RV:53:GLU:O	41:RV:53:GLU:HG2	1.94	0.66
2:XB:24:TRP:HD1	2:XB:24:TRP:H	1.43	0.66
4:XD:11:LEU:HD22	4:XD:66:ARG:HD3	1.78	0.66
12:XL:48:PRO:CD	12:XL:49:ASN:N	2.57	0.66
13:XM:81:LEU:O	13:XM:84:ILE:HG22	1.95	0.66
1:XA:1049:U:HO2'	14:XN:2:ALA:N	1.94	0.66
47:Y1:11:ARG:HH11	47:Y1:11:ARG:HB3	1.61	0.66
25:YA:458:G:O2'	25:YA:469:G:O6	2.13	0.66
25:YA:543:C:H42	25:YA:550:G:H1	1.43	0.66
28:YE:36:ARG:HH11	28:YE:36:ARG:HB3	1.60	0.66
34:YO:113:LYS:O	34:YO:117:LEU:HD12	1.96	0.66
34:YO:71:ARG:NH1	39:YT:74:ARG:HH21	1.94	0.66
34:YO:86:ILE:HD12	34:YO:86:ILE:H	1.61	0.66
40:YU:65:ILE:HG12	40:YU:96:ALA:CB	2.26	0.66
44:YY:35:TYR:CE1	44:YY:69:ALA:HB3	2.31	0.66
2:QB:164:VAL:HB	2:QB:186:ALA:HB2	1.78	0.65
7:QG:69:VAL:HG12	7:QG:69:VAL:O	1.95	0.65
10:QJ:99:LYS:O	10:QJ:100:THR:HG23	1.96	0.65
16:QP:45:THR:HG22	16:QP:47:ASP:H	1.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:R2:64:LEU:HD22	48:R2:68:ARG:HD2	1.76	0.65
50:R4:16:CYS:SG	50:R4:33:VAL:HB	2.35	0.65
27:RD:237:GLU:OE1	27:RD:237:GLU:N	2.29	0.65
32:RI:75:LEU:HB3	32:RI:105:HIS:HE1	1.60	0.65
32:RI:92:VAL:HG13	32:RI:120:ILE:CG2	2.16	0.65
39:RT:22:PHE:N	39:RT:22:PHE:CD2	2.63	0.65
1:XA:971:G:H5''	1:XA:972:C:H5''	1.77	0.65
8:XH:10:LEU:H	8:XH:10:LEU:HD23	1.60	0.65
25:YA:890:A:HO2'	25:YA:892:G:H8	1.45	0.65
27:YD:121:PRO:HB3	27:YD:135:PHE:CE1	2.30	0.65
44:YY:47:LYS:HG2	44:YY:60:PHE:CE1	2.31	0.65
1:QA:1459:C:OP1	20:QT:27:LYS:NZ	2.29	0.65
2:QB:87:ARG:O	2:QB:87:ARG:HD2	1.95	0.65
12:QL:115:LYS:O	12:QL:117:ARG:HG3	1.96	0.65
19:QS:3:ARG:CZ	19:QS:8:GLY:HA2	2.26	0.65
25:RA:863:A:H2'	25:RA:864:G:C8	2.32	0.65
27:RD:183:ARG:HH11	27:RD:183:ARG:CG	2.07	0.65
36:RQ:134:ARG:NE	45:RZ:122:ARG:HH22	1.94	0.65
25:RA:957:A:H5'	36:RQ:76:LYS:HD2	1.77	0.65
41:RV:76:LYS:HB2	41:RV:81:TYR:HB3	1.79	0.65
44:RY:99:CYS:SG	44:RY:100:ALA:N	2.69	0.65
45:RZ:112:ARG:NH2	45:RZ:145:GLU:HA	2.10	0.65
4:XD:52:SER:HB3	4:XD:55:ALA:HB2	1.77	0.65
7:XG:78:ARG:NH1	7:XG:80:VAL:HG23	2.11	0.65
10:XJ:99:LYS:O	10:XJ:100:THR:HG23	1.96	0.65
25:YA:928:G:O2'	49:Y3:43:ILE:HD11	1.96	0.65
52:Y6:7:ILE:C	52:Y6:9:LEU:H	1.98	0.65
28:YE:101:ARG:CZ	28:YE:171:GLU:HB2	2.25	0.65
28:YE:13:ARG:NH1	28:YE:21:VAL:HG12	2.11	0.65
35:YP:90:ARG:NE	35:YP:91:PHE:HD1	1.93	0.65
38:YS:106:ARG:HA	38:YS:110:LEU:CD2	2.26	0.65
38:YS:88:ASP:OD2	38:YS:90:GLY:N	2.28	0.65
12:QL:25:PRO:C	12:QL:27:LEU:H	1.98	0.65
15:QO:25:THR:HG21	15:QO:70:LEU:HB2	1.77	0.65
54:R8:30:ARG:O	54:R8:31:HIS:HB2	1.96	0.65
25:RA:942:G:O2'	25:RA:1189:A:N3	2.28	0.65
25:RA:2286:A:H4'	25:RA:2287:A:O4'	1.94	0.65
27:RD:27:THR:CG2	27:RD:28:GLU:H	2.09	0.65
31:RH:150:ALA:C	31:RH:152:ARG:N	2.44	0.65
42:RW:25:ARG:HB2	42:RW:25:ARG:NH1	2.11	0.65
44:RY:60:PHE:O	44:RY:61:ILE:HD12	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:130:A:H1'	1:XA:264:U:H5'	1.77	0.65
2:XB:14:GLY:O	2:XB:15:VAL:HG13	1.96	0.65
3:XC:70:VAL:HG12	3:XC:71:ALA:N	2.10	0.65
6:XF:41:GLU:O	6:XF:43:LEU:HD12	1.96	0.65
16:XP:45:THR:HG22	16:XP:47:ASP:H	1.60	0.65
1:XA:227:G:N2	16:XP:62:VAL:O	2.25	0.65
20:XT:36:LEU:HD12	20:XT:55:ILE:HG23	1.76	0.65
27:YD:145:VAL:HG12	27:YD:146:GLU:O	1.95	0.65
31:YH:124:GLU:HB3	31:YH:132:ARG:HD2	1.77	0.65
31:YH:168:PRO:O	31:YH:169:VAL:HG12	1.96	0.65
32:YI:116:LEU:O	32:YI:118:LYS:N	2.29	0.65
32:YI:79:ILE:HG21	32:YI:142:VAL:HG12	1.77	0.65
35:YP:39:LYS:HA	35:YP:45:LEU:HD13	1.79	0.65
36:YQ:80:GLU:CG	46:Y0:5:LYS:HB3	2.26	0.65
37:YR:26:LYS:HE2	37:YR:70:LEU:O	1.95	0.65
25:YA:2293:C:H5''	38:YS:89:ARG:NH2	2.11	0.65
42:YW:65:LEU:HD12	42:YW:68:ARG:NH1	2.11	0.65
45:YZ:33:LEU:HD21	45:YZ:35:ARG:HD2	1.77	0.65
4:QD:94:LEU:H	4:QD:94:LEU:CD1	2.08	0.65
10:QJ:38:ILE:HD11	10:QJ:71:LEU:HB3	1.78	0.65
13:QM:74:VAL:O	13:QM:78:ILE:HG13	1.96	0.65
21:QU:25:LYS:HE2	21:QU:26:LYS:O	1.96	0.65
50:R4:49:PHE:O	50:R4:50:VAL:HG23	1.97	0.65
25:RA:2208:U:O2'	27:RD:151:LYS:HG2	1.95	0.65
26:RB:50:G:OP1	38:RS:63:THR:HG23	1.97	0.65
43:RX:65:ARG:N	43:RX:65:ARG:HD3	2.12	0.65
45:RZ:27:VAL:HG22	45:RZ:28:MET:N	2.10	0.65
45:RZ:72:ARG:HH11	45:RZ:72:ARG:CB	2.09	0.65
1:XA:376:G:OP1	16:XP:5:ARG:HB2	1.96	0.65
7:XG:21:VAL:HG23	7:XG:22:LEU:H	1.61	0.65
10:XJ:38:ILE:HD11	10:XJ:71:LEU:HB3	1.78	0.65
17:XQ:27:PHE:CZ	17:XQ:36:ILE:HD11	2.31	0.65
19:XS:10:PHE:CG	19:XS:11:VAL:N	2.64	0.65
25:YA:1499:C:H2'	25:YA:1500:G:H8	1.61	0.65
25:YA:583:G:OP2	40:YU:10:ARG:NH1	2.29	0.65
27:YD:27:THR:CG2	27:YD:28:GLU:H	2.09	0.65
43:YX:65:ARG:HD3	43:YX:65:ARG:N	2.12	0.65
1:QA:375:U:H4'	16:QP:17:TYR:HE2	1.62	0.65
2:QB:17:PHE:HD2	2:QB:44:LEU:HD21	1.61	0.65
4:QD:122:ARG:HD3	4:QD:122:ARG:O	1.97	0.65
5:QE:83:GLU:HG2	5:QE:88:LYS:HG3	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:11:GLN:O	7:QG:12:LEU:HD13	1.97	0.65
9:QI:28:VAL:HA	9:QI:63:ILE:HB	1.79	0.65
15:QO:8:LYS:O	15:QO:12:ILE:HG13	1.96	0.65
16:QP:6:LEU:HD23	16:QP:17:TYR:CD2	2.32	0.65
19:QS:21:GLU:O	19:QS:25:LYS:HB3	1.97	0.65
20:QT:44:ALA:HB2	20:QT:88:VAL:HG13	1.78	0.65
25:RA:1510:A:O2'	25:RA:1511:A:N7	2.29	0.65
27:RD:176:ARG:HG2	27:RD:176:ARG:HH11	1.60	0.65
28:RE:28:ALA:O	28:RE:93:VAL:HG23	1.95	0.65
29:RF:155:LEU:HD13	29:RF:174:VAL:CG1	2.27	0.65
32:RI:116:LEU:O	32:RI:118:LYS:N	2.28	0.65
35:RP:138:LEU:HD11	35:RP:144:GLU:HG3	1.78	0.65
45:RZ:102:LEU:HD22	45:RZ:156:LYS:NZ	2.11	0.65
9:XI:112:LYS:HA	9:XI:119:ALA:HB2	1.77	0.65
9:XI:53:VAL:HG21	9:XI:92:TYR:CE1	2.32	0.65
48:Y2:42:GLY:O	48:Y2:44:LEU:N	2.30	0.65
25:YA:860:U:H1'	25:YA:2268:A:H5'	1.78	0.65
27:YD:80:ALA:HB3	27:YD:94:LEU:CD1	2.26	0.65
1:QA:1060:C:H2'	1:QA:1061:G:H8	1.62	0.65
1:QA:871:U:O2'	1:QA:872:A:O5'	2.11	0.65
8:QH:20:TYR:CE2	8:QH:75:ARG:HD2	2.32	0.65
8:QH:20:TYR:HA	8:QH:65:TYR:HE2	1.60	0.65
10:QJ:34:VAL:HG22	10:QJ:74:ILE:HG22	1.77	0.65
6:QF:98:LEU:HB3	18:QR:30:ASP:HA	1.79	0.65
25:RA:2096:U:H3	25:RA:2193:G:H1	1.44	0.65
32:RI:125:GLU:HA	32:RI:125:GLU:OE1	1.96	0.65
34:RO:12:ASP:OD1	34:RO:14:THR:HG23	1.97	0.65
40:RU:74:LEU:HD23	40:RU:114:LYS:HD3	1.77	0.65
41:RV:43:GLU:HA	41:RV:43:GLU:OE2	1.95	0.65
42:RW:18:ARG:HG3	42:RW:76:VAL:HG13	1.77	0.65
1:XA:235:C:H5'	17:XQ:70:ARG:HG2	1.78	0.65
2:XB:67:THR:HG21	2:XB:155:LEU:CD2	2.27	0.65
2:XB:87:ARG:HH11	2:XB:223:ILE:CD1	2.09	0.65
3:XC:101:LEU:HD23	3:XC:102:ASN:N	2.11	0.65
11:XK:103:LEU:HD22	11:XK:103:LEU:H	1.62	0.65
15:XO:8:LYS:O	15:XO:12:ILE:HG13	1.96	0.65
17:XQ:74:LEU:HD12	17:XQ:75:ARG:HG2	1.76	0.65
20:XT:83:ARG:CA	20:XT:86:ARG:HB3	2.27	0.65
1:XA:1397:C:H1'	23:XX:8:A:N6	2.12	0.65
25:YA:1826:G:H4'	27:YD:242:ARG:HH21	1.61	0.65
25:YA:2304:G:H1	25:YA:2312:U:H3	1.43	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:10:GLY:H	28:YE:25:VAL:HG23	1.60	0.65
31:YH:128:PRO:CD	31:YH:129:THR:H	2.09	0.65
35:YP:6:LEU:O	35:YP:7:ARG:HG2	1.96	0.65
44:YY:99:CYS:SG	44:YY:100:ALA:N	2.69	0.65
3:QC:70:VAL:HG12	3:QC:71:ALA:N	2.10	0.65
4:QD:52:SER:O	4:QD:56:VAL:HG23	1.96	0.65
10:QJ:27:ALA:CB	10:QJ:34:VAL:HG21	2.26	0.65
10:QJ:81:THR:C	10:QJ:83:GLU:H	1.99	0.65
12:QL:39:VAL:HB	12:QL:57:LYS:HB2	1.79	0.65
19:QS:10:PHE:CG	19:QS:11:VAL:N	2.64	0.65
20:QT:83:ARG:CA	20:QT:86:ARG:HB3	2.27	0.65
47:R1:29:GLY:O	47:R1:30:VAL:HG23	1.97	0.65
25:RA:2086:U:H2'	25:RA:2087:G:C8	2.32	0.65
25:RA:483:A:H3'	25:RA:484:C:C6	2.31	0.65
25:RA:483:A:H3'	25:RA:484:C:H6	1.61	0.65
27:RD:122:ASP:CG	27:RD:123:ALA:H	2.00	0.65
31:RH:128:PRO:CD	31:RH:129:THR:H	2.09	0.65
34:RO:7:TYR:CE1	34:RO:20:MET:HB2	2.32	0.65
35:RP:6:LEU:O	35:RP:7:ARG:HG2	1.97	0.65
34:RO:71:ARG:NH1	39:RT:74:ARG:HH21	1.94	0.65
40:RU:90:VAL:CG1	40:RU:91:ASP:H	2.00	0.65
2:XB:87:ARG:O	2:XB:87:ARG:HD2	1.95	0.65
4:XD:52:SER:HB3	4:XD:55:ALA:CB	2.27	0.65
7:XG:11:GLN:O	7:XG:12:LEU:HD13	1.97	0.65
12:XL:25:PRO:C	12:XL:27:LEU:H	1.99	0.65
12:XL:39:VAL:HB	12:XL:57:LYS:HB2	1.79	0.65
19:XS:21:GLU:HG3	19:XS:22:LEU:N	2.11	0.65
48:Y2:69:ARG:NH1	48:Y2:69:ARG:HB2	2.11	0.65
25:YA:2712:U:HO2'	25:YA:2712(A):A:H8	1.42	0.65
26:YB:28:C:OP1	38:YS:36:TYR:OH	2.11	0.65
32:YI:68:LEU:HA	32:YI:71:ILE:CG2	2.26	0.65
35:YP:97:PRO:HD3	35:YP:126:VAL:O	1.97	0.65
45:YZ:72:ARG:CB	45:YZ:72:ARG:HH11	2.09	0.65
1:QA:1015:A:H1'	1:QA:1219:U:H5'	1.77	0.65
1:QA:966:G:O2'	9:QI:127:LYS:O	2.15	0.65
1:QA:1177:G:OP2	9:QI:97:LYS:NZ	2.30	0.65
12:QL:21:LYS:HD2	12:QL:21:LYS:N	2.11	0.65
19:QS:15:LEU:O	19:QS:19:VAL:N	2.26	0.65
24:QY:29:U:H2'	24:QY:30:C:H6	1.61	0.65
47:R1:11:ARG:HH11	47:R1:11:ARG:HB3	1.61	0.65
51:R5:56:LYS:H	51:R5:56:LYS:CD	2.07	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:45:ARG:CG	29:RF:45:ARG:HH11	2.09	0.65
26:RB:42:C:C6	30:RG:69:ALA:HB2	2.31	0.65
35:RP:39:LYS:HA	35:RP:45:LEU:HD13	1.79	0.65
35:RP:97:PRO:HD3	35:RP:126:VAL:O	1.97	0.65
44:RY:35:TYR:CE1	44:RY:69:ALA:HB3	2.31	0.65
2:XB:17:PHE:HD2	2:XB:44:LEU:HD21	1.62	0.65
5:XE:41:VAL:HG12	5:XE:112:LEU:O	1.97	0.65
6:XF:96:PRO:HB3	18:XR:30:ASP:OD2	1.95	0.65
12:XL:115:LYS:O	12:XL:117:ARG:HG3	1.97	0.65
12:XL:48:PRO:CD	12:XL:49:ASN:H	2.10	0.65
13:XM:51:ALA:O	13:XM:55:ARG:HG3	1.97	0.65
18:XR:73:ALA:HB3	18:XR:79:LEU:HD12	1.78	0.65
25:YA:69:C:O2	25:YA:73:A:O2'	2.12	0.65
27:YD:176:ARG:HG2	27:YD:176:ARG:HH11	1.60	0.65
25:YA:1971:A:C4	27:YD:241:PRO:HD3	2.32	0.65
28:YE:201:THR:HG22	28:YE:203:LYS:N	2.07	0.65
32:YI:125:GLU:HA	32:YI:125:GLU:OE1	1.96	0.65
32:YI:77:LEU:HD11	32:YI:140:LEU:HD12	1.79	0.65
32:YI:99:GLU:HG2	32:YI:103:ARG:NH2	2.11	0.65
33:YN:43:THR:HB	33:YN:46:VAL:CG1	2.27	0.65
39:YT:11:GLU:OE1	39:YT:11:GLU:N	2.27	0.65
45:YZ:45:ASP:O	45:YZ:49:ARG:HG2	1.97	0.65
1:QA:1023:G:H3'	1:QA:1024:G:H5''	1.79	0.65
4:QD:52:SER:HB3	4:QD:55:ALA:CB	2.27	0.65
7:QG:21:VAL:HG23	7:QG:22:LEU:H	1.60	0.65
10:QJ:6:ILE:HD11	10:QJ:72:VAL:CB	2.24	0.65
18:QR:43:PHE:CE2	18:QR:58:LEU:HD11	2.31	0.65
47:R1:82:LEU:CD1	47:R1:83:GLU:C	2.64	0.65
48:R2:69:ARG:HB2	48:R2:69:ARG:NH1	2.11	0.65
50:R4:36:CYS:O	50:R4:37:SER:O	2.14	0.65
25:RA:184:C:H2'	25:RA:185:U:C6	2.32	0.65
30:RG:145:THR:HG23	50:R4:28:LYS:NZ	2.11	0.65
32:RI:99:GLU:HG2	32:RI:103:ARG:NH2	2.12	0.65
45:RZ:103:ARG:CB	45:RZ:138:GLU:HA	2.27	0.65
45:RZ:45:ASP:O	45:RZ:49:ARG:HG2	1.97	0.65
45:RZ:9:TYR:CE2	45:RZ:61:LEU:HD13	2.32	0.65
1:XA:1340:A:HO2'	22:XV:31:G:HO2'	1.31	0.65
2:XB:164:VAL:HB	2:XB:186:ALA:HB2	1.78	0.65
2:XB:7:VAL:HG22	2:XB:8:LYS:HD3	1.77	0.65
19:XS:3:ARG:CZ	19:XS:8:GLY:HA2	2.26	0.65
20:XT:44:ALA:HB2	20:XT:88:VAL:HG13	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:82:LEU:CD1	47:Y1:83:GLU:C	2.64	0.65
54:Y8:52:LYS:O	54:Y8:52:LYS:HG3	1.97	0.65
54:Y8:56:GLU:N	54:Y8:56:GLU:OE1	2.30	0.65
25:YA:1678:G:N2	25:YA:1989:G:H22	1.94	0.65
27:YD:44:ASN:HB3	27:YD:49:ILE:HG22	1.78	0.65
35:YP:113:LYS:HG2	35:YP:115:LEU:HD23	1.79	0.65
37:YR:28:LEU:HD21	37:YR:114:VAL:HG12	1.79	0.65
2:QB:14:GLY:O	2:QB:15:VAL:HG13	1.96	0.65
15:QO:74:ASP:OD1	15:QO:77:ARG:N	2.30	0.65
16:QP:51:VAL:HG21	16:QP:77:ALA:HB2	1.78	0.65
27:RD:172:TYR:HB3	27:RD:184:LYS:HG2	1.77	0.65
25:RA:1798:U:H5'	27:RD:259:THR:HG22	1.78	0.65
28:RE:13:ARG:NH1	28:RE:21:VAL:HG12	2.11	0.65
4:XD:13:ARG:HH22	4:XD:36:ARG:NH2	1.94	0.65
5:XE:79:GLU:OE2	8:XH:104:ARG:CA	2.45	0.65
10:XJ:54:PHE:C	10:XJ:55:LYS:HG3	2.17	0.65
16:XP:21:VAL:HG23	16:XP:33:ILE:HB	1.78	0.65
26:YB:12:C:H2'	46:Y0:73:GLY:HA3	1.79	0.65
25:YA:1663:C:HO2'	25:YA:1664:A:H8	1.43	0.65
27:YD:237:GLU:N	27:YD:237:GLU:OE1	2.29	0.65
39:YT:22:PHE:N	39:YT:22:PHE:CD2	2.63	0.65
40:YU:74:LEU:HD23	40:YU:114:LYS:HD3	1.78	0.65
42:YW:25:ARG:HB2	42:YW:25:ARG:NH1	2.11	0.65
1:QA:503:C:OP2	12:QL:116:SER:HB3	1.97	0.64
6:QF:50:TYR:CE1	18:QR:77:GLY:HA2	2.33	0.64
47:R1:56:GLN:N	47:R1:56:GLN:HE21	1.93	0.64
25:RA:1266:G:C5	42:RW:15:ARG:NH1	2.65	0.64
28:RE:35:GLN:CG	28:RE:37:ARG:HE	2.10	0.64
30:RG:81:LYS:O	30:RG:82:LEU:HB2	1.95	0.64
31:RH:105:LEU:H	31:RH:105:LEU:CD1	2.09	0.64
1:XA:1364:U:O2'	1:XA:1365:G:OP1	2.15	0.64
1:XA:272:C:H2'	1:XA:273:A:C8	2.32	0.64
1:XA:674:G:H2'	1:XA:675:A:H8	1.60	0.64
1:XA:828:A:H2'	1:XA:829:G:O4'	1.98	0.64
3:XC:34:LEU:HD21	3:XC:38:ARG:HD2	1.79	0.64
12:XL:21:LYS:N	12:XL:21:LYS:HD2	2.11	0.64
15:XO:74:ASP:OD1	15:XO:77:ARG:N	2.30	0.64
6:XF:98:LEU:HB3	18:XR:30:ASP:HA	1.79	0.64
19:XS:21:GLU:O	19:XS:25:LYS:HB3	1.97	0.64
19:XS:65:ASN:N	19:XS:65:ASN:HD22	1.94	0.64
48:Y2:40:SER:C	48:Y2:42:GLY:H	2.00	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1048:A:OP2	25:YA:1110:G:N2	2.30	0.64
25:YA:1509:C:N3	25:YA:1511:A:N6	2.45	0.64
25:YA:221:A:H4'	25:YA:222:A:O5'	1.95	0.64
25:YA:507:A:H5''	25:YA:508:G:H5'	1.79	0.64
35:YP:138:LEU:HD11	35:YP:144:GLU:HG3	1.79	0.64
36:YQ:23:GLY:HA3	36:YQ:101:ARG:NH1	2.12	0.64
38:YS:78:LEU:HD11	38:YS:107:GLU:O	1.97	0.64
42:YW:59:VAL:HG12	42:YW:60:ASN:N	2.11	0.64
1:QA:924:C:O2'	1:QA:1502:A:N6	2.31	0.64
2:QB:155:LEU:HD12	2:QB:157:ARG:O	1.98	0.64
2:QB:158:LEU:O	2:QB:158:LEU:HD12	1.97	0.64
3:QC:34:LEU:HD21	3:QC:38:ARG:HD2	1.79	0.64
4:QD:13:ARG:HH22	4:QD:36:ARG:NH2	1.94	0.64
4:QD:79:PHE:HD2	4:QD:79:PHE:C	1.99	0.64
10:QJ:39:PRO:HB3	10:QJ:70:ARG:HH12	1.61	0.64
51:R5:40:LYS:HD3	51:R5:46:CYS:CB	2.26	0.64
54:R8:52:LYS:HG3	54:R8:52:LYS:O	1.97	0.64
28:RE:37:ARG:HA	28:RE:37:ARG:NE	2.11	0.64
31:RH:51:ARG:HG3	31:RH:51:ARG:HH11	1.62	0.64
36:RQ:81:VAL:O	36:RQ:82:ARG:HG2	1.97	0.64
25:RA:2294:C:OP2	38:RS:89:ARG:NH2	2.31	0.64
39:RT:11:GLU:OE1	39:RT:11:GLU:N	2.27	0.64
40:RU:65:ILE:HG12	40:RU:96:ALA:CB	2.26	0.64
4:XD:61:LYS:HD2	4:XD:206:PHE:CE2	2.32	0.64
15:XO:25:THR:HG21	15:XO:70:LEU:HB2	1.77	0.64
16:XP:6:LEU:HD23	16:XP:17:TYR:CD2	2.32	0.64
1:XA:1314:C:OP1	19:XS:6:LYS:HE3	1.97	0.64
25:YA:1590:U:H2'	25:YA:1591:G:C8	2.32	0.64
27:YD:77:ALA:HB2	27:YD:97:TYR:HA	1.77	0.64
31:YH:105:LEU:H	31:YH:105:LEU:CD1	2.09	0.64
35:YP:98:GLU:O	35:YP:101:VAL:HG12	1.98	0.64
36:YQ:81:VAL:O	36:YQ:82:ARG:HG2	1.97	0.64
41:YV:76:LYS:HB2	41:YV:81:TYR:HB3	1.79	0.64
1:QA:1055:A:H61	1:QA:1205:U:H3	1.45	0.64
1:QA:1306:A:N6	1:QA:1331:G:H1'	2.13	0.64
1:QA:971:G:C5	1:QA:1365:G:H5'	2.32	0.64
2:QB:67:THR:HG21	2:QB:155:LEU:CD2	2.27	0.64
3:QC:138:VAL:HG13	3:QC:149:ALA:CB	2.27	0.64
19:QS:35:SER:O	19:QS:71:LEU:HD12	1.96	0.64
22:QV:6:G:H1	22:QV:67:C:H42	1.45	0.64
25:RA:2361:A:O5'	54:R8:27:THR:OG1	2.14	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1187:G:H5''	41:RV:81:TYR:HE2	1.60	0.64
31:RH:148:ILE:O	31:RH:151:ILE:HG12	1.98	0.64
32:RI:77:LEU:HD11	32:RI:140:LEU:HD12	1.79	0.64
45:RZ:5:LEU:O	45:RZ:6:LYS:HB2	1.98	0.64
1:XA:1002:G:H2'	1:XA:1003:G:C8	2.31	0.64
4:XD:122:ARG:HD3	4:XD:122:ARG:O	1.97	0.64
5:XE:50:GLU:HG3	5:XE:52:PRO:HD2	1.79	0.64
1:XA:537:G:H5''	12:XL:113:ARG:NH1	2.12	0.64
13:XM:13:LYS:HA	13:XM:44:ARG:HD2	1.77	0.64
13:XM:23:TYR:CB	13:XM:67:GLU:HG2	2.25	0.64
14:YN:24:CYS:SG	14:YN:27:CYS:N	2.69	0.64
51:Y5:40:LYS:HD3	51:Y5:46:CYS:CB	2.26	0.64
25:YA:372:G:HO2'	25:YA:400:G:H1	1.38	0.64
25:YA:372:G:N2	25:YA:401:A:OP2	2.22	0.64
40:YU:102:GLU:HG3	41:YV:2:PHE:HE2	1.62	0.64
3:QC:58:GLU:O	3:QC:64:VAL:HA	1.98	0.64
4:QD:11:LEU:HD22	4:QD:66:ARG:HD3	1.78	0.64
5:QE:41:VAL:CG1	5:QE:113:ALA:HB2	2.25	0.64
11:QK:103:LEU:HD22	11:QK:103:LEU:H	1.61	0.64
12:QL:26:ALA:O	12:QL:27:LEU:O	2.14	0.64
14:QN:7:ILE:HG13	14:QN:8:GLU:N	2.11	0.64
16:QP:58:TYR:O	16:QP:62:VAL:HG22	1.96	0.64
36:RQ:80:GLU:CD	46:R0:5:LYS:HB2	2.16	0.64
47:R1:80:LEU:HD12	47:R1:81:LYS:HE3	1.78	0.64
51:R5:40:LYS:NZ	51:R5:48:GLU:HB2	2.10	0.64
25:RA:593:G:H2'	25:RA:594:U:H6	1.63	0.64
27:RD:77:ALA:HB2	27:RD:97:TYR:HA	1.77	0.64
28:RE:104:VAL:HG11	28:RE:188:VAL:CG2	2.27	0.64
32:RI:88:ILE:HG12	32:RI:122:GLU:N	2.13	0.64
44:RY:56:PRO:HG2	44:RY:57:GLN:OE1	1.98	0.64
8:XH:42:GLU:HG3	8:XH:109:ILE:HD12	1.80	0.64
17:XQ:11:VAL:HG23	17:XQ:20:THR:HB	1.79	0.64
1:XA:186:C:H5'	20:XT:78:ALA:HB1	1.78	0.64
21:XU:25:LYS:HE2	21:XU:26:LYS:O	1.96	0.64
47:Y1:29:GLY:O	47:Y1:30:VAL:HG23	1.97	0.64
50:Y4:36:CYS:O	50:Y4:37:SER:O	2.14	0.64
50:Y4:37:SER:C	50:Y4:39:CYS:H	1.98	0.64
25:YA:2469:A:H5''	25:YA:2470:G:H8	1.63	0.64
30:YG:82:LEU:HA	30:YG:86:MET:SD	2.38	0.64
25:YA:24:G:O2'	42:YW:78:GLU:O	2.15	0.64
1:QA:1074:G:O2'	1:QA:1101:A:N1	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:61:LYS:HD2	4:QD:206:PHE:CE2	2.32	0.64
5:QE:41:VAL:HG12	5:QE:112:LEU:O	1.97	0.64
9:QI:53:VAL:HG21	9:QI:92:TYR:CE1	2.32	0.64
10:QJ:54:PHE:C	10:QJ:55:LYS:HG3	2.18	0.64
13:QM:4:ILE:H	13:QM:9:ILE:HG22	1.62	0.64
28:RE:50:GLY:HA3	28:RE:74:PRO:HG3	1.79	0.64
32:RI:120:ILE:HD11	32:RI:126:TYR:CZ	2.32	0.64
36:RQ:10:ARG:O	36:RQ:11:LYS:HB2	1.98	0.64
36:RQ:23:GLY:HA3	36:RQ:101:ARG:NH1	2.12	0.64
37:RR:2:ARG:HG2	37:RR:5:LYS:NZ	2.13	0.64
5:XE:83:GLU:HG2	5:XE:88:LYS:HG3	1.78	0.64
8:XH:20:TYR:CE2	8:XH:75:ARG:HD2	2.32	0.64
14:XN:26:ARG:NE	14:XN:47:LEU:HD21	2.13	0.64
14:XN:7:ILE:HG13	14:XN:8:GLU:N	2.12	0.64
50:Y4:35:VAL:O	50:Y4:37:SER:N	2.26	0.64
25:YA:1678:G:H22	25:YA:1989:G:H22	1.45	0.64
25:YA:575:A:OP1	25:YA:2499:C:O2'	2.15	0.64
27:YD:122:ASP:CG	27:YD:123:ALA:H	2.00	0.64
30:YG:114:ILE:CG2	30:YG:117:PHE:HB2	2.28	0.64
31:YH:117:PRO:HB3	31:YH:123:PHE:CE1	2.33	0.64
25:YA:2415:G:H4'	35:YP:67:MET:N	2.12	0.64
44:YY:56:PRO:HG2	44:YY:57:GLN:OE1	1.98	0.64
1:QA:1124:G:H3'	1:QA:1145:C:N4	2.13	0.64
2:QB:60:ASP:HB3	2:QB:64:ARG:NH1	2.13	0.64
16:QP:21:VAL:HG23	16:QP:33:ILE:HB	1.77	0.64
18:QR:73:ALA:HB3	18:QR:79:LEU:HD12	1.78	0.64
9:QI:128:ARG:HD3	22:QV:32:C:OP2	1.96	0.64
47:R1:91:LYS:HG3	47:R1:92:LYS:H	1.62	0.64
50:R4:71:ARG:HH11	50:R4:71:ARG:CG	1.98	0.64
54:R8:59:LYS:HZ3	54:R8:59:LYS:HB3	1.62	0.64
33:RN:57:ALA:HA	33:RN:60:ILE:HD11	1.78	0.64
5:XE:41:VAL:CG1	5:XE:113:ALA:HB2	2.25	0.64
11:XK:19:ALA:HA	11:XK:32:ILE:HG22	1.80	0.64
25:YA:848:G:H2'	25:YA:849:A:C8	2.32	0.64
28:YE:104:VAL:HG11	28:YE:188:VAL:CG2	2.27	0.64
29:YF:155:LEU:HD13	29:YF:174:VAL:CG1	2.27	0.64
30:YG:81:LYS:O	30:YG:82:LEU:HB2	1.96	0.64
31:YH:51:ARG:HG3	31:YH:51:ARG:HH11	1.62	0.64
33:YN:15:LEU:HD12	33:YN:136:GLU:HB2	1.79	0.64
36:YQ:81:VAL:O	36:YQ:82:ARG:HD3	1.98	0.64
39:YT:11:GLU:CD	39:YT:11:GLU:N	2.47	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YV:43:GLU:OE2	41:YV:43:GLU:HA	1.95	0.64
44:YY:86:ARG:O	44:YY:92:ASN:HB2	1.97	0.64
1:QA:1124:G:H5''	1:QA:1145:C:H41	1.60	0.64
21:QU:15:ARG:HH11	21:QU:15:ARG:HG2	1.63	0.64
25:RA:2790:A:O2'	25:RA:2893:G:N3	2.30	0.64
25:RA:994:C:H3'	40:RU:54:LYS:HE3	1.78	0.64
27:RD:182:LEU:H	27:RD:272:ALA:HB3	1.63	0.64
32:RI:67:ARG:O	32:RI:71:ILE:HG22	1.98	0.64
32:RI:74:ASN:OD1	32:RI:75:LEU:HD13	1.97	0.64
33:RN:15:LEU:HD12	33:RN:136:GLU:HB2	1.79	0.64
42:RW:86:LEU:HD12	42:RW:87:PRO:CD	2.23	0.64
45:RZ:120:ILE:HD13	45:RZ:169:GLU:HG3	1.79	0.64
1:XA:1502:A:H2	1:XA:1505:G:H1	1.46	0.64
2:XB:187:LEU:HD12	2:XB:205:ASP:HA	1.79	0.64
3:XC:181:ASN:ND2	3:XC:204:LEU:HB2	2.13	0.64
3:XC:58:GLU:O	3:XC:64:VAL:HA	1.97	0.64
1:XA:542:G:OP1	4:XD:10:ARG:NH2	2.31	0.64
9:XI:28:VAL:HA	9:XI:63:ILE:HB	1.79	0.64
10:XJ:27:ALA:CB	10:XJ:34:VAL:HG21	2.26	0.64
16:XP:58:TYR:O	16:XP:62:VAL:HG22	1.96	0.64
25:YA:2227:A:H5''	27:YD:263:ARG:NH1	2.12	0.64
25:YA:2593:U:H2'	25:YA:2594:C:H6	1.62	0.64
27:YD:135:PHE:HD2	27:YD:135:PHE:N	1.96	0.64
29:YF:11:VAL:HG12	29:YF:12:LEU:N	2.13	0.64
29:YF:175:THR:O	29:YF:176:LEU:HB2	1.96	0.64
29:YF:45:ARG:CG	29:YF:45:ARG:HH11	2.09	0.64
34:YO:12:ASP:OD1	34:YO:14:THR:HG23	1.97	0.64
2:QB:134:GLU:HA	2:QB:137:ARG:HB3	1.80	0.64
12:QL:10:LEU:HD13	17:QQ:32:TYR:HE2	1.55	0.64
20:QT:26:ASN:HB2	20:QT:71:THR:HG23	1.79	0.64
26:RB:12:C:H2'	46:R0:73:GLY:HA3	1.80	0.64
54:R8:56:GLU:OE1	54:R8:56:GLU:N	2.31	0.64
25:RA:389:G:H1	35:RP:70:GLN:HB3	1.61	0.64
35:RP:98:GLU:O	35:RP:101:VAL:HG12	1.97	0.64
40:RU:102:GLU:HG3	41:RV:2:PHE:HE2	1.62	0.64
42:RW:59:VAL:HG12	42:RW:60:ASN:N	2.11	0.64
1:XA:276:G:O3'	17:XQ:68:ARG:NH1	2.31	0.64
3:XC:138:VAL:HG13	3:XC:149:ALA:CB	2.28	0.64
8:XH:97:VAL:HG13	8:XH:98:LYS:N	2.13	0.64
16:XP:51:VAL:HG21	16:XP:77:ALA:HB2	1.78	0.64
46:Y0:68:GLU:HG2	46:Y0:80:HIS:HB2	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y4:49:PHE:O	50:Y4:50:VAL:HG23	1.97	0.64
25:YA:1113:U:OP1	31:YH:2:SER:N	2.30	0.64
28:YE:69:LYS:O	28:YE:71:GLY:N	2.27	0.64
31:YH:92:ILE:HD12	31:YH:92:ILE:H	1.63	0.64
32:YI:120:ILE:HD11	32:YI:126:TYR:CZ	2.33	0.64
37:YR:2:ARG:HG2	37:YR:5:LYS:NZ	2.13	0.64
7:QG:148:ASN:N	7:QG:148:ASN:ND2	2.46	0.64
9:QI:5:TYR:O	9:QI:84:ALA:HA	1.98	0.64
10:QJ:42:THR:HG23	10:QJ:68:HIS:HA	1.80	0.64
25:RA:2131:G:H4'	25:RA:2132:U:H4'	1.80	0.64
25:RA:507:A:H5''	25:RA:508:G:H5'	1.79	0.64
35:RP:105:LEU:O	35:RP:106:LEU:CB	2.42	0.64
43:RX:11:PRO:HB3	43:RX:92:LEU:HD21	1.78	0.64
25:RA:327:G:N2	44:RY:70:SER:OG	2.31	0.64
2:XB:134:GLU:HA	2:XB:137:ARG:HB3	1.80	0.64
6:XF:12:PRO:HG2	6:XF:13:ASN:H	1.62	0.64
11:XK:48:ILE:HD11	11:XK:64:ALA:CA	2.28	0.64
14:XN:18:VAL:HG23	14:XN:19:ARG:H	1.63	0.64
15:XO:87:ILE:CG2	15:XO:88:ARG:H	2.00	0.64
47:Y1:80:LEU:HD12	47:Y1:81:LYS:HE3	1.78	0.64
27:YD:239:ARG:O	27:YD:240:ALA:HB2	1.97	0.64
29:YF:46:ARG:NH1	29:YF:46:ARG:HG2	2.00	0.64
31:YH:148:ILE:O	31:YH:151:ILE:HG12	1.98	0.64
31:YH:3:ARG:HA	31:YH:3:ARG:NE	2.12	0.64
34:YO:104:ARG:HG2	34:YO:104:ARG:NH1	2.13	0.64
34:YO:7:TYR:CE1	34:YO:20:MET:HB2	2.32	0.64
41:YV:36:PRO:HA	41:YV:56:SER:OG	1.98	0.64
43:YX:57:LEU:HD12	43:YX:78:LYS:HB2	1.77	0.64
36:YQ:134:ARG:NE	45:YZ:122:ARG:HH22	1.94	0.64
6:QF:12:PRO:HG2	6:QF:13:ASN:H	1.63	0.64
12:QL:18:VAL:HG23	12:QL:19:ARG:H	1.63	0.64
14:QN:53:LEU:HB3	14:QN:56:VAL:HG21	1.80	0.64
19:QS:21:GLU:HG3	19:QS:22:LEU:N	2.11	0.64
46:R0:11:ARG:CG	46:R0:11:ARG:HH11	2.11	0.64
25:RA:1026:U:H4'	25:RA:1027:A:OP1	1.97	0.64
31:RH:92:ILE:H	31:RH:92:ILE:HD12	1.63	0.64
36:RQ:30:GLY:HA3	36:RQ:106:VAL:O	1.98	0.64
1:XA:1284:C:H3'	1:XA:1285:A:H8	1.63	0.64
2:XB:8:LYS:CD	2:XB:8:LYS:H	2.09	0.64
4:XD:165:MET:HE3	4:XD:165:MET:HA	1.80	0.64
4:XD:79:PHE:HD2	4:XD:79:PHE:C	2.00	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:78:HIS:CG	8:XH:104:ARG:HG2	2.32	0.64
8:XH:28:ALA:HB3	8:XH:57:PRO:HB2	1.79	0.64
20:XT:26:ASN:HB2	20:XT:71:THR:HG23	1.79	0.64
54:Y8:48:PHE:N	54:Y8:48:PHE:CD1	2.66	0.64
25:YA:127:A:H5"	25:YA:128:C:C6	2.32	0.64
25:YA:2580:U:H4'	28:YE:130:GLY:HA3	1.78	0.64
25:YA:273(C):C:H42	25:YA:363(C):G:H1	1.45	0.64
32:YI:74:ASN:OD1	32:YI:75:LEU:HD13	1.97	0.64
36:YQ:104:PHE:O	36:YQ:105:GLU:HB3	1.98	0.64
1:QA:664:G:H22	1:QA:741:G:H1	1.46	0.63
9:QI:47:LEU:HD22	9:QI:47:LEU:N	2.14	0.63
9:QI:97:LYS:HB3	9:QI:98:PRO:HD3	1.79	0.63
16:QP:51:VAL:CG1	16:QP:52:ASP:H	2.11	0.63
25:RA:1359:A:N6	25:RA:1372:U:H3	1.95	0.63
25:RA:1927:A:H2'	25:RA:1928:A:C8	2.33	0.63
25:RA:686:G:N2	25:RA:788:A:H61	1.95	0.63
25:RA:817:C:O2'	25:RA:839:U:H5"	1.98	0.63
25:RA:997:G:OP1	40:RU:93:LYS:HD3	1.98	0.63
30:RG:114:ILE:CG2	30:RG:117:PHE:HB2	2.28	0.63
30:RG:82:LEU:HA	30:RG:86:MET:SD	2.38	0.63
33:RN:43:THR:HB	33:RN:46:VAL:CG1	2.27	0.63
26:RB:6:C:HO2'	38:RS:29:PHE:HE1	1.44	0.63
41:RV:52:VAL:CG2	41:RV:55:ALA:HB3	2.28	0.63
1:XA:67:C:H2'	1:XA:68:G:C8	2.32	0.63
2:XB:21:ARG:HB2	2:XB:39:ILE:HA	1.80	0.63
6:XF:50:TYR:CE1	18:XR:77:GLY:HA2	2.32	0.63
7:XG:113:GLU:CG	7:XG:119:ARG:HG2	2.28	0.63
9:XI:62:TYR:O	9:XI:63:ILE:HD12	1.98	0.63
9:XI:5:TYR:O	9:XI:84:ALA:HA	1.98	0.63
11:XK:12:ARG:HG2	11:XK:13:GLN:H	1.63	0.63
25:YA:1055:G:H1	25:YA:1104:C:H42	1.44	0.63
28:YE:201:THR:HG21	28:YE:203:LYS:HB3	1.80	0.63
33:YN:39:ARG:HB3	33:YN:41:ASP:OD1	1.98	0.63
36:YQ:80:GLU:CD	46:Y0:5:LYS:HB3	2.18	0.63
38:YS:26:LEU:HD22	38:YS:87:PHE:HD1	1.63	0.63
45:YZ:120:ILE:HD13	45:YZ:169:GLU:HG3	1.79	0.63
1:QA:1347:G:N2	1:QA:1374:A:OP2	2.28	0.63
3:QC:181:ASN:ND2	3:QC:204:LEU:HB2	2.13	0.63
8:QH:97:VAL:HG13	8:QH:98:LYS:N	2.13	0.63
9:QI:62:TYR:O	9:QI:63:ILE:HD12	1.99	0.63
14:QN:40:CYS:SG	14:QN:43:CYS:HB2	2.38	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:QO:8:LYS:NZ	15:QO:8:LYS:HB2	2.13	0.63
25:RA:2637:U:H5''	28:RE:82:ARG:HH21	1.63	0.63
27:RD:147:LEU:CD1	27:RD:155:LEU:HD11	2.26	0.63
31:RH:117:PRO:HB3	31:RH:123:PHE:CE1	2.33	0.63
34:RO:86:ILE:N	34:RO:86:ILE:HD12	2.13	0.63
35:RP:113:LYS:HG2	35:RP:115:LEU:HD23	1.79	0.63
36:RQ:81:VAL:O	36:RQ:82:ARG:HD3	1.97	0.63
26:RB:116:G:H4'	38:RS:54:LEU:HD13	1.79	0.63
43:RX:63:LYS:O	43:RX:64:LYS:HD2	1.98	0.63
25:RA:299:A:H5'	44:RY:84:ARG:HH21	1.63	0.63
5:XE:53:LEU:HD12	5:XE:53:LEU:N	2.09	0.63
7:XG:150:ALA:HA	11:XK:59:TYR:HD2	1.61	0.63
12:XL:18:VAL:HG23	12:XL:19:ARG:H	1.62	0.63
47:Y1:82:LEU:CD1	47:Y1:83:GLU:CA	2.76	0.63
26:YB:42:C:H42	30:YG:91:ARG:HH21	1.46	0.63
40:YU:92:ARG:O	40:YU:94:ASN:N	2.25	0.63
4:QD:197:PRO:HD3	6:XF:16:GLN:HG3	1.80	0.63
13:QM:51:ALA:O	13:QM:55:ARG:HG3	1.97	0.63
14:QN:18:VAL:HG23	14:QN:19:ARG:H	1.63	0.63
1:QA:1187:G:H21	14:QN:60:SER:HB3	1.64	0.63
19:QS:39:THR:HG22	19:QS:40:ILE:N	2.14	0.63
25:RA:1007:C:O3'	33:RN:108:PRO:HB3	1.98	0.63
25:RA:1062:G:H2'	25:RA:1063:G:H8	1.63	0.63
25:RA:451:C:H41	25:RA:454:A:H5'	1.64	0.63
25:RA:959:A:N3	25:RA:2457:U:O2'	2.25	0.63
27:RD:135:PHE:HD2	27:RD:135:PHE:N	1.96	0.63
27:RD:230:ASP:O	27:RD:231:HIS:HB2	1.98	0.63
28:RE:201:THR:HG21	28:RE:203:LYS:HB3	1.80	0.63
29:RF:11:VAL:HG12	29:RF:12:LEU:N	2.13	0.63
33:RN:131:GLN:CD	33:RN:132:ALA:H	2.01	0.63
33:RN:61:ARG:HA	33:RN:61:ARG:HE	1.63	0.63
35:RP:112:LEU:HD11	35:RP:114:ILE:HG23	1.80	0.63
37:RR:28:LEU:HD21	37:RR:114:VAL:HG12	1.79	0.63
2:XB:158:LEU:HD12	2:XB:158:LEU:O	1.97	0.63
10:XJ:42:THR:HG23	10:XJ:68:HIS:HA	1.80	0.63
15:XO:8:LYS:HB2	15:XO:8:LYS:NZ	2.13	0.63
25:YA:1639:U:H2'	25:YA:1640:C:H5''	1.80	0.63
25:YA:601:C:O2'	25:YA:605:C:OP1	2.16	0.63
28:YE:14:ILE:CG1	28:YE:15:PHE:H	2.08	0.63
37:YR:117:VAL:O	37:YR:118:GLU:HB3	1.99	0.63
1:QA:439:A:OP2	1:QA:493:G:N1	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:34:LEU:CD2	3:QC:38:ARG:HD2	2.28	0.63
19:QS:15:LEU:O	19:QS:19:VAL:HG23	1.98	0.63
27:RD:239:ARG:O	27:RD:240:ALA:HB2	1.97	0.63
31:RH:3:ARG:HA	31:RH:3:ARG:NE	2.12	0.63
36:RQ:104:PHE:O	36:RQ:105:GLU:HB3	1.98	0.63
42:RW:74:ALA:O	42:RW:75:TYR:HB3	1.98	0.63
1:XA:1129:C:H4'	1:XA:1130:A:H5'	1.81	0.63
2:XB:25:ASN:O	2:XB:27:LYS:N	2.28	0.63
11:XK:50:TYR:HH	11:XK:59:TYR:HE2	1.47	0.63
12:XL:62:SER:O	12:XL:64:TYR:HD1	1.82	0.63
47:Y1:91:LYS:HG3	47:Y1:92:LYS:H	1.63	0.63
25:YA:2810:A:O3'	28:YE:61:ARG:HG3	1.98	0.63
25:YA:910:A:H62	36:YQ:12:GLN:HA	1.62	0.63
27:YD:18:VAL:HG12	27:YD:19:ALA:O	1.99	0.63
27:YD:230:ASP:O	27:YD:231:HIS:HB2	1.98	0.63
28:YE:50:GLY:HA3	28:YE:74:PRO:HG3	1.80	0.63
35:YP:106:LEU:O	35:YP:107:LYS:CB	2.46	0.63
43:YX:18:TYR:C	43:YX:20:GLY:H	2.02	0.63
2:QB:20:GLU:HB2	2:QB:190:THR:OG1	1.98	0.63
3:QC:95:THR:HG22	3:QC:96:GLY:N	2.07	0.63
4:QD:11:LEU:C	4:QD:13:ARG:H	2.00	0.63
4:QD:22:LYS:HG3	4:QD:26:CYS:SG	2.38	0.63
7:QG:9:VAL:CG1	7:QG:94:ARG:HE	2.12	0.63
8:QH:6:ILE:HB	8:QH:85:ARG:HH12	1.62	0.63
11:QK:48:ILE:HD11	11:QK:64:ALA:CA	2.28	0.63
1:QA:954:G:H4'	13:QM:121:LYS:HG3	1.79	0.63
20:QT:14:LYS:HA	20:QT:17:ARG:NH1	2.14	0.63
52:R6:27:LYS:HZ3	52:R6:27:LYS:HB2	1.61	0.63
25:RA:1037:G:H1	25:RA:1118:C:H42	1.44	0.63
25:RA:2306:C:H3'	25:RA:2307:G:H5''	1.79	0.63
28:RE:131:ALA:HB1	28:RE:135:HIS:CE1	2.34	0.63
29:RF:28:ILE:HG22	29:RF:112:MET:HB3	1.80	0.63
26:RB:42:C:N4	30:RG:91:ARG:HH21	1.88	0.63
33:RN:22:THR:CG2	33:RN:23:LEU:N	2.61	0.63
39:RT:49:VAL:HG13	39:RT:49:VAL:O	1.99	0.63
43:RX:18:TYR:C	43:RX:20:GLY:H	2.02	0.63
43:RX:49:VAL:HG13	43:RX:83:VAL:HG13	1.80	0.63
1:XA:375:U:H4'	16:XP:17:TYR:HE2	1.62	0.63
4:XD:153:ARG:HD3	4:XD:181:MET:SD	2.39	0.63
18:XR:43:PHE:CE2	18:XR:58:LEU:HD11	2.31	0.63
19:XS:42:PRO:HB3	50:Y4:60:GLN:OE1	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2015:A:N3	51:Y5:2:ALA:N	2.47	0.63
25:YA:1203:G:H3'	25:YA:1204:A:H5''	1.79	0.63
25:YA:2439:A:H5'	25:YA:2439:A:C8	2.33	0.63
26:YB:75:G:H21	45:YZ:85:HIS:CE1	2.16	0.63
32:YI:86:THR:HG22	32:YI:86:THR:O	1.98	0.63
33:YN:131:GLN:CD	33:YN:132:ALA:H	2.01	0.63
39:YT:111:ARG:C	39:YT:113:LYS:H	2.01	0.63
42:YW:110:LYS:HG3	42:YW:111:HIS:ND1	2.13	0.63
1:QA:1135:U:H4'	1:QA:1136:U:H5	1.64	0.63
1:QA:235:C:H5'	17:QQ:70:ARG:HG2	1.78	0.63
8:QH:112:LEU:HD12	8:QH:112:LEU:O	1.98	0.63
8:QH:28:ALA:HB3	8:QH:57:PRO:HB2	1.79	0.63
11:QK:17:GLY:HA3	11:QK:77:MET:HE3	1.78	0.63
1:QA:690:G:H22	11:QK:55:LYS:NZ	1.97	0.63
12:QL:62:SER:O	12:QL:64:TYR:HD1	1.82	0.63
48:R2:40:SER:C	48:R2:42:GLY:H	2.00	0.63
27:RD:18:VAL:HG12	27:RD:19:ALA:O	1.99	0.63
29:RF:132:VAL:HG23	29:RF:133:ASN:N	2.14	0.63
32:RI:144:VAL:C	32:RI:145:VAL:HG12	2.15	0.63
33:RN:39:ARG:HB3	33:RN:41:ASP:OD1	1.99	0.63
35:RP:108:LYS:H	35:RP:108:LYS:HD2	1.63	0.63
38:RS:78:LEU:HD11	38:RS:107:GLU:O	1.98	0.63
44:RY:95:LYS:CB	44:RY:100:ALA:HA	2.13	0.63
3:XC:95:THR:HG22	3:XC:96:GLY:N	2.07	0.63
12:XL:86:ARG:HB2	12:XL:101:VAL:CG2	2.28	0.63
48:Y2:40:SER:C	48:Y2:42:GLY:N	2.51	0.63
54:Y8:59:LYS:HB3	54:Y8:59:LYS:HZ3	1.62	0.63
30:YG:68:PRO:HB2	30:YG:90:LEU:HD12	1.80	0.63
32:YI:133:HIS:HD2	32:YI:134:PRO:HD2	1.63	0.63
32:YI:88:ILE:HG12	32:YI:122:GLU:N	2.13	0.63
33:YN:87:LEU:HD23	33:YN:87:LEU:O	1.99	0.63
34:YO:86:ILE:HD12	34:YO:86:ILE:N	2.13	0.63
36:YQ:30:GLY:HA3	36:YQ:106:VAL:O	1.98	0.63
38:YS:22:GLY:O	38:YS:23:ARG:O	2.17	0.63
39:YT:60:THR:HG22	39:YT:77:PRO:HA	1.80	0.63
42:YW:74:ALA:O	42:YW:75:TYR:HB3	1.98	0.63
45:YZ:4:ARG:HH11	45:YZ:4:ARG:HG2	1.64	0.63
1:QA:1410:G:H1	1:QA:1490:C:H42	1.45	0.63
2:QB:8:LYS:H	2:QB:8:LYS:CD	2.09	0.63
4:QD:79:PHE:C	4:QD:79:PHE:CD2	2.71	0.63
15:QO:61:GLY:C	15:QO:65:ARG:HH12	2.02	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:R2:42:GLY:O	48:R2:44:LEU:N	2.30	0.63
48:R2:46:GLN:HA	48:R2:46:GLN:OE1	1.98	0.63
25:RA:1509:C:H3'	25:RA:1510:A:H5''	1.79	0.63
25:RA:1792:G:H2'	25:RA:1793:C:H6	1.63	0.63
25:RA:2219:G:OP1	27:RD:172:TYR:OH	2.13	0.63
25:RA:2636:U:OP1	28:RE:79:ARG:HA	1.99	0.63
29:RF:119:ARG:HH11	29:RF:119:ARG:HG2	1.64	0.63
31:RH:153:LYS:HG3	31:RH:161:GLY:HA3	1.81	0.63
36:RQ:20:ALA:HB1	36:RQ:99:PRO:CB	2.29	0.63
36:RQ:66:ILE:CG1	36:RQ:67:ARG:H	2.12	0.63
39:RT:16:ARG:HE	39:RT:19:LEU:HD21	1.62	0.63
25:RA:1252:G:N3	40:RU:33:ARG:HD2	2.14	0.63
1:XA:591:U:H2'	1:XA:592:G:H8	1.64	0.63
2:XB:155:LEU:HD12	2:XB:157:ARG:O	1.97	0.63
5:XE:91:LEU:HA	5:XE:120:THR:HG22	1.81	0.63
9:XI:118:LYS:O	9:XI:119:ALA:HB3	1.99	0.63
9:XI:17:VAL:HG21	9:XI:81:ILE:N	2.14	0.63
19:XS:15:LEU:O	19:XS:19:VAL:HG23	1.98	0.63
48:Y2:46:GLN:HA	48:Y2:46:GLN:OE1	1.97	0.63
25:YA:1026:U:H1'	25:YA:1027:A:H5''	1.80	0.63
25:YA:2224:G:OP1	27:YD:268:ARG:HD3	1.98	0.63
25:YA:222:A:H3'	25:YA:421:U:H5'	1.79	0.63
28:YE:35:GLN:CG	28:YE:37:ARG:NE	2.62	0.63
30:YG:61:ALA:HB2	30:YG:68:PRO:HD2	1.81	0.63
36:YQ:10:ARG:O	36:YQ:11:LYS:HB2	1.98	0.63
36:YQ:20:ALA:HB1	36:YQ:99:PRO:CB	2.28	0.63
39:YT:16:ARG:HE	39:YT:19:LEU:HD21	1.62	0.63
2:QB:187:LEU:HD12	2:QB:205:ASP:HA	1.79	0.63
3:QC:70:VAL:HG12	3:QC:72:LYS:N	2.10	0.63
9:QI:118:LYS:O	9:QI:119:ALA:HB3	1.99	0.63
11:QK:19:ALA:HA	11:QK:32:ILE:HG22	1.80	0.63
12:QL:86:ARG:HB2	12:QL:101:VAL:CG2	2.28	0.63
13:QM:40:ASN:HD21	13:QM:42:ALA:HB3	1.64	0.63
47:R1:82:LEU:CD1	47:R1:83:GLU:CA	2.76	0.63
52:R6:13:CYS:HB2	52:R6:22:ALA:HB3	1.80	0.63
25:RA:2344:U:C2	52:R6:37:ARG:HD3	2.33	0.63
25:RA:1266:G:O5'	42:RW:15:ARG:NH2	2.32	0.63
25:RA:2404:C:O3'	35:RP:77:ARG:NH2	2.32	0.63
25:RA:249:C:H4'	25:RA:250:G:O5'	1.99	0.63
27:RD:44:ASN:HB3	27:RD:49:ILE:CA	2.27	0.63
27:RD:44:ASN:ND2	27:RD:44:ASN:N	2.42	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RI:86:THR:O	32:RI:86:THR:HG22	1.99	0.63
37:RR:63:ARG:NH1	37:RR:80:PHE:CD1	2.67	0.63
40:RU:102:GLU:HG3	41:RV:2:PHE:CE2	2.34	0.63
42:RW:110:LYS:HG3	42:RW:111:HIS:ND1	2.12	0.63
1:XA:1073:U:O2'	2:XB:104:ASN:OD1	2.17	0.63
2:XB:214:ILE:HD13	2:XB:217:ARG:NH2	2.14	0.63
2:XB:60:ASP:HB3	2:XB:64:ARG:NH1	2.13	0.63
3:XC:34:LEU:CD2	3:XC:38:ARG:HD2	2.29	0.63
5:XE:51:VAL:O	5:XE:55:VAL:HG23	1.99	0.63
9:XI:97:LYS:HB3	9:XI:98:PRO:HD3	1.79	0.63
47:Y1:18:ILE:HG12	47:Y1:37:ILE:HG12	1.81	0.63
25:YA:2287:A:O2'	25:YA:2288:A:O5'	2.15	0.63
25:YA:310:A:O2'	25:YA:311:A:H2'	1.98	0.63
27:YD:72:LYS:HG2	27:YD:103:ARG:NH2	2.13	0.63
29:YF:132:VAL:HG23	29:YF:133:ASN:N	2.14	0.63
29:YF:67:GLN:O	29:YF:67:GLN:CG	2.32	0.63
31:YH:153:LYS:HG3	31:YH:161:GLY:HA3	1.80	0.63
31:YH:86:GLU:O	31:YH:87:LEU:HB2	1.99	0.63
35:YP:83:VAL:HG12	35:YP:112:LEU:HD21	1.81	0.63
39:YT:49:VAL:O	39:YT:49:VAL:HG13	1.99	0.63
1:QA:920:U:H2'	1:QA:921:U:C6	2.34	0.63
2:QB:23:ARG:HD3	2:QB:23:ARG:H	1.64	0.63
2:QB:21:ARG:HB2	2:QB:39:ILE:HA	1.80	0.63
3:QC:189:ALA:O	3:QC:191:THR:HG23	1.99	0.63
3:QC:3:ASN:N	3:QC:3:ASN:HD22	1.97	0.63
1:QA:1402:C:N4	23:QX:3:G:OP1	2.32	0.63
47:R1:76:ARG:HD2	47:R1:76:ARG:H	1.64	0.63
47:R1:87:PRO:O	47:R1:88:LYS:C	2.37	0.63
54:R8:48:PHE:CD1	54:R8:48:PHE:N	2.66	0.63
27:RD:133:LEU:HD21	27:RD:191:ALA:CB	2.29	0.63
39:RT:111:ARG:C	39:RT:113:LYS:H	2.01	0.63
40:RU:34:LYS:HA	40:RU:34:LYS:CE	2.29	0.63
44:RY:86:ARG:O	44:RY:92:ASN:HB2	1.97	0.63
2:XB:236:TYR:CD2	2:XB:239:VAL:HG21	2.34	0.63
14:YN:18:VAL:HG23	14:YN:19:ARG:N	2.14	0.63
16:XP:66:PRO:HG2	16:XP:71:ARG:HH12	1.64	0.63
22:XV:6:G:H1	22:XV:67:C:H42	1.45	0.63
23:XX:8:A:O5'	23:XX:8:A:H8	1.81	0.63
19:XS:5:LEU:CG	50:Y4:66:SER:CB	2.77	0.63
33:YN:61:ARG:HE	33:YN:61:ARG:HA	1.63	0.63
35:YP:114:ILE:HD11	35:YP:130:PHE:CD1	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:64:LYS:HB2	54:Y8:25:MET:HG3	1.81	0.63
43:YX:49:VAL:HG13	43:YX:83:VAL:HG13	1.80	0.63
45:YZ:5:LEU:O	45:YZ:6:LYS:HB2	1.97	0.63
5:QE:51:VAL:O	5:QE:55:VAL:HG23	1.99	0.62
9:QI:59:PHE:HZ	9:QI:88:TYR:CE1	2.17	0.62
12:QL:85:ILE:HD11	12:QL:98:TYR:HB2	1.81	0.62
48:R2:65:ASN:HB3	48:R2:69:ARG:NH1	2.10	0.62
29:RF:107:LYS:O	29:RF:108:LYS:C	2.37	0.62
31:RH:136:ILE:H	31:RH:136:ILE:HD12	1.64	0.62
32:RI:133:HIS:HD2	32:RI:134:PRO:HD2	1.63	0.62
36:RQ:20:ALA:HB1	36:RQ:99:PRO:CD	2.29	0.62
2:XB:66:GLY:O	2:XB:67:THR:HG23	1.99	0.62
7:XG:9:VAL:CG1	7:XG:94:ARG:HE	2.12	0.62
11:XK:99:GLN:HG2	11:XK:105:VAL:CG2	2.28	0.62
11:XK:12:ARG:HG2	11:XK:13:GLN:N	2.14	0.62
11:XK:57:THR:HG22	11:XK:59:TYR:H	1.64	0.62
16:XP:8:ARG:HG2	16:XP:8:ARG:HH11	1.64	0.62
25:YA:2396:G:H1'	47:Y1:30:VAL:HG13	1.81	0.62
25:YA:226:G:O2'	25:YA:228:A:N6	2.32	0.62
28:YE:13:ARG:HH12	28:YE:21:VAL:HG12	1.64	0.62
28:YE:4:ILE:CD1	28:YE:28:ALA:HB1	2.29	0.62
32:YI:11:ASN:ND2	32:YI:12:LEU:HD13	2.14	0.62
33:YN:7:LYS:H	33:YN:7:LYS:HD2	1.64	0.62
39:YT:22:PHE:HD2	39:YT:22:PHE:N	1.97	0.62
43:YX:63:LYS:O	43:YX:64:LYS:HD2	1.98	0.62
44:YY:87:LYS:O	44:YY:88:LYS:NZ	2.32	0.62
45:YZ:9:TYR:CE2	45:YZ:61:LEU:HD13	2.32	0.62
1:QA:1226:C:O2'	13:QM:111:LYS:NZ	2.31	0.62
1:QA:192:U:H4'	20:QT:102:GLY:O	1.99	0.62
1:QA:514:C:H2'	1:QA:515:G:C8	2.34	0.62
2:QB:214:ILE:HD13	2:QB:217:ARG:NH2	2.14	0.62
5:QE:50:GLU:HG3	5:QE:52:PRO:HD2	1.79	0.62
6:QF:8:ILE:HD11	6:QF:79:LEU:HD13	1.81	0.62
7:QG:113:GLU:CG	7:QG:119:ARG:HG2	2.28	0.62
8:QH:42:GLU:HG3	8:QH:109:ILE:HD12	1.80	0.62
11:QK:12:ARG:HG2	11:QK:13:GLN:N	2.14	0.62
11:QK:58:PRO:HD3	11:QK:89:ALA:HB1	1.81	0.62
14:QN:26:ARG:NE	14:QN:47:LEU:HD21	2.13	0.62
46:R0:68:GLU:HG2	46:R0:80:HIS:HB2	1.79	0.62
39:RT:24:PRO:O	39:RT:94:ALA:HB2	2.00	0.62
1:XA:690:G:H22	11:XK:55:LYS:NZ	1.95	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:816:A:OP1	1:XA:1526:G:O2'	2.13	0.62
3:XC:3:ASN:N	3:XC:3:ASN:HD22	1.96	0.62
4:XD:29:PRO:C	4:XD:30:LYS:HD3	2.19	0.62
9:XI:47:LEU:HD22	9:XI:47:LEU:N	2.14	0.62
13:XM:36:LYS:HD3	13:XM:36:LYS:C	2.20	0.62
25:YA:49:A:N7	25:YA:120:U:H5	1.97	0.62
25:YA:1446:C:H42	25:YA:1465:G:H1	1.46	0.62
25:YA:227:A:O2'	25:YA:228:A:O5'	2.16	0.62
30:YG:94:LEU:HD23	30:YG:94:LEU:H	1.64	0.62
32:YI:75:LEU:HB3	32:YI:105:HIS:HE1	1.60	0.62
35:YP:1:MET:CE	35:YP:5:ASP:HB3	2.24	0.62
45:YZ:132:ASN:O	45:YZ:134:PRO:HD3	1.99	0.62
45:YZ:103:ARG:CB	45:YZ:138:GLU:HA	2.27	0.62
45:YZ:94:GLU:HB2	45:YZ:95:PRO:HA	1.80	0.62
1:QA:1226:C:OP2	13:QM:103:THR:OG1	2.10	0.62
2:QB:236:TYR:CD2	2:QB:239:VAL:HG21	2.34	0.62
4:QD:153:ARG:HD3	4:QD:181:MET:SD	2.38	0.62
7:QG:140:ASP:C	7:QG:142:GLU:H	2.03	0.62
9:QI:13:ALA:HB2	9:QI:67:GLY:O	1.99	0.62
25:RA:476:G:N1	25:RA:479:A:OP2	2.27	0.62
35:RP:65:ARG:CG	35:RP:65:ARG:HH11	2.06	0.62
36:RQ:81:VAL:HG23	46:R0:7:LEU:CD1	2.29	0.62
37:RR:117:VAL:O	37:RR:118:GLU:HB3	1.99	0.62
26:RB:48:A:OP2	38:RS:30:ARG:NH2	2.31	0.62
39:RT:60:THR:HG22	39:RT:77:PRO:HA	1.80	0.62
39:RT:96:ARG:NH1	39:RT:96:ARG:HB2	2.14	0.62
1:XA:292:G:H21	1:XA:608:A:H61	1.47	0.62
1:XA:312:C:H2'	1:XA:313:A:C8	2.34	0.62
1:XA:560:U:O2'	1:XA:561:U:OP2	2.14	0.62
2:XB:178:ARG:NH2	8:XH:74:PRO:CB	2.58	0.62
2:XB:20:GLU:HB2	2:XB:190:THR:OG1	1.98	0.62
14:XN:23:ARG:NH1	14:XN:30:ALA:HB2	2.14	0.62
52:Y6:27:LYS:HB2	52:Y6:27:LYS:HZ3	1.64	0.62
25:YA:1266:G:O5'	42:YW:15:ARG:NH2	2.33	0.62
25:YA:234:C:H2'	25:YA:235:U:C6	2.34	0.62
25:YA:2372:G:H4'	52:Y6:46:HIS:NE2	2.15	0.62
33:YN:133:GLN:O	33:YN:134:ARG:HB3	1.99	0.62
33:YN:26:LEU:O	33:YN:30:ILE:HG13	1.99	0.62
37:YR:63:ARG:NH1	37:YR:80:PHE:CD1	2.67	0.62
40:YU:34:LYS:CE	40:YU:34:LYS:HA	2.29	0.62
25:YA:993:G:OP1	40:YU:50:ARG:NH2	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:66:GLY:O	2:QB:67:THR:HG23	2.00	0.62
18:QR:82:THR:HG22	18:QR:83:GLU:N	2.15	0.62
25:RA:1600:C:H4'	53:R7:49:ARG:HE	1.64	0.62
27:RD:72:LYS:HG2	27:RD:103:ARG:NH2	2.13	0.62
28:RE:35:GLN:CG	28:RE:37:ARG:NE	2.62	0.62
30:RG:77:ILE:HD13	30:RG:82:LEU:CD1	2.29	0.62
34:RO:8:LEU:HB2	34:RO:19:ILE:HD11	1.81	0.62
45:RZ:97:GLU:HB3	45:RZ:125:LEU:HD11	1.81	0.62
7:XG:140:ASP:HA	7:XG:143:ARG:NH1	2.14	0.62
11:XK:58:PRO:HD3	11:XK:89:ALA:HB1	1.81	0.62
14:XN:53:LEU:HB3	14:XN:56:VAL:HG21	1.80	0.62
16:XP:51:VAL:CG1	16:XP:52:ASP:H	2.10	0.62
18:XR:82:THR:HG22	18:XR:83:GLU:N	2.15	0.62
52:Y6:13:CYS:HB2	52:Y6:22:ALA:HB3	1.81	0.62
52:Y6:44:ARG:O	52:Y6:45:LYS:HB2	2.00	0.62
25:YA:2250:G:C6	36:YQ:82:ARG:HD2	2.35	0.62
25:YA:2788:C:O2'	25:YA:2809:A:N3	2.31	0.62
25:YA:568:U:H5'	25:YA:945:A:N1	2.14	0.62
29:YF:129:PHE:O	29:YF:130:ALA:HB3	1.99	0.62
30:YG:112:PRO:HB3	50:Y4:37:SER:CB	2.25	0.62
39:YT:96:ARG:NH1	39:YT:96:ARG:HB2	2.14	0.62
41:YV:52:VAL:CG2	41:YV:55:ALA:HB3	2.28	0.62
45:YZ:97:GLU:HB3	45:YZ:125:LEU:HD11	1.81	0.62
1:QA:113:G:N3	1:QA:353:A:O2'	2.32	0.62
1:QA:1304:G:N1	1:QA:1332:A:OP2	2.33	0.62
1:QA:606:G:H22	1:QA:631:G:H5'	1.64	0.62
3:QC:127:ARG:HG2	3:QC:127:ARG:HH11	1.64	0.62
4:QD:29:PRO:C	4:QD:30:LYS:HD3	2.19	0.62
7:QG:140:ASP:HA	7:QG:143:ARG:NH1	2.14	0.62
1:QA:1347:G:C8	9:QI:107:ARG:HB3	2.34	0.62
9:QI:17:VAL:HG21	9:QI:81:ILE:N	2.15	0.62
48:R2:40:SER:C	48:R2:42:GLY:N	2.51	0.62
52:R6:41:PRO:HG2	52:R6:45:LYS:N	2.10	0.62
29:RF:28:ILE:HD13	29:RF:30:PRO:HD3	1.80	0.62
30:RG:94:LEU:N	30:RG:94:LEU:HD23	2.14	0.62
31:RH:137:ASP:HB3	31:RH:140:LYS:HB2	1.81	0.62
32:RI:11:ASN:ND2	32:RI:12:LEU:HD13	2.14	0.62
35:RP:61:ARG:H	35:RP:61:ARG:CD	2.09	0.62
38:RS:22:GLY:O	38:RS:23:ARG:O	2.17	0.62
38:RS:48:LEU:HD12	38:RS:48:LEU:N	2.15	0.62
39:RT:108:ARG:O	39:RT:111:ARG:HG3	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RV:36:PRO:HA	41:RV:56:SER:OG	1.98	0.62
42:RW:60:ASN:C	42:RW:61:ASN:HD22	2.03	0.62
1:XA:1014:A:H4'	19:XS:14:HIS:CD2	2.35	0.62
1:XA:1297:C:H4'	1:XA:1298:C:H5'	1.82	0.62
1:XA:1461:G:H2'	1:XA:1462:G:H8	1.64	0.62
2:XB:115:LEU:CD2	2:XB:153:ARG:HD3	2.30	0.62
4:XD:11:LEU:C	4:XD:13:ARG:H	2.00	0.62
8:XH:112:LEU:HD12	8:XH:112:LEU:O	1.98	0.62
1:XA:644:G:H4'	8:XH:92:ARG:HH21	1.63	0.62
1:XA:1320:C:N4	19:XS:36:ARG:HG3	2.14	0.62
48:Y2:41:ILE:HG12	48:Y2:44:LEU:HD12	1.82	0.62
25:YA:1590:U:H2'	25:YA:1591:G:H8	1.64	0.62
27:YD:133:LEU:HD21	27:YD:191:ALA:CB	2.29	0.62
30:YG:94:LEU:HD23	30:YG:94:LEU:N	2.14	0.62
35:YP:105:LEU:O	35:YP:106:LEU:CB	2.42	0.62
25:YA:587:C:OP2	35:YP:21:ARG:NH2	2.31	0.62
25:YA:2415:G:O3'	35:YP:66:GLY:HA3	1.99	0.62
39:YT:108:ARG:O	39:YT:111:ARG:HG3	1.99	0.62
44:YY:48:ALA:HB2	44:YY:61:ILE:HD13	1.82	0.62
6:QF:77:ARG:HB2	6:QF:77:ARG:NH1	2.15	0.62
9:QI:116:LYS:O	9:QI:118:LYS:N	2.33	0.62
9:QI:65:VAL:HG21	9:QI:73:GLN:HB3	1.81	0.62
17:QQ:11:VAL:HG23	17:QQ:20:THR:HB	1.79	0.62
23:QX:8:A:O5'	23:QX:8:A:H8	1.82	0.62
47:R1:91:LYS:HA	47:R1:91:LYS:HE3	1.81	0.62
25:RA:2424:C:O2	25:RA:2429:G:O2'	2.16	0.62
25:RA:686:G:H21	25:RA:788:A:H61	1.47	0.62
29:RF:129:PHE:O	29:RF:130:ALA:HB3	1.99	0.62
30:RG:68:PRO:HB2	30:RG:90:LEU:HD12	1.80	0.62
33:RN:26:LEU:O	33:RN:30:ILE:HG13	1.99	0.62
33:RN:7:LYS:HD2	33:RN:7:LYS:H	1.64	0.62
33:RN:96:GLU:O	33:RN:98:VAL:N	2.33	0.62
35:RP:83:VAL:HG12	35:RP:112:LEU:HD21	1.81	0.62
36:RQ:86:GLY:C	36:RQ:88:GLY:H	2.03	0.62
38:RS:26:LEU:HD22	38:RS:87:PHE:HD1	1.63	0.62
45:RZ:124:ILE:HD11	45:RZ:165:VAL:HG21	1.82	0.62
45:RZ:4:ARG:HG2	45:RZ:4:ARG:HH11	1.64	0.62
45:RZ:94:GLU:HB2	45:RZ:95:PRO:HA	1.80	0.62
1:XA:939:G:H5''	7:XG:102:ARG:HH22	1.64	0.62
2:XB:23:ARG:H	2:XB:23:ARG:HD3	1.64	0.62
4:XD:170:VAL:HG22	4:XD:171:GLY:N	2.12	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:96:LEU:CD2	4:XD:96:LEU:H	2.12	0.62
47:Y1:91:LYS:HE3	47:Y1:91:LYS:HA	1.82	0.62
48:Y2:69:ARG:HB2	48:Y2:69:ARG:CZ	2.29	0.62
25:YA:2404:C:H1'	35:YP:67:MET:HE1	1.81	0.62
29:YF:28:ILE:HD13	29:YF:30:PRO:HD3	1.80	0.62
31:YH:136:ILE:HD12	31:YH:136:ILE:H	1.64	0.62
35:YP:65:ARG:HE	54:Y8:15:LYS:HB2	1.65	0.62
38:YS:100:ALA:HA	38:YS:103:GLU:CG	2.30	0.62
25:YA:1266:G:C5	42:YW:15:ARG:NH1	2.67	0.62
1:QA:1305:G:H22	1:QA:1331:G:H2'	1.65	0.62
4:QD:196:LEU:C	4:QD:198:VAL:H	2.02	0.62
1:QA:545:C:H5''	4:QD:72:GLU:HG2	1.82	0.62
8:QH:16:ALA:HB2	8:QH:24:THR:HG21	1.82	0.62
13:QM:97:PRO:HB2	13:QM:101:GLN:HE22	1.65	0.62
14:QN:23:ARG:NH1	14:QN:30:ALA:HB2	2.14	0.62
18:QR:25:THR:O	18:QR:25:THR:HG22	2.00	0.62
27:RD:134:ARG:HD3	27:RD:135:PHE:CE2	2.35	0.62
28:RE:13:ARG:HH12	28:RE:21:VAL:HG12	1.64	0.62
32:RI:116:LEU:O	32:RI:116:LEU:HG	2.00	0.62
32:RI:124:GLY:H	32:RI:142:VAL:HG23	1.65	0.62
32:RI:8:PRO:O	32:RI:9:LEU:HB3	1.99	0.62
33:RN:87:LEU:O	33:RN:87:LEU:HD23	1.99	0.62
39:RT:57:PHE:CD2	39:RT:58:ASN:N	2.66	0.62
45:RZ:158:PRO:CB	45:RZ:159:PRO:HD2	2.29	0.62
1:XA:674:G:H2'	1:XA:675:A:C8	2.35	0.62
6:XF:8:ILE:HD11	6:XF:79:LEU:HD13	1.81	0.62
8:XH:16:ALA:HB2	8:XH:24:THR:HG21	1.82	0.62
10:XJ:29:ARG:O	10:XJ:29:ARG:HG2	2.00	0.62
13:XM:69:GLU:O	13:XM:72:ALA:N	2.32	0.62
20:XT:14:LYS:HA	20:XT:17:ARG:NH1	2.14	0.62
48:Y2:70:GLN:O	48:Y2:71:ASN:HB2	2.00	0.62
25:YA:2030:A:H4'	25:YA:2031:A:H8	1.65	0.62
25:YA:2756:U:H4'	25:YA:2757:A:OP1	1.99	0.62
25:YA:557:U:H2'	25:YA:558:G:H8	1.65	0.62
25:YA:666:G:H4'	35:YP:49:ARG:NH1	2.15	0.62
27:YD:35:LYS:HA	27:YD:64:ILE:HG22	1.81	0.62
29:YF:107:LYS:O	29:YF:108:LYS:C	2.37	0.62
30:YG:170:ARG:O	30:YG:174:GLU:HB2	2.00	0.62
34:YO:104:ARG:CZ	39:YT:34:VAL:HG11	2.29	0.62
45:YZ:94:GLU:HB2	45:YZ:130:PRO:CD	2.30	0.62
1:QA:646:U:H2'	1:QA:647:C:C6	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:178:ARG:NH2	8:QH:74:PRO:CB	2.54	0.62
15:QO:26:GLU:CD	15:QO:77:ARG:HH12	2.02	0.62
48:R2:69:ARG:CZ	48:R2:69:ARG:HB2	2.30	0.62
30:RG:6:ALA:HB2	50:R4:23:GLU:OE2	1.99	0.62
25:RA:443:A:HO2'	25:RA:1200:C:HO2'	1.47	0.62
25:RA:1441:G:H2'	25:RA:1442:G:H8	1.64	0.62
25:RA:1495:A:H2'	25:RA:1496:A:N3	2.14	0.62
29:RF:32:LEU:CD1	29:RF:105:VAL:HG13	2.29	0.62
32:RI:33:ARG:HG3	32:RI:33:ARG:HH11	1.63	0.62
25:RA:2723:C:H5''	37:RR:1:MET:HG2	1.81	0.62
38:RS:17:ARG:HG3	38:RS:18:ILE:N	2.14	0.62
45:RZ:132:ASN:O	45:RZ:134:PRO:HD3	1.99	0.62
1:XA:191(F):U:H2'	1:XA:191:G:H8	1.63	0.62
3:XC:111:LEU:HD21	3:XC:144:SER:O	2.00	0.62
8:XH:58:TYR:O	8:XH:59:LEU:HD23	2.00	0.62
9:XI:116:LYS:O	9:XI:118:LYS:N	2.33	0.62
11:XK:51:LYS:CA	11:XK:55:LYS:HD3	2.21	0.62
19:XS:12:ASP:OD1	19:XS:37:ARG:HD2	2.00	0.62
25:YA:2152:G:H2'	25:YA:2153:G:H8	1.64	0.62
25:YA:1693:U:H1'	27:YD:14:ARG:NH2	2.14	0.62
27:YD:182:LEU:H	27:YD:272:ALA:HB3	1.62	0.62
25:YA:1803:A:H4'	27:YD:259:THR:HG21	1.81	0.62
28:YE:131:ALA:HB1	28:YE:135:HIS:CE1	2.34	0.62
35:YP:112:LEU:HD11	35:YP:114:ILE:HG23	1.80	0.62
1:QA:34:C:H2'	1:QA:35:G:H8	1.64	0.62
4:QD:106:TYR:HE1	4:QD:112:VAL:O	1.82	0.62
8:QH:84:ARG:NH1	8:QH:84:ARG:HG3	2.10	0.62
1:QA:1199:U:H4'	10:QJ:54:PHE:CZ	2.35	0.62
13:QM:117:VAL:HG22	13:QM:118:ALA:N	2.15	0.62
47:R1:18:ILE:HG12	47:R1:37:ILE:HG12	1.81	0.62
47:R1:3:LYS:HD3	47:R1:43:TYR:CD2	2.35	0.62
52:R6:18:ARG:HD2	52:R6:18:ARG:O	2.00	0.62
25:RA:83:G:N2	25:RA:103:A:OP2	2.31	0.62
25:RA:1791:A:N6	25:RA:1828:G:O2'	2.32	0.62
25:RA:1849:G:H2'	25:RA:1850:G:H8	1.65	0.62
25:RA:558:G:OP1	33:RN:111:PRO:HD2	2.00	0.62
25:RA:1567:A:H5'	27:RD:58:HIS:ND1	2.14	0.62
28:RE:35:GLN:HG2	28:RE:37:ARG:NE	2.14	0.62
30:RG:111:LEU:HB2	30:RG:112:PRO:HD3	1.82	0.62
38:RS:100:ALA:HA	38:RS:103:GLU:CG	2.30	0.62
39:RT:22:PHE:N	39:RT:22:PHE:HD2	1.97	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RT:31:SER:HA	39:RT:44:ASP:OD2	2.00	0.62
43:RX:31:HIS:CE1	43:RX:33:LYS:HB2	2.34	0.62
45:RZ:94:GLU:HB2	45:RZ:130:PRO:CD	2.30	0.62
3:XC:127:ARG:HH11	3:XC:127:ARG:HG2	1.64	0.62
9:XI:65:VAL:HG21	9:XI:73:GLN:HB3	1.81	0.62
13:XM:66:LEU:HA	13:XM:70:LEU:HD23	1.81	0.62
50:Y4:61:ARG:O	50:Y4:63:TYR:N	2.33	0.62
25:YA:1782:C:H1'	25:YA:2609:U:H5''	1.81	0.62
27:YD:134:ARG:HD3	27:YD:135:PHE:CE2	2.35	0.62
28:YE:104:VAL:HG11	28:YE:188:VAL:HG23	1.82	0.62
28:YE:51:PHE:O	28:YE:52:LEU:C	2.38	0.62
32:YI:33:ARG:HH11	32:YI:33:ARG:HG3	1.64	0.62
38:YS:48:LEU:N	38:YS:48:LEU:HD12	2.15	0.62
1:QA:254:G:H2'	1:QA:255:G:H8	1.64	0.62
5:QE:51:VAL:HB	5:QE:52:PRO:CD	2.30	0.62
6:QF:10:LEU:HD13	6:QF:61:LEU:CD1	2.30	0.62
11:QK:57:THR:HG22	11:QK:59:TYR:H	1.64	0.62
48:R2:17:SER:HB2	48:R2:18:PRO:CA	2.30	0.62
50:R4:61:ARG:O	50:R4:63:TYR:N	2.33	0.62
25:RA:1309:G:H4'	53:R7:7:PRO:HB2	1.81	0.62
25:RA:573:G:N1	25:RA:2031:A:OP2	2.24	0.62
25:RA:2131:G:N2	25:RA:2158:A:N7	2.48	0.62
27:RD:137:PRO:HB2	27:RD:140:THR:HG23	1.81	0.62
27:RD:70:TRP:CH2	27:RD:150:LYS:HA	2.35	0.62
31:RH:86:GLU:O	31:RH:87:LEU:HB2	1.99	0.62
34:RO:78:ARG:HH21	39:RT:103:ARG:NH2	1.98	0.62
35:RP:114:ILE:HD11	35:RP:130:PHE:CD1	2.34	0.62
5:XE:42:GLY:HA2	5:XE:136:MET:HE1	1.82	0.62
17:XQ:65:ILE:HD12	17:XQ:65:ILE:N	2.15	0.62
19:XS:39:THR:HG22	19:XS:40:ILE:N	2.14	0.62
24:XY:29:U:H2'	24:XY:30:C:H6	1.60	0.62
47:Y1:87:PRO:O	47:Y1:88:LYS:C	2.37	0.62
48:Y2:17:SER:HB2	48:Y2:18:PRO:CA	2.30	0.62
30:YG:142:PRO:HB2	50:Y4:31:ILE:CD1	2.30	0.62
29:YF:28:ILE:HG22	29:YF:112:MET:HB3	1.80	0.62
25:YA:675:A:OP1	29:YF:63:LYS:NZ	2.32	0.62
35:YP:50:ARG:NH2	35:YP:50:ARG:CB	2.57	0.62
42:YW:60:ASN:C	42:YW:61:ASN:HD22	2.03	0.62
3:QC:111:LEU:HD21	3:QC:144:SER:O	2.00	0.61
5:QE:91:LEU:HA	5:QE:120:THR:HG22	1.81	0.61
8:QH:29:SER:HB3	8:QH:32:LYS:CG	2.22	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:29:ARG:HG2	10:QJ:29:ARG:O	2.00	0.61
13:QM:66:LEU:HA	13:QM:70:LEU:HD23	1.81	0.61
14:QN:18:VAL:HG23	14:QN:19:ARG:N	2.14	0.61
16:QP:66:PRO:HG2	16:QP:71:ARG:HH12	1.64	0.61
19:QS:11:VAL:O	19:QS:12:ASP:HB2	1.99	0.61
52:R6:44:ARG:O	52:R6:45:LYS:HB2	2.00	0.61
25:RA:128:C:H4'	53:R7:49:ARG:HH12	1.65	0.61
25:RA:1022:G:H22	25:RA:1142(A):A:H2	1.46	0.61
25:RA:1639:U:H2'	25:RA:1640:C:H5''	1.81	0.61
25:RA:319:C:H2'	25:RA:320:A:C8	2.35	0.61
25:RA:363(B):G:H2'	25:RA:363(C):G:C8	2.33	0.61
27:RD:237:GLU:OE1	27:RD:237:GLU:CA	2.48	0.61
27:RD:27:THR:O	27:RD:29:PRO:HD2	1.99	0.61
27:RD:72:LYS:HE3	27:RD:75:ILE:HD12	1.82	0.61
30:RG:9:ARG:HG2	30:RG:13:GLU:OE1	2.00	0.61
35:RP:50:ARG:CB	35:RP:50:ARG:NH2	2.57	0.61
37:RR:38:VAL:HB	37:RR:39:PRO:HD3	1.81	0.61
38:RS:26:LEU:HD12	38:RS:39:ILE:CD1	2.23	0.61
44:RY:87:LYS:O	44:RY:88:LYS:NZ	2.32	0.61
1:XA:1347:G:N2	1:XA:1373:G:H2'	2.15	0.61
2:XB:194:PRO:HG2	2:XB:195:ASP:H	1.64	0.61
3:XC:3:ASN:N	3:XC:3:ASN:ND2	2.47	0.61
4:XD:79:PHE:CD2	4:XD:79:PHE:C	2.71	0.61
9:XI:59:PHE:HZ	9:XI:88:TYR:CE1	2.17	0.61
16:XP:20:VAL:HG21	16:XP:32:TYR:CD2	2.35	0.61
16:XP:4:ILE:HG13	16:XP:21:VAL:CG1	2.29	0.61
25:YA:946:G:H2'	25:YA:947:G:O4'	2.00	0.61
28:YE:35:GLN:HG2	28:YE:37:ARG:NE	2.14	0.61
35:YP:108:LYS:H	35:YP:108:LYS:HD2	1.64	0.61
36:YQ:88:GLY:C	36:YQ:90:VAL:H	2.02	0.61
40:YU:102:GLU:HG3	41:YV:2:PHE:CE2	2.34	0.61
11:QK:121:PRO:HD2	11:QK:126:ARG:HD3	1.82	0.61
13:QM:69:GLU:O	13:QM:72:ALA:N	2.32	0.61
19:QS:2:PRO:HB2	50:R4:68:ARG:HH22	1.65	0.61
28:RE:201:THR:HG22	28:RE:203:LYS:N	2.07	0.61
30:RG:170:ARG:O	30:RG:174:GLU:HB2	2.00	0.61
32:RI:71:ILE:O	32:RI:71:ILE:HG12	2.00	0.61
33:RN:62:VAL:CG1	33:RN:66:LYS:HD2	2.29	0.61
35:RP:64:LYS:HB2	54:R8:25:MET:HG3	1.81	0.61
25:RA:2277:G:H5'	36:RQ:85:LYS:HG3	1.81	0.61
44:RY:101:LYS:HE3	44:RY:102:CYS:SG	2.40	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:58:C:O2'	1:XA:388:G:N7	2.29	0.61
5:XE:51:VAL:HB	5:XE:52:PRO:CD	2.31	0.61
7:XG:15:ASP:O	7:XG:19:GLY:HA2	2.00	0.61
47:Y1:73:LEU:C	47:Y1:75:GLU:H	2.03	0.61
47:Y1:76:ARG:HD2	47:Y1:76:ARG:H	1.64	0.61
54:Y8:22:VAL:HG21	54:Y8:53:PRO:HB2	1.82	0.61
26:YB:111:U:H2'	26:YB:112:G:C8	2.35	0.61
29:YF:32:LEU:CD1	29:YF:105:VAL:HG13	2.29	0.61
1:QA:1202:G:H1'	14:QN:29:ARG:HD2	1.81	0.61
1:QA:328:C:H4'	1:QA:329:A:H5'	1.81	0.61
2:QB:108:ILE:O	2:QB:111:ARG:HB2	2.01	0.61
4:QD:162:LEU:CD1	4:QD:181:MET:HB3	2.31	0.61
12:QL:48:PRO:CD	12:QL:49:ASN:H	2.10	0.61
47:R1:80:LEU:O	47:R1:81:LYS:HD2	2.00	0.61
50:R4:23:GLU:O	50:R4:25:TYR:N	2.33	0.61
50:R4:71:ARG:NH1	50:R4:71:ARG:CG	2.61	0.61
31:RH:152:ARG:O	31:RH:153:LYS:CD	2.48	0.61
34:RO:97:ARG:N	34:RO:117:LEU:HD22	2.15	0.61
44:RY:48:ALA:HB2	44:RY:61:ILE:HD13	1.82	0.61
30:YG:6:ALA:HB2	50:Y4:23:GLU:OE2	1.99	0.61
27:YD:70:TRP:CH2	27:YD:150:LYS:HA	2.35	0.61
36:YQ:2:LEU:HD23	36:YQ:2:LEU:H	1.65	0.61
36:YQ:54:MET:O	36:YQ:57:HIS:HB3	2.00	0.61
36:YQ:66:ILE:CG1	36:YQ:67:ARG:H	2.12	0.61
36:YQ:86:GLY:C	36:YQ:88:GLY:N	2.52	0.61
39:YT:24:PRO:O	39:YT:94:ALA:HB2	1.99	0.61
39:YT:31:SER:HA	39:YT:44:ASP:OD2	2.00	0.61
45:YZ:132:ASN:HB2	45:YZ:160:GLY:HA3	1.83	0.61
7:QG:15:ASP:O	7:QG:19:GLY:HA2	2.00	0.61
25:RA:530:G:C5	25:RA:2022:U:H5''	2.35	0.61
25:RA:2397:G:H2'	25:RA:2398:U:H6	1.66	0.61
27:RD:35:LYS:HA	27:RD:64:ILE:HG22	1.81	0.61
25:RA:871:U:H4'	36:RQ:69:PHE:CE2	2.35	0.61
36:RQ:80:GLU:HG2	46:R0:5:LYS:CB	2.23	0.61
45:RZ:154:ASP:O	45:RZ:155:LEU:HD22	2.01	0.61
1:XA:1213:A:N6	1:XA:1215:G:N3	2.48	0.61
1:XA:1286:A:H2'	1:XA:1287:A:H4'	1.81	0.61
1:XA:1391:U:H2'	1:XA:1392:G:C8	2.35	0.61
1:XA:501:C:H2'	1:XA:502:G:H8	1.65	0.61
2:XB:108:ILE:O	2:XB:111:ARG:HB2	2.00	0.61
3:XC:189:ALA:O	3:XC:191:THR:HG23	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:131:ILE:O	5:XE:134:ALA:HB3	2.01	0.61
6:XF:77:ARG:NH1	6:XF:77:ARG:HB2	2.15	0.61
9:XI:28:VAL:HG13	9:XI:63:ILE:HG22	1.83	0.61
15:XO:61:GLY:C	15:XO:65:ARG:HH12	2.02	0.61
15:XO:74:ASP:OD1	15:XO:77:ARG:HG2	2.00	0.61
19:XS:11:VAL:O	19:XS:12:ASP:HB2	1.99	0.61
20:XT:34:LYS:O	20:XT:38:LYS:HB2	2.01	0.61
21:XU:15:ARG:HG2	21:XU:15:ARG:HH11	1.63	0.61
50:Y4:23:GLU:O	50:Y4:25:TYR:N	2.33	0.61
25:YA:1228:G:OP2	40:YU:16:LYS:NZ	2.26	0.61
25:YA:2086:U:H2'	25:YA:2087:G:C8	2.35	0.61
25:YA:2134:A:OP2	25:YA:2157:G:N2	2.33	0.61
25:YA:628:G:HO2'	25:YA:651:G:HO2'	1.47	0.61
27:YD:2:ALA:HB3	27:YD:20:ASP:HB3	1.83	0.61
31:YH:6:ARG:HG3	31:YH:7:LEU:N	2.15	0.61
33:YN:62:VAL:CG1	33:YN:66:LYS:HD2	2.29	0.61
38:YS:17:ARG:HG3	38:YS:18:ILE:N	2.14	0.61
38:YS:49:VAL:HG22	38:YS:80:LEU:HD12	1.82	0.61
41:YV:46:VAL:HG13	41:YV:46:VAL:O	2.01	0.61
43:YX:15:GLU:OE1	43:YX:15:GLU:N	2.34	0.61
44:YY:44:ILE:HG13	44:YY:45:VAL:H	1.64	0.61
1:QA:34:C:H2'	1:QA:35:G:C8	2.35	0.61
7:QG:113:GLU:CB	7:QG:119:ARG:HG2	2.29	0.61
15:QO:68:ARG:O	15:QO:72:ARG:HB2	2.01	0.61
48:R2:41:ILE:HD11	48:R2:44:LEU:HG	1.82	0.61
52:R6:25:LYS:HD2	54:R8:34:TRP:CZ2	2.36	0.61
25:RA:1359:A:H61	25:RA:1372:U:H3	1.49	0.61
27:RD:133:LEU:HD21	27:RD:191:ALA:HB2	1.82	0.61
32:RI:115:ALA:CB	32:RI:128:LEU:HD11	2.29	0.61
35:RP:106:LEU:O	35:RP:107:LYS:CB	2.46	0.61
38:RS:88:ASP:O	38:RS:89:ARG:CB	2.49	0.61
40:RU:92:ARG:HD3	40:RU:94:ASN:HB3	1.83	0.61
42:RW:5:ALA:O	42:RW:50:VAL:HG13	2.00	0.61
1:XA:491:G:H2'	1:XA:492:G:H8	1.64	0.61
1:XA:501:C:H2'	1:XA:502:G:C8	2.35	0.61
2:XB:17:PHE:CD2	2:XB:44:LEU:HD11	2.36	0.61
15:XO:68:ARG:O	15:XO:72:ARG:HB2	2.00	0.61
25:YA:2023:G:H5'	25:YA:2617:C:H4'	1.83	0.61
25:YA:27:G:N2	25:YA:512:G:H2'	2.14	0.61
25:YA:581:C:H2'	25:YA:582:G:C8	2.36	0.61
27:YD:137:PRO:HB2	27:YD:140:THR:HG23	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:227:ASN:CB	27:YD:228:PRO:HD2	2.24	0.61
27:YD:27:THR:O	27:YD:29:PRO:HD2	1.99	0.61
42:YW:5:ALA:O	42:YW:50:VAL:HG13	2.00	0.61
1:QA:500:G:H2'	1:QA:501:C:C6	2.36	0.61
10:QJ:34:VAL:CG2	10:QJ:74:ILE:HG22	2.30	0.61
11:QK:12:ARG:HG2	11:QK:13:GLN:H	1.64	0.61
13:QM:36:LYS:C	13:QM:36:LYS:HD3	2.20	0.61
49:R3:29:ARG:CB	49:R3:29:ARG:HH11	2.13	0.61
30:RG:142:PRO:HB2	50:R4:31:ILE:CD1	2.30	0.61
54:R8:29:LYS:HD3	54:R8:44:LYS:CB	2.30	0.61
25:RA:153:C:P	47:R1:88:LYS:HE2	2.40	0.61
25:RA:2822:G:O2'	25:RA:2825:C:N4	2.31	0.61
25:RA:660:G:O3'	29:RF:38:ARG:NH2	2.33	0.61
26:RB:65:C:N4	26:RB:108:C:H2'	2.15	0.61
32:RI:77:LEU:C	32:RI:77:LEU:HD12	2.21	0.61
33:RN:7:LYS:CD	33:RN:9:VAL:H	2.14	0.61
33:RN:96:GLU:CG	33:RN:97:ARG:H	2.00	0.61
42:RW:82:LEU:HB2	42:RW:98:LYS:HB2	1.82	0.61
43:RX:66:LEU:O	43:RX:66:LEU:HD23	2.01	0.61
1:XA:1023:G:H3'	1:XA:1024:G:H5''	1.82	0.61
6:XF:10:LEU:HD13	6:XF:61:LEU:CD1	2.30	0.61
7:XG:140:ASP:C	7:XG:142:GLU:H	2.03	0.61
11:XK:121:PRO:HD2	11:XK:126:ARG:HD3	1.82	0.61
12:XL:126:LYS:C	12:XL:128:ALA:H	2.04	0.61
13:XM:121:LYS:NZ	24:XY:39:C:HO2'	1.98	0.61
48:Y2:41:ILE:HD11	48:Y2:44:LEU:HG	1.82	0.61
30:YG:77:ILE:HD13	30:YG:82:LEU:CD1	2.29	0.61
32:YI:116:LEU:HG	32:YI:116:LEU:O	2.00	0.61
33:YN:96:GLU:O	33:YN:98:VAL:N	2.33	0.61
37:YR:44:LEU:HD22	37:YR:48:VAL:HG23	1.82	0.61
8:QH:39:LEU:O	8:QH:45:ILE:HG12	2.01	0.61
10:QJ:98:ILE:N	10:QJ:98:ILE:HD12	2.16	0.61
50:R4:35:VAL:O	50:R4:37:SER:N	2.26	0.61
52:R6:41:PRO:HD2	52:R6:46:HIS:N	2.16	0.61
25:RA:2418:A:H2'	25:RA:2419:U:C6	2.36	0.61
25:RA:345:A:O2'	25:RA:346:A:N7	2.30	0.61
25:RA:698:C:O2'	25:RA:734:A:N6	2.34	0.61
34:RO:104:ARG:CZ	39:RT:34:VAL:HG11	2.29	0.61
35:RP:65:ARG:HE	54:R8:15:LYS:HB2	1.65	0.61
41:RV:46:VAL:HG13	41:RV:46:VAL:O	2.01	0.61
42:RW:65:LEU:HD12	42:RW:68:ARG:NH1	2.10	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:598:U:H4'	8:XH:94:TYR:CD2	2.35	0.61
4:XD:12:CYS:HB2	4:XD:31:CYS:O	2.01	0.61
4:XD:149:ALA:HB3	4:XD:152:SER:HB2	1.82	0.61
6:XF:69:GLU:O	6:XF:72:VAL:HG12	2.01	0.61
10:XJ:34:VAL:CG2	10:XJ:74:ILE:HG22	2.30	0.61
13:XM:117:VAL:HG22	13:XM:118:ALA:N	2.15	0.61
16:XP:20:VAL:HG22	16:XP:21:VAL:N	2.16	0.61
13:XM:121:LYS:CE	24:XY:40:G:OP1	2.49	0.61
49:Y3:5:LYS:HB2	49:Y3:36:VAL:HG12	1.82	0.61
25:YA:747:U:C4	51:Y5:2:ALA:N	2.69	0.61
52:Y6:18:ARG:O	52:Y6:18:ARG:HD2	2.00	0.61
52:Y6:7:ILE:HG13	52:Y6:8:LYS:N	2.06	0.61
54:Y8:29:LYS:HD3	54:Y8:44:LYS:CB	2.30	0.61
27:YD:25:THR:HG21	27:YD:81:ALA:CA	2.31	0.61
27:YD:35:LYS:HE3	27:YD:64:ILE:C	2.21	0.61
28:YE:95:ILE:N	28:YE:95:ILE:HD12	2.15	0.61
29:YF:164:ARG:HG2	29:YF:164:ARG:HH11	1.66	0.61
25:YA:2311:A:C8	30:YG:82:LEU:HD11	2.35	0.61
32:YI:77:LEU:C	32:YI:77:LEU:HD12	2.21	0.61
33:YN:7:LYS:CD	33:YN:9:VAL:H	2.13	0.61
34:YO:8:LEU:HB2	34:YO:19:ILE:HD11	1.81	0.61
34:YO:78:ARG:HH21	39:YT:103:ARG:NH2	1.98	0.61
34:YO:91:LEU:HD22	34:YO:91:LEU:N	2.16	0.61
35:YP:96:THR:HG22	35:YP:126:VAL:HB	1.82	0.61
38:YS:89:ARG:O	38:YS:90:GLY:O	2.19	0.61
45:YZ:73:GLN:HB3	45:YZ:87:ASP:OD1	2.01	0.61
1:QA:475:G:H2'	1:QA:476:G:C8	2.35	0.61
4:QD:129:ASN:HA	4:QD:145:GLU:HB2	1.82	0.61
4:QD:90:GLY:CA	4:QD:204:ILE:HD11	2.30	0.61
16:QP:4:ILE:HG13	16:QP:21:VAL:CG1	2.29	0.61
17:QQ:65:ILE:HD12	17:QQ:65:ILE:N	2.15	0.61
17:QQ:67:LYS:HA	17:QQ:70:ARG:NH1	2.15	0.61
20:QT:84:LEU:O	20:QT:88:VAL:HG23	2.01	0.61
25:RA:1497:U:H5''	25:RA:1498:C:H5	1.66	0.61
25:RA:2227:A:H5''	27:RD:263:ARG:NH1	2.15	0.61
25:RA:291:C:H42	25:RA:349:G:H1	1.47	0.61
25:RA:985:C:H2'	25:RA:986:C:H6	1.66	0.61
27:RD:174:ILE:N	27:RD:174:ILE:HD12	2.16	0.61
27:RD:35:LYS:HG2	27:RD:64:ILE:CG2	2.31	0.61
29:RF:63:LYS:HE2	29:RF:67:GLN:HB3	1.83	0.61
36:RQ:2:LEU:HD23	36:RQ:2:LEU:H	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:88:GLY:C	36:RQ:90:VAL:H	2.02	0.61
40:RU:69:CYS:HB3	40:RU:106:PHE:CZ	2.36	0.61
2:XB:178:ARG:NH2	8:XH:74:PRO:HG3	2.16	0.61
3:XC:13:GLY:HA3	14:XN:57:ARG:CZ	2.31	0.61
3:XC:88:ARG:NH1	3:XC:101:LEU:H	1.98	0.61
4:XD:196:LEU:C	4:XD:198:VAL:H	2.02	0.61
8:XH:102:ARG:HH11	8:XH:105:ARG:NH2	1.99	0.61
12:XL:85:ILE:HD11	12:XL:98:TYR:HB2	1.81	0.61
13:XM:96:LEU:HB3	13:XM:97:PRO:HD2	1.83	0.61
15:XO:26:GLU:CD	15:XO:77:ARG:HH12	2.03	0.61
49:Y3:59:VAL:HG12	49:Y3:60:GLU:N	2.16	0.61
13:XM:77:ASN:HA	50:Y4:71:ARG:NH2	2.15	0.61
25:YA:714:U:O2'	25:YA:716:A:N7	2.29	0.61
27:YD:133:LEU:HD21	27:YD:191:ALA:HB2	1.82	0.61
28:YE:35:GLN:CG	28:YE:37:ARG:HE	2.11	0.61
31:YH:137:ASP:HB3	31:YH:140:LYS:HB2	1.81	0.61
31:YH:152:ARG:O	31:YH:153:LYS:CD	2.48	0.61
32:YI:67:ARG:O	32:YI:71:ILE:HG22	2.01	0.61
36:YQ:20:ALA:HB1	36:YQ:99:PRO:CD	2.29	0.61
37:YR:38:VAL:HB	37:YR:39:PRO:HD3	1.81	0.61
43:YX:14:SER:O	43:YX:17:ALA:N	2.34	0.61
43:YX:66:LEU:O	43:YX:66:LEU:HD23	2.01	0.61
2:QB:115:LEU:CD2	2:QB:153:ARG:HD3	2.30	0.61
3:QC:70:VAL:O	3:QC:106:VAL:HG23	2.01	0.61
4:QD:149:ALA:HB3	4:QD:152:SER:HB2	1.82	0.61
6:QF:98:LEU:O	6:QF:98:LEU:HD12	2.01	0.61
13:QM:9:ILE:O	13:QM:9:ILE:HD12	2.01	0.61
16:QP:8:ARG:HG2	16:QP:8:ARG:HH11	1.64	0.61
49:R3:59:VAL:HG12	49:R3:60:GLU:N	2.16	0.61
25:RA:1385:G:H4'	25:RA:1386:C:OP1	2.01	0.61
25:RA:2051:A:OP1	28:RE:137:HIS:ND1	2.30	0.61
27:RD:21:PHE:HB3	27:RD:24:ILE:HG13	1.83	0.61
30:RG:28:VAL:O	30:RG:31:VAL:HG12	2.01	0.61
31:RH:6:ARG:HG3	31:RH:7:LEU:N	2.15	0.61
32:RI:74:ASN:ND2	32:RI:74:ASN:H	1.97	0.61
33:RN:23:LEU:HD12	33:RN:99:LEU:HD23	1.82	0.61
37:RR:52:ILE:O	37:RR:55:ALA:HB3	2.01	0.61
38:RS:49:VAL:HG22	38:RS:80:LEU:HD12	1.82	0.61
2:XB:21:ARG:HG3	2:XB:38:GLY:O	2.01	0.61
3:XC:141:VAL:O	3:XC:146:ALA:HB3	2.01	0.61
4:XD:106:TYR:HE1	4:XD:112:VAL:O	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:162:LEU:CD1	4:XD:181:MET:HB3	2.31	0.61
7:XG:79:ARG:HH11	7:XG:79:ARG:HG2	1.66	0.61
9:XI:13:ALA:HB2	9:XI:67:GLY:O	1.99	0.61
52:Y6:41:PRO:HD2	52:Y6:46:HIS:N	2.16	0.61
25:YA:2637:U:H5''	28:YE:82:ARG:HH21	1.65	0.61
25:YA:27:G:H22	25:YA:512:G:H2'	1.65	0.61
27:YD:147:LEU:CD1	27:YD:155:LEU:HD11	2.26	0.61
28:YE:52:LEU:HB3	28:YE:54:GLN:OE1	2.00	0.61
25:YA:674:G:C1'	29:YF:74:ARG:HD3	2.28	0.61
30:YG:44:GLY:HA2	30:YG:88:ILE:CG1	2.30	0.61
32:YI:8:PRO:O	32:YI:9:LEU:HB3	1.99	0.61
33:YN:17:ASP:O	33:YN:18:ALA:HB3	2.01	0.61
40:YU:88:ILE:CD1	40:YU:88:ILE:H	2.05	0.61
42:YW:28:SER:O	42:YW:31:GLU:N	2.34	0.61
44:YY:19:LYS:HG3	44:YY:19:LYS:O	2.01	0.61
1:QA:701:C:H4'	1:QA:702:A:H5''	1.83	0.61
2:QB:60:ASP:O	2:QB:64:ARG:HG2	2.01	0.61
4:QD:146:ILE:H	4:QD:146:ILE:HD12	1.66	0.61
11:QK:41:THR:HG21	11:QK:71:LYS:HB2	1.83	0.61
11:QK:78:GLN:O	11:QK:103:LEU:HA	2.00	0.61
12:QL:126:LYS:C	12:QL:128:ALA:H	2.04	0.61
20:QT:101:GLY:O	20:QT:103:GLY:N	2.34	0.61
49:R3:5:LYS:HB2	49:R3:36:VAL:HG12	1.82	0.61
51:R5:52:TYR:O	51:R5:53:ALA:HB3	2.01	0.61
25:RA:1056:G:O2'	25:RA:1086:A:O2'	2.18	0.61
33:RN:6:PRO:HG3	33:RN:41:ASP:HB2	1.83	0.61
34:RO:91:LEU:N	34:RO:91:LEU:HD22	2.16	0.61
35:RP:96:THR:HG22	35:RP:126:VAL:HB	1.82	0.61
25:RA:1030:G:OP2	36:RQ:128:LYS:HE2	2.00	0.61
4:XD:196:LEU:N	4:XD:196:LEU:HD12	2.15	0.61
8:XH:118:VAL:C	8:XH:119:LEU:HD23	2.21	0.61
17:XQ:67:LYS:HA	17:XQ:70:ARG:NH1	2.15	0.61
50:Y4:71:ARG:CG	50:Y4:71:ARG:NH1	2.61	0.61
25:YA:900:A:H5'	25:YA:901:A:OP2	2.01	0.61
27:YD:237:GLU:CA	27:YD:237:GLU:OE1	2.48	0.61
29:YF:119:ARG:HH11	29:YF:119:ARG:HG2	1.64	0.61
25:YA:617:G:OP1	29:YF:40:GLN:NE2	2.34	0.61
45:YZ:124:ILE:HD11	45:YZ:165:VAL:HG21	1.82	0.61
1:QA:15:G:H4'	5:QE:24:ARG:NH1	2.16	0.60
2:QB:141:GLU:O	2:QB:145:LEU:HD23	2.01	0.60
2:QB:194:PRO:HG2	2:QB:195:ASP:H	1.64	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:80:ILE:CD1	2:QB:208:ILE:HG23	2.22	0.60
2:QB:17:PHE:CD2	2:QB:44:LEU:HD11	2.36	0.60
3:QC:47:LEU:O	3:QC:52:LEU:HD22	2.01	0.60
6:QF:69:GLU:O	6:QF:72:VAL:HG12	2.01	0.60
11:QK:99:GLN:HG2	11:QK:105:VAL:CG2	2.29	0.60
16:QP:20:VAL:HG21	16:QP:32:TYR:CD2	2.35	0.60
19:QS:5:LEU:HD21	50:R4:66:SER:HB2	1.83	0.60
47:R1:80:LEU:C	47:R1:81:LYS:CD	2.69	0.60
25:RA:2427:C:H5''	25:RA:2429:G:H5'	1.83	0.60
25:RA:993:G:OP1	40:RU:50:ARG:NH1	2.34	0.60
28:RE:52:LEU:HB3	28:RE:54:GLN:OE1	2.00	0.60
33:RN:58:ASP:N	33:RN:60:ILE:HD11	2.16	0.60
41:RV:35:LEU:HD23	41:RV:35:LEU:O	2.01	0.60
42:RW:28:SER:O	42:RW:31:GLU:N	2.34	0.60
43:RX:14:SER:O	43:RX:17:ALA:N	2.34	0.60
1:XA:1147:C:O2	9:XI:16:ARG:NH1	2.33	0.60
1:XA:177:C:H5''	20:XT:65:LYS:NZ	2.16	0.60
4:XD:146:ILE:H	4:XD:146:ILE:HD12	1.66	0.60
6:XF:45:LEU:HD12	6:XF:59:TYR:HD1	1.66	0.60
13:XM:97:PRO:HB2	13:XM:101:GLN:HE22	1.65	0.60
14:XN:42:ILE:O	14:XN:43:CYS:C	2.39	0.60
18:XR:25:THR:HG22	18:XR:25:THR:O	2.00	0.60
25:YA:1992:G:H5'	25:YA:1994:C:H41	1.66	0.60
25:YA:565:C:H2'	25:YA:566:U:O4'	2.00	0.60
27:YD:263:ARG:CB	27:YD:263:ARG:HH11	2.14	0.60
27:YD:35:LYS:NZ	27:YD:65:ILE:HA	2.15	0.60
27:YD:54:ARG:HH11	27:YD:54:ARG:CG	2.14	0.60
28:YE:131:ALA:HB1	28:YE:135:HIS:HE1	1.65	0.60
28:YE:53:PRO:HG2	28:YE:54:GLN:NE2	2.16	0.60
32:YI:124:GLY:H	32:YI:142:VAL:HG23	1.65	0.60
32:YI:21:VAL:HG22	32:YI:22:LYS:N	2.16	0.60
33:YN:99:LEU:O	33:YN:103:VAL:HG23	2.01	0.60
35:YP:27:HIS:N	35:YP:27:HIS:ND1	2.49	0.60
36:YQ:66:ILE:CG1	36:YQ:67:ARG:N	2.64	0.60
39:YT:34:VAL:HG12	39:YT:36:GLU:HG2	1.83	0.60
41:YV:41:GLY:H	41:YV:46:VAL:HG13	1.66	0.60
42:YW:82:LEU:HB2	42:YW:98:LYS:HB2	1.82	0.60
1:QA:538:G:OP1	12:QL:113:ARG:HD2	2.01	0.60
2:QB:132:LYS:HA	2:QB:135:GLN:CD	2.22	0.60
3:QC:3:ASN:N	3:QC:3:ASN:ND2	2.48	0.60
3:QC:88:ARG:NH1	3:QC:101:LEU:H	1.98	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:88:ARG:O	3:QC:99:VAL:HG21	2.01	0.60
4:QD:96:LEU:H	4:QD:96:LEU:CD2	2.11	0.60
8:QH:49:GLU:O	8:QH:51:VAL:HG13	2.02	0.60
15:QO:74:ASP:OD1	15:QO:77:ARG:HG2	2.00	0.60
12:QL:11:VAL:HG21	17:QQ:34:LYS:HD3	1.84	0.60
19:QS:12:ASP:OD1	19:QS:37:ARG:HD2	2.00	0.60
20:QT:34:LYS:O	20:QT:38:LYS:HB2	2.01	0.60
25:RA:1050:A:H2'	25:RA:1051:G:O4'	2.01	0.60
25:RA:2343:C:H2'	25:RA:2344:U:H6	1.65	0.60
25:RA:247:G:H4'	25:RA:386:G:C5	2.37	0.60
25:RA:310:A:O2'	25:RA:311:A:H2'	2.01	0.60
25:RA:83:G:O2'	25:RA:84:A:O5'	2.19	0.60
29:RF:175:THR:O	29:RF:176:LEU:CB	2.49	0.60
31:RH:44:VAL:O	31:RH:44:VAL:HG22	2.01	0.60
36:RQ:66:ILE:CG1	36:RQ:67:ARG:N	2.64	0.60
41:RV:15:GLU:HG3	41:RV:16:PRO:HD2	1.83	0.60
1:XA:1106:G:H5''	3:XC:172:ARG:HG2	1.82	0.60
3:XC:47:LEU:O	3:XC:52:LEU:HD22	2.01	0.60
4:XD:12:CYS:HA	4:XD:19:LEU:CD2	2.31	0.60
5:XE:43:LEU:HD21	5:XE:132:ALA:HB1	1.82	0.60
8:XH:23:SER:HA	8:XH:63:LEU:CD2	2.24	0.60
1:XA:677:U:H1'	11:XK:119:CYS:SG	2.41	0.60
11:XK:78:GLN:O	11:XK:103:LEU:HA	2.00	0.60
19:XS:16:LEU:O	19:XS:20:LEU:HG	2.01	0.60
46:Y0:3:HIS:HD2	46:Y0:4:LYS:CA	2.13	0.60
25:YA:137(A):G:N3	43:YX:41:ASN:ND2	2.47	0.60
25:YA:451:C:H4'	29:YF:52:LYS:NZ	2.16	0.60
28:YE:37:ARG:CA	28:YE:37:ARG:NE	2.64	0.60
32:YI:74:ASN:ND2	32:YI:74:ASN:H	1.97	0.60
29:YF:34:TRP:CZ3	35:YP:8:PRO:HB3	2.36	0.60
44:YY:101:LYS:HE3	44:YY:102:CYS:SG	2.40	0.60
1:QA:939:G:H5''	7:QG:102:ARG:HH22	1.66	0.60
1:QA:960:U:O2	1:QA:960:U:H2'	2.00	0.60
4:QD:196:LEU:HD12	4:QD:196:LEU:N	2.15	0.60
4:QD:90:GLY:HA2	4:QD:204:ILE:HD11	1.83	0.60
13:QM:62:ASN:CG	50:R4:49:PHE:HD2	2.03	0.60
16:QP:40:ASP:OD2	16:QP:42:ARG:HB2	2.02	0.60
48:R2:70:GLN:O	48:R2:71:ASN:HB2	2.00	0.60
25:RA:2439:A:H5'	25:RA:2439:A:H8	1.65	0.60
25:RA:2790:A:H2'	25:RA:2791:C:H5''	1.83	0.60
25:RA:593:G:H2'	25:RA:594:U:C6	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:35:LYS:NZ	27:RD:65:ILE:HA	2.15	0.60
33:RN:17:ASP:O	33:RN:18:ALA:HB3	2.01	0.60
41:RV:66:ARG:HH12	41:RV:88:ARG:HH11	1.49	0.60
45:RZ:144:LEU:HD21	45:RZ:150:LEU:HD22	1.83	0.60
3:XC:70:VAL:HG12	3:XC:72:LYS:N	2.11	0.60
6:XF:98:LEU:HD12	6:XF:98:LEU:O	2.01	0.60
8:XH:49:GLU:O	8:XH:51:VAL:HG13	2.02	0.60
8:XH:6:ILE:HB	8:XH:85:ARG:HH12	1.62	0.60
25:YA:330:A:O2'	25:YA:331:A:H8	1.83	0.60
32:YI:35:LEU:O	32:YI:36:ALA:HB2	2.01	0.60
45:YZ:113:ALA:O	45:YZ:114:GLY:C	2.40	0.60
1:QA:1120:G:H2'	1:QA:1121:U:C6	2.36	0.60
1:QA:1305:G:N2	1:QA:1331:G:H2'	2.16	0.60
1:QA:1348:U:H3	1:QA:1374:A:H2	1.50	0.60
5:QE:43:LEU:HD21	5:QE:132:ALA:HB1	1.82	0.60
8:QH:118:VAL:C	8:QH:119:LEU:HD23	2.22	0.60
9:QI:3:GLN:HB3	9:QI:20:ARG:HG2	1.82	0.60
10:QJ:32:ALA:H	10:QJ:78:ASN:HD21	1.49	0.60
14:QN:39:LEU:CD2	14:QN:43:CYS:HG	2.02	0.60
16:QP:20:VAL:HG22	16:QP:21:VAL:N	2.16	0.60
25:RA:2392:A:H2	25:RA:2424:C:H42	1.48	0.60
25:RA:262:A:H2'	25:RA:263:C:O4'	2.01	0.60
25:RA:910:A:N3	25:RA:2264:C:O2'	2.33	0.60
28:RE:4:ILE:CD1	28:RE:28:ALA:HB1	2.29	0.60
31:RH:126:PRO:CD	31:RH:127:GLU:N	2.65	0.60
32:RI:2:LYS:HB3	32:RI:20:ASP:HB3	1.82	0.60
34:RO:104:ARG:HG2	34:RO:104:ARG:NH1	2.14	0.60
36:RQ:54:MET:O	36:RQ:57:HIS:HB3	2.00	0.60
36:RQ:80:GLU:C	36:RQ:81:VAL:HG13	2.22	0.60
36:RQ:86:GLY:C	36:RQ:88:GLY:N	2.52	0.60
44:RY:19:LYS:HG3	44:RY:19:LYS:O	2.01	0.60
44:RY:44:ILE:HG13	44:RY:45:VAL:H	1.65	0.60
1:XA:538:G:OP1	12:XL:113:ARG:HD2	2.01	0.60
2:XB:132:LYS:HA	2:XB:135:GLN:CD	2.22	0.60
2:XB:221:LEU:HD13	2:XB:221:LEU:O	2.02	0.60
4:XD:90:GLY:CA	4:XD:204:ILE:HD11	2.31	0.60
5:XE:79:GLU:HB3	5:XE:92:LYS:HA	1.84	0.60
6:XF:61:LEU:HB3	6:XF:63:TYR:HE2	1.67	0.60
47:Y1:3:LYS:HD3	47:Y1:43:TYR:CD2	2.35	0.60
51:Y5:52:TYR:O	51:Y5:53:ALA:HB3	2.02	0.60
52:Y6:13:CYS:O	52:Y6:21:TYR:HA	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1914:C:H2'	25:YA:1915:U:O4'	2.00	0.60
25:YA:784:A:N7	27:YD:229:VAL:HG21	2.16	0.60
27:YD:35:LYS:NZ	27:YD:64:ILE:O	2.32	0.60
30:YG:28:VAL:O	30:YG:31:VAL:HG12	2.01	0.60
31:YH:44:VAL:O	31:YH:44:VAL:HG22	2.01	0.60
32:YI:110:ASP:HB3	32:YI:112:LYS:N	2.16	0.60
33:YN:16:ILE:O	33:YN:55:VAL:HG22	2.01	0.60
35:YP:13:ASN:O	35:YP:15:ARG:N	2.34	0.60
38:YS:99:LYS:O	38:YS:102:ALA:N	2.34	0.60
40:YU:69:CYS:HB3	40:YU:106:PHE:CZ	2.36	0.60
25:YA:2011:U:OP2	42:YW:16:LYS:NZ	2.34	0.60
42:YW:36:LEU:HD11	42:YW:47:VAL:HG12	1.83	0.60
45:YZ:113:ALA:O	45:YZ:115:GLY:N	2.34	0.60
45:YZ:158:PRO:CB	45:YZ:159:PRO:HD2	2.29	0.60
1:QA:1175:G:H2'	1:QA:1176:A:C8	2.36	0.60
1:QA:191:G:O2'	20:QT:101:GLY:O	2.19	0.60
2:QB:114:ARG:O	2:QB:117:GLU:HB2	2.01	0.60
2:QB:221:LEU:O	2:QB:221:LEU:HD13	2.02	0.60
3:QC:130:VAL:O	3:QC:134:ILE:HG12	2.01	0.60
6:QF:61:LEU:HB3	6:QF:63:TYR:HE2	1.67	0.60
8:QH:58:TYR:O	8:QH:59:LEU:HD23	2.00	0.60
9:QI:114:TYR:O	9:QI:114:TYR:HD2	1.85	0.60
9:QI:28:VAL:HG13	9:QI:63:ILE:HG22	1.83	0.60
46:R0:2:ALA:HB1	46:R0:3:HIS:HD2	1.59	0.60
47:R1:73:LEU:C	47:R1:75:GLU:H	2.03	0.60
25:RA:2183:C:H2'	25:RA:2184:G:H8	1.67	0.60
25:RA:486:C:H4'	42:RW:60:ASN:OD1	2.02	0.60
27:RD:263:ARG:CB	27:RD:263:ARG:HH11	2.14	0.60
25:RA:586:A:H5'	29:RF:89:VAL:HG21	1.82	0.60
30:RG:50:ALA:O	30:RG:53:LEU:HB3	2.01	0.60
35:RP:55:ARG:HD2	35:RP:56:SER:O	2.01	0.60
40:RU:96:ALA:C	40:RU:98:LEU:H	2.04	0.60
43:RX:43:VAL:CG1	43:RX:51:VAL:HG21	2.32	0.60
45:RZ:113:ALA:O	45:RZ:115:GLY:N	2.34	0.60
1:XA:369:C:OP2	1:XA:388:G:N2	2.34	0.60
4:XD:90:GLY:HA2	4:XD:204:ILE:HD11	1.83	0.60
9:XI:3:GLN:HB3	9:XI:20:ARG:HG2	1.82	0.60
12:XL:5:PRO:HA	12:XL:9:GLN:NE2	2.16	0.60
13:XM:37:THR:CG2	13:XM:39:ILE:HD11	2.32	0.60
13:XM:40:ASN:HD21	13:XM:42:ALA:HB3	1.64	0.60
13:XM:4:ILE:H	13:XM:9:ILE:HG22	1.62	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:40:ASP:OD2	16:XP:42:ARG:HB2	2.02	0.60
47:Y1:80:LEU:O	47:Y1:81:LYS:HD2	2.00	0.60
26:YB:40:U:H3	26:YB:43:C:H5''	1.66	0.60
27:YD:35:LYS:HG2	27:YD:64:ILE:CG2	2.31	0.60
28:YE:63:LEU:CD1	28:YE:64:LYS:H	2.04	0.60
32:YI:114:LEU:O	32:YI:115:ALA:CB	2.49	0.60
32:YI:71:ILE:HG12	32:YI:71:ILE:O	2.00	0.60
33:YN:23:LEU:HD12	33:YN:99:LEU:HD23	1.82	0.60
34:YO:97:ARG:N	34:YO:117:LEU:HD22	2.15	0.60
38:YS:11:LYS:HB2	38:YS:91:PRO:HD3	1.84	0.60
3:QC:141:VAL:O	3:QC:146:ALA:HB3	2.01	0.60
5:QE:74:GLY:O	5:QE:115:VAL:HA	2.01	0.60
8:QH:86:ILE:HG22	8:QH:93:VAL:HG21	1.84	0.60
9:QI:9:ARG:CB	9:QI:14:VAL:HG22	2.31	0.60
13:QM:121:LYS:NZ	24:QY:39:C:O2'	2.35	0.60
15:QO:5:LYS:O	15:QO:8:LYS:HG2	2.02	0.60
1:QA:1314:C:OP1	19:QS:6:LYS:HE3	2.02	0.60
25:RA:1178:C:H2'	25:RA:1179:C:C6	2.37	0.60
25:RA:2451:A:N1	55:Z6:76:PPU:HE2	2.15	0.60
25:RA:2469:A:H2	25:RA:2481:G:H21	1.47	0.60
27:RD:2:ALA:HB3	27:RD:20:ASP:HB3	1.82	0.60
28:RE:104:VAL:HG11	28:RE:188:VAL:HG23	1.82	0.60
28:RE:51:PHE:O	28:RE:52:LEU:C	2.38	0.60
29:RF:164:ARG:HG2	29:RF:164:ARG:HH11	1.66	0.60
29:RF:46:ARG:CG	29:RF:46:ARG:HH11	2.04	0.60
30:RG:94:LEU:HD23	30:RG:94:LEU:H	1.64	0.60
33:RN:99:LEU:O	33:RN:103:VAL:HG23	2.01	0.60
33:RN:133:GLN:O	33:RN:134:ARG:HB3	2.00	0.60
1:XA:1446:A:OP1	1:XA:1446:A:H4'	2.01	0.60
3:XC:130:VAL:O	3:XC:134:ILE:HG12	2.01	0.60
6:XF:1:MET:HA	6:XF:67:MET:O	2.02	0.60
6:XF:97:PHE:HD2	6:XF:97:PHE:C	2.05	0.60
8:XH:39:LEU:O	8:XH:45:ILE:HG12	2.01	0.60
2:XB:181:PHE:CE1	8:XH:70:GLN:O	2.52	0.60
13:XM:9:ILE:HD12	13:XM:9:ILE:O	2.02	0.60
13:XM:121:LYS:HZ3	24:XY:39:C:HO2'	1.50	0.60
25:YA:1372:U:H2'	25:YA:1373:A:H5'	1.84	0.60
25:YA:528:A:C2	25:YA:2042:A:H2'	2.37	0.60
25:YA:2688:U:OP1	25:YA:2713:A:N6	2.35	0.60
25:YA:2716:U:H2'	25:YA:2717:G:H8	1.65	0.60
25:YA:558:G:OP1	33:YN:111:PRO:HD2	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:236:GLY:C	27:YD:237:GLU:OE1	2.39	0.60
28:YE:93:VAL:N	28:YE:95:ILE:HD12	2.17	0.60
36:YQ:63:LYS:HE2	36:YQ:65:PHE:CE1	2.37	0.60
37:YR:52:ILE:O	37:YR:55:ALA:HB3	2.01	0.60
41:YV:35:LEU:O	41:YV:35:LEU:HD23	2.01	0.60
41:YV:99:ILE:CD1	41:YV:99:ILE:N	2.65	0.60
2:QB:4:GLU:CG	2:QB:5:ILE:H	1.99	0.60
4:QD:12:CYS:HB2	4:QD:31:CYS:O	2.01	0.60
4:QD:76:ARG:HD2	4:QD:207:TYR:HE2	1.66	0.60
6:QF:1:MET:HA	6:QF:67:MET:O	2.02	0.60
6:QF:97:PHE:HD2	6:QF:97:PHE:C	2.05	0.60
12:QL:54:LYS:N	12:QL:54:LYS:CD	2.64	0.60
19:QS:25:LYS:O	19:QS:26:GLY:O	2.20	0.60
20:QT:104:LEU:HD12	20:QT:105:SER:H	1.66	0.60
48:R2:32:LEU:HD11	48:R2:54:LYS:HG3	1.84	0.60
30:RG:179:PRO:HG3	50:R4:38:LYS:HZ2	1.66	0.60
25:RA:1833:U:O2'	25:RA:1969:A:N1	2.27	0.60
27:RD:35:LYS:HD3	27:RD:63:ARG:CB	2.32	0.60
30:RG:112:PRO:HB3	50:R4:37:SER:CB	2.25	0.60
30:RG:128:ARG:HG3	30:RG:128:ARG:NH2	2.17	0.60
30:RG:61:ALA:HB2	30:RG:68:PRO:HD2	1.81	0.60
43:RX:15:GLU:N	43:RX:15:GLU:OE1	2.34	0.60
1:XA:1200:C:H4'	1:XA:1201:A:C5'	2.31	0.60
1:XA:941:G:H1	1:XA:1342:C:N4	1.99	0.60
1:XA:210:U:O2'	1:XA:216:G:N7	2.35	0.60
1:XA:312:C:H2'	1:XA:313:A:H8	1.66	0.60
2:XB:141:GLU:O	2:XB:145:LEU:HD23	2.01	0.60
3:XC:70:VAL:O	3:XC:106:VAL:HG23	2.01	0.60
5:XE:33:VAL:HG11	5:XE:109:ILE:HA	1.83	0.60
9:XI:96:LEU:HD23	9:XI:102:LEU:HD12	1.84	0.60
9:XI:111:ARG:HG2	9:XI:112:LYS:N	2.16	0.60
27:YD:147:LEU:HD13	27:YD:155:LEU:CD1	2.29	0.60
27:YD:166:GLN:CA	27:YD:166:GLN:HE21	2.14	0.60
40:YU:92:ARG:HD3	40:YU:94:ASN:HB3	1.82	0.60
40:YU:92:ARG:NH1	40:YU:95:LEU:CD1	2.65	0.60
43:YX:43:VAL:CG1	43:YX:51:VAL:HG21	2.31	0.60
1:QA:948:C:H2'	1:QA:949:A:H8	1.67	0.60
9:QI:85:LEU:O	9:QI:85:LEU:HD12	2.02	0.60
10:QJ:49:VAL:HG22	14:QN:41:ARG:HB2	1.83	0.60
48:R2:41:ILE:HG12	48:R2:44:LEU:HD12	1.82	0.60
25:RA:2404:C:H2'	25:RA:2405:G:O4'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:270(U):C:H2'	25:RA:270(V):G:H8	1.66	0.60
27:RD:165:ILE:HA	27:RD:175:LEU:HD23	1.83	0.60
27:RD:25:THR:HG21	27:RD:81:ALA:CA	2.31	0.60
28:RE:4:ILE:C	28:RE:5:LEU:HD23	2.22	0.60
30:RG:64:THR:HG23	30:RG:66:GLN:H	1.67	0.60
32:RI:114:LEU:O	32:RI:115:ALA:CB	2.49	0.60
32:RI:21:VAL:HG22	32:RI:22:LYS:N	2.16	0.60
35:RP:138:LEU:C	35:RP:140:ALA:N	2.55	0.60
29:RF:34:TRP:CZ3	35:RP:8:PRO:HB3	2.36	0.60
41:RV:18:LEU:HB3	41:RV:96:ILE:HG12	1.83	0.60
45:RZ:48:PHE:HA	45:RZ:51:ALA:HB3	1.84	0.60
1:XA:701:C:H1'	1:XA:703:G:C6	2.37	0.60
2:XB:60:ASP:O	2:XB:64:ARG:HG2	2.01	0.60
2:XB:69:LEU:O	2:XB:162:ILE:HA	2.02	0.60
4:XD:129:ASN:HA	4:XD:145:GLU:HB2	1.82	0.60
7:XG:148:ASN:N	7:XG:148:ASN:ND2	2.46	0.60
9:XI:85:LEU:O	9:XI:85:LEU:HD12	2.02	0.60
10:XJ:5:ARG:O	10:XJ:98:ILE:HA	2.02	0.60
47:Y1:81:LYS:HZ3	47:Y1:81:LYS:HA	0.70	0.60
25:YA:1918:A:O2'	25:YA:1920:C:N4	2.35	0.60
27:YD:25:THR:HG21	27:YD:81:ALA:HA	1.84	0.60
27:YD:72:LYS:HE3	27:YD:75:ILE:HD12	1.82	0.60
28:YE:93:VAL:N	28:YE:95:ILE:CD1	2.65	0.60
32:YI:99:GLU:CD	32:YI:103:ARG:HH21	2.05	0.60
35:YP:79:ARG:HD3	35:YP:110:TYR:HE1	1.67	0.60
25:YA:2318:G:H22	38:YS:2:ALA:HA	1.66	0.60
1:QA:1190:G:H5''	3:QC:176:HIS:NE2	2.17	0.60
1:QA:1239:A:O2'	1:QA:1298:C:N4	2.35	0.60
4:QD:12:CYS:HA	4:QD:19:LEU:CD2	2.31	0.60
10:QJ:5:ARG:O	10:QJ:98:ILE:HA	2.01	0.60
13:QM:37:THR:CG2	13:QM:39:ILE:HD11	2.31	0.60
14:QN:15:LYS:HD2	14:QN:16:PHE:CZ	2.37	0.60
14:QN:42:ILE:O	14:QN:43:CYS:C	2.39	0.60
15:QO:4:THR:HB	15:QO:6:GLU:OE2	2.02	0.60
11:QK:91:ARG:HH22	18:QR:88:LYS:HZ3	1.49	0.60
20:QT:96:GLY:O	20:QT:97:ALA:HB3	2.02	0.60
47:R1:91:LYS:CG	47:R1:92:LYS:H	2.15	0.60
25:RA:2287:A:O2'	25:RA:2288:A:O5'	2.18	0.60
25:RA:2688:U:H6	25:RA:2721:A:H62	1.49	0.60
25:RA:443:A:H1'	25:RA:1201:C:O4'	2.02	0.60
26:RB:33:G:H5''	26:RB:33:G:H8	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:53:PRO:HG2	28:RE:54:GLN:NE2	2.16	0.60
30:RG:44:GLY:HA2	30:RG:88:ILE:CG1	2.30	0.60
31:RH:117:PRO:HB3	31:RH:123:PHE:CD1	2.37	0.60
31:RH:89:ILE:O	31:RH:91:GLY:N	2.35	0.60
35:RP:13:ASN:O	35:RP:15:ARG:N	2.34	0.60
37:RR:44:LEU:HD22	37:RR:48:VAL:HG23	1.82	0.60
37:RR:92:GLY:H	37:RR:94:TYR:HE2	1.49	0.60
40:RU:76:TYR:CZ	40:RU:80:ILE:HG13	2.37	0.60
1:XA:1297:C:O2'	1:XA:1298:C:O5'	2.20	0.60
2:XB:114:ARG:O	2:XB:117:GLU:HB2	2.02	0.60
9:XI:9:ARG:CB	9:XI:14:VAL:HG22	2.32	0.60
14:XN:19:ARG:O	14:XN:20:ALA:C	2.40	0.60
14:XN:44:LEU:HD12	14:XN:48:ALA:HB2	1.84	0.60
16:XP:51:VAL:CG1	16:XP:52:ASP:N	2.65	0.60
19:XS:25:LYS:O	19:XS:26:GLY:O	2.20	0.60
20:XT:104:LEU:HD12	20:XT:105:SER:H	1.66	0.60
22:XV:35:A:C2	23:XX:3:G:C2	2.89	0.60
25:YA:2419:U:H5'	52:Y6:23:THR:HG22	1.84	0.60
54:Y8:53:PRO:CD	54:Y8:54:GLU:H	2.15	0.60
25:YA:2619:C:H1'	28:YE:156:MET:HE1	1.84	0.60
25:YA:503:A:H4'	25:YA:504:U:H5'	1.84	0.60
26:YB:74:U:H2'	26:YB:75:G:O4'	2.02	0.60
27:YD:21:PHE:HB3	27:YD:24:ILE:HG13	1.83	0.60
27:YD:35:LYS:HD3	27:YD:63:ARG:CB	2.32	0.60
29:YF:175:THR:O	29:YF:176:LEU:CB	2.49	0.60
30:YG:50:ALA:O	30:YG:53:LEU:HB3	2.01	0.60
30:YG:9:ARG:HG2	30:YG:13:GLU:OE1	2.00	0.60
32:YI:2:LYS:HB3	32:YI:20:ASP:HB3	1.83	0.60
34:YO:7:TYR:HE1	34:YO:20:MET:HE3	1.67	0.60
35:YP:138:LEU:C	35:YP:140:ALA:N	2.55	0.60
39:YT:107:ASP:O	39:YT:110:ILE:HG22	2.02	0.60
1:QA:1312:G:H5''	50:R4:67:TYR:OH	2.01	0.60
5:QE:42:GLY:HA2	5:QE:136:MET:HE1	1.82	0.60
5:QE:72:GLN:O	5:QE:73:ASN:HB3	2.02	0.60
46:R0:51:VAL:HG23	46:R0:81:VAL:HG23	1.83	0.60
25:RA:2012:G:H4'	42:RW:96:ILE:HD11	1.84	0.60
25:RA:286:C:H2'	25:RA:287:C:H6	1.65	0.60
28:RE:37:ARG:CA	28:RE:37:ARG:NE	2.64	0.60
28:RE:63:LEU:CD1	28:RE:64:LYS:H	2.04	0.60
30:RG:126:ASP:OD1	30:RG:130:ASN:HB2	2.02	0.60
32:RI:29:TYR:O	32:RI:33:ARG:HB2	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:27:HIS:N	35:RP:27:HIS:ND1	2.49	0.60
25:RA:227:A:OP1	35:RP:76:LYS:HE3	2.01	0.60
38:RS:11:LYS:HB2	38:RS:91:PRO:HD3	1.84	0.60
38:RS:99:LYS:O	38:RS:102:ALA:N	2.34	0.60
41:RV:35:LEU:HB2	41:RV:37:VAL:HG23	1.84	0.60
45:RZ:73:GLN:HB3	45:RZ:87:ASP:OD1	2.01	0.60
9:XI:66:ARG:HG2	9:XI:66:ARG:HH11	1.67	0.60
13:XM:3:ARG:HA	13:XM:9:ILE:CG2	2.21	0.60
19:XS:2:PRO:HB2	50:Y4:68:ARG:HH22	1.67	0.60
47:Y1:80:LEU:C	47:Y1:81:LYS:CD	2.69	0.60
52:Y6:41:PRO:HG2	52:Y6:45:LYS:N	2.10	0.60
25:YA:242:G:C5'	54:Y8:3:LYS:HE3	2.32	0.60
54:Y8:22:VAL:CG2	54:Y8:53:PRO:HB2	2.32	0.60
28:YE:68:ALA:O	28:YE:69:LYS:HG3	2.02	0.60
38:YS:59:LYS:HG2	38:YS:60:GLY:N	2.12	0.60
39:YT:57:PHE:CD2	39:YT:58:ASN:N	2.66	0.60
40:YU:90:VAL:CG1	40:YU:91:ASP:H	2.01	0.60
41:YV:1:MET:CE	41:YV:43:GLU:HG2	2.32	0.60
45:YZ:48:PHE:HA	45:YZ:51:ALA:HB3	1.84	0.60
1:QA:1014:A:H4'	19:QS:14:HIS:NE2	2.17	0.59
4:QD:114:ARG:NH1	4:QD:114:ARG:HG3	2.13	0.59
17:QQ:76:LEU:HD12	17:QQ:77:VAL:H	1.67	0.59
22:QV:75:C:OP1	25:RA:2602:A:O5'	2.20	0.59
13:QM:77:ASN:CG	50:R4:71:ARG:NH1	2.55	0.59
25:RA:2853:C:H2'	25:RA:2854:G:H8	1.66	0.59
27:RD:35:LYS:HE3	27:RD:64:ILE:C	2.21	0.59
28:RE:116:VAL:O	28:RE:117:MET:CB	2.49	0.59
28:RE:131:ALA:HB1	28:RE:135:HIS:HE1	1.65	0.59
37:RR:75:LEU:C	37:RR:75:LEU:HD13	2.22	0.59
39:RT:34:VAL:HG12	39:RT:36:GLU:HG2	1.83	0.59
1:XA:1182:G:H4'	1:XA:1183:A:H5''	1.84	0.59
1:XA:411:A:N6	1:XA:413:G:H21	1.97	0.59
1:XA:458:C:H2'	1:XA:464:G:H8	1.67	0.59
1:XA:953:G:N7	13:XM:104:ARG:NH2	2.47	0.59
3:XC:88:ARG:O	3:XC:99:VAL:HG21	2.01	0.59
5:XE:74:GLY:O	5:XE:115:VAL:HA	2.02	0.59
5:XE:72:GLN:O	5:XE:73:ASN:HB3	2.02	0.59
7:XG:113:GLU:CB	7:XG:119:ARG:HG2	2.30	0.59
10:XJ:32:ALA:H	10:XJ:78:ASN:HD21	1.49	0.59
10:XJ:98:ILE:N	10:XJ:98:ILE:HD12	2.15	0.59
12:XL:54:LYS:CD	12:XL:54:LYS:N	2.64	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:270(U):C:H2'	25:YA:270(V):G:H8	1.67	0.59
27:YD:35:LYS:CG	27:YD:64:ILE:N	2.56	0.59
30:YG:111:LEU:HB2	30:YG:112:PRO:HD3	1.82	0.59
31:YH:30:LYS:CD	31:YH:81:GLU:H	2.15	0.59
32:YI:144:VAL:CG2	32:YI:145:VAL:H	2.06	0.59
37:YR:75:LEU:HD13	37:YR:75:LEU:C	2.22	0.59
40:YU:76:TYR:CZ	40:YU:80:ILE:HG13	2.37	0.59
40:YU:96:ALA:C	40:YU:98:LEU:H	2.04	0.59
1:QA:1446:A:O2'	1:QA:1447:G:O5'	2.18	0.59
3:QC:13:GLY:HA3	14:QN:57:ARG:CZ	2.31	0.59
5:QE:33:VAL:HG11	5:QE:109:ILE:HA	1.83	0.59
5:QE:131:ILE:O	5:QE:134:ALA:HB3	2.01	0.59
13:QM:45:VAL:O	13:QM:45:VAL:HG22	2.02	0.59
13:QM:96:LEU:HB3	13:QM:97:PRO:HD2	1.83	0.59
26:RB:52:A:O2'	26:RB:53:A:N7	2.35	0.59
27:RD:166:GLN:HE21	27:RD:166:GLN:CA	2.14	0.59
27:RD:25:THR:HG21	27:RD:81:ALA:HA	1.83	0.59
29:RF:155:LEU:CD1	29:RF:174:VAL:HG13	2.32	0.59
31:RH:30:LYS:CD	31:RH:81:GLU:H	2.15	0.59
31:RH:4:ILE:N	31:RH:4:ILE:HD13	2.17	0.59
33:RN:16:ILE:O	33:RN:55:VAL:HG22	2.01	0.59
35:RP:37:GLY:HA2	35:RP:41:ARG:HE	1.67	0.59
36:RQ:81:VAL:HG23	36:RQ:82:ARG:H	1.67	0.59
37:RR:44:LEU:O	37:RR:48:VAL:HG23	2.02	0.59
39:RT:102:ILE:HB	39:RT:110:ILE:HD13	1.84	0.59
39:RT:107:ASP:O	39:RT:110:ILE:HG22	2.02	0.59
40:RU:58:ARG:HA	40:RU:61:TRP:CE3	2.37	0.59
44:RY:4:LYS:O	44:RY:5:MET:HB2	2.01	0.59
6:XF:44:GLY:HA2	6:XF:59:TYR:CZ	2.37	0.59
8:XH:86:ILE:HG22	8:XH:93:VAL:HG21	1.84	0.59
11:XK:41:THR:HG21	11:XK:71:LYS:HB2	1.83	0.59
16:XP:43:LYS:HA	16:XP:48:TRP:HB2	1.83	0.59
20:XT:58:LYS:O	20:XT:62:LEU:HD12	2.02	0.59
52:Y6:25:LYS:HD2	54:Y8:34:TRP:CZ2	2.36	0.59
54:Y8:56:GLU:O	54:Y8:59:LYS:N	2.35	0.59
25:YA:1693:U:H1'	27:YD:14:ARG:HH22	1.67	0.59
27:YD:172:TYR:CD1	27:YD:186:HIS:HA	2.37	0.59
29:YF:123:LEU:HD12	29:YF:124:LEU:N	2.17	0.59
29:YF:63:LYS:HE2	29:YF:67:GLN:HB3	1.83	0.59
31:YH:4:ILE:N	31:YH:4:ILE:HD13	2.17	0.59
32:YI:29:TYR:O	32:YI:33:ARG:HB2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YI:38:LEU:HD12	32:YI:38:LEU:N	2.11	0.59
33:YN:6:PRO:HG3	33:YN:41:ASP:HB2	1.83	0.59
39:YT:102:ILE:HB	39:YT:110:ILE:HD13	1.83	0.59
41:YV:35:LEU:HB2	41:YV:37:VAL:HG23	1.84	0.59
41:YV:66:ARG:HH12	41:YV:88:ARG:HH11	1.49	0.59
44:YY:4:LYS:O	44:YY:5:MET:HB2	2.01	0.59
45:YZ:154:ASP:O	45:YZ:155:LEU:HD22	2.01	0.59
8:QH:86:ILE:HG13	8:QH:133:LEU:HD22	1.84	0.59
9:QI:111:ARG:HG2	9:QI:112:LYS:N	2.16	0.59
11:QK:34:ASP:HB3	11:QK:40:ILE:HD11	1.83	0.59
20:QT:58:LYS:O	20:QT:62:LEU:HD12	2.02	0.59
25:RA:2419:U:O4	54:R8:30:ARG:NE	2.35	0.59
25:RA:1496:A:H8	25:RA:1577:C:O2'	1.86	0.59
25:RA:198:C:H5'	25:RA:2244:U:OP1	2.02	0.59
25:RA:38:A:H2'	25:RA:39:C:C6	2.37	0.59
28:RE:61:ARG:HB2	28:RE:62:PRO:CD	2.32	0.59
28:RE:95:ILE:HD12	28:RE:95:ILE:N	2.15	0.59
35:RP:95:VAL:HG13	35:RP:100:LEU:HD21	1.84	0.59
45:RZ:132:ASN:HB2	45:RZ:160:GLY:HA3	1.83	0.59
1:XA:15:G:H4'	5:XE:24:ARG:NH1	2.16	0.59
1:XA:246:A:N6	1:XA:281:G:H1'	2.17	0.59
2:XB:124:SER:HB2	2:XB:125:PRO:HD2	1.85	0.59
7:XG:85:TYR:HE1	7:XG:154:TYR:CE1	2.21	0.59
18:XR:31:LEU:H	18:XR:31:LEU:HD23	1.67	0.59
27:YD:174:ILE:N	27:YD:174:ILE:HD12	2.16	0.59
31:YH:55:PRO:HG2	31:YH:61:HIS:CE1	2.37	0.59
33:YN:18:ALA:HB3	33:YN:55:VAL:O	2.03	0.59
35:YP:95:VAL:HG13	35:YP:100:LEU:HD21	1.83	0.59
35:YP:121:LYS:HG3	35:YP:122:PRO:HD2	1.84	0.59
35:YP:127:ALA:O	35:YP:147:LEU:HD23	2.02	0.59
35:YP:55:ARG:HD2	35:YP:56:SER:O	2.01	0.59
36:YQ:86:GLY:C	36:YQ:88:GLY:H	2.03	0.59
33:YN:42:TRP:O	40:YU:64:ARG:NH2	2.35	0.59
41:YV:15:GLU:HG3	41:YV:16:PRO:HD2	1.83	0.59
1:QA:345:C:H4'	1:QA:346:G:C2	2.37	0.59
2:QB:69:LEU:O	2:QB:162:ILE:HA	2.01	0.59
3:QC:127:ARG:CG	3:QC:127:ARG:HH11	2.15	0.59
3:QC:189:ALA:HB3	3:QC:196:LEU:HB2	1.84	0.59
6:QF:44:GLY:HA2	6:QF:59:TYR:CZ	2.37	0.59
7:QG:23:VAL:HG12	7:QG:27:ILE:CD1	2.32	0.59
7:QG:66:VAL:O	7:QG:70:LYS:HG3	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:79:ARG:HH11	7:QG:79:ARG:HG2	1.66	0.59
8:QH:41:ARG:HH11	8:QH:41:ARG:HB3	1.66	0.59
19:QS:16:LEU:O	19:QS:20:LEU:HG	2.01	0.59
54:R8:22:VAL:CG2	54:R8:53:PRO:HB2	2.32	0.59
27:RD:172:TYR:CD1	27:RD:186:HIS:HA	2.37	0.59
27:RD:236:GLY:C	27:RD:237:GLU:OE1	2.40	0.59
28:RE:68:ALA:O	28:RE:69:LYS:HG3	2.02	0.59
31:RH:82:GLY:O	31:RH:135:GLY:O	2.20	0.59
33:RN:41:ASP:O	33:RN:48:MET:HE3	2.01	0.59
1:XA:17:U:H2'	1:XA:18:C:C6	2.37	0.59
7:XG:23:VAL:HG12	7:XG:27:ILE:CD1	2.32	0.59
8:XH:41:ARG:HB3	8:XH:41:ARG:HH11	1.66	0.59
20:XT:96:GLY:O	20:XT:97:ALA:HB3	2.02	0.59
46:Y0:51:VAL:HG23	46:Y0:81:VAL:HG23	1.83	0.59
49:Y3:29:ARG:HH11	49:Y3:29:ARG:CB	2.13	0.59
25:YA:1291:C:H5'	25:YA:1536:A:H5'	1.83	0.59
25:YA:747:U:C4	25:YA:2613:U:C4	2.90	0.59
27:YD:12:SER:C	27:YD:14:ARG:H	2.06	0.59
28:YE:51:PHE:HD1	28:YE:52:LEU:HG	1.68	0.59
36:YQ:80:GLU:C	36:YQ:81:VAL:HG13	2.22	0.59
37:YR:92:GLY:H	37:YR:94:TYR:HE2	1.49	0.59
40:YU:58:ARG:HA	40:YU:61:TRP:CE3	2.37	0.59
40:YU:92:ARG:HH11	40:YU:95:LEU:HD12	1.67	0.59
44:YY:96:ILE:CD1	44:YY:98:VAL:HG12	2.32	0.59
2:QB:124:SER:HB2	2:QB:125:PRO:HD2	1.85	0.59
3:QC:60:ALA:O	3:QC:61:ALA:CB	2.50	0.59
9:QI:96:LEU:HD23	9:QI:102:LEU:HD12	1.84	0.59
9:QI:9:ARG:HB3	9:QI:14:VAL:HG13	1.85	0.59
12:QL:46:LYS:HG2	12:QL:47:LYS:H	1.67	0.59
12:QL:70:ILE:HD13	12:QL:77:LEU:HD12	1.83	0.59
16:QP:43:LYS:HA	16:QP:48:TRP:HB2	1.84	0.59
46:R0:29:GLN:O	46:R0:31:VAL:HG13	2.03	0.59
47:R1:87:PRO:O	47:R1:91:LYS:N	2.31	0.59
52:R6:13:CYS:O	52:R6:21:TYR:HA	2.02	0.59
25:RA:2543:G:H2'	25:RA:2544:G:C8	2.38	0.59
25:RA:2681:C:O2'	25:RA:2682:U:O5'	2.16	0.59
27:RD:137:PRO:HB2	27:RD:140:THR:CG2	2.33	0.59
28:RE:116:VAL:CG2	28:RE:122:PHE:CD2	2.86	0.59
28:RE:36:ARG:H	28:RE:37:ARG:HH21	1.49	0.59
28:RE:69:LYS:O	28:RE:71:GLY:N	2.27	0.59
30:RG:13:GLU:O	30:RG:14:GLU:CB	2.44	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:153:LYS:HZ2	31:RH:153:LYS:HA	1.67	0.59
32:RI:99:GLU:CD	32:RI:103:ARG:HH21	2.05	0.59
36:RQ:63:LYS:HE2	36:RQ:65:PHE:CE1	2.37	0.59
45:RZ:113:ALA:O	45:RZ:114:GLY:C	2.40	0.59
45:RZ:30:ASN:HB3	45:RZ:89:PHE:HE2	1.68	0.59
2:XB:188:ALA:HB3	2:XB:200:ILE:HG23	1.84	0.59
3:XC:127:ARG:HH11	3:XC:127:ARG:CG	2.15	0.59
6:XF:26:ILE:O	6:XF:30:LEU:HG	2.02	0.59
17:XQ:92:ARG:HH11	17:XQ:92:ARG:HG3	1.68	0.59
20:XT:101:GLY:O	20:XT:103:GLY:N	2.35	0.59
20:XT:104:LEU:HD12	20:XT:105:SER:N	2.18	0.59
20:XT:84:LEU:O	20:XT:88:VAL:HG23	2.01	0.59
25:YA:1951:U:O2'	25:YA:1953:A:N7	2.33	0.59
25:YA:530:G:N1	25:YA:2022:U:OP1	2.35	0.59
25:YA:898:C:H2'	25:YA:899:A:H5'	1.83	0.59
28:YE:116:VAL:O	28:YE:117:MET:CB	2.49	0.59
29:YF:11:VAL:HG11	29:YF:18:ARG:HE	1.67	0.59
31:YH:86:GLU:O	31:YH:131:VAL:O	2.20	0.59
33:YN:58:ASP:N	33:YN:60:ILE:HD11	2.16	0.59
40:YU:92:ARG:C	40:YU:94:ASN:H	2.05	0.59
45:YZ:20:ARG:O	45:YZ:20:ARG:HD3	2.03	0.59
1:QA:1502:A:H2	1:QA:1505:G:H1	1.50	0.59
5:QE:68:GLU:HG3	5:QE:68:GLU:O	2.03	0.59
6:QF:26:ILE:O	6:QF:30:LEU:HG	2.02	0.59
12:QL:48:PRO:CD	12:QL:49:ASN:N	2.57	0.59
14:QN:19:ARG:O	14:QN:20:ALA:C	2.40	0.59
20:QT:104:LEU:HD12	20:QT:105:SER:N	2.18	0.59
46:R0:6:GLY:O	46:R0:7:LEU:HD22	2.03	0.59
54:R8:22:VAL:HG21	54:R8:53:PRO:HB2	1.83	0.59
25:RA:1019:U:H2'	25:RA:1020:A:C8	2.36	0.59
25:RA:1190:G:OP1	35:RP:30:THR:OG1	2.14	0.59
25:RA:1291:C:H5'	25:RA:1536:A:H5'	1.85	0.59
25:RA:256:A:H2'	25:RA:257:A:H8	1.68	0.59
33:RN:78:TYR:N	33:RN:78:TYR:CD1	2.70	0.59
35:RP:79:ARG:HD3	35:RP:110:TYR:HE1	1.67	0.59
1:XA:1510:U:H2'	1:XA:1511:G:C8	2.38	0.59
1:XA:258:G:H2'	1:XA:259:G:H8	1.67	0.59
3:XC:60:ALA:O	3:XC:61:ALA:CB	2.51	0.59
8:XH:12:ARG:HH12	8:XH:27:PRO:HD2	1.67	0.59
8:XH:41:ARG:HH11	8:XH:41:ARG:CG	2.15	0.59
14:YN:15:LYS:HD2	14:YN:16:PHE:CZ	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:XO:5:LYS:O	15:XO:8:LYS:HG2	2.02	0.59
50:Y4:48:ARG:NH1	50:Y4:52:THR:H	2.01	0.59
27:YD:177:LEU:HD11	27:YD:183:ARG:HB2	1.85	0.59
28:YE:4:ILE:C	28:YE:5:LEU:HD23	2.22	0.59
30:YG:16:ARG:NH2	30:YG:31:VAL:HG11	2.17	0.59
25:YA:2749:A:O2'	31:YH:59:ARG:NE	2.35	0.59
35:YP:39:LYS:CA	35:YP:45:LEU:CD1	2.80	0.59
38:YS:88:ASP:O	38:YS:89:ARG:CB	2.49	0.59
1:QA:527:G:O6	12:QL:49:ASN:ND2	2.28	0.59
1:QA:923:A:H2'	1:QA:924:C:C6	2.38	0.59
2:QB:115:LEU:HD23	2:QB:153:ARG:HD3	1.84	0.59
2:QB:178:ARG:HD2	8:QH:71:GLY:HA2	1.83	0.59
2:QB:19:HIS:NE2	2:QB:206:ASP:HB2	2.18	0.59
2:QB:188:ALA:HB3	2:QB:200:ILE:HG23	1.84	0.59
4:QD:163:GLU:C	4:QD:165:MET:H	2.03	0.59
5:QE:79:GLU:HB3	5:QE:92:LYS:HA	1.84	0.59
8:QH:41:ARG:HH11	8:QH:41:ARG:CG	2.16	0.59
10:QJ:13:HIS:HB3	10:QJ:68:HIS:CE1	2.37	0.59
12:QL:5:PRO:HA	12:QL:9:GLN:NE2	2.16	0.59
25:RA:1297:C:H2'	25:RA:1298:C:H6	1.68	0.59
25:RA:2425:A:OP2	25:RA:2426:A:O2'	2.12	0.59
25:RA:2689:U:H4'	25:RA:2690:C:O5'	2.01	0.59
25:RA:674:G:C1'	29:RF:74:ARG:HD3	2.30	0.59
31:RH:127:GLU:HG2	31:RH:128:PRO:CG	2.32	0.59
32:RI:110:ASP:HB3	32:RI:112:LYS:N	2.16	0.59
32:RI:35:LEU:O	32:RI:36:ALA:HB2	2.01	0.59
37:RR:79:LEU:C	37:RR:79:LEU:HD23	2.23	0.59
38:RS:89:ARG:O	38:RS:90:GLY:O	2.19	0.59
42:RW:66:GLU:O	42:RW:68:ARG:N	2.33	0.59
44:RY:51:VAL:CG1	44:RY:52:SER:H	2.11	0.59
45:RZ:58:VAL:O	45:RZ:60:GLU:N	2.36	0.59
4:XD:22:LYS:O	4:XD:113:SER:HB3	2.03	0.59
7:XG:66:VAL:O	7:XG:70:LYS:HG3	2.02	0.59
9:XI:127:LYS:CE	22:XV:34:C:OP2	2.51	0.59
12:XL:46:LYS:HG2	12:XL:47:LYS:H	1.67	0.59
1:XA:523:A:N6	12:XL:92:ASP:HB2	2.12	0.59
14:YN:23:ARG:CZ	14:YN:30:ALA:HB2	2.33	0.59
50:Y4:22:ILE:HG22	50:Y4:23:GLU:N	2.18	0.59
25:YA:1057:A:H62	25:YA:1086:A:H2'	1.68	0.59
25:YA:740:U:H2'	25:YA:741:G:C8	2.37	0.59
27:YD:27:THR:CG2	27:YD:83:GLU:HB3	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:159:GLU:O	31:YH:160:LYS:HG2	2.03	0.59
33:YN:78:TYR:N	33:YN:78:TYR:CD1	2.70	0.59
41:YV:18:LEU:HB3	41:YV:96:ILE:HG12	1.84	0.59
25:YA:71:A:C2	43:YX:31:HIS:HE1	2.08	0.59
1:QA:1498:U:HO2'	1:QA:1499:A:P	2.19	0.59
1:QA:300:A:O2'	1:QA:564:C:N3	2.31	0.59
3:QC:149:ALA:O	3:QC:169:ALA:HA	2.02	0.59
3:QC:36:ASP:HB3	3:QC:40:ARG:HH12	1.68	0.59
4:QD:173:TRP:O	4:QD:186:LEU:HB2	2.02	0.59
8:QH:12:ARG:HH12	8:QH:27:PRO:HD2	1.67	0.59
9:QI:66:ARG:HH11	9:QI:66:ARG:HG2	1.68	0.59
12:QL:54:LYS:N	12:QL:54:LYS:HD2	2.18	0.59
51:R5:40:LYS:NZ	51:R5:46:CYS:HB3	2.18	0.59
25:RA:520:G:H2'	25:RA:521:G:H8	1.66	0.59
27:RD:12:SER:C	27:RD:14:ARG:H	2.06	0.59
27:RD:54:ARG:HH11	27:RD:54:ARG:CG	2.14	0.59
28:RE:93:VAL:N	28:RE:95:ILE:CD1	2.65	0.59
29:RF:123:LEU:HD12	29:RF:124:LEU:N	2.17	0.59
29:RF:89:VAL:HG12	29:RF:90:PHE:N	2.18	0.59
33:RN:18:ALA:HB3	33:RN:55:VAL:O	2.03	0.59
33:RN:9:VAL:HG21	33:RN:48:MET:HB3	1.85	0.59
35:RP:138:LEU:O	35:RP:140:ALA:N	2.33	0.59
35:RP:71:VAL:HG13	35:RP:72:PRO:HD3	1.85	0.59
42:RW:36:LEU:HD11	42:RW:47:VAL:HG12	1.83	0.59
1:XA:539:A:H2'	1:XA:540:G:C8	2.37	0.59
4:XD:173:TRP:O	4:XD:186:LEU:HB2	2.02	0.59
17:XQ:76:LEU:HD12	17:XQ:77:VAL:H	1.67	0.59
19:XS:40:ILE:HD11	19:XS:62:ILE:HG21	1.85	0.59
48:Y2:64:LEU:CD2	48:Y2:68:ARG:HD2	2.33	0.59
31:YH:124:GLU:HB3	31:YH:132:ARG:HG3	1.85	0.59
37:YR:63:ARG:HG3	37:YR:63:ARG:HH11	1.68	0.59
37:YR:72:ASP:O	37:YR:76:VAL:HB	2.03	0.59
39:YT:102:ILE:HB	39:YT:110:ILE:HD11	1.84	0.59
43:YX:49:VAL:CG1	43:YX:83:VAL:HG13	2.33	0.59
44:YY:95:LYS:HD3	44:YY:95:LYS:H	1.67	0.59
45:YZ:18:LEU:HD12	45:YZ:18:LEU:N	2.12	0.59
2:QB:47:THR:HG22	2:QB:51:LEU:HG	1.85	0.59
6:QF:45:LEU:HD12	6:QF:59:TYR:HD1	1.66	0.59
10:QJ:31:GLY:HA3	10:QJ:78:ASN:ND2	2.18	0.59
11:QK:51:LYS:CA	11:QK:55:LYS:HD3	2.21	0.59
18:QR:31:LEU:H	18:QR:31:LEU:HD23	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:QV:53:G:H4'	22:QV:54:U:OP1	2.02	0.59
50:R4:63:TYR:C	50:R4:65:ASP:H	2.05	0.59
25:RA:1226:G:H4'	41:RV:84:LYS:HG2	1.84	0.59
31:RH:55:PRO:HG2	31:RH:61:HIS:CE1	2.37	0.59
40:RU:52:ARG:NH1	40:RU:52:ARG:HG2	2.18	0.59
41:RV:1:MET:CE	41:RV:43:GLU:HG2	2.32	0.59
43:RX:49:VAL:CG1	43:RX:83:VAL:HG13	2.33	0.59
1:XA:954:G:H21	1:XA:1227:A:H62	1.51	0.59
1:XA:1126:U:H1'	1:XA:1280:A:C5	2.37	0.59
1:XA:558:G:H5''	1:XA:559:A:OP2	2.03	0.59
3:XC:149:ALA:O	3:XC:169:ALA:HA	2.02	0.59
5:XE:153:LYS:NZ	5:XE:153:LYS:HB2	2.18	0.59
6:XF:97:PHE:CD2	6:XF:97:PHE:C	2.76	0.59
9:XI:9:ARG:HB3	9:XI:14:VAL:HG13	1.85	0.59
10:XJ:31:GLY:HA3	10:XJ:78:ASN:ND2	2.18	0.59
12:XL:70:ILE:HD13	12:XL:77:LEU:HD12	1.83	0.59
46:Y0:55:ARG:HH11	46:Y0:55:ARG:HG3	1.67	0.59
50:Y4:39:CYS:O	50:Y4:40:HIS:HB2	2.03	0.59
25:YA:2841:C:H2'	25:YA:2842:G:C8	2.37	0.59
27:YD:137:PRO:HB2	27:YD:140:THR:CG2	2.33	0.59
25:YA:1815:A:OP2	27:YD:54:ARG:NH2	2.36	0.59
31:YH:82:GLY:O	31:YH:135:GLY:O	2.20	0.59
35:YP:138:LEU:O	35:YP:140:ALA:N	2.33	0.59
36:YQ:81:VAL:HG23	36:YQ:82:ARG:H	1.67	0.59
1:QA:1524:C:H2'	1:QA:1525:G:C8	2.38	0.59
2:QB:187:LEU:CD1	2:QB:205:ASP:HA	2.33	0.59
46:R0:55:ARG:HH11	46:R0:55:ARG:HG3	1.67	0.59
13:QM:77:ASN:ND2	50:R4:71:ARG:NH1	2.50	0.59
25:RA:1268:A:H2'	25:RA:1269:A:O4'	2.03	0.59
25:RA:1657:C:H2'	25:RA:1658:C:H6	1.68	0.59
25:RA:1795:C:O2	27:RD:255:LYS:HE2	2.02	0.59
25:RA:946:G:H2'	25:RA:947:G:H8	1.68	0.59
28:RE:93:VAL:N	28:RE:95:ILE:HD12	2.17	0.59
25:RA:443:A:N7	29:RF:45:ARG:HD2	2.18	0.59
39:RT:66:VAL:HG12	39:RT:67:SER:H	1.67	0.59
41:RV:41:GLY:H	41:RV:46:VAL:HG13	1.66	0.59
1:XA:1104:G:H4'	2:XB:111:ARG:NH1	2.18	0.59
1:XA:438:G:H4'	4:XD:123:HIS:CE1	2.37	0.59
4:XD:163:GLU:C	4:XD:165:MET:H	2.03	0.59
5:XE:42:GLY:CA	5:XE:66:MET:HG2	2.32	0.59
11:XK:69:ALA:HB1	11:XK:103:LEU:HD21	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y4:15:ILE:HG22	50:Y4:19:GLY:O	2.03	0.59
25:YA:1858:G:O2'	25:YA:1884:A:N6	2.35	0.59
25:YA:2474:C:H5''	25:YA:2475:C:C5	2.38	0.59
4:QD:166:LYS:HD3	27:YD:134:ARG:NH1	2.18	0.59
28:YE:36:ARG:H	28:YE:37:ARG:HH21	1.50	0.59
28:YE:61:ARG:HB2	28:YE:62:PRO:CD	2.33	0.59
29:YF:174:VAL:HG13	29:YF:174:VAL:O	2.03	0.59
31:YH:126:PRO:CD	31:YH:127:GLU:N	2.65	0.59
31:YH:4:ILE:HG13	31:YH:6:ARG:CD	2.33	0.59
31:YH:89:ILE:O	31:YH:91:GLY:N	2.35	0.59
35:YP:37:GLY:HA2	35:YP:41:ARG:HE	1.67	0.59
42:YW:80:PRO:O	42:YW:100:THR:HG22	2.03	0.59
45:YZ:144:LEU:HD21	45:YZ:150:LEU:HD22	1.83	0.59
1:QA:1120:G:O6	1:QA:1152:A:N6	2.36	0.58
1:QA:184:G:H2'	1:QA:185:A:H8	1.67	0.58
4:QD:13:ARG:CD	4:QD:38:TYR:O	2.51	0.58
9:QI:40:LEU:HD11	9:QI:70:LYS:HG2	1.84	0.58
1:QA:1372:U:OP1	9:QI:71:SER:HB3	2.02	0.58
24:QY:39:C:O2'	24:QY:40:G:OP1	2.21	0.58
46:R0:51:VAL:HG21	46:R0:79:VAL:O	2.03	0.58
25:RA:1815:A:OP2	27:RD:54:ARG:NH2	2.36	0.58
25:RA:2394:C:OP1	35:RP:63:PRO:HD2	2.03	0.58
27:RD:242:ARG:HD2	27:RD:242:ARG:N	2.18	0.58
27:RD:71:ASP:HB3	27:RD:103:ARG:HH22	1.68	0.58
31:RH:86:GLU:O	31:RH:131:VAL:O	2.20	0.58
33:RN:14:VAL:HG12	33:RN:15:LEU:N	2.18	0.58
35:RP:121:LYS:HG3	35:RP:122:PRO:HD2	1.84	0.58
38:RS:42:ASP:C	38:RS:44:LYS:H	2.06	0.58
39:RT:36:GLU:HG3	39:RT:41:ARG:HD3	1.85	0.58
44:RY:81:LYS:HD3	44:RY:97:ARG:CD	2.33	0.58
1:XA:560:U:H4'	1:XA:561:U:H5''	1.85	0.58
2:XB:47:THR:HG22	2:XB:51:LEU:HG	1.85	0.58
9:XI:40:LEU:HD11	9:XI:70:LYS:HG2	1.84	0.58
10:XJ:13:HIS:HB3	10:XJ:68:HIS:CE1	2.37	0.58
11:XK:30:VAL:HG21	11:XK:65:ALA:HA	1.85	0.58
48:Y2:32:LEU:HD11	48:Y2:54:LYS:HG3	1.84	0.58
50:Y4:3:GLU:HG3	50:Y4:4:GLY:N	2.19	0.58
50:Y4:63:TYR:C	50:Y4:65:ASP:H	2.05	0.58
51:Y5:40:LYS:NZ	51:Y5:46:CYS:HB3	2.18	0.58
27:YD:27:THR:CG2	27:YD:28:GLU:N	2.66	0.58
30:YG:126:ASP:OD1	30:YG:130:ASN:HB2	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YB:42:C:H42	30:YG:91:ARG:NH2	2.00	0.58
32:YI:127:VAL:HG22	32:YI:139:GLN:HB3	1.84	0.58
34:YO:107:ARG:O	34:YO:112:MET:HE3	2.03	0.58
1:QA:1056:U:H2'	1:QA:1057:G:H8	1.67	0.58
1:QA:1348:U:N3	1:QA:1374:A:H2	2.01	0.58
1:QA:620:C:H2'	1:QA:621:A:O4'	2.03	0.58
4:QD:11:LEU:O	4:QD:13:ARG:N	2.36	0.58
16:QP:53:VAL:HG23	16:QP:54:GLU:N	2.18	0.58
20:QT:37:SER:HB3	20:QT:84:LEU:HD23	1.85	0.58
48:R2:16:LEU:O	48:R2:17:SER:HB3	2.04	0.58
48:R2:64:LEU:CD2	48:R2:68:ARG:HD2	2.33	0.58
50:R4:12:ALA:CB	50:R4:29:PRO:HA	2.33	0.58
50:R4:48:ARG:NH1	50:R4:52:THR:H	2.01	0.58
51:R5:60:VAL:OXT	51:R5:60:VAL:HG13	2.03	0.58
28:RE:72:VAL:O	28:RE:73:GLU:O	2.21	0.58
26:RB:55:U:C4'	30:RG:29:TRP:HE1	2.17	0.58
31:RH:92:ILE:HG22	31:RH:93:GLY:N	2.18	0.58
34:RO:71:ARG:HH11	34:RO:71:ARG:HG3	1.69	0.58
38:RS:88:ASP:CG	38:RS:90:GLY:H	2.06	0.58
39:RT:102:ILE:HB	39:RT:110:ILE:HD11	1.84	0.58
1:XA:188:U:H2'	1:XA:189:U:H5''	1.84	0.58
1:XA:714:G:H2'	1:XA:715:A:C8	2.38	0.58
1:XA:752:G:H1'	1:XA:754:C:H41	1.68	0.58
9:XI:114:TYR:O	9:XI:114:TYR:HD2	1.85	0.58
25:YA:2712:U:O2'	25:YA:2712(A):A:H8	1.84	0.58
25:YA:2774:C:H2'	25:YA:2775:A:O4'	2.03	0.58
29:YF:63:LYS:HE2	29:YF:67:GLN:CB	2.32	0.58
30:YG:16:ARG:HB3	30:YG:17:PRO:CD	2.33	0.58
32:YI:133:HIS:HB2	32:YI:134:PRO:CD	2.34	0.58
39:YT:66:VAL:HG12	39:YT:67:SER:H	1.67	0.58
1:QA:1126:U:OP2	1:QA:1281:U:H1'	2.03	0.58
1:QA:1392:G:H21	1:QA:1502:A:H8	1.51	0.58
2:QB:178:ARG:CD	8:QH:71:GLY:O	2.51	0.58
4:QD:170:VAL:HG22	4:QD:171:GLY:N	2.12	0.58
5:QE:111:GLU:C	5:QE:113:ALA:H	2.07	0.58
6:QF:62:TRP:C	6:QF:63:TYR:HD2	2.06	0.58
7:QG:49:ILE:O	7:QG:53:LYS:HB3	2.04	0.58
9:QI:17:VAL:HG13	9:QI:81:ILE:HD13	1.85	0.58
12:QL:126:LYS:HB2	12:QL:126:LYS:HZ3	1.68	0.58
17:QQ:92:ARG:HH11	17:QQ:92:ARG:HG3	1.68	0.58
48:R2:17:SER:CB	48:R2:18:PRO:HA	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:42:PHE:CG	50:R4:43:TYR:N	2.72	0.58
50:R4:65:ASP:O	50:R4:66:SER:CB	2.51	0.58
25:RA:1021:A:OP2	33:RN:65:LYS:NZ	2.37	0.58
25:RA:2356:C:O3'	46:R0:20:ARG:HD3	2.02	0.58
29:RF:63:LYS:HE2	29:RF:67:GLN:CB	2.32	0.58
25:RA:389:G:N1	35:RP:70:GLN:HB3	2.18	0.58
37:RR:72:ASP:O	37:RR:76:VAL:HB	2.03	0.58
45:RZ:20:ARG:O	45:RZ:20:ARG:HD3	2.03	0.58
1:XA:1442:G:O6	1:XA:1446:A:N6	2.36	0.58
2:XB:212:GLN:NE2	2:XB:235:SER:HB2	2.18	0.58
3:XC:181:ASN:HD22	3:XC:204:LEU:HB2	1.68	0.58
9:XI:79:LEU:O	9:XI:82:ALA:HB3	2.02	0.58
12:XL:82:VAL:HG23	12:XL:106:ASP:OD2	2.04	0.58
12:XL:18:VAL:O	12:XL:19:ARG:HB2	2.03	0.58
12:XL:45:PRO:HD3	12:XL:51:ALA:O	2.03	0.58
13:XM:19:LEU:HD22	13:XM:19:LEU:H	1.68	0.58
25:YA:747:U:N1	51:Y5:2:ALA:HB3	2.18	0.58
52:Y6:27:LYS:HB2	52:Y6:27:LYS:HZ2	1.66	0.58
25:YA:2208:U:O2'	27:YD:151:LYS:HG2	2.03	0.58
30:YG:64:THR:HG23	30:YG:66:GLN:H	1.67	0.58
31:YH:92:ILE:HG22	31:YH:93:GLY:N	2.18	0.58
36:YQ:66:ILE:HA	36:YQ:104:PHE:HA	1.85	0.58
37:YR:44:LEU:O	37:YR:48:VAL:HG23	2.02	0.58
39:YT:36:GLU:HG3	39:YT:41:ARG:HD3	1.85	0.58
41:YV:49:THR:CB	41:YV:50:PRO:HD2	2.25	0.58
45:YZ:52:SER:O	45:YZ:53:ILE:HG13	2.04	0.58
1:QA:1513:A:H2'	1:QA:1514:C:C6	2.37	0.58
2:QB:80:ILE:HD11	2:QB:208:ILE:CG2	2.23	0.58
4:QD:196:LEU:O	4:QD:198:VAL:N	2.31	0.58
5:QE:102:ALA:HB2	5:QE:120:THR:OG1	2.03	0.58
5:QE:78:HIS:CE1	5:QE:143:ARG:H	2.20	0.58
6:QF:97:PHE:O	18:QR:31:LEU:HD23	2.04	0.58
13:QM:84:ILE:HG23	13:QM:85:GLY:N	2.18	0.58
14:QN:23:ARG:H	14:QN:33:VAL:HG11	1.67	0.58
14:QN:23:ARG:CZ	14:QN:30:ALA:HB2	2.32	0.58
18:QR:36:ASN:ND2	18:QR:36:ASN:O	2.32	0.58
48:R2:69:ARG:CB	48:R2:69:ARG:NH1	2.67	0.58
25:RA:1264:G:H5'	51:R5:11:THR:HG21	1.84	0.58
25:RA:2015:A:C1'	51:R5:2:ALA:HA	2.31	0.58
25:RA:1061:U:H3'	25:RA:1062:G:H5''	1.86	0.58
25:RA:2517:C:C2	25:RA:2542:A:N6	2.71	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:92:ILE:HD12	27:RD:104:TYR:CD2	2.39	0.58
28:RE:6:GLY:HA3	28:RE:26:ILE:HD11	1.85	0.58
29:RF:174:VAL:HG13	29:RF:174:VAL:O	2.03	0.58
25:RA:442:G:H1'	29:RF:48:THR:HG21	1.84	0.58
31:RH:4:ILE:HG13	31:RH:6:ARG:CD	2.33	0.58
33:RN:114:ARG:O	33:RN:115:ARG:HB3	2.03	0.58
35:RP:127:ALA:O	35:RP:147:LEU:HD23	2.02	0.58
36:RQ:80:GLU:OE1	46:R0:5:LYS:HB2	2.03	0.58
40:RU:92:ARG:NH1	40:RU:95:LEU:CD1	2.65	0.58
1:XA:191:G:C4	20:XT:105:SER:HB3	2.39	0.58
2:XB:37:ASN:C	2:XB:39:ILE:H	2.07	0.58
2:XB:80:ILE:HG21	2:XB:212:GLN:HA	1.84	0.58
5:XE:78:HIS:HA	8:XH:105:ARG:HB2	1.85	0.58
13:XM:45:VAL:O	13:XM:45:VAL:HG22	2.02	0.58
16:XP:53:VAL:HG23	16:XP:54:GLU:N	2.17	0.58
51:Y5:50:GLY:O	51:Y5:51:TYR:HB2	2.03	0.58
25:YA:1689:A:N6	25:YA:1698:A:H2	1.99	0.58
25:YA:2151:G:H2'	25:YA:2152:G:C8	2.39	0.58
25:YA:598:G:H1	25:YA:659:C:H42	1.52	0.58
27:YD:44:ASN:HB3	27:YD:49:ILE:CA	2.27	0.58
32:YI:115:ALA:CB	32:YI:128:LEU:HD11	2.29	0.58
36:YQ:55:VAL:HG22	36:YQ:56:ARG:N	2.18	0.58
37:YR:2:ARG:HG2	37:YR:5:LYS:HZ1	1.68	0.58
25:YA:1266:G:N7	42:YW:15:ARG:NH1	2.51	0.58
1:QA:1053:G:N7	1:QA:1199:U:H3'	2.18	0.58
1:QA:817:C:H1'	1:QA:819:A:H5'	1.83	0.58
2:QB:21:ARG:HG3	2:QB:38:GLY:O	2.01	0.58
4:QD:12:CYS:HA	4:QD:19:LEU:HD23	1.85	0.58
7:QG:85:TYR:HE1	7:QG:154:TYR:CE1	2.21	0.58
9:QI:79:LEU:O	9:QI:82:ALA:HB3	2.02	0.58
13:QM:3:ARG:HH21	30:RG:139:LEU:HD13	1.65	0.58
19:QS:40:ILE:HD11	19:QS:62:ILE:HG21	1.85	0.58
48:R2:16:LEU:CG	48:R2:16:LEU:O	2.49	0.58
25:RA:1342:A:OP1	43:RX:36:LYS:NZ	2.33	0.58
25:RA:2159:G:H2'	25:RA:2160:G:H8	1.68	0.58
25:RA:2602:A:C2	55:Z6:76:PPU:C8	2.86	0.58
27:RD:27:THR:CG2	27:RD:28:GLU:N	2.66	0.58
27:RD:35:LYS:CG	27:RD:64:ILE:H	2.14	0.58
30:RG:16:ARG:NH2	30:RG:31:VAL:HG11	2.17	0.58
32:RI:133:HIS:HB2	32:RI:134:PRO:CD	2.34	0.58
32:RI:4:ILE:HG12	32:RI:18:VAL:CG2	2.25	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:13:TRP:O	33:RN:135:PRO:HD2	2.04	0.58
44:RY:95:LYS:HD3	44:RY:95:LYS:H	1.67	0.58
44:RY:96:ILE:CD1	44:RY:98:VAL:HG12	2.33	0.58
1:XA:372:C:H42	1:XA:389:A:H62	1.50	0.58
2:XB:115:LEU:HD23	2:XB:153:ARG:HD3	1.84	0.58
3:XC:77:ILE:O	3:XC:84:ILE:HG22	2.02	0.58
1:XA:939:G:H5'	7:XG:102:ARG:NH2	2.18	0.58
11:XK:34:ASP:HB3	11:XK:40:ILE:HD11	1.84	0.58
16:XP:28:ARG:HG2	16:XP:28:ARG:HH11	1.68	0.58
46:Y0:51:VAL:HG21	46:Y0:79:VAL:O	2.03	0.58
48:Y2:17:SER:CB	48:Y2:18:PRO:HA	2.33	0.58
19:XS:5:LEU:HG	50:Y4:66:SER:HB3	1.84	0.58
25:YA:593:G:O2'	54:Y8:61:LEU:HD13	2.03	0.58
25:YA:573:G:N1	25:YA:2031:A:OP2	2.34	0.58
25:YA:2405:G:O2'	25:YA:2406:U:OP2	2.16	0.58
25:YA:2877:G:H2'	25:YA:2878:U:O4'	2.03	0.58
25:YA:288:C:H2'	25:YA:289:A:H8	1.69	0.58
25:YA:748:G:O6	42:YW:90:ARG:NH1	2.37	0.58
27:YD:165:ILE:HA	27:YD:175:LEU:HD23	1.83	0.58
29:YF:89:VAL:HG12	29:YF:90:PHE:N	2.18	0.58
31:YH:85:LYS:HA	31:YH:86:GLU:OE1	2.03	0.58
35:YP:65:ARG:HH21	54:Y8:15:LYS:CB	2.17	0.58
36:YQ:90:VAL:C	36:YQ:92:GLY:H	2.07	0.58
43:YX:36:LYS:HE3	43:YX:54:VAL:O	2.04	0.58
1:QA:677:U:H2'	1:QA:678:U:C6	2.37	0.58
4:QD:156:GLU:O	4:QD:160:GLN:HG3	2.03	0.58
5:QE:42:GLY:CA	5:QE:66:MET:HG2	2.33	0.58
17:QQ:32:TYR:O	17:QQ:34:LYS:N	2.37	0.58
50:R4:3:GLU:HG3	50:R4:4:GLY:N	2.18	0.58
13:QM:77:ASN:OD1	50:R4:71:ARG:CZ	2.51	0.58
29:RF:11:VAL:HG11	29:RF:18:ARG:HE	1.67	0.58
29:RF:160:ASN:OD1	29:RF:162:LEU:HB2	2.04	0.58
34:RO:20:MET:O	34:RO:41:ALA:HB1	2.04	0.58
34:RO:7:TYR:HE1	34:RO:20:MET:HE3	1.68	0.58
38:RS:67:ARG:HH11	38:RS:67:ARG:HB2	1.65	0.58
40:RU:92:ARG:HH11	40:RU:95:LEU:HD12	1.67	0.58
42:RW:95:ILE:O	42:RW:95:ILE:HD12	2.04	0.58
1:XA:745:C:OP1	1:XA:851:G:O2'	2.20	0.58
1:XA:864:A:H5'	5:XE:86:ALA:HB2	1.84	0.58
4:XD:114:ARG:NH1	4:XD:114:ARG:HG3	2.13	0.58
5:XE:102:ALA:HB2	5:XE:120:THR:OG1	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:YN:23:ARG:H	14:YN:33:VAL:HG11	1.67	0.58
14:YN:44:LEU:HD12	14:YN:44:LEU:C	2.24	0.58
16:XP:14:ASN:N	16:XP:15:PRO:CD	2.67	0.58
48:Y2:51:ARG:HA	48:Y2:54:LYS:HB2	1.86	0.58
48:Y2:69:ARG:CB	48:Y2:69:ARG:NH1	2.67	0.58
49:Y3:22:ALA:O	49:Y3:25:ALA:HB3	2.04	0.58
25:YA:1292:U:H2'	25:YA:1293:C:C6	2.39	0.58
25:YA:1950:G:N2	25:YA:1951:U:O4	2.37	0.58
31:YH:4:ILE:H	31:YH:4:ILE:HD13	1.68	0.58
32:YI:116:LEU:HD11	32:YI:119:PRO:HG3	1.85	0.58
33:YN:9:VAL:HG21	33:YN:48:MET:HB3	1.85	0.58
38:YS:42:ASP:C	38:YS:44:LYS:H	2.06	0.58
41:YV:38:LEU:HD23	41:YV:39:LEU:N	2.19	0.58
42:YW:66:GLU:O	42:YW:68:ARG:N	2.33	0.58
44:YY:81:LYS:HD3	44:YY:97:ARG:CD	2.33	0.58
1:QA:1314:C:OP2	19:QS:4:SER:OG	2.22	0.58
2:QB:111:ARG:NE	2:QB:111:ARG:HA	2.18	0.58
2:QB:178:ARG:O	8:QH:71:GLY:HA2	2.03	0.58
10:QJ:3:LYS:O	10:QJ:100:THR:HG22	2.04	0.58
13:QM:19:LEU:HD22	13:QM:19:LEU:H	1.68	0.58
16:QP:28:ARG:HH11	16:QP:28:ARG:HG2	1.68	0.58
19:QS:9:VAL:HG23	19:QS:9:VAL:O	2.04	0.58
50:R4:15:ILE:HG22	50:R4:19:GLY:O	2.03	0.58
54:R8:46:ARG:O	54:R8:47:LYS:HB3	2.03	0.58
25:RA:1728:G:N1	25:RA:1730:U:OP2	2.37	0.58
28:RE:51:PHE:CD1	28:RE:52:LEU:HG	2.38	0.58
32:RI:1:MET:HG3	32:RI:23:PRO:HB3	1.85	0.58
32:RI:2:LYS:CB	32:RI:20:ASP:HB3	2.33	0.58
37:RR:117:VAL:CG2	37:RR:118:GLU:H	2.15	0.58
43:RX:7:VAL:O	43:RX:30:VAL:HG12	2.03	0.58
45:RZ:154:ASP:O	45:RZ:157:LEU:HD13	2.03	0.58
1:XA:737:A:H2'	1:XA:738:C:H6	1.69	0.58
2:XB:19:HIS:NE2	2:XB:206:ASP:HB2	2.18	0.58
3:XC:36:ASP:HB3	3:XC:40:ARG:HH12	1.68	0.58
4:XD:12:CYS:HA	4:XD:19:LEU:HD23	1.85	0.58
5:XE:68:GLU:HG3	5:XE:68:GLU:O	2.02	0.58
6:XF:62:TRP:C	6:XF:63:TYR:HD2	2.06	0.58
7:XG:49:ILE:O	7:XG:53:LYS:HB3	2.03	0.58
8:XH:84:ARG:NH1	8:XH:86:ILE:HD13	2.11	0.58
8:XH:86:ILE:HG13	8:XH:133:LEU:HD22	1.84	0.58
12:XL:54:LYS:HD2	12:XL:54:LYS:N	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:121:LYS:HZ1	24:XY:40:G:P	2.17	0.58
46:Y0:29:GLN:O	46:Y0:31:VAL:HG13	2.03	0.58
50:Y4:65:ASP:O	50:Y4:66:SER:CB	2.51	0.58
25:YA:859:G:H2'	25:YA:916:G:O6	2.03	0.58
28:YE:51:PHE:CD1	28:YE:52:LEU:HG	2.39	0.58
28:YE:72:VAL:O	28:YE:73:GLU:O	2.21	0.58
31:YH:117:PRO:HB3	31:YH:123:PHE:CD1	2.37	0.58
32:YI:73:GLU:OE1	32:YI:137:PRO:HD2	2.04	0.58
33:YN:41:ASP:O	33:YN:48:MET:HE3	2.03	0.58
34:YO:40:VAL:HG12	34:YO:41:ALA:N	2.19	0.58
35:YP:71:VAL:HG13	35:YP:72:PRO:HD3	1.85	0.58
42:YW:95:ILE:HD12	42:YW:95:ILE:O	2.04	0.58
45:YZ:30:ASN:HB3	45:YZ:89:PHE:HE2	1.68	0.58
1:QA:25:C:H2'	1:QA:26:A:C8	2.39	0.58
2:QB:212:GLN:NE2	2:QB:235:SER:HB2	2.18	0.58
3:QC:105:GLU:HG2	3:QC:106:VAL:N	2.18	0.58
5:QE:153:LYS:NZ	5:QE:153:LYS:HB2	2.18	0.58
12:QL:33:ARG:O	12:QL:85:ILE:HG22	2.03	0.58
51:R5:50:GLY:O	51:R5:51:TYR:HB2	2.03	0.58
25:RA:2232:U:P	47:R1:40:ARG:HH12	2.27	0.58
25:RA:414:C:H2'	25:RA:415:A:H8	1.68	0.58
25:RA:662:G:H5''	35:RP:15:ARG:O	2.04	0.58
29:RF:138:GLU:O	29:RF:141:ALA:HB3	2.03	0.58
31:RH:159:GLU:O	31:RH:160:LYS:HG2	2.03	0.58
35:RP:71:VAL:CG1	35:RP:72:PRO:HD3	2.33	0.58
36:RQ:47:ILE:CD1	36:RQ:70:PRO:HD3	2.34	0.58
3:XC:33:LEU:O	3:XC:37:GLN:HG2	2.04	0.58
10:XJ:49:VAL:HG22	14:XN:41:ARG:HB2	1.84	0.58
15:XO:4:THR:HB	15:XO:6:GLU:OE2	2.02	0.58
50:Y4:12:ALA:CB	50:Y4:29:PRO:HA	2.33	0.58
25:YA:1805:U:O2	27:YD:50:THR:HB	2.04	0.58
25:YA:2293:C:H5''	38:YS:89:ARG:HH22	1.68	0.58
25:YA:2351:G:H8	25:YA:2351:G:O5'	1.87	0.58
25:YA:2543:G:H2'	25:YA:2544:G:C8	2.39	0.58
25:YA:821:A:H2'	25:YA:946:G:H5''	1.85	0.58
27:YD:242:ARG:HD2	27:YD:242:ARG:N	2.18	0.58
29:YF:138:GLU:O	29:YF:141:ALA:HB3	2.03	0.58
35:YP:13:ASN:C	35:YP:15:ARG:N	2.54	0.58
35:YP:71:VAL:CG1	35:YP:72:PRO:HD3	2.33	0.58
38:YS:88:ASP:CG	38:YS:90:GLY:H	2.06	0.58
25:YA:1200:C:H1'	40:YU:2:PRO:HG2	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1073:U:OP2	5:QE:57:LYS:NZ	2.32	0.58
1:QA:411:A:H62	1:QA:413:G:H21	1.51	0.58
1:QA:592:G:H1	1:QA:647:C:N4	2.01	0.58
2:QB:140:HIS:HA	2:QB:143:GLU:OE1	2.04	0.58
2:QB:37:ASN:C	2:QB:39:ILE:H	2.07	0.58
3:QC:77:ILE:O	3:QC:84:ILE:HG22	2.03	0.58
11:QK:21:ILE:HG13	11:QK:30:VAL:HG12	1.86	0.58
13:QM:56:LEU:HD13	13:QM:60:VAL:HG23	1.86	0.58
15:QO:26:GLU:CD	15:QO:77:ARG:NH1	2.57	0.58
46:R0:36:ILE:HD13	46:R0:36:ILE:O	2.03	0.58
50:R4:27:THR:O	50:R4:28:LYS:HB3	2.04	0.58
54:R8:56:GLU:O	54:R8:59:LYS:N	2.35	0.58
27:RD:27:THR:CG2	27:RD:83:GLU:HB3	2.33	0.58
31:RH:85:LYS:HA	31:RH:86:GLU:OE1	2.03	0.58
32:RI:127:VAL:HG22	32:RI:139:GLN:HB3	1.84	0.58
41:RV:35:LEU:HD21	41:RV:57:VAL:CG2	2.30	0.58
3:XC:189:ALA:HB3	3:XC:196:LEU:HB2	1.84	0.58
4:XD:191:ARG:NH1	4:XD:200:GLU:OE1	2.37	0.58
4:XD:13:ARG:CD	4:XD:38:TYR:O	2.51	0.58
7:XG:69:VAL:HG11	7:XG:104:LEU:CD2	2.33	0.58
13:XM:4:ILE:HG22	13:XM:5:ALA:N	2.19	0.58
48:Y2:15:LYS:H	48:Y2:67:LYS:CE	2.17	0.58
28:YE:63:LEU:HD13	28:YE:65:GLY:H	1.68	0.58
28:YE:78:LEU:HD23	28:YE:79:ARG:HD2	1.86	0.58
32:YI:99:GLU:OE2	32:YI:103:ARG:NH2	2.36	0.58
33:YN:35:ARG:O	33:YN:37:LYS:N	2.37	0.58
38:YS:95:HIS:CG	38:YS:96:GLY:H	2.21	0.58
25:YA:2009:G:OP1	42:YW:41:LYS:HE2	2.04	0.58
43:YX:7:VAL:O	43:YX:30:VAL:HG12	2.04	0.58
44:YY:51:VAL:CG1	44:YY:52:SER:H	2.11	0.58
36:YQ:134:ARG:NE	45:YZ:122:ARG:NH2	2.52	0.58
45:YZ:154:ASP:O	45:YZ:155:LEU:O	2.22	0.58
45:YZ:27:VAL:HG22	45:YZ:28:MET:H	1.69	0.58
1:QA:1004:A:O5'	1:QA:1025:U:N3	2.36	0.58
7:QG:69:VAL:HG11	7:QG:104:LEU:CD2	2.34	0.58
48:R2:15:LYS:H	48:R2:67:LYS:NZ	2.02	0.58
50:R4:15:ILE:HG22	50:R4:20:ASN:HA	1.86	0.58
50:R4:38:LYS:C	50:R4:40:HIS:N	2.52	0.58
51:R5:55:ARG:NH1	51:R5:58:LEU:HD11	2.19	0.58
25:RA:1444(A):A:H4'	25:RA:1460:A:O2'	2.04	0.58
25:RA:1695:G:H1'	27:RD:8:PRO:O	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2273:A:H2'	25:RA:2274:A:C8	2.39	0.58
25:RA:2695:C:H2'	25:RA:2696:U:C6	2.38	0.58
25:RA:76:C:O2'	48:R2:62:THR:HG21	2.03	0.58
27:RD:147:LEU:HD13	27:RD:155:LEU:CD1	2.29	0.58
32:RI:116:LEU:HD11	32:RI:119:PRO:HG3	1.85	0.58
38:RS:26:LEU:CD2	38:RS:87:PHE:HD1	2.17	0.58
43:RX:27:THR:HB	43:RX:80:ILE:HB	1.85	0.58
45:RZ:27:VAL:HG22	45:RZ:28:MET:H	1.69	0.58
2:XB:111:ARG:NE	2:XB:111:ARG:HA	2.19	0.58
3:XC:76:VAL:HG21	3:XC:103:VAL:CG1	2.34	0.58
9:XI:17:VAL:HG13	9:XI:81:ILE:HD13	1.85	0.58
19:XS:68:GLY:N	50:Y4:59:PHE:CE1	2.71	0.58
20:XT:37:SER:HB3	20:XT:84:LEU:HD23	1.85	0.58
48:Y2:21:LEU:O	48:Y2:25:VAL:HG23	2.04	0.58
25:YA:747:U:C2	51:Y5:2:ALA:HB3	2.38	0.58
25:YA:1019:U:H3	25:YA:1142(A):A:H62	1.52	0.58
25:YA:2252:G:H2'	25:YA:2253:G:O4'	2.04	0.58
25:YA:807:U:OP2	35:YP:41:ARG:NH1	2.37	0.58
26:YB:6:C:H2'	26:YB:7:G:H5''	1.85	0.58
27:YD:71:ASP:HB3	27:YD:103:ARG:HH22	1.68	0.58
32:YI:2:LYS:CB	32:YI:20:ASP:HB3	2.34	0.58
33:YN:13:TRP:O	33:YN:135:PRO:HD2	2.04	0.58
36:YQ:47:ILE:CD1	36:YQ:70:PRO:HD3	2.34	0.58
43:YX:27:THR:HB	43:YX:80:ILE:HB	1.84	0.58
1:QA:294:U:OP1	1:QA:610:G:O2'	2.15	0.57
4:QD:22:LYS:O	4:QD:113:SER:HB3	2.03	0.57
13:QM:81:LEU:HB3	13:QM:89:GLY:CA	2.34	0.57
16:QP:51:VAL:CG1	16:QP:52:ASP:N	2.65	0.57
19:QS:17:GLU:HA	19:QS:20:LEU:HD12	1.86	0.57
50:R4:22:ILE:HG22	50:R4:23:GLU:N	2.18	0.57
25:RA:2853:C:H2'	25:RA:2854:G:C8	2.39	0.57
25:RA:530:G:C6	25:RA:2022:U:H5''	2.39	0.57
25:RA:947:G:H2'	25:RA:948:G:C8	2.39	0.57
30:RG:53:LEU:HD23	30:RG:53:LEU:C	2.25	0.57
31:RH:4:ILE:H	31:RH:4:ILE:HD13	1.68	0.57
35:RP:59:LEU:HA	35:RP:61:ARG:CZ	2.34	0.57
36:RQ:90:VAL:C	36:RQ:92:GLY:H	2.07	0.57
38:RS:106:ARG:O	38:RS:107:GLU:HB2	2.04	0.57
40:RU:24:TYR:HE1	40:RU:39:LEU:HD23	1.69	0.57
45:RZ:33:LEU:HG	45:RZ:34:ASN:N	2.19	0.57
1:XA:1065:U:OP2	1:XA:1190:G:N2	2.27	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:140:HIS:HA	2:XB:143:GLU:OE1	2.04	0.57
2:XB:12:GLU:O	2:XB:16:HIS:ND1	2.36	0.57
1:XA:1116:C:O2'	9:XI:108:VAL:HG11	2.03	0.57
12:XL:83:VAL:HG22	12:XL:84:LEU:H	1.69	0.57
51:Y5:60:VAL:OXT	51:Y5:60:VAL:HG13	2.03	0.57
25:YA:1567:A:H5'	27:YD:58:HIS:ND1	2.19	0.57
25:YA:207:A:H2'	25:YA:208:C:O4'	2.03	0.57
25:YA:2451:A:C6	55:Z8:76:PPU:HE2	2.39	0.57
25:YA:573:G:O2'	25:YA:574:C:H3'	2.04	0.57
28:YE:111:ARG:NE	28:YE:160:TYR:HE1	2.01	0.57
28:YE:6:GLY:HA3	28:YE:26:ILE:HD11	1.85	0.57
29:YF:160:ASN:OD1	29:YF:162:LEU:HB2	2.04	0.57
30:YG:39:ILE:HG23	30:YG:155:MET:HG3	1.86	0.57
31:YH:127:GLU:HG2	31:YH:128:PRO:CG	2.32	0.57
37:YR:117:VAL:CG2	37:YR:118:GLU:H	2.15	0.57
1:QA:1399:C:C2	1:QA:1502:A:N6	2.72	0.57
1:QA:514:C:H2'	1:QA:515:G:H8	1.68	0.57
1:QA:757:U:H2'	1:QA:758:G:O4'	2.03	0.57
2:QB:12:GLU:O	2:QB:16:HIS:ND1	2.36	0.57
2:QB:80:ILE:HG21	2:QB:212:GLN:HA	1.84	0.57
11:QK:30:VAL:HG21	11:QK:65:ALA:HA	1.85	0.57
1:QA:707:C:H5''	11:QK:85:ARG:HH11	1.70	0.57
1:QA:1226:C:H2'	13:QM:103:THR:HB	1.86	0.57
27:RD:25:THR:HG21	27:RD:81:ALA:HB1	1.85	0.57
28:RE:111:ARG:NE	28:RE:160:TYR:HE1	2.01	0.57
28:RE:51:PHE:HD1	28:RE:52:LEU:HG	1.67	0.57
31:RH:41:MET:HE1	31:RH:64:LEU:HB3	1.85	0.57
34:RO:20:MET:HG2	34:RO:21:CYS:N	2.19	0.57
36:RQ:66:ILE:HA	36:RQ:104:PHE:HA	1.85	0.57
37:RR:2:ARG:HG2	37:RR:5:LYS:HZ1	1.68	0.57
42:RW:1:MET:HE3	42:RW:1:MET:HA	1.85	0.57
2:XB:77:ALA:CB	2:XB:211:ILE:HG21	2.34	0.57
4:XD:156:GLU:O	4:XD:160:GLN:HG3	2.03	0.57
4:XD:196:LEU:O	4:XD:198:VAL:N	2.31	0.57
6:XF:39:LYS:HD2	6:XF:64:GLN:NE2	2.19	0.57
8:XH:19:VAL:O	8:XH:20:TYR:HB2	2.04	0.57
13:XM:84:ILE:HG23	13:XM:85:GLY:N	2.17	0.57
22:XV:53:G:H4'	22:XV:54:U:OP1	2.02	0.57
24:XY:39:C:O2'	24:XY:40:G:OP1	2.21	0.57
48:Y2:16:LEU:O	48:Y2:17:SER:HB3	2.04	0.57
50:Y4:37:SER:HB3	50:Y4:42:PHE:CE1	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1790:C:H2'	25:YA:1791:A:C4	2.39	0.57
28:YE:116:VAL:CG2	28:YE:122:PHE:CD2	2.86	0.57
28:YE:41:LYS:HA	28:YE:41:LYS:HE2	1.86	0.57
28:YE:63:LEU:HD12	28:YE:65:GLY:H	1.69	0.57
32:YI:11:ASN:O	32:YI:12:LEU:CB	2.51	0.57
33:YN:114:ARG:O	33:YN:115:ARG:HB3	2.03	0.57
33:YN:14:VAL:HG12	33:YN:15:LEU:N	2.18	0.57
39:YT:82:LEU:N	39:YT:82:LEU:HD12	2.19	0.57
40:YU:24:TYR:HE1	40:YU:39:LEU:HD23	1.69	0.57
1:QA:236:G:OP1	17:QQ:40:LYS:NZ	2.35	0.57
1:QA:343:U:H2'	1:QA:345:C:H1'	1.85	0.57
2:QB:178:ARG:CD	8:QH:71:GLY:C	2.73	0.57
7:QG:16:LEU:CD1	9:QI:45:ALA:HB2	2.33	0.57
13:QM:82:MET:O	13:QM:84:ILE:N	2.38	0.57
16:QP:21:VAL:HG22	16:QP:34:GLU:O	2.05	0.57
12:QL:10:LEU:HB3	17:QQ:32:TYR:CE2	2.38	0.57
50:R4:39:CYS:O	50:R4:40:HIS:HB2	2.03	0.57
30:RG:39:ILE:HG23	30:RG:155:MET:HG3	1.86	0.57
31:RH:125:VAL:HA	31:RH:126:PRO:CB	2.29	0.57
31:RH:84:SER:O	31:RH:133:VAL:O	2.22	0.57
38:RS:95:HIS:CG	38:RS:96:GLY:H	2.21	0.57
39:RT:82:LEU:HD12	39:RT:82:LEU:N	2.19	0.57
41:RV:78:LYS:O	41:RV:79:VAL:HB	2.04	0.57
2:XB:106:LYS:O	2:XB:110:GLN:HG3	2.05	0.57
2:XB:97:TRP:HH2	2:XB:176:GLU:HB2	1.69	0.57
10:XJ:94:VAL:HG12	10:XJ:95:GLU:N	2.20	0.57
11:XK:29:ILE:HG13	11:XK:43:SER:O	2.04	0.57
47:Y1:86:SER:H	47:Y1:87:PRO:CD	2.16	0.57
49:Y3:4:LEU:O	49:Y3:36:VAL:HA	2.04	0.57
25:YA:1530:G:O6	25:YA:1542:G:N2	2.37	0.57
25:YA:469:G:O6	53:Y7:37:LYS:HE2	2.03	0.57
27:YD:35:LYS:HG2	27:YD:64:ILE:CA	2.34	0.57
29:YF:192:LEU:HD21	29:YF:194:MET:CE	2.35	0.57
30:YG:53:LEU:HD23	30:YG:53:LEU:C	2.24	0.57
32:YI:4:ILE:HG12	32:YI:18:VAL:CG2	2.25	0.57
38:YS:67:ARG:NH1	38:YS:67:ARG:CB	2.64	0.57
38:YS:26:LEU:CD2	38:YS:87:PHE:HD1	2.17	0.57
2:QB:97:TRP:HH2	2:QB:176:GLU:HB2	1.69	0.57
3:QC:57:ILE:HG23	3:QC:64:VAL:HG13	1.86	0.57
4:QD:119:GLN:HG3	4:QD:123:HIS:CD2	2.39	0.57
5:QE:140:ARG:HH11	5:QE:140:ARG:HB2	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:49:VAL:HG21	14:QN:41:ARG:HB2	1.87	0.57
10:QJ:64:GLU:OE2	10:QJ:66:ARG:HD2	2.05	0.57
47:R1:81:LYS:H	47:R1:81:LYS:HE2	1.62	0.57
48:R2:21:LEU:O	48:R2:25:VAL:HG23	2.04	0.57
27:RD:177:LEU:HD11	27:RD:183:ARG:HB2	1.85	0.57
27:RD:263:ARG:HB2	27:RD:263:ARG:HH11	1.67	0.57
27:RD:35:LYS:HG2	27:RD:64:ILE:CA	2.34	0.57
33:RN:35:ARG:O	33:RN:37:LYS:N	2.37	0.57
36:RQ:55:VAL:HG22	36:RQ:56:ARG:N	2.18	0.57
37:RR:63:ARG:HG3	37:RR:63:ARG:HH11	1.68	0.57
38:RS:67:ARG:HH11	38:RS:67:ARG:CB	2.18	0.57
40:RU:92:ARG:C	40:RU:94:ASN:H	2.05	0.57
1:XA:924:C:O2'	1:XA:1502:A:N6	2.37	0.57
1:XA:491:G:H2'	1:XA:492:G:C8	2.39	0.57
6:XF:99:ALA:O	6:XF:100:ASN:HB2	2.04	0.57
7:XG:62:PHE:HA	7:XG:124:LEU:CD2	2.27	0.57
10:XJ:3:LYS:O	10:XJ:100:THR:HG22	2.04	0.57
11:XK:21:ILE:N	11:XK:21:ILE:HD12	2.20	0.57
1:XA:690:G:H22	11:XK:55:LYS:HZ1	1.51	0.57
12:XL:33:ARG:O	12:XL:85:ILE:HG22	2.03	0.57
16:XP:76:GLN:HG2	16:XP:76:GLN:O	2.05	0.57
19:XS:15:LEU:N	19:XS:15:LEU:HD23	2.19	0.57
25:YA:1309:G:OP1	53:Y7:9:ARG:HD3	2.04	0.57
25:YA:1430:C:H2'	25:YA:1431:U:C6	2.40	0.57
25:YA:1824:G:O3'	27:YD:249:PRO:HD3	2.04	0.57
32:YI:1:MET:HG3	32:YI:23:PRO:HB3	1.85	0.57
33:YN:14:VAL:HG12	33:YN:15:LEU:H	1.69	0.57
37:YR:79:LEU:HD23	37:YR:79:LEU:C	2.23	0.57
45:YZ:152:ALA:HB2	45:YZ:170:THR:H	1.69	0.57
1:QA:458:C:H2'	1:QA:464:G:H8	1.70	0.57
6:QF:99:ALA:O	6:QF:100:ASN:HB2	2.04	0.57
10:QJ:22:LYS:HD2	10:QJ:22:LYS:C	2.25	0.57
11:QK:69:ALA:HB1	11:QK:103:LEU:HD21	1.85	0.57
19:QS:65:ASN:N	19:QS:65:ASN:ND2	2.52	0.57
46:R0:24:LYS:O	46:R0:25:ARG:HD3	2.05	0.57
47:R1:86:SER:H	47:R1:87:PRO:CD	2.16	0.57
50:R4:37:SER:HB3	50:R4:42:PHE:CE1	2.38	0.57
52:R6:6:ARG:O	52:R6:8:LYS:HD2	2.05	0.57
25:RA:1543:A:C2	25:RA:1545:A:C8	2.92	0.57
25:RA:1678:G:H22	25:RA:1989:G:H1	1.53	0.57
25:RA:1820:U:C2	27:RD:202:LYS:HB3	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2692:C:H2'	25:RA:2693:A:O4'	2.04	0.57
25:RA:676:A:H8	25:RA:2069:G:N2	1.97	0.57
25:RA:878:A:N6	25:RA:899:A:HO2'	2.02	0.57
30:RG:16:ARG:HB3	30:RG:17:PRO:CD	2.33	0.57
30:RG:39:ILE:CG2	30:RG:155:MET:HG3	2.35	0.57
31:RH:125:VAL:HG12	31:RH:126:PRO:CG	2.34	0.57
32:RI:6:LEU:HD13	32:RI:36:ALA:CA	2.34	0.57
32:RI:73:GLU:OE1	32:RI:137:PRO:HD2	2.04	0.57
33:RN:14:VAL:HG12	33:RN:15:LEU:H	1.69	0.57
33:RN:42:TRP:O	40:RU:64:ARG:NH2	2.35	0.57
34:RO:40:VAL:HG12	34:RO:41:ALA:N	2.19	0.57
25:RA:2393:A:H4'	35:RP:61:ARG:O	2.05	0.57
42:RW:80:PRO:O	42:RW:100:THR:HG22	2.03	0.57
2:XB:30:ARG:HH21	2:XB:194:PRO:CG	2.17	0.57
13:XM:81:LEU:HB3	13:XM:89:GLY:CA	2.34	0.57
49:Y3:31:LEU:O	49:Y3:32:GLN:HB2	2.04	0.57
54:Y8:46:ARG:O	54:Y8:47:LYS:HB3	2.03	0.57
25:YA:1130:U:O5'	25:YA:1130:U:H6	1.87	0.57
25:YA:1297:C:H2'	25:YA:1298:C:H6	1.69	0.57
25:YA:1600:C:OP1	43:YX:58:HIS:NE2	2.30	0.57
28:YE:152:LYS:HG2	33:YN:78:TYR:CE1	2.39	0.57
28:YE:203:LYS:HE3	28:YE:204:ALA:HB2	1.87	0.57
30:YG:63:ILE:HD11	30:YG:102:PHE:HE2	1.69	0.57
30:YG:107:LEU:HD11	30:YG:178:PHE:CE1	2.40	0.57
31:YH:3:ARG:HA	31:YH:3:ARG:HE	1.69	0.57
33:YN:133:GLN:O	33:YN:134:ARG:CB	2.53	0.57
33:YN:63:THR:HG22	33:YN:66:LYS:NZ	2.20	0.57
33:YN:7:LYS:HG2	33:YN:8:GLN:N	2.20	0.57
34:YO:20:MET:O	34:YO:41:ALA:HB1	2.04	0.57
38:YS:106:ARG:O	38:YS:107:GLU:HB2	2.04	0.57
38:YS:26:LEU:HD12	38:YS:39:ILE:CD1	2.23	0.57
28:YE:7:VAL:HG11	39:YT:1:MET:HE3	1.85	0.57
41:YV:78:LYS:O	41:YV:79:VAL:HB	2.04	0.57
1:QA:1346:A:N6	7:QG:10:ARG:HD2	2.20	0.57
3:QC:181:ASN:HD22	3:QC:204:LEU:HB2	1.68	0.57
3:QC:77:ILE:O	3:QC:83:ARG:HB3	2.05	0.57
4:QD:100:ARG:HH22	4:QD:137:SER:HB3	1.70	0.57
4:QD:50:ARG:O	4:QD:50:ARG:HD2	2.05	0.57
6:QF:39:LYS:HD2	6:QF:64:GLN:NE2	2.19	0.57
7:QG:113:GLU:HB2	7:QG:119:ARG:CG	2.35	0.57
11:QK:32:ILE:O	11:QK:40:ILE:HG12	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:QN:13:THR:N	14:QN:14:PRO:CD	2.68	0.57
25:RA:443:A:O2'	25:RA:1200:C:O2'	2.19	0.57
28:RE:41:LYS:HA	28:RE:41:LYS:HE2	1.86	0.57
28:RE:63:LEU:HD13	28:RE:65:GLY:H	1.68	0.57
28:RE:74:PRO:HG2	28:RE:77:ILE:HG23	1.87	0.57
30:RG:107:LEU:HD11	30:RG:178:PHE:CE1	2.39	0.57
33:RN:133:GLN:O	33:RN:134:ARG:CB	2.53	0.57
37:RR:32:GLY:O	37:RR:115:GLU:HA	2.04	0.57
38:RS:103:GLU:O	38:RS:106:ARG:CG	2.53	0.57
26:RB:52:A:H62	38:RS:33:LYS:HG3	1.70	0.57
45:RZ:152:ALA:HB2	45:RZ:170:THR:H	1.69	0.57
45:RZ:157:LEU:N	45:RZ:158:PRO:HD3	2.20	0.57
1:XA:1239:A:H4'	1:XA:1240:U:H5''	1.86	0.57
3:XC:14:ILE:HG12	3:XC:15:THR:N	2.19	0.57
5:XE:140:ARG:HB2	5:XE:140:ARG:HH11	1.69	0.57
7:XG:121:ALA:O	7:XG:125:MET:N	2.37	0.57
46:Y0:14:ARG:O	46:Y0:15:ASP:HB2	2.05	0.57
46:Y0:36:ILE:HD13	46:Y0:36:ILE:O	2.03	0.57
51:Y5:55:ARG:NH1	51:Y5:58:LEU:HD11	2.19	0.57
25:YA:1003:G:O2'	25:YA:1010:A:N1	2.35	0.57
25:YA:1359:A:N6	25:YA:1372:U:C4	2.71	0.57
25:YA:2121:G:O6	25:YA:2176:A:N6	2.37	0.57
25:YA:2777:G:OP2	25:YA:2781:A:O2'	2.18	0.57
32:YI:6:LEU:HD13	32:YI:36:ALA:CA	2.34	0.57
34:YO:71:ARG:HH11	34:YO:71:ARG:HG3	1.69	0.57
37:YR:32:GLY:O	37:YR:115:GLU:HA	2.04	0.57
1:QA:935:A:H1'	1:QA:1384:C:N3	2.20	0.57
1:QA:865:A:N3	1:QA:918:A:O2'	2.34	0.57
2:QB:106:LYS:O	2:QB:110:GLN:HG3	2.04	0.57
3:QC:14:ILE:HG12	3:QC:15:THR:N	2.19	0.57
3:QC:90:GLU:O	3:QC:94:LEU:HG	2.05	0.57
20:QT:10:LEU:HG	20:QT:12:ALA:H	1.70	0.57
48:R2:17:SER:HB2	48:R2:18:PRO:HA	1.86	0.57
48:R2:15:LYS:H	48:R2:67:LYS:CE	2.17	0.57
54:R8:53:PRO:CD	54:R8:54:GLU:H	2.15	0.57
25:RA:180:G:N2	25:RA:215:G:O6	2.37	0.57
25:RA:2015:A:N3	51:R5:2:ALA:N	2.52	0.57
25:RA:2839:G:H21	37:RR:92:GLY:HA3	1.70	0.57
25:RA:443:A:C5	29:RF:45:ARG:HD2	2.39	0.57
25:RA:654(A):G:H22	25:RA:654(U):A:H1'	1.69	0.57
26:RB:11:C:H3'	26:RB:12:C:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:126:PRO:CG	31:RH:127:GLU:N	2.65	0.57
33:RN:40:PRO:HB3	40:RU:68:ALA:HB2	1.87	0.57
44:RY:89:PHE:O	44:RY:90:LEU:HD13	2.05	0.57
45:RZ:154:ASP:O	45:RZ:155:LEU:O	2.22	0.57
45:RZ:52:SER:O	45:RZ:53:ILE:HG13	2.03	0.57
1:XA:1112:C:H1'	3:XC:179:ARG:HH11	1.69	0.57
4:XD:100:ARG:HH22	4:XD:137:SER:HB3	1.70	0.57
5:XE:111:GLU:C	5:XE:113:ALA:H	2.07	0.57
15:XO:26:GLU:CD	15:XO:77:ARG:NH1	2.58	0.57
17:XQ:32:TYR:O	17:XQ:34:LYS:N	2.37	0.57
27:YD:25:THR:HG21	27:YD:81:ALA:HB1	1.85	0.57
27:YD:34:VAL:CG1	27:YD:34:VAL:O	2.50	0.57
27:YD:36:PRO:HB2	27:YD:61:LEU:HG	1.87	0.57
25:YA:1695:G:H1'	27:YD:8:PRO:O	2.03	0.57
38:YS:67:ARG:CB	38:YS:67:ARG:HH11	2.17	0.57
1:QA:1259:C:HO2'	1:QA:1283:G:H21	1.51	0.57
3:QC:76:VAL:HG21	3:QC:103:VAL:CG1	2.34	0.57
7:QG:121:ALA:O	7:QG:125:MET:N	2.37	0.57
11:QK:29:ILE:HG13	11:QK:43:SER:O	2.04	0.57
12:QL:18:VAL:O	12:QL:19:ARG:HB2	2.03	0.57
16:QP:76:GLN:HG2	16:QP:76:GLN:O	2.05	0.57
18:QR:85:LEU:HD23	18:QR:88:LYS:HD2	1.86	0.57
20:QT:53:LEU:HA	20:QT:56:MET:HB3	1.87	0.57
48:R2:31:GLU:O	48:R2:35:LEU:HG	2.05	0.57
49:R3:22:ALA:O	49:R3:25:ALA:HB3	2.04	0.57
52:R6:11:LEU:HD23	52:R6:26:ASN:HB3	1.87	0.57
52:R6:48:VAL:HG13	52:R6:49:HIS:N	2.20	0.57
54:R8:33:ASN:O	54:R8:34:TRP:C	2.42	0.57
25:RA:1292:U:H2'	25:RA:1293:C:C6	2.40	0.57
25:RA:2735:G:H2'	25:RA:2736:G:H8	1.70	0.57
25:RA:620:G:H4'	25:RA:621:A:H5''	1.86	0.57
26:RB:80:U:H2'	26:RB:81:G:N2	2.18	0.57
25:RA:1655:A:O3'	28:RE:115:GLY:HA3	2.03	0.57
43:RX:36:LYS:HE3	43:RX:54:VAL:O	2.04	0.57
45:RZ:30:ASN:HB3	45:RZ:89:PHE:CE2	2.40	0.57
1:XA:1321:C:H5''	1:XA:1322:C:H5''	1.86	0.57
2:XB:178:ARG:NH2	8:XH:68:ARG:NH2	2.52	0.57
4:XD:50:ARG:O	4:XD:50:ARG:HD2	2.05	0.57
5:XE:140:ARG:CB	5:XE:140:ARG:HH11	2.18	0.57
7:XG:16:LEU:CD1	9:XI:45:ALA:HB2	2.34	0.57
7:XG:37:ASN:HD21	9:XI:40:LEU:HD23	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y4:42:PHE:CG	50:Y4:43:TYR:N	2.72	0.57
25:YA:1553:A:C6	25:YA:1555:G:H1'	2.40	0.57
25:YA:2115:G:N2	25:YA:2165:G:N7	2.46	0.57
25:YA:994:C:H3'	40:YU:54:LYS:HE3	1.87	0.57
28:YE:102:VAL:HG13	28:YE:172:VAL:CG2	2.34	0.57
29:YF:32:LEU:HD13	29:YF:105:VAL:CG1	2.33	0.57
34:YO:96:THR:O	34:YO:97:ARG:HB3	2.04	0.57
35:YP:64:LYS:C	35:YP:66:GLY:N	2.56	0.57
25:YA:518:G:C4'	42:YW:18:ARG:HH12	2.08	0.57
44:YY:97:ARG:HG2	44:YY:97:ARG:O	2.05	0.57
45:YZ:154:ASP:O	45:YZ:157:LEU:HD13	2.03	0.57
45:YZ:33:LEU:HG	45:YZ:34:ASN:N	2.20	0.57
1:QA:1291:G:H4'	9:QI:39:GLY:HA3	1.87	0.57
1:QA:1158:C:H4'	2:QB:133:LYS:NZ	2.20	0.57
2:QB:30:ARG:HH21	2:QB:194:PRO:CG	2.17	0.57
3:QC:7:PRO:O	3:QC:11:ARG:HG2	2.05	0.57
4:QD:191:ARG:NH1	4:QD:200:GLU:OE1	2.37	0.57
10:QJ:74:ILE:HD13	10:QJ:74:ILE:N	2.16	0.57
10:QJ:94:VAL:HG12	10:QJ:95:GLU:N	2.19	0.57
13:QM:69:GLU:O	13:QM:71:ARG:N	2.38	0.57
18:QR:57:GLY:O	18:QR:58:LEU:C	2.43	0.57
47:R1:70:VAL:O	47:R1:74:VAL:HG23	2.05	0.57
47:R1:89:GLU:O	47:R1:93:GLU:HB2	2.05	0.57
49:R3:31:LEU:O	49:R3:32:GLN:HB2	2.04	0.57
25:RA:1426:G:O2'	25:RA:1572:A:N6	2.37	0.57
25:RA:2548:G:H2'	25:RA:2549:G:O4'	2.04	0.57
25:RA:507:A:C5'	25:RA:508:G:H5'	2.33	0.57
25:RA:74:A:H4'	25:RA:75:G:O5'	2.05	0.57
28:RE:102:VAL:HG13	28:RE:172:VAL:CG2	2.34	0.57
33:RN:112:LEU:O	33:RN:114:ARG:O	2.23	0.57
40:RU:96:ALA:O	40:RU:100:VAL:HG23	2.05	0.57
1:XA:1513:A:H2'	1:XA:1514:C:C6	2.39	0.57
1:XA:606:G:H1	1:XA:631:G:H5"	1.70	0.57
2:XB:187:LEU:CD1	2:XB:205:ASP:HA	2.34	0.57
10:XJ:64:GLU:OE2	10:XJ:66:ARG:HD2	2.05	0.57
13:XM:49:THR:HB	13:XM:52:GLU:HG3	1.86	0.57
13:XM:82:MET:O	13:XM:84:ILE:N	2.38	0.57
14:XN:13:THR:N	14:XN:14:PRO:CD	2.68	0.57
26:YB:55:U:O2'	26:YB:57:A:N7	2.37	0.57
27:YD:92:ILE:HD12	27:YD:104:TYR:CD2	2.39	0.57
27:YD:69:ARG:C	27:YD:71:ASP:H	2.08	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YS:5:THR:HG23	38:YS:8:GLU:OE2	2.05	0.57
38:YS:72:ALA:O	38:YS:76:LYS:HG3	2.04	0.57
40:YU:52:ARG:NH1	40:YU:52:ARG:HG2	2.18	0.57
44:YY:21:LYS:HG3	44:YY:22:GLY:H	1.69	0.57
1:QA:1298:C:O2'	1:QA:1299:A:OP2	2.21	0.57
1:QA:1305:G:C5'	21:QU:4:GLY:HA3	2.33	0.57
1:QA:579:G:H5'	1:QA:728:A:H1'	1.87	0.57
1:QA:797:C:OP1	11:QK:124:LYS:HE2	2.05	0.57
3:QC:59:ARG:NH2	3:QC:97:LYS:HE3	2.20	0.57
1:QA:939:G:H5''	7:QG:102:ARG:NH2	2.20	0.57
8:QH:84:ARG:NH1	8:QH:86:ILE:HD13	2.11	0.57
11:QK:69:ALA:HB1	11:QK:103:LEU:CD2	2.35	0.57
12:QL:45:PRO:HD3	12:QL:51:ALA:O	2.03	0.57
46:R0:14:ARG:O	46:R0:15:ASP:HB2	2.05	0.57
25:RA:2286:A:H3'	52:R6:31:PRO:HG2	1.86	0.57
53:R7:13:ALA:O	53:R7:17:GLY:HA3	2.05	0.57
25:RA:2342:C:O2	25:RA:2374:C:H4'	2.04	0.57
25:RA:2445:G:OP1	29:RF:74:ARG:NH2	2.38	0.57
25:RA:76:C:H2'	25:RA:77:C:H6	1.69	0.57
28:RE:63:LEU:HD12	28:RE:65:GLY:H	1.69	0.57
30:RG:63:ILE:HD11	30:RG:102:PHE:HE2	1.70	0.57
31:RH:124:GLU:HB3	31:RH:132:ARG:HG3	1.85	0.57
33:RN:131:GLN:CG	33:RN:132:ALA:N	2.68	0.57
28:RE:152:LYS:HG2	33:RN:78:TYR:CE1	2.39	0.57
33:RN:7:LYS:HG2	33:RN:8:GLN:N	2.20	0.57
34:RO:96:THR:O	34:RO:97:ARG:HB3	2.04	0.57
38:RS:32:LEU:O	38:RS:62:LYS:HE2	2.05	0.57
1:XA:328:C:H4'	1:XA:329:A:H5'	1.87	0.57
1:XA:891:U:OP2	1:XA:906:G:N2	2.28	0.57
3:XC:11:ARG:HH21	3:XC:180:ALA:HB3	1.70	0.57
4:XD:76:ARG:HD2	4:XD:207:TYR:HE2	1.66	0.57
19:XS:9:VAL:O	19:XS:9:VAL:HG23	2.04	0.57
21:XU:7:ARG:O	21:XU:8:THR:HG23	2.05	0.57
47:Y1:70:VAL:O	47:Y1:74:VAL:HG23	2.05	0.57
49:Y3:7:LYS:NZ	49:Y3:32:GLN:HE21	2.03	0.57
50:Y4:27:THR:O	50:Y4:28:LYS:HB3	2.03	0.57
52:Y6:14:THR:O	52:Y6:49:HIS:HA	2.05	0.57
25:YA:133:C:H42	25:YA:146:G:H1	1.50	0.57
25:YA:1859:A:N6	25:YA:1883:G:O2'	2.36	0.57
25:YA:2331:G:O2'	25:YA:2336:A:N1	2.27	0.57
25:YA:26:G:H1'	25:YA:515:A:N6	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:25:THR:HG21	27:YD:82:ILE:H	1.70	0.57
31:YH:84:SER:O	31:YH:133:VAL:O	2.22	0.57
31:YH:41:MET:HE1	31:YH:64:LEU:HB3	1.87	0.57
37:YR:45:ARG:HA	37:YR:95:THR:HG21	1.87	0.57
39:YT:134:GLU:O	39:YT:135:ALA:HB3	2.04	0.57
45:YZ:157:LEU:N	45:YZ:158:PRO:HD3	2.20	0.57
2:QB:60:ASP:HB3	2:QB:64:ARG:CZ	2.34	0.56
1:QA:1152:A:H5''	10:QJ:13:HIS:CD2	2.40	0.56
16:QP:14:ASN:N	16:QP:15:PRO:CD	2.67	0.56
49:R3:4:LEU:O	49:R3:36:VAL:HA	2.04	0.56
25:RA:1543:A:H2	25:RA:1545:A:C4	2.22	0.56
25:RA:2438:U:O3'	25:RA:2439:A:H3'	2.05	0.56
26:RB:48:A:H2'	26:RB:49:C:C6	2.39	0.56
32:RI:70:GLU:OE1	32:RI:70:GLU:HA	2.05	0.56
33:RN:82:LEU:HD12	33:RN:83:LYS:H	1.70	0.56
38:RS:72:ALA:O	38:RS:76:LYS:HG3	2.04	0.56
40:RU:68:ALA:O	40:RU:71:GLN:HB2	2.05	0.56
40:RU:79:PHE:C	40:RU:79:PHE:CD2	2.78	0.56
1:XA:1094:G:O2'	1:XA:1095:U:OP2	2.19	0.56
1:XA:198:G:H1	1:XA:219:C:H42	1.52	0.56
5:XE:78:HIS:CE1	5:XE:143:ARG:H	2.20	0.56
8:XH:49:GLU:HG3	8:XH:51:VAL:CG1	2.35	0.56
13:XM:68:GLY:HA3	30:YG:116:ASP:OD2	2.04	0.56
16:XP:21:VAL:HG22	16:XP:34:GLU:O	2.04	0.56
16:XP:7:ALA:O	16:XP:9:PHE:CD2	2.58	0.56
21:XU:6:ARG:HH21	21:XU:15:ARG:HE	1.52	0.56
53:Y7:31:LEU:O	53:Y7:32:LYS:C	2.43	0.56
25:YA:2892:A:H2'	25:YA:2893:G:O4'	2.05	0.56
25:YA:307:G:N2	25:YA:310:A:OP2	2.35	0.56
25:YA:784:A:HO2'	25:YA:785:G:H8	1.52	0.56
29:YF:118:ALA:O	29:YF:121:GLY:N	2.33	0.56
30:YG:39:ILE:CG2	30:YG:155:MET:HG3	2.35	0.56
30:YG:60:LEU:O	30:YG:64:THR:HG22	2.05	0.56
32:YI:126:TYR:O	32:YI:140:LEU:HD23	2.05	0.56
35:YP:59:LEU:HA	35:YP:61:ARG:CZ	2.35	0.56
39:YT:105:LEU:C	39:YT:107:ASP:H	2.08	0.56
40:YU:104:GLN:N	40:YU:104:GLN:OE1	2.35	0.56
40:YU:83:LEU:HD12	40:YU:113:ALA:HB2	1.86	0.56
40:YU:79:PHE:CD2	40:YU:79:PHE:C	2.78	0.56
1:QA:1326:C:OP1	21:QU:17:THR:OG1	2.20	0.56
8:QH:119:LEU:HD12	8:QH:124:ALA:HA	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:77:GLU:HG2	8:QH:78:GLN:H	1.70	0.56
9:QI:17:VAL:CG1	9:QI:81:ILE:HD13	2.36	0.56
11:QK:21:ILE:HD12	11:QK:21:ILE:N	2.19	0.56
13:QM:4:ILE:HG22	13:QM:5:ALA:N	2.19	0.56
19:QS:40:ILE:HG12	19:QS:41:VAL:N	2.20	0.56
48:R2:51:ARG:HA	48:R2:54:LYS:HB2	1.86	0.56
51:R5:55:ARG:HD3	51:R5:56:LYS:N	2.20	0.56
52:R6:42:TRP:CD1	52:R6:42:TRP:N	2.73	0.56
25:RA:2372:G:H4'	52:R6:46:HIS:NE2	2.19	0.56
25:RA:857:C:H4'	46:R0:23:VAL:HG21	1.87	0.56
27:RD:35:LYS:CE	27:RD:104:TYR:HB2	2.35	0.56
28:RE:78:LEU:HD23	28:RE:79:ARG:HD2	1.86	0.56
29:RF:24:LEU:HB3	29:RF:115:ALA:HB2	1.87	0.56
31:RH:3:ARG:HA	31:RH:3:ARG:HE	1.69	0.56
32:RI:11:ASN:O	32:RI:12:LEU:CB	2.51	0.56
35:RP:31:ALA:O	35:RP:32:THR:HG23	2.05	0.56
1:XA:1305:G:H21	1:XA:1331:G:H2'	1.70	0.56
1:XA:1492:A:H4'	12:XL:47:LYS:HD3	1.87	0.56
2:XB:80:ILE:CG2	2:XB:212:GLN:HA	2.35	0.56
2:XB:60:ASP:HB3	2:XB:64:ARG:CZ	2.34	0.56
3:XC:57:ILE:HG23	3:XC:64:VAL:HG13	1.86	0.56
4:XD:11:LEU:O	4:XD:13:ARG:N	2.36	0.56
13:XM:69:GLU:O	13:XM:71:ARG:N	2.38	0.56
6:XF:91:VAL:CG1	18:XR:72:ARG:HH12	2.18	0.56
46:Y0:24:LYS:O	46:Y0:25:ARG:HD3	2.05	0.56
48:Y2:31:GLU:O	48:Y2:35:LEU:HG	2.05	0.56
50:Y4:15:ILE:HG22	50:Y4:20:ASN:HA	1.86	0.56
53:Y7:48:LYS:HG2	53:Y7:49:ARG:N	2.19	0.56
54:Y8:33:ASN:O	54:Y8:34:TRP:C	2.42	0.56
25:YA:227:A:H1'	25:YA:228:A:C2	2.41	0.56
25:YA:2469:A:H5''	25:YA:2470:G:C8	2.39	0.56
25:YA:2716:U:H2'	25:YA:2717:G:C8	2.40	0.56
25:YA:443:A:C5	29:YF:45:ARG:HD2	2.40	0.56
27:YD:69:ARG:HD3	27:YD:105:ILE:HD11	1.87	0.56
31:YH:77:LYS:HZ3	31:YH:77:LYS:CB	2.11	0.56
33:YN:82:LEU:HD12	33:YN:83:LYS:H	1.70	0.56
38:YS:32:LEU:O	38:YS:62:LYS:HE2	2.05	0.56
41:YV:76:LYS:O	41:YV:79:VAL:HG12	2.05	0.56
1:QA:186(A):C:H2'	1:QA:186(B):C:C6	2.41	0.56
5:QE:93:PRO:HG3	8:QH:105:ARG:HG3	1.86	0.56
6:QF:97:PHE:CD2	6:QF:97:PHE:C	2.76	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:18:TYR:HD2	7:QG:59:LEU:HD22	1.70	0.56
12:QL:58:VAL:O	12:QL:65:GLU:HA	2.06	0.56
13:QM:73:GLU:O	13:QM:77:ASN:N	2.33	0.56
13:QM:7:VAL:HG11	30:RG:115:ARG:HH12	1.68	0.56
15:QO:53:HIS:CE1	15:QO:57:LEU:HD11	2.40	0.56
16:QP:7:ALA:O	16:QP:9:PHE:CD2	2.58	0.56
20:QT:82:SER:O	20:QT:86:ARG:HB2	2.05	0.56
53:R7:19:ARG:HH11	53:R7:19:ARG:HG2	1.71	0.56
54:R8:52:LYS:H	54:R8:53:PRO:HD2	1.66	0.56
25:RA:1800:C:OP1	27:RD:264:LYS:NZ	2.28	0.56
25:RA:1826:G:H2'	25:RA:1827:C:C6	2.39	0.56
25:RA:310:A:H5'	44:RY:17:SER:HB2	1.87	0.56
25:RA:666:G:H4'	35:RP:49:ARG:NH1	2.21	0.56
28:RE:69:LYS:C	28:RE:71:GLY:H	2.09	0.56
29:RF:192:LEU:HD21	29:RF:194:MET:CE	2.34	0.56
29:RF:46:ARG:NH1	29:RF:46:ARG:HG2	2.00	0.56
33:RN:56:ASN:N	33:RN:125:GLY:O	2.35	0.56
33:RN:63:THR:HG22	33:RN:66:LYS:NZ	2.20	0.56
41:RV:38:LEU:HD23	41:RV:39:LEU:N	2.19	0.56
36:RQ:134:ARG:NE	45:RZ:122:ARG:NH2	2.52	0.56
45:RZ:18:LEU:N	45:RZ:18:LEU:HD12	2.12	0.56
1:XA:376:G:H2'	1:XA:377:G:H8	1.69	0.56
1:XA:498:A:O2'	1:XA:546:G:N2	2.38	0.56
1:XA:688:G:H2'	1:XA:689:C:C6	2.35	0.56
1:XA:95:G:H2'	1:XA:96:G:C8	2.39	0.56
4:XD:42:GLN:O	4:XD:42:GLN:HG2	2.05	0.56
7:XG:148:ASN:C	7:XG:150:ALA:H	2.08	0.56
8:XH:38:ILE:HD12	8:XH:118:VAL:HG12	1.87	0.56
9:XI:10:ARG:CD	9:XI:105:ASP:HB2	2.35	0.56
14:XN:29:ARG:HH11	14:XN:29:ARG:HG3	1.70	0.56
15:XO:53:HIS:CE1	15:XO:57:LEU:HD11	2.40	0.56
16:XP:4:ILE:HA	16:XP:20:VAL:O	2.05	0.56
46:Y0:74:ARG:C	46:Y0:76:GLY:H	2.08	0.56
25:YA:270(R):G:H1'	47:Y1:78:LYS:HZ1	1.69	0.56
47:Y1:89:GLU:O	47:Y1:93:GLU:HB2	2.04	0.56
48:Y2:17:SER:HB2	48:Y2:18:PRO:HA	1.86	0.56
25:YA:1006:C:H5'	33:YN:28:THR:HG23	1.88	0.56
25:YA:1062:G:H2'	25:YA:1063:G:C8	2.40	0.56
25:YA:1171:G:O6	25:YA:1174:A:N6	2.38	0.56
25:YA:530:G:C5	25:YA:2022:U:H5''	2.39	0.56
25:YA:2820:A:O2'	25:YA:2821:A:OP1	2.22	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:183:ARG:HD2	27:YD:270:ILE:HG12	1.88	0.56
28:YE:69:LYS:C	28:YE:71:GLY:H	2.08	0.56
31:YH:125:VAL:HG12	31:YH:126:PRO:CG	2.34	0.56
32:YI:74:ASN:N	32:YI:74:ASN:HD22	1.94	0.56
34:YO:3:GLN:CB	34:YO:4:PRO:HD2	2.35	0.56
36:YQ:37:LEU:HD21	36:YQ:130:LYS:HE3	1.87	0.56
36:YQ:79:LEU:CG	36:YQ:79:LEU:O	2.52	0.56
40:YU:68:ALA:O	40:YU:71:GLN:HB2	2.05	0.56
43:YX:35:THR:HG22	43:YX:38:GLU:OE1	2.05	0.56
2:QB:77:ALA:CB	2:QB:211:ILE:HG21	2.35	0.56
3:QC:59:ARG:HH12	3:QC:97:LYS:HE3	1.71	0.56
4:QD:42:GLN:O	4:QD:42:GLN:HG2	2.05	0.56
5:QE:99:GLY:O	5:QE:117:ASP:HA	2.06	0.56
9:QI:10:ARG:CD	9:QI:105:ASP:HB2	2.35	0.56
47:R1:53:VAL:HG12	47:R1:54:ALA:N	2.21	0.56
50:R4:48:ARG:O	50:R4:50:VAL:N	2.38	0.56
50:R4:64:GLY:C	50:R4:66:SER:H	2.07	0.56
25:RA:1478:G:H2'	25:RA:1479:G:H8	1.70	0.56
25:RA:1428:C:N4	25:RA:1570:A:OP2	2.33	0.56
27:RD:236:GLY:O	27:RD:237:GLU:OE1	2.24	0.56
25:RA:1824:G:O3'	27:RD:249:PRO:HD3	2.05	0.56
28:RE:174:ASP:CG	28:RE:175:VAL:N	2.58	0.56
28:RE:37:ARG:NE	28:RE:37:ARG:N	2.53	0.56
29:RF:198:ALA:CA	29:RF:201:VAL:HG12	2.35	0.56
31:RH:77:LYS:HZ3	31:RH:77:LYS:CB	2.03	0.56
37:RR:70:LEU:HD13	37:RR:75:LEU:HD11	1.88	0.56
41:RV:1:MET:HE2	41:RV:43:GLU:HG2	1.87	0.56
1:XA:316:G:OP2	1:XA:351:G:O2'	2.24	0.56
6:XF:97:PHE:O	18:XR:31:LEU:HD23	2.04	0.56
7:XG:18:TYR:HD2	7:XG:59:LEU:HD22	1.70	0.56
10:XJ:22:LYS:HD2	10:XJ:22:LYS:C	2.25	0.56
10:XJ:49:VAL:HG21	14:XN:41:ARG:HB2	1.87	0.56
1:XA:267:C:OP2	17:XQ:67:LYS:HD2	2.05	0.56
53:Y7:12:ARG:NH2	53:Y7:44:PRO:HB3	2.21	0.56
25:YA:1608:A:H1'	25:YA:1610:A:OP2	2.05	0.56
25:YA:210:C:OP2	53:Y7:29:LYS:NZ	2.38	0.56
25:YA:2637:U:H2'	25:YA:2638:G:O4'	2.05	0.56
27:YD:236:GLY:O	27:YD:237:GLU:OE1	2.23	0.56
27:YD:2:ALA:O	27:YD:3:VAL:HB	2.06	0.56
30:YG:128:ARG:HG3	30:YG:128:ARG:NH2	2.17	0.56
45:YZ:58:VAL:O	45:YZ:60:GLU:N	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2451:A:C2	55:Z6:76:PPU:HD2	2.40	0.56
1:QA:1259:C:O2'	1:QA:1283:G:N2	2.34	0.56
1:QA:814:A:O2'	1:QA:815:A:H3'	2.05	0.56
3:QC:114:PRO:O	3:QC:118:GLN:HG3	2.06	0.56
3:QC:188:LEU:O	3:QC:189:ALA:HB2	2.05	0.56
3:QC:77:ILE:C	3:QC:83:ARG:HB3	2.26	0.56
8:QH:38:ILE:HD12	8:QH:118:VAL:HG12	1.87	0.56
12:QL:82:VAL:HG23	12:QL:106:ASP:OD2	2.04	0.56
12:QL:83:VAL:HG22	12:QL:84:LEU:H	1.70	0.56
52:R6:14:THR:O	52:R6:49:HIS:HA	2.06	0.56
25:RA:2134:A:H62	25:RA:2157:G:H1'	1.69	0.56
25:RA:928:G:O2'	49:R3:43:ILE:HD11	2.04	0.56
28:RE:183:LEU:N	28:RE:183:LEU:HD12	2.20	0.56
30:RG:179:PRO:HG3	50:R4:38:LYS:HZ1	1.67	0.56
30:RG:41:GLN:HB3	30:RG:43:LEU:HD13	1.87	0.56
35:RP:65:ARG:HH21	54:R8:15:LYS:CB	2.17	0.56
37:RR:84:ALA:HB3	37:RR:85:PRO:HD3	1.87	0.56
38:RS:5:THR:HG23	38:RS:8:GLU:OE2	2.05	0.56
1:XA:1001:G:H2'	1:XA:1002:G:O4'	2.06	0.56
3:XC:7:PRO:O	3:XC:11:ARG:HG2	2.05	0.56
3:XC:59:ARG:HH12	3:XC:97:LYS:HE3	1.70	0.56
7:XG:42:ILE:O	7:XG:117:ALA:HB2	2.06	0.56
11:XK:32:ILE:O	11:XK:40:ILE:HG12	2.05	0.56
47:Y1:76:ARG:NH1	47:Y1:76:ARG:HG2	2.19	0.56
52:Y6:6:ARG:O	52:Y6:8:LYS:HD2	2.05	0.56
54:Y8:50:LEU:HD12	54:Y8:51:ALA:H	1.70	0.56
25:YA:1495:A:H1'	25:YA:1579:A:H5''	1.87	0.56
28:YE:32:PRO:O	28:YE:34:VAL:HG13	2.06	0.56
33:YN:112:LEU:O	33:YN:114:ARG:O	2.22	0.56
38:YS:5:THR:OG1	38:YS:7:TYR:HB3	2.06	0.56
5:QE:140:ARG:HH11	5:QE:140:ARG:CB	2.18	0.56
9:QI:33:PHE:CE2	9:QI:47:LEU:HD21	2.40	0.56
10:QJ:24:VAL:HG21	10:QJ:37:PRO:HG3	1.86	0.56
13:QM:84:ILE:CG2	13:QM:85:GLY:N	2.68	0.56
16:QP:4:ILE:HA	16:QP:20:VAL:O	2.05	0.56
17:QQ:50:LYS:HG3	17:QQ:51:TYR:CE1	2.41	0.56
17:QQ:6:LEU:O	17:QQ:58:GLU:HA	2.05	0.56
19:QS:15:LEU:HD23	19:QS:15:LEU:N	2.19	0.56
20:QT:47:GLY:C	20:QT:49:ALA:H	2.08	0.56
21:QU:7:ARG:O	21:QU:8:THR:HG23	2.05	0.56
50:R4:41:PRO:O	50:R4:42:PHE:CB	2.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2370:G:N3	52:R6:45:LYS:NZ	2.54	0.56
25:RA:135:G:H1	25:RA:144:C:H42	1.52	0.56
25:RA:1678:G:N2	25:RA:1989:G:H22	2.02	0.56
25:RA:2867:G:O2'	25:RA:2868:A:H8	1.87	0.56
25:RA:898:C:H2'	25:RA:899:A:H5'	1.88	0.56
27:RD:183:ARG:HD2	27:RD:270:ILE:HG12	1.88	0.56
32:RI:126:TYR:O	32:RI:140:LEU:HD23	2.05	0.56
36:RQ:79:LEU:O	36:RQ:79:LEU:CG	2.52	0.56
42:RW:65:LEU:O	42:RW:66:GLU:C	2.43	0.56
44:RY:97:ARG:HG2	44:RY:97:ARG:O	2.05	0.56
1:XA:1239:A:H62	1:XA:1299:A:N6	2.03	0.56
1:XA:191(D):U:H2'	1:XA:191(E):G:C8	2.40	0.56
2:XB:102:LEU:HB3	2:XB:180:LEU:CD1	2.36	0.56
1:XA:1158:C:H4'	2:XB:133:LYS:NZ	2.20	0.56
9:XI:33:PHE:CE2	9:XI:47:LEU:HD21	2.40	0.56
11:XK:21:ILE:HG13	11:XK:30:VAL:HG12	1.86	0.56
11:XK:34:ASP:N	11:XK:40:ILE:HD11	2.21	0.56
13:XM:89:GLY:O	13:XM:92:HIS:HB2	2.06	0.56
50:Y4:64:GLY:C	50:Y4:66:SER:H	2.08	0.56
25:YA:2636:U:OP1	28:YE:79:ARG:HA	2.06	0.56
28:YE:37:ARG:NE	28:YE:37:ARG:N	2.53	0.56
28:YE:74:PRO:HG2	28:YE:77:ILE:HG23	1.86	0.56
31:YH:126:PRO:CG	31:YH:127:GLU:N	2.65	0.56
33:YN:56:ASN:N	33:YN:125:GLY:O	2.35	0.56
35:YP:59:LEU:HD23	35:YP:59:LEU:O	2.06	0.56
38:YS:103:GLU:O	38:YS:106:ARG:CG	2.53	0.56
1:QA:368:U:OP1	32:YI:91:SER:OG	2.23	0.56
2:QB:102:LEU:HB3	2:QB:180:LEU:CD1	2.36	0.56
3:QC:134:ILE:CD1	3:QC:153:VAL:HG21	2.35	0.56
3:QC:33:LEU:O	3:QC:37:GLN:HG2	2.04	0.56
9:QI:9:ARG:HB2	9:QI:14:VAL:HG22	1.88	0.56
10:QJ:35:SER:O	10:QJ:72:VAL:HG13	2.05	0.56
13:QM:49:THR:HB	13:QM:52:GLU:HG3	1.86	0.56
13:QM:89:GLY:O	13:QM:92:HIS:HB2	2.06	0.56
17:QQ:84:LEU:C	17:QQ:86:GLU:H	2.08	0.56
53:R7:12:ARG:NH2	53:R7:44:PRO:HB3	2.21	0.56
25:RA:1494:A:C2	25:RA:1495:A:C4	2.93	0.56
25:RA:1693:U:O4	25:RA:1976:U:O2'	2.14	0.56
25:RA:1952:A:OP1	34:RO:44:LYS:NZ	2.30	0.56
25:RA:276:A:OP1	25:RA:276:A:H4'	2.06	0.56
25:RA:984:A:H5''	25:RA:985:C:H5	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:180:PHE:C	30:RG:182:LYS:H	2.09	0.56
30:RG:60:LEU:O	30:RG:64:THR:HG22	2.05	0.56
34:RO:19:ILE:HD13	34:RO:19:ILE:O	2.06	0.56
35:RP:14:LYS:O	35:RP:16:ARG:N	2.39	0.56
38:RS:5:THR:OG1	38:RS:7:TYR:HB3	2.06	0.56
39:RT:134:GLU:O	39:RT:135:ALA:HB3	2.05	0.56
39:RT:26:ASP:CB	39:RT:91:ARG:HA	2.36	0.56
41:RV:76:LYS:O	41:RV:79:VAL:HG12	2.05	0.56
45:RZ:5:LEU:HB3	45:RZ:59:LEU:HD23	1.87	0.56
45:RZ:53:ILE:CG2	45:RZ:71:VAL:HG13	2.36	0.56
1:XA:156:G:H1	1:XA:165:C:H42	1.52	0.56
1:XA:735:C:H2'	1:XA:736:C:H6	1.71	0.56
3:XC:180:ALA:O	3:XC:181:ASN:HB3	2.06	0.56
3:XC:188:LEU:O	3:XC:189:ALA:HB2	2.05	0.56
4:XD:119:GLN:HG3	4:XD:123:HIS:CD2	2.40	0.56
4:XD:25:ARG:NH1	4:XD:30:LYS:HG3	2.20	0.56
8:XH:77:GLU:HG2	8:XH:78:GLN:H	1.70	0.56
8:XH:7:ALA:HB2	8:XH:85:ARG:HD3	1.87	0.56
10:XJ:35:SER:O	10:XJ:72:VAL:HG13	2.05	0.56
13:XM:62:ASN:HA	50:Y4:49:PHE:CD2	2.40	0.56
18:XR:85:LEU:HD23	18:XR:88:LYS:HD2	1.86	0.56
20:XT:82:SER:O	20:XT:86:ARG:HB2	2.06	0.56
48:Y2:41:ILE:HD11	48:Y2:44:LEU:CG	2.36	0.56
25:YA:1264:G:H5'	51:Y5:11:THR:HG21	1.87	0.56
53:Y7:13:ALA:O	53:Y7:17:GLY:HA3	2.05	0.56
25:YA:1201:C:H2'	25:YA:1202:C:C6	2.41	0.56
25:YA:1533:C:H2'	25:YA:1534:G:N7	2.21	0.56
25:YA:2151:G:H2'	25:YA:2152:G:H8	1.70	0.56
25:YA:909:A:H2'	25:YA:912:C:H5	1.70	0.56
25:YA:1826:G:O2'	27:YD:242:ARG:NH2	2.38	0.56
38:YS:14:VAL:HG13	38:YS:15:ARG:N	2.21	0.56
33:YN:40:PRO:HB3	40:YU:68:ALA:HB2	1.86	0.56
44:YY:95:LYS:O	44:YY:95:LYS:HE3	2.06	0.56
1:QA:429:U:H3	1:QA:431:A:H62	1.51	0.56
1:QA:560:U:H5'	1:QA:566:G:H22	1.71	0.56
4:QD:165:MET:HA	4:QD:165:MET:CE	2.36	0.56
4:QD:33:MET:HE2	4:QD:37:PRO:HA	1.87	0.56
9:QI:114:TYR:CD2	9:QI:114:TYR:O	2.58	0.56
14:QN:29:ARG:HG3	14:QN:29:ARG:HH11	1.70	0.56
15:QO:24:SER:O	15:QO:28:GLN:HG3	2.06	0.56
15:QO:76:GLU:C	15:QO:78:TYR:H	2.08	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:R2:50:ILE:CD1	48:R2:51:ARG:N	2.61	0.56
25:RA:753:C:H2'	25:RA:754:C:H6	1.69	0.56
28:RE:117:MET:HG3	28:RE:117:MET:O	2.06	0.56
29:RF:9:ILE:HD11	29:RF:125:LEU:CG	2.36	0.56
29:RF:32:LEU:HD13	29:RF:105:VAL:CG1	2.33	0.56
26:RB:56:G:P	30:RG:27:ASN:HD21	2.28	0.56
31:RH:153:LYS:CB	31:RH:154:PRO:CD	2.69	0.56
32:RI:99:GLU:OE2	32:RI:103:ARG:NH2	2.36	0.56
41:RV:27:ALA:O	41:RV:28:GLU:O	2.24	0.56
43:RX:35:THR:HG22	43:RX:38:GLU:OE1	2.05	0.56
1:XA:1034:G:H2'	1:XA:1035:A:C8	2.40	0.56
1:XA:452:A:H62	1:XA:480:U:H3	1.54	0.56
2:XB:169:LYS:HD3	2:XB:169:LYS:O	2.05	0.56
3:XC:105:GLU:HG2	3:XC:106:VAL:N	2.19	0.56
4:XD:110:PHE:CE2	4:XD:148:VAL:HG23	2.41	0.56
5:XE:82:VAL:CG1	5:XE:83:GLU:N	2.68	0.56
10:XJ:24:VAL:HG21	10:XJ:37:PRO:HG3	1.86	0.56
12:XL:111:LYS:O	12:XL:112:ASP:HB2	2.06	0.56
1:XA:881:G:P	12:XL:12:ARG:HH22	2.28	0.56
13:XM:56:LEU:HD13	13:XM:60:VAL:HG23	1.86	0.56
16:XP:53:VAL:HG23	16:XP:54:GLU:H	1.70	0.56
19:XS:17:GLU:HA	19:XS:20:LEU:HD12	1.86	0.56
19:XS:65:ASN:N	19:XS:65:ASN:ND2	2.52	0.56
50:Y4:38:LYS:C	50:Y4:40:HIS:N	2.52	0.56
25:YA:1454:U:P	37:YR:77:ARG:NH1	2.79	0.56
25:YA:2391:G:O2'	25:YA:2422:A:N7	2.38	0.56
25:YA:752:A:H4'	25:YA:753:C:O5'	2.05	0.56
27:YD:35:LYS:CE	27:YD:104:TYR:HB2	2.35	0.56
28:YE:183:LEU:HD12	28:YE:183:LEU:N	2.20	0.56
29:YF:155:LEU:CD1	29:YF:174:VAL:HG13	2.32	0.56
29:YF:197:ASP:O	29:YF:199:TRP:N	2.38	0.56
35:YP:115:LEU:HD12	35:YP:116:GLY:N	2.21	0.56
39:YT:26:ASP:CB	39:YT:91:ARG:HA	2.36	0.56
45:YZ:123:ASP:OD2	45:YZ:123:ASP:N	2.39	0.56
45:YZ:53:ILE:CG2	45:YZ:71:VAL:HG13	2.36	0.56
1:QA:302:G:O3'	12:QL:17:LYS:HE2	2.06	0.56
1:QA:637:G:H2'	1:QA:638:G:H8	1.70	0.56
3:QC:6:HIS:CD2	3:QC:7:PRO:HD2	2.41	0.56
4:QD:110:PHE:CE2	4:QD:148:VAL:HG23	2.41	0.56
5:QE:82:VAL:CG1	5:QE:83:GLU:N	2.68	0.56
6:QF:33:TYR:HE2	6:QF:74:ASP:HB3	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:73:MET:HG2	7:QG:90:GLU:HA	1.87	0.56
10:QJ:89:ASP:C	10:QJ:90:LEU:HD12	2.26	0.56
14:QN:15:LYS:O	14:QN:16:PHE:O	2.24	0.56
49:R3:59:VAL:CG1	49:R3:60:GLU:N	2.69	0.56
49:R3:7:LYS:NZ	49:R3:32:GLN:HE21	2.03	0.56
25:RA:2181:G:H2'	25:RA:2182:G:H8	1.70	0.56
25:RA:2537:U:H2'	25:RA:2538:C:C6	2.40	0.56
25:RA:2702:U:H2'	25:RA:2702:U:O2	2.06	0.56
25:RA:582:G:H2'	25:RA:583:G:H8	1.71	0.56
27:RD:221:VAL:HG22	27:RD:226:MET:HE2	1.88	0.56
27:RD:80:ALA:HB3	27:RD:94:LEU:HD13	1.88	0.56
28:RE:32:PRO:O	28:RE:34:VAL:HG13	2.06	0.56
34:RO:107:ARG:O	34:RO:112:MET:HE3	2.05	0.56
36:RQ:12:GLN:OE1	36:RQ:72:LYS:HD2	2.06	0.56
39:RT:105:LEU:C	39:RT:107:ASP:H	2.07	0.56
43:RX:65:ARG:HD3	43:RX:65:ARG:H	1.70	0.56
44:RY:95:LYS:O	44:RY:95:LYS:HE3	2.06	0.56
1:XA:346:G:H5''	39:YT:41:ARG:HD2	1.88	0.56
2:XB:68:ILE:HD12	2:XB:68:ILE:N	2.21	0.56
3:XC:77:ILE:C	3:XC:83:ARG:HB3	2.26	0.56
7:XG:62:PHE:O	7:XG:66:VAL:HG23	2.06	0.56
8:XH:82:HIS:HD2	8:XH:83:ILE:N	2.04	0.56
1:XA:966:G:O2'	9:XI:127:LYS:O	2.22	0.56
9:XI:17:VAL:CG1	9:XI:81:ILE:HD13	2.35	0.56
13:XM:84:ILE:CG2	13:XM:85:GLY:N	2.68	0.56
15:XO:76:GLU:C	15:XO:78:TYR:H	2.08	0.56
25:YA:177:G:H3'	25:YA:178:G:H8	1.71	0.56
32:YI:64:GLU:HG3	32:YI:67:ARG:NH2	2.21	0.56
45:YZ:5:LEU:HD13	45:YZ:5:LEU:C	2.26	0.56
57:QA:1661:PAR:O43	57:QA:1661:PAR:N21	2.39	0.56
1:QA:500:G:H2'	1:QA:501:C:H6	1.71	0.56
2:QB:7:VAL:HG22	2:QB:8:LYS:N	2.21	0.56
3:QC:45:LYS:HD2	3:QC:46:GLU:HG3	1.87	0.56
5:QE:126:ARG:HG3	5:QE:126:ARG:NH1	2.19	0.56
5:QE:7:GLU:HG2	5:QE:112:LEU:HD22	1.87	0.56
8:QH:19:VAL:O	8:QH:20:TYR:HB2	2.04	0.56
8:QH:49:GLU:HG3	8:QH:51:VAL:CG1	2.35	0.56
8:QH:7:ALA:HB2	8:QH:85:ARG:HD3	1.87	0.56
11:QK:41:THR:HG21	11:QK:71:LYS:CB	2.36	0.56
17:QQ:84:LEU:C	17:QQ:86:GLU:N	2.60	0.56
20:QT:94:ALA:O	20:QT:95:ALA:CB	2.54	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:R0:74:ARG:C	46:R0:76:GLY:H	2.08	0.56
50:R4:48:ARG:HH12	50:R4:52:THR:HG22	1.71	0.56
54:R8:50:LEU:HD12	54:R8:51:ALA:H	1.70	0.56
25:RA:1077:A:H5'	25:RA:1078:U:H5''	1.88	0.56
25:RA:270:A:OP2	25:RA:270(Y):G:N2	2.39	0.56
27:RD:155:LEU:HD23	27:RD:177:LEU:CD2	2.36	0.56
30:RG:120:LEU:HB3	30:RG:131:TYR:OH	2.05	0.56
30:RG:83:ARG:HG3	30:RG:86:MET:HE1	1.88	0.56
34:RO:3:GLN:CB	34:RO:4:PRO:HD2	2.35	0.56
40:RU:105:VAL:HA	41:RV:44:LYS:HE3	1.88	0.56
44:RY:62:GLU:O	44:RY:63:LYS:O	2.24	0.56
45:RZ:33:LEU:HD12	45:RZ:34:ASN:H	1.70	0.56
1:XA:686:U:O4	1:XA:703:G:H1'	2.06	0.56
2:XB:217:ARG:HA	2:XB:220:ASP:OD2	2.06	0.56
2:XB:55:PHE:HA	2:XB:58:ILE:HB	1.88	0.56
3:XC:112:SER:OG	3:XC:115:LEU:HG	2.06	0.56
3:XC:90:GLU:O	3:XC:94:LEU:HG	2.05	0.56
7:XG:20:ASP:HB3	7:XG:23:VAL:HG23	1.88	0.56
17:XQ:84:LEU:C	17:XQ:86:GLU:H	2.08	0.56
50:Y4:41:PRO:O	50:Y4:42:PHE:CB	2.54	0.56
52:Y6:11:LEU:HD23	52:Y6:26:ASN:HB3	1.87	0.56
52:Y6:48:VAL:HG13	52:Y6:49:HIS:N	2.20	0.56
25:YA:2262:U:H4'	25:YA:2328:A:C2	2.41	0.56
28:YE:195:LEU:HD12	28:YE:196:VAL:H	1.71	0.56
32:YI:144:VAL:O	32:YI:145:VAL:HG22	2.06	0.56
44:YY:62:GLU:O	44:YY:63:LYS:O	2.24	0.56
44:YY:84:ARG:NH1	44:YY:97:ARG:HB2	2.11	0.56
45:YZ:107:THR:CB	45:YZ:144:LEU:HB2	2.32	0.56
45:YZ:44:PHE:CE2	45:YZ:86:VAL:HG11	2.41	0.56
1:QA:1321:C:H3'	1:QA:1322:C:H5''	1.86	0.56
1:QA:939:G:H5''	7:QG:102:ARG:HH12	1.71	0.56
7:QG:42:ILE:O	7:QG:117:ALA:HB2	2.05	0.56
14:QN:41:ARG:HH11	14:QN:41:ARG:HG2	1.71	0.56
16:QP:48:TRP:O	16:QP:49:LEU:HB2	2.06	0.56
25:RA:1755:A:N6	25:RA:2694:G:O2'	2.39	0.56
25:RA:2776:A:OP1	25:RA:2776:A:H3'	2.05	0.56
27:RD:94:LEU:HD22	27:RD:95:LEU:H	1.70	0.56
29:RF:108:LYS:HZ3	29:RF:108:LYS:HA	1.71	0.56
35:RP:15:ARG:O	35:RP:17:LYS:N	2.39	0.56
36:RQ:37:LEU:HD21	36:RQ:130:LYS:HE3	1.87	0.56
38:RS:14:VAL:HG13	38:RS:15:ARG:N	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RZ:16:SER:O	45:RZ:20:ARG:HB2	2.06	0.56
45:RZ:93:ASP:O	45:RZ:94:GLU:CD	2.44	0.56
1:XA:1158:C:H4'	2:XB:133:LYS:HZ1	1.71	0.56
1:XA:486:U:H2'	1:XA:487:A:C8	2.38	0.56
3:XC:77:ILE:O	3:XC:83:ARG:HB3	2.05	0.56
5:XE:92:LYS:O	5:XE:118:ILE:HD12	2.06	0.56
6:XF:41:GLU:HG2	6:XF:43:LEU:HD11	1.89	0.56
8:XH:49:GLU:O	8:XH:51:VAL:N	2.39	0.56
11:XK:69:ALA:HB1	11:XK:103:LEU:CD2	2.35	0.56
13:XM:119:GLY:HA3	22:XV:29:G:OP1	2.06	0.56
48:Y2:15:LYS:H	48:Y2:67:LYS:NZ	2.02	0.56
49:Y3:59:VAL:CG1	49:Y3:60:GLU:N	2.69	0.56
50:Y4:48:ARG:O	50:Y4:50:VAL:N	2.38	0.56
25:YA:1338:G:N7	43:YX:62:LYS:NZ	2.47	0.56
25:YA:1525:G:H2'	25:YA:1526:G:C8	2.40	0.56
25:YA:2394:C:OP1	35:YP:63:PRO:HD2	2.05	0.56
25:YA:242:G:N2	25:YA:255:A:OP2	2.30	0.56
25:YA:2582:G:N2	25:YA:2583:G:H1'	2.20	0.56
40:YU:96:ALA:O	40:YU:100:VAL:HG23	2.05	0.56
40:YU:105:VAL:HA	41:YV:44:LYS:HE3	1.88	0.56
42:YW:1:MET:C	42:YW:64:MET:HE1	2.26	0.56
45:YZ:27:VAL:HG12	45:YZ:87:ASP:HB3	1.87	0.56
1:QA:184:G:H2'	1:QA:185:A:C8	2.40	0.55
1:QA:560:U:H5'	1:QA:566:G:N2	2.21	0.55
3:QC:20:SER:CB	3:QC:40:ARG:HH22	2.14	0.55
4:QD:13:ARG:NH2	4:QD:36:ARG:NH2	2.53	0.55
7:QG:148:ASN:C	7:QG:150:ALA:H	2.08	0.55
7:QG:62:PHE:HA	7:QG:124:LEU:CD2	2.27	0.55
11:QK:125:PHE:N	11:QK:125:PHE:CD1	2.74	0.55
13:QM:80:ARG:O	13:QM:84:ILE:HB	2.06	0.55
46:R0:11:ARG:HG3	46:R0:11:ARG:HH11	1.70	0.55
25:RA:2815:C:H5'	51:R5:29:THR:HG21	1.86	0.55
54:R8:30:ARG:O	54:R8:31:HIS:CB	2.54	0.55
25:RA:2698:U:H2'	25:RA:2699:C:C6	2.41	0.55
27:RD:69:ARG:C	27:RD:71:ASP:H	2.08	0.55
29:RF:28:ILE:HD12	29:RF:28:ILE:O	2.06	0.55
40:RU:83:LEU:HD12	40:RU:113:ALA:HB2	1.86	0.55
42:RW:14:PRO:HG2	42:RW:78:GLU:OE2	2.07	0.55
45:RZ:37:VAL:O	45:RZ:38:TYR:HB3	2.06	0.55
1:XA:1336:C:H1'	1:XA:1337:G:C2	2.41	0.55
1:XA:1356:G:H2'	1:XA:1357:A:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:417:C:H2'	1:XA:418:C:H6	1.70	0.55
1:XA:430:A:H4'	4:XD:7:PRO:HG3	1.88	0.55
1:XA:690:G:H2'	1:XA:691:G:O4'	2.06	0.55
2:XB:7:VAL:HG22	2:XB:8:LYS:N	2.21	0.55
4:XD:165:MET:HA	4:XD:165:MET:CE	2.36	0.55
4:XD:13:ARG:NH2	4:XD:36:ARG:NH2	2.53	0.55
8:XH:102:ARG:NH1	8:XH:105:ARG:NH2	2.54	0.55
10:XJ:26:ALA:HA	10:XJ:29:ARG:NH2	2.21	0.55
11:XK:41:THR:HG21	11:XK:71:LYS:CB	2.36	0.55
12:XL:83:VAL:HG22	12:XL:84:LEU:N	2.21	0.55
1:XA:947:G:O3'	13:XM:109:THR:OG1	2.22	0.55
16:XP:47:ASP:C	16:XP:49:LEU:H	2.09	0.55
17:XQ:6:LEU:O	17:XQ:58:GLU:HA	2.05	0.55
49:Y3:4:LEU:HD21	49:Y3:39:ASP:OD1	2.06	0.55
25:YA:1061:U:H3'	25:YA:1062:G:H5''	1.87	0.55
28:YE:117:MET:O	28:YE:117:MET:HG3	2.06	0.55
28:YE:174:ASP:CG	28:YE:175:VAL:N	2.58	0.55
30:YG:120:LEU:HB3	30:YG:131:TYR:OH	2.05	0.55
30:YG:135:LEU:HD12	30:YG:135:LEU:N	2.21	0.55
35:YP:15:ARG:O	35:YP:17:LYS:N	2.39	0.55
35:YP:19:VAL:CG2	35:YP:20:GLY:H	1.98	0.55
36:YQ:12:GLN:OE1	36:YQ:72:LYS:HD2	2.06	0.55
42:YW:20:VAL:C	42:YW:22:ASP:N	2.59	0.55
45:YZ:120:ILE:HD11	45:YZ:169:GLU:HG3	1.85	0.55
45:YZ:93:ASP:O	45:YZ:94:GLU:CD	2.44	0.55
1:QA:321:A:H62	1:QA:328:C:H1'	1.70	0.55
1:QA:581:G:N2	1:QA:760:G:N7	2.54	0.55
1:QA:980:C:H5'	1:QA:981:U:OP2	2.06	0.55
3:QC:180:ALA:O	3:QC:181:ASN:HB3	2.06	0.55
3:QC:95:THR:CG2	3:QC:96:GLY:H	2.10	0.55
8:QH:128:GLY:O	8:QH:129:VAL:HG13	2.06	0.55
8:QH:49:GLU:O	8:QH:51:VAL:N	2.39	0.55
8:QH:82:HIS:HD2	8:QH:83:ILE:N	2.03	0.55
10:QJ:26:ALA:HA	10:QJ:29:ARG:NH2	2.21	0.55
10:QJ:6:ILE:CG2	10:QJ:98:ILE:HG13	2.21	0.55
11:QK:50:TYR:HH	11:QK:59:TYR:HE2	1.54	0.55
16:QP:47:ASP:C	16:QP:49:LEU:H	2.09	0.55
20:QT:74:LYS:C	20:QT:76:ALA:H	2.10	0.55
23:QX:5:C:O2'	23:QX:6:C:H5'	2.06	0.55
25:RA:1062:G:H2'	25:RA:1063:G:C8	2.40	0.55
25:RA:1078:U:O2'	25:RA:1079:C:OP2	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1508:A:O2'	25:RA:1509:C:O4'	2.24	0.55
25:RA:1543:A:N3	25:RA:1545:A:O4'	2.40	0.55
25:RA:1794:U:H2'	25:RA:1795:C:H6	1.71	0.55
25:RA:407:G:H2'	25:RA:408:G:C8	2.41	0.55
27:RD:31:LYS:O	27:RD:35:LYS:O	2.24	0.55
27:RD:36:PRO:HB2	27:RD:61:LEU:HG	1.87	0.55
28:RE:203:LYS:HE3	28:RE:204:ALA:HB2	1.87	0.55
31:RH:59:ARG:HH11	31:RH:59:ARG:CG	2.20	0.55
35:RP:13:ASN:C	35:RP:15:ARG:N	2.54	0.55
25:RA:566:U:OP1	35:RP:29:LYS:HE2	2.06	0.55
38:RS:18:ILE:C	38:RS:19:LYS:O	2.44	0.55
44:RY:21:LYS:HG3	44:RY:22:GLY:H	1.69	0.55
1:XA:1095:U:P	1:XA:1108:G:H1	2.29	0.55
1:XA:1262:C:H42	1:XA:1273:G:H1	1.55	0.55
11:XK:125:PHE:HD1	11:XK:125:PHE:H	1.54	0.55
11:XK:17:GLY:HA3	11:XK:77:MET:HE3	1.88	0.55
12:XL:79:GLU:HG2	12:XL:79:GLU:O	2.06	0.55
16:XP:48:TRP:O	16:XP:49:LEU:HB2	2.06	0.55
48:Y2:43:GLN:O	48:Y2:44:LEU:CG	2.54	0.55
49:Y3:35:ARG:HB3	49:Y3:37:LEU:CD2	2.37	0.55
25:YA:1407:C:H42	25:YA:1595:G:H1	1.55	0.55
25:YA:609(A):G:H2'	25:YA:610:C:H6	1.71	0.55
28:YE:20:ALA:O	28:YE:21:VAL:CG2	2.48	0.55
29:YF:198:ALA:CA	29:YF:201:VAL:HG12	2.35	0.55
33:YN:101:HIS:C	33:YN:101:HIS:CD2	2.79	0.55
35:YP:14:LYS:O	35:YP:16:ARG:N	2.39	0.55
25:YA:2404:C:H1'	35:YP:67:MET:HE2	1.87	0.55
36:YQ:25:ASP:N	36:YQ:102:VAL:HG23	2.22	0.55
36:YQ:79:LEU:O	36:YQ:80:GLU:CD	2.44	0.55
40:YU:73:GLY:O	40:YU:74:LEU:HB3	2.07	0.55
40:YU:92:ARG:NH1	41:YV:11:GLN:HB2	2.22	0.55
45:YZ:38:TYR:CG	45:YZ:38:TYR:O	2.59	0.55
45:YZ:76:LEU:HD23	45:YZ:76:LEU:N	2.20	0.55
1:QA:1252:A:H2'	1:QA:1253:G:O4'	2.07	0.55
1:QA:458:C:H2'	1:QA:464:G:C8	2.41	0.55
2:QB:217:ARG:HA	2:QB:220:ASP:OD2	2.06	0.55
3:QC:112:SER:OG	3:QC:115:LEU:HG	2.06	0.55
11:QK:125:PHE:H	11:QK:125:PHE:HD1	1.54	0.55
19:QS:18:LYS:O	19:QS:22:LEU:HD13	2.07	0.55
48:R2:41:ILE:HD11	48:R2:44:LEU:CG	2.36	0.55
50:R4:9:LEU:H	50:R4:27:THR:HG22	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1277:G:O2'	37:RR:24:GLN:OE1	2.24	0.55
25:RA:1693:U:H1'	27:RD:14:ARG:NH2	2.21	0.55
25:RA:483:A:H4'	44:RY:49:VAL:HG13	1.87	0.55
25:RA:512:G:HO2'	25:RA:513:A:P	2.29	0.55
26:RB:21:G:H1	26:RB:62:C:H42	1.55	0.55
25:RA:1903:G:OP2	27:RD:241:PRO:HB2	2.06	0.55
28:RE:4:ILE:HD13	28:RE:5:LEU:H	1.71	0.55
36:RQ:79:LEU:O	36:RQ:80:GLU:CD	2.44	0.55
25:RA:2009:G:H1'	37:RR:107:ASP:O	2.06	0.55
45:RZ:38:TYR:O	45:RZ:38:TYR:CG	2.59	0.55
1:XA:1129:C:N4	1:XA:1133:G:O6	2.39	0.55
1:XA:692:U:H5	11:XK:26:ASN:OD1	1.90	0.55
4:XD:28:SER:CB	4:XD:29:PRO:CD	2.84	0.55
5:XE:99:GLY:O	5:XE:117:ASP:HA	2.06	0.55
7:XG:73:MET:HG2	7:XG:90:GLU:HA	1.87	0.55
10:XJ:89:ASP:C	10:XJ:90:LEU:HD12	2.26	0.55
14:XN:44:LEU:CD1	14:XN:48:ALA:HB2	2.36	0.55
17:XQ:50:LYS:HG3	17:XQ:51:TYR:CE1	2.41	0.55
19:XS:18:LYS:O	19:XS:22:LEU:HD13	2.07	0.55
20:XT:74:LYS:C	20:XT:76:ALA:H	2.10	0.55
25:YA:508:G:HO2'	25:YA:509:C:P	2.29	0.55
30:YG:180:PHE:C	30:YG:182:LYS:H	2.09	0.55
25:YA:1092:C:O2'	31:YH:170:ARG:NE	2.40	0.55
35:YP:31:ALA:O	35:YP:32:THR:HG23	2.05	0.55
35:YP:39:LYS:N	35:YP:45:LEU:HD11	2.21	0.55
37:YR:84:ALA:HB3	37:YR:85:PRO:HD3	1.87	0.55
38:YS:111:GLU:HA	38:YS:111:GLU:OE1	2.07	0.55
38:YS:59:LYS:CG	38:YS:60:GLY:H	2.12	0.55
39:YT:107:ASP:O	39:YT:111:ARG:NH1	2.39	0.55
42:YW:65:LEU:O	42:YW:66:GLU:C	2.43	0.55
44:YY:95:LYS:CB	44:YY:100:ALA:HA	2.13	0.55
44:YY:48:ALA:H	44:YY:60:PHE:HA	1.72	0.55
44:YY:89:PHE:O	44:YY:90:LEU:HD13	2.05	0.55
45:YZ:33:LEU:HD12	45:YZ:34:ASN:H	1.70	0.55
45:YZ:30:ASN:HB3	45:YZ:89:PHE:CE2	2.40	0.55
1:QA:1034:G:H2'	1:QA:1035:A:C8	2.41	0.55
1:QA:6:G:O2'	1:QA:7:G:H5"	2.07	0.55
2:QB:169:LYS:O	2:QB:169:LYS:HD3	2.05	0.55
2:QB:204:ASN:HD22	2:QB:205:ASP:N	2.04	0.55
2:QB:46:LYS:HA	2:QB:49:GLU:OE1	2.06	0.55
13:QM:81:LEU:HB3	13:QM:89:GLY:HA2	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:QP:59:TRP:CE3	16:QP:59:TRP:HA	2.42	0.55
25:RA:1929:G:H8	25:RA:1929:G:O5'	1.90	0.55
25:RA:2404:C:H1'	35:RP:67:MET:CE	2.36	0.55
25:RA:2531:A:H3'	25:RA:2532:G:H8	1.72	0.55
25:RA:298:G:H8	25:RA:298:G:O5'	1.89	0.55
25:RA:464:U:H4'	53:R7:5:TRP:CZ3	2.40	0.55
27:RD:28:GLU:O	27:RD:29:PRO:C	2.45	0.55
27:RD:69:ARG:HD3	27:RD:105:ILE:HD11	1.87	0.55
35:RP:115:LEU:HD12	35:RP:116:GLY:N	2.21	0.55
41:RV:52:VAL:O	41:RV:54:GLY:N	2.39	0.55
42:RW:88:ARG:HB3	42:RW:92:ARG:HB3	1.88	0.55
45:RZ:22:GLY:C	45:RZ:23:LYS:HD3	2.27	0.55
1:XA:1200:C:H4'	1:XA:1201:A:H5'	1.88	0.55
1:XA:908:A:H2'	1:XA:909:A:C8	2.42	0.55
3:XC:45:LYS:HD2	3:XC:46:GLU:HG3	1.87	0.55
11:XK:125:PHE:N	11:XK:125:PHE:CD1	2.73	0.55
18:XR:57:GLY:O	18:XR:58:LEU:C	2.43	0.55
20:XT:47:GLY:C	20:XT:49:ALA:H	2.07	0.55
20:XT:94:ALA:O	20:XT:95:ALA:CB	2.54	0.55
21:XU:21:TYR:O	21:XU:22:ARG:HB2	2.05	0.55
21:XU:6:ARG:O	21:XU:8:THR:N	2.39	0.55
47:Y1:91:LYS:CG	47:Y1:92:LYS:H	2.15	0.55
49:Y3:8:LEU:HD22	49:Y3:31:LEU:CD2	2.37	0.55
53:Y7:19:ARG:HH11	53:Y7:19:ARG:HG2	1.70	0.55
25:YA:1430:C:H2'	25:YA:1431:U:H6	1.71	0.55
25:YA:363(F):A:H4'	25:YA:364:C:H5'	1.89	0.55
25:YA:612:G:H2'	25:YA:613:U:O2	2.06	0.55
26:YB:103:U:O3'	45:YZ:72:ARG:HD3	2.06	0.55
28:YE:53:PRO:O	28:YE:74:PRO:HA	2.07	0.55
29:YF:24:LEU:HB3	29:YF:115:ALA:HB2	1.87	0.55
42:YW:14:PRO:HG2	42:YW:78:GLU:OE2	2.07	0.55
1:QA:690:G:H2'	1:QA:691:G:O4'	2.07	0.55
3:QC:188:LEU:HD22	3:QC:188:LEU:N	2.21	0.55
5:QE:144:THR:O	5:QE:148:VAL:HG23	2.06	0.55
7:QG:46:ALA:HB2	7:QG:117:ALA:HB1	1.88	0.55
7:QG:20:ASP:HB3	7:QG:23:VAL:HG23	1.88	0.55
15:QO:65:ARG:NH1	15:QO:65:ARG:HB2	2.20	0.55
16:QP:53:VAL:HG23	16:QP:54:GLU:H	1.71	0.55
21:QU:6:ARG:HH21	21:QU:15:ARG:HE	1.53	0.55
49:R3:4:LEU:HD21	49:R3:39:ASP:OD1	2.06	0.55
25:RA:1266:G:OP2	51:R5:20:ARG:NH2	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1332:G:H21	25:RA:1610:A:H8	1.49	0.55
25:RA:1792:G:H2'	25:RA:1793:C:C6	2.42	0.55
25:RA:2439:A:H5'	25:RA:2439:A:C8	2.41	0.55
27:RD:35:LYS:NZ	27:RD:64:ILE:O	2.32	0.55
28:RE:26:ILE:C	28:RE:26:ILE:HD13	2.26	0.55
29:RF:129:PHE:O	29:RF:130:ALA:CB	2.55	0.55
35:RP:39:LYS:CA	35:RP:45:LEU:CD1	2.80	0.55
37:RR:12:ARG:HH11	37:RR:12:ARG:HG3	1.71	0.55
40:RU:27:LEU:O	40:RU:29:SER:N	2.40	0.55
41:RV:49:THR:CB	41:RV:50:PRO:HD2	2.25	0.55
42:RW:1:MET:C	42:RW:64:MET:HE1	2.27	0.55
44:RY:95:LYS:NZ	44:RY:95:LYS:HB2	2.21	0.55
1:XA:1139:G:N2	1:XA:1143:G:O6	2.40	0.55
1:XA:950:U:H2'	1:XA:951:G:C8	2.41	0.55
2:XB:204:ASN:HD22	2:XB:205:ASP:N	2.04	0.55
2:XB:96:ARG:H	2:XB:96:ARG:CD	2.17	0.55
3:XC:188:LEU:N	3:XC:188:LEU:HD22	2.22	0.55
3:XC:59:ARG:NH2	3:XC:97:LYS:HE3	2.20	0.55
5:XE:144:THR:O	5:XE:148:VAL:HG23	2.06	0.55
9:XI:126:SER:O	9:XI:128:ARG:N	2.35	0.55
12:XL:58:VAL:O	12:XL:65:GLU:HA	2.06	0.55
15:XO:24:SER:O	15:XO:28:GLN:HG3	2.06	0.55
16:XP:59:TRP:HA	16:XP:59:TRP:CE3	2.41	0.55
20:XT:53:LEU:HA	20:XT:56:MET:HB3	1.87	0.55
25:YA:1007:C:O3'	33:YN:108:PRO:HB3	2.07	0.55
25:YA:2152:G:H2'	25:YA:2153:G:C8	2.41	0.55
25:YA:2318:G:N2	38:YS:2:ALA:HA	2.22	0.55
25:YA:2438:U:O3'	25:YA:2439:A:H3'	2.06	0.55
25:YA:2841:C:H2'	25:YA:2842:G:H8	1.70	0.55
1:QA:498:A:H4'	1:QA:500:G:OP1	2.06	0.55
1:QA:898:G:N2	1:QA:901:A:OP2	2.39	0.55
8:QH:23:SER:HB2	8:QH:61:VAL:O	2.07	0.55
9:QI:82:ALA:O	9:QI:86:VAL:HB	2.06	0.55
11:QK:34:ASP:N	11:QK:40:ILE:HD11	2.21	0.55
12:QL:111:LYS:O	12:QL:112:ASP:HB2	2.06	0.55
12:QL:79:GLU:HG2	12:QL:79:GLU:O	2.06	0.55
1:QA:186:C:O3'	20:QT:82:SER:HB3	2.06	0.55
52:R6:20:ASN:CG	52:R6:21:TYR:H	2.09	0.55
52:R6:27:LYS:HZ2	52:R6:27:LYS:HB2	1.69	0.55
25:RA:1128:A:O2'	25:RA:1129:A:OP2	2.21	0.55
25:RA:1448:G:H2'	25:RA:1449:A:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1657:C:H2'	25:RA:1658:C:C6	2.41	0.55
25:RA:1914:C:H2'	25:RA:1915:U:O4'	2.06	0.55
25:RA:2114:A:N6	25:RA:2119:A:N7	2.54	0.55
25:RA:2322:A:H2'	25:RA:2323:G:O4'	2.06	0.55
25:RA:2633:G:H2'	25:RA:2634:G:O4'	2.07	0.55
26:RB:55:U:H4'	30:RG:29:TRP:HE1	1.71	0.55
27:RD:2:ALA:O	27:RD:3:VAL:HB	2.05	0.55
28:RE:14:ILE:HD11	39:RT:14:TYR:CZ	2.42	0.55
28:RE:67:PHE:O	28:RE:69:LYS:N	2.39	0.55
30:RG:114:ILE:HD11	30:RG:140:ILE:HD12	1.89	0.55
30:RG:7:LEU:HD12	30:RG:104:GLU:HA	1.88	0.55
33:RN:109:LYS:HD2	33:RN:109:LYS:N	2.22	0.55
34:RO:79:PHE:HD2	39:RT:72:VAL:HG22	1.72	0.55
35:RP:88:LEU:C	35:RP:90:ARG:N	2.60	0.55
40:RU:74:LEU:HD13	40:RU:79:PHE:HB2	1.89	0.55
44:RY:48:ALA:H	44:RY:60:PHE:HA	1.71	0.55
45:RZ:44:PHE:CE2	45:RZ:86:VAL:HG11	2.41	0.55
1:XA:1346:A:N1	1:XA:1374:A:H5''	2.22	0.55
1:XA:236:G:OP1	17:XQ:40:LYS:NZ	2.32	0.55
2:XB:46:LYS:HA	2:XB:49:GLU:OE1	2.06	0.55
3:XC:114:PRO:O	3:XC:118:GLN:HG3	2.06	0.55
4:XD:126:ILE:HG22	4:XD:127:THR:N	2.22	0.55
6:XF:33:TYR:HE2	6:XF:74:ASP:HB3	1.71	0.55
8:XH:102:ARG:NH1	8:XH:105:ARG:NH1	2.55	0.55
8:XH:128:GLY:O	8:XH:129:VAL:HG13	2.06	0.55
10:XJ:16:LEU:O	10:XJ:16:LEU:HD13	2.07	0.55
14:XN:41:ARG:HG2	14:XN:41:ARG:HH11	1.71	0.55
15:XO:65:ARG:NH1	15:XO:65:ARG:HB2	2.19	0.55
16:XP:21:VAL:O	16:XP:33:ILE:N	2.39	0.55
16:XP:43:LYS:HA	16:XP:48:TRP:CB	2.37	0.55
19:XS:40:ILE:HG12	19:XS:41:VAL:N	2.21	0.55
25:YA:1728:G:H3'	25:YA:1729:A:H5''	1.89	0.55
25:YA:1993:U:H4'	28:YE:128:SER:OG	2.07	0.55
25:YA:568:U:N3	25:YA:571:A:OP2	2.24	0.55
25:YA:593:G:H2'	25:YA:594:U:C6	2.41	0.55
27:YD:221:VAL:HG22	27:YD:226:MET:HE2	1.88	0.55
27:YD:94:LEU:HD22	27:YD:95:LEU:H	1.69	0.55
28:YE:3:GLY:HA3	28:YE:81:ILE:HD12	1.88	0.55
33:YN:131:GLN:CG	33:YN:132:ALA:N	2.68	0.55
25:YA:1142(A):A:H4'	33:YN:25:ARG:HH22	1.70	0.55
34:YO:20:MET:HG2	34:YO:21:CYS:N	2.19	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YY:61:ILE:HG23	44:YY:62:GLU:H	1.71	0.55
45:YZ:16:SER:O	45:YZ:20:ARG:HB2	2.06	0.55
45:YZ:37:VAL:O	45:YZ:38:TYR:HB3	2.07	0.55
45:YZ:5:LEU:HB3	45:YZ:59:LEU:HD23	1.88	0.55
45:YZ:94:GLU:CB	45:YZ:95:PRO:HA	2.37	0.55
1:QA:126:G:H1	1:QA:235:C:H42	1.54	0.55
4:QD:25:ARG:NH1	4:QD:30:LYS:HG3	2.20	0.55
5:QE:92:LYS:O	5:QE:118:ILE:HD12	2.06	0.55
10:QJ:16:LEU:O	10:QJ:16:LEU:HD13	2.07	0.55
19:QS:41:VAL:CB	19:QS:42:PRO:CA	2.76	0.55
19:QS:7:LYS:HG3	19:QS:8:GLY:N	2.22	0.55
25:RA:1384:A:N3	25:RA:1405:U:H1'	2.22	0.55
25:RA:2502:G:H5''	25:RA:2503:A:H5''	1.89	0.55
25:RA:2712:U:OP1	25:RA:2714:G:H4'	2.07	0.55
25:RA:814:C:H41	35:RP:25:SER:HA	1.70	0.55
28:RE:3:GLY:HA3	28:RE:81:ILE:HD12	1.88	0.55
34:RO:68:GLU:HA	34:RO:78:ARG:HB3	1.89	0.55
40:RU:92:ARG:NH1	41:RV:11:GLN:HB2	2.22	0.55
45:RZ:136:PHE:HD1	45:RZ:137:ILE:N	2.05	0.55
45:RZ:5:LEU:HD13	45:RZ:5:LEU:C	2.26	0.55
1:XA:436:C:H2'	1:XA:437:U:O4'	2.06	0.55
1:XA:715:A:H1'	1:XA:777:A:N1	2.20	0.55
2:XB:142:LEU:HD23	2:XB:142:LEU:C	2.27	0.55
2:XB:214:ILE:HA	2:XB:217:ARG:NH2	2.22	0.55
5:XE:7:GLU:HG2	5:XE:112:LEU:HD22	1.88	0.55
7:XG:50:ILE:CB	7:XG:58:PRO:HB3	2.37	0.55
8:XH:23:SER:HB2	8:XH:61:VAL:O	2.07	0.55
11:XK:20:TYR:HB2	11:XK:31:THR:O	2.07	0.55
1:XA:110:C:O2'	16:XP:25:ARG:O	2.24	0.55
51:Y5:55:ARG:HD3	51:Y5:56:LYS:N	2.21	0.55
52:Y6:42:TRP:CD1	52:Y6:42:TRP:N	2.74	0.55
35:YP:49:ARG:NE	54:Y8:59:LYS:HG2	2.22	0.55
25:YA:1020:A:N6	25:YA:1141:U:O2'	2.40	0.55
25:YA:743:G:O2'	25:YA:1659:U:OP1	2.24	0.55
25:YA:581:C:H2'	25:YA:582:G:H8	1.71	0.55
25:YA:664:C:OP1	35:YP:18:ARG:NH2	2.28	0.55
25:YA:852:G:H1	25:YA:925:C:N4	2.03	0.55
27:YD:43:ARG:CB	27:YD:54:ARG:HB2	2.37	0.55
28:YE:4:ILE:HD13	28:YE:5:LEU:H	1.71	0.55
28:YE:67:PHE:O	28:YE:69:LYS:N	2.39	0.55
33:YN:109:LYS:N	33:YN:109:LYS:HD2	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YB:50:G:OP1	38:YS:63:THR:HG23	2.06	0.55
39:YT:29:ARG:HB2	39:YT:29:ARG:HH11	1.72	0.55
40:YU:6:THR:O	40:YU:9:VAL:HG23	2.07	0.55
41:YV:29:PRO:HA	41:YV:61:VAL:CG2	2.37	0.55
42:YW:25:ARG:HH11	42:YW:25:ARG:CB	2.20	0.55
1:QA:192:U:H2'	1:QA:193:C:C6	2.42	0.55
1:QA:444:C:H2'	1:QA:445:G:H8	1.72	0.55
1:QA:489:C:OP1	4:QD:132:ARG:NH2	2.40	0.55
4:QD:126:ILE:HG22	4:QD:127:THR:N	2.22	0.55
8:QH:102:ARG:HH11	8:QH:105:ARG:CZ	2.19	0.55
7:QG:37:ASN:HD21	9:QI:40:LEU:HD23	1.69	0.55
9:QI:45:ALA:O	9:QI:48:GLU:HG2	2.07	0.55
12:QL:83:VAL:HG22	12:QL:84:LEU:N	2.21	0.55
15:QO:77:ARG:HA	15:QO:80:ALA:CB	2.36	0.55
54:R8:63:PRO:O	54:R8:64:TYR:HB2	2.07	0.55
25:RA:1272:A:OP2	25:RA:1647:G:OP1	2.25	0.55
25:RA:2360:A:H2'	25:RA:2361:A:O4'	2.07	0.55
25:RA:571:A:N6	25:RA:2499:C:O3'	2.40	0.55
25:RA:2656:U:OP2	25:RA:2664:G:N1	2.28	0.55
25:RA:2783:G:H2'	25:RA:2784:C:C6	2.41	0.55
25:RA:414:C:O2	25:RA:1864:U:O2'	2.25	0.55
27:RD:118:VAL:HG22	27:RD:119:ALA:H	1.72	0.55
28:RE:195:LEU:HD12	28:RE:196:VAL:H	1.71	0.55
31:RH:12:PRO:O	31:RH:13:LYS:HB2	2.07	0.55
38:RS:13:ARG:HD2	38:RS:13:ARG:O	2.06	0.55
38:RS:36:TYR:HD2	38:RS:52:SER:CB	2.18	0.55
39:RT:6:LEU:O	39:RT:7:ILE:C	2.44	0.55
40:RU:104:GLN:N	40:RU:104:GLN:OE1	2.35	0.55
45:RZ:70:LEU:HD11	45:RZ:98:MET:HE1	1.89	0.55
1:XA:343:U:O2'	1:XA:346:G:O6	2.25	0.55
3:XC:43:LEU:O	3:XC:47:LEU:HB3	2.07	0.55
3:XC:6:HIS:CD2	3:XC:7:PRO:HD2	2.41	0.55
4:XD:31:CYS:O	4:XD:32:ALA:HB3	2.07	0.55
6:XF:52:ILE:O	6:XF:53:ALA:HB3	2.07	0.55
6:XF:92:LYS:HB2	6:XF:92:LYS:HZ2	1.72	0.55
1:XA:640:A:H1'	8:XH:115:SER:HB3	1.89	0.55
9:XI:82:ALA:O	9:XI:86:VAL:HB	2.07	0.55
10:XJ:19:SER:O	10:XJ:23:ILE:HG13	2.07	0.55
10:XJ:4:ILE:CB	10:XJ:74:ILE:HD11	2.36	0.55
13:XM:80:ARG:O	13:XM:84:ILE:HB	2.06	0.55
18:XR:58:LEU:H	18:XR:58:LEU:HD12	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:XT:43:LEU:HA	20:XT:46:GLU:HB3	1.89	0.55
25:YA:1062:G:H2'	25:YA:1063:G:H8	1.70	0.55
25:YA:1103:A:H5'	25:YA:1104:C:C5	2.41	0.55
28:YE:21:VAL:HG23	28:YE:22:PRO:HD3	1.89	0.55
32:YI:2:LYS:HA	32:YI:20:ASP:CB	2.35	0.55
33:YN:44:PRO:HG2	33:YN:45:ASN:H	1.71	0.55
34:YO:19:ILE:HD13	34:YO:19:ILE:O	2.06	0.55
34:YO:79:PHE:HD2	39:YT:72:VAL:HG22	1.72	0.55
35:YP:88:LEU:C	35:YP:90:ARG:N	2.60	0.55
36:YQ:21:THR:O	36:YQ:22:LYS:O	2.25	0.55
39:YT:123:GLN:O	39:YT:125:ARG:N	2.40	0.55
39:YT:16:ARG:HG2	39:YT:18:ASP:OD1	2.06	0.55
42:YW:20:VAL:C	42:YW:22:ASP:H	2.10	0.55
44:YY:91:GLU:HG3	44:YY:92:ASN:H	1.72	0.55
1:QA:1081:G:OP1	5:QE:16:THR:OG1	2.25	0.55
1:QA:1450:U:O2'	1:QA:1451:A:N7	2.40	0.55
7:QG:50:ILE:CB	7:QG:58:PRO:HB3	2.37	0.55
10:QJ:32:ALA:O	10:QJ:33:GLN:O	2.25	0.55
50:R4:65:ASP:O	50:R4:66:SER:HB3	2.07	0.55
25:RA:1203:G:H3'	25:RA:1204:A:H5''	1.87	0.55
25:RA:1494:A:H3'	25:RA:1495:A:H8	1.72	0.55
25:RA:1897:G:H2'	25:RA:1898:U:C6	2.42	0.55
25:RA:2111:C:N3	25:RA:2118:U:O2'	2.40	0.55
25:RA:2245:U:H5'	25:RA:2246:G:H5'	1.88	0.55
25:RA:2795:G:H3'	25:RA:2797:U:H5'	1.89	0.55
29:RF:118:ALA:O	29:RF:121:GLY:N	2.33	0.55
29:RF:147:GLY:O	29:RF:148:LEU:HD23	2.07	0.55
30:RG:3:LEU:HD12	30:RG:4:ASP:N	2.19	0.55
33:RN:101:HIS:C	33:RN:101:HIS:CD2	2.79	0.55
35:RP:106:LEU:O	35:RP:107:LYS:HD3	2.07	0.55
35:RP:39:LYS:N	35:RP:45:LEU:HD11	2.21	0.55
36:RQ:25:ASP:N	36:RQ:102:VAL:HG23	2.22	0.55
42:RW:25:ARG:HH11	42:RW:25:ARG:CB	2.20	0.55
45:RZ:27:VAL:HG12	45:RZ:87:ASP:HB3	1.87	0.55
45:RZ:76:LEU:N	45:RZ:76:LEU:HD23	2.20	0.55
1:XA:413:G:H2'	1:XA:428:G:H22	1.71	0.55
1:XA:946:A:H2'	1:XA:947:G:C8	2.41	0.55
2:XB:187:LEU:HD22	2:XB:201:ILE:O	2.07	0.55
6:XF:92:LYS:HB2	6:XF:92:LYS:NZ	2.22	0.55
9:XI:114:TYR:CD2	9:XI:114:TYR:O	2.58	0.55
48:Y2:31:GLU:HB2	48:Y2:53:LEU:HD11	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y4:9:LEU:H	50:Y4:27:THR:HG22	1.71	0.55
50:Y4:48:ARG:HH12	50:Y4:52:THR:HG22	1.71	0.55
50:Y4:51:ASP:O	50:Y4:51:ASP:OD1	2.25	0.55
25:YA:2815:C:H5'	51:Y5:29:THR:HG21	1.88	0.55
54:Y8:30:ARG:O	54:Y8:31:HIS:CB	2.54	0.55
25:YA:1114:G:H2'	25:YA:1115:G:H8	1.71	0.55
25:YA:1798:U:H5''	27:YD:259:THR:HG22	1.89	0.55
25:YA:2212:A:N3	25:YA:2215:G:N1	2.54	0.55
25:YA:2283:C:P	52:Y6:5:VAL:HG13	2.47	0.55
25:YA:2689:U:OP2	25:YA:2872:G:N2	2.31	0.55
28:YE:26:ILE:HD13	28:YE:26:ILE:C	2.27	0.55
30:YG:114:ILE:HD11	30:YG:140:ILE:HD12	1.89	0.55
35:YP:2:LYS:O	35:YP:5:ASP:HB2	2.06	0.55
36:YQ:64:ILE:HA	36:YQ:106:VAL:CG1	2.33	0.55
38:YS:107:GLU:N	38:YS:110:LEU:HD11	2.22	0.55
25:YA:1252:G:H1'	40:YU:33:ARG:CD	2.37	0.55
40:YU:58:ARG:O	40:YU:62:ILE:HG13	2.07	0.55
1:QA:1231:G:O3'	9:QI:126:SER:OG	2.25	0.55
1:QA:377:G:H1	1:QA:386:C:N4	2.05	0.55
3:QC:43:LEU:O	3:QC:47:LEU:HB3	2.07	0.55
1:QA:1179:A:O3'	9:QI:103:THR:HG23	2.06	0.55
9:QI:70:LYS:O	9:QI:74:ILE:HG13	2.07	0.55
15:QO:29:VAL:HG11	15:QO:67:LEU:HD21	1.89	0.55
17:QQ:62:SER:HB3	17:QQ:72:ARG:HH21	1.72	0.55
25:RA:857:C:H1'	46:R0:26:TYR:CE2	2.42	0.55
48:R2:47:ASN:ND2	48:R2:47:ASN:N	2.54	0.55
13:QM:65:LYS:HZ3	50:R4:52:THR:HG21	1.71	0.55
53:R7:48:LYS:HG2	53:R7:49:ARG:N	2.19	0.55
25:RA:1198:U:H2'	25:RA:1199:U:C6	2.42	0.55
25:RA:2688:U:H1'	25:RA:2721:A:H61	1.71	0.55
25:RA:311:A:HO2'	25:RA:331:A:HO2'	1.54	0.55
25:RA:922:U:H2'	25:RA:923:C:C6	2.41	0.55
25:RA:956:G:N2	25:RA:960:A:OP2	2.36	0.55
27:RD:43:ARG:CB	27:RD:54:ARG:HB2	2.37	0.55
25:RA:2638:G:OP2	28:RE:82:ARG:NH2	2.40	0.55
30:RG:135:LEU:N	30:RG:135:LEU:HD12	2.21	0.55
25:RA:2642:G:H5''	33:RN:78:TYR:CD2	2.42	0.55
34:RO:1:MET:HE2	34:RO:67:LYS:HG2	1.89	0.55
35:RP:84:ASN:ND2	35:RP:115:LEU:HD12	2.22	0.55
35:RP:2:LYS:O	35:RP:5:ASP:HB2	2.06	0.55
25:RA:389:G:H1	35:RP:71:VAL:HG12	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RS:74:ALA:HB1	38:RS:107:GLU:HB3	1.89	0.55
40:RU:58:ARG:O	40:RU:62:ILE:HG13	2.06	0.55
40:RU:73:GLY:O	40:RU:74:LEU:HB3	2.07	0.55
41:RV:49:THR:CB	41:RV:50:PRO:CD	2.83	0.55
1:XA:753:A:H4'	1:XA:754:C:O5'	2.06	0.55
2:XB:134:GLU:O	2:XB:138:LEU:HD12	2.07	0.55
2:XB:16:HIS:CE1	2:XB:209:ARG:HH21	2.25	0.55
2:XB:41:ILE:HD12	2:XB:41:ILE:N	2.22	0.55
4:QD:27:TYR:HE2	6:XF:15:ASP:HB3	1.72	0.55
8:XH:102:ARG:HH11	8:XH:105:ARG:CZ	2.19	0.55
9:XI:45:ALA:O	9:XI:48:GLU:HG2	2.07	0.55
9:XI:40:LEU:HD11	9:XI:70:LYS:CG	2.37	0.55
12:XL:10:LEU:HD13	17:XQ:32:TYR:CD2	2.42	0.55
1:XA:719:C:O2'	18:XR:50:ILE:O	2.21	0.55
19:XS:68:GLY:N	50:Y4:59:PHE:CZ	2.74	0.55
47:Y1:83:GLU:OE1	47:Y1:85:LEU:HD23	2.07	0.55
25:YA:1102:C:H2'	25:YA:1103:A:H5''	1.88	0.55
25:YA:2839:G:H5'	37:YR:46:GLY:CA	2.37	0.55
25:YA:2845:G:H2'	25:YA:2846:G:C8	2.41	0.55
27:YD:155:LEU:HD23	27:YD:177:LEU:CD2	2.36	0.55
13:XM:11:ARG:NH2	30:YG:146:TYR:CD2	2.71	0.55
30:YG:41:GLN:HB3	30:YG:43:LEU:HD13	1.87	0.55
30:YG:83:ARG:HG3	30:YG:86:MET:HE1	1.89	0.55
34:YO:4:PRO:O	34:YO:5:GLN:HB2	2.06	0.55
25:YA:2468:G:H5''	36:YQ:120:ILE:HD12	1.89	0.55
37:YR:12:ARG:HH11	37:YR:12:ARG:HG3	1.71	0.55
40:YU:27:LEU:O	40:YU:29:SER:N	2.40	0.55
45:YZ:22:GLY:C	45:YZ:23:LYS:HD3	2.27	0.55
1:QA:1207:G:H2'	1:QA:1208:C:C6	2.42	0.54
2:QB:214:ILE:HA	2:QB:217:ARG:NH2	2.21	0.54
2:QB:80:ILE:CG2	2:QB:212:GLN:HA	2.35	0.54
3:QC:11:ARG:HH21	3:QC:180:ALA:HB3	1.70	0.54
7:QG:50:ILE:O	7:QG:50:ILE:HG22	2.07	0.54
9:QI:66:ARG:NH1	9:QI:66:ARG:HG2	2.22	0.54
9:QI:40:LEU:HD11	9:QI:70:LYS:CG	2.37	0.54
14:QN:22:THR:HB	14:QN:33:VAL:HG11	1.89	0.54
16:QP:43:LYS:HA	16:QP:48:TRP:CB	2.37	0.54
47:R1:91:LYS:CE	47:R1:91:LYS:HA	2.37	0.54
35:RP:49:ARG:NE	54:R8:59:LYS:HG2	2.22	0.54
25:RA:141:A:N6	25:RA:1595:G:O2'	2.37	0.54
25:RA:1651:G:N7	37:RR:11:ASN:ND2	2.54	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2420:C:N4	54:R8:30:ARG:HD2	2.22	0.54
25:RA:310:A:O2'	25:RA:311:A:O5'	2.25	0.54
25:RA:958:U:OP2	36:RQ:14:ARG:NH1	2.33	0.54
29:RF:197:ASP:O	29:RF:198:ALA:HB3	2.06	0.54
29:RF:62:ARG:NH1	29:RF:62:ARG:HB3	2.22	0.54
32:RI:110:ASP:CB	32:RI:111:PRO:C	2.75	0.54
25:RA:2562:U:H1'	34:RO:23:ARG:NH1	2.22	0.54
35:RP:24:GLY:O	35:RP:25:SER:HB3	2.06	0.54
35:RP:59:LEU:HD23	35:RP:59:LEU:O	2.06	0.54
25:RA:2415:G:H4'	35:RP:67:MET:N	2.23	0.54
39:RT:107:ASP:O	39:RT:111:ARG:NH1	2.39	0.54
41:RV:99:ILE:CD1	41:RV:99:ILE:N	2.65	0.54
42:RW:70:TYR:CD2	42:RW:70:TYR:N	2.75	0.54
44:RY:95:LYS:N	44:RY:95:LYS:HD3	2.22	0.54
1:XA:44:G:C2	1:XA:45:U:H1'	2.41	0.54
3:XC:107:GLN:CD	3:XC:107:GLN:N	2.61	0.54
4:XD:19:LEU:HD23	4:XD:19:LEU:N	2.23	0.54
4:XD:94:LEU:CD1	4:XD:94:LEU:H	2.08	0.54
9:XI:9:ARG:HB2	9:XI:14:VAL:HG22	1.88	0.54
13:XM:121:LYS:N	13:XM:121:LYS:HE2	2.22	0.54
13:XM:7:VAL:HB	30:YG:115:ARG:HH12	1.71	0.54
1:XA:667:G:H4'	15:XO:51:HIS:CE1	2.41	0.54
17:XQ:84:LEU:C	17:XQ:86:GLU:N	2.60	0.54
20:XT:10:LEU:HG	20:XT:12:ALA:H	1.70	0.54
46:Y0:56:ASP:O	46:Y0:57:PHE:HB2	2.06	0.54
25:YA:2207:C:O2	27:YD:151:LYS:NZ	2.25	0.54
27:YD:31:LYS:O	27:YD:35:LYS:O	2.24	0.54
29:YF:28:ILE:O	29:YF:28:ILE:HD12	2.06	0.54
29:YF:32:LEU:HD12	29:YF:36:VAL:HG23	1.89	0.54
31:YH:26:VAL:CG1	31:YH:27:LYS:N	2.64	0.54
40:YU:58:ARG:NH1	40:YU:93:LYS:HE2	2.22	0.54
40:YU:95:LEU:HD12	41:YV:11:GLN:HE21	1.72	0.54
42:YW:88:ARG:HB3	42:YW:92:ARG:HB3	1.89	0.54
44:YY:95:LYS:HA	44:YY:101:LYS:H	1.72	0.54
1:QA:179:A:H2'	1:QA:180:U:C6	2.41	0.54
1:QA:555:C:H2'	1:QA:556:C:C6	2.42	0.54
1:QA:818:G:O2'	1:QA:819:A:H5"	2.07	0.54
3:QC:107:GLN:N	3:QC:107:GLN:CD	2.60	0.54
47:R1:53:VAL:O	47:R1:54:ALA:C	2.45	0.54
53:R7:18:PHE:CD2	53:R7:18:PHE:C	2.81	0.54
25:RA:242:G:C8	54:R8:5:LYS:HG2	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:139:G:N2	25:RA:1596:A:H4'	2.22	0.54
25:RA:2450:A:OP1	25:RA:2497:A:O2'	2.17	0.54
27:RD:25:THR:HG21	27:RD:81:ALA:CB	2.38	0.54
29:RF:197:ASP:O	29:RF:199:TRP:N	2.38	0.54
26:RB:42:C:N1	30:RG:69:ALA:HB2	2.22	0.54
39:RT:16:ARG:HG2	39:RT:18:ASP:OD1	2.06	0.54
39:RT:3:ARG:HG3	39:RT:7:ILE:CG1	2.36	0.54
45:RZ:107:THR:CB	45:RZ:144:LEU:HB2	2.32	0.54
1:XA:1246:C:H42	1:XA:1291:G:H1	1.55	0.54
1:XA:237:C:H2'	1:XA:238:G:H8	1.71	0.54
1:XA:442:C:H5'	1:XA:443:C:OP2	2.08	0.54
4:XD:11:LEU:O	4:XD:12:CYS:C	2.45	0.54
1:XA:1297:C:O2'	7:XG:114:ARG:NH2	2.40	0.54
9:XI:128:ARG:HH21	22:XV:35:A:P	2.29	0.54
10:XJ:32:ALA:O	10:XJ:33:GLN:O	2.25	0.54
1:XA:973:G:O4'	10:XJ:55:LYS:HG2	2.07	0.54
14:YN:15:LYS:O	14:YN:16:PHE:O	2.24	0.54
16:XP:28:ARG:HG2	16:XP:28:ARG:NH1	2.22	0.54
22:XV:68:C:H2'	22:XV:69:C:C6	2.42	0.54
52:Y6:20:ASN:CG	52:Y6:21:TYR:H	2.09	0.54
25:YA:330:A:C2	25:YA:1210:A:H2'	2.42	0.54
28:YE:54:GLN:NE2	28:YE:54:GLN:N	2.56	0.54
32:YI:70:GLU:HA	32:YI:70:GLU:OE1	2.05	0.54
38:YS:13:ARG:HD2	38:YS:13:ARG:O	2.06	0.54
38:YS:36:TYR:HD2	38:YS:52:SER:CB	2.19	0.54
39:YT:98:LYS:HB3	39:YT:100:TYR:CE1	2.43	0.54
41:YV:27:ALA:O	41:YV:28:GLU:O	2.24	0.54
41:YV:49:THR:CB	41:YV:50:PRO:CD	2.83	0.54
44:YY:2:ARG:NH1	44:YY:2:ARG:HG2	2.22	0.54
44:YY:97:ARG:NH2	44:YY:98:VAL:CB	2.65	0.54
1:QA:234:C:H2'	1:QA:235:C:C6	2.42	0.54
1:QA:754:C:H5'	15:QO:72:ARG:HH22	1.72	0.54
2:QB:55:PHE:HA	2:QB:58:ILE:HB	1.88	0.54
2:QB:83:MET:O	2:QB:85:ALA:N	2.41	0.54
3:QC:181:ASN:HD21	3:QC:204:LEU:CD1	2.12	0.54
10:QJ:101:VAL:O	10:QJ:101:VAL:HG22	2.07	0.54
17:QQ:33:GLY:O	17:QQ:34:LYS:O	2.26	0.54
47:R1:60:PHE:HE2	47:R1:91:LYS:HZ1	1.54	0.54
49:R3:8:LEU:HD22	49:R3:31:LEU:CD2	2.37	0.54
25:RA:1403:C:H5''	25:RA:1471:A:C1'	2.37	0.54
25:RA:919:G:N2	25:RA:2269:A:OP2	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2357:U:OP1	46:R0:20:ARG:NE	2.31	0.54
25:RA:2887:U:H2'	25:RA:2888:C:H6	1.71	0.54
25:RA:67:U:H2'	25:RA:68:G:C8	2.42	0.54
28:RE:21:VAL:HG23	28:RE:22:PRO:HD3	1.89	0.54
29:RF:67:GLN:O	29:RF:68:LYS:CB	2.39	0.54
31:RH:128:PRO:CD	31:RH:129:THR:N	2.71	0.54
31:RH:86:GLU:HG3	31:RH:165:ALA:CB	2.38	0.54
31:RH:8:PRO:O	31:RH:9:ILE:HG23	2.08	0.54
33:RN:44:PRO:HG2	33:RN:45:ASN:H	1.71	0.54
36:RQ:83:MET:HB2	46:R0:7:LEU:HB3	1.89	0.54
36:RQ:39:PRO:HB3	36:RQ:99:PRO:HD3	1.89	0.54
39:RT:123:GLN:O	39:RT:125:ARG:N	2.40	0.54
40:RU:58:ARG:NH1	40:RU:93:LYS:HE2	2.22	0.54
40:RU:6:THR:O	40:RU:9:VAL:HG23	2.07	0.54
41:RV:29:PRO:HA	41:RV:61:VAL:CG2	2.37	0.54
42:RW:80:PRO:O	42:RW:100:THR:CG2	2.55	0.54
42:RW:9:TYR:H	42:RW:102:HIS:CE1	2.26	0.54
43:RX:5:TYR:HE2	48:R2:30:ARG:HH11	1.56	0.54
45:RZ:94:GLU:CB	45:RZ:95:PRO:HA	2.37	0.54
1:XA:662:G:H2'	1:XA:663:A:C8	2.42	0.54
8:XH:119:LEU:HD12	8:XH:124:ALA:HA	1.88	0.54
8:XH:77:GLU:HG2	8:XH:78:GLN:N	2.22	0.54
8:XH:97:VAL:CG1	8:XH:98:LYS:N	2.70	0.54
9:XI:66:ARG:HG2	9:XI:66:ARG:NH1	2.21	0.54
9:XI:70:LYS:O	9:XI:74:ILE:HG13	2.07	0.54
13:XM:81:LEU:HB3	13:XM:89:GLY:HA2	1.89	0.54
19:XS:15:LEU:H	19:XS:15:LEU:CD2	2.21	0.54
46:Y0:49:LYS:O	46:Y0:50:ASN:HB2	2.07	0.54
47:Y1:92:LYS:O	47:Y1:94:LEU:N	2.41	0.54
51:Y5:55:ARG:HD3	51:Y5:56:LYS:H	1.73	0.54
25:YA:1402:C:H2'	25:YA:1403:C:H5'	1.89	0.54
25:YA:38:A:N6	25:YA:440:G:O6	2.40	0.54
25:YA:823:G:H2'	25:YA:824:A:C8	2.43	0.54
28:YE:176:ILE:HG22	28:YE:179:GLU:H	1.72	0.54
31:YH:8:PRO:O	31:YH:9:ILE:HG23	2.08	0.54
35:YP:65:ARG:HH21	54:Y8:15:LYS:HB2	1.72	0.54
39:YT:6:LEU:O	39:YT:7:ILE:C	2.45	0.54
42:YW:80:PRO:O	42:YW:100:THR:CG2	2.55	0.54
44:YY:95:LYS:HD3	44:YY:95:LYS:N	2.23	0.54
1:QA:1158:C:H4'	2:QB:133:LYS:HZ1	1.71	0.54
2:QB:41:ILE:N	2:QB:41:ILE:HD12	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:68:ILE:HD12	2:QB:68:ILE:N	2.21	0.54
3:QC:134:ILE:HG21	3:QC:168:ALA:HB3	1.90	0.54
4:QD:12:CYS:CB	4:QD:31:CYS:O	2.56	0.54
4:QD:11:LEU:O	4:QD:12:CYS:C	2.46	0.54
10:QJ:19:SER:O	10:QJ:23:ILE:HG13	2.07	0.54
11:QK:125:PHE:N	11:QK:125:PHE:HD1	2.05	0.54
15:QO:21:ASP:OD1	15:QO:24:SER:HB2	2.07	0.54
25:RA:2233:U:H2'	25:RA:2234:G:C8	2.43	0.54
25:RA:946:G:H2'	25:RA:947:G:C8	2.42	0.54
26:RB:11:C:H3'	26:RB:12:C:H6	1.72	0.54
30:RG:116:ASP:O	30:RG:117:PHE:CB	2.51	0.54
34:RO:53:LYS:HD2	34:RO:56:ASP:OD1	2.08	0.54
36:RQ:21:THR:O	36:RQ:22:LYS:O	2.25	0.54
38:RS:107:GLU:N	38:RS:110:LEU:HD11	2.22	0.54
41:RV:22:VAL:CG1	41:RV:23:GLU:N	2.71	0.54
44:RY:47:LYS:O	44:RY:49:VAL:HG23	2.07	0.54
45:RZ:139:VAL:HA	45:RZ:156:LYS:HE2	1.90	0.54
1:XA:1429:C:H2'	1:XA:1430:C:C6	2.41	0.54
8:XH:101:PRO:HG2	8:XH:133:LEU:HD11	1.89	0.54
14:YN:13:THR:N	14:YN:14:PRO:HD2	2.22	0.54
47:Y1:53:VAL:HG12	47:Y1:54:ALA:N	2.21	0.54
47:Y1:53:VAL:O	47:Y1:54:ALA:C	2.45	0.54
50:Y4:47:GLN:O	50:Y4:48:ARG:HB2	2.07	0.54
25:YA:1212:G:O2'	25:YA:1236:G:N2	2.38	0.54
25:YA:508:G:O2'	25:YA:509:C:P	2.65	0.54
27:YD:118:VAL:HG22	27:YD:119:ALA:H	1.72	0.54
31:YH:153:LYS:CE	31:YH:153:LYS:HA	2.38	0.54
31:YH:86:GLU:HG3	31:YH:165:ALA:CB	2.38	0.54
35:YP:106:LEU:O	35:YP:107:LYS:HD3	2.07	0.54
41:YV:52:VAL:O	41:YV:54:GLY:N	2.39	0.54
42:YW:9:TYR:H	42:YW:102:HIS:CE1	2.25	0.54
44:YY:95:LYS:NZ	44:YY:95:LYS:HB2	2.21	0.54
45:YZ:124:ILE:O	45:YZ:126:VAL:HG13	2.07	0.54
45:YZ:5:LEU:O	45:YZ:6:LYS:CB	2.56	0.54
1:QA:1446:A:C5	39:RT:118:ARG:NH1	2.76	0.54
1:QA:192:U:H4'	20:QT:103:GLY:HA2	1.90	0.54
1:QA:546:G:P	4:QD:72:GLU:HB3	2.47	0.54
1:QA:707:C:H5''	11:QK:85:ARG:NH1	2.22	0.54
2:QB:142:LEU:HD23	2:QB:142:LEU:C	2.27	0.54
2:QB:170:GLU:HA	2:QB:172:ILE:HD12	1.90	0.54
4:QD:166:LYS:CD	27:YD:134:ARG:HH11	2.18	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:19:LEU:HD23	4:QD:19:LEU:N	2.23	0.54
6:QF:52:ILE:O	6:QF:53:ALA:HB3	2.07	0.54
6:QF:92:LYS:NZ	6:QF:92:LYS:HB2	2.22	0.54
7:QG:62:PHE:O	7:QG:66:VAL:HG23	2.06	0.54
8:QH:97:VAL:CG1	8:QH:98:LYS:N	2.70	0.54
12:QL:83:VAL:CG2	12:QL:100:ILE:HG23	2.38	0.54
13:QM:121:LYS:N	13:QM:121:LYS:HE2	2.23	0.54
16:QP:21:VAL:O	16:QP:33:ILE:N	2.39	0.54
16:QP:28:ARG:HG2	16:QP:28:ARG:NH1	2.22	0.54
16:QP:4:ILE:N	16:QP:4:ILE:HD12	2.23	0.54
47:R1:83:GLU:CG	47:R1:84:GLY:N	2.71	0.54
13:QM:50:GLU:HB3	50:R4:32:TYR:OH	2.07	0.54
50:R4:37:SER:HB3	50:R4:42:PHE:CD1	2.43	0.54
42:RW:38:TYR:OH	51:R5:47:PRO:HG3	2.08	0.54
51:R5:55:ARG:HD3	51:R5:56:LYS:H	1.73	0.54
25:RA:1245:G:OP1	35:RP:13:ASN:ND2	2.33	0.54
25:RA:1416:G:H2'	25:RA:1417:C:C6	2.42	0.54
25:RA:1588:C:H2'	25:RA:1589:C:H6	1.73	0.54
25:RA:1991:U:H2'	25:RA:1992:G:H5''	1.90	0.54
25:RA:2197:U:H1'	25:RA:2198:A:N7	2.23	0.54
25:RA:2506:U:OP2	25:RA:2576:G:N1	2.26	0.54
25:RA:2525:G:H1	25:RA:2538:C:H42	1.55	0.54
25:RA:729:G:H2'	25:RA:1775:U:H1'	1.88	0.54
27:RD:227:ASN:HB3	27:RD:228:PRO:CD	2.30	0.54
28:RE:186:GLY:O	28:RE:188:VAL:N	2.41	0.54
31:RH:91:GLY:O	31:RH:94:TYR:HB2	2.08	0.54
32:RI:2:LYS:HA	32:RI:20:ASP:CB	2.36	0.54
32:RI:94:ALA:HB1	32:RI:111:PRO:HB2	1.89	0.54
39:RT:29:ARG:HB2	39:RT:29:ARG:HH11	1.72	0.54
42:RW:20:VAL:C	42:RW:22:ASP:H	2.10	0.54
44:RY:61:ILE:HG23	44:RY:62:GLU:H	1.71	0.54
45:RZ:124:ILE:O	45:RZ:126:VAL:HG13	2.07	0.54
45:RZ:5:LEU:O	45:RZ:6:LYS:CB	2.56	0.54
11:XK:24:SER:HB3	11:XK:27:ASN:O	2.08	0.54
11:XK:91:ARG:NH2	18:XR:88:LYS:HZ1	2.06	0.54
12:XL:6:THR:OG1	12:XL:9:GLN:HG3	2.08	0.54
13:XM:73:GLU:O	13:XM:77:ASN:N	2.33	0.54
19:XS:68:GLY:HA3	50:Y4:68:ARG:HB2	1.90	0.54
51:Y5:44:THR:O	51:Y5:46:CYS:N	2.41	0.54
53:Y7:18:PHE:CD2	53:Y7:18:PHE:C	2.81	0.54
54:Y8:32:LEU:O	54:Y8:36:LYS:HE3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:184:C:H2'	25:YA:185:U:C6	2.43	0.54
25:YA:264:C:C2'	25:YA:265:A:H5''	2.38	0.54
25:YA:2723:C:OP1	25:YA:2820:A:H8	1.91	0.54
28:YE:14:ILE:HG23	28:YE:15:PHE:N	2.23	0.54
29:YF:129:PHE:O	29:YF:130:ALA:CB	2.55	0.54
34:YO:53:LYS:HD2	34:YO:56:ASP:OD1	2.08	0.54
35:YP:114:ILE:HD11	35:YP:130:PHE:HE1	1.70	0.54
37:YR:28:LEU:HD13	37:YR:28:LEU:O	2.08	0.54
33:YN:42:TRP:CD1	40:YU:63:VAL:HG11	2.42	0.54
43:YX:65:ARG:HD3	43:YX:65:ARG:H	1.70	0.54
45:YZ:136:PHE:HD1	45:YZ:137:ILE:N	2.05	0.54
45:YZ:139:VAL:HA	45:YZ:156:LYS:HE2	1.89	0.54
1:QA:1327:C:H2'	1:QA:1328:C:H6	1.72	0.54
1:QA:316:G:OP2	1:QA:351:G:O2'	2.25	0.54
3:QC:109:PRO:O	3:QC:115:LEU:HD12	2.08	0.54
8:QH:102:ARG:NH1	8:QH:105:ARG:NH1	2.55	0.54
9:QI:118:LYS:HZ2	9:QI:118:LYS:HB2	1.72	0.54
15:QO:87:ILE:CG2	15:QO:88:ARG:H	2.00	0.54
6:QF:91:VAL:CG1	18:QR:72:ARG:HH12	2.19	0.54
52:R6:12:GLU:HG2	52:R6:52:VAL:O	2.07	0.54
53:R7:31:LEU:O	53:R7:32:LYS:C	2.43	0.54
35:RP:65:ARG:HH21	54:R8:15:LYS:HB2	1.72	0.54
54:R8:32:LEU:O	54:R8:36:LYS:HE3	2.07	0.54
25:RA:298:G:P	44:RY:85:VAL:HG22	2.47	0.54
25:RA:1812:A:O2'	27:RD:45:ASN:HB2	2.08	0.54
28:RE:101:ARG:HB3	28:RE:201:THR:OG1	2.08	0.54
29:RF:179:GLU:CD	29:RF:179:GLU:H	2.11	0.54
44:RY:91:GLU:HG3	44:RY:92:ASN:H	1.72	0.54
1:XA:1223:C:OP1	1:XA:1224:G:H3'	2.07	0.54
1:XA:1366:C:H2'	1:XA:1367:C:H6	1.73	0.54
1:XA:167:G:H2'	1:XA:168:G:H8	1.73	0.54
2:XB:170:GLU:HA	2:XB:172:ILE:HD12	1.90	0.54
2:XB:178:ARG:NH2	8:XH:74:PRO:CG	2.70	0.54
2:XB:83:MET:O	2:XB:85:ALA:N	2.41	0.54
3:XC:109:PRO:O	3:XC:115:LEU:HD12	2.08	0.54
3:XC:195:VAL:CG1	3:XC:196:LEU:N	2.71	0.54
4:XD:153:ARG:NH1	4:XD:181:MET:CG	2.71	0.54
10:XJ:61:GLU:HG3	14:XN:58:LYS:HE2	1.90	0.54
15:XO:21:ASP:OD1	15:XO:24:SER:HB2	2.07	0.54
16:XP:3:LYS:O	16:XP:21:VAL:HA	2.08	0.54
49:Y3:2:PRO:O	49:Y3:3:ARG:O	2.25	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:Y6:17:LYS:O	52:Y6:18:ARG:HB2	2.08	0.54
25:YA:155:C:H5'	25:YA:161:U:OP2	2.08	0.54
25:YA:2630:G:H2'	25:YA:2631:G:H8	1.72	0.54
25:YA:353:G:H2'	25:YA:354:G:C8	2.42	0.54
25:YA:363(B):G:H2'	25:YA:363(C):G:C8	2.43	0.54
27:YD:124:PRO:HB2	27:YD:126:GLN:NE2	2.22	0.54
27:YD:206:LEU:O	27:YD:211:ARG:NH1	2.38	0.54
30:YG:3:LEU:HD12	30:YG:4:ASP:N	2.19	0.54
25:YA:2306:C:N4	30:YG:42:GLY:O	2.35	0.54
30:YG:7:LEU:HD12	30:YG:104:GLU:HA	1.88	0.54
35:YP:124:LYS:HA	35:YP:143:GLY:O	2.08	0.54
44:YY:47:LYS:O	44:YY:49:VAL:HG23	2.08	0.54
45:YZ:7:ALA:O	45:YZ:8:TYR:CD2	2.61	0.54
1:QA:1012:U:H2'	1:QA:1013:G:C8	2.43	0.54
2:QB:24:TRP:CE2	2:QB:26:PRO:HD3	2.43	0.54
7:QG:13:GLN:O	7:QG:24:THR:HG21	2.08	0.54
12:QL:10:LEU:CD1	17:QQ:32:TYR:CD2	2.90	0.54
13:QM:34:LEU:CD1	13:QM:41:PRO:HG3	2.38	0.54
18:QR:39:VAL:HA	18:QR:42:ARG:NH1	2.23	0.54
20:QT:43:LEU:HA	20:QT:46:GLU:HB3	1.88	0.54
21:QU:21:TYR:O	21:QU:22:ARG:HB2	2.06	0.54
21:QU:6:ARG:O	21:QU:8:THR:N	2.39	0.54
46:R0:56:ASP:O	46:R0:57:PHE:HB2	2.06	0.54
47:R1:83:GLU:OE1	47:R1:85:LEU:HD23	2.07	0.54
48:R2:43:GLN:O	48:R2:44:LEU:CG	2.54	0.54
30:RG:111:LEU:HB2	50:R4:38:LYS:HZ3	1.72	0.54
25:RA:1352:U:O2'	25:RA:1570:A:N3	2.35	0.54
25:RA:1636:C:H2'	25:RA:1637:A:C8	2.42	0.54
25:RA:2641:G:OP2	33:RN:74:ARG:NH2	2.34	0.54
25:RA:481:G:O2'	25:RA:507:A:N1	2.37	0.54
25:RA:583:G:H5''	40:RU:10:ARG:NH1	2.21	0.54
25:RA:987:G:C2	25:RA:988:A:H1'	2.42	0.54
27:RD:233:HIS:CD2	27:RD:233:HIS:N	2.75	0.54
30:RG:139:LEU:HD22	30:RG:146:TYR:HD1	1.73	0.54
31:RH:26:VAL:CG1	31:RH:27:LYS:N	2.63	0.54
37:RR:1:MET:O	37:RR:2:ARG:HG3	2.08	0.54
1:XA:1267:C:O2	21:XU:20:LYS:HD2	2.08	0.54
1:XA:1439:C:H42	1:XA:1462:G:H1	1.56	0.54
1:XA:192:U:H4'	20:XT:102:GLY:O	2.07	0.54
1:XA:372:C:N4	1:XA:389:A:H62	2.05	0.54
1:XA:1055:A:O2'	3:XC:161:GLU:OE2	2.15	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:46:ALA:HB2	7:XG:117:ALA:HB1	1.88	0.54
8:XH:51:VAL:HG11	8:XH:60:ARG:CG	2.37	0.54
13:XM:66:LEU:O	13:XM:67:GLU:C	2.46	0.54
25:YA:2334:G:C6	46:Y0:75:LEU:HD21	2.43	0.54
25:YA:1043:C:H42	25:YA:1112:G:H1	1.55	0.54
25:YA:1600:C:H4'	53:Y7:49:ARG:HE	1.71	0.54
25:YA:1851:U:H2'	25:YA:1852:C:O4'	2.07	0.54
25:YA:2517:C:C2	25:YA:2542:A:N6	2.75	0.54
27:YD:158:ALA:HB3	27:YD:161:THR:HG21	1.90	0.54
27:YD:211:ARG:HD2	27:YD:214:TRP:CZ3	2.43	0.54
27:YD:25:THR:HG23	27:YD:25:THR:O	2.07	0.54
25:YA:442:G:H1'	29:YF:48:THR:HG21	1.89	0.54
29:YF:62:ARG:HB3	29:YF:62:ARG:NH1	2.22	0.54
36:YQ:39:PRO:HB3	36:YQ:99:PRO:HD3	1.89	0.54
1:QA:978:A:O2'	1:QA:1322:C:N3	2.39	0.54
1:QA:937:A:N6	1:QA:1345:U:O4	2.38	0.54
1:QA:191(F):U:O2	20:QT:105:SER:HB2	2.08	0.54
1:QA:45:U:H2'	1:QA:46:G:H8	1.73	0.54
2:QB:16:HIS:CE1	2:QB:209:ARG:HH21	2.25	0.54
4:QD:23:GLY:HA3	4:QD:112:VAL:CG2	2.38	0.54
6:QF:78:GLU:OE2	6:QF:81:ILE:HD12	2.08	0.54
8:QH:101:PRO:HG2	8:QH:133:LEU:HD11	1.89	0.54
8:QH:51:VAL:HG11	8:QH:60:ARG:CG	2.38	0.54
11:QK:20:TYR:HB2	11:QK:31:THR:O	2.07	0.54
51:R5:60:VAL:CG1	51:R5:60:VAL:OXT	2.56	0.54
25:RA:1936:A:H4'	25:RA:1937:A:O5'	2.08	0.54
25:RA:2795:G:H3'	25:RA:2797:U:C5'	2.38	0.54
27:RD:25:THR:CG2	27:RD:81:ALA:HB1	2.38	0.54
28:RE:176:ILE:HG22	28:RE:179:GLU:H	1.72	0.54
34:RO:113:LYS:HG2	34:RO:117:LEU:CD1	2.38	0.54
35:RP:125:VAL:O	35:RP:145:PRO:HD2	2.08	0.54
37:RR:45:ARG:HA	37:RR:95:THR:HG21	1.87	0.54
38:RS:67:ARG:NH1	38:RS:67:ARG:CB	2.64	0.54
40:RU:95:LEU:HD12	41:RV:11:GLN:HE21	1.72	0.54
41:RV:45:THR:O	41:RV:45:THR:HG22	2.08	0.54
3:XC:134:ILE:CD1	3:XC:153:VAL:HG21	2.35	0.54
3:XC:92:ALA:HB2	3:XC:99:VAL:CG1	2.38	0.54
7:XG:13:GLN:O	7:XG:24:THR:HG21	2.08	0.54
7:XG:137:LYS:O	7:XG:141:VAL:HG23	2.08	0.54
7:XG:50:ILE:O	7:XG:50:ILE:HG22	2.07	0.54
9:XI:13:ALA:HB2	9:XI:67:GLY:C	2.28	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:101:VAL:HG22	10:XJ:101:VAL:O	2.07	0.54
15:XO:77:ARG:HA	15:XO:80:ALA:CB	2.36	0.54
17:XQ:65:ILE:HD12	17:XQ:65:ILE:H	1.73	0.54
18:XR:29:PHE:CD2	18:XR:29:PHE:N	2.76	0.54
18:XR:39:VAL:HA	18:XR:42:ARG:NH1	2.23	0.54
18:XR:51:LEU:HD22	18:XR:55:ARG:HD2	1.89	0.54
25:YA:2485:G:OP1	36:YQ:46:GLN:NE2	2.39	0.54
25:YA:526:A:OP1	25:YA:527:C:OP1	2.25	0.54
28:YE:101:ARG:HB3	28:YE:201:THR:OG1	2.08	0.54
28:YE:134:ILE:HD12	28:YE:134:ILE:C	2.28	0.54
28:YE:51:PHE:O	28:YE:74:PRO:HB3	2.08	0.54
29:YF:127:GLU:O	29:YF:129:PHE:N	2.40	0.54
29:YF:147:GLY:O	29:YF:148:LEU:HD23	2.07	0.54
25:YA:586:A:H5'	29:YF:89:VAL:HG21	1.89	0.54
30:YG:81:LYS:O	30:YG:82:LEU:CB	2.56	0.54
33:YN:7:LYS:HD3	33:YN:9:VAL:CA	2.38	0.54
34:YO:68:GLU:HA	34:YO:78:ARG:HB3	1.88	0.54
35:YP:84:ASN:ND2	35:YP:115:LEU:HD12	2.22	0.54
35:YP:140:ALA:O	35:YP:141:ALA:HB2	2.08	0.54
41:YV:45:THR:O	41:YV:45:THR:HG22	2.08	0.54
43:YX:5:TYR:HE2	48:Y2:30:ARG:HH11	1.55	0.54
44:YY:87:LYS:NZ	44:YY:87:LYS:HB2	2.23	0.54
1:QA:108:G:H5''	1:QA:109:A:C5'	2.38	0.54
1:QA:1435:G:H2'	1:QA:1436:U:C6	2.43	0.54
1:QA:583:A:H2'	1:QA:584:G:O4'	2.08	0.54
3:QC:53:ALA:HB2	3:QC:115:LEU:HD21	1.90	0.54
3:QC:92:ALA:HB2	3:QC:99:VAL:CG1	2.37	0.54
4:QD:13:ARG:HD2	4:QD:38:TYR:O	2.08	0.54
7:QG:102:ARG:O	7:QG:106:GLN:HG3	2.08	0.54
10:QJ:61:GLU:HG3	14:QN:58:LYS:HE2	1.89	0.54
14:QN:13:THR:N	14:QN:14:PRO:HD2	2.21	0.54
16:QP:3:LYS:O	16:QP:21:VAL:HA	2.08	0.54
1:QA:1397:C:H1'	23:QX:8:A:N6	2.22	0.54
46:R0:53:MET:HA	46:R0:58:THR:O	2.08	0.54
50:R4:51:ASP:O	50:R4:51:ASP:OD1	2.25	0.54
52:R6:17:LYS:O	52:R6:18:ARG:HB2	2.08	0.54
25:RA:1451:C:H42	25:RA:1459:G:H1	1.55	0.54
25:RA:612:G:O2'	25:RA:616:A:N1	2.33	0.54
25:RA:848:G:H2'	25:RA:849:A:C8	2.43	0.54
27:RD:183:ARG:HG2	27:RD:183:ARG:NH1	2.12	0.54
33:RN:109:LYS:HD2	33:RN:109:LYS:H	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:4:PRO:O	34:RO:5:GLN:HB2	2.06	0.54
35:RP:112:LEU:HD13	35:RP:112:LEU:C	2.29	0.54
35:RP:124:LYS:HA	35:RP:143:GLY:O	2.08	0.54
35:RP:37:GLY:HA2	35:RP:41:ARG:NE	2.23	0.54
45:RZ:57:ILE:HD12	45:RZ:57:ILE:N	2.23	0.54
1:XA:1148:U:OP1	9:XI:7:THR:HG21	2.08	0.54
1:XA:439:A:OP2	1:XA:493:G:N1	2.41	0.54
5:XE:101:ILE:O	5:XE:101:ILE:HG12	2.08	0.54
47:Y1:91:LYS:CE	47:Y1:91:LYS:HA	2.37	0.54
50:Y4:65:ASP:O	50:Y4:66:SER:HB3	2.07	0.54
25:YA:2232:U:P	47:Y1:40:ARG:HH12	2.30	0.54
25:YA:242:G:C8	54:Y8:5:LYS:HG2	2.43	0.54
27:YD:80:ALA:HB3	27:YD:94:LEU:HD13	1.88	0.54
31:YH:91:GLY:O	31:YH:94:TYR:HB2	2.08	0.54
32:YI:94:ALA:HB1	32:YI:111:PRO:HB2	1.89	0.54
35:YP:112:LEU:HD13	35:YP:112:LEU:C	2.29	0.54
35:YP:92:GLU:HA	35:YP:123:LEU:CD2	2.38	0.54
35:YP:24:GLY:O	35:YP:25:SER:HB3	2.06	0.54
37:YR:38:VAL:HG22	37:YR:112:ALA:HB2	1.90	0.54
39:YT:55:ASN:O	39:YT:57:PHE:O	2.26	0.54
34:YO:78:ARG:O	39:YT:73:GLU:HG3	2.08	0.54
40:YU:24:TYR:O	40:YU:29:SER:HB3	2.08	0.54
25:YA:993:G:OP1	40:YU:50:ARG:NH1	2.40	0.54
40:YU:86:ALA:HB1	40:YU:88:ILE:HD11	1.90	0.54
3:QC:195:VAL:CG1	3:QC:196:LEU:N	2.71	0.54
13:QM:3:ARG:HA	13:QM:9:ILE:CG2	2.21	0.54
22:QV:68:C:H2'	22:QV:69:C:C6	2.42	0.54
47:R1:92:LYS:O	47:R1:94:LEU:N	2.41	0.54
48:R2:31:GLU:HB2	48:R2:53:LEU:HD11	1.89	0.54
25:RA:222:A:O2'	25:RA:223:A:O5'	2.22	0.54
25:RA:2308:G:N2	25:RA:2311:A:H2	2.03	0.54
25:RA:2696:U:H2'	25:RA:2697:G:C8	2.43	0.54
27:RD:227:ASN:CB	27:RD:228:PRO:HD2	2.24	0.54
25:RA:2680:C:H5'	28:RE:189:PRO:HA	1.90	0.54
28:RE:51:PHE:O	28:RE:74:PRO:HB3	2.08	0.54
28:RE:54:GLN:N	28:RE:54:GLN:NE2	2.55	0.54
37:RR:38:VAL:HG22	37:RR:112:ALA:HB2	1.90	0.54
37:RR:53:HIS:HA	37:RR:56:LYS:HD3	1.90	0.54
38:RS:111:GLU:OE1	38:RS:111:GLU:HA	2.07	0.54
44:RY:87:LYS:HB2	44:RY:87:LYS:NZ	2.23	0.54
45:RZ:110:GLY:O	45:RZ:117:LEU:HD21	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RZ:52:SER:C	45:RZ:53:ILE:HG13	2.29	0.54
1:XA:160:A:H1'	1:XA:344:A:N7	2.23	0.54
1:XA:34:C:H2'	1:XA:35:G:C8	2.42	0.54
3:XC:134:ILE:HG21	3:XC:168:ALA:HB3	1.89	0.54
7:XG:102:ARG:O	7:XG:106:GLN:HG3	2.08	0.54
1:XA:1298:C:P	7:XG:114:ARG:HH22	2.29	0.54
7:XG:12:LEU:N	7:XG:12:LEU:HD22	2.23	0.54
8:XH:20:TYR:HD1	8:XH:65:TYR:HD2	1.55	0.54
17:XQ:33:GLY:O	17:XQ:34:LYS:O	2.25	0.54
50:Y4:63:TYR:C	50:Y4:65:ASP:N	2.61	0.54
52:Y6:12:GLU:HG2	52:Y6:52:VAL:O	2.07	0.54
53:Y7:10:ARG:NH1	53:Y7:14:LYS:HE3	2.23	0.54
27:YD:183:ARG:HG2	27:YD:183:ARG:NH1	2.12	0.54
27:YD:34:VAL:C	27:YD:35:LYS:HG3	2.28	0.54
28:YE:186:GLY:O	28:YE:188:VAL:N	2.40	0.54
29:YF:53:THR:C	29:YF:55:GLY:H	2.11	0.54
31:YH:126:PRO:HD2	31:YH:127:GLU:H	1.73	0.54
32:YI:110:ASP:CB	32:YI:111:PRO:C	2.76	0.54
34:YO:49:ARG:NH1	34:YO:49:ARG:HB3	2.23	0.54
39:YT:105:LEU:O	39:YT:107:ASP:N	2.41	0.54
40:YU:47:TYR:C	40:YU:47:TYR:CD2	2.81	0.54
41:YV:66:ARG:HH11	41:YV:66:ARG:CB	2.20	0.54
44:YY:5:MET:HE1	44:YY:32:PRO:HB3	1.90	0.54
1:QA:342:C:H2'	1:QA:343:U:O4'	2.07	0.53
2:QB:75:LYS:C	2:QB:75:LYS:HD3	2.28	0.53
4:QD:173:TRP:CD1	4:QD:174:LEU:HG	2.44	0.53
4:QD:31:CYS:O	4:QD:32:ALA:HB3	2.08	0.53
4:QD:79:PHE:CE2	4:QD:83:SER:HB2	2.44	0.53
8:QH:77:GLU:HG2	8:QH:78:GLN:N	2.22	0.53
9:QI:99:LEU:O	9:QI:101:PHE:N	2.41	0.53
12:QL:6:THR:OG1	12:QL:9:GLN:HG3	2.08	0.53
13:QM:66:LEU:O	13:QM:67:GLU:C	2.46	0.53
17:QQ:5:VAL:O	17:QQ:6:LEU:HD23	2.08	0.53
18:QR:25:THR:C	18:QR:26:LEU:HD23	2.29	0.53
25:RA:818:G:N1	25:RA:1188:U:OP2	2.41	0.53
25:RA:1287:A:N7	37:RR:107:ASP:HB2	2.22	0.53
25:RA:1405:U:H2'	25:RA:1406:U:C6	2.44	0.53
25:RA:2540:C:O2'	25:RA:2740:A:N3	2.40	0.53
27:RD:158:ALA:HB3	27:RD:161:THR:HG21	1.90	0.53
27:RD:85:ASP:OD2	27:RD:88:ARG:HG2	2.07	0.53
28:RE:14:ILE:CG1	28:RE:15:PHE:H	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:53:PRO:O	28:RE:74:PRO:HA	2.07	0.53
29:RF:116:ASP:OD1	29:RF:119:ARG:NH2	2.41	0.53
29:RF:53:THR:C	29:RF:55:GLY:H	2.10	0.53
30:RG:81:LYS:O	30:RG:82:LEU:CB	2.56	0.53
31:RH:139:GLN:O	31:RH:143:GLN:HB2	2.09	0.53
32:RI:110:ASP:HB3	32:RI:111:PRO:C	2.29	0.53
33:RN:70:LYS:C	33:RN:71:ILE:HD13	2.28	0.53
35:RP:37:GLY:C	35:RP:41:ARG:HD3	2.29	0.53
36:RQ:81:VAL:C	36:RQ:82:ARG:CG	2.76	0.53
39:RT:14:TYR:H	39:RT:14:TYR:HD1	1.56	0.53
40:RU:24:TYR:O	40:RU:29:SER:HB3	2.08	0.53
33:RN:42:TRP:CD1	40:RU:63:VAL:HG11	2.42	0.53
45:RZ:94:GLU:CB	45:RZ:130:PRO:CD	2.86	0.53
1:XA:1114:C:H1'	14:YN:60:SER:HB2	1.89	0.53
1:XA:711:G:H2'	1:XA:712:A:H8	1.73	0.53
1:XA:791:G:H2'	1:XA:792:A:H5'	1.90	0.53
4:XD:120:LEU:HD22	4:XD:125:HIS:CB	2.38	0.53
9:XI:99:LEU:O	9:XI:101:PHE:N	2.41	0.53
14:YN:22:THR:HB	14:YN:33:VAL:HG11	1.88	0.53
14:YN:40:CYS:H	14:YN:43:CYS:HB2	1.73	0.53
1:XA:1216:G:H5''	14:YN:5:ALA:CB	2.37	0.53
46:Y0:53:MET:HA	46:Y0:58:THR:O	2.08	0.53
49:Y3:56:VAL:CG1	49:Y3:57:GLU:H	2.20	0.53
54:Y8:63:PRO:O	54:Y8:64:TYR:HB2	2.07	0.53
25:YA:1440:G:H2'	25:YA:1441:G:H8	1.73	0.53
25:YA:1525:G:H2'	25:YA:1526:G:H8	1.74	0.53
25:YA:2688:U:O2'	25:YA:2721:A:N6	2.41	0.53
25:YA:870:A:H5''	36:YQ:6:ARG:O	2.08	0.53
27:YD:85:ASP:OD2	27:YD:88:ARG:HG2	2.07	0.53
28:YE:14:ILE:HD11	39:YT:14:TYR:CZ	2.42	0.53
29:YF:51:THR:O	29:YF:93:LYS:NZ	2.38	0.53
31:YH:125:VAL:HA	31:YH:126:PRO:CB	2.29	0.53
31:YH:12:PRO:O	31:YH:13:LYS:HB2	2.07	0.53
34:YO:12:ASP:OD1	34:YO:85:VAL:HG13	2.08	0.53
35:YP:37:GLY:C	35:YP:41:ARG:HD3	2.29	0.53
37:YR:91:GLN:O	37:YR:91:GLN:HG2	2.08	0.53
28:YE:25:VAL:HG11	39:YT:11:GLU:HG2	1.90	0.53
39:YT:88:ILE:HD12	39:YT:88:ILE:C	2.29	0.53
40:YU:74:LEU:HD13	40:YU:79:PHE:HB2	1.89	0.53
45:YZ:125:LEU:C	45:YZ:164:ALA:HB3	2.29	0.53
1:QA:1129:C:H4'	1:QA:1130:A:O5'	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1286:A:C8	1:QA:1287:A:H4'	2.43	0.53
1:QA:46:G:H2'	1:QA:366:C:C5	2.43	0.53
6:QF:41:GLU:HG2	6:QF:43:LEU:HD11	1.89	0.53
11:QK:24:SER:HB3	11:QK:27:ASN:O	2.08	0.53
16:QP:75:ARG:C	16:QP:77:ALA:H	2.11	0.53
19:QS:15:LEU:CD2	19:QS:15:LEU:H	2.21	0.53
49:R3:35:ARG:HB3	49:R3:37:LEU:CD2	2.37	0.53
35:RP:64:LYS:HG3	54:R8:25:MET:SD	2.48	0.53
25:RA:2630:G:H2'	25:RA:2631:G:C8	2.43	0.53
25:RA:527:C:N4	25:RA:2779:U:H5"	2.22	0.53
27:RD:211:ARG:HD2	27:RD:214:TRP:CZ3	2.43	0.53
31:RH:153:LYS:HA	31:RH:153:LYS:CE	2.37	0.53
33:RN:137:LYS:HG3	33:RN:138:LEU:N	2.23	0.53
34:RO:78:ARG:O	39:RT:73:GLU:HG3	2.08	0.53
39:RT:88:ILE:C	39:RT:88:ILE:HD12	2.29	0.53
40:RU:47:TYR:CD2	40:RU:47:TYR:C	2.81	0.53
44:RY:44:ILE:CG1	44:RY:45:VAL:N	2.70	0.53
2:XB:102:LEU:HB3	2:XB:180:LEU:HD12	1.90	0.53
1:XA:1111:A:N1	3:XC:177:THR:HG23	2.24	0.53
3:XC:3:ASN:H	3:XC:3:ASN:ND2	2.05	0.53
9:XI:13:ALA:HA	9:XI:66:ARG:O	2.08	0.53
9:XI:53:VAL:CB	9:XI:95:LYS:HE3	2.36	0.53
52:Y6:11:LEU:CD1	52:Y6:51:GLU:HG3	2.38	0.53
25:YA:1705:G:C6	25:YA:1706:U:C4	2.97	0.53
25:YA:2839:G:H5'	37:YR:46:GLY:HA2	1.89	0.53
25:YA:297:C:H2'	25:YA:298:G:O4'	2.08	0.53
32:YI:76:THR:HG23	32:YI:139:GLN:O	2.08	0.53
34:YO:12:ASP:CG	34:YO:14:THR:HG23	2.29	0.53
45:YZ:52:SER:C	45:YZ:53:ILE:HG13	2.29	0.53
1:QA:126:G:OP1	1:QA:605:U:O2'	2.25	0.53
2:QB:134:GLU:O	2:QB:138:LEU:HD12	2.07	0.53
3:QC:173:VAL:O	3:QC:173:VAL:HG12	2.08	0.53
3:QC:51:GLY:O	3:QC:70:VAL:HG13	2.09	0.53
7:QG:12:LEU:HD22	7:QG:12:LEU:N	2.23	0.53
9:QI:13:ALA:HA	9:QI:66:ARG:O	2.08	0.53
13:QM:76:ALA:O	13:QM:79:LYS:HB3	2.09	0.53
46:R0:49:LYS:O	46:R0:50:ASN:HB2	2.07	0.53
50:R4:37:SER:C	50:R4:39:CYS:N	2.62	0.53
51:R5:16:ARG:NH1	51:R5:17:ASP:OD1	2.41	0.53
51:R5:44:THR:O	51:R5:46:CYS:N	2.41	0.53
53:R7:10:ARG:NH1	53:R7:14:LYS:HE3	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:R8:58:ILE:O	54:R8:61:LEU:HG	2.08	0.53
25:RA:513:A:H5'	25:RA:1216:G:O2'	2.08	0.53
25:RA:2150:U:H2'	25:RA:2151:G:C8	2.44	0.53
25:RA:2636:U:OP2	28:RE:79:ARG:NH1	2.42	0.53
27:RD:206:LEU:O	27:RD:211:ARG:NH1	2.38	0.53
25:RA:2415:G:O3'	35:RP:66:GLY:HA3	2.08	0.53
43:RX:53:LYS:NZ	43:RX:55:ASN:HD21	2.06	0.53
45:RZ:7:ALA:O	45:RZ:8:TYR:CD2	2.61	0.53
1:XA:407:G:H1	1:XA:435:C:H42	1.57	0.53
1:XA:518:C:H2'	1:XA:530:G:C4	2.43	0.53
1:XA:737:A:H2'	1:XA:738:C:C6	2.43	0.53
2:XB:24:TRP:CE2	2:XB:26:PRO:HD3	2.43	0.53
6:XF:89:MET:HG2	6:XF:89:MET:O	2.09	0.53
7:XG:113:GLU:HB2	7:XG:119:ARG:CG	2.35	0.53
7:XG:85:TYR:HE1	7:XG:154:TYR:HE1	1.56	0.53
10:XJ:16:LEU:O	10:XJ:20:ALA:HB2	2.08	0.53
11:XK:125:PHE:N	11:XK:125:PHE:HD1	2.05	0.53
12:XL:83:VAL:CG2	12:XL:100:ILE:HG23	2.38	0.53
48:Y2:16:LEU:CG	48:Y2:16:LEU:O	2.49	0.53
48:Y2:41:ILE:HD11	48:Y2:44:LEU:HB2	1.90	0.53
52:Y6:13:CYS:O	52:Y6:14:THR:HB	2.08	0.53
25:YA:1434:A:H61	25:YA:1558:A:H62	1.55	0.53
25:YA:1754:C:H2'	25:YA:1755:A:C8	2.42	0.53
25:YA:2469:A:H2	25:YA:2481:G:N2	2.04	0.53
25:YA:2723:C:O3'	37:YR:1:MET:HE2	2.08	0.53
26:YB:111:U:H2'	26:YB:112:G:H8	1.73	0.53
27:YD:25:THR:HG21	27:YD:81:ALA:CB	2.38	0.53
27:YD:263:ARG:HB2	27:YD:263:ARG:HH11	1.67	0.53
29:YF:197:ASP:O	29:YF:198:ALA:HB3	2.07	0.53
30:YG:139:LEU:HD22	30:YG:146:TYR:HD1	1.73	0.53
13:XM:11:ARG:NH2	30:YG:146:TYR:HD2	2.03	0.53
35:YP:88:LEU:HD23	35:YP:89:ALA:N	2.24	0.53
37:YR:70:LEU:HD13	37:YR:75:LEU:HD11	1.88	0.53
38:YS:74:ALA:HB1	38:YS:107:GLU:HB3	1.89	0.53
41:YV:35:LEU:N	41:YV:35:LEU:HD22	2.23	0.53
42:YW:28:SER:HB3	42:YW:31:GLU:HB2	1.90	0.53
25:YA:482:A:O2'	44:YY:47:LYS:NZ	2.38	0.53
44:YY:90:LEU:HD22	44:YY:90:LEU:H	1.73	0.53
45:YZ:94:GLU:CB	45:YZ:130:PRO:CD	2.86	0.53
1:QA:1422:G:H5''	34:RO:48:PRO:HG3	1.90	0.53
1:QA:407:G:OP1	4:QD:3:ARG:NH1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:12:LEU:O	5:QE:13:ILE:HD12	2.08	0.53
5:QE:140:ARG:NH1	5:QE:140:ARG:HB2	2.24	0.53
14:QN:40:CYS:H	14:QN:43:CYS:HB3	1.72	0.53
15:QO:7:GLU:O	15:QO:11:VAL:HG23	2.08	0.53
49:R3:2:PRO:O	49:R3:3:ARG:O	2.25	0.53
50:R4:15:ILE:HD13	50:R4:15:ILE:H	1.74	0.53
25:RA:2292:C:H2'	25:RA:2293:C:C6	2.43	0.53
25:RA:2503:A:O2'	25:RA:2505:G:OP2	2.25	0.53
25:RA:270(S):G:O4'	47:R1:78:LYS:HD2	2.08	0.53
25:RA:338:G:OP1	44:RY:4:LYS:NZ	2.37	0.53
27:RD:124:PRO:HB2	27:RD:126:GLN:NE2	2.23	0.53
29:RF:34:TRP:CH2	35:RP:8:PRO:HB3	2.43	0.53
32:RI:38:LEU:N	32:RI:38:LEU:HD12	2.11	0.53
34:RO:12:ASP:CG	34:RO:14:THR:HG23	2.29	0.53
35:RP:140:ALA:O	35:RP:141:ALA:HB2	2.08	0.53
37:RR:28:LEU:HD13	37:RR:28:LEU:O	2.08	0.53
37:RR:91:GLN:O	37:RR:91:GLN:HG2	2.08	0.53
39:RT:105:LEU:O	39:RT:107:ASP:N	2.41	0.53
41:RV:66:ARG:HH11	41:RV:66:ARG:CB	2.20	0.53
44:RY:95:LYS:HA	44:RY:101:LYS:H	1.72	0.53
1:XA:1184:G:H2'	1:XA:1185:G:C8	2.44	0.53
1:XA:1320:C:H5'	19:XS:70:LYS:HG3	1.89	0.53
1:XA:418:C:H2'	1:XA:419:C:C6	2.44	0.53
3:XC:53:ALA:HB2	3:XC:115:LEU:HD21	1.90	0.53
9:XI:47:LEU:HB3	9:XI:50:LEU:HD12	1.90	0.53
12:XL:42:THR:HA	12:XL:53:ARG:O	2.08	0.53
19:XS:63:THR:O	19:XS:66:MET:HG2	2.09	0.53
21:XU:14:TRP:CZ3	21:XU:15:ARG:HD3	2.43	0.53
50:Y4:37:SER:C	50:Y4:39:CYS:N	2.62	0.53
25:YA:1300:U:H4'	25:YA:1301:A:O5'	2.09	0.53
25:YA:1686:C:H2'	25:YA:1687:G:O4'	2.07	0.53
25:YA:2250:G:C8	25:YA:2496:C:H5''	2.43	0.53
25:YA:2853:C:H42	25:YA:2864:G:H1	1.56	0.53
31:YH:59:ARG:CG	31:YH:59:ARG:HH11	2.20	0.53
33:YN:70:LYS:C	33:YN:71:ILE:HD13	2.28	0.53
34:YO:7:TYR:C	34:YO:8:LEU:HD22	2.29	0.53
1:QA:1053:G:O6	1:QA:1199:U:H2'	2.08	0.53
1:QA:1205:U:H1'	3:QC:195:VAL:CG2	2.39	0.53
1:QA:1235:U:O2'	1:QA:1305:G:O5'	2.26	0.53
1:QA:1412:C:H2'	1:QA:1413:A:C8	2.44	0.53
1:QA:487:A:C2	1:QA:488:C:H1'	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:872:A:C5	1:QA:874:G:C8	2.96	0.53
2:QB:134:GLU:HB3	2:QB:138:LEU:CD1	2.39	0.53
2:QB:187:LEU:HD22	2:QB:201:ILE:O	2.08	0.53
3:QC:78:GLY:HA3	3:QC:83:ARG:CB	2.38	0.53
4:QD:147:ALA:HA	4:QD:182:LYS:HA	1.91	0.53
4:QD:198:VAL:HG12	4:QD:199:ASN:H	1.74	0.53
17:QQ:11:VAL:HG22	17:QQ:20:THR:O	2.09	0.53
52:R6:13:CYS:O	52:R6:14:THR:HB	2.08	0.53
52:R6:11:LEU:CD1	52:R6:51:GLU:HG3	2.39	0.53
43:RX:60:ARG:NH1	53:R7:47:ARG:HH22	2.07	0.53
54:R8:29:LYS:HB2	54:R8:44:LYS:HG2	1.91	0.53
25:RA:1297:C:H2'	25:RA:1298:C:C6	2.43	0.53
25:RA:177:G:H5'	25:RA:178:G:C8	2.43	0.53
25:RA:2351:G:O6	54:R8:39:LYS:HG2	2.09	0.53
25:RA:304:G:H2'	25:RA:305:U:C6	2.44	0.53
25:RA:336:C:O2'	44:RY:35:TYR:OH	2.23	0.53
25:RA:279:C:H42	25:RA:361:G:H1	1.57	0.53
25:RA:784:A:O2'	25:RA:785:G:H5''	2.09	0.53
28:RE:14:ILE:HG23	28:RE:15:PHE:N	2.22	0.53
29:RF:32:LEU:HD12	29:RF:36:VAL:HG23	1.89	0.53
33:RN:120:LEU:CD1	33:RN:122:VAL:HG23	2.38	0.53
34:RO:49:ARG:HB3	34:RO:49:ARG:NH1	2.23	0.53
36:RQ:119:ARG:NH1	36:RQ:119:ARG:HG2	2.20	0.53
44:RY:84:ARG:NH1	44:RY:97:ARG:HB2	2.11	0.53
44:RY:97:ARG:NH2	44:RY:98:VAL:CB	2.65	0.53
36:RQ:134:ARG:CZ	45:RZ:122:ARG:HH22	2.22	0.53
1:XA:1050:G:N2	1:XA:1209:C:H1'	2.24	0.53
1:XA:1233:G:O2'	1:XA:1365:G:OP1	2.21	0.53
1:XA:713:G:H2'	1:XA:714:G:C8	2.43	0.53
1:XA:811:C:H4'	1:XA:900:A:N6	2.23	0.53
4:XD:12:CYS:CB	4:XD:31:CYS:O	2.56	0.53
4:XD:173:TRP:CD1	4:XD:174:LEU:HG	2.44	0.53
4:XD:79:PHE:CE2	4:XD:83:SER:HB2	2.43	0.53
7:XG:95:ARG:CZ	7:XG:99:LEU:HD11	2.38	0.53
13:XM:39:ILE:HD11	13:XM:56:LEU:HB2	1.90	0.53
15:XO:8:LYS:HZ2	15:XO:8:LYS:HB2	1.73	0.53
17:XQ:11:VAL:HG22	17:XQ:20:THR:O	2.09	0.53
19:XS:7:LYS:HG3	19:XS:8:GLY:N	2.22	0.53
47:Y1:87:PRO:O	47:Y1:91:LYS:N	2.32	0.53
51:Y5:16:ARG:NH1	51:Y5:17:ASP:OD1	2.41	0.53
25:YA:1020:A:N1	25:YA:1141:U:H2'	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1204:A:HO2'	25:YA:1205:U:P	2.30	0.53
25:YA:1428:C:O2'	25:YA:1569:A:OP2	2.18	0.53
25:YA:2341:G:H2'	25:YA:2342:C:C6	2.43	0.53
25:YA:1127:A:N1	25:YA:2463:C:O2'	2.41	0.53
25:YA:2584:U:H2'	25:YA:2585:U:H2'	1.91	0.53
25:YA:2758:A:C2	25:YA:2759:G:H1'	2.44	0.53
25:YA:587:C:H4'	25:YA:588:U:O5'	2.08	0.53
26:YB:14:U:OP2	26:YB:70:C:O2'	2.26	0.53
27:YD:25:THR:CG2	27:YD:81:ALA:HB1	2.38	0.53
33:YN:134:ARG:N	33:YN:135:PRO:CD	2.58	0.53
35:YP:125:VAL:O	35:YP:145:PRO:HD2	2.08	0.53
37:YR:1:MET:O	37:YR:2:ARG:HG3	2.07	0.53
39:YT:110:ILE:HG23	39:YT:111:ARG:N	2.24	0.53
41:YV:81:TYR:C	41:YV:82:ARG:HG3	2.28	0.53
1:QA:1022:G:H2'	1:QA:1023:G:C8	2.43	0.53
1:QA:37:U:O2'	1:QA:500:G:H4'	2.08	0.53
2:QB:233:SER:OG	2:QB:234:PRO:HD2	2.09	0.53
4:QD:108:LEU:HD11	4:QD:174:LEU:CD2	2.37	0.53
4:QD:120:LEU:HD22	4:QD:125:HIS:CB	2.37	0.53
4:QD:153:ARG:NH1	4:QD:181:MET:CG	2.71	0.53
10:QJ:16:LEU:O	10:QJ:20:ALA:HB2	2.08	0.53
17:QQ:65:ILE:H	17:QQ:65:ILE:HD12	1.73	0.53
18:QR:58:LEU:H	18:QR:58:LEU:HD12	1.72	0.53
48:R2:41:ILE:HD11	48:R2:44:LEU:HB2	1.89	0.53
52:R6:9:LEU:HD13	52:R6:26:ASN:ND2	2.24	0.53
25:RA:2335:A:HO2'	25:RA:2336:A:P	2.30	0.53
25:RA:1693:U:H1'	27:RD:14:ARG:HH22	1.72	0.53
27:RD:25:THR:HG23	27:RD:25:THR:O	2.07	0.53
27:RD:34:VAL:C	27:RD:35:LYS:HG3	2.28	0.53
33:RN:78:TYR:N	33:RN:78:TYR:HD1	2.07	0.53
34:RO:7:TYR:C	34:RO:8:LEU:HD22	2.29	0.53
34:RO:12:ASP:OD1	34:RO:85:VAL:HG13	2.08	0.53
34:RO:14:THR:HG21	34:RO:86:ILE:HD13	1.91	0.53
28:RE:25:VAL:HG11	39:RT:11:GLU:HG2	1.90	0.53
41:RV:48:GLY:O	41:RV:49:THR:O	2.26	0.53
41:RV:7:THR:CG2	41:RV:22:VAL:HG11	2.39	0.53
45:RZ:51:ALA:O	45:RZ:52:SER:HB3	2.08	0.53
1:XA:1028:C:H42	1:XA:1033:G:H1	1.57	0.53
1:XA:1241:G:H2'	1:XA:1242:C:C6	2.44	0.53
1:XA:793:U:O2	1:XA:1516:G:H4'	2.09	0.53
2:XB:80:ILE:CD1	2:XB:208:ILE:HG23	2.21	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:14:ARG:HD3	4:XD:14:ARG:O	2.09	0.53
4:XD:172:PRO:HB2	4:XD:193:ASP:OD2	2.08	0.53
13:XM:34:LEU:CD1	13:XM:41:PRO:HG3	2.38	0.53
15:XO:62:GLN:N	15:XO:65:ARG:HH12	2.06	0.53
50:Y4:37:SER:HB3	50:Y4:42:PHE:CD1	2.43	0.53
50:Y4:49:PHE:CD1	50:Y4:49:PHE:N	2.76	0.53
50:Y4:56:VAL:HA	50:Y4:60:GLN:CB	2.28	0.53
43:YX:60:ARG:NH1	53:Y7:47:ARG:HH22	2.07	0.53
54:Y8:58:ILE:O	54:Y8:61:LEU:HG	2.08	0.53
25:YA:1871:A:H2'	25:YA:1872:A:C8	2.43	0.53
25:YA:2292:C:P	38:YS:17:ARG:HH22	2.30	0.53
25:YA:2698:U:H2'	25:YA:2699:C:C6	2.43	0.53
29:YF:179:GLU:H	29:YF:179:GLU:CD	2.11	0.53
13:XM:3:ARG:NH2	30:YG:139:LEU:HD13	2.20	0.53
31:YH:128:PRO:CD	31:YH:129:THR:N	2.70	0.53
31:YH:40:GLU:O	31:YH:41:MET:HB2	2.08	0.53
38:YS:56:LEU:O	38:YS:58:LEU:HD22	2.09	0.53
41:YV:22:VAL:CG1	41:YV:23:GLU:N	2.71	0.53
41:YV:41:GLY:HA3	41:YV:46:VAL:CG1	2.38	0.53
1:QA:1175:G:H2'	1:QA:1176:A:H8	1.74	0.53
1:QA:1200:C:O2'	1:QA:1201:A:OP2	2.18	0.53
1:QA:444:C:H2'	1:QA:445:G:C8	2.43	0.53
1:QA:455:C:H42	1:QA:477:G:H1	1.56	0.53
2:QB:102:LEU:HB3	2:QB:180:LEU:HD12	1.90	0.53
2:QB:96:ARG:H	2:QB:96:ARG:CD	2.16	0.53
3:QC:3:ASN:H	3:QC:3:ASN:ND2	2.06	0.53
7:QG:137:LYS:O	7:QG:141:VAL:HG23	2.07	0.53
7:QG:150:ALA:HA	11:QK:59:TYR:CD2	2.43	0.53
12:QL:42:THR:HA	12:QL:53:ARG:O	2.08	0.53
3:QC:29:TYR:OH	14:QN:54:PRO:HD2	2.09	0.53
15:QO:6:GLU:H	15:QO:6:GLU:CD	2.12	0.53
18:QR:51:LEU:HD22	18:QR:55:ARG:HD2	1.89	0.53
46:R0:56:ASP:C	46:R0:56:ASP:OD2	2.47	0.53
54:R8:52:LYS:N	54:R8:53:PRO:HD2	2.22	0.53
25:RA:1050:A:O2'	25:RA:2752:C:O2	2.27	0.53
25:RA:1491:G:H2'	25:RA:1492:G:H8	1.73	0.53
25:RA:2198:A:C2	32:RI:29:TYR:HB2	2.44	0.53
25:RA:492:A:H2'	25:RA:493:G:O4'	2.09	0.53
28:RE:134:ILE:HD12	28:RE:134:ILE:C	2.28	0.53
29:RF:129:PHE:O	29:RF:142:TRP:CD1	2.62	0.53
32:RI:76:THR:HG23	32:RI:139:GLN:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RI:77:LEU:O	32:RI:77:LEU:HD12	2.09	0.53
41:RV:51:VAL:CG1	41:RV:52:VAL:H	2.22	0.53
41:RV:81:TYR:C	41:RV:82:ARG:HG3	2.28	0.53
42:RW:43:GLY:O	42:RW:44:ALA:C	2.46	0.53
1:XA:1002:G:H1	1:XA:1038:C:H42	1.56	0.53
1:XA:1218:C:H2'	1:XA:1219:U:C6	2.43	0.53
1:XA:165:C:H2'	1:XA:166:G:H8	1.73	0.53
1:XA:186(E):C:N4	1:XA:191(B):G:H1	2.00	0.53
4:XD:23:GLY:HA3	4:XD:112:VAL:CG2	2.38	0.53
4:XD:13:ARG:HD2	4:XD:38:TYR:O	2.09	0.53
6:XF:78:GLU:OE2	6:XF:81:ILE:HD12	2.08	0.53
9:XI:28:VAL:HG13	9:XI:63:ILE:HG21	1.90	0.53
9:XI:4:TYR:CE2	9:XI:88:TYR:HB2	2.44	0.53
10:XJ:74:ILE:HD13	10:XJ:74:ILE:N	2.16	0.53
12:XL:32:PHE:HE1	12:XL:86:ARG:HG3	1.73	0.53
13:XM:76:ALA:O	13:XM:79:LYS:HB3	2.09	0.53
17:XQ:5:VAL:O	17:XQ:6:LEU:HD23	2.08	0.53
52:Y6:25:LYS:HE2	52:Y6:27:LYS:HE3	1.90	0.53
52:Y6:7:ILE:CG1	52:Y6:8:LYS:H	2.07	0.53
52:Y6:9:LEU:HD13	52:Y6:26:ASN:ND2	2.24	0.53
25:YA:1002:G:H2'	25:YA:1003:G:O4'	2.09	0.53
25:YA:2721:A:H2'	25:YA:2722:G:O4'	2.09	0.53
25:YA:2831:G:O2'	25:YA:2884:U:OP1	2.19	0.53
25:YA:288:C:H2'	25:YA:289:A:C8	2.44	0.53
27:YD:35:LYS:CG	27:YD:64:ILE:H	2.15	0.53
27:YD:77:ALA:HB2	27:YD:97:TYR:CG	2.44	0.53
29:YF:116:ASP:OD1	29:YF:119:ARG:NH2	2.41	0.53
30:YG:125:PHE:C	30:YG:127:GLY:H	2.12	0.53
32:YI:109:ILE:HB	32:YI:130:TYR:CZ	2.43	0.53
33:YN:137:LYS:HG3	33:YN:138:LEU:N	2.23	0.53
34:YO:2:ILE:HD12	34:YO:2:ILE:N	2.23	0.53
35:YP:79:ARG:HD3	35:YP:110:TYR:CE1	2.43	0.53
38:YS:10:ARG:O	38:YS:14:VAL:HG12	2.09	0.53
25:YA:1219:G:OP2	40:YU:19:LYS:HD2	2.08	0.53
40:YU:39:LEU:O	40:YU:40:PHE:C	2.47	0.53
41:YV:48:GLY:O	41:YV:49:THR:O	2.26	0.53
42:YW:43:GLY:O	42:YW:44:ALA:C	2.46	0.53
45:YZ:4:ARG:HG2	45:YZ:4:ARG:NH1	2.24	0.53
45:YZ:57:ILE:HD12	45:YZ:57:ILE:N	2.23	0.53
1:QA:1069:C:O3'	5:QE:25:ARG:NH1	2.41	0.53
1:QA:1376:U:H2'	1:QA:1377:A:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:198:G:H2'	1:QA:199:G:C8	2.44	0.53
2:QB:87:ARG:HH11	2:QB:223:ILE:HD12	1.73	0.53
4:QD:28:SER:CB	4:QD:29:PRO:CD	2.84	0.53
9:QI:53:VAL:CB	9:QI:95:LYS:HE3	2.36	0.53
1:QA:1152:A:H5''	10:QJ:13:HIS:HD2	1.71	0.53
13:QM:39:ILE:HD11	13:QM:56:LEU:HB2	1.90	0.53
13:QM:92:HIS:CD2	13:QM:98:VAL:HG21	2.43	0.53
16:QP:72:ARG:HD3	16:QP:73:LEU:HD23	1.91	0.53
52:R6:25:LYS:HE2	52:R6:27:LYS:HE3	1.91	0.53
25:RA:1085:A:O2'	25:RA:1086:A:OP1	2.25	0.53
25:RA:2298:A:N6	25:RA:2318:G:H8	1.92	0.53
25:RA:2395:C:H2'	25:RA:2396:G:O4'	2.08	0.53
25:RA:2705:A:H2'	25:RA:2706:G:O4'	2.08	0.53
25:RA:2728:U:O2'	25:RA:2729:G:H5'	2.09	0.53
25:RA:2847:U:H2'	25:RA:2848:G:H5'	1.90	0.53
25:RA:900:A:H3'	25:RA:901:A:H8	1.73	0.53
27:RD:36:PRO:HA	27:RD:62:TYR:O	2.09	0.53
28:RE:20:ALA:O	28:RE:21:VAL:CG2	2.48	0.53
39:RT:98:LYS:HB3	39:RT:100:TYR:CE1	2.43	0.53
40:RU:86:ALA:HB1	40:RU:88:ILE:HD11	1.90	0.53
42:RW:14:PRO:O	42:RW:17:VAL:N	2.42	0.53
43:RX:36:LYS:HA	43:RX:39:ILE:HD12	1.91	0.53
45:RZ:123:ASP:N	45:RZ:123:ASP:OD2	2.39	0.53
1:XA:240:C:H2'	1:XA:241:C:C6	2.44	0.53
1:XA:679:C:H2'	1:XA:680:C:C6	2.44	0.53
1:XA:892:A:N6	1:XA:906:G:O2'	2.41	0.53
1:XA:89:U:O2'	1:XA:90:C:OP1	2.24	0.53
2:XB:75:LYS:C	2:XB:75:LYS:HD3	2.28	0.53
3:XC:134:ILE:CG2	3:XC:168:ALA:HB3	2.39	0.53
3:XC:78:GLY:HA3	3:XC:83:ARG:CB	2.38	0.53
6:XF:75:LEU:HD21	6:XF:79:LEU:HD11	1.91	0.53
13:XM:81:LEU:HD13	13:XM:88:ARG:HD2	1.91	0.53
14:XN:40:CYS:H	14:XN:43:CYS:CB	2.22	0.53
18:XR:25:THR:C	18:XR:26:LEU:HD23	2.29	0.53
47:Y1:20:ARG:NH1	47:Y1:20:ARG:HG2	2.24	0.53
51:Y5:60:VAL:CG1	51:Y5:60:VAL:OXT	2.56	0.53
25:YA:1729:A:H2'	25:YA:1730:U:H5''	1.91	0.53
25:YA:1782:C:O2	25:YA:2608:G:O2'	2.24	0.53
29:YF:34:TRP:CH2	35:YP:8:PRO:HB3	2.43	0.53
30:YG:179:PRO:HG3	50:Y4:38:LYS:HZ1	1.74	0.53
31:YH:139:GLN:O	31:YH:143:GLN:HB2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:12:PRO:HG3	31:YH:48:GLY:O	2.09	0.53
25:YA:2406:U:N3	35:YP:72:PRO:HB2	2.23	0.53
36:YQ:134:ARG:CZ	45:YZ:122:ARG:HH22	2.22	0.53
36:YQ:76:LYS:O	36:YQ:88:GLY:HA3	2.09	0.53
39:YT:34:VAL:CG1	39:YT:36:GLU:HG2	2.39	0.53
39:YT:3:ARG:HG3	39:YT:7:ILE:CG1	2.36	0.53
41:YV:38:LEU:HD13	41:YV:55:ALA:HB3	1.91	0.53
1:QA:1292:U:H2'	1:QA:1293:G:C8	2.44	0.53
1:QA:358:U:H2'	1:QA:359:U:C6	2.43	0.53
1:QA:309:G:O2'	1:QA:607:A:N1	2.37	0.53
2:QB:206:ASP:O	2:QB:207:ALA:HB3	2.08	0.53
2:QB:5:ILE:N	2:QB:5:ILE:HD13	2.24	0.53
5:QE:36:ASP:OD1	5:QE:37:ARG:N	2.42	0.53
9:QI:28:VAL:HG13	9:QI:63:ILE:HG21	1.90	0.53
9:QI:4:TYR:CE2	9:QI:88:TYR:HB2	2.44	0.53
14:QN:40:CYS:H	14:QN:43:CYS:CB	2.22	0.53
16:QP:1:MET:SD	16:QP:3:LYS:HE3	2.49	0.53
19:QS:29:ARG:HD3	19:QS:30:LEU:HD13	1.91	0.53
50:R4:54:GLY:O	50:R4:71:ARG:HA	2.08	0.53
25:RA:2404:C:H1'	35:RP:67:MET:HE1	1.90	0.53
25:RA:828:U:H4'	25:RA:831:G:N1	2.24	0.53
30:RG:125:PHE:C	30:RG:127:GLY:H	2.12	0.53
32:RI:109:ILE:HB	32:RI:130:TYR:CZ	2.43	0.53
33:RN:19:GLU:HA	33:RN:59:LYS:HB2	1.91	0.53
37:RR:33:ARG:NH2	51:R5:55:ARG:CG	2.66	0.53
38:RS:10:ARG:O	38:RS:14:VAL:HG12	2.09	0.53
38:RS:106:ARG:HA	38:RS:110:LEU:CG	2.39	0.53
38:RS:25:ARG:CB	38:RS:25:ARG:HH11	2.22	0.53
38:RS:89:ARG:HG2	38:RS:89:ARG:HH11	1.74	0.53
25:RA:518:G:C4'	42:RW:18:ARG:HH12	2.09	0.53
42:RW:8:ARG:HH11	42:RW:8:ARG:HG3	1.73	0.53
1:XA:1297:C:HO2'	1:XA:1298:C:C5'	2.21	0.53
1:XA:1435:G:H2'	1:XA:1436:U:C6	2.44	0.53
5:XE:87:SER:HB3	5:XE:131:ILE:CD1	2.39	0.53
19:XS:11:VAL:O	19:XS:11:VAL:HG13	2.09	0.53
19:XS:29:ARG:HD3	19:XS:30:LEU:HD13	1.91	0.53
35:YP:64:LYS:HG3	54:Y8:25:MET:SD	2.48	0.53
25:YA:1078:U:O2'	25:YA:1079:C:OP2	2.24	0.53
25:YA:2844:G:H5'	25:YA:2845:G:OP2	2.08	0.53
25:YA:287:C:O2'	25:YA:288:C:O4'	2.26	0.53
25:YA:738:G:O6	25:YA:739:G:N1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YB:116:G:H2'	26:YB:117:G:C8	2.44	0.53
28:YE:119:ARG:HD3	28:YE:160:TYR:HB2	1.91	0.53
29:YF:129:PHE:O	29:YF:142:TRP:CD1	2.62	0.53
33:YN:109:LYS:H	33:YN:109:LYS:HD2	1.73	0.53
33:YN:19:GLU:HA	33:YN:59:LYS:HB2	1.91	0.53
33:YN:22:THR:CG2	33:YN:23:LEU:N	2.61	0.53
43:YX:53:LYS:NZ	43:YX:55:ASN:HD21	2.06	0.53
1:QA:127:G:H4'	17:QQ:2:PRO:HD2	1.91	0.53
1:QA:222:U:H2'	1:QA:223:U:H6	1.72	0.53
1:QA:677:U:H1'	11:QK:119:CYS:SG	2.49	0.53
1:QA:983:A:N1	1:QA:1222:G:N2	2.55	0.53
2:QB:200:ILE:HG22	2:QB:201:ILE:N	2.24	0.53
4:QD:206:PHE:HD2	4:QD:207:TYR:CD1	2.27	0.53
21:QU:14:TRP:CZ3	21:QU:15:ARG:HD3	2.43	0.53
50:R4:47:GLN:O	50:R4:48:ARG:HB2	2.07	0.53
25:RA:747:U:N3	51:R5:2:ALA:N	2.57	0.53
25:RA:1436:G:H1'	25:RA:1477:A:O2'	2.07	0.53
25:RA:1798:U:H5'	27:RD:259:THR:CG2	2.39	0.53
27:RD:155:LEU:CD1	27:RD:155:LEU:N	2.71	0.53
27:RD:43:ARG:NH1	27:RD:44:ASN:OD1	2.42	0.53
27:RD:25:THR:HG21	27:RD:82:ILE:H	1.70	0.53
31:RH:76:VAL:C	31:RH:78:GLY:H	2.13	0.53
45:RZ:154:ASP:CG	45:RZ:155:LEU:N	2.61	0.53
1:XA:1184:G:H2'	1:XA:1185:G:H8	1.74	0.53
5:XE:12:LEU:O	5:XE:13:ILE:HD12	2.08	0.53
5:XE:36:ASP:OD1	5:XE:37:ARG:N	2.42	0.53
9:XI:113:LYS:HD3	9:XI:119:ALA:O	2.09	0.53
10:XJ:39:PRO:HB3	10:XJ:70:ARG:NH1	2.23	0.53
15:XO:26:GLU:HA	15:XO:81:LEU:HD22	1.91	0.53
15:XO:7:GLU:O	15:XO:11:VAL:HG23	2.08	0.53
20:XT:30:LYS:HE2	20:XT:72:LEU:HD12	1.91	0.53
25:YA:380:U:H2'	25:YA:381:G:C8	2.42	0.53
28:YE:64:LYS:C	28:YE:66:HIS:H	2.12	0.53
29:YF:140:LEU:O	29:YF:143:ALA:HB3	2.09	0.53
32:YI:114:LEU:O	32:YI:115:ALA:HB3	2.09	0.53
35:YP:125:VAL:O	35:YP:125:VAL:HG13	2.09	0.53
37:YR:56:LYS:C	37:YR:58:GLY:N	2.62	0.53
37:YR:67:LEU:HD13	37:YR:76:VAL:CG2	2.27	0.53
40:YU:92:ARG:NH2	40:YU:94:ASN:HD22	2.07	0.53
41:YV:7:THR:CG2	41:YV:22:VAL:HG11	2.39	0.53
42:YW:1:MET:HE2	42:YW:2:GLU:H	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:172:PRO:HB2	4:QD:193:ASP:OD2	2.08	0.52
6:QF:75:LEU:HD23	6:QF:79:LEU:HG	1.91	0.52
7:QG:95:ARG:CZ	7:QG:99:LEU:HD11	2.38	0.52
9:QI:47:LEU:HB3	9:QI:50:LEU:HD12	1.90	0.52
18:QR:29:PHE:CD2	18:QR:29:PHE:N	2.76	0.52
19:QS:11:VAL:O	19:QS:11:VAL:HG13	2.09	0.52
22:QV:15:G:H22	22:QV:48:C:H42	1.57	0.52
22:QV:4:G:HO2'	22:QV:5:G:H8	1.56	0.52
47:R1:85:LEU:HA	47:R1:87:PRO:HD2	1.91	0.52
13:QM:65:LYS:NZ	50:R4:52:THR:HG21	2.24	0.52
25:RA:1337:G:H2'	25:RA:1338:G:C8	2.41	0.52
25:RA:1509:C:N3	25:RA:1511:A:N6	2.58	0.52
25:RA:1674:G:H1'	25:RA:1676:A:N6	2.25	0.52
25:RA:1667:G:H2'	25:RA:1991:U:O4	2.08	0.52
25:RA:2070:G:H2'	25:RA:2071:A:C8	2.44	0.52
25:RA:2159:G:H2'	25:RA:2160:G:C8	2.43	0.52
25:RA:2313:C:H2'	25:RA:2314:C:C6	2.44	0.52
25:RA:273:G:H1	25:RA:364:C:H42	1.56	0.52
27:RD:34:VAL:CG1	27:RD:34:VAL:O	2.51	0.52
31:RH:126:PRO:HD2	31:RH:127:GLU:H	1.72	0.52
31:RH:12:PRO:HG3	31:RH:48:GLY:O	2.09	0.52
32:RI:120:ILE:HD11	32:RI:126:TYR:OH	2.10	0.52
32:RI:85:GLU:OE2	32:RI:85:GLU:HA	2.08	0.52
35:RP:125:VAL:O	35:RP:125:VAL:HG13	2.09	0.52
35:RP:79:ARG:HD3	35:RP:110:TYR:CE1	2.43	0.52
36:RQ:76:LYS:O	36:RQ:88:GLY:HA3	2.09	0.52
38:RS:86:ALA:O	38:RS:87:PHE:HB3	2.10	0.52
45:RZ:120:ILE:HD12	45:RZ:171:ILE:H	1.74	0.52
45:RZ:169:GLU:O	45:RZ:170:THR:HG23	2.09	0.52
1:XA:1219:U:H2'	1:XA:1220:G:C8	2.44	0.52
1:XA:947:G:H2'	1:XA:948:C:C6	2.44	0.52
2:XB:188:ALA:HB3	2:XB:200:ILE:CG2	2.40	0.52
2:XB:206:ASP:O	2:XB:207:ALA:HB3	2.08	0.52
3:XC:51:GLY:O	3:XC:70:VAL:HG13	2.09	0.52
8:XH:100:ILE:CB	8:XH:125:ARG:HH12	2.20	0.52
8:XH:87:SER:HA	8:XH:93:VAL:HG23	1.91	0.52
13:XM:87:TYR:CE1	13:XM:91:ARG:HD3	2.44	0.52
15:XO:6:GLU:H	15:XO:6:GLU:CD	2.12	0.52
25:YA:1161:C:O2'	41:YV:8:GLY:HA2	2.09	0.52
25:YA:1332:G:N2	25:YA:1610:A:N7	2.53	0.52
25:YA:205:G:O2'	25:YA:206:U:P	2.68	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:137:HIS:HB3	28:YE:138:PRO:CD	2.37	0.52
30:YG:16:ARG:HH11	30:YG:16:ARG:HG2	1.74	0.52
31:YH:121:ILE:HG12	31:YH:135:GLY:HA3	1.91	0.52
31:YH:44:VAL:CG2	31:YH:44:VAL:O	2.58	0.52
32:YI:85:GLU:HA	32:YI:85:GLU:OE2	2.08	0.52
35:YP:37:GLY:HA2	35:YP:41:ARG:NE	2.23	0.52
37:YR:70:LEU:O	37:YR:72:ASP:N	2.43	0.52
41:YV:35:LEU:HD21	41:YV:57:VAL:CG2	2.30	0.52
45:YZ:6:LYS:O	45:YZ:7:ALA:HB3	2.09	0.52
1:QA:167:G:H2'	1:QA:168:G:H8	1.73	0.52
5:QE:101:ILE:HG12	5:QE:101:ILE:O	2.08	0.52
11:QK:91:ARG:NH2	18:QR:88:LYS:NZ	2.57	0.52
13:QM:73:GLU:O	13:QM:76:ALA:N	2.42	0.52
13:QM:87:TYR:CE1	13:QM:91:ARG:HD3	2.44	0.52
18:QR:44:LEU:HD12	18:QR:44:LEU:N	2.24	0.52
20:QT:30:LYS:HE2	20:QT:72:LEU:HD12	1.92	0.52
49:R3:9:VAL:HG12	49:R3:32:GLN:HE22	1.74	0.52
51:R5:55:ARG:HG3	51:R5:57:VAL:H	1.74	0.52
25:RA:2286:A:H3'	52:R6:31:PRO:CG	2.39	0.52
25:RA:1081:U:H3'	25:RA:1082:U:H4'	1.91	0.52
25:RA:49:A:H61	25:RA:177:G:H2'	1.74	0.52
25:RA:2566:A:H4'	25:RA:2567:G:O5'	2.08	0.52
27:RD:77:ALA:HB2	27:RD:97:TYR:CG	2.44	0.52
28:RE:61:ARG:O	28:RE:63:LEU:N	2.42	0.52
31:RH:40:GLU:O	31:RH:41:MET:HB2	2.09	0.52
31:RH:44:VAL:O	31:RH:44:VAL:CG2	2.57	0.52
36:RQ:29:PHE:HB3	36:RQ:65:PHE:CZ	2.44	0.52
38:RS:83:LYS:O	38:RS:109:GLY:CA	2.46	0.52
39:RT:100:TYR:HB3	39:RT:103:ARG:NH1	2.25	0.52
39:RT:110:ILE:HG23	39:RT:111:ARG:N	2.24	0.52
39:RT:55:ASN:O	39:RT:57:PHE:O	2.26	0.52
1:XA:1308:U:H2'	1:XA:1309:G:C8	2.45	0.52
1:XA:661:G:H1	1:XA:744:C:H42	1.57	0.52
1:XA:574:A:N3	1:XA:883:C:H1'	2.24	0.52
1:XA:895:G:H1	1:XA:904:C:N4	2.06	0.52
2:XB:233:SER:OG	2:XB:234:PRO:HD2	2.09	0.52
2:XB:80:ILE:HD11	2:XB:208:ILE:CG2	2.22	0.52
2:XB:9:GLU:N	2:XB:9:GLU:OE2	2.42	0.52
7:XG:106:GLN:O	7:XG:110:GLN:HG3	2.09	0.52
11:XK:77:MET:HE3	11:XK:80:VAL:HG12	1.90	0.52
19:XS:27:GLU:O	19:XS:28:LYS:CG	2.53	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:65:ASN:ND2	19:XS:65:ASN:H	2.08	0.52
48:Y2:50:ILE:CD1	48:Y2:51:ARG:N	2.61	0.52
49:Y3:6:VAL:HG12	49:Y3:56:VAL:HG22	1.92	0.52
52:Y6:14:THR:OG1	52:Y6:19:ARG:NE	2.41	0.52
25:YA:2531:A:H61	25:YA:2662:A:H61	1.56	0.52
4:QD:166:LYS:HG2	27:YD:135:PHE:CZ	2.42	0.52
27:YD:233:HIS:N	27:YD:233:HIS:CD2	2.75	0.52
28:YE:7:VAL:O	28:YE:196:VAL:HG13	2.09	0.52
28:YE:39:PRO:HG2	28:YE:40:GLU:OE1	2.09	0.52
29:YF:192:LEU:HD21	29:YF:194:MET:HE2	1.91	0.52
29:YF:9:ILE:HD11	29:YF:125:LEU:CG	2.36	0.52
30:YG:111:LEU:HB2	50:Y4:38:LYS:HZ3	1.73	0.52
31:YH:2:SER:O	31:YH:3:ARG:C	2.47	0.52
31:YH:76:VAL:C	31:YH:78:GLY:H	2.13	0.52
31:YH:89:ILE:CG1	31:YH:89:ILE:O	2.57	0.52
35:YP:147:LEU:O	35:YP:148:LEU:CB	2.57	0.52
36:YQ:29:PHE:HB3	36:YQ:65:PHE:CZ	2.44	0.52
38:YS:25:ARG:HH11	38:YS:25:ARG:CB	2.22	0.52
42:YW:25:ARG:HH11	42:YW:25:ARG:HB2	1.74	0.52
42:YW:8:ARG:HH11	42:YW:8:ARG:HG3	1.73	0.52
45:YZ:120:ILE:HD12	45:YZ:171:ILE:H	1.74	0.52
45:YZ:105:VAL:CG1	45:YZ:138:GLU:HG2	2.39	0.52
45:YZ:169:GLU:O	45:YZ:170:THR:HG23	2.10	0.52
45:YZ:59:LEU:O	45:YZ:60:GLU:CG	2.54	0.52
1:QA:1028(A):C:H42	1:QA:1032(B):G:H1	1.57	0.52
1:QA:376:G:H1	1:QA:387:U:H3	1.57	0.52
1:QA:446:G:H1	1:QA:488:C:N4	2.04	0.52
2:QB:92:TYR:CE1	2:QB:151:GLY:HA3	2.44	0.52
3:QC:140:ARG:HG3	3:QC:140:ARG:HH11	1.75	0.52
4:QD:176:LEU:HD12	4:QD:182:LYS:O	2.10	0.52
5:QE:87:SER:HB3	5:QE:131:ILE:CD1	2.38	0.52
6:QF:89:MET:HG2	6:QF:89:MET:O	2.09	0.52
7:QG:89:MET:CE	7:QG:156:TRP:H	2.22	0.52
10:QJ:4:ILE:HB	10:QJ:74:ILE:CD1	2.37	0.52
19:QS:50:ALA:CB	19:QS:57:HIS:HB3	2.37	0.52
19:QS:65:ASN:H	19:QS:65:ASN:ND2	2.08	0.52
47:R1:20:ARG:NH1	47:R1:20:ARG:HG2	2.24	0.52
47:R1:4:VAL:HG22	47:R1:5:CYS:N	2.24	0.52
50:R4:49:PHE:CD1	50:R4:49:PHE:N	2.76	0.52
25:RA:1228:G:OP1	40:RU:13:LYS:HG2	2.10	0.52
25:RA:1251:C:OP1	40:RU:10:ARG:HG3	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2524:G:C2	25:RA:2540:C:C2	2.98	0.52
25:RA:685:A:P	25:RA:685:A:H3'	2.49	0.52
27:RD:134:ARG:HB2	27:RD:135:PHE:HD2	1.75	0.52
29:RF:192:LEU:HD21	29:RF:194:MET:HE2	1.91	0.52
29:RF:125:LEU:HA	29:RF:194:MET:O	2.10	0.52
32:RI:145:VAL:CG2	32:RI:146:ALA:H	2.16	0.52
32:RI:25:TYR:CE2	32:RI:29:TYR:CD2	2.97	0.52
33:RN:12:ARG:NH1	33:RN:50:ASP:OD2	2.40	0.52
35:RP:92:GLU:HA	35:RP:123:LEU:CD2	2.39	0.52
38:RS:56:LEU:O	38:RS:58:LEU:HD22	2.09	0.52
39:RT:14:TYR:CD1	39:RT:14:TYR:N	2.77	0.52
45:RZ:125:LEU:C	45:RZ:164:ALA:HB3	2.29	0.52
1:XA:64:G:H5''	1:XA:65:U:OP1	2.09	0.52
3:XC:140:ARG:HH11	3:XC:140:ARG:HG3	1.75	0.52
3:XC:173:VAL:O	3:XC:173:VAL:HG12	2.08	0.52
3:XC:48:TYR:O	3:XC:51:GLY:N	2.41	0.52
5:XE:140:ARG:NH1	5:XE:140:ARG:HB2	2.23	0.52
13:XM:73:GLU:O	13:XM:76:ALA:N	2.42	0.52
15:XO:29:VAL:HG11	15:XO:67:LEU:HD21	1.90	0.52
16:XP:75:ARG:C	16:XP:77:ALA:H	2.12	0.52
18:XR:36:ASN:ND2	18:XR:36:ASN:O	2.32	0.52
50:Y4:40:HIS:N	50:Y4:41:PRO:CD	2.73	0.52
42:YW:38:TYR:OH	51:Y5:47:PRO:HG3	2.08	0.52
25:YA:2345:G:N3	25:YA:2381:C:H2'	2.23	0.52
25:YA:2648:C:H2'	25:YA:2649:U:H6	1.74	0.52
25:YA:270(T):G:H5''	47:Y1:97:LEU:CD2	2.32	0.52
25:YA:557:U:H2'	25:YA:558:G:C8	2.44	0.52
27:YD:155:LEU:CD1	27:YD:155:LEU:N	2.71	0.52
27:YD:35:LYS:HD3	27:YD:63:ARG:CA	2.39	0.52
28:YE:7:VAL:CG2	28:YE:8:LYS:H	2.11	0.52
32:YI:120:ILE:HD11	32:YI:126:TYR:OH	2.10	0.52
33:YN:131:GLN:CG	33:YN:132:ALA:H	2.21	0.52
33:YN:57:ALA:O	33:YN:58:ASP:HB3	2.09	0.52
41:YV:34:GLU:O	41:YV:36:PRO:HD3	2.09	0.52
42:YW:7:ALA:HB2	42:YW:50:VAL:CG2	2.40	0.52
44:YY:61:ILE:HG23	44:YY:62:GLU:N	2.24	0.52
1:QA:243:A:H4'	1:QA:244:U:O5'	2.10	0.52
3:QC:134:ILE:CG2	3:QC:168:ALA:HB3	2.40	0.52
9:QI:118:LYS:CB	9:QI:118:LYS:HZ2	2.23	0.52
15:QO:26:GLU:HA	15:QO:81:LEU:HD22	1.90	0.52
49:R3:21:ALA:O	49:R3:25:ALA:N	2.41	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:R3:56:VAL:CG1	49:R3:57:GLU:H	2.19	0.52
50:R4:48:ARG:CZ	50:R4:51:ASP:HA	2.40	0.52
25:RA:1412:A:H2'	25:RA:1413:G:O4'	2.10	0.52
25:RA:1416:G:H2'	25:RA:1417:C:H6	1.75	0.52
25:RA:1794:U:H2'	25:RA:1795:C:C6	2.44	0.52
25:RA:1810:A:H2'	25:RA:1811:G:O4'	2.10	0.52
25:RA:2343:C:H2'	25:RA:2344:U:C6	2.44	0.52
25:RA:2790:A:O3'	25:RA:2893:G:N2	2.42	0.52
25:RA:389:G:H22	35:RP:72:PRO:HD3	1.74	0.52
25:RA:34:C:H41	25:RA:447:A:N6	2.07	0.52
25:RA:796:C:H2'	25:RA:797:C:C6	2.44	0.52
25:RA:7:G:H2'	25:RA:8:A:O4'	2.09	0.52
28:RE:170:LEU:CD2	28:RE:185:LYS:HB2	2.40	0.52
28:RE:7:VAL:O	28:RE:196:VAL:HG13	2.09	0.52
29:RF:140:LEU:O	29:RF:143:ALA:HB3	2.09	0.52
31:RH:24:VAL:O	31:RH:24:VAL:HG23	2.09	0.52
33:RN:7:LYS:HD3	33:RN:9:VAL:CA	2.38	0.52
33:RN:94:HIS:O	33:RN:95:PRO:O	2.27	0.52
39:RT:94:ALA:O	39:RT:95:ARG:HB3	2.09	0.52
45:RZ:105:VAL:CG1	45:RZ:138:GLU:HG2	2.40	0.52
1:XA:532:A:HO2'	1:XA:533:A:P	2.32	0.52
1:XA:963:G:H21	10:XJ:55:LYS:HD3	1.74	0.52
2:XB:232:PRO:O	2:XB:233:SER:O	2.27	0.52
10:XJ:6:ILE:CG2	10:XJ:98:ILE:HG13	2.21	0.52
11:XK:91:ARG:NH2	18:XR:88:LYS:NZ	2.57	0.52
13:XM:92:HIS:CD2	13:XM:98:VAL:HG21	2.43	0.52
14:XN:7:ILE:CG1	14:XN:8:GLU:N	2.73	0.52
16:XP:34:GLU:OE1	16:XP:55:ARG:HD3	2.10	0.52
47:Y1:4:VAL:HG22	47:Y1:5:CYS:N	2.25	0.52
50:Y4:48:ARG:CZ	50:Y4:51:ASP:HA	2.40	0.52
50:Y4:54:GLY:O	50:Y4:71:ARG:HA	2.08	0.52
52:Y6:30:THR:HG23	52:Y6:30:THR:O	2.09	0.52
54:Y8:61:LEU:O	54:Y8:62:LEU:CB	2.57	0.52
25:YA:1440:G:H2'	25:YA:1441:G:C8	2.44	0.52
25:YA:1494:A:C2'	25:YA:1495:A:H5'	2.39	0.52
25:YA:1528:A:H2	25:YA:1542:G:C2	2.27	0.52
25:YA:48:G:H22	25:YA:177:G:H5'	1.74	0.52
25:YA:1819:A:H4'	25:YA:1820:U:O5'	2.08	0.52
25:YA:878:A:H61	25:YA:899:A:H1'	1.74	0.52
27:YD:28:GLU:O	27:YD:29:PRO:C	2.45	0.52
27:YD:66:ASP:OD2	27:YD:69:ARG:HG2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YI:25:TYR:CE2	32:YI:29:TYR:CD2	2.97	0.52
37:YR:53:HIS:HA	37:YR:56:LYS:HD3	1.90	0.52
39:YT:94:ALA:O	39:YT:95:ARG:HB3	2.09	0.52
25:YA:1266:G:C8	42:YW:15:ARG:NH1	2.78	0.52
1:QA:520:A:N1	1:QA:536:C:H1'	2.25	0.52
1:QA:558:G:H2'	1:QA:559:A:H2	1.75	0.52
1:QA:604:G:H2'	1:QA:605:U:O4'	2.09	0.52
2:QB:188:ALA:HB3	2:QB:200:ILE:CG2	2.40	0.52
2:QB:9:GLU:N	2:QB:9:GLU:OE2	2.42	0.52
9:QI:113:LYS:HD3	9:QI:119:ALA:O	2.09	0.52
12:QL:32:PHE:HE1	12:QL:86:ARG:HG3	1.73	0.52
36:RQ:78:PRO:HB2	46:R0:5:LYS:NZ	2.24	0.52
49:R3:7:LYS:HE2	49:R3:32:GLN:NE2	2.25	0.52
25:RA:1105:U:H2'	25:RA:1106:G:H8	1.73	0.52
25:RA:1133:U:O2	25:RA:1137:G:H5''	2.10	0.52
25:RA:1317:A:H61	25:RA:1335:U:H3	1.56	0.52
25:RA:2105:C:H2'	25:RA:2106:G:C8	2.44	0.52
25:RA:556:G:H2'	25:RA:557:U:C6	2.45	0.52
25:RA:724:U:H2'	25:RA:725:G:O4'	2.09	0.52
27:RD:210:GLY:O	27:RD:213:ARG:N	2.43	0.52
27:RD:35:LYS:HG2	27:RD:64:ILE:HG22	1.91	0.52
28:RE:179:GLU:OE1	28:RE:179:GLU:HA	2.10	0.52
28:RE:39:PRO:HG2	28:RE:40:GLU:OE1	2.09	0.52
30:RG:124:SER:HB2	30:RG:131:TYR:CE1	2.44	0.52
30:RG:16:ARG:HH11	30:RG:16:ARG:HG2	1.74	0.52
32:RI:114:LEU:O	32:RI:115:ALA:HB3	2.08	0.52
32:RI:131:LYS:HB3	32:RI:132:PRO:CA	2.38	0.52
33:RN:103:VAL:O	33:RN:106:MET:N	2.42	0.52
33:RN:112:LEU:HD23	33:RN:112:LEU:C	2.30	0.52
25:RA:2818:G:OP2	37:RR:42:LYS:NZ	2.42	0.52
37:RR:56:LYS:C	37:RR:58:GLY:N	2.61	0.52
41:RV:34:GLU:O	41:RV:36:PRO:HD3	2.09	0.52
45:RZ:120:ILE:HD11	45:RZ:169:GLU:HG3	1.85	0.52
45:RZ:4:ARG:NH1	45:RZ:4:ARG:HG2	2.24	0.52
2:XB:5:ILE:HD13	2:XB:5:ILE:N	2.24	0.52
2:XB:92:TYR:CE1	2:XB:151:GLY:HA3	2.45	0.52
6:XF:69:GLU:C	6:XF:71:ARG:H	2.13	0.52
6:XF:86:ARG:O	6:XF:87:ARG:CG	2.50	0.52
9:XI:13:ALA:HB2	9:XI:68:GLY:HA3	1.91	0.52
14:XN:24:CYS:HB2	14:XN:39:LEU:C	2.29	0.52
16:XP:4:ILE:N	16:XP:4:ILE:HD12	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:Y0:56:ASP:OD2	46:Y0:56:ASP:C	2.47	0.52
46:Y0:7:LEU:HD12	46:Y0:7:LEU:H	1.73	0.52
48:Y2:7:ARG:NH1	48:Y2:7:ARG:HG3	2.25	0.52
50:Y4:15:ILE:H	50:Y4:15:ILE:HD13	1.73	0.52
25:YA:270(J):G:H2'	25:YA:270(K):C:O4'	2.10	0.52
27:YD:36:PRO:HA	27:YD:62:TYR:O	2.09	0.52
29:YF:162:LEU:HD23	29:YF:165:ARG:NH2	2.25	0.52
30:YG:124:SER:HB2	30:YG:131:TYR:CE1	2.44	0.52
31:YH:24:VAL:O	31:YH:24:VAL:HG23	2.09	0.52
33:YN:114:ARG:C	33:YN:116:LEU:H	2.13	0.52
34:YO:79:PHE:CD2	39:YT:72:VAL:HG22	2.45	0.52
37:YR:52:ILE:CG2	37:YR:94:TYR:HD1	2.22	0.52
39:YT:100:TYR:HB3	39:YT:103:ARG:NH1	2.25	0.52
45:YZ:154:ASP:CG	45:YZ:155:LEU:N	2.61	0.52
1:QA:1321:C:H5''	1:QA:1322:C:H5''	1.91	0.52
1:QA:1494:G:N7	57:QA:1661:PAR:N32	2.57	0.52
1:QA:445:G:H2'	1:QA:446:G:C8	2.45	0.52
1:QA:545:C:OP2	4:QD:62:GLN:NE2	2.42	0.52
1:QA:939:G:H5''	7:QG:102:ARG:NH1	2.24	0.52
6:QF:10:LEU:HD13	6:QF:61:LEU:HD11	1.92	0.52
8:QH:100:ILE:CB	8:QH:125:ARG:HH12	2.21	0.52
8:QH:87:SER:HA	8:QH:93:VAL:HG23	1.91	0.52
15:QO:62:GLN:N	15:QO:65:ARG:HH12	2.06	0.52
50:R4:63:TYR:C	50:R4:65:ASP:N	2.62	0.52
25:RA:1543:A:H2	25:RA:1545:A:C5	2.28	0.52
25:RA:1579:A:H2'	25:RA:1580:A:C8	2.44	0.52
25:RA:1790:C:H2'	25:RA:1791:A:C4	2.44	0.52
25:RA:92:G:H2'	25:RA:93:C:C6	2.45	0.52
27:RD:133:LEU:HG	27:RD:189:CYS:O	2.10	0.52
27:RD:35:LYS:HD3	27:RD:63:ARG:CA	2.39	0.52
27:RD:66:ASP:OD2	27:RD:69:ARG:HG2	2.09	0.52
28:RE:116:VAL:HG22	28:RE:122:PHE:HB2	1.91	0.52
28:RE:55:ASN:C	28:RE:57:LYS:N	2.62	0.52
39:RT:23:ARG:HG2	39:RT:120:ARG:HH12	1.75	0.52
1:QA:346:G:H5'	39:RT:41:ARG:HH12	1.73	0.52
40:RU:88:ILE:CD1	40:RU:88:ILE:H	2.05	0.52
45:RZ:108:PRO:C	45:RZ:110:GLY:H	2.13	0.52
1:XA:1004:A:N1	1:XA:1024:G:H2'	2.25	0.52
1:XA:1049:U:OP1	14:YN:3:ARG:HB2	2.10	0.52
1:XA:1368:G:OP1	9:XI:111:ARG:NH2	2.39	0.52
1:XA:191(F):U:H2'	1:XA:191:G:C8	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:881:G:OP2	12:XL:12:ARG:NH2	2.42	0.52
13:XM:65:LYS:NZ	50:Y4:52:THR:HG21	2.25	0.52
16:XP:1:MET:SD	16:XP:3:LYS:HE3	2.49	0.52
19:XS:3:ARG:HG3	19:XS:4:SER:N	2.24	0.52
51:Y5:55:ARG:HG3	51:Y5:57:VAL:H	1.74	0.52
25:YA:1697:G:OP2	25:YA:1698:A:O2'	2.16	0.52
27:YD:174:ILE:CD1	27:YD:174:ILE:N	2.73	0.52
32:YI:69:LYS:O	32:YI:73:GLU:HB2	2.10	0.52
33:YN:103:VAL:O	33:YN:106:MET:N	2.42	0.52
33:YN:12:ARG:NH1	33:YN:50:ASP:OD1	2.43	0.52
38:YS:67:ARG:HH11	38:YS:67:ARG:HB2	1.65	0.52
38:YS:83:LYS:O	38:YS:109:GLY:CA	2.46	0.52
38:YS:89:ARG:HG2	38:YS:89:ARG:HH11	1.74	0.52
39:YT:99:LEU:HB2	39:YT:101:PHE:CE1	2.45	0.52
45:YZ:110:GLY:O	45:YZ:117:LEU:HD21	2.08	0.52
1:QA:1394:A:OP1	1:QA:1394:A:H8	1.92	0.52
1:QA:447:G:O6	1:QA:485:G:H2'	2.09	0.52
1:QA:595:G:N1	1:QA:641:U:O2'	2.36	0.52
1:QA:923:A:H2'	1:QA:924:C:H6	1.73	0.52
3:QC:35:GLU:OE2	3:QC:95:THR:HG23	2.10	0.52
12:QL:127:GLU:O	12:QL:128:ALA:HB3	2.10	0.52
13:QM:34:LEU:HD12	13:QM:41:PRO:HG3	1.92	0.52
13:QM:81:LEU:HD13	13:QM:88:ARG:HD2	1.90	0.52
14:QN:7:ILE:CG1	14:QN:8:GLU:N	2.72	0.52
25:RA:1614:A:H62	42:RW:93:ALA:HB2	1.74	0.52
31:RH:121:ILE:HG12	31:RH:135:GLY:HA3	1.91	0.52
31:RH:4:ILE:O	31:RH:6:ARG:N	2.43	0.52
35:RP:88:LEU:HD23	35:RP:89:ALA:N	2.24	0.52
37:RR:41:ALA:O	37:RR:43:GLU:N	2.43	0.52
40:RU:92:ARG:NH2	40:RU:94:ASN:HD22	2.07	0.52
41:RV:41:GLY:HA3	41:RV:46:VAL:CG1	2.38	0.52
1:XA:1152:A:OP1	10:XJ:68:HIS:NE2	2.43	0.52
1:XA:1288:A:N1	1:XA:1371:G:H1'	2.23	0.52
1:XA:730:G:C5	1:XA:731:G:H1'	2.45	0.52
2:XB:200:ILE:HG22	2:XB:201:ILE:N	2.24	0.52
2:XB:87:ARG:HH11	2:XB:223:ILE:HD12	1.73	0.52
3:XC:112:SER:HB3	3:XC:115:LEU:HD12	1.92	0.52
4:XD:155:LEU:O	4:XD:159:ARG:HG2	2.10	0.52
4:XD:176:LEU:HD12	4:XD:182:LYS:O	2.10	0.52
7:XG:89:MET:CE	7:XG:156:TRP:H	2.22	0.52
8:XH:102:ARG:NH1	8:XH:105:ARG:HH22	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:15:LEU:H	19:XS:15:LEU:HD23	1.74	0.52
49:Y3:9:VAL:HG12	49:Y3:32:GLN:HE22	1.74	0.52
25:YA:2334:G:O6	46:Y0:75:LEU:HD21	2.10	0.52
25:YA:2489:G:O2'	25:YA:2518:A:N6	2.43	0.52
25:YA:2022:U:O2'	25:YA:2617:C:H5'	2.10	0.52
25:YA:844:C:H3'	25:YA:845:G:H8	1.74	0.52
28:YE:176:ILE:HG22	28:YE:176:ILE:O	2.10	0.52
28:YE:55:ASN:C	28:YE:57:LYS:N	2.62	0.52
32:YI:77:LEU:O	32:YI:77:LEU:HD12	2.09	0.52
33:YN:7:LYS:HD3	33:YN:9:VAL:N	2.25	0.52
25:YA:871:U:H4'	36:YQ:69:PHE:CE2	2.45	0.52
39:YT:42:ILE:N	39:YT:42:ILE:HD12	2.25	0.52
42:YW:9:TYR:CD2	42:YW:102:HIS:HE1	2.28	0.52
44:YY:91:GLU:HG3	44:YY:92:ASN:N	2.25	0.52
45:YZ:107:THR:CG2	45:YZ:108:PRO:HA	2.40	0.52
1:QA:1050:G:H1	1:QA:1208:C:N4	2.07	0.52
1:QA:112:G:H4'	1:QA:389:A:H4'	1.91	0.52
1:QA:539:A:H2'	1:QA:540:G:H8	1.75	0.52
4:QD:106:TYR:CE1	4:QD:112:VAL:O	2.62	0.52
1:QA:922:G:H1'	5:QE:19:MET:HB3	1.92	0.52
5:QE:60:TYR:CE1	5:QE:64:ARG:NH2	2.77	0.52
9:QI:13:ALA:HB2	9:QI:67:GLY:C	2.28	0.52
9:QI:13:ALA:HB2	9:QI:68:GLY:HA3	1.92	0.52
1:QA:1316:G:H5''	14:QN:17:LYS:CE	2.40	0.52
19:QS:63:THR:O	19:QS:66:MET:HG2	2.09	0.52
9:QI:128:ARG:CD	22:QV:32:C:OP2	2.57	0.52
46:R0:7:LEU:N	46:R0:7:LEU:CD2	2.73	0.52
49:R3:6:VAL:HG12	49:R3:56:VAL:HG22	1.92	0.52
50:R4:50:VAL:O	50:R4:51:ASP:C	2.48	0.52
50:R4:54:GLY:HA2	50:R4:57:GLU:HG2	1.92	0.52
53:R7:38:GLY:O	53:R7:39:ARG:C	2.48	0.52
25:RA:1264:G:H3'	25:RA:1265:A:H5''	1.91	0.52
25:RA:2724:C:OP1	28:RE:118:LYS:NZ	2.39	0.52
25:RA:2831:G:OP1	25:RA:2834:G:H4'	2.09	0.52
25:RA:389:G:N1	35:RP:71:VAL:HG12	2.25	0.52
25:RA:27:G:H22	25:RA:512:G:H2'	1.75	0.52
25:RA:669:G:H2'	25:RA:669:G:N3	2.25	0.52
30:RG:97:ASP:N	30:RG:100:TRP:HD1	2.05	0.52
33:RN:114:ARG:C	33:RN:116:LEU:H	2.13	0.52
37:RR:52:ILE:CG2	37:RR:94:TYR:HD1	2.22	0.52
42:RW:28:SER:HB3	42:RW:31:GLU:HB2	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RY:91:GLU:HG3	44:RY:92:ASN:N	2.25	0.52
1:XA:555:C:OP1	12:XL:20:LYS:NZ	2.42	0.52
10:XJ:4:ILE:HB	10:XJ:74:ILE:CD1	2.37	0.52
11:XK:46:GLY:HA2	11:XK:50:TYR:O	2.10	0.52
13:XM:66:LEU:O	13:XM:68:GLY:N	2.43	0.52
16:XP:45:THR:HG23	16:XP:46:PRO:CD	2.39	0.52
12:XL:11:VAL:HG13	17:XQ:29:HIS:HD2	1.75	0.52
18:XR:44:LEU:N	18:XR:44:LEU:HD12	2.24	0.52
25:YA:1218:C:H42	25:YA:1231:G:H1	1.56	0.52
25:YA:1297:C:H2'	25:YA:1298:C:C6	2.45	0.52
25:YA:1853:A:N1	25:YA:2087:G:H1'	2.25	0.52
25:YA:2481:G:O2'	25:YA:2482:G:OP2	2.20	0.52
25:YA:2695:C:H2'	25:YA:2696:U:C6	2.45	0.52
28:YE:54:GLN:O	28:YE:55:ASN:HB2	2.09	0.52
28:YE:61:ARG:O	28:YE:63:LEU:N	2.42	0.52
29:YF:108:LYS:O	29:YF:112:MET:HG3	2.10	0.52
32:YI:131:LYS:HB3	32:YI:132:PRO:CA	2.38	0.52
32:YI:83:ALA:O	32:YI:84:GLY:C	2.48	0.52
34:YO:113:LYS:HG2	34:YO:117:LEU:CD1	2.38	0.52
34:YO:43:VAL:HG23	34:YO:56:ASP:O	2.10	0.52
34:YO:2:ILE:CD1	34:YO:82:ASN:HD22	2.14	0.52
34:YO:14:THR:HG21	34:YO:86:ILE:HD13	1.90	0.52
39:YT:23:ARG:HG2	39:YT:120:ARG:HH12	1.75	0.52
44:YY:9:LYS:O	44:YY:9:LYS:HG2	2.10	0.52
45:YZ:51:ALA:O	45:YZ:52:SER:HB3	2.09	0.52
1:QA:408:A:H5'	4:QD:116:GLN:HB2	1.92	0.52
1:QA:673:G:H2'	1:QA:674:G:C8	2.45	0.52
1:QA:762:C:H2'	1:QA:763:G:C8	2.44	0.52
1:QA:778:G:H2'	1:QA:779:C:O4'	2.10	0.52
3:QC:150:LYS:HG3	3:QC:169:ALA:HB2	1.92	0.52
3:QC:22:TRP:CZ3	3:QC:32:LEU:HD12	2.45	0.52
6:QF:99:ALA:HB1	18:QR:23:LYS:NZ	2.25	0.52
7:QG:151:TYR:HA	7:QG:153:HIS:CE1	2.45	0.52
7:QG:85:TYR:HE1	7:QG:154:TYR:HE1	1.56	0.52
10:QJ:39:PRO:HB3	10:QJ:70:ARG:NH1	2.23	0.52
12:QL:10:LEU:CD1	17:QQ:32:TYR:CE2	2.86	0.52
1:QA:986:A:H1'	19:QS:54:GLY:O	2.09	0.52
20:QT:89:ARG:HH22	20:QT:106:ALA:HB2	1.75	0.52
47:R1:76:ARG:NH1	47:R1:76:ARG:HG2	2.19	0.52
48:R2:9:GLN:O	48:R2:12:GLU:HB3	2.10	0.52
25:RA:1814:G:H2'	25:RA:1815:A:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:541:C:H2'	25:RA:542:C:H6	1.75	0.52
25:RA:76:C:H2'	25:RA:77:C:C6	2.45	0.52
28:RE:54:GLN:O	28:RE:55:ASN:HB2	2.09	0.52
29:RF:108:LYS:O	29:RF:112:MET:HG3	2.10	0.52
31:RH:2:SER:O	31:RH:3:ARG:C	2.47	0.52
33:RN:57:ALA:O	33:RN:58:ASP:HB3	2.09	0.52
34:RO:4:PRO:O	34:RO:5:GLN:CB	2.58	0.52
35:RP:112:LEU:HD11	35:RP:114:ILE:CG2	2.39	0.52
35:RP:13:ASN:O	35:RP:14:LYS:C	2.49	0.52
25:RA:2467:C:H4'	36:RQ:123:HIS:ND1	2.25	0.52
40:RU:39:LEU:O	40:RU:40:PHE:C	2.48	0.52
41:RV:3:ALA:HB3	41:RV:14:VAL:HG23	1.92	0.52
1:XA:363:A:C4	12:XL:31:PRO:HD2	2.43	0.52
2:XB:53:ARG:O	2:XB:56:ARG:HB2	2.10	0.52
4:XD:106:TYR:CE1	4:XD:112:VAL:O	2.62	0.52
4:XD:206:PHE:HD2	4:XD:207:TYR:CD1	2.27	0.52
4:XD:65:ARG:NH1	4:XD:70:ILE:O	2.43	0.52
6:XF:30:LEU:O	6:XF:35:ALA:HB3	2.10	0.52
9:XI:3:GLN:HB3	9:XI:20:ARG:CG	2.40	0.52
13:XM:98:VAL:HG12	13:XM:98:VAL:O	2.10	0.52
15:XO:26:GLU:OE2	15:XO:77:ARG:NH1	2.43	0.52
17:XQ:62:SER:HB3	17:XQ:72:ARG:HH21	1.73	0.52
6:XF:99:ALA:HB1	18:XR:23:LYS:NZ	2.25	0.52
49:Y3:49:LYS:HG2	49:Y3:49:LYS:O	2.10	0.52
53:Y7:38:GLY:O	53:Y7:39:ARG:C	2.48	0.52
25:YA:1210:A:H4'	25:YA:1211:U:O5'	2.09	0.52
25:YA:2474:C:H5''	25:YA:2475:C:H5	1.73	0.52
25:YA:2677:G:H2'	25:YA:2678:C:C6	2.45	0.52
25:YA:2832:U:H1'	25:YA:2834:G:C5	2.44	0.52
25:YA:2721:A:H1'	25:YA:2873:A:O2'	2.09	0.52
27:YD:133:LEU:HG	27:YD:189:CYS:O	2.10	0.52
27:YD:43:ARG:NH1	27:YD:44:ASN:OD1	2.42	0.52
28:YE:170:LEU:CD2	28:YE:185:LYS:HB2	2.40	0.52
33:YN:112:LEU:C	33:YN:112:LEU:HD23	2.30	0.52
38:YS:62:LYS:HB3	38:YS:97:ARG:CD	2.39	0.52
40:YU:107:ALA:O	40:YU:111:GLU:OE1	2.28	0.52
40:YU:59:ARG:O	40:YU:63:VAL:HG23	2.10	0.52
41:YV:35:LEU:CD2	41:YV:57:VAL:HG22	2.32	0.52
45:YZ:170:THR:O	45:YZ:171:ILE:HB	2.10	0.52
1:QA:575:G:O2'	1:QA:821:G:H5'	2.09	0.52
3:QC:40:ARG:O	3:QC:44:GLU:HG3	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:106:GLN:O	7:QG:110:GLN:HG3	2.10	0.52
1:QA:1329:A:P	13:QM:28:ALA:HB3	2.49	0.52
13:QM:66:LEU:O	13:QM:68:GLY:N	2.43	0.52
13:QM:98:VAL:O	13:QM:98:VAL:HG12	2.10	0.52
14:QN:40:CYS:SG	14:QN:43:CYS:N	2.75	0.52
16:QP:34:GLU:OE1	16:QP:55:ARG:HD3	2.10	0.52
1:QA:276:G:O3'	17:QQ:68:ARG:NH1	2.41	0.52
49:R3:49:LYS:HG2	49:R3:49:LYS:O	2.10	0.52
52:R6:30:THR:O	52:R6:30:THR:HG23	2.09	0.52
25:RA:1496:A:H5'	25:RA:1497:U:OP1	2.10	0.52
25:RA:1417:C:H1'	25:RA:1586:A:H62	1.75	0.52
25:RA:629:G:H5'	25:RA:650:C:O2'	2.10	0.52
28:RE:54:GLN:H	28:RE:54:GLN:NE2	2.08	0.52
33:RN:16:ILE:HG22	33:RN:17:ASP:N	2.25	0.52
34:RO:23:ARG:O	34:RO:39:ILE:HB	2.10	0.52
38:RS:95:HIS:CG	38:RS:96:GLY:N	2.77	0.52
43:RX:52:VAL:O	43:RX:52:VAL:HG12	2.09	0.52
45:RZ:107:THR:CG2	45:RZ:108:PRO:HA	2.40	0.52
45:RZ:136:PHE:O	45:RZ:137:ILE:HG23	2.10	0.52
45:RZ:61:LEU:HB3	45:RZ:62:PRO:CD	2.40	0.52
1:XA:1130:A:O2'	9:XI:3:GLN:NE2	2.42	0.52
1:XA:292:G:N2	1:XA:608:A:H61	2.07	0.52
3:XC:20:SER:CB	3:XC:40:ARG:HH22	2.14	0.52
3:XC:40:ARG:O	3:XC:44:GLU:HG3	2.10	0.52
4:XD:127:THR:CG2	4:XD:128:VAL:N	2.73	0.52
4:XD:147:ALA:HA	4:XD:182:LYS:HA	1.91	0.52
5:XE:101:ILE:HD13	5:XE:101:ILE:N	2.25	0.52
7:XG:153:HIS:CE1	11:XK:58:PRO:HD2	2.44	0.52
20:XT:83:ARG:O	20:XT:86:ARG:HB3	2.09	0.52
50:Y4:68:ARG:HD3	50:Y4:69:LYS:HG2	1.92	0.52
25:YA:1318:C:C2'	25:YA:1319:G:H5''	2.39	0.52
25:YA:2712:U:OP1	25:YA:2714:G:H4'	2.10	0.52
25:YA:888:C:H3'	25:YA:889:C:H4'	1.92	0.52
25:YA:1824:G:OP1	27:YD:52:ARG:HD3	2.10	0.52
29:YF:67:GLN:O	29:YF:68:LYS:CB	2.39	0.52
25:YA:2445:G:OP1	29:YF:74:ARG:NH2	2.43	0.52
30:YG:34:LEU:HD13	30:YG:34:LEU:C	2.30	0.52
37:YR:41:ALA:O	37:YR:43:GLU:N	2.43	0.52
39:YT:16:ARG:HD3	39:YT:19:LEU:HG	1.92	0.52
42:YW:14:PRO:O	42:YW:17:VAL:N	2.42	0.52
44:YY:75:ILE:C	44:YY:75:ILE:HD13	2.30	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:585:G:O3'	17:QQ:34:LYS:NZ	2.42	0.51
1:QA:669:U:H2'	1:QA:670:G:H8	1.76	0.51
1:QA:954:G:H21	1:QA:1227:A:H62	1.55	0.51
2:QB:232:PRO:O	2:QB:233:SER:O	2.27	0.51
2:QB:53:ARG:O	2:QB:56:ARG:HB2	2.10	0.51
4:QD:14:ARG:HD3	4:QD:14:ARG:O	2.09	0.51
4:QD:196:LEU:HD12	4:QD:196:LEU:H	1.75	0.51
4:QD:13:ARG:HD3	4:QD:38:TYR:O	2.10	0.51
13:QM:90:LEU:CB	13:QM:93:ARG:HD2	2.40	0.51
15:QO:16:ALA:HB1	15:QO:21:ASP:HB3	1.92	0.51
16:QP:21:VAL:O	16:QP:33:ILE:HG12	2.11	0.51
19:QS:40:ILE:HG23	19:QS:67:VAL:O	2.11	0.51
49:R3:17:LYS:HA	49:R3:20:LYS:HD2	1.92	0.51
50:R4:40:HIS:N	50:R4:41:PRO:CD	2.73	0.51
25:RA:1796:U:H2'	25:RA:1797:C:C6	2.45	0.51
25:RA:792:G:O2'	25:RA:2440:C:N3	2.36	0.51
25:RA:2518:A:H4'	25:RA:2519:U:OP1	2.09	0.51
25:RA:272:G:H1	25:RA:365:C:H42	1.59	0.51
1:QA:1443:G:N2	25:RA:2864:G:OP1	2.41	0.51
26:RB:40:U:H1'	26:RB:45:A:H61	1.75	0.51
27:RD:174:ILE:N	27:RD:174:ILE:CD1	2.73	0.51
29:RF:162:LEU:HD23	29:RF:165:ARG:NH2	2.25	0.51
30:RG:34:LEU:HD13	30:RG:34:LEU:C	2.30	0.51
30:RG:97:ASP:O	30:RG:101:ILE:HG23	2.10	0.51
31:RH:89:ILE:O	31:RH:89:ILE:CG1	2.57	0.51
33:RN:108:PRO:O	33:RN:113:GLY:HA3	2.10	0.51
34:RO:2:ILE:N	34:RO:2:ILE:HD12	2.24	0.51
39:RT:99:LEU:HB2	39:RT:101:PHE:CE1	2.45	0.51
39:RT:16:ARG:HD3	39:RT:19:LEU:HG	1.92	0.51
40:RU:107:ALA:O	40:RU:111:GLU:OE1	2.28	0.51
40:RU:59:ARG:O	40:RU:63:VAL:HG23	2.10	0.51
1:XA:1159:U:O2'	1:XA:1160:G:N7	2.35	0.51
1:XA:1190:G:H5'	3:XC:176:HIS:NE2	2.24	0.51
1:XA:1370:G:O3'	9:XI:12:GLU:HG3	2.09	0.51
1:XA:1414:U:H2'	1:XA:1415:G:C8	2.43	0.51
1:XA:261:U:O2'	1:XA:263:A:N7	2.34	0.51
1:XA:965:A:H4'	1:XA:966:G:OP1	2.09	0.51
3:XC:22:TRP:CZ3	3:XC:32:LEU:HD12	2.45	0.51
8:XH:51:VAL:HG11	8:XH:60:ARG:HG3	1.92	0.51
13:XM:90:LEU:CB	13:XM:93:ARG:HD2	2.40	0.51
16:XP:21:VAL:O	16:XP:33:ILE:HG12	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:101:ALA:HA	18:XR:28:GLU:OE1	2.10	0.51
47:Y1:83:GLU:CG	47:Y1:84:GLY:N	2.71	0.51
47:Y1:91:LYS:HE3	47:Y1:91:LYS:CA	2.40	0.51
25:YA:1022:G:H22	25:YA:1142(A):A:H2	1.58	0.51
25:YA:1245:G:OP1	35:YP:13:ASN:ND2	2.33	0.51
25:YA:1417:C:H2'	25:YA:1418:G:O4'	2.11	0.51
25:YA:1803:A:N1	25:YA:1822:G:O2'	2.29	0.51
25:YA:2244:U:H2'	25:YA:2245:U:O4'	2.10	0.51
25:YA:350:U:H2'	25:YA:351:G:O4'	2.10	0.51
27:YD:35:LYS:HD2	27:YD:104:TYR:CD1	2.45	0.51
4:QD:163:GLU:OE1	27:YD:134:ARG:NH2	2.43	0.51
29:YF:125:LEU:HA	29:YF:194:MET:O	2.10	0.51
30:YG:44:GLY:CA	30:YG:88:ILE:HD11	2.40	0.51
43:YX:52:VAL:HG12	43:YX:52:VAL:O	2.09	0.51
44:YY:101:LYS:O	44:YY:102:CYS:SG	2.66	0.51
44:YY:74:PRO:O	44:YY:80:GLY:HA2	2.10	0.51
1:QA:1219:U:OP1	14:QN:19:ARG:NH2	2.35	0.51
1:QA:376:G:OP1	16:QP:5:ARG:HB2	2.10	0.51
6:QF:75:LEU:HD21	6:QF:79:LEU:HD11	1.91	0.51
50:R4:14:ILE:HG23	50:R4:14:ILE:O	2.10	0.51
25:RA:1418:G:O5'	25:RA:1418:G:H8	1.93	0.51
25:RA:993:G:OP1	40:RU:50:ARG:NH2	2.43	0.51
29:RF:127:GLU:O	29:RF:129:PHE:N	2.39	0.51
31:RH:55:PRO:HG2	31:RH:61:HIS:ND1	2.26	0.51
32:RI:69:LYS:O	32:RI:73:GLU:HB2	2.10	0.51
35:RP:147:LEU:O	35:RP:148:LEU:CB	2.57	0.51
39:RT:42:ILE:N	39:RT:42:ILE:HD12	2.24	0.51
43:RX:47:PHE:CD1	43:RX:47:PHE:N	2.78	0.51
44:RY:75:ILE:C	44:RY:75:ILE:HD13	2.30	0.51
45:RZ:59:LEU:O	45:RZ:60:GLU:CG	2.54	0.51
1:XA:1365:G:H2'	1:XA:1366:C:C6	2.45	0.51
4:XD:162:LEU:HD11	4:XD:181:MET:HB3	1.92	0.51
7:XG:151:TYR:HA	7:XG:153:HIS:CE1	2.45	0.51
7:XG:16:LEU:HD11	9:XI:45:ALA:HB2	1.92	0.51
9:XI:88:TYR:O	9:XI:89:ASN:CB	2.58	0.51
12:XL:127:GLU:O	12:XL:128:ALA:HB3	2.10	0.51
12:XL:23:LYS:O	12:XL:24:VAL:HG23	2.10	0.51
1:XA:1229:A:O2'	22:XV:30:G:OP1	2.25	0.51
48:Y2:15:LYS:H	48:Y2:67:LYS:HE2	1.73	0.51
50:Y4:14:ILE:O	50:Y4:14:ILE:HG23	2.10	0.51
25:YA:331:A:N6	25:YA:1210:A:OP2	2.34	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1403:C:H5'	25:YA:1471:A:C1'	2.40	0.51
25:YA:1409:C:H2'	25:YA:1410:G:O4'	2.10	0.51
25:YA:14:A:N1	25:YA:2044:C:O2'	2.28	0.51
25:YA:1657:C:H2'	25:YA:1658:C:C6	2.45	0.51
25:YA:2307:G:H1'	25:YA:2308:G:N2	2.25	0.51
25:YA:2556:C:H2'	25:YA:2557:G:O4'	2.10	0.51
27:YD:67:PHE:CE1	27:YD:157:ARG:NH2	2.79	0.51
30:YG:37:VAL:HG22	30:YG:159:VAL:CA	2.34	0.51
31:YH:153:LYS:HG3	31:YH:161:GLY:HA2	1.91	0.51
31:YH:6:ARG:C	31:YH:8:PRO:HD2	2.30	0.51
32:YI:110:ASP:HB3	32:YI:111:PRO:C	2.29	0.51
32:YI:12:LEU:O	32:YI:13:GLY:O	2.28	0.51
33:YN:134:ARG:O	33:YN:136:GLU:N	2.43	0.51
33:YN:94:HIS:O	33:YN:95:PRO:O	2.28	0.51
34:YO:16:ALA:HA	34:YO:46:ALA:HB2	1.92	0.51
35:YP:112:LEU:HD11	35:YP:114:ILE:CG2	2.40	0.51
36:YQ:119:ARG:HG2	36:YQ:119:ARG:NH1	2.20	0.51
39:YT:111:ARG:O	39:YT:112:ARG:CG	2.55	0.51
41:YV:75:PHE:CD1	41:YV:75:PHE:C	2.83	0.51
1:QA:145:G:H1	1:QA:177:C:H42	1.58	0.51
3:QC:11:ARG:O	3:QC:13:GLY:N	2.43	0.51
3:QC:195:VAL:HG12	3:QC:196:LEU:H	1.75	0.51
6:QF:10:LEU:HD13	6:QF:61:LEU:HD13	1.93	0.51
7:QG:15:ASP:CB	7:QG:20:ASP:H	2.13	0.51
8:QH:102:ARG:NH1	8:QH:105:ARG:HH12	2.09	0.51
13:QM:87:TYR:C	13:QM:89:GLY:N	2.64	0.51
20:QT:83:ARG:O	20:QT:86:ARG:HB3	2.10	0.51
51:R5:40:LYS:HD3	51:R5:46:CYS:SG	2.50	0.51
25:RA:1113:U:H2'	25:RA:1114:G:C8	2.46	0.51
25:RA:1727:U:H2'	25:RA:1728:G:O4'	2.10	0.51
25:RA:2563:U:H1'	25:RA:2566:A:N6	2.25	0.51
25:RA:270(U):C:H2'	25:RA:270(V):G:C8	2.46	0.51
25:RA:2688:U:H1'	25:RA:2721:A:N6	2.25	0.51
28:RE:64:LYS:C	28:RE:66:HIS:H	2.12	0.51
29:RF:127:GLU:HA	29:RF:127:GLU:OE1	2.07	0.51
31:RH:126:PRO:HD2	31:RH:127:GLU:N	2.26	0.51
32:RI:12:LEU:O	32:RI:13:GLY:O	2.28	0.51
32:RI:129:THR:HA	32:RI:137:PRO:HA	1.92	0.51
33:RN:12:ARG:NH1	33:RN:50:ASP:OD1	2.43	0.51
35:RP:112:LEU:HD22	35:RP:113:LYS:H	1.74	0.51
35:RP:112:LEU:HD22	35:RP:113:LYS:N	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:31:ALA:C	35:RP:32:THR:HG23	2.31	0.51
39:RT:20:PRO:HD2	39:RT:86:ILE:HG23	1.92	0.51
41:RV:29:PRO:O	41:RV:61:VAL:O	2.29	0.51
41:RV:75:PHE:CD1	41:RV:75:PHE:C	2.83	0.51
42:RW:25:ARG:HB2	42:RW:25:ARG:HH11	1.74	0.51
43:RX:65:ARG:H	43:RX:65:ARG:CD	2.24	0.51
1:XA:1022:G:H2'	1:XA:1023:G:C8	2.45	0.51
1:XA:1126:U:H5	1:XA:1127:G:C4	2.28	0.51
1:XA:1306:A:N6	1:XA:1331:G:H1'	2.25	0.51
1:XA:1521:G:C2	1:XA:1522:U:C2	2.99	0.51
1:XA:200:G:H1	1:XA:217:C:H42	1.58	0.51
1:XA:269:C:H2'	1:XA:270:A:H8	1.75	0.51
3:XC:113:ALA:C	3:XC:115:LEU:H	2.14	0.51
3:XC:175:LEU:HD12	3:XC:175:LEU:H	1.76	0.51
3:XC:22:TRP:CH2	3:XC:32:LEU:HB2	2.45	0.51
3:XC:35:GLU:OE2	3:XC:95:THR:HG23	2.10	0.51
13:XM:4:ILE:HG22	13:XM:5:ALA:H	1.75	0.51
3:XC:29:TYR:OH	14:XN:54:PRO:HD2	2.09	0.51
9:XI:127:LYS:NZ	22:XV:34:C:OP2	2.44	0.51
51:Y5:40:LYS:HD3	51:Y5:46:CYS:SG	2.50	0.51
52:Y6:34:LEU:HD23	52:Y6:36:LEU:HD22	1.93	0.51
54:Y8:52:LYS:N	54:Y8:53:PRO:HD2	2.22	0.51
25:YA:1081:U:H3'	25:YA:1082:U:H4'	1.91	0.51
27:YD:35:LYS:HG2	27:YD:64:ILE:HG22	1.92	0.51
28:YE:95:ILE:H	28:YE:95:ILE:CD1	2.19	0.51
29:YF:65:TRP:HZ2	29:YF:72:ARG:NH2	2.08	0.51
30:YG:97:ASP:O	30:YG:101:ILE:HG23	2.10	0.51
33:YN:120:LEU:CD1	33:YN:122:VAL:HG23	2.38	0.51
33:YN:12:ARG:NH1	33:YN:50:ASP:OD2	2.40	0.51
34:YO:23:ARG:O	34:YO:39:ILE:HB	2.10	0.51
35:YP:112:LEU:HD22	35:YP:113:LYS:H	1.75	0.51
38:YS:106:ARG:HA	38:YS:110:LEU:CG	2.39	0.51
45:YZ:136:PHE:O	45:YZ:137:ILE:HG23	2.11	0.51
1:QA:376:G:N2	1:QA:387:U:O2	2.37	0.51
3:QC:112:SER:HB3	3:QC:115:LEU:HD12	1.92	0.51
3:QC:113:ALA:C	3:QC:115:LEU:H	2.14	0.51
3:QC:22:TRP:CH2	3:QC:32:LEU:HB2	2.45	0.51
4:QD:162:LEU:HD11	4:QD:181:MET:HB3	1.92	0.51
4:QD:65:ARG:NH1	4:QD:70:ILE:O	2.43	0.51
5:QE:107:ARG:O	5:QE:108:ALA:C	2.49	0.51
6:QF:69:GLU:C	6:QF:71:ARG:H	2.13	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1346:A:H5''	9:QI:120:ARG:HH12	1.75	0.51
9:QI:126:SER:O	9:QI:128:ARG:N	2.35	0.51
17:QQ:48:GLU:O	17:QQ:49:GLU:C	2.48	0.51
18:QR:64:ARG:O	18:QR:66:LEU:N	2.43	0.51
22:QV:76:A:O2'	55:Z6:76:PPU:N	2.38	0.51
25:RA:2224:G:OP1	27:RD:268:ARG:HD3	2.10	0.51
25:RA:299:A:H8	25:RA:299:A:OP2	1.94	0.51
25:RA:747:U:N1	51:R5:2:ALA:HB3	2.25	0.51
28:RE:105:THR:HB	28:RE:197:ILE:HG12	1.93	0.51
30:RG:114:ILE:CG2	30:RG:115:ARG:N	2.73	0.51
34:RO:24:VAL:HG21	34:RO:32:TYR:O	2.10	0.51
34:RO:43:VAL:HG23	34:RO:56:ASP:O	2.10	0.51
36:RQ:25:ASP:HA	36:RQ:100:GLY:O	2.11	0.51
36:RQ:80:GLU:HG2	46:R0:5:LYS:CG	2.40	0.51
37:RR:117:VAL:CG2	37:RR:118:GLU:N	2.74	0.51
37:RR:28:LEU:CD2	37:RR:114:VAL:HG12	2.41	0.51
38:RS:87:PHE:O	38:RS:88:ASP:O	2.28	0.51
39:RT:34:VAL:CG1	39:RT:36:GLU:HG2	2.39	0.51
44:RY:61:ILE:HG23	44:RY:62:GLU:N	2.24	0.51
44:RY:9:LYS:HG2	44:RY:9:LYS:O	2.11	0.51
45:RZ:94:GLU:CB	45:RZ:130:PRO:HD3	2.38	0.51
45:RZ:6:LYS:O	45:RZ:7:ALA:HB3	2.09	0.51
1:XA:1316:G:N2	1:XA:1318:A:H3'	2.25	0.51
1:XA:980:C:H5''	1:XA:981:U:C5	2.44	0.51
2:XB:170:GLU:HA	2:XB:172:ILE:CD1	2.41	0.51
3:XC:11:ARG:O	3:XC:13:GLY:N	2.43	0.51
3:XC:181:ASN:HD21	3:XC:204:LEU:CD1	2.12	0.51
4:XD:83:SER:HA	4:XD:89:THR:HG23	1.92	0.51
8:XH:12:ARG:NH1	8:XH:27:PRO:HD2	2.25	0.51
10:XJ:17:ASP:HA	10:XJ:20:ALA:HB3	1.93	0.51
1:XA:1330:U:H4'	13:XM:23:TYR:CZ	2.45	0.51
13:XM:34:LEU:HD12	13:XM:41:PRO:HG3	1.93	0.51
18:XR:64:ARG:O	18:XR:66:LEU:N	2.43	0.51
19:XS:40:ILE:HG23	19:XS:67:VAL:O	2.11	0.51
21:XU:3:LYS:HB3	21:XU:14:TRP:CD1	2.46	0.51
21:XU:6:ARG:HE	21:XU:15:ARG:NH2	2.08	0.51
50:Y4:42:PHE:O	50:Y4:44:THR:N	2.44	0.51
25:YA:747:U:N3	51:Y5:2:ALA:N	2.58	0.51
25:YA:942:G:O2'	25:YA:1189:A:N3	2.32	0.51
25:YA:1204:A:H1'	25:YA:1206:G:N9	2.26	0.51
25:YA:2365:G:OP1	46:Y0:55:ARG:HG2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:311:A:HO2'	25:YA:331:A:HO2'	1.57	0.51
25:YA:662:G:H5''	35:YP:17:LYS:HG2	1.92	0.51
25:YA:844:C:H3'	25:YA:845:G:C8	2.45	0.51
27:YD:134:ARG:HB2	27:YD:135:PHE:HD2	1.75	0.51
27:YD:30:GLU:HG3	27:YD:63:ARG:NH2	2.26	0.51
41:YV:14:VAL:HA	41:YV:18:LEU:HD12	1.93	0.51
44:YY:77:PRO:O	44:YY:78:ALA:HB2	2.10	0.51
44:YY:94:LYS:HE3	44:YY:101:LYS:HZ1	1.75	0.51
45:YZ:80:ARG:HH21	45:YZ:82:ARG:HH12	1.58	0.51
2:QB:24:TRP:CE3	2:QB:26:PRO:HA	2.45	0.51
4:QD:127:THR:CG2	4:QD:128:VAL:N	2.73	0.51
6:QF:86:ARG:O	6:QF:87:ARG:CG	2.50	0.51
7:QG:16:LEU:HD11	9:QI:45:ALA:HB2	1.92	0.51
10:QJ:54:PHE:O	10:QJ:55:LYS:HG3	2.10	0.51
1:QA:972:C:H4'	10:QJ:57:LYS:HG3	1.92	0.51
13:QM:9:ILE:C	13:QM:9:ILE:HD12	2.31	0.51
13:QM:2:ALA:O	13:QM:9:ILE:HB	2.11	0.51
6:QF:101:ALA:HA	18:QR:28:GLU:OE1	2.10	0.51
19:QS:15:LEU:H	19:QS:15:LEU:HD23	1.75	0.51
47:R1:87:PRO:O	47:R1:91:LYS:HB2	2.10	0.51
48:R2:15:LYS:H	48:R2:67:LYS:HE2	1.73	0.51
50:R4:36:CYS:O	50:R4:39:CYS:CB	2.55	0.51
53:R7:36:GLN:HG2	53:R7:36:GLN:O	2.09	0.51
25:RA:1226:G:O3'	41:RV:84:LYS:HD3	2.10	0.51
25:RA:2395:C:H42	25:RA:2421:G:H1	1.57	0.51
25:RA:2816:C:O2	25:RA:2883:A:O2'	2.27	0.51
25:RA:222:A:H3'	25:RA:421:U:H5''	1.93	0.51
25:RA:1902:C:H5'	27:RD:246:PRO:HD3	1.91	0.51
27:RD:259:THR:O	27:RD:260:ARG:C	2.49	0.51
28:RE:105:THR:HG23	28:RE:166:THR:OG1	2.10	0.51
29:RF:198:ALA:C	29:RF:200:GLU:N	2.62	0.51
29:RF:32:LEU:O	29:RF:36:VAL:HG23	2.11	0.51
33:RN:26:LEU:HG	33:RN:30:ILE:HD11	1.92	0.51
36:RQ:64:ILE:HA	36:RQ:106:VAL:CG1	2.33	0.51
34:RO:79:PHE:CD2	39:RT:72:VAL:HG22	2.45	0.51
44:RY:75:ILE:CG1	44:RY:76:CYS:N	2.73	0.51
44:RY:95:LYS:O	44:RY:96:ILE:O	2.28	0.51
45:RZ:170:THR:O	45:RZ:171:ILE:HB	2.10	0.51
45:RZ:48:PHE:CZ	45:RZ:52:SER:HA	2.46	0.51
45:RZ:80:ARG:HH21	45:RZ:82:ARG:HH12	1.58	0.51
1:XA:1422:G:H5''	34:YO:48:PRO:HG3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:244:U:H4'	1:XA:245:C:O5'	2.10	0.51
1:XA:38:G:N2	1:XA:397:A:OP1	2.40	0.51
1:XA:676:A:O2'	11:XK:115:PRO:HB3	2.11	0.51
1:XA:692:U:O2'	1:XA:694:A:N7	2.38	0.51
1:XA:784:C:H2'	1:XA:785:G:O4'	2.10	0.51
1:XA:950:U:H2'	1:XA:951:G:H8	1.75	0.51
6:XF:10:LEU:HD13	6:XF:61:LEU:HD13	1.92	0.51
11:XK:29:ILE:HG13	11:XK:44:SER:HB3	1.92	0.51
12:XL:24:VAL:CG1	12:XL:24:VAL:O	2.58	0.51
46:Y0:8:GLY:O	46:Y0:9:SER:O	2.29	0.51
25:YA:1870:C:H2'	25:YA:1871:A:O4'	2.09	0.51
25:YA:180:G:N2	25:YA:215:G:O6	2.43	0.51
25:YA:2216:G:H2'	25:YA:2217:G:H8	1.75	0.51
4:QD:166:LYS:HG2	27:YD:135:PHE:CE2	2.45	0.51
27:YD:210:GLY:O	27:YD:213:ARG:N	2.43	0.51
27:YD:259:THR:O	27:YD:260:ARG:C	2.49	0.51
28:YE:203:LYS:HE3	28:YE:204:ALA:CB	2.40	0.51
28:YE:51:PHE:CD1	28:YE:52:LEU:N	2.76	0.51
33:YN:131:GLN:HE21	33:YN:132:ALA:H	1.57	0.51
34:YO:24:VAL:HG21	34:YO:32:TYR:O	2.10	0.51
34:YO:4:PRO:O	34:YO:5:GLN:CB	2.58	0.51
37:YR:118:GLU:HG3	37:YR:118:GLU:OXT	2.11	0.51
25:YA:2839:G:O2'	37:YR:49:ASP:OD2	2.22	0.51
41:YV:1:MET:HE2	41:YV:43:GLU:HG2	1.92	0.51
43:YX:36:LYS:HA	43:YX:39:ILE:HD12	1.90	0.51
45:YZ:108:PRO:C	45:YZ:110:GLY:H	2.13	0.51
1:QA:160:A:H2'	1:QA:161:A:O4'	2.10	0.51
1:QA:339:C:H2'	1:QA:340:U:C6	2.45	0.51
1:QA:378:G:H2'	1:QA:379:C:C6	2.46	0.51
1:QA:713:G:H21	1:QA:777:A:H1'	1.75	0.51
1:QA:1074:G:C4'	2:QB:104:ASN:HB2	2.41	0.51
3:QC:36:ASP:HB3	3:QC:40:ARG:NH1	2.26	0.51
4:QD:54:TYR:CE1	4:QD:206:PHE:HE1	2.29	0.51
9:QI:3:GLN:HB3	9:QI:20:ARG:CG	2.40	0.51
10:QJ:17:ASP:HA	10:QJ:20:ALA:HB3	1.93	0.51
50:R4:61:ARG:C	50:R4:63:TYR:H	2.14	0.51
54:R8:10:ALA:O	54:R8:14:VAL:HG12	2.11	0.51
25:RA:1239:G:H2'	25:RA:1240:U:O4'	2.10	0.51
25:RA:1667:G:N1	25:RA:1992:G:OP2	2.31	0.51
25:RA:878:A:H3'	25:RA:879:G:H8	1.76	0.51
25:RA:878:A:H3'	25:RA:879:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RB:5:C:O2'	26:RB:27:C:O2	2.28	0.51
28:RE:77:ILE:O	28:RE:78:LEU:C	2.48	0.51
33:RN:134:ARG:O	33:RN:136:GLU:N	2.43	0.51
41:RV:5:VAL:HG22	41:RV:14:VAL:HG22	1.93	0.51
42:RW:20:VAL:C	42:RW:22:ASP:N	2.60	0.51
44:RY:46:LYS:HE3	44:RY:63:LYS:HB3	1.93	0.51
1:XA:1347:G:H22	1:XA:1374:A:P	2.34	0.51
1:XA:234:C:H2'	1:XA:235:C:C6	2.46	0.51
1:XA:243:A:H4'	1:XA:244:U:O5'	2.10	0.51
1:XA:31:G:O2'	1:XA:48:C:N4	2.43	0.51
1:XA:518:C:H5'	1:XA:530:G:O4'	2.10	0.51
2:XB:134:GLU:HB3	2:XB:138:LEU:CD1	2.39	0.51
3:XC:21:ARG:CD	3:XC:21:ARG:N	2.74	0.51
4:XD:52:SER:O	4:XD:53:ASP:C	2.49	0.51
6:XF:63:TYR:N	6:XF:63:TYR:CD2	2.79	0.51
6:XF:63:TYR:HD2	6:XF:63:TYR:N	2.08	0.51
6:XF:75:LEU:HD23	6:XF:79:LEU:HG	1.91	0.51
7:XG:11:GLN:C	7:XG:12:LEU:HD22	2.31	0.51
13:XM:87:TYR:C	13:XM:89:GLY:N	2.64	0.51
20:XT:89:ARG:HH22	20:XT:106:ALA:HB2	1.75	0.51
50:Y4:50:VAL:O	50:Y4:51:ASP:C	2.48	0.51
54:Y8:29:LYS:HB2	54:Y8:44:LYS:HG2	1.91	0.51
25:YA:1178:C:H2'	25:YA:1179:C:C6	2.45	0.51
25:YA:1199:U:H1'	40:YU:4:ALA:HB2	1.91	0.51
25:YA:184:C:H2'	25:YA:185:U:H6	1.76	0.51
28:YE:77:ILE:O	28:YE:78:LEU:C	2.48	0.51
30:YG:114:ILE:CG2	30:YG:115:ARG:N	2.73	0.51
32:YI:4:ILE:N	32:YI:37:VAL:O	2.41	0.51
35:YP:31:ALA:C	35:YP:32:THR:HG23	2.31	0.51
42:YW:70:TYR:HD2	42:YW:70:TYR:N	2.06	0.51
43:YX:18:TYR:C	43:YX:20:GLY:N	2.63	0.51
45:YZ:61:LEU:HB3	45:YZ:62:PRO:CD	2.40	0.51
1:QA:1095:U:P	1:QA:1108:G:H1	2.34	0.51
1:QA:522:C:H41	12:QL:53:ARG:HH22	1.58	0.51
1:QA:920:U:H5'	1:QA:1080:A:C6	2.46	0.51
2:QB:134:GLU:HB3	2:QB:138:LEU:HD12	1.93	0.51
4:QD:52:SER:O	4:QD:53:ASP:C	2.49	0.51
6:QF:30:LEU:O	6:QF:35:ALA:HB3	2.10	0.51
6:QF:63:TYR:N	6:QF:63:TYR:HD2	2.09	0.51
13:QM:57:ARG:CB	13:QM:57:ARG:HH11	2.14	0.51
15:QO:17:ARG:NH1	15:QO:77:ARG:NH1	2.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:94:LEU:O	47:R1:95:LEU:HG	2.11	0.51
48:R2:36:ARG:O	48:R2:40:SER:HB2	2.10	0.51
25:RA:1459:G:H2'	25:RA:1460:A:H5''	1.93	0.51
25:RA:1779:U:OP2	25:RA:1784:A:N6	2.38	0.51
25:RA:789:A:O3'	25:RA:1781:C:N4	2.44	0.51
25:RA:2556:C:H2'	25:RA:2557:G:O4'	2.11	0.51
25:RA:2701:C:H3'	25:RA:2702:U:C5'	2.26	0.51
25:RA:631:A:H2'	25:RA:632:A:O4'	2.10	0.51
25:RA:67:U:H2'	25:RA:68:G:H8	1.75	0.51
27:RD:67:PHE:CE1	27:RD:157:ARG:NH2	2.79	0.51
32:RI:14:ASP:O	32:RI:16:GLY:N	2.44	0.51
34:RO:16:ALA:HA	34:RO:46:ALA:HB2	1.92	0.51
34:RO:23:ARG:HH11	34:RO:23:ARG:HG2	1.76	0.51
36:RQ:36:ALA:HB1	36:RQ:127:ILE:HD12	1.93	0.51
28:RE:7:VAL:HG11	39:RT:1:MET:HE3	1.93	0.51
41:RV:38:LEU:HD13	41:RV:55:ALA:HB3	1.91	0.51
42:RW:7:ALA:HB2	42:RW:50:VAL:CG2	2.40	0.51
42:RW:9:TYR:CD2	42:RW:102:HIS:HE1	2.28	0.51
1:XA:1504:G:H4'	1:XA:1505:G:O5'	2.10	0.51
1:XA:156:G:H1	1:XA:165:C:N4	2.08	0.51
1:XA:262:A:H2'	1:XA:263:A:C8	2.46	0.51
1:XA:264:U:H2'	1:XA:265:G:O4'	2.11	0.51
3:XC:70:VAL:CG1	3:XC:71:ALA:N	2.73	0.51
4:XD:196:LEU:HD12	4:XD:196:LEU:H	1.75	0.51
7:XG:15:ASP:CB	7:XG:20:ASP:H	2.13	0.51
1:XA:1359:C:H3'	14:YN:35:ARG:HH12	1.75	0.51
16:XP:72:ARG:HD3	16:XP:73:LEU:HD23	1.91	0.51
22:XV:4:G:HO2'	22:XV:5:G:H8	1.58	0.51
1:XA:926:G:H22	23:XX:1:A:P	2.34	0.51
47:Y1:92:LYS:C	47:Y1:94:LEU:N	2.62	0.51
50:Y4:54:GLY:HA2	50:Y4:57:GLU:HG2	1.92	0.51
51:Y5:20:ARG:C	51:Y5:22:HIS:H	2.14	0.51
25:YA:1077:A:H2	25:YA:1079:C:H5''	1.75	0.51
25:YA:1270:C:H5''	25:YA:1271:G:O5'	2.11	0.51
25:YA:1400:G:H2'	25:YA:1401:G:C8	2.46	0.51
25:YA:1547:C:O2'	25:YA:1548:C:H5'	2.11	0.51
25:YA:1688:U:H1'	25:YA:1701:A:C6	2.46	0.51
25:YA:1929:G:C8	25:YA:1929:G:O5'	2.64	0.51
28:YE:37:ARG:HE	28:YE:37:ARG:N	2.09	0.51
32:YI:130:TYR:HB3	32:YI:136:VAL:HG13	1.93	0.51
32:YI:129:THR:HA	32:YI:137:PRO:HA	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YI:14:ASP:O	32:YI:16:GLY:N	2.44	0.51
35:YP:101:VAL:HA	35:YP:105:LEU:O	2.10	0.51
35:YP:95:VAL:HG13	35:YP:100:LEU:CD2	2.40	0.51
39:YT:14:TYR:CD1	39:YT:14:TYR:N	2.77	0.51
25:YA:142:G:O3'	43:YX:35:THR:HG21	2.10	0.51
43:YX:47:PHE:N	43:YX:47:PHE:CD1	2.78	0.51
43:YX:65:ARG:CD	43:YX:65:ARG:H	2.24	0.51
45:YZ:48:PHE:CZ	45:YZ:52:SER:HA	2.46	0.51
45:YZ:70:LEU:HD11	45:YZ:98:MET:HE1	1.91	0.51
1:QA:1131:G:H2'	1:QA:1132:C:H6	1.75	0.51
1:QA:509:A:H5''	4:QD:55:ALA:HB2	1.93	0.51
1:QA:539:A:H2'	1:QA:540:G:C8	2.45	0.51
1:QA:646:U:H2'	1:QA:647:C:H6	1.72	0.51
1:QA:765:G:N1	1:QA:812:C:H2'	2.25	0.51
2:QB:187:LEU:O	2:QB:187:LEU:HD13	2.11	0.51
2:QB:82:ARG:HA	2:QB:92:TYR:CE2	2.45	0.51
3:QC:21:ARG:CD	3:QC:21:ARG:N	2.74	0.51
3:QC:48:TYR:O	3:QC:51:GLY:N	2.41	0.51
4:QD:112:VAL:HG12	4:QD:116:GLN:OE1	2.11	0.51
8:QH:104:ARG:HD2	8:QH:138:TRP:CD2	2.45	0.51
9:QI:79:LEU:HD22	9:QI:101:PHE:O	2.10	0.51
9:QI:88:TYR:O	9:QI:89:ASN:CB	2.58	0.51
11:QK:46:GLY:HA2	11:QK:50:TYR:O	2.10	0.51
21:QU:3:LYS:HB3	21:QU:14:TRP:CD1	2.46	0.51
52:R6:9:LEU:HB3	52:R6:26:ASN:O	2.11	0.51
25:RA:1370:C:H2'	25:RA:1371:G:O4'	2.11	0.51
25:RA:307:G:N2	25:RA:330:A:H62	2.04	0.51
31:RH:131:VAL:CG1	31:RH:132:ARG:N	2.74	0.51
34:RO:113:LYS:O	34:RO:116:SER:HB3	2.11	0.51
34:RO:15:GLY:O	34:RO:46:ALA:HB1	2.10	0.51
38:RS:89:ARG:O	38:RS:89:ARG:HD2	2.11	0.51
43:RX:5:TYR:CE2	48:R2:30:ARG:HG3	2.45	0.51
1:XA:939:G:H2'	1:XA:940:C:C6	2.46	0.51
4:XD:178:VAL:O	4:XD:180:GLY:N	2.44	0.51
4:XD:13:ARG:HD3	4:XD:38:TYR:O	2.10	0.51
5:XE:107:ARG:O	5:XE:108:ALA:C	2.49	0.51
15:XO:16:ALA:HB1	15:XO:21:ASP:HB3	1.92	0.51
21:XU:10:ARG:HH11	21:XU:10:ARG:HG3	1.75	0.51
25:YA:1184:G:OP1	49:Y3:29:ARG:NH1	2.44	0.51
25:YA:1688:U:O2	25:YA:1700:A:H5''	2.11	0.51
25:YA:2308:G:N1	25:YA:2311:A:C2	2.77	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:43:G:H2'	25:YA:44:A:O4'	2.10	0.51
25:YA:890:A:O2'	25:YA:892:G:H8	1.93	0.51
25:YA:1654:A:O2'	28:YE:113:PHE:O	2.21	0.51
30:YG:51:ARG:HB3	30:YG:51:ARG:HH11	1.76	0.51
31:YH:19:VAL:HG13	31:YH:43:VAL:CG2	2.41	0.51
31:YH:55:PRO:HG2	31:YH:61:HIS:ND1	2.26	0.51
36:YQ:133:ARG:HG2	36:YQ:134:ARG:N	2.26	0.51
36:YQ:25:ASP:HA	36:YQ:100:GLY:O	2.11	0.51
43:YX:5:TYR:CE2	48:Y2:30:ARG:HG3	2.45	0.51
45:YZ:124:ILE:HD11	45:YZ:165:VAL:CG2	2.41	0.51
1:QA:109:A:C6	1:QA:326:G:C6	2.98	0.51
1:QA:1131:G:H2'	1:QA:1132:C:C6	2.46	0.51
1:QA:1207:G:H2'	1:QA:1208:C:H6	1.76	0.51
1:QA:410:G:OP2	4:QD:25:ARG:HG3	2.10	0.51
2:QB:23:ARG:HH11	2:QB:23:ARG:HG2	1.76	0.51
3:QC:99:VAL:HG23	3:QC:99:VAL:O	2.11	0.51
10:QJ:81:THR:C	10:QJ:83:GLU:N	2.64	0.51
13:QM:16:ASP:HB3	13:QM:34:LEU:HD11	1.93	0.51
21:QU:10:ARG:HH11	21:QU:10:ARG:HG3	1.76	0.51
47:R1:91:LYS:CA	47:R1:91:LYS:HE3	2.39	0.51
50:R4:12:ALA:HB1	50:R4:30:GLU:H	1.76	0.51
50:R4:42:PHE:O	50:R4:44:THR:N	2.44	0.51
25:RA:1049:C:H2'	25:RA:1050:A:H5''	1.93	0.51
25:RA:1283:G:O2'	25:RA:1285:G:N7	2.34	0.51
25:RA:1464:C:HO2'	25:RA:1528:A:H8	1.58	0.51
25:RA:1930:G:O2'	25:RA:1931:U:O5'	2.27	0.51
25:RA:2027:G:H2'	25:RA:2028:U:O4'	2.10	0.51
25:RA:482:A:O2'	25:RA:497:A:N1	2.38	0.51
27:RD:76:PRO:HA	27:RD:118:VAL:HG23	1.93	0.51
27:RD:94:LEU:C	27:RD:94:LEU:HD13	2.31	0.51
30:RG:44:GLY:CA	30:RG:88:ILE:HD11	2.40	0.51
30:RG:51:ARG:HB3	30:RG:51:ARG:HH11	1.76	0.51
32:RI:83:ALA:O	32:RI:84:GLY:C	2.48	0.51
33:RN:131:GLN:CG	33:RN:132:ALA:H	2.21	0.51
33:RN:6:PRO:HG2	33:RN:43:THR:OG1	2.11	0.51
33:RN:7:LYS:HD3	33:RN:9:VAL:N	2.25	0.51
34:RO:35:VAL:O	34:RO:35:VAL:HG23	2.11	0.51
44:RY:2:ARG:NH1	44:RY:2:ARG:HG2	2.22	0.51
1:XA:232:G:H1'	1:XA:262:A:N1	2.26	0.51
1:XA:292:G:H21	1:XA:608:A:N6	2.09	0.51
1:XA:496:A:H2'	1:XA:496:A:N3	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:659:U:H2'	1:XA:660:G:C8	2.46	0.51
1:XA:918:A:H2'	1:XA:919:A:C8	2.45	0.51
2:XB:15:VAL:H	2:XB:16:HIS:HD1	1.59	0.51
2:XB:187:LEU:HD13	2:XB:187:LEU:O	2.11	0.51
3:XC:139:GLN:O	3:XC:143:GLU:HB2	2.11	0.51
3:XC:99:VAL:O	3:XC:99:VAL:HG23	2.11	0.51
6:XF:10:LEU:HD13	6:XF:61:LEU:HD11	1.92	0.51
8:XH:104:ARG:HD2	8:XH:138:TRP:CD2	2.46	0.51
9:XI:48:GLU:N	9:XI:49:PRO:CD	2.74	0.51
12:XL:27:LEU:C	12:XL:29:GLY:N	2.64	0.51
16:XP:20:VAL:HG23	16:XP:34:GLU:O	2.11	0.51
16:XP:39:TYR:OH	16:XP:41:PRO:HB3	2.11	0.51
19:XS:41:VAL:CG1	19:XS:45:VAL:N	2.74	0.51
21:XU:14:TRP:CE3	21:XU:15:ARG:HD3	2.46	0.51
22:XV:58:A:O2'	22:XV:60:U:OP2	2.16	0.51
48:Y2:36:ARG:O	48:Y2:40:SER:HB2	2.10	0.51
52:Y6:20:ASN:O	52:Y6:21:TYR:CB	2.59	0.51
53:Y7:36:GLN:O	53:Y7:36:GLN:HG2	2.09	0.51
25:YA:2581:G:N3	25:YA:2581:G:H2'	2.26	0.51
25:YA:2710:C:H2'	25:YA:2711:A:O4'	2.11	0.51
25:YA:323:G:O2'	25:YA:1205:U:N3	2.38	0.51
25:YA:630:G:H4'	25:YA:640:C:H4'	1.92	0.51
26:YB:48:A:H2'	26:YB:49:C:C6	2.46	0.51
27:YD:28:GLU:OE1	27:YD:29:PRO:HD2	2.11	0.51
27:YD:94:LEU:C	27:YD:94:LEU:HD13	2.31	0.51
30:YG:109:VAL:O	30:YG:113:ARG:HG3	2.10	0.51
31:YH:4:ILE:O	31:YH:6:ARG:N	2.43	0.51
31:YH:72:ILE:O	31:YH:75:ALA:HB3	2.11	0.51
33:YN:108:PRO:O	33:YN:113:GLY:HA3	2.10	0.51
33:YN:16:ILE:HG22	33:YN:17:ASP:N	2.25	0.51
37:YR:92:GLY:N	37:YR:94:TYR:HE2	2.09	0.51
39:YT:14:TYR:H	39:YT:14:TYR:HD1	1.56	0.51
39:YT:51:ARG:HG3	39:YT:98:LYS:HG3	1.93	0.51
41:YV:41:GLY:N	41:YV:46:VAL:HG13	2.26	0.51
1:QA:1190:G:OP2	3:QC:5:ILE:HG23	2.11	0.51
1:QA:1268:A:H2'	1:QA:1269:A:C8	2.46	0.51
1:QA:1333:A:H2'	1:QA:1334:G:O4'	2.10	0.51
1:QA:1471:G:H2'	1:QA:1472:U:C6	2.46	0.51
1:QA:362:G:N2	1:QA:365:U:OP2	2.42	0.51
1:QA:648:A:H2'	1:QA:649:G:H8	1.76	0.51
1:QA:871:U:HO2'	1:QA:872:A:C5'	2.22	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:132:ARG:O	3:QC:136:GLN:HB2	2.11	0.51
3:QC:175:LEU:HD12	3:QC:175:LEU:H	1.75	0.51
4:QD:155:LEU:O	4:QD:159:ARG:HG2	2.10	0.51
4:QD:162:LEU:HD13	4:QD:181:MET:HB3	1.92	0.51
4:QD:83:SER:HA	4:QD:89:THR:HG23	1.92	0.51
5:QE:101:ILE:N	5:QE:101:ILE:HD13	2.25	0.51
11:QK:91:ARG:HH22	18:QR:88:LYS:NZ	2.09	0.51
13:QM:120:LYS:O	13:QM:121:LYS:HB2	2.11	0.51
14:QN:8:GLU:C	14:QN:10:ALA:H	2.13	0.51
16:QP:20:VAL:HG23	16:QP:34:GLU:O	2.11	0.51
16:QP:1:MET:O	16:QP:3:LYS:HG3	2.11	0.51
47:R1:8:SER:HB3	47:R1:66:HIS:CE1	2.46	0.51
47:R1:92:LYS:C	47:R1:94:LEU:N	2.62	0.51
54:R8:61:LEU:O	54:R8:62:LEU:CB	2.57	0.51
25:RA:1162:G:H1'	41:RV:23:GLU:OE2	2.11	0.51
25:RA:973:A:H5'	25:RA:1188:U:H1'	1.93	0.51
25:RA:127:A:H5''	25:RA:128:C:C6	2.47	0.51
25:RA:747:U:C4	25:RA:2613:U:C4	2.98	0.51
28:RE:137:HIS:HB3	28:RE:138:PRO:CD	2.37	0.51
28:RE:119:ARG:HD3	28:RE:160:TYR:HB2	1.92	0.51
28:RE:37:ARG:HE	28:RE:37:ARG:N	2.09	0.51
31:RH:72:ILE:O	31:RH:75:ALA:HB3	2.11	0.51
31:RH:6:ARG:C	31:RH:8:PRO:HD2	2.30	0.51
34:RO:2:ILE:CD1	34:RO:82:ASN:HD22	2.14	0.51
39:RT:54:ARG:HG2	39:RT:54:ARG:NH1	2.23	0.51
39:RT:57:PHE:CG	39:RT:58:ASN:N	2.79	0.51
44:RY:44:ILE:CG1	44:RY:45:VAL:H	2.24	0.51
1:XA:10:A:HO2'	1:XA:507:C:HO2'	1.58	0.51
1:XA:1126:U:H1'	1:XA:1280:A:N7	2.26	0.51
1:XA:1369:C:H2'	1:XA:1370:G:C8	2.45	0.51
1:XA:321:A:H61	1:XA:332:G:H1	1.58	0.51
4:XD:206:PHE:CD2	4:XD:207:TYR:CD1	2.99	0.51
5:XE:78:HIS:CD2	8:XH:104:ARG:CG	2.87	0.51
13:XM:9:ILE:HD12	13:XM:9:ILE:C	2.31	0.51
13:XM:2:ALA:O	13:XM:9:ILE:HB	2.10	0.51
22:XV:15:G:H22	22:XV:48:C:H42	1.57	0.51
22:XV:35:A:C4	23:XX:3:G:N2	2.79	0.51
25:YA:1218:C:N4	25:YA:1231:G:H1	2.09	0.51
25:YA:2055:C:H4'	25:YA:2056:G:H5''	1.92	0.51
26:YB:13:A:N6	26:YB:70:C:H5'	2.25	0.51
26:YB:42:C:N4	30:YG:91:ARG:NH2	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:10:THR:CG2	27:YD:13:ARG:HB3	2.35	0.51
29:YF:198:ALA:C	29:YF:200:GLU:N	2.62	0.51
29:YF:32:LEU:O	29:YF:36:VAL:HG23	2.11	0.51
33:YN:118:LYS:O	33:YN:120:LEU:N	2.43	0.51
33:YN:78:TYR:HD1	33:YN:78:TYR:N	2.07	0.51
34:YO:113:LYS:O	34:YO:116:SER:HB3	2.11	0.51
34:YO:24:VAL:HG13	34:YO:24:VAL:O	2.11	0.51
38:YS:83:LYS:HG2	38:YS:109:GLY:H	1.76	0.51
1:QA:1305:G:O2'	1:QA:1306:A:H8	1.94	0.50
1:QA:266:G:O2'	1:QA:267:C:OP2	2.20	0.50
1:QA:889:A:H5'	1:QA:891:U:H1'	1.93	0.50
2:QB:53:ARG:HA	2:QB:56:ARG:HG3	1.93	0.50
5:QE:45:PHE:CD2	5:QE:47:LYS:HD2	2.47	0.50
9:QI:29:ASN:OD1	9:QI:64:THR:HA	2.11	0.50
1:QA:1178:G:H5''	9:QI:93:ARG:HH21	1.76	0.50
21:QU:14:TRP:CE3	21:QU:15:ARG:HD3	2.46	0.50
46:R0:11:ARG:CG	46:R0:11:ARG:NH1	2.73	0.50
25:RA:1019:U:H2'	25:RA:1020:A:H8	1.76	0.50
25:RA:1232:G:H2'	25:RA:1233:C:C6	2.45	0.50
25:RA:1314:C:OP1	25:RA:1332:G:OP1	2.30	0.50
25:RA:1910:G:H1	25:RA:1920:C:H42	1.60	0.50
25:RA:2049:G:H1	25:RA:2619:C:H42	1.58	0.50
25:RA:587:C:H4'	25:RA:588:U:O5'	2.11	0.50
25:RA:690:G:H2'	25:RA:691:C:C6	2.46	0.50
29:RF:108:LYS:NZ	29:RF:108:LYS:HA	2.26	0.50
29:RF:65:TRP:HZ2	29:RF:72:ARG:NH2	2.09	0.50
30:RG:92:VAL:HG13	30:RG:92:VAL:O	2.12	0.50
33:RN:112:LEU:HD23	33:RN:113:GLY:N	2.26	0.50
36:RQ:133:ARG:HG2	36:RQ:134:ARG:N	2.26	0.50
37:RR:1:MET:O	37:RR:2:ARG:CB	2.59	0.50
39:RT:51:ARG:HG3	39:RT:98:LYS:HG3	1.93	0.50
41:RV:14:VAL:HA	41:RV:18:LEU:HD12	1.93	0.50
41:RV:35:LEU:CD2	41:RV:57:VAL:HG22	2.32	0.50
42:RW:88:ARG:HB3	42:RW:92:ARG:CB	2.41	0.50
1:XA:163:C:H2'	1:XA:164:U:C6	2.46	0.50
3:XC:150:LYS:HG3	3:XC:169:ALA:HB2	1.92	0.50
4:XD:108:LEU:HD11	4:XD:174:LEU:CD2	2.37	0.50
4:XD:112:VAL:HG12	4:XD:116:GLN:OE1	2.11	0.50
5:XE:126:ARG:CG	5:XE:126:ARG:HH11	2.20	0.50
16:XP:43:LYS:C	16:XP:45:THR:H	2.14	0.50
22:XV:68:C:H2'	22:XV:69:C:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:85:LEU:HA	47:Y1:87:PRO:HD2	1.91	0.50
49:Y3:7:LYS:HE2	49:Y3:32:GLN:NE2	2.25	0.50
50:Y4:12:ALA:HB1	50:Y4:30:GLU:H	1.76	0.50
25:YA:1309:G:P	53:Y7:9:ARG:HD3	2.51	0.50
25:YA:2133:G:H1'	25:YA:2158:A:H61	1.76	0.50
25:YA:2281:C:O2'	25:YA:2282:G:H5'	2.11	0.50
25:YA:2756:U:H1'	25:YA:2757:A:H5''	1.93	0.50
28:YE:116:VAL:HG22	28:YE:122:PHE:HB2	1.91	0.50
33:YN:26:LEU:HG	33:YN:30:ILE:HD11	1.93	0.50
35:YP:13:ASN:O	35:YP:14:LYS:C	2.49	0.50
35:YP:49:ARG:HE	54:Y8:59:LYS:HG2	1.76	0.50
35:YP:62:LEU:CD2	35:YP:62:LEU:H	2.19	0.50
38:YS:89:ARG:O	38:YS:89:ARG:HD2	2.11	0.50
38:YS:95:HIS:CG	38:YS:96:GLY:N	2.77	0.50
39:YT:57:PHE:CG	39:YT:58:ASN:N	2.79	0.50
44:YY:95:LYS:O	44:YY:96:ILE:O	2.28	0.50
45:YZ:116:VAL:HG23	45:YZ:116:VAL:O	2.11	0.50
45:YZ:81:ARG:O	45:YZ:81:ARG:HD3	2.12	0.50
1:QA:186(D):C:H2'	1:QA:186(E):C:H6	1.75	0.50
1:QA:445:G:H2'	1:QA:446:G:H8	1.77	0.50
3:QC:34:LEU:O	3:QC:38:ARG:HG3	2.10	0.50
5:QE:83:GLU:HG2	5:QE:88:LYS:CG	2.42	0.50
7:QG:23:VAL:O	7:QG:27:ILE:CD1	2.60	0.50
8:QH:12:ARG:NH1	8:QH:27:PRO:HD2	2.25	0.50
14:QN:48:ALA:CA	14:QN:53:LEU:HD12	2.41	0.50
22:QV:68:C:H2'	22:QV:69:C:H6	1.76	0.50
47:R1:4:VAL:HG23	47:R1:10:LYS:C	2.32	0.50
51:R5:37:LYS:HD2	51:R5:37:LYS:O	2.12	0.50
25:RA:288:C:H2'	25:RA:289:A:H8	1.76	0.50
29:RF:45:ARG:NH1	29:RF:45:ARG:CG	2.71	0.50
30:RG:43:LEU:O	30:RG:88:ILE:HG12	2.12	0.50
31:RH:153:LYS:HG3	31:RH:161:GLY:HA2	1.91	0.50
34:RO:20:MET:HG2	34:RO:21:CYS:O	2.11	0.50
37:RR:70:LEU:O	37:RR:72:ASP:N	2.42	0.50
1:XA:1225:A:N3	1:XA:1225:A:H2'	2.26	0.50
1:XA:1346:A:C5'	9:XI:120:ARG:HH12	2.24	0.50
1:XA:1399:C:C2	1:XA:1401:G:C5	3.00	0.50
2:XB:24:TRP:CE3	2:XB:26:PRO:HA	2.45	0.50
3:XC:184:TYR:HA	3:XC:200:ALA:O	2.12	0.50
4:XD:33:MET:HE2	4:XD:37:PRO:HA	1.93	0.50
9:XI:10:ARG:HG3	9:XI:105:ASP:HB2	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1048:G:OP1	14:YN:3:ARG:HB3	2.11	0.50
16:XP:1:MET:O	16:XP:3:LYS:HG3	2.11	0.50
17:XQ:48:GLU:O	17:XQ:49:GLU:C	2.48	0.50
21:XU:6:ARG:HH21	21:XU:15:ARG:NE	2.09	0.50
47:Y1:83:GLU:CD	47:Y1:85:LEU:H	2.15	0.50
49:Y3:56:VAL:CG1	49:Y3:57:GLU:N	2.74	0.50
25:YA:83:G:N2	25:YA:102:G:O2'	2.43	0.50
25:YA:1230:C:H2'	25:YA:1231:G:C8	2.46	0.50
25:YA:299:A:N6	25:YA:300:A:N1	2.58	0.50
25:YA:611:C:H2'	25:YA:612:G:O4'	2.11	0.50
25:YA:1818:U:H2'	27:YD:157:ARG:HG3	1.92	0.50
27:YD:238:GLY:O	27:YD:239:ARG:HB2	2.11	0.50
28:YE:105:THR:HG23	28:YE:166:THR:OG1	2.10	0.50
28:YE:54:GLN:NE2	28:YE:54:GLN:H	2.09	0.50
29:YF:108:LYS:HA	29:YF:108:LYS:NZ	2.27	0.50
31:YH:103:LEU:CD1	31:YH:131:VAL:HG21	2.41	0.50
33:YN:73:THR:HG22	33:YN:82:LEU:HD11	1.93	0.50
34:YO:23:ARG:HG2	34:YO:23:ARG:HH11	1.76	0.50
38:YS:18:ILE:C	38:YS:19:LYS:O	2.44	0.50
25:YA:2318:G:H1	38:YS:2:ALA:HA	1.75	0.50
38:YS:86:ALA:O	38:YS:87:PHE:HB3	2.09	0.50
39:YT:20:PRO:HD2	39:YT:86:ILE:HG23	1.92	0.50
1:QA:102:G:O2'	1:QA:151:A:N3	2.34	0.50
1:QA:314:C:H5'	1:QA:315:A:OP2	2.10	0.50
2:QB:170:GLU:HA	2:QB:172:ILE:CD1	2.40	0.50
1:QA:1111:A:N1	3:QC:177:THR:HG23	2.26	0.50
4:QD:107:ARG:C	4:QD:109:GLY:H	2.14	0.50
4:QD:206:PHE:CD2	4:QD:207:TYR:CD1	2.99	0.50
8:QH:83:ILE:HB	8:QH:137:VAL:HG13	1.93	0.50
9:QI:10:ARG:HG3	9:QI:105:ASP:HB2	1.92	0.50
12:QL:23:LYS:O	12:QL:24:VAL:HG23	2.11	0.50
13:QM:82:MET:O	13:QM:83:ASP:C	2.49	0.50
15:QO:26:GLU:OE2	15:QO:77:ARG:NH1	2.43	0.50
1:QA:110:C:O2'	16:QP:25:ARG:O	2.29	0.50
51:R5:48:GLU:HA	51:R5:59:GLU:HG2	1.94	0.50
25:RA:1533:C:H3'	25:RA:1534:G:H5''	1.92	0.50
25:RA:1578:U:C2'	25:RA:1579:A:H5'	2.41	0.50
25:RA:589:C:H2'	25:RA:590:A:C8	2.46	0.50
31:RH:152:ARG:C	31:RH:153:LYS:HE2	2.32	0.50
31:RH:151:ILE:C	31:RH:152:ARG:O	2.49	0.50
32:RI:4:ILE:N	32:RI:37:VAL:O	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RS:35:ILE:CD1	38:RS:101:LEU:HD23	2.41	0.50
40:RU:112:ARG:HH11	40:RU:112:ARG:HG2	1.77	0.50
45:RZ:108:PRO:CB	45:RZ:112:ARG:HB2	2.38	0.50
45:RZ:150:LEU:O	45:RZ:151:HIS:O	2.29	0.50
1:XA:1213:A:C6	1:XA:1215:G:H1'	2.46	0.50
1:XA:1465:C:H2'	1:XA:1466:C:O4'	2.11	0.50
1:XA:255:G:H2'	1:XA:256:U:C6	2.46	0.50
1:XA:523:A:H61	12:XL:92:ASP:CB	2.16	0.50
1:XA:646:U:H2'	1:XA:647:C:C6	2.46	0.50
1:XA:908:A:H2'	1:XA:909:A:H8	1.76	0.50
2:XB:53:ARG:HA	2:XB:56:ARG:HG3	1.93	0.50
2:XB:82:ARG:HA	2:XB:92:TYR:CE2	2.45	0.50
5:XE:126:ARG:NH1	5:XE:126:ARG:HG3	2.19	0.50
9:XI:79:LEU:HD22	9:XI:101:PHE:O	2.10	0.50
9:XI:83:ARG:HA	9:XI:86:VAL:CG1	2.42	0.50
11:XK:106:LYS:O	11:XK:107:SER:HB3	2.11	0.50
12:XL:126:LYS:HB2	12:XL:126:LYS:HZ2	1.74	0.50
13:XM:66:LEU:O	13:XM:70:LEU:HB2	2.11	0.50
15:XO:17:ARG:NH1	15:XO:77:ARG:NH1	2.59	0.50
1:XA:280:C:C2	17:XQ:38:ARG:HG3	2.47	0.50
47:Y1:80:LEU:HB2	47:Y1:81:LYS:CE	2.41	0.50
50:Y4:10:VAL:HG23	50:Y4:11:PRO:HD2	1.93	0.50
25:YA:284:U:H2'	25:YA:285:C:C6	2.46	0.50
25:YA:451:C:H4'	29:YF:52:LYS:HZ2	1.75	0.50
25:YA:651:G:OP2	54:Y8:21:LYS:HE3	2.11	0.50
25:YA:814:C:H41	35:YP:25:SER:HA	1.77	0.50
27:YD:10:THR:HG23	27:YD:13:ARG:CB	2.34	0.50
25:YA:2227:A:H5''	27:YD:263:ARG:HH11	1.74	0.50
31:YH:126:PRO:HD2	31:YH:127:GLU:N	2.26	0.50
32:YI:71:ILE:O	32:YI:72:LEU:HB2	2.10	0.50
25:YA:1006:C:H1'	33:YN:106:MET:HE3	1.93	0.50
33:YN:87:LEU:HD23	33:YN:87:LEU:C	2.31	0.50
38:YS:83:LYS:HG2	38:YS:109:GLY:HA2	1.90	0.50
41:YV:5:VAL:HG22	41:YV:14:VAL:HG22	1.93	0.50
44:YY:46:LYS:HE3	44:YY:63:LYS:HB3	1.93	0.50
44:YY:75:ILE:CG1	44:YY:76:CYS:N	2.73	0.50
1:QA:560:U:N3	1:QA:566:G:O4'	2.44	0.50
3:QC:139:GLN:O	3:QC:143:GLU:HB2	2.11	0.50
13:QM:30:ALA:O	13:QM:31:LYS:C	2.49	0.50
13:QM:66:LEU:O	13:QM:70:LEU:HB2	2.11	0.50
1:QA:1216:G:H5''	14:QN:5:ALA:CB	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:QP:45:THR:HG23	16:QP:46:PRO:CD	2.40	0.50
19:QS:26:GLY:O	19:QS:27:GLU:HB2	2.11	0.50
19:QS:43:GLU:OE2	19:QS:43:GLU:N	2.45	0.50
25:RA:1110:G:H2'	25:RA:1111:A:C8	2.46	0.50
25:RA:1826:G:H2'	25:RA:1827:C:H6	1.76	0.50
25:RA:2199:A:H3'	25:RA:2205:C:C6	2.42	0.50
25:RA:746:A:O2'	25:RA:747:U:OP2	2.29	0.50
27:RD:238:GLY:O	27:RD:239:ARG:HB2	2.11	0.50
27:RD:30:GLU:HG3	27:RD:63:ARG:NH2	2.26	0.50
28:RE:37:ARG:H	28:RE:37:ARG:HE	1.59	0.50
30:RG:109:VAL:O	30:RG:113:ARG:HG3	2.10	0.50
34:RO:24:VAL:O	34:RO:24:VAL:HG13	2.11	0.50
34:RO:47:ILE:CG1	34:RO:48:PRO:HD2	2.42	0.50
35:RP:104:GLY:C	35:RP:105:LEU:HD12	2.31	0.50
35:RP:101:VAL:HA	35:RP:105:LEU:O	2.10	0.50
35:RP:95:VAL:HG13	35:RP:100:LEU:CD2	2.41	0.50
45:RZ:134:PRO:O	45:RZ:136:PHE:N	2.45	0.50
45:RZ:124:ILE:HD11	45:RZ:165:VAL:CG2	2.41	0.50
1:XA:1348:U:N3	1:XA:1374:A:H2	2.09	0.50
2:XB:200:ILE:O	2:XB:201:ILE:HD13	2.11	0.50
4:XD:162:LEU:HD13	4:XD:181:MET:HB3	1.93	0.50
8:XH:102:ARG:NH1	8:XH:105:ARG:HH12	2.09	0.50
8:XH:29:SER:CB	8:XH:32:LYS:HG3	2.28	0.50
10:XJ:84:GLN:C	10:XJ:86:MET:H	2.14	0.50
14:YN:48:ALA:CA	14:YN:53:LEU:HD12	2.42	0.50
14:YN:8:GLU:C	14:YN:10:ALA:H	2.13	0.50
15:XO:39:LEU:O	15:XO:40:SER:C	2.50	0.50
1:XA:760:G:O2'	17:XQ:98:LEU:HD23	2.12	0.50
49:Y3:17:LYS:HA	49:Y3:20:LYS:HD2	1.92	0.50
50:Y4:61:ARG:C	50:Y4:63:TYR:H	2.14	0.50
51:Y5:56:LYS:N	51:Y5:56:LYS:HD2	2.13	0.50
25:YA:1187:G:H8	25:YA:1187:G:O5'	1.95	0.50
25:YA:239:U:H2'	25:YA:240:G:O4'	2.12	0.50
25:YA:2579:C:H2'	25:YA:2580:U:O4'	2.11	0.50
25:YA:818:G:O2'	25:YA:838:C:O2'	2.19	0.50
25:YA:99:U:H4'	25:YA:101:G:C5'	2.41	0.50
30:YG:111:LEU:N	30:YG:112:PRO:CD	2.75	0.50
31:YH:152:ARG:C	31:YH:153:LYS:HE2	2.32	0.50
34:YO:15:GLY:O	34:YO:46:ALA:HB1	2.10	0.50
35:YP:114:ILE:HD13	35:YP:125:VAL:CG2	2.41	0.50
38:YS:26:LEU:CD2	38:YS:87:PHE:CD1	2.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YS:87:PHE:O	38:YS:88:ASP:O	2.29	0.50
45:YZ:134:PRO:C	45:YZ:136:PHE:N	2.64	0.50
1:QA:1241:G:H2'	1:QA:1242:C:C6	2.46	0.50
1:QA:170:U:O2'	1:QA:171:A:H5'	2.12	0.50
1:QA:735:C:H2'	1:QA:736:C:H6	1.77	0.50
2:QB:15:VAL:H	2:QB:16:HIS:HD1	1.59	0.50
2:QB:200:ILE:O	2:QB:201:ILE:HD13	2.12	0.50
3:QC:11:ARG:HG3	3:QC:15:THR:HG21	1.93	0.50
3:QC:52:LEU:H	3:QC:52:LEU:CD2	2.20	0.50
8:QH:95:VAL:HB	8:QH:99:GLU:O	2.12	0.50
16:QP:59:TRP:HA	16:QP:59:TRP:HE3	1.76	0.50
51:R5:50:GLY:O	51:R5:51:TYR:CB	2.59	0.50
52:R6:9:LEU:HD13	52:R6:26:ASN:HD22	1.76	0.50
54:R8:56:GLU:O	54:R8:57:ARG:C	2.50	0.50
25:RA:1494:A:H3'	25:RA:1495:A:C8	2.46	0.50
25:RA:2426:A:H5'	25:RA:2426:A:H8	1.77	0.50
25:RA:2658:C:H2'	25:RA:2659:G:O4'	2.12	0.50
25:RA:1050:A:H8	25:RA:2751:G:O2'	1.94	0.50
25:RA:582:G:H2'	25:RA:583:G:C8	2.47	0.50
25:RA:840:C:H2'	25:RA:841:A:C8	2.46	0.50
27:RD:2:ALA:CB	27:RD:20:ASP:CB	2.89	0.50
27:RD:237:GLU:OE1	27:RD:237:GLU:HA	2.12	0.50
31:RH:169:VAL:HG13	31:RH:170:ARG:N	2.26	0.50
37:RR:92:GLY:N	37:RR:94:TYR:HE2	2.09	0.50
38:RS:62:LYS:HB3	38:RS:97:ARG:CD	2.39	0.50
38:RS:83:LYS:HG2	38:RS:109:GLY:HA2	1.90	0.50
38:RS:26:LEU:CD2	38:RS:87:PHE:CD1	2.94	0.50
45:RZ:134:PRO:C	45:RZ:136:PHE:N	2.64	0.50
1:XA:167:G:H2'	1:XA:168:G:C8	2.47	0.50
1:XA:797:C:OP1	11:XK:124:LYS:HE2	2.11	0.50
2:XB:23:ARG:HH11	2:XB:23:ARG:HG2	1.76	0.50
4:XD:165:MET:HE3	4:XD:168:ARG:HD2	1.93	0.50
10:XJ:81:THR:C	10:XJ:83:GLU:N	2.64	0.50
17:XQ:13:ASP:C	17:XQ:15:MET:H	2.15	0.50
19:XS:50:ALA:CB	19:XS:57:HIS:HB3	2.37	0.50
47:Y1:4:VAL:HG23	47:Y1:10:LYS:C	2.32	0.50
47:Y1:94:LEU:O	47:Y1:95:LEU:HG	2.11	0.50
50:Y4:57:GLU:O	50:Y4:61:ARG:O	2.30	0.50
52:Y6:9:LEU:HB3	52:Y6:26:ASN:O	2.11	0.50
25:YA:2067:G:O2'	25:YA:2069:G:H5''	2.11	0.50
25:YA:2303:G:H1	25:YA:2313:C:H42	1.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2593:U:H2'	25:YA:2594:C:C6	2.44	0.50
25:YA:2869:G:H2'	25:YA:2870:C:O4'	2.11	0.50
26:YB:44:G:H1'	26:YB:47:C:N4	2.26	0.50
27:YD:182:LEU:H	27:YD:272:ALA:CB	2.25	0.50
30:YG:43:LEU:O	30:YG:88:ILE:HG12	2.12	0.50
31:YH:131:VAL:CG1	31:YH:132:ARG:N	2.74	0.50
31:YH:133:VAL:HG12	31:YH:141:VAL:HG13	1.93	0.50
31:YH:16:SER:O	31:YH:17:VAL:HG23	2.12	0.50
33:YN:112:LEU:HD23	33:YN:113:GLY:N	2.26	0.50
34:YO:35:VAL:O	34:YO:35:VAL:HG23	2.11	0.50
35:YP:104:GLY:C	35:YP:105:LEU:HD12	2.31	0.50
36:YQ:132:VAL:HG12	36:YQ:133:ARG:N	2.27	0.50
37:YR:28:LEU:CD2	37:YR:114:VAL:HG12	2.40	0.50
40:YU:112:ARG:HG2	40:YU:112:ARG:HH11	1.77	0.50
41:YV:51:VAL:CG1	41:YV:52:VAL:H	2.22	0.50
42:YW:22:ASP:HA	42:YW:25:ARG:HH12	1.75	0.50
45:YZ:107:THR:HG22	45:YZ:108:PRO:HA	1.94	0.50
1:QA:598:U:H4'	8:QH:94:TYR:CD2	2.46	0.50
3:QC:70:VAL:CG1	3:QC:71:ALA:N	2.73	0.50
4:QD:128:VAL:O	4:QD:130:GLY:N	2.45	0.50
4:QD:198:VAL:CG1	4:QD:199:ASN:N	2.75	0.50
8:QH:20:TYR:HD1	8:QH:65:TYR:HD2	1.55	0.50
9:QI:53:VAL:HG21	9:QI:92:TYR:CZ	2.45	0.50
10:QJ:56:HIS:O	10:QJ:58:ASP:O	2.30	0.50
10:QJ:84:GLN:C	10:QJ:86:MET:H	2.15	0.50
10:QJ:98:ILE:H	10:QJ:98:ILE:CD1	2.25	0.50
22:QV:75:C:H2'	22:QV:76:A:O4'	2.12	0.50
46:R0:51:VAL:CG2	46:R0:81:VAL:HG23	2.42	0.50
48:R2:16:LEU:O	48:R2:17:SER:CB	2.56	0.50
25:RA:1083:U:O2'	25:RA:1085:A:H5''	2.12	0.50
25:RA:116:C:H2'	25:RA:117:G:O4'	2.11	0.50
25:RA:1655:A:O2'	28:RE:115:GLY:HA2	2.11	0.50
25:RA:2582:G:N2	25:RA:2583:G:H1'	2.27	0.50
28:RE:203:LYS:HE3	28:RE:204:ALA:CB	2.40	0.50
28:RE:61:ARG:CB	28:RE:62:PRO:HD3	2.41	0.50
26:RB:55:U:C5'	30:RG:28:VAL:HG21	2.42	0.50
31:RH:133:VAL:HG12	31:RH:141:VAL:HG13	1.93	0.50
33:RN:87:LEU:C	33:RN:87:LEU:HD23	2.32	0.50
34:RO:107:ARG:HA	34:RO:112:MET:HE1	1.94	0.50
35:RP:114:ILE:HD13	35:RP:125:VAL:CG2	2.41	0.50
35:RP:61:ARG:HH21	54:R8:13:ARG:HD2	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:108:GLY:O	36:RQ:109:VAL:HG23	2.12	0.50
36:RQ:2:LEU:N	36:RQ:2:LEU:HD23	2.27	0.50
40:RU:92:ARG:NH1	40:RU:95:LEU:HD11	2.26	0.50
44:RY:16:ALA:O	44:RY:21:LYS:HD3	2.11	0.50
44:RY:48:ALA:HB2	44:RY:61:ILE:CD1	2.41	0.50
44:RY:74:PRO:O	44:RY:80:GLY:HA2	2.10	0.50
44:RY:88:LYS:HA	44:RY:88:LYS:NZ	2.27	0.50
1:XA:1015:A:N3	1:XA:1218:C:O2'	2.43	0.50
1:XA:1329:A:H5'	13:XM:29:ARG:HG3	1.93	0.50
1:XA:1427:U:H2'	1:XA:1428:A:C8	2.47	0.50
2:XB:178:ARG:O	8:XH:71:GLY:HA2	2.12	0.50
3:XC:35:GLU:O	3:XC:39:ILE:HG13	2.12	0.50
2:XB:178:ARG:HD2	8:XH:71:GLY:C	2.32	0.50
1:XA:1348:U:H4'	9:XI:120:ARG:HD2	1.93	0.50
9:XI:53:VAL:HG21	9:XI:92:TYR:CZ	2.46	0.50
10:XJ:54:PHE:O	10:XJ:55:LYS:HG3	2.10	0.50
12:XL:28:LYS:O	12:XL:29:GLY:C	2.50	0.50
14:YN:39:LEU:HD22	14:YN:43:CYS:HB3	1.93	0.50
15:XO:17:ARG:NH1	15:XO:77:ARG:CZ	2.75	0.50
16:XP:83:GLU:HG3	16:XP:84:ALA:H	1.77	0.50
19:XS:67:VAL:HB	50:Y4:59:PHE:CE2	2.47	0.50
20:XT:49:ALA:CB	20:XT:99:LEU:HD22	2.42	0.50
47:Y1:60:PHE:HE2	47:Y1:91:LYS:HZ1	1.57	0.50
47:Y1:87:PRO:O	47:Y1:91:LYS:HB2	2.10	0.50
48:Y2:41:ILE:HD11	48:Y2:44:LEU:CB	2.42	0.50
30:YG:6:ALA:H	50:Y4:23:GLU:CG	2.25	0.50
25:YA:1416:G:O2'	25:YA:1417:C:O5'	2.22	0.50
25:YA:609(A):G:H2'	25:YA:610:C:C6	2.47	0.50
27:YD:233:HIS:H	27:YD:233:HIS:CD2	2.29	0.50
28:YE:105:THR:HB	28:YE:197:ILE:HG12	1.92	0.50
31:YH:169:VAL:HG13	31:YH:170:ARG:N	2.26	0.50
32:YI:74:ASN:ND2	32:YI:75:LEU:H	2.09	0.50
25:YA:1007:C:OP1	33:YN:35:ARG:NH1	2.45	0.50
35:YP:138:LEU:HD11	35:YP:144:GLU:CG	2.42	0.50
40:YU:92:ARG:CD	40:YU:94:ASN:HB3	2.42	0.50
42:YW:70:TYR:N	42:YW:70:TYR:CD2	2.75	0.50
45:YZ:170:THR:O	45:YZ:171:ILE:CB	2.60	0.50
1:QA:1128:C:N4	1:QA:1144:G:H1	2.09	0.50
1:QA:683:G:H2'	1:QA:684:A:C8	2.47	0.50
3:QC:184:TYR:HA	3:QC:200:ALA:O	2.12	0.50
4:QD:178:VAL:O	4:QD:180:GLY:N	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:QF:63:TYR:CD2	6:QF:63:TYR:N	2.79	0.50
7:QG:50:ILE:HA	7:QG:54:THR:HG22	1.94	0.50
14:QN:22:THR:O	14:QN:23:ARG:CB	2.59	0.50
16:QP:83:GLU:HG3	16:QP:84:ALA:H	1.77	0.50
17:QQ:13:ASP:C	17:QQ:15:MET:H	2.15	0.50
18:QR:30:ASP:C	18:QR:32:ARG:H	2.16	0.50
20:QT:49:ALA:CB	20:QT:99:LEU:HD22	2.42	0.50
21:QU:2:GLY:O	21:QU:4:GLY:N	2.45	0.50
25:RA:1925:C:N3	25:RA:1929:G:O6	2.44	0.50
25:RA:2410:G:H2'	25:RA:2411:A:H8	1.76	0.50
27:RD:28:GLU:OE1	27:RD:29:PRO:HD2	2.11	0.50
30:RG:111:LEU:N	30:RG:112:PRO:CD	2.75	0.50
31:RH:16:SER:O	31:RH:17:VAL:HG23	2.12	0.50
33:RN:46:VAL:O	33:RN:47:ALA:CB	2.58	0.50
25:RA:2414:G:H21	35:RP:67:MET:CE	2.25	0.50
39:RT:38:ASN:O	39:RT:39:ARG:O	2.30	0.50
42:RW:22:ASP:HA	42:RW:25:ARG:HH12	1.75	0.50
44:RY:94:LYS:HE3	44:RY:101:LYS:HZ1	1.76	0.50
1:XA:1069:C:O3'	5:XE:25:ARG:NH1	2.45	0.50
1:XA:1225:A:H5''	1:XA:1226:C:OP2	2.12	0.50
1:XA:345:C:H4'	1:XA:346:G:C2	2.47	0.50
1:XA:836:G:OP1	18:XR:61:LYS:NZ	2.34	0.50
2:XB:103:THR:N	2:XB:180:LEU:HD11	2.27	0.50
7:XG:50:ILE:HA	7:XG:54:THR:HG22	1.94	0.50
8:XH:95:VAL:HB	8:XH:99:GLU:O	2.12	0.50
9:XI:105:ASP:C	9:XI:107:ARG:H	2.14	0.50
9:XI:29:ASN:OD1	9:XI:64:THR:HA	2.11	0.50
10:XJ:40:LEU:HB2	10:XJ:69:ASN:CB	2.40	0.50
13:XM:120:LYS:O	13:XM:121:LYS:HB2	2.11	0.50
13:XM:57:ARG:CB	13:XM:57:ARG:HH11	2.14	0.50
47:Y1:8:SER:HB3	47:Y1:66:HIS:CE1	2.46	0.50
48:Y2:9:GLN:O	48:Y2:12:GLU:HB3	2.10	0.50
50:Y4:22:ILE:HD12	50:Y4:22:ILE:H	1.77	0.50
53:Y7:46:VAL:HG12	53:Y7:47:ARG:N	2.27	0.50
53:Y7:9:ARG:HH12	53:Y7:47:ARG:HG3	1.76	0.50
25:YA:1312:U:H4'	25:YA:1313:U:O5'	2.12	0.50
25:YA:1658:C:C4	25:YA:1659:U:C4	3.00	0.50
25:YA:2347:C:H5	25:YA:2382:G:H1'	1.76	0.50
30:YG:16:ARG:HB3	30:YG:17:PRO:HD3	1.94	0.50
30:YG:35:GLU:CD	30:YG:35:GLU:C	2.71	0.50
31:YH:24:VAL:HG21	31:YH:72:ILE:HG12	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YR:117:VAL:CG2	37:YR:118:GLU:N	2.74	0.50
1:XA:1443:G:N2	39:YT:119:LYS:HB2	2.27	0.50
25:YA:1156:A:C8	40:YU:51:LYS:HD2	2.46	0.50
41:YV:51:VAL:CG1	41:YV:52:VAL:N	2.75	0.50
41:YV:29:PRO:O	41:YV:61:VAL:O	2.29	0.50
44:YY:48:ALA:HB2	44:YY:61:ILE:CD1	2.41	0.50
45:YZ:134:PRO:O	45:YZ:136:PHE:N	2.45	0.50
55:Z8:76:PPU:HN2	55:Z8:76:PPU:HD2	1.76	0.50
1:QA:186(A):C:H2'	1:QA:186(B):C:H6	1.75	0.50
1:QA:254:G:OP1	17:QQ:67:LYS:O	2.30	0.50
1:QA:452:A:H2'	1:QA:453:A:C8	2.47	0.50
3:QC:35:GLU:O	3:QC:39:ILE:HG13	2.12	0.50
3:QC:36:ASP:HA	3:QC:39:ILE:HD12	1.94	0.50
8:QH:51:VAL:HG11	8:QH:60:ARG:HG3	1.92	0.50
1:QA:1346:A:C5'	9:QI:120:ARG:HH12	2.24	0.50
9:QI:5:TYR:HA	9:QI:17:VAL:O	2.12	0.50
15:QO:8:LYS:HZ2	15:QO:8:LYS:HB2	1.74	0.50
16:QP:39:TYR:CE2	16:QP:41:PRO:HD3	2.47	0.50
21:QU:6:ARG:HE	21:QU:15:ARG:NH2	2.08	0.50
47:R1:80:LEU:HB2	47:R1:81:LYS:CE	2.41	0.50
25:RA:297:C:H5''	44:RY:85:VAL:HG21	1.93	0.50
27:RD:35:LYS:HD2	27:RD:104:TYR:CD1	2.46	0.50
27:RD:32:SER:O	27:RD:33:LEU:CB	2.60	0.50
28:RE:176:ILE:O	28:RE:176:ILE:HG22	2.10	0.50
28:RE:179:GLU:O	28:RE:180:ASN:HB2	2.12	0.50
28:RE:2:LYS:HG2	28:RE:95:ILE:CG2	2.42	0.50
29:RF:11:VAL:CG1	29:RF:12:LEU:N	2.75	0.50
30:RG:103:LEU:HD21	30:RG:178:PHE:CZ	2.47	0.50
31:RH:103:LEU:CD1	31:RH:131:VAL:HG21	2.41	0.50
32:RI:130:TYR:HB3	32:RI:136:VAL:HG13	1.93	0.50
32:RI:145:VAL:CG2	32:RI:146:ALA:N	2.73	0.50
35:RP:6:LEU:CD2	35:RP:6:LEU:N	2.75	0.50
37:RR:96:ARG:NH2	37:RR:117:VAL:HG23	2.27	0.50
34:RO:104:ARG:NE	39:RT:34:VAL:HG11	2.26	0.50
45:RZ:170:THR:O	45:RZ:171:ILE:CB	2.60	0.50
1:XA:1116:C:C2'	1:XA:1117:G:H5'	2.42	0.50
1:XA:186:C:H2'	1:XA:186(A):C:C6	2.46	0.50
1:XA:27:G:C4'	4:XD:209:ARG:HG3	2.40	0.50
1:XA:428:G:H5''	4:XD:7:PRO:HB3	1.93	0.50
1:XA:52:G:H2'	1:XA:53:A:H8	1.76	0.50
2:XB:16:HIS:HB3	2:XB:210:SER:CB	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:132:ARG:O	3:XC:136:GLN:HB2	2.11	0.50
8:XH:84:ARG:O	8:XH:135:CYS:HB2	2.12	0.50
9:XI:33:PHE:HZ	9:XI:47:LEU:HD21	1.76	0.50
11:XK:25:TYR:CD1	11:XK:25:TYR:N	2.80	0.50
13:XM:102:ARG:O	13:XM:102:ARG:HG3	2.11	0.50
13:XM:65:LYS:HZ2	13:XM:69:GLU:HG2	1.76	0.50
1:XA:1318:A:H4'	19:XS:11:VAL:CG1	2.40	0.50
20:XT:26:ASN:CB	20:XT:71:THR:HG23	2.42	0.50
49:Y3:7:LYS:CB	49:Y3:34:GLU:HG2	2.41	0.50
51:Y5:37:LYS:HD2	51:Y5:37:LYS:O	2.12	0.50
53:Y7:12:ARG:HG3	53:Y7:12:ARG:NH1	2.27	0.50
25:YA:1069:A:H4'	25:YA:1070:A:H5''	1.94	0.50
25:YA:1086:A:OP1	25:YA:1104:C:O2'	2.30	0.50
25:YA:1162:G:H1'	41:YV:23:GLU:OE2	2.12	0.50
25:YA:1388:G:H2'	25:YA:1389:G:H8	1.76	0.50
25:YA:910:A:N1	25:YA:2277:G:H1'	2.27	0.50
25:YA:272:G:H2'	25:YA:273:G:H8	1.77	0.50
25:YA:571:A:H1'	25:YA:573:G:C8	2.47	0.50
26:YB:13:A:N1	26:YB:69:G:O2'	2.33	0.50
27:YD:218:ARG:HB3	27:YD:219:PRO:HD2	1.94	0.50
27:YD:35:LYS:HE2	27:YD:104:TYR:HB2	1.94	0.50
36:YQ:36:ALA:HB1	36:YQ:127:ILE:HD12	1.93	0.50
38:YS:26:LEU:HD22	38:YS:87:PHE:CD1	2.46	0.50
34:YO:104:ARG:NE	39:YT:34:VAL:HG11	2.26	0.50
1:QA:621:A:H2'	1:QA:622:A:C8	2.47	0.50
1:QA:980:C:H5''	1:QA:981:U:C5	2.47	0.50
7:QG:11:GLN:C	7:QG:12:LEU:HD22	2.31	0.50
8:QH:84:ARG:O	8:QH:135:CYS:HB2	2.12	0.50
11:QK:32:ILE:HD12	11:QK:72:ALA:CB	2.36	0.50
12:QL:24:VAL:CG1	12:QL:24:VAL:O	2.58	0.50
16:QP:39:TYR:OH	16:QP:41:PRO:HB3	2.12	0.50
19:QS:41:VAL:CG1	19:QS:45:VAL:N	2.74	0.50
50:R4:1:MET:O	50:R4:1:MET:HG3	2.12	0.50
52:R6:34:LEU:HD23	52:R6:36:LEU:HD22	1.92	0.50
52:R6:41:PRO:HD2	52:R6:46:HIS:H	1.77	0.50
53:R7:12:ARG:HG3	53:R7:12:ARG:NH1	2.27	0.50
53:R7:46:VAL:HG12	53:R7:47:ARG:N	2.27	0.50
25:RA:1186:G:H2'	25:RA:1187:G:O4'	2.12	0.50
25:RA:222:A:HO2'	25:RA:223:A:P	2.35	0.50
25:RA:2552:U:C2	25:RA:2554:U:H5''	2.47	0.50
27:RD:35:LYS:HE2	27:RD:104:TYR:HB2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:119:ARG:HD3	28:RE:160:TYR:CD2	2.47	0.50
33:RN:137:LYS:HG3	33:RN:138:LEU:H	1.77	0.50
35:RP:114:ILE:HD11	35:RP:130:PHE:HE1	1.70	0.50
39:RT:23:ARG:CB	39:RT:24:PRO:HD2	2.40	0.50
43:RX:18:TYR:C	43:RX:20:GLY:N	2.64	0.50
44:RY:81:LYS:HD3	44:RY:97:ARG:HD3	1.94	0.50
1:XA:299:G:H2'	1:XA:300:A:C8	2.46	0.50
2:XB:172:ILE:CD1	2:XB:172:ILE:H	2.18	0.50
3:XC:195:VAL:HG12	3:XC:196:LEU:H	1.75	0.50
3:XC:36:ASP:HB3	3:XC:40:ARG:NH1	2.26	0.50
4:XD:54:TYR:CE1	4:XD:206:PHE:HE1	2.29	0.50
5:XE:32:VAL:O	5:XE:43:LEU:HD12	2.12	0.50
7:XG:50:ILE:HG21	7:XG:58:PRO:HA	1.93	0.50
13:XM:117:VAL:O	13:XM:118:ALA:C	2.51	0.50
13:XM:14:ARG:HG3	13:XM:16:ASP:OD2	2.12	0.50
19:XS:26:GLY:O	19:XS:27:GLU:HB2	2.12	0.50
23:XX:7:G:H5''	23:XX:7:G:H8	1.76	0.50
48:Y2:69:ARG:CB	48:Y2:69:ARG:HH11	2.25	0.50
50:Y4:36:CYS:O	50:Y4:39:CYS:CB	2.55	0.50
51:Y5:50:GLY:O	51:Y5:51:TYR:CB	2.59	0.50
52:Y6:44:ARG:O	52:Y6:45:LYS:CB	2.60	0.50
25:YA:49:A:N7	25:YA:120:U:C5	2.79	0.50
25:YA:1388:G:O2'	25:YA:1389:G:H5'	2.11	0.50
25:YA:1727:U:H3	25:YA:1733:G:H1	1.60	0.50
27:YD:65:ILE:HD13	27:YD:65:ILE:C	2.32	0.50
28:YE:37:ARG:H	28:YE:37:ARG:HE	1.59	0.50
28:YE:2:LYS:HG2	28:YE:95:ILE:CG2	2.42	0.50
25:YA:323:G:H2'	29:YF:169:ASN:ND2	2.27	0.50
30:YG:103:LEU:HD21	30:YG:178:PHE:CZ	2.47	0.50
30:YG:114:ILE:HG21	30:YG:117:PHE:HB2	1.93	0.50
34:YO:105:GLU:O	34:YO:108:GLU:HB2	2.12	0.50
34:YO:55:GLY:O	34:YO:56:ASP:C	2.50	0.50
35:YP:147:LEU:O	35:YP:148:LEU:HB2	2.11	0.50
36:YQ:108:GLY:O	36:YQ:109:VAL:HG23	2.12	0.50
38:YS:35:ILE:CD1	38:YS:101:LEU:HD23	2.41	0.50
45:YZ:150:LEU:O	45:YZ:151:HIS:O	2.29	0.50
1:QA:1305:G:HO2'	1:QA:1306:A:H8	1.60	0.49
1:QA:1479:C:H2'	1:QA:1480:G:H8	1.77	0.49
2:QB:16:HIS:HB3	2:QB:210:SER:CB	2.42	0.49
9:QI:48:GLU:N	9:QI:49:PRO:CD	2.74	0.49
10:QJ:22:LYS:NZ	10:QJ:23:ILE:HG12	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:28:LYS:O	12:QL:29:GLY:C	2.50	0.49
50:R4:10:VAL:HG23	50:R4:11:PRO:HD2	1.93	0.49
25:RA:1285:G:H22	25:RA:1329:U:P	2.33	0.49
25:RA:1371:G:O2'	25:RA:1372:U:H5	1.87	0.49
25:RA:2643:G:H2'	25:RA:2644:G:O4'	2.11	0.49
25:RA:503:A:H4'	25:RA:504:U:H5''	1.93	0.49
25:RA:654(S):G:H2'	25:RA:654(T):C:C6	2.47	0.49
25:RA:2311:A:C8	30:RG:82:LEU:HD11	2.47	0.49
31:RH:153:LYS:O	31:RH:154:PRO:O	2.30	0.49
32:RI:114:LEU:HD12	32:RI:129:THR:O	2.12	0.49
32:RI:74:ASN:ND2	32:RI:75:LEU:H	2.09	0.49
33:RN:42:TRP:HA	33:RN:48:MET:CE	2.42	0.49
41:RV:41:GLY:N	41:RV:46:VAL:HG13	2.26	0.49
45:RZ:45:ASP:OD1	45:RZ:49:ARG:NE	2.41	0.49
45:RZ:81:ARG:O	45:RZ:81:ARG:HD3	2.12	0.49
1:XA:1298:C:H4'	1:XA:1299:A:C8	2.47	0.49
1:XA:243:A:N6	1:XA:281:G:O2'	2.45	0.49
1:XA:302:G:C6	1:XA:303:A:C5	2.99	0.49
4:XD:33:MET:CE	4:XD:37:PRO:HA	2.42	0.49
5:XE:41:VAL:CG1	5:XE:112:LEU:O	2.60	0.49
8:XH:91:ARG:NH1	8:XH:91:ARG:HG2	2.25	0.49
10:XJ:22:LYS:NZ	10:XJ:23:ILE:HG12	2.27	0.49
13:XM:82:MET:O	13:XM:83:ASP:C	2.49	0.49
14:XN:40:CYS:SG	14:XN:43:CYS:N	2.75	0.49
46:Y0:51:VAL:CG2	46:Y0:81:VAL:HG23	2.42	0.49
25:YA:121:G:H4'	25:YA:149:A:H5'	1.94	0.49
25:YA:1727:U:H2'	25:YA:1728:G:O4'	2.12	0.49
25:YA:1794:U:H2'	25:YA:1795:C:H6	1.77	0.49
25:YA:2719:G:O2'	25:YA:2720:U:O5'	2.29	0.49
27:YD:2:ALA:CB	27:YD:20:ASP:HB3	2.42	0.49
27:YD:76:PRO:HA	27:YD:118:VAL:HG23	1.93	0.49
28:YE:46:ALA:HB1	28:YE:80:GLU:HB2	1.94	0.49
30:YG:49:ASP:OD1	30:YG:51:ARG:HG3	2.12	0.49
30:YG:83:ARG:HH11	30:YG:83:ARG:HG2	1.76	0.49
32:YI:140:LEU:HD23	32:YI:140:LEU:N	2.28	0.49
35:YP:112:LEU:HD22	35:YP:113:LYS:N	2.26	0.49
36:YQ:79:LEU:O	36:YQ:80:GLU:OE1	2.31	0.49
38:YS:52:SER:O	38:YS:56:LEU:CD2	2.60	0.49
40:YU:92:ARG:NH1	40:YU:95:LEU:HD11	2.26	0.49
44:YY:16:ALA:O	44:YY:21:LYS:HD3	2.11	0.49
1:QA:1024:G:OP1	1:QA:1024:G:H4'	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1410:G:H1	1:QA:1490:C:N4	2.08	0.49
4:QD:206:PHE:HD2	4:QD:207:TYR:CE1	2.30	0.49
5:QE:32:VAL:O	5:QE:43:LEU:HD12	2.12	0.49
6:QF:72:VAL:HG13	6:QF:73:ASN:N	2.27	0.49
7:QG:50:ILE:HG21	7:QG:58:PRO:HA	1.93	0.49
13:QM:108:ARG:O	13:QM:109:THR:C	2.50	0.49
15:QO:17:ARG:NH1	15:QO:77:ARG:CZ	2.74	0.49
52:R6:20:ASN:O	52:R6:21:TYR:CB	2.59	0.49
25:RA:1728:G:H3'	25:RA:1729:A:C5'	2.37	0.49
25:RA:222:A:H5''	25:RA:421:U:OP1	2.13	0.49
25:RA:2400:G:N2	25:RA:2417:C:C2	2.80	0.49
25:RA:987:G:H2'	25:RA:988:A:O4'	2.12	0.49
26:RB:24:G:H5''	26:RB:25:A:OP1	2.12	0.49
27:RD:218:ARG:HB3	27:RD:219:PRO:HD2	1.94	0.49
28:RE:61:ARG:O	28:RE:62:PRO:C	2.51	0.49
30:RG:83:ARG:HG2	30:RG:83:ARG:HH11	1.76	0.49
31:RH:120:GLY:HA3	31:RH:140:LYS:NZ	2.28	0.49
38:RS:60:GLY:O	38:RS:61:ASN:CB	2.56	0.49
42:RW:29:LEU:HD23	42:RW:29:LEU:O	2.13	0.49
45:RZ:33:LEU:HD21	45:RZ:35:ARG:CD	2.42	0.49
1:XA:711:G:H2'	1:XA:712:A:C8	2.47	0.49
1:XA:87:A:H2'	1:XA:88:C:O4'	2.11	0.49
3:XC:34:LEU:O	3:XC:38:ARG:HG3	2.11	0.49
4:XD:107:ARG:C	4:XD:109:GLY:H	2.15	0.49
1:XA:489:C:P	4:XD:132:ARG:HH22	2.34	0.49
8:XH:61:VAL:HG12	8:XH:63:LEU:HD13	1.94	0.49
13:XM:120:LYS:O	13:XM:121:LYS:CB	2.60	0.49
16:XP:59:TRP:HE3	16:XP:59:TRP:HA	1.76	0.49
19:XS:64:GLU:HB2	50:Y4:55:ARG:NH1	2.22	0.49
47:Y1:19:GLN:OE1	47:Y1:19:GLN:HA	2.12	0.49
47:Y1:81:LYS:O	47:Y1:82:LEU:O	2.30	0.49
47:Y1:93:GLU:O	47:Y1:97:LEU:HD11	2.12	0.49
49:Y3:21:ALA:O	49:Y3:25:ALA:N	2.41	0.49
25:YA:1182:A:H2'	25:YA:1183:G:O4'	2.12	0.49
25:YA:1930:G:H2'	25:YA:1968:G:C6	2.46	0.49
25:YA:2197:U:H1'	25:YA:2198:A:C8	2.47	0.49
25:YA:859:G:O2'	25:YA:860:U:O5'	2.30	0.49
27:YD:227:ASN:HB3	27:YD:228:PRO:CD	2.30	0.49
33:YN:137:LYS:HG3	33:YN:138:LEU:H	1.77	0.49
33:YN:6:PRO:HG2	33:YN:43:THR:OG1	2.11	0.49
34:YO:47:ILE:CG1	34:YO:48:PRO:HD2	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:36:LYS:HB2	35:YP:40:SER:HB3	1.94	0.49
36:YQ:2:LEU:HD23	36:YQ:2:LEU:N	2.27	0.49
38:YS:60:GLY:O	38:YS:61:ASN:CB	2.55	0.49
41:YV:3:ALA:HB3	41:YV:14:VAL:HG23	1.92	0.49
44:YY:19:LYS:O	44:YY:19:LYS:CG	2.60	0.49
44:YY:44:ILE:CG1	44:YY:45:VAL:H	2.24	0.49
1:QA:919:A:O2'	1:QA:1080:A:N1	2.34	0.49
1:QA:1531:A:C5'	1:QA:1531:A:C8	2.85	0.49
1:QA:496:A:H5'	1:QA:497:U:OP2	2.12	0.49
1:QA:692:U:H5	11:QK:26:ASN:OD1	1.95	0.49
1:QA:789:U:O2'	1:QA:791:G:N7	2.46	0.49
4:QD:8:VAL:O	4:QD:11:LEU:HB2	2.12	0.49
4:QD:33:MET:CE	4:QD:37:PRO:HA	2.42	0.49
1:QA:1080:A:H5''	5:QE:16:THR:HG21	1.94	0.49
9:QI:105:ASP:C	9:QI:107:ARG:H	2.14	0.49
11:QK:29:ILE:HG13	11:QK:44:SER:HB3	1.92	0.49
48:R2:41:ILE:HD11	48:R2:44:LEU:CB	2.42	0.49
49:R3:7:LYS:CB	49:R3:34:GLU:HG2	2.41	0.49
50:R4:57:GLU:O	50:R4:61:ARG:O	2.30	0.49
51:R5:20:ARG:C	51:R5:22:HIS:H	2.14	0.49
25:RA:1537:C:H2'	25:RA:1538:G:O4'	2.11	0.49
27:RD:10:THR:HG23	27:RD:13:ARG:CB	2.34	0.49
27:RD:123:ALA:HB3	27:RD:131:LEU:HG	1.94	0.49
27:RD:35:LYS:CG	27:RD:64:ILE:HG22	2.42	0.49
30:RG:49:ASP:OD1	30:RG:51:ARG:HG3	2.12	0.49
31:RH:19:VAL:HG13	31:RH:43:VAL:CG2	2.41	0.49
31:RH:19:VAL:HG13	31:RH:43:VAL:HG23	1.94	0.49
33:RN:73:THR:HG22	33:RN:82:LEU:HD11	1.93	0.49
38:RS:18:ILE:O	38:RS:19:LYS:O	2.31	0.49
41:RV:91:TYR:HD1	41:RV:91:TYR:C	2.16	0.49
44:RY:77:PRO:O	44:RY:78:ALA:HB2	2.11	0.49
44:RY:90:LEU:H	44:RY:90:LEU:HD22	1.73	0.49
45:RZ:116:VAL:O	45:RZ:116:VAL:HG23	2.11	0.49
1:XA:1480:G:H2'	1:XA:1481:U:O4'	2.12	0.49
1:XA:165:C:H2'	1:XA:166:G:C8	2.47	0.49
2:XB:68:ILE:O	2:XB:91:PRO:HD2	2.13	0.49
8:XH:91:ARG:HH11	8:XH:91:ARG:CG	2.22	0.49
9:XI:5:TYR:HA	9:XI:17:VAL:O	2.12	0.49
9:XI:43:ALA:C	9:XI:45:ALA:H	2.16	0.49
12:XL:62:SER:C	12:XL:64:TYR:H	2.15	0.49
47:Y1:67:ILE:N	47:Y1:68:PRO:CD	2.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y4:9:LEU:H	50:Y4:27:THR:CG2	2.26	0.49
54:Y8:56:GLU:O	54:Y8:57:ARG:C	2.50	0.49
25:YA:1204:A:O2'	25:YA:1205:U:O5'	2.20	0.49
25:YA:1300:U:H4'	25:YA:1301:A:C5'	2.42	0.49
25:YA:2031:A:N3	25:YA:2455:G:O2'	2.36	0.49
27:YD:2:ALA:CB	27:YD:20:ASP:CB	2.89	0.49
29:YF:11:VAL:CG1	29:YF:12:LEU:N	2.75	0.49
31:YH:153:LYS:HA	31:YH:153:LYS:HZ3	1.75	0.49
32:YI:78:THR:HG22	32:YI:141:LYS:CD	2.27	0.49
33:YN:46:VAL:O	33:YN:47:ALA:CB	2.57	0.49
33:YN:73:THR:CG2	33:YN:82:LEU:HD11	2.43	0.49
33:YN:82:LEU:HD12	33:YN:83:LYS:N	2.27	0.49
34:YO:69:ILE:O	34:YO:76:ALA:HA	2.12	0.49
44:YY:88:LYS:HA	44:YY:88:LYS:NZ	2.27	0.49
45:YZ:124:ILE:O	45:YZ:124:ILE:HG23	2.11	0.49
45:YZ:57:ILE:HG22	45:YZ:58:VAL:N	2.28	0.49
45:YZ:69:THR:HG22	45:YZ:90:VAL:HG22	1.94	0.49
55:Z6:76:PPU:HN2	55:Z6:76:PPU:HD2	1.76	0.49
1:QA:1198:G:H2'	1:QA:1199:U:O4'	2.11	0.49
1:QA:1498:U:O2'	1:QA:1499:A:P	2.69	0.49
1:QA:617:G:H1	1:QA:623:C:H42	1.60	0.49
1:QA:64:G:H4'	1:QA:65:U:O5'	2.13	0.49
2:QB:103:THR:N	2:QB:180:LEU:HD11	2.27	0.49
2:QB:181:PHE:O	2:QB:183:PRO:HD3	2.12	0.49
4:QD:9:CYS:SG	4:QD:22:LYS:CE	3.01	0.49
5:QE:12:LEU:HD23	5:QE:13:ILE:H	1.77	0.49
6:QF:51:PRO:HA	6:QF:55:ASP:O	2.12	0.49
8:QH:14:ARG:HG2	8:QH:14:ARG:O	2.12	0.49
11:QK:62:GLN:O	11:QK:63:LEU:C	2.51	0.49
12:QL:6:THR:O	12:QL:7:ILE:C	2.51	0.49
14:QN:8:GLU:O	14:QN:10:ALA:N	2.45	0.49
47:R1:67:ILE:N	47:R1:68:PRO:CD	2.76	0.49
50:R4:23:GLU:C	50:R4:24:THR:HG1	2.16	0.49
50:R4:9:LEU:H	50:R4:27:THR:CG2	2.25	0.49
25:RA:1309:G:OP1	53:R7:9:ARG:HD3	2.13	0.49
53:R7:9:ARG:HH12	53:R7:47:ARG:HG3	1.76	0.49
25:RA:2277:G:OP1	36:RQ:85:LYS:HB2	2.12	0.49
25:RA:242:G:O3'	54:R8:6:THR:HG23	2.11	0.49
25:RA:2531:A:H4'	31:RH:157:TYR:CE2	2.47	0.49
25:RA:2585:U:O2'	25:RA:2586:C:O5'	2.29	0.49
27:RD:72:LYS:O	27:RD:73:VAL:C	2.51	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:23:VAL:HG12	28:RE:173:VAL:HG21	1.94	0.49
32:RI:71:ILE:O	32:RI:72:LEU:HB2	2.10	0.49
35:RP:49:ARG:HE	54:R8:59:LYS:HG2	1.76	0.49
36:RQ:132:VAL:HG12	36:RQ:133:ARG:N	2.27	0.49
37:RR:118:GLU:OXT	37:RR:118:GLU:HG3	2.11	0.49
37:RR:18:LEU:C	37:RR:18:LEU:HD13	2.33	0.49
40:RU:79:PHE:HE2	40:RU:83:LEU:HD22	1.78	0.49
43:RX:70:LEU:N	43:RX:70:LEU:CD2	2.72	0.49
45:RZ:134:PRO:HB2	45:RZ:136:PHE:O	2.12	0.49
13:XM:54:VAL:CG2	50:Y4:32:TYR:OH	2.60	0.49
47:Y1:40:ARG:NH2	47:Y1:42:GLN:HG2	2.27	0.49
50:Y4:1:MET:O	50:Y4:1:MET:HG3	2.12	0.49
50:Y4:42:PHE:O	50:Y4:43:TYR:C	2.51	0.49
19:XS:5:LEU:HG	50:Y4:66:SER:CB	2.42	0.49
54:Y8:10:ALA:O	54:Y8:14:VAL:HG12	2.11	0.49
25:YA:2273:A:H2'	25:YA:2274:A:C8	2.47	0.49
25:YA:2850:A:N7	25:YA:2868:A:O2'	2.27	0.49
25:YA:869:G:H1	25:YA:908:C:H42	1.58	0.49
25:YA:869:G:N2	25:YA:908:C:N3	2.59	0.49
25:YA:1568:G:O4'	27:YD:58:HIS:HE1	1.96	0.49
27:YD:72:LYS:O	27:YD:73:VAL:C	2.51	0.49
33:YN:68:GLU:HG2	33:YN:88:GLU:CD	2.33	0.49
36:YQ:29:PHE:N	36:YQ:105:GLU:OE2	2.41	0.49
42:YW:29:LEU:O	42:YW:29:LEU:HD23	2.13	0.49
45:YZ:82:ARG:HG3	45:YZ:83:PRO:N	2.27	0.49
1:QA:103:C:P	20:QT:17:ARG:HH21	2.35	0.49
1:QA:923:A:N6	1:QA:1392:G:O6	2.45	0.49
1:QA:981:U:H5	1:QA:982:U:HO2'	1.61	0.49
3:QC:178:LEU:N	3:QC:178:LEU:HD22	2.27	0.49
5:QE:11:ILE:CG1	5:QE:31:LEU:HD12	2.42	0.49
5:QE:82:VAL:HG12	5:QE:83:GLU:H	1.77	0.49
8:QH:29:SER:CB	8:QH:32:LYS:HG3	2.28	0.49
9:QI:79:LEU:HD13	9:QI:79:LEU:O	2.12	0.49
9:QI:83:ARG:HA	9:QI:86:VAL:CG1	2.42	0.49
11:QK:110:ASP:HB2	18:QR:88:LYS:HD3	1.95	0.49
12:QL:62:SER:C	12:QL:64:TYR:H	2.15	0.49
13:QM:102:ARG:HG3	13:QM:102:ARG:O	2.11	0.49
16:QP:83:GLU:HA	16:QP:83:GLU:OE2	2.12	0.49
17:QQ:67:LYS:HA	17:QQ:70:ARG:HH12	1.76	0.49
21:QU:6:ARG:HH21	21:QU:15:ARG:NE	2.09	0.49
48:R2:33:MET:O	48:R2:37:PHE:HD1	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:68:ARG:HD3	50:R4:69:LYS:HG2	1.92	0.49
25:RA:2328:A:H2'	25:RA:2329:G:C8	2.47	0.49
25:RA:2439:A:O2'	25:RA:2440:C:OP2	2.24	0.49
25:RA:2540:C:H2'	25:RA:2541:A:O4'	2.12	0.49
25:RA:2696:U:H2'	25:RA:2697:G:H8	1.77	0.49
26:RB:56:G:H5'	30:RG:27:ASN:HD21	1.73	0.49
27:RD:2:ALA:CB	27:RD:20:ASP:HB3	2.41	0.49
28:RE:55:ASN:O	28:RE:57:LYS:N	2.45	0.49
30:RG:35:GLU:C	30:RG:35:GLU:CD	2.71	0.49
31:RH:23:ARG:HD2	31:RH:34:GLU:OE2	2.12	0.49
33:RN:120:LEU:HD11	33:RN:122:VAL:CG2	2.42	0.49
38:RS:99:LYS:O	38:RS:101:LEU:N	2.45	0.49
39:RT:16:ARG:NE	39:RT:19:LEU:HD21	2.27	0.49
39:RT:94:ALA:O	39:RT:95:ARG:CB	2.61	0.49
41:RV:76:LYS:HG3	41:RV:81:TYR:CD1	2.48	0.49
1:XA:946:A:O2'	1:XA:1333:A:N3	2.39	0.49
2:XB:207:ALA:O	2:XB:209:ARG:N	2.45	0.49
3:XC:11:ARG:HG3	3:XC:15:THR:HG21	1.94	0.49
4:XD:128:VAL:O	4:XD:130:GLY:N	2.45	0.49
4:XD:196:LEU:C	4:XD:198:VAL:N	2.66	0.49
9:XI:113:LYS:H	9:XI:119:ALA:HA	1.77	0.49
9:XI:43:ALA:HA	9:XI:74:ILE:HD13	1.94	0.49
13:XM:108:ARG:O	13:XM:109:THR:C	2.50	0.49
15:XO:32:LEU:O	15:XO:33:THR:C	2.51	0.49
52:Y6:7:ILE:C	52:Y6:9:LEU:N	2.65	0.49
25:YA:128:C:H4'	53:Y7:49:ARG:HH12	1.77	0.49
25:YA:1942:C:OP2	25:YA:1943:U:O2'	2.18	0.49
25:YA:619:G:H3'	25:YA:620:G:N2	2.26	0.49
25:YA:953:A:OP2	36:YQ:16:ARG:NH1	2.42	0.49
28:YE:61:ARG:CB	28:YE:62:PRO:CD	2.90	0.49
30:YG:107:LEU:HD11	30:YG:178:PHE:CD1	2.48	0.49
31:YH:103:LEU:H	31:YH:103:LEU:HD23	1.77	0.49
34:YO:20:MET:HG2	34:YO:21:CYS:O	2.11	0.49
25:YA:2723:C:H5''	37:YR:1:MET:HB3	1.93	0.49
38:YS:99:LYS:O	38:YS:101:LEU:N	2.45	0.49
38:YS:25:ARG:HH12	38:YS:42:ASP:CG	2.16	0.49
39:YT:39:ARG:CG	39:YT:40:THR:H	2.22	0.49
41:YV:91:TYR:HD1	41:YV:91:TYR:C	2.16	0.49
42:YW:51:LEU:HD23	42:YW:105:VAL:HG11	1.95	0.49
44:YY:81:LYS:CD	44:YY:97:ARG:HE	2.20	0.49
45:YZ:111:VAL:HG22	45:YZ:111:VAL:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1259:C:HO2'	1:QA:1283:G:N2	2.09	0.49
1:QA:1326:C:H2'	1:QA:1327:C:C6	2.48	0.49
1:QA:148:G:H1	1:QA:174:C:H42	1.60	0.49
1:QA:629:G:H2'	1:QA:630:G:C8	2.48	0.49
1:QA:661:G:H1	1:QA:744:C:H42	1.59	0.49
1:QA:78:G:H1	1:QA:91:C:H42	1.60	0.49
5:QE:78:HIS:CB	8:QH:104:ARG:O	2.61	0.49
6:QF:101:ALA:HA	18:QR:28:GLU:HG2	1.95	0.49
9:QI:43:ALA:C	9:QI:45:ALA:H	2.16	0.49
9:QI:18:PHE:O	9:QI:61:ALA:HA	2.13	0.49
10:QJ:49:VAL:HG23	14:QN:34:TYR:OH	2.13	0.49
20:QT:37:SER:O	20:QT:41:ILE:HG12	2.13	0.49
50:R4:22:ILE:HD12	50:R4:22:ILE:H	1.77	0.49
25:RA:1951:U:N3	25:RA:1954:G:OP2	2.37	0.49
25:RA:2093:G:N2	25:RA:2198:A:H62	2.03	0.49
25:RA:227:A:H1'	25:RA:228:A:C2	2.47	0.49
25:RA:2336:A:N3	25:RA:2385:C:H1'	2.27	0.49
25:RA:328:U:H4'	44:RY:68:HIS:CD2	2.47	0.49
27:RD:25:THR:O	27:RD:27:THR:HG22	2.12	0.49
29:RF:196:LEU:C	29:RF:197:ASP:O	2.50	0.49
34:RO:105:GLU:O	34:RO:108:GLU:HB2	2.12	0.49
34:RO:69:ILE:O	34:RO:76:ALA:HA	2.12	0.49
34:RO:8:LEU:N	34:RO:8:LEU:CD2	2.76	0.49
36:RQ:29:PHE:N	36:RQ:105:GLU:OE2	2.41	0.49
36:RQ:23:GLY:O	36:RQ:24:GLY:O	2.30	0.49
44:RY:19:LYS:CG	44:RY:19:LYS:O	2.60	0.49
44:RY:95:LYS:CD	44:RY:95:LYS:N	2.75	0.49
45:RZ:19:ARG:HD3	45:RZ:25:PRO:HD2	1.95	0.49
45:RZ:82:ARG:HG3	45:RZ:83:PRO:N	2.27	0.49
1:XA:269:C:H2'	1:XA:270:A:C8	2.47	0.49
1:XA:833:U:H2'	1:XA:834:C:C6	2.47	0.49
1:XA:93:U:H2'	1:XA:95:G:O4'	2.12	0.49
4:XD:11:LEU:CD2	4:XD:66:ARG:HD3	2.41	0.49
4:XD:118:ARG:NH2	4:XD:136:PRO:HB2	2.28	0.49
4:XD:163:GLU:O	4:XD:165:MET:N	2.46	0.49
4:XD:198:VAL:HG12	4:XD:199:ASN:H	1.74	0.49
4:XD:8:VAL:O	4:XD:11:LEU:HB2	2.12	0.49
9:XI:110:GLU:HG3	9:XI:110:GLU:O	2.12	0.49
16:XP:83:GLU:OE2	16:XP:83:GLU:HA	2.12	0.49
17:XQ:3:LYS:HD2	17:XQ:60:ILE:HD11	1.95	0.49
19:XS:11:VAL:O	19:XS:12:ASP:CB	2.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:XU:2:GLY:O	21:XU:4:GLY:N	2.46	0.49
25:YA:153:C:P	47:Y1:88:LYS:HE2	2.53	0.49
13:XM:3:ARG:HG2	50:Y4:34:GLU:OE1	2.12	0.49
50:Y4:47:GLN:O	50:Y4:48:ARG:CB	2.60	0.49
54:Y8:58:ILE:O	54:Y8:61:LEU:HD12	2.13	0.49
25:YA:1469:A:H2'	25:YA:1470:G:C8	2.48	0.49
25:YA:2126:A:H61	25:YA:2163:C:H1'	1.77	0.49
25:YA:2610:C:H4'	25:YA:2611:U:OP2	2.13	0.49
25:YA:2564:A:OP1	25:YA:2648:C:H4'	2.13	0.49
25:YA:620:G:H4'	25:YA:621:A:H5''	1.94	0.49
27:YD:130:ALA:C	27:YD:131:LEU:HD12	2.33	0.49
28:YE:179:GLU:HA	28:YE:179:GLU:OE1	2.10	0.49
28:YE:179:GLU:O	28:YE:180:ASN:HB2	2.12	0.49
28:YE:61:ARG:O	28:YE:62:PRO:C	2.51	0.49
31:YH:19:VAL:HG13	31:YH:43:VAL:HG23	1.93	0.49
35:YP:30:THR:O	35:YP:33:ARG:HB2	2.12	0.49
37:YR:96:ARG:NH2	37:YR:117:VAL:HG23	2.27	0.49
37:YR:1:MET:O	37:YR:2:ARG:CB	2.60	0.49
39:YT:38:ASN:O	39:YT:39:ARG:O	2.30	0.49
39:YT:57:PHE:O	39:YT:59:THR:N	2.46	0.49
41:YV:79:VAL:O	41:YV:79:VAL:HG22	2.12	0.49
43:YX:51:VAL:HG13	43:YX:81:VAL:HG23	1.93	0.49
44:YY:61:ILE:HG22	44:YY:62:GLU:N	2.28	0.49
45:YZ:143:GLY:O	45:YZ:145:GLU:HG3	2.12	0.49
1:QA:396:G:O2'	1:QA:398:C:OP1	2.12	0.49
1:QA:683:G:C6	1:QA:684:A:C6	3.01	0.49
2:QB:179:LYS:HA	8:QH:72:PRO:HD3	1.95	0.49
8:QH:61:VAL:HG12	8:QH:63:LEU:HD13	1.94	0.49
9:QI:43:ALA:HA	9:QI:74:ILE:HD13	1.94	0.49
13:QM:120:LYS:O	13:QM:121:LYS:CB	2.60	0.49
13:QM:14:ARG:HG3	13:QM:16:ASP:OD2	2.13	0.49
19:QS:62:ILE:C	19:QS:63:THR:HG22	2.32	0.49
20:QT:53:LEU:HA	20:QT:56:MET:CB	2.43	0.49
47:R1:40:ARG:NH2	47:R1:42:GLN:HG2	2.27	0.49
47:R1:83:GLU:CD	47:R1:85:LEU:H	2.15	0.49
25:RA:153:C:OP2	47:R1:88:LYS:HE2	2.13	0.49
30:RG:6:ALA:H	50:R4:23:GLU:CG	2.24	0.49
30:RG:143:GLU:HA	50:R4:28:LYS:HD3	1.95	0.49
50:R4:42:PHE:O	50:R4:44:THR:O	2.31	0.49
52:R6:37:ARG:HA	52:R6:37:ARG:HE	1.77	0.49
52:R6:7:ILE:C	52:R6:9:LEU:N	2.65	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:R8:33:ASN:O	54:R8:35:GLN:N	2.46	0.49
25:RA:1535:U:H2'	25:RA:1536:A:C8	2.48	0.49
25:RA:1655:A:H4'	28:RE:115:GLY:N	2.28	0.49
25:RA:1678:G:N2	25:RA:1989:G:H1	2.10	0.49
25:RA:1751:C:O2'	25:RA:1752:C:H5'	2.13	0.49
25:RA:2126:A:H61	25:RA:2163:C:H1'	1.77	0.49
25:RA:2311:A:H1'	30:RG:82:LEU:CD1	2.41	0.49
25:RA:2638:G:O2'	25:RA:2778:A:N6	2.45	0.49
25:RA:39:C:H2'	25:RA:40:C:C6	2.47	0.49
27:RD:182:LEU:H	27:RD:272:ALA:CB	2.25	0.49
30:RG:107:LEU:HD11	30:RG:178:PHE:CD1	2.48	0.49
31:RH:54:ARG:HD3	31:RH:65:HIS:ND1	2.27	0.49
31:RH:24:VAL:HG21	31:RH:72:ILE:HG12	1.93	0.49
32:RI:140:LEU:N	32:RI:140:LEU:HD23	2.28	0.49
35:RP:101:VAL:CG1	35:RP:102:ARG:N	2.75	0.49
36:RQ:79:LEU:O	36:RQ:80:GLU:OE1	2.31	0.49
37:RR:52:ILE:CG2	37:RR:94:TYR:CD1	2.95	0.49
37:RR:71:GLN:HE21	37:RR:71:GLN:HA	1.77	0.49
26:RB:116:G:O2'	38:RS:54:LEU:HD11	2.12	0.49
40:RU:92:ARG:CD	40:RU:94:ASN:HB3	2.42	0.49
44:RY:35:TYR:CD1	44:RY:69:ALA:HB3	2.48	0.49
44:RY:84:ARG:HD3	44:RY:86:ARG:NH1	2.28	0.49
45:RZ:107:THR:HG22	45:RZ:108:PRO:CA	2.43	0.49
1:XA:376:G:OP2	16:XP:67:THR:HG21	2.13	0.49
1:XA:923:A:N6	1:XA:1392:G:O6	2.45	0.49
3:XC:178:LEU:N	3:XC:178:LEU:HD22	2.28	0.49
3:XC:76:VAL:HG21	3:XC:103:VAL:HG11	1.95	0.49
6:XF:72:VAL:HG13	6:XF:73:ASN:N	2.27	0.49
8:XH:83:ILE:HB	8:XH:137:VAL:HG13	1.94	0.49
8:XH:14:ARG:O	8:XH:14:ARG:HG2	2.12	0.49
14:XN:8:GLU:O	14:XN:10:ALA:N	2.45	0.49
19:XS:9:VAL:O	19:XS:10:PHE:HB3	2.13	0.49
20:XT:37:SER:O	20:XT:41:ILE:HG12	2.12	0.49
51:Y5:2:ALA:O	51:Y5:3:LYS:CB	2.60	0.49
25:YA:26:G:N1	25:YA:27:G:N2	2.61	0.49
25:YA:389:G:H1	35:YP:71:VAL:HG12	1.77	0.49
25:YA:628:G:H5''	54:Y8:18:ALA:HB2	1.95	0.49
25:YA:76:C:O2'	48:Y2:62:THR:HG21	2.13	0.49
25:YA:2239:G:H5'	27:YD:251:GLY:HA3	1.95	0.49
27:YD:44:ASN:H	27:YD:44:ASN:ND2	1.97	0.49
28:YE:17:ASP:N	28:YE:17:ASP:OD2	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:56:ALA:HB2	30:YG:153:ARG:NE	2.27	0.49
31:YH:151:ILE:C	31:YH:152:ARG:O	2.49	0.49
31:YH:153:LYS:CB	31:YH:154:PRO:CD	2.69	0.49
32:YI:128:LEU:O	32:YI:138:ILE:N	2.44	0.49
32:YI:114:LEU:HD12	32:YI:129:THR:O	2.12	0.49
37:YR:18:LEU:C	37:YR:18:LEU:HD13	2.33	0.49
26:YB:52:A:H62	38:YS:33:LYS:HG3	1.77	0.49
41:YV:29:PRO:O	41:YV:61:VAL:HG22	2.12	0.49
41:YV:76:LYS:HG3	41:YV:81:TYR:CD1	2.47	0.49
1:QA:167:G:H2'	1:QA:168:G:C8	2.47	0.49
1:QA:244:U:H4'	1:QA:245:C:C5'	2.43	0.49
1:QA:538:G:H2'	1:QA:539:A:C8	2.47	0.49
1:QA:539:A:OP2	12:QL:115:LYS:HE3	2.13	0.49
2:QB:16:HIS:HB3	2:QB:210:SER:HB2	1.95	0.49
2:QB:68:ILE:O	2:QB:91:PRO:HD2	2.13	0.49
5:QE:41:VAL:CG1	5:QE:112:LEU:O	2.60	0.49
15:QO:77:ARG:HA	15:QO:80:ALA:HB3	1.95	0.49
17:QQ:74:LEU:HD12	17:QQ:75:ARG:NE	2.28	0.49
6:QF:97:PHE:CD2	18:QR:31:LEU:HD21	2.48	0.49
20:QT:60:GLU:HG3	20:QT:81:LYS:HE3	1.94	0.49
51:R5:48:GLU:HA	51:R5:59:GLU:CG	2.43	0.49
25:RA:2168:G:N2	25:RA:2170:A:N7	2.61	0.49
25:RA:2645:G:H3'	25:RA:2646:C:C5'	2.32	0.49
25:RA:330:A:H2	25:RA:1210:A:H2'	1.78	0.49
25:RA:852:G:H1	25:RA:925:C:H42	1.61	0.49
29:RF:45:ARG:HG2	29:RF:45:ARG:NH1	2.28	0.49
30:RG:115:ARG:HG2	30:RG:115:ARG:NH1	2.26	0.49
31:RH:128:PRO:HD2	31:RH:129:THR:N	2.25	0.49
33:RN:30:ILE:O	33:RN:34:LEU:HD23	2.13	0.49
33:RN:95:PRO:O	33:RN:97:ARG:N	2.46	0.49
35:RP:147:LEU:O	35:RP:148:LEU:HB2	2.11	0.49
35:RP:47:ASP:OD1	35:RP:49:ARG:NH1	2.46	0.49
25:RA:2839:G:O2'	37:RR:49:ASP:OD2	2.30	0.49
41:RV:7:THR:HG23	41:RV:22:VAL:HG11	1.94	0.49
41:RV:29:PRO:O	41:RV:61:VAL:HG22	2.12	0.49
42:RW:30:GLU:O	42:RW:34:ASN:ND2	2.46	0.49
45:RZ:107:THR:HG22	45:RZ:108:PRO:HA	1.94	0.49
45:RZ:69:THR:HG22	45:RZ:90:VAL:HG22	1.94	0.49
1:XA:524:G:H2'	1:XA:525:C:C6	2.47	0.49
3:XC:188:LEU:CD2	3:XC:188:LEU:N	2.76	0.49
5:XE:153:LYS:HZ3	5:XE:153:LYS:HB2	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:79:LEU:HD13	9:XI:79:LEU:O	2.12	0.49
13:XM:73:GLU:O	13:XM:76:ALA:HB3	2.13	0.49
13:XM:90:LEU:HA	13:XM:93:ARG:CD	2.34	0.49
17:XQ:67:LYS:HA	17:XQ:70:ARG:HH12	1.76	0.49
6:XF:101:ALA:HA	18:XR:28:GLU:HG2	1.95	0.49
19:XS:62:ILE:C	19:XS:63:THR:HG22	2.33	0.49
30:YG:113:ARG:HD2	50:Y4:33:VAL:CG1	2.43	0.49
52:Y6:20:ASN:CG	52:Y6:21:TYR:N	2.66	0.49
52:Y6:9:LEU:HD13	52:Y6:26:ASN:HD22	1.76	0.49
52:Y6:37:ARG:HE	52:Y6:37:ARG:HA	1.77	0.49
25:YA:1250:G:OP2	35:YP:21:ARG:HD3	2.13	0.49
25:YA:1930:G:HO2'	25:YA:1931:U:P	2.36	0.49
25:YA:270(T):G:OP1	47:Y1:97:LEU:HD13	2.12	0.49
25:YA:748:G:C6	42:YW:90:ARG:NH1	2.81	0.49
25:YA:934:G:H2'	25:YA:935:C:C6	2.47	0.49
25:YA:945:A:H4'	25:YA:946:G:OP1	2.13	0.49
27:YD:35:LYS:CG	27:YD:64:ILE:HG22	2.42	0.49
28:YE:119:ARG:HD3	28:YE:160:TYR:CD2	2.47	0.49
30:YG:115:ARG:HG2	30:YG:115:ARG:HH11	1.77	0.49
31:YH:98:LEU:HD12	31:YH:102:ALA:O	2.13	0.49
32:YI:35:LEU:O	32:YI:36:ALA:CB	2.61	0.49
33:YN:4:TYR:OH	33:YN:7:LYS:NZ	2.46	0.49
33:YN:95:PRO:O	33:YN:97:ARG:N	2.46	0.49
36:YQ:23:GLY:O	36:YQ:24:GLY:O	2.30	0.49
37:YR:33:ARG:NH2	51:Y5:55:ARG:CG	2.66	0.49
40:YU:64:ARG:NH2	40:YU:64:ARG:CG	2.70	0.49
44:YY:84:ARG:HD3	44:YY:86:ARG:NH1	2.28	0.49
45:YZ:77:ASP:OD2	45:YZ:80:ARG:HB2	2.12	0.49
1:QA:1053:G:N7	1:QA:1200:C:H5''	2.28	0.49
1:QA:1352:C:H42	1:QA:1370:G:H1	1.61	0.49
2:QB:170:GLU:C	2:QB:172:ILE:HD12	2.33	0.49
2:QB:193:ASP:OD2	2:QB:196:LEU:CG	2.57	0.49
2:QB:42:ILE:HD11	2:QB:202:PRO:HB2	1.95	0.49
3:QC:173:VAL:N	3:QC:174:PRO:HD3	2.28	0.49
3:QC:188:LEU:CD2	3:QC:188:LEU:N	2.76	0.49
4:QD:9:CYS:C	4:QD:11:LEU:H	2.16	0.49
9:QI:110:GLU:HG3	9:QI:110:GLU:O	2.12	0.49
10:QJ:49:VAL:CG1	10:QJ:50:ILE:N	2.76	0.49
10:QJ:94:VAL:CG1	10:QJ:95:GLU:N	2.76	0.49
11:QK:25:TYR:N	11:QK:25:TYR:CD1	2.80	0.49
20:QT:97:ALA:HB3	20:QT:99:LEU:CD1	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:81:LYS:O	47:R1:82:LEU:O	2.30	0.49
30:RG:113:ARG:HD2	50:R4:33:VAL:CG1	2.43	0.49
51:R5:2:ALA:O	51:R5:3:LYS:CB	2.61	0.49
51:R5:52:TYR:O	51:R5:53:ALA:CB	2.60	0.49
52:R6:27:LYS:CB	52:R6:27:LYS:NZ	2.73	0.49
52:R6:44:ARG:O	52:R6:45:LYS:CB	2.60	0.49
25:RA:1344:G:H4'	25:RA:1384:A:N7	2.28	0.49
25:RA:1441:G:H2'	25:RA:1442:G:C8	2.47	0.49
25:RA:1790:C:H5''	25:RA:1791:A:OP1	2.12	0.49
25:RA:1931:U:H6	25:RA:1932:A:C8	2.31	0.49
25:RA:242:G:H4'	25:RA:243:U:O5'	2.12	0.49
25:RA:2051:A:H5'	25:RA:2578:G:O4'	2.12	0.49
25:RA:751:A:C6	25:RA:789:A:C5	3.00	0.49
28:RE:119:ARG:HD3	28:RE:160:TYR:HD2	1.78	0.49
28:RE:46:ALA:HB1	28:RE:80:GLU:HB2	1.94	0.49
28:RE:95:ILE:H	28:RE:95:ILE:CD1	2.19	0.49
29:RF:129:PHE:CD2	29:RF:163:VAL:HG21	2.48	0.49
31:RH:98:LEU:HD12	31:RH:102:ALA:O	2.13	0.49
31:RH:12:PRO:HD3	31:RH:48:GLY:O	2.13	0.49
31:RH:137:ASP:CB	31:RH:140:LYS:HB2	2.43	0.49
35:RP:64:LYS:C	35:RP:66:GLY:N	2.56	0.49
36:RQ:86:GLY:O	36:RQ:88:GLY:N	2.46	0.49
41:RV:79:VAL:HG22	41:RV:79:VAL:O	2.12	0.49
41:RV:91:TYR:CD1	41:RV:91:TYR:C	2.87	0.49
43:RX:51:VAL:HG13	43:RX:81:VAL:HG23	1.93	0.49
45:RZ:111:VAL:O	45:RZ:111:VAL:HG22	2.12	0.49
45:RZ:124:ILE:O	45:RZ:124:ILE:HG23	2.11	0.49
45:RZ:125:LEU:HG	45:RZ:164:ALA:HB1	1.95	0.49
45:RZ:72:ARG:HH11	45:RZ:72:ARG:CG	2.26	0.49
1:XA:1003:G:H21	1:XA:1005:A:H5'	1.77	0.49
1:XA:191(D):U:H2'	1:XA:191(E):G:H8	1.76	0.49
2:XB:95:GLN:NE2	2:XB:147:LYS:HE2	2.27	0.49
2:XB:7:VAL:CG2	2:XB:8:LYS:HD3	2.43	0.49
5:XE:12:LEU:HD23	5:XE:13:ILE:H	1.76	0.49
5:XE:60:TYR:CE1	5:XE:64:ARG:NH2	2.77	0.49
7:XG:23:VAL:O	7:XG:27:ILE:CD1	2.60	0.49
8:XH:109:ILE:HG12	8:XH:110:ALA:N	2.27	0.49
9:XI:22:GLY:HA3	9:XI:60:ASP:OD2	2.13	0.49
10:XJ:63:PHE:CD1	14:XN:58:LYS:HA	2.35	0.49
20:XT:60:GLU:HG3	20:XT:81:LYS:HE3	1.94	0.49
46:Y0:25:ARG:HD2	46:Y0:29:GLN:HE21	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:3:LEU:HD21	50:Y4:25:TYR:CE1	2.48	0.49
54:Y8:52:LYS:H	54:Y8:53:PRO:HD2	1.66	0.49
54:Y8:16:ILE:CD1	54:Y8:57:ARG:HG2	2.42	0.49
25:YA:1049:C:H1'	25:YA:1113:U:H4'	1.94	0.49
25:YA:1264:G:H3'	25:YA:1265:A:H5''	1.95	0.49
25:YA:1266:G:OP2	51:Y5:20:ARG:NE	2.44	0.49
25:YA:1368:G:C2	25:YA:1369:G:C8	3.01	0.49
25:YA:2185:C:H2'	25:YA:2186:G:C8	2.47	0.49
25:YA:2630:G:H1	25:YA:2788:C:H42	1.60	0.49
25:YA:2846:G:N2	25:YA:2871:C:H1'	2.28	0.49
25:YA:299:A:H5'	25:YA:300:A:OP2	2.13	0.49
27:YD:237:GLU:HA	27:YD:237:GLU:OE1	2.11	0.49
31:YH:124:GLU:HB3	31:YH:132:ARG:CG	2.43	0.49
31:YH:153:LYS:O	31:YH:154:PRO:O	2.30	0.49
31:YH:42:ARG:O	31:YH:52:VAL:HA	2.13	0.49
31:YH:54:ARG:HD3	31:YH:65:HIS:ND1	2.27	0.49
35:YP:14:LYS:O	35:YP:15:ARG:C	2.51	0.49
35:YP:47:ASP:OD1	35:YP:49:ARG:NH1	2.46	0.49
36:YQ:86:GLY:O	36:YQ:88:GLY:N	2.46	0.49
44:YY:47:LYS:C	44:YY:49:VAL:H	2.16	0.49
44:YY:81:LYS:HD3	44:YY:97:ARG:HD3	1.94	0.49
44:YY:95:LYS:N	44:YY:95:LYS:CD	2.76	0.49
45:YZ:134:PRO:HB2	45:YZ:136:PHE:O	2.12	0.49
1:QA:1190:G:OP1	3:QC:4:LYS:HA	2.13	0.49
1:QA:1250:A:H2	1:QA:1353:G:H21	1.59	0.49
1:QA:664:G:N2	1:QA:741:G:H1	2.10	0.49
2:QB:207:ALA:O	2:QB:209:ARG:N	2.45	0.49
5:QE:42:GLY:CA	5:QE:136:MET:HE1	2.42	0.49
8:QH:122:ARG:O	8:QH:125:ARG:N	2.46	0.49
9:QI:112:LYS:HD3	9:QI:113:LYS:O	2.13	0.49
9:QI:79:LEU:O	9:QI:83:ARG:HG2	2.13	0.49
10:QJ:33:GLN:HB2	10:QJ:75:ILE:CD1	2.43	0.49
13:QM:4:ILE:HG22	13:QM:5:ALA:H	1.75	0.49
19:QS:27:GLU:O	19:QS:28:LYS:CG	2.53	0.49
1:QA:191:G:N9	20:QT:105:SER:HB3	2.27	0.49
20:QT:26:ASN:CB	20:QT:71:THR:HG23	2.43	0.49
25:RA:851:U:H1'	49:R3:46:ASN:HD21	1.78	0.49
50:R4:10:VAL:CG2	50:R4:11:PRO:HD2	2.43	0.49
52:R6:20:ASN:CG	52:R6:21:TYR:N	2.66	0.49
52:R6:7:ILE:O	52:R6:9:LEU:N	2.46	0.49
25:RA:518:G:H2'	25:RA:519:U:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:861:A:N3	26:RB:79:C:O2'	2.46	0.49
28:RE:38:THR:O	28:RE:42:ASP:HB2	2.13	0.49
30:RG:114:ILE:HG21	30:RG:117:PHE:HB2	1.93	0.49
30:RG:36:LYS:HA	30:RG:95:ARG:HG2	1.95	0.49
31:RH:103:LEU:H	31:RH:103:LEU:HD23	1.78	0.49
32:RI:1:MET:HG3	32:RI:23:PRO:HA	1.94	0.49
33:RN:73:THR:CG2	33:RN:82:LEU:HD11	2.43	0.49
34:RO:55:GLY:O	34:RO:56:ASP:C	2.50	0.49
35:RP:36:LYS:HB2	35:RP:40:SER:HB3	1.94	0.49
36:RQ:31:ASP:O	36:RQ:32:TYR:CG	2.66	0.49
37:RR:44:LEU:HD22	37:RR:48:VAL:CG2	2.43	0.49
39:RT:111:ARG:O	39:RT:112:ARG:CG	2.55	0.49
39:RT:16:ARG:HD3	39:RT:19:LEU:CG	2.43	0.49
41:RV:22:VAL:HG12	41:RV:23:GLU:H	1.76	0.49
41:RV:35:LEU:HD22	41:RV:57:VAL:O	2.13	0.49
42:RW:51:LEU:HD23	42:RW:105:VAL:HG11	1.95	0.49
44:RY:5:MET:HE1	44:RY:32:PRO:HB3	1.94	0.49
44:RY:6:HIS:O	44:RY:7:VAL:CG1	2.59	0.49
45:RZ:77:ASP:OD2	45:RZ:80:ARG:HB2	2.12	0.49
1:XA:1022:G:H2'	1:XA:1023:G:H8	1.77	0.49
1:XA:1284:C:H3'	1:XA:1285:A:C8	2.47	0.49
1:XA:1347:G:C8	9:XI:107:ARG:HB3	2.48	0.49
1:XA:417:C:H2'	1:XA:418:C:C6	2.47	0.49
1:XA:798:G:OP1	11:XK:122:LYS:NZ	2.46	0.49
2:XB:39:ILE:O	2:XB:41:ILE:HD12	2.12	0.49
3:XC:87:LEU:C	3:XC:89:GLU:N	2.65	0.49
4:XD:206:PHE:HD2	4:XD:207:TYR:CE1	2.31	0.49
5:XE:45:PHE:CD2	5:XE:47:LYS:HD2	2.47	0.49
7:XG:63:LYS:HD2	7:XG:63:LYS:O	2.13	0.49
13:XM:12:ASN:O	13:XM:13:LYS:HB2	2.13	0.49
13:XM:30:ALA:O	13:XM:31:LYS:C	2.49	0.49
13:XM:3:ARG:HA	13:XM:9:ILE:HG12	1.95	0.49
12:XL:11:VAL:HG13	17:XQ:29:HIS:CD2	2.48	0.49
19:XS:64:GLU:C	50:Y4:55:ARG:NH1	2.66	0.49
20:XT:97:ALA:HB3	20:XT:99:LEU:CD1	2.43	0.49
47:Y1:80:LEU:C	47:Y1:81:LYS:CE	2.77	0.49
25:YA:1339:G:N2	25:YA:1603:A:H1'	2.27	0.49
25:YA:1374:G:H2'	25:YA:1375:C:O4'	2.12	0.49
25:YA:1742:C:H5'	25:YA:1743:G:OP2	2.13	0.49
25:YA:2123:G:H2'	25:YA:2124:G:H8	1.78	0.49
25:YA:530:G:H1'	25:YA:2021:C:O2'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:123:ALA:HB3	27:YD:131:LEU:HG	1.94	0.49
30:YG:115:ARG:HG2	30:YG:115:ARG:NH1	2.26	0.49
30:YG:92:VAL:O	30:YG:92:VAL:HG13	2.11	0.49
31:YH:13:LYS:HE2	31:YH:13:LYS:CA	2.39	0.49
33:YN:56:ASN:ND2	33:YN:125:GLY:C	2.66	0.49
35:YP:101:VAL:CG1	35:YP:102:ARG:N	2.75	0.49
36:YQ:112:GLU:CD	36:YQ:112:GLU:H	2.17	0.49
38:YS:11:LYS:HG2	38:YS:11:LYS:O	2.12	0.49
41:YV:35:LEU:HD22	41:YV:57:VAL:O	2.13	0.49
41:YV:91:TYR:CD1	41:YV:91:TYR:C	2.87	0.49
42:YW:88:ARG:HB3	42:YW:92:ARG:CB	2.42	0.49
44:YY:97:ARG:HG2	44:YY:97:ARG:NH1	2.28	0.49
1:QA:65:U:H5''	1:QA:65:U:H6	1.77	0.48
1:QA:971:G:O2'	1:QA:1365:G:O2'	2.18	0.48
2:QB:39:ILE:O	2:QB:41:ILE:HD12	2.12	0.48
7:QG:78:ARG:HH11	7:QG:78:ARG:HG3	1.78	0.48
10:QJ:3:LYS:O	10:QJ:100:THR:HA	2.13	0.48
11:QK:82:VAL:O	11:QK:108:ILE:HA	2.13	0.48
1:QA:690:G:H22	11:QK:55:LYS:HZ1	1.60	0.48
16:QP:43:LYS:HE2	16:QP:48:TRP:CZ3	2.48	0.48
47:R1:19:GLN:OE1	47:R1:19:GLN:HA	2.12	0.48
47:R1:25:LYS:C	47:R1:27:GLU:H	2.17	0.48
50:R4:47:GLN:O	50:R4:48:ARG:CB	2.61	0.48
52:R6:8:LYS:O	52:R6:27:LYS:HA	2.13	0.48
54:R8:41:ILE:HG13	54:R8:42:ARG:N	2.28	0.48
54:R8:58:ILE:O	54:R8:61:LEU:HD12	2.13	0.48
25:RA:1022:G:C6	25:RA:1140:C:C4	3.01	0.48
25:RA:1622:G:C2	25:RA:1623:G:C8	3.01	0.48
25:RA:226:G:O2'	25:RA:227:A:O4'	2.30	0.48
25:RA:2585:U:HO2'	25:RA:2586:C:C5'	2.25	0.48
25:RA:2735:G:H2'	25:RA:2736:G:C8	2.46	0.48
25:RA:312:G:H4'	25:RA:331:A:C2	2.47	0.48
25:RA:482:A:N6	25:RA:506:G:O2'	2.46	0.48
25:RA:64:A:C4	43:RX:66:LEU:HD13	2.48	0.48
29:RF:155:LEU:HD23	29:RF:186:ILE:HA	1.95	0.48
34:RO:107:ARG:NH1	39:RT:36:GLU:OE1	2.46	0.48
35:RP:30:THR:O	35:RP:33:ARG:HB2	2.12	0.48
35:RP:52:GLU:OE2	35:RP:57:THR:HA	2.13	0.48
37:RR:67:LEU:HD13	37:RR:76:VAL:CG2	2.28	0.48
38:RS:48:LEU:CD1	38:RS:48:LEU:N	2.76	0.48
38:RS:59:LYS:HG2	38:RS:60:GLY:N	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RZ:136:PHE:C	45:RZ:136:PHE:CD1	2.86	0.48
1:XA:501:C:H1'	1:XA:549:C:H1'	1.95	0.48
2:XB:15:VAL:H	2:XB:16:HIS:CE1	2.31	0.48
2:XB:16:HIS:HB3	2:XB:210:SER:HB2	1.95	0.48
2:XB:181:PHE:O	2:XB:183:PRO:HD3	2.12	0.48
2:XB:193:ASP:OD2	2:XB:196:LEU:CG	2.57	0.48
2:XB:69:LEU:HB3	2:XB:162:ILE:HG22	1.95	0.48
7:XG:80:VAL:HG12	7:XG:81:GLY:N	2.28	0.48
8:XH:45:ILE:O	8:XH:45:ILE:HG13	2.13	0.48
2:XB:178:ARG:HH22	8:XH:68:ARG:NH2	2.10	0.48
9:XI:79:LEU:O	9:XI:83:ARG:HG2	2.13	0.48
11:XK:34:ASP:HB2	11:XK:35:PRO:HD2	1.95	0.48
11:XK:41:THR:HG22	11:XK:42:TRP:N	2.28	0.48
12:XL:6:THR:O	12:XL:7:ILE:C	2.51	0.48
13:XM:16:ASP:HB3	13:XM:34:LEU:HD11	1.93	0.48
16:XP:43:LYS:HE2	16:XP:48:TRP:CZ3	2.47	0.48
16:XP:57:ARG:HG3	16:XP:57:ARG:HH11	1.78	0.48
22:XV:75:C:H2'	22:XV:76:A:O4'	2.12	0.48
25:YA:1364:G:N7	47:Y1:2:SER:N	2.60	0.48
48:Y2:16:LEU:O	48:Y2:17:SER:CB	2.56	0.48
51:Y5:49:CYS:SG	51:Y5:58:LEU:HB2	2.53	0.48
52:Y6:7:ILE:O	52:Y6:9:LEU:N	2.46	0.48
54:Y8:33:ASN:O	54:Y8:35:GLN:N	2.46	0.48
25:YA:942:G:O2'	25:YA:1189:A:H2'	2.12	0.48
25:YA:1548:C:H2'	25:YA:1549:C:C6	2.48	0.48
25:YA:2637:U:H5''	28:YE:82:ARG:NH2	2.27	0.48
25:YA:612:G:N2	25:YA:617:G:C5	2.81	0.48
25:YA:729:G:N7	27:YD:209:ALA:HB3	2.28	0.48
30:YG:77:ILE:O	30:YG:81:LYS:O	2.31	0.48
25:YA:195:A:OP1	35:YP:46:LYS:HE2	2.13	0.48
35:YP:52:GLU:OE2	35:YP:57:THR:HA	2.13	0.48
35:YP:6:LEU:O	35:YP:7:ARG:O	2.31	0.48
38:YS:33:LYS:HB3	38:YS:34:HIS:CD2	2.48	0.48
45:YZ:136:PHE:CD1	45:YZ:136:PHE:C	2.86	0.48
1:QA:186(D):C:H2'	1:QA:186(E):C:C6	2.47	0.48
1:QA:192:U:C4'	20:QT:103:GLY:HA2	2.43	0.48
1:QA:545:C:OP1	4:QD:61:LYS:NZ	2.41	0.48
2:QB:180:LEU:O	2:QB:181:PHE:HB2	2.13	0.48
2:QB:214:ILE:O	2:QB:218:ALA:HB2	2.13	0.48
2:QB:5:ILE:HG21	2:QB:224:GLN:HG2	1.95	0.48
4:QD:163:GLU:O	4:QD:165:MET:N	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:78:HIS:CE1	5:QE:142:LEU:HD23	2.48	0.48
9:QI:18:PHE:HB2	9:QI:62:TYR:HB3	1.95	0.48
11:QK:34:ASP:HB2	11:QK:35:PRO:HD2	1.95	0.48
12:QL:119:LYS:C	12:QL:120:TYR:HD1	2.16	0.48
12:QL:27:LEU:C	12:QL:29:GLY:N	2.64	0.48
23:QX:4:C:C3'	23:QX:5:C:H5'	2.41	0.48
25:RA:1034:G:H2'	25:RA:1035:U:O4'	2.13	0.48
25:RA:1069:A:O4'	25:RA:1096:A:O2'	2.30	0.48
25:RA:177:G:OP2	25:RA:177:G:N2	2.39	0.48
25:RA:2544:G:H2'	25:RA:2545:G:C8	2.48	0.48
25:RA:872:A:H4'	36:RQ:66:ILE:HD11	1.94	0.48
25:RA:995:C:N4	33:RN:2:LYS:HG3	2.28	0.48
28:RE:78:LEU:CD2	28:RE:79:ARG:HD2	2.43	0.48
30:RG:115:ARG:HH11	30:RG:115:ARG:HG2	1.77	0.48
30:RG:77:ILE:O	30:RG:81:LYS:O	2.31	0.48
31:RH:124:GLU:HB3	31:RH:132:ARG:CG	2.43	0.48
31:RH:42:ARG:O	31:RH:52:VAL:HA	2.13	0.48
35:RP:35:HIS:O	35:RP:36:LYS:O	2.31	0.48
36:RQ:112:GLU:CD	36:RQ:112:GLU:H	2.17	0.48
37:RR:42:LYS:HA	37:RR:45:ARG:HD2	1.95	0.48
40:RU:81:HIS:CE1	40:RU:117:GLN:HG3	2.48	0.48
43:RX:44:GLU:OE1	43:RX:50:LYS:HD2	2.13	0.48
44:RY:101:LYS:O	44:RY:102:CYS:SG	2.66	0.48
44:RY:47:LYS:C	44:RY:49:VAL:H	2.16	0.48
44:RY:81:LYS:HZ2	44:RY:98:VAL:CG1	2.25	0.48
45:RZ:93:ASP:OD1	45:RZ:94:GLU:N	2.46	0.48
1:XA:1006:C:H2'	1:XA:1007:C:C6	2.47	0.48
2:XB:16:HIS:HD2	2:XB:210:SER:HA	1.77	0.48
1:XA:1194:U:H4'	5:XE:22:GLY:O	2.13	0.48
10:XJ:3:LYS:O	10:XJ:100:THR:HA	2.13	0.48
10:XJ:56:HIS:O	10:XJ:58:ASP:O	2.30	0.48
11:XK:13:GLN:HG3	11:XK:75:TYR:O	2.14	0.48
11:XK:91:ARG:HH22	18:XR:88:LYS:NZ	2.09	0.48
12:XL:85:ILE:HD11	12:XL:98:TYR:CB	2.43	0.48
13:XM:23:TYR:HB3	13:XM:67:GLU:CG	2.39	0.48
16:XP:39:TYR:CE2	16:XP:41:PRO:HD3	2.47	0.48
20:XT:53:LEU:HA	20:XT:56:MET:CB	2.43	0.48
20:XT:37:SER:HB3	20:XT:84:LEU:CD2	2.43	0.48
21:XU:9:ARG:HH11	21:XU:9:ARG:HG2	1.78	0.48
30:YG:143:GLU:HA	50:Y4:28:LYS:HD3	1.95	0.48
52:Y6:27:LYS:O	52:Y6:28:ARG:HG2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:Y8:35:GLN:HA	54:Y8:35:GLN:OE1	2.13	0.48
25:YA:1557:C:H2'	25:YA:1558:A:C2	2.48	0.48
25:YA:205:G:O2'	25:YA:206:U:OP2	2.30	0.48
25:YA:507:A:C5'	25:YA:508:G:H5'	2.42	0.48
25:YA:7:G:H2'	25:YA:8:A:O4'	2.13	0.48
26:YB:43:C:O2	30:YG:95:ARG:NH2	2.47	0.48
27:YD:198:ASN:C	27:YD:198:ASN:HD22	2.16	0.48
27:YD:25:THR:O	27:YD:27:THR:HG22	2.12	0.48
31:YH:23:ARG:HD2	31:YH:34:GLU:OE2	2.12	0.48
32:YI:123:LEU:HA	32:YI:142:VAL:CG2	2.44	0.48
32:YI:1:MET:HG3	32:YI:23:PRO:HA	1.94	0.48
35:YP:144:GLU:O	35:YP:144:GLU:OE1	2.31	0.48
36:YQ:34:LEU:HD23	36:YQ:104:PHE:HD1	1.77	0.48
37:YR:71:GLN:HA	37:YR:71:GLN:HE21	1.77	0.48
40:YU:91:ASP:O	40:YU:95:LEU:N	2.42	0.48
41:YV:18:LEU:HB3	41:YV:96:ILE:CG1	2.43	0.48
25:YA:142:G:H1'	43:YX:37:THR:CG2	2.44	0.48
1:QA:129(A):G:N2	1:QA:188:U:O2'	2.46	0.48
1:QA:189:U:H3	17:QQ:63:ARG:HB3	1.78	0.48
1:QA:20:U:H2'	1:QA:21:G:O4'	2.13	0.48
1:QA:964:A:N3	1:QA:969:A:O2'	2.37	0.48
2:QB:7:VAL:CG2	2:QB:8:LYS:HD3	2.43	0.48
11:QK:19:ALA:CB	11:QK:32:ILE:HG22	2.42	0.48
12:QL:38:THR:CG2	12:QL:57:LYS:HB3	2.44	0.48
46:R0:37:LEU:N	46:R0:59:LEU:O	2.41	0.48
48:R2:69:ARG:HH11	48:R2:69:ARG:HB3	1.79	0.48
51:R5:45:VAL:O	51:R5:45:VAL:HG12	2.13	0.48
52:R6:27:LYS:O	52:R6:28:ARG:HG2	2.13	0.48
25:RA:1041:C:H2'	25:RA:1042:G:C8	2.47	0.48
25:RA:1425:G:H2'	25:RA:1426:G:C8	2.48	0.48
25:RA:2418:A:H2'	25:RA:2419:U:H6	1.78	0.48
25:RA:256:A:H2'	25:RA:257:A:C8	2.47	0.48
25:RA:260:G:O4'	25:RA:621:A:H1'	2.13	0.48
25:RA:2783:G:H2'	25:RA:2784:C:H6	1.78	0.48
25:RA:389:G:H22	35:RP:72:PRO:CD	2.25	0.48
25:RA:678:C:H2'	25:RA:679:C:C6	2.47	0.48
25:RA:774:A:H2	25:RA:787:U:O2'	1.97	0.48
26:RB:8:U:H3	26:RB:112:G:H1	1.61	0.48
27:RD:233:HIS:CD2	27:RD:233:HIS:H	2.29	0.48
30:RG:125:PHE:HB3	30:RG:166:ASP:HB2	1.95	0.48
31:RH:123:PHE:O	31:RH:125:VAL:HG23	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RI:10:GLU:O	32:RI:11:ASN:O	2.31	0.48
33:RN:95:PRO:O	33:RN:96:GLU:C	2.51	0.48
37:RR:70:LEU:C	37:RR:72:ASP:H	2.16	0.48
38:RS:11:LYS:O	38:RS:11:LYS:HG2	2.12	0.48
38:RS:33:LYS:HB3	38:RS:34:HIS:CD2	2.48	0.48
41:RV:6:LYS:HD3	41:RV:11:GLN:HG2	1.96	0.48
43:RX:35:THR:O	43:RX:37:THR:N	2.47	0.48
1:XA:1122:U:O4	1:XA:1123:A:N6	2.47	0.48
1:XA:489:C:H2'	1:XA:490:G:H8	1.77	0.48
1:XA:539:A:OP2	12:XL:115:LYS:HE3	2.12	0.48
2:XB:134:GLU:HB3	2:XB:138:LEU:HD12	1.93	0.48
2:XB:154:LEU:O	2:XB:155:LEU:HB2	2.13	0.48
4:XD:9:CYS:SG	4:XD:22:LYS:CE	3.01	0.48
5:XE:83:GLU:HG2	5:XE:88:LYS:CG	2.41	0.48
5:XE:84:PHE:HD2	5:XE:130:ASN:O	1.97	0.48
6:XF:51:PRO:HA	6:XF:55:ASP:O	2.12	0.48
6:XF:79:LEU:O	6:XF:85:VAL:HG11	2.14	0.48
1:XA:1346:A:C4	7:XG:10:ARG:NH1	2.81	0.48
7:XG:107:ALA:CB	7:XG:134:ALA:HB2	2.44	0.48
10:XJ:33:GLN:HB2	10:XJ:75:ILE:CD1	2.43	0.48
18:XR:46:GLU:HG3	18:XR:47:THR:N	2.29	0.48
24:XY:40:G:O2'	24:XY:41:A:H5'	2.13	0.48
36:YQ:80:GLU:HG3	46:Y0:5:LYS:HB3	1.95	0.48
47:Y1:8:SER:OG	47:Y1:10:LYS:HG3	2.13	0.48
50:Y4:53:GLU:O	50:Y4:57:GLU:HG3	2.14	0.48
53:Y7:48:LYS:CG	53:Y7:49:ARG:H	2.23	0.48
25:YA:1779:U:OP2	25:YA:1784:A:N6	2.39	0.48
25:YA:2854:G:H2'	25:YA:2855:C:C6	2.48	0.48
25:YA:481:G:C4	25:YA:507:A:C2	3.02	0.48
25:YA:1812:A:O2'	27:YD:45:ASN:HB2	2.14	0.48
27:YD:48:ARG:HH11	27:YD:48:ARG:HG3	1.78	0.48
28:YE:38:THR:O	28:YE:42:ASP:HB2	2.13	0.48
29:YF:128:ALA:O	29:YF:129:PHE:HB2	2.13	0.48
29:YF:155:LEU:HD23	29:YF:186:ILE:HA	1.95	0.48
31:YH:12:PRO:HD3	31:YH:48:GLY:O	2.13	0.48
31:YH:137:ASP:CB	31:YH:140:LYS:HB2	2.43	0.48
37:YR:52:ILE:CG2	37:YR:94:TYR:CD1	2.95	0.48
38:YS:48:LEU:CD1	38:YS:48:LEU:N	2.76	0.48
38:YS:55:ALA:O	38:YS:56:LEU:HB3	2.14	0.48
39:YT:135:ALA:C	39:YT:137:LYS:H	2.16	0.48
41:YV:7:THR:HG23	41:YV:22:VAL:HG11	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:YZ:157:LEU:HA	45:YZ:161:VAL:HG11	1.95	0.48
1:QA:177:C:H2'	1:QA:178:C:C6	2.48	0.48
2:QB:15:VAL:H	2:QB:16:HIS:CE1	2.30	0.48
4:QD:121:VAL:O	4:QD:134:ASP:HA	2.14	0.48
4:QD:11:LEU:CD2	4:QD:66:ARG:HD3	2.41	0.48
5:QE:51:VAL:CB	5:QE:52:PRO:HD3	2.38	0.48
7:QG:80:VAL:HG12	7:QG:81:GLY:N	2.28	0.48
9:QI:113:LYS:H	9:QI:119:ALA:HA	1.77	0.48
15:QO:32:LEU:O	15:QO:33:THR:C	2.51	0.48
16:QP:71:ARG:HB2	16:QP:71:ARG:HH11	1.79	0.48
25:RA:380:U:O3'	47:R1:16:ASN:HB2	2.12	0.48
47:R1:93:GLU:O	47:R1:97:LEU:HD11	2.12	0.48
25:RA:824:A:H1'	25:RA:2358:G:N7	2.28	0.48
27:RD:35:LYS:HD2	27:RD:104:TYR:CE1	2.49	0.48
29:RF:198:ALA:O	29:RF:201:VAL:HG12	2.13	0.48
33:RN:12:ARG:NH1	33:RN:50:ASP:CG	2.67	0.48
35:RP:101:VAL:C	35:RP:103:ALA:H	2.17	0.48
36:RQ:87:LYS:O	36:RQ:89:ASN:N	2.43	0.48
38:RS:46:VAL:HG12	38:RS:47:THR:N	2.28	0.48
39:RT:132:LYS:O	39:RT:136:GLN:HG3	2.14	0.48
41:RV:18:LEU:HB3	41:RV:96:ILE:CG1	2.43	0.48
42:RW:36:LEU:CD1	42:RW:47:VAL:HG12	2.44	0.48
25:RA:1398:C:OP1	43:RX:53:LYS:NZ	2.46	0.48
1:XA:134:A:H1'	1:XA:325:A:C5	2.48	0.48
1:XA:429:U:H1'	1:XA:430:A:H5''	1.94	0.48
2:XB:140:HIS:C	2:XB:142:LEU:H	2.16	0.48
2:XB:180:LEU:O	2:XB:181:PHE:HB2	2.13	0.48
2:XB:206:ASP:HA	2:XB:211:ILE:HD11	1.94	0.48
2:XB:5:ILE:HG21	2:XB:224:GLN:HG2	1.96	0.48
10:XJ:49:VAL:CG1	10:XJ:50:ILE:N	2.75	0.48
10:XJ:94:VAL:CG1	10:XJ:95:GLU:N	2.76	0.48
10:XJ:98:ILE:H	10:XJ:98:ILE:CD1	2.24	0.48
11:XK:82:VAL:O	11:XK:108:ILE:HA	2.13	0.48
12:XL:38:THR:CG2	12:XL:57:LYS:HB3	2.44	0.48
22:XV:4:G:O2'	22:XV:5:G:H8	1.96	0.48
51:Y5:52:TYR:O	51:Y5:53:ALA:CB	2.60	0.48
25:YA:1013:C:N4	25:YA:1149:G:H1	2.07	0.48
25:YA:1316:U:H2'	25:YA:1317:A:C8	2.48	0.48
25:YA:1386:C:H2'	25:YA:1387:C:C6	2.48	0.48
25:YA:1264:G:H2'	25:YA:2014:A:N6	2.29	0.48
25:YA:2159:G:H2'	25:YA:2160:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2350:C:H5	54:Y8:42:ARG:HH12	1.61	0.48
25:YA:600:G:N2	25:YA:605:C:O3'	2.46	0.48
25:YA:898:C:C2'	25:YA:899:A:H5'	2.43	0.48
28:YE:47:VAL:O	28:YE:48:GLN:C	2.52	0.48
29:YF:107:LYS:O	29:YF:110:LEU:N	2.47	0.48
32:YI:10:GLU:O	32:YI:11:ASN:O	2.31	0.48
33:YN:30:ILE:O	33:YN:34:LEU:HD23	2.13	0.48
38:YS:18:ILE:O	38:YS:19:LYS:O	2.30	0.48
39:YT:16:ARG:HD3	39:YT:19:LEU:CG	2.43	0.48
40:YU:81:HIS:CE1	40:YU:117:GLN:HG3	2.49	0.48
40:YU:52:ARG:NH1	40:YU:52:ARG:CG	2.76	0.48
44:YY:35:TYR:CD1	44:YY:69:ALA:HB3	2.48	0.48
45:YZ:108:PRO:HG2	45:YZ:111:VAL:HA	1.95	0.48
1:QA:246:A:N6	1:QA:281:G:H1'	2.28	0.48
1:QA:607:A:H2'	1:QA:608:A:O4'	2.13	0.48
2:QB:16:HIS:HD2	2:QB:210:SER:HA	1.77	0.48
5:QE:100:VAL:O	5:QE:107:ARG:NH2	2.47	0.48
9:QI:118:LYS:NZ	9:QI:118:LYS:CB	2.76	0.48
16:QP:21:VAL:HG23	16:QP:34:GLU:H	1.79	0.48
17:QQ:63:ARG:HG2	17:QQ:64:PRO:N	2.29	0.48
19:QS:24:ALA:O	19:QS:25:LYS:HB2	2.13	0.48
22:QV:4:G:O2'	22:QV:5:G:H8	1.96	0.48
46:R0:66:VAL:HG22	46:R0:82:ARG:HB3	1.96	0.48
48:R2:69:ARG:CB	48:R2:69:ARG:HH11	2.25	0.48
52:R6:14:THR:OG1	52:R6:19:ARG:NE	2.41	0.48
53:R7:12:ARG:HG3	53:R7:12:ARG:HH11	1.78	0.48
25:RA:2420:C:OP1	54:R8:34:TRP:HB2	2.14	0.48
25:RA:1444(A):A:O2'	25:RA:1460:A:N3	2.47	0.48
25:RA:2528:U:O2'	25:RA:2530:A:OP1	2.25	0.48
25:RA:1637:A:H4'	25:RA:2711:A:O2'	2.14	0.48
25:RA:310:A:HO2'	25:RA:311:A:P	2.35	0.48
25:RA:455:C:N3	25:RA:472:A:H2'	2.28	0.48
28:RE:77:ILE:CD1	28:RE:78:LEU:N	2.70	0.48
33:RN:10:GLU:HA	33:RN:11:PRO:HD3	1.73	0.48
36:RQ:19:GLY:O	36:RQ:98:LYS:HD3	2.14	0.48
37:RR:61:HIS:O	37:RR:65:LEU:HD13	2.14	0.48
43:RX:11:PRO:HB3	43:RX:92:LEU:CD2	2.43	0.48
44:RY:57:GLN:O	44:RY:58:GLY:O	2.32	0.48
1:XA:977:A:H8	1:XA:1223:C:C4	2.31	0.48
1:XA:1326:C:OP1	21:XU:17:THR:OG1	2.23	0.48
1:XA:389:A:H2'	1:XA:390:C:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:97:TRP:HZ2	2:XB:102:LEU:HD13	1.78	0.48
2:XB:42:ILE:HD11	2:XB:202:PRO:HB2	1.95	0.48
3:XC:71:ALA:HA	3:XC:106:VAL:HB	1.94	0.48
3:XC:173:VAL:N	3:XC:174:PRO:HD3	2.28	0.48
4:XD:6:GLY:O	4:XD:8:VAL:HG23	2.14	0.48
5:XE:11:ILE:CG1	5:XE:31:LEU:HD12	2.42	0.48
5:XE:96:PRO:HA	5:XE:117:ASP:OD2	2.14	0.48
8:XH:86:ILE:HG13	8:XH:133:LEU:CD2	2.44	0.48
9:XI:118:LYS:CB	9:XI:118:LYS:NZ	2.75	0.48
15:XO:24:SER:OG	15:XO:25:THR:N	2.47	0.48
16:XP:40:ASP:C	16:XP:42:ARG:H	2.17	0.48
47:Y1:56:GLN:H	47:Y1:56:GLN:NE2	2.10	0.48
48:Y2:69:ARG:HH11	48:Y2:69:ARG:HB3	1.79	0.48
51:Y5:48:GLU:HA	51:Y5:59:GLU:HG2	1.94	0.48
25:YA:1114:G:H2'	25:YA:1115:G:C8	2.48	0.48
25:YA:577:G:O2'	25:YA:1254:A:OP1	2.27	0.48
25:YA:859:G:O2'	25:YA:860:U:P	2.71	0.48
25:YA:942:G:C6	25:YA:943:U:N3	2.81	0.48
31:YH:82:GLY:O	31:YH:83:TYR:O	2.31	0.48
32:YI:140:LEU:N	32:YI:140:LEU:CD2	2.77	0.48
35:YP:71:VAL:HG13	35:YP:72:PRO:CD	2.43	0.48
36:YQ:19:GLY:O	36:YQ:98:LYS:HD3	2.14	0.48
1:QA:945:G:N2	1:QA:1334:G:O2'	2.46	0.48
1:QA:1512:U:H2'	1:QA:1513:A:H8	1.78	0.48
2:QB:97:TRP:HZ2	2:QB:102:LEU:HD13	1.78	0.48
2:QB:200:ILE:H	2:QB:200:ILE:HD12	1.79	0.48
1:QA:1205:U:H1'	3:QC:195:VAL:HG23	1.96	0.48
3:QC:71:ALA:HA	3:QC:106:VAL:HB	1.95	0.48
4:QD:183:GLY:C	4:QD:184:LYS:HG3	2.34	0.48
11:QK:106:LYS:O	11:QK:107:SER:HB3	2.12	0.48
11:QK:19:ALA:CA	11:QK:32:ILE:HG22	2.43	0.48
16:QP:57:ARG:HH11	16:QP:57:ARG:HG3	1.78	0.48
23:QX:4:C:H42	24:QY:36:G:H1	1.60	0.48
46:R0:74:ARG:C	46:R0:76:GLY:N	2.66	0.48
51:R5:56:LYS:HD2	51:R5:56:LYS:N	2.13	0.48
54:R8:35:GLN:HA	54:R8:35:GLN:OE1	2.13	0.48
54:R8:56:GLU:O	54:R8:58:ILE:N	2.47	0.48
25:RA:1774:C:O5'	25:RA:1774:C:H6	1.97	0.48
25:RA:2283:C:P	52:R6:5:VAL:HG13	2.54	0.48
25:RA:2335:A:O2'	25:RA:2336:A:O5'	2.28	0.48
25:RA:239:U:H2'	25:RA:240:G:O4'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2695:C:H2'	25:RA:2696:U:H6	1.77	0.48
27:RD:130:ALA:HA	27:RD:192:THR:HA	1.95	0.48
27:RD:198:ASN:HD22	27:RD:198:ASN:C	2.17	0.48
25:RA:2637:U:H5''	28:RE:82:ARG:NH2	2.28	0.48
29:RF:107:LYS:O	29:RF:110:LEU:N	2.47	0.48
31:RH:10:PRO:C	31:RH:11:VAL:HG22	2.34	0.48
31:RH:7:LEU:N	31:RH:8:PRO:CD	2.77	0.48
35:RP:14:LYS:O	35:RP:15:ARG:C	2.51	0.48
35:RP:71:VAL:HG13	35:RP:72:PRO:CD	2.43	0.48
39:RT:135:ALA:C	39:RT:137:LYS:H	2.16	0.48
45:RZ:57:ILE:HG22	45:RZ:58:VAL:N	2.28	0.48
1:XA:1243:C:H2'	1:XA:1244:C:C6	2.48	0.48
1:XA:791:G:N2	1:XA:1497:G:O3'	2.46	0.48
1:XA:271:C:H2'	1:XA:272:C:H6	1.78	0.48
2:XB:5:ILE:O	2:XB:6:THR:O	2.32	0.48
3:XC:195:VAL:CG1	3:XC:196:LEU:H	2.27	0.48
3:XC:153:VAL:HA	3:XC:197:GLY:O	2.14	0.48
4:XD:154:ASN:O	4:XD:155:LEU:O	2.32	0.48
4:XD:196:LEU:HB3	4:XD:197:PRO:HD2	1.95	0.48
4:XD:3:ARG:O	4:XD:5:ILE:HG13	2.14	0.48
9:XI:112:LYS:HD3	9:XI:113:LYS:O	2.13	0.48
12:XL:119:LYS:C	12:XL:120:TYR:HD1	2.16	0.48
14:XN:22:THR:O	14:XN:23:ARG:CB	2.59	0.48
52:Y6:41:PRO:HD2	52:Y6:46:HIS:H	1.77	0.48
25:YA:1655:A:H4'	28:YE:115:GLY:N	2.28	0.48
25:YA:2681:C:HO2'	25:YA:2682:U:P	2.36	0.48
27:YD:35:LYS:HD2	27:YD:104:TYR:CE1	2.49	0.48
28:YE:77:ILE:CD1	28:YE:78:LEU:N	2.70	0.48
29:YF:198:ALA:O	29:YF:201:VAL:HG12	2.13	0.48
30:YG:125:PHE:HB3	30:YG:166:ASP:HB2	1.95	0.48
31:YH:7:LEU:N	31:YH:8:PRO:CD	2.77	0.48
35:YP:35:HIS:O	35:YP:36:LYS:O	2.31	0.48
35:YP:6:LEU:N	35:YP:6:LEU:CD2	2.75	0.48
39:YT:58:ASN:N	39:YT:58:ASN:HD22	2.10	0.48
45:YZ:19:ARG:HD3	45:YZ:25:PRO:HD2	1.95	0.48
45:YZ:33:LEU:CG	45:YZ:34:ASN:N	2.77	0.48
45:YZ:93:ASP:OD1	45:YZ:94:GLU:N	2.46	0.48
1:QA:1127:G:H21	1:QA:1147:C:H41	1.61	0.48
1:QA:113:G:H21	1:QA:353:A:H1'	1.79	0.48
1:QA:1159:U:O2'	1:QA:1160:G:N7	2.46	0.48
1:QA:1530:G:H2'	1:QA:1531:A:O5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:384:G:H2'	1:QA:385:C:C6	2.49	0.48
1:QA:812:C:O2'	1:QA:813:U:P	2.72	0.48
4:QD:165:MET:CE	4:QD:168:ARG:HD2	2.44	0.48
4:QD:165:MET:HE3	4:QD:168:ARG:HD2	1.96	0.48
4:QD:196:LEU:C	4:QD:198:VAL:N	2.66	0.48
4:QD:196:LEU:HB3	4:QD:197:PRO:HD2	1.96	0.48
5:QE:87:SER:HB3	5:QE:131:ILE:HD13	1.95	0.48
8:QH:109:ILE:HG12	8:QH:110:ALA:N	2.27	0.48
8:QH:6:ILE:O	8:QH:10:LEU:HG	2.14	0.48
8:QH:86:ILE:HG12	8:QH:135:CYS:HA	1.96	0.48
20:QT:50:GLU:HA	20:QT:100:ILE:CG2	2.43	0.48
50:R4:42:PHE:O	50:R4:43:TYR:C	2.51	0.48
51:R5:49:CYS:SG	51:R5:58:LEU:HB2	2.53	0.48
25:RA:1697:G:H5''	25:RA:1698:A:H3'	1.96	0.48
25:RA:1861:G:H1	25:RA:1881:C:H42	1.61	0.48
25:RA:2320:A:N3	25:RA:2320:A:H2'	2.29	0.48
25:RA:2777:G:OP2	25:RA:2781:A:O2'	2.27	0.48
25:RA:278:A:N1	25:RA:362:U:N3	2.61	0.48
25:RA:530:G:O2'	25:RA:532:A:N7	2.43	0.48
27:RD:25:THR:O	27:RD:26:LYS:C	2.52	0.48
28:RE:61:ARG:CB	28:RE:62:PRO:CD	2.90	0.48
28:RE:93:VAL:H	28:RE:95:ILE:CD1	2.23	0.48
29:RF:128:ALA:O	29:RF:129:PHE:HB2	2.13	0.48
29:RF:155:LEU:HA	29:RF:174:VAL:HG12	1.95	0.48
30:RG:16:ARG:HB3	30:RG:17:PRO:HD3	1.94	0.48
31:RH:104:GLU:HG3	31:RH:114:VAL:HG22	1.96	0.48
25:RA:1093:G:OP1	31:RH:170:ARG:HD2	2.13	0.48
32:RI:140:LEU:N	32:RI:140:LEU:CD2	2.77	0.48
33:RN:56:ASN:ND2	33:RN:125:GLY:C	2.65	0.48
33:RN:34:LEU:O	33:RN:49:GLY:HA3	2.13	0.48
35:RP:112:LEU:HD12	35:RP:127:ALA:CB	2.44	0.48
35:RP:144:GLU:OE1	35:RP:144:GLU:O	2.31	0.48
36:RQ:21:THR:HB	36:RQ:22:LYS:H	1.42	0.48
36:RQ:34:LEU:HD23	36:RQ:104:PHE:HD1	1.78	0.48
39:RT:57:PHE:O	39:RT:59:THR:N	2.46	0.48
44:RY:11:ASP:HB2	44:RY:27:VAL:HG11	1.94	0.48
45:RZ:7:ALA:CB	45:RZ:59:LEU:HD22	2.42	0.48
1:XA:1305:G:N2	1:XA:1331:G:H2'	2.28	0.48
1:XA:1287:A:H2	1:XA:1353:G:N3	2.12	0.48
1:XA:1443:G:H4'	1:XA:1446:A:OP2	2.13	0.48
1:XA:28:G:O2'	1:XA:296:U:OP1	2.30	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:564:C:N4	1:XA:565:U:O4	2.47	0.48
2:XB:24:TRP:CD1	2:XB:26:PRO:HD3	2.49	0.48
4:XD:100:ARG:CZ	4:XD:137:SER:HA	2.44	0.48
5:XE:78:HIS:CE1	5:XE:142:LEU:HD23	2.48	0.48
9:XI:18:PHE:O	9:XI:61:ALA:HA	2.13	0.48
9:XI:59:PHE:CZ	9:XI:88:TYR:CE1	3.01	0.48
13:XM:50:GLU:O	13:XM:54:VAL:HG23	2.13	0.48
13:XM:72:ALA:O	13:XM:76:ALA:HB2	2.14	0.48
19:XS:43:GLU:N	19:XS:43:GLU:OE2	2.45	0.48
50:Y4:42:PHE:O	50:Y4:44:THR:O	2.31	0.48
53:Y7:12:ARG:HG3	53:Y7:12:ARG:HH11	1.78	0.48
25:YA:1204:A:H1'	25:YA:1206:G:C4	2.49	0.48
25:YA:1339:G:H21	25:YA:1603:A:H1'	1.79	0.48
25:YA:1906:G:H8	25:YA:1929:G:H2'	1.78	0.48
25:YA:721:C:H3'	25:YA:722:A:H8	1.79	0.48
25:YA:680:G:C4	25:YA:798:G:N2	2.81	0.48
26:YB:40:U:H1'	26:YB:45:A:H61	1.77	0.48
28:YE:174:ASP:O	28:YE:182:LEU:HD12	2.14	0.48
33:YN:42:TRP:HA	33:YN:48:MET:CE	2.42	0.48
33:YN:95:PRO:O	33:YN:96:GLU:C	2.51	0.48
36:YQ:31:ASP:O	36:YQ:32:TYR:CG	2.66	0.48
37:YR:44:LEU:HD22	37:YR:48:VAL:CG2	2.42	0.48
39:YT:96:ARG:CB	39:YT:96:ARG:NH1	2.77	0.48
43:YX:44:GLU:OE1	43:YX:50:LYS:HD2	2.13	0.48
44:YY:11:ASP:HB2	44:YY:27:VAL:HG11	1.94	0.48
45:YZ:125:LEU:HG	45:YZ:164:ALA:HB1	1.95	0.48
45:YZ:94:GLU:CB	45:YZ:130:PRO:HD3	2.38	0.48
1:QA:1109:C:H2'	1:QA:1110:A:O4'	2.13	0.48
1:QA:1487:G:H8	1:QA:1487:G:O5'	1.96	0.48
1:QA:192:U:H2'	1:QA:193:C:H6	1.76	0.48
1:QA:198:G:H2'	1:QA:199:G:H8	1.79	0.48
2:QB:154:LEU:O	2:QB:155:LEU:HB2	2.13	0.48
3:QC:87:LEU:C	3:QC:89:GLU:N	2.65	0.48
4:QD:118:ARG:NH2	4:QD:136:PRO:HB2	2.28	0.48
11:QK:13:GLN:HG3	11:QK:75:TYR:O	2.13	0.48
13:QM:73:GLU:O	13:QM:76:ALA:HB3	2.14	0.48
15:QO:50:HIS:O	15:QO:53:HIS:N	2.47	0.48
19:QS:11:VAL:O	19:QS:12:ASP:CB	2.61	0.48
20:QT:37:SER:HB3	20:QT:84:LEU:CD2	2.43	0.48
50:R4:60:GLN:O	50:R4:63:TYR:HB3	2.14	0.48
25:RA:1384:A:O2'	25:RA:1404:C:O2	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1523:U:H2'	25:RA:1524:G:H8	1.79	0.48
25:RA:2093:G:OP1	32:RI:23:PRO:HG2	2.14	0.48
25:RA:221:A:H5'	25:RA:222:A:H4'	1.94	0.48
25:RA:2286:A:N6	52:R6:24:GLU:OE1	2.47	0.48
25:RA:345:A:H2'	25:RA:347:A:H62	1.79	0.48
25:RA:528:A:C2	25:RA:2042:A:H2'	2.49	0.48
25:RA:628:G:HO2'	25:RA:651:G:HO2'	1.60	0.48
27:RD:65:ILE:C	27:RD:65:ILE:HD13	2.33	0.48
28:RE:93:VAL:C	28:RE:95:ILE:H	2.17	0.48
29:RF:34:TRP:HD1	35:RP:6:LEU:HB3	1.79	0.48
29:RF:51:THR:O	29:RF:93:LYS:NZ	2.38	0.48
30:RG:136:ARG:O	30:RG:154:GLY:CA	2.62	0.48
31:RH:131:VAL:HG12	31:RH:132:ARG:N	2.29	0.48
33:RN:82:LEU:HD12	33:RN:83:LYS:N	2.27	0.48
35:RP:138:LEU:HD11	35:RP:144:GLU:CG	2.42	0.48
36:RQ:119:ARG:O	36:RQ:123:HIS:HD2	1.97	0.48
44:RY:44:ILE:O	44:RY:62:GLU:O	2.32	0.48
45:RZ:143:GLY:O	45:RZ:145:GLU:HG3	2.13	0.48
45:RZ:33:LEU:CG	45:RZ:34:ASN:N	2.77	0.48
1:XA:1062:U:H2'	1:XA:1063:C:C6	2.49	0.48
1:XA:250:A:H4'	1:XA:251:G:O5'	2.13	0.48
3:XC:148:GLY:O	3:XC:202:ILE:HA	2.14	0.48
4:XD:22:LYS:HB2	4:XD:26:CYS:HB2	1.96	0.48
5:XE:100:VAL:O	5:XE:107:ARG:NH2	2.47	0.48
7:XG:51:GLN:HA	7:XG:51:GLN:OE1	2.14	0.48
10:XJ:47:PHE:CE1	10:XJ:63:PHE:HB2	2.32	0.48
1:XA:522:C:H41	12:XL:53:ARG:HH22	1.61	0.48
12:XL:61:THR:O	12:XL:63:GLY:N	2.45	0.48
16:XP:34:GLU:HG2	16:XP:35:LYS:N	2.29	0.48
17:XQ:74:LEU:HD12	17:XQ:75:ARG:NE	2.28	0.48
48:Y2:33:MET:O	48:Y2:37:PHE:HD1	1.95	0.48
50:Y4:10:VAL:CG2	50:Y4:11:PRO:HD2	2.43	0.48
25:YA:141:A:H1'	25:YA:1408:C:O4'	2.14	0.48
25:YA:1896:G:H2'	25:YA:1897:G:H8	1.79	0.48
25:YA:1930:G:O2'	25:YA:1931:U:P	2.71	0.48
25:YA:219:G:N3	25:YA:234:C:O2'	2.44	0.48
25:YA:2734:A:H3'	25:YA:2735:G:C8	2.43	0.48
25:YA:2849:U:H5	39:YT:93:ARG:HH12	1.62	0.48
25:YA:520:G:H2'	25:YA:521:G:C8	2.49	0.48
27:YD:130:ALA:HA	27:YD:192:THR:HA	1.95	0.48
28:YE:23:VAL:HG12	28:YE:173:VAL:HG21	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:55:ASN:O	28:YE:57:LYS:N	2.44	0.48
29:YF:129:PHE:CD2	29:YF:163:VAL:HG21	2.48	0.48
25:YA:2653:U:O2'	31:YH:110:SER:HB2	2.13	0.48
35:YP:101:VAL:C	35:YP:103:ALA:H	2.17	0.48
25:YA:1190:G:C5'	35:YP:32:THR:HA	2.43	0.48
37:YR:42:LYS:HA	37:YR:45:ARG:HD2	1.95	0.48
43:YX:6:ASP:OD1	48:Y2:29:LYS:NZ	2.46	0.48
45:YZ:120:ILE:O	45:YZ:171:ILE:HD13	2.14	0.48
45:YZ:33:LEU:HD11	45:YZ:35:ARG:CG	2.44	0.48
1:QA:1512:U:H2'	1:QA:1513:A:C8	2.49	0.48
1:QA:553:A:O2'	12:QL:29:GLY:O	2.31	0.48
2:QB:140:HIS:C	2:QB:142:LEU:H	2.16	0.48
2:QB:206:ASP:HA	2:QB:211:ILE:HD11	1.94	0.48
4:QD:163:GLU:C	4:QD:165:MET:N	2.67	0.48
5:QE:10:MET:HB2	5:QE:32:VAL:HG22	1.93	0.48
5:QE:84:PHE:HD2	5:QE:130:ASN:O	1.97	0.48
6:QF:89:MET:O	6:QF:90:VAL:C	2.51	0.48
10:QJ:4:ILE:CB	10:QJ:74:ILE:HD11	2.36	0.48
11:QK:41:THR:HG22	11:QK:42:TRP:N	2.28	0.48
13:QM:117:VAL:O	13:QM:118:ALA:C	2.51	0.48
13:QM:3:ARG:HA	13:QM:9:ILE:HG12	1.95	0.48
15:QO:39:LEU:O	15:QO:40:SER:C	2.50	0.48
1:QA:136:C:O2'	16:QP:63:GLY:O	2.28	0.48
18:QR:31:LEU:HD23	18:QR:31:LEU:N	2.29	0.48
19:QS:36:ARG:NH1	19:QS:36:ARG:HB3	2.28	0.48
19:QS:9:VAL:O	19:QS:10:PHE:HB3	2.13	0.48
24:QY:40:G:O2'	24:QY:41:A:H5'	2.13	0.48
25:RA:1138:G:H21	33:RN:106:MET:CE	2.26	0.48
25:RA:118:A:N3	25:RA:178:G:H1'	2.29	0.48
25:RA:1561:G:H2'	25:RA:1562:A:C8	2.49	0.48
25:RA:205:G:H1'	25:RA:206:U:OP2	2.14	0.48
25:RA:2527:C:H2'	25:RA:2528:U:O4'	2.13	0.48
25:RA:181:A:H1'	25:RA:435:C:H5'	1.96	0.48
27:RD:130:ALA:C	27:RD:131:LEU:HD12	2.33	0.48
27:RD:237:GLU:HB3	27:RD:238:GLY:H	1.45	0.48
27:RD:48:ARG:HG3	27:RD:48:ARG:HH11	1.78	0.48
25:RA:2784:C:O2'	28:RE:42:ASP:OD1	2.30	0.48
30:RG:3:LEU:HD21	50:R4:25:TYR:CE1	2.48	0.48
33:RN:18:ALA:O	33:RN:19:GLU:C	2.53	0.48
33:RN:75:TYR:C	33:RN:76:SER:O	2.52	0.48
38:RS:56:LEU:C	38:RS:56:LEU:HD23	2.34	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RU:92:ARG:CZ	40:RU:94:ASN:HD22	2.27	0.48
45:RZ:108:PRO:HG2	45:RZ:111:VAL:HA	1.95	0.48
45:RZ:26:GLY:HA3	45:RZ:86:VAL:O	2.14	0.48
1:XA:181:G:O2'	1:XA:182:U:O5'	2.32	0.48
1:XA:189:U:H3	17:XQ:63:ARG:CB	2.27	0.48
2:XB:214:ILE:O	2:XB:218:ALA:HB2	2.13	0.48
4:XD:121:VAL:O	4:XD:134:ASP:HA	2.14	0.48
4:XD:60:GLU:O	4:XD:63:LYS:HB3	2.14	0.48
7:XG:97:GLN:O	7:XG:101:LEU:HG	2.14	0.48
13:XM:8:GLU:C	13:XM:9:ILE:HG23	2.34	0.48
14:YN:15:LYS:HD2	14:YN:16:PHE:CE2	2.49	0.48
14:YN:41:ARG:NH1	14:YN:41:ARG:HG2	2.29	0.48
1:XA:134:A:H61	16:XP:25:ARG:NH1	2.11	0.48
16:XP:69:THR:O	16:XP:73:LEU:HG	2.14	0.48
19:XS:36:ARG:NH1	19:XS:36:ARG:HB3	2.28	0.48
20:XT:30:LYS:O	20:XT:33:ILE:HG12	2.14	0.48
47:Y1:76:ARG:HD2	47:Y1:76:ARG:N	2.29	0.48
50:Y4:36:CYS:O	50:Y4:37:SER:C	2.52	0.48
50:Y4:8:LYS:O	50:Y4:9:LEU:CB	2.62	0.48
25:YA:2370:G:N3	52:Y6:45:LYS:NZ	2.62	0.48
25:YA:1212:G:O2'	25:YA:1213:A:OP2	2.31	0.48
25:YA:1545:A:N6	25:YA:1545(A):A:N1	2.62	0.48
25:YA:2210:G:N3	25:YA:2210:G:H2'	2.28	0.48
25:YA:2277:G:OP1	36:YQ:85:LYS:HB2	2.13	0.48
25:YA:2516:G:C5	25:YA:2517:C:C4	3.02	0.48
25:YA:2657:A:H1'	25:YA:2665:A:N6	2.28	0.48
25:YA:270(R):G:H2'	25:YA:270(S):G:C8	2.49	0.48
25:YA:2724:C:P	37:YR:1:MET:HE3	2.54	0.48
25:YA:272:G:H2'	25:YA:273:G:C8	2.48	0.48
27:YD:25:THR:O	27:YD:26:LYS:C	2.52	0.48
27:YD:35:LYS:CG	27:YD:64:ILE:CG2	2.92	0.48
28:YE:64:LYS:C	28:YE:66:HIS:N	2.68	0.48
29:YF:34:TRP:HD1	35:YP:6:LEU:HB3	1.79	0.48
29:YF:45:ARG:HG2	29:YF:45:ARG:NH1	2.28	0.48
31:YH:124:GLU:HB3	31:YH:132:ARG:CD	2.44	0.48
31:YH:127:GLU:HB3	31:YH:128:PRO:HD2	1.92	0.48
36:YQ:42:ILE:HD12	36:YQ:42:ILE:N	2.29	0.48
37:YR:107:ASP:C	37:YR:107:ASP:OD2	2.52	0.48
38:YS:66:ALA:HA	38:YS:69:VAL:HG12	1.96	0.48
39:YT:16:ARG:NE	39:YT:19:LEU:HD21	2.27	0.48
40:YU:79:PHE:HE2	40:YU:83:LEU:CD2	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YV:21:ARG:HD2	41:YV:91:TYR:CZ	2.49	0.48
43:YX:11:PRO:HB3	43:YX:92:LEU:CD2	2.43	0.48
25:YA:64:A:O3'	43:YX:71:GLY:HA3	2.14	0.48
45:YZ:135:GLU:HG3	45:YZ:136:PHE:CD2	2.49	0.48
45:YZ:35:ARG:NH1	45:YZ:35:ARG:HB3	2.29	0.48
45:YZ:72:ARG:CG	45:YZ:72:ARG:HH11	2.26	0.48
1:QA:1107:C:O2	1:QA:1191:A:O2'	2.30	0.48
1:QA:1509:C:H2'	1:QA:1510:U:O4'	2.14	0.48
1:QA:244:U:H4'	1:QA:245:C:O5'	2.12	0.48
1:QA:266:G:O2'	1:QA:268:C:OP2	2.31	0.48
1:QA:356:A:N3	1:QA:368:U:O2'	2.39	0.48
1:QA:709:G:H2'	1:QA:710:G:H8	1.77	0.48
4:QD:6:GLY:O	4:QD:8:VAL:HG23	2.14	0.48
7:QG:63:LYS:HD2	7:QG:63:LYS:O	2.13	0.48
7:QG:79:ARG:O	7:QG:80:VAL:HG23	2.14	0.48
7:QG:97:GLN:O	7:QG:101:LEU:HG	2.14	0.48
8:QH:45:ILE:HG13	8:QH:45:ILE:O	2.13	0.48
9:QI:7:THR:O	9:QI:83:ARG:HD2	2.14	0.48
15:QO:61:GLY:C	15:QO:65:ARG:NH1	2.67	0.48
1:QA:450:G:H5'	16:QP:41:PRO:O	2.14	0.48
16:QP:43:LYS:C	16:QP:45:THR:H	2.14	0.48
16:QP:60:LEU:CA	16:QP:64:ALA:HB3	2.43	0.48
20:QT:64:ASP:O	20:QT:67:ALA:N	2.47	0.48
25:RA:1188:U:H4'	41:RV:79:VAL:HG22	1.96	0.48
25:RA:2607:G:H2'	25:RA:2608:G:O4'	2.14	0.48
25:RA:508:G:HO2'	25:RA:509:C:P	2.36	0.48
26:RB:17:C:H2'	26:RB:18:G:O4'	2.12	0.48
33:RN:57:ALA:O	33:RN:58:ASP:CB	2.61	0.48
33:RN:68:GLU:HG2	33:RN:88:GLU:CD	2.33	0.48
35:RP:6:LEU:O	35:RP:7:ARG:O	2.31	0.48
36:RQ:42:ILE:N	36:RQ:42:ILE:HD12	2.29	0.48
36:RQ:57:HIS:ND1	36:RQ:58:PHE:N	2.62	0.48
37:RR:63:ARG:NH1	37:RR:63:ARG:HG3	2.29	0.48
41:RV:35:LEU:O	41:RV:37:VAL:N	2.47	0.48
42:RW:66:GLU:O	42:RW:69:LEU:HG	2.14	0.48
45:RZ:120:ILE:HD12	45:RZ:171:ILE:N	2.29	0.48
1:XA:255:G:H2'	1:XA:256:U:H6	1.78	0.48
1:XA:438:G:H4'	4:XD:123:HIS:ND1	2.28	0.48
1:XA:533:A:OP1	1:XA:533:A:H3'	2.14	0.48
1:XA:741:G:H2'	1:XA:742:G:O4'	2.14	0.48
1:XA:779:C:H2'	1:XA:780:A:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:977:A:C2'	1:XA:978:A:H5'	2.44	0.48
4:XD:114:ARG:CG	4:XD:114:ARG:HH11	2.17	0.48
4:XD:163:GLU:C	4:XD:165:MET:N	2.66	0.48
4:XD:11:LEU:O	4:XD:19:LEU:HD21	2.14	0.48
4:XD:79:PHE:HE2	4:XD:83:SER:HB2	1.79	0.48
7:XG:79:ARG:O	7:XG:80:VAL:HG23	2.14	0.48
8:XH:44:PHE:CD1	8:XH:80:ILE:HG12	2.49	0.48
8:XH:86:ILE:HG22	8:XH:87:SER:N	2.29	0.48
9:XI:7:THR:O	9:XI:83:ARG:HD2	2.14	0.48
10:XJ:74:ILE:HG12	10:XJ:74:ILE:O	2.14	0.48
11:XK:110:ASP:HB2	18:XR:88:LYS:HD3	1.95	0.48
11:XK:115:PRO:C	11:XK:117:ASN:H	2.17	0.48
11:XK:19:ALA:CB	11:XK:32:ILE:HG22	2.42	0.48
11:XK:19:ALA:CA	11:XK:32:ILE:HG22	2.43	0.48
12:XL:43:VAL:HG23	12:XL:93:LEU:HD22	1.96	0.48
14:YN:6:LEU:CD2	14:YN:23:ARG:NH2	2.77	0.48
17:XQ:63:ARG:HG2	17:XQ:64:PRO:N	2.28	0.48
19:XS:41:VAL:CB	19:XS:42:PRO:CA	2.76	0.48
47:Y1:25:LYS:C	47:Y1:27:GLU:H	2.16	0.48
47:Y1:94:LEU:O	47:Y1:95:LEU:CB	2.62	0.48
50:Y4:60:GLN:O	50:Y4:63:TYR:HB3	2.13	0.48
52:Y6:20:ASN:ND2	52:Y6:42:TRP:CZ2	2.82	0.48
35:YP:61:ARG:HH21	54:Y8:13:ARG:HD2	1.77	0.48
25:YA:1009:A:OP1	33:YN:37:LYS:NZ	2.46	0.48
25:YA:1055:G:O2'	25:YA:1085:A:N1	2.40	0.48
25:YA:1108:U:H2'	25:YA:1109:C:C6	2.49	0.48
25:YA:1332:G:H8	25:YA:1332:G:H2'	1.51	0.48
25:YA:1388:G:H2'	25:YA:1389:G:C8	2.48	0.48
25:YA:1807:G:N2	25:YA:1810:A:OP2	2.44	0.48
25:YA:1930:G:H2'	25:YA:1968:G:N1	2.29	0.48
25:YA:298:G:P	44:YY:85:VAL:HG22	2.54	0.48
25:YA:383:U:H2'	25:YA:385:C:C5	2.48	0.48
25:YA:37:C:H2'	25:YA:38:A:O4'	2.14	0.48
25:YA:660:G:O3'	29:YF:38:ARG:NH2	2.46	0.48
27:YD:27:THR:O	27:YD:29:PRO:CD	2.62	0.48
27:YD:33:LEU:HB3	27:YD:34:VAL:H	1.48	0.48
28:YE:119:ARG:HD3	28:YE:160:TYR:HD2	1.78	0.48
28:YE:93:VAL:C	28:YE:95:ILE:H	2.17	0.48
30:YG:97:ASP:N	30:YG:100:TRP:HD1	2.05	0.48
31:YH:10:PRO:C	31:YH:11:VAL:HG22	2.34	0.48
31:YH:120:GLY:HA3	31:YH:140:LYS:NZ	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:45:VAL:HG13	31:YH:45:VAL:O	2.14	0.48
33:YN:137:LYS:CG	33:YN:138:LEU:H	2.27	0.48
33:YN:34:LEU:O	33:YN:49:GLY:HA3	2.13	0.48
37:YR:63:ARG:NH1	37:YR:63:ARG:HG3	2.29	0.48
37:YR:70:LEU:C	37:YR:72:ASP:H	2.16	0.48
38:YS:56:LEU:HD23	38:YS:56:LEU:C	2.34	0.48
34:YO:107:ARG:NH1	39:YT:36:GLU:OE1	2.46	0.48
39:YT:94:ALA:O	39:YT:95:ARG:CB	2.61	0.48
44:YY:57:GLN:O	44:YY:58:GLY:O	2.32	0.48
44:YY:81:LYS:HZ2	44:YY:98:VAL:CG1	2.27	0.48
45:YZ:107:THR:HG22	45:YZ:108:PRO:CA	2.43	0.48
1:QA:1152:A:H2'	1:QA:1153:C:H6	1.78	0.47
1:QA:1297:C:H2'	7:QG:114:ARG:NH2	2.28	0.47
1:QA:181:G:HO2'	1:QA:182:U:P	2.37	0.47
2:QB:87:ARG:NH1	2:QB:220:ASP:OD1	2.46	0.47
2:QB:24:TRP:CZ3	2:QB:26:PRO:HA	2.49	0.47
4:QD:100:ARG:CZ	4:QD:137:SER:HA	2.44	0.47
5:QE:75:THR:HG23	5:QE:76:ILE:O	2.14	0.47
7:QG:44:TYR:C	7:QG:46:ALA:N	2.66	0.47
7:QG:51:GLN:OE1	7:QG:51:GLN:HA	2.14	0.47
7:QG:8:GLU:N	7:QG:8:GLU:CD	2.67	0.47
10:QJ:39:PRO:CB	10:QJ:70:ARG:HH12	2.27	0.47
11:QK:48:ILE:HG21	11:QK:63:LEU:HD13	1.96	0.47
12:QL:127:GLU:O	12:QL:128:ALA:CB	2.62	0.47
13:QM:12:ASN:O	13:QM:13:LYS:HB2	2.13	0.47
13:QM:30:ALA:O	13:QM:33:ALA:N	2.47	0.47
46:R0:74:ARG:O	46:R0:76:GLY:N	2.47	0.47
47:R1:8:SER:OG	47:R1:10:LYS:HG3	2.13	0.47
54:R8:43:GLN:C	54:R8:44:LYS:HD2	2.34	0.47
25:RA:1069:A:H4'	25:RA:1070:A:H5''	1.95	0.47
25:RA:1853:A:H2'	25:RA:1854:A:C8	2.49	0.47
25:RA:2415:G:H4'	35:RP:66:GLY:C	2.35	0.47
25:RA:2520:C:H42	25:RA:2545:G:H1	1.61	0.47
25:RA:2593:U:H2'	25:RA:2594:C:C6	2.49	0.47
25:RA:30:G:H2'	25:RA:31:C:C6	2.49	0.47
27:RD:145:VAL:O	27:RD:153:ALA:HA	2.14	0.47
28:RE:120:TRP:O	28:RE:121:ASN:HB2	2.14	0.47
28:RE:64:LYS:C	28:RE:66:HIS:N	2.68	0.47
33:RN:113:GLY:O	33:RN:116:LEU:HB2	2.14	0.47
33:RN:97:ARG:HA	33:RN:100:GLU:HB3	1.96	0.47
34:RO:8:LEU:HB2	34:RO:19:ILE:CD1	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RU:107:ALA:O	40:RU:110:VAL:HB	2.14	0.47
40:RU:79:PHE:HE2	40:RU:83:LEU:CD2	2.27	0.47
40:RU:91:ASP:O	40:RU:92:ARG:C	2.52	0.47
41:RV:4:ILE:HA	41:RV:12:TYR:O	2.14	0.47
41:RV:21:ARG:HD2	41:RV:91:TYR:CZ	2.49	0.47
44:RY:56:PRO:O	44:RY:58:GLY:N	2.47	0.47
44:RY:97:ARG:NH1	44:RY:97:ARG:HG2	2.28	0.47
1:XA:413:G:H2'	1:XA:428:G:N2	2.27	0.47
1:XA:701:C:H1'	1:XA:703:G:C5	2.48	0.47
4:XD:165:MET:CE	4:XD:168:ARG:HD2	2.44	0.47
4:XD:198:VAL:CG1	4:XD:199:ASN:N	2.75	0.47
5:XE:82:VAL:CG1	5:XE:83:GLU:H	2.27	0.47
12:XL:50:SER:O	12:XL:51:ALA:HB2	2.14	0.47
1:XA:255:G:P	17:XQ:69:LYS:HZ3	2.37	0.47
18:XR:30:ASP:C	18:XR:32:ARG:H	2.16	0.47
19:XS:24:ALA:O	19:XS:25:LYS:HB2	2.13	0.47
21:XU:15:ARG:HG2	21:XU:15:ARG:NH1	2.29	0.47
52:Y6:8:LYS:O	52:Y6:27:LYS:HA	2.13	0.47
53:Y7:25:PRO:HA	53:Y7:28:ARG:CZ	2.44	0.47
54:Y8:41:ILE:HG13	54:Y8:42:ARG:N	2.28	0.47
54:Y8:53:PRO:CD	54:Y8:54:GLU:N	2.77	0.47
25:YA:1055:G:H1	25:YA:1104:C:N4	2.12	0.47
25:YA:1682:G:OP1	25:YA:1699:G:N1	2.47	0.47
25:YA:2013:A:N3	42:YW:88:ARG:NH2	2.60	0.47
25:YA:2294:C:H2'	25:YA:2295:C:H6	1.79	0.47
25:YA:652:C:H5'	25:YA:653:A:OP2	2.14	0.47
30:YG:12:TYR:O	30:YG:16:ARG:HB3	2.14	0.47
32:YI:1:MET:HG3	32:YI:23:PRO:CA	2.44	0.47
33:YN:120:LEU:HD11	33:YN:122:VAL:CG2	2.42	0.47
33:YN:57:ALA:O	33:YN:58:ASP:CB	2.61	0.47
40:YU:79:PHE:HE2	40:YU:83:LEU:HD22	1.78	0.47
41:YV:38:LEU:HD23	41:YV:39:LEU:H	1.79	0.47
43:YX:53:LYS:HZ2	43:YX:55:ASN:HD21	1.62	0.47
45:YZ:39:VAL:HG21	45:YZ:44:PHE:HB2	1.95	0.47
1:QA:109:A:H5'	1:QA:110:C:H5	1.80	0.47
1:QA:198:G:H1	1:QA:219:C:H42	1.62	0.47
1:QA:234:C:H2'	1:QA:235:C:H6	1.79	0.47
1:QA:375:U:H4'	16:QP:17:TYR:CE2	2.45	0.47
1:QA:601:C:H2'	1:QA:602:A:O4'	2.14	0.47
2:QB:164:VAL:HB	2:QB:186:ALA:HB1	1.95	0.47
2:QB:24:TRP:CD1	2:QB:26:PRO:HD3	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:153:VAL:HA	3:QC:197:GLY:O	2.14	0.47
3:QC:16:ARG:NH2	3:QC:183:ASP:OD2	2.47	0.47
4:QD:153:ARG:CZ	4:QD:181:MET:HG3	2.44	0.47
5:QE:82:VAL:CG1	5:QE:83:GLU:H	2.27	0.47
7:QG:69:VAL:O	7:QG:69:VAL:CG1	2.62	0.47
9:QI:17:VAL:HG11	9:QI:81:ILE:HA	1.96	0.47
9:QI:33:PHE:HZ	9:QI:47:LEU:HD21	1.76	0.47
9:QI:22:GLY:HA3	9:QI:60:ASP:OD2	2.13	0.47
9:QI:9:ARG:HA	9:QI:76:ALA:HB1	1.96	0.47
11:QK:124:LYS:O	11:QK:126:ARG:N	2.40	0.47
15:QO:24:SER:OG	15:QO:25:THR:N	2.47	0.47
17:QQ:3:LYS:HD2	17:QQ:60:ILE:HD11	1.95	0.47
20:QT:13:LEU:HD12	20:QT:13:LEU:C	2.34	0.47
36:RQ:83:MET:H	46:R0:7:LEU:HD12	1.80	0.47
51:R5:57:VAL:O	51:R5:57:VAL:HG13	2.13	0.47
54:R8:53:PRO:CD	54:R8:54:GLU:N	2.77	0.47
25:RA:1533:C:H42	25:RA:1538:G:H1	1.62	0.47
25:RA:2626:C:H2'	25:RA:2627:G:O4'	2.15	0.47
25:RA:2693:A:H2'	25:RA:2694:G:C8	2.49	0.47
25:RA:960:A:H2'	25:RA:962:G:H5'	1.95	0.47
27:RD:134:ARG:HB2	27:RD:135:PHE:CD2	2.49	0.47
27:RD:35:LYS:CG	27:RD:64:ILE:CG2	2.92	0.47
29:RF:53:THR:C	29:RF:55:GLY:N	2.68	0.47
30:RG:12:TYR:O	30:RG:16:ARG:HB3	2.15	0.47
31:RH:154:PRO:CG	31:RH:162:ILE:O	2.61	0.47
32:RI:123:LEU:HA	32:RI:142:VAL:CG2	2.44	0.47
33:RN:137:LYS:CG	33:RN:138:LEU:N	2.78	0.47
33:RN:4:TYR:OH	33:RN:7:LYS:NZ	2.46	0.47
33:RN:67:LEU:O	33:RN:88:GLU:HG3	2.14	0.47
35:RP:126:VAL:HA	35:RP:145:PRO:HD2	1.95	0.47
35:RP:47:ASP:OD1	35:RP:50:ARG:NH2	2.47	0.47
37:RR:107:ASP:C	37:RR:107:ASP:OD2	2.52	0.47
38:RS:55:ALA:O	38:RS:56:LEU:HB3	2.13	0.47
41:RV:48:GLY:O	41:RV:49:THR:C	2.52	0.47
41:RV:66:ARG:NH1	41:RV:88:ARG:NH1	2.61	0.47
42:RW:32:ALA:O	42:RW:33:ARG:C	2.52	0.47
44:RY:81:LYS:NZ	44:RY:98:VAL:HB	2.29	0.47
1:XA:593:G:H5''	1:XA:594:G:OP2	2.14	0.47
1:XA:954:G:H21	1:XA:1227:A:N6	2.12	0.47
2:XB:170:GLU:C	2:XB:172:ILE:HD12	2.33	0.47
4:XD:94:LEU:HD12	4:XD:94:LEU:N	2.12	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:9:CYS:C	4:XD:11:LEU:H	2.17	0.47
5:XE:75:THR:HG23	5:XE:76:ILE:O	2.14	0.47
11:XK:62:GLN:O	11:XK:63:LEU:C	2.51	0.47
11:XK:32:ILE:HD11	11:XK:68:ALA:O	2.14	0.47
16:XP:25:ARG:HH11	16:XP:25:ARG:HG3	1.79	0.47
6:XF:97:PHE:CD2	18:XR:31:LEU:HD21	2.48	0.47
20:XT:26:ASN:ND2	20:XT:26:ASN:N	2.62	0.47
20:XT:50:GLU:HA	20:XT:100:ILE:CG2	2.43	0.47
22:XV:19:G:H4'	22:XV:20:U:OP2	2.14	0.47
25:YA:1087:G:C5	25:YA:1089:G:H1'	2.48	0.47
25:YA:1728:G:H3'	25:YA:1729:A:C5'	2.44	0.47
25:YA:1799:G:H4'	25:YA:1800:C:O5'	2.14	0.47
25:YA:2376:A:H2'	25:YA:2377:A:O4'	2.14	0.47
25:YA:270(J):G:N2	25:YA:270(Q):C:O2	2.47	0.47
25:YA:483:A:H4'	44:YY:49:VAL:CA	2.33	0.47
26:YB:116:G:H2'	26:YB:117:G:H8	1.79	0.47
29:YF:127:GLU:OE1	29:YF:127:GLU:HA	2.06	0.47
29:YF:155:LEU:HA	29:YF:174:VAL:HG12	1.95	0.47
29:YF:196:LEU:C	29:YF:197:ASP:O	2.50	0.47
33:YN:12:ARG:NH1	33:YN:50:ASP:CG	2.67	0.47
33:YN:18:ALA:O	33:YN:19:GLU:C	2.53	0.47
33:YN:75:TYR:C	33:YN:76:SER:O	2.52	0.47
35:YP:147:LEU:HD22	35:YP:147:LEU:N	2.28	0.47
37:YR:41:ALA:C	37:YR:43:GLU:N	2.68	0.47
39:YT:132:LYS:O	39:YT:136:GLN:HG3	2.13	0.47
42:YW:30:GLU:O	42:YW:34:ASN:ND2	2.46	0.47
44:YY:44:ILE:CG1	44:YY:45:VAL:N	2.70	0.47
45:YZ:33:LEU:HD21	45:YZ:35:ARG:CD	2.42	0.47
1:QA:189:U:H3	17:QQ:63:ARG:CB	2.27	0.47
1:QA:558:G:H2'	1:QA:559:A:C2	2.49	0.47
1:QA:792:A:H4'	1:QA:793:U:O5'	2.14	0.47
1:QA:954:G:O6	1:QA:1225:A:N6	2.47	0.47
2:QB:116:GLU:HA	2:QB:119:GLU:HB3	1.96	0.47
3:QC:76:VAL:HG21	3:QC:103:VAL:HG11	1.95	0.47
4:QD:135:LEU:O	4:QD:137:SER:N	2.47	0.47
6:QF:22:GLU:CD	6:QF:82:ARG:HH21	2.18	0.47
10:QJ:24:VAL:HG21	10:QJ:37:PRO:CG	2.43	0.47
11:QK:115:PRO:C	11:QK:117:ASN:H	2.18	0.47
13:QM:50:GLU:O	13:QM:54:VAL:HG23	2.13	0.47
14:QN:6:LEU:CD2	14:QN:23:ARG:NH2	2.77	0.47
12:QL:10:LEU:HB3	17:QQ:32:TYR:CZ	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:QT:30:LYS:O	20:QT:33:ILE:HG12	2.14	0.47
21:QU:9:ARG:HH11	21:QU:9:ARG:HG2	1.78	0.47
22:QV:19:G:H4'	22:QV:20:U:OP2	2.14	0.47
47:R1:29:GLY:C	47:R1:30:VAL:CG2	2.82	0.47
47:R1:56:GLN:H	47:R1:56:GLN:NE2	2.10	0.47
50:R4:50:VAL:CG1	50:R4:50:VAL:O	2.63	0.47
25:RA:1329:U:H5''	25:RA:1330:C:H5	1.79	0.47
25:RA:1651:G:H1	25:RA:2006:C:H42	1.62	0.47
25:RA:2055:C:H4'	25:RA:2056:G:H5''	1.96	0.47
25:RA:270(F):U:H2'	25:RA:270(G):C:C6	2.49	0.47
25:RA:717:G:H2'	25:RA:718:A:O4'	2.14	0.47
25:RA:924:C:H2'	25:RA:925:C:H6	1.79	0.47
28:RE:129:HIS:O	28:RE:130:GLY:C	2.53	0.47
28:RE:174:ASP:O	28:RE:182:LEU:HD12	2.14	0.47
29:RF:162:LEU:HD23	29:RF:165:ARG:HH21	1.79	0.47
31:RH:82:GLY:O	31:RH:83:TYR:O	2.32	0.47
32:RI:9:LEU:HD21	32:RI:12:LEU:O	2.15	0.47
37:RR:41:ALA:C	37:RR:43:GLU:N	2.68	0.47
38:RS:40:ILE:HG22	38:RS:41:ASP:N	2.28	0.47
44:RY:75:ILE:HG12	44:RY:76:CYS:H	1.79	0.47
1:XA:955:U:H1'	1:XA:1227:A:H61	1.79	0.47
1:XA:554:C:H2'	1:XA:555:C:H6	1.79	0.47
1:XA:696:A:H8	1:XA:696:A:O5'	1.97	0.47
1:XA:745:C:H2'	1:XA:746:A:C8	2.49	0.47
1:XA:992:U:H4'	1:XA:993:G:O5'	2.15	0.47
2:XB:4:GLU:CG	2:XB:5:ILE:H	1.99	0.47
3:XC:36:ASP:HA	3:XC:39:ILE:HD12	1.95	0.47
4:XD:183:GLY:C	4:XD:184:LYS:HG3	2.34	0.47
4:XD:33:MET:HE1	4:XD:37:PRO:O	2.14	0.47
5:XE:87:SER:HB3	5:XE:131:ILE:HD13	1.95	0.47
7:XG:44:TYR:C	7:XG:46:ALA:N	2.66	0.47
9:XI:42:ARG:NH2	9:XI:75:ASP:OD2	2.47	0.47
1:XA:881:G:P	12:XL:12:ARG:NH2	2.88	0.47
15:XO:50:HIS:O	15:XO:53:HIS:N	2.47	0.47
15:XO:61:GLY:C	15:XO:65:ARG:NH1	2.67	0.47
20:XT:64:ASP:O	20:XT:67:ALA:N	2.47	0.47
46:Y0:10:THR:CG2	46:Y0:11:ARG:N	2.73	0.47
46:Y0:3:HIS:C	46:Y0:3:HIS:CD2	2.85	0.47
54:Y8:56:GLU:O	54:Y8:58:ILE:N	2.47	0.47
25:YA:1861:G:C2	25:YA:1862:G:C8	3.03	0.47
25:YA:2646:C:H2'	25:YA:2647:U:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2776:A:H3'	25:YA:2776:A:OP1	2.14	0.47
25:YA:2795:G:H3'	25:YA:2797:U:C5'	2.43	0.47
25:YA:543:C:N4	25:YA:550:G:H1	2.12	0.47
28:YE:15:PHE:CD1	28:YE:20:ALA:HB2	2.50	0.47
28:YE:61:ARG:CB	28:YE:62:PRO:HD3	2.41	0.47
29:YF:132:VAL:O	29:YF:133:ASN:C	2.52	0.47
30:YG:111:LEU:HD22	30:YG:120:LEU:HD21	1.97	0.47
36:YQ:119:ARG:O	36:YQ:123:HIS:HD2	1.97	0.47
36:YQ:57:HIS:ND1	36:YQ:58:PHE:N	2.62	0.47
37:YR:10:LEU:O	37:YR:12:ARG:HG3	2.14	0.47
37:YR:1:MET:SD	37:YR:1:MET:N	2.75	0.47
39:YT:36:GLU:O	39:YT:37:GLY:C	2.53	0.47
41:YV:2:PHE:CD2	41:YV:13:ARG:NH2	2.83	0.47
41:YV:35:LEU:O	41:YV:37:VAL:N	2.47	0.47
1:QA:15:G:H4'	5:QE:24:ARG:HH12	1.79	0.47
4:QD:3:ARG:O	4:QD:5:ILE:HG13	2.14	0.47
8:QH:44:PHE:CD1	8:QH:80:ILE:HG12	2.49	0.47
9:QI:42:ARG:NH2	9:QI:75:ASP:OD2	2.47	0.47
1:QA:1359:C:H3'	14:QN:35:ARG:HH12	1.78	0.47
17:QQ:98:LEU:O	17:QQ:99:SER:C	2.53	0.47
18:QR:31:LEU:H	18:QR:31:LEU:CD2	2.27	0.47
47:R1:94:LEU:O	47:R1:95:LEU:CB	2.62	0.47
50:R4:36:CYS:O	50:R4:37:SER:C	2.52	0.47
50:R4:55:ARG:C	50:R4:59:PHE:HB3	2.35	0.47
25:RA:2401:U:H2'	25:RA:2402:C:H5''	1.95	0.47
25:RA:458:G:O2'	53:R7:39:ARG:HD3	2.14	0.47
25:RA:825:C:H2'	25:RA:826:U:O4'	2.15	0.47
27:RD:72:LYS:CG	27:RD:103:ARG:NH2	2.77	0.47
28:RE:56:PRO:O	28:RE:57:LYS:CB	2.61	0.47
25:RA:617:G:OP1	29:RF:40:GLN:NE2	2.47	0.47
30:RG:56:ALA:HB2	30:RG:153:ARG:NE	2.27	0.47
31:RH:124:GLU:HB3	31:RH:132:ARG:CD	2.44	0.47
31:RH:45:VAL:O	31:RH:45:VAL:HG13	2.14	0.47
33:RN:118:LYS:O	33:RN:120:LEU:N	2.43	0.47
34:RO:37:ASP:O	34:RO:62:VAL:HG23	2.14	0.47
37:RR:10:LEU:O	37:RR:12:ARG:HG3	2.14	0.47
39:RT:96:ARG:CB	39:RT:96:ARG:NH1	2.77	0.47
41:RV:16:PRO:HA	41:RV:96:ILE:O	2.14	0.47
41:RV:38:LEU:HD23	41:RV:39:LEU:H	1.79	0.47
43:RX:6:ASP:OD1	48:R2:29:LYS:NZ	2.47	0.47
44:RY:94:LYS:HE3	44:RY:101:LYS:HZ3	1.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RZ:39:VAL:HG21	45:RZ:44:PHE:HB2	1.95	0.47
1:XA:1320:C:H42	19:XS:36:ARG:HG3	1.77	0.47
1:XA:1431:C:H2'	1:XA:1432:G:O4'	2.14	0.47
1:XA:184:G:H2'	1:XA:185:A:H8	1.79	0.47
1:XA:277:C:H2'	1:XA:278:G:H8	1.78	0.47
1:XA:777:A:H2'	1:XA:778:G:C8	2.49	0.47
2:XB:71:VAL:HG23	2:XB:164:VAL:HG13	1.96	0.47
2:XB:172:ILE:O	2:XB:175:ARG:CB	2.62	0.47
3:XC:127:ARG:NH1	3:XC:127:ARG:CG	2.73	0.47
4:XD:9:CYS:SG	4:XD:22:LYS:HE3	2.55	0.47
4:XD:29:PRO:O	4:XD:30:LYS:HB3	2.15	0.47
5:XE:13:ILE:O	5:XE:13:ILE:HG22	2.14	0.47
5:XE:141:GLN:HA	5:XE:143:ARG:HH12	1.79	0.47
9:XI:106:ALA:O	9:XI:108:VAL:HG13	2.15	0.47
9:XI:18:PHE:HB2	9:XI:62:TYR:HB3	1.95	0.47
10:XJ:24:VAL:HG21	10:XJ:37:PRO:CG	2.43	0.47
7:XG:151:TYR:HE1	11:XK:54:ARG:HD3	1.79	0.47
13:XM:30:ALA:O	13:XM:33:ALA:N	2.46	0.47
46:Y0:74:ARG:C	46:Y0:76:GLY:N	2.67	0.47
19:XS:5:LEU:HD21	50:Y4:66:SER:CB	2.45	0.47
25:YA:2287:A:N6	25:YA:2344:U:H3	2.08	0.47
25:YA:520:G:H2'	25:YA:521:G:H8	1.79	0.47
28:YE:65:GLY:HA2	28:YE:70:ALA:HB3	1.95	0.47
30:YG:83:ARG:HB2	30:YG:86:MET:HE3	1.97	0.47
31:YH:123:PHE:O	31:YH:125:VAL:HG23	2.13	0.47
34:YO:8:LEU:HB2	34:YO:19:ILE:CD1	2.43	0.47
35:YP:47:ASP:OD1	35:YP:50:ARG:NH2	2.47	0.47
40:YU:106:PHE:O	40:YU:109:LEU:HB2	2.15	0.47
40:YU:92:ARG:CZ	40:YU:94:ASN:HD22	2.27	0.47
41:YV:36:PRO:HA	41:YV:56:SER:CB	2.44	0.47
42:YW:32:ALA:O	42:YW:33:ARG:C	2.52	0.47
45:YZ:108:PRO:CG	45:YZ:112:ARG:N	2.70	0.47
1:QA:32:A:OP2	1:QA:398:C:H1'	2.15	0.47
1:QA:859:A:H2'	1:QA:860:A:O4'	2.15	0.47
4:QD:11:LEU:O	4:QD:19:LEU:HD21	2.14	0.47
4:QD:154:ASN:O	4:QD:155:LEU:O	2.32	0.47
7:QG:79:ARG:NH1	7:QG:79:ARG:HG2	2.29	0.47
8:QH:39:LEU:HD11	8:QH:111:ILE:HD11	1.96	0.47
10:QJ:40:LEU:HB2	10:QJ:69:ASN:CB	2.40	0.47
12:QL:50:SER:O	12:QL:51:ALA:HB2	2.14	0.47
13:QM:23:TYR:HB3	13:QM:67:GLU:CG	2.39	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:90:LEU:HA	13:QM:93:ARG:CD	2.34	0.47
14:QN:8:GLU:C	14:QN:10:ALA:N	2.68	0.47
16:QP:34:GLU:HG2	16:QP:35:LYS:N	2.29	0.47
47:R1:7:ILE:HD12	47:R1:62:VAL:HG11	1.96	0.47
25:RA:1025:G:C4	25:RA:1135:C:H1'	2.50	0.47
25:RA:1027:A:N6	25:RA:1126:A:C4	2.82	0.47
25:RA:1509:C:H3'	25:RA:1510:A:C5'	2.44	0.47
25:RA:2059:A:H5'	25:RA:2060:A:OP2	2.14	0.47
25:RA:2102:U:H2'	25:RA:2103:C:C6	2.49	0.47
25:RA:2287:A:HO2'	25:RA:2288:A:P	2.36	0.47
25:RA:2760:C:H2'	25:RA:2761:G:O4'	2.15	0.47
30:RG:13:GLU:O	30:RG:13:GLU:HG3	2.14	0.47
30:RG:5:VAL:HG22	50:R4:25:TYR:CE2	2.50	0.47
32:RI:1:MET:HG3	32:RI:23:PRO:CA	2.44	0.47
33:RN:131:GLN:HE21	33:RN:132:ALA:H	1.58	0.47
35:RP:19:VAL:CG2	35:RP:20:GLY:H	1.98	0.47
38:RS:25:ARG:HH12	38:RS:42:ASP:CG	2.16	0.47
45:RZ:102:LEU:HD22	45:RZ:156:LYS:HZ1	1.77	0.47
45:RZ:157:LEU:HA	45:RZ:161:VAL:HG11	1.95	0.47
2:XB:200:ILE:H	2:XB:200:ILE:HD12	1.79	0.47
2:XB:24:TRP:CZ3	2:XB:26:PRO:HA	2.50	0.47
3:XC:95:THR:CG2	3:XC:96:GLY:H	2.10	0.47
4:XD:153:ARG:CZ	4:XD:181:MET:HG3	2.44	0.47
5:XE:42:GLY:CA	5:XE:136:MET:HE1	2.44	0.47
6:XF:9:VAL:HB	6:XF:87:ARG:HB2	1.97	0.47
7:XG:78:ARG:HG3	7:XG:78:ARG:HH11	1.78	0.47
8:XH:10:LEU:H	8:XH:10:LEU:CD2	2.15	0.47
1:XA:640:A:O2'	8:XH:115:SER:HB3	2.14	0.47
11:XK:102:GLY:O	11:XK:103:LEU:C	2.53	0.47
11:XK:48:ILE:HG21	11:XK:63:LEU:HD13	1.96	0.47
13:XM:65:LYS:CE	50:Y4:50:VAL:HG11	2.45	0.47
10:XJ:49:VAL:HG23	14:XN:34:TYR:OH	2.13	0.47
17:XQ:29:HIS:N	17:XQ:33:GLY:O	2.47	0.47
20:XT:13:LEU:HD12	20:XT:13:LEU:C	2.34	0.47
46:Y0:12:ASN:HB2	46:Y0:13:GLY:H	1.51	0.47
47:Y1:7:ILE:HD12	47:Y1:62:VAL:HG11	1.96	0.47
48:Y2:17:SER:CB	48:Y2:18:PRO:CA	2.92	0.47
1:XA:1312:G:P	50:Y4:58:ARG:HH12	2.36	0.47
54:Y8:43:GLN:C	54:Y8:44:LYS:HD2	2.34	0.47
25:YA:1308:A:H2'	25:YA:1309:G:O4'	2.14	0.47
25:YA:1930:G:H22	25:YA:1969:A:H5''	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2790:A:H2'	25:YA:2791:C:H5''	1.95	0.47
25:YA:2849:U:H4'	25:YA:2868:A:C2	2.49	0.47
25:YA:319:C:H2'	25:YA:320:A:O4'	2.14	0.47
25:YA:611:C:H2'	25:YA:612:G:C8	2.50	0.47
25:YA:917:A:H62	26:YB:80:U:H4'	1.78	0.47
26:YB:27:C:H5'	26:YB:28:C:OP2	2.13	0.47
27:YD:134:ARG:HB2	27:YD:135:PHE:CD2	2.49	0.47
28:YE:195:LEU:HD12	28:YE:196:VAL:N	2.29	0.47
30:YG:16:ARG:NH2	30:YG:28:VAL:O	2.48	0.47
30:YG:5:VAL:HG22	50:Y4:25:TYR:CE2	2.50	0.47
31:YH:127:GLU:OE2	31:YH:130:ARG:NH2	2.48	0.47
31:YH:131:VAL:HG12	31:YH:132:ARG:N	2.29	0.47
31:YH:154:PRO:CG	31:YH:162:ILE:O	2.61	0.47
31:YH:41:MET:HG3	31:YH:54:ARG:HA	1.96	0.47
33:YN:137:LYS:CG	33:YN:138:LEU:N	2.77	0.47
33:YN:9:VAL:HG21	33:YN:48:MET:CB	2.45	0.47
33:YN:67:LEU:O	33:YN:88:GLU:HG3	2.14	0.47
35:YP:112:LEU:HD12	35:YP:127:ALA:CB	2.44	0.47
37:YR:117:VAL:O	37:YR:118:GLU:CB	2.63	0.47
37:YR:56:LYS:HE2	37:YR:94:TYR:OH	2.14	0.47
38:YS:40:ILE:HG22	38:YS:41:ASP:N	2.28	0.47
41:YV:59:ALA:HB2	41:YV:96:ILE:HD13	1.97	0.47
1:QA:1076:C:N4	1:QA:1077:G:O6	2.47	0.47
1:QA:1127:G:H2'	1:QA:1128:C:C6	2.50	0.47
1:QA:1347:G:N2	1:QA:1373:G:H2'	2.29	0.47
1:QA:1418:A:N6	1:QA:1482:G:O2'	2.44	0.47
1:QA:436:C:H2'	1:QA:437:U:C6	2.49	0.47
2:QB:223:ILE:HA	2:QB:226:ARG:HB3	1.97	0.47
5:QE:141:GLN:HA	5:QE:143:ARG:HH12	1.79	0.47
6:QF:40:VAL:HG22	6:QF:41:GLU:N	2.30	0.47
6:QF:79:LEU:O	6:QF:85:VAL:HG11	2.14	0.47
7:QG:107:ALA:CB	7:QG:134:ALA:HB2	2.44	0.47
10:QJ:74:ILE:O	10:QJ:74:ILE:HG12	2.13	0.47
12:QL:85:ILE:HD11	12:QL:98:TYR:CB	2.43	0.47
14:QN:15:LYS:HD2	14:QN:16:PHE:CE2	2.49	0.47
14:QN:36:PHE:CD1	14:QN:36:PHE:C	2.88	0.47
1:QA:377:G:P	16:QP:5:ARG:HH11	2.35	0.47
18:QR:82:THR:HG22	18:QR:83:GLU:H	1.79	0.47
25:RA:593:G:O3'	54:R8:61:LEU:HD22	2.14	0.47
25:RA:1012:U:O4	33:RN:25:ARG:HA	2.14	0.47
25:RA:1729:A:H2'	25:RA:1730:U:H5''	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:27:G:H1'	25:RA:513:A:N6	2.30	0.47
25:RA:598:G:C6	25:RA:599:G:C5	3.02	0.47
25:RA:862:G:H2'	25:RA:863:A:O4'	2.15	0.47
28:RE:63:LEU:CD1	28:RE:64:LYS:N	2.71	0.47
30:RG:106:LEU:HA	30:RG:110:ALA:HB3	1.96	0.47
32:RI:74:ASN:HD22	32:RI:74:ASN:N	1.94	0.47
32:RI:86:THR:O	32:RI:87:LYS:HB2	2.15	0.47
35:RP:147:LEU:N	35:RP:147:LEU:HD22	2.29	0.47
36:RQ:80:GLU:OE1	46:R0:5:LYS:HD2	2.14	0.47
26:RB:6:C:O2'	38:RS:29:PHE:HE1	1.97	0.47
41:RV:2:PHE:CD2	41:RV:13:ARG:NH2	2.83	0.47
41:RV:36:PRO:HA	41:RV:56:SER:CB	2.44	0.47
44:RY:61:ILE:HG22	44:RY:62:GLU:N	2.27	0.47
1:XA:1317:C:H5''	1:XA:1318:A:OP2	2.14	0.47
1:XA:1440:C:O2'	1:XA:1442:G:N2	2.48	0.47
1:XA:864:A:H2'	1:XA:865:A:C8	2.49	0.47
1:XA:908:A:O5'	1:XA:908:A:H8	1.97	0.47
6:XF:89:MET:O	6:XF:90:VAL:C	2.51	0.47
8:XH:16:ALA:HB2	8:XH:24:THR:CG2	2.44	0.47
8:XH:33:GLU:C	8:XH:35:ILE:N	2.65	0.47
8:XH:39:LEU:HD11	8:XH:111:ILE:HD11	1.96	0.47
8:XH:86:ILE:HG12	8:XH:135:CYS:HA	1.96	0.47
13:XM:23:TYR:HB2	13:XM:67:GLU:OE1	2.15	0.47
46:Y0:53:MET:HB3	46:Y0:59:LEU:HD23	1.96	0.47
46:Y0:74:ARG:O	46:Y0:76:GLY:N	2.47	0.47
25:YA:372:G:H8	47:Y1:65:SER:O	1.97	0.47
51:Y5:48:GLU:HA	51:Y5:59:GLU:CG	2.44	0.47
25:YA:1614:A:N1	42:YW:91:GLY:HA2	2.28	0.47
25:YA:223:A:N1	25:YA:407:G:O2'	2.34	0.47
25:YA:2429:G:N7	35:YP:56:SER:OG	2.41	0.47
25:YA:270(S):G:H1'	47:Y1:78:LYS:HD2	1.97	0.47
25:YA:2729:G:H2'	25:YA:2730:C:C6	2.49	0.47
25:YA:2860:A:C8	25:YA:2861:G:H1'	2.49	0.47
25:YA:357:A:H2'	25:YA:358:U:H6	1.79	0.47
25:YA:607:U:OP1	29:YF:102:PRO:HA	2.13	0.47
27:YD:32:SER:O	27:YD:33:LEU:CB	2.60	0.47
30:YG:106:LEU:HA	30:YG:110:ALA:CB	2.44	0.47
30:YG:14:GLU:O	30:YG:17:PRO:HG2	2.15	0.47
32:YI:74:ASN:ND2	32:YI:75:LEU:N	2.63	0.47
25:YA:1006:C:H1'	33:YN:106:MET:CE	2.45	0.47
33:YN:57:ALA:HA	33:YN:60:ILE:CD1	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YO:104:ARG:HD3	39:YT:36:GLU:OE2	2.15	0.47
25:YA:814:C:N4	35:YP:25:SER:HA	2.28	0.47
42:YW:66:GLU:O	42:YW:69:LEU:HG	2.14	0.47
43:YX:35:THR:O	43:YX:37:THR:N	2.47	0.47
43:YX:43:VAL:HG11	43:YX:51:VAL:HG21	1.97	0.47
44:YY:19:LYS:HE3	44:YY:20:TYR:CE1	2.49	0.47
1:QA:1275:A:H2'	1:QA:1276:G:O4'	2.15	0.47
1:QA:1327:C:OP2	21:QU:12:LYS:NZ	2.48	0.47
1:QA:1327:C:H2'	1:QA:1328:C:C6	2.49	0.47
1:QA:623:C:H2'	1:QA:624:C:O4'	2.14	0.47
1:QA:871:U:HO2'	1:QA:872:A:P	2.36	0.47
2:QB:69:LEU:HB3	2:QB:162:ILE:HG22	1.95	0.47
4:QD:60:GLU:O	4:QD:63:LYS:HB3	2.14	0.47
1:QA:614:A:OP1	4:QD:85:LYS:NZ	2.48	0.47
5:QE:96:PRO:HA	5:QE:117:ASP:OD2	2.14	0.47
6:QF:19:LEU:HD23	6:QF:19:LEU:C	2.35	0.47
8:QH:82:HIS:CD2	8:QH:83:ILE:N	2.82	0.47
11:QK:32:ILE:HD11	11:QK:68:ALA:O	2.14	0.47
50:R4:3:GLU:HG3	50:R4:4:GLY:H	1.79	0.47
52:R6:8:LYS:O	52:R6:27:LYS:HG2	2.15	0.47
54:R8:44:LYS:HD2	54:R8:44:LYS:N	2.30	0.47
25:RA:1897:G:C2	25:RA:1898:U:C2	3.03	0.47
25:RA:2011:U:OP2	42:RW:16:LYS:NZ	2.46	0.47
25:RA:2722:G:O2'	37:RR:3:HIS:HB2	2.15	0.47
25:RA:311:A:C6	25:RA:328:U:C4	3.02	0.47
25:RA:570:G:H2'	25:RA:2030:A:C5	2.49	0.47
26:RB:100:G:H2'	26:RB:101:A:O4'	2.15	0.47
28:RE:195:LEU:HD12	28:RE:196:VAL:N	2.29	0.47
28:RE:197:ILE:CD1	28:RE:199:ARG:HH12	2.26	0.47
28:RE:3:GLY:HA3	28:RE:81:ILE:HG21	1.97	0.47
30:RG:106:LEU:HA	30:RG:110:ALA:CB	2.44	0.47
32:RI:35:LEU:O	32:RI:36:ALA:CB	2.61	0.47
32:RI:77:LEU:HD12	32:RI:140:LEU:HB2	1.96	0.47
33:RN:137:LYS:CG	33:RN:138:LEU:H	2.27	0.47
33:RN:57:ALA:CA	33:RN:60:ILE:HD11	2.44	0.47
34:RO:120:GLU:OE1	39:RT:67:SER:OG	2.24	0.47
35:RP:37:GLY:O	35:RP:41:ARG:HD3	2.15	0.47
37:RR:117:VAL:O	37:RR:118:GLU:CB	2.62	0.47
38:RS:108:GLY:O	38:RS:110:LEU:N	2.48	0.47
26:RB:116:G:H4'	38:RS:54:LEU:CD1	2.42	0.47
41:RV:2:PHE:C	41:RV:2:PHE:CD1	2.88	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RY:19:LYS:HE3	44:RY:20:TYR:CE1	2.49	0.47
1:XA:1347:G:O2'	1:XA:1348:U:O5'	2.33	0.47
1:XA:271:C:H2'	1:XA:272:C:C6	2.50	0.47
1:XA:742:G:OP2	15:XO:35:ARG:NH2	2.42	0.47
1:XA:947:G:C6	1:XA:948:C:C4	3.02	0.47
2:XB:179:LYS:HA	8:XH:72:PRO:HG3	1.96	0.47
2:XB:224:GLN:HA	2:XB:229:VAL:HG23	1.97	0.47
4:XD:31:CYS:O	4:XD:32:ALA:CB	2.62	0.47
9:XI:5:TYR:OH	9:XI:7:THR:HG23	2.15	0.47
1:XA:1329:A:P	13:XM:28:ALA:HB3	2.54	0.47
1:XA:668:G:O2'	15:XO:46:HIS:HB3	2.14	0.47
17:XQ:63:ARG:HG2	17:XQ:64:PRO:CD	2.45	0.47
17:XQ:98:LEU:O	17:XQ:99:SER:C	2.53	0.47
18:XR:31:LEU:H	18:XR:31:LEU:CD2	2.27	0.47
20:XT:49:ALA:HB2	20:XT:99:LEU:HD22	1.97	0.47
50:Y4:38:LYS:C	50:Y4:40:HIS:H	2.07	0.47
50:Y4:50:VAL:O	50:Y4:50:VAL:CG1	2.62	0.47
50:Y4:50:VAL:O	50:Y4:50:VAL:HG13	2.15	0.47
25:YA:1300:U:H4'	25:YA:1301:A:H5''	1.95	0.47
25:YA:1932:A:H2'	25:YA:1933:G:O4'	2.15	0.47
25:YA:2452:C:O4'	55:Z8:76:PPU:HB2	2.15	0.47
25:YA:2074:U:HO2'	25:YA:2597:G:HO2'	1.58	0.47
25:YA:2850:A:H5'	25:YA:2868:A:H2	1.79	0.47
25:YA:2867:G:O2'	25:YA:2868:A:C8	2.68	0.47
25:YA:598:G:H1	25:YA:659:C:N4	2.13	0.47
26:YB:55:U:O3'	30:YG:27:ASN:ND2	2.45	0.47
28:YE:56:PRO:O	28:YE:57:LYS:CB	2.61	0.47
28:YE:78:LEU:CD2	28:YE:79:ARG:HD2	2.43	0.47
28:YE:89:ASP:O	28:YE:90:THR:O	2.33	0.47
29:YF:53:THR:C	29:YF:55:GLY:N	2.68	0.47
30:YG:36:LYS:HA	30:YG:95:ARG:HG2	1.95	0.47
35:YP:126:VAL:HA	35:YP:145:PRO:HD2	1.95	0.47
38:YS:46:VAL:HG12	38:YS:47:THR:N	2.28	0.47
40:YU:104:GLN:H	40:YU:104:GLN:CD	2.16	0.47
41:YV:48:GLY:O	41:YV:49:THR:C	2.52	0.47
44:YY:39:VAL:O	44:YY:40:GLU:OE2	2.32	0.47
44:YY:44:ILE:O	44:YY:62:GLU:O	2.32	0.47
45:YZ:125:LEU:HG	45:YZ:164:ALA:CB	2.44	0.47
1:QA:378:G:H2'	1:QA:379:C:H6	1.79	0.47
2:QB:95:GLN:NE2	2:QB:147:LYS:HE2	2.27	0.47
2:QB:220:ASP:O	2:QB:223:ILE:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:148:GLY:O	3:QC:202:ILE:HA	2.14	0.47
3:QC:203:PHE:O	3:QC:204:LEU:HD23	2.15	0.47
4:QD:110:PHE:H	4:QD:110:PHE:HD1	1.63	0.47
5:QE:101:ILE:CD1	5:QE:119:LEU:HD23	2.36	0.47
5:QE:78:HIS:HB3	8:QH:104:ARG:O	2.14	0.47
8:QH:86:ILE:HG22	8:QH:87:SER:N	2.29	0.47
13:QM:72:ALA:O	13:QM:76:ALA:HB2	2.14	0.47
16:QP:40:ASP:C	16:QP:42:ARG:H	2.17	0.47
20:QT:99:LEU:O	20:QT:100:ILE:HB	2.15	0.47
21:QU:15:ARG:HG2	21:QU:15:ARG:NH1	2.28	0.47
50:R4:8:LYS:O	50:R4:9:LEU:CB	2.62	0.47
52:R6:20:ASN:ND2	52:R6:42:TRP:CZ2	2.82	0.47
25:RA:1986:A:H2'	25:RA:1987:G:C8	2.50	0.47
25:RA:2207:C:H42	25:RA:2217:G:H1	1.62	0.47
25:RA:2402:C:H5	25:RA:2415:G:H22	1.60	0.47
25:RA:2725:A:O2'	25:RA:2726:U:OP2	2.31	0.47
25:RA:286:C:H2'	25:RA:287:C:C6	2.48	0.47
25:RA:29:U:H2'	25:RA:30:G:C8	2.50	0.47
27:RD:205:VAL:O	27:RD:206:LEU:C	2.52	0.47
25:RA:784:A:N7	27:RD:229:VAL:HG21	2.29	0.47
28:RE:65:GLY:HA2	28:RE:70:ALA:HB3	1.95	0.47
29:RF:184:TYR:CD2	29:RF:188:ARG:HD2	2.50	0.47
32:RI:74:ASN:ND2	32:RI:75:LEU:N	2.63	0.47
35:RP:12:ALA:C	35:RP:14:LYS:H	2.17	0.47
35:RP:75:ILE:CD1	35:RP:75:ILE:H	2.15	0.47
37:RR:74:LYS:O	37:RR:76:VAL:N	2.45	0.47
1:QA:1446:A:N3	39:RT:118:ARG:HD2	2.30	0.47
44:RY:39:VAL:O	44:RY:40:GLU:OE2	2.32	0.47
45:RZ:135:GLU:HG3	45:RZ:136:PHE:CD2	2.49	0.47
45:RZ:120:ILE:O	45:RZ:171:ILE:HD13	2.14	0.47
1:XA:1010:G:N2	1:XA:1020:U:O2'	2.47	0.47
1:XA:1366:C:O2'	10:XJ:60:ARG:NH1	2.47	0.47
1:XA:1459:C:OP1	20:XT:27:LYS:NZ	2.46	0.47
2:XB:116:GLU:HA	2:XB:119:GLU:HB3	1.96	0.47
2:XB:168:THR:CB	2:XB:192:SER:HB2	2.41	0.47
2:XB:223:ILE:HA	2:XB:226:ARG:HB3	1.97	0.47
2:XB:86:GLU:C	2:XB:88:ALA:H	2.17	0.47
2:XB:92:TYR:CD1	2:XB:92:TYR:C	2.88	0.47
3:XC:16:ARG:NH2	3:XC:183:ASP:OD2	2.48	0.47
3:XC:203:PHE:O	3:XC:204:LEU:HD23	2.14	0.47
3:XC:52:LEU:H	3:XC:52:LEU:CD2	2.20	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:19:LEU:C	6:XF:19:LEU:HD23	2.35	0.47
6:XF:40:VAL:HG22	6:XF:41:GLU:N	2.30	0.47
7:XG:70:LYS:O	7:XG:138:LYS:HE3	2.15	0.47
8:XH:6:ILE:O	8:XH:10:LEU:HG	2.14	0.47
9:XI:17:VAL:HG11	9:XI:81:ILE:HA	1.96	0.47
14:XN:8:GLU:C	14:XN:10:ALA:N	2.68	0.47
15:XO:76:GLU:O	15:XO:78:TYR:N	2.48	0.47
20:XT:50:GLU:CG	20:XT:51:GLU:N	2.76	0.47
1:XA:1326:C:H5''	21:XU:18:TYR:O	2.14	0.47
47:Y1:29:GLY:C	47:Y1:30:VAL:CG2	2.82	0.47
47:Y1:83:GLU:OE1	47:Y1:85:LEU:HB2	2.15	0.47
50:Y4:33:VAL:CG1	50:Y4:34:GLU:H	2.22	0.47
25:YA:1176:G:HO2'	25:YA:1178:C:H5	1.62	0.47
25:YA:1469:A:H2'	25:YA:1470:G:H8	1.78	0.47
25:YA:1631:A:H2'	25:YA:1632:A:O4'	2.15	0.47
25:YA:2070:G:H2'	25:YA:2071:A:O4'	2.14	0.47
25:YA:639:U:H2'	25:YA:640:C:C6	2.49	0.47
25:YA:956:G:H2'	25:YA:957:A:H2'	1.97	0.47
27:YD:35:LYS:HD3	27:YD:63:ARG:HB3	1.96	0.47
31:YH:18:GLU:HA	31:YH:18:GLU:OE2	2.14	0.47
32:YI:114:LEU:O	32:YI:128:LEU:HD12	2.15	0.47
32:YI:133:HIS:CB	32:YI:134:PRO:CD	2.92	0.47
36:YQ:34:LEU:HD11	36:YQ:129:THR:CB	2.35	0.47
38:YS:56:LEU:O	38:YS:57:LYS:C	2.53	0.47
39:YT:29:ARG:NH1	39:YT:46:GLU:OE1	2.48	0.47
39:YT:51:ARG:CG	39:YT:98:LYS:HG3	2.44	0.47
40:YU:107:ALA:O	40:YU:110:VAL:HB	2.14	0.47
44:YY:56:PRO:O	44:YY:57:GLN:C	2.53	0.47
44:YY:56:PRO:O	44:YY:58:GLY:N	2.47	0.47
1:QA:1442:G:C6	1:QA:1446:A:N6	2.83	0.47
1:QA:259:G:H1	1:QA:267:C:H42	1.62	0.47
1:QA:360:A:H2'	1:QA:361:G:C8	2.50	0.47
1:QA:496:A:H2'	1:QA:496:A:N3	2.30	0.47
1:QA:637:G:H2'	1:QA:638:G:C8	2.49	0.47
1:QA:811:C:H4'	1:QA:900:A:N6	2.29	0.47
2:QB:168:THR:CB	2:QB:192:SER:HB2	2.41	0.47
4:QD:135:LEU:C	4:QD:137:SER:H	2.18	0.47
8:QH:80:ILE:HG23	8:QH:137:VAL:HG12	1.97	0.47
8:QH:33:GLU:C	8:QH:35:ILE:N	2.65	0.47
9:QI:112:LYS:HD3	9:QI:112:LYS:C	2.35	0.47
16:QP:69:THR:O	16:QP:73:LEU:HG	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:QT:28:ALA:C	20:QT:30:LYS:N	2.67	0.47
25:RA:2152:G:H2'	25:RA:2153:G:C8	2.50	0.47
25:RA:2534:A:C2	25:RA:2535:G:H1'	2.50	0.47
25:RA:259:G:H21	25:RA:621:A:H8	1.63	0.47
27:RD:102:LYS:O	27:RD:103:ARG:HG3	2.15	0.47
27:RD:165:ILE:C	27:RD:166:GLN:HE21	2.18	0.47
28:RE:17:ASP:OD2	28:RE:17:ASP:N	2.46	0.47
30:RG:16:ARG:NH2	30:RG:28:VAL:O	2.48	0.47
31:RH:67:LEU:O	31:RH:71:LEU:HB2	2.15	0.47
32:RI:79:ILE:HG23	32:RI:81:VAL:HG13	1.97	0.47
33:RN:134:ARG:N	33:RN:135:PRO:CD	2.58	0.47
36:RQ:66:ILE:H	36:RQ:104:PHE:HA	1.80	0.47
37:RR:56:LYS:C	37:RR:58:GLY:H	2.18	0.47
38:RS:61:ASN:O	38:RS:65:VAL:HG23	2.15	0.47
40:RU:8:VAL:O	40:RU:9:VAL:C	2.53	0.47
44:RY:68:HIS:O	44:RY:71:LYS:HB2	2.14	0.47
45:RZ:128:VAL:HG22	45:RZ:129:SER:H	1.80	0.47
45:RZ:33:LEU:HD11	45:RZ:35:ARG:CG	2.44	0.47
45:RZ:33:LEU:CD1	45:RZ:34:ASN:H	2.28	0.47
1:XA:1127:G:H2'	1:XA:1128:C:C6	2.50	0.47
1:XA:189:U:H3	17:XQ:63:ARG:HB2	1.79	0.47
1:XA:397:A:N7	1:XA:547:A:O2'	2.44	0.47
1:XA:591:U:H2'	1:XA:592:G:C8	2.46	0.47
1:XA:867:G:HO2'	1:XA:873:A:N6	2.12	0.47
4:XD:114:ARG:CG	4:XD:114:ARG:NH1	2.77	0.47
7:XG:50:ILE:CG2	7:XG:61:VAL:HG21	2.45	0.47
7:XG:50:ILE:HG21	7:XG:61:VAL:HG21	1.97	0.47
5:XE:152:ARG:HD3	8:XH:44:PHE:CE1	2.49	0.47
13:XM:87:TYR:C	13:XM:89:GLY:H	2.18	0.47
16:XP:21:VAL:HG23	16:XP:34:GLU:H	1.79	0.47
46:Y0:37:LEU:N	46:Y0:59:LEU:O	2.40	0.47
25:YA:2285:C:H5	52:Y6:27:LYS:HE2	1.79	0.47
25:YA:2553:G:H1'	25:YA:2582:G:N3	2.29	0.47
25:YA:2630:G:H2'	25:YA:2631:G:C8	2.49	0.47
25:YA:680:G:H2'	25:YA:681:G:C8	2.50	0.47
25:YA:806:C:C2	25:YA:807:U:C5	3.03	0.47
27:YD:72:LYS:CG	27:YD:103:ARG:NH2	2.77	0.47
27:YD:145:VAL:O	27:YD:153:ALA:HA	2.14	0.47
28:YE:120:TRP:O	28:YE:121:ASN:HB2	2.14	0.47
28:YE:52:LEU:HB2	28:YE:75:VAL:CG2	2.40	0.47
28:YE:61:ARG:O	28:YE:63:LEU:CG	2.57	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:52:ILE:HG22	30:YG:52:ILE:O	2.15	0.47
30:YG:88:ILE:O	30:YG:88:ILE:CD1	2.54	0.47
31:YH:104:GLU:HG3	31:YH:114:VAL:HG22	1.96	0.47
31:YH:67:LEU:O	31:YH:71:LEU:HB2	2.15	0.47
1:QA:368:U:P	32:YI:91:SER:HG	2.38	0.47
25:YA:566:U:H5''	35:YP:29:LYS:NZ	2.30	0.47
40:YU:91:ASP:O	40:YU:92:ARG:C	2.53	0.47
41:YV:4:ILE:HA	41:YV:12:TYR:O	2.14	0.47
44:YY:81:LYS:NZ	44:YY:98:VAL:HB	2.30	0.47
45:YZ:120:ILE:HD12	45:YZ:171:ILE:N	2.29	0.47
1:QA:321:A:H2'	1:QA:322:C:C6	2.50	0.47
2:QB:71:VAL:HG23	2:QB:164:VAL:HG13	1.97	0.47
2:QB:172:ILE:O	2:QB:175:ARG:CB	2.62	0.47
2:QB:5:ILE:O	2:QB:6:THR:O	2.32	0.47
3:QC:11:ARG:HG2	3:QC:11:ARG:HH11	1.80	0.47
3:QC:172:ARG:O	3:QC:173:VAL:HG23	2.15	0.47
3:QC:23:TYR:CG	3:QC:24:ALA:N	2.83	0.47
4:QD:146:ILE:HG22	4:QD:146:ILE:O	2.15	0.47
4:QD:173:TRP:C	4:QD:186:LEU:HB2	2.35	0.47
14:QN:40:CYS:O	14:QN:42:ILE:N	2.48	0.47
17:QQ:63:ARG:HG2	17:QQ:64:PRO:CD	2.45	0.47
18:QR:32:ARG:HH11	18:QR:65:ILE:HD13	1.80	0.47
48:R2:17:SER:CB	48:R2:18:PRO:CA	2.92	0.47
51:R5:20:ARG:C	51:R5:22:HIS:N	2.68	0.47
25:RA:1024:G:C6	25:RA:1025:G:C6	3.02	0.47
25:RA:1676:A:H2'	25:RA:1677:A:O4'	2.14	0.47
25:RA:2246:G:H2'	25:RA:2247:A:C8	2.49	0.47
25:RA:311:A:H1'	25:RA:332:A:H5'	1.97	0.47
25:RA:451:C:N4	25:RA:454:A:H5'	2.29	0.47
25:RA:516:C:H2'	25:RA:517:C:H6	1.80	0.47
25:RA:771:G:OP1	53:R7:10:ARG:NH1	2.48	0.47
28:RE:63:LEU:O	28:RE:64:LYS:CB	2.62	0.47
31:RH:18:GLU:HA	31:RH:18:GLU:OE2	2.14	0.47
32:RI:99:GLU:CG	32:RI:103:ARG:NH2	2.75	0.47
32:RI:128:LEU:O	32:RI:138:ILE:N	2.44	0.47
32:RI:133:HIS:CB	32:RI:134:PRO:CD	2.92	0.47
32:RI:9:LEU:O	32:RI:10:GLU:O	2.33	0.47
34:RO:53:LYS:CD	34:RO:56:ASP:OD1	2.63	0.47
37:RR:56:LYS:HE2	37:RR:94:TYR:OH	2.14	0.47
33:RN:1:MET:HE3	40:RU:95:LEU:HD21	1.96	0.47
41:RV:30:GLY:O	41:RV:31:ALA:O	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RZ:131:ARG:C	45:RZ:133:ILE:H	2.18	0.47
45:RZ:156:LYS:HB2	45:RZ:158:PRO:HD3	1.96	0.47
45:RZ:35:ARG:HB3	45:RZ:35:ARG:NH1	2.29	0.47
1:XA:1036:G:H3'	1:XA:1037:C:C6	2.50	0.47
1:XA:1314:C:OP2	19:XS:4:SER:OG	2.32	0.47
1:XA:686:U:H1'	11:XK:42:TRP:NE1	2.21	0.47
1:XA:971:G:H2'	1:XA:1365:G:H4'	1.95	0.47
2:XB:96:ARG:HD2	2:XB:96:ARG:N	2.20	0.47
5:XE:77:PRO:HG2	5:XE:142:LEU:HD22	1.97	0.47
9:XI:112:LYS:C	9:XI:112:LYS:HD3	2.35	0.47
1:XA:970:C:N4	9:XI:128:ARG:OXT	2.47	0.47
11:XK:34:ASP:HB2	11:XK:35:PRO:CD	2.45	0.47
20:XT:93:GLU:HG2	20:XT:93:GLU:O	2.14	0.47
47:Y1:81:LYS:HE2	47:Y1:81:LYS:H	1.62	0.47
48:Y2:4:SER:OG	48:Y2:5:GLU:OE2	2.26	0.47
50:Y4:15:ILE:HG22	50:Y4:20:ASN:CA	2.45	0.47
52:Y6:8:LYS:O	52:Y6:27:LYS:HG2	2.15	0.47
25:YA:1029:A:N6	25:YA:1125:G:O2'	2.44	0.47
25:YA:1138:G:H21	33:YN:106:MET:CE	2.24	0.47
25:YA:1639:U:C2'	25:YA:1640:C:H5''	2.44	0.47
25:YA:273(A):G:C6	25:YA:364:C:C4	3.02	0.47
25:YA:503:A:H5''	25:YA:504:U:H5'	1.97	0.47
26:YB:49:C:H2'	26:YB:50:G:C8	2.50	0.47
26:YB:52:A:N6	38:YS:33:LYS:HG3	2.29	0.47
27:YD:136:ILE:HD12	27:YD:136:ILE:N	2.30	0.47
27:YD:231:HIS:ND1	27:YD:232:PRO:HD2	2.30	0.47
28:YE:103:ASP:OD2	28:YE:168:MET:HG2	2.15	0.47
28:YE:22:PRO:O	28:YE:22:PRO:CG	2.63	0.47
25:YA:618(A):C:OP2	29:YF:103:LYS:HE2	2.15	0.47
32:YI:74:ASN:CG	32:YI:75:LEU:HD13	2.36	0.47
32:YI:9:LEU:O	32:YI:10:GLU:O	2.33	0.47
33:YN:57:ALA:CA	33:YN:60:ILE:HD11	2.44	0.47
35:YP:81:GLN:HB3	35:YP:110:TYR:HB3	1.97	0.47
38:YS:5:THR:HG1	38:YS:7:TYR:HB3	1.78	0.47
45:YZ:111:VAL:O	45:YZ:113:ALA:N	2.48	0.47
45:YZ:156:LYS:HB2	45:YZ:158:PRO:HD3	1.96	0.47
45:YZ:26:GLY:HA3	45:YZ:86:VAL:O	2.14	0.47
45:YZ:95:PRO:O	45:YZ:96:VAL:HG13	2.15	0.47
1:QA:1186:G:O3'	9:QI:113:LYS:NZ	2.41	0.47
57:QA:1661:PAR:H43	57:QA:1661:PAR:H642	1.96	0.47
1:QA:664:G:OP1	18:QR:64:ARG:NE	2.41	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:22:LYS:HB2	4:QD:26:CYS:HB2	1.96	0.47
6:QF:41:GLU:HG2	6:QF:43:LEU:CD1	2.44	0.47
13:QM:8:GLU:C	13:QM:9:ILE:HG23	2.35	0.47
15:QO:82:ILE:O	15:QO:86:GLY:N	2.48	0.47
17:QQ:59:ILE:N	17:QQ:59:ILE:CD1	2.78	0.47
17:QQ:76:LEU:HD11	17:QQ:79:SER:H	1.80	0.47
21:QU:14:TRP:CE3	21:QU:15:ARG:NH1	2.83	0.47
22:QV:1:C:H4'	46:R0:5:LYS:CE	2.42	0.47
50:R4:53:GLU:O	50:R4:57:GLU:HG3	2.14	0.47
53:R7:2:LYS:HG2	53:R7:3:ARG:N	2.30	0.47
25:RA:593:G:O2'	54:R8:61:LEU:HD13	2.15	0.47
25:RA:1131:G:C8	25:RA:2025:C:H4'	2.50	0.47
25:RA:1270:C:H5''	25:RA:1271:G:H5'	1.96	0.47
25:RA:2677:G:H1	25:RA:2730:C:H42	1.63	0.47
25:RA:626:U:H5''	25:RA:627:A:H5'	1.96	0.47
25:RA:897:C:H2'	25:RA:898:C:C6	2.51	0.47
25:RA:923:C:H2'	25:RA:924:C:C6	2.50	0.47
27:RD:231:HIS:ND1	27:RD:232:PRO:HD2	2.30	0.47
27:RD:35:LYS:HD3	27:RD:63:ARG:HB3	1.96	0.47
30:RG:98:ARG:CA	30:RG:101:ILE:HG12	2.40	0.47
30:RG:44:GLY:HA2	30:RG:88:ILE:HG12	1.97	0.47
32:RI:67:ARG:NH2	32:RI:68:LEU:HB2	2.30	0.47
35:RP:98:GLU:HG2	35:RP:99:LEU:N	2.30	0.47
39:RT:57:PHE:O	39:RT:58:ASN:C	2.53	0.47
43:RX:26:TYR:HB3	43:RX:92:LEU:HD12	1.97	0.47
1:XA:1164:G:C6	1:XA:1165:C:C4	3.03	0.47
1:XA:1266:G:N2	1:XA:1269:A:OP2	2.48	0.47
1:XA:361:G:H2'	1:XA:362:G:O4'	2.15	0.47
1:XA:598:U:H4'	8:XH:94:TYR:CG	2.49	0.47
1:XA:637:G:H2'	1:XA:638:G:H8	1.81	0.47
1:XA:977:A:C8	1:XA:1223:C:C4	3.02	0.47
2:XB:220:ASP:O	2:XB:223:ILE:N	2.48	0.47
3:XC:172:ARG:O	3:XC:173:VAL:CG2	2.63	0.47
4:XD:173:TRP:C	4:XD:186:LEU:HB2	2.36	0.47
6:XF:69:GLU:O	6:XF:71:ARG:N	2.48	0.47
14:XN:40:CYS:O	14:XN:42:ILE:N	2.48	0.47
16:XP:13:HIS:C	16:XP:15:PRO:HD3	2.36	0.47
51:Y5:57:VAL:O	51:Y5:57:VAL:HG13	2.14	0.47
25:YA:1496:A:H8	25:YA:1577:C:O2'	1.80	0.47
25:YA:2356:C:H2'	25:YA:2357:U:O4'	2.15	0.47
25:YA:389:G:H22	35:YP:72:PRO:CG	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:769:G:H5'	25:YA:1379:A:N6	2.30	0.47
26:YB:31:C:H2'	26:YB:53:A:H61	1.80	0.47
27:YD:205:VAL:O	27:YD:206:LEU:C	2.52	0.47
28:YE:101:ARG:HD2	28:YE:171:GLU:HA	1.97	0.47
30:YG:106:LEU:HA	30:YG:110:ALA:HB3	1.95	0.47
30:YG:13:GLU:O	30:YG:13:GLU:HG3	2.14	0.47
31:YH:9:ILE:O	31:YH:10:PRO:O	2.33	0.47
33:YN:46:VAL:HG13	33:YN:47:ALA:N	2.30	0.47
33:YN:73:THR:HA	33:YN:83:LYS:O	2.15	0.47
34:YO:53:LYS:CD	34:YO:56:ASP:OD1	2.63	0.47
35:YP:115:LEU:CD1	35:YP:116:GLY:N	2.78	0.47
36:YQ:58:PHE:O	36:YQ:59:ARG:C	2.53	0.47
40:YU:27:LEU:O	40:YU:30:LYS:N	2.41	0.47
40:YU:66:ASN:CB	40:YU:76:TYR:HB2	2.44	0.47
41:YV:6:LYS:HD3	41:YV:11:GLN:HG2	1.96	0.47
45:YZ:33:LEU:CD1	45:YZ:34:ASN:H	2.28	0.47
1:QA:1365:G:H2'	1:QA:1366:C:H6	1.80	0.46
1:QA:161:A:N1	1:QA:347:G:O2'	2.47	0.46
1:QA:448:A:C2	1:QA:449:C:N3	2.83	0.46
3:QC:195:VAL:CG1	3:QC:196:LEU:H	2.27	0.46
4:QD:79:PHE:HE2	4:QD:83:SER:HB2	1.79	0.46
5:QE:13:ILE:HG22	5:QE:13:ILE:O	2.14	0.46
7:QG:70:LYS:O	7:QG:138:LYS:HE3	2.15	0.46
8:QH:28:ALA:CB	8:QH:57:PRO:HB2	2.45	0.46
9:QI:106:ALA:O	9:QI:108:VAL:HG13	2.15	0.46
13:QM:87:TYR:C	13:QM:89:GLY:H	2.18	0.46
15:QO:76:GLU:O	15:QO:78:TYR:N	2.48	0.46
19:QS:40:ILE:CG1	19:QS:41:VAL:N	2.78	0.46
47:R1:76:ARG:HD2	47:R1:76:ARG:N	2.29	0.46
47:R1:79:GLY:N	47:R1:80:LEU:HD23	2.30	0.46
53:R7:25:PRO:HA	53:R7:28:ARG:CZ	2.45	0.46
25:RA:1363:C:H2'	25:RA:1364:G:H8	1.80	0.46
25:RA:2198:A:O2'	25:RA:2199:A:O5'	2.28	0.46
25:RA:242:G:H5"	54:R8:3:LYS:HE3	1.97	0.46
25:RA:2844:G:H3'	25:RA:2845:G:H8	1.80	0.46
25:RA:301:G:H1	25:RA:316:C:H42	1.62	0.46
25:RA:83:G:O2'	25:RA:84:A:H8	1.97	0.46
26:RB:52:A:N6	38:RS:33:LYS:HG3	2.29	0.46
27:RD:183:ARG:NH1	27:RD:183:ARG:CG	2.69	0.46
27:RD:18:VAL:CG1	27:RD:19:ALA:N	2.78	0.46
28:RE:87:GLU:O	28:RE:89:ASP:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:65:TRP:CH2	29:RF:72:ARG:HB3	2.50	0.46
31:RH:9:ILE:O	31:RH:10:PRO:O	2.33	0.46
32:RI:64:GLU:HG3	32:RI:67:ARG:NH2	2.30	0.46
32:RI:68:LEU:HA	32:RI:71:ILE:HG23	1.97	0.46
34:RO:104:ARG:HD3	39:RT:36:GLU:OE2	2.15	0.46
36:RQ:34:LEU:HD11	36:RQ:129:THR:CB	2.35	0.46
37:RR:78:LYS:HG2	37:RR:78:LYS:O	2.15	0.46
38:RS:66:ALA:HA	38:RS:69:VAL:HG12	1.96	0.46
45:RZ:122:ARG:HB3	45:RZ:123:ASP:H	1.43	0.46
1:XA:1206:G:C4	1:XA:1207:G:C8	3.04	0.46
1:XA:1219:U:H2'	1:XA:1220:G:H8	1.80	0.46
1:XA:280:C:H5''	1:XA:281:G:C8	2.50	0.46
1:XA:585:G:O2'	1:XA:879:C:OP1	2.32	0.46
1:XA:652:U:O4	1:XA:752:G:H2'	2.15	0.46
1:XA:789:U:O2'	1:XA:791:G:N7	2.35	0.46
2:XB:15:VAL:HG23	2:XB:209:ARG:HE	1.80	0.46
3:XC:124:ILE:C	3:XC:126:ARG:H	2.19	0.46
4:XD:126:ILE:HG22	4:XD:127:THR:H	1.80	0.46
8:XH:68:ARG:HG2	8:XH:68:ARG:HH11	1.80	0.46
8:XH:82:HIS:CD2	8:XH:83:ILE:N	2.82	0.46
1:XA:1367:C:H4'	10:XJ:48:THR:HG21	1.96	0.46
11:XK:32:ILE:HD12	11:XK:72:ALA:CB	2.36	0.46
12:XL:10:LEU:CD1	17:XQ:32:TYR:CE2	2.89	0.46
18:XR:31:LEU:HD23	18:XR:31:LEU:N	2.29	0.46
25:YA:2364:C:H4'	46:Y0:56:ASP:OD1	2.15	0.46
52:Y6:20:ASN:O	52:Y6:21:TYR:HB2	2.15	0.46
54:Y8:9:GLY:O	54:Y8:13:ARG:HG2	2.16	0.46
25:YA:330:A:H2	25:YA:1210:A:H2'	1.80	0.46
25:YA:1957:C:H2'	25:YA:1958:C:C6	2.50	0.46
25:YA:199:A:O2'	25:YA:2433:A:N6	2.43	0.46
25:YA:2219:G:OP1	27:YD:172:TYR:OH	2.23	0.46
25:YA:2563:U:H1'	25:YA:2566:A:N6	2.30	0.46
25:YA:270(U):C:H2'	25:YA:270(V):G:C8	2.50	0.46
25:YA:277:C:H5'	25:YA:278:A:H8	1.80	0.46
25:YA:534:U:H2'	25:YA:535:C:C6	2.50	0.46
27:YD:183:ARG:CG	27:YD:183:ARG:NH1	2.69	0.46
28:YE:20:ALA:C	28:YE:21:VAL:HG13	2.35	0.46
29:YF:162:LEU:HD23	29:YF:165:ARG:HH21	1.80	0.46
29:YF:46:ARG:NH1	29:YF:46:ARG:CG	2.71	0.46
30:YG:104:GLU:OE1	50:Y4:23:GLU:HB3	2.15	0.46
31:YH:86:GLU:O	31:YH:132:ARG:HA	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YI:73:GLU:HG3	32:YI:136:VAL:CG2	2.43	0.46
33:YN:35:ARG:O	33:YN:35:ARG:HG3	2.15	0.46
34:YO:37:ASP:O	34:YO:62:VAL:HG23	2.14	0.46
35:YP:12:ALA:C	35:YP:14:LYS:H	2.16	0.46
35:YP:46:LYS:O	35:YP:48:PRO:N	2.48	0.46
37:YR:61:HIS:O	37:YR:65:LEU:HD13	2.14	0.46
39:YT:111:ARG:C	39:YT:113:LYS:N	2.64	0.46
41:YV:2:PHE:CD1	41:YV:2:PHE:C	2.88	0.46
42:YW:4:LYS:HA	42:YW:106:ILE:HA	1.98	0.46
43:YX:26:TYR:HB3	43:YX:92:LEU:HD12	1.96	0.46
44:YY:68:HIS:O	44:YY:71:LYS:HB2	2.14	0.46
45:YZ:107:THR:HG21	45:YZ:144:LEU:N	2.30	0.46
45:YZ:131:ARG:C	45:YZ:133:ILE:H	2.18	0.46
1:QA:1008:C:H42	1:QA:1021:G:H1	1.63	0.46
1:QA:1073:U:H3	1:QA:1102:A:H61	1.62	0.46
1:QA:1317:C:H5'	1:QA:1318:A:OP2	2.15	0.46
1:QA:1327:C:OP1	21:QU:21:TYR:HD1	1.98	0.46
1:QA:296:U:H2'	1:QA:297:G:C8	2.50	0.46
1:QA:651:C:H2'	1:QA:652:U:C6	2.50	0.46
1:QA:752:G:H1'	1:QA:754:C:H41	1.81	0.46
2:QB:86:GLU:C	2:QB:88:ALA:H	2.17	0.46
3:QC:58:GLU:O	3:QC:59:ARG:HG3	2.15	0.46
4:QD:29:PRO:O	4:QD:30:LYS:HB3	2.15	0.46
4:QD:31:CYS:O	4:QD:32:ALA:CB	2.63	0.46
7:QG:89:MET:HE1	7:QG:156:TRP:H	1.80	0.46
10:QJ:44:VAL:HG12	10:QJ:45:ARG:N	2.30	0.46
10:QJ:47:PHE:CE1	10:QJ:63:PHE:HB2	2.32	0.46
10:QJ:95:GLU:HA	10:QJ:95:GLU:OE2	2.16	0.46
11:QK:102:GLY:O	11:QK:103:LEU:C	2.53	0.46
12:QL:43:VAL:HG23	12:QL:93:LEU:HD22	1.97	0.46
19:QS:24:ALA:O	19:QS:25:LYS:CB	2.63	0.46
1:QA:1320:C:N4	19:QS:36:ARG:HG3	2.30	0.46
48:R2:15:LYS:H	48:R2:67:LYS:HZ3	1.63	0.46
49:R3:56:VAL:CG1	49:R3:57:GLU:N	2.74	0.46
51:R5:43:HIS:N	51:R5:43:HIS:ND1	2.63	0.46
54:R8:29:LYS:HE3	54:R8:41:ILE:O	2.15	0.46
25:RA:19:C:H2'	25:RA:20:C:C6	2.50	0.46
25:RA:2161:C:H2'	25:RA:2162:G:O4'	2.15	0.46
25:RA:2646:C:H2'	25:RA:2647:U:O4'	2.16	0.46
25:RA:265:A:O2'	25:RA:266:G:H4'	2.15	0.46
25:RA:704:G:H1'	25:RA:727:A:N6	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:27:THR:O	27:RD:29:PRO:CD	2.62	0.46
28:RE:20:ALA:C	28:RE:21:VAL:HG13	2.35	0.46
31:RH:153:LYS:HG3	31:RH:162:ILE:H	1.78	0.46
31:RH:41:MET:HG3	31:RH:54:ARG:HA	1.96	0.46
31:RH:4:ILE:CD1	31:RH:4:ILE:H	2.24	0.46
32:RI:114:LEU:O	32:RI:128:LEU:HD12	2.15	0.46
32:RI:37:VAL:HG12	32:RI:38:LEU:N	2.30	0.46
33:RN:9:VAL:HG21	33:RN:48:MET:CB	2.45	0.46
36:RQ:58:PHE:O	36:RQ:59:ARG:C	2.53	0.46
38:RS:13:ARG:O	38:RS:14:VAL:HB	2.15	0.46
39:RT:29:ARG:NH1	39:RT:46:GLU:OE1	2.47	0.46
45:RZ:140:ASP:OD2	45:RZ:156:LYS:CA	2.63	0.46
45:RZ:125:LEU:HG	45:RZ:164:ALA:CB	2.45	0.46
45:RZ:5:LEU:HD13	45:RZ:5:LEU:O	2.16	0.46
45:RZ:30:ASN:CB	45:RZ:89:PHE:HE2	2.27	0.46
45:RZ:95:PRO:O	45:RZ:96:VAL:HG13	2.15	0.46
1:XA:253:U:H2'	1:XA:254:G:C8	2.51	0.46
1:XA:585:G:H1'	1:XA:879:C:H5''	1.96	0.46
1:XA:60:A:H4'	1:XA:61:G:O5'	2.15	0.46
1:XA:833:U:H2'	1:XA:834:C:H6	1.81	0.46
3:XC:6:HIS:C	3:XC:8:ILE:H	2.18	0.46
6:XF:41:GLU:HG2	6:XF:43:LEU:CD1	2.44	0.46
7:XG:140:ASP:HA	7:XG:143:ARG:HH11	1.79	0.46
7:XG:92:SER:HB3	7:XG:95:ARG:CB	2.45	0.46
11:XK:80:VAL:O	11:XK:106:LYS:HD3	2.15	0.46
12:XL:127:GLU:O	12:XL:128:ALA:CB	2.62	0.46
15:XO:77:ARG:HA	15:XO:80:ALA:HB3	1.96	0.46
20:XT:99:LEU:O	20:XT:100:ILE:HB	2.14	0.46
24:XY:40:G:H2'	24:XY:41:A:C8	2.51	0.46
47:Y1:76:ARG:CD	47:Y1:76:ARG:H	2.28	0.46
50:Y4:55:ARG:C	50:Y4:59:PHE:HB3	2.35	0.46
54:Y8:29:LYS:HE3	54:Y8:41:ILE:O	2.15	0.46
25:YA:1437:C:H2'	25:YA:1438:U:H6	1.80	0.46
25:YA:1448:G:H5'	25:YA:1449:A:OP1	2.14	0.46
25:YA:1477:A:H2'	25:YA:1478:G:O4'	2.15	0.46
25:YA:2343:C:O2'	25:YA:2373:G:O2'	2.16	0.46
25:YA:2475:C:H3'	25:YA:2476:A:H5''	1.97	0.46
25:YA:2850:A:C2	37:YR:61:HIS:CD2	3.02	0.46
25:YA:2875:C:H2'	25:YA:2876:G:O4'	2.15	0.46
25:YA:486:C:H4'	42:YW:60:ASN:OD1	2.15	0.46
27:YD:165:ILE:C	27:YD:166:GLN:HE21	2.18	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:188:VAL:O	28:YE:188:VAL:HG13	2.15	0.46
29:YF:184:TYR:CD2	29:YF:188:ARG:HD2	2.50	0.46
30:YG:135:LEU:HD11	30:YG:157:ILE:HD12	1.98	0.46
31:YH:94:TYR:CD1	31:YH:94:TYR:N	2.82	0.46
32:YI:77:LEU:HD12	32:YI:140:LEU:HB2	1.97	0.46
32:YI:86:THR:O	32:YI:87:LYS:HB2	2.15	0.46
34:YO:104:ARG:HG2	34:YO:121:VAL:HG12	1.97	0.46
34:YO:61:VAL:O	34:YO:84:ALA:HB1	2.16	0.46
35:YP:37:GLY:O	35:YP:41:ARG:HD3	2.15	0.46
37:YR:56:LYS:C	37:YR:58:GLY:H	2.18	0.46
25:YA:2318:G:N1	38:YS:2:ALA:HA	2.30	0.46
40:YU:8:VAL:O	40:YU:9:VAL:C	2.53	0.46
41:YV:5:VAL:HG13	41:YV:14:VAL:HG21	1.97	0.46
45:YZ:140:ASP:OD2	45:YZ:156:LYS:CA	2.63	0.46
1:QA:1051:C:N4	1:QA:1052:U:O4	2.49	0.46
1:QA:1471:G:H2'	1:QA:1472:U:H6	1.80	0.46
1:QA:147:G:H1	1:QA:175:C:H42	1.62	0.46
57:QA:1661:PAR:N21	57:QA:1661:PAR:O53	2.49	0.46
1:QA:56:U:H2'	1:QA:57:G:C8	2.50	0.46
1:QA:583:A:N6	1:QA:758:G:O2'	2.48	0.46
1:QA:868:C:H2'	1:QA:869:G:O4'	2.15	0.46
2:QB:174:VAL:O	2:QB:178:ARG:HB3	2.16	0.46
7:QG:50:ILE:CG2	7:QG:61:VAL:HG21	2.45	0.46
1:QA:972:C:H4'	10:QJ:57:LYS:CG	2.46	0.46
11:QK:104:GLN:O	11:QK:106:LYS:HG3	2.16	0.46
11:QK:34:ASP:HB2	11:QK:35:PRO:CD	2.45	0.46
11:QK:96:ARG:O	11:QK:97:ALA:C	2.54	0.46
13:QM:23:TYR:HB2	13:QM:67:GLU:OE1	2.14	0.46
13:QM:80:ARG:O	13:QM:82:MET:O	2.34	0.46
16:QP:25:ARG:HG3	16:QP:25:ARG:HH11	1.79	0.46
18:QR:46:GLU:HG3	18:QR:47:THR:N	2.29	0.46
19:QS:3:ARG:HG3	19:QS:4:SER:N	2.24	0.46
20:QT:26:ASN:ND2	20:QT:26:ASN:N	2.62	0.46
24:QY:34:C:O2'	24:QY:35:G:O5'	2.25	0.46
47:R1:49:VAL:HG12	47:R1:51:VAL:CG2	2.45	0.46
48:R2:7:ARG:NH1	48:R2:7:ARG:HG3	2.25	0.46
52:R6:48:VAL:O	52:R6:49:HIS:HB2	2.15	0.46
25:RA:1430:C:H2'	25:RA:1431:U:C6	2.50	0.46
25:RA:1482:U:H3	25:RA:1512:G:H1	1.63	0.46
25:RA:2303:G:H1	25:RA:2313:C:H42	1.63	0.46
25:RA:270(R):G:N3	47:R1:78:LYS:NZ	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:918:A:C5	25:RA:919:G:H1'	2.51	0.46
26:RB:74:U:H2'	26:RB:75:G:O4'	2.16	0.46
30:RG:95:ARG:O	30:RG:96:ARG:C	2.54	0.46
31:RH:4:ILE:HG13	31:RH:6:ARG:HD3	1.97	0.46
33:RN:46:VAL:HG13	33:RN:47:ALA:N	2.30	0.46
34:RO:112:MET:O	34:RO:115:VAL:CG2	2.64	0.46
36:RQ:133:ARG:CG	36:RQ:134:ARG:N	2.78	0.46
38:RS:83:LYS:HG2	38:RS:109:GLY:H	1.76	0.46
38:RS:28:VAL:HG11	38:RS:98:VAL:HG12	1.97	0.46
43:RX:12:VAL:HG13	43:RX:12:VAL:O	2.15	0.46
43:RX:8:ILE:CD1	43:RX:42:ALA:HB1	2.45	0.46
45:RZ:107:THR:HG21	45:RZ:144:LEU:N	2.30	0.46
1:XA:106:C:H2'	1:XA:107:G:H8	1.80	0.46
1:XA:1478:C:H2'	1:XA:1479:C:C6	2.51	0.46
1:XA:297:G:N2	1:XA:299:G:H3'	2.30	0.46
3:XC:113:ALA:O	3:XC:115:LEU:N	2.48	0.46
1:XA:1205:U:O2'	3:XC:195:VAL:HG23	2.15	0.46
3:XC:23:TYR:CG	3:XC:24:ALA:N	2.83	0.46
3:XC:42:LEU:HD12	3:XC:45:LYS:HZ3	1.79	0.46
4:XD:7:PRO:HB2	4:XD:10:ARG:HD2	1.96	0.46
4:XD:146:ILE:CD1	4:XD:146:ILE:N	2.73	0.46
5:XE:96:PRO:HA	5:XE:117:ASP:CG	2.35	0.46
7:XG:108:ALA:C	7:XG:110:GLN:H	2.19	0.46
8:XH:122:ARG:O	8:XH:125:ARG:N	2.46	0.46
2:XB:178:ARG:HH22	8:XH:68:ARG:HH22	1.60	0.46
10:XJ:32:ALA:HB3	10:XJ:76:ASN:CB	2.33	0.46
10:XJ:80:LYS:HB2	10:XJ:80:LYS:NZ	2.30	0.46
14:XN:36:PHE:C	14:XN:36:PHE:CD1	2.88	0.46
19:XS:40:ILE:CG1	19:XS:41:VAL:N	2.78	0.46
20:XT:28:ALA:C	20:XT:30:LYS:N	2.67	0.46
54:Y8:40:GLU:C	54:Y8:42:ARG:N	2.68	0.46
25:YA:1022:G:O2'	25:YA:1023:U:OP2	2.24	0.46
25:YA:1790:C:H5''	25:YA:1791:A:OP1	2.15	0.46
22:XV:13:C:O2'	25:YA:1924:C:H4'	2.16	0.46
25:YA:2219:G:H5''	27:YD:269:PHE:CZ	2.51	0.46
25:YA:250:G:C6	25:YA:251:A:C6	3.04	0.46
25:YA:2818:G:H1	25:YA:2828:C:H42	1.63	0.46
25:YA:738:G:C6	25:YA:739:G:C2	3.03	0.46
25:YA:86:C:H4'	25:YA:104:U:H1'	1.96	0.46
25:YA:979:G:N2	25:YA:985:C:N3	2.63	0.46
28:YE:3:GLY:HA3	28:YE:81:ILE:HG21	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:68:GLY:HA2	30:YG:116:ASP:OD2	2.15	0.46
30:YG:20:ILE:HD13	30:YG:25:TYR:HB2	1.98	0.46
31:YH:4:ILE:HG13	31:YH:6:ARG:HD3	1.97	0.46
33:YN:97:ARG:HA	33:YN:100:GLU:HB3	1.96	0.46
35:YP:144:GLU:N	35:YP:144:GLU:OE1	2.48	0.46
36:YQ:109:VAL:HG13	36:YQ:113:GLN:OE1	2.16	0.46
36:YQ:80:GLU:CD	46:Y0:5:LYS:CB	2.84	0.46
36:YQ:87:LYS:O	36:YQ:89:ASN:N	2.43	0.46
37:YR:79:LEU:HD23	37:YR:79:LEU:O	2.16	0.46
38:YS:28:VAL:HG11	38:YS:98:VAL:HG12	1.97	0.46
38:YS:24:LEU:HB2	38:YS:85:VAL:HG12	1.98	0.46
39:YT:96:ARG:CB	39:YT:96:ARG:HH11	2.29	0.46
40:YU:73:GLY:O	40:YU:74:LEU:CB	2.63	0.46
41:YV:61:VAL:HA	41:YV:94:LEU:HD23	1.97	0.46
45:YZ:128:VAL:HG22	45:YZ:129:SER:H	1.80	0.46
45:YZ:102:LEU:CD1	45:YZ:171:ILE:HD11	2.46	0.46
45:YZ:45:ASP:OD1	45:YZ:49:ARG:NE	2.41	0.46
1:QA:1347:G:C2	9:QI:107:ARG:NH2	2.83	0.46
1:QA:297:G:H4'	1:QA:557:G:H4'	1.97	0.46
1:QA:689:C:O2'	1:QA:705:U:O2'	2.16	0.46
2:QB:224:GLN:HA	2:QB:229:VAL:HG23	1.97	0.46
2:QB:17:PHE:CD2	2:QB:44:LEU:HD21	2.47	0.46
6:QF:68:PRO:HG3	6:QF:71:ARG:NH2	2.31	0.46
7:QG:92:SER:HB3	7:QG:95:ARG:CB	2.45	0.46
7:QG:95:ARG:NE	7:QG:99:LEU:HD11	2.30	0.46
8:QH:39:LEU:C	8:QH:45:ILE:HG12	2.35	0.46
9:QI:28:VAL:O	9:QI:29:ASN:C	2.53	0.46
10:QJ:80:LYS:NZ	10:QJ:80:LYS:HB2	2.30	0.46
12:QL:115:LYS:O	12:QL:117:ARG:N	2.47	0.46
13:QM:65:LYS:NZ	13:QM:69:GLU:HG2	2.31	0.46
17:QQ:29:HIS:N	17:QQ:33:GLY:O	2.48	0.46
18:QR:43:PHE:C	18:QR:51:LEU:HD12	2.36	0.46
20:QT:44:ALA:O	20:QT:91:LEU:HB3	2.16	0.46
20:QT:49:ALA:HB2	20:QT:99:LEU:HD22	1.97	0.46
46:R0:55:ARG:HB2	46:R0:55:ARG:CZ	2.44	0.46
46:R0:53:MET:HB3	46:R0:59:LEU:HD23	1.97	0.46
25:RA:185:U:H2'	25:RA:186:G:C8	2.50	0.46
25:RA:1857:G:O2'	25:RA:1885:A:N6	2.48	0.46
25:RA:1930:G:HO2'	25:RA:1931:U:P	2.39	0.46
25:RA:2210:G:N3	25:RA:2210:G:H2'	2.29	0.46
25:RA:221:A:H4'	25:RA:222:A:O5'	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2331:G:O4'	46:R0:42:GLY:HA3	2.15	0.46
25:RA:2769:C:H2'	25:RA:2770:G:O4'	2.15	0.46
25:RA:428:A:H8	25:RA:428:A:OP2	1.99	0.46
29:RF:132:VAL:O	29:RF:133:ASN:C	2.52	0.46
31:RH:127:GLU:OE2	31:RH:130:ARG:NH2	2.47	0.46
36:RQ:66:ILE:O	36:RQ:104:PHE:N	2.49	0.46
25:RA:2468:G:H5''	36:RQ:120:ILE:HD12	1.97	0.46
38:RS:26:LEU:HD22	38:RS:87:PHE:CD1	2.46	0.46
39:RT:118:ARG:NH2	39:RT:121:ILE:HD12	2.31	0.46
44:RY:15:VAL:O	44:RY:21:LYS:HA	2.16	0.46
44:RY:35:TYR:O	44:RY:35:TYR:CD1	2.69	0.46
25:RA:336:C:HO2'	44:RY:35:TYR:HH	1.53	0.46
44:RY:56:PRO:O	44:RY:57:GLN:C	2.53	0.46
45:RZ:111:VAL:O	45:RZ:113:ALA:N	2.48	0.46
45:RZ:11:GLU:HG3	45:RZ:12:GLY:N	2.31	0.46
1:XA:1432:G:O2'	1:XA:1468:A:N6	2.49	0.46
1:XA:401:C:H2'	1:XA:402:G:C8	2.50	0.46
1:XA:411:A:H62	1:XA:413:G:N2	2.07	0.46
2:XB:77:ALA:HB1	2:XB:211:ILE:HG21	1.97	0.46
4:XD:135:LEU:C	4:XD:137:SER:H	2.18	0.46
4:XD:135:LEU:O	4:XD:137:SER:N	2.48	0.46
8:XH:86:ILE:CG1	8:XH:133:LEU:HD22	2.46	0.46
8:XH:39:LEU:C	8:XH:45:ILE:HG12	2.35	0.46
10:XJ:38:ILE:CD1	10:XJ:71:LEU:HB3	2.46	0.46
1:XA:686:U:C1'	11:XK:42:TRP:HE1	2.23	0.46
1:XA:35:G:O2'	12:XL:118:SER:O	2.22	0.46
15:XO:76:GLU:C	15:XO:78:TYR:N	2.69	0.46
17:XQ:100:LYS:O	17:XQ:101:ARG:HB2	2.15	0.46
17:XQ:76:LEU:HD11	17:XQ:79:SER:H	1.80	0.46
18:XR:43:PHE:C	18:XR:44:LEU:HD12	2.36	0.46
20:XT:96:GLY:O	20:XT:99:LEU:HD13	2.16	0.46
21:XU:14:TRP:CE3	21:XU:15:ARG:NH1	2.83	0.46
51:Y5:45:VAL:HG12	51:Y5:45:VAL:O	2.14	0.46
25:YA:1269:A:O5'	25:YA:1269:A:H8	1.98	0.46
25:YA:1925:C:N3	25:YA:1929:G:O6	2.48	0.46
25:YA:2394:C:H2'	25:YA:2395:C:H6	1.81	0.46
25:YA:2744:G:H21	31:YH:143:GLN:HE21	1.63	0.46
25:YA:74:A:H4'	25:YA:75:G:O5'	2.15	0.46
27:YD:102:LYS:O	27:YD:103:ARG:HG3	2.15	0.46
27:YD:117:VAL:CG2	27:YD:128:GLY:C	2.84	0.46
27:YD:198:ASN:ND2	27:YD:198:ASN:C	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:18:VAL:CG1	27:YD:19:ALA:N	2.78	0.46
29:YF:108:LYS:HA	29:YF:108:LYS:HZ3	1.80	0.46
31:YH:89:ILE:HD13	31:YH:89:ILE:H	1.81	0.46
32:YI:37:VAL:HG12	32:YI:38:LEU:N	2.30	0.46
32:YI:9:LEU:HD21	32:YI:12:LEU:O	2.15	0.46
33:YN:30:ILE:O	33:YN:34:LEU:CD2	2.63	0.46
34:YO:7:TYR:CD1	34:YO:20:MET:HB2	2.50	0.46
35:YP:1:MET:O	35:YP:2:LYS:HG3	2.16	0.46
25:YA:631:A:H4'	35:YP:65:ARG:HA	1.96	0.46
37:YR:1:MET:O	37:YR:2:ARG:HB2	2.15	0.46
40:YU:98:LEU:HD23	40:YU:98:LEU:C	2.36	0.46
42:YW:36:LEU:CD1	42:YW:47:VAL:HG12	2.44	0.46
43:YX:31:HIS:CD2	43:YX:33:LYS:HB2	2.50	0.46
45:YZ:30:ASN:CB	45:YZ:89:PHE:HE2	2.27	0.46
1:QA:1204:A:OP1	14:QN:3:ARG:NH2	2.44	0.46
1:QA:1301:U:H3'	1:QA:1302:U:H5'	1.98	0.46
1:QA:1356:G:H2'	1:QA:1357:A:C8	2.51	0.46
1:QA:826:C:H2'	1:QA:827:U:O2	2.15	0.46
2:QB:170:GLU:CA	2:QB:172:ILE:HD12	2.46	0.46
3:QC:113:ALA:O	3:QC:115:LEU:N	2.48	0.46
3:QC:127:ARG:NH1	3:QC:127:ARG:CG	2.74	0.46
3:QC:42:LEU:HD12	3:QC:45:LYS:HZ3	1.80	0.46
5:QE:12:LEU:HD21	5:QE:14:ARG:HB3	1.98	0.46
5:QE:150:ARG:HG2	5:QE:150:ARG:O	2.16	0.46
6:QF:3:ARG:HH11	6:QF:3:ARG:HG3	1.80	0.46
8:QH:68:ARG:HH11	8:QH:68:ARG:HG2	1.80	0.46
13:QM:10:PRO:HG3	13:QM:18:ALA:O	2.15	0.46
13:QM:3:ARG:O	13:QM:4:ILE:HD13	2.16	0.46
10:QJ:63:PHE:CD1	14:QN:58:LYS:HA	2.35	0.46
20:QT:53:LEU:HD12	20:QT:100:ILE:HG23	1.98	0.46
52:R6:18:ARG:O	52:R6:19:ARG:O	2.33	0.46
54:R8:52:LYS:O	54:R8:52:LYS:CG	2.64	0.46
25:RA:1438:U:H2'	25:RA:1439:A:H8	1.80	0.46
25:RA:1478:G:H2'	25:RA:1479:G:C8	2.49	0.46
25:RA:1696:G:H8	25:RA:1696:G:OP2	1.97	0.46
25:RA:2228:G:H2'	25:RA:2229:C:O4'	2.15	0.46
25:RA:2591:C:OP2	27:RD:238:GLY:HA3	2.15	0.46
25:RA:270(E):G:C2	25:RA:270(V):G:C2	3.04	0.46
28:RE:103:ASP:OD2	28:RE:168:MET:HG2	2.15	0.46
28:RE:188:VAL:HG13	28:RE:188:VAL:O	2.15	0.46
28:RE:47:VAL:O	28:RE:48:GLN:C	2.52	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:54:GLN:CA	28:RE:54:GLN:HE21	2.27	0.46
29:RF:31:HIS:O	29:RF:34:TRP:HB3	2.15	0.46
35:RP:6:LEU:HD22	35:RP:6:LEU:N	2.31	0.46
35:RP:90:ARG:HB3	35:RP:91:PHE:H	1.60	0.46
37:RR:75:LEU:HA	37:RR:78:LYS:HB3	1.97	0.46
38:RS:52:SER:O	38:RS:56:LEU:CD2	2.60	0.46
39:RT:36:GLU:O	39:RT:37:GLY:C	2.53	0.46
39:RT:51:ARG:CG	39:RT:98:LYS:HG3	2.44	0.46
40:RU:106:PHE:O	40:RU:109:LEU:HB2	2.15	0.46
42:RW:4:LYS:HA	42:RW:106:ILE:HA	1.98	0.46
43:RX:24:GLY:O	43:RX:82:GLN:HA	2.16	0.46
25:RA:137(A):G:H1'	43:RX:41:ASN:ND2	2.31	0.46
45:RZ:152:ALA:H	45:RZ:170:THR:N	2.14	0.46
1:XA:1308:U:OP1	13:XM:98:VAL:N	2.26	0.46
1:XA:687:A:N3	1:XA:688:G:H1'	2.30	0.46
1:XA:713:G:H21	1:XA:777:A:H1'	1.80	0.46
1:XA:966:G:C4	22:XV:34:C:H4'	2.50	0.46
1:XA:986:A:H2'	1:XA:987:G:C8	2.51	0.46
2:XB:136:VAL:O	2:XB:140:HIS:N	2.43	0.46
2:XB:174:VAL:O	2:XB:178:ARG:HB3	2.16	0.46
3:XC:134:ILE:HG23	3:XC:151:VAL:HB	1.98	0.46
3:XC:73:PRO:O	3:XC:77:ILE:HG13	2.16	0.46
6:XF:40:VAL:HG22	6:XF:41:GLU:H	1.80	0.46
6:XF:22:GLU:CD	6:XF:82:ARG:HH21	2.18	0.46
9:XI:40:LEU:C	9:XI:42:ARG:H	2.18	0.46
9:XI:83:ARG:C	9:XI:86:VAL:HG12	2.36	0.46
12:XL:126:LYS:HB2	12:XL:126:LYS:HZ3	1.80	0.46
16:XP:60:LEU:CA	16:XP:64:ALA:HB3	2.43	0.46
17:XQ:92:ARG:NH1	17:XQ:92:ARG:HG3	2.30	0.46
46:Y0:55:ARG:CZ	46:Y0:55:ARG:HB2	2.44	0.46
46:Y0:66:VAL:HG22	46:Y0:82:ARG:HB3	1.96	0.46
49:Y3:43:ILE:O	49:Y3:47:VAL:HG23	2.16	0.46
54:Y8:48:PHE:N	54:Y8:48:PHE:HD1	2.14	0.46
25:YA:30:G:O2'	25:YA:1214:A:N3	2.41	0.46
25:YA:414:C:O2	25:YA:1864:U:O2'	2.26	0.46
25:YA:704:G:H1'	25:YA:727:A:N6	2.30	0.46
25:YA:71:A:H5''	25:YA:72:U:H3'	1.97	0.46
25:YA:784:A:O2'	25:YA:785:G:H8	1.98	0.46
27:YD:211:ARG:HG2	27:YD:211:ARG:HH11	1.80	0.46
27:YD:35:LYS:HE3	27:YD:65:ILE:N	2.31	0.46
28:YE:54:GLN:CA	28:YE:54:GLN:HE21	2.27	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:618:G:OP1	29:YF:106:ARG:HB3	2.16	0.46
30:YG:102:PHE:HA	30:YG:105:LYS:HE3	1.98	0.46
30:YG:116:ASP:O	30:YG:117:PHE:CB	2.51	0.46
30:YG:36:LYS:O	30:YG:37:VAL:HG23	2.15	0.46
33:YN:36:GLY:O	33:YN:42:TRP:HE3	1.98	0.46
34:YO:101:PRO:HA	34:YO:120:GLU:O	2.16	0.46
35:YP:85:LEU:HD23	35:YP:88:LEU:HD22	1.97	0.46
36:YQ:11:LYS:HE2	36:YQ:87:LYS:HA	1.98	0.46
36:YQ:63:LYS:HE2	36:YQ:65:PHE:CZ	2.50	0.46
37:YR:75:LEU:HA	37:YR:78:LYS:HB3	1.97	0.46
39:YT:6:LEU:O	39:YT:10:VAL:HG23	2.16	0.46
39:YT:118:ARG:NH2	39:YT:121:ILE:HD12	2.31	0.46
41:YV:16:PRO:HA	41:YV:96:ILE:O	2.14	0.46
44:YY:15:VAL:O	44:YY:21:LYS:HA	2.15	0.46
1:QA:254:G:H2'	1:QA:255:G:C8	2.47	0.46
1:QA:424:G:H2'	1:QA:425:G:H8	1.81	0.46
1:QA:681:C:H2'	1:QA:682:G:H8	1.80	0.46
1:QA:74:C:H2'	1:QA:75:C:H6	1.80	0.46
2:QB:163:PHE:CE1	2:QB:215:LEU:HD22	2.50	0.46
3:QC:124:ILE:C	3:QC:126:ARG:H	2.18	0.46
4:QD:166:LYS:HD3	27:YD:134:ARG:HH11	1.78	0.46
4:QD:9:CYS:SG	4:QD:22:LYS:HE3	2.55	0.46
5:QE:55:VAL:O	5:QE:58:ALA:HB3	2.16	0.46
6:QF:101:ALA:HA	18:QR:28:GLU:CG	2.46	0.46
5:QE:78:HIS:CD2	8:QH:104:ARG:HE	2.33	0.46
8:QH:86:ILE:HG13	8:QH:133:LEU:CD2	2.44	0.46
8:QH:91:ARG:NH1	8:QH:91:ARG:HG2	2.25	0.46
1:QA:1232:U:P	9:QI:124:GLN:HE21	2.39	0.46
9:QI:59:PHE:CZ	9:QI:88:TYR:CE1	3.01	0.46
12:QL:8:ASN:OD1	17:QQ:34:LYS:CE	2.48	0.46
1:QA:1048:G:OP1	14:QN:3:ARG:HB3	2.16	0.46
1:QA:310:G:H4'	16:QP:31:LYS:HD3	1.97	0.46
20:QT:56:MET:HG3	20:QT:88:VAL:HG21	1.98	0.46
47:R1:83:GLU:OE1	47:R1:85:LEU:HB2	2.15	0.46
49:R3:18:ASP:O	49:R3:21:ALA:N	2.49	0.46
50:R4:50:VAL:O	50:R4:50:VAL:HG13	2.15	0.46
25:RA:242:G:C3'	54:R8:6:THR:HG23	2.46	0.46
25:RA:1927:A:C6	25:RA:1928:A:C6	3.04	0.46
25:RA:2181:G:H2'	25:RA:2182:G:C8	2.50	0.46
25:RA:2287:A:C6	25:RA:2289:G:C4	3.03	0.46
25:RA:401:A:H2'	25:RA:402:A:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:459:U:H5''	53:R7:40:TRP:CD2	2.51	0.46
25:RA:571:A:H5'	25:RA:2030:A:N7	2.30	0.46
25:RA:598:G:H2'	25:RA:599:G:O4'	2.14	0.46
25:RA:620:G:H4'	25:RA:621:A:C5'	2.45	0.46
25:RA:827:U:H1'	25:RA:2246:G:O2'	2.16	0.46
27:RD:136:ILE:N	27:RD:136:ILE:HD12	2.30	0.46
27:RD:69:ARG:C	27:RD:71:ASP:N	2.69	0.46
28:RE:172:VAL:HG13	28:RE:182:LEU:HD11	1.98	0.46
28:RE:89:ASP:O	28:RE:90:THR:O	2.33	0.46
30:RG:37:VAL:HG22	30:RG:159:VAL:CA	2.34	0.46
26:RB:43:C:O2'	30:RG:93:THR:O	2.11	0.46
32:RI:78:THR:O	32:RI:79:ILE:HG12	2.16	0.46
33:RN:30:ILE:O	33:RN:34:LEU:CD2	2.63	0.46
35:RP:23:PRO:HG2	35:RP:23:PRO:O	2.15	0.46
35:RP:81:GLN:HB3	35:RP:110:TYR:HB3	1.97	0.46
37:RR:29:LEU:CD1	37:RR:29:LEU:N	2.79	0.46
37:RR:85:PRO:C	37:RR:87:TYR:H	2.19	0.46
38:RS:109:GLY:O	38:RS:110:LEU:HB2	2.16	0.46
39:RT:96:ARG:CB	39:RT:96:ARG:HH11	2.29	0.46
25:RA:1200:C:H1'	40:RU:2:PRO:HG2	1.98	0.46
45:RZ:108:PRO:CG	45:RZ:112:ARG:N	2.70	0.46
45:RZ:151:HIS:O	45:RZ:153:SER:O	2.33	0.46
1:XA:109:A:H4'	1:XA:110:C:OP2	2.16	0.46
1:XA:1298:C:C4	7:XG:114:ARG:HD2	2.51	0.46
1:XA:565:U:H5''	1:XA:566:G:H2'	1.96	0.46
2:XB:24:TRP:CZ2	2:XB:26:PRO:HB3	2.51	0.46
2:XB:17:PHE:CD2	2:XB:44:LEU:HD21	2.47	0.46
3:XC:11:ARG:HG2	3:XC:11:ARG:HH11	1.80	0.46
3:XC:58:GLU:O	3:XC:59:ARG:HG3	2.15	0.46
1:XA:1080:A:H5''	5:XE:16:THR:HG21	1.98	0.46
8:XH:80:ILE:HG23	8:XH:137:VAL:HG12	1.97	0.46
9:XI:9:ARG:HA	9:XI:76:ALA:HB1	1.96	0.46
11:XK:17:GLY:HA3	11:XK:77:MET:HE1	1.97	0.46
15:XO:82:ILE:HD11	15:XO:88:ARG:HG2	1.95	0.46
51:Y5:20:ARG:C	51:Y5:22:HIS:N	2.68	0.46
51:Y5:54:GLY:O	51:Y5:55:ARG:C	2.54	0.46
54:Y8:44:LYS:HD2	54:Y8:44:LYS:N	2.30	0.46
25:YA:1289:C:H2'	25:YA:1290:C:H6	1.81	0.46
25:YA:1494:A:H2'	25:YA:1495:A:H5'	1.98	0.46
25:YA:1709:U:H2'	25:YA:1710:C:C6	2.50	0.46
25:YA:2105:C:H2'	25:YA:2106:G:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2159:G:H2'	25:YA:2160:G:H8	1.80	0.46
25:YA:2228:G:H2'	25:YA:2229:C:O4'	2.16	0.46
25:YA:2811:G:H1	25:YA:2889:C:H42	1.63	0.46
25:YA:372:G:O2'	25:YA:373:U:OP2	2.33	0.46
25:YA:748:G:C8	42:YW:89:ALA:HB1	2.51	0.46
27:YD:105:ILE:HG23	27:YD:106:ILE:O	2.15	0.46
27:YD:148:GLU:HB2	27:YD:151:LYS:HD2	1.98	0.46
27:YD:14:ARG:HG3	27:YD:15:PHE:N	2.31	0.46
28:YE:63:LEU:O	28:YE:64:LYS:CB	2.62	0.46
31:YH:106:THR:HG22	31:YH:112:PRO:HB3	1.97	0.46
31:YH:53:GLU:HA	31:YH:53:GLU:OE1	2.16	0.46
31:YH:86:GLU:O	31:YH:87:LEU:CB	2.64	0.46
32:YI:78:THR:O	32:YI:79:ILE:HG12	2.16	0.46
33:YN:128:HIS:HB2	33:YN:129:PRO:CD	2.46	0.46
36:YQ:87:LYS:HG2	36:YQ:87:LYS:O	2.15	0.46
37:YR:78:LYS:HG2	37:YR:78:LYS:O	2.15	0.46
38:YS:108:GLY:O	38:YS:110:LEU:N	2.48	0.46
38:YS:61:ASN:O	38:YS:65:VAL:HG23	2.15	0.46
43:YX:12:VAL:O	43:YX:12:VAL:HG13	2.15	0.46
43:YX:65:ARG:N	43:YX:65:ARG:CD	2.79	0.46
45:YZ:27:VAL:CG2	45:YZ:28:MET:N	2.78	0.46
45:YZ:5:LEU:O	45:YZ:5:LEU:HD13	2.16	0.46
1:QA:725:G:C6	1:QA:726:C:C4	3.03	0.46
1:QA:792:A:H1'	1:QA:793:U:OP2	2.16	0.46
2:QB:162:ILE:CD1	2:QB:184:VAL:HG13	2.44	0.46
3:QC:15:THR:HG22	3:QC:15:THR:O	2.15	0.46
3:QC:6:HIS:C	3:QC:8:ILE:H	2.18	0.46
4:QD:7:PRO:HB2	4:QD:10:ARG:HD2	1.97	0.46
6:QF:44:GLY:HA2	6:QF:59:TYR:CE2	2.51	0.46
1:QA:643:C:H5'	8:QH:31:PHE:CD1	2.51	0.46
9:QI:40:LEU:C	9:QI:42:ARG:H	2.18	0.46
11:QK:41:THR:CG2	11:QK:42:TRP:N	2.79	0.46
12:QL:126:LYS:C	12:QL:128:ALA:N	2.69	0.46
15:QO:30:ALA:HA	15:QO:85:LEU:HD11	1.97	0.46
17:QQ:84:LEU:O	17:QQ:86:GLU:N	2.49	0.46
13:QM:118:ALA:O	22:QV:28:C:O3'	2.34	0.46
22:QV:49:G:O6	22:QV:65:C:N4	2.49	0.46
47:R1:60:PHE:CE2	47:R1:91:LYS:NZ	2.84	0.46
49:R3:59:VAL:CG1	49:R3:60:GLU:H	2.29	0.46
50:R4:15:ILE:HG22	50:R4:20:ASN:CA	2.45	0.46
30:RG:104:GLU:OE1	50:R4:23:GLU:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1472:A:H2'	25:RA:1473:G:O4'	2.16	0.46
25:RA:1578:U:H2'	25:RA:1579:A:H5'	1.98	0.46
25:RA:1694:C:H4'	25:RA:1695:G:O5'	2.16	0.46
25:RA:1795:C:H2'	25:RA:1796:U:O4'	2.15	0.46
22:QV:13:C:O2'	25:RA:1924:C:H4'	2.16	0.46
25:RA:2777:G:H5''	25:RA:2778:A:O5'	2.16	0.46
25:RA:639:U:H2'	25:RA:640:C:C6	2.51	0.46
25:RA:719:C:H2'	25:RA:720:C:C6	2.51	0.46
27:RD:117:VAL:CG2	27:RD:128:GLY:C	2.84	0.46
27:RD:61:LEU:HB3	27:RD:63:ARG:NH1	2.31	0.46
28:RE:61:ARG:O	28:RE:63:LEU:CG	2.57	0.46
28:RE:95:ILE:HG22	28:RE:95:ILE:O	2.16	0.46
30:RG:111:LEU:HD22	30:RG:120:LEU:HD21	1.96	0.46
30:RG:135:LEU:HD11	30:RG:157:ILE:HD12	1.98	0.46
30:RG:52:ILE:O	30:RG:52:ILE:HG22	2.15	0.46
32:RI:77:LEU:HB2	32:RI:104:GLN:OE1	2.15	0.46
32:RI:135:GLU:HB2	32:RI:136:VAL:H	1.50	0.46
34:RO:101:PRO:HA	34:RO:120:GLU:O	2.16	0.46
35:RP:21:ARG:HB3	35:RP:22:GLY:H	1.65	0.46
35:RP:45:LEU:CD1	35:RP:45:LEU:N	2.79	0.46
35:RP:85:LEU:HD23	35:RP:88:LEU:HD22	1.97	0.46
36:RQ:109:VAL:HG13	36:RQ:113:GLN:OE1	2.16	0.46
36:RQ:23:GLY:O	36:RQ:24:GLY:C	2.54	0.46
38:RS:24:LEU:HB2	38:RS:85:VAL:HG12	1.98	0.46
28:RE:7:VAL:HG11	39:RT:1:MET:CE	2.45	0.46
39:RT:58:ASN:N	39:RT:58:ASN:HD22	2.10	0.46
40:RU:69:CYS:O	40:RU:74:LEU:HD12	2.16	0.46
43:RX:43:VAL:HG11	43:RX:51:VAL:HG21	1.97	0.46
1:XA:1095:U:H5'	1:XA:1109:C:O2	2.15	0.46
1:XA:1220:G:O3'	19:XS:36:ARG:HD3	2.15	0.46
1:XA:335:C:O2'	1:XA:1433:A:N3	2.47	0.46
1:XA:1441:G:H4'	1:XA:1442:G:C4	2.51	0.46
4:XD:192:GLU:HG3	4:XD:192:GLU:H	1.57	0.46
6:XF:100:ASN:HA	6:XF:100:ASN:HD22	1.47	0.46
7:XG:140:ASP:C	7:XG:142:GLU:N	2.69	0.46
8:XH:49:GLU:O	8:XH:49:GLU:HG3	2.15	0.46
9:XI:42:ARG:O	9:XI:45:ALA:HB3	2.16	0.46
1:XA:1219:U:P	14:XN:19:ARG:HH22	2.36	0.46
25:YA:857:C:OP2	46:Y0:77:ARG:NH2	2.49	0.46
49:Y3:28:LEU:HA	49:Y3:33:GLN:OE1	2.16	0.46
49:Y3:59:VAL:CG1	49:Y3:60:GLU:H	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:Y6:15:GLU:HB3	52:Y6:16:CYS:H	1.46	0.46
25:YA:1026:U:H1'	25:YA:1027:A:C5'	2.46	0.46
25:YA:1093:G:H3'	25:YA:1094:U:H6	1.80	0.46
25:YA:2038:G:H2'	25:YA:2039:C:O4'	2.16	0.46
25:YA:2347:C:C5	25:YA:2382:G:H1'	2.51	0.46
25:YA:634:C:H2'	25:YA:635:C:C6	2.51	0.46
25:YA:669:G:C2	25:YA:801:G:C6	3.04	0.46
25:YA:829:A:H5''	25:YA:831:G:N7	2.30	0.46
27:YD:48:ARG:NH1	27:YD:48:ARG:HG3	2.31	0.46
27:YD:61:LEU:HB3	27:YD:63:ARG:NH1	2.31	0.46
28:YE:129:HIS:O	28:YE:130:GLY:C	2.53	0.46
28:YE:87:GLU:O	28:YE:89:ASP:N	2.48	0.46
30:YG:76:SER:CB	30:YG:83:ARG:HA	2.46	0.46
31:YH:151:ILE:O	31:YH:152:ARG:O	2.34	0.46
32:YI:92:VAL:HG13	32:YI:92:VAL:O	2.16	0.46
33:YN:96:GLU:O	33:YN:99:LEU:N	2.34	0.46
34:YO:8:LEU:N	34:YO:8:LEU:CD2	2.76	0.46
35:YP:144:GLU:HA	35:YP:145:PRO:HD3	1.76	0.46
35:YP:23:PRO:O	35:YP:23:PRO:HG2	2.15	0.46
36:YQ:81:VAL:HG22	46:Y0:7:LEU:CD2	1.99	0.46
38:YS:74:ALA:O	38:YS:75:GLU:C	2.54	0.46
28:YE:7:VAL:HG11	39:YT:1:MET:CE	2.45	0.46
40:YU:69:CYS:O	40:YU:74:LEU:HD12	2.16	0.46
41:YV:36:PRO:HA	41:YV:56:SER:HG	1.81	0.46
42:YW:28:SER:C	42:YW:30:GLU:N	2.69	0.46
42:YW:48:ALA:O	42:YW:49:LYS:C	2.53	0.46
43:YX:35:THR:O	43:YX:35:THR:HG23	2.16	0.46
25:YA:142:G:H1'	43:YX:37:THR:HG21	1.97	0.46
1:QA:1050:G:N2	1:QA:1209:C:C2	2.84	0.46
1:QA:156:G:H1	1:QA:165:C:H42	1.63	0.46
1:QA:46:G:H2'	1:QA:366:C:H5	1.79	0.46
5:QE:96:PRO:HA	5:QE:117:ASP:CG	2.35	0.46
7:QG:107:ALA:O	7:QG:110:GLN:HB2	2.15	0.46
7:QG:54:THR:O	7:QG:54:THR:HG23	2.16	0.46
8:QH:49:GLU:O	8:QH:49:GLU:HG3	2.14	0.46
14:QN:41:ARG:NH1	14:QN:41:ARG:HG2	2.29	0.46
17:QQ:100:LYS:O	17:QQ:101:ARG:HB2	2.15	0.46
20:QT:93:GLU:O	20:QT:93:GLU:HG2	2.14	0.46
20:QT:98:PRO:O	20:QT:100:ILE:N	2.42	0.46
22:QV:76:A:H8	25:RA:2602:A:H62	1.63	0.46
24:QY:40:G:H2'	24:QY:41:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:80:LEU:C	47:R1:81:LYS:CE	2.77	0.46
47:R1:85:LEU:N	47:R1:85:LEU:HD22	2.31	0.46
54:R8:40:GLU:C	54:R8:42:ARG:N	2.68	0.46
25:RA:1641:A:H2'	25:RA:1642:G:O4'	2.16	0.46
25:RA:2693:A:H2'	25:RA:2694:G:H8	1.80	0.46
25:RA:307:G:N1	25:RA:310:A:OP2	2.48	0.46
25:RA:642:G:H21	25:RA:646:A:H2	1.63	0.46
28:RE:33:VAL:HG12	28:RE:90:THR:H	1.81	0.46
30:RG:88:ILE:CD1	30:RG:88:ILE:O	2.54	0.46
31:RH:13:LYS:HE2	31:RH:13:LYS:CA	2.39	0.46
31:RH:59:ARG:CG	31:RH:59:ARG:NH1	2.79	0.46
32:RI:92:VAL:O	32:RI:92:VAL:HG13	2.16	0.46
33:RN:36:GLY:O	33:RN:42:TRP:HE3	1.98	0.46
34:RO:61:VAL:O	34:RO:84:ALA:HB1	2.16	0.46
39:RT:76:PHE:HA	39:RT:77:PRO:HD3	1.75	0.46
41:RV:47:VAL:O	41:RV:48:GLY:O	2.34	0.46
45:RZ:108:PRO:HG2	45:RZ:112:ARG:N	2.24	0.46
1:XA:545:C:OP2	4:XD:62:GLN:NE2	2.48	0.46
1:XA:991:U:O2'	1:XA:992:U:O5'	2.32	0.46
2:XB:122:PHE:HD1	2:XB:139:LYS:NZ	2.08	0.46
4:XD:110:PHE:H	4:XD:110:PHE:HD1	1.63	0.46
4:XD:100:ARG:NH2	4:XD:137:SER:HA	2.31	0.46
5:XE:150:ARG:O	5:XE:150:ARG:HG2	2.16	0.46
9:XI:28:VAL:O	9:XI:29:ASN:C	2.53	0.46
12:XL:126:LYS:C	12:XL:128:ALA:N	2.69	0.46
13:XM:23:TYR:HB3	13:XM:67:GLU:HA	1.98	0.46
16:XP:30:GLY:O	16:XP:31:LYS:C	2.54	0.46
19:XS:65:ASN:HA	50:Y4:55:ARG:HH11	1.81	0.46
19:XS:63:THR:HG23	19:XS:66:MET:CE	2.46	0.46
51:Y5:36:CYS:C	51:Y5:38:ALA:H	2.19	0.46
25:YA:2396:G:C2'	25:YA:2397:G:H5'	2.45	0.46
27:YD:206:LEU:HD23	27:YD:206:LEU:HA	1.49	0.46
27:YD:79:VAL:HG21	27:YD:111:LEU:HD21	1.98	0.46
28:YE:137:HIS:CB	28:YE:138:PRO:HD2	2.42	0.46
30:YG:14:GLU:O	30:YG:17:PRO:HD2	2.16	0.46
31:YH:88:LEU:HD22	31:YH:163:TYR:O	2.16	0.46
32:YI:40:THR:O	32:YI:44:LEU:HB2	2.16	0.46
25:YA:2415:G:H4'	35:YP:66:GLY:C	2.36	0.46
36:YQ:66:ILE:H	36:YQ:104:PHE:HA	1.80	0.46
37:YR:3:HIS:C	37:YR:5:LYS:H	2.17	0.46
39:YT:54:ARG:HG2	39:YT:54:ARG:NH1	2.23	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:YZ:58:VAL:O	45:YZ:59:LEU:HB2	2.16	0.46
1:QA:1022:G:H2'	1:QA:1023:G:H8	1.81	0.46
1:QA:109:A:H5'	1:QA:110:C:C5	2.51	0.46
1:QA:1269:A:N1	1:QA:1312:G:O2'	2.43	0.46
3:QC:108:ASN:HB3	3:QC:111:LEU:HG	1.98	0.46
3:QC:172:ARG:O	3:QC:173:VAL:CG2	2.63	0.46
3:QC:43:LEU:HD22	3:QC:47:LEU:CD2	2.46	0.46
3:QC:53:ALA:O	3:QC:54:ARG:HB2	2.16	0.46
3:QC:87:LEU:C	3:QC:89:GLU:H	2.20	0.46
7:QG:57:GLU:O	7:QG:59:LEU:N	2.49	0.46
9:QI:5:TYR:OH	9:QI:7:THR:HG23	2.15	0.46
15:QO:76:GLU:C	15:QO:78:TYR:N	2.69	0.46
16:QP:30:GLY:O	16:QP:31:LYS:C	2.54	0.46
20:QT:98:PRO:C	20:QT:100:ILE:H	2.18	0.46
24:QY:39:C:O2'	24:QY:40:G:P	2.74	0.46
51:R5:41:PRO:HA	51:R5:42:PRO:HD3	1.82	0.46
25:RA:1341:U:OP1	25:RA:1397:U:N3	2.44	0.46
25:RA:1684:C:H42	25:RA:1704:G:H1	1.62	0.46
25:RA:171:G:H2'	25:RA:172:C:C6	2.51	0.46
25:RA:1932:A:H2'	25:RA:1933:G:O4'	2.16	0.46
25:RA:1939:U:O2	25:RA:1967:C:H4'	2.16	0.46
25:RA:2395:C:N4	25:RA:2421:G:H1	2.13	0.46
25:RA:2584:U:H6	25:RA:2585:U:C4	2.34	0.46
25:RA:2855:C:H2'	25:RA:2856:C:C6	2.51	0.46
25:RA:376:C:H2'	25:RA:377:C:C6	2.51	0.46
25:RA:845:G:H8	25:RA:845:G:OP2	1.99	0.46
28:RE:15:PHE:CD1	28:RE:20:ALA:HB2	2.50	0.46
30:RG:121:ASN:C	30:RG:123:ASN:H	2.19	0.46
30:RG:14:GLU:HB3	30:RG:15:VAL:H	1.56	0.46
31:RH:88:LEU:HD22	31:RH:163:TYR:O	2.16	0.46
31:RH:86:GLU:O	31:RH:132:ARG:HA	2.16	0.46
32:RI:90:GLY:O	32:RI:121:LYS:HE2	2.16	0.46
34:RO:7:TYR:CD1	34:RO:20:MET:HB2	2.50	0.46
35:RP:115:LEU:CD1	35:RP:116:GLY:N	2.78	0.46
35:RP:1:MET:O	35:RP:2:LYS:HG3	2.16	0.46
36:RQ:87:LYS:O	36:RQ:87:LYS:HG2	2.15	0.46
40:RU:79:PHE:CE2	40:RU:83:LEU:HD13	2.51	0.46
40:RU:98:LEU:HD23	40:RU:98:LEU:C	2.35	0.46
1:XA:451:A:OP1	1:XA:481:G:N2	2.49	0.46
1:XA:731:G:H2'	1:XA:732:C:H6	1.81	0.46
2:XB:162:ILE:CD1	2:XB:184:VAL:HG13	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:15:THR:HG22	3:XC:15:THR:O	2.15	0.46
3:XC:53:ALA:O	3:XC:54:ARG:HB2	2.16	0.46
4:XD:30:LYS:O	4:XD:32:ALA:N	2.49	0.46
4:XD:92:VAL:O	4:XD:96:LEU:CD2	2.64	0.46
5:XE:12:LEU:HB3	5:XE:31:LEU:HB2	1.97	0.46
7:XG:40:ALA:O	7:XG:41:ARG:C	2.54	0.46
7:XG:57:GLU:O	7:XG:59:LEU:N	2.49	0.46
7:XG:8:GLU:N	7:XG:8:GLU:CD	2.67	0.46
9:XI:11:LYS:O	9:XI:12:GLU:HB2	2.16	0.46
10:XJ:44:VAL:HG12	10:XJ:45:ARG:N	2.30	0.46
10:XJ:39:PRO:CB	10:XJ:70:ARG:HH12	2.27	0.46
13:XM:10:PRO:HG3	13:XM:18:ALA:O	2.15	0.46
16:XP:19:ILE:HB	16:XP:37:GLY:O	2.16	0.46
18:XR:32:ARG:HH11	18:XR:65:ILE:HD13	1.80	0.46
19:XS:24:ALA:O	19:XS:25:LYS:CB	2.63	0.46
47:Y1:79:GLY:N	47:Y1:80:LEU:HD23	2.30	0.46
49:Y3:7:LYS:HE2	49:Y3:32:GLN:HA	1.98	0.46
52:Y6:11:LEU:HD11	52:Y6:51:GLU:HG3	1.98	0.46
25:YA:1059:G:H3'	25:YA:1060:U:H5''	1.96	0.46
25:YA:1453:A:O2'	25:YA:1454:U:H2'	2.16	0.46
25:YA:1677:A:H2'	25:YA:1678:G:C8	2.50	0.46
25:YA:1764:G:H1	25:YA:1988:C:H42	1.62	0.46
25:YA:1891:G:C6	25:YA:1892:C:C4	3.04	0.46
25:YA:2133:G:H2'	25:YA:2157:G:N2	2.31	0.46
25:YA:241:A:H5'	25:YA:243:U:H1'	1.97	0.46
25:YA:592:G:N2	25:YA:666:G:C4	2.84	0.46
25:YA:730:C:OP2	25:YA:731:C:OP2	2.33	0.46
25:YA:94:G:H21	48:Y2:47:ASN:HD22	1.63	0.46
26:YB:89:G:C6	26:YB:89(A):A:C6	3.04	0.46
27:YD:118:VAL:O	27:YD:129:ASN:HA	2.16	0.46
27:YD:2:ALA:HB1	27:YD:20:ASP:CB	2.46	0.46
27:YD:36:PRO:HB3	27:YD:62:TYR:O	2.16	0.46
30:YG:129:GLY:O	30:YG:130:ASN:OD1	2.34	0.46
30:YG:95:ARG:O	30:YG:96:ARG:C	2.54	0.46
31:YH:128:PRO:HD2	31:YH:129:THR:N	2.25	0.46
33:YN:36:GLY:O	33:YN:42:TRP:CE3	2.69	0.46
41:YV:22:VAL:HG12	41:YV:23:GLU:H	1.76	0.46
25:YA:1225:C:O2'	41:YV:85:LYS:HA	2.16	0.46
44:YY:11:ASP:HB2	44:YY:27:VAL:CG1	2.46	0.46
1:QA:1431:C:H2'	1:QA:1432:G:O4'	2.16	0.46
1:QA:1461:G:H2'	1:QA:1462:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:781:A:C8	1:QA:782:A:C8	3.04	0.46
2:QB:24:TRP:CZ2	2:QB:26:PRO:HB3	2.51	0.46
2:QB:77:ALA:HB1	2:QB:211:ILE:HG21	1.97	0.46
2:QB:92:TYR:C	2:QB:92:TYR:CD1	2.88	0.46
2:QB:95:GLN:OE1	2:QB:95:GLN:HA	2.16	0.46
4:QD:197:PRO:HD3	6:XF:16:GLN:CG	2.46	0.46
4:QD:52:SER:N	4:QD:55:ALA:HB3	2.31	0.46
6:QF:40:VAL:HG22	6:QF:41:GLU:H	1.80	0.46
11:QK:121:PRO:HD2	11:QK:126:ARG:CD	2.46	0.46
13:QM:28:ALA:C	13:QM:30:ALA:N	2.70	0.46
18:QR:43:PHE:C	18:QR:44:LEU:HD12	2.36	0.46
19:QS:63:THR:HG23	19:QS:66:MET:CE	2.46	0.46
20:QT:22:ARG:O	20:QT:26:ASN:ND2	2.49	0.46
46:R0:66:VAL:O	46:R0:81:VAL:HA	2.16	0.46
25:RA:747:U:C2	51:R5:2:ALA:HB3	2.51	0.46
25:RA:1047:G:H2'	25:RA:1110:G:C6	2.51	0.46
25:RA:1454:U:H5'	37:RR:63:ARG:NE	2.24	0.46
25:RA:1570:A:H2'	25:RA:1571:A:C8	2.50	0.46
25:RA:1889:A:H2'	25:RA:1890:A:C8	2.51	0.46
25:RA:2324:C:H5''	25:RA:2325:G:H5'	1.99	0.46
25:RA:2346:A:H5''	25:RA:2383:G:H1'	1.98	0.46
25:RA:2843:G:H1	25:RA:2874:C:H42	1.63	0.46
25:RA:51:G:H8	25:RA:51:G:OP2	1.99	0.46
25:RA:972:G:OP2	25:RA:973:A:O2'	2.17	0.46
26:RB:44:G:H1'	26:RB:47:C:N4	2.31	0.46
27:RD:105:ILE:HG23	27:RD:106:ILE:O	2.15	0.46
27:RD:35:LYS:HE3	27:RD:65:ILE:N	2.31	0.46
28:RE:47:VAL:HG23	28:RE:47:VAL:O	2.16	0.46
30:RG:14:GLU:O	30:RG:17:PRO:HG2	2.15	0.46
30:RG:14:GLU:O	30:RG:17:PRO:HD2	2.16	0.46
31:RH:137:ASP:HB2	31:RH:140:LYS:HE3	1.98	0.46
33:RN:112:LEU:O	33:RN:116:LEU:HG	2.16	0.46
35:RP:46:LYS:O	35:RP:48:PRO:N	2.48	0.46
36:RQ:26:TYR:O	36:RQ:27:VAL:O	2.34	0.46
38:RS:56:LEU:O	38:RS:57:LYS:C	2.53	0.46
40:RU:27:LEU:HD12	40:RU:31:SER:HB3	1.98	0.46
43:RX:35:THR:HG23	43:RX:35:THR:O	2.16	0.46
1:XA:1521:G:N2	1:XA:1522:U:O2	2.49	0.46
2:XB:87:ARG:NH1	2:XB:220:ASP:OD1	2.46	0.46
3:XC:172:ARG:O	3:XC:173:VAL:HG23	2.15	0.46
13:XM:80:ARG:O	13:XM:82:MET:O	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1316:G:H5''	14:XN:17:LYS:CE	2.46	0.46
15:XO:82:ILE:O	15:XO:86:GLY:N	2.49	0.46
16:XP:71:ARG:HH11	16:XP:71:ARG:HB2	1.79	0.46
19:XS:15:LEU:N	19:XS:15:LEU:CD2	2.79	0.46
20:XT:22:ARG:O	20:XT:26:ASN:ND2	2.49	0.46
25:YA:396:G:O3'	47:Y1:44:PRO:HA	2.15	0.46
47:Y1:80:LEU:CB	47:Y1:81:LYS:HE2	2.44	0.46
49:Y3:18:ASP:O	49:Y3:21:ALA:N	2.49	0.46
25:YA:1264:G:H5'	51:Y5:11:THR:CG2	2.46	0.46
51:Y5:43:HIS:N	51:Y5:43:HIS:ND1	2.63	0.46
25:YA:118:A:O5'	25:YA:119:A:H5''	2.16	0.46
25:YA:1663:C:O2'	25:YA:1664:A:H8	1.99	0.46
25:YA:2198:A:O2'	25:YA:2199:A:P	2.74	0.46
25:YA:2210:G:H5'	25:YA:2211:G:C5	2.51	0.46
25:YA:247:G:H4'	25:YA:386:G:C5	2.51	0.46
25:YA:2517:C:N3	25:YA:2542:A:N6	2.64	0.46
25:YA:270(R):G:H1'	47:Y1:78:LYS:NZ	2.30	0.46
25:YA:612:G:C2	25:YA:617:G:C6	3.04	0.46
25:YA:690:G:H2'	25:YA:691:C:C6	2.51	0.46
25:YA:977:G:C6	25:YA:987:G:C6	3.04	0.46
30:YG:6:ALA:HB3	30:YG:104:GLU:OE2	2.16	0.46
32:YI:90:GLY:O	32:YI:121:LYS:HE2	2.16	0.46
34:YO:86:ILE:CD1	34:YO:86:ILE:H	2.28	0.46
35:YP:98:GLU:HG2	35:YP:99:LEU:N	2.30	0.46
36:YQ:85:LYS:HD3	36:YQ:86:GLY:H	1.80	0.46
38:YS:13:ARG:O	38:YS:14:VAL:HB	2.16	0.46
40:YU:92:ARG:C	40:YU:94:ASN:N	2.69	0.46
43:YX:8:ILE:CD1	43:YX:42:ALA:HB1	2.45	0.46
44:YY:48:ALA:CB	44:YY:61:ILE:HD13	2.45	0.46
45:YZ:151:HIS:O	45:YZ:153:SER:O	2.33	0.46
45:YZ:137:ILE:HG22	45:YZ:158:PRO:HG2	1.98	0.46
1:QA:1105:A:H2'	1:QA:1106:G:H8	1.81	0.45
1:QA:1313:U:OP1	19:QS:5:LEU:HB2	2.16	0.45
1:QA:1480:G:C6	1:QA:1481:U:C4	3.04	0.45
3:QC:108:ASN:HB3	3:QC:111:LEU:HD12	1.98	0.45
3:QC:8:ILE:C	3:QC:10:PHE:N	2.69	0.45
4:QD:180:GLY:O	4:QD:181:MET:C	2.54	0.45
4:QD:52:SER:H	4:QD:55:ALA:HB3	1.82	0.45
4:QD:92:VAL:O	4:QD:96:LEU:CD2	2.64	0.45
6:QF:72:VAL:HG23	6:QF:90:VAL:HG11	1.98	0.45
8:QH:110:ALA:HB3	8:QH:121:ASP:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:QI:11:LYS:O	9:QI:12:GLU:HB2	2.16	0.45
10:QJ:4:ILE:O	10:QJ:74:ILE:HD13	2.16	0.45
10:QJ:96:ILE:CD1	10:QJ:96:ILE:N	2.79	0.45
11:QK:80:VAL:O	11:QK:106:LYS:HD3	2.16	0.45
1:QA:521:G:H4'	12:QL:73:GLU:HG3	1.98	0.45
16:QP:58:TYR:O	16:QP:61:SER:OG	2.27	0.45
46:R0:36:ILE:N	46:R0:36:ILE:HD13	2.31	0.45
49:R3:7:LYS:HE2	49:R3:32:GLN:HA	1.98	0.45
50:R4:38:LYS:C	50:R4:40:HIS:H	2.07	0.45
50:R4:56:VAL:HA	50:R4:60:GLN:CB	2.28	0.45
51:R5:54:GLY:O	51:R5:55:ARG:C	2.54	0.45
52:R6:15:GLU:OE2	52:R6:44:ARG:NH1	2.49	0.45
25:RA:1270:C:H5''	25:RA:1271:G:C5'	2.46	0.45
25:RA:2429:G:N7	35:RP:56:SER:OG	2.44	0.45
27:RD:148:GLU:HB2	27:RD:151:LYS:HD2	1.98	0.45
27:RD:198:ASN:ND2	27:RD:198:ASN:C	2.69	0.45
28:RE:50:GLY:CA	28:RE:74:PRO:HG3	2.46	0.45
26:RB:55:U:H4'	30:RG:29:TRP:NE1	2.32	0.45
31:RH:37:VAL:HG11	31:RH:68:THR:HG23	1.99	0.45
33:RN:17:ASP:O	33:RN:55:VAL:O	2.34	0.45
33:RN:73:THR:HA	33:RN:83:LYS:O	2.15	0.45
36:RQ:63:LYS:HE2	36:RQ:65:PHE:CZ	2.50	0.45
38:RS:89:ARG:O	38:RS:90:GLY:C	2.54	0.45
42:RW:28:SER:C	42:RW:30:GLU:N	2.69	0.45
44:RY:47:LYS:O	44:RY:49:VAL:N	2.48	0.45
44:RY:75:ILE:HA	44:RY:80:GLY:HA2	1.98	0.45
44:RY:90:LEU:N	44:RY:90:LEU:CD2	2.73	0.45
45:RZ:108:PRO:HG2	45:RZ:111:VAL:CA	2.46	0.45
1:XA:1298:C:H4'	1:XA:1299:A:C4	2.51	0.45
1:XA:1301:U:O2'	1:XA:1302:U:OP1	2.30	0.45
1:XA:1304:G:C6	1:XA:1305:G:C2	3.04	0.45
1:XA:1362:C:H2'	1:XA:1362(A):C:H5''	1.97	0.45
1:XA:1365:G:H2'	1:XA:1366:C:H6	1.80	0.45
1:XA:310:G:OP2	16:XP:27:LYS:HE3	2.17	0.45
3:XC:43:LEU:HD22	3:XC:47:LEU:CD2	2.46	0.45
3:XC:78:GLY:HA3	3:XC:83:ARG:HB3	1.98	0.45
4:XD:199:ASN:O	4:XD:201:GLN:N	2.49	0.45
7:XG:54:THR:HG23	7:XG:54:THR:O	2.16	0.45
8:XH:33:GLU:O	8:XH:35:ILE:N	2.49	0.45
10:XJ:21:GLN:O	10:XJ:21:GLN:HG2	2.16	0.45
10:XJ:4:ILE:O	10:XJ:74:ILE:HD13	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:XK:104:GLN:O	11:XK:106:LYS:HG3	2.16	0.45
12:XL:27:LEU:HD13	12:XL:28:LYS:N	2.30	0.45
13:XM:3:ARG:O	13:XM:4:ILE:HD13	2.16	0.45
50:Y4:42:PHE:CD1	50:Y4:42:PHE:C	2.90	0.45
52:Y6:11:LEU:H	52:Y6:25:LYS:HA	1.80	0.45
25:YA:1454:U:H5'	37:YR:63:ARG:NE	2.23	0.45
25:YA:1786:A:H1'	25:YA:1938:A:N6	2.30	0.45
25:YA:2512:C:H2'	25:YA:2513:G:O4'	2.15	0.45
25:YA:270(T):G:C6	25:YA:270(U):C:C4	3.04	0.45
25:YA:869:G:O2'	25:YA:870:A:H5'	2.15	0.45
26:YB:40:U:N3	26:YB:43:C:H5''	2.31	0.45
27:YD:109:ASP:HB2	27:YD:197:GLY:CA	2.46	0.45
27:YD:11:PRO:O	27:YD:12:SER:CB	2.65	0.45
28:YE:111:ARG:NE	28:YE:160:TYR:CE1	2.76	0.45
28:YE:33:VAL:HG12	28:YE:90:THR:H	1.81	0.45
31:YH:109:PHE:CE1	31:YH:152:ARG:NH1	2.84	0.45
31:YH:51:ARG:NH1	31:YH:51:ARG:HG3	2.30	0.45
32:YI:79:ILE:HG23	32:YI:81:VAL:HG13	1.97	0.45
34:YO:112:MET:O	34:YO:115:VAL:CG2	2.64	0.45
38:YS:78:LEU:HD21	38:YS:108:GLY:HA2	1.98	0.45
45:YZ:108:PRO:HG2	45:YZ:111:VAL:CA	2.47	0.45
1:QA:300:A:H1'	1:QA:565:U:O2	2.16	0.45
1:QA:308:C:H2'	1:QA:309:G:H8	1.80	0.45
1:QA:719:C:C2	18:QR:50:ILE:HD13	2.50	0.45
1:QA:983:A:H2	1:QA:984:C:C6	2.33	0.45
2:QB:24:TRP:CD2	2:QB:26:PRO:HD3	2.51	0.45
2:QB:96:ARG:N	2:QB:96:ARG:HD2	2.20	0.45
3:QC:68:VAL:HG12	3:QC:70:VAL:HG23	1.98	0.45
1:QA:408:A:OP2	4:QD:115:ARG:NH2	2.50	0.45
4:QD:126:ILE:HG22	4:QD:127:THR:H	1.80	0.45
4:QD:187:ARG:HG2	4:QD:187:ARG:HH11	1.82	0.45
1:QA:1298:C:C4	7:QG:114:ARG:HD2	2.51	0.45
7:QG:50:ILE:HG21	7:QG:61:VAL:HG21	1.97	0.45
7:QG:95:ARG:HG2	7:QG:99:LEU:HD12	1.98	0.45
8:QH:33:GLU:O	8:QH:35:ILE:N	2.49	0.45
1:QA:502:G:OP1	12:QL:118:SER:HB2	2.17	0.45
12:QL:113:ARG:NH2	12:QL:120:TYR:CE2	2.85	0.45
1:QA:363:A:OP2	12:QL:34:ARG:HB3	2.15	0.45
15:QO:82:ILE:HD11	15:QO:88:ARG:HG2	1.95	0.45
24:QY:39:C:HO2'	24:QY:40:G:P	2.38	0.45
25:RA:2615:U:C2	51:R5:7:PRO:HA	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:128:C:H4'	53:R7:49:ARG:NH1	2.28	0.45
25:RA:1140:C:P	33:RN:66:LYS:HZ3	2.39	0.45
25:RA:1287:A:C6	25:RA:1288:U:N3	2.84	0.45
25:RA:1497:U:H5''	25:RA:1498:C:C5	2.50	0.45
25:RA:1543:A:O2'	25:RA:1544:C:P	2.73	0.45
25:RA:2031:A:H2'	25:RA:2031:A:N3	2.31	0.45
25:RA:2108:C:H2'	25:RA:2109:U:C6	2.51	0.45
25:RA:2212:A:H1'	25:RA:2215:G:C5	2.51	0.45
25:RA:2287:A:H62	25:RA:2344:U:H3	1.65	0.45
25:RA:2529:G:H5''	25:RA:2530:A:H5''	1.97	0.45
25:RA:2572:A:C4	28:RE:144:ARG:NH2	2.84	0.45
25:RA:2779:U:O2'	25:RA:2781:A:C5	2.64	0.45
26:RB:13:A:H4'	26:RB:15:A:C5	2.52	0.45
28:RE:1:MET:HA	28:RE:200:GLU:OE2	2.16	0.45
30:RG:76:SER:CB	30:RG:83:ARG:HA	2.46	0.45
30:RG:83:ARG:HG3	30:RG:86:MET:CE	2.46	0.45
31:RH:86:GLU:O	31:RH:87:LEU:CB	2.64	0.45
31:RH:89:ILE:HD13	31:RH:89:ILE:H	1.81	0.45
32:RI:79:ILE:HA	32:RI:79:ILE:HD13	1.83	0.45
34:RO:104:ARG:HG2	34:RO:121:VAL:HG12	1.97	0.45
36:RQ:30:GLY:CA	36:RQ:107:ALA:HB2	2.39	0.45
36:RQ:81:VAL:HG23	36:RQ:82:ARG:N	2.32	0.45
36:RQ:85:LYS:HD3	36:RQ:86:GLY:H	1.81	0.45
43:RX:35:THR:O	43:RX:36:LYS:C	2.55	0.45
1:XA:1124:G:H3'	1:XA:1145:C:N4	2.31	0.45
1:XA:291:C:N4	1:XA:309:G:H1	2.10	0.45
1:XA:421:U:H5''	1:XA:422:C:OP2	2.16	0.45
1:XA:96:G:C6	1:XA:97:U:C2	3.04	0.45
2:XB:163:PHE:CE1	2:XB:215:LEU:HD22	2.50	0.45
2:XB:95:GLN:OE1	2:XB:95:GLN:HA	2.16	0.45
4:XD:173:TRP:NE1	4:XD:174:LEU:HG	2.32	0.45
6:XF:44:GLY:HA2	6:XF:59:TYR:CE2	2.51	0.45
1:XA:1346:A:H5''	9:XI:120:ARG:HH12	1.82	0.45
1:XA:963:G:H21	10:XJ:55:LYS:CE	2.30	0.45
11:XK:91:ARG:HH22	18:XR:88:LYS:HZ3	1.63	0.45
15:XO:5:LYS:O	15:XO:8:LYS:CG	2.63	0.45
16:XP:40:ASP:O	16:XP:42:ARG:N	2.50	0.45
17:XQ:3:LYS:HD3	17:XQ:61:GLU:O	2.16	0.45
20:XT:96:GLY:O	20:XT:97:ALA:CB	2.64	0.45
25:YA:1228:G:OP1	40:YU:13:LYS:HG2	2.16	0.45
25:YA:1329:U:H5''	25:YA:1330:C:H5	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1679:U:C2'	25:YA:1680:U:H5'	2.46	0.45
25:YA:1888:G:N3	25:YA:1888:G:H5''	2.31	0.45
25:YA:17:G:H2'	25:YA:18:C:C6	2.51	0.45
25:YA:1965:C:H2'	25:YA:1966:A:C8	2.51	0.45
25:YA:2638:G:O2'	25:YA:2639:A:H8	1.99	0.45
25:YA:500:G:N2	25:YA:502:A:H3'	2.31	0.45
25:YA:580:C:H2'	25:YA:581:C:C6	2.51	0.45
25:YA:855:G:C6	25:YA:856:C:C4	3.05	0.45
25:YA:872:A:H4'	36:YQ:66:ILE:HD11	1.97	0.45
25:YA:934:G:H2'	25:YA:935:C:H6	1.81	0.45
26:YB:89:G:OP2	26:YB:89:G:H8	1.98	0.45
27:YD:92:ILE:HD12	27:YD:104:TYR:HD2	1.81	0.45
28:YE:1:MET:HA	28:YE:200:GLU:OE2	2.16	0.45
28:YE:77:ILE:O	28:YE:78:LEU:O	2.35	0.45
30:YG:14:GLU:HB3	30:YG:15:VAL:H	1.56	0.45
25:YA:2406:U:C2	35:YP:72:PRO:HB2	2.52	0.45
36:YQ:26:TYR:O	36:YQ:27:VAL:O	2.33	0.45
41:YV:4:ILE:HG22	41:YV:39:LEU:HD23	1.98	0.45
43:YX:24:GLY:O	43:YX:82:GLN:HA	2.16	0.45
44:YY:35:TYR:O	44:YY:35:TYR:CD1	2.69	0.45
45:YZ:11:GLU:HG3	45:YZ:12:GLY:N	2.31	0.45
45:YZ:152:ALA:H	45:YZ:170:THR:N	2.14	0.45
45:YZ:52:SER:O	45:YZ:54:HIS:N	2.50	0.45
2:QB:181:PHE:HE1	8:QH:70:GLN:O	2.00	0.45
4:QD:150:GLU:C	4:QD:152:SER:H	2.20	0.45
5:QE:12:LEU:HB3	5:QE:31:LEU:HB2	1.98	0.45
5:QE:64:ARG:HG3	5:QE:64:ARG:HH11	1.82	0.45
6:QF:69:GLU:O	6:QF:71:ARG:N	2.48	0.45
9:QI:80:GLY:C	9:QI:82:ALA:N	2.70	0.45
12:QL:27:LEU:HD13	12:QL:28:LYS:N	2.30	0.45
1:QA:1322:C:H5'	13:QM:100:GLY:HA2	1.98	0.45
1:QA:376:G:H5''	16:QP:5:ARG:HD2	1.99	0.45
20:QT:71:THR:HG22	20:QT:72:LEU:N	2.32	0.45
46:R0:7:LEU:N	46:R0:7:LEU:HD22	2.30	0.45
25:RA:1005:C:C2	25:RA:1143:A:C5	3.05	0.45
25:RA:1274:A:OP1	25:RA:1646:C:N4	2.48	0.45
25:RA:1937:A:C8	25:RA:1939:U:H2'	2.51	0.45
25:RA:2602:A:H2	55:Z6:76:PPU:N7	2.14	0.45
25:RA:309:G:O3'	44:RY:18:GLY:HA2	2.16	0.45
25:RA:330:A:O2'	25:RA:331:A:H2'	2.15	0.45
26:RB:40:U:H1'	26:RB:45:A:N6	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:80:ALA:O	27:RD:113:VAL:HG13	2.16	0.45
30:RG:36:LYS:O	30:RG:37:VAL:HG23	2.15	0.45
31:RH:151:ILE:O	31:RH:152:ARG:O	2.34	0.45
32:RI:78:THR:HG22	32:RI:141:LYS:CD	2.27	0.45
33:RN:129:PRO:C	33:RN:131:GLN:H	2.20	0.45
33:RN:22:THR:O	33:RN:60:ILE:HG22	2.16	0.45
35:RP:144:GLU:OE1	35:RP:144:GLU:N	2.48	0.45
36:RQ:104:PHE:O	36:RQ:105:GLU:CB	2.65	0.45
37:RR:1:MET:O	37:RR:2:ARG:HB2	2.15	0.45
38:RS:74:ALA:O	38:RS:75:GLU:C	2.54	0.45
39:RT:36:GLU:CG	39:RT:41:ARG:HD3	2.46	0.45
42:RW:34:ASN:O	42:RW:35:ILE:C	2.55	0.45
44:RY:81:LYS:CD	44:RY:97:ARG:HE	2.20	0.45
45:RZ:102:LEU:CD1	45:RZ:171:ILE:HD11	2.46	0.45
45:RZ:27:VAL:CG1	45:RZ:87:ASP:HB3	2.46	0.45
1:XA:1129:C:H5'	1:XA:1130:A:OP1	2.16	0.45
1:XA:1194:U:H3'	1:XA:1195:C:C6	2.52	0.45
1:XA:1252:A:H2'	1:XA:1253:G:O4'	2.16	0.45
1:XA:31:G:N2	1:XA:47:C:O5'	2.49	0.45
1:XA:570:G:O3'	1:XA:819:A:O2'	2.23	0.45
1:XA:777:A:H2'	1:XA:778:G:H8	1.81	0.45
2:XB:214:ILE:HD13	2:XB:217:ARG:HH22	1.81	0.45
3:XC:108:ASN:HB3	3:XC:111:LEU:HG	1.98	0.45
4:XD:146:ILE:HG22	4:XD:146:ILE:O	2.15	0.45
7:XG:95:ARG:NE	7:XG:99:LEU:HD11	2.30	0.45
7:XG:95:ARG:HG2	7:XG:99:LEU:HD12	1.98	0.45
1:XA:1179:A:O3'	9:XI:103:THR:HG23	2.16	0.45
9:XI:80:GLY:C	9:XI:82:ALA:N	2.70	0.45
10:XJ:95:GLU:HA	10:XJ:95:GLU:OE2	2.16	0.45
13:XM:65:LYS:NZ	13:XM:69:GLU:HG2	2.30	0.45
15:XO:77:ARG:HA	15:XO:80:ALA:HB2	1.98	0.45
17:XQ:84:LEU:O	17:XQ:86:GLU:N	2.49	0.45
1:XA:177:C:H5''	20:XT:65:LYS:HZ3	1.79	0.45
46:Y0:66:VAL:O	46:Y0:81:VAL:HA	2.16	0.45
51:Y5:16:ARG:O	51:Y5:20:ARG:HG3	2.16	0.45
52:Y6:17:LYS:O	52:Y6:18:ARG:CB	2.65	0.45
25:YA:1588:C:H2'	25:YA:1589:C:H6	1.80	0.45
25:YA:1688:U:O2	25:YA:1700:A:H8	1.99	0.45
25:YA:229:A:OP1	25:YA:229:A:H4'	2.17	0.45
25:YA:2498:C:O2'	25:YA:2499:C:H5'	2.17	0.45
25:YA:2588:G:O6	25:YA:2607:G:C6	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:389:G:N1	35:YP:71:VAL:HG12	2.31	0.45
25:YA:596:G:C6	25:YA:597:U:C2	3.03	0.45
27:YD:65:ILE:HD11	27:YD:67:PHE:CE1	2.51	0.45
29:YF:31:HIS:O	29:YF:34:TRP:HB3	2.15	0.45
29:YF:65:TRP:CH2	29:YF:72:ARG:HB3	2.51	0.45
29:YF:7:TYR:CD1	29:YF:7:TYR:N	2.85	0.45
32:YI:77:LEU:HB2	32:YI:104:GLN:OE1	2.15	0.45
33:YN:113:GLY:O	33:YN:116:LEU:HB2	2.14	0.45
33:YN:10:GLU:HA	33:YN:11:PRO:HD3	1.73	0.45
33:YN:120:LEU:C	33:YN:120:LEU:HD13	2.37	0.45
36:YQ:104:PHE:O	36:YQ:105:GLU:CB	2.64	0.45
37:YR:85:PRO:C	37:YR:87:TYR:H	2.19	0.45
38:YS:109:GLY:O	38:YS:110:LEU:HB2	2.16	0.45
39:YT:107:ASP:HB2	39:YT:108:ARG:H	1.48	0.45
41:YV:5:VAL:HG22	41:YV:14:VAL:CG2	2.46	0.45
42:YW:40:ASN:C	42:YW:41:LYS:HG2	2.36	0.45
1:QA:1028(B):C:H42	1:QA:1032(A):G:H1	1.65	0.45
1:QA:103:C:C4	1:QA:104:G:N7	2.85	0.45
1:QA:486:U:H2'	1:QA:487:A:H8	1.81	0.45
1:QA:519:C:H2'	1:QA:520:A:O4'	2.16	0.45
2:QB:240:GLN:HG2	2:QB:240:GLN:O	2.16	0.45
2:QB:30:ARG:O	2:QB:31:TYR:HD2	2.00	0.45
4:QD:104:VAL:O	4:QD:107:ARG:N	2.49	0.45
4:QD:114:ARG:NH1	4:QD:114:ARG:CG	2.77	0.45
4:QD:133:VAL:HG12	4:QD:135:LEU:H	1.82	0.45
4:QD:33:MET:HE1	4:QD:37:PRO:O	2.17	0.45
6:QF:9:VAL:HB	6:QF:87:ARG:HB2	1.97	0.45
8:QH:41:ARG:NH1	8:QH:41:ARG:CG	2.76	0.45
10:QJ:21:GLN:O	10:QJ:21:GLN:HG2	2.16	0.45
15:QO:82:ILE:CG2	15:QO:83:GLU:N	2.79	0.45
16:QP:40:ASP:O	16:QP:42:ARG:N	2.50	0.45
19:QS:10:PHE:CD1	19:QS:38:SER:HB2	2.52	0.45
46:R0:43:THR:O	46:R0:43:THR:CG2	2.62	0.45
51:R5:16:ARG:O	51:R5:20:ARG:HG3	2.16	0.45
52:R6:11:LEU:H	52:R6:25:LYS:HA	1.81	0.45
52:R6:20:ASN:O	52:R6:21:TYR:HB2	2.15	0.45
25:RA:819:A:N6	25:RA:1189:A:H1'	2.31	0.45
25:RA:1402:C:H2'	25:RA:1403:C:H5'	1.98	0.45
25:RA:1652:A:N7	25:RA:1653:G:C6	2.84	0.45
25:RA:270(E):G:H1	25:RA:270(U):C:H42	1.62	0.45
25:RA:340:A:H2'	25:RA:341:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:145:VAL:HB	27:RD:155:LEU:HB2	1.99	0.45
27:RD:166:GLN:NE2	27:RD:166:GLN:CA	2.78	0.45
27:RD:211:ARG:HH11	27:RD:211:ARG:HG2	1.80	0.45
27:RD:2:ALA:HB1	27:RD:20:ASP:CB	2.46	0.45
27:RD:31:LYS:C	27:RD:32:SER:O	2.54	0.45
27:RD:65:ILE:HD11	27:RD:67:PHE:CE1	2.51	0.45
28:RE:22:PRO:O	28:RE:22:PRO:CG	2.63	0.45
30:RG:51:ARG:NH2	30:RG:52:ILE:HD11	2.32	0.45
30:RG:83:ARG:HB2	30:RG:86:MET:HE3	1.97	0.45
31:RH:94:TYR:N	31:RH:94:TYR:CD1	2.82	0.45
33:RN:128:HIS:HB2	33:RN:129:PRO:CD	2.46	0.45
35:RP:62:LEU:CD2	35:RP:62:LEU:H	2.19	0.45
39:RT:24:PRO:HD3	39:RT:52:ILE:HD12	1.99	0.45
39:RT:6:LEU:O	39:RT:10:VAL:HG23	2.16	0.45
40:RU:57:PHE:O	40:RU:59:ARG:N	2.50	0.45
40:RU:92:ARG:C	40:RU:94:ASN:N	2.69	0.45
42:RW:14:PRO:O	42:RW:16:LYS:N	2.50	0.45
45:RZ:120:ILE:HD13	45:RZ:169:GLU:CG	2.45	0.45
45:RZ:27:VAL:CG2	45:RZ:28:MET:N	2.78	0.45
1:XA:1199:U:H5''	1:XA:1200:C:OP2	2.16	0.45
1:XA:412:A:H4'	1:XA:413:G:O5'	2.16	0.45
1:XA:564:C:C4	1:XA:565:U:C4	3.05	0.45
2:XB:77:ALA:HB2	2:XB:211:ILE:HG21	1.99	0.45
2:XB:25:ASN:HA	2:XB:26:PRO:HD2	1.85	0.45
2:XB:51:LEU:O	2:XB:55:PHE:HD2	2.00	0.45
2:XB:95:GLN:NE2	2:XB:96:ARG:NH1	2.64	0.45
3:XC:8:ILE:C	3:XC:10:PHE:N	2.69	0.45
4:XD:101:LEU:HD21	4:XD:121:VAL:HG13	1.99	0.45
4:XD:52:SER:H	4:XD:55:ALA:HB3	1.82	0.45
6:XF:68:PRO:HG3	6:XF:71:ARG:NH2	2.31	0.45
7:XG:79:ARG:HG2	7:XG:79:ARG:NH1	2.29	0.45
10:XJ:29:ARG:HH11	10:XJ:29:ARG:HG2	1.81	0.45
11:XK:41:THR:CG2	11:XK:42:TRP:N	2.79	0.45
18:XR:43:PHE:C	18:XR:51:LEU:HD12	2.36	0.45
19:XS:69:HIS:O	19:XS:70:LYS:O	2.34	0.45
20:XT:24:LEU:O	20:XT:24:LEU:HD13	2.16	0.45
47:Y1:49:VAL:HG12	47:Y1:51:VAL:CG2	2.45	0.45
47:Y1:85:LEU:N	47:Y1:85:LEU:HD22	2.31	0.45
48:Y2:28:LYS:HB3	48:Y2:57:ILE:HG12	1.97	0.45
25:YA:1654:A:P	37:YR:2:ARG:HD2	2.57	0.45
25:YA:195:A:N6	25:YA:198:C:OP2	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:74:A:H4'	25:YA:75:G:O4'	2.17	0.45
25:YA:1799:G:O2'	27:YD:270:ILE:HD11	2.17	0.45
28:YE:13:ARG:HH11	28:YE:13:ARG:HB3	1.82	0.45
30:YG:44:GLY:HA2	30:YG:88:ILE:HG12	1.97	0.45
35:YP:115:LEU:HA	35:YP:134:ALA:CB	2.47	0.45
25:YA:566:U:OP1	35:YP:29:LYS:HE2	2.16	0.45
36:YQ:30:GLY:CA	36:YQ:107:ALA:HB2	2.39	0.45
36:YQ:59:ARG:HD2	36:YQ:59:ARG:N	2.31	0.45
37:YR:10:LEU:O	37:YR:11:ASN:C	2.55	0.45
37:YR:29:LEU:CD1	37:YR:29:LEU:N	2.79	0.45
40:YU:27:LEU:HD12	40:YU:31:SER:HB3	1.98	0.45
41:YV:47:VAL:O	41:YV:48:GLY:O	2.34	0.45
45:YZ:108:PRO:HG2	45:YZ:112:ARG:N	2.24	0.45
1:QA:922:G:N3	1:QA:1398:A:H2	2.14	0.45
1:QA:390:C:O3'	16:QP:28:ARG:NH2	2.50	0.45
1:QA:756:C:H2'	1:QA:757:U:O4'	2.17	0.45
1:QA:909:A:H2'	1:QA:910:C:O4'	2.16	0.45
3:QC:34:LEU:C	3:QC:34:LEU:HD23	2.37	0.45
3:QC:78:GLY:HA3	3:QC:83:ARG:HB3	1.98	0.45
4:QD:101:LEU:HD21	4:QD:121:VAL:HG13	1.99	0.45
5:QE:77:PRO:HG2	5:QE:142:LEU:HD22	1.98	0.45
5:QE:52:PRO:HB2	5:QE:53:LEU:HD12	1.97	0.45
6:QF:35:ALA:HA	6:QF:67:MET:HB3	1.99	0.45
8:QH:97:VAL:CG1	8:QH:98:LYS:H	2.30	0.45
12:QL:64:TYR:O	12:QL:65:GLU:HB2	2.17	0.45
12:QL:91:LYS:HB2	12:QL:91:LYS:HE2	1.76	0.45
18:QR:63:GLN:HA	18:QR:63:GLN:OE1	2.16	0.45
22:QV:53:G:HO2'	22:QV:54:U:H6	1.63	0.45
48:R2:28:LYS:HB3	48:R2:57:ILE:HG12	1.97	0.45
49:R3:43:ILE:O	49:R3:47:VAL:HG23	2.16	0.45
51:R5:36:CYS:C	51:R5:38:ALA:H	2.19	0.45
25:RA:1588:C:H2'	25:RA:1589:C:C6	2.51	0.45
25:RA:2655:G:H2'	25:RA:2664:G:N1	2.30	0.45
25:RA:307:G:C2	25:RA:310:A:OP2	2.70	0.45
25:RA:329:G:H8	25:RA:329:G:OP1	1.99	0.45
25:RA:372:G:O2'	25:RA:373:U:P	2.74	0.45
25:RA:71:A:H5''	25:RA:72:U:H3'	1.97	0.45
26:RB:16:G:H2'	26:RB:17:C:H6	1.81	0.45
28:RE:2:LYS:O	28:RE:199:ARG:HA	2.17	0.45
30:RG:102:PHE:HA	30:RG:105:LYS:HE3	1.98	0.45
30:RG:20:ILE:HD13	30:RG:25:TYR:HB2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:109:PHE:CE1	31:RH:152:ARG:NH1	2.85	0.45
32:RI:127:VAL:HG13	32:RI:139:GLN:CG	2.47	0.45
33:RN:35:ARG:O	33:RN:35:ARG:HG3	2.15	0.45
33:RN:5:VAL:O	33:RN:5:VAL:HG13	2.16	0.45
35:RP:21:ARG:HE	35:RP:21:ARG:HA	1.82	0.45
35:RP:31:ALA:C	35:RP:32:THR:CG2	2.85	0.45
35:RP:96:THR:HG22	35:RP:126:VAL:CB	2.46	0.45
25:RA:911:A:H2'	36:RQ:9:TYR:OH	2.16	0.45
40:RU:76:TYR:CD2	40:RU:76:TYR:C	2.90	0.45
42:RW:40:ASN:C	42:RW:41:LYS:HG2	2.37	0.45
42:RW:48:ALA:O	42:RW:49:LYS:C	2.53	0.45
44:RY:2:ARG:O	44:RY:3:VAL:C	2.55	0.45
1:XA:757:U:H2'	1:XA:758:G:O4'	2.17	0.45
3:XC:42:LEU:HD12	3:XC:45:LYS:NZ	2.32	0.45
4:XD:104:VAL:O	4:XD:107:ARG:N	2.49	0.45
4:XD:52:SER:N	4:XD:55:ALA:HB3	2.31	0.45
5:XE:55:VAL:O	5:XE:58:ALA:HB3	2.16	0.45
6:XF:3:ARG:HH11	6:XF:3:ARG:HG3	1.81	0.45
6:XF:61:LEU:HD23	6:XF:63:TYR:OH	2.17	0.45
7:XG:148:ASN:C	7:XG:150:ALA:N	2.69	0.45
7:XG:151:TYR:OH	11:XK:54:ARG:HG3	2.17	0.45
10:XJ:51:ARG:HG2	10:XJ:51:ARG:HH11	1.81	0.45
12:XL:115:LYS:O	12:XL:117:ARG:N	2.47	0.45
17:XQ:33:GLY:O	17:XQ:34:LYS:C	2.55	0.45
20:XT:84:LEU:HD13	20:XT:84:LEU:C	2.37	0.45
47:Y1:54:ALA:O	47:Y1:55:GLY:O	2.35	0.45
47:Y1:60:PHE:CE2	47:Y1:91:LYS:NZ	2.84	0.45
50:Y4:3:GLU:HG3	50:Y4:4:GLY:H	1.80	0.45
52:Y6:9:LEU:CD1	52:Y6:26:ASN:ND2	2.80	0.45
25:YA:1526:G:H2'	25:YA:1527:G:O4'	2.17	0.45
25:YA:1682:G:H2'	25:YA:1683:C:O4'	2.16	0.45
25:YA:528:A:H2	25:YA:2043:C:C5'	2.29	0.45
25:YA:2283:C:H2'	25:YA:2284:C:O4'	2.16	0.45
25:YA:2520:C:H42	25:YA:2545:G:H1	1.64	0.45
25:YA:460:A:H2'	25:YA:461:C:O4'	2.17	0.45
25:YA:746:A:C5	25:YA:2611:U:H5''	2.51	0.45
27:YD:198:ASN:ND2	27:YD:198:ASN:O	2.50	0.45
27:YD:68:LYS:HD2	27:YD:70:TRP:CZ2	2.52	0.45
28:YE:47:VAL:O	28:YE:47:VAL:HG23	2.16	0.45
28:YE:51:PHE:HD1	28:YE:52:LEU:H	1.59	0.45
31:YH:16:SER:OG	31:YH:17:VAL:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YI:127:VAL:HG13	32:YI:139:GLN:CG	2.47	0.45
34:YO:97:ARG:H	34:YO:117:LEU:CD2	2.24	0.45
36:YQ:23:GLY:O	36:YQ:24:GLY:C	2.54	0.45
36:YQ:65:PHE:O	36:YQ:66:ILE:CG1	2.48	0.45
40:YU:95:LEU:HD13	41:YV:4:ILE:HD12	1.98	0.45
41:YV:30:GLY:O	41:YV:31:ALA:O	2.34	0.45
42:YW:21:VAL:HG12	42:YW:21:VAL:O	2.17	0.45
44:YY:2:ARG:O	44:YY:3:VAL:C	2.55	0.45
44:YY:75:ILE:HA	44:YY:80:GLY:HA2	1.99	0.45
1:QA:1107:C:C4	1:QA:1108:G:C8	3.05	0.45
1:QA:123:C:H5''	1:QA:311:C:O2'	2.17	0.45
1:QA:1343:G:H2'	1:QA:1344:C:C6	2.52	0.45
1:QA:60:A:N1	1:QA:107:G:O2'	2.30	0.45
1:QA:662:G:H2'	1:QA:663:A:C8	2.51	0.45
1:QA:681:C:H2'	1:QA:682:G:C8	2.51	0.45
1:QA:853:G:H2'	1:QA:854:G:H8	1.82	0.45
2:QB:214:ILE:HD13	2:QB:217:ARG:HH22	1.81	0.45
3:QC:134:ILE:HG23	3:QC:151:VAL:HB	1.98	0.45
1:QA:438:G:H4'	4:QD:123:HIS:CE1	2.52	0.45
12:QL:61:THR:O	12:QL:63:GLY:N	2.45	0.45
12:QL:6:THR:H	12:QL:9:GLN:NE2	1.97	0.45
13:QM:108:ARG:O	13:QM:111:LYS:N	2.48	0.45
16:QP:13:HIS:C	16:QP:15:PRO:HD3	2.36	0.45
20:QT:24:LEU:HD13	20:QT:24:LEU:O	2.16	0.45
49:R3:28:LEU:HA	49:R3:33:GLN:OE1	2.16	0.45
25:RA:2419:U:H5'	52:R6:23:THR:HG22	1.99	0.45
54:R8:48:PHE:HD1	54:R8:48:PHE:N	2.14	0.45
25:RA:1047:G:H2'	25:RA:1110:G:N1	2.32	0.45
25:RA:1188:U:H4'	41:RV:79:VAL:CG2	2.47	0.45
25:RA:1250:G:OP2	35:RP:21:ARG:HD3	2.16	0.45
25:RA:1340:U:OP2	43:RX:78:LYS:NZ	2.49	0.45
25:RA:16:G:H1	25:RA:524:U:H3	1.64	0.45
25:RA:2713:A:OP1	37:RR:14:SER:OG	2.35	0.45
27:RD:118:VAL:O	27:RD:129:ASN:HA	2.16	0.45
28:RE:21:VAL:HG23	28:RE:22:PRO:CD	2.46	0.45
31:RH:106:THR:HG22	31:RH:112:PRO:HB3	1.98	0.45
25:RA:2747:G:O2'	31:RH:67:LEU:HD13	2.17	0.45
32:RI:1:MET:HG3	32:RI:23:PRO:CB	2.47	0.45
32:RI:73:GLU:HG3	32:RI:136:VAL:CG2	2.43	0.45
33:RN:96:GLU:O	33:RN:99:LEU:N	2.34	0.45
35:RP:81:GLN:CD	35:RP:106:LEU:O	2.55	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:92:GLU:HA	35:RP:123:LEU:HD23	1.99	0.45
36:RQ:59:ARG:HD2	36:RQ:59:ARG:N	2.31	0.45
36:RQ:5:ARG:O	36:RQ:6:ARG:O	2.35	0.45
38:RS:5:THR:OG1	38:RS:8:GLU:HG3	2.17	0.45
40:RU:73:GLY:O	40:RU:74:LEU:CB	2.63	0.45
45:RZ:23:LYS:HD3	45:RZ:23:LYS:N	2.30	0.45
45:RZ:24:LEU:CD1	45:RZ:86:VAL:HG23	2.38	0.45
1:XA:1226:C:H2'	13:XM:103:THR:CB	2.45	0.45
1:XA:1356:G:H2'	1:XA:1357:A:H8	1.81	0.45
1:XA:1412:C:C2	1:XA:1489:G:N2	2.85	0.45
1:XA:20:U:H2'	1:XA:21:G:O4'	2.17	0.45
1:XA:256:U:H2'	1:XA:257:G:O4'	2.17	0.45
1:XA:980:C:H5'	1:XA:981:U:OP2	2.16	0.45
2:XB:98:LEU:O	2:XB:101:MET:HG3	2.17	0.45
2:XB:178:ARG:NE	8:XH:71:GLY:O	2.50	0.45
2:XB:240:GLN:O	2:XB:240:GLN:HG2	2.17	0.45
4:XD:133:VAL:HG12	4:XD:135:LEU:H	1.82	0.45
4:XD:187:ARG:HH11	4:XD:187:ARG:HG2	1.82	0.45
7:XG:107:ALA:O	7:XG:110:GLN:HB2	2.15	0.45
8:XH:102:ARG:NH1	8:XH:105:ARG:CZ	2.80	0.45
7:XG:153:HIS:CE1	11:XK:57:THR:HG23	2.52	0.45
11:XK:32:ILE:HD11	11:XK:72:ALA:HB2	1.96	0.45
12:XL:113:ARG:NH2	12:XL:120:TYR:CE2	2.85	0.45
13:XM:15:VAL:O	13:XM:19:LEU:CD2	2.64	0.45
17:XQ:59:ILE:N	17:XQ:59:ILE:CD1	2.78	0.45
1:XA:332:G:OP2	20:XT:10:LEU:HD23	2.15	0.45
52:Y6:15:GLU:OE2	52:Y6:44:ARG:NH1	2.49	0.45
52:Y6:45:LYS:HD3	52:Y6:45:LYS:HA	1.79	0.45
52:Y6:48:VAL:O	52:Y6:49:HIS:HB2	2.15	0.45
53:Y7:24:THR:O	53:Y7:28:ARG:HG3	2.16	0.45
25:YA:1307:A:N6	25:YA:1606:G:O2'	2.50	0.45
25:YA:1880:C:H2'	25:YA:1881:C:O4'	2.17	0.45
25:YA:2277:G:H5'	36:YQ:85:LYS:HG3	1.97	0.45
25:YA:2290:G:C6	25:YA:2291:U:C4	3.04	0.45
25:YA:2561:A:H2'	25:YA:2562:U:O4'	2.17	0.45
25:YA:27:G:O2'	25:YA:28:A:C8	2.67	0.45
26:YB:4:C:H42	26:YB:116:G:H1	1.64	0.45
27:YD:69:ARG:C	27:YD:71:ASP:N	2.69	0.45
28:YE:95:ILE:HG22	28:YE:95:ILE:O	2.16	0.45
29:YF:167:ALA:HB1	29:YF:173:VAL:HG11	1.99	0.45
29:YF:117:ARG:NH2	29:YF:189:THR:O	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:51:ARG:NH2	30:YG:52:ILE:HD11	2.32	0.45
33:YN:20:GLY:HA2	33:YN:61:ARG:HD2	1.99	0.45
35:YP:88:LEU:HD23	35:YP:88:LEU:C	2.36	0.45
38:YS:5:THR:OG1	38:YS:8:GLU:HG3	2.17	0.45
25:YA:483:A:C4'	44:YY:49:VAL:HA	2.36	0.45
44:YY:97:ARG:HG2	44:YY:97:ARG:HH11	1.82	0.45
45:YZ:136:PHE:CD1	45:YZ:137:ILE:N	2.84	0.45
1:QA:1310:G:H2'	1:QA:1311:G:H8	1.81	0.45
1:QA:58:C:O2'	1:QA:388:G:N7	2.39	0.45
2:QB:15:VAL:HG23	2:QB:209:ARG:HE	1.80	0.45
2:QB:33:TYR:O	2:QB:33:TYR:HD1	2.00	0.45
3:QC:92:ALA:HB2	3:QC:99:VAL:HG11	1.99	0.45
4:QD:100:ARG:NH2	4:QD:137:SER:HA	2.32	0.45
4:QD:120:LEU:CD2	4:QD:125:HIS:HB2	2.45	0.45
4:QD:173:TRP:NE1	4:QD:174:LEU:HG	2.32	0.45
4:QD:93:PHE:CZ	4:QD:97:LEU:HD11	2.52	0.45
7:QG:148:ASN:C	7:QG:150:ALA:N	2.69	0.45
9:QI:42:ARG:O	9:QI:45:ALA:HB3	2.16	0.45
16:QP:19:ILE:HB	16:QP:37:GLY:O	2.16	0.45
1:QA:1014:A:H4'	19:QS:14:HIS:CD2	2.51	0.45
47:R1:73:LEU:C	47:R1:75:GLU:N	2.70	0.45
49:R3:60:GLU:HG2	49:R3:60:GLU:O	2.16	0.45
52:R6:7:ILE:O	52:R6:8:LYS:HG2	2.17	0.45
25:RA:1210:A:H4'	25:RA:1211:U:O5'	2.16	0.45
25:RA:1266:G:H1'	25:RA:1267:U:OP2	2.16	0.45
25:RA:1771:C:O2'	25:RA:1786:A:H8	2.00	0.45
25:RA:2399:G:H2'	25:RA:2400:G:O4'	2.17	0.45
25:RA:242:G:H5'	54:R8:62:LEU:CD2	2.34	0.45
25:RA:2544:G:H2'	25:RA:2545:G:H8	1.81	0.45
25:RA:2585:U:O2'	25:RA:2586:C:P	2.75	0.45
25:RA:1999:C:H4'	25:RA:2723:C:O2	2.17	0.45
25:RA:2893:G:H5''	25:RA:2894:G:H5'	1.99	0.45
25:RA:358:U:H2'	25:RA:359:A:H8	1.80	0.45
25:RA:618(A):C:OP2	29:RF:103:LYS:HE2	2.17	0.45
25:RA:704:G:O2'	25:RA:705:A:P	2.74	0.45
26:RB:42:C:H2'	26:RB:43:C:H6	1.82	0.45
27:RD:36:PRO:HB3	27:RD:62:TYR:O	2.16	0.45
29:RF:119:ARG:CG	29:RF:119:ARG:HH11	2.29	0.45
29:RF:123:LEU:HD12	29:RF:124:LEU:H	1.82	0.45
32:RI:74:ASN:CG	32:RI:75:LEU:HD13	2.36	0.45
34:RO:2:ILE:HD11	34:RO:82:ASN:ND2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:40:VAL:CG1	34:RO:41:ALA:N	2.80	0.45
36:RQ:93:TYR:N	36:RQ:93:TYR:CD1	2.85	0.45
40:RU:53:ARG:C	40:RU:55:ARG:H	2.20	0.45
41:RV:59:ALA:HB2	41:RV:96:ILE:HD13	1.97	0.45
42:RW:65:LEU:CD1	42:RW:68:ARG:NH1	2.75	0.45
44:RY:36:ALA:HB1	44:RY:67:LEU:O	2.16	0.45
1:XA:1109:C:P	3:XC:176:HIS:HD1	2.39	0.45
1:XA:1269:A:HO2'	1:XA:1325:C:HO2'	1.64	0.45
1:XA:1304:G:H2'	1:XA:1305:G:H1'	1.98	0.45
1:XA:597:G:N2	1:XA:643:C:N3	2.65	0.45
1:XA:986:A:N3	19:XS:52:TYR:OH	2.49	0.45
3:XC:92:ALA:HB2	3:XC:99:VAL:HG11	1.99	0.45
5:XE:7:GLU:HB3	5:XE:112:LEU:HD13	1.99	0.45
5:XE:12:LEU:HB3	5:XE:31:LEU:CB	2.46	0.45
11:XK:48:ILE:HD11	11:XK:64:ALA:N	2.32	0.45
12:XL:64:TYR:O	12:XL:65:GLU:HB2	2.17	0.45
15:XO:30:ALA:HA	15:XO:85:LEU:HD11	1.97	0.45
1:XA:376:G:H5''	16:XP:5:ARG:HD2	1.98	0.45
17:XQ:48:GLU:O	17:XQ:50:LYS:N	2.50	0.45
20:XT:71:THR:HG22	20:XT:72:LEU:N	2.32	0.45
46:Y0:36:ILE:HD13	46:Y0:36:ILE:N	2.31	0.45
50:Y4:68:ARG:O	50:Y4:69:LYS:HB2	2.17	0.45
25:YA:1641:A:N6	25:YA:1642:G:C2	2.85	0.45
25:YA:2119:A:C2	25:YA:2171:A:H1'	2.52	0.45
25:YA:2259:G:C2	25:YA:2282:G:N1	2.85	0.45
25:YA:2317:C:H2'	25:YA:2318:G:H5'	1.98	0.45
25:YA:2325:G:H2'	25:YA:2326:C:H6	1.82	0.45
25:YA:2389:G:C5'	25:YA:2390:U:H5'	2.46	0.45
25:YA:2507:C:H2'	25:YA:2508:G:O4'	2.17	0.45
25:YA:419:C:H2'	25:YA:420:C:O4'	2.17	0.45
25:YA:431:U:H2'	25:YA:432:A:H8	1.81	0.45
29:YF:155:LEU:HA	29:YF:174:VAL:CG1	2.46	0.45
29:YF:45:ARG:CG	29:YF:45:ARG:NH1	2.71	0.45
30:YG:121:ASN:C	30:YG:123:ASN:H	2.19	0.45
32:YI:79:ILE:HG22	32:YI:81:VAL:HG22	1.99	0.45
33:YN:114:ARG:O	33:YN:115:ARG:CB	2.65	0.45
33:YN:7:LYS:HD3	33:YN:9:VAL:H	1.80	0.45
34:YO:22:ILE:HG12	34:YO:41:ALA:HA	1.98	0.45
40:YU:76:TYR:CD2	40:YU:76:TYR:C	2.90	0.45
40:YU:79:PHE:CE2	40:YU:83:LEU:HD13	2.51	0.45
42:YW:88:ARG:CB	42:YW:92:ARG:HB3	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:YX:47:PHE:O	43:YX:48:LYS:C	2.55	0.45
1:QA:1103:C:H2'	1:QA:1104:G:O4'	2.17	0.45
1:QA:1322:C:O2	1:QA:1322:C:H2'	2.16	0.45
1:QA:246:A:N1	1:QA:278:G:O2'	2.40	0.45
1:QA:321:A:H2'	1:QA:322:C:H6	1.81	0.45
1:QA:667:G:H4'	15:QO:51:HIS:ND1	2.31	0.45
1:QA:948:C:H2'	1:QA:949:A:C8	2.49	0.45
2:QB:22:LYS:O	2:QB:24:TRP:N	2.50	0.45
7:QG:95:ARG:HG3	7:QG:95:ARG:HH11	1.82	0.45
5:QE:152:ARG:HD3	8:QH:44:PHE:CE1	2.51	0.45
9:QI:83:ARG:C	9:QI:86:VAL:HG12	2.36	0.45
10:QJ:51:ARG:HG2	10:QJ:51:ARG:HH11	1.81	0.45
13:QM:15:VAL:O	13:QM:19:LEU:CD2	2.64	0.45
13:QM:23:TYR:HB3	13:QM:67:GLU:HA	1.98	0.45
15:QO:5:LYS:O	15:QO:8:LYS:CG	2.63	0.45
20:QT:28:ALA:O	20:QT:30:LYS:N	2.50	0.45
20:QT:96:GLY:O	20:QT:99:LEU:HD13	2.16	0.45
47:R1:49:VAL:HG12	47:R1:51:VAL:HG23	1.99	0.45
47:R1:80:LEU:CB	47:R1:81:LYS:HE2	2.44	0.45
47:R1:82:LEU:HD13	47:R1:83:GLU:C	2.35	0.45
51:R5:15:ARG:HA	51:R5:18:ALA:HB3	1.99	0.45
25:RA:180:G:OP1	53:R7:32:LYS:HG3	2.17	0.45
54:R8:36:LYS:HB3	54:R8:40:GLU:HG2	1.99	0.45
25:RA:1114:G:H2'	25:RA:1115:G:C8	2.52	0.45
25:RA:1583:A:H4'	25:RA:1586:A:N3	2.32	0.45
25:RA:2292:C:H2'	25:RA:2293:C:H6	1.82	0.45
25:RA:2300:G:H2'	25:RA:2301:C:C6	2.52	0.45
25:RA:2303:G:H1	25:RA:2313:C:N4	2.15	0.45
25:RA:2489:G:C5	25:RA:2490:G:C6	3.03	0.45
25:RA:2526:G:C6	25:RA:2527:C:C4	3.04	0.45
25:RA:2735:G:H22	25:RA:2770:G:H1'	1.82	0.45
25:RA:412:A:H2'	25:RA:413:C:H5'	1.98	0.45
26:RB:40:U:N3	26:RB:43:C:H5"	2.32	0.45
27:RD:109:ASP:HB2	27:RD:197:GLY:CA	2.46	0.45
27:RD:143:HIS:HD2	27:RD:144:ALA:HB2	1.82	0.45
27:RD:213:ARG:HA	27:RD:213:ARG:HD2	1.60	0.45
27:RD:68:LYS:HD2	27:RD:70:TRP:CZ2	2.52	0.45
29:RF:184:TYR:CE2	29:RF:188:ARG:HD2	2.52	0.45
29:RF:196:LEU:O	29:RF:200:GLU:HG2	2.17	0.45
31:RH:149:ARG:HA	31:RH:162:ILE:HG21	1.99	0.45
32:RI:79:ILE:HG22	32:RI:81:VAL:HG22	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:118:LYS:C	33:RN:120:LEU:H	2.20	0.45
34:RO:47:ILE:HG13	34:RO:48:PRO:HD2	1.99	0.45
35:RP:115:LEU:CB	35:RP:131:SER:HB2	2.47	0.45
35:RP:88:LEU:HD23	35:RP:88:LEU:C	2.37	0.45
35:RP:88:LEU:O	35:RP:90:ARG:N	2.50	0.45
37:RR:17:ARG:O	37:RR:20:LEU:HB3	2.17	0.45
40:RU:97:ASP:HA	40:RU:100:VAL:CG2	2.47	0.45
40:RU:79:PHE:C	40:RU:79:PHE:HD2	2.18	0.45
41:RV:61:VAL:HA	41:RV:94:LEU:HD23	1.97	0.45
1:XA:1074:G:H4'	2:XB:104:ASN:HB2	1.99	0.45
1:XA:1207:G:C6	1:XA:1208:C:C4	3.05	0.45
1:XA:359:U:H2'	1:XA:360:A:C8	2.52	0.45
1:XA:428:G:O2'	4:XD:36:ARG:NH2	2.47	0.45
1:XA:725:G:H2'	1:XA:726:C:H6	1.81	0.45
1:XA:926:G:H2'	1:XA:1505:G:N3	2.31	0.45
2:XB:229:VAL:O	2:XB:229:VAL:HG12	2.17	0.45
2:XB:22:LYS:O	2:XB:24:TRP:N	2.50	0.45
2:XB:68:ILE:HB	2:XB:70:PHE:HE1	1.82	0.45
7:XG:95:ARG:HG3	7:XG:95:ARG:HH11	1.82	0.45
8:XH:64:LYS:HB3	8:XH:79:VAL:HG21	1.98	0.45
9:XI:47:LEU:HD22	9:XI:47:LEU:H	1.81	0.45
1:XA:779:C:H4'	11:XK:121:PRO:O	2.17	0.45
13:XM:110:ARG:HG3	13:XM:110:ARG:HH11	1.82	0.45
13:XM:3:ARG:HH12	30:YG:113:ARG:NH2	2.15	0.45
13:XM:57:ARG:HD2	13:XM:61:GLU:OE2	2.17	0.45
18:XR:63:GLN:OE1	18:XR:63:GLN:HA	2.17	0.45
20:XT:10:LEU:C	20:XT:12:ALA:H	2.20	0.45
20:XT:53:LEU:HD12	20:XT:100:ILE:HG23	1.98	0.45
24:XY:39:C:O2'	24:XY:40:G:P	2.74	0.45
52:Y6:7:ILE:O	52:Y6:8:LYS:HG2	2.16	0.45
53:Y7:2:LYS:HG2	53:Y7:3:ARG:N	2.31	0.45
25:YA:1843:C:H2'	25:YA:1844:C:C6	2.52	0.45
25:YA:2677:G:H2'	25:YA:2678:C:H6	1.82	0.45
25:YA:2712:U:O2'	25:YA:2712(A):A:P	2.74	0.45
25:YA:356:G:H2'	25:YA:357:A:C8	2.51	0.45
25:YA:428:A:OP2	25:YA:428:A:H8	1.99	0.45
25:YA:598:G:H2'	25:YA:599:G:O4'	2.17	0.45
26:YB:110:G:H2'	26:YB:111:U:O4'	2.17	0.45
27:YD:166:GLN:CA	27:YD:166:GLN:NE2	2.78	0.45
27:YD:25:THR:CG2	27:YD:25:THR:O	2.65	0.45
28:YE:199:ARG:HH11	28:YE:199:ARG:HG3	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:2:LYS:O	28:YE:199:ARG:HA	2.17	0.45
31:YH:7:LEU:HD12	31:YH:7:LEU:C	2.37	0.45
33:YN:22:THR:O	33:YN:60:ILE:HG22	2.16	0.45
33:YN:5:VAL:HG13	33:YN:5:VAL:O	2.16	0.45
34:YO:104:ARG:NH2	39:YT:34:VAL:HG11	2.32	0.45
35:YP:92:GLU:HA	35:YP:123:LEU:HD23	1.99	0.45
35:YP:21:ARG:HA	35:YP:21:ARG:HE	1.82	0.45
36:YQ:133:ARG:CG	36:YQ:134:ARG:N	2.78	0.45
36:YQ:34:LEU:HB2	36:YQ:118:LEU:HD22	1.99	0.45
36:YQ:5:ARG:O	36:YQ:6:ARG:O	2.35	0.45
39:YT:24:PRO:HD3	39:YT:52:ILE:HD12	1.99	0.45
41:YV:61:VAL:O	41:YV:61:VAL:HG22	2.16	0.45
45:YZ:105:VAL:HG11	45:YZ:138:GLU:HG2	1.99	0.45
1:QA:1129:C:H5'	1:QA:1130:A:OP1	2.16	0.45
1:QA:1489:G:H2'	1:QA:1490:C:O4'	2.17	0.45
1:QA:635:G:C6	1:QA:636:U:C4	3.05	0.45
1:QA:648:A:H2'	1:QA:649:G:C8	2.52	0.45
1:QA:74:C:H2'	1:QA:75:C:C6	2.52	0.45
3:QC:140:ARG:CG	3:QC:140:ARG:HH11	2.30	0.45
3:QC:22:TRP:HB3	3:QC:59:ARG:HB2	1.99	0.45
4:QD:199:ASN:O	4:QD:201:GLN:N	2.49	0.45
5:QE:7:GLU:HB3	5:QE:112:LEU:HD13	1.99	0.45
7:QG:108:ALA:C	7:QG:110:GLN:H	2.19	0.45
5:QE:78:HIS:CB	8:QH:104:ARG:HG2	2.47	0.45
8:QH:86:ILE:CG1	8:QH:133:LEU:HD22	2.46	0.45
1:QA:1151:A:H1'	10:QJ:39:PRO:HB2	1.99	0.45
1:QA:779:C:H4'	11:QK:121:PRO:O	2.17	0.45
11:QK:32:ILE:HD11	11:QK:72:ALA:HB2	1.96	0.45
13:QM:110:ARG:HH11	13:QM:110:ARG:HG3	1.82	0.45
13:QM:56:LEU:O	13:QM:56:LEU:HD13	2.17	0.45
16:QP:39:TYR:CZ	16:QP:41:PRO:HB3	2.52	0.45
16:QP:50:LYS:O	16:QP:50:LYS:HD3	2.16	0.45
1:QA:719:C:O2'	18:QR:49:LYS:HB3	2.17	0.45
22:QV:35:A:C2	23:QX:3:G:C2	3.05	0.45
46:R0:25:ARG:HD2	46:R0:29:GLN:HE21	1.77	0.45
46:R0:2:ALA:HA	46:R0:3:HIS:HA	1.70	0.45
47:R1:60:PHE:HZ	47:R1:90:ILE:HG21	1.82	0.45
47:R1:94:LEU:O	47:R1:95:LEU:HB2	2.17	0.45
25:RA:2372:G:H4'	52:R6:46:HIS:CD2	2.52	0.45
25:RA:71:A:H62	25:RA:114:U:H1'	1.81	0.45
25:RA:122:G:OP1	25:RA:149:A:O2'	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1756:G:H4'	25:RA:1758:G:O4'	2.17	0.45
25:RA:1835:G:C4	25:RA:1931:U:N3	2.85	0.45
25:RA:1897:G:H2'	25:RA:1898:U:H6	1.80	0.45
25:RA:1889:A:H1'	25:RA:2087:G:O4'	2.17	0.45
25:RA:273(F):C:H2'	25:RA:274:G:H5'	1.99	0.45
25:RA:921:G:H4'	25:RA:2269:A:C5	2.51	0.45
25:RA:96:G:H4'	48:R2:48:HIS:NE2	2.31	0.45
26:RB:43:C:C4	26:RB:45:A:C6	3.05	0.45
27:RD:166:GLN:NE2	27:RD:166:GLN:HA	2.32	0.45
35:RP:115:LEU:HA	35:RP:134:ALA:CB	2.47	0.45
36:RQ:11:LYS:HE2	36:RQ:87:LYS:HA	1.98	0.45
41:RV:5:VAL:HG22	41:RV:14:VAL:CG2	2.46	0.45
42:RW:67:ASP:OD2	42:RW:67:ASP:N	2.50	0.45
43:RX:47:PHE:O	43:RX:48:LYS:C	2.55	0.45
1:XA:1086:U:H3	1:XA:1099:G:H22	1.65	0.45
1:XA:1014:A:C2	1:XA:1219:U:H1'	2.52	0.45
1:XA:665:A:N3	1:XA:732:C:H2'	2.31	0.45
2:XB:170:GLU:CA	2:XB:172:ILE:HD12	2.46	0.45
3:XC:34:LEU:HD23	3:XC:34:LEU:C	2.37	0.45
4:XD:178:VAL:O	4:XD:181:MET:N	2.50	0.45
5:XE:101:ILE:H	5:XE:101:ILE:HD13	1.82	0.45
16:XP:22:THR:CA	16:XP:33:ILE:HG12	2.42	0.45
1:XA:1222:G:H5"	19:XS:78:ARG:NH1	2.32	0.45
25:YA:2336:A:H61	46:Y0:43:THR:HG21	1.82	0.45
47:Y1:10:LYS:HD2	47:Y1:66:HIS:HE1	1.82	0.45
52:Y6:18:ARG:O	52:Y6:19:ARG:O	2.33	0.45
54:Y8:52:LYS:CG	54:Y8:52:LYS:O	2.64	0.45
25:YA:1113:U:H2'	25:YA:1114:G:C8	2.52	0.45
25:YA:140:A:H8	25:YA:1408:C:HO2'	1.58	0.45
25:YA:2170:A:H2'	25:YA:2171:A:O4'	2.17	0.45
25:YA:2216:G:H2'	25:YA:2217:G:C8	2.51	0.45
25:YA:2612:C:C5	25:YA:2613:U:H5	2.35	0.45
25:YA:606:U:H4'	25:YA:658:C:H4'	1.98	0.45
27:YD:45:ASN:CG	27:YD:46:GLN:N	2.68	0.45
28:YE:4:ILE:HG12	28:YE:91:VAL:HG11	1.99	0.45
29:YF:196:LEU:O	29:YF:200:GLU:HG2	2.17	0.45
30:YG:83:ARG:HG3	30:YG:86:MET:CE	2.46	0.45
34:YO:53:LYS:CD	34:YO:53:LYS:N	2.69	0.45
35:YP:81:GLN:CD	35:YP:106:LEU:O	2.55	0.45
35:YP:112:LEU:CD1	35:YP:114:ILE:HG23	2.47	0.45
35:YP:45:LEU:CD1	35:YP:45:LEU:N	2.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:910:A:C6	36:YQ:13:GLN:HG3	2.52	0.45
37:YR:12:ARG:HG3	37:YR:12:ARG:NH1	2.32	0.45
38:YS:89:ARG:O	38:YS:90:GLY:C	2.54	0.45
1:XA:1443:G:H22	39:YT:119:LYS:HD2	1.82	0.45
25:RA:2602:A:H2	55:Z6:76:PPU:H8	1.69	0.45
1:QA:1343:G:H1'	9:QL:121:ARG:NH1	2.31	0.45
1:QA:1233:G:O2'	1:QA:1365:G:OP1	2.34	0.45
1:QA:62:U:O2'	1:QA:379:C:H1'	2.17	0.45
1:QA:547:A:H4'	1:QA:548:G:O5'	2.16	0.45
1:QA:654:G:C6	1:QA:655:A:C4	3.05	0.45
2:QB:95:GLN:NE2	2:QB:96:ARG:NH1	2.65	0.45
4:QD:178:VAL:O	4:QD:181:MET:N	2.50	0.45
4:QD:94:LEU:O	4:QD:98:GLU:N	2.50	0.45
5:QE:36:ASP:C	5:QE:37:ARG:HG2	2.38	0.45
7:QG:26:PHE:HZ	7:QG:120:ILE:HG23	1.82	0.45
8:QH:64:LYS:HB3	8:QH:79:VAL:HG21	1.98	0.45
10:QJ:29:ARG:HH11	10:QJ:29:ARG:HG2	1.81	0.45
10:QJ:62:HIS:CD2	10:QJ:62:HIS:N	2.85	0.45
10:QJ:38:ILE:CD1	10:QJ:71:LEU:HB3	2.46	0.45
12:QL:120:TYR:CD1	12:QL:120:TYR:N	2.85	0.45
13:QM:101:GLN:HB2	13:QM:101:GLN:HE21	1.66	0.45
13:QM:57:ARG:HD2	13:QM:61:GLU:OE2	2.17	0.45
13:QM:66:LEU:HB2	13:QM:67:GLU:H	1.61	0.45
16:QP:15:PRO:O	16:QP:16:HIS:ND1	2.50	0.45
17:QQ:3:LYS:HD3	17:QQ:61:GLU:O	2.16	0.45
18:QR:82:THR:CG2	18:QR:83:GLU:N	2.79	0.45
19:QS:69:HIS:O	19:QS:70:LYS:O	2.34	0.45
30:RG:67:LYS:CE	50:R4:6:HIS:NE2	2.74	0.45
52:R6:17:LYS:O	52:R6:18:ARG:CB	2.65	0.45
52:R6:9:LEU:CD1	52:R6:26:ASN:ND2	2.79	0.45
53:R7:24:THR:O	53:R7:28:ARG:HG3	2.16	0.45
25:RA:1264:G:H5'	51:R5:11:THR:CG2	2.46	0.45
25:RA:1282:U:H2'	25:RA:1283:G:O4'	2.17	0.45
25:RA:1319:G:C2	25:RA:1320:C:N3	2.85	0.45
25:RA:1543:A:HO2'	25:RA:1544:C:P	2.40	0.45
25:RA:1303:G:H1'	25:RA:1641:A:N1	2.32	0.45
25:RA:1897:G:H2'	25:RA:1898:U:O4'	2.17	0.45
25:RA:2410:G:H2'	25:RA:2411:A:C8	2.52	0.45
25:RA:2420:C:H6	25:RA:2420:C:O5'	2.00	0.45
25:RA:2627:G:O2'	25:RA:2781:A:N1	2.45	0.45
25:RA:289:A:H2'	25:RA:290:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:459:U:OP1	53:R7:39:ARG:HA	2.17	0.45
25:RA:51:G:H4'	25:RA:52:A:H5'	1.99	0.45
25:RA:632:A:H2'	25:RA:633:A:C8	2.52	0.45
27:RD:14:ARG:HG3	27:RD:15:PHE:N	2.31	0.45
27:RD:198:ASN:ND2	27:RD:198:ASN:O	2.50	0.45
27:RD:44:ASN:HB2	27:RD:49:ILE:HA	1.93	0.45
27:RD:79:VAL:HG21	27:RD:111:LEU:HD21	1.98	0.45
28:RE:2:LYS:HG2	28:RE:95:ILE:HG22	1.99	0.45
30:RG:6:ALA:HB3	30:RG:104:GLU:OE2	2.16	0.45
31:RH:7:LEU:C	31:RH:7:LEU:HD12	2.37	0.45
33:RN:7:LYS:HD3	33:RN:9:VAL:H	1.80	0.45
25:RA:2416:C:H5''	35:RP:64:LYS:HE3	1.99	0.45
36:RQ:10:ARG:O	36:RQ:11:LYS:CB	2.64	0.45
38:RS:78:LEU:HD21	38:RS:108:GLY:CA	2.47	0.45
41:RV:5:VAL:HG13	41:RV:14:VAL:HG21	1.98	0.45
43:RX:87:GLN:HB2	43:RX:87:GLN:HE21	1.55	0.45
45:RZ:48:PHE:HE2	45:RZ:71:VAL:HG11	1.82	0.45
45:RZ:77:ASP:O	45:RZ:78:LYS:C	2.56	0.45
1:XA:1128:C:H5'	9:XI:16:ARG:NH2	2.32	0.45
1:XA:1234:C:H2'	1:XA:1235:U:C6	2.52	0.45
1:XA:1363:A:H4'	1:XA:1364:U:H5''	1.99	0.45
1:XA:1347:G:N2	1:XA:1374:A:OP2	2.45	0.45
1:XA:1525:G:C4	1:XA:1526:G:C8	3.05	0.45
1:XA:292:G:N7	1:XA:293:G:H1'	2.32	0.45
1:XA:449:C:H5	1:XA:450:G:C4	2.35	0.45
1:XA:438:G:H2'	1:XA:494:U:O4	2.17	0.45
1:XA:662:G:H2'	1:XA:663:A:H8	1.81	0.45
2:XB:179:LYS:HA	8:XH:72:PRO:HD3	1.99	0.45
2:XB:30:ARG:O	2:XB:31:TYR:HD2	2.00	0.45
3:XC:22:TRP:HB3	3:XC:59:ARG:HB2	1.99	0.45
4:XD:94:LEU:O	4:XD:98:GLU:N	2.49	0.45
5:XE:12:LEU:HD21	5:XE:14:ARG:HB3	1.98	0.45
6:XF:22:GLU:OE1	6:XF:82:ARG:NH2	2.46	0.45
5:XE:93:PRO:HG3	8:XH:105:ARG:HG3	1.99	0.45
8:XH:97:VAL:CG1	8:XH:98:LYS:H	2.30	0.45
9:XI:128:ARG:NH2	22:XV:35:A:P	2.90	0.45
7:XG:16:LEU:HD13	9:XI:45:ALA:HB2	1.99	0.45
10:XJ:54:PHE:CE2	10:XJ:55:LYS:HD2	2.52	0.45
10:XJ:54:PHE:CD2	10:XJ:55:LYS:HD2	2.52	0.45
11:XK:83:ILE:HG12	11:XK:109:VAL:HG23	1.98	0.45
11:XK:53:SER:C	11:XK:55:LYS:H	2.20	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:XK:75:TYR:N	11:XK:75:TYR:CD1	2.85	0.45
12:XL:117:ARG:NH2	12:XL:124:LYS:HD3	2.32	0.45
13:XM:56:LEU:HD13	13:XM:56:LEU:O	2.17	0.45
13:XM:66:LEU:C	13:XM:70:LEU:HB2	2.37	0.45
15:XO:82:ILE:CG2	15:XO:83:GLU:N	2.79	0.45
6:XF:101:ALA:HA	18:XR:28:GLU:CG	2.46	0.45
21:XU:6:ARG:C	21:XU:8:THR:H	2.20	0.45
52:Y6:7:ILE:HG23	52:Y6:8:LYS:N	2.32	0.45
54:Y8:36:LYS:HB3	54:Y8:40:GLU:HG2	1.99	0.45
25:YA:2038:G:C6	25:YA:2039:C:C4	3.05	0.45
25:YA:2729:G:H2'	25:YA:2730:C:H6	1.82	0.45
25:YA:2882:A:OP1	37:YR:96:ARG:NH1	2.49	0.45
28:YE:18:ASP:O	28:YE:19:ARG:C	2.56	0.45
28:YE:21:VAL:HG23	28:YE:22:PRO:CD	2.46	0.45
32:YI:99:GLU:CG	32:YI:103:ARG:NH2	2.75	0.45
32:YI:131:LYS:HD2	32:YI:131:LYS:N	2.32	0.45
32:YI:124:GLY:N	32:YI:142:VAL:HG23	2.31	0.45
34:YO:19:ILE:HD13	34:YO:19:ILE:H	1.83	0.45
25:YA:2277:G:C5'	36:YQ:85:LYS:HG3	2.47	0.45
37:YR:17:ARG:O	37:YR:20:LEU:HB3	2.17	0.45
38:YS:83:LYS:CE	38:YS:109:GLY:HA2	2.47	0.45
39:YT:57:PHE:O	39:YT:58:ASN:C	2.54	0.45
42:YW:14:PRO:O	42:YW:16:LYS:N	2.50	0.45
44:YY:25:GLY:HA3	44:YY:39:VAL:CG1	2.47	0.45
45:YZ:23:LYS:N	45:YZ:23:LYS:HD3	2.30	0.45
1:QA:1116:C:O2'	9:QI:108:VAL:HG11	2.16	0.44
1:QA:1268:A:O3'	21:QU:19:GLY:HA2	2.17	0.44
1:QA:1428:A:H2'	1:QA:1429:C:C6	2.51	0.44
1:QA:1507:A:H2'	1:QA:1508:G:O4'	2.18	0.44
1:QA:181:G:N2	1:QA:195:A:N3	2.65	0.44
2:QB:189:ASP:OD2	2:QB:205:ASP:OD1	2.35	0.44
2:QB:30:ARG:HH21	2:QB:194:PRO:HG2	1.82	0.44
3:QC:43:LEU:HD11	3:QC:66:VAL:HG11	1.98	0.44
3:QC:73:PRO:O	3:QC:77:ILE:HG13	2.16	0.44
4:QD:30:LYS:O	4:QD:32:ALA:N	2.49	0.44
4:QD:3:ARG:O	4:QD:4:TYR:C	2.55	0.44
5:QE:12:LEU:HB3	5:QE:31:LEU:CB	2.46	0.44
5:QE:80:ILE:HG13	5:QE:82:VAL:HG23	1.99	0.44
6:QF:3:ARG:HG2	6:QF:93:SER:OG	2.17	0.44
7:QG:45:ASP:O	7:QG:49:ILE:HG12	2.17	0.44
10:QJ:33:GLN:HB2	10:QJ:75:ILE:HD11	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:3:ARG:HD2	13:QM:9:ILE:CG1	2.45	0.44
10:QJ:63:PHE:HB3	14:QN:57:ARG:O	2.18	0.44
15:QO:29:VAL:HB	15:QO:81:LEU:HD21	1.99	0.44
47:R1:48:LYS:HA	47:R1:60:PHE:O	2.17	0.44
51:R5:56:LYS:O	51:R5:58:LEU:N	2.50	0.44
52:R6:11:LEU:HD11	52:R6:51:GLU:HG3	1.98	0.44
54:R8:9:GLY:O	54:R8:13:ARG:HG2	2.16	0.44
25:RA:1079:C:H2'	25:RA:1080:C:O4'	2.17	0.44
25:RA:1695:G:H2'	25:RA:1696:G:O4'	2.17	0.44
25:RA:1980:G:O2'	25:RA:1981:A:OP1	2.35	0.44
25:RA:2041:U:H2'	25:RA:2042:A:O4'	2.17	0.44
25:RA:2251:G:C4	25:RA:2450:A:H1'	2.52	0.44
25:RA:247:G:H4'	25:RA:386:G:C6	2.52	0.44
25:RA:520:G:H2'	25:RA:521:G:C8	2.48	0.44
25:RA:583:G:OP2	40:RU:10:ARG:NH1	2.50	0.44
25:RA:900:A:H5'	25:RA:901:A:OP2	2.17	0.44
28:RE:4:ILE:HG12	28:RE:91:VAL:HG11	1.99	0.44
29:RF:7:TYR:CD1	29:RF:7:TYR:N	2.84	0.44
25:RA:588:U:H1'	29:RF:90:PHE:CD1	2.51	0.44
30:RG:129:GLY:O	30:RG:130:ASN:OD1	2.34	0.44
30:RG:16:ARG:CZ	30:RG:31:VAL:HG11	2.47	0.44
31:RH:53:GLU:OE1	31:RH:53:GLU:HA	2.16	0.44
32:RI:111:PRO:O	32:RI:112:LYS:C	2.55	0.44
32:RI:83:ALA:O	32:RI:85:GLU:N	2.50	0.44
33:RN:120:LEU:HD13	33:RN:120:LEU:C	2.37	0.44
33:RN:36:GLY:O	33:RN:42:TRP:CE3	2.69	0.44
33:RN:57:ALA:HA	33:RN:60:ILE:CD1	2.44	0.44
34:RO:78:ARG:HH21	39:RT:103:ARG:HH22	1.64	0.44
35:RP:75:ILE:HG12	35:RP:77:ARG:HH12	1.82	0.44
36:RQ:119:ARG:CG	36:RQ:119:ARG:HH11	2.25	0.44
41:RV:69:LYS:HG3	41:RV:87:HIS:O	2.17	0.44
42:RW:21:VAL:O	42:RW:21:VAL:HG12	2.17	0.44
44:RY:73:ARG:HE	44:RY:73:ARG:HB3	1.51	0.44
44:RY:84:ARG:HD3	44:RY:86:ARG:HH11	1.83	0.44
45:RZ:58:VAL:O	45:RZ:59:LEU:HB2	2.16	0.44
1:XA:1321:C:C5'	1:XA:1322:C:H5''	2.48	0.44
1:XA:340:U:C2	1:XA:350:G:N2	2.85	0.44
1:XA:580:U:H2'	1:XA:581:G:O4'	2.17	0.44
3:XC:140:ARG:HH11	3:XC:140:ARG:CG	2.30	0.44
3:XC:87:LEU:C	3:XC:89:GLU:H	2.19	0.44
4:XD:76:ARG:O	4:XD:79:PHE:HB3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:45:ASP:O	7:XG:49:ILE:HG12	2.17	0.44
9:XI:13:ALA:HB2	9:XI:68:GLY:CA	2.47	0.44
9:XI:5:TYR:CD2	9:XI:6:GLY:N	2.85	0.44
9:XI:7:THR:O	9:XI:83:ARG:CD	2.66	0.44
10:XJ:6:ILE:O	10:XJ:71:LEU:HD12	2.18	0.44
13:XM:108:ARG:O	13:XM:111:LYS:N	2.48	0.44
13:XM:28:ALA:C	13:XM:30:ALA:N	2.70	0.44
15:XO:83:GLU:C	15:XO:85:LEU:N	2.70	0.44
19:XS:45:VAL:O	19:XS:62:ILE:O	2.35	0.44
20:XT:44:ALA:O	20:XT:91:LEU:HB3	2.16	0.44
47:Y1:48:LYS:HA	47:Y1:60:PHE:O	2.17	0.44
19:XS:5:LEU:CD2	50:Y4:67:TYR:CE2	2.90	0.44
51:Y5:56:LYS:O	51:Y5:58:LEU:N	2.50	0.44
25:YA:1999:C:H2'	25:YA:2000:G:O4'	2.17	0.44
25:YA:327:G:H2'	25:YA:328:U:H6	1.80	0.44
25:YA:448:U:H1'	29:YF:84:VAL:CG2	2.47	0.44
25:YA:517:C:O2'	42:YW:18:ARG:NH2	2.50	0.44
25:YA:596:G:H2'	25:YA:597:U:O4'	2.16	0.44
26:YB:95:U:C2	26:YB:96:G:C8	3.05	0.44
27:YD:166:GLN:NE2	27:YD:166:GLN:HA	2.32	0.44
31:YH:137:ASP:HB2	31:YH:140:LYS:HE3	1.98	0.44
35:YP:75:ILE:HG12	35:YP:77:ARG:HH12	1.82	0.44
38:YS:78:LEU:HD21	38:YS:108:GLY:CA	2.47	0.44
39:YT:80:SER:HA	39:YT:81:PRO:HD3	1.73	0.44
45:YZ:93:ASP:O	45:YZ:94:GLU:CB	2.65	0.44
1:QA:1064:G:H1'	1:QA:1066:C:C6	2.52	0.44
1:QA:1293:G:H2'	1:QA:1294:G:C8	2.53	0.44
1:QA:1326:C:H2'	1:QA:1327:C:H6	1.82	0.44
1:QA:1397:C:H5'	1:QA:1398:A:O4'	2.16	0.44
1:QA:719:C:N3	18:QR:50:ILE:HD13	2.32	0.44
1:QA:833:U:H2'	1:QA:834:C:C6	2.52	0.44
2:QB:229:VAL:O	2:QB:229:VAL:HG12	2.17	0.44
2:QB:51:LEU:O	2:QB:55:PHE:HD2	1.99	0.44
1:QA:430:A:H4'	4:QD:7:PRO:HG3	1.98	0.44
7:QG:111:ARG:HD2	7:QG:123:GLU:HB2	1.99	0.44
7:QG:40:ALA:O	7:QG:41:ARG:C	2.55	0.44
13:QM:66:LEU:C	13:QM:70:LEU:HB2	2.37	0.44
15:QO:54:ARG:O	15:QO:55:GLY:C	2.55	0.44
20:QT:89:ARG:HH12	20:QT:106:ALA:HB1	1.82	0.44
20:QT:10:LEU:C	20:QT:12:ALA:H	2.21	0.44
46:R0:40:GLN:OE1	46:R0:45:PHE:HB2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:15:ILE:CG2	50:R4:20:ASN:ND2	2.80	0.44
50:R4:68:ARG:HH11	50:R4:69:LYS:HG2	1.82	0.44
25:RA:1037:G:H1	25:RA:1118:C:N4	2.14	0.44
25:RA:1139:G:O2'	25:RA:1143:A:N1	2.36	0.44
25:RA:1494:A:N3	25:RA:1494:A:H2'	2.33	0.44
25:RA:1835:G:N3	25:RA:1931:U:N3	2.57	0.44
25:RA:2052:G:C6	25:RA:2053:G:N7	2.86	0.44
25:RA:226:G:O2'	25:RA:227:A:P	2.75	0.44
25:RA:2356:C:O3'	46:R0:20:ARG:CD	2.65	0.44
25:RA:2342:C:H2'	25:RA:2374:C:H5''	1.98	0.44
25:RA:2532:G:H2'	25:RA:2533:A:C8	2.53	0.44
25:RA:2629:A:O2'	25:RA:2630:G:H5''	2.17	0.44
25:RA:470:A:H2'	25:RA:471:A:O4'	2.17	0.44
27:RD:92:ILE:HD12	27:RD:104:TYR:HD2	1.81	0.44
28:RE:101:ARG:HD2	28:RE:171:GLU:HA	1.98	0.44
28:RE:36:ARG:CB	28:RE:36:ARG:HH11	2.28	0.44
28:RE:77:ILE:O	28:RE:78:LEU:O	2.35	0.44
29:RF:155:LEU:HA	29:RF:174:VAL:CG1	2.46	0.44
31:RH:51:ARG:HG3	31:RH:51:ARG:NH1	2.30	0.44
32:RI:92:VAL:O	32:RI:120:ILE:HG22	2.18	0.44
33:RN:67:LEU:HA	33:RN:87:LEU:HD13	2.00	0.44
34:RO:19:ILE:H	34:RO:19:ILE:HD13	1.83	0.44
36:RQ:90:VAL:C	36:RQ:92:GLY:N	2.71	0.44
37:RR:10:LEU:O	37:RR:11:ASN:C	2.55	0.44
25:RA:1654:A:OP2	37:RR:2:ARG:HD2	2.17	0.44
40:RU:66:ASN:CB	40:RU:76:TYR:HB2	2.44	0.44
44:RY:95:LYS:HB2	44:RY:99:CYS:O	2.18	0.44
45:RZ:137:ILE:HG22	45:RZ:158:PRO:HG2	1.98	0.44
1:XA:106:C:H2'	1:XA:107:G:C8	2.52	0.44
1:XA:1328:C:H2'	1:XA:1329:A:O4'	2.17	0.44
1:XA:1397:C:H1'	23:XX:8:A:H62	1.82	0.44
2:XB:164:VAL:HB	2:XB:186:ALA:HB1	1.96	0.44
2:XB:189:ASP:OD2	2:XB:205:ASP:OD1	2.35	0.44
4:XD:150:GLU:C	4:XD:152:SER:H	2.20	0.44
4:XD:68:TYR:O	4:XD:69:GLY:C	2.55	0.44
5:XE:52:PRO:HB2	5:XE:53:LEU:HD12	1.97	0.44
6:XF:23:LYS:HG2	6:XF:27:GLN:OE1	2.18	0.44
7:XG:26:PHE:HZ	7:XG:120:ILE:HG23	1.82	0.44
11:XK:13:GLN:HG3	11:XK:75:TYR:CA	2.48	0.44
12:XL:120:TYR:CD1	12:XL:120:TYR:N	2.86	0.44
10:XJ:61:GLU:CG	14:YN:58:LYS:HE2	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:XR:82:THR:HG22	18:XR:83:GLU:H	1.80	0.44
20:XT:36:LEU:C	20:XT:38:LYS:N	2.71	0.44
46:Y0:25:ARG:HH11	46:Y0:25:ARG:HG2	1.81	0.44
49:Y3:60:GLU:HG2	49:Y3:60:GLU:O	2.16	0.44
19:XS:3:ARG:HB3	50:Y4:67:TYR:CD2	2.53	0.44
25:YA:1309:G:H1	25:YA:1605:C:H42	1.65	0.44
25:YA:1508:A:O2'	25:YA:1509:C:O5'	2.33	0.44
25:YA:1556:C:H2'	25:YA:1557:C:H6	1.81	0.44
25:YA:2572:A:C4	28:YE:144:ARG:NH2	2.85	0.44
25:YA:2699:C:H2'	25:YA:2700:C:O4'	2.17	0.44
25:YA:2870:C:H2'	25:YA:2871:C:O4'	2.17	0.44
25:YA:288:C:N4	25:YA:353:G:H1	2.16	0.44
25:YA:357:A:H2'	25:YA:358:U:C6	2.52	0.44
25:YA:597:U:H2'	25:YA:598:G:C8	2.53	0.44
27:YD:177:LEU:O	27:YD:179:SER:N	2.51	0.44
27:YD:238:GLY:O	27:YD:239:ARG:O	2.36	0.44
27:YD:52:ARG:HB2	27:YD:53:PHE:CD2	2.53	0.44
27:YD:80:ALA:O	27:YD:113:VAL:HG13	2.16	0.44
30:YG:129:GLY:HA2	30:YG:169:ALA:HB2	1.99	0.44
30:YG:63:ILE:HG12	30:YG:64:THR:N	2.32	0.44
32:YI:83:ALA:O	32:YI:85:GLU:N	2.50	0.44
33:YN:112:LEU:O	33:YN:116:LEU:HG	2.16	0.44
34:YO:97:ARG:HA	34:YO:117:LEU:HD22	1.99	0.44
35:YP:75:ILE:HG12	35:YP:77:ARG:NH1	2.32	0.44
36:YQ:93:TYR:N	36:YQ:93:TYR:CD1	2.85	0.44
39:YT:23:ARG:CB	39:YT:24:PRO:HD2	2.40	0.44
39:YT:36:GLU:CG	39:YT:41:ARG:HD3	2.46	0.44
41:YV:69:LYS:HG3	41:YV:87:HIS:O	2.17	0.44
45:YZ:120:ILE:HD13	45:YZ:169:GLU:CG	2.45	0.44
45:YZ:27:VAL:CG1	45:YZ:87:ASP:HB3	2.46	0.44
1:QA:1149:C:H2'	1:QA:1150:U:O4'	2.17	0.44
1:QA:1338:G:N3	22:QV:41:C:O2'	2.49	0.44
1:QA:191:G:H1'	20:QT:105:SER:HB3	1.99	0.44
1:QA:374:A:C6	1:QA:375:U:C4	3.06	0.44
1:QA:392:G:OP2	16:QP:12:LYS:HG3	2.18	0.44
1:QA:59:A:H1'	1:QA:354:G:N2	2.32	0.44
3:QC:42:LEU:HD12	3:QC:45:LYS:NZ	2.32	0.44
4:QD:76:ARG:O	4:QD:79:PHE:HB3	2.17	0.44
5:QE:31:LEU:HD23	5:QE:45:PHE:CD1	2.53	0.44
6:QF:76:ALA:HB1	6:QF:80:ARG:HH21	1.82	0.44
8:QH:16:ALA:HB2	8:QH:24:THR:CG2	2.44	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:82:HIS:CD2	8:QH:82:HIS:C	2.91	0.44
9:QI:128:ARG:HH21	22:QV:35:A:P	2.40	0.44
1:QA:502:G:P	12:QL:118:SER:HB2	2.58	0.44
13:QM:39:ILE:HD12	13:QM:56:LEU:HD23	1.99	0.44
19:QS:41:VAL:HG13	19:QS:44:MET:CB	2.39	0.44
20:QT:44:ALA:HB1	20:QT:91:LEU:HB2	2.00	0.44
47:R1:10:LYS:HD2	47:R1:66:HIS:HE1	1.82	0.44
47:R1:54:ALA:O	47:R1:55:GLY:O	2.35	0.44
50:R4:15:ILE:N	50:R4:15:ILE:CD1	2.78	0.44
54:R8:17:THR:O	54:R8:20:GLY:N	2.46	0.44
54:R8:47:LYS:HD2	54:R8:48:PHE:N	2.33	0.44
54:R8:16:ILE:CD1	54:R8:57:ARG:HG2	2.42	0.44
25:RA:1893:C:C4	25:RA:1894:C:C4	3.05	0.44
25:RA:2350:C:H2'	25:RA:2351:G:O4'	2.17	0.44
25:RA:2417:C:C4	25:RA:2418:A:N7	2.86	0.44
25:RA:2844:G:H5'	25:RA:2845:G:OP2	2.17	0.44
25:RA:813:U:H2'	25:RA:814:C:C6	2.51	0.44
27:RD:48:ARG:HG3	27:RD:48:ARG:NH1	2.31	0.44
29:RF:132:VAL:HG23	29:RF:133:ASN:H	1.82	0.44
32:RI:117:GLU:O	32:RI:118:LYS:HB2	2.18	0.44
32:RI:124:GLY:N	32:RI:142:VAL:HG23	2.31	0.44
33:RN:20:GLY:HA2	33:RN:61:ARG:HD2	1.99	0.44
34:RO:104:ARG:NH2	39:RT:34:VAL:HG11	2.32	0.44
34:RO:22:ILE:HG12	34:RO:41:ALA:HA	1.98	0.44
39:RT:49:VAL:CG1	39:RT:49:VAL:O	2.64	0.44
41:RV:61:VAL:O	41:RV:61:VAL:HG22	2.16	0.44
1:XA:1074:G:C4'	2:XB:104:ASN:HB2	2.46	0.44
1:XA:1128:C:H5'	9:XI:16:ARG:HH22	1.82	0.44
1:XA:1213:A:N7	1:XA:1215:G:C5	2.85	0.44
1:XA:1530:G:H2'	1:XA:1531:A:O4'	2.17	0.44
1:XA:317:G:C6	1:XA:318:G:C5	3.05	0.44
1:XA:422:C:O2'	1:XA:423:G:H5''	2.18	0.44
2:XB:188:ALA:CB	2:XB:200:ILE:HG23	2.48	0.44
2:XB:24:TRP:CD2	2:XB:26:PRO:HD3	2.51	0.44
1:XA:412:A:OP2	4:XD:35:ARG:NH2	2.50	0.44
6:XF:27:GLN:HG2	6:XF:27:GLN:H	1.65	0.44
9:XI:118:LYS:O	9:XI:119:ALA:CB	2.65	0.44
9:XI:4:TYR:CZ	9:XI:88:TYR:HB2	2.51	0.44
13:XM:121:LYS:HZ2	24:XY:40:G:P	2.34	0.44
13:XM:53:VAL:HG12	13:XM:57:ARG:HH12	1.82	0.44
10:XJ:63:PHE:HB3	14:YN:57:ARG:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:XO:29:VAL:HB	15:XO:81:LEU:HD21	1.99	0.44
16:XP:72:ARG:CD	16:XP:73:LEU:HD23	2.48	0.44
19:XS:3:ARG:CG	19:XS:4:SER:H	2.21	0.44
20:XT:98:PRO:C	20:XT:100:ILE:H	2.19	0.44
46:Y0:78:TYR:CD1	46:Y0:78:TYR:N	2.86	0.44
36:YQ:82:ARG:H	46:Y0:7:LEU:HD22	1.80	0.44
50:Y4:33:VAL:CG1	50:Y4:34:GLU:N	2.80	0.44
51:Y5:40:LYS:HZ1	51:Y5:48:GLU:CB	2.19	0.44
54:Y8:15:LYS:HD3	54:Y8:15:LYS:C	2.37	0.44
25:YA:102:G:OP1	48:Y2:7:ARG:NH2	2.50	0.44
25:YA:1319:G:H8	25:YA:1319:G:H5'	1.82	0.44
25:YA:1437:C:H2'	25:YA:1438:U:C6	2.52	0.44
25:YA:2105:C:H2'	25:YA:2106:G:H8	1.83	0.44
25:YA:2550:G:C2	25:YA:2559:C:O2	2.71	0.44
25:YA:2693:A:H2'	25:YA:2694:G:H8	1.83	0.44
26:YB:61:G:C6	26:YB:62:C:C4	3.06	0.44
26:YB:71:C:H2'	26:YB:72:G:H8	1.82	0.44
26:YB:95:U:N3	26:YB:96:G:N7	2.65	0.44
27:YD:145:VAL:HG12	27:YD:146:GLU:N	2.32	0.44
29:YF:144:LYS:C	29:YF:146:ALA:H	2.21	0.44
29:YF:149:ASP:OD2	29:YF:151:SER:HB3	2.17	0.44
30:YG:19:LEU:HA	30:YG:22:ARG:HB2	1.99	0.44
32:YI:117:GLU:O	32:YI:118:LYS:HB2	2.17	0.44
33:YN:63:THR:HG23	33:YN:66:LYS:HE3	2.00	0.44
35:YP:45:LEU:HD12	35:YP:45:LEU:N	2.32	0.44
38:YS:3:ARG:O	38:YS:4:LEU:O	2.35	0.44
34:YO:104:ARG:NH1	39:YT:36:GLU:CD	2.71	0.44
40:YU:53:ARG:C	40:YU:55:ARG:H	2.20	0.44
40:YU:57:PHE:O	40:YU:59:ARG:N	2.50	0.44
41:YV:72:VAL:HG13	41:YV:85:LYS:HB3	2.00	0.44
42:YW:28:SER:O	42:YW:30:GLU:N	2.51	0.44
45:YZ:139:VAL:O	45:YZ:139:VAL:CG1	2.65	0.44
45:YZ:169:GLU:O	45:YZ:170:THR:OG1	2.35	0.44
1:QA:1311:G:C2	1:QA:1327:C:C2	3.06	0.44
1:QA:1318:A:H4'	19:QS:11:VAL:CG1	2.42	0.44
1:QA:271:C:H2'	1:QA:272:C:H6	1.83	0.44
1:QA:538:G:H2'	1:QA:539:A:H8	1.81	0.44
1:QA:771:G:H2'	1:QA:772:U:C6	2.52	0.44
4:QD:122:ARG:HA	4:QD:134:ASP:HB2	2.00	0.44
4:QD:9:CYS:SG	4:QD:32:ALA:HB2	2.58	0.44
5:QE:147:ASP:OD2	5:QE:147:ASP:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:QI:7:THR:O	9:QI:83:ARG:CD	2.66	0.44
11:QK:13:GLN:HG3	11:QK:75:TYR:CA	2.47	0.44
12:QL:120:TYR:O	12:QL:121:GLY:O	2.36	0.44
13:QM:16:ASP:O	13:QM:19:LEU:HD23	2.17	0.44
17:QQ:33:GLY:O	17:QQ:34:LYS:C	2.55	0.44
24:QY:34:C:C2'	24:QY:35:G:O5'	2.65	0.44
48:R2:41:ILE:O	48:R2:41:ILE:HD12	2.16	0.44
49:R3:50:VAL:HB	49:R3:53:LEU:HD12	2.00	0.44
53:R7:32:LYS:O	53:R7:33:ARG:C	2.56	0.44
54:R8:15:LYS:HD3	54:R8:15:LYS:C	2.37	0.44
25:RA:2133:G:H2'	25:RA:2157:G:N2	2.32	0.44
25:RA:2437:U:H2'	25:RA:2438:U:C6	2.52	0.44
25:RA:2635:C:OP1	28:RE:78:LEU:HD12	2.17	0.44
25:RA:2887:U:H2'	25:RA:2888:C:C6	2.51	0.44
25:RA:380:U:H2'	25:RA:381:G:H8	1.81	0.44
25:RA:704:G:HO2'	25:RA:705:A:P	2.40	0.44
27:RD:155:LEU:HD12	27:RD:155:LEU:N	2.32	0.44
29:RF:117:ARG:NH2	29:RF:189:THR:O	2.50	0.44
32:RI:9:LEU:C	32:RI:10:GLU:HG3	2.36	0.44
35:RP:45:LEU:HD12	35:RP:45:LEU:N	2.32	0.44
35:RP:81:GLN:HG3	35:RP:82:GLY:N	2.32	0.44
39:RT:135:ALA:C	39:RT:137:LYS:N	2.71	0.44
40:RU:86:ALA:CB	40:RU:88:ILE:HD11	2.48	0.44
41:RV:35:LEU:N	41:RV:35:LEU:HD22	2.23	0.44
41:RV:4:ILE:HG22	41:RV:39:LEU:HD23	1.99	0.44
42:RW:29:LEU:HD11	42:RW:55:ALA:HB2	1.98	0.44
42:RW:88:ARG:HG2	42:RW:88:ARG:HH11	1.82	0.44
43:RX:70:LEU:HD23	43:RX:70:LEU:H	1.77	0.44
44:RY:97:ARG:HG2	44:RY:97:ARG:HH11	1.82	0.44
45:RZ:117:LEU:HB3	45:RZ:118:GLN:H	1.70	0.44
45:RZ:136:PHE:CD1	45:RZ:137:ILE:N	2.84	0.44
45:RZ:52:SER:O	45:RZ:54:HIS:N	2.50	0.44
1:XA:1235:U:H2'	1:XA:1236:A:O4'	2.18	0.44
1:XA:36:C:O2'	1:XA:501:C:OP1	2.32	0.44
1:XA:540:G:H2'	1:XA:541:G:O4'	2.18	0.44
1:XA:557:G:C6	1:XA:558:G:C6	3.05	0.44
2:XB:30:ARG:HH21	2:XB:194:PRO:HG2	1.82	0.44
3:XC:108:ASN:HB3	3:XC:111:LEU:HD12	1.99	0.44
3:XC:43:LEU:HD11	3:XC:66:VAL:HG11	1.98	0.44
3:XC:68:VAL:HG12	3:XC:70:VAL:HG23	1.98	0.44
3:XC:69:HIS:ND1	3:XC:69:HIS:N	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:206:PHE:CD2	4:XD:207:TYR:CE1	3.05	0.44
5:XE:147:ASP:N	5:XE:147:ASP:OD2	2.50	0.44
5:XE:62:ALA:C	5:XE:64:ARG:H	2.21	0.44
5:XE:82:VAL:HG12	5:XE:83:GLU:H	1.77	0.44
7:XG:38:LEU:O	7:XG:42:ILE:HG13	2.17	0.44
8:XH:110:ALA:HB3	8:XH:121:ASP:HB3	1.99	0.44
8:XH:28:ALA:O	8:XH:29:SER:HB2	2.18	0.44
10:XJ:16:LEU:HD13	10:XJ:16:LEU:C	2.38	0.44
15:XO:25:THR:HG22	15:XO:70:LEU:HD22	1.99	0.44
1:XA:1320:C:C4	19:XS:36:ARG:HG3	2.51	0.44
1:XA:1221:G:O3'	19:XS:77:THR:HG21	2.18	0.44
9:XI:128:ARG:HD3	22:XV:32:C:OP2	2.18	0.44
48:Y2:41:ILE:HD12	48:Y2:41:ILE:O	2.16	0.44
52:Y6:19:ARG:HA	52:Y6:19:ARG:HD2	1.77	0.44
52:Y6:34:LEU:O	52:Y6:36:LEU:HD22	2.17	0.44
25:YA:2349:G:OP2	54:Y8:42:ARG:HD3	2.18	0.44
54:Y8:47:LYS:HD2	54:Y8:48:PHE:N	2.33	0.44
25:YA:1796:U:H2'	25:YA:1797:C:C6	2.52	0.44
25:YA:1937:A:N7	25:YA:1939:U:H2'	2.32	0.44
25:YA:573:G:N2	25:YA:2031:A:OP2	2.45	0.44
25:YA:2185:C:H2'	25:YA:2186:G:H8	1.83	0.44
25:YA:225:A:H5'	25:YA:226:G:OP2	2.16	0.44
25:YA:2373:G:H2'	25:YA:2374:C:C6	2.53	0.44
25:YA:2389:G:H5''	25:YA:2390:U:H5'	1.99	0.44
25:YA:2625:G:H2'	25:YA:2626:C:C6	2.52	0.44
25:YA:514:A:H2'	25:YA:515:A:C8	2.53	0.44
25:YA:529:A:C8	25:YA:530:G:C6	3.06	0.44
27:YD:237:GLU:HB3	27:YD:238:GLY:H	1.45	0.44
29:YF:201:VAL:HG13	29:YF:202:PHE:N	2.33	0.44
32:YI:9:LEU:C	32:YI:10:GLU:HG3	2.36	0.44
32:YI:1:MET:HG3	32:YI:23:PRO:CB	2.47	0.44
36:YQ:66:ILE:O	36:YQ:104:PHE:N	2.49	0.44
39:YT:135:ALA:C	39:YT:137:LYS:N	2.71	0.44
42:YW:1:MET:CE	42:YW:2:GLU:H	2.31	0.44
25:YA:71:A:C2	43:YX:31:HIS:CE1	2.94	0.44
45:YZ:137:ILE:O	45:YZ:156:LYS:NZ	2.50	0.44
1:QA:1062:U:H2'	1:QA:1063:C:C6	2.53	0.44
1:QA:1346:A:N1	1:QA:1374:A:H5''	2.32	0.44
1:QA:420:U:H4'	1:QA:421:U:H5	1.83	0.44
1:QA:892:A:C6	1:QA:893:C:C4	3.06	0.44
2:QB:98:LEU:O	2:QB:101:MET:HG3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:17:PHE:CG	2:QB:44:LEU:HD11	2.53	0.44
3:QC:69:HIS:N	3:QC:69:HIS:ND1	2.66	0.44
4:QD:206:PHE:CD2	4:QD:207:TYR:CE1	3.05	0.44
4:QD:60:GLU:HG2	4:QD:202:LEU:HD12	2.00	0.44
5:QE:62:ALA:C	5:QE:64:ARG:H	2.21	0.44
7:QG:150:ALA:HA	11:QK:59:TYR:HD2	1.83	0.44
7:QG:15:ASP:HB3	7:QG:20:ASP:N	2.15	0.44
11:QK:83:ILE:HG12	11:QK:109:VAL:HG23	1.99	0.44
1:QA:1316:G:H5''	14:QN:17:LYS:HE3	1.99	0.44
17:QQ:13:ASP:O	17:QQ:15:MET:N	2.51	0.44
20:QT:48:LYS:HB3	20:QT:51:GLU:CG	2.48	0.44
20:QT:84:LEU:HD13	20:QT:84:LEU:C	2.37	0.44
20:QT:83:ARG:C	20:QT:86:ARG:HB3	2.38	0.44
48:R2:4:SER:OG	48:R2:5:GLU:OE2	2.26	0.44
25:RA:1045:A:O2'	25:RA:1046:A:OP2	2.31	0.44
25:RA:1906:G:C8	25:RA:1929:G:C4	3.05	0.44
25:RA:2050:C:H2'	25:RA:2051:A:O4'	2.18	0.44
25:RA:2303:G:O2'	25:RA:2304:G:H5'	2.17	0.44
25:RA:348:G:H2'	25:RA:349:G:C8	2.53	0.44
25:RA:468:G:N7	53:R7:39:ARG:NH2	2.62	0.44
25:RA:774:A:HO2'	25:RA:775:G:P	2.40	0.44
25:RA:962:G:H2'	25:RA:963:U:O4'	2.17	0.44
27:RD:145:VAL:HG12	27:RD:146:GLU:N	2.32	0.44
28:RE:143:ASN:N	28:RE:143:ASN:ND2	2.65	0.44
29:RF:174:VAL:O	29:RF:174:VAL:CG1	2.65	0.44
30:RG:129:GLY:HA2	30:RG:169:ALA:HB2	1.99	0.44
30:RG:44:GLY:HA2	30:RG:88:ILE:HD11	2.00	0.44
32:RI:131:LYS:HD2	32:RI:131:LYS:N	2.32	0.44
32:RI:45:LYS:O	32:RI:49:ALA:N	2.48	0.44
32:RI:68:LEU:HA	32:RI:71:ILE:HG22	1.99	0.44
35:RP:101:VAL:HA	35:RP:106:LEU:HB2	1.99	0.44
37:RR:12:ARG:HG3	37:RR:12:ARG:NH1	2.32	0.44
37:RR:79:LEU:O	37:RR:79:LEU:HD23	2.16	0.44
38:RS:3:ARG:O	38:RS:4:LEU:O	2.35	0.44
40:RU:52:ARG:NH1	40:RU:52:ARG:CG	2.76	0.44
42:RW:74:ALA:O	42:RW:75:TYR:CB	2.65	0.44
44:RY:88:LYS:HB3	44:RY:90:LEU:CD2	2.48	0.44
45:RZ:93:ASP:O	45:RZ:94:GLU:CB	2.65	0.44
1:XA:170:U:H2'	1:XA:171:A:H8	1.81	0.44
1:XA:524:G:H2'	1:XA:525:C:C5	2.52	0.44
1:XA:659:U:H2'	1:XA:660:G:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:689:C:O4'	1:XA:704:A:H2	2.00	0.44
2:XB:54:THR:HG21	2:XB:201:ILE:HD11	1.99	0.44
4:XD:13:ARG:NH2	4:XD:36:ARG:HH21	2.15	0.44
4:XD:9:CYS:SG	4:XD:32:ALA:HB2	2.58	0.44
5:XE:80:ILE:HG13	5:XE:82:VAL:HG23	1.99	0.44
7:XG:111:ARG:HD2	7:XG:123:GLU:HB2	1.99	0.44
1:XA:1117:G:H5''	9:XI:104:ARG:NH2	2.32	0.44
9:XI:29:ASN:OD1	9:XI:65:VAL:N	2.47	0.44
10:XJ:62:HIS:N	10:XJ:62:HIS:CD2	2.85	0.44
13:XM:16:ASP:O	13:XM:19:LEU:HD23	2.17	0.44
15:XO:54:ARG:O	15:XO:55:GLY:C	2.55	0.44
20:XT:89:ARG:HH12	20:XT:106:ALA:HB1	1.82	0.44
20:XT:56:MET:HG3	20:XT:88:VAL:HG21	1.98	0.44
46:Y0:3:HIS:CD2	46:Y0:4:LYS:C	2.74	0.44
46:Y0:42:GLY:C	46:Y0:57:PHE:HD1	2.21	0.44
47:Y1:60:PHE:HE2	47:Y1:91:LYS:NZ	2.16	0.44
50:Y4:15:ILE:CG2	50:Y4:20:ASN:ND2	2.81	0.44
50:Y4:39:CYS:HB3	50:Y4:41:PRO:HD2	2.00	0.44
19:XS:5:LEU:HD21	50:Y4:66:SER:HB2	1.99	0.44
25:YA:125:G:N2	53:Y7:9:ARG:HB3	2.33	0.44
25:YA:1217:C:OP1	40:YU:15:LYS:NZ	2.44	0.44
25:YA:1575:C:H2'	25:YA:1576:U:O4'	2.18	0.44
25:YA:205:G:HO2'	25:YA:206:U:H5	1.64	0.44
25:YA:2687:U:H2'	25:YA:2688:U:O4'	2.18	0.44
25:YA:2713:A:H3'	25:YA:2714:G:H5''	1.99	0.44
25:YA:273(C):C:N4	25:YA:363(C):G:H1	2.14	0.44
25:YA:835:A:C6	25:YA:836:G:C5	3.06	0.44
27:YD:12:SER:C	27:YD:14:ARG:N	2.70	0.44
27:YD:145:VAL:HB	27:YD:155:LEU:HB2	1.99	0.44
27:YD:226:MET:H	27:YD:226:MET:HG2	1.53	0.44
25:YA:2572:A:C8	28:YE:144:ARG:HB3	2.52	0.44
28:YE:50:GLY:CA	28:YE:74:PRO:HG3	2.46	0.44
29:YF:116:ASP:OD2	35:YP:1:MET:N	2.44	0.44
30:YG:51:ARG:HB3	30:YG:51:ARG:NH1	2.33	0.44
32:YI:110:ASP:CB	32:YI:111:PRO:CA	2.96	0.44
32:YI:135:GLU:HB2	32:YI:136:VAL:H	1.49	0.44
32:YI:64:GLU:O	32:YI:67:ARG:NE	2.50	0.44
34:YO:120:GLU:OE1	39:YT:67:SER:OG	2.24	0.44
34:YO:40:VAL:CG1	34:YO:41:ALA:N	2.80	0.44
1:XA:339:C:H5	34:YO:97:ARG:HH12	1.62	0.44
35:YP:115:LEU:CB	35:YP:131:SER:HB2	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:31:ALA:C	35:YP:32:THR:CG2	2.85	0.44
38:YS:56:LEU:O	38:YS:57:LYS:O	2.36	0.44
1:QA:1251:A:H2'	1:QA:1252:A:C8	2.53	0.44
1:QA:1388:C:H2'	1:QA:1389:C:H6	1.82	0.44
1:QA:825:G:H2'	1:QA:826:C:O4'	2.17	0.44
1:QA:963:G:N3	10:QJ:55:LYS:NZ	2.63	0.44
2:QB:136:VAL:O	2:QB:140:HIS:N	2.43	0.44
7:QG:38:LEU:O	7:QG:42:ILE:HG13	2.17	0.44
9:QI:47:LEU:H	9:QI:47:LEU:HD22	1.81	0.44
9:QI:5:TYR:CD2	9:QI:6:GLY:N	2.86	0.44
10:QJ:54:PHE:CD2	10:QJ:55:LYS:HD2	2.52	0.44
10:QJ:61:GLU:CG	14:QN:58:LYS:HE2	2.47	0.44
10:QJ:6:ILE:O	10:QJ:71:LEU:HD12	2.17	0.44
11:QK:77:MET:HE3	11:QK:80:VAL:HG12	1.98	0.44
13:QM:53:VAL:HG12	13:QM:57:ARG:HH12	1.81	0.44
13:QM:90:LEU:HD12	13:QM:91:ARG:N	2.33	0.44
17:QQ:48:GLU:O	17:QQ:50:LYS:N	2.50	0.44
17:QQ:92:ARG:NH1	17:QQ:92:ARG:HG3	2.30	0.44
18:QR:20:ALA:O	18:QR:21:LYS:HG3	2.18	0.44
20:QT:50:GLU:O	20:QT:52:ALA:N	2.51	0.44
26:RB:12:C:O2'	46:R0:74:ARG:HG3	2.17	0.44
52:R6:34:LEU:O	52:R6:36:LEU:HD22	2.17	0.44
52:R6:11:LEU:HD12	52:R6:51:GLU:HG3	2.00	0.44
25:RA:2350:C:C5	54:R8:42:ARG:NH1	2.85	0.44
25:RA:1542:G:H5''	25:RA:1543:A:OP2	2.18	0.44
25:RA:1844:C:OP1	27:RD:257:LEU:HD23	2.18	0.44
25:RA:2667:C:H1'	31:RH:109:PHE:HD2	1.81	0.44
25:RA:310:A:OP1	44:RY:18:GLY:N	2.44	0.44
25:RA:300:A:H1'	25:RA:319:C:H1'	2.00	0.44
25:RA:635:C:H2'	25:RA:636:G:O4'	2.18	0.44
26:RB:72:G:O2'	26:RB:104:A:N6	2.44	0.44
27:RD:155:LEU:HD23	27:RD:177:LEU:HD21	2.00	0.44
27:RD:45:ASN:CG	27:RD:46:GLN:N	2.68	0.44
27:RD:95:LEU:HD12	27:RD:95:LEU:O	2.17	0.44
28:RE:11:MET:O	28:RE:12:THR:HB	2.18	0.44
30:RG:67:LYS:N	30:RG:67:LYS:HD2	2.33	0.44
32:RI:79:ILE:CB	32:RI:142:VAL:HA	2.42	0.44
32:RI:67:ARG:CZ	32:RI:68:LEU:HB2	2.48	0.44
33:RN:57:ALA:O	33:RN:124:ALA:HA	2.18	0.44
34:RO:63:VAL:HG23	34:RO:63:VAL:O	2.17	0.44
34:RO:91:LEU:N	34:RO:91:LEU:CD2	2.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:34:LEU:HB2	36:RQ:118:LEU:HD22	1.99	0.44
37:RR:33:ARG:HA	37:RR:114:VAL:O	2.18	0.44
45:RZ:105:VAL:HG22	45:RZ:105:VAL:O	2.18	0.44
45:RZ:152:ALA:HA	45:RZ:171:ILE:HB	2.00	0.44
45:RZ:24:LEU:HD21	45:RZ:86:VAL:CG2	2.48	0.44
1:XA:1074:G:OP2	5:XE:61:TYR:OH	2.30	0.44
1:XA:1297:C:O2'	1:XA:1298:C:P	2.75	0.44
1:XA:1389:C:H2'	1:XA:1390:U:O4'	2.18	0.44
1:XA:15:G:H4'	5:XE:24:ARG:HH12	1.81	0.44
1:XA:390:C:H4'	16:XP:28:ARG:NH2	2.31	0.44
1:XA:664:G:H22	1:XA:741:G:H1	1.65	0.44
4:XD:132:ARG:HG2	4:XD:132:ARG:HH11	1.83	0.44
10:XJ:100:THR:O	10:XJ:101:VAL:HB	2.17	0.44
10:XJ:33:GLN:HB2	10:XJ:75:ILE:HD11	1.99	0.44
11:XK:106:LYS:O	11:XK:107:SER:CB	2.65	0.44
11:XK:121:PRO:HD2	11:XK:126:ARG:CD	2.46	0.44
11:XK:124:LYS:O	11:XK:126:ARG:N	2.40	0.44
16:XP:50:LYS:O	16:XP:50:LYS:HD3	2.17	0.44
20:XT:36:LEU:HD13	20:XT:36:LEU:HA	1.82	0.44
20:XT:83:ARG:C	20:XT:86:ARG:HB3	2.38	0.44
46:Y0:40:GLN:OE1	46:Y0:45:PHE:HB2	2.18	0.44
46:Y0:68:GLU:OE1	46:Y0:82:ARG:NH1	2.50	0.44
50:Y4:23:GLU:O	50:Y4:24:THR:OG1	2.34	0.44
50:Y4:39:CYS:O	50:Y4:40:HIS:CB	2.66	0.44
19:XS:67:VAL:HG21	50:Y4:60:GLN:HE22	1.83	0.44
25:YA:1126:A:H4'	25:YA:1127:A:O5'	2.17	0.44
25:YA:1530:G:C2	25:YA:1531:C:C2	3.05	0.44
25:YA:1771:C:O2'	25:YA:1786:A:O4'	2.35	0.44
25:YA:2193:G:H2'	25:YA:2194:G:H8	1.82	0.44
25:YA:2331:G:O4'	46:Y0:42:GLY:HA3	2.17	0.44
25:YA:531:C:OP1	25:YA:561:G:N1	2.51	0.44
25:YA:638:G:C5	25:YA:651:G:C2	3.05	0.44
25:YA:83:G:O2'	25:YA:84:A:H8	2.01	0.44
27:YD:17:THR:HG21	27:YD:204:ILE:HA	1.99	0.44
27:YD:238:GLY:C	27:YD:239:ARG:O	2.53	0.44
27:YD:44:ASN:CB	27:YD:49:ILE:HG22	2.46	0.44
28:YE:120:TRP:CE3	28:YE:155:LYS:HD3	2.53	0.44
28:YE:172:VAL:HG13	28:YE:182:LEU:HD11	1.98	0.44
29:YF:65:TRP:CZ2	29:YF:72:ARG:NH2	2.86	0.44
30:YG:16:ARG:NH2	30:YG:31:VAL:CG1	2.75	0.44
31:YH:6:ARG:CG	31:YH:7:LEU:N	2.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:109:LYS:H	33:YN:109:LYS:CD	2.26	0.44
35:YP:107:LYS:HB2	35:YP:110:TYR:HD2	1.83	0.44
35:YP:6:LEU:HD22	35:YP:6:LEU:N	2.31	0.44
36:YQ:21:THR:HB	36:YQ:22:LYS:H	1.42	0.44
37:YR:41:ALA:C	37:YR:43:GLU:H	2.20	0.44
40:YU:97:ASP:HA	40:YU:100:VAL:CG2	2.47	0.44
40:YU:79:PHE:CE2	40:YU:83:LEU:CD1	3.00	0.44
42:YW:14:PRO:HB3	42:YW:18:ARG:HE	1.83	0.44
42:YW:88:ARG:HG2	42:YW:88:ARG:HH11	1.82	0.44
45:YZ:108:PRO:CB	45:YZ:112:ARG:HB2	2.38	0.44
1:QA:1206:G:C6	1:QA:1207:G:C5	3.05	0.44
1:QA:1226:C:N4	13:QM:104:ARG:HD2	2.33	0.44
1:QA:1268:A:H4'	21:QU:19:GLY:C	2.38	0.44
1:QA:1494:G:OP2	1:QA:1494:G:H8	2.01	0.44
1:QA:149:A:H4'	1:QA:1450:U:C4	2.53	0.44
1:QA:576:G:N2	1:QA:759:A:OP1	2.50	0.44
1:QA:792:A:H2'	1:QA:792:A:N3	2.33	0.44
2:QB:132:LYS:HA	2:QB:135:GLN:CB	2.42	0.44
2:QB:192:SER:OG	2:QB:193:ASP:N	2.50	0.44
2:QB:29:ALA:O	2:QB:32:ILE:HG22	2.17	0.44
2:QB:87:ARG:HH11	2:QB:223:ILE:HD11	1.82	0.44
4:QD:14:ARG:C	4:QD:14:ARG:HD3	2.38	0.44
4:QD:68:TYR:O	4:QD:69:GLY:C	2.55	0.44
1:QA:738:C:H5''	6:QF:69:GLU:HB2	2.00	0.44
7:QG:140:ASP:HA	7:QG:143:ARG:HH11	1.79	0.44
7:QG:62:PHE:O	7:QG:64:GLN:N	2.51	0.44
8:QH:23:SER:HB3	8:QH:62:TYR:HA	1.99	0.44
9:QI:13:ALA:HB2	9:QI:68:GLY:CA	2.47	0.44
10:QJ:70:ARG:HH11	10:QJ:70:ARG:HG3	1.83	0.44
20:QT:101:GLY:C	20:QT:103:GLY:H	2.21	0.44
20:QT:36:LEU:C	20:QT:38:LYS:N	2.71	0.44
46:R0:68:GLU:OE1	46:R0:82:ARG:NH1	2.50	0.44
51:R5:52:TYR:CD1	51:R5:52:TYR:N	2.85	0.44
25:RA:103:A:H8	25:RA:103:A:O5'	2.00	0.44
25:RA:1533:C:H2'	25:RA:1534:G:C8	2.53	0.44
25:RA:2821:A:H2'	25:RA:2822:G:C8	2.53	0.44
25:RA:2831:G:H1'	25:RA:2883:A:H2'	1.98	0.44
25:RA:2721:A:H1'	25:RA:2873:A:O2'	2.18	0.44
25:RA:303:U:H2'	25:RA:304:G:C8	2.53	0.44
25:RA:554:U:HO2'	25:RA:556:G:P	2.39	0.44
25:RA:836:G:H2'	25:RA:837:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:994:C:OP1	40:RU:53:ARG:NH2	2.51	0.44
27:RD:11:PRO:O	27:RD:12:SER:CB	2.65	0.44
27:RD:12:SER:C	27:RD:14:ARG:N	2.70	0.44
27:RD:12:SER:O	27:RD:14:ARG:N	2.51	0.44
27:RD:30:GLU:CD	27:RD:63:ARG:HE	2.21	0.44
27:RD:30:GLU:HG3	27:RD:63:ARG:NE	2.32	0.44
27:RD:44:ASN:ND2	27:RD:44:ASN:H	1.97	0.44
27:RD:52:ARG:HB2	27:RD:53:PHE:CD2	2.53	0.44
28:RE:13:ARG:HB3	28:RE:13:ARG:HH11	1.82	0.44
33:RN:96:GLU:CG	33:RN:97:ARG:N	2.73	0.44
34:RO:77:ILE:O	34:RO:77:ILE:HG23	2.17	0.44
37:RR:41:ALA:C	37:RR:43:GLU:H	2.20	0.44
38:RS:78:LEU:HD21	38:RS:108:GLY:HA2	1.99	0.44
39:RT:114:LEU:HA	39:RT:114:LEU:HD23	1.74	0.44
42:RW:14:PRO:HB3	42:RW:18:ARG:HE	1.83	0.44
45:RZ:12:GLY:O	45:RZ:13:GLU:O	2.36	0.44
1:XA:1064:G:H4'	1:XA:1065:U:O5'	2.18	0.44
1:XA:186(C):G:H2'	1:XA:186(D):C:O4'	2.18	0.44
1:XA:730:G:C6	1:XA:731:G:H1'	2.53	0.44
2:XB:33:TYR:O	2:XB:33:TYR:HD1	2.00	0.44
1:XA:1055:A:H4'	3:XC:161:GLU:OE2	2.18	0.44
4:XD:3:ARG:O	4:XD:4:TYR:C	2.55	0.44
4:XD:93:PHE:CZ	4:XD:97:LEU:HD11	2.52	0.44
5:XE:10:MET:HB2	5:XE:32:VAL:HG22	1.94	0.44
5:XE:62:ALA:O	5:XE:64:ARG:N	2.50	0.44
7:XG:69:VAL:CG1	7:XG:69:VAL:O	2.62	0.44
8:XH:23:SER:HB3	8:XH:62:TYR:HA	1.99	0.44
8:XH:82:HIS:CD2	8:XH:82:HIS:C	2.91	0.44
10:XJ:51:ARG:NH1	10:XJ:51:ARG:HG2	2.32	0.44
10:XJ:38:ILE:CG1	10:XJ:71:LEU:HB3	2.48	0.44
16:XP:15:PRO:O	16:XP:16:HIS:ND1	2.51	0.44
16:XP:72:ARG:O	16:XP:72:ARG:HD3	2.18	0.44
25:YA:1022:G:N2	25:YA:1142(A):A:H2	2.14	0.44
25:YA:1429:G:H2'	25:YA:1430:C:C6	2.52	0.44
25:YA:2302:G:C6	25:YA:2303:G:C5	3.06	0.44
25:YA:2517:C:C4	25:YA:2542:A:C6	3.05	0.44
25:YA:26:G:C6	25:YA:27:G:C2	3.06	0.44
25:YA:295:G:C5	25:YA:344:G:C2	3.05	0.44
25:YA:356:G:C2	25:YA:357:A:C4	3.06	0.44
25:YA:987:G:H2'	25:YA:988:A:O4'	2.18	0.44
27:YD:155:LEU:N	27:YD:155:LEU:HD12	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:184:TYR:CE2	29:YF:188:ARG:HD2	2.52	0.44
29:YF:24:LEU:N	29:YF:24:LEU:HD12	2.33	0.44
30:YG:16:ARG:CZ	30:YG:31:VAL:HG11	2.47	0.44
32:YI:92:VAL:O	32:YI:120:ILE:HG22	2.18	0.44
25:YA:2723:C:OP1	37:YR:3:HIS:HD2	2.00	0.44
38:YS:57:LYS:O	38:YS:58:LEU:HB3	2.18	0.44
39:YT:99:LEU:CD1	39:YT:99:LEU:O	2.65	0.44
40:YU:86:ALA:CB	40:YU:88:ILE:HD11	2.48	0.44
43:YX:35:THR:O	43:YX:36:LYS:C	2.55	0.44
44:YY:88:LYS:HB3	44:YY:90:LEU:CD2	2.48	0.44
45:YZ:152:ALA:HA	45:YZ:171:ILE:HB	2.00	0.44
45:YZ:48:PHE:HE2	45:YZ:71:VAL:HG11	1.82	0.44
1:QA:1266:G:N2	1:QA:1268:A:H3'	2.33	0.44
1:QA:1429:C:H2'	1:QA:1430:C:H6	1.82	0.44
1:QA:209:U:H1'	1:QA:216:G:C6	2.52	0.44
1:QA:730:G:C5	1:QA:731:G:H1'	2.52	0.44
2:QB:77:ALA:HB2	2:QB:211:ILE:HG21	2.00	0.44
2:QB:47:THR:HG22	2:QB:51:LEU:CG	2.48	0.44
4:QD:146:ILE:H	4:QD:146:ILE:CD1	2.29	0.44
5:QE:67:VAL:HG22	5:QE:68:GLU:N	2.33	0.44
2:QB:178:ARG:NH2	8:QH:74:PRO:CG	2.81	0.44
8:QH:88:LYS:HB3	8:QH:89:PRO:HD2	2.00	0.44
7:QG:16:LEU:HD13	9:QI:45:ALA:HB2	1.98	0.44
7:QG:151:TYR:HE1	11:QK:54:ARG:HD3	1.83	0.44
12:QL:117:ARG:NH2	12:QL:124:LYS:HD3	2.33	0.44
15:QO:10:LYS:O	15:QO:14:GLU:HB2	2.18	0.44
16:QP:72:ARG:CD	16:QP:73:LEU:HD23	2.48	0.44
1:QA:277:C:H5''	17:QQ:68:ARG:NH2	2.31	0.44
50:R4:39:CYS:HB3	50:R4:41:PRO:HD2	2.00	0.44
25:RA:1030:G:H1	25:RA:1124:C:H42	1.66	0.44
25:RA:1027:A:C6	25:RA:1126:A:C4	3.06	0.44
25:RA:1335:U:OP1	43:RX:65:ARG:NE	2.51	0.44
25:RA:2674:G:H2'	25:RA:2675:A:O4'	2.18	0.44
25:RA:395:U:H2'	25:RA:396:G:N7	2.32	0.44
25:RA:625:G:OP1	54:R8:64:TYR:HD1	2.00	0.44
27:RD:10:THR:O	27:RD:11:PRO:C	2.56	0.44
27:RD:25:THR:CG2	27:RD:25:THR:O	2.65	0.44
28:RE:199:ARG:HG3	28:RE:199:ARG:HH11	1.82	0.44
25:RA:618:G:OP1	29:RF:106:ARG:HB3	2.18	0.44
29:RF:65:TRP:CZ2	29:RF:72:ARG:NH2	2.86	0.44
31:RH:84:SER:OG	31:RH:85:LYS:N	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RI:40:THR:O	32:RI:44:LEU:HB2	2.18	0.44
35:RP:83:VAL:HG11	35:RP:112:LEU:HD21	1.97	0.44
38:RS:110:LEU:HA	38:RS:112:PHE:CE1	2.52	0.44
39:RT:111:ARG:C	39:RT:113:LYS:N	2.64	0.44
40:RU:79:PHE:CE2	40:RU:83:LEU:CD1	3.00	0.44
41:RV:72:VAL:HG13	41:RV:85:LYS:HB3	2.00	0.44
25:RA:495:G:H1'	42:RW:57:ASN:ND2	2.33	0.44
43:RX:14:SER:HB2	43:RX:15:GLU:OE1	2.18	0.44
44:RY:15:VAL:HB	44:RY:20:TYR:O	2.17	0.44
45:RZ:105:VAL:HG11	45:RZ:138:GLU:HG2	1.99	0.44
45:RZ:139:VAL:O	45:RZ:139:VAL:CG1	2.65	0.44
1:XA:1002:G:N2	1:XA:1039:C:N3	2.65	0.44
1:XA:1305:G:O2'	1:XA:1332:A:N6	2.50	0.44
1:XA:722:A:H2'	1:XA:724:G:C8	2.52	0.44
3:XC:14:ILE:C	3:XC:16:ARG:H	2.21	0.44
3:XC:188:LEU:HD12	3:XC:195:VAL:CG1	2.48	0.44
5:XE:94:ALA:HB2	5:XE:119:LEU:HG	2.00	0.44
5:XE:48:ALA:HB2	5:XE:57:LYS:HD3	2.00	0.44
6:XF:35:ALA:HA	6:XF:67:MET:HB3	1.99	0.44
6:XF:3:ARG:HG2	6:XF:93:SER:OG	2.17	0.44
8:XH:109:ILE:HD11	8:XH:120:THR:HG22	2.00	0.44
8:XH:6:ILE:HB	8:XH:85:ARG:HH11	1.74	0.44
19:XS:8:GLY:O	19:XS:9:VAL:CG2	2.57	0.44
46:Y0:25:ARG:CD	46:Y0:29:GLN:HE22	2.27	0.44
25:YA:2397:G:H5''	47:Y1:28:GLY:HA2	2.00	0.44
47:Y1:49:VAL:HG12	47:Y1:51:VAL:HG23	1.99	0.44
30:YG:67:LYS:CE	50:Y4:6:HIS:NE2	2.74	0.44
25:YA:11:G:H2'	25:YA:12:U:O4'	2.18	0.44
25:YA:1214:A:H2'	25:YA:1215:G:O4'	2.17	0.44
25:YA:1495:A:N3	25:YA:1578:U:O2'	2.41	0.44
25:YA:1442:G:C2	25:YA:1550:C:O2	2.71	0.44
25:YA:1660:C:H2'	25:YA:1661:G:C8	2.53	0.44
25:YA:2262:U:H2'	25:YA:2263:C:H6	1.83	0.44
25:YA:2296:U:H2'	38:YS:9:ARG:NH1	2.33	0.44
25:YA:2328:A:H2'	25:YA:2329:G:C8	2.53	0.44
25:YA:234:C:H2'	25:YA:235:U:H6	1.79	0.44
25:YA:524:U:H2'	25:YA:525:U:C6	2.53	0.44
25:YA:817:C:H4'	25:YA:932:G:C5	2.53	0.44
25:YA:971:C:O2'	25:YA:983:A:N3	2.43	0.44
27:YD:143:HIS:HD2	27:YD:144:ALA:HB2	1.82	0.44
25:YA:1567:A:H5'	27:YD:58:HIS:CE1	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:95:LEU:HD12	27:YD:95:LEU:O	2.17	0.44
29:YF:42:ALA:O	29:YF:45:ARG:HB2	2.18	0.44
31:YH:37:VAL:HG11	31:YH:68:THR:HG23	1.98	0.44
32:YI:110:ASP:HB2	32:YI:111:PRO:C	2.38	0.44
34:YO:77:ILE:HG23	34:YO:77:ILE:O	2.17	0.44
35:YP:13:ASN:C	35:YP:15:ARG:H	2.21	0.44
35:YP:19:VAL:HG22	35:YP:21:ARG:H	1.83	0.44
35:YP:88:LEU:O	35:YP:90:ARG:N	2.50	0.44
36:YQ:27:VAL:HG13	36:YQ:28:ALA:N	2.32	0.44
38:YS:110:LEU:HA	38:YS:112:PHE:CE1	2.53	0.44
39:YT:107:ASP:OD2	39:YT:109:GLU:HB2	2.18	0.44
42:YW:67:ASP:N	42:YW:67:ASP:OD2	2.50	0.44
44:YY:36:ALA:HB1	44:YY:67:LEU:O	2.16	0.44
1:QA:1194:U:H4'	5:QE:22:GLY:O	2.17	0.44
1:QA:1286:A:H8	1:QA:1287:A:H4'	1.83	0.44
1:QA:1346:A:O2'	1:QA:1347:G:O4'	2.36	0.44
1:QA:1374:A:O2'	7:QG:28:ASN:HB3	2.17	0.44
1:QA:580:U:H2'	1:QA:581:G:O4'	2.18	0.44
2:QB:87:ARG:NH1	2:QB:223:ILE:HD12	2.33	0.44
2:QB:47:THR:O	2:QB:51:LEU:N	2.32	0.44
4:QD:90:GLY:HA3	4:QD:204:ILE:HD11	2.00	0.44
8:QH:28:ALA:O	8:QH:29:SER:HB2	2.18	0.44
9:QI:43:ALA:O	9:QI:45:ALA:N	2.51	0.44
10:QJ:10:GLY:O	10:QJ:68:HIS:N	2.51	0.44
11:QK:53:SER:C	11:QK:55:LYS:H	2.21	0.44
12:QL:27:LEU:C	12:QL:29:GLY:H	2.20	0.44
13:QM:36:LYS:C	13:QM:36:LYS:CD	2.86	0.44
1:QA:375:U:H5''	16:QP:69:THR:HG21	1.99	0.44
19:QS:45:VAL:O	19:QS:62:ILE:O	2.35	0.44
47:R1:80:LEU:O	47:R1:81:LYS:CD	2.65	0.44
50:R4:33:VAL:CG1	50:R4:34:GLU:H	2.22	0.44
51:R5:3:LYS:O	51:R5:4:HIS:C	2.56	0.44
53:R7:48:LYS:CG	53:R7:49:ARG:H	2.23	0.44
54:R8:40:GLU:O	54:R8:43:GLN:N	2.50	0.44
25:RA:1020:A:N6	25:RA:1141:U:HO2'	2.15	0.44
25:RA:1475:G:H2'	25:RA:1476:C:C6	2.53	0.44
25:RA:2105:C:H2'	25:RA:2106:G:H8	1.82	0.44
25:RA:251:A:C5	25:RA:252:G:H1'	2.52	0.44
25:RA:2608:G:H5''	25:RA:2609:U:OP1	2.18	0.44
25:RA:1638:C:H4'	25:RA:2710:C:O2	2.18	0.44
25:RA:271(C):U:O2'	25:RA:271:G:OP1	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2720:U:H2'	25:RA:2721:A:O4'	2.17	0.44
25:RA:823:G:H2'	25:RA:824:A:C8	2.53	0.44
25:RA:863:A:H2'	25:RA:864:G:H8	1.79	0.44
27:RD:102:LYS:O	27:RD:103:ARG:CG	2.66	0.44
28:RE:31:CYS:HB3	28:RE:49:LEU:HG	2.00	0.44
28:RE:51:PHE:CD1	28:RE:52:LEU:N	2.76	0.44
28:RE:52:LEU:HB2	28:RE:75:VAL:CG2	2.40	0.44
37:RR:3:HIS:C	37:RR:5:LYS:H	2.17	0.44
34:RO:104:ARG:NH1	39:RT:36:GLU:CD	2.71	0.44
42:RW:70:TYR:HD2	42:RW:70:TYR:N	2.06	0.44
43:RX:3:THR:HA	43:RX:6:ASP:OD2	2.18	0.44
44:RY:48:ALA:CB	44:RY:61:ILE:HD13	2.45	0.44
44:RY:95:LYS:HA	44:RY:101:LYS:N	2.33	0.44
45:RZ:103:ARG:HB3	45:RZ:138:GLU:HG3	2.00	0.44
1:XA:1054:C:HO2'	1:XA:1055:A:P	2.40	0.44
1:XA:148:G:H1	1:XA:174:C:N4	2.13	0.44
1:XA:258:G:H2'	1:XA:259:G:C8	2.51	0.44
1:XA:573:A:N3	1:XA:883:C:O2'	2.40	0.44
2:XB:192:SER:OG	2:XB:193:ASP:N	2.50	0.44
2:XB:47:THR:HG22	2:XB:51:LEU:CG	2.48	0.44
5:XE:20:GLN:O	5:XE:21:ALA:C	2.56	0.44
5:XE:31:LEU:HD23	5:XE:45:PHE:CD1	2.53	0.44
9:XI:10:ARG:NE	9:XI:105:ASP:CB	2.81	0.44
12:XL:120:TYR:O	12:XL:121:GLY:O	2.36	0.44
14:XN:17:LYS:HG3	14:XN:18:VAL:N	2.33	0.44
14:XN:47:LEU:O	14:XN:48:ALA:C	2.56	0.44
16:XP:20:VAL:HG22	16:XP:21:VAL:H	1.83	0.44
19:XS:10:PHE:CD1	19:XS:38:SER:HB2	2.52	0.44
13:XM:80:ARG:NH1	19:XS:65:ASN:O	2.51	0.44
19:XS:63:THR:HG23	19:XS:66:MET:HE3	2.00	0.44
20:XT:48:LYS:HB3	20:XT:51:GLU:CG	2.48	0.44
25:YA:380:U:O3'	47:Y1:16:ASN:HB2	2.17	0.44
50:Y4:2:LYS:HD2	50:Y4:2:LYS:HA	1.61	0.44
25:YA:1142(A):A:C4	25:YA:1144:G:C8	3.05	0.44
25:YA:1313:U:H5''	25:YA:1314:C:OP2	2.18	0.44
25:YA:146:G:H2'	25:YA:147:U:O4'	2.17	0.44
25:YA:2197:U:H2'	25:YA:2224:G:H1	1.83	0.44
25:YA:2447:G:N2	25:YA:2450:A:OP2	2.51	0.44
25:YA:2528:U:O2'	25:YA:2529:G:H3'	2.18	0.44
25:YA:2592:G:C6	25:YA:2593:U:N3	2.86	0.44
25:YA:2524:G:H2'	25:YA:2741:A:H2	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:775:G:C5	25:YA:794:G:C8	3.06	0.44
31:YH:153:LYS:HG3	31:YH:162:ILE:H	1.79	0.44
32:YI:60:GLU:O	32:YI:64:GLU:N	2.51	0.44
32:YI:68:LEU:HA	32:YI:71:ILE:HG22	1.99	0.44
33:YN:67:LEU:HA	33:YN:87:LEU:HD13	2.00	0.44
34:YO:91:LEU:CD2	34:YO:91:LEU:N	2.80	0.44
35:YP:36:LYS:HZ3	35:YP:36:LYS:HG3	1.42	0.44
36:YQ:81:VAL:HG23	36:YQ:82:ARG:N	2.32	0.44
39:YT:29:ARG:HA	39:YT:45:PHE:O	2.17	0.44
39:YT:49:VAL:CG1	39:YT:49:VAL:O	2.64	0.44
44:YY:15:VAL:HB	44:YY:20:TYR:O	2.17	0.44
44:YY:95:LYS:HB2	44:YY:99:CYS:O	2.17	0.44
45:YZ:102:LEU:HD22	45:YZ:156:LYS:HZ2	1.80	0.44
45:YZ:152:ALA:H	45:YZ:170:THR:H	1.66	0.44
1:QA:1072:G:H2'	1:QA:1073:U:O4'	2.18	0.43
1:QA:1179:A:H2'	1:QA:1180:A:O4'	2.18	0.43
1:QA:1321:C:C3'	1:QA:1322:C:H5''	2.48	0.43
1:QA:1365:G:H2'	1:QA:1366:C:C6	2.53	0.43
1:QA:175:C:H2'	1:QA:176:C:O4'	2.18	0.43
1:QA:437:U:H2'	1:QA:438:G:O4'	2.18	0.43
1:QA:451:A:N7	1:QA:481:G:C2	2.86	0.43
1:QA:927:G:H1	1:QA:1390:U:H3	1.65	0.43
1:QA:97:U:H2'	1:QA:99:C:C6	2.53	0.43
2:QB:100:GLY:N	2:QB:176:GLU:OE2	2.51	0.43
7:QG:78:ARG:HH11	7:QG:78:ARG:CG	2.30	0.43
8:QH:118:VAL:O	8:QH:119:LEU:HD23	2.18	0.43
9:QI:100:GLY:C	9:QI:102:LEU:N	2.71	0.43
9:QI:4:TYR:CZ	9:QI:88:TYR:HB2	2.52	0.43
10:QJ:100:THR:O	10:QJ:101:VAL:HB	2.17	0.43
10:QJ:38:ILE:CG1	10:QJ:71:LEU:HB3	2.48	0.43
11:QK:34:ASP:OD1	11:QK:38:ASN:HB2	2.18	0.43
11:QK:48:ILE:HD11	11:QK:64:ALA:N	2.32	0.43
12:QL:44:THR:HA	12:QL:45:PRO:HD3	1.71	0.43
13:QM:69:GLU:O	13:QM:70:LEU:C	2.56	0.43
16:QP:83:GLU:HG3	16:QP:84:ALA:N	2.33	0.43
19:QS:36:ARG:NH1	19:QS:52:TYR:O	2.51	0.43
19:QS:51:VAL:HG12	19:QS:52:TYR:N	2.33	0.43
46:R0:25:ARG:CD	46:R0:29:GLN:HE22	2.27	0.43
47:R1:8:SER:CB	47:R1:66:HIS:CE1	3.01	0.43
50:R4:48:ARG:C	50:R4:49:PHE:HD1	2.22	0.43
54:R8:58:ILE:O	54:R8:61:LEU:CG	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:31:C:H5''	25:RA:1239:G:OP1	2.19	0.43
25:RA:1267:U:OP2	25:RA:2012:G:N1	2.41	0.43
25:RA:140:A:C8	25:RA:1408:C:O2'	2.70	0.43
25:RA:1433:U:H1'	25:RA:1561:G:N2	2.32	0.43
25:RA:1651:G:N2	25:RA:2007:C:C2	2.86	0.43
25:RA:2516:G:C5	25:RA:2517:C:C4	3.05	0.43
25:RA:276:A:O2'	25:RA:277:C:O5'	2.35	0.43
25:RA:396:G:H8	25:RA:396:G:O5'	2.01	0.43
25:RA:675:A:N3	25:RA:2443:C:O2'	2.40	0.43
25:RA:71:A:H4'	25:RA:72:U:H5''	2.00	0.43
25:RA:864:G:C6	25:RA:865:C:N4	2.86	0.43
25:RA:953:A:H2'	25:RA:954:G:H8	1.81	0.43
27:RD:206:LEU:HA	27:RD:206:LEU:HD23	1.49	0.43
28:RE:16:ARG:O	28:RE:18:ASP:O	2.36	0.43
25:RA:2636:U:OP1	28:RE:79:ARG:HG3	2.18	0.43
29:RF:24:LEU:N	29:RF:24:LEU:HD12	2.33	0.43
33:RN:30:ILE:HG22	33:RN:34:LEU:CD2	2.48	0.43
35:RP:107:LYS:HB2	35:RP:110:TYR:HD2	1.83	0.43
36:RQ:27:VAL:HG13	36:RQ:28:ALA:N	2.32	0.43
38:RS:86:ALA:O	38:RS:87:PHE:CB	2.65	0.43
39:RT:105:LEU:C	39:RT:107:ASP:OD1	2.56	0.43
39:RT:29:ARG:HA	39:RT:45:PHE:O	2.17	0.43
44:RY:25:GLY:HA3	44:RY:39:VAL:CG1	2.47	0.43
44:RY:88:LYS:HA	44:RY:88:LYS:HZ2	1.83	0.43
1:XA:61:G:H2'	1:XA:62:U:O4'	2.18	0.43
1:XA:89:U:HO2'	1:XA:90:C:P	2.42	0.43
2:XB:77:ALA:HB1	2:XB:165:VAL:HG11	2.00	0.43
4:XD:52:SER:HB3	4:XD:55:ALA:HB3	2.00	0.43
4:XD:95:GLY:O	4:XD:99:SER:N	2.51	0.43
5:XE:36:ASP:C	5:XE:37:ARG:HG2	2.38	0.43
6:XF:72:VAL:HG23	6:XF:90:VAL:HG11	1.98	0.43
7:XG:60:LYS:O	7:XG:61:VAL:C	2.56	0.43
9:XI:127:LYS:HE2	22:XV:34:C:OP2	2.17	0.43
9:XI:128:ARG:NH2	22:XV:35:A:OP2	2.51	0.43
10:XJ:96:ILE:H	10:XJ:96:ILE:HD13	1.83	0.43
10:XJ:96:ILE:N	10:XJ:96:ILE:CD1	2.79	0.43
11:XK:96:ARG:O	11:XK:97:ALA:C	2.54	0.43
18:XR:82:THR:CG2	18:XR:83:GLU:N	2.79	0.43
24:XY:39:C:H4'	24:XY:40:G:OP1	2.18	0.43
54:Y8:40:GLU:O	54:Y8:43:GLN:N	2.50	0.43
25:YA:1025:G:C4	25:YA:1135:C:H1'	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1469:A:H2'	25:YA:1470:G:O4'	2.18	0.43
25:YA:1562:A:N6	25:YA:1563:G:C6	2.86	0.43
25:YA:1967:C:H2'	25:YA:1968:G:H5'	1.99	0.43
25:YA:1956:U:O2	25:YA:1985:G:H4'	2.18	0.43
25:YA:67:U:H3	25:YA:74:A:H2	1.64	0.43
27:YD:102:LYS:O	27:YD:103:ARG:CG	2.66	0.43
27:YD:213:ARG:HA	27:YD:213:ARG:HD2	1.60	0.43
27:YD:35:LYS:HB3	27:YD:36:PRO:HA	2.00	0.43
27:YD:44:ASN:HB2	27:YD:49:ILE:HA	1.93	0.43
28:YE:2:LYS:HG2	28:YE:95:ILE:HG22	1.99	0.43
29:YF:174:VAL:CG1	29:YF:174:VAL:O	2.65	0.43
25:YA:448:U:H1'	29:YF:84:VAL:HG21	2.00	0.43
30:YG:44:GLY:HA2	30:YG:88:ILE:HD11	1.99	0.43
31:YH:109:PHE:C	31:YH:111:HIS:H	2.22	0.43
31:YH:137:ASP:OD1	31:YH:138:LYS:N	2.51	0.43
32:YI:111:PRO:O	32:YI:112:LYS:C	2.55	0.43
33:YN:87:LEU:CD2	33:YN:87:LEU:C	2.86	0.43
35:YP:96:THR:HG22	35:YP:126:VAL:CB	2.46	0.43
37:YR:33:ARG:HA	37:YR:114:VAL:O	2.18	0.43
26:YB:30:C:OP2	38:YS:32:LEU:HD11	2.18	0.43
38:YS:38:GLN:CG	38:YS:47:THR:HG21	2.48	0.43
38:YS:86:ALA:O	38:YS:87:PHE:CB	2.65	0.43
39:YT:114:LEU:HD23	39:YT:114:LEU:HA	1.74	0.43
25:YA:1252:G:H1'	40:YU:33:ARG:HD3	2.00	0.43
43:YX:14:SER:HB2	43:YX:15:GLU:OE1	2.18	0.43
43:YX:70:LEU:H	43:YX:70:LEU:HD23	1.77	0.43
45:YZ:158:PRO:N	45:YZ:161:VAL:HG21	2.33	0.43
45:YZ:24:LEU:HD21	45:YZ:86:VAL:CG2	2.48	0.43
45:YZ:27:VAL:CG2	45:YZ:28:MET:H	2.31	0.43
1:QA:1150:U:O4	1:QA:1151:A:N6	2.51	0.43
1:QA:1364:U:O2'	1:QA:1365:G:OP1	2.31	0.43
1:QA:1429:C:H2'	1:QA:1430:C:C6	2.53	0.43
1:QA:358:U:H2'	1:QA:359:U:H6	1.80	0.43
1:QA:401:C:H2'	1:QA:402:G:C8	2.53	0.43
1:QA:542:G:N2	1:QA:543:C:C2	2.86	0.43
1:QA:757:U:O2'	1:QA:879:C:H1'	2.18	0.43
4:QD:132:ARG:HH11	4:QD:132:ARG:HG2	1.83	0.43
5:QE:101:ILE:HD13	5:QE:101:ILE:H	1.82	0.43
10:QJ:80:LYS:HE2	1:XA:1162:C:H4'	2.00	0.43
11:QK:106:LYS:O	11:QK:107:SER:CB	2.66	0.43
11:QK:75:TYR:N	11:QK:75:TYR:CD1	2.85	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:19:LEU:HD22	13:QM:19:LEU:N	2.33	0.43
13:QM:77:ASN:ND2	50:R4:71:ARG:HH12	2.16	0.43
15:QO:25:THR:HG22	15:QO:70:LEU:HD22	1.99	0.43
15:QO:77:ARG:HA	15:QO:80:ALA:HB2	1.98	0.43
16:QP:23:ASP:O	16:QP:26:ARG:HB2	2.18	0.43
22:QV:4:G:C6	22:QV:70:G:N1	2.86	0.43
24:QY:39:C:H4'	24:QY:40:G:OP1	2.18	0.43
46:R0:42:GLY:C	46:R0:57:PHE:HD1	2.21	0.43
25:RA:2364:C:H4'	46:R0:56:ASP:OD1	2.18	0.43
50:R4:39:CYS:O	50:R4:40:HIS:CB	2.66	0.43
50:R4:49:PHE:HD1	50:R4:49:PHE:N	2.16	0.43
52:R6:15:GLU:HB3	52:R6:16:CYS:H	1.46	0.43
25:RA:2077:A:OP1	25:RA:2238:G:N2	2.49	0.43
25:RA:271(B):G:N7	25:RA:421:U:H2'	2.33	0.43
25:RA:639:U:H3	25:RA:649:G:H1	1.66	0.43
27:RD:227:ASN:CB	27:RD:228:PRO:CD	2.93	0.43
28:RE:69:LYS:C	28:RE:71:GLY:N	2.71	0.43
30:RG:19:LEU:HA	30:RG:22:ARG:HB2	1.99	0.43
30:RG:59:GLU:O	30:RG:62:LEU:HB3	2.18	0.43
31:RH:109:PHE:C	31:RH:111:HIS:H	2.22	0.43
31:RH:125:VAL:CG1	31:RH:126:PRO:CG	2.94	0.43
32:RI:35:LEU:HD12	32:RI:35:LEU:O	2.19	0.43
33:RN:114:ARG:O	33:RN:115:ARG:CB	2.65	0.43
35:RP:75:ILE:HG12	35:RP:77:ARG:NH1	2.32	0.43
37:RR:81:ASP:OD2	37:RR:81:ASP:N	2.50	0.43
39:RT:105:LEU:O	39:RT:105:LEU:HG	2.18	0.43
39:RT:99:LEU:O	39:RT:99:LEU:CD1	2.66	0.43
41:RV:66:ARG:NH1	41:RV:88:ARG:CD	2.74	0.43
43:RX:31:HIS:HA	43:RX:32:PRO:HD3	1.88	0.43
44:RY:11:ASP:HB2	44:RY:27:VAL:CG1	2.46	0.43
45:RZ:15:PRO:HA	45:RZ:18:LEU:HD13	2.00	0.43
1:XA:1071:C:H2'	1:XA:1072:G:C8	2.53	0.43
1:XA:115:G:O5'	1:XA:115:G:H8	2.02	0.43
1:XA:978:A:O2'	1:XA:1322:C:N3	2.51	0.43
1:XA:143:A:H2	1:XA:220:G:H1	1.65	0.43
1:XA:198:G:H1	1:XA:219:C:N4	2.16	0.43
1:XA:338:A:H61	1:XA:351:G:H1	1.66	0.43
1:XA:37:U:O2'	1:XA:500:G:H4'	2.17	0.43
1:XA:92:G:H3'	1:XA:93:U:C6	2.53	0.43
2:XB:95:GLN:HE21	2:XB:147:LYS:CE	2.28	0.43
3:XC:106:VAL:HG11	3:XC:109:PRO:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:180:GLY:O	4:XD:181:MET:C	2.55	0.43
7:XG:78:ARG:CG	7:XG:78:ARG:HH11	2.30	0.43
8:XH:1:MET:CE	8:XH:1:MET:H3	2.31	0.43
8:XH:88:LYS:HB3	8:XH:89:PRO:HD2	2.01	0.43
9:XI:43:ALA:O	9:XI:45:ALA:N	2.51	0.43
1:XA:562:C:N4	12:XL:16:GLU:OE1	2.51	0.43
13:XM:39:ILE:HD12	13:XM:56:LEU:HD23	1.99	0.43
18:XR:20:ALA:O	18:XR:21:LYS:HG3	2.18	0.43
20:XT:28:ALA:O	20:XT:30:LYS:N	2.50	0.43
20:XT:50:GLU:O	20:XT:52:ALA:N	2.51	0.43
1:XA:1054:C:N4	24:XY:34:C:C6	2.86	0.43
47:Y1:82:LEU:HD12	47:Y1:82:LEU:O	2.10	0.43
50:Y4:68:ARG:HH11	50:Y4:69:LYS:HG2	1.83	0.43
54:Y8:58:ILE:O	54:Y8:61:LEU:CD1	2.66	0.43
25:YA:1024:G:OP2	25:YA:1025:G:C3'	2.66	0.43
25:YA:1029:A:H2	25:YA:2465:C:O2	2.01	0.43
25:YA:1085:A:HO2'	25:YA:1086:A:P	2.38	0.43
25:YA:1126:A:OP1	25:YA:1126:A:H8	2.02	0.43
25:YA:1679:U:H2'	25:YA:1680:U:H5'	2.00	0.43
25:YA:1952:A:C6	25:YA:1953:A:N1	2.86	0.43
25:YA:2558:C:H2'	25:YA:2559:C:O4'	2.18	0.43
25:YA:2712:U:H1'	25:YA:2712(A):A:N7	2.33	0.43
25:YA:582:G:H2'	25:YA:583:G:H8	1.83	0.43
26:YB:5:C:O2'	26:YB:27:C:O2	2.37	0.43
27:YD:10:THR:O	27:YD:11:PRO:C	2.56	0.43
27:YD:30:GLU:HG3	27:YD:63:ARG:NE	2.32	0.43
30:YG:67:LYS:N	30:YG:67:LYS:HD2	2.33	0.43
31:YH:53:GLU:CD	31:YH:54:ARG:H	2.21	0.43
31:YH:92:ILE:CD1	31:YH:160:LYS:HD3	2.48	0.43
33:YN:129:PRO:C	33:YN:131:GLN:H	2.20	0.43
34:YO:47:ILE:HG13	34:YO:48:PRO:HD2	1.99	0.43
35:YP:70:GLN:OE1	35:YP:70:GLN:N	2.51	0.43
38:YS:110:LEU:HA	38:YS:112:PHE:CZ	2.54	0.43
41:YV:1:MET:HE1	41:YV:43:GLU:HG2	2.00	0.43
41:YV:66:ARG:NH1	41:YV:88:ARG:NH1	2.61	0.43
42:YW:29:LEU:HD11	42:YW:55:ALA:HB2	1.98	0.43
43:YX:3:THR:HA	43:YX:6:ASP:OD2	2.18	0.43
45:YZ:117:LEU:HB3	45:YZ:118:GLN:H	1.70	0.43
45:YZ:144:LEU:HD21	45:YZ:150:LEU:HD13	2.00	0.43
1:QA:1362:C:H2'	1:QA:1362(A):C:H5''	2.01	0.43
1:QA:190:G:H2'	1:QA:190:G:N3	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:232:G:H2'	1:QA:233:C:O4'	2.18	0.43
1:QA:654:G:H2'	1:QA:655:A:O4'	2.18	0.43
1:QA:992:U:H1'	1:QA:993:G:OP2	2.18	0.43
2:QB:142:LEU:HD23	2:QB:142:LEU:O	2.18	0.43
3:QC:69:HIS:HA	3:QC:104:GLN:HB2	2.00	0.43
3:QC:14:ILE:C	3:QC:16:ARG:H	2.21	0.43
9:QI:10:ARG:NE	9:QI:105:ASP:CB	2.81	0.43
9:QI:41:VAL:O	9:QI:41:VAL:HG12	2.18	0.43
11:QK:20:TYR:C	11:QK:21:ILE:HD12	2.38	0.43
1:QA:995:C:H5'	14:QN:8:GLU:HG2	2.00	0.43
15:QO:83:GLU:C	15:QO:85:LEU:N	2.71	0.43
16:QP:21:VAL:HG23	16:QP:34:GLU:N	2.34	0.43
22:QV:15:G:N2	22:QV:48:C:H42	2.17	0.43
47:R1:53:VAL:CG1	47:R1:54:ALA:N	2.81	0.43
50:R4:42:PHE:CD1	50:R4:42:PHE:C	2.90	0.43
52:R6:20:ASN:O	52:R6:21:TYR:CG	2.72	0.43
25:RA:1012:U:O2'	25:RA:1013:C:OP2	2.27	0.43
25:RA:1213:A:N3	25:RA:1238:G:O2'	2.49	0.43
25:RA:1380:G:OP2	25:RA:1380:G:H3'	2.18	0.43
25:RA:1380:G:O2'	25:RA:1569:A:N6	2.50	0.43
25:RA:1543:A:C2	25:RA:1545:A:C4	3.06	0.43
25:RA:1844:C:H2'	25:RA:1845:G:H8	1.81	0.43
25:RA:2741:A:H2'	25:RA:2742:C:O4'	2.18	0.43
25:RA:2818:G:O2'	25:RA:2819:G:H5'	2.18	0.43
25:RA:2855:C:H2'	25:RA:2856:C:H6	1.82	0.43
25:RA:308:G:C6	25:RA:309:G:C2	3.06	0.43
25:RA:818:G:O2'	25:RA:1189:A:N6	2.52	0.43
25:RA:829:A:N7	25:RA:2248:C:H5'	2.33	0.43
26:RB:13:A:H5''	26:RB:15:A:N6	2.33	0.43
28:RE:36:ARG:HB3	28:RE:36:ARG:NH1	2.31	0.43
28:RE:3:GLY:CA	28:RE:81:ILE:HG21	2.49	0.43
29:RF:201:VAL:HG13	29:RF:202:PHE:N	2.33	0.43
29:RF:63:LYS:CE	29:RF:67:GLN:HB2	2.48	0.43
30:RG:131:TYR:HE2	30:RG:133:LEU:HD22	1.84	0.43
30:RG:139:LEU:HA	30:RG:144:ILE:HG21	2.00	0.43
31:RH:119:GLU:CD	31:RH:120:GLY:H	2.22	0.43
31:RH:136:ILE:N	31:RH:136:ILE:HD12	2.31	0.43
31:RH:137:ASP:OD1	31:RH:138:LYS:N	2.51	0.43
32:RI:110:ASP:CB	32:RI:111:PRO:CA	2.96	0.43
32:RI:110:ASP:HB2	32:RI:111:PRO:C	2.38	0.43
32:RI:33:ARG:CG	32:RI:33:ARG:HH11	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:97:ARG:HA	34:RO:117:LEU:HD22	2.00	0.43
34:RO:51:ALA:O	34:RO:53:LYS:HE3	2.19	0.43
35:RP:101:VAL:HG13	35:RP:102:ARG:N	2.33	0.43
38:RS:14:VAL:CG1	38:RS:15:ARG:N	2.81	0.43
38:RS:38:GLN:CG	38:RS:47:THR:HG21	2.48	0.43
40:RU:64:ARG:CG	40:RU:64:ARG:NH2	2.70	0.43
40:RU:88:ILE:HG22	40:RU:90:VAL:CG2	2.44	0.43
43:RX:7:VAL:O	43:RX:30:VAL:CG1	2.67	0.43
44:RY:81:LYS:HZ2	44:RY:98:VAL:HB	1.83	0.43
45:RZ:24:LEU:O	45:RZ:24:LEU:HG	2.18	0.43
1:XA:1226:C:H4'	1:XA:1227:A:OP1	2.18	0.43
1:XA:1325:C:H2'	1:XA:1326:C:C6	2.53	0.43
1:XA:1441:G:H4'	1:XA:1442:G:C5	2.53	0.43
1:XA:584:G:H2'	1:XA:585:G:C8	2.53	0.43
1:XA:667:G:H4'	15:XO:51:HIS:ND1	2.32	0.43
1:XA:831:U:H2'	1:XA:832:C:C6	2.52	0.43
2:XB:115:LEU:HD21	2:XB:153:ARG:HD3	1.99	0.43
3:XC:59:ARG:HH12	3:XC:97:LYS:CD	2.31	0.43
5:XE:67:VAL:HG22	5:XE:68:GLU:N	2.33	0.43
6:XF:73:ASN:O	6:XF:76:ALA:HB3	2.18	0.43
6:XF:91:VAL:CG1	18:XR:72:ARG:NH1	2.82	0.43
7:XG:75:VAL:HG13	7:XG:145:ALA:HA	2.00	0.43
11:XK:108:ILE:HG21	18:XR:88:LYS:OXT	2.19	0.43
11:XK:124:LYS:HB3	11:XK:125:PHE:H	1.67	0.43
12:XL:6:THR:H	12:XL:9:GLN:NE2	1.97	0.43
15:XO:17:ARG:HD3	15:XO:26:GLU:HG3	2.00	0.43
15:XO:83:GLU:HA	15:XO:83:GLU:OE1	2.18	0.43
17:XQ:13:ASP:O	17:XQ:15:MET:N	2.51	0.43
18:XR:63:GLN:O	18:XR:66:LEU:HB3	2.18	0.43
47:Y1:94:LEU:O	47:Y1:95:LEU:HB2	2.17	0.43
48:Y2:59:ARG:O	48:Y2:62:THR:HG23	2.18	0.43
50:Y4:48:ARG:NH1	50:Y4:51:ASP:HA	2.34	0.43
50:Y4:59:PHE:CE1	50:Y4:70:GLY:N	2.87	0.43
52:Y6:11:LEU:HD12	52:Y6:51:GLU:HG3	2.00	0.43
53:Y7:19:ARG:NH1	53:Y7:19:ARG:HG2	2.33	0.43
25:YA:1012:U:H3	33:YN:25:ARG:HH11	1.66	0.43
25:YA:1819:A:C8	25:YA:1821:A:C2	3.06	0.43
25:YA:792:G:O2'	25:YA:2440:C:N3	2.42	0.43
25:YA:270(R):G:H2'	25:YA:270(S):G:H8	1.82	0.43
25:YA:373:U:H2'	25:YA:374:A:H8	1.84	0.43
25:YA:594:U:H5'	54:Y8:61:LEU:HD21	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:11:PRO:O	27:YD:12:SER:OG	2.29	0.43
27:YD:272:ALA:HB1	27:YD:273:ARG:H	1.58	0.43
27:YD:43:ARG:CZ	27:YD:49:ILE:HG21	2.48	0.43
27:YD:44:ASN:HB3	27:YD:49:ILE:CG2	2.47	0.43
28:YE:11:MET:O	28:YE:12:THR:HB	2.18	0.43
28:YE:69:LYS:C	28:YE:71:GLY:N	2.71	0.43
30:YG:31:VAL:HG13	30:YG:31:VAL:O	2.18	0.43
32:YI:60:GLU:HA	32:YI:63:ALA:HB3	2.00	0.43
33:YN:103:VAL:O	33:YN:104:LYS:C	2.56	0.43
34:YO:63:VAL:HG23	34:YO:63:VAL:O	2.17	0.43
38:YS:14:VAL:CG1	38:YS:15:ARG:N	2.81	0.43
42:YW:34:ASN:O	42:YW:35:ILE:C	2.55	0.43
42:YW:50:VAL:O	42:YW:53:SER:N	2.50	0.43
45:YZ:12:GLY:O	45:YZ:13:GLU:O	2.36	0.43
45:YZ:35:ARG:HB3	45:YZ:35:ARG:HH11	1.83	0.43
1:QA:25:C:H2'	1:QA:26:A:H8	1.81	0.43
2:QB:115:LEU:HD21	2:QB:153:ARG:HD3	2.00	0.43
3:QC:106:VAL:HG11	3:QC:109:PRO:HA	2.00	0.43
3:QC:27:LYS:HB3	3:QC:27:LYS:NZ	2.34	0.43
3:QC:67:THR:O	3:QC:69:HIS:CE1	2.72	0.43
6:QF:88:VAL:HG12	6:QF:89:MET:N	2.34	0.43
7:QG:155:ARG:HD3	7:QG:155:ARG:H	1.83	0.43
7:QG:15:ASP:OD1	7:QG:23:VAL:HG11	2.19	0.43
7:QG:60:LYS:O	7:QG:61:VAL:C	2.57	0.43
2:QB:178:ARG:NH2	8:QH:68:ARG:HH22	2.17	0.43
10:QJ:16:LEU:C	10:QJ:16:LEU:HD13	2.38	0.43
10:QJ:51:ARG:HG2	10:QJ:51:ARG:NH1	2.33	0.43
1:QA:1202:G:N7	10:QJ:53:PRO:HB2	2.33	0.43
10:QJ:54:PHE:CE2	10:QJ:55:LYS:HD2	2.52	0.43
11:QK:62:GLN:O	11:QK:64:ALA:N	2.52	0.43
46:R0:25:ARG:HG2	46:R0:25:ARG:HH11	1.82	0.43
47:R1:44:PRO:O	47:R1:46:LEU:N	2.51	0.43
53:R7:5:TRP:CD1	53:R7:7:PRO:HG3	2.53	0.43
54:R8:58:ILE:O	54:R8:61:LEU:CD1	2.67	0.43
25:RA:1210:A:P	25:RA:1212:G:H5'	2.58	0.43
25:RA:1469:A:H2'	25:RA:1470:G:O4'	2.18	0.43
25:RA:1479:G:H1	25:RA:1514:U:H3	1.65	0.43
25:RA:1804:C:H2'	25:RA:1805:U:H6	1.83	0.43
25:RA:221:A:H8	25:RA:221:A:OP2	2.01	0.43
25:RA:1453:A:C6	25:RA:2702:U:H1'	2.53	0.43
25:RA:27:G:O2'	25:RA:28:A:H8	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:705:A:H2'	25:RA:706:A:O4'	2.18	0.43
25:RA:940:G:H2'	25:RA:941:A:O4'	2.19	0.43
26:RB:111:U:H2'	26:RB:112:G:H8	1.83	0.43
27:RD:17:THR:HG22	27:RD:204:ILE:HA	1.98	0.43
25:RA:1805:U:H5''	27:RD:250:TRP:CG	2.54	0.43
29:RF:144:LYS:C	29:RF:146:ALA:H	2.21	0.43
29:RF:167:ALA:HB1	29:RF:173:VAL:HG11	1.99	0.43
32:RI:27:ARG:HD3	47:R1:71:TYR:CE1	2.45	0.43
33:RN:103:VAL:O	33:RN:104:LYS:C	2.56	0.43
33:RN:61:ARG:HA	33:RN:61:ARG:NE	2.32	0.43
35:RP:135:LEU:HD13	35:RP:139:LYS:HE3	2.01	0.43
35:RP:70:GLN:N	35:RP:70:GLN:OE1	2.51	0.43
38:RS:56:LEU:O	38:RS:57:LYS:O	2.36	0.43
39:RT:89:VAL:O	39:RT:90:GLN:HB2	2.19	0.43
1:XA:1049:U:H4'	1:XA:1050:G:C5'	2.49	0.43
1:XA:1053:G:C5'	1:XA:1054:C:H5'	2.42	0.43
1:XA:1171:G:H2'	1:XA:1172:C:C6	2.53	0.43
1:XA:1339:A:C5	1:XA:1340:A:H1'	2.53	0.43
1:XA:1342:C:H1'	9:XI:124:GLN:HG3	1.99	0.43
1:XA:236:G:H5''	17:XQ:42:TYR:OH	2.18	0.43
1:XA:392:G:OP1	16:XP:8:ARG:NH2	2.51	0.43
1:XA:560:U:HO2'	1:XA:561:U:P	2.36	0.43
1:XA:571:U:O2	1:XA:918:A:H5'	2.18	0.43
1:XA:89:U:H2'	1:XA:90:C:C6	2.54	0.43
2:XB:29:ALA:O	2:XB:32:ILE:HG22	2.17	0.43
3:XC:22:TRP:CB	3:XC:59:ARG:HB2	2.48	0.43
4:XD:163:GLU:HA	4:XD:163:GLU:OE2	2.19	0.43
7:XG:88:PRO:HB3	7:XG:145:ALA:HA	2.01	0.43
7:XG:62:PHE:O	7:XG:64:GLN:N	2.51	0.43
9:XI:41:VAL:HG12	9:XI:41:VAL:O	2.18	0.43
11:XK:20:TYR:C	11:XK:21:ILE:HD12	2.38	0.43
11:XK:70:LYS:HA	11:XK:73:MET:HE2	2.00	0.43
12:XL:27:LEU:C	12:XL:29:GLY:H	2.20	0.43
14:XN:12:ARG:C	14:XN:14:PRO:CD	2.80	0.43
20:XT:44:ALA:HB1	20:XT:91:LEU:HB2	1.99	0.43
22:XV:49:G:O6	22:XV:65:C:N4	2.49	0.43
47:Y1:44:PRO:O	47:Y1:46:LEU:N	2.51	0.43
47:Y1:60:PHE:HZ	47:Y1:90:ILE:HG21	1.82	0.43
52:Y6:20:ASN:O	52:Y6:21:TYR:CG	2.71	0.43
25:YA:2372:G:H4'	52:Y6:46:HIS:CD2	2.53	0.43
53:Y7:17:GLY:O	53:Y7:20:ALA:HB3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:Y8:58:ILE:O	54:Y8:61:LEU:CG	2.66	0.43
25:YA:2308:G:H22	25:YA:2311:A:H2	1.66	0.43
25:YA:2318:G:H22	38:YS:2:ALA:CA	2.29	0.43
25:YA:2865:U:C4	25:YA:2866:U:C4	3.07	0.43
25:YA:2868:A:H2'	25:YA:2869:G:O4'	2.18	0.43
25:YA:459:U:H2'	25:YA:460:A:H8	1.83	0.43
25:YA:869:G:H1	25:YA:908:C:N4	2.16	0.43
28:YE:3:GLY:CA	28:YE:81:ILE:HG21	2.49	0.43
28:YE:48:GLN:HB3	28:YE:48:GLN:HE21	1.55	0.43
31:YH:136:ILE:N	31:YH:136:ILE:HD12	2.31	0.43
31:YH:35:VAL:CG2	31:YH:75:ALA:HB2	2.48	0.43
32:YI:35:LEU:HD12	32:YI:35:LEU:O	2.19	0.43
33:YN:17:ASP:O	33:YN:55:VAL:O	2.34	0.43
35:YP:101:VAL:HA	35:YP:106:LEU:HB2	1.99	0.43
37:YR:48:VAL:O	37:YR:49:ASP:C	2.57	0.43
38:YS:110:LEU:HD23	38:YS:112:PHE:CE2	2.54	0.43
38:YS:42:ASP:C	38:YS:44:LYS:N	2.72	0.43
42:YW:111:HIS:CG	42:YW:112:GLY:H	2.37	0.43
44:YY:6:HIS:ND1	44:YY:6:HIS:N	2.66	0.43
44:YY:75:ILE:HG12	44:YY:76:CYS:H	1.79	0.43
1:QA:544:G:C6	1:QA:545:C:C4	3.06	0.43
2:QB:32:ILE:HD13	2:QB:190:THR:CG2	2.48	0.43
2:QB:90:MET:HA	2:QB:91:PRO:HD3	1.82	0.43
5:QE:62:ALA:O	5:QE:64:ARG:N	2.50	0.43
7:QG:88:PRO:HB3	7:QG:145:ALA:HA	2.01	0.43
9:QI:95:LYS:HD3	9:QI:95:LYS:C	2.39	0.43
10:QJ:90:LEU:N	10:QJ:91:PRO:CD	2.82	0.43
11:QK:105:VAL:HG23	11:QK:105:VAL:O	2.19	0.43
12:QL:119:LYS:HB2	12:QL:120:TYR:HD1	1.83	0.43
50:R4:68:ARG:O	50:R4:69:LYS:HB2	2.17	0.43
52:R6:7:ILE:HG23	52:R6:8:LYS:N	2.32	0.43
25:RA:1434:A:H2'	25:RA:1435:G:C8	2.54	0.43
25:RA:1951:U:O2	25:RA:1953:A:H8	2.01	0.43
25:RA:194:G:H2'	25:RA:195:A:O4'	2.18	0.43
25:RA:2081:C:H2'	25:RA:2082:A:C8	2.53	0.43
25:RA:2231:C:H2'	25:RA:2232:U:O4'	2.18	0.43
25:RA:945:A:C4	25:RA:2448:A:C2	3.06	0.43
25:RA:250:G:C6	25:RA:251:A:C6	3.07	0.43
25:RA:34:C:H41	25:RA:447:A:H61	1.67	0.43
25:RA:414:C:H2'	25:RA:415:A:C8	2.51	0.43
25:RA:678:C:H2'	25:RA:679:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:856:C:HO2'	25:RA:857:C:P	2.41	0.43
25:RA:868:U:H2'	25:RA:869:G:O4'	2.19	0.43
25:RA:978:G:H1	25:RA:985:C:H42	1.66	0.43
29:RF:62:ARG:NH1	29:RF:62:ARG:CB	2.82	0.43
31:RH:92:ILE:CD1	31:RH:160:LYS:HD3	2.48	0.43
32:RI:74:ASN:CG	32:RI:75:LEU:N	2.68	0.43
33:RN:1:MET:O	33:RN:1:MET:HG3	2.19	0.43
34:RO:86:ILE:CD1	34:RO:86:ILE:H	2.28	0.43
38:RS:110:LEU:HD23	38:RS:112:PHE:CE2	2.54	0.43
40:RU:95:LEU:HD13	41:RV:4:ILE:HD12	1.98	0.43
41:RV:15:GLU:O	41:RV:96:ILE:HB	2.19	0.43
43:RX:14:SER:O	43:RX:15:GLU:C	2.57	0.43
44:RY:6:HIS:ND1	44:RY:6:HIS:N	2.66	0.43
45:RZ:35:ARG:HB3	45:RZ:35:ARG:HH11	1.83	0.43
1:XA:1115:C:H2'	1:XA:1116:C:C6	2.53	0.43
1:XA:1126:U:C5	1:XA:1127:G:C4	3.07	0.43
2:XB:132:LYS:HA	2:XB:135:GLN:CB	2.43	0.43
2:XB:162:ILE:O	2:XB:185:ILE:HG13	2.18	0.43
3:XC:27:LYS:NZ	3:XC:27:LYS:HB3	2.34	0.43
4:XD:122:ARG:HA	4:XD:134:ASP:HB2	2.00	0.43
7:XG:148:ASN:O	7:XG:150:ALA:N	2.51	0.43
10:XJ:70:ARG:HG3	10:XJ:70:ARG:HH11	1.83	0.43
10:XJ:90:LEU:N	10:XJ:91:PRO:CD	2.81	0.43
13:XM:36:LYS:CD	13:XM:36:LYS:C	2.86	0.43
22:XV:54:U:C4	22:XV:55:U:C4	3.06	0.43
47:Y1:92:LYS:O	47:Y1:93:GLU:C	2.56	0.43
50:Y4:15:ILE:CD1	50:Y4:15:ILE:N	2.78	0.43
50:Y4:43:TYR:O	50:Y4:46:GLN:HA	2.19	0.43
51:Y5:15:ARG:HA	51:Y5:18:ALA:HB3	1.99	0.43
25:YA:1432:C:H2'	25:YA:1433:U:O4'	2.19	0.43
25:YA:1436:G:H2'	25:YA:1437:C:O4'	2.18	0.43
25:YA:1756:G:H4'	25:YA:1758:G:O4'	2.18	0.43
25:YA:1929:G:O5'	25:YA:1929:G:H8	2.01	0.43
25:YA:2186:G:H2'	25:YA:2187:G:H8	1.82	0.43
25:YA:2308:G:N2	25:YA:2311:A:H2	2.16	0.43
25:YA:2845:G:O2'	25:YA:2846:G:H5'	2.18	0.43
25:YA:392:C:OP1	25:YA:409:C:OP1	2.37	0.43
25:YA:652:C:N4	25:YA:653:A:N1	2.65	0.43
26:YB:87:G:H22	26:YB:89:G:H3'	1.84	0.43
27:YD:241:PRO:O	27:YD:242:ARG:C	2.55	0.43
28:YE:143:ASN:ND2	28:YE:143:ASN:N	2.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:51:PHE:O	28:YE:74:PRO:CB	2.67	0.43
30:YG:114:ILE:O	30:YG:116:ASP:N	2.51	0.43
39:YT:105:LEU:C	39:YT:107:ASP:OD1	2.56	0.43
40:YU:99:ALA:HA	40:YU:106:PHE:HB2	2.01	0.43
25:YA:532:A:H2'	40:YU:28:ARG:NE	2.34	0.43
44:YY:47:LYS:O	44:YY:49:VAL:N	2.48	0.43
45:YZ:103:ARG:HB3	45:YZ:138:GLU:HG3	2.00	0.43
1:QA:1441:G:H4'	1:QA:1442:G:C5	2.54	0.43
1:QA:292:G:C5	1:QA:293:G:H1'	2.53	0.43
1:QA:405:U:H5''	1:QA:406:G:O4'	2.19	0.43
1:QA:692:U:O2	1:QA:694:A:H3'	2.18	0.43
1:QA:762:C:H2'	1:QA:763:G:H8	1.82	0.43
2:QB:109:SER:C	2:QB:111:ARG:H	2.21	0.43
3:QC:59:ARG:HH12	3:QC:97:LYS:CD	2.31	0.43
6:QF:27:GLN:H	6:QF:27:GLN:HG2	1.65	0.43
6:QF:73:ASN:O	6:QF:76:ALA:HB3	2.19	0.43
6:QF:91:VAL:CG1	18:QR:72:ARG:NH1	2.82	0.43
8:QH:64:LYS:CB	8:QH:79:VAL:HG21	2.48	0.43
12:QL:22:SER:C	12:QL:24:VAL:H	2.22	0.43
13:QM:8:GLU:OE2	30:RG:115:ARG:NH1	2.51	0.43
14:QN:12:ARG:C	14:QN:14:PRO:CD	2.80	0.43
15:QO:64:ARG:CD	15:QO:68:ARG:NH2	2.82	0.43
18:QR:43:PHE:HA	18:QR:51:LEU:HD12	2.01	0.43
20:QT:44:ALA:C	20:QT:91:LEU:HB3	2.39	0.43
25:RA:95:G:H5'	48:R2:46:GLN:OE1	2.18	0.43
25:RA:1222:C:H6	25:RA:1222:C:O5'	2.00	0.43
25:RA:1632:A:O5'	25:RA:1632:A:H8	2.00	0.43
25:RA:1967:C:H2'	25:RA:1968:G:O4'	2.18	0.43
25:RA:2142:C:H2'	25:RA:2143:C:C6	2.53	0.43
25:RA:2475:C:H42	25:RA:2529:G:H22	1.66	0.43
25:RA:453:C:H4'	25:RA:472:A:N6	2.34	0.43
25:RA:541:C:H2'	25:RA:542:C:C6	2.54	0.43
27:RD:69:ARG:NH2	27:RD:130:ALA:HB2	2.20	0.43
27:RD:238:GLY:O	27:RD:239:ARG:O	2.35	0.43
27:RD:241:PRO:O	27:RD:242:ARG:C	2.55	0.43
28:RE:120:TRP:CE3	28:RE:155:LYS:HD3	2.53	0.43
28:RE:203:LYS:C	28:RE:203:LYS:HD2	2.38	0.43
25:RA:2638:G:P	28:RE:82:ARG:HH22	2.41	0.43
29:RF:101:LEU:HD12	29:RF:102:PRO:N	2.33	0.43
38:RS:105:ALA:C	38:RS:110:LEU:HD21	2.38	0.43
38:RS:57:LYS:O	38:RS:58:LEU:HB3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RV:25:LEU:H	41:RV:92:THR:CG2	2.29	0.43
45:RZ:137:ILE:O	45:RZ:156:LYS:NZ	2.50	0.43
1:XA:1071:C:H2'	1:XA:1072:G:H8	1.84	0.43
1:XA:1128:C:N4	1:XA:1144:G:H1	2.13	0.43
1:XA:1277:C:O2'	1:XA:1279:A:H1'	2.19	0.43
1:XA:1461:G:H2'	1:XA:1462:G:C8	2.49	0.43
1:XA:287:U:H2'	1:XA:288:A:H8	1.83	0.43
1:XA:35:G:C2	1:XA:550:G:C2	3.06	0.43
1:XA:721:G:H4'	1:XA:722:A:O4'	2.19	0.43
2:XB:127:ILE:HG23	2:XB:128:GLU:N	2.34	0.43
3:XC:101:LEU:C	3:XC:101:LEU:HD23	2.38	0.43
5:XE:64:ARG:HH11	5:XE:64:ARG:HG3	1.81	0.43
6:XF:76:ALA:HB1	6:XF:80:ARG:HH21	1.82	0.43
10:XJ:30:SER:OG	10:XJ:81:THR:HG22	2.19	0.43
1:XA:690:G:N2	11:XK:55:LYS:HZ1	2.16	0.43
12:XL:27:LEU:HD13	12:XL:28:LYS:H	1.84	0.43
13:XM:69:GLU:O	13:XM:70:LEU:C	2.56	0.43
15:XO:25:THR:O	15:XO:29:VAL:HG23	2.18	0.43
48:Y2:62:THR:O	48:Y2:65:ASN:HB2	2.18	0.43
49:Y3:50:VAL:HB	49:Y3:53:LEU:HD12	2.00	0.43
25:YA:1193:G:H2'	25:YA:1194:A:O4'	2.18	0.43
25:YA:1759:A:H4'	25:YA:2715:C:O4'	2.18	0.43
25:YA:1266:G:O2'	25:YA:2012:G:O6	2.17	0.43
25:YA:796:C:H2'	25:YA:797:C:C6	2.54	0.43
4:QD:166:LYS:CD	27:YD:135:PHE:HZ	2.30	0.43
27:YD:30:GLU:CD	27:YD:63:ARG:HE	2.21	0.43
28:YE:3:GLY:HA3	28:YE:81:ILE:CD1	2.48	0.43
31:YH:149:ARG:HA	31:YH:162:ILE:HG21	1.99	0.43
33:YN:30:ILE:HG22	33:YN:34:LEU:CD2	2.48	0.43
34:YO:61:VAL:O	34:YO:61:VAL:HG13	2.18	0.43
37:YR:54:LEU:O	37:YR:62:ALA:HB1	2.19	0.43
37:YR:74:LYS:O	37:YR:76:VAL:N	2.45	0.43
38:YS:30:ARG:NH2	38:YS:92:TYR:HD1	2.17	0.43
39:YT:64:ARG:HG2	39:YT:64:ARG:HH11	1.84	0.43
39:YT:89:VAL:O	39:YT:90:GLN:HB2	2.19	0.43
1:QA:1018:C:H2'	1:QA:1019:C:C6	2.53	0.43
1:QA:209:U:O2'	1:QA:210:U:H4'	2.19	0.43
1:QA:377:G:P	16:QP:5:ARG:NH1	2.91	0.43
1:QA:619:U:O2	4:QD:135:LEU:HD23	2.18	0.43
1:QA:765:G:N2	1:QA:812:C:O2'	2.51	0.43
1:QA:885:G:C2	1:QA:886:G:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:127:ILE:HG23	2:QB:128:GLU:N	2.34	0.43
4:QD:163:GLU:OE2	4:QD:163:GLU:HA	2.19	0.43
8:QH:91:ARG:HH11	8:QH:91:ARG:CG	2.22	0.43
11:QK:75:TYR:N	11:QK:75:TYR:HD1	2.17	0.43
16:QP:72:ARG:O	16:QP:72:ARG:HD3	2.18	0.43
22:QV:56:C:O2'	30:RG:78:SER:HB2	2.19	0.43
47:R1:92:LYS:O	47:R1:93:GLU:C	2.56	0.43
50:R4:59:PHE:CE1	50:R4:70:GLY:N	2.87	0.43
54:R8:40:GLU:O	54:R8:41:ILE:C	2.56	0.43
25:RA:1050:A:O2'	25:RA:2752:C:H1'	2.18	0.43
25:RA:1669:A:H5''	25:RA:2550:G:OP1	2.19	0.43
25:RA:2619:C:H1'	28:RE:156:MET:HE1	2.00	0.43
25:RA:503:A:H4'	25:RA:504:U:C5'	2.49	0.43
25:RA:512:G:O2'	25:RA:513:A:P	2.76	0.43
25:RA:522:G:H2'	25:RA:523:C:C6	2.54	0.43
28:RE:23:VAL:HG12	28:RE:184:VAL:O	2.19	0.43
28:RE:51:PHE:O	28:RE:74:PRO:CB	2.67	0.43
29:RF:149:ASP:OD2	29:RF:151:SER:HB3	2.18	0.43
33:RN:42:TRP:HA	33:RN:48:MET:HE1	1.99	0.43
33:RN:96:GLU:O	33:RN:97:ARG:C	2.57	0.43
34:RO:61:VAL:O	34:RO:61:VAL:HG13	2.18	0.43
45:RZ:144:LEU:HD21	45:RZ:150:LEU:HD13	2.00	0.43
1:XA:1293:G:H2'	1:XA:1294:G:O4'	2.19	0.43
1:XA:1531:A:H8	1:XA:1531:A:OP2	2.02	0.43
1:XA:33:A:H5''	1:XA:364:A:H1'	2.00	0.43
1:XA:633:G:H5'	1:XA:634:C:OP2	2.19	0.43
1:XA:654:G:C4	1:XA:753:A:C6	3.07	0.43
2:XB:32:ILE:HD13	2:XB:190:THR:CG2	2.48	0.43
4:XD:60:GLU:HG2	4:XD:202:LEU:HD12	2.00	0.43
5:XE:31:LEU:HD22	5:XE:31:LEU:HA	1.86	0.43
5:XE:72:GLN:C	5:XE:74:GLY:H	2.22	0.43
6:XF:48:LEU:HD23	6:XF:48:LEU:HA	1.85	0.43
6:XF:85:VAL:HG12	6:XF:85:VAL:O	2.18	0.43
7:XG:89:MET:HE3	7:XG:156:TRP:H	1.83	0.43
8:XH:118:VAL:O	8:XH:119:LEU:HD23	2.18	0.43
12:XL:22:SER:C	12:XL:24:VAL:H	2.22	0.43
13:XM:87:TYR:HA	13:XM:90:LEU:HG	2.01	0.43
13:XM:90:LEU:HD12	13:XM:91:ARG:N	2.33	0.43
12:XL:10:LEU:HB3	17:XQ:32:TYR:CE2	2.53	0.43
19:XS:29:ARG:HG2	19:XS:29:ARG:HH11	1.84	0.43
20:XT:101:GLY:C	20:XT:103:GLY:H	2.22	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:XT:44:ALA:C	20:XT:91:LEU:HB3	2.39	0.43
47:Y1:8:SER:CB	47:Y1:66:HIS:CE1	3.01	0.43
25:YA:2419:U:OP1	52:Y6:23:THR:HG21	2.17	0.43
25:YA:49:A:C8	25:YA:120:U:H5	2.37	0.43
25:YA:582:G:H1	25:YA:1258:C:H42	1.65	0.43
25:YA:1678:G:N2	25:YA:1989:G:N2	2.64	0.43
25:YA:2059:A:H5'	25:YA:2060:A:OP2	2.19	0.43
25:YA:2310:A:N6	30:YG:79:ASN:HB2	2.33	0.43
25:YA:2451:A:N1	55:Z8:76:PPU:HE2	2.33	0.43
25:YA:2048:G:N2	25:YA:2621:A:H1'	2.33	0.43
25:YA:303:U:H2'	25:YA:304:G:C8	2.54	0.43
25:YA:819:A:C4	25:YA:1189:A:C2	3.07	0.43
25:YA:825:C:H2'	25:YA:826:U:O4'	2.19	0.43
27:YD:17:THR:HG22	27:YD:204:ILE:HA	1.98	0.43
30:YG:136:ARG:O	30:YG:154:GLY:CA	2.62	0.43
30:YG:145:THR:O	30:YG:146:TYR:HB3	2.19	0.43
32:YI:33:ARG:HH11	32:YI:33:ARG:CG	2.31	0.43
33:YN:90:MET:O	33:YN:91:LEU:C	2.57	0.43
34:YO:51:ALA:O	34:YO:53:LYS:HE3	2.19	0.43
39:YT:19:LEU:HA	39:YT:20:PRO:HD3	1.88	0.43
39:YT:89:VAL:O	39:YT:90:GLN:CB	2.67	0.43
28:YE:25:VAL:HG21	39:YT:8:LYS:HG3	2.00	0.43
40:YU:79:PHE:C	40:YU:79:PHE:HD2	2.19	0.43
41:YV:66:ARG:NH1	41:YV:88:ARG:CD	2.74	0.43
40:YU:43:GLY:HA3	41:YV:73:SER:OG	2.19	0.43
45:YZ:77:ASP:O	45:YZ:78:LYS:C	2.56	0.43
1:QA:1060:C:C5	3:QC:2:GLY:HA2	2.53	0.43
1:QA:1211:U:H1'	1:QA:1213:A:N3	2.34	0.43
1:QA:1479:C:H2'	1:QA:1480:G:C8	2.54	0.43
1:QA:18:C:H4'	1:QA:1078:U:O2	2.19	0.43
1:QA:411:A:N6	1:QA:413:G:H21	2.15	0.43
1:QA:565:U:H5''	1:QA:566:G:H2'	2.01	0.43
1:QA:855:G:C6	1:QA:856:C:C4	3.07	0.43
2:QB:33:TYR:CD1	2:QB:33:TYR:C	2.92	0.43
4:QD:90:GLY:O	4:QD:93:PHE:HB3	2.19	0.43
5:QE:126:ARG:CG	5:QE:126:ARG:NH1	2.79	0.43
6:QF:61:LEU:HD23	6:QF:63:TYR:OH	2.17	0.43
7:QG:122:HIS:HA	7:QG:125:MET:HB2	2.00	0.43
7:QG:23:VAL:O	7:QG:27:ILE:HD12	2.19	0.43
12:QL:27:LEU:HD13	12:QL:28:LYS:H	1.84	0.43
14:QN:17:LYS:HG3	14:QN:18:VAL:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:QR:53:ARG:C	18:QR:55:ARG:H	2.22	0.43
19:QS:62:ILE:HG22	19:QS:63:THR:N	2.34	0.43
19:QS:8:GLY:O	19:QS:9:VAL:CG2	2.57	0.43
22:QV:43:A:H2'	22:QV:44:A:C8	2.54	0.43
22:QV:54:U:C4	22:QV:55:U:C4	3.06	0.43
48:R2:62:THR:O	48:R2:65:ASN:HB2	2.18	0.43
25:RA:1204:A:H1'	25:RA:1206:G:C8	2.53	0.43
25:RA:1653:G:H4'	25:RA:1654:A:O5'	2.19	0.43
25:RA:48:G:H22	25:RA:177:G:H5''	1.84	0.43
25:RA:2053:G:C2	25:RA:2617:C:C2	3.07	0.43
25:RA:2306:C:C3'	25:RA:2307:G:H5''	2.49	0.43
25:RA:2340:G:H2'	25:RA:2341:G:C8	2.53	0.43
25:RA:2415:G:H2'	25:RA:2416:C:C6	2.53	0.43
25:RA:2839:G:H5'	37:RR:46:GLY:HA2	2.00	0.43
25:RA:304:G:H2'	25:RA:305:U:H6	1.82	0.43
25:RA:546:C:H5'	25:RA:547:A:OP2	2.19	0.43
25:RA:753:C:H2'	25:RA:754:C:C6	2.52	0.43
25:RA:774:A:O2'	25:RA:775:G:O5'	2.29	0.43
27:RD:134:ARG:HG3	27:RD:134:ARG:H	1.55	0.43
27:RD:177:LEU:O	27:RD:179:SER:N	2.51	0.43
27:RD:44:ASN:HB3	27:RD:49:ILE:CG2	2.47	0.43
28:RE:18:ASP:O	28:RE:19:ARG:C	2.55	0.43
28:RE:48:GLN:HB3	28:RE:48:GLN:HE21	1.55	0.43
28:RE:52:LEU:O	28:RE:74:PRO:HA	2.18	0.43
29:RF:183:VAL:O	29:RF:184:TYR:C	2.56	0.43
30:RG:51:ARG:HB3	30:RG:51:ARG:NH1	2.33	0.43
31:RH:6:ARG:CG	31:RH:7:LEU:N	2.81	0.43
33:RN:63:THR:HG23	33:RN:66:LYS:HE3	2.00	0.43
33:RN:7:LYS:N	33:RN:7:LYS:HD2	2.29	0.43
35:RP:19:VAL:HG22	35:RP:21:ARG:H	1.83	0.43
37:RR:10:LEU:O	37:RR:12:ARG:N	2.52	0.43
37:RR:54:LEU:O	37:RR:62:ALA:HB1	2.19	0.43
38:RS:29:PHE:HD2	38:RS:92:TYR:HH	1.66	0.43
45:RZ:29:TYR:HA	45:RZ:33:LEU:O	2.19	0.43
1:XA:1202:G:O4'	14:YN:29:ARG:HD2	2.18	0.43
1:XA:237:C:H2'	1:XA:238:G:C8	2.53	0.43
1:XA:434:U:H2'	1:XA:435:C:C6	2.54	0.43
1:XA:836:G:C6	1:XA:851:G:C6	3.07	0.43
1:XA:885:G:H2'	1:XA:886:G:H8	1.83	0.43
2:XB:130:ARG:NH2	2:XB:138:LEU:HD21	2.34	0.43
2:XB:163:PHE:HD2	2:XB:163:PHE:HA	1.70	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:33:TYR:CD1	2:XB:33:TYR:C	2.92	0.43
3:XC:69:HIS:HA	3:XC:104:GLN:HB2	2.00	0.43
6:XF:3:ARG:HB3	6:XF:93:SER:CB	2.48	0.43
7:XG:122:HIS:HA	7:XG:125:MET:HB2	2.00	0.43
11:XK:34:ASP:OD1	11:XK:38:ASN:HB2	2.18	0.43
11:XK:75:TYR:HD1	11:XK:75:TYR:N	2.16	0.43
16:XP:1:MET:H2	16:XP:24:ALA:HB3	1.83	0.43
16:XP:21:VAL:HG23	16:XP:34:GLU:N	2.34	0.43
19:XS:36:ARG:NH1	19:XS:52:TYR:O	2.51	0.43
50:Y4:48:ARG:C	50:Y4:49:PHE:HD1	2.22	0.43
51:Y5:40:LYS:HE2	51:Y5:47:PRO:CG	2.49	0.43
53:Y7:5:TRP:CD1	53:Y7:7:PRO:HG3	2.53	0.43
25:YA:2097:C:H2'	25:YA:2098:U:O4'	2.19	0.43
25:YA:2308:G:N1	25:YA:2311:A:H2	2.16	0.43
25:YA:2619:C:H2'	25:YA:2620:C:H6	1.83	0.43
25:YA:273(C):C:N3	25:YA:363(C):G:N2	2.56	0.43
25:YA:2849:U:H5	39:YT:93:ARG:NH1	2.16	0.43
25:YA:2850:A:H2	37:YR:61:HIS:CG	2.37	0.43
25:YA:310:A:HO2'	25:YA:311:A:H2'	1.82	0.43
25:YA:552:G:H2'	25:YA:553:U:O4'	2.19	0.43
25:YA:6:A:H2'	25:YA:7:G:H8	1.83	0.43
25:YA:806:C:N3	25:YA:807:U:C5	2.87	0.43
25:YA:845:G:OP2	25:YA:845:G:H8	2.02	0.43
26:YB:24:G:N3	26:YB:27:C:N4	2.55	0.43
26:YB:87:G:N2	26:YB:89:G:H3'	2.34	0.43
28:YE:23:VAL:HG12	28:YE:184:VAL:O	2.19	0.43
30:YG:139:LEU:HA	30:YG:144:ILE:HG21	2.00	0.43
30:YG:59:GLU:O	30:YG:62:LEU:HB3	2.18	0.43
31:YH:120:GLY:O	31:YH:136:ILE:HD12	2.19	0.43
31:YH:59:ARG:NH1	31:YH:59:ARG:CG	2.79	0.43
33:YN:26:LEU:HG	33:YN:30:ILE:CD1	2.49	0.43
33:YN:57:ALA:O	33:YN:124:ALA:HA	2.18	0.43
34:YO:107:ARG:HA	34:YO:112:MET:HE1	2.00	0.43
37:YR:51:LEU:HD13	37:YR:66:VAL:HG22	2.01	0.43
1:QA:836:G:C6	1:QA:851:G:C6	3.07	0.43
2:QB:200:ILE:N	2:QB:200:ILE:HD12	2.34	0.43
2:QB:54:THR:HG21	2:QB:201:ILE:HD11	2.00	0.43
2:QB:231:GLU:HA	2:QB:232:PRO:HD3	1.83	0.43
2:QB:68:ILE:HB	2:QB:70:PHE:HE1	1.82	0.43
2:QB:95:GLN:HE21	2:QB:147:LYS:CE	2.28	0.43
3:QC:12:LEU:C	3:QC:14:ILE:H	2.22	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:188:LEU:HD12	3:QC:195:VAL:CG1	2.48	0.43
6:QF:85:VAL:O	6:QF:85:VAL:HG12	2.18	0.43
7:QG:111:ARG:HH11	7:QG:111:ARG:CB	2.24	0.43
7:QG:148:ASN:O	7:QG:150:ALA:N	2.51	0.43
8:QH:20:TYR:CD1	8:QH:65:TYR:HD2	2.35	0.43
9:QI:26:VAL:CG1	9:QI:63:ILE:HD13	2.49	0.43
11:QK:44:SER:O	11:QK:48:ILE:HG12	2.18	0.43
15:QO:83:GLU:OE1	15:QO:83:GLU:HA	2.19	0.43
17:QQ:77:VAL:O	17:QQ:78:GLU:HB2	2.18	0.43
18:QR:29:PHE:HD2	18:QR:29:PHE:N	2.17	0.43
1:QA:663:A:H5'	18:QR:61:LYS:NZ	2.34	0.43
19:QS:21:GLU:HG3	19:QS:22:LEU:CD1	2.49	0.43
46:R0:78:TYR:N	46:R0:78:TYR:CD1	2.86	0.43
50:R4:48:ARG:NH1	50:R4:51:ASP:HA	2.34	0.43
52:R6:50:ARG:HH11	52:R6:50:ARG:HG2	1.84	0.43
53:R7:17:GLY:O	53:R7:20:ALA:HB3	2.18	0.43
25:RA:1059:G:H3'	25:RA:1060:U:H5''	2.01	0.43
25:RA:996:A:N6	25:RA:1160:G:C6	2.87	0.43
25:RA:1372:U:H2'	25:RA:1373:A:H5'	2.01	0.43
25:RA:142:G:H2'	25:RA:143:C:C6	2.52	0.43
25:RA:1930:G:O2'	25:RA:1931:U:P	2.76	0.43
25:RA:1942:C:C4	25:RA:1943:U:C4	3.07	0.43
25:RA:2168:G:N3	25:RA:2168:G:H2'	2.32	0.43
25:RA:2370:G:H2'	25:RA:2371:G:O4'	2.19	0.43
25:RA:307:G:O5'	25:RA:307:G:H8	2.01	0.43
25:RA:479:A:N3	25:RA:481:G:H5''	2.33	0.43
27:RD:44:ASN:CB	27:RD:49:ILE:HG22	2.46	0.43
28:RE:155:LYS:O	28:RE:156:MET:HG3	2.19	0.43
30:RG:25:TYR:CZ	30:RG:32:PRO:HD3	2.54	0.43
31:RH:35:VAL:CG2	31:RH:75:ALA:HB2	2.48	0.43
31:RH:53:GLU:CD	31:RH:54:ARG:H	2.21	0.43
34:RO:17:ARG:HH11	34:RO:17:ARG:HG2	1.84	0.43
35:RP:120:ALA:HB1	35:RP:138:LEU:CB	2.49	0.43
35:RP:13:ASN:C	35:RP:15:ARG:H	2.21	0.43
35:RP:81:GLN:HE21	35:RP:81:GLN:HB2	1.59	0.43
42:RW:88:ARG:CB	42:RW:92:ARG:HB3	2.47	0.43
1:XA:1024:G:H4'	1:XA:1024:G:OP1	2.18	0.43
1:XA:1109:C:H2'	1:XA:1110:A:O4'	2.19	0.43
1:XA:975:A:N6	1:XA:1367:C:O4'	2.52	0.43
1:XA:1489:G:H2'	1:XA:1490:C:O4'	2.19	0.43
1:XA:166:G:H2'	1:XA:167:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:390:C:H2'	1:XA:391:G:C8	2.54	0.43
2:XB:17:PHE:CG	2:XB:44:LEU:HD11	2.53	0.43
2:XB:197:VAL:CG1	2:XB:198:ASP:N	2.82	0.43
5:XE:126:ARG:NH1	5:XE:126:ARG:CG	2.79	0.43
9:XI:26:VAL:CG1	9:XI:63:ILE:HD13	2.48	0.43
10:XJ:74:ILE:CD1	10:XJ:74:ILE:H	2.21	0.43
13:XM:54:VAL:O	13:XM:58:GLU:OE2	2.37	0.43
15:XO:71:GLN:HB2	15:XO:78:TYR:CE1	2.54	0.43
16:XP:39:TYR:CZ	16:XP:41:PRO:HB3	2.53	0.43
22:XV:53:G:HO2'	22:XV:54:U:H6	1.66	0.43
47:Y1:29:GLY:O	47:Y1:31:GLY:N	2.49	0.43
51:Y5:3:LYS:O	51:Y5:4:HIS:C	2.56	0.43
51:Y5:56:LYS:O	51:Y5:57:VAL:C	2.57	0.43
53:Y7:32:LYS:O	53:Y7:33:ARG:C	2.56	0.43
25:YA:177:G:N3	25:YA:177:G:H5''	2.33	0.43
25:YA:1906:G:H1	25:YA:1924:C:H42	1.66	0.43
25:YA:1906:G:C8	25:YA:1929:G:H2'	2.54	0.43
25:YA:2259:G:C6	25:YA:2260:C:C4	3.06	0.43
25:YA:2272:U:H5''	25:YA:2273:A:OP1	2.19	0.43
25:YA:654(S):G:H2'	25:YA:654(T):C:C6	2.53	0.43
25:YA:817:C:H2'	25:YA:818:G:O4'	2.18	0.43
25:YA:972:G:C6	25:YA:973:A:C6	3.07	0.43
28:YE:155:LYS:O	28:YE:156:MET:HG3	2.19	0.43
28:YE:16:ARG:O	28:YE:18:ASP:O	2.36	0.43
28:YE:52:LEU:O	28:YE:74:PRO:HA	2.18	0.43
29:YF:63:LYS:CE	29:YF:67:GLN:HB2	2.48	0.43
30:YG:131:TYR:HE2	30:YG:133:LEU:HD22	1.84	0.43
31:YH:125:VAL:CG1	31:YH:126:PRO:CG	2.94	0.43
32:YI:31:LEU:HD12	32:YI:31:LEU:N	2.34	0.43
32:YI:68:LEU:HA	32:YI:71:ILE:HG23	1.98	0.43
33:YN:118:LYS:C	33:YN:120:LEU:H	2.21	0.43
38:YS:105:ALA:C	38:YS:110:LEU:HD21	2.38	0.43
44:YY:84:ARG:HD3	44:YY:86:ARG:HH11	1.83	0.43
45:YZ:24:LEU:HG	45:YZ:24:LEU:O	2.19	0.43
45:YZ:63:ASP:O	45:YZ:64:GLY:C	2.57	0.43
1:QA:1130:A:N6	1:QA:1144:G:H21	2.16	0.43
1:QA:1227:A:OP2	13:QM:111:LYS:HE3	2.18	0.43
1:QA:1301:U:O2	1:QA:1301:U:H2'	2.17	0.43
1:QA:1366:C:O2'	10:QJ:60:ARG:NH1	2.49	0.43
1:QA:181:G:O2'	1:QA:182:U:O5'	2.31	0.43
1:QA:448:A:C2	1:QA:487:A:C2	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:51:A:C6	1:QA:353:A:C2	3.07	0.43
1:QA:690:G:H22	11:QK:55:LYS:HZ2	1.66	0.43
1:QA:963:G:H1	1:QA:972:C:N4	2.17	0.43
2:QB:162:ILE:O	2:QB:185:ILE:HG13	2.18	0.43
2:QB:188:ALA:CB	2:QB:200:ILE:HG23	2.48	0.43
2:QB:16:HIS:CD2	2:QB:213:LEU:HD13	2.54	0.43
2:QB:77:ALA:HB1	2:QB:165:VAL:HG11	2.01	0.43
2:QB:95:GLN:HB3	2:QB:148:TYR:HD1	1.84	0.43
3:QC:76:VAL:CG2	3:QC:103:VAL:HG11	2.49	0.43
4:QD:52:SER:O	4:QD:55:ALA:N	2.52	0.43
5:QE:105:VAL:HB	5:QE:106:PRO:CD	2.48	0.43
6:QF:23:LYS:HG2	6:QF:27:GLN:OE1	2.18	0.43
12:QL:120:TYR:O	12:QL:121:GLY:C	2.57	0.43
16:QP:55:ARG:O	16:QP:56:ALA:C	2.57	0.43
19:QS:29:ARG:HG2	19:QS:29:ARG:HH11	1.84	0.43
46:R0:6:GLY:C	46:R0:7:LEU:CD2	2.86	0.43
46:R0:72:ARG:HH21	46:R0:75:LEU:HD12	1.83	0.43
47:R1:13:ILE:CG1	47:R1:42:GLN:HB2	2.49	0.43
53:R7:19:ARG:NH1	53:R7:19:ARG:HG2	2.33	0.43
25:RA:2391:G:OP2	54:R8:32:LEU:HD13	2.19	0.43
25:RA:1046:A:N3	25:RA:1046:A:H3'	2.34	0.43
25:RA:1438:U:H2'	25:RA:1439:A:C8	2.54	0.43
25:RA:1775:U:H2'	25:RA:1776:G:O4'	2.19	0.43
25:RA:229:A:OP1	25:RA:229:A:H4'	2.19	0.43
25:RA:2426:A:H5'	25:RA:2426:A:C8	2.53	0.43
25:RA:242:G:H3'	54:R8:6:THR:HG23	2.01	0.43
25:RA:2872:G:C2	25:RA:2873:A:N6	2.86	0.43
25:RA:605:C:O2	25:RA:657:U:O2'	2.37	0.43
25:RA:747:U:C1'	51:R5:2:ALA:HB3	2.48	0.43
25:RA:90:U:H4'	25:RA:91:A:H5'	2.00	0.43
27:RD:17:THR:HG21	27:RD:204:ILE:HA	1.99	0.43
27:RD:76:PRO:O	27:RD:98:VAL:CG2	2.65	0.43
28:RE:188:VAL:HA	28:RE:189:PRO:HD2	1.78	0.43
29:RF:176:LEU:HD11	29:RF:180:GLY:O	2.19	0.43
29:RF:64:ILE:HG23	29:RF:65:TRP:CD1	2.54	0.43
32:RI:138:ILE:HG23	32:RI:138:ILE:O	2.19	0.43
33:RN:90:MET:O	33:RN:91:LEU:C	2.57	0.43
35:RP:112:LEU:CD1	35:RP:114:ILE:HG23	2.47	0.43
35:RP:52:GLU:OE2	35:RP:58:THR:N	2.52	0.43
37:RR:48:VAL:O	37:RR:49:ASP:C	2.57	0.43
39:RT:107:ASP:OD2	39:RT:109:GLU:HB2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:25:VAL:HG21	39:RT:8:LYS:HG3	2.00	0.43
40:RU:91:ASP:O	40:RU:95:LEU:N	2.42	0.43
42:RW:19:LEU:O	42:RW:22:ASP:HB2	2.19	0.43
42:RW:28:SER:O	42:RW:30:GLU:N	2.51	0.43
44:RY:95:LYS:HB2	44:RY:95:LYS:HZ1	1.83	0.43
45:RZ:158:PRO:N	45:RZ:161:VAL:HG21	2.33	0.43
1:XA:1015:A:H2'	1:XA:1016:A:O4'	2.18	0.43
1:XA:337:C:H2'	1:XA:338:A:C8	2.54	0.43
1:XA:33:A:H2'	1:XA:34:C:C6	2.53	0.43
1:XA:875:C:C4	1:XA:876:G:N7	2.86	0.43
1:XA:895:G:H2'	1:XA:896:C:C6	2.54	0.43
1:XA:889:A:H61	1:XA:907:A:H3'	1.83	0.43
2:XB:100:GLY:N	2:XB:176:GLU:OE2	2.51	0.43
3:XC:12:LEU:C	3:XC:14:ILE:H	2.21	0.43
4:XD:36:ARG:HA	4:XD:37:PRO:HD2	1.82	0.43
8:XH:64:LYS:CB	8:XH:79:VAL:HG21	2.49	0.43
8:XH:86:ILE:CB	8:XH:133:LEU:HD22	2.49	0.43
9:XI:22:GLY:O	9:XI:23:ASN:C	2.57	0.43
9:XI:95:LYS:HD3	9:XI:95:LYS:C	2.39	0.43
11:XK:105:VAL:O	11:XK:105:VAL:HG23	2.19	0.43
13:XM:3:ARG:HD2	13:XM:9:ILE:CG1	2.45	0.43
15:XO:10:LYS:O	15:XO:14:GLU:HB2	2.18	0.43
16:XP:20:VAL:CG2	16:XP:21:VAL:N	2.81	0.43
19:XS:51:VAL:HG12	19:XS:52:TYR:N	2.33	0.43
47:Y1:53:VAL:CG1	47:Y1:54:ALA:N	2.81	0.43
48:Y2:6:VAL:O	48:Y2:7:ARG:C	2.57	0.43
25:YA:1230:C:H2'	25:YA:1231:G:H8	1.84	0.43
25:YA:1316:U:H2'	25:YA:1317:A:H8	1.83	0.43
25:YA:1684:C:H2'	25:YA:1685:C:C6	2.54	0.43
25:YA:2660:A:H2'	25:YA:2661:G:O4'	2.19	0.43
25:YA:2816:C:H2'	25:YA:2817:G:H8	1.84	0.43
25:YA:2848:G:O2'	25:YA:2849:U:OP2	2.25	0.43
25:YA:2879:C:H4'	25:YA:2880:C:OP1	2.19	0.43
25:YA:650:C:OP1	54:Y8:48:PHE:CZ	2.72	0.43
25:YA:862:G:H2'	25:YA:863:A:O4'	2.18	0.43
25:YA:958:U:OP1	36:YQ:74:TYR:OH	2.22	0.43
26:YB:73:A:C4	26:YB:104:A:C2	3.07	0.43
26:YB:63:G:C6	26:YB:64:C:C4	3.07	0.43
28:YE:13:ARG:HH11	28:YE:13:ARG:HB2	1.82	0.43
30:YG:25:TYR:CZ	30:YG:32:PRO:HD3	2.54	0.43
30:YG:77:ILE:H	30:YG:82:LEU:HB2	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:125:VAL:HG12	31:YH:126:PRO:CD	2.49	0.43
35:YP:101:VAL:HG13	35:YP:102:ARG:N	2.33	0.43
37:YR:94:TYR:CD2	37:YR:94:TYR:N	2.87	0.43
44:YY:94:LYS:HE3	44:YY:101:LYS:HZ3	1.79	0.43
45:YZ:105:VAL:O	45:YZ:105:VAL:HG22	2.18	0.43
45:YZ:15:PRO:HA	45:YZ:18:LEU:HD13	2.00	0.43
45:YZ:29:TYR:HA	45:YZ:33:LEU:O	2.19	0.43
1:QA:22:G:H2'	1:QA:23:C:C6	2.54	0.42
1:QA:718:G:H5'	11:QK:117:ASN:ND2	2.34	0.42
3:QC:101:LEU:C	3:QC:101:LEU:HD23	2.38	0.42
1:QA:1112:C:H1'	3:QC:179:ARG:HH11	1.84	0.42
3:QC:22:TRP:CB	3:QC:59:ARG:HB2	2.48	0.42
5:QE:94:ALA:HB2	5:QE:119:LEU:HG	2.00	0.42
6:QF:22:GLU:OE1	6:QF:82:ARG:NH2	2.46	0.42
10:QJ:30:SER:OG	10:QJ:81:THR:HG22	2.19	0.42
11:QK:108:ILE:HG21	18:QR:88:LYS:OXT	2.19	0.42
16:QP:75:ARG:C	16:QP:77:ALA:N	2.72	0.42
18:QR:73:ALA:HB3	18:QR:79:LEU:CD1	2.47	0.42
18:QR:76:LEU:HD22	18:QR:76:LEU:N	2.34	0.42
22:QV:1:C:O2'	22:QV:2:G:H5'	2.19	0.42
50:R4:22:ILE:CG2	50:R4:23:GLU:N	2.81	0.42
50:R4:43:TYR:O	50:R4:46:GLN:HA	2.19	0.42
54:R8:28:GLY:O	54:R8:29:LYS:O	2.37	0.42
25:RA:1448:G:N3	25:RA:1529:A:H2	2.17	0.42
25:RA:1777:U:H3	25:RA:1787:A:H61	1.67	0.42
25:RA:2405:G:HO2'	25:RA:2406:U:P	2.42	0.42
25:RA:412:A:N7	25:RA:2411:A:H2	2.15	0.42
25:RA:422:A:C6	25:RA:423:A:C6	3.07	0.42
25:RA:924:C:H2'	25:RA:925:C:C6	2.54	0.42
29:RF:20:LEU:HD12	29:RF:21:ALA:N	2.26	0.42
31:RH:16:SER:OG	31:RH:17:VAL:N	2.50	0.42
32:RI:31:LEU:HD12	32:RI:31:LEU:N	2.34	0.42
37:RR:51:LEU:HD13	37:RR:66:VAL:HG22	2.01	0.42
38:RS:110:LEU:HA	38:RS:112:PHE:CZ	2.53	0.42
39:RT:64:ARG:HH11	39:RT:64:ARG:HG2	1.84	0.42
39:RT:6:LEU:HD12	39:RT:9:LEU:HD12	2.01	0.42
40:RU:27:LEU:O	40:RU:30:LYS:N	2.41	0.42
45:RZ:70:LEU:HB2	45:RZ:91:LEU:HD21	2.01	0.42
1:XA:1429:C:H2'	1:XA:1430:C:H6	1.83	0.42
1:XA:316:G:C2	1:XA:317:G:C8	3.07	0.42
1:XA:825:G:H2'	1:XA:826:C:O4'	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:955:U:H1'	1:XA:1227:A:N6	2.34	0.42
1:XA:977:A:H2'	1:XA:978:A:H5'	2.01	0.42
3:XC:67:THR:O	3:XC:69:HIS:CE1	2.72	0.42
4:XD:90:GLY:HA3	4:XD:204:ILE:HD11	2.01	0.42
9:XI:25:LYS:O	9:XI:60:ASP:OD1	2.37	0.42
9:XI:88:TYR:O	9:XI:89:ASN:HB2	2.19	0.42
10:XJ:10:GLY:O	10:XJ:68:HIS:N	2.51	0.42
11:XK:44:SER:O	11:XK:48:ILE:HG12	2.18	0.42
11:XK:62:GLN:O	11:XK:64:ALA:N	2.52	0.42
20:XT:96:GLY:O	20:XT:99:LEU:CD1	2.67	0.42
22:XV:4:G:C6	22:XV:70:G:N1	2.86	0.42
47:Y1:73:LEU:C	47:Y1:75:GLU:N	2.70	0.42
47:Y1:72:GLU:O	47:Y1:75:GLU:HB2	2.19	0.42
25:YA:1295:C:H2'	25:YA:1296:G:H8	1.84	0.42
25:YA:137(A):G:H1'	43:YX:41:ASN:HD22	1.83	0.42
25:YA:1427:A:H4'	25:YA:1428:C:O5'	2.19	0.42
25:YA:1995:U:H2'	25:YA:1996:C:C5	2.54	0.42
25:YA:2212:A:H1'	25:YA:2215:G:C5	2.54	0.42
25:YA:2540:C:H2'	25:YA:2541:A:O4'	2.19	0.42
25:YA:264:C:O2'	25:YA:265:A:H5"	2.18	0.42
25:YA:484:C:H2'	25:YA:485:C:C6	2.54	0.42
26:YB:29:A:H2'	26:YB:30:C:C6	2.54	0.42
28:YE:94:GLU:C	28:YE:96:PHE:N	2.72	0.42
29:YF:45:ARG:HH11	29:YF:45:ARG:HG2	1.82	0.42
25:YA:797:C:OP1	29:YF:62:ARG:NH1	2.52	0.42
30:YG:7:LEU:CD2	30:YG:176:LEU:HD22	2.45	0.42
30:YG:34:LEU:HD11	30:YG:99:MET:CE	2.49	0.42
32:YI:77:LEU:CD1	32:YI:140:LEU:HB2	2.49	0.42
33:YN:43:THR:HA	33:YN:44:PRO:HD2	1.92	0.42
33:YN:62:VAL:HG12	33:YN:66:LYS:HB2	2.01	0.42
35:YP:120:ALA:HB1	35:YP:138:LEU:CB	2.49	0.42
36:YQ:25:ASP:H	36:YQ:102:VAL:HG23	1.84	0.42
38:YS:15:ARG:O	38:YS:19:LYS:HD3	2.19	0.42
34:YO:78:ARG:HH21	39:YT:103:ARG:HH22	1.64	0.42
42:YW:65:LEU:CD1	42:YW:68:ARG:NH1	2.75	0.42
44:YY:97:ARG:HH21	44:YY:98:VAL:CG2	2.32	0.42
1:QA:1086:U:O5'	1:QA:1086:U:H6	2.02	0.42
1:QA:1488:G:H2'	1:QA:1489:G:C8	2.54	0.42
1:QA:309:G:H1'	1:QA:608:A:C2	2.53	0.42
1:QA:539:A:OP1	12:QL:114:LYS:HE2	2.18	0.42
1:QA:783:C:O2'	1:QA:784:C:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:828:A:H2'	1:QA:829:G:O4'	2.19	0.42
2:QB:211:ILE:O	2:QB:215:LEU:HB2	2.19	0.42
2:QB:92:TYR:HD1	2:QB:92:TYR:C	2.22	0.42
3:QC:113:ALA:C	3:QC:115:LEU:N	2.72	0.42
10:QJ:49:VAL:HG11	14:QN:41:ARG:O	2.19	0.42
13:QM:54:VAL:O	13:QM:58:GLU:OE2	2.37	0.42
16:QP:40:ASP:C	16:QP:42:ARG:N	2.73	0.42
1:QA:468:A:H4'	16:QP:80:PHE:O	2.19	0.42
17:QQ:22:LEU:HD13	17:QQ:41:LYS:HG2	2.02	0.42
18:QR:74:ARG:NH2	18:QR:81:PHE:HA	2.35	0.42
19:QS:66:MET:HG3	19:QS:66:MET:O	2.19	0.42
47:R1:72:GLU:O	47:R1:75:GLU:HB2	2.19	0.42
48:R2:6:VAL:O	48:R2:7:ARG:C	2.57	0.42
25:RA:96:G:H4'	48:R2:48:HIS:CD2	2.54	0.42
26:RB:32:C:N4	26:RB:33:G:O6	2.52	0.42
27:RD:71:ASP:CB	27:RD:103:ARG:HH22	2.32	0.42
27:RD:108:PRO:HG2	27:RD:111:LEU:HB2	2.01	0.42
27:RD:33:LEU:O	27:RD:35:LYS:N	2.52	0.42
30:RG:31:VAL:O	30:RG:31:VAL:HG13	2.18	0.42
30:RG:4:ASP:O	30:RG:5:VAL:HB	2.19	0.42
25:RA:270(O):U:C4	32:RI:52:ARG:HD3	2.53	0.42
33:RN:26:LEU:HG	33:RN:30:ILE:CD1	2.49	0.42
33:RN:30:ILE:HG22	33:RN:34:LEU:HD21	2.01	0.42
33:RN:87:LEU:C	33:RN:87:LEU:CD2	2.87	0.42
34:RO:31:LYS:O	34:RO:32:TYR:HD2	2.02	0.42
35:RP:114:ILE:CD1	35:RP:130:PHE:CE1	2.98	0.42
35:RP:49:ARG:HG2	35:RP:49:ARG:HH11	1.84	0.42
25:RA:2485:G:H5''	36:RQ:46:GLN:NE2	2.34	0.42
39:RT:50:ILE:HD11	39:RT:102:ILE:HG12	2.01	0.42
40:RU:98:LEU:O	40:RU:102:GLU:N	2.49	0.42
41:RV:72:VAL:HG13	41:RV:72:VAL:O	2.19	0.42
42:RW:111:HIS:CG	42:RW:112:GLY:H	2.37	0.42
1:XA:329:A:C5	1:XA:332:G:C6	3.07	0.42
1:XA:518:C:H2'	1:XA:530:G:N3	2.33	0.42
1:XA:532:A:O2'	1:XA:533:A:P	2.77	0.42
1:XA:527:G:O2'	1:XA:535:A:N1	2.34	0.42
1:XA:88:C:H3'	1:XA:89:U:C6	2.54	0.42
2:XB:87:ARG:NH1	2:XB:223:ILE:HD12	2.33	0.42
4:XD:146:ILE:CD1	4:XD:146:ILE:H	2.30	0.42
4:XD:14:ARG:HD3	4:XD:14:ARG:C	2.39	0.42
4:XD:90:GLY:O	4:XD:93:PHE:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:105:VAL:HB	5:XE:106:PRO:CD	2.49	0.42
6:XF:45:LEU:CD1	6:XF:59:TYR:HD1	2.31	0.42
7:XG:23:VAL:O	7:XG:27:ILE:HD12	2.19	0.42
1:XA:1151:A:N3	10:XJ:39:PRO:HG3	2.34	0.42
16:XP:40:ASP:C	16:XP:42:ARG:N	2.73	0.42
16:XP:75:ARG:C	16:XP:77:ALA:N	2.72	0.42
1:XA:254:G:OP1	17:XQ:67:LYS:O	2.37	0.42
18:XR:43:PHE:HA	18:XR:51:LEU:HD12	2.01	0.42
19:XS:62:ILE:HG22	19:XS:63:THR:N	2.34	0.42
47:Y1:13:ILE:CG1	47:Y1:42:GLN:HB2	2.49	0.42
48:Y2:48:HIS:O	48:Y2:49:LYS:C	2.57	0.42
49:Y3:46:ASN:O	49:Y3:50:VAL:HG22	2.19	0.42
25:YA:1224:G:OP2	41:YV:66:ARG:NH2	2.52	0.42
25:YA:1301:A:H2	25:YA:1626:G:N3	2.16	0.42
1:XA:784:C:H4'	25:YA:1837:C:OP1	2.19	0.42
25:YA:1885:A:H5'	25:YA:1886:C:OP2	2.19	0.42
25:YA:2198:A:O2'	25:YA:2199:A:O4'	2.37	0.42
25:YA:2309:A:H2'	25:YA:2310:A:O4'	2.18	0.42
25:YA:2784:C:H5''	28:YE:41:LYS:NZ	2.34	0.42
25:YA:311:A:C6	25:YA:328:U:C4	3.07	0.42
25:YA:335:C:H6	25:YA:335:C:O5'	2.02	0.42
25:YA:449:A:H2'	25:YA:450:G:O4'	2.19	0.42
25:YA:728:G:H4'	27:YD:13:ARG:HD2	2.01	0.42
25:YA:873:G:H1	25:YA:904:C:H42	1.67	0.42
27:YD:155:LEU:HD23	27:YD:177:LEU:HD21	2.00	0.42
27:YD:181:GLU:HA	27:YD:272:ALA:CB	2.39	0.42
28:YE:179:GLU:CB	28:YE:181:LEU:HD23	2.24	0.42
28:YE:203:LYS:C	28:YE:203:LYS:HD2	2.39	0.42
31:YH:26:VAL:CG1	31:YH:33:LEU:HB2	2.49	0.42
35:YP:107:LYS:O	35:YP:108:LYS:C	2.58	0.42
35:YP:98:GLU:O	35:YP:99:LEU:C	2.57	0.42
37:YR:81:ASP:N	37:YR:81:ASP:OD2	2.51	0.42
38:YS:99:LYS:C	38:YS:101:LEU:N	2.72	0.42
41:YV:38:LEU:CD2	41:YV:39:LEU:N	2.82	0.42
45:YZ:134:PRO:C	45:YZ:136:PHE:H	2.22	0.42
1:QA:1292:U:H2'	1:QA:1293:G:H8	1.84	0.42
1:QA:1310:G:H2'	1:QA:1311:G:C8	2.53	0.42
1:QA:940:C:H2'	1:QA:941:G:C8	2.54	0.42
4:QD:59:ARG:NE	4:QD:59:ARG:HA	2.34	0.42
5:QE:20:GLN:O	5:QE:21:ALA:C	2.57	0.42
7:QG:126:ASP:OD2	7:QG:126:ASP:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:79:ARG:HH12	7:QG:82:GLY:HA2	1.84	0.42
9:QI:29:ASN:OD1	9:QI:65:VAL:N	2.48	0.42
11:QK:124:LYS:HB3	11:QK:125:PHE:H	1.67	0.42
13:QM:4:ILE:CG2	13:QM:5:ALA:H	2.29	0.42
14:QN:47:LEU:O	14:QN:48:ALA:C	2.56	0.42
15:QO:17:ARG:HD3	15:QO:26:GLU:HG3	2.01	0.42
15:QO:8:LYS:NZ	15:QO:31:LEU:HD11	2.34	0.42
49:R3:46:ASN:O	49:R3:50:VAL:HG22	2.19	0.42
51:R5:3:LYS:CE	51:R5:3:LYS:HA	2.36	0.42
53:R7:47:ARG:HB2	53:R7:48:LYS:H	1.64	0.42
25:RA:195:A:OP1	35:RP:46:LYS:HE2	2.19	0.42
25:RA:196:A:H2'	25:RA:196:A:N3	2.35	0.42
25:RA:1649:G:C6	25:RA:2009:G:C6	3.08	0.42
25:RA:2287:A:N6	25:RA:2344:U:H3	2.17	0.42
25:RA:2487:G:H2'	25:RA:2488:A:C8	2.54	0.42
25:RA:2531:A:H3'	25:RA:2532:G:C8	2.52	0.42
25:RA:288:C:H2'	25:RA:289:A:C8	2.53	0.42
25:RA:373:U:H2'	25:RA:374:A:H8	1.84	0.42
25:RA:846:C:H42	25:RA:931:G:H1	1.67	0.42
27:RD:168:ARG:O	27:RD:169:GLU:HB2	2.19	0.42
27:RD:238:GLY:C	27:RD:239:ARG:O	2.53	0.42
27:RD:33:LEU:HB3	27:RD:34:VAL:H	1.48	0.42
28:RE:54:GLN:N	28:RE:54:GLN:CD	2.73	0.42
29:RF:164:ARG:HG2	29:RF:164:ARG:NH1	2.34	0.42
25:RA:675:A:H4'	29:RF:67:GLN:OE1	2.19	0.42
30:RG:114:ILE:O	30:RG:116:ASP:N	2.51	0.42
33:RN:15:LEU:HD13	33:RN:15:LEU:C	2.40	0.42
34:RO:2:ILE:N	34:RO:2:ILE:CD1	2.82	0.42
35:RP:119:GLU:OE1	35:RP:119:GLU:HA	2.19	0.42
25:RA:2722:G:H4'	37:RR:4:LEU:HB2	2.01	0.42
38:RS:52:SER:HB2	38:RS:55:ALA:CB	2.50	0.42
38:RS:95:HIS:O	38:RS:96:GLY:C	2.57	0.42
40:RU:92:ARG:NH2	41:RV:11:GLN:O	2.53	0.42
41:RV:44:LYS:HB3	41:RV:45:THR:H	1.56	0.42
42:RW:8:ARG:NH1	42:RW:8:ARG:HG3	2.34	0.42
44:RY:42:VAL:HG11	44:RY:65:ALA:HB3	2.02	0.42
1:XA:1222:G:P	19:XS:77:THR:HG21	2.58	0.42
1:XA:1225:A:H5''	13:XM:103:THR:HG1	1.85	0.42
2:XB:142:LEU:HD23	2:XB:142:LEU:O	2.18	0.42
2:XB:142:LEU:O	2:XB:145:LEU:HB2	2.19	0.42
4:XD:19:LEU:O	4:XD:20:TYR:C	2.57	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:36:ARG:CZ	6:XF:38:GLU:HG2	2.50	0.42
7:XG:79:ARG:NH1	7:XG:82:GLY:HA2	2.34	0.42
1:XA:520:A:O2'	12:XL:73:GLU:HG2	2.19	0.42
14:XN:26:ARG:NH1	14:XN:43:CYS:HA	2.34	0.42
15:XO:8:LYS:NZ	15:XO:31:LEU:HD11	2.34	0.42
16:XP:23:ASP:O	16:XP:26:ARG:HB2	2.18	0.42
17:XQ:77:VAL:O	17:XQ:78:GLU:HB2	2.18	0.42
20:XT:13:LEU:CD1	20:XT:17:ARG:NH1	2.82	0.42
25:YA:2354:G:O2'	46:Y0:36:ILE:HD12	2.19	0.42
46:Y0:72:ARG:HH21	46:Y0:75:LEU:HD12	1.83	0.42
50:Y4:23:GLU:C	50:Y4:24:THR:HG1	2.22	0.42
53:Y7:47:ARG:HB2	53:Y7:48:LYS:H	1.64	0.42
25:YA:1282:U:H2'	25:YA:1283:G:O4'	2.19	0.42
25:YA:1467:C:H2'	25:YA:1468:C:H6	1.84	0.42
25:YA:1473:G:H1	25:YA:1520:U:H3	1.67	0.42
25:YA:15:G:H4'	51:Y5:21:SER:CB	2.49	0.42
25:YA:1647:G:H5'	25:YA:1647:G:C8	2.54	0.42
25:YA:2289:G:H1	25:YA:2343:C:H42	1.68	0.42
25:YA:2849:U:O4	39:YT:23:ARG:NH2	2.48	0.42
27:YD:31:LYS:C	27:YD:32:SER:O	2.54	0.42
27:YD:33:LEU:O	27:YD:35:LYS:N	2.52	0.42
28:YE:197:ILE:CD1	28:YE:199:ARG:HH12	2.26	0.42
29:YF:128:ALA:O	29:YF:129:PHE:CB	2.67	0.42
30:YG:121:ASN:HA	30:YG:181:ARG:NH2	2.34	0.42
30:YG:16:ARG:NE	30:YG:31:VAL:HG11	2.35	0.42
33:YN:15:LEU:C	33:YN:15:LEU:HD13	2.39	0.42
25:YA:2642:G:H4'	33:YN:78:TYR:CE2	2.54	0.42
35:YP:125:VAL:C	35:YP:145:PRO:HD2	2.39	0.42
35:YP:52:GLU:OE2	35:YP:58:THR:N	2.52	0.42
37:YR:10:LEU:O	37:YR:12:ARG:N	2.52	0.42
40:YU:91:ASP:OD2	40:YU:96:ALA:HB2	2.19	0.42
1:QA:1060:C:H2'	1:QA:1061:G:C8	2.48	0.42
1:QA:1525:G:H2'	1:QA:1526:G:O4'	2.19	0.42
1:QA:189:U:C2	17:QQ:72:ARG:NH1	2.87	0.42
1:QA:346:G:H5'	39:RT:41:ARG:NH1	2.34	0.42
1:QA:600:C:H2'	1:QA:601:C:C6	2.54	0.42
1:QA:795:C:O5'	1:QA:795:C:H6	2.02	0.42
2:QB:33:TYR:HD1	2:QB:33:TYR:C	2.23	0.42
2:QB:99:GLY:O	2:QB:108:ILE:HD11	2.20	0.42
4:QD:127:THR:HG23	4:QD:130:GLY:O	2.20	0.42
4:QD:150:GLU:O	4:QD:152:SER:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:19:LEU:O	4:QD:20:TYR:C	2.57	0.42
5:QE:48:ALA:HB2	5:QE:57:LYS:HD3	2.00	0.42
1:QA:1346:A:C4	7:QG:10:ARG:NH1	2.87	0.42
7:QG:79:ARG:NH1	7:QG:82:GLY:HA2	2.35	0.42
8:QH:109:ILE:HD11	8:QH:120:THR:HG22	2.00	0.42
8:QH:33:GLU:O	8:QH:36:LEU:N	2.53	0.42
10:QJ:49:VAL:HG13	10:QJ:50:ILE:N	2.35	0.42
13:QM:87:TYR:HA	13:QM:90:LEU:HG	2.01	0.42
14:QN:26:ARG:NH1	14:QN:43:CYS:HA	2.34	0.42
15:QO:25:THR:O	15:QO:29:VAL:HG23	2.19	0.42
16:QP:20:VAL:CG2	16:QP:21:VAL:N	2.82	0.42
19:QS:41:VAL:CG1	19:QS:45:VAL:H	2.32	0.42
20:QT:96:GLY:O	20:QT:99:LEU:CD1	2.67	0.42
47:R1:60:PHE:HE2	47:R1:91:LYS:NZ	2.16	0.42
48:R2:59:ARG:O	48:R2:62:THR:HG23	2.18	0.42
51:R5:20:ARG:HA	51:R5:23:HIS:CE1	2.54	0.42
25:RA:747:U:C4	51:R5:2:ALA:N	2.88	0.42
25:RA:1071:G:H8	25:RA:1071:G:O5'	2.02	0.42
25:RA:1354:A:OP1	27:RD:38:LYS:HE2	2.20	0.42
25:RA:1430:C:C2	25:RA:1431:U:C5	3.07	0.42
25:RA:1497:U:H3'	25:RA:1498:C:H6	1.85	0.42
25:RA:1921:G:H2'	25:RA:1922:G:H8	1.84	0.42
25:RA:397:G:H1'	25:RA:2231:C:O2'	2.18	0.42
25:RA:2587:A:H8	25:RA:2587:A:O5'	2.02	0.42
25:RA:2596:U:H2'	25:RA:2597:G:O4'	2.19	0.42
25:RA:2623:G:H5'	25:RA:2826:A:H1'	2.02	0.42
25:RA:464:U:H2'	25:RA:465:G:O4'	2.19	0.42
25:RA:554:U:H2'	25:RA:556:G:C8	2.55	0.42
25:RA:553:U:H2'	25:RA:554:U:O4'	2.19	0.42
27:RD:14:ARG:CG	27:RD:15:PHE:N	2.83	0.42
27:RD:43:ARG:CZ	27:RD:49:ILE:HG21	2.49	0.42
30:RG:145:THR:O	30:RG:146:TYR:HB3	2.19	0.42
30:RG:41:GLN:NE2	30:RG:154:GLY:O	2.52	0.42
30:RG:27:ASN:HB3	30:RG:30:GLU:OE2	2.20	0.42
26:RB:55:U:H4'	30:RG:28:VAL:CG2	2.50	0.42
31:RH:26:VAL:CG1	31:RH:33:LEU:HB2	2.50	0.42
31:RH:58:GLU:O	31:RH:60:ARG:N	2.53	0.42
32:RI:121:LYS:HB2	32:RI:121:LYS:HE3	1.79	0.42
25:RA:1007:C:H5''	33:RN:35:ARG:NH1	2.34	0.42
35:RP:115:LEU:HB3	35:RP:131:SER:HB2	2.01	0.42
37:RR:10:LEU:C	37:RR:12:ARG:N	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:RR:44:LEU:HD23	37:RR:44:LEU:HA	1.79	0.42
1:XA:1311:G:N2	1:XA:1327:C:C2	2.88	0.42
1:XA:1453:G:H8	20:XT:39:LYS:HZ1	1.65	0.42
1:XA:728:A:C6	15:XO:54:ARG:HD2	2.54	0.42
1:XA:947:G:H2'	1:XA:948:C:H6	1.82	0.42
2:XB:179:LYS:HA	8:XH:72:PRO:CG	2.49	0.42
2:XB:200:ILE:HD12	2:XB:200:ILE:N	2.34	0.42
2:XB:5:ILE:HB	2:XB:221:LEU:HD23	2.01	0.42
2:XB:44:LEU:CD1	2:XB:44:LEU:H	2.26	0.42
2:XB:60:ASP:C	2:XB:62:ALA:N	2.72	0.42
2:XB:69:LEU:HD12	2:XB:91:PRO:O	2.19	0.42
2:XB:97:TRP:HZ3	2:XB:172:ILE:HG22	1.85	0.42
3:XC:143:GLU:C	3:XC:145:GLY:H	2.23	0.42
5:XE:71:LEU:HD11	5:XE:113:ALA:O	2.19	0.42
7:XG:140:ASP:O	7:XG:142:GLU:N	2.52	0.42
7:XG:79:ARG:HH12	7:XG:82:GLY:HA2	1.84	0.42
8:XH:20:TYR:CD1	8:XH:65:TYR:HD2	2.35	0.42
9:XI:100:GLY:C	9:XI:102:LEU:N	2.71	0.42
9:XI:8:GLY:CA	9:XI:79:LEU:HD12	2.49	0.42
19:XS:41:VAL:CG1	19:XS:45:VAL:H	2.32	0.42
19:XS:41:VAL:HG12	19:XS:45:VAL:H	1.85	0.42
21:XU:5:ASP:O	21:XU:11:GLY:HA3	2.20	0.42
24:XY:36:G:C2	24:XY:37:1MG:C4	3.07	0.42
52:Y6:33:LYS:C	52:Y6:35:GLU:H	2.22	0.42
54:Y8:53:PRO:HD2	54:Y8:54:GLU:H	1.84	0.42
25:YA:1265:A:H8	25:YA:1265:A:OP1	2.03	0.42
25:YA:1558:A:H1'	25:YA:1559:G:H5"	2.00	0.42
25:YA:2123:G:H2'	25:YA:2124:G:C8	2.53	0.42
25:YA:2296:U:OP2	38:YS:9:ARG:NH1	2.53	0.42
25:YA:2645:G:N2	25:YA:2767:C:OP2	2.52	0.42
27:YD:108:PRO:HG2	27:YD:111:LEU:HB2	2.01	0.42
28:YE:104:VAL:CG1	28:YE:188:VAL:HG23	2.49	0.42
28:YE:36:ARG:HH11	28:YE:36:ARG:CB	2.28	0.42
30:YG:114:ILE:HG22	30:YG:117:PHE:HB2	2.01	0.42
32:YI:8:PRO:HG3	32:YI:14:ASP:CB	2.48	0.42
36:YQ:20:ALA:HA	36:YQ:98:LYS:HB3	2.02	0.42
38:YS:64:GLU:O	38:YS:68:GLN:HG3	2.19	0.42
39:YT:110:ILE:CG2	39:YT:111:ARG:N	2.82	0.42
25:YA:445:C:H5"	40:YU:3:ARG:HB2	2.01	0.42
41:YV:38:LEU:CD1	41:YV:55:ALA:HB1	2.50	0.42
42:YW:19:LEU:O	42:YW:22:ASP:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1001:G:H2'	1:QA:1002:G:O4'	2.20	0.42
1:QA:865:A:H5'	1:QA:1078:U:C5	2.54	0.42
1:QA:404:U:H2'	1:QA:405:U:C6	2.55	0.42
1:QA:731:G:OP1	1:QA:766:A:H1'	2.20	0.42
2:QB:158:LEU:HD12	2:QB:158:LEU:C	2.38	0.42
2:QB:60:ASP:C	2:QB:62:ALA:N	2.72	0.42
3:QC:142:MET:HG2	3:QC:149:ALA:HB2	2.01	0.42
3:QC:149:ALA:O	3:QC:169:ALA:CA	2.67	0.42
3:QC:83:ARG:O	3:QC:86:VAL:HG22	2.20	0.42
5:QE:26:PHE:CD1	5:QE:26:PHE:N	2.87	0.42
6:QF:45:LEU:O	6:QF:46:ARG:HB2	2.19	0.42
10:QJ:75:ILE:CG1	10:QJ:76:ASN:H	2.18	0.42
17:QQ:27:PHE:HA	17:QQ:28:PRO:HD3	1.91	0.42
19:QS:29:ARG:HD3	19:QS:30:LEU:H	1.84	0.42
19:QS:30:LEU:O	19:QS:31:ILE:HB	2.19	0.42
20:QT:36:LEU:HD13	20:QT:36:LEU:HA	1.82	0.42
21:QU:6:ARG:C	21:QU:8:THR:H	2.20	0.42
25:RA:2432:A:C8	47:R1:33:LYS:HE2	2.54	0.42
50:R4:54:GLY:HA2	50:R4:57:GLU:CG	2.50	0.42
52:R6:33:LYS:C	52:R6:35:GLU:H	2.22	0.42
25:RA:1159:U:O2'	25:RA:1160:G:H5'	2.18	0.42
25:RA:1167:U:C2	25:RA:1183:G:N2	2.87	0.42
25:RA:1337:G:C4	25:RA:1338:G:C8	3.07	0.42
25:RA:1382:G:C5	25:RA:1383:C:C4	3.07	0.42
25:RA:1534:G:H2'	25:RA:1534:G:N3	2.33	0.42
25:RA:1880:C:H2'	25:RA:1881:C:O4'	2.19	0.42
25:RA:2068:U:H3	25:RA:2430:A:H2	1.60	0.42
25:RA:2183:C:H2'	25:RA:2184:G:C8	2.50	0.42
25:RA:2397:G:H2'	25:RA:2398:U:C6	2.49	0.42
25:RA:2758:A:C2	25:RA:2759:G:H1'	2.54	0.42
25:RA:2816:C:H2'	25:RA:2817:G:C8	2.54	0.42
25:RA:273:G:H1	25:RA:364:C:N4	2.17	0.42
25:RA:417:C:H2'	25:RA:418:G:O4'	2.19	0.42
25:RA:748:G:O6	42:RW:90:ARG:NH1	2.53	0.42
25:RA:897:C:H2'	25:RA:898:C:H6	1.83	0.42
28:RE:137:HIS:CB	28:RE:138:PRO:HD2	2.42	0.42
28:RE:143:ASN:HB2	28:RE:147:PRO:HD2	2.00	0.42
28:RE:3:GLY:HA3	28:RE:81:ILE:CD1	2.48	0.42
30:RG:109:VAL:C	30:RG:112:PRO:HD2	2.40	0.42
30:RG:121:ASN:HA	30:RG:181:ARG:NH2	2.34	0.42
31:RH:120:GLY:O	31:RH:136:ILE:HD12	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:89:ILE:H	31:RH:89:ILE:CD1	2.32	0.42
33:RN:10:GLU:OE2	33:RN:11:PRO:CD	2.68	0.42
34:RO:31:LYS:HA	34:RO:31:LYS:HD3	1.91	0.42
35:RP:37:GLY:O	35:RP:38:GLN:C	2.58	0.42
39:RT:80:SER:HA	39:RT:81:PRO:HD3	1.73	0.42
40:RU:79:PHE:CD2	40:RU:83:LEU:HD13	2.54	0.42
41:RV:59:ALA:HA	41:RV:95:LEU:O	2.19	0.42
1:XA:1403:C:H6	1:XA:1403:C:O5'	2.02	0.42
2:XB:163:PHE:CD2	2:XB:185:ILE:HD12	2.54	0.42
2:XB:16:HIS:CD2	2:XB:213:LEU:HD13	2.54	0.42
2:XB:33:TYR:HD1	2:XB:33:TYR:C	2.23	0.42
2:XB:92:TYR:C	2:XB:92:TYR:HD1	2.21	0.42
3:XC:83:ARG:O	3:XC:86:VAL:HG22	2.20	0.42
4:XD:59:ARG:NE	4:XD:59:ARG:HA	2.34	0.42
8:XH:85:ARG:HA	8:XH:135:CYS:HB3	2.02	0.42
10:XJ:49:VAL:HG11	14:YN:41:ARG:O	2.19	0.42
12:XL:120:TYR:O	12:XL:121:GLY:C	2.57	0.42
13:XM:88:ARG:HD2	13:XM:88:ARG:O	2.19	0.42
14:YN:48:ALA:HA	14:YN:53:LEU:HD12	2.02	0.42
14:YN:9:LYS:O	14:YN:9:LYS:HG2	2.19	0.42
16:XP:83:GLU:HG3	16:XP:84:ALA:N	2.33	0.42
18:XR:29:PHE:N	18:XR:29:PHE:HD2	2.17	0.42
19:XS:18:LYS:O	19:XS:18:LYS:HD2	2.19	0.42
46:Y0:11:ARG:CZ	46:Y0:11:ARG:CB	2.97	0.42
51:Y5:20:ARG:HA	51:Y5:23:HIS:CE1	2.55	0.42
53:Y7:12:ARG:HH21	53:Y7:44:PRO:HB3	1.85	0.42
25:YA:1317:A:H2'	25:YA:1318:C:C6	2.55	0.42
25:YA:1466:G:N2	25:YA:1547:C:N3	2.67	0.42
25:YA:1473:G:C2	25:YA:1474:C:C2	3.08	0.42
25:YA:49:A:H61	25:YA:177:G:H2'	1.85	0.42
25:YA:2313:C:O2'	25:YA:2314:C:H5'	2.20	0.42
25:YA:590:A:H2'	25:YA:591:C:O4'	2.19	0.42
25:YA:620:G:H4'	25:YA:621:A:C5'	2.49	0.42
27:YD:177:LEU:C	27:YD:179:SER:H	2.23	0.42
27:YD:2:ALA:O	27:YD:3:VAL:CB	2.68	0.42
27:YD:75:ILE:HG21	27:YD:99:ASP:HB2	2.01	0.42
28:YE:117:MET:HA	28:YE:122:PHE:N	2.35	0.42
29:YF:132:VAL:HG23	29:YF:133:ASN:H	1.82	0.42
30:YG:117:PHE:CE1	30:YG:119:GLY:CA	3.03	0.42
30:YG:73:ALA:O	30:YG:84:LYS:O	2.38	0.42
31:YH:136:ILE:O	31:YH:137:ASP:O	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:58:GLU:O	31:YH:60:ARG:N	2.52	0.42
34:YO:1:MET:HG2	34:YO:67:LYS:HG2	2.02	0.42
39:YT:54:ARG:HA	39:YT:59:THR:HG23	2.02	0.42
39:YT:96:ARG:CZ	39:YT:96:ARG:HB2	2.49	0.42
40:YU:79:PHE:CD2	40:YU:83:LEU:HD13	2.54	0.42
41:YV:25:LEU:H	41:YV:92:THR:CG2	2.28	0.42
42:YW:81:ALA:C	42:YW:82:LEU:HD12	2.40	0.42
43:YX:87:GLN:C	43:YX:88:LYS:HG3	2.40	0.42
44:YY:60:PHE:CD2	44:YY:60:PHE:N	2.87	0.42
45:YZ:70:LEU:HD11	45:YZ:98:MET:CE	2.49	0.42
1:QA:1053:G:H2'	1:QA:1199:U:H5	1.84	0.42
1:QA:119:A:C8	1:QA:288:A:C2	3.07	0.42
1:QA:1048:G:N2	1:QA:1209:C:N3	2.58	0.42
1:QA:1213:A:N6	1:QA:1215:G:N3	2.68	0.42
1:QA:162:A:C5	1:QA:163:C:H1'	2.55	0.42
1:QA:230:G:N2	1:QA:231:G:H1'	2.35	0.42
1:QA:323:U:H2'	1:QA:324:G:O4'	2.19	0.42
1:QA:372:C:O2'	1:QA:373:A:O5'	2.37	0.42
1:QA:410:G:H2'	1:QA:429:U:C4	2.55	0.42
1:QA:44:G:C6	1:QA:45:U:C2	3.08	0.42
1:QA:651:C:N4	1:QA:753:A:OP2	2.47	0.42
3:QC:143:GLU:C	3:QC:145:GLY:H	2.23	0.42
4:QD:13:ARG:NH2	4:QD:36:ARG:HH21	2.15	0.42
6:QF:46:ARG:HG3	6:QF:47:ARG:N	2.34	0.42
7:QG:11:GLN:HG3	7:QG:12:LEU:H	1.85	0.42
7:QG:75:VAL:HG13	7:QG:145:ALA:HA	2.00	0.42
8:QH:102:ARG:NH1	8:QH:105:ARG:CZ	2.80	0.42
9:QI:25:LYS:O	9:QI:60:ASP:OD1	2.37	0.42
18:QR:64:ARG:O	18:QR:65:ILE:C	2.58	0.42
18:QR:63:GLN:O	18:QR:66:LEU:HB3	2.18	0.42
49:R3:37:LEU:HD12	49:R3:43:ILE:CG2	2.50	0.42
25:RA:1216:G:N2	25:RA:1234:U:H1'	2.34	0.42
25:RA:579:G:C2	25:RA:1262:A:C4	3.07	0.42
25:RA:1401:G:C6	25:RA:1402:C:C4	3.07	0.42
25:RA:2094:G:C2	25:RA:2196:C:C2	3.08	0.42
25:RA:2327:A:H2'	25:RA:2328:A:C8	2.55	0.42
25:RA:500:G:N2	25:RA:502:A:H3'	2.34	0.42
25:RA:738:G:O6	25:RA:739:G:N1	2.53	0.42
25:RA:760:G:H2'	25:RA:761:A:O4'	2.20	0.42
25:RA:2729:G:C1'	28:RE:187:ALA:HB2	2.37	0.42
28:RE:101:ARG:C	28:RE:201:THR:OG1	2.58	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:24:THR:HB	28:RE:184:VAL:HG23	2.02	0.42
28:RE:35:GLN:HB3	28:RE:48:GLN:HB2	2.01	0.42
30:RG:34:LEU:HD11	30:RG:99:MET:CE	2.49	0.42
31:RH:136:ILE:O	31:RH:137:ASP:O	2.38	0.42
31:RH:169:VAL:HG22	31:RH:170:ARG:N	2.25	0.42
32:RI:117:GLU:O	32:RI:118:LYS:CB	2.67	0.42
33:RN:75:TYR:HA	33:RN:82:LEU:HA	2.01	0.42
25:RA:1952:A:C2	34:RO:22:ILE:HG23	2.55	0.42
36:RQ:27:VAL:HG11	36:RQ:134:ARG:HG3	2.00	0.42
36:RQ:65:PHE:O	36:RQ:66:ILE:CG1	2.48	0.42
37:RR:29:LEU:HD11	37:RR:48:VAL:CG1	2.50	0.42
38:RS:83:LYS:HE3	38:RS:84:GLN:HG3	2.02	0.42
39:RT:24:PRO:HA	39:RT:49:VAL:CG1	2.39	0.42
40:RU:97:ASP:HA	40:RU:100:VAL:HG23	2.01	0.42
40:RU:91:ASP:OD2	40:RU:96:ALA:HB2	2.19	0.42
42:RW:14:PRO:O	42:RW:15:ARG:C	2.58	0.42
44:RY:20:TYR:CE1	44:RY:42:VAL:HA	2.55	0.42
44:RY:60:PHE:CD2	44:RY:60:PHE:N	2.87	0.42
45:RZ:63:ASP:O	45:RZ:64:GLY:C	2.57	0.42
1:XA:1095:U:H2'	1:XA:1096:C:O4'	2.20	0.42
1:XA:1190:G:OP1	3:XC:4:LYS:HA	2.19	0.42
1:XA:1401:G:C2	1:XA:1402:C:H1'	2.55	0.42
2:XB:109:SER:C	2:XB:111:ARG:N	2.73	0.42
2:XB:158:LEU:HD12	2:XB:158:LEU:C	2.39	0.42
2:XB:67:THR:C	2:XB:68:ILE:HD12	2.40	0.42
4:XD:206:PHE:CD2	4:XD:207:TYR:HD1	2.37	0.42
5:XE:31:LEU:HD23	5:XE:45:PHE:HD1	1.85	0.42
4:QD:172:PRO:CG	6:XF:24:GLU:OE1	2.67	0.42
7:XG:15:ASP:OD1	7:XG:23:VAL:HG11	2.19	0.42
9:XI:35:GLU:O	9:XI:35:GLU:HG2	2.19	0.42
9:XI:71:SER:O	9:XI:74:ILE:N	2.52	0.42
11:XK:33:THR:HB	11:XK:37:GLY:C	2.40	0.42
7:XG:151:TYR:CE1	11:XK:54:ARG:HG2	2.54	0.42
19:XS:21:GLU:HG3	19:XS:22:LEU:CD1	2.49	0.42
19:XS:39:THR:CG2	19:XS:40:ILE:H	2.24	0.42
19:XS:68:GLY:H	50:Y4:59:PHE:HZ	1.62	0.42
22:XV:15:G:N2	22:XV:48:C:H42	2.17	0.42
22:XV:35:A:C2	23:XX:3:G:N3	2.87	0.42
46:Y0:74:ARG:H	46:Y0:74:ARG:HG3	1.60	0.42
25:YA:2395:C:O2'	47:Y1:30:VAL:HG12	2.20	0.42
48:Y2:27:GLU:CD	48:Y2:27:GLU:H	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:Y6:41:PRO:HG3	52:Y6:44:ARG:HB2	2.01	0.42
52:Y6:7:ILE:O	52:Y6:8:LYS:CG	2.68	0.42
54:Y8:28:GLY:O	54:Y8:29:LYS:O	2.37	0.42
25:YA:1010:A:H1'	25:YA:1153:C:H1'	2.00	0.42
25:YA:1251:C:OP1	40:YU:10:ARG:HG3	2.20	0.42
25:YA:1554:A:O2'	25:YA:1555:G:P	2.78	0.42
25:YA:2336:A:H61	46:Y0:43:THR:CG2	2.33	0.42
25:YA:2525:G:H1	25:YA:2538:C:H42	1.68	0.42
25:YA:2564:A:C6	25:YA:2565:A:C6	3.07	0.42
25:YA:2567:G:H2'	25:YA:2568:C:C6	2.55	0.42
25:YA:2845:G:H2'	25:YA:2846:G:H8	1.84	0.42
27:YD:25:THR:HG23	27:YD:27:THR:HB	2.02	0.42
28:YE:31:CYS:HB3	28:YE:49:LEU:HG	2.01	0.42
25:YA:2636:U:OP1	28:YE:79:ARG:HG3	2.19	0.42
25:YA:443:A:H3'	29:YF:45:ARG:NH1	2.34	0.42
29:YF:62:ARG:NH1	29:YF:62:ARG:CB	2.82	0.42
30:YG:109:VAL:C	30:YG:112:PRO:HD2	2.40	0.42
31:YH:77:LYS:HB3	31:YH:77:LYS:HZ2	1.78	0.42
32:YI:138:ILE:O	32:YI:138:ILE:HG23	2.19	0.42
32:YI:145:VAL:HG23	32:YI:146:ALA:N	2.35	0.42
33:YN:75:TYR:HA	33:YN:82:LEU:HA	2.01	0.42
38:YS:52:SER:HB2	38:YS:55:ALA:CB	2.49	0.42
39:YT:3:ARG:O	39:YT:4:GLY:C	2.58	0.42
41:YV:59:ALA:HA	41:YV:95:LEU:O	2.19	0.42
25:YA:1338:G:O6	43:YX:62:LYS:HE2	2.19	0.42
25:YA:85:G:OP1	44:YY:8:LYS:HA	2.19	0.42
45:YZ:102:LEU:HD22	45:YZ:156:LYS:HZ1	1.83	0.42
1:QA:1446:A:H5'	1:QA:1446:A:N3	2.33	0.42
1:QA:341:C:H2'	1:QA:342:C:C6	2.54	0.42
1:QA:501:C:H2'	1:QA:502:G:C8	2.55	0.42
1:QA:512:U:H2'	1:QA:513:C:C6	2.55	0.42
2:QB:197:VAL:CG1	2:QB:198:ASP:N	2.82	0.42
3:QC:35:GLU:O	3:QC:38:ARG:N	2.53	0.42
5:QE:71:LEU:HD11	5:QE:113:ALA:O	2.20	0.42
9:QI:71:SER:O	9:QI:74:ILE:N	2.52	0.42
12:QL:38:THR:HG22	12:QL:57:LYS:HB3	2.01	0.42
13:QM:13:LYS:HA	13:QM:44:ARG:CD	2.48	0.42
17:QQ:76:LEU:HD21	17:QQ:79:SER:HB2	2.01	0.42
19:QS:18:LYS:O	19:QS:18:LYS:HD2	2.19	0.42
20:QT:96:GLY:O	20:QT:97:ALA:CB	2.64	0.42
20:QT:99:LEU:O	20:QT:100:ILE:CB	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:QV:17:C:O2	22:QV:17:C:H2'	2.20	0.42
47:R1:76:ARG:CD	47:R1:76:ARG:H	2.28	0.42
51:R5:40:LYS:HE2	51:R5:47:PRO:HG2	2.02	0.42
52:R6:7:ILE:O	52:R6:8:LYS:CG	2.68	0.42
25:RA:942:G:O2'	25:RA:1189:A:H2'	2.20	0.42
25:RA:1429:G:H2'	25:RA:1430:C:H6	1.83	0.42
25:RA:1705:G:C6	25:RA:1706:U:C4	3.07	0.42
25:RA:1800:C:OP1	27:RD:260:ARG:NH2	2.52	0.42
25:RA:1821:A:H8	25:RA:1821:A:OP2	2.02	0.42
25:RA:1847:A:H5'	25:RA:1848:A:OP2	2.20	0.42
25:RA:2526:G:C5	25:RA:2527:C:C5	3.07	0.42
25:RA:2867:G:HO2'	25:RA:2868:A:P	2.42	0.42
25:RA:76:C:O2'	25:RA:77:C:H5'	2.20	0.42
25:RA:968:G:C6	25:RA:969:U:C4	3.07	0.42
27:RD:182:LEU:N	27:RD:272:ALA:HB3	2.32	0.42
28:RE:121:ASN:O	28:RE:122:PHE:C	2.57	0.42
28:RE:104:VAL:CG1	28:RE:188:VAL:HG23	2.49	0.42
29:RF:63:LYS:HE2	29:RF:67:GLN:HB2	2.01	0.42
31:RH:125:VAL:HG12	31:RH:126:PRO:CD	2.49	0.42
33:RN:43:THR:HA	33:RN:44:PRO:HD2	1.92	0.42
34:RO:50:GLY:O	34:RO:51:ALA:C	2.57	0.42
38:RS:102:ALA:C	38:RS:104:GLY:N	2.73	0.42
39:RT:110:ILE:CG2	39:RT:111:ARG:N	2.82	0.42
40:RU:43:GLY:HA3	41:RV:73:SER:OG	2.19	0.42
41:RV:21:ARG:HD2	41:RV:91:TYR:CE2	2.55	0.42
42:RW:71:VAL:HA	42:RW:107:LEU:HD12	2.02	0.42
45:RZ:153:SER:O	45:RZ:154:ASP:HB3	2.20	0.42
45:RZ:152:ALA:H	45:RZ:170:THR:H	1.66	0.42
1:XA:1091:U:N3	1:XA:1094:G:OP2	2.31	0.42
1:XA:977:A:H8	1:XA:1223:C:N3	2.17	0.42
1:XA:1312:G:H3'	50:Y4:67:TYR:OH	2.19	0.42
1:XA:1394:A:C5	1:XA:1501:C:H4'	2.55	0.42
1:XA:452:A:H4'	16:XP:72:ARG:NH2	2.35	0.42
1:XA:529:G:H22	12:XL:51:ALA:HB2	1.84	0.42
1:XA:575:G:O2'	1:XA:821:G:H5'	2.20	0.42
1:XA:977:A:H8	1:XA:1223:C:C2	2.37	0.42
3:XC:23:TYR:CD2	3:XC:24:ALA:N	2.88	0.42
3:XC:35:GLU:O	3:XC:38:ARG:N	2.53	0.42
5:XE:78:HIS:CD2	8:XH:104:ARG:HE	2.37	0.42
5:XE:78:HIS:HE1	5:XE:143:ARG:N	2.12	0.42
6:XF:46:ARG:HG3	6:XF:47:ARG:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:XL:119:LYS:HB2	12:XL:120:TYR:HD1	1.83	0.42
12:XL:53:ARG:HH12	12:XL:92:ASP:CB	2.33	0.42
13:XM:19:LEU:HD22	13:XM:19:LEU:N	2.33	0.42
16:XP:55:ARG:O	16:XP:56:ALA:C	2.57	0.42
50:Y4:54:GLY:HA2	50:Y4:57:GLU:CG	2.50	0.42
52:Y6:25:LYS:HE2	52:Y6:27:LYS:CD	2.49	0.42
43:YX:60:ARG:HH12	53:Y7:47:ARG:HH22	1.67	0.42
25:YA:1149:G:H2'	25:YA:1150:C:C6	2.54	0.42
25:YA:1204:A:H2	25:YA:1241:A:N1	2.18	0.42
25:YA:130:C:O3'	25:YA:1349:A:H1'	2.19	0.42
25:YA:1344:G:H5'	25:YA:1384:A:C6	2.54	0.42
25:YA:1405:U:H2'	25:YA:1406:U:C6	2.54	0.42
25:YA:1594:G:C6	25:YA:1595:G:C5	3.08	0.42
25:YA:1929:G:H4'	25:YA:1930:G:OP1	2.19	0.42
25:YA:2469:A:H3'	25:YA:2470:G:O4'	2.19	0.42
25:YA:2531:A:N6	25:YA:2662:A:H61	2.17	0.42
26:YB:38:C:O2	26:YB:48:A:H1'	2.20	0.42
26:YB:48:A:P	38:YS:30:ARG:NH2	2.93	0.42
27:YD:71:ASP:CB	27:YD:103:ARG:HH22	2.32	0.42
27:YD:12:SER:O	27:YD:14:ARG:N	2.51	0.42
27:YD:158:ALA:HB3	27:YD:161:THR:CG2	2.49	0.42
27:YD:263:ARG:CB	27:YD:263:ARG:NH1	2.75	0.42
28:YE:36:ARG:HB3	28:YE:36:ARG:NH1	2.31	0.42
29:YF:109:GLY:O	29:YF:110:LEU:C	2.58	0.42
29:YF:11:VAL:HG12	29:YF:12:LEU:H	1.85	0.42
29:YF:123:LEU:HD12	29:YF:124:LEU:H	1.82	0.42
31:YH:119:GLU:CD	31:YH:120:GLY:H	2.22	0.42
28:YE:152:LYS:HG2	33:YN:78:TYR:CD1	2.55	0.42
34:YO:2:ILE:HG12	34:YO:8:LEU:HD11	2.02	0.42
34:YO:50:GLY:O	34:YO:51:ALA:C	2.57	0.42
35:YP:119:GLU:OE1	35:YP:119:GLU:HA	2.19	0.42
35:YP:135:LEU:HD13	35:YP:139:LYS:HE3	2.01	0.42
35:YP:37:GLY:O	35:YP:38:GLN:C	2.58	0.42
36:YQ:132:VAL:HG11	45:YZ:81:ARG:CZ	2.50	0.42
37:YR:10:LEU:C	37:YR:12:ARG:N	2.72	0.42
38:YS:95:HIS:O	38:YS:96:GLY:C	2.57	0.42
42:YW:74:ALA:O	42:YW:75:TYR:CB	2.65	0.42
45:YZ:82:ARG:HG3	45:YZ:83:PRO:CD	2.50	0.42
1:QA:1296:C:H5'	1:QA:1297:C:OP2	2.20	0.42
1:QA:1316:G:O2'	1:QA:1318:A:N7	2.49	0.42
1:QA:1348:U:C4	1:QA:1374:A:H2	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1434:A:H2'	1:QA:1435:G:O4'	2.20	0.42
1:QA:222:U:C2	1:QA:223:U:C5	3.08	0.42
1:QA:250:A:H4'	1:QA:251:G:O5'	2.20	0.42
1:QA:501:C:O3'	12:QL:118:SER:HB2	2.20	0.42
1:QA:977:A:N3	1:QA:977:A:H3'	2.35	0.42
2:QB:130:ARG:NH2	2:QB:138:LEU:HD21	2.34	0.42
2:QB:200:ILE:CG2	2:QB:201:ILE:N	2.83	0.42
2:QB:204:ASN:C	2:QB:204:ASN:HD22	2.22	0.42
2:QB:69:LEU:HD12	2:QB:91:PRO:O	2.19	0.42
3:QC:88:ARG:NH2	3:QC:101:LEU:O	2.53	0.42
3:QC:47:LEU:HD11	3:QC:76:VAL:CG1	2.42	0.42
3:QC:58:GLU:HB2	3:QC:65:ALA:HB3	2.01	0.42
4:QD:150:GLU:C	4:QD:152:SER:N	2.73	0.42
1:QA:1081:G:P	5:QE:16:THR:OG1	2.78	0.42
6:QF:45:LEU:CD1	6:QF:59:TYR:HD1	2.30	0.42
8:QH:95:VAL:HG23	8:QH:95:VAL:O	2.20	0.42
12:QL:117:ARG:HB3	12:QL:122:THR:HB	2.02	0.42
14:QN:24:CYS:SG	14:QN:39:LEU:C	2.99	0.42
16:QP:21:VAL:HG21	16:QP:59:TRP:NE1	2.35	0.42
19:QS:41:VAL:HG11	19:QS:45:VAL:HG13	2.02	0.42
22:QV:58:A:O2'	22:QV:60:U:OP2	2.17	0.42
23:QX:2:U:HO2'	23:QX:3:G:H5'	1.82	0.42
46:R0:49:LYS:N	46:R0:80:HIS:ND1	2.63	0.42
47:R1:74:VAL:O	47:R1:74:VAL:CG1	2.64	0.42
50:R4:2:LYS:HD2	50:R4:2:LYS:HA	1.61	0.42
25:RA:1529:A:H2'	25:RA:1530:G:O4'	2.19	0.42
25:RA:1030:G:H4'	25:RA:2466:C:O2'	2.20	0.42
25:RA:2625:G:H2'	25:RA:2626:C:C6	2.55	0.42
25:RA:483:A:H4'	44:RY:49:VAL:CA	2.46	0.42
25:RA:13:A:C2	25:RA:526:A:N7	2.88	0.42
25:RA:903:C:H2'	25:RA:904:C:C6	2.54	0.42
25:RA:949:C:H42	25:RA:968:G:H1	1.68	0.42
27:RD:9:TYR:CZ	27:RD:13:ARG:HD3	2.54	0.42
28:RE:10:GLY:HA3	39:RT:8:LYS:HD3	2.02	0.42
28:RE:117:MET:HA	28:RE:122:PHE:N	2.35	0.42
28:RE:144:ARG:HB3	28:RE:145:LYS:H	1.58	0.42
28:RE:176:ILE:N	28:RE:176:ILE:HD12	2.35	0.42
28:RE:28:ALA:HB3	28:RE:93:VAL:CG2	2.47	0.42
29:RF:118:ALA:HA	29:RF:123:LEU:HB3	2.02	0.42
29:RF:132:VAL:CG2	29:RF:133:ASN:N	2.80	0.42
29:RF:192:LEU:HD21	29:RF:194:MET:HE3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:16:ARG:NE	30:RG:31:VAL:HG11	2.34	0.42
30:RG:51:ARG:CB	30:RG:51:ARG:NH1	2.83	0.42
30:RG:55:LYS:O	30:RG:59:GLU:HB2	2.19	0.42
30:RG:63:ILE:HG12	30:RG:64:THR:N	2.33	0.42
30:RG:78:SER:O	30:RG:80:PHE:N	2.53	0.42
30:RG:99:MET:O	30:RG:103:LEU:HB2	2.20	0.42
32:RI:112:LYS:HG2	32:RI:112:LYS:H	1.62	0.42
32:RI:77:LEU:CD1	32:RI:140:LEU:HB2	2.49	0.42
33:RN:62:VAL:HG12	33:RN:66:LYS:HB2	2.01	0.42
35:RP:98:GLU:O	35:RP:99:LEU:C	2.57	0.42
36:RQ:118:LEU:HD23	36:RQ:118:LEU:HA	1.87	0.42
38:RS:49:VAL:HG21	38:RS:77:ALA:HA	2.02	0.42
39:RT:3:ARG:O	39:RT:4:GLY:C	2.58	0.42
40:RU:35:ALA:O	40:RU:39:LEU:HG	2.19	0.42
40:RU:39:LEU:O	40:RU:42:ALA:N	2.53	0.42
41:RV:35:LEU:HB2	41:RV:37:VAL:CG2	2.48	0.42
42:RW:81:ALA:C	42:RW:82:LEU:HD12	2.40	0.42
43:RX:54:VAL:C	43:RX:55:ASN:HD22	2.23	0.42
43:RX:57:LEU:HD12	43:RX:57:LEU:H	1.85	0.42
1:XA:1221:G:OP1	19:XS:36:ARG:HD3	2.20	0.42
1:XA:1388:C:H2'	1:XA:1389:C:C6	2.55	0.42
1:XA:579:G:C6	1:XA:580:U:C4	3.08	0.42
1:XA:664:G:N2	1:XA:741:G:H1	2.17	0.42
1:XA:677:U:H2'	1:XA:678:U:C6	2.54	0.42
1:XA:936:C:H2'	1:XA:937:A:O4'	2.20	0.42
2:XB:109:SER:C	2:XB:111:ARG:H	2.21	0.42
2:XB:211:ILE:O	2:XB:215:LEU:HB2	2.20	0.42
3:XC:113:ALA:C	3:XC:115:LEU:N	2.72	0.42
5:XE:153:LYS:C	5:XE:153:LYS:HD3	2.40	0.42
7:XG:11:GLN:HG3	7:XG:12:LEU:H	1.85	0.42
8:XH:95:VAL:O	8:XH:95:VAL:HG23	2.20	0.42
10:XJ:49:VAL:HG13	10:XJ:50:ILE:N	2.35	0.42
13:XM:16:ASP:HB3	13:XM:34:LEU:CD1	2.49	0.42
15:XO:54:ARG:NH1	15:XO:58:MET:SD	2.93	0.42
15:XO:64:ARG:CD	15:XO:68:ARG:NH2	2.82	0.42
19:XS:58:VAL:HG23	19:XS:58:VAL:O	2.20	0.42
19:XS:4:SER:O	19:XS:5:LEU:HD13	2.20	0.42
20:XT:99:LEU:O	20:XT:100:ILE:CB	2.68	0.42
22:XV:43:A:H2'	22:XV:44:A:C8	2.54	0.42
47:Y1:56:GLN:HB2	47:Y1:57:GLU:H	1.48	0.42
49:Y3:7:LYS:O	49:Y3:7:LYS:HG2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:5:LEU:CD2	50:Y4:66:SER:HB2	2.49	0.42
51:Y5:40:LYS:HE2	51:Y5:47:PRO:HG2	2.02	0.42
52:Y6:50:ARG:HH11	52:Y6:50:ARG:HG2	1.85	0.42
53:Y7:9:ARG:NH1	53:Y7:47:ARG:HG3	2.35	0.42
35:YP:64:LYS:HG3	54:Y8:25:MET:CE	2.50	0.42
25:YA:1018:C:O3'	25:YA:1120:G:N2	2.52	0.42
25:YA:1094:U:O2'	25:YA:1096:A:OP1	2.26	0.42
25:YA:729:G:H2'	25:YA:1775:U:H1'	2.02	0.42
25:YA:2331:G:H5'	46:Y0:44:ARG:HG3	2.01	0.42
25:YA:2531:A:H2	25:YA:2658:C:O2	2.02	0.42
25:YA:2653:U:H3'	25:YA:2654:A:C8	2.55	0.42
25:YA:273:G:H1	25:YA:364:C:H42	1.67	0.42
25:YA:2804:C:H2'	25:YA:2805:G:O4'	2.20	0.42
25:YA:2849:U:H4'	25:YA:2868:A:N1	2.34	0.42
25:YA:514:A:H1'	25:YA:581:C:O2'	2.20	0.42
25:YA:6:A:H2'	25:YA:7:G:C8	2.54	0.42
25:YA:917:A:N6	26:YB:80:U:H4'	2.34	0.42
27:YD:109:ASP:HB2	27:YD:197:GLY:HA2	2.02	0.42
27:YD:196:VAL:CG1	27:YD:196:VAL:O	2.68	0.42
28:YE:176:ILE:N	28:YE:176:ILE:HD12	2.35	0.42
28:YE:28:ALA:HB3	28:YE:93:VAL:CG2	2.47	0.42
28:YE:35:GLN:HB3	28:YE:48:GLN:HB2	2.01	0.42
29:YF:101:LEU:HD12	29:YF:102:PRO:N	2.33	0.42
29:YF:183:VAL:HG22	29:YF:184:TYR:N	2.35	0.42
29:YF:192:LEU:HD21	29:YF:194:MET:HE3	2.02	0.42
30:YG:4:ASP:O	30:YG:5:VAL:HB	2.20	0.42
30:YG:99:MET:O	30:YG:103:LEU:HB2	2.20	0.42
31:YH:105:LEU:N	31:YH:105:LEU:CD1	2.81	0.42
31:YH:84:SER:O	31:YH:85:LYS:CB	2.64	0.42
32:YI:87:LYS:HA	32:YI:122:GLU:HA	2.02	0.42
34:YO:20:MET:O	34:YO:41:ALA:CB	2.67	0.42
35:YP:83:VAL:HG11	35:YP:112:LEU:HD21	1.97	0.42
36:YQ:27:VAL:HG11	36:YQ:134:ARG:HG3	2.00	0.42
38:YS:26:LEU:HB3	38:YS:87:PHE:HA	2.02	0.42
39:YT:24:PRO:HA	39:YT:49:VAL:CG1	2.39	0.42
41:YV:47:VAL:HG13	41:YV:48:GLY:N	2.26	0.42
44:YY:95:LYS:HA	44:YY:101:LYS:N	2.33	0.42
44:YY:91:GLU:CG	44:YY:92:ASN:N	2.83	0.42
45:YZ:68:PRO:HG2	45:YZ:68:PRO:O	2.20	0.42
1:QA:1424:C:H2'	1:QA:1425:U:O4'	2.20	0.42
1:QA:537:G:H5"	12:QL:113:ARG:HH12	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:685:G:H5''	1:QA:686:U:OP2	2.19	0.42
1:QA:838:G:C5	1:QA:842:C:H1'	2.55	0.42
1:QA:887:G:H21	1:QA:1489:G:H4'	1.85	0.42
2:QB:155:LEU:C	2:QB:157:ARG:H	2.22	0.42
2:QB:162:ILE:O	2:QB:185:ILE:CG1	2.67	0.42
4:QD:111:ALA:HB3	4:QD:117:ALA:HB2	2.02	0.42
4:QD:178:VAL:HG12	4:QD:179:GLU:N	2.35	0.42
6:QF:36:ARG:CZ	6:QF:38:GLU:HG2	2.49	0.42
7:QG:80:VAL:CG1	7:QG:81:GLY:N	2.83	0.42
8:QH:53:VAL:HG12	8:QH:54:ASP:OD2	2.20	0.42
8:QH:74:PRO:O	8:QH:75:ARG:C	2.58	0.42
1:QA:1179:A:H5''	9:QI:102:LEU:O	2.20	0.42
9:QI:22:GLY:O	9:QI:23:ASN:C	2.57	0.42
9:QI:35:GLU:O	9:QI:35:GLU:HG2	2.19	0.42
9:QI:6:GLY:HA3	9:QI:84:ALA:HB2	2.01	0.42
11:QK:72:ALA:HB1	11:QK:77:MET:HG2	2.02	0.42
13:QM:119:GLY:O	13:QM:120:LYS:O	2.38	0.42
17:QQ:77:VAL:HG12	17:QQ:77:VAL:O	2.20	0.42
17:QQ:82:MET:C	17:QQ:84:LEU:N	2.72	0.42
19:QS:15:LEU:CD2	19:QS:15:LEU:N	2.79	0.42
20:QT:10:LEU:O	20:QT:12:ALA:N	2.53	0.42
20:QT:50:GLU:HA	20:QT:100:ILE:HG22	2.02	0.42
47:R1:81:LYS:CD	47:R1:81:LYS:N	2.83	0.42
49:R3:37:LEU:N	49:R3:37:LEU:HD23	2.35	0.42
50:R4:26:SER:C	50:R4:27:THR:O	2.58	0.42
50:R4:61:ARG:C	50:R4:63:TYR:N	2.73	0.42
50:R4:68:ARG:HB2	50:R4:69:LYS:H	1.35	0.42
53:R7:9:ARG:NH1	53:R7:47:ARG:HG3	2.35	0.42
54:R8:56:GLU:C	54:R8:58:ILE:N	2.73	0.42
25:RA:106:C:H2'	25:RA:107:C:H6	1.85	0.42
25:RA:1142(A):A:O2'	25:RA:1143:A:O5'	2.33	0.42
25:RA:1359:A:N6	25:RA:1372:U:N3	2.66	0.42
25:RA:1538:G:H2'	25:RA:1539:G:H8	1.85	0.42
25:RA:1998:G:H4'	25:RA:2724:C:O2'	2.20	0.42
25:RA:232:G:H8	25:RA:232:G:OP2	2.03	0.42
25:RA:2521:C:H42	25:RA:2544:G:H1	1.67	0.42
25:RA:2542:A:H5'	25:RA:2543:G:OP1	2.19	0.42
25:RA:2776:A:H4'	25:RA:2777:G:O5'	2.19	0.42
25:RA:429:A:C5	25:RA:430:G:C6	3.07	0.42
25:RA:432:A:H2'	25:RA:433:C:H6	1.85	0.42
25:RA:904:C:H5'	25:RA:905:U:OP2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RB:15:A:H1'	26:RB:109:G:N9	2.34	0.42
27:RD:110:GLY:O	27:RD:111:LEU:C	2.59	0.42
27:RD:158:ALA:HB3	27:RD:161:THR:CG2	2.49	0.42
27:RD:165:ILE:O	27:RD:166:GLN:NE2	2.53	0.42
29:RF:198:ALA:HA	29:RF:201:VAL:CG1	2.41	0.42
29:RF:61:GLY:O	29:RF:62:ARG:C	2.58	0.42
30:RG:22:ARG:HH22	30:RG:175:LEU:HD21	1.85	0.42
31:RH:66:GLY:O	31:RH:67:LEU:C	2.58	0.42
31:RH:86:GLU:H	31:RH:86:GLU:CD	2.16	0.42
35:RP:107:LYS:O	35:RP:108:LYS:C	2.58	0.42
25:RA:631:A:H5'	35:RP:65:ARG:HG3	2.02	0.42
39:RT:89:VAL:O	39:RT:90:GLN:CB	2.67	0.42
40:RU:99:ALA:HA	40:RU:106:PHE:HB2	2.01	0.42
43:RX:60:ARG:HA	43:RX:75:ASP:OD2	2.20	0.42
44:RY:91:GLU:CG	44:RY:92:ASN:N	2.83	0.42
45:RZ:134:PRO:C	45:RZ:136:PHE:H	2.22	0.42
45:RZ:48:PHE:CE2	45:RZ:52:SER:HA	2.55	0.42
45:RZ:48:PHE:CE2	45:RZ:71:VAL:HG11	2.55	0.42
1:XA:1347:G:O2'	1:XA:1348:U:P	2.78	0.42
1:XA:735:C:H2'	1:XA:736:C:C6	2.52	0.42
1:XA:828:A:OP1	1:XA:828:A:H4'	2.20	0.42
2:XB:99:GLY:O	2:XB:108:ILE:HD11	2.19	0.42
4:XD:150:GLU:O	4:XD:152:SER:N	2.53	0.42
4:XD:52:SER:O	4:XD:55:ALA:N	2.52	0.42
7:XG:18:TYR:CD2	7:XG:59:LEU:HD13	2.55	0.42
12:XL:109:GLY:HA3	12:XL:121:GLY:O	2.19	0.42
15:XO:50:HIS:O	15:XO:53:HIS:HB3	2.20	0.42
18:XR:74:ARG:NH2	18:XR:81:PHE:HA	2.35	0.42
1:XA:1222:G:OP1	19:XS:77:THR:HG21	2.20	0.42
46:Y0:36:ILE:H	46:Y0:36:ILE:HD13	1.85	0.42
50:Y4:12:ALA:HB1	50:Y4:30:GLU:N	2.35	0.42
52:Y6:24:GLU:HB3	52:Y6:25:LYS:H	1.56	0.42
53:Y7:25:PRO:HA	53:Y7:28:ARG:NH2	2.35	0.42
25:YA:1045:A:O2'	25:YA:1046:A:OP2	2.30	0.42
25:YA:1318:C:C3'	25:YA:1319:G:H5''	2.50	0.42
25:YA:1896:G:H2'	25:YA:1897:G:C8	2.55	0.42
25:YA:227:A:O2'	25:YA:228:A:P	2.77	0.42
25:YA:2315:G:H2'	25:YA:2316:C:C6	2.54	0.42
25:YA:2508:G:H2'	25:YA:2509:G:O4'	2.19	0.42
25:YA:270:A:H1'	25:YA:370:G:C2	2.55	0.42
25:YA:310:A:H5'	44:YY:21:LYS:NZ	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:700:G:H2'	25:YA:701:G:O4'	2.20	0.42
25:YA:782:A:H5'	25:YA:783:A:C2	2.54	0.42
26:YB:70:C:H42	26:YB:106:G:H1	1.68	0.42
27:YD:14:ARG:CG	27:YD:15:PHE:N	2.83	0.42
28:YE:9:VAL:HB	28:YE:10:GLY:H	1.70	0.42
30:YG:55:LYS:O	30:YG:59:GLU:HB2	2.19	0.42
31:YH:89:ILE:CD1	31:YH:89:ILE:H	2.32	0.42
32:YI:74:ASN:CG	32:YI:75:LEU:N	2.68	0.42
33:YN:58:ASP:HB3	33:YN:95:PRO:HB3	2.02	0.42
33:YN:96:GLU:O	33:YN:97:ARG:C	2.57	0.42
35:YP:115:LEU:HB3	35:YP:131:SER:HB2	2.02	0.42
35:YP:114:ILE:CD1	35:YP:130:PHE:CE1	2.98	0.42
35:YP:81:GLN:HB2	35:YP:81:GLN:HE21	1.59	0.42
36:YQ:20:ALA:HB2	36:YQ:99:PRO:HD2	1.99	0.42
37:YR:28:LEU:C	37:YR:28:LEU:HD13	2.40	0.42
37:YR:28:LEU:HD12	37:YR:29:LEU:HD12	2.02	0.42
37:YR:34:ILE:HG22	37:YR:35:THR:N	2.35	0.42
39:YT:50:ILE:HD11	39:YT:102:ILE:HG12	2.01	0.42
28:YE:25:VAL:CG1	39:YT:11:GLU:HG2	2.50	0.42
40:YU:27:LEU:C	40:YU:29:SER:N	2.74	0.42
40:YU:6:THR:HG21	40:YU:10:ARG:CZ	2.50	0.42
41:YV:15:GLU:O	41:YV:96:ILE:HB	2.19	0.42
42:YW:96:ILE:O	42:YW:96:ILE:CG2	2.68	0.42
43:YX:14:SER:O	43:YX:15:GLU:C	2.57	0.42
1:QA:153:C:H2'	1:QA:154:C:C6	2.55	0.42
1:QA:190:G:O6	1:QA:264:U:H5''	2.20	0.42
1:QA:376:G:O2'	1:QA:377:G:H5'	2.20	0.42
1:QA:9:G:H2'	1:QA:10:A:H8	1.84	0.42
2:QB:109:SER:C	2:QB:111:ARG:N	2.73	0.42
2:QB:142:LEU:O	2:QB:145:LEU:HB2	2.19	0.42
2:QB:67:THR:C	2:QB:68:ILE:HD12	2.40	0.42
3:QC:120:VAL:O	3:QC:123:GLN:HB2	2.20	0.42
7:QG:140:ASP:O	7:QG:142:GLU:N	2.52	0.42
7:QG:18:TYR:CD2	7:QG:59:LEU:HD13	2.55	0.42
7:QG:95:ARG:O	7:QG:96:GLN:C	2.58	0.42
5:QE:78:HIS:CD2	8:QH:104:ARG:NE	2.88	0.42
8:QH:86:ILE:CB	8:QH:133:LEU:HD22	2.49	0.42
9:QI:43:ALA:C	9:QI:45:ALA:N	2.72	0.42
10:QJ:29:ARG:O	10:QJ:30:SER:HB3	2.20	0.42
11:QK:21:ILE:HD13	11:QK:84:VAL:HG12	2.02	0.42
12:QL:89:ARG:HB3	12:QL:97:ARG:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:88:ARG:O	13:QM:88:ARG:HD2	2.19	0.42
14:QN:48:ALA:HA	14:QN:53:LEU:HD12	2.01	0.42
16:QP:45:THR:CG2	16:QP:46:PRO:HD2	2.47	0.42
16:QP:8:ARG:HG2	16:QP:8:ARG:NH1	2.31	0.42
17:QQ:11:VAL:HG23	17:QQ:12:SER:N	2.35	0.42
19:QS:7:LYS:CG	19:QS:8:GLY:N	2.83	0.42
20:QT:101:GLY:C	20:QT:103:GLY:N	2.73	0.42
20:QT:13:LEU:CD1	20:QT:17:ARG:NH1	2.82	0.42
21:QU:5:ASP:O	21:QU:11:GLY:HA3	2.20	0.42
47:R1:29:GLY:O	47:R1:31:GLY:N	2.49	0.42
48:R2:41:ILE:CD1	48:R2:41:ILE:C	2.81	0.42
51:R5:56:LYS:O	51:R5:57:VAL:C	2.57	0.42
25:RA:1311:G:O6	53:R7:9:ARG:NH2	2.53	0.42
25:RA:180:G:H5''	25:RA:181:A:OP1	2.20	0.42
25:RA:1764:G:C6	25:RA:1989:G:C2	3.08	0.42
25:RA:2059:A:N6	25:RA:2503:A:H2'	2.35	0.42
25:RA:2238:G:H2'	25:RA:2238:G:N3	2.34	0.42
25:RA:829:A:N6	25:RA:2247:A:O2'	2.48	0.42
25:RA:263:C:H2'	25:RA:264:C:O4'	2.20	0.42
26:RB:28:C:H2'	26:RB:29:A:O4'	2.20	0.42
28:RE:128:SER:O	28:RE:129:HIS:HB2	2.20	0.42
28:RE:13:ARG:HH11	28:RE:13:ARG:HB2	1.81	0.42
28:RE:152:LYS:HG2	33:RN:78:TYR:CD1	2.55	0.42
28:RE:7:VAL:CG2	28:RE:8:LYS:H	2.11	0.42
28:RE:94:GLU:C	28:RE:96:PHE:N	2.72	0.42
29:RF:42:ALA:O	29:RF:45:ARG:HB2	2.18	0.42
34:RO:97:ARG:CA	34:RO:117:LEU:HD22	2.50	0.42
34:RO:16:ALA:HA	34:RO:46:ALA:CB	2.50	0.42
34:RO:1:MET:HG2	34:RO:67:LYS:HG2	2.02	0.42
35:RP:144:GLU:HA	35:RP:145:PRO:HD3	1.76	0.42
37:RR:55:ALA:HA	37:RR:80:PHE:CE2	2.55	0.42
38:RS:51:ALA:HB3	38:RS:73:LEU:HD23	2.01	0.42
38:RS:83:LYS:HE3	38:RS:84:GLN:CG	2.50	0.42
38:RS:99:LYS:C	38:RS:101:LEU:N	2.73	0.42
39:RT:134:GLU:OE1	39:RT:135:ALA:N	2.53	0.42
34:RO:71:ARG:HH11	39:RT:74:ARG:HH21	1.65	0.42
1:XA:1058:G:C5	1:XA:1059:C:C4	3.08	0.42
1:XA:1191:A:H2'	1:XA:1192:C:C6	2.55	0.42
1:XA:1302:U:H2'	1:XA:1302:U:O2	2.19	0.42
1:XA:1339:A:H2'	1:XA:1340:A:O4'	2.19	0.42
1:XA:57:G:H1	1:XA:355:C:H42	1.66	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:430:A:OP1	4:XD:9:CYS:N	2.44	0.42
1:XA:818:G:H3'	1:XA:819:A:H5''	2.01	0.42
2:XB:162:ILE:O	2:XB:185:ILE:CG1	2.67	0.42
3:XC:76:VAL:CG2	3:XC:103:VAL:HG11	2.49	0.42
3:XC:142:MET:HG2	3:XC:149:ALA:HB2	2.01	0.42
4:XD:150:GLU:C	4:XD:152:SER:N	2.73	0.42
4:XD:198:VAL:CG1	4:XD:199:ASN:H	2.32	0.42
6:XF:45:LEU:O	6:XF:46:ARG:HB2	2.19	0.42
8:XH:11:THR:HA	8:XH:14:ARG:NH1	2.35	0.42
9:XI:6:GLY:HA3	9:XI:84:ALA:HB2	2.02	0.42
12:XL:89:ARG:HB3	12:XL:97:ARG:HA	2.02	0.42
14:XN:39:LEU:HB3	14:XN:43:CYS:CB	2.42	0.42
16:XP:45:THR:CG2	16:XP:46:PRO:HD2	2.47	0.42
17:XQ:74:LEU:HD13	17:XQ:74:LEU:O	2.20	0.42
18:XR:53:ARG:C	18:XR:55:ARG:H	2.22	0.42
19:XS:29:ARG:HD3	19:XS:30:LEU:H	1.84	0.42
19:XS:41:VAL:HG11	19:XS:45:VAL:HG13	2.02	0.42
52:Y6:36:LEU:HD13	52:Y6:50:ARG:HH12	1.81	0.42
25:YA:1284:A:H2'	25:YA:1285:G:O4'	2.20	0.42
25:YA:1312:U:C2	25:YA:1603:A:C2	3.07	0.42
25:YA:1356:G:C6	25:YA:1357:U:C4	3.08	0.42
25:YA:1627:G:C2	25:YA:1628:G:C8	3.08	0.42
25:YA:188:G:H1	25:YA:208:C:H42	1.68	0.42
25:YA:529:A:H8	25:YA:530:G:C6	2.37	0.42
27:YD:165:ILE:O	27:YD:166:GLN:NE2	2.53	0.42
25:YA:1971:A:C5	27:YD:241:PRO:HD3	2.55	0.42
28:YE:128:SER:O	28:YE:129:HIS:HB2	2.20	0.42
28:YE:143:ASN:HB2	28:YE:147:PRO:HD2	2.01	0.42
30:YG:27:ASN:HB3	30:YG:30:GLU:OE2	2.19	0.42
31:YH:84:SER:OG	31:YH:85:LYS:N	2.51	0.42
32:YI:123:LEU:HA	32:YI:142:VAL:HG21	2.02	0.42
33:YN:52:VAL:CG1	33:YN:53:VAL:N	2.82	0.42
34:YO:31:LYS:O	34:YO:32:TYR:HD2	2.02	0.42
34:YO:97:ARG:CA	34:YO:117:LEU:HD22	2.50	0.42
35:YP:65:ARG:HH21	54:Y8:15:LYS:HB3	1.85	0.42
36:YQ:34:LEU:HD23	36:YQ:104:PHE:CD1	2.55	0.42
39:YT:105:LEU:HG	39:YT:105:LEU:O	2.19	0.42
40:YU:35:ALA:O	40:YU:39:LEU:HG	2.19	0.42
40:YU:57:PHE:C	40:YU:59:ARG:N	2.74	0.42
41:YV:16:PRO:HB3	41:YV:97:LYS:O	2.20	0.42
43:YX:60:ARG:HH22	53:Y7:47:ARG:HH12	1.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YY:20:TYR:CE1	44:YY:42:VAL:HA	2.55	0.42
44:YY:90:LEU:HB2	44:YY:91:GLU:H	1.53	0.42
45:YZ:153:SER:O	45:YZ:154:ASP:HB3	2.20	0.42
1:QA:1453:G:H8	20:QT:39:LYS:HE2	1.85	0.41
1:QA:386:C:C2'	1:QA:387:U:H5'	2.50	0.41
1:QA:386:C:H2'	1:QA:387:U:H5'	2.01	0.41
1:QA:417:C:H42	1:QA:426:G:H1	1.68	0.41
1:QA:977:A:C8	1:QA:1223:C:C2	3.08	0.41
2:QB:125:PRO:O	2:QB:126:GLU:HB2	2.20	0.41
2:QB:159:PRO:HB2	2:QB:160:ASP:H	1.74	0.41
2:QB:97:TRP:HZ3	2:QB:172:ILE:HG22	1.85	0.41
4:QD:95:GLY:O	4:QD:99:SER:N	2.51	0.41
5:QE:31:LEU:HD23	5:QE:45:PHE:HD1	1.85	0.41
7:QG:141:VAL:CG1	7:QG:141:VAL:O	2.64	0.41
7:QG:17:VAL:HG12	7:QG:18:TYR:CD1	2.55	0.41
1:QA:684:A:O2'	11:QK:39:PRO:O	2.30	0.41
1:QA:528:C:H41	12:QL:49:ASN:CG	2.23	0.41
13:QM:16:ASP:HB3	13:QM:34:LEU:CD1	2.50	0.41
17:QQ:74:LEU:HD13	17:QQ:74:LEU:O	2.20	0.41
50:R4:38:LYS:HG3	50:R4:44:THR:OG1	2.20	0.41
52:R6:19:ARG:HA	52:R6:19:ARG:HD2	1.77	0.41
43:RX:60:ARG:HH12	53:R7:47:ARG:HH22	1.67	0.41
25:RA:1765:C:H2'	25:RA:1766:U:O4'	2.19	0.41
25:RA:1826:G:H4'	27:RD:242:ARG:NH2	2.27	0.41
25:RA:1935:G:H1'	25:RA:1964:G:N2	2.35	0.41
25:RA:962:G:HO2'	25:RA:2496:C:HO2'	1.66	0.41
25:RA:2766:G:H2'	25:RA:2766:G:N3	2.34	0.41
25:RA:299:A:H5'	44:RY:84:ARG:NH2	2.33	0.41
25:RA:13:A:C2	25:RA:525:U:C2	3.08	0.41
25:RA:64:A:H2'	25:RA:65:C:O4'	2.19	0.41
25:RA:918:A:N3	26:RB:80:U:O2'	2.46	0.41
25:RA:1805:U:H5''	27:RD:250:TRP:CD2	2.54	0.41
28:RE:11:MET:HE3	28:RE:186:GLY:HA2	2.01	0.41
30:RG:73:ALA:O	30:RG:84:LYS:O	2.38	0.41
31:RH:128:PRO:CG	31:RH:129:THR:H	2.33	0.41
29:RF:34:TRP:CA	35:RP:6:LEU:HD12	2.46	0.41
43:RX:87:GLN:C	43:RX:88:LYS:HG3	2.40	0.41
1:XA:474:G:H5'	16:XP:81:ARG:HG3	2.00	0.41
1:XA:854:G:H3'	1:XA:871:U:O4	2.19	0.41
4:XD:94:LEU:HA	4:XD:97:LEU:HD12	2.01	0.41
5:XE:26:PHE:N	5:XE:26:PHE:CD1	2.87	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:67:MET:HB2	6:XF:68:PRO:CD	2.47	0.41
7:XG:17:VAL:HG12	7:XG:18:TYR:CD1	2.55	0.41
7:XG:79:ARG:CZ	7:XG:82:GLY:HA2	2.50	0.41
7:XG:95:ARG:O	7:XG:96:GLN:C	2.58	0.41
8:XH:122:ARG:HH11	8:XH:122:ARG:HG3	1.85	0.41
8:XH:28:ALA:CB	8:XH:57:PRO:HB2	2.45	0.41
1:XA:1346:A:H5'	9:XI:120:ARG:HH12	1.85	0.41
10:XJ:45:ARG:HG3	10:XJ:45:ARG:HH11	1.85	0.41
11:XK:72:ALA:HB1	11:XK:77:MET:HG2	2.02	0.41
14:YN:9:LYS:HE2	14:YN:9:LYS:HB3	1.85	0.41
18:XR:64:ARG:O	18:XR:65:ILE:C	2.58	0.41
51:Y5:39:MET:C	51:Y5:40:LYS:HG3	2.39	0.41
54:Y8:40:GLU:O	54:Y8:41:ILE:C	2.56	0.41
25:YA:1301:A:O2'	25:YA:1302:A:H3'	2.19	0.41
25:YA:1328:G:H8	25:YA:1328:G:O5'	2.02	0.41
25:YA:1971:A:OP2	27:YD:242:ARG:NH2	2.44	0.41
25:YA:204:A:H8	25:YA:204:A:OP1	2.02	0.41
25:YA:2364:C:H2'	25:YA:2365:G:O4'	2.20	0.41
25:YA:2441:C:H2'	25:YA:2442:C:C6	2.55	0.41
25:YA:2591:C:OP2	27:YD:238:GLY:HA3	2.20	0.41
25:YA:2599:G:OP2	27:YD:236:GLY:HA2	2.20	0.41
25:YA:2681:C:O2'	25:YA:2682:U:OP2	2.29	0.41
25:YA:2749:A:H3'	25:YA:2750:A:H2'	2.02	0.41
26:YB:44:G:H1'	26:YB:47:C:H42	1.85	0.41
27:YD:110:GLY:O	27:YD:111:LEU:C	2.58	0.41
27:YD:239:ARG:O	27:YD:240:ALA:CB	2.62	0.41
29:YF:80:ALA:O	29:YF:83:PHE:HB2	2.20	0.41
30:YG:78:SER:O	30:YG:80:PHE:N	2.53	0.41
32:YI:117:GLU:O	32:YI:118:LYS:CB	2.67	0.41
33:YN:10:GLU:OE2	33:YN:11:PRO:CD	2.68	0.41
33:YN:30:ILE:HG22	33:YN:34:LEU:HD21	2.01	0.41
34:YO:2:ILE:CD1	34:YO:2:ILE:N	2.82	0.41
39:YT:6:LEU:HD12	39:YT:9:LEU:HD12	2.01	0.41
43:YX:57:LEU:H	43:YX:57:LEU:HD12	1.85	0.41
44:YY:51:VAL:CG1	44:YY:52:SER:N	2.74	0.41
1:QA:1095:U:H2'	1:QA:1096:C:O4'	2.19	0.41
1:QA:1290:G:C4	1:QA:1291:G:C8	3.07	0.41
1:QA:14:U:O2	1:QA:17:U:H5	2.03	0.41
1:QA:259:G:H2'	1:QA:260:G:H8	1.85	0.41
1:QA:340:U:H2'	1:QA:341:C:C6	2.56	0.41
1:QA:686:U:O4	1:QA:703:G:H2'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:163:PHE:CD2	2:QB:185:ILE:HD12	2.54	0.41
4:QD:101:LEU:CD2	4:QD:121:VAL:HG11	2.50	0.41
4:QD:93:PHE:CE1	4:QD:97:LEU:HD11	2.55	0.41
4:QD:94:LEU:HA	4:QD:97:LEU:HD12	2.01	0.41
7:QG:24:THR:HA	7:QG:27:ILE:HD13	2.01	0.41
7:QG:44:TYR:O	7:QG:47:CYS:N	2.53	0.41
8:QH:85:ARG:HA	8:QH:135:CYS:HB3	2.02	0.41
9:QI:8:GLY:CA	9:QI:79:LEU:HD12	2.49	0.41
10:QJ:71:LEU:HD12	10:QJ:72:VAL:H	1.85	0.41
14:QN:9:LYS:O	14:QN:9:LYS:HG2	2.19	0.41
15:QO:3:ILE:HD13	15:QO:3:ILE:N	2.22	0.41
15:QO:71:GLN:HB2	15:QO:78:TYR:CE1	2.54	0.41
17:QQ:11:VAL:CG2	17:QQ:20:THR:HB	2.50	0.41
18:QR:20:ALA:C	18:QR:21:LYS:HG3	2.41	0.41
22:QV:23:C:H2'	22:QV:24:U:C6	2.55	0.41
48:R2:50:ILE:H	48:R2:50:ILE:HG13	1.64	0.41
50:R4:64:GLY:C	50:R4:66:SER:N	2.73	0.41
51:R5:40:LYS:HE2	51:R5:47:PRO:CG	2.49	0.41
52:R6:41:PRO:HG3	52:R6:44:ARG:HB2	2.01	0.41
53:R7:25:PRO:HA	53:R7:28:ARG:NH2	2.35	0.41
25:RA:140:A:H8	25:RA:1408:C:HO2'	1.58	0.41
25:RA:2467:C:C2'	25:RA:2468:G:H5'	2.50	0.41
25:RA:2469:A:OP1	25:RA:2469:A:H4'	2.20	0.41
25:RA:2563:U:N3	25:RA:2566:A:OP2	2.25	0.41
25:RA:265:A:H2'	25:RA:266:G:O4'	2.20	0.41
25:RA:2692:C:O2	25:RA:2847:U:O2'	2.38	0.41
25:RA:2779:U:H6	25:RA:2779:U:H2'	1.58	0.41
25:RA:348:G:H2'	25:RA:349:G:H8	1.85	0.41
25:RA:255:A:O2'	25:RA:384:U:OP1	2.37	0.41
25:RA:738:G:C6	25:RA:739:G:C2	3.09	0.41
25:RA:947:G:H2'	25:RA:948:G:H8	1.86	0.41
27:RD:196:VAL:CG1	27:RD:196:VAL:O	2.68	0.41
28:RE:35:GLN:HG3	28:RE:37:ARG:NH2	2.35	0.41
29:RF:53:THR:O	29:RF:55:GLY:N	2.53	0.41
31:RH:105:LEU:N	31:RH:105:LEU:CD1	2.81	0.41
31:RH:146:ALA:HA	31:RH:164:TYR:OH	2.21	0.41
32:RI:132:PRO:O	32:RI:133:HIS:C	2.59	0.41
32:RI:72:LEU:C	32:RI:74:ASN:H	2.24	0.41
32:RI:87:LYS:HA	32:RI:122:GLU:HA	2.02	0.41
32:RI:93:THR:O	32:RI:97:ILE:HG12	2.20	0.41
33:RN:114:ARG:C	33:RN:116:LEU:N	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:27:ALA:O	33:RN:28:THR:C	2.58	0.41
33:RN:62:VAL:CG1	33:RN:66:LYS:HB2	2.50	0.41
35:RP:18:ARG:HD2	35:RP:27:HIS:CD2	2.55	0.41
39:RT:39:ARG:CG	39:RT:40:THR:H	2.22	0.41
39:RT:96:ARG:HB2	39:RT:96:ARG:CZ	2.49	0.41
41:RV:38:LEU:CD2	41:RV:39:LEU:N	2.81	0.41
42:RW:19:LEU:HD12	42:RW:19:LEU:HA	1.79	0.41
45:RZ:157:LEU:O	45:RZ:158:PRO:O	2.37	0.41
36:RQ:20:ALA:CB	45:RZ:79:ARG:NH1	2.80	0.41
1:XA:1073:U:OP2	5:XE:57:LYS:NZ	2.40	0.41
1:XA:1128:C:N3	1:XA:1144:G:N2	2.67	0.41
1:XA:883:C:C2'	1:XA:884:U:H5'	2.50	0.41
1:XA:892:A:C6	1:XA:893:C:C4	3.08	0.41
1:XA:889:A:N1	1:XA:907:A:H5''	2.35	0.41
2:XB:130:ARG:HH22	2:XB:138:LEU:HD21	1.85	0.41
3:XC:58:GLU:HB2	3:XC:65:ALA:HB3	2.01	0.41
3:XC:59:ARG:NH1	3:XC:97:LYS:HE3	2.34	0.41
4:XD:120:LEU:HA	4:XD:120:LEU:HD23	1.84	0.41
6:XF:36:ARG:NH2	6:XF:38:GLU:HG2	2.35	0.41
6:XF:88:VAL:HG12	6:XF:89:MET:N	2.34	0.41
8:XH:38:ILE:CD1	8:XH:118:VAL:HG12	2.49	0.41
2:XB:178:ARG:CD	8:XH:71:GLY:O	2.68	0.41
9:XI:118:LYS:HZ2	9:XI:118:LYS:HB2	1.84	0.41
12:XL:8:ASN:O	12:XL:11:VAL:HG23	2.20	0.41
14:XN:18:VAL:CG2	14:XN:19:ARG:N	2.82	0.41
16:XP:21:VAL:HG21	16:XP:59:TRP:NE1	2.35	0.41
18:XR:74:ARG:NE	18:XR:80:PRO:O	2.48	0.41
19:XS:30:LEU:O	19:XS:31:ILE:HB	2.20	0.41
19:XS:66:MET:HG3	19:XS:66:MET:O	2.20	0.41
46:Y0:36:ILE:HA	46:Y0:60:PHE:CB	2.51	0.41
47:Y1:80:LEU:O	47:Y1:81:LYS:CD	2.65	0.41
50:Y4:38:LYS:HG3	50:Y4:44:THR:OG1	2.20	0.41
25:YA:1899:G:O2'	25:YA:1900:A:H5''	2.20	0.41
25:YA:2469:A:H5'	25:YA:2470:G:OP2	2.19	0.41
25:YA:2639:A:H1'	25:YA:2778:A:C2	2.56	0.41
25:YA:303:U:H2'	25:YA:304:G:H8	1.85	0.41
25:YA:376:C:H2'	25:YA:377:C:O4'	2.20	0.41
25:YA:456:C:C5	43:YX:69:TYR:CZ	3.09	0.41
25:YA:65:C:P	43:YX:71:GLY:HA3	2.60	0.41
25:YA:950:G:H2'	25:YA:951:C:C6	2.55	0.41
26:YB:66:A:HO2'	26:YB:67:G:P	2.43	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YB:71:C:H2'	26:YB:72:G:C8	2.55	0.41
28:YE:10:GLY:HA3	39:YT:8:LYS:HD3	2.02	0.41
29:YF:183:VAL:O	29:YF:184:TYR:C	2.57	0.41
30:YG:41:GLN:NE2	30:YG:154:GLY:O	2.52	0.41
33:YN:1:MET:HG3	33:YN:1:MET:O	2.19	0.41
34:YO:92:GLU:O	34:YO:93:PRO:C	2.58	0.41
35:YP:39:LYS:HA	35:YP:45:LEU:HD11	1.83	0.41
38:YS:49:VAL:HG21	38:YS:77:ALA:HA	2.02	0.41
40:YU:97:ASP:HA	40:YU:100:VAL:HG23	2.01	0.41
41:YV:35:LEU:HB2	41:YV:37:VAL:CG2	2.49	0.41
45:YZ:24:LEU:CD1	45:YZ:86:VAL:HG23	2.38	0.41
1:QA:1277:C:O2'	1:QA:1279:A:H8	2.03	0.41
1:QA:976:G:N2	1:QA:1362(A):C:OP2	2.35	0.41
1:QA:160:A:H1'	1:QA:344:A:N7	2.36	0.41
1:QA:468:A:C8	1:QA:474:G:C8	3.07	0.41
1:QA:498:A:H1'	1:QA:500:G:O5'	2.20	0.41
1:QA:502:G:OP1	12:QL:118:SER:N	2.47	0.41
1:QA:752:G:HO2'	1:QA:753:A:P	2.43	0.41
1:QA:939:G:H5''	7:QG:102:ARG:CZ	2.50	0.41
1:QA:972:C:O3'	10:QJ:57:LYS:HG2	2.20	0.41
3:QC:78:GLY:HA3	3:QC:83:ARG:HB2	2.03	0.41
4:QD:198:VAL:CG1	4:QD:199:ASN:H	2.32	0.41
5:QE:31:LEU:HA	5:QE:31:LEU:HD22	1.86	0.41
7:QG:78:ARG:NH1	7:QG:78:ARG:CG	2.84	0.41
8:QH:122:ARG:HG3	8:QH:122:ARG:HH11	1.85	0.41
9:QI:118:LYS:NZ	9:QI:118:LYS:HB3	2.34	0.41
10:QJ:45:ARG:HB2	10:QJ:65:LEU:HB3	2.02	0.41
11:QK:33:THR:HB	11:QK:37:GLY:C	2.40	0.41
14:QN:22:THR:HB	14:QN:33:VAL:CG1	2.50	0.41
14:QN:3:ARG:CG	14:QN:4:LYS:N	2.83	0.41
15:QO:54:ARG:NH1	15:QO:58:MET:SD	2.93	0.41
48:R2:61:LEU:HD23	48:R2:64:LEU:HD12	2.03	0.41
13:QM:77:ASN:OD1	50:R4:71:ARG:NH1	2.53	0.41
52:R6:25:LYS:HE2	52:R6:27:LYS:CD	2.49	0.41
25:RA:1327:C:N4	25:RA:1328:G:C6	2.88	0.41
25:RA:146:G:H2'	25:RA:147:U:O4'	2.19	0.41
25:RA:1491:G:C6	25:RA:1500:G:C2	3.08	0.41
25:RA:1543:A:O2'	25:RA:1544:C:O5'	2.34	0.41
25:RA:2081:C:H2'	25:RA:2082:A:H8	1.85	0.41
25:RA:222:A:H1'	25:RA:223:A:OP1	2.20	0.41
25:RA:2273:A:H2'	25:RA:2274:A:H8	1.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:337:C:H2'	25:RA:338:G:O4'	2.21	0.41
25:RA:389:G:H22	35:RP:72:PRO:CG	2.33	0.41
25:RA:527:C:C4	25:RA:2779:U:H5''	2.55	0.41
25:RA:585:G:H8	25:RA:585:G:O5'	2.02	0.41
26:RB:16:G:H2'	26:RB:17:C:C6	2.55	0.41
27:RD:35:LYS:HB3	27:RD:36:PRO:HA	2.00	0.41
27:RD:75:ILE:HG21	27:RD:99:ASP:HB2	2.01	0.41
28:RE:179:GLU:CB	28:RE:181:LEU:HD23	2.23	0.41
30:RG:117:PHE:CE1	30:RG:119:GLY:CA	3.03	0.41
30:RG:60:LEU:C	30:RG:60:LEU:HD23	2.41	0.41
33:RN:131:GLN:HB3	33:RN:131:GLN:HE21	1.57	0.41
33:RN:21:LYS:O	33:RN:22:THR:O	2.39	0.41
25:RA:2642:G:H5''	33:RN:78:TYR:CG	2.56	0.41
36:RQ:20:ALA:HA	36:RQ:98:LYS:HB3	2.02	0.41
38:RS:15:ARG:O	38:RS:19:LYS:HD3	2.19	0.41
38:RS:30:ARG:NH2	38:RS:92:TYR:HD1	2.17	0.41
28:RE:25:VAL:CG1	39:RT:11:GLU:HG2	2.50	0.41
39:RT:134:GLU:O	39:RT:135:ALA:CB	2.69	0.41
40:RU:83:LEU:HG	40:RU:88:ILE:HG13	2.02	0.41
41:RV:16:PRO:HB3	41:RV:97:LYS:O	2.20	0.41
41:RV:81:TYR:C	41:RV:82:ARG:CG	2.89	0.41
42:RW:1:MET:HG3	42:RW:2:GLU:N	2.35	0.41
44:RY:13:VAL:O	44:RY:24:VAL:HA	2.20	0.41
44:RY:2:ARG:O	44:RY:3:VAL:O	2.38	0.41
45:RZ:31:ARG:HE	45:RZ:31:ARG:HB2	1.61	0.41
45:RZ:91:LEU:N	45:RZ:91:LEU:HD22	2.35	0.41
1:XA:1106:G:H2'	1:XA:1107:C:C6	2.55	0.41
1:XA:1151:A:H2'	1:XA:1152:A:C8	2.55	0.41
1:XA:376:G:H2'	1:XA:377:G:C8	2.53	0.41
1:XA:427:U:O2'	1:XA:541:G:OP1	2.33	0.41
1:XA:597:G:H1'	1:XA:644:G:N2	2.35	0.41
1:XA:692:U:H1'	1:XA:695:A:N7	2.35	0.41
2:XB:155:LEU:C	2:XB:157:ARG:H	2.23	0.41
2:XB:166:ASP:O	2:XB:170:GLU:OE1	2.39	0.41
3:XC:128:PHE:O	3:XC:130:VAL:N	2.54	0.41
4:XD:25:ARG:C	4:XD:27:TYR:H	2.24	0.41
5:XE:68:GLU:CG	5:XE:68:GLU:O	2.68	0.41
7:XG:111:ARG:HH11	7:XG:111:ARG:CB	2.23	0.41
7:XG:126:ASP:N	7:XG:126:ASP:OD2	2.53	0.41
7:XG:24:THR:HA	7:XG:27:ILE:HD13	2.02	0.41
7:XG:44:TYR:O	7:XG:47:CYS:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:118:LYS:NZ	9:XI:118:LYS:HB3	2.34	0.41
14:YN:3:ARG:CG	14:YN:4:LYS:N	2.84	0.41
17:XQ:22:LEU:HD13	17:XQ:41:LYS:HG2	2.01	0.41
17:XQ:76:LEU:HD21	17:XQ:79:SER:HB2	2.02	0.41
17:XQ:82:MET:C	17:XQ:84:LEU:N	2.72	0.41
19:XS:41:VAL:HG13	19:XS:44:MET:CB	2.38	0.41
22:XV:17:C:O2	22:XV:17:C:H2'	2.20	0.41
51:Y5:41:PRO:HA	51:Y5:42:PRO:HD3	1.81	0.41
54:Y8:26:LYS:HD3	54:Y8:26:LYS:HA	1.86	0.41
25:YA:1471:A:H3'	25:YA:1472:A:H8	1.84	0.41
25:YA:2298:A:H62	25:YA:2318:G:H8	1.64	0.41
25:YA:2555:U:C4	25:YA:2556:C:C2	3.08	0.41
25:YA:532:A:H2'	40:YU:28:ARG:HE	1.85	0.41
25:YA:589:C:H2'	25:YA:590:A:C8	2.55	0.41
25:YA:71:A:OP1	25:YA:72:U:H2'	2.19	0.41
25:YA:738:G:C6	25:YA:739:G:N1	2.88	0.41
27:YD:9:TYR:CZ	27:YD:13:ARG:HD3	2.54	0.41
28:YE:167:VAL:CG1	28:YE:189:PRO:HD3	2.50	0.41
29:YF:129:PHE:O	29:YF:142:TRP:HD1	2.03	0.41
29:YF:20:LEU:HD12	29:YF:21:ALA:N	2.26	0.41
29:YF:53:THR:O	29:YF:55:GLY:N	2.53	0.41
31:YH:169:VAL:HG22	31:YH:170:ARG:N	2.25	0.41
32:YI:54:GLN:O	32:YI:57:ARG:HG3	2.21	0.41
33:YN:109:LYS:N	33:YN:109:LYS:CD	2.83	0.41
33:YN:28:THR:O	33:YN:29:LYS:C	2.59	0.41
33:YN:42:TRP:HA	33:YN:48:MET:HE3	2.03	0.41
34:YO:17:ARG:HG2	34:YO:17:ARG:HH11	1.84	0.41
35:YP:49:ARG:HG2	35:YP:49:ARG:HH11	1.84	0.41
38:YS:51:ALA:HB3	38:YS:73:LEU:HD23	2.01	0.41
40:YU:83:LEU:HG	40:YU:88:ILE:HG13	2.02	0.41
40:YU:92:ARG:NH2	41:YV:11:GLN:O	2.53	0.41
41:YV:72:VAL:HG13	41:YV:72:VAL:O	2.19	0.41
41:YV:21:ARG:HD2	41:YV:91:TYR:CE2	2.55	0.41
42:YW:25:ARG:CB	42:YW:25:ARG:NH1	2.79	0.41
42:YW:8:ARG:HG3	42:YW:8:ARG:NH1	2.34	0.41
45:YZ:157:LEU:O	45:YZ:158:PRO:O	2.37	0.41
45:YZ:48:PHE:CE2	45:YZ:52:SER:HA	2.55	0.41
45:YZ:70:LEU:HB2	45:YZ:91:LEU:HD21	2.01	0.41
45:YZ:91:LEU:N	45:YZ:91:LEU:HD22	2.35	0.41
1:QA:1052:U:H5''	1:QA:1053:G:OP2	2.20	0.41
1:QA:1055:A:N7	1:QA:1200:C:N4	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:32:A:C2	1:QA:33:A:C4	3.08	0.41
1:QA:973:G:C1'	10:QJ:55:LYS:HG2	2.50	0.41
2:QB:32:ILE:HD13	2:QB:190:THR:HG21	2.03	0.41
2:QB:231:GLU:HG3	2:QB:233:SER:H	1.86	0.41
3:QC:92:ALA:HB2	3:QC:99:VAL:HG13	2.03	0.41
6:QF:92:LYS:CB	6:QF:92:LYS:NZ	2.83	0.41
7:QG:118:VAL:HG23	7:QG:119:ARG:N	2.35	0.41
7:QG:79:ARG:CZ	7:QG:82:GLY:HA2	2.51	0.41
12:QL:53:ARG:HH12	12:QL:92:ASP:CB	2.33	0.41
19:QS:4:SER:O	19:QS:5:LEU:HD13	2.20	0.41
19:QS:58:VAL:HG23	19:QS:58:VAL:O	2.20	0.41
25:RA:1320:C:H4'	25:RA:1321:A:OP1	2.21	0.41
25:RA:1387:C:C2	25:RA:1388:G:C8	3.08	0.41
25:RA:1929:G:H4'	25:RA:1930:G:OP1	2.20	0.41
25:RA:2235:G:H2'	25:RA:2236:C:C6	2.55	0.41
25:RA:234:C:H2'	25:RA:235:U:O4'	2.19	0.41
25:RA:2419:U:OP1	52:R6:23:THR:HG21	2.19	0.41
25:RA:2448:A:OP1	25:RA:2499:C:OP1	2.38	0.41
25:RA:2869:G:H2'	25:RA:2870:C:O4'	2.20	0.41
25:RA:715:G:C6	25:RA:716:A:C6	3.08	0.41
26:RB:4:C:C2	26:RB:117:G:N2	2.88	0.41
27:RD:13:ARG:O	27:RD:13:ARG:HG2	2.20	0.41
27:RD:2:ALA:O	27:RD:3:VAL:CB	2.68	0.41
28:RE:111:ARG:NE	28:RE:160:TYR:CE1	2.76	0.41
28:RE:93:VAL:HG21	28:RE:180:ASN:HA	2.03	0.41
34:RO:86:ILE:N	34:RO:86:ILE:CD1	2.83	0.41
35:RP:125:VAL:C	35:RP:145:PRO:HD2	2.39	0.41
35:RP:64:LYS:HG3	54:R8:25:MET:CE	2.50	0.41
1:XA:1057:G:C6	1:XA:1058:G:C4	3.08	0.41
1:XA:110:C:H2'	1:XA:111:G:O4'	2.19	0.41
1:XA:1237:C:H4'	1:XA:1303:C:O2	2.20	0.41
1:XA:1298:C:O2'	1:XA:1299:A:OP2	2.31	0.41
1:XA:451:A:H4'	1:XA:452:A:O4'	2.21	0.41
1:XA:507:C:OP2	1:XA:508:C:O2'	2.30	0.41
1:XA:769:G:H4'	1:XA:1513:A:H4'	2.02	0.41
2:XB:23:ARG:H	2:XB:23:ARG:CD	2.30	0.41
2:XB:62:ALA:O	2:XB:65:GLY:N	2.53	0.41
3:XC:88:ARG:NH2	3:XC:101:LEU:O	2.53	0.41
4:XD:111:ALA:HB3	4:XD:117:ALA:HB2	2.02	0.41
7:XG:101:LEU:O	7:XG:104:LEU:HB2	2.21	0.41
8:XH:105:ARG:O	8:XH:107:LEU:N	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:49:PRO:O	9:XI:85:LEU:HD21	2.20	0.41
10:XJ:40:LEU:HB3	10:XJ:41:PRO:HD2	2.02	0.41
12:XL:53:ARG:HH12	12:XL:92:ASP:HB3	1.85	0.41
13:XM:13:LYS:HA	13:XM:44:ARG:CD	2.48	0.41
14:YN:22:THR:HB	14:YN:33:VAL:CG1	2.50	0.41
17:XQ:11:VAL:HG23	17:XQ:12:SER:N	2.35	0.41
18:XR:20:ALA:C	18:XR:21:LYS:HG3	2.41	0.41
18:XR:76:LEU:N	18:XR:76:LEU:HD22	2.35	0.41
49:Y3:37:LEU:N	49:Y3:37:LEU:HD23	2.35	0.41
25:YA:1142(A):A:H4'	25:YA:1143:A:OP1	2.21	0.41
25:YA:1356:G:C2	25:YA:1357:U:C2	3.08	0.41
25:YA:1519:G:H2'	25:YA:1520:U:O4'	2.20	0.41
25:YA:1980:G:O2'	25:YA:1982:C:OP2	2.39	0.41
25:YA:2002:G:H2'	25:YA:2003:G:H8	1.85	0.41
25:YA:2169:A:N6	25:YA:2170:A:N1	2.67	0.41
25:YA:265:A:O2'	25:YA:266:G:H4'	2.19	0.41
25:YA:2698:U:H2'	25:YA:2699:C:H6	1.84	0.41
25:YA:530:G:C4	25:YA:2022:U:H5''	2.56	0.41
25:YA:588:U:C2	29:YF:90:PHE:CE1	3.08	0.41
25:YA:704:G:O2'	25:YA:705:A:P	2.79	0.41
27:YD:269:PHE:N	27:YD:269:PHE:CD2	2.88	0.41
27:YD:182:LEU:N	27:YD:272:ALA:HB3	2.32	0.41
28:YE:4:ILE:HG22	28:YE:198:VAL:HB	2.03	0.41
29:YF:64:ILE:HG23	29:YF:65:TRP:CD1	2.54	0.41
30:YG:51:ARG:CB	30:YG:51:ARG:NH1	2.83	0.41
33:YN:114:ARG:C	33:YN:116:LEU:N	2.74	0.41
33:YN:21:LYS:O	33:YN:22:THR:O	2.39	0.41
29:YF:34:TRP:CA	35:YP:6:LEU:HD12	2.46	0.41
36:YQ:27:VAL:HG22	36:YQ:105:GLU:CD	2.41	0.41
36:YQ:118:LEU:HD13	36:YQ:131:ILE:HG23	2.02	0.41
37:YR:55:ALA:HA	37:YR:80:PHE:CE2	2.55	0.41
37:YR:85:PRO:C	37:YR:87:TYR:N	2.73	0.41
38:YS:92:TYR:HB2	38:YS:98:VAL:HG11	2.03	0.41
41:YV:81:TYR:C	41:YV:82:ARG:CG	2.89	0.41
42:YW:17:VAL:O	42:YW:18:ARG:C	2.57	0.41
42:YW:73:ALA:HB3	42:YW:106:ILE:CG1	2.46	0.41
45:YZ:20:ARG:O	45:YZ:20:ARG:CD	2.68	0.41
45:YZ:29:TYR:O	45:YZ:30:ASN:HB3	2.21	0.41
45:YZ:48:PHE:CE2	45:YZ:71:VAL:HG11	2.55	0.41
1:QA:544:G:H2'	1:QA:545:C:C6	2.56	0.41
1:QA:578:C:H2'	1:QA:579:G:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:823:G:H2'	1:QA:824:C:C6	2.56	0.41
1:QA:985:C:H2'	1:QA:986:A:H8	1.85	0.41
2:QB:5:ILE:HB	2:QB:221:LEU:HD23	2.01	0.41
4:QD:52:SER:HB3	4:QD:55:ALA:HB3	2.00	0.41
5:QE:153:LYS:HD3	5:QE:153:LYS:C	2.40	0.41
7:QG:121:ALA:O	7:QG:125:MET:HG3	2.21	0.41
8:QH:11:THR:HA	8:QH:14:ARG:NH1	2.35	0.41
8:QH:6:ILE:HB	8:QH:85:ARG:HH11	1.74	0.41
10:QJ:40:LEU:HB3	10:QJ:41:PRO:HD2	2.02	0.41
11:QK:20:TYR:N	11:QK:31:THR:O	2.54	0.41
11:QK:56:GLY:O	11:QK:89:ALA:HB3	2.21	0.41
12:QL:53:ARG:HH12	12:QL:92:ASP:HB3	1.85	0.41
14:QN:18:VAL:CG2	14:QN:19:ARG:H	2.32	0.41
16:QP:12:LYS:HB3	16:QP:12:LYS:HE2	1.74	0.41
16:QP:22:THR:HB	16:QP:32:TYR:HB3	2.03	0.41
18:QR:53:ARG:O	18:QR:55:ARG:N	2.53	0.41
9:QI:127:LYS:CE	22:QV:34:C:OP2	2.69	0.41
50:R4:14:ILE:HA	50:R4:31:ILE:O	2.21	0.41
52:R6:6:ARG:HA	52:R6:6:ARG:NE	2.35	0.41
25:RA:1429:G:H2'	25:RA:1430:C:C6	2.55	0.41
25:RA:1820:U:O2'	27:RD:158:ALA:HB1	2.19	0.41
25:RA:184:C:H2'	25:RA:185:U:H6	1.84	0.41
25:RA:2123:G:H2'	25:RA:2124:G:H8	1.85	0.41
25:RA:2512:C:H5''	25:RA:2513:G:OP2	2.21	0.41
25:RA:2697:G:H2'	25:RA:2698:U:O4'	2.20	0.41
25:RA:2774:C:H2'	25:RA:2775:A:O4'	2.20	0.41
25:RA:2882:A:OP1	37:RR:96:ARG:NH1	2.46	0.41
25:RA:36:G:N3	25:RA:450:G:O2'	2.52	0.41
25:RA:702:G:H5'	25:RA:703:U:OP2	2.21	0.41
25:RA:83:G:O2'	25:RA:84:A:C8	2.73	0.41
25:RA:857:C:N4	25:RA:858:U:O4	2.53	0.41
25:RA:870:A:OP1	36:RQ:6:ARG:NE	2.53	0.41
26:RB:117:G:OP1	38:RS:57:LYS:NZ	2.53	0.41
27:RD:158:ALA:O	27:RD:196:VAL:HG11	2.21	0.41
27:RD:269:PHE:N	27:RD:269:PHE:CD2	2.88	0.41
29:RF:111:ALA:O	29:RF:112:MET:C	2.59	0.41
29:RF:46:ARG:CG	29:RF:46:ARG:NH1	2.72	0.41
30:RG:135:LEU:N	30:RG:135:LEU:CD1	2.84	0.41
37:RR:28:LEU:C	37:RR:28:LEU:HD13	2.40	0.41
37:RR:28:LEU:HD12	37:RR:29:LEU:HD12	2.01	0.41
38:RS:99:LYS:HE2	38:RS:103:GLU:OE2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RW:55:ALA:O	42:RW:58:ALA:HB3	2.21	0.41
1:XA:1079:G:H2'	1:XA:1080:A:C8	2.55	0.41
1:XA:1268:A:O3'	21:XU:19:GLY:HA2	2.21	0.41
1:XA:595:G:N1	1:XA:641:U:O2'	2.44	0.41
2:XB:231:GLU:HG3	2:XB:233:SER:H	1.86	0.41
3:XC:46:GLU:C	3:XC:48:TYR:H	2.23	0.41
4:XD:101:LEU:CD2	4:XD:121:VAL:HG11	2.50	0.41
5:XE:68:GLU:HG3	5:XE:70:PRO:HD3	2.03	0.41
7:XG:141:VAL:CG1	7:XG:141:VAL:O	2.65	0.41
7:XG:80:VAL:CG1	7:XG:81:GLY:N	2.83	0.41
7:XG:87:VAL:HG11	7:XG:155:ARG:HA	2.03	0.41
10:XJ:29:ARG:O	10:XJ:30:SER:HB3	2.20	0.41
11:XK:20:TYR:N	11:XK:31:THR:O	2.54	0.41
1:XA:1226:C:C4	13:XM:104:ARG:HB2	2.56	0.41
14:YN:15:LYS:HD3	14:YN:15:LYS:HA	1.86	0.41
14:YN:34:TYR:CD1	14:YN:34:TYR:N	2.89	0.41
20:XT:48:LYS:O	20:XT:49:ALA:C	2.59	0.41
21:XU:2:GLY:C	21:XU:4:GLY:H	2.24	0.41
49:Y3:39:ASP:O	49:Y3:40:THR:C	2.59	0.41
13:XM:65:LYS:HZ1	50:Y4:52:THR:HG21	1.84	0.41
25:YA:1513:C:H2'	25:YA:1514:U:O4'	2.21	0.41
25:YA:1601:G:C5	25:YA:1602:U:C4	3.08	0.41
25:YA:1607:C:H4'	25:YA:1608:A:O5'	2.20	0.41
25:YA:2011:U:H2'	25:YA:2012:G:O4'	2.20	0.41
25:YA:571:A:C5'	25:YA:2030:A:H62	2.33	0.41
25:YA:2291:U:H2'	25:YA:2292:C:C6	2.56	0.41
25:YA:242:G:H5''	54:Y8:3:LYS:CE	2.46	0.41
25:YA:2068:U:N3	25:YA:2430:A:H2	2.11	0.41
25:YA:2633:G:H5'	25:YA:2811:G:O2'	2.20	0.41
25:YA:602:G:H3'	25:YA:654(V):A:H61	1.85	0.41
25:YA:753:C:O5'	25:YA:753:C:H6	2.02	0.41
25:YA:821:A:H5''	25:YA:822:U:H6	1.86	0.41
26:YB:51:G:N7	38:YS:62:LYS:NZ	2.52	0.41
27:YD:145:VAL:CG1	27:YD:146:GLU:N	2.84	0.41
28:YE:24:THR:HB	28:YE:184:VAL:HG23	2.02	0.41
28:YE:35:GLN:HG3	28:YE:37:ARG:NH2	2.35	0.41
28:YE:54:GLN:N	28:YE:54:GLN:CD	2.73	0.41
29:YF:176:LEU:HD11	29:YF:180:GLY:O	2.19	0.41
30:YG:60:LEU:HD23	30:YG:60:LEU:C	2.41	0.41
31:YH:146:ALA:HB2	31:YH:164:TYR:OH	2.21	0.41
33:YN:27:ALA:O	33:YN:28:THR:C	2.57	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YS:83:LYS:HE3	38:YS:84:GLN:CG	2.50	0.41
39:YT:134:GLU:OE1	39:YT:135:ALA:N	2.53	0.41
34:YO:71:ARG:HH11	39:YT:74:ARG:HH21	1.65	0.41
42:YW:1:MET:HG3	42:YW:2:GLU:N	2.36	0.41
42:YW:29:LEU:HD23	42:YW:29:LEU:C	2.41	0.41
43:YX:60:ARG:HA	43:YX:75:ASP:OD2	2.20	0.41
1:QA:1003:G:H2'	1:QA:1004:A:H5'	2.02	0.41
1:QA:1173:G:H2'	1:QA:1174:G:O4'	2.20	0.41
1:QA:1347:G:O2'	1:QA:1348:U:P	2.78	0.41
1:QA:359:U:H2'	1:QA:360:A:C8	2.56	0.41
1:QA:500:G:C6	1:QA:546:G:C2	3.09	0.41
2:QB:166:ASP:O	2:QB:170:GLU:OE1	2.38	0.41
4:QD:36:ARG:HA	4:QD:37:PRO:HD2	1.82	0.41
7:QG:103:TRP:O	7:QG:104:LEU:C	2.58	0.41
9:QL:71:SER:O	9:QL:72:GLY:C	2.58	0.41
10:QJ:45:ARG:HH11	10:QJ:45:ARG:HG3	1.86	0.41
12:QL:21:LYS:CD	12:QL:21:LYS:N	2.83	0.41
13:QM:110:ARG:O	13:QM:110:ARG:HG3	2.20	0.41
13:QM:47:ASP:O	13:QM:48:LEU:HB3	2.20	0.41
13:QM:82:MET:HG2	13:QM:93:ARG:HG3	2.03	0.41
15:QO:74:ASP:C	15:QO:76:GLU:H	2.24	0.41
16:QP:6:LEU:N	16:QP:6:LEU:CD1	2.84	0.41
1:QA:193:C:OP1	20:QT:57:ARG:HD2	2.20	0.41
20:QT:95:ALA:O	20:QT:97:ALA:N	2.54	0.41
22:QV:21:A:N6	22:QV:46:G:H2'	2.36	0.41
47:R1:94:LEU:HA	47:R1:94:LEU:HD23	1.82	0.41
54:R8:16:ILE:HD11	54:R8:57:ARG:CG	2.44	0.41
54:R8:14:VAL:CG1	54:R8:60:LEU:HD11	2.50	0.41
25:RA:1021:A:C2	25:RA:1023:U:C2	3.09	0.41
25:RA:1372:U:H2'	25:RA:1372:U:O2	2.20	0.41
25:RA:1541:U:H2'	25:RA:1542:G:O4'	2.21	0.41
25:RA:2675:A:OP2	25:RA:2675:A:H8	2.03	0.41
25:RA:2712:U:O2'	25:RA:2712(A):A:P	2.77	0.41
25:RA:2822:G:H8	25:RA:2822:G:O5'	2.04	0.41
25:RA:398:G:H2'	25:RA:399:G:O4'	2.20	0.41
26:RB:24:G:O6	26:RB:56:G:O2'	2.39	0.41
28:RE:167:VAL:CG1	28:RE:189:PRO:HD3	2.50	0.41
30:RG:77:ILE:H	30:RG:82:LEU:HB2	1.84	0.41
30:RG:53:LEU:CD1	30:RG:87:PRO:HB2	2.51	0.41
31:RH:86:GLU:HG3	31:RH:165:ALA:CA	2.49	0.41
33:RN:133:GLN:C	33:RN:134:ARG:HG2	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:52:VAL:CG1	33:RN:53:VAL:N	2.82	0.41
35:RP:9:ASN:HB2	35:RP:10:PRO:HD2	2.02	0.41
37:RR:47:PHE:O	37:RR:51:LEU:HD23	2.21	0.41
38:RS:42:ASP:C	38:RS:44:LYS:N	2.72	0.41
38:RS:64:GLU:O	38:RS:68:GLN:HG3	2.19	0.41
40:RU:91:ASP:OD2	40:RU:96:ALA:CA	2.69	0.41
41:RV:22:VAL:CG1	41:RV:23:GLU:H	2.32	0.41
41:RV:38:LEU:CD1	41:RV:55:ALA:HB1	2.50	0.41
41:RV:61:VAL:O	41:RV:61:VAL:CG2	2.68	0.41
41:RV:67:GLY:O	41:RV:68:LYS:C	2.59	0.41
42:RW:17:VAL:O	42:RW:18:ARG:C	2.57	0.41
44:RY:97:ARG:HH21	44:RY:98:VAL:CG2	2.32	0.41
45:RZ:68:PRO:O	45:RZ:68:PRO:HG2	2.20	0.41
1:XA:1101:A:H4'	1:XA:1102:A:O5'	2.20	0.41
1:XA:115:G:C2	1:XA:289:G:C5	3.08	0.41
1:XA:1367:C:OP2	9:XI:112:LYS:NZ	2.53	0.41
1:XA:22:G:H4'	1:XA:885:G:C8	2.55	0.41
1:XA:439:A:OP2	1:XA:493:G:N2	2.54	0.41
2:XB:212:GLN:O	2:XB:212:GLN:NE2	2.54	0.41
3:XC:59:ARG:HH12	3:XC:97:LYS:CE	2.34	0.41
3:XC:70:VAL:HG12	3:XC:71:ALA:H	1.84	0.41
4:XD:93:PHE:CE1	4:XD:97:LEU:HD11	2.55	0.41
9:XI:20:ARG:O	9:XI:21:PRO:C	2.59	0.41
11:XK:124:LYS:HB3	11:XK:125:PHE:CD1	2.47	0.41
11:XK:56:GLY:O	11:XK:89:ALA:HB3	2.21	0.41
12:XL:62:SER:HB2	12:XL:64:TYR:CD1	2.56	0.41
16:XP:9:PHE:HB3	16:XP:10:GLY:H	1.64	0.41
19:XS:13:ASP:O	19:XS:14:HIS:O	2.39	0.41
19:XS:39:THR:HG23	19:XS:68:GLY:O	2.21	0.41
19:XS:5:LEU:HD22	50:Y4:67:TYR:OH	2.19	0.41
19:XS:7:LYS:CG	19:XS:8:GLY:N	2.83	0.41
20:XT:101:GLY:C	20:XT:103:GLY:N	2.73	0.41
20:XT:10:LEU:O	20:XT:12:ALA:N	2.54	0.41
48:Y2:61:LEU:HD23	48:Y2:61:LEU:HA	1.85	0.41
49:Y3:37:LEU:HD12	49:Y3:43:ILE:CG2	2.50	0.41
50:Y4:61:ARG:C	50:Y4:63:TYR:N	2.73	0.41
25:YA:1364:G:C8	47:Y1:2:SER:N	2.89	0.41
25:YA:1376:C:H2'	25:YA:1377:G:C8	2.56	0.41
25:YA:1387:C:C2	25:YA:1388:G:C8	3.09	0.41
25:YA:2256:G:C6	25:YA:2257:U:C4	3.09	0.41
25:YA:2404:C:O3'	35:YP:77:ARG:NH2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2406:U:C4	35:YP:72:PRO:HB2	2.55	0.41
25:YA:2468:G:H5''	36:YQ:120:ILE:CD1	2.51	0.41
25:YA:271(B):G:O2'	25:YA:271(C):U:OP2	2.28	0.41
25:YA:2723:C:H5''	37:YR:1:MET:CB	2.50	0.41
25:YA:653:A:H4'	25:YA:654:A:OP1	2.20	0.41
25:YA:658:C:H2'	25:YA:659:C:H6	1.85	0.41
25:YA:707:G:H2'	25:YA:708:C:O4'	2.20	0.41
27:YD:117:VAL:HG22	27:YD:118:VAL:N	2.35	0.41
27:YD:134:ARG:HG3	27:YD:134:ARG:H	1.55	0.41
27:YD:145:VAL:O	27:YD:154:LYS:N	2.48	0.41
27:YD:154:LYS:C	27:YD:155:LEU:HD12	2.41	0.41
27:YD:158:ALA:O	27:YD:196:VAL:HG11	2.21	0.41
27:YD:168:ARG:O	27:YD:169:GLU:HB2	2.19	0.41
28:YE:161:GLY:O	28:YE:162:ALA:HB3	2.20	0.41
28:YE:63:LEU:CD1	28:YE:64:LYS:N	2.71	0.41
30:YG:44:GLY:C	30:YG:46:ALA:N	2.73	0.41
26:YB:45:A:O4'	30:YG:95:ARG:NH1	2.54	0.41
38:YS:66:ALA:HA	38:YS:69:VAL:CG1	2.51	0.41
40:YU:39:LEU:O	40:YU:42:ALA:N	2.53	0.41
42:YW:14:PRO:C	42:YW:16:LYS:N	2.73	0.41
42:YW:14:PRO:C	42:YW:18:ARG:HD2	2.41	0.41
42:YW:55:ALA:O	42:YW:58:ALA:HB3	2.20	0.41
42:YW:68:ARG:O	42:YW:110:LYS:N	2.46	0.41
44:YY:6:HIS:O	44:YY:7:VAL:CG1	2.59	0.41
44:YY:95:LYS:CD	44:YY:95:LYS:H	2.33	0.41
45:YZ:79:ARG:C	45:YZ:81:ARG:H	2.24	0.41
1:QA:1137:C:O2'	1:QA:1138:G:H5''	2.20	0.41
1:QA:118:U:O4	1:QA:288:A:H2'	2.21	0.41
1:QA:430:A:OP1	4:QD:9:CYS:HB2	2.21	0.41
1:QA:618:C:N3	1:QA:622:A:N6	2.68	0.41
1:QA:665:A:H2'	1:QA:725:G:N2	2.35	0.41
2:QB:223:ILE:O	2:QB:226:ARG:HB3	2.21	0.41
5:QE:68:GLU:CG	5:QE:68:GLU:O	2.68	0.41
6:QF:36:ARG:NH2	6:QF:38:GLU:HG2	2.35	0.41
7:QG:22:LEU:O	7:QG:25:ALA:HB3	2.21	0.41
7:QG:87:VAL:HG11	7:QG:155:ARG:HA	2.02	0.41
12:QL:43:VAL:HG13	12:QL:55:VAL:HG21	2.03	0.41
13:QM:28:ALA:C	13:QM:30:ALA:H	2.24	0.41
18:QR:84:LYS:HG2	18:QR:84:LYS:H	1.57	0.41
19:QS:41:VAL:HG12	19:QS:45:VAL:H	1.85	0.41
13:QM:80:ARG:NH1	19:QS:65:ASN:O	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:QU:2:GLY:C	21:QU:4:GLY:H	2.23	0.41
22:QV:16:C:O2'	22:QV:17:C:OP1	2.39	0.41
48:R2:41:ILE:HD12	48:R2:43:GLN:N	2.35	0.41
54:R8:26:LYS:HD3	54:R8:26:LYS:HA	1.86	0.41
54:R8:64:TYR:HB3	54:R8:65:GLU:H	1.40	0.41
25:RA:1711:C:H2'	25:RA:1712:C:C6	2.55	0.41
25:RA:2199:A:C2	25:RA:2205:C:H1'	2.55	0.41
25:RA:227:A:HO2'	25:RA:228:A:P	2.41	0.41
25:RA:2528:U:H2'	25:RA:2530:A:O5'	2.20	0.41
25:RA:2534:A:C5	25:RA:2535:G:C8	3.08	0.41
25:RA:2844:G:H3'	25:RA:2845:G:C8	2.55	0.41
25:RA:345:A:H5''	25:RA:346:A:OP1	2.21	0.41
25:RA:528:A:H2	25:RA:2043:C:C5'	2.34	0.41
25:RA:564:C:H2'	25:RA:565:C:O4'	2.20	0.41
25:RA:948:G:H2'	25:RA:949:C:C6	2.56	0.41
26:RB:79:C:H2'	26:RB:80:U:O4'	2.21	0.41
28:RE:197:ILE:HD11	28:RE:199:ARG:NH1	2.30	0.41
30:RG:47:LYS:HE3	30:RG:47:LYS:HB2	1.80	0.41
34:RO:2:ILE:HG12	34:RO:8:LEU:HD11	2.02	0.41
35:RP:101:VAL:HG23	35:RP:106:LEU:HB3	2.03	0.41
36:RQ:132:VAL:HG11	45:RZ:81:ARG:CZ	2.50	0.41
36:RQ:20:ALA:HB1	36:RQ:99:PRO:CG	2.51	0.41
36:RQ:34:LEU:HD23	36:RQ:104:PHE:CD1	2.55	0.41
38:RS:53:SER:HA	38:RS:56:LEU:CD2	2.50	0.41
40:RU:6:THR:HG21	40:RU:10:ARG:CZ	2.50	0.41
41:RV:38:LEU:CD1	41:RV:55:ALA:CB	2.99	0.41
42:RW:29:LEU:C	42:RW:29:LEU:HD23	2.41	0.41
42:RW:96:ILE:O	42:RW:96:ILE:CG2	2.68	0.41
43:RX:83:VAL:CG1	43:RX:87:GLN:HB2	2.50	0.41
45:RZ:122:ARG:HA	45:RZ:122:ARG:HD2	1.84	0.41
45:RZ:27:VAL:CG2	45:RZ:28:MET:H	2.31	0.41
1:XA:1167:A:OP1	1:XA:1167:A:H8	2.04	0.41
1:XA:294:U:H2'	1:XA:295:C:H6	1.85	0.41
2:XB:114:ARG:O	2:XB:118:LEU:HG	2.21	0.41
2:XB:115:LEU:O	2:XB:119:GLU:N	2.54	0.41
3:XC:108:ASN:CG	3:XC:111:LEU:HG	2.41	0.41
3:XC:113:ALA:HB3	3:XC:114:PRO:CD	2.44	0.41
3:XC:129:ALA:C	3:XC:131:ARG:N	2.72	0.41
4:XD:127:THR:HG23	4:XD:130:GLY:O	2.20	0.41
4:XD:26:CYS:HA	4:XD:31:CYS:HA	2.03	0.41
5:XE:10:MET:CE	5:XE:13:ILE:HD13	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:103:TRP:O	7:XG:104:LEU:C	2.59	0.41
7:XG:89:MET:HE1	7:XG:156:TRP:H	1.86	0.41
1:XA:1231:G:O3'	9:XI:126:SER:OG	2.39	0.41
9:XI:43:ALA:C	9:XI:45:ALA:N	2.73	0.41
11:XK:21:ILE:HD13	11:XK:84:VAL:HG12	2.02	0.41
12:XL:44:THR:HA	12:XL:45:PRO:HD3	1.70	0.41
17:XQ:77:VAL:O	17:XQ:77:VAL:HG12	2.20	0.41
22:XV:12:G:H4'	25:YA:1908:C:O2	2.20	0.41
47:Y1:82:LEU:HD13	47:Y1:83:GLU:C	2.35	0.41
48:Y2:53:LEU:O	48:Y2:57:ILE:HG13	2.21	0.41
50:Y4:4:GLY:O	50:Y4:5:ILE:C	2.59	0.41
52:Y6:27:LYS:CB	52:Y6:27:LYS:NZ	2.73	0.41
54:Y8:25:MET:HB3	54:Y8:26:LYS:H	1.69	0.41
54:Y8:14:VAL:CG1	54:Y8:60:LEU:HD11	2.51	0.41
25:YA:1022:G:H4'	25:YA:1023:U:H5'	2.03	0.41
25:YA:1322:A:OP1	42:YW:11:ARG:HG3	2.21	0.41
25:YA:1354:A:H2'	25:YA:1355:G:O4'	2.21	0.41
25:YA:1609:A:C6	25:YA:1616:A:C5	3.09	0.41
25:YA:1681:G:H8	25:YA:1681:G:OP2	2.04	0.41
25:YA:1799:G:H5'	25:YA:1819:A:H61	1.84	0.41
25:YA:1855:G:H2'	25:YA:1856:G:O4'	2.20	0.41
25:YA:1895:C:H2'	25:YA:1896:G:O4'	2.20	0.41
25:YA:18:C:O2'	25:YA:553:U:H5''	2.20	0.41
25:YA:1833:U:O2'	25:YA:1969:A:N1	2.40	0.41
25:YA:2378:A:C5	25:YA:2379:G:H1'	2.56	0.41
25:YA:2544:G:H8	25:YA:2544:G:O5'	2.04	0.41
25:YA:265:A:N6	25:YA:428:A:C8	2.89	0.41
25:YA:465:G:H21	25:YA:684:G:H1'	1.85	0.41
27:YD:197:GLY:O	27:YD:198:ASN:HB3	2.21	0.41
27:YD:215:LEU:HG	27:YD:215:LEU:H	1.59	0.41
27:YD:240:ALA:HA	27:YD:241:PRO:HD2	1.85	0.41
28:YE:36:ARG:O	28:YE:37:ARG:C	2.59	0.41
30:YG:22:ARG:HH22	30:YG:175:LEU:HD21	1.85	0.41
30:YG:95:ARG:CA	30:YG:99:MET:HB3	2.50	0.41
31:YH:86:GLU:HG3	31:YH:165:ALA:CA	2.49	0.41
32:YI:132:PRO:O	32:YI:133:HIS:C	2.59	0.41
32:YI:74:ASN:N	32:YI:74:ASN:ND2	2.61	0.41
33:YN:62:VAL:CG1	33:YN:66:LYS:HB2	2.50	0.41
35:YP:12:ALA:C	35:YP:14:LYS:N	2.72	0.41
36:YQ:90:VAL:C	36:YQ:92:GLY:N	2.71	0.41
39:YT:28:VAL:HG23	39:YT:87:ASP:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:YT:76:PHE:HA	39:YT:77:PRO:HD3	1.75	0.41
40:YU:92:ARG:O	40:YU:92:ARG:CG	2.54	0.41
42:YW:14:PRO:HG3	42:YW:101:SER:OG	2.21	0.41
25:YA:65:C:H5'	43:YX:71:GLY:HA3	2.03	0.41
43:YX:7:VAL:O	43:YX:30:VAL:CG1	2.67	0.41
43:YX:83:VAL:CG1	43:YX:87:GLN:HB2	2.50	0.41
44:YY:49:VAL:O	44:YY:50:ARG:C	2.59	0.41
1:QA:1030:C:H2'	1:QA:1031:G:O4'	2.21	0.41
1:QA:1301:U:H3'	1:QA:1302:U:C5'	2.51	0.41
1:QA:419:C:H42	1:QA:424:G:H1	1.68	0.41
1:QA:963:G:H21	10:QJ:55:LYS:HD3	1.86	0.41
2:QB:115:LEU:O	2:QB:119:GLU:N	2.54	0.41
3:QC:55:VAL:O	3:QC:55:VAL:HG12	2.21	0.41
5:QE:132:ALA:O	5:QE:133:TYR:C	2.59	0.41
5:QE:10:MET:CE	5:QE:13:ILE:HD13	2.51	0.41
5:QE:32:VAL:CG2	5:QE:58:ALA:HB1	2.51	0.41
7:QG:101:LEU:O	7:QG:104:LEU:HB2	2.20	0.41
7:QG:92:SER:HB3	7:QG:95:ARG:HB2	2.03	0.41
8:QH:18:ARG:HA	8:QH:18:ARG:HD2	1.92	0.41
9:QI:49:PRO:O	9:QI:85:LEU:HD21	2.20	0.41
10:QJ:8:LEU:HD11	10:QJ:23:ILE:CD1	2.37	0.41
11:QK:22:HIS:HB3	11:QK:29:ILE:HG22	2.03	0.41
11:QK:92:GLU:O	11:QK:95:ILE:N	2.54	0.41
13:QM:117:VAL:O	13:QM:119:GLY:N	2.53	0.41
13:QM:15:VAL:O	13:QM:19:LEU:HD22	2.21	0.41
16:QP:20:VAL:HG22	16:QP:21:VAL:H	1.83	0.41
16:QP:22:THR:CA	16:QP:33:ILE:HG12	2.41	0.41
1:QA:191(F):U:C2	20:QT:105:SER:HB2	2.55	0.41
23:QX:4:C:O2	23:QX:4:C:H2'	2.19	0.41
47:R1:18:ILE:HG22	47:R1:18:ILE:O	2.21	0.41
48:R2:18:PRO:C	48:R2:20:GLU:N	2.73	0.41
50:R4:12:ALA:HB1	50:R4:30:GLU:N	2.35	0.41
50:R4:4:GLY:O	50:R4:5:ILE:C	2.59	0.41
25:RA:1002:G:C6	25:RA:1003:G:C5	3.09	0.41
25:RA:141:A:C8	25:RA:1408:C:H1'	2.55	0.41
25:RA:1430:C:N3	25:RA:1431:U:C4	2.89	0.41
25:RA:1543:A:C2	25:RA:1545:A:N9	2.88	0.41
25:RA:1657:C:O2'	28:RE:133:LYS:HD2	2.21	0.41
25:RA:1889:A:C6	25:RA:1890:A:C6	3.08	0.41
25:RA:2037:G:C6	25:RA:2038:G:C6	3.08	0.41
25:RA:2341:G:H2'	25:RA:2342:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2472:G:H2'	25:RA:2475:C:H42	1.85	0.41
25:RA:269:U:C4	25:RA:270(Z):U:C2	3.09	0.41
25:RA:2758:A:H2'	25:RA:2759:G:O4'	2.19	0.41
25:RA:544:C:H2'	25:RA:545:G:O4'	2.21	0.41
25:RA:67:U:H3	25:RA:74:A:H2	1.64	0.41
25:RA:83:G:O2'	25:RA:84:A:P	2.79	0.41
27:RD:197:GLY:O	27:RD:198:ASN:HB3	2.21	0.41
28:RE:4:ILE:HG22	28:RE:198:VAL:HB	2.02	0.41
29:RF:183:VAL:HG22	29:RF:184:TYR:N	2.35	0.41
30:RG:7:LEU:CD2	30:RG:176:LEU:HD22	2.45	0.41
30:RG:44:GLY:C	30:RG:46:ALA:N	2.73	0.41
31:RH:137:ASP:HB2	31:RH:140:LYS:CE	2.51	0.41
31:RH:45:VAL:O	31:RH:45:VAL:CG1	2.69	0.41
32:RI:123:LEU:HA	32:RI:142:VAL:HG21	2.02	0.41
33:RN:56:ASN:ND2	33:RN:126:PRO:N	2.69	0.41
34:RO:10:VAL:HG21	34:RO:16:ALA:HB3	2.03	0.41
34:RO:48:PRO:O	34:RO:50:GLY:N	2.54	0.41
36:RQ:39:PRO:HA	36:RQ:97:VAL:O	2.21	0.41
39:RT:28:VAL:HG23	39:RT:87:ASP:O	2.21	0.41
44:RY:86:ARG:HA	44:RY:86:ARG:HD2	1.91	0.41
1:XA:1316:G:H2'	1:XA:1318:A:OP2	2.21	0.41
1:XA:181:G:HO2'	1:XA:182:U:H6	1.68	0.41
1:XA:707:C:H2'	1:XA:708:C:C6	2.56	0.41
2:XB:200:ILE:CG2	2:XB:201:ILE:N	2.83	0.41
2:XB:95:GLN:O	2:XB:96:ARG:C	2.59	0.41
4:XD:15:GLU:OE1	4:XD:15:GLU:N	2.54	0.41
4:XD:209:ARG:NE	4:XD:209:ARG:HA	2.36	0.41
8:XH:1:MET:O	8:XH:2:LEU:HB2	2.21	0.41
10:XJ:54:PHE:CZ	10:XJ:55:LYS:CE	3.04	0.41
10:XJ:45:ARG:HB2	10:XJ:65:LEU:HB3	2.03	0.41
11:XK:92:GLU:O	11:XK:95:ILE:N	2.54	0.41
12:XL:90:VAL:HG12	12:XL:92:ASP:H	1.85	0.41
13:XM:110:ARG:HG3	13:XM:110:ARG:O	2.20	0.41
14:XN:40:CYS:N	14:XN:43:CYS:SG	2.87	0.41
16:XP:22:THR:HB	16:XP:32:TYR:HB3	2.03	0.41
16:XP:50:LYS:HD3	16:XP:51:VAL:O	2.21	0.41
18:XR:53:ARG:O	18:XR:55:ARG:N	2.53	0.41
18:XR:74:ARG:HG2	18:XR:79:LEU:HB2	2.01	0.41
19:XS:64:GLU:C	50:Y4:55:ARG:HH12	2.24	0.41
20:XT:89:ARG:HH12	20:XT:106:ALA:CB	2.34	0.41
22:XV:23:C:H2'	22:XV:24:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:86:SER:O	47:Y1:89:GLU:HB2	2.21	0.41
50:Y4:60:GLN:HB3	50:Y4:61:ARG:H	1.55	0.41
53:Y7:24:THR:HB	53:Y7:25:PRO:HD2	2.03	0.41
25:YA:1210:A:C5'	25:YA:1210:A:H8	2.34	0.41
25:YA:1301:A:O3'	25:YA:1302:A:H2'	2.21	0.41
25:YA:1509:C:H3'	25:YA:1510:A:C5'	2.49	0.41
25:YA:2145:C:H2'	25:YA:2147:G:N2	2.36	0.41
25:YA:2313:C:H2'	25:YA:2314:C:C6	2.56	0.41
25:YA:2366:A:C6	25:YA:2367:G:C4	3.09	0.41
25:YA:2394:C:H2'	25:YA:2395:C:C6	2.56	0.41
25:YA:2790:A:C2	25:YA:2791:C:H2'	2.55	0.41
25:YA:2821:A:H2'	25:YA:2822:G:O4'	2.21	0.41
25:YA:2852:G:C6	25:YA:2853:C:C4	3.08	0.41
25:YA:2870:C:C5'	37:YR:65:LEU:HD21	2.51	0.41
25:YA:738:G:C2	25:YA:759:G:C5	3.08	0.41
25:YA:995:C:N4	33:YN:2:LYS:HG3	2.35	0.41
28:YE:11:MET:HE3	28:YE:186:GLY:HA2	2.03	0.41
13:XM:8:GLU:CD	30:YG:115:ARG:NH2	2.68	0.41
31:YH:145:ALA:O	31:YH:148:ILE:HB	2.21	0.41
32:YI:79:ILE:CB	32:YI:142:VAL:HA	2.42	0.41
34:YO:10:VAL:HG21	34:YO:16:ALA:HB3	2.03	0.41
34:YO:47:ILE:HD12	34:YO:48:PRO:CD	2.43	0.41
34:YO:48:PRO:O	34:YO:50:GLY:N	2.54	0.41
35:YP:101:VAL:O	35:YP:103:ALA:N	2.53	0.41
35:YP:18:ARG:HD2	35:YP:27:HIS:CD2	2.55	0.41
37:YR:29:LEU:HD11	37:YR:48:VAL:CG1	2.50	0.41
25:YA:2318:G:C2	38:YS:2:ALA:HA	2.56	0.41
40:YU:57:PHE:O	40:YU:60:LEU:N	2.54	0.41
41:YV:38:LEU:O	41:YV:51:VAL:HA	2.21	0.41
43:YX:31:HIS:HA	43:YX:32:PRO:HD3	1.88	0.41
45:YZ:108:PRO:HB2	45:YZ:112:ARG:CB	2.42	0.41
1:QA:1036:G:H3'	1:QA:1037:C:C6	2.56	0.41
1:QA:1043:C:H2'	1:QA:1044:A:H8	1.86	0.41
1:QA:1238:A:N7	1:QA:1303:C:H1'	2.36	0.41
1:QA:57:G:H2'	1:QA:58:C:O4'	2.21	0.41
2:QB:71:VAL:HG23	2:QB:164:VAL:HG22	2.02	0.41
2:QB:168:THR:CG2	2:QB:192:SER:HB2	2.51	0.41
3:QC:140:ARG:NH1	3:QC:140:ARG:HB2	2.36	0.41
1:QA:1189:C:H5''	3:QC:5:ILE:HG21	2.03	0.41
3:QC:47:LEU:CD1	3:QC:76:VAL:HG12	2.42	0.41
3:QC:95:THR:HG23	3:QC:97:LYS:HZ1	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:38:ILE:CD1	8:QH:118:VAL:HG12	2.49	0.41
15:QO:3:ILE:H	15:QO:3:ILE:CD1	2.20	0.41
15:QO:69:TYR:CZ	15:QO:73:GLU:HG3	2.56	0.41
17:QQ:89:LEU:HD23	17:QQ:89:LEU:HA	1.93	0.41
19:QS:32:LYS:HA	19:QS:50:ALA:HB3	2.03	0.41
46:R0:36:ILE:HA	46:R0:60:PHE:CB	2.51	0.41
48:R2:48:HIS:O	48:R2:49:LYS:C	2.57	0.41
50:R4:63:TYR:O	50:R4:65:ASP:N	2.54	0.41
52:R6:8:LYS:O	52:R6:9:LEU:HB2	2.21	0.41
25:RA:1165:U:H2'	25:RA:1166:C:C6	2.55	0.41
25:RA:1443:G:H1	25:RA:1548:C:H42	1.68	0.41
25:RA:14:A:H5''	25:RA:15:G:OP2	2.20	0.41
25:RA:216:A:C8	25:RA:432:A:C6	3.09	0.41
25:RA:2344:U:OP1	52:R6:38:LYS:HD3	2.20	0.41
25:RA:238:C:H42	25:RA:259:G:H1	1.68	0.41
25:RA:631:A:H61	25:RA:2402:C:N4	2.18	0.41
25:RA:2585:U:HO2'	25:RA:2586:C:P	2.44	0.41
25:RA:2848:G:OP2	39:RT:96:ARG:HG3	2.19	0.41
25:RA:2867:G:HO2'	25:RA:2868:A:H8	1.67	0.41
25:RA:365:C:H2'	25:RA:366:C:O4'	2.21	0.41
25:RA:425:G:N1	25:RA:426:C:C4	2.89	0.41
25:RA:57:C:H6	25:RA:57:C:O5'	2.04	0.41
25:RA:706:A:H2'	25:RA:707:G:O4'	2.21	0.41
25:RA:729:G:N7	27:RD:209:ALA:HB3	2.36	0.41
26:RB:10:C:C4	26:RB:11:C:C5	3.08	0.41
26:RB:16:G:H1	26:RB:68:C:H42	1.68	0.41
27:RD:134:ARG:HD3	27:RD:135:PHE:HE2	1.82	0.41
27:RD:177:LEU:C	27:RD:179:SER:H	2.23	0.41
27:RD:68:LYS:HG3	27:RD:68:LYS:O	2.20	0.41
30:RG:67:LYS:NZ	50:R4:6:HIS:CD2	2.89	0.41
30:RG:95:ARG:HA	30:RG:99:MET:HB3	2.03	0.41
30:RG:95:ARG:CA	30:RG:99:MET:HB3	2.50	0.41
33:RN:58:ASP:HB3	33:RN:95:PRO:HB3	2.02	0.41
38:RS:106:ARG:CZ	38:RS:106:ARG:HB2	2.49	0.41
39:RT:39:ARG:HG2	39:RT:40:THR:N	2.25	0.41
40:RU:27:LEU:C	40:RU:29:SER:N	2.73	0.41
40:RU:33:ARG:O	40:RU:37:GLU:HB2	2.21	0.41
40:RU:57:PHE:O	40:RU:60:LEU:N	2.54	0.41
42:RW:14:PRO:HG3	42:RW:101:SER:OG	2.21	0.41
42:RW:50:VAL:O	42:RW:53:SER:N	2.50	0.41
45:RZ:72:ARG:O	45:RZ:72:ARG:HG2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1301:U:HO2'	1:XA:1302:U:P	2.44	0.41
1:XA:1314:C:H2'	1:XA:1315:U:C6	2.56	0.41
1:XA:321:A:C2	1:XA:333:G:C2	3.08	0.41
1:XA:411:A:C8	1:XA:413:G:H1'	2.55	0.41
1:XA:501:C:OP1	12:XL:117:ARG:NH2	2.49	0.41
1:XA:637:G:H2'	1:XA:638:G:C8	2.56	0.41
1:XA:73:G:H2'	1:XA:74:C:C6	2.56	0.41
1:XA:767:A:H2'	1:XA:768:A:O4'	2.21	0.41
1:XA:926:G:C6	1:XA:1505:G:C6	3.09	0.41
2:XB:37:ASN:C	2:XB:39:ILE:N	2.73	0.41
2:XB:75:LYS:C	2:XB:77:ALA:H	2.25	0.41
8:XH:109:ILE:HG13	8:XH:120:THR:HB	2.03	0.41
8:XH:33:GLU:O	8:XH:36:LEU:N	2.53	0.41
8:XH:20:TYR:CD1	8:XH:65:TYR:CD2	2.98	0.41
9:XI:10:ARG:CG	9:XI:105:ASP:HB2	2.51	0.41
13:XM:117:VAL:O	13:XM:119:GLY:N	2.53	0.41
16:XP:20:VAL:CG2	16:XP:32:TYR:CD2	3.04	0.41
17:XQ:11:VAL:HG23	17:XQ:12:SER:H	1.85	0.41
48:Y2:41:ILE:HD12	48:Y2:43:GLN:N	2.35	0.41
52:Y6:6:ARG:NE	52:Y6:6:ARG:HA	2.35	0.41
52:Y6:8:LYS:O	52:Y6:9:LEU:HB2	2.21	0.41
54:Y8:56:GLU:C	54:Y8:58:ILE:N	2.73	0.41
25:YA:1011:G:H4'	25:YA:1012:U:OP1	2.20	0.41
25:YA:1212:G:H1'	25:YA:1237:A:N6	2.36	0.41
25:YA:1340:U:OP2	43:YX:78:LYS:NZ	2.50	0.41
25:YA:1506:C:H3'	25:YA:1507:A:H5''	2.02	0.41
25:YA:1766:U:H2'	25:YA:1767:C:H6	1.85	0.41
25:YA:1776:G:H2'	25:YA:1776:G:N3	2.36	0.41
25:YA:2317:C:C2'	25:YA:2318:G:H5'	2.51	0.41
25:YA:2360:A:H2'	25:YA:2361:A:O4'	2.21	0.41
25:YA:2530:A:OP1	25:YA:2535:G:N2	2.54	0.41
25:YA:2623:G:OP1	25:YA:2826:A:H1'	2.21	0.41
25:YA:2850:A:C2	25:YA:2851:A:C4	3.09	0.41
25:YA:467:G:OP1	53:Y7:33:ARG:NH1	2.54	0.41
25:YA:2729:G:C1'	28:YE:187:ALA:HB2	2.44	0.41
28:YE:62:PRO:O	28:YE:63:LEU:C	2.59	0.41
30:YG:67:LYS:NZ	50:Y4:6:HIS:CD2	2.89	0.41
30:YG:78:SER:O	30:YG:79:ASN:C	2.59	0.41
30:YG:53:LEU:CD1	30:YG:87:PRO:HB2	2.51	0.41
32:YI:32:PRO:C	32:YI:34:GLY:H	2.24	0.41
34:YO:31:LYS:HD3	34:YO:31:LYS:HA	1.92	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2495:G:H5''	36:YQ:81:VAL:CG1	2.50	0.41
37:YR:55:ALA:O	37:YR:58:GLY:HA3	2.21	0.41
38:YS:53:SER:HA	38:YS:56:LEU:CD2	2.50	0.41
38:YS:93:LYS:HE3	38:YS:93:LYS:HB2	1.93	0.41
41:YV:38:LEU:CD1	41:YV:55:ALA:CB	2.98	0.41
42:YW:71:VAL:HA	42:YW:107:LEU:HD12	2.02	0.41
43:YX:54:VAL:C	43:YX:55:ASN:HD22	2.23	0.41
44:YY:2:ARG:O	44:YY:3:VAL:O	2.38	0.41
44:YY:95:LYS:HZ1	44:YY:95:LYS:HB2	1.86	0.41
45:YZ:72:ARG:NH2	45:YZ:97:GLU:O	2.54	0.41
1:QA:177:C:H2'	1:QA:178:C:H6	1.84	0.41
1:QA:866:C:C4	1:QA:867:G:H1'	2.56	0.41
1:QA:908:A:H2'	1:QA:909:A:H8	1.85	0.41
3:QC:108:ASN:HB3	3:QC:111:LEU:CG	2.51	0.41
3:QC:108:ASN:CG	3:QC:111:LEU:HG	2.41	0.41
3:QC:23:TYR:CD2	3:QC:24:ALA:N	2.88	0.41
3:QC:46:GLU:C	3:QC:48:TYR:H	2.23	0.41
6:QF:75:LEU:HD23	6:QF:75:LEU:C	2.41	0.41
9:QI:83:ARG:HA	9:QI:86:VAL:HG12	2.03	0.41
9:QI:88:TYR:O	9:QI:89:ASN:HB2	2.20	0.41
12:QL:109:GLY:HA3	12:QL:121:GLY:O	2.20	0.41
12:QL:90:VAL:HG12	12:QL:92:ASP:H	1.86	0.41
13:QM:8:GLU:C	13:QM:9:ILE:CG2	2.90	0.41
16:QP:50:LYS:C	16:QP:50:LYS:HD3	2.42	0.41
17:QQ:11:VAL:HG23	17:QQ:12:SER:H	1.85	0.41
17:QQ:51:TYR:HA	17:QQ:52:LYS:HZ2	1.85	0.41
17:QQ:67:LYS:O	17:QQ:68:ARG:HB3	2.21	0.41
19:QS:39:THR:HG23	19:QS:68:GLY:O	2.21	0.41
48:R2:11:GLU:HA	48:R2:14:ARG:HD2	2.02	0.41
48:R2:65:ASN:O	48:R2:66:GLU:C	2.59	0.41
50:R4:26:SER:O	50:R4:27:THR:O	2.39	0.41
30:RG:143:GLU:C	50:R4:28:LYS:HZ2	2.24	0.41
53:R7:24:THR:HB	53:R7:25:PRO:HD2	2.03	0.41
25:RA:1006:C:H1'	33:RN:106:MET:HE3	2.02	0.41
25:RA:118:A:OP2	25:RA:119:A:H5''	2.21	0.41
25:RA:121:G:H5''	25:RA:149:A:O4'	2.21	0.41
25:RA:1338:G:N7	43:RX:62:LYS:NZ	2.63	0.41
25:RA:1418:G:N1	25:RA:1579:A:OP2	2.44	0.41
25:RA:1906:G:C2	25:RA:1907:G:C8	3.08	0.41
25:RA:210:C:OP2	53:R7:29:LYS:NZ	2.53	0.41
25:RA:2093:G:N3	25:RA:2198:A:N6	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2314:C:H2'	25:RA:2315:G:H8	1.86	0.41
25:RA:2377:A:H4'	38:RS:111:GLU:O	2.21	0.41
25:RA:2507:C:H2'	25:RA:2508:G:O4'	2.20	0.41
25:RA:2543:G:H21	25:RA:2646:C:H5''	1.86	0.41
25:RA:27:G:N2	25:RA:512:G:O2'	2.54	0.41
25:RA:35:G:H1'	25:RA:454:A:C4	2.56	0.41
25:RA:623:G:H2'	25:RA:624:C:C6	2.56	0.41
25:RA:918:A:C6	25:RA:919:G:H1'	2.56	0.41
27:RD:154:LYS:C	27:RD:155:LEU:HD12	2.41	0.41
27:RD:263:ARG:NH1	27:RD:263:ARG:CB	2.75	0.41
27:RD:31:LYS:O	27:RD:32:SER:O	2.39	0.41
25:RA:1824:G:OP1	27:RD:52:ARG:HD3	2.21	0.41
28:RE:147:PRO:HB2	28:RE:149:ARG:HG2	2.03	0.41
28:RE:51:PHE:CG	28:RE:52:LEU:N	2.89	0.41
28:RE:92:THR:HB	28:RE:93:VAL:H	1.57	0.41
29:RF:13:SER:OG	29:RF:14:PRO:HD2	2.21	0.41
31:RH:145:ALA:O	31:RH:148:ILE:HB	2.21	0.41
33:RN:133:GLN:CB	33:RN:135:PRO:HD3	2.42	0.41
35:RP:65:ARG:C	35:RP:66:GLY:O	2.59	0.41
36:RQ:27:VAL:HG22	36:RQ:105:GLU:CD	2.41	0.41
40:RU:83:LEU:CD1	40:RU:113:ALA:HB2	2.50	0.41
40:RU:76:TYR:O	40:RU:80:ILE:HG12	2.21	0.41
42:RW:14:PRO:C	42:RW:16:LYS:N	2.73	0.41
45:RZ:24:LEU:HD11	45:RZ:86:VAL:CG2	2.40	0.41
1:XA:1186:G:O3'	9:XI:113:LYS:NZ	2.51	0.41
1:XA:1316:G:H5''	14:YN:17:LYS:HE3	2.03	0.41
1:XA:1474:G:O2'	25:YA:1701:A:H2	2.03	0.41
1:XA:24:U:H2'	1:XA:25:C:C6	2.56	0.41
1:XA:588:G:C6	1:XA:589:C:N4	2.89	0.41
2:XB:143:GLU:O	2:XB:147:LYS:HB2	2.21	0.41
2:XB:87:ARG:HH11	2:XB:223:ILE:HD11	1.82	0.41
2:XB:95:GLN:HB3	2:XB:148:TYR:HD1	1.84	0.41
3:XC:47:LEU:CD1	3:XC:76:VAL:HG12	2.42	0.41
4:XD:170:VAL:CG2	4:XD:171:GLY:H	2.17	0.41
5:XE:51:VAL:CB	5:XE:52:PRO:HD3	2.38	0.41
5:XE:6:PHE:HB2	5:XE:63:ARG:HH12	1.86	0.41
5:XE:90:VAL:C	5:XE:91:LEU:HD12	2.42	0.41
9:XI:105:ASP:C	9:XI:107:ARG:N	2.74	0.41
9:XI:83:ARG:HG2	9:XI:83:ARG:H	1.64	0.41
1:XA:302:G:O3'	12:XL:17:LYS:HE2	2.21	0.41
12:XL:38:THR:HG22	12:XL:57:LYS:HB3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:XL:62:SER:O	12:XL:64:TYR:N	2.54	0.41
12:XL:25:PRO:HD2	12:XL:97:ARG:HH11	1.86	0.41
13:XM:15:VAL:O	13:XM:19:LEU:HD22	2.21	0.41
14:XM:48:ALA:O	14:XM:51:GLY:N	2.53	0.41
15:XO:69:TYR:CZ	15:XO:73:GLU:HG3	2.56	0.41
17:XQ:63:ARG:HG2	17:XQ:64:PRO:HD2	2.03	0.41
19:XS:39:THR:O	19:XS:40:ILE:HB	2.21	0.41
1:XA:191:G:O2'	20:XT:101:GLY:O	2.38	0.41
46:Y0:40:GLN:NE2	46:Y0:43:THR:HA	2.36	0.41
48:Y2:18:PRO:C	48:Y2:20:GLU:N	2.73	0.41
50:Y4:26:SER:C	50:Y4:27:THR:O	2.58	0.41
25:YA:1153:C:OP1	40:YU:76:TYR:OH	2.37	0.41
25:YA:1717:G:H1	25:YA:1742:C:H42	1.69	0.41
25:YA:1793:C:H2'	25:YA:1794:U:C6	2.55	0.41
25:YA:1906:G:C2	25:YA:1907:G:C8	3.08	0.41
25:YA:2100:G:N3	25:YA:2100:G:H2'	2.36	0.41
25:YA:2390:U:O2'	25:YA:2391:G:H5'	2.21	0.41
25:YA:28:A:C2	25:YA:513:A:C8	3.09	0.41
25:YA:643:A:C2	25:YA:644:A:C4	3.08	0.41
25:YA:760:G:H2'	25:YA:761:A:O4'	2.21	0.41
28:YE:101:ARG:C	28:YE:201:THR:OG1	2.58	0.41
29:YF:13:SER:OG	29:YF:14:PRO:HD2	2.21	0.41
29:YF:59:TYR:HB3	29:YF:60:SER:H	1.70	0.41
30:YG:47:LYS:HE3	30:YG:47:LYS:HB2	1.80	0.41
33:YN:101:HIS:HD2	33:YN:102:ALA:N	2.19	0.41
33:YN:9:VAL:HB	33:YN:10:GLU:H	1.70	0.41
38:YS:89:ARG:HG2	38:YS:89:ARG:NH1	2.36	0.41
40:YU:76:TYR:O	40:YU:80:ILE:HG12	2.21	0.41
40:YU:91:ASP:OD2	40:YU:96:ALA:CA	2.69	0.41
33:YN:1:MET:HE3	40:YU:95:LEU:HD21	1.98	0.41
44:YY:13:VAL:O	44:YY:24:VAL:HA	2.20	0.41
44:YY:42:VAL:HG21	44:YY:67:LEU:CD1	2.51	0.41
44:YY:98:VAL:O	44:YY:99:CYS:HB3	2.21	0.41
1:QA:130:A:N3	1:QA:263:A:O2'	2.49	0.41
2:QB:130:ARG:HH22	2:QB:138:LEU:HD21	1.85	0.41
3:QC:13:GLY:O	3:QC:14:ILE:HB	2.21	0.41
4:QD:199:ASN:OD1	4:QD:201:GLN:HB3	2.21	0.41
6:QF:3:ARG:HB3	6:QF:93:SER:CB	2.48	0.41
8:QH:97:VAL:O	8:QH:100:ILE:HG13	2.20	0.41
10:QJ:84:GLN:HG3	10:QJ:84:GLN:H	1.50	0.41
12:QL:62:SER:HB2	12:QL:64:TYR:CD1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:8:ASN:O	12:QL:11:VAL:HG23	2.20	0.41
15:QO:11:VAL:O	15:QO:12:ILE:C	2.60	0.41
15:QO:25:THR:CG2	15:QO:70:LEU:HB2	2.49	0.41
17:QQ:60:ILE:HG23	17:QQ:60:ILE:O	2.21	0.41
19:QS:29:ARG:HG2	19:QS:29:ARG:NH1	2.36	0.41
47:R1:85:LEU:N	47:R1:85:LEU:CD2	2.84	0.41
50:R4:42:PHE:CZ	50:R4:43:TYR:HB3	2.56	0.41
54:R8:32:LEU:HA	54:R8:32:LEU:HD23	1.94	0.41
25:RA:1466:G:H2'	25:RA:1547:C:H41	1.86	0.41
25:RA:1638:C:H5''	25:RA:2710:C:O2'	2.20	0.41
25:RA:1826:G:OP1	27:RD:224:ALA:N	2.43	0.41
25:RA:2396:G:H4'	47:R1:30:VAL:HA	2.02	0.41
25:RA:2511:U:O2	28:RE:140:SER:N	2.53	0.41
25:RA:2892:A:H2'	25:RA:2893:G:O4'	2.21	0.41
25:RA:373:U:H2'	25:RA:374:A:C8	2.56	0.41
25:RA:681:G:H2'	25:RA:682:G:O4'	2.20	0.41
26:RB:37:C:C4	26:RB:38:C:C4	3.09	0.41
27:RD:117:VAL:HG22	27:RD:118:VAL:N	2.35	0.41
28:RE:161:GLY:O	28:RE:162:ALA:HB3	2.20	0.41
28:RE:62:PRO:O	28:RE:63:LEU:C	2.59	0.41
29:RF:80:ALA:O	29:RF:83:PHE:HB2	2.20	0.41
13:QM:8:GLU:OE2	30:RG:115:ARG:CZ	2.69	0.41
30:RG:61:ALA:CB	30:RG:67:LYS:HA	2.51	0.41
32:RI:82:ARG:HD3	32:RI:82:ARG:HA	1.77	0.41
33:RN:10:GLU:OE2	33:RN:11:PRO:HD2	2.21	0.41
25:RA:1012:U:O2	33:RN:25:ARG:NH1	2.54	0.41
33:RN:23:LEU:CD1	33:RN:99:LEU:HD23	2.51	0.41
36:RQ:139:GLU:CG	36:RQ:140:ALA:N	2.84	0.41
37:RR:22:ARG:O	37:RR:26:LYS:HG3	2.21	0.41
37:RR:55:ALA:O	37:RR:58:GLY:HA3	2.21	0.41
25:RA:2873:A:N3	37:RR:5:LYS:HA	2.36	0.41
37:RR:94:TYR:CD2	37:RR:94:TYR:N	2.87	0.41
38:RS:66:ALA:HA	38:RS:69:VAL:CG1	2.51	0.41
39:RT:84:GLN:HG2	39:RT:85:LYS:N	2.36	0.41
42:RW:14:PRO:C	42:RW:18:ARG:HD2	2.41	0.41
44:RY:49:VAL:O	44:RY:50:ARG:C	2.59	0.41
44:RY:90:LEU:HB2	44:RY:91:GLU:H	1.53	0.41
45:RZ:108:PRO:O	45:RZ:110:GLY:N	2.45	0.41
45:RZ:10:ARG:O	45:RZ:36:LYS:HB2	2.21	0.41
1:XA:1343:G:H2'	1:XA:1344:C:C6	2.56	0.41
3:XC:19:GLU:HA	3:XC:54:ARG:NH1	2.14	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:12:CYS:O	4:XD:33:MET:HG3	2.21	0.41
4:XD:178:VAL:HG12	4:XD:179:GLU:N	2.35	0.41
5:XE:132:ALA:O	5:XE:133:TYR:C	2.59	0.41
5:XE:75:THR:CG2	5:XE:76:ILE:N	2.80	0.41
6:XF:40:VAL:HA	6:XF:62:TRP:O	2.21	0.41
9:XI:113:LYS:H	9:XI:113:LYS:CD	2.28	0.41
13:XM:117:VAL:CG2	13:XM:118:ALA:H	2.31	0.41
14:XN:47:LEU:O	14:XN:50:LYS:N	2.52	0.41
15:XO:11:VAL:O	15:XO:12:ILE:C	2.60	0.41
17:XQ:83:ASP:O	17:XQ:87:LYS:HG2	2.21	0.41
17:XQ:86:GLU:O	17:XQ:87:LYS:C	2.60	0.41
17:XQ:89:LEU:HD23	17:XQ:89:LEU:HA	1.93	0.41
1:XA:1221:G:P	19:XS:36:ARG:HD3	2.62	0.41
20:XT:50:GLU:HA	20:XT:100:ILE:HG22	2.02	0.41
1:XA:1327:C:P	21:XU:12:LYS:HZ1	2.40	0.41
47:Y1:85:LEU:N	47:Y1:85:LEU:CD2	2.84	0.41
48:Y2:11:GLU:HA	48:Y2:14:ARG:HD2	2.02	0.41
48:Y2:65:ASN:O	48:Y2:66:GLU:C	2.59	0.41
30:YG:112:PRO:CA	50:Y4:37:SER:HB2	2.51	0.41
50:Y4:63:TYR:O	50:Y4:65:ASP:N	2.53	0.41
54:Y8:17:THR:O	54:Y8:20:GLY:N	2.46	0.41
54:Y8:40:GLU:O	54:Y8:42:ARG:N	2.54	0.41
25:YA:1395:A:C6	25:YA:1398:C:C2	3.09	0.41
25:YA:1790:C:H2'	25:YA:1791:A:C5	2.56	0.41
25:YA:1826:G:H4'	27:YD:242:ARG:NH2	2.31	0.41
25:YA:1659:U:C2	25:YA:2002:G:N2	2.89	0.41
25:YA:2287:A:N1	25:YA:2289:G:H1'	2.35	0.41
25:YA:2408:U:H6	25:YA:2408:U:O5'	2.04	0.41
25:YA:2619:C:H2'	25:YA:2620:C:C6	2.56	0.41
25:YA:611:C:H2'	25:YA:612:G:H8	1.85	0.41
25:YA:741:G:C6	25:YA:757:U:O2	2.74	0.41
25:YA:78:A:H2'	25:YA:79:G:H8	1.85	0.41
25:YA:888:C:H3'	25:YA:889:C:C4'	2.49	0.41
27:YD:13:ARG:HG2	27:YD:13:ARG:O	2.20	0.41
27:YD:147:LEU:CD1	27:YD:155:LEU:HD21	2.51	0.41
27:YD:228:PRO:HD3	27:YD:234:GLY:O	2.21	0.41
27:YD:68:LYS:HG3	27:YD:68:LYS:O	2.20	0.41
29:YF:68:LYS:O	29:YF:69:HIS:HB2	2.21	0.41
30:YG:18:GLU:OE2	30:YG:18:GLU:HA	2.21	0.41
31:YH:137:ASP:HB2	31:YH:140:LYS:CE	2.51	0.41
31:YH:26:VAL:HG12	31:YH:33:LEU:HB2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:66:GLY:O	31:YH:67:LEU:C	2.58	0.41
32:YI:10:GLU:O	32:YI:11:ASN:HB3	2.21	0.41
33:YN:7:LYS:CG	33:YN:8:GLN:N	2.80	0.41
25:YA:2562:U:H1'	34:YO:23:ARG:NH1	2.36	0.41
35:YP:101:VAL:HG23	35:YP:106:LEU:HB3	2.03	0.41
35:YP:84:ASN:HB2	35:YP:87:ASP:OD2	2.21	0.41
37:YR:61:HIS:CE1	37:YR:65:LEU:HD11	2.56	0.41
39:YT:10:VAL:O	39:YT:11:GLU:C	2.59	0.41
39:YT:39:ARG:HG2	39:YT:40:THR:N	2.25	0.41
44:YY:97:ARG:NH2	44:YY:98:VAL:CG2	2.84	0.41
45:YZ:72:ARG:HG2	45:YZ:72:ARG:O	2.21	0.41
1:QA:1276:G:H2'	1:QA:1277:C:C6	2.56	0.40
1:QA:24:U:H2'	1:QA:25:C:H6	1.86	0.40
1:QA:256:U:H3	1:QA:270:A:H61	1.69	0.40
1:QA:391:G:C6	1:QA:392:G:C5	3.09	0.40
1:QA:452:A:C6	1:QA:453:A:C6	3.09	0.40
1:QA:502:G:C6	1:QA:503:C:C4	3.09	0.40
1:QA:692:U:O2'	1:QA:694:A:N7	2.41	0.40
2:QB:62:ALA:O	2:QB:65:GLY:N	2.53	0.40
2:QB:95:GLN:O	2:QB:96:ARG:C	2.59	0.40
4:QD:172:PRO:HG2	6:XF:24:GLU:OE1	2.21	0.40
5:QE:41:VAL:O	5:QE:66:MET:HA	2.22	0.40
5:QE:72:GLN:C	5:QE:74:GLY:H	2.23	0.40
1:QA:1376:U:P	7:QG:94:ARG:HH12	2.44	0.40
18:QR:37:VAL:O	18:QR:40:LEU:N	2.54	0.40
18:QR:74:ARG:HG2	18:QR:79:LEU:HB2	2.01	0.40
19:QS:31:ILE:HG23	19:QS:31:ILE:O	2.21	0.40
25:RA:855:G:O2'	46:R0:27:GLU:OE2	2.39	0.40
46:R0:55:ARG:NH1	46:R0:55:ARG:HG3	2.35	0.40
46:R0:5:LYS:HG2	46:R0:6:GLY:H	1.86	0.40
47:R1:96:LYS:O	47:R1:96:LYS:HG2	2.21	0.40
48:R2:32:LEU:HD23	48:R2:32:LEU:O	2.21	0.40
43:RX:60:ARG:HH22	53:R7:47:ARG:HH12	1.68	0.40
54:R8:3:LYS:HB3	54:R8:3:LYS:HE2	1.83	0.40
25:RA:1570:A:C6	25:RA:1571:A:C6	3.09	0.40
25:RA:1992:G:O5'	25:RA:1992:G:C8	2.74	0.40
25:RA:2255:G:H1	25:RA:2275:C:H42	1.68	0.40
25:RA:2291:U:OP1	25:RA:2380:C:O2'	2.33	0.40
25:RA:2583:G:H3'	25:RA:2584:U:O2	2.20	0.40
25:RA:27:G:H22	25:RA:512:G:C2'	2.34	0.40
25:RA:482:A:OP2	25:RA:507:A:N6	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:871:U:OP1	36:RQ:5:ARG:HG2	2.21	0.40
27:RD:147:LEU:CD1	27:RD:155:LEU:HD21	2.51	0.40
32:RI:27:ARG:HB3	47:R1:71:TYR:CE1	2.56	0.40
34:RO:92:GLU:O	34:RO:93:PRO:C	2.58	0.40
35:RP:55:ARG:NH2	35:RP:55:ARG:HG2	2.36	0.40
35:RP:66:GLY:O	35:RP:67:MET:CB	2.63	0.40
35:RP:84:ASN:HB2	35:RP:87:ASP:OD2	2.22	0.40
36:RQ:52:VAL:O	36:RQ:53:ALA:C	2.59	0.40
36:RQ:76:LYS:HB3	36:RQ:90:VAL:CG1	2.51	0.40
25:RA:2723:C:H4'	37:RR:1:MET:HE2	2.02	0.40
42:RW:88:ARG:HD2	42:RW:88:ARG:HA	1.92	0.40
44:RY:87:LYS:HB2	44:RY:87:LYS:HZ2	1.85	0.40
45:RZ:111:VAL:HG23	45:RZ:115:GLY:O	2.21	0.40
45:RZ:82:ARG:HG3	45:RZ:83:PRO:CD	2.50	0.40
1:XA:1064:G:C8	1:XA:1066:C:C2	3.09	0.40
1:XA:135:C:H2'	1:XA:136:C:H5'	2.02	0.40
1:XA:295:C:H2'	1:XA:296:U:C6	2.56	0.40
1:XA:321:A:N6	1:XA:332:G:H1	2.19	0.40
1:XA:410:G:C8	1:XA:410:G:H3'	2.56	0.40
1:XA:57:G:H2'	1:XA:58:C:C6	2.56	0.40
1:XA:791:G:C6	1:XA:792:A:N1	2.89	0.40
2:XB:125:PRO:O	2:XB:126:GLU:HB2	2.21	0.40
2:XB:223:ILE:O	2:XB:226:ARG:HB3	2.20	0.40
2:XB:76:GLN:OE1	2:XB:206:ASP:HB3	2.21	0.40
3:XC:47:LEU:HD11	3:XC:76:VAL:CG1	2.42	0.40
3:XC:5:ILE:CD1	3:XC:5:ILE:H	2.35	0.40
7:XG:21:VAL:HG23	7:XG:22:LEU:N	2.32	0.40
8:XH:33:GLU:C	8:XH:35:ILE:H	2.25	0.40
1:XA:1232:U:P	9:XI:124:GLN:HE21	2.43	0.40
10:XJ:84:GLN:H	10:XJ:84:GLN:HG3	1.50	0.40
11:XK:21:ILE:CD1	11:XK:82:VAL:HG13	2.51	0.40
11:XK:31:THR:O	11:XK:31:THR:HG23	2.21	0.40
12:XL:10:LEU:CD1	17:XQ:32:TYR:CD2	3.03	0.40
13:XM:65:LYS:HE3	50:Y4:50:VAL:HG11	2.03	0.40
13:XM:8:GLU:C	13:XM:9:ILE:CG2	2.90	0.40
17:XQ:85:VAL:HG12	17:XQ:85:VAL:O	2.20	0.40
17:XQ:94:ASN:O	17:XQ:97:SER:N	2.53	0.40
18:XR:84:LYS:H	18:XR:84:LYS:HG2	1.56	0.40
19:XS:10:PHE:CD2	19:XS:11:VAL:N	2.90	0.40
19:XS:31:ILE:HG23	19:XS:31:ILE:O	2.21	0.40
22:XV:16:C:O2'	22:XV:17:C:OP1	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YI:27:ARG:HB3	47:Y1:71:TYR:CE1	2.57	0.40
50:Y4:64:GLY:C	50:Y4:66:SER:N	2.73	0.40
25:YA:1166:C:H2'	25:YA:1167:U:H6	1.86	0.40
25:YA:1446:C:N4	25:YA:1465:G:H1	2.17	0.40
25:YA:1655:A:O2'	28:YE:115:GLY:HA2	2.22	0.40
25:YA:1690:A:H2'	25:YA:1691:C:O4'	2.21	0.40
25:YA:1729:A:N6	25:YA:1731:G:C2	2.88	0.40
25:YA:1872:A:H5'	25:YA:1878:G:OP2	2.21	0.40
25:YA:1659:U:O2'	25:YA:2712(A):A:N1	2.47	0.40
25:YA:638:G:H2'	25:YA:639:U:O4'	2.20	0.40
29:YF:62:ARG:CZ	29:YF:62:ARG:HB3	2.52	0.40
25:YA:588:U:H1'	29:YF:90:PHE:CD1	2.56	0.40
31:YH:128:PRO:CG	31:YH:129:THR:H	2.33	0.40
31:YH:20:ALA:HB3	31:YH:23:ARG:HG2	2.03	0.40
31:YH:45:VAL:O	31:YH:45:VAL:CG1	2.69	0.40
32:YI:93:THR:O	32:YI:97:ILE:HG12	2.21	0.40
36:YQ:20:ALA:HB1	36:YQ:99:PRO:CG	2.51	0.40
38:YS:102:ALA:C	38:YS:104:GLY:N	2.73	0.40
38:YS:20:ARG:HE	38:YS:21:THR:HA	1.87	0.40
40:YU:57:PHE:O	40:YU:58:ARG:C	2.59	0.40
1:QA:259:G:H1	1:QA:267:C:N4	2.19	0.40
1:QA:282:A:C8	1:QA:283:C:C5	3.10	0.40
1:QA:426:G:OP1	4:QD:38:TYR:OH	2.38	0.40
1:QA:467:G:C6	1:QA:468:A:C5	3.09	0.40
1:QA:864:A:H2'	1:QA:865:A:C8	2.55	0.40
2:QB:132:LYS:HA	2:QB:135:GLN:CG	2.51	0.40
3:QC:128:PHE:O	3:QC:130:VAL:N	2.54	0.40
3:QC:178:LEU:CD2	3:QC:178:LEU:N	2.85	0.40
5:QE:27:ARG:CG	5:QE:28:PHE:N	2.84	0.40
5:QE:90:VAL:C	5:QE:91:LEU:HD12	2.42	0.40
9:QI:13:ALA:H	9:QI:68:GLY:HA3	1.86	0.40
11:QK:83:ILE:HG12	11:QK:109:VAL:CG2	2.51	0.40
14:QN:34:TYR:CD1	14:QN:34:TYR:N	2.89	0.40
14:QN:26:ARG:CD	14:QN:47:LEU:HD21	2.52	0.40
17:QQ:85:VAL:HG12	17:QQ:85:VAL:O	2.20	0.40
17:QQ:86:GLU:O	17:QQ:87:LYS:C	2.60	0.40
19:QS:10:PHE:CD2	19:QS:11:VAL:N	2.89	0.40
20:QT:44:ALA:HB3	20:QT:91:LEU:HD12	2.03	0.40
50:R4:21:VAL:O	50:R4:22:ILE:O	2.40	0.40
19:QS:5:LEU:CD2	50:R4:66:SER:HB2	2.51	0.40
52:R6:50:ARG:NH1	52:R6:50:ARG:HG2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:R8:53:PRO:HD2	54:R8:54:GLU:H	1.84	0.40
25:RA:1419:A:H61	25:RA:1494:A:H61	1.70	0.40
25:RA:1688:U:O2	25:RA:1700:A:H5''	2.20	0.40
25:RA:1688:U:O2	25:RA:1700:A:H8	2.05	0.40
25:RA:1771:C:O2'	25:RA:1786:A:C8	2.73	0.40
25:RA:1845:G:N2	25:RA:1846:G:H1'	2.36	0.40
25:RA:195:A:H61	25:RA:198:C:H3'	1.86	0.40
25:RA:2210:G:H5'	25:RA:2211:G:C5	2.56	0.40
25:RA:2326:C:H6	25:RA:2326:C:O5'	2.04	0.40
25:RA:2740:A:N6	25:RA:2763:G:O2'	2.55	0.40
27:RD:145:VAL:CG1	27:RD:146:GLU:N	2.84	0.40
28:RE:5:LEU:O	28:RE:28:ALA:HA	2.22	0.40
29:RF:128:ALA:O	29:RF:129:PHE:CB	2.67	0.40
29:RF:144:LYS:C	29:RF:146:ALA:N	2.75	0.40
29:RF:68:LYS:O	29:RF:69:HIS:HB2	2.21	0.40
30:RG:78:SER:O	30:RG:79:ASN:C	2.59	0.40
31:RH:20:ALA:HB3	31:RH:23:ARG:HG2	2.03	0.40
33:RN:137:LYS:HD2	33:RN:137:LYS:HA	1.89	0.40
34:RO:47:ILE:HD12	34:RO:48:PRO:CD	2.43	0.40
37:RR:84:ALA:O	37:RR:85:PRO:C	2.59	0.40
38:RS:100:ALA:CA	38:RS:103:GLU:HG2	2.49	0.40
38:RS:12:PHE:HD2	38:RS:12:PHE:HA	1.80	0.40
38:RS:42:ASP:O	38:RS:43:GLU:CB	2.62	0.40
38:RS:6:ALA:O	38:RS:10:ARG:HD3	2.22	0.40
41:RV:55:ALA:O	41:RV:56:SER:OG	2.31	0.40
42:RW:100:THR:O	42:RW:100:THR:HG23	2.22	0.40
1:XA:1162:C:O2'	1:XA:1163:C:O4'	2.39	0.40
1:XA:1418:A:C2	1:XA:1483:A:C2	3.09	0.40
1:XA:187:C:H2'	1:XA:188:U:O4'	2.22	0.40
1:XA:474:G:H2'	1:XA:475:G:C8	2.56	0.40
1:XA:498:A:N1	1:XA:546:G:O2'	2.45	0.40
1:XA:575:G:C5	1:XA:881:G:C2	3.10	0.40
2:XB:204:ASN:HD22	2:XB:204:ASN:C	2.22	0.40
2:XB:47:THR:O	2:XB:51:LEU:N	2.32	0.40
3:XC:138:VAL:HG22	3:XC:151:VAL:HG23	2.03	0.40
3:XC:140:ARG:HB2	3:XC:140:ARG:NH1	2.36	0.40
3:XC:13:GLY:O	3:XC:14:ILE:HB	2.21	0.40
4:XD:68:TYR:OH	4:XD:196:LEU:HD21	2.21	0.40
7:XG:118:VAL:HG23	7:XG:119:ARG:N	2.35	0.40
7:XG:92:SER:HB3	7:XG:95:ARG:HB2	2.03	0.40
8:XH:97:VAL:O	8:XH:100:ILE:HG13	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:53:VAL:HG12	8:XH:54:ASP:OD2	2.20	0.40
9:XI:71:SER:O	9:XI:72:GLY:C	2.58	0.40
11:XK:83:ILE:HG12	11:XK:109:VAL:CG2	2.51	0.40
12:XL:117:ARG:HB3	12:XL:122:THR:HB	2.02	0.40
18:XR:37:VAL:O	18:XR:40:LEU:N	2.54	0.40
19:XS:3:ARG:CG	19:XS:4:SER:N	2.83	0.40
46:Y0:19:LYS:HA	46:Y0:19:LYS:HD3	1.68	0.40
46:Y0:68:GLU:CG	46:Y0:80:HIS:HB2	2.50	0.40
47:Y1:94:LEU:HA	47:Y1:94:LEU:HD23	1.81	0.40
48:Y2:15:LYS:H	48:Y2:67:LYS:HZ3	1.70	0.40
48:Y2:37:PHE:O	48:Y2:40:SER:HB3	2.22	0.40
50:Y4:42:PHE:CZ	50:Y4:43:TYR:HB3	2.56	0.40
50:Y4:49:PHE:HD1	50:Y4:49:PHE:N	2.17	0.40
54:Y8:64:TYR:HB3	54:Y8:65:GLU:H	1.40	0.40
25:YA:1638:C:OP1	25:YA:2710:C:O2'	2.39	0.40
25:YA:2262:U:H2'	25:YA:2263:C:C6	2.57	0.40
25:YA:2345:G:H4'	25:YA:2346:A:O5'	2.21	0.40
25:YA:273(A):G:C2	25:YA:364:C:C2	3.09	0.40
25:YA:2867:G:O2'	25:YA:2868:A:H8	2.04	0.40
25:YA:407:G:H2'	25:YA:408:G:C8	2.57	0.40
25:YA:686:G:H8	53:Y7:6:GLN:O	2.04	0.40
25:YA:716:A:C2	25:YA:717:G:H1'	2.57	0.40
25:YA:724:U:H2'	25:YA:725:G:O4'	2.22	0.40
25:YA:780:G:N2	25:YA:783:A:H62	2.12	0.40
27:YD:31:LYS:O	27:YD:32:SER:O	2.39	0.40
28:YE:119:ARG:HG2	28:YE:160:TYR:HB2	2.03	0.40
29:YF:198:ALA:HA	29:YF:201:VAL:CG1	2.41	0.40
32:YI:121:LYS:HB2	32:YI:121:LYS:HE3	1.79	0.40
32:YI:82:ARG:HA	32:YI:82:ARG:HD3	1.77	0.40
32:YI:94:ALA:O	32:YI:96:ASP:N	2.54	0.40
33:YN:10:GLU:OE2	33:YN:11:PRO:HD2	2.21	0.40
34:YO:106:LEU:HA	34:YO:106:LEU:HD23	1.88	0.40
34:YO:86:ILE:CD1	34:YO:86:ILE:N	2.83	0.40
36:YQ:139:GLU:CG	36:YQ:140:ALA:N	2.84	0.40
36:YQ:52:VAL:O	36:YQ:53:ALA:C	2.59	0.40
39:YT:50:ILE:CG2	39:YT:62:THR:OG1	2.68	0.40
40:YU:5:LYS:C	40:YU:7:GLY:N	2.75	0.40
42:YW:66:GLU:HG2	42:YW:67:ASP:N	2.37	0.40
1:QA:127:G:C2	1:QA:128:G:C8	3.09	0.40
1:QA:1285:A:H4'	1:QA:1286:A:C5'	2.52	0.40
1:QA:1432:G:OP1	39:RT:107:ASP:HB2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1531:A:C4'	1:QA:1531:A:C8	3.04	0.40
1:QA:421:U:H5''	1:QA:422:C:OP2	2.22	0.40
1:QA:661:G:H1	1:QA:744:C:N4	2.19	0.40
1:QA:709:G:H2'	1:QA:710:G:C8	2.56	0.40
1:QA:753:A:H4'	1:QA:754:C:O5'	2.21	0.40
1:QA:804:U:H5''	1:QA:805:C:OP2	2.21	0.40
1:QA:883:C:N3	1:QA:884:U:C4	2.89	0.40
2:QB:143:GLU:O	2:QB:147:LYS:HB2	2.21	0.40
2:QB:17:PHE:HB2	2:QB:42:ILE:CG2	2.51	0.40
3:QC:129:ALA:C	3:QC:131:ARG:N	2.72	0.40
4:QD:110:PHE:HE2	4:QD:148:VAL:HG23	1.86	0.40
4:QD:26:CYS:HA	4:QD:31:CYS:HA	2.03	0.40
4:QD:96:LEU:C	4:QD:98:GLU:N	2.72	0.40
5:QE:31:LEU:HD13	5:QE:43:LEU:HD11	2.04	0.40
10:QJ:22:LYS:CD	10:QJ:22:LYS:C	2.90	0.40
13:QM:39:ILE:CD1	13:QM:56:LEU:HB2	2.51	0.40
10:QJ:65:LEU:HA	14:QN:55:GLY:O	2.22	0.40
14:QN:9:LYS:HB3	14:QN:9:LYS:HE2	1.85	0.40
25:RA:270(R):G:H1'	47:R1:78:LYS:HZ1	1.85	0.40
47:R1:86:SER:O	47:R1:89:GLU:HB2	2.21	0.40
48:R2:53:LEU:O	48:R2:57:ILE:HG13	2.21	0.40
52:R6:7:ILE:CG1	52:R6:8:LYS:N	2.75	0.40
53:R7:5:TRP:HE1	53:R7:7:PRO:HG3	1.85	0.40
54:R8:40:GLU:O	54:R8:42:ARG:N	2.54	0.40
25:RA:1425:G:H2'	25:RA:1426:G:O4'	2.20	0.40
25:RA:1859:A:C2	25:RA:1884:A:H1'	2.57	0.40
25:RA:2020:A:OP1	40:RU:27:LEU:HD23	2.20	0.40
25:RA:2145:C:H2'	25:RA:2147:G:N2	2.35	0.40
25:RA:2152:G:H2'	25:RA:2153:G:H8	1.86	0.40
25:RA:2252:G:H2'	25:RA:2253:G:O4'	2.22	0.40
25:RA:2337:G:H2'	25:RA:2337:G:N3	2.36	0.40
25:RA:2526:G:H5'	25:RA:2742:C:O2'	2.21	0.40
25:RA:568:U:O5'	25:RA:945:A:N6	2.54	0.40
25:RA:66:C:C4	25:RA:67:U:C4	3.10	0.40
25:RA:680:G:H2'	25:RA:681:G:C8	2.56	0.40
27:RD:176:ARG:CG	27:RD:176:ARG:HH11	2.30	0.40
27:RD:272:ALA:HB1	27:RD:273:ARG:H	1.58	0.40
28:RE:119:ARG:HG2	28:RE:160:TYR:HB2	2.03	0.40
29:RF:62:ARG:HB3	29:RF:62:ARG:CZ	2.52	0.40
29:RF:64:ILE:HD12	29:RF:64:ILE:HA	1.89	0.40
26:RB:45:A:H1'	30:RG:95:ARG:HH22	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:26:VAL:HG12	31:RH:33:LEU:HB2	2.03	0.40
33:RN:28:THR:O	33:RN:29:LYS:C	2.59	0.40
33:RN:5:VAL:HA	33:RN:6:PRO:HD3	1.94	0.40
34:RO:20:MET:O	34:RO:41:ALA:CB	2.67	0.40
34:RO:31:LYS:C	34:RO:32:TYR:CD2	2.95	0.40
35:RP:19:VAL:HG22	35:RP:21:ARG:N	2.36	0.40
35:RP:65:ARG:HH21	54:R8:15:LYS:HB3	1.85	0.40
36:RQ:139:GLU:HG2	36:RQ:140:ALA:N	2.37	0.40
37:RR:14:SER:HB2	37:RR:15:SER:H	1.72	0.40
37:RR:61:HIS:CE1	37:RR:65:LEU:HD11	2.56	0.40
39:RT:10:VAL:O	39:RT:11:GLU:C	2.59	0.40
41:RV:38:LEU:O	41:RV:51:VAL:HA	2.21	0.40
42:RW:1:MET:CE	42:RW:2:GLU:H	2.31	0.40
44:RY:95:LYS:HA	44:RY:101:LYS:CB	2.51	0.40
1:XA:247:G:O6	1:XA:278:G:C6	2.74	0.40
1:XA:453:A:C6	1:XA:454:C:C4	3.10	0.40
1:XA:558:G:H2'	1:XA:559:A:H2	1.86	0.40
1:XA:901:A:C5	1:XA:902:G:H1'	2.56	0.40
2:XB:97:TRP:CH2	2:XB:176:GLU:HB2	2.54	0.40
2:XB:168:THR:CG2	2:XB:192:SER:HB2	2.51	0.40
2:XB:17:PHE:HB2	2:XB:42:ILE:CG2	2.50	0.40
3:XC:178:LEU:CD2	3:XC:178:LEU:N	2.85	0.40
4:XD:19:LEU:HG	4:XD:21:LEU:HG	2.03	0.40
7:XG:121:ALA:O	7:XG:125:MET:HG3	2.21	0.40
12:XL:43:VAL:HG13	12:XL:55:VAL:HG21	2.03	0.40
13:XM:54:VAL:HG12	13:XM:54:VAL:O	2.21	0.40
13:XM:56:LEU:HD13	13:XM:60:VAL:CG2	2.51	0.40
16:XP:39:TYR:CD2	16:XP:41:PRO:HD3	2.56	0.40
16:XP:50:LYS:C	16:XP:50:LYS:HD3	2.41	0.40
16:XP:8:ARG:HG2	16:XP:8:ARG:NH1	2.31	0.40
18:XR:44:LEU:C	18:XR:45:SER:O	2.59	0.40
18:XR:73:ALA:HB3	18:XR:79:LEU:CD1	2.47	0.40
19:XS:29:ARG:NH1	19:XS:29:ARG:HG2	2.37	0.40
48:Y2:18:PRO:C	48:Y2:20:GLU:H	2.24	0.40
52:Y6:50:ARG:NH1	52:Y6:50:ARG:HG2	2.37	0.40
54:Y8:39:LYS:O	54:Y8:39:LYS:HD2	2.22	0.40
25:YA:1084:A:H5'	25:YA:1085:A:OP2	2.22	0.40
25:YA:1789:A:OP1	27:YD:221:VAL:HA	2.21	0.40
25:YA:2168:G:N3	25:YA:2168:G:H2'	2.35	0.40
25:YA:2359:C:H42	25:YA:2428:G:H1	1.69	0.40
25:YA:1128:A:O4'	25:YA:2516:G:O2'	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:48:G:H22	25:YA:177:G:C5'	2.35	0.40
25:YA:723:G:H2'	25:YA:724:U:C6	2.57	0.40
25:YA:728:G:C2	25:YA:730:C:C2	3.09	0.40
27:YD:35:LYS:CE	27:YD:64:ILE:C	2.89	0.40
28:YE:154:LYS:C	28:YE:154:LYS:HD3	2.42	0.40
28:YE:93:VAL:H	28:YE:95:ILE:CD1	2.23	0.40
29:YF:118:ALA:HA	29:YF:123:LEU:HB3	2.02	0.40
29:YF:33:LEU:O	29:YF:37:VAL:HG23	2.21	0.40
25:YA:38:A:H4'	29:YF:50:SER:HB2	2.02	0.40
29:YF:61:GLY:O	29:YF:62:ARG:C	2.57	0.40
30:YG:61:ALA:CB	30:YG:67:LYS:HA	2.50	0.40
31:YH:146:ALA:HA	31:YH:164:TYR:OH	2.21	0.40
32:YI:9:LEU:CD2	32:YI:12:LEU:O	2.69	0.40
34:YO:16:ALA:HA	34:YO:46:ALA:CB	2.50	0.40
36:YQ:139:GLU:HG2	36:YQ:140:ALA:N	2.36	0.40
39:YT:29:ARG:HB2	39:YT:29:ARG:NH1	2.36	0.40
42:YW:14:PRO:O	42:YW:15:ARG:C	2.58	0.40
43:YX:9:LEU:HA	48:Y2:36:ARG:HH21	1.86	0.40
44:YY:97:ARG:O	44:YY:97:ARG:CG	2.69	0.40
1:QA:1157:A:H1'	1:QA:1158:C:N3	2.36	0.40
1:QA:1250:A:H4'	9:QL:68:GLY:O	2.21	0.40
1:QA:132:C:H4'	1:QA:262:A:H1'	2.03	0.40
1:QA:1439:C:H42	1:QA:1462:G:H1	1.69	0.40
1:QA:1415:G:C4	1:QA:1486:G:C2	3.10	0.40
1:QA:532:A:N1	3:QC:156:ARG:NH1	2.68	0.40
2:QB:76:GLN:OE1	2:QB:206:ASP:HB3	2.21	0.40
2:QB:212:GLN:O	2:QB:212:GLN:NE2	2.54	0.40
3:QC:113:ALA:HB3	3:QC:114:PRO:CD	2.43	0.40
1:QA:403:C:H4'	4:QD:122:ARG:NH2	2.36	0.40
1:QA:437:U:H5''	4:QD:155:LEU:HD22	2.03	0.40
4:QD:15:GLU:OE1	4:QD:15:GLU:N	2.54	0.40
4:QD:19:LEU:HG	4:QD:21:LEU:HG	2.03	0.40
4:QD:25:ARG:C	4:QD:27:TYR:H	2.24	0.40
4:QD:63:LYS:O	4:QD:67:ILE:HG13	2.21	0.40
5:QE:48:ALA:C	5:QE:50:GLU:H	2.25	0.40
6:QF:61:LEU:HB3	6:QF:63:TYR:CE2	2.53	0.40
7:QG:140:ASP:C	7:QG:142:GLU:N	2.69	0.40
13:QM:36:LYS:HE3	13:QM:59:TYR:CD1	2.57	0.40
15:QO:50:HIS:O	15:QO:53:HIS:HB3	2.20	0.40
16:QP:20:VAL:CG2	16:QP:32:TYR:CD2	3.04	0.40
18:QR:52:PRO:HG2	18:QR:55:ARG:HG2	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:QT:47:GLY:C	20:QT:49:ALA:N	2.72	0.40
20:QT:82:SER:O	20:QT:86:ARG:CB	2.70	0.40
47:R1:82:LEU:HD13	47:R1:83:GLU:CA	2.49	0.40
49:R3:7:LYS:HG2	49:R3:7:LYS:O	2.19	0.40
30:RG:112:PRO:CA	50:R4:37:SER:HB2	2.51	0.40
52:R6:36:LEU:N	52:R6:36:LEU:HD23	2.37	0.40
52:R6:37:ARG:O	52:R6:48:VAL:O	2.39	0.40
54:R8:53:PRO:CG	54:R8:54:GLU:N	2.85	0.40
25:RA:1159:U:H2'	25:RA:1160:G:H8	1.85	0.40
25:RA:1252:G:H1'	40:RU:33:ARG:HD3	2.04	0.40
25:RA:135:G:H1	25:RA:144:C:N4	2.17	0.40
25:RA:1454:U:O2	37:RR:64:ARG:NE	2.45	0.40
25:RA:1751:C:H2'	25:RA:1752:C:H6	1.86	0.40
25:RA:1839:G:C8	25:RA:1927:A:H1'	2.56	0.40
25:RA:1930:G:H2'	25:RA:1968:G:H1	1.87	0.40
25:RA:2120:G:H2'	25:RA:2121:G:C8	2.57	0.40
25:RA:315:G:H2'	25:RA:316:C:H6	1.85	0.40
25:RA:336:C:H5''	44:RY:6:HIS:CD2	2.56	0.40
25:RA:817:C:H2'	25:RA:818:G:O4'	2.21	0.40
25:RA:89:G:OP2	25:RA:90:U:O2'	2.28	0.40
25:RA:974:G:H1'	25:RA:975:G:N7	2.36	0.40
29:RF:36:VAL:HG11	29:RF:183:VAL:HG11	2.04	0.40
30:RG:41:GLN:HB3	30:RG:43:LEU:CD1	2.51	0.40
33:RN:101:HIS:HD2	33:RN:102:ALA:N	2.19	0.40
35:RP:65:ARG:O	35:RP:66:GLY:C	2.60	0.40
38:RS:52:SER:HB2	38:RS:55:ALA:HB3	2.04	0.40
38:RS:89:ARG:NH1	38:RS:89:ARG:HG2	2.36	0.40
25:RA:328:U:H4'	44:RY:68:HIS:CE1	2.56	0.40
45:RZ:108:PRO:C	45:RZ:110:GLY:N	2.75	0.40
45:RZ:154:ASP:O	45:RZ:157:LEU:CD1	2.68	0.40
1:XA:1279:A:O2'	1:XA:1282:C:N4	2.55	0.40
1:XA:1297:C:HO2'	1:XA:1298:C:P	2.45	0.40
1:XA:328:C:H4'	1:XA:329:A:C5'	2.51	0.40
1:XA:598:U:H2'	1:XA:599:C:C6	2.56	0.40
1:XA:701:C:O2	1:XA:703:G:N1	2.54	0.40
1:XA:773:G:H2'	1:XA:774:G:O4'	2.21	0.40
1:XA:871:U:O2'	1:XA:872:A:H5''	2.22	0.40
1:XA:971:G:H22	1:XA:1363:A:P	2.39	0.40
2:XB:132:LYS:HA	2:XB:135:GLN:CG	2.52	0.40
2:XB:183:PRO:HA	2:XB:198:ASP:OD1	2.21	0.40
3:XC:108:ASN:HB3	3:XC:111:LEU:CG	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:120:VAL:O	3:XC:123:GLN:HB2	2.20	0.40
3:XC:70:VAL:CG1	3:XC:71:ALA:H	2.35	0.40
5:XE:48:ALA:C	5:XE:50:GLU:H	2.24	0.40
7:XG:46:ALA:O	7:XG:49:ILE:HB	2.21	0.40
9:XI:9:ARG:CG	9:XI:14:VAL:HG22	2.51	0.40
13:XM:28:ALA:C	13:XM:30:ALA:H	2.24	0.40
13:XM:47:ASP:O	13:XM:48:LEU:HB3	2.20	0.40
15:XO:70:LEU:HD23	15:XO:81:LEU:HD23	2.04	0.40
17:XQ:68:ARG:HG3	17:XQ:68:ARG:O	2.22	0.40
17:XQ:82:MET:C	17:XQ:84:LEU:H	2.25	0.40
47:Y1:91:LYS:HG3	47:Y1:92:LYS:N	2.33	0.40
47:Y1:96:LYS:O	47:Y1:96:LYS:HG2	2.21	0.40
50:Y4:21:VAL:O	50:Y4:22:ILE:O	2.40	0.40
50:Y4:52:THR:O	50:Y4:53:GLU:CB	2.69	0.40
25:YA:1284:A:C6	25:YA:1285:G:C2	3.10	0.40
25:YA:781:A:O2'	25:YA:1788:C:O2	2.39	0.40
25:YA:1817:G:C6	25:YA:1818:U:C5	3.09	0.40
25:YA:2306:C:H2'	25:YA:2307:G:H21	1.87	0.40
25:YA:252:G:N2	25:YA:253:C:H1'	2.37	0.40
25:YA:2552:U:O5'	25:YA:2552:U:H6	2.04	0.40
25:YA:975:G:H1'	25:YA:990:A:C2	2.57	0.40
26:YB:49:C:H2'	26:YB:50:G:H8	1.85	0.40
28:YE:93:VAL:HG21	28:YE:180:ASN:HA	2.03	0.40
29:YF:124:LEU:HD12	29:YF:125:LEU:O	2.22	0.40
29:YF:36:VAL:HG11	29:YF:183:VAL:HG11	2.04	0.40
32:YI:56:LYS:HG3	32:YI:57:ARG:N	2.36	0.40
33:YN:133:GLN:C	33:YN:134:ARG:HG2	2.41	0.40
34:YO:13:ASN:HD21	34:YO:97:ARG:HB3	1.87	0.40
34:YO:31:LYS:C	34:YO:32:TYR:CD2	2.95	0.40
35:YP:126:VAL:HG12	35:YP:147:LEU:CD2	2.23	0.40
35:YP:85:LEU:HD23	35:YP:85:LEU:HA	1.92	0.40
36:YQ:58:PHE:C	36:YQ:59:ARG:HD2	2.42	0.40
36:YQ:39:PRO:HA	36:YQ:97:VAL:O	2.21	0.40
38:YS:83:LYS:HE3	38:YS:84:GLN:HG3	2.02	0.40
39:YT:20:PRO:HG2	39:YT:86:ILE:O	2.21	0.40
40:YU:33:ARG:O	40:YU:37:GLU:HB2	2.21	0.40
41:YV:70:ILE:HG22	41:YV:70:ILE:O	2.21	0.40
45:YZ:37:VAL:HG23	45:YZ:38:TYR:N	2.36	0.40
1:QA:1250:A:H2	1:QA:1353:G:N2	2.19	0.40
1:QA:1343:G:H1'	9:QI:121:ARG:HH12	1.87	0.40
1:QA:410:G:C2	1:QA:429:U:C2	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:838:G:C2	1:QA:849:C:C2	3.10	0.40
2:QB:201:ILE:HG21	2:QB:214:ILE:HG21	2.03	0.40
3:QC:138:VAL:HG22	3:QC:151:VAL:HG23	2.03	0.40
3:QC:172:ARG:C	3:QC:173:VAL:HG23	2.42	0.40
3:QC:59:ARG:NH1	3:QC:97:LYS:HE3	2.34	0.40
4:QD:120:LEU:HA	4:QD:120:LEU:HD23	1.84	0.40
4:QD:12:CYS:O	4:QD:33:MET:HG3	2.21	0.40
4:QD:209:ARG:NE	4:QD:209:ARG:HA	2.36	0.40
6:QF:98:LEU:C	6:QF:98:LEU:HD12	2.41	0.40
6:QF:99:ALA:O	6:QF:100:ASN:CB	2.70	0.40
7:QG:69:VAL:HG12	7:QG:100:ALA:HA	2.03	0.40
8:QH:100:ILE:HA	8:QH:101:PRO:HD3	1.85	0.40
1:QA:590:C:OP1	8:QH:29:SER:HA	2.22	0.40
9:QI:105:ASP:C	9:QI:107:ARG:N	2.74	0.40
10:QJ:101:VAL:O	10:QJ:101:VAL:HG13	2.22	0.40
11:QK:25:TYR:H	11:QK:25:TYR:HD1	1.69	0.40
12:QL:39:VAL:HG12	12:QL:41:ARG:HG2	2.04	0.40
1:QA:1329:A:H5''	13:QM:29:ARG:HG3	2.03	0.40
14:QN:48:ALA:O	14:QN:51:GLY:N	2.53	0.40
15:QO:77:ARG:CA	15:QO:80:ALA:HB3	2.52	0.40
46:R0:40:GLN:NE2	46:R0:43:THR:HA	2.36	0.40
52:R6:24:GLU:HB3	52:R6:25:LYS:H	1.56	0.40
25:RA:1422:G:C6	25:RA:1423:G:C5	3.10	0.40
25:RA:1572:A:H2'	25:RA:1573:G:O4'	2.22	0.40
25:RA:1728:G:C6	25:RA:1730:U:OP2	2.74	0.40
25:RA:2030:A:H4'	25:RA:2031:A:C8	2.57	0.40
25:RA:2458:G:H1'	25:RA:2460:U:O4	2.22	0.40
25:RA:271(B):G:N3	25:RA:271:G:H1'	2.37	0.40
25:RA:2742:C:H6	25:RA:2742:C:O5'	2.04	0.40
25:RA:2630:G:N3	25:RA:2894:G:N2	2.70	0.40
25:RA:372:G:N2	25:RA:400:G:H2'	2.37	0.40
25:RA:49:A:H5'	25:RA:51:G:O4'	2.21	0.40
25:RA:755:C:H2'	25:RA:756:C:H6	1.86	0.40
25:RA:930:U:H4'	25:RA:931:G:O4'	2.21	0.40
26:RB:12:C:C2	46:R0:74:ARG:HD2	2.57	0.40
27:RD:185:VAL:HG12	27:RD:186:HIS:N	2.37	0.40
27:RD:25:THR:HG23	27:RD:27:THR:HB	2.01	0.40
28:RE:154:LYS:HD3	28:RE:154:LYS:C	2.42	0.40
28:RE:93:VAL:C	28:RE:95:ILE:N	2.75	0.40
32:RI:121:LYS:CG	32:RI:122:GLU:N	2.85	0.40
32:RI:94:ALA:O	32:RI:96:ASP:N	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:97:ARG:H	34:RO:117:LEU:CD2	2.24	0.40
38:RS:92:TYR:HB2	38:RS:98:VAL:HG11	2.02	0.40
39:RT:50:ILE:HD11	39:RT:102:ILE:CG1	2.52	0.40
39:RT:23:ARG:O	39:RT:49:VAL:HG11	2.21	0.40
39:RT:54:ARG:HA	39:RT:59:THR:HG23	2.02	0.40
40:RU:15:LYS:O	40:RU:16:LYS:C	2.60	0.40
41:RV:95:LEU:C	41:RV:95:LEU:HD13	2.42	0.40
44:RY:57:GLN:O	44:RY:58:GLY:C	2.60	0.40
45:RZ:168:GLU:OE2	45:RZ:168:GLU:N	2.55	0.40
1:XA:1034:G:N2	1:XA:1035:A:C6	2.90	0.40
1:XA:1154:G:C4	1:XA:1155:G:C8	3.09	0.40
1:XA:1262:C:H2'	1:XA:1263:C:C6	2.55	0.40
1:XA:192:U:H2'	1:XA:193:C:C6	2.57	0.40
1:XA:338:A:C5	1:XA:339:C:C5	3.10	0.40
1:XA:370:C:C2	1:XA:392:G:N2	2.89	0.40
1:XA:468:A:OP1	16:XP:75:ARG:NH2	2.55	0.40
1:XA:570:G:H1'	1:XA:820:U:C4	2.56	0.40
3:XC:149:ALA:O	3:XC:169:ALA:CA	2.67	0.40
3:XC:172:ARG:C	3:XC:173:VAL:HG23	2.42	0.40
3:XC:55:VAL:HG12	3:XC:55:VAL:O	2.21	0.40
4:XD:110:PHE:HE2	4:XD:148:VAL:HG23	1.86	0.40
4:XD:199:ASN:OD1	4:XD:201:GLN:HB3	2.21	0.40
5:XE:36:ASP:O	5:XE:37:ARG:HG2	2.22	0.40
7:XG:69:VAL:HG12	7:XG:100:ALA:HA	2.03	0.40
8:XH:41:ARG:NH1	8:XH:41:ARG:CG	2.76	0.40
9:XI:13:ALA:H	9:XI:68:GLY:HA3	1.86	0.40
10:XJ:22:LYS:CD	10:XJ:22:LYS:C	2.89	0.40
10:XJ:49:VAL:HG13	14:XN:41:ARG:HD2	2.03	0.40
11:XK:90:GLY:O	11:XK:94:ALA:HB2	2.21	0.40
12:XL:21:LYS:N	12:XL:21:LYS:CD	2.83	0.40
13:XM:119:GLY:O	13:XM:120:LYS:O	2.38	0.40
14:XN:40:CYS:N	14:XN:43:CYS:HB2	2.36	0.40
3:XC:33:LEU:HD11	14:XN:53:LEU:HD23	2.04	0.40
16:XP:6:LEU:CD1	16:XP:6:LEU:N	2.84	0.40
17:XQ:8:GLY:HA3	17:XQ:21:VAL:HG12	2.03	0.40
17:XQ:51:TYR:HA	17:XQ:52:LYS:HZ2	1.86	0.40
20:XT:49:ALA:HA	20:XT:92:LEU:HD21	2.04	0.40
20:XT:55:ILE:HA	20:XT:58:LYS:HB3	2.03	0.40
22:XV:21:A:N6	22:XV:46:G:H2'	2.36	0.40
22:XV:74:C:H2'	22:XV:75:C:H5'	2.03	0.40
47:Y1:86:SER:O	47:Y1:89:GLU:N	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y4:51:ASP:CG	50:Y4:51:ASP:O	2.60	0.40
52:Y6:53:LYS:HB3	52:Y6:53:LYS:NZ	2.36	0.40
25:YA:1101:U:H2'	25:YA:1102:C:C6	2.56	0.40
25:YA:1402:C:C2'	25:YA:1403:C:H5'	2.51	0.40
25:YA:133:C:N4	25:YA:146:G:H1	2.18	0.40
25:YA:1795:C:H2'	25:YA:1796:U:O4'	2.21	0.40
25:YA:191:A:H2'	25:YA:192:C:C6	2.57	0.40
25:YA:2083:G:H2'	25:YA:2084:C:O4'	2.22	0.40
25:YA:2168:G:N2	25:YA:2170:A:N7	2.70	0.40
25:YA:2360:A:H8	25:YA:2360:A:O5'	2.04	0.40
25:YA:483:A:H3'	25:YA:484:C:H6	1.87	0.40
25:YA:539:G:H5'	25:YA:540:G:P	2.62	0.40
25:YA:790:C:H2'	25:YA:790:C:H6	1.69	0.40
25:YA:99:U:H1'	25:YA:102:G:C2	2.57	0.40
27:YD:107:ALA:HA	27:YD:108:PRO:HD2	2.01	0.40
27:YD:230:ASP:OD2	27:YD:230:ASP:N	2.54	0.40
28:YE:3:GLY:HA3	28:YE:81:ILE:CG2	2.52	0.40
30:YG:98:ARG:CA	30:YG:101:ILE:HG12	2.40	0.40
30:YG:137:GLU:OE2	30:YG:139:LEU:HD11	2.22	0.40
35:YP:96:THR:O	35:YP:97:PRO:O	2.40	0.40
38:YS:59:LYS:CG	38:YS:60:GLY:N	2.80	0.40
40:YU:30:LYS:HA	40:YU:30:LYS:HD3	1.84	0.40
41:YV:35:LEU:C	41:YV:37:VAL:N	2.75	0.40
44:YY:57:GLN:O	44:YY:58:GLY:C	2.60	0.40
44:YY:95:LYS:HA	44:YY:101:LYS:CB	2.51	0.40
45:YZ:144:LEU:CD2	45:YZ:150:LEU:HD13	2.51	0.40

All (3) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YV:51:VAL:N	51:Y5:60:VAL:O[4_445]	1.98	0.22
31:YH:47:GLU:OE2	44:YY:79:CYS:CB[4_445]	2.04	0.16
11:QK:99:GLN:NE2	3:XC:79:ARG:NH2[4_555]	2.06	0.14

5.3 Torsion angles

5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	QB	235/256 (92%)	153 (65%)	52 (22%)	30 (13%)	0	4
2	XB	235/256 (92%)	152 (65%)	53 (23%)	30 (13%)	0	4
3	QC	203/239 (85%)	128 (63%)	56 (28%)	19 (9%)	0	7
3	XC	203/239 (85%)	128 (63%)	56 (28%)	19 (9%)	0	7
4	QD	206/209 (99%)	133 (65%)	51 (25%)	22 (11%)	0	6
4	XD	206/209 (99%)	133 (65%)	50 (24%)	23 (11%)	0	5
5	QE	149/162 (92%)	103 (69%)	30 (20%)	16 (11%)	0	6
5	XE	149/162 (92%)	103 (69%)	31 (21%)	15 (10%)	0	6
6	QF	99/101 (98%)	66 (67%)	24 (24%)	9 (9%)	1	7
6	XF	99/101 (98%)	66 (67%)	24 (24%)	9 (9%)	1	7
7	QG	153/156 (98%)	102 (67%)	37 (24%)	14 (9%)	1	7
7	XG	153/156 (98%)	102 (67%)	36 (24%)	15 (10%)	0	6
8	QH	136/138 (99%)	92 (68%)	29 (21%)	15 (11%)	0	5
8	XH	136/138 (99%)	92 (68%)	29 (21%)	15 (11%)	0	5
9	QI	125/128 (98%)	77 (62%)	32 (26%)	16 (13%)	0	4
9	XI	125/128 (98%)	77 (62%)	32 (26%)	16 (13%)	0	4
10	QJ	97/105 (92%)	68 (70%)	19 (20%)	10 (10%)	0	6
10	XJ	97/105 (92%)	68 (70%)	20 (21%)	9 (9%)	0	7
11	QK	117/129 (91%)	87 (74%)	21 (18%)	9 (8%)	1	9
11	XK	117/129 (91%)	87 (74%)	21 (18%)	9 (8%)	1	9
12	QL	123/132 (93%)	85 (69%)	24 (20%)	14 (11%)	0	5
12	XL	123/132 (93%)	85 (69%)	24 (20%)	14 (11%)	0	5
13	QM	119/126 (94%)	71 (60%)	27 (23%)	21 (18%)	0	1
13	XM	119/126 (94%)	71 (60%)	27 (23%)	21 (18%)	0	1
14	QN	58/61 (95%)	33 (57%)	15 (26%)	10 (17%)	0	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	XN	58/61 (95%)	33 (57%)	15 (26%)	10 (17%)	0	2
15	QO	86/89 (97%)	61 (71%)	19 (22%)	6 (7%)	1	11
15	XO	86/89 (97%)	61 (71%)	19 (22%)	6 (7%)	1	11
16	QP	82/88 (93%)	48 (58%)	23 (28%)	11 (13%)	0	3
16	XP	82/88 (93%)	48 (58%)	23 (28%)	11 (13%)	0	3
17	QQ	98/105 (93%)	75 (76%)	15 (15%)	8 (8%)	1	9
17	XQ	98/105 (93%)	75 (76%)	15 (15%)	8 (8%)	1	9
18	QR	68/88 (77%)	46 (68%)	14 (21%)	8 (12%)	0	5
18	XR	68/88 (77%)	46 (68%)	14 (21%)	8 (12%)	0	5
19	QS	82/93 (88%)	46 (56%)	18 (22%)	18 (22%)	0	1
19	XS	82/93 (88%)	46 (56%)	18 (22%)	18 (22%)	0	1
20	QT	97/106 (92%)	63 (65%)	16 (16%)	18 (19%)	0	1
20	XT	97/106 (92%)	63 (65%)	15 (16%)	19 (20%)	0	1
21	QU	23/27 (85%)	15 (65%)	4 (17%)	4 (17%)	0	2
21	XU	23/27 (85%)	15 (65%)	4 (17%)	4 (17%)	0	2
27	RD	270/276 (98%)	204 (76%)	46 (17%)	20 (7%)	1	10
27	YD	270/276 (98%)	204 (76%)	46 (17%)	20 (7%)	1	10
28	RE	203/206 (98%)	120 (59%)	41 (20%)	42 (21%)	0	1
28	YE	203/206 (98%)	120 (59%)	41 (20%)	42 (21%)	0	1
29	RF	200/210 (95%)	144 (72%)	36 (18%)	20 (10%)	0	6
29	YF	200/210 (95%)	144 (72%)	36 (18%)	20 (10%)	0	6
30	RG	179/182 (98%)	120 (67%)	38 (21%)	21 (12%)	0	5
30	YG	179/182 (98%)	120 (67%)	38 (21%)	21 (12%)	0	5
31	RH	168/180 (93%)	94 (56%)	35 (21%)	39 (23%)	0	1
31	YH	168/180 (93%)	95 (56%)	35 (21%)	38 (23%)	0	1
32	RI	144/148 (97%)	83 (58%)	33 (23%)	28 (19%)	0	1
32	YI	144/148 (97%)	85 (59%)	32 (22%)	27 (19%)	0	1
33	RN	136/140 (97%)	84 (62%)	30 (22%)	22 (16%)	0	2
33	YN	136/140 (97%)	84 (62%)	30 (22%)	22 (16%)	0	2
34	RO	120/122 (98%)	90 (75%)	21 (18%)	9 (8%)	1	10
34	YO	120/122 (98%)	90 (75%)	21 (18%)	9 (8%)	1	10

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
35	RP	148/150 (99%)	97 (66%)	19 (13%)	32 (22%)	0	1
35	YP	148/150 (99%)	97 (66%)	19 (13%)	32 (22%)	0	1
36	RQ	139/141 (99%)	94 (68%)	30 (22%)	15 (11%)	0	5
36	YQ	139/141 (99%)	94 (68%)	30 (22%)	15 (11%)	0	5
37	RR	116/118 (98%)	82 (71%)	20 (17%)	14 (12%)	0	4
37	YR	116/118 (98%)	82 (71%)	20 (17%)	14 (12%)	0	4
38	RS	109/112 (97%)	62 (57%)	28 (26%)	19 (17%)	0	2
38	YS	109/112 (97%)	63 (58%)	27 (25%)	19 (17%)	0	2
39	RT	135/146 (92%)	83 (62%)	32 (24%)	20 (15%)	0	2
39	YT	135/146 (92%)	83 (62%)	32 (24%)	20 (15%)	0	2
40	RU	115/118 (98%)	87 (76%)	19 (16%)	9 (8%)	1	9
40	YU	115/118 (98%)	86 (75%)	20 (17%)	9 (8%)	1	9
41	RV	99/101 (98%)	73 (74%)	16 (16%)	10 (10%)	0	6
41	YV	99/101 (98%)	73 (74%)	16 (16%)	10 (10%)	0	6
42	RW	111/113 (98%)	75 (68%)	22 (20%)	14 (13%)	0	4
42	YW	111/113 (98%)	75 (68%)	22 (20%)	14 (13%)	0	4
43	RX	90/96 (94%)	77 (86%)	8 (9%)	5 (6%)	2	16
43	YX	90/96 (94%)	77 (86%)	8 (9%)	5 (6%)	2	16
44	RY	100/110 (91%)	57 (57%)	17 (17%)	26 (26%)	0	0
44	YY	100/110 (91%)	57 (57%)	17 (17%)	26 (26%)	0	0
45	RZ	170/206 (82%)	91 (54%)	40 (24%)	39 (23%)	0	1
45	YZ	170/206 (82%)	91 (54%)	40 (24%)	39 (23%)	0	1
46	R0	80/85 (94%)	61 (76%)	14 (18%)	5 (6%)	1	13
46	Y0	80/85 (94%)	62 (78%)	12 (15%)	6 (8%)	1	10
47	R1	95/98 (97%)	64 (67%)	20 (21%)	11 (12%)	0	5
47	Y1	95/98 (97%)	64 (67%)	20 (21%)	11 (12%)	0	5
48	R2	67/72 (93%)	46 (69%)	12 (18%)	9 (13%)	0	3
48	Y2	67/72 (93%)	46 (69%)	12 (18%)	9 (13%)	0	3
49	R3	57/60 (95%)	45 (79%)	9 (16%)	3 (5%)	2	16
49	Y3	57/60 (95%)	45 (79%)	9 (16%)	3 (5%)	2	16
50	R4	69/71 (97%)	23 (33%)	20 (29%)	26 (38%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
50	Y4	69/71 (97%)	23 (33%)	20 (29%)	26 (38%)	0	0
51	R5	57/60 (95%)	33 (58%)	9 (16%)	15 (26%)	0	0
51	Y5	57/60 (95%)	33 (58%)	9 (16%)	15 (26%)	0	0
52	R6	47/54 (87%)	15 (32%)	18 (38%)	14 (30%)	0	0
52	Y6	47/54 (87%)	15 (32%)	18 (38%)	14 (30%)	0	0
53	R7	47/49 (96%)	37 (79%)	7 (15%)	3 (6%)	1	13
53	Y7	47/49 (96%)	37 (79%)	7 (15%)	3 (6%)	1	13
54	R8	62/65 (95%)	36 (58%)	15 (24%)	11 (18%)	0	1
54	Y8	62/65 (95%)	36 (58%)	15 (24%)	11 (18%)	0	1
All	All	11378/12054 (94%)	7461 (66%)	2359 (21%)	1558 (14%)	0	3

All (1558) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	QB	6	THR
2	QB	15	VAL
2	QB	26	PRO
2	QB	84	GLU
2	QB	88	ALA
2	QB	126	GLU
2	QB	230	VAL
2	QB	233	SER
3	QC	4	LYS
3	QC	12	LEU
3	QC	14	ILE
3	QC	29	TYR
3	QC	61	ALA
3	QC	189	ALA
3	QC	190	ARG
4	QD	28	SER
4	QD	30	LYS
4	QD	51	PRO
4	QD	89	THR
4	QD	129	ASN
4	QD	154	ASN
4	QD	155	LEU
4	QD	178	VAL
5	QE	146	ALA
7	QG	5	ARG

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Mol	Chain	Res	Type
7	QG	7	ALA
8	QH	50	ARG
8	QH	129	VAL
9	QI	23	ASN
9	QI	56	LEU
9	QI	95	LYS
9	QI	111	ARG
9	QI	117	HIS
10	QJ	30	SER
10	QJ	33	GLN
11	QK	91	ARG
12	QL	18	VAL
12	QL	27	LEU
12	QL	48	PRO
12	QL	62	SER
12	QL	121	GLY
13	QM	70	LEU
13	QM	83	ASP
13	QM	106	ASN
13	QM	108	ARG
13	QM	118	ALA
14	QN	3	ARG
14	QN	16	PHE
14	QN	23	ARG
15	QO	88	ARG
16	QP	44	THR
16	QP	67	THR
17	QQ	34	LYS
17	QQ	49	GLU
18	QR	22	VAL
19	QS	3	ARG
19	QS	12	ASP
19	QS	14	HIS
19	QS	25	LYS
19	QS	26	GLY
19	QS	31	ILE
19	QS	41	VAL
19	QS	70	LYS
19	QS	78	ARG
19	QS	79	THR
20	QT	48	LYS
20	QT	49	ALA

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Mol	Chain	Res	Type
20	QT	74	LYS
20	QT	95	ALA
20	QT	96	GLY
20	QT	100	ILE
21	QU	7	ARG
21	QU	9	ARG
21	QU	22	ARG
27	RD	26	LYS
27	RD	28	GLU
27	RD	123	ALA
27	RD	231	HIS
28	RE	4	ILE
28	RE	7	VAL
28	RE	9	VAL
28	RE	22	PRO
28	RE	54	GLN
28	RE	57	LYS
28	RE	60	ASN
28	RE	63	LEU
28	RE	64	LYS
28	RE	68	ALA
28	RE	70	ALA
28	RE	73	GLU
28	RE	90	THR
28	RE	92	THR
28	RE	93	VAL
28	RE	169	ASN
28	RE	187	ALA
28	RE	189	PRO
29	RF	25	PRO
29	RF	66	PRO
29	RF	68	LYS
29	RF	73	ALA
29	RF	89	VAL
29	RF	128	ALA
29	RF	176	LEU
30	RG	4	ASP
30	RG	14	GLU
30	RG	79	ASN
30	RG	86	MET
31	RH	10	PRO
31	RH	12	PRO

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Mol	Chain	Res	Type
31	RH	83	TYR
31	RH	85	LYS
31	RH	86	GLU
31	RH	87	LEU
31	RH	90	LYS
31	RH	92	ILE
31	RH	126	PRO
31	RH	127	GLU
31	RH	128	PRO
31	RH	137	ASP
31	RH	138	LYS
31	RH	153	LYS
31	RH	154	PRO
31	RH	155	SER
31	RH	169	VAL
32	RI	9	LEU
32	RI	10	GLU
32	RI	13	GLY
32	RI	15	VAL
32	RI	56	LYS
32	RI	115	ALA
32	RI	133	HIS
32	RI	145	VAL
33	RN	6	PRO
33	RN	9	VAL
33	RN	22	THR
33	RN	36	GLY
33	RN	58	ASP
33	RN	95	PRO
33	RN	97	ARG
33	RN	119	ARG
33	RN	131	GLN
33	RN	133	GLN
33	RN	134	ARG
34	RO	49	ARG
35	RP	5	ASP
35	RP	10	PRO
35	RP	15	ARG
35	RP	19	VAL
35	RP	21	ARG
35	RP	25	SER
35	RP	27	HIS

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Mol	Chain	Res	Type
35	RP	36	LYS
35	RP	38	GLN
35	RP	42	SER
35	RP	65	ARG
35	RP	95	VAL
35	RP	106	LEU
35	RP	107	LYS
35	RP	141	ALA
35	RP	148	LEU
36	RQ	6	ARG
36	RQ	18	LYS
36	RQ	22	LYS
36	RQ	27	VAL
36	RQ	81	VAL
36	RQ	90	VAL
36	RQ	134	ARG
37	RR	2	ARG
37	RR	3	HIS
37	RR	4	LEU
37	RR	14	SER
37	RR	58	GLY
37	RR	86	ARG
37	RR	117	VAL
38	RS	4	LEU
38	RS	12	PHE
38	RS	14	VAL
38	RS	23	ARG
38	RS	56	LEU
38	RS	57	LYS
38	RS	88	ASP
38	RS	89	ARG
38	RS	90	GLY
38	RS	107	GLU
39	RT	2	ASN
39	RT	3	ARG
39	RT	39	ARG
39	RT	55	ASN
39	RT	58	ASN
39	RT	90	GLN
39	RT	94	ALA
39	RT	97	ALA
39	RT	106	SER

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Mol	Chain	Res	Type
39	RT	107	ASP
41	RV	28	GLU
41	RV	31	ALA
41	RV	45	THR
41	RV	48	GLY
41	RV	49	THR
41	RV	50	PRO
41	RV	53	GLU
41	RV	79	VAL
42	RW	59	VAL
42	RW	67	ASP
42	RW	75	TYR
42	RW	111	HIS
43	RX	36	LYS
44	RY	3	VAL
44	RY	23	ARG
44	RY	48	ALA
44	RY	49	VAL
44	RY	50	ARG
44	RY	53	PRO
44	RY	58	GLY
44	RY	63	LYS
44	RY	77	PRO
44	RY	78	ALA
44	RY	96	ILE
45	RZ	6	LYS
45	RZ	13	GLU
45	RZ	31	ARG
45	RZ	51	ALA
45	RZ	111	VAL
45	RZ	112	ARG
45	RZ	114	GLY
45	RZ	116	VAL
45	RZ	122	ARG
45	RZ	141	VAL
45	RZ	151	HIS
45	RZ	155	LEU
45	RZ	156	LYS
45	RZ	158	PRO
45	RZ	170	THR
45	RZ	171	ILE
47	R1	30	VAL

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Mol	Chain	Res	Type
47	R1	54	ALA
47	R1	81	LYS
47	R1	82	LEU
47	R1	95	LEU
48	R2	16	LEU
48	R2	43	GLN
48	R2	47	ASN
48	R2	48	HIS
48	R2	71	ASN
49	R3	3	ARG
50	R4	5	ILE
50	R4	14	ILE
50	R4	16	CYS
50	R4	22	ILE
50	R4	23	GLU
50	R4	36	CYS
50	R4	37	SER
50	R4	40	HIS
50	R4	42	PHE
50	R4	43	TYR
50	R4	49	PHE
50	R4	50	VAL
50	R4	51	ASP
50	R4	53	GLU
50	R4	62	ARG
50	R4	66	SER
50	R4	68	ARG
51	R5	3	LYS
51	R5	4	HIS
51	R5	35	GLU
51	R5	51	TYR
51	R5	53	ALA
52	R6	7	ILE
52	R6	14	THR
52	R6	15	GLU
52	R6	19	ARG
52	R6	21	TYR
52	R6	33	LYS
52	R6	45	LYS
52	R6	48	VAL
54	R8	29	LYS
54	R8	31	HIS

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Mol	Chain	Res	Type
54	R8	34	TRP
54	R8	52	LYS
54	R8	62	LEU
2	XB	6	THR
2	XB	15	VAL
2	XB	26	PRO
2	XB	84	GLU
2	XB	88	ALA
2	XB	126	GLU
2	XB	230	VAL
2	XB	233	SER
3	XC	4	LYS
3	XC	12	LEU
3	XC	14	ILE
3	XC	29	TYR
3	XC	61	ALA
3	XC	189	ALA
3	XC	190	ARG
4	XD	28	SER
4	XD	30	LYS
4	XD	51	PRO
4	XD	89	THR
4	XD	129	ASN
4	XD	154	ASN
4	XD	155	LEU
4	XD	178	VAL
5	XE	146	ALA
7	XG	5	ARG
7	XG	7	ALA
8	XH	50	ARG
8	XH	129	VAL
9	XI	23	ASN
9	XI	56	LEU
9	XI	95	LYS
9	XI	111	ARG
9	XI	117	HIS
10	XJ	30	SER
10	XJ	33	GLN
11	XK	91	ARG
12	XL	18	VAL
12	XL	27	LEU
12	XL	48	PRO

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Mol	Chain	Res	Type
12	XL	62	SER
12	XL	121	GLY
13	XM	67	GLU
13	XM	70	LEU
13	XM	83	ASP
13	XM	106	ASN
13	XM	108	ARG
13	XM	118	ALA
14	XN	3	ARG
14	XN	16	PHE
14	XN	23	ARG
15	XO	88	ARG
16	XP	44	THR
16	XP	67	THR
17	XQ	34	LYS
17	XQ	49	GLU
18	XR	22	VAL
19	XS	3	ARG
19	XS	12	ASP
19	XS	14	HIS
19	XS	25	LYS
19	XS	26	GLY
19	XS	31	ILE
19	XS	41	VAL
19	XS	70	LYS
19	XS	78	ARG
19	XS	79	THR
20	XT	48	LYS
20	XT	49	ALA
20	XT	74	LYS
20	XT	95	ALA
20	XT	96	GLY
20	XT	100	ILE
21	XU	7	ARG
21	XU	9	ARG
21	XU	22	ARG
27	YD	26	LYS
27	YD	28	GLU
27	YD	123	ALA
27	YD	231	HIS
28	YE	4	ILE
28	YE	7	VAL

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Mol	Chain	Res	Type
28	YE	9	VAL
28	YE	22	PRO
28	YE	54	GLN
28	YE	57	LYS
28	YE	60	ASN
28	YE	63	LEU
28	YE	64	LYS
28	YE	68	ALA
28	YE	70	ALA
28	YE	73	GLU
28	YE	90	THR
28	YE	92	THR
28	YE	93	VAL
28	YE	169	ASN
28	YE	187	ALA
28	YE	189	PRO
29	YF	25	PRO
29	YF	66	PRO
29	YF	68	LYS
29	YF	73	ALA
29	YF	89	VAL
29	YF	128	ALA
29	YF	176	LEU
30	YG	4	ASP
30	YG	14	GLU
30	YG	79	ASN
30	YG	86	MET
31	YH	10	PRO
31	YH	12	PRO
31	YH	83	TYR
31	YH	85	LYS
31	YH	86	GLU
31	YH	87	LEU
31	YH	90	LYS
31	YH	92	ILE
31	YH	126	PRO
31	YH	127	GLU
31	YH	128	PRO
31	YH	137	ASP
31	YH	138	LYS
31	YH	153	LYS
31	YH	154	PRO

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Mol	Chain	Res	Type
31	YH	155	SER
31	YH	169	VAL
32	YI	9	LEU
32	YI	10	GLU
32	YI	13	GLY
32	YI	15	VAL
32	YI	115	ALA
32	YI	133	HIS
32	YI	145	VAL
33	YN	6	PRO
33	YN	9	VAL
33	YN	22	THR
33	YN	36	GLY
33	YN	58	ASP
33	YN	95	PRO
33	YN	97	ARG
33	YN	119	ARG
33	YN	131	GLN
33	YN	133	GLN
33	YN	134	ARG
34	YO	49	ARG
35	YP	5	ASP
35	YP	10	PRO
35	YP	15	ARG
35	YP	19	VAL
35	YP	21	ARG
35	YP	25	SER
35	YP	27	HIS
35	YP	36	LYS
35	YP	38	GLN
35	YP	42	SER
35	YP	65	ARG
35	YP	95	VAL
35	YP	106	LEU
35	YP	107	LYS
35	YP	141	ALA
35	YP	148	LEU
36	YQ	6	ARG
36	YQ	18	LYS
36	YQ	22	LYS
36	YQ	27	VAL
36	YQ	81	VAL

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Mol	Chain	Res	Type
36	YQ	90	VAL
36	YQ	134	ARG
37	YR	2	ARG
37	YR	3	HIS
37	YR	4	LEU
37	YR	14	SER
37	YR	58	GLY
37	YR	86	ARG
37	YR	117	VAL
38	YS	4	LEU
38	YS	12	PHE
38	YS	14	VAL
38	YS	23	ARG
38	YS	56	LEU
38	YS	57	LYS
38	YS	88	ASP
38	YS	89	ARG
38	YS	90	GLY
38	YS	107	GLU
39	YT	2	ASN
39	YT	3	ARG
39	YT	39	ARG
39	YT	55	ASN
39	YT	58	ASN
39	YT	90	GLN
39	YT	94	ALA
39	YT	97	ALA
39	YT	106	SER
39	YT	107	ASP
41	YV	28	GLU
41	YV	31	ALA
41	YV	45	THR
41	YV	48	GLY
41	YV	49	THR
41	YV	50	PRO
41	YV	53	GLU
41	YV	79	VAL
42	YW	59	VAL
42	YW	67	ASP
42	YW	75	TYR
42	YW	111	HIS
43	YX	36	LYS

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Mol	Chain	Res	Type
44	YY	3	VAL
44	YY	23	ARG
44	YY	48	ALA
44	YY	49	VAL
44	YY	50	ARG
44	YY	53	PRO
44	YY	58	GLY
44	YY	63	LYS
44	YY	77	PRO
44	YY	78	ALA
44	YY	96	ILE
45	YZ	6	LYS
45	YZ	13	GLU
45	YZ	31	ARG
45	YZ	51	ALA
45	YZ	111	VAL
45	YZ	112	ARG
45	YZ	114	GLY
45	YZ	116	VAL
45	YZ	122	ARG
45	YZ	141	VAL
45	YZ	151	HIS
45	YZ	155	LEU
45	YZ	156	LYS
45	YZ	158	PRO
45	YZ	170	THR
45	YZ	171	ILE
47	Y1	30	VAL
47	Y1	54	ALA
47	Y1	81	LYS
47	Y1	82	LEU
47	Y1	95	LEU
48	Y2	16	LEU
48	Y2	43	GLN
48	Y2	47	ASN
48	Y2	48	HIS
48	Y2	71	ASN
49	Y3	3	ARG
50	Y4	5	ILE
50	Y4	14	ILE
50	Y4	16	CYS
50	Y4	22	ILE

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Mol	Chain	Res	Type
50	Y4	23	GLU
50	Y4	36	CYS
50	Y4	37	SER
50	Y4	40	HIS
50	Y4	42	PHE
50	Y4	43	TYR
50	Y4	49	PHE
50	Y4	50	VAL
50	Y4	51	ASP
50	Y4	53	GLU
50	Y4	62	ARG
50	Y4	66	SER
50	Y4	68	ARG
51	Y5	3	LYS
51	Y5	4	HIS
51	Y5	35	GLU
51	Y5	51	TYR
51	Y5	53	ALA
52	Y6	7	ILE
52	Y6	14	THR
52	Y6	15	GLU
52	Y6	19	ARG
52	Y6	21	TYR
52	Y6	33	LYS
52	Y6	45	LYS
52	Y6	48	VAL
54	Y8	29	LYS
54	Y8	31	HIS
54	Y8	34	TRP
54	Y8	52	LYS
54	Y8	62	LEU
2	QB	18	GLY
2	QB	65	GLY
2	QB	208	ILE
2	QB	216	SER
2	QB	237	ALA
3	QC	60	ALA
3	QC	79	ARG
3	QC	129	ALA
3	QC	145	GLY
4	QD	7	PRO
4	QD	20	TYR

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Mol	Chain	Res	Type
4	QD	32	ALA
4	QD	164	ALA
4	QD	170	VAL
4	QD	179	GLU
4	QD	181	MET
4	QD	200	GLU
5	QE	21	ALA
5	QE	63	ARG
5	QE	108	ALA
6	QF	70	ASP
7	QG	4	ARG
7	QG	63	LYS
7	QG	141	VAL
8	QH	68	ARG
8	QH	69	ARG
8	QH	76	PRO
8	QH	122	ARG
9	QI	31	GLN
9	QI	41	VAL
9	QI	100	GLY
9	QI	109	VAL
10	QJ	36	GLY
10	QJ	68	HIS
11	QK	103	LEU
11	QK	107	SER
11	QK	124	LYS
11	QK	125	PHE
11	QK	126	ARG
12	QL	65	GLU
12	QL	110	VAL
12	QL	115	LYS
12	QL	116	SER
12	QL	128	ALA
13	QM	49	THR
13	QM	67	GLU
13	QM	68	GLY
13	QM	120	LYS
14	QN	14	PRO
14	QN	15	LYS
16	QP	49	LEU
17	QQ	14	LYS
17	QQ	33	GLY

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Mol	Chain	Res	Type
17	QQ	78	GLU
17	QQ	100	LYS
18	QR	27	GLY
18	QR	54	ARG
18	QR	64	ARG
18	QR	65	ILE
19	QS	13	ASP
19	QS	45	VAL
20	QT	11	SER
20	QT	28	ALA
20	QT	62	LEU
20	QT	99	LEU
20	QT	102	GLY
20	QT	103	GLY
21	QU	3	LYS
27	RD	3	VAL
27	RD	32	SER
27	RD	58	HIS
27	RD	122	ASP
27	RD	169	GLU
28	RE	8	LYS
28	RE	20	ALA
28	RE	37	ARG
28	RE	53	PRO
28	RE	61	ARG
28	RE	78	LEU
28	RE	88	GLY
28	RE	186	GLY
28	RE	190	GLY
28	RE	204	ALA
29	RF	18	ARG
29	RF	107	LYS
29	RF	108	LYS
29	RF	111	ALA
29	RF	132	VAL
29	RF	134	GLY
29	RF	168	ARG
30	RG	36	LYS
30	RG	81	LYS
30	RG	82	LEU
30	RG	96	ARG
30	RG	110	ALA

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Mol	Chain	Res	Type
30	RG	126	ASP
30	RG	136	ARG
31	RH	3	ARG
31	RH	8	PRO
31	RH	55	PRO
31	RH	59	ARG
31	RH	84	SER
31	RH	151	ILE
31	RH	156	ALA
31	RH	168	PRO
32	RI	12	LEU
32	RI	36	ALA
32	RI	57	ARG
32	RI	72	LEU
32	RI	135	GLU
33	RN	23	LEU
33	RN	76	SER
34	RO	51	ALA
34	RO	56	ASP
34	RO	68	GLU
35	RP	6	LEU
35	RP	11	GLY
35	RP	12	ALA
35	RP	16	ARG
36	RQ	13	GLN
36	RQ	24	GLY
36	RQ	28	ALA
36	RQ	57	HIS
36	RQ	59	ARG
37	RR	11	ASN
38	RS	75	GLU
38	RS	87	PHE
38	RS	96	GLY
38	RS	100	ALA
38	RS	109	GLY
38	RS	111	GLU
39	RT	4	GLY
39	RT	36	GLU
39	RT	43	GLN
39	RT	67	SER
39	RT	124	ASP
40	RU	9	VAL

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Mol	Chain	Res	Type
40	RU	28	ARG
40	RU	73	GLY
40	RU	90	VAL
42	RW	63	ASP
42	RW	66	GLU
43	RX	67	GLY
44	RY	4	LYS
44	RY	41	GLY
44	RY	56	PRO
44	RY	57	GLN
44	RY	99	CYS
45	RZ	38	TYR
45	RZ	79	ARG
45	RZ	110	GLY
45	RZ	124	ILE
45	RZ	153	SER
45	RZ	159	PRO
46	R0	18	ALA
46	R0	55	ARG
47	R1	45	ASN
47	R1	55	GLY
47	R1	84	GLY
48	R2	24	LEU
48	R2	44	LEU
48	R2	70	GLN
50	R4	9	LEU
50	R4	24	THR
51	R5	43	HIS
51	R5	55	ARG
53	R7	39	ARG
2	XB	18	GLY
2	XB	65	GLY
2	XB	208	ILE
2	XB	216	SER
2	XB	237	ALA
3	XC	60	ALA
3	XC	79	ARG
3	XC	129	ALA
3	XC	145	GLY
4	XD	7	PRO
4	XD	20	TYR
4	XD	32	ALA

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Mol	Chain	Res	Type
4	XD	164	ALA
4	XD	170	VAL
4	XD	179	GLU
4	XD	181	MET
4	XD	200	GLU
5	XE	21	ALA
5	XE	63	ARG
5	XE	108	ALA
6	XF	70	ASP
7	XG	4	ARG
7	XG	63	LYS
7	XG	141	VAL
8	XH	68	ARG
8	XH	69	ARG
8	XH	76	PRO
8	XH	122	ARG
8	XH	128	GLY
9	XI	31	GLN
9	XI	41	VAL
9	XI	100	GLY
9	XI	109	VAL
10	XJ	36	GLY
10	XJ	68	HIS
11	XK	103	LEU
11	XK	107	SER
11	XK	124	LYS
11	XK	125	PHE
11	XK	126	ARG
12	XL	65	GLU
12	XL	110	VAL
12	XL	115	LYS
12	XL	116	SER
12	XL	128	ALA
13	XM	49	THR
13	XM	68	GLY
13	XM	120	LYS
14	XN	14	PRO
14	XN	15	LYS
16	XP	49	LEU
17	XQ	14	LYS
17	XQ	33	GLY
17	XQ	78	GLU

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Mol	Chain	Res	Type
17	XQ	100	LYS
18	XR	27	GLY
18	XR	54	ARG
18	XR	64	ARG
18	XR	65	ILE
19	XS	13	ASP
19	XS	45	VAL
20	XT	11	SER
20	XT	28	ALA
20	XT	62	LEU
20	XT	99	LEU
20	XT	102	GLY
20	XT	103	GLY
21	XU	3	LYS
27	YD	3	VAL
27	YD	32	SER
27	YD	58	HIS
27	YD	122	ASP
27	YD	169	GLU
28	YE	8	LYS
28	YE	20	ALA
28	YE	37	ARG
28	YE	53	PRO
28	YE	61	ARG
28	YE	71	GLY
28	YE	78	LEU
28	YE	88	GLY
28	YE	186	GLY
28	YE	190	GLY
28	YE	204	ALA
29	YF	18	ARG
29	YF	107	LYS
29	YF	108	LYS
29	YF	111	ALA
29	YF	132	VAL
29	YF	134	GLY
29	YF	168	ARG
30	YG	5	VAL
30	YG	36	LYS
30	YG	81	LYS
30	YG	82	LEU
30	YG	96	ARG

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Mol	Chain	Res	Type
30	YG	110	ALA
30	YG	126	ASP
30	YG	136	ARG
31	YH	3	ARG
31	YH	8	PRO
31	YH	55	PRO
31	YH	59	ARG
31	YH	84	SER
31	YH	151	ILE
31	YH	156	ALA
31	YH	168	PRO
32	YI	12	LEU
32	YI	36	ALA
32	YI	72	LEU
32	YI	135	GLU
33	YN	23	LEU
33	YN	76	SER
34	YO	51	ALA
34	YO	56	ASP
34	YO	68	GLU
35	YP	6	LEU
35	YP	11	GLY
35	YP	12	ALA
35	YP	16	ARG
36	YQ	13	GLN
36	YQ	24	GLY
36	YQ	28	ALA
36	YQ	57	HIS
36	YQ	59	ARG
37	YR	11	ASN
38	YS	87	PHE
38	YS	96	GLY
38	YS	100	ALA
38	YS	109	GLY
38	YS	111	GLU
39	YT	4	GLY
39	YT	36	GLU
39	YT	43	GLN
39	YT	67	SER
39	YT	124	ASP
40	YU	9	VAL
40	YU	28	ARG

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Mol	Chain	Res	Type
40	YU	73	GLY
40	YU	90	VAL
42	YW	63	ASP
42	YW	66	GLU
43	YX	67	GLY
44	YY	4	LYS
44	YY	41	GLY
44	YY	56	PRO
44	YY	57	GLN
44	YY	91	GLU
44	YY	99	CYS
45	YZ	38	TYR
45	YZ	79	ARG
45	YZ	80	ARG
45	YZ	110	GLY
45	YZ	124	ILE
45	YZ	153	SER
45	YZ	159	PRO
46	Y0	9	SER
46	Y0	18	ALA
46	Y0	55	ARG
47	Y1	45	ASN
47	Y1	55	GLY
47	Y1	84	GLY
48	Y2	24	LEU
48	Y2	44	LEU
48	Y2	70	GLN
50	Y4	9	LEU
50	Y4	24	THR
51	Y5	43	HIS
51	Y5	55	ARG
53	Y7	39	ARG
2	QB	155	LEU
2	QB	159	PRO
2	QB	175	ARG
3	QC	16	ARG
3	QC	45	LYS
3	QC	81	GLY
4	QD	29	PRO
4	QD	73	ARG
4	QD	136	PRO
5	QE	37	ARG

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Mol	Chain	Res	Type
6	QF	41	GLU
6	QF	87	ARG
7	QG	35	LYS
7	QG	62	PHE
7	QG	149	ARG
8	QH	2	LEU
8	QH	128	GLY
9	QI	12	GLU
9	QI	13	ALA
10	QJ	57	LYS
12	QL	51	ALA
12	QL	123	LYS
13	QM	12	ASN
13	QM	101	GLN
13	QM	121	LYS
14	QN	9	LYS
14	QN	41	ARG
14	QN	48	ALA
15	QO	14	GLU
15	QO	23	GLY
15	QO	77	ARG
16	QP	8	ARG
16	QP	83	GLU
17	QQ	30	PRO
17	QQ	99	SER
18	QR	55	ARG
19	QS	6	LYS
19	QS	27	GLU
19	QS	64	GLU
20	QT	82	SER
20	QT	98	PRO
27	RD	111	LEU
27	RD	238	GLY
27	RD	242	ARG
27	RD	262	ARG
28	RE	62	PRO
28	RE	69	LYS
28	RE	71	GLY
28	RE	82	ARG
28	RE	117	MET
28	RE	130	GLY
28	RE	132	HIS

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Mol	Chain	Res	Type
30	RG	5	VAL
30	RG	115	ARG
30	RG	128	ARG
30	RG	174	GLU
31	RH	50	VAL
31	RH	81	GLU
31	RH	152	ARG
32	RI	11	ASN
32	RI	86	THR
32	RI	87	LYS
32	RI	110	ASP
32	RI	118	LYS
33	RN	45	ASN
33	RN	130	HIS
33	RN	135	PRO
35	RP	7	ARG
35	RP	14	LYS
35	RP	43	GLY
35	RP	89	ALA
35	RP	102	ARG
35	RP	115	LEU
36	RQ	88	GLY
36	RQ	91	GLU
37	RR	42	LYS
37	RR	45	ARG
37	RR	71	GLN
37	RR	107	ASP
38	RS	19	LYS
38	RS	61	ASN
38	RS	74	ALA
39	RT	78	LEU
39	RT	112	ARG
40	RU	46	ALA
40	RU	93	LYS
41	RV	54	GLY
42	RW	68	ARG
42	RW	93	ALA
43	RX	48	LYS
43	RX	87	GLN
44	RY	21	LYS
44	RY	39	VAL
44	RY	42	VAL

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Mol	Chain	Res	Type
44	RY	69	ALA
44	RY	91	GLU
44	RY	102	CYS
45	RZ	30	ASN
45	RZ	61	LEU
45	RZ	64	GLY
45	RZ	80	ARG
45	RZ	81	ARG
45	RZ	92	SER
45	RZ	118	GLN
45	RZ	135	GLU
45	RZ	163	LEU
46	R0	15	ASP
46	R0	57	PHE
46	R0	75	LEU
47	R1	74	VAL
47	R1	91	LYS
47	R1	93	GLU
50	R4	27	THR
50	R4	46	GLN
52	R6	18	ARG
53	R7	32	LYS
54	R8	46	ARG
54	R8	47	LYS
2	XB	155	LEU
2	XB	159	PRO
2	XB	175	ARG
3	XC	16	ARG
3	XC	45	LYS
3	XC	81	GLY
4	XD	29	PRO
4	XD	73	ARG
4	XD	136	PRO
5	XE	37	ARG
6	XF	41	GLU
6	XF	87	ARG
7	XG	62	PHE
7	XG	149	ARG
8	XH	2	LEU
9	XI	12	GLU
9	XI	13	ALA
12	XL	51	ALA

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Mol	Chain	Res	Type
12	XL	123	LYS
13	XM	101	GLN
13	XM	121	LYS
14	XN	9	LYS
14	XN	41	ARG
15	XO	14	GLU
15	XO	23	GLY
15	XO	77	ARG
16	XP	8	ARG
16	XP	83	GLU
17	XQ	30	PRO
17	XQ	99	SER
18	XR	55	ARG
19	XS	6	LYS
19	XS	27	GLU
20	XT	82	SER
20	XT	98	PRO
27	YD	111	LEU
27	YD	238	GLY
27	YD	242	ARG
27	YD	262	ARG
28	YE	62	PRO
28	YE	69	LYS
28	YE	82	ARG
28	YE	117	MET
28	YE	130	GLY
28	YE	132	HIS
30	YG	115	ARG
30	YG	128	ARG
30	YG	174	GLU
31	YH	50	VAL
31	YH	81	GLU
31	YH	152	ARG
32	YI	11	ASN
32	YI	86	THR
32	YI	87	LYS
32	YI	118	LYS
33	YN	45	ASN
33	YN	130	HIS
33	YN	135	PRO
35	YP	7	ARG
35	YP	14	LYS

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Mol	Chain	Res	Type
35	YP	43	GLY
35	YP	89	ALA
35	YP	102	ARG
35	YP	115	LEU
36	YQ	88	GLY
36	YQ	91	GLU
37	YR	42	LYS
37	YR	45	ARG
37	YR	71	GLN
37	YR	107	ASP
38	YS	19	LYS
38	YS	61	ASN
38	YS	74	ALA
38	YS	75	GLU
39	YT	78	LEU
39	YT	112	ARG
40	YU	46	ALA
40	YU	58	ARG
40	YU	93	LYS
41	YV	54	GLY
42	YW	68	ARG
42	YW	93	ALA
43	YX	48	LYS
43	YX	87	GLN
44	YY	21	LYS
44	YY	39	VAL
44	YY	42	VAL
44	YY	69	ALA
44	YY	102	CYS
45	YZ	30	ASN
45	YZ	61	LEU
45	YZ	64	GLY
45	YZ	81	ARG
45	YZ	92	SER
45	YZ	118	GLN
45	YZ	135	GLU
45	YZ	163	LEU
46	Y0	15	ASP
46	Y0	57	PHE
46	Y0	75	LEU
47	Y1	74	VAL
47	Y1	91	LYS

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Mol	Chain	Res	Type
47	Y1	93	GLU
50	Y4	27	THR
50	Y4	46	GLN
52	Y6	18	ARG
53	Y7	32	LYS
54	Y8	46	ARG
54	Y8	47	LYS
2	QB	19	HIS
2	QB	131	PRO
2	QB	160	ASP
2	QB	177	ALA
3	QC	168	ALA
4	QD	151	LYS
5	QE	70	PRO
5	QE	72	GLN
5	QE	124	GLY
6	QF	13	ASN
6	QF	40	VAL
6	QF	42	GLU
7	QG	41	ARG
7	QG	109	ASN
7	QG	116	ALA
7	QG	117	ALA
8	QH	27	PRO
8	QH	49	GLU
10	QJ	93	GLY
12	QL	64	TYR
13	QM	4	ILE
13	QM	14	ARG
13	QM	69	GLU
13	QM	77	ASN
14	QN	44	LEU
15	QO	86	GLY
16	QP	26	ARG
16	QP	28	ARG
16	QP	48	TRP
18	QR	58	LEU
19	QS	28	LYS
19	QS	44	MET
20	QT	40	ALA
20	QT	51	GLU
27	RD	12	SER

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Mol	Chain	Res	Type
27	RD	73	VAL
28	RE	66	HIS
28	RE	126	PRO
29	RF	43	LYS
29	RF	130	ALA
29	RF	145	GLU
30	RG	12	TYR
30	RG	117	PHE
30	RG	146	TYR
31	RH	13	LYS
31	RH	109	PHE
31	RH	159	GLU
32	RI	113	ARG
32	RI	117	GLU
32	RI	122	GLU
33	RN	96	GLU
33	RN	127	ASP
33	RN	132	ALA
34	RO	17	ARG
34	RO	97	ARG
35	RP	29	LYS
35	RP	47	ASP
35	RP	139	LYS
39	RT	37	GLY
39	RT	95	ARG
40	RU	58	ARG
40	RU	74	LEU
42	RW	14	PRO
42	RW	48	ALA
45	RZ	144	LEU
50	R4	8	LYS
51	R5	14	ALA
51	R5	37	LYS
51	R5	45	VAL
51	R5	48	GLU
52	R6	8	LYS
52	R6	9	LEU
52	R6	10	LEU
52	R6	49	HIS
54	R8	25	MET
54	R8	53	PRO
54	R8	57	ARG

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Mol	Chain	Res	Type
2	XB	19	HIS
2	XB	129	GLU
2	XB	131	PRO
2	XB	160	ASP
3	XC	168	ALA
4	XD	151	LYS
5	XE	70	PRO
5	XE	72	GLN
5	XE	124	GLY
6	XF	13	ASN
6	XF	40	VAL
6	XF	42	GLU
7	XG	35	LYS
7	XG	41	ARG
7	XG	116	ALA
7	XG	117	ALA
8	XH	27	PRO
8	XH	29	SER
8	XH	49	GLU
10	XJ	57	LYS
10	XJ	93	GLY
12	XL	64	TYR
13	XM	4	ILE
13	XM	12	ASN
13	XM	14	ARG
13	XM	69	GLU
13	XM	77	ASN
14	XN	44	LEU
14	XN	48	ALA
15	XO	86	GLY
16	XP	26	ARG
16	XP	28	ARG
16	XP	48	TRP
19	XS	28	LYS
19	XS	44	MET
19	XS	64	GLU
20	XT	40	ALA
20	XT	51	GLU
27	YD	12	SER
27	YD	73	VAL
28	YE	66	HIS
28	YE	126	PRO

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Mol	Chain	Res	Type
29	YF	43	LYS
29	YF	130	ALA
29	YF	145	GLU
30	YG	12	TYR
30	YG	117	PHE
30	YG	146	TYR
31	YH	13	LYS
31	YH	109	PHE
31	YH	159	GLU
32	YI	110	ASP
32	YI	113	ARG
32	YI	117	GLU
32	YI	122	GLU
33	YN	96	GLU
33	YN	127	ASP
33	YN	132	ALA
34	YO	17	ARG
34	YO	97	ARG
35	YP	29	LYS
35	YP	47	ASP
35	YP	139	LYS
39	YT	37	GLY
39	YT	95	ARG
40	YU	74	LEU
42	YW	14	PRO
42	YW	48	ALA
45	YZ	144	LEU
50	Y4	8	LYS
51	Y5	14	ALA
51	Y5	37	LYS
51	Y5	45	VAL
51	Y5	48	GLU
52	Y6	8	LYS
52	Y6	9	LEU
52	Y6	10	LEU
52	Y6	49	HIS
54	Y8	25	MET
54	Y8	53	PRO
2	QB	23	ARG
2	QB	25	ASN
2	QB	98	LEU
2	QB	129	GLU

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Mol	Chain	Res	Type
2	QB	194	PRO
2	QB	229	VAL
2	QB	231	GLU
3	QC	125	GLU
5	QE	74	GLY
5	QE	77	PRO
5	QE	112	LEU
5	QE	128	PRO
5	QE	132	ALA
6	QF	12	PRO
6	QF	32	ASN
6	QF	96	PRO
8	QH	29	SER
8	QH	34	GLU
8	QH	103	VAL
9	QI	44	VAL
9	QI	88	TYR
9	QI	89	ASN
10	QJ	53	PRO
10	QJ	59	SER
10	QJ	75	ILE
11	QK	64	ALA
11	QK	105	VAL
12	QL	63	GLY
19	QS	11	VAL
27	RD	33	LEU
27	RD	178	PRO
27	RD	239	ARG
28	RE	79	ARG
29	RF	47	GLY
29	RF	118	ALA
29	RF	136	THR
31	RH	11	VAL
31	RH	27	LYS
31	RH	47	GLU
31	RH	77	LYS
31	RH	170	ARG
32	RI	18	VAL
32	RI	26	ALA
32	RI	102	SER
33	RN	29	LYS
33	RN	104	LYS

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Mol	Chain	Res	Type
33	RN	128	HIS
34	RO	25	LEU
35	RP	50	ARG
35	RP	97	PRO
35	RP	108	LYS
37	RR	85	PRO
40	RU	91	ASP
42	RW	32	ALA
43	RX	19	ALA
44	RY	7	VAL
45	RZ	132	ASN
45	RZ	133	ILE
49	R3	13	ILE
50	R4	30	GLU
50	R4	33	VAL
51	R5	42	PRO
52	R6	35	GLU
53	R7	44	PRO
54	R8	64	TYR
2	XB	23	ARG
2	XB	25	ASN
2	XB	98	LEU
2	XB	177	ALA
2	XB	194	PRO
2	XB	229	VAL
2	XB	231	GLU
3	XC	125	GLU
5	XE	74	GLY
5	XE	77	PRO
5	XE	128	PRO
5	XE	132	ALA
6	XF	12	PRO
6	XF	32	ASN
6	XF	96	PRO
7	XG	109	ASN
8	XH	34	GLU
8	XH	103	VAL
9	XI	44	VAL
9	XI	88	TYR
9	XI	89	ASN
10	XJ	53	PRO
10	XJ	59	SER

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Mol	Chain	Res	Type
10	XJ	75	ILE
11	XK	64	ALA
11	XK	105	VAL
12	XL	63	GLY
18	XR	58	LEU
19	XS	11	VAL
27	YD	33	LEU
27	YD	239	ARG
28	YE	79	ARG
29	YF	47	GLY
29	YF	118	ALA
29	YF	136	THR
31	YH	11	VAL
31	YH	27	LYS
31	YH	47	GLU
31	YH	77	LYS
31	YH	170	ARG
32	YI	18	VAL
32	YI	102	SER
33	YN	29	LYS
33	YN	104	LYS
33	YN	128	HIS
34	YO	25	LEU
35	YP	50	ARG
35	YP	97	PRO
35	YP	108	LYS
37	YR	85	PRO
39	YT	38	ASN
40	YU	91	ASP
42	YW	32	ALA
43	YX	19	ALA
44	YY	7	VAL
45	YZ	132	ASN
45	YZ	133	ILE
50	Y4	30	GLU
50	Y4	33	VAL
50	Y4	70	GLY
51	Y5	42	PRO
52	Y6	35	GLU
53	Y7	44	PRO
54	Y8	57	ARG
54	Y8	64	TYR

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Mol	Chain	Res	Type
2	QB	239	VAL
3	QC	51	GLY
5	QE	115	VAL
10	QJ	85	LEU
11	QK	106	LYS
13	QM	13	LYS
13	QM	48	LEU
14	QN	20	ALA
16	QP	57	ARG
30	RG	109	VAL
30	RG	181	ARG
31	RH	7	LEU
31	RH	26	VAL
31	RH	69	ARG
32	RI	104	GLN
32	RI	112	LYS
32	RI	120	ILE
39	RT	38	ASN
42	RW	11	ARG
42	RW	33	ARG
45	RZ	94	GLU
50	R4	69	LYS
50	R4	70	GLY
51	R5	57	VAL
3	XC	51	GLY
4	XD	72	GLU
5	XE	49	PRO
5	XE	112	LEU
5	XE	115	VAL
11	XK	106	LYS
13	XM	13	LYS
13	XM	48	LEU
14	XN	20	ALA
16	XP	57	ARG
20	XT	70	SER
27	YD	178	PRO
30	YG	109	VAL
30	YG	181	ARG
31	YH	7	LEU
31	YH	26	VAL
32	YI	26	ALA
32	YI	104	GLN

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Mol	Chain	Res	Type
32	YI	112	LYS
32	YI	120	ILE
41	YV	36	PRO
42	YW	11	ARG
42	YW	33	ARG
45	YZ	94	GLU
49	Y3	13	ILE
50	Y4	69	LYS
51	Y5	57	VAL
2	QB	202	PRO
3	QC	114	PRO
4	QD	88	VAL
5	QE	49	PRO
7	QG	55	GLY
7	QG	58	PRO
8	QH	106	GLY
16	QP	53	VAL
18	QR	37	VAL
20	QT	63	ILE
27	RD	240	ALA
28	RE	86	PRO
28	RE	184	VAL
32	RI	71	ILE
36	RQ	86	GLY
37	RR	32	GLY
41	RV	36	PRO
42	RW	35	ILE
45	RZ	53	ILE
45	RZ	130	PRO
2	XB	202	PRO
2	XB	239	VAL
3	XC	114	PRO
4	XD	88	VAL
7	XG	55	GLY
7	XG	58	PRO
18	XR	37	VAL
20	XT	63	ILE
27	YD	240	ALA
28	YE	86	PRO
28	YE	184	VAL
32	YI	71	ILE
36	YQ	86	GLY

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Mol	Chain	Res	Type
37	YR	32	GLY
42	YW	35	ILE
45	YZ	53	ILE
45	YZ	130	PRO
2	QB	227	GLY
3	QC	134	ILE
4	QD	90	GLY
9	QI	24	GLY
13	QM	60	VAL
15	QO	18	PHE
44	RY	27	VAL
44	RY	32	PRO
51	R5	46	CYS
2	XB	227	GLY
4	XD	90	GLY
8	XH	106	GLY
9	XI	24	GLY
13	XM	60	VAL
15	XO	18	PHE
16	XP	53	VAL
44	YY	32	PRO
51	Y5	46	CYS
9	QI	21	PRO
13	QM	84	ILE
27	RD	34	VAL
30	RG	52	ILE
34	RO	114	ILE
44	RY	51	VAL
45	RZ	107	THR
45	RZ	115	GLY
51	R5	34	PRO
3	XC	134	ILE
9	XI	21	PRO
13	XM	84	ILE
27	YD	34	VAL
30	YG	52	ILE
32	YI	144	VAL
34	YO	114	ILE
44	YY	27	VAL
44	YY	51	VAL
45	YZ	107	THR
45	YZ	115	GLY

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Mol	Chain	Res	Type
51	Y5	34	PRO
13	QM	78	ILE
28	RE	52	LEU
28	RE	55	ASN
34	RO	27	GLY
49	R3	40	THR
13	XM	78	ILE
28	YE	52	LEU
28	YE	55	ASN
34	YO	27	GLY
49	Y3	40	THR
5	QE	129	ILE
8	QH	51	VAL
16	QP	41	PRO
20	QT	97	ALA
7	XG	14	PRO
8	XH	51	VAL
16	XP	41	PRO
20	XT	97	ALA
48	R2	18	PRO
48	Y2	18	PRO

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	QB	205/220 (93%)	181 (88%)	24 (12%)	5	24
2	XB	205/220 (93%)	181 (88%)	24 (12%)	5	24
3	QC	159/188 (85%)	143 (90%)	16 (10%)	7	31
3	XC	159/188 (85%)	143 (90%)	16 (10%)	7	31
4	QD	180/181 (99%)	164 (91%)	16 (9%)	9	36
4	XD	180/181 (99%)	164 (91%)	16 (9%)	9	36
5	QE	116/123 (94%)	107 (92%)	9 (8%)	12	42
5	XE	116/123 (94%)	108 (93%)	8 (7%)	15	47

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	QF	90/90 (100%)	77 (86%)	13 (14%)	3	17
6	XF	90/90 (100%)	77 (86%)	13 (14%)	3	17
7	QG	126/127 (99%)	115 (91%)	11 (9%)	10	37
7	XG	126/127 (99%)	115 (91%)	11 (9%)	10	37
8	QH	119/119 (100%)	106 (89%)	13 (11%)	6	28
8	XH	119/119 (100%)	106 (89%)	13 (11%)	6	28
9	QI	98/99 (99%)	87 (89%)	11 (11%)	6	26
9	XI	98/99 (99%)	87 (89%)	11 (11%)	6	26
10	QJ	89/92 (97%)	81 (91%)	8 (9%)	9	36
10	XJ	89/92 (97%)	81 (91%)	8 (9%)	9	36
11	QK	90/99 (91%)	81 (90%)	9 (10%)	7	31
11	XK	90/99 (91%)	81 (90%)	9 (10%)	7	31
12	QL	104/109 (95%)	90 (86%)	14 (14%)	4	19
12	XL	104/109 (95%)	90 (86%)	14 (14%)	4	19
13	QM	97/101 (96%)	81 (84%)	16 (16%)	2	11
13	XM	97/101 (96%)	80 (82%)	17 (18%)	2	9
14	QN	49/50 (98%)	45 (92%)	4 (8%)	11	40
14	XN	49/50 (98%)	42 (86%)	7 (14%)	3	17
15	QO	79/80 (99%)	73 (92%)	6 (8%)	13	43
15	XO	79/80 (99%)	73 (92%)	6 (8%)	13	43
16	QP	72/74 (97%)	63 (88%)	9 (12%)	4	21
16	XP	72/74 (97%)	63 (88%)	9 (12%)	4	21
17	QQ	95/97 (98%)	89 (94%)	6 (6%)	18	50
17	XQ	95/97 (98%)	89 (94%)	6 (6%)	18	50
18	QR	61/77 (79%)	54 (88%)	7 (12%)	5	25
18	XR	61/77 (79%)	54 (88%)	7 (12%)	5	25
19	QS	73/80 (91%)	62 (85%)	11 (15%)	3	15
19	XS	73/80 (91%)	62 (85%)	11 (15%)	3	15
20	QT	76/82 (93%)	68 (90%)	8 (10%)	7	29
20	XT	76/82 (93%)	68 (90%)	8 (10%)	7	29
21	QU	20/22 (91%)	19 (95%)	1 (5%)	24	57

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	XU	20/22 (91%)	19 (95%)	1 (5%)	24	57
27	RD	214/218 (98%)	177 (83%)	37 (17%)	2	10
27	YD	214/218 (98%)	177 (83%)	37 (17%)	2	10
28	RE	165/166 (99%)	127 (77%)	38 (23%)	1	3
28	YE	165/166 (99%)	127 (77%)	38 (23%)	1	3
29	RF	161/166 (97%)	140 (87%)	21 (13%)	4	20
29	YF	161/166 (97%)	139 (86%)	22 (14%)	3	18
30	RG	155/156 (99%)	130 (84%)	25 (16%)	2	13
30	YG	155/156 (99%)	131 (84%)	24 (16%)	2	14
31	RH	142/148 (96%)	115 (81%)	27 (19%)	1	6
31	YH	142/148 (96%)	115 (81%)	27 (19%)	1	6
32	RI	122/124 (98%)	98 (80%)	24 (20%)	1	5
32	YI	122/124 (98%)	97 (80%)	25 (20%)	1	5
33	RN	117/119 (98%)	98 (84%)	19 (16%)	2	12
33	YN	117/119 (98%)	98 (84%)	19 (16%)	2	12
34	RO	100/100 (100%)	90 (90%)	10 (10%)	7	31
34	YO	100/100 (100%)	90 (90%)	10 (10%)	7	31
35	RP	116/116 (100%)	89 (77%)	27 (23%)	1	3
35	YP	116/116 (100%)	89 (77%)	27 (23%)	1	3
36	RQ	111/111 (100%)	92 (83%)	19 (17%)	2	10
36	YQ	111/111 (100%)	92 (83%)	19 (17%)	2	10
37	RR	101/101 (100%)	84 (83%)	17 (17%)	2	11
37	YR	101/101 (100%)	84 (83%)	17 (17%)	2	11
38	RS	87/88 (99%)	74 (85%)	13 (15%)	3	16
38	YS	87/88 (99%)	74 (85%)	13 (15%)	3	16
39	RT	120/127 (94%)	97 (81%)	23 (19%)	1	6
39	YT	120/127 (94%)	97 (81%)	23 (19%)	1	6
40	RU	93/94 (99%)	80 (86%)	13 (14%)	3	17
40	YU	93/94 (99%)	80 (86%)	13 (14%)	3	17
41	RV	82/82 (100%)	71 (87%)	11 (13%)	4	19
41	YV	82/82 (100%)	71 (87%)	11 (13%)	4	19

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
42	RW	92/92 (100%)	77 (84%)	15 (16%)	2	12
42	YW	92/92 (100%)	77 (84%)	15 (16%)	2	12
43	RX	74/78 (95%)	63 (85%)	11 (15%)	3	16
43	YX	74/78 (95%)	63 (85%)	11 (15%)	3	16
44	RY	85/91 (93%)	70 (82%)	15 (18%)	2	9
44	YY	85/91 (93%)	70 (82%)	15 (18%)	2	9
45	RZ	152/179 (85%)	124 (82%)	28 (18%)	1	7
45	YZ	152/179 (85%)	124 (82%)	28 (18%)	1	7
46	R0	65/67 (97%)	55 (85%)	10 (15%)	2	14
46	Y0	65/67 (97%)	56 (86%)	9 (14%)	3	18
47	R1	82/83 (99%)	67 (82%)	15 (18%)	1	7
47	Y1	82/83 (99%)	67 (82%)	15 (18%)	1	7
48	R2	64/67 (96%)	57 (89%)	7 (11%)	6	28
48	Y2	64/67 (96%)	57 (89%)	7 (11%)	6	28
49	R3	51/52 (98%)	40 (78%)	11 (22%)	1	4
49	Y3	51/52 (98%)	40 (78%)	11 (22%)	1	4
50	R4	63/63 (100%)	44 (70%)	19 (30%)	0	2
50	Y4	63/63 (100%)	44 (70%)	19 (30%)	0	2
51	R5	51/52 (98%)	39 (76%)	12 (24%)	1	3
51	Y5	51/52 (98%)	39 (76%)	12 (24%)	1	3
52	R6	48/52 (92%)	38 (79%)	10 (21%)	1	5
52	Y6	48/52 (92%)	38 (79%)	10 (21%)	1	5
53	R7	42/42 (100%)	39 (93%)	3 (7%)	14	46
53	Y7	42/42 (100%)	39 (93%)	3 (7%)	14	46
54	R8	54/55 (98%)	39 (72%)	15 (28%)	0	2
54	Y8	54/55 (98%)	39 (72%)	15 (28%)	0	2
All	All	9614/9998 (96%)	8197 (85%)	1417 (15%)	3	16

All (1417) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	QB	5	ILE
2	QB	8	LYS

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Mol	Chain	Res	Type
2	QB	16	HIS
2	QB	23	ARG
2	QB	24	TRP
2	QB	33	TYR
2	QB	36	ARG
2	QB	63	MET
2	QB	67	THR
2	QB	73	THR
2	QB	82	ARG
2	QB	92	TYR
2	QB	94	ASN
2	QB	121	LEU
2	QB	155	LEU
2	QB	163	PHE
2	QB	165	VAL
2	QB	168	THR
2	QB	172	ILE
2	QB	174	VAL
2	QB	178	ARG
2	QB	196	LEU
2	QB	204	ASN
2	QB	215	LEU
3	QC	3	ASN
3	QC	5	ILE
3	QC	12	LEU
3	QC	16	ARG
3	QC	21	ARG
3	QC	29	TYR
3	QC	56	ASP
3	QC	69	HIS
3	QC	94	LEU
3	QC	127	ARG
3	QC	131	ARG
3	QC	154	SER
3	QC	184	TYR
3	QC	192	THR
3	QC	193	TYR
3	QC	196	LEU
4	QD	3	ARG
4	QD	7	PRO
4	QD	9	CYS
4	QD	13	ARG

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Mol	Chain	Res	Type
4	QD	30	LYS
4	QD	50	ARG
4	QD	53	ASP
4	QD	79	PHE
4	QD	86	LYS
4	QD	94	LEU
4	QD	96	LEU
4	QD	114	ARG
4	QD	122	ARG
4	QD	131	ARG
4	QD	181	MET
4	QD	200	GLU
5	QE	10	MET
5	QE	13	ILE
5	QE	16	THR
5	QE	31	LEU
5	QE	53	LEU
5	QE	73	ASN
5	QE	79	GLU
5	QE	101	ILE
5	QE	153	LYS
6	QF	17	SER
6	QF	21	LEU
6	QF	36	ARG
6	QF	55	ASP
6	QF	63	TYR
6	QF	69	GLU
6	QF	74	ASP
6	QF	77	ARG
6	QF	87	ARG
6	QF	92	LYS
6	QF	94	GLN
6	QF	97	PHE
6	QF	100	ASN
7	QG	8	GLU
7	QG	12	LEU
7	QG	78	ARG
7	QG	84	ASN
7	QG	98	SER
7	QG	111	ARG
7	QG	114	ARG
7	QG	124	LEU

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Mol	Chain	Res	Type
7	QG	137	LYS
7	QG	148	ASN
7	QG	155	ARG
8	QH	1	MET
8	QH	10	LEU
8	QH	27	PRO
8	QH	41	ARG
8	QH	52	ASP
8	QH	63	LEU
8	QH	69	ARG
8	QH	81	HIS
8	QH	99	GLU
8	QH	119	LEU
8	QH	121	ASP
8	QH	129	VAL
8	QH	137	VAL
9	QI	7	THR
9	QI	9	ARG
9	QI	48	GLU
9	QI	65	VAL
9	QI	83	ARG
9	QI	95	LYS
9	QI	104	ARG
9	QI	113	LYS
9	QI	114	TYR
9	QI	121	ARG
9	QI	128	ARG
10	QJ	22	LYS
10	QJ	47	PHE
10	QJ	57	LYS
10	QJ	62	HIS
10	QJ	74	ILE
10	QJ	80	LYS
10	QJ	84	GLN
10	QJ	96	ILE
11	QK	26	ASN
11	QK	32	ILE
11	QK	63	LEU
11	QK	75	TYR
11	QK	92	GLU
11	QK	109	VAL
11	QK	114	VAL

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Mol	Chain	Res	Type
11	QK	116	HIS
11	QK	125	PHE
12	QL	17	LYS
12	QL	20	LYS
12	QL	27	LEU
12	QL	41	ARG
12	QL	53	ARG
12	QL	57	LYS
12	QL	60	LEU
12	QL	62	SER
12	QL	70	ILE
12	QL	73	GLU
12	QL	81	SER
12	QL	89	ARG
12	QL	112	ASP
12	QL	120	TYR
13	QM	3	ARG
13	QM	8	GLU
13	QM	13	LYS
13	QM	35	GLU
13	QM	47	ASP
13	QM	56	LEU
13	QM	57	ARG
13	QM	64	TRP
13	QM	66	LEU
13	QM	70	LEU
13	QM	88	ARG
13	QM	90	LEU
13	QM	101	GLN
13	QM	115	LYS
13	QM	116	THR
13	QM	122	LYS
14	QN	3	ARG
14	QN	12	ARG
14	QN	14	PRO
14	QN	16	PHE
15	QO	3	ILE
15	QO	8	LYS
15	QO	26	GLU
15	QO	39	LEU
15	QO	62	GLN
15	QO	65	ARG

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Mol	Chain	Res	Type
16	QP	1	MET
16	QP	26	ARG
16	QP	28	ARG
16	QP	59	TRP
16	QP	62	VAL
16	QP	69	THR
16	QP	71	ARG
16	QP	72	ARG
16	QP	82	GLN
17	QQ	12	SER
17	QQ	48	GLU
17	QQ	52	LYS
17	QQ	59	ILE
17	QQ	68	ARG
17	QQ	74	LEU
18	QR	26	LEU
18	QR	29	PHE
18	QR	32	ARG
18	QR	36	ASN
18	QR	46	GLU
18	QR	54	ARG
18	QR	55	ARG
19	QS	5	LEU
19	QS	10	PHE
19	QS	12	ASP
19	QS	13	ASP
19	QS	15	LEU
19	QS	29	ARG
19	QS	30	LEU
19	QS	41	VAL
19	QS	63	THR
19	QS	65	ASN
19	QS	83	HIS
20	QT	11	SER
20	QT	24	LEU
20	QT	26	ASN
20	QT	41	ILE
20	QT	62	LEU
20	QT	73	HIS
20	QT	75	ASN
20	QT	93	GLU
21	QU	6	ARG

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Mol	Chain	Res	Type
27	RD	10	THR
27	RD	17	THR
27	RD	26	LYS
27	RD	33	LEU
27	RD	43	ARG
27	RD	44	ASN
27	RD	61	LEU
27	RD	65	ILE
27	RD	67	PHE
27	RD	71	ASP
27	RD	73	VAL
27	RD	94	LEU
27	RD	98	VAL
27	RD	105	ILE
27	RD	106	ILE
27	RD	131	LEU
27	RD	134	ARG
27	RD	135	PHE
27	RD	155	LEU
27	RD	157	ARG
27	RD	166	GLN
27	RD	173	VAL
27	RD	183	ARG
27	RD	192	THR
27	RD	198	ASN
27	RD	200	ASP
27	RD	215	LEU
27	RD	217	ARG
27	RD	218	ARG
27	RD	226	MET
27	RD	230	ASP
27	RD	237	GLU
27	RD	257	LEU
27	RD	259	THR
27	RD	261	LYS
27	RD	262	ARG
27	RD	271	ILE
28	RE	2	LYS
28	RE	4	ILE
28	RE	13	ARG
28	RE	16	ARG
28	RE	17	ASP

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Mol	Chain	Res	Type
28	RE	25	VAL
28	RE	26	ILE
28	RE	27	LEU
28	RE	33	VAL
28	RE	36	ARG
28	RE	37	ARG
28	RE	38	THR
28	RE	41	LYS
28	RE	45	THR
28	RE	54	GLN
28	RE	61	ARG
28	RE	62	PRO
28	RE	66	HIS
28	RE	73	GLU
28	RE	75	VAL
28	RE	77	ILE
28	RE	78	LEU
28	RE	79	ARG
28	RE	80	GLU
28	RE	101	ARG
28	RE	113	PHE
28	RE	117	MET
28	RE	119	ARG
28	RE	143	ASN
28	RE	146	THR
28	RE	154	LYS
28	RE	167	VAL
28	RE	179	GLU
28	RE	184	VAL
28	RE	196	VAL
28	RE	200	GLU
28	RE	202	LYS
28	RE	203	LYS
29	RF	7	TYR
29	RF	9	ILE
29	RF	25	PRO
29	RF	32	LEU
29	RF	45	ARG
29	RF	46	ARG
29	RF	65	TRP
29	RF	66	PRO
29	RF	67	GLN

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Mol	Chain	Res	Type
29	RF	70	THR
29	RF	82	ILE
29	RF	106	ARG
29	RF	108	LYS
29	RF	117	ARG
29	RF	124	LEU
29	RF	127	GLU
29	RF	145	GLU
29	RF	164	ARG
29	RF	181	LEU
29	RF	183	VAL
29	RF	206	ILE
30	RG	4	ASP
30	RG	22	ARG
30	RG	26	GLN
30	RG	33	ARG
30	RG	34	LEU
30	RG	35	GLU
30	RG	43	LEU
30	RG	45	GLU
30	RG	63	ILE
30	RG	67	LYS
30	RG	71	THR
30	RG	88	ILE
30	RG	94	LEU
30	RG	96	ARG
30	RG	97	ASP
30	RG	103	LEU
30	RG	115	ARG
30	RG	118	ARG
30	RG	133	LEU
30	RG	147	ASP
30	RG	155	MET
30	RG	156	ASP
30	RG	159	VAL
30	RG	167	GLU
30	RG	174	GLU
31	RH	3	ARG
31	RH	4	ILE
31	RH	9	ILE
31	RH	10	PRO
31	RH	11	VAL

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Mol	Chain	Res	Type
31	RH	16	SER
31	RH	27	LYS
31	RH	32	GLU
31	RH	37	VAL
31	RH	41	MET
31	RH	43	VAL
31	RH	59	ARG
31	RH	64	LEU
31	RH	77	LYS
31	RH	81	GLU
31	RH	85	LYS
31	RH	88	LEU
31	RH	89	ILE
31	RH	105	LEU
31	RH	132	ARG
31	RH	139	GLN
31	RH	152	ARG
31	RH	153	LYS
31	RH	154	PRO
31	RH	155	SER
31	RH	158	HIS
31	RH	169	VAL
32	RI	1	MET
32	RI	9	LEU
32	RI	25	TYR
32	RI	33	ARG
32	RI	38	LEU
32	RI	41	GLU
32	RI	51	ILE
32	RI	67	ARG
32	RI	70	GLU
32	RI	74	ASN
32	RI	85	GLU
32	RI	88	ILE
32	RI	96	ASP
32	RI	101	LEU
32	RI	112	LYS
32	RI	113	ARG
32	RI	128	LEU
32	RI	131	LYS
32	RI	134	PRO
32	RI	135	GLU

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Mol	Chain	Res	Type
32	RI	139	GLN
32	RI	140	LEU
32	RI	141	LYS
32	RI	142	VAL
33	RN	2	LYS
33	RN	7	LYS
33	RN	43	THR
33	RN	48	MET
33	RN	60	ILE
33	RN	61	ARG
33	RN	65	LYS
33	RN	73	THR
33	RN	78	TYR
33	RN	90	MET
33	RN	93	THR
33	RN	94	HIS
33	RN	101	HIS
33	RN	109	LYS
33	RN	112	LEU
33	RN	120	LEU
33	RN	127	ASP
33	RN	131	GLN
33	RN	136	GLU
34	RO	8	LEU
34	RO	9	GLU
34	RO	17	ARG
34	RO	19	ILE
34	RO	23	ARG
34	RO	31	LYS
34	RO	39	ILE
34	RO	49	ARG
34	RO	53	LYS
34	RO	65	THR
35	RP	5	ASP
35	RP	9	ASN
35	RP	10	PRO
35	RP	16	ARG
35	RP	21	ARG
35	RP	27	HIS
35	RP	29	LYS
35	RP	30	THR
35	RP	32	THR

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Mol	Chain	Res	Type
35	RP	36	LYS
35	RP	38	GLN
35	RP	41	ARG
35	RP	50	ARG
35	RP	55	ARG
35	RP	61	ARG
35	RP	62	LEU
35	RP	64	LYS
35	RP	65	ARG
35	RP	75	ILE
35	RP	81	GLN
35	RP	88	LEU
35	RP	91	PHE
35	RP	99	LEU
35	RP	100	LEU
35	RP	108	LYS
35	RP	144	GLU
35	RP	146	VAL
36	RQ	2	LEU
36	RQ	25	ASP
36	RQ	26	TYR
36	RQ	27	VAL
36	RQ	45	GLN
36	RQ	46	GLN
36	RQ	54	MET
36	RQ	55	VAL
36	RQ	58	PHE
36	RQ	59	ARG
36	RQ	79	LEU
36	RQ	80	GLU
36	RQ	83	MET
36	RQ	89	ASN
36	RQ	90	VAL
36	RQ	91	GLU
36	RQ	130	LYS
36	RQ	135	ASP
36	RQ	139	GLU
37	RR	14	SER
37	RR	31	HIS
37	RR	37	THR
37	RR	44	LEU
37	RR	51	LEU

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Mol	Chain	Res	Type
37	RR	57	ARG
37	RR	66	VAL
37	RR	67	LEU
37	RR	71	GLN
37	RR	75	LEU
37	RR	76	VAL
37	RR	81	ASP
37	RR	95	THR
37	RR	104	ARG
37	RR	105	ARG
37	RR	107	ASP
37	RR	113	LEU
38	RS	4	LEU
38	RS	12	PHE
38	RS	17	ARG
38	RS	18	ILE
38	RS	20	ARG
38	RS	44	LYS
38	RS	56	LEU
38	RS	57	LYS
38	RS	89	ARG
38	RS	101	LEU
38	RS	103	GLU
38	RS	106	ARG
38	RS	111	GLU
39	RT	2	ASN
39	RT	14	TYR
39	RT	22	PHE
39	RT	23	ARG
39	RT	26	ASP
39	RT	27	THR
39	RT	42	ILE
39	RT	51	ARG
39	RT	58	ASN
39	RT	65	LYS
39	RT	73	GLU
39	RT	78	LEU
39	RT	86	ILE
39	RT	87	ASP
39	RT	99	LEU
39	RT	100	TYR
39	RT	104	ASN

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Mol	Chain	Res	Type
39	RT	107	ASP
39	RT	111	ARG
39	RT	112	ARG
39	RT	115	ARG
39	RT	128	GLU
39	RT	134	GLU
40	RU	5	LYS
40	RU	9	VAL
40	RU	31	SER
40	RU	52	ARG
40	RU	74	LEU
40	RU	76	TYR
40	RU	79	PHE
40	RU	88	ILE
40	RU	92	ARG
40	RU	98	LEU
40	RU	108	GLU
40	RU	114	LYS
40	RU	117	GLN
41	RV	13	ARG
41	RV	14	VAL
41	RV	18	LEU
41	RV	35	LEU
41	RV	38	LEU
41	RV	39	LEU
41	RV	40	LEU
41	RV	66	ARG
41	RV	75	PHE
41	RV	91	TYR
41	RV	99	ILE
42	RW	11	ARG
42	RW	14	PRO
42	RW	16	LYS
42	RW	18	ARG
42	RW	19	LEU
42	RW	20	VAL
42	RW	63	ASP
42	RW	67	ASP
42	RW	69	LEU
42	RW	70	TYR
42	RW	87	PRO
42	RW	88	ARG

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Mol	Chain	Res	Type
42	RW	92	ARG
42	RW	107	LEU
42	RW	109	GLU
43	RX	3	THR
43	RX	6	ASP
43	RX	15	GLU
43	RX	27	THR
43	RX	30	VAL
43	RX	55	ASN
43	RX	57	LEU
43	RX	65	ARG
43	RX	70	LEU
43	RX	80	ILE
43	RX	88	LYS
44	RY	7	VAL
44	RY	11	ASP
44	RY	27	VAL
44	RY	45	VAL
44	RY	57	GLN
44	RY	64	GLU
44	RY	75	ILE
44	RY	77	PRO
44	RY	79	CYS
44	RY	87	LYS
44	RY	88	LYS
44	RY	89	PHE
44	RY	90	LEU
44	RY	95	LYS
44	RY	97	ARG
45	RZ	2	GLU
45	RZ	20	ARG
45	RZ	24	LEU
45	RZ	31	ARG
45	RZ	38	TYR
45	RZ	72	ARG
45	RZ	76	LEU
45	RZ	81	ARG
45	RZ	82	ARG
45	RZ	87	ASP
45	RZ	94	GLU
45	RZ	96	VAL
45	RZ	97	GLU

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Mol	Chain	Res	Type
45	RZ	107	THR
45	RZ	117	LEU
45	RZ	118	GLN
45	RZ	119	GLU
45	RZ	121	HIS
45	RZ	122	ARG
45	RZ	123	ASP
45	RZ	131	ARG
45	RZ	132	ASN
45	RZ	137	ILE
45	RZ	139	VAL
45	RZ	148	ASP
45	RZ	155	LEU
45	RZ	170	THR
45	RZ	171	ILE
46	R0	3	HIS
46	R0	9	SER
46	R0	10	THR
46	R0	11	ARG
46	R0	35	ASN
46	R0	36	ILE
46	R0	41	ARG
46	R0	55	ARG
46	R0	74	ARG
46	R0	82	ARG
47	R1	2	SER
47	R1	11	ARG
47	R1	21	ARG
47	R1	30	VAL
47	R1	40	ARG
47	R1	41	ARG
47	R1	56	GLN
47	R1	76	ARG
47	R1	80	LEU
47	R1	81	LYS
47	R1	83	GLU
47	R1	87	PRO
47	R1	91	LYS
47	R1	92	LYS
47	R1	97	LEU
48	R2	7	ARG
48	R2	9	GLN

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Mol	Chain	Res	Type
48	R2	16	LEU
48	R2	24	LEU
48	R2	53	LEU
48	R2	62	THR
48	R2	64	LEU
49	R3	4	LEU
49	R3	8	LEU
49	R3	9	VAL
49	R3	10	LYS
49	R3	17	LYS
49	R3	30	ARG
49	R3	31	LEU
49	R3	32	GLN
49	R3	37	LEU
49	R3	40	THR
49	R3	44	ARG
50	R4	6	HIS
50	R4	15	ILE
50	R4	18	CYS
50	R4	21	VAL
50	R4	23	GLU
50	R4	39	CYS
50	R4	42	PHE
50	R4	48	ARG
50	R4	49	PHE
50	R4	50	VAL
50	R4	51	ASP
50	R4	53	GLU
50	R4	57	GLU
50	R4	61	ARG
50	R4	62	ARG
50	R4	63	TYR
50	R4	67	TYR
50	R4	68	ARG
50	R4	71	ARG
51	R5	3	LYS
51	R5	4	HIS
51	R5	6	VAL
51	R5	11	THR
51	R5	19	ARG
51	R5	25	LEU
51	R5	36	CYS

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Mol	Chain	Res	Type
51	R5	37	LYS
51	R5	43	HIS
51	R5	52	TYR
51	R5	56	LYS
51	R5	58	LEU
52	R6	6	ARG
52	R6	8	LYS
52	R6	18	ARG
52	R6	19	ARG
52	R6	28	ARG
52	R6	34	LEU
52	R6	37	ARG
52	R6	42	TRP
52	R6	44	ARG
52	R6	46	HIS
53	R7	1	MET
53	R7	9	ARG
53	R7	43	THR
54	R8	15	LYS
54	R8	16	ILE
54	R8	30	ARG
54	R8	35	GLN
54	R8	39	LYS
54	R8	43	GLN
54	R8	44	LYS
54	R8	47	LYS
54	R8	48	PHE
54	R8	49	VAL
54	R8	52	LYS
54	R8	53	PRO
54	R8	62	LEU
54	R8	63	PRO
54	R8	65	GLU
2	XB	5	ILE
2	XB	8	LYS
2	XB	16	HIS
2	XB	23	ARG
2	XB	24	TRP
2	XB	33	TYR
2	XB	36	ARG
2	XB	63	MET
2	XB	67	THR

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Mol	Chain	Res	Type
2	XB	73	THR
2	XB	82	ARG
2	XB	92	TYR
2	XB	94	ASN
2	XB	121	LEU
2	XB	155	LEU
2	XB	163	PHE
2	XB	165	VAL
2	XB	168	THR
2	XB	172	ILE
2	XB	174	VAL
2	XB	178	ARG
2	XB	196	LEU
2	XB	204	ASN
2	XB	215	LEU
3	XC	3	ASN
3	XC	5	ILE
3	XC	12	LEU
3	XC	16	ARG
3	XC	21	ARG
3	XC	29	TYR
3	XC	56	ASP
3	XC	69	HIS
3	XC	94	LEU
3	XC	127	ARG
3	XC	131	ARG
3	XC	154	SER
3	XC	184	TYR
3	XC	192	THR
3	XC	193	TYR
3	XC	196	LEU
4	XD	3	ARG
4	XD	7	PRO
4	XD	9	CYS
4	XD	13	ARG
4	XD	30	LYS
4	XD	50	ARG
4	XD	53	ASP
4	XD	79	PHE
4	XD	86	LYS
4	XD	94	LEU
4	XD	96	LEU

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Mol	Chain	Res	Type
4	XD	114	ARG
4	XD	122	ARG
4	XD	131	ARG
4	XD	181	MET
4	XD	200	GLU
5	XE	10	MET
5	XE	13	ILE
5	XE	16	THR
5	XE	31	LEU
5	XE	53	LEU
5	XE	79	GLU
5	XE	101	ILE
5	XE	153	LYS
6	XF	17	SER
6	XF	21	LEU
6	XF	36	ARG
6	XF	55	ASP
6	XF	63	TYR
6	XF	69	GLU
6	XF	74	ASP
6	XF	77	ARG
6	XF	87	ARG
6	XF	92	LYS
6	XF	94	GLN
6	XF	97	PHE
6	XF	100	ASN
7	XG	8	GLU
7	XG	12	LEU
7	XG	78	ARG
7	XG	84	ASN
7	XG	98	SER
7	XG	111	ARG
7	XG	114	ARG
7	XG	124	LEU
7	XG	137	LYS
7	XG	148	ASN
7	XG	155	ARG
8	XH	1	MET
8	XH	10	LEU
8	XH	27	PRO
8	XH	41	ARG
8	XH	52	ASP

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Mol	Chain	Res	Type
8	XH	63	LEU
8	XH	69	ARG
8	XH	81	HIS
8	XH	99	GLU
8	XH	119	LEU
8	XH	121	ASP
8	XH	129	VAL
8	XH	137	VAL
9	XI	7	THR
9	XI	9	ARG
9	XI	48	GLU
9	XI	65	VAL
9	XI	83	ARG
9	XI	95	LYS
9	XI	104	ARG
9	XI	113	LYS
9	XI	114	TYR
9	XI	121	ARG
9	XI	128	ARG
10	XJ	22	LYS
10	XJ	47	PHE
10	XJ	57	LYS
10	XJ	62	HIS
10	XJ	74	ILE
10	XJ	80	LYS
10	XJ	84	GLN
10	XJ	96	ILE
11	XK	26	ASN
11	XK	32	ILE
11	XK	63	LEU
11	XK	75	TYR
11	XK	92	GLU
11	XK	109	VAL
11	XK	114	VAL
11	XK	116	HIS
11	XK	125	PHE
12	XL	17	LYS
12	XL	20	LYS
12	XL	27	LEU
12	XL	41	ARG
12	XL	53	ARG
12	XL	57	LYS

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Mol	Chain	Res	Type
12	XL	60	LEU
12	XL	62	SER
12	XL	70	ILE
12	XL	73	GLU
12	XL	81	SER
12	XL	89	ARG
12	XL	112	ASP
12	XL	120	TYR
13	XM	3	ARG
13	XM	8	GLU
13	XM	13	LYS
13	XM	35	GLU
13	XM	47	ASP
13	XM	56	LEU
13	XM	57	ARG
13	XM	64	TRP
13	XM	66	LEU
13	XM	70	LEU
13	XM	77	ASN
13	XM	88	ARG
13	XM	90	LEU
13	XM	101	GLN
13	XM	115	LYS
13	XM	116	THR
13	XM	122	LYS
14	XN	3	ARG
14	XN	12	ARG
14	XN	14	PRO
14	XN	16	PHE
14	XN	24	CYS
14	XN	27	CYS
14	XN	44	LEU
15	XO	3	ILE
15	XO	8	LYS
15	XO	26	GLU
15	XO	39	LEU
15	XO	62	GLN
15	XO	65	ARG
16	XP	1	MET
16	XP	26	ARG
16	XP	28	ARG
16	XP	59	TRP

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Mol	Chain	Res	Type
16	XP	62	VAL
16	XP	69	THR
16	XP	71	ARG
16	XP	72	ARG
16	XP	82	GLN
17	XQ	12	SER
17	XQ	48	GLU
17	XQ	52	LYS
17	XQ	59	ILE
17	XQ	68	ARG
17	XQ	74	LEU
18	XR	26	LEU
18	XR	29	PHE
18	XR	32	ARG
18	XR	36	ASN
18	XR	46	GLU
18	XR	54	ARG
18	XR	55	ARG
19	XS	5	LEU
19	XS	10	PHE
19	XS	12	ASP
19	XS	13	ASP
19	XS	15	LEU
19	XS	29	ARG
19	XS	30	LEU
19	XS	41	VAL
19	XS	63	THR
19	XS	65	ASN
19	XS	83	HIS
20	XT	11	SER
20	XT	24	LEU
20	XT	26	ASN
20	XT	41	ILE
20	XT	62	LEU
20	XT	73	HIS
20	XT	75	ASN
20	XT	93	GLU
21	XU	6	ARG
27	YD	10	THR
27	YD	17	THR
27	YD	26	LYS
27	YD	33	LEU

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Mol	Chain	Res	Type
27	YD	43	ARG
27	YD	44	ASN
27	YD	61	LEU
27	YD	65	ILE
27	YD	67	PHE
27	YD	71	ASP
27	YD	73	VAL
27	YD	94	LEU
27	YD	98	VAL
27	YD	105	ILE
27	YD	106	ILE
27	YD	131	LEU
27	YD	134	ARG
27	YD	135	PHE
27	YD	155	LEU
27	YD	157	ARG
27	YD	166	GLN
27	YD	173	VAL
27	YD	183	ARG
27	YD	192	THR
27	YD	198	ASN
27	YD	200	ASP
27	YD	215	LEU
27	YD	217	ARG
27	YD	218	ARG
27	YD	226	MET
27	YD	230	ASP
27	YD	237	GLU
27	YD	257	LEU
27	YD	259	THR
27	YD	261	LYS
27	YD	262	ARG
27	YD	271	ILE
28	YE	2	LYS
28	YE	4	ILE
28	YE	13	ARG
28	YE	16	ARG
28	YE	17	ASP
28	YE	25	VAL
28	YE	26	ILE
28	YE	27	LEU
28	YE	33	VAL

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Mol	Chain	Res	Type
28	YE	36	ARG
28	YE	37	ARG
28	YE	38	THR
28	YE	41	LYS
28	YE	45	THR
28	YE	54	GLN
28	YE	61	ARG
28	YE	62	PRO
28	YE	66	HIS
28	YE	73	GLU
28	YE	75	VAL
28	YE	77	ILE
28	YE	78	LEU
28	YE	79	ARG
28	YE	80	GLU
28	YE	101	ARG
28	YE	113	PHE
28	YE	117	MET
28	YE	119	ARG
28	YE	143	ASN
28	YE	146	THR
28	YE	154	LYS
28	YE	167	VAL
28	YE	179	GLU
28	YE	184	VAL
28	YE	196	VAL
28	YE	200	GLU
28	YE	202	LYS
28	YE	203	LYS
29	YF	7	TYR
29	YF	9	ILE
29	YF	25	PRO
29	YF	32	LEU
29	YF	45	ARG
29	YF	46	ARG
29	YF	65	TRP
29	YF	66	PRO
29	YF	67	GLN
29	YF	70	THR
29	YF	82	ILE
29	YF	106	ARG
29	YF	108	LYS

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Mol	Chain	Res	Type
29	YF	117	ARG
29	YF	124	LEU
29	YF	127	GLU
29	YF	145	GLU
29	YF	164	ARG
29	YF	169	ASN
29	YF	181	LEU
29	YF	183	VAL
29	YF	206	ILE
30	YG	4	ASP
30	YG	22	ARG
30	YG	26	GLN
30	YG	33	ARG
30	YG	34	LEU
30	YG	35	GLU
30	YG	43	LEU
30	YG	45	GLU
30	YG	63	ILE
30	YG	67	LYS
30	YG	71	THR
30	YG	88	ILE
30	YG	94	LEU
30	YG	96	ARG
30	YG	97	ASP
30	YG	103	LEU
30	YG	115	ARG
30	YG	118	ARG
30	YG	133	LEU
30	YG	147	ASP
30	YG	155	MET
30	YG	156	ASP
30	YG	159	VAL
30	YG	174	GLU
31	YH	3	ARG
31	YH	4	ILE
31	YH	9	ILE
31	YH	10	PRO
31	YH	11	VAL
31	YH	16	SER
31	YH	27	LYS
31	YH	32	GLU
31	YH	37	VAL

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Mol	Chain	Res	Type
31	YH	41	MET
31	YH	43	VAL
31	YH	59	ARG
31	YH	64	LEU
31	YH	77	LYS
31	YH	81	GLU
31	YH	85	LYS
31	YH	88	LEU
31	YH	89	ILE
31	YH	105	LEU
31	YH	132	ARG
31	YH	139	GLN
31	YH	152	ARG
31	YH	153	LYS
31	YH	154	PRO
31	YH	155	SER
31	YH	158	HIS
31	YH	169	VAL
32	YI	1	MET
32	YI	9	LEU
32	YI	25	TYR
32	YI	33	ARG
32	YI	38	LEU
32	YI	56	LYS
32	YI	57	ARG
32	YI	60	GLU
32	YI	67	ARG
32	YI	70	GLU
32	YI	74	ASN
32	YI	85	GLU
32	YI	88	ILE
32	YI	96	ASP
32	YI	101	LEU
32	YI	112	LYS
32	YI	113	ARG
32	YI	128	LEU
32	YI	131	LYS
32	YI	134	PRO
32	YI	135	GLU
32	YI	139	GLN
32	YI	140	LEU
32	YI	141	LYS

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Mol	Chain	Res	Type
32	YI	142	VAL
33	YN	2	LYS
33	YN	7	LYS
33	YN	43	THR
33	YN	48	MET
33	YN	60	ILE
33	YN	61	ARG
33	YN	65	LYS
33	YN	73	THR
33	YN	78	TYR
33	YN	90	MET
33	YN	93	THR
33	YN	94	HIS
33	YN	101	HIS
33	YN	109	LYS
33	YN	112	LEU
33	YN	120	LEU
33	YN	127	ASP
33	YN	131	GLN
33	YN	136	GLU
34	YO	8	LEU
34	YO	9	GLU
34	YO	17	ARG
34	YO	19	ILE
34	YO	23	ARG
34	YO	31	LYS
34	YO	39	ILE
34	YO	49	ARG
34	YO	53	LYS
34	YO	65	THR
35	YP	5	ASP
35	YP	9	ASN
35	YP	10	PRO
35	YP	16	ARG
35	YP	21	ARG
35	YP	27	HIS
35	YP	29	LYS
35	YP	30	THR
35	YP	32	THR
35	YP	36	LYS
35	YP	38	GLN
35	YP	41	ARG

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Mol	Chain	Res	Type
35	YP	50	ARG
35	YP	55	ARG
35	YP	61	ARG
35	YP	62	LEU
35	YP	64	LYS
35	YP	65	ARG
35	YP	75	ILE
35	YP	81	GLN
35	YP	88	LEU
35	YP	91	PHE
35	YP	99	LEU
35	YP	100	LEU
35	YP	108	LYS
35	YP	144	GLU
35	YP	146	VAL
36	YQ	2	LEU
36	YQ	25	ASP
36	YQ	26	TYR
36	YQ	27	VAL
36	YQ	45	GLN
36	YQ	46	GLN
36	YQ	54	MET
36	YQ	55	VAL
36	YQ	58	PHE
36	YQ	59	ARG
36	YQ	79	LEU
36	YQ	80	GLU
36	YQ	83	MET
36	YQ	89	ASN
36	YQ	90	VAL
36	YQ	91	GLU
36	YQ	130	LYS
36	YQ	135	ASP
36	YQ	139	GLU
37	YR	14	SER
37	YR	31	HIS
37	YR	37	THR
37	YR	44	LEU
37	YR	51	LEU
37	YR	57	ARG
37	YR	66	VAL
37	YR	67	LEU

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Mol	Chain	Res	Type
37	YR	71	GLN
37	YR	75	LEU
37	YR	76	VAL
37	YR	81	ASP
37	YR	95	THR
37	YR	104	ARG
37	YR	105	ARG
37	YR	107	ASP
37	YR	113	LEU
38	YS	4	LEU
38	YS	12	PHE
38	YS	17	ARG
38	YS	18	ILE
38	YS	20	ARG
38	YS	44	LYS
38	YS	56	LEU
38	YS	57	LYS
38	YS	89	ARG
38	YS	101	LEU
38	YS	103	GLU
38	YS	106	ARG
38	YS	111	GLU
39	YT	2	ASN
39	YT	14	TYR
39	YT	22	PHE
39	YT	23	ARG
39	YT	26	ASP
39	YT	27	THR
39	YT	42	ILE
39	YT	51	ARG
39	YT	58	ASN
39	YT	65	LYS
39	YT	73	GLU
39	YT	78	LEU
39	YT	86	ILE
39	YT	87	ASP
39	YT	99	LEU
39	YT	100	TYR
39	YT	104	ASN
39	YT	107	ASP
39	YT	111	ARG
39	YT	112	ARG

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Mol	Chain	Res	Type
39	YT	115	ARG
39	YT	128	GLU
39	YT	134	GLU
40	YU	5	LYS
40	YU	9	VAL
40	YU	31	SER
40	YU	52	ARG
40	YU	74	LEU
40	YU	76	TYR
40	YU	79	PHE
40	YU	88	ILE
40	YU	92	ARG
40	YU	98	LEU
40	YU	108	GLU
40	YU	114	LYS
40	YU	117	GLN
41	YV	13	ARG
41	YV	14	VAL
41	YV	18	LEU
41	YV	35	LEU
41	YV	38	LEU
41	YV	39	LEU
41	YV	40	LEU
41	YV	66	ARG
41	YV	75	PHE
41	YV	91	TYR
41	YV	99	ILE
42	YW	11	ARG
42	YW	14	PRO
42	YW	16	LYS
42	YW	18	ARG
42	YW	19	LEU
42	YW	20	VAL
42	YW	63	ASP
42	YW	67	ASP
42	YW	69	LEU
42	YW	70	TYR
42	YW	87	PRO
42	YW	88	ARG
42	YW	92	ARG
42	YW	107	LEU
42	YW	109	GLU

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Mol	Chain	Res	Type
43	YX	3	THR
43	YX	6	ASP
43	YX	15	GLU
43	YX	27	THR
43	YX	30	VAL
43	YX	55	ASN
43	YX	57	LEU
43	YX	65	ARG
43	YX	70	LEU
43	YX	80	ILE
43	YX	88	LYS
44	YY	7	VAL
44	YY	11	ASP
44	YY	27	VAL
44	YY	45	VAL
44	YY	57	GLN
44	YY	64	GLU
44	YY	75	ILE
44	YY	77	PRO
44	YY	79	CYS
44	YY	87	LYS
44	YY	88	LYS
44	YY	89	PHE
44	YY	90	LEU
44	YY	95	LYS
44	YY	97	ARG
45	YZ	2	GLU
45	YZ	20	ARG
45	YZ	24	LEU
45	YZ	31	ARG
45	YZ	38	TYR
45	YZ	72	ARG
45	YZ	76	LEU
45	YZ	81	ARG
45	YZ	82	ARG
45	YZ	87	ASP
45	YZ	94	GLU
45	YZ	96	VAL
45	YZ	97	GLU
45	YZ	107	THR
45	YZ	117	LEU
45	YZ	118	GLN

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Mol	Chain	Res	Type
45	YZ	119	GLU
45	YZ	121	HIS
45	YZ	122	ARG
45	YZ	123	ASP
45	YZ	131	ARG
45	YZ	132	ASN
45	YZ	137	ILE
45	YZ	139	VAL
45	YZ	148	ASP
45	YZ	155	LEU
45	YZ	170	THR
45	YZ	171	ILE
46	Y0	4	LYS
46	Y0	7	LEU
46	Y0	11	ARG
46	Y0	35	ASN
46	Y0	36	ILE
46	Y0	41	ARG
46	Y0	55	ARG
46	Y0	74	ARG
46	Y0	82	ARG
47	Y1	2	SER
47	Y1	11	ARG
47	Y1	21	ARG
47	Y1	30	VAL
47	Y1	40	ARG
47	Y1	41	ARG
47	Y1	56	GLN
47	Y1	76	ARG
47	Y1	80	LEU
47	Y1	81	LYS
47	Y1	83	GLU
47	Y1	87	PRO
47	Y1	91	LYS
47	Y1	92	LYS
47	Y1	97	LEU
48	Y2	7	ARG
48	Y2	9	GLN
48	Y2	16	LEU
48	Y2	24	LEU
48	Y2	53	LEU
48	Y2	62	THR

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Mol	Chain	Res	Type
48	Y2	64	LEU
49	Y3	4	LEU
49	Y3	8	LEU
49	Y3	9	VAL
49	Y3	10	LYS
49	Y3	17	LYS
49	Y3	30	ARG
49	Y3	31	LEU
49	Y3	32	GLN
49	Y3	37	LEU
49	Y3	40	THR
49	Y3	44	ARG
50	Y4	6	HIS
50	Y4	15	ILE
50	Y4	18	CYS
50	Y4	21	VAL
50	Y4	23	GLU
50	Y4	39	CYS
50	Y4	42	PHE
50	Y4	48	ARG
50	Y4	49	PHE
50	Y4	50	VAL
50	Y4	51	ASP
50	Y4	53	GLU
50	Y4	57	GLU
50	Y4	61	ARG
50	Y4	62	ARG
50	Y4	63	TYR
50	Y4	67	TYR
50	Y4	68	ARG
50	Y4	71	ARG
51	Y5	3	LYS
51	Y5	4	HIS
51	Y5	6	VAL
51	Y5	11	THR
51	Y5	19	ARG
51	Y5	25	LEU
51	Y5	36	CYS
51	Y5	37	LYS
51	Y5	43	HIS
51	Y5	52	TYR
51	Y5	56	LYS

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Mol	Chain	Res	Type
51	Y5	58	LEU
52	Y6	6	ARG
52	Y6	8	LYS
52	Y6	18	ARG
52	Y6	19	ARG
52	Y6	28	ARG
52	Y6	34	LEU
52	Y6	37	ARG
52	Y6	42	TRP
52	Y6	44	ARG
52	Y6	46	HIS
53	Y7	1	MET
53	Y7	9	ARG
53	Y7	43	THR
54	Y8	15	LYS
54	Y8	16	ILE
54	Y8	30	ARG
54	Y8	35	GLN
54	Y8	39	LYS
54	Y8	43	GLN
54	Y8	44	LYS
54	Y8	47	LYS
54	Y8	48	PHE
54	Y8	49	VAL
54	Y8	52	LYS
54	Y8	53	PRO
54	Y8	62	LEU
54	Y8	63	PRO
54	Y8	65	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (105) such sidechains are listed below:

Mol	Chain	Res	Type
2	QB	95	GLN
2	QB	135	GLN
2	QB	204	ASN
2	QB	212	GLN
3	QC	181	ASN
5	QE	72	GLN
5	QE	78	HIS
6	QF	64	GLN
6	QF	100	ASN

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Mol	Chain	Res	Type
7	QG	37	ASN
7	QG	86	GLN
7	QG	148	ASN
10	QJ	78	ASN
12	QL	9	GLN
13	QM	40	ASN
13	QM	62	ASN
13	QM	101	GLN
19	QS	65	ASN
20	QT	26	ASN
27	RD	44	ASN
27	RD	143	HIS
27	RD	166	GLN
27	RD	198	ASN
28	RE	48	GLN
28	RE	135	HIS
32	RI	11	ASN
32	RI	74	ASN
32	RI	105	HIS
33	RN	56	ASN
33	RN	101	HIS
33	RN	131	GLN
34	RO	5	GLN
34	RO	82	ASN
35	RP	81	GLN
35	RP	84	ASN
36	RQ	123	HIS
37	RR	3	HIS
39	RT	55	ASN
39	RT	58	ASN
40	RU	81	HIS
40	RU	94	ASN
41	RV	11	GLN
43	RX	55	ASN
43	RX	87	GLN
44	RY	57	GLN
46	R0	3	HIS
46	R0	29	GLN
47	R1	56	GLN
48	R2	9	GLN
48	R2	47	ASN
49	R3	19	GLN

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Mol	Chain	Res	Type
49	R3	32	GLN
2	XB	95	GLN
2	XB	135	GLN
2	XB	204	ASN
2	XB	212	GLN
3	XC	181	ASN
5	XE	72	GLN
5	XE	78	HIS
6	XF	64	GLN
6	XF	100	ASN
7	XG	28	ASN
7	XG	86	GLN
7	XG	148	ASN
10	XJ	78	ASN
11	XK	117	ASN
12	XL	9	GLN
13	XM	62	ASN
13	XM	101	GLN
19	XS	65	ASN
20	XT	26	ASN
27	YD	44	ASN
27	YD	143	HIS
27	YD	166	GLN
27	YD	198	ASN
28	YE	48	GLN
28	YE	135	HIS
32	YI	11	ASN
32	YI	74	ASN
32	YI	105	HIS
33	YN	56	ASN
33	YN	101	HIS
33	YN	131	GLN
34	YO	5	GLN
34	YO	82	ASN
35	YP	81	GLN
35	YP	84	ASN
36	YQ	123	HIS
37	YR	3	HIS
39	YT	55	ASN
39	YT	58	ASN
40	YU	49	HIS
40	YU	94	ASN

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Mol	Chain	Res	Type
41	YV	11	GLN
42	YW	61	ASN
43	YX	31	HIS
43	YX	55	ASN
43	YX	87	GLN
44	YY	57	GLN
46	Y0	3	HIS
46	Y0	29	GLN
47	Y1	56	GLN
48	Y2	9	GLN
49	Y3	19	GLN
49	Y3	32	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	QA	1499/1522 (98%)	343 (22%)	51 (3%)
1	XA	1499/1522 (98%)	333 (22%)	55 (3%)
22	QV	76/77 (98%)	30 (39%)	1 (1%)
22	XV	76/77 (98%)	30 (39%)	1 (1%)
23	QX	7/25 (28%)	6 (85%)	1 (14%)
23	XX	7/25 (28%)	2 (28%)	0
24	QY	13/18 (72%)	6 (46%)	1 (7%)
24	XY	13/18 (72%)	5 (38%)	1 (7%)
25	RA	2880/2916 (98%)	734 (25%)	76 (2%)
25	YA	2879/2916 (98%)	747 (25%)	75 (2%)
26	RB	119/122 (97%)	30 (25%)	2 (1%)
26	YB	119/122 (97%)	38 (31%)	1 (0%)
55	Z6	1/3 (33%)	0	0
55	Z8	1/3 (33%)	0	0
All	All	9189/9366 (98%)	2304 (25%)	265 (2%)

All (2304) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	QA	6	G
1	QA	7	G
1	QA	9	G
1	QA	32	A
1	QA	39	G
1	QA	41	G

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Mol	Chain	Res	Type
1	QA	44	G
1	QA	47	C
1	QA	48	C
1	QA	50	A
1	QA	51	A
1	QA	64	G
1	QA	65	U
1	QA	66	G
1	QA	76	G
1	QA	80	G
1	QA	89	U
1	QA	91	C
1	QA	95	G
1	QA	101	A
1	QA	108	G
1	QA	116	A
1	QA	120	A
1	QA	121	C
1	QA	129(A)	G
1	QA	130	A
1	QA	142	G
1	QA	144	G
1	QA	147	G
1	QA	162	A
1	QA	163	C
1	QA	168	G
1	QA	171	A
1	QA	173	U
1	QA	174	C
1	QA	182	U
1	QA	185	A
1	QA	190	G
1	QA	195	A
1	QA	209	U
1	QA	222	U
1	QA	226	G
1	QA	244	U
1	QA	245	C
1	QA	247	G
1	QA	251	G
1	QA	267	C
1	QA	270	A

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Mol	Chain	Res	Type
1	QA	279	A
1	QA	281	G
1	QA	289	G
1	QA	290	C
1	QA	306	G
1	QA	314	C
1	QA	315	A
1	QA	316	G
1	QA	328	C
1	QA	329	A
1	QA	332	G
1	QA	343	U
1	QA	344	A
1	QA	345	C
1	QA	346	G
1	QA	347	G
1	QA	351	G
1	QA	352	C
1	QA	353	A
1	QA	354	G
1	QA	362	G
1	QA	367	U
1	QA	373	A
1	QA	382	A
1	QA	384	G
1	QA	388	G
1	QA	397	A
1	QA	398	C
1	QA	406	G
1	QA	411	A
1	QA	412	A
1	QA	413	G
1	QA	414	A
1	QA	419	C
1	QA	421	U
1	QA	422	C
1	QA	423	G
1	QA	424	G
1	QA	429	U
1	QA	439	A
1	QA	440	A
1	QA	442	C

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Mol	Chain	Res	Type
1	QA	450	G
1	QA	452	A
1	QA	465	A
1	QA	467	G
1	QA	482	A
1	QA	484	G
1	QA	485	G
1	QA	486	U
1	QA	496	A
1	QA	497	U
1	QA	498	A
1	QA	500	G
1	QA	505	G
1	QA	509	A
1	QA	510	A
1	QA	511	C
1	QA	517	G
1	QA	518	C
1	QA	521	G
1	QA	527	G
1	QA	531	U
1	QA	532	A
1	QA	533	A
1	QA	534	U
1	QA	536	C
1	QA	547	A
1	QA	559	A
1	QA	560	U
1	QA	561	U
1	QA	566	G
1	QA	568	G
1	QA	572	A
1	QA	573	A
1	QA	576	G
1	QA	577	G
1	QA	596	C
1	QA	597	G
1	QA	618	C
1	QA	623	C
1	QA	630	G
1	QA	631	G
1	QA	633	G

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Mol	Chain	Res	Type
1	QA	652	U
1	QA	653	A
1	QA	665	A
1	QA	686	U
1	QA	687	A
1	QA	688	G
1	QA	701	C
1	QA	702	A
1	QA	703	G
1	QA	704	A
1	QA	723	U
1	QA	724	G
1	QA	729	A
1	QA	731	G
1	QA	733	A
1	QA	748	C
1	QA	749	C
1	QA	753	A
1	QA	754	C
1	QA	755	G
1	QA	777	A
1	QA	786	G
1	QA	792	A
1	QA	793	U
1	QA	794	A
1	QA	795	C
1	QA	796	C
1	QA	801	U
1	QA	802	A
1	QA	813	U
1	QA	815	A
1	QA	816	A
1	QA	817	C
1	QA	818	G
1	QA	819	A
1	QA	821	G
1	QA	828	A
1	QA	836	G
1	QA	841	U
1	QA	843	U
1	QA	848	C
1	QA	859	A

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Mol	Chain	Res	Type
1	QA	870	U
1	QA	871	U
1	QA	872	A
1	QA	873	A
1	QA	889	A
1	QA	902	G
1	QA	914	A
1	QA	926	G
1	QA	927	G
1	QA	934	C
1	QA	935	A
1	QA	960	U
1	QA	961	U
1	QA	966	G
1	QA	968	A
1	QA	969	A
1	QA	971	G
1	QA	972	C
1	QA	974	A
1	QA	975	A
1	QA	976	G
1	QA	977	A
1	QA	978	A
1	QA	981	U
1	QA	982	U
1	QA	983	A
1	QA	991	U
1	QA	992	U
1	QA	993	G
1	QA	994	A
1	QA	995	C
1	QA	1001	G
1	QA	1002	G
1	QA	1004	A
1	QA	1005	A
1	QA	1006	C
1	QA	1008	C
1	QA	1016	A
1	QA	1020	U
1	QA	1021	G
1	QA	1024	G
1	QA	1025	U

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Mol	Chain	Res	Type
1	QA	1028	C
1	QA	1029	G
1	QA	1032(A)	G
1	QA	1036	G
1	QA	1039	C
1	QA	1040	U
1	QA	1050	G
1	QA	1052	U
1	QA	1053	G
1	QA	1054	C
1	QA	1055	A
1	QA	1064	G
1	QA	1065	U
1	QA	1066	C
1	QA	1085	U
1	QA	1094	G
1	QA	1095	U
1	QA	1096	C
1	QA	1101	A
1	QA	1112	C
1	QA	1117	G
1	QA	1124	G
1	QA	1125	U
1	QA	1126	U
1	QA	1127	G
1	QA	1130	A
1	QA	1131	G
1	QA	1136	U
1	QA	1137	C
1	QA	1138	G
1	QA	1139	G
1	QA	1145	C
1	QA	1146	A
1	QA	1157	A
1	QA	1158	C
1	QA	1159	U
1	QA	1160	G
1	QA	1171	G
1	QA	1176	A
1	QA	1177	G
1	QA	1181	G
1	QA	1182	G

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Mol	Chain	Res	Type
1	QA	1183	A
1	QA	1187	G
1	QA	1196	U
1	QA	1200	C
1	QA	1201	A
1	QA	1202	G
1	QA	1212	U
1	QA	1213	A
1	QA	1218	C
1	QA	1224	G
1	QA	1225	A
1	QA	1238	A
1	QA	1240	U
1	QA	1241	G
1	QA	1256	A
1	QA	1257	U
1	QA	1258	G
1	QA	1268	A
1	QA	1270	C
1	QA	1273	G
1	QA	1280	A
1	QA	1281	U
1	QA	1282	C
1	QA	1286	A
1	QA	1287	A
1	QA	1290	G
1	QA	1293	G
1	QA	1296	C
1	QA	1297	C
1	QA	1298	C
1	QA	1299	A
1	QA	1300	G
1	QA	1301	U
1	QA	1302	U
1	QA	1303	C
1	QA	1305	G
1	QA	1306	A
1	QA	1317	C
1	QA	1319	A
1	QA	1320	C
1	QA	1321	C
1	QA	1322	C

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Mol	Chain	Res	Type
1	QA	1323	G
1	QA	1331	G
1	QA	1335	C
1	QA	1336	C
1	QA	1337	G
1	QA	1338	G
1	QA	1347	G
1	QA	1348	U
1	QA	1353	G
1	QA	1359	C
1	QA	1362(A)	C
1	QA	1363	A
1	QA	1364	U
1	QA	1365	G
1	QA	1368	G
1	QA	1370	G
1	QA	1379	G
1	QA	1388	C
1	QA	1397	C
1	QA	1398	A
1	QA	1404	C
1	QA	1419	G
1	QA	1442	G
1	QA	1443	G
1	QA	1446	A
1	QA	1447	G
1	QA	1451	A
1	QA	1452	C
1	QA	1453	G
1	QA	1454	G
1	QA	1460	A
1	QA	1487	G
1	QA	1492	A
1	QA	1499	A
1	QA	1503	A
1	QA	1504	G
1	QA	1506	U
1	QA	1508	G
1	QA	1517	G
1	QA	1519	A
1	QA	1520	G
1	QA	1529	G

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Mol	Chain	Res	Type
1	QA	1530	G
22	QV	3	C
22	QV	4	G
22	QV	5	G
22	QV	7	G
22	QV	8	U
22	QV	14	A
22	QV	16	C
22	QV	17	C
22	QV	17(A)	U
22	QV	18	G
22	QV	19	G
22	QV	21	A
22	QV	22	G
22	QV	25	C
22	QV	31	G
22	QV	37	A
22	QV	42	G
22	QV	47	U
22	QV	48	C
22	QV	49	G
22	QV	50	U
22	QV	51	C
22	QV	52	G
22	QV	54	U
22	QV	59	A
22	QV	63	G
22	QV	67	C
22	QV	72	A
22	QV	75	C
22	QV	76	A
23	QX	3	G
23	QX	4	C
23	QX	5	C
23	QX	6	C
23	QX	7	G
23	QX	8	A
24	QY	31	G
24	QY	33	U
24	QY	35	G
24	QY	36	G
24	QY	39	C

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Mol	Chain	Res	Type
24	QY	40	G
25	RA	9	U
25	RA	15	G
25	RA	33	U
25	RA	34	C
25	RA	35	G
25	RA	36	G
25	RA	46	C
25	RA	49	A
25	RA	50	U
25	RA	51	G
25	RA	52	A
25	RA	55	G
25	RA	61	G
25	RA	64	A
25	RA	72	U
25	RA	74	A
25	RA	75	G
25	RA	84	A
25	RA	91	A
25	RA	95	G
25	RA	96	G
25	RA	99	U
25	RA	101	G
25	RA	102	G
25	RA	103	A
25	RA	118	A
25	RA	119	A
25	RA	120	U
25	RA	125	G
25	RA	138	G
25	RA	149	A
25	RA	161	U
25	RA	175	G
25	RA	177	G
25	RA	181	A
25	RA	196	A
25	RA	199	A
25	RA	206	U
25	RA	214	G
25	RA	215	G
25	RA	216	A

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Mol	Chain	Res	Type
25	RA	221	A
25	RA	222	A
25	RA	223	A
25	RA	225	A
25	RA	227	A
25	RA	228	A
25	RA	229	A
25	RA	230	U
25	RA	232	G
25	RA	233	A
25	RA	242	G
25	RA	243	U
25	RA	248	G
25	RA	249	C
25	RA	250	G
25	RA	252	G
25	RA	265	A
25	RA	266	G
25	RA	267	C
25	RA	269	U
25	RA	270(L)	U
25	RA	270(M)	U
25	RA	270(N)	G
25	RA	270(P)	C
25	RA	270(U)	C
25	RA	271(C)	U
25	RA	271	G
25	RA	273(F)	C
25	RA	274	G
25	RA	275	G
25	RA	276	A
25	RA	277	C
25	RA	278	A
25	RA	279	C
25	RA	294	A
25	RA	299	A
25	RA	305	U
25	RA	311	A
25	RA	323	G
25	RA	324	A
25	RA	327	G
25	RA	329	G

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Mol	Chain	Res	Type
25	RA	330	A
25	RA	332	A
25	RA	342	G
25	RA	343	C
25	RA	346	A
25	RA	352	G
25	RA	362	U
25	RA	363(E)	U
25	RA	363(F)	A
25	RA	371	A
25	RA	372	G
25	RA	373	U
25	RA	376	C
25	RA	386	G
25	RA	396	G
25	RA	404	C
25	RA	405	U
25	RA	411	G
25	RA	412	A
25	RA	420	C
25	RA	422	A
25	RA	428	A
25	RA	444	C
25	RA	448	U
25	RA	451	C
25	RA	454	A
25	RA	455	C
25	RA	457	A
25	RA	459	U
25	RA	470	A
25	RA	481	G
25	RA	483	A
25	RA	496	G
25	RA	503	A
25	RA	504	U
25	RA	505	A
25	RA	509	C
25	RA	513	A
25	RA	527	C
25	RA	531	C
25	RA	532	A
25	RA	533	G

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Mol	Chain	Res	Type
25	RA	537	C
25	RA	539	G
25	RA	540	G
25	RA	541	C
25	RA	544	C
25	RA	546	C
25	RA	547	A
25	RA	549	G
25	RA	556	G
25	RA	562	U
25	RA	563	G
25	RA	573	G
25	RA	575	A
25	RA	577	G
25	RA	588	U
25	RA	603	A
25	RA	606	U
25	RA	607	U
25	RA	609(A)	G
25	RA	614	U
25	RA	615	G
25	RA	616	A
25	RA	617	G
25	RA	621	A
25	RA	622	G
25	RA	624	C
25	RA	626	U
25	RA	627	A
25	RA	631	A
25	RA	637	A
25	RA	638	G
25	RA	645	C
25	RA	646	A
25	RA	650	C
25	RA	651	G
25	RA	652	C
25	RA	653	A
25	RA	654	A
25	RA	654(A)	G
25	RA	654(B)	C
25	RA	654(T)	C
25	RA	658	C

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Mol	Chain	Res	Type
25	RA	659	C
25	RA	668	G
25	RA	669	G
25	RA	685	A
25	RA	686	G
25	RA	702	G
25	RA	705	A
25	RA	709	U
25	RA	717	G
25	RA	722	A
25	RA	726	G
25	RA	730	C
25	RA	734	A
25	RA	739	G
25	RA	740	U
25	RA	747	U
25	RA	752	A
25	RA	753	C
25	RA	765	G
25	RA	769	G
25	RA	775	G
25	RA	776	G
25	RA	782	A
25	RA	783	A
25	RA	784	A
25	RA	785	G
25	RA	790	C
25	RA	792	G
25	RA	800	A
25	RA	805	G
25	RA	812	C
25	RA	819	A
25	RA	827	U
25	RA	828	U
25	RA	831	G
25	RA	847	U
25	RA	854	G
25	RA	856	C
25	RA	857	C
25	RA	859	G
25	RA	860	U
25	RA	869	G

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Mol	Chain	Res	Type
25	RA	872	A
25	RA	880	G
25	RA	881	G
25	RA	882	G
25	RA	884	C
25	RA	885	C
25	RA	886	C
25	RA	888	C
25	RA	889	C
25	RA	893	C
25	RA	896	A
25	RA	899	A
25	RA	900	A
25	RA	901	A
25	RA	902	C
25	RA	904	C
25	RA	906	G
25	RA	907	U
25	RA	910	A
25	RA	914	C
25	RA	917	A
25	RA	932	G
25	RA	941	A
25	RA	945	A
25	RA	946	G
25	RA	954	G
25	RA	959	A
25	RA	961	C
25	RA	962	G
25	RA	973	A
25	RA	974	G
25	RA	974(A)	C
25	RA	979	G
25	RA	983	A
25	RA	990	A
25	RA	991	C
25	RA	996	A
25	RA	1003	G
25	RA	1011	G
25	RA	1012	U
25	RA	1013	C
25	RA	1015	G

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Mol	Chain	Res	Type
25	RA	1022	G
25	RA	1023	U
25	RA	1025	G
25	RA	1026	U
25	RA	1027	A
25	RA	1033	U
25	RA	1034	G
25	RA	1036	G
25	RA	1039	G
25	RA	1044	G
25	RA	1045	A
25	RA	1046	A
25	RA	1050	A
25	RA	1054	A
25	RA	1055	G
25	RA	1057	A
25	RA	1059	G
25	RA	1060	U
25	RA	1061	U
25	RA	1066	U
25	RA	1067	A
25	RA	1068	G
25	RA	1070	A
25	RA	1071	G
25	RA	1076	C
25	RA	1077	A
25	RA	1078	U
25	RA	1079	C
25	RA	1082	U
25	RA	1083	U
25	RA	1084	A
25	RA	1085	A
25	RA	1086	A
25	RA	1087	G
25	RA	1088	A
25	RA	1090	U
25	RA	1093	G
25	RA	1095	A
25	RA	1096	A
25	RA	1097	U
25	RA	1099	G
25	RA	1104	C

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Mol	Chain	Res	Type
25	RA	1105	U
25	RA	1110	G
25	RA	1111	A
25	RA	1112	G
25	RA	1129	A
25	RA	1130	U
25	RA	1131	G
25	RA	1135	C
25	RA	1136	G
25	RA	1140	C
25	RA	1142	U
25	RA	1142(A)	A
25	RA	1143	A
25	RA	1148	A
25	RA	1151	G
25	RA	1157	G
25	RA	1173	G
25	RA	1174	A
25	RA	1175	U
25	RA	1176	G
25	RA	1178	C
25	RA	1179	C
25	RA	1180	C
25	RA	1181	C
25	RA	1190	G
25	RA	1195	G
25	RA	1204	A
25	RA	1205	U
25	RA	1209	G
25	RA	1210	A
25	RA	1211	U
25	RA	1220	A
25	RA	1221	C
25	RA	1238	G
25	RA	1252	G
25	RA	1256	G
25	RA	1265	A
25	RA	1266	G
25	RA	1267	U
25	RA	1271	G
25	RA	1272	A
25	RA	1282	U

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Mol	Chain	Res	Type
25	RA	1286	A
25	RA	1288	U
25	RA	1300	U
25	RA	1301	A
25	RA	1302	A
25	RA	1304	C
25	RA	1306	C
25	RA	1312	U
25	RA	1313	U
25	RA	1314	C
25	RA	1319	G
25	RA	1321	A
25	RA	1329	U
25	RA	1341	U
25	RA	1349	A
25	RA	1352	U
25	RA	1365	A
25	RA	1368	G
25	RA	1370	C
25	RA	1372	U
25	RA	1379	A
25	RA	1380	G
25	RA	1384	A
25	RA	1385	G
25	RA	1386	C
25	RA	1391	U
25	RA	1392	A
25	RA	1395	A
25	RA	1402	C
25	RA	1406	U
25	RA	1407	C
25	RA	1408	C
25	RA	1411	C
25	RA	1416	G
25	RA	1419	A
25	RA	1420	U
25	RA	1421	G
25	RA	1424	G
25	RA	1428	C
25	RA	1435	G
25	RA	1444(A)	A
25	RA	1445	C

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Mol	Chain	Res	Type
25	RA	1449	A
25	RA	1449(A)	G
25	RA	1455	G
25	RA	1459	G
25	RA	1460	A
25	RA	1461	G
25	RA	1467	C
25	RA	1471	A
25	RA	1472	A
25	RA	1480	G
25	RA	1482	U
25	RA	1483	G
25	RA	1485	G
25	RA	1486	A
25	RA	1493	C
25	RA	1494	A
25	RA	1495	A
25	RA	1497	U
25	RA	1504	C
25	RA	1506	C
25	RA	1508	A
25	RA	1510	A
25	RA	1513	C
25	RA	1514	U
25	RA	1515	C
25	RA	1520	U
25	RA	1522	G
25	RA	1534	G
25	RA	1535	U
25	RA	1536	A
25	RA	1537	C
25	RA	1538	G
25	RA	1543	A
25	RA	1544	C
25	RA	1545	A
25	RA	1547	C
25	RA	1554	A
25	RA	1558	A
25	RA	1559	G
25	RA	1566	A
25	RA	1567	A
25	RA	1569	A

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Mol	Chain	Res	Type
25	RA	1573	G
25	RA	1578	U
25	RA	1579	A
25	RA	1580	A
25	RA	1581	G
25	RA	1585	C
25	RA	1586	A
25	RA	1593	G
25	RA	1598	C
25	RA	1602	U
25	RA	1603	A
25	RA	1608	A
25	RA	1609	A
25	RA	1610	A
25	RA	1617	C
25	RA	1618	A
25	RA	1639	U
25	RA	1640	C
25	RA	1646	C
25	RA	1648	C
25	RA	1654	A
25	RA	1667	G
25	RA	1668	A
25	RA	1674	G
25	RA	1695	G
25	RA	1698	A
25	RA	1699	G
25	RA	1725	G
25	RA	1728	G
25	RA	1729	A
25	RA	1730	U
25	RA	1731	G
25	RA	1732	A
25	RA	1733	G
25	RA	1742	C
25	RA	1743	G
25	RA	1752	C
25	RA	1754	C
25	RA	1756	G
25	RA	1762	A
25	RA	1763	G
25	RA	1764	G

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Mol	Chain	Res	Type
25	RA	1773	A
25	RA	1780	A
25	RA	1787	A
25	RA	1791	A
25	RA	1799	G
25	RA	1800	C
25	RA	1801	G
25	RA	1803	A
25	RA	1816	G
25	RA	1817	G
25	RA	1820	U
25	RA	1821	A
25	RA	1829	A
25	RA	1835	G
25	RA	1847	A
25	RA	1848	A
25	RA	1853	A
25	RA	1858	G
25	RA	1869	G
25	RA	1870	C
25	RA	1872	A
25	RA	1878	G
25	RA	1885	A
25	RA	1888	G
25	RA	1889	A
25	RA	1896	G
25	RA	1905	C
25	RA	1906	G
25	RA	1909	C
25	RA	1913	A
25	RA	1914	C
25	RA	1916	A
25	RA	1919	A
25	RA	1927	A
25	RA	1929	G
25	RA	1930	G
25	RA	1931	U
25	RA	1934	C
25	RA	1936	A
25	RA	1937	A
25	RA	1938	A
25	RA	1939	U

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Mol	Chain	Res	Type
25	RA	1940	U
25	RA	1949	G
25	RA	1954	G
25	RA	1955	U
25	RA	1956	U
25	RA	1963	U
25	RA	1964	G
25	RA	1966	A
25	RA	1967	C
25	RA	1969	A
25	RA	1970	A
25	RA	1971	A
25	RA	1972	A
25	RA	1981	A
25	RA	1982	C
25	RA	1992	G
25	RA	1993	U
25	RA	2023	G
25	RA	2027	G
25	RA	2031	A
25	RA	2033	A
25	RA	2043	C
25	RA	2051	A
25	RA	2052	G
25	RA	2055	C
25	RA	2056	G
25	RA	2059	A
25	RA	2060	A
25	RA	2061	G
25	RA	2062	A
25	RA	2063	C
25	RA	2069	G
25	RA	2089	U
25	RA	2092	U
25	RA	2093	G
25	RA	2111	C
25	RA	2113	U
25	RA	2114	A
25	RA	2115	G
25	RA	2116	G
25	RA	2117	A
25	RA	2118	U

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Mol	Chain	Res	Type
25	RA	2120	G
25	RA	2126	A
25	RA	2127	G
25	RA	2128	C
25	RA	2131	G
25	RA	2132	U
25	RA	2133	G
25	RA	2136	C
25	RA	2146	C
25	RA	2147	G
25	RA	2148	G
25	RA	2158	A
25	RA	2166	G
25	RA	2168	G
25	RA	2169	A
25	RA	2173	A
25	RA	2176	A
25	RA	2190	G
25	RA	2192	G
25	RA	2197	U
25	RA	2198	A
25	RA	2199	A
25	RA	2205	C
25	RA	2207	C
25	RA	2208	U
25	RA	2210	G
25	RA	2211	G
25	RA	2212	A
25	RA	2213	U
25	RA	2215	G
25	RA	2225	A
25	RA	2239	G
25	RA	2243	U
25	RA	2245	U
25	RA	2275	C
25	RA	2280	G
25	RA	2283	C
25	RA	2286	A
25	RA	2287	A
25	RA	2294	C
25	RA	2295	C
25	RA	2303	G

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Mol	Chain	Res	Type
25	RA	2305	A
25	RA	2307	G
25	RA	2308	G
25	RA	2311	A
25	RA	2319	G
25	RA	2320	A
25	RA	2321	G
25	RA	2325	G
25	RA	2329	G
25	RA	2330	G
25	RA	2334	G
25	RA	2342	C
25	RA	2343	C
25	RA	2345	G
25	RA	2346	A
25	RA	2347	C
25	RA	2350	C
25	RA	2354	G
25	RA	2372	G
25	RA	2379	G
25	RA	2382	G
25	RA	2383	G
25	RA	2385	C
25	RA	2388	A
25	RA	2392	A
25	RA	2394	C
25	RA	2400	G
25	RA	2402	C
25	RA	2403	C
25	RA	2406	U
25	RA	2411	A
25	RA	2423	U
25	RA	2425	A
25	RA	2426	A
25	RA	2427	C
25	RA	2428	G
25	RA	2429	G
25	RA	2430	A
25	RA	2431	U
25	RA	2435	A
25	RA	2439	A
25	RA	2440	C

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Mol	Chain	Res	Type
25	RA	2441	C
25	RA	2445	G
25	RA	2448	A
25	RA	2450	A
25	RA	2469	A
25	RA	2470	G
25	RA	2476	A
25	RA	2482	G
25	RA	2483	C
25	RA	2484	G
25	RA	2487	G
25	RA	2494	G
25	RA	2502	G
25	RA	2505	G
25	RA	2506	U
25	RA	2507	C
25	RA	2513	G
25	RA	2519	U
25	RA	2520	C
25	RA	2531	A
25	RA	2532	G
25	RA	2542	A
25	RA	2543	G
25	RA	2549	G
25	RA	2553	G
25	RA	2554	U
25	RA	2559	C
25	RA	2560	C
25	RA	2567	G
25	RA	2573	C
25	RA	2582	G
25	RA	2585	U
25	RA	2586	C
25	RA	2602	A
25	RA	2603	G
25	RA	2609	U
25	RA	2610	C
25	RA	2611	U
25	RA	2612	C
25	RA	2614	A
25	RA	2616	C
25	RA	2623	G

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Mol	Chain	Res	Type
25	RA	2629	A
25	RA	2634	G
25	RA	2638	G
25	RA	2645	G
25	RA	2646	C
25	RA	2647	U
25	RA	2654	A
25	RA	2655	G
25	RA	2656	U
25	RA	2665	A
25	RA	2673	G
25	RA	2682	U
25	RA	2686	G
25	RA	2689	U
25	RA	2690	C
25	RA	2691	C
25	RA	2702	U
25	RA	2703	C
25	RA	2712	U
25	RA	2712(A)	A
25	RA	2713	A
25	RA	2714	G
25	RA	2724	C
25	RA	2726	U
25	RA	2733	A
25	RA	2734	A
25	RA	2752	C
25	RA	2754	U
25	RA	2757	A
25	RA	2760	C
25	RA	2761	G
25	RA	2762	G
25	RA	2764	A
25	RA	2765	A
25	RA	2766	G
25	RA	2777	G
25	RA	2778	A
25	RA	2779	U
25	RA	2780	G
25	RA	2781	A
25	RA	2789	C
25	RA	2790	A

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Mol	Chain	Res	Type
25	RA	2791	C
25	RA	2797	U
25	RA	2807	G
25	RA	2810	A
25	RA	2812	G
25	RA	2817	G
25	RA	2818	G
25	RA	2820	A
25	RA	2821	A
25	RA	2833	G
25	RA	2839	G
25	RA	2847	U
25	RA	2849	U
25	RA	2867	G
25	RA	2868	A
25	RA	2872	G
25	RA	2874	C
25	RA	2880	C
25	RA	2891	G
25	RA	2892	A
25	RA	2894	G
26	RB	8	U
26	RB	9	G
26	RB	12	C
26	RB	13	A
26	RB	14	U
26	RB	15	A
26	RB	22	U
26	RB	25	A
26	RB	26	A
26	RB	27	C
26	RB	30	C
26	RB	32	C
26	RB	33	G
26	RB	41	U
26	RB	42	C
26	RB	45	A
26	RB	47	C
26	RB	52	A
26	RB	53	A
26	RB	56	G
26	RB	67	G

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Mol	Chain	Res	Type
26	RB	73	A
26	RB	81	G
26	RB	88	C
26	RB	89	G
26	RB	101	A
26	RB	105	G
26	RB	108	C
26	RB	109	G
26	RB	112	G
1	XA	6	G
1	XA	7	G
1	XA	9	G
1	XA	32	A
1	XA	39	G
1	XA	47	C
1	XA	48	C
1	XA	51	A
1	XA	61	G
1	XA	65	U
1	XA	66	G
1	XA	78	G
1	XA	81	G
1	XA	82	U
1	XA	89	U
1	XA	90	C
1	XA	92	G
1	XA	95	G
1	XA	101	A
1	XA	116	A
1	XA	120	A
1	XA	121	C
1	XA	129	U
1	XA	129(A)	G
1	XA	130	A
1	XA	131	C
1	XA	144	G
1	XA	147	G
1	XA	163	C
1	XA	172	A
1	XA	173	U
1	XA	174	C
1	XA	182	U

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Mol	Chain	Res	Type
1	XA	190	G
1	XA	195	A
1	XA	197	A
1	XA	201	C
1	XA	209	U
1	XA	216	G
1	XA	240	C
1	XA	243	A
1	XA	244	U
1	XA	245	C
1	XA	247	G
1	XA	251	G
1	XA	256	U
1	XA	262	A
1	XA	267	C
1	XA	270	A
1	XA	281	G
1	XA	282	A
1	XA	289	G
1	XA	309	G
1	XA	316	G
1	XA	321	A
1	XA	328	C
1	XA	329	A
1	XA	330	C
1	XA	332	G
1	XA	344	A
1	XA	345	C
1	XA	346	G
1	XA	347	G
1	XA	352	C
1	XA	353	A
1	XA	354	G
1	XA	356	A
1	XA	367	U
1	XA	373	A
1	XA	384	G
1	XA	388	G
1	XA	390	C
1	XA	392	G
1	XA	397	A
1	XA	398	C

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Mol	Chain	Res	Type
1	XA	406	G
1	XA	410	G
1	XA	411	A
1	XA	412	A
1	XA	413	G
1	XA	414	A
1	XA	419	C
1	XA	421	U
1	XA	422	C
1	XA	423	G
1	XA	424	G
1	XA	429	U
1	XA	430	A
1	XA	440	A
1	XA	442	C
1	XA	466	C
1	XA	467	G
1	XA	482	A
1	XA	485	G
1	XA	497	U
1	XA	509	A
1	XA	510	A
1	XA	511	C
1	XA	518	C
1	XA	519	C
1	XA	524	G
1	XA	527	G
1	XA	531	U
1	XA	532	A
1	XA	533	A
1	XA	534	U
1	XA	547	A
1	XA	559	A
1	XA	561	U
1	XA	562	C
1	XA	566	G
1	XA	572	A
1	XA	573	A
1	XA	576	G
1	XA	577	G
1	XA	579	G
1	XA	592	G

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Mol	Chain	Res	Type
1	XA	593	G
1	XA	596	C
1	XA	630	G
1	XA	631	G
1	XA	632	A
1	XA	633	G
1	XA	649	G
1	XA	651	C
1	XA	653	A
1	XA	664	G
1	XA	665	A
1	XA	686	U
1	XA	688	G
1	XA	701	C
1	XA	702	A
1	XA	703	G
1	XA	704	A
1	XA	721	G
1	XA	731	G
1	XA	742	G
1	XA	748	C
1	XA	749	C
1	XA	753	A
1	XA	754	C
1	XA	755	G
1	XA	760	G
1	XA	763	G
1	XA	774	G
1	XA	777	A
1	XA	792	A
1	XA	793	U
1	XA	794	A
1	XA	796	C
1	XA	813	U
1	XA	817	C
1	XA	818	G
1	XA	819	A
1	XA	821	G
1	XA	828	A
1	XA	841	U
1	XA	843	U
1	XA	848	C

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Mol	Chain	Res	Type
1	XA	853	G
1	XA	855	G
1	XA	859	A
1	XA	871	U
1	XA	872	A
1	XA	888	G
1	XA	889	A
1	XA	902	G
1	XA	914	A
1	XA	920	U
1	XA	922	G
1	XA	926	G
1	XA	927	G
1	XA	934	C
1	XA	935	A
1	XA	942	G
1	XA	948	C
1	XA	960	U
1	XA	961	U
1	XA	966	G
1	XA	968	A
1	XA	969	A
1	XA	972	C
1	XA	974	A
1	XA	975	A
1	XA	976	G
1	XA	977	A
1	XA	978	A
1	XA	982	U
1	XA	991	U
1	XA	992	U
1	XA	993	G
1	XA	994	A
1	XA	1001	G
1	XA	1002	G
1	XA	1004	A
1	XA	1005	A
1	XA	1006	C
1	XA	1008	C
1	XA	1016	A
1	XA	1020	U
1	XA	1021	G

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Mol	Chain	Res	Type
1	XA	1024	G
1	XA	1025	U
1	XA	1028	C
1	XA	1029	G
1	XA	1032(A)	G
1	XA	1036	G
1	XA	1039	C
1	XA	1040	U
1	XA	1054	C
1	XA	1055	A
1	XA	1064	G
1	XA	1065	U
1	XA	1066	C
1	XA	1085	U
1	XA	1094	G
1	XA	1095	U
1	XA	1101	A
1	XA	1107	C
1	XA	1117	G
1	XA	1124	G
1	XA	1125	U
1	XA	1126	U
1	XA	1127	G
1	XA	1130	A
1	XA	1131	G
1	XA	1136	U
1	XA	1137	C
1	XA	1138	G
1	XA	1139	G
1	XA	1146	A
1	XA	1151	A
1	XA	1154	G
1	XA	1157	A
1	XA	1158	C
1	XA	1159	U
1	XA	1160	G
1	XA	1162	C
1	XA	1171	G
1	XA	1176	A
1	XA	1177	G
1	XA	1181	G
1	XA	1182	G

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Mol	Chain	Res	Type
1	XA	1183	A
1	XA	1184	G
1	XA	1187	G
1	XA	1190	G
1	XA	1191	A
1	XA	1193	G
1	XA	1196	U
1	XA	1200	C
1	XA	1201	A
1	XA	1202	G
1	XA	1210	C
1	XA	1211	U
1	XA	1212	U
1	XA	1213	A
1	XA	1215	G
1	XA	1225	A
1	XA	1226	C
1	XA	1232	U
1	XA	1236	A
1	XA	1238	A
1	XA	1240	U
1	XA	1241	G
1	XA	1256	A
1	XA	1257	U
1	XA	1258	G
1	XA	1263	C
1	XA	1270	C
1	XA	1272	G
1	XA	1273	G
1	XA	1280	A
1	XA	1281	U
1	XA	1282	C
1	XA	1286	A
1	XA	1287	A
1	XA	1296	C
1	XA	1297	C
1	XA	1298	C
1	XA	1299	A
1	XA	1301	U
1	XA	1302	U
1	XA	1305	G
1	XA	1310	G

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Mol	Chain	Res	Type
1	XA	1317	C
1	XA	1319	A
1	XA	1320	C
1	XA	1322	C
1	XA	1323	G
1	XA	1330	U
1	XA	1331	G
1	XA	1334	G
1	XA	1336	C
1	XA	1337	G
1	XA	1348	U
1	XA	1353	G
1	XA	1362(A)	C
1	XA	1363	A
1	XA	1364	U
1	XA	1365	G
1	XA	1368	G
1	XA	1370	G
1	XA	1372	U
1	XA	1373	G
1	XA	1381	U
1	XA	1397	C
1	XA	1411	C
1	XA	1419	G
1	XA	1420	C
1	XA	1442	G
1	XA	1443	G
1	XA	1446	A
1	XA	1447	G
1	XA	1449	C
1	XA	1452	C
1	XA	1453	G
1	XA	1454	G
1	XA	1475	G
1	XA	1487	G
1	XA	1492	A
1	XA	1499	A
1	XA	1502	A
1	XA	1503	A
1	XA	1504	G
1	XA	1505	G
1	XA	1506	U

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Mol	Chain	Res	Type
1	XA	1507	A
1	XA	1517	G
1	XA	1520	G
1	XA	1529	G
1	XA	1530	G
1	XA	1531	A
22	XV	3	C
22	XV	4	G
22	XV	5	G
22	XV	7	G
22	XV	8	U
22	XV	14	A
22	XV	16	C
22	XV	17	C
22	XV	17(A)	U
22	XV	18	G
22	XV	19	G
22	XV	21	A
22	XV	22	G
22	XV	25	C
22	XV	31	G
22	XV	37	A
22	XV	42	G
22	XV	47	U
22	XV	48	C
22	XV	49	G
22	XV	50	U
22	XV	51	C
22	XV	52	G
22	XV	54	U
22	XV	59	A
22	XV	63	G
22	XV	67	C
22	XV	72	A
22	XV	75	C
22	XV	76	A
23	XX	3	G
23	XX	4	C
24	XY	31	G
24	XY	33	U
24	XY	36	G
24	XY	39	C

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Mol	Chain	Res	Type
24	XY	40	G
25	YA	9	U
25	YA	13	A
25	YA	15	G
25	YA	33	U
25	YA	34	C
25	YA	35	G
25	YA	43	G
25	YA	46	C
25	YA	49	A
25	YA	50	U
25	YA	51	G
25	YA	55	G
25	YA	61	G
25	YA	63	U
25	YA	64	A
25	YA	66	C
25	YA	72	U
25	YA	74	A
25	YA	75	G
25	YA	91	A
25	YA	95	G
25	YA	96	G
25	YA	97	C
25	YA	99	U
25	YA	101	G
25	YA	102	G
25	YA	103	A
25	YA	118	A
25	YA	119	A
25	YA	120	U
25	YA	124	G
25	YA	127	A
25	YA	140	A
25	YA	142	G
25	YA	155	C
25	YA	161	U
25	YA	173	G
25	YA	177	G
25	YA	188	G
25	YA	196	A
25	YA	202	U

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Mol	Chain	Res	Type
25	YA	205	G
25	YA	206	U
25	YA	214	G
25	YA	216	A
25	YA	222	A
25	YA	223	A
25	YA	225	A
25	YA	226	G
25	YA	227	A
25	YA	228	A
25	YA	229	A
25	YA	230	U
25	YA	232	G
25	YA	242	G
25	YA	243	U
25	YA	248	G
25	YA	252	G
25	YA	265	A
25	YA	266	G
25	YA	269	U
25	YA	270(L)	U
25	YA	270(M)	U
25	YA	270(N)	G
25	YA	270(P)	C
25	YA	270(Z)	U
25	YA	271(C)	U
25	YA	271	G
25	YA	274	G
25	YA	276	A
25	YA	278	A
25	YA	279	C
25	YA	285	C
25	YA	288	C
25	YA	299	A
25	YA	300	A
25	YA	310	A
25	YA	323	G
25	YA	324	A
25	YA	329	G
25	YA	330	A
25	YA	332	A
25	YA	342	G

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Mol	Chain	Res	Type
25	YA	345	A
25	YA	352	G
25	YA	353	G
25	YA	363	G
25	YA	364	C
25	YA	371	A
25	YA	372	G
25	YA	373	U
25	YA	380	U
25	YA	386	G
25	YA	387	U
25	YA	393	C
25	YA	396	G
25	YA	405	U
25	YA	411	G
25	YA	412	A
25	YA	417	C
25	YA	421	U
25	YA	428	A
25	YA	442	G
25	YA	444	C
25	YA	448	U
25	YA	451	C
25	YA	457	A
25	YA	470	A
25	YA	479	A
25	YA	481	G
25	YA	482	A
25	YA	483	A
25	YA	491	G
25	YA	496	G
25	YA	503	A
25	YA	504	U
25	YA	505	A
25	YA	509	C
25	YA	512	G
25	YA	518	G
25	YA	527	C
25	YA	531	C
25	YA	532	A
25	YA	533	G
25	YA	537	C

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Mol	Chain	Res	Type
25	YA	539	G
25	YA	540	G
25	YA	546	C
25	YA	547	A
25	YA	549	G
25	YA	563	G
25	YA	573	G
25	YA	575	A
25	YA	586	A
25	YA	588	U
25	YA	599	G
25	YA	603	A
25	YA	607	U
25	YA	609(A)	G
25	YA	613	U
25	YA	614	U
25	YA	615	G
25	YA	617	G
25	YA	621	A
25	YA	622	G
25	YA	624	C
25	YA	627	A
25	YA	629	G
25	YA	631	A
25	YA	634	C
25	YA	637	A
25	YA	638	G
25	YA	645	C
25	YA	646	A
25	YA	648	G
25	YA	649	G
25	YA	650	C
25	YA	652	C
25	YA	654	A
25	YA	654(A)	G
25	YA	654(B)	C
25	YA	659	C
25	YA	664	C
25	YA	668	G
25	YA	669	G
25	YA	670	A
25	YA	681	G

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Mol	Chain	Res	Type
25	YA	686	G
25	YA	705	A
25	YA	709	U
25	YA	717	G
25	YA	722	A
25	YA	730	C
25	YA	747	U
25	YA	753	C
25	YA	764	A
25	YA	765	G
25	YA	776	G
25	YA	782	A
25	YA	784	A
25	YA	785	G
25	YA	790	C
25	YA	791	C
25	YA	792	G
25	YA	805	G
25	YA	812	C
25	YA	819	A
25	YA	827	U
25	YA	828	U
25	YA	829	A
25	YA	831	G
25	YA	845	G
25	YA	846	C
25	YA	847	U
25	YA	854	G
25	YA	856	C
25	YA	857	C
25	YA	859	G
25	YA	860	U
25	YA	865	C
25	YA	866	A
25	YA	870	A
25	YA	880	G
25	YA	881	G
25	YA	882	G
25	YA	884	C
25	YA	885	C
25	YA	886	C
25	YA	887	A

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Mol	Chain	Res	Type
25	YA	888	C
25	YA	889	C
25	YA	890	A
25	YA	893	C
25	YA	896	A
25	YA	897	C
25	YA	899	A
25	YA	900	A
25	YA	901	A
25	YA	904	C
25	YA	906	G
25	YA	907	U
25	YA	910	A
25	YA	917	A
25	YA	918	A
25	YA	932	G
25	YA	938	G
25	YA	941	A
25	YA	945	A
25	YA	946	G
25	YA	961	C
25	YA	974	G
25	YA	974(A)	C
25	YA	975	G
25	YA	983	A
25	YA	986	C
25	YA	990	A
25	YA	991	C
25	YA	996	A
25	YA	1003	G
25	YA	1005	C
25	YA	1011	G
25	YA	1012	U
25	YA	1013	C
25	YA	1015	G
25	YA	1022	G
25	YA	1023	U
25	YA	1025	G
25	YA	1026	U
25	YA	1027	A
25	YA	1033	U
25	YA	1045	A

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Mol	Chain	Res	Type
25	YA	1046	A
25	YA	1047	G
25	YA	1050	A
25	YA	1051	G
25	YA	1054	A
25	YA	1055	G
25	YA	1057	A
25	YA	1059	G
25	YA	1060	U
25	YA	1061	U
25	YA	1065	U
25	YA	1066	U
25	YA	1067	A
25	YA	1068	G
25	YA	1070	A
25	YA	1071	G
25	YA	1076	C
25	YA	1077	A
25	YA	1078	U
25	YA	1079	C
25	YA	1082	U
25	YA	1083	U
25	YA	1084	A
25	YA	1085	A
25	YA	1086	A
25	YA	1088	A
25	YA	1090	U
25	YA	1095	A
25	YA	1096	A
25	YA	1097	U
25	YA	1103	A
25	YA	1104	C
25	YA	1105	U
25	YA	1110	G
25	YA	1111	A
25	YA	1112	G
25	YA	1122	G
25	YA	1124	C
25	YA	1131	G
25	YA	1135	C
25	YA	1136	G
25	YA	1142	U

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Mol	Chain	Res	Type
25	YA	1142(A)	A
25	YA	1143	A
25	YA	1148	A
25	YA	1155	A
25	YA	1157	G
25	YA	1168	G
25	YA	1170	G
25	YA	1173	G
25	YA	1174	A
25	YA	1175	U
25	YA	1176	G
25	YA	1178	C
25	YA	1179	C
25	YA	1181	C
25	YA	1183	G
25	YA	1188	U
25	YA	1190	G
25	YA	1195	G
25	YA	1197	G
25	YA	1204	A
25	YA	1205	U
25	YA	1210	A
25	YA	1211	U
25	YA	1218	C
25	YA	1220	A
25	YA	1236	G
25	YA	1237	A
25	YA	1238	G
25	YA	1241	A
25	YA	1243	G
25	YA	1244	G
25	YA	1248	G
25	YA	1252	G
25	YA	1253	A
25	YA	1256	G
25	YA	1265	A
25	YA	1271	G
25	YA	1272	A
25	YA	1273	U
25	YA	1274	A
25	YA	1282	U
25	YA	1300	U

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Mol	Chain	Res	Type
25	YA	1301	A
25	YA	1303	G
25	YA	1308	A
25	YA	1313	U
25	YA	1319	G
25	YA	1321	A
25	YA	1329	U
25	YA	1330	C
25	YA	1345	C
25	YA	1349	A
25	YA	1352	U
25	YA	1356	G
25	YA	1365	A
25	YA	1368	G
25	YA	1371	G
25	YA	1376	C
25	YA	1378	A
25	YA	1379	A
25	YA	1380	G
25	YA	1384	A
25	YA	1385	G
25	YA	1386	C
25	YA	1388	G
25	YA	1389	G
25	YA	1390	U
25	YA	1392	A
25	YA	1395	A
25	YA	1407	C
25	YA	1408	C
25	YA	1411	C
25	YA	1412	A
25	YA	1416	G
25	YA	1417	C
25	YA	1419	A
25	YA	1420	U
25	YA	1421	G
25	YA	1428	C
25	YA	1444(A)	A
25	YA	1445	C
25	YA	1448	G
25	YA	1449	A
25	YA	1449(A)	G

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Mol	Chain	Res	Type
25	YA	1451	C
25	YA	1453	A
25	YA	1455	G
25	YA	1458	C
25	YA	1460	A
25	YA	1461	G
25	YA	1467	C
25	YA	1471	A
25	YA	1474	C
25	YA	1480	G
25	YA	1482	U
25	YA	1483	G
25	YA	1486	A
25	YA	1493	C
25	YA	1494	A
25	YA	1495	A
25	YA	1497	U
25	YA	1505	C
25	YA	1506	C
25	YA	1507	A
25	YA	1508	A
25	YA	1510	A
25	YA	1513	C
25	YA	1514	U
25	YA	1522	G
25	YA	1534	G
25	YA	1535	U
25	YA	1536	A
25	YA	1537	C
25	YA	1538	G
25	YA	1543	A
25	YA	1544	C
25	YA	1545	A
25	YA	1549	C
25	YA	1554	A
25	YA	1555	G
25	YA	1558	A
25	YA	1559	G
25	YA	1560	G
25	YA	1566	A
25	YA	1569	A
25	YA	1578	U

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Mol	Chain	Res	Type
25	YA	1579	A
25	YA	1581	G
25	YA	1585	C
25	YA	1586	A
25	YA	1598	C
25	YA	1606	G
25	YA	1607	C
25	YA	1608	A
25	YA	1610	A
25	YA	1616	A
25	YA	1617	C
25	YA	1618	A
25	YA	1619	G
25	YA	1631	A
25	YA	1639	U
25	YA	1640	C
25	YA	1646	C
25	YA	1647	G
25	YA	1648	C
25	YA	1654	A
25	YA	1666	G
25	YA	1667	G
25	YA	1668	A
25	YA	1674	G
25	YA	1688	U
25	YA	1695	G
25	YA	1699	G
25	YA	1700	A
25	YA	1725	G
25	YA	1728	G
25	YA	1729	A
25	YA	1730	U
25	YA	1731	G
25	YA	1741	C
25	YA	1742	C
25	YA	1743	G
25	YA	1750	G
25	YA	1753	G
25	YA	1754	C
25	YA	1756	G
25	YA	1759	A
25	YA	1762	A

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Mol	Chain	Res	Type
25	YA	1763	G
25	YA	1764	G
25	YA	1769	G
25	YA	1773	A
25	YA	1780	A
25	YA	1787	A
25	YA	1791	A
25	YA	1799	G
25	YA	1800	C
25	YA	1801	G
25	YA	1811	G
25	YA	1816	G
25	YA	1819	A
25	YA	1820	U
25	YA	1829	A
25	YA	1833	U
25	YA	1834	U
25	YA	1835	G
25	YA	1836	C
25	YA	1847	A
25	YA	1849	G
25	YA	1850	G
25	YA	1858	G
25	YA	1869	G
25	YA	1870	C
25	YA	1872	A
25	YA	1878	G
25	YA	1881	C
25	YA	1882	C
25	YA	1885	A
25	YA	1889	A
25	YA	1896	G
25	YA	1903	G
25	YA	1906	G
25	YA	1910	G
25	YA	1913	A
25	YA	1916	A
25	YA	1930	G
25	YA	1931	U
25	YA	1936	A
25	YA	1937	A
25	YA	1938	A

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Mol	Chain	Res	Type
25	YA	1939	U
25	YA	1941	C
25	YA	1945	G
25	YA	1947	C
25	YA	1955	U
25	YA	1963	U
25	YA	1964	G
25	YA	1965	C
25	YA	1967	C
25	YA	1968	G
25	YA	1969	A
25	YA	1970	A
25	YA	1971	A
25	YA	1972	A
25	YA	1982	C
25	YA	1988	C
25	YA	1991	U
25	YA	1993	U
25	YA	2017	U
25	YA	2020	A
25	YA	2023	G
25	YA	2031	A
25	YA	2033	A
25	YA	2034	U
25	YA	2040	C
25	YA	2043	C
25	YA	2049	G
25	YA	2052	G
25	YA	2055	C
25	YA	2056	G
25	YA	2059	A
25	YA	2060	A
25	YA	2061	G
25	YA	2062	A
25	YA	2063	C
25	YA	2069	G
25	YA	2093	G
25	YA	2099	U
25	YA	2111	C
25	YA	2113	U
25	YA	2114	A
25	YA	2115	G

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Mol	Chain	Res	Type
25	YA	2116	G
25	YA	2117	A
25	YA	2118	U
25	YA	2119	A
25	YA	2120	G
25	YA	2126	A
25	YA	2127	G
25	YA	2128	C
25	YA	2131	G
25	YA	2132	U
25	YA	2133	G
25	YA	2136	C
25	YA	2145	C
25	YA	2146	C
25	YA	2147	G
25	YA	2148	G
25	YA	2158	A
25	YA	2166	G
25	YA	2167	U
25	YA	2168	G
25	YA	2169	A
25	YA	2173	A
25	YA	2176	A
25	YA	2181	G
25	YA	2190	G
25	YA	2191	G
25	YA	2192	G
25	YA	2193	G
25	YA	2198	A
25	YA	2199	A
25	YA	2205	C
25	YA	2209	C
25	YA	2210	G
25	YA	2211	G
25	YA	2212	A
25	YA	2215	G
25	YA	2225	A
25	YA	2238	G
25	YA	2239	G
25	YA	2240	C
25	YA	2243	U
25	YA	2249	U

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Mol	Chain	Res	Type
25	YA	2250	G
25	YA	2273	A
25	YA	2275	C
25	YA	2279	G
25	YA	2280	G
25	YA	2283	C
25	YA	2286	A
25	YA	2287	A
25	YA	2290	G
25	YA	2303	G
25	YA	2305	A
25	YA	2307	G
25	YA	2308	G
25	YA	2310	A
25	YA	2311	A
25	YA	2319	G
25	YA	2320	A
25	YA	2325	G
25	YA	2334	G
25	YA	2335	A
25	YA	2336	A
25	YA	2341	G
25	YA	2342	C
25	YA	2343	C
25	YA	2346	A
25	YA	2347	C
25	YA	2350	C
25	YA	2357	U
25	YA	2372	G
25	YA	2383	G
25	YA	2385	C
25	YA	2387	U
25	YA	2392	A
25	YA	2394	C
25	YA	2396	G
25	YA	2397	G
25	YA	2398	U
25	YA	2402	C
25	YA	2403	C
25	YA	2406	U
25	YA	2407	G
25	YA	2408	U

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Mol	Chain	Res	Type
25	YA	2411	A
25	YA	2422	A
25	YA	2423	U
25	YA	2424	C
25	YA	2426	A
25	YA	2429	G
25	YA	2430	A
25	YA	2435	A
25	YA	2439	A
25	YA	2440	C
25	YA	2441	C
25	YA	2445	G
25	YA	2448	A
25	YA	2450	A
25	YA	2460	U
25	YA	2467	C
25	YA	2469	A
25	YA	2470	G
25	YA	2474	C
25	YA	2475	C
25	YA	2478	A
25	YA	2482	G
25	YA	2484	G
25	YA	2494	G
25	YA	2502	G
25	YA	2505	G
25	YA	2506	U
25	YA	2507	C
25	YA	2518	A
25	YA	2519	U
25	YA	2529	G
25	YA	2542	A
25	YA	2543	G
25	YA	2554	U
25	YA	2562	U
25	YA	2566	A
25	YA	2567	G
25	YA	2569	G
25	YA	2573	C
25	YA	2582	G
25	YA	2585	U
25	YA	2602	A

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Mol	Chain	Res	Type
25	YA	2609	U
25	YA	2610	C
25	YA	2611	U
25	YA	2612	C
25	YA	2623	G
25	YA	2629	A
25	YA	2632	A
25	YA	2641	G
25	YA	2642	G
25	YA	2654	A
25	YA	2655	G
25	YA	2665	A
25	YA	2666	C
25	YA	2673	G
25	YA	2681	C
25	YA	2682	U
25	YA	2689	U
25	YA	2690	C
25	YA	2691	C
25	YA	2702	U
25	YA	2703	C
25	YA	2712	U
25	YA	2712(A)	A
25	YA	2713	A
25	YA	2718	G
25	YA	2719	G
25	YA	2720	U
25	YA	2723	C
25	YA	2724	C
25	YA	2726	U
25	YA	2727	G
25	YA	2730	C
25	YA	2733	A
25	YA	2734	A
25	YA	2744	G
25	YA	2748	A
25	YA	2751	G
25	YA	2752	C
25	YA	2753	A
25	YA	2757	A
25	YA	2758	A
25	YA	2760	C

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Mol	Chain	Res	Type
25	YA	2761	G
25	YA	2764	A
25	YA	2765	A
25	YA	2771	C
25	YA	2777	G
25	YA	2778	A
25	YA	2779	U
25	YA	2780	G
25	YA	2787	C
25	YA	2790	A
25	YA	2791	C
25	YA	2797	U
25	YA	2807	G
25	YA	2808	U
25	YA	2813	A
25	YA	2818	G
25	YA	2820	A
25	YA	2821	A
25	YA	2831	G
25	YA	2833	G
25	YA	2834	G
25	YA	2835	A
25	YA	2846	G
25	YA	2847	U
25	YA	2848	G
25	YA	2849	U
25	YA	2861	G
25	YA	2867	G
25	YA	2868	A
25	YA	2872	G
25	YA	2883	A
25	YA	2891	G
25	YA	2892	A
25	YA	2894	G
26	YB	2	C
26	YB	7	G
26	YB	8	U
26	YB	9	G
26	YB	12	C
26	YB	13	A
26	YB	14	U
26	YB	15	A

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Mol	Chain	Res	Type
26	YB	19	G
26	YB	21	G
26	YB	22	U
26	YB	24	G
26	YB	25	A
26	YB	26	A
26	YB	27	C
26	YB	31	C
26	YB	32	C
26	YB	40	U
26	YB	41	U
26	YB	42	C
26	YB	44	G
26	YB	45	A
26	YB	52	A
26	YB	53	A
26	YB	54	G
26	YB	56	G
26	YB	67	G
26	YB	73	A
26	YB	81	G
26	YB	84	C
26	YB	88	C
26	YB	89	G
26	YB	89(A)	A
26	YB	101	A
26	YB	105	G
26	YB	109	G
26	YB	112	G
26	YB	116	G

All (265) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	QA	5	U
1	QA	31	G
1	QA	64	G
1	QA	115	G
1	QA	181	G
1	QA	243	A
1	QA	244	U
1	QA	250	A

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Mol	Chain	Res	Type
1	QA	266	G
1	QA	328	C
1	QA	372	C
1	QA	388	G
1	QA	410	G
1	QA	412	A
1	QA	421	U
1	QA	428	G
1	QA	481	G
1	QA	484	G
1	QA	485	G
1	QA	498	A
1	QA	509	A
1	QA	533	A
1	QA	560	U
1	QA	595	G
1	QA	687	A
1	QA	701	C
1	QA	703	G
1	QA	753	A
1	QA	792	A
1	QA	812	C
1	QA	815	A
1	QA	870	U
1	QA	871	U
1	QA	913	A
1	QA	960	U
1	QA	991	U
1	QA	992	U
1	QA	1027	C
1	QA	1065	U
1	QA	1129	C
1	QA	1200	C
1	QA	1201	A
1	QA	1285	A
1	QA	1297	C
1	QA	1305	G
1	QA	1336	C
1	QA	1347	G
1	QA	1446	A
1	QA	1498	U
1	QA	1503	A

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Mol	Chain	Res	Type
1	QA	1528	U
22	QV	53	G
23	QX	6	C
24	QY	39	C
25	RA	50	U
25	RA	74	A
25	RA	83	G
25	RA	99	U
25	RA	102	G
25	RA	196	A
25	RA	205	G
25	RA	221	A
25	RA	222	A
25	RA	226	G
25	RA	227	A
25	RA	229	A
25	RA	241	A
25	RA	242	G
25	RA	271(B)	G
25	RA	271(C)	U
25	RA	276	A
25	RA	372	G
25	RA	404	C
25	RA	503	A
25	RA	508	G
25	RA	512	G
25	RA	587	C
25	RA	637	A
25	RA	685	A
25	RA	704	G
25	RA	752	A
25	RA	774	A
25	RA	846	C
25	RA	856	C
25	RA	960	A
25	RA	1022	G
25	RA	1026	U
25	RA	1045	A
25	RA	1078	U
25	RA	1085	A
25	RA	1130	U
25	RA	1142(A)	A

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Mol	Chain	Res	Type
25	RA	1178	C
25	RA	1210	A
25	RA	1266	G
25	RA	1301	A
25	RA	1312	U
25	RA	1379	A
25	RA	1427	A
25	RA	1460	A
25	RA	1558	A
25	RA	1608	A
25	RA	1653	G
25	RA	1694	C
25	RA	1698	A
25	RA	1786	A
25	RA	1819	A
25	RA	1929	G
25	RA	1930	G
25	RA	1936	A
25	RA	1944	U
25	RA	1955	U
25	RA	1980	G
25	RA	1992	G
25	RA	2126	A
25	RA	2426	A
25	RA	2439	A
25	RA	2481	G
25	RA	2518	A
25	RA	2566	A
25	RA	2585	U
25	RA	2610	C
25	RA	2681	C
25	RA	2689	U
25	RA	2712	U
25	RA	2756	U
25	RA	2776	A
25	RA	2832	U
25	RA	2848	G
25	RA	2867	G
26	RB	24	G
26	RB	66	A
1	XA	31	G
1	XA	60	A

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Mol	Chain	Res	Type
1	XA	64	G
1	XA	89	U
1	XA	115	G
1	XA	181	G
1	XA	243	A
1	XA	244	U
1	XA	250	A
1	XA	266	G
1	XA	328	C
1	XA	366	C
1	XA	410	G
1	XA	412	A
1	XA	428	G
1	XA	429	U
1	XA	481	G
1	XA	484	G
1	XA	509	A
1	XA	532	A
1	XA	533	A
1	XA	560	U
1	XA	575	G
1	XA	595	G
1	XA	687	A
1	XA	701	C
1	XA	703	G
1	XA	753	A
1	XA	792	A
1	XA	812	C
1	XA	871	U
1	XA	913	A
1	XA	960	U
1	XA	965	A
1	XA	991	U
1	XA	992	U
1	XA	1027	C
1	XA	1064	G
1	XA	1065	U
1	XA	1094	G
1	XA	1200	C
1	XA	1224	G
1	XA	1279	A
1	XA	1285	A

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Mol	Chain	Res	Type
1	XA	1297	C
1	XA	1300	G
1	XA	1301	U
1	XA	1336	C
1	XA	1347	G
1	XA	1364	U
1	XA	1443	G
1	XA	1498	U
1	XA	1503	A
1	XA	1504	G
1	XA	1528	U
22	XV	53	G
24	XY	39	C
25	YA	74	A
25	YA	99	U
25	YA	196	A
25	YA	205	G
25	YA	221	A
25	YA	222	A
25	YA	227	A
25	YA	229	A
25	YA	242	G
25	YA	271(B)	G
25	YA	278	A
25	YA	370	G
25	YA	372	G
25	YA	404	C
25	YA	508	G
25	YA	587	C
25	YA	637	A
25	YA	653	A
25	YA	669	G
25	YA	704	G
25	YA	752	A
25	YA	846	C
25	YA	856	C
25	YA	858	U
25	YA	859	G
25	YA	880	G
25	YA	896	A
25	YA	945	A
25	YA	974(A)	C

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Mol	Chain	Res	Type
25	YA	1022	G
25	YA	1026	U
25	YA	1045	A
25	YA	1078	U
25	YA	1085	A
25	YA	1130	U
25	YA	1178	C
25	YA	1204	A
25	YA	1210	A
25	YA	1300	U
25	YA	1427	A
25	YA	1554	A
25	YA	1558	A
25	YA	1653	G
25	YA	1694	C
25	YA	1698	A
25	YA	1786	A
25	YA	1799	G
25	YA	1819	A
25	YA	1847	A
25	YA	1929	G
25	YA	1930	G
25	YA	1937	A
25	YA	1992	G
25	YA	2060	A
25	YA	2126	A
25	YA	2198	A
25	YA	2238	G
25	YA	2405	G
25	YA	2428	G
25	YA	2439	A
25	YA	2481	G
25	YA	2566	A
25	YA	2610	C
25	YA	2681	C
25	YA	2702	U
25	YA	2712	U
25	YA	2719	G
25	YA	2751	G
25	YA	2756	U
25	YA	2776	A
25	YA	2779	U

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Mol	Chain	Res	Type
25	YA	2832	U
25	YA	2848	G
25	YA	2867	G
25	YA	2873	A
26	YB	66	A

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

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
55	PPU	Z6	76	55,25	32,40,41	2.55	6 (18%)	33,57,60	2.14	5 (15%)
24	1MG	QY	37	24	18,26,27	2.82	3 (16%)	19,39,42	1.47	4 (21%)
24	1MG	XY	37	24	18,26,27	2.79	3 (16%)	19,39,42	1.48	4 (21%)
55	PPU	Z8	76	55,25	32,40,41	2.54	6 (18%)	33,57,60	2.14	5 (15%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
55	PPU	Z6	76	55,25	-	2/21/43/44	0/4/4/4
24	1MG	QY	37	24	-	0/3/25/26	0/3/3/3
24	1MG	XY	37	24	-	0/3/25/26	0/3/3/3
55	PPU	Z8	76	55,25	-	2/21/43/44	0/4/4/4

All (18) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	Z6	76	PPU	O-C	9.21	1.41	1.23
55	Z8	76	PPU	O-C	9.21	1.41	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	QY	37	1MG	C4-N3	8.79	1.49	1.35
24	XY	37	1MG	C4-N3	8.64	1.49	1.35
24	QY	37	1MG	C2-N2	7.17	1.48	1.33
24	XY	37	1MG	C2-N2	7.13	1.48	1.33
55	Z6	76	PPU	C9-N6	-5.95	1.32	1.45
55	Z8	76	PPU	C9-N6	-5.91	1.32	1.45
55	Z6	76	PPU	C-N3'	5.71	1.46	1.34
55	Z8	76	PPU	C-N3'	5.70	1.46	1.34
55	Z8	76	PPU	C10-N6	-5.62	1.32	1.45
55	Z6	76	PPU	C10-N6	-5.61	1.32	1.45
24	XY	37	1MG	C6-C5	2.73	1.45	1.41
55	Z8	76	PPU	O4'-C1'	2.66	1.44	1.41
55	Z6	76	PPU	O4'-C1'	2.65	1.44	1.41
24	QY	37	1MG	C6-C5	2.56	1.45	1.41
55	Z6	76	PPU	C4-N3	-2.12	1.32	1.35
55	Z8	76	PPU	C4-N3	-2.09	1.32	1.35

All (18) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	Z8	76	PPU	C3'-N3'-C	-8.58	110.27	123.21
55	Z6	76	PPU	C3'-N3'-C	-8.58	110.28	123.21
55	Z6	76	PPU	N3-C2-N1	-4.69	121.35	128.68
55	Z8	76	PPU	N3-C2-N1	-4.67	121.38	128.68
24	QY	37	1MG	N2-C2-N1	4.23	123.79	118.47
24	XY	37	1MG	N2-C2-N1	4.14	123.68	118.47
55	Z6	76	PPU	CA-C-N3'	4.01	121.72	116.15
55	Z8	76	PPU	CA-C-N3'	4.00	121.70	116.15
55	Z8	76	PPU	CM-OC-CZ	-3.37	110.20	117.51
55	Z6	76	PPU	CM-OC-CZ	-3.37	110.20	117.51
55	Z8	76	PPU	C4-C5-N7	-3.25	106.01	109.40
55	Z6	76	PPU	C4-C5-N7	-3.22	106.04	109.40
24	XY	37	1MG	C4-C5-N7	-2.61	106.67	109.40
24	QY	37	1MG	C4-C5-N7	-2.52	106.77	109.40
24	XY	37	1MG	C2-N3-C4	2.41	118.11	115.36
24	XY	37	1MG	C1'-N9-C4	-2.34	122.53	126.64
24	QY	37	1MG	C1'-N9-C4	-2.33	122.55	126.64
24	QY	37	1MG	C2-N3-C4	2.25	117.92	115.36

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
55	Z6	76	PPU	O-C-CA-N
55	Z8	76	PPU	O-C-CA-N
55	Z6	76	PPU	N3'-C-CA-N
55	Z8	76	PPU	N3'-C-CA-N

There are no ring outliers.

3 monomers are involved in 15 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
55	Z6	76	PPU	10	0
24	XY	37	1MG	1	0
55	Z8	76	PPU	4	0

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

Of 607 ligands modelled in this entry, 605 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
57	PAR	XA	1664	-	45,45,45	1.46	7 (15%)	64,67,67	1.33	7 (10%)
57	PAR	QA	1661	-	45,45,45	1.43	7 (15%)	64,67,67	1.36	8 (12%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
57	PAR	XA	1664	-	-	4/18/94/94	0/4/4/4

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
57	PAR	QA	1661	-	-	7/18/94/94	0/4/4/4

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	QA	1661	PAR	C64-C54	4.85	1.58	1.52
57	XA	1664	PAR	C64-C54	4.83	1.58	1.52
57	XA	1664	PAR	C52-C42	3.02	1.58	1.52
57	XA	1664	PAR	C11-C21	2.98	1.58	1.52
57	QA	1661	PAR	C52-C42	2.97	1.58	1.52
57	QA	1661	PAR	O54-C14	2.89	1.49	1.41
57	XA	1664	PAR	O54-C14	2.71	1.48	1.41
57	XA	1664	PAR	O51-C11	2.47	1.48	1.41
57	QA	1661	PAR	O51-C11	2.28	1.47	1.41
57	QA	1661	PAR	C11-C21	2.27	1.56	1.52
57	XA	1664	PAR	C14-C24	2.21	1.56	1.52
57	QA	1661	PAR	C31-C21	2.16	1.56	1.53
57	QA	1661	PAR	C14-C24	2.01	1.56	1.52
57	XA	1664	PAR	C31-C21	2.00	1.56	1.53

All (15) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	XA	1664	PAR	O33-C14-C24	4.33	115.67	108.22
57	QA	1661	PAR	C14-O54-C54	4.20	121.94	113.69
57	XA	1664	PAR	C14-O54-C54	4.06	121.65	113.69
57	QA	1661	PAR	O33-C14-C24	3.79	114.74	108.22
57	QA	1661	PAR	O52-C13-C23	3.79	115.81	107.96
57	QA	1661	PAR	O54-C54-C64	3.40	112.33	106.01
57	XA	1664	PAR	O52-C13-C23	3.33	114.86	107.96
57	XA	1664	PAR	O54-C54-C64	3.02	111.63	106.01
57	XA	1664	PAR	O11-C42-C32	-2.99	102.06	109.18
57	QA	1661	PAR	O11-C42-C32	-2.89	102.29	109.18
57	QA	1661	PAR	C22-C12-C62	-2.42	106.38	110.04
57	XA	1664	PAR	C11-O51-C51	2.20	118.00	113.69
57	QA	1661	PAR	C22-C32-C42	2.09	114.82	109.53
57	XA	1664	PAR	C31-C41-C51	-2.05	106.59	110.24
57	QA	1661	PAR	O41-C41-C51	2.01	114.28	109.30

There are no chirality outliers.

All (11) torsion outliers are listed below:

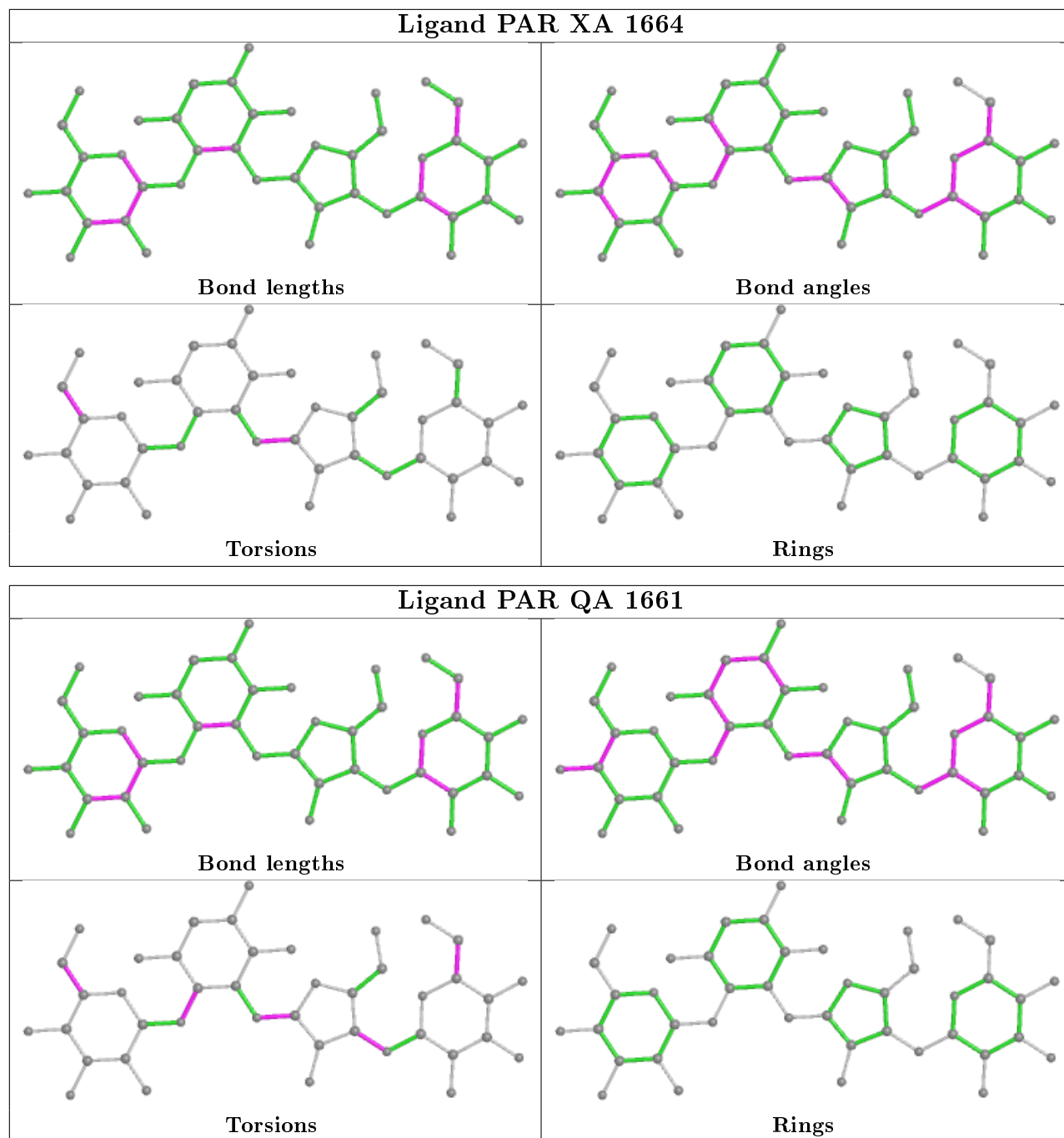
Mol	Chain	Res	Type	Atoms
57	QA	1661	PAR	C44-C54-C64-N64
57	QA	1661	PAR	O54-C54-C64-N64
57	XA	1664	PAR	O51-C51-C61-O61
57	XA	1664	PAR	C41-C51-C61-O61
57	QA	1661	PAR	O51-C51-C61-O61
57	QA	1661	PAR	C41-C51-C61-O61
57	XA	1664	PAR	C23-C13-O52-C52
57	QA	1661	PAR	C43-C33-O33-C14
57	XA	1664	PAR	O43-C13-O52-C52
57	QA	1661	PAR	C23-C13-O52-C52
57	QA	1661	PAR	C52-C42-O11-C11

There are no ring outliers.

2 monomers are involved in 5 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
57	XA	1664	PAR	1	0
57	QA	1661	PAR	4	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	QA	1500/1522 (98%)	0.19	57 (3%) 40 39	30, 83, 175, 356	0
1	XA	1501/1522 (98%)	0.06	50 (3%) 46 45	30, 76, 171, 324	0
2	QB	237/256 (92%)	0.84	31 (13%) 3 5	56, 138, 222, 266	0
2	XB	237/256 (92%)	0.50	24 (10%) 7 9	55, 126, 194, 238	0
3	QC	205/239 (85%)	0.69	30 (14%) 2 3	54, 122, 199, 216	0
3	XC	205/239 (85%)	0.25	10 (4%) 29 30	39, 95, 158, 217	0
4	QD	208/209 (99%)	0.17	8 (3%) 40 39	44, 92, 154, 184	0
4	XD	208/209 (99%)	0.30	8 (3%) 40 39	39, 95, 161, 234	0
5	QE	151/162 (93%)	0.57	11 (7%) 15 17	29, 104, 175, 237	0
5	XE	151/162 (93%)	0.12	4 (2%) 56 54	34, 79, 149, 229	0
6	QF	101/101 (100%)	0.11	3 (2%) 50 48	44, 86, 125, 222	0
6	XF	101/101 (100%)	0.10	3 (2%) 50 48	36, 86, 144, 209	0
7	QG	155/156 (99%)	0.50	15 (9%) 7 10	51, 106, 181, 215	0
7	XG	155/156 (99%)	0.28	9 (5%) 23 24	46, 103, 177, 230	0
8	QH	138/138 (100%)	0.25	3 (2%) 62 60	48, 108, 167, 204	0
8	XH	138/138 (100%)	0.18	4 (2%) 51 50	48, 96, 158, 208	0
9	QI	127/128 (99%)	0.69	14 (11%) 5 8	53, 124, 188, 214	0
9	XI	127/128 (99%)	0.55	8 (6%) 20 21	43, 116, 194, 219	0
10	QJ	99/105 (94%)	1.30	24 (24%) 0 1	67, 145, 212, 246	0
10	XJ	99/105 (94%)	0.90	20 (20%) 1 1	37, 119, 193, 210	0
11	QK	119/129 (92%)	0.52	10 (8%) 11 14	42, 92, 152, 199	0
11	XK	119/129 (92%)	0.31	5 (4%) 36 35	39, 89, 165, 204	0
12	QL	125/132 (94%)	0.39	6 (4%) 30 31	42, 84, 176, 269	0
12	XL	125/132 (94%)	0.08	4 (3%) 47 46	30, 66, 131, 242	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	QM	121/126 (96%)	0.53	11 (9%) 9 11	43, 124, 197, 254	0
13	XM	121/126 (96%)	0.24	5 (4%) 37 36	44, 98, 183, 264	0
14	QN	60/61 (98%)	1.05	9 (15%) 2 3	61, 128, 195, 227	0
14	XN	60/61 (98%)	0.09	1 (1%) 70 68	47, 87, 134, 161	0
15	QO	88/89 (98%)	0.44	7 (7%) 12 15	42, 97, 165, 235	0
15	XO	88/89 (98%)	-0.07	1 (1%) 80 77	39, 79, 130, 178	0
16	QP	84/88 (95%)	0.28	1 (1%) 79 76	41, 79, 136, 206	0
16	XP	84/88 (95%)	0.38	3 (3%) 42 42	54, 92, 151, 203	0
17	QQ	100/105 (95%)	0.27	2 (2%) 65 63	53, 102, 165, 210	0
17	XQ	100/105 (95%)	0.42	6 (6%) 21 23	38, 101, 159, 213	0
18	QR	70/88 (79%)	0.12	3 (4%) 35 34	34, 90, 156, 213	0
18	XR	70/88 (79%)	0.10	2 (2%) 51 50	30, 88, 138, 206	0
19	QS	84/93 (90%)	1.23	18 (21%) 0 1	87, 149, 204, 237	0
19	XS	84/93 (90%)	0.56	6 (7%) 16 18	55, 105, 176, 244	0
20	QT	99/106 (93%)	0.53	9 (9%) 9 11	48, 101, 192, 233	0
20	XT	99/106 (93%)	0.25	6 (6%) 21 23	50, 107, 163, 197	0
21	QU	25/27 (92%)	1.03	3 (12%) 4 6	41, 100, 139, 189	0
21	XU	25/27 (92%)	0.72	2 (8%) 12 15	52, 96, 135, 165	0
22	QV	77/77 (100%)	0.46	5 (6%) 18 20	40, 91, 151, 170	0
22	XV	77/77 (100%)	0.18	2 (2%) 56 54	34, 77, 126, 180	0
23	QX	8/25 (32%)	0.64	0 100 100	61, 82, 137, 169	0
23	XX	8/25 (32%)	0.65	1 (12%) 3 6	39, 67, 104, 175	0
24	QY	13/18 (72%)	4.04	8 (61%) 0 0	93, 213, 294, 312	0
24	XY	13/18 (72%)	2.83	6 (46%) 0 0	69, 188, 276, 278	0
25	RA	2883/2916 (98%)	0.12	174 (6%) 21 23	24, 57, 221, 389	0
25	YA	2882/2916 (98%)	-0.00	158 (5%) 25 26	17, 48, 215, 377	0
26	RB	120/122 (98%)	0.11	2 (1%) 70 68	52, 91, 141, 150	0
26	YB	120/122 (98%)	-0.12	0 100 100	44, 74, 109, 158	0
27	RD	272/276 (98%)	0.06	2 (0%) 87 85	19, 60, 98, 243	0
27	YD	272/276 (98%)	-0.12	1 (0%) 92 91	13, 50, 85, 221	0
28	RE	205/206 (99%)	0.16	5 (2%) 59 57	24, 78, 165, 260	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å ²)	Q<0.9
28	YE	205/206 (99%)	0.19	6 (2%)	51	50	22, 76, 161, 238	0
29	RF	202/210 (96%)	0.21	7 (3%)	44	43	21, 82, 158, 250	0
29	YF	202/210 (96%)	0.04	4 (1%)	65	63	13, 64, 130, 197	0
30	RG	181/182 (99%)	1.89	74 (40%)	0	0	58, 164, 258, 303	0
30	YG	181/182 (99%)	0.90	26 (14%)	2	4	59, 108, 186, 248	0
31	RH	170/180 (94%)	1.29	37 (21%)	0	1	78, 171, 239, 267	0
31	YH	170/180 (94%)	0.46	10 (5%)	22	24	39, 100, 156, 260	0
32	RI	146/148 (98%)	0.66	16 (10%)	5	8	56, 118, 204, 240	0
32	YI	146/148 (98%)	0.24	3 (2%)	63	62	40, 104, 169, 214	0
33	RN	138/140 (98%)	0.08	3 (2%)	62	60	32, 84, 153, 194	0
33	YN	138/140 (98%)	-0.06	1 (0%)	87	85	31, 78, 128, 166	0
34	RO	122/122 (100%)	0.04	3 (2%)	57	55	24, 71, 133, 170	0
34	YO	122/122 (100%)	0.08	0	100	100	23, 66, 114, 153	0
35	RP	150/150 (100%)	0.35	13 (8%)	10	13	15, 79, 185, 232	0
35	YP	150/150 (100%)	0.12	3 (2%)	65	63	5, 68, 135, 230	0
36	RQ	141/141 (100%)	0.31	7 (4%)	28	29	38, 85, 149, 219	0
36	YQ	141/141 (100%)	0.02	2 (1%)	75	72	27, 66, 118, 196	0
37	RR	118/118 (100%)	-0.09	0	100	100	28, 68, 107, 171	0
37	YR	118/118 (100%)	-0.08	0	100	100	20, 64, 114, 153	0
38	RS	111/112 (99%)	0.26	5 (4%)	33	32	40, 90, 146, 203	0
38	YS	111/112 (99%)	0.07	3 (2%)	54	52	36, 77, 134, 207	0
39	RT	137/146 (93%)	0.31	10 (7%)	15	17	39, 90, 189, 221	0
39	YT	137/146 (93%)	0.27	5 (3%)	42	42	41, 78, 176, 220	0
40	RU	117/118 (99%)	0.14	5 (4%)	35	34	27, 73, 155, 249	0
40	YU	117/118 (99%)	-0.05	2 (1%)	70	68	20, 59, 129, 212	0
41	RV	101/101 (100%)	0.46	11 (10%)	5	8	28, 88, 167, 278	0
41	YV	101/101 (100%)	0.16	4 (3%)	38	37	25, 82, 143, 255	0
42	RW	113/113 (100%)	0.09	4 (3%)	44	43	28, 63, 127, 241	0
42	YW	113/113 (100%)	-0.10	0	100	100	22, 60, 109, 204	0
43	RX	92/96 (95%)	0.00	1 (1%)	80	77	31, 65, 108, 137	0
43	YX	92/96 (95%)	0.12	2 (2%)	62	60	21, 50, 92, 134	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	RY	102/110 (92%)	0.94	20 (19%) 1 1	46, 106, 214, 270	0
44	YY	102/110 (92%)	0.34	7 (6%) 16 19	25, 85, 144, 243	0
45	RZ	172/206 (83%)	1.50	42 (24%) 0 1	62, 130, 264, 332	0
45	YZ	172/206 (83%)	0.89	25 (14%) 2 4	33, 111, 243, 361	0
46	R0	82/85 (96%)	0.25	1 (1%) 79 76	35, 72, 105, 143	0
46	Y0	82/85 (96%)	0.03	0 100 100	28, 63, 99, 116	0
47	R1	97/98 (98%)	0.40	3 (3%) 49 48	24, 67, 167, 259	0
47	Y1	97/98 (98%)	0.27	5 (5%) 27 28	20, 65, 161, 211	0
48	R2	69/72 (95%)	0.07	3 (4%) 35 34	34, 82, 149, 217	0
48	Y2	69/72 (95%)	0.11	2 (2%) 51 50	22, 72, 138, 203	0
49	R3	59/60 (98%)	0.24	1 (1%) 70 68	35, 81, 147, 173	0
49	Y3	59/60 (98%)	0.05	2 (3%) 45 44	33, 67, 108, 178	0
50	R4	71/71 (100%)	3.14	42 (59%) 0 0	102, 207, 283, 352	0
50	Y4	71/71 (100%)	1.83	23 (32%) 0 0	88, 160, 251, 277	0
51	R5	59/60 (98%)	0.49	7 (11%) 4 6	12, 64, 224, 264	0
51	Y5	59/60 (98%)	-0.07	3 (5%) 28 28	20, 71, 220, 229	0
52	R6	49/54 (90%)	4.18	33 (67%) 0 0	119, 196, 290, 297	0
52	Y6	49/54 (90%)	3.70	37 (75%) 0 0	120, 182, 235, 265	0
53	R7	49/49 (100%)	-0.25	0 100 100	19, 44, 100, 216	0
53	Y7	49/49 (100%)	-0.06	3 (6%) 21 23	15, 37, 100, 216	0
54	R8	64/65 (98%)	0.22	3 (4%) 31 31	18, 62, 156, 228	0
54	Y8	64/65 (98%)	0.23	2 (3%) 49 48	20, 61, 116, 173	0
55	Z6	2/3 (66%)	0.38	0 100 100	49, 49, 49, 51	0
55	Z8	2/3 (66%)	0.22	0 100 100	36, 36, 36, 37	0
All	All	20776/21420 (96%)	0.27	1351 (6%) 18 20	5, 78, 195, 389	0

All (1351) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
25	YA	2173	A	16.7
25	RA	2116	G	15.6
52	R6	43	CYS	15.1
25	YA	2175	C	15.0
24	QY	32	U	14.9

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Mol	Chain	Res	Type	RSRZ
25	YA	2174	C	14.6
50	R4	70	GLY	13.5
25	YA	2112	G	13.1
25	RA	2169	A	13.1
25	YA	2801	A	12.7
25	RA	2168	G	12.5
25	RA	1088	A	12.5
52	Y6	43	CYS	12.4
50	R4	44	THR	12.1
52	R6	46	HIS	11.8
25	YA	2125	G	11.4
24	XY	32	U	11.3
50	Y4	40	HIS	11.1
50	R4	47	GLN	11.0
25	RA	1059	G	11.0
45	RZ	142	SER	10.9
25	RA	1057	A	10.8
1	QA	1033	G	10.7
45	RZ	112	ARG	10.6
25	YA	2136	C	10.5
25	RA	1096	A	10.5
42	RW	113	LYS	10.5
25	RA	2117	A	10.3
7	QG	82	GLY	10.3
7	QG	81	GLY	10.2
51	R5	60	VAL	10.2
25	RA	1098	A	10.2
52	R6	50	ARG	10.2
52	R6	14	THR	9.9
2	QB	4	GLU	9.8
44	RY	58	GLY	9.8
45	RZ	146	ILE	9.8
1	QA	1032(A)	G	9.7
25	YA	1096	A	9.6
1	QA	1032(B)	G	9.5
50	R4	71	ARG	9.5
25	RA	2118	U	9.4
25	YA	2799	A	9.4
25	RA	2173	A	9.4
2	QB	231	GLU	9.3
25	YA	2121	G	9.2
25	YA	1058	G	9.0

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Mol	Chain	Res	Type	RSRZ
25	YA	2113	U	8.9
24	QY	33	U	8.9
25	RA	2799	A	8.9
25	YA	2123	G	8.8
52	R6	20	ASN	8.8
25	RA	2138	C	8.7
1	XA	87	A	8.7
25	YA	2122	U	8.7
25	RA	2170	A	8.6
25	YA	1057	A	8.6
25	RA	1061	U	8.6
25	RA	1065	U	8.6
45	RZ	140	ASP	8.5
45	RZ	144	LEU	8.4
52	R6	40	CYS	8.4
25	YA	2129	C	8.4
2	QB	19	HIS	8.2
50	R4	45	GLY	8.2
25	YA	2114	A	8.1
50	R4	11	PRO	8.0
25	RA	1068	G	8.0
45	YZ	148	ASP	8.0
25	RA	2798	C	7.9
25	RA	2797	U	7.9
25	YA	1536	A	7.8
52	R6	49	HIS	7.8
25	YA	2133	G	7.8
52	R6	6	ARG	7.8
25	RA	1067	A	7.8
25	RA	1064	C	7.8
25	YA	1060	U	7.7
25	RA	2119	A	7.6
25	RA	1060	U	7.6
25	RA	2801	A	7.6
30	RG	182	LYS	7.6
25	RA	2141	G	7.6
45	RZ	138	GLU	7.5
49	Y3	60	GLU	7.4
1	QA	1029	G	7.3
25	RA	2114	A	7.3
45	YZ	147	GLY	7.2
52	R6	7	ILE	7.2

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Mol	Chain	Res	Type	RSRZ
50	R4	39	CYS	7.2
25	YA	2117	A	7.2
50	R4	49	PHE	7.2
25	RA	1100	C	7.1
1	XA	1032(A)	G	7.1
52	Y6	48	VAL	7.1
2	QB	233	SER	7.1
52	Y6	38	LYS	7.1
50	R4	67	TYR	7.1
25	RA	1063	G	7.0
25	RA	2112	G	7.0
30	RG	154	GLY	7.0
52	Y6	39	TYR	7.0
1	XA	1032	A	6.9
25	YA	2141	G	6.9
50	R4	29	PRO	6.9
25	RA	2894	G	6.9
45	RZ	141	VAL	6.9
1	QA	345	C	6.8
13	QM	121	LYS	6.8
25	RA	654	A	6.8
52	R6	13	CYS	6.8
25	YA	2167	U	6.7
52	Y6	46	HIS	6.7
16	XP	83	GLU	6.7
24	QY	31	G	6.7
25	YA	1059	G	6.7
25	YA	2166	G	6.6
52	R6	30	THR	6.6
28	RE	204	ALA	6.6
30	RG	2	PRO	6.6
2	QB	232	PRO	6.6
1	QA	344	A	6.6
25	RA	1078	U	6.5
25	RA	1084	A	6.5
52	Y6	44	ARG	6.5
45	YZ	149	SER	6.5
25	YA	2893	G	6.4
25	YA	1061	U	6.4
10	QJ	33	GLN	6.4
52	R6	52	VAL	6.4
30	RG	108	ASN	6.4

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Mol	Chain	Res	Type	RSRZ
24	XY	33	U	6.4
10	XJ	4	ILE	6.3
25	RA	2113	U	6.3
25	RA	1058	G	6.3
50	Y4	39	CYS	6.3
25	RA	1099	G	6.2
25	YA	2894	G	6.2
50	Y4	1	MET	6.2
52	Y6	37	ARG	6.2
24	XY	31	G	6.2
25	RA	2128	C	6.2
45	RZ	148	ASP	6.1
10	QJ	25	GLU	6.1
45	YZ	171	ILE	6.1
25	YA	2164	C	6.1
25	YA	2798	C	6.1
11	QK	129	SER	6.1
52	Y6	49	HIS	6.1
1	QA	994	A	6.0
52	R6	38	LYS	6.0
25	YA	2132	U	6.0
45	RZ	117	LEU	6.0
19	QS	27	GLU	6.0
50	Y4	66	SER	6.0
25	YA	2793	G	6.0
25	RA	2115	G	5.9
45	YZ	145	GLU	5.9
52	Y6	13	CYS	5.9
7	XG	78	ARG	5.9
45	RZ	147	GLY	5.9
44	RY	48	ALA	5.9
25	YA	2106	G	5.9
12	QL	129	ALA	5.8
52	R6	39	TYR	5.8
52	Y6	22	ALA	5.8
25	RA	1536	A	5.8
25	RA	1079	C	5.8
25	RA	1093	G	5.7
25	RA	2129	C	5.7
45	RZ	109	ALA	5.7
52	R6	5	VAL	5.7
25	YA	2135	A	5.7

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Mol	Chain	Res	Type	RSRZ
1	XA	345	C	5.7
1	XA	344	A	5.7
19	XS	27	GLU	5.7
2	QB	40	HIS	5.7
25	RA	546	C	5.6
25	RA	1066	U	5.6
6	QF	101	ALA	5.6
10	XJ	5	ARG	5.6
25	YA	1095	A	5.6
25	RA	1055	G	5.6
2	QB	240	GLN	5.6
2	XB	240	GLN	5.6
9	XI	98	PRO	5.6
5	QE	154	GLY	5.6
25	RA	2125	G	5.6
25	YA	2165	G	5.6
45	RZ	113	ALA	5.6
2	QB	18	GLY	5.6
5	QE	155	GLU	5.6
42	RW	112	GLY	5.6
52	Y6	53	LYS	5.6
31	RH	43	VAL	5.6
2	QB	6	THR	5.6
41	RV	26	ASP	5.5
1	QA	1024	G	5.5
25	YA	2168	G	5.5
25	RA	1095	A	5.5
20	XT	106	ALA	5.5
50	R4	19	GLY	5.5
47	R1	98	LEU	5.5
1	QA	1451	A	5.5
19	QS	64	GLU	5.5
52	R6	45	LYS	5.4
2	XB	96	ARG	5.4
13	XM	7	VAL	5.4
45	RZ	143	GLY	5.4
50	Y4	67	TYR	5.4
25	RA	2131	G	5.4
45	RZ	33	LEU	5.4
1	QA	1025	U	5.4
25	RA	890	A	5.3
50	R4	1	MET	5.3

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Mol	Chain	Res	Type	RSRZ
28	RE	205	ALA	5.3
7	XG	85	TYR	5.3
1	XA	80	G	5.3
52	Y6	41	PRO	5.3
25	RA	2154	G	5.3
40	YU	118	GLY	5.3
51	R5	59	GLU	5.3
18	XR	88	LYS	5.3
25	YA	2477	C	5.3
52	Y6	26	ASN	5.3
25	YA	2137	C	5.2
25	YA	2797	U	5.2
32	RI	59	ALA	5.2
50	R4	40	HIS	5.2
50	R4	12	ALA	5.2
25	YA	2178	C	5.2
1	QA	1001	G	5.2
32	RI	146	ALA	5.2
1	QA	1036	G	5.2
30	RG	26	GLN	5.2
25	YA	2188	C	5.2
31	RH	35	VAL	5.2
1	QA	1032	A	5.2
30	RG	85	GLY	5.2
52	Y6	40	CYS	5.2
19	QS	28	LYS	5.2
52	R6	47	THR	5.1
25	RA	887	A	5.1
2	QB	228	GLY	5.1
25	RA	1087	G	5.1
30	RG	46	ALA	5.1
45	YZ	144	LEU	5.1
52	Y6	30	THR	5.1
25	RA	2156	G	5.1
25	YA	890	A	5.1
50	R4	66	SER	5.1
25	RA	899	A	5.1
50	R4	23	GLU	5.0
25	RA	1077	A	5.0
52	Y6	32	ASN	5.0
1	QA	1450	U	5.0
41	RV	36	PRO	5.0

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Mol	Chain	Res	Type	RSRZ
25	RA	1074	G	5.0
44	RY	57	GLN	5.0
1	QA	1034	G	5.0
25	RA	654(A)	G	5.0
25	YA	2118	U	5.0
25	RA	2174	C	5.0
25	YA	2108	C	5.0
30	RG	152	LEU	5.0
50	R4	8	LYS	5.0
25	RA	2165	G	4.9
15	QO	7	GLU	4.9
10	XJ	33	GLN	4.9
45	YZ	140	ASP	4.9
25	RA	1105	U	4.9
4	XD	24	GLU	4.9
50	R4	61	ARG	4.8
30	RG	82	LEU	4.8
45	YZ	117	LEU	4.8
2	QB	198	ASP	4.8
35	RP	150	ALA	4.8
3	QC	193	TYR	4.8
30	RG	122	PRO	4.8
4	XD	23	GLY	4.8
25	RA	2104	G	4.8
25	RA	2133	G	4.8
25	YA	2124	G	4.8
40	YU	117	GLN	4.8
1	QA	1026	G	4.8
25	YA	2160	G	4.8
2	QB	229	VAL	4.7
25	YA	2119	A	4.7
1	XA	81	G	4.7
24	QY	29	U	4.7
27	RD	26	LYS	4.7
52	R6	41	PRO	4.7
30	RG	28	VAL	4.7
25	RA	1054	A	4.7
25	RA	2171	A	4.7
20	QT	102	GLY	4.7
2	QB	230	VAL	4.7
25	YA	276	A	4.7
30	RG	93	THR	4.7

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Mol	Chain	Res	Type	RSRZ
25	RA	1083	U	4.7
1	XA	1129	C	4.7
49	R3	60	GLU	4.6
1	XA	1032(B)	G	4.6
20	QT	104	LEU	4.6
52	Y6	23	THR	4.6
9	QI	127	LYS	4.6
25	RA	2153	G	4.6
31	RH	5	GLY	4.6
44	RY	55	TYR	4.6
25	YA	1064	C	4.6
32	RI	83	ALA	4.6
12	QL	64	TYR	4.6
25	YA	2803	C	4.6
44	RY	56	PRO	4.6
1	QA	1023	G	4.6
25	YA	2162	G	4.6
47	Y1	98	LEU	4.6
25	RA	1085	A	4.5
25	YA	2169	A	4.5
10	XJ	101	VAL	4.5
25	RA	1056	G	4.5
25	YA	897	C	4.5
25	YA	2146	C	4.5
25	RA	2146	C	4.5
30	RG	58	GLN	4.5
50	R4	51	ASP	4.5
25	RA	2160	G	4.5
31	RH	124	GLU	4.5
50	R4	20	ASN	4.5
30	RG	118	ARG	4.5
31	RH	4	ILE	4.5
50	Y4	56	VAL	4.5
31	RH	24	VAL	4.4
25	YA	2104	G	4.4
50	Y4	62	ARG	4.4
30	YG	26	GLN	4.4
50	R4	60	GLN	4.4
45	RZ	119	GLU	4.4
45	RZ	149	SER	4.4
7	QG	79	ARG	4.4
25	RA	898	C	4.4

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Mol	Chain	Res	Type	RSRZ
25	YA	1087	G	4.4
50	R4	46	GLN	4.4
13	XM	122	LYS	4.4
7	QG	83	ALA	4.3
3	XC	179	ARG	4.3
25	YA	2130	U	4.3
25	YA	2189	U	4.3
41	YV	45	THR	4.3
25	YA	2128	C	4.3
1	XA	1028(B)	C	4.3
25	YA	546	C	4.3
52	R6	19	ARG	4.2
51	R5	54	GLY	4.2
7	QG	2	ALA	4.2
52	R6	42	TRP	4.2
45	YZ	119	GLU	4.2
2	XB	233	SER	4.2
14	QN	2	ALA	4.2
32	RI	144	VAL	4.2
11	XK	129	SER	4.2
1	QA	1000	A	4.2
31	RH	125	VAL	4.2
25	YA	2105	C	4.2
52	Y6	29	ASN	4.2
41	RV	45	THR	4.2
25	RA	1082	U	4.2
30	RG	117	PHE	4.2
25	RA	2152	G	4.2
31	RH	33	LEU	4.2
50	Y4	11	PRO	4.2
2	QB	5	ILE	4.2
25	YA	2794	C	4.2
52	Y6	42	TRP	4.2
31	RH	42	ARG	4.1
10	XJ	98	ILE	4.1
31	RH	97	ARG	4.1
19	QS	6	LYS	4.1
31	RH	18	GLU	4.1
30	RG	87	PRO	4.1
25	YA	2161	C	4.1
10	XJ	73	ASP	4.1
50	Y4	71	ARG	4.1

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Mol	Chain	Res	Type	RSRZ
30	RG	92	VAL	4.1
1	QA	81	G	4.1
25	YA	2143	C	4.1
45	RZ	107	THR	4.1
50	R4	10	VAL	4.1
25	RA	645	C	4.1
15	QO	26	GLU	4.1
25	RA	1062	G	4.1
52	R6	16	CYS	4.1
10	QJ	29	ARG	4.0
25	RA	888	C	4.0
2	QB	21	ARG	4.0
25	YA	2795	G	4.0
52	Y6	45	LYS	4.0
7	XG	84	ASN	4.0
14	QN	35	ARG	4.0
30	RG	158	ALA	4.0
30	RG	4	ASP	4.0
31	YH	2	SER	4.0
40	RU	118	GLY	4.0
7	QG	156	TRP	4.0
45	RZ	1	MET	4.0
3	QC	104	GLN	4.0
1	XA	90	C	4.0
31	RH	81	GLU	4.0
11	QK	11	LYS	4.0
25	YA	2159	G	4.0
45	RZ	121	HIS	4.0
2	XB	95	GLN	4.0
25	RA	2802	G	4.0
52	R6	12	GLU	4.0
25	YA	1067	A	4.0
25	YA	2176	A	4.0
44	YY	99	CYS	3.9
3	QC	107	GLN	3.9
30	RG	77	ILE	3.9
13	QM	120	LYS	3.9
24	XY	29	U	3.9
25	YA	1066	U	3.9
10	XJ	6	ILE	3.9
1	XA	630	G	3.9
25	YA	2110	G	3.9

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Mol	Chain	Res	Type	RSRZ
10	QJ	34	VAL	3.9
52	R6	23	THR	3.9
32	YI	59	ALA	3.9
54	R8	65	GLU	3.9
12	QL	63	GLY	3.9
25	YA	1075	C	3.9
25	YA	2804	C	3.9
25	YA	2126	A	3.9
30	RG	131	TYR	3.9
31	RH	25	LYS	3.9
25	YA	2156	G	3.9
25	RA	1097	U	3.9
25	YA	1069	A	3.9
25	YA	654(A)	G	3.9
25	RA	1052	C	3.9
25	RA	2136	C	3.9
25	RA	1070	A	3.9
25	YA	2182	G	3.9
10	QJ	28	ARG	3.8
45	RZ	93	ASP	3.8
25	RA	889	C	3.8
25	YA	1070	A	3.8
25	RA	2145	C	3.8
25	YA	654(T)	C	3.8
4	XD	37	PRO	3.8
45	RZ	64	GLY	3.8
3	QC	101	LEU	3.8
25	YA	2102	U	3.8
1	XA	82	U	3.8
32	RI	61	ARG	3.8
25	YA	654	A	3.8
27	YD	26	LYS	3.8
29	YF	8	GLN	3.8
52	R6	29	ASN	3.8
25	RA	2135	A	3.8
25	YA	2790	A	3.8
13	QM	7	VAL	3.8
25	RA	2147	G	3.8
31	RH	96	ALA	3.8
35	RP	13	ASN	3.8
45	YZ	167	PRO	3.8
25	RA	1075	C	3.8

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Mol	Chain	Res	Type	RSRZ
45	YZ	143	GLY	3.7
50	R4	32	TYR	3.7
10	QJ	72	VAL	3.7
25	RA	2159	G	3.7
1	QA	723	U	3.7
31	RH	3	ARG	3.7
3	QC	72	LYS	3.7
4	QD	35	ARG	3.7
1	QA	1020	U	3.7
31	RH	82	GLY	3.7
25	YA	2140	C	3.7
25	RA	2148	G	3.7
30	YG	182	LYS	3.7
30	RG	72	ARG	3.7
19	QS	67	VAL	3.7
25	RA	1094	U	3.7
30	RG	80	PHE	3.7
50	R4	18	CYS	3.7
1	QA	1042	G	3.7
16	XP	82	GLN	3.7
50	Y4	34	GLU	3.7
44	RY	79	CYS	3.7
25	RA	1089	G	3.6
19	QS	79	THR	3.6
25	YA	1076	C	3.6
25	YA	2116	G	3.6
24	QY	30	C	3.6
25	RA	2175	C	3.6
20	QT	106	ALA	3.6
45	RZ	116	VAL	3.6
25	RA	1102	C	3.6
10	QJ	21	GLN	3.6
25	YA	2170	A	3.6
13	QM	83	ASP	3.6
44	RY	50	ARG	3.6
45	YZ	109	ALA	3.6
25	RA	1508	A	3.6
25	YA	899	A	3.6
31	RH	14	GLY	3.6
30	RG	27	ASN	3.6
2	QB	20	GLU	3.6
19	XS	67	VAL	3.6

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Mol	Chain	Res	Type	RSRZ
49	Y3	59	VAL	3.6
52	Y6	47	THR	3.6
25	YA	2144	U	3.5
30	RG	155	MET	3.5
45	YZ	146	ILE	3.5
1	XA	210	U	3.5
10	XJ	72	VAL	3.5
52	R6	21	TYR	3.5
52	R6	44	ARG	3.5
21	XU	26	LYS	3.5
25	RA	1092	C	3.5
1	QA	210	U	3.5
39	RT	2	ASN	3.5
1	XA	77	C	3.5
45	YZ	105	VAL	3.5
50	R4	6	HIS	3.5
29	RF	162	LEU	3.5
45	YZ	142	SER	3.5
31	RH	83	TYR	3.5
9	XI	99	LEU	3.5
51	R5	53	ALA	3.5
32	RI	73	GLU	3.5
10	QJ	71	LEU	3.5
3	QC	109	PRO	3.5
30	RG	100	TRP	3.5
31	RH	157	TYR	3.5
25	RA	2166	G	3.5
35	YP	13	ASN	3.5
25	RA	2132	U	3.5
17	XQ	36	ILE	3.5
39	RT	115	ARG	3.5
25	RA	10	G	3.5
25	YA	2127	G	3.5
19	QS	5	LEU	3.5
25	YA	1088	A	3.4
25	YA	2134	A	3.4
9	QI	117	HIS	3.4
30	RG	30	GLU	3.4
30	YG	52	ILE	3.4
1	XA	1026	G	3.4
25	YA	1077	A	3.4
25	RA	2167	U	3.4

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Mol	Chain	Res	Type	RSRZ
25	YA	1078	U	3.4
25	YA	1086	A	3.4
45	RZ	139	VAL	3.4
45	RZ	145	GLU	3.4
40	RU	117	GLN	3.4
25	YA	1068	G	3.4
25	YA	2792	G	3.4
1	XA	1260	C	3.4
5	XE	64	ARG	3.4
6	XF	31	GLU	3.4
50	Y4	41	PRO	3.4
4	QD	42	GLN	3.4
25	YA	2172	U	3.4
16	QP	83	GLU	3.4
50	R4	65	ASP	3.4
28	YE	60	ASN	3.4
28	RE	69	LYS	3.4
44	YY	63	LYS	3.4
16	XP	84	ALA	3.4
25	YA	654(S)	G	3.4
31	RH	32	GLU	3.4
35	RP	149	GLU	3.4
25	YA	2158	A	3.4
50	Y4	2	LYS	3.4
30	RG	90	LEU	3.4
30	RG	116	ASP	3.4
50	R4	9	LEU	3.3
45	RZ	137	ILE	3.3
9	QI	124	GLN	3.3
52	Y6	5	VAL	3.3
25	RA	1176	G	3.3
25	YA	2131	G	3.3
28	YE	205	ALA	3.3
13	QM	122	LYS	3.3
5	QE	34	VAL	3.3
52	R6	22	ALA	3.3
1	QA	993	G	3.3
1	QA	1003	G	3.3
31	RH	141	VAL	3.3
30	RG	113	ARG	3.3
30	YG	25	TYR	3.3
25	RA	2105	C	3.3

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Mol	Chain	Res	Type	RSRZ
25	YA	889	C	3.3
1	QA	1027	C	3.3
1	XA	1037	C	3.3
25	RA	2139	C	3.3
50	Y4	47	GLN	3.3
28	YE	204	ALA	3.3
4	XD	154	ASN	3.3
9	QI	65	VAL	3.3
25	RA	2157	G	3.3
25	RA	2795	G	3.3
2	XB	231	GLU	3.3
11	XK	11	LYS	3.3
44	RY	22	GLY	3.3
45	RZ	171	ILE	3.3
1	XA	1027	C	3.3
25	RA	2896	C	3.3
47	Y1	28	GLY	3.3
41	YV	36	PRO	3.3
25	YA	1079	C	3.3
9	QI	126	SER	3.2
25	YA	2151	G	3.2
50	Y4	18	CYS	3.2
10	QJ	98	ILE	3.2
31	RH	100	GLY	3.2
1	QA	992	U	3.2
7	QG	78	ARG	3.2
22	QV	1	C	3.2
52	Y6	15	GLU	3.2
25	RA	2162	G	3.2
33	YN	130	HIS	3.2
3	QC	158	GLY	3.2
52	Y6	9	LEU	3.2
30	YG	80	PHE	3.2
52	Y6	20	ASN	3.2
25	RA	1448	G	3.2
30	YG	143	GLU	3.2
10	XJ	21	GLN	3.2
2	QB	94	ASN	3.2
13	QM	65	LYS	3.2
32	YI	123	LEU	3.2
52	Y6	34	LEU	3.2
1	QA	208	U	3.2

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Mol	Chain	Res	Type	RSRZ
30	YG	88	ILE	3.2
35	RP	118	GLY	3.2
3	QC	66	VAL	3.2
1	QA	485	G	3.2
54	R8	64	TYR	3.2
1	XA	89	U	3.1
10	QJ	4	ILE	3.1
1	QA	88	C	3.1
25	YA	1173	G	3.1
25	RA	1076	C	3.1
25	YA	884	C	3.1
7	XG	81	GLY	3.1
50	Y4	12	ALA	3.1
48	R2	43	GLN	3.1
52	Y6	28	ARG	3.1
39	YT	137	LYS	3.1
50	R4	56	VAL	3.1
9	XI	94	ALA	3.1
30	RG	43	LEU	3.1
39	YT	136	GLN	3.1
24	QY	39	C	3.1
14	XN	2	ALA	3.1
45	YZ	172	ALA	3.1
45	RZ	115	GLY	3.1
10	QJ	64	GLU	3.1
30	YG	137	GLU	3.1
25	RA	2791	C	3.1
30	YG	46	ALA	3.1
41	RV	27	ALA	3.1
2	XB	228	GLY	3.1
12	QL	19	ARG	3.1
39	YT	133	GLU	3.1
2	QB	125	PRO	3.1
30	YG	116	ASP	3.1
12	QL	62	SER	3.1
25	RA	2893	G	3.1
30	RG	179	PRO	3.1
31	RH	95	ARG	3.1
47	Y1	81	LYS	3.1
6	XF	101	ALA	3.1
30	YG	112	PRO	3.1
13	QM	103	THR	3.1

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Mol	Chain	Res	Type	RSRZ
1	XA	88	C	3.1
25	RA	1071	G	3.0
25	RA	2127	G	3.0
25	RA	2158	A	3.0
2	XB	4	GLU	3.0
45	RZ	2	GLU	3.0
31	YH	3	ARG	3.0
10	QJ	62	HIS	3.0
46	R0	2	ALA	3.0
1	QA	1031	G	3.0
45	RZ	159	PRO	3.0
5	QE	24	ARG	3.0
25	RA	885	C	3.0
2	XB	232	PRO	3.0
44	RY	49	VAL	3.0
25	YA	2120	G	3.0
19	QS	8	GLY	3.0
31	RH	52	VAL	3.0
5	QE	94	ALA	3.0
25	RA	2793	G	3.0
25	RA	2892	A	3.0
25	YA	1073	A	3.0
44	RY	45	VAL	3.0
52	Y6	36	LEU	3.0
30	RG	29	TRP	3.0
2	XB	5	ILE	3.0
9	XI	8	GLY	3.0
30	YG	89	GLY	3.0
3	XC	193	TYR	3.0
25	RA	1053	C	3.0
25	YA	2897	U	3.0
7	QG	53	LYS	3.0
48	R2	72	ALA	3.0
47	R1	97	LEU	3.0
9	QI	38	GLN	3.0
32	RI	125	GLU	3.0
44	RY	102	CYS	3.0
51	R5	55	ARG	3.0
19	QS	2	PRO	3.0
5	QE	13	ILE	3.0
25	YA	2107	C	3.0
45	RZ	154	ASP	3.0

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Mol	Chain	Res	Type	RSRZ
20	QT	99	LEU	3.0
19	QS	85	LYS	3.0
25	RA	1069	A	3.0
2	XB	227	GLY	2.9
25	RA	2123	G	2.9
30	RG	63	ILE	2.9
50	Y4	22	ILE	2.9
1	XA	1043	C	2.9
2	XB	156	LYS	2.9
25	YA	2805	G	2.9
18	QR	54	ARG	2.9
35	RP	139	LYS	2.9
44	RY	62	GLU	2.9
44	RY	89	PHE	2.9
25	RA	1103	A	2.9
25	RA	2476	A	2.9
25	YA	2476	A	2.9
5	QE	8	GLU	2.9
32	RI	54	GLN	2.9
30	YG	87	PRO	2.9
1	QA	91	C	2.9
25	RA	1166	C	2.9
48	Y2	15	LYS	2.9
25	RA	547	A	2.9
2	XB	6	THR	2.9
3	QC	191	THR	2.9
25	YA	2148	G	2.9
25	YA	2154	G	2.9
30	RG	53	LEU	2.9
50	Y4	68	ARG	2.9
9	XI	126	SER	2.9
5	XE	155	GLU	2.9
30	YG	134	GLY	2.9
17	XQ	19	VAL	2.9
19	QS	29	ARG	2.9
44	RY	47	LYS	2.9
14	QN	43	CYS	2.9
13	XM	8	GLU	2.9
24	QY	41	A	2.9
10	QJ	80	LYS	2.9
29	RF	115	ALA	2.9
1	XA	1259	C	2.9

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Mol	Chain	Res	Type	RSRZ
25	RA	1018	C	2.9
30	RG	13	GLU	2.9
1	QA	1304	G	2.9
39	RT	130	ALA	2.9
30	YG	45	GLU	2.9
25	YA	2109	U	2.9
45	RZ	98	MET	2.9
1	XA	631	G	2.9
25	YA	1093	G	2.9
30	RG	143	GLU	2.9
36	RQ	138	ASP	2.9
8	QH	107	LEU	2.9
8	XH	67	PRO	2.9
7	QG	4	ARG	2.8
23	XX	8	A	2.8
25	RA	879	G	2.8
15	QO	30	ALA	2.8
52	Y6	8	LYS	2.8
10	QJ	8	LEU	2.8
42	RW	77	ASP	2.8
1	XA	1453	G	2.8
38	RS	108	GLY	2.8
2	QB	234	PRO	2.8
31	RH	34	GLU	2.8
9	QI	125	TYR	2.8
25	YA	1176	G	2.8
41	YV	101	GLY	2.8
30	RG	97	ASP	2.8
44	RY	46	LYS	2.8
41	RV	1	MET	2.8
34	RO	107	ARG	2.8
30	RG	180	PHE	2.8
31	RH	89	ILE	2.8
24	XY	41	A	2.8
30	YG	164	GLU	2.8
50	R4	69	LYS	2.8
52	Y6	18	ARG	2.8
1	XA	1036	G	2.8
52	Y6	33	LYS	2.8
3	QC	100	ALA	2.8
9	QI	123	PRO	2.8
5	QE	60	TYR	2.8

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Mol	Chain	Res	Type	RSRZ
45	RZ	153	SER	2.8
2	QB	160	ASP	2.8
13	QM	6	GLY	2.8
44	RY	51	VAL	2.8
45	YZ	141	VAL	2.8
50	Y4	60	GLN	2.8
15	QO	15	PHE	2.8
25	YA	1534	G	2.8
25	YA	2101	G	2.8
32	RI	81	VAL	2.8
19	QS	40	ILE	2.8
9	QI	110	GLU	2.8
10	QJ	83	GLU	2.8
25	RA	1046	A	2.8
25	YA	887	A	2.8
3	QC	52	LEU	2.8
31	RH	2	SER	2.8
7	XG	55	GLY	2.8
34	RO	30	ALA	2.8
1	QA	1129	C	2.8
9	QI	53	VAL	2.8
43	YX	65	ARG	2.8
22	QV	47	U	2.7
17	XQ	101	ARG	2.7
31	RH	146	ALA	2.7
51	R5	2	ALA	2.7
30	RG	137	GLU	2.7
24	XY	30	C	2.7
25	RA	2179	C	2.7
3	QC	60	ALA	2.7
39	RT	116	ALA	2.7
44	YY	60	PHE	2.7
13	XM	43	THR	2.7
32	RI	58	LEU	2.7
25	RA	2140	C	2.7
10	QJ	88	LEU	2.7
30	RG	133	LEU	2.7
31	RH	41	MET	2.7
45	YZ	154	ASP	2.7
8	XH	66	GLY	2.7
45	RZ	136	PHE	2.7
1	QA	1303	C	2.7

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Mol	Chain	Res	Type	RSRZ
25	YA	270(K)	C	2.7
45	RZ	120	ILE	2.7
4	QD	45	GLN	2.7
53	Y7	49	ARG	2.7
35	RP	91	PHE	2.7
2	QB	31	TYR	2.7
9	QI	128	ARG	2.7
1	XA	208	U	2.7
4	XD	42	GLN	2.7
30	RG	132	ASN	2.7
25	YA	2892	A	2.7
1	XA	220	G	2.7
45	RZ	92	SER	2.7
22	XV	47	U	2.7
6	XF	37	VAL	2.7
7	XG	156	TRP	2.7
10	XJ	35	SER	2.7
25	YA	1177	A	2.7
7	QG	80	VAL	2.7
5	XE	60	TYR	2.7
11	XK	36	ASP	2.7
15	QO	22	THR	2.7
25	YA	2139	C	2.7
21	QU	25	LYS	2.7
30	RG	17	PRO	2.7
30	YG	142	PRO	2.7
44	RY	2	ARG	2.7
1	QA	89	U	2.7
30	YG	2	PRO	2.7
17	XQ	12	SER	2.7
25	RA	2172	U	2.7
30	RG	107	LEU	2.6
3	QC	108	ASN	2.6
28	RE	60	ASN	2.6
1	QA	1006	C	2.6
38	RS	57	LYS	2.6
30	RG	12	TYR	2.6
54	Y8	48	PHE	2.6
10	QJ	36	GLY	2.6
25	YA	895	U	2.6
10	XJ	28	ARG	2.6
28	YE	61	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
31	RH	39	PRO	2.6
25	RA	2804	C	2.6
15	QO	73	GLU	2.6
30	RG	136	ARG	2.6
30	RG	164	GLU	2.6
4	XD	38	TYR	2.6
30	RG	57	ALA	2.6
47	Y1	80	LEU	2.6
5	XE	154	GLY	2.6
29	RF	15	SER	2.6
11	QK	25	TYR	2.6
25	RA	2101	G	2.6
28	YE	69	LYS	2.6
29	RF	207	GLY	2.6
45	YZ	116	VAL	2.6
25	RA	654(T)	C	2.6
25	RA	2895	U	2.6
20	QT	103	GLY	2.6
25	RA	1104	C	2.6
2	QB	113	HIS	2.6
2	XB	35	GLU	2.6
9	XI	2	GLU	2.6
10	XJ	8	LEU	2.6
1	QA	1312	G	2.6
24	QY	40	G	2.6
25	YA	2149	G	2.6
1	QA	979	C	2.6
14	QN	8	GLU	2.6
25	RA	2164	C	2.6
30	RG	89	GLY	2.6
10	XJ	71	LEU	2.6
50	R4	25	TYR	2.6
20	XT	9	ASN	2.6
50	Y4	20	ASN	2.6
17	XQ	37	LYS	2.6
30	RG	75	LYS	2.6
30	RG	165	THR	2.6
25	RA	2111	C	2.6
25	RA	2130	U	2.6
20	QT	49	ALA	2.6
3	XC	103	VAL	2.6
2	QB	63	MET	2.6

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Mol	Chain	Res	Type	RSRZ
11	QK	71	LYS	2.6
17	XQ	61	GLU	2.6
44	RY	91	GLU	2.6
3	XC	192	THR	2.6
1	XA	1005	A	2.5
1	QA	1028	C	2.5
3	QC	64	VAL	2.5
8	XH	43	GLY	2.5
25	RA	1108	U	2.5
25	YA	274	G	2.5
25	YA	2103	C	2.5
25	YA	2181	G	2.5
25	YA	2802	G	2.5
40	RU	90	VAL	2.5
35	RP	135	LEU	2.5
2	XB	234	PRO	2.5
9	QI	98	PRO	2.5
38	RS	34	HIS	2.5
35	YP	118	GLY	2.5
1	QA	1002	G	2.5
1	XA	1258	G	2.5
2	XB	26	PRO	2.5
10	XJ	59	SER	2.5
1	XA	1006	C	2.5
25	RA	2161	C	2.5
25	YA	878	A	2.5
44	YY	50	ARG	2.5
45	RZ	108	PRO	2.5
31	RH	27	LYS	2.5
3	QC	62	ASP	2.5
3	XC	79	ARG	2.5
31	YH	34	GLU	2.5
45	RZ	101	PRO	2.5
45	RZ	55	HIS	2.5
30	RG	88	ILE	2.5
50	R4	13	ARG	2.5
50	R4	22	ILE	2.5
52	Y6	6	ARG	2.5
2	QB	35	GLU	2.5
30	RG	159	VAL	2.5
25	RA	2803	C	2.5
32	RI	107	VAL	2.5

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Mol	Chain	Res	Type	RSRZ
25	RA	1081	U	2.5
36	RQ	141	GLN	2.5
3	QC	58	GLU	2.5
35	RP	1	MET	2.5
25	YA	277	C	2.5
27	RD	98	VAL	2.5
1	XA	1001	G	2.5
22	QV	46	G	2.5
30	RG	99	MET	2.5
35	YP	108	LYS	2.5
7	QG	52	GLU	2.5
12	QL	127	GLU	2.5
12	XL	127	GLU	2.5
25	YA	1080	C	2.5
2	QB	105	PHE	2.5
5	QE	64	ARG	2.5
39	YT	2	ASN	2.5
1	XA	78	G	2.5
10	QJ	84	GLN	2.5
1	QA	1531	A	2.5
25	RA	2126	A	2.5
25	RA	2794	C	2.5
25	YA	2179	C	2.5
54	R8	31	HIS	2.5
10	QJ	70	ARG	2.5
52	Y6	35	GLU	2.5
1	XA	64	G	2.5
30	RG	54	GLU	2.5
45	YZ	168	GLU	2.5
8	QH	119	LEU	2.4
10	QJ	101	VAL	2.4
29	RF	166	ALA	2.4
10	QJ	54	PHE	2.4
9	QI	66	ARG	2.4
11	QK	12	ARG	2.4
52	R6	18	ARG	2.4
31	YH	47	GLU	2.4
25	RA	2124	G	2.4
2	XB	148	TYR	2.4
25	RA	2122	U	2.4
45	YZ	101	PRO	2.4
11	QK	32	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
19	XS	28	LYS	2.4
25	RA	654(S)	G	2.4
25	YA	270(O)	U	2.4
19	QS	46	GLY	2.4
6	QF	93	SER	2.4
41	RV	31	ALA	2.4
44	RY	87	LYS	2.4
1	QA	995	C	2.4
25	RA	1101	U	2.4
25	YA	886	C	2.4
25	YA	2896	C	2.4
1	QA	1269	A	2.4
25	YA	10	G	2.4
25	YA	1084	A	2.4
44	YY	103	GLY	2.4
45	YZ	121	HIS	2.4
52	Y6	25	LYS	2.4
30	RG	101	ILE	2.4
47	Y1	89	GLU	2.4
30	RG	41	GLN	2.4
35	RP	16	ARG	2.4
25	YA	2142	C	2.4
25	YA	2791	C	2.4
1	QA	1124	G	2.4
20	XT	11	SER	2.4
12	XL	61	THR	2.4
31	RH	123	PHE	2.4
5	QE	83	GLU	2.4
50	R4	58	ARG	2.4
1	QA	478	A	2.4
30	RG	38	VAL	2.4
1	XA	1029	G	2.4
13	QM	62	ASN	2.4
25	YA	11	G	2.4
1	QA	1028(B)	C	2.4
1	XA	1030	C	2.4
19	XS	6	LYS	2.4
36	RQ	1	MET	2.4
36	YQ	141	GLN	2.4
25	RA	878	A	2.4
6	QF	38	GLU	2.4
30	RG	145	THR	2.4

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Mol	Chain	Res	Type	RSRZ
41	RV	15	GLU	2.4
45	YZ	112	ARG	2.4
48	Y2	11	GLU	2.4
50	R4	68	ARG	2.4
21	QU	2	GLY	2.4
33	RN	1	MET	2.4
51	Y5	54	GLY	2.4
25	RA	1080	C	2.4
30	RG	142	PRO	2.4
9	XI	95	LYS	2.4
19	QS	80	TYR	2.4
2	XB	63	MET	2.4
25	RA	1173	G	2.4
25	RA	2155	G	2.4
11	XK	15	ALA	2.4
18	QR	88	LYS	2.4
35	RP	94	GLU	2.4
4	XD	167	GLY	2.3
25	RA	1177	A	2.3
30	YG	113	ARG	2.3
30	YG	75	LYS	2.3
52	R6	24	GLU	2.3
11	QK	89	ALA	2.3
25	YA	1044	G	2.3
39	RT	131	ALA	2.3
3	XC	101	LEU	2.3
52	R6	37	ARG	2.3
3	QC	105	GLU	2.3
25	RA	654(U)	A	2.3
50	Y4	32	TYR	2.3
30	YG	90	LEU	2.3
2	XB	229	VAL	2.3
1	XA	73	G	2.3
10	XJ	48	THR	2.3
25	YA	879	G	2.3
50	Y4	45	GLY	2.3
10	XJ	17	ASP	2.3
4	QD	71	SER	2.3
32	RI	6	LEU	2.3
13	XM	58	GLU	2.3
45	YZ	75	ASN	2.3
1	XA	1031	G	2.3

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Mol	Chain	Res	Type	RSRZ
2	QB	96	ARG	2.3
25	YA	2157	G	2.3
28	RE	68	ALA	2.3
32	RI	79	ILE	2.3
52	R6	36	LEU	2.3
7	XG	77	SER	2.3
1	XA	1450	U	2.3
36	RQ	91	GLU	2.3
3	QC	15	THR	2.3
7	QG	86	GLN	2.3
38	YS	68	GLN	2.3
20	QT	44	ALA	2.3
19	QS	26	GLY	2.3
25	RA	1505	C	2.3
1	QA	1021	G	2.3
30	YG	24	GLY	2.3
7	QG	5	ARG	2.3
1	QA	1004	A	2.3
7	QG	84	ASN	2.3
30	RG	172	LEU	2.3
19	QS	9	VAL	2.3
1	XA	1028(A)	C	2.3
30	YG	54	GLU	2.3
45	RZ	162	GLU	2.3
1	XA	1047	G	2.3
20	XT	45	GLN	2.3
25	YA	275	G	2.3
2	QB	239	VAL	2.3
7	XG	80	VAL	2.3
25	YA	654(U)	A	2.3
36	YQ	1	MET	2.3
1	QA	841	U	2.3
29	RF	169	ASN	2.3
30	RG	9	ARG	2.3
32	RI	113	ARG	2.3
25	RA	11	G	2.3
25	RA	918	A	2.3
25	RA	2790	A	2.3
25	YA	1444(A)	A	2.3
28	YE	41	LYS	2.3
8	XH	1	MET	2.3
53	Y7	1	MET	2.3

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Mol	Chain	Res	Type	RSRZ
3	QC	140	ARG	2.3
17	QQ	29	HIS	2.3
7	QG	85	TYR	2.3
25	RA	925	C	2.3
31	YH	35	VAL	2.3
47	R1	45	ASN	2.3
10	QJ	6	ILE	2.3
4	QD	20	TYR	2.3
30	RG	37	VAL	2.3
45	RZ	156	LYS	2.3
3	QC	98	ASN	2.3
3	QC	177	THR	2.3
8	QH	24	THR	2.3
11	QK	39	PRO	2.3
19	XS	4	SER	2.3
1	XA	96	G	2.2
30	YG	100	TRP	2.2
2	XB	10	LEU	2.2
3	QC	102	ASN	2.2
14	QN	39	LEU	2.2
25	RA	2137	C	2.2
30	RG	112	PRO	2.2
31	RH	131	VAL	2.2
50	R4	43	TYR	2.2
50	R4	62	ARG	2.2
25	RA	545	G	2.2
33	RN	83	LYS	2.2
31	RH	48	GLY	2.2
11	QK	40	ILE	2.2
35	RP	122	PRO	2.2
2	QB	95	GLN	2.2
17	QQ	101	ARG	2.2
36	RQ	139	GLU	2.2
41	RV	28	GLU	2.2
2	XB	213	LEU	2.2
50	R4	15	ILE	2.2
15	QO	89	GLY	2.2
30	RG	171	ALA	2.2
31	RH	13	LYS	2.2
10	QJ	5	ARG	2.2
51	Y5	60	VAL	2.2
12	XL	126	LYS	2.2

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Mol	Chain	Res	Type	RSRZ
18	QR	19	LYS	2.2
45	YZ	164	ALA	2.2
50	R4	41	PRO	2.2
4	XD	12	CYS	2.2
30	RG	34	LEU	2.2
25	YA	1082	U	2.2
2	XB	22	LYS	2.2
7	XG	6	ARG	2.2
20	QT	56	MET	2.2
1	XA	79	G	2.2
38	RS	109	GLY	2.2
3	QC	87	LEU	2.2
30	RG	138	GLN	2.2
15	XO	88	ARG	2.2
1	QA	978	A	2.2
30	YG	157	ILE	2.2
3	XC	122	GLU	2.2
31	YH	155	SER	2.2
19	QS	13	ASP	2.2
45	RZ	124	ILE	2.2
1	QA	991	U	2.2
20	QT	46	GLU	2.2
50	R4	34	GLU	2.2
31	YH	135	GLY	2.2
1	QA	1035	A	2.2
2	XB	30	ARG	2.2
19	XS	42	PRO	2.2
31	YH	59	ARG	2.2
25	RA	279	C	2.2
25	RA	2751	G	2.2
25	YA	1063	G	2.2
2	XB	123	ALA	2.2
14	QN	5	ALA	2.2
35	RP	124	LYS	2.2
25	RA	273(F)	C	2.2
40	RU	72	HIS	2.2
41	RV	63	GLY	2.2
31	RH	103	LEU	2.2
52	R6	53	LYS	2.2
21	QU	5	ASP	2.2
21	XU	23	PRO	2.2
31	YH	29	PRO	2.2

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Mol	Chain	Res	Type	RSRZ
50	R4	42	PHE	2.2
30	RG	168	GLU	2.2
33	RN	10	GLU	2.2
39	RT	3	ARG	2.2
3	QC	91	LEU	2.1
29	YF	162	LEU	2.1
1	XA	456	C	2.1
25	RA	1072	C	2.1
39	RT	106	SER	2.1
1	XA	1257	U	2.1
25	RA	362	U	2.1
53	Y7	48	LYS	2.1
10	XJ	100	THR	2.1
5	QE	150	ARG	2.1
39	RT	137	LYS	2.1
44	RY	61	ILE	2.1
1	QA	1338	G	2.1
25	RA	2120	G	2.1
30	RG	74	LYS	2.1
52	Y6	12	GLU	2.1
50	Y4	51	ASP	2.1
4	QD	25	ARG	2.1
9	QI	111	ARG	2.1
11	QK	31	THR	2.1
38	RS	2	ALA	2.1
43	RX	3	THR	2.1
50	Y4	49	PHE	2.1
20	XT	60	GLU	2.1
1	XA	1138	G	2.1
25	RA	229	A	2.1
25	RA	1086	A	2.1
30	RG	65	GLY	2.1
30	YG	65	GLY	2.1
1	QA	998(A)	C	2.1
25	YA	1100	C	2.1
42	RW	92	ARG	2.1
10	XJ	95	GLU	2.1
52	R6	32	ASN	2.1
52	Y6	24	GLU	2.1
2	XB	36	ARG	2.1
3	QC	154	SER	2.1
10	XJ	99	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
31	RH	36	PRO	2.1
30	RG	21	ARG	2.1
25	RA	2100	G	2.1
25	YA	270(L)	U	2.1
30	RG	109	VAL	2.1
38	YS	111	GLU	2.1
54	Y8	35	GLN	2.1
29	YF	135	LYS	2.1
36	RQ	83	MET	2.1
44	YY	2	ARG	2.1
44	YY	46	LYS	2.1
3	XC	206	GLU	2.1
22	XV	21	A	2.1
3	QC	194	GLY	2.1
3	XC	26	LYS	2.1
25	YA	1071	G	2.1
30	RG	62	LEU	2.1
39	YT	36	GLU	2.1
9	XI	54	ASP	2.1
3	QC	127	ARG	2.1
10	QJ	74	ILE	2.1
19	QS	12	ASP	2.1
14	QN	38	GLY	2.1
29	YF	168	ARG	2.1
43	YX	82	GLN	2.1
25	YA	892	G	2.1
25	YA	2211	G	2.1
41	YV	34	GLU	2.1
34	RO	1	MET	2.1
3	QC	103	VAL	2.1
39	RT	41	ARG	2.1
26	RB	4	C	2.1
1	XA	76	G	2.1
1	XA	1274	G	2.1
22	QV	45	G	2.1
40	RU	91	ASP	2.1
25	YA	1081	U	2.1
32	RI	82	ARG	2.1
41	RV	17	GLY	2.1
2	QB	16	HIS	2.1
30	RG	156	ASP	2.1
1	QA	1047	G	2.0

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Mol	Chain	Res	Type	RSRZ
13	QM	8	GLU	2.0
51	Y5	55	ARG	2.0
52	Y6	50	ARG	2.0
13	QM	43	THR	2.0
38	YS	56	LEU	2.0
14	QN	31	ARG	2.0
25	RA	917	A	2.0
51	R5	37	LYS	2.0
25	YA	645	C	2.0
2	QB	33	TYR	2.0
14	QN	30	ALA	2.0
32	RI	65	ALA	2.0
45	RZ	91	LEU	2.0
48	R2	44	LEU	2.0
26	RB	97	G	2.0
2	QB	48	MET	2.0
25	RA	2176	A	2.0
25	YA	529	A	2.0
4	QD	86	LYS	2.0
10	XJ	74	ILE	2.0
25	RA	1585	C	2.0
41	RV	101	GLY	2.0
1	XA	991	U	2.0
39	RT	1	MET	2.0
25	RA	1534	G	2.0
3	XC	42	LEU	2.0
4	QD	46	LYS	2.0
1	QA	1041	A	2.0
18	XR	54	ARG	2.0
50	R4	55	ARG	2.0
25	RA	2107	C	2.0
3	QC	90	GLU	2.0
35	RP	119	GLU	2.0
12	XL	28	LYS	2.0
25	RA	271(C)	U	2.0
29	RF	23	ASP	2.0
32	YI	144	VAL	2.0
1	XA	1131	G	2.0
31	YH	5	GLY	2.0
22	QV	21	A	2.0
3	QC	135	LYS	2.0
36	RQ	89	ASN	2.0

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Mol	Chain	Res	Type	RSRZ
20	XT	18	GLN	2.0
11	XK	25	TYR	2.0

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

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
24	1MG	QY	37	24/25	0.83	0.24	124,124,124,124	0
24	1MG	XY	37	24/25	0.93	0.15	89,89,89,89	0
55	PPU	Z6	76	37/38	0.94	0.28	53,53,53,53	0
55	PPU	Z8	76	37/38	0.95	0.25	40,40,40,40	0

6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

6.4 Ligands [i](#)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
56	MG	RA	3203	1/1	0.57	0.27	73,73,73,73	0
56	MG	QH	201	1/1	0.63	0.31	124,124,124,124	0
56	MG	QA	1639	1/1	0.64	0.13	44,44,44,44	0
56	MG	XA	1605	1/1	0.65	0.41	126,126,126,126	0
56	MG	QA	1615	1/1	0.67	0.76	46,46,46,46	0
56	MG	YA	3173	1/1	0.67	0.20	43,43,43,43	0
56	MG	XA	1648	1/1	0.68	0.32	25,25,25,25	0
56	MG	YA	3012	1/1	0.70	1.51	80,80,80,80	0
56	MG	RA	3176	1/1	0.71	0.53	71,71,71,71	0
56	MG	XM	202	1/1	0.72	0.32	43,43,43,43	0
56	MG	RA	3201	1/1	0.72	0.34	22,22,22,22	0
56	MG	YA	3171	1/1	0.72	0.30	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	RA	3141	1/1	0.73	0.37	43,43,43,43	0
56	MG	YA	3236	1/1	0.74	0.24	57,57,57,57	0
56	MG	YA	3172	1/1	0.75	0.17	55,55,55,55	0
58	ZN	QN	101	1/1	0.76	0.13	155,155,155,155	0
56	MG	RA	3173	1/1	0.76	0.18	71,71,71,71	0
56	MG	XA	1619	1/1	0.76	0.15	46,46,46,46	0
56	MG	YA	3177	1/1	0.76	0.17	35,35,35,35	0
56	MG	RA	3202	1/1	0.77	0.41	84,84,84,84	0
56	MG	YA	3169	1/1	0.78	0.21	84,84,84,84	0
56	MG	YE	302	1/1	0.79	0.19	13,13,13,13	0
56	MG	YA	3156	1/1	0.80	0.15	33,33,33,33	0
56	MG	YA	3239	1/1	0.81	0.44	48,48,48,48	0
56	MG	YA	3176	1/1	0.81	0.17	54,54,54,54	0
56	MG	YA	3120	1/1	0.81	0.23	36,36,36,36	0
56	MG	YA	3084	1/1	0.83	0.19	23,23,23,23	0
56	MG	YA	3158	1/1	0.83	0.12	20,20,20,20	0
56	MG	YA	3105	1/1	0.83	0.22	16,16,16,16	0
56	MG	RA	3187	1/1	0.83	0.49	68,68,68,68	0
56	MG	XA	1647	1/1	0.84	0.52	58,58,58,58	0
56	MG	QA	1620	1/1	0.84	0.50	40,40,40,40	0
56	MG	RA	3096	1/1	0.84	0.16	8,8,8,8	0
56	MG	RA	3192	1/1	0.84	0.29	56,56,56,56	0
56	MG	RA	3175	1/1	0.84	0.25	99,99,99,99	0
56	MG	QA	1627	1/1	0.84	0.36	57,57,57,57	0
56	MG	XA	1644	1/1	0.84	0.28	59,59,59,59	0
56	MG	YA	3240	1/1	0.84	0.14	45,45,45,45	0
56	MG	YA	3181	1/1	0.84	0.28	51,51,51,51	0
56	MG	YA	3165	1/1	0.84	0.24	42,42,42,42	0
56	MG	QA	1643	1/1	0.84	0.20	24,24,24,24	0
56	MG	QA	1613	1/1	0.84	0.33	56,56,56,56	0
56	MG	RA	3200	1/1	0.84	0.23	58,58,58,58	0
56	MG	YA	3116	1/1	0.85	0.20	28,28,28,28	0
56	MG	RA	3167	1/1	0.85	0.19	35,35,35,35	0
56	MG	XA	1638	1/1	0.86	0.21	55,55,55,55	0
56	MG	YA	3164	1/1	0.86	0.30	25,25,25,25	0
56	MG	QA	1614	1/1	0.86	0.25	38,38,38,38	0
56	MG	RA	3186	1/1	0.86	0.22	90,90,90,90	0
56	MG	YA	3183	1/1	0.86	0.12	36,36,36,36	0
56	MG	RA	3208	1/1	0.86	0.14	47,47,47,47	0
56	MG	XA	1618	1/1	0.86	0.14	24,24,24,24	0
56	MG	RA	3162	1/1	0.86	0.28	56,56,56,56	0
56	MG	YA	3133	1/1	0.86	0.73	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	QF	201	1/1	0.86	0.17	56,56,56,56	0
56	MG	XA	1642	1/1	0.86	0.27	49,49,49,49	0
56	MG	RA	3083	1/1	0.87	0.20	26,26,26,26	0
56	MG	YA	3207	1/1	0.87	0.30	66,66,66,66	0
56	MG	RA	3163	1/1	0.87	0.18	38,38,38,38	0
56	MG	RA	3122	1/1	0.87	0.24	70,70,70,70	0
56	MG	RA	3117	1/1	0.87	0.24	42,42,42,42	0
56	MG	YA	3228	1/1	0.87	0.17	45,45,45,45	0
56	MG	YA	3122	1/1	0.87	0.17	35,35,35,35	0
56	MG	RA	3210	1/1	0.87	0.34	38,38,38,38	0
56	MG	RA	3196	1/1	0.88	0.23	53,53,53,53	0
56	MG	RA	3197	1/1	0.88	0.15	50,50,50,50	0
56	MG	YA	3227	1/1	0.88	0.14	22,22,22,22	0
56	MG	YA	3162	1/1	0.88	0.27	34,34,34,34	0
56	MG	QA	1657	1/1	0.88	0.10	76,76,76,76	0
56	MG	RA	3205	1/1	0.88	0.23	54,54,54,54	0
56	MG	RA	3195	1/1	0.88	0.25	28,28,28,28	0
56	MG	RA	3144	1/1	0.88	0.18	36,36,36,36	0
56	MG	YA	3039	1/1	0.88	0.20	30,30,30,30	0
56	MG	RA	3209	1/1	0.88	0.25	49,49,49,49	0
56	MG	RA	3207	1/1	0.88	0.12	51,51,51,51	0
56	MG	YA	3190	1/1	0.88	0.24	51,51,51,51	0
56	MG	YA	3186	1/1	0.88	0.28	50,50,50,50	0
56	MG	RA	3190	1/1	0.88	0.18	50,50,50,50	0
56	MG	RA	3180	1/1	0.89	0.21	28,28,28,28	0
56	MG	RA	3080	1/1	0.89	0.27	44,44,44,44	0
56	MG	RA	3147	1/1	0.89	0.41	49,49,49,49	0
56	MG	XA	1645	1/1	0.89	0.19	31,31,31,31	0
56	MG	RA	3108	1/1	0.89	0.17	26,26,26,26	0
56	MG	XA	1641	1/1	0.89	0.13	24,24,24,24	0
56	MG	XA	1626	1/1	0.89	0.32	27,27,27,27	0
56	MG	RA	3056	1/1	0.89	0.15	26,26,26,26	0
56	MG	YA	3016	1/1	0.89	0.14	19,19,19,19	0
56	MG	RA	3106	1/1	0.89	0.50	24,24,24,24	0
56	MG	RA	3169	1/1	0.89	0.14	23,23,23,23	0
56	MG	YA	3234	1/1	0.89	0.22	34,34,34,34	0
56	MG	XA	1621	1/1	0.89	0.15	22,22,22,22	0
56	MG	QA	1625	1/1	0.89	0.14	66,66,66,66	0
56	MG	YA	3188	1/1	0.89	0.20	38,38,38,38	0
56	MG	QA	1640	1/1	0.89	0.18	54,54,54,54	0
56	MG	YA	3107	1/1	0.89	0.22	25,25,25,25	0
56	MG	RA	3133	1/1	0.89	0.13	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	XA	1654	1/1	0.89	0.12	50,50,50,50	0
56	MG	QA	1660	1/1	0.90	0.19	45,45,45,45	0
56	MG	QA	1618	1/1	0.90	0.16	41,41,41,41	0
56	MG	XA	1658	1/1	0.90	0.28	50,50,50,50	0
56	MG	QA	1644	1/1	0.90	0.19	23,23,23,23	0
56	MG	RA	3152	1/1	0.90	0.18	26,26,26,26	0
56	MG	RA	3185	1/1	0.90	0.37	44,44,44,44	0
56	MG	RA	3191	1/1	0.90	0.17	62,62,62,62	0
57	PAR	QA	1661	42/42	0.90	0.23	75,75,75,75	0
56	MG	RA	3206	1/1	0.90	0.28	38,38,38,38	0
56	MG	YA	3139	1/1	0.90	0.22	32,32,32,32	0
56	MG	RA	3130	1/1	0.90	0.31	44,44,44,44	0
56	MG	YA	3130	1/1	0.90	0.19	16,16,16,16	0
56	MG	XA	1652	1/1	0.90	0.16	64,64,64,64	0
56	MG	RA	3097	1/1	0.90	0.21	24,24,24,24	0
56	MG	RA	3183	1/1	0.90	0.33	49,49,49,49	0
56	MG	RA	3072	1/1	0.90	0.27	24,24,24,24	0
56	MG	YA	3192	1/1	0.90	0.28	40,40,40,40	0
56	MG	YA	3056	1/1	0.90	0.19	9,9,9,9	0
56	MG	RA	3174	1/1	0.90	0.39	68,68,68,68	0
56	MG	QA	1632	1/1	0.90	0.24	41,41,41,41	0
56	MG	RF	301	1/1	0.90	0.24	45,45,45,45	0
56	MG	QA	1652	1/1	0.90	0.16	36,36,36,36	0
56	MG	QA	1622	1/1	0.90	0.27	60,60,60,60	0
56	MG	XA	1656	1/1	0.90	0.18	37,37,37,37	0
56	MG	XA	1631	1/1	0.91	0.32	45,45,45,45	0
56	MG	RA	3027	1/1	0.91	0.74	80,80,80,80	0
56	MG	XA	1653	1/1	0.91	0.22	44,44,44,44	0
56	MG	YX	101	1/1	0.91	0.09	28,28,28,28	0
56	MG	YA	3003	1/1	0.91	0.13	13,13,13,13	0
56	MG	XA	1663	1/1	0.91	0.29	85,85,85,85	0
56	MG	RA	3103	1/1	0.91	0.61	48,48,48,48	0
56	MG	YA	3151	1/1	0.91	0.51	26,26,26,26	0
56	MG	RA	3171	1/1	0.91	0.33	49,49,49,49	0
56	MG	QA	1601	1/1	0.91	0.23	27,27,27,27	0
57	PAR	XA	1664	42/42	0.91	0.25	57,57,57,57	0
56	MG	QA	1638	1/1	0.91	0.31	53,53,53,53	0
56	MG	RA	3098	1/1	0.91	0.13	11,11,11,11	0
56	MG	RA	3101	1/1	0.91	0.11	50,50,50,50	0
56	MG	YA	3200	1/1	0.91	0.12	15,15,15,15	0
56	MG	YA	3182	1/1	0.91	0.24	30,30,30,30	0
56	MG	RA	3111	1/1	0.91	0.30	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	YA	3065	1/1	0.91	0.13	12,12,12,12	0
56	MG	RA	3159	1/1	0.91	0.42	26,26,26,26	0
56	MG	QA	1637	1/1	0.91	0.17	49,49,49,49	0
56	MG	YA	3117	1/1	0.91	0.34	60,60,60,60	0
56	MG	YA	3194	1/1	0.91	0.30	42,42,42,42	0
56	MG	RA	3181	1/1	0.91	0.28	34,34,34,34	0
56	MG	YA	3201	1/1	0.91	0.10	122,122,122,122	0
56	MG	QA	1659	1/1	0.92	0.26	79,79,79,79	0
56	MG	YA	3152	1/1	0.92	0.39	38,38,38,38	0
56	MG	RA	3146	1/1	0.92	0.30	44,44,44,44	0
56	MG	RA	3066	1/1	0.92	0.24	12,12,12,12	0
56	MG	RA	3091	1/1	0.92	0.17	21,21,21,21	0
56	MG	RA	3033	1/1	0.92	0.21	62,62,62,62	0
56	MG	RA	3164	1/1	0.92	0.15	52,52,52,52	0
56	MG	RA	3095	1/1	0.92	0.14	31,31,31,31	0
56	MG	XA	1651	1/1	0.92	0.14	18,18,18,18	0
56	MG	YA	3150	1/1	0.92	0.19	54,54,54,54	0
56	MG	RA	3123	1/1	0.92	0.14	32,32,32,32	0
56	MG	QV	102	1/1	0.92	0.19	8,8,8,8	0
56	MG	YB	202	1/1	0.92	0.16	42,42,42,42	0
56	MG	YA	3071	1/1	0.92	0.14	18,18,18,18	0
56	MG	RA	3075	1/1	0.92	0.35	4,4,4,4	0
56	MG	XA	1614	1/1	0.92	0.11	14,14,14,14	0
56	MG	YA	3061	1/1	0.92	0.12	35,35,35,35	0
56	MG	YA	3230	1/1	0.92	0.39	43,43,43,43	0
56	MG	RA	3115	1/1	0.92	0.26	59,59,59,59	0
56	MG	QA	1611	1/1	0.92	0.08	32,32,32,32	0
56	MG	YA	3098	1/1	0.92	0.18	49,49,49,49	0
56	MG	RA	3015	1/1	0.92	0.15	15,15,15,15	0
56	MG	QA	1634	1/1	0.92	0.10	48,48,48,48	0
56	MG	RA	3178	1/1	0.92	0.25	62,62,62,62	0
56	MG	RA	3153	1/1	0.92	0.16	36,36,36,36	0
56	MG	RA	3092	1/1	0.92	0.10	18,18,18,18	0
56	MG	RA	3188	1/1	0.92	0.28	58,58,58,58	0
56	MG	QA	1610	1/1	0.92	0.21	33,33,33,33	0
56	MG	YA	3063	1/1	0.92	0.12	6,6,6,6	0
56	MG	RA	3073	1/1	0.92	0.38	5,5,5,5	0
56	MG	RA	3158	1/1	0.93	0.16	14,14,14,14	0
56	MG	RA	3102	1/1	0.93	0.25	32,32,32,32	0
56	MG	RA	3157	1/1	0.93	0.38	20,20,20,20	0
56	MG	YE	301	1/1	0.93	0.11	1,1,1,1	0
56	MG	RA	3193	1/1	0.93	0.15	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	RA	3120	1/1	0.93	0.11	10,10,10,10	0
56	MG	YA	3178	1/1	0.93	0.22	68,68,68,68	0
56	MG	YA	3082	1/1	0.93	0.15	13,13,13,13	0
56	MG	QA	1645	1/1	0.93	0.17	22,22,22,22	0
56	MG	RA	3114	1/1	0.93	0.11	30,30,30,30	0
56	MG	YA	3242	1/1	0.93	0.32	34,34,34,34	0
56	MG	RA	3007	1/1	0.93	0.13	8,8,8,8	0
56	MG	YA	3198	1/1	0.93	0.26	32,32,32,32	0
56	MG	YA	3208	1/1	0.93	0.21	53,53,53,53	0
56	MG	XA	1632	1/1	0.93	0.19	11,11,11,11	0
56	MG	QA	1635	1/1	0.93	0.18	31,31,31,31	0
56	MG	QA	1633	1/1	0.93	0.36	50,50,50,50	0
56	MG	XA	1655	1/1	0.93	0.21	33,33,33,33	0
56	MG	RA	3012	1/1	0.93	0.37	26,26,26,26	0
56	MG	RA	3150	1/1	0.93	0.25	26,26,26,26	0
56	MG	YA	3168	1/1	0.93	0.29	65,65,65,65	0
56	MG	RA	3143	1/1	0.93	0.47	16,16,16,16	0
56	MG	XA	1646	1/1	0.93	0.18	23,23,23,23	0
56	MG	YA	3124	1/1	0.93	0.22	22,22,22,22	0
56	MG	RA	3134	1/1	0.93	0.21	18,18,18,18	0
56	MG	YA	3142	1/1	0.93	0.16	30,30,30,30	0
56	MG	YA	3160	1/1	0.93	0.19	37,37,37,37	0
56	MG	QA	1619	1/1	0.93	0.29	48,48,48,48	0
56	MG	RA	3168	1/1	0.93	0.10	31,31,31,31	0
56	MG	QA	1631	1/1	0.93	0.15	55,55,55,55	0
56	MG	XV	102	1/1	0.93	0.12	22,22,22,22	0
56	MG	YA	3141	1/1	0.93	0.48	43,43,43,43	0
56	MG	YA	3226	1/1	0.93	0.15	14,14,14,14	0
56	MG	RA	3139	1/1	0.93	0.13	31,31,31,31	0
56	MG	YA	3196	1/1	0.94	0.13	33,33,33,33	0
56	MG	YA	3191	1/1	0.94	0.13	24,24,24,24	0
56	MG	QA	1623	1/1	0.94	0.15	28,28,28,28	0
56	MG	YA	3005	1/1	0.94	0.12	19,19,19,19	0
56	MG	RA	3009	1/1	0.94	0.17	21,21,21,21	0
56	MG	YA	3212	1/1	0.94	0.10	21,21,21,21	0
56	MG	RA	3040	1/1	0.94	0.13	9,9,9,9	0
56	MG	RA	3131	1/1	0.94	0.20	77,77,77,77	0
56	MG	YA	3170	1/1	0.94	0.35	10,10,10,10	0
56	MG	YA	3205	1/1	0.94	0.15	28,28,28,28	0
56	MG	RA	3127	1/1	0.94	0.18	47,47,47,47	0
56	MG	RA	3199	1/1	0.94	0.18	47,47,47,47	0
56	MG	YA	3149	1/1	0.94	0.30	26,26,26,26	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	RA	3160	1/1	0.94	0.17	25,25,25,25	0
56	MG	RA	3082	1/1	0.94	0.14	13,13,13,13	0
56	MG	YA	3066	1/1	0.94	0.48	18,18,18,18	0
56	MG	YA	3175	1/1	0.94	0.12	12,12,12,12	0
56	MG	QA	1656	1/1	0.94	0.22	53,53,53,53	0
56	MG	RA	3069	1/1	0.94	0.30	43,43,43,43	0
56	MG	YA	3131	1/1	0.94	0.14	20,20,20,20	0
56	MG	RA	3128	1/1	0.94	0.20	27,27,27,27	0
56	MG	RA	3189	1/1	0.94	0.23	34,34,34,34	0
56	MG	RA	3078	1/1	0.94	0.19	15,15,15,15	0
56	MG	YA	3241	1/1	0.94	0.28	33,33,33,33	0
56	MG	YA	3211	1/1	0.94	0.18	42,42,42,42	0
56	MG	RA	3149	1/1	0.94	0.18	48,48,48,48	0
56	MG	YA	3174	1/1	0.94	0.19	29,29,29,29	0
56	MG	XA	1625	1/1	0.94	0.14	20,20,20,20	0
56	MG	RA	3104	1/1	0.94	0.24	44,44,44,44	0
56	MG	YA	3197	1/1	0.94	0.16	33,33,33,33	0
56	MG	RA	3161	1/1	0.94	0.16	32,32,32,32	0
56	MG	YA	3184	1/1	0.94	0.17	33,33,33,33	0
56	MG	QX	102	1/1	0.94	0.09	42,42,42,42	0
56	MG	YA	3223	1/1	0.94	0.09	30,30,30,30	0
56	MG	XA	1662	1/1	0.94	0.24	27,27,27,27	0
56	MG	YA	3018	1/1	0.94	0.32	24,24,24,24	0
56	MG	YA	3214	1/1	0.94	0.15	42,42,42,42	0
56	MG	YA	3215	1/1	0.94	0.15	51,51,51,51	0
56	MG	RA	3057	1/1	0.94	0.06	22,22,22,22	0
56	MG	YA	3127	1/1	0.94	0.53	44,44,44,44	0
56	MG	XM	201	1/1	0.94	0.12	28,28,28,28	0
56	MG	YA	3199	1/1	0.94	0.21	42,42,42,42	0
56	MG	YA	3067	1/1	0.94	0.14	15,15,15,15	0
56	MG	RA	3121	1/1	0.94	0.65	35,35,35,35	0
56	MG	YA	3088	1/1	0.94	0.26	20,20,20,20	0
56	MG	XA	1650	1/1	0.94	0.26	39,39,39,39	0
56	MG	RA	3179	1/1	0.94	0.21	22,22,22,22	0
56	MG	XA	1636	1/1	0.94	0.15	58,58,58,58	0
56	MG	YA	3159	1/1	0.94	0.30	43,43,43,43	0
56	MG	RA	3137	1/1	0.94	0.17	36,36,36,36	0
56	MG	YA	3231	1/1	0.94	0.29	32,32,32,32	0
56	MG	YA	3126	1/1	0.94	0.18	27,27,27,27	0
56	MG	YA	3033	1/1	0.94	0.24	6,6,6,6	0
56	MG	RA	3135	1/1	0.94	0.27	32,32,32,32	0
56	MG	YA	3121	1/1	0.94	0.16	23,23,23,23	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	RA	3094	1/1	0.95	0.12	19,19,19,19	0
56	MG	RA	3099	1/1	0.95	0.13	21,21,21,21	0
56	MG	RA	3048	1/1	0.95	0.22	13,13,13,13	0
56	MG	YA	3154	1/1	0.95	0.16	15,15,15,15	0
56	MG	YA	3155	1/1	0.95	0.24	22,22,22,22	0
56	MG	XA	1609	1/1	0.95	0.24	15,15,15,15	0
56	MG	YA	3148	1/1	0.95	0.11	25,25,25,25	0
56	MG	RA	3166	1/1	0.95	0.23	56,56,56,56	0
56	MG	YA	3070	1/1	0.95	0.13	22,22,22,22	0
56	MG	QA	1617	1/1	0.95	0.22	41,41,41,41	0
56	MG	XA	1637	1/1	0.95	0.11	39,39,39,39	0
56	MG	RA	3119	1/1	0.95	0.39	34,34,34,34	0
56	MG	XA	1660	1/1	0.95	0.08	61,61,61,61	0
56	MG	XA	1639	1/1	0.95	0.17	32,32,32,32	0
56	MG	RB	202	1/1	0.95	0.07	31,31,31,31	0
56	MG	YA	3085	1/1	0.95	0.10	41,41,41,41	0
56	MG	XA	1627	1/1	0.95	0.29	31,31,31,31	0
56	MG	YA	3224	1/1	0.95	0.18	18,18,18,18	0
56	MG	QA	1650	1/1	0.95	0.14	36,36,36,36	0
56	MG	YA	3185	1/1	0.95	0.09	10,10,10,10	0
56	MG	YA	3232	1/1	0.95	0.29	43,43,43,43	0
56	MG	RA	3148	1/1	0.95	0.20	21,21,21,21	0
56	MG	QA	1629	1/1	0.95	0.17	68,68,68,68	0
56	MG	YA	3128	1/1	0.95	0.21	23,23,23,23	0
56	MG	RA	3136	1/1	0.95	0.24	49,49,49,49	0
56	MG	RA	3065	1/1	0.95	0.28	21,21,21,21	0
56	MG	RA	3116	1/1	0.95	0.22	69,69,69,69	0
56	MG	YA	3045	1/1	0.95	0.37	22,22,22,22	0
56	MG	QA	1649	1/1	0.95	0.34	45,45,45,45	0
56	MG	RA	3125	1/1	0.95	0.32	24,24,24,24	0
56	MG	QA	1655	1/1	0.95	0.36	50,50,50,50	0
56	MG	YA	3220	1/1	0.95	0.14	18,18,18,18	0
56	MG	YA	3221	1/1	0.95	0.21	26,26,26,26	0
56	MG	YA	3145	1/1	0.95	0.15	42,42,42,42	0
56	MG	RA	3047	1/1	0.95	0.23	7,7,7,7	0
56	MG	YA	3134	1/1	0.95	0.10	29,29,29,29	0
56	MG	XA	1661	1/1	0.95	0.20	38,38,38,38	0
56	MG	RA	3005	1/1	0.95	0.26	8,8,8,8	0
56	MG	YA	3004	1/1	0.95	0.23	13,13,13,13	0
56	MG	RA	3023	1/1	0.95	0.29	24,24,24,24	0
56	MG	RA	3018	1/1	0.95	0.22	6,6,6,6	0
56	MG	RP	201	1/1	0.95	0.34	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	XA	1617	1/1	0.96	0.14	26,26,26,26	0
56	MG	RA	3090	1/1	0.96	0.11	14,14,14,14	0
56	MG	YA	3074	1/1	0.96	0.17	28,28,28,28	0
56	MG	YA	3225	1/1	0.96	0.16	32,32,32,32	0
56	MG	YA	3060	1/1	0.96	0.23	13,13,13,13	0
56	MG	XA	1615	1/1	0.96	0.24	19,19,19,19	0
56	MG	XA	1612	1/1	0.96	0.31	21,21,21,21	0
56	MG	YA	3008	1/1	0.96	0.27	17,17,17,17	0
56	MG	XA	1620	1/1	0.96	0.10	55,55,55,55	0
56	MG	RA	3184	1/1	0.96	0.30	33,33,33,33	0
56	MG	QA	1653	1/1	0.96	0.26	39,39,39,39	0
56	MG	QA	1626	1/1	0.96	0.34	77,77,77,77	0
56	MG	YA	3100	1/1	0.96	0.32	1,1,1,1	0
56	MG	RA	3034	1/1	0.96	0.28	16,16,16,16	0
56	MG	YA	3163	1/1	0.96	0.20	40,40,40,40	0
56	MG	YA	3102	1/1	0.96	0.25	5,5,5,5	0
56	MG	RA	3044	1/1	0.96	0.29	21,21,21,21	0
56	MG	RA	3051	1/1	0.96	0.40	1,1,1,1	0
56	MG	RA	3041	1/1	0.96	0.17	5,5,5,5	0
56	MG	QA	1612	1/1	0.96	0.07	37,37,37,37	0
56	MG	YA	3097	1/1	0.96	0.24	19,19,19,19	0
56	MG	RA	3140	1/1	0.96	0.20	45,45,45,45	0
56	MG	YA	3187	1/1	0.96	0.36	58,58,58,58	0
56	MG	RA	3052	1/1	0.96	0.42	24,24,24,24	0
56	MG	RA	3020	1/1	0.96	0.27	29,29,29,29	0
56	MG	QA	1602	1/1	0.96	0.34	19,19,19,19	0
56	MG	RA	3004	1/1	0.96	0.11	5,5,5,5	0
56	MG	RE	302	1/1	0.96	0.38	22,22,22,22	0
58	ZN	QD	301	1/1	0.96	0.19	59,59,59,59	0
56	MG	RA	3001	1/1	0.96	0.19	36,36,36,36	0
56	MG	RA	3063	1/1	0.96	0.20	27,27,27,27	0
56	MG	YA	3179	1/1	0.96	0.41	31,31,31,31	0
56	MG	RA	3016	1/1	0.96	0.26	2,2,2,2	0
56	MG	RA	3124	1/1	0.96	0.33	21,21,21,21	0
56	MG	YA	3210	1/1	0.96	0.11	35,35,35,35	0
56	MG	RA	3038	1/1	0.96	0.15	14,14,14,14	0
56	MG	YA	3219	1/1	0.96	0.26	29,29,29,29	0
56	MG	RA	3008	1/1	0.96	0.20	13,13,13,13	0
56	MG	YA	3119	1/1	0.96	0.37	35,35,35,35	0
56	MG	YA	3083	1/1	0.96	0.42	21,21,21,21	0
56	MG	YA	3123	1/1	0.96	0.12	15,15,15,15	0
56	MG	RA	3003	1/1	0.96	0.23	17,17,17,17	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	QA	1604	1/1	0.96	0.10	33,33,33,33	0
56	MG	YA	3203	1/1	0.96	0.13	24,24,24,24	0
56	MG	QA	1616	1/1	0.96	0.09	42,42,42,42	0
56	MG	YA	3009	1/1	0.96	0.45	27,27,27,27	0
56	MG	RA	3177	1/1	0.96	0.15	59,59,59,59	0
56	MG	XA	1659	1/1	0.96	0.10	60,60,60,60	0
56	MG	XA	1657	1/1	0.96	0.13	28,28,28,28	0
56	MG	YA	3144	1/1	0.96	0.16	13,13,13,13	0
56	MG	YA	3034	1/1	0.96	0.19	3,3,3,3	0
56	MG	RA	3212	1/1	0.96	0.28	18,18,18,18	0
56	MG	YA	3115	1/1	0.96	0.14	21,21,21,21	0
56	MG	YA	3125	1/1	0.96	0.13	18,18,18,18	0
56	MG	QA	1624	1/1	0.96	0.34	24,24,24,24	0
56	MG	YA	3202	1/1	0.96	0.07	21,21,21,21	0
56	MG	RA	3088	1/1	0.96	0.17	24,24,24,24	0
56	MG	RA	3087	1/1	0.96	0.11	9,9,9,9	0
56	MG	QA	1606	1/1	0.97	0.16	7,7,7,7	0
56	MG	R5	101	1/1	0.97	0.14	27,27,27,27	0
56	MG	RA	3129	1/1	0.97	0.20	26,26,26,26	0
56	MG	YA	3106	1/1	0.97	0.29	32,32,32,32	0
56	MG	YA	3110	1/1	0.97	0.08	10,10,10,10	0
56	MG	YA	3019	1/1	0.97	0.39	21,21,21,21	0
56	MG	RA	3077	1/1	0.97	0.32	14,14,14,14	0
56	MG	YA	3233	1/1	0.97	0.38	44,44,44,44	0
56	MG	YA	3193	1/1	0.97	0.14	39,39,39,39	0
56	MG	YA	3054	1/1	0.97	0.14	14,14,14,14	0
56	MG	XA	1633	1/1	0.97	0.23	32,32,32,32	0
56	MG	YA	3035	1/1	0.97	0.20	10,10,10,10	0
56	MG	YA	3040	1/1	0.97	0.12	1,1,1,1	0
56	MG	YA	3090	1/1	0.97	0.39	11,11,11,11	0
56	MG	QA	1647	1/1	0.97	0.10	41,41,41,41	0
56	MG	RA	3132	1/1	0.97	0.21	12,12,12,12	0
56	MG	YA	3051	1/1	0.97	0.22	4,4,4,4	0
56	MG	YA	3118	1/1	0.97	0.17	12,12,12,12	0
56	MG	YA	3143	1/1	0.97	0.13	33,33,33,33	0
56	MG	RA	3155	1/1	0.97	0.21	12,12,12,12	0
56	MG	RA	3085	1/1	0.97	0.11	15,15,15,15	0
56	MG	RA	3074	1/1	0.97	0.32	8,8,8,8	0
56	MG	YA	3189	1/1	0.97	0.11	31,31,31,31	0
56	MG	XA	1623	1/1	0.97	0.39	31,31,31,31	0
56	MG	YA	3020	1/1	0.97	0.34	8,8,8,8	0
56	MG	RA	3026	1/1	0.97	0.22	6,6,6,6	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	XA	1610	1/1	0.97	0.17	37,37,37,37	0
56	MG	RA	3002	1/1	0.97	0.24	8,8,8,8	0
56	MG	YA	3157	1/1	0.97	0.16	29,29,29,29	0
56	MG	QA	1608	1/1	0.97	0.18	27,27,27,27	0
56	MG	RA	3100	1/1	0.97	0.16	44,44,44,44	0
56	MG	XA	1649	1/1	0.97	0.36	28,28,28,28	0
56	MG	QA	1605	1/1	0.97	0.17	51,51,51,51	0
56	MG	YA	3113	1/1	0.97	0.27	21,21,21,21	0
56	MG	YA	3112	1/1	0.97	0.11	41,41,41,41	0
56	MG	RA	3118	1/1	0.97	0.14	14,14,14,14	0
56	MG	YA	3081	1/1	0.97	0.30	18,18,18,18	0
56	MG	YA	3069	1/1	0.97	0.16	16,16,16,16	0
56	MG	YA	3180	1/1	0.97	0.11	53,53,53,53	0
56	MG	XA	1602	1/1	0.97	0.15	15,15,15,15	0
56	MG	RA	3081	1/1	0.97	0.47	28,28,28,28	0
56	MG	RA	3068	1/1	0.97	0.13	16,16,16,16	0
56	MG	RA	3105	1/1	0.97	0.12	50,50,50,50	0
56	MG	YA	3014	1/1	0.97	0.39	12,12,12,12	0
56	MG	YA	3047	1/1	0.97	0.26	6,6,6,6	0
56	MG	RA	3093	1/1	0.97	0.08	24,24,24,24	0
56	MG	YA	3129	1/1	0.97	0.07	22,22,22,22	0
56	MG	XA	1640	1/1	0.97	0.19	47,47,47,47	0
56	MG	YA	3136	1/1	0.97	0.15	4,4,4,4	0
56	MG	YA	3059	1/1	0.97	0.15	74,74,74,74	0
56	MG	RA	3076	1/1	0.97	0.40	22,22,22,22	0
56	MG	YA	3072	1/1	0.97	0.14	10,10,10,10	0
56	MG	YA	3132	1/1	0.97	0.11	13,13,13,13	0
56	MG	YA	3101	1/1	0.97	0.27	5,5,5,5	0
56	MG	XA	1629	1/1	0.97	0.13	49,49,49,49	0
56	MG	YA	3026	1/1	0.97	0.40	9,9,9,9	0
56	MG	QA	1630	1/1	0.97	0.12	66,66,66,66	0
56	MG	RA	3071	1/1	0.97	0.19	32,32,32,32	0
56	MG	QX	101	1/1	0.97	0.10	24,24,24,24	0
56	MG	RE	301	1/1	0.97	0.12	22,22,22,22	0
56	MG	RA	3060	1/1	0.97	0.22	25,25,25,25	0
56	MG	RA	3211	1/1	0.97	0.27	13,13,13,13	0
56	MG	YA	3055	1/1	0.97	0.22	16,16,16,16	0
56	MG	RA	3198	1/1	0.97	0.09	53,53,53,53	0
56	MG	YA	3218	1/1	0.97	0.11	19,19,19,19	0
56	MG	YA	3041	1/1	0.97	0.28	6,6,6,6	0
56	MG	YA	3216	1/1	0.97	0.09	42,42,42,42	0
56	MG	QA	1642	1/1	0.97	0.09	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	XA	1634	1/1	0.97	0.29	28,28,28,28	0
56	MG	RA	3037	1/1	0.97	0.26	10,10,10,10	0
56	MG	QV	101	1/1	0.97	0.19	17,17,17,17	0
56	MG	YA	3092	1/1	0.97	0.16	11,11,11,11	0
56	MG	RA	3204	1/1	0.97	0.12	30,30,30,30	0
56	MG	RA	3138	1/1	0.97	0.17	21,21,21,21	0
56	MG	QA	1609	1/1	0.97	0.28	34,34,34,34	0
56	MG	QA	1607	1/1	0.97	0.14	22,22,22,22	0
56	MG	RA	3145	1/1	0.97	0.22	37,37,37,37	0
56	MG	YA	3077	1/1	0.97	0.15	8,8,8,8	0
56	MG	RA	3151	1/1	0.97	0.23	23,23,23,23	0
56	MG	YA	3057	1/1	0.97	0.49	22,22,22,22	0
56	MG	RA	3172	1/1	0.97	0.21	29,29,29,29	0
56	MG	XA	1643	1/1	0.97	0.17	47,47,47,47	0
56	MG	YA	3030	1/1	0.97	0.27	24,24,24,24	0
56	MG	RA	3021	1/1	0.97	0.42	27,27,27,27	0
56	MG	YA	3146	1/1	0.97	0.11	50,50,50,50	0
56	MG	YA	3138	1/1	0.97	0.16	15,15,15,15	0
56	MG	YA	3080	1/1	0.97	0.30	3,3,3,3	0
56	MG	RA	3170	1/1	0.97	0.09	41,41,41,41	0
56	MG	YA	3140	1/1	0.97	0.29	2,2,2,2	0
56	MG	RA	3042	1/1	0.97	0.20	11,11,11,11	0
56	MG	YA	3213	1/1	0.97	0.13	41,41,41,41	0
56	MG	QA	1636	1/1	0.97	0.08	15,15,15,15	0
56	MG	YA	3029	1/1	0.97	0.35	17,17,17,17	0
56	MG	YA	3167	1/1	0.97	0.06	12,12,12,12	0
56	MG	QA	1621	1/1	0.97	0.18	48,48,48,48	0
56	MG	XA	1628	1/1	0.98	0.17	24,24,24,24	0
56	MG	RA	3022	1/1	0.98	0.33	3,3,3,3	0
56	MG	YA	3050	1/1	0.98	0.18	2,2,2,2	0
56	MG	RA	3045	1/1	0.98	0.29	12,12,12,12	0
56	MG	YA	3038	1/1	0.98	0.13	12,12,12,12	0
56	MG	RA	3058	1/1	0.98	0.20	13,13,13,13	0
56	MG	XA	1601	1/1	0.98	0.12	15,15,15,15	0
56	MG	YA	3052	1/1	0.98	0.23	17,17,17,17	0
56	MG	YA	3195	1/1	0.98	0.09	55,55,55,55	0
56	MG	RA	3079	1/1	0.98	0.20	32,32,32,32	0
56	MG	YA	3091	1/1	0.98	0.13	23,23,23,23	0
56	MG	YA	3049	1/1	0.98	0.27	15,15,15,15	0
56	MG	YA	3064	1/1	0.98	0.18	23,23,23,23	0
56	MG	YB	201	1/1	0.98	0.15	21,21,21,21	0
56	MG	YA	3217	1/1	0.98	0.09	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	RA	3035	1/1	0.98	0.12	21,21,21,21	0
56	MG	YA	3073	1/1	0.98	0.25	24,24,24,24	0
56	MG	RA	3062	1/1	0.98	0.38	21,21,21,21	0
56	MG	QA	1628	1/1	0.98	0.28	14,14,14,14	0
56	MG	XA	1606	1/1	0.98	0.25	17,17,17,17	0
56	MG	YA	3036	1/1	0.98	0.23	3,3,3,3	0
56	MG	RA	3039	1/1	0.98	0.26	18,18,18,18	0
56	MG	YA	3103	1/1	0.98	0.08	12,12,12,12	0
56	MG	YA	3025	1/1	0.98	0.18	6,6,6,6	0
56	MG	YA	3209	1/1	0.98	0.18	41,41,41,41	0
56	MG	RA	3142	1/1	0.98	0.11	15,15,15,15	0
56	MG	XA	1630	1/1	0.98	0.14	39,39,39,39	0
56	MG	RA	3089	1/1	0.98	0.28	26,26,26,26	0
56	MG	YA	3094	1/1	0.98	0.29	10,10,10,10	0
56	MG	YA	3068	1/1	0.98	0.31	12,12,12,12	0
56	MG	RA	3165	1/1	0.98	0.09	5,5,5,5	0
56	MG	RB	201	1/1	0.98	0.05	13,13,13,13	0
56	MG	YA	3166	1/1	0.98	0.19	51,51,51,51	0
56	MG	RA	3110	1/1	0.98	0.12	51,51,51,51	0
56	MG	YA	3238	1/1	0.98	0.26	34,34,34,34	0
58	ZN	XD	301	1/1	0.98	0.23	49,49,49,49	0
56	MG	YA	3079	1/1	0.98	0.26	18,18,18,18	0
56	MG	YA	3022	1/1	0.98	0.21	6,6,6,6	0
56	MG	QA	1641	1/1	0.98	0.17	25,25,25,25	0
56	MG	XV	101	1/1	0.98	0.21	14,14,14,14	0
56	MG	YA	3024	1/1	0.98	0.19	10,10,10,10	0
56	MG	QM	201	1/1	0.98	0.15	34,34,34,34	0
56	MG	QA	1646	1/1	0.98	0.25	14,14,14,14	0
56	MG	YA	3032	1/1	0.98	0.21	9,9,9,9	0
56	MG	RA	3064	1/1	0.98	0.40	25,25,25,25	0
56	MG	RA	3061	1/1	0.98	0.21	28,28,28,28	0
56	MG	RA	3067	1/1	0.98	0.06	7,7,7,7	0
56	MG	YA	3006	1/1	0.98	0.24	0,0,0,0	0
56	MG	QA	1658	1/1	0.98	0.08	68,68,68,68	0
56	MG	YA	3137	1/1	0.98	0.08	15,15,15,15	0
56	MG	XA	1622	1/1	0.98	0.07	40,40,40,40	0
56	MG	RA	3030	1/1	0.98	0.28	15,15,15,15	0
56	MG	RA	3010	1/1	0.98	0.36	4,4,4,4	0
56	MG	YA	3044	1/1	0.98	0.22	9,9,9,9	0
56	MG	Y5	101	1/1	0.98	0.15	25,25,25,25	0
56	MG	QA	1654	1/1	0.98	0.15	14,14,14,14	0
56	MG	YA	3237	1/1	0.98	0.08	15,15,15,15	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	RA	3028	1/1	0.98	0.19	12,12,12,12	0
56	MG	YA	3010	1/1	0.98	0.15	3,3,3,3	0
56	MG	YA	3021	1/1	0.98	0.32	12,12,12,12	0
56	MG	RA	3084	1/1	0.98	0.30	17,17,17,17	0
56	MG	YA	3076	1/1	0.98	0.37	7,7,7,7	0
56	MG	RA	3194	1/1	0.98	0.14	14,14,14,14	0
56	MG	RA	3126	1/1	0.98	0.24	27,27,27,27	0
56	MG	YA	3087	1/1	0.98	0.24	7,7,7,7	0
56	MG	XA	1611	1/1	0.98	0.17	29,29,29,29	0
56	MG	RA	3031	1/1	0.98	0.29	26,26,26,26	0
56	MG	YA	3001	1/1	0.98	0.43	13,13,13,13	0
56	MG	YA	3086	1/1	0.98	0.14	3,3,3,3	0
56	MG	YA	3078	1/1	0.98	0.39	25,25,25,25	0
58	ZN	XN	101	1/1	0.98	0.12	107,107,107,107	0
56	MG	YA	3099	1/1	0.98	0.34	11,11,11,11	0
56	MG	YA	3017	1/1	0.98	0.11	16,16,16,16	0
56	MG	RA	3043	1/1	0.98	0.11	30,30,30,30	0
56	MG	RA	3070	1/1	0.98	0.31	37,37,37,37	0
56	MG	YA	3048	1/1	0.98	0.16	4,4,4,4	0
56	MG	YA	3153	1/1	0.98	0.22	26,26,26,26	0
56	MG	YA	3161	1/1	0.98	0.09	30,30,30,30	0
56	MG	YA	3027	1/1	0.98	0.11	5,5,5,5	0
56	MG	RA	3113	1/1	0.98	0.27	24,24,24,24	0
56	MG	RA	3046	1/1	0.98	0.35	31,31,31,31	0
56	MG	YA	3075	1/1	0.98	0.10	14,14,14,14	0
56	MG	YA	3109	1/1	0.98	0.25	25,25,25,25	0
56	MG	XA	1608	1/1	0.98	0.16	7,7,7,7	0
56	MG	RA	3182	1/1	0.98	0.34	25,25,25,25	0
56	MG	RA	3154	1/1	0.98	0.13	12,12,12,12	0
56	MG	RA	3029	1/1	0.98	0.15	2,2,2,2	0
56	MG	YA	3043	1/1	0.98	0.39	9,9,9,9	0
56	MG	YA	3015	1/1	0.98	0.43	10,10,10,10	0
56	MG	RA	3019	1/1	0.98	0.16	10,10,10,10	0
56	MG	RA	3112	1/1	0.98	0.28	50,50,50,50	0
56	MG	RA	3086	1/1	0.98	0.22	33,33,33,33	0
56	MG	YA	3222	1/1	0.98	0.05	9,9,9,9	0
56	MG	XA	1603	1/1	0.98	0.07	23,23,23,23	0
56	MG	YA	3229	1/1	0.98	0.10	52,52,52,52	0
56	MG	YA	3206	1/1	0.98	0.10	24,24,24,24	0
56	MG	QA	1651	1/1	0.98	0.21	70,70,70,70	0
56	MG	YA	3095	1/1	0.99	0.29	5,5,5,5	0
56	MG	RA	3017	1/1	0.99	0.12	13,13,13,13	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	YA	3007	1/1	0.99	0.17	6,6,6,6	0
56	MG	XA	1613	1/1	0.99	0.13	45,45,45,45	0
56	MG	QA	1603	1/1	0.99	0.05	28,28,28,28	0
56	MG	RA	3024	1/1	0.99	0.45	4,4,4,4	0
56	MG	XA	1624	1/1	0.99	0.13	35,35,35,35	0
56	MG	RA	3049	1/1	0.99	0.15	10,10,10,10	0
56	MG	RA	3156	1/1	0.99	0.16	22,22,22,22	0
56	MG	YA	3235	1/1	0.99	0.13	26,26,26,26	0
56	MG	YA	3135	1/1	0.99	0.10	33,33,33,33	0
56	MG	YA	3108	1/1	0.99	0.11	5,5,5,5	0
56	MG	YA	3204	1/1	0.99	0.16	43,43,43,43	0
56	MG	RA	3059	1/1	0.99	0.27	21,21,21,21	0
56	MG	YA	3093	1/1	0.99	0.14	18,18,18,18	0
56	MG	RA	3014	1/1	0.99	0.24	10,10,10,10	0
56	MG	XA	1607	1/1	0.99	0.07	5,5,5,5	0
56	MG	RA	3109	1/1	0.99	0.07	26,26,26,26	0
56	MG	QA	1648	1/1	0.99	0.03	100,100,100,100	0
56	MG	YA	3013	1/1	0.99	0.31	3,3,3,3	0
56	MG	YA	3111	1/1	0.99	0.23	30,30,30,30	0
56	MG	YA	3089	1/1	0.99	0.23	2,2,2,2	0
56	MG	XA	1635	1/1	0.99	0.07	36,36,36,36	0
56	MG	YA	3011	1/1	0.99	0.26	13,13,13,13	0
56	MG	RA	3050	1/1	0.99	0.14	0,0,0,0	0
56	MG	RA	3013	1/1	0.99	0.22	10,10,10,10	0
56	MG	YA	3046	1/1	0.99	0.13	4,4,4,4	0
56	MG	RA	3107	1/1	0.99	0.28	21,21,21,21	0
56	MG	YA	3023	1/1	0.99	0.26	4,4,4,4	0
56	MG	XA	1604	1/1	0.99	0.07	31,31,31,31	0
56	MG	YA	3031	1/1	0.99	0.35	6,6,6,6	0
56	MG	RA	3006	1/1	0.99	0.17	3,3,3,3	0
56	MG	RA	3055	1/1	0.99	0.15	12,12,12,12	0
56	MG	YA	3062	1/1	0.99	0.11	6,6,6,6	0
56	MG	RA	3036	1/1	0.99	0.33	10,10,10,10	0
56	MG	RA	3025	1/1	0.99	0.14	9,9,9,9	0
56	MG	YA	3114	1/1	0.99	0.24	6,6,6,6	0
56	MG	YA	3147	1/1	0.99	0.11	11,11,11,11	0
56	MG	RA	3032	1/1	0.99	0.16	17,17,17,17	0
56	MG	RA	3054	1/1	0.99	0.23	5,5,5,5	0
56	MG	YA	3058	1/1	0.99	0.30	16,16,16,16	0
56	MG	YA	3028	1/1	0.99	0.18	23,23,23,23	0
56	MG	YA	3037	1/1	0.99	0.20	3,3,3,3	0
56	MG	XA	1616	1/1	0.99	0.11	20,20,20,20	0

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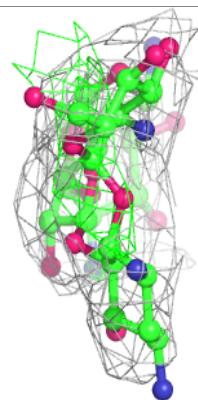
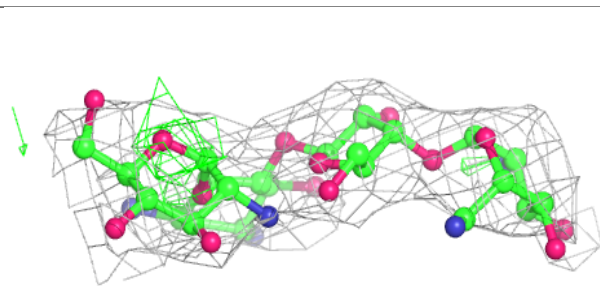
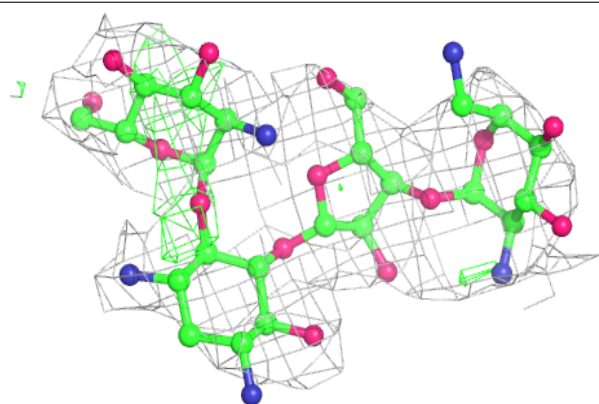
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
56	MG	YA	3053	1/1	0.99	0.15	4,4,4,4	0
56	MG	RA	3011	1/1	0.99	0.17	30,30,30,30	0
56	MG	YA	3096	1/1	0.99	0.22	15,15,15,15	0
56	MG	RA	3053	1/1	0.99	0.17	5,5,5,5	0
56	MG	YA	3104	1/1	0.99	0.24	6,6,6,6	0
56	MG	YA	3042	1/1	0.99	0.31	28,28,28,28	0
56	MG	YA	3002	1/1	1.00	0.38	15,15,15,15	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

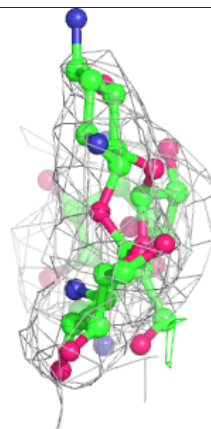
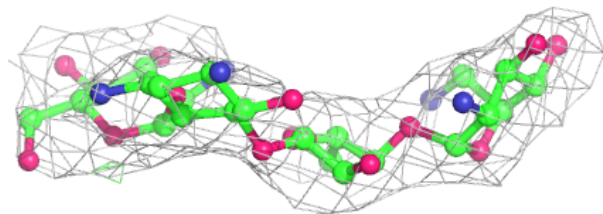
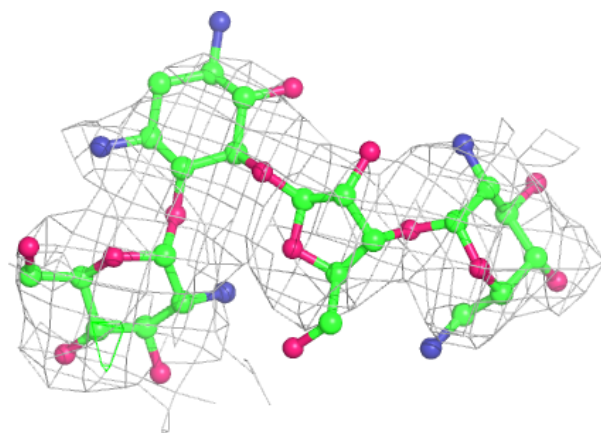
Electron density around PAR QA 1661:

2mF_o-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around PAR XA 1664:

$2mF_o - DF_c$ (at 0.7 rmsd) in gray
 $mF_o - DF_c$ (at 3 rmsd) in purple (negative)
and green (positive)



6.5 Other polymers [i](#)

There are no such residues in this entry.